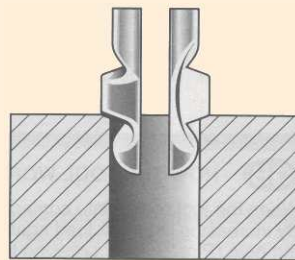


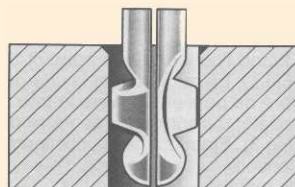
MECH-INDIA deburring tools are simple and sturdy, suitable for deburring holes on front and back faces in just one stroke. Thanks to their simple design, they can be used on various types of machine tools without any special skills being required on the part of the operator. MECH-INDIA manufactures two types of tools : CT tool with blade, and CTD type flexible tool. Both are designed to deburr holes quickly and easily.

### DEBURRING TOOLS - TYPE CTD

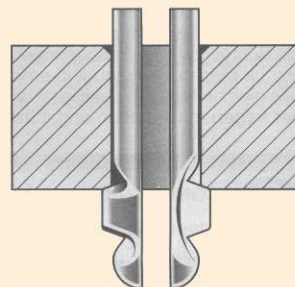
These are sturdy, integral and flexible tools, of simple construction and easily adaptable to the most sophisticated manufacturing cycles on automatic machines. They are among the most simple and inexpensive tools for deburring holes. The CTD tools deburr on front and back faces of holes in just one stroke, without any adjustment or having overturn the interferences, cast or pressed pieces, etc. They are also ideal for large productions and can be re-sharpened.



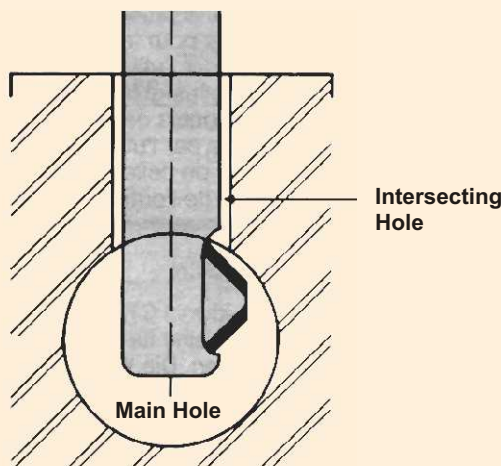
**Fig 1**  
**Deburring front face of hole.**  
When the tool comes into contact with the piece, the front cutting edge of the blade deburrs the front face of the hole



**Fig.2**  
**Crossing the hole without scratching the inside surface.** By increasing the work load against the piece, until the elastic stress of the tool is exceeded, the tool is free to pass through the hole



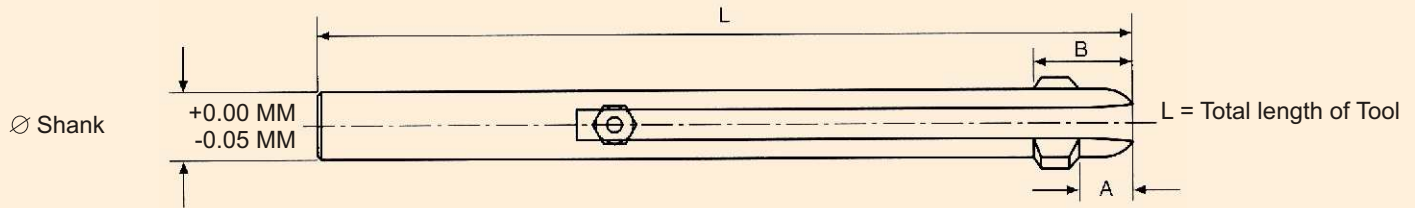
**Fig.3**  
**Return stroke, the back blade cutting edge deburrs the back face.** After crossing the hole, the elastic stress brings the blade back to its original position. During return, with the back cutting edge of the blade, the back face of the hole is deburred



**Because of its shape, the blade does not damage the inner surface of the hole.** The recommended speed and feed for this type of tools are the same as for drilling operations on the same types of materials. All the CTD tools can deburr a range of diameters as per the specifications shown in the following tables.

# DEBURRING TOOLS

## Specifications



TOOL MODEL NO.	DIAMETER RANGE (mm)	SHANK -0.05/-0.00	L (mm)	A (mm)	B (mm)
CTD 032	3.2 - 3.6	3.2	102	3,5	8
CTD 036	3.6 - 4.0	3.6	102	3,5	8
CTD 040	4.0 - 4.4	4.0	102	3,5	8
CTD 044	4.4 - 4.8	4.4	102	3,5	8
CTD 048	4.8 - 5.2	4.8	102	3,5	10
CTD 052	5.2 - 5.6	5.2	102	3,5	10
CTD 056	5.6 - 6.0	5.6	102	6,5	13
CTD 060	6.0 - 6.4	6.0	102	6,5	13
CTD 064	6.4 - 6.8	6.4	102	6,5	13
CTD 068	6.8 - 7.2	6.8	102	6,5	13
CTD 072	7.2 - 7.6	7.2	102	6,5	13
CTD 076	7.6 - 8.0	7.6	102	6,5	13
CTD 080	8.0 - 8.4	8.0	102	7,5	14
CTD 084	8.4 - 8.8	8.3	102	7,5	14
CTD 088	8.8 - 9.2	8.7	102	7,5	14
CTD 092	9.2 - 9.6	9.1	102	7,5	14
CTD 096	9.6 - 10.0	9.5	102	8,5	14
CTD 100	10.0 - 10.4	9.9	113	8,5	14
CTD 104	10.4 - 10.8	10.3	113	8,5	14
CTD 108	10.8 - 11.1	10.7	113	8,5	14
CTD 111	11.1 - 11.5	11.1	140	9,0	16
CTD 115	11.5 - 11.9	11.5	140	9,0	16
CTD 119	11.9 - 12.3	11.9	140	9,0	16
CTD 123	12.3 - 12.7	12.3	140	9,0	16
CTD 127	12.7 - 13.1	12.7	178	10,0	17
CTD 131	13.1 - 13.5	13.1	178	10,0	17
CTE 135	13.5 - 13.9	13.5	178	10,0	17
CTD 139	13.9 - 14.2	13.9	178	10,0	17
CTD 142	14.2 - 14.7	14.2	191	11,0	21
CTD 147	14.7 - 15.1	14.7	191	11,0	21
CTD 151	15.1 - 15.5	15.1	191	11,0	21
CTD 155	15.5 - 15.9	15.5	191	11,0	21
CTD 159	15.9 - 16.3	15.9	191	12,0	21

## DEBURRING TOOLS - TYPE CT

The CT series of deburring tools are sturdy, consist of very few component parts, feature a replaceable blade and are designed for controlled deburring operations. To use these tools no special adjustments or delicate operations are required. They can be used on machine tools or with portable tools. They are able to easily and quickly deburr front and back faces of holes in just one stroke

## How the tool works

(Fig.4). The CT tool features a replaceable blade kept taut by a spring. When the tool comes into contact with the piece, the front cutting edge of the blade deburrs the front face of the hole

(Fig.5) By increasing the work load against the piece, until the pressure of the spring is exceeded, the blade is able to return. In this way the tool is free to pass through the hole

(Fig.6) Only the convex and smooth side of the blade comes into contact with the inner surface of the hole without damaging ID surface. After crossing the hole, the pressure of the spring brings the blade back to its original position. During return, the back face of the hole is deburred.

If deburring is insufficient or excessive, the pressure of the spring can be regulated by means of the grub screw positioned in the head of tools CTA and CTB or on the rod of tools CTC. Never press the spring fully down as the blade would lose its flexibility. Use the same type of speed and feed as those adopted for drilling. Sometimes tapping feeds have produced very good

Fig 4  
Deburring  
front face  
of hole.

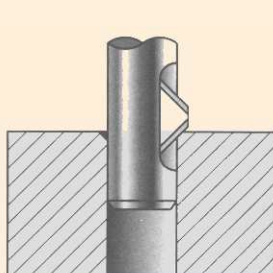


Fig 5  
Increase of work load, the blade returns,  
crossing of hole without scratching the surface.

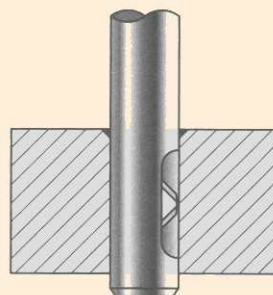
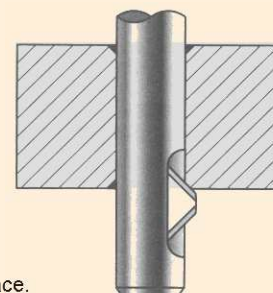


Fig 6  
Blade  
returns to original  
position.  
During return  
stroke, the back  
cutting edge  
deburr the back  
face of the hole.



## BLADES

fig.D



Blades for tools CTA and CTB

fig.E



Blades for tools CTC

# DEBURRING TOOLS

## TYPE OF BLADES

The tools of the CT series normally feature D type double - cutting blade to deburr holes on both the front and rear faces. To deburr only the front or rear face of a hole, always specify the blade type as shown below :



**D type blade with double cutting edge**  
to deburr the front and back face of holes.



**B type blade with back cutting edge**  
to deburr the back face of holes.

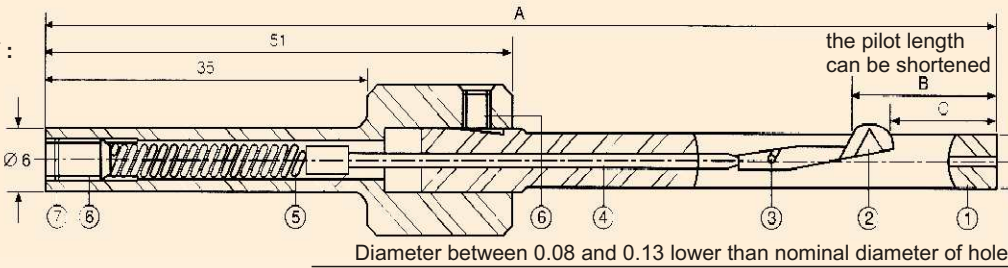


**F type blade with front cutting edge**  
to deburr the front face of holes.

## TYPE CTA

### ARBOR ASSEMBLY :

1. Arbor
2. Blade
3. Pin
4. Plunger



### ADAPTER ASSEMBLY:

5. Spring
6. Adjustment screw
7. Adapter

To change the blade we suggest replacing the Arbor assembly

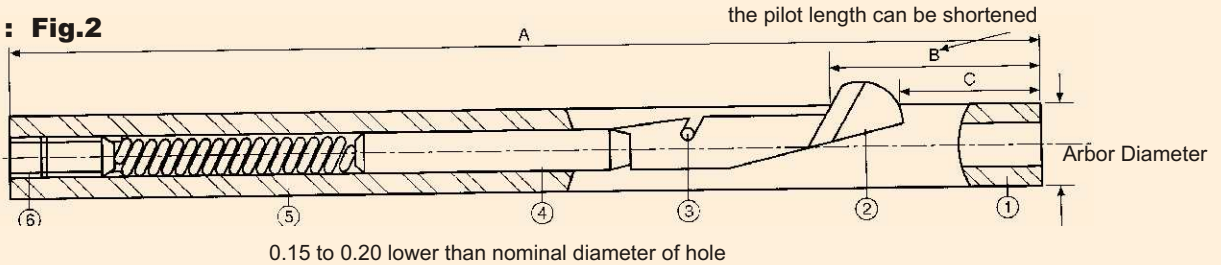
HOLE DIMENSIONS (mm)	TOOL MODEL NO.	A (mm)	B (mm)	C (mm)	BLADE PART NUMBER
2.0	CTA 020	85	11.5	LDP332*	LDP 332*
2.5	CTA 025	85	11.5	6.5	LDP 332*
3.0	CTA 030	85	11.5	6.5	LDP 003*
3.5	CTA 035	85	11.5	6.5	LDP 180*
4.0	CTA 040	85	11.5	6.5	LDP 532*
4.5	CTA 045	103	18	11	LDP 316*
5.0	CTA 050	103	18	11	LDP 319*

Tools for intermediate or larger dimensions available on request.

For Specifying Double back or front chamfering add D/B/F at the end of model no (Example :LDP332B)

## TYPE CTB : Fig.2

1. Arbor
2. Blade
3. Pin
4. Plunger
5. Spring
6. Adjustment screw



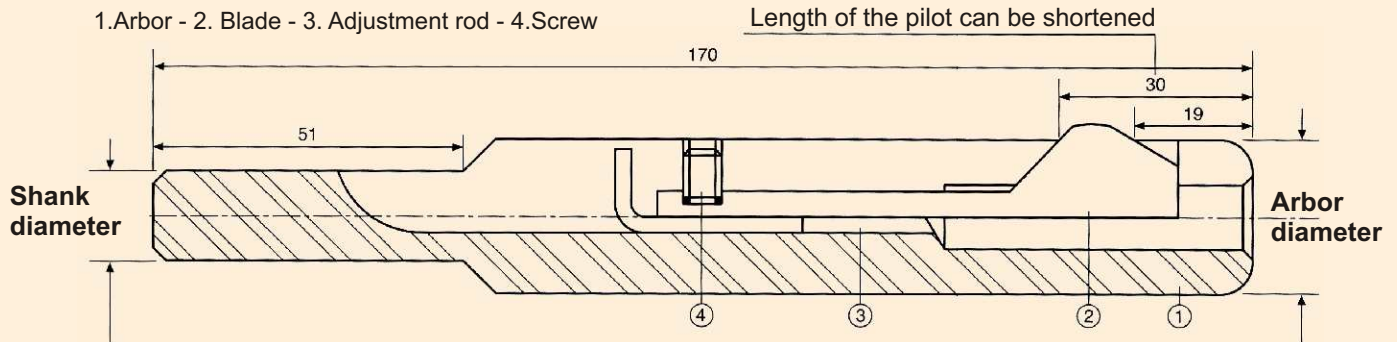
HOLE DIMENSIONS (mm)	TOOL MODEL NO.	A (mm)	B (mm)	C (mm)	BLADE PART NUMBER
5.5	CTB 055	114	22	14	LDP 100*
6.0	CTB 060	114	22	14	LDP 100*
6.5	CTB 065	114	22	14	LDP 100*
7.0	CTB 070	114	22	14	LDP 100*
7.5	CTB 075	114	24	17	LDP 200*
8.0	CTB 080	114	24	17	LDP 200*
8.5	CTB 085	114	24	17	LDP 200*
9.0	CTB 090	127	25	17	LDP 300*
9.5	CTB 095	127	25	17	LDP 300*
10.0	CTB 100	127	25	17	LDP 300*
10.5	CTB 105	140	26	18	LDP 312*
11.0	CTB 110	140	26	18	LDP 312*
11.5	CTB 115	140	26	18	LDP 312*
12.0	CTB 120	140	26	18	LDP 312*
12.5	CTB 125	140	26	18	LDP 100*
13.0	CTB 130	140	26	18	LDP 312*
13.5	CTB 135	140	26	18	LDP 312*
14.0	CTB 140	165	33	23	LDP 400*
14.5	CTB 145	165	33	23	LDP 400*
15.0	CTB 150	165	33	23	LDP 400*
15.5	CTB 155	165	33	23	LDP 400*
16.0	CTB 160	165	33	23	LDP 400*
16.5	CTB 165	165	33	23	LDP 400*
17.0	CTB 170	165	33	23	LDP 400*
17.5	CTB 175	165	33	23	LDP 400*
18.0	CTB 180	165	33	23	LDP 400*
18.5	CTB 185	165	33	23	LDP 400*
19.0	CTB 190	165	33	23	LDP 400*

# DEBURRING TOOLS

## TYPE CTC

Fig M

1.Arbor - 2. Blade - 3. Adjustment rod - 4.Screw



Shank diameter =  $\varnothing$  14 for tools between 20 and 35 -  $\varnothing$  25 for tools between 40 and 50 (MT 2/3 shank optional)  
Arbor diameter = 0.15 & 0.20 lower than nominal diameter of hole

HOLE DIMENSIONS (mm)	TOOL MODEL NO	BLADE PART NO
20.0	CTC 200	LDP 110*
25.0	CTC 250	LDP 110*
30.0	CTC 300	LDP 110*
35.0	CTC 350	LDP 110*
40.0	CTC 400	LDP 110*
45.0	CTC 450	LDP 110*
50.0	CTC 500	LDP 110*

\* In order to specify exactly the requested type of blade, add to the model number the letter D/B/F (Example :LDP110B)

## NOTES

Both types of tools, CTD and CT, are designed for use on automatic machines or manually. They are suitable for use on traditional machines such as drills or lathes, as well as on special high - production machines. The tools of the series CT with their extended front guide pilot are most suitable for use with portable tools. The speeds and feeds recommended for this type of tools

are the same as those used for drilling operations, on the same types of materials. To achieve the best results, the tools should have feed controlled in the direction of cutting. Excessive burr, causes Blade for instance by the use of a blunt helical bit, can result in the problems like: partial removal of blade or tool breakage.

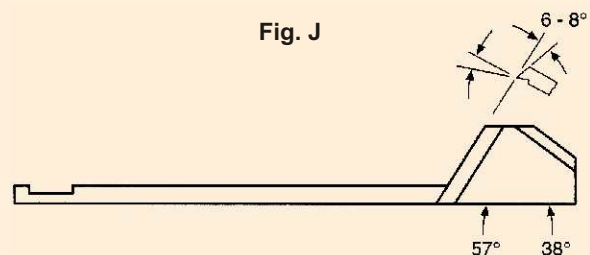
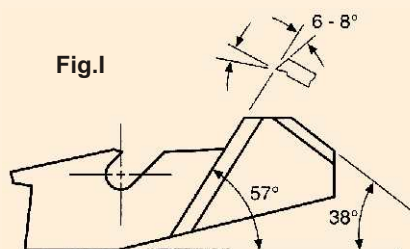
## SPECIAL USES

The deburring tools can work holes that cross one another perpendicularly or diametrically. When deburring a hole that intersects another hole, the tools create an elliptical bevel. If the

relation between the diameter of the intersecting hole and the diameter of the main hole is too small, risk exists of breaking the blade.

## REPLACING AND RE-SHARPENING THE BLADE

The blade normally lasts about four to ten times more than the bit used for making the hole. Considering the low cost of the spare blade , most customers prefer to replace this with a new one. For CTA tools, we recommend replacing the entire arbor assembly. For the CTB and CTC tools, only the blade needs replacing.



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