



CHANGSHA DTH DRILL CONSTRUCTION MACHINERY CO.,LTD.



WHATSAPP



WECHAT

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CS DRILL DRILLING TOOLS PRODUCT MANUAL

CHANGSHA DTH DRILL CONSTRUCTION MACHINERY CO., LTD

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Note: Photographs and illustrations, parameters are for reference only and do not represent the standard version of the equipment. The company reserves the right to make changes without prior notice. For the latest information, please contact us.

ABOUT CSDRILL GROUP

The King of Drilling Rigs, Make Drilling Simple



Changsha CSDRILL Group was established in June 2021 as a comprehensive service provider specializing in mining rigs and drilling tools. One of the company's founders is Professor Zhao Mingchun from Central South University, who has been recognized by Stanford University as one of the top 2% scientists in the world for three consecutive years (2022, 2023, and 2024). Under the leadership of Professor Zhao Mingchun, Changsha CSDRILL Group focuses on research in the field of "development and construction of high-performance, high-quality metal materials for extreme environments." This includes research directions such as "heat treatment processes and technologies for high-performance wear-resistant materials in mining machinery," "hydrogen embrittlement, hydrogen-induced delayed fracture, and fatigue properties of high-strength steels," and "preparation, key control processes, and microstructure and performance regulation of ultra-high-strength steels." The company maintains close scientific collaborations with renowned research institutions, including the Institute of Metal Research of the Chinese Academy of Sciences and the University of Queensland in Australia, and jointly trains master's and doctoral students, following a path of integrated industry-academia-research development.

Changsha CSDRILL Group has factories in Xiangtan, Yueyang, Yiyang, and Linyi, with its global sales office located on the entire 13th floor of Building T2 in Changsha Greenland Intercity Space Station. The company's CSDRILL brand products, including reverse circulation drills, core drills, multi-function drills (reverse circulation/core/water well), blasting drills, water well drills, tunnel drills, and drilling tools, are exported to over 80 countries and serve more than 100 mines worldwide.

The products of Changsha CSDRILL Group are suitable for various types of mines, with a focus on drilling solutions for gold, copper, bauxite, coal, and stone mines. They are widely adaptable to harsh environments such as plateaus, permafrost, and rainy regions. The company provides one-stop drilling solutions for exploration, blasting, mining, oil wells, slope protection, anchoring, tunneling, and pile foundation construction (including solar energy applications).

Changsha CSDRILL Group is committed to becoming the king of drilling rigs, making drilling simple!

Welcome to visit our factory!

BUSINESS AND PRODUCTION

01

Our global sales headquarters is strategically located on the 13th floor of the Greenland Changsha Intercity Space Station T2 building.

02

CSDRILL Group operates state-of-the-art manufacturing facilities in Xiangtan, Yueyang, Yiyang, and Linyi.

潜钻集团 CSDRILL GROUP



01 Sales Headquarters



02 Manufacturing Factory (Drilling Rig)



02 Manufacturing Factory (Drilling Tools)



ENTERPRISE STRENGTH



Top 2% Global Scientists

2022、2023 and 2024 Top 2% Global Scientists Selected by Stanford University in the United States.

20TH

20+Yrs Experience

20+ years of production experience of DTH drilling tools.

One Shop



Online Shop

One-stop Solution

water well drilling machines, coring drilling machines, reverse circulation drilling machines, tunnel drilling machines, and drilling tools.



Key Projects in Hunan

The new factory is a key project in Hunan Province.



3A Credit Certification

Certifies 3A credit by People's Bank of China.



School enterprise cooperation

Research and development team of School of Materials Science and Engineering, Central South University.



BUSINESS SCOPE

80⁺

CSDRILL Group's drilling rigs and drilling tools are exported to more than 80 countries and can fully adapt to a variety of extreme climatic and geographical conditions such as permafrost, plateau altitude, and tropical rainy season.

100⁺

CSDRILL Group providing one-stop drilling service solutions for more than 100 gold mines, copper mines, bauxite mines and other mines.



The King of Drilling Rigs
Make Drilling Simple



Own Factory

20 years of experience in professional drilling rig R&D and manufacturing.



Customized

A variety of drilling rigs can be customized, including core drilling rigs, reverse circulation drilling rigs, blasting drilling rigs, tunnel drilling rigs, water well drilling rigs, etc.



Production Line

We have a dedicated production and processing line, which is equipped with several CNC machine tools and advanced guide rail grinders, large gantry planers, vertical machining centers, horizontal machining centers and welding robots.



Technical Support

We are online 24 hours a day to provide professional drilling rig knowledge answers and any consulting services.



01

DTH HAMMER

What is DTH Hammer ?

DTH Hammer has a wide range of use in all kinds of hard and abrasive rocks following features:

1. New products designed based on mining condition in china, improving by advanced technology from global market.
2. Superior materials, advanced process guaranteed quality.
3. Faster drilling rate.
4. Hardness can be enhanced to expand the lifespan of hammer, and lower the cost.
5. Huge impulse with low consumption of electricity.
6. The modern theory is adopted in the structural design, which makes the stress.
7. wave duration longer, the stress amplitude is lower, and the piston life is long.

The Application of DTH Hammer

DTH hammers are used for blast hole drilling and blasting, mainly applied in Mining. Marble quarry or well drilling and other construction projects.

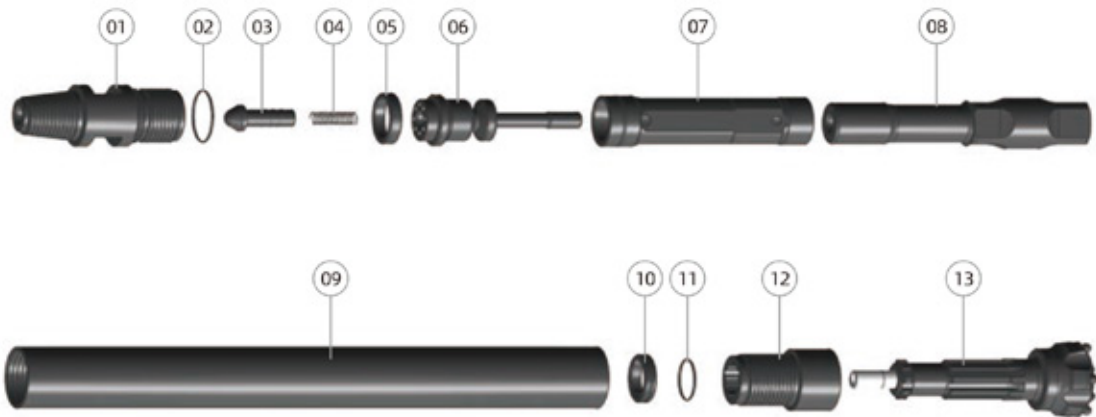
High Air Pressure DTH Hammer With Foot Valve

The main features are as following:

- Valveless air distribution. More reliable.
- Simple design of the piston.long life span.
- More efficient energy transfer,faster drilling speed,lower air consumption and lower oil consumption.
- Fewer internal parts,simple structure,long life span,less failure and easier to maintain because all the parts are heat treated.
- Easy to disassemble because the top sub,the drive chuck and the external cyinder are connected by multiple steps thread.



DHD 3.5

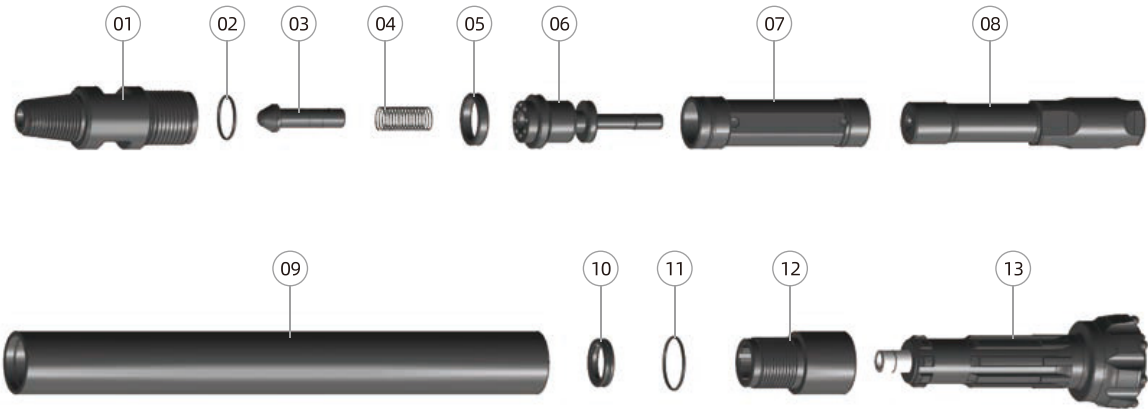


Ref.	Parts	Weight	Part No.	Ref.	Parts	Weight	Part No.
01	Top Sub	4.4 Kg	01-DHD3.5-01	09	External Cylinder	9.5 Kg	01-DHD3.5-09
02	O Ring	0.01 Kg	01-DHD3.5-02	10	Stop Ring	0.1 Kg	01-DHD3.5-10
03	Check Valve	0.2 Kg	01-DHD3.5-03	11	O Ring	0.01 Kg	01-DHD3.5-11
04	Spring	0.02 Kg	01-DHD3.5-04	12	Drive Chuck	2.1 Kg	01-DHD3.5-12
05	Rubber Buffer	0.02 Kg	01-DHD3.5-05	13	Drill Bit		01-DHD3.5-13
06	Valve Seat	1.4 Kg	01-DHD3.5-06				
07	Inner Cylinder	1.7 Kg	01-DHD3.5-07				
08	Piston	5.6 Kg	01-DHD3.5-08				

Specification Parameter

Length(Less bit)	Weight	Outer diameter	Connection Thread	Bit Shank	Hole Range
928mm	25 Kg	φ82 mm	API2 3/8"REG	DHD3.5	φ90-φ110mm
Working pressure		Recommended rotation speed		Air Consumption	
				1.0Mpa	1.5Mpa
1.0-1.7Mpa		30-60r/min		4.5³/min	8.5m³/min

DHD 340

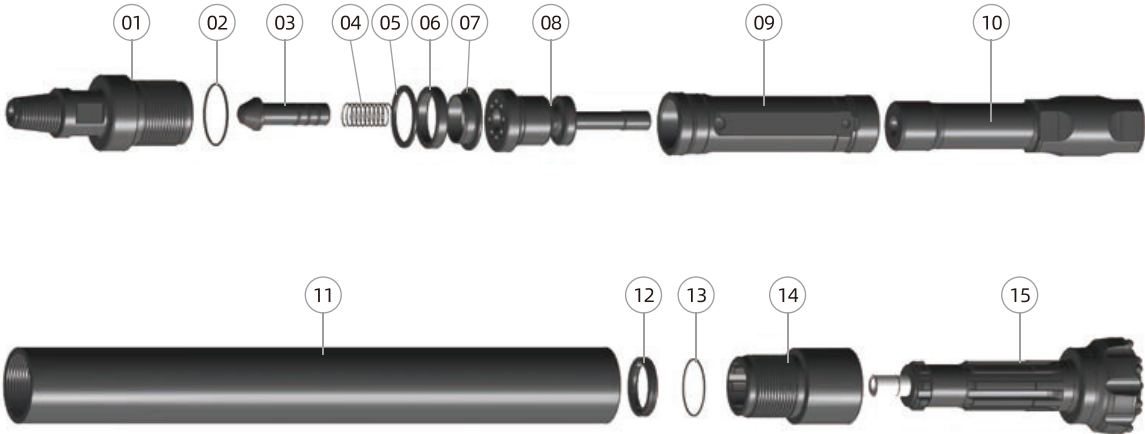


Ref.	Parts	Weight	Part No.	Ref.	Parts	Weight	Part No.
01	Top Sub	8.8 Kg	01-DHD340-01	09	External Cylinder	15.9 Kg	01-DHD340-09
02	O Ring	0.01 Kg	01-DHD340-02	10	Stop Ring	0.2 Kg	01-DHD340-10
03	Check Valve	0.46Kg	01-DHD340-03	11	O ring	0.01 Kg	01-DHD340-11
04	Spring	0.04 Kg	01-DHD340-04	12	Drive Chuck	3.7 Kg	01-DHD340-12
05	Rubber Buffer	0.2 Kg	01-DHD340-05	13	Drill Bit		01-DHD340-13
06	Valve Seat	2.1 Kg	01-DHD340-06				
07	Inner Cylinder	2.45 Kg	01-DHD340-07				
08	Piston	9 Kg	01-DHD340-08				

Specification Parameter

Length(Less bit)	Weight	Outer diameter	Connection Thread	Bit Shank	Hole Range
1032mm	43 Kg	φ99 mm	API2 3/8"REG	DHD340	φ110-φ135mm
Working pressure		Recommended rotation speed		Air Consumption	
				1.0Mpa	1.8Mpa
1.0-2.2Mpa		30-60r/min		5.5³/min	10m³/min

DHD 350

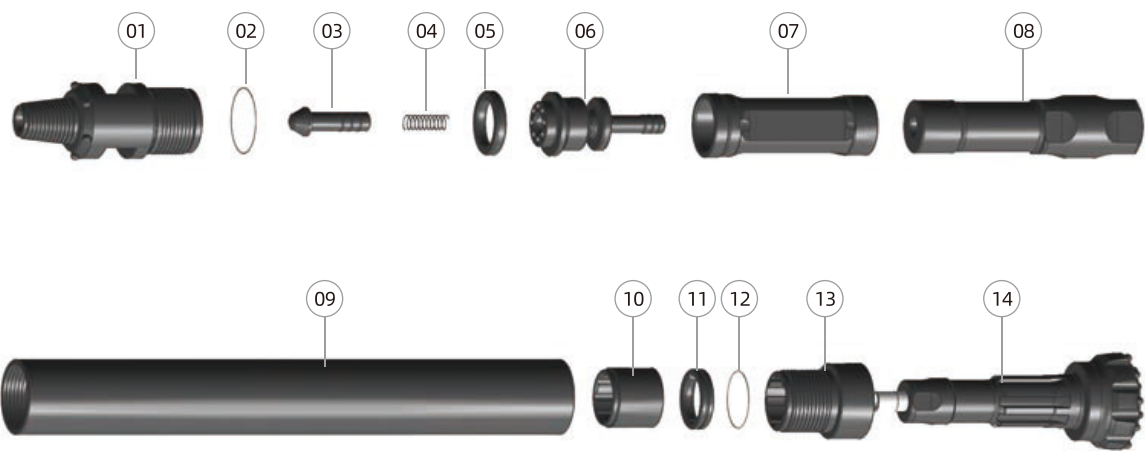


Ref.	Parts	Weight	Part No.	Ref.	Parts	Weight	Part No.
01	Top Sub	14.7 Kg	01-DHD350-01	09	Inner Cylinder	4.9 Kg	01-DHD350-09
02	O Ring	0.02 Kg	01-DHD350-02	10	Piston	15.5 Kg	01-DHD350-10
03	Check Valve	1 Kg	01-DHD350-03	11	Piston Case	30.3 Kg	01-DHD350-11
04	Spring	0.06 Kg	01-DHD350-04	12	Retainer Ring	0.3 Kg	01-DHD350-12
05	Regulate Ring	0.1 Kg	01-DHD350-05	13	O Ring	0.01 Kg	01-DHD350-13
06	Rubber Buffer	0.06 Kg	01-DHD350-06	14	Drive Chuck	7.1 Kg	01-DHD350-14
07	Pedestal	0.2 Kg	01-DHD350-07	15	Drill Bit		01-DHD350-15
08	Valve Seat	4.2 Kg	01-DHD350-08				

Specification Parameter

Length(Less bit)	Weight	Outer diameter	Connection Thread	Bit Shank	Hole Range
1209mm	78.5 Kg	φ125 mm	API2 3/8"REG	DHD350	φ135-φ155mm
Working pressure		Recommended rotation speed		Air Consumption	
				1.0Mpa	1.8Mpa
1.0-2.5Mpa		30-60r/min		9³/min	15m³/min

DHD 360

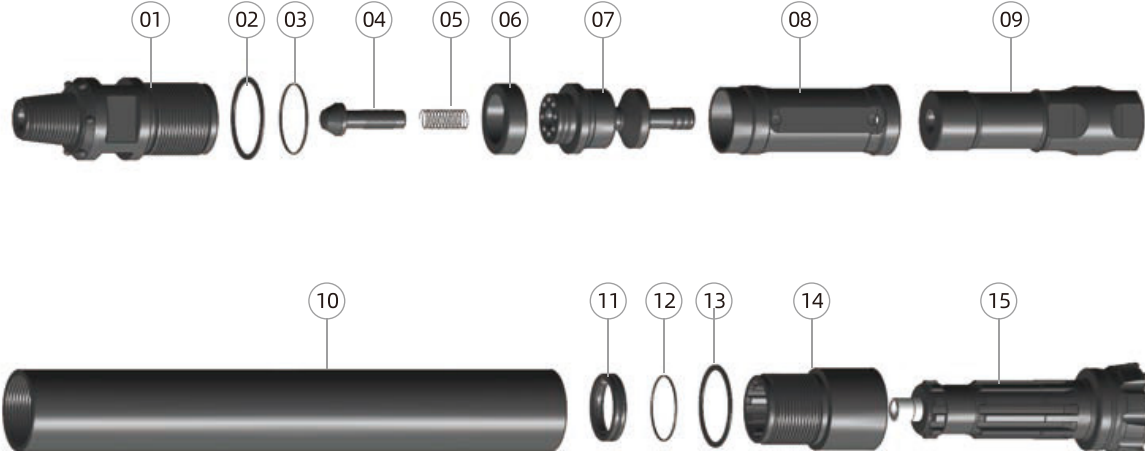


Ref.	Parts	Weight	Part No.	Ref.	Parts	Weight	Part No.
01	Top Sub	20.3 Kg	01-DHD360-01	09	Piston Case	37.2 Kg	01-DHD360-09
02	O Ring	0.02 Kg	01-DHD360-02	10	Guide Sleeve	2.5 Kg	01-DHD360-10
03	Check Valve	0.8 Kg	01-DHD360-03	11	Retainer Ring	0.6 Kg	01-DHD360-11
04	Spring	0.05 Kg	01-DHD360-04	12	O Ring	0.02 Kg	01-DHD360-12
05	Rubber Buffer	0.3 Kg	01-DHD360-05	13	Drive Chuck	6 Kg	01-DHD360-13
06	Valve Seat	5 Kg	01-DHD360-06	14	Drill Bit		01-DHD360-14
07	Inner Cylinder	4 Kg	01-DHD360-07				
08	Piston	23.5 Kg	01-DHD360-08				

Specification Parameter

Length(Less bit)	Weight	Outer diameter	Connection Thread	Bit Shank	Hole Range
1063mm	100.5Kg	φ142 mm	API3 1/2"REG	DHD360	φ150-φ190mm
Working pressure	Recommended rotation speed	Air Consumption			
		1.8Mpa	2.4Mpa		
1.0-2.5Mpa	30-60r/min	20³/min	28m³/min		

DHD 380

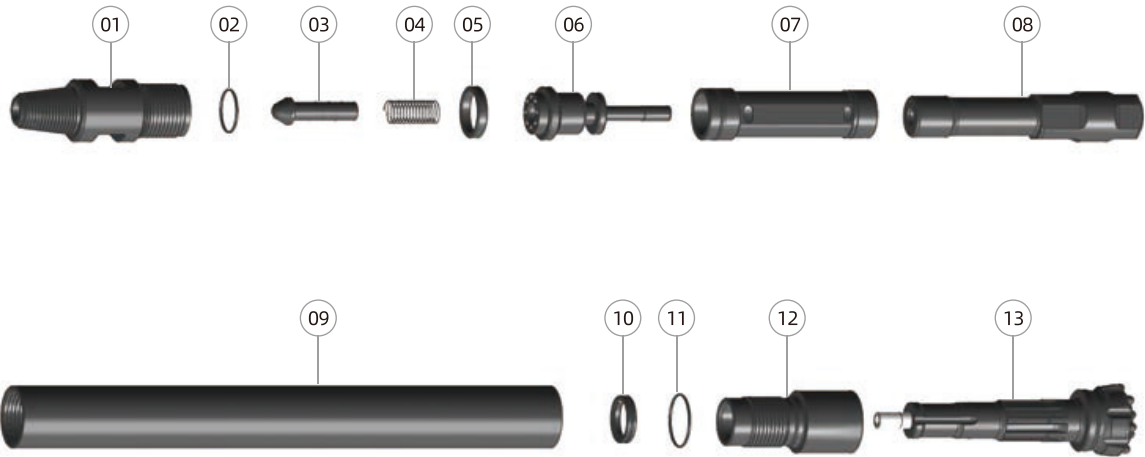


Ref.	Parts	Weight	Part No.	Ref.	Parts	Weight	Part No.
01	Top Sub	42 Kg	01-DHD380-01	09	Piston	41.5 Kg	01-DHD380-09
02	Squashing Ring	0.2 Kg	01-DHD380-02	10	Piston Case	62.5 Kg	01-DHD380-10
03	O Ring	0.02 Kg	01-DHD380-03	11	Retainer Ring	1.2 Kg	01-DHD380-11
04	Check Valve	1.3 Kg	01-DHD380-04	12	O Ring	0.02 Kg	01-DHD380-12
05	Spring	0.09 Kg	01-DHD380-05	13	Squashing Ring	0.2 Kg	01-DHD380-13
06	Rubber Buffer	0.4 Kg	01-DHD380-06	14	Drive Chuck	18.2 Kg	01-DHD380-14
07	Valve Seat	13 Kg	01-DHD380-07	15	Drill Bit		01-DHD380-15
08	Inner Cylinder	9.1 Kg	01-DHD380-08				

Specification Parameter

Length(Less bit)	Weight	Outer diameter	Connection Thread	Bit Shank	Hole Range
1492mm	190 Kg	φ180mm	API4 1/2"REG	DHD380	φ195-φ254mm
Working pressure	Recommended rotation speed	Air Consumption			
		1.8Mpa	2.4Mpa		
1.5-3.3Mpa	30-60r/min	26³/min	34m³/min		

SD 4

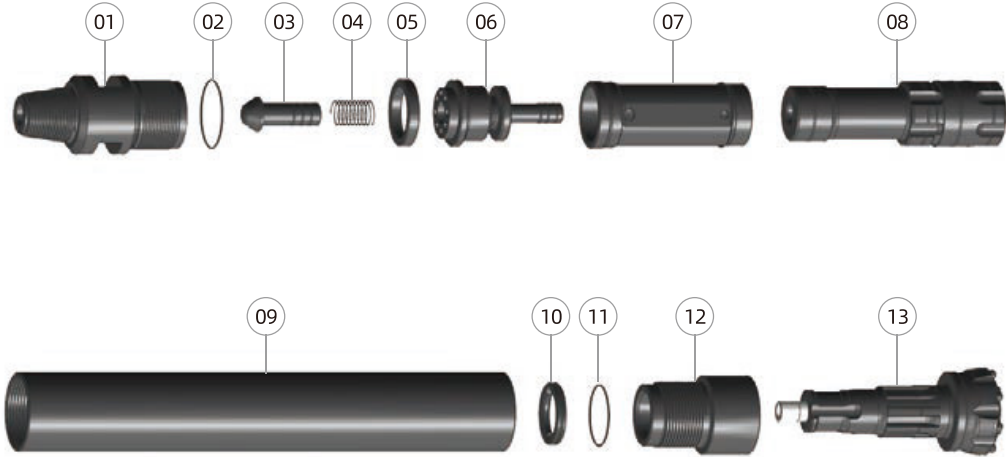


Ref.	Parts	Weight	Part No.	Ref.	Parts	Weight	Part No.
01	Top Sub	8.8 Kg	01-SD4-01	09	Piston Case	15.6 Kg	01-SD4-09
02	O Ring	0.01 Kg	01-SD4-02	10	Retainer Ring	0.2 Kg	01-SD4-10
03	Check Valve	0.46 Kg	01-SD4-03	11	O Ring	0.01 Kg	01-SD4-11
04	Spring	0.04 Kg	01-SD4-04	12	Drive Chuck	4 Kg	01-SD4-12
05	Rubber Buffer	0.2 Kg	01-SD4-05	13	DRill Bit		01-SD4-13
06	Valve Seat	2.1 Kg	01-SD4-06				
07	Inner Cylinder	2.45 Kg	01-SD4-07				
08	Piston	9 Kg	01-SD4-08				

Specification Parameter

Length(Less bit)	Weight	Outer diameter	Connection Thread	Bit Shank	Hole Range
1082mm	43Kg	φ99 mm	API2 3/8"REG	SD4	φ110-φ135mm
Working pressure		Recommended rotation speed		Air Consumption	
1.0-2.2Mpa		30-60r/min		1.8Mpa	2.4Mpa
				5.5³/min	10m³/min

SD 5

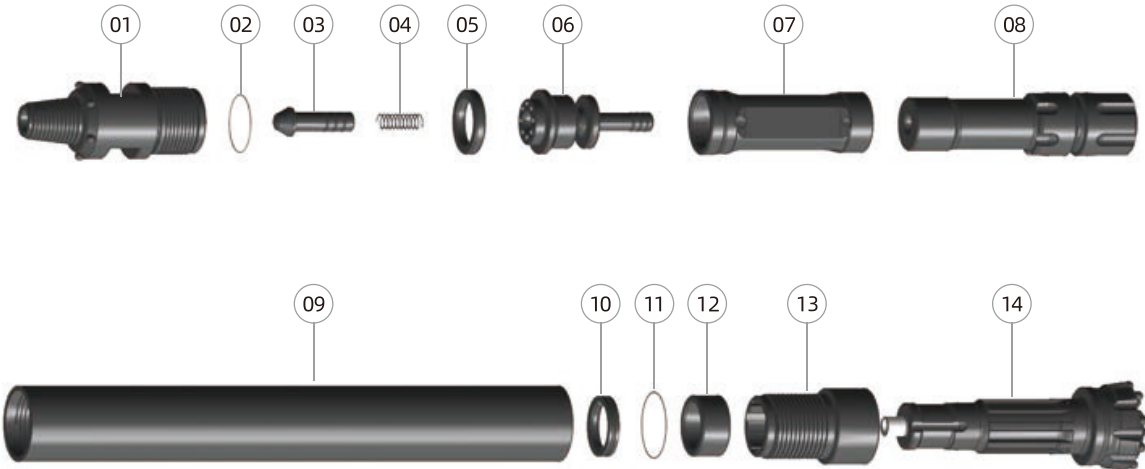


Ref.	Parts	Weight	Part No.	Ref.	Parts	Weight	Part No.
01	Top Sub	14.7 Kg	01-SD5-01	09	Piston Case	23.5 Kg	01-SD5-09
02	O Ring	0.02 Kg	01-SD5-02	10	Retainer Ring	0.5 Kg	01-SD5-10
03	Check Valve	1 Kg	01-SD5-03	11	O Ring	0.01Kg	01-SD5-11
04	Spring	0.06 Kg	01-SD5-04	12	Drive Chuck	7.8 Kg	01-SD5-12
05	Rubber Buffer	0.2 Kg	01-SD5-05	13	Drill Bit		01-SD5-13
06	Valve Seat	4.1 Kg	01-SD5-06				
07	Inner Cylinder	4.4 Kg	01-SD5-07				
08	Piston	17.3 Kg	01-SD5-08				

Specification Parameter

Length(Less bit)	Weight	Outer diameter	Connection Thread	Bit Shank	Hole Range
1178mm	73.6 Kg	φ125mm	API2 3/8"REG	SD5	φ135-φ155mm
Working pressure		Recommended rotation speed		Air Consumption	
1.0-2.5Mpa		30-60r/min		1.8Mpa	2.4Mpa
				9³/min	15m³/min

SD 6

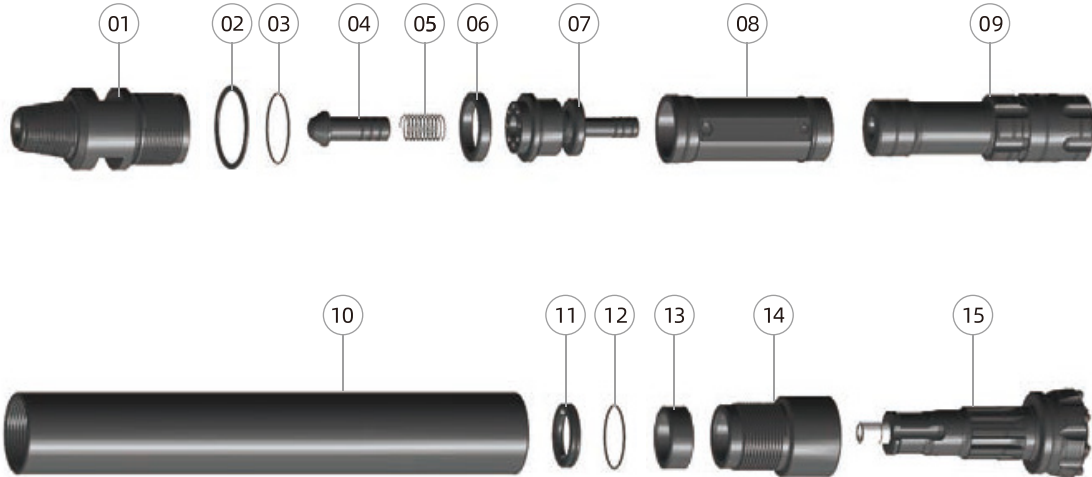


Ref.	Parts	Weight	Part No.	Ref.	Parts	Weight	Part No.
01	Top Sub	20.3 Kg	01-SD6-01	09	Piston Case	34.5 Kg	01-SD6-09
02	O Ring	0.02 Kg	01-SD6-02	10	Retainer Ring	0.5 Kg	01-SD6-10
03	Check Valve	0.8 Kg	01-SD6-03	11	O Ring	0.01 Kg	01-SD6-11
04	Spring	0.05 Kg	01-SD6-04	12	Guide Sleeve	1.6 Kg	01-SD6-12
05	Rubber Buffer	0.3 Kg	01-SD6-05	13	Drive Chuck	8 Kg	01-SD6-13
06	Valve Seat	5 Kg	01-SD6-06	14	Drill Bit		01-SD6-14
07	Inner Cylinder	4 Kg	01-SD6-07				
08	Piston	23.5 Kg	01-SD6-08				

Specification Parameter

Length(Less bit)	Weight	Outer diameter	Connection Thread	Bit Shank	Hole Range
1277mm	99Kg	φ142 mm	API3 1/2"REG	SD6	φ150-φ190mm
Working pressure	Recommended rotation speed	Air Consumption			
		1.8Mpa	2.4Mpa		
1.0-2.5Mpa	30-60r/min	20³/min	28m³/min		

SD 8

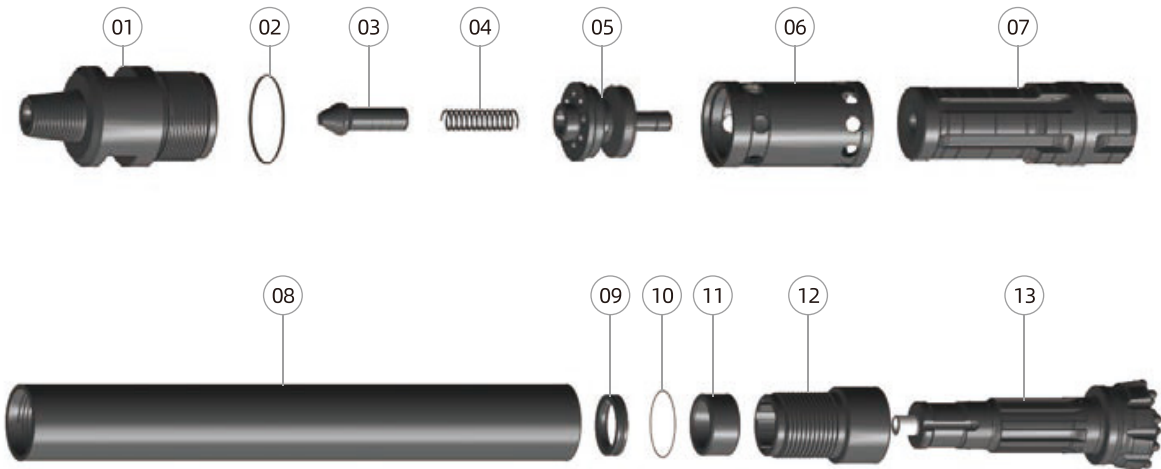


Ref.	Parts	Weight	Part No.	Ref.	Parts	Weight	Part No.
01	Top Sub	42 Kg	01-SD8-01	09	Piston	43.5 Kg	01-SD8-09
02	Squashing Ring	0.2 Kg	01-SD8-02	10	Piston Case	64.5 Kg	01-SD8-10
03	O Ring	0.02 Kg	01-SD8-03	11	Retainer Ring	1.25 Kg	01-SD8-11
04	Check Valve	1.3 Kg	01-SD8-04	12	O Ring	0.02 Kg	01-SD8-12
05	Spring	0.09 Kg	01-SD8-05	13	Guide Sleeve	3.35 Kg	01-SD8-13
06	Rubber Buffer	0.4 Kg	01-SD8-06	14	Drive Chuck	16 Kg	01-SD8-14
07	Valve Seat	12.7 Kg	01-SD8-07	15	Drill Bit		01-SD8-15
08	Inner Cylinder	9.1 Kg	01-SD8-08				

Specification Parameter

Length(Less bit)	Weight	Outer diameter	Connection Thread	Bit Shank	Hole Range
1463mm	194 Kg	φ180mm	API4 1/2"REG	SD8	φ195-φ254mm
Working pressure	Recommended rotation speed	Air Consumption			
		1.8Mpa	2.4Mpa		
1.5-3.3Mpa	30-60r/min	26³/min	34m³/min		

SD 10

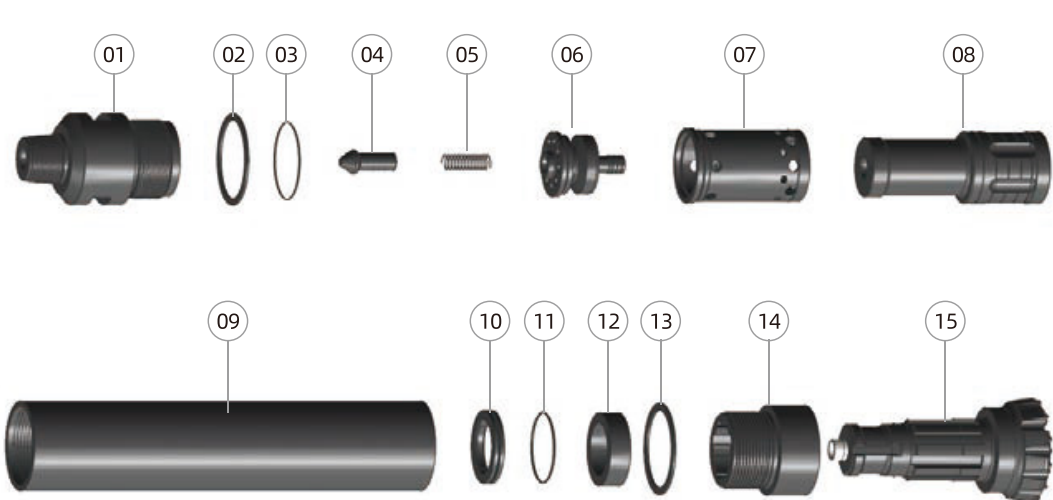


Ref.	Parts	Weight	Part No.	Ref.	Parts	Weight	Part No.
01	Top Sub	60 Kg	01-SD10-01	09	Retainer Ring	2.76 Kg	01-SD10-09
02	O Ring	0.03 Kg	01-SD10-02	10	O Ring	0.02 Kg	01-SD10-10
03	Check Valve	1.5 Kg	01-SD10-03	11	Guide Sleeve	5 Kg	01-SD10-11
04	Spring	0.2 Kg	01-SD10-04	12	Drive Chuck	21 Kg	01-SD10-12
05	Valve Seat	12.8 Kg	01-SD10-05	13	Drill Bit		01-SD10-13
06	Inner Cylinder	13.5 Kg	01-SD10-06				
07	Piston	71 Kg	01-SD10-07				
08	Piston Case	85 Kg	01-SD10-08				

Specification Parameter

Length(Less bit)	Weight	Outer diameter	Connection Thread	Bit Shank	Hole Range
1413mm	273Kg	φ225 mm	API5 1/2"REG	SD10	φ254-φ311mm
Working pressure		Recommended rotation speed		Air Consumption	
1.5-3.3Mpa		25-50r/min		1.8Mpa	2.4Mpa
				40³/min	60m³/min

SD 12

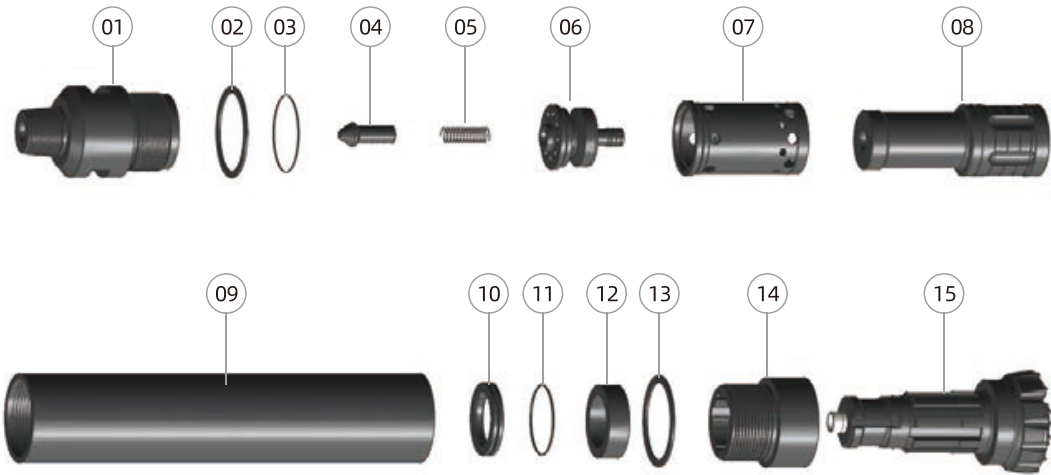


Ref.	Parts	Weight	Part No.	Ref.	Parts	Weight	Part No.
01	Top Sub	134 Kg	01-SD12-01	09	Piston Case	220 Kg	01-SD12-09
02	Squashing Ring	0.8 Kg	01-SD12-02	10	Retainer Ring	5.2 Kg	01-SD12-10
03	O Ring	0.04 Kg	01-SD12-03	11	O Ring	0.03 Kg	01-SD12-11
04	Check Valve	1.5 Kg	01-SD12-04	12	Guide Sleeve	5.2 Kg	01-SD12-12
05	Spring	0.2 Kg	01-SD12-05	13	Squashing Ring	0.8 Kg	01-SD12-13
06	Valve Seat	21 Kg	01-SD12-06	14	Drive Chuck	53.5 Kg	01-SD12-14
07	Inner Cylinder	29 Kg	01-SD12-07	15	Drill Bit		01-SD12-15
08	Piston	118 Kg	01-SD12-08				

Specification Parameter

Length(Less bit)	Weight	Outer diameter	Connection Thread	Bit Shank	Hole Range
1825mm	589 Kg	φ275mm	API6 5/8"REG	SD12	φ295-φ400mm
Working pressure		Recommended rotation speed		Air Consumption	
1.5-3.3Mpa		25-50r/min		1.8Mpa	2.4Mpa
				50³/min	70m³/min

SD 15

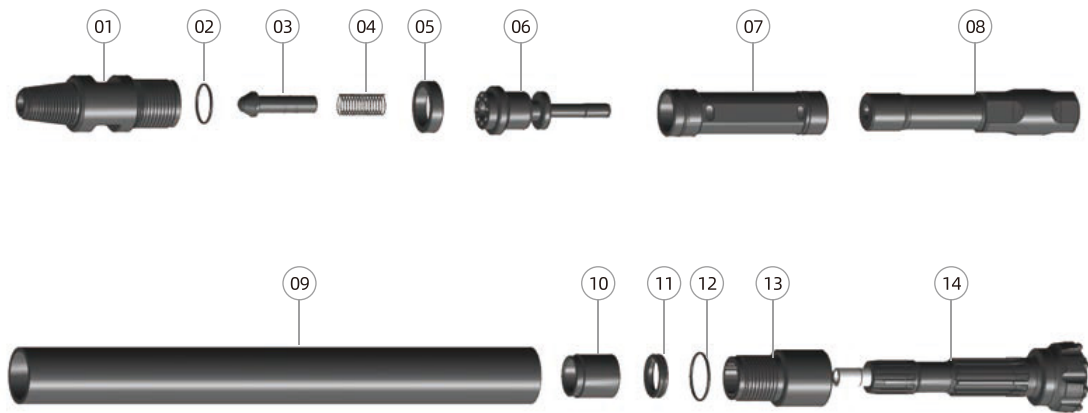


Ref.	Parts	Weight	Part No.	Ref.	Parts	Weight	Part No.
01	Top Sub	285 Kg	01-SD15-01	09	Piston Case	469 Kg	01-SD15-09
02	Squashing Ring	2 Kg	01-SD15-02	10	Retainer Ring	11 Kg	01-SD15-10
03	O Ring	0.4 Kg	01-SD15-03	11	O Ring	0.5 Kg	01-SD15-11
04	Check Valve	3 Kg	01-SD15-04	12	Guide Sleeve	11 Kg	01-SD15-12
05	Spring	0.6 Kg	01-SD15-05	13	Squashing Ring	0.5 Kg	01-SD15-13
06	Valve Seat	45 Kg	01-SD15-06	14	Drive Chuck	114 Kg	01-SD15-14
07	Inner Cylinder	62 Kg	01-SD15-07	15	Drill Bit		01-SD15-15
08	Piston	256 Kg	01-SD15-08				

Specification Parameter

Length(Less bit)	Weight	Outer diameter	Connection Thread	Bit Shank	Hole Range
1829mm	1260 Kg	ϕ332mm	API7 5/8"REG	SD15	ϕ445-ϕ575mm
Working pressure		Recommended rotation speed		Air Consumption	
				1.8Mpa	2.5Mpa
1.5-3.3Mpa		25-50r/min		50 ³ /min	70m ³ /min

QL 40

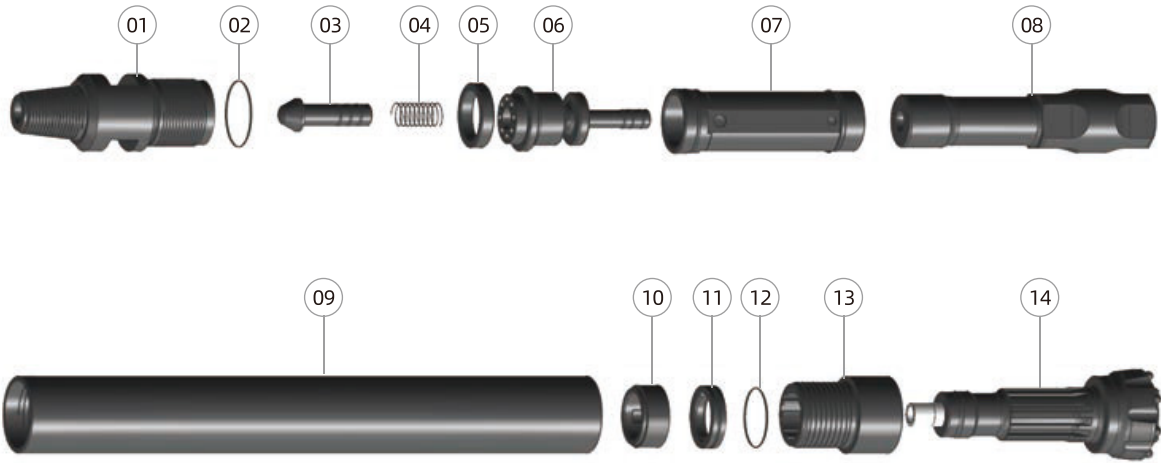


Ref.	Parts	Weight	Part No.	Ref.	Parts	Weight	Part No.
01	Top Sub	8.8 Kg	01-QL40-01	09	Piston Case	16.5 Kg	01-QL40-09
02	O Ring	0.01 Kg	01-QL40-02	10	Guide Sleeve	0.9 Kg	01-QL40-10
03	Check Valve	0.46 Kg	01-QL40-03	11	Retainer Ring	0.2 Kg	01-QL40-11
04	Spring	0.04 Kg	01-QL40-04	12	O Ring	0.01 Kg	01-QL40-12
05	Rubber Buffer	0.2 Kg	01-QL40-05	13	Drive Chuck	3.3 Kg	01-QL40-13
06	Valve Seat	2.1 Kg	01-QL40-06	14	Drill Bit		01-QL40-14
07	Inner Cylinder	2.45 Kg	01-QL40-07				
08	Piston	8.8 Kg	01-QL40-08				

Specification Parameter

Length(Less bit)	Weight	Outer diameter	Connection Thread	Bit Shank	Hole Range
1102mm	43.7 Kg	ϕ99mm	API2 3/8"REG	QL40	ϕ110-ϕ135mm
Working pressure		Recommended rotation speed		Air Consumption	
				1.0Mpa	1.8Mpa
1.0-2.2Mpa		30-60r/min		5.5 ³ /min	10m ³ /min

QL 50

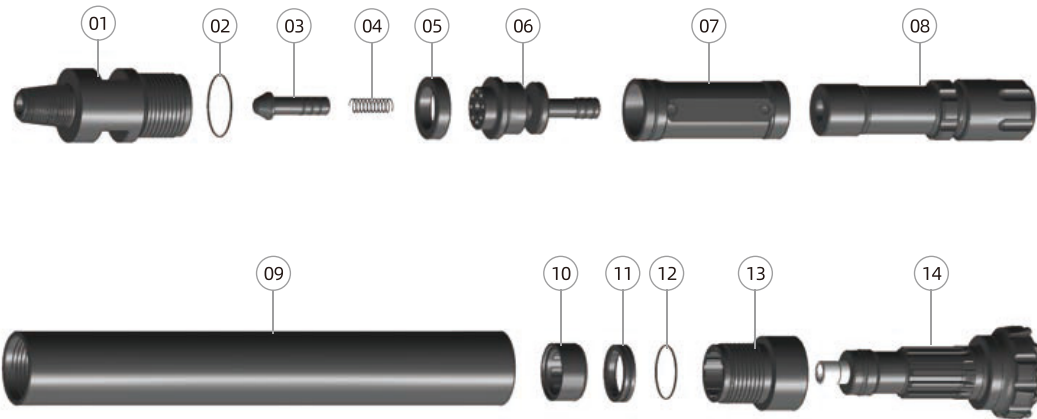


Ref.	Parts	Weight	Part No.	Ref.	Parts	Weight	Part No.
01	Top Sub	14.7 Kg	01-QL50-01	09	Piston Case	24.7 Kg	01-QL50-09
02	O Ring	0.02 Kg	01-QL50-02	10	Guide Sleeve	1 Kg	01-QL50-10
03	Check Valve	1 Kg	01-QL50-03	11	Retainer Ring	0.6 Kg	01-QL50-11
04	Spring	0.06 Kg	01-QL50-04	12	O Ring	0.01 Kg	01-QL50-12
05	Rubber Buffer	0.2 Kg	01-QL50-05	13	Drive Chuck	5.6 Kg	01-QL50-13
06	Valve Seat	4.1 Kg	01-QL50-06	14	Drill Bit		01-QL50-14
07	Inner Cylinder	4.4 Kg	01-QL50-07				
08	Piston	17 Kg	01-QL50-08				

Specification Parameter

Length(Less bit)	Weight	Outer diameter	Connection Thread	Bit Shank	Hole Range
1154mm	73.5 Kg	ϕ126mm	API2 3/8"REG	QL50	ϕ135-ϕ155mm
Working pressure	Recommended rotation speed	Air Consumption			
		1.0Mpa	1.8Mpa		
1.0-2.5Mpa	30-60r/min	9 ³ /min	15m ³ /min		

QL 60

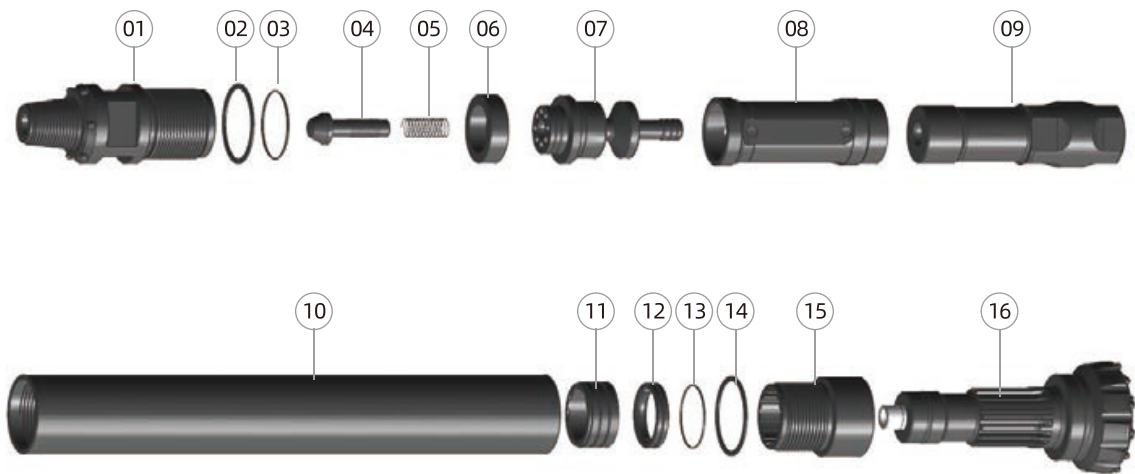


Ref.	Parts	Weight	Part No.	Ref.	Parts	Weight	Part No.
01	Top Sub	23 Kg	01-QL60-01	09	Piston Case	39 Kg	01-QL60-09
02	O Ring	0.02 Kg	01-QL60-02	10	Guide Sleeve	1.1 Kg	01-QL60-10
03	Check Valve	0.08 Kg	01-QL60-03	11	Retainer Ring	0.6 Kg	01-QL60-11
04	Spring	0.05 Kg	01-QL60-04	12	O Ring	0.02 Kg	01-QL60-12
05	Rubber Buffer	0.3 Kg	01-QL60-05	13	Drive Chuck	6.3 Kg	01-QL60-13
06	Valve Seat	6.2 Kg	01-QL60-06	14	Drill Bit		01-QL60-14
07	Inner Cylinder	5 Kg	01-QL60-07				
08	Piston	23.5 Kg	01-QL60-08				

Specification Parameter

Length(Less bit)	Weight	Outer diameter	Connection Thread	Bit Shank	Hole Range
1211mm	105Kg	ϕ148mm	API3 1/2"REG	QL60	ϕ158-ϕ190mm
Working pressure	Recommended rotation speed	Air Consumption			
		1.0Mpa	1.8Mpa		
1.0-2.5Mpa	30-60r/min	20 ³ /min	28m ³ /min		

QL 80

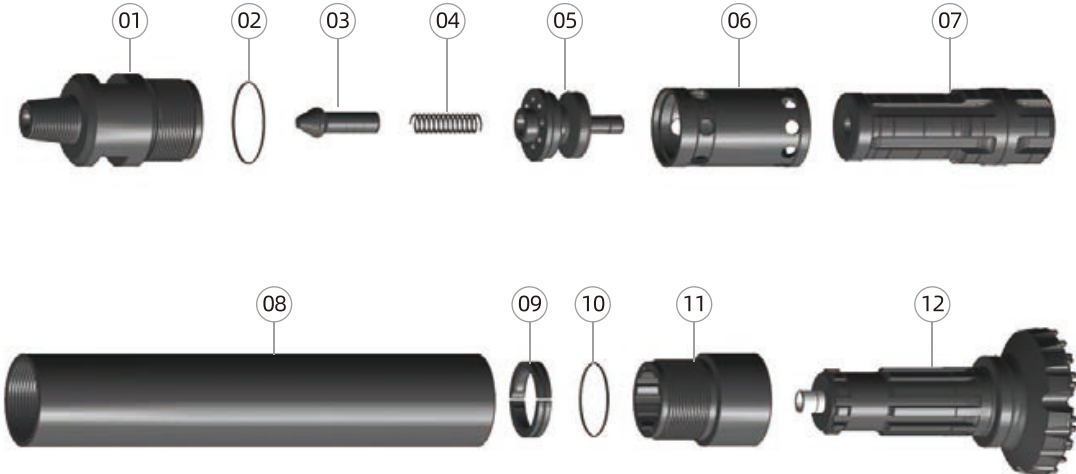


Ref.	Parts	Weight	Part No.	Ref.	Parts	Weight	Part No.
01	Top Sub	42 Kg	01-QL80-01	09	Piston	41 Kg	01-QL80-09
02	Squashing Ring	0.2 Kg	01-QL80-02	10	Piston Case	64 Kg	01-QL80-10
03	O Ring	0.02 Kg	01-QL80-03	11	Guide Sleeve	2.9 Kg	01-QL80-11
04	Check Valve	1.3 Kg	01-QL80-04	12	Retainer Ring	1.2 Kg	01-QL80-12
05	Spring	0.1 Kg	01-QL80-05	13	O Ring	0.02 Kg	01-QL80-13
06	Rubber Buffer	0.4 Kg	01-QL80-06	14	Squashing Ring	0.2 Kg	01-QL80-14
07	Valve Seat	12.7 Kg	01-QL80-07	15	Drive Chuck	12 Kg	01-QL80-15
08	Inner Cylinder	9.1 Kg	01-QL80-08	16	Drill Bit		01-QL80-16

Specification Parameter

Length(Less bit)	Weight	Outer diameter	Connection Thread	Bit Shank	Hole Range
1471mm	187Kg	ϕ180mm	API4 1/2"REG	QL80	ϕ195-ϕ254mm
Working pressure		Recommended rotation speed		Air Consumption	
1.5-3.3Mpa		30-60r/min		1.8Mpa	2.4Mpa
				26 ³ /min	34m ³ /min

NUMA 100



Ref.	Parts	Weight	Part No.	Ref.	Parts	Weight	Part No.
01	Top Sub	60 Kg	01-NUMA100-01	09	Retainer Ring	2.2 Kg	01-NUMA100-09
02	O Ring	0.03 Kg	01-NUMA100-02	10	O Ring	0.02 Kg	01-NUMA100-10
03	Check Valve	1.5 Kg	01-NUMA100-03	11	Drive Chuck	27 Kg	01-NUMA100-11
04	Spring	0.2 Kg	01-NUMA100-04	12	Drill Bit		01-NUMA100-12
05	Valve Seat	12.8 Kg	01-NUMA100-05				
06	Inner Cylinder	13.5 Kg	01-NUMA100-06				
07	Piston	71 Kg	01-NUMA100-07				
08	Piston Case	94.5 Kg	01-NUMA100-08				

Specification Parameter

Length(Less bit)	Weight	Outer diameter	Connection Thread	Bit Shank	Hole Range
1432mm	283 Kg	ϕ225mm	API5 1/2"REG	NUMA100	ϕ254-ϕ311mm
Working pressure		Recommended rotation speed		Air Consumption	
1.5-3.3Mpa		25-50r/min		1.8Mpa	2.4Mpa
				40 ³ /min	60m ³ /min

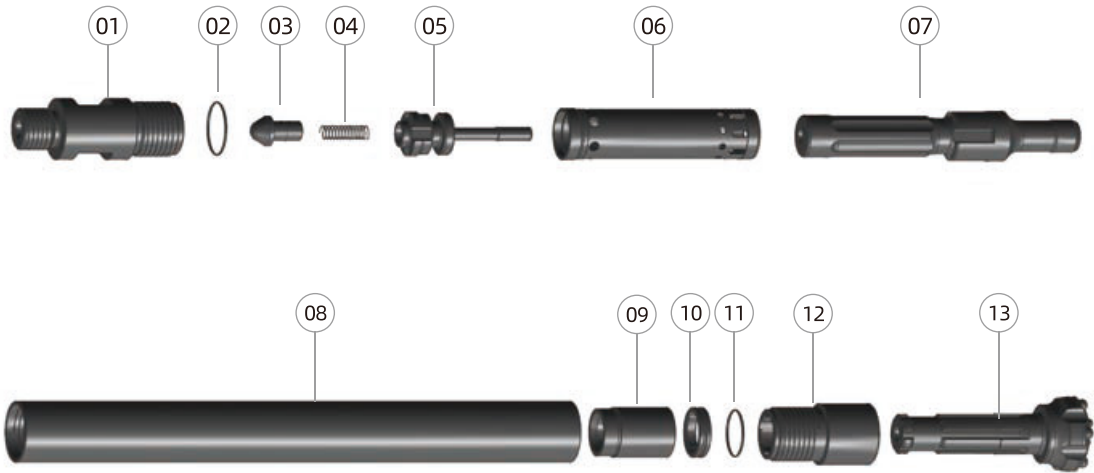
High Air Pressure DTH Hammer Without Foot Valve

It has following advantages:

- Avoid the problem happens on foot valve. Fracture,expansion and contraction.
- Lower air comsumption and higher impact frequency. 15-30% higher drilling efficiency than the bit with foot valve.
- Simpler structure and less spare parts, makes easier & cheaper maintenance.
- Heat-hardened spare parts,makes longer serving life and less problem.
- Thread connection for top sub and drive chuck,makes easier disassembly.



HD 25A

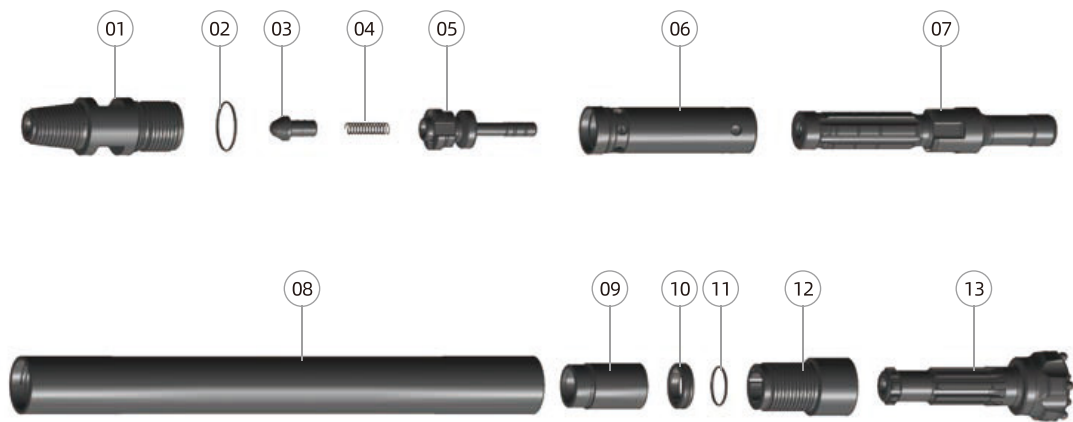


Ref.	Parts	Weight	Part No.	Ref.	Parts	Weight	Part No.
01	Top Sub	3.5 Kg	01-HD25A-01	09	Guide Sleeve	0.7 Kg	01-HD25A-09
02	O Ring	0.01 Kg	01-HD25A-02	10	Retainer Ring	0.1 Kg	01-HD25A-10
03	Check Valve	0.13 Kg	01-HD25A-03	11	O Ring	0.01 Kg	01-HD25A-11
04	Spring	0.02 Kg	01-HD25A-04	12	Drive Chuck	1.5 Kg	01-HD25A-12
05	Valve Seat	0.56 Kg	01-HD25A-05	13	Drill Bit		01-HD25A-13
06	Inner Cylinder	1.1 Kg	01-HD25A-06				
07	Piston	3.8 Kg	01-HD25A-07				
08	Piston Case	4.5 Kg	01-HD25A-08				

Specification Parameter

Length(Less bit)	Weight	Outer diameter	Connection Thread	Bit Shank	Hole Range
872mm	16 Kg	φ71 mm	T48x10x1.5	HD25A	φ76-φ90mm
Working pressure		Recommended rotation speed		Air Consumption	
1.0-1.7Mpa		30-50r/min		1.0Mpa	1.5Mpa
				3 ³ /min	4.5m ³ /min

HD 35A

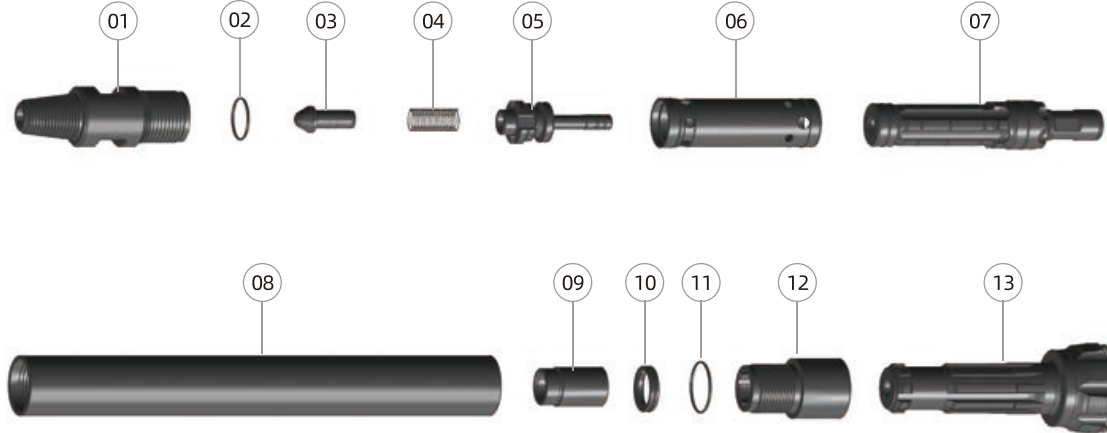


Ref.	Parts	Weight	Part No.	Ref.	Parts	Weight	Part No.
01	Top Sub	4.5 Kg	01-HD35A-01	09	Guide Sleeve	0.9 Kg	01-HD35A-09
02	O Ring	0.01 Kg	01-HD35A-02	10	Retainer Ring	0.15 Kg	01-HD35A-10
03	Check Valve	0.13 Kg	01-HD35A-03	11	O ring	0.01 Kg	01-HD35A-11
04	Spring	0.02 Kg	01-HD35A-04	12	Drive Chuck	1.9 Kg	01-HD35A-12
05	Valve Seat	0.76 Kg	01-HD35A-05	13	Drill Bit		01-HD35A-13
06	Inner Cylinder	1.45 Kg	01-HD35A-06				
07	Piston	4.8 Kg	01-HD35A-07				
08	Piston Case	9.5 Kg	01-HD35A-08				

Specification Parameter

Length(Less bit)	Weight	Outer diameter	Connection Thread	Bit Shank	Hole Range
886mm	24.2 Kg	φ82 mm	API2 3/8"REG	HD35A	φ90-φ115mm
Working pressure	Recommended rotation speed	Air Consumption			
		1.0Mpa	1.5Mpa		
1.0-1.7Mpa	30-50r/min	4 ³ /min	6.5m ³ /min		

HD 45A

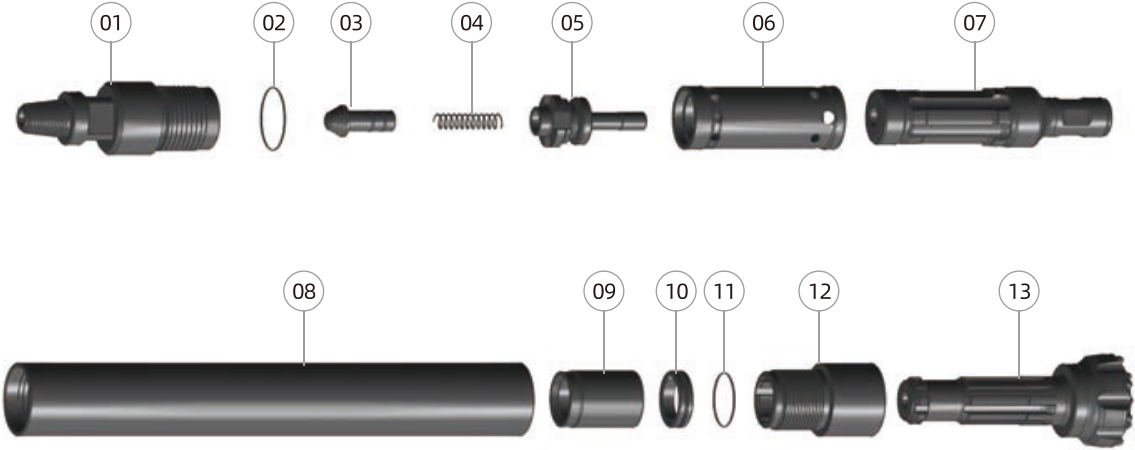


Ref.	Parts	Weight	Part No.	Ref.	Parts	Weight	Part No.
01	Top Sub	8.1 Kg	01-HD45A-01	09	Guide Sleeve	1 Kg	01-HD45A-09
02	O Ring	0.01 Kg	01-HD45A-02	10	Retainer Ring	0.2 Kg	01-HD45A-10
03	Check Valve	0.3 Kg	01-HD45A-03	11	O Ring	0.01 Kg	01-HD45A-11
04	Spring	0.04 Kg	01-HD45A-04	12	Drive Chuck	3.6 Kg	01-HD45A-12
05	Valve Seat	1.5 Kg	01-HD45A-05	13	Drill Bit		01-HD45A-13
06	Inner Cylinder	2.1 Kg	01-HD45A-06				
07	Piston	8.4 Kg	01-HD45A-07				
08	Piston Case	15 Kg	01-HD45A-08				

Specification Parameter

Length(Less bit)	Weight	Outer diameter	Connection Thread	Bit Shank	Hole Range
986mm	40.5 Kg	φ99 mm	API2 3/8"REG	HD45A	φ110-φ135mm
Working pressure	Recommended rotation speed	Air Consumption			
		1.0Mpa	1.8Mpa		
1.0-2.2Mpa	30-60r/min	5 ³ /min	9m ³ /min		

HD 55A

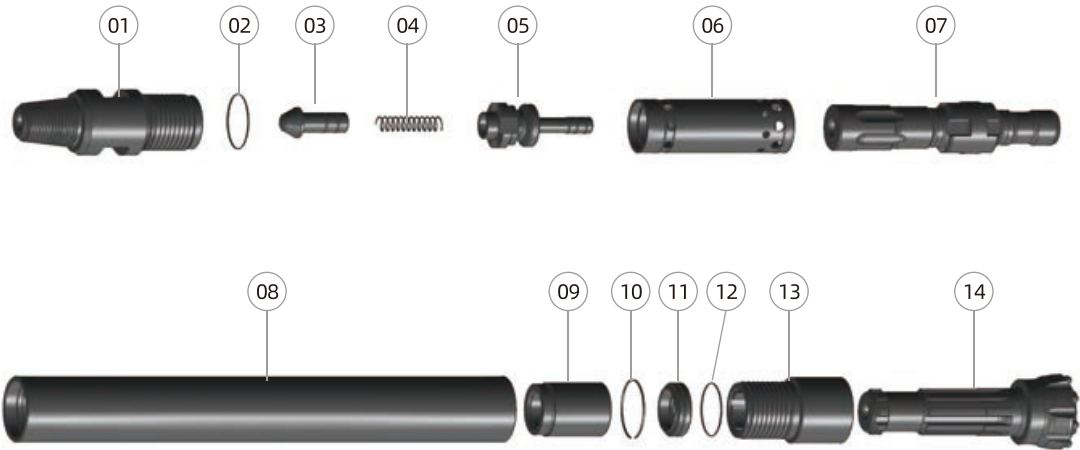


Ref.	Parts	Weight	Part No.	Ref.	Parts	Weight	Part No.
01	Top Sub	14 Kg	01-HD55A-01	09	Guide Sleeve	2.64 Kg	01-HD55A-09
02	O Ring	0.01 Kg	01-HD55A-02	10	Retainer Ring	0.5 Kg	01-HD55A-10
03	Check Valve	0.6 Kg	01-HD55A-03	11	O ring	0.01 Kg	01-HD55A-11
04	Spring	0.06 Kg	01-HD55A-04	12	Drive Chuck	7 Kg	01-HD55A-12
05	Valve Seat	2.15 Kg	01-HD55A-05	13	Drill Bit		01-HD55A-13
06	Inner Cylinder	3.3 Kg	01-HD55A-06				
07	Piston	15.5 Kg	01-HD55A-07				
08	Piston Case	24.2 Kg	01-HD55A-08				

Specification Parameter

Length(Less bit)	Weight	Outer diameter	Connection Thread	Bit Shank	Hole Range
1122mm	70 Kg	φ126 mm	API2 3/8"REG	HD55A	φ136-φ155mm
Working pressure	Recommended rotation speed	Air Consumption			
		1.0Mpa	1.5Mpa		
1.0-2.5Mpa	30-60r/min	7 ³ /min	13m ³ /min		

HD 55S

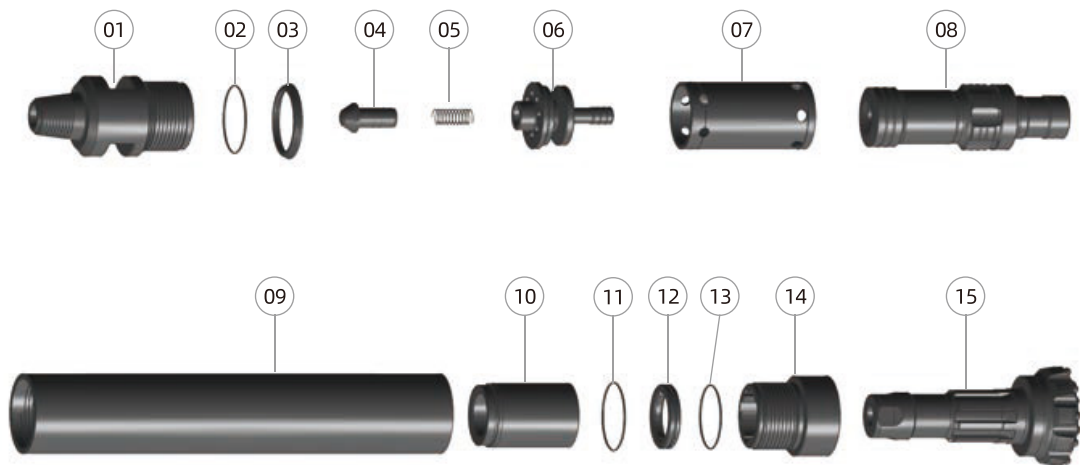


Ref.	Parts	Weight	Part No.	Ref.	Parts	Weight	Part No.
01	Top Sub	13.5 Kg	01-HD55S-01	09	Guide Sleeve	2.3 Kg	01-HD55S-09
02	O Ring	0.01 Kg	01-HD55S-02	10	Circlip	0.02 Kg	01-HD55S-10
03	Check Valve	0.6 Kg	01-HD55S-03	11	Retainer Ring	0.5 Kg	01-HD55S-11
04	Spring	0.06 Kg	01-HD55S-04	12	O Ring	0.01 Kg	01-HD55S-12
05	Valve Seat	1.85 Kg	01-HD55S-05	13	Drive Chuck	5.8 Kg	01-HD55S-13
06	Inner Cylinder	3.1 Kg	01-HD55S-06	14	Drill Bit		01-HD55S-14
07	Piston	11.8 Kg	01-HD55S-07				
08	Piston Case	22.5 Kg	01-HD55S-08				

Specification Parameter

Length(Less bit)	Weight	Outer diameter	Connection Thread	Bit Shank	Hole Range
1119mm	62 Kg	φ117 mm	API3 1/2"REG	HD55S	φ127-φ145mm
Working pressure	Recommended rotation speed	Air Consumption			
		1.0Mpa	1.8Mpa		
1.0-2.5Mpa	30-60r/min	6 ³ /min	12m ³ /min		

HD 65A

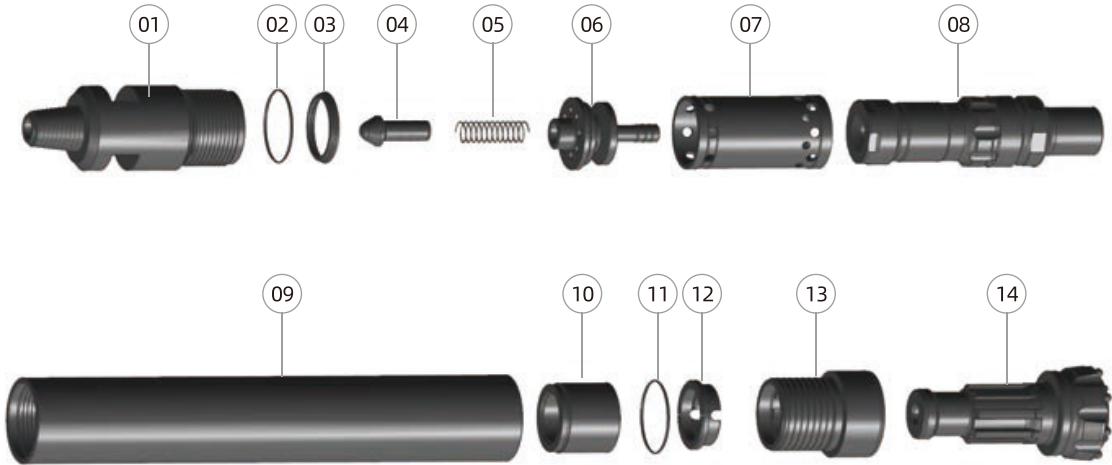


Ref.	Parts	Weight	Part No.	Ref.	Parts	Weight	Part No.
01	Top Sub	21.5 Kg	01-HD65A-01	09	Piston Case	36.5 Kg	01-HD65A-09
02	O Ring	0.01 Kg	01-HD65A-02	10	Guide Sleeve	6.3 Kg	01-HD65A-10
03	Disc Spring	0.34 Kg	01-HD65A-03	11	Circlip	0.02 Kg	01-HD65A-11
04	Check Valve	0.56 Kg	01-HD65A-04	12	Retainer Ring	1 Kg	01-HD65A-12
05	Spring	0.05 Kg	01-HD65A-05	13	O Ring	0.01 Kg	01-HD65A-13
06	Valve Seat	4.3 Kg	01-HD65A-06	14	Drive Chuck	8.2 Kg	01-HD65A-14
07	Inner Cylinder	4.2 Kg	01-HD65A-07	15	Drill Bit		01-HD65A-15
08	Piston	23 Kg	01-HD65A-08				

Specification Parameter

Length(Less bit)	Weight	Outer diameter	Connection Thread	Bit Shank	Hole Range
1210mm	106 Kg	φ148 mm	API3 1/2"REG	HD65A	φ158-φ190mm
Working pressure		Recommended rotation speed		Air Consumption	
				1.8Mpa	2.4Mpa
1.2-2.5Mpa		30-60r/min		16³/min	23m³/min

HD 75A

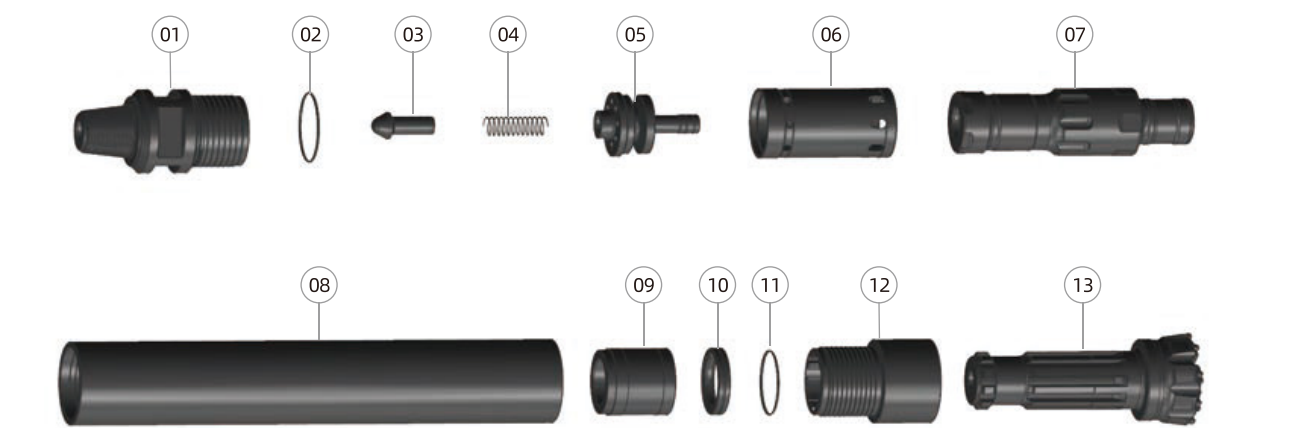


Ref.	Parts	Weight	Part No.	Ref.	Parts	Weight	Part No.
01	Top Sub	31.2 Kg	01-HD75A-01	09	Piston Case	47 Kg	01-HD75A-09
02	O Ring	0.01 Kg	01-HD75A-02	10	Guide Sleeve	5.65 Kg	01-HD75A-10
03	Disc Spring	0.5 Kg	01-HD75A-03	11	Circlip	0.02 Kg	01-HD75A-11
04	Check Valve	0.65 Kg	01-HD75A-04	12	Retainer Ring	1.3 Kg	01-HD75A-12
05	Spring	0.09 Kg	01-HD75A-05	13	Drive Chuck	11.5 Kg	01-HD75A-13
06	Valve Seat	5.5 Kg	01-HD75A-06	14	Drill Bit		01-HD75A-14
07	Inner Cylinder	5.5 Kg	01-HD75A-07				
08	Piston	34.5 Kg	01-HD75A-08				

Specification Parameter

Length(Less bit)	Weight	Outer diameter	Connection Thread	Bit Shank	Hole Range
1225mm	143.5 Kg	φ165 mm	API3 1/2"REG	HD75A	φ178-φ216mm
Working pressure		Recommended rotation speed		Air Consumption	
				1.8Mpa	2.4Mpa
1.5-2.8Mpa		30-60r/min		21³/min	28m³/min

HD 85A

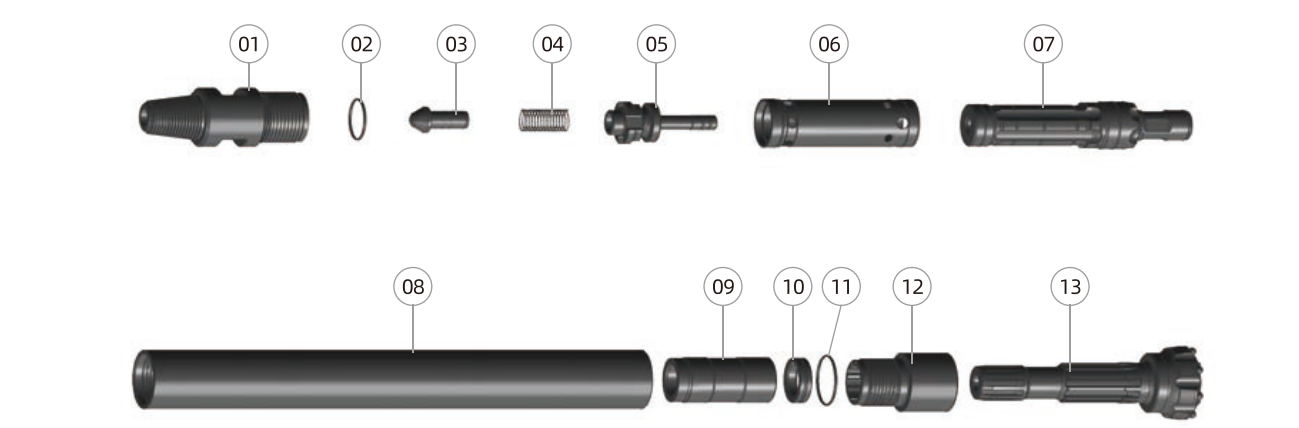


Ref.	Parts	Weight	Part No.	Ref.	Parts	Weight	Part No.
01	Top Sub	38.5 Kg	01-HD85A-01	09	Guide Sleeve	6.1 Kg	01-HD85A-09
02	O Ring	0.02 Kg	01-HD85A-02	10	Retainer Ring	1.2 Kg	01-HD85A-10
03	Check Valve	0.65 Kg	01-HD85A-03	11	O Ring	0.01 Kg	01-HD85A-11
04	Spring	0.1 Kg	01-HD85A-04	12	Drive Chuck	19.3 Kg	01-HD85A-12
05	Valve Seat	6.2 Kg	01-HD85A-05	13	Drill Bit		01-HD85A-13
06	Inner Cylinder	7.4 Kg	01-HD85A-06				
07	Piston	44.5 Kg	01-HD85A-07				
08	Piston Case	69.5 Kg	01-HD85A-08				

Specification Parameter

Length(Less bit)	Weight	Outer diameter	Connection Thread	Bit Shank	Hole Range
1354mm	193 Kg	φ185 mm	API4 1/2"REG	HD85A	φ198-φ254mm
Working pressure	Recommended rotation speed	Air Consumption			
		1.8Mpa	2.4Mpa		
1.5-3.3Mpa	30-60r/min	25³/min	34m³/min		

QL 40A

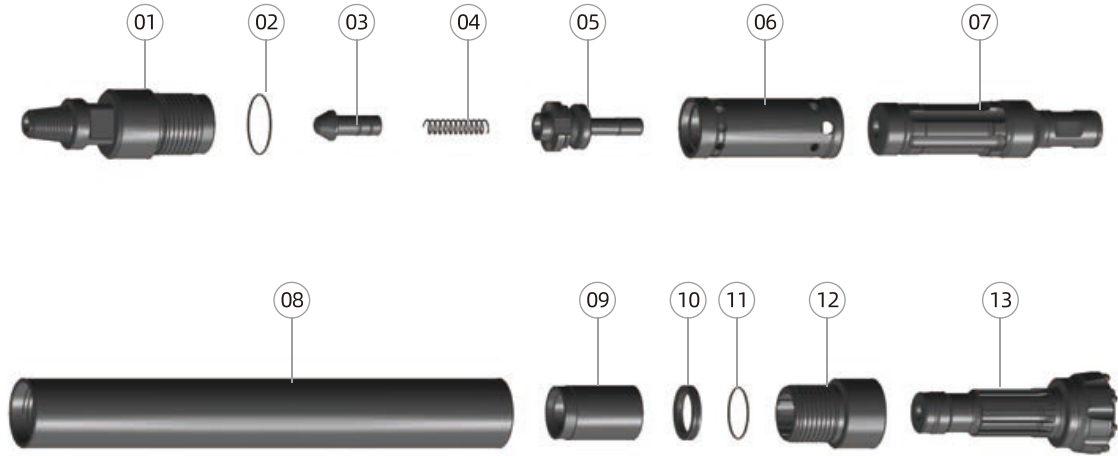


Ref.	Parts	Weight	Part No.	Ref.	Parts	Weight	Part No.
01	Top Sub	8.1 Kg	01-QL40A-01	09	Guide Sleeve	2.3 Kg	01-QL40A-09
02	O Ring	0.01 Kg	01-QL40A-02	10	Retainer Ring	0.27 Kg	01-QL40A-10
03	Check Valve	0.3 Kg	01-QL40A-03	11	O Ring	0.01 Kg	01-QL40A-11
04	Spring	0.04 Kg	01-QL40A-04	12	Drive Chuck	3.3 Kg	01-QL40A-12
05	Valve Seat	1.5 Kg	01-QL40A-05	13	Drill Bit		01-QL40A-13
06	Inner Cylinder	2.1 Kg	01-QL40A-06				
07	Piston	8.4 Kg	01-QL40A-07				
08	Piston Case	16.4 Kg	01-QL40A-08				

Specification Parameter

Length(Less bit)	Weight	Outer diameter	Connection Thread	Bit Shank	Hole Range
1057mm	42.7 Kg	φ99 mm	API2 3/8"REG	QL40A	φ110-φ135mm
Working pressure	Recommended rotation speed	Air Consumption			
		1.0Mpa	1.8Mpa		
1.0-2.2Mpa	30-60r/min	5³/min	9m³/min		

QL 50A

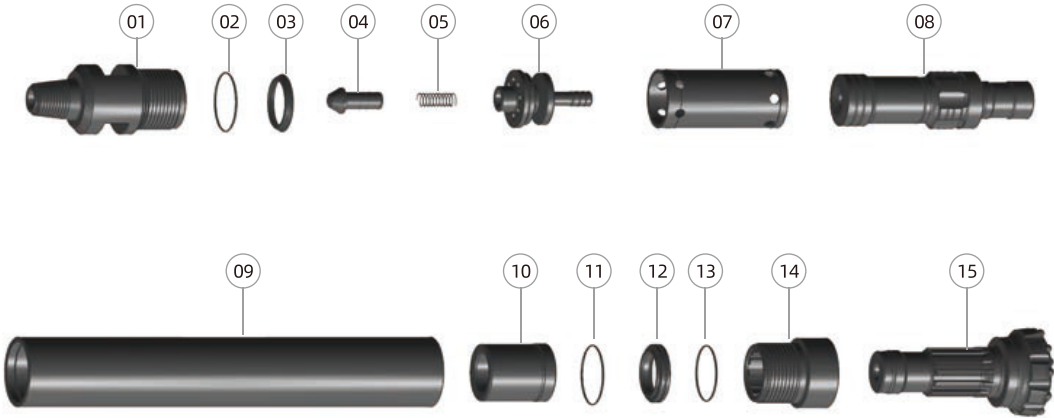


Ref.	Parts	Weight	Part No.	Ref.	Parts	Weight	Part No.
01	Top Sub	14 Kg	01-QL50A-01	09	Guide Sleeve	2.75 Kg	01-QL50A-09
02	O Ring	0.01 Kg	01-QL50A-02	10	Retainer Ring	0.45 Kg	01-QL50A-10
03	Check Valve	0.6 Kg	01-QL50A-03	11	O Ring	0.01 Kg	01-QL50A-11
04	Spring	0.06 Kg	01-QL50A-04	12	Drive Chuck	5.4 Kg	01-QL50A-12
05	Valve Seat	2.15 Kg	01-QL50A-05	13	Drill Bit		01-QL50A-13
06	Inner Cylinder	3.3 Kg	01-QL50A-06				
07	Piston	15.5 Kg	01-QL50A-07				
08	Piston Case	24.2 Kg	01-QL50A-08				

Specification Parameter

Length(Less bit)	Weight	Outer diameter	Connection Thread	Bit Shank	Hole Range
1102mm	68.5 Kg	φ126 mm	API2 3/8"REG	QL50A	φ136-φ155mm
Working pressure	Recommended rotation speed	Air Consumption			
		1.0Mpa	1.8Mpa		
1.0-2.5Mpa	30-60r/min	7³/min	13m³/min		

QL 60A

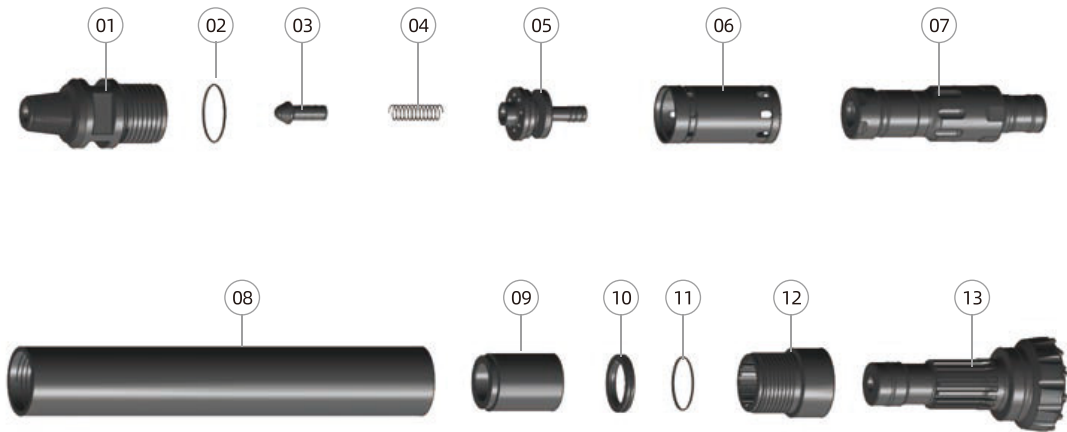


Ref.	Parts	Weight	Part No.	Ref.	Parts	Weight	Part No.
01	Top Sub	21.5 Kg	01-QL60A-01	09	Piston Case	34.3 Kg	01-QL60A-09
02	O Ring	0.01 Kg	01-QL60A-02	10	Guide Sleeve	5.4 Kg	01-QL60A-10
03	Disc Spring	0.34 Kg	01-QL60A-03	11	Circlip	0.02 Kg	01-QL60A-11
04	Check Valve	0.56 Kg	01-QL60A-04	12	Retainer Ring	0.92 Kg	01-QL60A-12
05	Spring	0.05 Kg	01-QL60A-05	13	O Ring	0.01 Kg	01-QL60A-13
06	Valve Seat	4.3 Kg	01-QL60A-06	14	Drive Chuck	7.5 Kg	01-QL60A-14
07	Inner Cylinder	4.2 Kg	01-QL60A-07	15	Drill Bit		01-QL60A-15
08	Piston	23 Kg	01-QL60A-08				

Specification Parameter

Length(Less bit)	Weight	Outer diameter	Connection Thread	Bit Shank	Hole Range
1155mm	102 Kg	φ148mm	API3 1/2"REG	QL60A	φ158-φ203mm
Working pressure	Recommended rotation speed	Air Consumption			
		1.8Mpa	2.4Mpa		
1.2-2.7Mpa	30-60r/min	16³/min	23m³/min		

QL 80A

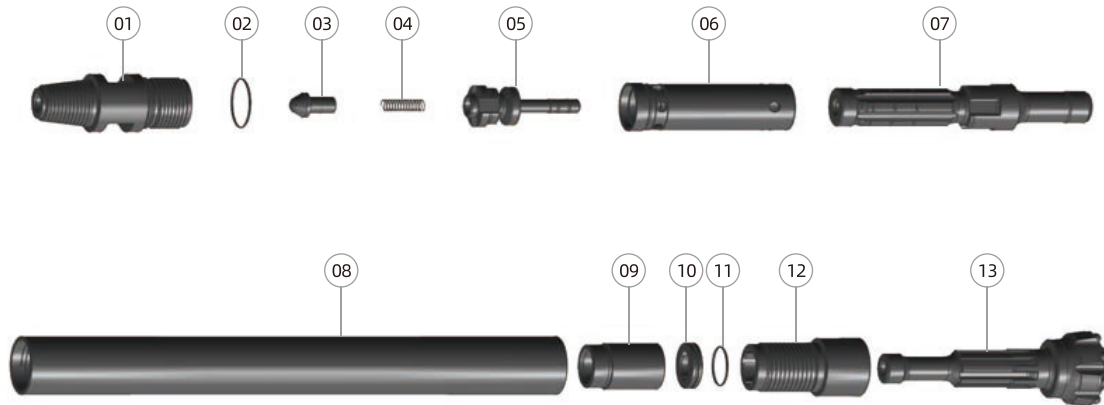


Ref.	Parts	Weight	Part No.	Ref.	Parts	Weight	Part No.
01	Top Sub	38.5 Kg	01-QL80A-01	09	Guide Sleeve	10.5 Kg	01-QL80A-09
02	O Ring	0.02 Kg	01-QL80A-02	10	Retainer Ring	1.2 Kg	01-QL80A-10
03	Check Valve	0.65 Kg	01-QL80A-03	11	O Ring	0.01 Kg	01-QL80A-11
04	Spring	0.1 Kg	01-QL80A-04	12	Drive Chuck	14.5 Kg	01-QL80A-12
05	Valve Seat	6.2 Kg	01-QL80A-05	13	Drill Bit		01-QL80A-13
06	Inner Cylinder	7.4 Kg	01-QL80A-06				
07	Piston	44.5 Kg	01-QL80A-07				
08	Piston Case	64.5 Kg	01-QL80A-08				

Specification Parameter

Length(Less bit)	Weight	Outer diameter	Connection Thread	Bit Shank	Hole Range
1335mm	188 Kg	φ185 mm	API4 1/2"REG	QL80A	φ198-φ254mm
Working pressure		Recommended rotation speed		Air Consumption	
1.5-3.3Mpa		30-60r/min		1.8Mpa	2.4Mpa
				25³/min	34m³/min

Mission 30

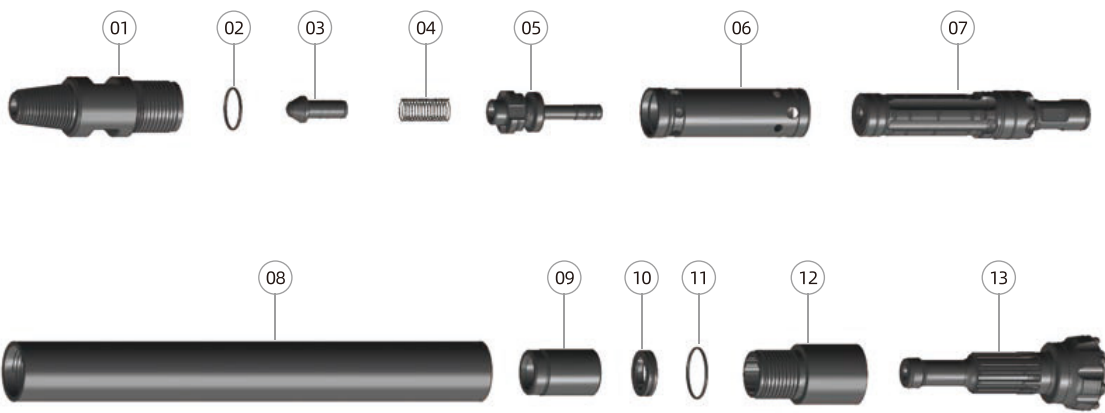


Ref.	Parts	Weight	Part No.	Ref.	Parts	Weight	Part No.
01	Top Sub	4.5 Kg	01-Mission30-01	09	Guide Sleeve	0.9 Kg	01-Mission30-09
02	O Ring	0.01 Kg	01-Mission30-02	10	Retainer Ring	0.2 Kg	01-Mission30-10
03	Check Valve	0.13 Kg	01-Mission30-03	11	O Ring	0.01 Kg	01-Mission30-11
04	Spring	0.02 Kg	01-Mission30-04	12	Drive Chuck	2.5 Kg	01-Mission30-12
05	Valve Seat	0.76 Kg	01-Mission30-05	13	Drill Bit		01-Mission30-13
06	Inner Cylinder	1.45 Kg	01-Mission30-06				
07	Piston	4.8 Kg	01-Mission30-07				
08	Piston Case	7.6 Kg	01-Mission30-08				

Specification Parameter

Length(Less bit)	Weight	Outer diameter	Connection Thread	Bit Shank	Hole Range
931mm	23 Kg	φ82mm	API2 3/8"REG	Mission30	φ90-φ115mm
Working pressure		Recommended rotation speed		Air Consumption	
1.0-1.7Mpa		30-50r/min		1.0Mpa	1.5Mpa
				4³/min	6.5m³/min

Mission 40

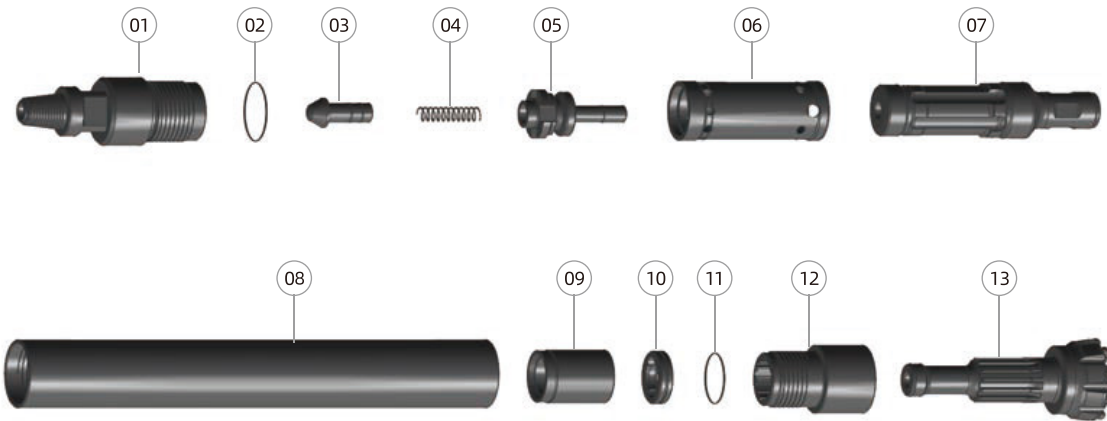


Ref.	Parts	Weight	Part No.	Ref.	Parts	Weight	Part No.
01	Top Sub	8.1 Kg	01-Mission40-01	09	Guide Sleeve	1.84 Kg	01-Mission40-09
02	O Ring	0.01 Kg	01-Mission40-02	10	Retainer Ring	0.3 Kg	01-Mission40-10
03	Check Valve	0.3 Kg	01-Mission40-03	11	O Ring	0.01 Kg	01-Mission40-11
04	Spring	0.04 Kg	01-Mission40-04	12	Drive Chuck	3.9 Kg	01-Mission40-12
05	Valve Seat	1.5 Kg	01-Mission40-05	13	Drill Bit		01-Mission40-13
06	Inner Cylinder	2.1 Kg	01-Mission40-06				
07	Piston	8.4 Kg	01-Mission40-07				
08	Piston Case	15 Kg	01-Mission40-08				

Specification Parameter

Length(Less bit)	Weight	Outer diameter	Connection Thread	Bit Shank	Hole Range
1004mm	40.5 Kg	φ99 mm	API2 3/8"REG	Mission40	φ110~φ135mm
Working pressure		Recommended rotation speed		Air Consumption	
				1.0Mpa	1.8Mpa
1.0~2.2Mpa		30~60r/min		5 ³ /min	9m ³ /min

Mission 50

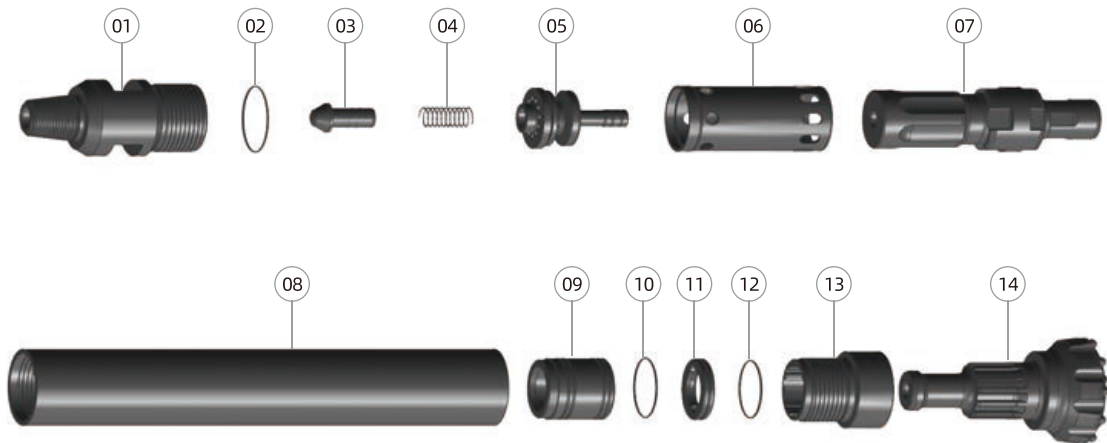


Ref.	Parts	Weight	Part No.	Ref.	Parts	Weight	Part No.
01	Top Sub	13.7 Kg	01-Mission50-01	09	Guide Sleeve	2.6 Kg	01-Mission50-09
02	O Ring	0.02 Kg	01-Mission50-02	10	Retainer Ring	0.7 Kg	01-Mission50-10
03	Check Valve	0.7 Kg	01-Mission50-03	11	O Ring	0.01 Kg	01-Mission50-11
04	Spring	0.1 Kg	01-Mission50-04	12	Drive Chuck	7.1 Kg	01-Mission50-12
05	Valve Seat	2 Kg	01-Mission50-05	13	Drill Bit		01-Mission50-13
06	Inner Cylinder	2.8 Kg	01-Mission50-06				
07	Piston	15 Kg	01-Mission50-07				
08	Piston Case	24 Kg	01-Mission50-08				

Specification Parameter

Length(Less bit)	Weight	Outer diameter	Connection Thread	Bit Shank	Hole Range
1122mm	70.5 Kg	φ126mm	API2 3/8"REG	Mission50	φ136~φ155mm
Working pressure		Recommended rotation speed		Air Consumption	
				1.0Mpa	1.8Mpa
1.0~2.5Mpa		30~60r/min		7 ³ /min	13m ³ /min

Mission 60

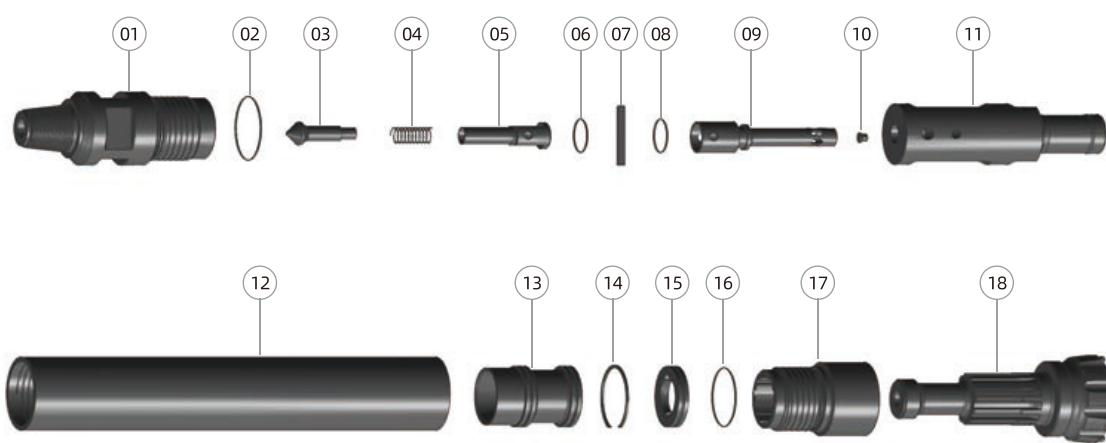


Ref.	Parts	Weight	Part No.	Ref.	Parts	Weight	Part No.
01	Top Sub	20 Kg	01-Mission60-01	09	Guide Sleeve	4.8 Kg	01-Mission60-09
02	O Ring	0.01 Kg	01-Mission60-02	10	O Ring	0.01 Kg	01-Mission60-10
03	Check Valve	0.56 Kg	01-Mission60-03	11	Retainer Ring	0.9 Kg	01-Mission60-11
04	Spring	0.06 Kg	01-Mission60-04	12	O Ring	0.01 Kg	01-Mission60-12
05	Valve Seat	3.5 Kg	01-Mission60-05	13	Drive Chuck	5.8 Kg	01-Mission60-13
06	Inner Cylinder	3.9 Kg	01-Mission60-06	14	Drill Bit		01-Mission60-14
07	Piston	21.5 Kg	01-Mission60-07				
08	Piston Case	30.5 Kg	01-Mission60-08				

Specification Parameter

Length(Less bit)	Weight	Outer diameter	Connection Thread	Bit Shank	Hole Range
1129mm	91.5 Kg	ϕ144 mm	API3 1/2"REG	Mission60	ϕ152-ϕ203mm
Working pressure	Recommended rotation speed	Air Consumption			
		1.0Mpa	1.8Mpa		
1.0-2.8Mpa	30-60r/min	18³/min	25m³/min		

Mission 80

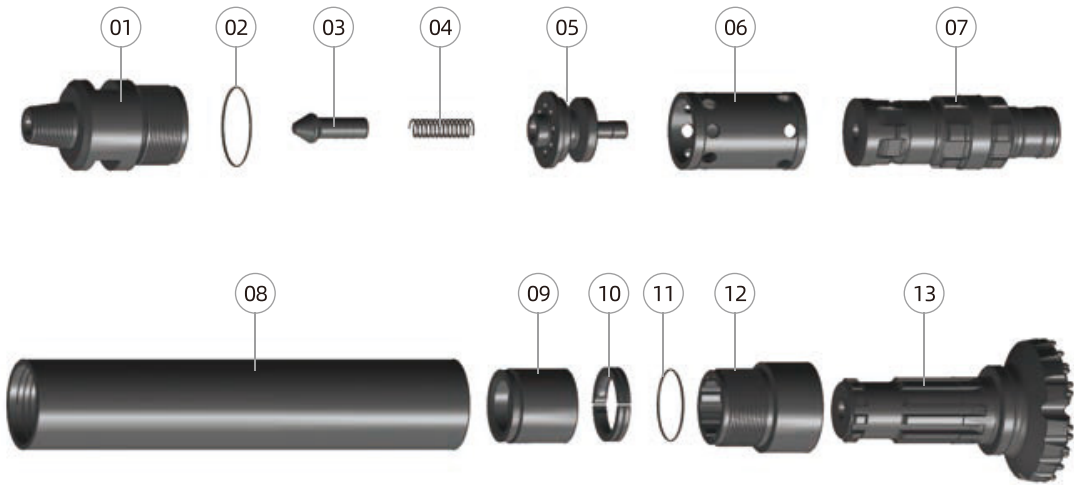


Ref.	Parts	Weight	Part No.	Ref.	Parts	Weight	Part No.
01	Top Sub	43 Kg	01-Mission80-01	10	Nylon Plug	0.04 Kg	01-Mission80-10
02	O Ring	0.01 Kg	01-Mission80-02	11	Piston	42 Kg	01-Mission80-11
03	Check Valve	0.46 Kg	01-Mission80-03	12	Piston Case	43 Kg	01-Mission80-12
04	Spring	0.07 Kg	01-Mission80-04	13	Guide Sleeve	9.8 Kg	01-Mission80-13
05	Valve Seat	0.65 Kg	01-Mission80-05	14	Circlip	0.09 Kg	01-Mission80-14
06	O Ring	0.01 Kg	01-Mission80-06	15	Retainer Ring	1.9 Kg	01-Mission80-15
07	Bole	0.3 Kg	01-Mission80-07	16	O Ring	0.01 Kg	01-Mission80-16
08	O Ring	0.01 Kg	01-Mission80-08	17	Drive Chuck	17 Kg	01-Mission80-17
09	Rigid Valve	2 Kg	01-Mission80-09	18	Drill Bit		01-Mission80-18

Specification Parameter

Length(Less bit)	Weight	Outer diameter	Connection Thread	Bit Shank	Hole Range
1333mm	160.5 Kg	ϕ180mm	API4 1/2"REG	Mission80	ϕ195-ϕ245mm
Working pressure	Recommended rotation speed	Air Consumption			
		1.8Mpa	2.4Mpa		
1.5-3.3Mpa	30-60r/min	26³/min	35m³/min		

NUMA 100A

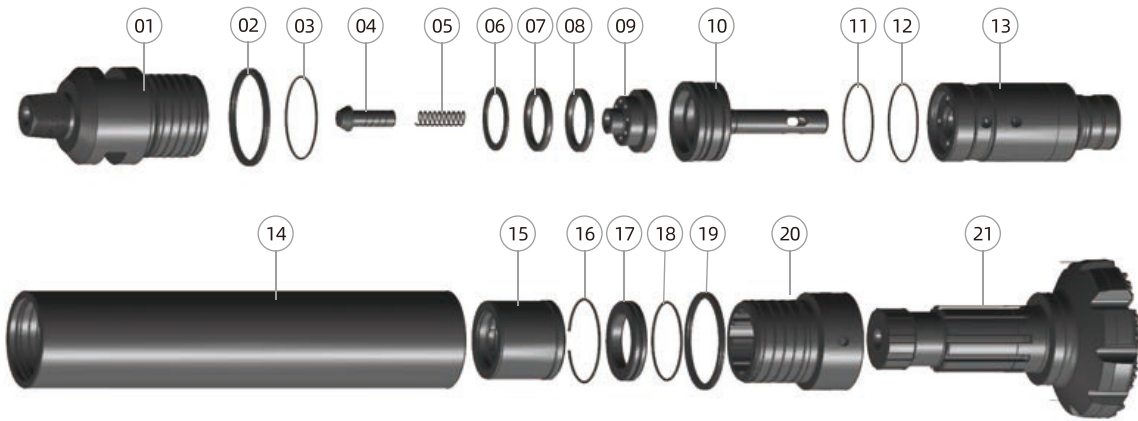


Ref.	Parts	Weight	Part No.	Ref.	Parts	Weight	Part No.
01	Top Sub	62 Kg	01-NUMA100A-01	09	Guide Sleeve	11.5 Kg	01-NUMA100A-09
02	O Ring	0.02 Kg	01-NUMA100A-02	10	Retainer Ring	2.2 Kg	01-NUMA100A-10
03	Check Valve	1.5 Kg	01-NUMA100A-03	11	O Ring	0.02 Kg	01-NUMA100A-11
04	Spring	0.20 Kg	01-NUMA100A-04	12	Drive Chuck	26 Kg	01-NUMA100A-12
05	Valve Seat	13.5 Kg	01-NUMA100A-05	13	Drill Bit		01-NUMA100A-13
06	Inner Cylinder	13 Kg	01-NUMA100A-06				
07	Piston	71.5 Kg	01-NUMA100A-07				
08	Piston Case	98 Kg	01-NUMA100A-08				

Specification Parameter

Length(Less bit)	Weight	Outer diameter	Connection Thread	Bit Shank	Hole Range
1475mm	299.5 Kg	φ225 mm	API5 1/2"REG	NUMA100A	φ254-φ311mm
Working pressure		Recommended rotation speed		Air Consumption	
1.5-3.3Mpa		25-50r/min		1.8Mpa	2.4Mpa
				36³/min	58m³/min

NUMA 125A



Ref.	Parts	Weight	Part No.	Ref.	Parts	Weight	Part No.
01	Top Sub	163.5 Kg	01-NUMA125A-01	13	Piston	137.7 Kg	01-NUMA125A-13
02	Washer	1.5 Kg	01-NUMA125A-02	14	Piston Case	247.5 Kg	01-NUMA125A-14
03	O Ring	0.03 Kg	01-NUMA125A-03	15	Guide Sleeve	29.7 Kg	01-NUMA125A-15
04	Check Chuck	1.5 Kg	01-NUMA125A-04	16	Circlip	0.2 Kg	01-NUMA125A-16
05	Spring	0.2 Kg	01-NUMA125A-05	17	Retainer Ring	7 Kg	01-NUMA125A-17
06	Squashing Ring	0.7 Kg	01-NUMA125A-06	18	O Ring	0.3 Kg	01-NUMA125A-18
07	Rubber Buffer	0.3 Kg	01-NUMA125A-07	19	Washer	1.5 Kg	01-NUMA125A-19
08	Rubber Buffer	0.3 Kg	01-NUMA125A-08	20	Drive Chuck	67.2 Kg	01-NUMA125A-20
09	Valve Seat	11.8 Kg	01-NUMA125A-09	21	Drill Bit		01-NUMA125A-21
10	Rigid Valve	27.4 Kg	01-NUMA125A-10				
11	O Ring	0.03 Kg	01-NUMA125A-11				
12	O Ring	0.03 Kg	01-NUMA125A-12				

Specification Parameter

Length(Less bit)	Weight	Outer diameter	Connection Thread	Bit Shank	Hole Range
1785mm	698.5 Kg	φ305mm	API6 5/8"REG	NUMA125A	φ330-φ400mm
Working pressure		Recommended rotation speed		Air Consumption	
1.5-3.3Mpa		25-45r/min		1.8Mpa	2.4Mpa
				46³/min	58m³/min

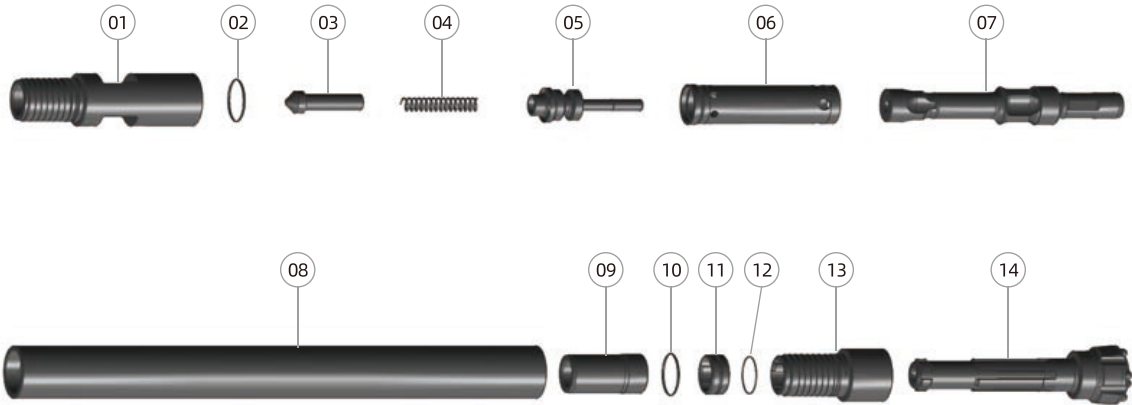
Medium Air Pressure DTH Hammer Without Foot Valve

The main features are as following:

- The pressure are between 0.7 MPa and 1.75 MPa.
- Valveless hammers.
- Simple structure, esily to assemble and to disassemble, long lifespan.
- Higher impulse and faster drilling rate.
- Lower air consumption and lower oil consumption. A hole can bedrilled on the check valve to provide more efficient cuttings discharge.
- Especially suitable for quarrying.



BR 1

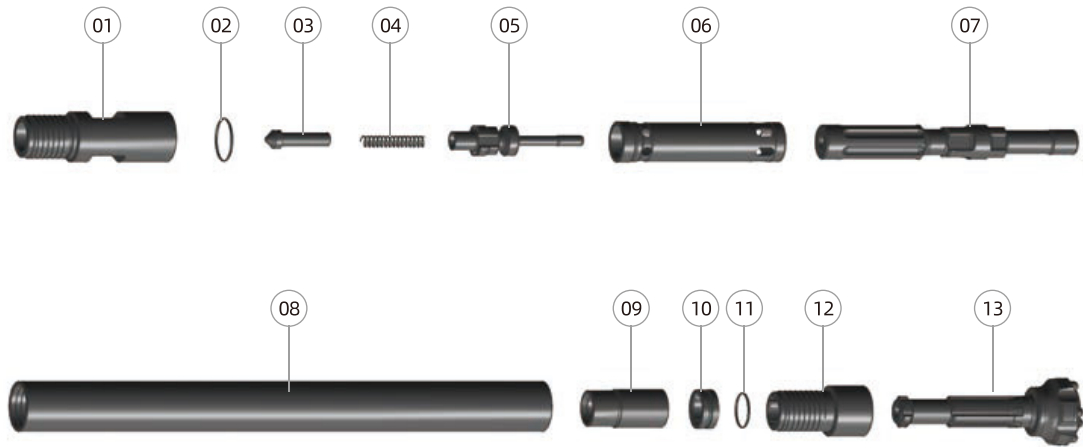


Ref.	Parts	Weight	Part No.	Ref.	Parts	Weight	Part No.
01	Top Sub	1.92 Kg	01-BR1-01	09	Guide Sleeve	0.29 Kg	01-BR1-09
02	O Ring	0.01 Kg	01-BR1-02	10	Circlip	0.1 Kg	01-BR1-10
03	Check Valve	0.08 Kg	01-BR1-03	11	Retainer Ring	0.08 Kg	01-BR1-11
04	Spring	0.01 Kg	01-BR1-04	12	O Ring	0.01 Kg	01-BR1-12
05	Valve Seat	0.46 Kg	01-BR1-05	13	Drive Chuck	0.82 Kg	01-BR1-13
06	Inner Cylinder	0.38 Kg	01-BR1-06	14	Drill Bit		01-BR1-14
07	Piston	1.16 Kg	01-BR1-07				
08	Piston Case	3.46 Kg	01-BR1-08				

Specification Parameter

Length(Less bit)	Weight	Outer diameter	Connection Thread	Bit Shank	Hole Range
689mm	8.8 Kg	ϕ56mm	RD40 BOX	BR1	ϕ64-ϕ76mm
Working pressure		Recommended rotation speed		Air Consumption	
0.8-1.5Mpa		30-50r/min		1.0Mpa 2 ³ /min	1.4Mpa 3m ³ /min

BR 2

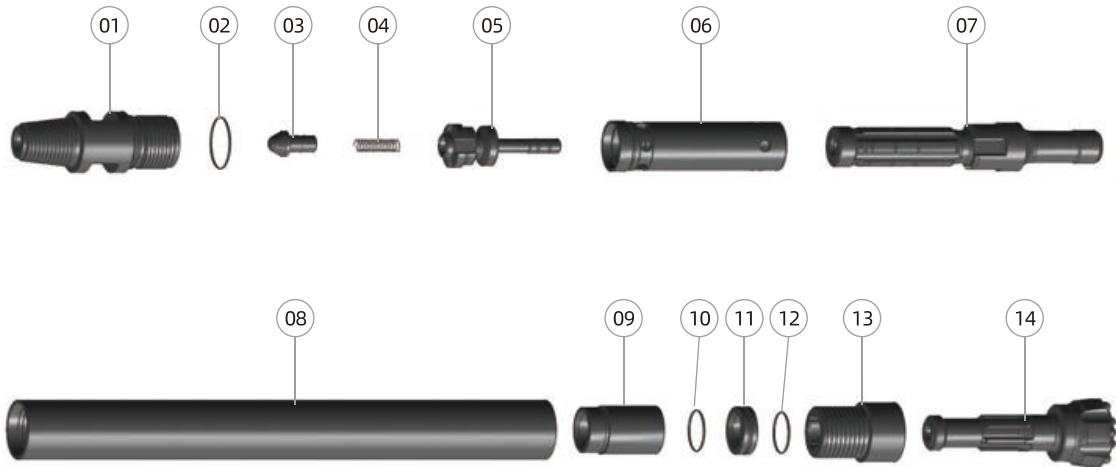


Ref.	Parts	Weight	Part No.	Ref.	Parts	Weight	Part No.
01	Top Sub	2.5 Kg	01-BR2-01	09	Guide Sleeve	0.52 Kg	01-BR2-09
02	O Ring	0.01 Kg	01-BR2-02	10	Retainer Ring	0.1 Kg	01-BR2-10
03	Check Valve	0.08 Kg	01-BR2-03	11	O ring	0.01 Kg	01-BR2-11
04	Spring	0.05 Kg	01-BR2-04	12	Drive Chuck	1.2 Kg	01-BR2-12
05	Valve Seat	0.5 Kg	01-BR2-05	13	Drill Bit		01-BR2-13
06	Inner Cylinder	0.6 Kg	01-BR2-06				
07	Piston	2.3 Kg	01-BR2-07				
08	Piston Case	4.5 Kg	01-BR2-08				

Specification Parameter

Length(Less bit)	Weight	Outer diameter	Connection Thread	Bit Shank	Hole Range
810mm	12.5 Kg	ϕ64 mm	RD50 BOX	BR2	ϕ70-ϕ90mm
Working pressure		Recommended rotation speed		Air Consumption	
0.8-1.5Mpa		30-50r/min		1.0Mpa	1.4Mpa
				3 ³ /min	4.5m ³ /min

BR 3

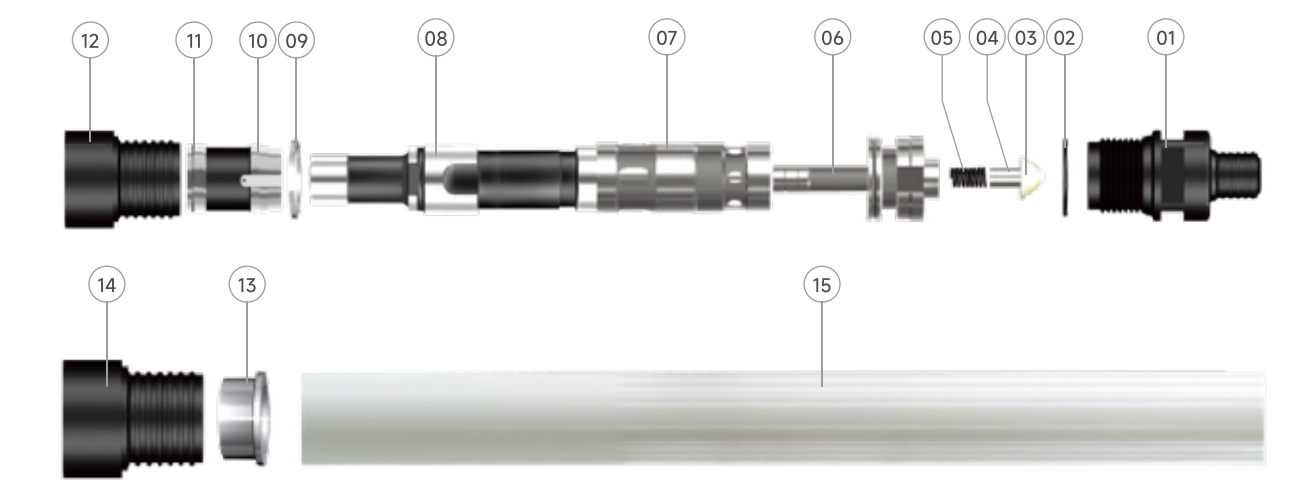


Ref.	Parts	Weight	Part No.	Ref.	Parts	Weight	Part No.
01	Top Sub	4.4 Kg	01-BR3-01	09	Guide Sleeve	0.9 Kg	01-BR3-09
02	O Ring	0.01 Kg	01-BR3-02	10	Circlip	0.15 Kg	01-BR3-10
03	Check Valve	0.13 Kg	01-BR3-03	11	Retainer Ring	0.25 Kg	01-BR3-11
04	Spring	0.02 Kg	01-BR3-04	12	O Ring	0.01 Kg	01-BR3-12
05	Valve Seat	0.76 Kg	01-BR3-05	13	Drive Chuck	2 Kg	01-BR3-13
06	Inner Cylinder	1.45 Kg	01-BR3-06	14	Drill Bit		01-BR3-14
07	Piston	4.7 Kg	01-BR3-07				
08	Piston Case	6 Kg	01-BR3-08				

Specification Parameter

Length(Less bit)	Weight	Outer diameter	Connection Thread	Bit Shank	Hole Range
871mm	21 Kg	ϕ82mm	API2 3/8REG	BR3	ϕ90-ϕ115mm
Working pressure		Recommended rotation speed		Air Consumption	
1.0-1.7Mpa		30-50r/min		1.0Mpa	1.5Mpa
				4 ³ /min	7m ³ /min

M 3

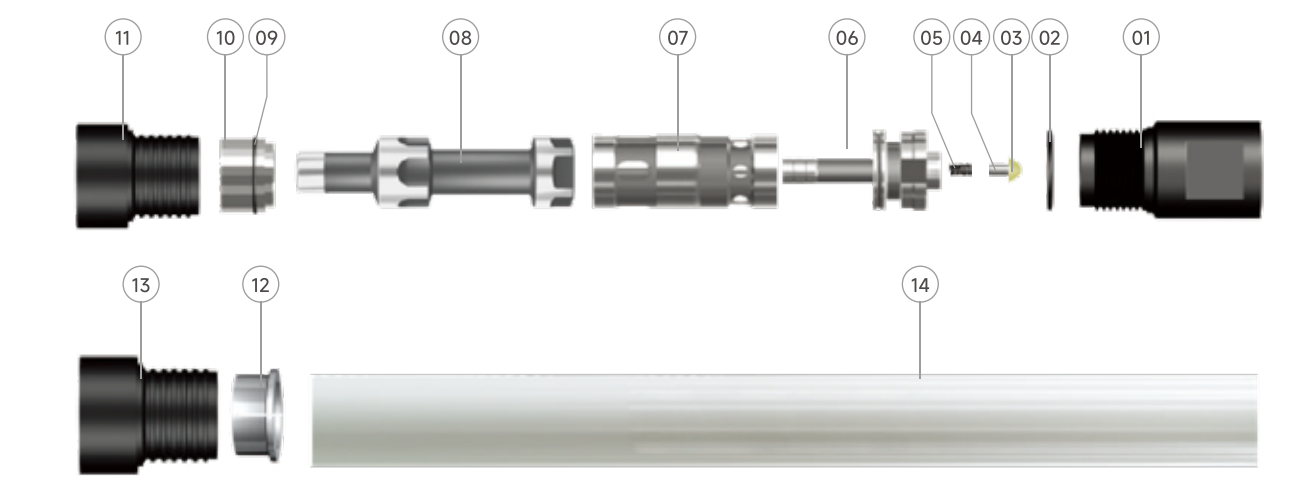


Ref.	Parts	Part No.	Ref.	Parts	Part No.
01	Top Sub	01-M3-01	09	Jump Ring	01-M3-09
02	O-Ring	01-M3-02	10	Guide Sleeve	01-M3-10
03	Cap	01-M3-03	11	O-Ring	01-M3-11
04	Check Valve	01-M3-04	12	Driver Sub	01-M3-12
05	Spring	01-M3-05	13	Bit Retainer Ring	01-M3-13
06	Air Distributor	01-M3-06	14	Driver Sub	01-M3-14
07	Inner Cylinder	01-M3-07	15	Outer Sleeve	01-M3-15
08	Piston	01-M3-08			

Specification Parameter

Length (Without Bit)	Weight (Without Bit)	Bit Shank	Top Sub Thread	Outside Diameter
870mm	24.00 Kg	CIR90/M3	F48x10PIN	80mm
Working pressure	Bit Diameter		Air Consumption	
10-13bar	90-120mm		8-10 ³ /min	

M 4

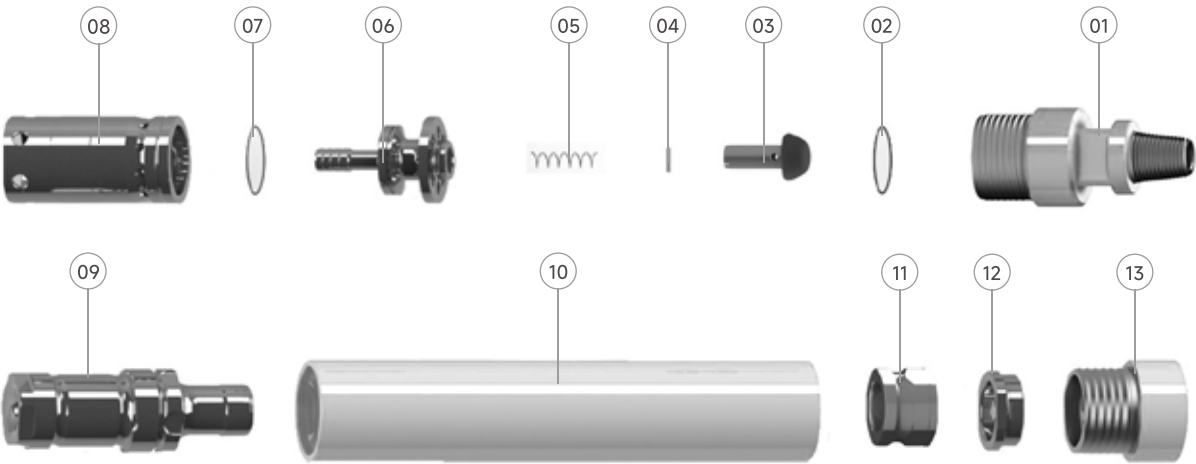


Ref.	Parts	Part No.	Ref.	Parts	Part No.
01	Top Sub	01-M4-01	09	Guide Sleeve	01-M4-09
02	O-Ring	01-M4-02	10	O-Ring	01-M4-10
03	Cap	01-M4-03	11	Driver Sub	01-M4-11
04	Check Valve	01-M4-04	12	Bit Retainer Ring	01-M4-12
05	Spring	01-M4-05	13	Driver Sub	01-M4-13
06	Air Distributor	01-M4-06	14	Outer Sleeve	01-M4-14
07	Inner Cylinder	01-M4-07			
08	Piston	01-M4-08			

Specification Parameter

Length (Without Bit)	Weight (Without Bit)	Bit Shank	Top Sub Thread	Outside Diameter
848mm	34.00 Kg	CIR110/M4	API2 3/8"REG BOX	104mm
Working pressure	Bit Diameter		Air Consumption	
10-13bar	115-150mm		8-12 ³ /min	

M 5



Ref.	Parts	Part No.	Ref.	Parts	Part No.
01	Top Sub	01-M5-01	09	Piston	01-M5-09
02	O-Ring	01-M5-02	10	Piston Case	01-M5-10
03	Check Valve Dart	01-M5-03	11	Guide Sleeve	01-M5-11
04	Choke Blank (optional)	01-M5-04	12	Bit Retainer Ring	01-M5-12
05	Spring	01-M5-05	13	Driver Sub	01-M5-13
06	Rigid Valve	01-M5-06			
07	O-Ring	01-M5-07			
08	Internal Cylinder	01-M5-08			



Specification Parameter

Length (Without Bit)	Weight (Without Bit)	Bit Shank	Top Sub Thread	Outside Diameter
808mm	56.00 Kg	M5	API2 3/8"REG、 API2 1/2"REG	126mm
Working pressure	Bit Diameter	Air Consumption		
		10 bar	18 bar	24 bar
10-25bar	140、146、148、152mm	6 ³ /min	12.5 ³ /min	16.5 ³ /min

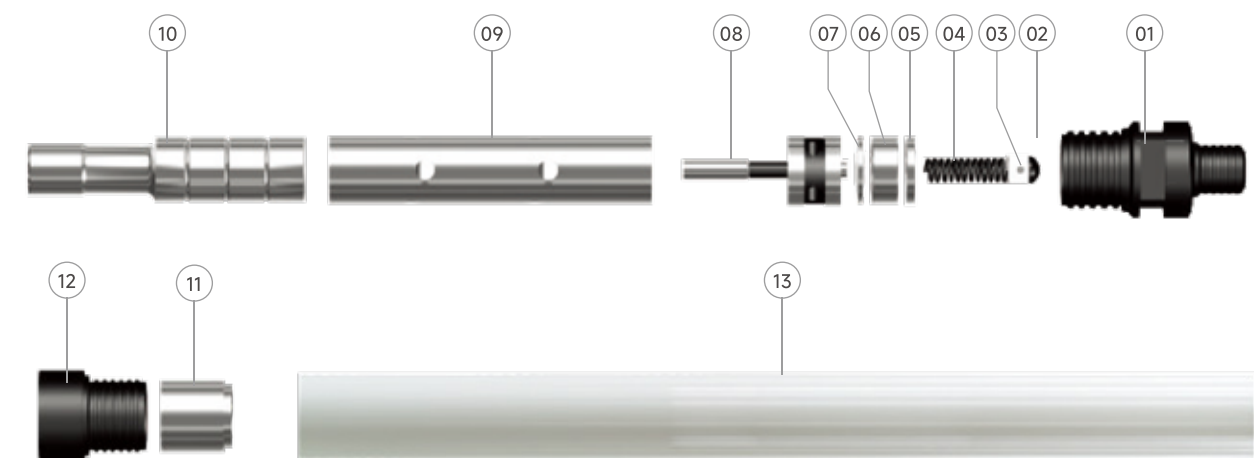
Low Air Pressure DTH Hammer Without Foot Valve

The main features are as following:

- The strong energy of single impact and the low energy consumption in rock crushing.
- The weight ratio of Piston and Bit almost reaches 1: 1 to provide long effective proformance, which leads to the improved efficiency in rock crushing and the extended service life of the drilling tool.
- A good performance in central air exhaust and cuttings discharge, which reduces the repeated crushing ofrock.
- A check valve device is available to drill holes under water.
- The CIR Series DTH Hammer, an ideal drilling tool, is widely used in such industries relating to energy. transportation, metallurgy, building etc .



CIR 50

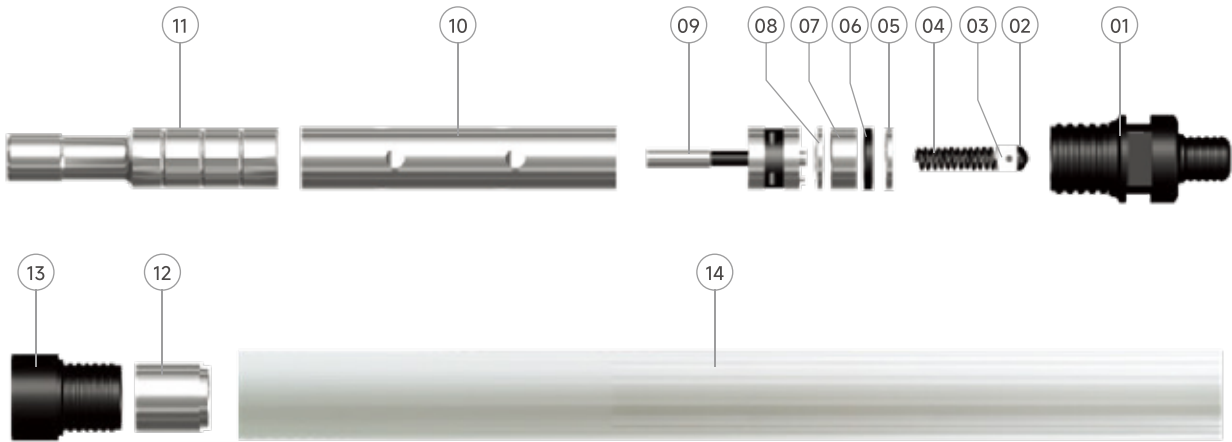


Ref.	Parts	Part No.	Ref.	Parts	Part No.
01	Top Sub	01-CIR50-01	09	Inner Cylinder	01-CIR50-09
02	Cap	01-CIR50-02	10	Piston	01-CIR50-10
03	Check Valve	01-CIR50-03	11	Guide Sleeve	01-CIR50-11
04	Spring	01-CIR50-04	12	Driver Sub	01-CIR50-12
05	Shim	01-CIR50-05	13	Outer Sleeve	01-CIR50-13
06	Valve Cap	01-CIR50-06			
07	Valve	01-CIR50-07			
08	Air Distributor	01-CIR50-08			

Specification Parameter

Length (Without Bit)	Weight (Without Bit)	Bit Shank	Top Sub Thread	Outside Diameter
660mm	7.00 Kg	CIR50	F32x8PIN	50mm
Working pressure	Bit Diameter	Air Consumption		
4-10bar	55mm	3-5 ³ /min		

CIR 65

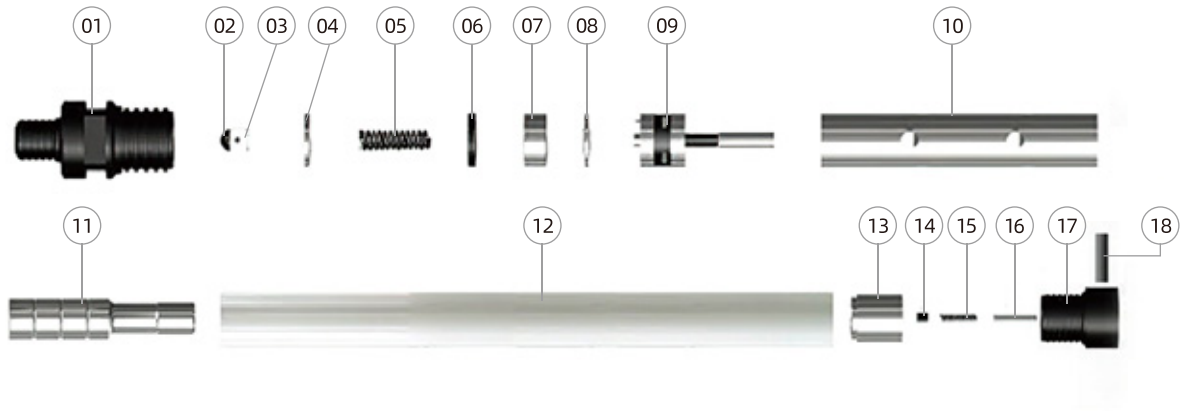


Ref.	Parts	Part No.	Ref.	Parts	Part No.
01	Top Sub	01-CIR65-01	09	Air Distributor	01-CIR65-09
02	Cap	01-CIR65-02	10	Inner Cylinder	01-CIR65-10
03	Check Valve	01-CIR65-03	11	Piston	01-CIR65-11
04	Spring	01-CIR65-04	12	Guide Sleeve	01-CIR65-12
05	Shim	01-CIR65-05	13	Driver Sub	01-CIR65-13
06	Rubber Ring	01-CIR65-06	14	Outer Sleeve	01-CIR65-14
07	Valve Cap	01-CIR65-07			
08	Valve	01-CIR65-08			

Specification Parameter

Length (Without Bit)	Weight (Without Bit)	Bit Shank	Top Sub Thread	Outside Diameter
745mm	13.00 Kg	CIR65	F42x10PIN	61mm
Working pressure	Bit Diameter		Air Consumption	
4-10bar	65mm		6-12³/min	

CIR 76

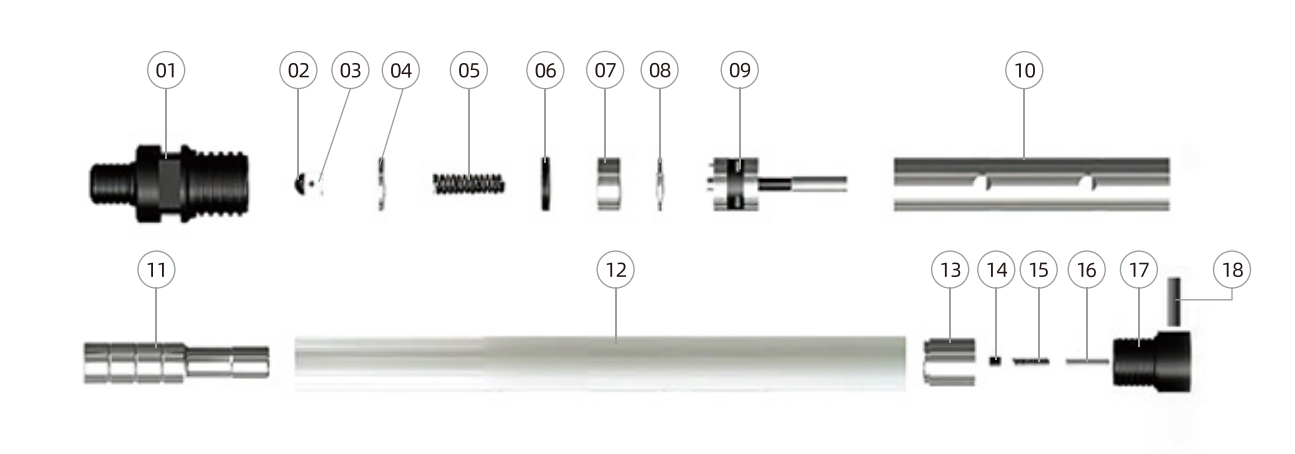


Ref.	Parts	Weight	Part No.	Ref.	Parts	Weight	Part No.
01	Back Adaptor	/	01-CIR76-01	10	Air Cylinder	/	01-CIR76-10
02	End	/	01-CIR76-02	11	Piston	/	01-CIR76-11
03	Check valve	/	01-CIR76-03	12	Outer Casing	/	01-CIR76-12
04	Iron Washer	/	01-CIR76-04	13	Guide Sleeve	/	01-CIR76-13
05	Spring	/	01-CIR76-05	14	Rubber Sleeve	/	01-CIR76-14
06	Rubber Washer	/	01-CIR76-06	15	Spring	/	01-CIR76-15
07	Valve Cap	/	01-CIR76-07	16	Vertical Pin	/	01-CIR76-16
08	Valve Piece	/	01-CIR76-08	17	Front Adaptor	/	01-CIR76-17
09	Valve Seat	/	01-CIR76-09	18	Traverse Pin	/	01-CIR76-18

Specification Parameter

Length(Less bit)	Weight	Outer diameter	Use drill pipe specifications	Hole diameter
766mm	15 Kg	φ67 mm	φ42 φ50	φ70-φ76mm
Working pressure		Impacting frequency		Air Consumption
0.5-0.7Mpa		≥810Times/min		3³/min

CIR 90

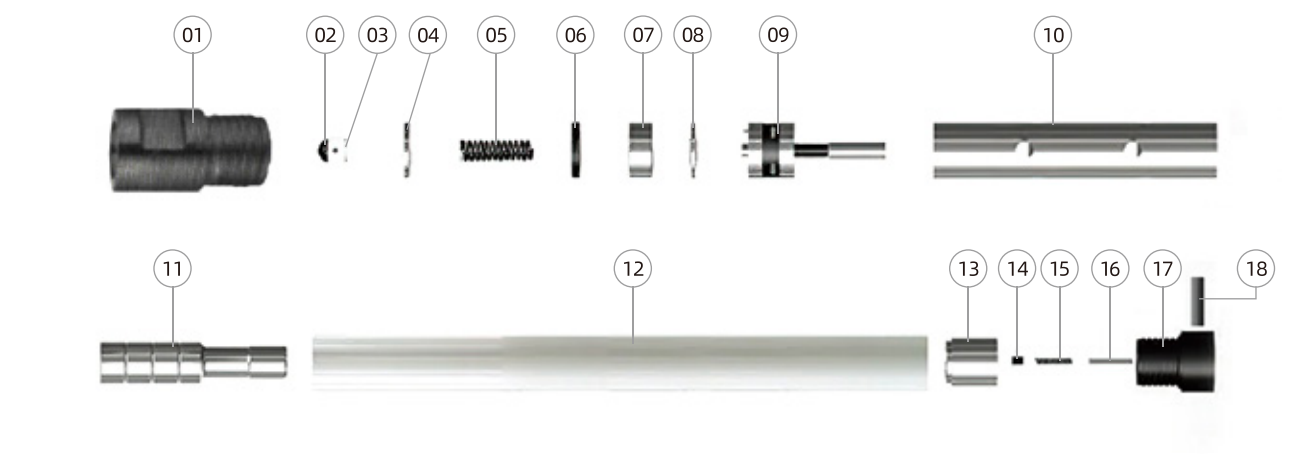


Ref.	Parts	Weight	Part No.	Ref.	Parts	Weight	Part No.
01	Back Adaptor	/	01-CIR90-01	10	Air Cylinder	/	01-CIR90-10
02	End	/	01-CIR90-02	11	Piston	/	01-CIR90-11
03	Check valve	/	01-CIR90-03	12	Outer Casing	/	01-CIR90-12
04	Iron Washer	/	01-CIR90-04	13	Guide Sleeve	/	01-CIR90-13
05	Spring	/	01-CIR90-05	14	Rubber Sleeve	/	01-CIR90-14
06	Rubber Washer	/	01-CIR90-06	15	Spring	/	01-CIR90-15
07	Valve Cap	/	01-CIR90-07	16	Vertical Pin	/	01-CIR90-16
08	Valve Piece	/	01-CIR90-08	17	Front Adaptor	/	01-CIR90-17
09	Valve Seat	/	01-CIR90-09	18	Traverse Pin	/	01-CIR90-18

Specification Parameter

Length(Less bit)	Weight	Outer diameter	Use drill pipe specifications	Hole diameter
796mm	22 Kg	φ80mm	φ50 φ60	φ90-φ100mm
Working pressure		Impacting frequency		Air Consumption
0.5-0.7Mpa		≥840Times/min		6³/min

CIR 110

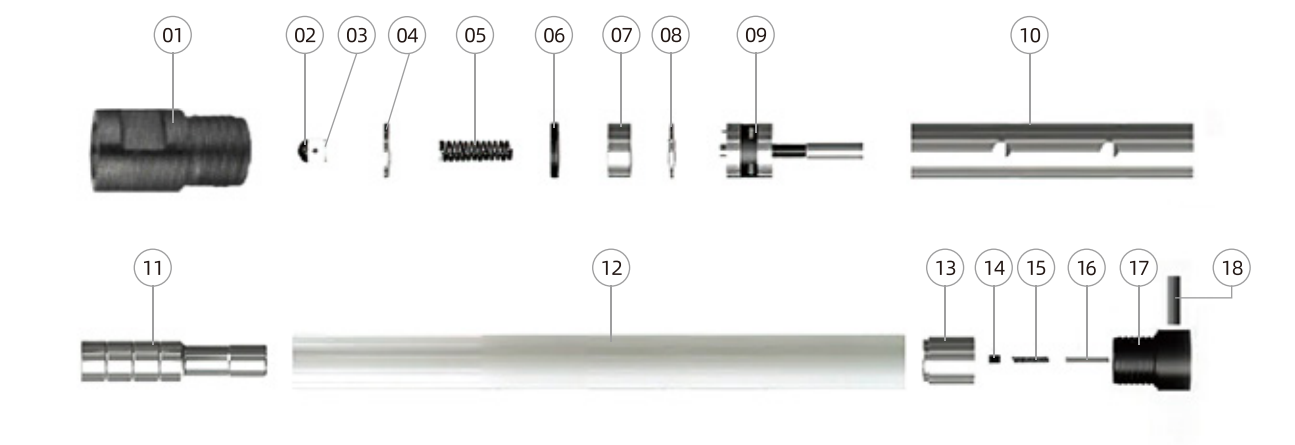


Ref.	Parts	Weight	Part No.	Ref.	Parts	Weight	Part No.
01	Back Adaptor	/	01-CIR110-01	10	Air Cylinder	/	01-CIR110-10
02	End	/	01-CIR110-02	11	Piston	/	01-CIR110-11
03	Check valve	/	01-CIR110-03	12	Outer Casing	/	01-CIR110-12
04	Iron Washer	/	01-CIR110-04	13	Guide Sleeve	/	01-CIR110-13
05	Spring	/	01-CIR110-05	14	Rubber Sleeve	/	01-CIR110-14
06	Rubber Washer	/	01-CIR110-06	15	Spring	/	01-CIR110-15
07	Valve Cap	/	01-CIR110-07	16	Vertical Pin	/	01-CIR110-16
08	Valve Piece	/	01-CIR110-08	17	Front Adaptor	/	01-CIR110-17
09	Valve Seat	/	01-CIR110-09	18	Traverse Pin	/	01-CIR110-18

Specification Parameter

Length(Less bit)	Weight	Outer diameter	Use drill pipe specifications	Hole diameter
838mm	36 Kg	φ98 mm	φ42 φ50 φ76	φ100-φ120mm
Working pressure		Impacting frequency		Air Consumption
0.5-0.7Mpa		≥840Times/min		11³/min

CIR 130

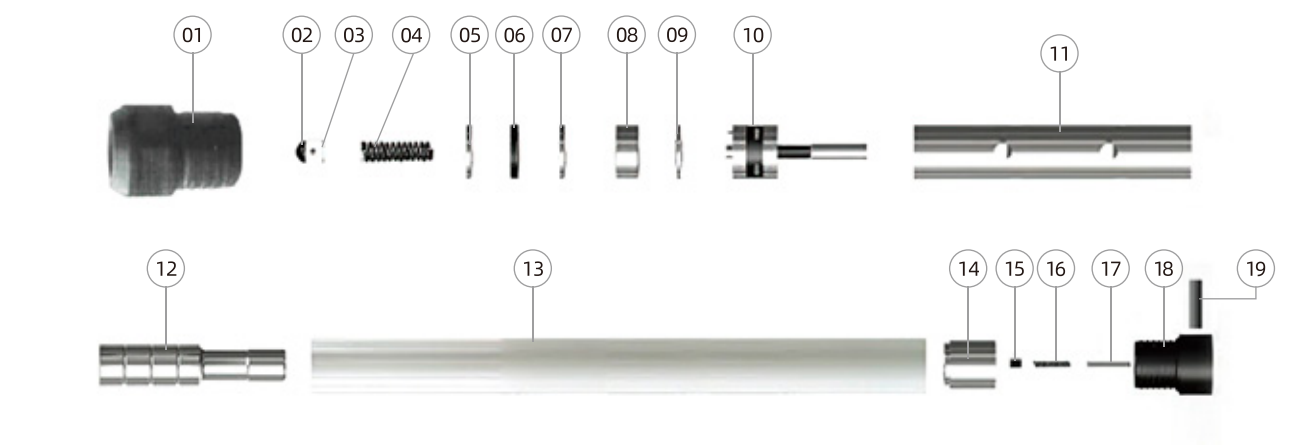


Ref.	Parts	Weight	Part No.	Ref.	Parts	Weight	Part No.
01	Back Adaptor	/	01-CIR130-01	10	Air Cylinder	/	01-CIR130-10
02	End	/	01-CIR130-02	11	Piston	/	01-CIR130-11
03	Check valve	/	01-CIR130-03	12	Outer Casing	/	01-CIR130-12
04	Iron Washer	/	01-CIR130-04	13	Guide Sleeve	/	01-CIR130-13
05	Spring	/	01-CIR130-05	14	Rubber Sleeve	/	01-CIR130-14
06	Rubber Washer	/	01-CIR130-06	15	Spring	/	01-CIR130-15
07	Valve Cap	/	01-CIR130-07	16	Vertical Pin	/	01-CIR130-16
08	Valve Piece	/	01-CIR130-08	17	Front Adaptor	/	01-CIR130-17
09	Valve Seat	/	01-CIR130-09	18	Traverse Pin	/	01-CIR130-18

Specification Parameter

Length(Less bit)	Weight	Outer diameter	Use drill pipe specifications	Hole diameter
912mm	48.5 Kg	ϕ112mm	ϕ76	ϕ135mm
Working pressure		Impacting frequency		Air Consumption
0.7-1.0Mpa		900Times/min		7-12 ³ /min

CIR 150

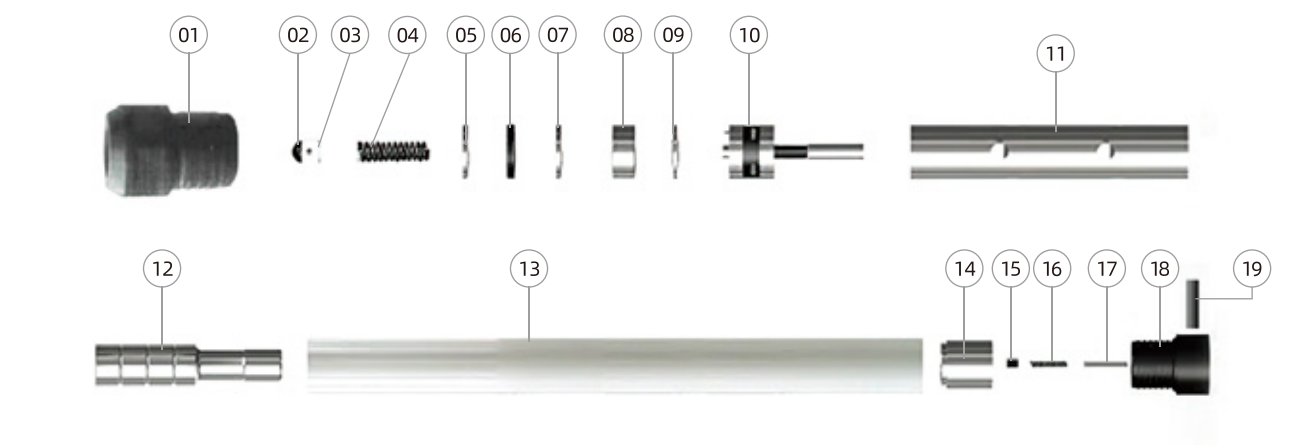


Ref.	Parts	Weight	Part No.	Ref.	Parts	Weight	Part No.
01	Back Adaptor	/	01-CIR150-01	11	Air Cylinder	/	01-CIR150-12
02	End	/	01-CIR150-02	12	Piston	/	01-CIR150-13
03	Check valve	/	01-CIR150-03	13	Outer Casing	/	01-CIR150-14
04	Spring	/	01-CIR150-04	14	Guide Sleeve	/	01-CIR150-15
05	Iron Washer	/	01-CIR150-05	15	Rubber Sleeve	/	01-CIR150-15
06	Rubber Washer	/	01-CIR150-06	16	Spring	/	01-CIR150-16
07	Iron Washer	/	01-CIR150-07	17	Vertical Pin	/	01-CIR150-17
08	Valve Cap	/	01-CIR150-08	18	Front Adaptor	/	01-CIR150-18
09	Valve Piece	/	01-CIR150-09	19	Traverse Pin	/	01-CIR150-19
10	Valve Seat	/	01-CIR150-10				

Specification Parameter

Length(Less bit)	Weight	Outer diameter	Use drill pipe specifications	Hole diameter
904mm	70 Kg	ϕ136.5 mm	ϕ60 ϕ76	ϕ115mm
Working pressure		Impacting frequency		Air Consumption
0.5-0.7Mpa		≥800Times/min		15.9 ³ /min

CIR 170

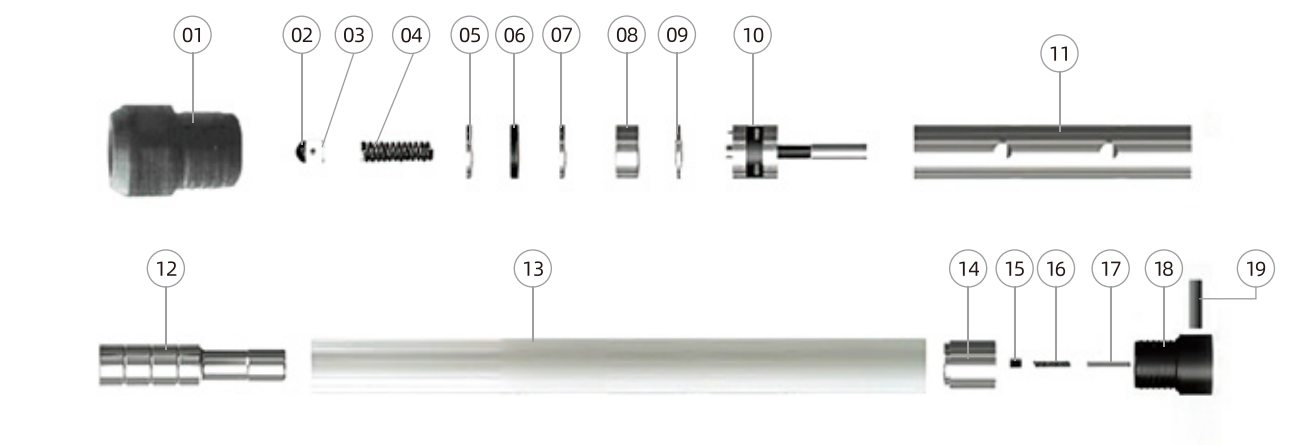


Ref.	Parts	Weight	Part No.	Ref.	Parts	Weight	Part No.
01	Back Adaptor	/	01-CIR170-01	11	Air Cylinder	/	01-CIR170-12
02	End	/	01-CIR170-02	12	Piston	/	01-CIR170-13
03	Check valve	/	01-CIR170-03	13	Outer Casing	/	01-CIR170-14
04	Spring	/	01-CIR170-04	14	Guide Sleeve	/	01-CIR170-15
05	Iron Washer	/	01-CIR170-05	15	Rubber Sleeve	/	01-CIR170-15
06	Rubber Washer	/	01-CIR170-06	16	Spring	/	01-CIR170-16
07	Iron Washer	/	01-CIR170-07	17	Vertical Pin	/	01-CIR170-17
08	Valve Cap	/	01-CIR170-08	18	Front Adaptor	/	01-CIR170-18
09	Rubber Valve Piece	/	01-CIR170-09	19	Traverse Pin	/	01-CIR170-19
10	Valve Seat	/	01-CIR170-10				

Specification Parameter

Length(Less bit)	Weight	Outer diameter	Use drill pipe specifications	Hole diameter
1022mm	102 Kg	φ156 mm	φ60 φ76	φ170-250mm
Working pressure		Impacting frequency		Air Consumption
0.5-0.7Mpa		840Times/min		19.5³/min

CIR 200

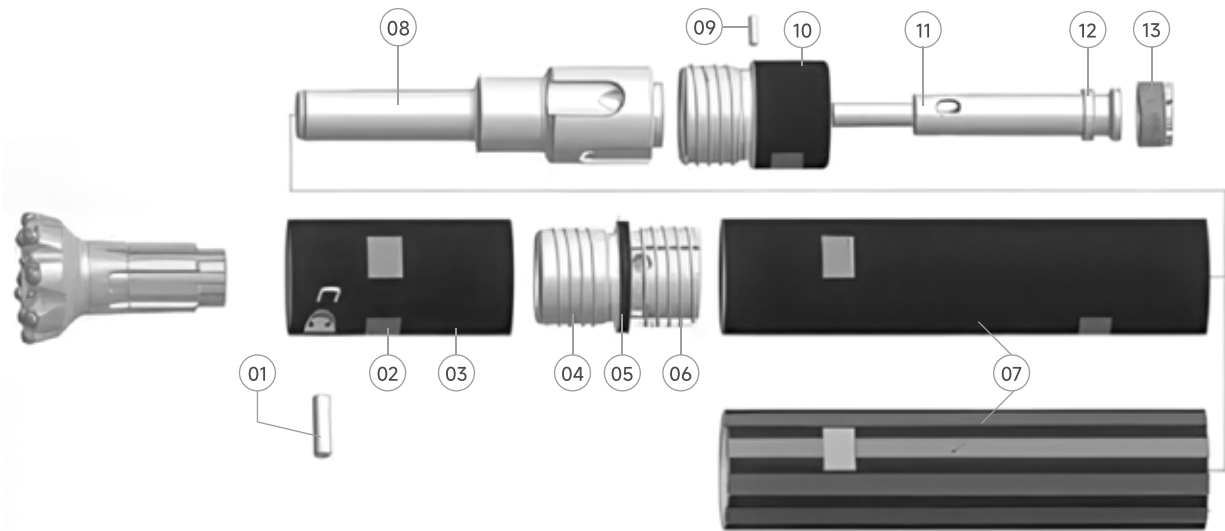


Ref.	Parts	Weight	Part No.	Ref.	Parts	Weight	Part No.
01	Back Adaptor	/	01-CIR200-01	11	Air Cylinder	/	01-CIR200-12
02	End	/	01-CIR200-02	12	Piston	/	01-CIR200-13
03	Check valve	/	01-CIR200-03	13	Outer Casing	/	01-CIR200-14
04	Spring	/	01-CIR200-04	14	Guide Sleeve	/	01-CIR200-15
05	Iron Washer	/	01-CIR200-05	15	Rubber Sleeve	/	01-CIR200-15
06	Rubber Washer	/	01-CIR200-06	16	Spring	/	01-CIR200-16
07	Iron Washer	/	01-CIR200-07	17	Vertical Pin	/	01-CIR200-17
08	Valve Cap	/	01-CIR200-08	18	Front Adaptor	/	01-CIR200-18
09	Rubber Valve Piece	/	01-CIR200-09	19	Traverse Pin	/	01-CIR200-19
10	Valve Seat	/	01-CIR200-10				

Specification Parameter

Length(Less bit)	Weight	Outer diameter	Use drill pipe specifications	Hole diameter
1120mm	152 Kg	φ188 mm	φ60 φ76	φ 200-250mm
Working pressure		Impacting frequency		Air Consumption
0.5-0.7Mpa		840 Times/min		24³/min

P 110

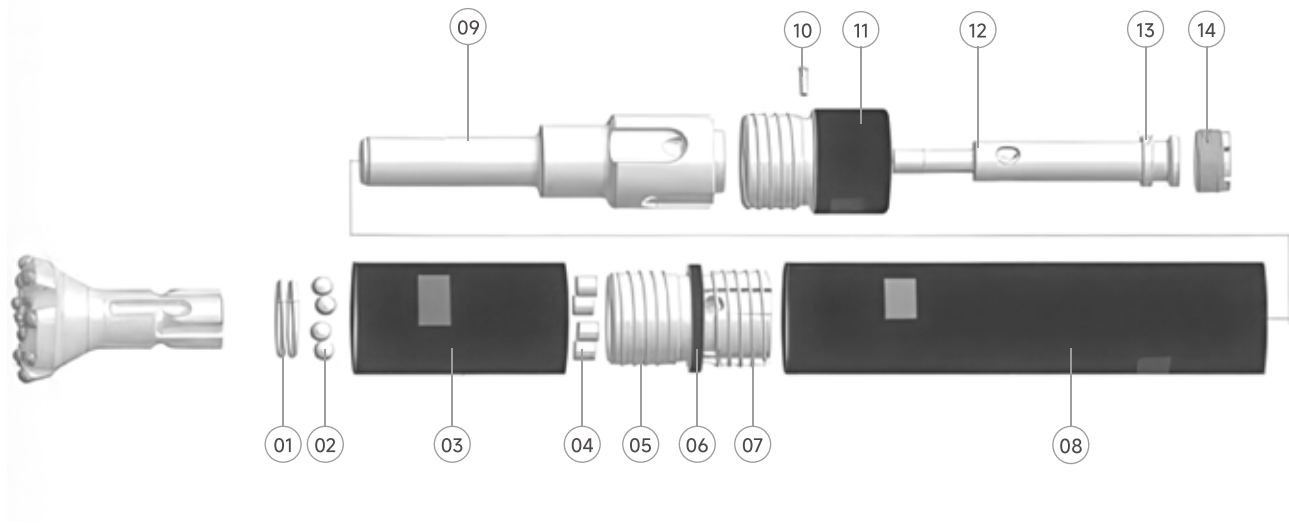


Ref.	Parts	Part No.	Ref.	Parts	Part No.
01	Traverse Pin	01-P110-01	09	Retainer	01-P110-09
02	Bracket	01-P110-02	10	Top Sub	01-P110-10
03	Driver Sub	01-P110-03	11	Air Distribution Tube	01-P110-11
04	Thread	01-P110-04	12	Seat	01-P110-12
05	Guide Sleeve	01-P110-05	13	Adjusting Nut	01-P110-13
06	Thread	01-P110-06			
07	Outer Sleeve	01-P110-07			
08	Piston	01-P110-08			

Specification Parameter

Length (Without Bit)	Weight (Without Bit)	Bit Shank	Top Sub Thread	Outside Diameter
670mm	25.50 Kg	P110	F72x10 BOX	103x98mm
Working pressure	Bit Diameter	Air Consumption	Bit Coupling Type	
7-11bar	110-140mm	7-12 ³ /min	Spline	

P 130

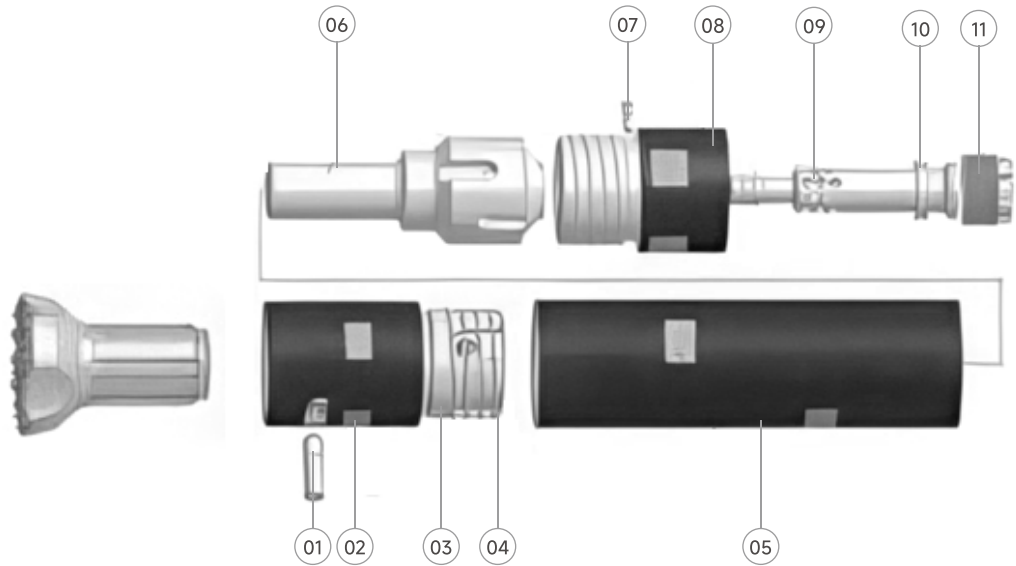


Ref.	Parts	Part No.	Ref.	Parts	Part No.
01	Reatainer Ring	01-P130-01	09	Piston	01-P130-09
02	Ball	01-P130-02	10	Retainer	01-P130-10
03	Driver Sub	01-P130-03	11	Top Sub	01-P130-11
04	Roller	01-P130-04	12	Air Distribution Tube	01-P130-12
05	Thread	01-P130-05	13	Seat	01-P130-13
06	Guide Sleeve	01-P130-06	14	Adjusting Nut	01-P130-14
07	Thread	01-P130-07			
08	Outer Sleeve	01-P130-08			

Specification Parameter

Length (Without Bit)	Weight (Without Bit)	Bit Shank	Top Sub Thread	Outside Diameter
655mm	35.50 Kg	P130	F73x10 BOX	115mm
Working pressure	Bit Diameter	Air Consumption	Bit Coupling Type	
7-11bar	130-160mm	8-14 ³ /min	Bayonet	

P 160



Ref.	Parts	Part No.	Ref.	Parts	Part No.
01	Finger	01-P160-01	09	Air Distribution Tube	01-P160-09
02	Staple	01-P160-02	10	Saddle	01-P160-10
03	Buxa	01-P160-03	11	Adjusting Nut	01-P160-11
04	Threaded thread	01-P160-04			
05	Cylinder	01-P160-05			
06	Drummer	01-P160-06			
07	Stopper	01-P160-07			
08	One-sided Adapter	01-P160-08			

Specification Parameter

Length (Without Bit)	Weight (Without Bit)	Bit Shank	Top Sub Thread	Outside Diameter
759mm	61.20 Kg	P160	3-102	/
Working pressure	Bit Diameter	Air Consumption	Bit Coupling Type	
7-11bar	/	14.9 ³ /min	Slotted	



02

DTH DRILLING BITS

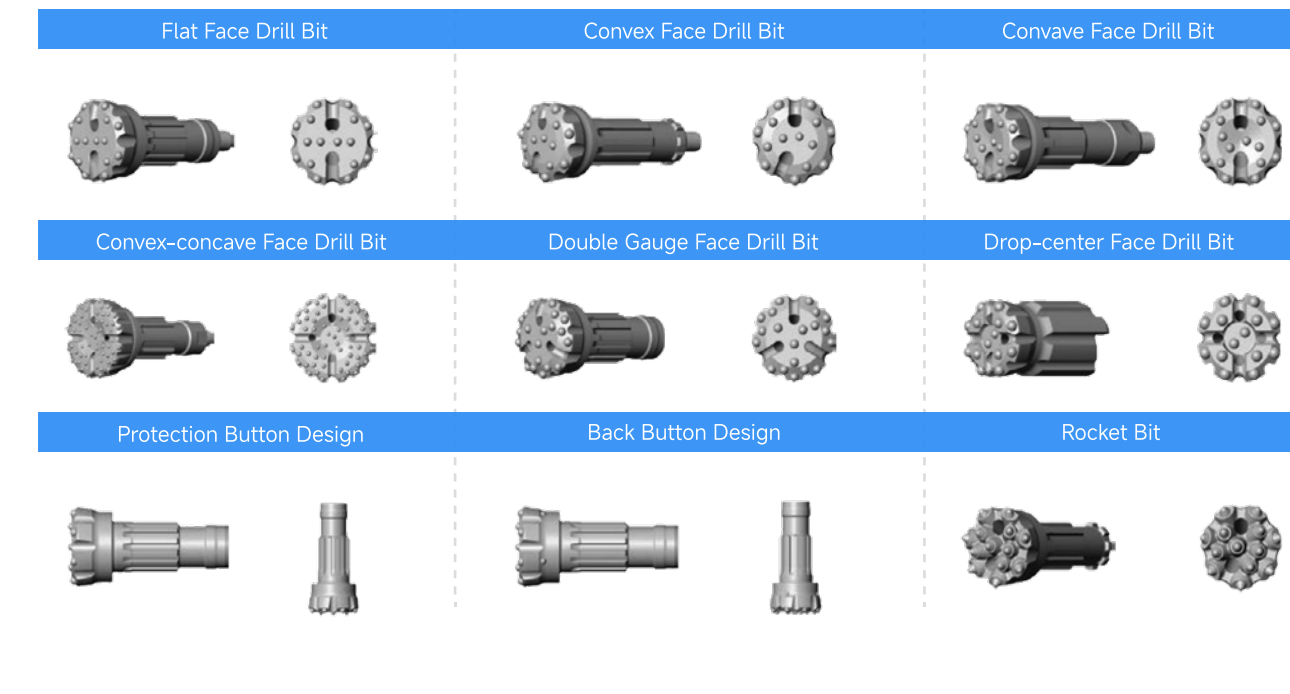
Advantages Of DTH Drilling Bits

1. The longer life of the drill: the alloy material, with longer using life which better than the similar products.
2. High Drilling Efficiency: the drill buttons is wear-resistant, so that the drill can always keep sharp, thus greatly improving the speed of the drilling.
3. The drilling speed is stable: the bit is scraped and cut to break the rock.
4. Good Performance: the bit has strong wear resistance, good Diameter protection and can make the cutting teeth be used efficiently.
5. The use of a wide range: the practice proves that the bit is suitable for carbonate rock, limestone, chalk, clay rock, siltstone, sandstone and other soft and hard (9 - grade drillability of rock, hard rock drilling), compared with normal bit, especially drilling in 6-8 grade rock the effect is particularly significant.

The Application of DTH Drilling Bits

The DTH drill Bit is mainly used in geological exploration, coal mine, water conservancy and hydropower, highway, railway, bridge, construction and construction, etc.

Drill Bit Design



Drill Bit Characteristics

Flat Face

This flat face is suitable for drilling very hard rock formations and corrosive wall formations at high air pressures. When the bits is drilling, the faster the drilling speed, the less wear of the drill body.

Concave Face

This Concave face is suitable for all rock formations, especially in medium-hard and homogeneous rock formations, the effect is good. The blast hole deviation is small, and the slag discharge effect is good.

Convex Face

This Convex face is suitable for low- to medium-pressure drilling of soft-medium hard rock formations, and the drill block is not easy to corrode. The characteristics of this design are the low load of the side button, the wear is not badly and the drilling speed is fast.

Double Gauge Face

This double-sided button face is suitable for drilling very hard rock formations at high air pressures. When the bits is drilling, drilling speed is fast, the bit body wear will also be less.

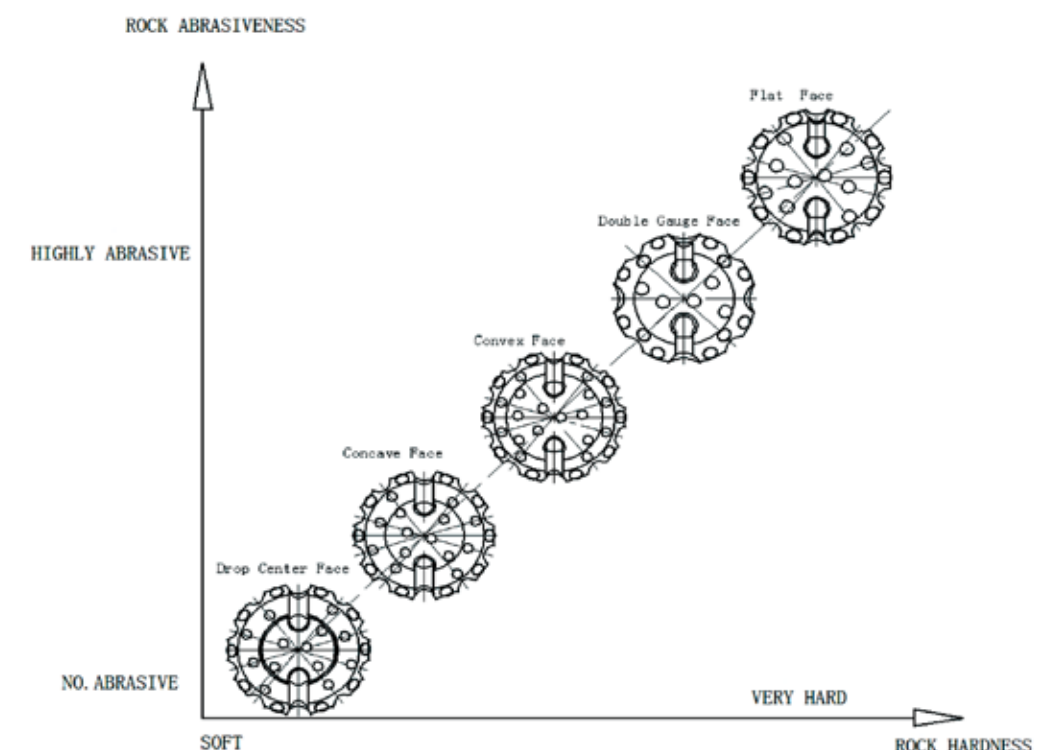
Drop Center

When using low-medium pressure to dri soft-medium hard and fractured rock formations, in order to obtain fast rock drilling speed and less blast hole slope, this face shape is usually used.

Carbide Button Shape Selection

Domed/Round Button		Domed/round buttons are usually used as gauge buttons of DTH bits, suitable for very abrasive and very hard formations.
Parabolic/Semi-Ballistic Button		Parabolic buttons are usually used as gauge buttons and front buttons of DTH bits, suitable for medium abrasive and hard formations.
Ballistic Button		Ballistic buttons are usually used as front buttons of dth bits, suitable for medium abrasive and medium hard formations, They can also be used as gauge buttons if the rock is soft.
Sharp Button		Sharp buttons are usually used as front buttons of DTH bits for soft formations, suitable for high rotation speed and low bit broken rate soft rock.
Flat Button		Flat buttons are usually used as protection buttons to reduce wear on rubbing surface of DTH bits.

Main Technial Features



High Air Pressure DTH Drill Bit

The main features are as following:

- The longer life of the drill: the alloy material, with longer using life which better than the similar products.
- High Drilling Efficiency: the drill buttons is wear-resistant, so that the drill can always keep sharp, thus greatly improving the speed of the drilling.
- The drilling speed is stable: the bit is scraped and cut to break the rock.
- Good Performance: the bit has strong wear resistance, good Diameter protection and can make the cutting teeth be used efficiently.
- The use of a wide range: the practice proves that the bit is suitable for carbonate rock, limestone, chalk, clay rock, siltstone, sandstone and other soft and hard (9 - grade drillability of rock, hard rock drilling), compared with normal bit, especially drilling in 6-8 grade rock the effect is particularly significant.



DHD Shank Drill Bits

Specifications	Head Shape	Head Diameter (mm)	Shank Length	Spline	Port Holes	Button qty.pcs x dia.mm			Weight (Kg)
Specifications						Bottom Type (Optional)	Gauge Buttons	Front Buttons	
DHD3.5									
 	Flat Face	90	180	8	2	Spherical+Ballistic	6xØ14	5xØ12	4.7
	Flat Face	95	180	8	2	Spherical+Ballistic	6xØ14	5xØ12	4.8
	Flat Face	100	180	8	2	Spherical+Ballistic	6xØ14	6xØ12	4.9
	Flat Face	108	180	8	2	Spherical+Ballistic	8xØ13	6xØ12	5.4
DHD340									
 	Convex Face	108	209	8	2	Spherical+Ballistic	7xØ16	6xØ14	7.85
	Convex Face	115	209	8	2	Spherical+Ballistic	7xØ16	6xØ14	8.22
	Convex Face	127	209	8	2	Spherical+Ballistic	8xØ16	4xØ14+3xØ13	8.88
	Convex Face	130	209	8	2	Spherical+Ballistic	8xØ16	4xØ14+3xØ13	9.15
DHD350									
 	Convex Face	140	260	8	2	Spherical+Ballistic	7xØ18	4xØ15+3xØ14	15.8
	Flat Face	146	260	8	2	Spherical+Ballistic	8xØ18	8xØ14	16.5
	Flat Face	152	260	8	2	Spherical+Ballistic	8xØ18	8xØ14	17
	Concave Face	165	260	8	2	Spherical	8xØ18	4xØ16+4xØ14	18.9
	Concave Face	178	260	8	2	Spherical	8xØ18	6xØ16+5xØ14	20.4
DHD360									
 	Concave Face	154	308.5	8	2	Domed	8xØ18	4xØ16+4xØ15	22.5
	Flat Face	165	308.5	8	2	Domed	8xØ18	8xØ16	23.6
	Concave Face	171	308.5	8	2	Domed	8xØ18	6xØ16+4xØ15	25.2
	Concave Face	178	308.5	8	2	Domed	8xØ18	6xØ16+5xØ15	26.1
	Concave Face	190	308.5	8	3	Domed	9xØ18	6xØ16+5xØ15	29
	Concave Face	203	308.5	8	2	Domed	10xØ18	8xØ16+6xØ15	30.4
DHD380									
 	Concave Face	203	350	10	2	Domed	10xØ18	4xØ18+10xØ16	48.5
	Concave Face	216	350	10	2	Domed	10xØ18	4xØ18+10xØ16	52.1
	Concave Face	230	350	10	2	Domed	12xØ18	12xØ18+6xØ16	54.8
	Concave Face	235	350	10	2	Domed	12xØ18	12xØ18+6xØ16	55.5
	Concave Face	254	350	10	3	Domed	12xØ18	12xØ18+8xØ16	62.4
	Convex-Concave Face	275	350	10	2	Domed	12xØ18	27xØ16	69
	Convex-Concave Face	305	350	10	3	Domed	15xØ18	35xØ16	77.6
DHD1120									
 	Concave Face	305	490	8	3	Domed	15xØ20	27xØ18+8xØ16	141.3
	Concave Face	311	490	8	3	Domed	15xØ20	27xØ18+8xØ16	141.3
	Concave Face	325	490	8	3	Domed	15xØ20	27xØ18+9xØ16	164.3
	Concave Face	350	490	8	4	Domed	16xØ20	32xØ18+13xØ16	169.1
	Concave Face	381	490	8	4	Domed	16xØ20	36xØ18+18xØ16	183
	Concave Face	400	490	8	4	Domed	16xØ20	40xØ18+28xØ16	194
	Concave Face	445	490	8	4	Domed	20xØ20	48xØ18+25xØ16	225.7
	Concave Face	500	490	8	4	Domed	24xØ20	90xØ18	331.2

HD Shank Drill Bits

Specifications	Head Shape	Head Diameter (mm)	Shank Length	Spline	Port Holes	Button qty.pcs x dia.mm			Weight (Kg)
Specifications						Bottom Type (Optional)	Gauge Buttons	Front Buttons	
HD25A									
	Flat Face	76	174	6	2	Ballistic	6xØ14	4xØ11	3.2
	Flat Face	80	174	6	2	Ballistic	6xØ14	4xØ11	3.3
	Flat Face	85	174	6	2	Ballistic	6xØ14	4xØ12	3.4
	Flat Face	90	174	6	2	Ballistic	6xØ14	4xØ12	3.6
HD35A									
	Flat Face	90	180	8	2	Spherical+Ballistic	6xØ14	5xØ12	4.7
	Flat Face	95	180	8	2	Spherical+Ballistic	6xØ14	5xØ12	4.8
	Flat Face	100	180	8	2	Spherical+Ballistic	6xØ14	6xØ12	4.9
	Flat Face	108	180	8	2	Spherical+Ballistic	8xØ13	6xØ12	5.4
HD45A									
	Convex Face	108	209	8	2	Spherical+Ballistic	7xØ16	6xØ14	4.7
	Convex Face	115	209	8	2	Spherical+Ballistic	7xØ16	6xØ14	4.8
	Convex Face	127	209	8	2	Spherical+Ballistic	8xØ16	4xØ14+3xØ13	4.9
	Convex Face	130	209	8	2	Spherical+Ballistic	8xØ16	4xØ14+3xØ13	5.4
HD55A									
	Convex Face	140	260	8	2	Spherical+Ballistic	7xØ18	4xØ15+3xØ14	15.8
	Flat Face	146	260	8	2	Spherical+Ballistic	8xØ18	8xØ14	16.5
	Flat Face	152	260	8	2	Spherical+Ballistic	8xØ18	8xØ14	17
	Concave Face	165	260	8	2	Spherical	8xØ18	4xØ16+4xØ14	18.9
	Concave Face	178	260	8	2	Spherical	8xØ18	6xØ16+5xØ14	20.4
HD55S									
	Convex Face	127	260	8	2	Spherical+Ballistic	8xØ18	6xØ16	14.5
	Convex Face	130	260	8	3	Spherical+Ballistic	9xØ16	6xØ15+4xØ14	14.7
HD65A									
	Concave Face	154	308.5	8	2	Domed	8xØ18	4xØ16+4xØ15	22.5
	Flat Face	165	308.5	8	2	Domed	8xØ18	8xØ16	23.6
	Concave Face	171	308.5	8	2	Domed	8xØ18	6xØ16+4xØ15	25.2
	Concave Face	178	308.5	8	2	Domed	8xØ18	6xØ16+5xØ15	26.1
	Concave Face	190	308.5	8	3	Domed	9xØ18	6xØ16+5xØ15	29
	Concave Face	203	308.5	8	2	Domed	10xØ18	8xØ16+6xØ15	30.4
HD85A									
	Concave Face	203	350	10	2	Domed	10xØ18	4xØ18+10xØ16	48.5
	Concave Face	216	350	10	2	Domed	10xØ18	4xØ18+10xØ16	52.1
	Concave Face	230	350	10	2	Domed	12xØ18	12xØ18+6xØ16	54.8
	Concave Face	235	350	10	2	Domed	12xØ18	12xØ18+6xØ16	55.5
	Concave Face	254	350	10	3	Domed	12xØ18	12xØ18+8xØ16	62.4
	Convex-Concave Face	275	350	10	2	Domed	12xØ18	8xØ16+19xØ16	69
	Convex-Concave Face	305	350	10	3	Domed	15xØ18	12xØ16+23xØ16	77.6

Mission Shank Drill Bits

Specifications	Head Shape	Head Diameter (mm)	Shank Length	Spline	Port Holes	Button qty.pcs x dia.mm			Weight (kg)
						Botton Type (Optional)	Gauge Buttons	Front Buttons	
Specifications									



Flat Face	90	225	8	2	Spherical+Ballistic	6xØ14	5xØ12	4.8
Flat Face	95	225	8	2	Spherical+Ballistic	6xØ14	5xØ12	4.9
Flat Face	100	225	8	2	Spherical+Ballistic	6xØ14	6xØ12	5.1
Flat Face	108	225	8	2	Spherical+Ballistic	8xØ13	6xØ12	5.4



Convex Face	108	228	12	2	Spherical+Ballistic	7xØ16	6xØ14	7.8
Convex Face	115	228	12	2	Spherical+Ballistic	7xØ16	6xØ14	8.2
Convex Face	127	228	12	2	Spherical+Ballistic	8xØ16	4xØ14+3xØ13	9.2
Convex Face	130	228	12	2	Spherical+Ballistic	8xØ16	4xØ14+3xØ13	9.3



Convex Face	140	260	12	2	Spherical+Ballistic	7xØ18	4xØ15+3xØ14	13.9
Flat Face	146	260	12	2	Spherical	8xØ18	8xØ14	14.6
Flat Face	152	260	12	2	Spherical+Ballistic	8xØ18	8xØ14	15
Flat Face	165	260	12	2	Spherical+Ballistic	8xØ18	9xØ14	17
Concave Face	178	260	12	2	Spherical	8xØ18	6xØ16+5xØ14	18.5



Concave Face	154	231	12	2	Spherical	8xØ18	4xØ16+4xØ15	20.3
Flat Face	165	231	12	2	Spherical	8xØ18	8xØ16	20.5
Concave Face	171	231	12	2	Spherical	8xØ18	6xØ16+4xØ15	22
Concave Face	178	231	12	2	Spherical	8xØ18	6xØ16+5xØ15	23
Concave Face	190	231	12	3	Spherical	9xØ18	6xØ16+5xØ15	24
Concave Face	203	231	12	2	Spherical	10xØ18	8xØ16+6xØ15	27.3



Concave Face	203	329	12	2	Spherical	10xØ18	4xØ18+10xØ16	41.2
Concave Face	216	329	12	2	Spherical	10xØ18	4xØ18+10xØ16	46
Concave Face	230	329	12	2	Spherical	12xØ18	12xØ18+6xØ16	48.7
Concave Face	235	329	12	2	Spherical	12xØ18	12xØ18+6xØ16	49.3
Concave Face	254	329	12	2	Spherical	12xØ18	12xØ18+8xØ16	56.2
Convex-Concave Face	275	329	12	2	Spherical	12xØ18	8xØ16+19xØ16	62.8
Convex-Concave Face	305	329	12	3	Spherical	15xØ18	12xØ16+23xØ16	71.3

QL Shank Drill Bits

Specifications	Head Shape	Head Diameter (mm)	Shank Length	Spline	Port Holes	Button qty.pcs x dia.mm			Weight (Kg)
Specifications						Bottom Type (Optional)	Gauge Buttons	Front Buttons	
QL40									
	Convex Face	108	280	10	2	Domed+Ballistic	7xØ16	6xØ14	9.42
	Convex Face	115	280	10	2	Domed+Ballistic	7xØ16	6xØ14	9.5
	Convex Face	127	280	10	2	Domed+Ballistic	8xØ16	4xØ14+3xØ13	10.7
	Convex Face	130	280	10	2	Domed+Ballistic	8xØ16	4xØ14+3xØ13	10.9
QL50									
	Convex Face	140	240	12	a2	Domed+Ballistic	7xØ18	4xØ15+3xØ14	15.3
	Flat Face	146	240	12	2	Domed+Ballistic	8xØ18	8xØ14	16
	Flat Face	152	240	12	2	Domed+Ballistic	8xØ18	8xØ14	16.5
	Concave Face	165	240	12	2	Domed	8xØ18	4xØ16+4xØ14	18.5
	Concave Face	175	240	12	2	Domed	8xØ18	6xØ16+5xØ14	20
QL60									
	Concave Face	154	253	12	2	Domed	8xØ18	4xØ16+4xØ15	22.5
	Flat Face	165	253	12	2	Domed	8xØ18	8xØ16	23
	Concave Face	171	253	12	2	Domed	8xØ18	6xØ16+4xØ15	24.4
	Concave Face	178	253	12	2	Domed	8xØ18	6xØ16+5xØ15	25.3
	Concave Face	190	253	12	3	Domed	9xØ18	6xØ16+5xØ15	26.5
	Concave Face	203	253	12	2	Domed	10xØ18	8xØ16+6xØ15	29.7
QL80									
	Concave Face	203	331	16	2	Domed	10xØ18	4xØ18+10xØ16	48.2
	Concave Face	216	331	16	2	Domed	10xØ18	4xØ18+10xØ16	51.9
	Concave Face	230	331	16	2	Domed	12xØ18	12xØ18+6xØ16	54.7
	Concave Face	235	331	16	2	Domed	12xØ18	12xØ18+6xØ16	55.3
	Concave Face	254	331	16	2	Domed	12xØ18	12xØ18+8xØ16	62.2
	Convex-Concave Face	275	331	16	2	Domed	12xØ18	8xØ16+19xØ16	68.8
	Convex-Concave Face	305	331	16	3	Domed	15xØ18	12xØ16+23xØ16	77.3

NUMA Shank Drill Bits

Specifications	Head Shape	Head Diameter (mm)	Shank Length	Spline	Port Holes	Button qty.pcs x dia.mm			Weight (Kg)
						Bottom Type (Optional)	Gauge Buttons	Front Buttons	
Specifications									



Convex-Concave Face	254	375	10	2	Domed	12xØ19	8xØ18+19xØ16	89
Convex-Concave Face	275	375	10	2	Domed	12xØ19	8xØ18+20xØ16	93.5
Convex-Concave Face	305	375	10	3	Domed	15xØ19	27xØ18+8xØ16	103.5
Convex-Concave Face	325	375	10	3	Domed	15xØ19	27xØ18+9xØ16	112
Convex-Concave Face	350	375	10	4	Domed	16xØ19	32xØ18+14xØ16	121
Convex-Concave Face	400	375	10	4	Domed	16xØ19	40xØ18+25xØ16	146.5



Convex-Concave Face	305	491	10	3	Domed	15xØ20	27xØ18+8xØ16	175.5
Convex-Concave Face	311	491	10	3	Domed	15xØ20	27xØ18+8xØ16	176
Convex-Concave Face	325	491	10	3	Domed	15xØ20	27xØ18+9xØ16	185
Convex-Concave Face	350	491	10	4	Domed	16xØ20	32xØ18+13xØ16	200
Convex-Concave Face	381	491	10	4	Domed	16xØ20	36xØ18+18xØ16	213
Convex-Concave Face	400	491	10	4	Domed	16xØ20	40xØ18+28xØ16	228.5
Convex-Concave Face	445	491	10	4	Domed	20xØ20	48xØ18+25xØ16	226.5
Convex-Concave Face	500	491	10	4	Domed	24xØ20	90xØ18	322

Middle-low Air Pressure DTH Drill Bit

The main features are as following:

- The longer life of the drill: the alloy material, with longer using life which better than the similar products.
- High Drilling Efficiency: the drill buttons is wear-resistant, so that the drill can always keep sharp, thus greatly improving the speed of the drilling.
- The drilling speed is stable: the bit is scraped and cut to break the rock.
- Good Performance: the bit has strong wear resistance, good Diameter protection and can make the cutting teeth be used efficiently.
- The use of a wide range: the practice proves that the bit is suitable for carbonate rock, limestone, chalk, clay rock, siltstone, sandstone and other soft and hard (9 - grade drillability of rock, hard rock drilling), compared with normal bit, especially drilling in 6-8 grade rock the effect is particularly significant.



M Series Drill Bits

Schema	Part No	Weight (Kg)	Air holes	Button angle°	No x Buttons diameter,mm		Diameter	
					Front Buttons	Gauge Buttons	inch	mm



M 3(CIR90)								
M3-90BVC6	3.60	2	45	2xφ13+2xφ12	6xφ14	3 1/2	90	
M3-100BVC6	4.00	3	45	3xφ13+2xφ12	6xφ14	4	100	
M3-110BVC6	4.70	3	45	3xφ13+3xφ12	6xφ14	4 1/3	110	
M3-120BVC6	5.20	3	45	3xφ13+4xφ12	6xφ14	4 3/4	120	
M3-130BVC6	6.20	3	45	3xφ14+4xφ12	6xφ14	5 1/8	130	
M3-140BVC9	7.80	3	45	3xφ14+5xφ12	9xφ14	5 1/2	140	
M3-150BVC9	8.40	3	45	3xφ14+5xφ12	9xφ14	6	150	



M 4(CIR110)								
M4-110BVC6	6.00	3	45	3xφ13+3xφ12	6xφ14	4 1/3	110	
M4-120BVC6	6.50	3	45	3xφ13+4xφ12	6xφ14	4 3/4	120	
M4-130BVC6	6.90	3	45	3xφ14+4xφ12	6xφ14	5 1/8	130	
M4-140BVC9	8.50	3	45	3xφ14+5xφ12	9xφ14	5 1/2	140	
M4-150BVC9	9.10	3	45	3xφ14+5xφ12	9xφ14	6	150	
M4-165BVC9	9.90	3	45	3xφ14+6xφ12	9xφ14	6 1/2	165	
M4-175BVC9	11.20	3	45	3xφ14+6xφ12	9xφ14	7	175	



M 5(CIR130)								
M5-130BC	7.59	/	/	/	7xφ14	/	130	
M5-140BC	8.47	/	/	/	8xφ14	/	140	
M5-150BC	9.47	/	/	/	8xφ14	/	150	
M5-170BC	11.44	/	/	/	9xφ14	/	170	



CIR Series Drill Bits

Schema	Part No	Weight (Kg)	Air holes	Button angle°	No x Buttons diameter,mm		Diameter	
					Front Buttons	Gauge Buttons	inch	mm
	CIR50							
	CIR50-50BF	0.54	/	/	/	3xφ10	/	50
	CIR65							
	CIR65-65BF	1.42	/	/	/	4xφ12	/	65
	CIR76							
	CIR76-76BFF5	2.20	2	45	3xφ12	5xφ13	3	76
	CIR76-80BFF5	2.50	2	45	3xφ12	5xφ13	3 1/5	80
	CIR90							
	CIR90-90BVC6	3.60	2	45	2xφ13+2xφ12	6xφ14	3 1/2	
	CIR90-100BVC6	4.00	3	45	3xφ13+2xφ12	6xφ14	4	
	CIR90-110BVC6	4.70	3	45	3xφ13+3xφ12	6xφ14	4 1/3	
	CIR90-120BVC6	5.20	3	45	3xφ13+4xφ12	6xφ14	4 3/4	
	CIR90-130BVC6	6.20	3	45	3xφ14+4xφ12	6xφ14	5 1/8	
	CIR90-140BVC9	7.80	3	45	3xφ14+5xφ12	9xφ14	5 ½	
	CIR90-150BVC9	8.40	3	45	3xφ14+5xφ12	9xφ14	6	
	CIR110							
	CIR110-110BVC6	6.00	3	45	3xφ13+3xφ12	6xφ14	4 1/3	
	CIR110-120BVC6	6.50	3	45	3xφ13+4xφ12	6xφ14	4 3/4	
	CIR110-130BVC6	6.90	3	45	3xφ14+4xφ12	6xφ14	5 1/8	
	CIR110-140BVC9	8.50	3	45	3xφ14+5xφ12	9xφ14	5 1/2	
	CIR110-150BVC9	9.10	3	45	3xφ14+5xφ12	9xφ14	6	
	CIR110-165BVC9	9.90	3	45	3xφ14+6xφ12	9xφ14	6 ½	
	CIR110-175BVC9	11.20	3	45	3xφ14+6xφ12	9xφ14	7	

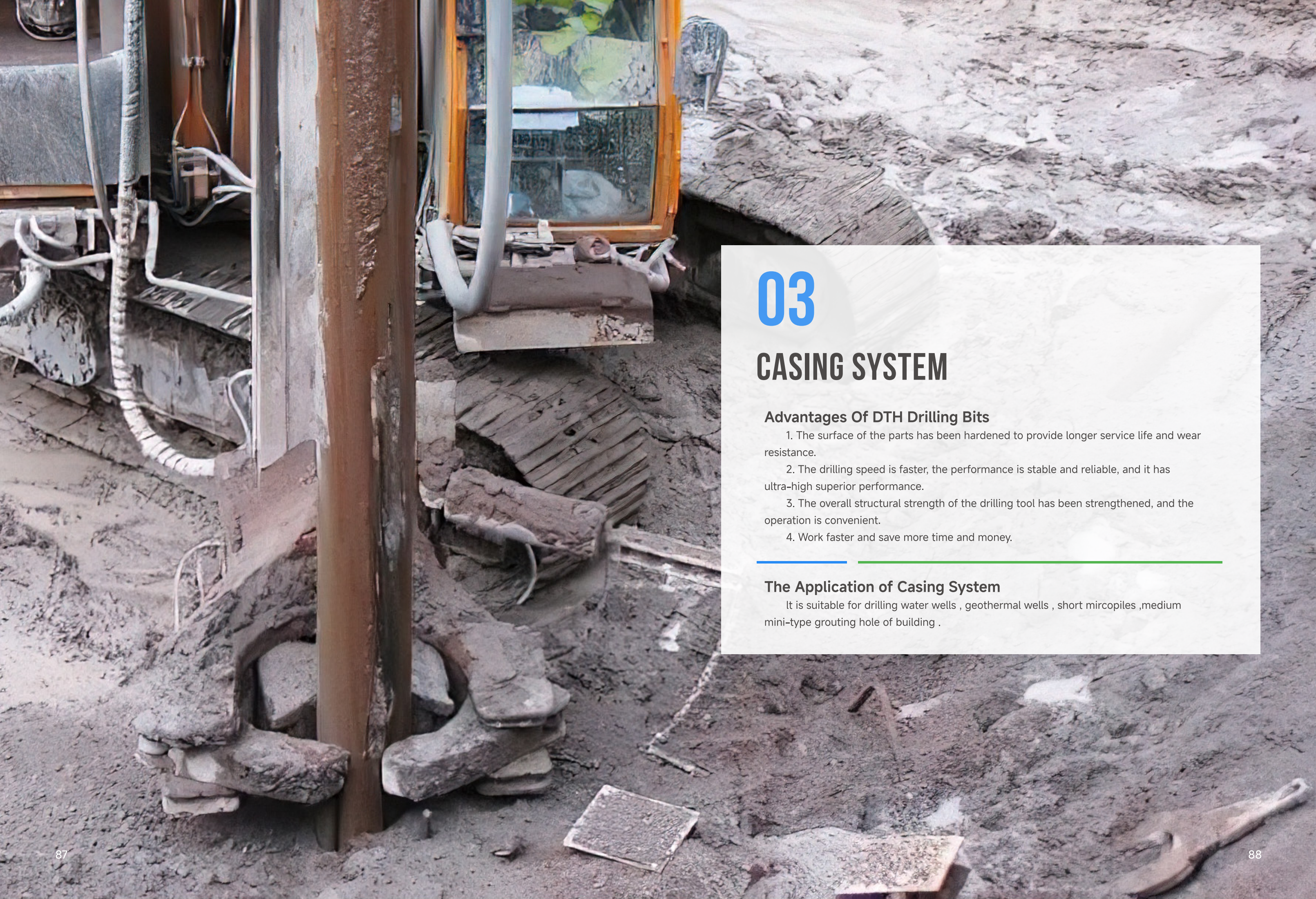
Schema	Part No	Weight (Kg)	Air holes	Button angle°	No x Buttons diameter,mm		Diameter	
					Front Buttons	Gauge Buttons	inch	mm
	CIR130							
	CIR130-130BC	7.59	/	/	/	7xφ14	/	
	CIR130-140BC	8.47	/	/	/	8xφ14	/	
	CIR130-150BC	9.47	/	/	/	8xφ14	/	
	CIR130-170BC	11.44	/	/	/	9xφ14	/	
	CIR150							
	CIR150-155DVC9	16.60	3	45	6xφ16+3xφ14	9xφ16	6 1/5	
	CIR150-165DVC9	18.60	3	45	6xφ16+4xφ14	9xφ16	6 1/2	
	CIR150-180DVC9	20.80	3	45	9xφ16+4xφ14	9xφ16	7	
	CIR150-200DVC9	23.00	3	45	9xφ16+4xφ14	9xφ16	8	
	CIR170							
	CIR170-175BF	21.86	/	/	/	9xφ16	/	
	CIR170-185BF	23.00	/	/	/	9xφ16	/	
	CIR170-200BF	25.86	/	/	/	11xφ16	/	
	CIR170-220BF	30.50	/	/	/	12xφ16	/	
	CIR170-250BF	38.00	/	/	/	15xφ16	/	

P Series Drill Bits

Schema	Diameter(mm)	Spline Type	Gauge Buttons
	P110		
	110	Bayonet	8×φ12、8×φ13、8×φ14
	130	Bayonet	8×φ14
	P110		
	110	Spline	8×φ12、8×φ13、8×φ14
	130	Spline	8×φ14
	P130		
	130	Bayonet	8×φ14
	140	Bayonet	8×φ14
	160	Bayonet	8×φ14
	P130		
	130	Spline	8×φ14

BR Series Drill Bits

Schema	Part No	Weight (Kg)	Air holes	Button angle°	No x Buttons diameter,mm		Diameter	
					Front Buttons	Gauge Buttons	inch	mm
	BR 1							
	BR1-64BFF6	2.60	2	38	3xφ10	6xφ10	3 9/16	64
	BR1-70BFF6	2.80	2	38	4xφ9	6xφ12	3 3/4	70
	BR1-76BFF6	3.20	2	38	5xφ10	6xφ13	3 15/16	76
	BR 2							
	BR2-76BFF6	3.60	2	38	5xφ10	6xφ13	3 9/16	76
	BR2-80BFF6	4.00	2	38	5xφ11	6xφ13	3 3/4	80
	BR2-90BVC6	4.20	2	38	5xφ12	6xφ14	3 15/16	90
	BR 3							
	BR3-90BVC6	4.00	2	38	4xφ12	6xφ14	3 9/16	90
	BR3-95BVC6	4.30	2	38	5xφ12	6xφ14	3 3/4	95
	BR3-100BVC6	4.80	2	38	6xφ12	6xφ14	3 15/16	100
	BR3-105BVC6	5.20	2	38	6xφ12	8xφ13	4 1/8	105



03

CASING SYSTEM

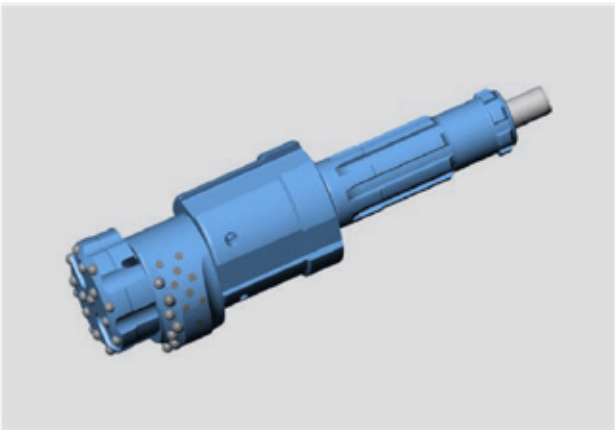
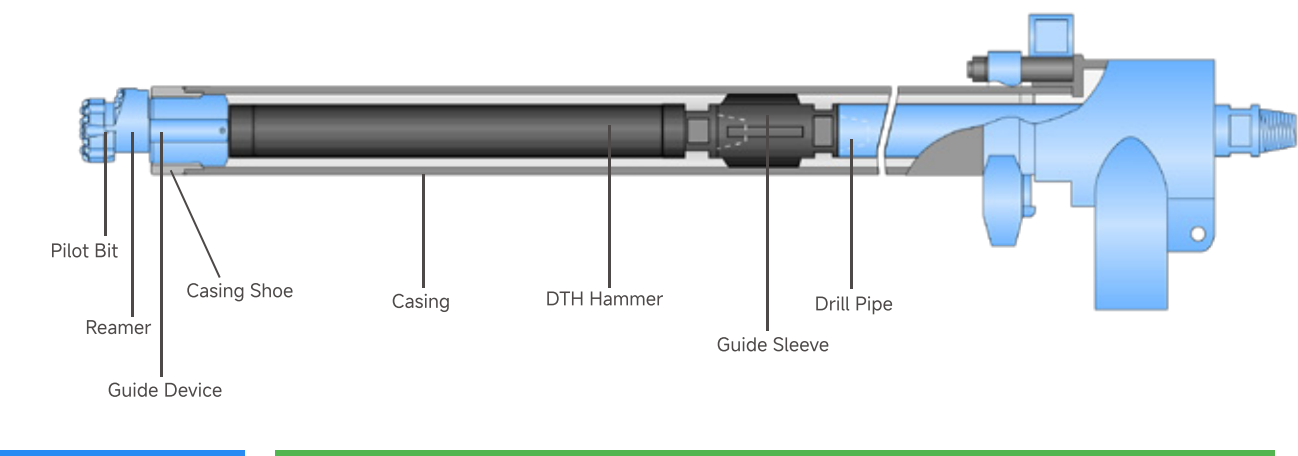
Advantages Of DTH Drilling Bits

1. The surface of the parts has been hardened to provide longer service life and wear resistance.
2. The drilling speed is faster, the performance is stable and reliable, and it has ultra-high superior performance.
3. The overall structural strength of the drilling tool has been strengthened, and the operation is convenient.
4. Work faster and save more time and money.

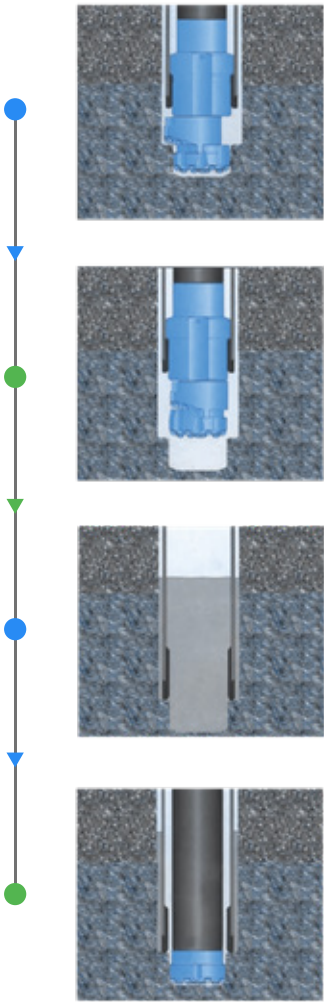
The Application of Casing System

It is suitable for drilling water wells , geothermal wells , short micropiles ,medium mini-type grouting hole of building .

Eccentric Casing System



Working Principle of Drill



When starting drilling, the reamer swings out and reams the pilot-hole wide enough for the casing tube to slide down behind the drill bit assembly.

When the required depth is reached, rotation is reversed carefully, whereupon the reamer swings in. Allowing the drill bit assembly to be pulled up through the casing.

Casing tubes that are to be left in the drill hole should be sealed at the bottom of the hole by means of cement grout or some other sealing agent.

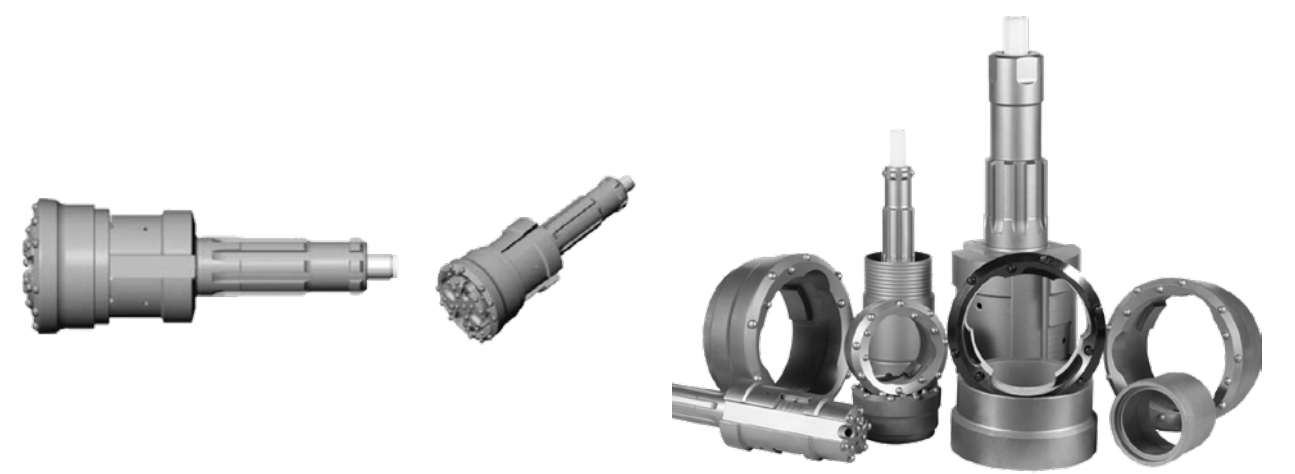
Drilling continues to the desired depth in the bedrock using a conventional drill string.

ODEX Casing System /Eccentric Overboardurden Casing System

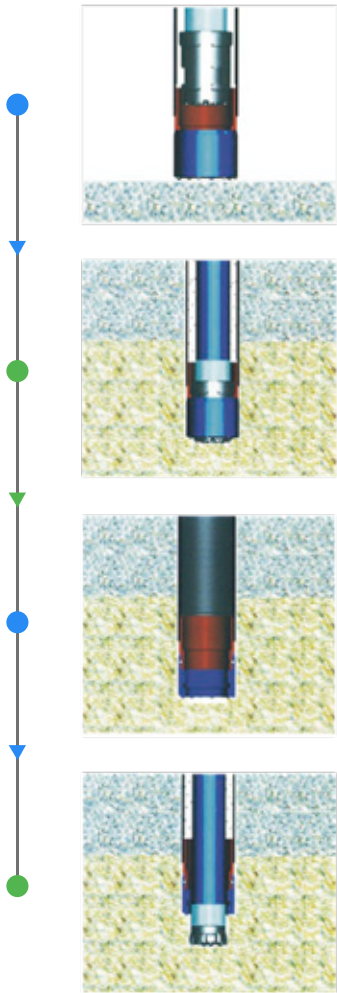
	Model	Casing Tube O.D.(mm)	Maximum O.D. of Guide Device(mm)	Bit Diameter (Button included) (mm)	Casing shoe I.D. (mm)	Maximum Reaming O.D.(mm)	Hammer Style
	108 Eccentric casing system	108	92	84	86	118	3 inches
	114 Eccentric casing system	114	100	92	94	124	3 inches
	127 Eccentric casing system	127	110	100	102	136	3-4 inches
	146 Eccentric casing system	146	124	115	117	156	4 inches
	168 Eccentric casing system	168	146	134	138	178	5 inches
	178 Eccentric casing system	178	156	144	148	193	5 inches
	183 Eccentric casing system	183	160	144	152	193	5 inches
	194 Eccentric casing system	194	178	165	167	208	6 inches
	219 Eccentric casing system	219	203	189	193	237	6-7 inches
	245 Eccentric casing system	245	220	206	210	260	6-8 inches
	273 Eccentric casing system	273	256	238	242	308	8 inches
	325 Eccentric casing system	325	297	280	285	355	8-10 inches
	108 Eccentric casing system	377	351	328	333	420	10-12 inches

Note: The above size is the factory standard design size, if the customer casing wall thickness is different, special design is required.

Concentric Casing System



Working Principle of Drill



Ring bit and casing shoe assembly is welded to casing prior to drilling.Lock the assembly into pilot bit with hammer. The pilot bit' shoulder engages the shoulder of the casing shoe.

Hammer's percussive energy is transferred through the pilot and ring bit, crushing rock. Part of impact energy advances casing.

At the end of drilling, the drill tool is retrieved by gently reversing the transfer bayonet connection to unlock. The ring bit remains in the hole, and when the hole is finished grouting and the casing is pulled out, the ring bit is removed together.

In bedrock, if further drilling is required, replace the guide bit with a standard bit of appropriate size.

Advantages of Concentric Drilling

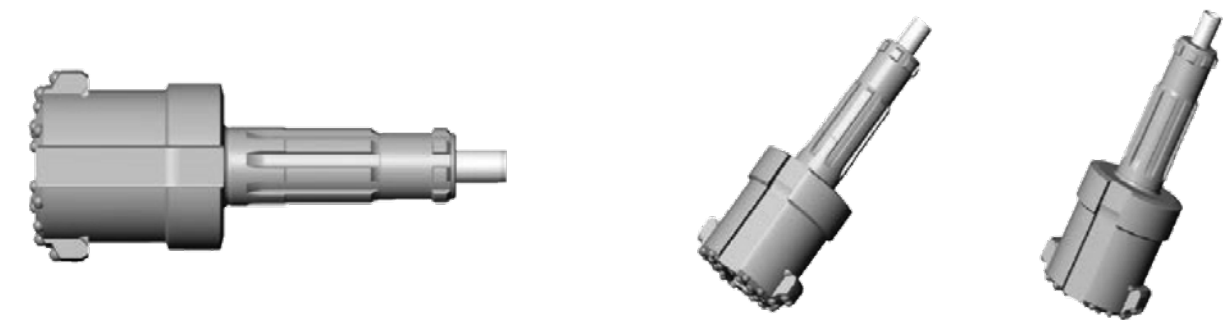
- Drilling Straight and fast**
Theoretically,Concentric drilling makes sure the hole in all formations such as gravel bed,sand bed and pebble bed etc.is considerably straight,the drilling speed fast and the drilling torque relatively small.
- The torque for Concentric drilling is much less than for eccentricdrilling**
A smooth and steady drilling may be achieved using ring bit on all conditions and create big hole even if a small drilling rig is used.
- Easily Unlocking-relocking**
Unlocking the system is sometimes required during process.Relocking is easy since there are no eccentric components that must be opened or closed inside the hole.
- Drilling in any angle**
Concentric drilling system can drill the hole at any angle.
- Effective cuttings discharge**
The airflow for cutting discharge purpose during the Concentric drilling will instantly ascend along the casing pipe after spurting out from the pilot bit.Hence,the negligible damage on the wall of hole can guarantee effective cutting discharge.
- Easy-to-operate and system security**
Drilling workers are relieved of the need to maintain their continuous and constant attention on drilling process since Concentric drilling can carry on smoothly.
- Economical and cost-effective**
The structure and principle of operation of Concentric drilling system can guarantee considerable reduction in downtime,fewer consumable and lower operation costs.

Concentric Casing System

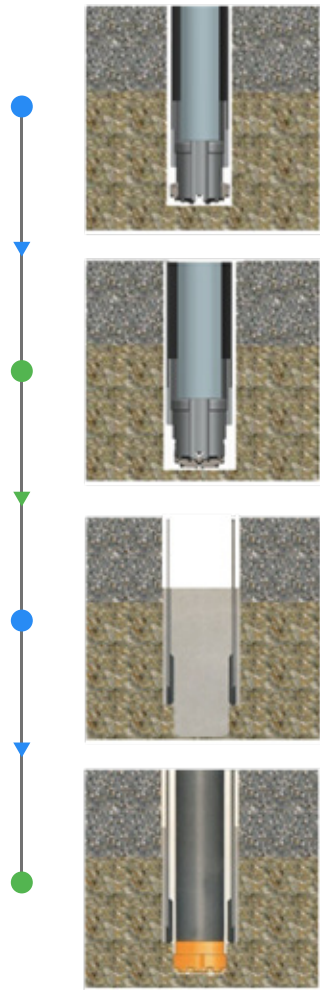
	Model	Casing Tube O.D.(mm)	Bit Diameter (Button included) (mm)	Casing shoe I.D. (mm)	Maximum Reaming O.D.(mm)	Hammer Style
	146 Concentric casing system	146	123.5	116	156	4 inches
	168 Concentric casing system	168	146	140	184	5 inches
	178 Concentric casing system	178	157	150	194	5 inches
	183 Concentric casing system	183	160	152	198	5 inches
	194 Concentric casing system	194	178	164	208	6 inches
	219 Concentric casing system	219	203	192	234	6-7 inches
	245 Concentric casing system	245	217	205	260	6-8 inches
	273 Concentric casing system	273	246	233	291	8 inches
	325 Concentric casing system	325	297	282	340	8-10 inches
	377 Concentric casing system	377	351	332	405	10-12 inches

Note: The above size is the factory standard design size, if the customer casing wall thickness is different, special design is required.

Slide Block Casing System



Working Principle of Drill



When drilling starts , the reamer swings out and reams the pilot-hole wide enough for the casing tube to slide down behind the drill bit assembly.

When the required depth is reached . rotation is reversed carefully, whereupon the reamer swinas in , allowing the drill bit assembly to be pulled up through the casing.

Casing tubes that are to be left in the drill hole should be sealed at the bottom of the hole by means of cement grout or some other sealing agent.

Drilling continues to the desired depth in the bedrock using a conventional drilling tools.

Two Slide Block Casing Systems



Three Slide Block Casing Systems

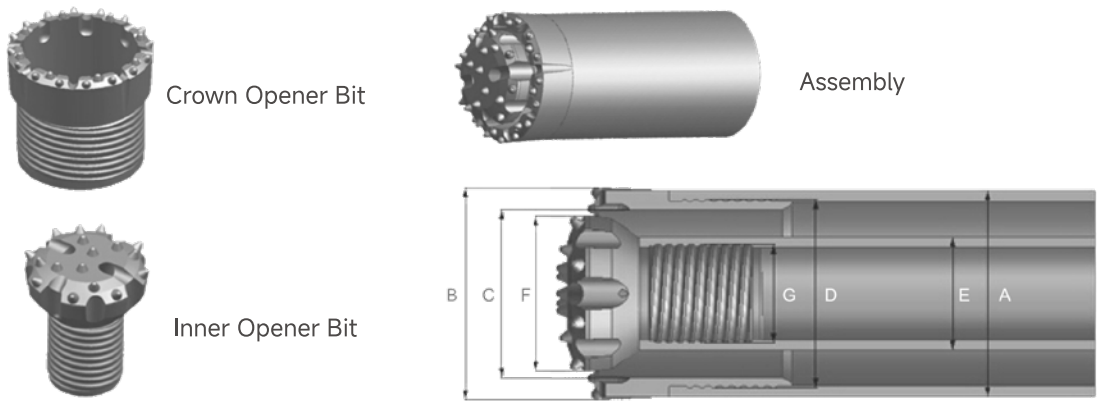
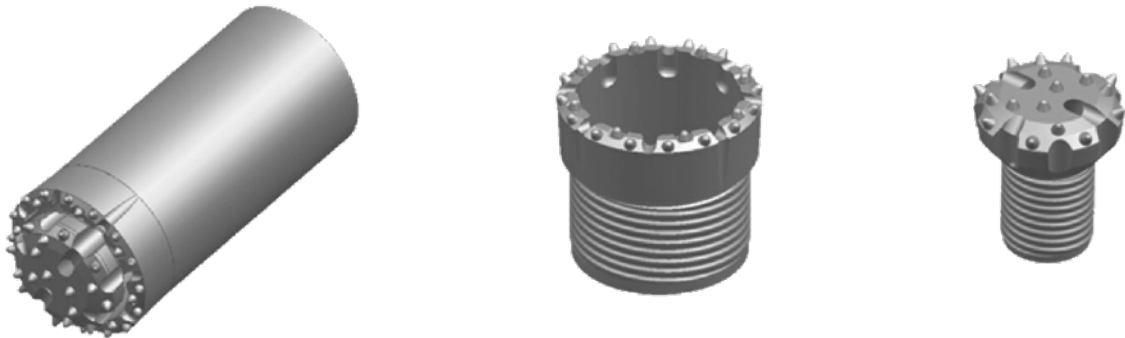


Slide Block Casing System

	Model	Casing Tube O.D.(mm)	Maximum O.D. of Center Bit(mm)	Casing shoe I.D. (mm)	Maximum O.D. of Reaming(mm)	Hammer Style
	146 slide block casing system	146	123	115	156	4 inches
	168 slide block casing system	168	146	140	185	5 inches
	178 slide block casing system	178	156	150	193	5 inches
	183 slide block casing system	183	160	154	193	5 inches
	194 slide block casing system	194	178	166	211	6 inches
	219 slide block casing system	219	203	193	237	6-7 inches
	245 slide block casing system	245	220	210	260	6-8 inches
	273 slide block casing system	273	251	241	308	8 inches
	325 slide block casing system	325	298	281	378	8-10 inches
	377 slide block casing system	377	350	335	430	10-12 inches
	406 slide block casing system	406	380	363	426	12 inches
	560 slide block casing system	560	530	511	590	18 inches
	610 slide block casing system	610	582	556	640	18 inches

Note: The above size is the factory standard design size, if the customer casing wall thickness is different, special design is required.

Double Casing Drilling System



Features

- **Hardening treatment of the part's surface**
with longer operating life and excellent anti-wear properties.
- **Structural optimization**
Strengthen the structural,easy to operate.
- **Superior performance**
smoothly drilling with high efficiency.

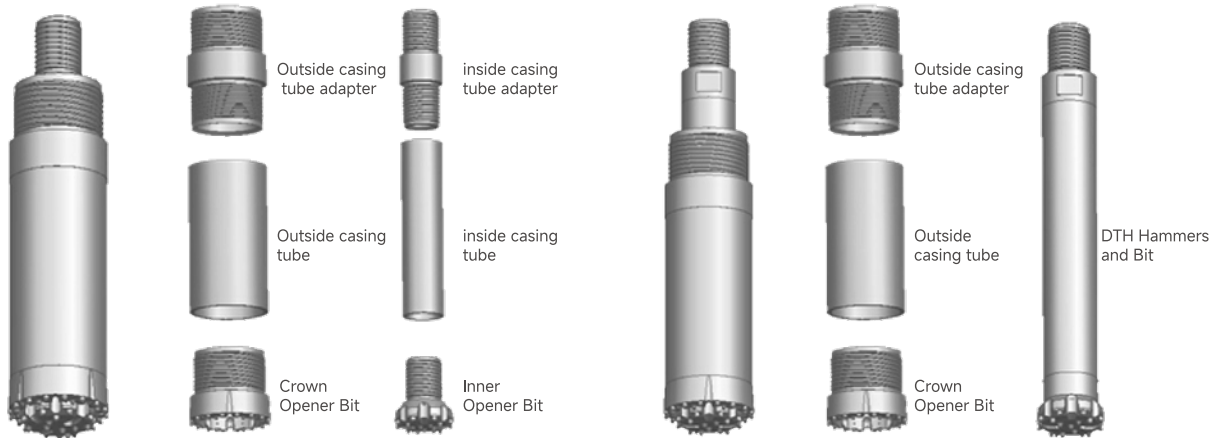


Double Casing Drilling System

Outer Dia.(A) mm	Reamed Dia.(B) mm	Inner Dia.(C) mm	Thread(D) mm	Drill Rod Dia.(E) mm	Drill Bit Dia.(F) mm	Thread type (G)
118	125	88	104.5	76	83	R 56
133	140	108	122	76	102	R 56
146	152	120	134	89	116	R 78
168	172	133	146.5	114	128	R 83
216	225	178	203	114	165	R 102

Note: The above size is the factory standard design size, if the customer casing wall thickness is different, special design is required.
Order Guide: Outer Dia.(A)+Reamed Dia.(B)+Inner Dia.(C)+Thread(D)+ Drill Rod Dia.(E)+Drill Bit Dia.(F)+Thread(G)

Structure



Top hammer type drilling inside the casing DTH hammer type drilling inside the casing



04

TOP HAMMER DRILL BIT

What is Top Hammer Drill Bit ?

Threaded Drill Bits cover regular, retrac and reaming types. With stronger button-fixing ability, longer service life, better wear-resistance and impact-resistance performance, they are widely used in tunneling, underground mining, open pit mining, anchoring and other large-scale construction projects.

The Application of Top Hammer Drill Bit

Thread button bits made with high quality of best quality alloy steel bar and tungsten carbides, through heat treatment so that it can withstand the toughest rock drilling demands, and transmit intensive impact energy into the rock with the least possible loss of energy.

Retrac Button Bits

Specifications	Head Shape	Head Diameter (mm)	Length (without Button)	Holes		Button qty.pcs x dia.mm			Weight (Kg)
Specifications				Port Holes	Side Holes	Bottom Type (Optional)	Gauge Buttons	Front Buttons	



R32

Flat Face	51	130	3	/	Domed +Domed	6-ϕ10	3-ϕ9	1.25
Flat Face	57	130	3	/	Ballistic	6-ϕ10	3-ϕ9	1.65



R38

Flat Face	64	140	3	/	Domed+Ballistic	6xØ11	3-ϕ9	2.05
Center Drop Face	76	160	4	/	Domed+Domed	8-ϕ11	5-ϕ11	3.65
Center Drop Face	89	170	4	/	Domed+Domed	8-ϕ12	4-ϕ12+2-ϕ10	5.3



T38

Center Drop Face	64	160	2	/	Domed+Domed	8-ϕ9	5-ϕ9	2.45
Flat Face	70	160	3	/	Domed+Domed	6-ϕ11	4-ϕ9	2.85
Center Drop Face	76	160	4	/	Domed+Domed	8-ϕ11	5-ϕ11	3.7
Center Drop Face	89	160	4	/	Parabola+Parabola	8-ϕ12	4-ϕ12+2-ϕ10	5.3



T45

Center Drop Face	72	160	4	/	Domed+Domed	8-ϕ11	5-ϕ10	3.15
Center Drop Face	76	160	4	/	Domed+Domed	8-ϕ12	4-ϕ11+1-ϕ10	3.55
Center Drop Face	89	170	4	/	Ballistic+Ballistic	8-ϕ12	4-ϕ12+2-ϕ10	5
Center Drop Face	102	180	4	/	Domed+Domed	8-ϕ13	6-ϕ12	7.3



T51

Center Drop Face	89	170	4	/	Ballistic+Ballistic	8-ϕ12	4-ϕ12+2-ϕ11	5
Center Drop Face	102	180	4	/	Ballistic+Ballistic	8-ϕ13	4-ϕ13+2-ϕ12	7.12
Flat Face	115	185	2	2	Domed+Domed	8-ϕ14	6-ϕ13	10.1
Center Drop Face	127	185	4	/	Domed+Domed	8-ϕ14	4-ϕ14+3-ϕ13	12.4



ST58

Flat Face	102	180	3	/	Parabola+Parabola	9-ϕ13	6-ϕ12	6.5
Flat Face	115	185	2	2	Domed+Domed	8-ϕ14	6-ϕ13	9.5
Center Drop Face	127	185	4	/	Domed+Domed	8-ϕ14	4-ϕ14+3-ϕ13	11.7



GT60Sandvik

Flat Triangle Face	102	212	3	/	Domed+Domed	9-ϕ13	9-ϕ11	10
Flat Triangle Face	115	212	3	/	Domed+Domed	9-ϕ14	10-ϕ12	8
Flat Triangle Face	127	212	3	/	Domed+Domed	9-ϕ16	10-ϕ14	13.9
Flat Triangle Face	140	225	3	/	Domed+Domed	9-ϕ16	10-ϕ14	17.4

Retrac Button Bits

Specifications	Head Shape	Head Diameter (mm)	Length (without Button)	Holes		Button qty.pcs x dia.mm			Weight (Kg)
Specifications				Port Holes	Side Holes	Bottom Type (Optional)	Gauge Buttons	Front Buttons	



EL60

Center Drop Face	102	200	3	/	Domed+Domed	9-ϕ14	7-ϕ13	6.5
Center Drop Face	115	200	4	/	Domed+Domed	8-ϕ14	4-ϕ14+2-ϕ13	9
Center Drop Face	127	205	4	/	Domed+Domed	8-ϕ14	4-ϕ14+3-ϕ13	12



ST68

Center Drop Face	102	185	4	/	Domed+Domed	8-ϕ14	4-ϕ13+2-ϕ12	6.1
Center Drop Face	115	185	4	/	Domed+Domed	8-ϕ14	4-ϕ14+2-ϕ13	8.4
Center Drop Face	127	190	4	/	Domed+Domed	8-ϕ14	4-ϕ14+3-ϕ13	11.4
Center Drop Face	140	190	4	/	Domed+Domed	8-ϕ16	4-ϕ14+3-ϕ13	14.3



T45Sandvik

Triangle Face	89	170	4	/	Domed+Domed	8-ϕ13	5-ϕ13	5
Flat Triangle Face	102	175	3	/	Domed+Domed	9-ϕ13	9-ϕ11	7.25
Flat Triangle Face	115	175	3	/	Domed+Domed	9-ϕ14	10-ϕ12	9.5



T51Sandvik

Flat Triangle Face	102	185	3	/	Domed+Domed	9-ϕ13	9-ϕ11	7.5
Flat Triangle Face	115	185	3	/	Domed+Domed	9-ϕ14	10-ϕ12	10
Flat Triangle Face	127	185	3	/	Domed+Domed	9-ϕ14	10-ϕ13	12.8

Normal Button Bits

Specifications	Head Shape	Head Diameter (mm)	Length (without Button)	Holes		Button qty.pcs x dia.mm			Weight (Kg)
Specifications				Port Holes	Side Holes	Bottom Type (Optional)	Gauge Buttons	Front Buttons	



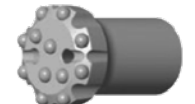
R25									
Flat Face	38	105	1	2	Ballistic	5-φ8	2-φ8	0.5	
Flat Face	45	110	3	2	Ballistic	6-φ9	3-φ8	0.65	



R32									
Flat Face	45	113	3	2	Ballistic	6-φ9	3-φ8	0.75	
Flat Face	64	130	2	/	Domed	6-φ10	4-φ9	2.1	
Convex Face	76	130	2	/	Domed	6-φ12	2-φ12+2-φ10	2.7	



R38									
Center Drop Face	64	130	3	/	Domed+Ballistic	6xØ11	3-φ9	1.85	
Center Drop Face	76	130	2	2	Domed+Domed	8-φ12	4-φ12	2.45	
Center Drop Face	89	130	2	2	Domed+Domed	8-φ12	6-φ12	3.5	



T38									
Center Drop Face	64	130	2	/	Domed+Domed	8-φ9	5-φ9	1.85	
Flat Face	70	130	3	2	Domed+Domed	6-φ12	4-φ10	2.05	
Center Drop Face	76	130	4	/	Domed+Domed	8-φ11	5-φ10	2.55	
Center Drop Face	89	130	4	/	Parabola+Parabola	8-φ12	4-φ12+2-φ10	3.55	



T45									
Center Drop Face	72	140	4	/	Domed+Domed	8-φ11	5-φ10	2.25	
Center Drop Face	76	140	4	/	Domed+Domed	8-φ11	4-φ11+1-φ10	2.9	
Center Drop Face	89	145	4	/	Ballistic+Ballistic	8-φ12	4-φ12+2-φ10	3.8	
Center Drop Face	102	150	4	/	Domed+Domed	8-φ13	6-φ12	4.8	



T51									
Center Drop Face	89	155	4	/	Ballistic+Ballistic	8-φ12	4-φ12+2-φ11	4.15	
Center Drop Face	102	155	4	/	Ballistic+Ballistic	8-φ14	4-φ13+2-φ12	5.8	
Flat Face	115	160	2	2	Domed+Domed	8-φ14	6-φ13	6.55	
Center Drop Face	127	165	4	/	Domed+Domed	8-φ14	4-φ14+3-φ13	7.7	



ST58									
Center Drop Face	89	175	4	/	Ballistic+Ballistic	8-φ12	4-φ12+2-φ11	4.4	
Flat Face	102	180	3	/	Parabola+Parabola	8-φ13	6-φ12	5.8	
Flat Face	115	185	2	2	Domed+Domed	8-φ14	6-φ13	7.7	
Center Drop Face	127	185	4	/	Domed+Domed	8-φ14	4-φ14+3-φ13	8.9	



GT60Sandvik									
Flat Triangle Face	102	220	3	/	Domed+Domed	9-φ13	9-φ11	8.1	
Flat Triangle Face	115	220	3	/	Domed+Domed	9-φ14	10-φ12	8.8	
Flat Triangle Face	127	225	3	/	Domed+Domed	9-φ16	10-φ14	10.6	
Flat Triangle Face	140	230	3	/	Domed+Domed	9-φ16	10-φ14	11.7	

Normal Button Bits

Specifications	Head Shape	Head Diameter (mm)	Length (without Button)	Holes		Button qty.pcs x dia.mm			Weight (Kg)
Specifications				Port Holes	Side Holes	Bottom Type (Optional)	Gauge Buttons	Front Buttons	



ST68									
Flat Face	102	180	2	2	Domed+Domed	8-φ14	6-φ13	5.4	
Center Drop Face	115	180	4	/	Domed+Domed	8-φ14	4-φ14+2-φ13	6.65	
Center Drop Face	127	190	4	/	Domed+Domed	8-φ14	4-φ14+3-φ13	8.9	
Center Drop Face	140	190	4	/	Domed+Domed	8-φ16	4-φ14+3-φ13	10.8	



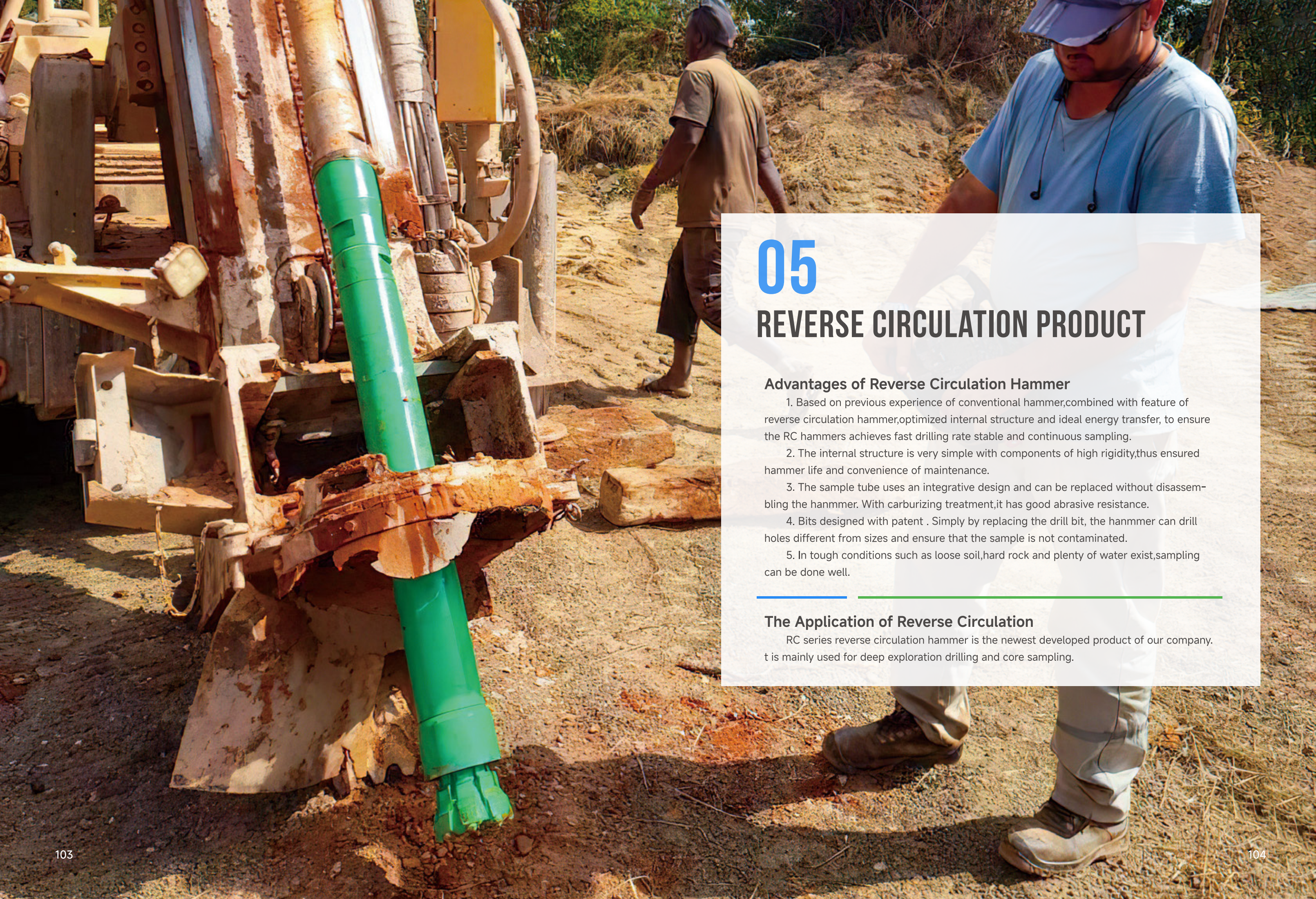
T45									
Triangle Face	89	145	4	/	Domed+Domed	8-φ13	5-φ13	3.5	
Flat Triangle Face	102	150	3	/	Domed+Domed	9-φ13	9-φ11	4.5	
Flat Triangle Face	115	160	3	/	Domed+Domed	9-φ14	10-φ12	5	



T51									
Flat Triangle Face	102	155	3	/	Domed+Domed	9-φ13	9-φ11	5.5	
Flat Triangle Face	115	165	3	/	Domed+Domed	9-φ14	10-φ12	6.5	
Flat Triangle Face	127	165	3	/	Domed+Domed	9-φ14	10-φ13	7.5	



EL60									
Flat Face	102	210	2	2	Domed+Domed	8-φ14	6-φ13	7.5	
Center Drop Face	115	210	4	/	Domed+Domed	8-φ14	4-φ14+2-φ13	8.2	
Center Drop Face	127	220	4	/	Domed+Domed	8-φ14	4-φ14+3-φ13	10	



05

REVERSE CIRCULATION PRODUCT

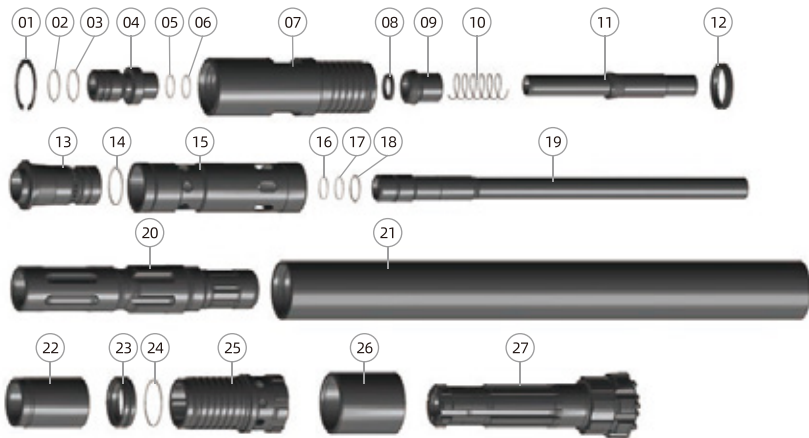
Advantages of Reverse Circulation Hammer

1. Based on previous experience of conventional hammer,combined with feature of reverse circulation hammer,optimized internal structure and ideal energy transfer, to ensure the RC hammers achieves fast drilling rate stable and continuous sampling.
2. The internal structure is very simple with components of high rigidity,thus ensured hammer life and convenience of maintenance.
3. The sample tube uses an integrative design and can be replaced without disassembling the hanmmer. With carburizing treatment,it has good abrasive resistance.
4. Bits designed with patent . Simply by replacing the drill bit, the hanmmer can drill holes different from sizes and ensure that the sample is not contaminated.
5. In tough conditions such as loose soil,hard rock and plenty of water exist,sampling can be done well.

The Application of Reverse Circulation

RC series reverse circulation hammer is the newest developed product of our company. t is mainly used for deep exploration drilling and core sampling.

RE 004

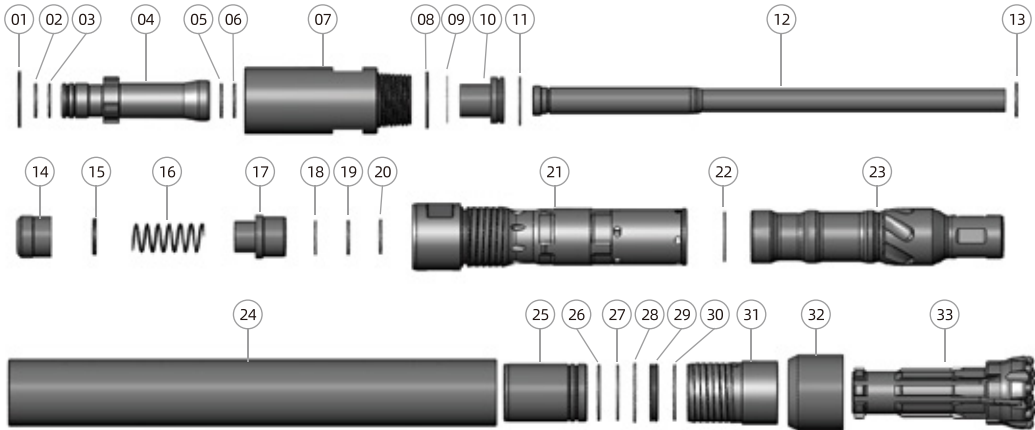


Ref.	Parts	Weight	Part No.	Ref.	Parts	Weight	Part No.
01	Jump Ring	0.03 Kg	01-RE004-01	15	Inner Cylinder	2.5 Kg	01-RE004-15
02	O Ring	0.02 Kg	01-RE004-02	16	O Ring	0.02 Kg	01-RE004-16
03	O Ring	0.02 Kg	01-RE004-03	17	O Ring	0.02 Kg	01-RE004-17
04	Adapter	1.0 Kg	01-RE004-04	18	O Ring	0.02 Kg	01-RE004-18
05	O Ring	0.02 Kg	01-RE004-05	19	Collecting Tube	2.6 Kg	01-RE004-19
06	O Ring	0.02 Kg	01-RE004-06	20	Piston	10.5 Kg	01-RE004-20
07	Top Sub	7.9 Kg	01-RE004-07	21	Piston Case	18 Kg	01-RE004-21
08	Y Ring	0.02 Kg	01-RE004-08	22	Guide Sleeve	1.8 Kg	01-RE004-22
09	Check Valve	0.5 Kg	01-RE004-09	23	Retainer Ring	0.3 Kg	01-RE004-23
10	Spring	0.1 Kg	01-RE004-10	24	O Ring	0.02 Kg	01-RE004-24
11	Collecting Pipe	1.1 Kg	01-RE004-11	25	Driver Chuck	3.2 Kg	01-RE004-25
12	Disc Spring	0.15 Kg	01-RE004-12	26	Shroud	1.1 Kg	01-RE004-26
13	Valve Seat	2.0 Kg	01-RE004-13	27	Drill Bit		01-RE004-27
14	O Ring	0.02 Kg	01-RE004-14				

Specification Parameter

Length(Less bit)	Weight	Outer diameter	Connection Thread	Bit Shank	Hole Range
1252mm	53 Kg	ϕ107 mm	4" Remet	RE004	ϕ112-ϕ127mm
Working pressure		Recommended rotation speed		Air Consumption	
1.2-2.5Mpa		30-60r/min		1.8Mpa	2.4Mpa
				8.5³/min	12m³/min

RE 542

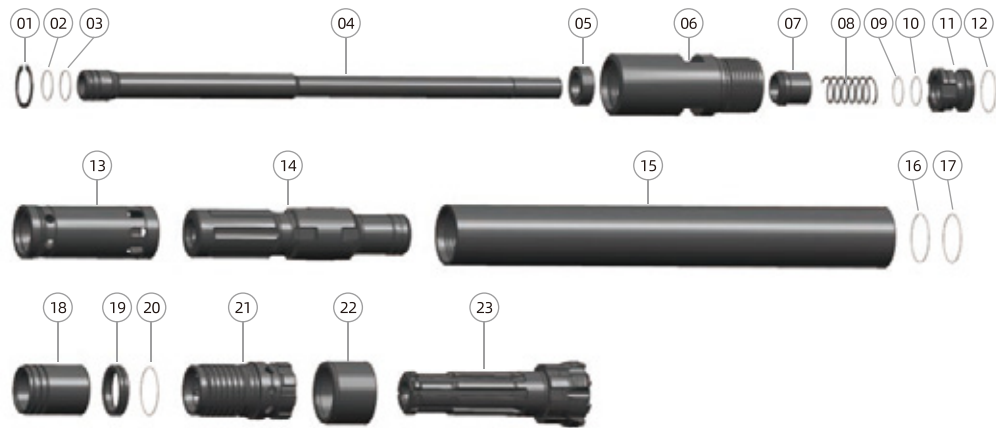


Ref.	Parts	Weight	Part No.	Ref.	Parts	Weight	Part No.
01	Circlip	0.03 Kg	01-RE542-01	18	O Ring	0.02 Kg	01-RE542-18
02	O Ring	0.02 Kg	01-RE542-02	19	O Ring	0.02 Kg	01-RE542-19
03	O Ring	0.02 Kg	01-RE54203	20	O Ring	0.02 Kg	01-RE542-20
04	Adapter Tube	2.83 Kg	01-RE542-04	21	Inner Cylinder	6.6 Kg	01-RE542-21
05	O Ring	0.02 Kg	01-RE542-05	22	O Ring	0.02 Kg	01-RE542-22
06	O Ring	0.02 Kg	01-RE542-06	23	Piston	11.6 Kg	01-RE542-23
07	Backhead	9 Kg	01-RE542-07	24	Piston Case	13.7 Kg	01-RE542-24
08	Air Screen	0.1 Kg	01-RE542-08	25	Guide Sleeve	2.4 Kg	01-RE542-25
09	Piston Retaining Ring	0.05 Kg	01-RE542-09	26	O Ring	0.02 Kg	01-RE542-26
10	Air Distributer	0.6 Kg	01-RE542-10	27	O Ring	0.02 Kg	01-RE542-27
11	O Ring	0.02 Kg	01-RE542-11	28	Piston Retaining Ring	0.05 Kg	01-RE542-28
12	Inner Tube	3.1 Kg	01-RE542-12	29	Retaining Ring	0.29 Kg	01-RE542-29
13	O Ring	0.02 Kg	01-RE542-13	30	O Ring	0.02 Kg	01-RE542-30
14	Check Valve	0.4 Kg	01-RE542-14	31	Chuck Drive	2.85 Kg	01-RE542-31
15	Rubber Ring	0.02 Kg	01-RE542-15	32	Shroud		01-RE542-32
16	Check Valve Spring	0.1 Kg	01-RE542-16	33	Drill Bit		01-RE542-33
17	Sample Tube Retainer	0.88 Kg	01-RE542-17				

Specification Parameter

Length(Less bit)	Weight	Outer diameter	Connection Thread	Bit Shank	Hole Range
1192mm	55 Kg	ϕ110mm	4"Remet Screw thread	RE542	ϕ113-ϕ130mm
Working pressure		Recommended rotation speed		Air Consumption	
1.2-3.3Mpa		30-60r/min		1.8Mpa	2.4Mpa
				12³/min	18m³/min

PR 52

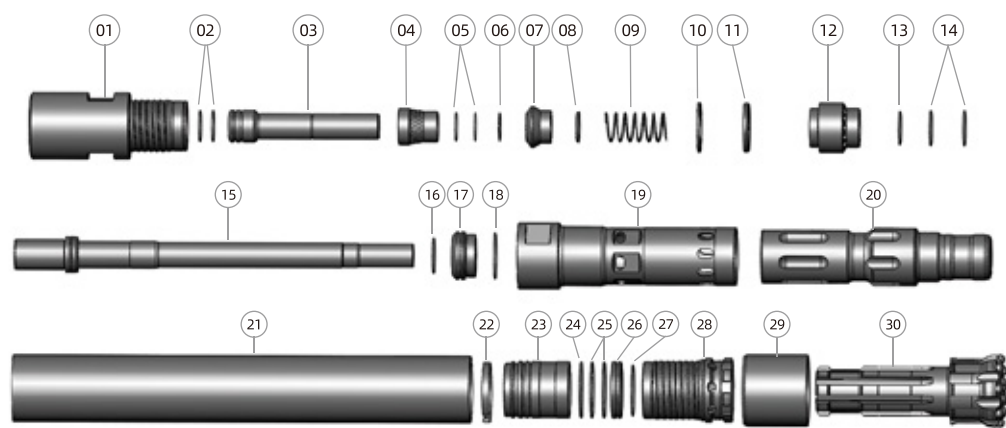


Ref.	Parts	Weight	Part No.	Ref.	Parts	Weight	Part No.
01	Jump Ring	0.03 Kg	01-PR52-01	13	Inner Cylinder	3 Kg	01-PR52-13
02	O Ring	0.02 Kg	01-PR52-02	14	Piston	18 Kg	01-PR52-14
03	O Ring	0.02 Kg	01-PR52-03	15	Piston Case	22.5 Kg	01-PR52-15
04	Collecting Tube	7.2 Kg	01-PR52-04	16	O Ring	0.02 Kg	01-PR52-16
05	Filter Screen	0.14 Kg	01-PR52-05	17	O Ring	0.02 Kg	01-PR52-17
06	Tub Sub	13.5 Kg	01-PR52-06	18	Guide Sleeve	1.9 Kg	01-PR52-18
07	Check Valve	0.6 Kg	01-PR52-07	19	Retainer Ring	0.3 Kg	01-PR52-19
08	Spring	0.1 Kg	01-PR52-08	20	O Ring	0.02 Kg	01-PR52-20
09	O Ring	0.02 Kg	01-PR52-09	21	Driver Chuck	4.1 Kg	01-PR52-21
10	O Ring	0.02 Kg	01-PR52-10	22	Shroud	1.6 Kg	01-PR52-22
11	Valve Seat	1.4 Kg	01-PR52-11	23	Drill Bit		01-PR52-23
12	O Ring	0.02 Kg	01-PR52-12				

Specification Parameter

Length(Less bit)	Weight	Outer diameter	Connection Thread	Bit Shank	Hole Range
1208mm	75.2 Kg	ϕ126 mm	4 1/2" Remet	PR52	ϕ130-ϕ146mm
Working pressure	Recommended rotation speed	Air Consumption			
		1.8Mpa	2.4Mpa		
1.5-3.0Mpa	30-60r/min	16 ³ /min	22m ³ /min		

PR 54R

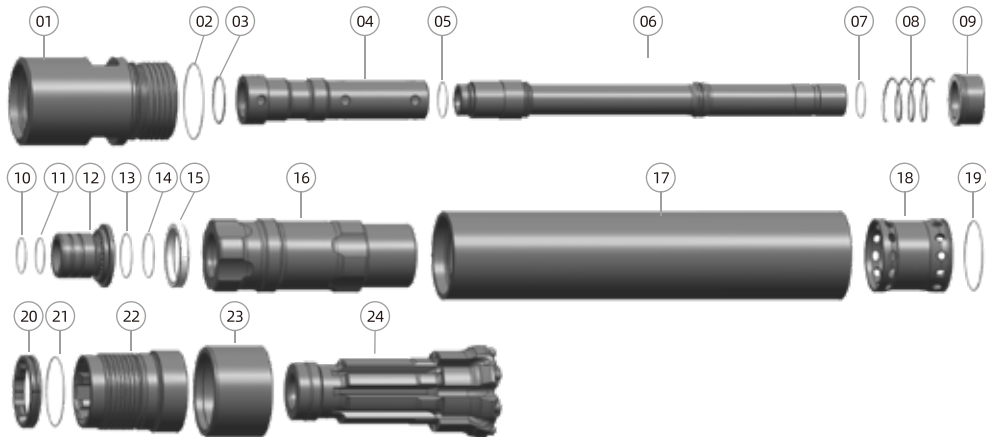


Ref.	Parts	Weight	Part No.	Ref.	Parts	Weight	Part No.
01	Backhead	11.5 Kg	01-PR54R-01	16	O Ring	0.02 Kg	01-PR54R-16
02	O Ring x2	0.02 x2 Kg	01-PR54R-02	17	Sample Tube Retainer	1 Kg	01-PR54R-17
03	Adapter Tube	2.27 Kg	01-PR54R-03	18	O Ring	0.02 Kg	01-PR54R-18
04	Air Screen	0.39 Kg	01-PR54R-04	19	Inner Cylinder	8.25 Kg	01-PR54R-19
05	O Ring x2	0.02 x2 Kg	01-PR54R-05	20	Piston	16.7 Kg	01-PR54R-20
06	Circlip	0.03 Kg	01-PR54R-06	21	Piston Case	23.5 Kg	01-PR54R-21
07	Check Valve	0.4 Kg	01-PR54R-07	22	Piston Retaining Ring	0.1 Kg	01-PR54R-22
08	Rubber Spacer	0.1 Kg	01-PR54R-08	23	Guide Sleeve	2.5 Kg	01-PR54R-23
09	Check Valve Spring	0.1 Kg	01-PR54R-09	24	O Ring	0.02 Kg	01-PR54R-24
10	Gasket	0.1 Kg	01-PR54R-10	25	O Ring x2	0.02 x2 Kg	01-PR54R-25
11	Rubber Spacer	0.1 Kg	01-PR54R-11	26	Retaining Ring	0.4 Kg	01-PR54R-26
12	Air Distributer	1.58 Kg	01-PR54R-12	27	O Ring	0.02 Kg	01-PR54R-27
13	O Ring	0.02 Kg	01-PR54R-13	28	Chuck Drive	4.1 Kg	01-PR54R-28
14	O Ring x2	0.02 x2 Kg	01-PR54R-14	29	Shroud	4.1 Kg	01-PR54R-29
15	Inner Tube	7.43 Kg	01-PR54R-15	30	Drill bit		01-PR54R-30

Specification Parameter

Length(Less bit)	Weight	Outer diameter	Connection Thread	Bit Shank	Hole Range
1294mm	81 Kg	ϕ130mm	4 1/2 "Remet Screw thread	PR 54R	ϕ135-ϕ150mm
Working pressure	Recommended rotation speed	Air Consumption			
		1.8Mpa	2.4Mpa		
1.5-3.0Mpa	30-60r/min	16 ³ /min	22m ³ /min		

RC 45

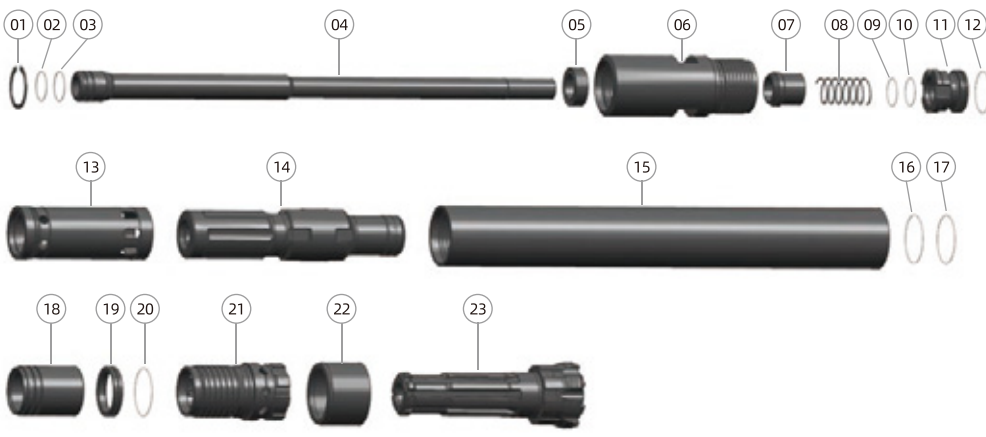


Ref.	Parts	Weight	Part No.	Ref.	Parts	Weight	Part No.
01	Tub Sub	8.64 Kg	01-RC45-01	13	O Ring	0.02 Kg	01-RC45-13
02	O Ring	0.02 Kg	01-RC45-02	14	O Ring	0.02 Kg	01-RC45-14
03	O Ring	0.02 Kg	01-RC45-03	15	Rubber Buffer	0.04 Kg	01-RC45-15
04	Valve Rod	1.31 Kg	01-RC45-04	16	Piston	10.46 Kg	01-RC45-16
05	O Ring	0.02 Kg	01-RC45-05	17	Piston Case	16.25 Kg	01-RC45-17
06	Collecting Tube	3.54 Kg	01-RC45-06	18	Guide Sleeve	1.15 Kg	01-RC45-18
07	O Ring	0.02 Kg	01-RC45-07	19	O Ring	0.02 Kg	01-RC45-19
08	Spring	0.14 Kg	01-RC45-08	20	Retainer Ring	0.26 Kg	01-RC45-20
09	Check Valve	0.42 Kg	01-RC45-09	21	O Ring	0.02 Kg	01-RC45-21
10	O Ring	0.02 Kg	01-RC45-10	22	Driver Chuck	2.84 Kg	01-RC45-22
11	O Ring	0.02 Kg	01-RC45-11	23	Shroud	1.74 Kg	01-RC45-23
12	Adapter	1.21 Kg	01-RC45-12	24	Drill Bit		01-RC45-24

Specification Parameter

Length(Less bit)	Weight	Outer diameter	Connection Thread	Bit Shank	Hole Range
842mm	48.2 Kg	ϕ125 mm	4 1/2" Remet	RC40	ϕ130-ϕ146mm
Working pressure	Recommended rotation speed	Air Consumption			
		1.8Mpa	2.4Mpa		
1.5-3.0Mpa	30-60r/min	16 ³ /min	22m ³ /min		

RC 50

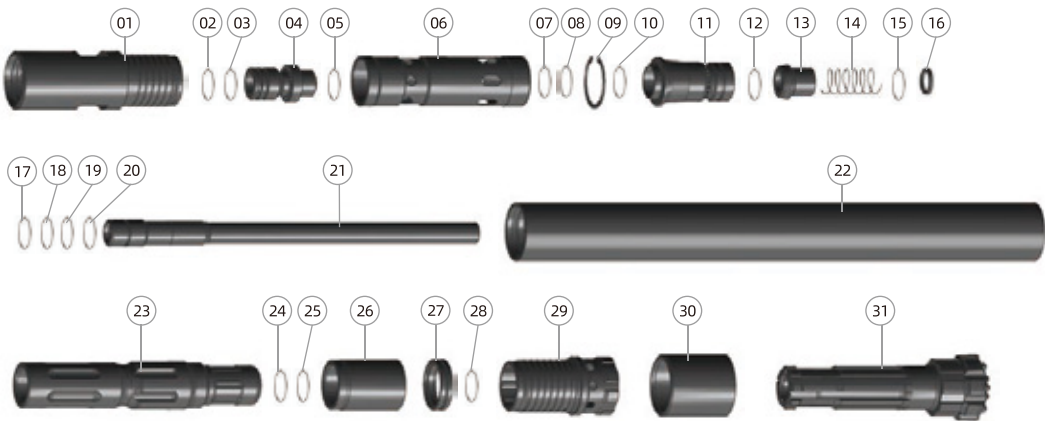


Ref.	Parts	Weight	Part No.	Ref.	Parts	Weight	Part No.
01	Jump Ring	0.03 Kg	01-RC50-01	13	Inner Cylinder	3 Kg	01-RC50-13
02	O Ring	0.02 Kg	01-RC50-02	14	Piston	18 Kg	01-RC50-14
03	O Ring	0.02 Kg	01-RC50-03	15	Piston Case	22.5 Kg	01-RC50-15
04	Collecting Tube	7.2 Kg	01-RC50-04	16	O Ring	0.02 Kg	01-RC50-16
05	Filter Screen	0.14 Kg	01-RC50-05	17	O Ring	0.02 Kg	01-RC50-17
06	Tub Sub	13.5 Kg	01-RC50-06	18	Guide Sleeve	1.9 Kg	01-RC50-18
07	Check Valve	0.6 Kg	01-RC50-07	19	Retainer Ring	0.3 Kg	01-RC50-19
08	Spring	0.1 Kg	01-RC50-08	20	O Ring	0.02 Kg	01-RC50-20
09	O Ring	0.02 Kg	01-RC50-09	21	Driver Chuck	4.1 Kg	01-RC50-21
10	O Ring	0.02 Kg	01-RC50-10	22	Shroud	1.6 Kg	01-RC50-22
11	Valve Seat	1.4 Kg	01-RC50-11	23	Drill Bit		01-RC50-23
12	O Ring	0.02 Kg	01-RC50-12				

Specification Parameter

Length(Less bit)	Weight	Outer diameter	Connection Thread	Bit Shank	Hole Range
1168mm	75.2 Kg	ϕ131mm	4 1/2 "Remet	RC 50	ϕ130-ϕ146mm
Working pressure	Recommended rotation speed	Air Consumption			
		1.8Mpa	2.4Mpa		
1.5-3.0Mpa	30-60r/min	16 ³ /min	22m ³ /min		

RE531



Ref.	Parts	Weight	Part No.	Ref.	Parts	Weight	Part No.
01	Top Sub	9.00 Kg	01-RE531-01	17	O Ring	0.02 Kg	01-RE531-17
02	O Ring	0.02 Kg	01-RE531-02	18	O Ring	0.02 Kg	01-RE531-18
03	O Ring	0.02 Kg	01-RE531-03	19	O Ring	0.02 Kg	01-RE531-19
04	Adapter Tube	2.83 Kg	01-RE531-04	20	O Ring	0.02 Kg	01-RE531-20
05	O Ring	0.02 Kg	01-RE531-05	21	Collecting Tube	3.10 Kg	01-RE531-21
06	Inner Cylinder	6.60 Kg	01-RE531-06	22	Piston Case	13.7 Kg	01-RE531-22
07	O Ring	0.02 Kg	01-RE531-07	23	Piston	11.6 Kg	01-RE531-23
08	O Ring	0.02 Kg	01-RE531-08	24	O Ring	0.02 Kg	01-RE531-24
09	Jump Ring	0.03 Kg	01-RE531-09	25	O Ring	0.02 Kg	01-RE531-25
10	O Ring	0.02 Kg	01-RE531-10	26	Guide Sleeve	2.4 Kg	01-RE531-26
11	Valve Seat	0.60 Kg	01-RE531-11	27	Retaining Ring	0.29 Kg	01-RE531-27
12	O Ring	0.02 Kg	01-RE531-12	28	O Ring	0.02 Kg	01-RE531-28
13	Check Valve	0.40 Kg	01-RE531-13	29	Driver Chuck	2.85 Kg	01-RE531-29
14	Spring	0.10 Kg	01-RE531-14	30	Shroud	1.1 Kg	01-RE531-30
15	O Ring	0.02 Kg	01-RE531-15	31	Drill Bit		01-RE531-31
16	Check Valve Seat	0.02 Kg	01-RE531-16				

Specification Parameter

Length(Less bit)	Weight	Outer diameter	Connection Thread	Bit Shank	Hole Range
1069mm	29.0 Kg	φ81mm	3" Remet	BD 531	φ841-φ100mm
Impact Rate At 2.4Mpa		Recommended rotation speed		Air Consumption 200-500(Psi)	
30 HZ		25-40r/min		300-1200(CFM)	

Reverse Circulation Drill Rod

What is reverse circulation drill pipe?

- Reverse circulation drill pipe, also known as double-wall drill pipe, is a kind of drilling tool used for reverse circulation drilling. It consists of two layers of drill pipe (called inner tube and outer tube). An annular gap is formed between the inner and outer tubes. During drilling, the circulating medium flows from the annular gap of the double-wall drill pipe to the bottom of the hole.
- The center hole of the inner tube is used to discharge the circulating medium and carry the core sample back to the ground. Each double-wall drill pipe is connected with the thread of the outer tube to ensure the transmission of torque and pressure. The inner tubes are mostly connected by plug-in, which generally only plays the role of circulating the circulating medium. A sealing device is provided at the plug-in. Reverse circulation drilling can effectively prevent well wall collapse and improve drilling efficiency.



Drill Pipe Parameters

Number	Specification	Outer tube		Inner tube	
		Outer diameter	wall thickness	Outer diameter	wall thickness
1	Ø89钻杆	89	7.5	50	40
2	Ø102钻杆	102	8.38	50	40
3	Ø114钻杆	114	8.56	60	50
4	Ø127钻杆	127	8	60	49
5	Ø146钻杆	146	10	73	62

Reverse Circulation Drill Bits

RE004 Drill Bit

Specifications	Head Shape	Head Diameter (mm)	Shank Length	Spline	Port Holes	Button qty.pcs x dia.mm			Weight (Kg)
Specifications						Bottom Type (Optional)	Gauge Buttons	Front Buttons	
RE004									
	Drop-Center Face	115	271	8	2	Domed	8xØ14	4xØ14+4xØ13	11.5
	Drop-Center Face	121	271	8	2	Domed	8xØ14	4xØ14+4xØ13	12.1
	Drop-Center Face	124	271	8	2	Domed	8xØ16	4xØ14+ 2xØ14	12.3
	Drop-Center Face	127	271	8	2	Domed	8xØ16	4xØ14+ 2xØ14	12.5

RE542 Drill Bit

Specifications	Head Shape	Head Diameter (mm)	Shank Length	Spline	Port Holes	Button qty.pcs x dia.mm			Weight (Kg)
Specifications						Bottom Type (Optional)	Gauge Buttons	Front Buttons	
RE542									
	Drop-Center Face	121	225	8	2	Domed	8xØ14	4xØ14+4xØ13	10.7
	Drop-Center Face	124	225	8	2	Domed	8xØ14	4xØ14+4xØ13	11
	Drop-Center Face	127	225	8	2	Domed	8xØ16	4xØ14+2xØ14	11.2
	Drop-Center Face	133	225	8	2	Domed	8xØ16	4xØ14+2xØ14	11.4

PR52 Drill Bit

Specifications	Head Shape	Head Diameter (mm)	Shank Length	Spline	Port Holes	Button qty.pcs x dia.mm			Weight (Kg)
Specifications						Bottom Type (Optional)	Gauge Buttons	Front Buttons	
PR52									
	Drop-Center Face	133	282	8	2	Domed	8xØ16	6xØ16+2xØ14	16.5
	Drop-Center Face	136	282	8	2	Domed	8xØ16	6xØ16+2xØ14	16.7
	Drop-Center Face	140	282	8	2	Domed	8xØ16	6xØ16+3xØ14	16.9
	Drop-Center Face	143	282	8	2	Domed	8xØ16	6xØ16+3xØ14	17.1

PR54R Drill Bit

Specifications	Head Shape	Head Diameter (mm)	Shank Length	Spline	Port Holes	Button qty.pcs x dia.mm			Weight (Kg)
Specifications						Bottom Type (Optional)	Gauge Buttons	Front Buttons	
PR54R									
	Drop-Center Face	136	261	8	2	Domed	8xØ16	6xØ16+2xØ14	18.3
	Drop-Center Face	140	261	8	2	Domed	8xØ16	6xØ16+3xØ14	18.5
	Drop-Center Face	143	261	8	2	Domed	8xØ16	6xØ16+3xØ14	18.7
	Drop-Center Face	146	261	8	2	Domed	8xØ16	6xØ16+3xØ14	18.9
	Drop-Center Face	165	261	8	2	Domed	8xØ18	6xØ16+4xØ16	21
	Drop-Center Face	178	261	8	2	Domed	8xØ18	6xØ16+4xØ16	22.5



06

DRILL ROD ADAPTER TUBE AND DRILL ROD

What is Drill Rod Adapter Tube and Drill Rod?

Adapter Tube is a part of the drill string, it includes pin-pin adapter, pin-box adapter and box-box adapter.

A drill pipe is a seamless steel pipe with the API thread connection, which is used for connecting the drill rig equipment.

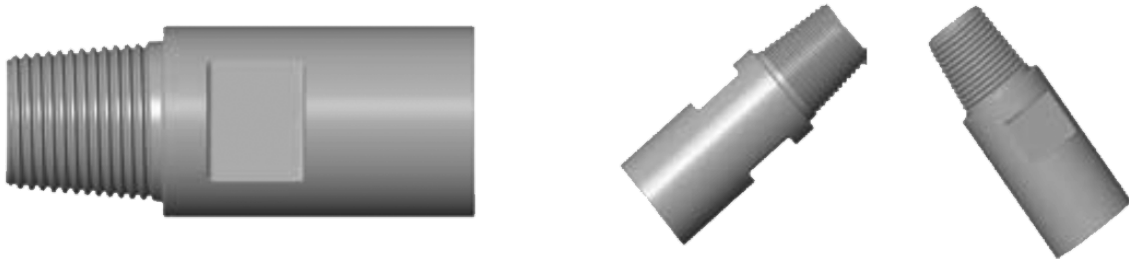
The Application

The sub adapter of drill-class production technology, and has formed a complete production system has a number of leading level of electro-hydraulic forging hammer, to control atmosphere furnace heat treatment production line and excellent Seiko CNC machine tool production equipment. All parts CNC machining, the key technology of CNC control to ensure that the products of high quality, high reliability.

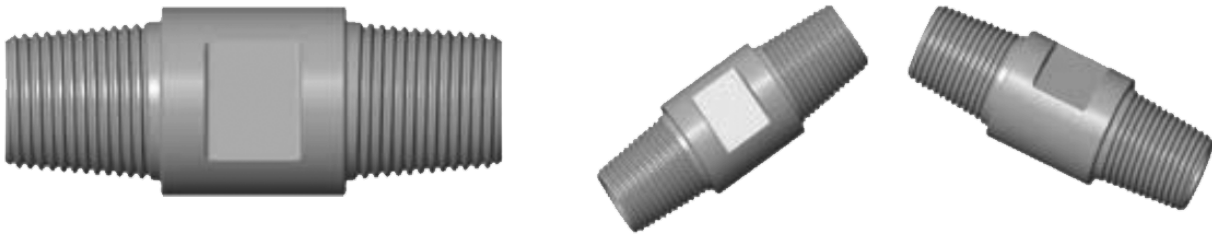
Drill Rod Adapter Tube

- Adapter sub can be manufactured by customer specifications

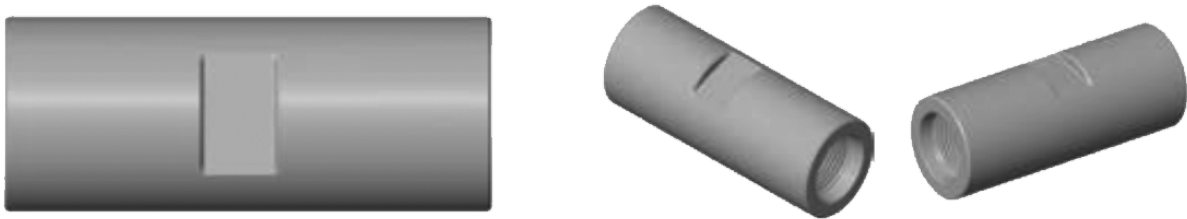
Pin-Box Adapter



Pin-Pin Adapter



Box-Box Adapter



Pin-Box Adapters

	number	Adapter type	Size A (mm)	Size B (mm)	Size C (mm)	Wrench Flat(mm)
	1	2-3/8公-2-3/8母过渡接头	25	45	Ø78	57
	2	2-3/8IF公-2-3/8母过渡接头	25	45	Ø89	70
	3	2-3/8IF公-2-3/8IF母过渡接头	25	45	Ø89	70
	4	2-3/8公-2-7/8母过渡接头	25	45	Ø102	70
	5	2-7/8IF公-2-7/8IF母过渡接头	25	45	Ø108	85
	6	3-1/2公-3-1/2母过渡接头	25	50	Ø114	95

Pin-Pin Adapters

	number	Adapter type	Size A (mm)	Size B (mm)	Size C (mm)	Wrench Flat(mm)
	1	2-3/8公-2-3/8公过渡接头	21	45	Ø89	70
	2	3-1/2公-3-1/2公过渡接头	23	50	Ø114	95
	3	3-1/2公-4-1/2公过渡接头	30	50	Ø140	102
	4	4-1/2公-4-1/2公过渡接头	30	50	Ø140	102

Box-Box Adapters

	number	Adapter type	Size A (mm)	Size B (mm)	Size C (mm)	Wrench Flat(mm)
	1	2-3/8母-2-3/8母过渡接头	97	45	Ø89	70
	2	2-3/8母-2-7/8母过渡接头	115	50	Ø102	85
	3	2-3/8IF母-3-1/2母过渡接头	102	50	Ø114	95
	4	2-7/8母-3-1/2母过渡接头	122	50	Ø114	95

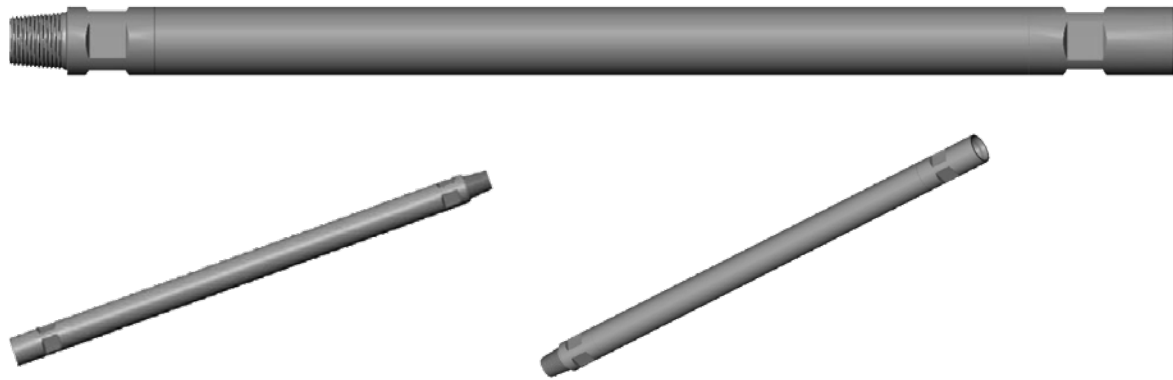
Drill Rod

The main features are as following:

- DTH drill pipes are widely used in mining ,water well drilling, geothermal, oil and all kinds of DTH rock drilling, with high quality low carbon steel to ensure good resistance to strengthen and tensile, friction welded to ensure the adapter and pipe connect tightly as a whole set the cyclic extrusion-compression ensure reliable pipe.



Drill Rod



Drill Rod specification

Number	Drill pipe model	Drill rod length（mm）	wall thickness（mm）	Thread type	Adapter length	Rod material	Adapter Material
1	Ø76钻杆	1500	4	API23/8REG	190/190	R780	35Crmo
2	Ø89*5.5毫米单方钻杆	1000	5.5	API23/8REG	200/200	R780	35Crmo
3	Ø89*5.5毫米双方钻杆	1000	5.5	API23/8REG	200/200	R780	35Crmo
4	Ø89*6.5单方钻杆	1000	6.5	API23/8REG	200/200	R780	35Crmo
5	Ø89*6.5双方钻杆	1000	6.5	NC26	280/200	R780	35Crmo
6	Ø102*8.5单方钻杆	1000	8.5	NC31	230/230	R780	35Crmo
7	Ø102*8.5双方钻杆	1000	8.5	NC31	320/230	R780	35Crmo
8	Ø114*8.5单方钻杆	1500	8.5	NC35	240/240	R780	35Crmo
9	Ø114*8.5双方钻杆	1500	8.5	NC35	320/230	R780	35Crmo
10	Ø127*9单方钻杆	1500	9	NC38	240/240	G105	35Crmo
11	Ø127*9双方钻杆	1500	9	NC38	320/240	G105	35Crmo
12	Ø140*9.5单方钻杆	1500	9.5	NC46	270/270	G105	35Crmo
13	Ø140*9.5双方钻杆	1500	9.5	NC46	340/270	G105	35Crmo

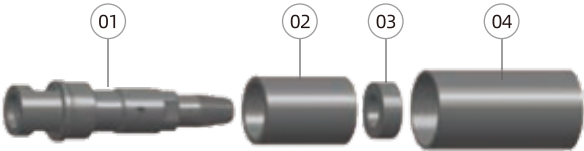


07

OTHER DRILLING TOOLS OR ACCESSORIES

Back Hammer

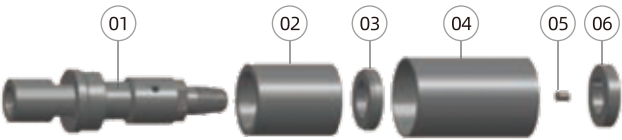
BH140

BH140 Back Hammer	Ref.	Parts	Weight	Part No.
	01	Mandrel	16.5 kg	20-BH140-01
	02	Piston	8.7 kg	20-BH140-02
	03	Bumping Block	2 kg	20-BH140-03
	04	Outer Casing	6.7 kg	20-BH140-04

Specification Parameter

Length(Less bit)	Weight	Outer diameter	Connection Thread	Working pressure
420 mm	34 Kg	ϕ155 mm	API2 3/8"REG	0.8-1.7 Mpa

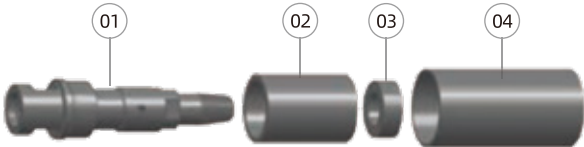
BH170

BH170 Back Hammer	Ref.	Parts	Weight	Part No.
	01	Mandrel	32 kg	20-BH170-01
	02	Piston	18 kg	20-BH170-02
	03	Bumping Block	2.5 kg	20-BH170-03
	04	Outer Casing	9 kg	20-BH170-04
	05	Flat Key	0.1 kg	20-BH170-05
	06	Cushion Block	2.7 kg	20-BH170-06

Specification Parameter

Length(Less bit)	Weight	Outer diameter	Connection Thread	Working pressure
606 mm	64.5 Kg	ϕ190 mm	API3 1/2"REG	0.8-2.5 Mpa

BH190

BH190 Back Hammer	Ref.	Parts	Weight	Part No.
	01	Mandrel	42.5 kg	20-BH190-01
	02	Piston	25.2 kg	20-BH190-02
	03	Bumping Block	3.4 kg	20-BH190-03
	04	Outer Casing	13.5 kg	20-BH190-04

Specification Parameter

Length(Less bit)	Weight	Outer diameter	Connection Thread	Working pressure
560 mm	84.5 Kg	ϕ220 mm	API3 1/2"REG	0.8-3.0 Mpa

BH240

BH240 Back Hammer	Ref.	Parts	Weight	Part No.
	01	Mandrel	71.5 kg	20-BH240-01
	02	Piston	44.3 kg	20-BH240-02
	03	Bumping Block	7.8 kg	20-BH240-03

Specification Parameter

Length(Less bit)	Weight	Outer diameter	Connection Thread	Working pressure
600 mm	123.5 Kg	ϕ240 mm	API4 1/2"REG	0.8-3.0 Mpa