

Recommended Clearances

Total Clearance Calculated

Material	% of Material Thickness	Material Thickness					
		20G 0.9	18G 1.2	16G 1.6	14G 2.0	10G 3.0	¼' 6.0
Aluminium	15%	0.14	0.18	0.24	0.3	0.45	0.9
Mild Steel	20%	0.18	0.24	0.32	0.4	0.6	1.2
Stainless Steel	25%	0.23	0.3	0.4	0.5	0.75	1.5

Please Note Measurements in mm

This is a recommended guide. If any problems or queries arise please contact us for our expert advice

Shear is used on punches to reduce tonnage and noise whilst punching.
A full shear can reduce the tonnages by up to 50%.

Rooftop Shear:

- Ideal when punching at high loads
- Avoid excessive side loading by Taking large cuts (over 75%)

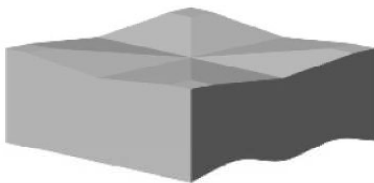


Inverted Rooftop:

- Very effective
- Easy to produce and regrind
- Avoid sharp corner in the centre, as this provides a stress point, making the tool more susceptible

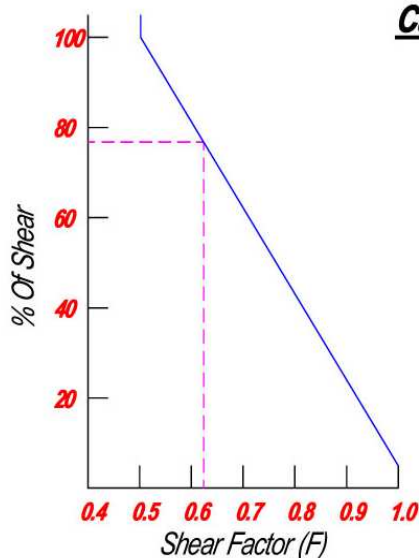
Concave:

- Best for nibbling
- More difficult to regrind Than inverted rooftop



Four Way Shear:

- Ideal for large squares
- always avoid sharp inside corners, as these encourage breakage



Calculating The Effect Of Shear

$$\text{Shear Factor (F)} = \frac{104 - (\text{Shear \%} \times 0.54)}{100}$$

eg. 75% Shear = 0.63
Shear Factor

$$\% \text{ Of Shear} = \frac{\text{Shear Depth} \times 100}{\text{Material Thickness}}$$

eg. ¼' Material with
3/16' shear on tool

$$= \frac{0.1875 \times 100}{0.250}$$

$$= 75\%$$