

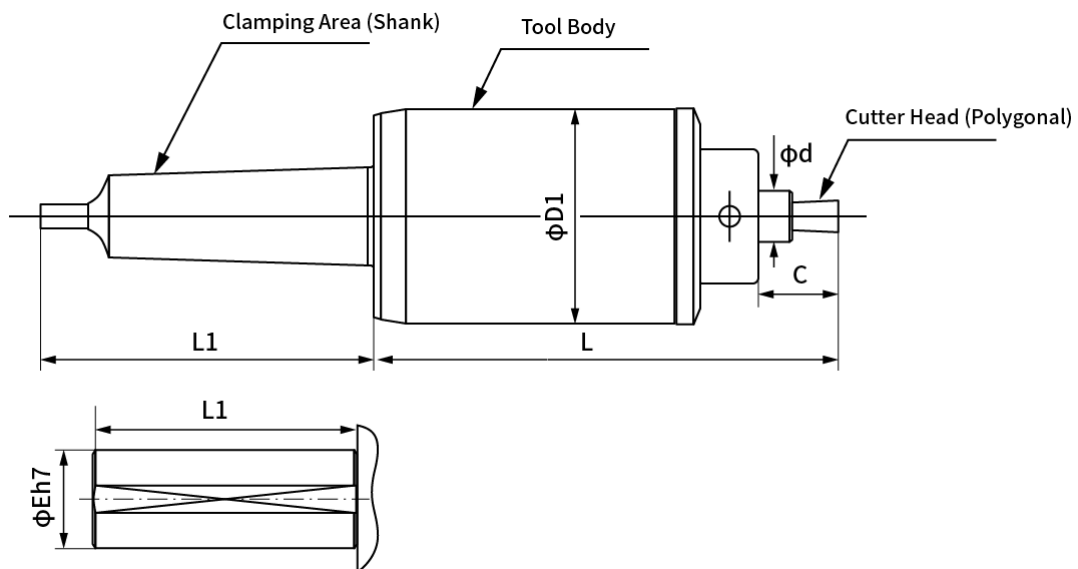
# Catalogue & Operating Manual of Polygonal Rotary Broaching Tool



(Available Dia. Ranges of Cutter:  $\phi 2\text{mm}$  -  $\phi 25\text{mm}$ )

The Polygonal Rotary Broaching Tool is developed by RBT that is an easy and simple tool for processing special-shaped hole. The tool is suitable for general lathe, CNC automatic lathe, machining center, drilling machine, and other machines, which can be used for process blind hole, through hole, and regular or irregular polygonal hole; In addition to the standard hexagonal holes and square holes, you can also customize other type shapes of holes, such as stellated holes, splined holes, column-shaped holes, etc., just change the broaching head.

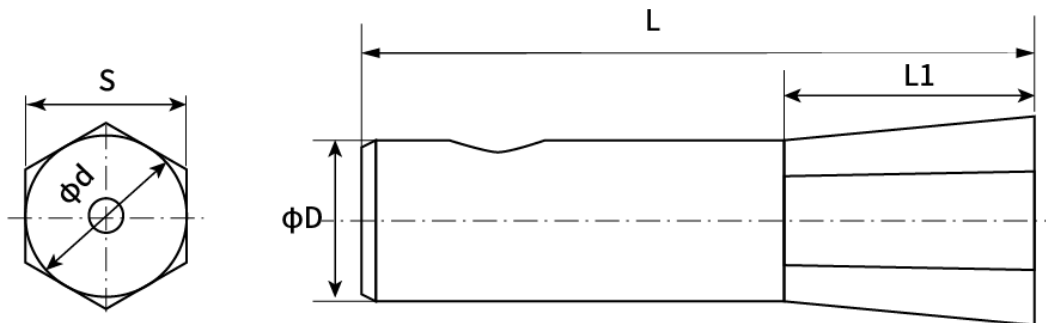
## Structure Drawing



## Specifications for Reference

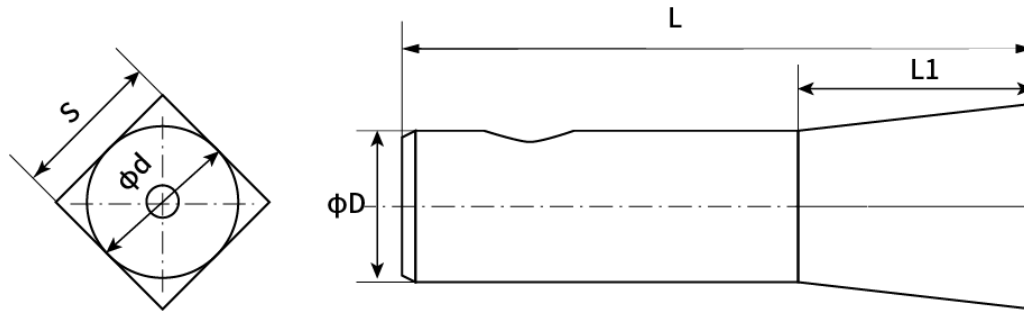
Model	Dimension (Unit: mm)					Cutter Model
	Shank Size	D1	d	L	C	
RBT-BT-08MT2	Morse Taper #2 (2MT)	45	8	92	19	SC-LG8-***
RBT-BT-08MT3	Morse Taper #3 (3MT)					
RBT-BT-08MT4	Morse Taper #4 (4MT)					
RBT-BT-08S12	$\phi 12 \times 70$					
RBT-BT-08S16	$\phi 16 \times 70$					
RBT-BT-08S20	$\phi 20 \times 70$					
RBT-BT-08S25	$\phi 25 \times 70$					
RBT-BT-16(A/B)MT3	Morse Taper #3 (3MT)	62	16	/	A=42 B=82	SC-LG16-***
RBT-BT-16(A/B)MT4	Morse Taper #4 (4MT)					
RBT-BT-16(A/B)S16	$\phi 16 \times 50$					
RBT-BT-16(A/B)S20	$\phi 20 \times 60$					
RBT-BT-16(A/B)S25	$\phi 25 \times 60$					

## Drawing & Dimension of Hexangular Cutter



Model	Dimension (Unit: mm)			
	S	L1	L	D
SC-LG8-6-2	2	4	30	8
SC-LG8-6-2.5	2.5	5		
SC-LG8-6-3	3	6		
SC-LG8-6-4	4	7		
SC-LG8-6-5	5	9		
SC-LG8-6-6	6	10.5		
SC-LG8-6-8	8	12		
SC-LG8-6-10	10	15		
SC-LG16-6-14	14	21	65	16
SC-LG16-6-17	17	40		
SC-LG16-6-19	19	40		

## Drawing & Dimension of Square Cutter



Model	Dimension (Unit: mm)			
	S	L1	L	D
SC-LG8-4-2	2	4	30	8
SC-LG8-4-2.5	2.5	5		
SC-LG8-4-3	3	6		
SC-LG8-4-4	4	7		
SC-LG8-4-5	5	9		
SC-LG8-4-6	6	10.5		
SC-LG8-4-8	8	12		
SC-LG16-4-10	10	15		
SC-LG16-4-11.2	11.2	17		
SC-LG16-4-12.5	12.5	19	65	16
SC-LG16-4-14	14	21		

## Performance & Features

- 1) The tool works by eccentric rotation, which translates into cutting force at the front end.
- 2) This processing craft is more economical, environmental and convenient compare with traditional punching and discharge processing.
- 3) The tool works with machine tool, just single set-up, and the serial procedure is completed once; therefore, the accuracy and efficiency are greatly improved.
- 4) This tool is suitable for processing metal parts with hardness less than HRC30

## Usages & Notes

- 1) Keep and use the tool is clamped onto the rotatable and feeding machine turret (holder), spindle, and tailstock (lathe, drilling machine, milling machine, machining center, etc.), In order to ensure the machining accuracy of hole, the tool center must be aligned with center of preprocessed hole.
- 2) Tool rotation or workpiece are available, it depends on your choice, must be kept the tool rotation in positive (rotation according to the direction indicated by arrow on tool).
- 3) To increase service life of tool, please use coolant or cutting oil when processing.
- 4) Preprocessed hole that to be broached, which the diameter should be slightly bigger than or equal to the diameter of incircle of the polygonal broaching head (If there is the hexagonal hole, which the diameter should be larger than or equal to the opposite side distance); The preprocessed hole must be chamfered before broaching, and the hole diameter after chamfering should be bigger than the diameter of the excircle of the polygonal broaching head, which is convenient for tool guidance; The depth of preprocessed hole should be more than 1.5 times of the diameter of incircle of polygonal broaching head.
- 5) Keep the tool with low speed to contact workpiece, to increase the rotate speed when the broaching head in working state.
- 6) Machining Parameters:
  - Rotate Speed: 600-2000 rev/min
  - Feed Rate: 0.1~0.5 mm/r (For copper & aluminum materials, which feed rate should be increased by 2-3 times.)

## Demonstration Videos

- 1) <https://www.youtube.com/watch?v=b50PAefHxY0>
- 2) <https://www.youtube.com/watch?v=mMBCV4YWenA>