



**FIRMTECH**

**FIRMTECH DRILLING EQUIPMENT**

Piling Roller Bit

[www.firmtechpiling.com](http://www.firmtechpiling.com)



## MH-1

Entrance level roller bit, good for the less challenging formation and smaller pile diameter

- INSERTS: 52 pieces
- **INSERT SIZE: 13.7mm**
- **CONE SIZE: 133mm**
- BODY WIDTH: 92mm
- **BODY MATERIAL: 20CrNiMoA**
- BEARING: Journal bearing
- SEALING: Double sealing
- GREASE: Vacuum grease system
- FIXING: Welding



## MH-2

Traditional body most used in the oil and gas industry

- INSERTS: 52 pieces
- INSERT SIZE: 14mm
- CONE SIZE: 139mm
- **BODY WIDTH: 125mm**
- BEARING: Journal bearing
- SEALING: Double sealing
- GREASE: Vacuum grease system
- FIXING: Welding



## MH-3 Flagship

FIRMTECH flagship model, the most popular and best-selling product in the hard rock piling

- INSERTS: 52 pieces
- INSERT SIZE: 14mm
- CONE SIZE: 139 mm
- BODY WIDTH: 92mm
- BEARING: Journal bearing
- SEALING: Double sealing
- GREASE: Vacuum grease system
- FIXING: Welding



## MH-3H

12-1/4" big size for the large OD borehole, more than 2000mm

- **INSERTS: 74 pieces**
- **INSERT SIZE: 17mm**
- **CONE SIZE: 168 mm**
- **BODY WIDTH: 131mm**
- BEARING: Journal bearing
- SEALING: Double sealing
- GREASE: Vacuum grease system
- FIXING: Welding



## MH-3R

The holder connection for quick replacement, works in the regular core barrel

- INSERTS: 52 pieces
- INSERT SIZE: 14mm
- CONE SIZE: 139mm
- BODY WIDTH: 92mm
- BEARING: Journal bearing
- SEALING: Double sealing
- GREASE: Vacuum grease system
- **FIXING: Holder for quick fix**



## MH-3B

Bolt type for quick replace, more stable than MH-3R, but require special core barrel

- INSERTS: 52 pieces
- INSERT SIZE: 14mm
- CONE SIZE: 139mm
- BODY WIDTH: 92mm
- BEARING: Journal bearing
- SEALING: Double sealing
- GREASE: Vacuum grease system
- **FIXING: Bolt plate for quick fix**



### Bearing Alloy Applied

Reduce the heat of the bearing, more working life



### Double Sealing

Besides the traditional O ring sealing, we use a highly precise machine to make another metal sealing before the O ring to prevent the cutting wearing of the ring.



### Vacuum grease system

Remove the traditional rubber material, keep consistent internal pressure to lubricate the bearing

Proudly announce our roller bits are manufactured with

### Premium 15MnNi4 Material



Chisel  
70-100 Mpa



Conical  
120-200 Mpa



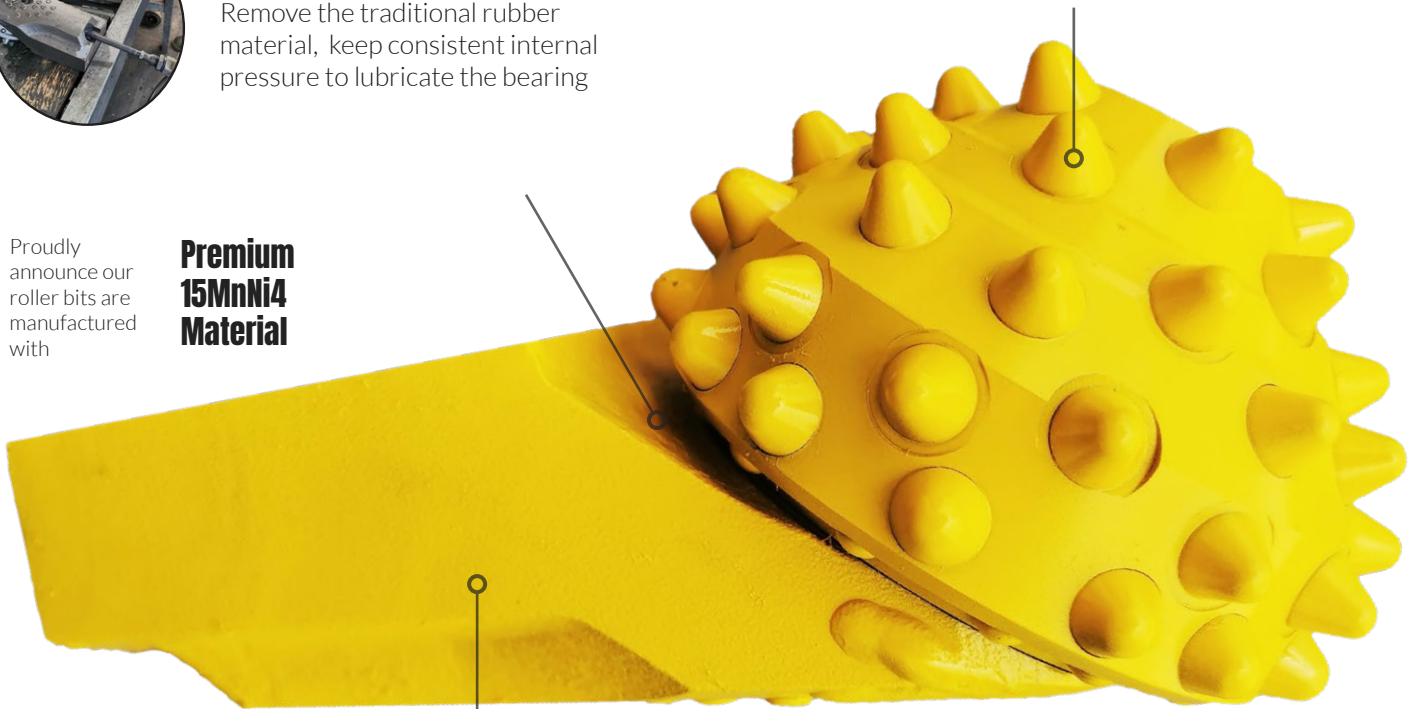
Bullet  
130-250 Mpa



Spherical  
130-280Mpa

### 52 pieces large inserts

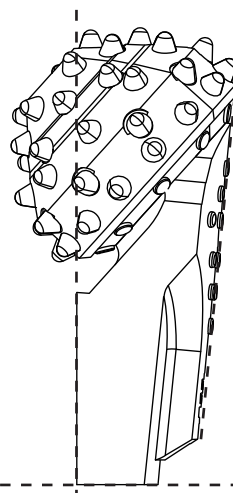
It is called full covered inserts layout. The maximized insert coverage leaves no blind point during the fieldwork. Increase the penetration speed and working life.



### Auto Position Leg

The roller bit adapts FIRMTECH 4th generation leg. The leg is specially designed for piling welding.

The leg is preloaded at the right welding angle. There is no need to adjust again when doing the welding, no matter in the workshop or on the field.



Automatic degree, when simply put on the ground.







## MS ROLLER BIT CORE BARREL

A clear bottom is always the top priority for a good performance roller bit.

FIRMTECH HS ( high spiral) core barrel is with highest 70mm continuous spiral to remove the cuttings and debris from the bottom.

With the strongest MH-3 roller bit, you can expect 30-50% both penetration speed and working life increase.



### Kelly Box Reinforce

We placed an additional 4 enforcement bars around the kelly box to make the kelly box more durable, and reduce the crack possibilities.

### 70mm High Spiral

With a special design, we can make the 70mm tall spiral to remove the bottom cuttings.

The height of the spiral is more than doubled compared with the regular design(30mm).

### 2mm tolerance roundness body

We care about the roundness a lot. It can only be round enough to have a concentric core barrel, which is the top point for a good performance roller bit core barrel.

### Taller and Firmer Bottom Ring

To replace the roller bit more times, we have put more material to increase the height of the bottom ring. It will remove the deformation of the bottom ring both when working and roller bit replacing.

### FIRMTECH MH-3 Roller Bit

With million of sales, FIRMTECH MH-3 proven to be most reliable and best performance roller in the market. Its patented automatic angle will help you position the roller bit with ease and confidence.



### Self adjustment Cutting removal Blade

To remove the most bottom cuttings, we design the self-adjustment blade. This blade with wear out together with roller bits to always keep itself to the same level.





# FIRMTECH



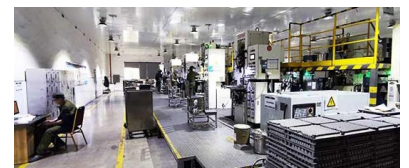
FIRMTECH ( Cangzhou Firmtech Drilling Equipment Co., Ltd.) is a roller bit, bullet teeth, core barrel manufacturer in Hebei Province, China.

The company was established in 2010 and positioned itself as a leading expert in the piling rock drilling industry.

With years of dedicated work, the company earns its trust in both domestic and overseas markets. The company has a good reputation in Shenzhen, Guangzhou, and rapidly expands products in South Asia, the Middle East, and Europe.

“Deep knowledge of industry pain” is our core value. We believe our strength is from consistently learning the customer’s problem and application challenges.

With deep industry understanding, the company develops a full range of roller bits, bullet teeth, and core barrels for all kinds of piling applications.



## Hot Selling Bullet Teeth





How to weld roller bit?  
How to increase the penetration  
speed?

Scan the QR code to get the latest  
knowledge about hard rock piling

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