

SumiTurn B-Groove



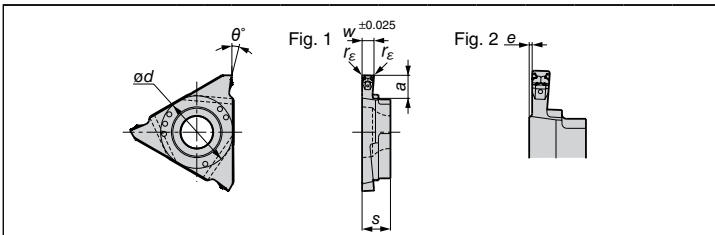
General Features

To solve chip control problems, grooving inserts with **SumiTurn B-Groove (BF Type)** chipbreakers have been added to the TGA Type insert line-up.

Characteristics

- Achieving good chip control in a wide range of grooving processes.
- Good chip control during final wide groove touch-up with traverse tool movement.
- A selection of 14 models for snap ring applications are available in edge widths from 1.4 to 4.5 mm for a total of 60 models.
- The **AC530U** grade with Super ZX Coat for a longer tool life, is now available to cover various work materials from Steel, Stainless Steel to Non-ferrous metals.

Chipbreaker Insert for Square Grooves BF Type



Grade	Cutting Edge	θ°
Coated Carbide	AC530U	Honing
		15°

* For rake angle when fitted on the holder, refer to page F5.

Note 1: Please note that cutting edge dimension e differs, for grooving widths below 1.85mm.

Note 2: Figures show right hand tools.



Cat. No.	Coated Carbide		Grooving Width (mm)	Max. Grooving Depth (mm)		Dimensions (mm)					Fig.	* Group No.
	AC530U			External	Internal	a	r_ϵ	ϕd	s	e		
	R	L	w									
TGA R/L4140BF01	●	●	1.40	2.0	1.7	2.5	0.1	12.70	4.76	0.300	2	②
TGA R/L4165BF01	●	●	1.65	3.5	2.5	3.9	0.1	12.70	4.76	0.175	2	③
TGA R/L4190BF01	●	●	1.90									
TGA R/L4220BF01	●	●	2.20									
TGA R/L4270BF02	●	●	2.70	5.0	2.5	5.4	0.2	12.70	4.76	0	1	④
TGA R/L4320BF02	●	●	3.20									
TGA R/L4420BF02	●	●	4.20									
TGA R/L4150BF	●	●	1.50	3.5	2.5	3.9	0.2	12.70	4.76	0.250	2	③
TGA R/L4165BF	●	●	1.65							0.175		
TGA R/L4175BF	●	●	1.75							0.125		
TGA R/L4185BF	●	●	1.85							0.075		
TGA R/L4200BF	●	●	2.00							0	1	
TGA R/L4220BF	●	●	2.20									
TGA R/L4230BF	●	●	2.30									
TGA R/L4250BF	●	●	2.50									
TGA R/L4265BF	●	●	2.65									
TGA R/L4270BF	●	●	2.70									
TGA R/L4280BF	●	●	2.80	5.0	2.5	5.4	0.3	12.70	4.76	0	1	④
TGA R/L4300BF	●	●	3.00									
TGA R/L4320BF	●	●	3.20									
TGA R/L4330BF	●	●	3.30									
TGA R/L4350BF	●	●	3.50									
TGA R/L4370BF	●	●	3.70									
TGA R/L4390BF	●	●	3.90									
TGA R/L4400BF	●	●	4.00									
TGA R/L4410BF	●	●	4.10									
TGA R/L4420BF	●	●	4.20									
TGA R/L4430BF	●	●	4.30	0.4								
TGA R/L4440BF	●	●	4.40									
TGA R/L4450BF	●	●	4.50									

Recommended Cutting Conditions

Work Material	Process	Cutting Conditions	Grooving Widths w (mm)			
			1.4 to 2.3	2.5 to 3.3	3.5 to 4.5	
P General Steel	Cutting	Cutting Speed v_c (m/min)	50 to 180	50 to 180	50 to 180	
		Feed Rate f (mm/rev)	0.03 to 0.12	0.04 to 0.12	0.05 to 0.12	
	Grooving	Depth of Cut a_p (mm)	External Diameter	UP to 3.5	UP to 5.0	UP to 5.0
			Internal Diameter	UP to 2.5	UP to 2.5	UP to 2.5
	Turning	Feed Rate f (mm/rev)	0.03~0.10	0.05~0.10	0.07~0.12	
		Depth of Cut a_p (mm)	UP to 0.3	UP to 0.5	UP to 0.7	
M Stainless Steel	Cutting	Cutting Speed v_c (m/min)	50 to 160	50 to 160	50 to 160	
		Feed Rate f (mm/rev)	0.03 to 0.12	0.04 to 0.12	0.05 to 0.12	
	Grooving	Depth of Cut a_p (mm)	External Diameter	UP to 3.5	UP to 5.0	UP to 5.0
			Internal Diameter	UP to 2.5	UP to 2.5	UP to 2.5
	Turning	Feed Rate f (mm/rev)	0.03 to 0.10	0.05 to 0.10	0.07 to 0.12	
		Depth of Cut a_p (mm)	UP to 0.3	UP to 0.5	UP to 0.7	

* Refer to pages F4, F5 for applicable holders GWC, GWCS and GWCI types. Select applicable inserts for the holders by using matching group numbers.