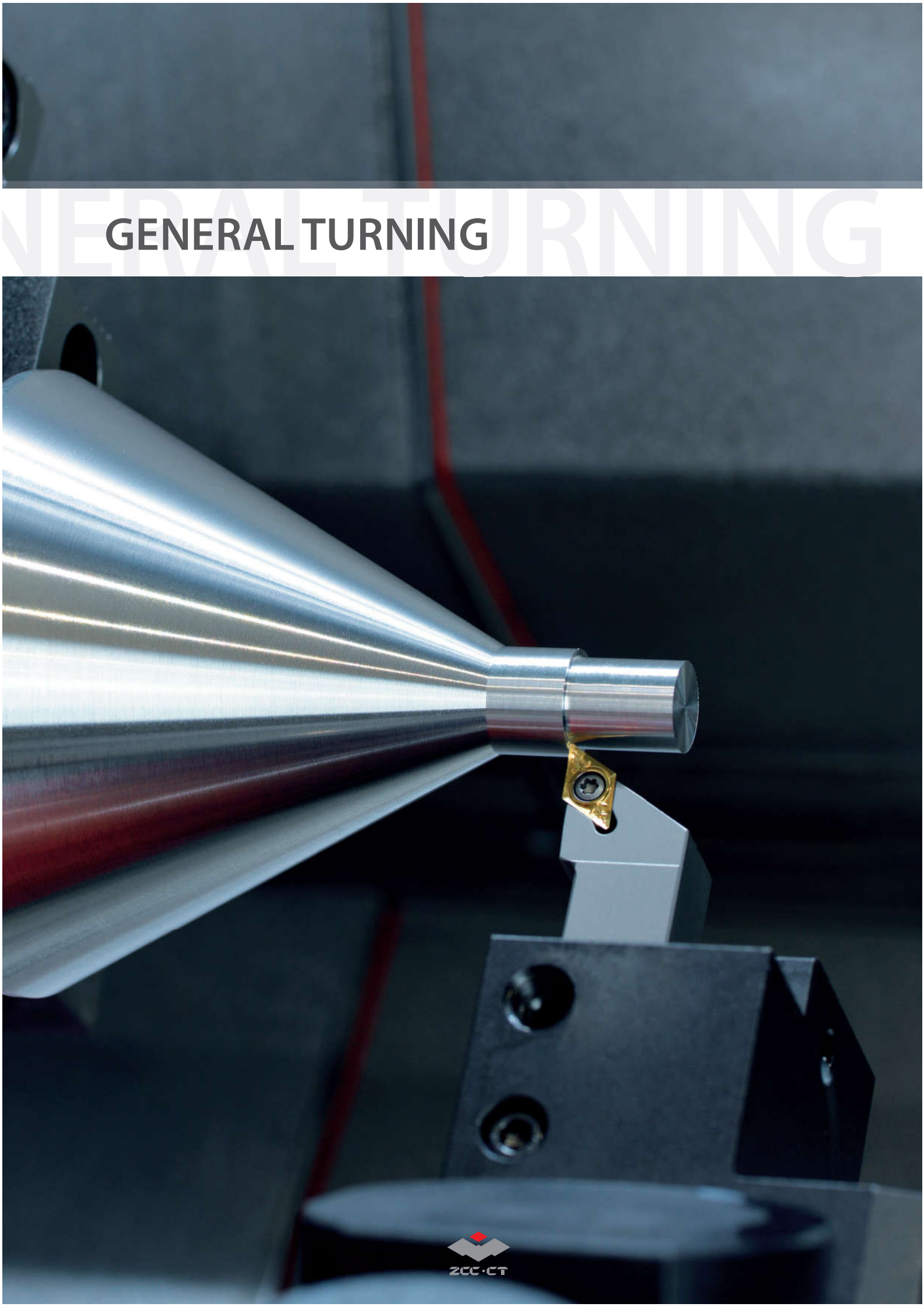
Turning A	General turning	A1-A379
	Parting & grooving	A380-A457
	Threading	A458-A500
Milling B	Indexable milling	B1-B263
	Solid carbide milling	B264-B526
Drilling C	Indexable drills	C1-C37
	Solid carbide drills	C38-C151
	Solid carbide reamers	C152-C171
	Solid carbide threading tools	C172-C200
Technical information D		D1-D12
Index E		E1-E10

GENERAL TURNING



General turning

Product overview	**A2-A15**
Chip breaker overview	**A16-A26**
Application fields of chip breakers	**A27-A35**
Grade overview	**A36-A41**
Application fields of grades	**A42-A47**
ISO code – general turning inserts	**A48-A49**
Conversion table metric/imperial	**A50**
Negative inserts	**A51-A115**
Positive inserts	**A116-A157**
ISO code – PCBN & PCD inserts	**A158-A159**
PCBN & PCD inserts	**A160-A197**
ISO code – ceramic inserts	**A198-A199**
Ceramic inserts	**A200-A221**
External tool holder overview	**A222-A227**
ISO code – external tool holders	**A228-A229**
External tool holders	**A230-A303**
ISO code – external tool holders – Swiss turning	**A304-A305**
External tool holders – Swiss turning	**A306-A313**
System code – external tool holders – rail applications	**A314-A315**
External tool holders – rail applications	**A316-A319**
Boring bar overview	**A320-A321**
ISO code – boring bars	**A322-A323**
Boring bars	**A324-A365**
Recommended cutting data	**A366-A379**
Trouble shooting	**A502-A503**
Technical information	**A505-A509**
Special tools	**A513**

Carbide and cermet inserts

Double sided, negative – Finishing

	CNEG-NF	CNMG-ADF	CNMG-DF	CNMG-EF	CNMG-SF	CNMG-XF	
	12	12	09 12	09 12	09 12	12	Edge length
	A52	A51	A51	A51	A51	A52	Page

	DNEG-NF	DNEG-NGF	DNMG-ADF	DNMG-DF	DNMG-EF	DNMG-FM	DNMG-SF	DNMG-XF	
	15	15	15	11 15	11 15	15	11 15	11 15	Edge length
	A66	A66	A62	A62	A66	A66	A62	A63	Page

	SNMG-ADF	SNMG-DF	SNMG-EF	SNMG-SF	SNMG-XF	
	12	12	09 12 15	09 12	12	Edge length
	A71	A71	A72	A71	A73	Page

	TNMG-ADF	TNMG-DF	TNMG-EF	TNMG-FM	TNMG-SF	
	16	16 22	11 16 22	16	16	Edge length
	A87	A87	A89	A90	A88	Page

	VNEG-NF	VNEG-NGF	VNMG-ADF	VNMG-DF	VNMG-EF	VNMG-SF	VNMG-XF	
	16	16	16	16	16	16	16	Edge length
	A100	A101	A100	A100	A100	A101	A102	Page

	WNEG-NF	WNMG-ADF	WNMG-DF	WNMG-EF	WNMG-NF	WNMG-SF	WNMG-XF	
	08	08	06 08	06 08	06	06 08	06 08	Edge length
	A106	A105	A105	A106	A106	A105	A107	Page

Double sided, negative, Wiper – Finishing

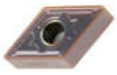
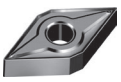
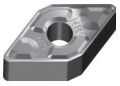
	CNMG-WG	DNMX-WG	TNMX-WG	WNMG-WG	
	12	11 15	16	08	Edge length
	A51	A62	A87	A106	Page

Carbide and cermet inserts

Double sided, negative – Medium machining

					
CNMG	**CNMG-DM**	**CNMG-EG**	**CNMG-EM**	**CNMG-NM**	
12 16 19	09 12 16 19	12	12 16	12	Edge length
A61	A54	A54	A54	A56	Page

					
CNMG-PM	**CNMG-TC**	**CNMG-TK**	**CNMG-XM**	**CNMG-ZM**	
09 12 16 19	12 16	12	12 16 19	12	Edge length
A53	A56	A56	A53	A55	Page

					
DNMG-DM	**DNMG-EG**	**DNMG-EM**	**DNMG-NM**		
11 15	15	11 15	15		Edge length
A64	A67	A67	A67		Page

					
DNMG-PM	**DNMG-TC**	**DNMG-TK**	**DNMG-XM**	**DNMG-ZM**	
11 15	15	15	11 15	15	Edge length
A64	A67	A68	A63	A65	Page

					
SNMG	**SNMG-DM**	**SNMG-EG**	**SNMG-EM**	**SNMG-NM**	
12 25	09 12 15 19	12	12 15	12	Edge length
A83	A75	A75	A76	A77	Page

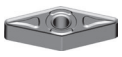
					
SNMG-PM	**SNMG-TC**	**SNMG-TK**	**SNMG-XM**		
09 12 15 19	12 15	12	12 15 19		Edge length
A74	A76	A76	A73		Page

								
TNMG	**TNMG-DM**	**TNMG-EG**	**TNMG-EM**	**TNMG-PM**	**TNMG-TC**	**TNMG-XM**	**TNMG-ZM**	
16 22 27 33	11 16 22	16	16 22	11 16 22	16 22	16 22	16	Edge length
A98	A91	A93	A93	A91	A93	A90	A92	Page

Carbide and cermet inserts

Double sided, negative – Medium machining



VNMG	VNMG-DM	VNMG-EM	VNMG-NM	
16	16	16	16	Edge length
A103	A103	A103	A103	Page







VNMG-PM	VNMG-SNR	VNMG-TC	VNMG-XM	VNMG-ZM	
16	16	16	16	16	Edge length
A104	A104	A104	A102	A104	Page






WNMG-DM	WNMG-EG	WNMG-EM	WNMG-NM	
06 08	08	06 08	08	Edge length
A108	A108	A108	A110	Page







WNMG-PM	WNMG-TC	WNMG-TK	WNMG-XM	WNMG-ZM	
06 08	08	08	06 08	08	Edge length
A109	A110	A110	A107	A109	Page



RNMG	
12	Edge length
A112	Page

Double sided, negative – Medium machining to roughing








CNMA	DNMA	SNMA	SNUN	TNMA	WNMA	
12 16 19	15	12 15 19	12 19	16 22	06 08	Edge length
A61	A69	A84	A86	A99	A111	Page

Double sided, negative – Roughing








CNMG-DR	CNMG-ER	CNMG-SNR	DNMG-DR	DNMG-ER	DNMG-SNR	
12 16 19 25	12 16 19	12 16 19	15	15	15	Edge length
A57	A58	A57	A68	A69	A68	Page

Carbide and cermet inserts

Double sided, negative – Roughing



SNMG-DR	SNMG-ER	SNMG-SNR	TNMG-DR	TNMG-ER	TNMG-SNR	
12 15 19 25	12 15 19	12	16 22 27	16 22	16	Edge length
A77	A78	A78	A94	A95	A92	Page



WNMG-DR	WNMG-SNR	
06 08	08	Edge length
A111	A109	Page

Single sided, negative – Roughing



CNMM	CNMM-DR	CNMM-ER	CNMM-HDR	CNMM-HPR	CNMM-LR	
12 19	12 16 19 25	25	12 16 19 25	19 25	12 16 19 25	Edge length
A60	A58	A58	A60	A60	A59	Page



DNMM-DR	DNMM-ER	DNMM-HDR	DNMM-LR			
15	15	15	15			Edge length
A70	A70	A70	A70			Page



SNMM	SNMM-DR	SNMM-ER	SNMM-HDR	SNMM-HPR	SNMM-LR	
19 25	15 19 25	25	12 15 19 25	19 25	12 15 19 25	Edge length
A85	A79	A79	A81	A82	A80	Page



TNMM	TNMM-DR	TNMM-HDR	TNMM-LR			
16 22 27	16 22 27	22 27	16			Edge length
A99	A95	A97	A95			Page

Special form – Finishing



CNMG-RF	CNMM-RF	CNMM-RH	KNUX	LNUX-RF	LNUX-RH	
19	19	19	16	19 30	19 30	Edge length
A114	A114	A114	A113	A115	A115	Page

Carbide and cermet inserts

Positive – Fine-finishing



CCGT-SF	CCGT-USF	CPGT-SF	DCGT-SF	DPGT-SF	
06 09	06 09	06 09	07 11	07 11	Edge length
A116	A116	A124	A125	A131	Page



TBGH	TCGT-SF	TPGH	TPGT-SF	
06	06 09 11	09 11	09 11	Edge length
A139	A140	A146	A147	Page



VBGT-SF	VCGT-SF	
11	11 16	Edge length
A150	A153	Page

Positive – Finishing



CCMT-AHF	CCMT-EF	CCMT-HF	CCMT-XF	CPMT-HF	
06 09 12	06 09 12	06 09 12	06 09	06	Edge length
A117	A118	A117	A118	A124	Page



DCMT-AHF	DCMT-EF	DCMT-HF	DCMT-XF	SCMT-AHF	SCMT-EF	SCMT-HF	SCMT-XF	
07 11	07 11	07 11	07 11	09	09	09	09	Edge length
A125	A126	A126	A126	A134	A134	A135	A134	Page



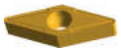
TCMT-AHF	TCMT-EF	TCMT-HF	TCMT-XF	
11 16	09 11 16	09 11 16	09 11 16	Edge length
A141	A142	A141	A141	Page



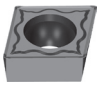
VBET-NF	VBET-NGF	VBMT-AHF	VBMT-EF	VBMT-HF	VBMT-XF	
16	16	16	11 16	11	11 16	Edge length
A149	A151	A148	A148	A149	A148	Page

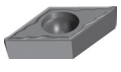
Carbide and cermet inserts

Positive – Finishing

						
VCGT	**VCGT-HF**	**VCGT-NF**	**VCMT-EF**	**VCMT-XF**		
13	11	16	16	11 16		Edge length
A153	A153	A153	A156	A156		Page

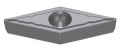
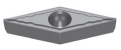
Positive – Medium machining

						
CCMT-EM	**CCMT-HM**	**CCMT-XM**	**CCMW**	**CPGW**	**CPMT-HM**	
06 09 12	06 09 12	09 12	09 12	06	09	Edge length
A119	A120	A119	A121	A124	A124	Page

					
DCMT-EM	**DCMT-HM**	**DCMT-XM**	**DCMW**		
07 11	07 11	11	11		Edge length
A127	A128	A127	A129		Page

					
SCMT-EM	**SCMT-HM**	**SPMW**	**SCMT-XM**		
09 12	09 12	09 12	09 12		Edge length
A134	A135	A138	A135		Page

					
TCMT	**TCMT-EM**	**TCMT-HM**	**TCMW**	**TCMT-XM**	
22	09 11 16	09 11 16	16	16	Edge length
A144	A142	A143	A143	A142	Page

					
VBMT-EM	**VBMT-HM**	**VBMT-XM**	**VCMT-EM**	**VCMT-XM**	
11 16	16	16	16	16	Edge length
A151	A151	A151	A156	A156	Page

Positive – Roughing

								
CCMT-HR	**CCMT-TC**	**DCMT-HR**	**RCMT · RCGT**	**RCMX**	**RCMX-PV**	**SCMT-HR**	**TCMT-HR**	
06 09 12	06 09 12	11	08 10 12 16 20 25	08 10 12 16 20 25 32	32	09 12	09 11 16 22	Edge length
A121	A121	A129	A132	A133	A133	A136	A143	Page

Carbide and cermet inserts

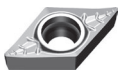
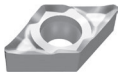
Positive – Roughing




VBMT-HR	VBMT-SNR	
16	16	Edge length
A152	A152	Page

Positive – Aluminium machining




CCGX-LC	CCGX-LH	DCGX-LC	DCGX-LH	RCGX-LH	
06 09 12	06 09 12	07 11	07 11	08 12	Edge length
A122	A122	A129	A130	A132	Page





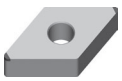



SCGX-LC	SCGX-LH	TCGX-LC	TCGX-LH	VCGX-LC	VCGX-LH	
09 12	09 12	09 11 16	09 11 16	11 16 22	11 16 22	Edge length
A136	A137	A145	A145	A154	A155	Page

PCBN & PCD

Negative







CNGA-2	CNGA-2W	DNGA-2	SNGA-4	TNGA-3	
12	12	15	12	16	Edge length
A160	A160	A161	A162	A163	Page





VNGA-2	WNGA-3	ZNEX	
16	08	04	Edge length
A164	A165	A166	Page





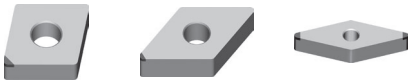




CNGN	CNGN-M	RNGN	SNGN	SNGN-M	WNGN	WNGN-M	
09 12	12	09 12	12	12	08	08	Edge length
A173	A173	A174	A175	A175	A176	A176	Page

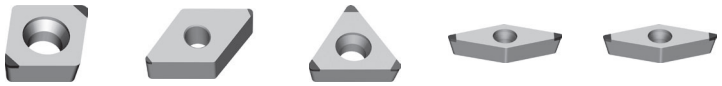
PCBN & PCD

Negative



CNGA	DNGA	VNGA	
12	15	16	Edge length
A177	A178	A179	Page

Positive



CCGW-2	DCGW-2	TCGW-3	VBGW-2	VCGW-2	
06 09 12	07 11	11 16	16	11 16	Edge length
A167	A169	A170	A171	A172	Page



CCGT	CCGT-1MED	CCGT-L	CCGW	CCGW-L	
06 09 12	06 09	09 12	06 09 12	06 09 12	Edge length
A180	A180	A181	A182	A183	Page



DCGT	DCGT-1MED	DCGW	
07 11	07 11	07 11	Edge length
A184	A185	A186	Page



TCGT	TCGT-1MED	TCGT-L	TCGW	TCGW-L	
11 16	11 16	11 16	11 16	11 16	Edge length
A187	A187	A188	A189	A190	Page



VBGT	VBGT-1MED	VBGW	VCGT	VCGT-1MED	VCGW	
11 16	16	11 16	11 16	11 16	11 16 22	Edge length
A191	A191	A192	A193	A194	A195	Page

Ceramic inserts

Negative



CNGA	CNGN	CNGX	DNGA	DNGN	DNGX	
12 16	12 16	12	15	15	15	Edge length
A200	A201	A203	A204	A205	A206	Page

Ceramic inserts

Negative



RNGA	RNGN	SNGA	SNGN	SNGX	TNGA	TNGN	
12	06 09 12 15 19 25	12	12 15 19	12	16 22	16 22	Edge length
A207	A208	A210	A211	A213	A214	A215	Page



VNGA	WNGA		
16	08		Edge length
A216	A217		Page

Positive



RCGX	RPGN	RPGX	TPGN	
06 09 12 19	12	09	11 16	Edge length
A218	A219	A220	A221	Page

External tool holders

Holder with double clamping

							
DCLNR/L	**DDJNR/L**	**DSBNR/L**	**DTGNR/L**	**DVJNR/L**	**DVVNN**	**DWLNR/L**	
95°	93°	75°	90°	93°	72.5°	95°	Angle
A230	A231	A232	A233	A235	A234	A236	Page

Holder with knee lever clamping

								
PCBNR/L	**PCLNR/L**	**PDJNR/L**	**PDNNR/L**	**PSBNR/L**	**PSDNN**	**PSKNR/L**	**PSSNR/L**	
75°	95°	93°	63°	75°	45°	75°	45°	Angle
A237	A238	A240	A241	A242	A244	A245	A246	Page

				
PTFNR/L	**PTGNR/L**	**PTTNR/L**	**PWLNR/L**	
91°	90°	60°	95°	Angle
A247	A249	A248	A251	Page

Holder with multi clamping

								
MCBNR/L	**MCLNR/L**	**MDJNR/L**	**MDPNN**	**MRDNN**	**MRGNR/L**	**MSBNR/L**	**MSDNN**	
75°	95°	93°	62.5°	45°	90°	75°	45°	Angle
A252	A253	A254	A255	A267	A268	A256	A259	Page

								
MSKNR/L	**MSRNR/L**	**MTFNR/L**	**MTGNR/L**	**MTJNR/L**	**MTJNR/L-Z**	**MVJNR/L**	**MVVNN**	
75°	75°	90°	90°	93°	93°	93°	72.5°	Angle
A258	A257	A263	A260	A261	A262	A265	A264	Page


MWLNR/L
95°
A266

External tool holders

Holder with screw clamping



SCACR/L	SCLCR/L	SDACR/L	SDJCR/L	SDNCN	SRDCN	SRGCR/L	SSBCR/L	
90°	95°	90°	93°	63°	45°	90°	75°	Angle
A269	A270	A271	A272	A273	A288	A289	A279	Page



SSDCN	SSKCR/L	SSSCR/L	STACR/L	STFCR/L	STGCR/L	STTCR/L	SVABR/L	
45°	75°	45°	90°	90°	90°	60°	90°	Angle
A280	A281	A282	A283	A284	A285	A286	A275	Page



SVJBR/L	SVJCR/L	SVVBN	SVVCN	SWACR/L				
93°	93°	72.5°	72.5°	90°				Angle
A274	A278	A276	A277	A287				Page

Holder with top clamping



CKJNR/L	CKNNR/L							
93°	63°							Angle
A290	A291							Page

Tool holder for ceramic inserts and solid CBN inserts



CCLNR/L	CDJNR/L	CRDNN	CSDNN	CSKNR/L	CSRNR/L	CTJNR/L	CTUNR/L	
95°	93°	45°	45°	75°	75°	93°	93°	Angle
A292	A294	A298	A299	A296	A297	A293	A295	Page



JCLNR/L	JDJNR/L	JSDNN						
95°	93°	45°						Angle
A300	A301	A302						Page

External tool holders

Swiss turning

								
SCACR/L-SC	**SCLCR/L-SC**	**SDACR/L-SC**	**SDHCR/L-SC**	**SDJCR/L-SC**	**SDNCN-SC**	**SVACR/L-SC**	**SVJCR/L-SC**	
90°	95°	90°	107.5°	93°	63°	90°	93°	Angle
A306	A307	A308	A309	A310	A311	A312	A313	Page

Rail applications

			
RW-PCLNR/L	**RW-PLANR/L**	**RW-PLFNR/L**	
90°	90°	90°	Angle
A318	A316	A317	Page

Boring bars

Steel boring bars with knee lever clamping –

					
A*-PCLNR/L**	**A***-PDSNR/L**	**A***-PDUNR/L**	**A***-PSKNR/L**	**A***-PTFNR/L**	
95°	45°	93°	75°	90°	Angle
A324	A326	A327	A329	A330	Page

						
S*-PCLNR/L**	**S***-PDSNR/L**	**S***-PDUNR/L**	**S***-PSKNR/L**	**S***-PTFNR/L**	**S***-PWLNR/L**	
95°	45°	93°	75°	90°	95°	Angle
A324	A326	A327	A329	A330	A332	Page

Steel boring bars with screw clamping –

				
A*-SCLCR/L**	**A***-SDQCR/L**	**A***-SDUCR/L**	**A***-SDZCR/L**	
95°	107.5°	93°	95°	Angle
A334	A336	A337	A338	Page

								
S*-SCFCR/L**	**S***-SCLCR/L**	**S***-SCLPR/L**	**S***-SDQCR/L**	**S***-SDQPR/L**	**S***-SDUCR/L**	**S***-SDUPR/L**	**S***-SDZCR/L**	
90°	95°	95°	107.5°	107.5°	93°	93°	95°	Angle
A352	A334	A348	A336	A349	A337	A350	A338	Page

Boring bars

Steel boring bars with screw clamping –






A***-SSKCR/L	A***-STFCR/L	A***-SVQBR/L	A***-SVUBR/L	
75°	90°	107.5°	93°	Angle
A339	A341	A345	A346	Page









S***-SSKCR/L	S***-STFCR/L	S***-STUPR/L	S***-SVQBR/L	S***-SVQCR/L	S***-SVUBR/L	S***-SVUCR/L	
75°	90°	93°	107.5°	107.5°	93°	93°	Angle
A339	A341	A351	A345	A343	A346	A344	Page

Solid carbide boring bars with screw clamping –









C***-SCLPR/L	C***-SDQPR/L	C***-SDUPR/L	C***-STUPR/L	C***-SVQCR/L	C***-SVUCR/L	C***-SZLNR/L	
A354	A356	A358	A360	A363	A364	A365	Page









E***-SCLCR/L	E***-SCLPR/L	E***-SDQCR/L	E***-SDUCR/L	E***-STFCR/L	E***-STFPR/L	E***-SVUCR/L	
95°	95°	107.5°	93°	90°	90°	93°	Angle
A355	A354	A357	A359	A361	A362	A364	Page

Notes

Negative inserts

Finishing

XF P





Double-sided chip breaker for finishing operations in the P application field. Superb chip control with low cutting forces.

RF P





Double-sided chip breaker for applications from finishing to medium machining.

SF P M K





Double sided chip breaker in combination with cermet grades. Geometry with high sharpness for improved chip control and great surface quality. Ideal for machining with small cutting depths and feed rates.

DF P K





Double sided chip breaker with good chip control. Suitable for finishing and medium machining of steel and cast iron.

ADF P M





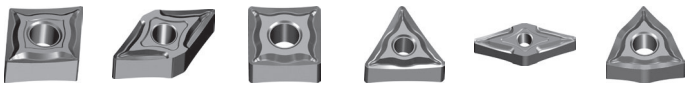
Ground, double sided chip breaker with good chip control. Wide range of application due to excellent balance of sharpness and cutting edge stability.

Negative inserts

Finishing

EF M S

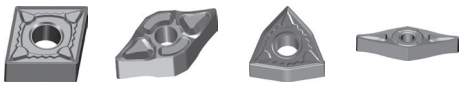




Double sided chip breaker with sharp cutting edge and large rake angle for finishing of stainless steel.

NF S M

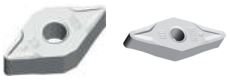




Double sided chip breaker with ground cutting edge and large rake angle for finishing. E-tolerance for high repeatability.

NGF S M





Double sided chip breaker with ground cutting edge and large rake angle for finishing. E-tolerance for high repeatability.

Wiper

WG P M K





Double sided chip breaker with wiper geometry. Allows to double the feed rate and improves the surface quality.

Medium machining

XM P





Double-sided chip breaker for medium machining operations in the P application field. Superb chip control at high and low feed rates.

Negative inserts

Medium machining

DM P K





Double sided chip breaker for medium machining. Wide range of application due to excellent balance of sharpness and cutting edge stability.

ZM P





Double sided chip breaker for medium machining. Wide range of application due to stable cutting edge and large rake angle. Very suitable for machining of steel.

PM P K





Double sided chip breaker for medium machining. Wide range of application in steel and cast iron.

TC K P





Double sided chip breaker with surrounding cutting edge. Process reliable machining due to highest cutting edge stability.

TK K





Double-sided chip breaker for medium machining operations in the K application field. Optimum combination of impact resistance and cutting edge sharpness.

Negative inserts

Medium machining

NM S M





Double sided chip breaker with ground cutting edge and large rake angle for medium machining of heat-resistant materials.

EM M S





Double sided chip breaker with sharp cutting edge and large rake angle. Process reliable medium machining of stainless steel.

EG M S





Double sided chip breaker with grinded cutting edge and large rake angle. Wide range of application for medium machining of stainless steel.

Basic P K





Double sided chip breaker with surrounding cutting edge for universal machining of steel and cast iron.

Roughing

DR double sided P K





Double sided chip breaker with positive rake angle and stable cutting edge for light to medium roughing of steel and cast iron.

Negative inserts

Roughing

DR single sided **P** **K**





Single sided chipbreaker with positive rake angle and stable cutting edge for light to medium roughing of steel and cast iron.

RH **P**

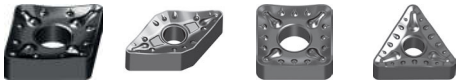




Double-sided chip breaker for applications from medium machining to roughing.

LR **P** **M**





Single sided chip breaker with curved cutting edge and unique bumpy geometry. Low cutting pressure for process reliable machining. Light roughing of steel and stainless steel.

ER double sided **M** **S**





Double sided chip breaker with large rake angle for low cutting forces. Suitable for roughing of stainless steel.

ER single sided **M** **S**





Single sided chip breaker with large rake angle for low cutting forces. Suitable for roughing of stainless steel.

Negative inserts

Roughing

HDR P K





Single sided chip breaker with high cutting edge stability and deformation resistance. Excellent for roughing with high cutting depths in steel and stainless steel.

HPR P K





Single sided chip breaker with high cutting edge stability and large chip space. Excellent for heavy roughing in steel and cast iron.

Flat K





Double sided insert without chip breaker. Stable cutting edge design, due to missing microgeometry. Excellent for roughing in cast iron.

SNR M S N





Double sided chip breaker for roughing. Wide range of application due to excellent balance of sharpness and cutting edge stability.

PCBN & PCD inserts

Flat N H





With brazed CBN or PCD cutting edge. For machining of hardened steel (CBN) or non-ferrous metals (PCD).

Negative inserts

PCBN & PCD inserts

Flat H K





Solid CBN insert for machining od steel and cast iron.

Ceramic inserts

Flat K H





Ceramic inserts for machining of low hardened steel and cast iron.

Positive inserts

Fine-finishing

USF P M

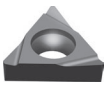




Single sided chip breaker for fine finishing. Sharp cutting edge with large hollow flute, excellently suitable for machining small work pieces. G-tolerance for high repeatability.

R/L P M

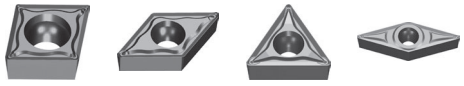




Single sided chip breaker for fine finishing. Excellent for high surface quality. G-tolerance for high repeatability.

SF P M





Single sided chip breaker in combination with cermet grades. Geometry with high sharpness for improved chip control and great surface quality. Ideal for machining with small cutting depths and feed rates.

Positive inserts

Finishing

XF P




Single-sided chip breaker for finishing operations in the P application field. Superb chip control with low cutting forces.

HF P K




Single sided chip breaker with good chip control. Suitable for finishing to medium machining of steel and cast iron.

AHF M S P




Ground, single sided chip breaker with good chip control. Wide range of application due to excellent balance of sharpness and cutting edge stability.

EF M S




Single sided chip breaker with sharp cutting edge and large rake angle for finishing of stainless steel.

NF M S




Single sided chip breaker with ground cutting edge and large rake angle for finishing. E-tolerance for high repeatability.

Positive inserts

Finishing

NGF M S




Single sided chip breaker with ground cutting edge and large rake angle for finishing. E-tolerance for high repeatability.

Medium machining

XM P




Single-sided chip breaker for medium machining operations in the P application field. Superb chip control at high and low feed rates.

TC K P



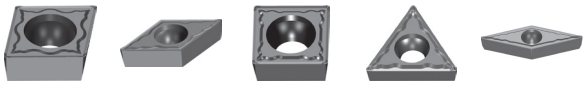

Single sided chip breaker with encircling cutting edge. Process reliable machining due to highest cutting edge stability.

HM P K




Single sided chip breaker for medium machining. Wide range of application due to excellent balance of sharpness and cutting edge stability.

EM M S

Single sided chip breaker with sharp cutting edge and large rake angle. Process reliable medium machining of stainless steel.

Positive inserts

Medium machining

Basic P K




Single sided chip breaker with encircling cutting edge for universal machining of steel and cast iron.

Roughing

Flat K




Single sided insert without chip breaker. Stable cutting edge design due to missing microgeometry. Excellent for roughing in cast iron.

HR P K




Single sided chip breaker with positive rake angle and stable cutting edge for light to medium roughing of steel and cast iron.

SNR S M




Single sided chip breaker for roughing. Wide range of application due to excellent balance of sharpness and cutting edge stability.

Basic P K




Single sided chip breaker with encircling cutting edge for universal machining of steel and cast iron.

Positive inserts

Aluminium machining

LC N





Single sided chip breaker with excellent cutting edge design. Sharp cutting edge with positive rake angle. G-tolerance for high repeatability.

LH N





Single sided chipbreaker for machining of cast aluminium alloys. Sharp cutting edge with positive rake angle. G-tolerance for high repeatability.

PCBN & PCD inserts

Flat N H





With brazed CBN or PCD cutting edge. For machining of hardened steel (CBN) or non-ferrous metals (PCD).

MED N



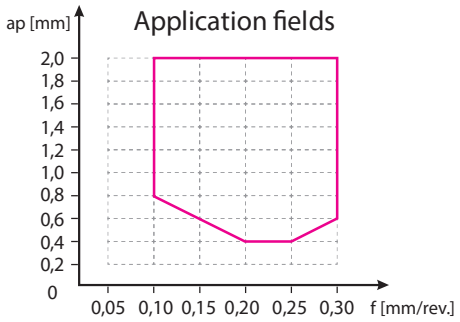


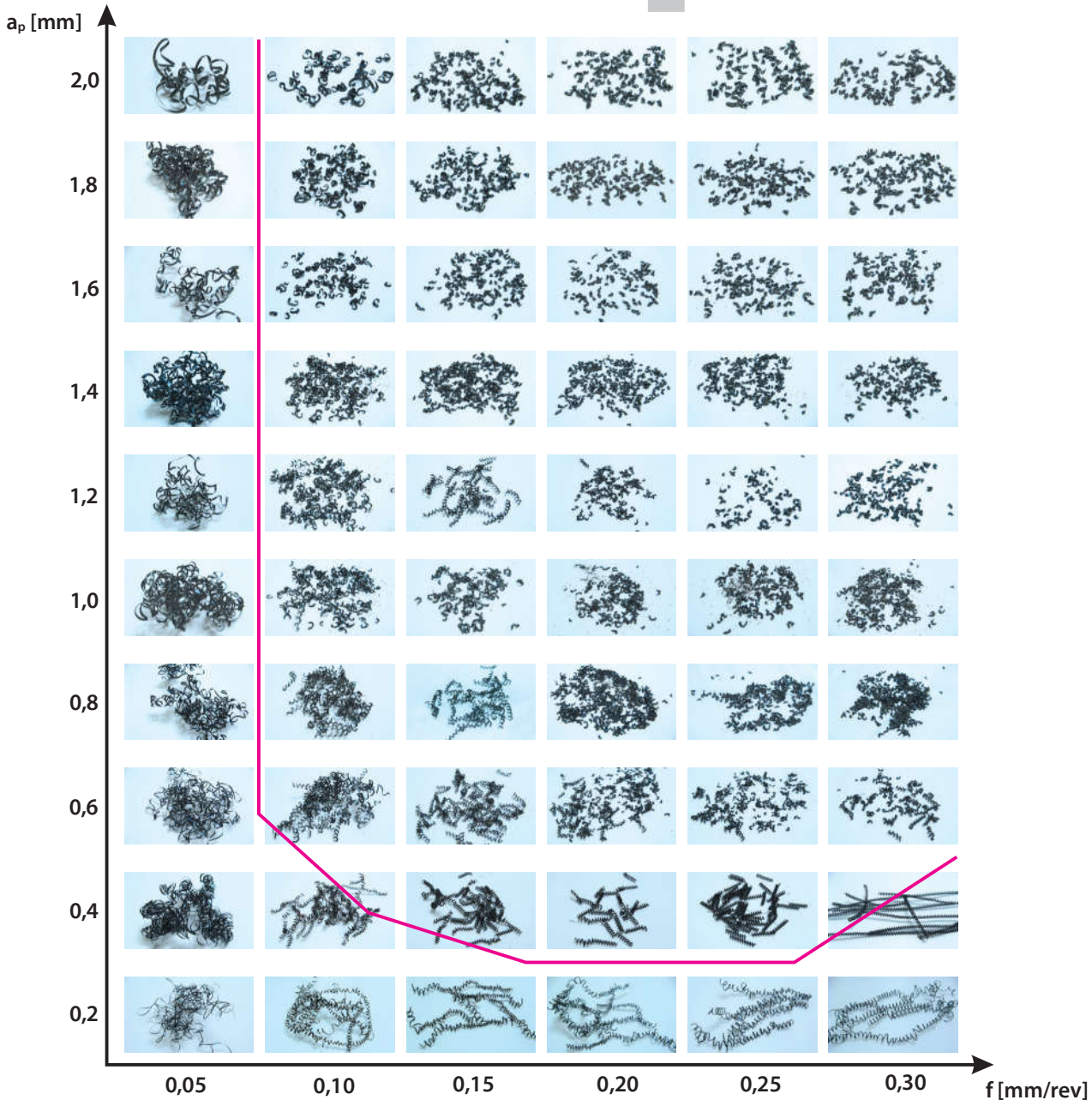
Laser-cut chip breaker for finishing and medium machining operations.

General turning

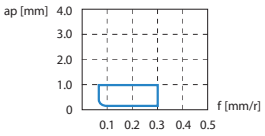
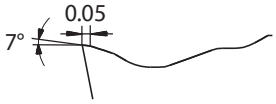
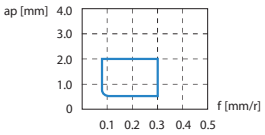
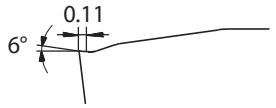
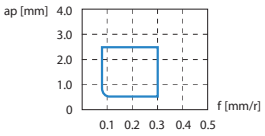
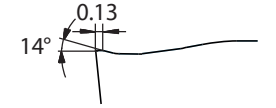
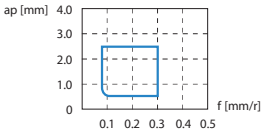
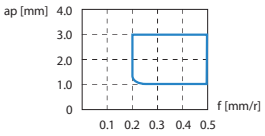
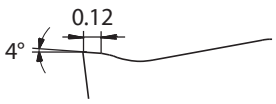
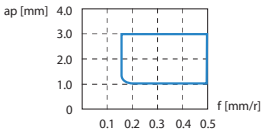
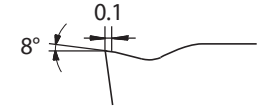
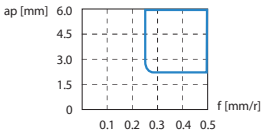
Application fields of chip breakers

Example
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Holder: PCLNL2525M12
Material: C45 steel
V_C : 200 m/min

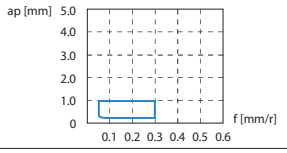
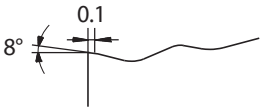
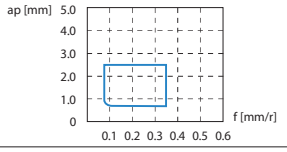
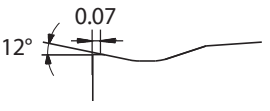
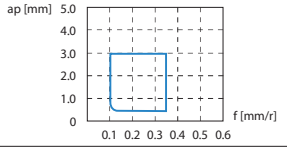
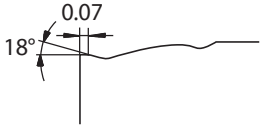
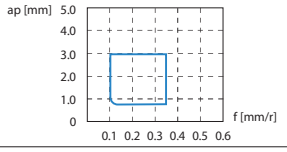
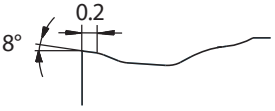
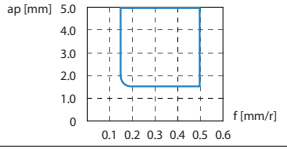
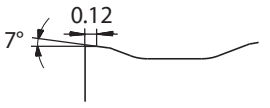
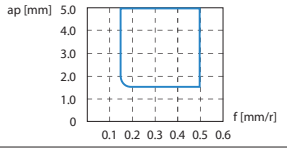
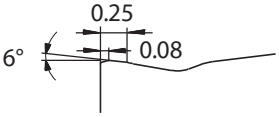
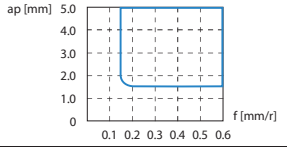
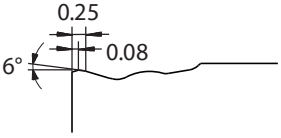
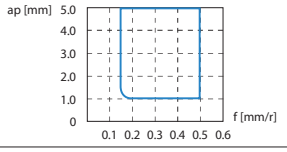
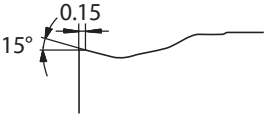
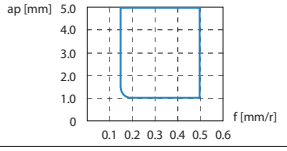
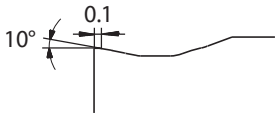
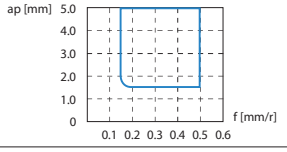
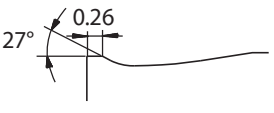
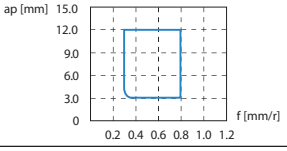
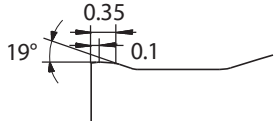




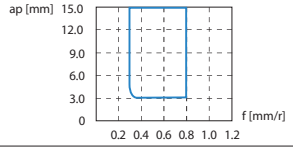
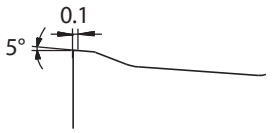
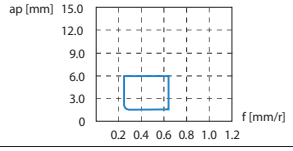
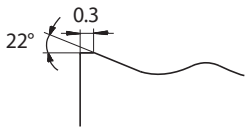
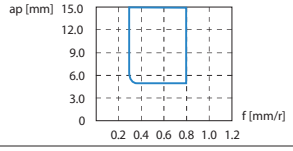
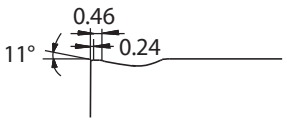
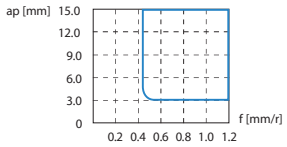
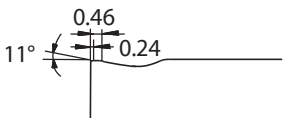
P Positive inserts

Chip breaker	Application		Application fields	Cutting edge design
SF	Fine-finishing			
HF	Finishing			
AHF	Finishing			
XF	Finishing			
HM	Medium machining			
XM	Medium machining			
HR	Roughing			

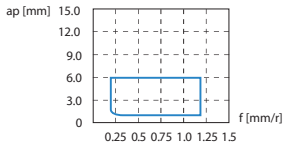
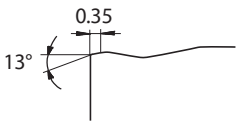
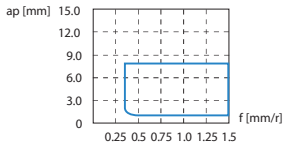
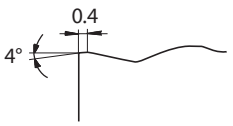
P Negative inserts

Chip breaker	Application		Application fields	Cutting edge design
SF	Fine-finishing			
DF	Finishing			
XF	Finishing			
ADF	Finishing			
DM	Medium machining			
PM	Medium machining			
ZM	Medium machining			
XM	Medium machining			
WG	Medium machining			
Basic	Medium machining			
DR	Roughing			

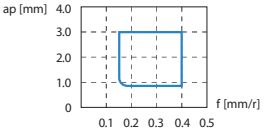
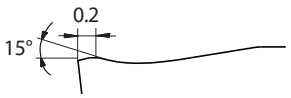
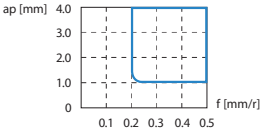
P Negative inserts

Chip breaker	Application		Application fields	Cutting edge design
DR (single sided)	Roughing			
LR (single sided)	Roughing			
HDR (single sided)	Roughing			
HPR (single sided)	Roughing			

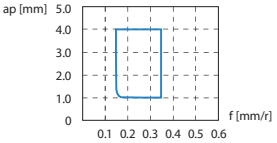
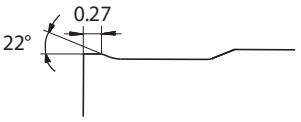
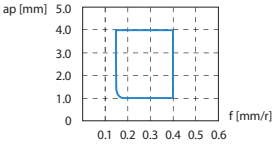
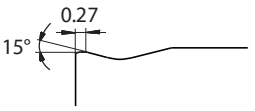
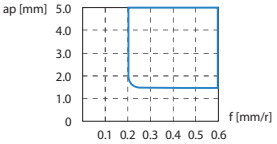
P Negative inserts (rail technology)

Chip breaker	Application		Application fields	Cutting edge design
RF	Finishing			
RH	Roughing			

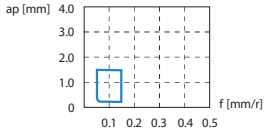
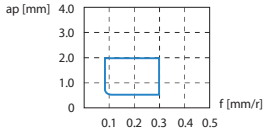
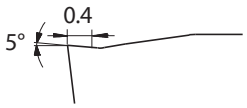
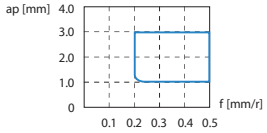
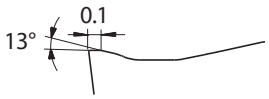
K Positive inserts

Chip breaker	Application		Application fields	Cutting edge design
TC	Medium machining			
Flat	Roughing			

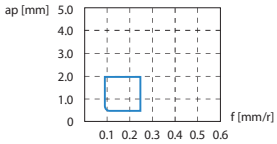
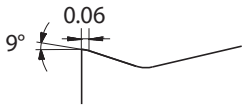
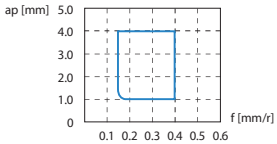
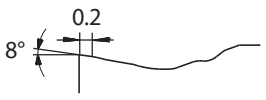
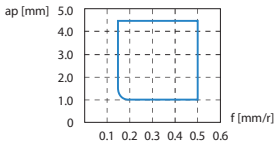
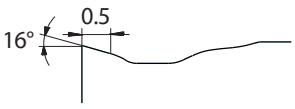
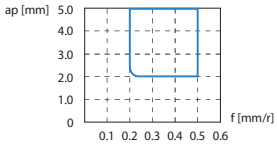
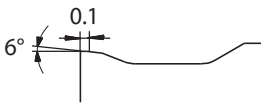
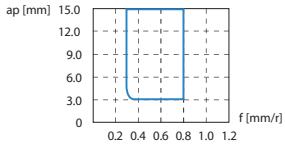
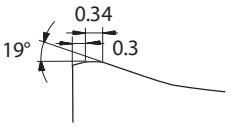
K Negative inserts

Chip breaker	Application		Application fields	Cutting edge design
TK	Medium machining			
TC	Medium machining			
Flat	Roughing			

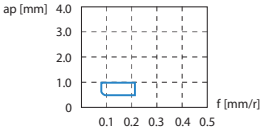
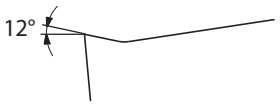
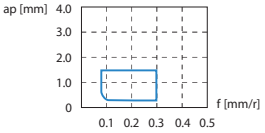
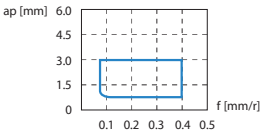
M Positive inserts

Chip breaker	Application		Application fields	Cutting edge design
USF	Fine-finishing	●		
EF	Finishing	● ✱		
EM	Medium machining	● ✱ ✱		

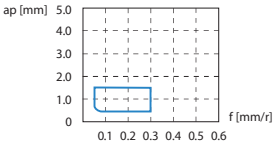
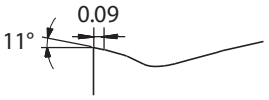
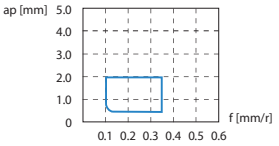
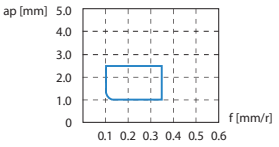
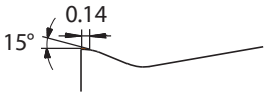
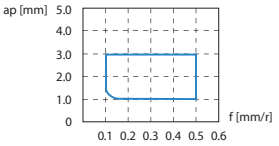
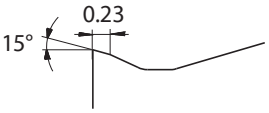
M Negative inserts

Chip breaker	Application		Application fields	Cutting edge design
EF	Finishing	●		
EM	Medium machining	● ✱		
EG	Medium machining	● ✱		
ER	Roughing	● ✱ ✱		
ER (single sided)	Roughing	● ✱ ✱		

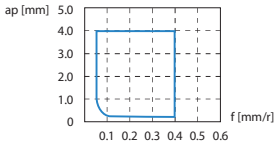
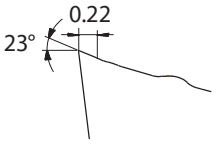
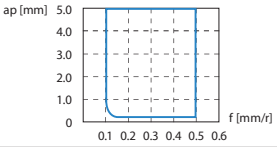
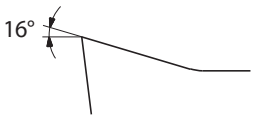
S Positive inserts

Chip breaker	Application		Application fields	Cutting edge design
NF	Finishing			
NGF	Finishing			
SNR	Roughing			

S Negative inserts

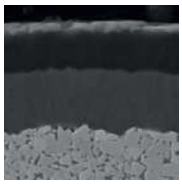
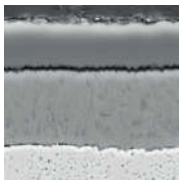
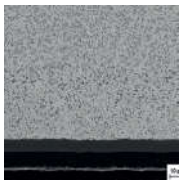
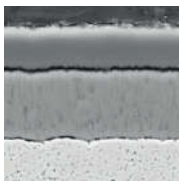
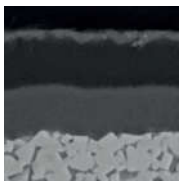
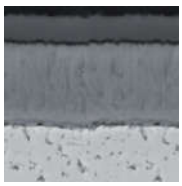
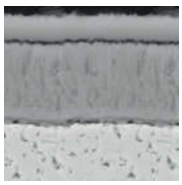
Chip breaker	Application		Application fields	Cutting edge design
NF	Finishing			
NGF	Medium machining			
NM	Medium machining			
SNR	Roughing			

N Positive inserts

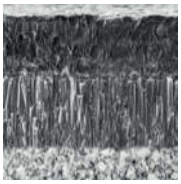
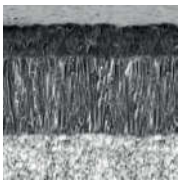
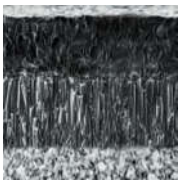
Chip breaker	Application		Application fields	Cutting edge design
LC	Finishing	●		
LH	Finishing	●		

Notes

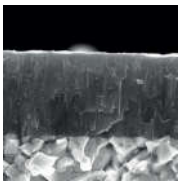
Coated cemented carbide CVD

Grade	ISO	Micro structure	Grade description
YBC103	P05 – P15		P10 grade with excellent wear resistance at higher cutting speeds. Latest sinter processes and CVD coating technologies enable a wide range of applications in the P material range.
YB6315	P05 – P20		CVD coated P10–P20 carbide grade for finishing to medium operation of steel, casting steel and high chrome material. Outstanding performance under high cutting speed and temperature with excellent wear resistance.
YBC152	P10 – P20		CVD coated P10–P20 carbide grade for finishing to medium operation of steel and casting steel. Outstanding performance under higher cutting speed and temperature with excellent wear resistance.
YBC203	P15 – P25		P20 grade with exceptional wear resistance and toughness for reliable machining operations. Ultra-modern sintering technique and CVD coating technologies allow for a wide range of applications in the P material range.
YBC252	P20 - P35		CVD coated P20–P35 carbide grade for medium operation to roughing of steel and casting steel. Optimal performance of wear resistance and toughness for a wide application field.
YBC352	P20 - P40		CVD coated P20–P40 carbide grade for roughing operation of steel and casting steel. Optimal performance of wear resistance and toughness for a wide application field.
YBM153	M10 - M25		CVD coated M10–M25 carbide grade for finishing to medium application in stainless steel. High wear resistance and capability against plastic deformation at higher cutting speed.
YBM253	M15 - M35		CVD coated M15–M35 carbide grade for medium to roughing operation in stainless steel with wide application field. High wear resistance and capability against plasctic deformation at higher cutting speed.

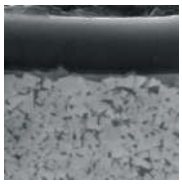
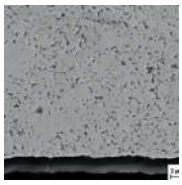
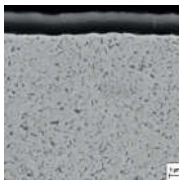
Coated cemented carbide CVD

Grade	ISO	Micro structure	Grade description
YBD102	K05 - K20		CVD coated K05–K20 carbide substrate. Optimized for medium operation of cast iron, special nodular cast iron and hard steel at high cutting speed.
YB7315	K10 - K25		CVD coated K10–K25 carbide substrate. Optimized for medium to roughing operation of cast iron. Improved wear resistance and toughness at high cutting speed.
YBD152	K10 - K25		CVD coated K10–K25 carbide substrate. Optimized for medium to roughing operation of cast iron. Good wear resistance and toughness at higher cutting speed.
YBD152C	K10 - K25		Thick Al2O3 CVD coated K05–K25 carbide substrate. Optimized for medium to roughing operation of cast iron. Higher wear resistance and toughness at higher cutting speed in combination with TC chip breaker.

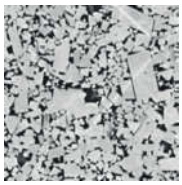
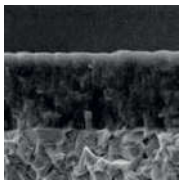
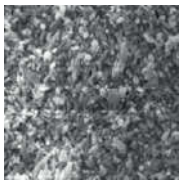
Coated cemented carbide PVD

Grade	ISO	Micro structure	Grade description
YBG101	N05 - N20		PVD coated N05–N20 carbide substrate for finishing to semi-finishing in aluminium materials. Coating only on the top face, in combination with the aluminium chip breakers, prevents built-up edges and gives a smooth cut.
YBG102	S05 - S15		PVD coated S05–S15 carbide substrate for finishing to medium application of super alloy material, stainless steel and aluminum. Good wear resistance in a wide application field.
YBG105	S05 - S20		PVD multilayer coated S05–S20 carbide substrate for finishing to medium application of super alloy material but also stainless steel. Good wear resistance and thermal stability in a wide application field.

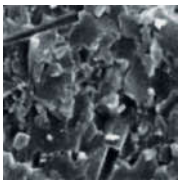
Coated cemented carbide PVD

Grade	ISO	Micro structure	Grade description
YBG205	P10 - P30 M20 - M40 S15-S25		PVD multilayer coated P10–P30/M20–M40/S15–S25 carbide substrate for finishing to medium machining of stainless steel, super alloys and steel (milling). Excellent wear resistance and thermal stability in a wide range of applications.
YB9320	P10 - P30 M10 - M25		PVD multilayer coated P10–P30/M10–M25 carbide substrate for finishing to medium machining of stainless steel, super alloys and steel (grooving/milling). Optimised coating stability for higher wear resistance and thermal stability in a wide range of applications.
YPD201	S20 – S30		Carbide grade for semi-roughing to chip breaking of high-strength and high-alloy materials. High-performance grade with high wear resistance. Balanced hardness and internal stress ratio provide a wide range of applications.
YBS103	S10 – S20		Turning grade for processing nickel-base materials. A special carbide substrate and the latest PVD coating technology enable a very good wear behaviour and high thermal stability.

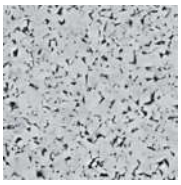
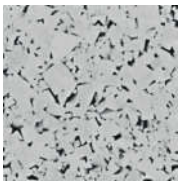
Ceramic

Grade	ISO	Micro structure	Grade description
CA1000	K10 - K25 H10 - H25		Uncoated H10–H25/K10–K25 mixed ceramic grade for finishing to medium operation in hardened steel and nodular cast iron. Good wear resistance and toughness.
CM1000	K10 - K25 H10 - H25		Coated H1–H25/K10–K25 mixed ceramic grade for finishing to medium operations in hardened steel, tool steel, HSS material and nodular cast iron. Good wear resistance and toughness.
CN1000	K05 - K15		Uncoated K05-K15 Si3N4 ceramic grade for finishing to medium operation in grey cast iron. Good wear resistance and thermal stability.

Ceramic

Grade	ISO	Micro structure	Grade description
CS1000	S05 – S20		Uncoated SiAlON ceramic grade for medium machining to roughing of nickel- and cobalt-based alloys at medium to low cutting speeds.
CW1400	S10 – S20 H10-H20		Uncoated whisker ceramic grade for medium and low speed cutting in HSS steel, high chrome steel and cobalt-base alloy also with interrupted cut. Good wear resistance, notch wear resistance and thermal stability.
CW1800	S10 – S25		Uncoated whisker ceramic grade for finishing to rough operations in Ni-base alloy material like Inconel, Nimonic or Hastelloy. Good wear resistance, notch wear resistance and thermal stability.

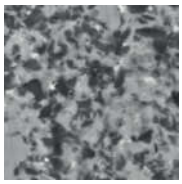
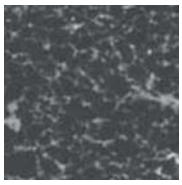
Uncoated cemented carbide

Grade	ISO	Micro structure	Grade description
YD101	N05 - N20 K05 - K20		Uncoated N05–N20/K05–K20 carbide substrate for fine to medium application in aluminum and other material.
YD201	N10 - N30 K10 - K30		Uncoated N10–N30/K10–K30 carbide substrate for medium application in aluminum and other material.

CBN

Grade	ISO	Micro structure	Grade description
YCB112	S10 – S20		Uncoated, brazed S10–S20 CBN grade for fine finishing operations on hardened steel and super alloys. Excellent wear resistance and thermal stability.

CBN

Grade	ISO	Micro structure	Grade description
YCB113	H01 - H10		Uncoated, brazed H01–H10 CBN grade for fine finishing operation in hardened steel with continuous cut. High wear resistance and productivity at higher cutting speed.
YCB121	H10 - H25		Uncoated, brazed H10–H25 CBN grade for fine to medium application in hardened steel from continuous to light interrupted cut. Good wear resistance and toughness for universal use.
YCB131	H20 - H35		Uncoated, brazed H20–H35 CBN grade for fine to medium application in hardened steel with interrupted cut. Good wear resistance and optimized toughness for safe process.
YCB113C	H01 - H10		Coated, brazed H01–H10 CBN grade for fine finishing operations on hardened steel with a continuous cut. High wear resistance and productivity at higher cutting speeds
YCB121C	H10 - H25		Coated, brazed H10–H25 CBN grade for fine to medium machining operations on hardened steel with a continuous to partially interrupted cut. Good wear resistance and toughness for universal application.
YCB131C	H20 - H25		Coated, brazed H20–H35 CBN grade for fine to medium machining operations on hardened steel with an interrupted cut. Good wear resistance and optimum toughness for reliable operations.
YCB215	K10 - K20		Uncoated, brazed K10 –K20 CBN grade for fine to medium machining operations on cast iron. Excellent wear resistance and thermal conductivity.
YZB630	H20 - H30		Uncoated H20–H30 solid CBN grade for medium machining operations on hardened steel with a slight to medium interrupted cut. Excellent combination of wear resistance and thermal stability.

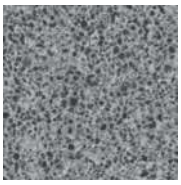
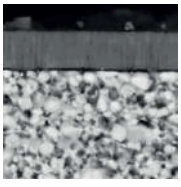
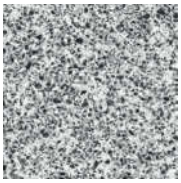
CBN

Grade	ISO	Micro structure	Grade description
YZB630C	H20 - H30		Coated H20–H30 solid CBN grade for medium machining operations on hardened steel with a slight to medium interrupted cut. Excellent combination of wear resistance and thermal stability.
YZB223	K10 - K25		Uncoated H10–H25/K10–K25 mixed ceramic grade for finishing to medium operation in hardened steel and nodular cast iron. Good wear resistance and toughness.

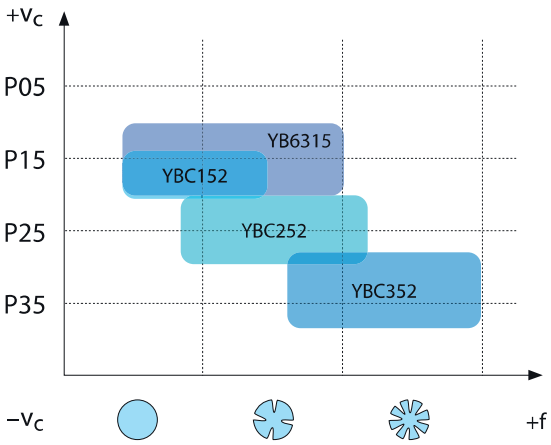
PCD

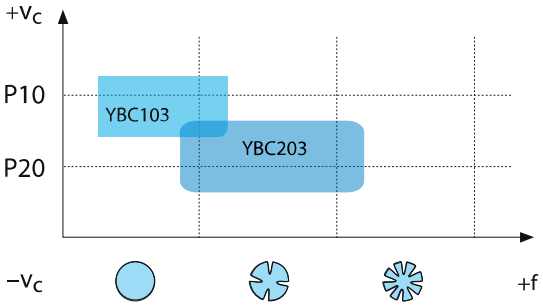
Grade	ISO	Micro structure	Grade description
YCD421	N01 - N10		Uncoated, brazed N01–N10 PCD grade for fine finishing operation of aluminum alloys less than 12 % Si, composites, copper/magnesium and other alloys. Medium grain size grade with good wear resistance for a wide application field.

Cermet

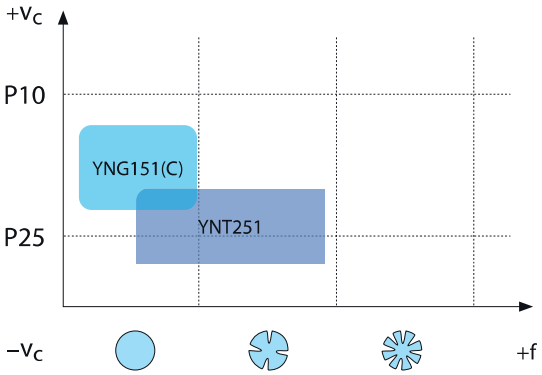
Grade	ISO	Micro structure	Grade description
YNG151	P05 – P15		Uncoated P05–P15 cermet grade for fine finishing operation of steel and stainless steel. Good resistance against plastic deformation for good surface finishing.
YNG151C	P05 – P15		PVD coated P05–P15 cermet grade for fine finishing operation of steel and stainless steel. Good wear resistance and capability against plastic deformation for good surface roughness.
YNT251	P10 - P25		Uncoated P10–P25 cermet grade for fine finishing to medium operation of steel and stainless steel. Good wear resistance and toughness. Suitable also in light interrupted cut.

CVD coated carbide grades for steel

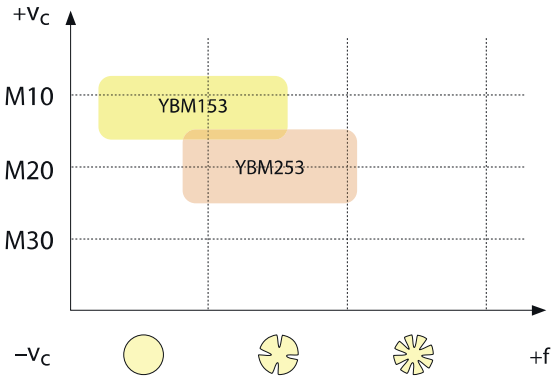




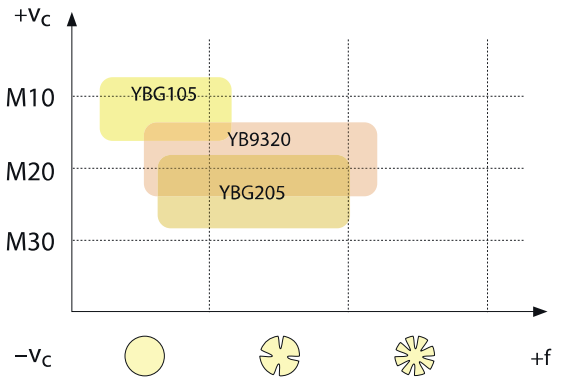
Cermet grades for steel



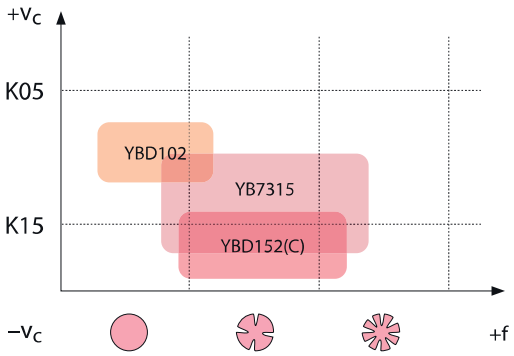
CVD coated carbide grades for stainless steel



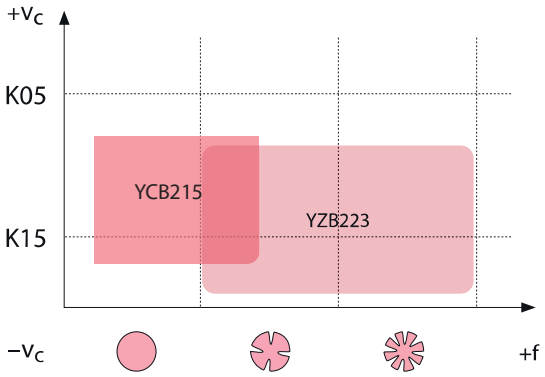
PVD coated carbide grades for stainless steel



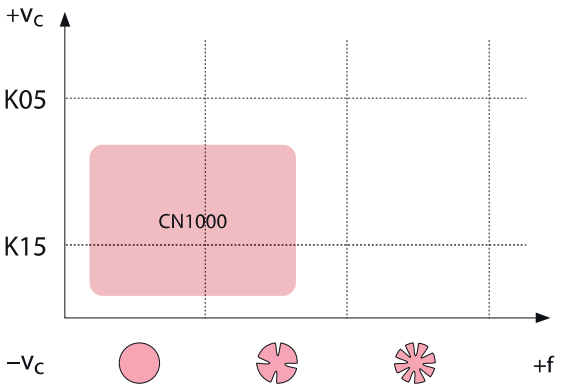
CVD coated carbide grades for cast iron



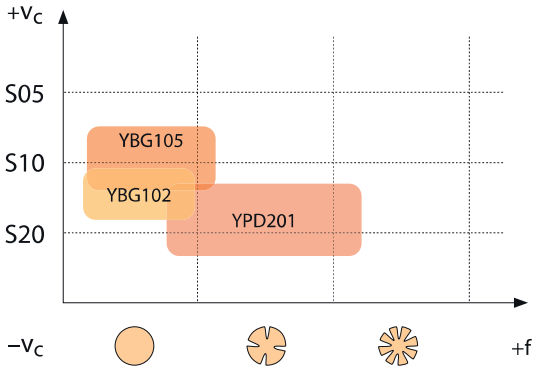
CBN grades for cast iron

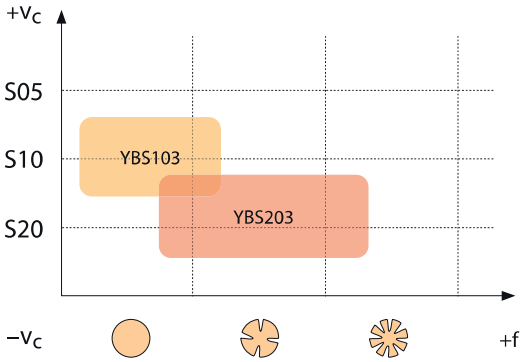


Ceramic grades for cast iron

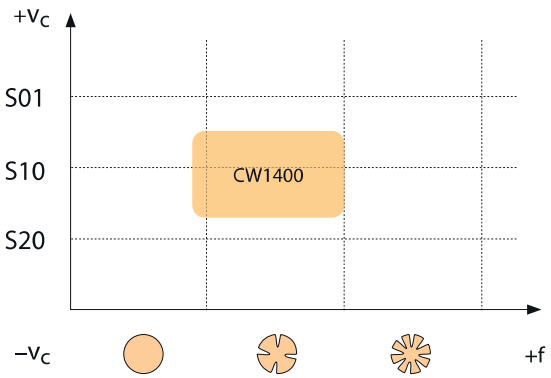


PVD coated carbide grades for superalloys

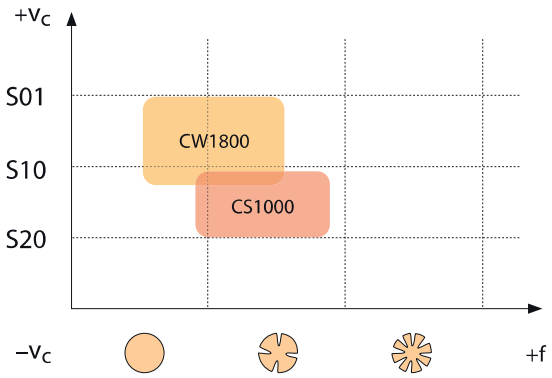




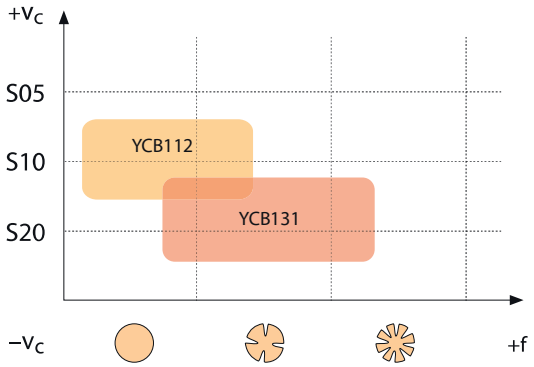
Ceramic grades for cobalt base alloys/HSS



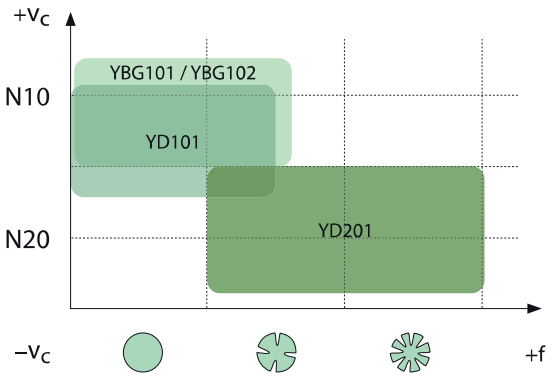
Ceramic grades for nickel base alloys



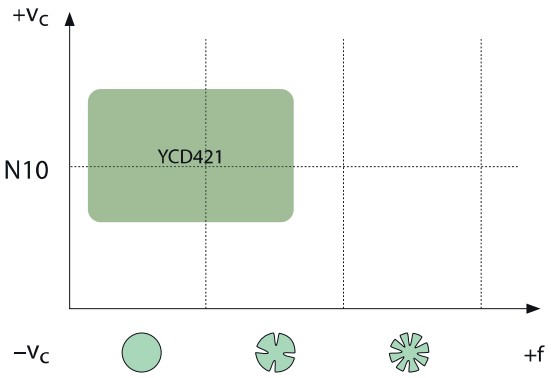
CBN grades for superalloys



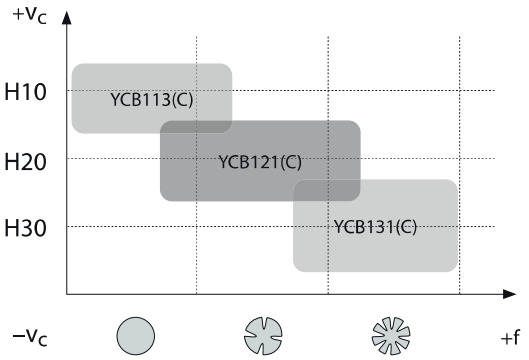
Carbide grades for non-ferrous metals



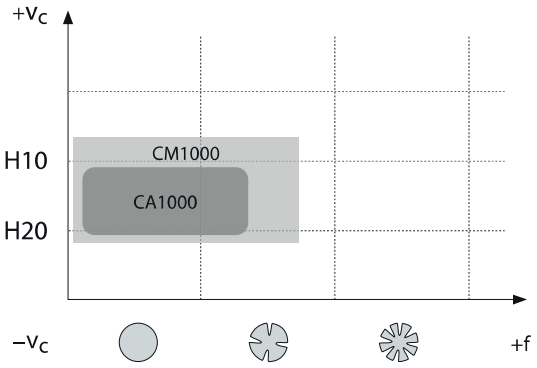
PCD grades for non-ferrous metals



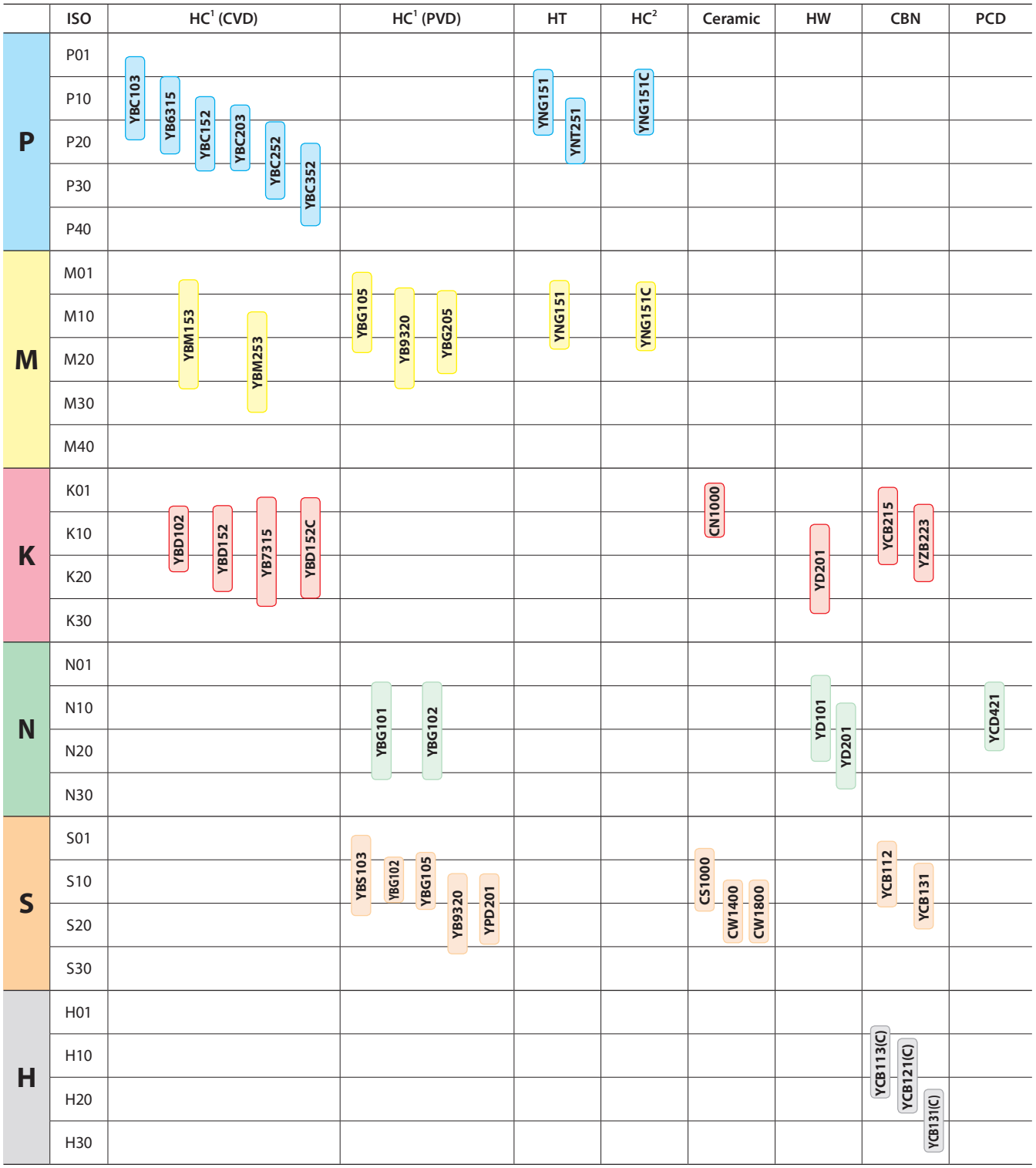
CBN grades for hardened steel



Ceramic grades for hardened steel



Application fields of grades – general turning

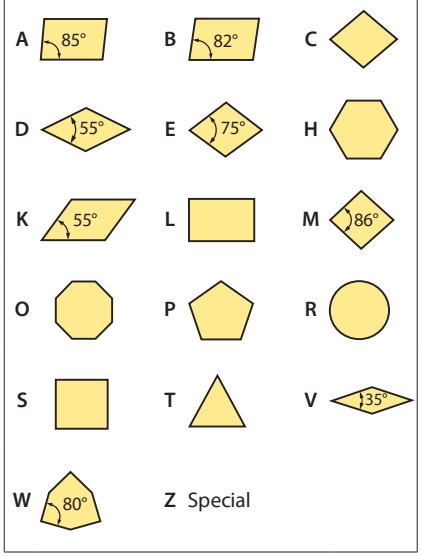


P	Steel	N	Non-ferrous metals	HC¹ Coated carbide
M	Stainless steel	S	Heat-resistant alloys	HT Uncoated cermet
K	Cast iron	H	Hardened materials	HC² Coated cermet
				HW Uncoated carbide

ISO standard

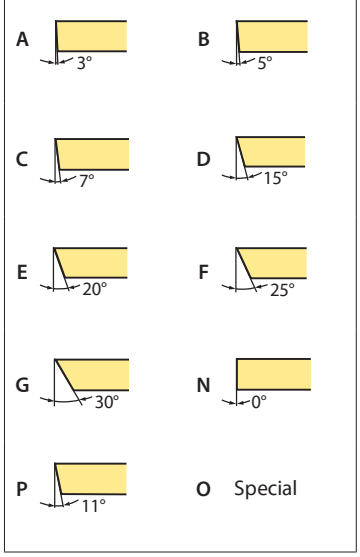
T	N	M	G	22	04	08	(N)	–	DM
1	2	3	4	5	6	7	8		9

Insert shape



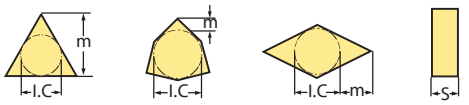
1

Clearance angle



2

Tolerance class

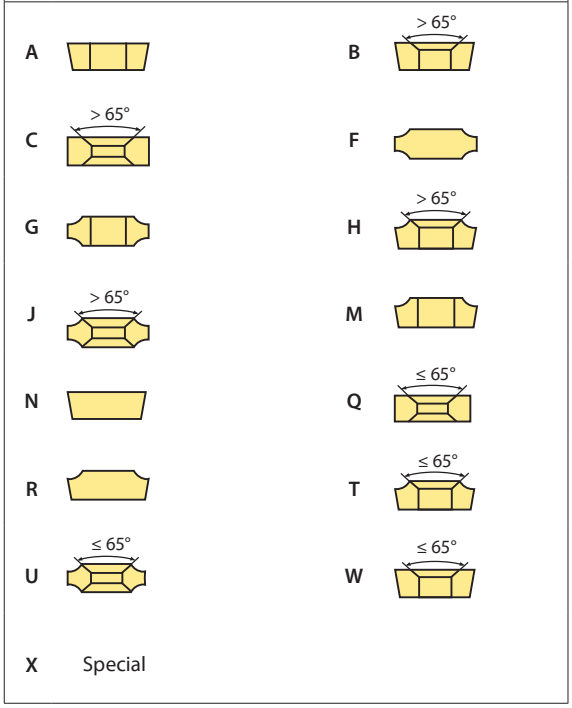


Code	I.C [mm]	m [mm]	S [mm]
A	±0,025	±0,005	±0,025
C	±0,025	±0,013	±0,025
E	±0,025	±0,025	±0,025
F	±0,013	±0,005	±0,025
G	±0,025	±0,025	±0,130
H	±0,013	±0,013	±0,025
J	±0,05–0,15	±0,005	±0,025
K	±0,05–0,15	±0,013	±0,025
L	±0,05–0,15	±0,025	±0,025
M	±0,05–0,15	±0,08–0,20	±0,130
N	±0,05–0,15	±0,08–0,20	±0,025
U	±0,08–0,25	±0,13–0,38	±0,130

3

Fastening features (metric)

Insert shape

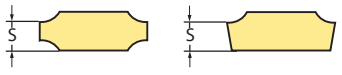


4

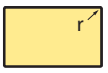
Cutting edge length l [mm]

I.C [mm]	Insert shape C	D	R	S	T	V	W	K
3,97					06			
5,0			05					
5,56					09			
6,0			06					
6,35	06	07			11	11		
8,0			08					
9,525	09	11	09	09	16	16	06	16
10,0			10					
12,0			12					
12,7	12	15	12	12	22	22	08	
15,875	16		15	15	27			
16,0		19	16					
19,05	19		19	19	33			
20,0			20					
25,0	25	25	25					
25,4			25	25				
31,75			31					
32			32					

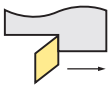
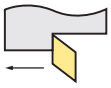
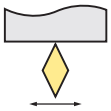
5

Insert thickness S [mm]			
			
Code	S	Code	S
00	0,79	**T5**	5,95
T0	0,99	**06**	6,35
01	1,59	**T6**	6,75
T1	1,98	**07**	7,94
02	2,38	**09**	9,52
T2	2,58	**T9**	9,72
03	3,18	**11**	11,11
T3	3,97	**12**	12,70
04	4,76		
T4	4,96		
05	5,56		

6

Nose radius r [mm]	
	
Code	r
00	–
02	0,2
04	0,4
08	0,8
12	1,2
16	1,6
20	2,0
24	2,4
32	3,2
X	Special
MO	Round inserts

7

Cutting direction
 **L**
 **R**
 **N**

8

Chip breaker overview (on page A16)

9

ANSI standard

T	N	M	G	4	3	2	(N)	–	DM
1	2	3	4	5	6	7	8		9

Inner circle		
Code	[mm]	Pouce
2	6.35	0.250
3	9.525	0.375
4	12.7	0.500
5	15.875	0.625
6	19.05	0.750
8	25.4	1.000

5

Insert thickness		
Code	[mm]	Pouce
2	3.18	0.125
3	4.76	0.187
4	6.35	0.250
5	7.94	0.313
6	9.52	0.375

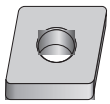
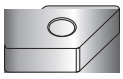
6

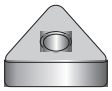
Nose radius		
Code	[mm]	Pouce
0	0.2	0.008
1	0.4	0.016
2	0.8	0.031
3	1.2	0.047
4	1.6	0.063
5	2.0	0.079
6	2.4	0.094

7

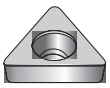
Conversion table for general turning inserts (metric/imperial system)

Negative angle/insert

	ISO	Inch
Insert shape C 	090304	321
	090308	322
	120404	431
	120408	432
	120412	433
	120416	434
	160608	542
	160612	543
	160616	544
	190608	642
	190612	643
	190616	644
	190624	646
	250724	856
	250732	858
	250924	866
	250932	868
Insert shape D 	110404	331
	110408	332
	110412	333
	150404	431
	150408	432
	150412	433
	150604	441
	150608	442
	150612	443
	150616	444
	190608	542
	190612	543
Insert shape V 	160404	331
	160408	332
	160412	333
Insert shape R 	0903MO	32
	1204MO	43

	ISO	Inch
Insert shape W 	06T304	3(2.5)1
	06T308	3(2.5)2
	06T312	3(2.5)3
	060404	331
	060408	332
	060412	333
	080404	431
	080408	432
	080412	433
Insert shape T 	113304	221
	110308	222
	160404	331
	160408	332
	160412	333
	220404	431
	220408	432
	220412	433
	220416	434
	270608	542
	270612	543
	270616	544
Insert shape S 	090304	321
	090308	322
	090312	323
	120404	431
	120408	432
	120412	433
	120416	434
	150608	542
	150612	543
	150616	544
	190412	633
	190424	636
	190612	643
	190616	644
	250724	856
	250732	858
	250924	866
	250932	868

Positive angle/insert

	ISO	Inch
Insert shape C 	060202	2(1.5)0
	060204	2(1.5)1
	060208	2(1.5)2
	09T302	3(2.5)0
	09T304	3(2.5)1
	09T308	3(2.5)2
	120404	431
	120408	432
	120412	433
Inserts shape T 	06T102	1.2(1.2)0
	06T104	1.2(1.2)1
	06T108	1.2(1.2)2
	090202	1.8(1.5)0
	090204	1.8(1.5)1
	090208	1.8(1.5)2
	110202	2(1.5)0
	110204	2(1.5)1
	110208	2(1.5)2
	110302	220
	110304	221
	110308	222
	16T302	30
	16T304	31
	16T308	32
	16T312	33
	160400	330
	220408	432
	220412	433
	220416	434
	270408	532
	27041 2	533
	330612	643
	330616	644

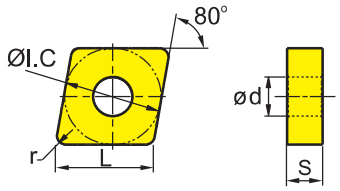
	ISO	Inch
Insert shape D 	070202	2(1.5)0
	070204	2(1.5)1
	070208	2(1.5)2
	11T302	3(2.5)0
	11T304	3(2.5)1
	11T308	3(2.5)2
	11T312	3(2.5)3
Insert shape S 	060204	2(1.5)1
	09T302	3(2.5)0
	09T304	3(2.5)1
	09T308	3(2.5) 2
	120404	431
	120408	432
	120412	433
	150404	531
	150408	532
	150412	533
	190408	632
	190412	633
	190416	634
Inserts shape V 	110202	2(1.5)0
	110204	2(1.5)1
	110208	2(1.5)2
	110302	220
	110304	221
	110308	222
	160402	330
	160404	331
	160408	332
	160412	333

Turning inserts

- Ideal machining conditions
- Normal machining conditions
- Unfavourable machining conditions

CNMG	L	I.C	S	d
09 03	9.7	9.525	3.18	3.81
12 04	12.9	12.7	4.76	5.16

CN** negative insert



	ISO	r	a_p	f	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
					P	P	P	P	P	P	P	P	P	P	P	P	N	N	N	N	N	N	N	HT	HT	HC²	HW	HW
					M	M	M	M	M	M	M	M	M	M	M	M	S	S	S	S	S	S	S	HT	HT	HC²	HW	HW
					K	K	K	K	K	K	K	K	K	K	K	K												
					N	N	N	N	N	N	N	N	N	N	N	N											HW	HW
					S	S	S	S	S	S	S	S	S	S	S	S											HW	HW
					H	H	H	H	H	H	H	H	H	H	H	H												
WG	**CNMG120404-WG**	0.4	0.25-3.00	0.05-0.25			○																					
	CNMG120408-WG	0.8	0.5-5.0	0.15-0.70			●		●						○													
	CNMG120412-WG	1.2	0.8-6.0	0.20-0.75			●																					
Wiper																												
ADF	**CNMG120404-ADF**	0.4	0.5-3.0	0.05-0.30		●														●	●							
	CNMG120408-ADF	0.8	0.5-3.0	0.1-0.4		●														○	●			●				
	CNMG120412-ADF	1.2	0.8-3.0	0.15-0.50		○															●			●				
Finishing																												
DF	**CNMG090304-DF**	0.4	0.25-1.50	0.07-0.30			●		●																			
	CNMG090308-DF	0.8	0.3-1.5	0.1-0.3			●		○																			
	CNMG120404-DF	0.4	0.25-1.50	0.07-0.30			●		●																			
	CNMG120408-DF	0.8	0.3-1.5	0.1-0.4			●		●																			
Finishing	**CNMG120412-DF**	1.2	0.35-1.50	0.10-0.35			●		●																			
EF	**CNMG090304-EF**	0.4	0.5-2.0	0.05-0.20							○									●								
	CNMG090308-EF	0.8	0.5-2.0	0.05-0.25							○									●								
	CNMG120404-EF	0.4	0.5-2.5	0.05-0.20							●									●								
	CNMG120408-EF	0.8	0.5-2.5	0.05-0.25							●									●								
Finishing	**CNMG120412-EF**	1.2	0.5-2.5	0.10-0.35							○									○								
SF	**CNMG090304-SF**	0.4	0.05-0.50	0.05-0.30																						●		
	CNMG120404-SF	0.4	0.1-1.5	0.05-0.30																						●		
	CNMG120408-SF	0.8	0.1-1.5	0.10-0.35																						●		
Finishing																												

● Ex stock ○ On demand

YBC152F, YBC252F, YBM153F, YBM253F available

HC¹ Coated carbide
HT Uncoated cermet
HC² Coated cermet
HW Uncoated carbide

Tool holder

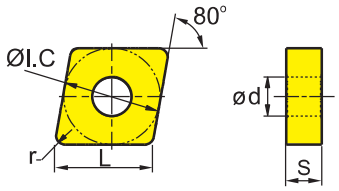
DCLNR/L	PCBNR/L	PCLNR/L	MCBNR/L	MCLNR/L	A***-PCLNR/L
Kr: 95°	Kr: 75°	Kr: 95°	Kr: 75°	Kr: 95°	Kr: 95°
					
A230	A237	A238	A252	A253	A324

System code A48 | Grade selection A42 | Technical info A501 | Cutting data A366

- Ideal machining conditions
- Normal machining conditions
- Unfavourable machining conditions

CN**	L	I.C	S	d
12 04	12.9	12.7	4.76	5.16

Turning inserts

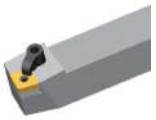


CN** negative insert					HC[1] (CVD)										HC[1] (PVD)						HT		HC[2]	HW	
					P																				
					M																				
					K																				
					N																				
					S																				
					H																				
ISO		r	a_p	f	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
NF	**CNEG120404-NF**	0.4	0.2-2.5	0.05-0.30													○	●								○	
	CNEG120408-NF	0.8	0.2-2.5	0.10-0.35													○	●								○	
	CNEG120412-NF	1.2	0.2-2.5	0.13-0.40													○	●								○	
Finishing																											
XF	**CNMG120404-XF**	0.4	0.5-2.5	0.1-0.25	●			●																			
	CNMG120408-XF	0.8	0.5-2.5	0.1-0.30	●			●																			
	CNMG120412-XF	1.2	0.5-2.5	0.1-0.35	●			●																			
Finishing																											

● Ex stock ○ On demand

HC[1] Coated carbide
HT Uncoated cermet
HC[2] Coated cermet
HW Uncoated carbide

Tool holder

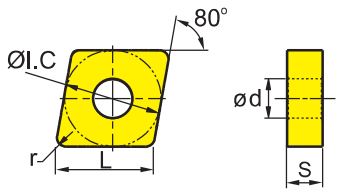
DCLNR/L	PCBNR/L	PCLNR/L	MCBNR/L	MCLNR/L	S***-PCLNR/L
Kr: 95°	Kr: 75°	Kr: 95°	Kr: 75°	Kr: 95°	Kr: 95°
					
A230	A237	A238	A252	A253	A324

System code A48 Grade selection A42 Technical info A501 Cutting data A366

CNMG	L	I.C	S	d
09 03	9.7	9.525	3.18	3.81
12 04	12.9	12.7	4.76	5.16
16 06	16.1	15.875	6.35	6.35
19 06	19.3	19.05	6.35	7.94

Turning inserts

Ideal machining conditions
Normal machining conditions
Unfavourable machining conditions



CN** negative insert		HC[1] (CVD)											HC[1] (PVD)							HT		HC[2]	HW		
	P	○	○	○	◍	◍	◍									◍	◍			○	◍	○			
	M							○	◍					○	○	◍	◍	◍	○	○	◍	○			
	K									●	◍	◍	◍												
	N													●	●								●	◍	
	S													●	●	◍	◍	◍	●				●	◍	
	H																								

	ISO	r	a_p	f	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
PM	**CNMG090304-PM**	0.4	0.4-4.0	0.1-0.3					●																			
	CNMG090308-PM	0.8	0.5-4.0	0.15-0.50					●																			
	CNMG120404-PM	0.4	0.4-5.5	0.1-0.3			●		●				●		●													
	CNMG120408-PM	0.8	0.5-5.5	0.15-0.50			●		●	●			●		●													
	CNMG120412-PM	1.2	0.8-5.5	0.18-0.60			●		●				●		●													
	CNMG120416-PM	1.6	1.0-5.5	0.23-0.65			●		●				●		●													
	CNMG160608-PM	0.8	0.5-7.2	0.15-0.50			○		●				○		○													
	CNMG160612-PM	1.2	0.8-7.2	0.18-0.60			●		●				●		●													
	CNMG160616-PM	1.6	1.0-7.2	0.23-0.65					●				●		○													
	CNMG190608-PM	0.8	0.5-8.6	0.15-0.50					●																			
	CNMG190612-PM	1.2	0.8-8.6	0.18-0.60					●				○		●													
	CNMG190616-PM	1.6	1.0-8.6	0.23-0.65					○						○													
XM	**CNMG120404-XM**	0.4	1-4.2	0.2-0.3	●			○																				
	CNMG120408-XM	0.8	1-4.2	0.2-0.4	●			●																				
	CNMG120412-XM	1.2	1-4.2	0.2-0.6	●			●																				
	CNMG120416-XM	1.6	1-4.2	0.2-0.65	●			●																				
	CNMG160608-XM	0.8	1-5.6	0.2-0.4	●			●																				
	CNMG160612-XM	1.2	1-5.6	0.2-0.6	●			●																				
	CNMG160616-XM	1.6	1-5.6	0.2-0.65	○			●																				
	CNMG190608-XM	0.8	1-6.65	0.2-0.4	●			●																				
	CNMG190612-XM	1.2	1-6.65	0.2-0.6	○			●																				
	CNMG190616-XM	1.6	1-6.65	0.2-0.65	○			●																				

PM

Medium Cut

XM

Medium Cut

● Ex stock ○ On demand
YBC152F, YBC252F, YBM153F, YBM253F available

HC[1] Coated carbide
HT Uncoated cermet
HC[2] Coated cermet
HW Uncoated carbide

Tool holder

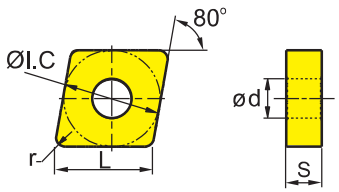
DCLNR/L	PCBNR/L	PCLNR/L	MCBNR/L	MCLNR/L	A***-PCLNR/L
Kr: 95°	Kr: 75°	Kr: 95°	Kr: 75°	Kr: 95°	Kr: 95°
					
A230	A237	A238	A252	A253	A324

System code A48 | Grade selection A42 | Technical info A501 | Cutting data A366

CNMG	L	I.C	S	d
09 03	9.7	9.525	3.18	3.81
12 04	12.9	12.7	4.76	5.16
16 06	16.1	15.875	6.35	6.35
19 06	19.3	19.05	6.35	7.94

Ideal machining conditions
Normal machining conditions
Unfavourable machining conditions

Turning inserts



CN** negative insert					HC[1] (CVD)											HC[1] (PVD)						HT		HC[2]	HW	
					YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
P					○	○	○	◉	◉	◉										◉	◉			○	◉	○		
M											○	◉					○	○	◉	◉	◉	○	○	◉	◉	○		
K													○	◉	◉	◉												
N																	○	○									○	◉
S																	○	○	◉	◉	◉	○					○	◉
H																												
	ISO		r	a_p	f																							
DM	**CNMG090304-DM**		0.4	0.4-4.0	0.1-0.3			●		●																		
	CNMG090308-DM		0.8	0.5-4.0	0.15-0.50			●		●																		
	CNMG090312-DM		1.2	0.5-3.0	0.1-0.4					○																		
	CNMG120404-DM		0.4	0.4-5.5	0.1-0.3			●		●																		
	CNMG120408-DM		0.8	0.5-5.5	0.15-0.50		○	●		●	●	○	●															
	CNMG120412-DM		1.2	0.8-5.5	0.18-0.60		○	●		●		○	○															
	CNMG120416-DM		1.6	1.0-5.5	0.23-0.65			○		●																		
	CNMG160608-DM		0.8	0.5-7.2	0.15-0.50			○		●																		
	CNMG160612-DM		1.2	0.8-7.2	0.18-0.60			●		●																		
	CNMG160616-DM		1.6	1.0-7.2	0.23-0.65			●		●																		
	CNMG190608-DM		0.8	0.5-8.6	0.15-0.50			●		●																		
	CNMG190612-DM		1.2	0.8-8.6	0.18-0.60			●		●																		
	CNMG190616-DM		1.6	1.0-8.6	0.23-0.65					●																		
EG	**CNMG120404-EG**		0.4	0.5-4.0	0.05-0.30						●	●								○	●							
	CNMG120408-EG		0.8	0.5-4.0	0.1-0.4						●	●								●	●							
	CNMG120412-EG		1.2	0.5-4.0	0.2-0.5							●								●	●							
EM	**CNMG120404-EM**		0.4	0.5-4.0	0.05-0.30						●	●								●								
	CNMG120408-EM		0.8	0.5-5.7	0.15-0.45						●	●								●								
	CNMG120412-EM		1.2	0.5-5.7	0.25-0.60						●	●								●								
	CNMG160608-EM		0.8	0.5-7.2	0.15-0.45						●	●								●								
	CNMG160612-EM		1.2	0.5-7.2	0.25-0.60						●	●								●								

DM  Medium Cut

EG  Medium Cut

EM  Medium Cut

● Ex stock ○ On demand
YBC152F, YBC252F, YBM153F, YBM253F available

HC[1] Coated carbide
HT Uncoated cermet
HC[2] Coated cermet
HW Uncoated carbide

Tool holder

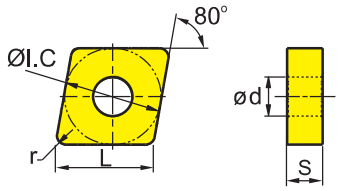
DCLNR/L	PCBNR/L	PCLNR/L	MCBNR/L	MCLNR/L	A***-PCLNR/L
Kr: 95°	Kr: 75°	Kr: 95°	Kr: 75°	Kr: 95°	Kr: 95°
					
A230	A237	A238	A252	A253	A324

System code A48 | Grade selection A42 | Technical info A501 | Cutting data A366

CNMG	L	I.C	S	d
12 04	12.9	12.7	4.76	5.16

Turning inserts

- Ideal machining conditions
- Normal machining conditions
- Unfavourable machining conditions



CN** negative insert		HC¹ (CVD)											HC¹ (PVD)							HT		HC²	HW		
		P																							
		M																							
		K																							
		N																							
		S																							
		H																							
ISO		r	a_p	f	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
ZM	**CNMG120404-ZM**	0.4	0.5-3.0	0.05-0.30	●																						
	**CNMG120408-ZM**	0.8	0.5-4.0	0.1-0.5	○																						
Medium Cut																											

● Ex stock ○ On demand

HC¹ Coated carbide
HT Uncoated cermet
HC² Coated cermet
HW Uncoated carbide

Tool holder

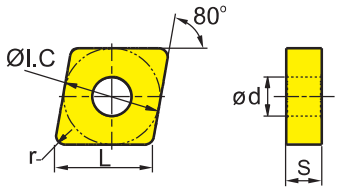
DCLNR/L	PCBNR/L	PCLNR/L	MCBNR/L	MCLNR/L	S***-PCLNR/L
Kr: 95°	Kr: 75°	Kr: 95°	Kr: 75°	Kr: 95°	Kr: 95°
					
A230	A237	A238	A252	A253	A324

System code A48 | Grade selection A42 | Technical info A501 | Cutting data A366

Turning inserts

- Ideal machining conditions
- Normal machining conditions
- Unfavourable machining conditions

CNMG	L	I.C	S	d
12 04	12.9	12.7	4.76	5.16
16 06	16.1	15.875	6.35	6.35

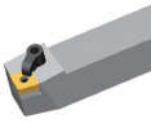


	ISO	r	a_p	f	HC¹ (CVD)										HC¹ (PVD)						HT		HC²	HW	
					YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
NM	**CNMG120404-NM**	0.4	0.2-3.0	0.05-0.30														○	●								
	**CNMG120408-NM**	0.8	0.2-4.0	0.1-0.5														○	●	●	●					○	
	CNMG120412-NM	1.2	0.2-4.0	0.2-0.6														○	●								
Medium Cut																											
TC	**CNMG120404-TC**	0.4	0.5-5.0	0.08-0.40										●		●											
	**CNMG120408-TC**	0.8	0.5-5.0	0.15-0.50										●		●											
	CNMG120412-TC	1.2	0.5-5.0	0.2-0.6										●		●											
	CNMG120416-TC	1.6	0.5-5.0	0.20-0.65										●		○											
Medium Cut	**CNMG160608-TC**	0.8	1-7	0.15-0.50										●		●											
	CNMG160612-TC	1.2	1-7	0.2-0.6										●		●											
	CNMG160616-TC	1.6	1-7	0.20-0.65										●		○											
TK	**CNMG120408-TK**	0.8	0.2-0.4	0.2-0.4										○													
	**CNMG120412-TK**	1.2	0.2-0.4	0.2-0.45										○													
	CNMG120416-TK	1.6	0.2-0.4	0.2-0.5										●													
Medium Cut																											

● Ex stock ○ On demand

HC¹ Coated carbide
HT Uncoated cermet
HC² Coated cermet
HW Uncoated carbide

Tool holder

DCLNR/L	PCBNR/L	PCLNR/L	MCBNR/L	MCLNR/L	S***-PCLNR/L
Kr: 95°	Kr: 75°	Kr: 95°	Kr: 75°	Kr: 95°	Kr: 95°
					
A230	A237	A238	A252	A253	A324

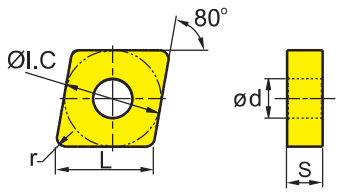
System code A48 Grade selection A42 Technical info A501 Cutting data A366

Turning inserts

- Ideal machining conditions
- Normal machining conditions
- Unfavourable machining conditions

CNMG	L	I.C	S	d
12 04	12.9	12.7	4.76	5.16
16 06	16.1	15.875	6.35	6.35
19 06	19.3	19.05	6.35	7.94
25 09	25.79	25.4	9.525	9.12

CN** negative insert



	HC[1] (CVD)											HC[1] (PVD)							HT		HC[2]	HW		
P	○	○	○	◉	◉	◉									◉	◉			○	◉	○			
M							○	◉					○	○	◉	◉			○	◉	○			
K									○	◉	◉	◉												
N													○	○									○	◉
S													○	○	◉	◉							○	◉
H																								

	ISO	r	a_p	f	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
DR Roughing	**CNMG120408-DR**	0.8	0.7-7.0	0.2-0.5		○	●		●	●			●		●													
	CNMG120412-DR	1.2	1-7	0.25-0.70		○	●		●	●			●		●													
	CNMG120416-DR	1.6	1.5-7.0	0.32-0.75			○		●				○		●													
	CNMG160608-DR	0.8	0.7-8.0	0.2-0.5					●				●		○													
	CNMG160612-DR	1.2	1-8	0.25-0.70		○	●		●	○			●		●													
	CNMG160616-DR	1.6	1.5-8.0	0.3-0.8		○	●		●	●			○		○													
	CNMG190608-DR	0.8	0.7-10.0	0.2-0.5			●		●				○		●													
	CNMG190612-DR	1.2	1-10	0.25-0.70		○	●		●	●			○		●													
	CNMG190616-DR	1.6	1.5-10.0	0.3-0.8			●	●	●	●			○		●													
	CNMG190624-DR	2.4	2-10	0.32-0.90		○			●						○													
	CNMG250924-DR	2.4	2-15	0.4-1.0					●																			
SNR Roughing	**CNMG120408-SNR**	0.8	1-3	0.1-0.4															●			●	●					
	CNMG120412-SNR	1.2	1-3	0.2-0.6															●			●	●					
	CNMG160608-SNR	0.8	2-6	0.1-0.4															●			●	●				○	
	CNMG190616-SNR	1.6	2-7	0.2-0.6															○				●				○	

● Ex stock ○ On demand

YBC152F, YBC252F, YBM153F, YBM253F available

HC[1] Coated carbide
HT Uncoated cermet
HC[2] Coated cermet
HW Uncoated carbide

Tool holder

DCLNR/L	PCBNR/L	PCLNR/L	MCBNR/L	MCLNR/L	S***-PCLNR/L
Kr: 95°	Kr: 75°	Kr: 95°	Kr: 75°	Kr: 95°	Kr: 95°
					
A230	A237	A238	A252	A253	A324

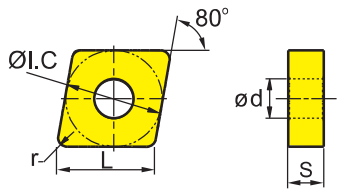
System code A48 | Grade selection A42 | Technical info A501 | Cutting data A366

CN**	L	I.C	S	d
12 04	12.9	12.7	4.76	5.16
16 06	16.1	15.875	6.35	6.35
19 06	19.3	19.05	6.35	7.94
25 07	25.79	25.4	7.94	9.12
25 09	25.79	25.4	9.525	9.12

Turning inserts

● Ideal machining conditions
❁ Normal machining conditions
❁ Unfavourable machining conditions

CN** negative insert



	ISO	r	a_p	f	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
					HC¹ (CVD)												HC¹ (PVD)							HT		HC²	HW	
	P				●	●	●	❁	❁	❁										❁	❁			●	❁	●		
	M										○	❁					○	○	❁	❁	❁	❁	○	○	❁	○		
	K												●	❁	❁	❁												
	N																●	●									●	❁
	S																○	○	❁	❁	❁	❁	○				○	❁
	H																											
DR  Roughing	**CNMM120412-DR**	1.2	1.0-7.5	0.25-0.70		○	●		●	●	○	○																
	CNMM160612-DR	1.2	1.0-9.5	0.25-0.70			●		●																			
	CNMM160616-DR	1.6	1.5-9.5	0.32-0.90			●		●	○																		
	CNMM190612-DR	1.2	1-12	0.25-0.70		○	●		●	●		●																
	CNMM190616-DR	1.6	1.5-12.0	0.32-0.90			●		●	●																		
	CNMM190624-DR	2.4	2-12	0.35-1.20		○	●		●																			
	CNMM250924-DR	2.4	2.0-12.5	0.2-1.2			●		●	○																		
ER  Roughing	**CNMG120408-ER**	0.8	2.0-7.6	0.15-0.55								○																
	CNMG120412-ER	1.2	2.0-7.6	0.25-0.80								○																
	CNMG160612-ER	1.2	2-10	0.35-0.80								○																
	CNMG160616-ER	1.6	2-10	0.45-1.00								○																
	CNMG190612-ER	1.2	2.0-11.4	0.35-1.00					○			○								○								
	CNMG190616-ER	1.6	2.0-11.4	0.45-1.10								○																
ER  Roughing	**CNMM250724-ER**	2.4	2.0-12.5	0.3-1.4					●																			
	CNMM250732-ER	3.2	2.0-12.5	0.45-1.80					○																			
	CNMM250924-ER	2.4	2.0-12.5	0.3-1.4					●			○																
	CNMM250932-ER	3.2	2.0-12.5	0.45-1.80					●																			

● Ex stock ○ On demand
YBC152F, YBC252F, YBM153F, YBM253F available

HC¹ Coated carbide
HT Uncoated cermet
HC² Coated cermet
HW Uncoated carbide

Tool holder

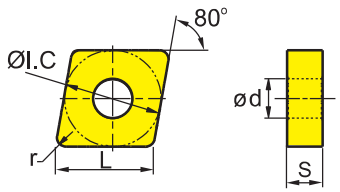
DCLNR/L	PCBNR/L	PCLNR/L	MCBNR/L	MCLNR/L	S***-PCLNR/L
Kr: 95°	Kr: 75°	Kr: 95°	Kr: 75°	Kr: 95°	Kr: 95°
					
A230	A237	A238	A252	A253	A324

System code A48 Grade selection A42 Technical info A501 Cutting data A366

CNMM	L	I.C	S	d
12 04	12.9	12.7	4.76	5.16
16 06	16.1	15.875	6.35	6.35
19 06	19.3	19.05	6.35	7.94
25 09	25.79	25.4	9.525	9.12

Turning inserts

Ideal machining conditions
Normal machining conditions
Unfavourable machining conditions

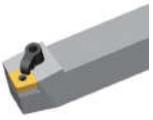


CN** negative insert					HC¹ (CVD)											HC¹ (PVD)							HT		HC²	HW		
				P	○	○	○	◉	◉	◉									◉	◉				○	◉	○			
				M							○	◉					○	○	◉	◉	◉	○	○	◉	○				
				K									○	◉	◉	◉													
				N													○	○									○	◉	
				S													○	○	◉	◉	◉	○					○	◉	
				H																									
	ISO		r	a_p	f	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201	
LR	**CNMM120408-LR**		0.8	1-5	0.1-0.5			●		●																			
	CNMM120412-LR		1.2	2-6	0.2-0.7			●		●			●																
	CNMM120416-LR		1.6	2.0-6.5	0.25-0.80					●																			
	CNMM160608-LR		0.8	1-7	0.2-0.6			●		●			○																
	CNMM160612-LR		1.2	1.0-7.5	0.2-0.7			●		●			●																
	CNMM160616-LR		1.6	1.0-8.5	0.25-0.80	○		●	○	●																			
Roughing	**CNMM190612-LR**		1.2	2.0-10.5	0.2-0.7			●		●																			
	CNMM190616-LR		1.6	2.0-10.5	0.3-1.0			●		●			●																
	CNMM190624-LR		2.4	2.0-10.5	0.3-1.1			●		○																			
	CNMM250924-LR		2.4	2.0-12.5	0.3-1.2			○		●																			

● Ex stock ○ On demand
YBC152F, YBC252F, YBM153F, YBM253F available

HC¹ Coated carbide
HT Uncoated cermet
HC² Coated cermet
HW Uncoated carbide

Tool holder

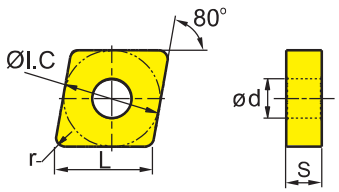
DCLNR/L	PCBNR/L	PCLNR/L	MCBNR/L	MCLNR/L	S***-PCLNR/L
Kr: 95°	Kr: 75°	Kr: 95°	Kr: 75°	Kr: 95°	Kr: 95°
					
A230	A237	A238	A252	A253	A324

System code A48 | Grade selection A42 | Technical info A501 | Cutting data A366

CNMM	L	I.C	S	d
12 04	12.9	12.7	4.76	5.16
16 06	16.1	15.875	6.35	6.35
19 06	19.3	19.05	6.35	7.94
25 09	25.79	25.4	9.525	9.12

Turning inserts

- Ideal machining conditions
- Normal machining conditions
- Unfavourable machining conditions



CN** negative insert					HC¹ (CVD)										HC¹ (PVD)						HT		HC²	HW	
					P																				
					M																				
					K																				
					N																				
					S																				
					H																				
	ISO	r	a_p	f	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
Basic	**CNMM120404**	0.4	0.5-7.0	0.1-0.5																							
	CNMM190612	1.2	0.5-10.5	0.1-0.8																							
Medium Cut	**CNMM190616**	1.6	0.5-10.5	0.1-1.0																							
HDR	**CNMM120408-HDR**	0.8	1-7	0.2-0.6			●		●																		
	CNMM120412-HDR	1.2	1-7	0.3-0.8			○		●																		
	CNMM120416-HDR	1.6	1-7	0.4-1.0			●		●																		
	CNMM160612-HDR	1.2	1.5-7.5	0.3-0.8			●		●																		
	CNMM160616-HDR	1.6	1.5-8.5	0.4-1.0			○		●																		
	CNMM160624-HDR	2.4	1.5-10.5	0.8-1.2			○		○																		
	CNMM190608-HDR	0.8	2.0-12.5	0.3-0.7			○																				
	CNMM190612-HDR	1.2	2.0-12.5	0.35-0.80			○		●																		
	CNMM190616-HDR	1.6	2.0-12.5	0.5-1.1			○	●	●							○											
	CNMM190624-HDR	2.4	2.0-12.5	0.8-1.2			●		●																		
Roughing	**CNMM250924-HDR**	2.4	2.0-12.5	0.8-1.4			○		●																		
HPR	**CNMM190616-HPR**	1.6	2.0-10.5	0.5-1.0					○																		
	CNMM190624-HPR	2.4	2.0-10.5	0.7-1.4			●		○																		
Roughing	**CNMM250924-HDR**	2.4	2.0-12.5	0.7-1.4					●	●																	

● Ex stock ○ On demand

YBC152F, YBC252F, YBM153F, YBM253F available

HC¹ Coated carbide
HT Uncoated cermet
HC² Coated cermet
HW Uncoated carbide

Tool holder

DCLNR/L	PCBNR/L	PCLNR/L	MCBNR/L	MCLNR/L	S***-PCLNR/L
Kr: 95°	Kr: 75°	Kr: 95°	Kr: 75°	Kr: 95°	Kr: 95°
					
A230	A237	A238	A252	A253	A324

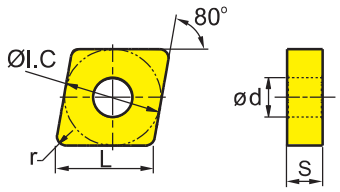
System code A48 Grade selection A42 Technical info A501 Cutting data A366

Turning inserts

- Ideal machining conditions
- Normal machining conditions
- Unfavourable machining conditions

CN**	L	I.C	S	d
12 04	12.9	12.7	4.76	5.16
16 06	16.1	15.875	6.35	6.35
19 06	19.3	19.05	6.35	7.94

CN** negative insert



	HC[1] (CVD)											HC[1] (PVD)							HT		HC[2]	HW		
P	○	○	○	◍	◍	◍											◍	◍		○	◍	○			
M							○	◍					○	○	◍	◍	◍	○		○	◍	○			
K									○	◍	◍	◍													
N													○	○									○	◍	
S													○	○	◍	◍	◍	○					○	◍	
H																									

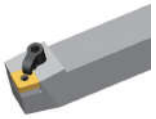
	ISO	r	a_p	f	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
Flat	**CNMA120404**	0.4	0.2-5.0	0.05-0.40									○															
	CNMA120408	0.8	0.2-5.0	0.05-0.50									●	●	●	●												
	CNMA120412	1.2	0.2-5.0	0.1-0.6									●	●	●	●												○
	CNMA120416	1.6	0.2-5.0	0.10-0.65									●		●	○												
	CNMA160608	0.8	0.2-7.0	0.1-0.5									○															
	CNMA160612	1.2	0.2-7.0	0.1-0.6									●		●													
	CNMA160616	1.6	0.2-7.0	0.15-0.65									○		●													
	CNMA190612	1.2	0.2-8.0	0.15-0.70									○		●													
	CNMA190616	1.6	0.2-8.0	0.15-0.70									●		●													
Basic	**CNMG120404**	0.4	0.1-5.0	0.05-0.50					○																			
	CNMG120408	0.8	0.1-5.0	0.1-0.6					○						○													
	CNMG120412	1.2	0.1-5.0	0.1-0.7			○		○																			
	CNMG160612	1.2	0.1-7.0	0.1-0.7																								
	CNMG190608	0.8	0.1-8.0	0.1-0.7																								
	CNMG190612	1.2	0.1-8.0	0.1-0.8																								
	CNMG190616	1.6	0.1-8.0	0.1-1.0																								

● Ex stock ○ On demand

YBC152F, YBC252F, YBM153F, YBM253F available

HC[1] Coated carbide
HT Uncoated cermet
HC[2] Coated cermet
HW Uncoated carbide

Tool holder

DCLNR/L	PCBNR/L	PCLNR/L	MCBNR/L	MCLNR/L	S***-PCLNR/L
Kr: 95°	Kr: 75°	Kr: 95°	Kr: 75°	Kr: 95°	Kr: 95°
					
A230	A237	A238	A252	A253	A324

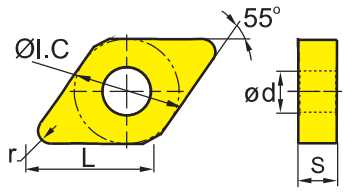
System code A48 | Grade selection A42 | Technical info A501 | Cutting data A366

Turning inserts

- Ideal machining conditions
- Normal machining conditions
- Unfavourable machining conditions

DN**	L	I.C	S	d
11 04	11.6	9.525	4.76	3.81
15 04	15.5	12.7	4.76	5.16
15 06	15.5	12.7	6.35	5.16

DN** negative insert



	HC[1] (CVD)						HC[1] (PVD)						HT		HC[2]	HW	
P	○	○	○	⊛	⊛	⊛				⊛	⊛		○	⊛	○		
M						○	⊛		○	○	⊛	⊛	○	⊛	○		
K								○	⊛	⊛	⊛						
N							○	○								○	⊛
S							○	○	⊛	⊛	⊛	○				○	⊛
H																	

ISO		r	a_p	f	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
WG	**DNMX110404-WG**	0.4	0.2-1.5	0.08-0.30			○																					
	DNMX110408-WG	0.8	0.5-3.5	0.15-0.50			●		●																			
	DNMX150408-WG	0.8	0.5-5.0	0.15-0.70			○																					
	DNMX150608-WG	0.8	0.5-5.0	0.15-0.70			○		○																			
Wiper	**DNMX150612-WG**	1.2	0.8-6.0	0.20-0.75			○																					
ADF	**DNMG150604-ADF**	0.4	0.5-6.0	0.15-0.50		○															●				○			
	DNMG150608-ADF	0.8	0.1-4.0	0.08-0.50		○														●	●				○			
	DNMG150612-ADF	1.2	0.5-4.0	0.15-0.50		○															●							
Finishing																												
DF	**DNMG110404-DF**	0.4	0.15-2.00	0.08-0.25			●		●																			
	DNMG110408-DF	0.8	0.15-2.00	0.1-0.3			●		●																			
	DNMG110412-DF	1.2	0.35-1.50	0.15-0.50			○																					
	DNMG150404-DF	0.4	0.15-2.00	0.08-0.25			●		●																			
	DNMG150408-DF	0.8	0.15-2.00	0.1-0.3			●		●																			
	DNMG150412-DF	1.2	0.35-1.50	0.15-0.50					○																			
Finishing	**DNMG150604-DF**	0.4	0.8-6.0	0.18-0.60			●		●																			
	DNMG150608-DF	0.8	0.15-2.00	0.1-0.3			●		●																			
	DNMG150612-DF	1.2	0.2-2.5	0.10-0.35			●																					
SF	**DNMG110404-SF**	0.4	0.05-0.50	0.05-0.25																						●		
	DNMG150404-SF	0.4	0.05-0.50	0.05-0.25																						●		
	DNMG150408-SF	0.8	0.05-0.50	0.10-0.35																						●		
	DNMG150604-SF	0.4	0.05-0.50	0.05-0.25																						●		
Finishing	**DNMG150608-SF**	0.8	0.05-0.50	0.10-0.35																						●		

● Ex stock ○ On demand

YBC152F, YBC252F, YBM153F, YBM253F available

HC[1] Coated carbide
HT Uncoated cermet
HC[2] Coated cermet
HW Uncoated carbide

Tool holder

DDJNR/L	PDJNR/L	PDNNR/L	MDJNR/L	MDPNN	S***-PDSNR/L	A***-PDUNR/L
Kr: 93°	Kr: 93°	Kr: 63°	Kr: 93°	Kr: 62°30'	Kr: 62°30'	Kr: 93°
						
A231	A240	A241	A254	A255	A326	A327

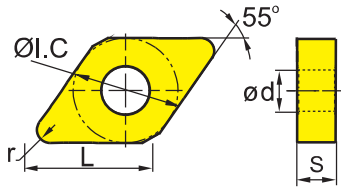
System code A48 | Grade selection A42 | Technical info A501 | Cutting data A366

Turning inserts

- Ideal machining conditions
- Normal machining conditions
- Unfavourable machining conditions

DNMG	L	I.C	S	d
11 04	11.6	9.525	4.76	3.81
15 06	15.5	12.7	6.35	5.16

DN** negative insert



	HC[1] (CVD)											HC[1] (PVD)							HT		HC[2]	HW	
P	○	○	○	⊛	⊛	⊛									⊛	⊛				○	⊛	○		
M							○	⊛				○	○	⊛	⊛	⊛	⊛	○	○	⊛	○			
K									○	⊛	⊛	⊛												
N												○	○										○	⊛
S													○	○	⊛	⊛	⊛	○					○	⊛
H																								

	ISO	r	a_p	f	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
XF Finishing	**DNMG110404-XF**	0.4	0.5-2.0	0.1-0.25	●																							
	DNMG110408-XF	0.8	0.5-2.0	0.1-0.30	○																							
	DNMG150604-XF	0.4	0.5-2.5	0.1-0.25	●			●																				
	DNMG150608-XF	0.8	0.5-2.5	0.1-0.30	●			●																				
	DNMG150612-XF	1.2	0.5-2.5	0.1-0.35	●			●																				
XM Medium Cut	**DNMG110404-XM**	0.4	1-3.85	0.2-0.4	●			○																				
	DNMG110408-XM	0.8	1-3.85	0.2-0.4	●			○																				
	DNMG110412-XM	1.2	1-3.85	0.2-0.6	●			○																				
	DNMG150604-XM	0.4	1-5.25	0.2-0.4	●			●																				
	DNMG150608-XM	0.8	1-5.25	0.2-0.4	●			●																				
	DNMG150612-XM	1.2	1-5.25	0.2-0.6	●			●																				
	DNMG150616-XM	1.6	1-5.25	0.2-0.65	●			●																				

● Ex stock ○ On demand

HC[1] Coated carbide
HT Uncoated cermet
HC[2] Coated cermet
HW Uncoated carbide

Tool holder

DDJNR/L	PDJNR/L	PDNNR/L	MDJNR/L	MDPNN	S***-PDSNR/L	A***-PDUNR/L
Kr: 93°	Kr: 93°	Kr: 63°	Kr: 93°	Kr: 62°30'	Kr: 62°30'	Kr: 93°
						
A231	A240	A241	A254	A255	A326	A327

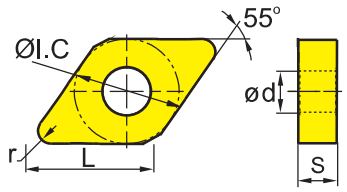
System code A48 | Grade selection A42 | Technical info A501 | Cutting data A366

Turning inserts

Ideal machining conditions
Normal machining conditions
Unfavourable machining conditions

DNMG	L	I.C	S	d
11 04	11.6	9.525	4.76	3.81
15 04	15.5	12.7	4.76	5.16
15 06	15.5	12.7	6.35	5.16

DN** negative insert



	HC[1] (CVD)						HC[1] (PVD)						HT		HC[2]	HW	
P	○	○	○	◎	◎	◎					◎	◎	○	◎	○		
M					○	◎	○	○	◎	◎	◎	○	○	◎	○		
K										○	◎	◎	◎				
N							○	○								○	◎
S							○	○	◎	◎	◎	○				○	◎
H																	

	ISO	r	a_p	f	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
DM Medium Cut	**DNMG110404-DM**	0.4	0.4-5.0	0.1-0.3			●		●																			
	DNMG110408-DM	0.8	0.5-5.0	0.15-0.50			●		●																			
	DNMG110412-DM	1.2	0.8-5.0	0.18-0.50			●		●																			
	DNMG150404-DM	0.4	0.4-6.0	0.1-0.3			●		●																			
	DNMG150408-DM	0.8	0.5-6.0	0.15-0.50			●		●																			
	DNMG150412-DM	1.2	0.8-6.0	0.18-0.60			○		●																			
	DNMG150604-DM	0.4	1-6	0.23-0.65			●		●																			
	DNMG150608-DM	0.8	0.5-6.0	0.15-0.50		○	●		●			●																
	DNMG150612-DM	1.2	0.8-6.0	0.18-0.60		○	●		●																			
	DNMG150616-DM	1.6	1-6	0.23-0.65		○	●		●																			
PM Medium Cut	**DNMG110404-PM**	0.4	0.4-5.0	0.1-0.3					●				○															
	DNMG110408-PM	0.8	0.5-5.0	0.15-0.50			○		●				●															
	DNMG110412-PM	1.2	0.8-5.0	0.18-0.50					○				●															
	DNMG150404-PM	0.4	0.4-6.0	0.1-0.3			○																					
	DNMG150408-PM	0.8	0.5-6.0	0.15-0.50			●		●				●		●													
	DNMG150412-PM	1.2	0.8-6.0	0.18-0.60					○						○													
	DNMG150416-PM	1.6	1-6	0.23-0.65					○																			
	DNMG150604-PM	0.4	0.4-6.0	0.1-0.3			●		●				●		○													
	DNMG150608-PM	0.8	0.5-6.0	0.15-0.50			●		●	●			●		●													
	DNMG150612-PM	1.2	0.8-6.0	0.18-0.60			●		●				●		●													
	DNMG150616-PM	1.6	1-6	0.23-0.65					●																			

● Ex stock ○ On demand
YBC152F, YBC252F, YBM153F, YBM253F available

HC[1] Coated carbide
HT Uncoated cermet
HC[2] Coated cermet
HW Uncoated carbide

Tool holder

DDJNR/L	PDJNR/L	PDNNR/L	MDJNR/L	MDPNN	S***-PDSNR/L	A***-PDUNR/L
Kr: 93°	Kr: 93°	Kr: 63°	Kr: 93°	Kr: 62°30'	Kr: 62°30'	Kr: 93°
						
A231	A240	A241	A254	A255	A326	A327

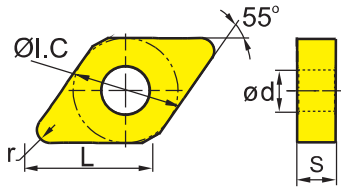
System code A48 | Grade selection A42 | Technical info A501 | Cutting data A366

Turning inserts

- Ideal machining conditions
- Normal machining conditions
- Unfavourable machining conditions

DNMG	L	I.C	S	d
15 06	15.5	12.7	6.35	5.16

DN** negative insert



	HC[1] (CVD)											HC[1] (PVD)							HT		HC[2]	HW	
P	●	●	●	⊛	⊛	⊛									⊛	⊛				●	⊛	●		
M							○	⊛				○	○	⊛	⊛	⊛	⊛	○	●	⊛	○			
K									●	⊛	⊛	⊛												
N												●	●										●	⊛
S													●	○	⊛	⊛	⊛	●					●	⊛
H																								

ISO		r	a_p	f	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
ZM	**DNMG150612-ZM**	1.2	1.0-5.5	0.15-0.60		○			●																			
Medium Cut																												

● Ex stock ○ On demand

YBC152F, YBC252F, YBM153F, YBM253F available

HC[1] Coated carbide
HT Uncoated cermet
HC[2] Coated cermet
HW Uncoated carbide

Tool holder

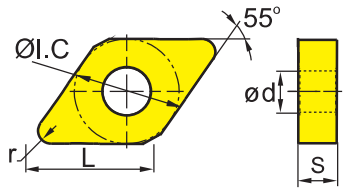
DDJNR/L	PDJNR/L	PDNNR/L	MDJNR/L	MDPNN	S***-PDSNR/L	S***-PDUNR/L
Kr: 93°	Kr: 93°	Kr: 63°	Kr: 93°	Kr: 62°30'	Kr: 62°30'	Kr: 93°
						
A231	A240	A241	A254	A255	A326	A327

System code A48 | Grade selection A42 | Technical info A501 | Cutting data A366

Turning inserts

- Ideal machining conditions
- Normal machining conditions
- Unfavourable machining conditions

DN**	L	I.C	S	d
11 04	11.6	9.525	4.76	3.81
15 04	15.5	12.7	4.76	5.16
15 06	15.5	12.7	6.35	5.16



DN** negative insert		HC¹ (CVD)										HC¹ (PVD)						HT		HC²	HW	
	P																					
	M																					
	K																					
	N																					
	S																					
	H																					
ISO		YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
EF	DNMG110404-EF							○								●									
	DNMG110408-EF							○								●									
	DNMG150404-EF															●									
	DNMG150408-EF															●									
	DNMG150604-EF							●								●									
	DNMG150608-EF							●								●									
	DNMG150612-EF															●									
FM	DNMG150604L-FM					●										●									
	DNMG150604R-FM			●		●										●									
	DNMG150608L-FM			○		●										●									
	DNMG150608R-FM			●		●										●									
NF	DNEG150404-NF														○										
	DNEG150408-NF														○										
	DNEG150604-NF													○	●									○	
	DNEG150608-NF													○	●									○	
NGF	DNEG150608-NGF														●										
	DNEG150612-NGF														●										

● Ex stock ○ On demand

YBC152F, YBC252F, YBM153F, YBM253F available

HC¹ Coated carbide
HT Uncoated cermet
HC² Coated cermet
HW Uncoated carbide

Tool holder

DDJNR/L	PDJNR/L	PDNNR/L	MDJNR/L	MDPNN	S***-PDSNR/L	A***-PDUNR/L
Kr: 93°	Kr: 93°	Kr: 63°	Kr: 93°	Kr: 62°30'	Kr: 62°30'	Kr: 93°
						
A231	A240	A241	A254	A255	A326	A327

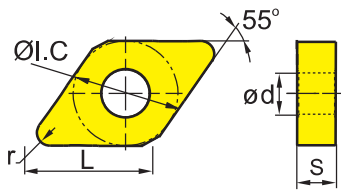
System code A48 | Grade selection A42 | Technical info A501 | Cutting data A366

Turning inserts

- Ideal machining conditions
- Normal machining conditions
- Unfavourable machining conditions

DNMG	L	I.C	S	d
11 04	11.6	9.525	4.76	3.81
15 04	15.5	12.7	4.76	5.16
15 06	15.5	12.7	6.35	5.16

DN** negative insert



	HC[1] (CVD)											HC[1] (PVD)							HT		HC[2]	HW		
	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
P	●	●	●	◍	◍	◍										◍	◍			●	◍	●		
M							○	◍					○	○	◍	◍	◍	◍	○	●	◍	○		
K									◍	◍	◍	◍												
N													●	●									●	◍
S													○	○	◍	◍	◍	◍	○				●	◍
H																								

	ISO	r	a_p	f	HC[1] (CVD)											HC[1] (PVD)							HT		HC[2]	HW		
					YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
EG	**DNMG150604-EG**	0.4	1-3	0.05-0.30							●										●							
	DNMG150608-EG	0.8	1-3	0.1-0.4							●	○								●	●							
	DNMG150612-EG	1.2	1-3	0.2-0.6							●	●								●	●							
Medium Cut																												
EM	**DNMG110404-EM**	0.4	0.5-4.4	0.05-0.30							●									●								
	DNMG110408-EM	0.8	0.5-4.4	0.10-0.45							●									●								
	DNMG150404-EM	0.4	0.5-6.4	0.05-0.30							○									○								
	DNMG150408-EM	0.8	0.5-6.4	0.10-0.45							○									●								
	DNMG150412-EM	1.2	0.5-6.4	0.1-0.6							○																	
Medium Cut	**DNMG150604-EM**	0.4	0.2-6.4	0.05-0.30							●	●								●								
	DNMG150608-EM	0.8	0.5-6.4	0.10-0.45							●	●								●								
	DNMG150612-EM	1.2	0.5-6.4	0.1-0.6							●	●								●								
NM	**DNMG150412-NM**	1.2	0.2-4.0	0.2-0.6														○										
	DNMG150608-NM	0.8	0.2-4.0	0.1-0.4															●									
	DNMG150612-NM	1.2	0.2-4.0	0.2-0.6														○	●									
Medium Cut																												
TC	**DNMG150608-TC**	0.8	0.5-5.0	0.15-0.40										●		●												
	DNMG150612-TC	1.2	0.5-5.0	0.2-0.6										●		○												
Medium Cut																												

● Ex stock ○ On demand

YBC152F, YBC252F, YBM153F, YBM253F available

HC[1] Coated carbide
HT Uncoated cermet
HC[2] Coated cermet
HW Uncoated carbide

Tool holder

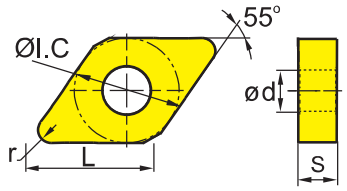
DDJNR/L	PDJNR/L	PDNNR/L	MDJNR/L	MDPNN	S***-PDSNR/L	A***-PDUNR/L
Kr: 93°	Kr: 93°	Kr: 63°	Kr: 93°	Kr: 62°30'	Kr: 62°30'	Kr: 93°
						
A231	A240	A241	A254	A255	A326	A327

System code A48 | Grade selection A42 | Technical info A501 | Cutting data A366

- Ideal machining conditions
- Normal machining conditions
- Unfavourable machining conditions

DNMG	L	I.C	S	d
15 06	15.5	12.7	6.35	5.16

Turning inserts



DN** negative insert		HC¹ (CVD)										HC¹ (PVD)						HT		HC²	HW	
		P																				
		M																				
		K																				
		N																				
		S																				
		H																				
ISO		r	a_p	f	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
TK	**DNMG150608-TK**	0.8	0.2-0.4	0.2-0.4										○													
	DNMG150612-TK	1.2	0.2-0.4	0.2-0.45										○													
Medium Cut																											
DR	**DNMG150608-DR**	0.8	1-6	0.2-0.5			●	●					●		●												
	DNMG150612-DR	1.2	1-6	0.25-0.70			●	●					●		●												
	DNMG150616-DR	1.6	1-6	0.32-0.75			●						●		○												
Roughing																											
SNR	**DNMG150608-SNR**	0.8	0.2-6.0	0.1-0.5															●		○	●					
	DNMG150612-SNR	1.2	0.2-6.0	0.2-0.6															○		○	●					
Roughing																											

● Ex stock ○ On demand

YBC152F, YBC252F, YBM153F, YBM253F available

HC¹ Coated carbide
HT Uncoated cermet
HC² Coated cermet
HW Uncoated carbide

Tool holder

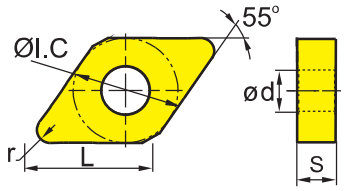
DDJNR/L	PDJNR/L	PDNNR/L	MDJNR/L	MDPNN	S***-PDSNR/L	S***-PDUNR/L
Kr: 93°	Kr: 93°	Kr: 63°	Kr: 93°	Kr: 62°30'	Kr: 62°30'	Kr: 93°
						
A231	A240	A241	A254	A255	A326	A327

System code A48 Grade selection A42 Technical info A501 Cutting data A366

Turning inserts

- Ideal machining conditions
- Normal machining conditions
- Unfavourable machining conditions

DN**	L	I.C	S	d
15 06	15.5	12.7	6.35	5.16



	ISO	r	a_p	f	HC¹ (CVD)										HC¹ (PVD)							HT		HC²	HW	
					YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
Flat	**DNMA150604**	0.4	0.2-6.0	0.1-0.3									●		○													
	DNMA150608	0.8	0.2-6.0	0.1-0.6									●		●													
	DNMA150612	1.2	0.2-6.0	0.15-0.70									●		●													
Medium Cut	**DNMA150616**	1.6	0.2-6.0	0.2-0.8											○													
ER	**DNMG150608-ER**	0.8	2-6	0.15-0.55								○																
	DNMG150612-ER	1.2	2-6	0.25-0.80								○																
Roughing																												

● Ex stock ○ On demand

YBC152F, YBC252F, YBM153F, YBM253F available

HC¹ Coated carbide
HT Uncoated cermet
HC² Coated cermet
HW Uncoated carbide

Tool holder

DDJNR/L	PDJNR/L	PDNNR/L	MDJNR/L	MDPNN	S***-PDSNR/L	S***-PDUNR/L
Kr: 93°	Kr: 93°	Kr: 63°	Kr: 93°	Kr: 62°30'	Kr: 62°30'	Kr: 93°
						
A231	A240	A241	A254	A255	A326	A327

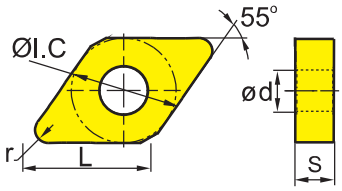
System code A48 | Grade selection A42 | Technical info A501 | Cutting data A366

Ideal machining conditions
Normal machining conditions
Unfavourable machining conditions

DNMM	L	I.C	S	d
15 06	15.5	12.7	6.35	5.16

Turning inserts

DN** negative insert



	ISO	r	a_p	f	HC¹ (CVD)											HC¹ (PVD)						HT		HC²	HW	
					YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
DR	**DNMM150608-DR**	0.8	0.7-6.0	0.20-0.55			●		●																		
	DNMM150612-DR	1.2	1-6	0.25-0.70			●		●	●																	
	DNMM150616-DR	1.6	1.5-6.0	0.32-0.90			●		●																		
Roughing																											
ER	**DNMM150608-ER**	0.8	0.7-6.0	0.20-0.55							○																
	DNMM150612-ER	1.2	1-6	0.25-0.70								○															
Roughing																											
HDR	**DNMM150608-HDR**	0.8	1-7	0.25-0.60			●		○																		
	DNMM150612-HDR	1.2	1-7	0.3-0.8			○																				
	DNMM150616-HDR	1.6	1.5-7.0	0.4-1.0			○																				
Roughing																											
LR	**DNMM150608-LR**	0.8	2-6	0.1-0.6			●		●			●															
	DNMM150612-LR	1.2	2-6	0.2-0.8					●			○															
	DNMM150616-LR	1.6	2-6	0.25-1.00			●		●																		
Roughing																											

● Ex stock ○ On demand
YBC152F, YBC252F, YBM153F, YBM253F available

HC¹ Coated carbide
HT Uncoated cermet
HC² Coated cermet
HW Uncoated carbide

Tool holder

DDJNR/L	PDJNR/L	PDNNR/L	MDJNR/L	MDPNN	S***-PDSNR/L	S***-PDUNR/L
Kr: 93°	Kr: 93°	Kr: 63°	Kr: 93°	Kr: 62°30'	Kr: 62°30'	Kr: 93°
						
A231	A240	A241	A254	A255	A326	A327

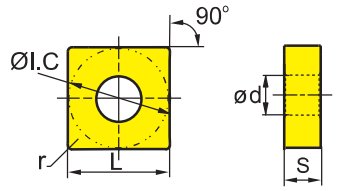
System code A48 Grade selection A42 Technical info A501 Cutting data A366

Turning inserts

- Ideal machining conditions
- Normal machining conditions
- Unfavourable machining conditions

SNMG	L	I.C	S	d
09 03	9.525	9.525	3.18	3.81
12 04	12.7	12.7	4.76	5.16

SN** negative insert



	HC[1] (CVD)											HC[1] (PVD)							HT		HC[2]	HW	
P	○	○	○	◔	◔	◔									◔	◔			○	◔	○		
M							○	◔				○	○	◔	◔	◔	○		○	◔	○		
K									●	◔	◔	◔											
N												●	●									●	◔
S													●	○	◔	◔	◔	○				●	◔
H																							

	ISO	r	a_p	f	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
ADF	**SNMG120404-ADF**	0.4	0.5-5.0	0.1-0.3	●																●							
	SNMG120408-ADF	0.8	0.5-5.0	0.12-0.50	●																●							
	SNMG120412-ADF	1.2	1-5	0.2-0.6	●																●							
Finishing																												
DF	**SNMG120408-DF**	0.8	0.3-1.5	0.1-0.4			●		●																			
	SNMG120412-DF	1.2	0.35-1.50	0.15-0.50			●		●																			
Finishing																												
SF	**SNMG090304-SF**	0.4	0.05-0.50	0.05-0.20																						●		
	SNMG090308-SF	0.8	0.05-0.50	0.10-0.35																						○		
	SNMG120404-SF	0.4	0.05-0.50	0.05-0.20																						○		
	SNMG120408-SF	0.8	0.05-0.50	0.10-0.35																						○		
Finishing																												

● Ex stock ○ On demand

YBC152F, YBC252F, YBM153F, YBM253F available

HC[1] Coated carbide
HT Uncoated cermet
HC[2] Coated cermet
HW Uncoated carbide

Tool holder

DSBNR/L	PSBNR/L	PSDNN	PSKNR/L	PSSNR/L	MSBNR/L	MSRNR/L
Kr: 75°	Kr: 75°	Kr: 45°	Kr: 75°	Kr: 45°	Kr: 75°	Kr: 75°
						
A232	A242	A244	A245	A246	A256	A257

MSKNR/L	MSDNN	S***-PSKNR/L
Kr: 75°	Kr: 45°	Kr: 75°
		
A258	A259	A329

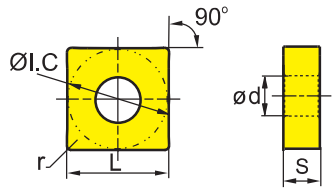
System code A48 | Grade selection A42 | Technical info A501 | Cutting data A366

Turning inserts

- Ideal machining conditions
- Normal machining conditions
- Unfavourable machining conditions

SNMG	L	I.C	S	d
09 03	9.525	9.525	3.18	3.81
12 04	12.7	12.7	4.76	5.16
15 06	15.875	15.875	6.35	6.35

SN** negative insert



	HC¹ (CVD)											HC¹ (PVD)						HT		HC²	HW	
P	○	○	○	◍	◍	◍									◍	◍		○	◍	○		
M							○	◍				○	○	◍	◍	◍	○	○	◍	○		
K									○	◍	◍	◍										
N												○	○								○	◍
S												○	○	◍	◍	◍	○				○	◍
H																						

	ISO	r	a_p	f	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
EF Finishing	**SNMG090304-EF**	0.4	0.5-2.0	0.05-0.30							●								●								
	SNMG090308-EF	0.8	0.5-2.0	0.05-0.40							●								●								
	SNMG090312-EF	1.2	0.5-2.0	0.05-0.45							○																
	SNMG120404-EF	0.4	0.8-3.0	0.05-0.30															●								
	SNMG120408-EF	0.8	0.8-3.0	0.1-0.4															●								
	SNMG120412-EF	1.2	0.8-3.0	0.15-0.45							○								●								
	SNMG150608-EF	0.8	1-4	0.1-0.4							○																
	SNMG150612-EF	1.2	1-4	0.15-0.45							○																

● Ex stock ○ On demand

YBC152F, YBC252F, YBM153F, YBM253F available

HC¹ Coated carbide
HT Uncoated cermet
HC² Coated cermet
HW Uncoated carbide

Tool holder

DSBNR/L	PSBNR/L	PSDNN	PSKNR/L	PSSNR/L	MSBNR/L	MSRNR/L
Kr: 75°	Kr: 75°	Kr: 45°	Kr: 75°	Kr: 45°	Kr: 75°	Kr: 75°
						
A232	A242	A244	A245	A246	A256	A257

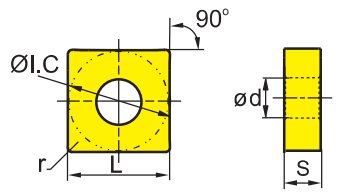
MSKNR/L	MSDNN	S***-PSKNR/L
Kr: 75°	Kr: 45°	Kr: 75°
		
A258	A259	A329

System code A48 | Grade selection A42 | Technical info A501 | Cutting data A366

Turning inserts

- Ideal machining conditions
- Normal machining conditions
- Unfavourable machining conditions

SNMG	L	I.C	S	d
12 04	12.7	12.7	4.76	5.16
15 06	15.875	15.875	6.35	6.35
19 06	19.05	19.05	6.35	7.94



		ISO	r	a_p	f	HC¹ (CVD)										HC¹ (PVD)							HT		HC²	HW	
						YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
XF		**SNMG120404-XF**	0.4	0.5-2.5	0.1-0.25	●			●																			
		SNMG120408-XF	0.8	0.5-2.5	0.1-0.30	●			●																			
Finishing																												
XM		**SNMG120404-XM**	0.4	1-4.2	0.2-0.4	○			○																			
		SNMG120408-XM	0.8	1-4.2	0.2-0.4	●			●																			
		SNMG120412-XM	1.2	1-4.2	0.2-0.6	●			●																			
		SNMG120416-XM	1.6	1-4.2	0.2-0.65	○			○																			
		SNMG150608-XM	0.8	1-5.25	0.2-0.4	●			●																			
		SNMG150612-XM	1.2	1-5.25	0.2-0.6	●			●																			
		SNMG150616-XM	1.6	1-5.25	0.2-0.65	○			●																			
		SNMG190608-XM	0.8	1-6.65	0.2-0.4	○			○																			
		SNMG190612-XM	1.2	1-6.65	0.2-0.6	○			○																			
		SNMG190616-XM	1.6	1-6.65	0.2-0.65	○			○																			
		SNMG190624-XM	2.4	1-6.65	0.2-1.2	○			○																			
Medium Cut																												

● Ex stock ○ On demand

HC¹ Coated carbide
HT Uncoated cermet
HC² Coated cermet
HW Uncoated carbide

Tool holder

DSBNR/L	PSBNR/L	PSDNN	PSKNR/L	PSSNR/L	MSBNR/L	MSRNR/L
Kr: 75°	Kr: 75°	Kr: 45°	Kr: 75°	Kr: 45°	Kr: 75°	Kr: 75°
						
A232	A242	A244	A245	A246	A256	A257

MSKNR/L	MSDNN	S***-PSKNR/L
Kr: 75°	Kr: 45°	Kr: 75°
		
A258	A259	A329

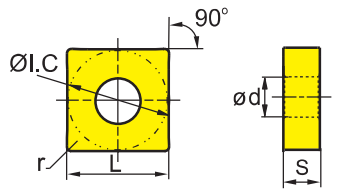
System code A48 | Grade selection A42 | Technical info A501 | Cutting data A366

SNMG	L	I.C	S	d
09 03	9.525	9.525	3.18	3.81
12 04	12.7	12.7	4.76	5.16
15 06	15.875	15.875	6.35	6.35
19 06	19.05	19.05	6.35	7.94

Turning inserts

Ideal machining conditions
Normal machining conditions
Unfavourable machining conditions

SN** negative insert



	HC¹ (CVD)											HC¹ (PVD)						HT		HC²	HW	
P	●	●	●	◉	◉	◉									◉	◉		●	◉	●		
M							○	◉				○	○	◉	◉	◉	○	○	◉	○		
K									●	◉	◉	◉										
N												●	●								●	◉
S												●	●	◉	◉	◉	●				●	◉
H																						

	ISO	r	a_p	f	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
PM	**SNMG090304-PM**	0.4	0.4-4.5	0.1-0.3					○																			
	SNMG090308-PM	0.8	0.5-4.5	0.15-0.50					○				●		●													
	SNMG090312-PM	1.2	0.6-4.5	0.2-0.6					○																			
	SNMG120404-PM	0.4	0.4-6.0	0.1-0.3			●		○						○													
	SNMG120408-PM	0.8	0.5-6.0	0.15-0.50			●		●				○		●													
	SNMG120412-PM	1.2	0.8-6.0	0.18-0.60			●		●				○		●													
	SNMG120416-PM	1.6	1-6	0.23-0.65			○		○				○		○													
	SNMG150608-PM	0.8	0.7-7.5	0.14-0.50			○		○																			
	SNMG150612-PM	1.2	0.8-7.5	0.18-0.60			○		●				●		●													
	SNMG190612-PM	1.2	1.0-7.5	0.20-0.65			○		●				●		●													

Medium Cut

● Ex stock ○ On demand
YBC152F, YBC252F, YBM153F, YBM253F available

HC¹ Coated carbide
HT Uncoated cermet
HC² Coated cermet
HW Uncoated carbide

Tool holder

DSBNR/L	PSBNR/L	PSDNN	PSKNR/L	PSSNR/L	MSBNR/L	MSRNR/L
Kr: 75°	Kr: 75°	Kr: 45°	Kr: 75°	Kr: 45°	Kr: 75°	Kr: 75°
						
A232	A242	A244	A245	A246	A256	A257

MSKNR/L	MSDNN	S***-PSKNR/L
Kr: 75°	Kr: 45°	Kr: 75°
		
A258	A259	A329

System code A48 | Grade selection A42 | Technical info A501 | Cutting data A366

SNMG	L	I.C	S	d
09 03	9.525	9.525	3.18	3.81
12 04	12.7	12.7	4.76	5.16
15 06	15.875	15.875	6.35	6.35
19 06	19.05	19.05	6.35	7.94

Turning inserts

Ideal machining conditions
Normal machining conditions
Unfavourable machining conditions

SN** negative insert					HC¹ (CVD)											HC¹ (PVD)							HT		HC²	HW		
					P																							
					M																							
					K																							
					N																							
					S																							
					H																							
ISO		r	a_p	f	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
DM	**SNMG090304-DM**	0.4	0.4-4.5	0.1-0.3			●		●																			
	SNMG090308-DM	0.8	0.5-4.5	0.15-0.50			●		●																			
	SNMG120404-DM	0.4	0.4-6.0	0.1-0.3			●		●																			
	SNMG120408-DM	0.8	0.5-6.0	0.15-0.50			●		●	○																		
	SNMG120412-DM	1.2	0.8-6.0	0.18-0.60			●		●																			
	SNMG120416-DM	1.6	1-6	0.23-0.65			○		●																			
Medium Cut	**SNMG150608-DM**	0.8	0.8-7.5	0.1-0.5			●		●																			
	SNMG150612-DM	1.2	0.8-7.5	0.18-0.60			●		●																			
	SNMG190612-DM	1.2	1-9	0.18-0.60			●		●																			
	SNMG190616-DM	1.6	1-9	0.23-0.65			○		●																			
EG	**SNMG120408-EG**	0.8	0.5-4.0	0.1-0.5								●									●	●						
	SNMG120412-EG	1.2	0.5-4.0	0.2-0.6								●									●							
Medium Cut																												

● Ex stock ○ On demand
YBC152F, YBC252F, YBM153F, YBM253F available

HC¹ Coated carbide
HT Uncoated cermet
HC² Coated cermet
HW Uncoated carbide

Tool holder

DSBNR/L	PSBNR/L	PSDNN	PSKNR/L	PSSNR/L	MSBNR/L	MSRNR/L
Kr: 75°	Kr: 75°	Kr: 45°	Kr: 75°	Kr: 45°	Kr: 75°	Kr: 75°
						
A232	A242	A244	A245	A246	A256	A257

MSKNR/L	MSDNN	S***-PSKNR/L
Kr: 75°	Kr: 45°	Kr: 75°
		
A258	A259	A329

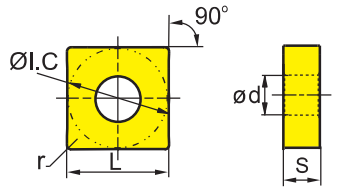
System code A48 | Grade selection A42 | Technical info A501 | Cutting data A366

Turning inserts

Ideal machining conditions
Normal machining conditions
Unfavourable machining conditions

SNMG	L	I.C	S	d
12 04	12.7	12.7	4.76	5.16
15 06	15.875	15.875	6.35	6.35

SN** negative insert



	HC[1] (CVD)											HC[1] (PVD)						HT		HC[2]	HW	
P	●	●	●	◉	◉	◉									◉	◉		●	◉	●		
M							●	◉				●	●	◉	◉	◉	●	●	◉	●		
K									●	◉	◉	◉										
N													●	●							●	◉
S													●	●	◉	◉	◉	●			●	◉
H																						

	ISO	r	a_p	f	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
EM	**SNMG120404-EM**	0.4	0.50-6.35	0.05-0.30								○							●									
	SNMG120408-EM	0.8	0.50-6.35	0.20-0.45							●	●							●									
	SNMG120412-EM	1.2	0.50-6.35	0.25-0.60							●	●							●									
	SNMG120416-EM	1.6	0.50-6.35	0.30-0.75								○																
Medium Cut	**SNMG150612-EM**	1.2	0.5-8.0	0.25-0.60							○	●							●									
	SNMG150616-EM	1.6	0.5-8.0	0.30-0.75								○							●									
TC	**SNMG120404-TC**	0.4	0.5-5.0	0.08-0.25										●														
	SNMG120408-TC	0.8	0.5-5.0	0.15-0.40										●		●												
	SNMG120412-TC	1.2	0.5-5.0	0.2-0.5										●		●												
Medium Cut	**SNMG150616-TC**	1.6	1-7	0.2-0.7										●														
TK	**SNMG120412-TK**	1.2	0.2-0.4	0.2-0.45										●														
Medium Cut																												

● Ex stock ○ On demand
YBC152F, YBC252F, YBM153F, YBM253F available

HC[1] Coated carbide
HT Uncoated cermet
HC[2] Coated cermet
HW Uncoated carbide

Tool holder

DSBNR/L	PSBNR/L	PSDNN	PSKNR/L	PSSNR/L	MSBNR/L	MSRNR/L
Kr: 75°	Kr: 75°	Kr: 45°	Kr: 75°	Kr: 45°	Kr: 75°	Kr: 75°
						
A232	A242	A244	A245	A246	A256	A257

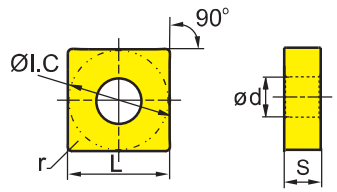
MSKNR/L	MSDNN	S***-PSKNR/L
Kr: 75°	Kr: 45°	Kr: 75°
		
A258	A259	A329

System code A48 | Grade selection A42 | Technical info A501 | Cutting data A366

SNMG	L	I.C	S	d
12 04	12.7	12.7	4.76	5.16
15 06	15.875	15.875	6.35	6.35
19 06	19.05	19.05	6.35	7.94
25 09	25.4	25.4	9.525	9.12

Turning inserts

Ideal machining conditions
Normal machining conditions
Unfavourable machining conditions

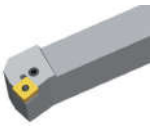


SN** negative insert					HC¹ (CVD)												HC¹ (PVD)							HT		HC²	HW	
					P																							
					M																							
					K																							
					N																							
					S																							
					H																							
ISO		r	a_p	f	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
NM	**SNMG120408-NM**	0.8	0.5-5.0	0.1-0.4													○	●									○	
	SNMG120412-NM	1.2	0.5-5.0	0.15-0.50														○										
Medium Cut																												
DR	**SNMG120408-DR**	0.8	0.7-7.0	0.2-0.5			○		●				●		●													
	SNMG120412-DR	1.2	1-7	0.25-0.70			●		●	●			○		●													
	SNMG120416-DR	1.6	1.5-7.0	0.32-0.75			○		●				●		●													
	SNMG150612-DR	1.2	1-8	0.25-0.70					●				○		●													
	SNMG150616-DR	1.6	1.5-8.0	0.3-0.8			○		●				○		○													
	SNMG190612-DR	1.2	1-10	0.25-0.70			●		●	●					●													
Roughing	**SNMG190616-DR**	1.6	1.5-10.0	0.3-0.8	○		●	●	●	●			○		●													
	SNMG190624-DR	2.4	2-10	0.32-0.90					●	○																		
	SNMG250924-DR	2.4	2-15	0.4-1.2					●	○																		

● Ex stock ○ On demand
YBC152F, YBC252F, YBM153F, YBM253F available

HC¹ Coated carbide
HT Uncoated cermet
HC² Coated cermet
HW Uncoated carbide

Tool holder

DSBNR/L	PSBNR/L	PSDNN	PSKNR/L	PSSNR/L	MSBNR/L	MSRNR/L
Kr: 75°	Kr: 75°	Kr: 45°	Kr: 75°	Kr: 45°	Kr: 75°	Kr: 75°
						
A232	A242	A244	A245	A246	A256	A257

MSKNR/L	MSDNN	S***-PSKNR/L
Kr: 75°	Kr: 45°	Kr: 75°
		
A258	A259	A329

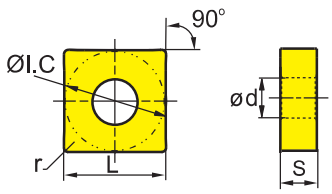
System code A48 | Grade selection A42 | Technical info A501 | Cutting data A366

Turning inserts

- Ideal machining conditions
- Normal machining conditions
- Unfavourable machining conditions

SNMG	L	I.C	S	d
12 04	12.7	12.7	4.76	5.16
15 06	15.875	15.875	6.35	6.35
19 06	19.05	19.05	6.35	7.94

SN** negative insert



	HC¹ (CVD)						HC¹ (PVD)						HT		HC²	HW	
P	●	●	●	◍	◍	◍				◍	◍		●	◍	●		
M				○	◍		○		◍	◍	◍		○	◍	○		
K						●	◍	◍	◍								
N							●	●								●	◍
S							○		◍	◍	◍					○	◍
H																	

	ISO	r	a_p	f	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
ER	**SNMG120408-ER**	0.8	2.0-7.6	0.20-0.55							○	○																
	SNMG120412-ER	1.2	2.0-7.6	0.3-0.6							○	○																
	SNMG150612-ER	1.2	2.0-9.6	0.3-0.6							○	○																
	SNMG190612-ER	1.2	2.0-11.4	0.3-0.6								○																
Roughing	**SNMG190616-ER**	1.6	2.0-11.4	0.35-0.80							○	○																
SNR	**SNMG120408-SNR**	0.8	1-4	0.2-0.6															●				●					
Roughing																												

● Ex stock ○ On demand

YBC152F, YBC252F, YBM153F, YBM253F available

HC¹ Coated carbide
HT Uncoated cermet
HC² Coated cermet
HW Uncoated carbide

Tool holder

DSBNR/L	PSBNR/L	PSDNN	PSKNR/L	PSSNR/L	MSBNR/L	MSRNR/L
Kr: 75°	Kr: 75°	Kr: 45°	Kr: 75°	Kr: 45°	Kr: 75°	Kr: 75°
						
A232	A242	A244	A245	A246	A256	A257

MSKNR/L	MSDNN	S***-PSKNR/L
Kr: 75°	Kr: 45°	Kr: 75°
		
A258	A259	A329

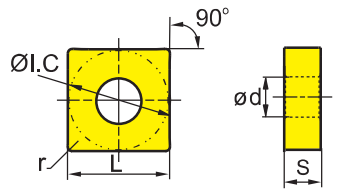
System code A48 | Grade selection A42 | Technical info A501 | Cutting data A366

SNMM	L	I.C	S	d
15 06	15.875	15.875	6.35	6.35
19 06	19.05	19.05	6.35	7.94
25 07	25.4	25.4	7.94	9.12
25 09	25.4	25.4	9.525	9.12

Turning inserts

Ideal machining conditions
Normal machining conditions
Unfavourable machining conditions

SN** negative insert



		ISO	r	a_p	f	HC¹ (CVD)											HC¹ (PVD)							HT		HC²	HW	
						YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
		P				○	○	○	◎	◎	◉										◎	◎			○	◎	○		
		M										○	◎					○	○	◎	◎	◎	◎	○	◎	◎	○		
		K												○	◎	◎	◉												
		N																○	○									○	◎
		S																○	○	◎	◎	◎	◎	○				○	◎
		H																											
DR	**SNMM150612-DR**		1.2	1-7	0.25-0.60					●																			
	SNMM150616-DR		1.6	1.5-9.0	0.32-0.90			○		●	●																		
	SNMM190608-DR		0.8	2.0-10.5	0.25-0.50					○																			
	SNMM190612-DR		1.2	2.0-10.5	0.25-0.60			●		●	●																		
	SNMM190616-DR		1.6	2.0-10.5	0.35-0.90			●		●	●																		
	SNMM190624-DR		2.4	2.0-10.5	0.4-1.1			●	●	●																			
	SNMM250716-DR		1.6	2.5-12.5	0.4-1.0					●																			
	SNMM250724-DR		2.4	2.5-12.5	0.5-1.2			○		●																			
	SNMM250924-DR		2.4	2.5-12.5	0.5-1.2					●	●																		
ER	**SNMM250724-ER**		2.4	2.8-18.0	0.45-1.40					●		○	●																
	SNMM250732-ER		3.2	2.8-18.0	0.32-1.40					●																			
	SNMM250924-ER		2.4	2.8-18.0	0.45-1.40					●	○		○																
	SNMM250932-ER		3.2	2.8-18.0	0.55-1.80					●																			

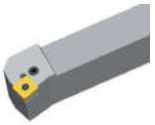
Roughing

Roughing

● Ex stock ○ On demand
YBC152F, YBC252F, YBM153F, YBM253F available

HC¹ Coated carbide
HT Uncoated cermet
HC² Coated cermet
HW Uncoated carbide

Tool holder

DSBNR/L	PSBNR/L	PSDNN	PSKNR/L	PSSNR/L	MSBNR/L	MSRNR/L
Kr: 75°	Kr: 75°	Kr: 45°	Kr: 75°	Kr: 45°	Kr: 75°	Kr: 75°
						
A232	A242	A244	A245	A246	A256	A257

MSKNR/L	MSDNN
Kr: 75°	Kr: 45°
	
A258	A259

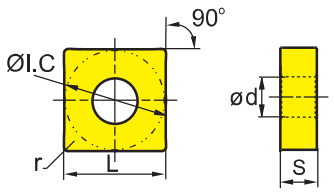
System code A48 | Grade selection A42 | Technical info A501 | Cutting data A366

SNMM	L	I.C	S	d
12 04	12.7	12.7	4.76	5.16
15 06	15.875	15.875	6.35	6.35
19 06	19.05	19.05	6.35	7.94
25 09	25.4	25.4	9.525	9.12

Ideal machining conditions
Normal machining conditions
Unfavourable machining conditions

Turning inserts

SN** negative insert



					HC¹ (CVD)											HC¹ (PVD)							HT		HC²	HW	
					YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
	ISO		r	a_p																								
P					○	○	○	◉	◉	◉										◉	◉			○	◉	●			
M											○	◉					○	○	◉	◉	◉	○	○	○	◉	●			
K													●	◉	◉	◉													
N																	●	●									●	◉	
S																	●	●	◉	◉	◉	◉	●				●	◉	
H																													
LR Roughing	**SNMM120408-LR**		0.8	1-6	0.1-0.5			○		●																			
	SNMM120412-LR		1.2	1-6	0.2-0.6			○		●																			
	SNMM120416-LR		1.6	1-6	0.25-0.70					○																			
	SNMM150612-LR		1.2	1.5-7.0	0.1-0.5					●																			
	SNMM150616-LR		1.6	1.5-7.0	0.1-0.5			○		○																			
	SNMM190612-LR		1.2	2-10	0.25-0.70			○		●																			
	SNMM190616-LR		1.6	2-10	0.3-1.0			○		●																			
	SNMM190624-LR		2.4	2-10	0.3-1.1			○		●																			
	SNMM250924-LR		2.4	3.0-12.5	0.3-1.2			○		●	○																		

● Ex stock ○ On demand
YBC152F, YBC252F, YBM153F, YBM253F available

HC¹ Coated carbide
HT Uncoated cermet
HC² Coated cermet
HW Uncoated carbide

Tool holder

DSBNR/L	PSBNR/L	PSDNN	PSKNR/L	PSSNR/L	MSBNR/L	MSRNR/L
Kr: 75°	Kr: 75°	Kr: 45°	Kr: 75°	Kr: 45°	Kr: 75°	Kr: 75°
						
A232	A242	A244	A245	A246	A256	A257

MSKNR/L	MSDNN	S***-PSKNR/L
Kr: 75°	Kr: 45°	Kr: 75°
		
A258	A259	A329

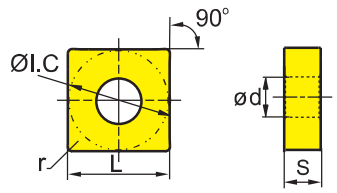
System code A48 | Grade selection A42 | Technical info A501 | Cutting data A366

SNMM	L	I.C	S	d
12 04	12.7	12.7	4.76	5.16
15 06	15.875	15.875	6.35	6.35
19 06	19.05	19.05	6.35	7.94
25 07	25.4	25.4	7.94	9.12
25 09	25.4	25.4	9.525	9.12

Turning inserts

Ideal machining conditions
Normal machining conditions
Unfavourable machining conditions

SN** negative insert



	HC¹ (CVD)											HC¹ (PVD)							HT		HC²	HW		
	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
P	○	○	○	◍	◍	◍										◍	◍			○	◍	○		
M							○	◍						○	○	◍	◍	◍	○	○	◍	○		
K									○	◍	◍	◍												
N													○	○									○	◍
S														○	○	◍	◍	◍	○				○	◍
H																								

	ISO	r	a_p	f	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
HDR  Roughing	**SNMM120408-HDR**	0.8	1-6	0.1-0.6					●																			
	SNMM120412-HDR	1.2	1.5-6.0	0.2-0.7					○																			
	SNMM150608-HDR	0.8	1-7	0.2-0.6						○																		
	SNMM150612-HDR	1.2	1-7	0.25-0.70			●		●																			
	SNMM150616-HDR	1.6	1.5-9.0	0.32-1.00					○																			
	SNMM190612-HDR	1.2	2.0-10.5	0.25-0.70			○		○																			
	SNMM190616-HDR	1.6	2.0-10.5	0.35-1.00			●		●			○																
	SNMM190624-HDR	2.4	2.0-10.5	0.4-1.2			●		●																			
	SNMM250724-HDR	2.4	2.5-12.5	0.5-1.4					●																			
	SNMM250924-HDR	2.4	2.5-12.5	0.5-1.4			●		●	●																		

● Ex stock ○ On demand
YBC152F, YBC252F, YBM153F, YBM253F available

HC¹ Coated carbide
HT Uncoated cermet
HC² Coated cermet
HW Uncoated carbide

Tool holder

DSBNR/L	PSBNR/L	PSDNN	PSKNR/L	PSSNR/L	MSBNR/L	MSRNR/L
Kr: 75°	Kr: 75°	Kr: 45°	Kr: 75°	Kr: 45°	Kr: 75°	Kr: 75°
						
A232	A242	A244	A245	A246	A256	A257

MSKNR/L	MSDNN	S***-PSKNR/L
Kr: 75°	Kr: 45°	Kr: 75°
		
A258	A259	A329

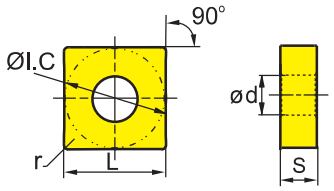
System code A48 | Grade selection A42 | Technical info A501 | Cutting data A366

Turning inserts

Ideal machining conditions
Normal machining conditions
Unfavourable machining conditions

SNMM	L	I.C	S	d
19 06	19.05	19.05	6.35	7.94
25 09	25.4	25.4	9.525	9.12

SN** negative insert



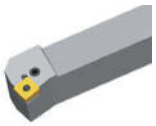
		HC¹ (CVD)											HC¹ (PVD)						HT		HC²	HW	
		YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
P		●	●	●	◍	◍	◍										◍	◍			◍	◍	●		
M								○	◍					○	○	◍	◍	◍	◍	○	◍	◍	○		
K										◍	◍	◍	◍												
N														●	●									◍	◍
S														○	○	◍	◍	◍	◍	○				◍	◍
H																									

	ISO	r	a_p	f																					
HPR	**SNMM190616-HPR**	1.6	2.0-10.5	0.35-1.00				●																	
	SNMM190624-HPR	2.4	2.0-10.5	0.4-1.2			○	●																	
	SNMM250924-HPR	2.4	2.0-12.5	0.5-1.4			○	●	●																
Roughing																									

● Ex stock ○ On demand
YBC152F, YBC252F, YBM153F, YBM253F available

HC¹ Coated carbide
HT Uncoated cermet
HC² Coated cermet
HW Uncoated carbide

Tool holder

PSBNR/L	PSDNN	PSKNR/L	PSSNR/L	MSBNR/L	MSRNR/L	MSKNR/L
Kr: 75°	Kr: 45°	Kr: 75°	Kr: 45°	Kr: 75°	Kr: 75°	Kr: 75°
						
A242	A244	A245	A246	A256	A257	A258

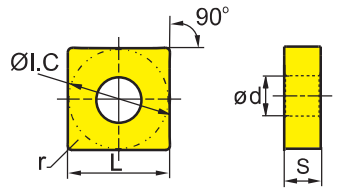
System code A48 | Grade selection A42 | Technical info A501 | Cutting data A366

Turning inserts

- Ideal machining conditions
- Normal machining conditions
- Unfavourable machining conditions

SNMG	L	I.C	S	d
12 04	12.7	12.7	4.76	5.16
25 07	25.4	25.4	7.94	9.12
25 09	25.4	25.4	9.525	9.12

SN** negative insert



	HC¹ (CVD)											HC¹ (PVD)							HT		HC²	HW		
	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
P	○	○	○	◎	◎	◎										◎	◎			○	◎	○		
M							○	◎					○	○	◎	◎	◎	◎	○	○	◎	○		
K									○	◎	◎	◎												
N													○	○									○	◎
S													○	○	◎	◎	◎	◎	○				○	◎
H																								

	ISO	r	a_p	f
Basic	**SNMG120408**	0.8	0.5-6.0	0.1-0.6
	SNMG120412	1.2	0.5-6.0	0.1-0.7
	SNMG250724	2.4	1-9	0.1-1.1
	SNMG250924	2.4	1-9	0.1-1.1
Medium Cut				

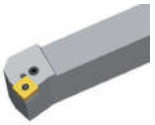
	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
Basic																								
SNMG120408			●		●																			
SNMG120412			○		○																			
SNMG250724																								
SNMG250924																								

● Ex stock ○ On demand

YBC152F, YBC252F, YBM153F, YBM253F available

HC¹ Coated carbide
HT Uncoated cermet
HC² Coated cermet
HW Uncoated carbide

Tool holder

DSBNR/L	PSBNR/L	PSDNN	PSKNR/L	PSSNR/L	MSBNR/L	MSRNR/L
Kr: 75°	Kr: 75°	Kr: 45°	Kr: 75°	Kr: 45°	Kr: 75°	Kr: 75°
						
A232	A242	A244	A245	A246	A256	A257

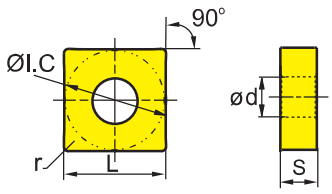
MSKNR/L	MSDNN	S***-PSKNR/L
Kr: 75°	Kr: 45°	Kr: 75°
		
A258	A259	A329

System code A48 | Grade selection A42 | Technical info A501 | Cutting data A366

SN**	L	I.C	S	d
12 04	12.7	12.7	4.76	5.16
15 06	15.875	15.875	6.35	6.35
19 06	19.05	19.05	6.35	7.94
25 07	25.4	25.4	7.94	9.12

Turning inserts

Ideal machining conditions
Normal machining conditions
Unfavourable machining conditions



SN** negative insert					HC¹ (CVD)											HC¹ (PVD)						HT		HC²	HW	
					P																					
					M																					
					K																					
					N																					
					S																					
					H																					
ISO		r	a_p	f	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
Flat	**SNMA120408**	0.8	0.5-5.0	0.1-0.5									●	●	●													
	SNMA120412	1.2	0.5-5.0	0.2-0.7									○	○	●	○												
	SNMA120416	1.6	0.5-5.0	0.2-1.0									○	●	○													
	SNMA150608	0.8	0.8-7.0	0.1-0.5											○													
	SNMA150612	1.2	0.8-7.0	0.2-0.7											●													
	SNMA190612	1.2	0.8-7.0	0.2-0.7									○		●													
	SNMA190616	1.6	0.8-7.0	0.3-0.8									○		●													
Basic	**SNMM250724-1**	2.4	2.0-12.5	0.3-1.2					●	●																		

● Ex stock ○ On demand
YBC152F, YBC252F, YBM153F, YBM253F available

HC¹ Coated carbide
HT Uncoated cermet
HC² Coated cermet
HW Uncoated carbide

Tool holder

DSBNR/L	PSBNR/L	PSDNN	PSKNR/L	PSSNR/L	MSBNR/L	MSRNR/L
Kr: 75°	Kr: 75°	Kr: 45°	Kr: 75°	Kr: 45°	Kr: 75°	Kr: 75°
						
A232	A242	A244	A245	A246	A256	A257

MSKNR/L	MSDNN	S***-PSKNR/L
Kr: 75°	Kr: 45°	Kr: 75°
		
A258	A259	A329

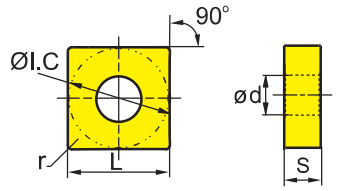
System code A48 | Grade selection A42 | Technical info A501 | Cutting data A366

Turning inserts

- Ideal machining conditions
- Normal machining conditions
- Unfavourable machining conditions

SNMM	L	I.C	S	d
19 06	19.05	19.05	6.35	7.94
25 09	25.4	25.4	9.525	9.12

SN** negative insert



	HC¹ (CVD)											HC¹ (PVD)							HT		HC²	HW	
P	●	●	●	⊛	⊛	⊛									⊛	⊛				●	⊛	●		
M							○	⊛				○	○	⊛	⊛	⊛	⊛	○	○	⊛	○			
K									●	⊛	⊛	⊛												
N												●	●										●	⊛
S													○	○	⊛	⊛	⊛	○					○	⊛
H																								

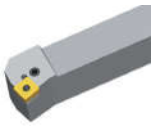
	ISO	r	a_p	f	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
Basic	**SNMM190612**	1.2	1.5-10.5	0.2-0.7					○																			
	SNMM190616	1.6	0.5-10.5	0.2-1.0					○																			
	SNMM250924	2.4	2.0-12.5	0.3-1.2					●																			

● Ex stock ○ On demand

YBC152F, YBC252F, YBM153F, YBM253F available

HC¹ Coated carbide
HT Uncoated cermet
HC² Coated cermet
HW Uncoated carbide

Tool holder

PSBNR/L	PSDNN	PSKNR/L	PSSNR/L	MSBNR/L	MSRNR/L	MSKNR/L
Kr: 75°	Kr: 45°	Kr: 75°	Kr: 45°	Kr: 75°	Kr: 75°	Kr: 75°
						
A242	A244	A245	A246	A256	A257	A258

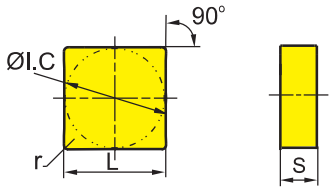
System code A48 | Grade selection A42 | Technical info A501 | Cutting data A366

Turning inserts

Ideal machining conditions
Normal machining conditions
Unfavourable machining conditions

SNUN	L	I.C	S
12 04	12.7	12.7	4.76
19 04	19.05	19.05	4.76

SN** negative insert



	HC[1] (CVD)											HC[1] (PVD)						HT		HC[2]	HW	
	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
P	●	●	●	◉	◉	◉										◉	◉			◉	◉	●		
M							○	◉					○	○	◉	◉	◉	◉	○	◉	◉	○		
K									◉	◉	◉	◉												
N													●	●									●	◉
S													○	○	◉	◉	◉	◉	○				○	◉
H																								

	ISO	r	a_p	f
Flat	**SNUN120408**	0.8	0.7-6.0	0.2-0.5
	SNUN120412	1.2	0.7-6.0	0.25-0.60
	SNUN190412	1.2	0.9-6.0	0.25-0.60

● Ex stock ○ On demand

HC[1] Coated carbide
HT Uncoated cermet
HC[2] Coated cermet
HW Uncoated carbide

Tool holder

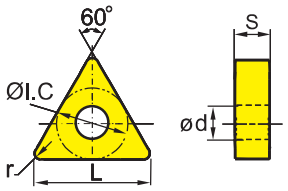
CSKNR/L	CSRNR/L	CSDNN
Kr: 75°	Kr: 75°	Kr: 45°
		
A296	A297	A299

System code A48 Grade selection A42 Technical info A501 Cutting data A366

Turning inserts

- Ideal machining conditions
- Normal machining conditions
- Unfavourable machining conditions

TN**	L	I.C	S	d
16 04	16.5	9.525	4.76	3.81
22 04	22	12.7	4.76	5.16



TN** negative insert					HC¹ (CVD)											HC¹ (PVD)							HT		HC²	HW	
					YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
P					○	○	○	⊛	⊛	⊛											⊛	⊛		○	⊛	○		
M											○	⊛					○	○	⊛	⊛	⊛	○		○	⊛	○		
K													○	⊛	⊛	⊛												
N																	○	○									⊛	⊛
S																		○	⊛	⊛	⊛	⊛	○				○	⊛
H																												
ISO		r	a_p	f																								
WG	**TNMX160408-WG**	0.8	0.5-5.0	0.15-0.70			●																					
	TNMX160412-WG	1.2	0.8-6.0	0.20-0.75			○																					
Wiper																												
ADF	**TNMG160404-ADF**	0.4	0.5-5.0	0.05-0.30		●															●			●				
	TNMG160408-ADF	0.8	0.5-5.0	0.1-0.4		●														○	●			●				
	TNMG160412-ADF	1.2	0.5-5.0	0.2-0.5		●															●							
Finishing																												
DF	**TNMG160404-DF**	0.4	0.15-2.00	0.08-0.25			●		●																			
	TNMG160408-DF	0.8	0.15-2.00	0.1-0.3			●		●																			
	TNMG160412-DF	1.2	0.35-1.50	0.15-0.50			●		●																			
	TNMG220408-DF	0.8	0.3-1.5	0.1-0.4			●		●																			
Finishing	**TNMG220412-DF**	1.2	0.35-1.50	0.15-0.50			●																					

● Ex stock ○ On demand

YBC152F, YBC252F, YBM153F, YBM253F available

HC¹ Coated carbide
HT Uncoated cermet
HC² Coated cermet
HW Uncoated carbide

Tool holder

DTGNR/L	PTFNR/L	PTTNR/L	PTGNR/L	MTGNR/L	MTJNR/L	MTJNR/L
Kr: 91°	Kr: 91°	Kr: 60°	Kr: 90°	Kr: 90°	Kr: 93°	Kr: 93°
						
A233	A247	A248	A249	A260	A261	A262

MTFNR/L	S***-PTFNR/L
Kr: 91°	Kr: 90°
	
A263	A330

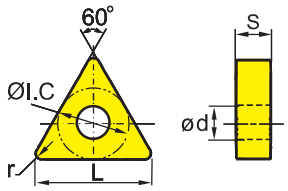
System code A48 | Grade selection A42 | Technical info A501 | Cutting data A366

Turning inserts

- Ideal machining conditions
- Normal machining conditions
- Unfavourable machining conditions

TNMG	L	I.C	S	d
16 04	16.5	9.525	4.76	3.81

TN** negative insert



	HC¹ (CVD)											HC¹ (PVD)						HT		HC²	HW	
P	●	●	●	◍	◍	◍									◍	◍		●	◍	●		
M							○	◍				○	○	◍	◍	◍	○	○	◍	○		
K									●	◍	◍	◍										
N													●	●							◍	◍
S													●	○	◍	◍	◍	○			◍	◍
H																						

	ISO	r	a_p	f	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
SF	**TNMG160404-SF**	0.4	0.05-1.00	0.05-0.30																				○		●		
	TNMG160408-SF	0.8	0.05-1.00	0.05-0.40																						●		
Finishing																												

● Ex stock ○ On demand

HC¹ Coated carbide
HT Uncoated cermet
HC² Coated cermet
HW Uncoated carbide

Tool holder

DTGNR/L	PTFNR/L	PTTNR/L	PTGNR/L	MTGNR/L	MTJNR/L	MTJNR/L
Kr: 91°	Kr: 91°	Kr: 60°	Kr: 90°	Kr: 90°	Kr: 93°	Kr: 93°
						
A233	A247	A248	A249	A260	A261	A262

MTFNR/L	S***-PTFNR/L
Kr: 91°	Kr: 90°
	
A263	A330

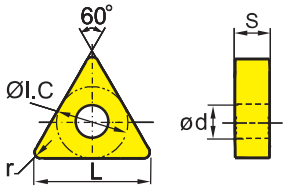
System code A48 | Grade selection A42 | Technical info A501 | Cutting data A366

Turning inserts

- Ideal machining conditions
- Normal machining conditions
- Unfavourable machining conditions

TNMG	L	I.C	S	d
11 03	11	6.35	3.18	2.26
16 04	16.5	9.525	4.76	3.81
22 04	22	12.7	4.76	5.16

TN** negative insert



	HC[1] (CVD)											HC[1] (PVD)							HT		HC[2]	HW		
	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
P	○	○	○	◍	◍	◍											◍	◍		○	◍	○			
M							○	◍						○	○	◍	◍	◍	○	○	◍	○			
K									◍	◍	◍	◍													
N													○	○									◍	◍	
S													◍	◍	◍	◍	◍	◍	○				◍	◍	
H																									

	ISO	r	a_p	f	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
EF	**TNMG110304-EF**	0.4	0.1-1.0	0.05-0.20																●								
	TNMG110308-EF	0.8	0.1-1.0	0.05-0.40																●								
	TNMG160404-EF	0.4	0.1-1.5	0.05-0.30							●									●								
	TNMG160408-EF	0.8	0.1-1.5	0.1-0.4							●									●								
	TNMG160412-EF	1.2	0.2-2.5	0.15-0.40							○									●								
Finishing	**TNMG220404-EF**	0.4	0.5-2.5	0.05-0.25							○									●								
	TNMG220408-EF	0.8	0.5-2.5	0.1-0.4							○									●								

● Ex stock ○ On demand

YBC152F, YBC252F, YBM153F, YBM253F available

HC[1] Coated carbide
HT Uncoated cermet
HC[2] Coated cermet
HW Uncoated carbide

Tool holder

DTGNR/L	PTFNR/L	PTTNR/L	PTGNR/L	MTGNR/L	MTJNR/L	MTJNR/L
Kr: 91°	Kr: 91°	Kr: 60°	Kr: 90°	Kr: 90°	Kr: 93°	Kr: 93°
						
A233	A247	A248	A249	A260	A261	A262

MTFNR/L	S***-PTFNR/L
Kr: 91°	Kr: 90°
	
A263	A330

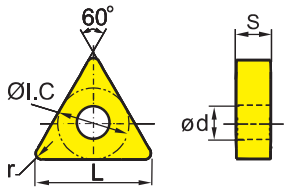
System code A48 | Grade selection A42 | Technical info A501 | Cutting data A366

Turning inserts

- Ideal machining conditions
- Normal machining conditions
- Unfavourable machining conditions

TNMG	L	I.C	S	d
16 04	16.5	9.525	4.76	3.81
22 04	22	12.7	4.76	5.16

TN** negative insert



	HC¹ (CVD)											HC¹ (PVD)						HT		HC²	HW	
P	●	●	●	◉	◉	◉									◉	◉		●	◉	●		
M							●	◉				●	●	◉	◉	◉	●	●	◉	●		
K									●	◉	◉	◉										
N												●	●								●	◉
S												●	●	◉	◉	◉	●				●	◉
H																						

	ISO	r	a_p	f	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
FM	**TNMG160404L-FM**	0.4	0.5-3.0	0.1-0.3					●										●									
	TNMG160404R-FM	0.4	0.5-3.0	0.1-0.3			○		●										●									
	TNMG160408L-FM	0.8	0.5-3.0	0.15-0.50			○		●										●									
Finishing	**TNMG160408R-FM**	0.8	0.5-3.0	0.15-0.50			●		●										●									
XM	**TNMG160404-XM**	0.4	1-5.6	0.2-0.4	●			○																				
	TNMG160408-XM	0.8	1-5.6	0.2-0.4	●			●																				
	TNMG160412-XM	1.2	1-5.6	0.2-0.6	●			●																				
	TNMG160416-XM	1.6	1-5.6	0.2-0.65	○			●																				
Medium Cut	**TNMG220408-XM**	0.8	1-7.7	0.2-0.4	●			●																				
	TNMG220412-XM	1.2	1-7.7	0.2-0.6	●			●																				
	TNMG220416-XM	1.6	1-7.7	0.2-0.65	○			●																				

● Ex stock ○ On demand

YBC152F, YBC252F, YBM153F, YBM253F available

HC¹ Coated carbide
HT Uncoated cermet
HC² Coated cermet
HW Uncoated carbide

Tool holder

DTGNR/L	PTFNR/L	PTTNR/L	PTGNR/L	MTGNR/L	MTJNR/L	MTJNR/L
Kr: 91°	Kr: 91°	Kr: 60°	Kr: 90°	Kr: 90°	Kr: 93°	Kr: 93°
						
A233	A247	A248	A249	A260	A261	A262

MTFNR/L	S***-PTFNR/L
Kr: 91°	Kr: 90°
	
A263	A330

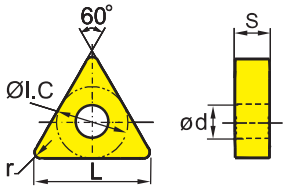
System code A48 | Grade selection A42 | Technical info A501 | Cutting data A366

Turning inserts

- Ideal machining conditions
- Normal machining conditions
- Unfavourable machining conditions

TNMG	L	I.C	S	d
11 03	11	6.35	3.18	2.26
16 04	16.5	9.525	4.76	3.81
22 04	22	12.7	4.76	5.16

TN** negative insert



	HC[1] (CVD)											HC[1] (PVD)							HT		HC[2]	HW		
	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
P	○	○	○	◉	◉	◉										◉	◉			○	◉	○		
M							○	◉					○	○	◉	◉	◉	◉	○	○	◉	○		
K									◉	◉	◉	◉												
N													○	○									◉	◉
S													○	○	◉	◉	◉	◉	○				◉	◉
H																								

	ISO	r	a_p	f	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
DM Medium Cut	**TNMG110308-DM**	0.8	0.3-3.0	0.1-0.4			○		●																			
	TNMG160404-DM	0.4	0.4-5.0	0.1-0.3			●		●			●																
	TNMG160408-DM	0.8	0.5-5.0	0.15-0.50			●		●			○																
	TNMG160412-DM	1.2	0.8-5.0	0.18-0.60			●		●																			
	TNMG220404-DM	0.4	0.4-6.6	0.1-0.3			●		●																			
	TNMG220408-DM	0.8	0.5-6.6	0.15-0.50			●		●																			
	TNMG220412-DM	1.2	0.8-6.6	0.18-0.60			●		●																			
	TNMG220416-DM	1.6	1.0-6.6	0.23-0.65			●		●																			
PM Medium Cut	**TNMG110304-PM**	0.4	0.4-3.0	0.1-0.3					●																			
	TNMG110308-PM	0.8	0.4-3.0	0.15-0.40					●																			
	TNMG160404-PM	0.4	0.4-5.0	0.1-0.3			●		●				●		●													
	TNMG160408-PM	0.8	0.5-5.0	0.15-0.50			●		●				●		●													
	TNMG160412-PM	1.2	0.8-5.0	0.18-0.60			●		●				○		○													
	TNMG220408-PM	0.8	0.5-6.6	0.15-0.50			○		●				●		●													
	TNMG220412-PM	1.2	0.8-6.6	0.18-0.60			○		●				●		●													
	TNMG220416-PM	1.6	1.0-6.6	0.23-0.65					○						○													

● Ex stock ○ On demand

YBC152F, YBC252F, YBM153F, YBM253F available

HC[1] Coated carbide
HT Uncoated cermet
HC[2] Coated cermet
HW Uncoated carbide

Tool holder

DTGNR/L	PTFNR/L	PTTNR/L	PTGNR/L	MTGNR/L	MTJNR/L	MTJNR/L
Kr: 91°	Kr: 91°	Kr: 60°	Kr: 90°	Kr: 90°	Kr: 93°	Kr: 93°
						
A233	A247	A248	A249	A260	A261	A262

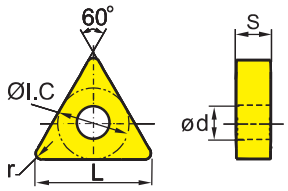
MTFNR/L	S***-PTFNR/L
Kr: 91°	Kr: 90°
	
A263	A330

System code A48 | Grade selection A42 | Technical info A501 | Cutting data A366

- Ideal machining conditions
- Normal machining conditions
- Unfavourable machining conditions

TNMG	L	I.C	S	d
16 04	16.5	9.525	4.76	3.81

Turning inserts



TN** negative insert					HC[1] (CVD)											HC[1] (PVD)						HT		HC[2]	HW	
					P																					
					M																					
					K																					
					N																					
					S																					
					H																					
ISO		r	a_p	f	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
ZM	**TNMG160404-ZM**	0.4	0.5-5.0	0.08-0.30		●																					
	TNMG160408-ZM	0.8	0.5-5.0	0.1-0.4		●																					
	TNMG160412-ZM	1.2	0.5-5.0	0.1-0.6		●																					
Medium Cut																											
SNR	**TNMG160408-SNR**	0.8	1-5.6	0.1-0.5																			●				
Roughing																											

● Ex stock ○ On demand

HC[1] Coated carbide
HT Uncoated cermet
HC[2] Coated cermet
HW Uncoated carbide

Tool holder

DTGNR/L	PTFNR/L	PTTNR/L	PTGNR/L	MTGNR/L	MTJNR/L	MTJNR/L
Kr: 91°	Kr: 91°	Kr: 60°	Kr: 90°	Kr: 90°	Kr: 93°	Kr: 93°
						
A233	A247	A248	A249	A260	A261	A262

MTFNR/L	S***-PTFNR/L
Kr: 91°	Kr: 90°
	
A263	A330

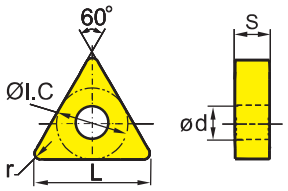
System code A48 | Grade selection A42 | Technical info A501 | Cutting data A366

Turning inserts

Ideal machining conditions
Normal machining conditions
Unfavourable machining conditions

TNMG	L	I.C	S	d
16 04	16.5	9.525	4.76	3.81
22 04	22	12.7	4.76	5.16

TN** negative insert



	HC[1] (CVD)											HC[1] (PVD)							HT		HC[2]	HW		
	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
P	○	○	○	◍	◍	◍											◍	◍		○	◍	○		
M							○	◍					○	○	◍	◍	◍	○		○	◍	○		
K									◍	◍	◍	◍												
N													○	○									◍	◍
S														○	○	◍	◍	◍	○				◍	◍
H																								

	ISO	r	a_p	f	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
EG	**TNMG160404-EG**	0.4	0.5-4.0	0.1-0.3																	●							
	**TNMG160408-EG**	0.8	0.5-4.0	0.1-0.4							●	●								●	●							
	TNMG160412-EG	1.2	0.5-4.0	0.15-0.50								●								●								
Medium Cut																												
EM	**TNMG160404-EM**	0.4	0.5-4.8	0.05-0.30							●	○								●								
	**TNMG160408-EM**	0.8	0.5-4.8	0.10-0.45							●	●								●								
	TNMG160412-EM	1.2	0.5-4.8	0.1-0.6							●	●								●								
	TNMG220408-EM	0.8	0.5-6.6	0.10-0.45							●	●								●								
Medium Cut	**TNMG220412-EM**	1.2	0.5-6.6	0.1-0.6							○	●								●								
	TNMG220416-EM	1.6	0.5-6.6	0.10-0.65								●								●								
TC	**TNMG160404-TC**	0.4	0.5-3.0	0.05-0.20										●		●												
	**TNMG160408-TC**	0.8	0.5-3.0	0.08-0.25										●		●												
	TNMG160412-TC	1.2	1-3	0.1-0.3										●		●												
	TNMG220412-TC	1.2	1-6	0.15-0.40										●		●												
Medium Cut	**TNMG220416-TC**	1.6	1-6	0.2-0.5										●														

● Ex stock ○ On demand
YBC152F, YBC252F, YBM153F, YBM253F available

HC[1] Coated carbide
HT Uncoated cermet
HC[2] Coated cermet
HW Uncoated carbide

Tool holder

DTGNR/L	PTFNR/L	PTTNR/L	PTGNR/L	MTGNR/L	MTJNR/L	MTJNR/L
Kr: 91°	Kr: 91°	Kr: 60°	Kr: 90°	Kr: 90°	Kr: 93°	Kr: 93°
						
A233	A247	A248	A249	A260	A261	A262

MTFNR/L	S***-PTFNR/L
Kr: 91°	Kr: 90°
	
A263	A330

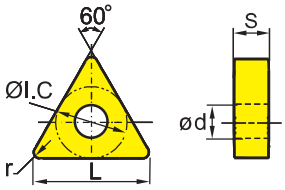
System code A48 | Grade selection A42 | Technical info A501 | Cutting data A366

Turning inserts

- Ideal machining conditions
- Normal machining conditions
- Unfavourable machining conditions

TNMG	L	I.C	S	d
16 04	16.5	9.525	4.76	3.81
22 04	22	12.7	4.76	5.16
27 06	27.5	15.875	6.35	6.35

TN** negative insert



	HC¹ (CVD)										HC¹ (PVD)						HT		HC²	HW	
	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
P	○	○	○	❁	❁	❁										❁	❁			○	❁	○		
M							○	❁					○	○	❁	❁	❁	○		○	❁	○		
K									○	❁	❁	❁												
N													○	○									○	❁
S													○	○	❁	❁	❁	○					○	❁
H																								

	ISO	r	a_p	f	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
DR	**TNMG160408-DR**	0.8	0.7-6.0	0.20-0.55			●		●				●		●													
	TNMG160412-DR	1.2	1-6	0.25-0.65			●		●				○		●													
	TNMG220408-DR	0.8	0.7-7.0	0.20-0.55					●						○													
	TNMG220412-DR	1.2	1-7	0.25-0.65			○		●						●													
	TNMG220416-DR	1.6	1.5-7.0	0.32-0.75					●				○		●													
Roughing	**TNMG270608-DR**	0.8	1.5-12.0	0.35-0.55																								
	TNMG270612-DR	1.2	2-12	0.35-0.75					○																			

● Ex stock ○ On demand

YBC152F, YBC252F, YBM153F, YBM253F available

HC¹ Coated carbide
HT Uncoated cermet
HC² Coated cermet
HW Uncoated carbide

Tool holder

DTGNR/L	PTFNR/L	PTTNR/L	PTGNR/L	MTGNR/L	MTJNR/L	MTJNR/L
Kr: 91°	Kr: 91°	Kr: 60°	Kr: 90°	Kr: 90°	Kr: 93°	Kr: 93°
						
A233	A247	A248	A249	A260	A261	A262

MTFNR/L	S***-PTFNR/L
Kr: 91°	Kr: 90°
	
A263	A330

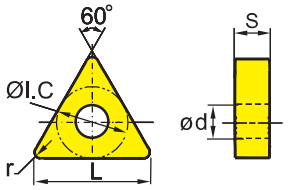
System code A48 | Grade selection A42 | Technical info A501 | Cutting data A366

Turning inserts

- Ideal machining conditions
- Normal machining conditions
- Unfavourable machining conditions

TN**	L	I.C	S	d
16 04	16.5	9.525	4.76	3.81
22 04	22	12.7	4.76	5.16
27 06	27.5	15.875	6.35	5.16

TN** negative insert



	HC¹ (CVD)											HC¹ (PVD)							HT		HC²	HW	
P	○	○	○	◍	◍	◍									◍	◍			○	◍	○		
M							○	◍					○	○	◍	◍	◍	○	○	◍	○		
K									◍	◍	◍	◍											
N												○	○									○	◍
S													○	○	◍	◍	◍	○				○	◍
H																							

	ISO	r	a_p	f	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
DR	**TNMM160408-DR**	0.8	0.7-6.0	0.20-0.55			○		●																			
	TNMM160412-DR	1.2	1-6	0.25-0.70			○																					
	TNMM220408-DR	0.8	0.7-8.0	0.20-0.55			○		○																			
	TNMM220412-DR	1.2	1-8	0.25-0.70					●																			
	TNMM220416-DR	1.6	1.5-8.0	0.32-0.90					○																			
	TNMM270612-DR	1.2	2.5-11.0	0.25-0.70					○																			
Roughing	**TNMM270616-DR**	1.6	2.5-11.0	0.3-0.9					○																			
ER	**TNMG160408-ER**	0.8	2.0-5.6	0.15-0.55								○																
	TNMG160412-ER	1.2	2.0-5.6	0.15-0.60								○																
	TNMG220408-ER	0.8	2.0-7.7	0.15-0.55								○																
	TNMG220412-ER	1.2	2.0-7.7	0.15-0.60								○																
Roughing																												
LR	**TNMM160408-LR**	0.8	1-5	0.1-0.5			●		●			●																
	TNMM160412-LR	1.2	1.5-6.0	0.1-0.6			○		○			○																
Roughing																												

● Ex stock ○ On demand

YBC152F, YBC252F, YBM153F, YBM253F available

HC¹ Coated carbide
HT Uncoated cermet
HC² Coated cermet
HW Uncoated carbide

System code A48 | Grade selection A42 | Technical info A501 | Cutting data A366

Tool holder

DTGNR/L	PTFNR/L	PTTNR/L	PTGNR/L	MTGNR/L	MTJNR/L	MTJNR/L
Kr: 91°	Kr: 91°	Kr: 60°	Kr: 90°	Kr: 90°	Kr: 93°	Kr: 93°
						
A233	A247	A248	A249	A260	A261	A262

MTFNR/L	S***-PTFNR/L
Kr: 91°	Kr: 90°
	
A263	A330

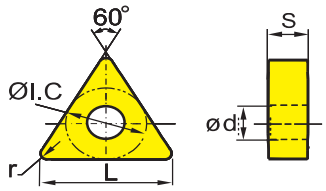
System code > A48 | Grade selection > A42 | Technical info > A501 | Cutting data > A366

Turning inserts

- Ideal machining conditions
- Normal machining conditions
- Unfavourable machining conditions

TNMM	L	I.C	S	d
22 04	22	12.7	4.76	5.16
27 06	27.5	15.875	6.35	6.35

TN** negative insert



	HC[1] (CVD)											HC[1] (PVD)							HT		HC[2]	HW		
P	●	●	●	⊛	⊛	⊛									⊛	⊛				●	⊛	●			
M							○	⊛				○	○	⊛	⊛	⊛	⊛	○	○	⊛	○			
K									●	⊛	⊛	⊛												
N												●	●										●	⊛
S													○	○	⊛	⊛	⊛	⊛	○				○	⊛
H																								

ISO		r	a_p	f	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
HDR	**TNMM220412-HDR**	1.2	2-9	0.25-0.80			○																					
	**TNMM220416-HDR**	1.6	2-9	0.35-1.00					○																			
	TNMM270616-HDR	1.6	2-6	0.35-1.00					●																			
	TNMM270624-HDR	2.4	2-7	0.4-1.2					●			○																	
Heavy Turning																												

● Ex stock ○ On demand

YBC152F, YBC252F, YBM153F, YBM253F available

HC[1] Coated carbide
HT Uncoated cermet
HC[2] Coated cermet
HW Uncoated carbide

Tool holder

PTFNR/L	PTTNR/L	PTGNR/L	MTGNR/L	MTJNR/L	MTJNR/L	MTFNR/L
Kr: 91°	Kr: 60°	Kr: 90°	Kr: 90°	Kr: 93°	Kr: 93°	Kr: 91°
						
A247	A248	A249	A260	A261	A262	A263

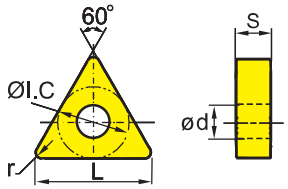
System code A48 | Grade selection A42 | Technical info A501 | Cutting data A366

Turning inserts

- Ideal machining conditions
- Normal machining conditions
- Unfavourable machining conditions

TNMG	L	I.C	S	d
16 04	16.5	9.525	4.76	3.81
22 04	22	12.7	4.76	5.16
27 06	27.5	15.875	6.35	6.35
33 09	33	19.05	9.525	7.94

TN** negative insert



	ISO	r	a_p	f	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
					HC¹ (CVD)												HC¹ (PVD)							HT		HC²	HW	
Basic	**TNMG160404**	0.4	0.2-4.0	0.05-0.20					○																			
	TNMG160408	0.8	0.2-4.0	0.08-0.30			●		●																			
	TNMG160412	1.2	0.2-4.0	0.1-0.4			●																					
	TNMG220404	0.4	0.2-6.0	0.05-0.20					○																			
	TNMG220408	0.8	0.2-6.0	0.1-0.3																								
	TNMG220416	1.6	0.2-6.0	0.1-0.5					○																			
Medium Cut	**TNMG270612**	1.2	0.2-9.0	0.1-0.5					○																			
	TNMG270616	1.6	0.2-9.0	0.1-0.5					○																			
	TNMG330916	1.6	0.2-11.0	0.1-0.5					○																			
	TNMG330924	2.4	0.2-11.0	0.1-0.7																								

● Ex stock ○ On demand

YBC152F, YBC252F, YBM153F, YBM253F available

HC¹ Coated carbide
HT Uncoated cermet
HC² Coated cermet
HW Uncoated carbide

Tool holder

DTGNR/L	PTFNR/L	PTTNR/L	PTGNR/L	MTGNR/L	MTJNR/L	MTJNR/L
Kr: 91°	Kr: 91°	Kr: 60°	Kr: 90°	Kr: 90°	Kr: 93°	Kr: 93°
						
A233	A247	A248	A249	A260	A261	A262

MTFNR/L	S***-PTFNR/L
Kr: 91°	Kr: 90°
	
A263	A330

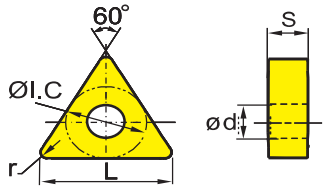
System code A48 | Grade selection A42 | Technical info A501 | Cutting data A366

Turning inserts

- Ideal machining conditions
- Normal machining conditions
- Unfavourable machining conditions

TN**	L	I.C	S	d
16 04	16.5	9.525	4.76	3.81
22 04	22	12.7	4.76	5.16
27 06	27.5	15.875	6.35	6.35

TN** negative insert



	HC[1] (CVD)											HC[1] (PVD)							HT		HC[2]	HW	
	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
P	○	○	○	◍	◍	◍										◍	◍			○	◍	○		
M							○	◍						○	○	◍	◍	◍	○	○	◍	○		
K									◍	◍	◍	◍												
N													○	○									◍	◍
S														○	○	◍	◍	◍	○				◍	◍
H																								

	ISO	r	a_p	f
Flat	**TNMA160404**	0.4	0.2-4.0	0.05-0.20
	TNMA160408	0.8	0.2-4.0	0.08-0.30
	TNMA160412	1.2	0.2-4.0	0.1-0.4
	TNMA160416	1.6	0.5-4.0	0.05-0.50
	TNMA220404	0.4	0.2-6.0	0.05-0.20
	TNMA220408	0.8	0.2-6.0	0.1-0.3
	TNMA220412	1.2	0.2-6.0	0.1-0.4
	TNMA220416	1.6	0.2-6.0	0.1-0.5
Basic	**TNMM160404**	0.4	0.2-7.0	0.05-0.60
	TNMM160408	0.8	0.5-7.0	0.05-0.60
	TNMM220408	0.8	0.5-7.0	0.05-0.60
	TNMM220412	1.2	1-7	0.1-0.6
	TNMM220416	1.6	0.5-7.0	0.05-0.60
	TNMM270616	1.6	0.5-6.5	0.05-0.70

● Ex stock ○ On demand

YBC152F, YBC252F, YBM153F, YBM253F available

HC[1] Coated carbide
HT Uncoated cermet
HC[2] Coated cermet
HW Uncoated carbide

Tool holder

DTGNR/L	PTFNR/L	PTTNR/L	PTGNR/L	MTGNR/L	MTJNR/L	MTJNR/L
Kr: 91°	Kr: 91°	Kr: 60°	Kr: 90°	Kr: 90°	Kr: 93°	Kr: 93°
						
A233	A247	A248	A249	A260	A261	A262

MTFNR/L	S***-PTFNR/L
Kr: 91°	Kr: 90°
	
A263	A330

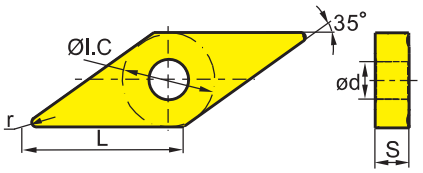
System code A48 | Grade selection A42 | Technical info A501 | Cutting data A366

- Ideal machining conditions
- Normal machining conditions
- Unfavourable machining conditions

VN**	L	I.C	S	d
16 04	16.6	9.525	4.76	3.81

Turning inserts

VN** negative insert



					HC¹ (CVD)										HC¹ (PVD)						HT		HC²	HW	
					P																				
					M																				
					K																				
					N																				
					S																				
					H																				
	ISO		r	a_p	f	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
ADF	**VNMG160404-ADF**		0.4	0.5-2.5	0.1-0.3		●														●						
	VNMG160408-ADF		0.8	0.5-2.5	0.1-0.5		●														●						
Finishing																											
DF	**VNMG160404-DF**		0.4	0.25-1.50	0.07-0.30			○		●																	
	VNMG160408-DF		0.8	0.3-1.5	0.1-0.4			●		●																	
Finishing																											
EF	**VNMG160404-EF**		0.4	0.1-1.5	0.05-0.25							●								●							
	VNMG160408-EF		0.8	0.2-2.5	0.08-0.35							●								●							
	VNMG160412-EF		1.2	0.2-2.5	0.10-0.45							○															
Finishing																											
NF	**VNEG160404-NF**		0.4	0.2-4.0	0.05-0.30															●						○	
	VNEG160408-NF		0.8	0.2-4.0	0.05-0.50															●						○	
Finishing																											

● Ex stock ○ On demand

YBC152F, YBC252F, YBM153F, YBM253F available

HC¹ Coated carbide
HT Uncoated cermet
HC² Coated cermet
HW Uncoated carbide

Tool holder

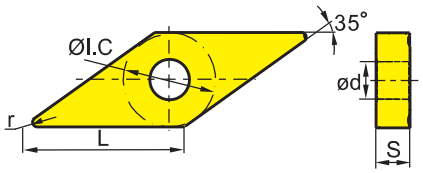
DVVNN	DVJNR/L	MVVNN	MVJNR/L
Kr: 72°30'	Kr: 93°	Kr: 72°30'	Kr: 93°
			
A234	A235	A264	A265

System code A48 | Grade selection A42 | Technical info A501 | Cutting data A366

Turning inserts

- Ideal machining conditions
- Normal machining conditions
- Unfavourable machining conditions

VN**	L	I.C	S	d
16 04	16.6	9.525	4.76	3.81



VN** negative insert		HC¹ (CVD)											HC¹ (PVD)							HT		HC²	HW		
		YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
P		○	○	○	◍	◍	◍										◍	◍			○	◍	○		
M								○	◍						○	○	◍	◍	◍	○	○	◍	○		
K										◍	◍	◍	◍												
N														○	○									◍	◍
S															○	○	◍	◍	◍	○				○	◍
H																									
ISO		r	a_p	f																					
NGF	**VNEG160408-NGF**	0.8	0.2-3.0	0.1-0.3												●									
	VNEG160412-NGF	1.2	0.2-3.0	0.1-0.5												○									
Finishing																									
SF	**VNMG160404-SF**	0.4	0.05-3.00	0.05-0.20																			●		
	VNMG160408-SF	0.8	0.05-3.00	0.05-0.35																			○		
Finishing																									

● Ex stock ○ On demand

HC¹ Coated carbide
HT Uncoated cermet
HC² Coated cermet
HW Uncoated carbide

Tool holder

DVVNN	DVJNR/L	MVVNN	MVJNR/L
Kr: 72°30'	Kr: 93°	Kr: 72°30'	Kr: 93°
			
A234	A235	A264	A265

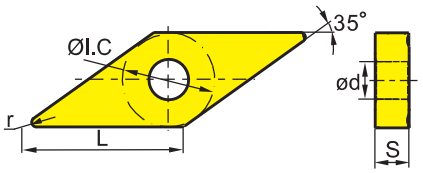
System code A48 | Grade selection A42 | Technical info A501 | Cutting data A366

- Ideal machining conditions
- Normal machining conditions
- Unfavourable machining conditions

VNMG	L	I.C	S	d
16 04	16.6	9.525	4.76	3.81

Turning inserts

VN** negative insert



	HC¹ (CVD)											HC¹ (PVD)						HT		HC²	HW	
	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
P	●	●	●	◉	◉	◉										◉	◉			◉	◉	●		
M							○	◉					○	○	◉	◉	◉	◉	○	◉	◉	○		
K									●	◉	◉	◉												
N													●	●									●	◉
S													○	○	◉	◉	◉	◉	○				○	◉
H																								

	ISO	r	a_p	f	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
XF	**VNMG160404-XF**	0.4	0.5-2.5	0.1-0.25	●																							
	VNMG160408-XF	0.8	0.5-2.5	0.1-0.30	●																							
	VNMG160412-XF	1.2	0.5-2.5	0.1-0.35	●																							
Finishing																												
XM	**VNMG160404-XM**	0.4	1-5.6	0.2-0.4	●			○																				
	VNMG160408-XM	0.8	1-5.6	0.2-0.4	●			●																				
	VNMG160412-XM	1.2	1-5.6	0.2-0.6	●			●																				
	VNMG160416-XM	1.6	1-5.6	0.2-0.65	○			○																				
Medium Cut																												

● Ex stock ○ On demand

HC¹ Coated carbide
HT Uncoated cermet
HC² Coated cermet
HW Uncoated carbide

Tool holder

DVVNN	DVJNR/L	MVVNN	MVJNR/L
Kr: 72°30'	Kr: 93°	Kr: 72°30'	Kr: 93°
			
A234	A235	A264	A265

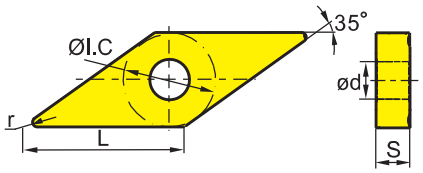
System code A48 Grade selection A42 Technical info A501 Cutting data A366

Turning inserts

- Ideal machining conditions
- Normal machining conditions
- Unfavourable machining conditions

VNMG	L	I.C	S	d
16 04	16.6	9.525	4.76	3.81

VN** negative insert



	ISO	r	a_p	f	HC¹ (CVD)										HC¹ (PVD)							HT		HC²	HW	
					YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
Basic	**VNMG160404**	0.4	0.2-6.0	0.05-0.60			○																				
	VNMG160408	0.8	0.2-6.0	0.08-0.60			○																				
Medium Cut																											
DM	**VNMG160408-DM**	0.8	0.5-4.0	0.15-0.50			●		●																		
	VNMG160412-DM	1.2	0.8-4.0	0.18-0.60			●		●																		
Medium Cut																											
EM	**VNMG160404-EM**	0.4	0.2-3.0	0.05-0.30							●									●							
	VNMG160408-EM	0.8	0.5-4.0	0.10-0.45							●									●							
Medium Cut																											
NM	**VNMG160412-NM**	1.2	0.2-4.0	0.05-0.40															●								
Medium Cut																											

● Ex stock ○ On demand

YBC152F, YBC252F, YBM153F, YBM253F available

HC¹ Coated carbide
HT Uncoated cermet
HC² Coated cermet
HW Uncoated carbide

Tool holder

DVVNN	DVJNR/L	MVVNN	MVJNR/L
Kr: 72°30'	Kr: 93°	Kr: 72°30'	Kr: 93°
			
A234	A235	A264	A265

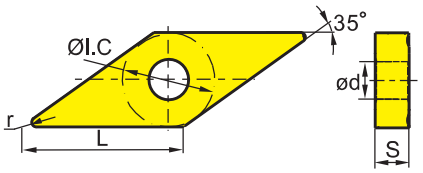
System code A48 | Grade selection A42 | Technical info A501 | Cutting data A366

- Ideal machining conditions
- Normal machining conditions
- Unfavourable machining conditions

VNMG	L	I.C	S	d
16 04	16.6	9.525	4.76	3.81

Turning inserts

VN** negative insert



	HC¹ (CVD)											HC¹ (PVD)						HT		HC²	HW	
P	○	○	○	◉	◉	◉									◉	◉		○	◉	○		
M							○	◉					○	○	◉	◉		○	◉	○		
K									○	◉	◉	◉										
N													○	○							○	◉
S													○	○	◉	◉					○	◉
H																						

	ISO	r	a_p	f	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
PM	**VNMG160404-PM**	0.4	0.4-4.0	0.13-0.40			●		●				●		○													
	VNMG160408-PM	0.8	0.5-4.0	0.15-0.50			●		●				●		●													
	VNMG160412-PM	1.2	0.8-4.0	0.18-0.60					●				●															
Medium Cut																												
TC	**VNMG160404-TC**	0.4	0.5-2.0	0.05-0.20										●		●												
	VNMG160408-TC	0.8	0.5-2.0	0.08-0.25										●		●												
	VNMG160412-TC	1.2	0.5-3.0	0.08-0.30										●		●												
Medium Cut																												
ZM	**VNMG160404-ZM**	0.4	0.5-3.0	0.08-0.30		○																						
	VNMG160408-ZM	0.8	0.5-3.0	0.1-0.4		●																						
Medium Cut																												
SNR	**VNMG160408-SNR**	0.8	0.2-2.0	0.1-0.4															●			○	●					
	VNMG160412-SNR	1.2	0.2-2.0	0.1-0.5															●			○	●					
Roughing																												

● Ex stock ○ On demand

YBC152F, YBC252F, YBM153F, YBM253F available

HC¹ Coated carbide
HT Uncoated cermet
HC² Coated cermet
HW Uncoated carbide

Tool holder

DVVNN	DVJNR/L	MVVNN	MVJNR/L
Kr: 72°30'	Kr: 93°	Kr: 72°30'	Kr: 93°
			
A234	A235	A264	A265

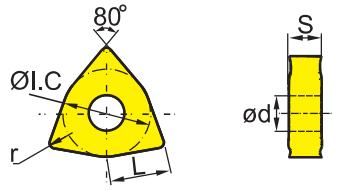
System code A48 | Grade selection A42 | Technical info A501 | Cutting data A366

Turning inserts

- Ideal machining conditions
- Normal machining conditions
- Unfavourable machining conditions

WNMG	L	I.C	S	d
06 T3	6.5	9.525	3.97	3.81
06 04	6.5	9.525	4.76	3.81
08 04	8.7	12.7	4.76	5.16

WN** negative insert



	HC[1] (CVD)											HC[1] (PVD)							HT		HC[2]	HW		
P	●	●	●	◐	◐	◐									◐	◐			●	◐	●			
M							○	◐				○	○	◐	◐	◐	○		○	◐	○			
K									●	◐	◐	◐												
N												●	●									●	◐	
S												●	●	◐	◐	◐	●					●	◐	
H																								

	ISO	r	a_p	f	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
ADF	**WNMG080404-ADF**	0.4	0.2-2.5	0.05-0.30		●															●				●			
	WNMG080408-ADF	0.8	0.5-2.5	0.05-0.40		●														○	●				●			
	WNMG080412-ADF	1.2	0.5-2.5	0.05-0.50		●															●							
Finishing																												
DF	**WNMG060404-DF**	0.4	0.15-2.00	0.08-0.25			●	●																				
	WNMG060408-DF	0.8	0.15-2.00	0.1-0.3			●	●																				
	WNMG080404-DF	0.4	0.15-2.00	0.08-0.25			●	●																				
	WNMG080408-DF	0.8	0.15-2.00	0.1-0.3			●	○																				
Finishing	**WNMG080412-DF**	1.2	0.2-2.5	0.10-0.35			●	●																				
SF	**WNMG060404-SF**	0.4	0.05-0.50	0.05-0.20																						●		
	WNMG060408-SF	0.8	0.05-0.50	0.05-0.35																						●		
	WNMG06T304-SF	0.4	0.05-0.50	0.05-0.20																						●		
	WNMG06T308-SF	0.8	0.05-0.50	0.05-0.35																						●		
	WNMG080404-SF	0.4	0.05-0.50	0.05-0.20																						●		
Finishing	**WNMG080408-SF**	0.8	0.05-0.50	0.05-0.35																						●		

● Ex stock ○ On demand

YBC152F, YBC252F, YBM153F, YBM253F available

HC[1] Coated carbide
HT Uncoated cermet
HC[2] Coated cermet
HW Uncoated carbide

Tool holder

DWLNR/L	PWLNR/L	MWLNR/L	S***-PWLNR/L
Kr: 95°	Kr: 95°	Kr: 95°	Kr: 95°
			
A236	A251	A266	A332

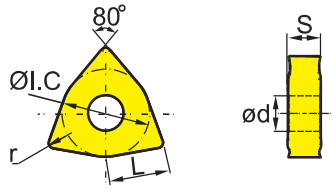
System code A48 | Grade selection A42 | Technical info A501 | Cutting data A366

Turning inserts

Ideal machining conditions
Normal machining conditions
Unfavourable machining conditions

WN**	L	I.C	S	d
06 T3	6.5	9.525	3.97	3.81
06 04	6.5	9.525	4.76	3.81
08 04	8.7	12.7	4.76	5.16

WN** negative insert



	HC[1] (CVD)						HC[1] (PVD)						HT		HC[2]	HW	
P	○	○	○	◎	◎	◎					◎	◎	○	◎	○		
M					○	◎	○	○	◎	◎	◎	○	○	◎	○		
K										○	◎	◎					
N							○	○								○	◎
S							○	○	◎	◎	◎	○				○	◎
H																	

	ISO	r	a_p	f	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
WG	**WNMG080408-WG**	0.8	0.5-5.0	0.15-0.70			●		●																			
	WNMG080412-WG	1.2	0.8-6.0	0.20-0.75			●		○																			
Wiper																												
EF	**WNMG060404-EF**	0.4	0.1-1.5	0.05-0.30							○								●									
	WNMG060408-EF	0.8	0.1-1.5	0.1-0.4							○								●									
	WNMG06T308-EF	0.8	0.1-1.5	0.1-0.4															●									
	WNMG080404-EF	0.4	0.1-1.5	0.05-0.30							●								●									
Finishing	**WNMG080408-EF**	0.8	0.1-1.5	0.1-0.4							●							○	●									
NF	**WNEG080404-NF**	0.4	0.2-3.0	0.05-0.30														○	●									
	WNEG080408-NF	0.8	0.2-2.5	0.05-0.30															●									
Finishing																												
NF	**WNMG060408-NF**	0.8	0.2-2.5	0.05-0.30															●									
Finishing																												

● Ex stock ○ On demand
YBC152F, YBC252F, YBM153F, YBM253F available

HC[1] Coated carbide
HT Uncoated cermet
HC[2] Coated cermet
HW Uncoated carbide

Tool holder

DWLNR/L	PWLNR/L	MWLNR/L	S***-PWLNR/L
Kr: 95°	Kr: 95°	Kr: 95°	Kr: 95°
			
A236	A251	A266	A332

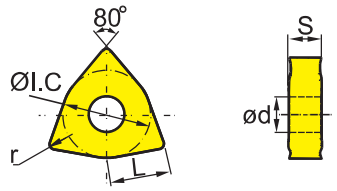
System code A48 Grade selection A42 Technical info A501 Cutting data A366

Turning inserts

- Ideal machining conditions
- Normal machining conditions
- Unfavourable machining conditions

WNMG	L	I.C	S	d
06 04	6.5	9.525	4.76	3.81
08 04	8.7	12.7	4.76	5.16

WN** negative insert



	HC¹ (CVD)											HC¹ (PVD)							HT		HC²	HW	
P	○	○	○	◎	◎	◎									◎	◎			○	◎	○		
M							○	◎				○	○	◎	◎	◎	○		○	◎	○		
K									○	◎	◎	◎											
N												○	○									○	◎
S													○	○	◎	◎	◎	○				○	◎
H																							

	ISO	r	a_p	f	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
XF	**WNMG060404-XF**	0.4	0.5-2.0	0.1-0.25	●																							
	WNMG060408-XF	0.8	0.5-2.0	0.1-0.30	●																							
	WNMG080408-XF	0.8	0.5-2.5	0.1-0.30	●																							
	WNMG080412-XF	1.2	0.5-2.5	0.1-0.35	●																							
Finishing																												
XM	**WNMG060404-XM**	0.4	1-2.1	0.2-0.4	●			○																				
	WNMG060408-XM	0.8	1-2.1	0.2-0.4	●			●																				
	WNMG060412-XM	1.2	1-2.1	0.2-0.6	●			●																				
	WNMG080404-XM	0.4	1-2.8	0.2-0.4	●			●																				
	WNMG080408-XM	0.8	1-2.8	0.2-0.4	●			●																				
	WNMG080412-XM	1.2	1-2.8	0.2-0.6	●			●																				
	WNMG080416-XM	1.6	1-2.8	0.2-0.65	○			○																				
Medium Cut																												

● Ex stock ○ On demand

HC¹ Coated carbide
HT Uncoated cermet
HC² Coated cermet
HW Uncoated carbide

Tool holder

DWLNR/L	PWLNR/L	MWLNR/L	S***-PWLNR/L
Kr: 95°	Kr: 95°	Kr: 95°	Kr: 95°
			
A236	A251	A266	A332

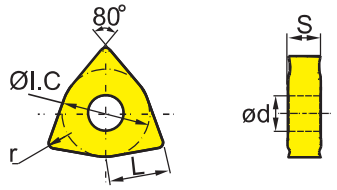
System code A48 | Grade selection A42 | Technical info A501 | Cutting data A366

Turning inserts

- Ideal machining conditions
- Normal machining conditions
- Unfavourable machining conditions

WNMG	L	I.C	S	d
06 T3	6.5	9.525	3.97	3.81
06 04	6.5	9.525	4.76	3.81
08 04	8.7	12.7	4.76	5.16

WN** negative insert



	ISO	r	a_p	f	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
					HC¹ (CVD)												HC¹ (PVD)							HT		HC²	HW	
P					●	●	●	●	●	●										●	●			●	●	●		
M											○	●					○	○	●	●	●	●	○	●	●	○		
K													●	●	●	●												
N																	●	●									●	●
S																	●	○	●	●	●	●	○				●	●
H																												
DM	**WNMG060408-DM**	0.8	0.5-3.0	0.15-0.50			●		●																			
	WNMG060412-DM	1.2	0.8-3.0	0.18-0.60		○	●		●																			
	WNMG06T308-DM	0.8	0.5-3.0	0.15-0.15					○																			
	WNMG080404-DM	0.4	0.5-4.0	0.1-0.4			●		●																			
	WNMG080408-DM	0.8	0.5-4.0	0.15-0.50		○	●		●	●		●																
	WNMG080412-DM	1.2	0.8-4.0	0.18-0.60		○	●		●																			
	WNMG080416-DM	1.6	1-4	0.23-0.65			●		●																			
EG	**WNMG080408-EG**	0.8	0.5-4.0	0.05-0.40							○	●								●	●							
	WNMG080412-EG	1.2	0.5-4.0	0.05-0.60							○	●								●	●							
EM	**WNMG060404-EM**	0.4	0.5-3.0	0.05-0.30							○	●								●								
	WNMG060408-EM	0.8	0.5-3.0	0.1-0.5							●	●								●								
	WNMG06T304-EM	0.4	0.5-3.0	0.05-0.30							●																	
	WNMG06T308-EM	0.8	0.5-3.0	0.1-0.5							●																	
	WNMG06T312-EM	1.2	0.5-3.0	0.1-0.7							○									○								
	WNMG080404-EM	0.4	1-4	0.05-0.30							●	●								●								
	WNMG080408-EM	0.8	1-4	0.1-0.5							●	●								●								
	WNMG080412-EM	1.2	1-4	0.1-0.7							●	●								●								

Medium Cut

● Ex stock ○ On demand

YBC152F, YBC252F, YBM153F, YBM253F available

HC¹ Coated carbide
HT Uncoated cermet
HC² Coated cermet
HW Uncoated carbide

Tool holder

DWLNR/L	PWLNR/L	MWLNR/L	S***-PWLNR/L
Kr: 95°	Kr: 95°	Kr: 95°	Kr: 95°
			
A236	A251	A266	A332

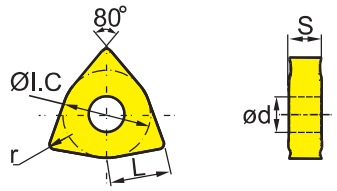
System code A48 | Grade selection A42 | Technical info A501 | Cutting data A366

Turning inserts

- Ideal machining conditions
- Normal machining conditions
- Unfavourable machining conditions

WNMG	L	I.C	S	d
06 04	6.5	9.525	4.76	3.81
08 04	8.7	12.7	4.76	5.16

WN** negative insert



	HC[1] (CVD)											HC[1] (PVD)							HT		HC[2]	HW		
	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
P	○	○	○	◉	◉	◉										◉	◉			○	◉	○		
M							○	◉						○		◉	◉	◉		○	◉	○		
K									○	◉	◉	◉												
N													○	○									○	◉
S														○		◉	◉	◉					○	◉
H																								

	ISO	r	a_p	f	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
PM	**WNMG060408-PM**	0.8	0.5-3.0	0.15-0.50			●		●				●		●													
	WNMG060412-PM	1.2	0.8-3.0	0.18-0.60			●		○				○															
	WNMG080404-PM	0.4	0.4-4.0	0.12-0.40			●		●				●		●													
	WNMG080408-PM	0.8	0.5-4.0	0.15-0.50			●		●	●			●		●													
Medium Cut	**WNMG080412-PM**	1.2	0.8-4.0	0.18-0.60			●		●				●		●													
	WNMG080416-PM	1.6	1-4	0.23-0.65					●				●		●													
ZM	**WNMG080408-ZM**	0.8	0.5-4.0	0.1-0.5		●																						
	WNMG080412-ZM	1.2	1.0-5.5	0.15-0.60		●																						
Medium Cut																												
SNR	**WNMG080408-SNR**	0.8	1-3	0.1-0.5															○			●	○					
	WNMG080412-SNR	1.2	1-3	0.2-0.6																			●					
Roughing																												

● Ex stock ○ On demand

YBC152F, YBC252F, YBM153F, YBM253F available

HC[1] Coated carbide
HT Uncoated cermet
HC[2] Coated cermet
HW Uncoated carbide

Tool holder

DWLNR/L	PWLNR/L	MWLNR/L	S***-PWLNR/L
Kr: 95°	Kr: 95°	Kr: 95°	Kr: 95°
			
A236	A251	A266	A332

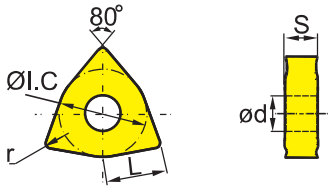
System code A48 | Grade selection A42 | Technical info A501 | Cutting data A366

Ideal machining conditions
Normal machining conditions
Unfavourable machining conditions

WNMG	L	I.C	S	d
08 04	8.7	12.7	4.76	5.16

Turning inserts

WN** negative insert



	ISO	r	a_p	f	HC¹ (CVD)										HC¹ (PVD)						HT		HC²	HW	
					P	P	P	P	P	P	M	M	K	K	K	K	N	N	S	S	S	S	S	S	H	H	H
					YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
NM	**WNMG080404-NM**	0.4	0.2-3.0	0.05-0.30														●									
	WNMG080408-NM	0.8	0.2-3.0	0.1-0.3														●	●	○							
	WNMG080412-NM	1.2	0.2-4.0	0.1-0.4														●	●								
Medium Cut																											
TC	**WNMG080404-TC**	0.4	0.5-3.0	0.08-0.25										●		○											
	WNMG080408-TC	0.8	0.5-4.0	0.15-0.40										●		●											
	WNMG080412-TC	1.2	0.5-4.0	0.2-0.6										●		●											
Medium Cut																											
TK	**WNMG080408-TK**	0.8	0.2-0.4	0.2-0.4										●													
	WNMG080412-TK	1.2	0.2-0.4	0.2-0.45										○													
	WNMG080416-TK	1.6	0.2-0.4	0.2-0.5										○													
Medium Cut																											

● Ex stock ○ On demand

HC¹ Coated carbide
HT Uncoated cermet
HC² Coated cermet
HW Uncoated carbide

Tool holder

DWLNR/L	PWLNR/L	MWLNR/L	S***-PWLNR/L
Kr: 95°	Kr: 95°	Kr: 95°	Kr: 95°
			
A236	A251	A266	A332

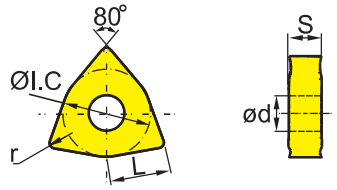
System code A48 Grade selection A42 Technical info A501 Cutting data A366

Turning inserts

- Ideal machining conditions
- Normal machining conditions
- Unfavourable machining conditions

WN**	L	I.C	S	d
06 T3	6.5	9.525	3.97	3.81
06 04	6.5	9.525	4.76	3.81
08 04	8.7	12.7	4.76	5.16

WN** negative insert



	HC[1] (CVD)											HC[1] (PVD)							HT		HC[2]	HW		
	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
P	●	●	●	◉	◉	◉											◉	◉		●	◉	●			
M							○	◉					○	○	◉	◉	◉	◉	○	◉	◉	○		
K									●	◉	◉	◉												
N													●	●									●	◉
S													○	○	◉	◉	◉	◉	○				○	◉
H																								

	ISO	r	a_p	f	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
DR	**WNMG060408-DR**	0.8	0.7-3.5	0.20-0.45			●		●				●		●													
	WNMG060412-DR	1.2	0.8-3.5	0.25-0.55			●		●				○		○													
	WNMG080408-DR	0.8	0.7-5.0	0.20-0.55			●		●	●			●		●													
	WNMG080412-DR	1.2	1-5	0.25-0.70		○	●		●	●			●		●													
Roughing	**WNMG080416-DR**	1.6	1.5-5.0	0.32-0.75			○		●				●		○													
Flat	**WNMA060408**	0.8	0.5-3.0	0.1-0.3									●		●													
	WNMA060412	1.2	0.5-3.0	0.15-0.30											●													
	WNMA06T308	0.8	0.5-3.0	0.1-0.3																								
	WNMA080404	0.4	0.5-4.0	0.08-0.25									○		●	○												
	WNMA080408	0.8	0.5-4.0	0.15-0.30									●		●	●												
	WNMA080412	1.2	0.5-5.0	0.15-0.30									●	○	●	●												
	WNMA080416	1.6	0.5-5.0	0.2-0.5									○	○		○												

● Ex stock ○ On demand

YBC152F, YBC252F, YBM153F, YBM253F available

HC[1] Coated carbide
HT Uncoated cermet
HC[2] Coated cermet
HW Uncoated carbide

Tool holder

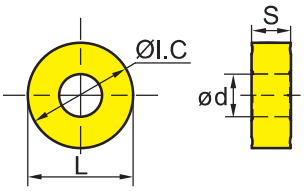
DWLNR/L	PWLNR/L	MWLNR/L	S***-PWLNR/L
Kr: 95°	Kr: 95°	Kr: 95°	Kr: 95°
			
A236	A251	A266	A332

System code A48 | Grade selection A42 | Technical info A501 | Cutting data A366

- Ideal machining conditions
- Normal machining conditions
- Unfavourable machining conditions

RNMG	L	I.C	S	d
12 04	12.7	12.7	4.76	5.16

Turning inserts

RN** negative insert				HC¹ (CVD)										HC¹ (PVD)						HT		HC²	HW	
			P	●	●	●	○	○	◉								○	○		●	○	●		
			M							○	○						○	○	○	○	○	○	○	
			K									○	○	○	○									
			N													●	●						○	○
			S													○	○	○	○	○	○			
			H																					
ISO		a_p	f	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
Basic	**RNMG120400**	0.5-7.0	0.1-1.8											○	○											
 Medium Cut																										

● Ex stock ○ On demand

HC¹ Coated carbide
HT Uncoated cermet
HC² Coated cermet
HW Uncoated carbide

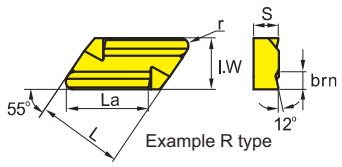
Tool holder	
MRDNN	**MRGNR/L**
	
A267	A268

System code A48 Grade selection A42 Technical info A501 Cutting data A366

KNUX	L	I.W	S
16 04		9.525	4.76

- Ideal machining conditions
- Normal machining conditions
- Unfavourable machining conditions

Turning inserts



KN** negative insert							HC¹ (CVD)											HC¹ (PVD)							HT		HC²	HW	
							YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
P							●	●	●	⊛	⊛	⊛										⊛	⊛			●	⊛	●		
M													○	⊛					○	○	⊛	⊛	⊛	○		○	⊛	○		
K															●	⊛	⊛	⊛												
N																			●	●									●	⊛
S																			●	○	⊛	⊛	⊛	●					●	⊛
H																														
ISO			La	brn	r	a_p	f																							
KNUX	**KNUX160405L11**		16	2.2	0.5	0.2-6.0	0.05-0.70					●																	○	
	KNUX160405L12		16	2.2	0.5	0.2-6.0	0.05-0.70																							
	KNUX160405R11		16	2.2	0.5	0.2-6.0	0.05-0.70					●																	○	
	KNUX160405R12		16	2.2	0.5	0.2-6.0	0.05-0.70																							
	KNUX160410L11		16	2.2	1	0.2-6.0	0.05-0.70																							
Finishing	**KNUX160410L12**		16	2.2	1	0.2-6.0	0.05-0.70		○																					
	KNUX160410R11		16	2.2	1	0.2-6.0	0.05-0.70					●																		
	KNUX160410R12		16	2.2	1	0.2-6.0	0.05-0.70																							

● Ex stock ○ On demand

YBC152F, YBC252F, YBM153F, YBM253F available

HC¹ Coated carbide
HT Uncoated cermet
HC² Coated cermet
HW Uncoated carbide

Tool holder

CKJNR/L	CKNNR/L
Kr: 93°	Kr: 63°
	
A290	A291

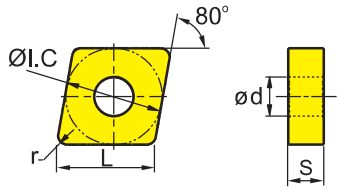
System code A48 | Grade selection A42 | Technical info A501 | Cutting data A366

Turning inserts

- Ideal machining conditions
- Normal machining conditions
- Unfavourable machining conditions

CN**	L	I.C	S	d
19 07	19.3	19.05	7.94	7.93
19 11	19.3	19.05	11	7.8

CN** negative insert



		ISO	r	a_p	f	HC¹ (CVD)											HC¹ (PVD)						HT		HC²	HW	
						YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
RF	Finishing	**CNMG191140-RF**	4	1.0-5.5	0.20-0.60			●																				
RF	Finishing	**CNMM190740-RF**	4	1.0-5.5	0.20-0.60			●																				
		CNMM191140-RF	4	1.0-5.5	0.20-0.60			●																				
RH	Roughing	**CNMM190740-RH**	4	1.5-7.0	0.35-1.20			●		●																		
		CNMM191140-RH	4	1.5-7.0	0.35-1.20			●		●																		

● Ex stock ○ On demand

HC¹ Coated carbide
HT Uncoated cermet
HC² Coated cermet
HW Uncoated carbide

Tool holder

PCLNR/L

Kr: 95°



A318

System code A48 | Grade selection A42 | Technical info A501 | Cutting data A366

Turning inserts

- Ideal machining conditions
- Normal machining conditions
- Unfavourable machining conditions

LNUX	L	l.C	S	d
19 19	19.05	10	19.05	6.35
30 19	30	10	19.05	6.35

LN** negative insert					HC[1] (CVD)											HC[1] (PVD)							HT		HC[2]	HW	
					P																							
					M																							
					K																							
					N																							
					S																							
					H																							
ISO		r	a_p	f	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
RF	**LNUX191940-RF**	4	1,0-5,5	0,20-0,60			●		●																			
	LNUX301940-RF	4	1,0-6,0	0,20-0,70			●		○																			
Heavy Turning																												
RH	**LNUX191940-RH**	4	1,5-7,0	0,35-1,20			●		●																			
	LNUX301940-RH	4	1,5-8,0	0,35-1,40			●		●																			
Heavy Turning																												

● Ex stock ○ On demand

HC[1] Coated carbide
HT Uncoated cermet
HC[2] Coated cermet
HW Uncoated carbide

Tool holder

PLANR/L	PLFNR/L
Kr: 90°	Kr: 90°
	
A316	A317

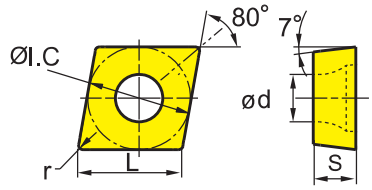
System code A48 | Grade selection A42 | Technical info A501 | Cutting data A366

Turning inserts

Ideal machining conditions
Normal machining conditions
Unfavourable machining conditions

CCGT	L	I.C	S	d
06 02	6.4	6.35	2.38	2.8
09 T3	9.7	9.525	3.97	4.4

CC** positive insert

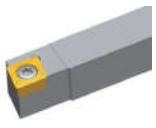


					HC¹ (CVD)												HC¹ (PVD)						HT		HC²	HW	
					P												N										
					M												S										
					K												H										
	ISO		r	a_p	f	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
SF	**CCGT060202-SF**		0.2	0.05-2.00	0.05-0.18																			●		●		
	CCGT060204-SF		0.4	0.05-2.00	0.05-0.35																			●	●	●		
	CCGT09T304-SF		0.4	0.05-2.00	0.05-0.35																			●	●	●		
Finishing																												
USF	**CCGT060202L-USF**		0.2	0.05-2.00	0.05-0.18															○								
	CCGT060204L-USF		0.4	0.05-2.00	0.05-0.35															○								
	CCGT09T301L-USF		0.1	0.2-2.0	0.01-0.08																●							
	CCGT09T302L-USF		0.2	0.2-2.0	0.05-0.18															●								
Finishing	**CCGT09T304L-USF**		0.4	0.2-2.0	0.05-0.20															○								
USF	**CCGT09T304R-USF**		0.4	0.2-2.0	0.05-0.20															○								
Finishing																												

● Ex stock ○ On demand

HC¹ Coated carbide
HT Uncoated cermet
HC² Coated cermet
HW Uncoated carbide

Tool holder

SCACR/L	SCLCR/L	SCACR/L-SC	SCLCR/L-SC	S***-SCLCR/L	S***-SCFCR/L	S***-SCLCR
Kr: 90°	Kr: 95°	Kr: 90°	Kr: 95°	Kr: 95°	Kr: 90°	Kr: 95°
						
A269	A270	A306	A307	A334	A352	A353

E***-SCLCR/L
Kr: 95°

A355

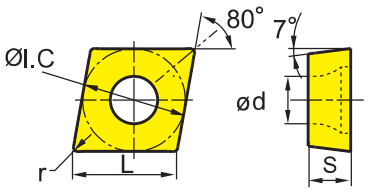
System code A48 Grade selection A42 Technical info A501 Cutting data A366

Turning inserts

- Ideal machining conditions
- Normal machining conditions
- Unfavourable machining conditions

CCMT	L	I.C	S	d
06 02	6.4	6.35	2.38	2.8
09 T3	9.7	9.525	3.97	4.4
12 04	12.9	12.7	4.76	5.56

CC** positive insert



	HC[1] (CVD)											HC[1] (PVD)							HT		HC[2]	HW		
P	●	●	●	◍	◍	◍									◍	◍			●	◍	●			
M							○	◍					○	○	◍	◍	◍	○	○	◍	○			
K									●	◍	◍	◍												
N												●	●										●	◍
S													○	○	◍	◍	◍	○					○	◍
H																								

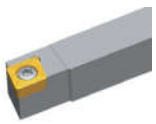
	ISO	r	a_p	f	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
AHF	**CCMT060204-AHF**	0.4	0.2-2.5	0.05-0.20		●															●		●		●			
	CCMT060208-AHF	0.8	0.3-2.5	0.05-0.30		○															●							
	CCMT09T302-AHF	0.2	0.08-2.00	0.04-0.15																						●			
	CCMT09T304-AHF	0.4	0.2-3.0	0.05-0.30		●														○	●		○		●			
	CCMT09T308-AHF	0.8	0.3-3.0	0.05-0.40		●														○	●				●			
	CCMT120404-AHF	0.4	0.5-4.0	0.05-0.30		○														○	●							
Finishing	**CCMT120408-AHF**	0.8	0.8-4.0	0.08-0.40		●															●							
HF	**CCMT060202-HF**	0.2	0.06-1.70	0.03-0.11			●		●																				
	CCMT060204-HF	0.4	0.1-1.7	0.05-0.17			●		●						○														
	CCMT060208-HF	0.8	0.1-1.7	0.05-0.30			○		●																	●			
	CCMT09T302-HF	0.2	0.08-2.00	0.04-0.15			●		●															○					
	CCMT09T304-HF	0.4	0.11-2.00	0.06-0.23			●		●				○		●														
Finishing	**CCMT09T308-HF**	0.8	0.15-2.00	0.08-0.30			●		●				○		●														
	CCMT120404-HF	0.4	0.14-2.40	0.07-0.27			●		●																				
	CCMT120408-HF	0.8	0.2-3.0	0.08-0.30			●		○																				

● Ex stock ○ On demand

YBC152F, YBC252F, YBM153F, YBM253F available

HC[1] Coated carbide
HT Uncoated cermet
HC[2] Coated cermet
HW Uncoated carbide

Tool holder

SCACR/L	**SCLCR/L**	**SCACR/L-SC**	**SCLCR/L-SC**	**A***-SCLCR/L**	**S***-SCFCR/L**	**S***-SCLCR**
Kr: 90°	Kr: 95°	Kr: 90°	Kr: 95°	Kr: 95°	Kr: 90°	Kr: 95°
						
A269	A270	A306	A307	A334	A352	A353

E*-SCLCR/L**
Kr: 95°

A355

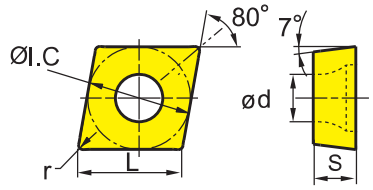
System code A48 | Grade selection A42 | Technical info A501 | Cutting data A366

Turning inserts

- Ideal machining conditions
- Normal machining conditions
- Unfavourable machining conditions

CCMT	L	I.C	S	d
06 02	6.4	6.35	2.38	2.8
09 T3	9.7	9.525	3.97	4.4
12 04	12.9	12.7	4.76	5.56

CC** positive insert



	HC¹ (CVD)											HC¹ (PVD)						HT		HC²	HW	
P	○	○	○	◎	◎	◎									◎	◎		○	◎	○		
M							○	◎				○	○	◎	◎	◎	○	○	◎	○		
K									●	◎	◎	◎										
N												●	●								●	◎
S												●	●	◎	◎	◎	●				●	◎
H																						

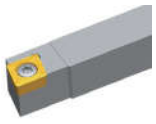
	ISO	r	a_p	f	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
EF Finishing	**CCMT060202-EF**	0.2	0.06-1.70	0.03-0.11							●								●									
	CCMT060204-EF	0.4	0.1-1.7	0.05-0.17							●								●									
	CCMT09T302-EF	0.2	0.08-2.00	0.04-0.15							○								●									
	CCMT09T304-EF	0.4	0.11-2.00	0.06-0.23							●								○	●								
	CCMT09T308-EF	0.8	0.15-2.00	0.08-0.30							●								○	●								
	CCMT120404-EF	0.4	0.14-2.40	0.07-0.27							●									●								
	CCMT120408-EF	0.8	0.2-3.0	0.1-0.3							●									●								
XF Finishing	**CCMT060202-XF**	0.2	0.5-1.5	0.08-0.15				●																				
	CCMT060208-XF	0.8	0.5-1.5	0.08-0.20	●																							
	CCMT09T302-XF	0.2	0.5-2.0	0.08-0.15	●			●																				
	CCMT09T308-XF	0.8	0.5-2.0	0.08-0.25	●			○																				

● Ex stock ○ On demand

YBC152F, YBC252F, YBM153F, YBM253F available

HC¹ Coated carbide
HT Uncoated cermet
HC² Coated cermet
HW Uncoated carbide

Tool holder

SCACR/L	SCLCR/L	SCACR/L-SC	SCLCR/L-SC	A***-SCLCR/L	S***-SCFCR/L	S***-SCLCR
Kr: 90°	Kr: 95°	Kr: 90°	Kr: 95°	Kr: 95°	Kr: 90°	Kr: 95°
						
A269	A270	A306	A307	A334	A352	A353

E***-SCLCR/L
Kr: 95°

A355

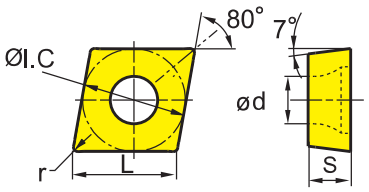
System code A48 | Grade selection A42 | Technical info A501 | Cutting data A366

Turning inserts

- Ideal machining conditions
- Normal machining conditions
- Unfavourable machining conditions

CCMT	L	I.C	S	d
06 02	6.4	6.35	2.38	2.8
09 T3	9.7	9.525	3.97	4.4
12 04	12.9	12.7	4.76	5.56

CC** positive insert



	HC[1] (CVD)											HC[1] (PVD)							HT		HC[2]	HW		
	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
P	○	○	○	◍	◍	◍										◍	◍			○	◍	○		
M							○	◍						○	○	◍	◍	◍	○	○	◍	○		
K									○	◍	◍	◍												
N													○	○									○	◍
S														○	○	◍	◍	◍	○				○	◍
H																								

		ISO	r	a_p	f
EM	 Medium Cut	**CCMT060204-EM**	0.4	0.2-2.4	0.06-0.17
		CCMT060208-EM	0.8	0.4-2.4	0.08-0.23
		CCMT09T304-EM	0.4	0.25-3.00	0.08-0.23
		CCMT09T308-EM	0.8	0.5-3.0	0.1-0.3
		CCMT120404-EM	0.4	0.3-3.6	0.09-0.27
		CCMT120408-EM	0.8	0.6-3.6	0.12-0.36
		CCMT120412-EM	1.2	0.72-3.60	0.14-0.43
XM	 Medium Cut	**CCMT09T304-XM**	0.4	1-2.5	0.15-0.3
		CCMT09T308-XM	0.8	1-2.5	0.15-0.35
		CCMT09T312-XM	1.2	1-2.5	0.15-0.4
		CCMT120404-XM	0.4	1-3.0	0.15-0.3
		CCMT120408-XM	0.8	1-3.0	0.15-0.35
		CCMT120412-XM	1.2	1-3.0	0.15-0.4

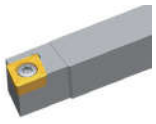
	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
EM							●	●								●								
							●	○								●								
							●	●								●								
							●	●								●								
								●								●								
							●	●								●								
								○																
XM	●			○																				
	●			●																				
	●			●																				
	○			○																				
	○			○																				
	○			○																				

● Ex stock ○ On demand

YBC152F, YBC252F, YBM153F, YBM253F available

HC[1] Coated carbide
HT Uncoated cermet
HC[2] Coated cermet
HW Uncoated carbide

Tool holder

SCACR/L	SCLCR/L	SCACR/L-SC	SCLCR/L-SC	A***-SCLCR/L	S***-SCFCR/L	S***-SCLCR
Kr: 90°	Kr: 95°	Kr: 90°	Kr: 95°	Kr: 95°	Kr: 90°	Kr: 95°
						
A269	A270	A306	A307	A334	A352	A353

E***-SCLCR/L
Kr: 95°

A355

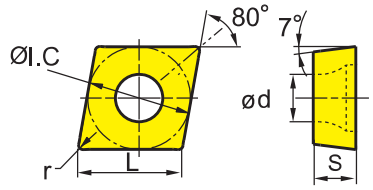
System code A48 | Grade selection A42 | Technical info A501 | Cutting data A366

Turning inserts

- Ideal machining conditions
- Normal machining conditions
- Unfavourable machining conditions

CCMT	L	I.C	S	d
06 02	6.4	6.35	2.38	2.8
09 T3	9.7	9.525	3.97	4.4
12 04	12.9	12.7	4.76	5.56

CC** positive insert



	HC¹ (CVD)										HC¹ (PVD)						HT		HC²	HW	
P	○	○	○	❁	❁	❁								❁	❁		○	❁	○		
M							○	❁			○	○	❁	❁	❁	○	○	❁	○		
K									○	❁											
N											○	○								○	❁
S											○	○	❁	❁	❁	○				○	❁
H																					

ISO		r	a_p	f	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
HM  Medium Cut	**CCMT060204-HM**	0.4	0.2-2.4	0.06-0.17			●		●			●	●		●													
	CCMT060208-HM	0.8	0.2-3.0	0.08-0.20			●		●				●		●													
	CCMT09T304-HM	0.4	0.25-3.00	0.08-0.23			●		●			●	●		●													
	CCMT09T308-HM	0.8	0.5-3.0	0.1-0.3			●		●			●	●		●													
	CCMT120404-HM	0.4	0.3-3.6	0.09-0.27			●		●				○		●													
	CCMT120408-HM	0.8	0.6-3.6	0.12-0.36			●		●				●		●													
	CCMT120412-HM	1.2	0.72-3.60	0.14-0.43			●		○				○															

● Ex stock ○ On demand

YBC152F, YBC252F, YBM153F, YBM253F available

HC¹ Coated carbide
HT Uncoated cermet
HC² Coated cermet
HW Uncoated carbide

Tool holder

SCACR/L	SCLCR/L	SCACR/L-SC	SCLCR/L-SC	A***-SCLCR/L	S***-SCFCR/L	S***-SCLCR
Kr: 90°	Kr: 95°	Kr: 90°	Kr: 95°	Kr: 95°	Kr: 90°	Kr: 95°
						
A269	A270	A306	A307	A334	A352	A353

E***-SCLCR/L
Kr: 95°

A355

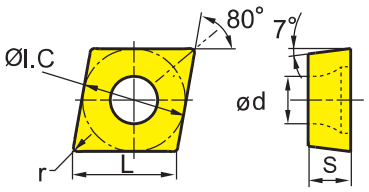
System code A48 | Grade selection A42 | Technical info A501 | Cutting data A366

Turning inserts

● Ideal machining conditions
⊛ Normal machining conditions
✺ Unfavourable machining conditions

CC**	L	I.C	S	d
06 02	6.4	6.35	2.38	2.8
09 T3	9.7	9.525	3.97	4.4
12 04	12.9	12.7	4.76	5.56

CC** positive insert



	ISO	r	a_p	f	HC¹ (CVD)										HC¹ (PVD)							HT		HC²	HW	
					YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
Basic	**CCMW09T304**	0.4	0.1-5.0	0.05-0.50																						○
	CCMW120404	0.4	0.2-5.0	0.05-0.50																					○	○
	CCMW120408	0.8	0.5-5.0	0.08-0.50											○											
Medium Cut																										
TC	**CCMT060204-TC**	0.4	0.5-3.0	0.1-0.3										○		●										
	CCMT09T304-TC	0.4	0.5-3.0	0.1-0.3										○		●										
	CCMT09T308-TC	0.8	0.5-3.0	0.1-0.4										●		●										
	CCMT120404-TC	0.4	1-4	0.1-0.3										●		●										
Medium Cut	**CCMT120408-TC**	0.8	1-4	0.1-0.4										●		●										
HR	**CCMT060204-HR**	0.4	0.5-3.0	0.05-0.24			●	●																		
	CCMT060208-HR	0.8	0.8-3.2	0.09-0.26			●	○							●											
	CCMT09T304-HR	0.4	0.2-4.0	0.05-0.30			●	●							●											
	CCMT09T308-HR	0.8	1-4	0.12-0.35			●	●					●		●											
Roughing	**CCMT120408-HR**	0.8	1.2-4.8	0.14-0.42			●	●					●		●											
	CCMT120412-HR	1.2	1.44-4.80	0.17-0.50			●	●					○													

● Ex stock ○ On demand
YBC152F, YBC252F, YBM153F, YBM253F available

HC¹ Coated carbide
HT Uncoated cermet
HC² Coated cermet
HW Uncoated carbide

Tool holder

SCACR/L	SCLCR/L	SCACR/L-SC	SCLCR/L-SC	A***-SCLCR/L	S***-SCFCR/L	S***-SCLCR
Kr: 90°	Kr: 95°	Kr: 90°	Kr: 95°	Kr: 95°	Kr: 90°	Kr: 95°
						
A269	A270	A306	A307	A334	A352	A353

E***-SCLCR/L
Kr: 95°

A355

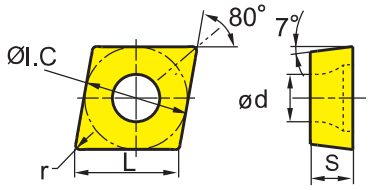
System code A48 | Grade selection A42 | Technical info A501 | Cutting data A366

Turning inserts

- Ideal machining conditions
- Normal machining conditions
- Unfavourable machining conditions

CCGX	L	I.C	S	d
06 02	6.4	6.35	2.38	2.8
09 T3	9.7	9.525	3.97	4.4
12 04	12.9	12.7	4.76	5.56

CC** positive insert



	HC¹ (CVD)											HC¹ (PVD)						HT		HC²	HW	
P	○	○	○	◎	◎	◎									◎	◎		○	◎	○		
M							○	◎				○	○	◎	◎	◎	○	○	◎	○		
K									○	◎	◎	◎										
N												○	○								○	◎
S													○	○	◎	◎	○	○			○	◎
H																						

	ISO	r	a_p	f	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
LC Alum Machining	**CCGX060202-LC**	0.2	0.3-3.0	0.05-0.15													●										●	
	CCGX060204-LC	0.4	0.5-3.0	0.1-0.3													●										●	
	CCGX09T302-LC	0.2	0.5-4.0	0.1-0.2													●										●	
	CCGX09T304-LC	0.4	0.5-5.0	0.1-0.3													●										●	
	CCGX09T308-LC	0.8	0.5-5.0	0.15-0.60													●										●	
	CCGX120404-LC	0.4	0.5-7.0	0.1-0.3													●										●	
	CCGX120408-LC	0.8	0.5-7.0	0.15-0.60													●										●	
LH Alum Machining	**CCGX060202-LH**	0.2	0.3-3.0	0.05-0.15														●									●	
	CCGX060204-LH	0.4	0.5-3.0	0.1-0.3														●									●	
	CCGX060208-LH	0.8	0.6-3.0	0.15-0.40																							●	
	CCGX09T302-LH	0.2	0.4-5.0	0.05-0.15														●									●	
	CCGX09T304-LH	0.4	0.5-5.0	0.1-0.3														●									●	
	CCGX09T308-LH	0.8	0.5-5.0	0.15-0.60														●									●	
	CCGX120402-LH	0.2	0.4-7.0	0.05-0.15														○									○	
	CCGX120404-LH	0.4	0.5-7.0	0.1-0.3														●									●	
	CCGX120408-LH	0.8	0.5-7.0	0.15-0.60														●									●	
	CCGX120412-LH	1.2	0.5-7.0	0.15-0.80														○									●	

● Ex stock ○ On demand

HC¹ Coated carbide
HT Uncoated cermet
HC² Coated cermet
HW Uncoated carbide

System code A48 Grade selection A42 Technical info A501 Cutting data A366

Tool holder

SCACR/L	SCLCR/L	SCACR/L-SC	SCLCR/L-SC	A***-SCLCR/L	S***-SCFCR/L	S***-SCLCR
Kr: 90°	Kr: 95°	Kr: 90°	Kr: 95°	Kr: 95°	Kr: 90°	Kr: 95°
						
A269	A270	A306	A307	A334	A352	A353

E***-SCLCR/L
Kr: 95°

A355

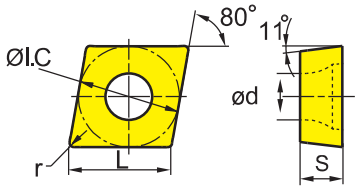
System code A48 | Grade selection A42 | Technical info A501 | Cutting data A366

Turning inserts

- Ideal machining conditions
- Normal machining conditions
- Unfavourable machining conditions

CP**	L	I.C	S	d
06 02	6.4	6.35	2.38	2.8
09 T3	9.7	9.525	3.97	4.4

CP** positive insert



	HC¹ (CVD)											HC¹ (PVD)						HT		HC²	HW	
P	●	●	●	◉	◉	◉									◉	◉		●	◉	●		
M							○	◉					○	○	◉	◉	◉	○	◉	○		
K									●	◉	◉	◉										
N													●	●							●	◉
S													●	○	◉	◉	◉	○			○	◉
H																						

	ISO	r	a_p	f	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
HF	**CPMT060204-HF**	0.4	0.1-1.5	0.04-0.18			○								○					○								
	CPMT060208-HF	0.8	0.1-1.5	0.05-0.25																○								
Finishing																												
SF	**CPGT060202-SF**	0.2	0.05-2.00	0.05-0.25																				○		○		
	CPGT060204-SF	0.4	0.05-2.00	0.05-0.35																				●		●		
	CPGT09T304-SF	0.4	0.05-2.00	0.05-0.35																				●		●		
Finishing																												
Flat	**CPGW060204**	0.4	0.5-1.5	0.05-0.40																							○	
Medium Cut																												
HM	**CPMT09T304-HM**	0.4	0.2-3.5	0.05-0.35																●								
	CPMT09T308-HM	0.8	0.2-3.5	0.10-0.55					○																			
Medium Cut																												

● Ex stock ○ On demand

YBC152F, YBC252F, YBM153F, YBM253F available

HC¹ Coated carbide
HT Uncoated cermet
HC² Coated cermet
HW Uncoated carbide

Tool holder

S***-SCLPR/L	C***-SCLPR/L
Kr: 95°	Kr: 95°
	
A348	A354

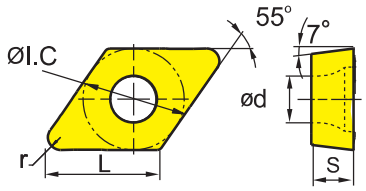
System code A48 Grade selection A42 Technical info A501 Cutting data A366

Turning inserts

- Ideal machining conditions
- Normal machining conditions
- Unfavourable machining conditions

DC**	L	I.C	S	d
07 02	7.8	6.35	2.38	2.8
11 T3	11.6	9.525	3.97	4.4

DC** positive insert



	HC[1] (CVD)											HC[1] (PVD)							HT		HC[2]	HW	
P	○	○	○	◎	◎	◎									◎	◎			○	◎	○		
M							○	◎				○	○	◎	◎	◎	○		○	◎	○		
K									○	◎	◎	◎											
N												○	○									○	◎
S													○	○	◎	◎	◎	○				○	◎
H																							

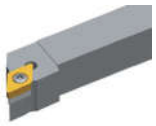
	ISO	r	a_p	f	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
AHF	**DCMT070204-AHF**	0.4	0.2-2.5	0.05-0.20	○															○	●				●			
	DCMT11T302-AHF	0.2	0.5-3.0	0.05-0.15	○															●	●				●	●		
	DCMT11T304-AHF	0.4	0.5-3.0	0.05-0.30	●															●	●				●			
	DCMT11T308-AHF	0.8	0.5-3.0	0.05-0.40	●																●				●	●		
Finishing																												
SF	**DCGT070202-SF**	0.2	0.05-1.50	0.05-0.15																				●	●	○		
	DCGT070204-SF	0.4	0.05-1.50	0.05-0.20																				○		●		
	DCGT070208-SF	0.8	0.05-1.50	0.05-0.30																						●		
	DCGT11T302-SF	0.2	0.05-2.00	0.05-0.15														○						○	●	●		
	DCGT11T304-SF	0.4	0.05-2.00	0.05-0.20																				●	●	●		
Finishing	**DCGT11T308-SF**	0.8	0.05-2.00	0.05-0.30																				●		●		

● Ex stock ○ On demand

YBC152F, YBC252F, YBM153F, YBM253F available

HC[1] Coated carbide
HT Uncoated cermet
HC[2] Coated cermet
HW Uncoated carbide

Tool holder

SDACR/L	SDJCR/L	SDNCN	SDACR/L-SC	SDHCR/L-SC	SDJCR/L-SC	SDNCN-SC
Kr: 90°	Kr: 93°	Kr: 62°30'	Kr: 90°	Kr: 107°30'	Kr: 93°	Kr: 62°30'
						
A271	A272	A273	A308	A309	A310	A311

S***-SDQCR/L	A***-SDUCR/L	S***-SDZCR/L	E***-SDQCR/L
Kr: 107°30'	Kr: 93°	Kr: 85°	Kr: 107°30'
			
A336	A337	A338	A357

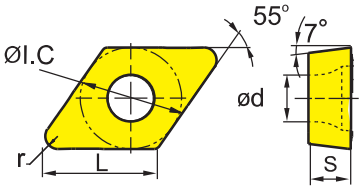
System code A48 | Grade selection A42 | Technical info A501 | Cutting data A366

Turning inserts

- Ideal machining conditions
- Normal machining conditions
- Unfavourable machining conditions

DCMT	L	I.C	S	d
07 02	7.8	6.35	2.38	2.8
11 T3	11.6	9.525	3.97	4.4

DC** positive insert



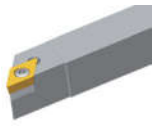
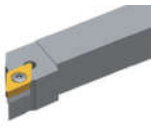
	ISO	r	a_p	f	HC¹ (CVD)											HC¹ (PVD)						HT		HC²	HW	
					YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
EF	**DCMT070202-EF**	0.2	0.06-1.50	0.03-0.11							○								○									
	DCMT070204-EF	0.4	0.08-1.50	0.05-0.17							●								●									
	DCMT11T302-EF	0.2	0.08-2.00	0.04-0.15							○								●									
	DCMT11T304-EF	0.4	0.11-2.00	0.06-0.23							●								●									
Finishing	**DCMT11T308-EF**	0.8	0.15-2.00	0.08-0.30							●								●	●								
HF	**DCMT070202-HF**	0.2	0.06-1.50	0.03-0.11			○		●																			
	DCMT070204-HF	0.4	0.08-1.50	0.05-0.17			●		●																			
	DCMT070208-HF	0.8	0.08-1.50	0.05-0.30			●		○																			
	DCMT11T302-HF	0.2	0.08-2.00	0.04-0.15			○		●										○									
Finishing	**DCMT11T304-HF**	0.4	0.11-2.00	0.06-0.23			●		●				○		●													
	DCMT11T308-HF	0.8	0.15-2.00	0.08-0.30			●		●				●															
XF	**DCMT070202-XF**	0.2	0.5-1.5	0.08-0.15				○																				
	DCMT070204-XF	0.4	0.5-1.5	0.08-0.15	○																							
	DCMT070208-XF	0.8	0.5-1.5	0.08-0.25	○																							
	DCMT11T304-XF	0.4	0.5-2.0	0.08-0.15	○																							
Finishing	**DCMT11T308-XF**	0.8	0.5-2.0	0.08-0.25	○																							

● Ex stock ○ On demand

YBC152F, YBC252F, YBM153F, YBM253F available

HC¹ Coated carbide
HT Uncoated cermet
HC² Coated cermet
HW Uncoated carbide

Tool holder

SDACR/L	SDJCR/L	SDNCN	SDACR/L-SC	SDHCR/L-SC	SDJCR/L-SC	SDNCN-SC
Kr: 90°	Kr: 93°	Kr: 62°30'	Kr: 90°	Kr: 107°30'	Kr: 93°	Kr: 62°30'
						
A271	A272	A273	A308	A309	A310	A311

S***-SDQCR/L	A***-SDUCR/L	S***-SDZCR/L	E***-SDQCR/L
Kr: 107°30'	Kr: 93°	Kr: 85°	Kr: 107°30'
			
A336	A337	A338	A357

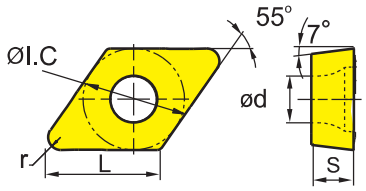
System code A48 Grade selection A42 Technical info A501 Cutting data A366

Turning inserts

- Ideal machining conditions
- Normal machining conditions
- Unfavourable machining conditions

DCMT	L	I.C	S	d
07 02	7.8	6.35	2.38	2.8
11 T3	11.6	9.525	3.97	4.4

DC** positive insert



	HC[1] (CVD)											HC[1] (PVD)							HT		HC[2]	HW		
	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
P	○	○	○	◉	◉	◉											◉	◉		○	◉	○		
M							○	◉					○	○	◉	◉	◉	◉	○	○	◉	○		
K									○	◉	◉	◉												
N													○	○									○	◉
S													○	○	◉	◉	◉	◉	○				○	◉
H																								

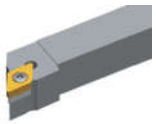
	ISO	r	a_p	f	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
EM	**DCMT070204-EM**	0.4	0.19-2.25	0.06-0.17							●	●								●								
	DCMT070208-EM	0.8	0.38-2.25	0.08-0.23							●	○								●								
	DCMT11T304-EM	0.4	0.25-3.00	0.08-0.23							●	●								●								
Medium Cut	**DCMT11T308-EM**	0.8	0.5-3.0	0.1-0.3							●	●								●								
XM	**DCMT11T304-XM**	0.4	1-2.5	0.15-0.3	●			○																				
	DCMT11T308-XM	0.8	1-2.5	0.15-0.35	●			●																				
Medium Cut	**DCMT11T312-XM**	1.2	1-2.5	0.15-0.4	●			●																				

● Ex stock ○ On demand

YBC152F, YBC252F, YBM153F, YBM253F available

HC[1] Coated carbide
HT Uncoated cermet
HC[2] Coated cermet
HW Uncoated carbide

Tool holder

SDACR/L	SDJCR/L	SDNCN	SDACR/L-SC	SDHCR/L-SC	SDJCR/L-SC	SDNCN-SC
Kr: 90°	Kr: 93°	Kr: 62°30'	Kr: 90°	Kr: 107°30'	Kr: 93°	Kr: 62°30'
						
A271	A272	A273	A308	A309	A310	A311

S***-SDQCR/L	A***-SDUCR/L	S***-SDZCR/L	E***-SDQCR/L
Kr: 107°30'	Kr: 93°	Kr: 85°	Kr: 107°30'
			
A336	A337	A338	A357

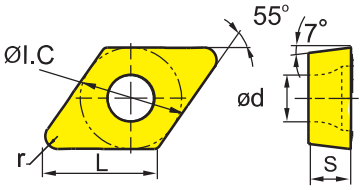
System code A48 | Grade selection A42 | Technical info A501 | Cutting data A366

Turning inserts

- Ideal machining conditions
- Normal machining conditions
- Unfavourable machining conditions

DCMT	L	I.C	S	d
07 02	7.8	6.35	2.38	2.8
11 T3	11.6	9.525	3.97	4.4

DC** positive insert



	HC[1] (CVD)											HC[1] (PVD)						HT		HC[2]	HW	
	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
P	●	●	●	◉	◉	◉										◉	◉			◉	◉	●		
M							○	◉					○	○	◉	◉	◉	◉	○	◉	◉	○		
K									◉	◉	◉	◉												
N													●	●									◉	◉
S													○	○	◉	◉	◉	◉	○				◉	◉
H																								

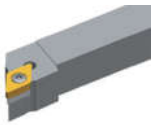
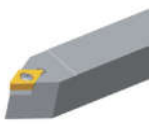
	ISO	r	a_p	f	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
HM	**DCMT070204-HM**	0.4	0.19-2.25	0.06-0.17		○	●		●				●		●					●								
	DCMT070208-HM	0.8	0.38-2.25	0.08-0.23			●		●				●		●													
	DCMT11T304-HM	0.4	0.25-3.00	0.08-0.23		○	●		●				●		●						●							
	DCMT11T308-HM	0.8	0.5-3.0	0.1-0.3			●		●				●		●						●							
Medium Cut	**DCMT11T312-HM**	1.2	0.6-3.0	0.12-0.36					○				○		○													

● Ex stock ○ On demand

YBC152F, YBC252F, YBM153F, YBM253F available

HC[1] Coated carbide
HT Uncoated cermet
HC[2] Coated cermet
HW Uncoated carbide

Tool holder

SDACR/L	SDJCR/L	SDNCN	SDACR/L-SC	SDHCR/L-SC	SDJCR/L-SC	SDNCN-SC
Kr: 90°	Kr: 93°	Kr: 62°30'	Kr: 90°	Kr: 107°30'	Kr: 93°	Kr: 62°30'
						
A271	A272	A273	A308	A309	A310	A311

S***-SDQCR/L	A***-SDUCR/L	S***-SDZCR/L	E***-SDQCR/L
Kr: 107°30'	Kr: 93°	Kr: 85°	Kr: 107°30'
			
A336	A337	A338	A357

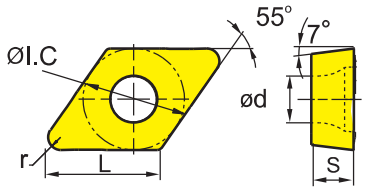
System code A48 Grade selection A42 Technical info A501 Cutting data A366

Turning inserts

- Ideal machining conditions
- Normal machining conditions
- Unfavourable machining conditions

DC**	L	I.C	S	d
07 02	7.8	6.35	2.38	2.8
11 T3	11.6	9.525	3.97	4.4

DC** positive insert



	HC[1] (CVD)											HC[1] (PVD)							HT		HC[2]	HW	
	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
P	●	●	●	◉	◉	◉										◉	◉			●	◉	●		
M							○	◉					○	○	◉	◉	◉	◉	○	◉	○			
K									●	◉	◉	◉												
N													●	●									◉	◉
S													○	○	◉	◉	◉	◉	○				○	◉
H																								

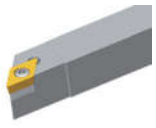
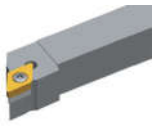
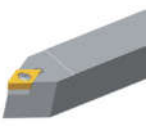
	ISO	r	a_p	f	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
Flat	**DCMW11T304**	0.4	0.5-5.0	0.05-0.20									○															
	DCMW11T308	0.8	0.4-5.0	0.1-0.4									○															
Medium Cut																												
HR	**DCMT11T304-HR**	0.4	1-4	0.1-0.3			○		●				●		●													
	DCMT11T308-HR	0.8	1-4	0.12-0.35			●		●				●		●													
	DCMT11T312-HR	1.2	1.2-4.0	0.14-0.42			○		●				○															
Roughing																												
LC	**DCGX070201-LC**	0.1	0.3-4.0	0.05-0.10																							●	
	DCGX070202-LC	0.2	0.3-4.0	0.05-0.15													●										●	
	DCGX070204-LC	0.4	0.5-4.0	0.1-0.3													●										●	
	DCGX11T302-LC	0.2	0.3-5.5	0.05-0.15													●										●	
Alum Machining	**DCGX11T304-LC**	0.4	0.5-5.5	0.1-0.3													●										●	
	DCGX11T308-LC	0.8	0.5-5.5	0.15-0.60													●										●	

● Ex stock ○ On demand

YBC152F, YBC252F, YBM153F, YBM253F available

HC[1] Coated carbide
HT Uncoated cermet
HC[2] Coated cermet
HW Uncoated carbide

Tool holder

SDACR/L	SDJCR/L	SDNCN	SDACR/L-SC	SDHCR/L-SC	SDJCR/L-SC	SDNCN-SC
Kr: 90°	Kr: 93°	Kr: 62°30'	Kr: 90°	Kr: 107°30'	Kr: 93°	Kr: 62°30'
						
A271	A272	A273	A308	A309	A310	A311

S***-SDQCR/L	A***-SDUCR/L	S***-SDZCR/L	E***-SDQCR/L
Kr: 107°30'	Kr: 93°	Kr: 85°	Kr: 107°30'
			
A336	A337	A338	A357

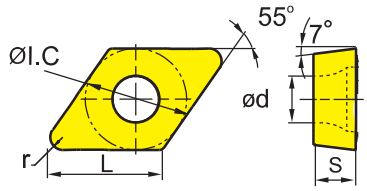
System code A48 | Grade selection A42 | Technical info A501 | Cutting data A366

Turning inserts

- Ideal machining conditions
- Normal machining conditions
- Unfavourable machining conditions

DCGX	L	I.C	S	d
07 02	7.8	6.35	2.38	2.8
11 T3	11.6	9.525	3.97	4.4

DC** positive insert



	HC¹ (CVD)											HC¹ (PVD)						HT		HC²	HW	
	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
P	○	○	○	◉	◉	◉										◉	◉			◉	◉	○		
M							○	◉					○	○	◉	◉	◉	◉	○	◉	◉	○		
K									◉	◉	◉	◉												
N													○	○									○	◉
S													○	○	◉	◉	◉	◉	○				○	◉
H																								

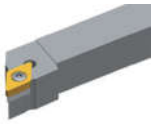
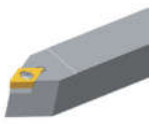
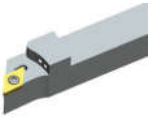
	ISO	r	a_p	f
LH	**DCGX070202-LH**	0.2	0.3-4.0	0.05-0.15
	DCGX070204-LH	0.4	0.5-4.0	0.1-0.3
	DCGX070208-LH	0.8	0.5-4.0	0.15-0.60
	DCGX11T302-LH	0.2	0.3-5.5	0.05-0.15
Alum Machining	**DCGX11T304-LH**	0.4	0.5-5.5	0.1-0.3
	DCGX11T308-LH	0.8	0.5-5.5	0.15-0.60

	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
DCGX070202-LH														●									●	
DCGX070204-LH														●									●	
DCGX070208-LH														○									●	
DCGX11T302-LH														●									●	
DCGX11T304-LH														●									●	
DCGX11T308-LH														●									●	

● Ex stock ○ On demand

HC¹ Coated carbide
HT Uncoated cermet
HC² Coated cermet
HW Uncoated carbide

Tool holder

SDACR/L	SDJCR/L	SDNCN	SDACR/L-SC	SDHCR/L-SC	SDJCR/L-SC	SDNCN-SC
Kr: 90°	Kr: 93°	Kr: 62°30'	Kr: 90°	Kr: 107°30'	Kr: 93°	Kr: 62°30'
						
A271	A272	A273	A308	A309	A310	A311

S***-SDQCR/L	A***-SDUCR/L	S***-SDZCR/L	E***-SDQCR/L
Kr: 107°30'	Kr: 93°	Kr: 85°	Kr: 107°30'
			
A336	A337	A338	A357

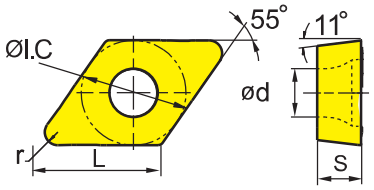
System code A48 | Grade selection A42 | Technical info A501 | Cutting data A366

Turning inserts

- Ideal machining conditions
- Normal machining conditions
- Unfavourable machining conditions

DPGT	L	I.C	S	d
07 02	7.8	6.35	2.38	2.8
11 T3	11.6	9.525	3.97	4.4

DP** positive insert



	HC[1] (CVD)											HC[1] (PVD)							HT		HC[2]	HW		
P	○	○	○	◎	◎	◎									◎	◎			○	◎	○			
M							○	◎				○	○	◎	◎	◎	◎	○	◎	○				
K									◎	◎	◎	◎												
N													○	○									○	◎
S												○	○	◎	◎	◎	◎	○					○	◎
H																								

	ISO	r	a_p	f	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
SF	**DPGT070202-SF**	0.2	0.05-2.00	0.05-0.15																				○		●		
	DPGT070204-SF	0.4	0.05-2.00	0.05-0.30																				●		●		
	DPGT11T304-SF	0.4	0.05-2.00	0.1-0.3																				●		●		
	DPGT11T308-SF	0.8	0.05-2.00	0.1-0.4																				○		○		
Finishing																												

● Ex stock ○ On demand

HC[1] Coated carbide
HT Uncoated cermet
HC[2] Coated cermet
HW Uncoated carbide

Tool holder

S***-SDQPR/L	S***-SDUPR/L	C***-SDQPR/L
Kr: 107°30'	Kr: 93°	Kr: 107°30'
		
A349	A350	A356

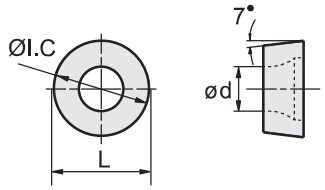
System code A48 | Grade selection A42 | Technical info A501 | Cutting data A366

RC**	L	I.C	S	d
08 03	8	8	3.18	3.36
10 T3	10	10	3.97	3.6
12 04	12	12	4.76	44.4
16 06	16	16	6.35	5.5
20 06	20	20	6.35	6.5
25 07	25	25	7.94	7.7

Ideal machining conditions
Normal machining conditions
Unfavourable machining conditions

Turning inserts

RC** positive insert



	ISO		a_p	f	HC¹ (CVD)											HC¹ (PVD)							HT		HC²	HW	
					YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
Basic		**RCMT0803MO**	0.5-3.0	0.1-0.4					●				●															
		RCMT10T3MO	0.5-4.0	0.1-0.5					○				●															
		RCMT1204MO	0.8-5.0	0.1-0.6			○		●				●		●													
		RCMT1606MO	1-6	0.1-0.8			●		●			○	●															
Medium Cut		**RCMT2006MO**	1.2-8.0	0.1-1.0			○		●																			
		RCMT2507MO	1.4-10.0	0.1-1.2			○		○																			
LH		**RCGX0803MO-LH**	1-4	0.2-0.5																							●	
		RCGX1204MO-LH	1.2-5.0	0.2-0.6																							●	
Alum Machining																												

● Ex stock ○ On demand
YBC152F, YBC252F, YBM153F, YBM253F available

HC¹ Coated carbide
HT Uncoated cermet
HC² Coated cermet
HW Uncoated carbide

Tool holder

SRDCN	SRGCR/L
	
A288	A289

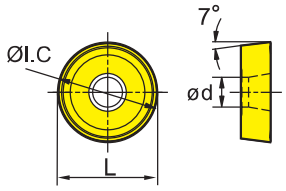
System code A48 | Grade selection A42 | Technical info A501 | Cutting data A366

RCMX	L	I.C	S	d
08 03	8	8	3.18	3.36
10 03	10	10	3.18	4.4
12 04	12	12	4.76	4.4
16 06	16	16	6.35	5.5
20 06	20	20	6.35	6.5
25 07	25	25	7.94	7.2
32 09	32	32	9.52	10.2

Turning inserts

Ideal machining conditions
Normal machining conditions
Unfavourable machining conditions

RC** positive insert



				HC¹ (CVD)											HC¹ (PVD)							HT		HC²	HW		
				P																							
				M																							
				K																							
				N																							
				S																							
				H																							
	ISO		a_p	f	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
Basic		**RCMX0803MO**	0.5-4.0	0.1-0.5					●																		
		RCMX1003MO	0.5-5.0	0.1-0.6					●																		
		RCMX1204MO	1-6	0.1-0.8			○		●																		
		RCMX1606MO	1-7	0.2-0.9			○		●			○								○								
		RCMX2006MO	1-9	0.2-1.0			●		●						●													
		RCMX2507MO	2-10	0.25-1.20					●																			
		RCMX3209MO	2-13	0.25-1.40			○		●																			
Basic		**RCMX2507MO-1**	2-9	0.1-0.4			○																					
Basic		**RCMX3209MO-PV**	3-12	0.1-0.4			○		●																			

● Ex stock ○ On demand
YBC152F, YBC252F, YBM153F, YBM253F available

HC¹ Coated carbide
HT Uncoated cermet
HC² Coated cermet
HW Uncoated carbide

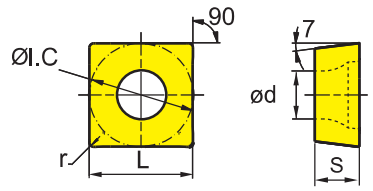
System code A48 | Grade selection A42 | Technical info A501 | Cutting data A366

Turning inserts

- Ideal machining conditions
- Normal machining conditions
- Unfavourable machining conditions

SCMT	L	I.C	S	d
09 T3	9.525	9.525	3.97	4.4
12 04	12.7	12.7	4.76	5.56

SC** positive insert



	HC¹ (CVD)											HC¹ (PVD)						HT		HC²	HW	
P	○	○	○	◉	◉	◉									◉	◉		○	◉	○		
M							○	◉				○	○	◉	◉	◉	○	○	◉	○		
K									◉	◉	◉											
N												○	○								◉	◉
S												○	○	◉	◉	◉	○				◉	◉
H																						

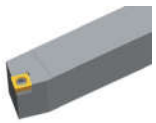
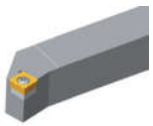
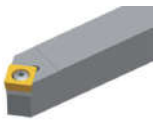
	ISO	r	a_p	f	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
AHF	**SCMT09T304-AHF**	0.4	0.5-3.0	0.05-0.30		●															●			○				
	SCMT09T308-AHF	0.8	0.5-3.0	0.05-0.40		●															●			●				
Finishing																												
EF	**SCMT09T302-EF**	0.2	0.07-2.00	0.05-0.15																●								
	SCMT09T304-EF	0.4	0.11-2.00	0.06-0.23																●								
	SCMT09T308-EF	0.8	0.15-2.00	0.08-0.30																●								
Finishing																												
EM	**SCMT09T304-EM**	0.4	0.25-3.00	0.08-0.23							○	○								●								
	SCMT09T308-EM	0.8	0.5-3.0	0.1-0.3							●	●								●								
	SCMT120404-EM	0.4	0.3-3.6	0.09-0.27							○	○								●								
	SCMT120408-EM	0.8	0.6-3.6	0.12-0.36							○	○								●								
Finishing	**SCMT120412-EM**	1.2	0.72-3.60	0.14-0.43								○								●								
XF	**SCMT09T304-XF**	0.4	0.5-2.0	0.08-0.25	●																							
	SCMT09T308-XF	0.8	0.5-2.0	0.08-0.30	●			○																				
Finishing																												

● Ex stock ○ On demand

YBC152F, YBC252F, YBM153F, YBM253F available

HC¹ Coated carbide
HT Uncoated cermet
HC² Coated cermet
HW Uncoated carbide

Tool holder

SSBCR/L	SSDCN	SSKCR/L	SSSCR/L	S***-SSKCR/L
Kr: 75°	Kr: 45°	Kr: 75°	Kr: 45°	Kr: 75°
				
A279	A280	A281	A282	A339

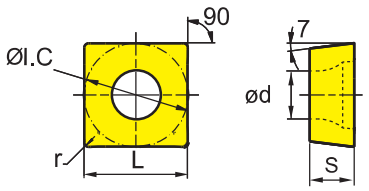
System code A48 | Grade selection A42 | Technical info A501 | Cutting data A366

Turning inserts

- Ideal machining conditions
- Normal machining conditions
- Unfavourable machining conditions

SCMT	L	I.C	S	d
09 T3	9.525	9.525	3.97	4.4
12 04	12.7	12.7	4.76	5.56

SC** positive insert



	HC[1] (CVD)											HC[1] (PVD)							HT		HC[2]	HW	
P	○	○	○	⊛	⊛	⊛									⊛	⊛			○	⊛	○		
M							○	⊛				○	○	⊛	⊛	⊛	⊛	○	○	⊛	○		
K									●	⊛	⊛	⊛											
N												●	●									●	⊛
S													○	○	⊛	⊛	⊛	○				○	⊛
H																							

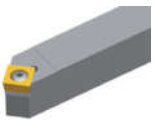
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HF Finishing	**SCMT09T302-HF**	0.2	0.15-2.00	0.05-0.15																								
	SCMT09T304-HF	0.4	0.11-2.00	0.05-0.23					●																			
	SCMT09T308-HF	0.8	0.15-2.00	0.05-0.30			●		●																			
HM Medium Cut	**SCMT09T304-HM**	0.4	0.25-3.00	0.08-0.23			●		●				●		●													
	SCMT09T308-HM	0.8	0.5-3.0	0.1-0.3			●		●				●		●													
	SCMT120404-HM	0.4	0.3-3.6	0.09-0.27			●		●																			
	SCMT120408-HM	0.8	0.6-3.6	0.12-0.36			○		●				●		●													
	SCMT120412-HM	1.2	0.72-3.60	0.14-0.43					●																			
XM Medium Cut	**SCMT09T304-XM**	0.4	1-2.5	0.15-0.3	○			○																				
	SCMT09T308-XM	0.8	1-2.5	0.15-0.35	○			○																				
	SCMT09T312-XM	1.2	1-2.5	0.15-0.4	○			○																				
	SCMT120408-XM	0.8	1-3.0	0.15-0.35	○			○																				
	SCMT120412-XM	1.2	1-3.0	0.15-0.4	○			○																				

● Ex stock ○ On demand

YBC152F, YBC252F, YBM153F, YBM253F available

HC[1] Coated carbide
HT Uncoated cermet
HC[2] Coated cermet
HW Uncoated carbide

Tool holder

SSBCR/L	SSDCN	SSKCR/L	SSSCR/L	S***-SSKCR/L
Kr: 75°	Kr: 45°	Kr: 75°	Kr: 45°	Kr: 75°
				
A279	A280	A281	A282	A339

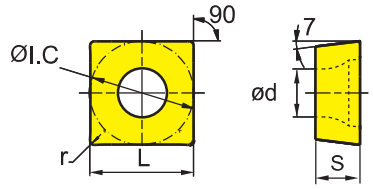
System code A48 | Grade selection A42 | Technical info A501 | Cutting data A366

Turning inserts

Ideal machining conditions
Normal machining conditions
Unfavourable machining conditions

SC**	L	I.C	S	d
09 T3	9.525	9.525	3.97	4.4
12 04	12.7	12.7	4.76	5.55.56

SC** positive insert



					HC¹ (CVD)											HC¹ (PVD)						HT		HC²	HW	
					YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
P		ISO	r	a_p	f																							
HR	**SCMT09T304-HR**		0.4	0.2-4.0	0.05-0.40		○		●						○													
	SCMT09T308-HR		0.8	1-4	0.12-0.35		●		●				●		●													
	SCMT09T312-HR		1.2	1.2-4.0	0.14-0.42				○																			
	SCMT120404-HR		0.4	0.5-4.0	0.05-0.50		○		○																			
	SCMT120408-HR		0.8	1.2-4.8	0.14-0.42		●		●				●		●													
	SCMT120412-HR		1.2	1.44-4.80	0.17-0.50		●		●				●		○													
LC	**SCGX09T304-LC**		0.4	0.5-5.0	0.1-0.5																						●	
	SCGX09T308-LC		0.8	0.5-5.0	0.15-0.60																						●	
	SCGX120408-LC		0.8	1-7	0.15-0.60												●										●	

HR Roughing

LC Alum Machining

● Ex stock ○ On demand

YBC152F, YBC252F, YBM153F, YBM253F available

HC¹ Coated carbide
HT Uncoated cermet
HC² Coated cermet
HW Uncoated carbide

Tool holder

SSBCR/L	SSDCN	SSKCR/L	SSSCR/L	S***-SSKCR/L
Kr: 75°	Kr: 45°	Kr: 75°	Kr: 45°	Kr: 75°
				
A279	A280	A281	A282	A339

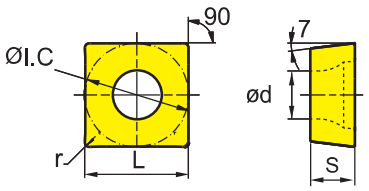
System code A48 | Grade selection A42 | Technical info A501 | Cutting data A366

Turning inserts

- Ideal machining conditions
- Normal machining conditions
- Unfavourable machining conditions

SCGX	L	I.C	S	d
09 T3	9.525	9.525	3.97	4.4
12 04	12.7	12.7	4.76	5.56

SC** positive insert



	HC[1] (CVD)											HC[1] (PVD)							HT		HC[2]	HW		
P	○	○	○	⊛	⊛	⊛									⊛	⊛			○	⊛	○			
M							○	⊛				○	○	⊛	⊛	⊛	⊛	○	○	⊛	○			
K									○	⊛	⊛	⊛												
N													○	○									○	⊛
S													○	○	⊛	⊛	⊛	○					○	⊛
H																								

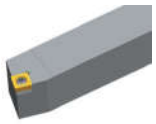
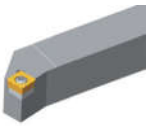
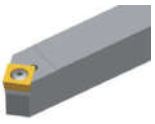
	ISO	r	a_p	f	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
LH	**SCGX09T302-LH**	0.2	0.5-4.0	0.05-0.15														○									●	
	SCGX09T304-LH	0.4	0.5-4.0	0.1-0.3																							●	
	SCGX09T308-LH	0.8	0.5-4.0	0.15-0.60																							●	
	SCGX120408-LH	0.8	0.5-5.0	0.15-0.60														○									●	

Alum Machining

● Ex stock ○ On demand

HC[1] Coated carbide
HT Uncoated cermet
HC[2] Coated cermet
HW Uncoated carbide

Tool holder

SSBCR/L	SSDCN	SSKCR/L	SSSCR/L	S***-SSKCR/L
Kr: 75°	Kr: 45°	Kr: 75°	Kr: 45°	Kr: 75°
				
A279	A280	A281	A282	A339

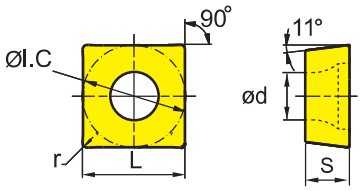
System code A48 | Grade selection A42 | Technical info A501 | Cutting data A366

Turning inserts

- Ideal machining conditions
- Normal machining conditions
- Unfavourable machining conditions

SPMW	L	I.C	S	d
09 T3	9.525	9.525	3.97	4.4
12 04	12.7	12.7	4.76	5.56

SP** positive insert



	HC¹ (CVD)											HC¹ (PVD)						HT		HC²	HW	
P	●	●	●	◐	◐	◐									◐	◐		●	◐	●		
M							○	◐				○	○	◐	◐	◐	○	○	◐	○		
K									●	◐	◐	◐										
N												●	●								●	◐
S												●	○	◐	◐	◐	○				●	◐
H																						

	ISO	r	a_p	f	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
Flat	**SPMW09T304**	0.4	0.5-4.0	0.1-0.4											○													
	SPMW09T308	0.8	0.5-4.0	0.2-0.4											○													
	SPMW120408	0.8	1-6	0.3-0.6											○													

● Ex stock ○ On demand

HC¹ Coated carbide
HT Uncoated cermet
HC² Coated cermet
HW Uncoated carbide

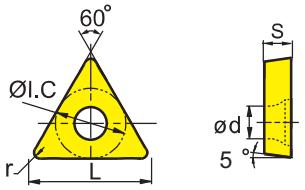
System code A48 Grade selection A42 Technical info A501 Cutting data A366

Turning inserts

- Ideal machining conditions
- Normal machining conditions
- Unfavourable machining conditions

TBGH	L	I.C	S	d
06 01	6.87	3.97	1.59	2.2

TB** positive insert



	ISO	r	a_p	f	HC¹ (CVD)											HC¹ (PVD)							HT		HC²	HW	
					YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
	**TBGH060102L**	0.2	0.5-3.5	0.05-0.40													●						●				
	TBGH060104L	0.4	0.5-3.5	0.05-0.40													○						●				

● Ex stock ○ On demand

HC¹ Coated carbide
HT Uncoated cermet
HC² Coated cermet
HW Uncoated carbide

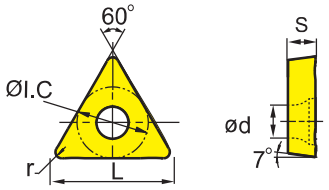
System code A48 | Grade selection A42 | Technical info A501 | Cutting data A366

Turning inserts

Ideal machining conditions
Normal machining conditions
Unfavourable machining conditions

TCGT	L	I.C	S	d
06 T1	6.87	3.97	1.98	2.2
09 02	9.63	5.56	2.38	2.5
11 03	11	6.35	3.18	2.8

TC** positive insert



	HC¹ (CVD)											HC¹ (PVD)						HT		HC²	HW	
	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
P	○	○	○	◎	◎	◎										◎	◎			○	◎	○		
M							○	◎						○	○	◎	◎	◎	○	○	◎	○		
K									●	◎	◎	◎												
N													○	○									○	◎
S													○	○	◎	◎	◎	◎	○				○	◎
H																								

	ISO	r	a_p	f																					
SF	**TCGT06T102-SF**	0.2	0.05-2.00	0.05-0.15																		●			
	TCGT090202-SF	0.2	0.05-2.00	0.05-0.15																○		○			
	TCGT090204-SF	0.4	0.05-2.00	0.1-0.3																		●			
	TCGT090208-SF	0.8	0.05-2.00	0.10-0.35																		●			
	TCGT110302-SF	0.2	0.05-2.00	0.05-0.15																		○			
Finishing	**TCGT110304-SF**	0.4	0.05-2.00	0.1-0.3																●		●			
	TCGT110308-SF	0.8	0.05-2.00	0.10-0.35																		○			

● Ex stock ○ On demand

HC¹ Coated carbide
HT Uncoated cermet
HC² Coated cermet
HW Uncoated carbide

Tool holder

STGCR/L	E***-STFCR/L
Kr: 91°	Kr: 90°
	
A285	A361

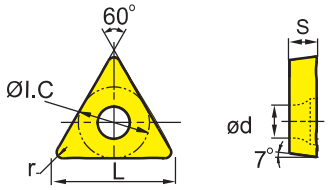
System code A48 Grade selection A42 Technical info A501 Cutting data A366

Turning inserts

- Ideal machining conditions
- Normal machining conditions
- Unfavourable machining conditions

TCMT	L	I.C	S	d
09 02	9.63	5.56	2.38	2.5
11 02	11	6.35	2.38	2.8
16 T3	16.5	9.525	3.97	4.4

TC** positive insert



	HC[1] (CVD)											HC[1] (PVD)							HT		HC[2]	HW		
	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
P	○	○	○	◍	◍	◍										◍	◍			○	◍	○	◍	
M							○	◍					○	○	◍	◍	◍	○		○	◍	○		
K									●	◍	◍	◍												
N													○	○									○	◍
S													○	○	◍	◍	◍	◍	○				○	◍
H																								

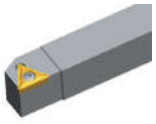
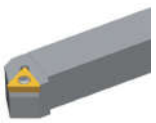
	ISO	r	a_p	f	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
AHF	**TCMT110204-AHF**	0.4	0.2-2.5	0.05-0.30		●															●							
	TCMT110208-AHF	0.8	0.2-2.5	0.1-0.4		●															●							
	TCMT16T304-AHF	0.4	0.5-3.0	0.05-0.30		●															●							
	TCMT16T308-AHF	0.8	0.5-3.5	0.1-0.4		●															●							
Finishing																												
HF	**TCMT090202-HF**	0.2	0.06-1.70	0.03-0.13			○		●															○				
	TCMT090204-HF	0.4	0.1-1.7	0.05-0.19			○		●																			
	TCMT090208-HF	0.8	0.15-1.70	0.10-0.25					○																			
	TCMT110202-HF	0.2	0.08-2.00	0.05-0.20					●																			
	TCMT110204-HF	0.4	0.1-2.0	0.05-0.30			○		●						○													
	TCMT110208-HF	0.8	0.1-2.0	0.05-0.35			●		●				●															
Finishing	**TCMT16T304-HF**	0.4	0.11-2.00	0.05-0.23			○		●																			
	TCMT16T308-HF	0.8	0.2-3.5	0.05-0.30																								
XF	**TCMT090202-XF**	0.2	0.5-1.5	0.08-0.15				○																				
	TCMT090204-XF	0.4	0.5-1.5	0.08-0.20	●																							
	TCMT110202-XF	0.2	0.5-2.0	0.08-0.15				○																				
	TCMT110204-XF	0.4	0.5-2.0	0.08-0.20	●																							
	TCMT110208-XF	0.8	0.5-2.5	0.08-0.25	●																							
	TCMT16T304-XF	0.4	0.5-2.5	0.08-0.20	●																							
Finishing	**TCMT16T308-XF**	0.8	0.5-2.5	0.08-0.25	●																							

● Ex stock ○ On demand

YBC152F, YBC252F, YBM153F, YBM253F available

HC[1] Coated carbide
HT Uncoated cermet
HC[2] Coated cermet
HW Uncoated carbide

Tool holder

STACR/L	STFCR/L	STGCR/L	STTCR/L	S***-STFCR/L	E***-STFCR/L
Kr: 90°	Kr: 91°	Kr: 91°	Kr: 60°	Kr: 91°	Kr: 90°
					
A283	A284	A285	A286	A341	A361

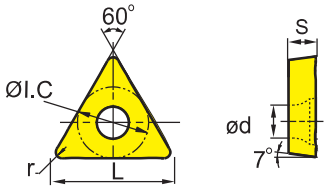
System code A48 | Grade selection A42 | Technical info A501 | Cutting data A366

Turning inserts

Ideal machining conditions
Normal machining conditions
Unfavourable machining conditions

TCMT	L	I.C	S	d
09 02	9.63	5.56	2.38	2.5
11 02	11	6.35	2.38	2.8
16 T3	16.5	9.525	3.97	4.4

TC** positive insert

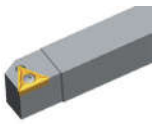
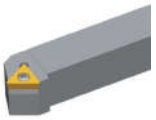


	ISO	r	a_p	f	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
					HC¹ (CVD)												HC¹ (PVD)							HT		HC²	HW	
P					●	●	●	◉	◉	◉										◉	◉			●	◉	●		
M											○	◉					○	○		◉	◉	◉	○	○	◉	○		
K													●	◉	◉	◉												
N																	●	●									●	◉
S																	●	○		◉	◉	◉	●				●	◉
H																												
EF	**TCMT090202-EF**	0.2	0.06-1.70	0.03-0.13																								
	TCMT090204-EF	0.4	0.1-1.7	0.05-0.19															●									
	TCMT110202-EF	0.2	0.2-2.0	0.05-0.13															○									
	TCMT110204-EF	0.4	0.2-2.0	0.05-0.20															●									
	TCMT16T304-EF	0.4	0.3-3.0	0.05-0.23															●									
Finishing	**TCMT16T308-EF**	0.8	0.3-3.0	0.1-0.4							●								●									
EM	**TCMT090204-EM**	0.4	0.19-2.25	0.06-0.17							○								●									
	TCMT110204-EM	0.4	0.2-2.7	0.05-0.30							○								●									
	TCMT110208-EM	0.8	0.8-2.7	0.08-0.30															●									
	TCMT16T304-EM	0.4	0.25-3.00	0.08-0.23							●								●									
Medium Cut	**TCMT16T308-EM**	0.8	0.5-3.0	0.1-0.3							●	●							●									
XM	**TCMT16T304-XM**	0.4	1-3.0	0.15-0.3	○			○																				
	TCMT16T308-XM	0.8	1-3.0	0.15-0.35	○			○																				
	TCMT16T312-XM	1.2	1-3.0	0.15-0.4	○			○																				
Medium Cut																												

● Ex stock ○ On demand
YBC152F, YBC252F, YBM153F, YBM253F available

HC¹ Coated carbide
HT Uncoated cermet
HC² Coated cermet
HW Uncoated carbide

Tool holder

STACR/L	STFCR/L	STGCR/L	STTCR/L	S***-STFCR/L	E***-STFCR/L
Kr: 90°	Kr: 91°	Kr: 91°	Kr: 60°	Kr: 91°	Kr: 90°
					
A283	A284	A285	A286	A341	A361

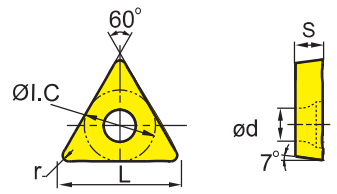
System code A48 Grade selection A42 Technical info A501 Cutting data A366

Turning inserts

Ideal machining conditions
Normal machining conditions
Unfavourable machining conditions

TC**	L	I.C	S	d
09 02	9.63	5.56	2.38	2.5
11 02	11	6.35	2.38	2.8
16 T3	16.5	9.525	3.97	4.4
22 04	22	12.7	4.76	5.5

TC** positive insert

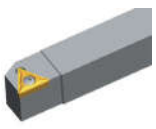
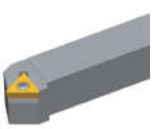


	ISO	r	a_p	f	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
					HC¹ (CVD)												HC¹ (PVD)							HT		HC²	HW	
P					○	○	○	❁	❁	❁										❁	❁			○	❁	○		
M											○	❁					○	○	❁	❁	❁	○		○	❁	○		
K													●	❁	❁	❁												
N																	○	○									○	❁
S																	○	○	❁	❁	❁	○					○	❁
H																												
Flat	**TCMW16T308**	0.8	0.5-5.0	0.05-0.60											○													
Medium Cut																												
HM	**TCMT090204-HM**	0.4	0.19-2.25	0.06-0.17			●		●				●		●													
Medium Cut	**TCMT090208-HM**	0.8	0.38-2.25	0.08-0.23			○		○						○													
	TCMT110204-HM	0.4	0.2-2.7	0.07-0.20			●		●				●		●													
	TCMT110208-HM	0.8	0.5-2.7	0.1-0.3			●		●						●													
	TCMT16T304-HM	0.4	0.25-3.00	0.08-0.23			●		●				●		●													
	TCMT16T308-HM	0.8	0.5-3.0	0.1-0.3			●		●				●		●													
	TCMT16T312-HM	1.2	0.6-3.0	0.12-0.36			○		●																			
HR	**TCMT090204-HR**	0.4	0.5-3.0	0.1-0.3					○																			
Roughing	**TCMT090208-HR**	0.8	0.5-3.5	0.08-0.50					○						○													
	TCMT110204-HR	0.4	0.5-3.0	0.1-0.4					●																			
	TCMT110208-HR	0.8	1-4	0.1-0.5					●																			
	TCMT16T304-HR	0.4	0.5-4.0	0.1-0.4					●				●															
	TCMT16T308-HR	0.8	1-4	0.12-0.35					●				●		●													
	TCMT16T312-HR	1.2	1.2-4.0	0.14-0.42			○						○		●													
	TCMT220408-HR	0.8	1.2-4.8	0.14-0.42			○		●						●													

● Ex stock ○ On demand
YBC152F, YBC252F, YBM153F, YBM253F available

HC¹ Coated carbide
HT Uncoated cermet
HC² Coated cermet
HW Uncoated carbide

Tool holder

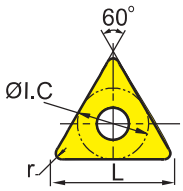
STACR/L	STFCR/L	STGCR/L	STTCR/L	S***-STFCR/L	E***-STFCR/L
Kr: 90°	Kr: 91°	Kr: 91°	Kr: 60°	Kr: 91°	Kr: 90°
					
A283	A284	A285	A286	A341	A361

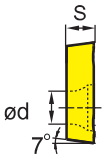
System code A48 | Grade selection A42 | Technical info A501 | Cutting data A366

Turning inserts

- Ideal machining conditions
- Normal machining conditions
- Unfavourable machining conditions

TCMT	L	I.C	S	d
22 04	22	12.7	4.76	5.5





TC** positive insert					HC[1] (CVD)										HC[1] (PVD)						HT		HC[2]	HW	
				P																					
				M																					
				K																					
				N																					
				S																					
				H																					
ISO		r	a_p	f	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
Basic	**TCMT220408**	0.8	1.2-4.8	0.14-0.42									●															



● Ex stock ○ On demand

HC[1] Coated carbide
HT Uncoated cermet
HC[2] Coated cermet
HW Uncoated carbide

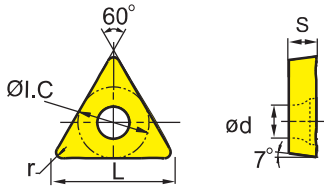
System code A48 Grade selection A42 Technical info A501 Cutting data A366

Turning inserts

- Ideal machining conditions
- Normal machining conditions
- Unfavourable machining conditions

TCGX	L	I.C	S	d
09 02	9.63	5.56	2.38	2.5
11 02	11	6.35	2.38	2.8
16 T3	16.5	9.525	3.97	4.4

TC** positive insert



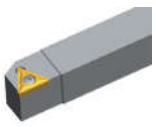
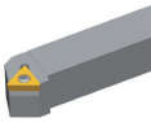
	HC[1] (CVD)											HC[1] (PVD)							HT		HC[2]	HW	
P	●	●	●	◉	◉	◉									◉	◉			●	◉	●		
M							○	◉					○	○	◉	◉	◉	○	○	◉	○		
K									●	◉	◉	◉											
N												●	●									●	◉
S													○	○	◉	◉	◉	○				○	◉
H																							

	ISO	r	a_p	f	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
LC	**TCGX090202-LC**	0.2	0.3-4.0	0.05-0.15													●										●	
	TCGX090204-LC	0.4	0.5-4.0	0.1-0.3													●										●	
	TCGX110202-LC	0.2	0.3-5.0	0.05-0.15													●										●	
	TCGX110204-LC	0.4	0.5-5.0	0.1-0.3													●										●	
	TCGX110208-LC	0.8	0.5-5.0	0.15-0.60													●										●	
Alum Machining	**TCGX16T304-LC**	0.4	0.5-7.0	0.1-0.3																							●	
	TCGX16T308-LC	0.8	0.5-7.0	0.15-0.60													●										●	
LH	**TCGX090202-LH**	0.2	0.3-4.0	0.05-0.15														○									●	
	TCGX090204-LH	0.4	0.5-4.0	0.1-0.3																							●	
	TCGX110202-LH	0.2	0.3-5.0	0.05-0.15														○									●	
	TCGX110204-LH	0.4	0.5-5.0	0.1-0.3														●									●	
	TCGX110208-LH	0.8	0.5-5.0	0.15-0.60																							●	
Alum Machining	**TCGX16T302-LH**	0.2	0.5-7.0	0.05-0.15																							●	
	TCGX16T304-LH	0.4	0.5-7.0	0.1-0.3														○									●	
	TCGX16T308-LH	0.8	0.5-7.0	0.15-0.60														○									●	

● Ex stock ○ On demand

HC[1] Coated carbide
HT Uncoated cermet
HC[2] Coated cermet
HW Uncoated carbide

Tool holder

STACR/L	STFCR/L	STGCR/L	STTCR/L	S***-STFCR/L	E***-STFCR/L
Kr: 90°	Kr: 91°	Kr: 91°	Kr: 60°	Kr: 91°	Kr: 90°
					
A283	A284	A285	A286	A341	A361

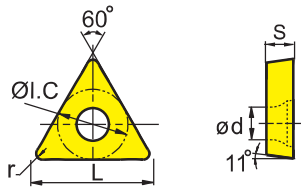
System code A48 | Grade selection A42 | Technical info A501 | Cutting data A366

Turning inserts

Ideal machining conditions
Normal machining conditions
Unfavourable machining conditions

TPGH	L	I.C	S	d
09 02	9.63	5.56	2.38	2.8
11 03	11	6.35	3.18	3.18

TP** positive insert



	HC[1] (CVD)											HC[1] (PVD)						HT		HC[2]	HW	
P	○	○	○	◔	◔	◔									◔	◔		○	◔	○		
M								○	◔				○	○	◔	◔	◔	○	◔	○		
K										○	◔	◔	◔									
N													○	○							○	◔
S													○	○	◔	◔	◔	○			○	◔
H																						

	ISO	r	a_p	f	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
 Super Finishing	**TPGH090202L**	0.2	0.2-3.0	0.05-0.15														●						●	●			
	TPGH090204L	0.4	0.2-3.0	0.05-0.30														●						●	●			
	TPGH110302L	0.2	0.2-3.5	0.05-0.15														●						●	●			
	TPGH110304L	0.4	0.2-3.5	0.05-0.30														●						●	●			

● Ex stock ○ On demand

HC[1] Coated carbide
HT Uncoated cermet
HC[2] Coated cermet
HW Uncoated carbide

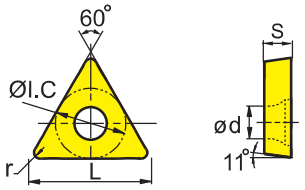
System code > A48 Grade selection > A42 Technical info > A501 Cutting data > A366

Turning inserts

- Ideal machining conditions
- Normal machining conditions
- Unfavourable machining conditions

TPGT	L	I.C	S	d
09 02	9.63	5.56	2.38	2.5
11 03	11	6.35	3.18	2.8

TP** positive insert



	HC¹ (CVD)											HC¹ (PVD)							HT		HC²	HW	
P	●	●	●	◉	◉	◉								◉	◉				●	◉	●		
M							○	◉				○	○	◉	◉	◉	◉		○	◉	○		
K									●	◉	◉	◉											
N												●	●									●	◉
S												●	○	◉	◉	◉	◉	○				●	◉
H																							

	ISO	r	a_p	f	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
SF	**TPGT090202-SF**	0.2	0.05-2.00	0.05-0.15																						●		
	TPGT090204-SF	0.4	0.05-2.00	0.05-0.25														○						●		●		
	TPGT090208-SF	0.8	0.05-2.00	0.05-0.35																				●				
	TPGT110302-SF	0.2	0.05-2.00	0.05-0.15																				●		●		
Finishing	**TPGT110304-SF**	0.4	0.05-2.00	0.05-0.25																				○		●		
	TPGT110308-SF	0.8	0.05-2.00	0.05-0.35																						●		

● Ex stock ○ On demand

HC¹ Coated carbide
HT Uncoated cermet
HC² Coated cermet
HW Uncoated carbide

Tool holder

S***-STUPR/L	C***-STUPR/L	E***-STFPR/L
Kr: 93°	Kr: 93°	Kr: 90°
		
A351	A360	A362

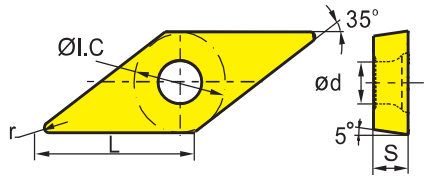
System code A48 | Grade selection A42 | Technical info A501 | Cutting data A366

Turning inserts

Ideal machining conditions
Normal machining conditions
Unfavourable machining conditions

VBMT	L	I.C	S	d
11 02	11	6.35	2.38	2.8
11 03	11	6.35	3.18	2.8
16 04	16.5	9.525	4.76	4.4

VB** positive insert



	HC¹ (CVD)										HC¹ (PVD)						HT		HC²	HW	
P	○	○	○	⊛	⊛	⊛								⊛	⊛		○	⊛	○		
M							○	⊛				○	○	⊛	⊛	○	○	⊛	○		
K									○	⊛	⊛	⊛									
N											○	○								○	⊛
S											○	○	⊛	⊛	⊛	○				○	⊛
H																					

ISO		r	a_p	f	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
AHF	**VBMT160404-AHF**	0.4	0.2-3.0	0.05-0.30		●															●						
	VBMT160408-AHF	0.8	0.8-3.5	0.08-0.40		●															●						
Finishing																											
EF	**VBMT110302-EF**	0.2	0.06-1.70	0.03-0.13																●							
	VBMT110304-EF	0.4	0.1-1.7	0.05-0.19							●									●							
	VBMT110308-EF	0.8	0.13-1.70	0.07-0.26							●									○							
	VBMT160404-EF	0.4	0.1-1.8	0.05-0.20							●									●							
Finishing	**VBMT160408-EF**	0.8	0.14-1.80	0.07-0.27							●									●							
XF	**VBMT110202-XF**	0.2	0.5-2.0	0.08-0.20				○																			
	VBMT110204-XF	0.4	0.5-2.0	0.08-0.20	●																						
	VBMT110302-XF	0.2	0.5-2.0	0.08-0.20				○																			
	VBMT110304-XF	0.4	0.5-2.0	0.08-0.20	●																						
Finishing	**VBMT160404-XF**	0.4	0.5-2.5	0.08-0.20	●																						
	VBMT160408-XF	0.8	0.5-2.5	0.08-0.25	●																						

● Ex stock ○ On demand
YBC152F, YBC252F, YBM153F, YBM253F available

HC¹ Coated carbide
HT Uncoated cermet
HC² Coated cermet
HW Uncoated carbide

Tool holder

SVJBR/L	SVABR/L	SVVBN	S***-SVQBR/L	S***-SVUBR/L	S***-SVXBR/L
Kr: 93°	Kr: 90°	Kr: 72°30'	Kr: 107°30'	Kr: 93°	Kr: 93°
					
A274	A275	A276	A345	A346	A347

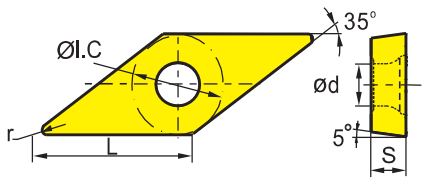
System code A48 | Grade selection A42 | Technical info A501 | Cutting data A366

Turning inserts

- Ideal machining conditions
- Normal machining conditions
- Unfavourable machining conditions

VB**	L	I.C	S	d
11 02	11	6.35	2.38	2.8
16 04	16.5	9.525	4.76	4.4

VB** positive insert



	HC¹ (CVD)											HC¹ (PVD)							HT		HC²	HW	
	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
P	●	●	●	◉	◉	◉										◉	◉			●	◉	●		
M							○	◉					○	○	◉	◉	◉	◉	○	●	◉	○		
K									●	◉	◉	◉												
N													●	●									●	◉
S														○	○	◉	◉	◉	○				○	◉
H																								

ISO		r	a_p	f
HF	**VBMT110202-HF**	0.2	0.2-2.0	0.05-0.15
	VBMT110204-HF	0.4	0.2-2.0	0.05-0.35
	VBMT110208-HF	0.8	0.2-2.0	0.05-0.40
Finishing				
NF	**VBET160404-NF**	0.4	0.2-3.0	0.05-0.30
	VBET160408-NF	0.8	0.2-3.0	0.08-0.40
Finishing				

● Ex stock ○ On demand

HC¹ Coated carbide
HT Uncoated cermet
HC² Coated cermet
HW Uncoated carbide

Tool holder

SVJBR/L	SVABR/L	SVVBN	S***-SVQBR/L	S***-SVUBR/L	S***-SVXBR/L
Kr: 93°	Kr: 90°	Kr: 72°30'	Kr: 107°30'	Kr: 93°	Kr: 93°
					
A274	A275	A276	A345	A346	A347

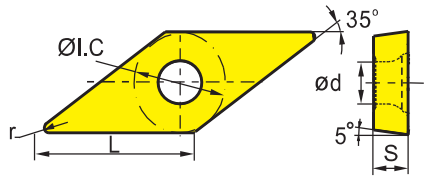
System code A48 | Grade selection A42 | Technical info A501 | Cutting data A366

- Ideal machining conditions
- Normal machining conditions
- Unfavourable machining conditions

VBGT	L	I.C	S	d
11 03	11	6.35	3.18	2.8

Turning inserts

VB** positive insert



	HC[1] (CVD)											HC[1] (PVD)						HT		HC[2]	HW	
P	○	○	○	◎	◎	◎									◎	◎		○	◎	○		
M							○	◎				○	○	◎	◎	◎	○	○	◎	○		
K									○	◎	◎	◎										
N													○	○							○	◎
S												○	○	◎	◎	◎	○				○	◎
H																						

ISO		r	a_p	f	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
SF	**VBGT110302-SF**	0.2	0.05-2.00	0.05-0.15																				○	○	●		
	VBGT110304-SF	0.4	0.05-2.00	0.05-0.20																					○	●		
Finishing																												

● Ex stock ○ On demand

HC[1] Coated carbide
HT Uncoated cermet
HC[2] Coated cermet
HW Uncoated carbide

Tool holder

SVJBR/L	SVABR/L	SVVBN	S***-SVXBR/L
Kr: 93°	Kr: 90°	Kr: 72°30'	Kr: 93°
			
A274	A275	A276	A347

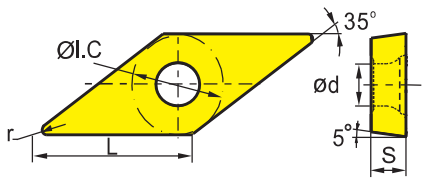
System code A48 Grade selection A42 Technical info A501 Cutting data A366

Turning inserts

- Ideal machining conditions
- Normal machining conditions
- Unfavourable machining conditions

VB**	L	l.C	S	d
11 03	11	6.35	3.18	2.8
16 04	16.5	9.525	4.76	4.4

VB** positive insert



	HC¹ (CVD)											HC¹ (PVD)							HT		HC²	HW		
	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
P	○	○	○	◍	◍	◍										◍	◍			○	◍	○		
M							○	◍						○	○	◍	◍	◍	○	○	◍	○		
K									◍	◍	◍	◍												
N													○	○									◍	◍
S														○	○	◍	◍	◍	○				○	◍
H																								

	ISO	r	a_p	f	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
NGF	**VBET160408-NGF**	0.8	0.2-3.0	0.08-0.30															●									
	VBET160412-NGF	1.2	0.2-3.0	0.1-0.4															●									
Finishing																												
EM	**VBMT110304-EM**	0.4	0.15-2.00	0.07-0.20							●									●								
	VBMT110308-EM	0.8	0.2-2.0	0.09-0.27			○				●									●								
	VBMT160404-EM	0.4	0.23-2.70	0.07-0.20							●									●								
Medium Cut	**VBMT160408-EM**	0.8	0.45-2.70	0.09-0.27							●									●								
HM	**VBMT160404-HM**	0.4	0.23-2.70	0.07-0.20			●		●		●		●															
	VBMT160408-HM	0.8	0.45-2.70	0.09-0.27			●		●		●	●	●		●												○	
Medium Cut	**VBMT160412-HM**	1.2	0.54-2.70	0.11-0.32			●		●																			
XM	**VBMT160404-XM**	0.4	1-2.5	0.15-0.25	●			○																				
	VBMT160408-XM	0.8	1-2.5	0.15-0.3	●			○																				
Medium Cut	**VBMT160412-XM**	1.2	1-2.5	0.15-0.35	●			○																				

● Ex stock ○ On demand

YBC152F, YBC252F, YBM153F, YBM253F available

HC¹ Coated carbide
HT Uncoated cermet
HC² Coated cermet
HW Uncoated carbide

Tool holder

SVJBR/L	SVABR/L	SVVBN	S***-SVQBR/L	S***-SVUBR/L	S***-SVXBR/L
Kr: 93°	Kr: 90°	Kr: 72°30'	Kr: 107°30'	Kr: 93°	Kr: 93°
					
A274	A275	A276	A345	A346	A347

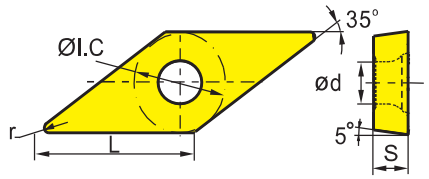
System code A48 | Grade selection A42 | Technical info A501 | Cutting data A366

Turning inserts

Ideal machining conditions
Normal machining conditions
Unfavourable machining conditions

VBMT	L	I.C	S	d
16 04	16.5	9.525	4.76	4.4

VB** positive insert



	HC[1] (CVD)											HC[1] (PVD)						HT		HC[2]	HW	
	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
P	●	●	●	◉	◉	◉										◉	◉			●	◉	●		
M							○	◉					○	○	◉	◉	◉	◉	○	○	◉	○		
K									◉	◉	◉	◉												
N													●	●									●	◉
S													●	○	◉	◉	◉	◉	○				●	◉
H																								

	ISO	r	a_p	f
HR	**VBMT160404-HR**	0.4	0.5-3.0	0.1-0.3
	VBMT160408-HR	0.8	0.9-3.6	0.11-0.32
	VBMT160412-HR	1.2	1.08-3.60	0.13-0.38
Roughing				
SNR	**VBMT160408-SNR**	0.8	0.5-4.0	0.1-0.3
	VBMT160412-SNR	1.2	0.5-4.0	0.3-0.6
Roughing				

	HC[1] (CVD)											HC[1] (PVD)						HT		HC[2]	HW	
	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
HR			●		●																			
			○		●																			
			○		●																			
SNR															●				○					
															●			○	○					

● Ex stock ○ On demand
YBC152F, YBC252F, YBM153F, YBM253F available

HC[1] Coated carbide
HT Uncoated cermet
HC[2] Coated cermet
HW Uncoated carbide

Tool holder

SVJBR/L	SVABR/L	SVVBN	S***-SVQBR/L	S***-SVUBR/L	S***-SVXBR/L
Kr: 93°	Kr: 90°	Kr: 72°30'	Kr: 107°30'	Kr: 93°	Kr: 93°
					
A274	A275	A276	A345	A346	A347

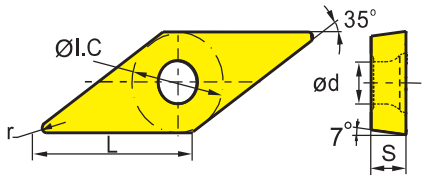
System code A48 | Grade selection A42 | Technical info A501 | Cutting data A366

Turning inserts

- Ideal machining conditions
- Normal machining conditions
- Unfavourable machining conditions

VCGT	L	l.C	S	d
11 03	11	6.35	3.18	2.8
16 04	16.5	9.525	4.76	4.4

VC** positive insert



	HC¹ (CVD)											HC¹ (PVD)							HT		HC²	HW	
P	○	○	○	◍	◍	◍									◍	◍			○	◍	○		
M							○	◍				○	○	◍	◍	◍	◍	○	◍	○			
K									●	◍	◍	◍											
N												●	●									●	◍
S													○	○	◍	◍	◍	○				○	◍
H																							

	ISO	r	a_p	f	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
HF	**VCGT110304-HF**	0.4	0.2-2.0	0.05-0.30																○								
Finishing																												
NF	**VCGT160408-NF**	0.8	0.2-2.0	0.1-0.4															●									
Finishing																												
SF	**VCGT110302-SF**	0.2	0.05-1.00	0.05-0.15																				●	●	●		
	VCGT110304-SF	0.4	0.05-1.00	0.05-0.25														○		●				●	○	●		
	VCGT160404-SF	0.4	0.05-1.50	0.05-0.25																						●		
Finishing																												

● Ex stock ○ On demand

HC¹ Coated carbide
HT Uncoated cermet
HC² Coated cermet
HW Uncoated carbide

Tool holder

SVVCN	SVJCR/L	SVACR/L-SC	SVJCR/L-SC	S***-SVQCR/L	S***-SVUCR/L	C***-SVQCR/L
Kr: 72°30'	Kr: 93°	Kr: 90°	Kr: 93°	Kr: 107°30'	Kr: 93°	Kr: 107°30'
						
A277	A278	A312	A313	A343	A344	A363

C***-SVUCR/L
Kr: 93°

A364

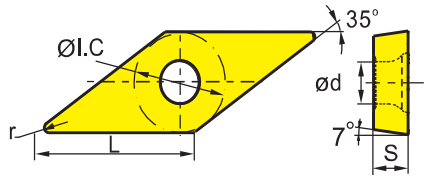
System code A48 | Grade selection A42 | Technical info A501 | Cutting data A366

Turning/Milling inserts

- Ideal machining conditions
- Normal machining conditions
- Unfavourable machining conditions

VCGX	L	I.C	S	d
11 03	11	6.35	3.18	2.8
16 04	16.6	9.525	4.76	4.4
22 05	22	12.7	5.56	5.5

VC** turning/milling insert



	HC¹ (CVD)											HC¹ (PVD)						HT		HC²	HW	
	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
P	●	●	●	◉	◉	◉										◉	◉			●	◉	●		
M							○	◉					○	○	◉	◉	◉	◉	○	◉	◉	○		
K									●	◉	◉	◉												
N													●	●									●	◉
S													●	○	○	◉	◉	◉	○				●	◉
H																								

	ISO	r	a_p	f																				
LC	**VCGX110301-LC**	0.1	0.3-3.0	0.05-0.10										●		●							●	
	VCGX110302-LC	0.2	0.3-3.0	0.05-0.15										●		○							●	
	VCGX110304-LC	0.4	0.5-3.0	0.1-0.3										●									●	
	VCGX110308-LC	0.8	1-3	0.1-0.5										●									●	
Alum Machining	**VCGX160404-LC**	0.4	0.5-5.0	0.1-0.3										●									●	
	VCGX160408-LC	0.8	0.5-5.0	0.15-0.60										●									●	
	VCGX160412-LC	1.2	0.5-5.0	0.15-0.80										○									●	
	VCGX220530-LC	3	0.5-7.0	0.25-1.00										●									○	●

● Ex stock ○ On demand

HC¹ Coated carbide
HT Uncoated cermet
HC² Coated cermet
HW Uncoated carbide

Tool holder

SVVCN	SVJCR/L	SVACR/L-SC	SVJCR/L-SC	S***-SVQCR/L	S***-SVUCR/L	C***-SVQCR/L
Kr: 72°30'	Kr: 93°	Kr: 90°	Kr: 93°	Kr: 107°30'	Kr: 93°	Kr: 107°30'
						
A277	A278	A312	A313	A343	A344	A363

C***-SVUCR/L
Kr: 93°

A364

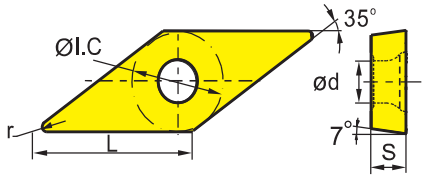
System code A48 | Grade selection A42 | Technical info A501 | Cutting data A366

VCGX	L	I.C	S	d
11 02	11	6.35	2.38	2.8
11 03	11	6.35	3.18	2.8
16 04	16.6	9.525	4.76	4.4
22 05	22	12.7	5.56	5.5

Turning/Milling inserts

- Ideal machining conditions
- Normal machining conditions
- Unfavourable machining conditions

VC** turning/milling insert



	ISO	r	a_p	f	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
					HC¹ (CVD)												HC¹ (PVD)							HT		HC²	HW	
P					○	○	○	◉	◉	◉										◉	◉			◉	◉	●		
M											○	◉						○	○	◉	◉	◉	○	◉	◉	○		
K													●	◉	◉	◉												
N																	●	●									●	◉
S																		○	○	◉	◉	◉	○				●	◉
H																												
LH	**VCGX110204-LH**	0.4	0.5-3.0	0.1-0.3														●									●	
	VCGX110301-LH	0.1	0.5-3.0	0.05-0.10																							●	●
	VCGX110302-LH	0.2	0.3-3.0	0.05-0.15														●									●	○
	VCGX110304-LH	0.4	0.5-3.0	0.1-0.3														●									●	○
	VCGX110308-LH	0.8	0.5-3.0	0.15-0.60														○									●	
	VCGX160402-LH	0.2	0.5-5.0	0.05-0.10														●									●	
	VCGX160404-LH	0.4	0.5-5.0	0.1-0.3														●									●	
	VCGX160408-LH	0.8	0.5-5.0	0.15-0.60														●									●	
	VCGX160412-LH	1.2	0.5-5.0	0.15-0.80														○									●	
	VCGX220530-LH	3	0.5-7.0	0.25-1.00														○									●	○

Alum Machining

● Ex stock ○ On demand

HC¹ Coated carbide
HT Uncoated cermet
HC² Coated cermet
HW Uncoated carbide

Tool holder

SVVCN	SVJCR/L	SVACR/L-SC	SVJCR/L-SC	S***-SVQCR/L	S***-SVUCR/L	C***-SVQCR/L
Kr: 72°30'	Kr: 93°	Kr: 90°	Kr: 93°	Kr: 107°30'	Kr: 93°	Kr: 107°30'
						
A277	A278	A312	A313	A343	A344	A363

C***-SVUCR/L
Kr: 93°

A364

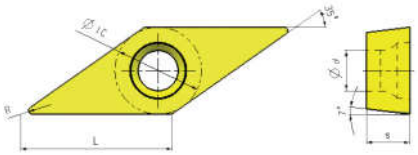
System code A48 | Grade selection A42 | Technical info A501 | Cutting data A366

Turning inserts

- Ideal machining conditions
- Normal machining conditions
- Unfavourable machining conditions

VCMT	L	I.C	S	d
11 03	11	6.35	3.18	2.8
16 04	16	9.525	4.76	4.4

VC** positive insert



					HC¹ (CVD)											HC¹ (PVD)						HT		HC²	HW	
					P																					
					M																					
					K																					
					N																					
					S																					
					H																					
	ISO		r	a_p	f	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
XF	**VCMT110302-XF**		0.2	0.5-2.0	0.08-0.20				○																		
	VCMT110304-XF		0.4	0.5-2.0	0.08-0.20	●																					
	VCMT110308-XF		0.8	0.5-2.0	0.08-0.25	●																					
	VCMT160404-XF		0.4	0.5-2.5	0.08-0.20	●																					
Finishing	**VCMT160408-XF**		0.8	0.5-2.5	0.08-0.25	●																					
EF	**VCMT160404-EF**		0.4	0.5-2.5	0.05-0.20															●							
Medium Cut																											
EM	**VCMT160404-EM**		0.4	0.5-2.5	0.05-0.35							○								●							
	VCMT160408-EM		0.8	0.5-2.5	0.10-0.45							○								●							
Medium Cut																											
XM	**VCMT160412-XM**		1.2	1-2.5	0.15-0.35	○			○																		
Medium Cut																											

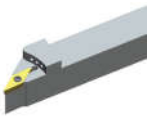
● Ex stock ○ On demand

YBC152F, YBC252F, YBM153F, YBM253F available

HC¹ Coated carbide
HT Uncoated cermet
HC² Coated cermet
HW Uncoated carbide

System code > A48 | Grade selection > A42 | Technical info > A501 | Cutting data > A366

Tool holder

SVVCN	SVJCR/L	SVACR/L-SC	SVJCR/L-SC	S***-SVQCR/L	S***-SVUCR/L	C***-SVQCR/L
Kr: 72°30'	Kr: 93°	Kr: 90°	Kr: 93°	Kr: 107°30'	Kr: 93°	Kr: 107°30'
						
A277	A278	A312	A313	A343	A344	A363

C***-SVUCR/L
Kr: 93°

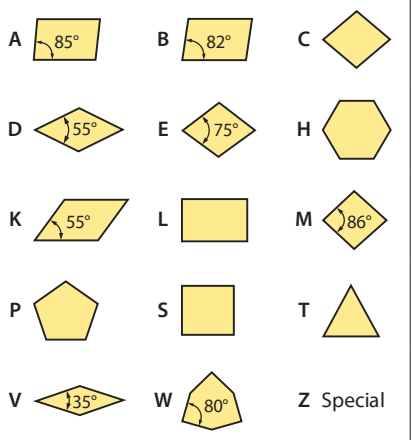
A364

System code A48 | Grade selection A42 | Technical info A501 | Cutting data A366

General turning ISO code – PCBN & PCD inserts

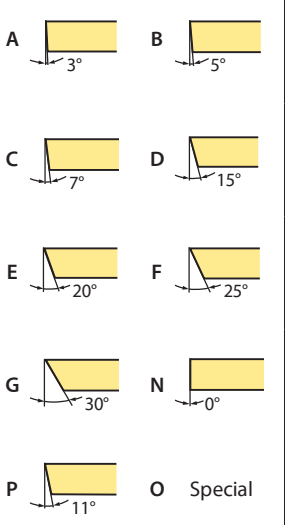
C	N	G	A	12	04	08	T	020	20	–	2	(W)
1	2	3	4	5	6	7	8	9	10		11	12

Insert shape



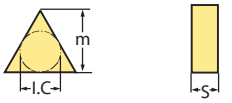
1

Clearance angle



2

Tolerance class

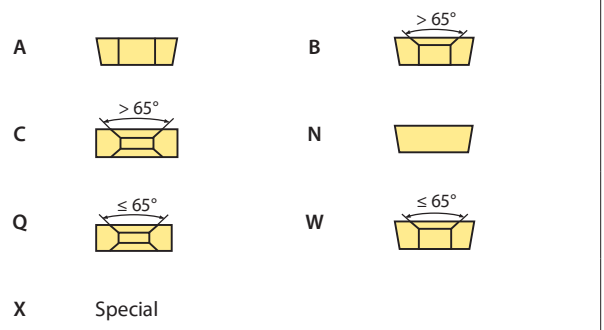


Code	I.C [mm]	m [mm]	S [mm]
A	±0,025	±0,005	±0,025
C	±0,025	±0,013	±0,025
E	±0,025	±0,025	±0,025
F	±0,013	±0,005	±0,025
G	±0,025	±0,025	±0,130
H	±0,013	±0,013	±0,025
J	±0,05–0,15	±0,005	±0,025
K	±0,05–0,15	±0,013	±0,025
L	±0,05–0,15	±0,025	±0,025
M	±0,05–0,15	±0,08–0,20	±0,130
N	±0,05–0,15	±0,08–0,20	±0,025
U	±0,08–0,25	±0,13–0,38	±0,130

3

Fastening features (metric)

Insert shape



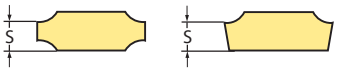
4

Cutting edge length l [mm]

I.C [mm]	Insert shape C	D	S	T	V	W
3,97				06		
5,0						
5,56				09		
6,0						
6,35	06	07		11	11	
8,0						
9,525	09	11	09	16	16	06
10,0						
12,0						
12,7	12	15	12	22	22	08
15,875	16		15	27		
16,0		19				
19,05	19		19	33		
20,0						
25,0	25	25				
25,4			25			
31,75						
32						

5

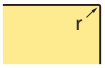
Insert thickness S [mm]



Code	S	Code	S
02	2,38	**06**	6,35
T2	2,58	**T6**	6,75
03	3,18	**07**	7,94
T3	3,97	**09**	9,52
04	4,76	**T9**	9,72
T4	4,96	**11**	11,11
05	5,56	**12**	12,70
T5	5,95		

6

Nose radius r [mm]



Code	r
00	–
02	0,2
04	0,4
08	0,8
12	1,2
16	1,6
20	2,0
24	2,4
32	3,2
X	Special
MO	Round inserts

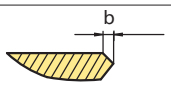
7

Cutting edge profile

Code	Cutting edge	Insert shape
E	Rounding	
F	Sharp edge	
T	Chamfer	
S	Chamfer + Rounding	

8

Chamfer width b [mm]



Code	b
010	0,10
015	0,15
020	0,20
025	0,25
030	0,30
035	0,35
040	0,40
045	0,45
050	0,50
100	1,00
200	2,00

9

Chamfer angle α



Code	α
05	5°
10	10°
15	15°
20	20°
25	25°
30	30°

10

Cutting edges

Code	Form
1	
2	
3	
4	

11

Extra

Code	Description
W	Wiper
HS	Full face single brazed CBN insert
M	Solid CBN with clamping dimple
CB	Chip breaker (CBN)
MED	Chip breaker, fine – medium (PCD)
ROF	Chip breaker, medium – roughing (PCD)
L (L/R)	Full-edge tipped (PCD)

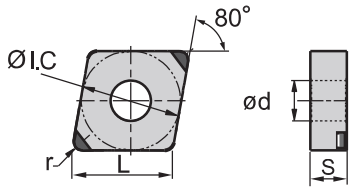
12

- Ideal machining conditions
- Normal machining conditions
- Unfavourable machining conditions

CNGA	L	I.C	S	d
12 04	12.9	12.7	4.76	5.16

Turning CBN inserts

CN** negative insert



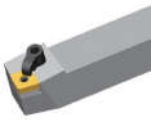
	BL (CBN)	BC (CBN)	BH (CBN)
P			
M			
K			○
N			
S	○	❂	
H	○ ❂	○ ❂	

	ISO	r	a_p	f	YCB112	YCB113	YCB121	YCB131	YCB113C	YCB121C	YCB131C	YCB215
	**CNGA120402S01020-2**	0.2	0.08-0.50	0.05-0.15			○			○		
	CNGA120402S01225-2	0.2	0.08-0.50	0.05-0.15		○			○			
	CNGA120404E-2	0.4	0.08-0.50	0.05-0.20	○			○				
	CNGA120404S01020-2	0.4	0.08-0.50	0.05-0.20			●			○		○
	CNGA120404S01225-2	0.4	0.08-0.50	0.05-0.20		●			○			
	CNGA120408E-2	0.8	0.08-0.50	0.05-0.25	○			○				
	CNGA120408S01525-2	0.8	0.08-0.50	0.05-0.25		●		●	●			
	CNGA120408S02020-2	0.8	0.08-0.50	0.05-0.25			●			●		
	CNGA120412E-2	1.2	0.08-0.50	0.05-0.30	○			○				
	CNGA120412S01020-2	1.2	0.08-0.50	0.05-0.30								●
	CNGA120412S01525-2	1.2	0.08-0.50	0.05-0.30		●		●	●			
	CNGA120412S02020-2	1.2	0.08-0.50	0.05-0.30			●			○		
	CNGA120416S01020-2	1.6	0.08-0.50	0.05-0.35								○
	CNGA120416S01525-2	1.6	0.08-0.50	0.05-0.35		○		○	○			
	CNGA120416S02020-2	1.6	0.08-0.50	0.05-0.35			○			○		
	**CNGA120408S01525-2W**	0.8	0.08-0.50	0.05-0.25		●		○	○			
	CNGA120408S02020-2W	0.8	0.08-0.50	0.05-0.25						○		

● Ex stock ○ On demand

BL CBN with a low CBN content
BC CBN with coating
BH CBN with a high CBN content

Tool holder

DCLNR/L	PCBNR/L	PCLNR/L	MCBNR/L	MCLNR/L	S***-PCLNR/L
Kr: 95°	Kr: 75°	Kr: 95°	Kr: 75°	Kr: 95°	Kr: 95°
					
A230	A237	A238	A252	A253	A324

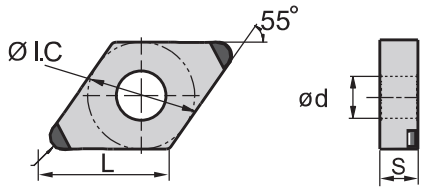
System code A158 Grade selection A42 Technical info A501 Cutting data A366

Turning CBN inserts

- Ideal machining conditions
- Normal machining conditions
- Unfavourable machining conditions

DNGA	L	I.C	S	d
15 06	15.5	12.7	6.35	5.16

DN** negative insert



	BL (CBN)				BC (CBN)			BH (CBN)
	YCB112	YCB113	YCB121	YCB131	YCB113C	YCB121C	YCB131C	YCB215
P								
M								
K								●
N								
S	○			◈				
H		○	◈	❁	○	◈	❁	

ISO	r	a_p	f	YCB112	YCB113	YCB121	YCB131	YCB113C	YCB121C	YCB131C	YCB215
DNGA150604E-2	0.4	0.08-0.50	0.05-0.20	○			○				
DNGA150604S01020-2	0.4	0.08-0.50	0.05-0.20			○			○		○
DNGA150604S01225-2	0.4	0.08-0.50	0.05-0.20		○		○	○			
DNGA150608E-2	0.8	0.08-0.50	0.05-0.25	○			○				
DNGA150608S01020-2	0.8	0.08-0.50	0.05-0.25								○
DNGA150608S01525-2	0.8	0.08-0.50	0.05-0.25		●		●	●			
DNGA150608S02020-2	0.8	0.08-0.50	0.05-0.25			●			●		
DNGA150612S01020-2	1.2	0.08-0.50	0.05-0.30								○
DNGA150612S01525-2	1.2	0.08-0.50	0.05-0.30		●		○	○			
DNGA150612S02020-2	1.2	0.08-0.50	0.05-0.30			●			○		

● Ex stock ○ On demand

BL CBN with a low CBN content
BC CBN with coating
BH CBN with a high CBN content

Tool holder

DDJNR/L	PDJNR/L	PDNNR/L	MDJNR/L	MDPNN	S***-PDSNR/L	S***-PDUNR/L
Kr: 93°	Kr: 93°	Kr: 63°	Kr: 93°	Kr: 62°30'	Kr: 62°30'	Kr: 93°
						
A231	A240	A241	A254	A255	A326	A327

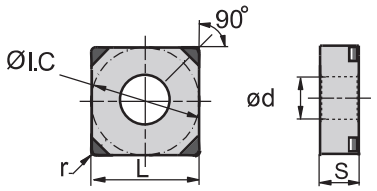
System code A158 Grade selection A42 Technical info A501 Cutting data A366

- Ideal machining conditions
- Normal machining conditions
- Unfavourable machining conditions

SNGA	L	I.C	S	d
12 04	12.7	12.7	4.76	5.16

Turning CBN inserts

SN** negative insert



	BL (CBN)	BC (CBN)	BH (CBN)
P			
M			
K			●
N			
S	○		
H	◯ ❂ ❁	◯ ❂ ❁	

ISO	r	a_p	f	YCB112	YCB113	YCB121	YCB131	YCB113C	YCB121C	YCB131C	YCB215
SNGA120408S01020-4	0.8	0.08-0.50	0.05-0.25								○
SNGA120408S01525-4	0.8	0.08-0.50	0.05-0.25		○		○	○			
SNGA120408S02020-4	0.8	0.08-0.50	0.05-0.25			○			○		
SNGA120412S01020-4	1.2	0.08-0.50	0.05-0.30								○
SNGA120412S01525-4	1.2	0.08-0.50	0.05-0.30		○		○	○			
SNGA120412S02020-4	1.2	0.08-0.50	0.05-0.30			○			○		

● Ex stock ○ On demand

BL CBN with a low CBN content
BC CBN with coating
BH CBN with a high CBN content

Tool holder

DSBNR/L	PSBNR/L	PSDNN	PSKNR/L	PSSNR/L	MSBNR/L	MSRNR/L
Kr: 75°	Kr: 75°	Kr: 45°	Kr: 75°	Kr: 45°	Kr: 75°	Kr: 75°
						
A232	A242	A244	A245	A246	A256	A257

MSKNR/L	MSDNN	S***-PSKNR/L
Kr: 75°	Kr: 45°	Kr: 75°
		
A258	A259	A329

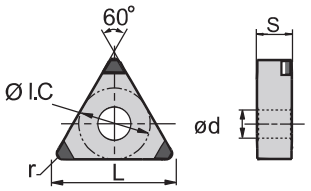
System code A158 Grade selection A42 Technical info A501 Cutting data A366

- Ideal machining conditions
- Normal machining conditions
- Unfavourable machining conditions

TNGA	L	I.C	S	d
16 04	16.5	9.525	4.76	3.81

Turning CBN inserts

TN** negative insert



	BL (CBN)	BC (CBN)	BH (CBN)
P			
M			
K			●
N			
S	○ ❁		
H	○ ❁ ❁	○ ❁ ❁	

	ISO	r	a_p	f	YCB112	YCB113	YCB121	YCB131	YCB113C	YCB121C	YCB131C	YCB215
	**TNGA160404S01020-3**	0.4	0.08-0.50	0.05-0.20			○			○		○
	TNGA160404S01225-3	0.4	0.08-0.50	0.05-0.20		○			○			
	TNGA160408S01020-3	0.8	0.08-0.50	0.05-0.25								○
	TNGA160408S01525-3	0.8	0.08-0.50	0.05-0.25		○		○	○			
	TNGA160408S02020-3	0.8	0.08-0.50	0.05-0.25			●			○		
	TNGA160412S01020-3	1.2	0.08-0.50	0.05-0.30								○
	TNGA160412S01525-3	1.2	0.08-0.50	0.05-0.30		○		○	○			
	TNGA160412S02020-3	1.2	0.08-0.50	0.05-0.30			○			○		

● Ex stock ○ On demand

BL CBN with a low CBN content
BC CBN with coating
BH CBN with a high CBN content

Tool holder

DTGNR/L	PTFNR/L	PTTNR/L	PTGNR/L	MTGNR/L	MTJNR/L	MTJNR/L-Z
Kr: 91°	Kr: 91°	Kr: 60°	Kr: 90°	Kr: 90°	Kr: 93°	Kr: 93°
						
A233	A247	A248	A249	A260	A261	A262

MTFNR/L	S***-PTFNR/L
Kr: 91°	Kr: 90°
	
A263	A330

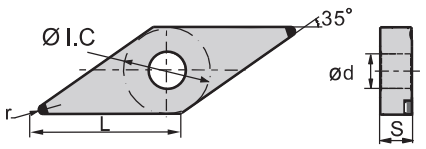
System code A158 | Grade selection A42 | Technical info A501 | Cutting data A366

- Ideal machining conditions
- Normal machining conditions
- Unfavourable machining conditions

VNGA	L	I.C	S	d
16 04	16.6	9.525	4.76	3.81

Turning CBN inserts

VN** negative insert



	BL (CBN)	BC (CBN)	BH (CBN)
P			
M			
K			○
N			
S	○		
H	○ ⊛ ⊛	○ ⊛ ⊛	

	ISO	r	a_p	f	YCB112	YCB113	YCB121	YCB131	YCB113C	YCB121C	YCB131C	YCB215
	**VNGA160404S01020-2**	0.4	0.08-0.50	0.05-0.20			●			○		○
	VNGA160404S01225-2	0.4	0.08-0.50	0.05-0.20		●			○			
	VNGA160408S01020-2	0.8	0.08-0.50	0.05-0.25								○
	VNGA160408S01525-2	0.8	0.08-0.50	0.05-0.25		●			○			
	VNGA160408S02020-2	0.8	0.08-0.50	0.05-0.25			●			○		

● Ex stock ○ On demand

BL CBN with a low CBN content
BC CBN with coating
BH CBN with a high CBN content

Tool holder

DVVNN	DVJNR/L	MVVNN	MVJNR/L
Kr: 72°30'	Kr: 93°	Kr: 72°30'	Kr: 93°
			
A234	A235	A264	A265

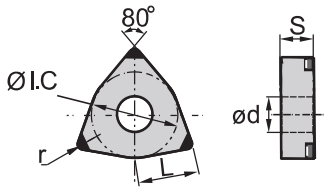
System code A158 | Grade selection A42 | Technical info A501 | Cutting data A366

Turning CBN inserts

- Ideal machining conditions
- Normal machining conditions
- Unfavourable machining conditions

WNGA	L	I.C	S	d
08 04	8.69	12.7	4.76	5.16

WN** negative insert



	BL (CBN)				BC (CBN)			BH (CBN)
	YCB112	YCB113	YCB121	YCB131	YCB113C	YCB121C	YCB131C	YCB215
P								
M								
K								●
N								
S	●			◈				
H		○	◈	❁	○	◈	❁	

ISO	r	a_p	f	YCB112	YCB113	YCB121	YCB131	YCB113C	YCB121C	YCB131C	YCB215
WNGA080404S01020-3	0.4	0.08-0.50	0.05-0.20			○			○		○
WNGA080404S01225-3	0.4	0.08-0.50	0.05-0.20		○			○			
WNGA080408S01020-3	0.8	0.08-0.50	0.05-0.25								○
WNGA080408S01525-3	0.8	0.08-0.50	0.05-0.25		○			○			
WNGA080408S02020-3	0.8	0.08-0.50	0.05-0.25			○			○		
WNGA080412S01020-3	1.2	0.08-0.50	0.05-0.30								○
WNGA080412S01525-3	1.2	0.08-0.50	0.05-0.30		○		○	○			
WNGA080412S02020-3	1.2	0.08-0.50	0.05-0.30			○			○		

● Ex stock ○ On demand

BL CBN with a low CBN content
BC CBN with coating
BH CBN with a high CBN content

Tool holder

DWLNR/L	PWLNR/L	MWLNR/L	S***-PWLNR/L
Kr: 95°	Kr: 95°	Kr: 95°	Kr: 95°
			
A236	A251	A266	A332

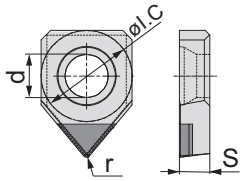
System code A158 | Grade selection A42 | Technical info A501 | Cutting data A366

- Ideal machining conditions
- Normal machining conditions
- Unfavourable machining conditions

ZNEX	I.C	S	d
04 01	4.76	1.59	2.3

Turning CBN inserts

ZN** negative insert



	BL (CBN)	BC (CBN)	BH (CBN)
P			
M			
K			●
N			
S	○		
H	○ ◌ ❁	○ ◌ ❁	

ISO		r	a_p	f	YCB112	YCB113	YCB121	YCB131	YCB113C	YCB121C	YCB131C	YCB215
	**ZNEX040102S01515**	0.2	0.08-0.50	0.05-0.15		○	○					
	ZNEX040104S01515	0.4	0.08-0.50	0.05-0.20		○	○					

● Ex stock ○ On demand

BL CBN with a low CBN content
BC CBN with coating
BH CBN with a high CBN content

Tool holder
C*-SZLNR/L**
Kr: 95°



A365

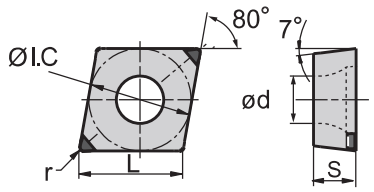
System code A158 | Grade selection A42 | Technical info A501 | Cutting data A366

Turning CBN inserts

- Ideal machining conditions
- Normal machining conditions
- Unfavourable machining conditions

CCGW	L	I.C	S	d
06 02	6.4	6.35	2.38	2.8
09 T3	9.7	9.525	3.97	4.4
12 04	12.9	12.7	4.76	5.5

CC** positive insert



	BL (CBN)				BC (CBN)			BH (CBN)
P								
M								
K								○
N								
S	○			◍				
H		○	◍	◍	○	◍	◍	

	ISO	r	a_p	f	YCB112	YCB113	YCB121	YCB131	YCB113C	YCB121C	YCB131C	YCB215
	CCGW060202S01020-2	0.2	0.08-0.50	0.05-0.20			○			○		○
	CCGW060202S01225-2	0.2	0.08-0.50	0.05-0.150.05-0.20		○			○			
	CCGW060204S01020-2	0.4	0.08-0.50	0.05-0.20			○			○		○
	CCGW060204S01225-2	0.4	0.08-0.50	0.05-0.20		○			○			
	CCGW060208S01020-2	0.8	0.08-0.50	0.05-0.25								○
	CCGW060208S01525-2	0.8	0.08-0.50	0.05-0.25		○			○			
	CCGW060208S02020-2	0.8	0.08-0.50	0.05-0.25			○			○		
	CCGW09T302S01020-2	0.2	0.08-0.50	0.05-0.15			○			○		○
	CCGW09T302S01225-2	0.2	0.08-0.50	0.05-0.15		○			○			
	CCGW09T304E-2	0.4	0.08-0.50	0.05-0.20	○			○				
	CCGW09T304S01020-2	0.4	0.08-0.50	0.05-0.20			●			○		○
	CCGW09T304S01225-2	0.4	0.08-0.50	0.05-0.20		●			○			
	**CCGW09T308E-2**	0.8	0.08-0.50	0.05-0.25	○			○				
	CCGW09T308S01020-2	0.8	0.08-0.50	0.05-0.25								●
	CCGW09T308S01525-2	0.8	0.08-0.50	0.05-0.25		●		○	○			
	CCGW09T308S02020-2	0.8	0.08-0.50	0.05-0.25			●			●		
	CCGW09T312E-2	1.2	0.08-0.50	0.05-0.30	○			○				
	CCGW120404S01020-2	0.4	0.08-0.50	0.05-0.20			○			○		○
	CCGW120404S01225-2	0.4	0.08-0.50	0.05-0.20		○			○			
	CCGW120408S01020-2	0.8	0.08-0.50	0.05-0.25								○
	CCGW120408S01525-2	0.8	0.08-0.50	0.05-0.25		○		○	○			
	CCGW120408S02020-2	0.8	0.08-0.50	0.05-0.25			○			○		
	CCGW120412S01020-2	1.2	0.08-0.50	0.05-0.30								○
	CCGW120412S01525-2	1.2	0.08-0.50	0.05-0.30		○		○	○			
	CCGW120412S02020-2	1.2	0.08-0.50	0.05-0.30			○			○		

● Ex stock ○ On demand

BL CBN with a low CBN content
BC CBN with coating
BH CBN with a high CBN content

System code A158 Grade selection A42 Technical info A501 Cutting data A366

Tool holder

SCACR/L	SCLCR/L	SCACR/L-SC	SCLCR/L-SC	A***-SCLCR/L	S***-SCFCR/L	S***-SCLCR
Kr: 90°	Kr: 95°	Kr: 90°	Kr: 95°	Kr: 95°	Kr: 90°	Kr: 95°
						
A269	A270	A306	A307	A334	A352	A353

E***-SCLCR/L
Kr: 95°

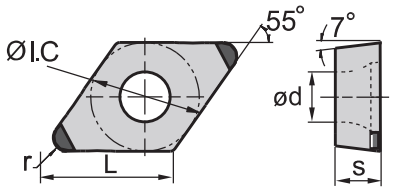
A355

Turning CBN inserts

- Ideal machining conditions
- Normal machining conditions
- Unfavourable machining conditions

DCGW	L	I.C	S	d
07 02	7.8	6.35	2.38	2.8
11 T3	11.6	9.525	3.97	4.4

DC** positive insert



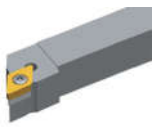
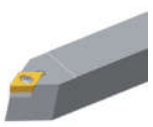
	BL (CBN)	BC (CBN)	BH (CBN)
P			
M			
K			○
N			
S	○	◉	
H	○ ◉ ◉	○ ◉ ◉	

	ISO	r	a_p	f	YCB112	YCB113	YCB121	YCB131	YCB113C	YCB121C	YCB131C	YCB215
	DCGW070202S01020-2	0.2	0.08-0.50	0.05-0.15			●			○		
	DCGW070202S01225-2	0.2	0.08-0.50	0.05-0.15		○			○			
	DCGW070204S01020-2	0.4	0.08-0.50	0.05-0.20			●			○		○
	DCGW070204S01225-2	0.4	0.08-0.50	0.05-0.20		●			○			
	DCGW070208S01020-2	0.8	0.08-0.50	0.05-0.25								○
	DCGW070208S01525-2	0.8	0.08-0.50	0.05-0.25		●			○			
	DCGW070208S02020-2	0.8	0.08-0.50	0.05-0.25			●			○		
	DCGW11T302S01020-2	0.2	0.08-0.50	0.05-0.15			○			○		○
	**DCGW11T302S01225-2**	0.2	0.08-0.50	0.05-0.15		○			○			
	DCGW11T304E-2	0.4	0.08-0.50	0.05-0.20	○			○				
	DCGW11T304S01020-2	0.4	0.08-0.50	0.05-0.20			●			○		●
	DCGW11T304S01225-2	0.4	0.08-0.50	0.05-0.20		●			○			
	DCGW11T308E-2	0.8	0.08-0.50	0.05-0.25	○			○				
	DCGW11T308S01020-2	0.8	0.08-0.50	0.05-0.25								●
	DCGW11T308S01525-2	0.8	0.08-0.50	0.05-0.25		●		○	●			
	DCGW11T308S02020-2	0.8	0.08-0.50	0.05-0.25			●			●		
	DCGW11T312E-2	1.2	0.08-0.50	0.05-0.30	○			○				

● Ex stock ○ On demand

BL CBN with a low CBN content
BC CBN with coating
BH CBN with a high CBN content

Tool holder

SDACR/L	SDJCR/L	SDNCN	SDACR/L-SC	SDHCR/L-SC	SDJCR/L-SC	SDNCN-SC
Kr: 90°	Kr: 93°	Kr: 62°30'	Kr: 90°	Kr: 107°30'	Kr: 93°	Kr: 62°30'
						
A271	A272	A273	A308	A309	A310	A311

S***-SDQCR/L	A***-SDUCR/L	S***-SDZCR/L	E***-SDQCR/L
Kr: 107°30'	Kr: 93°	Kr: 85°	Kr: 107°30'
			
A336	A337	A338	A357

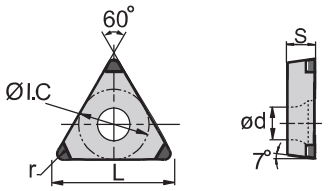
System code A158 | Grade selection A42 | Technical info A501 | Cutting data A366

Turning CBN inserts

Ideal machining conditions
Normal machining conditions
Unfavourable machining conditions

TCGW	L	I.C	S	d
11 02	11	6.35	2.38	2.5
16 T3	16.5	9.525	3.97	4.4

TC** positive insert



	BL (CBN)	BC (CBN)	BH (CBN)
P			
M			
K			●
N			
S	○	◎	
H	○ ◎ ❁	○ ◎ ❁	

ISO	r	a_p	f	YCB112	YCB113	YCB121	YCB131	YCB113C	YCB121C	YCB131C	YCB215
TCGW110204S01020-3	0.4	0.08-0.50	0.05-0.20			○			○		○
TCGW110204S01225-3	0.4	0.08-0.50	0.05-0.20		○			○			
TCGW110208S01020-3	0.8	0.08-0.50	0.05-0.25								○
TCGW110208S01525-3	0.8	0.08-0.50	0.05-0.25		○			○			
TCGW110208S02020-3	0.8	0.08-0.50	0.05-0.25			○			○		
TCGW16T304S01020-3	0.4	0.08-0.50	0.05-0.20			●			○		○
TCGW16T304S01225-3	0.4	0.08-0.50	0.05-0.20	●				○			
TCGW16T308S01020-3	0.8	0.08-0.50	0.05-0.25								○
TCGW16T308S01525-3	0.8	0.08-0.50	0.05-0.25	●				○			
TCGW16T308S02020-3	0.8	0.08-0.50	0.05-0.25			●			○		

● Ex stock ○ On demand

BL CBN with a low CBN content
BC CBN with coating
BH CBN with a high CBN content

Tool holder

STACR/L	STFCR/L	STGCR/L	STTCR/L	S***-STFCR/L	E***-STFCR/L
Kr: 90°	Kr: 91°	Kr: 91°	Kr: 60°	Kr: 91°	Kr: 90°
					
A283	A284	A285	A286	A341	A361

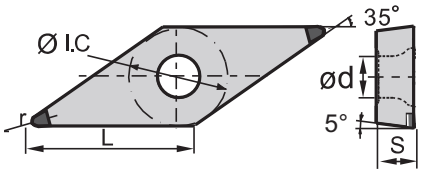
System code A158 Grade selection A42 Technical info A501 Cutting data A366

VBGW	L	I.C	S	d
16 04	16.6	9.525	4.76	4.4

- Ideal machining conditions
- Normal machining conditions
- Unfavourable machining conditions

Turning CBN inserts

VB** positive insert



	BL (CBN)	BC (CBN)	BH (CBN)
P			
M			
K			○
N			
S	○	⊛	
H	○ ⊛ ⊛	○ ⊛ ⊛	

	ISO	r	a_p	f	YCB112	YCB113	YCB121	YCB131	YCB113C	YCB121C	YCB131C	YCB215
	**VBGW160404S01020-2**	0.4	0.08-0.50	0.05-0.20			●			○		○
	VBGW160404S01225-2	0.4	0.08-0.50	0.05-0.20		●			○			
	VBGW160408S01020-2	0.8	0.08-0.50	0.05-0.25								○
	VBGW160408S01525-2	0.8	0.08-0.50	0.05-0.25		●			○			
	VBGW160408S02020-2	0.8	0.08-0.50	0.05-0.25			●			○		

● Ex stock ○ On demand

BL CBN with a low CBN content
BC CBN with coating
BH CBN with a high CBN content

Tool holder

SVJBR/L	SVABR/L	SVVBN	S***-SVQBR/L	S***-SVUBR/L	S***-SVXBR/L
Kr: 93°	Kr: 90°	Kr: 72°30'	Kr: 107°30'	Kr: 93°	Kr: 93°
					
A274	A275	A276	A345	A346	A347

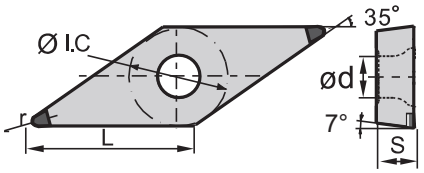
System code A158 Grade selection A42 Technical info A501 Cutting data A366

Turning CBN inserts

- Ideal machining conditions
- Normal machining conditions
- Unfavourable machining conditions

VCGW	L	I.C	S	d
11 03	11.1	6.35	3.18	2.8
16 04	16.6	9.525	4.76	4.4

VC** positive insert



	BL (CBN)	BC (CBN)	BH (CBN)
P			
M			
K			●
N			
S	○ ❁		
H	○ ❁ ❁	○ ❁ ❁	

	ISO	r	a_p	f	YCB112	YCB113	YCB121	YCB131	YCB113C	YCB121C	YCB131C	YCB215
	**VCGW110302E-2**	0.2	0.08-0.50	0.05-0.15	○			○				
	VCGW110304E-2	0.4	0.08-0.50	0.05-0.20	○			○				
	VCGW160404E-2	0.4	0.08-0.50	0.05-0.20	○			○				
	VCGW160404S01020-2	0.4	0.08-0.50	0.05-0.20			●			○		○
	VCGW160404S01225-2	0.4	0.08-0.50	0.05-0.20		●			○			
	VCGW160408E-2	0.8	0.08-0.50	0.05-0.25	○			○				
	VCGW160408S01020-2	0.8	0.08-0.50	0.05-0.25								○
	VCGW160408S01525-2	0.8	0.08-0.50	0.05-0.25		●			○			
	VCGW160408S02020-2	0.8	0.08-0.50	0.05-0.25			●			○		
	VCGW160412E-2	1.2	0.08-0.50	0.05-0.30	○			○				

● Ex stock ○ On demand

BL CBN with a low CBN content
BC CBN with coating
BH CBN with a high CBN content

Tool holder

SVVCN	SVJCR/L	SVACR/L-SC	SVJCR/L-SC	S***-SVQCR/L	S***-SVUCR/L	C***-SVQCR/L
Kr: 72°30'	Kr: 93°	Kr: 90°	Kr: 93°	Kr: 107°30'	Kr: 93°	Kr: 107°30'
						
A277	A278	A312	A313	A343	A344	A363

C***-SVUCR/L
Kr: 93°

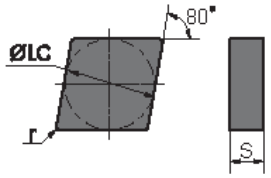
A364

Turning CBN inserts

- Ideal machining conditions
- Normal machining conditions
- Unfavourable machining conditions

CNGN	L	I.C	S
09 03	9.7	9.525	3.18
12 04	12.9	12.7	4.76

CN** negative insert



	BL (CBN)	BC (CBN)	BH (CBN)
P			
M			
K			⊛
N			
S			
H	⊛	⊛	

	ISO	r	a_p	f	YZB630	YZB630C	YZB223
	**CNGN090308S01525**	0.8	0.5-2.0	0.3-0.5	○	○	
	CNGN090308T01525	0.8	0.5-2.0	0.3-0.5			○
	CNGN090312S01525	1.2	0.5-2.0	0.3-0.5	○	○	
	CNGN090312T01525	1.2	0.5-2.0	0.3-0.5			○
	CNGN120408S01525	0.8	0.5-2.0	0.3-0.5	○	○	
	CNGN120408T01525	0.8	0.5-2.0	0.3-0.5			●
	CNGN120412S01525	1.2	0.5-2.0	0.3-0.5	●	○	
	CNGN120412T01525	1.2	0.5-2.0	0.3-0.5			●
	CNGN120416S01525	1.6	0.5-2.0	0.3-0.5	○	○	
	**CNGN120408T01525-M**	0.8	0.5-2.0	0.3-0.5			○
	CNGN120412T01525-M	1.2	0.5-2.0	0.3-0.5			○
	CNGN120416T01525-M	1.6	0.5-2.0	0.3-0.5			○

● Ex stock ○ On demand

BL CBN with a low CBN content
BC CBN with coating
BH CBN with a high CBN content

Tool holder
CCLNR/L
Kr: 95°



A292

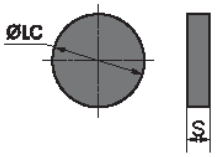
System code A158 | Grade selection A42 | Technical info A501 | Cutting data A366

Turning CBN inserts

Ideal machining conditions
Normal machining conditions
Unfavourable machining conditions

RNGN	I.C	S
09 03	9.525	3.18
12 04	12.7	4.76

RN** negative insert



	ISO	a_p	f	BL (CBN) YZB630	BC (CBN) YZB630C	BH (CBN) YZB223
P						
M						
K						⊛
N						
S						
H				⊛	⊛	
	**RNGN090300S01525**	0.5-2.0	0.3-0.5	○	○	
	RNGN090300T01525	0.5-2.0	0.3-0.5			○
	RNGN120400S01525	0.5-2.0	0.3-0.5	○	○	
	RNGN120400T01525	0.5-2.0	0.3-0.5			●

● Ex stock ○ On demand

BL CBN with a low CBN content
BC CBN with coating
BH CBN with a high CBN content

Tool holder
CRDNN



A298

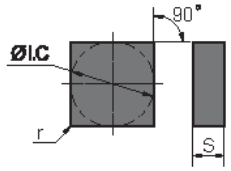
System code A158 Grade selection A42 Technical info A501 Cutting data A366

Turning CBN inserts

- Ideal machining conditions
- Normal machining conditions
- Unfavourable machining conditions

SNGN	L	I.C	S
12 04	12.7	12.7	4.76

SN** negative insert



	BL (CBN)	BC (CBN)	BH (CBN)
P			
M			
K			⊛
N			
S			
H	⊛	⊛	

	ISO	r	a_p	f	YZB630	YZB630C	YZB223
	**SNGN120408S01525**	0.8	0.5-2.0	0.3-0.5	○	○	
	SNGN120408T01525	0.8	0.5-2.0	0.3-0.5			●
	SNGN120412S01525	1.2	0.5-2.0	0.3-0.5	○	○	
	SNGN120412T01525	1.2	0.5-2.0	0.3-0.5			○
	SNGN120416T01525	1.6	0.5-2.0	0.3-0.5			●
	**SNGN120412T01525-M**	1.2	0.5-2.0	0.3-0.5			○
	SNGN120416T01525-M	1.6	0.5-2.0	0.3-0.5			●

● Ex stock ○ On demand

BL CBN with a low CBN content
BC CBN with coating
BH CBN with a high CBN content

Tool holder

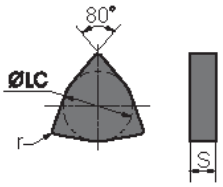
CSKNR/L	CSRNR/L	CSDNN
Kr: 75°	Kr: 75°	Kr: 45°
		
A296	A297	A299

System code A158 | Grade selection A42 | Technical info A501 | Cutting data A366

- Ideal machining conditions
- Normal machining conditions
- Unfavourable machining conditions

WNGN	L	I.C	S
08 04	8.69	12.7	4.76

Turning CBN inserts

WN** negative insert						BL (CBN)	BC (CBN)	BH (CBN)
					P			
					M			
					K			⊛
					N			
					S			
					H	⊛	⊛	
	ISO	r	a_p	f		YZB630	YZB630C	YZB223
	**WNGN080408T01525**	0.8	0.5-2.0	0.3-0.5				○
	WNGN080412T01525	1.2	0.5-2.0	0.3-0.5				○
	WNGN080416T01525	1.6	0.5-2.0	0.3-0.5				○
	**WNGN080408T01525-M**	0.8	0.5-2.0	0.3-0.5				○
	WNGN080412T01525-M	1.2	0.5-2.0	0.3-0.5				○
	WNGN080416T01525-M	1.6	0.5-2.0	0.3-0.5				○

● Ex stock ○ On demand

BL CBN with a low CBN content
BC CBN with coating
BH CBN with a high CBN content

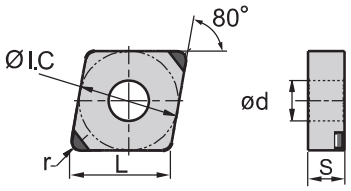
System code > A158 Grade selection > A42 Technical info > A501 Cutting data > A366

Turning PCD inserts

- Ideal machining conditions
- Normal machining conditions
- Unfavourable machining conditions

CNGA	L	I.C	S	d
12 04	12.9	12.7	4.76	5.16

CN** negative insert



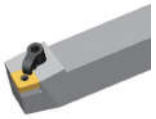
	DP
P	
M	
K	
N	○
S	
H	

	ISO	r	a_p	f	YCD421
	**CNGA120402F-1**	0.2	0.08-0.50	0.05-0.15	○
	CNGA120404F-1	0.4	0.08-0.50	0.05-0.20	○
	CNGA120408F-1	0.8	0.08-0.50	0.05-0.25	○
	CNGA120412F-1	1.2	0.08-0.50	0.05-0.30	○

● Ex stock ○ On demand

DP Polycrystalline diamond

Tool holder

DCLNR/L	PCBNR/L	PCLNR/L	MCBNR/L	MCLNR/L	S***-PCLNR/L
Kr: 95°	Kr: 75°	Kr: 95°	Kr: 75°	Kr: 95°	Kr: 95°
					
A230	A237	A238	A252	A253	A324

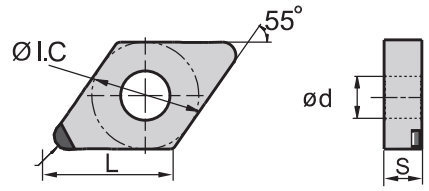
System code A158 Grade selection A42 Technical info A501 Cutting data A366

Ideal machining conditions
Normal machining conditions
Unfavourable machining conditions

DNGA	L	I.C	S	d
15 06	15.5	12.7	6.35	5.16

Turning PCD inserts

DN** negative insert



DP

P
M
K
N
S
H

ISO	r	a_p	f	YCD421
DNGA150602F-1	0.2	0.08-0.50	0.05-0.15	○
DNGA150604F-1	0.4	0.08-0.50	0.05-0.20	○
DNGA150608F-1	0.8	0.08-0.50	0.05-0.25	○

● Ex stock ○ On demand

DP Polycrystalline diamond

Tool holder

DDJNR/L	PDJNR/L	PDNNR/L	MDJNR/L	MDPNN	S***-PDSNR/L	S***-PDUNR/L
Kr: 93°	Kr: 93°	Kr: 63°	Kr: 93°	Kr: 62°30'	Kr: 62°30'	Kr: 93°
						
A231	A240	A241	A254	A255	A326	A327

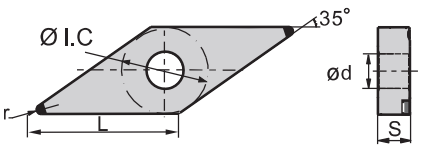
System code A158 Grade selection A42 Technical info A501 Cutting data A366

Turning PCD inserts

- Ideal machining conditions
- Normal machining conditions
- Unfavourable machining conditions

VNGA	L	I.C	S	d
16 04	16.6	9.525	4.76	3.81

VN** negative insert



	ISO	r	a_p	f	YCD421
	**VNGA160402F-1**	0.2	0.08-0.50	0.05-0.15	○
	VNGA160404F-1	0.4	0.08-0.50	0.05-0.20	○

P M K N S H — DP

● Ex stock ○ On demand

DP Polycrystalline diamond

Tool holder

DVVNN	DVJNR/L	MVVNN	MVJNR/L
Kr: 72°30'	Kr: 93°	Kr: 72°30'	Kr: 93°
			
A234	A235	A264	A265

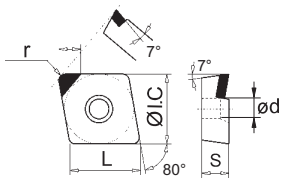
System code A158 | Grade selection A42 | Technical info A501 | Cutting data A366

Turning PCD inserts

Ideal machining conditions
Normal machining conditions
Unfavourable machining conditions

CCGT	L	I.C	S	d
06 02	6.4	6.35	2.38	2.8
09 T3	9.7	9.525	3.97	4.4
12 04	12.9	12.7	4.76	5.56

CC** positive insert



DP

P
M
K
N ○
S
H

	ISO	r	a_p	f	YCD421
	**CCGT060202F-1**	0.2	0.05-0.50	0.05-0.15	○
	CCGT060204F-1	0.4	0.08-0.50	0.05-0.20	●
	CCGT060208F-1	0.8	0.08-0.50	0.05-0.25	○
	CCGT09T302F-1	0.2	0.08-0.50	0.05-0.15	○
	CCGT09T304F-1	0.4	0.08-0.50	0.05-0.20	○
	CCGT09T308F-1	0.8	0.08-0.50	0.05-0.25	○
	CCGT120402F-1	0.2	0.08-0.50	0.05-0.15	○
	CCGT120404F-1	0.4	0.08-0.50	0.05-0.20	○
	CCGT120408F-1	0.8	0.08-0.50	0.05-0.25	○
	**CCGT060204F-1MED**	0.4	0.08-0.50	0.05-0.20	○
	CCGT060208F-1MED	0.8	0.08-0.50	0.05-0.25	○
	CCGT09T302F-1MED	0.2	0.08-0.50	0.05-0.15	○
	CCGT09T304F-1MED	0.4	0.08-0.50	0.05-0.20	○
	CCGT09T308F-1MED	0.8	0.08-0.50	0.05-0.25	○

● Ex stock ○ On demand

DP Polycrystalline diamond

Tool holder

SCACR/L	SCLCR/L	SCACR/L-SC	SCLCR/L-SC	A***-SCLCR/L	S***-SCFCR/L	S***-SCLCR
Kr: 90°	Kr: 95°	Kr: 90°	Kr: 95°	Kr: 95°	Kr: 90°	Kr: 95°
						
A269	A270	A306	A307	A334	A352	A353

E***-SCLCR/L
Kr: 95°

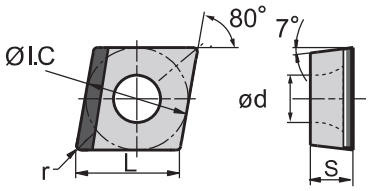
A355

Turning PCD inserts

- Ideal machining conditions
- Normal machining conditions
- Unfavourable machining conditions

CCGT	L	I.C	S	d
09 T3	9.7	9.525	3.97	4.4
12 04	12.9	12.7	4.76	5.56

CC** positive insert



	DP
P	
M	
K	
N	○
S	
H	

	ISO	r	a_p	f	YCD421
	**CCGT09T308-LL**	0.8	0.08-0.50	0.05-0.25	○
	CCGT09T308-LR	0.8	0.08-0.50	0.05-0.25	○
	CCGT120404-LL	0.4	0.08-0.50	0.05-0.20	○
	CCGT120404-LR	0.4	0.08-0.50	0.05-0.20	○
	CCGT120408-LL	0.8	0.08-0.50	0.05-0.25	○
	CCGT120408-LR	0.8	0.08-0.50	0.05-0.25	○

● Ex stock ○ On demand

DP Polycrystalline diamond

Tool holder

SCACR/L	**SCLCR/L**	**SCACR/L-SC**	**SCLCR/L-SC**	**A***-SCLCR/L**	**S***-SCFCR/L**	**S***-SCLCR**
Kr: 90°	Kr: 95°	Kr: 90°	Kr: 95°	Kr: 95°	Kr: 90°	Kr: 95°
						
A269	A270	A306	A307	A334	A352	A353

E*-SCLCR/L**

Kr: 95°



A355

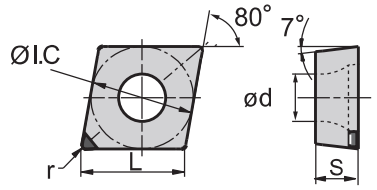
System code A158 | Grade selection A42 | Technical info A501 | Cutting data A366

Ideal machining conditions
Normal machining conditions
Unfavourable machining conditions

CCGW	L	I.C	S	d
06 02	6.4	6.35	2.38	2.8
09 T3	9.7	9.525	3.97	4.4
12 04	12.9	12.7	4.76	5.56

Turning PCD inserts

CC** positive insert



DP

	ISO	r	a_p	f	YCD421
	**CCGW060202F-1**	0.2	0.08-0.50	0.05-0.15	○
	CCGW060204F-1	0.4	0.08-0.50	0.05-0.20	○
	CCGW09T304F-1	0.4	0.08-0.50	0.05-0.20	●
	CCGW09T308F-1	0.8	0.08-0.50	0.05-0.25	●
	CCGW120404F-1	0.4	0.08-0.50	0.05-0.20	●
	CCGW120408F-1	0.8	0.08-0.50	0.05-0.25	●

● Ex stock ○ On demand

DP Polycrystalline diamond

Tool holder

SCACR/L	SCLCR/L	SCACR/L-SC	SCLCR/L-SC	A***-SCLCR/L	S***-SCFCR/L	S***-SCLCR
Kr: 90°	Kr: 95°	Kr: 90°	Kr: 95°	Kr: 95°	Kr: 90°	Kr: 95°
						
A269	A270	A306	A307	A334	A352	A353

E***-SCLCR/L
Kr: 95°

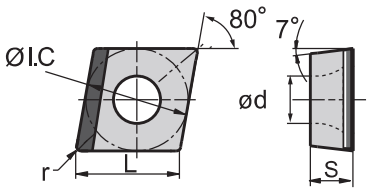
A355

CCGW	L	I.C	S	d
06 02	6.4	6.35	2.38	2.8
09 T3	9.7	9.525	3.97	4.4
12 04	12.9	12.7	4.76	5.56

Ideal machining conditions
Normal machining conditions
Unfavourable machining conditions

Turning PCD inserts

CC** positive insert



DP

ISO	r	a_p	f	YCD421
CCGW060204-LL	0.2	0.08-0.50	0.05-0.20	○
CCGW060204-LR	0.4	0.08-0.50	0.05-0.20	○
CCGW09T304-LL	0.4	0.08-0.50	0.05-0.20	○
CCGW09T304-LR	0.4	0.08-0.50	0.05-0.20	○
CCGW09T308-LL	0.8	0.08-0.50	0.05-0.25	○
CCGW09T308-LR	0.8	0.08-0.50	0.05-0.25	○
CCGW120404-LL	0.4	0.08-0.50	0.05-0.20	○
CCGW120404-LR	0.4	0.08-0.50	0.05-0.20	○
CCGW120408-LL	0.8	0.08-0.50	0.05-0.25	○
CCGW120408-LR	0.8	0.08-0.50	0.05-0.25	○



● Ex stock ○ On demand

DP Polycrystalline diamond

Tool holder

SCACR/L	SCLCR/L	SCACR/L-SC	SCLCR/L-SC	A***-SCLCR/L	S***-SCFCR/L	S***-SCLCR
Kr: 90°	Kr: 95°	Kr: 90°	Kr: 95°	Kr: 95°	Kr: 90°	Kr: 95°
						
A269	A270	A306	A307	A334	A352	A353

E***-SCLCR/L
Kr: 95°

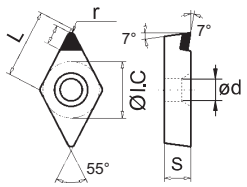
A355

Turning PCD inserts

Ideal machining conditions
Normal machining conditions
Unfavourable machining conditions

DCGT	L	I.C	S	d
07 02	7.8	6.35	2.38	2.8
11 T3	11.6	9.525	3.97	4.4

DC** positive insert



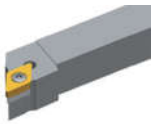
	DP
P	
M	
K	
N	○
S	
H	

	ISO	r	a_p	f	YCD421
	**DCGT070202F-1**	0.2	0.08-0.50	0.05-0.15	○
	DCGT070204F-1	0.4	0.08-0.50	0.05-0.20	○
	DCGT11T302F-1	0.2	0.08-0.50	0.05-0.15	●
	DCGT11T304F-1	0.4	0.08-0.50	0.05-0.20	●
	DCGT11T308F-1	0.8	0.08-0.50	0.05-0.25	○

● Ex stock ○ On demand

DP Polycrystalline diamond

Tool holder

SDACR/L	SDJCR/L	SDNCN	SDACR/L-SC	SDHCR/L-SC	SDJCR/L-SC	SDNCN-SC
Kr: 90°	Kr: 93°	Kr: 62°30'	Kr: 90°	Kr: 107°30'	Kr: 93°	Kr: 62°30'
						
A271	A272	A273	A308	A309	A310	A311

S***-SDQCR/L	A***-SDUCR/L	S***-SDZCR/L	E***-SDQCR/L
Kr: 107°30'	Kr: 93°	Kr: 85°	Kr: 107°30'
			
A336	A337	A338	A357

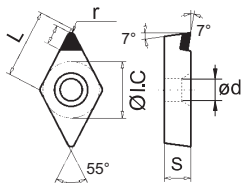
System code A158 Grade selection A42 Technical info A501 Cutting data A366

Turning PCD inserts

- Ideal machining conditions
- Normal machining conditions
- Unfavourable machining conditions

DCGT	L	l.C	S	d
07 02	7.8	6.35	2.38	2.8
11 T3	11.6	9.525	3.97	4.4

DC** positive insert

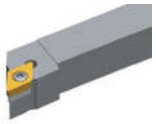


		ISO	r	a_p	f	YCD421
		DCGT070202F-1MED	0.2	0.08-0.50	0.05-0.15	○
		DCGT070204F-1MED	0.4	0.08-0.50	0.05-0.20	○
		DCGT070208F-1MED	0.8	0.08-0.50	0.05-0.25	○
		DCGT11T302F-1MED	0.2	0.08-0.50	0.05-0.15	○
		DCGT11T304F-1MED	0.4	0.08-0.50	0.05-0.20	○
		DCGT11T308F-1MED	0.8	0.08-0.50	0.05-0.25	○

● Ex stock ○ On demand

DP Polycrystalline diamond

Tool holder

SDACR/L	SDJCR/L	SDNCN	SDACR/L-SC	SDHCR/L-SC	SDJCR/L-SC	SDNCN-SC
Kr: 90°	Kr: 93°	Kr: 62°30'	Kr: 90°	Kr: 107°30'	Kr: 93°	Kr: 62°30'
						
A271	A272	A273	A308	A309	A310	A311

S***-SDQCR/L	A***-SDUCR/L	S***-SDZCR/L	E***-SDQCR/L
Kr: 107°30'	Kr: 93°	Kr: 85°	Kr: 107°30'
			
A336	A337	A338	A357

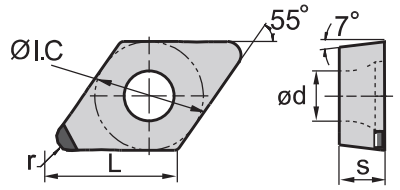
System code A158 Grade selection A42 Technical info A501 Cutting data A366

Turning PCD inserts

- Ideal machining conditions
- Normal machining conditions
- Unfavourable machining conditions

DCGW	L	I.C	S	d
07 02	7.8	6.35	2.38	2.8
11 T3	11.6	9.525	3.97	4.4

DC** positive insert



	ISO	r	a_p	f	YCD421
P	**DCGW070202F-1**	0.2	0.08-0.50	0.05-0.15	●
M	**DCGW070204F-1**	0.4	0.08-0.50	0.05-0.20	●
K	**DCGW070208F-1**	0.8	0.08-0.50	0.05-0.25	○
N	**DCGW11T302F-1**	0.2	0.08-0.50	0.05-0.15	●
S	**DCGW11T304F-1**	0.4	0.08-0.50	0.05-0.20	●
H					

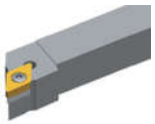
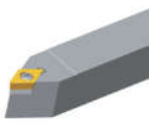


DP

● Ex stock ○ On demand

DP Polycrystalline diamond

Tool holder

SDACR/L	SDJCR/L	SDNCN	SDACR/L-SC	SDHCR/L-SC	SDJCR/L-SC	SDNCN-SC
Kr: 90°	Kr: 93°	Kr: 62°30'	Kr: 90°	Kr: 107°30'	Kr: 93°	Kr: 62°30'
						
A271	A272	A273	A308	A309	A310	A311

S***-SDQCR/L	A***-SDUCR/L	S***-SDZCR/L	E***-SDQCR/L
Kr: 107°30'	Kr: 93°	Kr: 85°	Kr: 107°30'
			
A336	A337	A338	A357

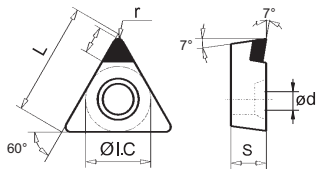
System code A158 Grade selection A42 Technical info A501 Cutting data A366

Turning PCD inserts

- Ideal machining conditions
- Normal machining conditions
- Unfavourable machining conditions

TCGT	L	I.C	S	d
11 02	11	6.35	2.38	2.8
16 T3	16.5	9.525	3.97	4.4

TC** positive insert



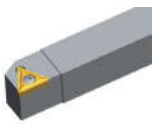
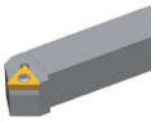
	DP
P	
M	
K	
N	○
S	
H	

	ISO	r	a_p	f	YCD421
	**TCGT110202F-1**	0.2	0.08-0.50	0.05-0.15	○
	TCGT110204F-1	0.4	0.08-0.50	0.05-0.20	○
	TCGT110208F-1	0.8	0.08-0.50	0.05-0.25	○
	TCGT16T302F-1	0.2	0.08-0.50	0.05-0.15	○
	TCGT16T304F-1	0.4	0.08-0.50	0.05-0.20	○
	TCGT16T308F-1	0.8	0.08-0.50	0.05-0.25	○
	**TCGT110202F-1MED**	0.2	0.08-0.50	0.05-0.15	○
	TCGT110204F-1MED	0.4	0.08-0.50	0.05-0.20	○
	TCGT110208F-1MED	0.8	0.08-0.50	0.05-0.25	○
	TCGT16T302F-1MED	0.2	0.08-0.50	0.05-0.15	○
	TCGT16T304F-1MED	0.4	0.08-0.50	0.05-0.20	○
	TCGT16T308F-1MED	0.8	0.08-0.50	0.05-0.25	○

● Ex stock ○ On demand

DP Polycrystalline diamond

Tool holder

STACR/L	STFCR/L	STGCR/L	STTCR/L	S***-STFCR/L	E***-STFCR/L
Kr: 90°	Kr: 91°	Kr: 91°	Kr: 60°	Kr: 91°	Kr: 90°
					
A283	A284	A285	A286	A341	A361

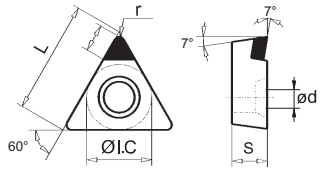
System code A158 Grade selection A42 Technical info A501 Cutting data A366

Turning PCD inserts

- Ideal machining conditions
- Normal machining conditions
- Unfavourable machining conditions

TCGT	L	I.C	S	d
11 02	11	6.35	2.38	2.8
16 T3	16.5	9.525	3.97	4.4

TC** positive insert



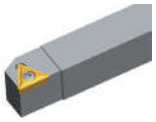
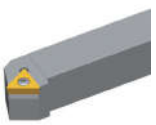
	ISO	r	a_p	f	YCD421
	TCGT110202-L	0.2	0.08-0.50	0.05-0.15	○
	TCGT110204-L	0.4	0.08-0.50	0.05-0.20	○
	TCGT110208-L	0.8	0.08-0.50	0.05-0.25	○
	TCGT16T302-L	0.2	0.08-0.50	0.05-0.15	○
	TCGT16T304-L	0.4	0.08-0.50	0.05-0.20	○
	TCGT16T308-L	0.8	0.08-0.50	0.05-0.25	○



● Ex stock ○ On demand

DP Polycrystalline diamond

Tool holder

STACR/L	STFCR/L	STGCR/L	STTCR/L	S***-STFCR/L	E***-STFCR/L
Kr: 90°	Kr: 91°	Kr: 91°	Kr: 60°	Kr: 91°	Kr: 90°
					
A283	A284	A285	A286	A341	A361

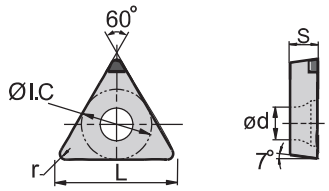
System code A158 | Grade selection A42 | Technical info A501 | Cutting data A366

Turning PCD inserts

- Ideal machining conditions
- Normal machining conditions
- Unfavourable machining conditions

TCGW	L	I.C	S	d
11 02	11	6.35	2.38	2.8
16 T3	16.5	9.525	3.97	4.4

TC** positive insert



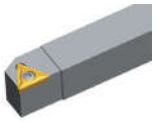
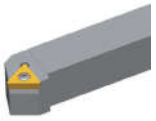
	DP
P	
M	
K	
N	○
S	
H	

	ISO	r	a_p	f	YCD421
	**TCGW110202F-1**	0.2	0.08-0.50	0.05-0.15	○
	TCGW110204F-1	0.4	0.08-0.50	0.05-0.20	●
	TCGW110208F-1	0.8	0.08-0.50	0.05-0.25	○
	TCGW16T304F-1	0.4	0.08-0.50	0.05-0.20	●
	TCGW16T308F-1	0.8	0.08-0.50	0.05-0.25	○
	TCGW16T312F-1	1.2	0.08-0.50	0.05-0.30	○

● Ex stock ○ On demand

DP Polycrystalline diamond

Tool holder

STACR/L	STFCR/L	STGCR/L	STTCR/L	S***-STFCR/L	E***-STFCR/L
Kr: 90°	Kr: 91°	Kr: 91°	Kr: 60°	Kr: 91°	Kr: 90°
					
A283	A284	A285	A286	A341	A361

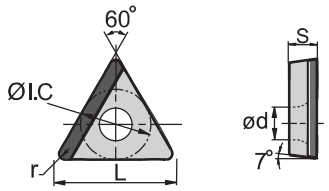
System code A158 Grade selection A42 Technical info A501 Cutting data A366

Turning PCD inserts

Ideal machining conditions
Normal machining conditions
Unfavourable machining conditions

TCGW	L	I.C	S	d
11 02	11	6.35	2.38	2.8
16 T3	16.5	9.525	3.97	4.4

TC** positive insert



DP

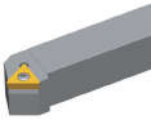
P
M
K
N ○
S
H

ISO	r	a_p	f	YCD421
TCGW110202-L	0.2	0.08-0.50	0.05-0.15	○
TCGW110204-L	0.4	0.08-0.50	0.05-0.20	○
TCGW110208-L	0.8	0.08-0.50	0.05-0.25	○
TCGW16T302-L	0.2	0.08-0.50	0.05-0.15	○
TCGW16T304-L	0.4	0.08-0.50	0.05-0.20	○
TCGW16T308-L	0.8	0.08-0.50	0.05-0.25	○

● Ex stock ○ On demand

DP Polycrystalline diamond

Tool holder

STACR/L	STFCR/L	STGCR/L	STTCR/L	S***-STFCR/L	E***-STFCR/L
Kr: 90°	Kr: 91°	Kr: 91°	Kr: 60°	Kr: 91°	Kr: 90°
					
A283	A284	A285	A286	A341	A361

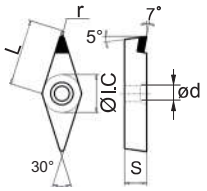
System code A158 Grade selection A42 Technical info A501 Cutting data A366

Turning PCD inserts

- Ideal machining conditions
- Normal machining conditions
- Unfavourable machining conditions

VBGT	L	I.C	S	d
11 03	11	6.35	3.18	2.8
16 04	16.6	9.525	4.76	4.4

VB** positive insert



	DP
P	
M	
K	
N	○
S	
H	

	ISO	r	a_p	f	YCD421
	**VBGT110302F-1**	0.2	0.08-0.50	0.05-0.15	○
	VBGT110304F-1	0.4	0.08-0.50	0.05-0.20	○
	VBGT110308F-1	0.8	0.08-0.50	0.05-0.25	○
	VBGT160402F-1	0.2	0.08-0.50	0.05-0.15	○
	VBGT160404F-1	0.4	0.08-0.50	0.05-0.20	○
	VBGT160408F-1	0.8	0.08-0.50	0.05-0.25	○
	**VBGT160404F-1MED**	0.4	0.08-0.50	0.05-0.20	○
	VBGT160408F-1MED	0.8	0.08-0.50	0.05-0.25	○

● Ex stock ○ On demand

DP Polycrystalline diamond

Tool holder

SVJBR/L	SVABR/L	SVVBN	S***-SVQBR/L	S***-SVUBR/L	S***-SVXBR/L
Kr: 93°	Kr: 90°	Kr: 72°30'	Kr: 107°30'	Kr: 93°	Kr: 93°
					
A274	A275	A276	A345	A346	A347

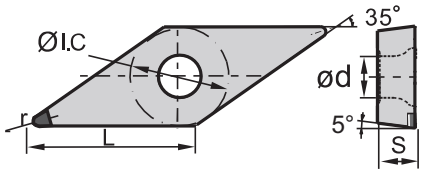
System code A158 | Grade selection A42 | Technical info A501 | Cutting data A366

Turning PCD inserts

- Ideal machining conditions
- Normal machining conditions
- Unfavourable machining conditions

VBGW	L	I.C	S	d
11 03	11	6.35	3.18	2.8
16 04	16.6	9.525	4.76	4.4

VB** positive insert



DP

	P	M	K	N	S	H
				○		

	ISO	r	a_p	f	YCD421
	**VBGW110302F-1**	0.2	0.08-0.50	0.05-0.15	○
	VBGW110304F-1	0.4	0.08-0.50	0.05-0.20	●
	VBGW160402F-1	0.2	0.08-0.50	0.05-0.15	○
	VBGW160404F-1	0.4	0.08-0.50	0.05-0.20	●
	VBGW160408F-1	0.8	0.08-0.50	0.05-0.25	○

● Ex stock ○ On demand

DP Polycrystalline diamond

Tool holder

SVJBR/L	SVABR/L	SVVBN	S***-SVQBR/L	S***-SVUBR/L	S***-SVXBR/L
Kr: 93°	Kr: 90°	Kr: 72°30'	Kr: 107°30'	Kr: 93°	Kr: 93°
					
A274	A275	A276	A345	A346	A347

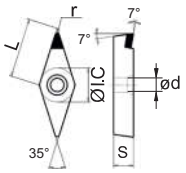
System code A158 Grade selection A42 Technical info A501 Cutting data A366

Turning PCD inserts

- Ideal machining conditions
- Normal machining conditions
- Unfavourable machining conditions

VCGT	L	l.C	S	d
11 02	11	6.35	2.38	2.8
16 04	16.6	9.525	4.76	4.4

VC** positive insert



DP

P	
M	
K	
N	○
S	
H	

	ISO	r	a_p	f	YCD421
	**VCGT110202F-1**	0.2	0.08-0.50	0.05-0.15	○
	VCGT110204F-1	0.4	0.08-0.50	0.05-0.20	○
	VCGT160402F-1	0.2	0.08-0.50	0.05-0.15	○
	VCGT160404F-1	0.4	0.08-0.50	0.05-0.20	○
	VCGT160408F-1	0.8	0.08-0.50	0.05-0.25	○

● Ex stock ○ On demand

DP Polycrystalline diamond

Tool holder

SVVCN	SVJCR/L	SVACR/L-SC	SVJCR/L-SC	S***-SVQCR/L	S***-SVUCR/L	C***-SVQCR/L
Kr: 72°30'	Kr: 93°	Kr: 90°	Kr: 93°	Kr: 107°30'	Kr: 93°	Kr: 107°30'
						
A277	A278	A312	A313	A343	A344	A363

C***-SVUCR/L
Kr: 93°

A364

A Turning
B Milling
C Drilling
D Technical Information
E Index

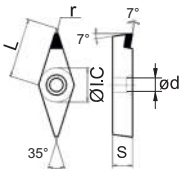
System code A158 Grade selection A42 Technical info A501 Cutting data A366

Turning PCD inserts

- Ideal machining conditions
- Normal machining conditions
- Unfavourable machining conditions

VCGT	L	I.C	S	d
11 03	11	6.35	3.18	2.8
16 04	16.6	9.525	4.76	4.4

VC** positive insert



	DP
P	
M	
K	
N	○
S	
H	

	ISO	r	a_p	f	YCD421
	**VCGT110302F-1MED**	0.2	0.08-0.50	0.05-0.15	○
	VCGT110304F-1MED	0.4	0.08-0.50	0.05-0.20	○
	VCGT160404F-1MED	0.4	0.08-0.50	0.05-0.20	○
	VCGT160408F-1MED	0.8	0.08-0.50	0.05-0.25	○
	VCGT160412F-1MED	1.2	0.08-0.50	0.05-0.30	○

● Ex stock ○ On demand

DP Polycrystalline diamond

Tool holder

SVVCN	SVJCR/L	SVACR/L-SC	SVJCR/L-SC	S***-SVQCR/L	S***-SVUCR/L	C***-SVQCR/L
Kr: 72°30'	Kr: 93°	Kr: 90°	Kr: 93°	Kr: 107°30'	Kr: 93°	Kr: 107°30'
						
A277	A278	A312	A313	A343	A344	A363

C***-SVUCR/L
Kr: 93°

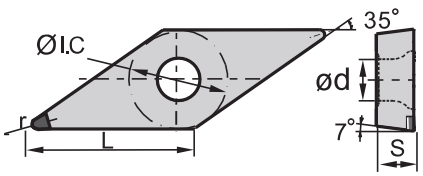
A364

Turning PCD inserts

- Ideal machining conditions
- Normal machining conditions
- Unfavourable machining conditions

VCGW	L	I.C	S	d
11 03	11	6.35	3.18	2.8
16 04	16.6	9.525	4.76	4.4

VC** positive insert



		ISO	r	a_p	f	YCD421
DP	P					
	M					
	K					
	N					
	S					
	H					
		**VCGW110302F-1**	0.2	0.08-0.50	0.05-0.15	○
		VCGW110304F-1	0.4	0.08-0.50	0.05-0.20	○
		VCGW160404F-1	0.4	0.08-0.50	0.05-0.20	○
		VCGW160408F-1	0.8	0.08-0.50	0.05-0.25	○

● Ex stock ○ On demand

DP Polycrystalline diamond

Tool holder

SVVCN	SVJCR/L	SVACR/L-SC	SVJCR/L-SC	S***-SVQCR/L	S***-SVUCR/L	C***-SVQCR/L
Kr: 72°30'	Kr: 93°	Kr: 90°	Kr: 93°	Kr: 107°30'	Kr: 93°	Kr: 107°30'
						
A277	A278	A312	A313	A343	A344	A363

C***-SVUCR/L
Kr: 93°

A364

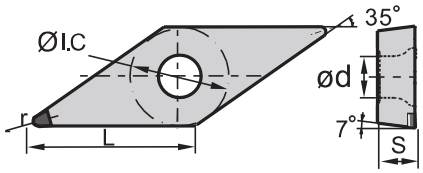
System code A158 Grade selection A42 Technical info A501 Cutting data A366

- Ideal machining conditions
- Normal machining conditions
- Unfavourable machining conditions

VCGX	L	I.C	S	d
22 05	22	12.7	5.56	5.5

Turning PCD inserts

VC** positive insert



	ISO	r	a_p	f	DP: YCD421
P					
M					
K					
N					○
S					
H					
	**VCGX220530-1**	3	0.5-7.0	0.25-1.00	○

● Ex stock ○ On demand

DP Polycrystalline diamond

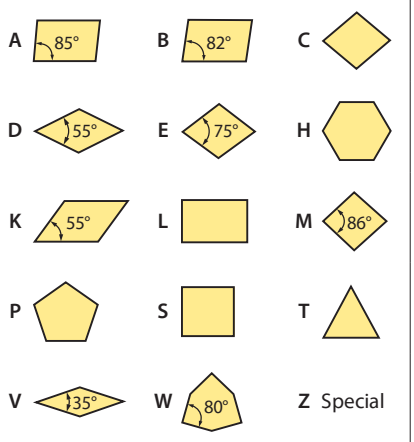
System code > A158 | Grade selection > A42 | Technical info > A501 | Cutting data > A366

Notes

General turning ISO code – ceramic inserts

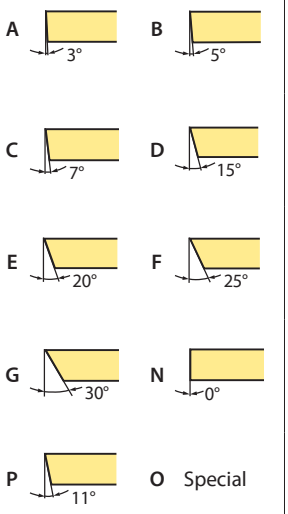
T	N	G	A	12	04	08	T	020	20
1	2	3	4	5	6	7	8	9	10

Insert shape



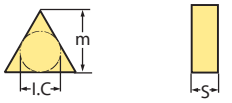
1

Clearance angle



2

Tolerance class

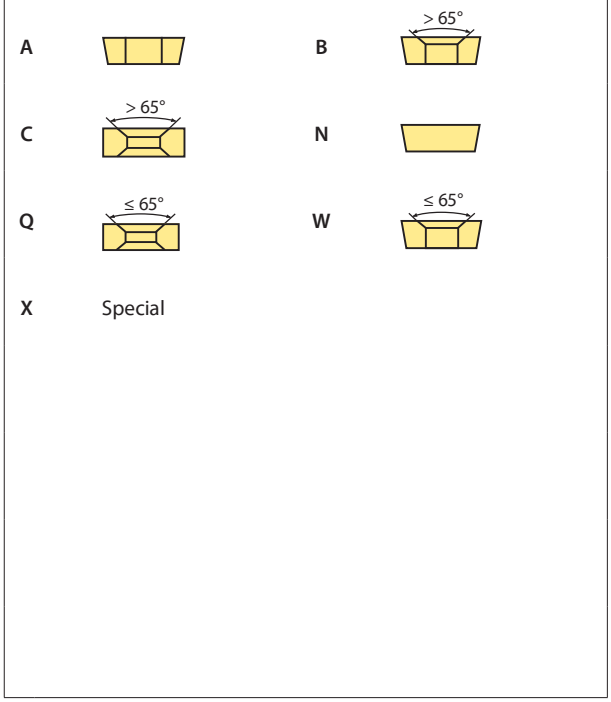


Code	I.C [mm]	m [mm]	S [mm]
A	±0,025	±0,005	±0,025
C	±0,025	±0,013	±0,025
E	±0,025	±0,025	±0,025
F	±0,013	±0,005	±0,025
G	±0,025	±0,025	±0,130
H	±0,013	±0,013	±0,025
J	±0,05–0,15	±0,005	±0,025
K	±0,05–0,15	±0,013	±0,025
L	±0,05–0,15	±0,025	±0,025
M	±0,05–0,15	±0,08–0,20	±0,130
N	±0,05–0,15	±0,08–0,20	±0,025
U	±0,08–0,25	±0,13–0,38	±0,130

3

Fastening features (metric)

Insert shape



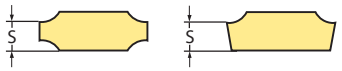
4

Cutting edge length l [mm]

I.C [mm]	Insert shape C	D	S	T	V	W
3,97				06		
5,0						
5,56				09		
6,0						
6,35	06	07		11	11	
8,0						
9,525	09	11	09	16	16	06
10,0						
12,0						
12,7	12	15	12	22	22	08
15,875	16		15	27		
16,0		19				
19,05	19		19	33		
20,0						
25,0	25	25				
25,4			25			
31,75						
32						

5

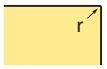
Insert thickness S [mm]



Code	S	Code	S
02	2,38	**06**	6,35
T2	2,58	**T6**	6,75
03	3,18	**07**	7,94
T3	3,97	**09**	9,52
04	4,76	**T9**	9,72
T4	4,96	**11**	11,11
05	5,56	**12**	12,70
T5	5,95		

6

Nose radius r [mm]



Code	r
00	–
02	0,2
04	0,4
08	0,8
12	1,2
16	1,6
20	2,0
24	2,4
32	3,2
X	Special
MO	Plaquettes rondes

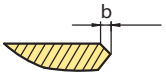
7

Cutting edge profile

Code	Cutting edge	Insert shape
E	Rounding	
F	Sharp edge	
T	Chamfer	
S	Chamfer + Rounding	

8

Chamfer width b [mm]



Code	b
010	0,10
015	0,15
020	0,20
025	0,25
030	0,30
035	0,35
040	0,40
045	0,45
050	0,50
100	1,00
200	2,00

9

Angle du chanfrein α



Code	α
05	5°
10	10°
15	15°
20	20°
25	25°
30	30°

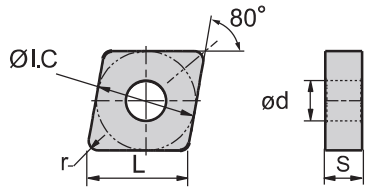
10

Turning ceramic inserts

- Ideal machining conditions
- Normal machining conditions
- Unfavourable machining conditions

CNGA	L	I.C	S	d
12 04	12.9	12.7	4.76	5.16
16 06	16.1	15.875	6.35	6.35

CN** negative insert



	CM	CC	CN	CR
P	○			
M				
K	○		⊛	
N				
S			●	⊛ ⊛
H		○		

	ISO	r	a_p	f	CA1000	CM1000	CN1000	CS1000	CW1400	CW1800
	CNGA120404S02020	0.4	0.1-0.3	0.08-0.25		●				
	CNGA120404T01020	0.4	0.1-0.3	0.08-0.25		○				
	CNGA120404T02020	0.4	0.1-0.3	0.08-0.25	○	●	●			
	CNGA120408S01520	0.8	0.1-0.25	0.5-2.5					○	
	CNGA120408S02020	0.8	0.1-0.4	0.1-0.3		●				
	CNGA120408T00520	0.8	0.1-0.25	0.5-2.5					○	●
	CNGA120408T01020	0.8	0.1-0.4	0.1-0.3		○				
	**CNGA120408T02020**	0.8	0.1-0.4	0.1-0.3	○	●	○			
	CNGA120412S01520	1.2	0.1-0.3	0.5-2.5					○	
	CNGA120412S02020	1.2	0.1-0.5	0.1-0.3		●				
	CNGA120412T00520	1.2	0.1-0.3	0.5-2.5						○
	CNGA120412T02020	1.2	0.1-0.5	0.1-0.3	○	○	●			
	CNGA120416S01520	1.6	0.1-0.35	0.5-3.0					○	
	CNGA120416T00520	1.6	0.1-0.35	0.5-3.0					○	○
	CNGA160612T02020	1.2	0.2-2.0	0.1-0.3			●			

● Ex stock ○ On demand

CM Mixed ceramic
CC Mixed ceramic, coated
CN Si3N4 Ceramic
CR Al2O3 cutting ceramic, reinforced

Tool holder

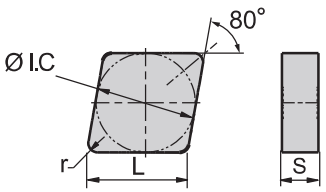
DCLNR/L	PCBNR/L	PCLNR/L	MCBNR/L	MCLNR/L	S***-PCLNR/L
Kr: 95°	Kr: 75°	Kr: 95°	Kr: 75°	Kr: 95°	Kr: 95°
					
A230	A237	A238	A252	A253	A324

System code A198 Grade selection A42 Technical info A501 Cutting data A366

CNGN	L	I.C	S
12 07	12.9	12.7	7.94
12 04	12.9	12.7	4.76
16 06	16.1	15.875	6.35
16 07	16.1	15.875	7.94

Turning ceramic inserts

○ Ideal machining conditions
⊛ Normal machining conditions
⊛ Unfavourable machining conditions



CN** negative insert					CM		CC		CN		CR	
				P	○							
				M								
				K	○				⊛			
				N								
				S					○		⊛	⊛
				H			○					
	ISO	r	a_p	f	CA1000		CM1000		CN1000	CS1000	CW1400	CW1800
	CNGN120404T00520	0.4	0.1-0.25	0.5-2.0								○
	CNGN120404T02020	0.4	0.1-0.3	0.08-0.25	○							
	CNGN120408S01520	0.8	0.1-0.25	0.5-2.5							○	
	CNGN120408S02020	0.8	0.1-0.4	0.1-0.3			○					
	CNGN120408T00520	0.8	0.1-0.25	0.5-2.5								●
	CNGN120408T02020	0.8	0.1-0.4	0.1-0.3	●				●			
	CNGN120412S01520	1.2	0.1-0.3	0.5-2.5							○	
	CNGN120412T00520	1.2	0.1-0.3	0.5-2.5								●
	CNGN120412T02020	1.2	0.1-0.5	0.1-0.3	○				○			
	CNGN120416S01520	1.6	0.1-0.35	0.5-3.0							○	
	CNGN120416T00520	1.6	0.1-0.35	0.5-3.0								●
	CNGN120416T02020	1.6	0.5-2.0	0.1-0.35					○			
	CNGN120708S01520	0.8	0.1-0.25	0.5-2.5							○	
	**CNGN120708T00520**	0.8	0.1-0.25	0.5-2.5								●
	CNGN120708T02020	0.8	0.1-0.4	0.1-0.3	○							
	CNGN120712S01520	1.2	0.1-0.3	0.5-2.5							○	
	CNGN120712S02025	1.2	0.1-0.3	0.5-2.5								○
	CNGN120712T00520	1.2	0.1-0.3	0.5-2.5								●
	CNGN120712T00525	1.2	0.1-0.3	0.5-2.5						○	○	○
	CNGN120712T02020	1.2	0.1-0.5	0.1-0.3	●				○			
	CNGN120716S01520	1.6	0.1-0.35	0.5-3.0							○	
	CNGN120716T00520	1.6	0.1-0.35	0.5-3.0								○
	CNGN120716T01520	1.6	0.1-0.35	0.5-3.0							○	
	CNGN120716T02020	1.6	0.1-0.6	0.1-0.4	○				○			
	CNGN160616T02020	1.6	0.1-0.6	0.1-0.4	○							
	CNGN160712T01525	1.2	0.2-2.0	0.1-0.3					○			
	CNGN160716T01525	1.6	0.1-0.6	0.1-0.4	○							
	CNGN160716T02020	1.6	0.5-2.0	0.1-0.35					○			

● Ex stock ○ On demand

CM Mixed ceramic
CC Mixed ceramic, coated
CN Si3N4 Ceramic
CR Al2O3 cutting ceramic, reinforced

System code > A198 Grade selection > A42 Technical info > A501 Cutting data > A366

Tool holder
CCLNR/L
Kr: 95°

A292

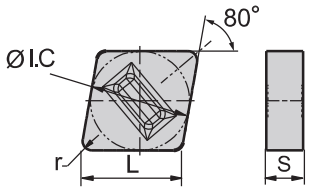
System code > A198 Grade selection > A42 Technical info > A501 Cutting data > A366

CNGX	L	I.C	S
12 07	12.9	12.7	7.94

- Ideal machining conditions
- Normal machining conditions
- Unfavourable machining conditions

Turning ceramic inserts

CN** negative insert



	ISO	r	a_p	f	CM: CA1000	CC: CM1000	CN: CN1000	CN: CS1000	CR: CW1400	CR: CW1800
P					○					
M										
K					○		◉			
N										
S								●	◉	◉
H						○				
	**CNGX120712T02020**	1.2	0.2-2.0	0.1-0.3			●			
	CNGX120716T02020	1.6	0.5-2.0	0.1-0.35			○			

● Ex stock ○ On demand

CM Mixed ceramic
CC Mixed ceramic, coated
CN Si3N4 Ceramic
CR Al2O3 cutting ceramic, reinforced

Tool holder
JCLNR/L
Kr: 95°

A300

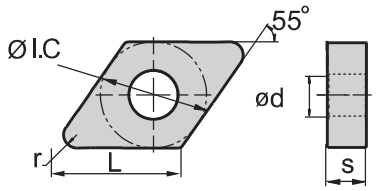
System code A198 | Grade selection A42 | Technical info A501 | Cutting data A366

Turning ceramic inserts

Ideal machining conditions
Normal machining conditions
Unfavourable machining conditions

DNGA	L	I.C	S	d
15 06	15.5	12.7	6.35	5.16
15 04	15.5	12.7	4.76	5.16

DN** negative insert



	CM	CC	CN	CR
P	○			
M				
K	○		⊛	
N				
S			●	⊛ ⊛
H		○		

	ISO	r	a_p	f	CA1000	CM1000	CN1000 CS1000	CW1400 CW1800
	DNGA150404T02020	0.4	0.1-0.3	0.08-0.25		○		
	DNGA150408S01520	0.8	0.1-0.25	0.5-2.5				○
	DNGA150408T00520	0.8	0.1-0.25	0.5-2.5				●
	DNGA150408T02020	0.8	0.1-0.4	0.1-0.3		○		
	DNGA150412S01520	1.2	0.1-0.3	0.5-2.5				○
	DNGA150412T00520	1.2	0.1-0.3	0.5-2.5				●
	DNGA150412T02020	1.2	0.1-0.5	0.1-0.3		○	○	○
	DNGA150416S01520	1.6	0.1-0.35	0.5-3.0				○
	**DNGA150416T00520**	1.6	0.1-0.35	0.5-3.0				○
	DNGA150604S02020	0.4	0.1-0.3	0.08-0.25		●		
	DNGA150604T01020	0.4	0.1-0.3	0.08-0.25		○		
	DNGA150604T02020	0.4	0.1-0.3	0.08-0.25		●	○	
	DNGA150608S02020	0.8	0.1-0.4	0.1-0.3		●		
	DNGA150608T02020	0.8	0.1-0.4	0.1-0.3		○	●	
	DNGA150612S02020	1.2	0.1-0.5	0.1-0.3		●		
	DNGA150612T01020	1.2	0.1-0.5	0.1-0.3		○		
	DNGA150612T02020	1.2	0.1-0.5	0.1-0.3		●	○	
	DNGA150616T02020	1.6	0.5-2.0	0.1-0.35			○	

● Ex stock ○ On demand

CM Mixed ceramic
CC Mixed ceramic, coated
CN Si3N4 Ceramic
CR Al2O3 cutting ceramic, reinforced

Tool holder

DDJNR/L	PDJNR/L	PDNNR/L	MDJNR/L	MDPNN	S***-PDSNR/L	S***-PDUNR/L
Kr: 93°	Kr: 93°	Kr: 63°	Kr: 93°	Kr: 62°30'	Kr: 62°30'	Kr: 93°
						
A231	A240	A241	A254	A255	A326	A327

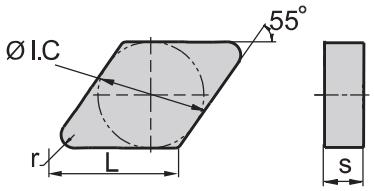
System code A198 Grade selection A42 Technical info A501 Cutting data A366

Turning ceramic inserts

- Ideal machining conditions
- Normal machining conditions
- Unfavourable machining conditions

DNGN	L	I.C	S
15 04	15.5	12.7	4.76
15 07	15.5	12.7	7.94

DN** negative insert



	CM	CC	CN	CR
P	○			
M				
K	○		⊛	
N				
S			●	⊛ ⊛
H		○		

	ISO	r	a_p	f	CA1000	CM1000	CN1000 CS1000	CW1400 CW1800
	DNGN150408S01520	0.8	0.1-0.25	0.5-2.5				○
	DNGN150408T00520	0.8	0.1-0.25	0.5-2.5				●
	DNGN150408T02020	0.8	0.1-0.4	0.1-0.3	○	○		
	DNGN150412S01520	1.2	0.1-0.3	0.5-2.5				○
	DNGN150412T00520	1.2	0.1-0.3	0.5-2.5				●
	DNGN150412T02020	1.2	0.1-0.5	0.1-0.3	○			
	**DNGN150416S01520**	1.6	0.1-0.35	0.5-3.0				○
	DNGN150416T00520	1.6	0.1-0.35	0.5-3.0				○
	DNGN150704T02020	0.4	0.1-0.3	0.08-0.25	○		○	
	DNGN150708T01520	0.8	0.1-0.25	0.5-2.5				○
	DNGN150708T02020	0.8	0.1-0.4	0.1-0.3	●		○	
	DNGN150712T02020	1.2	0.1-0.5	0.1-0.3	○		○	
	DNGN150716T01520	1.6	0.1-0.35	0.5-3.0				○
	DNGN150716T02020	1.6	0.1-0.6	0.1-0.4	○			

● Ex stock ○ On demand

CM Mixed ceramic
CC Mixed ceramic, coated
CN Si3N4 Ceramic
CR Al2O3 cutting ceramic, reinforced

Tool holder
CDJNR/L
Kr: 93°



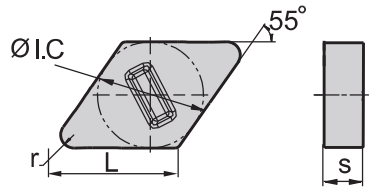
A294

System code A198 Grade selection A42 Technical info A501 Cutting data A366

Turning ceramic inserts

- Ideal machining conditions
- Normal machining conditions
- Unfavourable machining conditions

DNGX	L	I.C	S
15 07	15.5	12.7	7.94



DN** negative insert					CM		CC		CN		CR	
				P	○							
				M								
				K	○				◍			
				N								
				S						●	◍	◍
				H			○					
ISO		r	a_p	f	CA1000		CM1000		CN1000	CS1000	CW1400	CW1800
	DNGX150708T02020	0.8	0.15-1.5	0.1-025					○			
	DNGX150712T02020	1.2	0.2-2.0	0.1-0.3					○			
	DNGX150716T02020	1.6	0.5-2.0	0.1-0.35					○			

● Ex stock ○ On demand

CM Mixed ceramic
CC Mixed ceramic, coated
CN Si3N4 Ceramic
CR Al2O3 cutting ceramic, reinforced

Tool holder
JDJNR/L
Kr: 93°



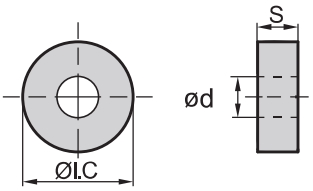
A301

System code A198 | Grade selection A42 | Technical info A501 | Cutting data A366

RNGA	l.C	S	d
12 04	12.7	4.76	

- Ideal machining conditions
- Normal machining conditions
- Unfavourable machining conditions

Turning ceramic inserts

RN** negative insert					CM	CC	CN	CR
				P	●			
				M				
				K	●		⊛	
				N				
				S			●	⊛ ⊛
				H		○		
ISO		a_p	f		CA1000	CM1000	CN1000 CS1000	CW1400 CW1800
	**RNGA120400T02020**	0.1-0.6	0.1-0.4		○	○		

● Ex stock ○ On demand

CM Mixed ceramic
CC Mixed ceramic, coated
CN Si3N4 Ceramic
CR Al2O3 cutting ceramic, reinforced

Tool holder

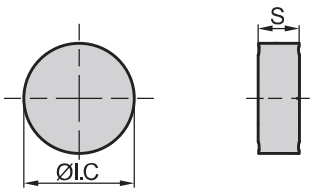
MRDNN	MRGNR/L
	
A267	A268

System code A198 | Grade selection A42 | Technical info A501 | Cutting data A366

RNGN	I.C	S
06 03	6.35	3.18
09 04	9.525	4.76
09 03	9.525	3.18
12 07	12.7	7.94
12 04	12.7	4.76
15 07	15.875	7.94
19 07	19.05	7.94
25 07	25.4	7.94
25 10	25.4	10.05

Turning ceramic inserts

Ideal machining conditions
Normal machining conditions
Unfavourable machining conditions



RN** negative insert				CM	CC	CN	CR
			P	○			
			M				
			K	○		⊛	
			N				
			S			●	⊛ ⊛
			H		○		
ISO		a_p	f	CA1000	CM1000	CN1000 CS1000	CW1400 CW1800
	RNGN060300T01020	0.1-0.3	0.08-0.25	○	○		
	RNGN090300S01520	0.1-0.3	0.5-2.5				○
	RNGN090300T00520	0.1-0.3	0.5-2.5				○ ○
	RNGN090300T02020	0.1-0.3	0.1-0.3	○			
	RNGN090400S01520	0.1-0.3	0.5-2.5				○
	RNGN090400T00520	0.1-0.3	0.5-2.5				○
	RNGN090400T02020	0.1-0.3	0.1-0.3	○			
	RNGN120400S01520	0.1-0.35	0.5-3.0				○
	RNGN120400S02020	0.1-0.6	0.1-0.4		●		
	RNGN120400T00520	0.1-0.35	0.5-3.0				●
	RNGN120400T01020	0.5-2.0	0.1-0.2			○	
	RNGN120400T01525	0.1-0.6	0.1-0.4		○		
	RNGN120400T02020	0.1-0.6	0.1-0.4	○		○	
	RNGN120700S01520	0.1-0.35	0.5-3.0				○
	RNGN120700S02020	0.1-0.6	0.1-0.4		●		
	RNGN120700T00520	0.1-0.35	0.5-3.0				● ●
	RNGN120700T00525	0.1-0.35	0.5-3.0			○	○ ○
	RNGN120700T01520	0.1-0.35	0.5-3.0				○
	RNGN120700T01525	0.2-2.0	0.1-0.3			○	
	RNGN120700T02020	0.2-2.0	0.1-0.3	●		●	
	RNGN150700T02020	0.1-0.6	0.1-0.5	○			
	RNGN190700S01520	0.1-0.4	0.5-3.0				○
	RNGN190700T00520	0.1-0.4	0.5-3.0				○
	RNGN190700T03020	0.1-0.7	0.1-0.5	○			
	RNGN250700T19015	0.1-0.7	0.1-0.8	○			
	RNGN251000T05020	0.1-0.7	0.1-0.5	○			

● Ex stock ○ On demand

CM Mixed ceramic
CC Mixed ceramic, coated
CN Si3N4 Ceramic
CR Al2O3 cutting ceramic, reinforced

System code A198 Grade selection A42 Technical info A501 Cutting data A366

Tool holder
CRDNN



A298

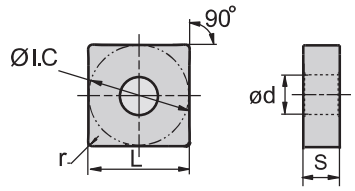
System code > A198 | Grade selection > A42 | Technical info > A501 | Cutting data > A366

Turning ceramic inserts

- Ideal machining conditions
- Normal machining conditions
- Unfavourable machining conditions

SNGA	L	I.C	S	d
12 04	12.7	12.7	4.76	5.16

SN** negative insert



	CM	CC	CN	CR
P	○			
M				
K	○		⊛	
N				
S			●	⊛ ⊛
H		○		

	ISO	r	a_p	f	CA1000	CM1000	CN1000	CS1000	CW1400	CW1800
	**SNGA120404T02020**	0.4	0.1-1.0	0.1-0.2			○			
	SNGA120408S02020	0.8	0.1-0.4	0.1-0.3		○				
	SNGA120408T02020	0.8	0.1-0.4	0.1-0.3	○	○	○			
	SNGA120412T02020	1.2	0.2-2.0	0.1-0.3			○			

● Ex stock ○ On demand

CM Mixed ceramic
CC Mixed ceramic, coated
CN Si3N4 Ceramic
CR Al2O3 cutting ceramic, reinforced

Tool holder

DSBNR/L	PSBNR/L	PSDNN	PSKNR/L	PSSNR/L	MSBNR/L	MSRNR/L
Kr: 75°	Kr: 75°	Kr: 45°	Kr: 75°	Kr: 45°	Kr: 75°	Kr: 75°
						
A232	A242	A244	A245	A246	A256	A257

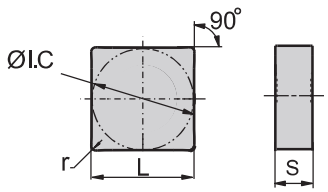
MSKNR/L	MSDNN	S***-PSKNR/L
Kr: 75°	Kr: 45°	Kr: 75°
		
A258	A259	A329

System code A198 Grade selection A42 Technical info A501 Cutting data A366

SNGN	L	I.C	S
12 04	12.7	12.7	4.76
12 07	12.7	12.7	7.94
15 07	15.875	15.875	7.94
19 07	19.05	19.05	7.94

Turning ceramic inserts

Ideal machining conditions
Normal machining conditions
Unfavourable machining conditions



SN** negative insert	CM	CC	CN	CR
P	○			
M				
K	○		⊛	
N				
S			●	⊛ ⊛
H		○		

	ISO	r	a_p	f	CA1000	CM1000	CN1000 CS1000	CW1400 CW1800
	SNGN120404T02020	0.4	0.1-0.3	0.08-0.25	○			
	SNGN120408S01520	0.8	0.1-0.25	0.5-2.5				○
	SNGN120408S02020	0.8	0.1-0.4	0.1-0.3		○		
	SNGN120408T00520	0.8	0.15-1.5	0.1-025			○	●
	SNGN120408T02020	0.8	0.1-0.4	0.1-0.3	○		●	
	SNGN120412S01520	1.2	0.1-0.3	0.5-2.5				○
	SNGN120412T00520	1.2	0.1-0.3	0.5-2.5				●
	SNGN120412T02020	1.2	0.1-0.5	0.1-0.3	○		○	
	SNGN120416S01520	1.6	0.1-0.35	0.5-3.0				○
	SNGN120416T00520	1.6	0.1-0.35	0.5-3.0				○
	SNGN120416T02020	1.6	0.1-0.6	0.1-0.4	○		○	
	SNGN120704T02020	0.4	0.1-0.3	0.08-0.25	●			
	SNGN120708S01520	0.8	0.1-0.25	0.5-2.5				○
	SNGN120708T00520	0.8	0.1-0.25	0.5-2.5				●
	SNGN120708T02020	0.8	0.1-0.4	0.1-0.3	○	○	○	
	SNGN120712S01520	1.2	0.1-0.3	0.5-2.5				○
	SNGN120712T00520	1.2	0.1-0.3	0.5-2.5				●
	SNGN120712T02020	1.2	0.1-0.5	0.1-0.3	○	○	●	
	SNGN120716S01520	1.6	0.1-0.35	0.5-3.0				○
	SNGN120716T00520	1.6	0.1-0.35	0.5-3.0				○
	SNGN120716T01520	1.6	0.1-0.35	0.5-3.0				○
	SNGN120716T02020	1.6	0.1-0.6	0.1-0.4	○			
	SNGN150708T02020	0.8	0.1-0.4	0.1-0.3	○			
	SNGN150712T02020	1.2	0.1-0.5	0.1-0.3	●		○	
	SNGN150716T02020	1.6	0.1-0.6	0.1-0.4	●		○	
	SNGN190716S02030	1.6	0.5-2.0	0.1-0.35			○	
	SNGN190716T03020	1.6	0.1-0.6	0.1-0.4	○			

● Ex stock ○ On demand

CM Mixed ceramic
CC Mixed ceramic, coated
CN Si3N4 Ceramic
CR Al2O3 cutting ceramic, reinforced

System code > A198 Grade selection > A42 Technical info > A501 Cutting data > A366

Tool holder

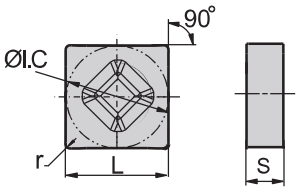
CSKNR/L	CSRNR/L	CSDNN
Kr: 75°	Kr: 75°	Kr: 45°
		
A296	A297	A299

System code A198 Grade selection A42 Technical info A501 Cutting data A366

Turning ceramic inserts

- Ideal machining conditions
- Normal machining conditions
- Unfavourable machining conditions

SNGX	L	I.C	S
12 07	12.7	12.7	7.94

SN** negative insert					CM	CC	CN	CR
				P	●			
				M				
				K	●		◍	
				N				
				S			◉	◍ ◍
				H		○		
ISO		r	a_p	f	CA1000	CM1000	CN1000 CS1000	CW1400 CW1800
	**SNGX120712T02020**	1.2	0.2-2.0	0.1-0.3			○	
	SNGX120716T02020	1.6	0.5-2.0	0.1-0.35			○	

● Ex stock ○ On demand

CM Mixed ceramic
CC Mixed ceramic, coated
CN Si3N4 Ceramic
CR Al2O3 cutting ceramic, reinforced

Tool holder
JSDNN
Kr: 45°

A302

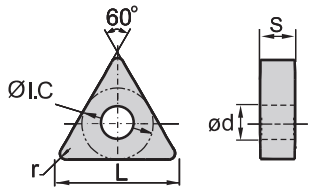
System code A198 | Grade selection A42 | Technical info A501 | Cutting data A366

Turning ceramic inserts

- Ideal machining conditions
- Normal machining conditions
- Unfavourable machining conditions

TNGA	L	I.C	S	d
16 04	16.5	9.525	4.76	3.86
22 04	22	12.7	4.76	5.16

TN** negative insert



	CM	CC	CN	CR
P	○			
M				
K	○		⊛	
N				
S			●	⊛ ⊛
H		○		

ISO	r	a_p	f	CA1000	CM1000	CN1000	CS1000	CW1400	CW1800
TNGA160404S02020	0.4	0.1-0.3	0.08-0.25		●				
TNGA160404T01020	0.4	0.1-0.3	0.08-0.25		○	●			
TNGA160404T02020	0.4	0.1-0.3	0.08-0.25		○				
TNGA160408S02020	0.8	0.1-0.4	0.1-0.3		●				
TNGA160408T02020	0.8	0.1-0.4	0.1-0.3		○	●			
TNGA160412T02020	1.2	0.1-0.5	0.1-0.3		○	●			
TNGA220408T02020	0.8	0.15-1.5	0.1-025			○			
TNGA220412T02020	1.2	0.2-2.0	0.1-0.3			○			
TNGA220416T02020	1.6	0.5-2.0	0.1-0.35			○			

● Ex stock ○ On demand

CM Mixed ceramic
CC Mixed ceramic, coated
CN Si3N4 Ceramic
CR Al2O3 cutting ceramic, reinforced

Tool holder

DTGNR/L	PTFNR/L	PTTNR/L	PTGNR/L	MTGNR/L	MTJNR/L	MTJNR/L-Z
Kr: 91°	Kr: 91°	Kr: 60°	Kr: 90°	Kr: 90°	Kr: 93°	Kr: 93°
						
A233	A247	A248	A249	A260	A261	A262

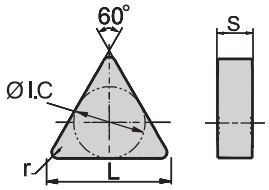
MTFNR/L	S***-PTFNR/L
Kr: 91°	Kr: 90°
	
A263	A330

System code A198 Grade selection A42 Technical info A501 Cutting data A366

TNGN	L	I.C	S
16 04	16.5	9.525	4.76
16 07	16.5	9.525	7.94
22 04	22	12.7	4.76

Turning ceramic inserts

- Ideal machining conditions
- Normal machining conditions
- Unfavourable machining conditions

TN** negative insert		CM	CC	CN	CR
	P	●			
	M				
	K	●		⊛	
	N				
	S			●	⊛⊛
	H		○		

	ISO	r	a_p	f	CA1000	CM1000	CN1000 CS1000	CW1400 CW1800
	**TNGN160404T02020**	0.4	0.1-0.3	0.08-0.25	○			
	TNGN160408S02020	0.8	0.1-0.4	0.1-0.3		○		
	TNGN160408T02020	0.8	0.1-0.4	0.1-0.3	○		○	
	TNGN160412T02020	1.2	0.1-0.5	0.1-0.3	○		○	
	TNGN160416T02020	1.6	0.5-2.0	0.1-0.35			○	
	TNGN160708T02020	0.8	0.15-1.5	0.1-025			○	
	TNGN160712T02020	1.2	0.1-0.5	0.1-0.3	○			
	TNGN220408T02020	0.8	0.1-0.4	0.1-0.3	○		○	
	TNGN220412T02020	1.2	0.1-0.5	0.1-0.3	○		○	
	TNGN220416T02020	1.6	0.1-0.6	0.1-0.4	○		○	

● Ex stock ○ On demand

CM Mixed ceramic
CC Mixed ceramic, coated
CN Si3N4 Ceramic
CR Al2O3 cutting ceramic, reinforced

Tool holder

CTJNR/L	CTUNR/L
Kr: 93°	Kr: 93°
	
A293	A295

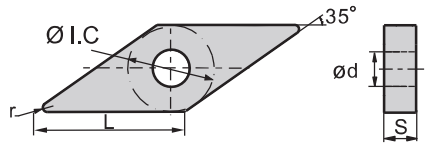
System code A198 Grade selection A42 Technical info A501 Cutting data A366

Turning ceramic inserts

Ideal machining conditions
Normal machining conditions
Unfavourable machining conditions

VNGA	L	I.C	S	d
16 07	16.6	9.525	7.94	3.81
16 04	16.6	9.525	4.76	3.81

VN** negative insert



	CM	CC	CN	CR
P	○			
M				
K	○		⊛	
N				
S			●	⊛ ⊛
H		○		

	ISO	r	a_p	f	CA1000	CM1000	CN1000 CS1000	CW1400 CW1800
	**VNGA160404S02020**	0.4	0.1-0.3	0.08-0.25		●		
	VNGA160404T01020	0.4	0.1-0.3	0.08-0.25		○		
	VNGA160408S02020	0.4	0.1-0.4	0.1-0.3		●		
	VNGA160408T01020	0.8	0.1-0.4	0.1-0.3		○		
	VNGA160408T02020	0.8	0.1-0.4	0.1-0.3		●		
	VNGA160708S02020	0.8	0.1-0.4	0.1-0.3		●		

● Ex stock ○ On demand

CM Mixed ceramic
CC Mixed ceramic, coated
CN Si3N4 Ceramic
CR Al2O3 cutting ceramic, reinforced

Tool holder

DVVNN	DVJNR/L	MVVNN	MVJNR/L
Kr: 72°30'	Kr: 93°	Kr: 72°30'	Kr: 93°
			
A234	A235	A264	A265

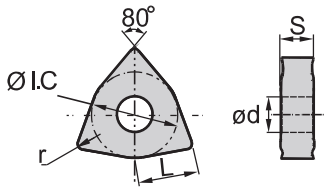
System code A198 | Grade selection A42 | Technical info A501 | Cutting data A366

Turning ceramic inserts

- Ideal machining conditions
- Normal machining conditions
- Unfavourable machining conditions

WNGA	L	I.C	S	d
08 04	8.69	12.7	4.76	5.16

WN** negative insert



	CM	CC	CN	CR
P	○			
M				
K	○		⊛	
N				
S			●	⊛ ⊛
H		○		

	ISO	r	a_p	f	CA1000	CM1000	CN1000	CS1000	CW1400	CW1800
	**WNGA080404T01020**	0.4	0.1-0.3	0.08-0.25		○				
	WNGA080404T02020	0.4	0.1-0.3	0.08-0.25		○				
	WNGA080408S02020	0.8	0.1-0.4	0.1-0.3		○				
	WNGA080408T02020	0.8	0.1-0.4	0.1-0.3		○	●			
	WNGA080412S02020	1.2	0.1-0.5	0.1-0.3		○				
	WNGA080412T02020	1.2	0.1-0.5	0.1-0.3		○	●			
	WNGA080416T01525	1.6	0.5-2.0	0.1-0.35			○			
	WNGA080416T02020	1.6	0.5-2.0	0.1-0.35			●			

● Ex stock ○ On demand

CM Mixed ceramic
CC Mixed ceramic, coated
CN Si3N4 Ceramic
CR Al2O3 cutting ceramic, reinforced

Tool holder

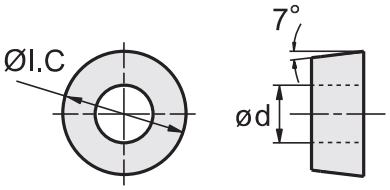
DWLNR/L	PWLNR/L	MWLNR/L	S***-PWLNR/L
Kr: 95°	Kr: 95°	Kr: 95°	Kr: 95°
			
A236	A251	A266	A332

System code A198 | Grade selection A42 | Technical info A501 | Cutting data A366

RCGX	I.C	S	d
06 07	6	7.94	
06 04	6	4.76	
06 06	6	6.35	
09 07	9	7.94	
12 07	12	7.94	
19 10	19	10	

Turning ceramic inserts

Ideal machining conditions
Normal machining conditions
Unfavourable machining conditions



RC** positive insert				CM		CC		CN		CR	
			P	○							
			M								
			K	○				✲			
			N								
			S					○		✲	✲
			H			○					
ISO		a_p	f	CA1000		CM1000		CN1000	CS1000	CW1400	CW1800
	RCGX060400S01520	0.1-0.25	0.5-2.5							○	
	RCGX060400T00520	0.1-0.25	0.5-2.5								○
	RCGX060600S02020	0.1-0.3	0.08-0.25	○							
	RCGX060600T01020	0.1-0.25	0.5-2.5							○	
	RCGX060700T00525	0.1-0.25	0.5-2.5						○	○	○
	RCGX090700S01520	0.1-0.3	0.5-2.5							○	
	RCGX090700T00520	0.1-0.3	0.5-2.5								○
	RCGX090700T00525	0.1-0.3	0.5-2.5						○	○	○
	RCGX090700T20015	0.1-0.3	0.1-0.3	○							
	RCGX120700E	0.5-2.0	0.1-0.2						○		
	RCGX120700S01020	0.5-2.0	0.1-0.2						○		
	RCGX120700S01520	0.1-0.35	0.5-3.0							○	
	RCGX120700T00520	0.1-0.35	0.5-3.0								○
	RCGX120700T00525	0.1-0.35	0.5-3.0						○	○	○
	RCGX120700T01020	0.1-0.35	0.5-3.0			○				○	
	RCGX191000T02020	0.1-0.6	0.1-0.5			○					

● Ex stock ○ On demand

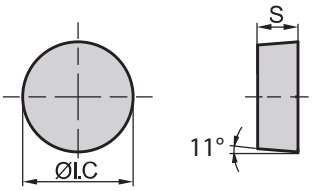
CM Mixed ceramic
CC Mixed ceramic, coated
CN Si3N4 Ceramic
CR Al2O3 cutting ceramic, reinforced

System code A198 Grade selection A42 Technical info A501 Cutting data A366

RPGN	I.C	S
12 04	12.7	4.76

- Ideal machining conditions
- Normal machining conditions
- Unfavourable machining conditions

Turning ceramic inserts



RP** positive insert				CM	CC	CN	CR
			P	○			
			M				
			K	○		⊛	
			N				
			S			●	⊛ ⊛
			H		○		
ISO		a_p	f	CA1000	CM1000	CN1000 CS1000	CW1400 CW1800
	**RPGN120400S01520**	0.1-0.35	0.5-3.0				○
	RPGN120400T00520	0.1-0.35	0.5-3.0				○

● Ex stock ○ On demand

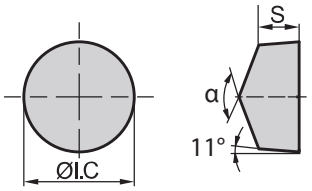
CM Mixed ceramic
CC Mixed ceramic, coated
CN Si3N4 Ceramic
CR Al2O3 cutting ceramic, reinforced

System code A198 | Grade selection A42 | Technical info A501 | Cutting data A366

- Ideal machining conditions
- Normal machining conditions
- Unfavourable machining conditions

RPGX	I.C	S
09 07	9.525	7.94

Turning ceramic inserts



RP** positive insert				CM	CC	CN		CR	
			P	○					
			M						
			K	○		⊛			
			N						
			S			●		⊛	⊛
			H		○				
ISO		a_p	f	CA1000	CM1000	CN1000	CS1000	CW1400	CW1800
	RPGX090700T00525	0.1-0.3	0.5-2.5					○	○

● Ex stock ○ On demand

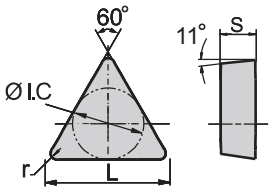
CM Mixed ceramic
CC Mixed ceramic, coated
CN Si3N4 Ceramic
CR Al2O3 cutting ceramic, reinforced

System code A198 Grade selection A42 Technical info A501 Cutting data A366

Turning ceramic inserts

- Ideal machining conditions
- Normal machining conditions
- Unfavourable machining conditions

TPGN	L	I.C	S
11 03	11	6.35	3.18
16 03	16.5	9.525	3.18



TP** positive insert		CM	CC	CN	CR
	P	●			
	M				
	K	●		⊛	
	N				
	S			●	⊛⊛
	H		○		

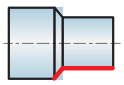
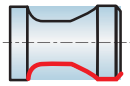
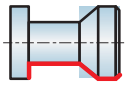
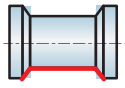
	ISO	r	a_p	f	CA1000	CM1000	CN1000 CS1000	CW1400 CW1800
	**TPGN110304T02020**	0.4	0.1-0.3	0.08-0.25		○		
	TPGN160304T01020	0.4	0.1-0.3	0.08-0.25		○		
	TPGN160308T01020	0.8	0.1-0.4	0.1-0.3		○		

● Ex stock ○ On demand

CM Mixed ceramic
CC Mixed ceramic, coated
CN Si3N4 Ceramic
CR Al2O3 cutting ceramic, reinforced

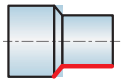
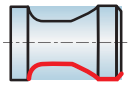
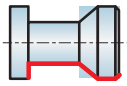
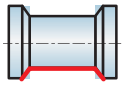
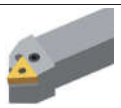
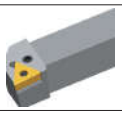
System code > A198 Grade selection > A42 Technical info > A501 Cutting data > A366

External turning tool holders

	Tool holder	Application: External machining	Application: Facing	Application: Profiling	Application: Profiling	Application: Profiling	Workpiece: Stable	Workpiece: Unstable	Page
									
D	DCLNR/L 95° 	●	●				●		A230
	DDJNR/L 93° 			●	●	●	●	●	A231
	DSBNR/L 75° 	●					●		A232
	DTGNR/L 91° 	●					●		A233
	DVVNN 72.5° 					●	●		A234
	DVJNR/L 93° 			●	●		●	●	A235
	DWLNR/L 95° 	●	●				●		A236
P	PCBNR/ L 75° 	●					●		A237
	PCLNR/ L 95° 	●	●				●		A238
	PDJNR/ L 93° 			●	●	●	●	●	A240
	PDNNR/ L 63° 					●	●		A241
	PSBNR/ L 75° 	●					●		A242
	PSDNN 45° 	●				●	●		A244
	PSKNR/ L 75° 		●				●		A245

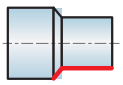
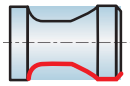
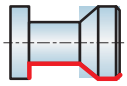
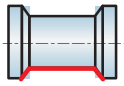
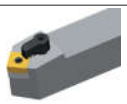
● Recommended

External turning tool holders

	Tool holder		Application					Workpiece		Page
			External machining	Facing	Profiling	Profiling	Profiling	Stable	Unstable	
										
P	PSSNR/ L 45°		●	●				●		A246
P	PTFNR/L 91°			●				●		A247
P	PTTNR/L 60°		●					●		A248
P	PTGNR/L 90°		●					●		A249
P	PWLNR/L 95°		●	●				●		A251
P	PLANR/L 90°		●	●			●	●		A316
P	PLFNR/L 90°		●					●		A317
P	PCLNR/L 95°		●	●				●		A318
M	MCBNR/L 75°		●					●		A252
M	MCLNR/L 95°		●	●				●		A253
M	MDJNR/L 93°				●	●	●	●	●	A254
M	MDPNN 62.5°						●	●		A255
M	MSBNR/L 75°		●					●		A256
M	MSRNR/L 75°		●					●		A257

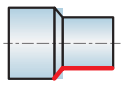
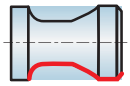
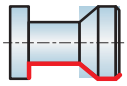
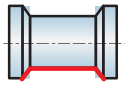
● Recommended

External turning tool holders

	Tool holder		Application					Workpiece		Page
			External machining	Facing	Profiling	Profiling	Profiling	Stable	Unstable	
										
M	MSKNR/L 75°			●				●		A258
M	MSDNN 45°						●	●		A259
M	MTGNR/L 90°		●					●		A260
M	MTJNR/L 93°		●					●		A261
M	MTJNR/L-Z 93°			●		●		●		A262
M	MTFNR/L 91°			●				●		A263
M	MVVNN 72,5°						●	●		A264
M	MVJNR/L 93°				●	●		●	●	A265
M	MWLNR/L 95°		●	●				●		A266
M	MRGNR/L –				●			●		A268
M	MRDNN –						●	●		A267
S	SCACR/L 90°		●					●	●	A269
S	SCLCR/L 95°		●	●				●	●	A270
S	SDACR/L 90°					●		●	●	A271

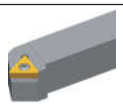
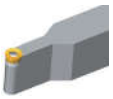
● Recommended

External turning tool holders

	Tool holder		Application					Workpiece		Page
			External machining	Facing	Profiling	Profiling	Profiling	Stable	Unstable	
										
S	SDJCR/L 93°		●			●		●	●	A272
	SDNCN 63°						●	●	●	A273
	SVJBR/L 93°		●			●		●	●	A274
	SVABR/L 90°		●			●		●	●	A275
	SVVBN 72,5°						●	●	●	A276
	SVVCN 72,5°						●	●	●	A277
	SVJCR/L 93°		●			●		●	●	A278
	SSBCR/L 75°		●					●		A279
	SSDCN 45°						●	●		A280
	SSKCR/L 75°			●				●		A281
	SSSCR/L 45°		●					●		A282
	STACR/L 90°		●					●	●	A283
	STFCR/L 91°			●				●		A284
	STGCR/L 91°		●					●	●	A285

● Recommended

External turning tool holders

Tool holder			Application					Workpiece		Page
			External machining	Facing	Profiling	Profiling	Profiling	Stable	Unstable	
S	STTCR/L 60°		●					●		A286
	SWACR/L 90°		●					●	●	A287
	SRDCN –						●	●		A288
	SRGCR/L –				●			●		A289
	SCACR/L-SC 90°		●					●	●	A306
	SCLCR/L-SC 95°		●	●				●	●	A307
	SDACR/L-SC 90°					●		●	●	A308
	SDHCR/L-SC 107°30'					●		●	●	A309
	SDJCR/L-SC 93°		●			●		●	●	A310
	SDNCN-SC 62°30'						●	●	●	A311
	SVACR/L-SC 90°		●			●		●	●	A312
	SVJCR/L-SC 93°		●			●		●	●	A313
C	CKJNR/L 93°		●			●		●		A290
	CKNNR/L 63°						●	●		A291

● Recommended

Notes

General turning ISO code – external tool holders

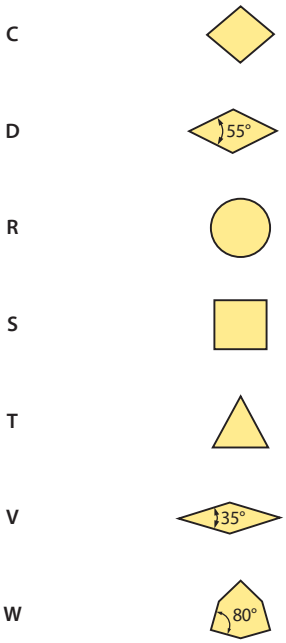
P	C	L	N	L	25	25	M	12
1	2	3	4	5	6	7	8	9

Clamping system

Code	Description	
P	Lever lock clamping	
M	Wedge/pin lock clamping	
S	Screw-on clamping	
C/J	Wedge clamping	
D	Duel wedge clamping	

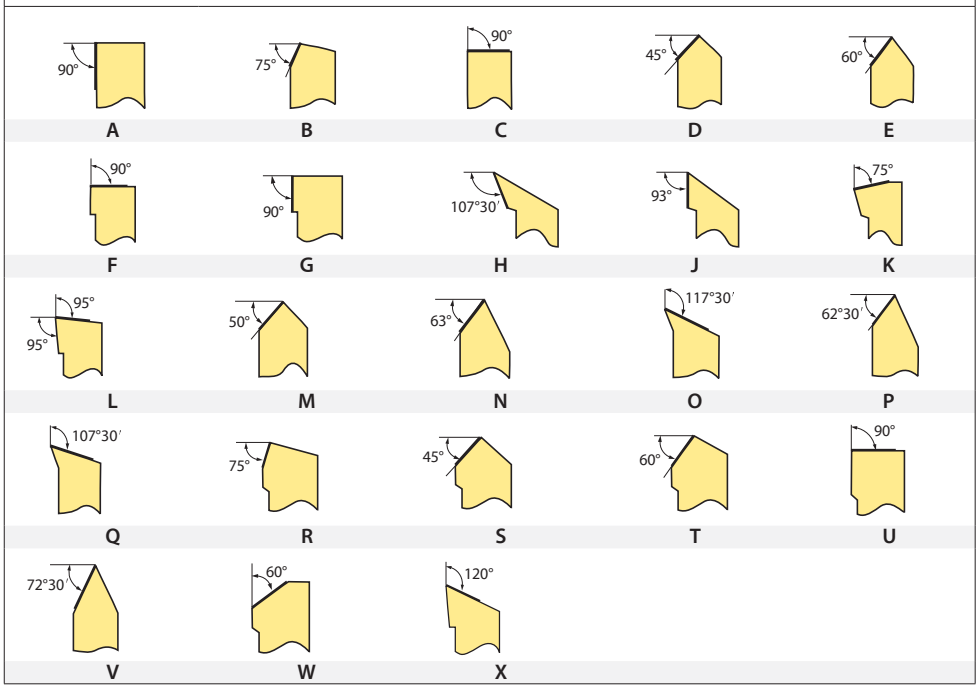
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Insert shape



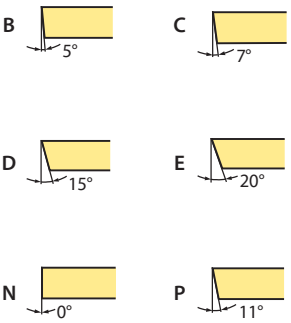
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Tool holder type and entering angle



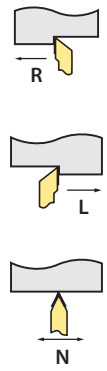
3

Clearance angle



4

Cutting direction



5

Shank height h [mm]



Code	h
12	12
16	16
20	20
25	25
32	32
40	40
50	50

6

Shank width b [mm]



Code	b
12	12
16	16
20	20
25	25
32	32
40	40
50	50

7

Holder length L [mm]



Code	L
H	100
K	125
M	150
P	170
Q	180
R	200
S	250
T	300

8

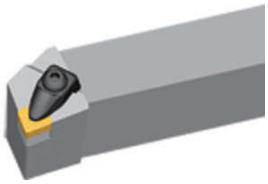
Cutting edge length l [mm]

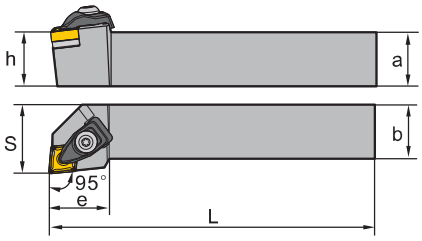
I.C [mm]	Insert shape						
	C	D	R	S	T	V	W
5,56					**09**		
6,35	**06**	**07**			**11**		
9,525	**09**	**11**	**09**	**09**	**16**	**16**	**06**
12,7	**12**	**15**	**12**	**12**	**22**	**22**	**08**
15,875	**16**	**19**	**15**	**15**	**27**		
19,05	**19**		**19**	**19**	**33**		
25,4	**25**		**25**	**25**	**44**		
32			**32**				

9

CN** holder (external) D-Clamping

DCLNR/L Kr: 95°







Article	✻	Stock R	Stock L	Dimensions [mm] a	b	L	h	s	e	Inserts
DCLNR/L1616H09		●	○	16	16	100	16	20	24	CN**0903**
DCLNR/L2020K09		●	●	20	20	125	20	25	24	CN**0903**
DCLNR/L2525M09		●	●	25	25	150	25	32	24	CN**0903**
DCLNR/L2020K12		●	●	20	20	125	20	25	28	CN**1204**
DCLNR/L2525M12		●	●	25	25	150	25	32	28	CN**1204**
DCLNR/L3225P12		●	●	32	25	170	32	32	28	CN**1204**

● Ex stock ○ On demand

✻ With internal cooling

Spare parts

	Insert	CN**0903**	CN**1204**
	h	16-25	20-32
	Clamp	C1RA	C2RA
	Screw (clamp)	CM5×22C (4.0 Nm)	CM6×25C (7.0 Nm)
	Screw (shim)	SM5×8.65XA1	SM6×10XA1
	Shim	C09BM	C12BM
	Spring	SPR6	SPR4
	Wrench (shim)	WH30L	WH40L
	Wrench (clamp)	WH30L	WH40L

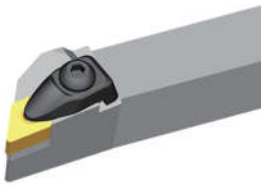
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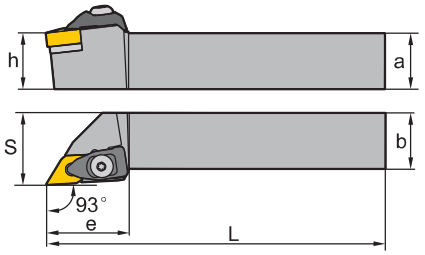
					
Wiper	**Finishing**	**Medium Cut**	**Roughing**	**Cast Iron**	**PCBN/PCD**
A51	A52	A53	A57	A61	A177

System code A228 Grade selection A42 Technical info A501 Cutting data A366

DN** holder (external) D-Clamping

DDJNR/L Kr: 93°







Article	✲	Stock		Dimensions [mm]						Inserts
		R	L	a	b	L	h	s	e	
DDJNR/L1616H11		●	●	16	16	100	16	20	30	DN**1104**
DDJNR/L2020K11		●	●	20	20	125	20	25	30	DN**1104**
DDJNR/L2525M11		●	●	25	25	150	25	32	30	DN**1104**
DDJNR/L3225P11		○	○	32	25	170	32	32	30	DN**1104**
DDJNR/L2020K15		●	●	20	20	125	20	25	35	DN**1506**
DDJNR/L2525M15		●	●	25	25	150	25	32	35	DN**1506**
DDJNR/L3232P15		●	●	32	32	170	32	40	35	DN**1506**

● Ex stock ○ On demand

✲ With internal cooling

Spare parts

	Insert	DN**1104**	DN**1506**
	h	16-32	20-32
	Clamp	C1RA	C2RA
	Screw (clamp)	CM5×22C (4.0 Nm)	CM6×25C (7.0 Nm)
	Screw (shim)	SM5×8.65XA1	SM6×10XA1
	Shim	D11BM	D15BM
	Spring	SPR6	SPR4
	Wrench (shim)	WH30L	WH40L
	Wrench (clamp)	WH30L	WH40L

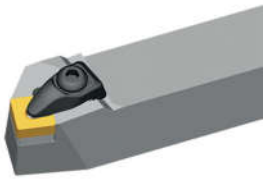
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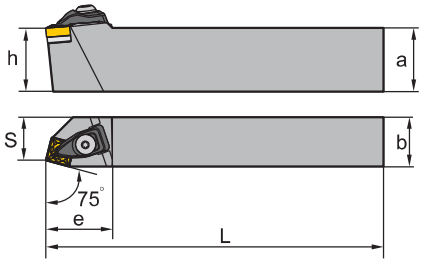
Wiper	Finishing	Medium Cut	Roughing	Cast Iron	PCBN/PCD
A62	A63	A63	A68	A69	A178

System code A228 Grade selection A42 Technical info A501 Cutting data A366

SN** holder (external) D-Clamping

DSBNR/L Kr: 75°







Article	✻	Stock R	Stock L	Dimensions [mm] a	b	L	h	s	e	Inserts
DSBNR/L1616H09		○		16	16	100	16	13	26	SN**0903**
DSBNR/L2020K12		●	●	20	20	125	20	17	34	SN**1204**
DSBNR/L2525M12		●	●	25	25	150	25	22	34	SN**1204**
DSBNR/L3225P12		●	●	32	25	170	32	22	34	SN**1204**
DSBNR/L3232P15		●	●	32	32	170	32	27	41	SN**1506**

● Ex stock ○ On demand

✻ With internal cooling

Spare parts

	Insert	SN**0903**	SN**1204**	SN**1506**
	h	16	20-32	32
	Clamp	C1RA	C2RA	C3RA
	Screw (clamp)	CM5×22C (4.0 Nm)	CM6×25C (7.0 Nm)	CM6×25C (7.0 Nm)
	Screw (shim)	SM5×8.65XA1	SM6×10XA1	SM6×10XA2
	Shim	S09BM	S12BM	S15BM
	Spring	SPR6	SPR4	SPR4
	Wrench (shim)	WH30L	WH40L	WH40L
	Wrench (clamp)	WH30L	WH40L	WH40L

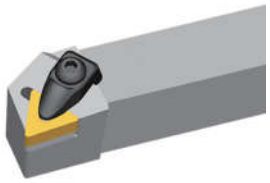
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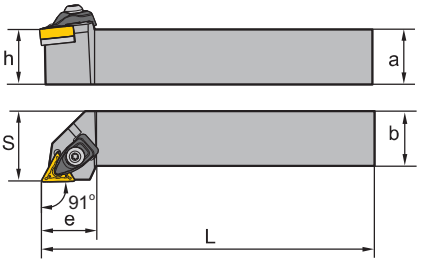
				
Finishing	**Medium Cut**	**Roughing**	**Cast Iron**	**PCBN/PCD**
A73	A73	A78	A84	A162

System code A228 Grade selection A42 Technical info A501 Cutting data A366

TN** holder (external) D-Clamping

DTGNR/L Kr: 91°







Article	✲	Stock		Dimensions [mm]						Inserts
		R	L	a	b	L	h	s	e	
DTGNR/L1616H16		●	●	16	16	100	16	20	25	TN**1604**
DTGNR/L2020K16		●	●	20	20	125	20	25	25	TN**1604**
DTGNR/L2525M16		●	●	25	25	150	25	32	25	TN**1604**

● Ex stock ○ On demand

✲ With internal cooling

Spare parts

	Insert	TN**1604**
	h	16-25
	Clamp	C1RA
	Screw (clamp)	CM5×22C (4.0 Nm)
	Screw (shim)	SM5×8.65XA1
	Shim	T16BM
	Spring	SPR6
	Wrench (shim)	WH30L
	Wrench (clamp)	WH30L

Insert

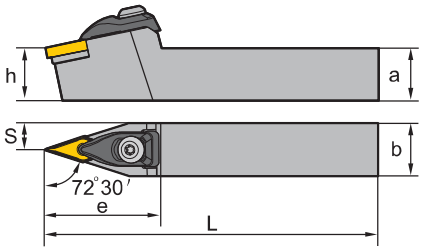
Wiper	Finishing	Medium Cut	Roughing	Cast Iron	PCBN/PCD
A87	A88	A90	A92	A99	A163

System code A228 Grade selection A42 Technical info A501 Cutting data A366

VN** holder (external) D-Clamping

DVVNN Kr: 72°30'







Article	✻	Stock	Dimensions [mm]						Inserts
			a	b	L	h	s	e	
DVVNN2020K16		●	20	20	125	20	10	44	VN**1604**
DVVNN2525M16		●	25	25	150	25	12.5	44	VN**1604**

● Ex stock ○ On demand

✻ With internal cooling

Spare parts

	Insert	VN**1604**
	h	**20-25**
	Clamp	C6RA
	Screw (clamp)	CM5×22C (4.0 Nm)
	Screw (shim)	SM5×8.65XA1
	Shim	V16BM
	Spring	SPR6
	Wrench (shim)	WH30L
	Wrench (clamp)	WH30L

Insert

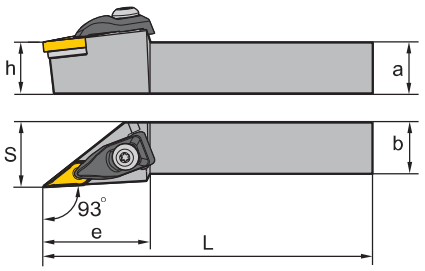
Finishing	Medium Cut	Roughing	Cast Iron	PCBN/PCD
A102	A102	A104	A103	A179

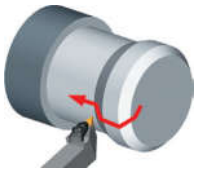
System code A228 Grade selection A42 Technical info A501 Cutting data A366

VN** holder (external) D-Clamping

DVJNR/L Kr: 93°







Article	✲	Stock		Dimensions [mm]						Inserts
		R	L	a	b	L	h	s	e	
DVJNR/L2020K16		●	●	20	20	125	20	25	41	VN**1604**
DVJNR/L2525M16		●	●	25	25	150	25	32	41	VN**1604**

● Ex stock ○ On demand

✲ With internal cooling

Spare parts

	Insert	VN**1604**
	h	20-25
	Clamp	C6RA
	Screw (clamp)	CM5×22C (4.0 Nm)
	Screw (shim)	SM5×8.65XA1
	Shim	V16BM
	Spring	SPR6
	Wrench (clamp)	WH30L
	Wrench (shim)	WH30L

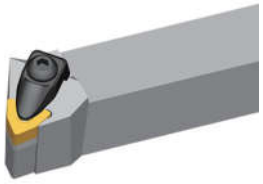
Insert

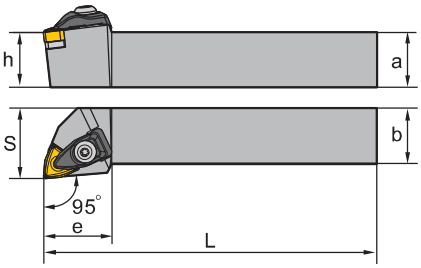
Finishing	Medium Cut	Roughing	Cast Iron	PCBN/PCD
A102	A102	A104	A103	A179

System code A228 Grade selection A42 Technical info A501 Cutting data A366

WN** holder (external) D-Clamping

DWLNR/L Kr: 95°







Article	✻	Stock R	Stock L	Dimensions [mm] a	b	L	h	s	e	Inserts
DWLNR/L1616H06		●	●	16	16	100	16	25	24	WN**0604**
DWLNR/L2020K06		●	●	20	20	125	20	25	24	WN**0604**
DWLNR/L2525M06		●	●	25	25	150	25	32	24	WN**0604**
DWLNR/L2020K08		●	●	20	20	125	20	25	31	WN**0804**
DWLNR/L2525M08		●	●	25	25	150	25	32	31	WN**0804**
DWLNR/L3225P08		●	●	32	25	170	32	32	31	WN**0804**

● Ex stock ○ On demand

✻ With internal cooling

Spare parts

	Insert	WN**0604**	WN**0804**
	h	16-25	20-32
	Clamp	C1RA	C2RA
	Screw (clamp)	CM5×22C (4.0 Nm)	CM6×25C (7.0 Nm)
	Screw (shim)	SM5×8.65XA1	SM6×10XA1
	Shim	W06BM	W08BM
	Spring	SPR6	SPR4
	Wrench (shim)	WH30L	WH40L
	Wrench (clamp)	WH30L	WH40L

Insert

 Wiper	 Finishing	 Medium Cut	 Roughing	 Cast Iron	 PCBN/PCD
A106	A107	A107	A109	A111	A165

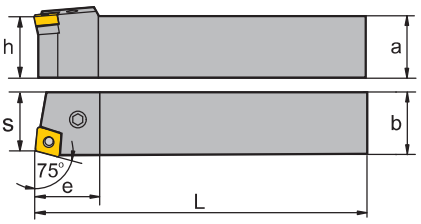
System code A228 Grade selection A42 Technical info A501 Cutting data A366

CN** holder (external) P-Clamping

PCBNR/L Kr: 75°



Right hand style





Article	✲	Stock		Dimensions [mm]						Inserts
		R	L	a	b	L	h	s	e	
PCBNR/L2020K12		●	●	20	20	125	20	17	27	CN**1204**
PCBNR/L2525M12		●	●	25	25	150	25	22	27	CN**1204**
PCBNR/L3232P12		●	●	32	32	170	32	27	27	CN**1204**
PCBNR/L2525M16		●	●	25	25	150	25	22	33	CN**1606**
PCBNR/L3232P16		●	●	32	32	170	32	27	33	CN**1606**
PCBNR/L3232P19		●	●	32	32	170	32	27	38	CN**1906**
PCBNR/L4040S19		●	●	40	40	250	40	35	38	CN**1906**
PCBNR/L4040S2507		●	●	40	40	250	40	35	50	CN**2507**
PCBNR/L4040S2509		●	●	40	40	250	40	35	50	CN**2509**

● Ex stock ○ On demand

✲ With internal cooling

Spare parts

	Insert	CN**1204**	CN**1606**	CN**1906**	CN**2507**	CN**2509**
	h	20-32	25-32	32-40	40	40
	Knee lever	L4	L5	L6	L8	L8
	Screw	LEM8×21 (10.2 Nm)	LEM8×25 (10.2 Nm)	LEM10×27 (16.6 Nm)		
	Screw				LEM12×36A (25.2 Nm)	LEM12×36A (25.2 Nm)
	Shim	C12AP	C16AP	C19AP	C25AP-07	C25AP
	Shim pin (shim)	SP4	SP5	SP6	SP8	SP8
	Wrench	WH30L	WH30L	WH40L	WH50L	WH50L

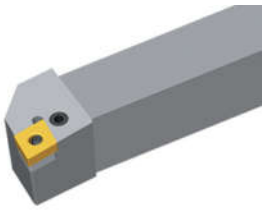
Insert

Wiper	Finishing	Medium Cut	Roughing	Cast Iron	PCBN/PCD
A51	A52	A53	A57	A61	A177

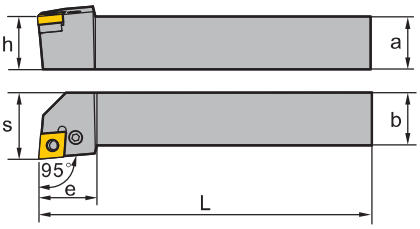
System code A228 Grade selection A42 Technical info A501 Cutting data A366

CN** holder (external) P-Clamping

PCLNR/L Kr: 95°



Right hand style





Article	✻	Stock		Dimensions [mm]						Inserts
		R	L	a	b	L	h	s	e	
PCLNR/L1616H09		●	●	16	16	100	16	20	20	CN**0903**
PCLNR/L2020K09		●	●	20	20	125	20	25	22	CN**0903**
PCLNR/L2525M09		○	●	25	25	150	25	32	22	CN**0903**
PCLNR/L1616H12		○	○	16	16	100	16	20	20	CN**1204**
PCLNR/L2020K12		●	●	20	20	125	20	25	28	CN**1204**
PCLNR/L2525M12		●	●	25	25	150	25	32	28	CN**1204**
PCLNR/L3232P12		●	●	32	32	170	32	40	28	CN**1204**
PCLNR/L2525M16		●	●	25	25	150	25	32	33	CN**1606**
PCLNR/L3232P16		●	●	32	32	170	32	40	33	CN**1606**
PCLNR/L3232P19		●	●	32	32	170	32	40	38	CN**1906**
PCLNR/L4040S19		●	●	40	40	250	40	50	38	CN**1906**
PCLNR/L4040S2507		●	●	40	40	250	40	50	49	CN**2507**
PCLNR/L4040S2509		●	●	40	40	250	40	50	49	CN**2509**

● Ex stock ○ On demand

✻ With internal cooling

Spare parts

	Insert	CN**0903**	CN**1204**	CN**1606**	CN**1906**	CN**2507**	CN**2509**
	h	16-25	16-32	25-32	32-40	40	40
	Knee lever	L3	L4	L5	L6	L8	L8
	Screw		LEM8×21 (10.2 Nm)	LEM8×25 (10.2 Nm)	LEM10×27 (16.6 Nm)		
	Screw	LEM6×13.4A (7.0 Nm)				LEM12×36A (25.2 Nm)	LEM12×36A (25.2 Nm)
	Shim	C09AP	C12AP	C16AP	C19AP	C25AP-07	C25AP
	Shim pin (shim)	SP10	SP4	SP5	SP6	SP8	SP8
	Wrench	WH25L	WH30L	WH30L	WH40L	WH50L	WH50L

System code A228 Grade selection A42 Technical info A501 Cutting data A366

CN** holder (external)

Insert

					
Wiper	**Finishing**	**Medium Cut**	**Roughing**	**Cast Iron**	**PCBN/PCD**
A51	A52	A53	A57	A61	A177

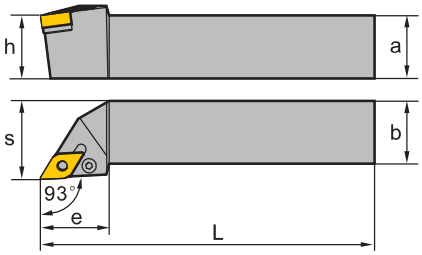
System code > A228 Grade selection > A42 Technical info > A501 Cutting data > A366

DN** holder (external) P-Clamping

PDJNR/L Kr: 93°



Right hand style





Article	✻	Stock R	Stock L	Dimensions [mm] a	b	L	h	s	e	Inserts
PDJNR/L1616H11		●	●	16	16	100	16	20	25	DN**1104**
PDJNR/L2020K11		●	●	20	20	125	20	25	25	DN**1104**
PDJNR/L2525M11		●	●	25	25	150	25	32	30	DN**1104**
PDJNR/L2020K15-3		●	○	20	20	125	20	25	35	DN**1504**
PDJNR/L2525M15-3		●	●	25	25	150	25	32	35	DN**1504**
PDJNR/L3232P15-3		●	●	32	32	170	32	40	35	DN**1504**
PDJNR/L2020K15		●	○	20	20	125	20	25	35	DN**1506**
PDJNR/L2525M15		●	●	25	25	150	25	32	35	DN**1506**
PDJNR/L3232P15		●	●	32	32	170	32	40	35	DN**1506**

● Ex stock ○ On demand

✻ With internal cooling

Spare parts

	Insert	DN**1104**	DN**1504**	DN**1506**
	h	16-32	20-32	20-32
	Knee lever	L3	L4	L4B
	Screw		LEM8×21 (10.2 Nm)	LEM8×21 (10.2 Nm)
	Screw	LEM6×13.4A (7.0 Nm)		
	Shim	D11AP	D15AP	D15AP
	Shim pin (shim)	SP3	SP4	SP4
	Wrench	WH25L	WH30L	WH30L

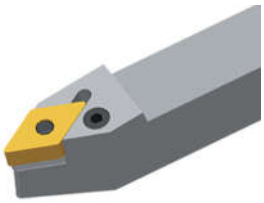
Insert

					
Wiper	**Finishing**	**Medium Cut**	**Roughing**	**Cast Iron**	**PCBN/PCD**
A62	A63	A63	A68	A69	A178

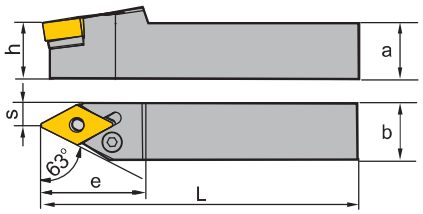
System code A228 Grade selection A42 Technical info A501 Cutting data A366

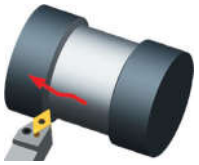
DN** holder (external) P-Clamping

PDNNR/L Kr: 63°



Left hand style





Article	✻	Stock		Dimensions [mm]						Inserts
		R	L	a	b	L	h	s	e	
PDNNR/L2020K15-3		●	○	20	20	125	20	8	37	DN**1504**
PDNNR/L2525M15-3		●	○	25	25	150	25	12.5	37	DN**1504**
PDNNR/L3232P15-3		●	●	32	32	170	32	16	37	DN**1504**
PDNNR/L2020K15		●	●	20	20	125	20	8	37	DN**1506**
PDNNR/L2525M15		●	●	25	25	150	25	12.5	37	DN**1506**
PDNNR/L3232P15		●	●	32	32	170	32	16	37	DN**1506**

● Ex stock ○ On demand

✻ With internal cooling

Spare parts

	Insert	DN**1504**	DN**1506**
	hh	**20-32**	**20-32**
	Knee lever	L4	L4B
	Screw	LEM8×21 (10.2 Nm)	LEM8×21 (10.2 Nm)
	Shim	D15AP	D15AP
	Shim pin (shim)	SP4	SP4
	Wrench	WH30L	WH30L

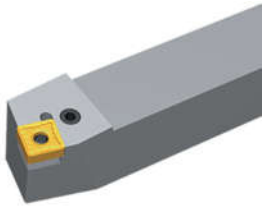
Insert

					
Wiper	**Finishing**	**Medium Cut**	**Roughing**	**Cast Iron**	**PCBN/PCD**
A62	A63	A63	A68	A69	A178

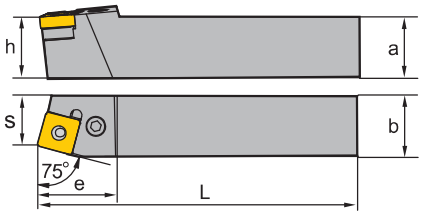
System code A228 Grade selection A42 Technical info A501 Cutting data A366

SN** holder (external) P-Clamping

PSBNR/L Kr: 75°



Right hand style





Article	*	Stock		Dimensions [mm]						Inserts
		R	L	a	b	L	h	s	e	
PSBNR/L1616H09		●	○	16	16	100	16	13	21	SN**0903**
PSBNR/L2020K09		●	○	20	20	125	20	17	23	SN**0903**
PSBNR/L2020K12		●	●	20	20	125	20	17	28	SN**1204**
PSBNR/L2525M12		●	●	25	25	125	25	22	28	SN**1204**
PSBNR/L3225P12		●	○	32	25	170	32	22	28	SN**1204**
PSBNR/L3232P12		●	○	32	32	170	32	27	28	SN**1204**
PSBNR/L2525M15		●	○	25	25	150	25	22	35	SN**1506**
PSBNR/L3232P15		●	●	32	32	170	32	27	35	SN**1506**
PSBNR/L3232P19		●	●	32	32	170	32	27	40	SN**1906**
PSBNR/L4040S19		●	●	40	40	250	40	35	40	SN**1906**
PSBNR/L4040S2507		○	○	40	40	250	40	35	48	SN**2507**
PSBNR/L4040S2509		○	○	40	40	250	40	35	48	SN**2509**

● Ex stock ○ On demand

* With internal cooling

Spare parts

	Insert	SN**0903**	SN**1204**	SN**1506**	SN**1906**	SN**2507**	SN**2509**
	h	16-20	20-32	25-32	32-40	40	40
	Knee lever	L3	L4	L5	L6	L8	L8
	Screw		LEM8×21 (10.2 Nm)	LEM8×25 (10.2 Nm)	LEM10×27 (16.6 Nm)		
	Screw	LEM6×13.4A (7.0 Nm)				LEM12×36A (25.2 Nm)	LEM12×36A (25.2 Nm)
	Shim	S09AP	S12AP	S15AP	S19AP	S25AP	
	Shim						S25AP-09
	Shim pin (shim)	SP10	SP4	SP5	SP6	SP8	SP8
	Wrench	WH25L	WH30L	WH30L	WH40L	WH50L	WH50L

System code > A228 Grade selection > A42 Technical info > A501 Cutting data > A366

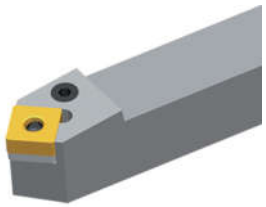
SN** holder (external)

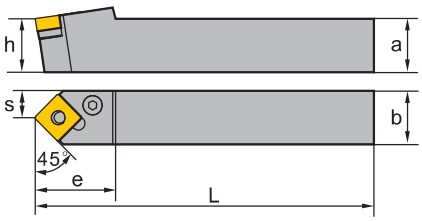
Insert				
				
Finishing	**Medium Cut**	**Roughing**	**Cast Iron**	**PCBN/PCD**
A73	A73	A78	A84	A162

System code A228 Grade selection A42 Technical info A501 Cutting data A366

SN** holder (external) P-Clamping

PSDNN Kr: 45°







Article	✻	Stock	Dimensions [mm]						Inserts
			a	b	L	h	s	e	
PSDNN1212F09		○	12	12	80	12	6	21	SN**0903**
PSDNN1616H09		●	16	16	100	16	8	23	SN**0903**
PSDNN2020K12		●	20	20	125	20	10	30	SN**1204**
PSDNN2525M12		●	20	20	150	20	12.5	30	SN**1204**
PSDNN3232P12		●	32	32	170	32	16	40	SN**1204**
PSDNN2525M15		●	25	25	150	25	12.5	40	SN**1506**
PSDNN3232P15		●	32	32	170	32	16	40	SN**1506**
PSDNN3232P19		●	32	32	170	32	16	40	SN**1906**
PSDNN4040S19		●	40	40	250	40	20	40	SN**1906**

● Ex stock ○ On demand

✻ With internal cooling

Spare parts

	Insert	SN**0903**	SN**0903**	SN**1204**	SN**1506**	SN**1906**
	h	12	16	20-32	25-32	32-40
	Knee lever	L3B	L3	L3	L5	L6
	Screw	LEM5×12B (4.0 Nm)				
	Screw				LEM8×25 (10.2 Nm)	LEM10×27 (16.6 Nm)
	Screw		LEM6×13.4A (7.0 Nm)	LEM6×13.4A (7.0 Nm)		
	Shim		S09AP	S12AP	S15AP	S19AP
	Shim pin (shim)		SP10	SP10	SP5	SP6
	Wrench		WH25L	WH25L	WH30L	WH40L
	Wrench	WT09IP				

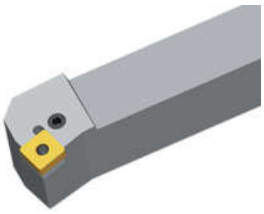
Insert

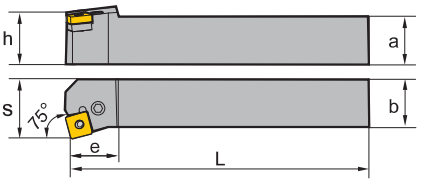
				
Finishing	**Medium Cut**	**Roughing**	**Cast Iron**	**PCBN/PCD**
A73	A73	A78	A84	A162

System code A228 Grade selection A42 Technical info A501 Cutting data A366

SN** holder (external) P-Clamping

PSKNR/L Kr: 75°







Right hand style

Article	✲	Stock		Dimensions [mm]						Inserts
		R	L	a	b	L	h	s	e	
PSKNR/L1616H09		○	○	16	16	100	16	20	17	SN**0903**
PSKNR/L2020K09		●	○	20	20	125	20	25	20	SN**0903**
PSKNR/L2020K12		●	●	20	20	125	20	25	26	SN**1204**
PSKNR/L2525M12		●	●	25	25	150	25	32	26	SN**1204**
PSKNR/L3232P12		●	●	32	32	170	32	40	26	SN**1204**
PSKNR/L2525M15		●	○	25	25	150	25	32	32	SN**1506**
PSKNR/L3232P15		●	●	32	32	170	32	40	32	SN**1506**
PSKNR/L3232P19		●	●	32	32	170	32	40	36	SN**1906**
PSKNR/L4040S19		○	○	40	40	250	40	50	40	SN**1906**

● Ex stock ○ On demand

✲ With internal cooling

Spare parts

	Insert	SN**0903**	SN**1204**	SN**1506**	SN**1906**
	h	16-20	20-32	25-32	32-40
	Knee lever	L3	L4	L5	L6
	Screw		LEM8×21 (10.2 Nm)	LEM8×25 (10.2 Nm)	LEM10×27 (16.6 Nm)
	Screw	LEM6×13.4A (7.0 Nm)			
	Shim	S09AP	S12AP	S15AP	S19AP
	Shim pin (shim)	SP10	SP4	SP5	SP6
	Wrench	WH25L	WH30L	WH30L	WH40L

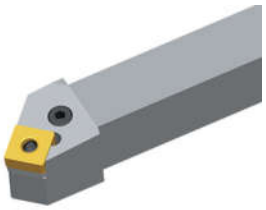
Insert

				
Finishing	**Medium Cut**	**Roughing**	**Cast Iron**	**PCBN/PCD**
A73	A73	A78	A84	A162

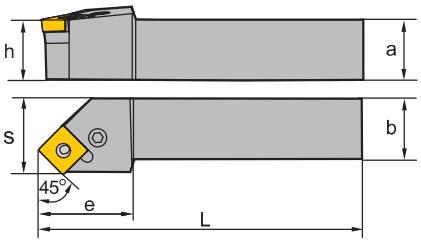
System code A228 Grade selection A42 Technical info A501 Cutting data A366

SN** holder (external) P-Clamping

PSSNR/L Kr: 45°



Right hand style





Article	*	Stock R	Stock L	Dimensions [mm] a	b	L	h	s	e	Inserts
PSSNR/L1616H09		●	●	16	16	100	16	20	25	SN**0903**
PSSNR/L2020K12		●	●	20	20	125	20	25	30	SN**1204**
PSSNR/L2525M12		●	●	25	25	150	25	32	30	SN**1204**
PSSNR/L3232P12		●	●	32	32	170	32	40	40	SN**1204**
PSSNR/L2525M15		●	●	25	25	150	25	32	30	SN**1506**
PSSNR/L3232P15		●	●	32	32	170	32	40	40	SN**1506**
PSSNR/L3232P19		●	●	32	32	170	32	40	40	SN**1906**
PSSNR/L4040S19		●	●	40	40	250	40	50	50	SN**1906**
PSSNR/L4040S2507		●	●	40	40	250	40	50	50	SN**2507**
PSSNR/L4040S2509		●	●	40	40	250	40	50	50	SN**2509**

● Ex stock ○ On demand

* With internal cooling

Spare parts

	Insert	SN**0903**	SN**1204**	SN**1506**	SN**1906**	SN**2507**	SN**2509**
	h	**16**	**20-32**	**25-32**	**32-40**	**40**	**40**
	Knee lever	L3	L4	L5	L6	L8	L8
	Screw		LEM8×21 (10.2 Nm)	LEM8×25 (10.2 Nm)	LEM10×27 (16.6 Nm)		
	Screw	LEM6×13.4A (7.0 Nm)				LEM12×36A (25.2 Nm)	LEM12×36A (25.2 Nm)
	Shim	S09AP	S12AP	S15AP	S19AP	S25AP	
	Shim						S25AP-09
	Shim pin (shim)	SP10	SP4	SP5	SP6	SP8	SP8
	Wrench	WH25L	WH30L	WH30L	WH40L	WH50L	WH50L

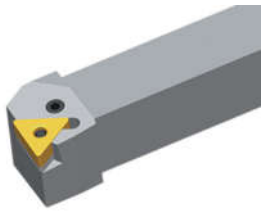
Insert

				
Finishing	**Medium Cut**	**Roughing**	**Cast Iron**	**PCBN/PCD**
A73	A73	A78	A84	A162

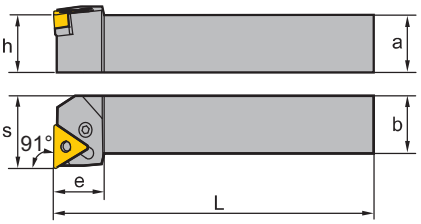
System code A228 Grade selection A42 Technical info A501 Cutting data A366

TN** holder (external) P-Clamping

PTFNR/L Kr: 91°



Right hand style





Article	✲	Stock		Dimensions [mm]						Inserts
		R	L	a	b	L	h	s	e	
PTFNR/L1616H16		●	●	16	16	100	16	20	20	TN**1604**
PTFNR/L2020K16		●	●	20	20	125	20	25	20	TN**1604**
PTFNR/L2525M16		●	●	25	25	150	25	32	20	TN**1604**
PTFNR/L2525M22		●	●	25	25	150	25	32	25	TN**2204**
PTFNR/L3232P22		●	●	32	32	170	32	40	25	TN**2204**
PTFNR/L3232P27		●	○	32	32	170	32	40	34	TN**2706**
PTFNR/L4040S27		○	○	40	40	250	40	50	34	TN**2706**

● Ex stock ○ On demand

✲ With internal cooling

Spare parts

	Insert	TN**1604**	TN**2204**	TN**2706**
	h	16-25	25-32	32-40
	Knee lever	L3	L4	L5
	Screw		LEM8×21 (10.2 Nm)	LEM8×25 (10.2 Nm)
	Screw	LEM6×13.4A (7.0 Nm)		
	Shim	T16AP	T22AP	T27AP
	Shim pin (shim)	SP3	SP4	SP5
	Wrench	WH25L	WH30L	WH30L

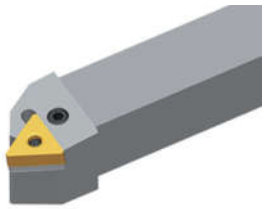
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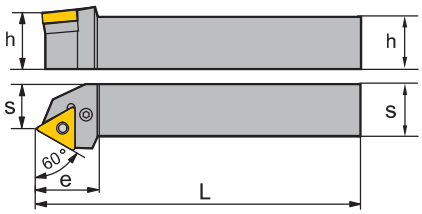
						
Wiper	**Finishing**	**Medium Cut**	**Roughing**	**Heavy Turning**	**Cast Iron**	**PCBN/PCD**
A87	A88	A90	A92	A97	A99	A163

System code A228 Grade selection A42 Technical info A501 Cutting data A366

TN** holder (external) P-Clamping

PTTNR/L Kr: 60°







Right hand style

Article	✻	Stock R	Stock L	Dimensions [mm] a	b	L	h	s	e	Inserts
PTTNR/L1616H16		●		16	16	100	16	13	25	TN**1604**
PTTNR/L2020K16		●	○	20	20	125	20	17	25	TN**1604**
PTTNR/L2525M22		●	●	25	25	150	20	22	32	TN**2204**

● Ex stock ○ On demand

✻ With internal cooling

Spare parts

	Insert	TN**1604**	TN**2204**
	h	**16-25**	**20**
	Knee lever	L3	L4
	Screw		LEM8×21 (10.2 Nm)
	Screw	LEM6×13.4A (7.0 Nm)	
	Shim	T16AP	T22AP
	Shim pin (shim)	SP3	SP4
	Wrench	WH25L	WH30L

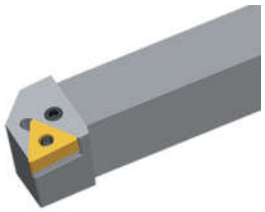
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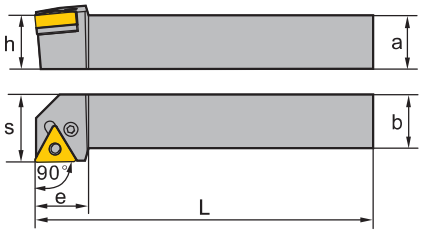
Wiper	Finishing	Medium Cut	Roughing	Heavy Turning	Cast Iron	PCBN/PCD
A87	A88	A90	A92	A97	A99	A163

System code A228 Grade selection A42 Technical info A501 Cutting data A366

TN** holder (external) P-Clamping

PTGNR/L Kr: 90°







Right hand style

Article	✲	Stock		Dimensions [mm]						Inserts
		R	L	a	b	L	h	s	e	
PTGNR/L1010E11		●		10	10	70	10	14	16	TN**1103**
PTGNR/L1212F11		●	●	12	12	80	12	16	14	TN**1103**
PTGNR/L1616H11		●		16	16	100	16	20	18	TN**1103**
PTGNR/L2020K11		●	○	20	20	125	20	25	19	TN**1103**
PTGNR/L2525M11		○	○	25	25	150	25	32	20	TN**1103**
PTGNR/L1616H16		●	●	16	16	100	16	20	20	TN**1604**
PTGNR/L2020K16		●	●	20	20	125	20	25	20	TN**1604**
PTGNR/L2525M16		●	●	25	25	150	25	32	20	TN**1604**
PTGNR/L3232P16		●	○	32	32	170	32	40	20	TN**1604**
PTGNR/L2525M22		●	●	25	25	150	25	32	28	TN**2204**
PTGNR/L3232P22		●	●	32	32	170	32	40	28	TN**2204**
PTGNR/L3232P27		●	○	32	32	170	32	40	33	TN**2706**
PTGNR/L4040S27		○	○	40	40	250	40	50	33	TN**2706**

● Ex stock ○ On demand

✲ With internal cooling

Spare parts

	Insert	**TN**1103****	**TN**1604****	**TN**2204****	**TN**2706****
	h	**10-25**	**16-32**	**25-32**	**32-40**
	Knee lever	L2	L3	L4	L5
	Screw	LEM5×9B (4.0 Nm)			
	Screw			LEM8×21 (10.2 Nm)	LEM8×25 (10.2 Nm)
	Screw		LEM6×13.4A (7.0 Nm)		
	Shim		T16AP	T22AP	T27AP
	Shim pin (shim)		SP3	SP4	SP5
	Wrench		WH25L	WH30L	WH30L
	Wrench	WT09IP			

System code A228 Grade selection A42 Technical info A501 Cutting data A366

TN** holder (external)

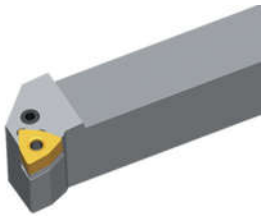
Insert

						
Wiper	**Finishing**	**Medium Cut**	**Roughing**	**Heavy Turning**	**Cast Iron**	**PCBN/PCD**
A87	A88	A90	A92	A97	A99	A163

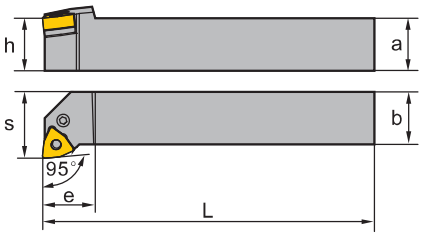
System code > A228 Grade selection > A42 Technical info > A501 Cutting data > A366

WN** holder (external) P-Clamping

PWLNR/L Kr: 95°



Right hand style





Article	✻	Stock		Dimensions [mm]						Inserts
		R	L	a	b	L	h	s	e	
PWLNR/L1616H06		●	●	16	16	100	16	20	20	WN**0604**
PWLNR/L2020K06		●	●	20	20	125	20	25	20	WN**0604**
PWLNR/L2525M06		●	●	25	25	150	25	32	20	WN**0604**
PWLNR/L2020K08		●	●	20	20	125	20	25	26	WN**0804**
PWLNR/L2525M08		●	●	25	25	150	25	32	26	WN**0804**

● Ex stock ○ On demand

✻ With internal cooling

Spare parts

	Insert	WN**0604**	WN**0804**
	h	**16-25**	**20-25**
	Knee lever	L3	L4
	Screw		LEM8×21 (10.2 Nm)
	Screw	LEM6×13.4A (7.0 Nm)	
	Shim	W06AP	W08AP
	Shim pin (shim)	SP3	SP4
	Wrench	WH25L	WH30L

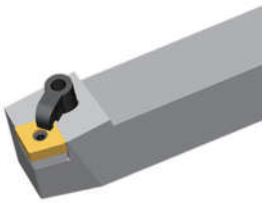
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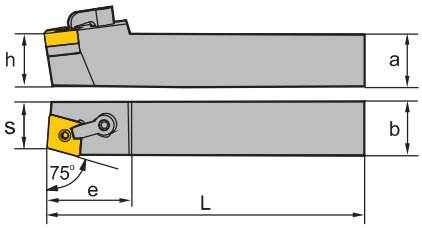
					
Wiper	**Finishing**	**Medium Cut**	**Roughing**	**Cast Iron**	**PCBN/PCD**
A106	A107	A107	A109	A111	A165

System code A228 Grade selection A42 Technical info A501 Cutting data A366

CN** holder (external) M-Clamping

MCBNR/L Kr: 75°







Right hand style

Article	*	Stock R	Stock L	Dimensions [mm] a	b	L	h	s	e	Inserts
MCBNR/L2020K12		●	○	20	20	125	20	17	32	CN**1204**
MCBNR/L2525M12		●	●	25	25	150	20	22	32	CN**1204**
MCBNR/L3225P12		●	●	32	25	170	32	22	32	CN**1204**
MCBNR/L2525M16		○	○	25	25	150	25	22	40	CN**1606**
MCBNR/L3232P16		●	●	32	32	170	32	27	40	CN**1606**
MCBNR/L3232P19		○	○	32	32	170	32	27	45	CN**1906**
MCBNR/L4040R19		○	●	40	40	200	40	35	45	CN**1906**

● Ex stock ○ On demand

* With internal cooling

Spare parts

	Insert	CN**1204**	CN**1204**	CN**1606**	CN**1906**
	h	20	25-32	25-32	32-40
	Clamp	C1RD	C1RD	C2RD	C5RD
	Dowel pin	TM6×17	TM6×17	TM8×21	TM10×21
	Screw (clamp)	DM6×25 (7.0 Nm)	DM6×30 (7.0 Nm)	DM6×30 (7.0 Nm)	
	Screw (clamp)				DM8×30X (10.2 Nm)
	Shim	C12BM	C12BM	C16BM	C19BM
	Wrench (dowel pin)	WH30L	WH30L	WH30L	WH40L
	Wrench (clamp)	WH30L	WH30L	WH30L	WH40L

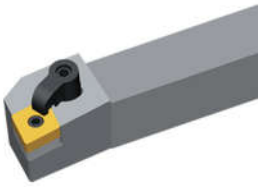
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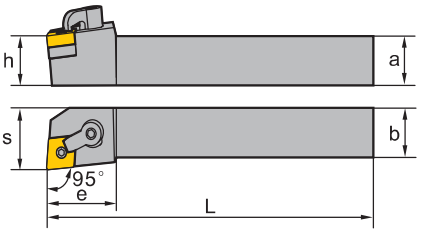
					
Wiper	**Finishing**	**Medium Cut**	**Roughing**	**Cast Iron**	**PCBN/PCD**
A51	A52	A53	A57	A61	A177

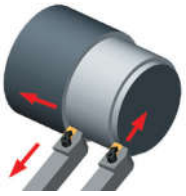
System code > A228 Grade selection > A42 Technical info > A501 Cutting data > A366

CN** holder (external) M-Clamping

MCLNR/L Kr: 95°







Right hand style

Article	✻	Stock		Dimensions [mm]						Inserts
		R	L	a	b	L	h	s	e	
MCLNR/L2020K12		●	●	20	20	125	20	25	32	CN**1204**
MCLNR/L2525M12		●	●	25	25	150	25	32	32	CN**1204**
MCLNR/L3225P12		●	●	32	25	170	32	32	32	CN**1204**
MCLNR/L2525M16		●	●	25	25	150	25	32	38	CN**1606**
MCLNR/L3232P16		●	●	32	32	170	32	40	38	CN**1606**
MCLNR/L3232P19		●	●	32	32	170	32	40	45	CN**1906**
MCLNR/L4040R19		●	○	40	40	200	40	50	45	CN**1906**
MCLNR/L4040S25		○	○	40	40	250	40	50	38	CN**2509**

● Ex stock ○ On demand

✻ With internal cooling

Spare parts

	Insert	CN**1204**	CN**1204**	CN**1606**	CN**1906**	CN**2509**
	h	20	25-32	25-32	32-40	40
	Clamp	C1RD	C1RD	C2RD	C5RD	C6RD
	Dowel pin	TM6×17	TM6×17	TM8×21	TM10×21	TM12×29 (25.2 Nm)
	Screw (clamp)	DM6×25 (7.0 Nm)	DM6×30 (7.0 Nm)	DM6×30 (7.0 Nm)		
	Screw (clamp)				DM8×30X (10.2 Nm)	DM10×35X (16.6 Nm)
	Shim	C12BM	C12BM	C16BM	C19BM	
	Shim					C25BM-09
	Wrench (clamp)	WH30L	WH30L	WH30L	WH40L	WH50L
	Wrench (dowel pin)	WH30L	WH30L	WH30L	WH40L	WH40L

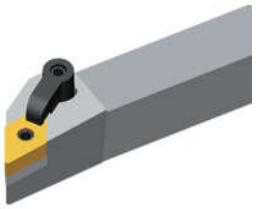
Insert

Wiper	Finishing	Medium Cut	Roughing	Cast Iron	PCBN/PCD
A51	A52	A53	A57	A61	A177

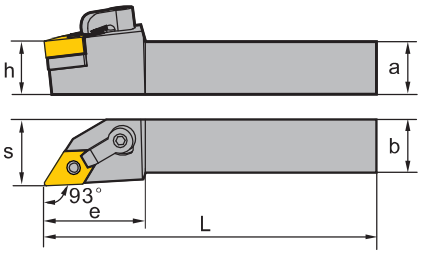
System code A228 Grade selection A42 Technical info A501 Cutting data A366

DN** holder (external) M-Clamping

MDJNR/L Kr: 93°



Right hand style





Article	✻	Stock R	Stock L	Dimensions [mm] a	b	L	h	s	e	Inserts
MDJNR/L2020K11		●	●	20	20	125	20	25	32	DN**1104**
MDJNR/L2525M11		●	●	25	25	150	25	32	32	DN**1104**
MDJNR/L3225P11		●	○	32	25	170	32	32	32	DN**1104**
MDJNR/L2020K15		●	●	20	20	125	20	25	38	DN**1506**
MDJNR/L2525M15		●	●	25	25	150	25	32	38	DN**1506**
MDJNR/L3225P15		●	●	32	25	170	32	32	38	DN**1506**

● Ex stock ○ On demand

✻ With internal cooling

Spare parts

	Insert h	DN**1104** 20	DN**1104** 25-32	DN**1506** 20	DN**1506** 25-32
	Clamp	C1RD	C1RD	C2RD	C2RD
	Dowel pin	TM5×13	TM5×13	TM6×19	TM6×19
	Screw (clamp)	DM6×25 (7.0 Nm)	DM6×30 (7.0 Nm)	DM6×25 (7.0 Nm)	DM6×30 (7.0 Nm)
	Shim	D11BM	D11BM	D15BM	D15BM
	Wrench (clamp)	WH30L	WH30L	WH30L	WH30L
	Wrench (dowel pin)	WH20L	WH20L	WH30L	WH30L

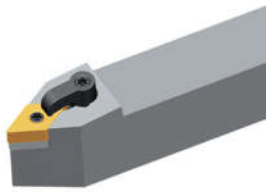
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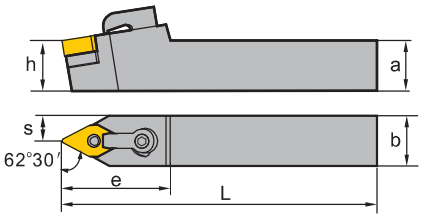
					
Wiper	**Finishing**	**Medium Cut**	**Roughing**	**Cast Iron**	**PCBN/PCD**
A62	A63	A63	A68	A69	A178

System code A228 Grade selection A42 Technical info A501 Cutting data A366

DN** holder (external) M-Clamping

MDPNN Kr: 62°30'







Article	✻	Stock	Dimensions [mm]						Inserts
			a	b	L	h	s	e	
MDPNN2020K11		●	20	20	125	20	10	35	DN**1104**
MDPNN2525M11		●	25	25	150	25	12.5	35	DN**1104**
MDPNN2020K15		●	20	20	125	20	10	40	DN**1506**
MDPNN2525M15		●	25	25	150	25	12.5	40	DN**1506**
MDPNN3225P15		●	32	25	170	32	12.5	40	DN**1506**

● Ex stock ○ On demand

✻ With internal cooling

Spare parts

	Insert	DN**1104**	DN**1104**	DN**1506**	DN**1506**
	h	20	25-32	20	25-32
	Clamp	C1RD	C1RD	C2RD	C2RD
	Dowel pin	TM5×13	TM5×13	TM6×19	TM6×19
	Screw (clamp)	DM6×25 (7.0 Nm)	DM6×30 (7.0 Nm)	DM6×25 (7.0 Nm)	DM6×30 (7.0 Nm)
	Shim	D11BM	D11BM	D15BM	D15BM
	Wrench (clamp)	WH30L	WH30L	WH30L	WH30L
	Wrench (dowel pin)	WH20L	WH20L	WH30L	WH30L

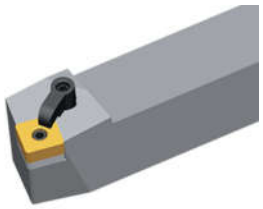
Insert

					
Wiper	**Finishing**	**Medium Cut**	**Roughing**	**Cast Iron**	**PCBN/PCD**
A62	A63	A63	A68	A69	A178

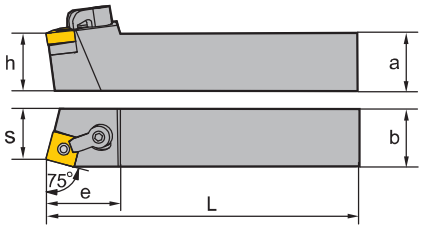
System code A228 Grade selection A42 Technical info A501 Cutting data A366

SN** holder (external) M-Clamping

MSBNR/L Kr: 75°



Right hand style





Article	*	Stock R	Stock L	Dimensions [mm] a	b	L	h	s	e	Inserts
MSBNR/L2020K12		●	●	20	20	125	20	17	32	SN**1204**
MSBNR/L2525M12		●	○	25	25	150	25	22	32	SN**1204**
MSBNR/L3225P12			●	32	25	170	32	22	32	SN**1204**
MSBNR/L2525M15		●	○	25	25	150	25	22	38	SN**1506**
MSBNR/L3232P15		●	●	32	32	170	32	29	38	SN**1506**
MSBNR/L4032R15		○		40	32	200	40	27	38	SN**1506**
MSBNR/L3232P19		●	●	32	32	170	32	27	45	SN**1906**
MSBNR/L4040R19		○	●	40	40	200	40	35	45	SN**1906**
MSBNR/L4040R25		●	○	40	40	200	40	35	50	SN**2507**
MSBNR/L4040S2509		○	○	40	40	250	40	35	50	SN**2509**

● Ex stock ○ On demand

✻ With internal cooling

Spare parts

	Insert	SN**1204**	SN**1204**	SN**1506**	SN**1906**	SN**2507**	SN**2509**
	h	**20**	**25-32**	**25-40**	**32-40**	**40**	**40**
	Clamp	C1RD	C1RD	C2RD	C5RD	C6RD	C6RD
	Dowel pin	TM6×17	TM6×17	TM8×21	TM10×21	TM12×29	TM12×29
	Screw (clamp)	DM6×25 (7.0 Nm)	DM6×30 (7.0 Nm)	DM6×30 (7.0 Nm)			
	Screw (clamp)				DM8×30X (10.2 Nm)	DM10×35X (16.6 Nm)	DM10×35X (16.6 Nm)
	Shim	S12BM	S12BM	S15BM	S19BM	S25BM	S25BM
	Wrench (clamp)	WH30L	WH30L	WH30L	WH40L	WH40L	WH40L
	Wrench (dowel pin)	WH31L	WH31L	WH30L	WH40L	WH50L	WH50L

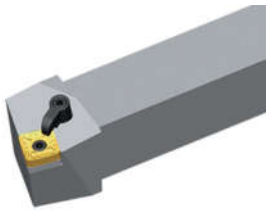
Insert

				
Finishing	**Medium Cut**	**Roughing**	**Cast Iron**	**PCBN/PCD**
A73	A73	A78	A84	A162

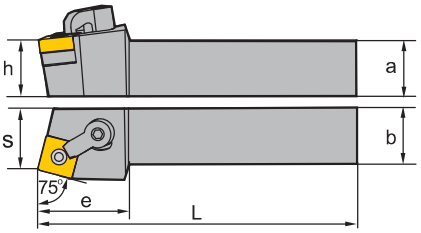
System code A228 Grade selection A42 Technical info A501 Cutting data A366

SN** holder (external) M-Clamping

MSRNR/L Kr: 75°



Right hand style





Article	✻	Stock		Dimensions [mm]						Inserts
		R	L	a	b	L	h	s	e	
MSRNR/L2020K12		●	●	20	20	125	20	22	36	SN**1204**
MSRNR/L2525M12		●	●	25	25	150	25	27	36	SN**1204**
MSRNR/L3225P12			○	32	25	170	32	27	36	SN**1204**
MSRNR/L2525M15		●	○	25	25	150	25	27	40	SN**1506**
MSRNR/L3232P15		●	●	32	32	170	32	35	40	SN**1506**
MSRNR/L4032R15		○		40	32	200	40	35	40	SN**1506**
MSRNR/L3232P19		○	○	32	32	170	32	35	45	SN**1906**
MSRNR/L4040R19		○		40	40	200	40	43	45	SN**1906**
MSRNR/L4040R2509		○	○	40	40	200	40	43	50	SN**2509**
MSRNR/L4040S2509		○	○	40	40	250	40	43	50	SN**2509**

● Ex stock ○ On demand

✻ With internal cooling

Spare parts

	Insert	SN**1204**	SN**1204**	SN**1506**	SN**1906**	SN**2509**
	h	20	25-32	25-40	32-40	40
	Clamp	C1RD	C1RD	C2RD	C5RD	C6RD
	Dowel pin	TM6×17	TM6×17	TM8×21	TM10×21	TM12×29
	Screw (clamp)	DM6×25 (7.0 Nm)	DM6×30 (7.0 Nm)	DM6×30 (7.0 Nm)		
	Screw (clamp)				DM8×30X (10.2 Nm)	DM10×35X (16.6 Nm)
	Shim	S12BM	S12BM	S15BM	S19BM	S25BM
	Wrench (clamp)	WH30L	WH30L	WH30L	WH40L	WH40L
	Wrench (dowel pin)	WH31L	WH31L	WH30L	WH40L	WH50L

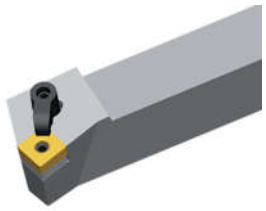
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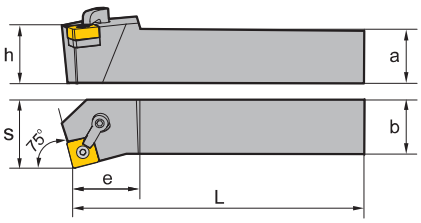
				
Finishing	**Medium Cut**	**Roughing**	**Cast Iron**	**PCBN/PCD**
A73	A73	A78	A84	A162

System code A228 Grade selection A42 Technical info A501 Cutting data A366

SN** holder (external) M-Clamping

MSKNR/L Kr: 75°







Right hand style

Article	✻	Stock R	Stock L	Dimensions [mm] a	b	L	h	s	e	Inserts
MSKNR/L2020K12		●	●	20	20	125	20	25	32	SN**1204**
MSKNR/L2525M12		●	●	25	25	150	25	32	32	SN**1204**
MSKNR/L3225P12		●	○	32	25	170	32	32	32	SN**1204**
MSKNR/L2525M15		●	○	25	25	150	25	32	28	SN**1506**
MSKNR/L3232P15		●	○	32	32	170	32	40	38	SN**1506**
MSKNR/L4032R15			○	40	32	200	40	40	38	SN**1506**
MSKNR/L3232P19		●	●	32	32	170	32	40	45	SN**1906**
MSKNR/L4040R19		○	○	40	40	200	40	50	45	SN**1906**
MSKNR/L4040S2509		○	●	40	40	250	40	50	50	SN**2509**

● Ex stock ○ On demand

✻ With internal cooling

Spare parts

	Insert	SN**1204**	SN**1204**	SN**1506**	SN**1906**	SN**2509**
	h	20	25-32	25-40	32-40	40
	Clamp	C1RD	C1RD	C2RD	C5RD	C6RD
	Dowel pin	TM6×17	TM6×17	TM8×21	TM10×21	TM12×29
	Screw (clamp)	DM6×25 (7.0 Nm)	DM6×30 (7.0 Nm)	DM6×30 (7.0 Nm)		
	Screw (clamp)				DM8×30X (10.2 Nm)	DM10×35X (16.6 Nm)
	Shim	S12BM	S12BM	S15BM	S19BM	S25BM
	Wrench (clamp)	WH30L	WH30L	WH30L	WH40L	WH40L
	Wrench (dowel pin)	WH30L	WH30L	WH30L	WH40L	WH50L

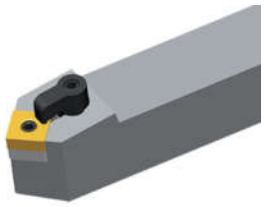
Insert

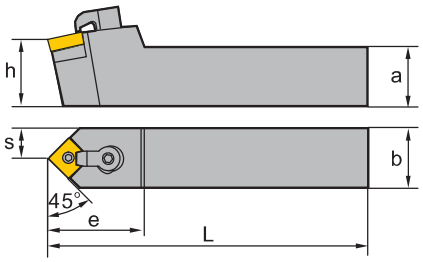
				
Finishing	**Medium Cut**	**Roughing**	**Cast Iron**	**PCBN/PCD**
A73	A73	A78	A84	A162

System code A228 Grade selection A42 Technical info A501 Cutting data A366

SN** holder (external) M-Clamping

MSDNN Kr: 45°







Article	✲	Stock	Dimensions [mm]						Inserts
			a	b	L	h	s	e	
MSDNN2020K12		●	20	20	125	20	10	35	SN**1204**
MSDNN2525M12		●	25	25	150	25	12.5	35	SN**1204**
MSDNN3225P12		●	32	25	170	32	12.5	35	SN**1204**
MSDNN2525M15		●	25	25	150	25	12.5	42	SN**1506**
MSDNN3232P15		○	32	32	170	32	16	42	SN**1506**
MSDNN4032R15		○	40	32	200	40	16	42	SN**1506**

● Ex stock ○ On demand

✲ With internal cooling

Spare parts

	Insert	SN**1204**	SN**1204**	SN**1506**
	h	20	25-32	25-40
	Clamp	C1RD	C1RD	C2RD
	Dowel pin	TM6×17	TM6×17	TM8×21
	Screw (clamp)	DM6×25 (7.0 Nm)	DM6×30 (7.0 Nm)	DM6×30 (7.0 Nm)
	Shim	S12BM	S12BM	S15BM
	Wrench (clamp)	WH30L	WH30L	WH30L
	Wrench (dowel pin)	WH30L	WH30L	WH30L

Insert

				
Finishing	**Medium Cut**	**Roughing**	**Cast Iron**	**PCBN/PCD**
A73	A73	A78	A84	A162

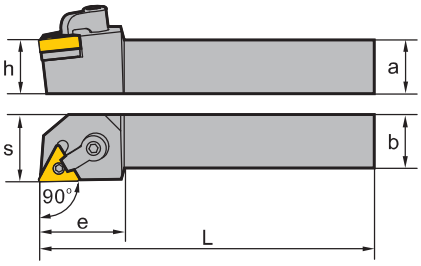
System code A228 Grade selection A42 Technical info A501 Cutting data A366

TN** holder (external) M-Clamping

MTGNR/L Kr: 90°



Right hand style





Article	*	Stock R	Stock L	Dimensions [mm] a	b	L	h	s	e	Inserts
MTGNR/L2020K16		●	○	20	20	125	20	25	33	TN**1604**
MTGNR/L2525M16		●	●	25	25	150	25	32	33	TN**1604**
MTGNR/L3225P16		●	○	32	25	170	32	32	33	TN**1604**
MTGNR/L2525M22		●	○	25	25	150	25	32	35	TN**2204**
MTGNR/L3225P22		○	○	32	25	170	32	32	35	TN**2204**

● Ex stock ○ On demand

* With internal cooling

Spare parts

	Insert	TN**1604**	TN**1604**	TN**2204**
	h	20	25-32	25-32
	Clamp	C1RD	C1RD	C2RD
	Dowel pin	TM5×13	TM5×13	TM6×17
	Screw (clamp)	DM6×25 (7.0 Nm)	DM6×30 (7.0 Nm)	DM6×30 (7.0 Nm)
	Shim	T16BM	T16BM	T22BM
	Wrench (clamp)	WH30L	WH30L	WH30L
	Wrench (dowel pin)	WH20L	WH20L	WH30L

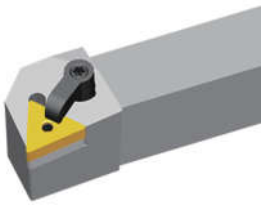
Insert

Wiper	Finishing	Medium Cut	Roughing	Heavy Turning	Cast Iron	PCBN/PCD
A87	A88	A90	A92	A97	A99	A163

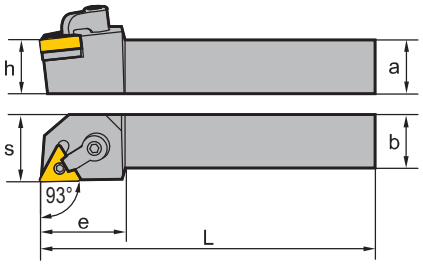
System code > A228 Grade selection > A42 Technical info > A501 Cutting data > A366

TN** holder (external) M-Clamping

MTJNR/L Kr: 93°



Right hand style





Article	✲	Stock		Dimensions [mm]						Inserts
		R	L	a	b	L	h	s	e	
MTJNR/L2020K16		●		20	20	125	20	25	32	TN**1604**
MTJNR/L2525M16		○	○	25	25	150	25	32	32	TN**1604**
MTJNR/L3225P16		○		32	25	170	32	32	32	TN**1604**
MTJNR/L2525M22		○		25	25	150	25	32	36	TN**2204**
MTJNR/L3225P22		○	●	32	25	170	32	32	36	TN**2204**

● Ex stock ○ On demand

✲ With internal cooling

Spare parts

	Insert	TN**1604**	TN**1604**	TN**2204**
	h	20	25-32	25-32
	Clamp	C1RD	C1RD	C2RD
	Dowel pin	TM5×13	TM5×13	TM6×17
	Screw (clamp)	DM6×25 (7.0 Nm)	DM6×30 (7.0 Nm)	DM6×30 (7.0 Nm)
	Shim	T16BM	T16BM	T22BM
	Wrench (clamp)	WH30L	WH30L	WH30L
	Wrench (dowel pin)	WH20L	WH20L	WH30L

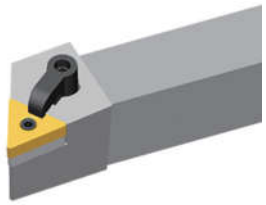
Insert

Wiper	Finishing	Medium Cut	Roughing	Heavy Turning	Cast Iron	PCBN/PCD
A87	A88	A90	A92	A97	A99	A163

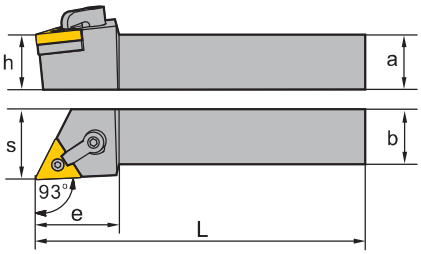
System code A228 Grade selection A42 Technical info A501 Cutting data A366

TN** holder (external) M-Clamping

MTJNR/L-Z Kr: 93°



Right hand style





Article	✻	Stock		Dimensions [mm]						Inserts
		R	L	a	b	L	h	s	e	
MTJNR/L2020K16-Z		●	●	20	20	125	20	25	32	TN**1604**
MTJNR/L2525M16-Z		●	●	25	25	150	25	32	32	TN**1604**
MTJNR/L3225P16-Z		●	○	32	25	170	32	32	32	TN**1604**
MTJNR/L2525M22-Z		●	●	25	25	150	25	32	36	TN**2204**
MTJNR/L3225P22-Z		●	○	32	25	170	32	32	36	TN**2204**

● Ex stock ○ On demand

✻ With internal cooling

Spare parts

	Insert	TN**1604**	TN**1604**	TN**2204**
	h	20	25-32	25-32
	Clamp	C1RD	C1RD	C2RD
	Dowel pin	TM5×13	TM5×13	TM6×17
	Screw (clamp)	DM6×25 (7.0 Nm)	DM6×30 (7.0 Nm)	DM6×30 (7.0 Nm)
	Shim	T16BM	T16BM	T22BM
	Wrench (clamp)	WH30L	WH30L	WH30L
	Wrench (dowel pin)	WH20L	WH20L	WH30L

Insert

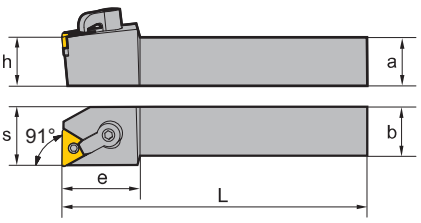
Wiper	Finishing	Medium Cut	Roughing	Heavy Turning	Cast Iron	PCBN/PCD
A87	A88	A90	A92	A97	A99	A163

System code A228 Grade selection A42 Technical info A501 Cutting data A366

TN** holder (external) M-Clamping

MTFNR/L Kr: 91°







Right hand style

Article	✲	Stock		Dimensions [mm]						Inserts
		R	L	a	b	L	h	s	e	
MTFNR/L2020K16		●	○	20	20	125	20	25	32	TN**1604**
MTFNR/L2525M16		●	●	25	25	150	25	32	32	TN**1604**
MTFNR/L3225P16		●		32	25	170	32	32	32	TN**1604**
MTFNR/L2525M22		●	○	25	25	150	25	32	36	TN**2204**
MTFNR/L3225P22		●	○	32	25	170	32	32	36	TN**2204**

● Ex stock ○ On demand

✲ With internal cooling

Spare parts

	Insert	TN**1604**	TN**1604**	TN**2204**
	h	20	25-32	25-32
	Clamp	C1RD	C1RD	C2RD
	Dowel pin	TM5×13	TM5×13	TM6×17
	Screw (clamp)	DM6×25 (7.0 Nm)	DM6×30 (7.0 Nm)	DM6×30 (7.0 Nm)
	Shim	T16BM	T16BM	T22BM
	Wrench (clamp)	WH30L	WH30L	WH30L
	Wrench (dowel pin)	WH20L	WH20L	WH30L

Insert

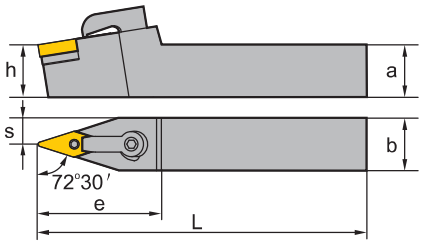
Wiper	Finishing	Medium Cut	Roughing	Heavy Turning	Cast Iron	PCBN/PCD
A87	A88	A90	A92	A97	A99	A163

System code A228 Grade selection A42 Technical info A501 Cutting data A366

VN** holder (external) M-Clamping

MVVNN Kr: 72°30'







Article	✻	Stock	Dimensions [mm]						Inserts
			a	b	L	h	s	e	
MVVNN2020K16		●	20	20	125	20	10	45	VN**1604**
MVVNN2525M16		●	25	25	150	25	12.5	45	VN**1604**
MVVNN3225P16		○	32	25	170	32	12.5	45	VN**1604**
MVVNN3232P16		●	32	32	170	32	16	45	VN**1604**

● Ex stock ○ On demand

✻ With internal cooling

Spare parts

	Insert	VN**1604**	VN**1604**
	h	**20**	**25-32**
	Clamp	C3RD	C3RD
	Dowel pin	TM5×13	TM5×13
	Screw (clamp)	DM6×25 (7.0 Nm)	DM6×30 (7.0 Nm)
	Shim	V16BM	V16BM
	Wrench (clamp)	WH30L	WH30L
	Wrench (dowel pin)	WH20L	WH20L

Insert

Finishing	Medium Cut	Roughing	Cast Iron	PCBN/PCD
A102	A102	A104	A103	A179

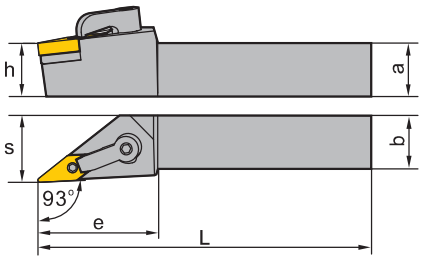
System code A228 Grade selection A42 Technical info A501 Cutting data A366

VN** holder (external) M-Clamping

MVJNR/L Kr: 93°



Right hand style





Article	✻	Stock		Dimensions [mm]						Inserts
		R	L	a	b	L	h	s	e	
MVJNR/L2020K16		●	●	20	20	125	20	25	45	VN**1604**
MVJNR/L2525M16		●	●	25	25	150	25	32	45	VN**1604**
MVJNR/L3225P16		●	●	32	25	170	32	32	45	VN**1604**
MVJNR/L3232P16		●	●	32	32	170	32	40	45	VN**1604**

● Ex stock ○ On demand

✻ With internal cooling

Spare parts

	Insert	VN**1604**	VN**1604**
	h	20	25-32
	Clamp	C3RD	C3RD
	Dowel pin	TM5×13	TM5×13
	Screw (clamp)	DM6×25 (7.0 Nm)	DM6×30 (7.0 Nm)
	Shim	V16BM	V16BM
	Wrench (clamp)	WH30L	WH30L
	Wrench (dowel pin)	WH20L	WH20L

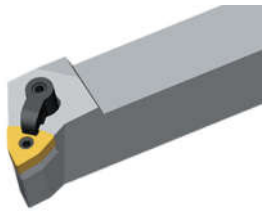
Insert

Finishing	Medium Cut	Roughing	Cast Iron	PCBN/PCD
A102	A102	A104	A103	A179

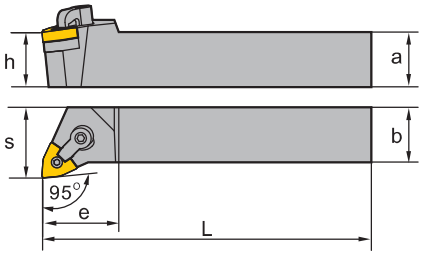
System code A228 Grade selection A42 Technical info A501 Cutting data A366

WN** holder (external) M-Clamping

MWLNR/L Kr: 95°



Right hand style





Article	*	Stock R	Stock L	Dimensions [mm] a	b	L	h	s	e	Inserts
MWLNR/L2020K06		●	●	20	20	125	20	25	30	WN**0604**
MWLNR/L2525M06		●	●	25	25	150	25	32	30	WN**0604**
MWLNR/L2020K08		●	●	20	20	125	20	25	30	WN**0804**
MWLNR/L2525M08		●	●	25	25	150	25	32	35	WN**0804**
		○		25	25	170	25	32	35	WN**0804**
MWLNR/L3232P08		●	●	32	32	170	32	40	35	WN**0804**

● Ex stock ○ On demand

✻ With internal cooling

Spare parts

	Insert	WN**0604**	WN**0604**	WN**0804**	WN**0804**
	h	20	25	20	25-32
	Clamp	C1RD	C1RD	C1RD	C1RD
	Dowel pin	TM5×13	TM5×13	TM6×17	TM6×17
	Screw (clamp)	DM6×25 (7.0 Nm)	DM6×30 (7.0 Nm)	DM6×25 (7.0 Nm)	DM6×30 (7.0 Nm)
	Shim	W06BM	W06BM	W08BM	W08BM
	Wrench (clamp)	WH30L	WH30L	WH30L	WH30L
	Wrench (dowel pin)	WH20L	WH20L	WH30L	WH30L

Insert

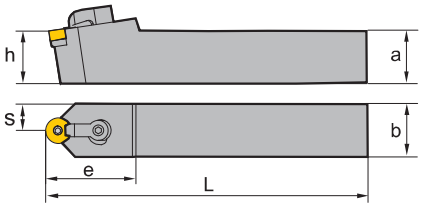
					
Wiper	**Finishing**	**Medium Cut**	**Roughing**	**Cast Iron**	**PCBN/PCD**
A106	A107	A107	A109	A111	A165

System code A228 Grade selection A42 Technical info A501 Cutting data A366

RN** holder (external) M-Clamping

MRDNN







Right hand style

Article	✻	Stock	Dimensions [mm]						Inserts
			a	b	L	h	s	e	
MRDNN2020K12		○	20	20	125	20	10	35	RN**1204**
MRDNN2525M12		○	25	25	150	25	12.5	35	RN**1204**
MRDNN3225P12		○	32	25	170	32	12.5	35	RN**1204**
MRDNN3232P12		○	32	32	170	32	16	35	RN**1204**

● Ex stock ○ On demand

✻ With internal cooling

Spare parts

	Insert	RN**1204**	RN**1204**
	h	**20**	**25-32**
	Clamp	C1RD	C1RD
	Dowel pin	TM6×17	TM6×17
	Screw (clamp)	DM6×25 (7.0 Nm)	DM6×30 (7.0 Nm)
	Shim	R12BM	R12BM
	Wrench (clamp)	WH30L	WH30L
	Wrench (dowel pin)	WH30L	WH30L

Insert



Cast Iron

A112

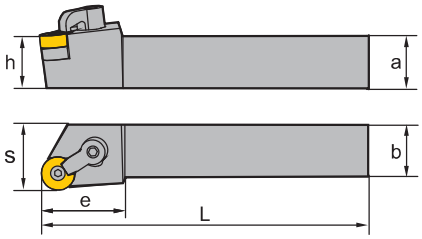
System code A228 Grade selection A42 Technical info A501 Cutting data A366

RN** holder (external) M-Clamping

MRGNR/L



Right hand style





Article	*	Stock		Dimensions [mm]						Inserts
		R	L	a	b	L	h	s	e	
MRGNR/L2020K12		○	○	20	20	125	20	25	32	RN**1204**
MRGNR/L2525M12		○	●	25	25	150	25	32	32	RN**1204**
MRGNR/L3225P12		○	○	32	25	170	32	32	32	RN**1204**
MRGNR/L3232P12		○	○	32	32	170	32	40	32	RN**1204**

● Ex stock ○ On demand

✻ With internal cooling

Spare parts

	Insert	RN**1204**	RN**1204**
	h	**20**	**25-32**
	Clamp	C1RD	C1RD
	Dowel pin	TM6×17	TM6×17
	Screw (clamp)	DM6×25 (7.0 Nm)	DM6×30 (7.0 Nm)
	Shim	R12BM	R12BM
	Wrench (clamp)	WH30L	WH30L
	Wrench (dowel pin)	WH30L	WH30L

Insert



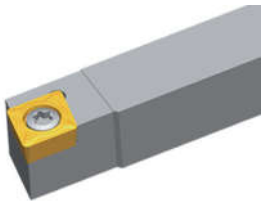
Cast Iron

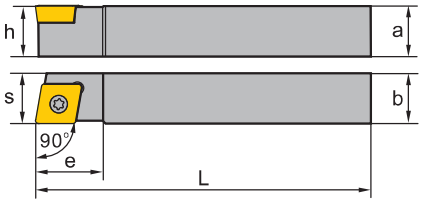
A112

System code A228 Grade selection A42 Technical info A501 Cutting data A366

CC** holder (external) S-Clamping

SCACR/L Kr: 90°







Right hand style

Article	✻	Stock		Dimensions [mm]						Inserts
		R	L	a	b	L	h	s	e	
SCACR/L1010E06		●	●	10	10	70	10	10.5	10	CC**0602**
SCACR/L1212F09		●	●	12	12	80	12	12.7	16	CC**09T3**

● Ex stock ○ On demand

✻ With internal cooling

Spare parts

	Insert	CC**0602**	CC**09T3**
	h	**10**	**12**
	Screw	I60M2.5×6.5 (1.0 Nm)	I60M3.5×8 (2.7 Nm)
	Wrench (screw)	WT07IP	WT15IP

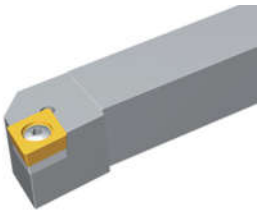
Insert

Finishing	Medium Cut	Roughing	Alum Machining	Cast Iron	PCBN/PCD
A116	A119	A121	A122	A121	A180

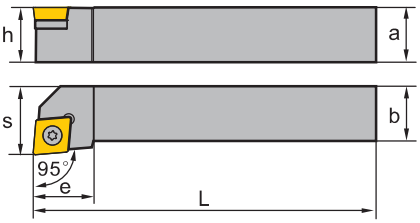
System code A228 Grade selection A42 Technical info A501 Cutting data A366

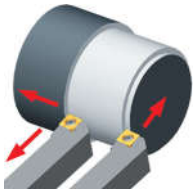
CC** holder (external) S-Clamping

SCLCR/L Kr: 95°



Right hand style





Article	✻	Stock		Dimensions [mm]							Inserts
		R	L	a	b	L	h	s	L_2	e	
SCLCR/L0808D06		●	●	8	8	60	8	10	10	10	CC**0602**
SCLCR/L1010E06		●	●	10	10	70	10	12	10	10	CC**0602**
SCLCR/L1212F09		●	●	12	12	80	12	16	16	16	CC**09T3**
SCLCR/L1616H09		●	●	16	16	100	16	20	16	16	CC**09T3**
SCLCR/L2020K09		●	●	20	20	125	20	25	25	25	CC**09T3**
SCLCR/L1616H12		●	●	16	16	100	16	20	18	18	CC**1204**
SCLCR/L2020K12		●	●	20	20	125	20	25	25	25	CC**1204**
SCLCR/L2525M12		●	●	25	25	150	25	32	26	26	CC**1204**
SCLCR/L3225P12		○	○	32	25	170	32	32	26	26	CC**1204**
SCLCR/L3232P12		●	●	32	32	170	32	40	28	28	CC**1204**

● Ex stock ○ On demand

✻ With internal cooling

Spare parts

	Insert	CC**0602**	CC**09T3**	CC**1204**
	h	8-10	12-20	16-32
	Screw	I60M2.5×6.5 (1.0 Nm)	I60M3.5×8 (2.7 Nm)	
	Screw			I60M4×11X (3.4 Nm)
	Screw (shim)			SM6×10XA
	Shim			C12BS
	Wrench (screw)	WT07IP	WT15IP	WT15IP
	Wrench (shim)			WH40L

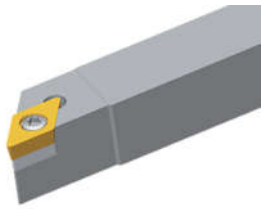
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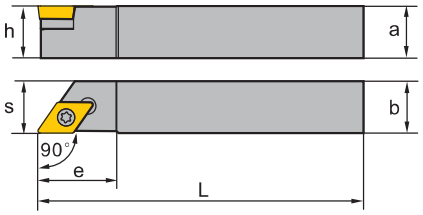
Finishing	Medium Cut	Roughing	Alum Machining	Cast Iron	PCBN/PCD
A116	A119	A121	A122	A121	A180

System code A228 Grade selection A42 Technical info A501 Cutting data A366

DC** holder (external) S-Clamping

SDACR/L Kr: 90°







Right hand style

Article	✲	Stock		Dimensions [mm]						Inserts
		R	L	a	b	L	h	s	e	
SDACR/L1010E07		●	●	10	10	70	10	10.5	15	DC**0702**
SDACR/L1212F11		●	●	12	12	80	12	12.5	15	DC**11T3**
SDACR/L1616H11		●	●	16	16	100	16	16.7	24	DC**11T3**

● Ex stock ○ On demand

✲ With internal cooling

Spare parts

	Insert	DC**0702**	DC**11T3**	DC**11T3**
	h	10	12	16
	Screw	I60M2.5×6.5 (1.0 Nm)	I60M3.5×8 (2.7 Nm)	I60M3.5×12 (2.7 Nm)
	Screw (shim)			SM5×8.65XA
	Shim			D11BS
	Wrench (screw)	WT07IP	WT15IP	WT15IP
	Wrench (shim)			WH35L

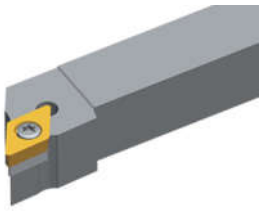
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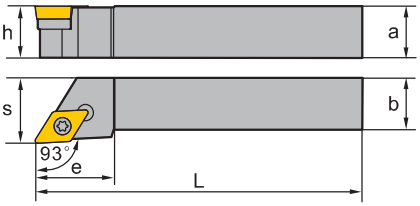
Finishing	Medium Cut	Roughing	Alum Machining	Cast Iron	PCBN/PCD
A126	A127	A129	A129	A129	A184

System code A228 Grade selection A42 Technical info A501 Cutting data A366

DC** holder (external) S-Clamping

SDJCR/L Kr: 93°







Right hand style

Article	✻	Stock R	Stock L	Dimensions [mm] a	b	L	h	s	e	Inserts
SDJCR/L1010E07		●	●	10	10	70	10	12	15	DC**0702**
SDJCR/L1212F07		●	●	12	12	80	12	16	15	DC**0702**
SDJCR/L1616H07		●	●	16	16	100	16	20	18	DC**0702**
SDJCR/L1616H11		●	●	16	16	100	16	20	24	DC**11T3**
SDJCR/L2020K11		●	●	20	20	125	20	25	24	DC**11T3**
SDJCR/L2525M11		●	●	25	25	150	25	32	29	DC**11T3**
SDJCR/L3225P11		●	●	32	25	170	32	32	29	DC**11T3**

● Ex stock ○ On demand

✻ With internal cooling

Spare parts

	Insert	DC**0702**	DC**11T3**
	h	**10-16**	**16-32**
	Screw	I60M2.5×6.5 (1.0 Nm)	I60M3.5×12 (2.7 Nm)
	Screw (shim)		SM5×8.65XA
	Shim		D11BS
	Wrench (screw)	WT07IP	WT15IP
	Wrench (shim)		WH35L

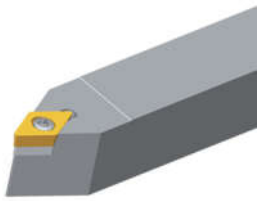
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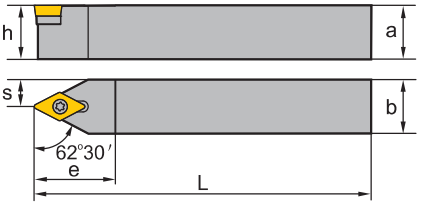
Finishing	Medium Cut	Roughing	Alum Machining	Cast Iron	PCBN/PCD
A126	A127	A129	A129	A129	A184

System code A228 Grade selection A42 Technical info A501 Cutting data A366

DC** holder (external) S-Clamping

SDNCN Kr: 62°30'







Article	✲	Stock	Dimensions [mm]						Inserts
			a	b	L	h	s	e	
SDNCN1010E07		●	10	10	70	10	5	20	DC**0702**
SDNCN1212F07		●	12	12	80	12	6	20	DC**0702**
SDNCN1212H11		●	12	12	100	12	6	30	DC**11T3**
SDNCN1616H11		●	16	16	100	16	8	30	DC**11T3**
SDNCN2020K11		●	20	20	125	20	10	30	DC**11T3**
SDNCN2525M11		●	25	25	150	25	12.5	30	DC**11T3**

● Ex stock ○ On demand

✲ With internal cooling

Spare parts

	Insert	DC**0702**	DC**11T3**	DC**11T3**
	h	10-12	12	16-25
	Screw	I60M2.5×6.5 (1.0 Nm)	I60M3.5×8 (2.7 Nm)	I60M3.5×12 (2.7 Nm)
	Screw (shim)			SM5×8.65XA
	Shim			D11BS
	Wrench (screw)	WT07IP	WT15IP	WT15IP
	Wrench (shim)			WH35L

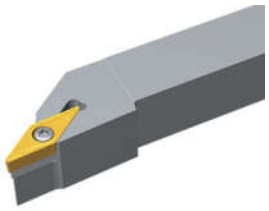
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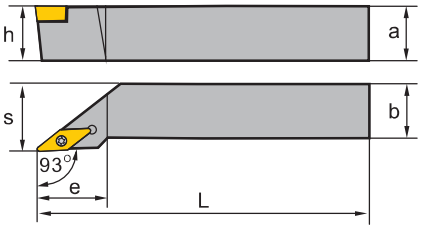
Finishing	Medium Cut	Roughing	Alum Machining	Cast Iron	PCBN/PCD
A126	A127	A129	A129	A129	A184

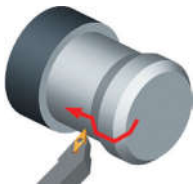
System code A228 Grade selection A42 Technical info A501 Cutting data A366

VB** holder (external) S-Clamping

SVJBR/L Kr: 93°







Right hand style

Article	*	Stock R	Stock L	Dimensions [mm] a	b	L	h	s	e	Inserts
SVJBR/L1212F11			●	12	12	80	12	16	27	VB**1103**
SVJBR/L1616H11		●	●	16	16	100	16	20	27	VB**1103**
SVJBR/L2525M11		●	●	25	25	150	25	32	27	VB**1103**
SVJBR/L1616H16		●	●	16	16	100	16	20	36	VB**1604**
SVJBR/L2020K16		●	●	20	20	125	20	25	41	VB**1604**
SVJBR/L2525M16		●	●	25	25	150	25	32	41	VB**1604**
SVJBR/L3225P16		●	●	32	25	170	32	32	41	VB**1604**

● Ex stock ○ On demand

* With internal cooling

Spare parts

	Insert	VB**1103**	VB**1604**
	h	12-25	16-32
	Screw	I60M2.5×6.5 (1.0 Nm)	I60M3.5×12 (2.7 Nm)
	Screw (shim)		SM5×8.65XA
	Shim		V16BS
	Wrench (screw)	WT07IP	WT15IP
	Wrench (shim)		WH35L

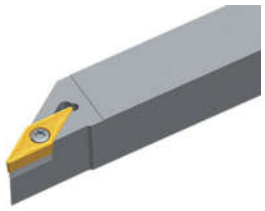
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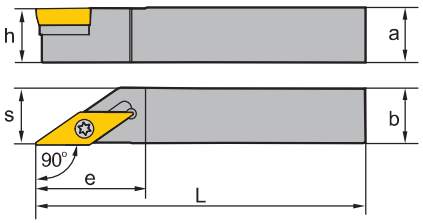
Finishing	Medium Cut	Roughing	PCBN/PCD
A148	A151	A152	A191

System code A228 Grade selection A42 Technical info A501 Cutting data A366

VB** holder (external) S-Clamping

SVABR/L Kr: 90°







Right hand style

Article	✻	Stock		Dimensions [mm]						Inserts
		R	L	a	b	L	h	s	e	
SVABR/L1010F11		●	●	10	10	80	10	10.5	28	VB**1103**
SVABR/L1616H16		●	○	16	16	100	16	16.5	28	VB**1604**
SVABR/L2020K16		●	○	20	20	125	20	20.5	28	VB**1604**
SVABR/L2525M16		●	●	25	25	150	25	25.5	28	VB**1604**

● Ex stock ○ On demand

✻ With internal cooling

Spare parts

	Insert	VB**1103**	VB**1604**
	h	10	16-32
	Screw	I60M2.5×6.5 (1.0 Nm)	I60M3.5×12 (2.7 Nm)
	Screw (shim)		SM5×8.65XA
	Shim		V16BS
	Wrench (screw)	WT07IP	WT15IP
	Wrench (shim)		WH35L

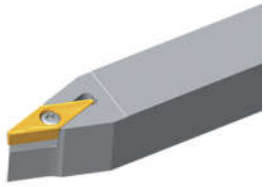
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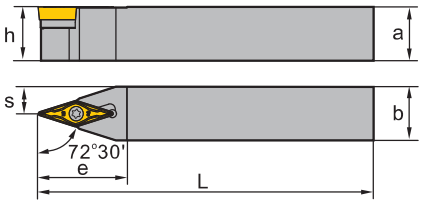
Finishing	Medium Cut	Roughing	PCBN/PCD
A148	A151	A152	A191

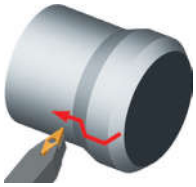
System code A228 | Grade selection A42 | Technical info A501 | Cutting data A366

VB** holder (external) S-Clamping

SVVBN Kr: 72°30'







Article	✻	Stock	Dimensions [mm]						Inserts
			a	b	L	h	s	e	
SVVBN1616H11		●	16	16	100	16	8	27	VB**1103**
SVVBN2020K11		●	20	20	125	20	10	30	VB**1103**
SVVBN1616H16		●	16	16	100	16	8	33	VB**1604**
SVVBN2020K16		●	20	20	125	20	10	33	VB**1604**
SVVBN2525M16		●	25	25	150	25	12.5	38	VB**1604**

● Ex stock ○ On demand

✻ With internal cooling

Spare parts

	Insert	VB**1103**	VB**1604**
	h	12-25	16-32
	Screw	I60M2.5×6.5 (1.0 Nm)	I60M3.5×12 (2.7 Nm)
	Screw (shim)		SM5×8.65XA
	Shim		V16BS
	Wrench (screw)	WT07IP	WT15IP
	Wrench (shim)		WH35L

Insert

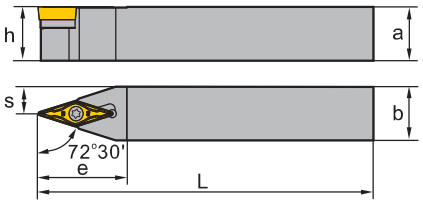
Finishing	Medium Cut	Roughing	PCBN/PCD
A148	A151	A152	A191

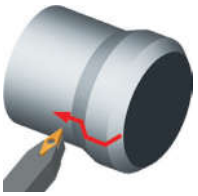
System code A228 Grade selection A42 Technical info A501 Cutting data A366

VC** holder (external) S-Clamping

SVVCN Kr: 72°30'







Article	✲	Stock	Dimensions [mm]						Inserts
			a	b	L	h	s	e	
SVVCN1212F11		●	12	12	80	12	6	27	VC**1103**
SVVCN1616H11		●	16	16	100	16	8	27	VC**1103**
SVVCN2020K11		●	20	20	125	20	10	30	VC**1103**
SVVCN1212M11		●	12	12	150	12	6	27	VC**1103**
SVVCN2525M11		●	25	25	150	25	12.5	38	VC**1103**
SVVCN1616H16		●	16	16	100	16	8	33	VC**1604**
SVVCN2020K16		●	20	20	125	20	10	33	VC**1604**
SVVCN2525M16		●	25	25	150	25	12.5	38	VC**1604**

● Ex stock ○ On demand

✲ With internal cooling

Spare parts

	Insert	VC**1103**	VC**1604**
	h	12-25	16-32
	Screw	I60M2.5×6.5 (1.0 Nm)	I60M3.5×12 (2.7 Nm)
	Screw (shim)		SM5×8.65XA
	Shim		V16BSC
	Wrench (screw)	WT07IP	WT15IP
	Wrench (shim)		WH35L

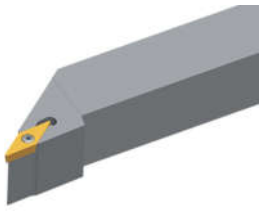
Insert

Finishing	Medium Cut	Alum Machining	PCBN/PCD
A156	A156	A154	A193

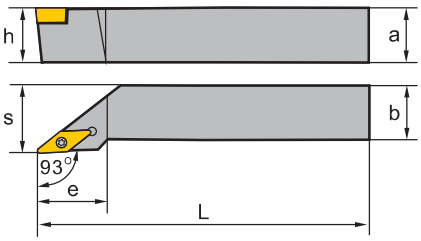
System code A228 Grade selection A42 Technical info A501 Cutting data A366

VC** holder (external) S-Clamping

SVJCR/L Kr: 93°



Right hand style





Article	*	Stock R	Stock L	Dimensions [mm] a	b	L	h	s	e	Inserts
SVJCR/L1010E11		●		10	10	70	10	12	22	VC**1103**
SVJCR/L1212F11		●	●	12	12	80	12	16	27	VC**1103**
SVJCR/L1616H11		●	●	16	16	100	16	20	27	VC**1103**
SVJCR/L2020K11		●	●	20	20	125	20	25	27	VC**1103**
SVJCR/L2525M11		●	●	25	25	150	25	32	27	VC**1103**
SVJCR/L1616H16		●	●	16	16	100	16	20	36	VC**1604**
SVJCR/L2020K16		●	●	20	20	125	20	25	41	VC**1604**
SVJCR/L2020M16		●	●	20	20	150	20	25	41	VC**1604**
SVJCR/L2525M16		●	●	25	25	150	20	32	41	VC**1604**
SVJCR/L3225P16		○	○	32	25	170	32	32	41	VC**1604**

● Ex stock ○ On demand

* With internal cooling

Spare parts

	Insert	VC**1103**	VC**1604**
	h	10-25	16-32
	Screw	I60M2.5×6.5 (1.0 Nm)	I60M3.5×12 (2.7 Nm)
	Screw (shim)		SM5×8.65XA
	Shim		V16BSC
	Wrench (screw)	WT07IP	WT15IP
	Wrench (shim)		WH35L

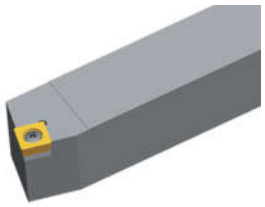
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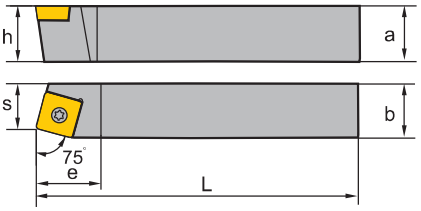
Finishing	Medium Cut	Alum Machining	PCBN/PCD
A156	A156	A154	A193

System code A228 Grade selection A42 Technical info A501 Cutting data A366

SC** steel boring bar S-Clamping

SSBCR/L Kr: 75°







Right hand style

Article	✻	Stock		Dimensions [mm]						Inserts
		R	L	a	b	L	h	s	e	
SSBCR/L1212F09		●	●	12	12	80	12	11	16	SC**09T3**
SSBCR/L1616H09		●	●	16	16	100	16	13	16	SC**09T3**
SSBCR/L2020K12		●	●	20	20	125	20	17	25	SC**1204**

● Ex stock ○ On demand

✻ With internal cooling

Spare parts

	Insert	SC**09T3**	SC**09T3**	SC**1204**
	h	12	16	20
	Screw	I60M3.5×8 (2.7 Nm)	I60M3.5×8 (2.7 Nm)	
	Screw			I60M4×11X (3.4 Nm)
	Screw (shim)		SM5×8.65XA	SM6×10XA
	Shim		S09BS	S12BS
	Wrench (screw)	WT15IP	WT15IP	WT15IP
	Wrench (shim)		WH35L	WH40L

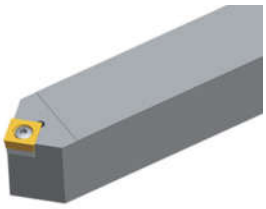
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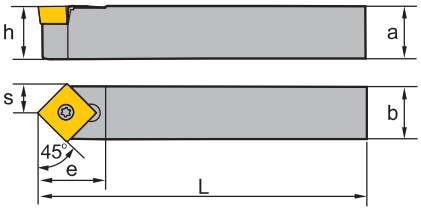
			
Finishing	**Medium Cut**	**Roughing**	**Alum Machining**
A134	A135	A136	A136

System code A228 Grade selection A42 Technical info A501 Cutting data A366

SC** steel boring bar S-Clamping

SSDCN Kr: 45°







Right hand style

Article	✻	Stock	Dimensions [mm]						Inserts
			a	b	L	h	s	e	
SSDCN1212F09		●	12	12	80	12	6	15.5	SC**09T3**
SSDCN1616H09		●	16	16	100	16	8	15.5	SC**09T3**

● Ex stock ○ On demand

✻ With internal cooling

Spare parts

	Insert	SC**09T3**	SC**09T3**
	h	12	16
	Screw	I60M3.5×8 (2.7 Nm)	I60M3.5×8 (2.7 Nm)
	Screw (shim)		SM5×8.65XA
	Shim		S09BS
	Wrench (screw)	WT15IP	WT15IP
	Wrench (shim)		WH35L

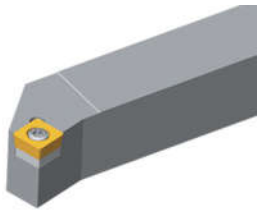
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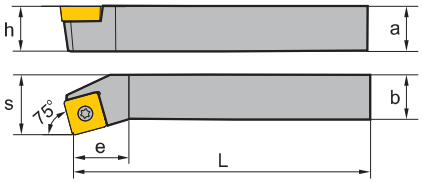
Finishing	Medium Cut	Roughing	Alum Machining
A134	A135	A136	A136

System code A228 Grade selection A42 Technical info A501 Cutting data A366

SC** steel boring bar S-Clamping

SSKCR/L Kr: 75°







Right hand style

Article	✲	Stock		Dimensions [mm]						Inserts
		R	L	a	b	L	h	s	e	
SSKCR/L1616H09		●	●	16	16	100	16	20	13	SC**09T3**

● Ex stock ○ On demand

✲ With internal cooling

Spare parts

	Insert	SC**09T3**
	h	16
	Screw	I60M3.5×8 (2.7 Nm)
	Screw (shim)	SM5×8.65XA
	Shim	S09BS
	Wrench (screw)	WT15IP
	Wrench (shim)	WH35L

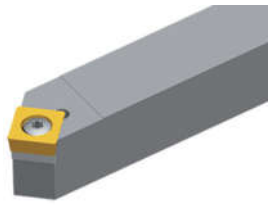
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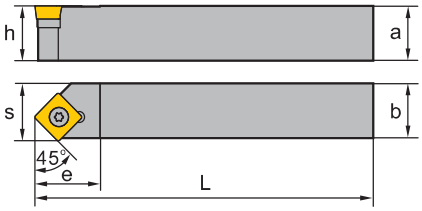
Finishing	Medium Cut	Roughing	Alum Machining
A134	A135	A136	A136

System code A228 Grade selection A42 Technical info A501 Cutting data A366

SC** steel boring bar S-Clamping

SSSCR/L Kr: 45°







Right hand style

Article	✻	Stock R	Stock L	Dimensions [mm] a	b	L	h	s	e	Inserts
SSSCR/L1616H09		●	●	16	16	100	16	17	17	SC**09T3**
SSSCR/L2020K12		●	●	20	20	125	20	21	21	SC**1204**

● Ex stock ○ On demand

✻ With internal cooling

Spare parts

	Insert	SC**09T3**	SC**1204**
	h	16	20
	Screw	I60M3.5×12 (2.7 Nm)	
	Screw		I60M4×11X (3.4 Nm)
	Screw (shim)		SM6×10XA
	Shim		S12BS
	Wrench (screw)	WT15IP	WT15IP
	Wrench (shim)		WH40L

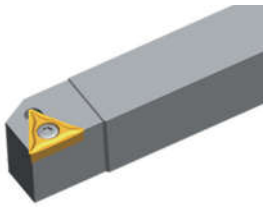
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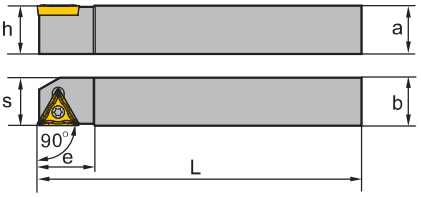
			
Finishing	**Medium Cut**	**Roughing**	**Alum Machining**
A134	A135	A136	A136

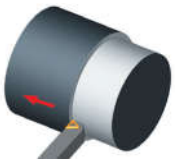
System code A228 Grade selection A42 Technical info A501 Cutting data A366

TC** holder (external) S-Clamping

STACR/L Kr: 90°







Right hand style

Article	✲	Stock		Dimensions [mm]						Inserts
		R	L	a	b	L	h	s	e	
STACR/L1212F11		●	●	12	12	80	12	12.5	14	TC**1102**

● Ex stock ○ On demand

✲ With internal cooling

Spare parts

	Insert	TC**1102**
	h	**12**
	Screw	I60M2.5×6.5 (1.0 Nm)
	Wrench (screw)	WT07IP

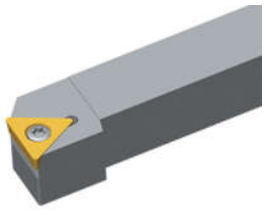
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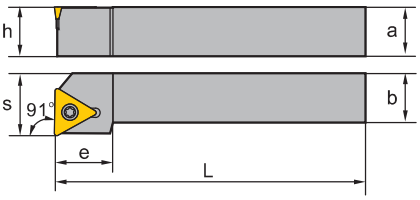
Finishing	Medium Cut	Roughing	Alum Machining	PCBN/PCD
A141	A142	A143	A145	A187

System code A228 Grade selection A42 Technical info A501 Cutting data A366

TC** holder (external) S-Clamping

STFCR/L Kr: 91°







Right hand style

Article	✻	Stock R	Stock L	Dimensions [mm] a	b	L	h	s	e	Inserts
STFCR/L1212F11		●	○	12	12	80	12	16	14	TC**1102**
STFCR/L1616H11		●	○	16	16	100	16	20	14	TC**1102**
STFCR/L1616H16		●	○	16	16	100	16	20	19	TC**16T3**
STFCR/L2020K16		●	●	20	20	125	20	25	19	TC**16T3**

● Ex stock ○ On demand

✻ With internal cooling

Spare parts

	Insert h	TC**1102** 12-16	TC**16T3** 16-20
	Screw	I60M2.5×6.5 (1.0 Nm)	I60M3.5×12 (2.7 Nm)
	Screw (shim)		SM5×8.65XA
	Shim		T16BS
	Wrench (screw)	WT07IP	WT15IP
	Wrench (shim)		WH35L

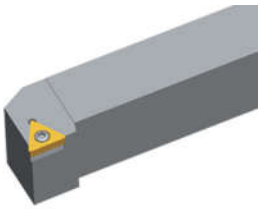
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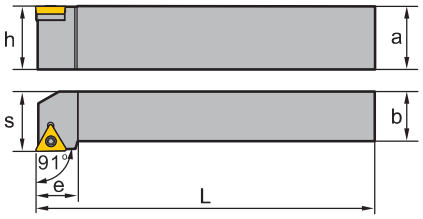
Finishing	Medium Cut	Roughing	Alum Machining	Cast Iron	PCBN/PCD
A141	A142	A143	A145	A143	A187

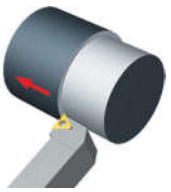
System code A228 Grade selection A42 Technical info A501 Cutting data A366

TC** holder (external) S-Clamping

STGCR/L Kr: 91°







Right hand style

Article	✻	Stock		Dimensions [mm]						Inserts
		R	L	a	b	L	h	s	e	
STGCR/L0808D09		○		8	8	60	8	10	11	TC**0902**
STGCR/L1010E09		●	○	10	10	70	10	12	11	TC**0902**
STGCR/L1212F11		●	●	12	12	80	12	16	14	TC**1102**
STGCR/L1616H11		●	●	16	16	100	16	20	16	TC**1102**
STGCR/L2020K16		●	●	20	20	125	20	25	21	TC**16T3**
STGCR/L2525M16		●	●	25	25	150	25	25	21	TC**16T3**

● Ex stock ○ On demand

✻ With internal cooling

Spare parts

	Insert	TC**0902**	TC**1102**	TC**16T3**
	h	8-10	12-16	20-25
	Screw	I60M2.2×5.5 (0.8 Nm)	I60M2.5×6.5 (1.0 Nm)	I60M3.5×12 (2.7 Nm)
	Screw (shim)			SM5×8.65XA
	Shim			T16BS
	Wrench (screw)	WT06IP	WT07IP	WT15IP
	Wrench (shim)			WH35L

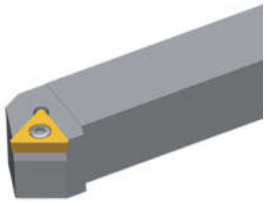
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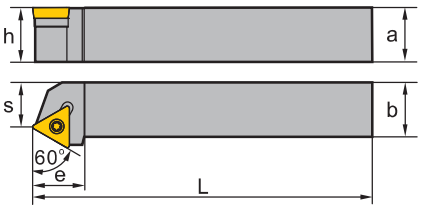
Finishing	Medium Cut	Roughing	Alum Machining	Cast Iron	PCBN/PCD
A141	A142	A143	A145	A143	A187

System code A228 Grade selection A42 Technical info A501 Cutting data A366

TC** holder (external) S-Clamping

STTCR/L Kr: 60°







Right hand style

Article	✻	Stock R	Stock L	Dimensions [mm] a	b	L	h	s	e	Inserts
STTCR/L1616H11		●	○	16	16	100	16	13	14	TC**1102**
STTCR/L1616H16		●	●	16	16	100	16	13	19	TC**16T3**
STTCR/L2020K16		●	●	20	20	125	20	17	19	TC**16T3**

● Ex stock ○ On demand

✻ With internal cooling

Spare parts

	Insert	TC**1102**	TC**16T3**
	h	16	16-20
	Screw	I60M2.5×6.5 (1.0 Nm)	I60M3.5×12 (2.7 Nm)
	Screw (shim)		SM5×8.65XA
	Shim		T16BS
	Wrench (screw)	WT07IP	WT15IP
	Wrench (shim)		WH35L

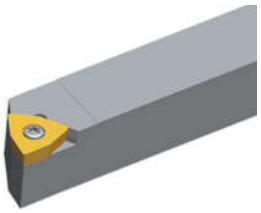
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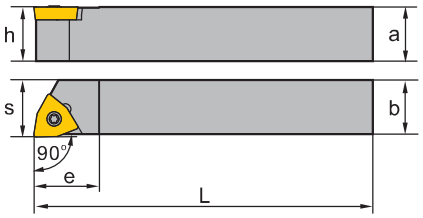
Finishing	Medium Cut	Roughing	Alum Machining	Cast Iron	PCBN/PCD
A141	A142	A143	A145	A143	A187

System code A228 Grade selection A42 Technical info A501 Cutting data A366

WC** holder (external) S-Clamping

SWACR/L Kr: 90°







Right hand style

Article	✻	Stock		Dimensions [mm]						Inserts
		R	L	a	b	L	h	s	e	
SWACR/L1010E04		●	○	10	10	70	10	10.5	10	WC**0402**
SWACR/L1212F04		●	○	12	12	80	12	12	14	WC**0402**
SWACR/L1616H06		●	●	16	16	100	16	16.5	20	WC**06T3**
SWACR/L2020K08		●	●	20	20	125	20	20.5	24	WC**0804**

● Ex stock ○ On demand

✻ With internal cooling

Spare parts

	Insert	WC**0402**	WC**06T3**	WC**0804**
	h	**10-12**	**16**	**20**
	Screw	I60M2.5×6.5 (1.0 Nm)	I60M3×7 (1.8 Nm)	I60M3.5×12 (2.7 Nm)
	Wrench (screw)	WT07IP	WT10IP	WT15IP

Insert



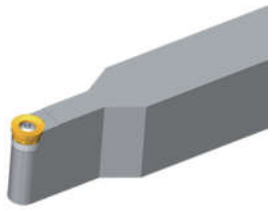
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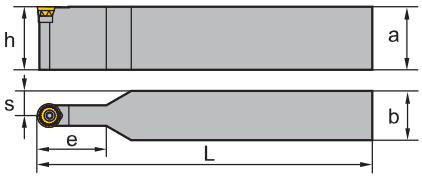
C35

System code A228 Grade selection A42 Technical info A501 Cutting data A366

RC** holder (external) S-Clamping

SRDCN







Article	✻	Stock	Dimensions [mm]						Inserts	
			a	b	L	h	s	e		
SRDCN1616H08		○	16	16	100	16	8	16	RCGX0803MO	RCMT0803MO
SRDCN2020K08		●	20	20	125	20	10	16	RCGX0803MO	RCMT0803MO
SRDCN2020K12		●	20	20	125	20	10	35	RCGX1204MO	RCMT1204MO
SRDCN2525M12		●	25	25	150	25	12.5	35	RCGX1204MO	RCMT1204MO
SRDCN3225P12		●	32	25	170	32	12.5	35	RCGX1204MO	RCMT1204MO
SRDCN2020K10		●	20	20	125	20	10	25	RCMT10T3MO	
SRDCN2525M10		●	25	25	150	25	12.5	25	RCMT10T3MO	
SRDCN3225P16		●	32	25	170	32	12.5	35	RCMT1606MO	
SRDCN3232P16		●	32	32	170	32	16	40	RCMT1606MO	
SRDCN4040S16		●	40	40	250	40	20	50	RCMT1606MO	
SRDCN4040S20		●	40	40	250	40	20	50	RCMT2006MO	

● Ex stock ○ On demand

✻ With internal cooling

Spare parts

	Insert	RCGX0803MO	RCGX1204MO	RCMT10T3MO	RCMT1606MO	RCMT2006MO
	h	16-20	20-32	20-25	32-40	40
	Screw	I60M3×7 (1.8 Nm)	I60M3.5×12 (2.7 Nm)	I60M3.5×10 (2.7 Nm)		I43M6×16 (9.1 Nm)
	Screw				I60M4×15X (3.4 Nm)	
	Screw (shim)		SM5×8.65XA		SM6×10XA	
	Shim		R12BS		R16BS	
	Wrench (screw)	WT10IP	WT15IP	WT15IP	WT15IP	
	Wrench (screw)					WT25IT
	Wrench (shim)		WH35L		WH40L	

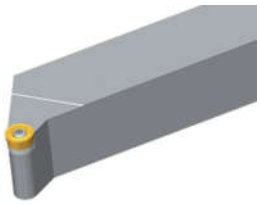
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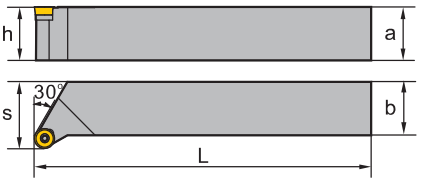
	
Alum Machining	**Cast Iron**
A132	A132

System code A228 Grade selection A42 Technical info A501 Cutting data A366

RC** holder (external) S-Clamping

SRGCR/L







Right hand style

Article	✲	Stock		Dimensions [mm]					Inserts	
		R	L	a	b	L	h	s		
SRGCR/L1616H08		●	●	16	16	100	16	20	RCGX0803MO-LH	RCMT0803MO
SRGCR/L2020K12		●	○	20	20	125	20	27	RCGX1204MO	RCMT1204MO
SRGCR/L2525M12		●	○	25	25	150	25	32	RCGX1204MO	RCMT1204MO
SRGCR/L2525M10		●	○	25	25	100	25	32	RCMT10T3MO	
SRGCR/L2020K10		●	○	20	20	125	20	25	RCMT10T3MO	

● Ex stock ○ On demand

✲ With internal cooling

Spare parts

	Insert	RCGX0803MO-LH	RCGX1204MO	RCMT10T3MO
	h	**16**	**20-25**	**16-25**
	Screw	I60M3.5×10 (2.7 Nm)	I60M3.5×12 (2.7 Nm)	I60M3.5×10 (2.7 Nm)
	Screw (shim)		SM5×8.65XA	
	Shim		R12BS	
	Wrench (screw)	WT15IP	WT15IP	WT15IP
	Wrench (shim)		WH35L	

Insert

	
Alum Machining	**Cast Iron**
A132	A132

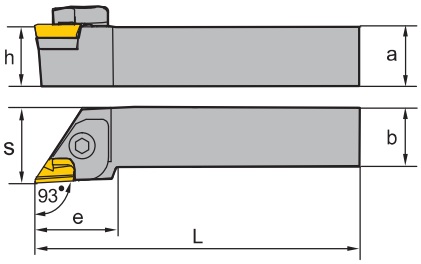
System code A228 Grade selection A42 Technical info A501 Cutting data A366

KNUX** holder C-Clamping

CKJNR/L Kr: 93°



Right hand style





Article	*	Stock R	Stock L	Dimensions [mm] a	b	L	h	s	e	Inserts
CKJNL2525M16			●	25	25	150	25	32	32	KNUX1604**L
CKJNL3232P16			●	32	32	170	32	40	32	KNUX1604**L
CKJNL4040R16			●	40	40	200	40	50	32	KNUX1604**L
CKJNR2525M16		●		25	25	150	25	32	32	KNUX1604**R
CKJNR3232P16		●		32	32	170	32	40	32	KNUX1604**R
CKJNR4040R16		○		40	40	200	40	50	32	KNUX1604**R

● Ex stock ○ On demand

* With internal cooling

Spare parts

	Insert h	KNUX1604**L 25-40	KNUX1604**R 25-40
	Clamp	C6L1T	C6R1T
	Dowel pin	P0515	P0515
	Screw (clamp)	CM6×25A (7.0 Nm)	CM6×25A (7.0 Nm)
	Screw (shim)	SM3×10B	SM3×10B
	Shim		K16CC
	Shim	K16CCL	
	Spring (clamp)	SPR1	SPR1
	Spring (dowel pin)	SPR2	SPR2
	Wrench (clamp)	WH40L	WH40L
	Wrench (shim)	WH20L	WH20L

Insert

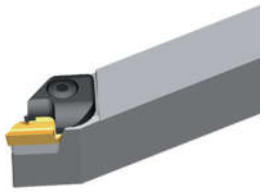


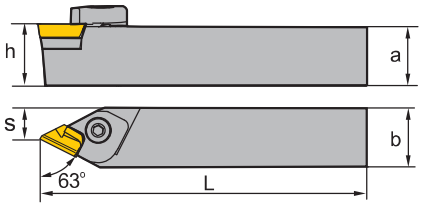
Finishing
A113

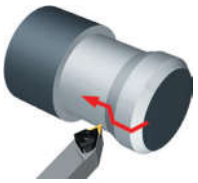
System code A228 Grade selection A42 Technical info A501 Cutting data A366

KNUX** holder C-Clamping

CKNNR/L Kr: 63°







Right hand style

Article	✻	Stock		Dimensions [mm]					Inserts
		R	L	a	b	L	h	s	
CKNNL2525M16			●	25	25	150	25	14.3	KNUX1604**L
CKNNL3232P16			○	32	32	170	32	16.8	KNUX1604**L
CKNNR2525M16		●		25	25	150	25	14.3	KNUX1604**R

● Ex stock ○ On demand

✻ With internal cooling

Spare parts

	Insert	KNUX1604**L	KNUX1604**R
	h	**25-32**	**25-32**
	Clamp	C6L1T	C6R1T
	Dowel pin	P0515	P0515
	Screw (clamp)	CM6×25A (7.0 Nm)	CM6×25A (7.0 Nm)
	Screw (shim)	SM3×10B	SM3×10B
	Shim		K16CC
	Shim	K16CCL	
	Spring (clamp)	SPR1	SPR1
	Spring (dowel pin)	SPR2	SPR2
	Wrench (clamp)	WH40L	WH40L
	Wrench (shim)	WH20L	WH20L

Insert



Finishing
A113

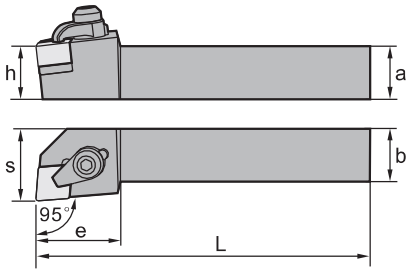
System code A228 Grade selection A42 Technical info A501 Cutting data A366

CN** holder (external) C-Clamping

CCLNR/L Kr: 95°



Right hand style





Article	*	Stock R	Stock L	Dimensions [mm] a	b	L	h	s	e	Inserts	
CCLNR/L2020K12		○	○	20	20	125	20	27	32	CNGN1204**	CNGN1207**
CCLNR/L2525M12		○	●	25	20	100	25	27	36	CNGN1204**	CNGN1207**
CCLNR/L2525M16			○	25	25	150	25	32	36	CNGN1604**	CNGN1606**
CCLNR/L3225P16		○	○	32	25	170	32	32	36	CNGN1604**	CNGN1606**

● Ex stock ○ On demand

* With internal cooling

Spare parts

	Insert	CNGN1204**	CNGN1207**	CNGN1604**	CNGN1606**
	h	20-25	20-25	25-32	25-32
	Clamp	C1RC	C1RC	C2RC	C2RC
	Screw (clamp)	CM6×30B (7.0 Nm)	CM6×30B (7.0 Nm)	CM8×30B (10.2 Nm)	CM8×30B (10.2 Nm)
	Screw (shim)	SM3×10B	SM3×10B	SM4×12B	SM4×12B
	Shim	C12CC-04	C12CC-07	C16CC-04	C16CC-06
	Spring	SPR1	SPR1	SPR3	SPR3
	Wrench (clamp)	WH40L	WH40L	WH50L	WH50L
	Wrench (shim)	WH20L	WH20L	WH30L	WH30L

Insert



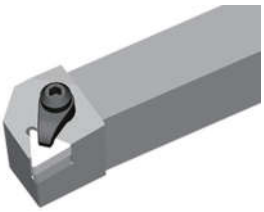
PCBN/PCD

A173

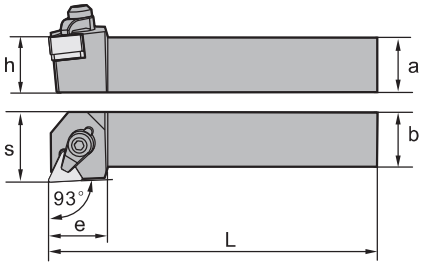
System code A228 Grade selection A42 Technical info A501 Cutting data A366

TN** holder (external) C-Clamping

CTJNR/L Kr: 93°



Right hand style





Article	✻	Stock		Dimensions [mm]						Inserts	
		R	L	a	b	L	h	s	e		
CTJNR/L2020K16		○	○	20	20	125	20	25	30	TNGN1604**	TNGN1607**
CTJNR/L2525M16		○	○	25	25	150	25	32	30	TNGN1604**	TNGN1607**

● Ex stock ○ On demand

✻ With internal cooling

Spare parts

	Insert	TNGN1604**	TNGN1607**
	h	20-25	20-25
	Clamp	C1RC	C1RC
	Screw (clamp)	CM6×30B (7.0 Nm)	CM6×30B (7.0 Nm)
	Screw (shim)	SM3×10B	SM3×10B
	Shim	T16CC-04	T16CC-07
	Spring	SPR1	SPR1
	Wrench (clamp)	WH40L	WH40L
	Wrench (shim)	WH20L	WH20L

Insert



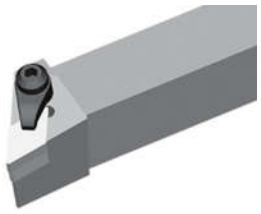
Medium Cut

A218

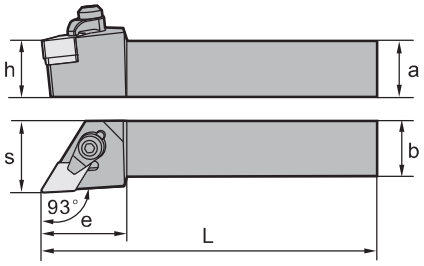
System code A228 Grade selection A42 Technical info A501 Cutting data A366

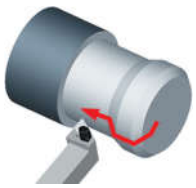
DN** holder (external) C-Clamping

CDJNR/L Kr: 93°



Right hand style





Article	✻	Stock R	Stock L	Dimensions [mm] a	b	L	h	s	e	Inserts	
CDJNR/L2525M15		●	●	25	25	150	25	32	32	DNGN1504**	DNGN1507**
CDJNR/L3225P15		○	○	32	25	170	32	32	32	DNGN1504**	DNGN1507**

● Ex stock ○ On demand

✻ With internal cooling

Spare parts

	Insert	DNGN1504**	DNGN1507**
	h	25-32	25-32
	Clamp	C1RC	C1RC
	Screw (clamp)	CM6×30B (7.0 Nm)	CM6×30B (7.0 Nm)
	Screw (shim)	SM3×10B	SM3×10B
	Shim	D15CC-04	D15CC-07
	Spring	SPR1	SPR1
	Wrench (clamp)	WH40L	WH40L
	Wrench (shim)	WH20L	WH20L

Insert



Medium Cut

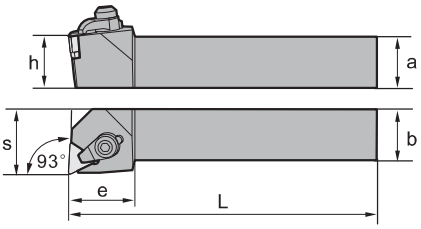
A205

System code A228 Grade selection A42 Technical info A501 Cutting data A366

TN** holder (external) C-Clamping

CTUNR/L Kr: 93°







Right hand style

Article	✲	Stock		Dimensions [mm]						Inserts	
		R	L	a	b	L	h	s	e		
CTUNR/L2525M16		○	○	25	25	150	25	32	27	TNGN1604**	TNGN1607**

● Ex stock ○ On demand

✲ With internal cooling

Spare parts

	Insert	TNGN1604**	TNGN1607**
	h	**20-25**	**20-25**
	Clamp	C1RC	C1RC
	Screw (clamp)	CM6×30B (7.0 Nm)	CM6×30B (7.0 Nm)
	Screw (shim)	SM3×10B	SM3×10B
	Shim	T16CC-04	T16CC-07
	Spring	SPR1	SPR1
	Wrench (clamp)	WH40L	WH40L
	Wrench (shim)	WH20L	WH20L

Insert



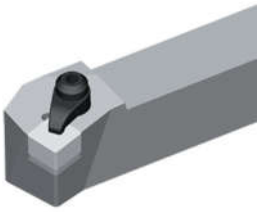
Medium Cut

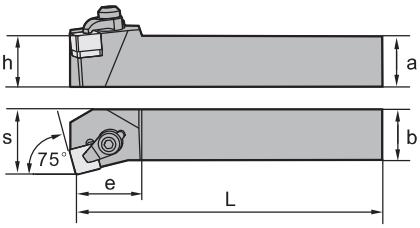
A218

System code A228 Grade selection A42 Technical info A501 Cutting data A366

SN** holder (external) C-Clamping

CSKNR/L Kr: 75°







Right hand style

Article	*	Stock R	Stock L	Dimensions [mm] a	b	L	h	s	e	Inserts	
CSKNR/L2020K12		○	○	20	20	125	20	25	25	SNGN1204**	SNGN1207**
CSKNR/L2525M12		○	○	25	25	170	25	32	25	SNGN1204**	SNGN1207**
CSKNR/L3225P12		○	○	32	25	170	32	32	25	SNGN1204**	SNGN1207**
CSKNR/L3225P15		○	○	32	25	170	32	32	32	SNGN1507**	

● Ex stock ○ On demand

✻ With internal cooling

Spare parts

	Insert	SNGN1204**	SNGN1207**	SNGN1507**
	h	20-32	20-32	32
	Clamp	C1RC	C1RC	C2RC
	Screw (clamp)	CM6×30B (7.0 Nm)	CM6×30B (7.0 Nm)	CM8×30B (10.2 Nm)
	Screw (shim)	SM3×10B	SM3×10B	SM4×12B
	Shim	S12CC-04	S12CC-07	S15CC-07
	Spring	SPR1	SPR1	SPR3
	Wrench (clamp)	WH40L	WH40L	WH50L
	Wrench (shim)	WH20L	WH20L	WH30L

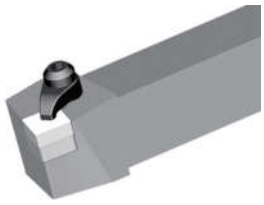
Insert

Cast Iron	PCBN/PCD
A86	A175

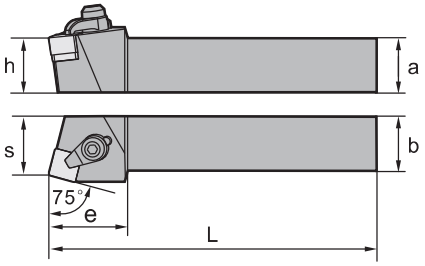
System code A228 Grade selection A42 Technical info A501 Cutting data A366

SN** holder (external) C-Clamping

CSRNR/L Kr: 75°



Right hand style





Article	✲	Stock		Dimensions [mm]						Inserts	
		R	L	a	b	L	h	s	e		
CSRNR/L2020K12		○	○	20	20	125	20	22	32	SNGN1204**	SNGN1207**
CSRNR/L2525M12		○	○	25	20	100	25	27	32	SNGN1204**	SNGN1207**
CSRNR/L3225P12		○	○	32	25	170	32	27	32	SNGN1204**	SNGN1207**
CSRNR/L3225P15		○		32	25	170	32	32	40	SNGN1507**	
CSRNR/L4040R15		○	○	40	40	200	40	43	40	SNGN1507**	

● Ex stock ○ On demand

✲ With internal cooling

Spare parts

	Insert	SNGN1204**	SNGN1207**	SNGN1507**
	h	20-32	20-32	32-40
	Clamp	C1RC	C1RC	C2RC
	Screw (clamp)	CM6×30B (7.0 Nm)	CM6×30B (7.0 Nm)	CM8×30B (10.2 Nm)
	Screw (shim)	SM3×10B	SM3×10B	SM4×12B
	Shim	S12CC-04	S12CC-07	S15CC-07
	Spring	SPR1	SPR1	SPR3
	Wrench (clamp)	WH40L	WH40L	WH50L
	Wrench (shim)	WH20L	WH20L	WH30L

Insert

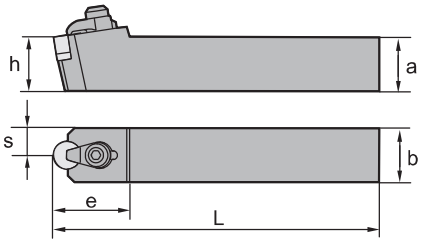
Cast Iron	PCBN/PCD
A86	A175

System code A228 Grade selection A42 Technical info A501 Cutting data A366

RN** holder (external) C-Clamping

CRDNN







Article	✻	Stock	Dimensions [mm]						Inserts	
			a	b	L	h	s	e		
CRDNN2020K12		○	20	20	125	20	10	32	RNGN1204**	RNGN1207**
CRDNN2525M12		○	25	25	150	25	12.5	32	RNGN1204**	RNGN1207**
CRDNN3225P12		○	32	25	170	32	12.5	32	RNGN1204**	RNGN1207**
CRDNN3232P15		○	32	32	170	32	17.5	40	RNGN1507**	
CRDNN4040R15		○	40	40	200	40	20	40	RNGN1507**	

● Ex stock ○ On demand

✻ With internal cooling

Spare parts

	Insert	RNGN1204**	RNGN1207**	RNGN1507**
	h	20-32	20-32	32-40
	Clamp	C1RC	C1RC	C2RC
	Screw (clamp)	CM6×30B (7.0 Nm)	CM6×30B (7.0 Nm)	CM8×30B (10.2 Nm)
	Screw (shim)	SM3×10B	SM3×10B	SM4×12B
	Shim	R12CC-04	R12CC-07	R15CC-07
	Spring	SPR1	SPR1	SPR3
	Wrench (clamp)	WH40L	WH40L	WH50L
	Wrench (shim)	WH20L	WH20L	WH30L

Insert



PCBN/PCD

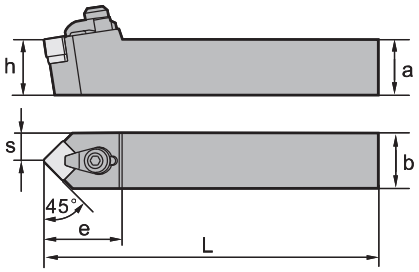
A174

System code A228 Grade selection A42 Technical info A501 Cutting data A366

SN** holder (external) C-Clamping

CSDNN Kr: 45°







Article	✻	Stock	Dimensions [mm]						Inserts	
			a	b	L	h	s	e		
CSDNN2020K12		○	20	20	125	20	10	35	SNGN1204**	SNGN1207**
CSDNN2525M12		●	25	25	150	25	12.5	30	SNGN1204**	SNGN1207**
CSDNN3225P12		○	32	25	170	32	12.5	35	SNGN1204**	SNGN1207**

● Ex stock ○ On demand

✻ With internal cooling

Spare parts

	Insert	SNGN1204**	SNGN1207**
	h	20-32	20-32
	Clamp	C1RC	C1RC
	Screw (clamp)	CM6×30B (7.0 Nm)	CM6×30B (7.0 Nm)
	Screw (shim)	SM3×10B	SM3×10B
	Shim	S12CC-04	S12CC-07
	Spring	SPR1	SPR1
	Wrench (clamp)	WH40L	WH40L
	Wrench (shim)	WH20L	WH20L

Insert

Cast Iron	PCBN/PCD
A86	A175

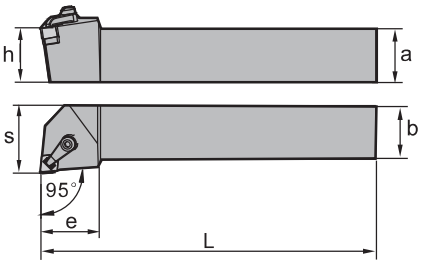
System code A228 Grade selection A42 Technical info A501 Cutting data A366

CN** holder (external) J-Clamping

JCLNR/L Kr: 95°



Right hand style





Article	✻	Stock		Dimensions [mm]						Inserts
		R	L	a	b	L	h	s	e	
JCLNR/L2020K12		○	○	20	20	125	20	29	32	CNGX1207**
JCLNR/L2525M12		○	○	25	25	150	25	32	32	CNGX1207**

● Ex stock ○ On demand

✻ With internal cooling

Spare parts

	Insert	CNGX1207**
	h	20-25
	Clamp	C1RJ
	Screw (clamp)	CM6×30B (7.0 Nm)
	Screw (shim)	SM3×10B
	Shim	C12CC-07
	Spring	SPR1
	Wrench (clamp)	WH40L
	Wrench (shim)	WH20L

Insert

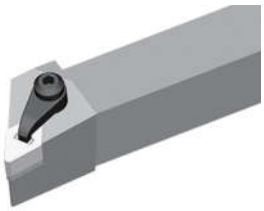
Medium Cut

A203

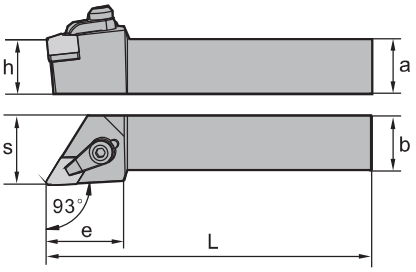
System code A228 Grade selection A42 Technical info A501 Cutting data A366

DN** holder (external) J-Clamping

JDJNR/L Kr: 93°



Right hand style





Article	*	Stock		Dimensions [mm]						Inserts
		R	L	a	b	L	h	s	e	
JDJNR/L2525M15		●	○	25	25	150	25	32	38	DNGX1507**
JDJNR/L3225P15		○	○	32	25	170	32	32	38	DNGX1507**

● Ex stock ○ On demand

* With internal cooling

Spare parts

	Insert	DNGX1507**
	h	25-32
	Clamp	C1RJ
	Screw (clamp)	CM6×30B (7.0 Nm)
	Screw (shim)	SM3×10B
	Shim	D15CC-07
	Spring	SPR1
	Wrench (clamp)	WH40L
	Wrench (shim)	WH20L

Insert



Medium Cut

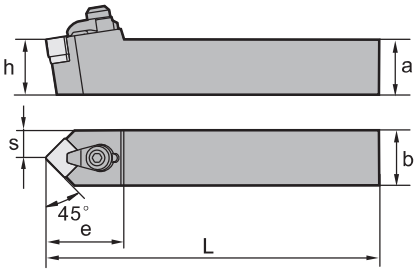
A206

System code A228 Grade selection A42 Technical info A501 Cutting data A366

SN** holder (external) J-Clamping

JSDNN Kr: 45°







Article	✻	Stock	Dimensions [mm]						Inserts
			a	b	L	h	s	e	
JSDNN2525M12		○	25	25	150	25	12.5	40	SNGX1207**
JSDNN3225P12		○	32	25	170	32	12.5	40	SNGX1207**

● Ex stock ○ On demand

✻ With internal cooling

Spare parts

	Insert	SNGX1207**
	h	**20-32**
	Clamp	C1RJ
	Screw (clamp)	CM6×30B (7.0 Nm)
	Screw (shim)	SM3×10B
	Shim	S12CC-07
	Spring	SPR1
	Wrench (clamp)	WH40L
	Wrench (shim)	WH20L

Insert

Medium Cut

A216

System code A228 Grade selection A42 Technical info A501 Cutting data A366

Notes

S	C	L	N	L	25	25	M	12	–	S	C
1	2	3	4	5	6	7	8	9		10	11

Clamping system

Code	Description
S	Knee lever clamping



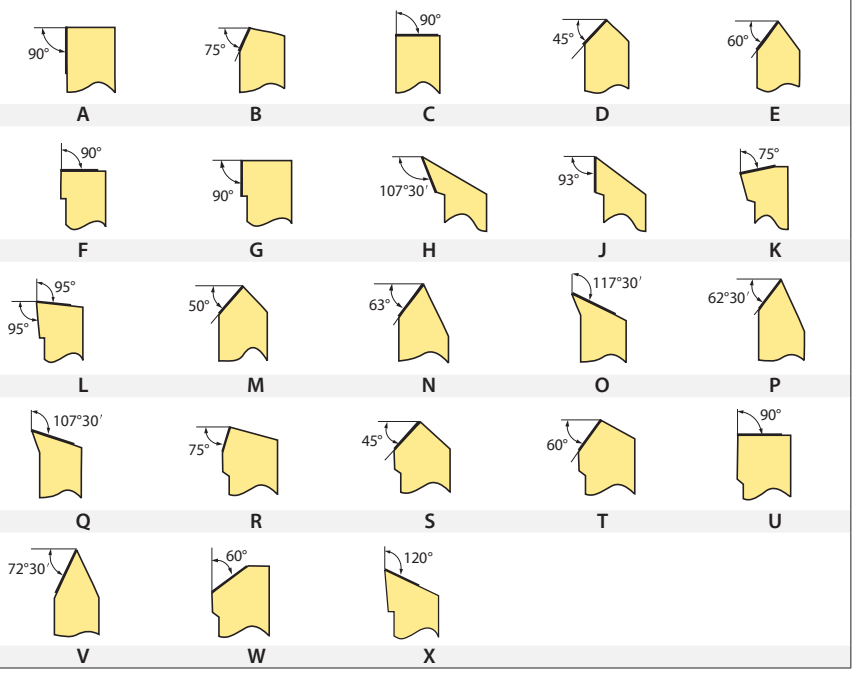
1

Insert shape

C	
D	
R	
S	
T	
V	
W	

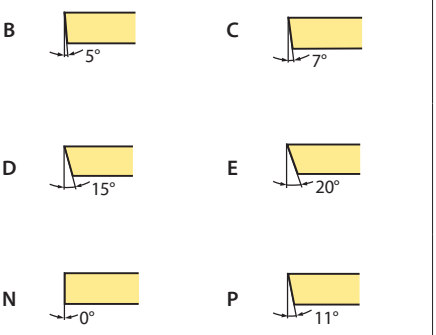
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Tool holder type and entering angle



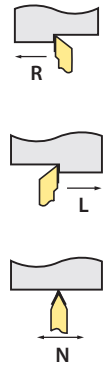
3

Clearance angle



4

Cutting direction



5

Shank height h [mm]



Code	h
12	12
16	16
20	20
25	25
32	32
40	40
50	50

6

Shank width b [mm]



Code	b
12	12
16	16
20	20
25	25
32	32
40	40
50	50

7

Holder length L [mm]



Code	L
H	100
K	125
M	150
P	170
Q	180
R	200
S	250
T	300

8

Cutting edge length l [mm]

I.C [mm]	Insert shape C	D	R	S	T	V	W
5,56					**09**		
6,35	**06**	**07**			**11**		
9,525	**09**	**11**	**09**	**09**	**16**	**16**	**06**
12,7	**12**	**15**	**12**	**12**	**22**	**22**	**08**
15,875	**16**	**19**	**15**	**15**	**27**		
19,05	**19**		**19**	**19**	**33**		
25,4	**25**		**25**	**25**	**44**		
32			**32**				

9

Swissturning

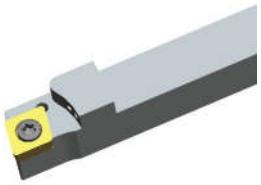
10

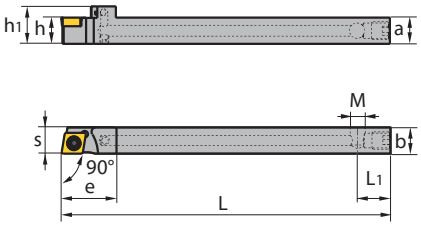
With inner cooling

11

CC** holder S-Clamping

SCACR/L-SC Kr: 90°





Article	✻	Stock R	Stock L	a	b	L	h	h_1	s	L_1	e	M	kg	Inserts
SCACR/L1212M09-SC	✻	●	●	12	12	150	12	17	12	15	25	M8X1	0.14	CC**09T3**
SCACR/L1616H09-SC	✻	●	●	16	16	100	16	21	16	15	28	M8X1	0.21	CC**09T3**

● Ex stock ○ On demand

✻ With internal cooling

Spare parts

	Insert	CC**09T3**
	h	12-16
	Screw	I60M3.5×8 (2.7 Nm)
	Wrench	WT15IP

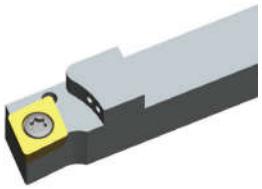
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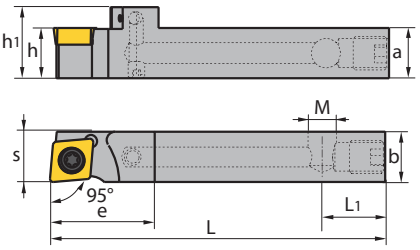
Finishing	Medium Cut	Roughing	Alum Machining	Cast Iron	PCBN/PCD
A117	A119	A121	A122	A121	A180

System code A304 Grade selection A42 Technical info A501 Cutting data A366

CC** holder S-Clamping

SCLCR/L-SC Kr: 95°





Article	✲	Stock R	Stock L	a	b	L	h	h_1	s	L_1	e	M	kg	Inserts
SCLCR/L1010F06-S		●	●	10	10	80	10	15	10	15	10		0.06	CC**0602**
SCLCR/L1212F09-SC	✲	●	●	12	12	80	12	17	12	15	25	M8X1	0.07	CC**09T3**

● Ex stock ○ On demand

✲ With internal cooling

Spare parts

	Insert	CC**0602**	CC**09T3**
	h	**10**	**12**
	Screw	I60M2.5×6.5 (1.0 Nm)	I60M3.5×8 (2.7 Nm)
	Wrench	WT07IP	WT15IP

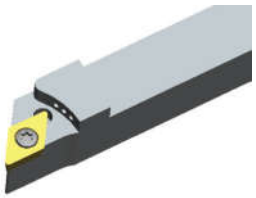
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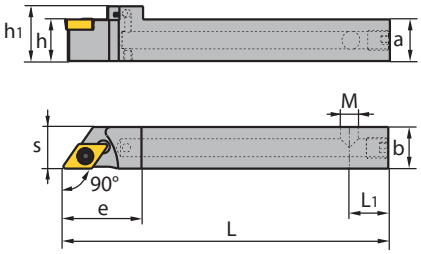
Finishing	Medium Cut	Roughing	Alum Machining	Cast Iron	PCBN/PCD
A116	A119	A121	A122	A121	A180

System code A304 Grade selection A42 Technical info A501 Cutting data A366

DC** holder S-Clamping

SDACR/L-SC Kr: 90°





Article	✻	Stock R	Stock L	a	b	L	h	h_1	s	L_1	e	M	kg	Inserts
SDACR/L1212M07-SC	✻	●	●	12	12	150	12	17	12	15	25	M8X1	0.15	DC**0702**
SDACR/L1212H11-SC	✻	○		12	12	100	12	17	12	15	30	M8X1	0.1	DC**11T3**
SDACR/L1616K11-SC	✻	●	●	16	16	125	16	21	16	15	30	M8X1	0.21	DC**11T3**
SDACR/L1212M11-SC	✻	●	●	12	12	150	12	17	12	15	30	M8X1	0.14	DC**11T3**

● Ex stock ○ On demand
✻ With internal cooling

Spare parts

	Insert	DC**0702**	DC**11T3**	DC**11T3**
	h	12	12-16	12
	Screw	I60M2.5×6.5 (1.0 Nm)	I60M3.5×8 (2.7 Nm)	I60M3.5×8 (2.7 Nm)
	Wrench	WT07IP	WT15IP	WT15IP

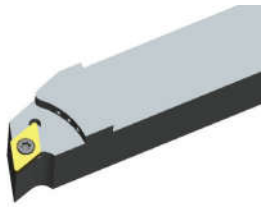
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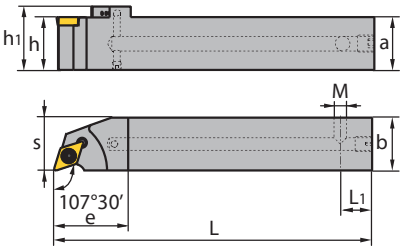
Finishing	Medium Cut	Roughing	Alum Machining	Cast Iron	PCBN/PCD
A126	A127	A129	A129	A129	A184

System code A304 Grade selection A42 Technical info A501 Cutting data A366

DC** holder S-Clamping

SDHCR/L-SC Kr: 107°30'





Article	✲	Stock	Dimensions [mm]									kg	Inserts
			a	b	L	h	h_1	s	L_1	e	M		
SDHCR/L2020K11-SC	✲	○	20	20	125	20	25	20	15	30	M8X1	0.35	DC**11T3**
SDHCR/L2525M11-SC	✲	●	25	25	150	25	30	25	15	35	M8X1	0.66	DC**11T3**

● Ex stock ○ On demand

✲ With internal cooling

Spare parts

	Insert	**DC**11T3****
	h	**20-25**
	Screw	I60M3.5×8 (2.7 Nm)
	Wrench	WT15IP

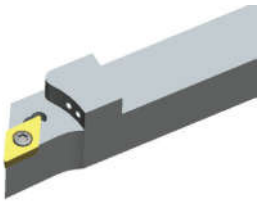
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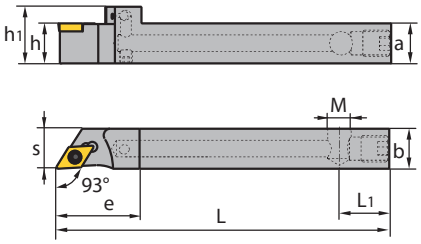
Finishing	**Medium Cut**	**Roughing**	**Alum Machining**	**Cast Iron**	**PCBN/PCD**
A126	A127	A129	A129	A129	A184

System code A304 Grade selection A42 Technical info A501 Cutting data A366

DC** holder S-Clamping

SDJCR/L-SC Kr: 93°





Article	✻	Stock R	Stock L	a	b	L	h	h_1	s	L_1	e	M	kg	Inserts
SDJCR/L1212H07-SC	✻	●	●	12	12	100	12	17	12	15	25	M8X1	0.1	DC**0702**
SDJCR/L1212H11-SC	✻	●	●	12	12	100	12	17	12	15	30	M8X1	0.1	DC**11T3**
SDJCR/L1616K11-SC	✻	●	●	16	16	125	16	21	16	15	30	M8X1	0.21	DC**11T3**

● Ex stock ○ On demand

✻ With internal cooling

Spare parts

	Insert	DC**0702**	DC**11T3**
	h	**12**	**12-16**
	Screw	I60M2.5×6.5 (1.0 Nm)	I60M3.5×8 (2.7 Nm)
	Wrench	WT07IP	WT15IP

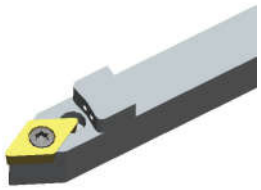
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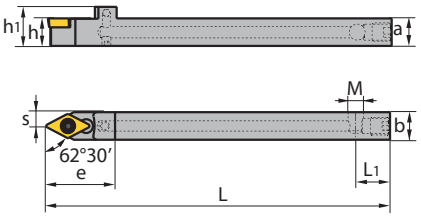
 Finishing	 Medium Cut	 Roughing	 Alum Machining	 Cast Iron	 PCBN/PCD
A126	A127	A129	A129	A129	A184

System code A304 Grade selection A42 Technical info A501 Cutting data A366

DC** holder S-Clamping

SDNCN-SC Kr: 62°30'





Article	✲	Stock	Dimensions [mm]									kg	Inserts
			a	b	L	h	h_1	s	L_1	e	M		
SDNCN1212H11-SC	✲	○	12	12	100	12	17	6	15	30	M8X1	0.09	DC**11T3**
SDNCN1212M11-SC	✲	●	12	12	150	12	17	6	15	30	M8X1	0.1	DC**11T3**

● Ex stock ○ On demand

✲ With internal cooling

Spare parts

	Insert	DC**11T3**
	h	**12**
	Screw	I60M3.5×8 (2.7 Nm)
	Wrench	WT15IP

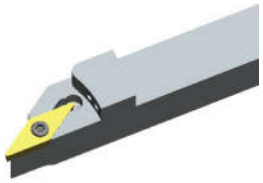
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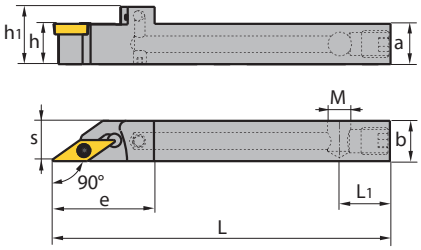
Finishing	Medium Cut	Roughing	Alum Machining	Cast Iron	PCBN/PCD
A126	A127	A129	A129	A129	A184

System code A304 Grade selection A42 Technical info A501 Cutting data A366

VC** holder S-Clamping

SVACR/L-SC Kr: 90°





Article	✻	Stock R	Stock L	a	b	L	h	h_1	s	L_1	e	M	kg	Inserts
SVACR/L1212H11-SC	✻	●	●	12	12	100	12	17	12	15	30	M8X1	0.1	VC**1103**

● Ex stock ○ On demand

✻ With internal cooling

Spare parts

	Insert	VC**1103**
	h	12
	Screw	I60M2.5×6.5 (1.0 Nm)
	Wrench	WT07IP

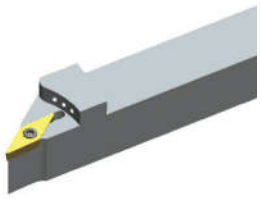
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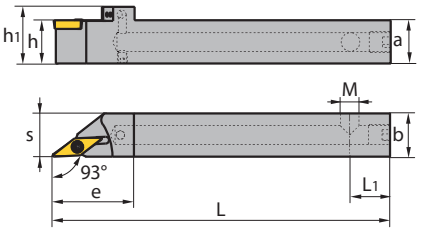
Finishing	Alum Machining	PCBN/PCD
A156	A154	A193

System code A304 Grade selection A42 Technical info A501 Cutting data A366

VC** holder S-Clamping

SVJCR/L-SC Kr: 93°





Article	✲	Stock R	Stock L	a	b	L	h	h_1	s	L_1	e	M	kg	Inserts
SVJCR/L0808H11-S		●	●	8	8	100	8	13	8	15	22	M8X1	0.044	VC**1103**
SVJCR/L1212H11-SC	✲	●	●	12	12	100	12	17	12	15	30	M8X1	0.095	VC**1103**
SVJCR/L1616K11-SC	✲	●	●	16	16	125	16	21	16	15	30	M8X1	0.2	VC**1103**

● Ex stock ○ On demand

✲ With internal cooling

Spare parts

	Insert	VC**1103**
	h	**8-16**
	Screw	I60M2.5×6.5 (1.0 Nm)
	Wrench	WT07IP

Insert

		
Finishing	**Alum Machining**	**PCBN/PCD**
A156	A154	A193

System code A304 Grade selection A42 Technical info A501 Cutting data A366

RW	P	L	F	N	L/R	19
1	2	3	4	5	6	7

1

(RW = Rail Way)

Tool holders for rail applications

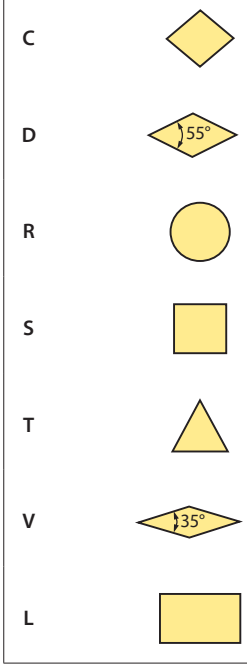
2

Clamping system

Code	Description	
P	Lever lock clamping	
M	Wedge/pin lock clamping	
S	Screw-on clamping	
C/J	Wedge clamping	
D	Duel wedge clamping	

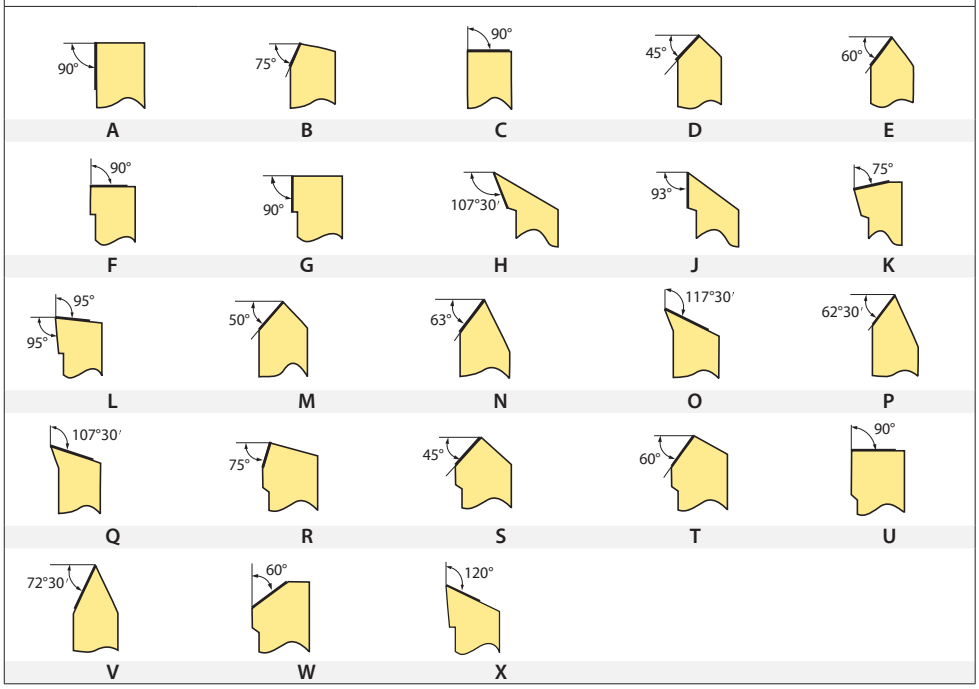
3

Insert shape



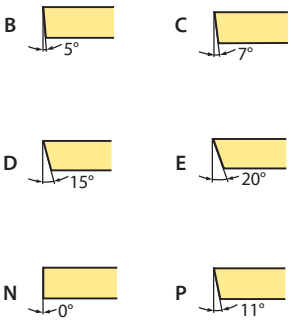
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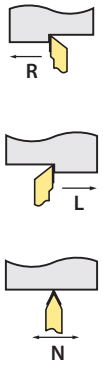
Tool holder type and entering angle



5

Clearance angle



Cutting direction


6

Cutting edge length l [mm]							
I.C [mm]	Insert shape						
	C	D	R	S	T	V	W
5,56					**09**		
6,35	**06**	**07**			**11**		
9,525	**09**	**11**	**09**	**09**	**16**	**16**	**06**
12,7	**12**	**15**	**12**	**12**	**22**	**22**	**08**
15,875	**16**	**19**	**15**	**15**	**27**		
19,05	**19**		**19**	**19**	**33**		
25,4	**25**		**25**	**25**	**44**		
32			**32**				

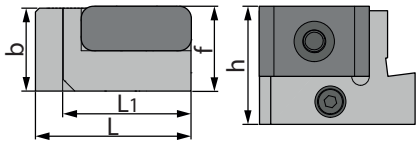
7

LN** holder (external) P-Clamping

RW-PLANR/L Kr: 90°



Right hand style



Article	✻	Stock		Dimensions [mm]					Inserts
		R	L	b	L	h	L_1	f	
RW-PLANR/L-19	✻	○	○	22.5	43	32	35	23	LNUX1919**
RW-PLANR/L-30	✻	○	○	22.5	43	32	35	23	LNUX3019**

● Ex stock ○ On demand

✻ With internal cooling

Spare parts

	Insert	LNUX1919**	LNUX3019**
	h	25-32	25-32
	Knee lever	L5 RWL	L5 RWL
	Screw	LEM8×25 RWL (10.2 Nm)	LEM8×25 RWL (10.2 Nm)
	Wrench	WH30L	WH30L

Insert



Heavy Turning

A115

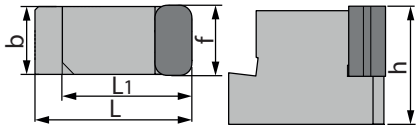
System code A314 Grade selection A42 Technical info A501 Cutting data A366

LN** holder (external) P-Clamping

RW-PLFNR/L Kr: 90°



Right hand style



Article	✲	Stock		Dimensions [mm]					Inserts
		R	L	b	L	h	L_1	f	
RW-PLFNR/L-19	✲	○	○	18.6	43	32	35	19.1	LNUX1919**

● Ex stock ○ On demand

✲ With internal cooling

Spare parts

	Insert	LNUX1919**
	h	**25-32**
	Knee lever	L5 RWL
	Screw	LEM8×25 RWL (10.2 Nm)
	Wrench	WH30L

Insert

Heavy Turning

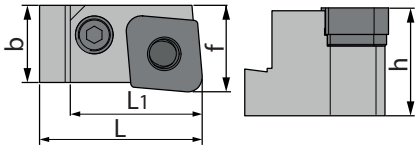
A115

System code A314 Grade selection A42 Technical info A501 Cutting data A366

CN** holder (external) P-Clamping

RW-PCLNR/L Kr: 95°





Right hand style

Article	✻	Stock R	Stock L	Dimensions [mm] b	L	h	L_1	f	Inserts
RW-PCLNR/L-1907	✻	○	○	24.8	43	32	35	19.1	CNMM1907**
RW-PCLNR/L-1911	✻	○	○	24.8	43	32	35	19.1	CNMM1911**

● Ex stock ○ On demand

✻ With internal cooling

Spare parts

	Insert	CNMM1907**	CNMM1911**
	h	**25-32**	**25-32**
	Knee lever	L5 RWC	L5 RWC
	Screw	LEM8×25 RWC (10.2 Nm)	LEM8×25 RWC (10.2 Nm)
	Shim pin (shim)	SP5 RWC	SP5 RWC
	Shim	C19 RWC	C19 RWC
	Wrench	WH30L	WH30L

Insert

	
Finishing	**Roughing**
A114	A114

System code A314 Grade selection A42 Technical info A501 Cutting data A366

Notes

Boring bars

	Boring bar	Application					Workpiece		Page
		Longitudinal turning	Facing	Undercut	Contouring	Profiling	Stable	Unstable	
P	PDSNR/L 62°30' 	●		●	●	●	●		A326
P	PCLNR/L 95° 	●	●				●	●	A324
P	PDUNR/L 93° 	●			●	●	●	●	A327
P	PSKNR/L 75° 	●					●		A329
P	PTFNR/L 91° 	●					●		A330
P	PWLNR/L 95° 	●	●				●		A332
S	SCFCR/L 90° 	●					●	●	A352
S	SCLCR/L 95° 	●	●				●		A352
S	SCLPR/L 95° 	●	●				●	●	A354
S	SDQCR/L 107°30' 	●			●	●	●	●	A357
S	SDQPR/L 107°30' 	●			●	●	●	●	A356
S	SDUCR/L 93° 	●			●	●	●	●	A359
S	SDUPR/L 93° 	●			●		●	●	A358
S	SDZCR/L 95° 			●			●		A338

● Recommended

Boring bars

	Boring bar		Application					Workpiece		Page
			Longitudinal turning	Facing	Undercut	Contouring	Profiling	Stable	Unstable	
S	SSKCR/L 75°		●					●		A339
	STFCR/L 91°		●							A361
	STUPR/L 93°		●							A360
	SVQBR/L 107°30'		●			●	●			A345
	SVXBR/L 93°				●			●		A347
	SVQCR/L 107°30'		●							A363
	SVUBR/L 93°		●			●	●			A346
	SVUCR/L 93°		●			●	●			A364
	SZLNR/L 95°		●	●				●		A365
Antivibration	SCLPR/L 95°		●	●						A348
	SDQPR/L 107°30'		●			●	●			A349
	SDUPR/L 93°		●							A350
	STUPR/L 93°		●							A351
	SVQCR/L 107°30'		●			●	●			A343
	SVUCR/L 93°		●			●	●			A344

● Recommended

General turning ISO-Code – boring bars

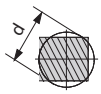
S	16	R	–	S	D	U	C	R	07	–	KR93
1	2	3		4	5	6	7	8	9		10

Shank type

Code	Description
A	Steel shank (IC)
C	Solid carbide shank
E	Solid carbide shank (IC)
S	Steel shank
X	Special application

1

Shank diameter d [mm]



Code	d
16	16
20	20
25	25
32	32
40	40
50	50

2

Clamping system



Code	L
H	100
K	125
M	150
N	160
P	170
Q	180
R	200
S	250
T	300
U	350
V	400

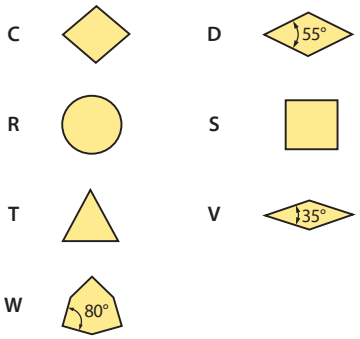
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Clamping system

Code	Description	
P	Knee lever clamping	
S	Screw clamping	

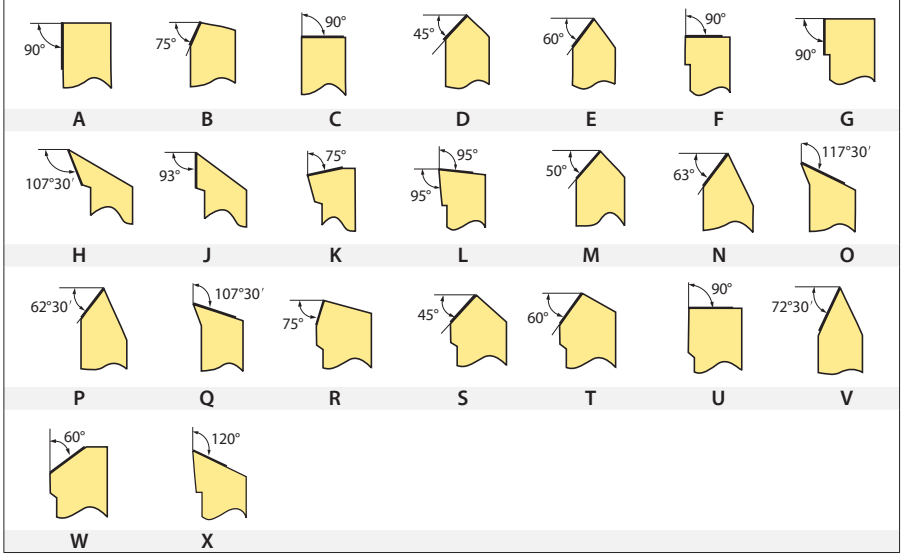
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Insert shape



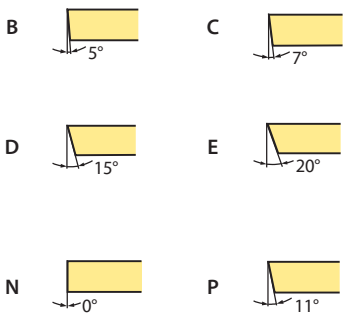
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Tool holder type and entering angle



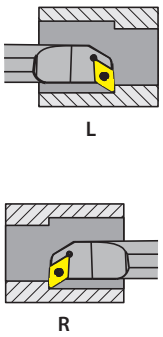
6

Clearance angle



7

Cutting direction



8

Cutting edge length l [mm]

I.C [mm]	Insert shape C	D	R	S	T	V	W
5,56					09		
6,35	06	07			11		
9,525	09	11	09	09	16	16	06
12,7	12	15	12	12	22	22	08
15,875	16	19	15	15	27		
19,05	19		19	19	33		
25,4	25		25	25	44		
32			32				

9

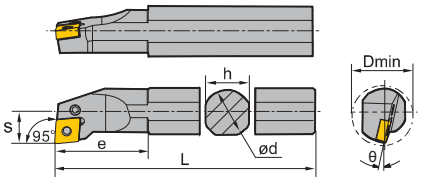
Entering angle

10

CN** steel boring bar P-Clamping

PCLNR/L Kr: 95°







Right hand style

Article	✻	Stock R	Stock L	Dimensions [mm] ød	L	h	S	e	D_{min}	θ	Inserts
S16M-PCLNR/L09		●	●	16	150	15	11	28	20	-12	CN**0903**
S16R-PCLNR/L09		●	●	16	200	15	11	28	20	-12	CN**0903**
S20Q-PCLNR/L09		●	●	20	180	18	13	31	25	-11	CN**0903**
S20S-PCLNR/L09		●	●	20	250	18	13	31	25	-11	CN**0903**
S25Q-PCLNR/L09		○	○	25	180	23	17	35	32	-10	CN**0903**
S25T-PCLNR/L09		●	○	25	300	23	17	35	32	-10	CN**0903**
A16M-PCLNR/L09	✻	○		16	150	14	11		20	-12	CN**0903**
S25Q-PCLNR/L12		○	○	25	180	23	17	40	32	-12	CN**1204**
S25T-PCLNR/L12		●	●	25	300	23	17	40	32	-12	CN**1204**
S32R-PCLNR/L12		●	●	32	200	30	22	50	44	-10	CN**1204**
S32U-PCLNR/L12		●	●	32	350	30	22	50	44	-10	CN**1204**
S40S-PCLNR/L12		○	●	40	250	37	27	55	54	-10	CN**1204**
S40V-PCLNR/L12		●	●	40	400	37	27	55	54	-10	CN**1204**
S50S-PCLNR/L12		○	○	50	250	47	35	56	63	-10	CN**1204**
S50W-PCLNR/L12		●	●	50	450	47	35	56	63	-10	CN**1204**
A25R-PCLNR/L12	✻	●	●	25	200	24	17	40	32	-12	CN**1204**
A32S-PCLNR/L12	✻	●	●	32	250	31	22	50	44	-10	CN**1204**
S50S-PCLNR/L19		○	○	50	250	47	35	63	63	-10	CN**1906**
S50W-PCLNR/L19		●	○	50	450	47	35	63	63	-10	CN**1906**

● Ex stock ○ On demand

✻ With internal cooling

System code A322 Grade selection A42 Technical info A501 Cutting data A366

CN** steel boring bar

Spare parts

	Insert	CN**0903**	CN**1204**	CN**1204**	CN**1906**
	ød	16-25	25	32-50	50
	Knee lever	L3C	L4A	L4A	L6
	Screw	LEM5×9B (4.0 Nm)			
	Screw				LEM10×27 (16.6 Nm)
	Screw		LEM6×13.4A (7.0 Nm)	LEM6×13.4A (7.0 Nm)	
	Shim pin (shim)			SP4	SP6
	Shim				C19AP
	Shim			C12APB	
	Wrench		WH25L	WH25L	WH40L
	Wrench	WT09IP			

Insert

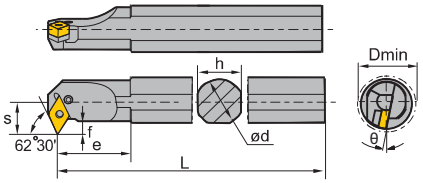
					
Wiper	**Finishing**	**Medium Cut**	**Roughing**	**Cast Iron**	**PCBN/PCD**
A51	A52	A53	A57	A61	A177

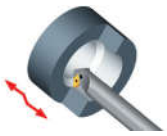
System code A322 Grade selection A42 Technical info A501 Cutting data A366

DN** steel boring bar P-Clamping

PDSNR/L Kr: 62°30'







Right hand style

Article	✻	Stock R	Stock L	Dimensions [mm] ød	L	h	s	e	f	D_{min}	θ	Inserts
S32R-PDSNR/L15-3		○	○	32	200	30	22	45	8.5	40	-11	DN**1504**
S40V-PDSNR/L15-3		●		40	400	37	27	43	9.4	50	-11	DN**1504**
A32S-PDSNR/L15-3	✻	○	○	32	250	31	22	45	8.5	40	-11	DN**1504**
S32R-PDSNR/L15		●	●	32	200	30	22	45	8.5	40	-11	DN**1506**
S32U-PDSNR/L15		●	●	32	350	30	22	45	8.5	40	-11	DN**1506**
S40S-PDSNR/L15		○	○	40	250	37	27	43	9.4	50	-11	DN**1506**
S40V-PDSNR/L15		○	○	40	400	37	27	43	9.4	50	-11	DN**1506**
A32S-PDSNR/L15	✻	●	●	32	250	31	22	45	8.5	40	-11	DN**1506**

● Ex stock ○ On demand

✻ With internal cooling

Spare parts

	Insert	DN**1504**	DN**1506**
	ød	**32-40**	**32-40**
	Knee lever	L4	L4B
	Screw	LEM8×21 (10.2 Nm)	LEM8×21 (10.2 Nm)
	Shim pin (shim)	SP4	SP4
	Shim	D15AP	D15AP
	Wrench	WH30L	WH30L

Insert

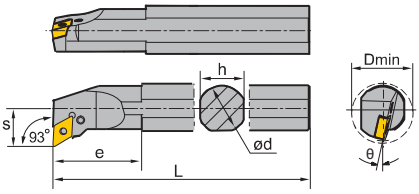
					
Wiper	**Finishing**	**Medium Cut**	**Roughing**	**Cast Iron**	**PCBN/PCD**
A62	A63	A63	A68	A69	A178

System code A322 Grade selection A42 Technical info A501 Cutting data A366

DN** steel boring bar P-Clamping

PDUNR/L Kr: 93°







Right hand style

Article	✻	Stock		Dimensions [mm]							Inserts
		R	L	ød	L	h	s	e	D_{min}	θ	
S20Q-PDUNR/L11		●	○	20	180	18	13	30	25	-16	DN**1104**
S20S-PDUNR/L11		●	●	20	250	18	13	30	25	-16	DN**1104**
S25Q-PDUNR/L11		●	●	25	180	23	17	35	32	-13	DN**1104**
S25T-PDUNR/L11		●	●	25	300	23	17	35	32	-13	DN**1104**
S32R-PDUNR/L11		○	○	32	200	30	22	40	40	-16	DN**1104**
S32U-PDUNR/L11		●	●	32	350	30	22	40	40	-16	DN**1104**
A25R-PDUNR/L11	✻	●		25	200	24	17	35	32	-13	DN**1104**
S32R-PDUNR/L15-3		○	○	32	200	30	22	50	40	-16	DN**1504**
S32U-PDUNR/L15-3		●	●	32	350	30	22	50	40	-16	DN**1504**
S40S-PDUNR/L15-3		○	○	40	250	37	27	50	50	-11	DN**1504**
S40V-PDUNR/L15-3		●	●	40	400	37	27	50	50	-11	DN**1504**
A32S-PDUNR/L15-3	✻	●	●	32	250	31	22	50	40	-16	DN**1504**
S32R-PDUNR/L15		○	○	32	200	30	22	50	40	-16	DN**1506**
S32U-PDUNR/L15		●	●	32	350	30	22	50	40	-16	DN**1506**
S40S-PDUNR/L15		○	○	40	250	37	27	50	50	-11	DN**1506**
S40V-PDUNR/L15		●	●	40	400	37	27	50	50	-11	DN**1506**
A32S-PDUNR/L15	✻	●	●	32	250	31	22	50	40	-16	DN**1506**

● Ex stock ○ On demand

✻ With internal cooling

Spare parts

	Insert	DN**1104**	DN**1104**	DN**1504**	DN**1506**
	ød	20-25	32	32-40	32-40
	Knee lever	L3D	L3	L4	L4B
	Screw	LEM5×12B (4.0 Nm)	LEM6×17 (7.0 Nm)		
	Screw			LEM8×21 (10.2 Nm)	LEM8×21 (10.2 Nm)
	Shim pin (shim)		SP3	SP4	SP4
	Shim		D11AP	D15AP	D15AP
	Wrench		WH25L	WH30L	WH30L
	Wrench	WT09IP			

System code A322 Grade selection A42 Technical info A501 Cutting data A366

DN** steel boring bar

Insert

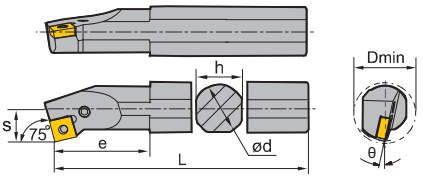
					
Wiper	**Finishing**	**Medium Cut**	**Roughing**	**Cast Iron**	**PCBN/PCD**
A62	A63	A63	A68	A69	A178

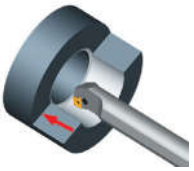
System code > A322 Grade selection > A42 Technical info > A501 Cutting data > A366

SN** steel boring bar P-Clamping

PSKNR/L Kr: 75°







Right hand style

Article	✻	Stock R	Stock L	Dimensions [mm] ød	L	h	s	e	D_{min}	θ	Inserts
S25Q-PSKNR/L12		○	●	25	180	23	17	42	32	-12	SN**1204**
S25T-PSKNR/L12		●	○	25	300	23	17	42	32	-12	SN**1204**
S32R-PSKNR/L12		○	○	32	200	30	22	45	44	-10	SN**1204**
S32U-PSKNR/L12		●	●	32	350	30	22	45	44	-10	SN**1204**
S40S-PSKNR/L12		○	○	40	250	37	27	50	54	-10	SN**1204**
S40V-PSKNR/L12		●	○	40	400	37	27	50	54	-10	SN**1204**
A25R-PSKNR/L12	✻	●	●	25	200	24	17	42	32	-12	SN**1204**
A32S-PSKNR/L12	✻	●	●	32	250	31	22	50	44	-12	SN**1204**

● Ex stock ○ On demand

✻ With internal cooling

Spare parts

	Insert	SN**1204**	SN**1204**
	ød	**25**	**32-40**
	Knee lever	L4A	L4
	Screw		LEM8×21 (10.2 Nm)
	Screw	LEM6×13.4A (7.0 Nm)	
	Shim pin (shim)		SP4
	Shim		S12APB
	Wrench	WH25L	WH30L

Insert

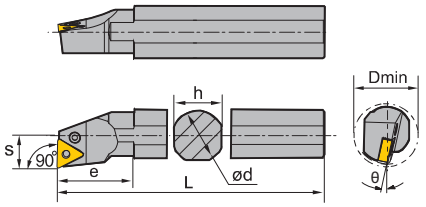
				
Finishing	**Medium Cut**	**Roughing**	**Cast Iron**	**PCBN/PCD**
A73	A73	A78	A84	A162

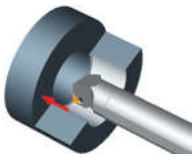
System code A322 Grade selection A42 Technical info A501 Cutting data A366

TN** steel boring bar P-Clamping

PTFNR/L Kr: 90°







Right hand style

Article	✻	Stock R	Stock L	Dimensions [mm] ød	L	h	s	e	D_{min}	θ	Inserts
S16M-PTFNR/L11		○	○	16	150	15	11	28	20	-14	TN**1103**
S16R-PTFNR/L11		●	●	16	200	15	11	28	20	-14	TN**1103**
S20Q-PTFNR/L11		●	●	20	180	18	13	31	25	-12	TN**1103**
S20S-PTFNR/L11		●	●	20	250	18	13	31	25	-12	TN**1103**
S25Q-PTFNR/L11		○	○	25	180	23	17	35	32	-10	TN**1103**
S25T-PTFNR/L11		○	○	25	300	23	17	35	32	-10	TN**1103**
S25Q-PTFNR/L16		○	○	25	180	23	17	42	32	-12	TN**1604**
S25T-PTFNR/L16		●	●	25	300	23	17	42	32	-12	TN**1604**
S32R-PTFNR/L16		○	○	32	200	30	22	50	44	-10	TN**1604**
S32U-PTFNR/L16		●	●	32	350	30	22	50	44	-10	TN**1604**
S40S-PTFNR/L16		○	○	40	250	37	27	55	54	-10	TN**1604**
S40V-PTFNR/L16		●	●	40	400	37	27	55	54	-10	TN**1604**
A25R-PTFNR/L16	✻	●	○	25	200	24	17	40	32	-12	TN**1604**
A32S-PTFNR/L16	✻	●	●	32	250	31	22	50	44	-10	TN**1604**

● Ex stock ○ On demand

✻ With internal cooling

Spare parts

	Insert	TN**1103**	TN**1604**	TN**1604**
	ød	16-25	25	32-40
	Knee lever	L2	L3B	L3
	Screw	LEM5×9B (4.0 Nm)	LEM5×12B (4.0 Nm)	LEM6×17 (7.0 Nm)
	Shim pin (shim)			SP3
	Shim			T16APB
	Wrench		WH20L	WH25L
	Wrench	WT09IP		

System code A322 Grade selection A42 Technical info A501 Cutting data A366

TN** steel boring bar

Insert

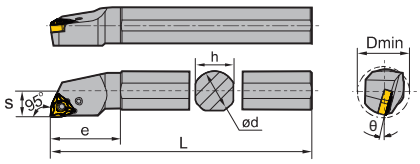
					
Wiper	**Finishing**	**Medium Cut**	**Roughing**	**Cast Iron**	**PCBN/PCD**
A87	A88	A90	A92	A99	A163

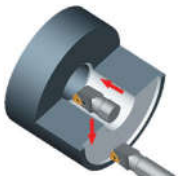
System code A322 Grade selection A42 Technical info A501 Cutting data A366

WN** steel boring bar P-Clamping

PWLNR/L Kr: 95°







Right hand style

Article	✻	Stock R	Stock L	Dimensions [mm] ød	L	h	s	e	D_{min}	θ	Inserts
S16M-PWLNR/L06			●	16	150	15	11	25	20	-13	WN**0604**
S16M-PWLNR/L06		●		16	150	15	11	25	20	-13	WN**0604**
S16R-PWLNR/L06		○	○	16	200	15	11	25	20	-13	WN**0604**
S20Q-PWLNR/L06		●	●	20	180	18	13	35	25	-13	WN**0604**
S20S-PWLNR/L06		●	○	20	250	18	13	35	25	-13	WN**0604**
S25Q-PWLNR/L06		○	○	25	180	23	17	35	32	-13	WN**0604**
S25T-PWLNR/L06		○		25	300	23	17	35	32	-13	WN**0604**
S20Q-PWLNR/L08		●	●	20	180	18	13	32	25	-13	WN**0804**
S20S-PWLNR/L08		●		20	250	18	13	32	25	-13	WN**0804**
S25Q-PWLNR/L08		●	○	25	180	23	17	45	32	-13	WN**0804**
S25T-PWLNR/L08		●	●	25	300	23	17	45	32	-13	WN**0804**
S32R-PWLNR/L08		●	●	32	200	30	22	50	40	-15	WN**0804**
S32U-PWLNR/L08		●	●	32	350	30	22	50	40	-15	WN**0804**
S50W-PWLNR/L08		○	○	50	450	47	35	50	63	-15	WN**0804**

● Ex stock ○ On demand

✻ With internal cooling

Spare parts

	Insert	WN**0604**	WN**0804**	WN**0804**	WN**0804**
	ød	16-25	20-25	32	50
	Knee lever	L3B	L4A	L4	L4
	Screw	LEM5×12B (4.0 Nm)			
	Screw			LEM8×21 (10.2 Nm)	LEM8×21 (10.2 Nm)
	Screw		LEM6×13.4A (7.0 Nm)		
	Shim pin (shim)			SP4	SP4
	Shim			W08AP	W08AP
	Wrench		WH25L	WH30L	WH30L
	Wrench	WT09IP			

System code A322 Grade selection A42 Technical info A501 Cutting data A366

WN** steel boring bar

Insert

					
Wiper	**Finishing**	**Medium Cut**	**Roughing**	**Cast Iron**	**PCBN/PCD**
A106	A107	A107	A109	A111	A165

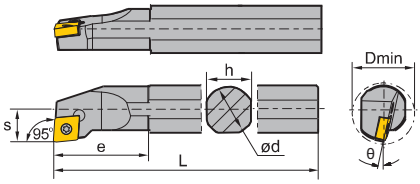
System code A322 Grade selection A42 Technical info A501 Cutting data A366

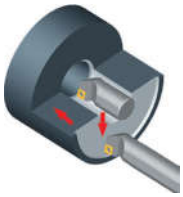
CC** steel boring bar S-Clamping

SCLCR/L Kr: 95°



Right hand style





Article	✻	Stock		Dimensions [mm]								Inserts
		R	L	ød	L	h	s	L_2	e	D_{min}	θ	
S08K-SCLCR/L06		●	●	8	125	7	5	14	14	10	-15	CC**0602**
S10K-SCLCR/L06		●	●	10	125	7	5	14	14	10	-15	CC**0602**
S10M-SCLCR/L06		●	●	10	150	9	6	14	14	12	-13	CC**0602**
S12M-SCLCR/L06		●	●	12	150	11	9	25	25	16	-10	CC**0602**
A08F-SCLCR/L06	✻	●	●	8	80	7.5	5	14	14	10	-15	CC**0602**
A10H-SCLCR/L06	✻	●	●	10	100	9.5	6	14	14	12	-13	CC**0602**
A12K-SCLCR/L06	✻	●	●	12	125	11.5	9	25	25	16	-10	CC**0602**
S12M-SCLCR/L09		●	●	12	150	11	9	25	25	16	-10	CC**09T3**
S16M-SCLCR/L09		●	○	16	150	15	11	32.5	32.5	20	-12	CC**09T3**
S16R-SCLCR/L09		●	●	16	200	15	11	32.5	32.5	20	-12	CC**09T3**
S20Q-SCLCR/L09		●	●	20	180	18	13	38	38	25	-8	CC**09T3**
S20S-SCLCR/L09		●	●	20	250	18	13	38	38	25	-8	CC**09T3**
S25Q-SCLCR/L09		●	○	25	180	23	17	45	45	32	-6	CC**09T3**
S25T-SCLCR/L09		●	●	25	300	23	17	45	45	32	-6	CC**09T3**
A12K-SCLCR/L09	✻	●	●	12	125	11.5	9	25	25	16	-10	CC**09T3**
A16M-SCLCR/L09	✻	●	●	16	150	15.5	11	32.5	32.5	20	-12	CC**09T3**
A20Q-SCLCR/L09	✻	●	●	20	180	19	13	38	38	25	-8	CC**09T3**
A25R-SCLCR/L09	✻	●	●	25	200	24	17	45	45	32	-6	CC**09T3**
S25Q-SCLCR/L12		●	○	25	180	23	17	45	45	32	-6	CC**1204**
S25T-SCLCR/L12		●	●	25	300	23	17	45	45	32	-6	CC**1204**
S32R-SCLCR/L12		●	●	32	200	30	22	50	50	40	-10	CC**1204**
S32U-SCLCR/L12		●	●	32	350	30	22	50	50	40	-10	CC**1204**
S40S-SCLCR/L12		○		40	250	37	27	60	60	50	-8	CC**1204**
S40V-SCLCR/L12		●	●	40	400	37	27	60	60	50	-8	CC**1204**
A25R-SCLCR/L12	✻	●	●	25	200	24	17	45	45	32	-6	CC**1204**
A32T-SCLCR/L12	✻	○		32	300	30	22			40	-10	CC**1204**
A32S-SCLCR/L12	✻	●	●	32	250	31	22	50	50	40	-10	CC**1204**

● Ex stock ○ On demand

✻ With internal cooling

System code A322 Grade selection A42 Technical info A501 Cutting data A366

CC** steel boring bar

Spare parts

	Insert	CC**0602**	CC**09T3**	CC**09T3**	CC**1204**	CC**1204**
	ød	8-12	12-20	25	25	32-40
	Screw	I60M2.5×5.5 (1.0 Nm)	I60M3.5×8 (2.7 Nm)	I60M3.5×10 (2.7 Nm)		
	Screw				I60M4×11X (3.4 Nm)	I60M4×11X (3.4 Nm)
	Screw (shim)					SM6×10XA
	Shim					C12BS
	Wrench (screw)	WT07IP	WT15IP	WT15IP	WT15IP	WT15IP
	Wrench (shim)					WH40L

Insert

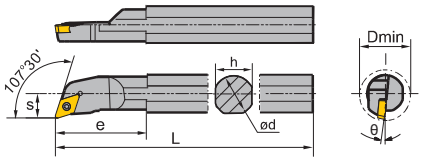
					
Finishing	**Medium Cut**	**Roughing**	**Alum Machining**	**Cast Iron**	**PCBN/PCD**
A116	A119	A121	A122	A121	A180

System code A322 Grade selection A42 Technical info A501 Cutting data A366

DC** steel boring bar S-Clamping

SDQCR/L Kr: 107°30'







Right hand style

Article	✻	Stock R	Stock L	Dimensions [mm] ød	L	h	s	L_2	e	D_{min}	θ	Inserts
S10M-SDQCR/L07		●	●	10	150	9	7	20	20	13	-8	DC**0702**
S12M-SDQCR/L07		●	●	12	150	11	9	22	22	16	-8	DC**0702**
S16M-SDQCR/L07		○	●	16	150	15	11	27	27	20	-6	DC**0702**
S16Q-SDQCR/L07		●	●	16	180	15	11	27	27	20	-6	DC**0702**
S16R-SDQCR/L07		●	●	16	200	15	11	27	27	20	-6	DC**0702**
A10H-SDQCR/L07	✻	●	●	10	100	9.5	7	20	20	13	-8	DC**0702**
A12K-SDQCR/L07	✻	●	●	12	125	11.5	9	22	22	16	-8	DC**0702**
S20Q-SDQCR/L11		●	○	20	180	18	13	32	32	25	-6	DC**11T3**
S20S-SDQCR/L11		●	●	20	250	18	13	32	32	25	-6	DC**11T3**
S25Q-SDQCR/L11		●	○	25	180	23	17	32	32	32	-6	DC**11T3**
S25T-SDQCR/L11		●	●	25	300	23	17	32	32	32	-6	DC**11T3**
A16M-SDQCR/L11	✻	●	●	16	150	15.5	11	27	27	20	-6	DC**11T3**
A20Q-SDQCR/L11	✻	●	●	20	180	19	13	32	32	25	-6	DC**11T3**
A25R-SDQCR/L11	✻	●	●	25	200	24	17	32	32	32	-6	DC**11T3**

● Ex stock ○ On demand

✻ With internal cooling

Spare parts

	Insert	DC**0702**	DC**0702**	DC**11T3**	DC**11T3**	DC**11T3**
	ød	10	12-16	16-20	20	25
	Screw	I60M2.5×5.5 (1.0 Nm)	I60M2.5×6.5 (1.0 Nm)	I60M3.5×8 (2.7 Nm)	I60M3.5×8 (2.7 Nm)	I60M3.5×10 (2.7 Nm)
	Wrench (screw)	WT07IP	WT07IP	WT15IP	WT15IP	WT15IP

Insert

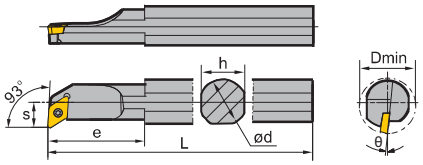
Finishing	Medium Cut	Roughing	Alum Machining	Cast Iron	PCBN/PCD
A126	A127	A129	A129	A129	A184

System code A322 Grade selection A42 Technical info A501 Cutting data A366

DC** steel boring bar S-Clamping

SDUCR/L Kr: 93°







Right hand style

Article	✻	Stock R	Stock L	Dimensions [mm] ød	L	h	s	L_2	e	D_{min}	θ	Inserts
S10M-SDUCR/L07		●	●	10	150	9	7	-	0	13	-8	DC**0702**
S12M-SDUCR/L07		●	●	12	150	11	9	22	22	16	-8	DC**0702**
S16M-SDUCR/L07		●	●	16	150	15	11	27	27	20	-6	DC**0702**
S16R-SDUCR/L07		●	●	16	200	15	11	27	27	20	-6	DC**0702**
A10H-SDUCR/L07	✻	●	●	10	100	9.5	7	-	0	13	-8	DC**0702**
A12K-SDUCR/L07	✻	●	●	12	125	11.5	9	22	22	16	-8	DC**0702**
A16M-SDUCR/L07	✻	●	●	16	150	15.5	11	27	27	20	-6	DC**0702**
S20Q-SDUCR/L11		●	●	20	180	18	13	40	40	25	-6	DC**11T3**
S20S-SDUCR/L11		●	●	20	250	18	13	40	40	25	-6	DC**11T3**
S25Q-SDUCR/L11		●	○	25	180	23	17	46	46	32	-6	DC**11T3**
S25T-SDUCR/L11		●	●	25	300	23	17	46	46	32	-6	DC**11T3**
A16R-SDUCR/L11	✻	○		16	200	15	14.5	27	27	23	-6	DC**11T3**
A20Q-SDUCR/L11	✻	●	●	20	180	19	13	40	40	25	-6	DC**11T3**
A25R-SDUCR/L11	✻	●	●	25	200	24	17	46	46	32	-6	DC**11T3**

● Ex stock ○ On demand

✻ With internal cooling

Spare parts

	Insert	DC**0702**	DC**11T3**
	ød	**10-16**	**16-25**
	Screw	I60M2.5×5.5 (1.0 Nm)	I60M3.5×8 (2.7 Nm)
	Wrench	WT07IP	WT15IP

Insert

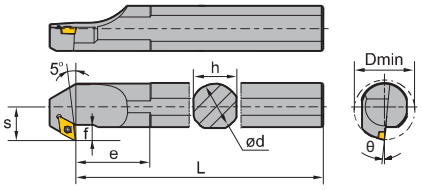
					
Finishing	**Medium Cut**	**Roughing**	**Alum Machining**	**Cast Iron**	**PCBN/PCD**
A126	A127	A129	A129	A129	A184

System code A322 | Grade selection A42 | Technical info A501 | Cutting data A366

DC** steel boring bar S-Clamping

SDZCR/L Kr: 85°







Right hand style

Article	*	Stock R	Stock L	Dimensions [mm] ød	L	h	s	e	f	D_{min}	θ	Inserts
S25Q-SDZCR/L11		●	●	25	180	23	17	30	6.9	32	-6	DC**11T3**
S25T-SDZCR/L11		●	●	25	300	23	17	30	6.9	32	-6	DC**11T3**
S32R-SDZCR/L11		○		32	200	30	22	39	8.4	40	-6	DC**11T3**
S32U-SDZCR/L11		●	●	32	350	30	22	39	8.4	40	-6	DC**11T3**
S40S-SDZCR/L11		○	●	40	250	37	27	47	9.4	50	-4	DC**11T3**
S40V-SDZCR/L11		●	●	40	400	37	27	47	9.4	50	-4	DC**11T3**
A25R-SDZCR/L11	*	●	●	25	200	24	17	30	4.5	32	-6	DC**11T3**
A32S-SDZCR/L11	*	●	●	32	250	31	22	39	6	40	-6	DC**11T3**

● Ex stock ○ On demand

* With internal cooling

Spare parts

	Insert	DC**11T3**	DC**11T3**
	ød	**25**	**32-40**
	Screw	I60M3.5×10 (2.7 Nm)	I60M3.5×12 (2.7 Nm)
	Screw (shim)		SM5×8.65XA
	Shim		D11BS
	Wrench (screw)	WT15IP	WT15IP
	Wrench (shim)		WH35L

Insert

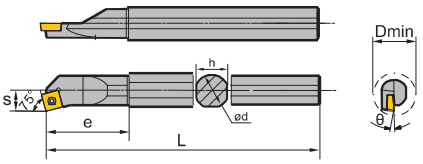
					
Finishing	**Medium Cut**	**Roughing**	**Alum Machining**	**Cast Iron**	**PCBN/PCD**
A126	A127	A129	A129	A129	A184

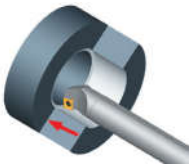
System code A322 Grade selection A42 Technical info A501 Cutting data A366

SC** steel boring bar S-Clamping

SSKCR/L Kr: 75°







Right hand style

Article	✻	Stock R	Stock L	Dimensions [mm] ød	L	h	s	e	D_{min}	θ	Inserts
S12M-SSKCR/L09		●	●	12	150	11	9	26	16	-10	SC**09T3**
S16M-SSKCR/L09		○	○	16	150	15	11	32.5	20	-11	SC**09T3**
S16R-SSKCR/L09		○	○	16	200	15	11	32.5	20	-11	SC**09T3**
S20Q-SSKCR/L09		○	○	20	180	18	13	34.5	25	-6	SC**09T3**
S20S-SSKCR/L09		●	○	20	250	18	13	34.5	25	-6	SC**09T3**
A12K-SSKCR/L09	✻	●	○	12	125	11	9	26	16	-10	SC**09T3**
A16M-SSKCR/L09	✻	●	○	16	150	15	11	32.5	20	-11	SC**09T3**
A20Q-SSKCR/L09	✻	●	○	20	180	19	13	34.5	25	-6	SC**09T3**
S25Q-SSKCR/L12		○	○	25	180	23	17	36.3	32	-8	SC**1204**
S25T-SSKCR/L12		●	○	25	300	23	17	36.3	32	-8	SC**1204**
S32R-SSKCR/L12		○	○	32	200	30	22	43.5	40	-10	SC**1204**
S32U-SSKCR/L12		●		32	350	30	22	43.5	40	-10	SC**1204**
A25R-SSKCR/L12	✻	●	○	25	200	24	17	41.3	32	-8	SC**1204**
A32S-SSKCR/L12	✻	●		32	250	31	22	42.8	40	-10	SC**1204**

● Ex stock ○ On demand

✻ With internal cooling

Spare parts

	Insert	SC**09T3**	SC**1204**	SC**1204**
	ød	12-20	25	32
	Screw	I60M3.5×8 (2.7 Nm)		
	Screw		I60M4×11X (3.4 Nm)	I60M4×11X (3.4 Nm)
	Screw (shim)			SM6×10XA
	Shim			S12BS
	Wrench (screw)	WT15IP	WT15IP	WT15IP
	Wrench (shim)			WH40L

System code A322 Grade selection A42 Technical info A501 Cutting data A366

SC** steel boring bar

Insert

			
Finishing	**Medium Cut**	**Roughing**	**Alum Machining**
A134	A135	A136	A136

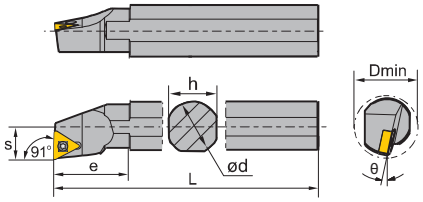
System code > A322 Grade selection > A42 Technical info > A501 Cutting data > A366

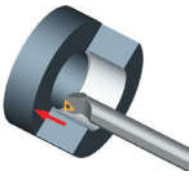
TC** steel boring bar S-Clamping

STFCR/L Kr: 91°



Right hand style





Article	✻	Stock R	Stock L	Dimensions [mm] ød	L	h	s	e	D_{min}	θ	Inserts
S12M-STFCR/L11		●	●	12	150	11	9	30	16	-10	TC**1102**
S16M-STFCR/L11		○	●	16	150	15	11	35	20	-6	TC**1102**
S16R-STFCR/L11		●	●	16	200	15	11	35	20	-6	TC**1102**
S20Q-STFCR/L11		○	○	20	180	18	13	36	25	-3	TC**1102**
S20S-STFCR/L11		●	●	20	250	18	13	36	25	-3	TC**1102**
A12K-STFCR/L11	✻	●	●	12	125	11.5	9	26	16	-10	TC**1102**
A16M-STFCR/L11	✻	●	●	16	150	15.5	11	30	20	-6	TC**1102**
A20Q-STFCR/L11	✻	●	●	20	180	19	13	36	25	-3	TC**1102**
S25Q-STFCR/L16		●	○	25	180	23	17	49	32	-6	TC**16T3**
S25T-STFCR/L16		●	●	25	300	23	17	49	32	-6	TC**16T3**
S32R-STFCR/L16		●	●	32	200	30	22	50	40	-10	TC**16T3**
S32U-STFCR/L16		●	●	32	350	30	22	50	40	-10	TC**16T3**
S40S-STFCR/L16		○	○	40	250	37	27	60	50	-8	TC**16T3**
S40V-STFCR/L16		●	●	40	400	37	27	60	50	-8	TC**16T3**
A25R-STFCR/L16	✻	●	●	25	200	24	17	45	32	-6	TC**16T3**
A32S-STFCR/L16	✻	●	○	32	250	31	22	49	40	-10	TC**16T3**

● Ex stock ○ On demand

✻ With internal cooling

Spare parts

	Insert	TC**1102**	TC**16T3**	TC**16T3**
	ød	**12-20**	**25**	**32-40**
	Screw	I60M2.5×6.5 (1.0 Nm)	I60M3.5×10 (2.7 Nm)	I60M3.5×12 (2.7 Nm)
	Screw (shim)			SM5×8.65XA
	Shim			T16BS
	Wrench (screw)	WT07IP	WT15IP	WT15IP
	Wrench (shim)			WH35L

System code A322 Grade selection A42 Technical info A501 Cutting data A366

TC** steel boring bar

Insert

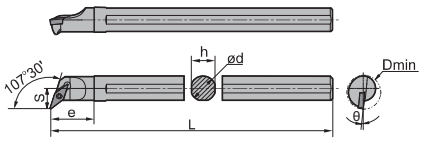
					
Finishing	**Medium Cut**	**Roughing**	**Alum Machining**	**Cast Iron**	**PCBN/PCD**
A141	A142	A143	A145	A143	A187

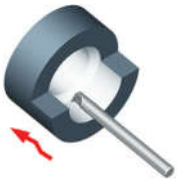
System code > A322 Grade selection > A42 Technical info > A501 Cutting data > A366

VC** steel boring bar S-Clamping

SVQCR/L Kr: 107°30'







Right hand style

Article	✻	Stock		Dimensions [mm]							Inserts
		R	L	ød	L	h	s	e	D_{min}	θ	
S16Q-SVQCR/L11		●	●	16	180	15	13	28	22	-6	VC**1103**
S20R-SVQCR/L11		●	○	20	200	18	15	32	26	-4	VC**1103**

● Ex stock ○ On demand

✻ With internal cooling

Spare parts

	Insert	**VC**1103****
	ød	**16-20**
	Screw	I60M2.5×6.5 (1.0 Nm)
	Wrench (screw)	WT07IP

Insert

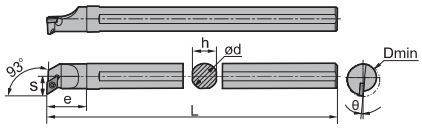
		
Finishing	**Alum Machining**	**PCBN/PCD**
A156	A154	A193

System code A322 | Grade selection A42 | Technical info A501 | Cutting data A366

VC** steel boring bar S-Clamping

SVUCR/L Kr: 93°







Right hand style

Article	*	Stock R	Stock L	Dimensions [mm] ød	L	h	s	L_2	e	D_{min}	θ	Inserts
S16Q-SVUCR/L11		●	○	16	180	15	15	25	25	24	-6	VC**1103**
S20R-SVUCR/L11		●	●	20	200	18	17	30	30	28	-4	VC**1103**
S40U-SVUCR/L16			○	40	350	37	27	56	56	50	-8	VC**1604**

● Ex stock ○ On demand

✻ With internal cooling

Spare parts

	Insert	VC**1103**	VC**1604**
	ød	**16-20**	**40**
	Screw	I60M2.5×6.5 (1.0 Nm)	I60M3.5×12 (2.7 Nm)
	Screw (shim)		SM5×8.65XA (4.0 Nm)
	Shim		V16BSC
	Wrench (screw)	WT07IP	WT15IP
	Wrench (shim)		WH35L

Insert

			
Finishing	**Medium Cut**	**Alum Machining**	**PCBN/PCD**
A156	A156	A154	A193

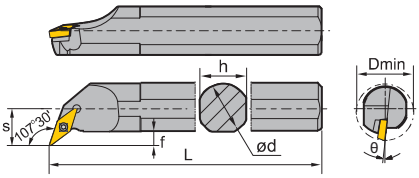
System code A322 Grade selection A42 Technical info A501 Cutting data A366

VB** steel boring bar S-Clamping

SVQBR/L Kr: 107°30'



Right hand style





Article	✻	Stock R	Stock L	Dimensions [mm] ød	L	h	s	e	f	D_{min}	θ	Inserts
S32R-SVQBR/L16		●	●	32	200	30	22	56	8.4	40	-8	VB**1604**
S32U-SVQBR/L16		●	●	32	350	30	22	56	8.4	40	-8	VB**1604**
S40V-SVQBR/L16		●	●	40	400	37	27	64	9.4	50	-8	VB**1604**
A32S-SVQBR/L16	✻	○	○	32	250	31	22	56	8.4	40	-8	VB**1604**

● Ex stock ○ On demand

✻ With internal cooling

Spare parts

	Insert	VB**1604**
	ød	**32-40**
	Screw	I60M3.5×12 (2.7 Nm)
	Screw (shim)	SM5×8.65XA
	Shim	V16BS
	Wrench (screw)	WT15IP
	Wrench (shim)	WH35L

Insert

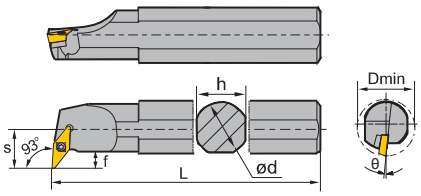
Finishing	Medium Cut	Roughing	PCBN/PCD
A148	A151	A152	A191

System code A322 | Grade selection A42 | Technical info A501 | Cutting data A366

VB** steel boring bar S-Clamping

SVUBR/L Kr: 93°







Right hand style

Article	✻	Stock R	Stock L	Dimensions [mm] ød	L	h	s	e	f	D_{min}	θ	Inserts
S32R-SVUBR/L16		●	○	32	200	30	22	49	8.4	40	-8	VB**1604**
S32U-SVUBR/L16		●	●	32	350	30	22	49	8.4	40	-8	VB**1604**
S40S-SVUBR/L16		●	○	40	250	37	27	56.5	9.4	50	-8	VB**1604**
S40V-SVUBR/L16		●	●	40	400	37	27	56.5	9.4	50	-8	VB**1604**
A32S-SVUBR/L16	✻	●	●	32	250	31	22	49	8.4	40	-8	VB**1604**

● Ex stock ○ On demand

✻ With internal cooling

Spare parts

	Insert	VB**1604**
	ød	**32-40**
	Screw	I60M3.5×12 (2.7 Nm)
	Screw (shim)	SM5×8.65XA
	Shim	V16BS
	Wrench (screw)	WT15IP
	Wrench (shim)	WH35L

Insert

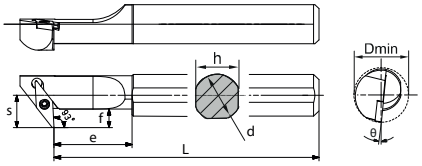
Finishing	Medium Cut	Roughing	PCBN/PCD
A148	A151	A152	A191

System code A322 Grade selection A42 Technical info A501 Cutting data A366

VB** steel boring bar S-Clamping

SVXBR/L Kr: 93°





Right hand style

Article	✲	Stock		Dimensions [mm]								Inserts
		R	L	ød	L	h	s	e	f	D_{min}	θ	
S16P-SVXBR/L1102-KR93		○	○	16	170	15	12.5	30	72	21	-8	VB**1102**
S16P-SVXBR/L11-KR93		○	○	16	170	15	12.5	30	72	21	-8	VB**1103**
S20R-SVXBR/L11-KR93		○	○	20	187	20	13	22	5.7	25	-8	VB**1103**
S25S-SVXBR/L16-KR93		○	○	25	235	25	19	26	10.2	32	-8	VB**1604**
S32T-SVXBR/L16-KR93		○	○	32	280	32	22	80	11.7	40	-8	VB**1604**
S40M-SVXBR/L16-KR93		○	○	40	130	40	27	40	14.3	50	-8	VB**1604**
S40U-SVXBR/L16-KR93		○	○	40	330	40	27	90	14.3	50	-8	VB**1604**

● Ex stock ○ On demand

✲ With internal cooling

Spare parts

	Insert	VB**1102**	VB**1103**	VB**1604**
	ød	**16-20**	**16-20**	**25-40**
	Screw	I60M2.5×6.5 (1.0 Nm)	I60M2.5×6.5 (1.0 Nm)	I60M3.5×12 (2.7 Nm)
	Screw (shim)			SM5×8.65XA (4.0 Nm)
	Shim			V16BS
	Wrench (screw)			WT15IP
	Wrench (shim)			WH35L
	Wrench	WT07IP	WT07IP	WT15IP

Insert

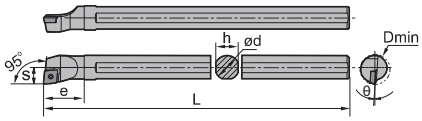
			
Finishing	**Medium Cut**	**Roughing**	**PCBN/PCD**
A148	A151	A152	A191

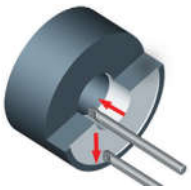
System code A322 Grade selection A42 Technical info A501 Cutting data A366

CP** steel boring bar S-Clamping

SCLPR/L Kr: 95°







Right hand style

Article	✻	Stock R	Stock L	Dimensions [mm] ød	L	h	s	e	D_{min}	θ	Inserts
S10K-SCLPR/L06		●	●	10	125	9	6	17	12	-7	CP**0602**
S12M-SCLPR/L06		●	●	12	150	11	8	20	16	-4	CP**0602**
S16Q-SCLPR/L09		●	●	16	180	15	10	29	20	-4	CP**09T3**
S20R-SCLPR/L09		○	○	20	200	18	13	35	25	-4	CP**09T3**

● Ex stock ○ On demand

✻ With internal cooling

Spare parts

	Insert	CP**0602**	CP**09T3**
	ød	**10-12**	**20-25**
	Screw	I60M2.5×5.5 (1.0 Nm)	I60M3.5×8 (2.7 Nm)
	Wrench (screw)	WT07IP	WT15IP

Insert

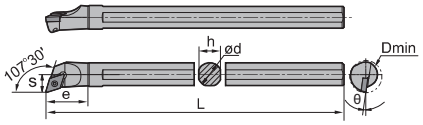
		
Finishing	**Medium Cut**	**Cast Iron**
A124	A124	A124

System code A322 Grade selection A42 Technical info A501 Cutting data A366

DP** steel boring bar S-Clamping

SDQPR/L Kr: 107°30'







Right hand style

Article	✲	Stock		Dimensions [mm]							Inserts
		R	L	ød	L	h	s	e	D_{min}	θ	
S10K-SDQPR/L07		●	●	10	125	9	7	20	13	-8	DP**0702**
S12M-SDQPR/L07		●	●	12	150	11	9	22	16	-8	DP**0702**
S16Q-SDQPR/L07		●	●	16	180	15	11	27	20	-6	DP**0702**
S16Q-SDQPR/L11		●	●	16	180	15	11	32	20	-6	DP**11T3**
S20R-SDQPR/L11		○	○	20	200	18	13	33	25	-6	DP**11T3**

● Ex stock ○ On demand

✲ With internal cooling

Spare parts

	Insert	DP**0702**	DP**0702**	DP**11T3**
	ød	10-12	16	16-20
	Screw	I60M2.5×5.5 (1.0 Nm)	I60M2.5×6.5 (1.0 Nm)	I60M3.5×8 (2.7 Nm)
	Wrench (screw)	WT07IP	WT07IP	WT15IP

Insert



Finishing

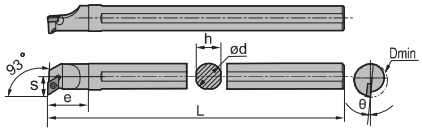
A131

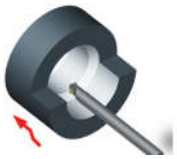
System code A322 Grade selection A42 Technical info A501 Cutting data A366

DP** steel boring bar S-Clamping

SDUPR/L Kr: 93°







Right hand style

Article	✻	Stock R	Stock L	Dimensions [mm] ød	L	h	s	e	D_{min}	θ	Inserts
S10K-SDUPR/L07		●	●	10	125	9	9	18	15	-8	DP**0702**
S12M-SDUPR/L07		●	●	12	150	11	9	19	16	-8	DP**0702**
S16Q-SDUPR/L07		●	●	16	180	15	11	25	20	-6	DP**0702**

● Ex stock ○ On demand

✻ With internal cooling

Spare parts

	Insert	DP**0702**	DP**0702**
	ød	**10-12**	**16**
	Screw	I60M2.5×5.5 (1.0 Nm)	I60M2.5×6.5 (1.0 Nm)
	Wrench (screw)	WT07IP	WT07IP

Insert



Finishing

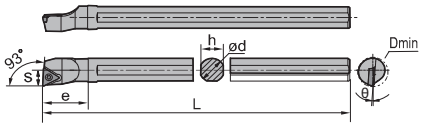
A131

System code A322 Grade selection A42 Technical info A501 Cutting data A366

TP** steel boring bar S-Clamping

STUPR/L Kr: 93°







Right hand style

Article	✻	Stock		Dimensions [mm]							Inserts
		R	L	ød	L	h	s	e	D_{min}	θ	
S10K-STUPR/L09		●	●	10	125	9	6	20	12	-6	TP**0902**
S12M-STUPR/L09		●	●	12	150	11	8	22	16	-4	TP**0902**
S12M-STUPR/L11		●	●	12	150	11	8	25	16	-4	TP**1103**
S16Q-STUPR/L11		●	●	16	180	15	10	27	20	-3	TP**1103**

● Ex stock ○ On demand

✻ With internal cooling

Spare parts

	Insert	TP**0902**	TP**1103**
	ød	**10-12**	**12-16**
	Screw	I60M2.2×5.5 (0.8 Nm)	I60M2.5×6.5 (1.0 Nm)
	Wrench	WT07IP	WT07IP

Insert



Finishing

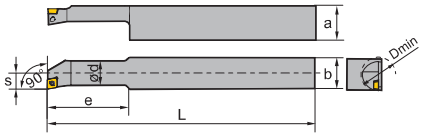
A147

System code A322 | Grade selection A42 | Technical info A501 | Cutting data A366

CC** steel boring bar S-Clamping

SCFCR/L Kr: 90°







Article	✲	Stock R	Stock L	Dimensions [mm] ød	a	b	L	s	e	D_{min}	Inserts
S10M-SCFCR/L06S25		●	○	10	27	25	150	7	30	13	CC**0602**
S12P-SCFCR/L06S25		●		12	27	25	170	9	35	16	CC**0602**
S16Q-SCFCR/L09S25		●	○	16	27	25	180	11	40	20	CC**09T3**
S20R-SCFCR/L09S25		●		20	27	25	200	13	45	25	CC**09T3**
S25R-SCFCR/L12S25		●	●	25	27	25	200	17	50	32	CC**1204**

● Ex stock ○ On demand

✲ With internal cooling

Spare parts

	Insert	CC**0602**	CC**09T3**	CC**1204**
	ød	**10-12**	**16-20**	**25**
	Screw	I60M2.5×5.5 (1.0 Nm)	I60M3.5×8 (2.7 Nm)	I60M4×12 (3.4 Nm)
	Wrench	WT07IP	WT15IP	WT20IP

Insert

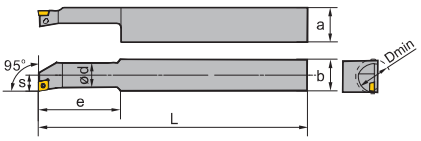
					
Finishing	**Medium Cut**	**Roughing**	**Alum Machining**	**Cast Iron**	**PCBN/PCD**
A116	A119	A121	A122	A121	A180

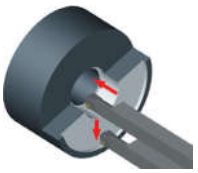
System code A322 Grade selection A42 Technical info A501 Cutting data A366

CC** steel boring bar S-Clamping

SCLCR Kr: 95°







Article	✲	Stock	Dimensions [mm]							Inserts
			ød	a	b	L	s	e	D_{min}	
S10M-SCLCR06S20		○	10	22	20	150	7	30	13	CC**0602**
S12P-SCLCR06S20		○	12	22	20	170	9	35	16	CC**0602**
S16Q-SCLCR09S20		●	16	22	20	180	11	40	20	CC**09T3**
S20R-SCLCR09S20		●	20	22	20	200	13	60	25	CC**09T3**

● Ex stock ○ On demand

✲ With internal cooling

Spare parts

	Insert	CC**0602**	CC**09T3**
	ød	**10-12**	**16-20**
	Screw	I60M2.5×5.5 (1.0 Nm)	I60M3.5×8 (2.7 Nm)
	Wrench	WT07IP	WT15IP

Insert

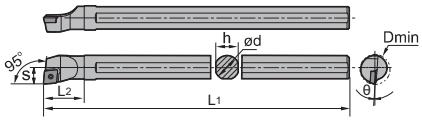
Finishing	Medium Cut	Roughing	Alum Machining	Cast Iron	PCBN/PCD
A116	A119	A121	A122	A121	A180

System code A322 Grade selection A42 Technical info A501 Cutting data A366

CP** solid carbide boring bar S-Clamping

SCLPR/L Kr: 95°







Right hand style

Article	✻	Stock R	Stock L	ØD	ød	h	s	L_1	L_2	θ	Inserts
C10M-SCLPR/L06		●	●	12	10	9	6	150	17	7	CP**0602**
C12Q-SCLPR/L06		●	○	16	12	11	8	180	20	4	CP**0602**
C16R-SCLPR/L09		●	●	20	16	15	10	200	29	4	CP**09T3**
E16R-SCLPR/L09	✻	○	○	19	16	15.5	10	200	-	-2	CP**09T3**
C20S-SCLPR/L09		●	○	25	20	18	13	250	35	4	CP**09T3**
E20S-SCLPR/L09	✻	○		24	20	19.5	13	250	-	-2	CP**09T3**

● Ex stock ○ On demand

✻ With internal cooling

Spare parts

	Insert	CP**0602**	CP**09T3**
	ød	**10-12**	**16-20**
	Screw	I60M2.5×5.5 (1.0 Nm)	I60M3.5×10 (2.7 Nm)
	Wrench (screw)	WT07IP	WT15IP

Insert

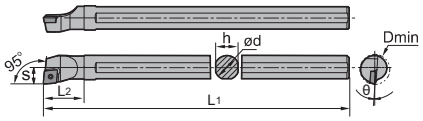
Finishing	Medium Cut	Cast Iron
A124	A124	A124

System code A322 Grade selection A42 Technical info A501 Cutting data A366

CC** solid carbide boring bar S-Clamping

SCLCR/L Kr: 95°







Right hand style

Article	✲	Stock		Dimensions [mm]							Inserts
		R	L	ØD	ød	h	s	L_1	L_2	θ	
E08K-SCLCR/L06-09	✲	●	●	9	8	7.5	5	125	-	-12	CC**0602**
E08K-SCLCR/L06-10	✲	●	●	10	8	7.5	6	125	-	-12	CC**0602**
E10M-SCLCR/L06	✲	●	●	12	10	9.5	7	150	-	-10	CC**0602**
E12Q-SCLCR/L06	✲	●	●	15	12	11.5	9	180	-	-10	CC**0602**
E16R-SCLCR/L06	✲	●	●	18	16	15.5	10	200	-	-8	CC**0602**
E12Q-SCLCR/L09	✲	●	●	15	12	11.5	9	180	-	-9	CC**09T3**
E16R-SCLCR/L09	✲	●	●	18	16	15.5	10	200	-	-10	CC**09T3**
E20S-SCLCR/L09	✲	●	●	24	20	19.5	13	250	-	-8	CC**09T3**
E25T-SCLCR/L09	✲	●	●	31	25	24	17	300	-	-6	CC**09T3**

● Ex stock ○ On demand

✲ With internal cooling

Spare parts

	Insert	CC**0602**	CC**09T3**	CC**09T3**
	ød	8-16	12	16-25
	Screw	I60M2.5×5.5 (1.0 Nm)	I60M3.5×8 (2.7 Nm)	I60M3.5×10 (2.7 Nm)
	Wrench (screw)	WT07IP	WT15IP	WT15IP

Insert

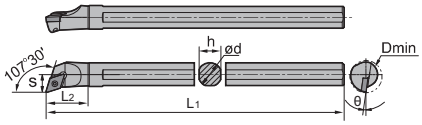
					
Finishing	**Medium Cut**	**Roughing**	**Alum Machining**	**Cast Iron**	**PCBN/PCD**
A116	A119	A121	A122	A121	A180

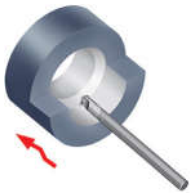
System code A322 Grade selection A42 Technical info A501 Cutting data A366

DP** solid carbide boring bar S-Clamping

SDQPR/L Kr: 107°30'







Right hand style

Article	✻	Stock		Dimensions [mm]							Inserts
		R	L	ØD	ød	h	s	L_1	L_2	θ	
C10M-SDQPR/L07		●	●	13	10	9	7	150	20	8	DP**0702
C12Q-SDQPR/L07		○	●	16	12	11	9	180	22	8	DP**0702
C16R-SDQPR/L07		○	○	20	16	15	11	200	27	6	DP**0702
C16R-SDQPR/L11		○	○	20	16	15	11	200	32	6	DP**11T3**
C20S-SDQPR/L11		●	○	25	20	18	13	250	33	6	DP**11T3**

● Ex stock ○ On demand

✻ With internal cooling

Spare parts

	Insert	DP**0702	DP**0702	DP**11T3**
	ød	10-12	16	16-20
	Screw	I60M2.5×5.5 (1.0 Nm)	I60M2.5×6.5 (1.0 Nm)	I60M3.5×8 (2.7 Nm)
	Wrench (screw)	WT07IP	WT07IP	WT15IP

Insert



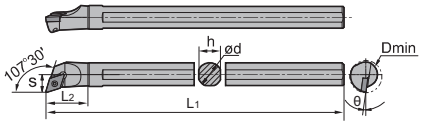
Finishing
A131

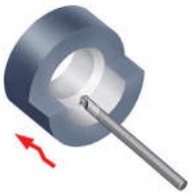
System code A322 Grade selection A42 Technical info A501 Cutting data A366

DC** solid carbide boring bar S-Clamping

SDQCR/L Kr: 107°30'







Right hand style

Article	✻	Stock		Dimensions [mm]							Inserts
		R	L	ØD	ød	h	s	L_1	L_2	θ	
E08K-SDQCR/L07	✻	●	●	11	8	7.5	6.5	125	-	-12	DC**0702**
E10M-SDQCR/L07	✻	●	●	12	10	9.5	7	150	-	-10	DC**0702**
E12Q-SDQCR/L07	✻	●	●	15	12	11.5	9	180	-	-10	DC**0702**
E16R-SDQCR/L07	✻	●	○	18	16	15.5	10	200	27-	-6	DC**0702**
E20S-SDQCR/L07	✻	●	○	24	20	19.5	13	250	33-	-4	DC**0702**
E16R-SDQCR/L11	✻	●	●	18	16	15.5	10	200	-	-8	DC**11T3**
E20S-SDQCR/L11	✻	●	○	24	20	19.5	13	250	-	-8	DC**11T3**
E25T-SDQCR/L11	✻	●	○	31	25	24	17	300	-	-6	DC**11T3**

● Ex stock ○ On demand

✻ With internal cooling

Spare parts

	Insert	DC**0702**	DC**11T3**
	ød	**8-20**	**16-25**
	Screw	I60M2.5×5.5 (1.0 Nm)	I60M3.5×10 (2.7 Nm)
	Wrench (screw)	WT07IP	WT15IP

Insert

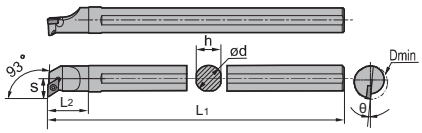
					
Finishing	**Medium Cut**	**Roughing**	**Alum Machining**	**Cast Iron**	**PCBN/PCD**
A126	A127	A129	A129	A129	A184

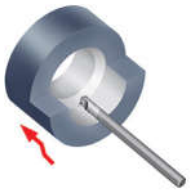
System code A322 Grade selection A42 Technical info A501 Cutting data A366

DP** solid carbide boring bar S-Clamping

SDUPR/L Kr: 93°







Right hand style

Article	✻	Stock		Dimensions [mm]							Inserts
		R	L	ØD	ød	h	s	L_1	L_2	θ	
C10M-SDUPR/L07		●	●	15	10	9	9	150	18	8	DP**0702**
C12Q-SDUPR/L07		●	○	16	12	11	9	180	19	8	DP**0702**
C16R-SDUPR/L07		○	○	20	16	15	11	200	25	6	DP**0702**

● Ex stock ○ On demand

✻ With internal cooling

Spare parts

	Insert	**DP**0702****
	ød	**15-20**
	Screw	I60M2.5×5.5 (1.0 Nm)
	Wrench	WT07IP

Insert



Finishing

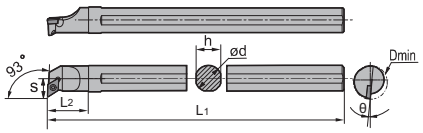
A131

System code A322 Grade selection A42 Technical info A501 Cutting data A366

DC** solid carbide boring bar S-Clamping

SDUCR/L Kr: 93°







Right hand style

Article	✲	Stock		Dimensions [mm]							Inserts
		R	L	ØD	ød	h	s	L_1	L_2	θ	
E10M-SDUCR/L07	✲	●	○	12	10	9.5	7	150	-	-10	DC**0702**
E12Q-SDUCR/L07	✲	●	●	15	12	11.5	9	180	-	-10	DC**0702**
E16R-SDUCR/L07	✲	●	○	18	16	15.5	10	200	-	-6	DC**0702**
E20S-SDUCR/L07	✲	○	○	24	20	19.5	13	250	-	-4	DC**0702**
E16R-SDUCR/L11	✲	●	○	18	16	15.5	10	200	-	-8	DC**11T3**
E20S-SDUCR/L11	✲	●	●	24	20	19.5	13	250	-	-8	DC**11T3**
E25T-SDUCR/L11	✲	○	○	31	25	24	17	300	-	-6	DC**11T3**

● Ex stock ○ On demand

✲ With internal cooling

Spare parts

	Insert	**DC**0702****	**DC**11T3****
	ød	**10-20**	**16-25**
	Screw	I60M2.5×5.5 (1.0 Nm)	I60M3.5×10 (2.7 Nm)
	Wrench (screw)	WT07IP	WT15IP

Insert

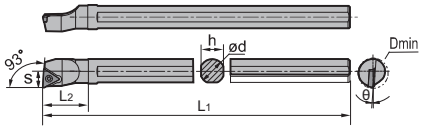
					
Finishing	**Medium Cut**	**Roughing**	**Alum Machining**	**Cast Iron**	**PCBN/PCD**
A126	A127	A129	A129	A129	A184

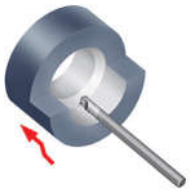
System code A322 Grade selection A42 Technical info A501 Cutting data A366

TP** solid carbide boring bar S-Clamping

STUPR/L Kr: 93°







Right hand style

Article	*	Stock		Dimensions [mm]							Inserts
		R	L	ØD	ød	h	s	L_1	L_2	θ	
C10M-STUPR/L09		○	○	12	10	9	6	150	20	6	TP**0902**
C12Q-STUPR/L09		●		16	12	11	8	180	22	4	TP**0902**
C12Q-STUPR/L11		●		16	12	11	8	180	25	4	TP**1103**
C16R-STUPR/L11		○	○	20	16	15	10	200	27	3	TP**1103

● Ex stock ○ On demand

* With internal cooling

Spare parts

	Insert	TP**0902**	TP**1103
		10-12	**12-16**
	Screw	I60M2.2×5.5 (0.8 Nm)	I60M2.5×6.5 (1.0 Nm)
	Wrench (screw)	WT07IP	WT07IP

Insert



Finishing

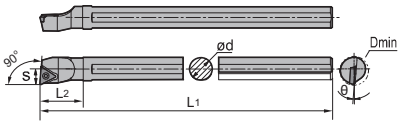
A147

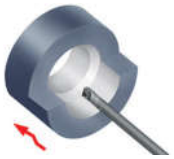
System code A322 Grade selection A42 Technical info A501 Cutting data A366

TC** solid carbide boring bar S-Clamping

STFCR/L Kr: 90°







Right hand style

Article	✲	Stock		Dimensions [mm]							Inserts
		R	L	ØD	ød	h	s	L_1	L_2	θ	
E08K-STFCR/L09	✲	○	●	11	8	7.5	6	125	-	-12	TC**0902**
E10M-STFCR/L09	✲	○	○	12	10	9.5	7	150	-	-10	TC**0902**
E12Q-STFCR/L11	✲	○	○	15	12	11.5	9	180	-	-10	TC**1102**
E16R-STFCR/L11	✲	○	○	18	16	15.5	10	200	-	-8	TC**1102**
E20S-STFCR/L11	✲	○	○	24	20	19.5	13	250	-	-8	TC**1102**
E20S-STFCR/L16	✲	○	○	24	20	19.5	13	250	-	-8	TC**16T3**
E25T-STFCR/L16	✲	○	○	31	25	24	17	300	-	-6	TC**16T3**

● Ex stock ○ On demand

✲ With internal cooling

Spare parts

	Insert	TC**0902**	TC**1102**	TC**16T3**
		8-10	**12-20**	**20-25**
	Screw	I60M2.2×5.5 (0.8 Nm)	I60M2.5×5.5 (1.0 Nm)	I60M3.5×10 (2.7 Nm)
	Wrench (screw)	WT07IP	WT07IP	WT15IP

Insert

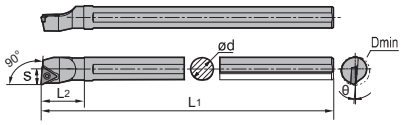
					
Finishing	**Medium Cut**	**Roughing**	**Alum Machining**	**Cast Iron**	**PCBN/PCD**
A141	A142	A143	A145	A143	A187

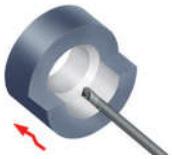
System code A322 Grade selection A42 Technical info A501 Cutting data A366

TC** solid carbide boring bar S-Clamping

STFPR/L Kr: 90°







Right hand style

Article	✲	Stock R	Stock L	Dimensions [mm] ØD	ød	h	s	L_1	L_2	θ	Inserts
E10M-STFPR/L11	✲	○	○	12	10	9.5	6	150	-	-5	TP**1103**
E12Q-STFPR/L11	✲	○	○	15	12	11.5	8	180	-	-4	TP**1103**
E16R-STFPR/L11	✲	○	○	19	16	15.5	10	200	-	-2	TP**1103**
E20S-STFPR/L11	✲	○	○	24	20	19	13	250	-	-2	TP**1103**

● Ex stock ○ On demand

✲ With internal cooling

Spare parts

	Insert	TP**1103**
		10-20
	Screw	I60M3.0×7.0 (1.8 Nm)
	Wrench (screw)	WT08IP

Insert



Finishing

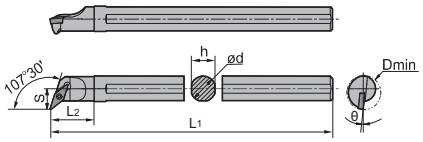
A147

System code A322 Grade selection A42 Technical info A501 Cutting data A366

VC** solid carbide boring bar S-Clamping

SVQCR/L Kr: 107°30'







Right hand style

Article	✻	Stock		Dimensions [mm]							Inserts
		R	L	ØD	ød	h	s	L_1	L_2	θ	
C16R-SVQCR/L11		○	○	22	16	15	13	200	28	-6	VC**1103**
C20S-SVQCR/L11		○	○	26	20	18	15	250	32	-4	VC**1103**

● Ex stock ○ On demand

✻ With internal cooling

Spare parts

	Insert	VC**1103**
		16-20
	Screw	I60M2.5×6.5 (1.0 Nm)
	Wrench (screw)	WT07IP

Insert

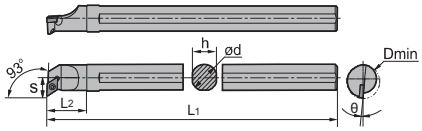
		
Finishing	**Alum Machining**	**PCBN/PCD**
A156	A154	A193

System code A322 | Grade selection A42 | Technical info A501 | Cutting data A366

VC** solid carbide boring bar S-Clamping

SVUCR/L Kr: 93°







Right hand style

Article	✻	Stock R	Stock L	Dimensions [mm] ØD	ød	h	s	L_1	L_2	θ	Inserts
C16R-SVUCR/L11			○	24	16	15	15	200	25	6	VC**1103**
E16R-SVUCR/L11	✻	○	○	22	16	15	13	200	-	-6.5	VC**1103**
C20S-SVUCR/L11		●	●	28	20	18	17	250	30	4	VC**1103**
E20S-SVUCR/L11	✻	○	○	27	20	18	13	250	-	-6.5	VC**1103**
E25T-SVUCR/L16	✻	○	○	35	25	23	20.5	300	-	-6.5	VC**1604**

● Ex stock ○ On demand

✻ With internal cooling

Spare parts

	Insert	VC**1103**	VC**1604**
		16-20	**25**
	Screw	l60M2.5×6.5 (1.0 Nm)	l60M3.5×10 (2.7 Nm)
	Wrench (screw)	WT07IP	WT15IP

Insert

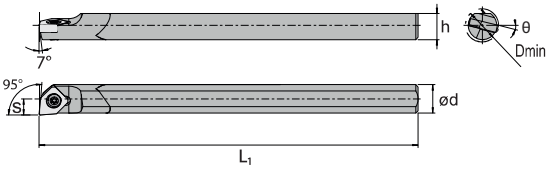
 Finishing	 Medium Cut	 Alum Machining	 PCBN/PCD
A156	A156	A154	A193

System code A322 Grade selection A42 Technical info A501 Cutting data A366

ZNEX solid carbide boring bar S clamping

SZLNR Kr: 95°





Article	*	Stock		Dimensions [mm]							Insert
		R	L	D_{min}	ød	h	s	L_1	L_2	θ	
C06X-SZLNR04		●		7	6	5,5	3,4	80	-	-14	ZNEX0401**

● Ex stock ○ On demand

* With internal cooling

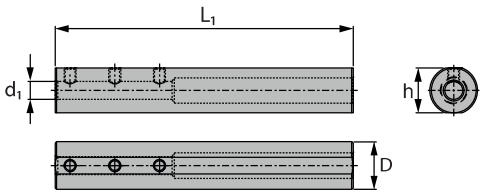
Spare parts

	Insert	**ZNEX0401****
	ød	**6**
	Screw	I60M2x3,7 (0,5 Nm)
	Wrench (Screw)	WT06IP

C06X** holder

SZLNR Kr: 95°





Article	Stock	Dimensions [mm]			
		D	d_1	L_1	h
SHSZ1600.06.100	●	16	6	100	15

● Ex stock ○ On demand

* With internal cooling

Spare parts

	Screw	M4x5SH
	Wrench (Screw)	WH20L

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General turning Recommended cutting data

Turning insert, negative

Material group		Composition / structure / heat treatment		Brinell hardness HB	Machining group	Starting values for cutting speed v_c [m/min]								
						HC (CVD)								
						YBC103			YB6315			YBC152		
						Feed rate [mm]			Feed rate [mm]			Feed rate [mm]		
						0,1	0,2	0,6	0,1	0,2	0,6	0,1	0,2	0,6
P	Unalloyed steel	approx. 0,15 % C	annealed	125	1	520	420	280	500	400	270	500	400	270
		approx. 0,45 % C	annealed	190	2	440	360	250	420	340	230	420	340	230
		approx. 0,45 % C	tempered	250	3	350	300	220	330	280	200	330	280	200
		approx. 0,75 % C	annealed	270	4	340	290	210	320	270	190	320	270	190
		approx. 0,75 % C	tempered	300	5	300	260	190	280	240	170	280	240	170
	Low-alloyed steel		annealed	180	6	420	320	200	400	300	180	400	300	180
			tempered	275	7	300	250	170	280	230	150	280	230	150
			tempered	300	8	280	240	170	260	220	150	260	220	150
			tempered	350	9	250	210	140	230	190	120	230	190	120
	High-alloyed steel and high-alloyed tool steel		annealed	200	10	380	310	210	360	290	190	360	290	190
			hardened and tempered	325	11	210	180	150	190	160	130	190	160	130
M	Stainless steel	ferritic/martensitic	annealed	200	12									
		martensitic	tempered	240	13									
		austenitic	quench hardened	180	14									
		austenitic-ferritic		230	15									
K	Grey cast iron	perlitic/ferritic		180	16									
		perlitic (martensitic)		260	17									
	Cast iron with spheroidal graphite	ferritic		160	18									
		perlitic		250	19									
	Malleable cast iron	ferritic		130	20									
		perlitic		230	21									
N	Aluminium wrought alloys	cannot be hardened		60	22									
		hardenable	hardened	100	23									
	Cast aluminium alloys	≤ 12 % Si, cannot be hardened		75	24									
		≤ 12 % Si, hardenable	hardened	90	25									
		> 12 % Si, cannot be hardened		130	26									
	Copper and copper alloys (bronze/brass)	machining steel, PB> 1%		110	27									
		CuZn, CuSnZn		90	28									
		CuSn, Pb-free copper, electrolytic copper		100	29									
S	Heat-resistant alloys	Fe-based alloys	annealed	200	30									
			hardened	280	31									
		Ni or Co bass	annealed	250	32									
			hardened	350	33									
			cast	320	34									
	Titanium alloys	pure titanium		R_m 400	35									
		α and β alloys	hardened	R_m 1050	36									
H	Hardened steel		hardened and tempered	55 HRC	37									
			hardened and tempered	60 HRC	38									
	Hard cast iron		cast	400	39									
	Hardened cast iron		hardened and tempered	55 HRC	40									
X	Non-metallic materials	Thermoplastics			41									
		Thermosetting plastics			42									
		Plastic, glass-fibre reinforced GFRP			43									
		Plastic, carbon fibre reinforced CFRP			44									
		Graphite			45									
		Wood			46									

Note: The given cutting values are guide values, which were determined under ideal conditions.
The values have to be adapted in individual cases.
For examples of material for cutting tool groups view page D11.

Starting values for cutting speed v_c [m/min]																								
HC (CVD)																								
YBC203			YBC252			YBC352			YBM153			YBM253			YBD102			YB7315			YBD152		
Feed rate [mm]			Feed rate [mm]			Feed rate [mm]			Feed rate [mm]			Feed rate [mm]			Feed rate [mm]			Feed rate [mm]			Feed rate [mm]		
0,1	0,4	0,8	0,1	0,4	0,8	0,2	0,5	1,0	0,2	0,4	0,6	0,2	0,4	0,6	0,1	0,3	0,4	0,1	0,3	0,5	0,1	0,3	0,5
480	370	230	480	370	230	430	330	220															
400	310	190	400	310	190	350	270	180															
310	250	160	310	250	160	260	210	150															
300	240	150	300	240	150	250	200	140															
260	210	130	260	210	130	210	170	120															
380	290	170	380	290	170	320	240	150															
260	210	140	260	210	140	200	170	120															
240	200	140	240	200	140	180	160	120															
220	180	110	220	180	110	150	130	90															
310	250	170	310	250	170	220	180	130															
150	130	100	150	130	100	–	–	–															
									380	295	210	350	265	180									
									190	155	120	150	110	65									
									250	200	150	200	140	80									
									200	160	130	160	115	70									
															530	380	220	600	410	220	540	375	210
															240	200	150	330	240	150	280	210	140
															300	210	145	340	250	160	290	215	140
															220	150	105	260	190	120	210	155	100
															330	265	220	370	300	230	320	265	210
															230	155	100	280	200	120	230	165	100

HC Coated carbide
HT Uncoated carbide, primary component (TiC) or (TiN), cermet
HW Uncoated carbide, primary component (WC)
BL Cubic boron nitride with low BN content
BH Cubic boron nitride with high BN content
CN Si3N4 ceramic
CM Mixed ceramic
HC_1 Coated cermet
BC CBN with coating
CC Coated cutting ceramic
CR Cutting ceramic, primary component aluminium oxide (Al_2O_3), reinforced
DP Polycrystalline diamond

General turning Recommended cutting data

Turning insert, negative

Material group		Composition / structure / heat treatment		Brinell hardness HB	Machining group	Starting values for cutting speed v_c [m/min]								
						HC (CVD)			HC (PVD)					
						YBD152C			YBG101			YBG102		
						Feed rate [mm]			Feed rate [mm]					
						0,1	0,3	0,5	0,1	0,3	0,6	0,1	0,3	0,6
P	Unalloyed steel	approx. 0,15 % C	annealed	125	1									
		approx. 0,45 % C	annealed	190	2									
		approx. 0,45 % C	tempered	250	3									
		approx. 0,75 % C	annealed	270	4									
		approx. 0,75 % C	tempered	300	5									
	Low-alloyed steel		annealed	180	6									
			tempered	275	7									
			tempered	300	8									
			tempered	350	9									
	High-alloyed steel and high-alloyed tool steel		annealed	200	10									
			hardened and tempered	325	11									
M	Stainless steel	ferritic/martensitic	annealed	200	12							360	290	200
		martensitic	tempered	240	13							180	150	110
		austenitic	quench hardened	180	14							240	190	140
		austenitic-ferritic		230	15							190	150	110
K	Grey cast iron	perlitic/ferritic		180	16	570	395	220						
		perlitic (martensitic)		260	17	310	230	150						
	Cast iron with spheroidal graphite	ferritic		160	18	310	230	150						
		perlitic		250	19	230	170	110						
	Malleable cast iron	ferritic		130	20	340	280	220						
		perlitic		230	21	250	180	110						
N	Aluminium wrought alloys	cannot be hardened		60	22				2000	1200	–	2000	1200	–
		hardenable	hardened	100	23				610	420	–	610	420	–
	Cast aluminium alloys	≤ 12 % Si, cannot be hardened		75	24				550	300	–	550	300	–
		≤ 12 % Si, hardenable	hardened	90	25				360	190	–	360	190	–
		> 12 % Si, cannot be hardened		130	26				320	170	–	320	170	–
	Copper and copper alloys (bronze/brass)	machining steel, PB> 1%		110	27				730	350	–	730	350	–
		CuZn, CuSnZn		90	28				370	330	–	370	330	–
		CuSn, Pb-free copper, electrolytic copper		100	29				270	200	–	270	200	–
S	Heat-resistant alloys	Fe-based alloys	annealed	200	30							65	45	–
			hardened	280	31							60	40	–
		Ni or Co bass	annealed	250	32							60	40	–
			hardened	350	33							55	35	–
			cast	320	34							55	35	–
	Titanium alloys	pure titanium		R_m 400	35							100	60	–
		α and β alloys	hardened	R_m 1050	36							80	40	–
H	Hardened steel		hardened and tempered	55 HRC	37									
			hardened and tempered	60 HRC	38									
	Hard cast iron		cast	400	39									
	Hardened cast iron		hardened and tempered	55 HRC	40									
X	Non-metallic materials	Thermoplastics			41									
		Thermosetting plastics			42									
		Plastic, glass-fibre reinforced GFRP			43									
		Plastic, carbon fibre reinforced CFRP			44									
		Graphite			45									
		Wood			46									

Note: The given cutting values are guide values, which were determined under ideal conditions.
The values have to be adapted in individual cases.
For examples of material for cutting tool groups view page D11.

Starting values for cutting speed v_c [m/min]																									
HC (PVD)																HC_1			HT					
YBS103			YBG105			YB9320			YBG205			YPD201			YNG151C			YNG151			YNT251		
Feed rate [mm]			Feed rate [mm]			Feed rate [mm]			Feed rate [mm]			Feed rate [mm]			Feed rate [mm]			Feed rate [mm]					
0,1	0,3	0,6	0,1	0,3	0,6	0,1	0,3	0,6	0,1	0,3	0,6	0,1	0,3	0,6	0,1	0,2	0,4	0,1	0,2	0,4	0,1	0,2	0,4
															510	350	–	510	350	–	510	350	–
															430	270	–	430	270	–	430	270	–
															330	220	–	330	220	–	330	220	–
															320	200	–	320	200	–	320	200	–
															280	170	–	280	170	–	280	170	–
															400	240	–	400	240	–	400	240	–
															290	180	–	290	180	–	290	180	–
															240	170	–	240	170	–	240	170	–
															220	150	–	220	150	–	220	150	–
															340	220	–	340	220	–	340	220	–
															180	110	–	180	110	–	180	110	–
360	290	200	360	290	200	360	290	200	320	250	160	360	290	200									
180	150	110	180	150	110	190	155	110	170	150	110	190	155	110									
240	190	140	240	190	140	250	210	150	230	190	140	250	210	150									
190	150	110	190	150	110	200	165	120	180	150	110	200	165	120									
															430	365	280	430	365	280	430	365	280
															390	340	270	390	340	270	390	340	270
															360	300	220	360	300	220	360	300	220
															340	295	230	340	295	230	340	295	230
															310	260	190	310	260	190	310	260	190
															250	210	150	250	210	150	250	210	150
80	65	45	65	45	–	55	35	–	55	–	–	–	65	45									
75	60	40	60	40	–	50	30	–	50	–	–	–	60	40									
70	60	40	60	40	–	50	30	–	50	–	–	–	60	40									
65	55	35	55	35	–	45	25	–	45	–	–	–	55	35									
65	55	35	55	35	–	45	25	–	45	–	–	–	55	35									
110	100	60	100	60	–	80	60	–	70	–	–	–	100	60									
90	80	40	80	40	–	60	40	–	50	–	–	–	80	40									

HC Coated carbide
HT Uncoated carbide, primary component (TiC) or (TiN), cermet
HW Uncoated carbide, primary component (WC)
BL Cubic boron nitride with low BN content
BH Cubic boron nitride with high BN content
CN Si3N4 ceramic
CM Mixed ceramic
HC_1 Coated cermet
BC CBN with coating
CC Coated cutting ceramic
CR Cutting ceramic, primary component aluminium oxide (Al_2O_3), reinforced
DP Polycrystalline diamond

General turning Recommended cutting data

Turning insert, negative

Material group		Composition / structure / heat treatment		Brinell hardness HB	Machining group	Starting values for cutting speed v_c [m/min]								
						HW						BL		
						YD101			YD201			YCB112		
						Feed rate [mm]			Feed rate [mm]			Feed rate [mm]		
						0,05	0,2	0,35	0,1	0,2	0,3	0,1	0,2	0,3
P	Unalloyed steel	approx. 0,15 % C	annealed	125	1									
		approx. 0,45 % C	annealed	190	2									
		approx. 0,45 % C	tempered	250	3									
		approx. 0,75 % C	annealed	270	4									
		approx. 0,75 % C	tempered	300	5									
	Low-alloyed steel		annealed	180	6									
			tempered	275	7									
			tempered	300	8									
			tempered	350	9									
	High-alloyed steel and high-alloyed tool steel		annealed	200	10									
			hardened and tempered	325	11									
M	Stainless steel	ferritic/martensitic	annealed	200	12									
		martensitic	tempered	240	13									
		austenitic	quench hardened	180	14									
		austenitic-ferritic		230	15									
K	Grey cast iron	perlitic/ferritic		180	16									
		perlitic (martensitic)		260	17									
	Cast iron with spheroidal graphite	ferritic		160	18									
		perlitic		250	19									
	Malleable cast iron	ferritic		130	20									
		perlitic		230	21									
N	Aluminium wrought alloys	cannot be hardened		60	22	1750	1200	800	1750	1200	800			
		hardenable	hardened	100	23	510	380	250	510	380	250			
	Cast aluminium alloys	≤ 12 % Si, cannot be hardened		75	24	460	320	175	460	320	175			
		≤ 12 % Si, hardenable	hardened	90	25	300	205	110	300	205	110			
		> 12 % Si, cannot be hardened		130	26	270	185	100	270	185	100			
	Copper and copper alloys (bronze/brass)	machining steel, PB> 1%		110	27	610	410	205	610	410	205			
		CuZn, CuSnZn		90	28	310	250	195	310	250	195			
		CuSn, Pb-free copper, electrolytic copper		100	29	225	170	115	225	170	115			
S	Heat-resistant alloys	Fe-based alloys	annealed	200	30									
			hardened	280	31									
		Ni or Co bass	annealed	250	32							180	160	140
			hardened	350	33							160	140	120
			cast	320	34							120	100	80
	Titanium alloys	pure titanium		R_m 400	35									
		α and β alloys	hardened	R_m 1050	36									
H	Hardened steel		hardened and tempered	55 HRC	37							220	170	130
			hardened and tempered	60 HRC	38							200	160	120
	Hard cast iron		cast	400	39							200	150	100
	Hardened cast iron		hardened and tempered	55 HRC	40							200	150	100
X	Non-metallic materials	Thermoplastics			41									
		Thermosetting plastics			42									
		Plastic, glass-fibre reinforced GFRP			43									
		Plastic, carbon fibre reinforced CFRP			44									
		Graphite			45									
		Wood			46									

Note: The given cutting values are guide values, which were determined under ideal conditions.
The values have to be adapted in individual cases.
For examples of material for cutting tool groups view page D11.

Starting values for cutting speed v_c [m/min]																									
BL										BC										BH			BL		
YCB113			YCB121			YCB131			YCB113C			YCB121C			YCB131C			YCB215			YZB630				
Feed rate [mm]			Feed rate [mm]			Feed rate [mm]			Feed rate [mm]			Feed rate [mm]			Feed rate [mm]			Feed rate [mm]			Feed rate [mm]				
0,1	0,2	0,3	0,1	0,2	0,3	0,1	0,3	0,5	0,1	0,2	0,3	0,1	0,2	0,3	0,1	0,3	0,5	0,1	0,3	0,5	0,1	0,3	0,5		
																			1500	980	400				
																			1250	800	320				
																			–	–	–				
																			300	200	100				
																			–	–	–				
																			300	200	100				
							160	140	120																
							140	120	100																
							120	100	80																
240	180	140	220	170	130	160	120	100	240	180	140	220	170	130	160	120	100				220	170	130		
220	180	140	200	160	120	150	120	100	220	180	140	200	160	120	150	120	100				200	160	120		
250	150	100	200	150	100	180	120	100	250	150	100	200	150	100	180	120	100				200	150	100		
200	150	100	200	150	100	150	120	100	200	150	100	200	150	100	150	120	100				200	150	100		

HC Coated carbide
HT Uncoated carbide, primary component (TiC) or (TiN), cermet
HW Uncoated carbide, primary component (WC)
BL Cubic boron nitride with low BN content
BH Cubic boron nitride with high BN content
CN Si3N4 ceramic
CM Mixed ceramic
HC_1 Coated cermet
BC CBN with coating
CC Coated cutting ceramic
CR Cutting ceramic, primary component aluminium oxide (Al_2O_3), reinforced
DP Polycrystalline diamond

General turning Recommended cutting data

Turning insert, negative

Material group		Composition / structure / heat treatment		Brinell hardness HB	Machining group	Starting values for cutting speed v_c [m/min]								
						BC			BH			CM		
						YZB630C			YZB233			CA1000		
						Feed rate [mm]			Feed rate [mm]			Feed rate [mm]		
						0,1	0,3	0,5	0,3	0,9	1,5	0,1	0,6	1,5
P	Unalloyed steel	approx. 0,15 % C	annealed	125	1									
		approx. 0,45 % C	annealed	190	2									
		approx. 0,45 % C	tempered	250	3									
		approx. 0,75 % C	annealed	270	4									
		approx. 0,75 % C	tempered	300	5									
	Low-alloyed steel		annealed	180	6									
			tempered	275	7									
			tempered	300	8									
			tempered	350	9									
	High-alloyed steel and high-alloyed tool steel		annealed	200	10									
			hardened and tempered	325	11									
M	Stainless steel	ferritic/martensitic	annealed	200	12									
		martensitic	tempered	240	13									
		austenitic	quench hardened	180	14									
		austenitic-ferritic		230	15									
K	Grey cast iron	perlitic/ferritic		180	16				1500	950	400			
		perlitic (martensitic)		260	17				1250	780	320			
	Cast iron with spheroidal graphite	ferritic		160	18				–	–	–			
		perlitic		250	19				500	300	100			
	Malleable cast iron	ferritic		130	20				–	–	–			
		perlitic		230	21				500	300	100			
N	Aluminium wrought alloys	cannot be hardened		60	22									
		hardenable	hardened	100	23									
	Cast aluminium alloys	≤ 12 % Si, cannot be hardened		75	24									
		≤ 12 % Si, hardenable	hardened	90	25									
		> 12 % Si, cannot be hardened		130	26									
	Copper and copper alloys (bronze/brass)	machining steel, PB> 1%		110	27									
		CuZn, CuSnZn		90	28									
		CuSn, Pb-free copper, electrolytic copper		100	29									
S	Heat-resistant alloys	Fe-based alloys	annealed	200	30									
			hardened	280	31									
		Ni or Co bass	annealed	250	32									
			hardened	350	33									
			cast	320	34									
	Titanium alloys	pure titanium		R_m 400	35									
		α and β alloys	hardened	R_m 1050	36									
H	Hardened steel		hardened and tempered	55 HRC	37	220	170	130				180	150	120
			hardened and tempered	60 HRC	38	200	160	120				140	120	80
	Hard cast iron		cast	400	39	200	150	100				80	60	40
	Hardened cast iron		hardened and tempered	55 HRC	40	200	150	100				–	–	–
X	Non-metallic materials	Thermoplastics			41									
		Thermosetting plastics			42									
		Plastic, glass-fibre reinforced GFRP			43									
		Plastic, carbon fibre reinforced CFRP			44									
		Graphite			45									
		Wood			46									

Note: The given cutting values are guide values, which were determined under ideal conditions.
The values have to be adapted in individual cases.
For examples of material for cutting tool groups view page D11.

Starting values for cutting speed v_c [m/min]																
CC			CN						CR							
CM1000			CN1000			CS1000			CW1400			CW1800				
Feed rate [mm]			Feed rate [mm]			Feed rate [mm]			Feed rate [mm]			Feed rate [mm]				
0,1	0,6	1,5	0,1	0,6	1,5	0,1	0,6	1,5	0,1	0,6	1,5	0,1	0,6	1,5		
			800	700	600											
			750	625	500											
			600	530	450											
			500	420	350											
			800	700	600											
			700	600	500											
						450	400	350	400	350	300	400	350	300		
						300	250	200	300	250	200	300	250	200		
						250	180	150	180	160	140	180	160	140		
200	160	140														
150	130	100														
–	–	–														
–	–	–														

HC Coated carbide
HT Uncoated carbide, primary component (TiC) or (TiN), cermet
HW Uncoated carbide, primary component (WC)
BL Cubic boron nitride with low BN content
BH Cubic boron nitride with high BN content
CN Si3N4 ceramic
CM Mixed ceramic
HC_1 Coated cermet
BC CBN with coating
CC Coated cutting ceramic
CR Cutting ceramic, primary component aluminium oxide (Al_2O_3), reinforced
DP Polycrystalline diamond

General turning Recommended cutting data

Turning insert, positive

Material group		Composition / structure / heat treatment		Brinell hardness HB	Machining group	Starting values for cutting speed v_c [m/min]								
						HC (CVD)								
						YBC103			YB6315			YBC152		
						Feed rate [mm]			Feed rate [mm]			Feed rate [mm]		
						0,1	0,2	0,4	0,1	0,2	0,4	0,1	0,2	0,4
P	Unalloyed steel	approx. 0,15 % C	annealed	125	1	460	400	280	450	390	270	450	390	270
		approx. 0,45 % C	annealed	190	2	390	340	240	380	330	230	380	330	230
		approx. 0,45 % C	tempered	250	3	310	275	210	300	265	200	300	265	200
		approx. 0,75 % C	annealed	270	4	300	265	200	290	255	190	290	255	190
		approx. 0,75 % C	tempered	300	5	260	235	180	250	225	170	250	225	170
	Low-alloyed steel		annealed	180	6	370	310	190	360	300	180	360	300	180
			tempered	275	7	260	220	160	250	210	150	250	210	150
			tempered	300	8	240	210	160	230	200	150	230	200	150
			tempered	350	9	210	180	130	200	170	120	200	170	120
	High-alloyed steel and high-alloyed tool steel		annealed	200	10	330	285	200	320	275	190	320	275	190
			hardened and tempered	325	11	170	160	140	160	150	130	160	150	130
M	Stainless steel	ferritic/martensitic	annealed	200	12									
		martensitic	tempered	240	13									
		austenitic	quench hardened	180	14									
		austenitic-ferritic		230	15									
K	Grey cast iron	perlitic/ferritic		180	16									
		perlitic (martensitic)		260	17									
	Cast iron with spheroidal graphite	ferritic		160	18									
		perlitic		250	19									
	Malleable cast iron	ferritic		130	20									
		perlitic		230	21									
N	Aluminium wrought alloys	cannot be hardened		60	22									
		hardenable	hardened	100	23									
	Cast aluminium alloys	≤ 12 % Si, cannot be hardened		75	24									
		≤ 12 % Si, hardenable	hardened	90	25									
		> 12 % Si, cannot be hardened		130	26									
	Copper and copper alloys (bronze/brass)	machining steel, PB> 1%		110	27									
		CuZn, CuSnZn		90	28									
		CuSn, Pb-free copper, electrolytic copper		100	29									
S	Heat-resistant alloys	Fe-based alloys	annealed	200	30									
			hardened	280	31									
		Ni or Co bass	annealed	250	32									
			hardened	350	33									
			cast	320	34									
	Titanium alloys	pure titanium		R_m 400	35									
		α and β alloys	hardened	R_m 1050	36									
H	Hardened steel		hardened and tempered	55 HRC	37									
			hardened and tempered	60 HRC	38									
	Hard cast iron		cast	400	39									
	Hardened cast iron		hardened and tempered	55 HRC	40									
X	Non-metallic materials	Thermoplastics			41									
		Thermosetting plastics			42									
		Plastic, glass-fibre reinforced GFRP			43									
		Plastic, carbon fibre reinforced CFRP			44									
		Graphite			45									
		Wood			46									

Note: The given cutting values are guide values, which were determined under ideal conditions.
The values have to be adapted in individual cases.
For examples of material for cutting tool groups view page D11.

Starting values for cutting speed v_c [m/min]																								
HC (CVD)																								
YBC203			YBC252			YBC352			YBM153			YBM253			YBD102			YB7315			YBD152		
Feed rate [mm]			Feed rate [mm]			Feed rate [mm]			Feed rate [mm]			Feed rate [mm]			Feed rate [mm]			Feed rate [mm]			Feed rate [mm]		
0,1	0,3	0,6	0,1	0,3	0,6	0,2	0,4	0,6	0,1	0,2	0,4	0,1	0,2	0,4	0,1	0,2	0,4	0,1	0,2	0,4	0,1	0,2	0,4
430	350	230	430	350	230	390	310	230															
360	295	190	360	295	190	315	250	190															
280	235	160	280	235	160	230	195	160															
270	225	150	270	225	150	220	185	150															
235	195	130	235	195	130	185	155	120															
340	270	170	340	270	170	290	225	150															
235	195	140	235	195	140	170	150	130															
220	180	140	220	180	140	150	140	130															
190	155	110	190	155	110	130	110	90															
280	230	170	280	230	170	180	160	140															
130	115	100	130	115	100	–	–	–															
									360	340	260	330	300	230									
									180	170	140	150	130	95									
									240	220	170	195	170	115									
									190	175	140	160	140	100									
															480	345	200	540	370	200	490	340	190
															220	180	135	300	220	135	250	190	130
															270	210	130	300	230	145	260	200	125
															200	150	95	230	180	110	190	140	90
															275	240	180	310	260	190	265	230	170
															190	145	85	230	170	100	190	140	90

HC Coated carbide
HT Uncoated carbide, primary component (TiC) or (TiN), cermet
HW Uncoated carbide, primary component (WC)
BL Cubic boron nitride with low BN content
BH Cubic boron nitride with high BN content
CN Si3N4 ceramic
CM Mixed ceramic
HC_1 Coated cermet
BC CBN with coating
CC Coated cutting ceramic
CR Cutting ceramic, primary component aluminium oxide (Al_2O_3), reinforced
DP Polycrystalline diamond

General turning Recommended cutting data

Turning insert, positive

Material group		Composition / structure / heat treatment		Brinell hardness HB	Machining group	Starting values for cutting speed v_c [m/min]								
						HC (CVD)			HC (PVD)					
						YBD152C			YBG101			YBG102		
						Feed rate [mm]			Feed rate [mm]			Feed rate [mm]		
						0,1	0,2	0,4	0,1	0,2	0,4	0,1	0,2	0,4
P	Unalloyed steel	approx. 0,15 % C	annealed	125	1									
		approx. 0,45 % C	annealed	190	2									
		approx. 0,45 % C	tempered	250	3									
		approx. 0,75 % C	annealed	270	4									
		approx. 0,75 % C	tempered	300	5									
	Low-alloyed steel		annealed	180	6									
			tempered	275	7									
			tempered	300	8									
			tempered	350	9									
	High-alloyed steel and high-alloyed tool steel		annealed	200	10									
			hardened and tempered	325	11									
M	Stainless steel	ferritic/martensitic	annealed	200	12							305	245	205
		martensitic	tempered	240	13							150	125	100
		austenitic	quench hardened	180	14							200	165	145
		austenitic-ferritic		230	15							160	130	115
K	Grey cast iron	perlitic/ferritic		180	16	520	360	200						
		perlitic (martensitic)		260	17	280	210	135						
	Cast iron with spheroidal graphite	ferritic		160	18	280	220	135						
		perlitic		250	19	210	160	100						
	Malleable cast iron	ferritic		130	20	280	245	180						
		perlitic		230	21	210	160	100						
N	Aluminium wrought alloys	cannot be hardened		60	22				1800	880	–	1800	880	–
		hardenable	hardened	100	23				540	380	–	540	380	–
	Cast aluminium alloys	≤ 12 % Si, cannot be hardened		75	24				500	270	–	500	270	–
		≤ 12 % Si, hardenable	hardened	90	25				320	170	–	320	170	–
		> 12 % Si, cannot be hardened		130	26				290	150	–	290	150	–
	Copper and copper alloys (bronze/brass)	machining steel, PB> 1%		110	27				660	320	–	660	320	–
		CuZn, CuSnZn		90	28				330	300	–	330	300	–
		CuSn, Pb-free copper, electrolytic copper		100	29				220	175	–	220	175	–
S	Heat-resistant alloys	Fe-based alloys	annealed	200	30							60	45	–
			hardened	280	31							55	40	–
		Ni or Co bass	annealed	250	32							55	40	–
			hardened	350	33							50	35	–
			cast	320	34							50	35	–
	Titanium alloys	pure titanium		R_m 400	35							95	60	–
		α and β alloys	hardened	R_m 1050	36							75	40	–
H	Hardened steel		hardened and tempered	55 HRC	37									
			hardened and tempered	60 HRC	38									
	Hard cast iron		cast	400	39									
	Hardened cast iron		hardened and tempered	55 HRC	40									
X	Non-metallic materials	Thermoplastics			41									
		Thermosetting plastics			42									
		Plastic, glass-fibre reinforced GFRP			43									
		Plastic, carbon fibre reinforced CFRP			44									
		Graphite			45									
		Wood			46									

Note: The given cutting values are guide values, which were determined under ideal conditions.
The values have to be adapted in individual cases.
For examples of material for cutting tool groups view page D11.

	Starting values for cutting speed v_c [m/min]																							
	HC (PVD)															HC_1			HT					
	YBS103			YBG105			YB9320			YBG205			YPD201			YNG151C			YNG151			YNT251		
	Feed rate [mm]			Feed rate [mm]			Feed rate [mm]			Feed rate [mm]			Feed rate [mm]			Feed rate [mm]			Feed rate [mm]			Feed rate [mm]		
	0,1	0,2	0,4	0,1	0,2	0,4	0,1	0,2	0,4	0,1	0,2	0,4	0,1	0,3	0,6	0,1	0,2	0,4	0,1	0,2	0,4	0,1	0,2	0,4
																470	320	–	470	320	–	470	320	–
																400	250	–	400	250	–	400	250	–
																300	200	–	300	200	–	300	200	–
																290	180	–	290	180	–	290	180	–
																245	150	–	245	150	–	245	150	–
																370	220	–	370	220	–	370	220	–
																255	160	–	255	160	–	255	160	–
																200	140	–	200	140	–	200	140	–
																185	130	–	185	130	–	185	130	–
																285	180	–	285	180	–	285	180	–
																150	90	–	150	90	–	150	90	–
	305	245	205	305	245	205	305	245	206	270	205	165	360	290	200									
	150	125	100	150	125	100	160	130	110	145	125	100	190	155	110									
	200	165	145	200	165	145	210	180	155	195	165	145	250	210	150									
	160	130	115	160	130	115	170	140	120	155	130	115	200	165	120									
																390	330	255	390	330	255	390	330	255
																355	310	245	355	310	245	355	310	245
																330	270	200	330	270	200	330	270	200
																310	270	210	310	270	210	310	270	210
																260	220	160	260	220	160	260	220	160
																210	170	120	210	170	120	210	170	120
	70	50	–	60	45	–	50	35	–	50	–	–	–	50	35									
	60	45	–	55	40	–	45	30	–	45	–	–	–	45	30									
	60	45	–	55	40	–	45	30	–	45	–	–	–	45	30									
	66	40	–	50	35	–	40	–	–	40	–	–	–	40	–									
	66	40	–	50	35	–	40	–	–	40	–	–	–	40	–									
	100	65	–	95	60	–	75	60	–	70	–	–	–	75	60									
	75	50	–	75	40	–	55	40	–	45	–	–	–	55	40									

HC Coated carbide
HT Uncoated carbide, primary component (TiC) or (TiN), cermet
HW Uncoated carbide, primary component (WC)
BL Cubic boron nitride with low BN content
BH Cubic boron nitride with high BN content
CN Si3N4 ceramic
CM Mixed ceramic
HC_1 Coated cermet
BC CBN with coating
CC Coated cutting ceramic
CR Cutting ceramic, primary component aluminium oxide (Al_2O_3), reinforced
DP Polycrystalline diamond

General turning Recommended cutting data

Turning insert, positive

Material group		Composition / structure / heat treatment		Brinell hardness HB	Machining group	Starting values for cutting speed v_c [m/min]								
						HW						BL		
						YD101			YD201			YCB112		
						Feed rate [mm]			Feed rate [mm]			Feed rate [mm]		
						0,1	0,2	0,3	0,1	0,2	0,3	0,1	0,2	0,3
P	Unalloyed steel	approx. 0,15 % C	annealed	125	1									
		approx. 0,45 % C	annealed	190	2									
		approx. 0,45 % C	tempered	250	3									
		approx. 0,75 % C	annealed	270	4									
		approx. 0,75 % C	tempered	300	5									
	Low-alloyed steel		annealed	180	6									
			tempered	275	7									
			tempered	300	8									
			tempered	350	9									
	High-alloyed steel and high-alloyed tool steel		annealed	200	10									
			hardened and tempered	325	11									
M	Stainless steel	ferritic/martensitic	annealed	200	12									
		martensitic	tempered	240	13									
		austenitic	quench hardened	180	14									
		austenitic-ferritic		230	15									
K	Grey cast iron	perlitic/ferritic		180	16									
		perlitic (martensitic)		260	17									
	Cast iron with spheroidal graphite	ferritic		160	18									
		perlitic		250	19									
	Malleable cast iron	ferritic		130	20									
		perlitic		230	21									
N	Aluminium wrought alloys	cannot be hardened		60	22	1550	1050	700	1550	1050	700			
		hardenable	hardened	100	23	450	320	200	450	320	200			
	Cast aluminium alloys	≤ 12 % Si, cannot be hardened		75	24	400	270	150	400	270	150			
		≤ 12 % Si, hardenable	hardened	90	25	250	170	95	250	170	95			
		> 12 % Si, cannot be hardened		130	26	230	150	85	230	150	85			
	Copper and copper alloys (bronze/brass)	machining steel, PB> 1%		110	27	550	370	170	550	370	170			
		CuZn, CuSnZn		90	28	260	210	160	260	210	160			
		CuSn, Pb-free copper, electrolytic copper		100	29	190	145	95	190	145	95			
S	Heat-resistant alloys	Fe-based alloys	annealed	200	30	55	30	–	55	30	–	–	–	–
			hardened	280	31	55	25	–	55	25	–	–	–	–
		Ni or Co bass	annealed	250	32	45	25	–	45	25	–	180	160	140
			hardened	350	33	35	20	–	35	20	–	160	140	120
			cast	320	34	40	20	–	40	20	–	120	100	80
	Titanium alloys	pure titanium		R_m 400	35	60	40	–	60	40	–	–	–	–
		α and β alloys	hardened	R_m 1050	36	30	–	–	30	–	–	–	–	–
H	Hardened steel		hardened and tempered	55 HRC	37							220	170	130
			hardened and tempered	60 HRC	38							200	160	120
	Hard cast iron		cast	400	39							200	150	100
	Hardened cast iron		hardened and tempered	55 HRC	40							200	150	100
X	Non-metallic materials	Thermoplastics			41									
		Thermosetting plastics			42									
		Plastic, glass-fibre reinforced GFRP			43									
		Plastic, carbon fibre reinforced CFRP			44									
		Graphite			45									
		Wood			46									

Note: The given cutting values are guide values, which were determined under ideal conditions.
The values have to be adapted in individual cases.
For examples of material for cutting tool groups view page D11.

Starting values for cutting speed v_c [m/min]																									
BL										BC									BH			DP			
YCB113			YCB121			YCB131			YCB113C			YCB121C			YCB131C			YCB215			YCD421			
Feed rate [mm]			Feed rate [mm]			Feed rate [mm]			Feed rate [mm]			Feed rate [mm]			Feed rate [mm]			Feed rate [mm]						
0,1	0,2	0,3	0,1	0,2	0,3	0,1	0,2	0,3	0,1	0,2	0,3	0,1	0,2	0,3	0,1	0,2	0,3	0,1	0,2	0,3	0,05	0,2	0,4
																			1500	980	400			
																			1250	800	320			
																			–	–	–			
																			300	200	100			
																			–	–	–			
																			300	200	100			
																						2500	2000	250
																						2500	2000	250
																						2500	2000	250
																						2500	2000	250
																						1000	800	100
																						650	530	70
																						650	530	70
																						400	330	40
							–	–	–															
							–	–	–															
							160	140	120															
							140	120	100															
							120	100	80															
							–	–	–															
							–	–	–															
240	180	140	220	170	130	160	120	100	240	180	140	220	170	130	160	120	100						
220	180	140	200	160	120	150	120	100	220	180	140	200	160	120	150	120	100						
250	150	100	200	150	100	180	120	100	250	150	100	200	150	100	180	120	100						
200	150	100	200	150	100	150	120	100	200	150	100	200	150	100	150	120	100						

HC Coated carbide
HT Uncoated carbide, primary component (TiC) or (TiN), cermet
HW Uncoated carbide, primary component (WC)
BL Cubic boron nitride with low BN content
BH Cubic boron nitride with high BN content
CN Si3N4 ceramic
CM Mixed ceramic
HC_1 Coated cermet
BC CBN with coating
CC Coated cutting ceramic
CR Cutting ceramic, primary component aluminium oxide (Al_2O_3), reinforced
DP Polycrystalline diamond

PARTING & GROOVING



Parting & grooving

Product overview	**A382-A383**
System overview	**A384-A385**
Tool holder orientation	**A386-A387**
Chip breaker overview	**A388-A389**
Application fields of chip breakers	**A390-A391**
Grade overview	**A392-A393**
Application fields of grades	**A394-A397**
System code – inserts	**A398**
Inserts	**A399-A415**
System code – inserts – QC series	**A416**
Inserts – QC series	**A417-A421**
System code – tool holders	**A422-A424**
Tool holders	**A425-A445**
Precision monoblock tool holder	**A446-A451**
System code – tool holders – QC series	**A452**
Tool holders – QC series	**A453-A455**
Recommended cutting data	**A456-A457**
Technical Information	**A510**
Special tools	**A513**

Parting & grooving inserts

Double sided



ZT*D-MM	ZT*D-MG	ZT**-EG	ZP*D-MG	ZP*D-MG-R/L	
2-8	2.5-6	1-6.5	2.5-6	2.35-2.85	Width
A399	A404	A407	A400	A401	Page



ZR*D-MG	ZR*D-EG	ZR*D-LH	ZILD-LC		
2.5-6	3-6	6-8	8		Width
A410	A411	A414	A415		Page

Single sided



ZT*S-MM	ZT*S-MG	ZP*S-MG	ZP*S-MG-R/L	ZIMF-NM	ZIGQ-NM	
2.5-6	5-6	2.5-6	2.5-3	3-6	3-6	Width
A406	A405	A402	A403	A412	A413	Page

Three cutting edges



QC**R/L	QC**R/L***R		
0.75-4.8	1-4		Width
A417	A420		Page

External tool holders



GQCR/L**

A453



QER/L**

A425



QE*SN**

A431



QE*SN-1**

A432



QE*SN30

A427



QE*SR/L

A430



QECDR/L

A428

Page



QFR/L**

A434



QFRR/LL**

A436



QF*DR/L

A439



QF*SRR/LL

A438



QFHSDR/L

A441



QX*DR/L

A429



QZS*

A433

Page



QER/L-DGC**

A446



QER/L-DGSC**

A448



QER/L-SC**

A449

Page

Boring bars



C*-Q*DR/L**

A444



C40X-Q*DR/L

A443



S*K-QCR/L**

A454

Page

Parting & grooving System overview

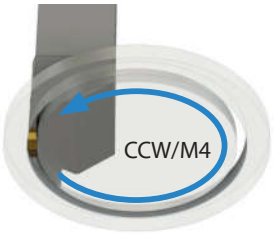
	System information	Groove width S	Groove depth a_p max.	Grooving	Parting	Turning	Page
QE system	• System for **radial parting off and grooving** and **turning** • Tool holders available for internal and external machining • Available with targeted cooling and direct supply of coolant via the shank • Inserts with one or two cutting edges • Inserts for precision grooving available	2,0–6,0 mm	max 30,0 mm	✔	✔	✔	■ A425 ■ A444
QZ and QE system	• System for **radial parting off** and **grooving** • Insert holder and clamping block in one • Self-clamping system • Inserts with one cutting edge • Can be used in a wide range of applications	2,5–6,0 mm	max 60,0 mm	✔	✔	–	■ A431
QF system	• System for radial **grooving and turning** • Penetration diameter range of Ø 48–400 mm • Screw clamped for maximum stability • Inserts with two cutting edges • Tool holders available in a neutral design or with a 90° offset • Right base for M3 • Left base for M4	2,0–6,0 mm	max 22,0 mm	✔	–	✔	■ A434
QX system	• System for **undercutting** • Shank holder with 45° approach angle • Screw clamped for maximum stability • For grooving inserts with two cutting edges • For turning operations and machining undercuts and recesses. Can also be used in copy turning applications	3,0–6,0 mm	max 4,0 mm	✔	–	✔	■ A429

■ External tool holders
● Boring bars

	System information	Groove width S	Groove depth a_r max.	Grooving	Parting	Turning	Page
C*X-Q system	• Special system for **machining aluminium wheels** • Boring bar with 15° approach angle • Screw clamped for maximum stability • For grooving inserts with two cutting edges • Penetration diameter range from Ø 160 mm • Special chip breakers for aluminium machining	6,0–8,0 mm	max 80,0 mm	–	–	✔	● A443
QE*S*N system	• System specially designed for **heat-resistant alloys** • Special chip breakers for heat-resistant alloys • Screw clamped for maximum stability • For grooving inserts with one cutting edge	3,0–6,0 mm	max 22,0 mm	✔	–	✔	■ A430
QC system	• System for **precision grooving** • Tool holders available for external and internal machining • Tangential screw clamping for high stability and rigidity • Three cutting edges for high efficiency • Precision-ground grooving inserts with high tolerances • High repeatability even after replacing insert • Grooving inserts with straight or round cutting edge • Special feature with internal machining: right tool holder + left grooving insert / left tool holder + right grooving insert	0,5–4,8 mm	max 5,0 mm	✔	–	–	■ A453 ● A454

■ External tool holders
● Boring bars

Tool holders for axial machining

Tool holder	Tool holder orientation
QFFD****L**-**H	
QFFD****R**-**H	
QFFD****LL**-**H	
QFFD****RR**-**H	
QFFD****L**-**L	
QFFD****R**-**L	

Notes

Parting & grooving Chip breaker overview

Grooving

MM P M K S




Sintered chip breaker with straight cutting edge for general machining of steel, stainless steel, cast iron and difficult-to-machine materials. Can be used for grooving, turning and parting off.

MG P M K S




Sintered chip breaker for general machining of steel, stainless steel, cast iron and difficult-to-machine materials. Can be used for grooving, turning and parting off.

MG P M K S




Universal chip breaker with round profile for general machining of steel, stainless steel and cast iron. Suitable for grooving and profiling.

EG M P S



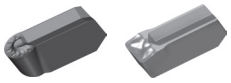

Ground precision chip breaker for grooving and turning applications. Suitable for machining of stainless steel. E-tolerance for high repeatability.

EG M P S




Ground precision chip breaker with round profile for grooving and turning applications. Suitable for machining of stainless steel. E-tolerance for high repeatability.

NM S

Special chip breaker for machining of heat-resistant materials.

Grooving

LC N





Ground chip breaker for profile and turning applications of non-ferrous metals.

LH N

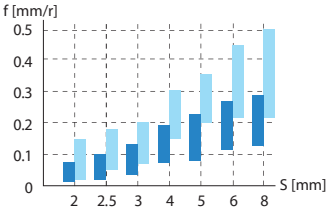
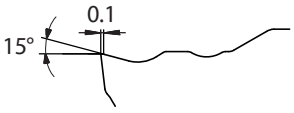
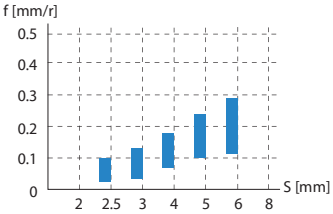
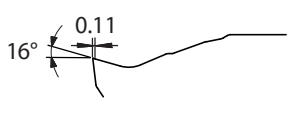
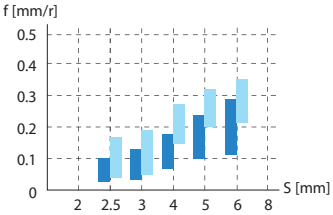
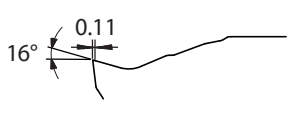
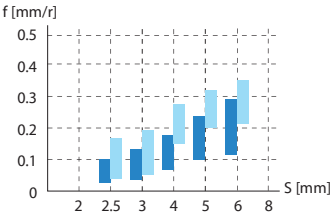
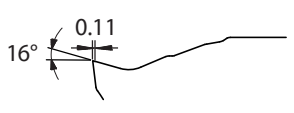
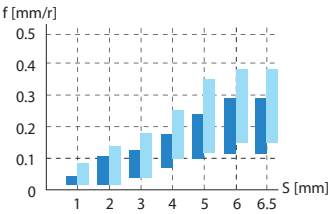
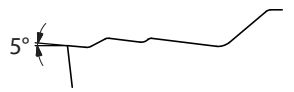
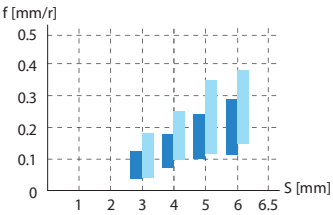
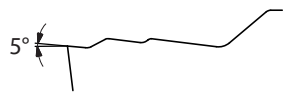
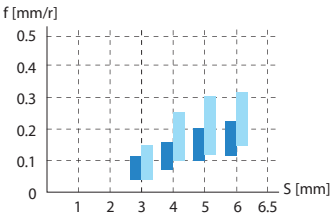
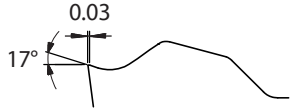




Ground chip breaker for profile and turning applications of non-ferrous metals.

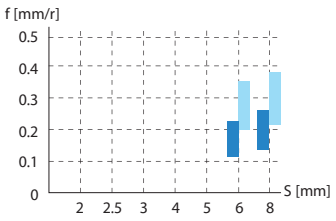
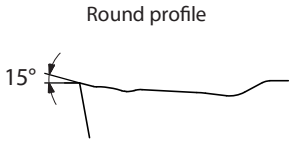
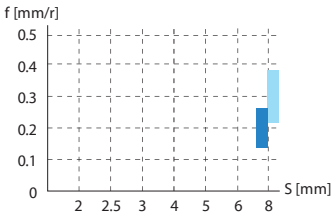
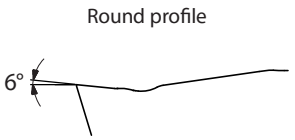
Parting & grooving

Application fields of chip breakers

Chip breaker	Application	P	M	K	N	S	H	Feed	Cutting edge design
ZT****-MM	Parting & grooving ✔	✔	✔	✔		✔			
	Turning ✔								S = 4 mm
ZP****-MG	Parting & grooving ✔	✔	✔	✔		✔			
	Turning –								S = 4 mm
ZT****-MG	Parting & grooving ✔	✔	✔	✔		✔			
	Turning ✔								S = 4 mm
ZR****-MG	Parting & grooving ✔	✔	✔	✔		✔			Round profile 
	Turning ✔								S = 4 mm
ZT****-EG	Parting & grooving ✔	✔	✔	✔		✔			
	Turning ✔								
ZR****-EG	Parting & grooving ✔	✔	✔		✔	✔			Round profile 
	Turning ✔								S = 4 mm
ZI****-NM	Parting & grooving ✔		✔		✔	✔			Round profile 
	Turning ✔								S = 4 mm

✔ Very suitable ✔ Suitable

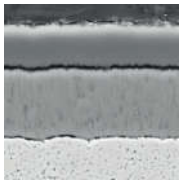
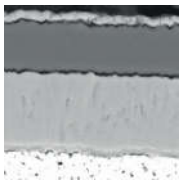
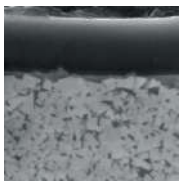
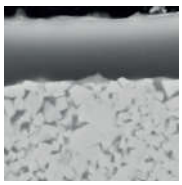
Parting & grooving
Turning

Chip breaker	Application	P	M	K	N	S	H	Feed	Cutting edge design
ZR****-LH	Parting & grooving ✔				✔	✔			
	Turning ✔								
ZI****-LC	Parting & grooving ✔				✔	✔			
	Turning ✔								

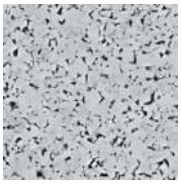
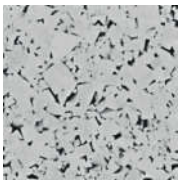
✔ Very suitable ✔ Suitable

Parting & grooving
Turning

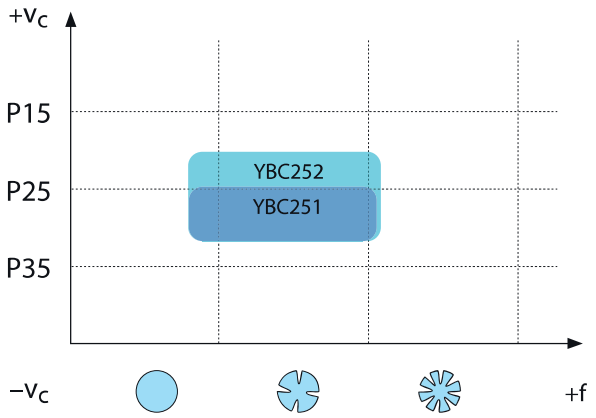
Parting & grooving

Grade	ISO	Micro structure	Grade description
YBC252	P20 - P35		CVD coated P20–P35 carbide grade for medium operation to roughing of steel and casting steel. Optimal performance of wear resistance and toughness for a wide application field.
YBC251	P20 - P35		CVD coated P20–P35 carbide grade for medium operation to roughing of steel and casting steel in lower cutting speed.
YBG105	S05 - S20		PVD multilayer coated S05–S20 carbide substrate for finishing to medium application of super alloy material but also stainless steel. Good wear resistance and thermal stability in a wide application field.
YBG102	S05 - S15		PVD coated S05–S15 carbide substrate for finishing to medium application of super alloy material, stainless steel and aluminum. Good wear resistance in a wide application field.
YB9320	P10 - P30 M10 - M25		PVD multilayer coated P10–P30/M10–M25 carbide substrate for finishing to medium machining of stainless steel, super alloys and steel (grooving/milling). Optimised coating stability for higher wear resistance and thermal stability in a wide range of applications.
YBG205	P10 - P30 M20 - M40 S15-S25		PVD multilayer coated P10–P30/M20–M40/S15–S25 carbide substrate for finishing to medium machining of stainless steel, super alloys and steel (milling). Excellent wear resistance and thermal stability in a wide range of applications.
YBG202	P10 - P30 M10 - M25		PVD coated P10–P30/M10–M25 carbide substrate for finishing to medium application of stainless steel and steel (milling). Good wear resistance in a wide application field.
YBG302	P15 - P30 M25 - M40		PVD coated P15–P30/M25–M40 carbide substrate for medium roughing application of stainless steel and steel (milling). Good wear resistance and toughness.

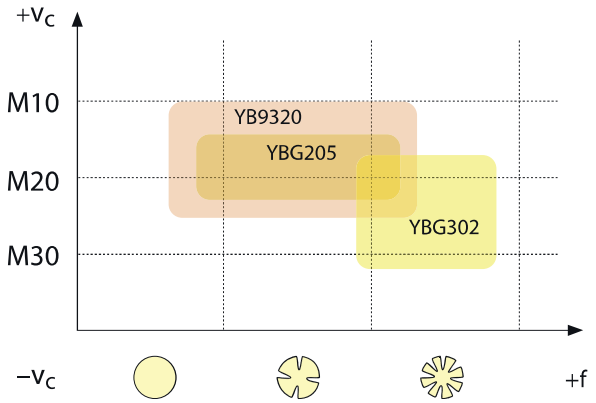
Parting & grooving

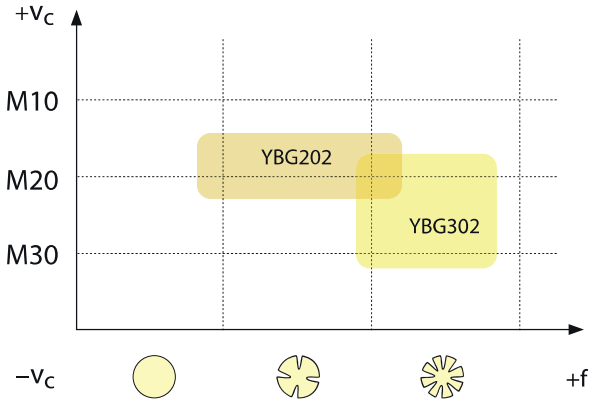
Grade	ISO	Micro structure	Grade description
YD101	K05 - K20 N05 - N20		Uncoated K05–K20/N05–N20 carbide substrate for fine to medium application in aluminum and other material.
YD201	K10 - K30 N10 - N30		Uncoated K10–K30/N10–N30 carbide substrate for medium application in aluminum and other material.

CVD coated carbide grades for steel

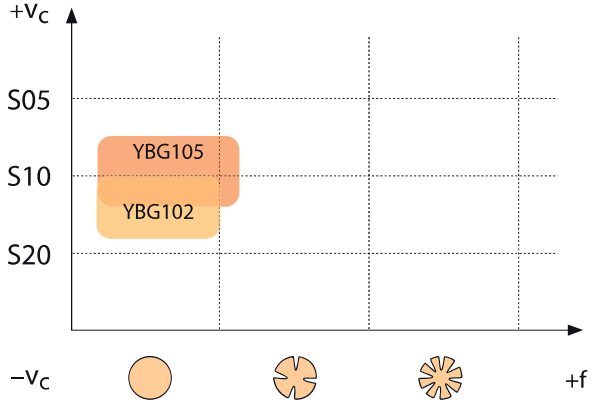


PVD coated carbide grades for stainless steel

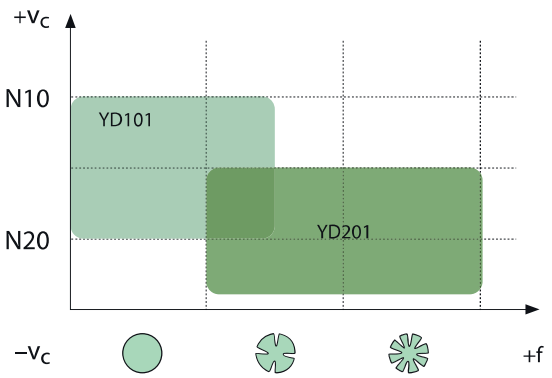




PVD coated carbide grades for superalloys



Carbide grades for non-ferrous metals



Application fields of grades – parting & grooving

	ISO	HC[1] (CVD)	HC[1] (PVD)	HT	HC[2]	Ceramic	HW	CBN	PCD
P	P01								
	P10	YBC251 YBC252							
	P20								
	P30								
	P40								
M	M01								
	M10		YBG202 YBG205 YB9320 YBG302						
	M20								
	M30								
	M40								
K	K01								
	K10								
	K20								
	K30								
N	N01								
	N10						YD101 YD102		
	N20								
	N30								
S	S01								
	S10		YBG102 YBG105						
	S20								
	S30								
H	H01								
	H10								
	H20								
	H30								

P	Steel	N	Non-ferrous metals
M	Stainless steel	S	Heat-resistant alloys
K	Cast iron	H	Hardened materials

HC[1] Coated carbide
HT Uncoated cermet
HC[2] Coated cermet
HW Uncoated carbide

Notes

Parting & grooving System code – inserts

ZP	G	D	04	04	–	M	G
1	2	3	4	5		6	7

Application	
Code	Description
ZP	Parting
ZT	Grooving & turning
ZR	Form turning

1

Insert seat size [mm]	
Groove width	
Code	Description
B	2,0
E	2,5
F	3,0
G	4,0
H	5,0
K	6,0
L	8,0

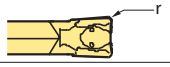
2

No. of cutting edges	
Code	Description
S	Single
D	Double

3

Insert thickness S [mm]	
	
Code	S
02	2,0
025	2,5
03	3,0
04	4,0
05	5,0
06	6,0
08	8,0

4

Nose radius r [mm]	
	
Code	r
02	0,2
03	0,3
04	0,4
08	0,8

5

Tolerance class [mm]	
Code	Description
M	±0,13
E	±0,025

6

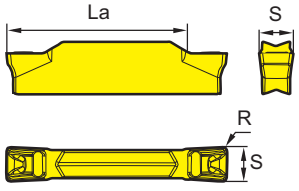
Chip breaker	
Code	Description
G	General chip breaker
F	Special chip breaker
M	Straight edge

7

● Ideal machining conditions
◍ Normal machining conditions
✱ Unfavourable machining conditions

Parting inserts

ZT** parting & grooving insert (double sided)



Double cutting edge

						HC¹ (CVD)							HC¹ (PVD)							HW		
	ISO	R±0.1	La *max*	S	f	YBC252	YBC251						YBG105	YBG102	YB9320	YBG205	YBG202	YBG302		YD101	YD201	
	ZTBD02002-MM	0.2	13	2	0,02-0,07										●	●		○				
	ZTED02503-MM	0.3	17	2.5	0,03-0,1										●							
	ZTFD0303-MM	0.3	17	3	0,04-0,13										●							
	ZTGD0404-MM	0.4	22	4	0,06-0,18										●							
	ZTHD0504-MM	0.4	22	5	0,08-0,23										●							
	ZTKD0608-MM	0.8	22	6	0,12-0,27										●							
	ZTLD0808-MM	0.8	28	8	0,13-0,29	○									●	○						

● Ex stock ○ On demand

HC¹ Coated carbide
HW Uncoated carbide

Tool holders

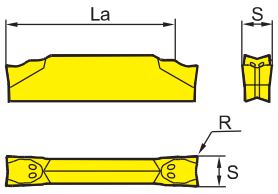
QE*D*R/L	QF*D*R/L-H	QF*D*LL-H	QF*D*RR-H	QF*D*R/L-L	*-QBDR/L	C***-Q*DR/L
						
A425	A434	A436	A436	A439	A444	A444

QE*D*R/L-DGC	QE*D*R/L-DGSC	QE*D*R/L-SC
		
A446	A448	A449

System code A398 | Grade selection A394 | Technical info A501 | Cutting data A456

Ideal machining conditions
Normal machining conditions
Unfavourable machining conditions

Parting inserts



Double cutting edge

Parting & grooving insert (double sided)						HC[1] (CVD)				HC[1] (PVD)						HW	
						P											
						M											
						K											
						N											
						S											
						H											
ISO		R±0.1	La *max*	S±0.10	f	YBC252	YBC251			YBG105	YBG102	YB9320	YBG205	YBG202	YBG302	YD101	YD201
	**ZPED02502-MG**	0.2	17	2.5	0,03-0,1		●					●		○	●		
	ZPFD0302-MG	0.2	17	3	0,04-0,13	●	●					●		○	●		
	ZPGD0402-MG	0.2	22	4	0,07-0,18		●					●			●		○
	ZPHD0503-MG	0.3	22	5	0,1-0,24									○	●		
	ZPKD0604-MG	0.4	22	6	0,12-0,29	○								○	●		

● Ex stock ○ On demand

HC[1] Coated carbide
HW Uncoated carbide

Tool holders

QE*D*R/L	QF*D*R/L-H	QF*D*RR-H	QF*D*LL-H	QF*D*R/L-L	C***-Q*DR/L	QE*D*R/L-DGC
						
A425	A434	A436	A436	A439	A444	A446

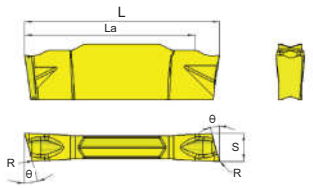
QE*D*R/L-DGSC	QE*D*R/L-SC
	
A448	A449

System code A398 | Grade selection A394 | Technical info A501 | Cutting data A456

- Ideal machining conditions
- Normal machining conditions
- Unfavourable machining conditions

Parting inserts

ZT** parting & grooving insert (double sided)



Right hand style

	P	M	K	N	S	H
HC[1] (CVD)	●○					
HC[1] (PVD)	●●●●	●●●●			●●●●●	
HW				●●		

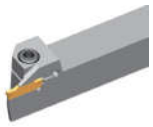
	ISO	La *max*	L	S	θ	R	f	HC[1] (CVD) YBC252	HC[1] (CVD) YBC251	HC[1] (PVD) YBG105	HC[1] (PVD) YBG102	HC[1] (PVD) YB9320	HC[1] (PVD) YBG205	HC[1] (PVD) YBG202	HC[1] (PVD) YBG302	HW YD101	HW YD201
	**ZPED02502-MG-6L**	17	20	2.35	6°	0.2	0,03-0,08								●		
	ZPED02502-MG-6R	17	20	2.35	6°	0.2	0,03-0,08					●			●		
	ZPED02502-MG-15L	17	20	2.35	15°	0.2	0,03-0,05								○		
	ZPED02502-MG-15R	17	20	2.35	15°	0.2	0,03-0,05							○	○		
	ZPFD0302-MG-6L	17	20	2.85	6°	0.2	0,04-0,1					●		○	●		
	ZPFD0302-MG-6R	17	20	2.85	6°	0.2	0,04-0,1					●		○	○		
	ZPFD0302-MG-15L	17	20	2.85	15°	0.2	0,04-0,08							○	○		
	ZPFD0302-MG-15R	17	20	2.85	15°	0.3	0,04-0,08					●			○		

● Ex stock ○ On demand

HC[1] Coated carbide
HW Uncoated carbide

Tool holders

QE*D*R/L



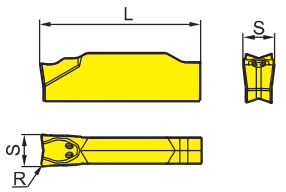
A425

System code A398 Grade selection A394 Technical info A501 Cutting data A456

Ideal machining conditions
Normal machining conditions
Unfavourable machining conditions

Parting inserts

Parting & grooving insert (single sided)



Single cutting edge

		ISO	R±0.1	S±0.10	f	HC[1] (CVD) YBC252	HC[1] (CVD) YBC251	HC[1] (PVD) YBG105	HC[1] (PVD) YBG102	HC[1] (PVD) YB9320	HC[1] (PVD) YBG205	HC[1] (PVD) YBG202	HC[1] (PVD) YBG302	HW YD101	HW YD201
P															
M															
K															
N															
S															
H															
		**ZPES02502-MG**	0.2	2.5	0,03-0,1					○		○	●		
		ZPFS0302-MG	0.2	3	0,04-0,13	●				●			●		
		ZPGS0402-MG	0.2	4	0,07-0,18	○						○	●		○
		ZPGS0402-MG-25	0.2	4	0,07-0,18					●					
		ZPHS0503-MG	0.3	5	0,1-0,24							○	●		
		ZPHS0503-MG-25	0.3	5	0,1-0,24					●					
		ZPKS0604-MG	0.4	6	0,12-0,29							○	●		
		ZPKS0604-MG-25	0.4	6	0,12-0,29					●					

● Ex stock ○ On demand
Single sided inserts only for parting blades

HC[1] Coated carbide
HW Uncoated carbide

Tool holders

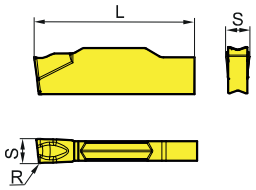
QE*S*R/L	QZ**+QE**	QF*S*LL-H	QF*S*RR-H	QF*S*R/L-L	QF*S*R/L-H
					
A427	A432	A438	A438	A441	A442

System code A398 | Grade selection A394 | Technical info A501 | Cutting data A456

- Ideal machining conditions
- Normal machining conditions
- Unfavourable machining conditions

Parting inserts

Parting & grooving insert (single sided)



Single cutting edge

	HC[1] (CVD)				HC[1] (PVD)						HW		
P	◉	◉					◉	◉	◉	◉			
M							◉	◉	◉	◉			
K													
N											○	◉	
S					○	○	◉	◉	◉				
H													

	ISO	R±0.1	L	S±0.10	θ	f	YBC252	YBC251	YBG105	YBG102	YB9320	YBG205	YBG202	YBG302	YD101	YD201
	**ZPES02502-MG-6L**	0.2	19.9	2.5	6°	0,03-0,08					●					
	ZPES02502-MG-6R	0.2	19.9	2.5	6°	0,03-0,08					●					
	ZPFS0302-MG-6L	0.2	19.9	3	6°	0,04-0,1					●					
	ZPFS0302-MG-6R	0.2	19.9	3	6°	0,04-0,1					●					

● Ex stock ○ On demand

Single sided inserts only for parting blades

HC[1] Coated carbide
HW Uncoated carbide

Tool holders

QZ+QE****

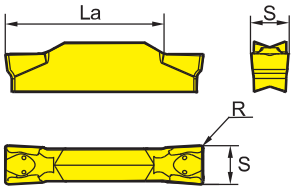


A432

System code A398 | Grade selection A394 | Technical info A501 | Cutting data A456

Ideal machining conditions
Normal machining conditions
Unfavourable machining conditions

Parting inserts



Double cutting edge

Parting & grooving insert (double sided)						HC[1] (CVD)				HC[1] (PVD)						HW	
						P											
						M											
						K											
						N											
						S											
						H											
ISO		R±0.1	La *max*	S±0.10	f	YBC252	YBC251			YBG105	YBG102	YB9320	YBG205	YBG202	YBG302	YD101	YD201
	ZTED02503-MG		17	2.5	0,03-0,11									○	●		
	ZTFD0303-MG		17	3	0,04-0,14						○		●	●	●		
	ZTGD0402-MG		22	4	0,07-0,2												
	ZTGD0404-MG		22	4	0,07-0,2		●						●	○	●		●
	ZTHD0504-MG		22	5	0,10-0,25								●	○	●		
	ZTKD0604-MG		22	6	0,13-0,30							○	●				
	ZTKD0608-MG		22	6	0,13-0,30						○	●		○	●		

● Ex stock ○ On demand

HC[1] Coated carbide
HW Uncoated carbide

Tool holders

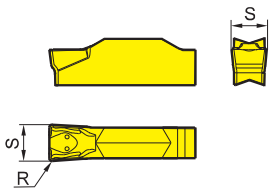
QE*D*R/L	QF*D*R/L-H	QF*D*RR-H	QF*D*LL-H	QF*D*R/L-L	C***-Q*DR/L	QE*D*R/L-DGC
						
A425	A434	A436	A436	A439	A444	A446

QE*D*R/L-DGSC	QE*D*R/L-SC
	
A448	A449

System code A398 | Grade selection A394 | Technical info A501 | Cutting data A456

- Ideal machining conditions
- Normal machining conditions
- Unfavourable machining conditions

Parting inserts



Single cutting edge

Parting & grooving insert (single sided)					HC[1] (CVD)				HC[1] (PVD)						HW	
					YBC252	YBC251			YBG105	YBG102	YB9320	YBG205	YBG202	YBG302	YD101	YD201
P					⊛	⊛					⊛	⊛	⊛	✺		
M											⊛	⊛	⊛	✺		
K																
N															○	⊛
S									○	○	⊛	⊛	⊛			
H																
ISO		R±0.1	S±0.10	f												
	**ZTHS0504-MG**	0.4	5	0,10-0,25							○		○	●		
	**ZTKS0608-MG**	0.8	6	0,13-0,30									○	●		

● Ex stock ○ On demand

HC[1] Coated carbide
HW Uncoated carbide

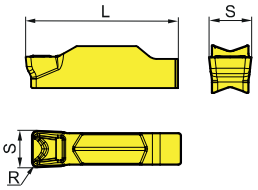
Tool holders

QE*S*R/L	QZ**+QE**	QF*S*LL-H	QF*S*RR-H	QF*S*R/L-L	QF*S*R/L-H
					
A427	A431	A438	A438	A441	A442

System code A398 Grade selection A394 Technical info A501 Cutting data A456

Ideal machining conditions
Normal machining conditions
Unfavourable machining conditions

Parting inserts

Parting & grooving insert (single sided)							HC[1] (CVD)						HC[1] (PVD)						HW	
 Single cutting edge						P														
						M														
						K														
						N														
						S														
						H														
	ISO		R±0.1	L	S±0.10	f	YBC252	YBC251					YBG105	YBG102	YB9320	YBG205	YBG202	YBG302	YD101	YD201
	**ZTES02503-MM**		0.3	19.9	2.5	0,03-0,1									●					
	ZTFS0303-MM		0.3	19.9	3	0,04-0,13									●					
	ZTGS0404-MM-25		0.4	24.6	4	0,06-0,18									●					
	ZTHS0504-MM-25		0.4	24.6	5	0,08-0,23									●					
	ZTKS0608-MM-25		0.8	24.6	6	0,12-0,27									●					

● Ex stock ○ On demand

HC[1] Coated carbide
HW Uncoated carbide

Tool holders

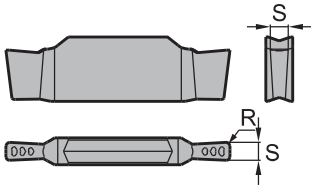
QE*S*R/L	QZ**+QE**	QF*S*LL-H	QF*S*RR-H	QF*S*R/L-L	QF*S*R/L-H
					
A427	A432	A438	A438	A441	A442

System code A398 | Grade selection A394 | Technical info A501 | Cutting data A456

Ideal machining conditions
Normal machining conditions
Unfavourable machining conditions

Parting inserts

Parting & grooving insert (double sided)



	HC[1] (CVD)				HC[1] (PVD)						HW	
P												
M												
K												
N												
S												
H												

	ISO	La *max*	S±0.025	R±0.05	f	YBC252	YBC251	YBG105	YBG102	YB9320	YBG205	YBG202	YBG302	YD101	YD201
	**ZTCD01002-EG**	2.6	1	0.2	0,02-0,04								○		
	ZTCD011502-EG	2.6	1.15	0.2	0,02-0,04								○		
	ZTCD01202-EG	2.6	1.2	0.2	0,02-0,04								○		
	ZTCD013802-EG	2.6	1.38	0.2	0,02-0,04								○		
	ZTCD01402-EG	2.6	1.4	0.2	0,02-0,04								○		
	ZTCD01500-EG	2.6	1.5	0	0,02-0,04								○		
	ZTCD01502-EG	2.6	1.5	0.2	0,02-0,04								○		
	ZTCD01503-EG	2.6	1.5	0.3	0,02-0,04							○			
	ZTCD015503-EG	2.6	1.55	0.3	0,02-0,04								○		
	ZTCD01602-EG	2.6	1.6	0.2	0,02-0,04								○		
	ZTCD01702-EG	3.4	1.7	0.2	0,02-0,08								○		
	ZTCD017503-EG	3.4	1.75	0.3	0,02-0,08								○		
	ZTCD017602-EG	3.4	1.76	0.2	0,02-0,08							○			
	ZTCD01802-EG	3.4	1.8	0.2	0,02-0,08								○		
	ZTCD018502-EG	3.4	1.85	0.2	0,02-0,08								○		
	ZTCD02000-EG	3.4	2	0	0,02-0,08								○		
	ZTCD02002-EG	3.4	2	0.2	0,02-0,08								●		
	ZTCD020503-EG	3.4	2.05	0.3	0,02-0,08								○		
	ZTCD021502-EG	3.4	2.15	0.2	0,02-0,08								○		
	ZTCD02302-EG	3.4	2.3	0.2	0,03-0,11								○		
	ZTCD02303-EG	3.4	2.3	0.3	0,03-0,11								○		
	ZTCD02402-EG	3.4	2.4	0.2	0,03-0,11								○		

● Ex stock ○ On demand

HC[1] Coated carbide
HW Uncoated carbide

Tool holders

QECD

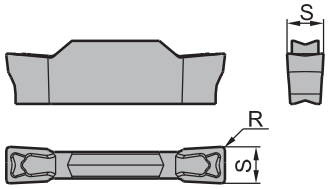


A428

Parting inserts

Ideal machining conditions
Normal machining conditions
Unfavourable machining conditions

Parting & grooving insert (double sided)



	HC[1] (CVD)	HC[1] (PVD)	HW
P	⊛ ⊛	⊛ ⊛ ⊛ ⊛	
M		⊛ ⊛ ⊛ ⊛	
K			
N			● ⊛
S		● ● ⊛ ⊛ ⊛	
H			

	ISO	La *max*	S±0.025	R±0.05	f	YBC252	YBC251	YBG105	YBG102	YB9320	YBG205	YBG202	YBG302	YD101	YD201
	ZTED02502-EG	17	2.5	0.2	0,03-0,11								○		
	ZTED026502-EG	17	2.65	0.2	0,03-0,11								○		
	ZTED02702-EG	17	2.7	0.2	0,03-0,11								○		
	ZTED02703-EG	17	2.7	0.3	0,03-0,11								○		
	ZTED02802-EG	17	2.8	0.2	0,04-0,13								○		
	ZTED02803-EG	17	2.8	0.3	0,04-0,13								○		
	ZTED02804-EG	17	2.8	0.4	0,04-0,13								○		
	ZTED02903-EG	17	2.9	0.3	0,04-0,13								○		
	ZTFD03001-EG	17	3	0.1	0,04-0,13							○			
	ZTFD03002-EG	17	3	0.2	0,04-0,13								○		
	ZTFD03003-EG	17	3	0.3	0,04-0,13								○		
	ZTFD03203-EG	17	3.2	0.3	0,04-0,13								○		
	ZTFD0325024-EG	17	3.25	2.4	0,04-0,13								○		
	ZTFD03302-EG	17	3.3	0.2	0,04-0,13							○	○		
	ZTFD03303-EG	17	3.3	0.3	0,04-0,13								○		
	**ZTFD03403-EG**	17	3.4	0.3	0,04-0,13								○		
	ZTFD035-EG	17	3.5	0	0,04-0,13								○		
	ZTGD039602-EG	22	3.96	0.2	0,07-0,18								○		
	ZTGD04002-EG	22	4	0.2	0,07-0,18								○		
	ZTGD04003-EG	22	4	0.3	0,07-0,18								○		
	ZTGD04004-EG	22	4	0.4	0,07-0,18								○		
	ZTGD04008-EG	22	4	0.8	0,07-0,18							○			
	ZTGD04503-EG	22	4.5	0.3	0,07-0,18								○		
	ZTGD04505-EG	22	4.5	0.5	0,07-0,18								○		
	ZTGD04805-EG	22	4.8	0.5	0,1-0,24								○		
	ZTHD05003-EG	22	5	0.3	0,1-0,24								○		
	ZTHD05004-EG	22	5	0.4	0,1-0,24						○				
	ZTHD05008-EG	22	5	0.8	0,1-0,24							○			
	ZTHD05012-EG	22	5	0.12	0,1-0,24							○			
	ZTHD05202-EG	22	5.2	0.2	0,1-0,24								○		
	ZTHD052503-EG	22	5.25	0.3	0,1-0,24								○		
	ZTHD05508-EG	22	5.5	0.8	0,1-0,24								○		

● Ex stock ○ On demand

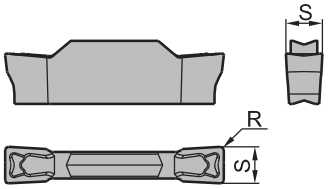
HC[1] Coated carbide
HW Uncoated carbide

System code A398 | Grade selection A394 | Technical info A501 | Cutting data A456

- Ideal machining conditions
- Normal machining conditions
- Unfavourable machining conditions

Parting inserts

Parting & grooving insert (double sided)



						HC[1] (CVD)			HC[1] (PVD)						HW	
					P											
					M											
					K											
					N											
					S											
					H											
	ISO	La *max*	S±0.025	R±0.05	f	YBC252	YBC251		YBG105	YBG102	YB9320	YBG205	YBG202	YBG302	YD101	YD201
	**ZTKD06004-EG**	22	6	0,4	0,12-0,29									○		
	ZTKD06504-EG	22	6,5	0,4	0,12-0,29									○		

● Ex stock ○ On demand

HC[1] Coated carbide
HW Uncoated carbide

Tool holders

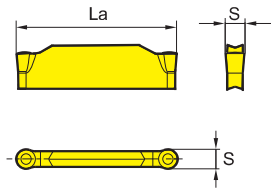
QE*D*R/L	QF*D*R/L-H	QF*D*RR-H	QF*D*LL-H	QF*D*R/L-L	C***-Q*DR/L	QE*D*R/L-DGC
						
A425	A434	A436	A436	A439	A444	A446

QE*D*R/L-DGSC	QE*D*R/L-SC
	
A448	A449

Ideal machining conditions
Normal machining conditions
Unfavourable machining conditions

Parting inserts

Parting & grooving insert (double sided)



Double cutting edge

					HC[1] (CVD)						HC[1] (PVD)						HW	
	ISO	La *max*	S±0.10	f	YBC252	YBC251					YBG105	YBG102	YB9320	YBG205	YBG202	YBG302	YD101	YD201
P																		
M																		
K																		
N																		
S																		
H																		
	**ZRED025-MG**	17.5	2.5	0,03-0,11											○	●		
	ZRFD03-MG	17	3	0,04-0,14										●		●		
	ZRGD04-MG	21	4	0,07-0,2		○									●	○ ●		
	ZRHD05-MG	20	5	0,1-0,24											○	●		○
	ZRKD06-MG	19	6	0,12-0,29											○	●		

● Ex stock ○ On demand

HC[1] Coated carbide
HW Uncoated carbide

Tool holders

QE*D*R/L	QX*D*	QF*D*R/L-H	QF*D*LL-H	QF*D*RR-H	QF*D*R/L-L	C*X-Q*DR/L
						
A425	A429	A434	A436	A436	A439	A443

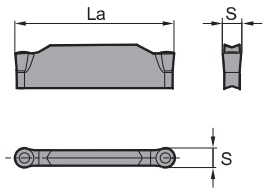
C***-Q*DR/L

A444

Ideal machining conditions
Normal machining conditions
Unfavourable machining conditions

Parting inserts

Parting & grooving insert (double sided)



Double cutting edge

	ISO	La *max*	S±0.025	f	HC[1] (CVD) YBC252	YBC251	HC[1] (PVD) YBG105	YBG102	YB9320	YBG205	YBG202	YBG302	HW YD101	YD201
P					◉	◉			◉	◉	◉	◉		
M									◉	◉	◉	◉		
K														
N													◉	◉
S							◉	◉	◉	◉	◉			
H														
	**ZRFD03-EG**	17	3	0,04-0,14					●			○		
	ZRGD04-EG	21	4	0,07-0,2					●					
	ZRHD05-EG	20	5	0,1-0,24					●			○		
	ZRKD06-EG	19	6	0,12-0,29					○					

● Ex stock ○ On demand

HC[1] Coated carbide
HW Uncoated carbide

Tool holders

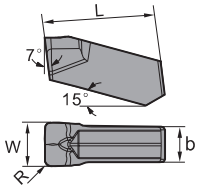
QE*D*R/L	QX*D*	QF*D*R/L-H	QF*D*LL-H	QF*D*RR-H	QF*D*R/L-L	C*X-Q*DR/L
						
A425	A429	A434	A436	A436	A439	A443

C***-Q*DR/L

A444

Ideal machining conditions
Normal machining conditions
Unfavourable machining conditions

Parting inserts

Parting & grooving insert (single sided)								HC[1] (CVD)						HC[1] (PVD)						HW	
							P														
							M														
							K														
							N														
							S														
							H														
	ISO		R±0.1	W±0.05	b	L	f	YBC252	YBC251					YBG105	YBG102	YB9320	YBG205	YBG202	YBG302	YD101	YD201
	**ZIMF304N-NM**		0.4	3	2.4	15.3	0,04-0,11							●							
	ZIMF406N-NM		0.6	4	3.2	15.3	0,07-0,16							●	○						
	ZIMF506N-NM		0.6	5	4	15.3	0,1-0,2							●	○						
	ZIMF608N-NM		0.8	6	4	15.3	0,12-0,23							●	○						

● Ex stock ○ On demand

HC[1] Coated carbide
HW Uncoated carbide

Tool holders

QE*S*R/L-N



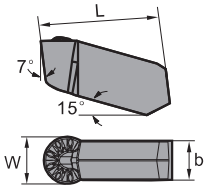
A430

System code A398 | Grade selection A394 | Technical info A501 | Cutting data A456

Ideal machining conditions
Normal machining conditions
Unfavourable machining conditions

Parting inserts

Parting & grooving insert (single sided)



						HC[1] (CVD)				HC[1] (PVD)						HW	
					P	⊛	⊛			⊛	⊛	⊛	⊛				
					M					⊛	⊛	⊛	⊛				
					K												
					N											○	⊛
					S					○	○	⊛	⊛	⊛			
					H												
	ISO	W±0.05	b	L	f	YBC252	YBC251			YBG105	YBG102	YB9320	YBG205	YBG202	YBG302	YD101	YD201
	**ZIGQ3N-NM**	3	2.4	15.3	0,04-0,11					●	○						
	ZIGQ4N-NM	4	3.2	15.3	0,07-0,16					●	○						
	ZIGQ5N-NM	5	4	15.3	0,1-0,2					●	○						
	ZIGQ6N-NM	6	5	15.3	0,13-0,24					●							

● Ex stock ○ On demand

HC[1] Coated carbide
HW Uncoated carbide

Tool holders

QE*S*R/L-N

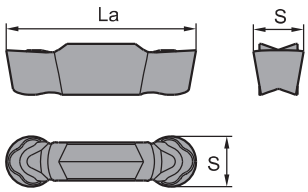


A430

System code A398 Grade selection A394 Technical info A501 Cutting data A456

Ideal machining conditions
Normal machining conditions
Unfavourable machining conditions

Parting inserts

Parting & grooving insert (double sided)						HC[1] (CVD)				HC[1] (PVD)						HW	
					P												
					M												
					K												
					N												
					S												
					H												
ISO		La *max*	S±0.025	f		YBC252	YBC251			YBG105	YBG102	YB9320	YBG205	YBG202	YBG302	YD101	YD201
	**ZRKD06-LH**	19	6	0,12-0,23												○	
	ZRLD08-LH	22	8	0,14-0,26												○	

● Ex stock ○ On demand

HC[1] Coated carbide
HW Uncoated carbide

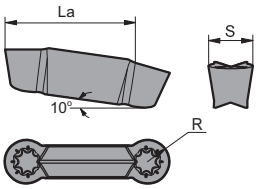
Tool holders

QE*D*R/L	C*X-Q*DR/L	C***-Q*DR/L
		
A425	A443	A444

System code A398 | Grade selection A394 | Technical info A501 | Cutting data A456

- Ideal machining conditions
- Normal machining conditions
- Unfavourable machining conditions

Parting inserts

Parting & grooving insert (double sided)						HC[1] (CVD)						HC[1] (PVD)						HW		
					P	◉	◉					◉	◉	◉	◉					
					M							◉	◉	◉	◉					
					K															
					N													◉	◉	
					S							◉	◉	◉	◉	◉				
					H															
ISO		La *max*	S±0.025	f		YBC252	YBC251					YBG105	YBG102	YB9320	YBG205	YBG202	YBG302	YD101	YD201	
	**ZILD08-LC**	22	8	0,14-0,26														○	○	

● Ex stock ○ On demand

HC[1] Coated carbide
HW Uncoated carbide

System code A398 | Grade selection A394 | Technical info A501 | Cutting data A456

Triangular, tangential grooving inserts (straight edge)

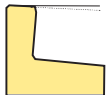
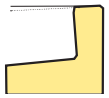
QC	22	R	300 –	R	03
1	2	3	4	5	6

1 – Series

2 – Cutting edge length [mm]

Code	I.C
11	6,35
16	9,525
22	12,70

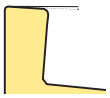
3 – Cutting direction

Code	Description
R	 Right
L	 Left

4 – Groove width [mm]

Code	Description
050	0,50
100	1,00
…	…
480	4,80

5 – Edge shape

Code	Description
R	 Radius
C	 Chamfer

6 – Radius/Chamfer [mm]

Code	Description
005	0,05
02	0,2
03	0,3
04	0,4

Triangular, tangential grooving inserts (round edge)

QC	22	R	300 –	R
1	2	3	4	5

1 – Series

2 – Cutting edge length [mm]

Code	I.C
11	6,35
16	9,525
22	12,70

3 – Cutting direction

Code	Description
R	 Right
L	 Left

4 – Groove width [mm]

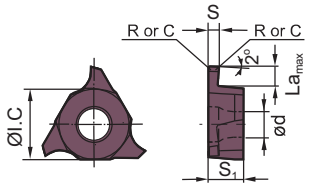
Code	Description
050	0,50
100	1,00
…	…
480	4,80

5 – Round

Ideal machining conditions
Normal machining conditions
Unfavourable machining conditions

Parting inserts

QC** turning/milling insert



Right hand style

	HC¹ (CVD)		HC¹ (PVD)						HW	
	YBC252	YBC251	YBG105	YBG102	YB9320	YBG205	YBG202	YBG302	YD101	YD201
P	◉	◉			◉	◉	◉	◉		
M					◉	◉	◉	◉		
K										
N									●	◉
S			●	●	◉	◉	◉			
H										

	ISO	La *max*	S±0.025	R/C	ØI.C	S1	ød	f	YBC252	YBC251	YBG105	YBG102	YB9320	YBG205	YBG202	YBG302	YD101	YD201
	QC11R120-R02	1.5	1.2	0.2	6.35	3.18	2.8	0,02-0,03					●					
	QC11L120-R02	1.5	1.2	0.2	6.35	3.18	2.8	0,02-0,03					●					
	QC11R125-R02	1.5	1.25	0.2	6.35	3.18	2.8	0,02-0,03					●					
	QC11L125-R02	1.5	1.25	0.2	6.35	3.18	2.8	0,02-0,03					●					
	QC11R145-R02	1.5	1.45	0.2	6.35	3.18	2.8	0,02-0,05					●					
	QC11L145-R02	1.5	1.45	0.2	6.35	3.18	2.8	0,02-0,05					●					
	QC11R150-R02	1.5	1.5	0.2	6.35	3.18	2.8	0,02-0,05					●					
	QC11L150-R02	1.5	1.5	0.2	6.35	3.18	2.8	0,02-0,05					●					
	QC11R200-R02	2	2	0.2	6.35	3.18	2.8	0,02-0,06					●					
	QC11L200-R02	2	2	0.2	6.35	3.18	2.8	0,02-0,06					●					
	QC11R225-R02	2	2.25	0.2	6.35	3.18	2.8	0,02-0,06					○					
	QC11L225-R02	2	2.25	0.2	6.35	3.18	2.8	0,02-0,06					○					
	QC16R075-R01	2	0.75	0.1	9.525	3.18	4.4	0,02-0,03					○					
	QC16L075-R01	2	0.75	0.1	9.525	3.18	4.4	0,02-0,03					○					
	QC16R080-R01	2	0.8	0.1	9.525	3.18	4.4	0,02-0,03					○					
	QC16R095-R01	2	0.95	0.1	9.525	3.18	4.4	0,02-0,03					○					
	**QC16L095-R01**	2	0.95	0.1	9.525	3.18	4.4	0,02-0,03					○					
	QC16L100-R01	2	1	0.1	9.525	3.18	4.4	0,02-0,03					○					
	QC16R110-R01	2	1.1	0.1	9.525	3.18	4.4	0,02-0,03					○					
	QC16L110-R01	2	1.1	0.1	9.525	3.18	4.4	0,02-0,03					●	○				
	QC16R115-R04	2	1.15	0.4	9.525	3.18	4.4	0,02-0,03					○					
	QC16R120-R01	2	1.2	0.1	9.525	3.18	4.4	0,02-0,03					○					
	QC16L120-R01	2	1.2	0.1	9.525	3.18	4.4	0,02-0,03					○					
	QC16R125-R02	2	1.25	0.2	9.525	3.18	4.4	0,02-0,03					○					
	QC16L125-R02	2	1.25	0.2	9.525	3.18	4.4	0,02-0,03					●					
	QC16R130-R02	2	1.3	0.2	9.525	3.18	4.4	0,02-0,06					○					
	QC16L130-R02	2	1.3	0.2	9.525	3.18	4.4	0,02-0,06					○					
	QC16R140-R02	2	1.4	0.2	9.525	3.18	4.4	0,02-0,06					○					
	QC16R145-R02	2	1.45	0.2	9.525	3.18	4.4	0,02-0,06					●					
	QC16L145-R02	2	1.45	0.2	9.525	3.18	4.4	0,02-0,06					●					
	QC16R150-R02	2	1.5	0.2	9.525	3.18	4.4	0,02-0,06					●					
	QC16L150-R02	2	1.5	0.2	9.525	3.18	4.4	0,02-0,06					○					
	QC16R160-R02	2	1.6	0.2	9.525	3.18	4.4	0,02-0,06					●					
	QC16L160-R02	2	1.6	0.2	9.525	3.18	4.4	0,02-0,06					●					

● Ex stock ○ On demand

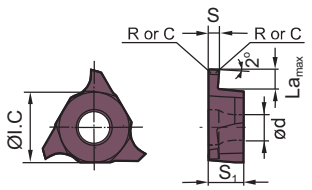
HC¹ Coated carbide
HW Uncoated carbide

System code A416 | Grade selection A394 | Technical info A501 | Cutting data A456

Parting inserts

Ideal machining conditions
Normal machining conditions
Unfavourable machining conditions

QC** turning/milling insert



Right hand style

	HC¹ (CVD)	HC¹ (PVD)	HW
P	◎ ◎	◎ ◎ ◎ ◎	
M		◎ ◎ ◎ ◎	
K			
N			○ ◎
S		○ ○ ◎ ◎ ◎	
H			

	ISO	La *max*	S±0.025	R/C	ØI.C	S1	ød	f	YBC252	YBC251	YBG105	YBG102	YB9320	YBG205	YBG202	YBG302	YD101	YD201
	QC16R165-R02	2	1.65	0.2	9.525	3.18	4.4	0,02-0,06						○				
	QC16L165-R02	2	1.65	0.2	9.525	3.18	4.4	0,02-0,06						○				
	QC16R170-R02	2	1.7	0.2	9.525	3.18	4.4	0,02-0,06						○				
	QC16L170-R02	2	1.7	0.2	9.525	3.18	4.4	0,02-0,06						○				
	QC16R175-R02	2	1.75	0.2	9.525	3.18	4.4	0,02-0,07						●				
	QC16L175-R02	2	1.75	0.2	9.525	3.18	4.4	0,02-0,06						○				
	QC16R180-R02	2	1.8	0.2	9.525	3.18	4.4	0,02-0,07						○				
	QC16R185-R02	2.5	1.85	0.2	9.525	3.18	4.4	0,02-0,07						●				
	QC16L185-R02	2.5	1.85	0.2	9.525	3.18	4.4	0,02-0,07						○				
	QC16R200-R02	2.5	2	0.2	9.525	3.18	4.4	0,02-0,07						●				
	QC16L200-R02	2.5	2	0.2	9.525	3.18	4.4	0,02-0,07						●				
	QC16L210-R02	2.5	2.1	0.2	9.525	3.18	4.4	0,02-0,07						○				
	QC16L210-R05	2.5	2.1	0.5	9.525	3.18	4.4	0,02-0,07						○				
	QC16R220-R02	2.5	2.2	0.2	9.525	3.18	4.4	0,02-0,07						○				
	QC16L220-R02	2.5	2.2	0.2	9.525	3.18	4.4	0,02-0,07						○				
	QC16R250-R02	2.5	2.5	0.2	9.525	3.18	4.4	0,02-0,08						●	○			
	**QC16L250-R02**	2.5	2.5	0.2	9.525	3.18	4.4	0,02-0,08						●				
	QC16R300-R02	3	3	0.2	9.525	3.18	4.4	0,03-0,11						●				
	QC16L300-R02	3	3	0.2	9.525	3.18	4.4	0,03-0,11						●				
	QC22L100-R02	2	1	0.2	12.7	4.76	5.5	0,02-0,03						○				
	QC22R125-R02	2	1.25	0.2	12.7	4.76	5.5	0,02-0,03						●				
	QC22L125-R02	2	1.25	0.2	12.7	4.76	5.5	0,02-0,03						○				
	QC22R145-R02	2	1.45	0.2	12.7	4.76	5.5	0,02-0,06						○				
	QC22L145-R02	2	1.45	0.2	12.7	4.76	5.5	0,02-0,06						○				
	QC22R150-R02	3.5	1.5	0.2	12.7	4.76	5.5	0,02-0,06						○				
	QC22L150-R02	3.5	1.5	0.2	12.7	4.76	5.5	0,02-0,06						○				
	QC22R175-R02	3.5	1.75	0.2	12.7	4.76	5.5	0,02-0,06						●				
	QC22L175-R02	3.5	1.75	0.2	12.7	4.76	5.5	0,02-0,06						○				
	QC22R185-R02	3.5	1.85	0.2	12.7	4.76	5.5	0,02-0,07						●				
	QC22L185-R02	3.5	1.85	0.2	12.7	4.76	5.5	0,02-0,07						○				
	QC22R195-R02	3.5	1.95	0.2	12.7	4.76	5.5	0,02-0,07						○				
	QC22R200-R02	3.5	2	0.2	12.7	4.76	5.5	0,02-0,07						○				
	QC22L200-R02	3.5	2	0.2	12.7	4.76	5.5	0,02-0,07						○				
	QC22R225-R02	3.5	2.25	0.2	12.7	4.76	5.5	0,02-0,07						○				

● Ex stock ○ On demand

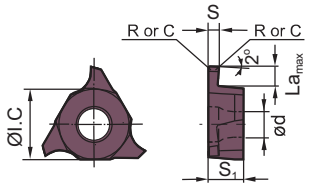
HC¹ Coated carbide
HW Uncoated carbide

System code A416 Grade selection A394 Technical info A501 Cutting data A456

Parting inserts

Ideal machining conditions
Normal machining conditions
Unfavourable machining conditions

QC** turning/milling insert



Right hand style

	HC¹ (CVD)		HC¹ (PVD)				HW	
P								
M								
K								
N								
S								
H								

ISO	La *max*	S±0.025	R/C	ØI.C	S1	ød	f	YBC252	YBC251	YBG105	YBG102	YB9320	YBG205	YBG202	YBG302	YD101	YD201
QC22R230-R02	3.5	2.3	0.2	12.7	4.76	5.5	0,02-0,07					●					
QC22L230-R02	3.5	2.3	0.2	12.7	4.76	5.5	0,02-0,07					○					
QC22R250-R03	4	2.5	0.3	12.7	4.76	5.5	0,02-0,08					●					
QC22L250-R03	4	2.5	0.3	12.7	4.76	5.5	0,02-0,08					○					
QC22R265-R03	4	2.65	0.3	12.7	4.76	5.5	0,02-0,08					●					
QC22L265-R03	4	2.65	0.3	12.7	4.76	5.5	0,02-0,08					●					
QC22R280-R03	4	2.8	0.3	12.7	4.76	5.5	0,02-0,08					●					
QC22L280-R03	4	2.8	0.3	12.7	4.76	5.5	0,02-0,08					○					
QC22R300-R03	4	3	0.3	12.7	4.76	5.5	0,03-0,11					○					
QC22L300-R03	4	3	0.3	12.7	4.76	5.5	0,03-0,11					○					
QC22R320-R03	4	3.2	0.3	12.7	4.76	5.5	0,03-0,11					○					
QC22L320-R03	4	3.2	0.3	12.7	4.76	5.5	0,03-0,11					○					
QC22R330-R03	4	3.3	0.3	12.7	4.76	5.5	0,03-0,11					○					
QC22L330-R03	4	3.3	0.3	12.7	4.76	5.5	0,03-0,11					○					
QC22R350-R03	5	3.5	0.3	12.7	4.76	5.5	0,05-0,13					○					
QC22L350-R03	5	3.5	0.3	12.7	4.76	5.5	0,05-0,13					○					
QC22R400-R04	5	4	0.4	12.7	4.76	5.5	0,05-0,14					○					
QC22L400-R04	5	4	0.4	12.7	4.76	5.5	0,05-0,14					●					
QC22R430-R04	5	4.3	0.4	12.7	4.76	5.5	0,05-0,14					○					
QC22L430-R04	5	4.3	0.4	12.7	4.76	5.5	0,05-0,14					○	○				
QC22R450-R04	5	4.5	0.4	12.7	4.76	5.5	0,06-0,18					○					
QC22L450-R04	5	4.5	0.4	12.7	4.76	5.5	0,06-0,18					○				○	
QC22R480-R04	5	4.8	0.4	12.7	5.06	5.5	0,06-0,18					○					
QC22L480-R04	5	4.8	0.4	12.7	5.06	5.5	0,08-0,2					○					

● Ex stock ○ On demand

HC¹ Coated carbide
HW Uncoated carbide

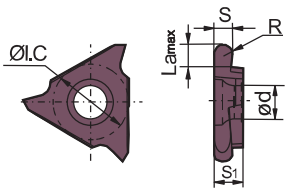
Tool holders

GQCR/L	S***-QC**R/L
	
A453	A454

System code A416 Grade selection A394 Technical info A501 Cutting data A456

Ideal machining conditions
Normal machining conditions
Unfavourable machining conditions

Parting inserts



Right hand style

QC** turning/milling insert		HC[1] (CVD)				HC[1] (PVD)						HW	
	P	⊛	⊛			⊛	⊛	⊛	⊛				
	M					⊛	⊛	⊛	⊛				
	K												
	N											○	⊛
	S	○	○	⊛	⊛	⊛							
	H												

	ISO	La *max*	S±0.025	R/C	ØI.C	S1	ød	f	YBC252	YBC251	YBG105	YBG102	YB9320	YBG205	YBG202	YBG302	YD101	YD201
	QC16R100R	2	1	0.5	12.7	3.18	4.4	0,02-0,03						○				
	QC16R120R	2	1.2	0.6	12.7	3.18	4.4	0,02-0,03						○				
	QC16R150R	2	1.5	0.75	12.7	3.18	4.4	0,02-0,06						○				
	QC16R200R	2.5	2	1	12.7	3.18	4.4	0,02-0,07						●				
	QC16L200R	2.5	2	1	12.7	3.18	4.4	0,02-0,07						○				
	QC16R250R	2.5	2.5	1.25	12.7	3.18	4.4	0,02-0,08						○				
	QC16L280R	2.5	2.8	1.4	12.7	3.18	4.4	0,02-0,08						○				
	QC16R300R	2.5	3	1.5	12.7	3.18	4.4	0,03-0,11						●				
	QC16L300R	2.5	3	1.5	12.7	3.18	4.4	0,03-0,11						●				
	QC22R100R	2	1	0.5	12.7	4.76	5.5	0,02-0,03						●				
	**QC22L100R**	2	1	0.5	12.7	4.76	5.5	0,02-0,03						○	○			
	QC22R150R	3.5	1.5	0.75	12.7	4.76	5.5	0,02-0,06						●				
	QC22L150R	3.5	1.5	0.75	12.7	4.76	5.5	0,02-0,06						●	○			
	QC22R170R	3.5	1.7	0.85	12.7	4.76	5.5	0,02-0,06						○				
	QC22R200R	3.5	2	1	12.7	4.76	5.5	0,02-0,07						○				
	QC22L200R	3.5	2	1	12.7	4.76	5.5	0,02-0,07						○				
	QC22R250R	4	2.5	1.25	12.7	4.76	5.5	0,02-0,08						●				
	QC22L250R	4	2.5	1.25	12.7	4.76	5.5	0,02-0,08						●				
	QC22R300R	4	3	1.5	12.7	4.76	5.5	0,03-0,11						●				
	QC22L300R	4	3	1.5	12.7	4.76	5.5	0,03-0,11						●				
	QC22R320R	4	3.2	1.6	12.7	4.76	5.5	0,03-0,11						○				
	QC22R400R	5	4	2	12.7	4.76	5.5	0,05-0,14						●				
	QC22L400R	5	4	2	12.7	4.76	5.5	0,05-0,14						●				

● Ex stock ○ On demand

HC[1] Coated carbide
HW Uncoated carbide

Tool holders

GQCR/L	S***-QC**R/L
	
A453	A454

System code A416 Grade selection A394 Technical info A501 Cutting data A456

Notes

External tool holders

Q	F	G	D	2525	R	22	(S)	C	–	(130)	(H)
1	2	3	4	5	6	7	8	9		10	11

1 Holder for parting & grooving

2 Application

Code	Description
E	External machining
F	Axial machining

3 Insert seat size [mm]

Holder/cutting width

Code	Description
A	1,5
B	2,0
E	2,5
F	3,0
G	4,0
H	5,0
K	6,0
L	8,0

4 No. of cutting edges

Code	Description
S	Single
D	Double

5 Cross section of holder [mm] x [mm]

6 Type

Code	Description
R	Right
L	Left
N	Right and left

7 Max. cutting depth [mm]

8 Serie

Code	Description
S	Swiss turning holder
DG	Cut-off holder for greater grooving depths with reinforcement
DGS	Cut-off holder for greater grooving depths without reinforcement

9 With internal cooling

10 Min. diameter of work piece for first axial grooving [mm]

11 Cutting head

Code	Description
H	0°
L	90°

Boring bars

C	32	S	–	Q	G	D	R	11	–	44
1	2	3		4	5	6	7	8		9

1 Clamping system

2 Diameter [mm]

3 Length [mm]

Code	Description
Q	180
R	200
S	250
X	320

4 Holder for grooving

5 Insert seat size [mm]

Holder/Cutting width

Code	Description
B	2.0
E	2.5
F	3.0
G	4.0
H	5.0
K	6.0
L	8.0

6 No. of cutting edges

Code	Description
S	Single
D	Double

7 Type

Code	Description
R	Right
L	Left
N	Right and left

8 Max. cutting depth [mm]

9 Min. internal diameter of work piece [mm]

Blade

Q	E	G	D	32	N	(–1)
1	2	3	4	5	6	7

1 Blade for parting & grooving

2 Application

Code	Description
E	External machining

3 Insert seat size [mm]

Holder/ cutting width

Code	Description
B	2,0
E	2,5
F	3,0
G	4,0
H	5,0
K	6,0
L	8,0

4 No. of cutting edges

Code	Description
S	Single
D	Double

5 Blade height [mm]

6 Type

Code	Description
R	Right
L	Left
N	Right and left

7 Blade height –1 mm

Clamping block

QZ	S	32	32
1	2	3	4

1 Parting & grooving tool

2 No. of cutting edges

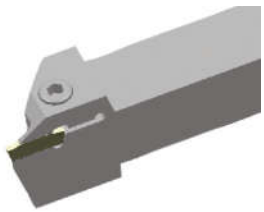
Code	Description
S	Single
D	Double

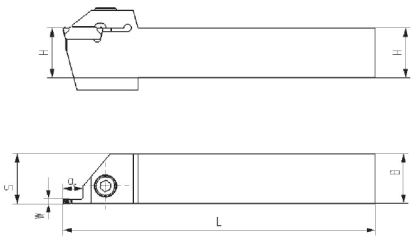
3 Clamping surface height [mm]

4 Blade height [mm]

Parting & grooving tool holder (external)

QE**R/L





Article	✻	Stock		Dimensions [mm]					Inserts
		R	L	HxB	L	S	W	ar_{max}	
QEBD1616R/L04		○	○	16x16	150	16.17	2	4	Z*BD**
QEBD2020R/L07		○	○	20x20	150	20.17	2	7	Z*BD**
QEED1616R/L10		●	●	16x16	125	15	2.5	10	Z*ED**
QEED1616R/L17		●	●	16x16	125	15	2.5	17	Z*ED**
QEED2020R/L17		●	●	20x20	125	19	2.5	17	Z*ED**
QEED2020R/L10		●	●	20x20	150	10	2.5	10	Z*ED**
QEED2525R/L10		●	●	25x25	150	19	2.5	10	Z*ED**
QEED2525R/L17		●	●	25x25	150	19	2.5	17	Z*ED**
QEFD1616R/L10		●	●	16x16	125	14.8	3	10	Z*FD**
QEFD1616R/L17		●	●	16x16	125	14.8	3	17	Z*FD**
QEFD2020R/L10		●	●	20x20	125	18.8	3	10	Z*FD**
QEFD2020R/L17		●	●	20x20	125	18.8	3	17	Z*FD**
QEFD2525R/L10		●	●	25x25	150	23.8	3	10	Z*FD**
QEFD2525R/L17		●	●	25x25	150	23.8	3	17	Z*FD**
QEGD2020R/L13		●	●	20x20	140	18.5	4	13	Z*GD**
QEGD2020R/L22		●	●	20x20	140	18.5	4	22	Z*GD**
QEGD2525R/L13		●	●	25x25	150	23.5	4	13	Z*GD**
QEGD2525R/L22		●	●	25x25	150	23.5	4	22	Z*GD**
QEGD3232R/L13		●	●	32x32	170	30.5	4	13	Z*GD**
QEGD3232R/L22		●	●	32x32	170	30.5	4	22	Z*GD**
QEHD2525R/L13		●	●	25x25	150	23	5	13	Z*HD**
QEHD2525R/L22		●	●	25x25	150	23	5	22	Z*HD**
QEHD3232R/L13		●	●	32x32	170	30	5	13	Z*HD**
QEHD3232R/L22		●	●	32x32	170	30	5	22	Z*HD**
QEKD2525R/L13		●	●	25x25	150	22.6	6	13	Z*KD**
QEKD2525R/L22		●	●	25x25	150	22.6	6	22	Z*KD**
QEKD3232R/L13		●	●	32x32	170	29.6	6	13	Z*KD**
QEKD3232R/L22		●	●	32x32	170	29.6	6	22	Z*KD**

● Ex stock ○ On demand

✻ With internal cooling

System code A422 | Grade selection A394 | Technical info A501 | Cutting data A456

Parting & grooving tool holder (external)

Spare parts

	Insert	Z*BD**	Z*ED**	Z*ED**	Z*FD**	Z*FD**	Z*GD**	Z*HD**	Z*KD**
	H	16-20	16	20-32	16	20-32	20-32	20-32	20-32
	Screw	GB70-85-M5×16 (4.0 Nm)	GB70-85-M5×20 (4.0 Nm)	GB70-85-M6×20 (7.0 Nm)	GB70-85-M5×20 (4.0 Nm)	GB70-85-M6×20 (7.0 Nm)	GB70-85-M6×20 (7.0 Nm)	GB70-85-M6×20 (7.0 Nm)	GB70-85-M6×20 (7.0 Nm)
	Wrench	WH40L	WH40L	WH50L	WH40L	WH50L	WH50L	WH50L	WH50L

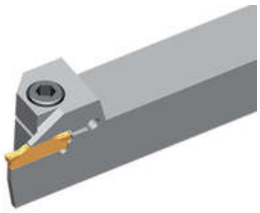
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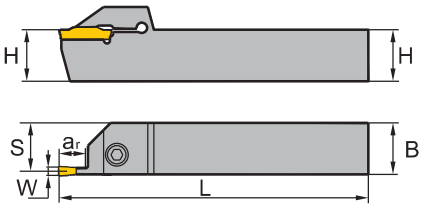
						
A399	A400	A401	A404	A407	A410	A411
						
A414						

System code A422 | Grade selection A394 | Technical info A501 | Cutting data A456

Parting & grooving tool holder (external)

QE*SN30







Article	✲	Stock	Dimensions [mm]					Inserts
			HxB	L	S	W	ar_{max}	
QEHS2525N30		●	25x25	150	12.5	5	30	Z*HS**
QEHS3232N30		●	32x32	170	16	5	30	Z*HS**
QEKS2525N30		○	25x25	150	12.5	6	30	Z*KS**
QEKS3232N30		○	32x32	170	16	6	30	Z*KS**

● Ex stock ○ On demand

✲ With internal cooling

Spare parts

	Insert	Z*HS**	Z*KS**
	H	**25-32**	**25-32**
	Screw	GB70-85-M6×20 (7.0 Nm)	GB70-85-M6×20 (7.0 Nm)
	Wrench	WH50L	WH50L

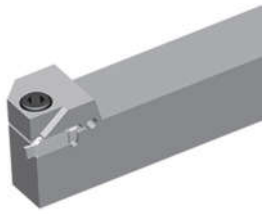
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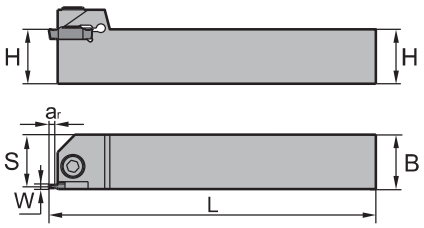
A402	A405	A406

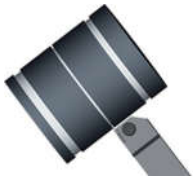
System code A422 Grade selection A394 Technical info A501 Cutting data A456

Parting & grooving tool holder (external)

QECDR/L







Right hand style

Article	✻	Stock		Dimensions [mm]					Inserts
		R	L	HxB	L	S	W	ar_{max}	
QECD1616R/L025		○	○	16x16	125	14.75		2.5	Z*CD**
QECD2020R/L025		○	○	20x20	125	18.75		2.5	Z*CD**
QECD2525R/L025		○	○	25x25	150	23.75		2.5	Z*CD**

● Ex stock ○ On demand

✻ With internal cooling

Spare parts

	Insert	Z*CD**	Z*CD**
	H	16	20-32
	Screw	GB70-85-M5×20 (4.0 Nm)	GB70-85-M6×20 (7.0 Nm)
	Wrench	WH40L	WH50L

Insert

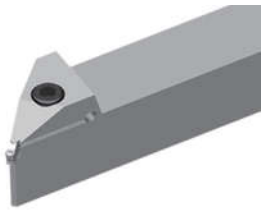


A407

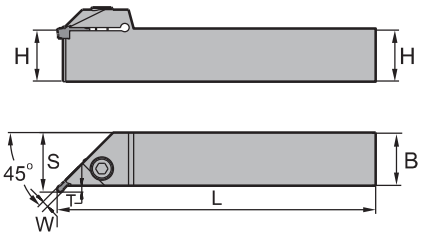
System code A422 Grade selection A394 Technical info A501 Cutting data A456

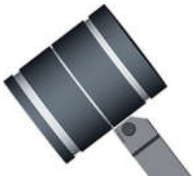
Parting & grooving tool holder (external)

QX*DR/L



Right hand style





Article	✻	Stock		Dimensions [mm]					Inserts
		R	L	HxB	L	S	W	ar_{max}	
QXFD2020R/L03-45		○	○	20x20	125	23	3	3	Z*FD**
QXFD2525R/L03-45		●	●	25x25	150	28	3	3	Z*FD**
QXFD3232R/L03-45		○	○	32x32	170	35	3	3	Z*FD**
QXGD2020R/L03-45		○	○	20x20	125	23	4	3	Z*GD**
QXGD2525R/L03-45		○	○	25x25	150	28	4	3	Z*GD**
QXGD3232R/L03-45		○	○	32x32	170	35	4	3	Z*GD**
QXHD2020R/L04-45		○	○	20x20	125	24	5	4	Z*HD**
QXHD2525R/L04-45		○	○	25x25	150	29	5	4	Z*HD**
QXHD3232R/L04-45		○	○	32x32	170	36	5	4	Z*HD**
QXKD2020R/L04-45		○	○	20x20	125	24	6	4	Z*KD**
QXKD2525R/L04-45		○	○	25x25	150	29	6	4	Z*KD**
QXKD3232R/L04-45		○	○	32x32	170	36	6	4	Z*KD**

● Ex stock ○ On demand

✻ With internal cooling

Spare parts

	Insert	Z*FD**	Z*GD**	Z*HD**	Z*KD**
	H	20-32	20-32	20-32	20-32
	Screw	GB70-85-M6×20 (7.0 Nm)	GB70-85-M6×20 (7.0 Nm)	GB70-85-M6×20 (7.0 Nm)	GB70-85-M6×20 (7.0 Nm)
	Wrench	WH50L	WH50L	WH50L	WH50L

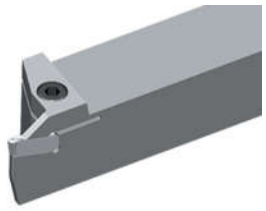
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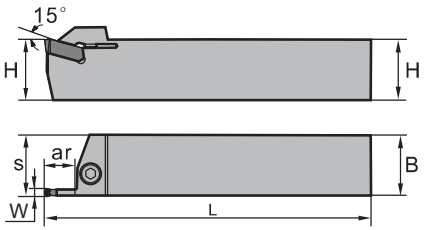
	
A410	A411

System code A422 Grade selection A394 Technical info A501 Cutting data A456

Parting & grooving tool holder (external)

QE*SR/L







Right hand style

Article	*	Stock R	Stock L	Dimensions [mm] HxB	L	S	W	ar_{max}	Inserts
QEFS2525R/L12-3N		○	○	25x25	150	25.3	3	12	ZI**
QEGS2525R/L12-4N		○	○	25x25	150	25.3	4	12	ZI**
QEHS2525R/L12-5N		○	○	25x25	150	25.4	5	12	ZI**
QEKS2525R/L12-6N		○	○	25x25	150	25.4	6	12	ZI**
QEFS3232R/L22-3N		○	○	32x32	170	32.3	3	22	ZI**
QEGS3232R/L22-4N		○	○	32x32	170	32.3	4	22	ZI**
QEHS3232R/L22-5N		○	○	32x32	170	32.4	5	22	ZI**
QEKS3232R/L22-6N		○		32x32	170	32.4	6	22	ZI**

● Ex stock ○ On demand

✻ With internal cooling

Spare parts

	Insert	ZI**
	H	**25-32**
	Screw	GB70-85-M6×20 (7.0 Nm)
	Wrench	WH50L

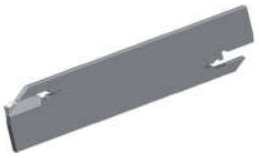
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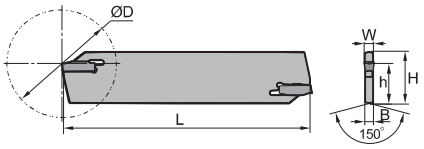
	
A412	A413

System code A422 Grade selection A394 Technical info A501 Cutting data A456

Parting blade for external machining

QE*S**N







Article	✻	Stock	Dimensions [mm]						Inserts
			H	L	h	B	W	ØDmax	
QEES26N		●	26	110	19	2	2.5	60	ZPES**
QEES32N		●	32	150	24.6	2	2.5	100	ZPES**
QEFS26N		●	26	110	19	2.4	3	60	ZPFS**
QEFS32N		●	32	150	24.6	2.4	3	100	ZPFS**
QEGS26N		●	26	110	19	3.2	4	70	ZPGS**
QEGS32N		●	32	150	24.6	3.2	4	120	ZPGS**
QEHS26N		●	26	110	19	4	5	70	ZPHS**
QEHS32N		●	32	150	24.6	4	5	120	ZPHS**
QEKS26N		●	26	110	19	5	6	70	ZPKS**
QEKS32N		●	32	150	24.6	5	6	120	ZPKS**

● Ex stock ○ On demand

✻ With internal cooling

Spare parts

	Insert	ZPES**	ZPFS**	ZPGS**	ZPHS**	ZPKS**
	H	26-32	26-32	26-32	26-32	26-32
	Wrench	W50RL	W50RL	W50RL	W50RL	W50RL

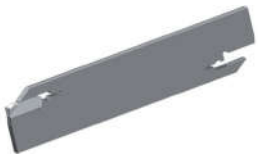
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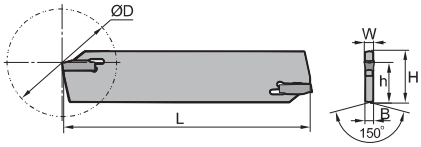
			
A402	A403	A405	A406

System code A422 | Grade selection A394 | Technical info A501 | Cutting data A456

Parting blade for external machining

QE*S**N-1







Article	✻	Stock	Dimensions [mm]						Inserts
			H	L	h	B	W	ØDmax	
QEES26N-1		●	26	110	19	2	2.5	60	ZPES**
QEES32N-1		●	32	150	24.6	2	2.5	100	ZPES**
QEFS26N-1		●	26	110	19	2.4	3	60	ZPFS**
QEFS32N-1		●	32	150	24.6	2.4	3	100	ZPFS**
QEGS26N-1		●	26	110	19	3.2	4	70	ZPGS**
QEGS32N-1		●	32	150	24.6	3.2	4	120	ZPGS**

● Ex stock ○ On demand

✻ With internal cooling

Only compatible with clamping blocks of commercially available systems from other manufacturers.

Spare parts

	Insert	**ZPES****	**ZPFS****	**ZPGS****
	H	**26-32**	**26-32**	**26-32**
	Wrench	W50X	W50X	W50X

W50X key must be ordered as an option.

Insert

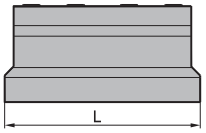
		
A402	A403	A406

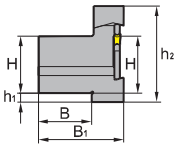
System code A422 Grade selection A394 Technical info A501 Cutting data A456

Clamping block (external)

QZS*









Article	✲	Stock	Dimensions [mm]						Inserts
			H	L	h_1	h_2	B	B1	
QZS2026		●	20	86	10	46.6	19	38	QE**26
QZS2526		●	25	86	5	46.6	23	42	QE**26
QZS3226		○	32	86	3	51.6	30	48	QE**26
QZS2032		●	20	110	13	50	19	38	QE**32
QZS2532		●	25	110	8	50	23	42	QE**32
QZS3232		●	32	110	5	54	30	48	QE**32

● Ex stock ○ On demand

✲ With internal cooling

Spare parts

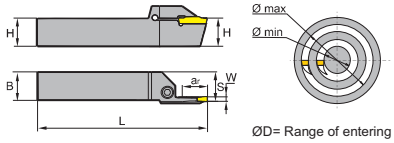
	Insert	**QE**26**	**QE**32**
	H	**20-32**	**20-32**
	Clamp	QZC26	QZC32
	Screw	GB70-85-M6×20 (7.0 Nm)	GB70-85-M6×20 (7.0 Nm)
	Wrench	W50RL	W50RL

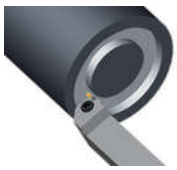
System code A422 Grade selection A394 Technical info A501 Cutting data A456

Parting & grooving tool holder (axial)

QF**R/L







Left hand style

Article	*	Stock R	Stock L	Dimensions [mm] HxB	L	S	W	ar_{max}	ØD (min-max)	Inserts
QFFD2020R/L7-48H		○	○	20x20	150	21	3	7	48-66	Z*FD**
QFFD2020R/L7-60H		○	○	20x20	150	21	3	7	60-80	Z*FD**
QFFD2020R/L7-74H		○	○	20x20	150	21	3	7	74-110	Z*FD**
QFFD2020R/L7-100H		○	○	20x20	150	21	3	7	100-150	Z*FD**
QFFD2020R/L10-48H		○	○	20x20	150	21	3	10	48-66	Z*FD**
QFFD2020R/L10-60H		○	○	20x20	150	21	3	10	60-80	Z*FD**
QFFD2020R/L10-74H		○	○	20x20	150	21	3	10	74-110	Z*FD**
QFFD2020R/L10-100H		○	○	20x20	150	21	3	10	100-150	Z*FD**
QFFD2525R/L10-48H		●	●	25x25	150	26	3	10	48-66	Z*FD**
QFFD2525R/L10-60H		●	●	25x25	150	26	3	10	60-80	Z*FD**
QFFD2525R/L10-74H		●	●	25x25	150	26	3	10	74-110	Z*FD**
QFFD2525R/L10-100H		●	●	25x25	150	26	3	10	100-150	Z*FD**
QFFD2525R/L17-48H		●	●	25x25	150	26	3	17	48-66	Z*FD**
QFFD2525R/L17-60H		●	●	25x25	150	26	3	17	60-80	Z*FD**
QFFD2525R/L17-74H		●	●	25x25	150	26	3	17	74-110	Z*FD**
QFFD2525R/L17-100H		●	●	25x25	150	26	3	17	100-150	Z*FD**
QFGD2020R/L10-52H		○	○	20x20	150	21	4	10	52-72	Z*GD**
QFGD2020R/L10-64H		○	○	20x20	150	21	4	10	64-100	Z*GD**
QFGD2020R/L10-90H		○	○	20x20	150	21	4	10	90-140	Z*GD**
QFGD2020R/L10-130H		○	○	20x20	150	21	4	10	130-230	Z*GD**
QFGD2020R/L15-52H		○	○	20x20	150	21	4	15	52-72	Z*GD**
QFGD2020R/L15-64H		○	○	20x20	150	21	4	15	64-100	Z*GD**
QFGD2020R/L15-90H		○	○	20x20	150	21	4	15	90-140	Z*GD**
QFGD2020R/L15-130H		○	○	20x20	150	21	4	15	130-230	Z*GD**
QFGD2525R/L13-52H		●	●	25x25	150	26	4	13	52-72	Z*GD**
QFGD2525R/L13-64H		●	●	25x25	150	26	4	13	64-100	Z*GD**
QFGD2525R/L13-90H		●	●	25x25	150	26	4	13	90-140	Z*GD**
QFGD2525R/L13-130H		●	●	25x25	150	26	4	13	130-230	Z*GD**
QFGD2525R/L22-52H		●	●	25x25	150	26	4	22	52-72	Z*GD**
QFGD2525R/L22-64H		●	●	25x25	150	26	4	22	64-100	Z*GD**
QFGD2525R/L22-90H		●	●	25x25	150	26	4	22	90-140	Z*GD**
QFGD2525R/L22-130H		●	●	25x25	150	26	4	22	130-230	Z*GD**
QFHD2525R/L13-58H		●	●	25x25	150	26	5	13	58-96	Z*HD**
QFHD2525R/L13-86H		●	●	25x25	150	26	5	13	86-140	Z*HD**
QFHD2525R/L13-130H		●	●	25x25	150	26	5	13	130-200	Z*HD**
QFHD2525R/L13-185H		●	●	25x25	150	26	5	13	185-400	Z*HD**

System code > A422 | Grade selection > A394 | Technical info > A501 | Cutting data > A456

Article	✻	Stock		Dimensions [mm]						Inserts
		R	L	HxB	L	S	W	ar_{max}	ØD (min-max)	
QFHD2523R/L16-44H		○		25x23	150		5	16	44-52	Z*HD**
QFHD2525R/L22-58H		●	●	25x25	150	26	5	22	58-96	Z*HD**
QFHD2525R/L22-86H		●	●	25x25	150	26	5	22	86-140	Z*HD**
QFHD2525R/L22-130H		●	●	25x25	150	26	5	22	130-200	Z*HD**
QFHD2525R/L22-185H		●	●	25x25	150	26	5	22	185-400	Z*HD**
QFKD2525R/L13-60H		●	●	25x25	150	26	6	13	60-100	Z*KD**
QFKD2525R/L13-88H		○	●	25x25	150	26	6	13	88-180	Z*KD**
QFKD2525R/L13-160H		●	●	25x25	150	26	6	13	160-400	Z*KD**
QFKD2525R/L20-45H			○	25x25	150		6	20	45-90	Z*KD**
QFKD2525R/L22-60H		●	●	25x25	150	26	6	22	60-100	Z*KD**
QFKD2525R/L22-88H		●	●	25x25	150	26	6	22	88-180	Z*KD**
QFKD2525R/L22-160H		●	●	25x25	150	26	6	22	160-400	Z*KD**
QFKD2525R/L30-88H		●		25x25	150		6	30	88-180	Z*KD**

● Ex stock ○ On demand

✻ With internal cooling

Spare parts

	Insert	**Z*FD****	**Z*GD****	**Z*HD****	**Z*KD****
	H	**20-25**	**20-25**	**20-25**	**20-25**
	Screw	GB70-85-M6×20 (7.0 Nm)	GB70-85-M6×20 (7.0 Nm)	GB70-85-M6×20 (7.0 Nm)	GB70-85-M6×20 (7.0 Nm)
	Wrench	W50RL	W50RL	W50RL	W50RL

Insert

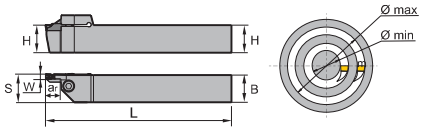
					
A399	A400	A404	A407	A410	A411

System code A422 | Grade selection A394 | Technical info A501 | Cutting data A456

Parting & grooving tool holder (axial)

QF**RR/LL







LL Version

Article	*	Stock R	Stock L	Dimensions [mm] HxB	L	S	W	ar_{max}	ØD (min-max)	Inserts
QFFD2020LL10-48H			○	20x20	150	21	3	10	48-66	Z*FD**
QFFD2020RR10-48H		○		20x20	150	21	3	10	48-66	Z*FD**
QFFD2020RR10-60H		○		20x20	150	21	3	10	60-80	Z*FD**
QFFD2020RR10-74H		○		20x20	150	21	3	10	74-110	Z*FD**
QFFD2525LL10-48H			●	25x25	150	26	3	10	48-66	Z*FD**
QFFD2525RR10-48H		○		25x25	150	26	3	10	48-66	Z*FD**
QFFD2525LL10-60H			○	25x25	150	26	3	10	60-80	Z*FD**
QFFD2525RR10-60H		○		25x25	150	26	3	10	60-80	Z*FD**
QFFD2525LL10-74H			○	25x25	150	26	3	10	74-110	Z*FD**
QFFD2525RR10-74H		○		25x25	150	26	3	10	74-110	Z*FD**
QFFD2525LL10-100H			○	25x25	150	26	3	10	100-150	Z*FD**
QFFD2525RR10-100H		○		25x25	150	26	3	10	100-150	Z*FD**
QFFD2525LL17-48H			●	25x25	150	26	3	17	48-66	Z*FD**
QFFD2525RR17-48H		○		25x25	150	26	3	17	48-66	Z*FD**
QFFD2525LL17-60H			○	25x25	150	26	3	17	60-80	Z*FD**
QFFD2525RR17-60H		○		25x25	150	26	3	17	60-80	Z*FD**
QFFD2525LL17-74H			○	25x25	150	26	3	17	74-110	Z*FD**
QFFD2525RR17-74H		○		25x25	150	26	3	17	74-110	Z*FD**
QFFD2525LL17-100H			○	25x25	150	26	3	17	100-150	Z*FD**
QFFD2525RR17-100H		○		25x25	150	26	3	17	100-150	Z*FD**
QFGD2020LL10-52H			○	20x20	150	21	4	10	52-72	Z*GD**
QFGD2020RR10-52H		○		20x20	150	21	4	10	52-72	Z*GD**
QFGD2020LL15-52H			○	20x20	150	26	4	15	52-72	Z*GD**
QFGD2020RR15-52H		○		20x20	150	26	4	15	52-72	Z*GD**
QFGD2020LL15-90H			○	20x20	150	26	4	15	90-140	Z*GD**
QFGD2020RR15-90H		○		20x20	150	26	4	15	90-140	Z*GD**
QFGD2020RR15-130H		○		20x20	150	26	4	15	130-230	Z*GD**
QFGD2525RR13-52H		●		25x25	150	21	4	13	52-72	Z*GD**
QFGD2525LL13-64H			●	25x25	150	21	4	13	64-100	Z*GD**
QFGD2525RR13-64H		○		25x25	150	21	4	13	64-100	Z*GD**
QFGD2525LL13-130H			●	25x25	150	26	4	13	130-230	Z*GD**
QFGD2525RR13-130H		○		25x25	150	21	4	13	130-230	Z*GD**
QFGD2525LL22-52H			○	25x25	150	26	4	22	52-72	Z*GD**
QFGD2525RR22-52H		○		25x25	150	26	4	22	52-72	Z*GD**
QFGD2525LL22-64H			○	25x25	150	26	4	22	64-100	Z*GD**

System code A422 | Grade selection A394 | Technical info A501 | Cutting data A456

Article	✻	Stock		Dimensions [mm]						Inserts
		R	L	HxB	L	S	W	ar_{max}	ØD (min-max)	
QFGD2525RR22-64H		○		25x25	150	26	4	22	64-100	Z*GD**
QFGD2525LL22-90H			○	25x25	150	26	4	22	90-140	Z*GD**
QFGD2525RR22-90H		○		25x25	150	26	4	22	90-140	Z*GD**
QFGD2525LL22-130H			○	25x25	150	26	4	22	130-230	Z*GD**
QFGD2525RR22-130H		●		25x25	150	26	4	22	130-230	Z*GD**
QFHD2525LL13-130H			○	25x25	150	26	5	13	130-200	Z*HD**
QFHD2525RR13-130H		○		25x25	150	26	5	13	130-200	Z*HD**
QFHD2525RR13-185H		○		25x25	150	26	5	13	185-400	Z*HD**
QFHD2525LL22-58H			●	25x25	150	26	5	22	58-96	Z*HD**
QFHD2525RR22-58H		●		25x25	150	26	5	22	58-96	Z*HD**
QFHD2525RR22-86H		○		25x25	150	26	5	22	86-140	Z*HD**
QFHD2525LL22-130H			○	25x25	150	26	5	22	130-200	Z*HD**
QFHD2525RR22-130H		●		25x25	150	26	5	22	130-200	Z*HD**
QFHD2525LL22-185H			○	25x25	150	26	5	22	185-400	Z*HD**
QFHD2525RR22-185H		○		25x25	150	26	5	22	185-400	Z*HD**
QFKD2525RR13-60H		○		25x25	150	26	6	13	60-100	Z*KD**
QFKD2525RR13-88H		○		25x25	150	26	6	13	88-180	Z*KD**
QFKD2525RR15-50H		○		25x25	150		6	15	50-100	Z*KD**
QFKD2525RR22-60H		○		25x25	150	26	6	22	60-100	Z*KD**
QFKD2525LL22-88H			○	25x25	150	26	6	22	88-180	Z*KD**
QFKD2525RR22-88H		○		25x25	150	26	6	22	88-180	Z*KD**
QFKD2525LL22-160H			●	25x25	150	26	6	22	160-400	Z*KD**
QFKD2525RR22-160H		○		25x25	150	26	6	22	160-400	Z*KD**

● Ex stock ○ On demand

✻ With internal cooling

Spare parts

	Insert	Z*FD**	Z*GD**	Z*HD**	Z*KD**
	H	20-25	20-25	20-25	20-25
	Screw	GB70-85-M6×20 (7.0 Nm)	GB70-85-M6×20 (7.0 Nm)	GB70-85-M6×20 (7.0 Nm)	GB70-85-M6×20 (7.0 Nm)
	Wrench	W50RL	W50RL	W50RL	W50RL

Insert

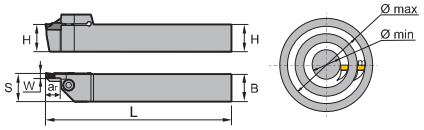
					
A399	A400	A404	A407	A410	A411

System code A422 Grade selection A394 Technical info A501 Cutting data A456

Parting & grooving tool holder (axial)

QF*SRR/LL







LL Version

Article	*	Stock R	Stock L	Dimensions [mm] HxB	L	S	W	ar_{max}	ØD (min-max)	Inserts
QFHS2525LL30-185H			●	25x25	150	26	5	30	185-400	Z*HS**
QFHS2525RR30-185H		○		25x25	150	26	5	30	185-400	Z*HS**
QFKS2525RR30-160H		○		25x25	150	26	6	30	160-400	Z*KS**
QFKS2525LL30-160H			○	25x25	150	26	6	30	160-400	ZT*S**

● Ex stock ○ On demand

* With internal cooling

Spare parts

	Insert	Z*HS**	Z*KS**	ZT*S**
	H	**25**	**25**	**25**
	Screw	GB70-85-M6×20 (7.0 Nm)	GB70-85-M6×20 (7.0 Nm)	GB70-85-M6×20 (7.0 Nm)
	Wrench	W50RL	W50RL	W50RL

Insert

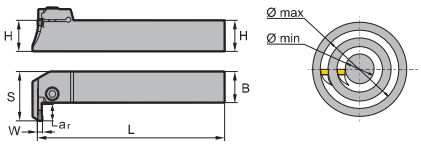
A402	A405	A406

System code A422 Grade selection A394 Technical info A501 Cutting data A456

Parting & grooving tool holder (axial)

QF*DR/L







Right hand style

Article	*	Stock		Dimensions [mm]						Inserts
		R	L	HxB	L	S	W	ar_{max}	ØD (min-max)	
QFFD2020R/L10-48L		○	○	20x20	150	31.5	3	10	48-66	Z*FD**
QFGD2020R/L10-52L		○	○	20x20	150	31.5	4	10	52-72	Z*GD**
QFFD2020R/L10-74L		●	○	20x20	150	31.5	3	10	74-110	Z*FD**
QFGD2020R/L10-90L		●	○	20x20	150	31.5	4	10	90-140	Z*GD**
QFFD2020R/L10-100L		○	○	20x20	150	31.5	3	10	100-150	Z*FD**
QFGD2020R/L15-52L		○	○	20x20	150	36.5	4	15	52-72	Z*GD**
QFFD2525R/L10-48L		●	●	25x25	150	36.5	3	10	48-66	Z*FD**
QFFD2525R/L10-60L		●	○	25x25	150	36.5	3	10	60-80	Z*FD**
QFFD2525R/L10-74L		○	○	25x25	150	36.5	3	10	74-110	Z*FD**
QFFD2525R/L10-100L		○	○	25x25	150	36.5	3	10	100-150	Z*FD**
QFGD2525R/L13-52L		○	○	25x25	150	39.5	4	13	52-72	Z*GD**
QFKD2525R/L13-60L		○	○	25x25	150	39.5	6	13	60-100	Z*KD**
QFGD2525R/L13-64L		○	●	25x25	150	39.5	4	13	64-100	Z*GD**
QFGD2525R/L13-90L		○	○	25x25	150	39.5	4	13	90-140	Z*GD**
QFGD2525R/L13-130L		○	○	25x25	150	39.5	4	13	130-230	Z*GD**
QFFD2525R/L17-48L		○	○	25x25	150	43.5	3	17	48-66	Z*FD**
QFFD2525R/L17-60L		○	○	25x25	150	43.5	3	17	60-80	Z*FD**
QFFD2525R/L17-74L		○	○	25x25	150	43.5	3	17	74-110	Z*FD**
QFFD2525R/L17-100L		●	○	25x25	150	43.5	3	17	100-150	Z*FD**
QFGD2525R/L22-52L		○	○	25x25	150	48.5	4	22	52-72	Z*GD**
QFKD2525R/L22-60L		○	●	25x25	150	48.5	6	22	60-100	Z*KD**
QFGD2525R/L22-64L		○	○	25x25	150	48.5	4	22	64-100	Z*GD**
QFKD2525R/L22-88L		○	●	25x25	150	48.5	6	22	88-180	Z*KD**
QFGD2525R/L22-90L		○	○	25x25	150	48.5	4	22	90-140	Z*GD**
QFGD2525R/L22-130L		●	○	25x25	150	48.5	4	22	130-230	Z*GD**
QFFD2020R/L7-74L		○		20x20	150	28.5	3	7	74-110	Z*FD**
QFFD2020R/L10-60L		●		20x20	150	31.5	3	10	60-80	Z*FD**
QFGD2020R/L10-130L		●		20x20	150	31.5	4	10	130-230	Z*GD**
QFGD2020R/L15-64L		○		20x20	150	36.5	4	15	64-100	Z*GD**
QFGD2020R/L15-90L		○		20x20	150	36.5	4	15	90-140	Z*GD**
QFGD2020R/L15-130L		○		20x20	150	36.5	4	15	130-230	Z*GD**
QFHD2525R/L13-58L		○		25x25	150	39.5	5	13	58-96	Z*HD**
QFHD2525R/L13-86L		●		25x25	150	39.5	5	13	86-140	Z*HD**
QFHD2525R/L13-130L		○	○	25x25	150	39.5	5	13	130-200	Z*HD**
QFHD2525R/L13-185L		○		25x25	150	39.5	5	13	185-400	Z*HD**
QFHD2525R/L22-58L		○	○	25x25	150	48.5	5	22	58-96	Z*HD**

System code A422 | Grade selection A394 | Technical info A501 | Cutting data A456

Parting & grooving Tool holders

Article	✻	Stock		Dimensions [mm]						Inserts
		R	L	HxB	L	S	W	ar_{max}	ØD (min-max)	
QFHD2525R/L22-86L		○	○	25x25	150	48.5	5	22	86-140	Z*HD**
QFHD2525R/L22-130L		○	○	25x25	150	48.5	5	22	130-200	Z*HD**
QFHD2525R/L22-185L		○	○	25x25	150	48.5	5	22	185-400	Z*HD**
QFKD2525R/L13-88L			○	25x25	150	39.5	6	13	88-180	Z*KD**

● Ex stock ○ On demand

✻ With internal cooling

Spare parts

	Insert	**Z*FD****	**Z*GD****	**Z*HD****	**Z*KD****
	H	**20-25**	**20-25**	**20-25**	**20-25**
	Screw	GB70-85-M6×20 (7.0 Nm)	GB70-85-M6×20 (7.0 Nm)	GB70-85-M6×20 (7.0 Nm)	GB70-85-M6×20 (7.0 Nm)
	Wrench	W50RL	W50RL	W50RL	W50RL

Insert

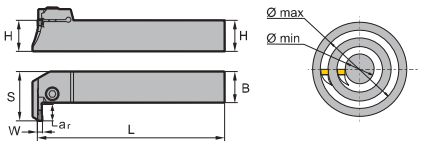
					
A399	A400	A404	A407	A410	A411

System code A422 | Grade selection A394 | Technical info A501 | Cutting data A456

Parting & grooving tool holder (axial)

QFHSDR/L







Right hand style

Article	✻	Stock		Dimensions [mm]						Inserts
		R	L	HxB	L	S	W	ar_{max}	ØD (min-max)	
QFHS2525R/L30-185L		○	○	25x25	150	56.5	5	30	185-400	Z*HS**

● Ex stock ○ On demand

✻ With internal cooling

Spare parts

	Insert	**Z*HS****
	H	**25**
	Screw	GB70-85-M6×20 (7.0 Nm)
	Wrench	W50RL

Insert

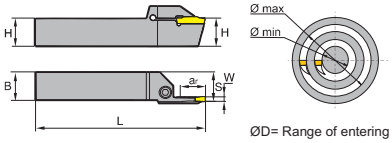
		
A402	A405	A406

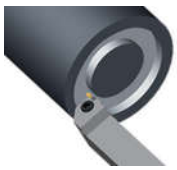
System code A422 | Grade selection A394 | Technical info A501 | Cutting data A456

Parting & grooving tool holder (axial)

QF**R/L







Left hand style

Article	✻	Stock R	Stock L	Dimensions [mm] HxB	L	S	W	ar_{max}	ØD (min-max)	Inserts
QFHS2525R/L30-185H		●	●	25x25	150	26	5	30	185-400	Z*HS**
QFKS2525R/L30-160H		●	●	25x25	150	26	6	30	160-400	Z*KS**

● Ex stock ○ On demand

✻ With internal cooling

Spare parts

	Insert	Z*HS**	Z*KS**
	H	**25**	**25**
	Screw	GB70-85-M6×20 (7.0 Nm)	GB70-85-M6×20 (7.0 Nm)
	Wrench	W50RL	W50RL

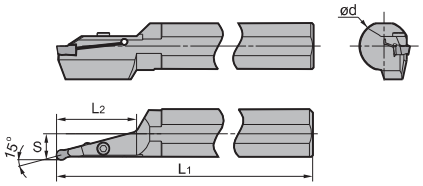
Insert

A402	A405	A406

Parting & grooving tool holder (external)

C40X-Q*DR/L







Right hand style

Article	*	Stock		Dimensions [mm]					Inserts
		R	L	ØD	ød	S	L_1	L_2	
C40X-QKDR/L60-15A		○	○	160	40	20	320	60	Z*KD**
C40X-QKDR/L75-15A		●	○	160	40	20	320	75	Z*KD**
C40X-QLDR/L65-15A		○	○	160	40	21	320	65	Z*LD**
C40X-QLDR/L80-15A		○	○	160	40	21	320	80	Z*LD**

● Ex stock ○ On demand

* With internal cooling

Spare parts

	Insert	Z*KD**	Z*LD**
	Ød	**32-40**	**32-40**
	Screw	GB70-85-M6×20 (7.0 Nm)	GB70-85-M6×20 (7.0 Nm)
	Wrench	WH50L	WH50L

Insert

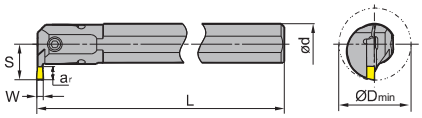
A410	A411	A414

System code A422 | Grade selection A394 | Technical info A501 | Cutting data A456

Parting & grooving tool holder (internal)

C***-Q*DR/L







Article	✻	Stock		Dimensions [mm]						Inserts
		R	L	ØDmin	ød	L	S	W	ar_{max}	
C16M-QBDR/L04-20		●	○	20	16	150		2	4	Z*BD**
C20Q-QEDR/L05-27		●	●	27	20	180		2.5	5	Z*ED**
C25R-QEDR/L07-33		●	●	33	25	200		2.5	7	Z*ED**
C32S-QEDR/L09-42		●	●	42	32	250		2.5	9	Z*ED**
C20Q-QFDR/L05-27		●	●	27	20	0		3	5	Z*FD**
C25R-QFDR/L07-33		●	●	33	25	200		3	7	Z*FD**
C32S-QFDR/L09-42		●	●	42	32	250		3	9	Z*FD**
C25R-QGDR/L08-35		●	●	35	25	200		4	8	Z*GD**
C32S-QGDR/L11-44		●	●	44	32	250		4	11	Z*GD**
C40T-QGDR/L13-54		●	●	5	40	300		4	13	Z*GD**
C25R-QHDR/L08-35		●	●	35	25	200		5	8	Z*HD**
C32S-QHDR/L11-44		●	●	44	32	250		5	11	Z*HD**
C40T-QHDR/L13-54		●	●	54	40	300		5	13	Z*HD**
C25R-QKDR/L08-35		○	●	35	25	200		6	8	Z*KD**
C32S-QKDR/L11-44		●	●	44	32	250		6	11	Z*KD**
C40T-QKDR/L13-54		●	●	54	40	300		6	13	Z*KD**

● Ex stock ○ On demand

✻ With internal cooling

Spare parts

	Insert	Z*BD**	Z*ED**	Z*ED**	Z*ED**	Z*FD**	Z*FD**	Z*FD**	Z*GD**	Z*GD**	Z*HD**	Z*HD**	Z*KD**	Z*KD**
	Ød	16	20	25	32-40	20	25	32-40	25	32-40	25	32-40	25	32-40
	Screw	GB70-85-M5×10 (4.0 Nm)	GB70-85-M4×12 (2.6 Nm)	GB70-85-M5×16 (4.0 Nm)	GB70-85-M6×20 (7.0 Nm)	GB70-85-M4×12 (2.6 Nm)	GB70-85-M5×16 (4.0 Nm)	GB70-85-M6×20 (7.0 Nm)	GB70-85-M5×16 (4.0 Nm)	GB70-85-M6×20 (7.0 Nm)	GB70-85-M5×16 (4.0 Nm)	GB70-85-M6×20 (7.0 Nm)	GB70-85-M5×16 (4.0 Nm)	GB70-85-M6×20 (7.0 Nm)
	Wrench	WH40L	WH30L	WH40L	WH50L	WH30L	WH40L	WH50L	WH40L	WH50L	WH40L	WH50L	WH40L	WH50L

System code A422 | Grade selection A394 | Technical info A501 | Cutting data A456

Parting & grooving tool holder (internal)

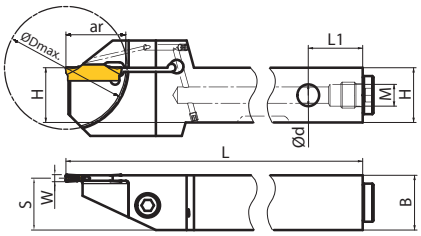
Insert						
						
A399	A400	A404	A407	A410	A411	A414

System code A422 Grade selection A394 Technical info A501 Cutting data A456

Parting & grooving tool holder (external)

QE**R/L-DGC





Article	✲	Stock R	Stock L	Dimensions [mm] HxB	ød	L	S	L_1	W	ar_{max}	ØDmax	M	Inserts
QEBD1616R/L20-DGC	✲	○	○	16x16	G1/8	96	15	20	2	20	40	G1/8	Z*BD**
QEBD1616R/L30-DGC	✲	●	●	16x16	G1/8	105	15	20	2	30	60	G1/8	Z*BD**
QEBD2020R/L20-DGC	✲	○	○	20x20	G1/8	111	19	20	2	20	40	G1/8	Z*BD**
QEBD2020R/L30-DGC	✲	●	●	20x20	G1/8	120	19	20	2	30	60	G1/8	Z*BD**
QEBD2525R/L20-DGC	✲	○	○	25x25	G1/8	126	24	20	2	20	40	G1/8	Z*BD**
QEBD2525R/L30-DGC	✲	●	●	25x25	G1/8	135	24	20	2	30	60	G1/8	Z*BD**
QEED1616R/L20-DGC	✲	○	○	16x16	G1/8	96	14.75	20	2.5	20	40	G1/8	Z*ED**
QEED1616R/L30-DGC	✲	●	●	16x16	G1/8	105	14.75	20	2.5	30	60	G1/8	Z*ED**
QEED2020R/L20-DGC	✲	○	○	20x20	G1/8	111	18.75	20	2.5	20	40	G1/8	Z*ED**
QEED2020R/L30-DGC	✲	●	○	20x20	G1/8	120	18.75	20	2.5	30	60	G1/8	Z*ED**
QEED2525R/L20-DGC	✲	○	○	25x25	G1/8	126	23.75	20	2.5	20	40	G1/8	Z*ED**
QEED2525R/L30-DGC	✲	○	○	25x25	G1/8	135	23.75	20	2.5	30	60	G1/8	Z*ED**
QEFD1616R/L20-DGC	✲	○	○	16x16	G1/8	96	14.5	20	3	20	40	G1/8	Z*FD**
QEFD1616R/L30-DGC	✲	●	●	16x16	G1/8	105	14.5	20	3	30	60	G1/8	Z*FD**
QEFD2020R/L20-DGC	✲	○	○	20x20	G1/8	111	18.5	20	3	20	40	G1/8	Z*FD**
QEFD2020R/L30-DGC	✲	●	●	20x20	G1/8	120	18.5	20	3	30	60	G1/8	Z*FD**
QEFD2525R/L20-DGC	✲	○	○	25x25	G1/8	126	23.5	20	3	20	40	G1/8	Z*FD**
QEFD2525R/L30-DGC	✲	○	○	25x25	G1/8	135	23.5	20	3	30	60	G1/8	Z*FD**
QEGD1616R/L20-DGC	✲	○	○	16x16	G1/8	96	14	20	4	20	40	G1/8	Z*GD**
QEGD1616R/L30-DGC	✲	●	●	16x16	G1/8	105	14	20	4	30	60	G1/8	Z*GD**
QEGD2020R/L20-DGC	✲	○	○	20x20	G1/8	111	18	20	4	20	40	G1/8	Z*GD**
QEGD2020R/L30-DGC	✲	○	○	20x20	G1/8	120	18	20	4	30	60	G1/8	Z*GD**
QEGD2525R/L20-DGC	✲	○	○	25x25	G1/8	126	23	20	4	20	40	G1/8	Z*GD**
QEGD2525R/L30-DGC	✲	○	○	25x25	G1/8	135	23	20	4	30	60	G1/8	Z*GD**

● Ex stock ○ On demand

✲ With internal cooling

Spare parts

	Insert	Z*BD**	Z*ED**	Z*FD**	Z*GD**
	H	16-25	16-25	16-25	20-25
	Grub screw	PT1/8x4	PT1/8x4	PT1/8x4	PT1/8x4
	Screw	GB70-85-M5×20 (4.0 Nm)	GB70-85-M5×20 (4.0 Nm)	GB70-85-M5×20 (4.0 Nm)	GB70-85-M5×20 (4.0 Nm)
	Wrench	WH40L	WH40L	WH40L	WH40L
	Wrench	WH50L	WH50L	WH50L	WH50L

System code > A422 Grade selection > A394 Technical info > A501 Cutting data > A456

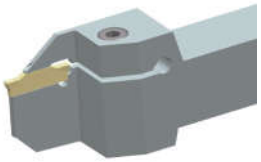
Parting & grooving tool holder (external)

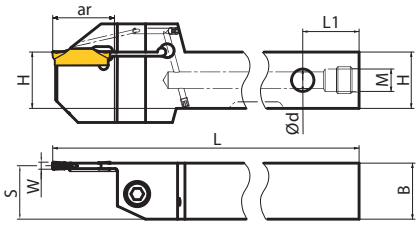
Insert			
			
A399	A400	A404	A407

System code A422 Grade selection A394 Technical info A501 Cutting data A456

Parting & grooving tool holder (external)

QE**R/L-DGSC





Article	✻	Stock R	Stock L	Dimensions [mm] HxB	ød	L	S	L_1	W	ar_{max}	M	Inserts
QEED1616R/L30-DGSC	✻	●	●	16x16	G1/8	105	14.75	20	2.5	30	G1/8	Z*ED**
QEED2020R/L30-DGSC	✻	●	○	20x20	G1/8	120	18.75	20	2.5	30	G1/8	Z*ED**
QEED2525R/L30-DGSC	✻	○	○	25x25	G1/8	135	23.75	20	2.5	30	G1/8	Z*ED**
QEFD1616R/L30-DGSC	✻	●	●	16x16	G1/8	105	14.5	20	3	30	G1/8	Z*FD**
QEFD2020R/L30-DGSC	✻	○	○	20x20	G1/8	120	18.5	20	3	30	G1/8	Z*FD**
QEFD2525R/L30-DGSC	✻	○	○	25x25	G1/8	135	23.5	20	3	30	G1/8	Z*FD**
QEGD1616R/L30-DGSC	✻	○	○	16x16	G1/8	105	14	20	4	30	G1/8	Z*GD**
QEGD2020R/L30-DGSC	✻	○	○	20x20	G1/8	120	18	20	4	30	G1/8	Z*GD**
QEGD2525R/L30-DGSC	✻	○	○	25x25	G1/8	135	23	20	4	30	G1/8	Z*GD**
QEHD2525R/L30-DGSC	✻	○	○	25x25	G1/8	135	22.5	20	5	30	G1/8	Z*HD**
QEKD2525R/L30-DGSC	✻	○	○	25x25	G1/8	135	22	20	6	30	G1/8	Z*KD**

● Ex stock ○ On demand

✻ With internal cooling

Spare parts

	Insert	Z*ED**	Z*FD**	Z*GD**	Z*HD**	Z*KD**
	H	16-25	16-25	20-25	20-25	20-25
	Grub screw	PT1/8x4	PT1/8x4	PT1/8x4	PT1/8x4	PT1/8x4
	Screw	GB70-85-M5×20 (4.0 Nm)	GB70-85-M5×20 (4.0 Nm)	GB70-85-M5×20 (4.0 Nm)	GB70-85-M6×20 (7.0 Nm)	GB70-85-M6×20 (7.0 Nm)
	Wrench	WH40L	WH40L	WH40L	WH50L	WH50L
	Wrench	WH50L	WH50L	WH50L	WH50L	WH50L

Insert

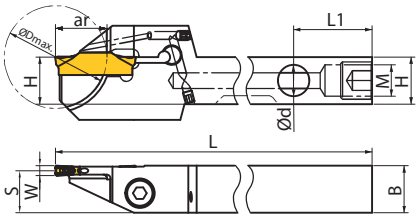
			
A399	A400	A404	A407

System code A422 Grade selection A394 Technical info A501 Cutting data A456

Parting & grooving tool holder (external)

QE**R/L-SC





Article	✻	Stock R	Stock L	Dimensions [mm] HxB	ød	L	S	L_1	W	ar_{max}	ØDmax	M	Inserts
QEAD1010R/L10-SC	✻	○	○	10x10	G1/16	125	9	20	1.5	10	20	G1/16	Z*AD**
QEAD1212R/L13-SC	✻	○	○	12x12	G1/8	125	12	20	1.5	13	26	G1/8	Z*AD**
QEAD1616R/L13-SC	✻	○	○	16x16	G1/8	125	15	20	1.5	13	26	G1/8	Z*AD**
QEAD2020R/L13-SC	✻	○	○	20x20	G1/8	125	19	20	1.5	13	26	G1/8	Z*AD**
QEBD1010R/L10-SC	✻	○	○	10x10	G1/16	110	9	20	2	10	20	G1/16	Z*BD**
QEBD1212R/L13-SC	✻	●	●	12x12	G1/8	110	11	20	2	13	26	G1/8	Z*BD**
QEBD1616R/L13-SC	✻	●	●	16x16	G1/8	110	15	20	2	13	26	G1/8	Z*BD**
QEBD2020R/L13-SC	✻	○	○	20x20	G1/8	110	19	20	2	13	26	G1/8	Z*BD**
QEED1010R/L10-SC	✻	○	○	10x10	G1/16	110	8.75	20	2.5	10	20	G1/16	Z*ED**
QEED1212R/L13-SC	✻	●	●	12x12	G1/8	110	10.75	20	2.5	13	26	G1/8	Z*ED**
QEED1616R/L17-SC	✻	●	●	16x16	G1/8	110	14.75	20	2.5	17	34	G1/8	Z*ED**
QEED2020R/L17-SC	✻	●	●	20x20	G1/8	110	18.75	20	2.5	17	34	G1/8	Z*ED**
QEFD1212R/L13-SC	✻	●	●	12x12	G1/8	110	10.5	20	3	13	26	G1/8	Z*FD**
QEFD1616R/L17-SC	✻	●	●	16x16	G1/8	110	14.5	20	3	17	34	G1/8	Z*FD**
QEFD2020R/L22-SC	✻	●	●	20x20	G1/8	110	18.5	20	3	22	44	G1/8	Z*FD**

● Ex stock ○ On demand

✻ With internal cooling

Spare parts

	Insert	Z*AD**	Z*AD**	Z*AD**	Z*AD**	Z*BD**	Z*BD**	Z*BD**	Z*ED**	Z*ED**	Z*ED**	Z*FD**	Z*FD**
	H	10	12	16	20	10	12	16-20	10	12	16-20	12	16-20
	Grub screw	PT1/16x6	PT1/8x4	PT1/8x4	PT1/8x4	PT1/16x6	PT1/8x4	PT1/8x4	PT1/16x6	PT1/8x4	PT1/8x4	PT1/8x4	PT1/8x4
	Screw	GB70-85-M4×12 (2.6 Nm)	GB70-85-M4×12 (2.6 Nm)	GB70-85-M4×14	GB70-85-M4×18	GB70-85-M4×12 (2.6 Nm)	GB70-85-M4×12 (2.6 Nm)	GB70-85-M6×20 (7.0 Nm)	GB70-85-M4×12 (2.6 Nm)	GB70-85-M4×12 (2.6 Nm)	GB70-85-M6×20 (7.0 Nm)	GB70-85-M4×12 (2.6 Nm)	GB70-85-M5×20 (4.0 Nm)
	Wrench	WH30L	WH30L	WH30L	WH30L	WH30L	WH30L	WH40L	WH30L	WH30L	WH40L	WH30L	WH40L
	Wrench	WH40L	WH50L	WH50L	WH50L	WH40L	WH50L	WH50L	WH40L	WH50L	WH50L	WH50L	WH50L

System code A422 | Grade selection A394 | Technical info A501 | Cutting data A456

Parting & grooving tool holder (external)

Insert			
			
A399	A400	A404	A407

System code A422 Grade selection A394 Technical info A501 Cutting data A456

Accessoires

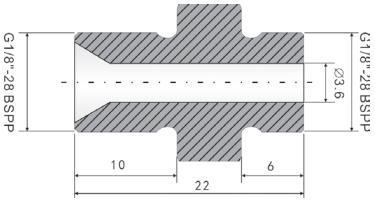
Coolant hose



Article	Dimensions [mm]			Stock
	L	Th1	Th2	
HOSE G1/8-7/16/200BS	200	G1/8"-28 BSPP	G1/8"-28 BSPP	○
HOSE G1/8-7/16/300BS	300	G1/8"-28 BSPP	G1/8"-28 BSPP	○
HOSE G1/8-7/16/200BB	200	G1/8"-28 BSPP	G1/8"-28 BSPP	○
HOSE G1/8-7/16/300BB	300	G1/8"-28 BSPP	G1/8"-28 BSPP	○

● Ex stock ○ On demand

Coolant connection



Article	Stock
NIPPLE G1/8- G1/8	○

● Ex stock ○ On demand

External tool holders – QC series

GQC	R	20	20	K	22	–	15
1	2	3	4	5	6		7

Series	Type		Height [mm]		Width [mm]		Length [mm]	
	Code	Description	Code	Description	Code	Description	Code	Description
	R	Right	16	16	16	16	K	125
	L	Left	20	20	20	20	M	150
			25	25	25	25		
1	2		3		4		5	

Cutting edge length [mm]		Cutting width range [mm]		
Code	I.C	Code	Insert size	
11	6,35	15	0,5≤S<1,8 (QC16***)	1,0≤S<2,3 (QC22***)
16	9,252	25	1,8≤S<3,0 (QC16***)	2,3≤S<3,3 (QC22***)
22	12,70	35	–	3,3≤S≤4,8 (QC22***)
6		7		

Boring bars – QC series

S	20	K	–	QC	16	15	R	25
1	2	3		4	5	6	7	8

Shank type		Diameter [mm]		Length [mm]	
Code	Material	Code	Description	Code	Description
S	Steel shank	16	16	H	100
C	Solid carbide shank	20	20	K	125
A	Solid carbide shank (IC)	25	25	M	150
1		2		3	

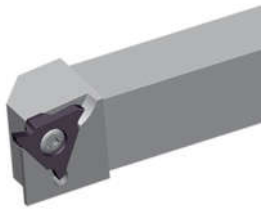
Series	Cutting edge length [mm]		Cutting width range [mm]		
	Code	I.C	Code	Insert size	
	11	6,35	15	0,5≤S<1,8 (QC11***)	0,5≤S<1,8 (QC16***)	1,0≤S<2,3 (QC22***)
	16	9,252	25	1,8≤S<3,0 (QC11***)	1,8≤S<3,0 (QC16***)	2,3≤S<3,3 (QC22***)
	22	12,70	35	–	–	3,3≤S≤4,8 (QC22***)
4		5		6		

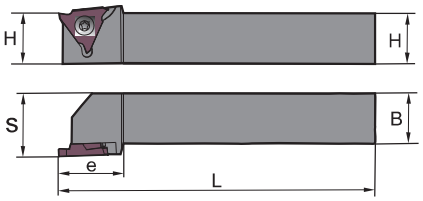
Cutting direction	
Code	Description
R	Right
L	Left
7	

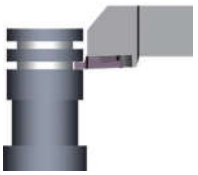
Starting diameter [mm]			
Code	Ø	Code	Ø
16	16	25	25
20	20	35	35
8			

Grooving (external)

GQC**R/L







Right hand style

Article	✻	Stock		Dimensions [mm]						Inserts
		R	L	H	L	S	e	B	Width	
GQCR/L1616K16-15		●	●	16	125	21	25.5	16	0.5-1.80	QC16R/L 050-180
GQCR/L2020K16-15		○	●	20	125	25	25.5	20	0.5-1.80	QC16R/L 050-180
GQCR/L2525M16-15		○	●	25	150	30	25.5	25	0.5-1.80	QC16R/L 050-180
GQCR/L1616K16-25		●	●	16	125	21	25.5	16	1.8-3.0	QC16R/L 180-300
GQCR/L2020K16-25		○	●	20	125	25	25.5	20	1.8-3.0	QC16R/L 180-300
GQCR/L2525M16-25		○	●	25	150	30	25.5	25	1.8-3.0	QC16R/L 180-300
GQCR/L2020K22-15		○	●	20	125	25	25.5	20	1.0-2.3	QC22R/L 100-230
GQCR/L2525M22-15		○	●	25	150	30	25.5	25	1.0-2.3	QC22R/L 100-230
GQCR/L2020K22-25		○	●	20	125	25	25.5	20	2.3-3.3	QC22R/L 230-330
GQCR/L2525M22-25		○	●	25	150	30	25.5	25	2.3-3.3	QC22R/L 230-330
GQCR/L2020K22-35		●	●	20	125	25	25.5	20	3.3-4.8	QC22R/L 330-480
GQCR/L2525M22-35		●	●	25	150	30	25.5	25	3.3-4.8	QC22R/L 330-480

● Ex stock ○ On demand

✻ With internal cooling

Spare parts

	Insert	QC16R/L 050-180	QC16R/L 180-300	QC22R/L 100-230	QC22R/L 230-330	QC22R/L 330-480
	H	**16-32**	**16-32**	**16-32**	**16-32**	**16-32**
	Screw	I60M3.5×10 (2.7 Nm)	I60M3.5×10 (2.7 Nm)	I60M5×13 (6.7 Nm)	I60M5×13 (6.7 Nm)	I60M5×13 (6.7 Nm)
	Wrench (shim)	WT15IP	WT15IP	WT20IP	WT20IP	WT20IP

Insert



Medium Cut

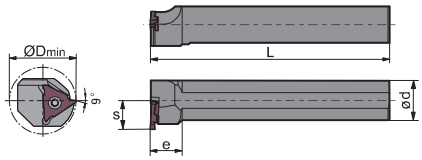
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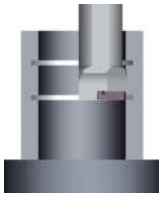
System code A452 Grade selection A394 Technical info A501 Cutting data A456

S_QCR/L

S*K-QC**R/L







Right hand style

Article	✻	Stock R	Stock L	Dimensions [mm] ØDmin	ød	L	S	e	Width	Inserts
S16H-QC1115R/L20		●	●	21	16	100	11.5	12	0.5-1.80	QC11R/L 050-180
S20K-QC1115R/L16		●	●	16	20	125	11.1	40	0.5-1.80	QC11R/L 050-180
S16H-QC1125R/L20		●	●	21	16	100	11.5	12	1.8-3.0	QC11R/L 180-300
S20K-QC1125R/L16		○	○	16	20	125	11.1	40	1.8-3.0	QC11R/L 180-300
S20M-QC1615R/L25		○	●	26	20	150	12.5	15	0.5-1.80	QC16R/L 050-180
S20M-QC1625R/L25		●	●	26	20	150	12.5	15	1.8-3.0	QC16R/L 180-300
S25M-QC2215R/L35		●	●	35	25	150	18.2	15	1.0-2.3	QC22R/L 100-230
S25M-QC2225R/L35		●	●	35	25	150	18.2	20	2.3-3.3	QC22R/L 230-330
S25M-QC2235R/L35		○	●	35	25	150	18.2	20	3.3-4.8	QC22R/L 330-480

● Ex stock ○ On demand

✻ With internal cooling

Right-hand tool holder for left-hand grooving insert.
Left-hand tool holder for right-hand grooving insert.

Spare parts

	Insert	QC11R/L 050-180	QC11R/L 180-300	QC16R/L 050-180	QC16R/L 180-300	QC22R/L 100-230	QC22R/L 230-330	QC22R/L 330-480
	ød	**16-20**	**16-20**	**20**	**20**	**25**	**25**	**25**
	Screw	I60M2.5×6.5 (1.0 Nm)	I60M2.5×6.5 (1.0 Nm)	I60M3.5×10 (2.7 Nm)	I60M3.5×10 (2.7 Nm)	I60M5×13 (6.7 Nm)	I60M5×13 (6.7 Nm)	I60M5×13 (6.7 Nm)
	Wrench (shim)	WT07IP	WT07IP	WT15IP	WT15IP	WT20IP	WT20IP	WT20IP

Insert



Medium Cut

A417

System code A452 | Grade selection A394 | Technical info A501 | Cutting data A456

Notes

Parting & grooving inserts

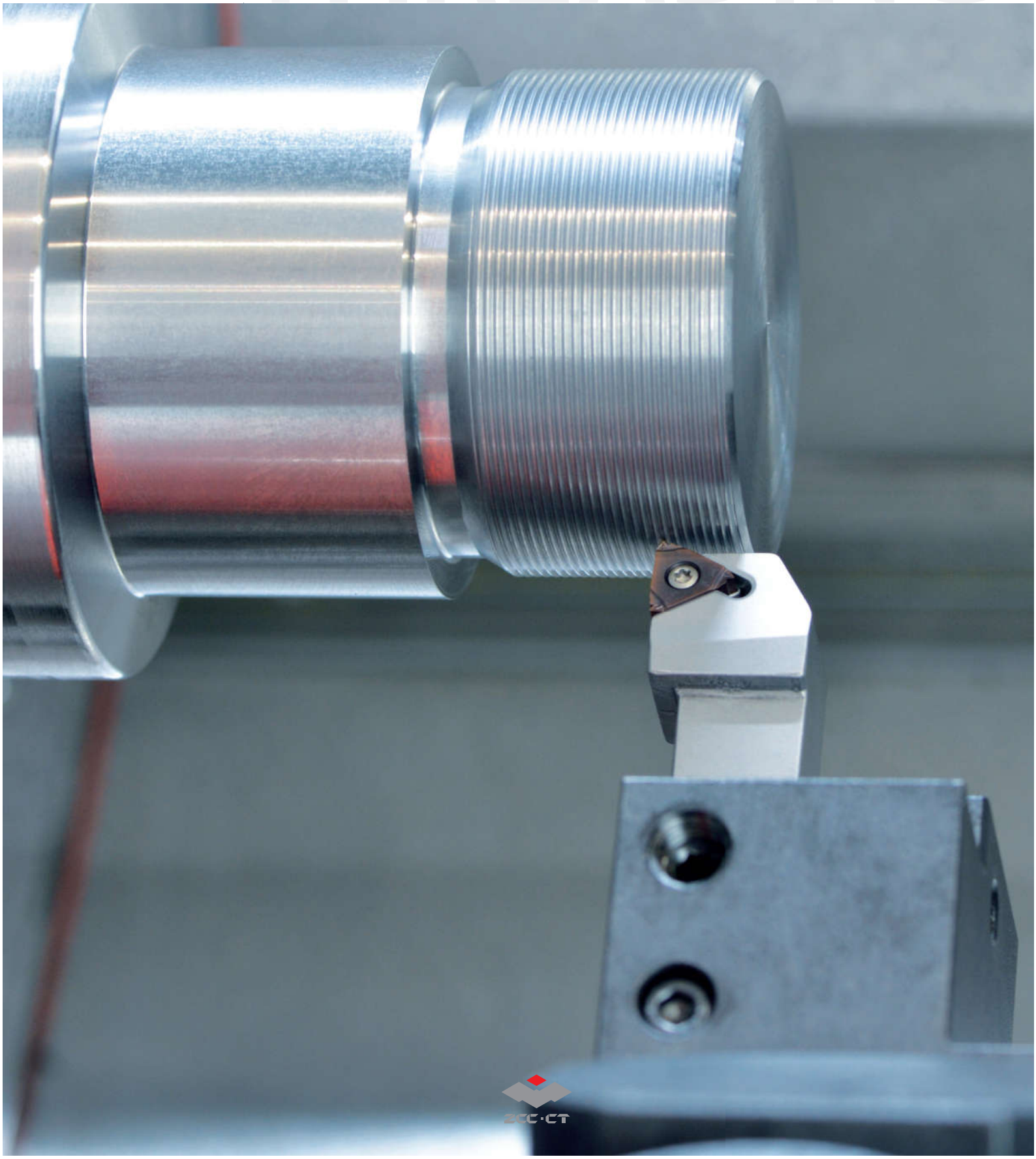
Material group		Composition / structure / heat treatment		Brinell hardness HB	Machining group	Starting values for cutting speed vc [m/min]			
						HC (CVD)	HC (PVD)		
						YBC252	YBG102	YBG105	
P	Unalloyed steel	approx. 0,15 % C	annealed	125	1	190			
		approx. 0,45 % C	annealed	190	2	175			
		approx. 0,45 % C	tempered	250	3	145			
		approx. 0,75 % C	annealed	270	4	140			
		approx. 0,75 % C	tempered	300	5	135			
	Low-alloyed steel		annealed	180	6	170			
			tempered	275	7	125			
			tempered	300	8	115			
			tempered	350	9	105			
	High-alloyed steel and high-alloyed tool steel		annealed	200	10	125			
			hardened and tempered	325	11	95			
M	Stainless steel	ferritic/martensitic	annealed	200	12	165	165	170	
		martensitic	tempered	240	13	135	135	140	
		austenitic	quench hardened	180	14	155	155	160	
		austenitic-ferritic		230	15	135	135	140	
K	Grey cast iron	perlitic/ferritic		180	16	240			
		perlitic (martensitic)		260	17	185			
	Cast iron with spheroidal graphite	ferritic		160	18	220			
		perlitic		250	19	165			
	Malleable cast iron	ferritic		130	20	175			
		perlitic		230	21	165			
N	Aluminium wrought alloys	cannot be hardened		60	22				
		hardenable	hardened	100	23				
	Cast aluminium alloys	≤ 12 % Si, cannot be hardened		75	24				
		≤ 12 % Si, hardenable	hardened	90	25				
		> 12 % Si, cannot be hardened		130	26				
	Copper and copper alloys (bronze/brass)	machining steel, PB> 1%		110	27				
		CuZn, CuSnZn		90	28				
		CuSn, Pb-free copper, electrolytic copper		100	29				
S	Heat-resistant alloys	Fe-based alloys	annealed	200	30		95	100	
			hardened	280	31		50	50	
		Ni or Co bass	annealed	250	32		80	80	
			hardened	350	33		70	70	
			cast	320	34		70	70	
	Titanium alloys	pure titanium		R_m 400	35		145	150	
		α and β alloys	hardened	R_m 1050	36		50	50	
H	Hardened steel		hardened and tempered	55 HRC	37				
			hardened and tempered	60 HRC	38				
	Hard cast iron		cast	400	39				
	Hardened cast iron		hardened and tempered	55 HRC	40				
X	Non-metallic materials	Thermoplasts			41				
		Thermosetting plastics			42				
		Plastic, glass-fibre reinforced GFRP			43				
		Plastic, carbon fibre reinforced CFRP			44				
		Graphite			45				
		Wood			46				

Note: The given cutting values are guide values, which were determined under ideal conditions.
The values have to be adapted in individual cases.
For examples of material for cutting tool groups view page D11.

	Starting values for cutting speed vc [m/min]						
	HC (PVD)				HW		
	YB9320	YBG202	YBG205	YBG302	YD101	YD201	
	190	190	190	185			
	175	175	175	170			
	145	145	145	140			
	140	140	140	135			
	135	135	135	130			
	170	170	170	165			
	125	125	125	125			
	115	115	115	115			
	105	105	105	105			
	125	125	125	125			
	95	95	95	95			
	165	165	165	160			
	135	135	135	130			
	155	155	155	150			
	135	135	135	130			
	240	240	240	235			
	185	185	185	180			
	220	220	220	215			
	165	165	165	160			
	175	175	175	170			
	165	165	165	160			
					800	760	
					600	570	
					320	305	
					240	230	
					160	155	
					160	155	
					600	570	
					200	190	
	95	95	95	95	70	65	
	50	50	50	50	35	35	
	80	80	80	75	60	60	
	70	70	70	65	50	50	
	70	70	70	65	50	50	
	145	145	145	140	105	100	
	50	50	50	50	35	35	

HC Coated carbide
HW Uncoated carbide, main component (WC)

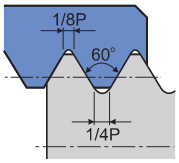
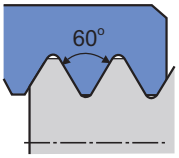
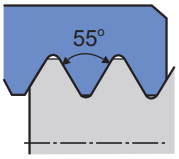
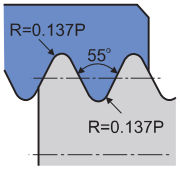
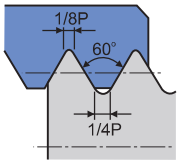
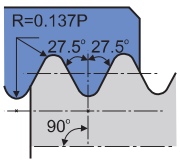
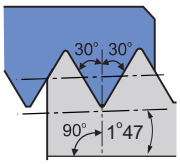
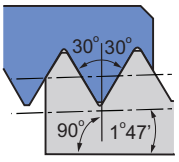
THREADING

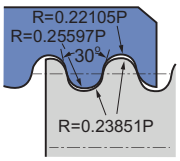
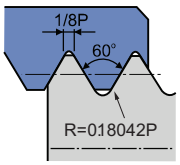
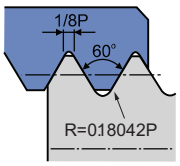
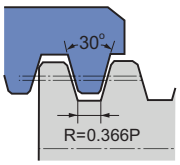
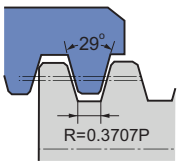
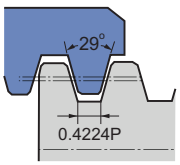
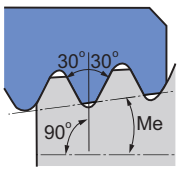
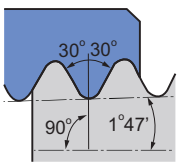


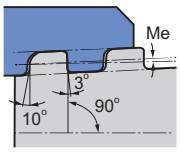
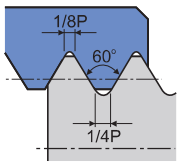
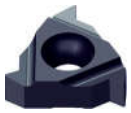
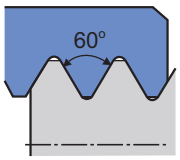
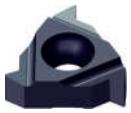
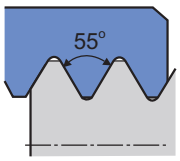
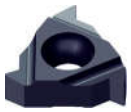
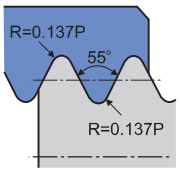
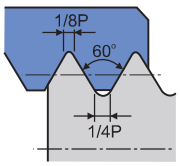
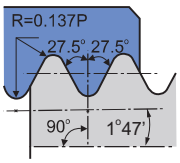
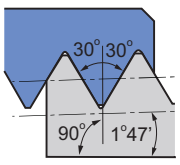
Threading

System overview	**A460-A463**
Grade overview	**A464**
Application fields of grades	**A465**
System code - inserts	**A466**
Inserts	**A467-A491**
System code - threading tool holders	**A492**
Threading tool holders	**A493-A499**
Recommended cutting data	**A500**
Trouble shooting	**A504**
Technical Information	**A511-A512**
Special tools	**A513**

Threading System overview

Thread types	Profile	Sectional drawing	Insert	Internal thread pitch mm (TPI)	External thread pitch mm (TPI)	Page
ISO metric coarse thread 60° full profile	**GM**			0,5-6,0	0,5-6,0	A467
60° partial profile	**60°**			0,5-5,0 (5-48)	0,5-5,0 (5-48)	A469
55° partial profile	**55°**			0,5-5,0 (5-48)	0,5-5,0 (5-48)	A470
Whitworth	**W**			(8-16)	(8-16)	A471
UN unified conventional thread 60° full profile	**UN**			(8-20)	(8-20)	A472
BSPT Whitworth taper pipe thread	**BSPT**			(11-28)	11-28	A473
NPT American taper pipe thread	**NPT**			(8-27)	(8-27)	A474
NPTF dryseal American taper pipe thread 60°	**NPTF**			(8-27)	(8-27)	A475

Thread types	Profile	Sectional drawing	Insert	Internal thread pitch mm (TPI)	External thread pitch mm (TPI)	Page
R knuckle thread 30°	**R**			(6-10)	(6-10)	A476
MJ thread for aerospace	**MJ**			---	1,5-2,0	A477
UNJ unified screw thread	**UNJ**			---	(8-32)	A478
TR metrical ISO trapezoidal thread 30°	**Tr**			1,5-3,0	1,5-3,0	A479
ACME American national thread 29°	**AC**			(8-16)	(8-16)	A480
STUB-ACME thread	**STAC**			(8-16)	(8-16)	A481
API 60° thread	**AP**			4-5	(4-5)	A482
API round thread	**RD**			8-10	(8-10)	A483

Thread types	Profile	Sectional drawing	Insert	Internal thread pitch mm (TPI)	External thread pitch mm (TPI)	Page
API American buttress thread	**BUT**			(5)	(5)	A484
ISO metric coarse thread 60° full profile (thin type)	**GM**			0,5-3,0	0,5-3,0	A485
60° partial profile (thin type)	**60°**			0,5-3,0 (8-48)	0,5-3,0 (8-48)	A486
55° partial profile (thin type)	**55°**			0,5-3,0 (8-48)	0,5-3,0 (8-48)	A487
Whitworth (thin type)	**W**			(8-16)	(8-16)	A488
UN unified conventional thread 60° full profile (thin type)	**UN**			(8-24)	(8-20)	A489
BSPT Whitworth taper pipe thread (thin type)	**BSPT**			(11-28)	(11-28)	A490
NPT American taper pipe thread (thin type)	**NPT**			(8-27)	(8-27)	A491

Type	Tool holder	Dimensions [mm]	Page
External thread holder		16×16×100 20×20×125 25×25×150 32×25×170 32×32×170 40×40×250	A493
Internal thread holder		16×125×12 16×150×16 16×150×20 20×150×25 20×180×25 25×150×32 32×200×40 32×250×40 40×300×50 50×350×63	A495
External thread holder (Thin Type)		16×16×100 32×25×170 20×20×125 32×32×170 25×25×150	A497
Internal thread holder (Thin Type)		16×150×20 32×200×40 20×180×25 32×250×40 25×150×32	A498

Threading

Grade	ISO	Micro structure	Grade description
YBG201	P10 - P30 M10 - M30		PVD coated P10–P30/M10–M30 carbide substrate for finishing to medium application of steel and stainless steel. Good wear resistance in a wide application field.
YBG205	P10 - P30 M20 - M40 S15-S25		PVD multilayer coated P10–P30/M20–M40/S15–S25 carbide substrate for finishing to medium machining of stainless steel, super alloys and steel (milling). Excellent wear resistance and thermal stability in a wide range of applications.

Application fields of grades – threading

	ISO	HC[1] (CVD)	HC[1] (PVD)	HT	HC[2]	Ceramic	HW	CBN	PCD
P	P01								
	P10		YBG205 YBG201						
	P20								
	P30								
	P40								
M	M01								
	M10		YBG205 YBG201						
	M20								
	M30								
	M40								
K	K01								
	K10								
	K20								
	K30								
N	N01								
	N10								
	N20								
	N30								
S	S01								
	S10		YBG205 YBG201						
	S20								
	S30								
H	H01								
	H10								
	H20								
	H30								

P	Steel	N	Non-ferrous metals
M	Stainless steel	S	Heat-resistant alloys
K	Cast iron	H	Hardened materials

HC[1] Coated carbide
HT Uncoated cermet
HC[2] Coated cermet
HW Uncoated carbide

Threading System code – inserts

R	T	22.	01	W	–	3.50	GM	(P)	(B)
1	2	3	4	5		6	7	8	9

1 Type

Code	Description
R	Right
L	Left

2 Insert shape

T  Z Special

3 Insert size [mm]

Code	I.C
11	6,35
16	9,252
22	12,70

4 Teeth per cutting edge

Code	Description
01	1
02	2

5 Application

Code	Description
W	External thread
N	Internal thread

6 Pitch

Code	Pitch range (part profile)	
A	0,5 – 1,5 mm	48 – 16 (TPI)
AG	0,5 – 3,0 mm	48 – 8 (TPI)
G	1,75 – 3,0 mm	14 – 8 (TPI)
N	3,5 – 5,0 mm	7 – 5 (TPI)

Pitch range [mm] (full profile)
0,50 0,75 1,00 1,25 1,50
1,75 2,00 2,50 3,00 3,50
4,00 4,50 5,00 5,50 6,00

Pitch range (TPI) (full profile)
4 5 6 8
10 11 11,5 12
14 16 18 19
20 24 27 28

7 Thread profile

Code	Description
GM	ISO metric coarse thread 60°
60	Partial profile 60°
55	Partial profile 55°
W	Whitworth
UN	Unified conventional thread
BSPT	Whitworth taper pipe thread
NPT	American taper pipe thread
NPTF	Dryseal American taper pipe thread
R	Knuckle thread 30°
MJ	Thread for aerospace
UNJ	Unified screw thread
TR	Metrical ISO trapezoidal thread
AC	American national thread
STAC	STUB-ACME thread
AP	API 60° thread
RD	API round thread
BUT	American buttress thread

8 Chip breaker

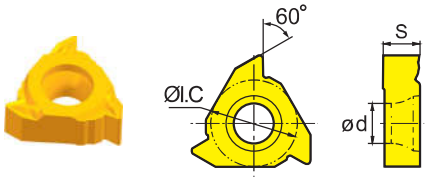
9 Insert thickness [mm]

Code	Description
B	Thin type

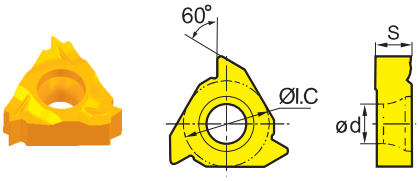
R/LT**N/W	I.C	S	d
11	6.35	3.18	2.8
16	9.525	3.97	4.4
22	12.7	5.56	5.5

Threading inserts

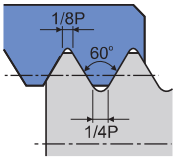
ISO metric coarse thread 60° full profile



External right hand
Internal left hand



Internal right hand
External left hand



ISO 965-1980 DIN 13
GB·T 197-2003 Tolerance: 6g·6H

ISO	Pitch (mm)	External	HC[1] (PVD) YBG201	HC[1] (PVD) YBG205	Internal	HC[1] (PVD) YBG201	HC[1] (PVD) YBG205
11	0.50	-			RT11.01N-0.50GM	○	
11		-			LT11.01N-0.50GM	○	
11	0.75	-			RT11.01N-0.75GM	●	
11		-			LT11.01N-0.75GM	○	
11	1.00	-			RT11.01N-1.00GM	○	●
11		-			LT11.01N-1.00GM	●	
11	1.25	-			RT11.01N-1.25GM	●	
11		-			LT11.01N-1.25GM	●	
11	1.50	-			RT11.01N-1.50GM	○	●
11		-			LT11.01N-1.50GM	●	
11	1.75	-			RT11.01N-1.75GM	○	
11		-			LT11.01N-1.75GM	●	
11	2.00	-			RT11.01N-2.00GM	○	●
11		-			LT11.01N-2.00GM	●	
16	0.50	-			RT16.01N-0.50GM	○	
16		-			LT16.01N-0.50GM	○	
16	0.75	-			RT16.01N-0.75GM	○	
16		-			LT16.01N-0.75GM	○	
16	1.00	RT16.01W-1.00GM	○	●	RT16.01N-1.00GM	○	
16		LT16.01W-1.00GM	●		LT16.01N-1.00GM	●	
16	1.25	RT16.01W-1.25GM	○	●	RT16.01N-1.25GM	○	
16		LT16.01W-1.25GM	●		LT16.01N-1.25GM	●	
16	1.50	RT16.01W-1.50GM	○	●	RT16.01N-1.50GM	●	
16		LT16.01W-1.50GM	●		LT16.01N-1.50GM	●	
16	1.75	RT16.01W-1.75GM	●		RT16.01N-1.75GM	○	
16		LT16.01W-1.75GM	●		LT16.01N-1.75GM	●	
16	2.00	RT16.01W-2.00GM	○	●	RT16.01N-2.00GM	○	●

● Ex stock ○ On demand

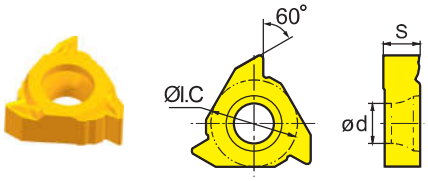
HC[1] Coated carbide

System code A466 Grade selection A465 Technical info A501 Cutting data A500

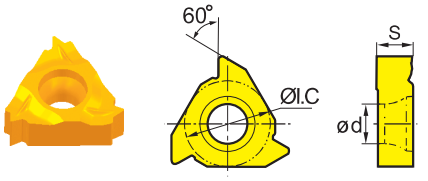
R/LT**N/W	I.C	S	d
11	6.35	3.18	2.8
16	9.525	3.97	4.4
22	12.7	5.56	5.5

Threading inserts

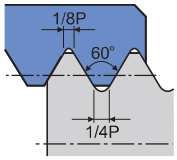
ISO metric coarse thread 60° full profile



External right hand
Internal left hand



Internal right hand
External left hand



ISO 965-1980 DIN 13
GB·T 197-2003 Tolerance: 6g·6H

ISO	Pitch (mm)	External	HC[1] (PVD) YBG201	HC[1] (PVD) YBG205	Internal	HC[1] (PVD) YBG201	HC[1] (PVD) YBG205
16	2.00	**LT16.01W-2.00GM**	●		**LT16.01N-2.00GM**	●	
16	2.50	**RT16.01W-2.50GM**	○	●	**RT16.01N-2.50GM**	○	●
16		**LT16.01W-2.50GM**	●		**LT16.01N-2.50GM**	●	
16	3.00	**RT16.01W-3.00GM**	○	●	**RT16.01N-3.00GM**	○	●
16		**LT16.01W-3.00GM**	●		**LT16.01N-3.00GM**	●	
22	3.50	**RT22.01W-3.50GM**	○		**RT22.01N-3.50GM**	○	●
22		**LT22.01W-3.50GM**	●		**LT22.01N-3.50GM**	●	
22	4.00	**RT22.01W-4.00GM**	○	●	**RT22.01N-4.00GM**	●	
22		**LT22.01W-4.00GM**	●		**LT22.01N-4.00GM**	●	
22	4.50	**RT22.01W-4.50GM**	○		**RT22.01N-4.50GM**	○	●
22		**LT22.01W-4.50GM**	○		**LT22.01N-4.50GM**	●	
22	5.00	**RT22.01W-5.00GM**	○		**RT22.01N-5.00GM**	○	
22		**LT22.01W-5.00GM**	●		**LT22.01N-5.00GM**	●	
22	5.50	**RT22.01W-5.50GM**	○		**RT22.01N-5.50GM**	○	
22		**LT22.01W-5.50GM**	○		**LT22.01N-5.50GM**	●	
22	6.00	**RT22.01W-6.00GM**	○	●	**RT22.01N-6.00GM**	○	●
22		**LT22.01W-6.00GM**	●		**LT22.01N-6.00GM**	●	

● Ex stock ○ On demand

HC[1] Coated carbide

Tool holders

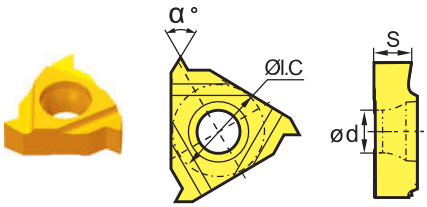
SWR/L	SNR/L
	
A493-A494	A495-A496

System code A466 | Grade selection A465 | Technical info A501 | Cutting data A500

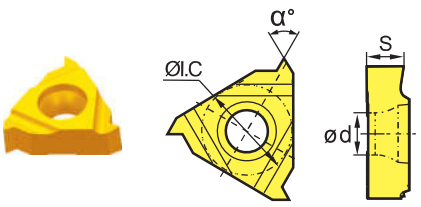
R/LT**N/W	I.C	S	d
16	9.525	3.97	4.4
22	12.7	5.56	5.5

Threading inserts

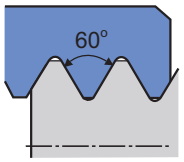
60° partial profile



External right hand
Internal left hand



Internal right hand
External left hand



ISO	Pitch (mm)	External	HC[1] (PVD) YBG201	HC[1] (PVD) YBG205	Internal	HC[1] (PVD) YBG201	HC[1] (PVD) YBG205
16	0.50 - 1.50	**RT16.01W-A60**	○	●	**RT16.01N-A60**	○	
16		**LT16.01W-A60**	●		**LT16.01N-A60**	●	
16	0.50 - 3.00	**RT16.01W-AG60**	○	●	**RT16.01N-AG60**	○	
16		**LT16.01W-AG60**	●		**LT16.01N-AG60**	●	●
16	1.75 - 3.00	**RT16.01W-G60**	○		**RT16.01N-G60**	○	
16		**LT16.01W-G60**	●		**LT16.01N-G60**	○	
16		**LT16.01W-G60P**	●		**LT16.01N-G60P**	○	
16		**RT16.01W-G60P***	○	○	**RT16.01N-G60P***	○	
22	3.50 - 5.00	**LT22.01W-N60P**	○		-		
22		**RT22.01W-N60P***	●		**RT22.01N-N60P***	●	
22		**LT22.01W-N60P***			**LT22.01N-N60P***	○	

● Ex stock ○ On demand
P*: Inserts with chip-breakers

HC[1] Coated carbide

Tool holders

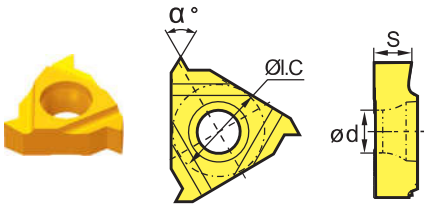
SWR/L	SNR/L
	
A493-A494	A495-A496

System code A466 | Grade selection A465 | Technical info A501 | Cutting data A500

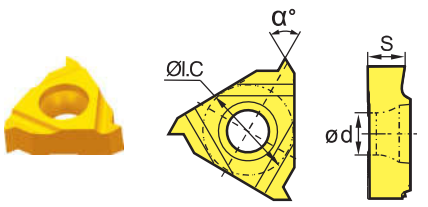
R/LT**N/W	I.C	S	d
16	9.525	3.97	4.4
22	12.7	5.56	5.5

Threading inserts

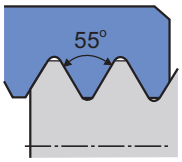
55° partial profile



External right hand
Internal left hand



Internal right hand
External left hand



ISO	Pitch (T.P.i)	External	HC[1] (PVD) YBG201	HC[1] (PVD) YBG205	Internal	HC[1] (PVD) YBG201	HC[1] (PVD) YBG205
16	48 - 16	**RT16.01W-A55**	○		**RT16.01N-A55**	○	
16		**LT16.01W-A55**	●		**LT16.01N-A55**	○	
16	48 - 8	**RT16.01W-AG55**	●		**RT16.01N-AG55**	○	●
16		**LT16.01W-AG55**	○		**LT16.01N-AG55**	●	
16	14 - 8	**RT16.01W-G55**	○		**RT16.01N-G55**	○	
16		**LT16.01W-G55**	●		**LT16.01N-G55**	○	
16		**LT16.01W-G55P**	●		**LT16.01N-G55P**	●	
16		**RT16.01W-G55P***	○		**RT16.01N-G55P***	○	
22	7 - 5	**RT22.01W-N55P**	○		**RT22.01N-N55P**	○	
22		-			**LT22.01N-N55**	○	

● Ex stock ○ On demand
P*: Inserts with chip-breakers

HC[1] Coated carbide

Tool holders

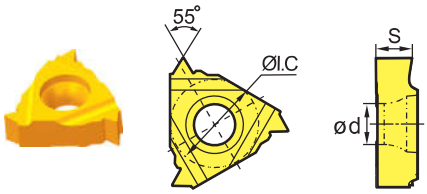
SWR/L	SNR/L
	
A493-A494	A495-A496

System code A466 | Grade selection A465 | Technical info A501 | Cutting data A500

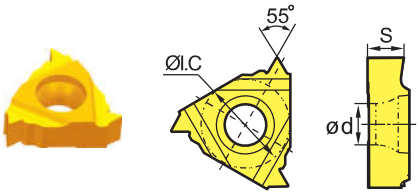
Threading inserts

R/LT**N/W	I.C	S	d
16	9.525	3.97	4.4

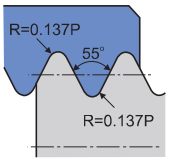
Whitworth



External right hand
Internal left hand



Internal right hand
External left hand



ISO 228·1:1982 DIN 259
B.S.84: 1956 Tolerance: Medium Class 1

ISO	Pitch (T.P.i)	External	HC[1] (PVD) YBG201	HC[1] (PVD) YBG205	Internal	HC[1] (PVD) YBG201	HC[1] (PVD) YBG205
16	8.00	**RT16.01W-8W**	○		**RT16.01N-8W**	○	
16		**LT16.01W-8W**	●		**LT16.01N-8W**	●	
16	9.00	-			**RT16.01N-9W**	○	
16		**LT16.01W-9W**	○		**LT16.01N-9W**	○	
16	10.00	**RT16.01W-10W**	○		**RT16.01N-10W**	○	
16		**LT16.01W-10W**	○		**LT16.01N-10W**	○	
16	11.00	**RT16.01W-11W**	○	●	**RT16.01N-11W**	○	●
16		**LT16.01W-11W**	●		**LT16.01N-11W**	○	
16	12.00	**RT16.01W-12W**	○		**RT16.01N-12W**	○	
16		**LT16.01W-12W**	○		**LT16.01N-12W**	○	
16	14.00	**RT16.01W-14W**	●		**RT16.01N-14W**	○	●
16		**LT16.01W-14W**	○		**LT16.01N-14W**	○	
16	16.00	**RT16.01W-16W**	○	●	**RT16.01N-16W**	○	●
16		**LT16.01W-16W**	○		**LT16.01N-16W**	○	

● Ex stock ○ On demand

HC[1] Coated carbide

Tool holders

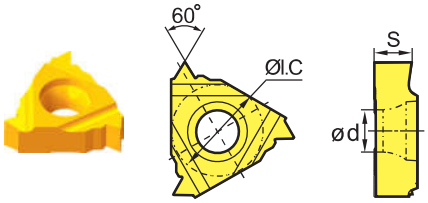
SWR/L	SNR/L
	
A493-A494	A495-A496

System code A466 Grade selection A465 Technical info A501 Cutting data A500

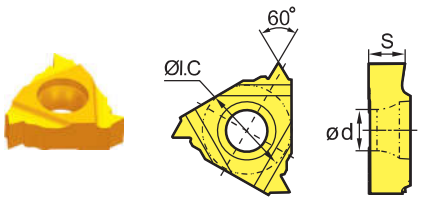
Threading inserts

R/LT**N/W	I.C	S	d
16	9.525	3.97	4.4

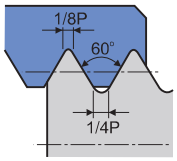
UN unified conventional thread 60° full profile



External right hand
Internal left hand



Internal right hand
External left hand



AS;E B1.1-1989
Tolerance: 2A·2B

ISO	Pitch (T.P.i)	External	HC[1] (PVD) YBG201	HC[1] (PVD) YBG205	Internal	HC[1] (PVD) YBG201	HC[1] (PVD) YBG205
16	8.00	**RT16.01W-8UN**	○		**RT16.01N-8UN**	○	
16		**LT16.01W-8UN**	○		**LT16.01N-8UN**	○	
16	10.00	**RT16.01W-10UN**	○		**RT16.01N-10UN**	○	
16		**LT16.01W-10UN**	○		**LT16.01N-10UN**	○	
16	12.00	**RT16.01W-12UN**	○		**RT16.01N-12UN**	○	
16		**LT16.01W-12UN**	○		**LT16.01N-12UN**	○	
16	14.00	**RT16.01W-14UN**	○		**RT16.01N-14UN**	○	
16		**LT16.01W-14UN**	○		**LT16.01N-14UN**	○	
16	16.00	**RT16.01W-16UN**	○		**RT16.01N-16UN**	○	
16		**LT16.01W-16UN**	○		**LT16.01N-16UN**	○	
16	18.00	**RT16.01W-18UN**	○		**RT16.01N-18UN**	○	
16		**LT16.01W-18UN**	○		**LT16.01N-18UN**	○	
16	20.00	**RT16.01W-20UN**	○		**RT16.01N-20UN**	○	
16		**LT16.01W-20UN**	○		**LT16.01N-20UN**	○	
16	24.00	-			**RT16.01N-24UN**	○	
16		-			**LT16.01N-24UN**	○	

● Ex stock ○ On demand

HC[1] Coated carbide

Tool holders

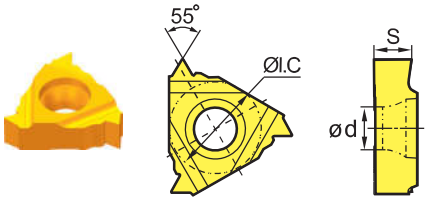
SWR/L	SNR/L
	
A493-A494	A495-A496

System code A466 | Grade selection A465 | Technical info A501 | Cutting data A500

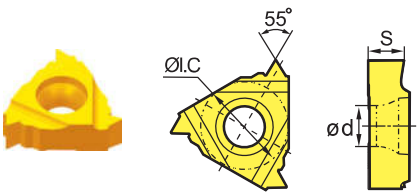
Threading inserts

R/LT**N/W	I.C	S	d
16	9.525	3.97	4.4

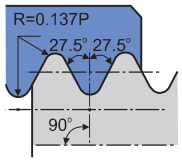
BSPT Whitworth taper pipe thread



External right hand
Internal left hand



Internal right hand
External left hand



ISO 7-1: 1984 B.S.21:1985
Standard BSPT

ISO	Pitch (T.P.i)	External	HC[1] (PVD) YBG201	HC[1] (PVD) YBG205	Internal	HC[1] (PVD) YBG201	HC[1] (PVD) YBG205
16	11.00	**RT16.01W-11BSPT**	○		**RT16.01N-11BSPT**	○	
16		**LT16.01W-11BSPT**	●		**LT16.01N-11BSPT**	○	
16	14.00	**RT16.01W-14BSPT**	○		**RT16.01N-14BSPT**	○	
16		**LT16.01W-14BSPT**	○		**LT16.01N-14BSPT**	○	
16	19.00	**RT16.01W-19BSPT**	○		**RT16.01N-19BSPT**	○	
16		**LT16.01W-19BSPT**	○		**LT16.01N-19BSPT**	○	
16	28.00	**RT16.01W-28BSPT**	○		**RT16.01N-28BSPT**		
16		**LT16.01W-28BSPT**	○		**LT16.01N-28BSPT**	○	

● Ex stock ○ On demand

HC[1] Coated carbide

Tool holders

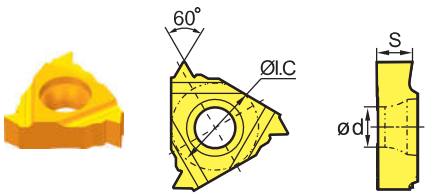
SWR/L	SNR/L
	
A493-A494	A495-A496

System code A466 Grade selection A465 Technical info A501 Cutting data A500

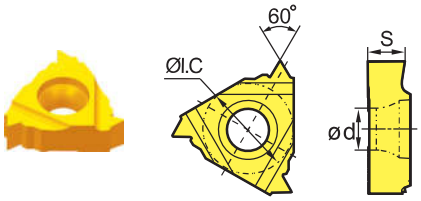
Threading inserts

R/LT**N/W	I.C	S	d
16	9.525	3.97	4.4

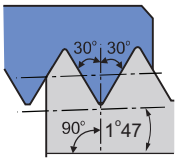
NPT American taper pipe thread



External right hand
Internal left hand



Internal right hand
External left hand



ASME B1.20.1-1983
Standard NPT

ISO	Pitch (T.P.i)	External	HC[1] (PVD) YBG201	HC[1] (PVD) YBG205	Internal	HC[1] (PVD) YBG201	HC[1] (PVD) YBG205
16	8.00	**RT16.01W-8NPT**	○		**RT16.01N-8NPT**	○	
16		**LT16.01W-8NPT**	○		**LT16.01N-8NPT**	○	
16	11.50	**RT16.01W-11.5NPT**	○		**RT16.01N-11.5NPT**	○	
16		**LT16.01W-11.5NPT**	○		**LT16.01N-11.5NPT**	○	
16	14.00	**RT16.01W-14NPT**	○	○	**RT16.01N-14NPT**	○	
16		**LT16.01W-14NPT**	○		**LT16.01N-14NPT**	○	
16	18.00	**RT16.01W-18NPT**	○		**RT16.01N-18NPT**	○	
16		**LT16.01W-18NPT**	○		**LT16.01N-18NPT**	○	
16	27.00	**RT16.01W-27NPT**	○		**RT16.01N-27NPT**	○	
16		**LT16.01W-27NPT**	○		**LT16.01N-27NPT**	○	

● Ex stock ○ On demand

HC[1] Coated carbide

Tool holders

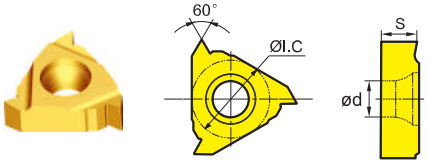
SWR/L	SNR/L
	
A493-A494	A495-A496

System code > A466 | Grade selection > A465 | Technical info > A501 | Cutting data > A500

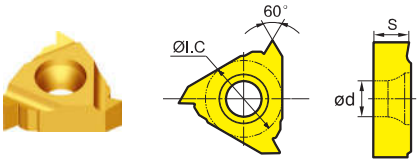
Threading inserts

R/LT**N/W	I.C	S	d
16	9.525	3.97	4.4

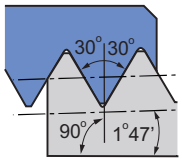
NPTF dryseal American taper pipe thread 60°



External right hand
Internal left hand



Internal right hand
External left hand



ASME B1.20.1-1983
Tolerance: 2

ISO	Pitch (T.P.i)	External	HC[1] (PVD) YBG201	HC[1] (PVD) YBG205	Internal	HC[1] (PVD) YBG201	HC[1] (PVD) YBG205
16	8.00	-			**RT16.01N-8NPTF**	○	
16	11.50	**RT16.01W-11.5NPTF**	○		**RT16.01N-11.5NPTF**	○	
16	14.00	**RT16.01W-14NPTF**	○		**RT16.01N-14NPTF**	○	
16	18.00	**RT16.01W-18NPTF**	○		**RT16.01N-18NPTF**	○	
16	27.00	-			**RT16.01N-27NPTF**	○	

● Ex stock ○ On demand

HC[1] Coated carbide

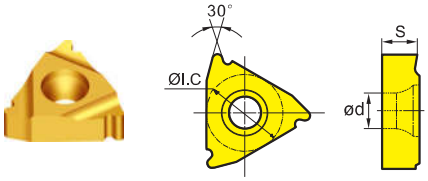
Tool holders

SWR/L	SNR/L
	
A493	A495

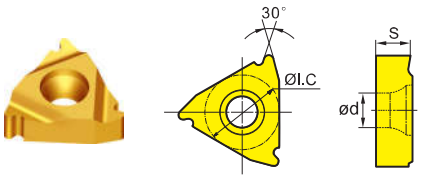
Threading inserts

R/LT**N/W	I.C	S	d
16	9.525	3.97	4.4

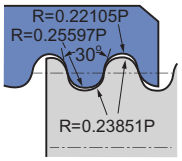
R knuckle thread 30°



External right hand
Internal left hand



Internal right hand
External left hand



DIN 405
Tolerance: 7

ISO	Pitch (T.P.i)	External	HC[1] (PVD)		Internal	HC[1] (PVD)	
			YBG201	YBG205		YBG201	YBG205
16	6.00	**RT16.01W-6R**	○		**RT16.01N-6R**	○	○
16	8.00	**RT16.01W-8R**	○		**RT16.01N-8R**	○	○
16	10.00	**RT16.01W-10R**	○		**RT16.01N-10R**	○	○

● Ex stock ○ On demand

HC[1] Coated carbide

Tool holders

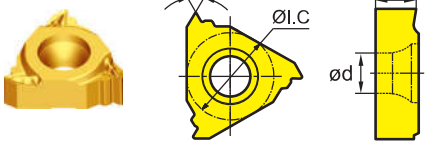
SWR/L	SNR/L
	
A493	A495

System code A466 | Grade selection A465 | Technical info A501 | Cutting data A500

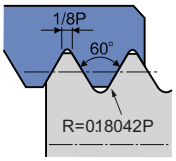
Threading inserts

R/LT**N/W	I.C	S	d
16	9.525	3.97	4.4

MJ thread for aerospace



External right hand
Internal left hand



ISO 5855-1999
Tolerance: 4

ISO	Pitch (mm)	External	HC[1] (PVD) YBG201	HC[1] (PVD) YBG205	Internal	HC[1] (PVD) YBG201	HC[1] (PVD) YBG205
16	1.50	**RT16.01W-1.50MJ**	○		-		
16	2.00	**RT16.01W-2.00MJ**	○		-		

● Ex stock ○ On demand

HC[1] Coated carbide

Tool holders

SWR/L



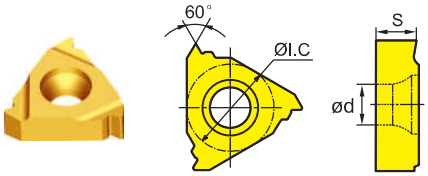
A493

System code A466 | Grade selection A465 | Technical info A501 | Cutting data A500

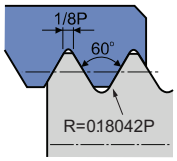
Threading inserts

R/LT**N/W	I.C	S	d
16	9.525	3.97	4.4

UNJ unified screw thread



External right hand
Internal left hand



ISO 3161-1999
Tolerance: 3A

ISO	Pitch (T.P.i)	External	HC[1] (PVD)		Internal	HC[1] (PVD)	
			YBG201	YBG205		YBG201	YBG205
16	10.00	**RT16.01W-10UNJ**	○		-		
16	12.00	**RT16.01W-12UNJ**	○		-		
16	14.00	**RT16.01W-14UNJ**	○		-		
16	18.00	**RT16.01W-18UNJ**	○		-		
16	20.00	**RT16.01W-20UNJ**	○		-		
16	24.00	**RT16.01W-24UNJ**	○		-		
16	28.00	**RT16.01W-28UNJ**	○		-		
16	32.00	**RT16.01W-32UNJ**	○		-		

● Ex stock ○ On demand

HC[1] Coated carbide

Tool holders

SWR/L



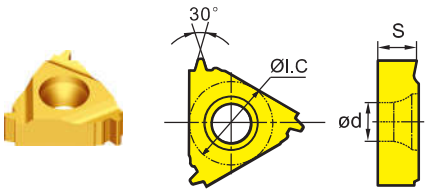
A493

System code A466 | Grade selection A465 | Technical info A501 | Cutting data A500

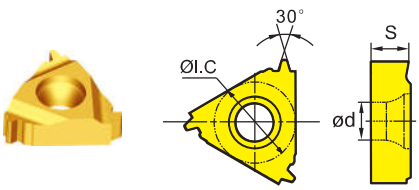
Threading inserts

R/LT**N/W	l.C	S	d
16	9.525	3.97	4.4

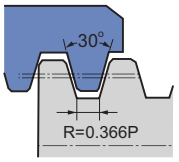
TR metrical ISO trapezoidal thread 30°



External right hand
Internal left hand



Internal right hand
External left hand



ISO 2901-2904
Tolerance: 7

ISO	Pitch (mm)	External	HC[1] (PVD) YBG201	HC[1] (PVD) YBG205	Internal	HC[1] (PVD) YBG201	HC[1] (PVD) YBG205
16	1.50	**RT16.01W-1.50TR**	○		**RT16.01N-1.50TR**	●	
16	2.00	**RT16.01W-2.00TR**	○	○	**RT16.01N-2.00TR**	○	○
16	3.00	**RT16.01W-3.00TR**	○	○	**RT16.01N-3.00TR**	○	●

● Ex stock ○ On demand

HC[1] Coated carbide

Tool holders

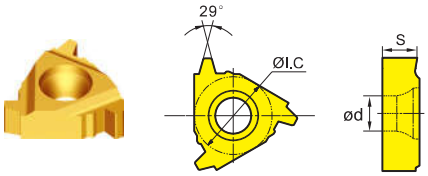
SWR/L	SNR/L
	
A493	A495

System code A466 Grade selection A465 Technical info A501 Cutting data A500

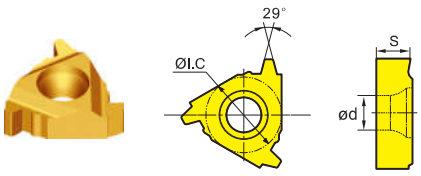
Threading inserts

R/LT**N/W	I.C	S	d
16	9.525	3.97	4.4

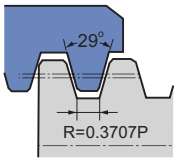
ACME American national thread 29°



External right hand
Internal left hand



Internal right hand
External left hand



ANSI B1.5-1988
Tolerance: 2G

ISO	Pitch (T.P.i)	External	HC[1] (PVD)		Internal	HC[1] (PVD)	
			YBG201	YBG205		YBG201	YBG205
16	8.00	**RT16.01W-8AC**	○		**RT16.01N-8AC**	○	
16	10.00	**RT16.01W-10AC**	○		**RT16.01N-10AC**	○	
16	12.00	**RT16.01W-12AC**	○		**RT16.01N-12AC**	○	
16	14.00	**RT16.01W-14AC**	○		**RT16.01N-14AC**	○	
16	16.00	**RT16.01W-16AC**	○		**RT16.01N-16AC**	○	

● Ex stock ○ On demand

HC[1] Coated carbide

Tool holders

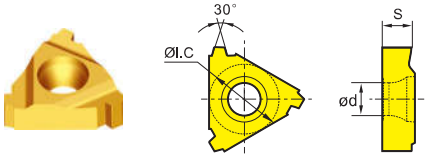
SWR/L	SNR/L
	
A493	A495

System code A466 | Grade selection A465 | Technical info A501 | Cutting data A500

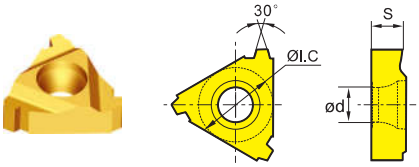
Threading inserts

R/LT**N/W	I.C	S	d
16	9.525	3.97	4.4

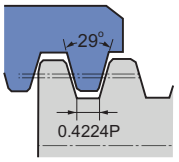
STUB-ACME thread



External right hand
Internal left hand



Internal right hand
External left hand



ANSI B1.8-1988
Tolerance: API Standard

ISO	Pitch (T.P.i)	External	HC[1] (PVD)		Internal	HC[1] (PVD)	
			YBG201	YBG205		YBG201	YBG205
16	8.00	**RT16.01W-8STAC**	○		**RT16.01N-8STAC**	○	
16	10.00	**RT16.01W-10STAC**	○		**RT16.01N-10STAC**	○	
16	12.00	**RT16.01W-12STAC**	○		**RT16.01N-12STAC**	○	
16	14.00	**RT16.01W-14STAC**	○		**RT16.01N-14STAC**	○	
16	16.00	**RT16.01W-16STAC**	○		**RT16.01N-16STAC**	○	

● Ex stock ○ On demand

HC[1] Coated carbide

Tool holders

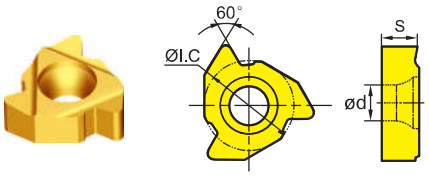
SWR/L	SNR/L
	
A493	A495

System code A466 | Grade selection A465 | Technical info A501 | Cutting data A500

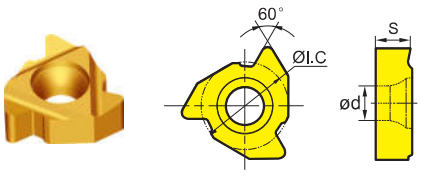
Threading inserts

R/LT**N/W	I.C	S	d
22	12.7	5.56	5.5

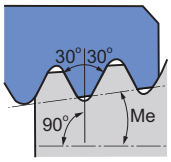
API 60° thread



External right hand
Internal left hand



Internal right hand
External left hand



Me = taper, 2i.p.f-4°46', 3i.p.f-7°01'
API SPEC7:1990 Tolerance: API Standard

ISO	Pitch (T.P.i)	External	HC[1] (PVD) YBG201	HC[1] (PVD) YBG205	Internal	HC[1] (PVD) YBG201	HC[1] (PVD) YBG205
22	4.00	**RT22.01W-4AP382**	○		**RT22.01N-4AP382**	○	
22		**RT22.01W-4AP383**	○		**RT22.01N-4AP383**	○	
22		**RT22.01W-4AP502**	○		**RT22.01N-4AP502**	○	
22		**RT22.01W-4AP503**	○		**RT22.01N-4AP503**	○	
22	5.00	**RT22.01W-5AP403**	○		**RT22.01N-5AP403**	○	

● Ex stock ○ On demand

HC[1] Coated carbide

Tool holders

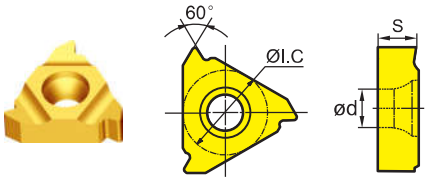
SWR/L	SNR/L
	
A493	A495

System code A466 | Grade selection A465 | Technical info A501 | Cutting data A500

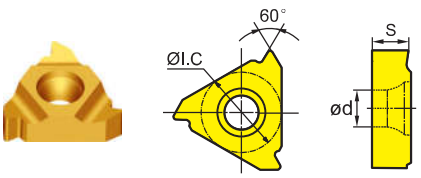
R/LT**N/W	I.C	S	d
16	9.525	3.97	4.4
22	12.7	5.56	5.5

Threading inserts

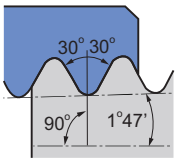
API round thread



External right hand
Internal left hand



Internal right hand
External left hand



API spec.5B
Tolerance: API RD

ISO	Pitch (T.P.i)	External	HC[1] (PVD) YBG201	HC[1] (PVD) YBG205	Internal	HC[1] (PVD) YBG201	HC[1] (PVD) YBG205
16	8.00	**RT16.01W-8RD**	○		**RT16.01N-8RD**	○	
16	10.00	**RT16.01W-10RD**	○		**RT16.01N-10RD**	○	
22	8.00	**RT22.01W-8RD**	○		**RT22.01N-8RD**	○	
22	10.00	**RT22.01W-10RD**	○		**RT22.01N-10RD**	○	

● Ex stock ○ On demand

HC[1] Coated carbide

Tool holders

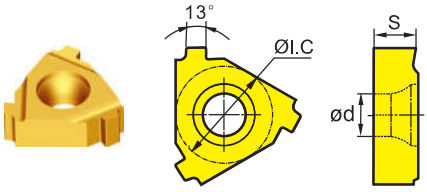
SWR/L	SNR/L
	
A493	A495

System code A466 | Grade selection A465 | Technical info A501 | Cutting data A500

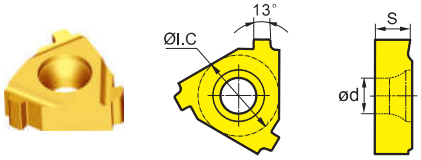
Threading inserts

R/LT**N/W	I.C	S	d
22	12.7	5.56	5.5

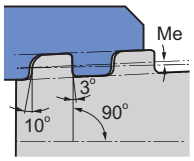
API American buttress thread



External right hand
Internal left hand



Internal right hand
External left hand



Me=taper 3/4i.p.f-1°47'-1°47' for Ø 4 1/2-13 3/8"
1 i.p.f--2°23' for Ø16" SEPC.5B.1979 Tol.: API Std.

ISO	Pitch (T.P.i)	External	HC[1] (PVD)		Internal	HC[1] (PVD)	
			YBG201	YBG205		YBG201	YBG205
22	5.00	**RT22.01W-5BUT**	○		**RT22.01N-5BUT**	○	

● Ex stock ○ On demand

HC[1] Coated carbide

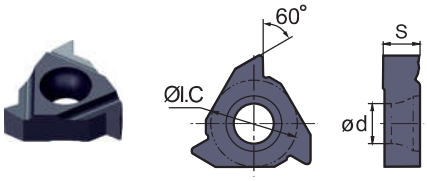
Tool holders

SWR/L	SNR/L
	
A493	A495

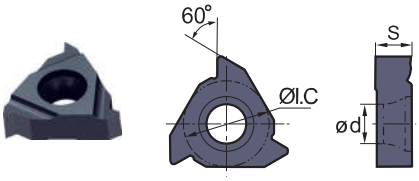
Threading inserts (thin type)

R/LT**N/W	I.C	S	d
16	9.525	3.52	4

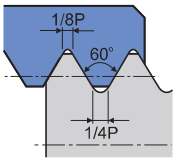
ISO metric coarse thread 60° full profile (thin type)



External right hand
Internal left hand



Internal right hand
External left hand



ISO 965-1980 DIN 13
GB·T 197-2003 Tolerance: 6g/6H

ISO	Pitch (mm)	External	HC[1] (PVD)		Internal	HC[1] (PVD)	
			YBG202	YBG205		YBG202	YBG205
16	0.50	**RT16.01W-0.50GMB**	○	○	**RT16.01N-0.50GMB**	○	○
16	0.75	**RT16.01W-0.75GMB**	○	○	**RT16.01N-0.75GMB**	○	○
16	1.00	**RT16.01W-1.00GMB**	○	○	**RT16.01N-1.00GMB**	○	○
16		-			**RT16.01N-1.00GMPB**	○	
16	1.25	**RT16.01W-1.25GMB**	○	○	**RT16.01N-1.25GMB**	○	○
16	1.50	**RT16.01W-1.50GMB**	○	○	**RT16.01N-1.50GMB**	○	
16		**RT16.01W-1.50GMPB***	○	○	-		
16	1.75	**RT16.01W-1.75GMB**	○	○	**RT16.01N-1.75GMB**	○	○
16	2.00	**RT16.01W-2.00GMB**	○	○	**RT16.01N-2.00GMB**	○	○
16		-			**RT16.01N-2.00GMPB***	○	○
16	2.50	**RT16.01W-2.50GMB**	○	○	**RT16.01N-2.50GMB**	○	○
16	3.00	**RT16.01W-3.00GMB**	○	○	**RT16.01N-3.00GMB**	○	○
16		-			**RT16.01N-3.00GMPB***	○	

● Ex stock ○ On demand
PB*: Inserts with chip-breakers

HC[1] Coated carbide

Tool holders

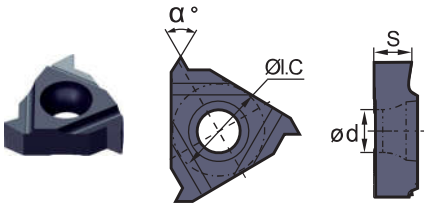
SWR	SNR
	
A497	A498

System code A466 Grade selection A465 Technical info A501 Cutting data A500

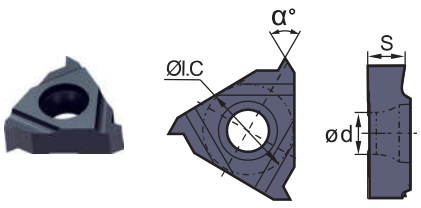
Threading inserts (thin type)

R/LT**N/W	I.C	S	d
16	9.525	3.52	4

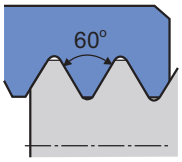
60° partial profile (thin type)



External right hand
Internal left hand



Internal right hand
External left hand



ISO	Pitch (mm)	External	HC[1] (PVD) YBG202	HC[1] (PVD) YBG205	Internal	HC[1] (PVD) YBG202	HC[1] (PVD) YBG205
16	0.50 - 1.50	**RT16.01W-A60B**	○		**RT16.01N-A60B**	○	
16	0.50 - 3.00	**RT16.01W-AG60B**	○		**RT16.01N-AG60B**	○	
16		**RT16.01W-AG60PB***	○		-		
16	1.75 - 3.00	**RT16.01W-G60B**	○		**RT16.01N-G60B**	○	

● Ex stock ○ On demand
HC[1] Coated carbide
PB*: Inserts with chip-breakers

Tool holders

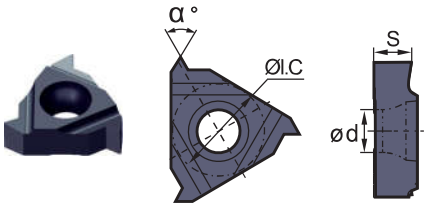
SWR	SNR
	
A497	A498

System code A466 | Grade selection A465 | Technical info A501 | Cutting data A500

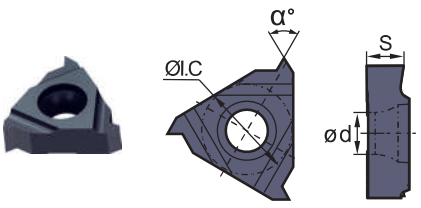
Threading inserts (thin type)

R/LT**N/W	I.C	S	d
16	9.525	3.52	4

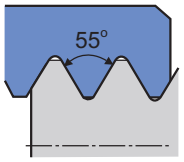
55° partial profile (thin type)



External right hand
Internal left hand



Internal right hand
External left hand



ISO	Pitch (T.P.i)	External	HC[1] (PVD) YBG202	HC[1] (PVD) YBG205	Internal	HC[1] (PVD) YBG202	HC[1] (PVD) YBG205
16	48 - 16	**RT16.01W-A55B**	○		**RT16.01N-A55B**	○	
16	48 - 8	**RT16.01W-AG55B**	○		**RT16.01N-AG55B**	○	
16		**RT16.01W-AG55PB**	○	○	-		
16	14 - 8	**RT16.01W-G55B**	○		**RT16.01N-G55B**	○	

● Ex stock ○ On demand
HC[1] Coated carbide
PB*: Inserts with chip-breakers

Tool holders

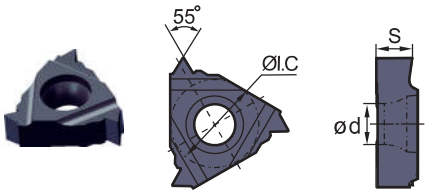
SWR	SNR
	
A497	A498

System code A466 | Grade selection A465 | Technical info A501 | Cutting data A500

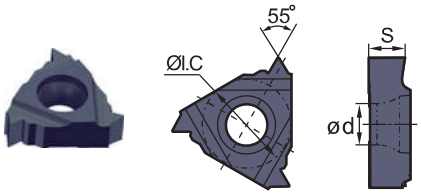
Threading inserts (thin type)

R/LT**N/W	I.C	S	d
16	9.525	3.52	4

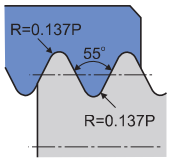
Whitworth (thin type)



External right hand
Internal left hand



Internal right hand
External left hand



ISO 965-1980 DIN 13
GB·T 197-2003 Tolerance: Medium Class A

ISO	Pitch (T.P.i)	External	HC[1] (PVD)		Internal	HC[1] (PVD)	
			YBG202	YBG205		YBG202	YBG205
16	8.00	**RT16.01W-8WB**	○		**RT16.01N-8WB**	○	
16	9.00	**RT16.01W-9WB**	○		**RT16.01N-9WB**	○	
16	10.00	**RT16.01W-10WB**	○		**RT16.01N-10WB**	○	
16	11.00	**RT16.01W-11WB**	○	○	**RT16.01N-11WB**	○	
16		-			**RT16.01N-11WPB**	○	
16		-			**RT16.01N-11WPB***	○	
16	12.00	**RT16.01W-12WB**	○		**RT16.01N-12WB**	○	
16	14.00	**RT16.01W-14WB**	○		**RT16.01N-14WB**	○	
16		-			**RT16.01N-14WPB***	○	
16	16.00	**RT16.01W-16WB**	○		**RT16.01N-16WB**	○	○

● Ex stock ○ On demand
HC[1] Coated carbide
PB*: Inserts with chip-breakers

Tool holders

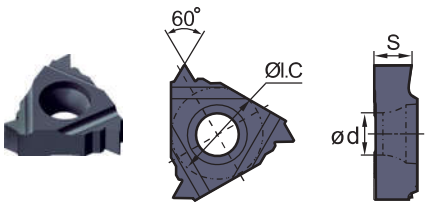
SWR	SNR
	
A497	A498

System code A466 | Grade selection A465 | Technical info A501 | Cutting data A500

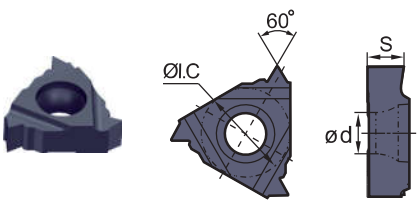
Threading inserts (thin type)

R/LT**N/W	I.C	S	d
16	9.525	3.52	4

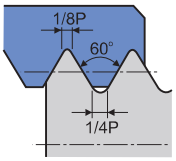
UN unified conventional thread 60° full profile (thin type)



External right hand
Internal left hand



Internal right hand
External left hand



ASME B1.1-1989
Tolerance: 2A/2B

ISO	Pitch (T.P.i)	External	HC[1] (PVD) YBG202	HC[1] (PVD) YBG205	Internal	HC[1] (PVD) YBG202	HC[1] (PVD) YBG205
16	8.00	**RT16.01W-8UNB**	○		**RT16.01N-8UNB**	○	
16	10.00	**RT16.01W-10UNB**	○		**RT16.01N-10UNB**	○	
16	12.00	**RT16.01W-12UNB**	○		**RT16.01N-12UNB**	○	
16	14.00	**RT16.01W-14UNB**	○		**RT16.01N-14UNB**	○	
16	16.00	**RT16.01W-16UNB**	○		**RT16.01N-16UNB**	○	
16	18.00	**RT16.01W-18UNB**	○		**RT16.01N-18UNB**	○	
16	20.00	**RT16.01W-20UNB**	○		**RT16.01N-20UNB**	○	
16	24.00	-			**RT16.01N-24UNB**	○	

● Ex stock ○ On demand

HC[1] Coated carbide

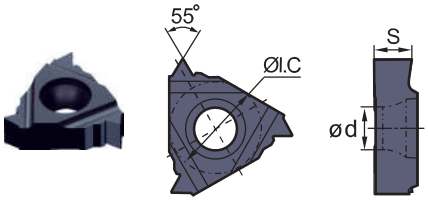
Tool holders

SWR	SNR
	
A497	A498

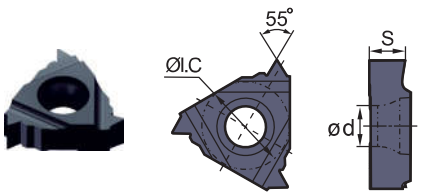
Threading inserts (thin type)

R/LT**N/W	I.C	S	d
16	9.525	3.52	4

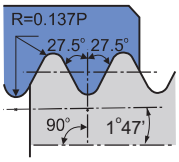
BSPT Whitworth taper pipe thread (thin type)



External right hand
Internal left hand



Internal right hand
External left hand



ASME B1.1-1989
Standard BSPT

ISO	Pitch (T.P.i)	External	HC[1] (PVD) YBG202	HC[1] (PVD) YBG205	Internal	HC[1] (PVD) YBG202	HC[1] (PVD) YBG205
16	11.00	**RT16.01W-11BSPTB**	○	○	**RT16.01N-11BSPTB**	○	○
16	14.00	**RT16.01W-14BSPTB**	○		**RT16.01N-14BSPTB**	○	
16		**RT16.01W-14BSPTPB***	○		**RT16.01N-14BSPTPB***	○	○
16	19.00	**RT16.01W-19BSPTB**	○		**RT16.01N-19BSPTB**	○	
16	28.00	**RT16.01W-28BSPTB**	○		**RT16.01N-28BSPTB**	○	

● Ex stock ○ On demand
PB*: Inserts with chip-breakers

HC[1] Coated carbide

Tool holders

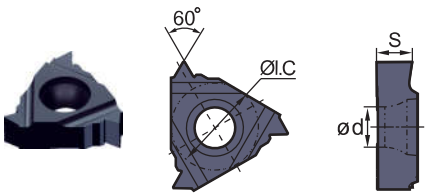
SWR	SNR
	
A497	A498

System code A466 | Grade selection A465 | Technical info A501 | Cutting data A500

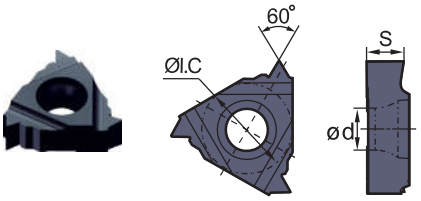
Threading inserts (thin type)

R/LT**N/W	I.C	S	d
16	9.525	3.52	4

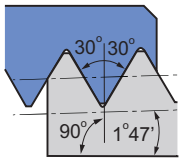
NPT American taper pipe thread (thin type)



External right hand
Internal left hand



Internal right hand
External left hand



ASME B1.20.1-1983
Standard NPT

ISO	Pitch (T.P.i)	External	HC[1] (PVD) YBG202	HC[1] (PVD) YBG205	Internal	HC[1] (PVD) YBG202	HC[1] (PVD) YBG205
16	8.00	**RT16.01W-8NPTB**	○		**RT16.01N-8NPTB**	○	
16	11.50	**RT16.01W-11.5NPTB**	○		**RT16.01N-11.5NPTB**	○	
16		-			**RT16.01N-11.5NPTPB***	○	
16	14.00	**RT16.01W-14NPTB**	○	○	**RT16.01N-14NPTB**	○	
16		-			**RT16.01N-14NPTPB***	○	○
16	18.00	**RT16.01W-18NPTB**	○		**RT16.01N-18NPTB**	○	
16	27.00	**RT16.01W-27NPTB**	○		**RT16.01N-27NPTB**	○	

● Ex stock ○ On demand
HC[1] Coated carbide
PB*: Inserts with chip-breakers

Tool holders

SWR	SNR
	
A497	A498

System code A466 | Grade selection A465 | Technical info A501 | Cutting data A500

Threading System code – tool holders

S	W	R	20	20	K	16	(B)
1	2	3	4	5	6	7	8

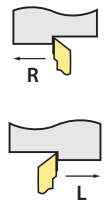
1 Clamping system

Code	Description	
S	Screw clamping	
C	Top clamping	

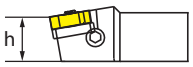
2 Application

Code	Description
W	External thread tool holder
N	Internal thread tool holder

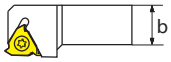
3 Cutting direction



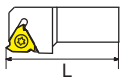
4 Shank height h [mm]



5 Shank width b [mm]



6 Shank length L [mm]



Code	L
H	100
K	125
M	150
P	170
Q	180
R	200
S	250
T	300

7 Insert size [mm]

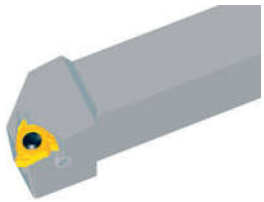
Code	Height
11	6,35
16	9,525
22	12,7

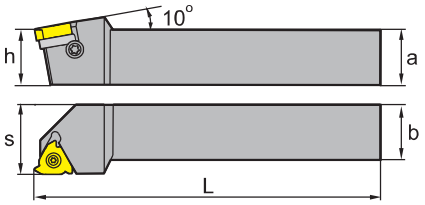
8

Holder for thin thread inserts (B type)

Threading tool holder (external)

SWR/L





Article	✻	Stock	Dimensions [mm]					Inserts
			a	b	L	h	s	
SWR1616H16		●	16	16	100	16	20	RT16.01W-****
SWR2020K16		●	20	20	125	20	25	RT16.01W-****
SWR2525M16		●	25	25	150	25	32	RT16.01W-****
SWR3225P16		●	32	25	170	32	32	RT16.01W-****
SWR3232P16		●	32	32	170	32	40	RT16.01W-****
SWR2525M22		●	25	25	150	25	32	RT22.01W-****
SWR3225P22		●	32	25	170	32	32	RT22.01W-****
SWR3232P22		●	32	32	170	32	40	RT22.01W-****
SWR4040S22		○	40	40	250	40	50	RT22.01W-****

● Ex stock ○ On demand

✻ With internal cooling

Spare parts

	Insert	RT16.01W-****	RT22.01W-****
	h	**16-32**	**25-40**
	Screw	I60M3.5×12 (2.7 Nm)	I60M5×17 (6.7 Nm)
	Screw (shim)	SM4×8C	SM5×8.5C
	Shim	MT16-__M	MT22-__M
	Wrench (screw)	WT15IP	WT20IP

Insert



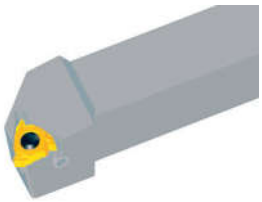
Medium Cut

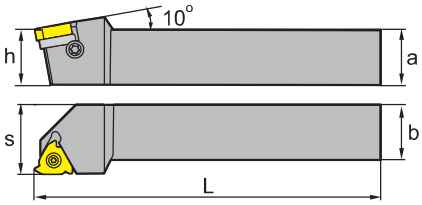
A467

System code A492 | Grade selection A465 | Technical info A501 | Cutting data A500

Threading tool holder (external)

SWR/L





Article	✻	Stock	Dimensions [mm]					Inserts
			a	b	L	h	s	
SWL1616H16		●	16	16	100	16	20	LT16.01W-****
SWL2020K16		●	20	20	125	20	25	LT16.01W-****
SWL2525M16		●	25	25	150	25	32	LT16.01W-****
SWL3225P16		●	32	25	170	32	32	LT16.01W-****
SWL3232P16		○	32	32	170	32	40	LT16.01W-****
SWL2525M22		●	25	25	150	25	32	LT22.01W-****
SWL3225P22		○	32	25	170	32	32	LT22.01W-****
SWL3232P22		●	32	32	170	32	40	LT22.01W-****
SWL4040S22		○	40	40	250	40	50	LT22.01W-****

● Ex stock ○ On demand

✻ With internal cooling

Spare parts

	Insert	LT16.01W-****	LT22.01W-****
	h	**16-32**	**25-40**
	Screw	I60M3.5×12 (2.7 Nm)	I60M5×17 (6.7 Nm)
	Screw (shim)	SM4×8C	SM5×8.5C
	Shim	MT16-__M	MT22-__M
	Wrench (screw)	WT15IP	WT20IP

Insert



Medium Cut

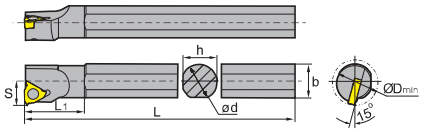
A467

System code A492 | Grade selection A465 | Technical info A501 | Cutting data A500

Threading tool holder (internal)

SNR/L





Article	✻	Stock	Dimensions [mm]							Inserts
			ød	b	L	h	s	L_1	D_{min}	
SNR0016K11		●	16	16	125	15	10	20.9	12	RT11.01N-****
SNR0016M11		●	16	15.5	150	15	10.5	25.9	16	RT11.01N-****
SNR0016M16		●	16	15.5	150	15	12	27	20	RT16.01N-****
SNR0020M16		●	20	19	150	18	14	28.7	25	RT16.01N-****
SNR0020Q16		●	20	19	180	18	14	34	25	RT16.01N-****
SNR0025M16		●	25	24	150	23	17	28.8	32	RT16.01N-****
SNR0032R16		●	32	31	200	30	22	30.9	40	RT16.01N-****
SNR0032S16		●	32	31	250	30	22	30.9	40	RT16.01N-****
SNR0040T16		●	40	38.5	300	37	27	31.5	50	RT16.01N-****
SNR0050U16		○	50	49.5	350	49	35	40.2	63	RT16.01N-****
SNR0020Q22		●	20	21.5	180	18	15	35	25	RT22.01N-****
SNR0025R22		●	25	24	200	23	19	39	32	RT22.01N-****
SNR0032S22		●	32	31	250	30	22	36.4	40	RT22.01N-****
SNR0040T22		●	40	38.5	300	37	27	37.2	50	RT22.01N-****
SNR0050U22		●	50	48.5	350	47	35	42.6	63	RT22.01N-****

● Ex stock ○ On demand

✻ With internal cooling

Spare parts

	Insert	RT11.01N-****	RT16.01N-****	RT16.01N-****	RT22.01N-****	RT22.01N-****
	ød	16	16	20-50	20	25-50
	Screw	I60M2.5×6.5 (1.0 Nm)	I60M3.5×8 (2.7 Nm)	I60M3.5×12 (2.7 Nm)	I60M5×10 (6.7 Nm)	I60M5×17 (6.7 Nm)
	Screw (shim)			SM4×8C		SM5×8.5C
	Shim			MT16-__M		MT22-__M
	Wrench (screw)	WT07IP	WT15IP	WT15IP	WT20IP	WT20IP

Insert



Medium Cut

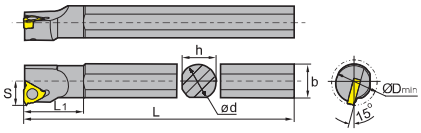
A467

System code A492 Grade selection A465 Technical info A501 Cutting data A500

Threading tool holder (internal)

SNR/L





Article	✻	Stock	Dimensions [mm]							Inserts
			ød	b	L	h	s	L_1	D_{min}	
SNL0016K11		●	16	16	125	15	10	20.9	12	LT11.01N-****
SNL0016M11		●	16	15.5	150	15	10.5	25.9	16	LT11.01N-****
SNL0016M16		●	16	15.5	150	15	12	27	20	LT16.01N-****
SNL0020M16		○	20	19	150	18	14	28.7	25	LT16.01N-****
SNL0020Q16		●	20	19	180	18	14	34	25	LT16.01N-****
SNL0025M16		●	25	24	150	23	17	28.8	32	LT16.01N-****
SNL0032R16		●	32	31	200	30	22	30.9	40	LT16.01N-****
SNL0032S16		○	32	31	250	30	22	30.9	40	LT16.01N-****
SNL0040T16		●	40	38.5	300	37	27	31.5	50	LT16.01N-****
SNL0050U16		○	50	49.5	350	49	35	40.2	63	LT16.01N-****
SNL0020Q22		●	20	21.5	180	18	15	35	25	LT22.01N-****
SNL0025R22		○	25	24	200	23	19	39	32	LT22.01N-****
SNL0032S22		●	32	31	250	30	22	36.4	40	LT22.01N-****
SNL0040T22		●	40	38.5	300	37	27	37.2	50	LT22.01N-****
SNL0050U22		●	50	48.5	350	47	35	42.6	63	LT22.01N-****

● Ex stock ○ On demand

✻ With internal cooling

Spare parts

	Insert	LT11.01N-****	LT16.01N-****	LT16.01N-****	LT22.01N-****	LT22.01N-****
	ød	16	16	20-50	20	25-50
	Screw	I60M2.5×6.5 (1.0 Nm)	I60M3.5×8 (2.7 Nm)	I60M3.5×12 (2.7 Nm)	I60M5×10 (6.7 Nm)	I60M5×17 (6.7 Nm)
	Screw (shim)			SM4×8C		SM5×8.5C
	Shim			MT16-__M		MT16-__M
	Wrench (screw)	WT07IP	WT15IP	WT15IP	WT20IP	WT20IP

Insert



Medium Cut

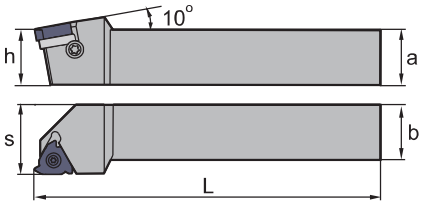
A467

System code A492 Grade selection A465 Technical info A501 Cutting data A500

Threading tool holder (external)

SWR-B Thin Type





Article	✻	Stock	Dimensions [mm]					Inserts
			a	b	L	h	s	
SWR1616H16B		●	16	16	100	16	20	RT16.01W-****B
SWR2020K16B		●	20	20	125	20	25	RT16.01W-****B
SWR2525M16B		●	25	25	150	25	32	RT16.01W-****B
SWR3225P16B		●	32	25	170	32	32	RT16.01W-****B
SWR3232P16B		●	32	32	170	32	40	RT16.01W-****B

● Ex stock ○ On demand

✻ With internal cooling

Spare parts

	Insert	**RT16.01W-****B**
	h	**16-32**
	Screw	I60M3.5×12TT (2.7 Nm)
	Screw (shim)	SM4×8C
	Shim	MT16-__M
	Wrench (screw)	WT15IP

Insert



Medium Cut

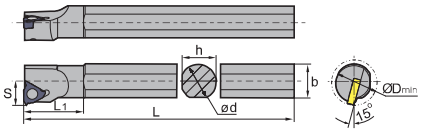
A486

System code A492 | Grade selection A465 | Technical info A501 | Cutting data A500

Threading tool holder (internal)

SNR-B Thin Type





Article	✻	Stock	Dimensions [mm]							Inserts
			ød	b	L	h	s	L_1	D_{min}	
SNR0016M16B		●	16	15.5	150	15	12	27	20	RT16.01N-****B
SNR0020Q16B		●	20	19	180	18	14	34	25	RT16.01N-****B
SNR0025M16B		●	25	24	150	23	17	28.8	32	RT16.01N-****B
SNR0032R16B		●	32	31	200	30	22	30.9	40	RT16.01N-****B
SNR0032S16B		●	32	31	250	30	22	30.9	40	RT16.01N-****B

● Ex stock ○ On demand

✻ With internal cooling

Spare parts

	Insert	RT16.01N-****B	RT16.01N-****B
	ød	16	20-32
	Screw	I60M3.5×08TT (2.7 Nm)	
	Screw		I60M3.5×12TT (2.7 Nm)
	Screw (shim)		SM4×8C
	Shim		MT16-__M
	Wrench (screw)	WT15IP	WT15IP

System code A492 | Grade selection A465 | Technical info A501 | Cutting data A500

Notes

Threading inserts

Material group		Composition / structure / heat treatment		Brinell hardness HB	Machining group	Starting values for cutting speed v_c [m/min] HC (PVD) YBG201	YBG205	
P	Unalloyed steel	approx. 0,15 % C	annealed	125	1	190	190	
		approx. 0,45 % C	annealed	190	2	175	175	
		approx. 0,45 % C	tempered	250	3	145	145	
		approx. 0,75 % C	annealed	270	4	140	140	
		approx. 0,75 % C	tempered	300	5	135	135	
	Low-alloyed steel		annealed	180	6	170	170	
			tempered	275	7	125	125	
			tempered	300	8	115	115	
			tempered	350	9	105	105	
	High-alloyed steel and high-alloyed tool steel		annealed	200	10	125	125	
			hardened and tempered	325	11	95	95	
M	Stainless steel	ferritic/martensitic	annealed	200	12	165	165	
		martensitic	tempered	240	13	135	135	
		austenitic	quench hardened	180	14	155	155	
		austenitic-ferritic		230	15	135	135	
K	Grey cast iron	perlitic/ferritic		180	16	240	240	
		perlitic (martensitic)		260	17	185	185	
	Cast iron with spheroidal graphite	ferritic		160	18	220	220	
		perlitic		250	19	165	165	
	Malleable cast iron	ferritic		130	20	175	175	
		perlitic		230	21	165	165	
N	Aluminium wrought alloys	cannot be hardened		60	22	800	800	
		hardenable	hardened	100	23	600	600	
	Cast aluminium alloys	≤ 12 % Si, cannot be hardened		75	24	320	320	
		≤ 12 % Si, hardenable	hardened	90	25	240	240	
		> 12 % Si, cannot be hardened		130	26	160	160	
	Copper and copper alloys (bronze/brass)	machining steel, PB> 1%		110	27	160	160	
		CuZn, CuSnZn		90	28	600	600	
		CuSn, Pb-free copper, electrolytic copper		100	29	200	200	
S	Heat-resistant alloys	Fe-based alloys	annealed	200	30	95	95	
			hardened	280	31	50	50	
		Ni or Co bass	annealed	250	32	80	80	
			hardened	350	33	70	70	
			cast	320	34	70	70	
	Titanium alloys	pure titanium		R_m 400	35	145	145	
		α and β alloys	hardened	R_m 1050	36	50	50	
H	Hardened steel		hardened and tempered	55 HRC	37			
			hardened and tempered	60 HRC	38			
	Hard cast iron		cast	400	39			
	Hardened cast iron		hardened and tempered	55 HRC	40			
X	Non-metallic materials	Thermoplasts			41			
		Thermosetting plastics			42			
		Plastic, glass-fibre reinforced GFRP			43			
		Plastic, carbon fibre reinforced CFRP			44			
		Graphite			45			
		Wood			46			

Note: The given cutting values are guide values, which were determined under ideal conditions.
The values have to be adapted in individual cases.
For examples of material for cutting tool groups view page D11.

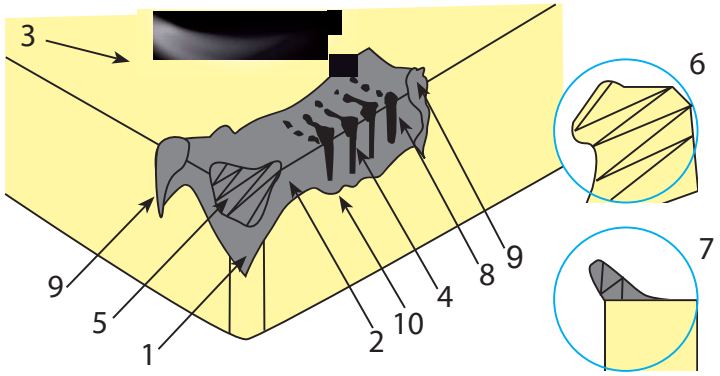
HC Coated carbide

Technical information

Trouble shooting - turning	**A502-A504**
Technical Information - turning	**A505-A512**
Special tools – turning	**A513**

Trouble shooting – general turning

Fig.	Type of wear	Effects	Reason	Countermeasure
1+2	Flank wear	– Bad surface quality and dimensional stability – Increase of cutting force	– Grade not wear-resistant enough – Cutting speed too high – Clearance angle too small – Feed rate too low	– Grade with higher wear-resistance – Reduce cutting speed – Increase clearance angle – Reduce feed rate
3	Crater wear	– Bad surface quality and chip control	– Grade not wear-resistant enough – Cutting speed too high – Feed rate too low	– Grade with higher wear-resistance – Reduce cutting speed – Reduce feed rate
4	Chipping	– Unstable tool life – Sudden breakage of cutting edge	– Grade too hard – Feed rate too high – Cutting edge not stable enough – Stability of the holder or tension insuf-ficient	– Grade with higher toughness – Reduce feed rate – Change honing of cutting edge – Use a more stable tool holder
5	Breakage	– Increase of cutting force – Bad surface quality and dimensional stability	– Grade too hard – Feed rate too high – Cutting edge not stable enough – Stability of the holder or tension insuf-ficient	– Grade with higher toughness – Reduce feed rate – Change honing of cutting edge – Use a more stable tool holder
6	Plastic deformation	– Bad dimensional stability – Damage to cutting edge	– Grade not wear-resistant enough – Cutting speed too high – Cutting depth and/or feed rate too high – Temperature on the cutting edge too high	– Grade with higher toughness – Reduce cutting speed – Reduce cutting depth and feed rate – Grade with higher heat-resistance
7	Welding	– Increase of cutting force – Bad surface quality	– Cutting speed too low – Cutting edge not sharp enough – Grade not suitable	– Increase cutting speed – Increase rake angle – Use a more suitable grade
8	Thermal cracks	– Breakage due to thermal interaction, often caused when cutting is interrupted (milling)	– Temperature fluctuation when machining – Grade too hard	– Dry machining – Grade with higher toughness
9	Notch wear	– Burr formation – Increase of cutting force	– Damage through chips (jagged edges) – Feed rate and cutting speed too high	– Grade with higher wear-resistance – Increase rake angle to get a sharper cutting edge – Reduce cutting speed
10	Flaking (coating)	– Often appears when ma-chining hardened materials or caused by vibration	– Cutting edge adhesion and chipping – Bad chip removal	– Increase rake angle to get a sharper cutting edge – Chip breaker with bigger chip space



Trouble shooting – PCBN & PCD

Type of wear	Countermeasure	
	Geometry	Cutting condition
Flank wear	– Sharper cutting edge for reduced cutting force – Smaller negative chamfer – Use positive inserts	– Reduce cutting speed – Increase feed rate to reduce operation time
Notch wear	– Bigger radius	– Use "method of altering feed rate"
Crater wear/breakage due to crater wear	– Sharper cutting edge for reduced cutting force	– Reduce cutting speed – Increase feed rate to minimise operation time and to increase distance between cutting edge and crater
Chipping due to rough condition or vibration	– Bigger negative chamfer angle and/or honed chamfer	– Increase feed rate to reduce number of hits
Flaking	– Sharper cutting edge to reduce cutting force – Smaller negative chamfer – Use positive inserts	– Increase feed rate to reduce operation time
Thermal crack/breakage	– Sharper cutting edge for reduced cutting force – Smaller negative chamfer – Use positive inserts	– Reduce cutting speed, feed rate and depth of cut – Dry machining
Chipping	– Bigger negative chamfer	– Increase cutting speed to reduce cutting force

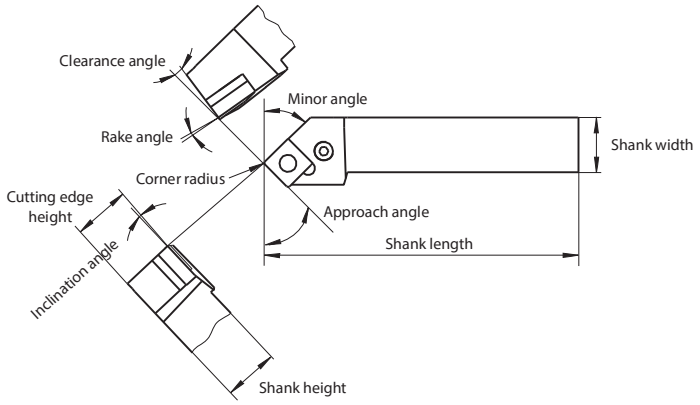
For investigation please send us the used inserts. If breakage is the problem please use inserts only 80–90 % of expected tool life because broken inserts almost have no information.

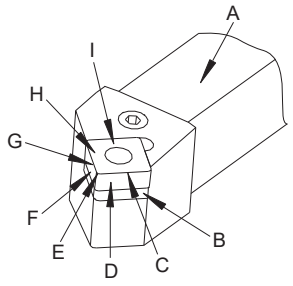
Trouble shooting – threading

Problème	Cause	Solution
Big flank wear	– Cutting speed too high	– Reduce cutting speed
	– Width of cut too small	– Reduce number of width of cut
	– Insert over/under centre line	– Adjust insert height
Asymmetric wear on left and right cutting edge	– Width of cut not optimal	– Adjust width of cut
	– Inclination angle and lead angle are not optimally aligned	– Change the shim to get the correct angle
Breakage	– Cutting speed too low	– Increase cutting speed
	– Cutting force too high	– Increase number of width of cut – Reduce width of cut
	– Unstable conditions	– Improve clamping and overhang to avoid vibrations
	– Bad chip control	– Increase coolant pressure for better chip removal
Déformation plastique	– Cutting speed and temperature too high	– Reduce cutting speed – Increase number of width of cut – Reduce width of cut
	– Insufficient coolant supply	– Improve coolant supply
Mauvais état de surface du filet	– Cutting speed too low	– Increase cutting speed
	– Insert over/under centre line	– Adjust insert height
	– Bad chip control	– Change feed rate and/or width of cut
Profil de filet incorrect	– Incorrect insert height	– Change insert height
	– Tool holder doesn't form a 90° angle	– Adjust tool holder
	– Pitch error in machine	– Adjust machine
Profil de filetage de profondeur insuffisante	– Incorrect insert height	– Change insert height
	– Breakage of cutting edge	– Change insert
	– Excessive wear	– Change insert
Formation d'arêtes rapportées	– Temperature on cutting edge is too low	– Increase cutting speed
	– Often occurs when machining of carbon steel and stainless steel	– Use grade with sufficient toughness (PVD coated)
Vibrations	– Incorrect cutting data	– Increase or highly decrease cutting speed
	– Incorrect insert height	– Change insert height
	– Insufficient clamping	– Improve clamping system and minimise overhang

General turning

Cutting tool geometry





A Holder
B Shim
C Main cutting edge
D Flank face
E Nose radius
G Minor cutting edge
H Rake face
I Insert

Rake angle

The rake angle is a cutting edge angle that has large effects on cutting resistance, chip disposal, cutting temperature and tool life. Increasing the rake angle in positive direction improves the sharpness of the cutting edge and the cutting force decreases but at the same time it lowers the strength. To increase the cutting resistance the rake angle must be increased in negative direction.

Rake angle	Applications
Small	Machining of fragile and hard materials, roughing and interrupted cut
Large	Machining of plastic materials and soft materials, precision machining

Clearance angle

The flank angle prevents friction between the flank face and work piece resulting in smooth feed. Increasing the flank angle decreases the cutting force and the surface roughness becomes better but on the other hand this lowers the cutting edge strength and decreases the flank wear occurrence.

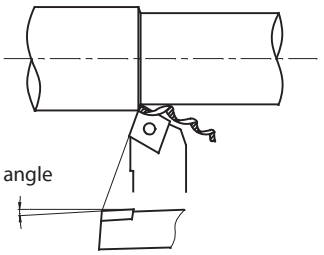
Clearance angle	Applications
Small	Machining of hard and demure materials, for roughing operation with stable cutting edge
Large	Precision machining with low cutting force, work pieces suffer from work hardening easily

Inclination angle

The positive and negative edge inclination angle determines the discharging direction of chips. In heavy cutting, the cutting edge receives extremely large shocks at the beginning of cutting. Cutting edge inclination keeps the cutting edge from receiving this shock and prevents fracturing. On the other hand the back force increases and occurs vibration. For a finishing operation a positive angle is more suitable.

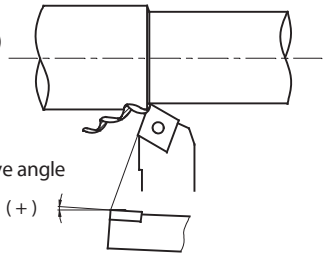
When the edge inclination angle is negative, i.e. the cutting edge is located at the lowest point relative to the bottom plane of the tool holder, the chips flow to the machined surface of workpiece.

Fig. (1)



As shown in Fig. (2), when the edge inclination angle is positive, i.e. the cutting edge is located at the highest point relative to the bottom plane of the tool holder, the chips flow to the un-machined surface of workpiece.

Fig. (2)

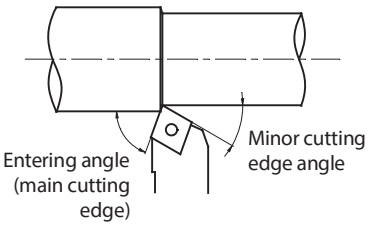


General turning

Entering angle (main cutting edge)

Reducing the lead angle increases the strength of the cutting edge. Because the lead angle is small, the cutting width is long, the force on the unit cutting edge length is small. At the same time, reducing the lead angle can increase the tool life. Normally, when turning thin long shaft and ladder shaft, the lead angle adapts 90°. The lead angle is increased, radial force is reduced, cutting is stable, cutting thickness is increased and chip breaking performance is good.

Entering angle	Applications
Small	For material with high tensile strength, high hardness or hardened layer on surface
Large	For machining with low rigidity



Minor cutting edge

The minor cutting edge angle is the main angle on influence surface roughness; its size is also influence strength of cutter. When the minor cutting edge angle is too small, the cutting force increases and results in chattering and vibration.
The selection principle for the minor cutting edge angle is under the condition of rough machining, or un-influencing friction and producing vibration, the smaller angle should be chosen; the bigger angle can be used for precision machining.

Nose radius

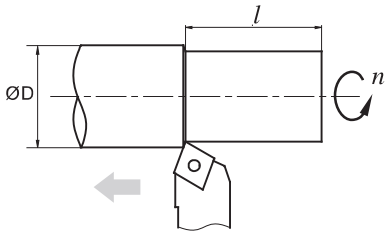
The nose radius effects the cutting edge strength and the finished surface. By increasing the nose radius the surface finish becomes better and the cutting edge strength improves. Flank and rake wear decreases. If the radius becomes too big, the cutting force increases and causes vibration which effects the chip control negative.

Radius	Applications
Small	Finishing with small cutting depth, machining thin long shaft, rigidity of machine is insufficient
Large	Rough machining, high cutting edge strength is required, rigidity of machine is good, machining hardened materials and interrupted cut

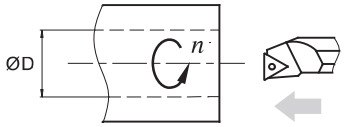
General turning

Cutting speed V_c

$$V_C = \frac{\pi \times D \times n}{1000} \text{ [m/min]}$$



External machining



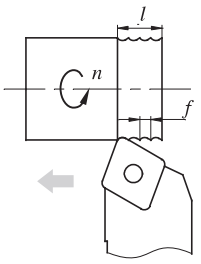
Internal machining

Vc: Cutting speed [m/min]
n: Revolution [1/min]
f: Feed rate [mm]

Example: n = 250 1/min, f = 0,2 mm, l = 150 mm
Result: [insert values in formula Vc]

Feed rate F

$$f = \frac{l}{n} \text{ [mm/rev]}$$



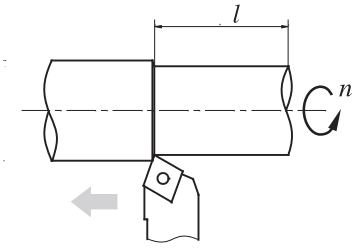
f: Feed rate [mm]
l: Cutting length [mm/min]
n: Revolution [1/min]

Example: n = 500 1/min, l = 100 mm/min
Result: [insert values in formula f]

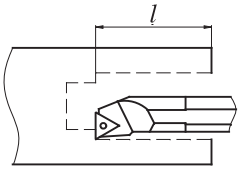
$$f = \frac{l}{n} = \frac{100}{500} = 0{,}2 \text{ mm}$$

Cutting time T_c

$$T_C = \frac{l}{f \times n} \text{ [min]}$$



External machining



Internal machining

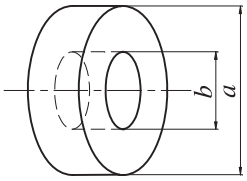
T_C: Cutting time [min]
l: Cutting length [mm/min]
f: Feed rate [mm]
n: Revolution [1/min]

Example: n = 250 1/min, f = 0,2 mm, l = 150 mm
Result: [insert values in formula T_C]

General turning

Cutting time T_c for face milling

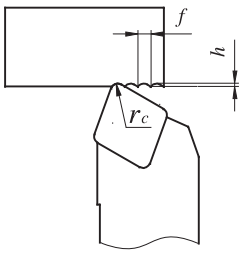
$$T_C = \frac{\pi \times (a^2 - b^2)}{4000 \times V_C \times f} \text{ [min]}$$



T_C: Cutting time [min]
V_C: Cutting speed [m/min]
f: Feed rate [mm]

Theoretical surface roughness R

$$R = \frac{f^2}{8r_c} \times 1000 \text{ [µm]}$$



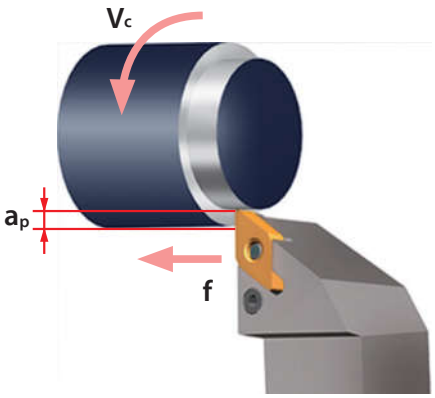
R: Surface roughness [µm]
f: Feed rate [mm]
r_C: Radius of insert [mm]

Example: f = 0,2 mm,
r_C = 0,4 mm

General turning

Three effects of cutting condition for turning

Today short machining time, long tool life and high machining accuracy is expected from modern tools. Based on the machine performance, material shape and hardness of the components the right choice of tool and cutting conditions are the premise for a successful machining process. Cutting speed, feed rate and depth of cut are what we call the "Three effects of cutting".



1. Cutting speed (V_c)

Cutting speed is defined as the rate (or speed) that the material moves past the cutting edge of the tool. The unit for V_c is meter per minute [m/min].

Cutting speed influence: Cutting speed is one of the three important effects of turning and has influence on tool life. Increasing the cutting speed also increases the cutting temperature and that decreases the tool life. Depending on the hardness and type of material the cutting speed varies. Therefore to choose a suitable grade for the cutting speed is necessary.
In general situation, when cutting speed is increased by 20 % the tool life will be reduced ½; when the cutting speed is increased by 50 % the tool life decreases ⅛. Lower cutting speed results in vibration which will shorten tool life.

2. Feed rate (f)

In turning application feed rate is the distance the tool holder moves per work piece revolution. That has influence to the surface quality. The unit for feed rate is millimetre per revolution [mm/rev]

Feed rate influence: Decreasing the feed rate will increase flank wear and tool life will be shortened. Increasing the feed rate increases the cutting temperature and also flank wear. On the other hand the efficiency will be improved.

3. Depth of cut (a_p)

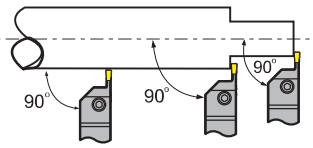
The depth of cut refers to the half different value between the diameter of the unmachined and machined work piece. The unit is millimetre [mm].

Depth of cut influence: Changing depth of cut has no big influence to the tool life. Machining hardened layer with small depth of cut results in friction and short tool life. Machining uncut surface or cast iron material, choose maximum depth of cut according to the machine power so that the cutting edge and corner radius is out of the hardened layer. That helps to prevent chipping and abnormal wear.

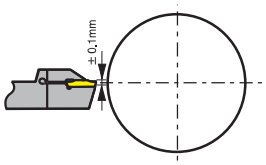
Parting & grooving

Adjusting the cutting edge height

– Mount the tool holder in a 90° angle to the central axis of the workpiece. This improves the surface quality and decreases the risk of vibrations.



– Height tolerance between the cutting edge of the insert and the centre of the work piece should be kept ± 0.1 mm, especially for parting of rods and grooving of materials with a small diameter. This extends the tool life and reduces the cutting forces as well as the formation of burrs.

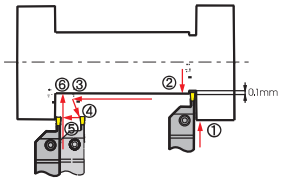


Parting off

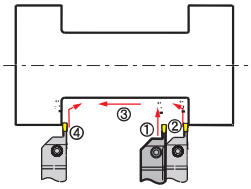
– When the cutting edge nears the central axis of the work piece, reducing the feed rate by 30 % can extend the tool life of the insert.
– Pick a tool holder with the smallest possible overhang to avoid vibrations and tool deflection.

Longitudinal turning and profile turning

– Machining sequence 0.5 mm:
1. Bring radial feed rate to required cutting depth (ap max. 0.75 × cutting edge width)
2. Radial relocating by 0.1 mm
3. Longitudinal turning to opposite shoulder
4. Diagonal relocating by 0.5 mm outward axial feed rate to the starting point
5. Radial feed rate to required cutting depth, etc.

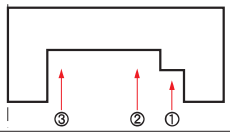


– When machining the chamfer or the base of the slot follow the steps as shown in figure. This reduces tool deflection and avoids cutting edge chipping.

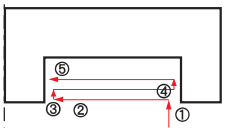


Surface grooving and turning

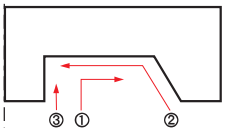
– Roughing:
Processing from largest diameter to the axis. When returning it's recommended to bend the tool slightly.



– Flute turning:
Depth of axial turning less than 0.75 × S (width of insert). When the pocket width is bigger than the depth follow the working steps as shown. When the pocket depth is bigger than the width, we recommend to go to the required diameter step by step.

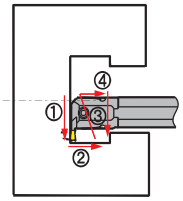


– Finishing:
When finishing begin with the outer diameter and the bottom. Then go on with the inner diameter to the required size.



Internal machining

– Procedure according to figure. For better chip removal in blind holes machine from the inside out.



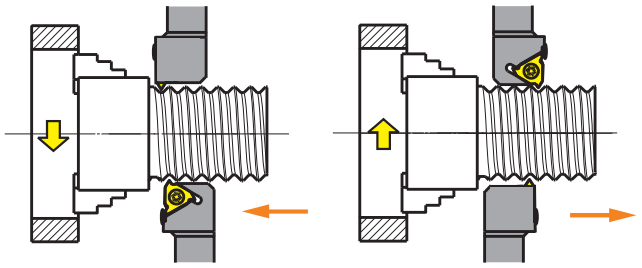
Threading

Steps for best results when thread-cutting

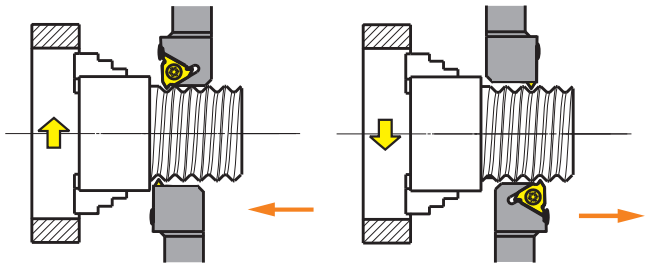
1. Choice of threading method
2. Choice of angle and shim
3. Choice of tool holder and inserts
4. Choice of cutting data
5. Choice of cutting direction

Thread turning method

External machining

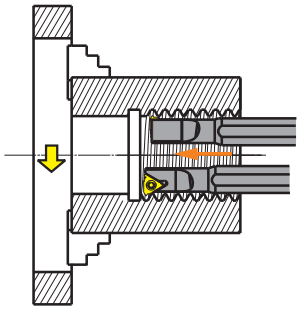


Right hand type

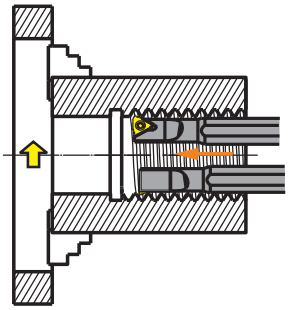


Left hand type

Internal machining



Right hand type



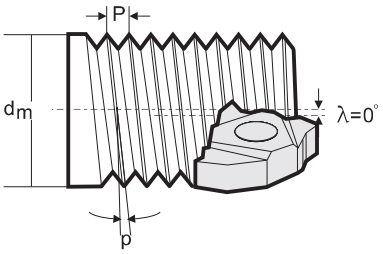
Left hand type

Choice of angle and shim

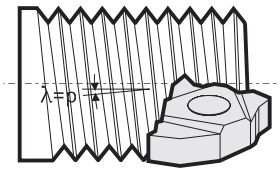
Choice of angle

The flank clearance angles of the thread profile depend on the helical angle of the thread. The helical angle of the thread must coincide with the insert's angle of inclination angle as far as possible to get the ideal profile, to avoid longer unfavourable wear on one of the flanks and thus to ensure tool life.

$$\lambda = \arctan \frac{p}{d_2 \times \pi}$$



Helix angle (p)



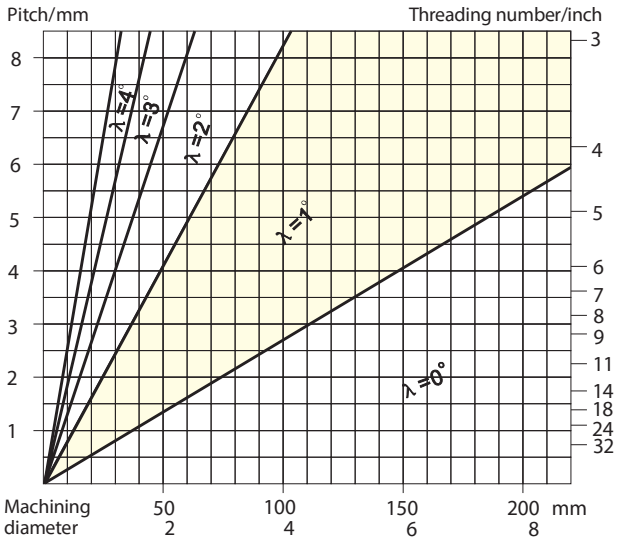
Pitch angle (λ)

p Pitch
d_2 Flank diameter
λ Pitch angle

Choice of shim

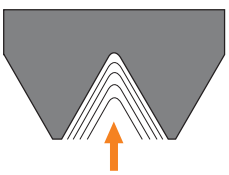
Pitch range	Dimension	Pitch angle	Shim
0,5–0,3	16	0	MT16-00M
		1	MT16-01M
		2	MT16-02M
		3	MT16-03M
3,5–6,0	22	0	MT22-00M
		1	MT22-01M
		2	MT22-02M
		3	MT22-03M

The shim λ = 1° is delivered with the tool holder.



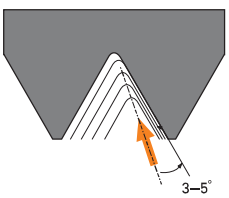
Infeed way of threading

The number of passes and widths of cut are the key points of threading operation. Please choose the cutting parameters with the recommended form according to experience data. In case of breakages or too much wear please have a look at page A447 (trouble shooting).



Radial width of cut

Radial width of cut requires low cutting depth, sharp cutting edge and tough grade. It is recommended when the pitch is smaller than 2 mm, not ideal for material with long chips.



Modified flank width of cut

Infeed at an angle of 3–5° to the flank of the teeth. It is easy for chips flow. Suitable for long chip material and internal threading.



Alternating width of cut

Alternating width of cut is mainly used for large pitches and long chip materials. To get equal insert wear on both edges.