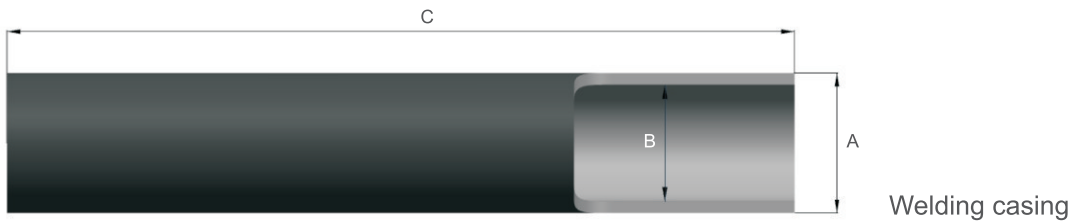




Casing Systems

- CASING & CASING SHOE ----- PAGE 57
- ECCENTRIC CASING SYSTEM ----- PAGE 59
- SLIDE BLOCK CASING SYSTEM ----- PAGE 61
- SYMMETRIC OVERBURDEN
DRILLING EQUIPMENT ----- PAGE 63
- DOUBLE CASING DRILLING TOOLS ----- PAGE 65

ABROAD CASING

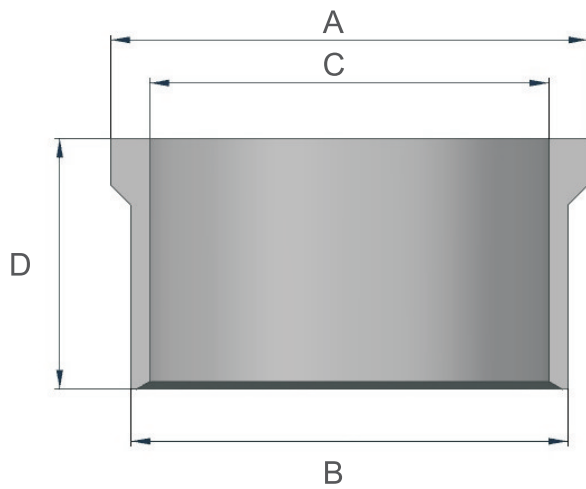


Technical Data

Outer Dia.(A) mm	Inner Dia.(B) mm	Wall Thickness mm	Weight(kg)
φ108	φ 95	6.5	16
φ114	φ 101	6.5	17
φ127	φ 114	6.5	19
φ140	φ 124	8	26
φ146	φ 127	9.5	32
φ168	φ 149	9.5	37
φ178	φ 159	9.5	39.5
φ194	φ 174	10	43
φ219	φ 199	10	51.5
φ245	φ 225	10	58
φ273	φ 253	10	65
φ325	φ 305	10	78

Order Guide :Outer Dia.(A)+ Inner Dia.(B)+Length(C)+thread(T)/Weldable(W)

CASING SHOE



Technical Data

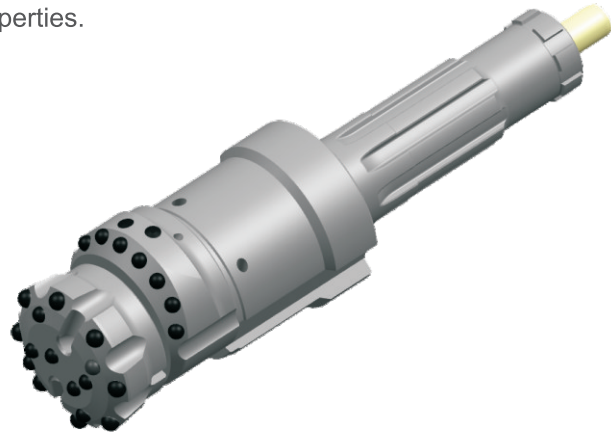
Outer Dia.(A) mm	Outer Dia.(B)	Inner Dia.(C) mm	Length(D) mm
φ108	φ 94.5	87	90
φ114	φ 100.5	90	92
φ127	φ 113.5	90	102
φ140	φ 123.5	76	113
φ146	φ 126.5	76	117
φ168	φ 147.5	90	138
φ178	φ 158.5	90	148
φ194	φ 173.5	95	162
φ219	φ 198	110	188
φ245	φ 224	110	212
φ273	φ 252	110	241
φ325	φ 304	125	281

Order Guide : Outer Dia.(A)+threaded Dia./Outer Dia.(B) Inner Dia.(C)+Length(D)

ECCENTRIC CASING SYSTEM

Features

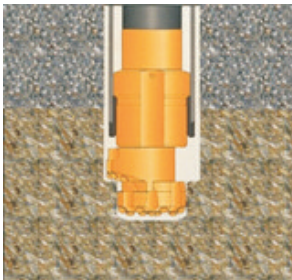
- Hardening treatment of the part's surface
with longer operating life and excellent anti-wear properties.
- Structural optimization
Strengthen the structural strength, easy to operate
- Superior performance
Stable and reliable performance, high drilling speed



Application Range

It is suitable for drilling water wells , geothermal wells , short micropiles ,medium mini-type grouting hole of building , damand harbour project .

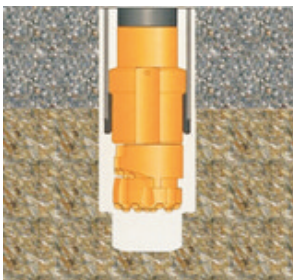
- ① When drilling starts , the reamer swings out and reams the pilot-hole wide enough for the casing tube to slide down behind the drill bit assembly



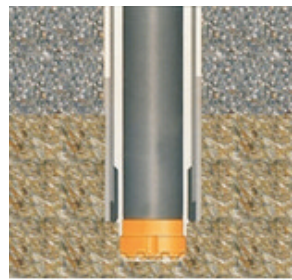
- ③ Casing tubes that are to be left in the drill hole should be sealed at the bottom of the hole by means of cement grout or some other sealing agent.



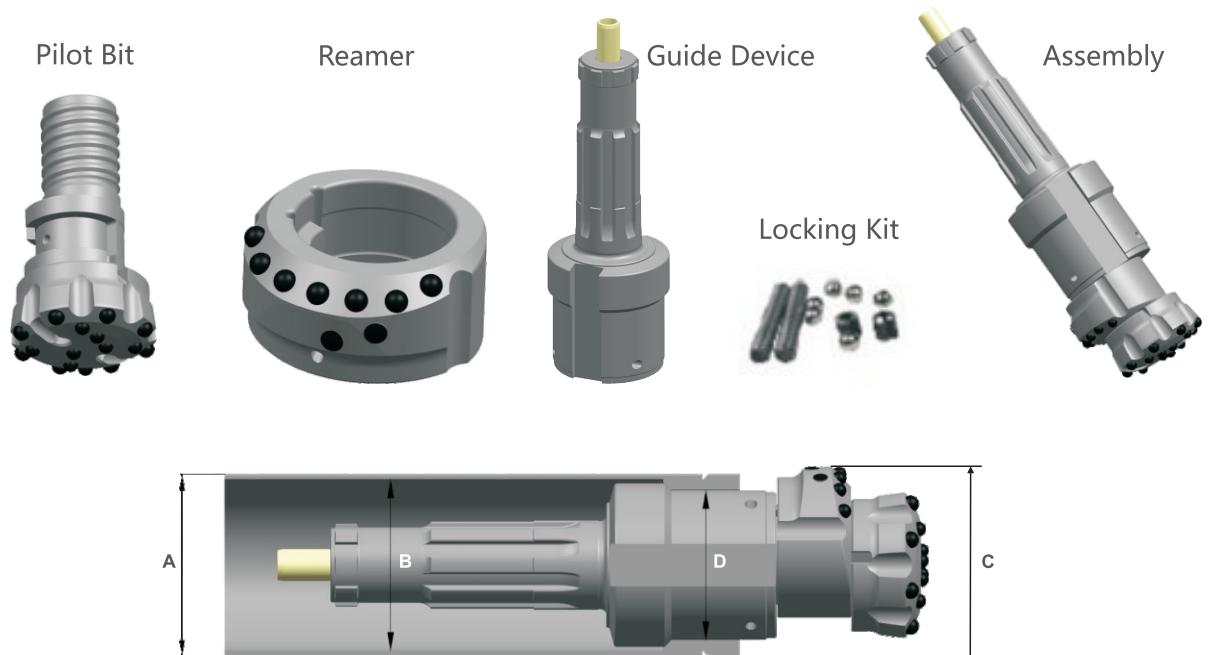
- ② When the required depth is reached , rotation is reversed carefully, whereupon the reamer swings in , allowing the drill bit assembly to be pulled up through the casing.



- ④ Drilling continues to the desired depth in the bedrock using a conventional drilling.



ECCENTRIC CASING SYSTEM



Technical Data

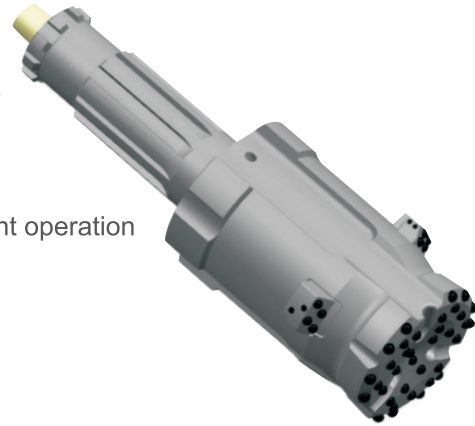
Outer Dia.(A) mm	Inner Dia.(B) mm	Reamed Dia.(C) mm	Inner Dia. Of Casing Shoe(D)mm	Hammer Type(E)	Drill Pipe mm
108	95	118	87	DHD3.5 QL30	76
114	101	123	92	DHD3.5 QL30	76
127	114	136	102	DHD3.5 QL30	76
140	124	148	113	DHD340 QL40	76
146	127	152	117	DHD340 QL40	76
168	149	181	138	DHD350 QL50	76/89
178	159	195	148	DHD350 QL50	76/89
194	174	206	162	DHD360 QL60	89/114
219	199	234	188	DHD360 QL60	89/114
245	225	264	212	DHD380 QL80	114
273	253	308	241	DHD380 QL80	114
325	305	378	281	NUMA100 SD10	114/127

Order Guide: Outer Dia(A) + Inner Dia(B) + Reamed Dia (C) + Inner Dia. Of Casing Shoe (D) + Hammer Type (E)

SLIDE BLOCK CASING SYSTEM

Features

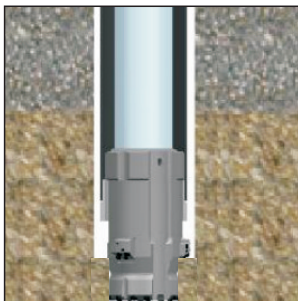
- Hardening treatment of the part's surface with longer operating life and excellent anti-wear properties.
- Simple structure greatly minimize the chances of structural failure, convenient operation
- Superior performance take care of both the drilling wear life and drilling efficiency



Application Range

It is suitable for drilling water wells , geothermal wells , short micropiles ,medium mini-type grouting hole of building , dam and harbour project .

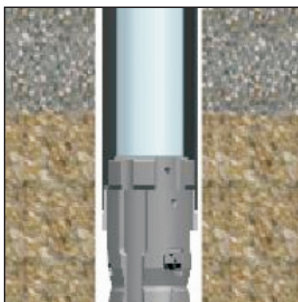
- ① When drilling starts , the reamer swings out and reams the pilot-hole wide enough for the casing tube to slide down behind the drill bit assembly



- ③ Casing tubes that are to be left in the drill hole should be sealed at the bottom of the hole by means of cement grout or some other sealing agent.



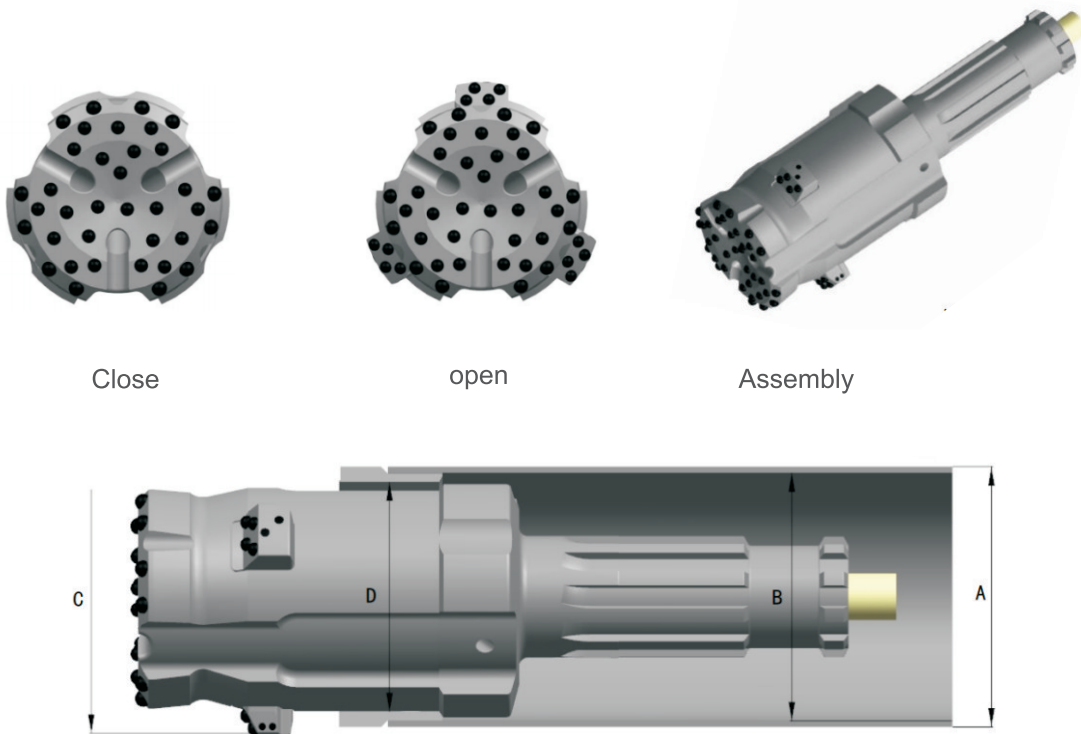
- ② When the required depth is reached , rotation is reversed carefully, whereupon the reamer swings in , allowing the drill bit assembly to be pulled up through the casing.



- ④ Drilling continues to the desired depth in the bedrock using a conventional drilling.



SLIDE BLOCK CASING SYSTEM



Technical Data

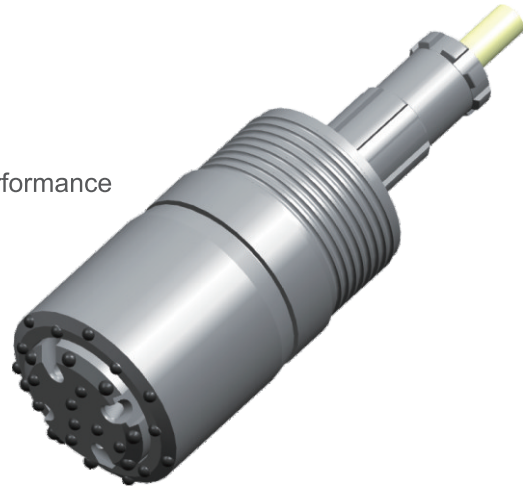
Outer Dia.(A) mm	Inner Dia.(B) mm	Max Reamed Dia.(C) mm	Inner Dia. Of Casing Shoe(D)mm	Hammer Type(E)	Drill Pipe mm
168	149	181	138	DHD350 QL50	76/89
178	159	191	148	DHD350 QL50	76/89
194	174	212	162	DHD360 QL60	89/114
219	199	235	188	DHD360 QL60	89/114
245	225	265	212	DHD380 QL80	114
273	253	293	241	DHD380 QL80	114
325	305	340	281	NUMA100 SD10	114/127
406	381	425	360	NUMA125 SD12	127

Order Guide: Outer Dia(A) + Inner Dia(B) + Reamed Dia (C) + Inner Dia. Of Casing Shoe (D) + Hammer Type (E)

SYMMETRIC OVERBURDEN DRILLING EQUIPMENT

Features

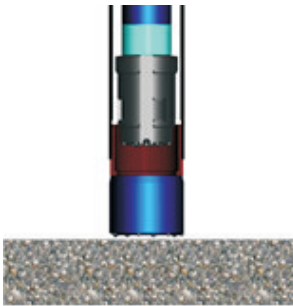
- Hardening treatment of the part's surface with longer operating life and excellent anti-wear properties.
- Structural optimization strength the structural strength, easy to operate, reliable performance
- Superior performance smooth with high efficiency



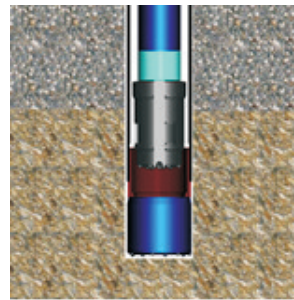
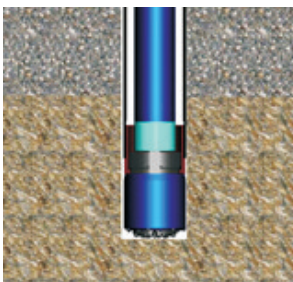
Application Range

It is suitable for drilling water wells , geothermal wells , short micropiles ,medium mini-type grouting hole of building , damand harbour project .

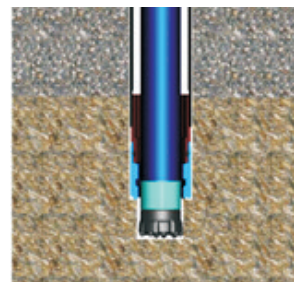
- 1 Ring bit and casing shoe assembly is welded to casing prior to drilling. Lock the assembly into pilot bit with hammer. The pilot bit's upper shoulder engages the shoulder of the casing shoe.
- 3 On completion of drilling and casing , the drill string with pilot bit is retrieved by a slight reverse rotation to unlock the bayonet coupling . The ring bit stays in the hole , and can be recovered only if the casing is retrieved .



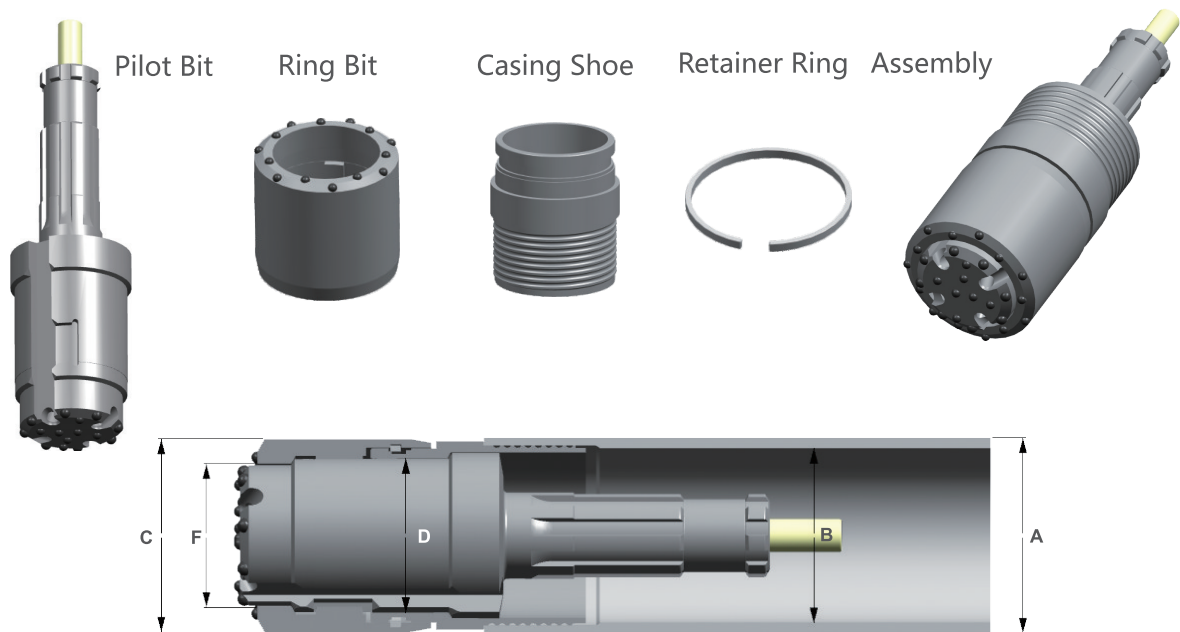
- 2 Hammer's percussive energy is transferred through the pilot and ring bits, crushing rock . Part of impact energy advances casing.



- 4 Drilling continues to the desired depth in the bedrock using a conventional drilling.



SYMMETRIC OVERBURDEN DRILLING EQUIPMENT



Technical Data

Outer Dia.(A) mm	Inner Dia.(B) mm	Reamed Dia.(C) mm	Inner Dia. Of Casing Shoe(D)mm	Max Outer Dia. Of Normal Bit(F)mm	Hammer Type(E)	Drill Pipe mm
108	95	118	80	70	DHD3.5 QL30	76
114	101	128	90	80	DHD3.5 QL30	76
127	114	141	100	90	DHD3.5 QL30	76
140	124	154	110	98	DHD340 QL40	76
146	127	160	114	102	DHD340 QL40	76
168	149	182	132	120	DHD350 QL50	76/89
178	159	192	142	130	DHD350 QL50	76/89
194	174	210	164	148	DHD360 QL60	89/114
219	199	235	184	170	DHD360 QL60	89/114
245	225	261	210	192	DHD380 QL80	114
273	253	293	238	219	DHD380 QL80	114/127
325	305	348	294	270	NUMA100 SD10	127
406	382	426	374	350	NUMA125 SD12	140

Order Guide: Outer Dia(A) + Inner Dia(B) + Reamed Dia (C) + Inner Dia. Of Casing Shoe (D) + Hammer Type (E)

DOUBLE CASING DRILLING TOOLS

Features

- Hardening treatment of the part's surface
with longer operating life and excellent anti-wear properties.
- Structural optimization
Strengthen the structural
- Superior performance
smooth with high efficiency

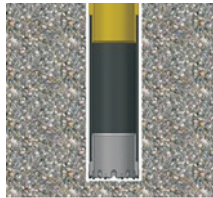


DOUBLE CASING DRILLING TOOLS(FOR TOP HAMMER)

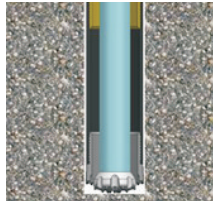
Application Range

It can be widely used in drilling for grouting holes in projects such as cofferdam , foundation and geothermal well and etc .

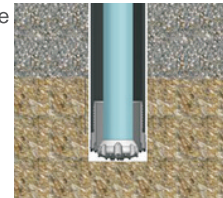
- ① firstly, connect the crown opener bit and the outer casing tube, the drill head of the rig impacts the advancing of the outer casing tube, until the completion of the first tube.



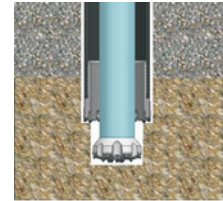
- ② The inner opener bit is connected with the drill rod, the drill head alongside the bore of the outer tube, until the completion of the first tube.



- ③ connect the drill rod and the tube, the drill head of the rig push forward the external casing tube altogether with the drill rod until the external casing tube is into the desired epth.



- ④ No need to add any casing tube in the base rock, only apply with the drill rod to push down to the desired depth.

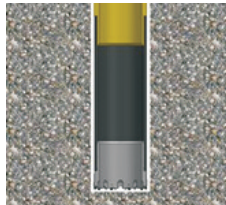


DOUBLE CASING DRILLING TOOLS(FOR DTH HAMMER)

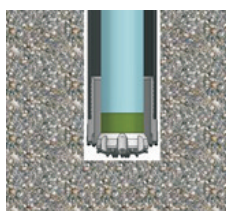
Application Range

It can be widely used in drilling for grouting holes in projects such as cofferdam , foundation and geothermal well and etc .

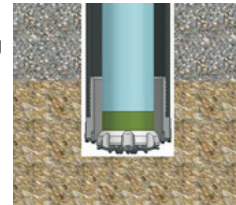
- ① firstly, connect the crown opener bit and the external casing tube, the drill head of the rig impacts the advancing of the external casing tube, until the completion of the first tube.



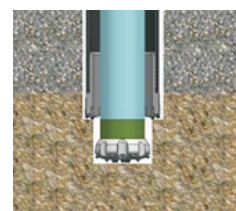
- ② the hammer connected with the drill rod, the hammer drill alongside the external casing tube until the completion of the first tube.



- ③ connect the drill rod with the casing tube, the drill head of the rig push forward the external casing tube, the hammer impacts the drill rod forward until the external casing tube is into the desired depth.



- ④ Drilling continues to the desired depth in the bedrock using a conventional drilling.



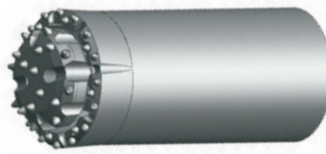
DOUBLE CASING DRILLING TOOLS



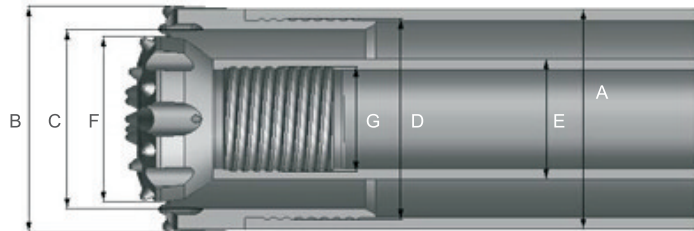
Crown Opener Bit



Inner Opener Bit



Assembly

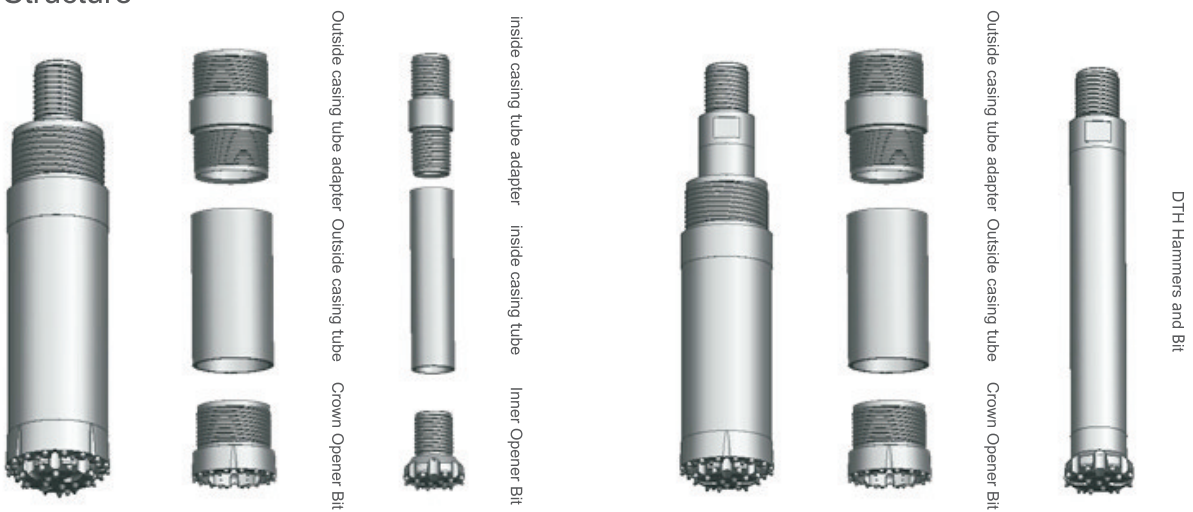


Technical Data

Outer Dia.(A) mm	Reamed Dia.(B) mm	Inner Dia.(C) mm	Thread(D) mm	Drill Rod Dia.(E) mm	Drill Bit Dia.(F) mm	Thread (G)
118	125	88	104.5	76	83	R56
133	140	108	122	76	102	R56
146	152	120	134	89	116	R78
168	172	133	146.5	114	128	R83
216	225	178	203	114	165	R102

Order Guide: Outer Dia(A)+Reamed Dia (B)+Inner Dia (C)+Thread(D)+ Drill Rod Dia(E)+Drill Bit Dia(F)+Thread(G)

Structure



Top hammer type drilling inside the case

DTH hammer type drilling inside the case