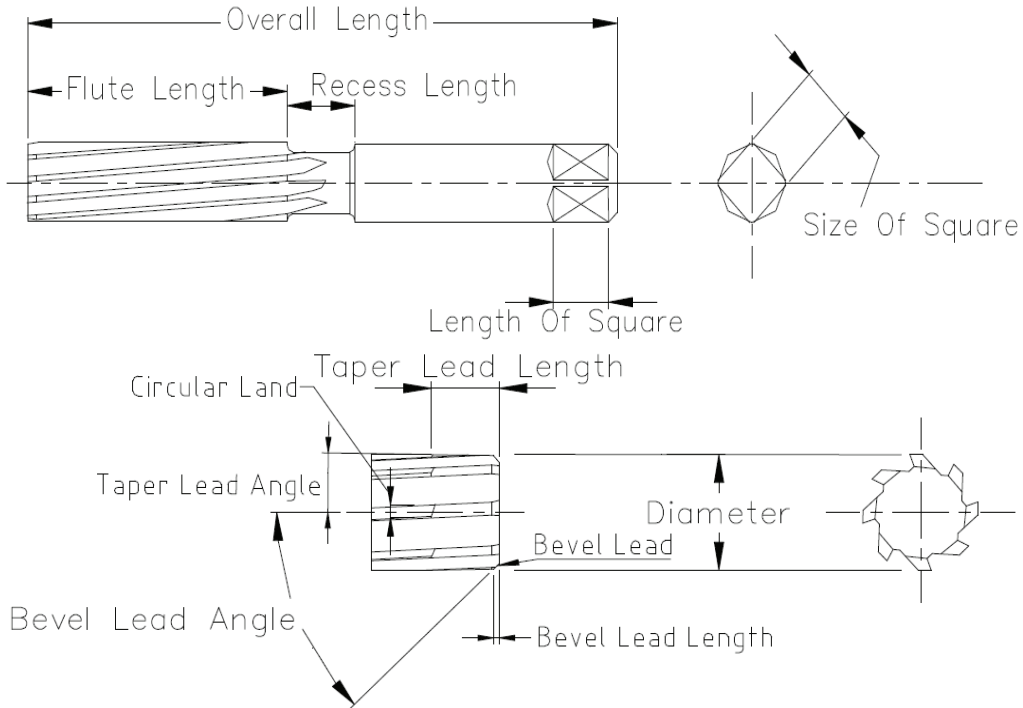
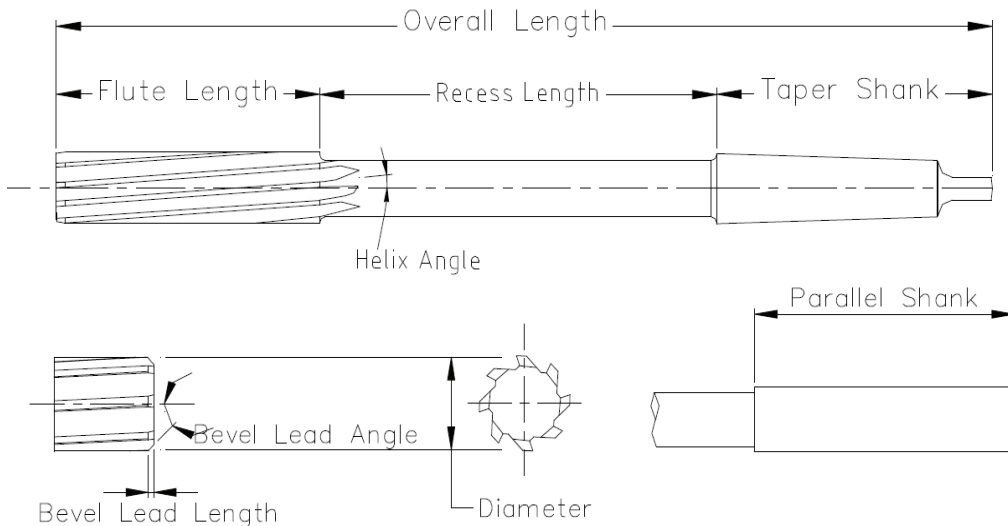


REAMERS

Parallel Hand Reamer, Right-hand Rotation -Left hand Helical Flutes



Machine/Chucking Reamer, Right hand Rotation Left Hand Helical Flutes



Machine reamers are made in both straight shank and taper shank. The DIN standard are all chucking types with short flutes and are offered in straight flutes, 6° left hand spiral, and quick spiral. British Standard Machine reamers with long flutes are made in both taper shanks and parallel shanks all 6° L.H. Spiral.

Note that Din Quick Spiral machine reamers have a 2° lead for approximately 1/2 of the diameter in length, and a 45° bevel. They cannot ream to a blind hole without leaving this step.

REAMING PRACTICE

All reamers are now made to cut an H7 tolerance on both British and Din Standard. Many users expect this to be exact, this is not practicable and they are made slightly oversize. The chart lists both the hole size and the reamers tolerance.

Diameter	H7 hole tolerance	Reamer Tolerance
0 - 3mm	+ 0.01 max + 0 min	+0.008 max + 0.002 min
Over 3 - 6	+ 0.012 + 0	+ 0.010, + 0.004mm
>6 -10mm	+ 0.015 + 0	+ 0.012 + 0.004mm
>10 - 18	+ 0.018 + 0	+ 0.015 + 0.006mm
>18 - 30	+ 0.021 + 0	+ 0.017 + 0.009mm
>30 - 50	+ 0.025 + 0	+ 0.021 + 0.012mm

Reaming Allowance

Diameter	Machine	Hand
up to 6mm	0.2mm	0.15mm or 0.006"
>6 - 12	0.2 to 0.3mm	0.5mm or 1/64"
>12 - 25	0.3 to 0.5mm	0.5mm or 1/64"
>25 - 50	0.4 to 0.8mm	0.8mm or 1/32"

Reaming allowance is dependant on the material being cut Harder materials will require less allowance and very soft steel may require more as the drill may have torn the bore.

Speeds and Feeds

General practice is to use half the drilling speed and double the feed per rev as used in drilling. It is always stated that reaming is a slow process, but at these conditions it has the same cycle time as drilling.

Lubricants

Good lubrication is required as the material being cut will gall or pick up on the cutting edges, giving oversize holes and scored bores.

Use the above notes as a guide, in practice adjust the recommendations to suit the job until optimum results are obtained.

Resharpenering

This must be done by skilled personnel on proper machine tools, on no account must free hand grinding be done: When regrinding remember that the lead performs the cutting action. For correct lands and clearances copy those on a new reamer.