



**D MININGWELL**  
**CONSTRUCTION MACHINERY**

**DTH Hammer One-Stop  
Modification Supporting Service Center**

**Enterprise vision:  
Pioneering and enterprising,  
realistic and innovative.**

**Enterprise slogan:  
Start a new journey.**







# CONTENTS

**P1-2** COMPANY PROFILE

**P3-5** DTH HAMMER PROCESS  
MODIFIED STRUCTURE

**P6-10** CLUSTER DTH HAMMER  
COMBINED DTH HAMMER  
CLUSTER RING CUTTING HAMMER  
DTH HAMMER  
DTH HAMMER ACCESSORIES

**P11-12** APPLICATION CASE LIST

**P13-16** FULL CASING  
AIR COMPRESSOR  
ROTARY DRILLING TOOL  
ROTARY EXCAVATION ACCESSORIES



**P17-20** AFTER-SALE SERVICE  
SUPPORTING LEASE  
WATER WELL DRILLING  
SERIES

# Company profile

Zhejiang Miningwell Supply Chain Management Co., Ltd. is located in Quzhou, a hub city in western Zhejiang. Covering a total area of 45 acres, the foundation engineering research and development center is 2,000 square meters, and the manufacturing plant is 12,000 square meters. It is an innovative enterprise integrating research and development, production and sales. In the process of years of industry accumulation, MININGWELL has completed project experience accumulation and resource docking in large-diameter pile foundation engineering, water well engineering, tunnel construction engineering, mine blasting engineering, subway engineering and other engineering projects. Successfully achieved "there is no unacceptable project", and realized the closed loop of the DTH industry.

In the field of large-diameter pile foundation construction, MININGWELL continues to innovate:

Independent research and development of large-scale rotary DTH hammer dual-condition drilling rig, micro pile hole drilling rig, tunnel driving DTH hammer drilling rig and other special DTH hammer equipment;

Design and manufacture of pneumatic and hydraulic down-the-hole hammers for rotary drilling rigs, long screw pile frames, double-wheel milling and stirring of continuous walls, and underground trenchless equipment;

Completed the design and research and development of mechanized equipment for pile foundation construction auxiliary projects such as pile hole concrete mechanized pouring engineering, mechanized steel cage docking engineering and other auxiliary projects.

In response to the high efficiency requirements of the global market for large-diameter pile foundation projects, the MWQC series (600-3000mm) vertical DTH hammers and ring cutting hammers developed by our company have been widely used in construction, subway, bridge projects all over the country, and deep loved and praised by customers. MININGWELL adheres to the principle of industry wisdom and time experience sharing, and is willing to cooperate with you to achieve a win-win future.







The modification of DTH by rotary drilling is to increase the DTH hammer technology on the basis of not affecting the existing functions of rotary drilling, so as to solve the problem of low construction efficiency of rotary drilling rig in hard rock stratum

## Rotary DTH Hammer Technology

**01**

Rotary drilling rig as the host Suspended DTH hammer drill

**02**

Air compressor as power source  
Provide high pressure air

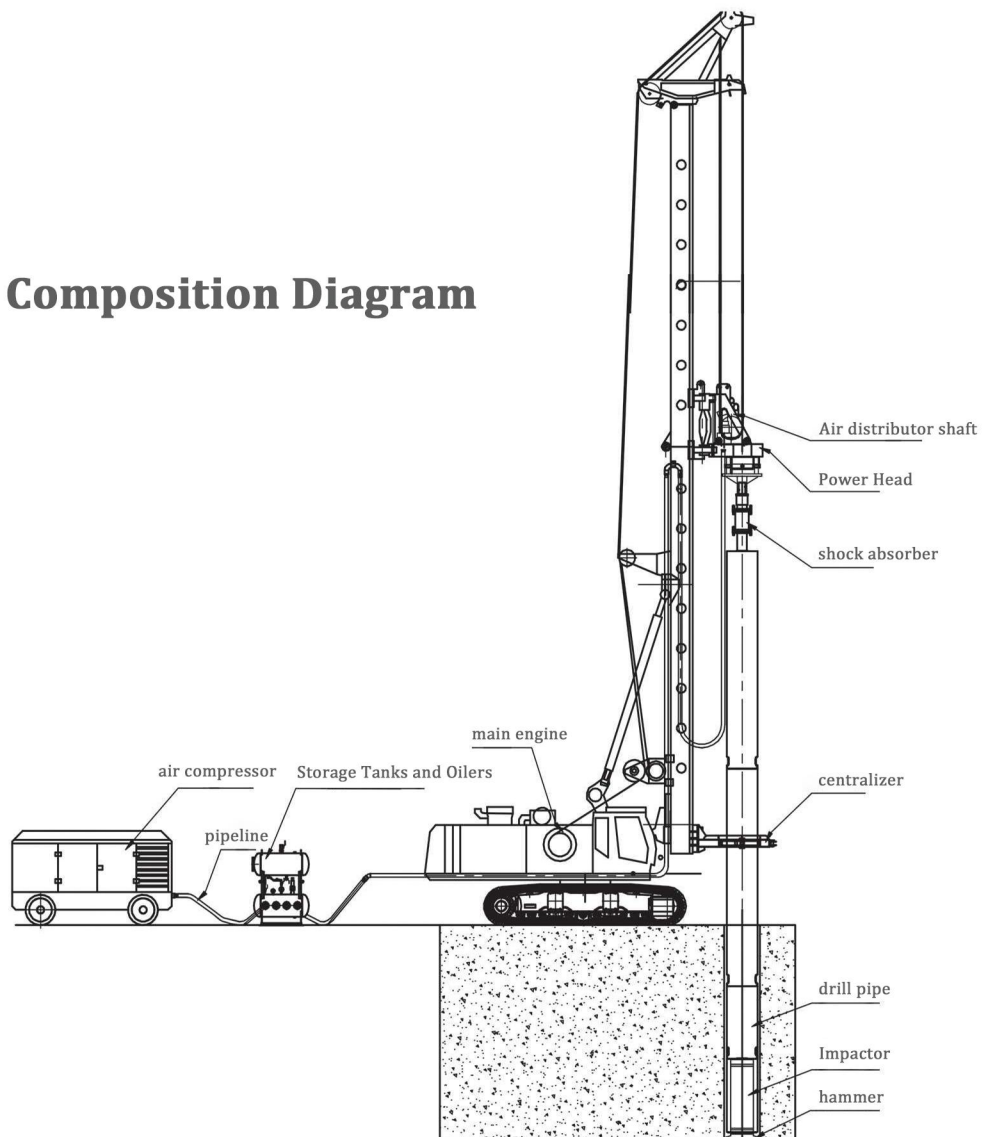
**03**

Pneumatic DTH Hammer for Drilling  
Toolspercussion drilling

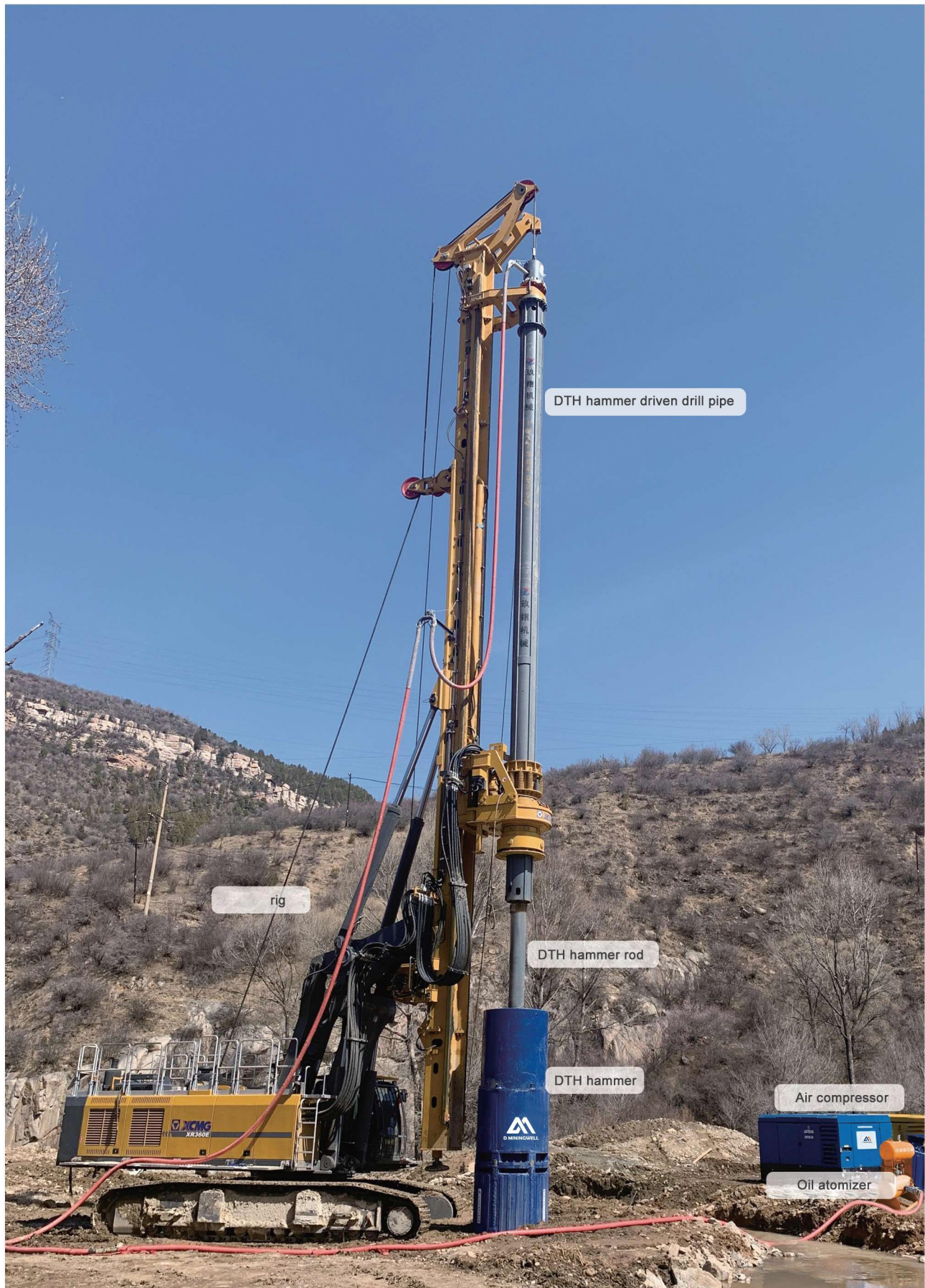
**04**

Compressed air is used as the circulating medium to power and cool the drill bit Hole cleaning and slag discharge

## System Composition Diagram









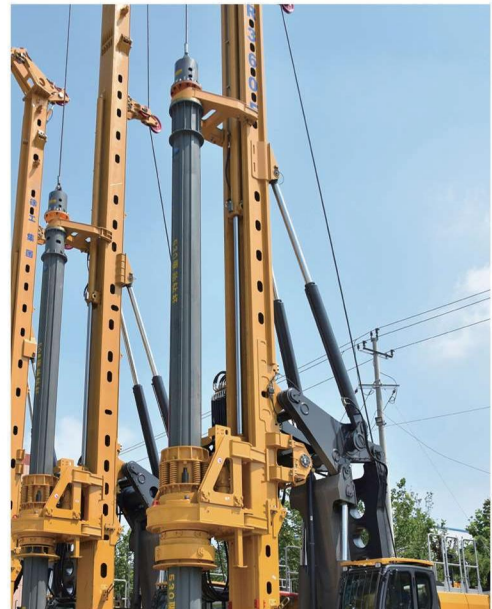


## ← Multi channel reel under power head

1. Maintain the original function of rotary excavation.
2. The reel rotates 360 degrees at will and moves up and down with the drill pipe.
3. Wide applicability, can transport gas and hydraulic power under the hole.

## Top structure of air distributor shaft →

1. Maintain the original function of rotary excavation and good working stability.
2. The process of rotary excavation and DTH hammer can be switched quickly, with strong process adaptability and fast assembly in the field.



## ← Power head jacking structure

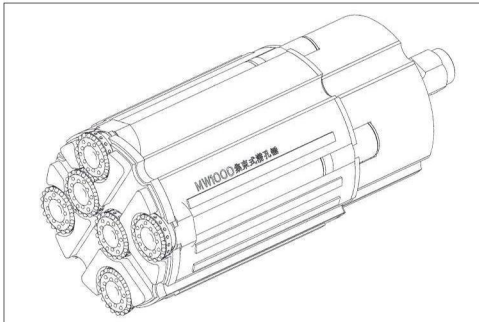
1. Increase the lifting force of large and small rotary excavation.
2. Casing follow-up is simple and convenient.



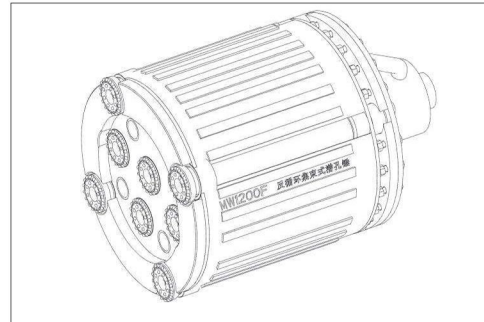
## Classification of cluster DTH hammer

Cluster DTH hammer can be divided into positive circulation cluster DTH hammer and reverse circulation cluster DTH hammer according to slag discharge mode ; According to different operation modes , it can be divided into primary hole forming cluster DTH hammer, reaming cluster DTH hammer and ring cutting cluster DTH hammer.

MWOC series positive  
circulation cluster DTH hammer

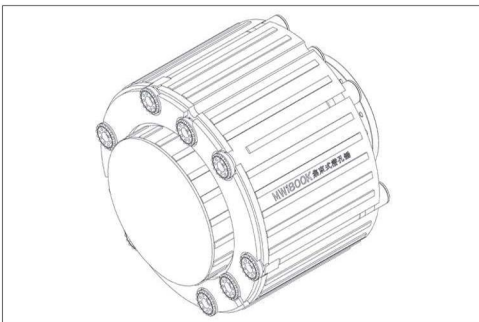


MWOC series reverse  
circulation cluster DTH hammer

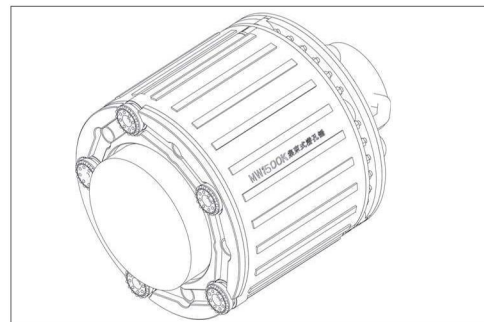


The rock slag of the positive Circulation DTH hammer is discharged out of the hole or into the storage tank through the outside of the DTH hammer. The positive Circulation DTH hammer can be matched with various types of drilling rigs . The rock slag of the Reverse Circulation DTH hammer passes through the slag discharge channel designed inside the DTH hammer and enters the inner slag discharge hole of the double wall drill pipe for slag discharge . The Reverse Circulation DTH hammer can only be used for the reverse circulation drill rig.

MWCK series reaming positive  
circulation cluster DTH hammer



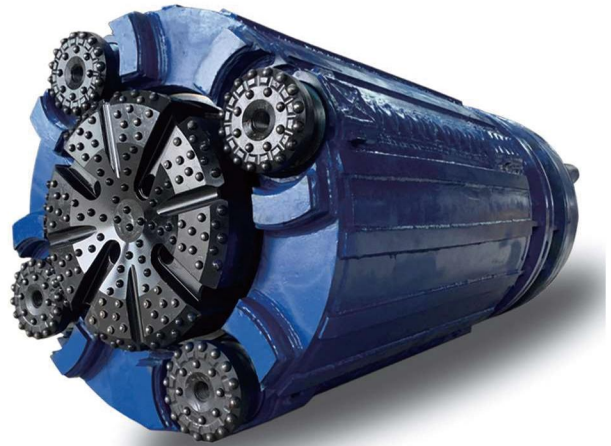
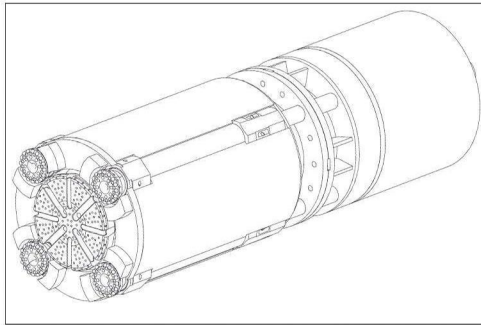
MWQCK series reaming  
reverse circulation cluster DTH hammer



One time hole forming cluster DTH hammer is a cluster DTH hammer that can reach the size of pile hole in one operation. The pile hole of 1.5m and below can be operated by one-time hole forming positive and negative Circulation DTH hammer. The reaming DTH hammer is mainly used to drill the small center hole in advance for the large diameter pile hole more than 1.5m, and the reaming DTH hammer is used to expand the small diameter to the design diameter.

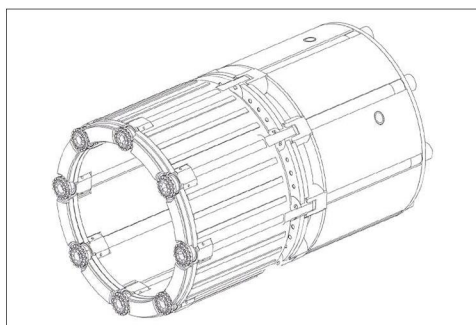
## MWQCZ series combined hammer

Combined DTH hammer is the third generation of cluster DTH hammer developed by MW. Compared with the first and second generations of cluster DTH hammer, the third generation of combined hammer has lower cost, better stability and higher return on operation. A set of hammers can meet a variety of operating apertures. The center hammer can be removed and used separately as a single hammer, and the removed center hammer can be used separately as a ring cutting hammer





## MWQCH ring cutting cluster DTH hammer



The ring cutting type is similar to the cone drill. The DTH hammer is used instead of the cone to break the rock ring groove. It is mainly used in large diameter pile holes over 1500mm.

### Cluster DTH Hammer Product Parameter Application List

Parameters are for reference only, subject to actual product data

Type model		No. of Hammers	Weight (Kg)	Reference Air Volume		Applicable Rig Types			
Type	Model			Under the lowest pressure of 1Mpa (m3/min)	Under the highest pressure of 2.4Mpa (m3/min)	Rotary Drilling Rig	Long Auger Rig	Rotary Piling Drill	Reverse Circulation Rig
One Time Hole Forming Cluster DTH hammer	MWQC600	4	150	36	104	✓	✓	✓	✓
	MWQC800	4	250	48	112	✓	✓	✓	✓
	MWQC1000	6	330	72	168	✓	✓	✓	✓
	MWQC1200	7	420	84	196	✓	✓	✓	✓
	MWQC1500	10	700	120	280	✓		✓	✓
Secondary Reaming Cluster DTH hammer	MWQC1000-1500K	6	450	72	168	✓		✓	✓
	MWQC1200-1800K	9	580	108	252	✓		✓	✓
	MWQC1200-2000K	12	650	144	336	✓		✓	✓
	MWQC1200-2200K	12	700	144	336	✓		✓	✓
Combined DTH hammer	MWQC1000Z	4+1	580	90	150	✓		✓	✓
	MWQC1200Z	5+1	950	122	196	✓		✓	✓
	MWQC1500Z	7+1	1250	146	222	✓		✓	✓
	MWQC1800Z	9+1	1450	170	248	✓		✓	✓
	MWQC2000Z	12+1	1700	206	320	✓		✓	✓
Cluster Ring Cutting DTH Hammer	MWQC1200H	4	350	48	104	✓		✓	✓
	MWQC1500H	6	670	72	156	✓		✓	✓
	MWQC1800H	8	1000	96	208	✓		✓	✓
	MWQC2000H	9	1200	108	234	✓		✓	✓
	MWQC2200H	11	1500	132	286	✓		✓	✓

## MWQCZ series combined hammer



## Specifications

type	MWQTC180	MWQTC240	MWQTC280	MWQTC300
Overall length (without drill)	1954mm	2543.5mm	2529.5mm	2865.5mm
Gross weight (without drill bit)	1492.4KG	2597.8KG	3989.5KG	4688KG
Impactor outer diameter	406mm	525mm	645mm	660mm
Available drill shanks	MWQTC18	MWQTC24	MWQTC28	MWQTC30
Recommended drilling range	φ500mm-φ650mm	φ650mm-φ800mm	φ800mm-φ1000mm	φ800mm-φ1200mm
rear connector thread	Hexagonal joint	Hexagonal joint	Hexagonal joint	Hexagonal joint
maximum wind pressure	3.5MPa	3.5MPa	3.5MPa	3.5MPa
Shock frequency	About 18Hz at 18Bar	About 16Hz at 18Bar	About 12Hz at 18Bar	About 11Hz at 18Bar
Recommended speed	10-25r/min	5-15r/min	2-8r/min	2-7r/min
Air consumption	About 110m³/min at 18Bar	About 130m³/min at 18Bar	About 145m³/min at 18Bar	About 160m³/min at 18Bar

Pneumatic DTH Hammer Impactor Air Supply:  $Q_{NVK} = \frac{D^2 - d^2}{4} \pi V$

Among them: Q—air supply volume m³/min; D—diameterrm; d—drill pipe diameterrm; V—upward reverse wind speed, generally greater than 15m/s; K—hole depth loss air volume increase coefficient, generally 1.3.





DTH hammer driven drill pipe



Oil atomizer



Air distributor shaft



DTH hammer rod



Gun coat



Shock absorber



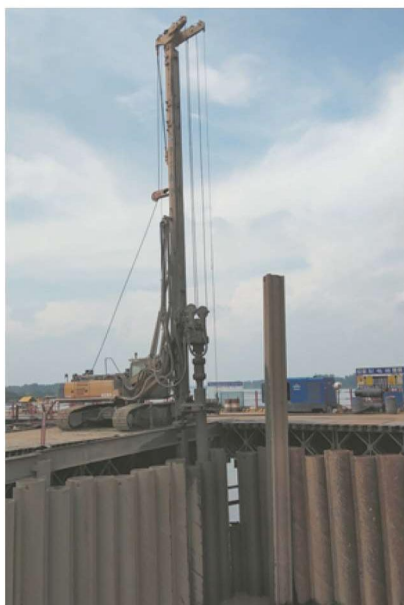
Overburden Drilling



Hanging cap



Hexagonal to square transition joint



**Yellow yellow high  
speed railway**  
φ 600—d 28M



**Yushan Island**  
φ 600—d 8M



**Jiaozhou Shanghai  
Electric**  
φ 800—d 13M



**Qingdao big data  
Industrial Park**  
φ 1000—d 16M



**Jilai high speed  
railway**  
φ 1000—d 22M



**Qingdao Metro Line 6**  
φ 1000—d 25M





**Heilongjiang Tieyi  
high speed railway**  
φ 1000—d 28M



**Jilai high speed  
railway**  
φ 1000—d 16M



**JingTai high  
speed railway**  
φ 1500—d 20M



**Lairong high  
speed railway**  
φ 1500—d 15M



**Shanxi Lixi high  
speed railway**  
φ 1500—d 18M



**Jinan Ring  
Expressway**  
φ 1800—d 22M



Full casing has the advantages of good environmental protection effect: low noise and low vibration; No mud is used, no mud pollution, and the construction site is clean and civilized. It is very suitable for construction in the urban area. High quality of hole forming and pile forming: when taking soil, the hole wall will not collapse because the casing is inserted into the whole hole; Easy to control the pile section size and shape; The water content ratio is small, it is easy to deal with the empty soil at the hole bottom, and the bottom cleaning effect is good. Small filling coefficient, saving concrete. It can be constructed in various miscellaneous fill (including brick slag, stone slag and concrete block), which is suitable for the foundation engineering of old city reconstruction. The improved drive sleeve adopts T-type rotary bayonet link mode, which is convenient and fast for disassembly and assembly!





### Atlas Air Compressor

In the 1920s, Atlas Copco's products first entered the Chinese market by importing them from Europe. In 1959 Atlas Copco established its first company in Taiwan.

China. Today, the Group's four major business areas: compressor technology, vacuum technology, industrial technology, and power technology have all entered China providing customers with innovative products and solutions. By the end of 2020, Atlas Copco had more than 20 companies in China with nearly 6,000 employees.

As one of the Group's most important markets, Atlas Copco will further develop the Chinese market, continuously expand its market share in China through innovative industrial solutions, and continue to provide Chinese customers with sustainable productivity.



### Sullivan air compressor



In 1868, Sullivan Company was founded in Michigan Indiana, USA. In 1984, Palatek Company was established. In 1998, the two parties jointly established the American Sullivan Company. After one and a half worlds of accumulation and development, American Sai Liwen has developed from a pioneer of air compressors in 1868 to a manufacturer with a long production history, providing customers with super efficient, durable and reliable machinery and equipment

### LiUTECH air compressor

Liuzhou Fuda Machinery Co., Ltd., as a wholly-owned company in China of Atlas Copco Group, the world's largest compressor supplier, is a professional manufacturer of screw air compressors, oil-free centrifugal compressors and their post-processing. Manufacturer of equipment, has been committed to providing users with the best solution for compressed air systems



conventional Rotary Drilling Tool



custom drill bucket









After sales service scope: maintenance, overhaul and hydraulic system repair of various rotary drilling rigs, DTH hammer drilling rigs and pile foundation equipment; Atlas, Sullivan, fidelity air compressor fault detection, maintenance, repair and a series of services.







## Main Technical Specification

parameter name		unit	XSL3/160A	XSL5/280	XSL7/360	XSL12/600	XSL20/1000	XSC30/1200
Drilling capacity	Drilling depth	m	330(φ89)	500(φ89)	700(φ89)	1200(φ89)	2000(φ114)	3000(φ114)
	Maximum passing diameter	mm	φ330	φ400	φ500	φ500	φ610	φ820
feed system	maximum lift	kN	200	280	360	600	1000	1200
	maximum feed force	kN	80	120	150	160	260	260
	Fast boost speed	m/min	30	30	32	31	43	30
	fast release speed	m/min	60	60	60	45	50	60
	journey	mm	6600	7000	7000	5000	15200	15240
top drive head	maximum torque	Nm	8300/4150	9200/4600	14500/7250	20000/10000	31500/21000	27500/18300
	maximum speed	r/min	80/160	90/190	75/150	70/140	105/155	120/180
	Spindle diameter	mm	φ45	φ55	φ55	φ105	φ105	φ105
	Spindle floating stroke	mm	/	/	/	60	100	100
	Maximum tilt angle	°	/	/	/	/	85	85
Get on the engine	model	/	YC4A125-T300	YC6J175-T302	YC6J210-T300	YCA08260-T301	TAD1650VE	CAT C18
	rated power	kW	92	129	154	191	405	571
main winch	maximum lift	kN	/	/	30(Optional)	50	50	/
tool winch	maximum lift	kN	15	15	15	15	15	50
Shackle device	Maximum Shackle Torque	Nm	/	/	/	/	9500	9500
	Clamping range	°	/	/	/	/	2-7/8 " ~10-6/8 "	2-7/8 " ~10-6/8 "
foam pump	maximum displacement	L/min	35(Optional)	35(Optional)	35(Optional)	20	100	/
	greatest pressure	MPa	4(Optional)	4(Optional)	4(Optional)	15	5	/
Manifold	The way to	mm	φ55	φ55	φ55	φ76	φ76	φ76
	greatest pressure	MPa	8	8	8	8	35	35
chassis	drive form	/	Track chassis	Track chassis	Track chassis	Track chassis	Track chassis	10*8All-terrainvehicle chassis
	Engine rated power	kW	/	/	/	/	/	327
	top speed	km/h	2.9	2	3	3	3	80
	Maximum grade	%	39	39	39	39	39	45
Working size (L*W*H)		mm	4280*3130*9300	5100*3200*9800	5040*3575*9900	6450*3290*9420	8800*4500*22090	14680*5184*(13800~21400)
Shipping Dimensions (L*W*H)		mm	5900*1800*2400	6100*2100*2690	6210*2250*2880	9100*2250*3030	14400*3000*3600	14200*2550*4000
Total Weight		t	9	12	13.5	18	47.5	55



Deep well drilling rig rescue and rescue construction of Shandong Qixia Gold Mine



Deep well drilling rig Shanxi coalbed methane well construction



Deep well drilling rig Liaoning ultra-shallow and ultralong horizontal well construction





## **Zhejiang Miningwell Supply Chain Management Co., Ltd**

---

Add: No. 18 Gaotang Road, Shenjia Economic Development Zone,  
Quzhou City, Zhejiang, China

E-mail: [info@dminingwell.com](mailto:info@dminingwell.com)

Web: [www.dminingwell.com](http://www.dminingwell.com)

