

ECCENTRIC FINE BORING TOOL



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Redefining Cutting Technology

www.renukatools.in

Company Profile

Renuka Tools® was founded in the year 2000 in Aurangabad, India with its vision to be the preferred special cutting tools provider. We now successfully cater to both domestic and international markets with our wide range of solutions. We ensure that we remain nimble and agile by continually investing in technology & R&D to stay ahead of time & keep pace with the changing technology in the industry.

Renuka Tools® with its state-of-the-art manufacturing unit manufactures high quality special indexable cutting tools with utmost precision using the latest technology and highly skilled and technical manpower. All cutting tools manufactured at our unit come with a Zoller Report, ensuring that the global export quality standards are met, guaranteeing complete customer satisfaction.

At Renuka Tools®, our core expertise is in manufacturing special customized cutting tools. With over 20 years of technical expertise and continual R&D efforts, we manufacture products such as:

- ▶ Micro Bore Unit
- ▶ Adjustable Boring Tools
- ▶ Fine Boring Tools
- ▶ Eccentric Boring Tools
- ▶ Large diameter Boring Tools
- ▶ Anti-vibration Boring Tools
- ▶ Large Diameter Milling Cutters
- ▶ Spot Face Cutters
- ▶ Side & Face Milling Cutters
- ▶ Chamfer Tools

Why Us - What Differentiates us from Competition

- ▶ We use the best-in-class technology in our state-of-the-art manufacturing facility.
- ▶ We ensure best quality products adhering to global standards.
- ▶ We provide a QC Report along with our tools to certify the quality of the product, which is accepted world-wide.
- ▶ We ensure shortest lead times in manufacturing.
- ▶ All of the above is ensured at lowest possible price.

This catalogue will give you further insights and details about our Eccentric Fine Boring Tools. For more details of our other standard offerings, please refer to our website (www.renukatools.in).



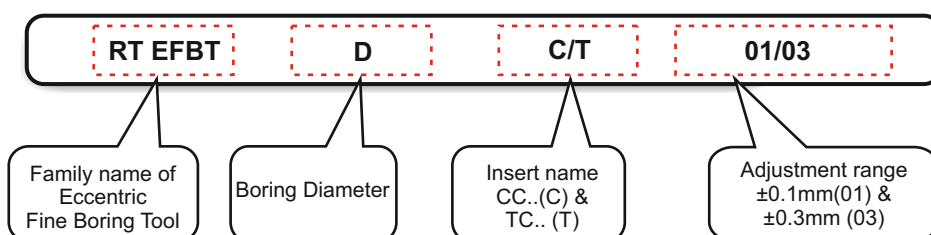
Facts & Advantages

- ▶ Used for finish boring application from diameter 5mm up to 25mm (any intermediary size on demand).
- ▶ Available with adjustment options of $\pm 0.1\text{mm}$ (LC 10 microns) & $\pm 0.3\text{mm}$ (LC 30 microns).
- ▶ User friendly & quick adjustment ensures minimum loss time.
- ▶ Guaranteed repeatability by using recommended torque for locking.
- ▶ Most economic solution for finish boring with precise adjustment in microns.
- ▶ Tailor made tools with similar concept also available for the application of back boring & OD turning.



SAMPLE IMAGE

Nomenclature Code Key For Ordering Eccentric Fine Boring Tool



Ordering Example:
1 piece
RT EFBT 5.0 C01

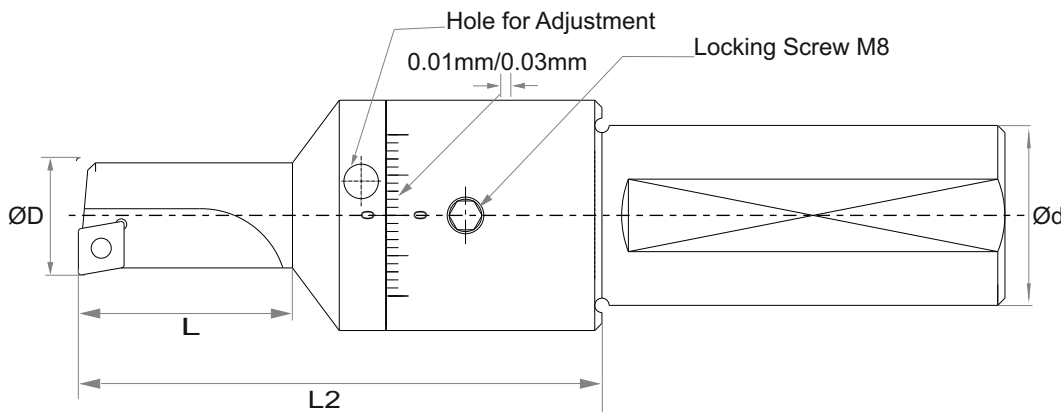


Fig 1

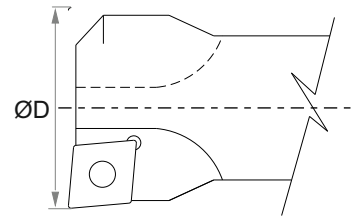


Fig 2



SAMPLE IMAGE

All dimensions are in mm.

Fig No.	Sr. No	Item Code	Adjustment Range & Least Count	Item Code	Adjustment Range & Least Count	Insert	D	L	L2
Fig 1	1	RT EFBT 5.0 - 5.9 C01	Adjustment range: $\pm 0.1\text{mm}$	RT EFBT 5.0 - 5.9 C03	Adjustment range: $\pm 0.3\text{mm}$	CC..0301	5.0 - 5.9	15	58
	2	RT EFBT 6.0 - 6.9 C01		RT EFBT 6.0 - 6.9 C03		CC..0401	6.0 - 6.9	18	61
	3	RT EFBT 7.0 - 7.9 C01		RT EFBT 7.0 - 7.9 C03		CC..0401	7.0 - 7.9	21	64
	4	RT EFBT 8.0 - 8.9 C01		RT EFBT 8.0 - 8.9 C03		CC..0401	8.0 - 8.9	24	67
	5	RT EFBT 9.0 - 9.9 C01		RT EFBT 9.0 - 9.9 C03		CC..0602	9.0 - 9.9	27	70
	6	RT EFBT 10 - 10.9 C01		RT EFBT 10 - 10.9 C03		CC..0602	10 - 10.9	30	73
	7	RT EFBT 11 - 11.9 C01		RT EFBT 11 - 11.9 C03		CC..0602	11 - 11.9	33	76
	8	RT EFBT 12 - 12.9 C01		RT EFBT 12 - 12.9 C03		CC..0602	12 - 12.9	36	79
	9	RT EFBT 13 - 13.9 C01		RT EFBT 13 - 13.9 C03		CC..0602	13 - 13.9	39	82
	10	RT EFBT 14 - 14.9 C01		RT EFBT 14 - 14.9 C03		CC..0602	14 - 14.9	42	85
	11	RT EFBT 15 - 15.9 C01	Each Division 0.01mm	RT EFBT 15 - 15.9 C03	Each Division 0.03mm	CC..0602	15 - 15.9	45	88
	12	RT EFBT 16 - 16.9 C01		RT EFBT 16 - 16.9 C03		CC..0602	16 - 16.9	48	91
	13	RT EFBT 17 - 17.9 C01		RT EFBT 17 - 17.9 C03		CC..0602	17 - 17.9	51	94
	14	RT EFBT 18 - 18.9 C01		RT EFBT 18 - 18.9 C03		CC..0602	18 - 18.9	54	97
	15	RT EFBT 19 - 19.9 C01		RT EFBT 19 - 19.9 C03		CC..0602	19 - 19.9	57	100
Fig 2	16	RT EFBT 20 - 20.9 C01		RT EFBT 20 - 20.9 C03		CC..0602	20 - 20.9	60	103
	17	RT EFBT 21 - 21.9 C01		RT EFBT 21 - 21.9 C03		CC..0602	21 - 21.9	63	106
	18	RT EFBT 22 - 22.9 C01		RT EFBT 22 - 22.9 C03		CC..0602	22 - 22.9	66	109
	19	RT EFBT 23 - 23.9 C01		RT EFBT 23 - 23.9 C03		CC..0602	23 - 23.9	69	112
	20	RT EFBT 24 - 25.0 C01		RT EFBT 24 - 25.0 C03		CC..0602	24 - 25.0	70	113

Notes:

- Least count for $\pm 0.1\text{mm}$ adjustable EFBT is 10 microns, for $\pm 0.3\text{mm}$ adjustable EFBT is 30 microns.
- Shank Diameter "Ød" for all of the above tools is 20mm, Collar Diameter is 32mm & Shank Length is 50mm.
- Inserts are not included with the tools.
- Locking Screw provided is M8 with recommended torque of 8N.m. for consistent results. Allen key also provided.
- Above table gives the entire range of diameters, exact diameter to be mentioned in requirement eg. 15.7mm.
- Further options available till diameter 30mm on demand, will be tailor made with a lead time of 2-3 weeks.
- Please refer to page no. 6 for insert spare details.
- Diameter range 'D' calculated considering 0.4mm insert nose radius (and 0.2mm for insert CC..0301).
- Maximum recommended material removal is 0.5mm diametrically.
- Lead time of 1-2 weeks for all options.
- Tailor made tools with similar concept also available for the application of back boring & OD boring.

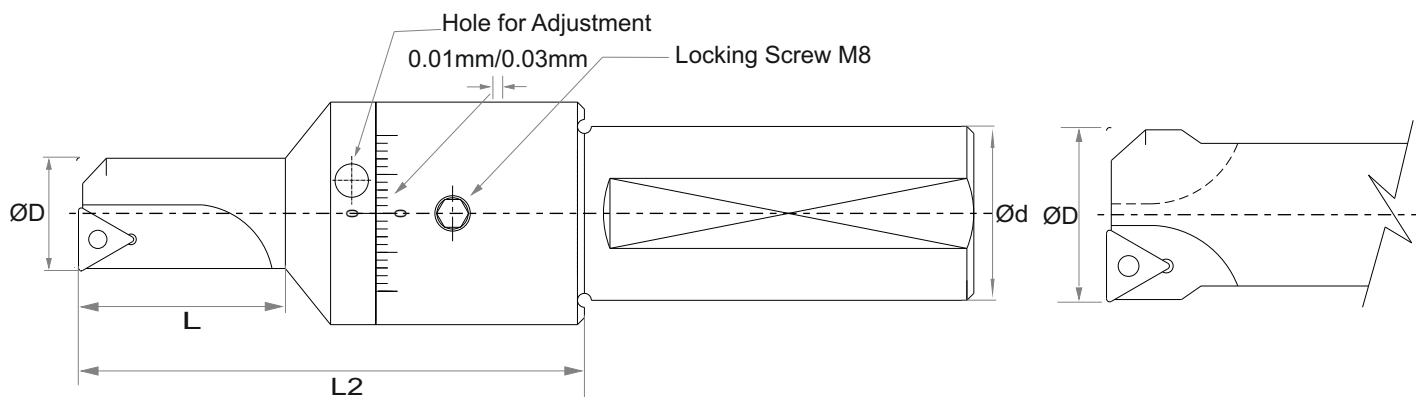


Fig 1

Fig 2






SAMPLE IMAGE

All dimensions are in mm.

Fig No.	Sr. No	Item Code	Adjustment Range & Least Count	Item Code	Adjustment Range & Least Count	Insert	D	L	L2
Fig 1	1	RT EFBT 8.0 - 8.9 T01	Adjustment range: $\pm 0.1\text{mm}$	RT EFBT 8.0 - 8.9 T03	Adjustment range: $\pm 0.3\text{mm}$	TC..06T1	8.0 - 8.9	24	67
	2	RT EFBT 9.0 - 9.9 T01		RT EFBT 9.0 - 9.9 T03		TC..06T1	9.0 - 9.9	27	70
	3	RT EFBT 10 - 10.9 T01		RT EFBT 10 - 10.9 T03		TC..06T1	10 - 10.9	30	73
	4	RT EFBT 11 - 11.9 T01		RT EFBT 11 - 11.9 T03		TC..06T1	11 - 11.9	33	76
	5	RT EFBT 12 - 12.9 T01		RT EFBT 12 - 12.9 T03		TC..06T1	12 - 12.9	36	79
	6	RT EFBT 13 - 13.9 T01		RT EFBT 13 - 13.9 T03		TC..06T1	13 - 13.9	39	82
	7	RT EFBT 14 - 14.9 T01		RT EFBT 14 - 14.9 T03		TC..06T1	14 - 14.9	42	85
	8	RT EFBT 15 - 15.9 T01		RT EFBT 15 - 15.9 T03		TC..0902	15 - 15.9	45	88
	9	RT EFBT 16 - 16.9 T01		RT EFBT 16 - 16.9 T03		TC..0902	16 - 16.9	48	91
	10	RT EFBT 17 - 17.9 T01		RT EFBT 17 - 17.9 T03		TC..0902	17 - 17.9	51	94
	11	RT EFBT 18 - 18.9 T01		RT EFBT 18 - 18.9 T03		TC..0902	18 - 18.9	54	97
	12	RT EFBT 19 - 19.9 T01		RT EFBT 19 - 19.9 T03		TC..0902	19 - 19.9	57	100
Fig 2	13	RT EFBT 20 - 20.9 T01	Each Division 0.01mm	RT EFBT 20 - 20.9 T03	Each Division 0.03mm	TC..0902	20 - 20.9	60	103
	14	RT EFBT 21 - 21.9 T01		RT EFBT 21 - 21.9 T03		TC..0902	21 - 21.9	63	106
	15	RT EFBT 22 - 22.9 T01		RT EFBT 22 - 22.9 T03		TC..0902	22 - 22.9	66	109
	16	RT EFBT 23 - 23.9 T01		RT EFBT 23 - 23.9 T03		TC..0902	23 - 23.9	69	112
	17	RT EFBT 24 - 25.0 T01		RT EFBT 24 - 25.0 T03		TC..0902	24 - 25.0	70	113

Notes:

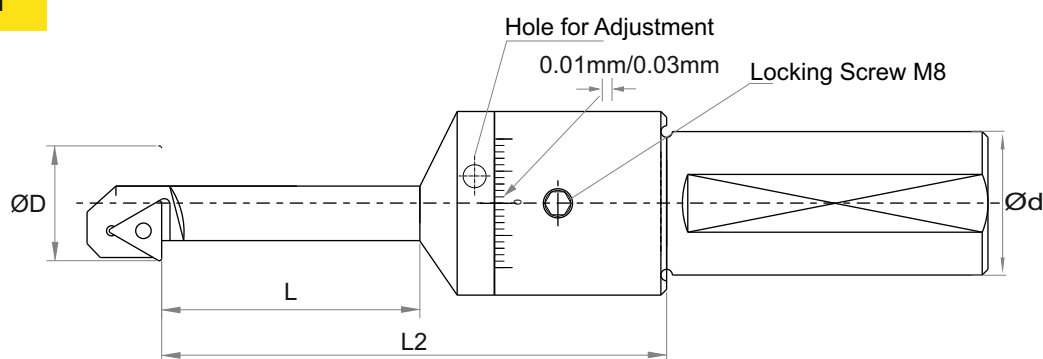
- Least count for $\pm 0.1\text{mm}$ adjustable EFBT is 10 microns, for $\pm 0.3\text{mm}$ adjustable EFBT is 30 microns.
- Shank Diameter "Ød" for all of the above tools is 20mm, Collar Diameter is 32mm & Shank Length is 50mm.
- Inserts are not included with the tools.
- Locking Screw provided is M8 with recommended torque of 8N.m. for consistent results. Allen key also provided.
- Above table gives the entire range of diameters, exact diameter to be mentioned in requirement eg. 15.7mm.
- Further options available till diameter 30mm on demand, will be tailor made with a lead time of 2-3 weeks.
- Please refer to page no. 6 for insert spare details.
- Diameter range 'D' calculated considering 0.4mm insert nose radius.
- Maximum recommended material removal is 0.5mm diametrically.
- Lead time of 1-2 weeks for all options.
- Tailor made tools with similar concept also available for the application of back boring & OD boring.

Sr. no.	Insert 	Insert Screw 	Torx 
1	CC.. 0301	M2.0	T-6
2	CC.. 0401	M2.2	T-6
3	CC.. 0602	M2.5	T-7
4	TC.. 06T1	M2.0	T-6
5	TC.. 0902	M2.2	T-6

Other Applications with Similar Tooling Concept

Back Boring & Facing Tool

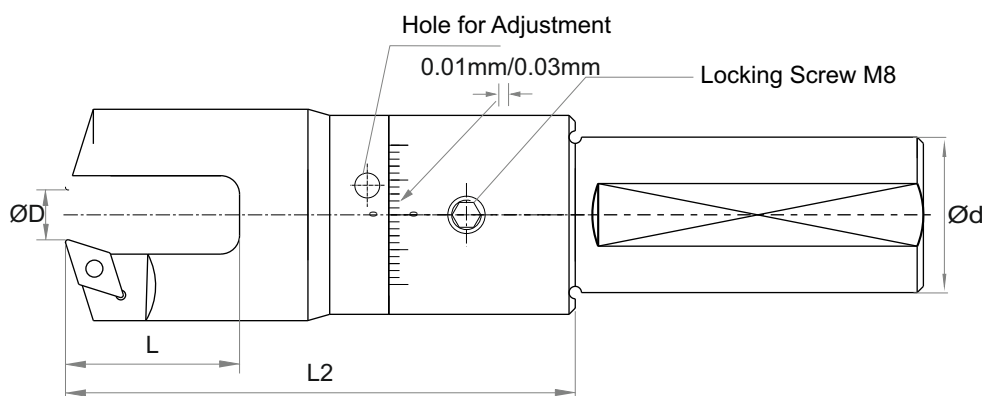
- Tailor made tools using similar concept can also be manufactured and supplied for the application of back boring & facing as per customer requirements.
- Lead time of 2-3 weeks.
- Minimum Diameter $\varnothing D = \varnothing 10.0\text{mm}$
- Maximum Diameter $\varnothing D = \varnothing 25.0\text{mm}$
- Maximum L/D Ratio = 2.5
- Maximum Length $L = 50.0\text{mm}$
- Shank Diameter $\varnothing d = 20.0\text{mm}$



SAMPLE IMAGE

OD Turning Tool

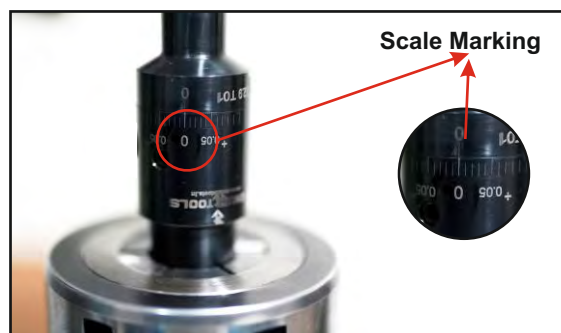
- Tailor made tools using similar concept can also be manufactured and supplied for the application of OD turning as per customer requirements.
- Lead time of 2-3 weeks.
- Minimum Diameter $\varnothing D = \varnothing 8.0\text{mm}$
- Maximum Diameter $\varnothing D = \varnothing 22.0\text{mm}$
- Maximum L/D Ratio = 2.5
- Maximum Length $L = 50.0\text{mm}$
- Shank Diameter $\varnothing d = 20.0\text{mm}$



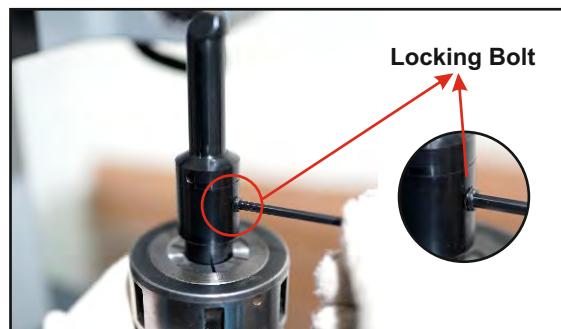
SAMPLE IMAGE

Operating Instructions for Eccentric Fine Boring Tool

- ▶ The tool is initially set on zero mark on the scale. (pic 1)
- ▶ After clamping the tool in the hydro grip or side-lock adaptor or ER collet chuck adaptor, measure the exact diameter on the pre-setter or by using a precise dial indicator.
- ▶ In case you wish to adjust the diameter, loosen the Locking Screw of M8 with the provided Allen key of 4mm. (pic 2)
- ▶ Use the same allen key to adjust the diameter by using the scale mentioned on the body of the tool. (pic 3)
- ▶ The smallest division is the least count of the tool, adjust accordingly and then recheck if the required size is achieved. (pic 1)
- ▶ If the required diameter is achieved, tighten the locking screw with a torque wrench using a torque of 8 Nm (Recommended) for precise repeatability and to ensure sufficient torque for locking. (pic 2)
- ▶ The tool is now ready to use.



(pic 1)



(pic 2)



(pic 3)

Precautionary measures while using Eccentric Fine Boring Tools

- ▶ Due to constraints in the assembly tolerances, it is recommended that tools, if damaged, are returned to Renuka Tools® for assessment/repair in a controlled environment. Commercial for repair can only be determined after detailed assessment of the damaged tool.
- ▶ Please change the locking screws and insert screws ahead in time to avoid accidents.
- ▶ In case of any observed decrease in accuracy over the time of usage, kindly request Renuka Tools® for servicing the tool.



OUR OTHER STANDARD PRODUCTS

FINE BORING BARS & MICRO BORE UNITS



BCA BORING BARS & FINISH BORING CARTRIDGES



BORING KIT



DUO BORING BARS



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SPECIAL CARTRIDGES**



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SPECIAL ADAPTORS



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