



NEWS VIEWS

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**Determination to Establish Excellence
Through Efficiency and Expertise**

TIGHTER MANUFACTURING TOLERANCE FOR ROTARY CUTTER, SLITTING KNIFE AND SPACER

Achievable manufacturing tolerances - Slitter Knives / Steel Spacers

O.D in mm	Precision Grade				Extra Precision Grade		
	Thickness Tolerance	Flatness (within) depends on thickness			Thickness Tolerance	Flatness (within) depends on thickness	
		≤ 2 mm	> 2 mm ≤ 5 mm	> 5 mm		> 2 mm ≤ 5 mm	> 5 mm
Upto 255 mm	+ 0.003	0.1	0.040	0.010	±0.001 (lapped)	0.020 mm	0.005 mm
above 255 mm upto 365	+ 0.004	0.1	0.050	0.015	±0.001 (lapped)	0.030 mm	0.005 mm
above 365 mm upto 435	+ 0.005	0.1	0.060	0.020	±0.003 (ground)	0.040 mm	0.006 mm
above 435 mm	+ 0.006	0.1	0.070	0.025	±0.004 (ground)	0.050 mm	0.010 mm

Other Tolerance

All dimensions are in mm

O.D. Tolerance - Knives	upto 365	+0.000 -0.020	+0.000 -0.015
	above 365	+0.000 -0.030	+0.000 -0.025
Spacer O. D. Tolerance		+0.020	+0.020
Knife I. D.		G-7	G-6
Spacer I. D.		F-7 / F-8	F-7 / F-8
Knife Key Way	width	+0.2 +0.5	
	depth	+0.3 +0.6	
Note - Key way corner radius 1.5 mm upto 225 dia & 2.5 mm above 225 dia sitting knife			
Spacer Key Way	width	+0.2 +0.5	
	depth	+0.3 +1.0	
Note - Key way corner radius should be minimum 1.0 mm			
Concentricity of Knife		0.02	0.015



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DeeTee stands for total quality movement



Recommended Tolerance For Rubber Bonded Metal Spacer (BSR/Rubberized Spacer)

- ★ Outer Diameter : Precision Grade: ± 0.15 mm & Extra Precision Grade ± 0.1 mm.
- ★ Bore: G7/G6; Same as Knife Bore Tolerance.
- ★ In Case of rubber and metal thickness specified are same; rubber thickness would be max. -0.05 mm each side.
- ★ Rubber-Metal Junction: Undercut should be provided to avoid any possibility of interference by rubber flushing.
- ★ Rubber surface should be smooth and shining
- ★ Rubber can be supplied in Nitrile, Neoprene and Polyurethane
- ★ Hardness ± 5 Shore A

Rubber Rings :

- ★ ID Tolerance: Tight Fitment on Mandrel $\phi \pm 0.020$ mm; Max. ovality allowed is 1.0mm.
- ★ OD Tolerance: Down upto 0.5mm after ID fitment on mandrel $\phi \pm 0.020$ mm.
- ★ Thickness:
 - For $T \leq 10$ mm – down upto 0.25mm
 - For $T > 10$ mm – down upto 0.50mm

Recommended Tolerance For Over Arm Separator Disc.

- ★ Outer Diameter ± 0.300 mm
- ★ On I.D. We should provide F-8 tolerance, as OASD should be Free to align with strip
- ★ Thickness of OASD may be kept as ± 0.050 mm
- ★ Sharp corners should be avoided and corner radius of 1R may be provided
- ★ Thickness tolerance on over arm spacer is ± 0.020 mm
- ★ Bevel R/D tolerance ± 1.5 mm
- ★ In case of chrome plating: Max Layer Deposition = 1 Thou or 25 mm;
- ★ In case of TiN coating: Layer Deposition = 3-5 Microns

Recommended Tolerance For Tube Mill Roll Spacers.

- ★ Outer Diameter ± 0.20 mm only turning and polishing
- ★ Bore $\pm 0.05/+0.10$ mm only turning and polishing
- ★ Thickness ± 0.02 mm to be ground
- ★ Keyway Width $+0.2$ to $+0.5$ mm and Keyway Depth $+0.3$ to $+1.0$ mm

Note :

- ★ Lapping in case of extra precision can be done from 3mm thick and above tooling
- ★ Lapping can be done upto 1 mm thickness on request with extra cost.
- ★ Lapped Cutters, Spacers are available upto $\phi 365$ mm in thickness tolerance of ± 0.001 mm,
- ★ Specify quantity tolerance on every order.
- ★ In case of Extra Precision, do specify whether ground finish or lapped finish is required.
- ★ Bore to Face Perpendicularity should be within 0.010mm per 10mm of thickness.
- ★ Bore to Face Perpendicularity for shimless tooling should be within 0.010mm

Tools WHICH LAST LONGER - Slitting Line Tooling, Tube/Section Mill Rolls, Tube Cut Off Knives, Cold Rolling Mill Rolls, Leveller Rolls, 20 Hi Mill Rolls, Fins Steel Centers, Chipper Knives, Friction Saws, Shear Blades, H.S.S. Saws, C.T. Saw Bodies & C.O.C. Cutters etc.



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