Catalogue

Version2018

Turning

ZCC Cutting Tools Europe GmbH

your Partner \ your Value

Parting & grooving

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
A351	A355	A357	A352	A354	Page




ZR*D-MG	ZR*D-EG	ZR*D-LH	ZILD-LC	
2.5-6	3-6	6-8	8	Width
A360	A361	A364	A365	Page

Single sided




ZT*S-MG	ZP*S-MG	ZIMF-NM	ZIGQ-NM	
5-6	2.5-6	3-6	3-6	Width
A356	A353	A362	A363	Page

Three cutting edges


QC**R/L	QC**R/L***R	
0.75-4.8	1-4	Width
A367	A370	Page

External tool holders

GQCR/L**
A397

QER/L**
A376

QE*SN**
A382

QE*SR/L
A381

QECDR/L
A379

Page

QFR/L**
A384

QFRR/LL**
A386

QF*DR/L
A390

QX*DR/L
A380

QZS*
A383

Page

Boring bars

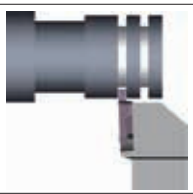
C*-Q*DR/L**
A395

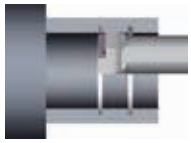
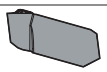
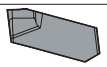
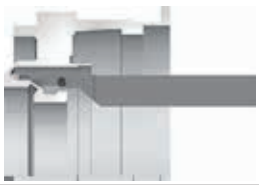
C16M-QBDR/L
A375

C40X-Q*DR/L
A394

S*K-QCR/L**
A398

Page

Machining			Tool holders	Inserts	Tool features and parameters	Page
External machining	Parting		 QZ**+QE**	 ZP*S**	– Variable overhang, also in greater grooving depths. – Max. parting diameter 120.0 mm	A382-A383
			 QE*DR/L	 ZP**D*	– Inserts with three different chip breakers for low cutting forces and good chip control. – Max. parting diameter 120.0 mm	A376-A378
			 QE*SR/L	 ZP*S*		
	Grooving & turning		 QE*DR/L	 ZT*D**  ZR*D*	– With this universal tooling system, and by using the different inserts, applications like parting, grooving, profiling and turning are possible – Max. groove depth 30.0 mm	A376-A378
			 QE*SR/L	 ZT*S*		
	Precision grooving		 QECD	 ZT*D**-EG	– Ground inserts for precision grooving. – Cutting edge width can be any size between 1.0–6.5 mm according to customers requirements. – ZT*D*-EG insert: when the groove width is between 1.0–2.4 mm the max. groove depth is 2.5 mm (in combination with QECD).	A379
			 QE*DR/L	 ZT*D**-EG	– Ground inserts for precision grooving. – Cutting edge width can be any size between 1.0–6.5 mm according to customers requirements. – ZT*D*-EG insert: when the groove width is 1.6 mm<S≤2.4 mm the max. groove depth is 3.4 mm when the groove width is 2.4 mm<S≤3.8 mm the max. groove depth is 17.0 mm when the groove width is 3.8 mm<S≤6.5 mm the max. groove depth is 22.0 mm	A376
	Grooving		 QC series GQCR/L	 QC16/22****	– Precision ground with high tolerances. – Sharp cutting edge for precise machining. – High efficiency through three cutting edges. – Finishing with groove width between 0.5 mm–4.8 mm – Max. groove depth 5.0 mm	A397
Internal machining	Grooving & turning		 C*-Q*R/L*	 ZT*D**  ZR*D**	– Tooling system for groove turning and profiling. – Max. groove depth 13.0 mm – Min. diameter 27.0 mm	A375 A395

Machining			Tool holders	Inserts	Tool features and parameters	Page
Internal machining	Grooving		 QC series S***-QC**R/L*	 QC11/16/22****	– Fine ground insert for high precision. – Groove width 0.5–4.8 mm – Min. diameter 16.0 mm – Max. groove depth 4.0 mm	A398
Axial grooving			 QF*D*H	 ZT*D**  ZR*D**	– Tooling system for groove turning and profiling. – Parting diameter 48.0–400.0 mm – Groove depth 10.0–30.0 mm	A384-A389
			 QF*D*L	 ZT*D**  ZR*D**	– Tooling system for groove turning and profiling. – Parting diameter 48.0–400.0 mm – Groove depth 10.0–30.0 mm – 90° tool holder, top clamping	A390-A392
Undercutting	Undercutting & turning		 QX*DR/L	 ZT*D**  ZR*D**	– Monoblock tool holder positioned at an angle (45°). – Tooling system for undercutting and turning. – Different turning operations like recesses, undercuts and copy turning.	A380
Aluminium profile turning	Facing & longitudinal profile turning		 C40X*	 ZR**-LH	– Special chip breakers for machining of aluminium. – Sharp and stable cutting edge for continuous to interrupted cut. – Profiling of aluminium rims.	A394
Tools for aerospace	External machining		 QE*S*N	 ZIGQ**  ZIMF**	– Precision insert with optimised seat and safe clamping. – Insert for heat-resistant alloys and special materials.	A381
	Nonstandard tools		Nonstandard tools	Selection according to application	– Nonstandard solutions for machining of different workpieces.	

Parting & grooving Chip breaker overview

Grooving

MM P M K S


Ground chip breaker with straight cutting edge for general machining of steel, stainless steel and heat-resistant alloys. Suitable for grooving, turning and parting.

MG P M K S


Universal chip breaker for general machining of steel, stainless steel and cast iron. Suitable for grooving, turning and parting.

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

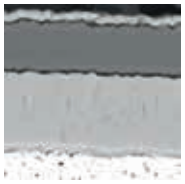
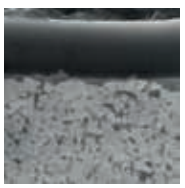
LC N

Ground chip breaker for profile and turning applications of non-ferrous metals.

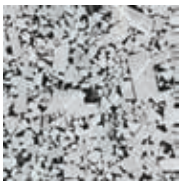
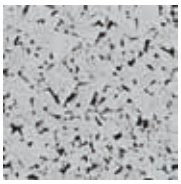
LH N

Ground chip breaker for profile and turning applications of non-ferrous metals.

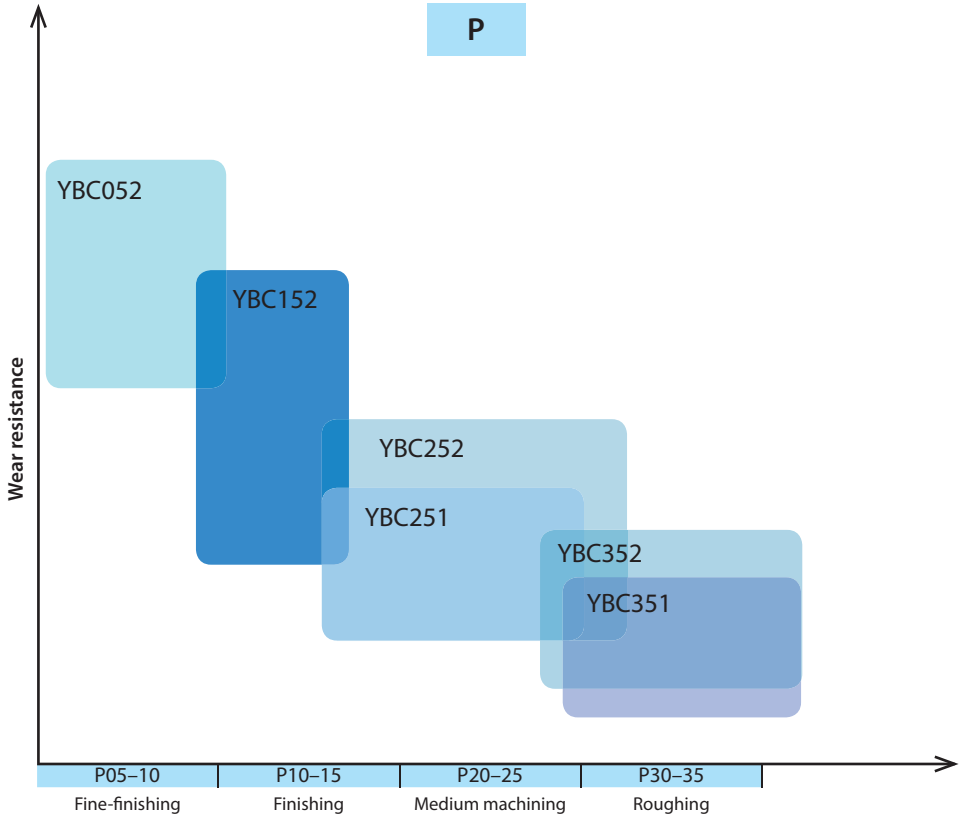
Parting & grooving

Grade	ISO	Micro structure	Grade description
YBC152	P10 – 20		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.
YBC251	P20 – P35		CVD coated P20–P35 carbide grade for medium operation to roughing of steel and casting steel in lower cutting speed.
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.
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.
YB9320	P10 – P30 M10 – M25		PVD multilayer coated P10–P30/M10–M25 carbide substrate for finishing to medium application of stainless steel, super alloy and steel (grooving/milling). Optimized coating stability for higher wear resistance and thermal stability in a wide application field.
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.

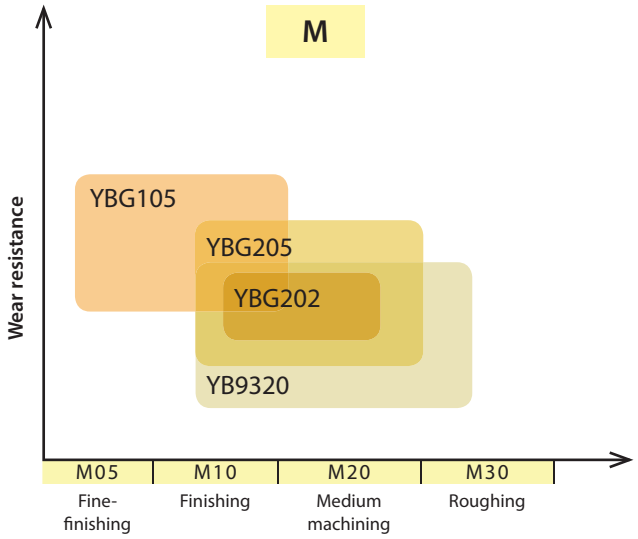
Parting & grooving

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 application of stainless steel, super alloy and steel (milling). Good wear resistance and thermal stability 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.
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.

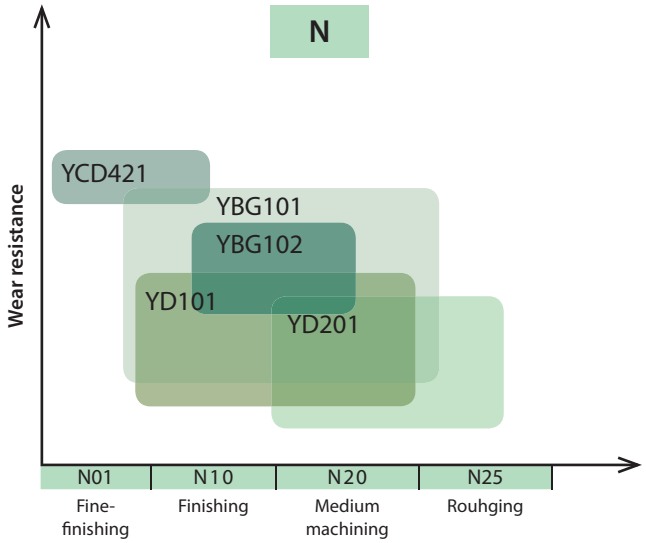
CVD grades for steel, stainless steel and cast iron



PVD grade for stainless steel and heat-resistant alloys



Turning grades for non-ferrous metals



Application fields of grades – Parting & grooving

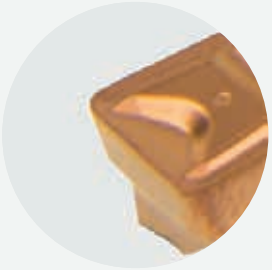
	ISO	HC[1] (CVD)	HC[1] (PVD)	HT	HC[2]	Ceramic	HW	CBN	PCD
P	P01								
	P10	YBC152, YBC251, YBC252	YBG202, YB9320, YBG302						
	P20								
	P30								
	P40								
M	M01								
	M10		YBG202, YB9320, YBG302						
	M20								
	M30								
	M40								
K	K01								
	K10								
	K20								
	K30								
N	N01								
	N10						YD101, YD102		
	N20								
	N30								
S	S01								
	S10		YBG102						
	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

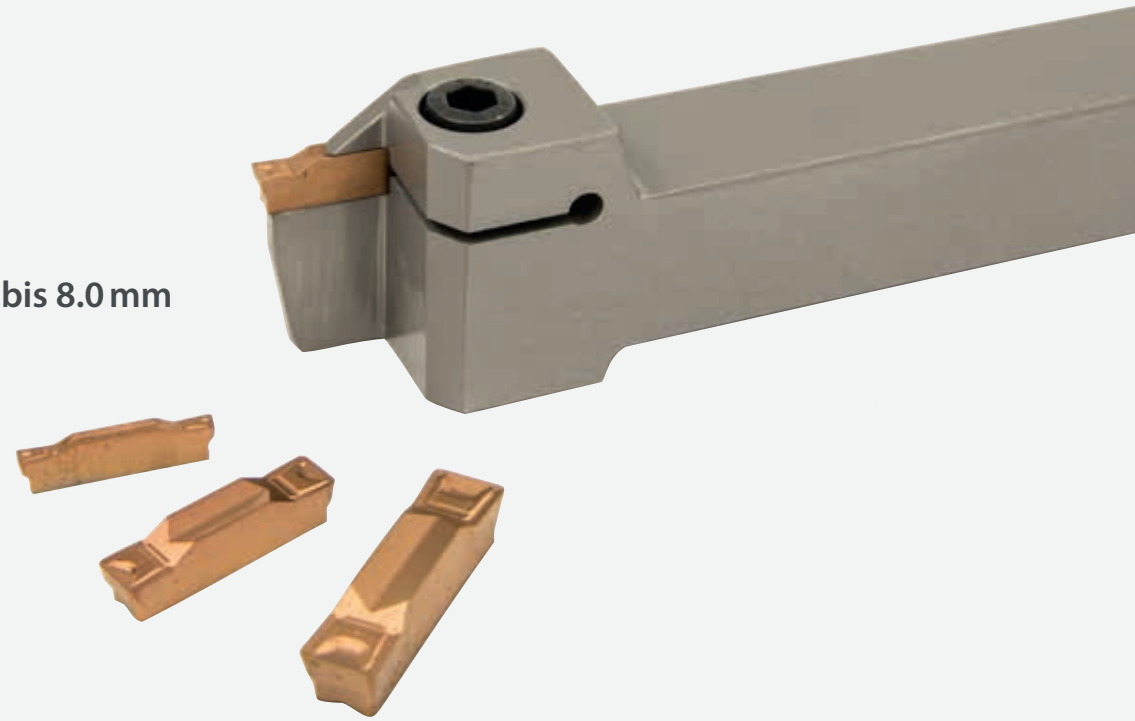
New

MM chip breaker



Ground chip breaker in combination with grade YB9320 for general machining of steel, stainless steel and heat-resistant alloys. Suitable for grooving, groove turning and parting.

Width 2.0 mm bis 8.0 mm



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

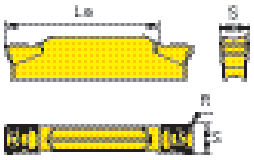
Code	Description
G	General chip breaker
F	Special chip breaker
M	Straight edge

7

- Ideal machining conditions
- Normal machining conditions
- Unfavorable machining conditions

Parting inserts

ZT parting & grooving insert (double sided)**



Double cutting edge

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

ISO		S	R±0.1	La *max*	f	YBC252	YBC251	YBG105	YBG102	YBG9320	YBG205	YBG202	YBG302	YD101	YD201
	**ZTBD02002-MM**	2.0	0.2	13	0.02-0.07					●	●	○	○		
	ZTED02503-MM	2.5	0.3	17	0.03-0.1					●					
	ZTFD0303-MM	3.0	0.3	17	0.04-0.13					●					
	ZTGD0404-MM	4.0	0.4	22	0.06-0.18					●					
	ZTHD0504-MM	5.0	0.4	22	0.08-0.23					●					
	ZTKD0608-MM	6.0	0.8	22	0.12-0.27					●					
	ZTLD0808-MM	8.0	0.8	28	0.13-0.29					●	○				

● Ex Stock ○ On demand

HC[1] Coated carbide
HW Uncoated carbide

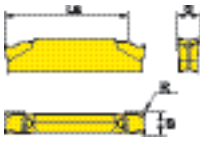
Tool holders

QE*D*R/L	QF*D*R/L-H	QF*D*RR-H	QF*D*LL-H	QF*D*R/L-L	*-QBDR/L	*-Q*DR/L
						
A376	A384	A386	A386	A390	A375	A394

- Ideal machining conditions
- Normal machining conditions
- Unfavorable machining conditions

Parting inserts

Parting & grooving insert (double sided)



Double cutting edge

						HC[1] (CVD)						HC[1] (PVD)						HW	
	ISO	S±0.10	R±0.1	La *max*	f	YBC252	YBC251					YBG105	YBG102	YBG9320	YBG205	YBG202	YBG302	YD101	YD201
P						⊛	⊛							⊛	⊛	⊛	⊛		
M														⊛	⊛	⊛	⊛		
K																			
N																		●	⊛
S												●	●	⊛	⊛	⊛			
H																			
	**ZPED02502-MG**	2.5	0.2	17	0.03-0.1		●							●		●	●		
	ZPFD0302-MG	3.0	0.2	17	0.04-0.13		●							●		●	●		
	ZPGD0402-MG	4.0	0.2	22	0.07-0.18		●							●		●	●		○
	ZPHD0503-MG	5.0	0.3	22	0.1-0.24									●		●	●		
	ZPKD0604-MG	6.0	0.4	22	0.12-0.29	○								●		●	●		

● Ex Stock ○ On demand

HC[1] Coated carbide
HW Uncoated carbide

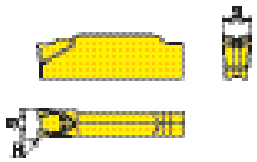
Tool holders

QE*D*R/L	QF*D*R/L-H	QF*D*RR-H	QF*D*LL-H	QF*D*R/L-L	*-Q*DR/L
					
A376	A384	A386	A386	A390	A375

- Ideal machining conditions
- Normal machining conditions
- Unfavorable 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		S±0.10	R±0.1	f	YBC252	YBC251	YBG105	YBG102	YBG9320	YBG205	YBG202	YBG302	YD101	YD201
	**ZPES02502-MG**	2.5	0.2	0.03-0.1							●	●		
	ZPFS0302-MG	3.0	0.2	0.04-0.13		●					●	●		
	ZPGS0402-MG	4.0	0.2	0.07-0.18		●					●	●		○
	ZPHS0503-MG	5.0	0.3	0.1-0.24							○	●		
	ZPKS0604-MG	6.0	0.4	0.12-0.29	○						●	●		

● Ex Stock ○ On demand

Single sided inserts only for parting blades

HC[1] Coated carbide

HW Uncoated carbide

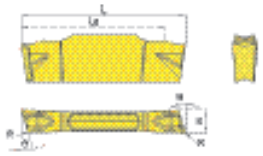
Tool holders

QZ**+QE**	QE*S*R/L	QF*S*R/L-H	QF*S*RR-H	QF*S*LL-H	QF*S*R/L-L
					
A382-A383	A381	A384	A389	A389	A390

- Ideal machining conditions
- Normal machining conditions
- Unfavorable machining conditions

Parting inserts

ZT parting & grooving insert (double sided)**



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

	ISO	L	S	θ	R	La max	f	YBC252	YBC251					YBG105	YBG102	YBG9320	YBG205	YBG202	YBG302			YD101	YD201		
	**ZPED02502-MG-6L**	20.0	2.35	6°	0.2	17	0.03-0.08											○	●			○			
	ZPED02502-MG-6R	20.0	2.35	6°	0.2	17	0.03-0.08									●		○	●			○			
	ZPED02502-MG-15L	20.0	2.35	15°	0.2	17	0.03-0.05											○	●			○			
	ZPED02502-MG-15R	20.0	2.35	15°	0.2	17	0.03-0.05											●	●			○			
	ZPFD0302-MG-6L	20.0	2.85	6°	0.2	17	0.04-0.1									●		●	●			○			
	ZPFD0302-MG-6R	20.0	2.85	6°	0.2	17	0.04-0.1									●		●	●			○			
	ZPFD0302-MG-15L	20.0	2.85	15°	0.2	17	0.04-0.08											●	●			○			
	ZPFD0302-MG-15R	20.0	2.85	15°	0.3	17	0.04-0.08	○								●		●	●			○			

● Ex Stock ○ On demand

HC[1] Coated carbide
HW Uncoated carbide

Tool holders

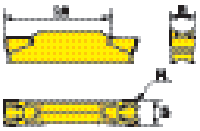
QE*D*R/L

A376

- Ideal machining conditions
- Normal machining conditions
- Unfavorable machining conditions

Parting inserts

Parting & grooving insert (single sided)



Double cutting edge

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

ISO		S±0.10	R±0.1	La *max*	f	YBC252	YBC251	YBG105	YBG102	YBG9320	YBG205	YBG202	YBG302	YD101	YD201
	**ZTED02503-MG**	2.5	0.3	17	0.03-0.11						○	●	●		
	ZTFD0303-MG	3.0	0.3	17	0.04-0.14				○		●	●	●		
	ZTGD0404-MG	4.0	0.4	22	0.07-0.2		●				●	●	●		●
	ZTHD0504-MG	5.0	0.4	22	0.10-0.25						●	●	●		
	ZTKD0608-MG	6.0	0.8	22	0.13-0.30	○			○		○	●	●		

● Ex Stock ○ On demand

HC[1] Coated carbide
HW Uncoated carbide

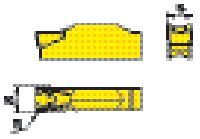
Tool holders

QE*D*R/L	QF*D*R/L-H	QF*D*RR-H	QF*D*LL-H	QF*D*R/L-L	C*-Q*R/L*
					
A376	A384	A386	A386	A390	A394

- Ideal machining conditions
- Normal machining conditions
- Unfavorable machining conditions

Parting inserts

Parting & grooving insert (single sided)



Single cutting edge

					HC[1] (CVD)				HC[1] (PVD)						HW	
	ISO	S±0.10	R±0.1	f	YBC252	YBC251			YBG105	YBG102	YBG9320	YBG205	YBG202	YBG302	YD101	YD201
P					⊛	⊛					⊛	⊛	⊛	⊛		
M											⊛	⊛	⊛	⊛		
K																
N															●	⊛
S									●	●	⊛	⊛	⊛			
H																
	**ZTHS0504-MG**	5.0	0.4	0.10-0.25								○	●	●		
	ZTKS0608-MG	6.0	0.8	0.13-0.30								○	○	●		

● Ex Stock ○ On demand

HC[1] Coated carbide
HW Uncoated carbide

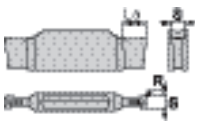
Tool holders

QZ**+QE**	QE*S*R/L	QF*S*R/L-L	QF*S*R/L-H	QF*S*RR-H	QF*S*LL-H
					
A382-A383	A381	A390	A384	A389	A389

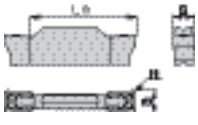
- Ideal machining conditions
- Normal machining conditions
- Unfavorable machining conditions

Parting inserts

Parting & grooving insert (double sided)



1.0-2.4 mm



2.4-6.5 mm

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

	ISO	S±0.025	R±0.05	La *max*	f	YBC252	YBC251	YBG105	YBG102	YBG9320	YBG205	YBG202	YBG302	YD101	YD201
	ZTCD01002-EG	1.0	0,2	2.6	0.02-0.04								○		
	ZTCD010500-EG	1.05	0	2.6	0.02-0.04								○		
	ZTCD011502-EG	1.15	0,2	2.6	0.02-0.04								○		
	ZTCD01202-EG	1.20	0,2	2.6	0.02-0.04								○		
	ZTCD0127502-EG	1.275	0,2	2.6	0.02-0.04								○		
	ZTCD01302-EG	1.3	0,2	2.6	0.02-0.04								○		
	ZTCD013802-EG	1.38	0,2	2.6	0.02-0.04								○		
	ZTCD01402-EG	1.4	0,2	2.6	0.02-0.04								○		
	ZTCD01500-EG	1.5	0	2.6	0.02-0.04								○		
	ZTCD01502-EG	1.5	0,2	2.6	0.02-0.04								○		
	ZTCD01503-EG	1.5	0,3	2.6	0.02-0.04							○			
	ZTCD015503-EG	1.55	0,3	2.6	0.02-0.04								○		
	ZTCD01602-EG	1.6	0,2	2.6	0.02-0.04								○		
	ZTCD01702-EG	1.7	0,2	3.4	0.02-0.08								○		
	ZTCD017503-EG	1.75	0,3	3.4	0.02-0.08								○		
	ZTCD017602-EG	1.76	0,2	3.4	0.02-0.08							○			
	ZTCD01802-EG	1.8	0,2	3.4	0.02-0.08								○		
	ZTCD018502-EG	1.85	0,2	3.4	0.02-0.08								○		
	ZTCD02000-EG	2.0	0	3.4	0.02-0.08								○		
	ZTCD02002-EG	2.0	0,2	3.4	0.02-0.08								○		
	ZTCD02003-EG	2.0	0,3	3.4	0.02-0.08							○			
	ZTCD020503-EG	2.05	0,3	3.4	0.02-0.08								○		
	ZTCD021502-EG	2.15	0,2	3.4	0.02-0.08								○		
	ZTCD022503-EG	2.25	0,3	3.4	0.02-0.08								○		
	ZTCD02302-EG	2.3	0,2	3.4	0.03-0.11								○		
	ZTCD02303-EG	2.3	0,3	3.4	0.03-0.11								○		
	ZTCD02402-EG	2.4	0,2	3.4	0.03-0.11								○		
	ZTED0247020-EG	2.47	0,2	17	0.03-0.11								○		
	ZTED02502-EG	2.5	0,2	17	0.03-0.11								○		
	ZTED026502-EG	2.6	0,2	17	0.03-0.11								○		
	ZTED02702-EG	2.7	0,2	17	0.03-0.11								○		
	ZTED02703-EG	2.7	0,3	17	0.03-0.11								○		
	ZTED02802-EG	2.8	0,2	17	0.04-0.13								○		
	ZTED02803-EG	2.8	0,3	17	0.04-0.13								○		
	ZTED02804-EG	2.8	0,4	17	0.04-0.13								○		

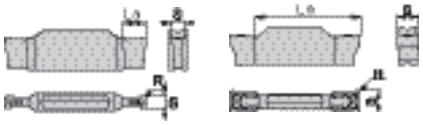
● Ex Stock ○ On demand

HC[1] Coated carbide
HW Uncoated carbide

● Ideal machining conditions
◍ Normal machining conditions
◍ Unfavorable machining conditions

Parting inserts

Parting & grooving insert (double sided)



1.0-2.4 mm 2.4-6.5 mm

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

ISO	S±0.025	R±0.05	La *max*	f	YBC252	YBC251	YBG105	YBG102	YBG9320	YBG205	YBG202	YBG302	YD101	YD201
ZTED02903-EG	2.9	0,3	17	0.04-0.13								○		
ZTED03003-EG	3.0	0,3	17	0.04-0.13								○		
ZTFD03001-EG	3.0	0,1	17	0.04-0.13							○			
ZTFD03002-EG	3.0	0,2	17	0.04-0.13								○		
ZTFD030038-EG	3.0	0,38	17	0.04-0.13								○		
ZTFD03003-EG	3.0	0,3	17	0.04-0.13								○		
ZTFD03004-EG	3.0	0,4	17	0.04-0.13								○		
ZTFD03005-EG	3.0	0,5	17	0.04-0.13								○		
ZTFD03008-EG	3.0	0,8	17	0.04-0.13								○		
ZTFD031802-EG	3.18	0,2	17	0.04-0.13								○		
ZTFD03203-EG	3.2	0,3	17	0.04-0.13								○		
ZTFD0325024-EG	3.25	0,24	17	0.04-0.13								○		
ZTFD03302-EG	3.3	0,2	17	0.04-0.13							○	○		
ZTFD03303-EG	3.3	0,3	17	0.04-0.13								○		
ZTFD03403-EG	3.4	0,3	17	0.04-0.13								○		
ZTFD035-EG	3.5	0	17	0.04-0.13								○		
ZTFD03602-EG	3.6	0,2	17	0.04-0.13								○		
ZTGD038048-EG	3.8	0,48	22	0.07-0.18										
ZTGD039602-EG	3.96	0,2	22	0.07-0.18								○		
ZTGD04002-EG	4.0	0,2	22	0.07-0.18		○					○	○		
ZTGD04003-EG	4.0	0,3	22	0.07-0.18								○		
ZTGD04004-EG	4.0	0,4	22	0.07-0.18								○		
ZTGD04008-EG	4.0	0,8	22	0.07-0.18							○			
ZTGD04202-EG	4.2	0,2	22	0.07-0.18										
ZTGD0423010-EG	4.23	0,1	22	0.07-0.18								○		
ZTGD04503-EG	4.5	0,3	22	0.07-0.18								○		
ZTGD04505-EG	4.5	0,5	22	0.07-0.18								○		
ZTGD04803-EG	4.8	0,3	22	0.1-0.24								○		
ZTGD04805-EG	4.8	0,5	22	0.1-0.24								○		
ZTHD048058-EG	4.8	0,58	22	0.1-0.24										
ZTHD05003-EG	5.0	0,3	22	0.1-0.24								○		
ZTHD05004-EG	5.0	0,4	22	0.1-0.24						○				
ZTHD05008-EG	5.0	0,8	22	0.1-0.24							○			
ZTHD05012-EG	5.01	0,12	22	0.1-0.24							○			
ZTHD050508-EG	5.05	0,8	22	0.1-0.24										

● Ex Stock ○ On demand

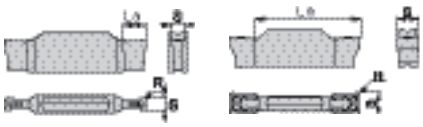
HC[1] Coated carbide
HW Uncoated carbide

System code > Grade selection > Technical info > Cutting data >

- Ideal machining conditions
- Normal machining conditions
- Unfavorable machining conditions

Parting inserts

Parting & grooving insert (double sided)



1.0-2.4 mm 2.4-6.5 mm

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

	ISO	S±0.025	R±0.05	La *max*	f	YBC252	YBC251	YBG105	YBG102	YBG9320	YBG205	YBG202	YBG302	YD101	YD201
	**ZTHD05202-EG**	5.2	0,2	22	0.1-0.24								○		
	ZTHD052503-EG	5.25	0,3	22	0.1-0.24								○		
	ZTHD05403-EG	5.4	0,3	22	0.1-0.24								○		
	ZTHD05508-EG	5.5	0,8	22	0.1-0.24								○		
	ZTHD055603-EG	5.56	0,3	22	0.1-0.24								○		
	**ZTKD06004-EG**	6.0	0,4	22	0.12-0.29										
	ZTKD06008-EG	6.0	0,8	22	0.12-0.29										
	ZTKD063504-EG	6.35	0,4	22	0.12-0.29										
	ZTKD0635055-EG	6.35	0,55	22	0.12-0.29										
	ZTKD0635057-EG	6.35	0,57	22	0.12-0.29										
	ZTKD06504-EG	6.5	0,4	22	0.12-0.29								○		

● Ex Stock ○ On demand

HC[1] Coated carbide
HW Uncoated carbide

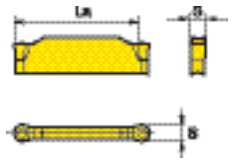
Tool holders

QE*D*R/L	QECD
	
A376	A379

- Ideal machining conditions
- Normal machining conditions
- Unfavorable machining conditions

Parting inserts

Parting & grooving insert (double sided)



Double cutting edge

					P	M	K	N	S	H	HC[1] (CVD)		HC[1] (PVD)					HW	
ISO		S±0.10	La *max*	f							YBC252	YBC251	YBG105	YBG102	YBG9320	YBG205	YBG202	YD101	YD201
	**ZRED025-MG**	2.5	17.5	0.03-0.11													●		
	ZRFD03-MG	3.0	17	0.04-0.14											●		●		
	ZRGD04-MG	4.0	21	0.07-0.2								○					●		
	ZRHD05-MG	5.0	20	0.1-0.24													●		
	ZRKD06-MG	6.0	19	0.12-0.29													●		

● Ex Stock ○ On demand

HC[1] Coated carbide
HW Uncoated carbide

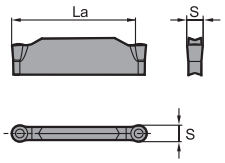
Tool holders

QE*D*R/L	QX*D*	QF*D*RR-H	QF*D*LL-H	QF*D*R/L-L	*-Q*DR/L
					
A376	A380	A386	A386	A390	A394

- Ideal machining conditions
- Normal machining conditions
- Unfavorable machining conditions

Parting inserts

Parting & grooving insert (double sided)



Double cutting edge

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

	ISO	S±0.025	La *max*	f	YBC252	YBC251	YBG105	YBG102	YBG9320	YBG205	YBG202	YBG302	YD101	YD201
	**ZRFD03-EG**	3.0	17	0.04-0.14					●			○		
	ZRGD04-EG	4.0	21	0.07-0.2					●			○		
	ZRHD05-EG	5.0	20	0.1-0.24					●			○		
	ZRKD06-EG	6.0	19	0.12-0.29					●			○		

● Ex Stock ○ On demand

HC[1] Coated carbide
HW Uncoated carbide

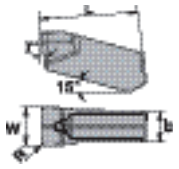
Tool holders

QE*D*R/L	QX*D*	QF*D*RR-H	QF*D*LL-H	QF*D*R/L-L	*-Q*DR/L
					
A376	A380	A386	A386	A390	A394

- Ideal machining conditions
- Normal machining conditions
- Unfavorable 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	R±0.1	b	L	f	YBC252	YBC251	YBG105	YBG102	YBG9320	YBG205	YBG202	YBG302	YD101	YD201
	**ZIMF304N-NM**	3	0.4	2.4	15.3	0.04-0.11			●	○						
	ZIMF406N-NM	4	0.6	3.2	15.3	0.07-0.16			●	○						
	ZIMF506N-NM	5	0.6	4	15.3	0.1-0.2			●	○						
	ZIMF608N-NM	6	0.8	4	15.3	0.12-0.23			●	○						

● Ex Stock ○ On demand

HC[1] Coated carbide
HW Uncoated carbide

Tool holders

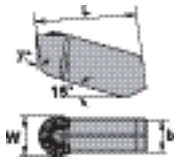
QE*S*R/L-N

A381

- Ideal machining conditions
- Normal machining conditions
- Unfavorable 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	YBG9320	YBG205	YBG202	YBG302	YD101	YD201
	**ZIGQ3N-NM**	3.0	2.4	15.3	0.04-0.11							●	○						
	ZIGQ4N-NM	4.0	3.2	15.3	0.07-0.16							●	○						
	ZIGQ5N-NM	5.0	4.0	15.3	0.1-0.2							●	○						
	ZIGQ6N-NM	6.0	5.0	15.3	0.13-0.24							●	○						

● Ex Stock ○ On demand

HC[1] Coated carbide
HW Uncoated carbide

Tool holders

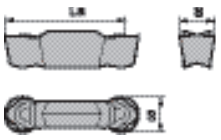
QE*S*R/L-N

A381

- Ideal machining conditions
- Normal machining conditions
- Unfavorable machining conditions

Parting inserts

Parting & grooving insert (double sided)



		P	M	K	N	S	H
HC[1] (CVD)	YBC252	⊛	⊛				
	YBC251	⊛					
HC[1] (PVD)	YBG105					●	
	YBG102					●	
	YBG9320		⊛			⊛	
	YBG205		⊛			⊛	
	YBG202		⊛			⊛	
	YBG302		⊛			⊛	
HW	YD101				● ⊛		
	YD201						

ISO		S±0.025	La *max*	f	YD101
	**ZRKD06-LH**	6.0	19.0	0.12-0.23	○
	ZRLD08-LH	8.0	22.0	0.14-0.26	●

● Ex Stock ○ On demand

HC[1] Coated carbide
HW Uncoated carbide

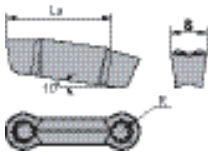
Tool holders

C*X-Q*DR/L

A394

- Ideal machining conditions
- Normal machining conditions
- Unfavorable machining conditions

Parting inserts

Parting & grooving insert (single sided)						HC[1] (CVD)						HC[1] (PVD)						HW	
					P	⊛	⊛					⊛	⊛	⊛	✹				
					M							⊛	⊛	⊛	✹				
					K														
					N													●	⊛
					S							●	●	⊛	⊛	⊛			
					H														
ISO		S±0.025	La *max*	f		YBC252	YBC251					YBG105	YBG102	YBG9320	YBG205	YBG202	YBG302	YD101	YD201
	**ZILD08-LC**	8.0	22.0	0.14-0.26														○	○

● Ex Stock ○ On demand

HC[1] Coated carbide
HW Uncoated carbide

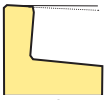
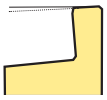
Triangular inserts (straight edge)

QC	22	R	300	–	R	03
1	2	3	4		5	6

Series — 1

Cutting edge length [mm]	
Code	I.C
11	6.35
16	9.525
22	12.70

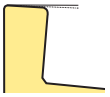
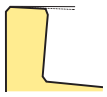
2

Cutting direction		
Code	Description	
R	Right	
L	Left	

3

Groove width [mm]	
Code	Description
050	0.50
100	1.00
…	…
480	4.80

4

Edge shape		
Code	Description	
R	Radius	
C	Chamfer	

5

Radius/Chamfer [mm]	
Code	Description
005	0.05
02	0.2
03	0.3
04	0.4

6

Triangular inserts (round edge)

QC	22	R	300	–	R
1	2	3	4		5

Series — 1

Cutting edge length [mm]	
Code	I.C
11	6.35
16	9.525
22	12.70

2

Cutting direction		
Code	Description	
R	Right	
L	Left	

3

Groove width [mm]	
Code	Description
050	0.50
100	1.00
…	…
480	4.80

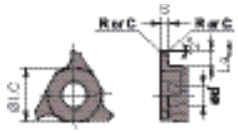
4

Round — 5

Ideal machining conditions
Normal machining conditions
Unfavorable machining conditions

Parting inserts

QC turning/milling insert**



Right hand style

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

ISO	S±0.025	La *max*	ØI.C	S1	Ød	f	YBC252	YBC251	YBG105	YBG102	YBG9320	YBG205	YBG202	YBG302	YD101	YD201
QC11R120-R02	1.2	1.5	6.35	3.18	2.8	0.02-0.03						●	○			
QC11L120-R02	1.2	1.5	6.35	3.18	2.8	0.02-0.03						●	○			
QC11R125-R02	1.25	1.5	6.35	3.18	2.8	0.02-0.03						●	○			
QC11L125-R02	1.25	1.5	6.35	3.18	2.8	0.02-0.03						●	○			
QC11R145-R02	1.45	1.5	6.35	3.18	2.8	0.02-0.05						●	○			
QC11L145-R02	1.45	1.5	6.35	3.18	2.8	0.02-0.05						●	○			
QC11R150-R02	1.5	1.5	6.35	3.18	2.8	0.02-0.05						●	○			
QC11L150-R02	1.5	1.5	6.35	3.18	2.8	0.02-0.05						●	○			
QC11R200-R02	2	2	6.35	3.18	2.8	0.02-0.06						●	○			
QC11L200-R02	2	2	6.35	3.18	2.8	0.02-0.06						●	○			
QC11R225-R02	2.25	2	6.35	3.18	2.8	0.02-0.06						●	○			
QC11L225-R02	2.25	2	6.35	3.18	2.8	0.02-0.06						●	○			
QC16R075-R01	0.75	2	9.525	3.18	4.4	0.02-0.03						○				
QC16L075-R01	0.75	2	9.525	3.18	4.4	0.02-0.03						○				
QC16R080-R01	0.8	2	9.525	3.18	4.4	0.02-0.03						○				
QC16R095-R01	0.95	2	9.525	3.18	4.4	0.02-0.03						○				
QC16L095-R01	0.95	2	9.525	3.18	4.4	0.02-0.03						○				
QC16L100-R01	1	2	9.525	3.18	4.4	0.02-0.03						○				
QC16R110-R01	1.1	2	9.525	3.18	4.4	0.02-0.03						●	●			
QC16L110-R01	1.1	2	9.525	3.18	4.4	0.02-0.03						●	●			
QC16R115-R04	1.15	2	9.525	3.18	4.4	0.02-0.03						○	○			
QC16R120-R01	1.2	2	9.525	3.18	4.4	0.02-0.03						○	○			
QC16L120-R01	1.2	2	9.525	3.18	4.4	0.02-0.03						○	○			
QC16R125-R02	1.25	2	9.525	3.18	4.4	0.02-0.03						●	○			
QC16L125-R02	1.25	2	9.525	3.18	4.4	0.02-0.03						●				
QC16R130-R02	1.3	2	9.525	3.18	4.4	0.02-0.06						●	○			
QC16L130-R02	1.3	2	9.525	3.18	4.4	0.02-0.06						●	○			
QC16R140-R02	1.4	2	9.525	3.18	4.4	0.02-0.06						○	○			
QC16R145-R02	1.45	2	9.525	3.18	4.4	0.02-0.06						●	○			
QC16L145-R02	1.45	2	9.525	3.18	4.4	0.02-0.06						●				
QC16R150-R02	1.5	2	9.525	3.18	4.4	0.02-0.06						●	○			
QC16L150-R02	1.5	2	9.525	3.18	4.4	0.02-0.06						○				
QC16R160-R02	1.6	2	9.525	3.18	4.4	0.02-0.06						●	○			
QC16L160-R02	1.6	2	9.525	3.18	4.4	0.02-0.06						●	○			
QC16R165-R02	1.65	2	9.525	3.18	4.4	0.02-0.06						○				

● Ex Stock ○ On demand

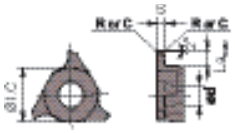
HC[1] Coated carbide
HW Uncoated carbide

System code A366 Grade selection A348 Technical info A445 Cutting data A400

Ideal machining conditions
Normal machining conditions
Unfavorable machining conditions

Parting inserts

QC turning/milling insert**



Right hand style

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

ISO	S±0.025	La *max*	ØI.C	S1	Ød	f	YBC252	YBC251	YBG105	YBG102	YBG9320	YBG205	YBG202	YBG302	YD101	YD201
QC16L165-R02	1.65	2	9.525	3.18	4.4	0.02-0.06						○				
QC16R170-R02	1.7	2	9.525	3.18	4.4	0.02-0.06						○				
QC16L170-R02	1.7	2	9.525	3.18	4.4	0.02-0.06						○				
QC16R175-R02	1.75	2	9.525	3.18	4.4	0.02-0.07						●	○			
QC16L175-R02	1.75	2	9.525	3.18	4.4	0.02-0.06						●				
QC16R180-R02	1.8	2	9.525	3.18	4.4	0.02-0.07						○				
QC16R185-R02	1.85	2.5	9.525	3.18	4.4	0.02-0.07						●	○			
QC16L185-R02	1.85	2.5	9.525	3.18	4.4	0.02-0.07						●				
QC16R200-R02	2	2.5	9.525	3.18	4.4	0.02-0.07						●	○			
QC16L200-R02	2	2.5	9.525	3.18	4.4	0.02-0.07						●				
QC16L210-R02	2.1	2.5	9.525	3.18	4.4	0.02-0.07						○				
QC16L210-R05	2.1	2.5	9.525	3.18	4.4	0.02-0.07						○				
QC16R220-R02	2.2	2.5	9.525	3.18	4.4	0.02-0.07						○				
QC16L220-R02	2.2	2.5	9.525	3.18	4.4	0.02-0.07						○				
QC16R225-R02	2.25	2.5	9.525	3.18	4.4	0.02-0.07						○				
QC16R250-R02	2.5	2.5	9.525	3.18	4.4	0.02-0.08						●	○			
QC16L250-R02	2.5	2.5	9.525	3.18	4.4	0.02-0.08						●				
QC16R300-R02	3	3	9.525	3.18	4.4	0.03-0.11						●	○			
QC16L300-R02	3	3	9.525	3.18	4.4	0.03-0.11						●				
QC22L100-R02	1	2	12.7	4.76	5.5	0.02-0.03						○				
QC22R125-R02	1.25	2	12.7	4.76	5.5	0.02-0.03						●	○			
QC22L125-R02	1.25	2	12.7	4.76	5.5	0.02-0.03						○	○			
QC22R145-R02	1.45	2	12.7	4.76	5.5	0.02-0.06						○	○			
QC22L145-R02	1.45	2	12.7	4.76	5.5	0.02-0.06						●	○			
QC22R150-R02	1.5	3.5	12.7	4.76	5.5	0.02-0.06						●	○			
QC22L150-R02	1.5	3.5	12.7	4.76	5.5	0.02-0.06						●				
QC22R163-R02	1.63	3.5	12.7	4.76	5.5	0.02-0.06						○				
QC22R163-R03	1.63	3.5	12.7	4.76	5.5	0.02-0.06						○				
QC22R175-R02	1.75	3.5	12.7	4.76	5.5	0.02-0.06						●	○			
QC22L175-R02	1.75	3.5	12.7	4.76	5.5	0.02-0.06						●	○			
QC22R185-R02	1.85	3.5	12.7	4.76	5.5	0.02-0.07						●	○			
QC22L185-R02	1.85	3.5	12.7	4.76	5.5	0.02-0.07						●	○			
QC22R195-R02	1.95	3.5	12.7	4.76	5.5	0.02-0.07						○				
QC22R200-R02	2	3.5	12.7	4.76	5.5	0.02-0.07						●	○			
QC22L200-R02	2	3.5	12.7	4.76	5.5	0.02-0.07						●				

● Ex Stock ○ On demand

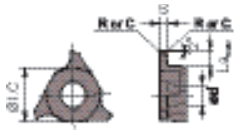
HC[1] Coated carbide
HW Uncoated carbide

System code A366 Grade selection A348 Technical info A445 Cutting data A400

- Ideal machining conditions
- Normal machining conditions
- Unfavorable machining conditions

Parting inserts

QC turning/milling insert**



Right hand style

	HC[1] (CVD)						HC[1] (PVD)						HW	
	YBC252	YBC251					YBG105	YBG102	YBG9320	YBG205	YBG202	YBG302	YD101	YD201
P	❁	❁							❁	❁	❁	❁		
M									❁	❁	❁	❁		
K														
N													●	❁
S							●	●	❁	❁	❁			
H														

ISO	S±0.025	La *max*	ØI.C	S1	Ød	f
QC22R225-R02	2.25	3.5	12.7	4.76	5.5	0.02-0.07
QC22R230-R02	2.3	3.5	12.7	4.76	5.5	0.02-0.07
QC22L230-R02	2.3	3.5	12.7	4.76	5.5	0.02-0.07
QC22R250-R03	2.5	4	12.7	4.76	5.5	0.02-0.08
QC22L250-R03	2.5	4	12.7	4.76	5.5	0.02-0.08
QC22R265-R03	2.65	4	12.7	4.76	5.5	0.02-0.08
QC22L265-R03	2.65	4	12.7	4.76	5.5	0.02-0.08
QC22R280-R03	2.8	4	12.7	4.76	5.5	0.02-0.08
QC22L280-R03	2.8	4	12.7	4.76	5.5	0.02-0.08
QC22R300-R03	3	4	12.7	4.76	5.5	0.03-0.11
QC22L300-R03	3	4	12.7	4.76	5.5	0.03-0.11
QC22R320-R03	3.2	4	12.7	4.76	5.5	0.03-0.11
QC22L320-R03	3.2	4	12.7	4.76	5.5	0.03-0.11
QC22R330-R03	3.3	4	12.7	4.76	5.5	0.03-0.11
QC22L330-R03	3.3	4	12.7	4.76	5.5	0.03-0.11
QC22R350-R03	3.5	5	12.7	4.76	5.5	0.05-0.13
QC22L350-R03	3.5	5	12.7	4.76	5.5	0.05-0.13
QC22R400-R04	4	5	12.7	4.76	5.5	0.05-0.14
QC22L400-R04	4	5	12.7	4.76	5.5	0.05-0.14
QC22R430-R04	4.3	5	12.7	4.76	5.5	0.05-0.14
QC22L430-R04	4.3	5	12.7	4.76	5.5	0.05-0.14
QC22R450-R04	4.5	5	12.7	4.76	5.5	0.06-0.18
QC22L450-R04	4.5	5	12.7	4.76	5.5	0.06-0.18
QC22R480-R04	4.8	5	12.7	5.06	5.5	0.06-0.18
QC22L480-R04	4.8	5	12.7	5.06	5.5	0.08-0.2

	YBC252	YBC251	YBG105	YBG102	YBG9320	YBG205	YBG202	YBG302	YD101	YD201
QC22R225-R02						○				
QC22R230-R02						●	○			
QC22L230-R02						●				
QC22R250-R03						●	○			
QC22L250-R03						●				
QC22R265-R03						●	○			
QC22L265-R03						●				
QC22R280-R03						●	○			
QC22L280-R03						●				
QC22R300-R03						●	○			
QC22L300-R03						●				
QC22R320-R03						●	○			
QC22L320-R03						●				
QC22R330-R03						●	○			
QC22L330-R03						●	○			
QC22R350-R03						●	○			
QC22L350-R03						●				
QC22R400-R04						●	○			
QC22L400-R04						●				
QC22R430-R04						○	○			
QC22L430-R04						●	●			
QC22R450-R04						○	○			
QC22L450-R04						○	○			○
QC22R480-R04						●	○			
QC22L480-R04						○	○			

● Ex Stock ○ On demand

HC[1] Coated carbide
HW Uncoated carbide

Tool holders

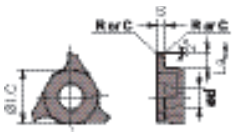
S***-QC**R/L	GQCR/L
	
A398	A397

System code A366 Grade selection A348 Technical info A445 Cutting data A400

- Ideal machining conditions
- Normal machining conditions
- Unfavorable machining conditions

Parting inserts

QC turning/milling insert**



Right hand style

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

ISO		S±0.025	La max	R/C	ØI.C	S1	Ød	f	YBC252	YBC251	YBG105	YBG102	YBG9320	YBG205	YBG202	YBG302	YD101	YD201
	QC16R100R	1.0	2.0	0.5	12.7	3.18	4.4	0.05-0.14						○				
	QC16R120R	1.2	2.0	0.6	12.7	3.18	4.4	0.06-0.18						○				
	QC16R150R	1.5	2.0	0.75	12.7	3.18	4.4	0.08-0.2						○				
	QC16L200R	2.0	2.5	1.0	12.7	3.18	4.4	0.02-0.03						○	○			
	QC16R200R	2.0	2.5	1.0	12.7	3.18	4.4	0.02-0.06						●	○			
	QC16L222R	2.22	2.5	1.11	12.7	3.18	4.4	0.02-0.06						○				
	QC16R222R	2.22	2.5	1.11	12.7	3.18	4.4	0.02-0.06						○				
	QC16R250R	2.5	2.5	1.25	12.7	3.18	4.4	0.02-0.06						○				
	QC16L280R	2.8	2.5	1.4	12.7	3.18	4.4	0.02-0.06						○				
	QC16R280R	2.8	2.5	1.4	12.7	3.18	4.4	0.02-0.07						○				
	QC16L300R	3.0	2.5	1.5	12.7	3.18	4.4	0.02-0.07						●	○			
	QC16R300R	3.0	2.5	1.5	12.7	3.18	4.4	0.02-0.07						●	○			
	QC22R100R	1.0	2.0	0.5	12.7	4.76	5.5	0.02-0.07						●	○			
	QC22L100R	1.0	2.0	0.5	12.7	4.76	5.5	0.02-0.07						○	●			
	QC22R150R	1.5	3.5	0.75	12.7	4.76	5.5	0.02-0.08						●	○			
	QC22L150R	1.5	3.5	0.75	12.7	4.76	5.5	0.02-0.08						●	●			
	QC22R170R	1.7	3.5	0.85	12.7	4.76	5.5	0.02-0.08						○				
	QC22R200R	2.0	3.5	1.0	12.7	4.76	5.5	0.03-0.11						●	○			
	QC22L200R	2.0	3.5	1.0	12.7	4.76	5.5	0.03-0.11						●	○			
	QC22R250R	2.5	4.0	1.25	12.7	4.76	5.5	0.03-0.11						●	○			
	QC22L250R	2.5	4.0	1.25	12.7	4.76	5.5	0.05-0.13						●	○			
	QC22R300R	3.0	4.0	1.5	12.7	4.76	5.5	0.05-0.14						●	○			
	QC22L300R	3.0	4.0	1.5	12.7	4.76	5.5	0.05-0.14						●	○			
	QC22R320R	3.2	4.0	1.6	12.7	4.76	5.5	0.06-0.18						○				
	QC22R400R	4.0	5.0	2.0	12.7	4.76	5.5	0.06-0.18						●	○			
	QC22L400R	4.0	5.0	2.0	12.7	4.76	5.5	0.05-0.3						●	○			

● Ex Stock ○ On demand

HC[1] Coated carbide
HW Uncoated carbide

Tool holders

GQCR/L	S***-QC**R/L
	
A397	A398

System code A366 | Grade selection A348 | Technical info A445 | Cutting data A400

Notes

External tool holders

Q	F	G	D	2525	R	22	(S)	– (130)	(H)
1	2	3	4	5	6	7	8	9	10

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
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 Extra

Code	Description
S	Strengthened holder for deep cuts

9 Min. diameter of work piece for first axial grooving [mm]

10 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	2	3	4	5	6

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

Clamping block

QZ	S	32	32
1	2	3	4

1 — Parting & grooving tool

2 — No. of cutting edges

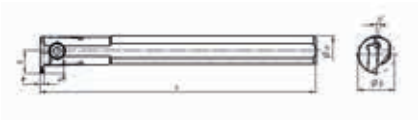
Code	Description
S	Single
D	Double

3 — Clamping surface height [mm]

4 — Blade height [mm]

Parting & grooving tool holder (internal)

C16M-QBDR/L



Article	✻	Stock		Dimensions [mm]						Inserts
		R	L	ØD	ød	L	S	W	ar_{max}	
C16M-QBDR/L04-20		●	●	20	16	150	12	2	4	ZTBD02002-MM

● Ex stock ○ On demand

✻ With internal cooling

Spare parts

	Insert	ZTBD02002-MM
	H	**16**
	Screw	M5x10
	Wrench	WH30L

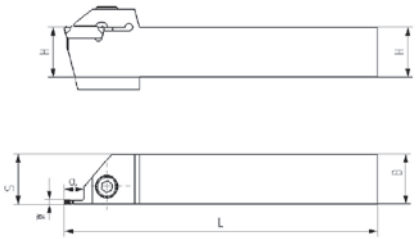
Insert

A351

System code A373 Grade selection A348 Technical info A445 Cutting data A400

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 A372 Grade selection A348 Technical info A445 Cutting data A400

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-M5x16	GB70-85-M5x20	GB70-85-M6x20	GB70-85-M5x20	GB70-85-M6x20	GB70-85-M6x20	GB70-85-M6x20	GB70-85-M6x20
	Wrench	WH40L	WH40L	WH50L	WH40L	WH50L	WH50L	WH50L	WH50L

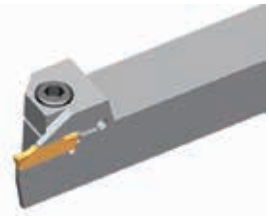
Insert

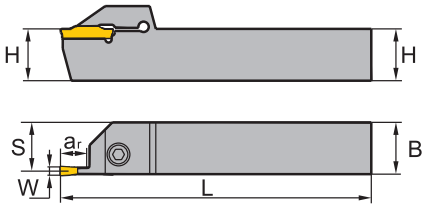
A351

System code A372 Grade selection A348 Technical info A445 Cutting data A400

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-M6x20	GB70-85-M6x20
	Wrench	WH50L	WH50L

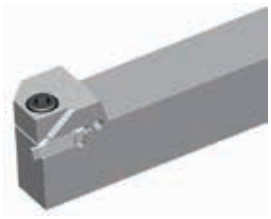
Insert

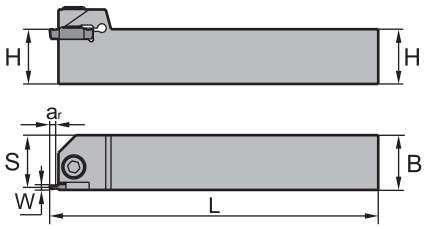
A353

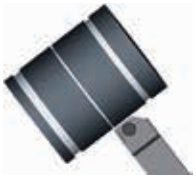
System code A372 Grade selection A348 Technical info A445 Cutting data A400

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-M5x20	GB70-85-M6x20
	Wrench	WH40L	WH50L

Insert

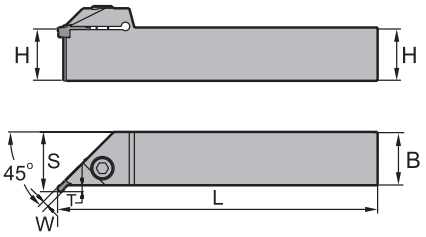
A357

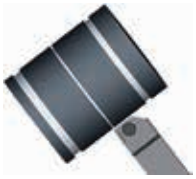
A Turning
B Milling
C Drilling
D Technical Information
E Index

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-M6x20	GB70-85-M6x20	GB70-85-M6x20	GB70-85-M6x20
	Wrench	WH50L	WH50L	WH50L	WH50L

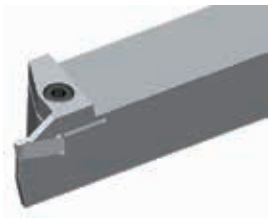
Insert

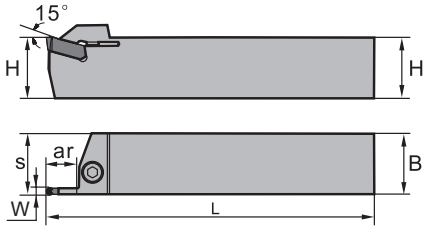
A352

System code A372 Grade selection A348 Technical info A445 Cutting data A400

Parting & grooving tool holder (external)

QE*SR/L





Right hand style

Article	✻	Stock		Dimensions [mm]					Inserts
		R	L	HxB	L	S	W	ar_{max}	
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-M6x20
	Wrench	WH50L

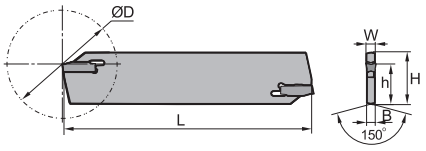
Insert

A362

System code A372 | Grade selection A348 | Technical info A445 | Cutting data A400

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

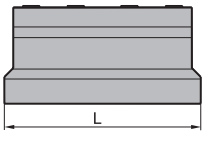
Insert

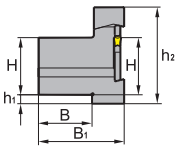
A353

System code A374 | Grade selection A348 | Technical info A445 | Cutting data A400

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

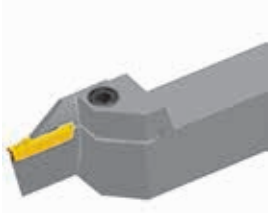
	Insert	**QE**26**	**QE**32**
	H	**20-32**	**20-32**
	Clamp	QZC26	QZC32
	Screw	GB70-85-M6x20	GB70-85-M6x20
	Wrench	W50RL	W50RL

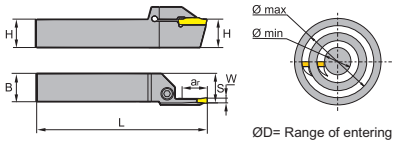
A Turning
B Milling
C Drilling
D Technical Information
E Index

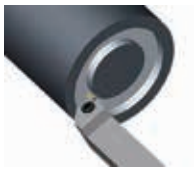
System code A374 Grade selection A348 Technical info A445 Cutting data A400

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	19	4	10	52-72	Z*GD**
QFGD2020R/L10-64H		○	○	20x20	150	19	4	10	64-100	Z*GD**
QFGD2020R/L10-90H		○	●	20x20	150	19	4	10	90-140	Z*GD**
QFGD2020R/L10-130H		○	○	20x20	150	19	4	10	130-230	Z*GD**
QFGD2020R/L15-52H		●	●	20x20	150	19	4	15	52-72	Z*GD**
QFGD2020R/L15-64H		○	○	20x20	150	19	4	15	64-100	Z*GD**
QFGD2020R/L15-90H		●	○	20x20	150	19	4	15	90-140	Z*GD**
QFGD2020R/L15-130H		●	○	20x20	150	19	4	15	130-230	Z*GD**
QFGD2525R/L13-52H		●	●	25x25	150	24	4	13	52-72	Z*GD**
QFGD2525R/L13-64H		●	●	25x25	150	24	4	13	64-100	Z*GD**
QFGD2525R/L13-90H		●	●	25x25	150	24	4	13	90-140	Z*GD**
QFGD2525R/L13-130H		●	●	25x25	150	24	4	13	130-230	Z*GD**
QFGD2525R/L22-52H		●	●	25x25	150	24	4	22	52-72	Z*GD**
QFGD2525R/L22-64H		●	●	25x25	150	24	4	22	64-100	Z*GD**
QFGD2525R/L22-90H		●	●	25x25	150	24	4	22	90-140	Z*GD**
QFGD2525R/L22-130H		●	●	25x25	150	24	4	22	130-230	Z*GD**
QFHD2525R/L13-58H		●	●	25x25	150	23.5	5	13	58-96	Z*HD**
QFHD2525R/L13-86H		●	●	25x25	150	23.5	5	13	86-140	Z*HD**
QFHD2525R/L13-130H		●	●	25x25	150	23.5	5	13	130-200	Z*HD**
QFHD2525R/L13-185H		●	●	25x25	150	23.5	5	13	185-400	Z*HD**

System code A372 | Grade selection A348 | Technical info A445 | Cutting data A400

Article	✲	Stock		Dimensions [mm]						Inserts
		R	L	HxB	L	S	W	ar_{max}	ØD (min-max)	
QFHD2525R/L22-58H		●	●	25x25	150	23.5	5	22	58-96	Z*HD**
QFHD2525R/L22-86H		●	●	25x25	150	23.5	5	22	86-140	Z*HD**
QFHD2525R/L22-130H		●	●	25x25	150	23.5	5	22	130-200	Z*HD**
QFHD2525R/L22-185H		●	●	25x25	150	23.5	5	22	185-400	Z*HD**
QFKD2525R/L13-60H		●	●	25x25	150	23	6	13	60-100	Z*KD**
QFKD2525R/L13-88H		○	●	25x25	150	23	6	13	88-180	Z*KD**
QFKD2525R/L13-160H		●	●	25x25	150	23	6	13	160-400	Z*KD**
QFKD2525R/L22-60H		●	●	25x25	150	23	6	22	60-100	Z*KD**
QFKD2525R/L22-88H		●	●	25x25	150	23	6	22	88-180	Z*KD**
QFKD2525R/L22-160H		●	●	25x25	150	23	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-M6x20	GB70-85-M6x20	GB70-85-M6x20	GB70-85-M6x20
	Wrench	W50RL	W50RL	W50RL	W50RL

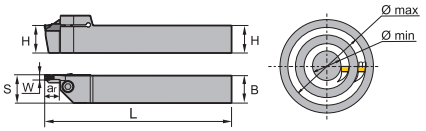
Insert

A351

System code A374 Grade selection A348 Technical info A445 Cutting data A400

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
QFFD2020LL7-48H			○	20x20	150	21	3	7	48-66	Z*FD**
QFFD2020RR7-48H		○		20x20	150	21	3	7	48-66	Z*FD**
QFFD2020LL7-60H			○	20x20	150	21	3	7	60-80	Z*FD**
QFFD2020RR7-60H		○		20x20	150	21	3	7	60-80	Z*FD**
QFFD2020LL7-74H			○	20x20	150	21	3	7	74-110	Z*FD**
QFFD2020RR7-74H		○		20x20	150	21	3	7	74-110	Z*FD**
QFFD2020LL7-100H			○	20x20	150	21	3	7	100-150	Z*FD**
QFFD2020RR7-100H		○		20x20	150	21	3	7	100-150	Z*FD**
QFFD2020LL10-48H			○	20x20	150	21	3	10	48-66	Z*FD**
QFFD2020RR10-48H		●		20x20	150	21	3	10	48-66	Z*FD**
QFFD2020LL10-60H			○	20x20	150	21	3	10	60-80	Z*FD**
QFFD2020RR10-60H		○		20x20	150	21	3	10	60-80	Z*FD**
QFFD2020LL10-74H			○	20x20	150	21	3	10	74-110	Z*FD**
QFFD2020RR10-74H		○		20x20	150	21	3	10	74-110	Z*FD**
QFFD2020LL10-100H			○	20x20	150	21	3	10	100-150	Z*FD**
QFFD2020RR10-100H		○		20x20	150	21	3	10	100-150	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**
QFGD2020LL10-64H			○	20x20	150	21	4	10	64-100	Z*GD**
QFGD2020RR10-64H		○		20x20	150	21	4	10	64-100	Z*GD**

System code A372 | Grade selection A348 | Technical info A445 | Cutting data A400

Article	*	Stock		Dimensions [mm]						Inserts
		R	L	HxB	L	S	W	ar_{max}	ØD (min-max)	
QFGD2020LL10-90H			○	20x20	150	21	4	10	90-140	Z*GD**
QFGD2020RR10-90H		○		20x20	150	21	4	10	90-140	Z*GD**
QFGD2020LL10-130H			○	20x20	150	21	4	10	130-230	Z*GD**
QFGD2020RR10-130H		○		20x20	150	21	4	10	130-230	Z*GD**
QFGD2020LL15-52H			○	20x20	150	26	4	15	52-72	Z*GD**
QFGD2020RR15-52H		○		20x20	150	26	4	15	52-72	Z*GD**
QFGD2020LL15-64H			○	20x20	150	26	4	15	64-100	Z*GD**
QFGD2020RR15-64H		○		20x20	150	26	4	15	64-100	Z*GD**
QFGD2020LL15-90H			○	20x20	150	26	4	15	90-140	Z*GD**
QFGD2020RR15-90H		●		20x20	150	26	4	15	90-140	Z*GD**
QFGD2020LL15-130H			○	20x20	150	21	4	15	130-230	Z*GD**
QFGD2020RR15-130H		●		20x20	150	26	4	15	130-230	Z*GD**
QFGD2525LL13-52H			○	25x25	150	21	4	13	52-72	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**
QFGD2525LL13-90H			○	25x25	150	21	4	13	90-140	Z*GD**
QFGD2525RR13-90H		○		25x25	150	21	4	13	90-140	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**
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**
QFHD2525LL13-58H			○	25x25	150	26	5	13	58-96	Z*HD**
QFHD2525RR13-58H		○		25x25	150	26	5	13	58-96	Z*HD**
QFHD2525LL13-86H			○	25x25	150	26	5	13	86-140	Z*HD**
QFHD2525RR13-86H		○		25x25	150	26	5	13	86-140	Z*HD**
QFHD2525LL13-130H			○	25x25	150	26	5	13	130-200	Z*HD**
QFHD2525RR13-130H		○		25x25	150	26	5	13	130-200	Z*HD**
QFHD2525LL13-185H			○	25x25	150	26	5	13	185-400	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**
QFHD2525LL22-86H			○	25x25	150	26	5	22	86-140	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**
QFKD2525LL13-60H			○	25x25	150	26	6	13	60-100	Z*KD**
QFKD2525RR13-60H		○		25x25	150	26	6	13	60-100	Z*KD**
QFKD2525LL13-88H			○	25x25	150	26	6	13	88-180	Z*KD**
QFKD2525RR13-88H		○		25x25	150	26	6	13	88-180	Z*KD**

System code A372 | Grade selection A348 | Technical info A445 | Cutting data A400

Parting & grooving Tool holders

Article	✻	Stock R	Stock L	Dimensions [mm] HxB	L	S	W	ar_{max}	ØD (min-max)	Inserts
QFKD2525LL13-160H			○	25x25	150	26	6	13	160-400	Z*KD**
QFKD2525RR13-160H		○		25x25	150	26	6	13	160-400	Z*KD**
QFKD2525LL22-60H			○	25x25	150	26	6	22	60-100	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-M6x20	GB70-85-M6x20	GB70-85-M6x20	GB70-85-M6x20
	Wrench	W50RL	W50RL	W50RL	W50RL

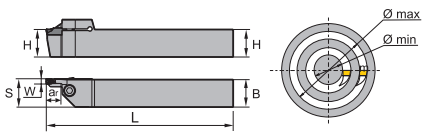
Insert

A351

System code A372 Grade selection A348 Technical info A445 Cutting data A400

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-M6x20	GB70-85-M6x20	GB70-85-M6x20
	Wrench	W50RL	W50RL	W50RL

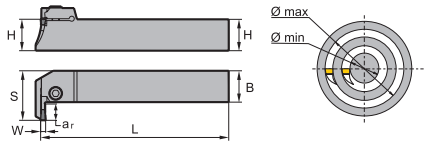
Insert

A356

System code A372 Grade selection A348 Technical info A445 Cutting data A400

Parting & grooving tool holder (axial)

QF*DR/L



Left hand style

Article	*	Stock R	Stock L	Dimensions [mm] HxB	L	S	W	ar_{max}	ØD (min-max)	Inserts
QFFD2020R/L7-48L		○	○	20x20	150	28.5	3	7	48x66	Z*FD**
QFFD2020R/L7-60L		○	○	20x20	150	28.5	3	7	60x80	Z*FD**
QFFD2020R/L7-74L		●	○	20x20	150	28.5	3	7	74x110	Z*FD**
QFFD2020R/L7-100L		○	○	20x20	150	28.5	3	7	100x150	Z*FD**
QFFD2020R/L10-48L		●	●	20x20	150	31.5	3	10	48x66	Z*FD**
QFGD2020R/L10-52L		○	●	20x20	150	31.5	4	10	52x72	Z*GD**
QFFD2020R/L10-60L		●	●	20x20	150	31.5	3	10	60x80	Z*FD**
QFGD2020R/L10-64L		○	○	20x20	150	31.5	4	10	64x100	Z*GD**
QFFD2020R/L10-74L		●	●	20x20	150	31.5	3	10	74x110	Z*FD**
QFGD2020R/L10-90L		●	●	20x20	150	31.5	4	10	90x140	Z*GD**
QFFD2020R/L10-100L		○	●	20x20	150	31.5	3	10	100x150	Z*FD**
QFGD2020R/L10-130L		●	○	20x20	150	31.5	4	10	130x230	Z*GD**
QFGD2020R/L15-52L		○	●	20x20	150	36.5	4	15	52x72	Z*GD**
QFGD2020R/L15-64L		●	○	20x20	150	36.5	4	15	64x100	Z*GD**
QFGD2020R/L15-90L		○	○	20x20	150	36.5	4	15	90x140	Z*GD**
QFGD2020R/L15-130L		○	○	20x20	150	36.5	4	15	130x230	Z*GD**
QFFD2525R/L10-48L		●	●	25x25	150	36.5	3	10	48x66	Z*FD**
QFFD2525R/L10-60L		●	○	25x25	150	36.5	3	10	60x80	Z*FD**
QFFD2525R/L10-74L		○	○	25x25	150	36.5	3	10	74x110	Z*FD**
QFFD2525R/L10-100L		○	○	25x25	150	36.5	3	10	100x150	Z*FD**
QFGD2525R/L13-52L		○	●	25x25	150	39.5	4	13	52x72	Z*GD**
QFKD2525R/L13-60L		○	○	25x25	150	39.5	6	13	60x100	Z*KD**
QFGD2525R/L13-64L		●	●	25x25	150	39.5	4	13	64x100	Z*GD**
QFKD2525R/L13-88L		○	○	25x25	150	39.5	6	13	88x180	Z*KD**
QFGD2525R/L13-90L		●	○	25x25	150	39.5	4	13	90x140	Z*GD**
QFGD2525R/L13-130L		○	○	25x25	150	39.5	4	13	130x230	Z*GD**
QFFD2525R/L17-48L		●	●	25x25	150	43.5	3	17	48x66	Z*FD**
QFFD2525R/L17-60L		●	○	25x25	150	43.5	3	17	60x80	Z*FD**
QFFD2525R/L17-74L		●	○	25x25	150	43.5	3	17	74x110	Z*FD**
QFFD2525R/L17-100L		●	●	25x25	150	43.5	3	17	100x150	Z*FD**
QFGD2525R/L22-52L		●	○	25x25	150	48.5	4	22	52x72	Z*GD**
QFKD2525R/L22-60L		●	●	25x25	150	48.5	6	22	60x100	Z*KD**
QFGD2525R/L22-64L		●	●	25x25	150	48.5	4	22	64x100	Z*GD**
QFKD2525R/L22-88L		○	●	25x25	150	48.5	6	22	88x180	Z*KD**
QFGD2525R/L22-90L		●	●	25x25	150	48.5	4	22	90x140	Z*GD**
QFGD2525R/L22-130L		●	●	25x25	150	48.5	4	22	130x230	Z*GD**

System code A372 | Grade selection A348 | Technical info A445 | Cutting data A400

Article	✻	Stock		Dimensions [mm]						Inserts
		R	L	HxB	L	S	W	ar_{max}	ØD (min-max)	
QFHD2525R/L13-58L		○	○	25x25	150	39.5	5	13	58x96	Z*HD**
QFHD2525R/L13-86L		●	○	25x25	150	39.5	5	13	86x140	Z*HD**
QFHD2525R/L13-130L		○	○	25x25	150	39.5	5	13	130x200	Z*HD**
QFHD2525R/L13-185L		○	○	25x25	150	39.5	5	13	185x400	Z*HD**
QFHD2525R/L22-58L		●	○	25x25	150	48.5	5	22	58x96	Z*HD**
QFHD2525R/L22-86L		●	○	25x25	150	48.5	5	22	86x140	Z*HD**
QFHD2525R/L22-130L		●	○	25x25	150	48.5	5	22	130x200	Z*HD**
QFHD2525R/L22-185L		●	○	25x25	150	48.5	5	22	185x400	Z*HD**

● 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-M6x20	GB70-85-M6x20	GB70-85-M6x20	GB70-85-M6x20
	Wrench	W50RL	W50RL	W50RL	W50RL

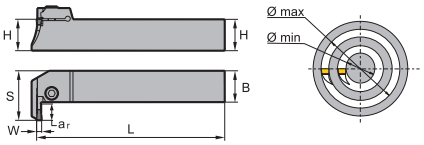
Insert

A351

System code A372 Grade selection A348 Technical info A445 Cutting data A400

Parting & grooving tool holder (axial)

QFHSDR/L



Right hand style

Article	✻	Stock R	Stock L	Dimensions [mm] HxB	L	S	W	ar_{max}	ØD (min-max)	Inserts
QFHS2525R/L30-185L		●	○	25x25	150	56.5	5	30	185x400	Z*HS**

● Ex stock ○ On demand

✻ With internal cooling

Spare parts

	Insert	Z*HS**
	H	**25**
	Screw	GB70-85-M6x20
	Wrench	W50RL

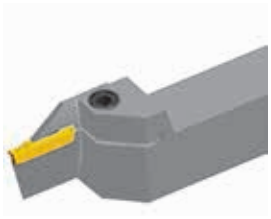
Insert

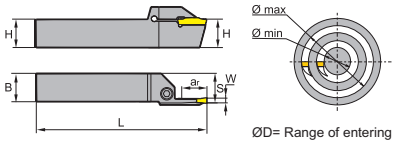
A356

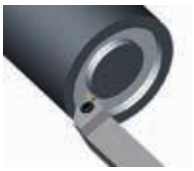
System code A372 Grade selection A348 Technical info A445 Cutting data A400

Parting & grooving tool holder (axial)

QF**R/L







Left hand style

Article	✻	Stock		Dimensions [mm]					Inserts
		R	L	HxB	L	S	W	ØD (min-max)	
QFHS2525R/L30-185H		●	●	25x25	150	23.5	5	185-400	Z*HS**
QFKS2525R/L30-160H		●	●	25x25	150	23	6	160-400	Z*KS**

● Ex stock ○ On demand

✻ With internal cooling

Spare parts

	Insert	Z*HS**	Z*KS**
	H	25	25
	Screw	GB70-85-M6x20	GB70-85-M6x20
	Wrench	W50RL	W50RL

Insert

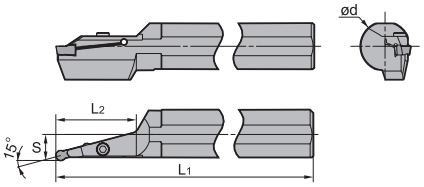
A356

A Turning
B Milling
C Drilling
D Technical Information
E Index

System code A372 | Grade selection A348 | Technical info A445 | Cutting data A400

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**
	H	**32-40**	**32-40**
	Screw	GB70-85-M6x20	GB70-85-M6x20
	Wrench	WH50L	WH50L

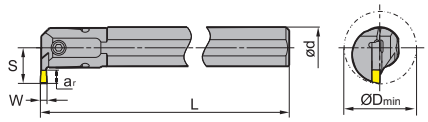
Insert

A364

System code A372 Grade selection A348 Technical info A445 Cutting data A400

Parting & grooving tool holder (internal)

C***-Q*DR/L



Right hand style

Article	✻	Stock		Dimensions [mm]						Inserts
		R	L	ØDmin	ød	L	S	W	ar_{max}	
C16M-QBDR/L04-20		●	●	20	16	150	12	2	4	Z*BD**
C20Q-QEDR/L05-27		●	●	27	20	180	15,2	2,5	5	Z*ED**
C25R-QEDR/L07-33		●	●	33	25	200	20,3	2,5	7	Z*ED**
C32S-QEDR/L09-42		●	●	42	32	250	25,3	2,5	9	Z*ED**
C20Q-QFDR/L05-27		●	●	27	20	0	15,2	3	5	Z*FD**
C25R-QFDR/L07-33		●	●	33	25	200	20,3	3	7	Z*FD**
C32S-QFDR/L09-42		●	●	42	32	250	25,3	3	9	Z*FD**
C25R-QGDR/L08-35		●	●	35	25	200	21,5	4	8	Z*GD**
C32S-QGDR/L11-44		●	●	44	32	250	27,5	4	11	Z*GD**
C40T-QGDR/L13-54		●	●	5	40	300	33,5	4	13	Z*GD**
C25R-QHDR/L08-35		●	●	35	25	200	21,5	5	8	Z*HD**
C32S-QHDR/L11-44		●	●	44	32	250	27,5	5	11	Z*HD**
C40T-QHDR/L13-54		●	●	54	40	300	33,5	5	13	Z*HD**
C25R-QKDR/L08-35		●	●	35	25	200	21,5	6	8	Z*KD**
C32S-QKDR/L11-44		●	●	44	32	250	27,5	6	11	Z*KD**
C40T-QKDR/L13-54		●	●	54	40	300	33,5	6	13	Z*KD**

● Ex stock ○ On demand

✻ With internal cooling

Spare parts

	Insert	Z*ED**	Z*ED**	Z*ED**	Z*FD**	Z*FD**	Z*FD**	Z*GD**	Z*GD**	Z*HD**	Z*HD**	Z*KD**	Z*KD**
	H	**20**	**25**	**32-40**	**20**	**25**	**32-40**	**25**	**32-40**	**25**	**32-40**	**25**	**32-40**
	Screw	GB70-85-M4x12	GB70-85-M5x16	GB70-85-M6x20	GB70-85-M4x12	GB70-85-M5x16	GB70-85-M6x20	GB70-85-M5x16	GB70-85-M6x20	GB70-85-M5x16	GB70-85-M6x20	GB70-85-M5x16	GB70-85-M6x20
	Wrench	WH30L	WH40L	WH50L	WH30L	WH40L	WH50L	WH40L	WH50L	WH40L	WH50L	WH40L	WH50L

Insert

A351

System code A373 | Grade selection A348 | Technical info A445 | Cutting data A400

External tool holders – QC series

GQC	R	20	20	K	22	–	15
1	2	3	4	5	6		7

Series
1

Type	
Code	Description
R	Right
L	Left

2

Height [mm]	
Code	Description
16	16
20	20
25	25

3

Width [mm]	
Code	Description
16	16
20	20
25	25

4

Length [mm]	
Code	Description
K	125
M	150

5

Cutting edge length [mm]	
Code	I.C
11	6.35
16	9.252
22	12.70

6

Cutting width range [mm]		
Code	Insert size	
15	0.5≤S<1.8(QC16***)	1.0≤S<2.3(QC22***)
25	1.8≤S<3.0(QC16***)	2.3≤S<3.3(QC22***)
35	–	3.3≤S≤4.8(QC22***)

7

Boring bars – QC series

S	20	K	–	QC	16	15	R	25
1	2	3		4	5	6	7	8

Shank type	
Code	Material
S	Steel shank
C	Solid carbide shank
A	Solid carbide shank (IC)

1

Diameter [mm]	
Code	Description
16	16
20	20
25	25

2

Length [mm]	
Code	Description
H	100
K	125
M	150

3

Series
4

Cutting edge length [mm]	
Code	I.C
11	6.35
16	9.252
22	12.70

5

Cutting width range [mm]			
Code	Insert size		
15	0.5≤S<1.8(QC11***)	0.5≤S<1.8(QC16***)	1.0≤S<2.3(QC22***)
25	1.8≤S<3.0(QC11***)	1.8≤S<3.0(QC16***)	2.3≤S<3.3(QC22***)
35	–	–	3.3≤S≤4.8(QC22***)

6

Cutting direction	
Code	Description
R	Right
L	Left

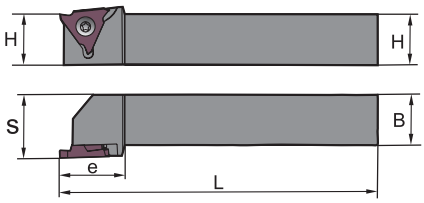
7

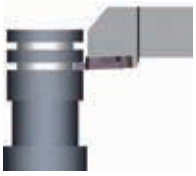
Starting diameter [mm]			
Code	Ø	Code	Ø
16	16	25	25
20	20	35	35

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/L1616K16-25		●	●	16	125	21	25.5	16	1.8-3.0	QC16R/L 050-300
GQCR/L2020K16-15		●	●	20	125	25	25.5	20	0.5-1.80	QC16R/L 050-180
GQCR/L2020K16-25		●	●	20	125	25	25.5	20	1.8-3.0	QC16R/L 050-300
GQCR/L2525M16-15		●	●	25	150	30	25.5	25	0.5-1.80	QC16R/L 050-180
GQCR/L2525M16-25		●	●	25	150	30	25.5	25	1.8-3.0	QC16R/L 050-300
GQCR/L2020K22-15		●	●	20	125	25	25.5	20	1.0-2.3	QC22R/L 100-230
GQCR/L2020K22-25		●	●	20	125	25	25.5	20	2.3-3.3	QC22R/L 100-330
GQCR/L2020K22-35		●	●	20	125	25	25.5	20	3.3-4.8	QC22R/L 100-480
GQCR/L2525M22-15		●	●	25	150	30	25.5	25	1.0-2.3	QC22R/L 100-230
GQCR/L2525M22-25		●	●	25	150	30	25.5	25	2.3-3.3	QC22R/L 100-330
GQCR/L2525M22-35		●	●	25	150	30	25.5	25	3.3-4.8	QC22R/L 100-480

● Ex stock ○ On demand

✲ With internal cooling

Spare parts

	Insert	QC16R/L 050-180	QC22R/L 100-230
	H	**16-32**	**16-32**
	Screw	I60M3.5×10	I60M5×13
	Wrench (shim)	WT15IP	WT20IP

Insert

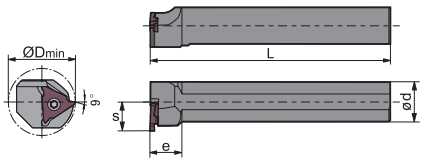
Medium Cut

A367

System code A396 Grade selection A348 Technical info A445 Cutting data A400

S_QCR/L

S*K-QC**R/L



Right hand style

Article	✲	Stock		Dimensions [mm]						Inserts
		R	L	ØDmin	ød	L	S	e	Width	
S16H-QC1115R/L20		●	●	21	16	100	11.5	12	0.5-1.80	QC11R/L 050-180
S16H-QC1125R/L20		●	●	21	16	100	11.5	12	1.8-3.0	QC11R/L 050-180
S20K-QC1115R/L16		●	●	16	20	125	11.1	40	0.5-1.80	QC11R/L 050-180
S20K-QC1125R/L16		●	●	16	20	125	11.1	40	1.8-3.0	QC11R/L 050-180
S20M-QC1615R/L25		●	●	26	20	150	12.5	15	0.5-1.80	QC16R/L050-180
S20M-QC1625R/L25		●	●	26	20	150	12.5	15	1.8-3.0	QC16R/L050-180
S25M-QC2215R/L35		●	●	35	25	150	18.2	15	1.0-2.3	QC22R/L100-230
S25M-QC2225R/L35		●	●	35	25	150	18.2	20	2.3-3.3	QC22R/L100-230
S25M-QC2235R/L35		●	●	35	25	150	18.2	20	3.3-4.8	QC22R/L100-230

● Ex stock ○ On demand

✲ With internal cooling

Spare parts

	Insert	QC11R/L 050-180	QC16R/L050-180	QC16R/L050-180	QC22R/L100-230
	ød	**16-20**	**20**	**25**	**25**
	Screw	I60M2.5×6.5	I60M3.5×10	I60M5×13	I60M5×13
	Wrench (shim)	WT07IP	WT15IP	WT20IP	WT20IP

Insert

Medium Cut

A367

System code A396 | Grade selection A348 | Technical info A445 | Cutting data A400

Notes

Parting & grooving inserts

Material group		Composition / structure / heat treatment		Brinell hardness HB	Machining group	Starting values for cutting speed v_c [m/min]			
						HC (CVD)	HC (PVD)		
						YBC252	YBG105	YB9320	
P	Unalloyed steel	ca. 0,15 % C	annealed	125	1	190	200	190	
		ca. 0,45 % C	annealed	190	2	175	180	175	
		ca. 0,45 % C	tempered	250	3	145	150	145	
		ca. 0,75 % C	annealed	270	4	140	145	140	
		ca. 0,75 % C	tempered	300	5	135	140	135	
	Low-alloyed steel		annealed	180	6	170	180	170	
			tempered	275	7	125	130	125	
			tempered	300	8	115	120	115	
			tempered	350	9	105	110	105	
	High-alloyed steel and high-alloyed tool steel		annealed	200	10	125	130	125	
			hardened and tempered	325	11	95	100	95	
M	Stainless steel	ferritic/martensitic	annealed	200	12	165	170	165	
		martensitic	tempered	240	13	135	140	135	
		austenitic	quench hardened	180	14	155	160	155	
		austenitic-ferritic		230	15	135	140	135	
K	Grey cast iron	perlitic/ferritic		180	16	240	250	240	
		perlitic (martensitic)		260	17	185	190	185	
	Cast iron with spheroidal graphite	ferritic		160	18	220	230	220	
		perlitic		250	19	165	170	165	
	Malleable cast iron	ferritic		130	20	175	180	175	
		perlitic		230	21	165	170	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		100	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		150	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 D22.

	Starting values for cutting speed v_c [m/min]					
	HC (PVD)			HW		
	YBG202	YBG205	YBG302	YD101	YD201	
	190	190	185			
	175	175	170			
	145	145	140			
	140	140	135			
	135	135	130			
	170	170	165			
	125	125	125			
	115	115	115			
	105	105	105			
	125	125	125			
	95	95	95			
	165	165	160			
	135	135	130			
	155	155	150			
	135	135	130			
	240	240	235			
	185	185	180			
	220	220	215			
	165	165	160			
	175	175	170			
	165	165	160			
				800	760	
				600	570	
				320	305	
				240	230	
				160	155	
				160	155	
				600	570	
				200	190	
	95	95	95	70	65	
	50	50	50	35	35	
	80	80	75	60	60	
	70	70	65	50	50	
	70	70	65	50	50	
	145	145	140	105	100	
	50	50	50	35	35	

HC Coated carbide
HW Uncoated carbide, main component (WC)