Little squirrel series

-EG

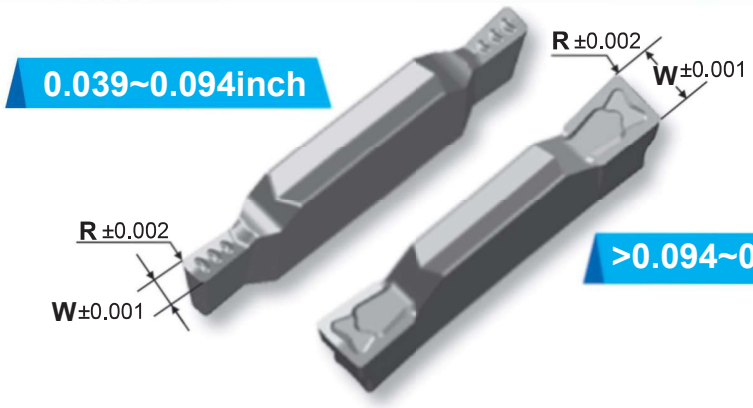
Precise grooving and profile turning inserts

Special chipbreaker design, suitable for precise grooving of low-carbon steel, stainless steel, adhesive materials and non-ferrous metal.

-EG Precise grooving inserts

The edge width can be anything between 0.039-0.256inch according to your requirements.

The tolerance of the edge width S of precise grooving and profiling inserts can reach ±0.001. Inserts can also be mounted on the corresponding specifications of original tool series.



-EG Precise profile turning inserts

The Little Squirrel series precise profiling and turning inserts are mainly used for Precise grooving and profiling.

The width of the Little Squirrel series precise grooving inserts can be anything between 0.039inch to 0.256inch, which means products with any edge width or nose radius can be provided according to customers' requirements. The inserts are mainly used for precise grooving, such as sealing slot and locating slot, etc.

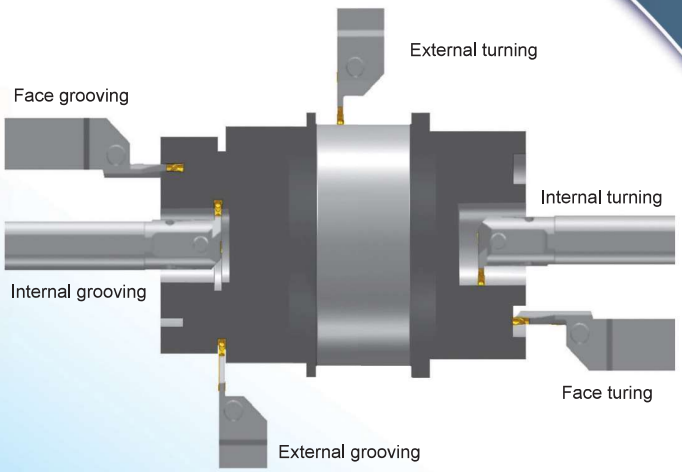
-MG *Little squirrel series*

-MG Series Chipbreaker

Suitable for parting, grooving, profiling, and turning. Good chip control and chip evacuation for good surface finish.

Insert design allows for use in many applications with need for fewer insert grades and configurations.

Inserts with the same cutting edge width can be used with different holders. Standardization with fewer inserts for internal, external, grooving and turning reduces tool inventory and tool management cost.



20% reduction in cutting force and reduced ovality.

Unique disign of parting insert

- Insert uses specially designed flank to reduce cutting resistance by 20% with reduced machined surface ovality.
- A special design of the cutting edge requires less rigidity of machine. Older and lower horsepower machines can be used more productively.

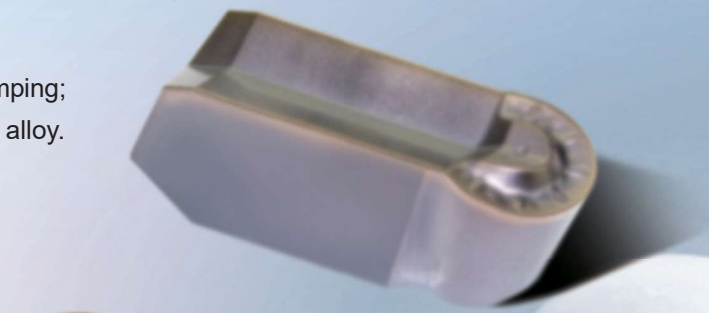
Little-Squirrel Series

Profile turning inserts for parting of aviation titanium alloy and high-temperature alloy

-NF

Single-headed precision profile turning inserts

Sharp edge, small cutting force, good surface quality;
Indexing accuracy reaches ±0.001inch, safe and stable clamping;
Mainly applied in finishing of high-temperature alloy, titanium alloy.



-NM

Precision profile turning inserts

Sharp edge, small cutting force, good surface quality;
Indexing accuracy reaches ±0.001inch;
Highly economical, two edges available;
Compatible with little squirrel tool holder,suitable for small depth profile finishing and semi-finishing of high- temperature alloy and Ti-alloy.

-SM

Single-headed groove turning inserts

Straight edge, excellent surface quality;
Sharp edge, smaller cutting force;
Good chip breaking;
Mainly used for rough machining of high-temperature alloy and titanium alloy.

-MM

Straight edge groove turning inserts

High edge strength, sharp edge;
Highly economical, two edges available, compatible with little squirrel tool holder;
With special grades, suitable for roughing with small cutting depths of high-temperature alloy and titanium alloy.

Case

Insert：YBG105/ZIMF604N-SM
Hardness of workpiece material：GH4169 （HB380）
Cutting data：V=150 SFPM, f=0.008in/r
Coolant: Water

Products of company A

YBG105/ZIMF604N-SM

Conclusion: Under the same conditions, chip breaking performance is better and the time for stopping the removal of long winding chips is reduced.

B

Parting, grooving and profiling inserts code key

Application of inserts

ZP ➤ Parting
ZR ➤ Profile machining
ZT ➤ Grooving and turning

Code of locating slot

Code of locating slot	A	B	E	F	G	H	K
Width of cutting edge	0.059	0.079	0.098	0.118	0.157	0.197	0.236

Number of cutting edge

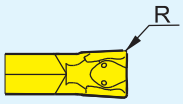
S ➤ Single cutting edge
D ➤ Double cutting edges

ZP G D 04 04 - M G

Width of cutting edge

015=0.059"
025=0.098"
03=0.118"
04=0.157"
02=0.079"
05=0.197"
06=0.236"

Nose radius



02=0.008"
03=0.012"
04=0.016"
06=0.236"

Tolerances

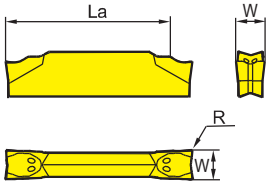
M ➤ M class tolerance
E ➤ E class tolerance

Tolerances

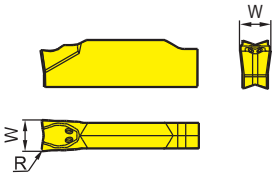
G ➤ General chip-breakers, suitable for all kinds of machined materials
F ➤ Special chip-breakers

Parting inserts

Double cutting edges



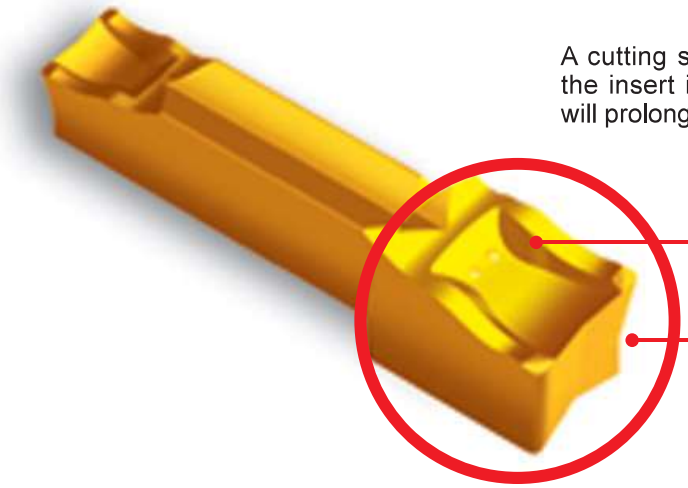
Single cutting edge



Type		Dimension(inch)			Grade							
					P		M			K		
		$W_{0}^{+0.004}$	R±0.002	La_{max}	YBG202	YBG302	YBG202	YBG302	YD201	YBG302	YD201	YBG102
Double cutting edges	ZPAD01502-MG	0.059	0.008	0.472		○		○		○		
	ZPBD0202-MG	0.079	0.008	0.551		○		○		○		
	ZPED02502-MG	0.098	0.008	0.670	○	●	○	●		●		
	ZPFD0302-MG	0.118	0.008	0.670		○		○		○		
	ZPGD0402-MG	0.157	0.008	0.866		○		○		○		
	ZPHD0503-MG	0.197	0.012	0.866		○		○		○		
	ZPKD0604-MG	0.236	0.016	0.866		○		○		○		
Single cutting edge	ZPES02502-MG	0.098	0.008	--	○	●	○	●		●		
	ZPFS0302-MG	0.118	0.008	--		○		○		○		
	ZPGS0402-MG	0.157	0.008	--		○		○		○		
	ZPHS0503-MG	0.197	0.012	--		○		○		○		
	ZPKS0604-MG	0.236	0.016	--		○		○		○		

Insert with single cutting edge only be used to parting blade

● Always stock available ○ Produce according to order

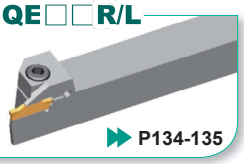


A cutting speed reduction of 30% is preferred when the insert is approaching the workpiece. This action will prolong tool life.

Enhanced chipbreaker design improves chip control.

20% cutting force reduction and reduced vibrations.

QE□□R/L



P134-135

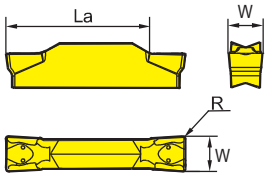
QZ□□+QE□□

P138-139

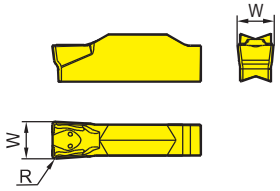
Applicable tool

Grooving, turning inserts

Double cutting edges



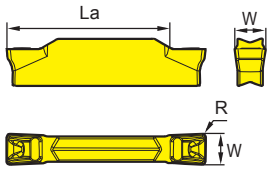
Single cutting edge



Type		Dimension(inch)			Grade							
					P		M			K		
		$W_0^{+0.004}$	R±0.002	La_{max}	YBG202	YBG302	YBG202	YBG302	YD201	YBG302	YD201	YBG102
Double cutting edges	ZTED02503-MG	0.098	0.012	0.670	●	●	●	●		●		
	ZTFD0303-MG	0.118	0.012	0.670	●	●	●	●		●		
	ZTGD0404-MG	0.157	0.016	0.866	●	●	●	●		●		
	ZTHD0504-MG	0.197	0.016	0.866	●	●	●	●		●		
	ZTKD0608-MG	0.236	0.031	0.866	●	●	●	●		●		
Single cutting edge	ZTHS0504-MG	0.197	0.016	--	○	○	○	○		○		
	ZTKS0608-MG	0.236	0.031	--	○	○	○	○		○		

● Always stock available ○ Produce according to order

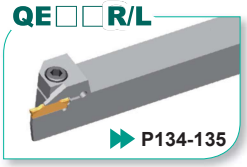
Grooving, turning inserts

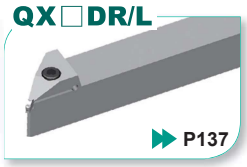


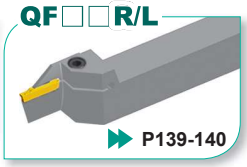
Type		Dimension(inch)			Grade							
					P		M			K		
		$W^{+0.004}_{0}$	R±0.002	La_{max}	YBG202	YBG302	YBG202	YBG302	YD201	YBG302	YD201	YBG102
Double edges	ZTAD01502-MM	0.059±0.001	0.008	0.472	●	○	●	○		○		
	ZTBD02002-MM	0.079±0.001	0.008	0.551	●	○	●	○		○		
	ZTED02503-MM	0.098±0.001	0.012	0.670	●	○	●	○		○		
	ZTFD0303-MM	0.118±0.001	0.012	0.670	●	○	●	○		○		
	ZTGD0404-MM	0.157±0.002	0.016	0.866	●	○	●	○		○		
	ZTHD0504-MM	0.197±0.002	0.016	0.866	●	○	●	○		○		
	ZTKD0608-MM	0.236±0.002	0.031	0.866	●	○	●	○		○		
	ZTLD0808-MM	0.315±0.002	0.031	1.102	●	○	●	○		○		

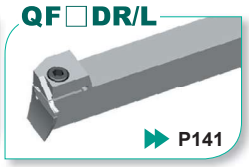
● Always stock available ○ Produce according to order

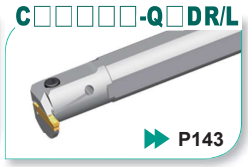
Applicable tool



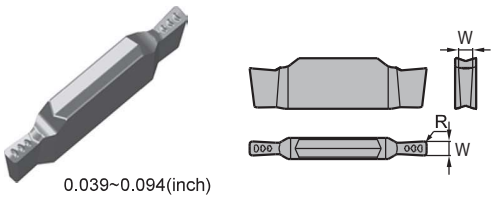




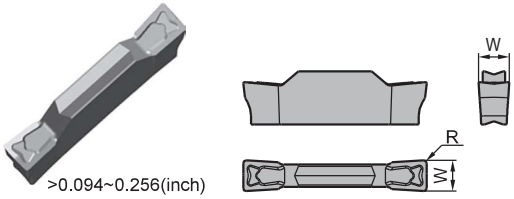




Precision grooving and turning inserts



0.039~0.094(inch)



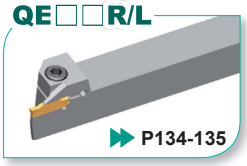
>0.094~0.256(inch)

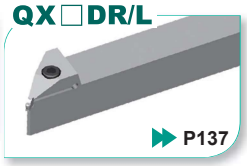
Type		Dimension(inch)			Grade							
					P		M			K		
		$W^{+0.004}_{0}$	R±0.002	La_{max}	YBG202	YBG302	YBG202	YBG302	YD201	YBG302	YD201	YBG102
Double cutting edges	ZTCD□□□□[(1)]–EG	0.039-0.094	Please see annotations (2)	0.670	○	○	○	○	○	○		
	ZTED□□□□–EG	0.094-0.118		0.670	○	○	○	○	○	○		
	ZTFD□□□□–EG	0.118-0.150		0.670	○	○	○	○	○	○		
	ZTGD□□□□–EG	0.150-0.189		0.866	○	○	○	○	○	○		
	ZTHD□□□□–EG	0.189-0.228		0.866	○	○	○	○	○	○		
	ZTKD□□□□–EG	0.228-0.256		0.866	○	○	○	○	○	○		

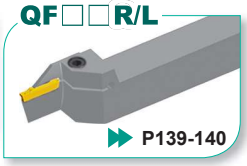
● Always stock available ○ Produce according to order

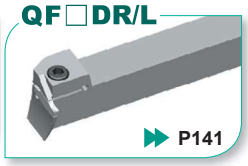
Note: (1)The code indicated with * is to be designated based on the edge width and edge radius. The code will be ZTFD03503-EG if the ordered inserts is with an edge width of 0.138inch and an edge radius of 0.118inch.
(2)Edge radius R is based on customers'requiremen.

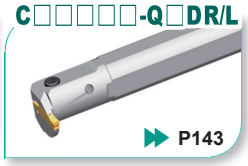
Applicable tool



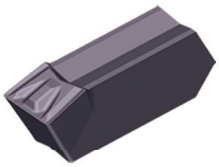


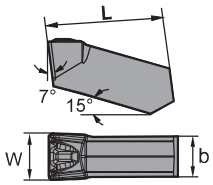






Single-head grooving and turning inserts for semi-finishing to roughing in difficult-to-machine materials

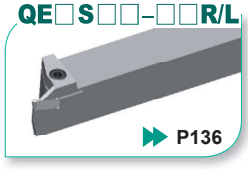




Type	Dimension(inch)				Grade			
					S			
	W±0.002	R±0.004	b	L	YBG105	YBG212	YBS103	YD101
ZIMF304N-SM	0.118	0.016	0.094	0.602	●	●	○	○
ZIMF404N-SM	0.157	0.016	0.126	0.602	●	●	○	○
ZIMF504N-SM	0.197	0.016	0.157	0.602	●	●	○	○
ZIMF604N-SM	0.236	0.016	0.201	0.602	●	●	○	○

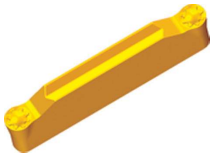
● Always stock available ○ Produce according to order

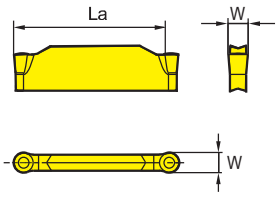
Applicable tool



B

Precision grooving and turning inserts

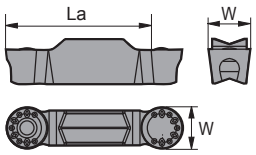




Type		Dimension(inch)			Grade							
					P		M			K		
		$W_0^{+0.004}$	R±0.002	La_{max}	YBG202	YBG302	YBG202	YBG302	YD201	YBG302	YD201	YBG102
Double cutting edges	ZRED025-MG	0.098	0.049	0.787	●	●	●	●		●		
	ZRFD03-MG	0.118	0.059	0.787	●	●	●	●		●		
	ZRGD04-MG	0.157	0.079	0.984	●	●	●	●		●		
	ZRHD05-MG	0.197	0.098	0.984	○	●	○	●		●		
	ZRKD06-MG	0.236	0.118	0.984	●	●	●	●		●		

● Always stock available ○ Produce according to order

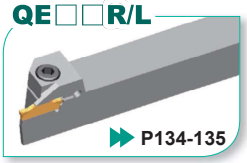
Profile turning inserts for difficult-to-machine materials

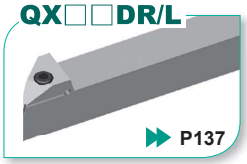


Type		Dimension(inch)		Grade		
				S		
		$W_0^{+0.004}$	La_{max}	YBG105	YBG212	YBS103
Double edge	ZRFD03-NM	0.118	0.669	●	●	○
	ZRGD04-NM	0.157	0.827	●	●	○
	ZRHD05-NM	0.197	0.787	●	●	○
	ZRKD06-NM	0.236	0.748	●	●	○

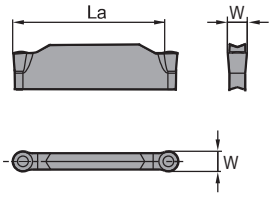
● Always stock available ○ Produce according to order

Applicable tool





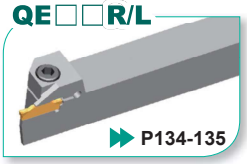
Precision grooving and turning inserts

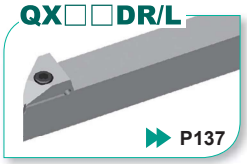


Type		Dimension(inch)			Grade							
					P		M			K		
		W±0.001	R±0.002	La_{max}	YBG202	YBG302	YBG202	YBG302	YD201	YBG302	YD201	YBG102
Double cutting edges	ZRFD03-EG	0.118	0.059	0.787		○		○	○	○		
	ZRGD04-EG	0.157	0.079	0.984		○		○	○	○		
	ZRHD05-EG	0.197	0.098	0.984		○		○	○	○		
	ZRKD06-EG	0.236	0.118	0.984		○		○	○	○		

● Always stock available ○ Produce according to order

Applicable tool

QE□□R/L

P134-135

QX□□DR/L

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C□□□□□-Q□DR/L

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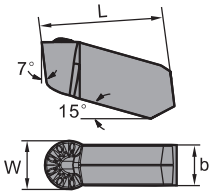
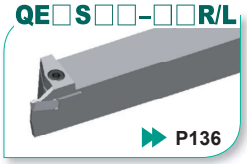
Single-head grooving and turning inserts for precision profiling in difficult-to-machine materials



Type	Dimension(inch)			Grade			
				S			
	W±0.001	b	L	YBG102	YBG202	YBS103	YD101
ZIGQ3N-NM	0.118	0.094	0.602	●	○	●	○
ZIGQ4N-NM	0.157	0.126	0.602	●	○	●	○
ZIGQ5N-NM	0.197	0.157	0.602	●	○	○	○
ZIGQ6N-NM	0.236	0.201	0.602	●	○	○	○

● Always stock available ○ Produce according to order

Applicable tool

QE□S□□-□□R/L

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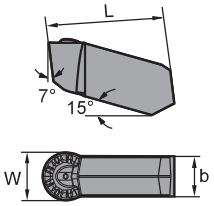
Single-head grooving and turning inserts for precision profiling in difficult-to-machine materials

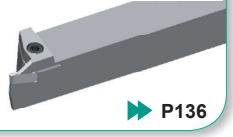


B

Type	Dimension(inch)			Grade		
				S		
	W±0.001	b	L	YBG105	YBG212	YBS103
ZIGQ3N-NF	0.118	0.094	0.602	●	●	○
ZIGQ4N-NF	0.157	0.126	0.602	●	●	○
ZIGQ5N-NF	0.197	0.157	0.602	●	●	○
ZIGQ6N-NF	0.236	0.200	0.602	●	●	○

● Always stock available ○ Produce according to order

QE□S□□-□□R/L



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Applicable tool