ESPARTANA®

DTH SERIES

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N SERIES DTH HAMMER

Item Description	Weight (kg)		
	N100	N120	N125
1. Top Sub	59.00	70.00	70.00
2. 0" Ring Of Top Sub	0.03	0.04	0.04
3. Breakout Ring	0.40	0.80	0.80
4. Check Valve	1.60	3.00	3.00
5. Spring	0.30	0.10	0.10
6. Compression Buffer	0.60	1.00	1.00
7. Air Distributor	11.50	20.00	20.00
8. Internal Cylinder	11.00	23.00	23.00
9. Piston	62.00	125.00	125.00
10. External Cylinder	112.00	170.00	170.00
11. Guided Sleeve		18.00	
12. "0" Ring Of Stop Ring	0.03	0.04	0.01
13. Stop Ring	1.50	4.50	4.00
14. Breakout Ring	0.40	0.80	0.80
15. Drive Chuck	26.00	49.00	45.00
16. Drill Bit	115.00	120.0	175.00

	Technical Data		
	N100	N120	N125
Length (Without Bit)	1510mm	1900mm	1900mm
Weight (Without Bit)	288.00 kg	485.00 kg	480.00 kg
External Diameter	Φ226mm	Φ275mm	Φ275mm
Bit Shank	NUMA100	NUMA120	NUMA125
Hole Range	Φ254 –Φ311 mm	Φ305 –Φ445 mm	Φ305 –Φ445 mm
Connection Thread	API $4\frac{1}{2}$" Reg API $6\frac{5}{8}$" Reg	API $6\frac{5}{8}$" Reg	API $6\frac{5}{8}$" Reg
Working Pressure	2.0 – 3.5 Mpa	2.0 – 3.5 Mpa	2.0 – 3.5 Mpa
Impact Rate at 17 Bar	18HZ	16HZ	16HZ
Recommended Rotation Speed	15–25 r/min	15–25 r/min	15–25 r/min
Air Consumption	1.0Mpa :22 m³/min	1.0Mpa :30 m³/min	1.0Mpa :30 m³/min
	1.8Mpa :45 m³/min	1.8Mpa :56 m³/min	1.8Mpa :56 m³/min
	2.4Mpa :60 m³/min	2.4Mpa :78 m³/min	2.4Mpa :78 m³/min

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The Characteristics of High Air Pressure DTH Hammers Without Foot Valve

It is a kind of high air pressure DTH hammer without foot valve, and it is our newest design. It is also one of the most advanced DTH hammers in the world.

It has the following advantages:

1. Out of the trouble of foot valve fracture and expansion and contraction.
2. Lower energy consumption and higher impact frequency. The drilling speed is 15%-30% higher than the one with foot valve.
3. Simple structure, reliable parts, long life span, easy and cheap maintenance.
4. Lower air and oil consumption. The oil consumption is about 10% lower than the one with foot valve.

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ND SERIES DTH HAMMER

Item Description	Weight (kg)					
	ND25A	ND35A	ND45A	ND45S	ND55A	ND55S
1. Top Sub	3.10	4.20	6.50	6.00	13.70	13.30
2. "O" Ring Of Top Sub		0.01	0.01	0.01	0.015	0.015
3. Breakout Ring						
4. Check Valve	0.10	0.20	0.35	0.30	0.70	0.70
5. Spring	0.05	0.02	0.05	0.05	0.10	0.10
6. Compression Buffer						
7. Air Distributor	0.60	0.80	1.50	1.30	2.00	1.90
8. Internal Cylinder	0.80	1.30	2.10	1.90	2.80	2.70
9. Piston	3.80	5.50	8.50	7. 80	15.00	14.50
10. External Cylinder	4.50	9.50	15.20	14.60	24.00	23.00
11. Guided Sleeve	0.60	1.00	1.30	1.20	2.60	2.50
12. "O" Ring Of Stop Ring	0.005	0.05	0.01	0.005	0.01	0.01
13. Stop Ring	0.10	0.15	0.30	0.20	0.50	0.50
14. Breakout Ring						
15. Drive Chuck	1.40	1.90	3.40	3.40	6.50	6.20
16. Drill Bit	3.20	5.00	9.00	8.50	16.00	15.50

	Technical Data					
	ND25A	ND35A	ND45A	ND45S	ND55A	ND55S
Length (Without Bit)	872mm	888mm	1011mm	986mm	1110mm	1110mm
Weight (Without Bit)	16.00 kg	25.00 kg	43.20 kg	37.00 kg	69.00 kg	66.00 kg
External Diameter	Φ71mm	Φ82mm	Φ99mm	Φ92mm	Φ125mm	Φ116mm
Bit Shank	ND25	IR3.5	COP44/DHD340	COP44/DHD340	COP54/DHD350R	COP54/DHD350R
Hole Range	Φ76 –Φ90 mm	Φ90 –Φ115 mm	Φ110 –Φ135 mm	Φ105 –Φ120 mm	Φ135 –Φ155 mm	Φ127 –Φ145 mm
Connection Thread	T42*10*1.5	API $2\frac{3}{8}$" Reg	API $2\frac{3}{8}$" Reg	API $2\frac{3}{8}$" Reg	API $2\frac{3}{8}$" Reg API $3\frac{1}{2}$" Reg API $2\frac{7}{8}$" Reg $2\frac{7}{8}$" IF	API $2\frac{3}{8}$" Reg API $3\frac{1}{2}$" Reg API $2\frac{7}{8}$" Reg
Working Pressure	1.0 – 1.5 Mpa	1.0 – 1.5 Mpa	1.2 – 2.0 Mpa	1.2 – 2.0 Mpa	1.3 – 2.3 Mpa	1.3 – 2.3 Mpa
Impact Rate at 17 Bar	25HZ	25HZ	30HZ	30HZ	28HZ	28HZ
Recommended Rotation Speed	22 – 35 r/min	25–40 r/min	22–35 r/min	25–40 r/min	20 – 35 r/min	20–35 r/min
Air Consumption	1.0Mpa :4 m³/min	1.0Mpa :3.8 m³/min	1.0Mpa :6 m³/min	1.8Mpa :8 m³/min	1.0Mpa :7 m³/min	1.0Mpa :7 m³/min
	1.5Mpa :6 m³/min	1.5Mpa :7.5 m³/min	1.8Mpa :10 m³/min	2.4Mpa :13 m³/min	1.8Mpa :14 m³/min	1.8Mpa :13.5 m³/min
			2.4Mpa :15 m³/min		2.4Mpa :19 m³/min	2.4Mpa :18 m³/min

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ND SERIES DTH HAMMER

Item Description	Weight (kg)				
	ND55C(A)	ND65A	ND75A	ND85A	ND1120A
1. Top Sub	13.70	20.00	23.00	34.00	70.00
2. "O" Ring Of Top Sub	0.015	0.02	0.015	0.015	0.04
3. Breakout Ring				0.30	0.80
4. Check Valve	0.70	0.70	0.70	1.20	2.00
5. Spring	0.10	0.10	0.10	0.10	0.10
6. Compression Buffer					
7. Air Distributor	2.00	3.50	4.50	6.00	16.00
8. Internal Cylinder	2.80	4.20	6.50	6.50	25.00
9. Piston	15.00	23.00	28.00	42.50	113.00
10. External Cylinder	25.00	31.50	40.00	60.00	173.00
11. Guided Sleeve	3.20	6.50	7.50	5.30	24.00
12. "O"Ring Of Stop Ring	0.01	0.01	0.01	0.01	0.01
13. Stop Ring	0.50	0.60	0.80	1.20	4.00
14. Breakout Ring				0.30	0.80
15. Drive Chuck	4.00	6.00	8.00	17.50	46.00
16. Drill Bit	15.90	26.00	28.50	40.00	140.00

	Technical Data				
	ND55C(A)	ND65A	ND75A	ND85A	ND1120A
Length (Without Bit)	1102mm	1238mm	1258mm	1359mm	1880mm
Weight (Without Bit)	68.00 kg	98.00 kg	120.00 kg	175.00 kg	474.00 kg
External Diameter	Φ125mm	Φ142mm	Φ165mm	Φ180/Φ185mm	Φ275mm
Bit Shank	ND55C/DHD350Q	COP64/DHD360	COP64/DHD360	COP84/DHD380	DHD1120
Hole Range	Φ135 –Φ155 mm	Φ155 –Φ203 mm	Φ175 –Φ216 mm	Φ195 –Φ254 mm	Φ305 –Φ445 mm
Connection Thread	API $2\frac{3}{8}$" Reg API $3\frac{1}{2}$" Reg API $2\frac{7}{8}$" Reg	API $3\frac{1}{2}$" Reg	API $3\frac{1}{2}$" Reg	API $4\frac{1}{2}$" Reg	API $6\frac{5}{8}$" Reg
Working Pressure	1.3 – 2.3 Mpa	1.5 – 3.0 Mpa	1.5 – 3.0 Mpa	1.5 – 3.0 Mpa	2.0 – 3.5 Mpa
Impact Rate at 17 Bar	28HZ	25HZ	23HZ	22HZ	20HZ
Recommended Rotation Speed	20 – 35 r/min	20 – 30 r/min	20 – 30 r/min	15 – 25 r/min	15 – 25 r/min
Air Consumption	1.0Mpa :8 m³/min	1.0Mpa :9 m³/min	1.0Mpa :11 m³/min	1.0Mpa :12 m³/min	1.0Mpa :28 m³/min
	.8Mpa :14 m³/min	1.8Mpa :18 m³/min	1.8Mpa :20 m³/min	1.8Mpa :22 m³/min	1.8Mpa :50 m³/min
	2.4Mpa :19 m³/min	2.4Mpa :26 m³/min	2.4Mpa :28 m³/min	2.4Mpa :28m³/min	2.4Mpa :71 m³/min

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NSD SERIES DTH HAMMER

Item Description	Weight (kg)					
	NSD4A	NSD5A	NSD6A	NSD8A	NSD10A	NSD12A
1. Top Sub	6.50	13.70	20.00	34.00	59.00	70.00
2. "O" Ring of Top Sub	0.10	0.015	0.015	0.015	0.03	0.04
3. Breakout Ring				0.30	0.50	0.80
4. Check Valve	0.35	0.70	0.70	1.20	1.40	2.00
5. Spring	0.05	0.10	0.10	0.10	0.30	0.10
6. Air Distributor	1.50	2.00	3.50	6.00	10.50	16.00
7. Internal Cylinder	2.10	2.80	4.20	6.50	12.50	25.00
8. Piston	8.50	15.00	23.00	42.50	77.00	113.00
9. External Cylinder	15.30	24.00	28.00	59.00	110.00	175.00
10. Guided Sleeve	1.30	2.60	2.50	6.00	11.50	25.00
11. "O"Ring Of Stop Ring	0.005	0.01	0.01	0.01	0.01	0.01
12. Stop Ring	0.20	0.50	0.50	1.20	1.50	4.50
13. Breakout Ring				0.30	0.50	0.80
14. Drive Chuck	4.00	7.50	7.50	16.00	31.50	48.00
15. Drill Bit	9.80	16.00	27.00	37.00	108.00	165.00

	Technical Data					
	NSD4A	NSD5A	NSD6A	NSD8A	NSD10A	NSD12A
Length (Without Bit)	1012mm	1090mm	1182mm	1330mm	1525mm	1860mm
Weight (Without Bit)	40.00 kg	70.00 kg	90.00 kg	174.00 kg	316.00 kg	480.00 kg
External Diameter	Φ99mm	Φ125mm	Φ146mm	Φ180/Φ185mm	Φ226mm	Φ275mm
Bit Shank	SD4	SD5	SD6	SD8	SD10	SD12
Hole Range	Φ110 –Φ135 mm	Φ155 –Φ190 mm	Φ155 –Φ203 mm	Φ195 –Φ254 mm	Φ254 –Φ311 mm	Φ305 –Φ445 mm
Connection Thread	API $2\frac{3}{8}$" Reg	API $2\frac{3}{8}$" Reg API $3\frac{1}{2}$" Reg API $2\frac{7}{8}$" Reg	API $3\frac{1}{2}$" Reg	API $4\frac{1}{2}$" Reg	API $6\frac{5}{8}$" Reg	API $6\frac{5}{8}$" Reg
Working Pressure	1.2 – 2.0 Mpa	1.3 – 2.3 Mpa	1.5 – 2.5 Mpa	1.5 – 3.0 Mpa	2.0 – 3.5 Mpa	2.0 – 3.5 Mpa
Impact Rate at 17 Bar	30HZ	28HZ	25HZ	22HZ	20HZ	20HZ
Recommended Rotation Speed	25 – 40 r/min	20 – 35 r/min	20 – 30 r/min	15 – 25 r/min	20 – 35 r/min	15 – 25 r/min
Air Consumption	1.0Mpa :6 m³/min	1.0Mpa :7 m³/min	1.0Mpa :9 m³/min	1.0Mpa :12 m³/min	15 – 25 r/min	1.0Mpa :28 m³/min
	1.8Mpa :9 m³/min	1.8Mpa :14 m³/min	1.8Mpa :18 m³/min	1.8Mpa :22 m³/min	1.8Mpa :40 m³/min	1.8Mpa :50 m³/min
	2.4Mpa :14 m³/min	2.4Mpa :19 m³/min	2.4Mpa :26 m³/min	2.4Mpa :28m³/min	2.4Mpa :65 m³/min	2.4Mpa :71 m³/min

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NQL SERIES DTH HAMMER

Item Description	Weight (kg)				
	NQL4A	NQL5A	NQL6A	NQL8A	NQL95A
1. Top Sub	6.50	13.70	20.0	34.00	35.00
2. "0" Ring of Top Sub	0.01	0.015	0.015	0.015	0.01
3. Breakout Ring				0. 30	0.04
4. Check Valve	0.35	0.70	0.70	1.20	1.20
5. Spring	0.05	0.10	0.10	0.10	0.10
6. Air Distributor	1.50	2.00	3.50	6.00	7.00
7. Internal Cylinder	2.10	2.70	4.20	6.50	7.50
8. Piston	8.50	15.00	23.00	42.50	48.00
9. External Cylinder	15.20	24.00	30.00	59.00	75.00
10. Guided Sleeve	1.80	3. 00	4.00	6.30	12.00
11 "O"Ring Of Stop Ring	0.005	0.01	0.01	0.01	0.01
12. Stop Ring	0.20	0.40	0.60	1.40	1.70
13. Breakout Ring				0. 30	0.40
14. Drive Chuck	3.20	4.50	5.50	13.00	15.00
15. Drill Bit	9.00	16.00	25.00	35.00	50.00

	Technical Data				
	NQL4A	NQL5A	NQL6A	NQL8A	NQL95A
Length (Without Bit)	1070mm	1090mm	1183mm	1330mm	1340mm
Weight (Without Bit)	40.00 kg	67.00 kg	92.00 kg	171.00 kg	203.00 kg
External Diameter	Φ99mm	Φ125mm	Φ146mm	Φ180/Φ185mm	Φ203mm
Bit Shank	QL40	QL50	QL60	QL80	QL80
Hole Range	Φ110 –Φ135 mm	Φ135 –Φ155 mm	Φ155 –Φ203 mm	Φ195 –Φ254 mm	Φ216 –Φ254 mm
Connection Thread	API $2\frac{3}{8}$" Reg	API $2\frac{3}{8}$" Reg API $3\frac{1}{2}$" Reg API $2\frac{7}{8}$" Reg	API $3\frac{1}{2}$" Reg	API $4\frac{1}{2}$" Reg	API $4\frac{1}{2}$" Reg
Working Pressure	1.2 – 2.0 Mpa	1.3 – 2.3 Mpa	1.5 – 2.5 Mpa	1.5 – 3.0 Mpa	1.8 – 3.0 Mpa
Impact Rate at 17 Bar	30HZ	28HZ	25HZ	22HZ	22HZ
Recommended Rotation Speed	20 – 30 r/min	20 – 35 r/min	20 – 30 r/min	15 – 25 r/min	15 – 25 r/min
Air Consumption	1.0Mpa :5 m³/min	1.0Mpa :7 m³/min	1.0Mpa :9 m³/min	1.0Mpa :12 m³/min	1.0Mpa :16 m³/min
	.1.8Mpa :9 m³/min	1.8Mpa :14 m³/min	1.8Mpa :18 m³/min	1.8Mpa :22 m³/min	1.8Mpa :28 m³/min
	2.4Mpa :14 m³/min	2.4Mpa :19 m³/min	2.4Mpa :26 m³/min	2.4Mpa :28m³/min	2.4Mpa :39m³/min

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NM SERIES DTH HAMMER

Item Description	Weight (kg)			
	NM4A	NM5A	NM6A	NM8A
1. Top Sub	6.50	13.70	20.00	34.00
2. "0" Ring of Top Sub	0.10	0.015	0.015	0.015
3. Breakout Ring				0.30
4. Check Valve	0.35	0.70	0.70	1.20
5 Spring	0.05	0.10	0.10	0.10
6. Air Distributor	1.50	2.00	3.50	6.00
7. Internal Cylinder	2.10	2.80	4.20	6.50
8. Piston	8.50	15.00	23.00	42.50
9. External Cylinder	14.80	24.00	26.00	61.00
10. Guided Sleeve	1.80	2.60	4.80	5.30
11. "O"Ring Of Stop Ring	0.005	0.01	0.01	0.01
12. Stop Ring	0.30	0.70	0.80	1.50
13. Breakout Ring				0.30
14. Drive Chuck	3.80	6.50	4.20	17.30
15. Drill Bit	6.60	13.50	23.00	31.00

	Technical Data			
	NM4A	NM5A	NM6A	NM8A
Length (Without Bit)	1005mm	1110mm	1161mm	1338mm
Weight (Without Bit)	40.00 kg	68.50 kg	90.00 kg	176kg
External Diameter	Φ99mm	Φ126mm	Φ142mm Φ144mm Φ146mm Φ148mm	Φ180/Φ185mm
Bit Shank	NM4	NM5	NM6	NM8
Hole Range	Φ110 – Φ135 mm	Φ155 – Φ190 mm	Φ155 – Φ203 mm	Φ195 – Φ254 mm
Connection Thread	API $2\frac{3}{8}$" Reg	API $2\frac{3}{8}$" Reg API $3\frac{1}{2}$" Reg API $2\frac{7}{8}$" Reg	API $2\frac{7}{8}$" Reg API $3\frac{1}{2}$" Reg $2\frac{7}{8}$" IF	API $4\frac{1}{2}$" Reg
Working Pressure	1.2 – 2.0 Mpa	1.3 – 2.3 Mpa	1.5 – 2.5 Mpa	1.5 – 3.0 Mpa
Impact Rate at 17 Bar	30HZ	28HZ	25HZ	22HZ
Recommended Rotation Speed	25 – 40 r/min	20 – 35 r/min	20 – 30 r/min	15 – 25 r/min
Air Consumption	1.0Mpa :5 m³/min	1.0Mpa :7 m³/min	1.0Mpa :9 m³/min	1.0Mpa :12 m³/min
	1.8Mpa :9 m³/min	1.8Mpa :14 m³/min	1.8Mpa :18 m³/min	1.8Mpa :22 m³/min
	2.4Mpa :14 m³/min	2.4Mpa :19 m³/min	2.4Mpa :26 m³/min	2.4Mpa :28 m³/min

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N SERIES DTH HAMMER

Item Description	Weight (kg)		
	N100A	N120A	N125A
1. Top Sub	59.00	70.00	70.00
2. "O" Ring of Top Sub	0.03	0.04	0.04
3. Breakout Ring	0.50	0.80	0.80
4. Check Valve	1.40	2.00	2.00
5. Spring	0.30	0.10	0.10
6. Air Distributor	10.50	16.00	16.00
7. Internal Cylinder	12.50	25.00	25.00
8. Piston	77.00	113.00	113.00
9. External Cylinder	110.00	170.00	170.00
10. Guided Sleeve	4.50	25.00	23.00
11. "O"Ring Of Stop Ring	0.02	0.01	0.01
12. Stop Ring	1.90	4.50	4.00
13. Breakout Ring	0.50	0.80	0.80
14. Drive Chuck	25.50	48.00	45.00
15. Drill Bit	106.00	164.00	175.00

	Technical Data		
	N100A	N120A	N125A
Length (Without Bit)	1545mm	1880mm	1880mm
Weight (Without Bit)	305.00 kg	475.0 kg	470.00 kg
External Diameter	Φ226mm	Φ275mm	Φ275mm
Bit Shank	NUMA100	NUMA120	NUMA125
Hole Range	Φ254 – Φ311mm	Φ305 – Φ445 mm	Φ305 – Φ445 mm
Connection Thread	API $6\frac{5}{8}$" Reg	API $6\frac{5}{8}$" Reg	API $6\frac{5}{8}$" Reg
Working Pressure	2.0 – 3.5 Mpa	2.0 – 3.5 Mpa	2.0 – 3.5 Mpa
Impact Rate at 17 Bar	20HZ	20HZ	20HZ
Recommended Rotation Speed	15 – 25 r/min	15 – 25 r/min	15 – 25 r/min
Air Consumption	1.0Mpa :22m³/min	1.0Mpa :28 m³/min	1.0Mpa :28 m³/min
	1.8Mpa :40 m³/min	1.8Mpa :50 m³/min	1.8Mpa :50 m³/min
	2.4Mpa :65 m³/min	2.4Mpa :71 m³/min	2.4Mpa :71 m³/min

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The Characteristics of NRC Hammers

NRC series reverse circulation DTH hammer is the latest developed product of our company. It is mainly used for deep exploration drilling and core sampling.

It has the following characteristics:

1.Based on previous experience of ordinary hammer, combined with feature of reverse circulation hammer, optimized internal structure and ideal energy transfer, thus ensuring the series of hammers drilling with fast, smooth and continuous sampling.
2.The internal structure is very simple with components of high rigidity, thus ensuring long life and easy maintenance of the hammer.
3.The collection tube adopts an integrative design and can be replaced without disassembling the hammer with carburizing treatment, it has good abrasive resistance.
4.Equipment with bits designed with patent. Simply by replacing the drill bit, the same hammer can drill holes of different sizes ensuring that the sample is not contaminated.
5.In difficult conditions such as loose soil, hard rock and plenty of water exist, sampling can be done well.

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Reverse Circulation Hammers

Item Description	Weight (kg)			
	NRC45	NRC55	NRC65	NRC52
1. Internal Circl	0.03	0.04	0.05	0.04
2. Air Screen	0.35	0.44	0.65	0.44
3. Top Sub	6.50	9.65	20.00	9.65
4. "O" Ring	0.01	0.02	0.02	0.02
5. Sample Tube	5.10	6.72	12.50	6.75
6. Check Valve	0.25	0.68	0.85	0.68
7. Spring	0.04	0.12	0.10	0.12
8. "O" Ring	0.01	0.02	0.02	0.02
9. Air Distributor	0.85	1.48	3.50	1.48
10. "O" Ring	0.02	0.01	0.02	0.01
11. Internal Cylinder	2.20	4.12	4.20	4.12
12. Piston	8.50	16.90	24.00	16.90
13. External Cylinder	14.50	19.50	32.00	21.50
14. Guided Sleeve	1.20	0.90	5.50	1.90
15. "O" Ring				0.02
16. "O" Ring				0.01
17. Stop Ring				0.32
18. Shrout				1.86
19. Drive Chuck	3.20	5.65	6.50	4.17
20. Drill Bit	10.50	15.80	31.00	11.05
21. Retaining Ping	0.01	0.15	0.30	

	Technical Data			
	NRC45	NRC55	NRC65	NRC52
Length (Without Bit)	1020mm	1111mm	1250mm	1208mm
Weight (Without Bit)	94.00 kg	66.50 kg	110.00 kg	70.00kg
External Diameter	Φ99mm	Φ126mm	Φ146mm	Φ126mm
Bit Shank	NRC45	NRC55	NRC65	PR52
Hole Range	Φ114 – Φ127 mm	Φ133 –Φ152 mm	Φ155 –Φ190 mm	Φ133 –Φ146mm
Working Pressure	1.0 – 3.0 Mpa	1.5 – 3.5 Mpa	1.5 – 3.5 Mpa	1.5 – 3.5 Mpa
Impact Rate at 17 Bar	30HZ	35HZ	28HZ	35HZ
Recommended Rotation Speed	25 – 40 r/min	25 – 40 r/min	25 – 40 r/min	25 – 40 r/min
Air Consumption	1.0Mpa :8m³/min	1.7Mpa :16 m³/min	1.7Mpa :20 m³/min	1.7Mpa :16m³/min
	1.8Mpa :12 m³/min	2.4Mpa :22 m³/min	2.0Mpa :26m³/min	2.4Mpa :22 m³/min
	2.4Mpa :16m³/min	3.0Mpa :28 m³/min	3.0Mpa :35m³/min	3.0Mpa :28 m³/min

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Company Introduction

Shandong Zhongrui Construction Machinery Co., Ltd is located in beautiful world kite capital--Weifang, Shandong Province, the company is the New Hi-tech Enterprises which specialized in research and manufacturing rock drilling machinery, and is also " Weifang Rock Drilling Machinery Engineering Technical Research Center".

The company own more than 80 Mu of land with over 20000 square metres construction area, and has advanced mechanical processing equipment、AICHELIN heat treat production line. It has perfect quality managemen: system and already passed ISO9001: 2000 quality system certification. The Tech Center of the company has built high-level laboratory with advanced equipment and detection methods, which keep close connections with domestic universities and scientific research institute enged in researching product.

The company possesses a highly qualified staff nearly 200 people, including a college education accounted for the total number of staff more than 80%. several have senior titles and special allowance granted by the State Council.

After many years research, the company has five series products: low and high wind pressure DTH drilling tool, hycraulic power crilling tool, rock drill machine, quartering hammer, drilling tool used in prospecting、well、the ground source heat pump; some of the product quality like high wind pressure DTH dril bit、hammer、air-leg rockdrill have reached the domestic advanced level.The product widely used in Mining, tunnel driving, high-speed road、railway、hydropower station、port、wharf、national defense constructing and related important domain. The products enjoy high reputation and deeply welcomed by customers, Some of them had been exported all over the world.

After several years high-speed development, the company has become an important member in domestic rock dril machinery industry. Our mission is to catch up with and surpass advanced world levels, our goal is provide high quality and efficient products for customers. And the zhongrui whole staff have the confidence to improve our national rock drilling product level and work hard with friends in the industry.

The Characteristics of Big Size DTH Hammers Using in Water Well,Oil,Gas and Construction Drilling Without Foot Valve

Features

Based on the characteristics of the wells, oil, gas and construction drilling, our company self-designed, developed and manufactured this kind of high air pressure DTH hammer.

The main features are as following:

1.Using the latest rock drilling theory, optimizing the inside structure and the size of the air distribution, to make the DTH hammer obtain the optimal energy transfer and make it achieve faster drilling speed and lower air consumption.
2.For such projects as the drill bit break, retrieving very difficult, we specially designed a safe and reliable anti-shedding device for the bit.
3.The check valve can be replaced to the one with bigger air controlling hole to provide more efficient cutting discharge.
4.The top sub and the drive chuck have special thread, which can achieve an easier disassemble.

Big Hole High Air Pressure DTH Hammers

Item Description	Weight (kg)						
	ND142A	ND180A	ND225A	ND275A	ND330A	ND475A	ND525A
1. Top Sub	20.00	34.00	59.00	230.00	320.00	800.00	960.00
2. "O" Ring of Top Sub	0.02	0.015	0.03	0.04	0.10	0.02	0.03
3. Breakout Ring		0.60	0.80	1.00	2.00	3.55	5.00
4. Check Valve	0.70	1.20	1.40	2.00	5.00	13.50	18.00
5. Spring	0.10	0.10	0.30	0.50	0.80	0.35	0.45
6. Air Distributor	3.50	6.00	10.50	16.00	35.00	58.90	79.50
7. Internal Cylinder	4.20	6.50	12.50	25.00	30.00	101.60	137.00
8. Piston	23.00	42.50	77.00	113.00	190.00	517.00	698.00
9. External Cylinder	31.50	60.00	110.00	170.00	316.00	952.00	1285.00
10. Guided Sleeve	6.50	6.30	4.50	23.00	38.00	98.00	132.00
11. "O"Ring Of Stop Ring	0.01	0.01	0.02	0.03	0.05	0.02	0.02
12. Stop Ring	0.60	1.40	1.90	4.00	6.00	14.25	19.50
13. Breakout Ring	0.20	0.60	0.80	1.00	2.00	3.55	5.00
14. Drive Chuck	5.00	12.00	21.00	34.00	64.00	162.00	219.00
15. Retainer	3.50	6.50	9.00	30.00	42.00	50.00	67.50
16. Drill Bit	27.00	37.00	68.00	185.00	240.00	528.00	1328.00

	Technical Data						
	ND142A	ND180A	ND225A	ND275A	ND330A	ND475A	ND525A
Length (Without Bit)	1388mm	1520mm	1745mm	2626mm	3870mm	4080mm	4260mm
Weight (Without Bit)	102.00 kg	178.00 kg	315.00kg	650.00 kg	1050.00 kg	2775.00 kg	3626.00 kg
External Diameter	Φ142mm	Φ180mm	Φ225mm	Φ275mm	Φ330mm	Φ475mm	Φ525mm
Bit Shank	DHD360	QL80	NUMA100	NUMA125	ND330	ND475	ND525
Hole Range	Φ155–Φ195mm	Φ195–Φ254mm	Φ254–Φ311mm	Φ305–Φ445mm	Φ350–Φ660mm	Φ508–Φ706 mm	Φ610 – Φ800 mm
Connection Thread	API $3\frac{1}{2}$" Reg	API $4\frac{1}{2}$" Reg	API $4\frac{1}{2}$" Reg API $6\frac{5}{8}$" Reg	API $6\frac{5}{8}$" Reg API $7\frac{5}{8}$" Reg	API $7\frac{5}{8}$" Reg	API $8\frac{5}{8}$" Reg	API $8\frac{5}{8}$" Reg
Working Pressure	1.0 – 2.5Mpa	1.8 – 3.0 Mpa	1.8 – 3.0 Mpa	1.8 – 3.0 Mpa	1.8 – 3.0 Mpa	2.0 – 3.0 Mpa	2.0 – 3.0 Mpa
Impact Rate at 17 Bar	25HZ	20HZ	20HZ	20HZ	20HZ	20HZ	20HZ
Recommended Rotation Speed	20 – 30r/min	15 – 25r/min	15 – 25r/min	15 – 25r/min	15 – 25r/min	15 – 25r/min	15 – 25 r/min
Air Consumption	1.0Mpa :9m³/min	1.0Mpa :12m³/min	1.0Mpa :22m³/min	1.0Mpa :28m³/min	1.0Mpa :32m³/min	1.0Mpa :56m³/min	1.0Mpa :50m³/min
	1.8Mpa :18m³/min	1.8Mpa :22m³/min	1.8Mpa :40m³/min	1.8Mpa :50m³/min	1.8Mpa :58m³/min	1.8Mpa :75m³/min	1.8Mpa :80m³/min
	2.4Mpa :26m³/min	2.4Mpa :28m³/min	2.4Mpa :65m³/min	2.4Mpa :71m³/min	2.4Mpa :85m³/min	2.4Mpa :85m³/min	2.4Mpa :99m³/min

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Bit Face Shape Selection

Center Drop Bit
For high penetration rates in soft to medium hard and fissured rock formations. Low to medium air pressure. Maximum hole deviation control.

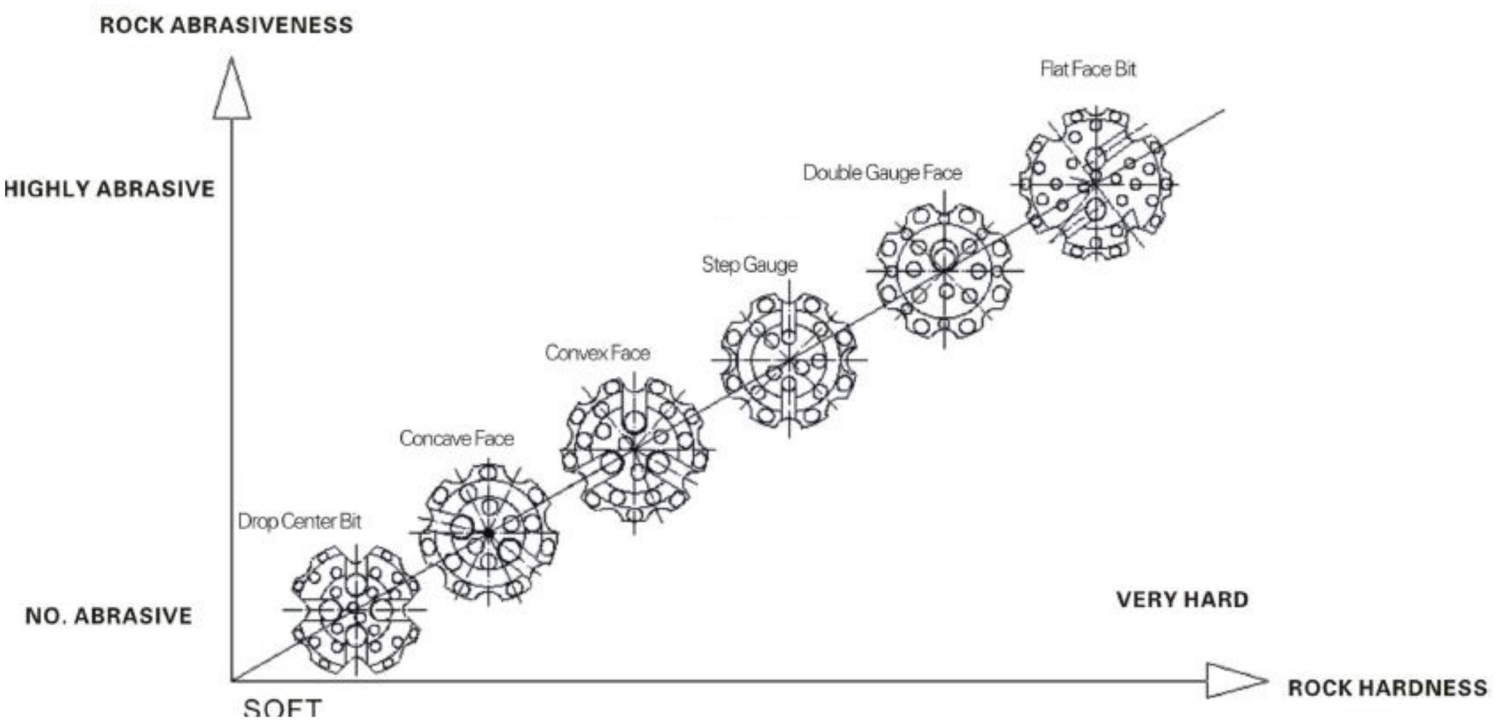
Concave Face
The all- around application bit face specifically for medium hard and homogenerous rock formations. Good hole deviation control and good flushing capacity.

Convex Face
For high penetration rates in soft to medium-hard with low to medium air pressure. It is the most resistance to steel wash, and may reduce the load and wear on gauge buttons, but poor hole deviation control.

Double Gauge Face
This kind of face shape is suitable for fast penetration rates in medium to hard rock formations. Designed for high air pressures and good resistance to steel wash step gauge bit.

Flat Face Bit
This kind of face shape is suitable for hard to very hard and abrasive rock formations in applications with high air pressures. Good penetration rates an resistance to steel wash.

Technical Data



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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 Buttons
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 Buttons
Flat buttons are usually used as protection buttons to reduce wear on rubbing surface of DTH bits.

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4-5" High Air Pressure DTH Bits

Drill Bit	The Drill Head Diameter(mm)	NO. AirHoles	Gauge Buttons	Front Buttons	Weight(kg)	
ND45(DHD340A、COP44) 	105	2	6*Φ14	5*Φ13	8.5	4" High Air Pressure DTH Bits
	110	2	7*Φ14	6*Φ13	8.8	
	115	2	7*Φ14	7*Φ13	9.0	
	120	2	8*Φ14	7*Φ13	9.8	
	127	2	8*Φ14	7*Φ14	11.0	
NSD4 	105	2	6*Φ14	5*Φ13	9.0	
	110	2	7*Φ14	6*Φ13	9.5	
	115	2	7*Φ14	7*Φ13	9.8	
	120	2	8*Φ14	7*Φ13	11.5	
	127	2	8*Φ14	7*Φ14	12.3	
NQL40 	105	2	6*Φ14	5*Φ13	9.0	
	110	2	7*Φ14	6*Φ13	9.2	
	115	2	7*Φ14	7*Φ13	9.5	
	120	2	8*Φ14	7*Φ14	10.3	
	127	2	8*Φ14	7*Φ14	11.5	
NM4 	105	2	6*Φ14	5*Φ13	6.0	We can design and manufacture according to customers' requirement of the bit diameter , the NO. of air holes, carbide buttons and the face shape.
	110	2	7*Φ14	6*Φ13	6.2	
	115	2	7*Φ14	7*Φ13	6.6	
	120	2	8*Φ14	7*Φ14	7.0	
	127	2	8*Φ14	7*Φ14	7.4	
ND55(DHD350R、COP54) 	133	2	7*Φ16	7*Φ14	15.0	5" High Air Pressure DTH Bits
	140	2	7*Φ18	7*Φ14	16.0	
	146	2	8*Φ18	7*Φ14	17.0	
	152	2	8*Φ18	8*Φ14	17.5	
	165	2	8*Φ18	8*Φ16	18.5	
NSD5 	133	2	7*Φ16	7*Φ14	15.5	
	140	2	7*Φ18	7*Φ14	16.0	
	146	2	8*Φ18	7*Φ14	16.5	
	152	2	8*Φ18	8*Φ14	17.0	
	165	2	8*Φ18	8*Φ16	18.0	
NQL50 	133	2	7*Φ16	7*Φ14	15.5	
	140	2	7*Φ18	7*Φ14	16.0	
	146	2	8*Φ18	7*Φ14	16.5	
	152	2	8*Φ18	8*Φ14	17.0	
	165	2	8*Φ18	8*Φ16	18.0	
NM5 	135	2	7*Φ18	7*Φ14	12.5	We can design and manufacture according to customers' requirement of the bit diameter , the NO. of air holes, carbide buttons and the face shape.
	140	2	7*Φ18	7*Φ14	13.5	
	146	2	8*Φ18	7*Φ14	14.0	
	152	2	8*Φ18	8*Φ14	14.4	
	165	2	8*Φ18	8*Φ16	15.0	

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6-8" High Air Pressure DTH Bits

Drill Bit	The Drill Head Diameter(mm)	NO.Air Holes	Gauge Buttons	Front Buttons	Weight(kg)	
ND65 (DHD360/COP64) 	152	2	8*Φ18	7*Φ16	22.0	6" High Air Pressure DTH Bits
	165	2	8*Φ18	8*Φ16	26.0	
	175	2	8*Φ18	10*Φ16	27.0	
	190	2	10*Φ18	12*Φ16	28.5	
	203	2	10*Φ18	13*Φ16	29.5	
NSD6 	152	2	8*Φ16	7*Φ16	26.0	
	165	2	8*Φ18	8*Φ16	27.0	
	175	2	8*Φ18	8*Φ16	29.0	
	190	2	10*Φ18	12*Φ16	32.0	
	203	2	10*Φ18	14*Φ16	34.0	
NQL60 	152	2	8*Φ18	7*Φ16	24.0	
	165	2	8*Φ18	8*Φ16	25.0	
	175	2	8*Φ18	8*Φ16	27.0	
	190	2	10*Φ18	12*Φ16	29.0	
	203	3	10*Φ18	13*Φ16	33.0	
NM6 	152	2	8*Φ18	8*Φ16	22.0	We can design and manufacture according to customers' requirement of the bit diameter , the NO. of air holes, carbide buttons and the face shape.
	165	2	8*Φ18	10*Φ16	23.0	
	171	2	8*Φ18	10*Φ16	24.0	
	190	2	10*Φ18	12*Φ16	25.0	
	203	2	10*Φ18	14*Φ16	28.0	

ND85 (DHD380/COP84) 	195	3	9*Φ18	9*Φ16	33.0	
	203	2	10*Φ18	13*Φ16	40.0	
	216	2	10*Φ18	14*Φ16	49.0	
	254	3	12*Φ18	17*Φ16	71.0	
	305	4	12*Φ18	29*Φ16	95.0	
NSD8 	195	3	9*Φ18	9*Φ16	32.0	
	203	2	10*Φ18	12*Φ16	37.0	8" High Air Pressure DTH Bits
	216	2	10*Φ18	14*Φ16	48.0	
	254	2	12*Φ18	21*Φ16	70.0	
	305	4	12*Φ18	29*Φ16	94.0	
NQL80 	195	3	9*Φ18	9*Φ16	32.0	
	203	2	10*Φ18	13*Φ16	35.0	
	216	2	10*Φ18	14*Φ16	49.0	
	254	2	12*Φ18	21*Φ16	71.0	
	305	4	12*Φ18	29*Φ16	95.0	
NM8 	203	2	10*Φ18	13*Φ16	35.0	We can design and manufacture according to customers' requirement of the bit diameter , the NO. of air holes, carbide buttons and the face shape.
	216	2	10*Φ18	14*Φ18	40.0	
	241	2	12*Φ18	18*Φ16	54.0	
	254	2	12*Φ18	21*Φ16	57.0	
	305	4	12*Φ18	29*Φ16	77.0	

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10-12" High Air Pressure DTH Bits

Drill Bit	The Drill Head Diameter(mm)	NO. Air Holes	Gauge Buttons	Front Buttons	Weight(kg)	
NSD10 	254	2	12*Φ18	21*Φ16	108.0	10" High Air Pressure DTH Bits
	305	4	12*Φ18	36*Φ16	125.0	
	311	4	12*Φ18	36*Φ16	130.0	
	318	4	12*Φ18	38*Φ16	142.0	
	330	4	16*Φ18	42*Φ16	155.0	
Numa100 	254	2	12*Φ18	21*Φ16	90.0	We can design and manufacture according to customers' requirement of the bit diameter , the NO. of air holes, carbide buttons and the face shape.
	305	4	12*Φ18	36*Φ16	102.0	
	311	4	12*Φ18	36*Φ16	104.0	
	318	4	12*Φ18	38*Φ16	106.0	
	330	4	14*Φ18	42*Φ16	112.0	
DHD1120 	305	4	12*Φ18	36*Φ16	152.0	12" High Air Pressure DTH Bits
	311	4	12*Φ18	36*Φ16	157.0	
	330	4	16*Φ18	42*Φ16	165.0	
	346	4	16*Φ19	48*Φ16	178.0	
	381	4	16*Φ19	48*Φ16	198.0	
NSD12 	305	4	12*Φ18	36*Φ16	156.0	
	311	4	12*Φ18	36*Φ16	168.0	
	330	4	16*Φ18	42*Φ16	180.0	
	356	4	16*Φ19	48*Φ16	191.0	
	381	4	16*Φ19	48*Φ16	200.0	
NUMA120 	305	4	12*Φ18	36*Φ16	152.0	
	311	4	12*Φ18	36*Φ16	158.0	
	330	4	16*Φ18	42*Φ16	165.0	
	356	4	16*Φ19	48*Φ16	178.0	
	381	4	16*Φ19	48*Φ16	195.0	
NUMA125 	305	4	12*Φ18	36*Φ16	170.0	We can design and manufacture according to customers' requirement of the bit diameter , the NO. of air holes, carbide buttons and the face shape.
	311	4	12*Φ18	36*Φ16	173.0	
	330	4	16*Φ18	42*Φ16	182.0	
	356	4	16*Φ19	48*Φ16	191.0	
	381	4	16*Φ19	48*Φ16	200.0	

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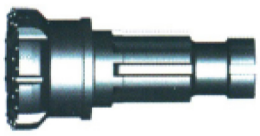
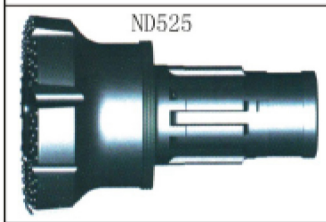
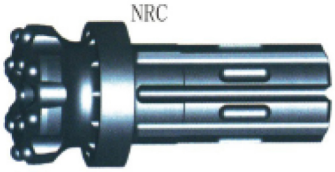
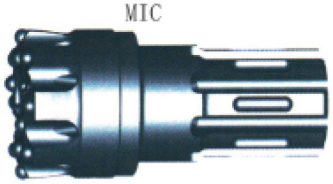
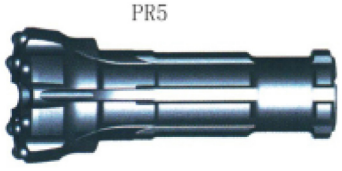
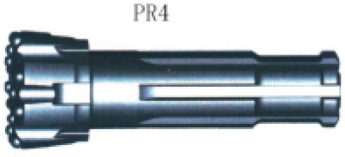
Big Size Bits Using in Water Wells,Oil,Gas and ConstructionDrilling/Reverse Circulation Drill Bits

Drill Bit	The Drill Head Diameter(mm)	NO. AirHoles	Gauge Buttons	Front Buttons	Weight(kg)	
ND275 	311	3	15*Φ18	36*Φ16	205.0	Big Size Bits Using in WaterWells,Oil,Gas and Construction Drilling
	334	3	18*Φ19	44*Φ18	216.0	
	356	3	18*Φ19	48*Φ18	225.0	
	368	4	20*Φ19	50*Φ18	230.0	
	381	4	20*Φ19	54*Φ19	236.0	
ND330 	381	4	20*Φ19	54*Φ18	297.0	
	406	4	20*Φ19	58*Φ18	311.0	
	431	4	20*Φ19	64*Φ18	324.0	
	445	4	24*Φ20	72*Φ18	334.0	
	470	4	24*Φ20	80*Φ18	347.0	
ND475 	495	4	24*Φ20	88*Φ18	710.0	
	525	4	24*Φ20	100*Φ18	760.0	
	580	4	24*Φ20	116*Φ18	855.0	
	660	4	28*Φ20	140*Φ19	950.0	
	680	4	28*Φ20	144*Φ19	968.0	
ND525 	711	4	28*Φ20	154*Φ19	1455.0	We can design and manufacture according to customers' requirement of the bit diameter , the NO. of air holes, carbide buttons and the face shape.
	762	4	32*Φ20	172*Φ19	1539.0	
	780	4	32*Φ20	180*Φ19	1564.0	
	825	4	36*Φ20	216*Φ19	1625.0	
	998	4	40*Φ20	348*Φ19	1980.0	
NRC 	115	2	8*Φ14	8*Φ13	14.00	ReverseCirculation Drill Bits
	140	2	8*Φ16	8*Φ16	16.50	
	165	2	8*Φ18	8*Φ16	24.85	
MIC 	133	2	8*Φ16	8*Φ16	17.50	
	140	2	8*Φ16	8*Φ14	18.00	
	146	2	8*Φ18	8*Φ14	20.00	
PR5 	133	2	8*Φ16	8*Φ14	12.50	
	140	2	8*Φ16	8*Φ14	13.00	
	146	2	8*Φ18	8*Φ14	13.50	
PR4 	115	2	8*Φ16	8*Φ13	14.40	We can design and manufacture according to customers' requirement of the bit diameter , the NO. of air holes, carbide buttons and the face shape.
	127	2	8*Φ16	8*Φ14	15.00	
	133	2	8*Φ16	8*Φ14	15.50	

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Hole Opener Bits Series

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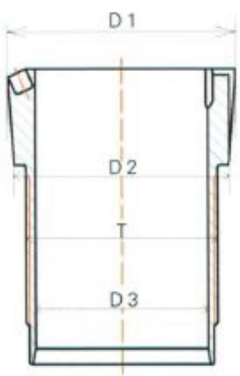
DTH Opener Bits、Thread Opener Bits、Crown Opener Bits

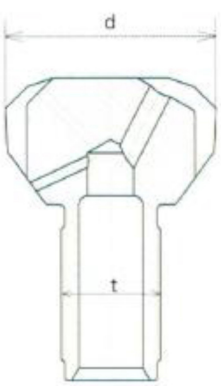
D mm	165	178	190	216	254	305	381	305	381	445	482	660
D1 mm	82	99	115	138	159	208	296	208	296	305	311	445
Gauge	14	16	16	16	16	16	16	16	16	18	18	19
Front	14	14	14	14	14	16	16	16	16	16	16	18
Shank	DHD340 SD4 QL40		DHD350 SD5 QL50		DHD360 SD6 QL60		DHD380 SD8 QL80		SD10 NUMA100		SD12 NUMA120	

mm	76	89	102	115	102	115	127	140	165
D2 mm	26	43	43	76	43	76	76	89	102
Gauge	R32	R32	R38	R38	T38	T38	T45	T45	T51



Inner Opener Bits

D1 mm	125	140	152	172	225
D2 mm	118	133	133	165	216
D3 mm	88	108	108	133	178
Gauge	16	16	16	16	18
Front	14	14	16	16	16
Thread	T104.5	T122	T122	T146.5	T203



Crown Opener Bits

D mm	83	102	116	128	165
T mm	56	56	78	83	120
Gauge	13	14	16	16	18
Front	12	14	14	16	16
Thread	R56 * 12.7	R56 * 12.7	R78 * 22.56	R83 * 22.56	R120 * 22.56

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Explanation of Thread Bits Serial Number and Thread

N (R) 1 0 2 F (D) 8 – T (R) 3 8

38＝Thread Dia.38mm

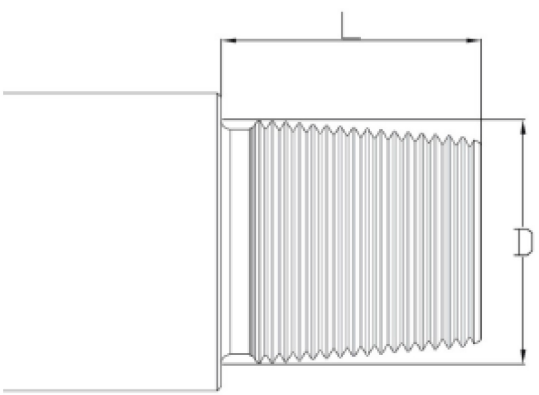
R＝Rope Thread
T＝Trapezaidal Thread

NO.Gauge Button is 8.

D ＝The Bit Fore head is Drop Center
F ＝ The Bit Fore head is Flat

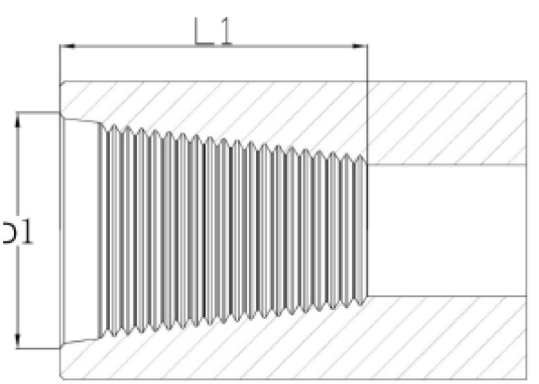
102＝Gauge Dia 102mm

N＝Nomal Thread Bit
R＝ Retract Thread Bit



API(REG)	L (mm)	D (mm)
2 3/8"	76.2	66.6
2 7/8"	88.9	76.2
3 1/2"	95.2	88.9
4 1/2"	107.9	117.4
6 5/8"	127.0	152.1
5 1/2"	120.6	140.2
7 5/8"	133.3	177.8
8 5/8"	136.5	201.9

API(REG)	L (mm)	D (mm)
2 3/8"	79.4	68.3
2 7/8"	92.1	77.8
3 1/2"	98.4	90.5
4 1/2"	111.1	119.1
5 1/2"	123.8	141.7
6 5/8"	130.2	154.0
7 5/8"	136.5	180.2
8 5/8"	139.7	204.4



IF(NL)	L1 (mm)	D1 (mm)
2 3/8"	76.2	73.05
2 7/8"	88.9	86.1
3 1/2"	101.6	102.0
4 1/2"	114.3	133.3

IF(NL)	L1 (mm)	D1 (mm)
2 3/8"	79.4	74.6
2 7/8"	92.1	87.8
3 1/2"	104.8	103.6
4 1/2"	117.5	134.9

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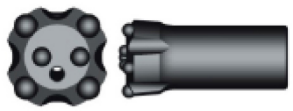
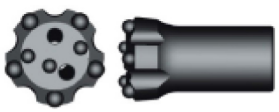
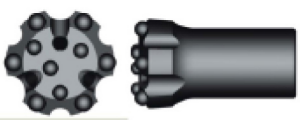
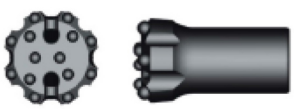
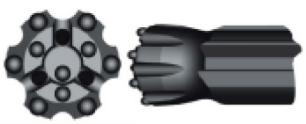
R25/R32 Thread Bits

Name of product	Dia	Tip size(mm)		No.of flushing holes		Weight(kg)
R25/R32	mm	Gauge	Front	Side	Front	
	41	4*9	2*8	1	1	0.54
	43	4*9	2*9	1	1	0.55
	45	5*10	2*9	1	1	0.60
	41	5*8	2*8	1	1	0.50
	43	5*8	2*8	1	1	0.60
	45	5*10	2*9	1	2	0.80
	48	5*10	2*9	1	2	0.90
	51	5*10	2*9	1	2	1.10
	45	6*9	2*9	2	1	0.80
	48	6*9	3*8	2	1	0.90
	57	6*9	3*9	1	1	1.30
	64	6*10	3*10	1	1	1.60
	64	8*9	4*9	2	2	1.60
	76	8*11	4*10	2	2	2.80
	89	8*12	5*12	2	2	2.90
	60	6*9	4*9	0	3	1.70
	64	6*9	4*9	0	3	1.90
	70	6*10	4*10	0	3	2.20
	76	8*11	5*10	0	4	3.10
	89	8*12	6*12	0	4	5.00
	102	8*13	6*12	0	4	7.00
	115	8*14	6*13	0	4	9.60

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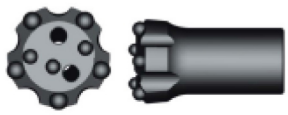
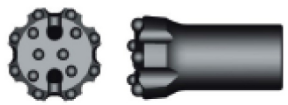
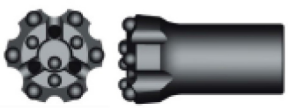
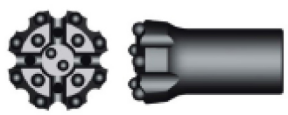
T38 / R38 Thread Bits

Name of product	Dia	Tip size(mm)		No.of flushing holes		Weight(kg)
T38/R38	mm	Gauge	Front	Side	Front	
	57	5*11	3*10	0	2	1.6
	64	5*12	3*11	0	2	1.6
	76	6*13	4*10	0	3	2.4
	64	8*10	4*9	2	2	1.8
	76	8*11	4*10	2	2	2.6
	89	6*13	5*12	2	2	3.3
	102	8*13	6*12	2	2	4.7
	64	6*10	4*9	0	3	1.7
	70	6*11	4*10	0	3	2.2
	89	6*14	4*12	0	3	4.3
	64	8*9	5*9	0	4	1.7
	70	8*10	5*9	0	4	2.2
	76	8*11	5*10	0	4	2.7
	89	8*12	6*12	0	4	3.3
	102	8*13	6*12	0	4	4.7
	60	8*9	4*9	2	2	1.7
	64	8*9	4*9	2	2	2.0
	70	8*10	4*10	2	2	2.4
	76	8*12	4*10	2	2	3.2
	89	8*12	5*12	2	2	5.8
	64	8*9	5*9	0	4	1.9
	70	8*10	5*10	0	4	2.4
	76	8*11	5*10	0	4	3.3
	89	8*12	6*12	0	4	5.3

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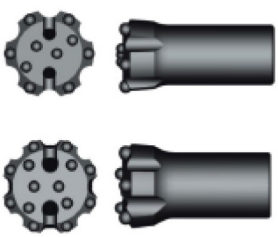
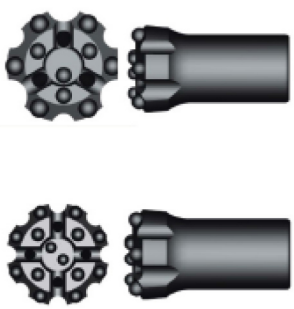
T45 Thread Bits

Name of product	Dia	Tip size(mm)		No.of flushing holes		Weight(kg)
T45	mm	Gauge	Front	Side	Front	
	70	6*12	4*10	0	2	2.4
	76	6*13	4*10	0	2	2.6
	89	8*12	5*12	2	2	4.5
	102	8*13	6*12	2	2	5.0
	115	8*14	6*13	2	2	6.8
	64	6*10	4*9	0	3	1.6
	70	6*12	4*10	0	3	2.4
	76	8*11	5*10	0	4	2.6
	89	8*12	6*12	0	4	4.6
	102	8*13	6*12	0	4	4.5
	70	8*11	4*10	2	2	2.5
	76	8*11	4*10	2	2	3.1
	80	8*12	5*11	2	2	4.0
	89	8*12	5*12	2	2	5.1
	102	8*13	6*12	2	2	8.2
	70	8*10	5*9	0	4	2.2
	76	8*11	5*10	0	4	3.1
	89	8*12	6*12	0	4	5.4
	102	8*13	6*12	0	4	7.8
	105	8*13	6*12	0	4	8.3

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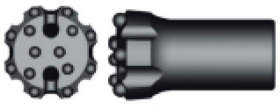
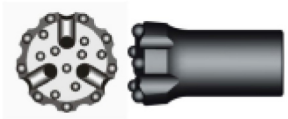
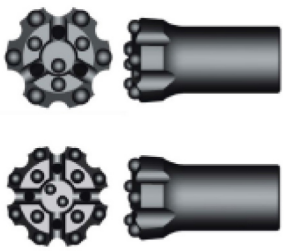
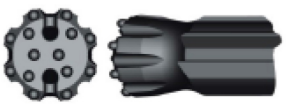
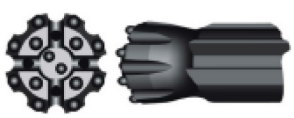
T51 Thread Bits

Name of product	Dia	Tip size(mm)		No.of flushing holes		Weight(kg)
T51	mm	Gauge	Front	Side	Front	
	89	8*12	5*12	2	2	4.9
	102	8*13	6*12	2	2	5.8
	115	8*14	6*13	2	2	6.8
	127	8*14	7*13	2	2	7.5
	89	9*11	6*11	0	3	4.6
	102	9*12	6*12	0	3	5.9
	115	9*13	9*12	0	3	6.6
	127	9*14	9*13	0	3	8.4
	152	9*14	9*14	0	3	11.1
	89	8*12	6*12	0	4	4.5
	102	8*13	6*12	0	4	5.7
	115	8*13	6*13	0	4	6.8
	127	8*14	7*13	0	4	7.5
	140	8*16	7*14	0	4	14.4
	152	8*16	7*16	0	4	15.1
	89	8*12	5*12	2	2	5.1
	102	8*13	6*12	2	2	7.1
	115	8*14	7*13	2	2	10.5
	127	8*14	7*13	2	2	12.5
	89	8*12	6*12	0	4	5.3
	102	8*13	6*12	0	4	7.4
	115	8*14	6*13	0	4	10.2
	127	8*14	7*13	0	4	12.0

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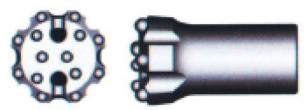
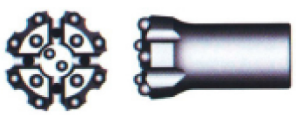
GT60 Thread Bits

Name of product	Dia	Tip size(mm)		No.of flushing holes		Weight(kg)
GT60	mm	Gauge	Front	Side	Front	
	102	8*13	6*12	-	2	8.2
	115	8*13	6*13	-	2	10.1
	127	8*14	7*14	-	2	11.3
	152	8*18	7*16	-	2	15.9
	102	8*13	6*12	-	2	8.1
	115	8*13	6*13	-	2	10.0
	127	8*14	7*14	-	2	11.2
	152	8*18	7*16	-	2	15.8
	102	8*13	6*12	-	2	8.5
	115	8*13	6*13	-	2	10.4
	127	8*14	7*14	-	2	11.6
	152	8*18	8*16	-	2	15.9
	102	8*13	6*12	-	2	8.7
	115	8*13	6*13	-	2	10.6
	127	8*14	7*14	-	2	11.8
	152	8*18	7*16	-	2	16.2
	102	8*13	6*12	-	2	8.8
	115	8*13	6*13	-	2	10.9
	127	8*14	7*14	-	2	11.7
	152	8*18	7*16	-	2	16.6
	102	8*13	6*12	-	2	8.7
	115	8*13	6*13	-	2	10.6
	127	8*14	7*14	-	2	11.6
	152	8*18	7*16	-	2	16.4

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The Others

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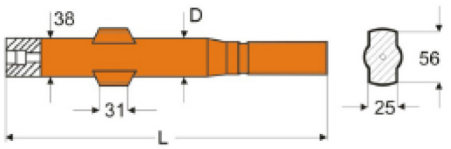
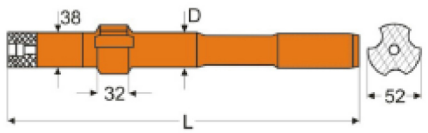
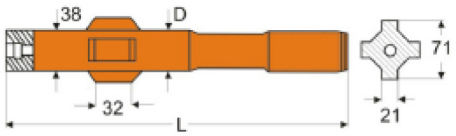
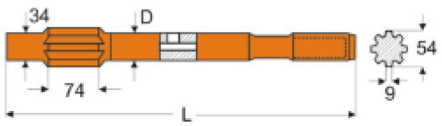
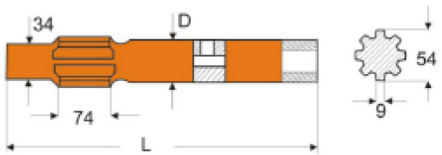
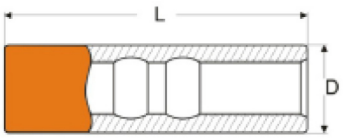
Shank Adapters and Coupling Sleeves

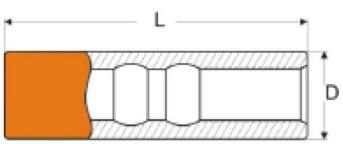
Rock dill type (Dimensions, mm)	Thread	D	L	
	R32	38	300	We can manufacture all kinds of adapters according to customer's sample.
	R38	38.5	380	
	T38	38.5	380	
	T38	44.3	390	
	R38	38	498	
	T38	38	500	
	T45	45	500	
	R32	45	340	
	T51	52	670	

Explanation Of Serial Number:

HCS-37X127-R25

- Thread Type
- Lenght
- External Dia
- Coupling





D(mm)	Thread	Lenght	
37	R25	127	We can manufacture all kinds of coupling sleeves according to customer's sample
45	R32	160	
55	R32	180	
	R38	180	
	R38	180	
57	R38	180	
	T38	180	
66	T45	207	
76	T51	225	
55	R32 R38	180	
	R38 R38	180	
61	T45 T38	200	
66	T38 T45	200	
71	T45 T51	225	

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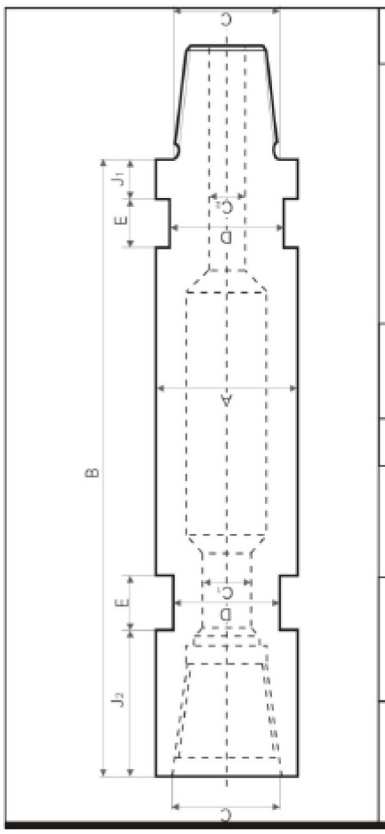
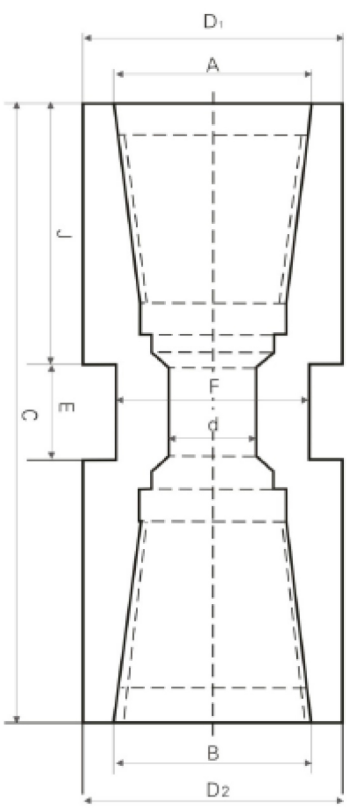
Drill Tubes、Box-Box Adapters



A OD (mm)		ϕ76	ϕ89	ϕ102	ϕ114	ϕ127	ϕ140	ϕ152
C Tool Joints	Connection	API2 3/8" REG	API2 3/8" REG	API3 1/2" REG	API3 1/2" REG	API3 1/2" REG	API3 1/2" REG	API4 1/2" REG
	C1	25.4	28.6	44.4	38.1	44.4	44.4	76.2
	C2	38.1	38.1	57.1	57.1	57.1	57.1	85.7
J Length shoulder to flat	J1 16	11.1	15.8	15.8	12.7	12.7	19	
	J2 90.5	76.2	90.5	69.8	95.2	95.2	120.6	
D Across Flat (mm)		65	69.8	63.5	92.2	120.6	120.6	130.1
Allowed Pull Down Unit. (KNm)		5.4	11.2	14.2	22.2	47	47	52.9
Approx Weight unit 3m long/kgs		26.6	53.4	53.1	77.4	114	114	127
E Width Spanner flat (mm)		38.1	60.3	50.8	69.8	50.8s	50.8	60.3



Connection	Box up A	API4 1/2" REG	API2 7/8" REG	API3 1/2" REG	API3 1/2" REG	API2 3/8" REG	API2 7/8" REG	API2 3/8" REG
	Box down B	API2 7/8" REG	API3 1/2" REG	API4 1/2" REG	API3 1/2" REG	API3 1/2" REG	API2 3/8" REG	API2 3/8" REG
Length C (mm)		250.8	241.3	269.8	241.3	128.6	219	219
Length Shoulder J (mm)		76.2	69.85	88.9	69.85	57.1	69. 85	57.1
Width Spanner flats E (mm)		50.8	50.8	50.8	50.8	50.8	50.8	50.8
Std bore d (mm)		44.45	44.45	58.7	44.45	38.1	38.1	38.1
Outside diameter	Top D1 (mm)	114.3	114.3	114.3	114.3	88.9	114.3	88.9
	Bottom D2 (mm)	146	51.7	146	114.3	114.3	88.9	88.9
Across Flat F (mm)		98.4	98.4	98.4	98.4	69.8	98.4	69.85

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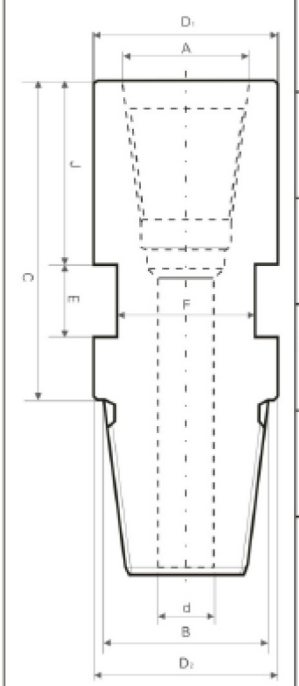
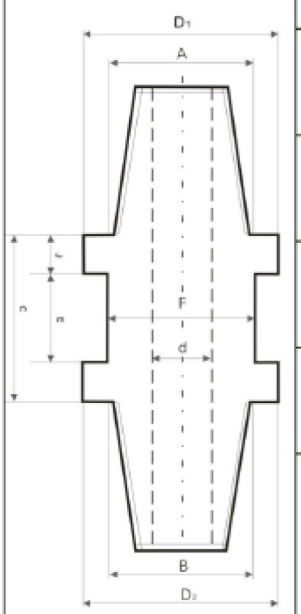
Pin-Box Adapters、Pin-Pin Adapters

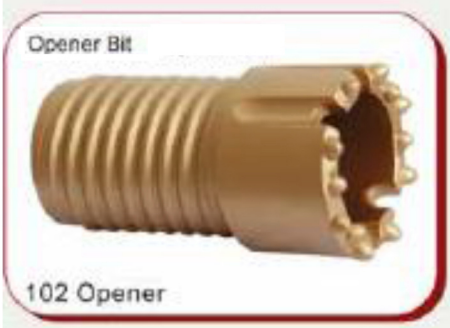


Connection	Box up A	API2 3/8" REG	API2 3/8" REG	API2 3/8" REG	API3 1/2" REG	API3 1/2" REG	API2 7/8" REG	API2 7/8" REG	API2 7/8" REG
	Box down B	API2 3/8" REG	API2 7/8" REG	API3 1/2" REG	API3 1/2" REG	API4 1/2" REG	API2 3/8" REG	API3 1/2" REG	API4 1/2" REG
Length C (mm)		140	134.9	146	101.6	134.9	134.9	134.9	174.6
Length Shoulder J (mm)		50.8	69.85	39.7	39.7	39.7	39.7	39.7	100
Width Spanner flats E (mm)		65	50.8	50.8	50.8	50.8	50.8	50.8	50.8
Std bore d (mm)		24	31.75	25.4	44.45	52.4	31.75	44.45	44.45
Outside diameter	Top D_1 (mm)	88.9	88.9	114.3	127	114.3	88.9	114.3	114.3
	Bottom D_2 (mm)	88.9	88.9	88.9	127	146	88.9	114.3	146
Across Flat F (mm)		69.85	69.85	98.4	98.4	98.4	69.85	98.4	98.4



Connection	Box up A	API2 3/8" REG	API2 3/8" REG	API2 3/8" REG	API3 1/2" REG	API3 1/2" REG	API4 1/2" REG
	Box down B	API2 3/8" REG	API2 7/8" REG	API3 1/2" REG	API3 1/2" REG	API4 1/2" REG	API4 1/2" REG
Length C (mm)		70	152.4	96	177.8	92	203.2
Length Shoulder J (mm)		20	50.8	35	63.5	12.7	76.2
Width Spanner flats E (mm)		50.8	50.8	50.8	50.8	69.85	50.8
Std bore d (mm)		24	25.4	24/26	44.45	38.1	58.7
Outside diameter	Top D_1 (mm)	78	88.9	114.3	114.3	114.3	146
	Bottom D_2 (mm)	78	88.9	114.3	114.3	139.7	146
Across Flat F (mm)		65	69.85	98.4	98.4	120.65	120.65

Our products



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API Standard Drill Rod

API Standard Drill Rod

We adopts famous domestic large steel enterprises (such as Anshan Iron and Steel Group corporation and Hengyang Steel Group) production of material to produce drill pipe, and heat treatment of materials by using an integrated multi-processing furnace, professional CNC machining was applied in all of the connection thread processing, all the threads are configured thread gauge, which are in accordance with international standard, Internal thickening technology has carried on the tempering process after friction welding, so the processing quality of drill pipe is stable, reliable, use cycle greatly extended. We can process different length, diameter and wall thickness and material of API standard thread rod, we also can design and manufacture drill pipe according to customers' requirement of the material, length, wall thickness and connection thread.

Part No	Pipe Diameter (mm)		Pipe Length (mm)	Wall Thickness (mm)	Connection Thread	Trigger Slot
	inch	mm				
1	3	76	1000-6000	5.00	API 2 3/8"REG	方57/64.5
2	3	76	1000-6000	6.00	API 2 3/8"REG	方57/64.5
2	3	76	1000-9000	8.00	API 2 3/8"REG	方57/64.5
3	3 1/2	89	1000-6000	6.00	API 2 3/8"REG	方70/64
4	3 1/2	89	1000-6000	6.00	API 2 3/8"REG	方70/64
3	3 1/2	89	1000-9600	8.00	API 2 3/8"REG	方70/64
4	3 1/2	89	1000-9600	8.00	API 2 3/8"REG	方70/64
5	4	102	1000-9000	8.00	API 2 7/8"REG	方76/89
5	4	102	1000-9000	10.00	API 2 7/8"REG	方76/89
7	4 1/2	114	1500-7620	6.00	API 3 1/2"REG	89/95
7	4 1/2	114	1500-9140	8.00	API 3 1/2"REG	89/95
8	4 1/2	114	1500-9140	8.00	API 3 1/2"REG	89/95
9	4 1/2	114	1500-9140	10.00	API 3 1/2"REG	89/95
10	4 1/2	114	1500-9140	18.00	API 3 1/2"REG	89/95
11	5	127	1500-9500	10.00	API 3 1/2"REG	89
12	5	127	1500-9500	12.00	API 3 1/2"REG	89
13	5	127	1500-9500	14.00	API 3 1/2"REG	89
14	5	127	1500-9500	18.00	API 3 1/2"REG	89
16	5 1/2	140	1500-9500	9.00	API 4 1/2"REG or 4"FH	114
17	5 1/2	140	1500-9500	10.00	API 4 1/2"REG or 4"FH	114
18	5 1/2	140	1500-9500	12.00	API 4 1/2"REG or 4"FH	114

Breakout Bench/Cutter Bits

Breakout Bench

Breakout Bench Operation Method:

1).Put hammer in the bench.
2).Adjust hammer and wrench to make wrench block at top sub; let wrench and jack be in the same plane.
3).Fix K-shaped base with nut.
4).Fix wrench with nuts.
5).Sway jack handle slowly to unlink hammer .
6).After top sub dismantled, grease jack, release nuts, discharge K-shaped base and turn around hammer.
7).Adjust hammer and wrench to make wrench block drive chuck; let wrench and jack be in the same plane.
8).Adjust hammer.
9).Fix K-shaped base and wrench with nuts.
10).Sway jack handle slowly to unlink hammer.

Eccentric Casing System (ODEX) with Three Pieces

Outer Dia.of Casing Tube	Inner Dia.of Casing Tube	Reamed Dia.	Min.inner Dia.of Casing Shoe	Hammer Type	Drill Pipes
mm	mm	mm	mm		mm
108	93-99	118	86	ND35	76
114	101-103	127	91	ND35	76
127	114-116	136	101	ND35	76
140	124-127	152	117	ND45	76
146	127-132	154	117	ND45	76
168	149-155	184	140	ND55	76,89
178	159-165	194	150	ND55	76,89
193	173-180	206	166	ND65	89,114
219	199-206	234	193	ND65	89,114
245	224-231	260	210	Nd85	114
273	251-257	300	241	ND85	114,127

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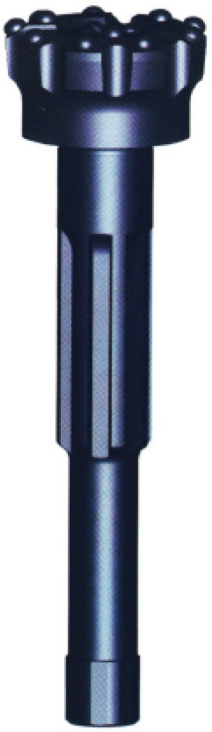
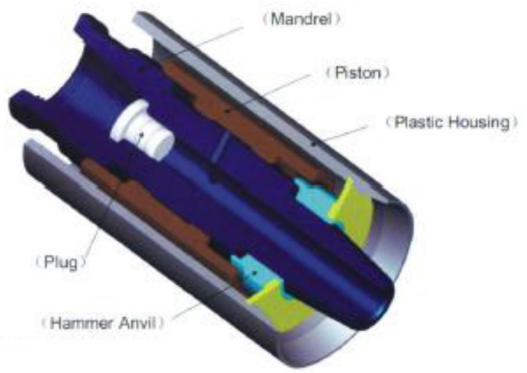
Long Shank Bits/Back Hammers

Long Shank Bits



Dia (mm)	Gauge	Front	Flushing holes	Weight(kg)
90	9*11	7*11	3*8	5.8
95	9*12	7*11	3*8	6.0
105	9*12	7*12	3*10	6.4
105	9*13	7*12	3*13	9.1
115	9*14	6*14	3*13	9.7
127	9*14	7*14	3*13	10.6
115	9*14	6*14	3*13	12.6
127	9*14	7*14	3*13	13.2
140	9*16	9*16	3*13	14.5
140	9*16	9*16	3*15	21.3
152	9*16	9*16	3*15	23.1
165	10*16	10*16	3*15	23.9

Back Hammers



Back Hammer:
In case of jamming of any drilling tool during the boring process, the back hammer will help you save time and money.
The back hammer may be mounted on the drill pipe joint between the borehole gripper and the swivel head, thus, creating a combined effect of effective reverse impact and vibration.
Sturdy and reliable, the back hammer is composed of three components and a plastic housing which acts both as an exhaust emission guider and a muffler. With regards to the maintenance, it's only necessary to keep it clean and the linking section well protected when the back hammer is not working.

Product	Pressure	Thread	Total length(mm)	Outer Dia.(mm)	Weight(kg)
NBH14	8Bar	API3 1 /2′ ′	510	180	31.0
NBH16	8Bar	API3 1 /2′ ′	540	200	44.0
NBH19	8Bar	API3 1 /2′ ′	540	225	63.0

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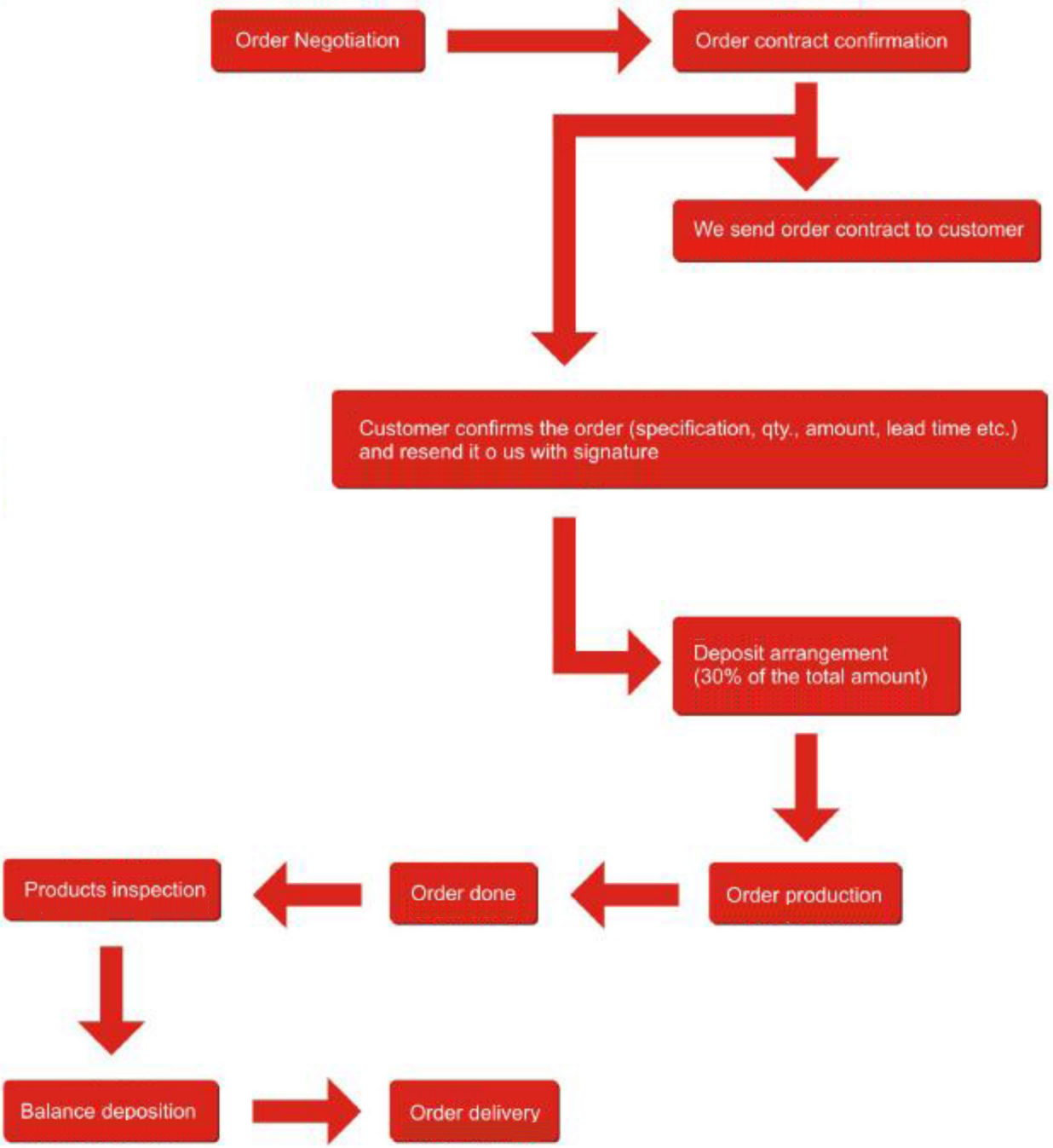
About Ordering



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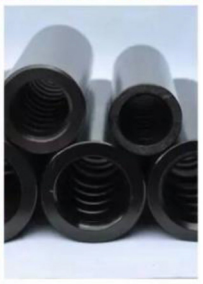

"ISO9001:2008 QMS

Quality Management System makes every products perfect."

High Standards For Choosing Raw Materials

Following strict standards to control the quality of raw materials

Top Quality Heat Treatment Device

Automatic production processing control keeps quality consistency and stability

Strong Technology Services

To supply the best drilling solution of using our products for our customers

Perfect Customization

To supply customized services with our professional suggestions

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The Characteristics of High Air Pressure DTH Hammers with Foot Valve

It is a kind of valveless high air pressure DTH hammer with foot valve.It has the following advantages:

The main features are as following:

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

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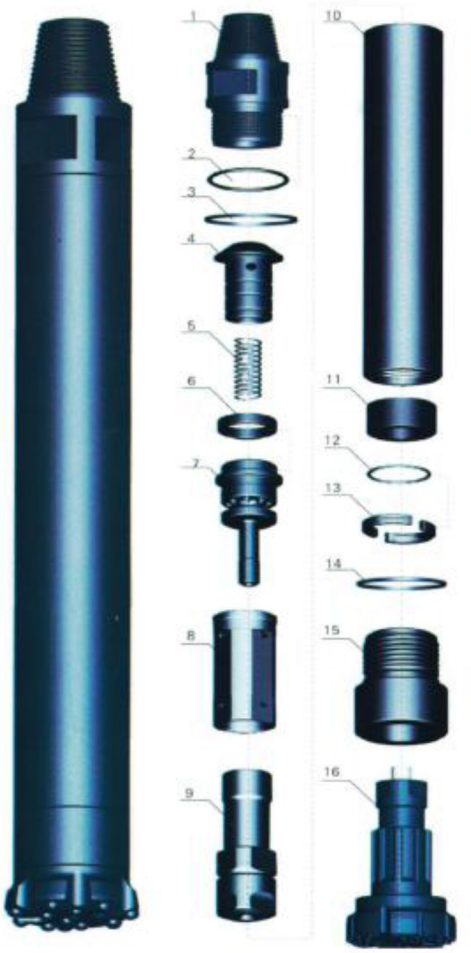
ND SERIES DTH HAMMER



Item Description	Weight (kg)						
	ND35	ND45	ND55	ND55C	ND65	ND85	ND1120
1. Top Sub	4.20	6.50	15.00	13.70	20.00	41.00	70.00
2. "O" Ring Of Top Sub	0.01	0.01	0.01	0.01	0.02	0.02	0.04
3. Breakout Ring	0.01					0.20	0.80
4. Check Valve	0.20	0.42	1.00	1.00	1.00	1.50	3.00
5. Spring	0.02	0.04	0.04	0.04	0.04	0.10	0.10
6. Compression Buffer	0.04	0.04	0.08	0.08	0.08	0.42	1.00
7. Air Distributor	1.40	2.20	3.70	3.50	5.00	12.5	20.00
8. Internal Cylinder	1.60	2.30	4.50	4.20	5.00	8.60	23.00
9. Piston	5.40	9.00	15.50	17.20	23.60	41.00	125.00
10. External Cylinder	9.50	15.0	30.00	26.50	36.80	62.00	170.00
11. Guided Sleeve				1.20	2.40	9.60	16.00
12. "O" Ring Of Stop Ring	0.01	0.01	0.01	0.02	0.02	0.02	0.04
13. Stop Ring	0.20	0.20	0.30	0.50	0.60	1.20	4.50
14. Breakout Ring	0.01					0.20	0.80
15. Drive Chuck	1.95	3.50	6.40	4.50	6.00	17.50	48.00
16. Drill Bit	5.00	9.00	16.00	15.60	26.00	40.00	120.00

	Technical Data						
	ND35	ND45	ND55	ND55C	ND65	ND85	ND1120
Length (Without Bit)	930mm	1030mm	1214mm	1160mm	1248mm	1492mm	1900mm
Weight (Without Bit)	25.00 kg	39.00 kg	76.50 kg	72.50 kg	100.00 kg	188.00 kg	480.00 kg
External Diameter	Φ82mm	Φ99mm	Φ125mm	Φ125mm	Φ142mm Φ144mm Φ146mm Φ148mm	Φ180/Φ185mm	Φ275mm
Bit Shank	DHD3.5	COP44/DHD340	COP54/DHD350R	ND55C/DHD350Q	COP64/DHD360	COP84/DHD380	DHD1120
Hole Range	Φ90 –Φ110 mm	Φ110 –Φ135 mm	Φ135 –Φ155 mm	Φ135 –Φ155 mm	Φ155 –Φ190 mm	Φ195 –Φ254 mm	Φ305 –Φ445 mm
Connection Thread	API 2 3/8" Reg	API 2 3/8" Reg	API 2 3/8" Reg API 3 1/2" Reg API 2 7/8" Reg	API 2 3/8" Reg API 3 1/2" Reg API 2 7/8" Reg	API 3 1/2" Reg	API 4 1/2" Reg	API 6 5/8" Reg
Working Pressure	1.0 – 1.5 Mpa	1.2 – 2.0 Mpa	1.3 – 2.3Mpa	1.3 – 2.3 Mpa	1.5 – 2.5 Mpa	1.5 – 3.0Mpa	2.0– 3.5Mpa
Impact Rate at 17 Bar	28HZ	27HZ	25HZ	25HZ	23HZ	27HZ	16HZ
Recommended Rotation Speed	25 – 40 r/min	25 – 40 r/min	20 – 35 r/min	20–35 r/min	20 – 30 r/min	20 – 30 r/min	15 – 25 r/min
Air Consumption	1.0Mpa :4.5 m³/min	1.0Mpa :6 m³/min	1.0Mpa :9 m³/min	1.0Mpa :9 m³/min	1.0Mpa :10 m³/min	1.0Mpa :15 m³/min	1.0Mpa :30 m³/min
	1.5Mpa :9.0 m³/min	1.8Mpa :10 m³/min	1.8Mpa :15 m³/min	1.8Mpa :15 m³/min	1.8Mpa :20 m³/min	1.8Mpa :26 m³/min	.1.8Mpa :56 m³/min
		2.4Mpa :15 m³/min	2.4Mpa :23 m³/min	2.4Mpa :23 m³/min	2.4Mpa :28.5 m³/min	2.4Mpa :34 m³/min	2.4Mpa :78 m³/min

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NSD SERIES DTH HAMMER

Item Description	Weight (kg)					
	NSD4	NSD5	NSD6	NSD8	NSD10	NSD12
1. Top Sub	6.50	15.00	20.00	41.00	59.00	70.00
2. "O" Ring Of Top Sub	0.01	0.01	0.01	0.02	0.03	0.04
3. Breakout Ring	0.01			0.20	0.30	0.80
4. Check Valve	0.42	1.00	1.00	1.50	1.40	3.00
5. Spring	0.04	0.10	0.05	0.10	0.30	0.10
6. Compression Buffer	0.04	0.05	0.10	0.42	0.60	1.00
7. Air Distributor	2.20	3.50	5.00	12.50	11.50	20.00
8. Internal Cylinder	2.50	4.20	5.00	8.60	11.00	23.00
9. Piston	9.00	15.50	24.00	42.00	62.00	125.00
10. External Cylinder	15.60	25.00	35.00	65.00	110.00	170.00
11. "O" Ring Of Stop Ring	0.02	0.01	0.01	0.05	0.03	0.04
12. Stop Ring	0.20	0.50	0.50	1.20	0.60	4.80
13. Guided Sleeve			1.50	3.40	4.50	18.00
14. Breakout Ring	0.01				0.30	0.80
15. Drive Chuck	4.00	7.50	7.50	15.50	24.00	51.00
16. Drill Bit	9.60	15.60	25.80	37.00	115.00	120.00

	Technical Data					
	NSD4	NSD5	NSD6	NSD8	NSD10	NSD12
Length (Without Bit)	1084mm	1175mm	1261mm	1463mm	1502mm	1880mm
Weight (Without Bit)	40.50 kg	72.50 kg	100.00 kg	192.00 kg	290.00 kg	487.00 kg
External Diameter	Φ99mm	Φ125mm	Φ142mm Φ144mm Φ146mm Φ148mm	Φ180选配/Φ185 mm	Φ226mm	Φ275mm
Bit Shank	SD4	SD5	SD6	SD8	SD10	SD12
Hole Range	Φ110 –Φ135 mm	Φ135 –Φ155 mm	Φ155 –Φ190 mm	Φ195 –Φ254 mm	Φ254 –Φ311 mm	Φ305 –Φ445 mm
Connection Thread	API $2\frac{3}{8}$" Reg	API $3\frac{1}{2}$" Reg API $2\frac{7}{8}$" Reg	API $3\frac{1}{2}$" Reg	API $4\frac{1}{2}$" Reg	API $4\frac{1}{2}$" Reg API $6\frac{5}{8}$" Reg	API $6\frac{5}{8}$" Reg
Working Pressure	1.2 – 2.0 Mpa	1.3 – 2.3Mpa	1.5 – 2.5 Mpa	1.5 – 3.0 Mpa	2.0 – 3.5 Mpa	2.0 – 3.5 Mpa
Impact Rate at 17 Bar	27HZ	25HZ	23HZ	20HZ	18HZ	16HZ
Recommended Rotation Speed	25 – 40 r/min	20 – 35 r/min	20 – 30 r/min	5 – 25 r/min	20 – 30 r/min	15 – 25 r/min
Air Consumption	1.0Mpa :6 m³/min	1.0Mpa :9 m³/min	1.0Mpa :10 m³/min	1.0Mpa :15 m³/min	1.0Mpa :22 m³/min	1.0Mpa :30 m³/min
	1.8Mpa :10 m³/min	1.8Mpa :15 m³/min	1.8Mpa :20 m³/min	1.8Mpa :26 m³/min	1.8Mpa :40 m³/min	1.8Mpa :56 m³/min
	2.4Mpa :15 m³/min	2.4Mpa :23 m³/min	2.4Mpa :28.5 m³/min	2.4Mpa :34 m³/min	2.4Mpa :55 m³/min	2.4Mpa :78 m³/min

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NQL SERIES DTH HAMMER

Item Description	Weight (kg)			
	NQL4	NQL5	NQL6	NQL8
1. Top Sub	6.50	15.00	20.00	41.00
2. "O"Ring Of Top Sub	0.01	0.015	0.02	0.02
3. Breakout Ring				0.30
4. Check Valve	0.42	1.00	1.00	1.50
5. Spring	0.04	0.10	0.10	0.10
6. Compression Buffer	0.04	0.10	0.10	0.42
7. Air Distributor	2.20	3.50	6.00	13.00
8. Internal Cylinder	2.30	4.20	5.00	8.60
9. Piston	9.00	19.00	23.50	41.00
10. External Cylinder	16.5	24.60	31.00	60.00
11. Guided Sleeve		0.90	1.00	2.20
12. "O" Ring Of Stop Ring	0.01	0.01	0.02	0.02
13. Stop Ring	0.30	0.40	0.60	1.20
14. Breakout Ring				0.30
15. Drive Chuck	3.00	4.60	5.40	12.00
16. Drill Bit	9.50	15.50	24.60	35.00

	Technical Data			
	NQL4	NQL5	NQL6	NQL8
Length (Without Bit)	1097mm	1156mm	1212mm	1465mm
Weight (Without Bit)	41.00 kg	73.00 kg	95.00 kg	182.00 kg
External Diameter	Φ99mm	Φ125mm	Φ142mm Φ144mm Φ146mm Φ148mm	Φ180mm
Bit Shank	QI40	QI50	QI60	QI80
Hole Range	Φ110 –Φ135 mm	Φ135 –Φ155 mm	Φ155 –Φ190 mm	Φ195 –Φ254 mm
Connection Thread	API $2\frac{3}{8}$" Reg	API $3\frac{1}{2}$" Reg API $2\frac{7}{8}$" Reg	API $3\frac{1}{2}$" Reg API $2\frac{7}{8}$" Reg $2\frac{7}{8}$"IF	API $4\frac{1}{2}$" Reg
Working Pressure	1.2 – 2.0 Mpa	1.3 – 2.3 Mpa	1.5 – 2.5 Mpa	1.5 – 3.0 Mpa
Impact Rate at 17 Bar	27HZ	25HZ	23HZ	20HZ
Recommended Rotation Speed	25 – 40 r/min	25 – 40 r/min	20 – 30 r/min	15 – 25 r/min
Air Consumption	1.0Mpa :6 m³/min	1.0Mpa :9 m³/min	1.0Mpa :10 m³/min	1.0Mpa :15 m³/min
	1.8Mpa :10 m³/min	1.8Mpa :15 m³/min	1.8Mpa :20 m³/min	1.8Mpa :26 m³/min
	2.4Mpa :15 m³/min	2.4Mpa :23 m³/min	2.4Mpa :28.5 m³/min	2.4Mpa :34 m³/min

fm@espartana.com.pt | www.espartana.com.pt | +351910078653