

Curve Tooth cutter heads

Capable of handling the toughest and hardest soils

Royal IHC has extended its cutter head portfolio with a new Curve Tooth system that promises to deliver the best value for money in the market.

The general shape of the cutter head is the result of a long lasting scientific research for maximising the performance of a cutter head. Best practices from the field combined with the results of this research resulted in a long list of the most sought-after features for a state-of-the-art cutter head and makes this cutter head the new standard in the market.

Features

- strong teeth to be able to penetrate hard soils
- strong adapters to withstand all cutting forces
- durable teeth and adapters
- easy changing of the teeth
- hammerless locking
- teeth as light as possible
- a locking mechanism that is covered, preventing contact with soil
- adapters protected against abrasive action of the soil.

Curve design inspired by nature

The cutting segment of the newly designed teeth show an elegant curvature inspired by nature. The cutting segment of the whole tooth is based on a specific snail's tooth found to be highly effective since it is used to scrape food from rocks. This delicate creature has found a way of surviving and thriving while attacking one of the hardest materials in nature. The curved teeth have a small cutting surface and high penetration force so achieve optimal strength versus wear resistance.

Benefits

- stronger and more compact than straight teeth
- able to withstand higher strains and stresses with the smallest possible cross-sectional area of the teeth
- the cutting element of the teeth is self-sharpening
- fixation of the teeth to the adapter is maximised by a curvature of the tail preventing unnecessary resistance and wear.



Wear is always perpendicular to the cutting area. Although worn almost halfway, the teeth show a sharp and crisp edge.

Extra strong Steel

As well as the intrinsic strength of the Curve Tooth realised by the curved design, the material also contributes to their longevity. The material of the teeth and adapters is based on a specialised material used in the dry mining industry for a long time and optimised for the particulars of dredging, namely operating while immersed in salt water.

This makes the teeth suitable for the most demanding application of dredging hard rock and also offers a long lifetime in all other applications.

User friendly

The locking mechanism is designed with safety in mind following the current standards in the market of hammerless operation. It is integrated inside the tooth, so there is no contact between soil or other abrasive materials and the locking.

The 'locked-in' locking enables the teeth to be easily replaced by one person. The locking mechanism is inside the tooth, so when the cutter ladder is lifted to change the teeth, it can be carried out quickly and easily. Tooth exchange is faster with the Curve Tooth system to meet market demand.

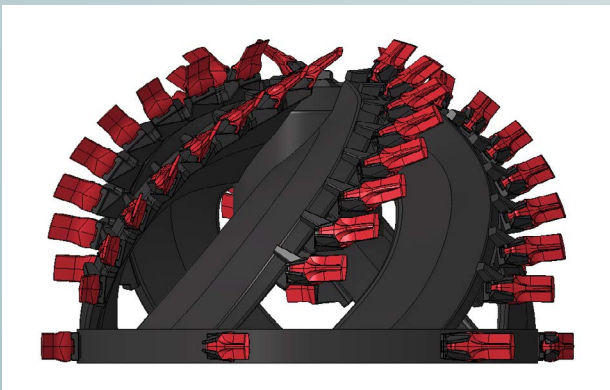


**'Looking sharp,
staying sharp'**

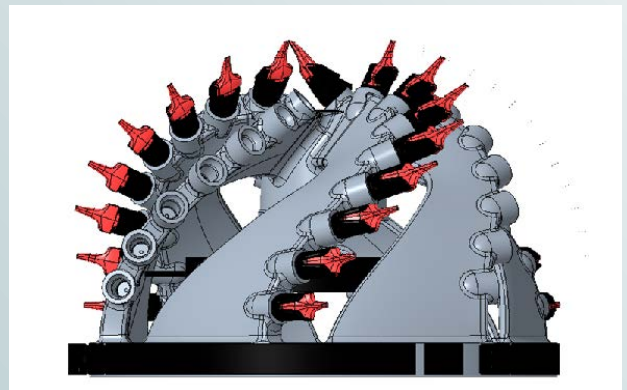
Single-cast body

The cutter body is cast as a single piece including back ring, arms and hub, which makes it intrinsically strong and durable, as there are no weak points resulting from welding. A cutter head is a complex shape and demands quite some ingenuity to realise as a single-part cast. The body of the Curve Tooth cutter head is one piece of continuous material, unlike other versions where the back ring, arms and the hub are welded together after casting.

To meet customer requirements, the body can also be manufactured traditionally as a welded construction if preferred.



Cutter head with teeth connected to WING adapter



Cutter head with teeth connected to SHANK adapter

SHANK type	Back ring inside	Cutter Power	Teeth system	Adapter system	weight
30 CT	2,030mm	1,400kW	Curve Tooth	Shank adapters	9,000kg
40 CT	2,330mm	2,200kW	Curve Tooth	Shank adapters	12,000kg
50 CT	2,430mm	3,500kW	Curve Tooth	Shank adapters	18,000kg
60 CT	2,600mm	5,000kW	Curve Tooth	Shank adapters	22,000kg
70 CT	2,800mm	6,000kW	Curve Tooth	Shank adapters	26,000kg
WING type					
30 CT-w	2,030mm	1,500kW	Curve Tooth	Wing adapters	8,500kg
40 CT-w	2,300mm	2,500kW	Curve Tooth	Wing adapters	11,000kg
50 CT-w	2,600mm	4,000kW	Curve Tooth	Wing adapters	17,000kg
60 CT-w	2,800mm	6,000kW	Curve Tooth	Wing adapters	22,000kg

Which cutter head is right for your project?

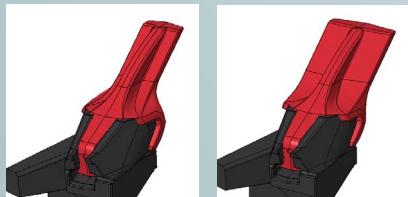
Application of Curve Tooth cutter heads

Curve Tooth cutter heads can be used with all soil varieties, ranging from easy flowing sand and silt to stiff clay types and hard-packed sand. They are especially effective in light and heavy-duty rock applications.

To efficiently and cost-effectively deploy the Curve Tooth cutter head in these conditions, a wide range of optional parts and peripherals is available. These vary from several types of cutting equipment (flared or narrow chisels and pick points) to knock-off blocks on the contour ring, and from stone gratings and grizzly bars to all sorts of wear protection on the cutter head body.



Wide chisel, narrow chisel and pick point connected to SHANK adapter



Narrow chisel and wide chisel connected to WING adapter

Options and configurations

Curve Tooth cutter heads are available in two types of applications. For medium to hard soils such as hard-packed sand or hard rock, the cutter head with shank adapters is preferred. This is available for 1,400kW up to 7,000kW.

For soft and medium hard soils up to packed sand, the Curve Tooth cutter head with wing adapters is preferred. This is available in a range fit from 375kW up to 8,000kW.

Both variants use the same design of Curve Teeth available as pick points, and narrow or flared chisels.