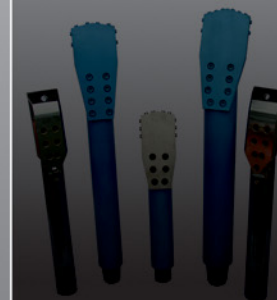
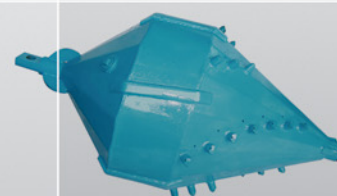
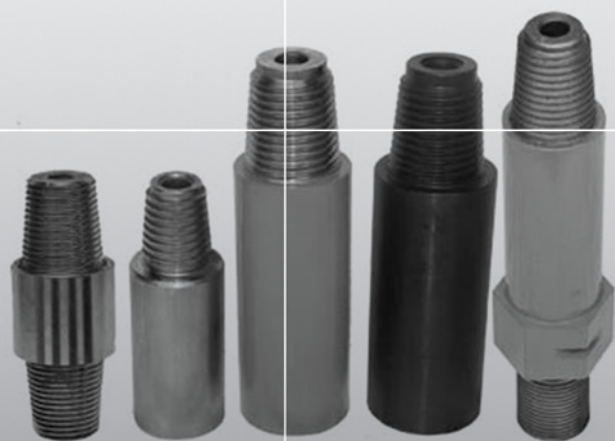




无锡钻探工具厂有限公司

Wuxi Drilling Tools Factory Co., Ltd.



无锡钻探工具厂有限公司

Wuxi Drilling Tools Factory Co., Ltd.

地址：无锡市惠山经济开发区畅园路8号

电话：0510-85407119 85410864

0510-83769831 (国际贸易部)

0510-85411584 85419145

010-62018706 (北京销售部)

传真：0510-85407119 85407347

0510-83769831 (国际贸易部)

010-62018706 (北京销售部)

邮箱：info@drillingtoolschina.com

邮编：214174



## 公司简介

无锡钻探工具厂有限公司（原地质矿产部无锡钻探工具厂）始建于1958年，2014年3月企业正式改制更名，现为地质装备集团有限公司直属企业，是国内钻探工具专业生产基地。2008年5月迁入无锡市惠山经济开发区，占地面积120亩，现有固定资产近两亿元，职工人数600多人，技术力量雄厚。迁入新厂区后，投入资金2800万元进行技术改造，引进了多台套国内一流的专业化生产线。近几年，企业加强同中国地质大学（武汉）、吉林大学、中国地质科学院勘探技术研究所合作，承担多个国家、省部级科技研究项目，企业拥有多项自主知识产权专利，新产品多次刷新国内深孔小口径钻探施工记录，是《地质岩心钻探钻具》国家标准的制定者，是国内唯一一家具有地勘产品量规设计制造能力的企业。企业营销网络健全，并设有国际贸易部，拥有自营进出口权。2001年，通过了ISO9001：2000质量体系认证；2010年通过美国石油协会API 5DP产品认证；2011年被评为高新技术企业。2012年企业成功申报江苏省重大科技成果转化专项资金项目，同年阿特拉斯·科普柯矿山与岩石开挖技术部与我厂的战略合作签约；2014年本企业改制工作已完成，正式更名为“无锡钻探工具厂有限公司”



## About us

Wuxi Drilling Tools Factory Co., Ltd. (Geology and Mineral Resources Bureau Wuxi Drilling Tools Factory) founded in 1958, which now is an state-owned enterprise directly under China Geological Equipment Group Co.,Ltd., the production base for manufacturing geological drilling tools in China. In May 2008, we relocated our plant in Huishan district covering an area of 80000 m<sup>2</sup> with USD 35,000,000 fixed assets. Over 600 employees and a strong technical force team in our company. USD 5,000,000 has been invested for making the technical transformation and introducing a series of national-advanced production lines, in the recent years, we strength our connection to China University of Geosciences(Wuhan), Jilin University, Exploration Institute of Technology of Chinese Academy of Geological Sciences, undertaken lots of national-provincial level scientific researching projects, owned so many proprietary intellectual property rights, our new patent drill rods has refreshed the depth records of small-bore drilling at the site investigation repeatedly.

We participated in and set the "Geological Core Drilling Tools"(China national standard: ISO 3551:1992, Diamond core drilling equipment system A, ISO 10097:1999, wireline diamond core drilling equipment system A, NEQ), and the only one who has the ability to design and manufacture the gauges for geological drilling tools in China.

Our marketing system is effective and comprehensive for domestic and oversea markets, we have domestic & oversea sales divisions and Import Export License for do the international business. There are some special events for us:

In 2001, we're certified by ISO9001:2000 Quality System Certification;

In 2010, we passed the API 5DP production certification;

In 2011, we're awarded High & New Technical Enterprise honor.

In 2012, we're successfully applied for getting the fund support of achievement transformation of Jiangsu province significant scientific and technological achievement project. And signed the Strategic Partnership with Atlas Copco Ming and Rock Exploration Division;

In 2014, we complete the restructuring of enterprise,named to be Wuxi Drilling Tools Factory Co.,Ltd.

## 主要产品

地质钻探工具、非开挖整体加厚钻杆及机具、各种牌号的硬质合金及硬质合金制品、冲击器与跟管钻具、人造金刚石钻头扩孔器及金刚石聚晶、复合片、砂轮及石油钻头附属产品。

## Products Scope

Geological drilling tools, HDD one-piece upsetting drill rods & accessories, various kinds of tungsten carbide and their products, DTH hammers, impregnated/surface set diamond bits and reaming shells and Synthetic Polycrystalline Diamond (PCD), Polycrystalline Diamond Compact (PDC), Diamond Grinders and oil drilling bits' accessories.





## Horizontal Directional Drilling Tools

我厂生产的Horizontal directional drilling tools(包括HDD rods, friction welding drill rods, HDD bits and HDD accessories)非开挖钻杆及钻具, 是HDD drill rig的主要配套工具。主要应用于穿越高速公路、铁路、建筑物、河流、湖泊, 以及在市区、古迹保护区、农作物或植被保护区等进行污水、自来水、煤气、电力、电讯、石油、天然气等地下管线的施工。此外, 还可用于降水工程、隧道工程、基础工程以及环境治理工程等领域。其主要特点是施工周期短、成本低、效率高, 工程施工时对环境的影响极小, 不影响交通

### Horizontal Directional Drilling Tools (HDD Tools)

Description:

As a professional manufacturer of HDD tools in China, Our factory is able to offer a wide variety of HDD equipment for clients worldwide, including HDD drill rods, API friction welding drill rods, HDD bits, horizontal directional drilling rigs and various HDD accessories.

These HDD tools can be widely used in various underground pipeline constructions of wastewater, tap water (running water), coal gas, electricity, telecommunications, petroleum and natural gas in fields of highway, railway, building, river, lake, city, heritage conservation area, crop protection area, vegetation protection zone, etc.

Besides, the tools can also be utilized in industries of precipitation engineering, tunnel construction project, foundation engineering and environmental improvement projects.

The main advantages of our tools are short construction period, low construction costs, high efficiency, little influence on environment, and no impact on traffic.



## HDD Bits

导向钻进非开挖铺管方法是目前非开挖铺管技术方法中的主流方法。一般是先打导向孔, 后进行扩孔, 扩孔是非常关键而且工作量较大的一道工序。此工序花费时间越短, 钻孔越安全, 铺管效率越高, 经济效益也越好。因此, 根据不同地层选择合适的HDD bits是关键。

### 产品的使用操作和注意事项

HDD bits在使用过程中, 也要根据钻头大小制定合适的施工工艺, 不能野蛮施工, 影响钻头的使用寿命。假如连接螺纹磨损严重, 应及时更换其芯轴, 以保证钻头在使用过程中的安全性; 如有切削刃口缺损或断裂, 应将其补上, 以保证扩孔的完整性。

### 产品的维护与保养

HDD bits在每次回扩孔完成后, 必须将胡在钻头表面的泥土、沙石等清理干净, 同时在运输及堆放时要注意, 不要碰撞, 不要重压, 以免碰坏切削刃口。螺纹上要涂丝扣油并拧好护丝。

### HDD Bits (Horizontal Directional Drill Bit)

Description:

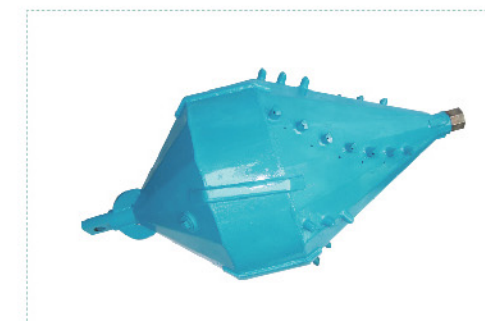
We provide various HDD bits for customers worldwide: fluted reamer, barrel reamer, ringed reamer and spiral cutting expanding bit.

As a professional manufacturer of HDD tools in China, Our factory is able to offer a wide variety of HDD equipment for clients worldwide, including HDD drill rods, API friction welding drill rods, HDD bits, horizontal directional drilling rigs and various HDD accessories.

These HDD tools can be widely used in various underground pipeline constructions of wastewater, tap water (running water), coal gas, electricity, telecommunications, petroleum and natural gas in fields of highway, railway, building, river, lake, city, heritage conservation area, crop protection area, vegetation protection zone, etc.

Besides, the tools can also be utilized in industries of precipitation engineering, tunnel construction project, foundation engineering and environmental improvement projects.

The main advantages of our tools are short construction period, low construction costs, high efficiency, little influence on environment, and no impact on traffic.





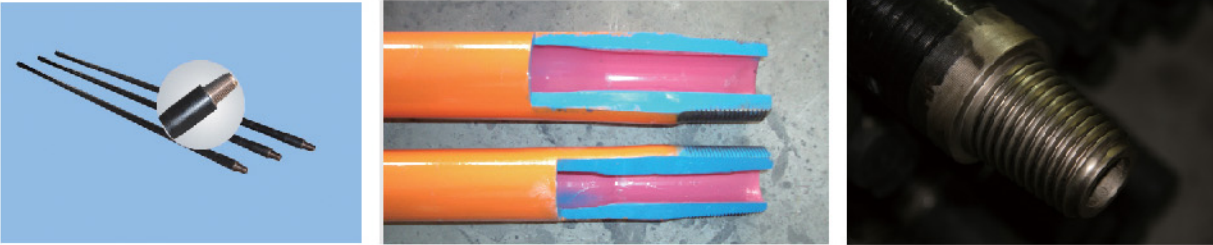
HDD Drill Rods

Introduction:

我厂生产的非开挖钻杆分为整体管端加厚的自接式钻杆和摩擦焊接的钻杆。整体管端加厚的自接式钻杆规格有φ50、φ60、φ73、φ89，其钻杆的长度及连接的螺纹可根据用户的需求定制，一般常规的长度为3米。我们可提供与国内外各种水平钻机配套的连接螺纹。如国外的凯斯、威猛、沟神、罗宾斯等公司钻机配套的连接螺纹，国内的深圳钻通、北京土行孙、上海谷登、三一重工、中联重科、徐工集团、桂林华力、南京地龙等公司钻机配套的连接螺纹。

Main Component:

钢管。



Feature:

整体钻杆的加工，采购的材料是上海宝钢生产的R780的管材，并根据各种不同规格的管材，分别按各种工艺对两管端加厚并进行整体热处理，使各规格的钻杆能达到其各自的机械性能。公、母螺纹都采用双台阶结构，密封好，受扭矩后变形小，螺纹表面采用化学镀，以提高其表面硬度和螺纹的耐磨性。我厂生产的各规格钻杆都能与国内各规格的水平导向钻机进行配套使用。

NO.	Specifications	Unit Weight kg /pcs	Steel Grade 钢级	The adapter Vermeer drill rig and kais drill rig 配套钻机
1	Φ50*1.5m	15	G105	VermeerD10、Keyes 6010
2	Φ50*2m	18	G105	VermeerD10、Keyes 6010
3	Φ50*3m	25	G105	VermeerD10、Keyes 6010
4	Φ60*2m	25	G105	VermeerD24*40、keyes 6130
5	Φ60*3m	35	G105	VermeerD40*40、Keyes 6130
6	Φ73*3m	45	G105	VermeerD50*100
7	Φ73*4.5m	66	G105	VermeerD50*100
8	Φ89*4.5m	100	G105	VermeerD80*100
9	Φ89*6m	130	G105	Vermeer D80*100

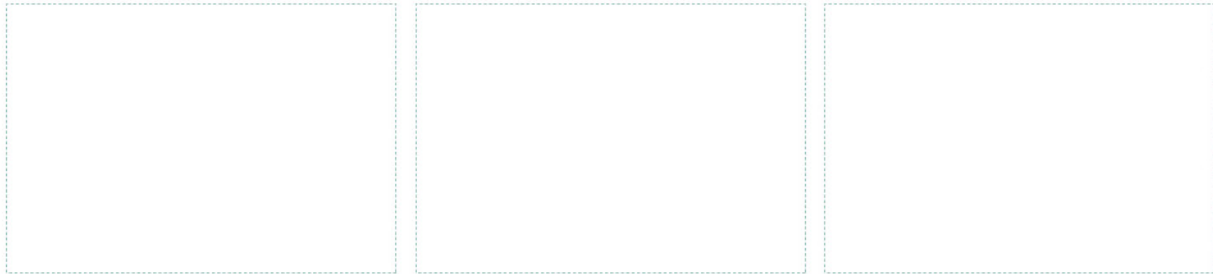
Description:

The HDD drill rod has four different specifications for customer's choice: φ50, φ60, φ73 and φ89. And the length of drill rods and connection threads can be made totally according to specific requirements of clients. The normal length of our HDD drill rods is 3m.

Regarding its packaging, slotted steel frameworks are utilized to pack HDD drill rods in the forms of bundle, and each bundle has 20 to 50 drill rods.

Features:

- 1.Pipe end upsetting technology, self connecting mode and heat treatment have been used in the manufacture of this kind of HDD drill rod. Thus, our drill rods in different specifications possess excellent mechanical properties.
- 2.Double-step structure is used for its male and female threads, so this kind of drill rod has optimal sealing property and after torsion, there is little transformation in the rod.
- 3.Chemical plating (electroless plating) is used on the surfaces of threads so as to improve the hardness of surface and abrasive resistance of thread.
- 4.Our HDD drill rods can work together with various horizontal directional drill rigs within and beyond China.



No.	Specifications	Unit Weight kg /pc	Steel Grade	Matched drill rig
1	Φ50×1.5m	15	G105	VermeerD10; case 6010
2	Φ50×2m	18	G105	VermeerD10; case 6010
3	Φ50×3m	25	G105	VermeerD10; case 6010
4	Φ60×2m	25	G105	VermeerD24×40; case 6130
5	Φ60×3m	35	G105	VermeerD24×40; case 6130
6	Φ73×3m	45	G105	VermeerD50×100
7	Φ73×4.5m	66	G105	VermeerD50×100
8	Φ89×4.5m	100	G105	VermeerD80×100
9	Φ89×6m	130	G105	Vermeer D80×100



## API Friction Welding Drill Rods

### Introduction:

摩擦焊接的钻杆规格有 $\phi 89 \times 10$ 、 $\phi 114 \times 8.56$ 、 $\phi 127 \times 9.19$ ，其螺纹标准为API标准，分别是数字型接头螺纹NC31、NC38、NC50。（也可以为沟神JT4020/JT7020等配套）

摩擦焊接的钻杆实现了钻杆的最佳组合，杆体与接头可采用不同的材料。通过不同的热处理工艺，其接头具有较高的机械性能和耐磨性，与整体钻杆相比使用寿命长，且钻杆的重量轻，柔韧性好。

### Main Component:

钢管

### Feature:

按API标准进行加工，其钻杆的钢级可根据用户的要求能达到G105或S135，连接螺纹为数字型接头螺纹NC31、NC38、NC50。（也可以为沟神JT4020/JT7020等配套）



Description 描述		OD(mm) 外径	Wall thickness(mm) 壁厚	ODI(mm) 杆体外径	Min bend Radius (m) 最小弯曲半径	Max Torque(KNM) 最大扭矩	Pull back(T) 回拖力
公制mm	英制Inch						
3 1/2	89	88.9	10	92	72	20	150
2 7/8	73	73.0	8	79	62	15	110
2 3/8	60	60	7.5	67	40	6.0	70
2	50	50	6.5	57	37	4.8	60

### Description:

The API friction welding drill rod feature longer service life, lighter weight and better flexibility. Special heat treatment ensures its joints better mechanical properties and wear resistance.

Their threads meet the API standards, and their digital connector threads are NC31, NC38 and NC50. And the specifications of this API friction welding drill rods can be  $\phi 89 \times 10$ ,  $\phi 114 \times 8.56$ , and  $\phi 127 \times 9.19$ .

Size	O.D ( mm )	wall thickness (mm)	Coupling O.D	Thread type	Max Torque	Material grade
73	$\Phi 73$	10	$\Phi 99$	D75	16	G105/S135
89	$\Phi 89$	10	$\Phi 105. \Phi 121$	D100.NC31,NC38	25	G105/S135
102	$\Phi 101.6$	8.36	$\Phi 127$	NC38	40	G105/S135
114	$\Phi 114.3$	8.56	$\Phi 127$	NC38	65	G105/S135
127	$\Phi 127$	9.19	$\Phi 168.3$	NC50	110	G105/S135

## 流道钻头

### Introduction:

流道钻头是一种表面有螺旋形凹形水槽的锥体，具有点或线状分布的切削刃的钻头。

### Main Component:

芯轴、16Mn钢板、硬质合金刀头

### Feature:

流道钻头具有螺旋形扩孔钻头的特征，但不象螺扣一样易吃入地层，扩孔阻力相对较大。此类钻头特别适合于较完整的土层中应用，它具有挤压和切削的双重功能，扩孔后成型较好，寿命长，而且实践也证明，此类扩孔钻头在许多一般地层中应用效果良好。凹槽的流线形设计使泥浆易于流动、冷却和钻头体自洁。但是它在高粘性的土层中使用时易产生泥包现象，钻头成泥包球体，扩孔效率极低，扩孔后留下的残渣较多，清孔时间较长，另外钻头加工成本相对较高。

### 产品的维护与保养

流道钻头在每次回扩孔工序完成后，必须将胡在钻头表面的泥土、沙石等清理干净，特别是要疏通泥浆的喷嘴孔，同时要检查芯杆连接螺纹的磨损及各切削刃刀口情况。在运输及堆放时要注意，不要碰撞，不要重压，以免碰坏切削刃口及螺纹。螺纹上要涂丝扣油并拧好护丝。

### Technical Parameters:

我厂生产的流道钻头规格为 $\phi 250 \text{mm} \sim \phi 1500 \text{mm}$ 。连接芯轴的螺纹可根据用户的需要进行配套连接。



### Description:

The fluted reamer is a kind of drill bit whose cutting edge is distributed in dot and linear forms, and the surface of its cone body has a spiral concave water tank.

Its main components include core shaft, 16Mn steel plate and tungsten carbide cutter head.

This kind of fluted reamer is especially suitable to be used in relatively complete stratum. And its application effects are good for general soil layers.

### Features:

- 1.This kind of fluted reamer has all features of spiral reamer bit, but it is more difficult to enter into the ground because of its larger hole-expanding resistance (or reaming resistance).
- 2.Excellent squeezing and cutting functions are available for this reamer.
- 3.After reaming, its forming capacity is quite good.
- 4.Its service life is longer.
- 5.Its fluted (or groove) streamline design makes slurry (mud) easier to flow and cool down. Meanwhile, this design is also good for the self-cleaning of drill bit.
- 6.The specifications of our fluted reamers range from  $\phi 250 \text{mm}$  to  $\phi 1500 \text{mm}$ .
- 7.The thread, which connects the core shafts, can be made in accordance with demands of our customers.



## Barrel Reamer

### Introduction:

挤扩钻头是一种两端呈锥形，中间有一直段，表面有点或螺旋线状分布的切削刃的钻头。

### Main Component:

芯轴、16Mn钢板、硬质合金刀头

### Feature:

挤扩钻头具有螺旋形扩孔钻头的特征，但不象螺扣一样易吃入地层，扩孔阻力较大。此类钻头特别适合于较完整的土层中应用，它具有挤压的功能，扩孔后成型较好，寿命长，而且实践也证明，此类扩孔钻头在许多一般地层中应用效果良好。但是它在高粘性的土层中使用易产生泥包现象，钻头成泥包球体，扩孔效率极低，但扩孔后留下的残渣不多，清孔时间短。钻头体制作容易，成本低。

### 产品的维护与保养

挤扩钻头在每次回扩孔工序完成后，必须将胡在钻头表面的泥土、沙石等清理干净，特别是要疏通泥浆的喷嘴孔，同时要检查芯杆连接螺纹的磨损及各切削刃刀口情况。在运输及堆放时要注意，不要碰撞，不要重压，以免碰坏切削刃口及螺纹。螺纹上要涂丝扣油并拧好护丝。

### Technical Parameters:

我厂生产的流道钻头规格为 $\phi 300\text{mm} \sim \phi 1200\text{mm}$ 。连接芯轴的螺纹可根据用户的需要进行配套连接。

### Description:

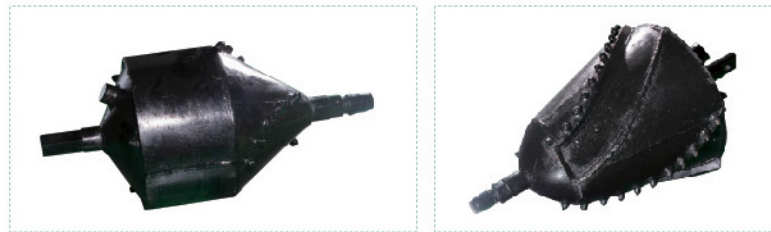
The barrel reamer is a kind of drill bit whose two ends are cone-shaped and whose middle part is straight. And dotted and linear distribution modes have been designed for its cutting blade. It is specially designed for relatively complete soil layer (strata) as well as general formation (stratum).

Its main components are core shaft, 16Mn steel plate and tungsten carbide cutter head.

The specifications of our barrel reamer vary from  $\phi 300\text{mm}$  to  $\phi 1200\text{mm}$ . And the tread that link core shafts can be manufactured according to specific requirements of clients.

### Features:

- 1.It has all advantages of spiral reamer bit, and its reaming resistance is bigger than that of spiral reamer bit.
- 2.Squeezing function is designed for this barrel reamer. And after reaming, its formality is superior.
- 3.When used in high-viscosity soil layer, it will generate little residue, and the time of hole cleaning is very short.
- 4.This kind of barrel reamer is easy to make and its manufacture costs are quite low.



## Ringed Reamer

### Introduction:

圈式钻头是在三块翼板的外径上加上一圈腰箍，其作用是作为翼板的加强筋，同时又起到扶正作器的作用，翼板和腰箍上的切削刃呈点状分布设计原理与三翼钻头类似。

### Main Component:

芯轴、16Mn板材、硬质合金头

### Feature:

由于此类钻头翼板切削刃为阶梯分层切削，切削刃刀口短而点状分布，所以旋转阻力降低。开放式的结构使钻井液和钻屑能轻易越过扩孔钻头，扩孔速度快，保直能力好，修补方便。与土层作用时不易变形，扩孔作用时，钻头类似于刮刀，属于非挤土形钻头类。钻头过障碍能力强，即使遇到大的建筑垃圾，如石块也能顺利通过。但钻头扩孔后一般要求有专门的清孔工序。一般适用于较硬土层的扩孔。

### 产品的维护与保养

圈式钻头在每次回扩孔完成后，必须将胡在钻头表面的泥土、沙石等清理干净，芯杆上的喷嘴孔也要清理干净，以保证扩孔过程中泥浆的畅通，冷却切削刃及清洗刀刃。同时要检查芯杆连接螺纹的磨损及各翼板、腰箍上的切削刃刀口情况。在运输及堆放时要注意，不要碰撞，不要重压，以免碰坏切削刃口。螺纹上要涂丝扣油并拧好护丝。

### Technical Parameters:

我厂生产的圈式钻头规格为 $\phi 300\text{mm} \sim \phi 1500\text{mm}$ 。连接芯轴的螺纹可根据用户的需要进行配套连接。

### Description:

This ringed reamer is mainly comprised of core shaft, 16Mn steel plate and tungsten carbide. And it is typically used in the reaming of hard soil layers.

The cutting blade is very short and is distributed in punctuate (or dot) form, so its rotation resistance is largely lowered.

The specifications of ringed reamers range from  $\phi 300\text{mm}$  to  $\phi 1500\text{mm}$ . And the thread connecting the core shaft can be made in line with special needs of clients.

### Features:

- 1.Its open structure makes it easier for drilling fluids and drill cuttings to go through the reamer bit.
- 2.Its reaming speed is quick, and straightness-keeping is superior.
- 3.It is quite easy and convenient to repair.
- 4.Its obstacle passing capacity is large enough to enable it to go through construction wastes, even stones.



## Spiral Cutting Expanding Bit

### Introduction:

三翼钻头是在三块翼板的各交错面上焊有硬质合金切削刃，翼板切削刃呈点状分布。

### Main Component:

芯轴、16Mn板材、硬质合金头

### Feature:

由于三翼扩孔钻头翼板切削刃为阶梯分层切削，切削刃刀口短而点状分布，所以极大地降低了阻力和旋转所需的能量，此种钻头要求翼板有高的强度，与土层作用时不易变形，扩孔作用时，钻头类似于刮刀，属于非挤土形钻头类。钻头过障碍能力强，即使遇到大的建筑垃圾，如石块也能顺利通过。但钻头扩孔后一般要求有专门的清孔工序。一般适用于较硬土层的扩孔。

### 产品的维护与保养

三翼钻头在每次回扩孔完成后，必须将胡在钻头表面的泥土、沙石等清理干净，同时要检查连接螺纹的磨损及各翼板上的切削刃刀口情况。在运输及堆放时要注意，不要碰撞，不要重压，以免碰坏切削刃口。螺纹上要涂丝扣油并拧好护丝。

### Technical Parameters:

我厂生产的三翼钻头规格为 $\phi 150\text{mm} \sim \phi 400\text{mm}$ 。连接芯轴的螺纹可根据用户的需要进行配套连接。

### Description:

The spiral cutting expanding bit is mainly comprised of core shaft, 16Mn plate and tungsten carbide drill bit. Its cutting blade is short and dot-distributed, which helps greatly reduces the resistance as well as required rotating energy.

Its flange plate is of high strength, so deformation will not happen easily. This spiral cutting expanding bit has strong obstacle-passing capacity, and it can get through large construction wastes and rocks. So it is suitable for drilling hard stratum (formation).

The specifications of our spiral cutting expanding bit range from  $\phi 150\text{mm}$  to  $\phi 400\text{mm}$ . And the threads that connecting core shafts can be made according to customers' requirements.



## HDD Accessories

### Introduction:

我厂为满足国内外非开挖行业钻具的需求，在全厂技术人员的努力下，加强市场调研，设计出了许多符合国内外非开挖行业各客户所需求的产品。如：分动器、缓冲杆、扭矩套、钻铤、保护短接、公母拉头、各种变径接头等等。

### Main Component:

42CrMo合金钢



### Feature:

我厂生产的分动器、缓冲杆、扭矩套、钻铤、保护短接、公母拉头、各种变径接头等，其产品的机械性能完全符合非开挖行业铺管施工的要求，而且在国内同行中处于领先地位。

### Description:

Our HDD accessories include directional drill head, directional blade and transfer case. All of them are made of 42CrMo alloy steel.







# 无锡钻探工具厂有限公司

Wuxi Drilling Tools Factory Co., Ltd.







## 产品手册

Product Manual