

# Mincon

# HDD70

"Leaders in Rock Drilling Technology"



## The Mincon HDD Story

In 2002 Mincon, in collaboration with leading industry professionals, started design and manufacturing of a range of pneumatically powered horizontal directional drilling systems to service the trenchless utility industry. Since then the tools have become the benchmark for steerable drilling systems in medium to hard rock where conventional directional drilling systems struggle.

The Mincon Hard Rock range offers the most complete line of steerable hammer systems on the market, covering pilot holes from 3 1/2" (89mm) to 6 1/4" (159mm). With the Mincon Hardrock Support Station and hosing any conventional HDD machine can be converted for rock drilling. The sonde carriage can be easily adapted to your existing locating equipment.

Utilizing "high Frequency Cycle" technology Mincon hammer systems provide many benefits to the contractor. Small chip production and faster material removal from the bit face keeps the bore hole cleaner and reduces the possibility of getting stuck. With less vibration to the drill string you ensure less wear and tear to the rig and locating sonde. Steering capabilities are greatly improved and in head to head tests against other competitor manufacturers the Mincon Hardrock systems out steered in dirt, cobble and solid rock.

Mincon offers the revolutionary Pull Reamer system. Once the pilot hole has been drilled, the pilot hammer and sonde is removed and the pull reamer is attached to the drill string. The pull reamer is then drawn back towards the drill machine and the pilot hole is hammer reamed out to a current maximum of 14" (356mm). This innovative reaming method is the fastest way to ream a rock bore and is vastly superior to conventional methods in all rock conditions.

The philosophy at Mincon is to provide "World Class" products, training, service and support. We like to think that we are with you from beginning to end. The Mincon Hardrock systems are the only systems available that can offer the contractor the peace of mind that comes with superior performance, reliability, innovation and complete support. Be wary of imitators that promise the world but just can't deliver.

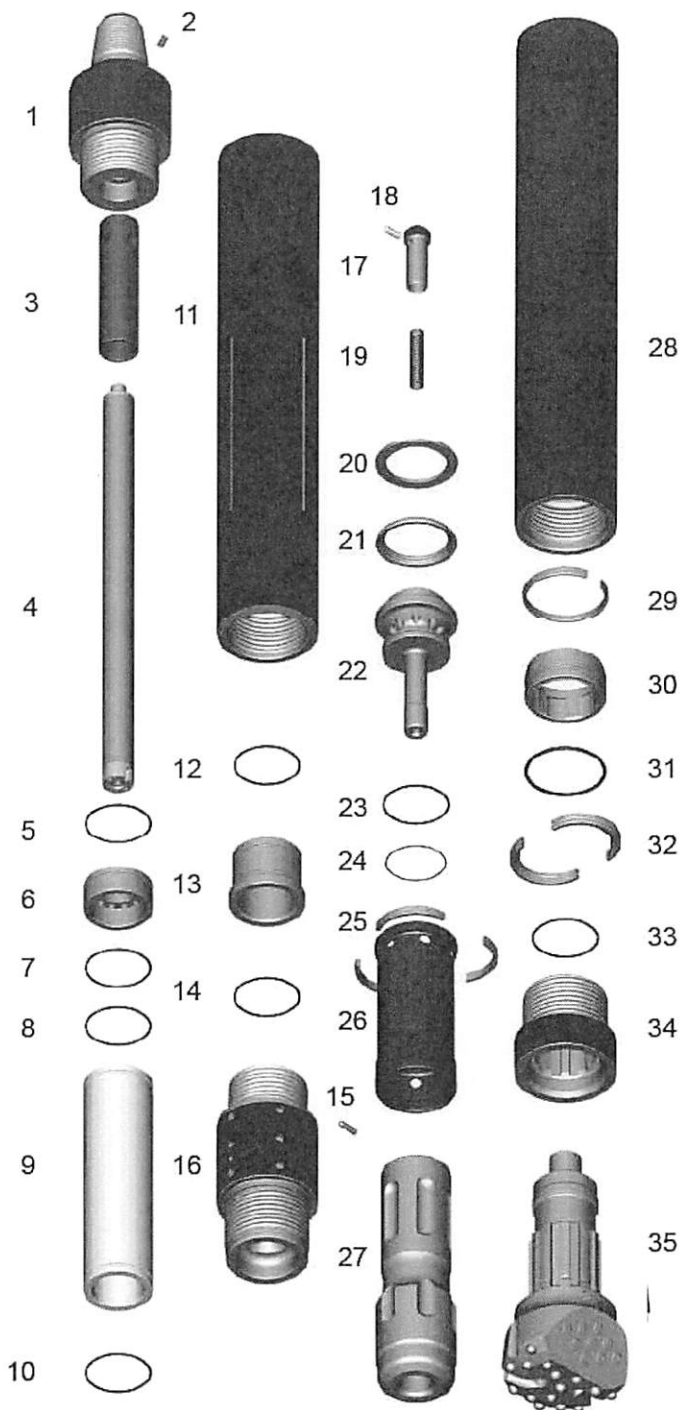
## Features:

- Dual steering point design incorporating slanted drill bit and 2° bent sub provides more responsive steering capabilities while transitioning in and out of rock formations.
- High frequency hammer cycle transmits less vibration that can be detrimental to sensitive electronics. Rock formations fracture into smaller pieces which are easier to flush out of the bore hole. Less Stress Transmits to pipe joints and gearbox assembly reducing maintenance requirements to drill. Provides the most effective steering in any pneumatically powered HDD system.
- High pressure/high volume compressed air powers drilling operations and requires minimal torque and feed pressure loads on drill machine increasing overall life of drill.
- Shorter body design compared to competitive models allows for easier steering in the bore hole and less rotational stresses on hammer body.
- Existing locating electronics (DCI, Sub SITE, or WIRELINE) can be used with no additional cost to the contractor.
- Support Station delivers compressed air mixed with a water/polymer (3-5 gal/min) and rock drill oil (2-4 pints/hr) to operate the drilling cycle resulting in minimal environmentally friendly clean up. Can be used on environmentally sensitive locations using biodegradable rock drill oils.

### HDD70 Hard Rock Drilling Systems Contains:

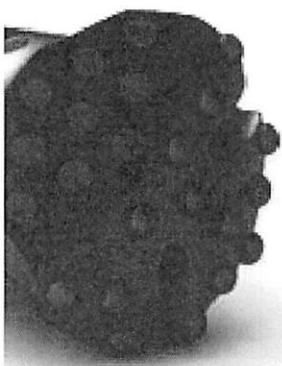
- Complete Hammer
- Sonde Carriage
- 4 x Safety Whip Checks
- 20 Foot High Pressure Air Hose
- 30 Foot High Pressure Air Hose
- 40' Clear Water Supply Hose
- Support Station
- TriLite Valve Controller with connectors
- Water Hose
- 2 x HDD70 Slant Drill Bit
- Sonde Alignment Tool
- Sonde Torque Wrench
- 4 x air couplers

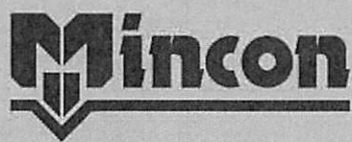




# MINCON HDD70 PARTS LIST & SPECIFICATION

Item	Description	Part No.
	Mincon HDD70 Hammer	MHD601AS01
	Sonde Housing Assembly	MHS601AS01
1	Sonde Housing Backhead	MHS501BH01
2	Air Diverter Plug (Solid)	MHS409DP01
	Air Diverter Plug (1/8" Orifice)	MHS409DP02
3	Sonde Spacer	MHS402SS01
4	Sonde Carriage	MN585
5	O Ring	MHS621OR01
6	Diverter	MHS605DV01
7	O Ring	MHS621OR01
8	O Ring	MHS621OR01
9	Sealing Sleeve	MHS606SL01
10	O Ring	MHS621OR01
11	Sonde Housing Sleeve	MHS604SH01
12	O Ring	MHS621OR01
13	Carriage Guide	MHS607CG01
14	O Ring	MHS62OSR01
15	Locating Pin	MHS608LP01
16	Bent Sub	MHD601BH01
17	Check Valve	MB502CV01
18	Choke	MB506CH01
	Choke 1/8" (3.2mm)	MB506CH02
	Choke 3/16" (4.8mm)	MB506CH03
19	Spring	MB503SP01
20	Steel Make Up Ring	MB604SM01
21	Lock Ring	MB605LR01
22	Air Distributor	MB607DR01
23	O Ring	MB621OR01
24	O Ring	MB623OR01
25	Seating Ring	MB609SR01
26	Inner Cylinder	MB608IC02
27	Piston	MB610PN01
28	Wear Sleeve	MHD611WS01
29	Piston Retaining Ring	MD612PR01
30	O Ring	MD621OR01
31	Aligner	MHD613BB01
32	Bit Retaining Ring	MHD614BR01
33	O Ring	MHD615CK01
34	Chuck	MHD615CK01
35	Bit	
Hammer Outside Diameter		5.75" 146mm
Bit Size		7.5" 190mm
Backhead Spanner Flat Size		5.28" 134mm
Hammer Length (Less Bit)		76.8" 1951mm
Bit Shank Type		HDD70
Backhead Thread		3 1/2" A.P.I. Reg. Pin
Weight (Less Bit)		349 Lbs 158.6 Kgs





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