

## **Broaching toolholders, broaching cutters**

For efficient production of hexagon or splined profiles in components made from a wide range of materials

The broaching toolholders are available with cylindrical shank, VDI shank according to DIN 69880 and taper HSK according to DIN 69893. The broaching toolholders are supplied as standard with a through toolholder coolant channel to provide coolant directly to the cutting edge, promoting longer tool life.

### **Instruction for using the broaching heads & cutters on turning centres::**

- The drill must be a minimum of 1% larger than the across flats dimension of the required hexagon.
- For blind hexagon holes the drilled hole depth must be at least 1.5 x the required length of hexagon section.
- The countersink of the bore should be below 60-90° and correlate at least with the outside diameter of the profile.
- Clamp the broaching cutter  $\varnothing 08 \times 28$  and  $\varnothing 12 \times 55$  into the broaching holder using the hexagon provided.
- The broaching toolholder must be aligned with the machine centreline and the use of a setting arbor in the machine turret is recommended, prior to mounting the toolholder.
- Apply coolant preferably to the frontedge of the blade.
- The broaching toolholder with fixed broaching cutter is centrically moved at rapid traverse to the pre-drilled hole.
- The surface speeds used to broach the components should be based on the speeds when machining the same component material an HSS cutter, but should never exceed 2000 RPM.
- The feed used should be between 0.01 mm and 0.1 mm / revolution.
- The return feed is to select between 0.1 mm and 0.5 mm / revolution.
- Experience has shown that even where upper range of feeds and speeds can be used it is advantageous to commence the broaching operation at a lower speed and feed until the broaching cutter is settled inside the drilled hole and then increase the speed and feed upwards to the selected maximum.
- Subject to cutting edge wear the broaching cutter can be reground on the face, at an angle of 4 - 8°.