



FIRMTECH



PDC Reamer | PDC Bit | Tricone Hole Opener | Tricone Bit

H.D.D.



Customization is available to suit your specific formation.

PDC Reamer

PDC reamers are regarded as much quicker in penetration speed compared to tricone reamers for specific ground formations, up to 180 MPa. With no moving parts and being a single solid body, it minimizes drilling risks. Moreover, it is much easier to be repaired by clients or any nearby tool manufacturers.

- Range: 7 - 5/8" to 32"
- Blade counts: 3, 4, 5, 6, 7 (The more blades there are, the more stable the reamer is and the more suitable it is for harder rock.)
- Cutter size: 13, 16, 19 (The larger the cutter size, the softer the formation it is suitable for.)
- Cutter layout: Single - row cutter, double - row cutter
- Fix Type: Fixed in a single body, replaceable type
- Material: AISI 4145H fully heat - treated alloy steel



Replaceable Bolted Type

Achieving a quick and simple cutter blade change-out is possible by using hand tools on site and in the field. In a short span of time, the tool can be renewed with replacement blades, enabling your operation to resume drilling quickly.

One body can fix difference sizes blades. You are use body for multiple uses.



The blade can be quickly replaced with different sizes.



Tricone Hole Opener

Tricone hole openers are widely utilized in the HDD (Horizontal Directional Drilling) industry. They are the most versatile tools for drilling in hard rock formations such as shale, limestone, granite, and basalt. These hole openers require less torque, enabling relatively small machines to handle larger jobs.

Available sizes range from 8 inches to 48 inches.

OD Size	Roller Bit Size Recommended	Rollers No. Recommended	
8"	203mm	5-7/8"	3
10"	254mm	6"	3
12"	305mm	8-1/2"	3
14"	356mm	8-1/2"	3
16"	406mm	8-1/2"	4
18"	457mm	8-1/2"	5
20"	508mm	8-1/2"	5
22"	559mm	8-1/2"	6
24"	610mm	8-1/2"	7
26"	660mm	12-1/4"	5
28"	711mm	12-1/4"	5
30"	762mm	12-1/4"	6
32"	813mm	12-1/4"	7
34"	864mm	12-1/4"	7
36"	914mm	12-1/4"	8
38"	965mm	12-1/4"	8
40"	1016mm	12-1/4"	9

Replaceable Tricone Hole Opener

FIRMTECH's replaceable tricone hole opener can save time. Replacing the tricone cutters is much faster compared to the welding type. Moreover, with the force - stable 3 - point bolt design, combined with anti - loosening springs and clips, it becomes highly reliable during operation.



Upto more than 40% inserts in a single cone



8-1/2
52 pieces inserts



12-1/4
74 pieces inserts



The anti-loosening spring, combined with the bolt clips, makes it highly reliable during the operation.



PDC Bit

PDC bits used as HDD pilot bits are becoming more and more common nowadays. When it comes to soft and medium - soft formations like sandstone and limestone, the penetration speed can be several times faster than that of conventional tricone bits. FIRMTECH PDC Pilot bits are specially designed for HDD applications. They incorporate the most efficient cutters and blade designs to maximize the working life.

- Size: 5-1/2" to 6-1/2"
- Cutter: 13mm/16mm/19mm
- Blades: 3-7 blades
- Connection: API REG
- Supporting HDD Machine: JT4020AT, JT60AT, JT100AT and D36x50DR etc.



3 Blades



4 Blades



5 Blades



6 Blades



7 Blades



Tricone Bit

Tricone bits are the most versatile in the HDD (Horizontal Directional Drilling) industry. They are suitable for a wide range of rock hardness, from 30 MPa to as high as 300 MPa. They are commonly used in shale, limestone, granite, and basalt formations. FIRMTECH tricone bits have specially increased side hard facings and the bearing system for HDD applications, making them more durable and giving them a longer working life.

- Size: 6", 6-1/2", 8-1/2"
- Bearing: Journal bearing
- Sealing: rubber sealing, metal sealing
- IADC code: 137, 517, 537, 617, 637



MEET HARD ROCK, GET



FIRMTECH (Cangzhou FIRMTECH Drilling Equipment Co., Ltd.) is a manufacturer specializing in pdc reamer, pdc bit, tricone bit, tricone hole opener, roller cutters, piling rollers, round shank chisel.

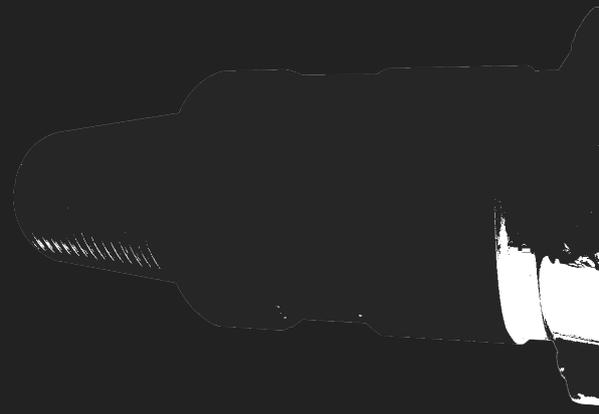
Established in 2010, the company positions itself as a leading expert in the piling and HDD rock drilling industry.

Through years of dedicated work, FIRMTECH has earned the trust of both domestic and overseas markets. It enjoys a good reputation in Shenzhen and Guangzhou and is rapidly expanding its products in South Asia, the Middle East, and Europe.

“Deep knowledge of industry pain” is FIRMTECH’s core value. The company believes that its strength stems from consistently learning about customers’ problems and application challenges.

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





How to weld roller bit or a bullet teeth?
How to increase the penetration speed?

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

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