



Support your business with

Quality Foundation Parts



Your First Option:

Unicorn Drill is a world leading foundation drilling tools manufacturer.

Our vision is to be the China's leader as a piling solution provider. When Unicorn Drill decide to create the world class drilling tools, we have already clearly in mind the outline of business plan: to become the benchmark in the production of tools and to let the whole industry been impressed by Chinese manufacturing.

Our mission is to provide quality professional tools, exceeding customer expectations, by the effective utilization of for any type of construction resources, with best practices of the industry to construct a stronger foundation.

We sincerely to cooperate with you for bright future!



Drilling Buckets

Features:

- Option prolong straight bucket shell can avoid drilling hole inclined;
- Choose conical shell type can accelerate dumping, increase of efficiency;
- Ventilation pipe shaft inside prevents vacuum; add collar plate according to working conditions.

Rock Drilling Bucket



Drilling Dia mm	Shell Dia mm	Shell Length mm	Shell Thickness mm	Teeth Qty pcs	Single cut	Double cut
					Weight kg	Weight kg
600	550	1200	16	5+2	682	712
700	650	1200	16/20	6+2	826	866
800	700	1200	16/20	7+2	921	971
900	800	1200	16/20	10+1	1061	1130
1000	900	1200	16/20	8+4+2	1190	1280
1100	1000	1200	16/20	10+4+2	1360	1440
1200	1100	1200	16/20	10+4+2	1513	1643
1300	1200	1200	16/20	12+4+2	1778	1938
1400	1300	1200	16/20	13+4+2	1919	2100
1500	1400	1200	16/20	14+4+2	2164	2304
1600	1500	1200	16/20	16+4+2	2428	2668
1700	1600	1000	20	16+4+4	2405	2535
1800	1700	1000	20	18+4+4	2957	3207
2000	1900	800	20	20+4+4	3247	3567
2200	2100	800	20	22+4+4	3787	4137
2500	2400	800	20	24+4+4	4236	4716

Remark:
Cutter and Bottom Custom: Single and Double design as Customer demand;
Kelly Box Size: Kelly box size based on the kelly bar, like 130*130, 150*150, 200*200 etc;
***Other sizes can be manufactured as per customer demand**

Drilling Buckets

Features:

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Choose conical shell type can accelerate dumping, increase of efficiency;

Ventilation pipe shaft inside prevents vacuum; add collar plate according to working conditions.

Drilling Dia mm	Shell Dia mm	Shell Length mm	Shell Thickness mm	Teeth Qty pcs	Single cut	Double cut
					Weight kg	Weight kg
600	550	1200	16	4	656	686
700	650	1200	16/20	4	784	824
800	700	1200	16/20	4	909	959
900	800	1200	16/20	5	1051	1120
1000	900	1200	16/20	6	1186	1276
1100	1000	1200	16/20	6	1336	1416
1200	1100	1200	16/20	6	1455	1585
1300	1200	1200	16/20	7	1668	1828
1400	1300	1200	16/20	8	1841	2022
1500	1400	1200	16/20	9	1938	2078
1600	1500	1200	16/20	10	2152	2392
1700	1600	1000	20	10	2271	2401
1800	1700	1000	20	11	2823	3073
2000	1900	800	20	12	3160	3480
2200	2100	800	20	14	3669	4019
2500	2400	800	20	16	4076	4556

Soil Drilling Bucket



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Kelly Box Size: Kelly box size based on the kelly bar, like 130*130, 150*150, 200*200 etc;

***Other sizes can be manufactured as per customer demand**

Drilling Augers

Features:

Design as straight type, better for carry soil;

Double cutter bearing uniform force, can avoid inclined hole;

Double spiral easy to carry soil, but meet cohesive soil, single spiral is easy to dump spoil.

Rock Drilling Augers



Drilling Dia mm	Flight Dia mm	Pitch mm	Flight Length mm	Teeth Qty pcs	Single cut	Double cut
					Weight kg	Weight kg
600	550	600	1200	20+4	438	537
700	650	600	1200	20+4	467	596
800	750	600	1200	22+4	512	708
900	850	600	1200	22+4	586	775
1000	950	600	1200	24+4	633	871
1100	1050	600	1200	26+4	674	958
1200	1150	600	1200	28+4	718	1047
1300	1250	600	1200	28+4	767	1145
1400	1350	600	1200	30+4	821	1253
1500	1450	600	1200	32+4	875	1367
1800	1750	600	1200	36+4	1081	1766

Remark:

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***Other sizes can be manufactured as per customer demand**

Drilling Augers

Features:

- Design as straight type, better for carry soil;
- Double cutter bearing uniform force, can avoid inclined hole;
- Double spiral easy to carry soil, but meet cohesive soil, single spiral is easy to dump spoil.

Soil Drilling Augers

Drilling Dia mm	Flight Dia mm	Pitch mm	Flight Length mm	Teeth Qty pcs	Single cut	Double cut
					Weight kg	Weight kg
600	550	600	1200	4	478	561
700	650	600	1200	4	516	630
800	750	600	1200	4	554	700
900	850	600	1200	5	610	796
1000	950	600	1200	6	668	904
1100	1050	600	1200	6	732	1016
1200	1150	600	1200	6	800	1139
1300	1250	600	1200	7	879	1279
1400	1350	600	1200	8	959	1429
1500	1450	600	1200	9	1050	1590
1800	1750	600	1200	11	1351	2132



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***Other sizes can be manufactured as per customer demand**

Core Barrel

Features:

Cutting ring with rock drilling bits and releases the internal stress of rock;

Rock drilling bits perform stage breaking and drilling;

Small barrel facilitates the coring operation; large barrel performs stage breaking.

Core Barrel with Bullet teeth



Drilling Dia mm	Shell Dia mm	Shell Length mm	Shell Thickness mm	Teeth Qty pcs	Weight kg
600	530	1200	16+30	6	500
700	620	1200	16+30	9	572
800	720	1200	16+30	9	660
900	820	1200	16+30	12	730
1000	920	1200	16+30	12	810
1100	1020	1200	16+30	15	861
1200	1120	1200	16+30	15	1000
1300	1220	1200	16+30	15	1052
1400	1320	1200	16+30	18	1180
1500	1420	1200	16+30	18	1240
1600	1520	1200	16+30	21	1350
1700	1620	1000	20+40	24	1635
1800	1720	1000	20+40	24	1690
2000	1920	800	20+40	27	1770
2200	2120	800	20+40	30	1950
2500	2420	800	20+40	33	2450

Remark:

Cutter and Bottom Custom: Single and Double design as Customer demand;

Kelly Box Size: Kelly box size based on the kelly bar, like 130*130, 150*150, 200*200 etc;

***Other sizes can be manufactured as per customer demand**

Core Barrel

Features:

Cutting ring with roller bits and releases the internal stress of rock;

Roller bits perform stage breaking and drilling;

Small barrel facilitates the coring operation; large barrel performs stage breaking.

Core Barrel with Roller bits



Drilling Dia mm	Shell Dia mm	Shell Length mm	Shell Thickness mm	Teeth Qty pcs	Weight kg
600	520	1200	16+30	4	550
700	600	1200	16+30	4	612
800	700	1200	16+30	6	734
900	800	1200	16+30	6	794
1000	900	1200	16+30	8	908
1100	1000	1200	16+30	8	1006
1200	1100	1200	16+30	8	1089
1300	1200	1200	16+30	10	1175
1400	1300	1200	16+30	12	1327
1500	1400	1200	16+30	12	1387
1600	1500	1200	16+30	14	1522
1700	1600	1000	20+40	16	1831
1800	1700	1000	20+40	16	1886
2000	1900	800	20+40	18	1991
2200	2100	800	20+40	19	2162
2500	2400	800	20+40	20	2687

Remark:

Cutter and Bottom Custom: Single and Double design as Customer demand;

Kelly Box Size: Kelly box size based on the kelly bar, like 130*130, 150*150, 200*200 etc;

***Other sizes can be manufactured as per customer demand**

Cleaning Bucket

Features:

Choose conical or straight bucket according to different working conditions;

Choose straight guide plate or no guide plate according to different working condition;

Applicable scope: cleaning spoil at pile bottom, soft layer.

Cleaning Bucket



Drilling Dia mm	Shell Dia mm	Shell Length mm	Shell Thickness mm	Weight kg
600	550	1200	16	740
700	650	1200	16/20	837
800	700	1200	16/20	920
900	800	1200	16/20	1024
1000	900	1200	16/20	1109
1100	1000	1200	16/20	1293
1200	1100	1200	16/20	1431
1300	1200	1200	16/20	1591
1400	1300	1200	16/20	1778
1500	1400	1200	16/20	1988
1600	1500	1200	16/20	2194
1700	1600	1000	20	2592
1800	1700	1000	20	2875
2000	1900	800	20	3350
2200	2100	800	20	3829
2500	2400	800	20	4622

Remark:

Cutter and Bottom Custom: Single and Double design as Customer demand;

Kelly Box Size: Kelly box size based on the kelly bar, like 130*130, 150*150,200*200 etc;

***Other sizes can be manufactured as per customer demand**

Continuous Flight Auger



Continuous Flight Auger

Continuous Flight Augers or CFA also manufactured by Unicorn Drill for different drilling conditions i.e., soft soil or hard rock. CFA is equipped with different types of hexagonal coupling depending on the type of soil being drilled, drilling method being used and also the drilling diameter.

Size	Diameter(D) (mm)	Pitch(P) (mm)	Flight thickness(T) (mm)	Spacing(S) (mm)
600	580	1000	30	500
700	680	1150	30	500
800	780	1300	30	600
900	880	1400	30	650
1000	980	1500	30	700

**Other sizes can be manufactured as per customer demand*

Kelly Bar



Interlocking kelly Bar

Identification No.	Torque(ton.m)	O.D.(mm)	Sections	Drilling Depth(m)
IK 36/470/3/27-28	36	470	3	27-28
IK 36/470/4/36-72	36	470	4	36-72
IK 25/440/3/36	25	440	3	36
IK 25/440/4/50	25	440	4	50
IK 28/394/3/24-48	28	394	3	24-48
IK 28/394/4/32-65	28	394	4	32-65
IK 18/377/3/36	18	377	3	36
IK 18/377/4/50	18	377	4	50
IK 22/406/3/36	22	406	3	36
IK 22/406/4/50	22	406	4	50
IK 36/508/4/60	36	508	4	60

**Other sizes can be tailor-made as requirement*

Other Kelly Bar Accessories:



Kelly Bar



Identification No.	Torque(ton.m)	O.D.(mm)	Sections	Drilling Depth(m)
FK 36/470/3/27-28	36	470	3	27-28
FK 36/470/4/36-72	36	470	4	36-72
FK 25/440/3/36	25	440	3	36
FK 25/440/4/50	25	440	4	50
FK 25/440/5/65	25	440	5	65
FK 28/394/3/24-48	28	394	3	24-48
FK 28/394/4/32-65	28	394	4	32-65
FK 18/377/3/36	18	377	3	36
FK 18/377/4/50	18	377	4	50
FK 22/406/3/36	22	406	3	36
FK 22/406/4/50	22	406	4	50
FK 36/508/4/60	36	508	4	60
FK 36/508/5/75	36	508	5	75

***Other sizes can be tailor-made as requirement**

Other Kelly Bar Accessories:



Casing Items



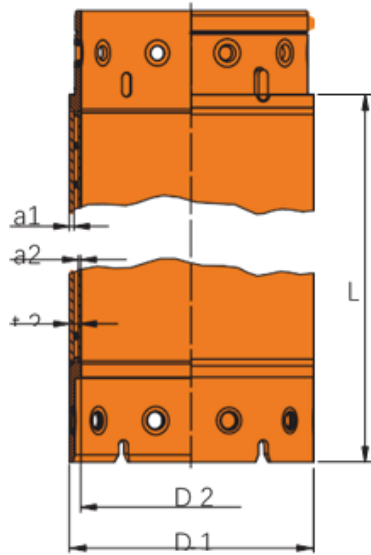
Full Casing System

The casing drilling is obtained by driving a steel siding into the ground in order to protect the whole drilling operation; basically the rotary drilling tool during the working process, performs inside mechanical protection made by the casing fixed into ground.

Single Wall Casing Technical Data

Diameter	Length						Casing wall Thickness	Casing wall Thickness	Bolt QTY
	1m	2m	3m	4m	5m	6m			
(mm)	Weight(KG)Parts Number						(mm)	(mm)	(Nos)
1300/1200	845	1475	2105	2735	3365	3995	20	40	12
1500/1400	1310	2220	3130	4040	4950	5860	25	50	12
1800/1700	1580	2675	3770	4865	5960	7055	25	50	16
2000/1880	2140	3355	4570	5785	7000	8215	25	60	12
2200/2080	2350	3690	5030	6350	7710	9050	25	60	12
2500/2380	2575	4100	5625	7150	8675	10200	25	60	16

Casing Items



Double Wall Casing Technical Data

Diameter (mm)	Length						Casing wall Thickness1 (mm)	Casing wall Thickness2 (mm)	Total Thickness (mm)	Bolt QTY (Nos)
	1m	2m	3m	4m	5m	6m				
D1/D2	Weight(KG)Parts Number						A1	A2	T2	Bolt
620/540	403	739	1074	1411	1747	2081	12	8	40	0
750/670	492	902	1311	1722	2131	2540	12	8	40	10
880/800	585	1069	1552	2036	2520	3005	12	8	40	10
1000/920	669	1221	1773	2328	2877	3429	12	8	40	10
1180/1100	844	1580	2316	3052	3787	4522	16	8	40	12
1200/1120	872	1620	2370	3120	3870	4620	16	8	40	12
1300/1220	933	1746	2558	3372	4184	4996	16	8	40	12
1500/1400	1433	2628	3817	5009	6210	7393	20	10	50	12
1800/1700	1730	3166	4602	6038	7474	8910	20	10	50	16
2000/1880	2450	4280	6110	7940	9770	11600	20	15	60	12
2200/2080	2700	4720	6740	8760	10780	12800	20	15	60	12
2500/2380	2960	5240	7520	9800	12080	14360	20	15	60	16

Other Accessories



Casing Shoe



Casing Drive



Casing Adaptor



Casing Oscillator



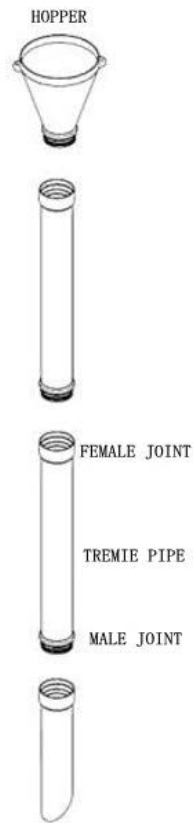
Casing Oscillator

The short type Hydraulic casing oscillators are Perfectly suited for mounting rotary drilling rigs. The short hydraulic casing oscillators have been designed in accordance with the latest technical know-how. Extremely sturdy construction guarantee Worth-while use on size. By means of exact statical Calculations in conjunction with higher quality material, an optimum conformity of loads, weight and material strength is achieved.

	Size		UND1000/D	UND1300/D	UND1500/D	UND2000/D
D	Max.Casing diameter	mm	1000	1300	1500	2000
W	Width of machine	mm	1850	2250	2500	3200
L	Length of machine	mm	2700	3870	4070	4800
L1	W.retaining cycl.	mm	950	1200	1450	1700
H	Height of machine	mm	1250	1600	1600	1600
H1	Height from ground to top of cradle guide	mm	850	1020	1020	1020
H2	Height of cradle guide	mm	400	400	500	500
	Operating pressure	Mpa	27	27	27	27
	Torque	KN.m	650	1750	2000	2520
	Stroke	mm	350	450	450	450
	Lifting force	KN	800	1800	1800	2000
	Clamping force	KN	530	1650	2100	2510
	Rotation angle		22°	22°	22°	22°
	Casing rotation	mm	185	245	290	340
	Weight	kg	7500	11200	15000	17600

Tremie Pipe

Thread Type



Tremie Pipe

During the operations they are lowered inside and through the steel cage reinforcement to protect concrete from soil contamination water filtering and to avoid any possible concrete quality corruption.

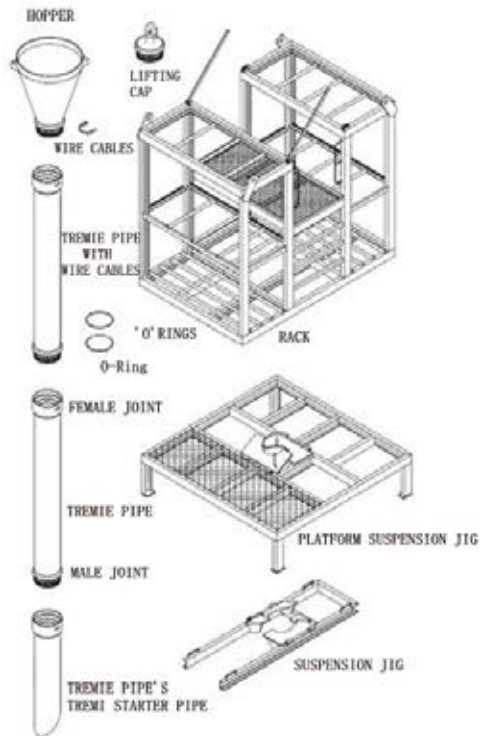
Unicorn Drill tremie pipes are made of quality drawn steel plates in order to guarantee high resistance elements.

Pipes sections can be connected by two kinds of coupling systems: threaded joints and wire cable joints.

While threaded tremie pipes are equipped with male/female joints with tread, the wire cable system is designed for quick assembly / dismantling of the various pipe sections during the concreting operations. Using wire cables joints water and mud penetrations is prevented by O-ring seals applied in between male and female joints.

Tremie Pipe

Wire Cable Type



Tremie Pipe Technical Data

Threaded Tremie Pipes

Female joint	Male joint	Tremie pipe	Tremie pipe Thickness	Weight for 1 m
mm	mm	mm	mm	kg
260	240	219	3	30
306	286	269	3	32
345	322	300	3	40

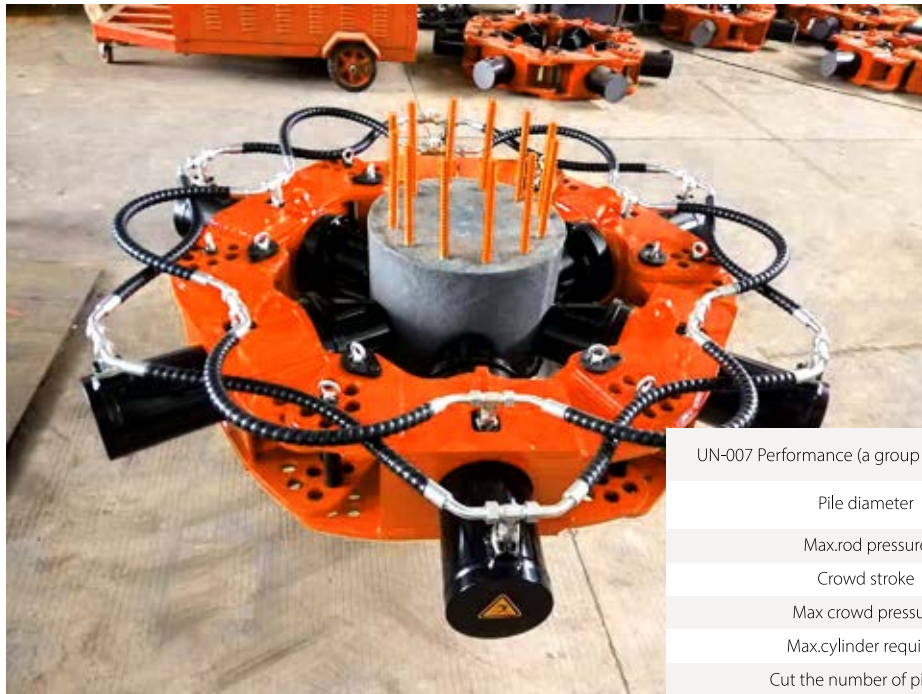
**Other dimensions are available on request.*

Tremie Pipes with Wire Cables

Female joint	Male joint	Tremie pipe	Tremie pipe Thickness	Weight for 1 m
mm	mm	mm	mm	kg
274	248	219	3	40
325	294	260	3	48
374	338	300	3	65

**Other dimensions are available on request.*

Pile Breaker



Pile Breaker

The low-cost hydraulic pile breakers can be easily handled for efficient, low-noise and safe operation. It imposes no impact force on the parent body of the pile and no influence on the bearing capacity of the pile, and shortens the construction period greatly. It is applicable for pile-group works and is recommended strongly by the construction department and the supervisor department.

UN-007 Performance (a group of 12 modules)		UN-007 construction parameters				
Pile diameter	1700-1850mm	Module number	The diameter range	Platform weight	weight	Height of single crush pile
Max.rod pressure	690KN	6	Φ 500-650mm	≥ 15t	1970kg	≤ 300mm
Crowd stroke	180mm	7	Φ 750-850mm	≥ 20t	2250kg	≤ 300mm
Max crowd pressure	34.3MPa	8	Φ 900-1050mm	≥ 25t	2530kg	≤ 300mm
Max.cylinder required	25L/min	9	Φ 1100-1250mm	≥ 26t	2810kg	≤ 300mm
Cut the number of pile/8h	40-100	10	Φ 1300-1450mm	≥ 30t	3090kg	≤ 300mm
Max.single cutting height	≤ 300mm	11	Φ 1500-1650mm	≥ 30t	3370kg	≤ 300mm
Matched machinery tonnage (excavator)	≥ 35t	12	Φ 1700-1850mm	≥ 35t	3650kg	≤ 300mm
Single module weight	280kg	13	Φ 1900-2050mm	≥ 35t	3930kg	≤ 300mm
Single module size	908×680×380mm					
Operating size	Φ 3200×Φ 3000mm					
Overall weight	3.7t					

Desander



Desander

UN-Desanding plant is widely used in the purification and recycling of slurry for the construction of hydropower, continuous concrete wall, sully shield tunnel , etc. the equipment is increasingly becoming a necessity of civilized construction since it not only can cut down construction cost, but also can reduce the pollution of the environment. It can provide you with main advantages as following.

UN-100/30 slurry separation system is widely used in the purification and recycling of slurry for the construction of hydropower, continuous concrete wall, slurry shield tunnel, etc. the equipment is increasingly becoming a necessity of civilized construction since it not only can cut down construction cost, but also can reduce the pollution of the environment.

Slurry feed capacity

100m³/h

Cut piont

30μm

Soild feed capacity

25-50t/h

Total capacity

24.2kw

Dismension

3.0*1.9*2.3m

Weight

2700kg

**Other models can be provided as requirement*

Teeth and Holder

Soil Teeth & Holder



18TL



25TL



BFZ70



BFZ72



BFZ80

Rock Bits



Unicorn-NB(30Mpa)



Unicorn-SB(60Mpa)



Unicorn-TB(70Mpa)



Unicorn-DB(70Mpa)



Unicorn-UB(80Mpa)



Unicorn-MB(100Mpa)



C31 & C30

Holder



B43H



B85



B85/2

Roller Bits

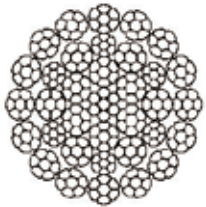


Pilot & Holder

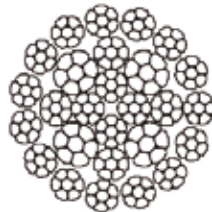


Wire Rope

35(W)*K7



25(W)*K7



Wire Rope for Rotary Drilling Rig

Nominal diameter mm	Mass (Approx.length mass) kg/100m	Tensile strength grade	
		1770 Mpa	1960 Mpa
		Minimum breaking force kN	
14	100	142	158
16	131	186	206
18	165	235	260
20	204	290	321
22	247	351	389
24	294	418	463
26	345	491	543
28	400	569	630
30	459	653	723
32	522	743	823
34	590	839	929
36	661	941	1040
38	736	1050	1160
40	816	1160	1290
42	900	1280	1420

Unicorn Drill

Your Foundation Optimizer

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