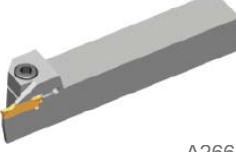
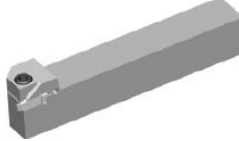


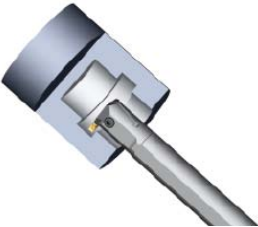
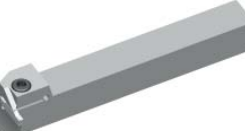


TURNING Parting and grooving tools

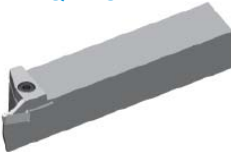
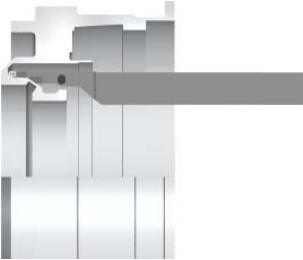
Parting and grooving tools overview

General turning
Parting and grooving
Parting and grooving tools overview

Machining application	Machining type	Applicable tools	Corresponding inserts	Tool features and parameters
External machining	Parting	Little squirrel series QZ□□+QE□□  A269	Parting inserts ZP□S□□ 	- Assemble structure of parting blade and holder; good rigidity; adjustable parting range - The maximum parting diameter is 120mm.
		Little squirrel series QE□□R/L  A266	ZP□D□□  ZP□S□ 	- Inserts have three-dimensional chipbreaker with low cutting force and good performance on chip-breaking. - The maximum parting diameter is 60mm.
		Supplementary series QZQ□□R/L  A280	ZQMX□□ 	- Cutting edge strength is suitable for bad machining conditions. - The maximum parting diameter is 70mm.
	Grooving and turning	 Little squirrel series QE□□R/L  A266	Double cutting edges for parting ZT□D□□  Profile turning ZR□D□□  Single cutting edge for deep grooving ZT□S□□ 	- A single tool with multiple applications such as grooving, parting and profile turning, reducing tools categories needed. - A multifunctional tool when used with grooving inserts. Suitable for profile machining. - The maximum slot depth machinable is 30mm.
	Precise grooving	 Little squirrel series QECD  A267	Precise grooving ZT□D□□-EG  Edge width 1.2~2.4mm	- Grinded insert used for precise grooving - Edge width can be anything between 1.0-6.5mm, customized according to users' needs.
		Little squirrel series QE□□R/L  A266	Precise grooving ZT□D□□-EG  Edge width 2.4~6.5mm	ZT□D□□-EG inserts: When edge width is between 1.2-2.4mm, the maximum cutting depth is 2.5mm. When edge width is above 2.4-6.5mm, the maximum cutting depth is 22mm.

Machining application	Machining type	Applicable tools	Corresponding inserts	Tool features and parameters
Internal machining	Grooving and turning	 Little squirrel series C□□-Q□□R/L□  A278	Grooving, Turning ZT□D□□  Profile turning ZR□D□□ 	- By using inserts for grooving and profiling, one tool can be versatile, reducing the tool categories needed. - The maximum slot depth machinable is 13mm. - The minimum machining diameter is 27mm.
		 Little squirrel series QF□□□□H  A270-A275	Grooving, Turning ZT□D□□  Profile turning ZR□D□□ 	- By using inserts for grooving and profiling, one tool can be versatile, reducing the tool categories needed. - Grooving diameter is 48-400mm. - Grooving depth is 10-30mm.
End surface machining	Grooving and turning	Little squirrel series QF□□□□L  A276-A277	Grooving, Turning ZT□D□□  Profile turning ZR□D□□ 	90°holder, top clamping. - By using inserts for grooving and profiling, one tool can be versatile, reducing the tool categories needed. - Grooving diameter is 48~400mm. - Grooving depth is 10~30mm.
		 Little squirrel series QX□□D□□□  A267	Grooving, Turning ZT□D□□  Profile turning ZR□D□□ 	- The unique tool for recess machining. - Complete range of specifications, able to achieve various recess machining.
AI profiling	External machining	 Little squirrel series QE□□R/L  A266	Little squirrel series ZR□□-LH 	- The unique tool for profiling of AI material. - Cutting edge is designed to combine sharpness and strength, suitable for continuous and intermittent turning.
	Inner wall and surface machining	 Little squirrel series C40X□□  A278		Used for external, surface and inner wall machining of AI wheel hub.



Machining application	Machining type	Applicable tools	Corresponding inserts	Tool features and parameters
Tools for aviation and aerospace industries	External machining	 Little squirrel series QE□S□□N  A268	Little squirrel series ZIG□□□  Little squirrel series ZIMF□□ 	• V-type locating, top clamping, precise locating, safe clamping. • Normal square-ended inserts and precise square-ended inserts are suitable for adhesive. materials hard to machine such as Ni-base high-temperature alloy, Ti alloy and stainless steel, etc.
	Non-standard Tools	 Non-standard tools to match workpiece	Select and manufacture as required	• Tailor made solutions for machining various parts to satisfy your requirements.

General turning

Parting and grooving

Parting and grooving tools overview



TURNING Parting and grooving tools

Little squirrel series parting and grooving tools

Little squirrel series parting and grooving tools code key

● External and surface turning

General turning

Parting and grooving

Little squirrel series parting and grooving tools

Code of grooving tools

Machining mode

E > External cutting **F** > End surface cutting

Code of locating slot

Accords with locating slot code of insert and corresponds to certain range of insert edge width

Code of edge number of corresponding inserts

S > Single cutting edge **D** > Double cutting edge

Q E G D - **2525 R 13**
32 N

Q F G D 2525 R 22 S - 130 H

Nose height and width of tool holder

Left and right hand of tool

R > Right **L** > Left **N** > Both are acceptable

Maximum cutting depth

Supplementary code

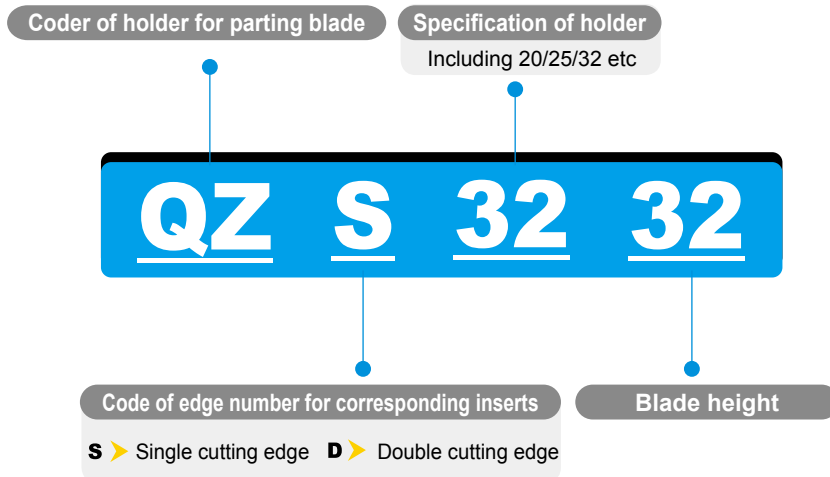
S: Strengthened tool holder for external and surface deep grooving

The minimum diameter of end surface grooving tools for initial machining

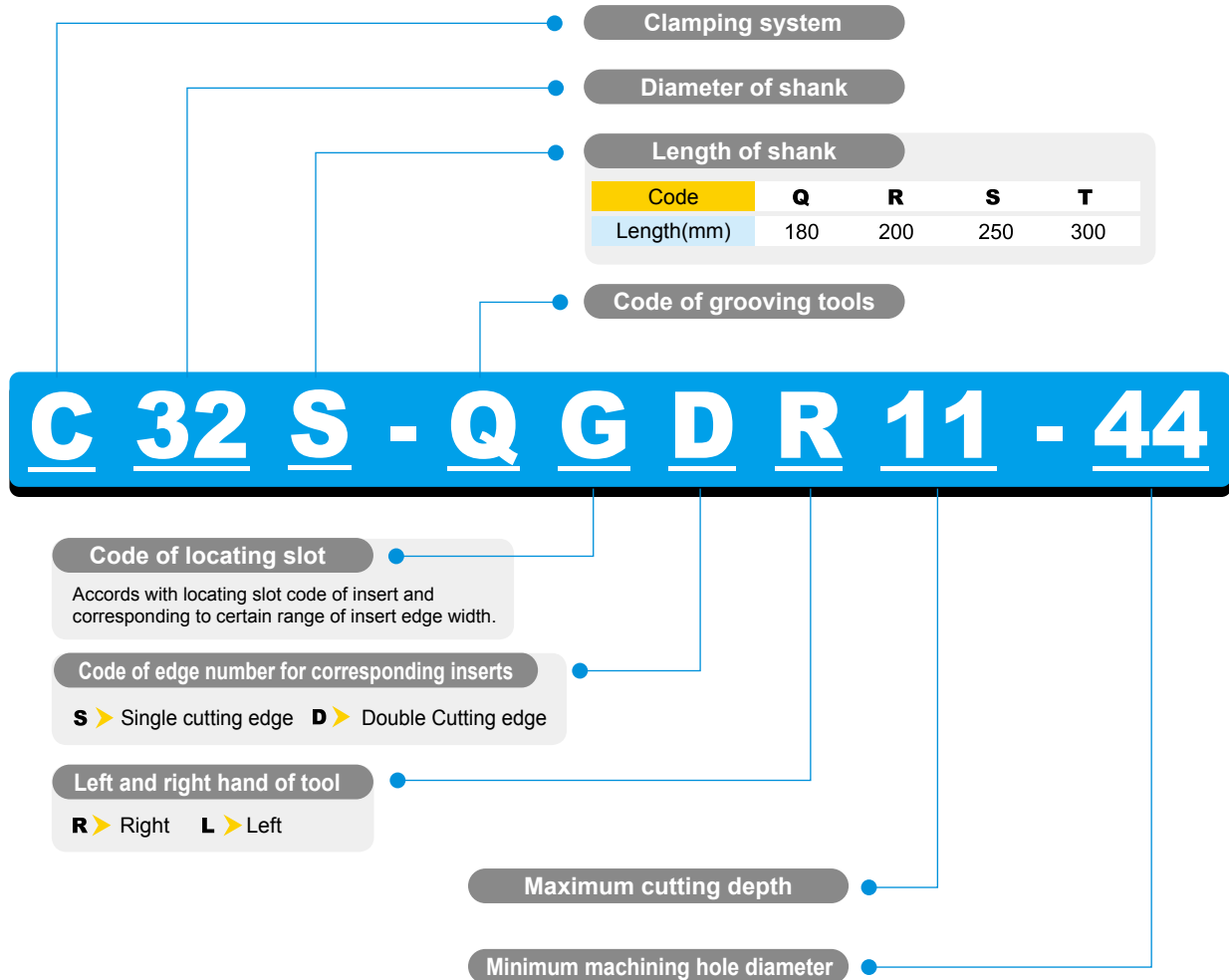
Holder type of end surface grooving tools

H > Straight holder **L** > 90° holder

● Holder for parting blade

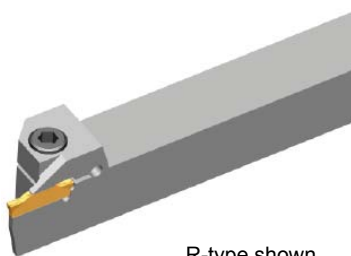


● Internal machining

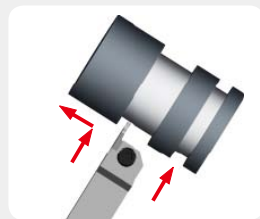
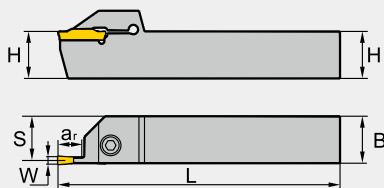




External parting, grooving and turning tools



R-type shown

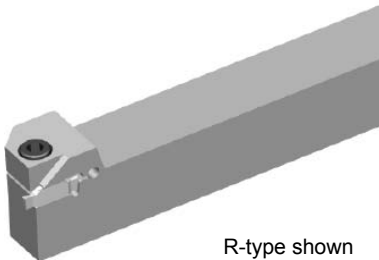


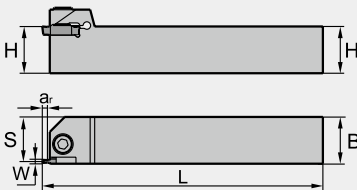
Type		Stock		Basic dimensions(mm)					Applicable inserts	Screw	Wrench
		R	L	H×B	L	S	W	ar _{max}			
QEED	1616R/L10	▲	▲	16×16	125	15	2.5	10	Z□ED025□□	GB70-85-M5×20	WH40L
	1616R/L17	▲	▲	16×16	125	15	2.5	17	Z□ED025□□		
	2020R/L10	▲	▲	20×20	125	19	2.5	10	Z□ED025□□	GB70-85-M6×20	WH50L
	2020R/L17	▲	▲	20×20	125	19	2.5	17	Z□ED025□□		
	2525R/L10	▲	▲	25×25	150	24	2.5	10	Z□ED025□□		
	2525R/L17	▲	▲	25×25	150	24	2.5	17	Z□ED025□□		
QEFD	1616R/L10	▲	▲	16×16	125	14.8	3	10	Z□FD03□□	GB70-85-M5×20	WH40L
	1616R/L17	▲	▲	16×16	125	14.8	3	17	Z□FD03□□		
	2020R/L10	▲	▲	20×20	125	18.8	3	10	Z□FD03□□	GB70-85-M6×20	WH50L
	2020R/L17	▲	▲	20×20	125	18.8	3	17	Z□FD03□□		
	2525R/L10	▲	▲	25×25	150	23.8	3	10	Z□FD03□□		
	2525R/L17	▲	▲	25×25	150	23.8	3	17	Z□FD03□□		
QEGD	2020R/L13	▲	▲	20×20	140	18.5	4	13	Z□GD04□□	GB70-85-M6×20	WH50L
	2020R/L22	▲	▲	20×20	140	18.5	4	22	Z□GD04□□		
	2525R/L13	▲	▲	25×25	150	23.5	4	13	Z□GD04□□		
	2525R/L22	▲	▲	25×25	150	23.5	4	22	Z□GD04□□		
	3232R/L13	▲	▲	32×32	170	30.5	4	13	Z□GD04□□		
	3232R/L22	▲	▲	32×32	170	30.5	4	22	Z□GD04□□		
QEHD	2525R/L13	▲	▲	25×25	150	23	5	13	Z□HD05□□	GB70-85-M6×20	WH50L
	2525R/L22	▲	▲	25×25	150	23	5	22	Z□HD05□□		
QEHS	2525N30	▲	▲	25×25	150	12.5	5	30	Z□HS05□□		
QEHD	3232R/L13	▲	▲	32×32	170	30	5	13	Z□HD05□□		
	3232R/L22	▲	▲	32×32	170	30	5	22	Z□HD05□□		
QEHS	3232N30	▲	▲	32×32	170	16	5	30	Z□HS05□□		
QEKD	2525R/L13	▲	▲	25×25	150	22.6	6	13	Z□KD06□□	GB70-85-M6×20	WH50L
	2525R/L22	▲	▲	25×25	150	22.6	6	22	Z□KD06□□		
QEKS	2525N30	▲	▲	25×25	150	12.5	6	30	Z□KS06□□		
QEKD	3232R/L13	▲	▲	32×32	170	29.6	6	13	Z□KD06□□		
	3232R/L22	▲	▲	32×32	170	29.6	6	22	Z□KD06□□		
QEKS	3232N30	▲	▲	32×32	170	16	6	30	Z□KS06□□		
QELD	2525R/L16	▲	▲	25×25	150	22	8	16	ZTLD0808-MM	GB70-85-M6×20	WH50L
	2525R/L25	▲	▲	25×25	150	22	8	25	ZTLD0808-MM	GB70-85-M6×20	WH50L
	3232R/L28	▲	▲	32×32	170	29	8	28	ZTLD0808-MM	GB70-85-M8×30	WH60L

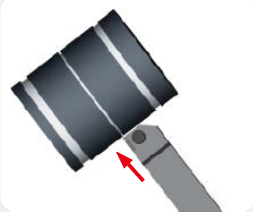
▲Stock available

△Make-to-order

Precision grooving and turning tools







R-type shown

Type		Stock		Basic dimensions(mm)					Applicable inserts	Screw	Wrench
		R	L	H×B	L	S	W	a _r max			
QECD	1616R/L025	△	△	16×16	125	14.75		2.5	ZTCD□□□□-EG	GB70-85-M5×20	WH40L
	2020R/L025	▲	△	20×20	125	18.75				GB70-85-M6×20	WH50L
	2525R/L025	▲	△	25×25	150	23.75					

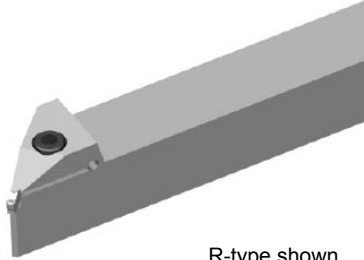
▲Stock available △Make-to-order

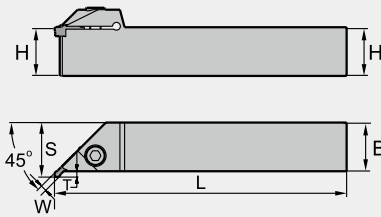
General turning

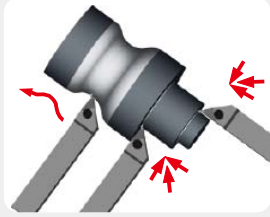
Parting and grooving

Little squirrel series parting and grooving tools

External recess and profiling turning tools







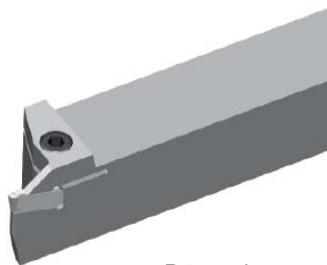
R-type shown

Type		Stock		Basic dimensions(mm)					Applicable inserts	Screw	Wrench						
		R	L	H×B	L	S	W	a _r max									
QXFD	2020R/L03-45	△	△	20×20	125	23	3.0	3.0	ZR(T)FD03-EG ZR(T)FD03-MG	GB70-85-M6×20	WH50L						
	2525R/L03-45	△	△	25×25	150	28											
	3232R/L03-45	△	△	32×32	170	35											
QXGD	2020R/L03-45	△	△	20×20	125	23	4.0	3.0	ZR(T)GD04-EG ZR(T)GD04-MG			GB70-85-M6×20	WH50L				
	2525R/L03-45	△	△	25×25	150	28											
	3232R/L03-45	△	△	32×32	170	35											
QXHD	2020R/L04-45	△	△	20×20	125	24	5.0	4.0	ZR(T)HD05-EG ZR(T)HD05-MG					GB70-85-M6×20	WH50L		
	2525R/L04-45	△	△	25×25	150	29											
	3232R/L04-45	△	△	32×32	170	36											
QXKD	2020R/L04-45	△	△	20×20	125	24	6.0	4.0	ZR(T)KD06-EG ZR(T)KD06-MG							GB70-85-M6×20	WH50L
	2525R/L04-45	△	△	25×25	150	29											
	3232R/L04-45	△	△	32×32	170	36											

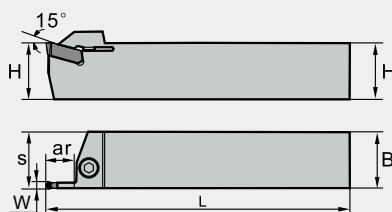
▲Stock available △Make-to-order



External grooving tools for materials hard to be machined

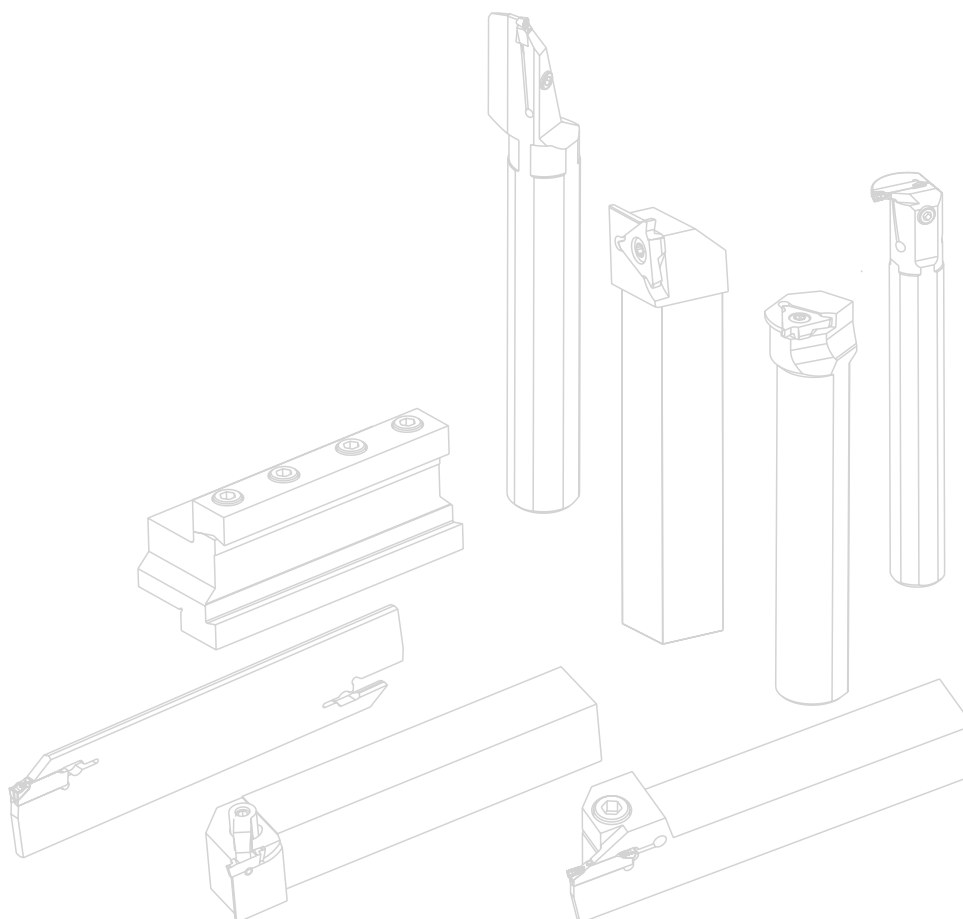


R-type shown

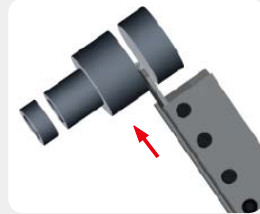
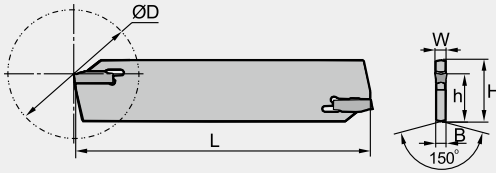
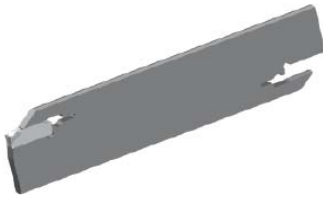


Type		Stock		Basic dimensions(mm)					Applicable inserts	Screw	Wrench
		R	L	H×B	L	S	W	a _r max			
QEFS	2525R/L12-3N	△	△	25×25	150	25.3	3	12	ZIGQ3N-NM ZIMF304N-NM	GB70-85-M6×20	WH50L
	3232R/L22-3N	△	△	32×32	170	32.3	3	22			
QEGS	2525R/L12-4N	△	△	25×25	150	25.3	4	12	ZIGQ4N-NM ZIMF406N-NM		
	3232R/L22-4N	△	△	32×32	170	32.3	4	22			
QEHS	2525R/L12-5N	△	△	25×25	150	25.4	5	12	ZIGQ5N-NM ZIMF506N-NM		
	3232R/L22-5N	△	△	32×32	170	32.4	5	22			
QEKS	2525R/L12-6N	△	△	25×25	150	25.4	6	12	ZIGQ6N-NM ZIMF608N-NM		
	3232R/L22-6N	△	△	32×32	170	32.4	6	22			

▲Stock available △Make-to-order



Blade for external parting

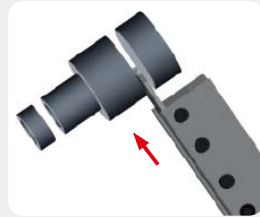
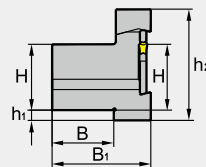


Type	Stock	Basic dimensions(mm)						Applicable inserts	Wrench
		L	H	h	B	W	ØDmax (Maximum parting diameter)		
QES26N	▲	110	26	19	2	2.5	60	ZPES02502-MG	W50RL
QEF26N	▲	110	26	19	2.4	3	60	ZPFS0302-MG	
QEG26N	▲	110	26	19	3.2	4	70	ZPGS0402-MG	
QEH26N	▲	110	26	19	4	5	70	ZPHS0503-MG	
QEK26N	▲	110	26	19	5	6	70	ZPKS0604-MG	
QES32N	▲	150	32	24.6	2	2.5	100	ZPES02502-MG	
QEF32N	▲	150	32	24.6	2.4	3	100	ZPFS0302-MG	
QEG32N	▲	150	32	24.6	3.2	4	120	ZPGS0402-MG	
QEH32N	▲	150	32	24.6	4	5	120	ZPHS0503-MG	
QEK32N	▲	150	32	24.6	5	6	120	ZPKS0604-MG	

▲Stock available

△Make-to-order

Holder for blade used for external parting



Type	Stock	Basic dimensions(mm)						Clamp	Screw	Wrench
		L	H	h1	h2	B	B1			
QZS2026	▲	86	20	10	46.6	19	38	QZC26	GB70-85-M6×20	WH50L
QZS2526	▲	86	25	5	46.6	23	42	QZC26		
QZS3226	▲	86	30	3	51.6	30	48	QZC26		
QZS2032	▲	110	20	13	50	19	38	QZC32		
QZS2532	▲	110	25	8	50	23	42	QZC32		
QZS3232	▲	110	32	5	54	30	48	QZC32		

▲Stock available

△Make-to-order

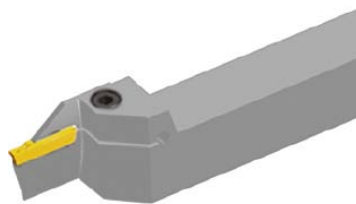
General
turning

Parting and
grooving

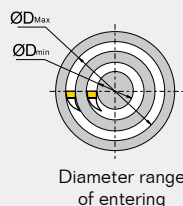
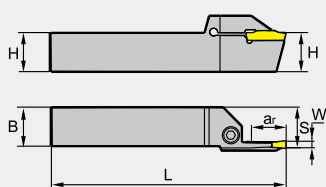
Little squirrel series parting and
grooving tools



End surface grooving and turning tools



L-type shown



Diameter range of entering



General turning

Parting and grooving

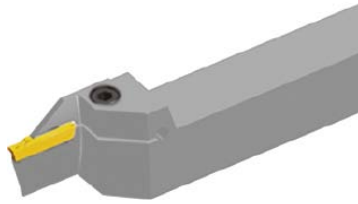
Little squirrel series parting and grooving tools

Type		Stock		Basic dimensions(mm)						Applicable inserts	Screw	Wrench		
		R	L	H×B	L	S	W	a _r max	ØD (min-max)					
QFFD	2020R/L7-48H	▲	▲	20×20	150	21	3	7	48-66	ZTFD0303-□□	GB70-85-M6×20	WH50L		
	2020R/L10-48H	▲	▲	20×20	150	21	3	10	48-66					
	2525R/L10-48H	▲	▲	25×25	150	26	3	10	48-66					
	2525R/L17-48H	▲	▲	25×25	150	26	3	17	48-66					
	2020R/L7-60H	△	△	20×20	150	21	3	7	60-80					
	2020R/L10-60H	△	△	20×20	150	21	3	10	60-80					
	2525R/L10-60H	▲	▲	25×25	150	26	3	10	60-80					
	2525R/L17-60H	▲	▲	25×25	150	26	3	17	60-80					
	2020R/L7-74H	△	△	20×20	150	21	3	7	74-110					
	2020R/L10-74H	△	▲	20×20	150	21	3	10	74-110					
	2525R/L10-74H	▲	▲	25×25	150	26	3	10	74-110					
	2525R/L17-74H	▲	▲	25×25	150	26	3	17	74-110					
	2020R/L7-100H	△	△	20×20	150	21	3	7	100-150					
	2020R/L10-100H	△	△	20×20	150	21	3	10	100-150					
	2525R/L10-100H	▲	▲	25×25	150	26	3	10	100-150					
	2525R/L17-100H	▲	▲	25×25	150	26	3	17	100-150					
QFGD	2020R/L10-52H	△	△	20×20	150	21	4	10	52-72	ZTGD0404-□□				
	2525R/L13-52H	▲	▲	25×25	150	26	4	13	52-72					
	2020R/L15-52H	△	△	20×20	150	21	4	15	52-72					
	2525R/L22-52H	▲	▲	25×25	150	26	4	22	52-72					
	2020R/L10-64H	△	▲	20×20	150	21	4	10	64-100					
	2525R/L13-64H	▲	▲	25×25	150	26	4	13	64-100					
	2020R/L15-64H	△	△	20×20	150	21	4	15	64-100					
	2525R/L22-64H	▲	▲	25×25	150	26	4	22	64-100					
	2020R/L10-90H	△	△	20×20	150	21	4	10	90-140					
	2525R/L13-90H	▲	▲	25×25	150	26	4	13	90-140					
	2020R/L15-90H	△	△	20×20	150	21	4	15	90-140					
	2525R/L22-90H	▲	▲	25×25	150	26	4	22	90-140					
	2020R/L10-130H	△	△	20×20	150	21	4	10	130-230					
	2525R/L13-130H	▲	▲	25×25	150	26	4	13	130-230					
	2020R/L15-130H	△	△	20×20	150	21	4	15	130-230					
	2525R/L22-130H	▲	▲	25×25	150	26	4	22	130-230					

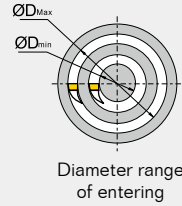
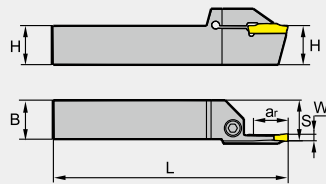
▲Stock available

△Make-to-order

End surface grooving and turning tools



L-type shown



Diameter range of entering



General turning

Parting and grooving

Little squirrel series parting and grooving tools

Type		Stock		Basic dimensions(mm)						Applicable inserts	Screw	Wrench
		R	L	H×B	L	S	W	a _r max	ØD (min-max)			
QFHD	2525R/L13-58H	▲	▲	25×25	150	26	5	13	58-96	ZTHD0504-□□	GB70-85-M6×20	WH50L
	2525R/L22-58H	▲	▲	25×25	150	26	5	22	58-96			
	2525R/L13-86H	△	▲	25×25	150	26	5	13	86-140			
	2525R/L22-86H	▲	▲	25×25	150	26	5	22	86-140			
	2525R/L13-130H	▲	▲	25×25	150	26	5	13	130-200			
	2525R/L22-130H	▲	▲	25×25	150	26	5	22	130-200			
	2525R/L13-185H	▲	▲	25×25	150	26	5	13	185-400			
	2525R/L22-185H	▲	▲	25×25	150	26	5	22	185-400			
QFHS	2525R/L30-185H	△	△	25×25	150	26	5	30	185-400	ZTHS0504-MG		
QFKD	2525R/L13-60H	▲	▲	25×25	150	26	6	13	60-100	ZTKD0608-□□	GB70-85-M6×20	WH50L
	2525R/L22-60H	▲	▲	25×25	150	26	6	22	60-100			
	2525R/L13-88H	△	▲	25×25	150	26	6	13	88-180			
	2525R/L22-88H	▲	▲	25×25	150	26	6	22	88-180			
	2525R/L13-160H	▲	▲	25×25	150	26	6	13	160-400			
	2525R/L22-160H	▲	▲	25×25	150	26	6	22	160-400			
QFKS	2525R/L30-160H	△	△	25×25	150	26	6	30	160-400	ZTKS0608-MG		
QFLD	2525R/L25-75H	▲	▲	25×25	150	27	8	25	75-150	ZTLD0808-MM	GB70-85-M6×20	WH50L
	2525R/L25-140H	▲	▲	25×25	150	27	8	25	140-400	ZTLD0808-MM	GB70-85-M6×20	WH50L
	3232R/L28-140H	▲	▲	32×32	170	30	8	28	140-400	ZTLD0808-MM	GB70-85-M8×30	WH60L

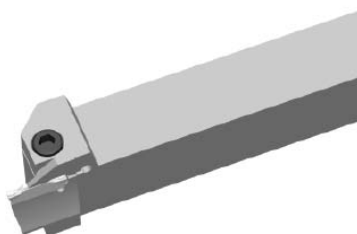
▲Stock available △Make-to-order



TURNING Parting and grooving tools

Little squirrel series parting and grooving tools

End surface grooving and turning tools



RR-type shown



General
turning

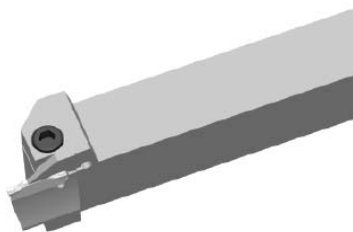
Parting and
grooving

Little squirrel series parting and
grooving tools

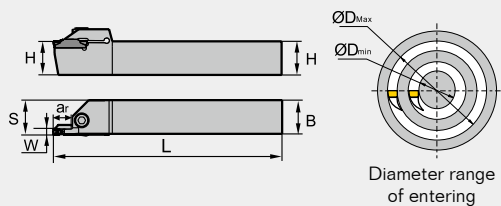
Type		Stock	Basic dimensions(mm)						Applicable inserts	Screw	Wrench		
			H×B	L	S	W	a _r max	ØD (min-max)					
QFFD	2020RR7-48H	△	20×20	150	21	3	7	48-66	ZTFD0303-□□	GB70-85-M6×20	WH50L		
	2020RR10-48H	△	20×20	150	21	3	10	48-66					
	2525RR10-48H	△	25×25	150	26	3	10	48-66					
	2525RR17-48H	△	25×25	150	26	3	17	48-66					
	2020RR7-60H	△	20×20	150	21	3	7	60-80					
	2020RR10-60H	△	20×20	150	21	3	10	60-80					
	2525RR10-60H	△	25×25	150	26	3	10	60-80					
	2525RR17-60H	△	25×25	150	26	3	17	60-80					
	2020RR7-74H	△	20×20	150	21	3	7	74-110					
	2020RR10-74H	△	20×20	150	21	3	10	74-110					
	2525RR10-74H	△	25×25	150	26	3	10	74-110					
	2525RR17-74H	△	25×25	150	26	3	17	74-110					
	2020RR7-100H	△	20×20	150	21	3	7	100-150					
	2020RR10-100H	△	20×20	150	21	3	10	100-150					
	2525RR10-100H	△	25×25	150	26	3	10	100-150					
	2525RR17-100H	△	25×25	150	26	3	17	100-150					
QFGD	2020RR10-52H	△	20×20	150	21	4	10	52-72	ZTGD0404-□□			GB70-85-M6×20	WH50L
	2020RR15-52H	△	20×20	150	26	4	15	52-72					
	2525RR13-52H	△	25×25	150	21	4	13	52-72					
	2525RR22-52H	△	25×25	150	26	4	22	52-72					
	2020RR10-64H	△	20×20	150	21	4	10	64-100					
	2020RR15-64H	△	20×20	150	26	4	15	64-100					
	2525RR13-64H	△	25×25	150	21	4	13	64-100					
	2525RR22-64H	△	25×25	150	26	4	22	64-100					
	2020RR10-90H	△	20×20	150	21	4	10	90-140					
	2020RR15-90H	△	20×20	150	26	4	15	90-140					
	2525RR13-90H	△	25×25	150	21	4	13	90-140					
	2525RR22-90H	△	25×25	150	26	4	22	90-140					
	2020RR10-130H	△	20×20	150	21	4	10	130-230					
	2020RR15-130H	△	20×20	150	26	4	15	130-230					
	2525RR13-130H	△	25×25	150	21	4	13	130-230					
	2525RR22-130H	△	25×25	150	26	4	22	130-230					

▲Stock available △Make-to-order

End surface grooving and turning tools



RR-type shown



Type	Stock	Basic dimensions(mm)							Applicable inserts	Screw	Wrench
		H×B	L	S	W	ar max	ØD (min-max)				
QFHD	2525RR13-58H	△	25×25	150	26	5	13	58-96	ZTHD0504-□□	GB70-85-M6×20	WH50L
	2525RR22-58H	△	25×25	150	26	5	22	58-96			
	2525RR13-86H	△	25×25	150	26	5	13	86-140			
	2525RR22-86H	△	25×25	150	26	5	22	86-140			
	2525RR13-130H	△	25×25	150	26	5	13	130-200			
	2525RR22-130H	△	25×25	150	26	5	22	130-200			
	2525RR13-185H	△	25×25	150	26	5	13	185-400			
	2525RR22-185H	△	25×25	150	26	5	22	185-400			
QFHS	2525RR30-185H	△	25×25	150	26	5	30	185-400	ZTHS0504-MG		
QFKD	2525RR13-60H	△	25×25	150	26	6	13	60-100	ZTKD0608-□□	GB70-85-M6×20	WH50L
	2525RR22-60H	△	25×25	150	26	6	22	60-100			
	2525RR13-88H	△	25×25	150	26	6	13	88-180			
	2525RR22-88H	△	25×25	150	26	6	22	88-180			
	2525RR13-160H	△	25×25	150	26	6	13	160-400			
	2525RR22-160H	△	25×25	150	26	6	22	160-400			
QFKS	2525RR30-160H	△	25×25	150	26	6	30	160-400	ZTKS0608-MG		

▲Stock available

△Make-to-order

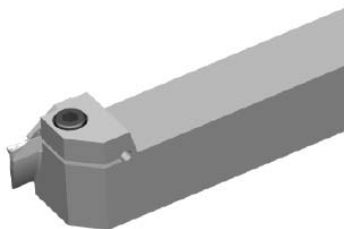
General turning

Parting and grooving

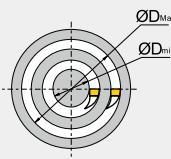
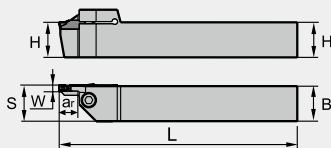
Little squirrel series parting and grooving tools



End surface grooving and turning tools



LL-type shown



Diameter range of entering

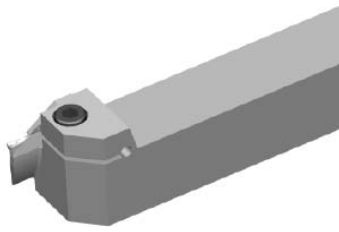


Type		Stock	Basic dimensions(mm)						Applicable inserts	Screw	Wrench		
			H×B	L	S	W	a _r max	ØD (min-max)					
QFFD	2020LL7-48H	△	20×20	150	21	3	7	48-66	ZTFD0303-□□	GB70-85-M6×20	WH50L		
	2020LL10-48H	△	20×20	150	21	3	10	48-66					
	2525LL10-48H	△	25×25	150	26	3	10	48-66					
	2525LL17-48H	△	25×25	150	26	3	17	48-66					
	2020LL7-60H	△	20×20	150	21	3	7	60-80					
	2020LL10-60H	△	20×20	150	21	3	10	60-80					
	2525LL10-60H	△	25×25	150	26	3	10	60-80					
	2525LL17-60H	△	25×25	150	26	3	17	60-80					
	2020LL7-74H	△	20×20	150	21	3	7	74-110					
	2020LL10-74H	△	20×20	150	21	3	10	74-110					
	2525LL10-74H	△	25×25	150	26	3	10	74-110					
	2525LL17-74H	△	25×25	150	26	3	17	74-110					
	2020LL7-100H	△	20×20	150	21	3	7	100-150					
	2020LL10-100H	△	20×20	150	21	3	10	100-150					
	2525LL10-100H	△	25×25	150	26	3	10	100-150					
	2525LL17-100H	△	25×25	150	26	3	17	100-150					
QFGD	2020LL10-52H	△	20×20	150	21	4	10	52-72	ZTGD0404-□□				
	2020LL15-52H	△	20×20	150	26	4	15	52-72					
	2525LL13-52H	△	25×25	150	21	4	13	52-72					
	2525LL22-52H	△	25×25	150	26	4	22	52-72					
	2020LL10-64H	△	20×20	150	21	4	10	64-100					
	2020LL15-64H	△	20×20	150	26	4	15	64-100					
	2525LL13-64H	△	25×25	150	21	4	13	64-100					
	2525LL22-64H	△	25×25	150	26	4	22	64-100					
	2020LL10-90H	△	20×20	150	21	4	10	90-140					
	2020LL15-90H	△	20×20	150	26	4	15	90-140					
	2525LL13-90H	△	25×25	150	21	4	13	90-140					
	2525LL22-90H	△	25×25	150	26	4	22	90-140					
	2020LL10-130H	△	20×20	150	21	4	10	130-230					
	2020LL15-130H	△	20×20	150	26	4	15	130-230					
	2525LL13-130H	△	25×25	150	21	4	13	130-230					
	2525LL22-130H	△	25×25	150	26	4	22	130-230					

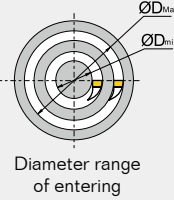
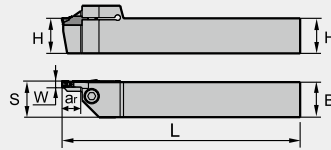
▲Stock available

△Make-to-order

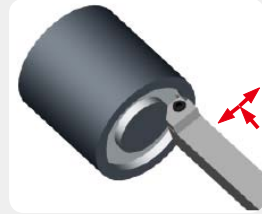
End surface grooving and turning tools



LL-type shown



Diameter range of entering



General turning

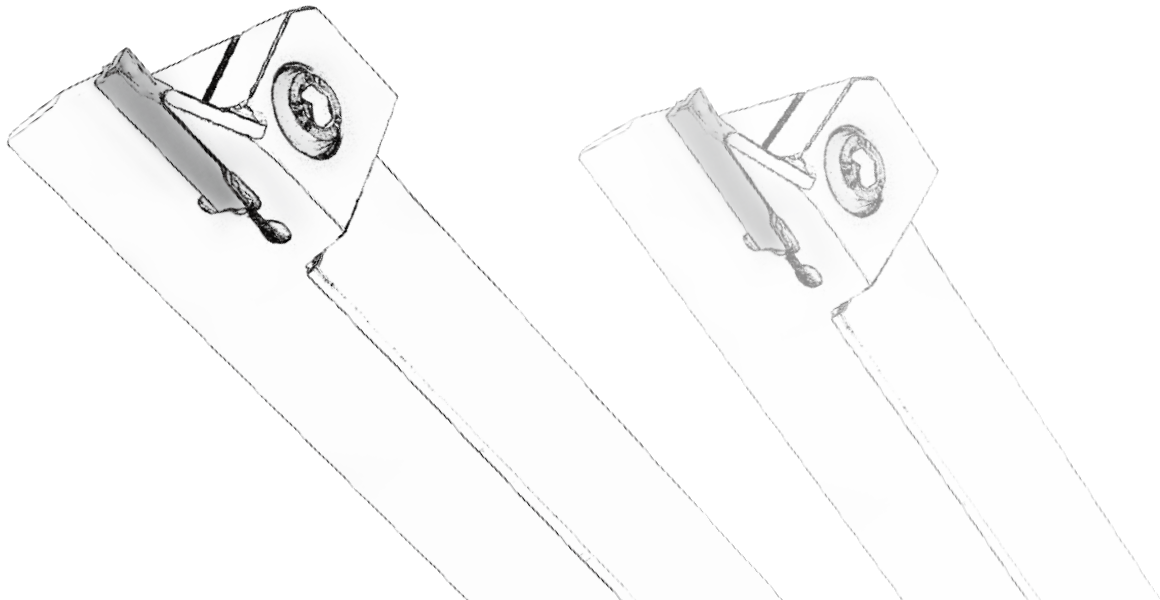
Parting and grooving

Little squirrel series parting and grooving tools

Type		Stock	Basic dimensions(mm)						Applicable inserts	Screw	Wrench
			H×B	L	S	W	ar max	ØD (min-max)			
QFHD	2525LL13-58H	△	25×25	150	26	5	13	58-96	ZTHD0504-□□	GB70-85-M6×20	WH50L
	2525LL22-58H	△	25×25	150	26	5	22	58-96			
	2525LL13-86H	△	25×25	150	26	5	13	86-140			
	2525LL22-86H	△	25×25	150	26	5	22	86-140			
	2525LL13-130H	△	25×25	150	26	5	13	130-200			
	2525LL22-130H	△	25×25	150	26	5	22	130-200			
	2525LL13-185H	△	25×25	150	26	5	13	185-400			
	2525LL22-185H	△	25×25	150	26	5	22	185-400			
QFHS	2525LL30-185H	△	25×25	150	26	5	30	185-400	ZTHS0504-MG		
QFKD	2525LL13-60H	△	25×25	150	26	6	13	60-100	ZTKD0608-□□	GB70-85-M6×20	WH50L
	2525LL22-60H	△	25×25	150	26	6	22	60-100			
	2525LL13-88H	△	25×25	150	26	6	13	88-180			
	2525LL22-88H	△	25×25	150	26	6	22	88-180			
	2525LL13-160H	△	25×25	150	26	6	13	160-400			
	2525LL22-160H	△	25×25	150	26	6	22	160-400			
QFKS	2525LL30-160H	△	25×25	150	26	6	30	160-400	ZTKS0608-MG		

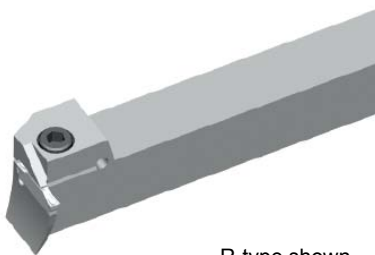
▲Stock available

△Make-to-order

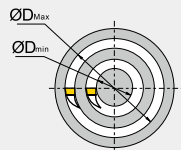
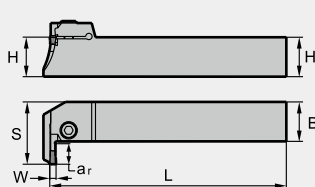




L type tools for surface grooving and turning



R-type shown



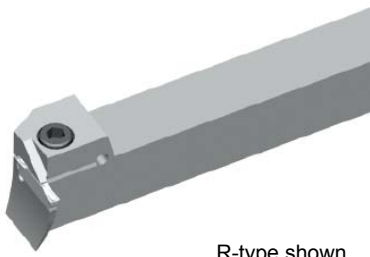
Diameter range of entering



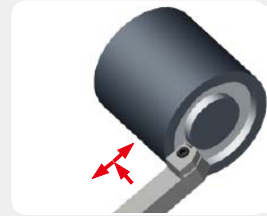
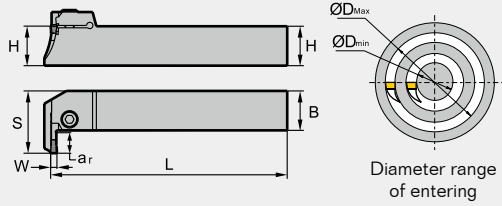
Type		Stock		Basic dimensions(mm)						Applicable inserts	Screw	Wrench		
		R	L	H×B	L	S	W	a _r max	ØD (min-max)					
QFFD	2020R/L7-48L	△	△	20×20	150	28.5	3	7	48-66	ZTFD0303-□□	GB70-85-M6×20	WH50L		
	2020R/L10-48L	△	△	20×20	150	31.5	3	10	48-66					
	2525R/L10-48L	▲	▲	25×25	150	36.5	3	10	48-66					
	2525R/L17-48L	△	△	25×25	150	43.5	3	17	48-66					
	2020R/L7-60L	△	△	20×20	150	28.5	3	7	60-80					
	2020R/L10-60L	△	△	20×20	150	31.5	3	10	60-80					
	2525R/L10-60L	▲	▲	25×25	150	36.5	3	10	60-80					
	2525R/L17-60L	△	△	25×25	150	43.5	3	17	60-80					
	2020R/L7-74L	△	△	20×20	150	28.5	3	7	74-110					
	2020R/L10-74L	△	△	20×20	150	31.5	3	10	74-110					
	2525R/L10-74L	▲	▲	25×25	150	36.5	3	10	74-110					
	2525R/L17-74L	△	△	25×25	150	43.5	3	17	74-110					
	2020R/L7-100L	△	△	20×20	150	28.5	3	7	100-150					
	2020R/L10-100L	△	△	20×20	150	31.5	3	10	100-150					
	2525R/L10-100L	▲	▲	25×25	150	36.5	3	10	100-150					
	2525R/L17-100L	△	△	25×25	150	43.5	3	17	100-150					
QFGD	2020R/L10-52L	△	△	20×20	150	31.5	4	10	52-72	ZTGD0404-□□			GB70-85-M6×20	WH50L
	2525R/L13-52L	▲	△	25×25	150	39.5	4	13	52-72					
	2020R/L15-52L	△	△	20×20	150	36.5	4	15	52-72					
	2525R/L22-52L	△	△	25×25	150	48.5	4	22	52-72					
	2020R/L10-64L	△	△	20×20	150	31.5	4	10	64-100					
	2525R/L13-64L	△	△	25×25	150	39.5	4	13	64-100					
	2020R/L15-64L	△	△	20×20	150	36.5	4	15	64-100					
	2525R/L22-64L	△	△	25×25	150	48.5	4	22	64-100					
	2020R/L10-90L	△	△	20×20	150	31.5	4	10	90-140					
	2525R/L13-90L	△	△	25×25	150	39.5	4	13	90-140					
	2020R/L15-90L	△	△	20×20	150	36.5	4	15	90-140					
	2525R/L22-90L	▲	△	25×25	150	48.5	4	22	90-140					
	2020R/L10-130L	△	△	20×20	150	31.5	4	10	130-230					
	2525R/L13-130L	△	△	25×25	150	39.5	4	13	130-230					
	2020R/L15-130L	△	△	20×20	150	36.5	4	15	130-230					
	2525R/L22-130L	▲	▲	25×25	150	48.5	4	22	130-230					

▲Stock available △Make-to-order

L type tools for surface grooving and turning



R-type shown



General
turning

Parting and
grooving

Little squirrel series parting and
grooving tools

Type		Stock		Basic dimensions(mm)						Applicable inserts	Screw	Wrench
		R	L	H×B	L	S	W	a _r max	ØD (min-max)			
QFHD	2525R/L13-58L	△	△	25×25	150	39.5	5	13	58-96	ZTHD0504-□□	GB70-85-M6×20	WH50L
	2525R/L22-58L	△	△	25×25	150	48.5	5	22	58-96			
	2525R/L13-86L	△	△	25×25	150	39.5	5	13	86-140			
	2525R/L22-86L	△	△	25×25	150	48.5	5	22	86-140			
	2525R/L13-130L	△	△	25×25	150	39.5	5	13	130-200			
	2525R/L22-130L	△	△	25×25	150	48.5	5	22	130-200			
	2525R/L13-185L	△	△	25×25	150	39.5	5	13	185-400			
	2525R/L22-185L	▲	△	25×25	150	48.5	5	22	185-400			
QFHS	2525R/L30-185L	△	△	25×25	150	56.5	5	30	185-400	ZTHS0504-MG		
QFKD	2525R/L13-60L	▲	▲	25×25	150	39.5	6	13	60-100	ZTKD0608-□□	GB70-85-M6×20	WH50L
	2525R/L22-60L	▲	▲	25×25	150	48.5	6	22	60-100			
	2525R/L13-88L	△	▲	25×25	150	39.5	6	13	88-180			
	2525R/L22-88L	▲	▲	25×25	150	48.5	6	22	88-180			

▲Stock available △Make-to-order



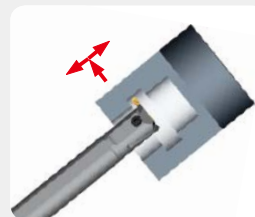
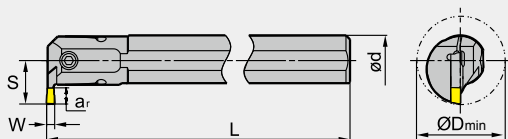
TURNING Parting and grooving tools

Little squirrel series parting and grooving tools

Internal grooving and turning tools



R-type shown

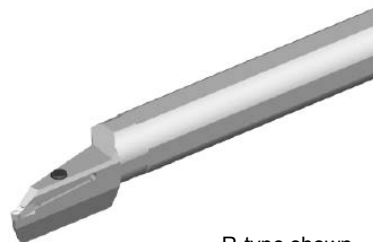


Type	Stock		Basic dimensions(mm)						Applicable inserts	Screw	Wrench
	R	L	ød	L	S	W	ar _{max}	ØD _{min}			
C20Q-QEDR/L05-27	▲	▲	20	180	15.2	2.5	5	27	ZTED025□□ ZRED025□□	GB70-85-M4×12	WH30L
C25R-QEDR/L07-33	▲	▲	25	200	20.3	2.5	7	33		GB70-85-M5×16	WH40L
C32S-QEDR/L09-42	▲	▲	32	250	25.3	2.5	9	42		GB70-85-M5×20	WH40L
C20Q-QFDR/L05-27	▲	▲	20	180	15.2	3	5	27	ZTFD03□□ ZRFD03□□	GB70-85-M4×12	WH30L
C25R-QFDR/L07-33	▲	▲	25	200	20.3	3	7	33		GB70-85-M5×16	WH40L
C32S-QFDR/L09-42	▲	▲	32	250	25.3	3	9	42		GB70-85-M5×20	WH40L
C25R-QGDR/L08-35	▲	▲	25	200	21.5	4	8	35	ZTGD04□□ ZRGD04□□	GB70-85-M5×16	WH40L
C32S-QGDR/L11-44	▲	▲	32	250	27.5	4	11	44		GB70-85-M6×20	WH50L
C40T-QGDR/L13-54	▲	▲	40	300	33.5	4	13	54		GB70-85-M6×20	WH50L
C25R-QHDR/L08-35	▲	▲	25	200	21.5	5	8	35	ZTHD05□□ ZRHD05□□	GB70-85-M5×16	WH40L
C32S-QHDR/L11-44	▲	▲	32	250	27.5	5	11	44		GB70-85-M6×20	WH50L
C40T-QHDR/L13-54	▲	▲	40	300	33.5	5	13	54		GB70-85-M6×20	WH50L
C25R-QKDR/L08-35	▲	▲	25	200	21.5	6	8	35	ZTKD06□□ ZRKD06□□	GB70-85-M5×16	WH40L
C32S-QKDR/L11-44	▲	▲	32	250	27.5	6	11	44		GB70-85-M6×20	WH50L
C40T-QKDR/L13-54	▲	▲	40	300	33.5	6	13	54		GB70-85-M6×20	WH50L

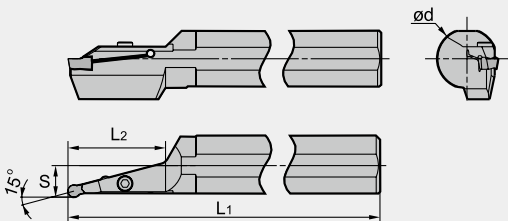
▲Stock available

△Make-to-order

Profile turning tools for Al



R-type shown



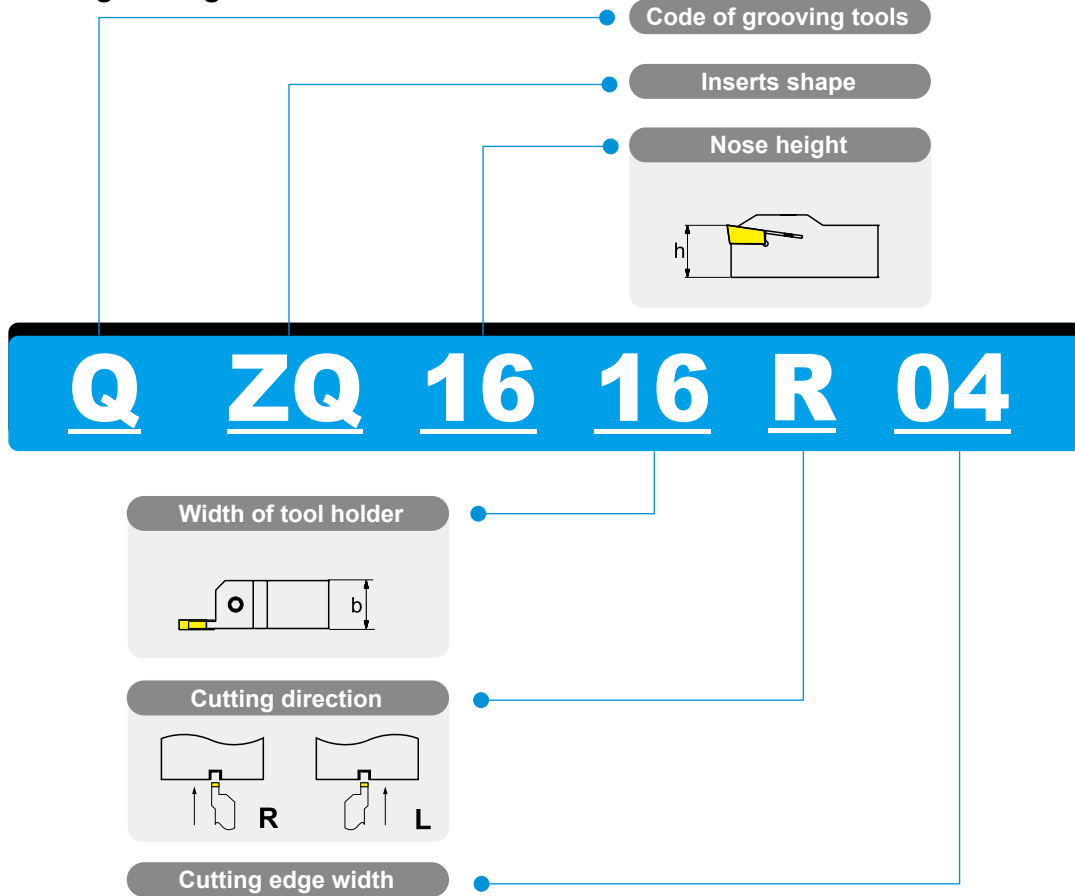
Type	Stock		Basic dimensions(mm)					Applicable inserts	Screw	Wrench
	R	L	ØD (Minimum machining diameter)	ød	S	L ₁	L ₂			
C40X-QLDR/L65-15A	▲	▲	160	40	21	320	65	ZRLD08-LH	GB70-85-M6×20	WH50L
C40X-QLDR/L80-15A	▲	△	160	40	21	320	80	ZRLD08-LH		
C40X-QKDR/L60-15A	△	△	160	40	20	320	60	ZRKD06-LH		
C40X-QKDR/L75-15A	△	△	160	40	20	320	75	ZRKD06-LH		

▲Stock available

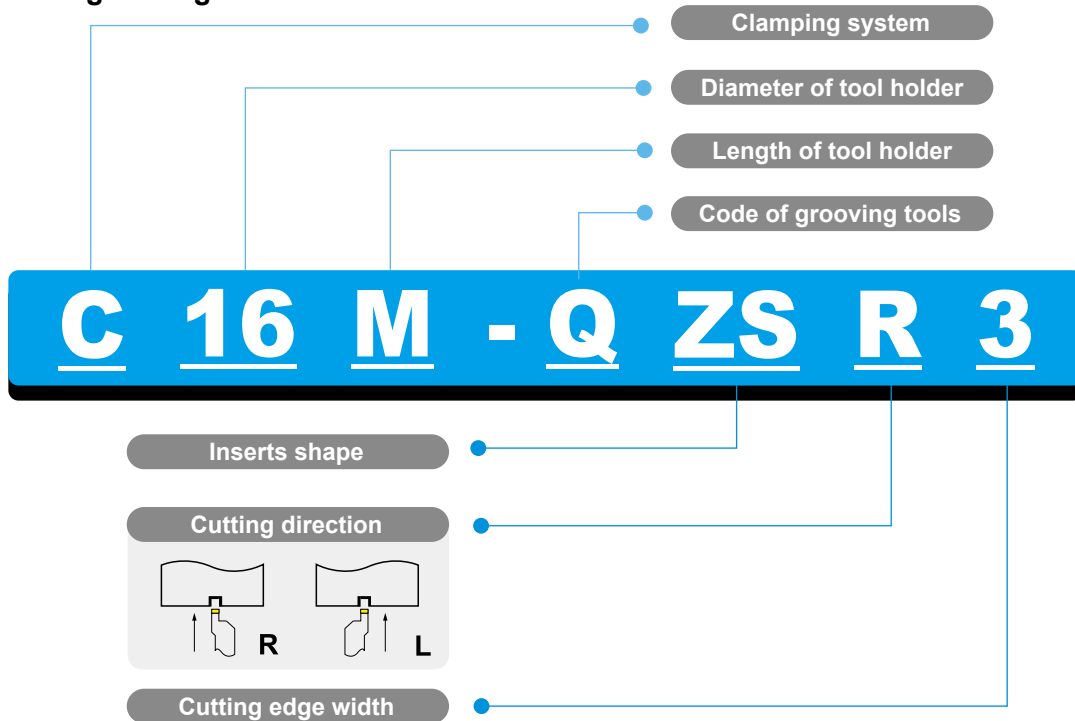
△Make-to-order

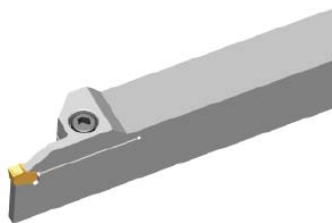
Parting and grooving tools code key

● External grooving

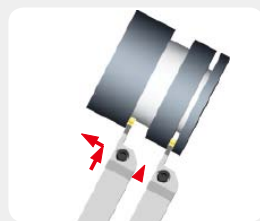
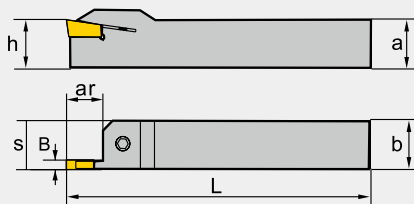


● Internal grooving



External parting and grooving tools: QZQ series

R-type shown



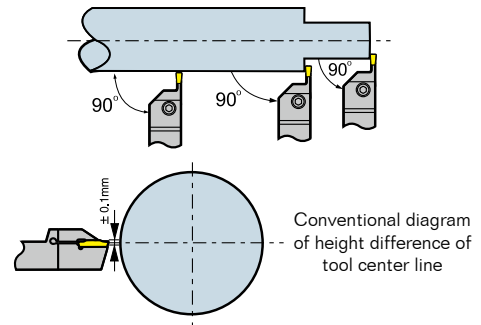
Type		Stock		Basic dimensions(mm)						Applicable inserts	Screw	Wrench
		R	L	a=h	b	L	S	B	ar max			
QZQ	1616R/L03	▲	▲	16	16	100	16.4	3	16	ZQMX3N11-IE	GB70-85-M5×16	WH40L
	1616R/L04	▲	▲	16	16	100	16.4	4	18	ZQMX4N11-IE		
	2020R/L03	▲	▲	20	20	125	20.4	3	20	ZQMX3N11-IE		
	2020R/L04	▲	▲	20	20	125	20.4	4	20	ZQMX4N11-IE		
	2525R/L03	▲	▲	25	25	150	25.4	3	20	ZQMX3N11-IE	GB70-85-M6×20	WH50L
	2525R/L04	▲	▲	25	25	150	25.4	4	20	ZQMX4N11-IE		
	2525R/L05	▲	▲	25	25	150	25.4	5	25	ZQMX5N11-IE		
	2525R/L06	▲	▲	25	25	150	25.7	6	32	ZQMX6N11-IE		
	3225R/L03	▲	▲	32	25	170	25.4	3	25	ZQMX3N11-IE		
	3225R/L04	▲	▲	32	25	170	25.4	4	25	ZQMX4N11-IE		
	3225R/L05	▲	▲	32	25	170	25.4	5	25	ZQMX5N11-IE		
	3225R/L06	▲	▲	32	25	170	25.7	6	35	ZQMX6N11-IE		

▲ Stock available

△ Make-to-order

Center height control of parting and grooving tools

- No matter which parting or grooving tools you select, the ideal surface quality is only achieved by ensuring that insert is vertical from the center line of workpiece, which can also effectively reduce vibration during machining.
- The height tolerance between insert edge bottom and the center height of workpiece should be remained in $\pm 0.1\text{mm}$, especially for lever parting and grooving workpieces with small diameter. This can improve tool life, reduce cutting resistant force, and diminish burrs.

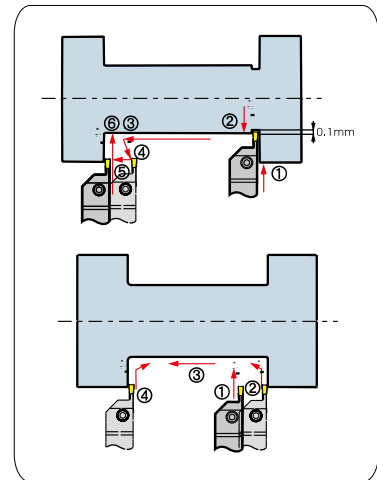


Parting

- When the insert is approaching the center of workpiece, the cutting speed should be reduced by 30%, which is good for improving life and surface quality.
- As long as conditions allow, try to shorten the overhang of tools as much as possible to ensure good stability.

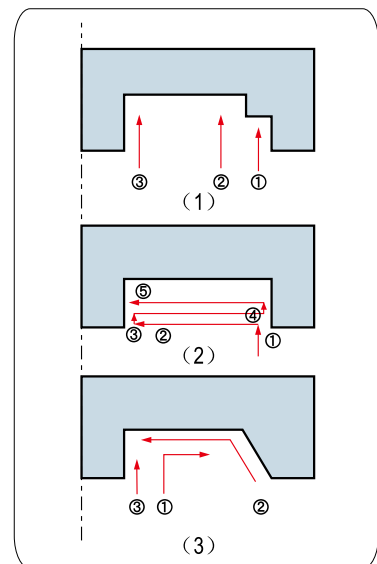
External grooving, turning and profiling

- In-feed sequence: When cutting depth $> 0.5\text{mm}$, radial in-feed (Max. cutting depth can be $0.75 \times \text{insert edge width } S$) $\rightarrow$ radial out-feed about 0.1mm $\rightarrow$ axial in-feed $\rightarrow$ flank out-feed $\rightarrow$ axial in-feed $\rightarrow$ radial machining to required depth.
- When finishing, adopt the sequence shown in the diagram. It can reduce vibration caused by the friction between tools and chips.



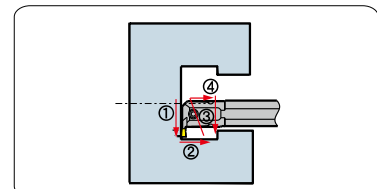
Surface grooving and turning

- Finishing (Multi-slot cutting)
Cut inwards from Max. diameter. Inserts offset to inward flange when retracting, as is shown in diagram (1).
- Recess turning
Axial turning depth should not exceed $0.75 \times S$ (cutting edge width).
If slot width is larger than slot depth, it is recommended to adopt recess turning, as is shown in diagram (2).
If slot depth is larger than slot depth, it is recommended to adopt multi-slot cutting.
- Finish machining
First finish bottom and external diameter fringe, then finish the internal diameter to required size, as is shown in diagram (3).



Internal grooving and turning

- To facilitate chip flow, always feed along the direction of moving from the deepest in the hole to outside.





The cutting parameters recommended are suitable for wet machining.

Insert size	Recommended feed rate(mm/r)					
Insert width(mm)	Parting	Grooving	Grooving(-MM)	Turning	Turning(-MM)	Profiling
2.5	0.05-0.15	0.05-0.15	0.05-0.2	0.05-0.15	0.05-0.2	0.05-0.15
3	0.05-0.15	0.05-0.15	0.05-0.2	0.07-0.15	0.07-0.2	0.1-0.2
4	0.05-0.2	0.05-0.2	0.05-0.25	0.07-0.25	0.07-0.3	0.1-0.2
5	0.07-0.2	0.07-0.22	0.07-0.25	0.1-0.25	0.1-0.3	0.15-0.3
6	0.1-0.3	0.07-0.25	0.07-0.3	0.1-0.3	0.1-0.35	0.15-0.3
8			0.1-0.4		0.15-0.45	

Workpiece material		Hardness	YBG302	YBG202 YBG205	YBC151	YBC251	YD101	YD201	YBG102	YC10	YC40
P	Carbon steel	125≤HB≤170	120-260	150-280	140-280	150-280				130-280	110-260
	Low alloy steel	180≤HB≤275	80-175	110-200	100-240	110-200				90-200	70-175
	High alloy steel	180≤HB≤325	80-160	110-190	100-220	110-190				90-190	70-160
	Cast steel	180≤HB≤250	75-140	100-170	80-160	100-170				80-170	60-140
M	Ferrite, Martensite	200≤HB≤300	70-170	100-200		100-200				80-200	60-170
	Austenite	180≤HB≤300	80-200	110-220		110-220				90-220	70-200
K	Malleable cast iron	130≤HB≤230	100-200	130-220				90-160			
	Grey cast iron	180≤HB≤220	90-170	120-200				80-140			
	Nodular cast iron	160≤HB≤250	80-150	110-180				60-140			
N	Al alloy	--					200-400				
S	High temperature alloy	≤400					20-50		30-60		

The cutting parameters recommended are suitable for wet machining.

Advice: internal machining and end machining, The cutting speed should be reduced by 30%-40%.

General
turning

Parting and
grooving

Application information of
parting and grooving