



## Catálogo de Productos



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Comercial Plastimetel S.A.

## Brief introduction

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# INTRODUCTION

**Comercial Plastimetal S.A.** is established with the mission to manufacture and supply the customers at competitive prices with consistent premium rock drilling equipments and associated tools used in mining, tunneling, quarrying, water well drilling, oil and gas drilling, construction and demolition industries.

Combined with state of the art design and manufacturing, all products are manufactured from carefully selected premium raw materials available in today market and by highly skilled workforce to give outstanding performance under rough working conditions.

Our well experienced work staffs keep the principle in mind all the time: to manufacture and supply the customers throughout the world high quality and cost effective products timely with prompt after-sale services fulfilled through efficient distribution network.

The principle we hold did drive, are driving and will drive us constantly to build strong, lasting relationships with our customers distributed in more than 40 countries by supplying quality products at competitive prices based on the premises of honesty, integrity, trust and mutual benefit.

***Competitive price***  
***Advanced technology***  
***Superior performance***  
***Consistent & Reliable high-quality***

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## Top Hammer Rock Drilling Tools



### Integral drill steels

- Shank: H22 x 108mm, H25 x 159mm
- Diameter: 28mm-41mm
- Effective length: 400mm-4345mm
- High quality alloy steel & premium quality TC inserts, Multiple precise heat-treatment.
- Highest penetration rate, maximum wear resistance, longest lifespan and outstanding performance in rough working conditions.



### Tapered drill bits

- Bit type: Chisel bits, Cross bits and Button bits ( Spherical, Ballistic, Parabolic )
- Diameter: 23mm to 70mm
- Taper: 4°, 6°, 7°, 11° and 12°
- Skirt: Short skirt and Long skirt
- Quality aircraft alloy steel and tungsten carbide, Optimum design, State of art manufacturing, Multiple precise heat-treatment.
- Highest penetration rate, maximum wear resistance, longest lifespan and outstanding performance in roughest working conditions.



### Tapered drill rods

- Shank: H22 x 108mm, H25 x 159mm
- Taper: 4°, 6°, 7°, 11° and 12°
- Effective length: 400mm-4800mm
- Quality aircraft alloy steel, State of art manufacturing, Multiple precise heat-treatment.
- Maximum wear resistance, longest lifespan and outstanding performance in roughest working conditions.



### Threaded drill bits

- Bit type: Cross type, X type and Button bit ( Spherical, Ballistic, Semi-ballistic, Parabolic )
- Bit diameter: 33mm to 203mm
- Bit thread: R22, R25, R28, SR28, R32, SR32, SR35, R38, T38, T45, T51, GT60, ST58, ST68
- Bit skirt: Normal and Retrac
- Bit face: Flat, Concave, Convex and Drop-Center
- Quality aircraft alloy steel and tungsten carbide, Optimum design, State of art manufacturing, Multiple precise heat-treatment.
- Highest penetration rate, maximum wear resistance, longest lifespan and outstanding performance in roughest working conditions.



### Drifting rods and Extension rods

- Thread: R22, R25, R28, SR28, R32, SR32, SR35, R38, T38, T45, T51, GT60, ST58, ST68
- Length: 255mm-6100mm
- Quality aircraft alloy steel, Optimum design, State of art manufacturing, Fully carburized
- Maximum wear resistance, longest lifespan and outstanding performance in roughest working conditions.



### Coupling sleeves

- Thread: R22, R25, R28, SR28, R32, SR32, SR35, R38, T38, T45, T51, GT60, ST58, ST68
- Quality aircraft alloy steel, Optimum design, State of art manufacturing, Fully carburized
- Maximum wear resistance, longest lifespan and outstanding performance in roughest working conditions.



### Shank adapters

- Thread: R22, R25, R28, SR28, R32, SR32, SR35, R38, T38, T45, T51, GT60, ST58, ST68
- For the rock drills of Tamrock, Atlas-Copco, Ingersoll Rand, Furukawa, Montabert etc
- Quality aircraft alloy steel, Optimum design, State of art manufacturing, Fully carburized
- Maximum wear resistance, longest lifespan and outstanding performance in roughest working conditions





## DTH Drilling Tools

### DTH hammer 1"—18"

- Simple and reasonable design, ease to assemble and disassemble, low problem rate
- Carefully selected high quality alloy steels, precisely machined to tight tolerance by CNC machines

Hammer size		1"	2"	3"			3"	
Hammer Model		WIN1BR	WIN2BR	WIN3BR	WIN33BR	WIN3.5	WIN34	WIN303
Shank		Bulroc 1	Bulroc 2	Bulroc 3	Bulroc 33	DI D3.5	COP34	MACH303
Top sub API Reg. Pin		RD40 Box	RD50 Box	2 3/8"	2 3/8"	2 3/8"	2 3/8"	2 3/8"
Hammer O.D.	mm	51	62	81	81	81	81	81
Weight less bit	Kgs	8	13	22	25	25	25	25
Length less bit	mm	709	836	768	768	932	1047	1047
Piston weight	Kgs	1	1.8	2.5	3.0	5.50	5.60	5.60
Piston stroke	mm	76	101	101	101	140	140	140
Bit range	mm	60-64	70-80	90-102	90-102	90-102	90-102	90-102
Working Air Pressure	Bar	7-17.2	7-17.2	7-17.2	7-17.2	5-25	5-25	5-25
Air consumption SCFM / (m <sup>3</sup> /min)	7.3bar/103PSI	45/1.3	70/2.0	130/3.7	130/3.7	—	—	—
	10.3bar/150PSI	80/2.3	135/3.8	165/4.68	165/4.68	165/4.68	165/4.68	165/4.68
	17.2bar/250PSI	—	—	—	—	292/8.28	292/8.28	292/8.28
	24.1bar/350PSI	—	—	—	—	445/12.6	445/12.6	445/12.6

Hammer size		4"				5"			
Hammer Model		WIN340	WIN40QL	WIN4SD	WIN40M	WIN350	WIN50QL	WIN5SD	WIN5M
Shank		DHD340A COP44	QL40	SD4	Mission 40	DHD350 COP54	QL50 COP54Gold	SD5	Mission 50
Top sub API Reg. Pin		2 3/8"	2 3/8"	2 3/8"	2 3/8"	3 1/2"	3 1/2"	3 1/2"	3 1/2"
Hammer O.D.	mm	96	96	96	96	125	125	125	120
Weight less bit	Kgs	40	41	41	38	72	72	74	66
Length less bit	mm	1033	1033	1065	968	1170	1155	1176	968
Piston weight	Kgs	9.0	9.0	9.0	7	17.0	17.1	17	12
Piston stroke	mm	140	140	140	125	145	145	145	125
Bit range	mm	110-135	110-135	110-135	105-130	135-152	135-152	135-152	130-152
Working Air Pressure	Bar	10-25	10-25	10-25	10-25	10-25	10-25	10-25	10-25
Air consumption SCFM / (m <sup>3</sup> /min)	10.3bar/150PSI	233/6.6	233/6.6	233/6.6	188/5.3	318/9.0	318/9.0	318/9.0	308/8.7
	17.2bar/250PSI	305/10.3	305/10.3	305/10.3	370/10.5	600/17.0	600/17.0	600/17.0	583/16.5
	24.1bar/350PSI	521/14.8	521/14.8	521/14.8	648/18.5	854/24.2	854/24.2	854/24.2	855/24.2

## DTH Drilling Tools

### DTH hammer 1"—18"

- Multiple precise heat-treatment with all hammer parts to provide longest lifespan under roughest working conditions
- Low air consumption, smooth drilling, maximum impact power, high penetration rate

Hammer size		6"				8"		
Hammer Model		WIN360	WIN6SD	WIN60M	WIN60QL	WIN380	WIN80QL	WIN6SD
Shank		DHD360	SD6	Mission 60	QL60 COP64 Gold	DHD380	QL80	SD8
Top sub API Reg. Pin		3 1/2"	3 1/2"	3 1/2"	3 1/2"	4 1/2"	4 1/2"	4 1/2"
Hammer O.D.	mm	142	142	142	146	180	180	180
Weight less bit	Kgs	99	98	90	100	190	188	190
Length less bit	mm	1249	1265	928	1210	1488	1465	1460
Piston weight	Kgs	23.5	23.5	22	23.4	42	42	44
Piston stroke	mm	145	145	125	145	145	145	145
Bit range	mm	152-190	152-190	152-190	152-190	203-254	203-254	203-254
Working Air Pressure	Bar	10-25	10-25	10-25	10-25	10-25	10-25	10-25
Air consumption SCFM / (m <sup>3</sup> /min)	10.3bar/150PSI	370/10.5	370/10.5	370/10.5	370/10.5	600/17	600/17	600/17
	17.2bar/250PSI	712/20.2	712/20.2	712/20.2	712/20.2	1140/32.3	1140/32.3	1140/32.3
	24.1bar/350PSI	1050/29.8	1050/29.8	1050/29.8	1050/29.8	1700/48	1700/48	1700/48

Hammer size		10"	12"	15"	18"	
Hammer Model		WIN10SD	WIN12SD	WIN112	WIN15SD	WIN18SD
Shank		SD10	SD12	DHD112	SD15	SD18
Top sub API Reg. Pin		5 1/2"	6 5/8"	6 5/8"	6 5/8"	8 5/8"
Hammer O.D.	mm	220	275	275	355	420
Weight less bit	Kgs	320	560	560	1100	1495
Length less bit	mm	1683	1938	1938	1885	2020
Piston weight	Kgs	82	118	118	180	270
Piston stroke	mm	120	134	134	125	140
Bit range	mm	270-330	305-445	305-445	445-560	480-620
Working Air Pressure	Bar	10-25	10-25	10-25	10-25	10-25
Air consumption SCFM / (m <sup>3</sup> /min)	10.3bar/150PSI	690/19.5	880/24.9	880/24.9	1650/46.7	2120/60.0
	17.2bar/250PSI	1290/36.5	1700/48.1	1700/48.1	2680/75.9	—
	21.0bar/300PSI	1610/45.6	—	—	—	—



## Down The Hole Bits



- Bit Shank: Sanevik, Atlas Copco, Ingersoll-Rand, Halco, Bulroc etc.
- Bit Diameter: 64mm to 810mm

Bit Face: Flat, Concave, Convex and Drop-Center

Button Shape: Spherical, Ballistic, Semi-Ballistic and Parabolic



- Quality aircraft alloy steel and tungsten carbide. Optimum design, State of art manufacturing. Multiple precise heat-treatment.
- Highest penetration rate, maximum wear resistance, longest lifespan and outstanding performance in roughest working conditions.

## 3-Pieces Eccentric Overburden Drilling System



- Quality aircraft alloy steel and tungsten carbide, Optimum design, State of art manufacturing, Multiple precise heat-treatment.
- Highest penetration rate, maximum wear resistance, longest lifespan and outstanding performance in roughest working conditions.

Model	Hammer Size	Pilot Diameter	Reaming Diameter	Recommended casing dimensions	
				Weldable casing tubes	Threaded casing tubes
WDEX90	3"	90mm (3 1/2")	123mm	Max. O.D. 115mm (4.5") Min. I.D. 102mm (4") Min. wall thickness 5mm (0.203")	C.D. 114.3mm (4.5") Wall thickness 6.3mm (0.25") Left-hand thread
WDEX115	4"	115mm (4 1/2")	152mm	Max. O.D. 142mm (5.59") Min. I.D. 128mm (5.04") Min. wall thickness 5mm (0.203")	C.D. 139.7mm (5.5") Wall thickness 5.8mm (0.234") Left-hand thread
WDEX140	5"	140mm (5 1/2")	188mm	Max. O.D. 171mm (6.73") Min. I.D. 155.6mm (6.125") Min. wall thickness 5mm (0.203")	C.D. 168.3mm (6.625") Wall thickness 6.3mm (0.25") Left-hand thread
WDEX165	6"	165mm (6 1/2")	209mm	Max. O.D. 195.6mm (7.7") Min. I.D. 182.5mm (7.19") Min. wall thickness 5.5mm (0.218")	C.D. 193.7mm (7.625") Wall thickness 6.3mm (0.25") Left-hand thread
WDEX190	6"	190mm (7 1/2")	237mm	Max. O.D. 222mm (8.74") Min. I.D. 205mm (8.07") Min. wall thickness 6.3mm (0.25")	Threaded casing tubes not available
WDEX240	8"	240mm (9 1/2")	308mm	Max. O.D. 273mm (10.75") Min. I.D. 260.4mm (10.25") Min. wall thickness 6.3mm (0.25")	Threaded casing tubes not available
WDEX230	10"	230mm (9 1/4")	378mm	Max. O.D. 327mm (12.875") Min. I.D. 304.8mm (12") Min. wall thickness 9.5mm (0.25")	Threaded casing tubes not available



## 2-Pieces Eccentric Overburden Drilling System



- Quality aircraft alloy steel and tungsten carbide, Optimum design, State of art manufacturing, Multiple precise heat-treatment.
- Highest penetration rate, maximum wear resistance, longest lifespan and outstanding performance in roughest working conditions.

Model	Hammer Size	Pilot Diameter	Reaming Diameter	Recommended casing dimensions	
				Weldable casing tubes	Threaded casing tubes
TDEX90	3"	90mm (3 1/2")	123mm	Max. O.D. 115mm (4.5") Min. I.D. 102mm (4") Min. wall thickness 5mm (0.203")	O.D. 114.3mm (4.5") Wall thickness 6.3mm (0.25") Left-hand thread
TDEX115	4"	115mm (4 1/2")	152mm	Max. O.D. 142mm (5.59") Min. I.D. 128mm (5.04") Min. wall thickness 5mm (0.203")	O.D. 139.7mm (5.5") Wall thickness 5.8mm (0.234") Left-hand thread
TDEX140	5"	140mm (5 1/2")	186mm	Max. O.D. 171mm (6.73") Min. I.D. 155.6mm (6.125") Min. wall thickness 5mm (0.203")	O.D. 168.3mm (6.625") Wall thickness 6.3mm (0.25") Left-hand thread
TDEX165	6"	165mm (6 1/2")	209mm	Max. O.D. 195.6mm (7.7") Min. I.D. 182.5mm (7.19") Min. wall thickness 5.5mm (0.218")	O.D. 193.7mm (7.625") Wall thickness 6.3mm (0.25") Left-hand thread
TDEX190	6"	190mm (7 1/2")	237mm	Max. O.D. 222mm (8.74") Min. I.D. 205mm (8.07") Min. wall thickness 6.3mm (0.25")	Threaded casing tubes not available
TDEX240	8"	240mm (9 1/2")	308mm	Max. O.D. 273mm (10.75") Min. I.D. 260.4mm (10.25") Min. wall thickness 6.3mm (0.25")	Threaded casing tubes not available
TDEX280	10"	280mm (11")	378mm	Max. O.D. 357mm (12.875") Min. I.D. 304.8mm (12") Min. wall thickness 9.5mm (0.25")	Threaded casing tubes not available

## Drill Pipes, Drill Collars, Sub Adapters



- Pipe diameter: 42mm, 50mm, 60mm, 73mm, 76mm, 89mm, 102mm, 114mm, 127mm, 140mm.
- Pipe wall thickness: 5.5mm, 6mm, 6.3mm, 8mm, 8.56mm, 9.19mm and 10mm
- Tools joint: 2 3/8", 2 7/8", 3 1/2", 4 1/2", 5 1/2" API Reg. Pin x Box and API IF Pin x Box
- Carefully selected seamless steel pipe and high quality alloy steel for joint tools
- Precisely friction welding to ensure straightness and concentricity
- Multiple precise heat-treatment with tools joint
- Internally and externally upset drill rod are available

### Drill Pipe Specifications

Diameter		Thread Pin / Box	Wall Thickness	Length	Wrench flats	
Inch	mm				mm	meter
3	76	2 3/8" API Reg.	5.50	1.0-6.0	65	Both ends
3	76	2 3/8" RD50	6.30	1.0-6.0	65	Both ends
3.5	89	2 3/8" API Reg.	5.50	1.0-6.0	65	Both ends
3.5	89	2 3/8" API IF	6.30	1.0-6.0	65	Both ends
3.5	89	2 7/8" API Reg.	8.0	1.0-6.0	65	Both ends
4	102	2 7/8" API Reg.	6.30	1.0-6.0	75	Both ends
4.5	114	3 1/2" API Reg.	6.30	1.0-6.0	95	Both ends
4.5	114	3 1/2" API IF	6.30	1.0-6.0	95	Both ends
4.5	114	3 1/2" API IF	8.80	1.0-6.0	95	Both ends
5.0	127	3 1/2" API Reg.	6.30	1.0-6.0	95	Both ends
5.0	127	3 1/2" API IF	8.80	1.0-6.0	95	Both ends

Other specification DTH drill pipes are available upon request





## Diamond Core Drilling Tools

**Diamond impregnated bits** can drill a broad range of geological formations from the softest to the hardest. They are manufactured with very small, high quality synthetic diamonds mixed evenly through a metal matrix. When drilling, the matrix wears away evenly resulting in continuous exposure of new sharp diamond points. This gives an efficient and stable cutting action throughout bit's life. The optimum diamond size, concentration and matrix composition depend on the hardness and abrasiveness of the formations to be drilled.

### Synthetic Diamond

All impregnated bits are manufactured with high quality synthetic diamonds carefully selected according to drilling and coring applications.

### Matrix Range

Hardness	Abrasiveness	Rock Description	Bit Matrix Range										
			W1	W2	W3	W4	W5	W6	W7	W8	W9	W10	
Soft	Medium	clay, shale, very soft sandstone, marl, argillite, volcanic tuff etc.	●	●									
	Low			●	●	●	●						
Medium Hard	Medium	Limestone, rhyolite lava, andesite, marble, hard stone, limonite, dolomite, schist			●	●	●	●	●				
	High				●	●	●	●	●	●			
Hard	Low	basalt, gneiss, granodiorite						●	●	●			
	Medium	amphibolite, pegmatite, diabase etc.								●	●	●	
Very Hard	High									●	●		
	Medium	Hard granite, quartzite, conglomerate, quartzite									●	●	
	High	hard slate, rhyolite etc.										●	●

## Diamond Impregnated Core Bits



### Face Profile

Most diamond impregnated bits come with W profile, thin kerf bits come with flat face profile. Other face profiles are available on request.

### Waterways

The number and depth of waterways are optimized for the formations to be drilled. Special requirement on waterways can be met.

### Impregnation Height

Impregnated diamond bits are manufactured in four standard height of impregnation: 6mm, 8mm, 10mm and 12mm. Other impregnation height can be supplied to order. The higher matrix is more cost effective when drilling medium to hard non-abrasive formations. The shorter matrix is more suitable for highly abrasive or fractured formations where large wear of the bit diameter is anticipated and a higher matrix can not be fully utilized.

### Gauge Protection

To avoid excessive bit wear outside and inside gauge, tungsten carbide inserts are used on both sides of the waterway, and larger strong gauge diamonds are adopted to reinforce gauge protection.

## Main Impregnated Core Bit Specifications

- All D. C. D. M. A. standards
- Wireline series: AQ, BQ, NQ, NQ2, NQ3, HQ, HQ3, PQ and PQ3
- T2 series: 46, 56, 66, 76, 86 and 101
- T6 series: 76, 86, 101, 116, 131 and 146
- T6S series: 76, 86, 101, 116, 131 and 146
- B series: 46, 56, 66, 76, 86, 101, 116, 131 and 146



## Surface Set Core Bit

A broad range of surface set core bit are manufactured to the highest quality standards to give long service life and maximum penetrate in soft to medium hard rock formations. The range includes diamond grades, stone sizes and face profile enabling a cost effective solution to be taken for most conditions. The quality nature diamond and PDC used are imbedded in a hard matrix with high resistance to erosion. The surface set bit can not be used in broken or loose rock formations.



### Matrix

Surface set bit are manufactured using a universal hard type of matrix which provide best adaptability to various rock formations.

### Diamond Grades

Very good quality, processed and well round diamonds are used to manufacture surface set bit to assure the quality.

### Diamond Stone Size

Stones per Carat ( spc )

Our standard diamond sizes are 30/40 spc and 60/80 spc, other diamond sizes are available upon request.

### Gauge Protection

To avoid excessive matrix wear at the leading edge of each segment, tungsten carbides inserts are fitted on each side of the waterway.

### Face Profile



#### Semi-Round

Even diamond distribution on the bit face, suited for drilling medium-hard and hard rock formations with high penetration rate.



#### Bottom Discharge

Suited for drilling sedimentary or metamorphic rock formations containing more powder mineral with high core recovery percentage, and no excessive core washout.



#### Stepped

Suited for drilling medium hard, broken or interbedded rock formations, hole deviation can be prevented. Other face profiles are available upon request.

### Main Surface Set Diamond Core Bit Specifications

- All D. C. D. M. A. standards
- Wireline series: AQ, BQ, NQ, NQ2, NQ3, HQ, HQ3, PQ and PQ3
- T2 series: 46, 56, 66, 76, 86 and 101.
- T6 series: 76, 86, 101, 116, 131 and 146.
- T6S series: 76, 86, 101, 116, 131 and 146.
- B series: 46, 56, 66, 76, 86, 101, 116, 131 and 146.
- Tb56

## Diamond Reaming Shell

Reaming shells are designed to be placed behind the core bit and on the core barrel to ensure hole diameter is maintained and to assist core barrel stabilization. This ensures that when a new core bit is inserted into a continuing bore hole there is a good chance of reaching bottom of bore hole without reaming.

A reaming shell should be retired as soon as they wear under gauge, otherwise it could result in an undersize bore hole diameter which can mean reaming later.

Reaming shells are available for all types of core barrels and drill bits.

### Diamond Surface Set Reaming Shells

All reaming shells are spiral set rib type which provides a good passage for drilling fluids and protect lower drilling string from excessive wear. Specially designed waterways facilitate effective flushing and contribute to long service life and good drilling economy for both reaming shells and core bits.



### Tungsten Carbide Reaming shells

A range of tungsten carbide reaming shells are available. In some rock formations it may be more economic to use tungsten carbide reaming shell rather than diamond surface set reaming shells.



### Main Reaming Shell Specifications

- All D. C. D. M. A. standards
- Wireline series: AQ, BQ, NQ, NQ2, NQ3, HQ, HQ3, PQ and PQ3
- T2 series: 46, 56, 66, 76, 86 and 101
- T6 series: 76, 86, 101, 116, 131 and 146
- T6S series: 76, 86, 101, 116, 131 and 146.
- B series: 46, 56, 66, 76, 86, 101, 116, 131 and 146.





## Casing Shoes



Casing shoes are used to drill down or place casing tubes in a drilled hole. The interior is smooth and sufficiently large enough to allow free passage of drill bits, core bits, reaming shells and core barrels having the same letter-name designation (e.g. HW casing accepts HWF, HWG and T6-H core barrels). Impregnated casing shoes are recommended for very hard and fractured formations whilst Tungsten Carbide casing shoes are recommended for soft to medium hard formations.

A wide range of impregnated, TC inserts casing shoes and surface set casing shoes are available.

### Main Casing Shoes Specifications

- All D. C. D. M. A. standards
- Metric standards: 46, 56, 66, 76, 86, 101, 116, 131 and 146

## Drill Rod and Casing



Type	O.D. mm	Wall Thickness mm	Length m	Net Weight kg	Tensile Strength Mpa >	Yield Strength Mpa >	Elongation % >
CR42	42	29.3	3	10	780	550	15
CR50	50	37.3	3	14	780	550	15
AW rod	43.7	6.5	3	18	780	600	12
BW rod	54	8.5	3	29	780	600	12
NW rod	66.8	7.85	3	35	780	600	12
HW rod	89	8.4	3	50	780	600	12
BQ rod	55.6	4.8	3	18	850	650	17
NQ rod	70	5	3	24	850	650	17
FQ rod	89	5.5	3	37	895	610	17
FQ rod	117.5	7.2	3	58	1050	970	16
AW Casing	57.2	4.35	3	16.7	780	600	12
BW Casing	73	6.5	3	31.5	780	600	12
NW Casing	88.9	6.35	3	39	780	600	12
HW Casing	114.3	6.35	3	51	703	562	16
PW Casing	139.7	7.72	3	70	703	562	16

## Rotally Percussion Casing Drilling Bit



### Outer Bit and Inner Bit

- Quality aircraft alloy steel and tungsten carbide, Optimum design, State of art manufacturing, Multiple precise heat-treatment.
- Highest penetration rate, maximum wear resistance, longest lifespan and outstanding performance in roughest working conditions.



## Self-drilling Injection Bolts and Accessories



Specifications

Specification	F25	R32N	R32S	R38	R51L	R51N	T78N	T78S	T30/11	T30/14	T30/18	T40/18	T40/20	T62/26
Outside Diameter (mm)	25	32	32	38	51	51	78	78	30	30	30	40	40	52
Internal Diameter (mm)	14	20	17	21	36	34	49	46	11	14	16	16	20	26
Yield load (KN)	>150	>230	>280	>400	>450	>630	>1200	>1500	>260	>220	>180	>525	>430	>730
Ultimate load (KN)	>200	>280	>360	>500	>550	>800	>1600	>1900	>320	>260	>220	>660	>530	>920
Approx. Weight	2.3	2.9	3.5	4.8	8.5	7.8	16	18	3.1	2.8	2.70	6.8	6.3	9.5
Thread Left/right-hand	Left-hand													
Length of each rod (m)	1m; 1.5m; 2m; 2.5m; 3m; 3.5m; 4m; 4.5m; 5m; 5.5m; 6m													

## Polycrystalline Diamond (PCD) Bits



- Bit type: Matrix type and Steel body type
- Bit diameter: 27mm—445mm
- High quality PCD cutters, Optimum design, State of art manufacturing, Precise processing
- Highest penetration rate, maximum wear resistance, longest lifespan and outstanding performance in rough working conditions

## Drag Bits



- Bit type: Step type and Chevron type
- Bit diameter: 64mm—610mm
- Wing number: 2, 3 and 4
- High quality tungsten carbide inserts, Advanced welding technology, Multiple precise heat-treatment
- Highest penetration rate, maximum wear resistance, longest lifespan in rough working conditions