



# 湖南天鷹鑽機制造有限公司

HUNAN TIANYING DRILLING MACHINE MANUFACTURING CO.,LTD





## COMPANY INFORMATION

**Hunan Tianying Drilling Machine Manufacturing Co., Ltd**, adjacent to the beautiful Xiang River, is located in high-tech development area of Zhuzhou. As a specialized manufacturer of tri-cone bits, its products fall into two categories: rock lines and oil lines. The rock tricone bits covering more than 30 specifications fall into two categories: air cooled bearing series and sealed bearing series. Our annual capacity is 10000 pcs. The Tianying Tri-cone bits: selected material, fine workmanship, reasonable price, various specifications. The rock series comply with Quality Standards GB/T13343-2008, while the oil series comply with SY/T6164-2008. Tianying Products, integrating with IADC models, are popular in strip mining and oil exploitation







# HM Series Metal Sealed Bearing Bit

## HM系列金属密封另轮钻具



### 结构特点:

滑动轴承金属密封。实施牙掌轴表面堆焊硬质合金层和牙轮内孔镀银的新工艺，提高轴承承载能力、抗咬合能力和稳定性。该系列镶齿钻头配置勺形齿、楔形齿、锥球齿和双球齿等多种齿形。合理选用齿形，做到钻井工艺与地层和钻头有效结合，实现安全高效钻进。

### Main structure features:

Metal face seal journal bearing. New processes of head bearing hardfacing and cone bearing silver plating are used to improve the load capacity, anti-galling ability and stability of the bearing. Various shapes of inserts can be equipped on this series of bits, including scoop inserts, wedge inserts, conical-spherical inserts and double spherical inserts, etc. Drilling process & formation and bit are efficient integrated by scientific insert shape selection to realize safety and high efficient

钻头尺寸 (Bit Size)		钻头型号 (Bit Type)
英寸 (Inch)	毫米 (mm)	
7 7/8	200.0	HM437、HM447、HM517、HM537
8 1/2	215.9	HM417、HM437、HM447、HM517、HM527、HM537、HM547
8 3/4	222.3	HM437、HM447、HM517、HM527
9 1/2	241.3	HM437、HM447、HM517、HM537、HM547
9 7/8	250.8	HM437.HM517
10 1/2	266.7	HM517、HM537、HM547

10 5/8	269.9	HM517、HM537、HM547
12	304.8	HM517、HM537、HM547
12 1/4	311.2	HM417、HM437、HM447、HM517、HM537
13 1/2	342.9	HM517、HM537、HM547
14 3/4	374.7	HM517、HM537、HM547
17 1/2	444.5	HM517、HM517、HM527
18 7/8	479.4	HM517.HM537

### 推荐钻井参数 Recommended Drilling Parameters

IADC	WOB (KN/mm) (Bit Dia)	RPM (r/min)	Applicable Formations
117	0.35-0.8	240-80	低抗压强度、高可钻性的极软地层，如粘土，泥石等 Very soft formations with low compressive strength and high drillability, such as clay, mudstone, chalk, etc.
127	0.35-0.9	240-70	低抗压强度、高可钻性的软地层，如泥石，石膏，盐岩，软页岩，软石灰岩等 Soft formations with low compressive strength and high drillability, such as mudstone, gypsum, salt, soft shale, soft limestone, etc.
217	0.35-0.9	240-70	低抗压强度、高可钻性的中硬地层，如硬页岩，砂岩，石灰岩等 Medium hard with low compressive strength and high drillability, such as hard shale, sandstone and limestone, etc.
417	0.35-0.9	240-70	低抗压强度、高可钻性的软地层，粘土，泥石，石膏，盐岩，软页岩，软石灰岩 Very soft formations with low compressive strength and high drillability, such as clay, mudstone, chalk, gypsum, salt, soft shale, soft limestone, etc.
437 447	0.35-0.9	240-70	低抗压强度、高可钻性的软地层，粘土，泥石，石膏，盐岩，软页岩，软石灰岩 Very soft formations with low compressive strength and high drillability, such as clay, mudstone, chalk, gypsum, salt, soft shale, soft limestone, etc.
517 527	0.35-1.0	220-60	低抗压强度、高可钻性的软地层，如泥石，石膏，软页岩，软石灰岩 Soft formations with low compressive strength and high drillability, such as mudstone, gypsum, salt, soft shale, soft limestone, etc.
537	0.45-1.0	220-50	低抗压强度、高可钻性的中硬地层，如中硬页岩，中硬石灰岩 medium formations with low compressive strength, such as medium soft shale, medium soft limestone, medium soft sandstone, medium formation with harder and abrasive interbeds, etc.
617 627	0.45-1.1	200-50	高抗压强度的中硬地层，如硬页岩，石灰岩，砂岩，白云岩 Medium hard formations with high compressive strength, such as hard shale, limestone, sandstone, dolomite, etc.
637	0.5-1.1	180-40	高抗压强度的硬地层，如石灰岩，砂岩，白云岩，硬石膏，花岗岩 Hard formations with high compressive strength, such as sandstone, limestone, dolomite, hard gypsum, marble, etc.
737	0.5-1.1	150-40	研磨性高的极硬地层，如硬石灰岩，白云岩，硬砂岩，燧石，玄武岩等 Hard formations with high compressive strength, such as hard limestone, dolomite, hard sandstone, chert, basalt, etc.

注：切勿将钻压和转速同时选用最大值

Note: The upper limits of WOB and RPM in above table should not be used simultaneously.



## HR Series Rubber Sealed Bearing Bit

### HR系列視胶空封牙轮钻皇



- 采用滑动轴承形式，牙掌轴表面堆焊硬质合金层，牙轮内孔镀银，提高承载能力和抗咬合能力。
- 轴承O形密封圈采用耐磨、耐高温的高饱和丁睛橡胶，加大的密封圈截面减少密封压力，密封外端凸台提高密封的可靠性。■采用可限制压差并防止钻井液进入润滑系统的全橡胶储油囊为轴承系统提供良好的润滑保证。
- 镶齿钻头采用高强度韧性硬质合金齿，优化设计的齿排数，齿数，露齿高度和独特的合金齿外形，充分发挥镶齿钻头高耐 磨性和优异的切削能力，钢齿钻头齿面焊新型耐磨材料，在保持钢齿钻头高机械钻速的同时，提高钻切削齿寿命。

#### ■ MAIN STRUCTURE FEATURES

1. Journal bearing.Hardfaced head bearing surface. Inner hole of cone is silver-plated.The load capacity and seizure resistance of the bearing is greatly improved.
- 2.0 ring seal is made of the more wear resistant and high saturated buna-N with the increased seal section and precisely designed scaling flange in the cone sealing area has increased the reliability of the seal.
3. AII rubber compensator is used which can limit pressure differential and prevent drilling fluid from entering the lubrication system and this provides the bearing system with good assurance of lubrication.
4. High wear resistance and excellent cutting ability of the insert bit are given full play by using carbide compacts of high strength and high toughness in combination with optimized compact numbers androws.the exposure height and special shaped compacts.For steel tooth bit,the tooth surface is hard faced with new type of wear resistant material and thus has extended working life of the cutting structure while still maintaining high ROP.

Bit Size in mm3		Bit Type
3 1/2	88.9	HR527
4 5/8	117.5	HR126 HR517
4 3/4	120.7	HR116
5 7/8	149.2	HR216 HR537 HR547 HR637
6	152.4	HR117 HR216 HR246 HR517 HR547
6 1/4	158.8	HR 127 HR247 HR517 HR527 HR547 HR637
6 1/2	165.1	HR127 HR217 HR517 HR537
6 3/4	171.5	HR116 HR447 HR537
7 1/2	190.5	HR127 HR217 HR517 HR517 HR527 HR527 HR617
7 7/8	200	HR117 HR437 HR517 HR527 HR537 HR547 HR547 HR617 HR627 HR637
8 3/8	212.7	HR217 HR527 HR547
8 1/2	215.9	HR117 HR 127 HR137 HR217 HR247 HR437 HR447 HR517 HR527 HR537 HR547 HR617 HR627 HR637
8 3/4	222.3	HR116 HR437 HR517 HR537 HR627
9 1/2	241.3	HR117 HR 127 HR417 HR437 HR517 HR527 HR537 HR547 HR617
9 5/8	244.5	HR117 HR127 HR137 HR217 HR437 HR517 HR527
9 7/8	250.8	HR117 HR127 HR137 HR217 HR417 HR437 HR517 HR527
10 5/8	269.9	HR127 HR217 HR437 HR517 HR547
11 5/8	295.3	HR117 HR 127 HR 137 HR217 HR 147 HR517 HR537 HR547
12 1/4	311.2	HR117 HR 127 HR 137 HR417 HR437 HR517 HR527 HR537 HR547 HR617 HR627 HR637
13 5/8	346.1	HR437 HR517 HR537
13 3/4	349.3	HR437 HR517 HR537
14 3/4	374.7	HR117 HR 127 HR 137 HR517 HR527
15 1/2	393.7	HR127 HR217 HR517 HR527 HR537 HR547
16	406.4	HR117 HR 127 HR127 HR517 HR527 HR537 HR547
17 1/2	444.5	HR117 HR 127 HR 137 HR437 HR517 HR527 HR537 HR547
18	457.2	HR547

注：切勿将钻压和转速同时选用最大值  
Note:The upper limits of WOB and RPM in above table should not be used simultaneously.





Bit Size In	mm	Bit Type
20	508	HR117 HR217 HR515 HR535
22	558.8	HR117 HR217 HR515 HR535
24	609.6	HR117 HR217 HR515 HR535
26	660.4	HR117 HR217 HR515 HR535
28	711.2	HR117 HR217 HR515 HR535
36	914.4	HR117 HR217 HR515 HR535

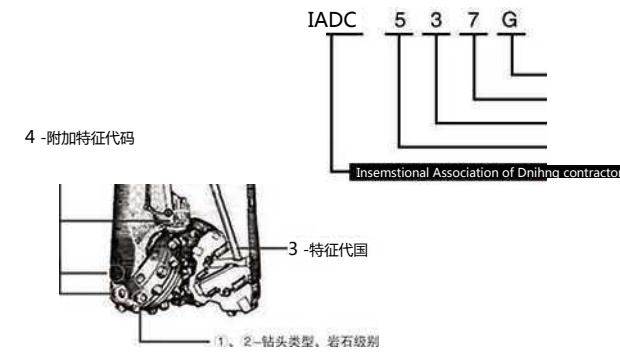
### Recommended Drilling Parameters

	WOB (kN/mm) (BITDia)	RPM (r/min)	Applicable Formations
116 117	0.35-0.8	150~80	非常软地层具有低的抗压强度和g可钻性,如粘土,泥岩,白垩,等等。 Very soft formations with low compressive strength and high drillability,such as clay,mudstone,chalk etc.
126 127	0.35-0.9	150~70	软地层具有低的抗压强度和g可钻性,如泥岩,石膏,盐,软页岩,软石灰石等。 Soft formations with low compressive strength and high drillability,such as mudstone.gypsum,salt,soft shale.soft limestone,etc.
136 137	0.35~1.0	120-60	软地层中低抗压强度和g可钻性,如中软页岩,硬石膏岩,软石灰岩,中软砂岩,软地层与硬地层等。 Soft to medium soft formations with low compressive strength and high drillability,such as medium soft shale.hard gypsum,medium soft limestone,medium son sandstone soft formation with harder nterbeds.ect.
216 217	0.4-1.0	100-60	软至中硬地层具有低的抗压强度,如中软页岩,硬石膏岩,软石灰岩,中软砂岩,软地层与硬地层等。 Medium formations with high compressive strength,such as medium soft shale.hard gypsum,medium soft limestone,medium soft sandstone,soft formation with harder interbeds etc.
246 247	0.4 ~1.0	80-50	具有高抗压中硬地层,如磨性页岩,石灰石,砂岩,白云岩,硬石膏,大理石等。 Medium hard formations with high compressive strength,such as abrasive shale,limestone,sandstone,dolomite,hard gypsum,marble,etc.
417 437 447	0.35-0.9	150-70	非常软地层具有低的抗压强度和g可钻性,如泥岩,石膏,盐,软页岩,软石灰石等。 Very soft formations with low compressive strength and high drillability,such as clay,mudstone,chalk, gypsum,salt,soft shale,soft limestone,etc.
517 527	0.35-1.0	140~60	软地层具有低的抗压强度和g可钻性,如泥岩,石膏,盐,软页岩,软石灰石等。 Soft formations with low compressive strength and high drillability such as mudstone,gypsum,salt, soft shale,soft limestone,etc.
537 547	0.455.0	120-50	软至中地层具有低的抗压强度,如中软页岩,中软石灰岩,中软砂岩,形成中硬与硬研磨层。 Soft to medium formations with low compressive strength,such as medium soft shale,medium soft 等o limestone,medium soft sandstone,medium formation with harder and abrasiver interbeds,etc.
617 627	0.45 ~1.1	90~50	具有高抗压中硬地层强度,如硬页岩,石灰石,砂岩,白云岩,等等。 Medium hard formations with high compressive strength,such as hard shale,limestone, sandstone,dolomite,etc.
637	0.53.2	80-40	硬地层具有高抗压强度,如砂岩,石灰石,白云石石膏,大理石等。 Hard formations with high compressive strength,such as sandstone,limestone,dolomite,hard gypsum,marble,etc.

注:切勿将钻压和转速同时选用最大值  
Note:The upper limits of WOB and RPM in above table should not be used simultaneously.

### 三牙轮钻头型号参考: IADC号

IADC CODE-钻头的国际标准代码



#### 1-钻头类型

- 1-3 表示铣齿钻头(Milled Tooth Bit)
- 4-8 表示镶齿钻头(Insert Tooth Bit)

代码详解:

- 1- 铁齿, 软地层(低抗压强度, 高可钻性)
- 2- 铁齿, 中-中硬地层(高抗压强度)
- 3- 铁齿, 硬、研磨性或半研磨性地层
- 4- 镶齿, 软地层(低抗压强度, 高可钻性)
- 5- 镶齿, 软-中硬地层(低抗压强度)
- 6- 镶齿, 中硬地层(高抗压强度)
- 7- 镶齿, 硬、研磨性或中等研磨性地层
- 8- 镶齿, 极硬(高研磨性地层)

#### 2-岩石级别代号

地层中再依次从软到硬分成1、2、3、4共四个等级。

#### 3-结构特征代码

用9个数字表示,其中1-7表示钻头轴承及保径特征,8与9B待未来的新结构钻头用

1-7代码详解:

- 1- 非密封滚动轴承
- 2- 空久清晰、冷却,滚动轴承
- 3- 滚动轴承,保径
- 4- 滚动密封轴承
- 5- 滚幼密封轴承,保径
- 6- 滑动、密封轴承
- 7- 滑动、密封轴承,保径

#### 4-岩石级别代号

用以表示前而三位数字无法表达的特征,用英文字母表示

C

目前IADC已定义了11个特征:

- A- 空气冷却
- C- 中心喷嘴
- D- 定向钻进
- E- 加长喷嘴
- R- 加强焊缝(用于镶齿)
- S- 标准说齿
- X- 楔形镶齿
- Y- 圆锥形镶齿
- JSSM 射
- Z- 其他形状擦齿
- G- 附加保径筋头体保护



### K Hard plastic formation cutting structure

Unique designing parameters and wider insert crest enlarge rock-breaking volume on bottom hole and increase bottom hole coverage.At the same time,shear sliding distance of inserts at bottom hole is made larger and ROP of the bit in hard plastic formation is increased.



### X Convex crested wedge compact

Convex crested wedge compact is with the features of high effectively cutting ability and strong anti-breaking ability.which can increase ROP and improve service lite of bit effectively It's suitable for formations from medium soft to medium hard.



### Y Conical spherical compact

Main cutters of bit are conical spherical compacts,which are suitable for drilling in hard brittle formations.



## HS1904 IADC : S122 四刀翼 钢体PDC 钻头

- Bit characteristics: suitable for soft and medium soft layers, high abrasive formation.
- Bit performance: blade less, chip space is large, and the use of good abrasion resistance, strong anti impact properties of high quality PDC films, is conducive to the three-dimensional rotating spiral blade runner injection, fast cutting exhaust, improve the service life of drill bits. Using swirl channel change bottom flow field, avoid duplication of cuttings, greatly improve the drilling speed.

- 钻头特点：适用于软—中软且夹层多、研磨性较高的地层。
- 钻头性能：刀翼少，排屑空间大，并采用耐磨性好、抗冲击性能强的高质量PDC片，有利于三维螺旋叶片旋转流道喷射，排岩屑快，提高钻头的使用寿命。利用旋流水道改变井底流场，避免岩屑的重复破碎，大幅提高钻进速度。



钻头尺寸 Bit Size	技术数 Product Specification				推荐钻井参数 Recommended Drilling Parameters		
	主切削齿尺寸 Primary Cutter Size	保径长度 Gauge Length	喷嘴数量/类型 Nozzle Qty/Type	API正规扣型 API Pin Size	钻压 WOB	转速 Rotary Speed	转速 Flow Rate
4 5/8-5	8 ~13.4	1.0-1.5	4R	2 7/8REG	10-50	50-200	6~15
6	13.4-16	1.0 ~1.5	4R	3 1/2REG	10~100	50-200	8~25
8 1/2-8 3/4	16-19	2.0~2.5	6R	4 1/2REG	30-120	80~800	25-38
9 1/2	19	2.0 ~3.0	6R	6 5/8REG	30~140	80-800	25~48
12 1/4	19	2.5 ~3.5	8R	6 5/8REG	50-150	80-800	30-70
16	19	2.5~3.5	8R	7 5/8REG	30~280	80~600	44~90
17 1/2	19	2.5~3.5	8R	7 5/8REG	50-280	80~600	44 ~90
26	19	2.5~3.5	8R	7 5/8REG	50-280	80~600	44 ~90

注：切勿将钻压和转速同时选用最大值  
Note: The upper limits of WOB and RPM in above table should not be used simultaneously.

## HS1905 IADC:S223/323 五刀翼钢体PDC钻头

- Matrix material of the bit adopts high quality steel and wear-resistance material with high performance is built-up welded on the surface of blades to prevent matrix material from eroding.
- Bit body is made from an integrated alloy forging and finished by advanced CNC machining center.
- Deep and wide junk slots ensure bit cleaning and cooling of drilling fluid, which benefits fast drilling and anti-balling.
- Adopts high performance PDC cutters, increases the ability to drill through hard stringers and provides longer service life.
- PDC cutters of different features are selected and bit profile design is optimized to suit different drilling applications in different formations to satisfy different requirements when drilling soft to medium hard formations.
- According to the requirements of customers, design and produce different bits.

- 采用优质钢材做钻头的基体材料，刀翼表面堆焊高性能耐磨材料，防止基体材料冲蚀。
- 钻头采用合金钢整体锻造，用高端计算机数控加工中心精密加工而成。
- 深刀翼、宽排屑槽，保证了泥浆的清洗和冷却，有利于快速钻进和防止泥包。
- 采用高性能复合片切削齿，提高钻头穿硬地层的能力和使用寿命。

针对不同的地层岩石特征，优化冠部轮廓、优选不同功能的复合片，满足软到中硬地层钻井的需要。

- 可根据客户需求，设计制造适用于不同地层的钻头。



Bit Specification 钻头参数				Recommended Operation Parameters 钻或参数				
Size 规格 (Inches)	No. of Nozzles 喷嘴数	Gauge Length 保径 长度 (inches) 硬度 (inches)	API Reg. Pin Conn. API公 螺纹连接 (inches)	Hydraulic Flow Rate 泥浆 排量		Rotation Speed 钻 速 (r/min)	Weight On Bit 钻压	
				l/s	gpm		kn	klbs
17-1/2	10R	3-1/4	7-5/8	60-90	950-1430	60~250	40-190	9~43
15-1/2	8R	3-1/4	7-5/8	50~80	790~1260	60-250	20~150	5~34
13-5/8	7R	3	6-5/8	40-70	600~1100	60-280	20~140	5~30
12-1/4	7R	3	6-5/8	37~62	590~980	60~300	20-140	5~30
8-1/2	6R	2	4-1/2	24-42	380~670	60-300	20-110	5~25

注：切勿将钻压和转速同时选用最大值  
Note: The upper limits of WOB and RPM in above table should not be used simultaneously.





## HM1905 IADC:M333/433 五刀翼钢体PDC钻头

- PDC cutters of different features are selected and bit profile design is optimized to suit different drilling applications in different formations to satisfy different requirement when drilling soft to medium hard formations.
- Better wear resistance and higher strength of the bit are guaranteed in regard to material and structure by using matrix body material with quality materials.
- Enhanced gage design to improve the bit's ability of gage protection.
- Deep blade and long parabolic configuration, ensure optimal bottom hole flow pattern and anti-balling.
- Anti-whirl design improves ROP and enhances the drilling stability.
- According to the requirements of customers, design and produce different bits.
- 针对不同的地层岩石特征，优化冠部轮廓、优选不同功能的复合片，满足软到中硬地层不同钻井需要。
- 采用优质材料，从材料和结构两方面确保钻头具有更好的耐磨性和更高的强度。
- 强化保径设计，加强钻头保径能力
- 深刀翼长抛物线外形结构，并底流畅优化设计，有利于岩屑的运移和防泥包。
- 抗回旋设计，提高了机械钻速，增强钻头稳定性。
- 可根据客户需求，设计制造适用于不同地层的钻头。



## HS1606 IADC:324 六刀翼钢体PDC钻头

- 6 straight or spiral blades, high density cutters, deep junk slots; ■ Available with back row cutters to restrict cutting depth and reduce torque fluctuation and extend bit service life;
- Applicable to drill in soft to medium hard formation with small abrasive layers as well as directional drilling and angle building.



- 六个直的或螺旋刀翼、高密度布齿，深排屑槽；
- 刀翼上可配备背齿约束切削深度，降低扭矩的波动，延长钻头使用寿命；
- 适用于含薄研磨性夹层的软至中硬地层和定向、造斜。

Bit Specificatio 钻头参数				Recommended Operation Parameters 钻头参数				
Size 规格 (Inches)	No.of Nozzles 喷嘴数	Gauge Length 保径 长度 (inches)	API Reg. Pin Conn. API公螺纹连接 (inches)	Hydraulic Flow Rate 泥浆 排量		Rotation Speed 钻 速 (r/min)	Weight On Bit 钻压	
				l/s	gpm		kn	klbs
14-3/4	7R	3-1/4	7-5/8	40-65	600-1000	60~300	45-150	9~30
11-5/8	7R	3-1/8	6-5/8	35-60	550~950	60-300	35-130	8~29
12-1/4	7R	2-1/2	6-5/8	37~62	590~980	60~300	40-140	9~30
9-7/8	5R+2F	2-3/8	6-5/8	35-55	550-870	60~300	20~130	5~29
8-3/4	5R+1F	2	4-1/2	24~42	380~670	60~300	20-110	5~25
8-1/2	5R+2F	2-1/8	4-1/2	24~42	380-670	60~300	20~110	5~25
7-1/2	5R	3	4-1/2	24-42	380~670	60~300	20~110	5~25
5-7/8	2R+1F	1-1/2	3-1/2	18-32	280~490	60~300	10-80	2~18

注：切勿将钻压和转速同时选用最大值  
Note: The upper limits of WOB and RPM in above table should not be used simultaneously.

Bit Specificatio 钻头参数				Recommended Operation Parameters 钻头参数				
Size 规格 (Inches)	No.of Nozzles 喷嘴数	Gauge Length 保径 长度 (inches)	API Reg. Pin Conn. API公螺纹连接 (inches)	Hydraulic Flow Rate 泥浆 排量		Rotation Speed 钻 速 (r/min)	Weight On Bit 钻压	
				l/s	gpm		kn	klbs
9-1/2	6R	2-3/8	6-5/8	37~62	590~980	60~300	20~190	5~43
6-1/2	1R+4F	2	3-1/2	18~32	280~490	60~300	10~100	2~23
7-7/8	6R	1-1/2	4-1/2	24~42	380~670	60~300	20~125	5~28
6	3R	1-1/2	3-1/2	18~32	280~490	60~300	10~100	2~23
12-1/4	8R	3-1/8	6-5/8	37~62	590~980	60~300	20~190	5~43
8-1/2	3R+3F	3	4-1/2	24~42	380~670	60~300	20~125	5~28
17-1/2	9R+2F	5-1/8	7-5/8	24~42	950~1430	60~250	40~190	9~43

注：切勿将钻压和转速同时选用最大值  
Note: The upper limits of WOB and RPM in above table should not be used simultaneously.



## HS1307 IADC:423 七刀翼钢体PDC钻头



- 7-blade,small PDC cutters,high cutter density layout, applicable to medium hard to hard formations;
- Deep blade configuration, deep blades and wide junk slots benefit rock debris removal and prevent mud balling;
- Short to medium parabolic crown and heavy cutter density increase bit service life when drilling in medium hard formations

- 七个刀翼，小复合片切削齿，适合在中硬至硬地层中钻进；
- 可配备背齿、修边齿和倒划齿，降低扭矩波动，增加平稳性，并完成倒划眼作业；
- 短到中等抛物线冠部，高密度布齿，提高了钻头在中硬地层的使用寿命。

Bit Specificatio 钻头参数				Recommended Operation Parameters 钻头参数				
Size 规格 (Inches)	No.of Nozzles 喷嘴数	Gauge Length 保径长度 (inches)	API Reg. Pin Conn. API公螺纹连接 (inches)	Hydraulic Flow Rate 泥浆排量		Rotation Speed 钻速 (r/min)	Weight On Bit 钻压	
				l/s	gpm		kn	klbs
12-1/4	7R	2	6-5/8	40-60	630-950	60-300	40~140	9~30
9-7/8	4R+3F	2-1/2	6-5/8	35-50	550~790	60~300	20-130	5~29
9-1/2	4R+3F	2-1/2	6-5/8	35-50	550-790	60-300	20~130	5~29
8-3/4	3R+4F	2-1/2	4-1/2	24-42	380-670	60~300	20-110	5~25
8-1/2	3R+4F	2-1/2	4-1/2	24~42	380~670	60~300	20~110	5~25

注：切勿将钻压和转速同时选用最大值  
Note:The upper limits of WOB and RPM in above table should not be used simultaneously.

## Diamond Core Bit 金刚石取芯钻头

- Natural diamond layout;
- Multiple blade profile design,available with round,double taper and parabolic profiles;
- Various ID flow path designs provide sufficient cooling and cleaning to whole bit surface;
- Applicable to high compressive medium hard to hard formation with thin interbedded layers.

- 采用天然金刚石布齿；
- 多刀翼轮廓设计，有圆头型，双锥型，抛物线型等；
- 各式内径流道设置，可充分冷却和清洁整个钻头表面；
- 适用于高抗压强度含薄研磨层的中硬到硬地层。



(Inches)	TFA 流道面积 (肝)	Gauge Length 保径长度 (Inches)	Core Barrel 取 芯筒尺寸 (In)	Hydraulic Flow Rate 泥浆 排量		Rotation Speed 转速 (r/min)	Wei^t^on Bit	
				l/s	gpm		kn	klbs
8-1/2X4	0.15-1.5	1-1/2	6-3/4X4	22-35	350-550	60-300	23-100	5~23
0214.4X105	0.15-1.5	1-1/2	III8-4	22-35	350-550	60-300	23-100	5~23
8-1/2X4	0.15-1.5	1-1/2	6-3/4X4	22-35	350~550	60~300	23-100	5~23
0214.4X101	0.15-1.5	1-1/2	III7-4	22-35	350-550	60~300	23-100	5~23
6X2-5/8	0.1-1.0	1	4-3/4X2-5/8	10-20	160-320	60-300	23-75	5~18
5-7/8X2-5/8	0.1-1.0	1	心4X2 - 5/8	10-20	160-320	60-300	23-75	5~18

注：切勿将钻压和转速同时选用最大值  
Note:The upper limits of WOB and RPM in above table should not be used simultaneously.





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