

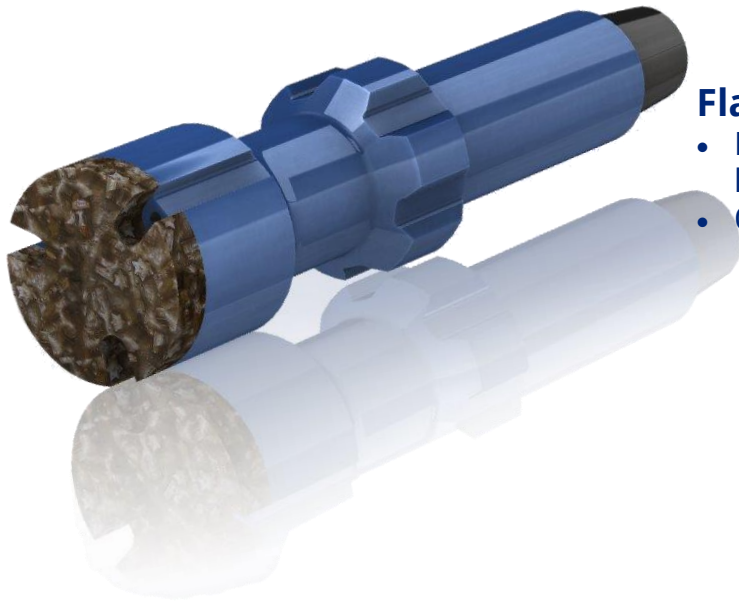
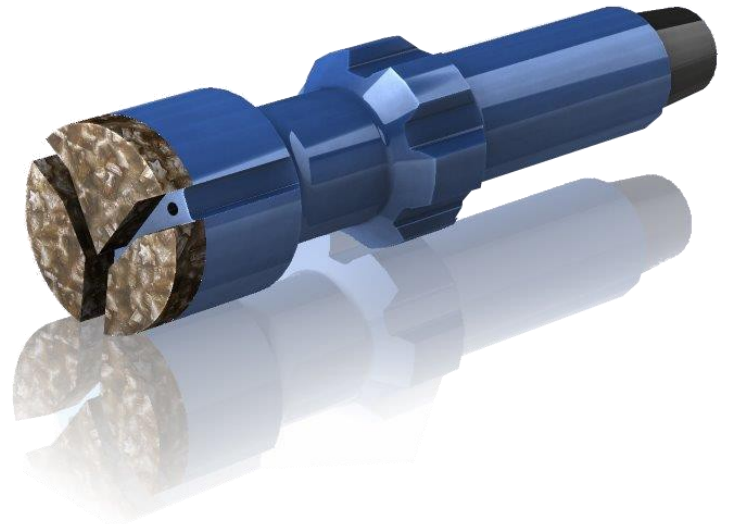
Hydropulsion[®]

MILLING TOOLS



Asymmetric Mill

- Hardfaced with **Supacutt** to ensure outstanding milling performance
- Optional hardfacing with **Starcutt** or **Sharkstooth**



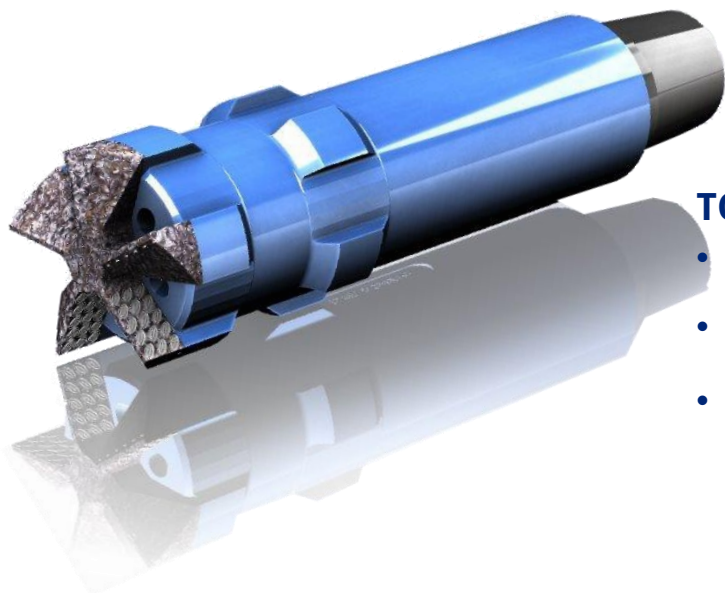
Flat Bottom Mill

- Hardfaced with a greater amount of **Supacutt** for longer milling life
- Optional hardfacing with **Starcutt** or **Sharkstooth**



Concave Mill

- Concave shape is ideal for milling bit cones and other objects by keeping them centred under the mill.
- Hardfaced with **Supacutt** for superior milling life
- Optional hardfacing with **Starcutt** or **Sharkstooth**



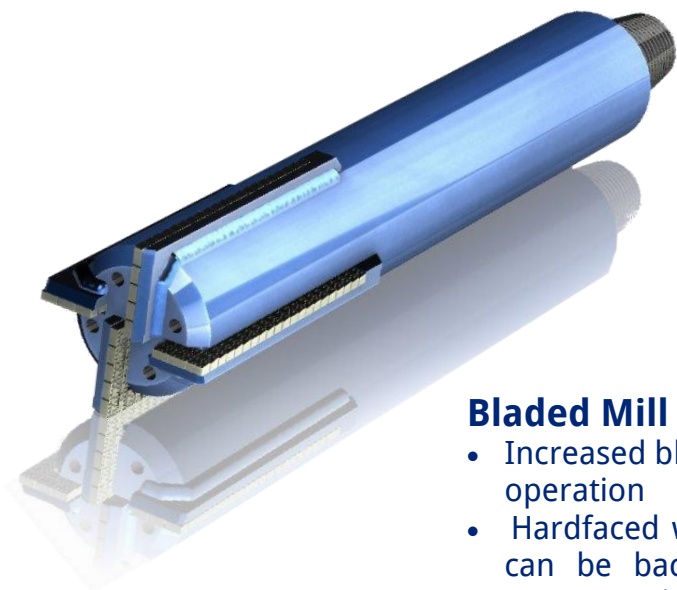
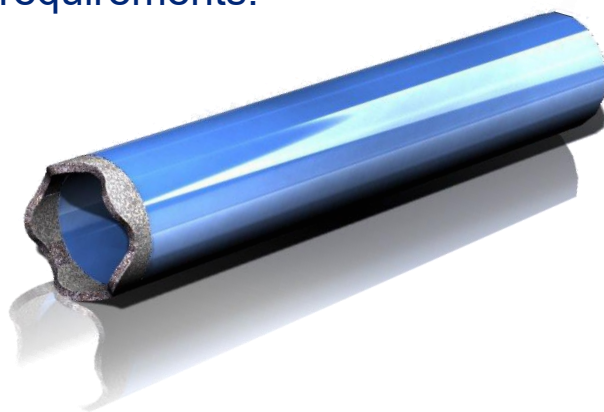
TCI Mill

- Hardfaced with Tungsten Carbide Inserts considerably improve ROP and tool life
- Backed up with **Supacutt** to provide greater resistance downhole
- Allows for a variety of insert configurations to suit all milling requirements

All our Mills are manufactured from AISI 4145H Modified Steel and are available in a variety of standard sizes. Hydropulsion Mills can be customised to suit your size, connection type and hardfacing requirements.

Washover Shoe

- Hardfaced with Supacutt on the ID, OD and end face, as required
- Available in a wave or castellation form



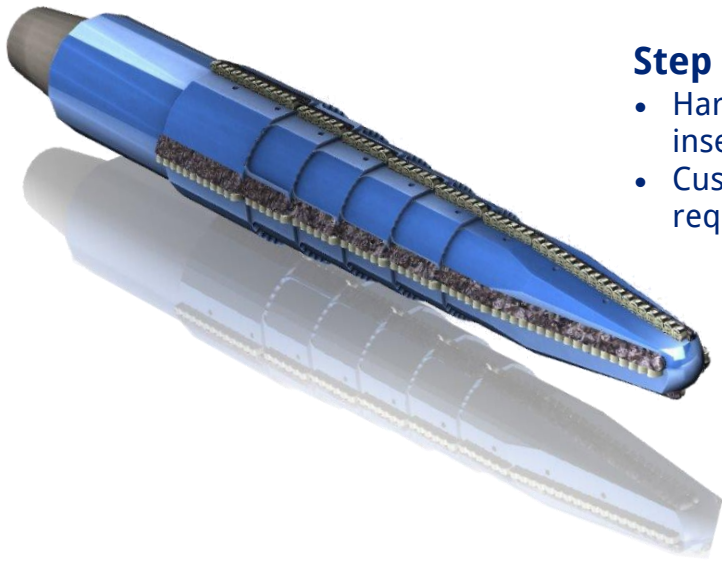
Bladed Mill

- Increased blade length to provide extended milling operation
- Hardfaced with Tungsten Carbide Inserts which can be backed up with *Supacutt* to provide greater resistance downhole
- Optional hardfacing with *Starcutt* or *Sharkstooth*

Taper Mill

- Available with straight or spiral blades
- Available as a long or short version
- Customised hardfacing combining *Supacutt* with Specialised Tungsten Carbide Inserts



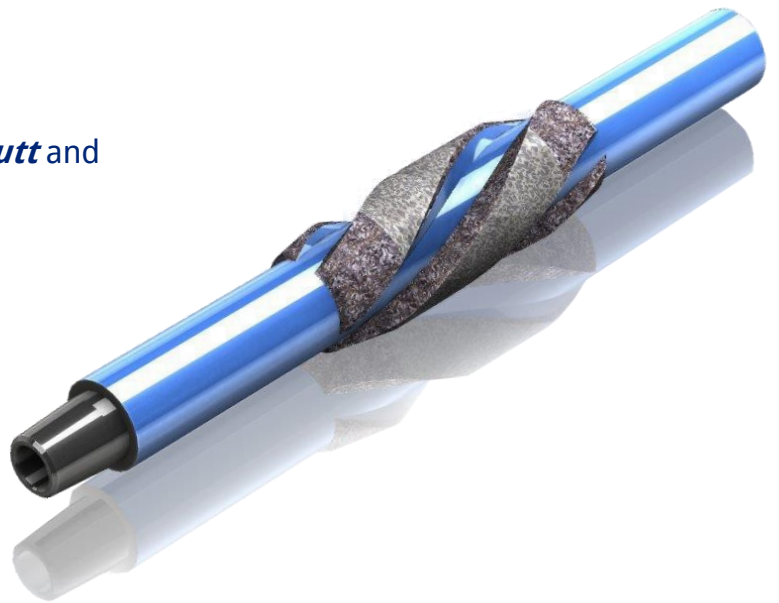


Step Mill

- Hardfaced with *Supacutt* and *Brand X* or *Swordfish* inserts
- Customised to suit your step number and dimension requirements

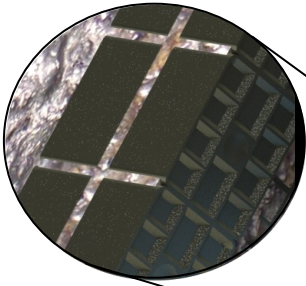
String Mill

- Optional spiral or straight blades
- Customised hardfacing combining *Supacutt* and metal cutting inserts when appropriate



Hydro Mill

- Hard Faced with Tungsten Carbide Inserts
- Low Torque Consumption on Motor
- Large range of sizes available
- For the effective removal of Scale & Cement in the wellbore.



Milling Inserts



Made from premium CW6 cutting grade tungsten carbide, our **Oval** Inserts are optimised for use with our QuickTip process with feet placed on the bottom of the inserts for ease of application.



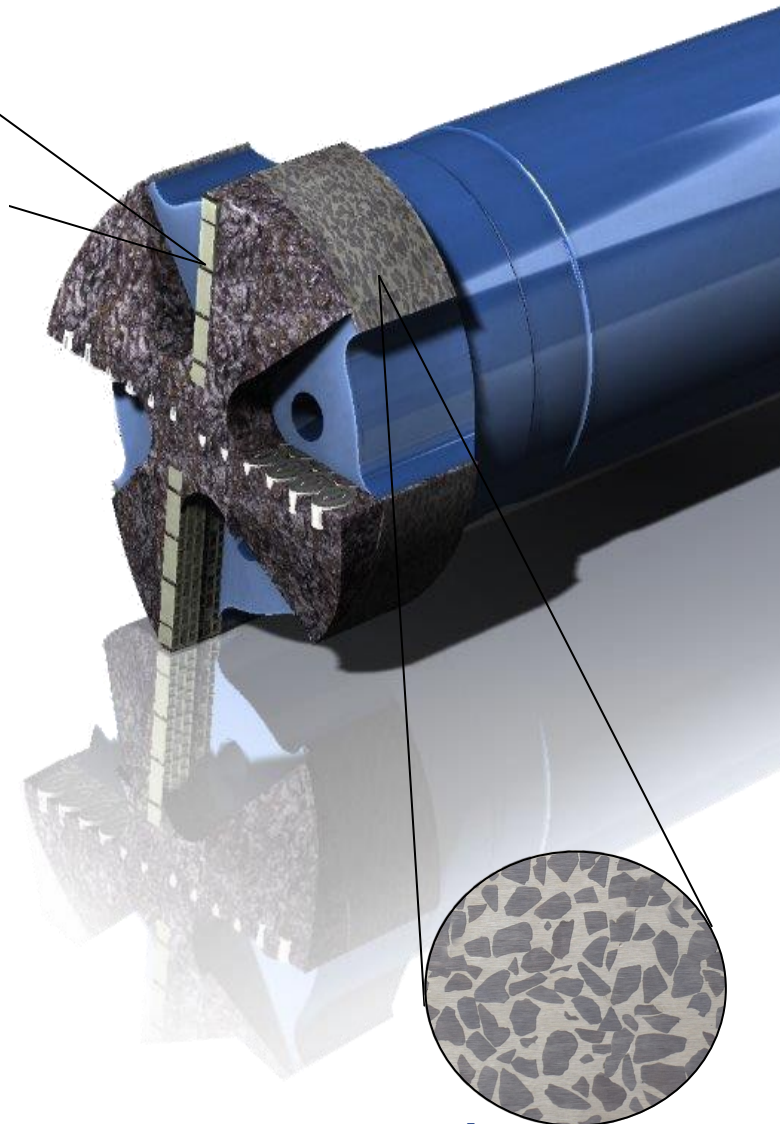
Swordfish tungsten carbide cutting inserts have been designed specifically for multiple chip breaking for downhole milling applications with the option of varying the rake angle.



HF20001 & HF20002 tungsten carbide cutting inserts are part of the fishing insert family and have been designed specifically for multiple chip breaking for downhole milling applications.



Made from premium CW6 cutting grade tungsten carbide, our HF30 **Brand X** Inserts are optimised for use with our QuickTip process with 3 feet placed on the bottom of the inserts for ease of application.



Composite Rod

Supacutt Rod



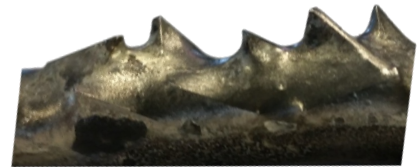
A range of sizes, (the largest fragment size denotes the mesh size of the rod), are then blended to optimize packing density when laid and laying characteristics when combined with high strength nickel bronze brazing alloy (100,000 PSI).

Starcutt Rod



Our "high performance" cutting composite rod. The tungsten carbide has 12 sharp cutting points and is equivalent to 1/4 (6.4mm) mesh size. Composition 55% Starcutt insert, 45% matrix.

Sharkstooth Rod



The tungsten carbide is a tetrahedral shape giving sharp aggressive cutting edges with high strength and is available in one size equivalent to 5/16 (8mm) mesh size.