Milling Tools

The Hydropulsion wide range of Mills are designed for milling several types of obstructions and loose debris contained within the wellbore.
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.

The Hydropulsion wide range of Mills are designed for milling several types of obstructions and loose debris contained within the wellbore. The aggressive cutting inserts our Mills are dressed with ensure high material removal rates resulting in reduced milling times.

Our Hydro-Mill is especially efficient in the removal of Scale & Cement, The design of these incorporates a small contact area that reduces the torque on the motor, reducing stalling.

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

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

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

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

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

Hydro Mill
- Tungsten Carbide Inserts ensure high material removal rates
- Design allows for a reduced contact area resulting in a lower torque consumption reducing stalling

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

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

Taper Mill
- Available with straight or spiral blades
- Available as a long or short version
- Customised hardfacing combining Supacutt with specialised Tungsten Carbide Inserts

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**MILLING INSERTS**

**Oval**
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.

**Brand X**
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**

- **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.

- **Starcut 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% Starcut insert, 45% matrix.

- **Supacut 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).

**DOWNHOLE TOOLS**

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