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The Driller's Choice

HDD SYSTEMS 2024



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MINCON, EST. 1977

Mincon has earned its reputation as The Driller's Choice thanks to nearly five decades of developing world-class rock drilling solutions for a wide range of applications.



EXPERTS ON SITE

Our rock-drilling expertise doesn't stop at manufacturing. Around the world, our highly qualified teams work closely with customers to tailor their requirements to available drilling platforms and ground conditions, while also accounting for application-specific requirements. Importantly, feedback from every drill site is provided to our design engineers, informing the cycle of continuous improvement.



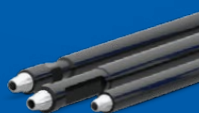
SOLUTIONS FOR EVERY APPLICATION

Our products can be found on drill sites around the world, in the blasthole, exploration, geotechnical, water-well, and geothermal industries. At each of those projects, drillers have insisted on using Mincon tools for their superior reliability, durability, performance, and efficiency.



ENGINEERED EFFICIENCY

For us, efficiency means drilling faster while using less fuel and maintaining productivity throughout the useful life of a product. We want our customers to get the best performance out of their drilling solution. We achieve this with our own, proven designs; precise manufacturing; and proprietary heat-treat processes, all of which result in components that have tight tolerances, as well as tailored surface and material properties that ensure longer life.



EUROPE AND MIDDLE EAST REGION

All European Countries
Middle East Countries

AMERICAS REGION

North and South America

POINTS OF PRESENCE

With nine global factories, a growing network of Mincon customer service centres, and more than 200 distributors, we have the international presence that our customers need. We manufacture within region to meet local customer demand, while providing service and support to ensure customers achieve optimum productivity from their assets.

ASIA PACIFIC

Australia, New Zealand,
Pacific Islands

AFRICA REGION

African Continent

COMPREHENSIVE PRODUCT RANGE

Our ambition is always to offer customers a comprehensive range of drilling tools that will drill faster and last longer. Individually, Mincon products offer incremental savings. Together, a complete Mincon drill string will deliver tangible savings through higher penetration rates, unparalleled durability, rock-solid reliability, and reduced strain on ancillary components.



HDD SYSTEMS RANGE

The Mincon range of HDD systems use proven technology to reliably deliver fast, efficient performance – helping you lower costs and deliver on time.

DRILLERS BENEFIT FROM MINCON'S WORLD-CLASS TECHNOLOGIES, INCLUDING:

- » **HIGH-FREQUENCY HAMMER CYCLE:** outperform the competition in hard rock conditions with a hammer that produces smaller chips that are easier to remove from the borehole. This also allows for better steerability in and out of rock formations, as well as a lower impact on electronics and the drill string.
- » **ADAPTABILITY:** our HDD systems can easily be used with conventional dirt drilling rigs.
- » **COMPATIBILITY:** Mincon HDD tools work with industry-standard locating electronics from DCI, Subsite, and Umag.
- » **GLOBAL AVAILABILITY:** our partnership with Vermeer Corporation brings Mincon HDD systems to more than 220 Vermeer Industrial dealers around the world.



GLOBAL PARTNERS



Two of the HDD industry's leading equipment and tooling manufacturers, Mincon and Vermeer, have a distribution alliance to expand contractors' access to quality rock tooling worldwide.

As part of the agreement, Vermeer dealers are now the exclusive global* channel for Mincon HDD air hammer systems, HDD pull reaming hammers, HDD oilers, and HDD support equipment.

*Scandinavia region serviced by Mincon Finland.



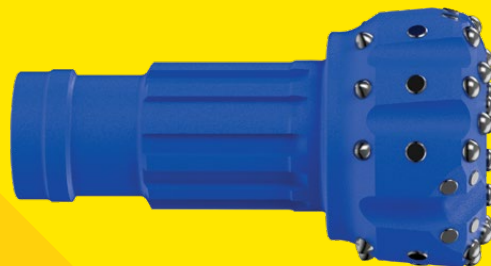
HDD PILOT HAMMERS

Mincon's HDD range starts with our selection of finely-tuned pilot hammers, available in 3.5" (89 mm), 4.5" (114 mm), 5.25" (133 mm), 6.25" (159 mm), and 7.25" (184 mm).

Our HDD pilot hammers are available with a choice of two bit styles, each suited to specific steering requirements and ground conditions, to help you get the most accurate and reliable performance.



Mincon Hammer Model	HDD30	HDD40	HDD50	HDD60	HDD70
Vermeer Drill Rig	D6X6 / D10X15	D20	D23 - D24 - D40	D40 - D60 - D100	D60 - D100 - D130
Bit Size	3.5 inch 89 mm	4.5 inch 114.3 mm	5.25 inch 133.35 mm	6.25 inch 158.75 mm	7.25 inch 184.15 mm
Hammer Diameter	3.03 inch 77 mm	3.54 inch 90 mm	4.06 inch , 4.25 inch 103mm wearsleeve, 108mm sonde housing	5 inch 127 mm	5.75 inch 146 mm
Hammer Length	66.4 inch 1,713 mm	73.5 inches 1867 mm	79 inches 2007 mm	81 inches 2057 mm	82.6 inches , 78.8 inches to backhead shoulder 2098 (to end of API Pin), 2002.5 to backhead shoulder
Hammer Weight	85 lbs 38.6 kg	128 lbs 58 kg	183 lbs 83 kg	306 lbs 139 kg	403 lbs 183 kg
Backhead Thread	2 3/8" API Reg Pin	2 3/8" API Reg Pin	2 3/8" API Reg Pin	3 1/2" API Reg Pin	3 1/2" API Reg Pin
Make-up Torque	2,250 - 3,000 lbf.ft	2,250 - 3,000 lbf.ft	3,000 - 4,000 lbf.ft	3,750 - 5,000 lbf.ft	4,500 - 6,000 lbf.ft
Minimum Air < 250'	400cfm @ 250psi	400 cfm @ 250 psi	750 cfm @ 350 psi	900 cfm @ 350 psi	900 cfm @ 350 psi
Minimum Air > 250'	500cfm @ 350psi	700 cfm @ 350 psi	900 cfm @ 350 psi	1,100 cfm @ 350 psi	1,100 cfm @ 350 psi
Minimum Air < 76.2m	11.3 m3/min @ 17.2 bar	11.33 m3/min @ 17.2 bar	21.25 m3/min @ 24.1 bar	25.5 m3/min @ 24.1 bar	25.5 m3/min @ 24.1 bar
Minimum Air > 76.2m	14.2 m3/min @ 24.1 bar	19.83 m3/min @ 24.1 bar	25.5 m3/min @ 24.1 bar	31.17 m3/min @ 24.1 bar	31.17 m3/min @ 24.1 bar
Air Quality	After Cooled Air Recommended				



PILOT BIT HEAD CONFIGURATIONS

» EXTREME DUTY SLANT

The Extreme Duty Slant pilot bit offers the most aggressive steering ability. Best suited for jobs with significant steering requirements and when transitioning in and out of rock formations.

» MULTI-POINT SYMMETRICAL SLANT

The patented Multi-Point Symmetrical Slant pilot bit offers the best of both worlds, with steering capabilities at the bit face as well as significantly increased gauge-row strength and protection. The MSS pilot bit is suited for jobs with less-aggressive steering requirements, where long runs in solid rock are anticipated.

HDD80PR HAMMER REAMER

Using a high-frequency drilling cycle, the Mincon HDD80PR hammer reamer operates at unmatched rates of penetration in hard rock conditions, while requiring minimal pull and rotation forces.



THE MINCON HDD80PR (HAMMER PULLREAMER) IS AVAILABLE WITH FIVE BIT OPTIONS:

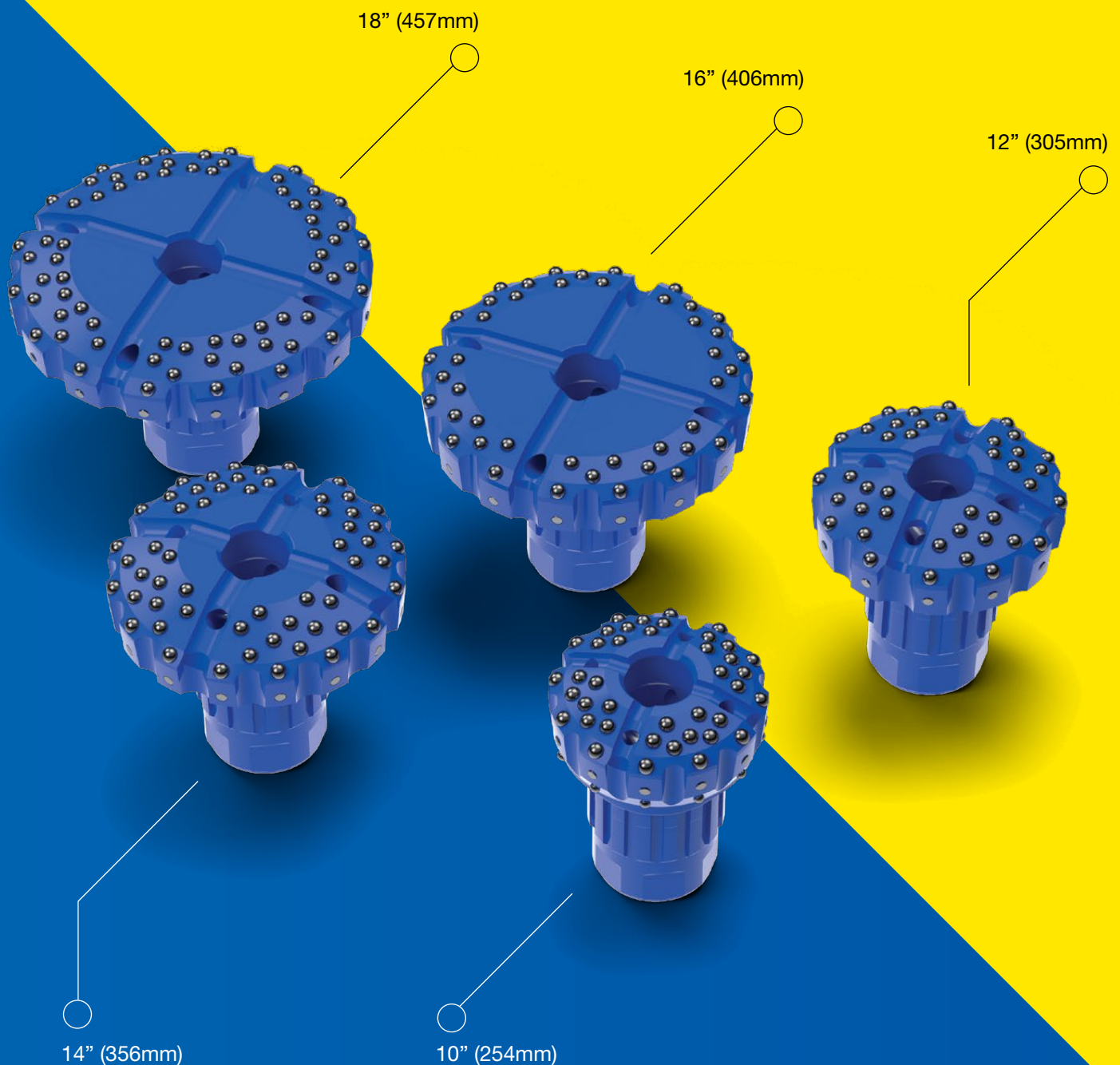
- 10" (254mm)
- 12" (305mm)
- 14" (356mm)
- 16" (406mm)
- 18" (457mm)

Minimum air requirement: 1,250 cfm
@ 350 psi (35.40 m³/min)

In certain situations, additional air may be required to properly evacuate the cuttings from the borehole.

HDDPR REAMER BITS

Mincon drill bits are manufactured using high-quality raw materials from the bit body to the carbide inserts. Our stronger tungsten carbide inserts are available in grades, shapes, and sizes to fit your application.

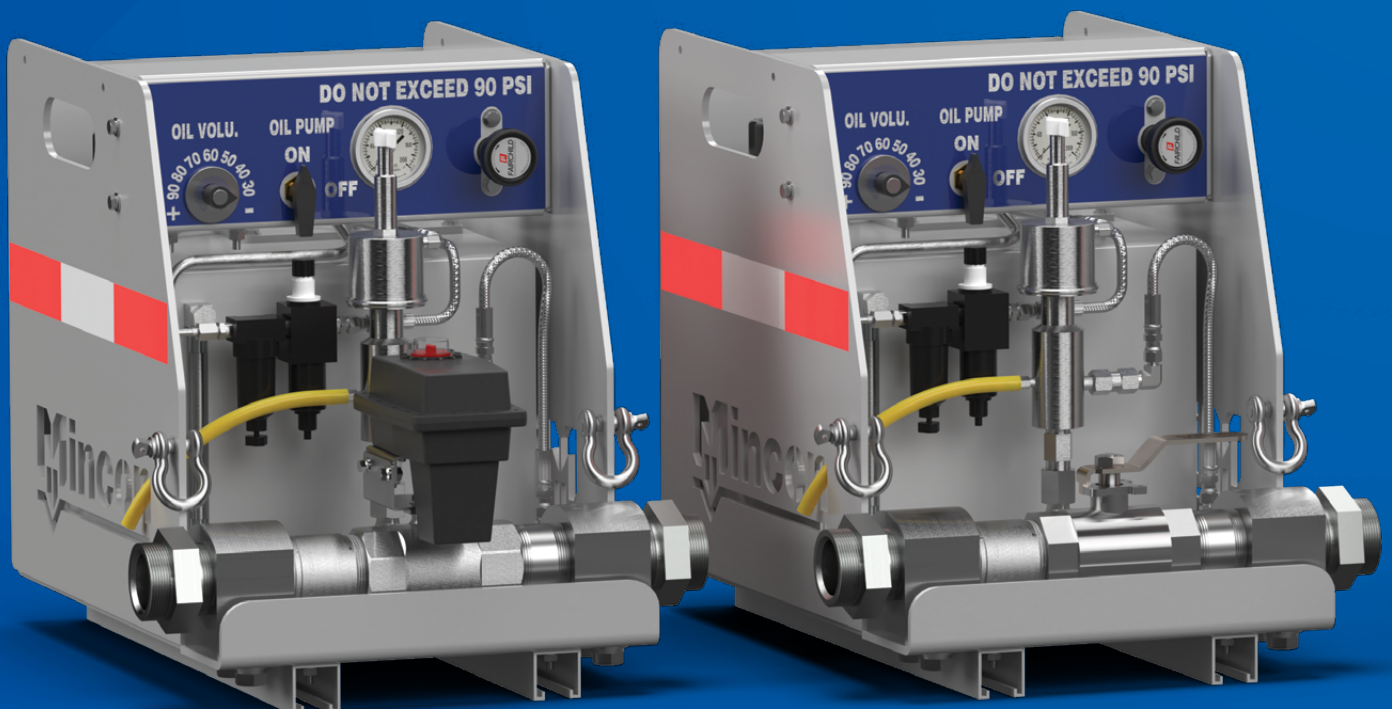


LUBRICATION SYSTEMS

The Mincon manual and remote-controlled oilers introduce rock drill oil into the air-stream to lubricate the internal hammer components during the high frequency drilling cycle.

» OILER CAPACITY

- Oil tank is 7-gallon (26.5-litre) capacity
- Oil rates 2-4 pints/hour (0.95-1.9 l/hour)
- Fluid injection system
- Up to 5 gpm (19 l/min) feed rate





Optional add-on fluid injection system delivers a mixture of water, foam, and/or polymer at a rate of 0-5 gal/min (0-19 l/min) into the air-stream, assisting with dust suppression, lubrication, and removal of cuttings.



MINCON HDD FLUIDS

Hammer lubrication is critical for the operation of your hammer. Not only does it allow your hammer to operate more efficiently, but correct lubrication will also significantly prolong the life of your tools. We offer a range of specifically formulated lubricants designed to work with Mincon HDD systems.

Also available is a comprehensive range of Mincon drilling fluids, including foamers and hole control agents, to ensure every drilling endeavour is a success.



MINCON ENVIROSAFE RDO

- Environmentally safe vegetable oil-based rock drill lubricant.
- Specially formulated to improve performance.
- Reduces friction on internal wear components.
- Designed to work when drilling with water. Does not wash away.

MINCON ENVIROSAFE HOLE CONTROL

- Unique high-performing polymer blend for air drilling.
- Reduces redrilling of cuttings.
- Stabilises the bore hole.
- Improves carrying capacity.
- Helps seal fractured formations.
- Lubricant and torque reducer.

THE COMPLETE PACKAGE

Mincon aims to offer comprehensive product range, allowing drillers to tailor a complete Mincon drilling solution for their application and drilling platform.

Our range includes DTH hammers, DTH drill bits, rotary drill bits, geotechnical and foundation drilling systems, reverse circulation systems for exploration drilling, horizontal directional drilling systems, and drill pipes. Each of these offerings has been designed in-house by Mincon and is manufactured at our state-of-the-art factories around the world.

In addition to our class-leading tools and solutions, we offer customers ancillary equipment for the operation and maintenance of their drill string. This equipment can be installed at customer sites or accessed through Mincon service centres.

We also offer a range of drilling fluids, including Mincon Envirosafe rock drilling oil which ensures the correct lubrication to prolong the service life of DTH hammers. The range includes Envirosafe Foamer and Hole Control, designed to stabilise boreholes in specific ground conditions.

Additional information on the complete Mincon product range can be obtained from your Mincon service centre, distributor, or by visiting www.mincon.com.



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