

Kelly drilling tools

EN



LIEBHERR

Contents

Kelly drilling tools	3
<hr/>	
Augers	4
Description and technical data	6
<hr/>	
Drilling buckets	10
Description and technical data	11
<hr/>	
Core barrels	14
Description and technical data	15
<hr/>	
Special drilling tools	18
Belling buckets	19
Boulder extractor	19
<hr/>	
Casings and accessories, cutting shoes and casing drivers	20
Casings	21
Casing accessories	22
Cutting shoes	22
Casing drivers	23
<hr/>	
Wear parts for drilling tools	24
<hr/>	
Hydraulic retaining clamps for casings	25
<hr/>	
Tremie pipes	26

GL = total length

NL = effective length

All illustrations are examples only. The given weights are also approximate values that may deviate from the actual values.

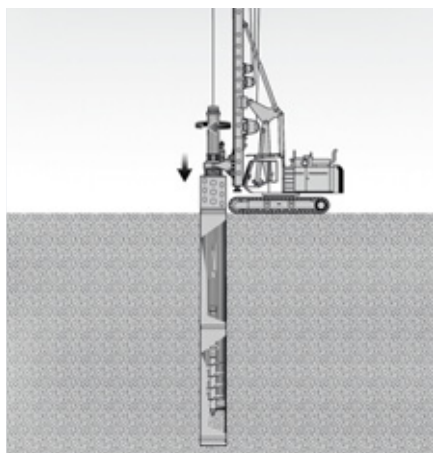
Kelly drilling tools

The Kelly drilling method ranks as one of the most flexible dry drilling methods. Depending on the size of the machine, drilling depths of more than 120 m and diameters of more than 3000 mm can be achieved. With the Kelly drilling method, uncased, partly cased or fully cased boreholes can be drilled, also as inclined boreholes. Support fluids or bellows buckets can also be used.

A wide range of drilling tools enables the optimal loosening, breaking up and conveying of the prevailing soil or rock. A long service life and optimal cutting speeds are ensured through continuous further development of drilling tools and the use of high-quality wear protection, as well as cutting and ripping teeth combined with quick exchange systems. This results in the highest possible drilling performance and a reduction in wear and tear on Kelly bars and drilling rigs.

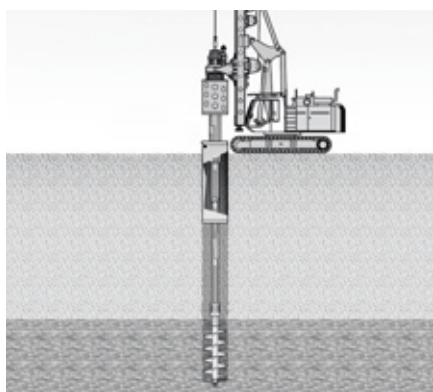
Available drilling tool diameters

These apply for all Kelly drilling tools listed in this brochure.
Other diameters available on request.



Cased drilling

Ø drilling tool mm	Ø casing mm outside / inside
520	620 / 540
650	750 / 670
700	800 / 720
780	880 / 800
900	1000 / 920
970	1080 / 1000
1060	1180 / 1100
1180	1300 / 1220
1370	1500 / 1420
1650	1800 / 1720
1840	2000 / 1910



Uncased drilling (with support fluid)

Ø drilling tool mm
600
700
800
900
1000
1200
1500
1800
2000



Augers



Model AU-FC



Model AU-RSC



Model AU-PL



Model AU-FC2



Model AU-RSC2



Model AU-P



Model AU-RSCi

Except for model AU-P, all augers are available in two lengths:
Standard effective length 1500 mm
Extended version 2500 mm

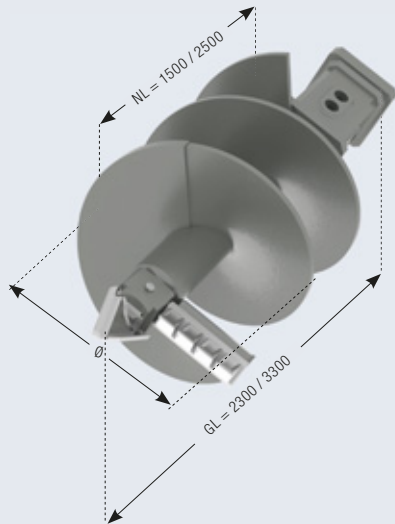
Drilling tools are fitted with a 200 x 200 mm Kelly box as a standard.
Other sizes available on request



Description and technical data

Single-start auger

Model AU-FC



Range of application

Firm to very stiff cohesive soils as well as in loosely to densely consolidated non-cohesive soils

Features

Kelly box 200 mm, flat teeth, fishtail pilot bit, easily exchangeable hard metal wear plates and hardfacing as wear protection

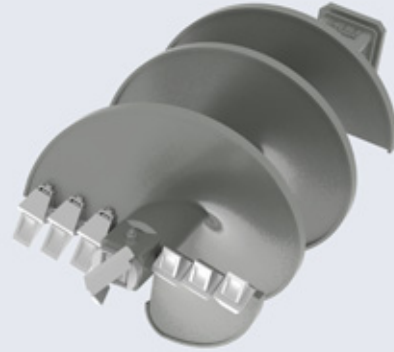
Ø auger mm	Ø casing mm	Weight kg NL = 1.5 m / 2.5 m	Max. torque kNm
520	620 / 540	635 / 900	350
650	750 / 670	690 / 1005	350
700	800 / 720	730 / 1120	350
780	880 / 800	850 / 1265	480
900	1000 / 920	915 / 1385	480
970	1080 / 1000	980 / 1510	480
1060	1180 / 1100	1135 / 1705	480
1180	1300 / 1220	1305 / 1915	480
1370	1500 / 1420	1380 / 2005	480
1650	1800 / 1720	1510 / 2480	480
1840	2000 / 1910	1735 / 2765	480

Ø auger mm	Ø bored pile mm	Weight kg NL = 1.5 m / 2.5 m	Max. torque kNm
600	600	663 / 953	350
700	700	730 / 1120	350
800	800	860 / 1275	480
900	900	915 / 1385	480
1000	1000	995 / 1525	480
1200	1200	1305 / 1915	480
1500	1500	1445 / 2243	480
1800	1800	1680 / 2690	480
2000	2000	1930 / 2990	480

Other sizes available on request

Double-start auger

Model AU-FC2



Range of application

Firm to very stiff cohesive soils as well as in loosely to densely consolidated non-cohesive soils

Features

Kelly box 200 mm, flat teeth, fishtail pilot bit, easily exchangeable hard metal wear plates and hardfacing as wear protection

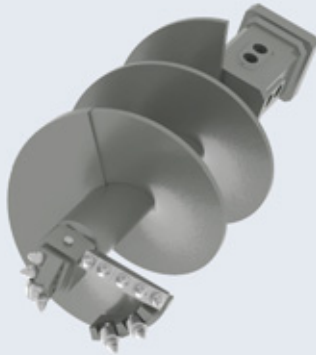
Ø auger mm	Ø casing mm	Weight kg NL = 1.5 m / 2.5 m	Max. torque kNm
520	620 / 540	675 / 940	350
650	750 / 670	720 / 1035	350
700	800 / 720	780 / 1170	350
780	880 / 800	925 / 1340	480
900	1000 / 920	1025 / 1495	480
970	1080 / 1000	1110 / 1640	480
1060	1180 / 1100	1260 / 1830	480
1180	1300 / 1220	1410 / 2035	480
1370	1500 / 1420	1565 / 2190	480
1650	1800 / 1720	1750 / 2720	480
1840	2000 / 1910	1995 / 2930	480

Ø auger mm	Ø bored pile mm	Weight kg NL = 1.5 m / 2.5 m	Max. torque kNm
600	600	700 / 990	350
700	700	780 / 1170	350
800	800	940 / 1355	480
900	900	1025 / 1495	480
1000	1000	1125 / 1655	480
1200	1200	1410 / 2035	480
1500	1500	1660 / 2455	480
1800	1800	1845 / 2950	480
2000	2000	2220 / 3275	480

Other sizes available on request

Single-start rock auger

Model AU-RSC



Range of application

Very densely consolidated non-cohesive soils and low strength rock up to approx. 50 MPa. and platy rock

Features

Kelly box 200 mm, cutter bar with round shank chisels and calibration chisels, round shank chisel pilot bit, easily exchangeable hard metal wear plates and hardfacing as wear protection

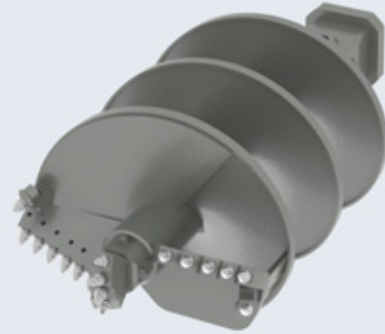
Ø auger mm	Ø casing mm	Weight kg NL = 1.5 m / 2.5 m	Max. torque kNm
520	620 / 540	670 / 935	350
650	750 / 670	780 / 1096	350
700	800 / 720	890 / 1280	350
780	880 / 800	910 / 1325	480
900	1000 / 920	1010 / 1480	480
970	1080 / 1000	1120 / 1650	480
1060	1180 / 1100	1220 / 1730	480
1180	1300 / 1220	1530 / 2140	480
1370	1500 / 1420	1825 / 2430	480
1650	1800 / 1720	1915 / 2885	480
1840	2000 / 1910	2250 / 3175	480

Ø auger mm	Ø bored pile mm	Weight kg NL = 1.5 m / 2.5 m	Max. torque kNm
600	600	750 / 1040	350
700	700	890 / 1280	350
800	800	930 / 1345	480
900	900	1010 / 1480	480
1000	1000	1150 / 1680	480
1200	1200	1530 / 2130	480
1500	1500	1875 / 2480	480
1800	1800	2090 / 2975	480
2000	2000	2500 / 3305	480

Other sizes available on request

Double-start rock auger

Model AU-RSC2



Range of application

Very densely consolidated non-cohesive soils, low strength rock up to approx. 50 MPa, platy rock and secant bored piled walls

Features

Kelly box 200 mm, cutter bar with round shank chisels and calibration chisels, round shank chisel pilot bit, easily exchangeable hard metal wear plates and hardfacing as wear protection

Ø auger mm	Ø casing mm	Weight kg NL = 1.5 m / 2.5 m	Max. torque kNm
520	620 / 540	700 / 965	350
650	750 / 670	780 / 1095	350
700	800 / 720	840 / 1230	350
780	880 / 800	960 / 1375	480
900	1000 / 920	1060 / 1530	480
970	1080 / 1000	1170 / 1700	480
1060	1180 / 1100	1270 / 1840	480
1180	1300 / 1220	1750 / 2360	480
1370	1500 / 1420	2050 / 2675	480
1650	1800 / 1720	2450 / 3420	480
1840	2000 / 1910	2715 / 3800	480

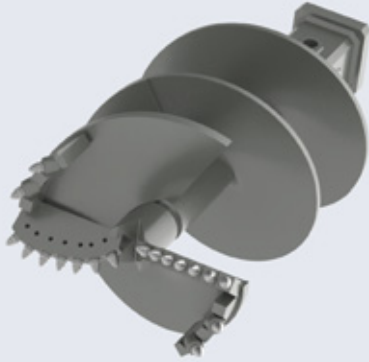
Ø auger mm	Ø bored pile mm	Weight kg NL = 1.5 m / 2.5 m	Max. torque kNm
600	600	730 / 995	350
700	700	840 / 1230	350
800	800	975 / 1390	480
900	900	1060 / 1530	480
1000	1000	1185 / 1715	480
1200	1200	1750 / 1840	480
1500	1500	2235 / 3020	480
1800	1800	2685 / 3620	480
2000	2000	2985 / 4010	480

Other sizes available on request

Description and technical data

Double-start rock auger without pilot bit

Model AU-RSCi



Range of application

Medium-hard rock up to 60 MPa, fissured rock

Features

Kelly box 200 mm, cutter bars with round shank chisels and calibration chisels, easily exchangeable hard metal wear plates and hardfacing as wear protection

Ø auger mm	Ø casing mm	Weight kg NL = 1.5 m / 2.5 m	Max. torque kNm
520	620 / 540	670 / 795	350
650	750 / 670	780 / 925	350
700	800 / 720	835 / 1000	350
780	880 / 800	910 / 1085	480
900	1000 / 920	975 / 1175	480
970	1080 / 1000	1030 / 1270	480
1060	1180 / 1100	1125 / 1365	480
1180	1300 / 1220	1505 / 2115	480
1370	1500 / 1420	1675 / 2300	480
1650	1800 / 1720	1915 / 2885	480
1840	2000 / 1910	2125 / 3210	480

Ø auger mm	Ø bored pile mm	Weight kg NL = 1.5 m / 2.5 m	Max. torque kNm
600	600	720 / 865	350
700	700	835 / 1000	350
800	800	935 / 1105	480
900	900	975 / 1175	480
1000	1000	1050 / 1290	480
1200	1200	1505 / 2115	480
1500	1500	1795 / 2600	480
1800	1800	2125 / 3180	480
2000	2000	2415 / 3475	480

Other sizes available on request

Progressive rock auger light design

Model AU-PL



Range of application

Medium-hard to hard rock up to 100 MPa

Features

Kelly box 200 mm, round shank chisels mounted on the progressive auger part, round shank chisel pilot bit, easily exchangeable hard metal wear plates and hardfacing as wear protection

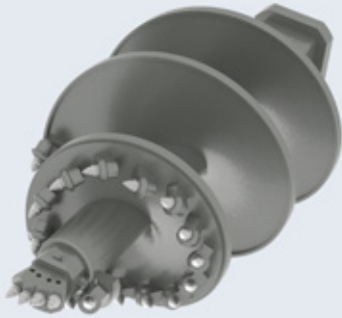
Ø auger mm	Ø casing mm	Weight kg NL = 1.5 m / 2.5 m	Max. torque kNm
520	620 / 540	640 / 905	350
650	750 / 670	680 / 945	350
700	800 / 720	735 / 1125	350
780	880 / 800	820 / 1235	480
900	1000 / 920	860 / 1330	480
970	1080 / 1000	955 / 1485	480
1060	1180 / 1100	1010 / 1580	480
1180	1300 / 1220	1280 / 1890	480
1370	1500 / 1420	1400 / 2025	480
1650	1800 / 1720	1570 / 2540	480
1840	2000 / 1910	1900 / 2985	480

Ø auger mm	Ø bored pile mm	Weight kg NL = 1.5 m / 2.5 m	Max. torque kNm
600	600	665 / 980	350
700	700	735 / 1125	350
800	800	835 / 1250	480
900	900	860 / 1330	480
1000	1000	970 / 1500	480
1200	1200	1280 / 1890	480
1500	1500	1485 / 2230	480
1800	1800	1785 / 2685	480
2000	2000	1980 / 3065	480

Other sizes available on request

Progressive rock auger heavy-duty design

Model AU-P



Range of application

Hard rock up to 100 MPa

Features

Kelly box 200 mm, round shank chisels densely mounted on the progressive auger part, exchangeable round shank chisel pilot bit, easily exchangeable hard metal wear plates and hardfacing as wear protection, especially robust design

Ø auger mm	Ø casing mm	Weight kg	Max. torque kNm
520	620 / 540	780	350
650	750 / 670	975	350
700	800 / 720	1015	350
780	880 / 800	1090	480
900	1000 / 920	1210	480
970	1080 / 1000	1280	480
1060	1180 / 1100	1390	480
1180	1300 / 1220	1490	480
1370	1500 / 1420	1690	480
1650	1800 / 1720	1910	480
1840	2000 / 1910	2300	480

Ø auger mm	Ø bored pile mm	Weight kg	Max. torque kNm
600	600	900	350
700	700	1015	350
800	800	1110	480
900	900	1210	480
1000	1000	1300	480
1200	1200	1490	480
1500	1500	1790	480
1800	1800	2250	480
2000	2000	2520	480

Other sizes available on request



Drilling buckets

Description and technical data

Drilling bucket with reamer bar

Model BU-R



Model BU-R



Model BU-FC



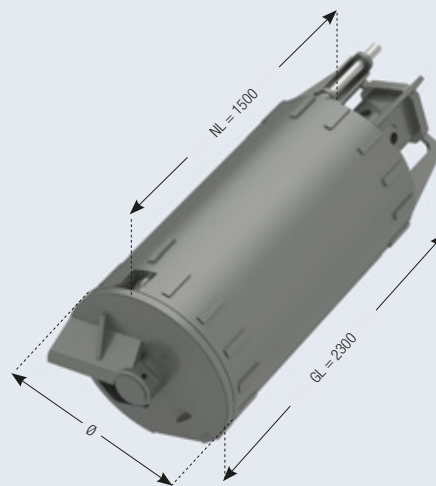
Model BU-FC 2



Model BU-RSC



Model BU-RSC 2



Range of application

Cleaning the bottom of the borehole

Features

Kelly box 200 mm, automatic opening mechanism in heavy-duty version with guided opening rod, flow passage, hardfacing as wear protection

Ø drilling bucket mm	Ø casing mm	Weight kg	Max. torque kNm
520	620 / 540	670	350
650	750 / 670	780	350
700	800 / 720	1010	350
780	880 / 800	1110	480
900	1000 / 920	1160	480
970	1080 / 1000	1340	480
1060	1180 / 1100	1440	480
1180	1300 / 1220	1740	480
1370	1500 / 1420	1900	480
1650	1800 / 1720	2240	480
1840	2000 / 1910	2475	480

Ø drilling bucket mm	Ø pile mm	Weight kg	Max. torque kNm
600	600	730	350
700	700	1010	350
800	800	1120	480
900	900	1160	480
1000	1000	1360	480
1200	1200	1740	480
1500	1500	2080	480
1800	1800	2350	480
2000	2000	2550	480

Other sizes available on request

Description and technical data

Single-start drilling bucket

Model BU-FC



Range of application

Firm to very stiff cohesive soils as well as in loosely to densely consolidated non-cohesive soils

Features

Kelly box 200 mm, flat teeth, fishtail pilot bit, automatic opening mechanism in heavy-duty version with guided opening rod, hardfacing as wear protection

Ø drilling bucket mm	Ø casing mm	Weight kg	Max. torque kNm
520	620 / 540	670	350
650	750 / 670	780	350
700	800 / 720	1010	350
780	880 / 800	1110	480
900	1000 / 920	1160	480
970	1080 / 1000	1340	480
1060	1180 / 1100	1440	480
1180	1300 / 1220	1740	480
1370	1500 / 1420	1900	480
1650	1800 / 1720	2240	480
1840	2000 / 1910	2475	480

Ø drilling bucket mm	Ø pile mm	Weight kg	Max. torque kNm
600	600	730	350
700	700	1010	350
800	800	1120	480
900	900	1160	480
1000	1000	1360	480
1200	1200	1740	480
1500	1500	2080	480
1800	1800	2350	480
2000	2000	2550	480

Other sizes available on request

Double-start drilling bucket

Model BU-FC2



Range of application

Firm to very stiff cohesive soils as well as in loosely to densely consolidated non-cohesive soils

Features

Kelly box 200 mm, flat teeth, round shank chisel pilot bit, automatic opening mechanism in heavy-duty version with guided opening rod, ventilation channel, hardfacing as wear protection

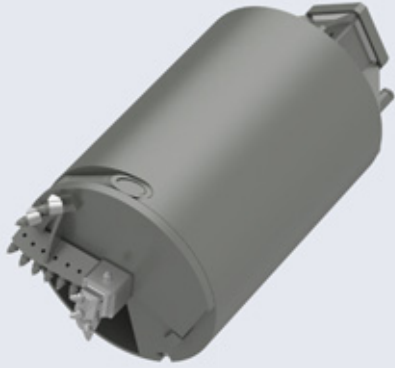
Ø drilling bucket mm	Ø casing mm	Weight kg	Max. torque kNm
1180	1300 / 1220	1740	480
1370	1500 / 1420	1900	480
1650	1800 / 1720	2240	480
1840	2000 / 1910	2475	480

Ø drilling bucket mm	Ø pile mm	Weight kg	Max. torque kNm
1200	1200	1740	480
1500	1500	2080	480
1800	1800	2350	480
2000	2000	2550	480

Other sizes available on request

Single-start rock drilling bucket

Model BU-RSC



Range of application

Very densely consolidated non-cohesive soils and low strength rock up to approx. 50 MPa

Features

Kelly box 200 mm, round shank chisels, round shank chisel pilot bit, automatic opening mechanism in heavy-duty version with guided opening rod, calibration chisel, ventilation channel, hardfacing as wear protection

Ø drilling bucket mm	Ø casing mm	Weight kg	Max. torque kNm
520	620 / 540	670	350
650	750 / 670	780	350
700	800 / 720	1010	350
780	880 / 800	1110	480
900	1000 / 920	1160	480
970	1080 / 1000	1340	480
1060	1180 / 1100	1440	480
1180	1300 / 1220	1740	480
1370	1500 / 1420	1900	480
1650	1800 / 1720	2240	480
1840	2000 / 1910	2475	480

Ø drilling bucket mm	Ø pile mm	Weight kg	Max. torque kNm
600	600	730	350
700	700	1010	350
800	800	1120	480
900	900	1160	480
1000	1000	1360	480
1200	1200	1740	480
1500	1500	2080	480
1800	1800	2350	480
2000	2000	2550	480

Other sizes available on request

Double-start rock drilling bucket

Model BU-RSC2



Range of application

Very densely consolidated non-cohesive soils, low strength rock up to approx. 50 MPa and secant bored piled walls

Features

Kelly box 200 mm, round shank chisels, round shank chisel pilot bit, automatic opening mechanism in heavy-duty version with guided opening rod, calibration chisel, ventilation channel, hardfacing as wear protection

Ø drilling bucket mm	Ø casing mm	Weight kg	Max. torque kNm
1180	1300 / 1220	1740	480
1370	1500 / 1420	1900	480
1650	1800 / 1720	2240	480
1840	2000 / 1910	2475	480

Ø drilling bucket mm	Ø pile mm	Weight kg	Max. torque kNm
1200	1200	1740	480
1500	1500	2080	480
1800	1800	2350	480
2000	2000	2550	480

Other sizes available on request



Core barrels



Model CB-WB



Model CB-RSC



Model CB-RB

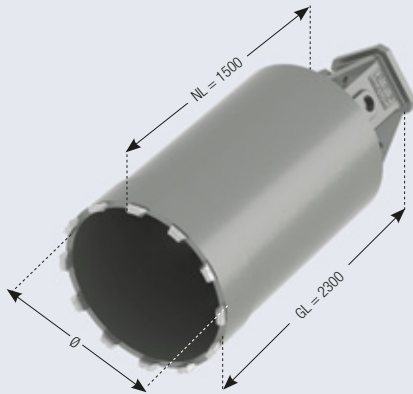


Model CB-CC

Description and technical data

Core barrel with weld-on blocks

Model CB-WB



Range of application

Rock up to 100 MPa, unreinforced concrete

Features

Kelly box 200 mm, easily exchangeable cutting ring with weld-on blocks, hardfacing as wear protection

Ø core barrel mm	Ø casing mm	Weight kg	Max. torque kNm
520	620 / 540	525	350
650	750 / 670	735	350
700	800 / 720	789	350
780	880 / 800	878	480
900	1000 / 920	1013	480
970	1080 / 1000	1105	480
1060	1180 / 1100	1222	480
1180	1300 / 1220	1365	480
1370	1500 / 1420	1598	480
1650	1800 / 1720	1969	480
1840	2000 / 1910	2222	480

Ø core barrel mm	Ø bored pile mm	Weight kg	Max. torque kNm
600	600	613	350
700	700	789	350
800	800	900	480
900	900	1013	480
1000	1000	1128	480
1200	1200	1365	480
1500	1500	1737	480
1800	1800	2128	480
2000	2000	2400	480

Other sizes available on request

Core barrel with round shank chisels

Model CB-RSC



Range of application

Hard rock up to 100 MPa, unreinforced concrete

Features

Kelly box 200 mm, easily exchangeable cutting ring with round shank chisels, hardfacing as wear protection

Ø core barrel mm	Ø casing mm	Weight kg	Max. torque kNm
520	620 / 540	525	350
650	750 / 670	735	350
700	800 / 720	789	350
780	880 / 800	878	480
900	1000 / 920	1013	480
970	1080 / 1000	1105	480
1060	1180 / 1100	1222	480
1180	1300 / 1220	1365	480
1370	1500 / 1420	1598	480
1650	1800 / 1720	1969	480
1840	2000 / 1910	2222	480

Ø core barrel mm	Ø bored pile mm	Weight kg	Max. torque kNm
600	600	613	350
700	700	789	350
800	800	900	480
900	900	1013	480
1000	1000	1128	480
1200	1200	1365	480
1500	1500	1737	480
1800	1800	2128	480
2000	2000	2400	480

Other sizes available on request

Core barrel with roller bits**Model CB-RB****Range of application**

Compact rock/unreinforced concrete from 100 up to 250 MPa

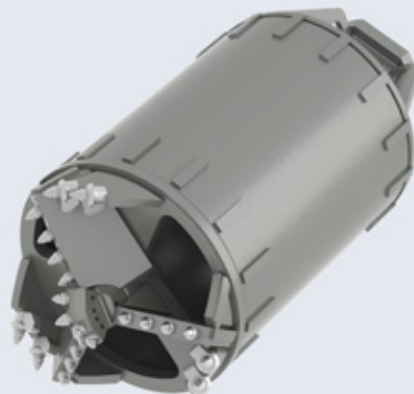
Features

Kelly box 200 mm, easily exchangeable tapered roller bits with carbide pins, collector for cleaning of the borehole bottom, screw for conveying the drill cuttings, no airlifting required, easily exchangeable, high-strength wear protection along the body

Ø core barrel mm	Ø casing mm	Weight kg	Max. torque kNm
650	750 / 670	1220	350
700	800 / 720	1300	350
780	880 / 800	1420	480
900	1000 / 920	1780	480
970	1080 / 1000	1950	480
1060	1180 / 1100	2220	480
1180	1300 / 1220	2440	480
1370	1500 / 1420	2940	480
1650	1800 / 1720	3520	480
1840	2000 / 1910	4020	480

Ø core barrel mm	Ø bored pile mm	Weight kg	Max. torque kNm
700	700	1300	350
800	800	1600	480
900	900	1780	480
1000	1000	1980	480
1200	1200	2440	480
1500	1500	3280	480
1800	1800	3950	480
2000	2000	4220	480

Other sizes available on request

Cross cutter**Model CB-CC****Range of application**

Fracture existing building elements, break out drill cores, drill rock < 100 MPa, penetrate boulders

Features

Kelly box 200 mm, three cutter bars with round shank chisels and round shank chisel pilot bit, easily exchangeable hard metal wear plates and hardfacing as wear protection

Ø core barrel mm	Ø casing mm	Weight kg	Max. torque kNm
520	620 / 540	525	350
650	750 / 670	735	350
700	800 / 720	789	350
780	880 / 800	878	480
900	1000 / 920	1013	480
970	1080 / 1000	1105	480
1060	1180 / 1100	1222	480
1180	1300 / 1220	1365	480
1370	1500 / 1420	1598	480
1650	1800 / 1720	1969	480
1840	2000 / 1910	2222	480

Ø core barrel mm	Ø bored pile mm	Weight kg	Max. torque kNm
600	600	613	350
700	700	789	350
800	800	900	480
900	900	1013	480
1000	1000	1128	480
1200	1200	1365	480
1500	1500	1737	480
1800	1800	2128	480
2000	2000	2400	480

Other sizes available on request



Special tools

Belling bucket



Range of application

Enlargement of the borehole above the borehole bottom

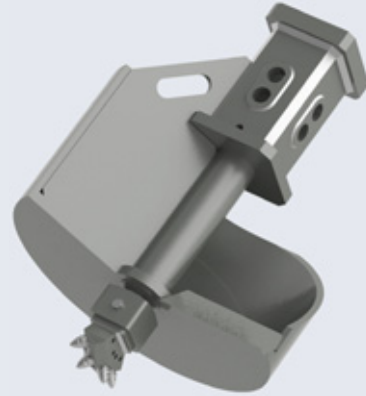
Features

Kelly box 200 mm, cutting arms with flat teeth or round shank chisels, catch bucket, hinged bottom gate, hardfacing as wear protection

Dimensions

Belling buckets are manufactured as projects require.

Boulder extractor



Range of application

Removal of large boulders

Features

Kelly box 200 mm

Ø boulder extractor mm	Ø casing mm	Weight kg	Max. torque kNm
520	620 / 540	465	350
650	750 / 670	596	350
700	800 / 720	621	350
780	880 / 800	664	480
900	1000 / 920	731	480
970	1080 / 1000	779	480
1060	1180 / 1100	841	480
1180	1300 / 1220	919	480
1370	1500 / 1420	1053	480
1650	1800 / 1720	1278	480
1840	2000 / 1910	1439	480

Ø boulder extractor mm	Ø pile mm	Weight kg	Max. torque kNm
600	600	503	350
700	700	621	350
800	800	675	480
900	900	731	480
1000	1000	791	480
1200	1200	919	480
1500	1500	1135	480
1800	1800	1378	480
2000	2000	1556	480

Other sizes available on request

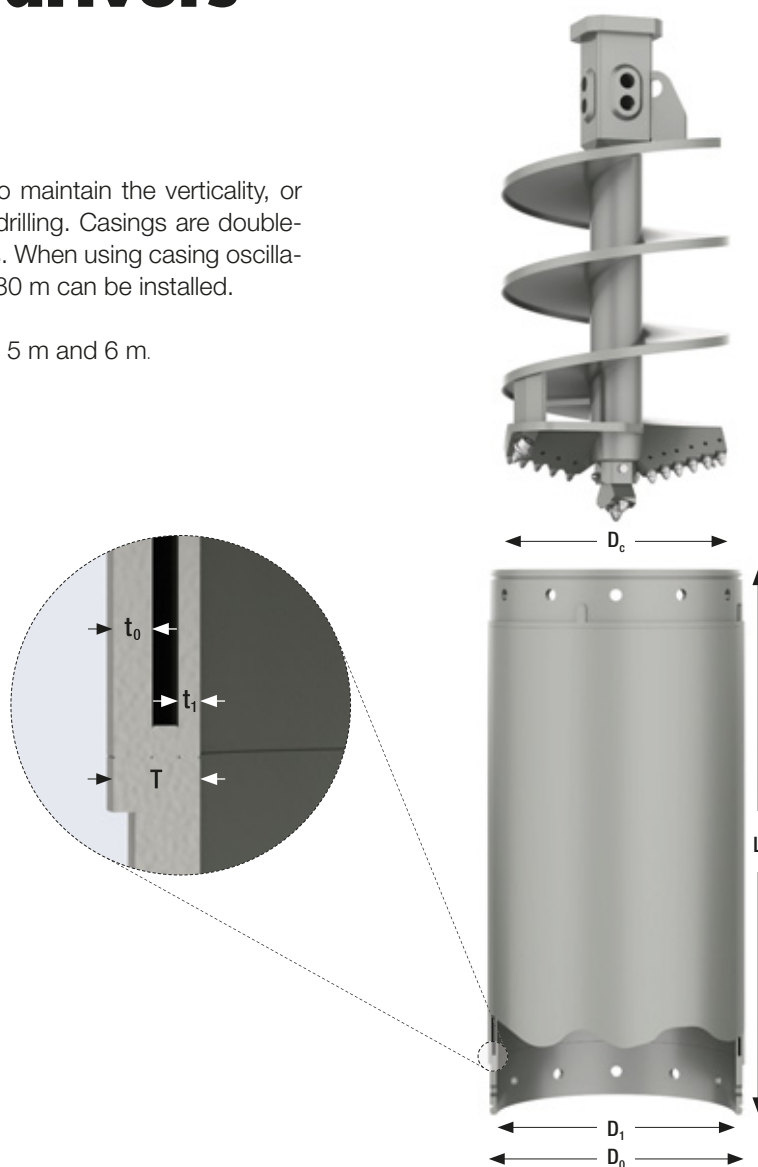


Casings and accessories, cutting shoes and casing drivers

Casings

Casings are used to stabilize the borehole wall and to maintain the verticality, or to maintain the required angle in the case of inclined drilling. Casings are double-walled and are offered in various diameters and lengths. When using casing oscillators or casing rotators, cased boreholes of more than 80 m can be installed.

Casings are available in lengths of 1 m, 2 m, 3 m, 4 m, 5 m and 6 m.



Outside diameter	Inside diameter	Cutting diameter	Wall thickness	Wall thickness	Wall thickness
\emptyset casing mm ($D_0 =$)	\emptyset casing mm ($D_1 =$)	Tool mm ($D_c =$)	Casing mm ($T =$)	Outside wall mm ($t_0 =$)	Inside wall mm ($t_1 =$)
620	540	520	40	15	10
750	670	650	40	15	10
800	720	700	40	15	10
880	800	780	40	15	10
1000	920	900	40	18	10
1080	1000	970	40	18	10
1180	1100	1060	40	18	10
1300	1220	1180	40	18	10
1500	1420	1370	40	18	10
1800	1720	1650	40	18	10
2000	1910	1840	45	18	10

Other diameters available on request

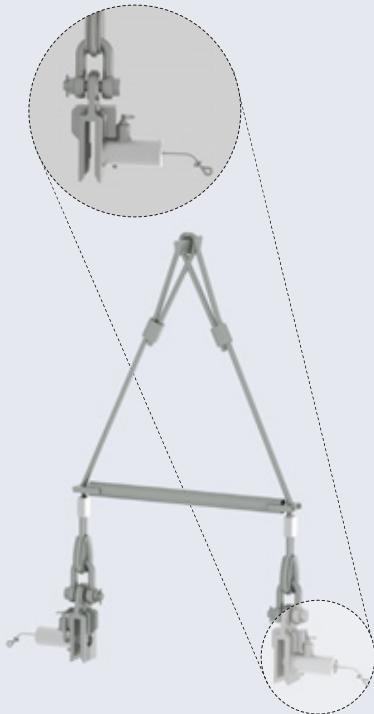
Casing accessories

Cutting shoes

Cutting shoes are attached at the lower end of the casing string. They cut soil and rock and create an overcut at the casing. For better wear protection cutting shoes are made of solid material.

Casing rigging with remote release

Casing rigging enables quick and safe positioning of the casings. Available for all casing diameters.

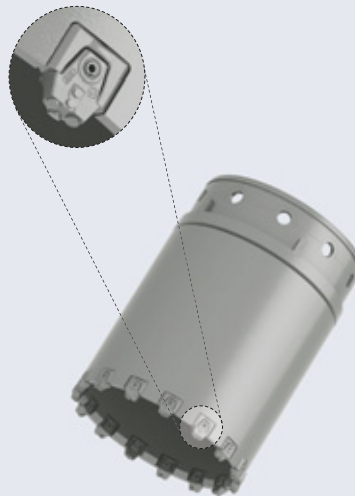


Ø casing mm	Weight kg
620	96
750	97
800	98
880	98
1000	110
1080	132
1180	142
1300	144
1500	145
1800	205
2000	209

Cutting shoe with exchangeable blocks

Exchangeable blocks have the advantage that they can be quickly replaced during operation without altering the cutting geometry of the cutting shoe. The overcut can be altered depending on the various types of teeth.

Available in the following lengths: 0.5 m, 1.0 m, 2.0 m. Other lengths available on request

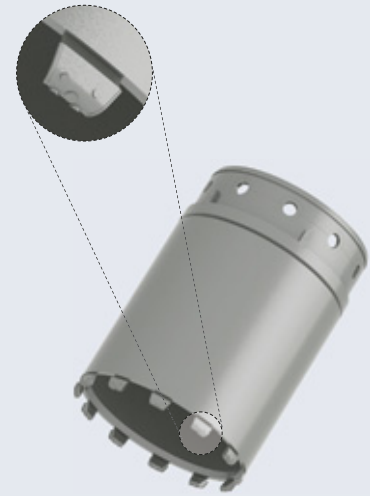


Ø mm	Weight (kg) depending on length		
	0,5 m	1 m	2 m
620	245	643	1165
750	435	800	1452
800	465	854	1550
880	510	950	1705
1000	555	1053	2050
1080	620	1160	2111
1180	690	1286	2338
1300	760	1395	2555
1500	890	1610	3007
1800	1100	1940	3610
2000	1450	2460	4520

Cutting shoe with weld-on blocks

Available in the following lengths: 0.5 m, 1.0 m, 2.0 m

Other lengths available on request



Ø mm	Weight (kg) depending on length		
	0,5 m	1 m	2 m
620	245	643	1165
750	435	800	1452
800	465	854	1550
880	510	950	1705
1000	555	1053	2050
1080	620	1160	2111
1180	690	1286	2338
1300	760	1395	2555
1500	890	1610	3007
1800	1100	1940	3610
2000	1450	2460	4520

Casing drivers

The casing driver is attached to the cardan joint on the rotary drive and is the connecting element to the casings. If the casing drive and the casings are bolted, the casings can be rotated and/or extracted.

Casing driver manual

Locking/unlocking manually via opening rod

Total length 2250 mm

Max. diameter (protection ring) =
Outside diameter casing + 320 mm



Ø mm	Weight kg
620	615
750	690
800	760
880	820
1000	1050
1080	1110
1180	1180
1300	1580
1500	1950
1800	2580
2000	3080

Casing driver automatic (pneumatic)

Locking/unlocking via remote control
Closing/opening using pneumatic cylinders

Various radio frequencies available (USA)

Total length 1850 mm

Max. diameter (protection ring) =
Outside diameter casing + 400 mm



Ø mm	Weight kg
620	1050
750	1290
800	1350
880	1460
1000	1830
1080	1920
1180	2012
1300	2400
1500	3200
1800	3400
2000	3582

Casing driver automatic (electric)

Locking/unlocking via remote control
Closing/opening using electric motors

Various radio frequencies available (USA)

Total length 2110 mm

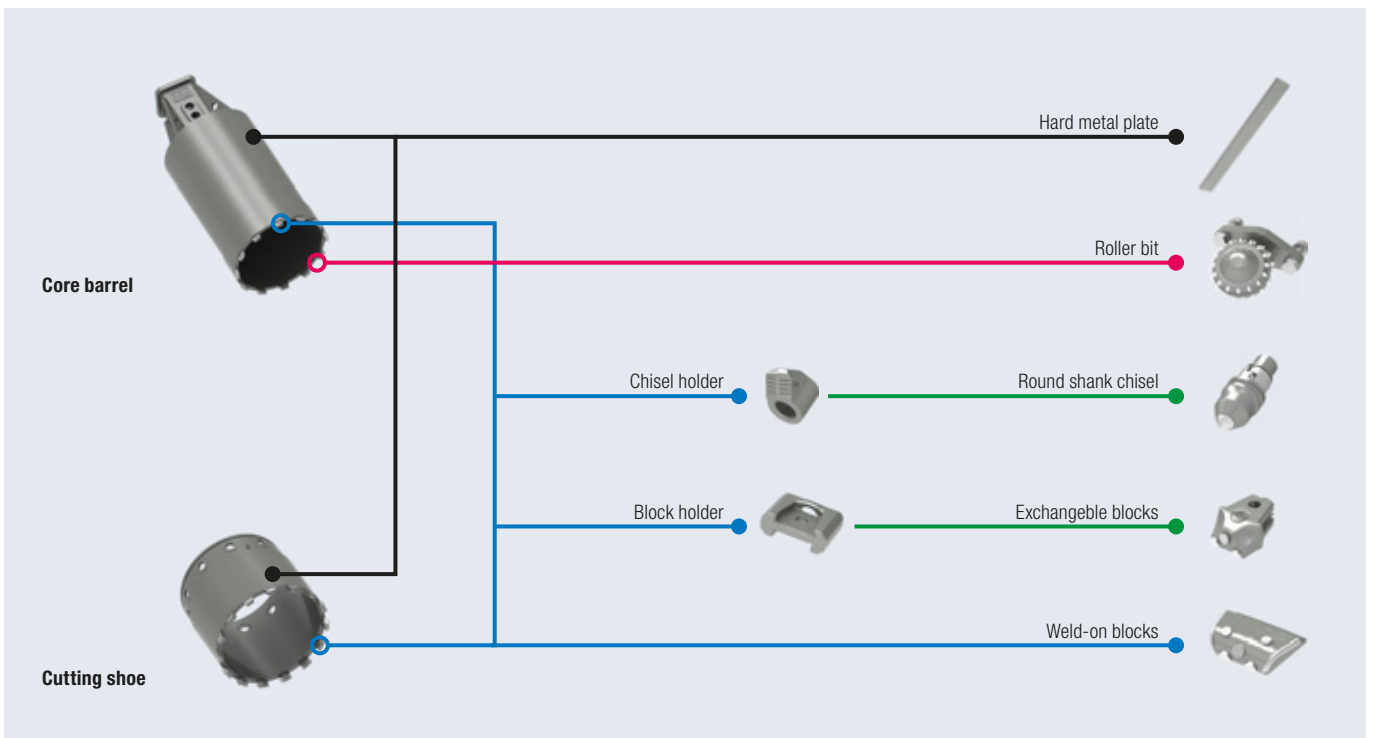
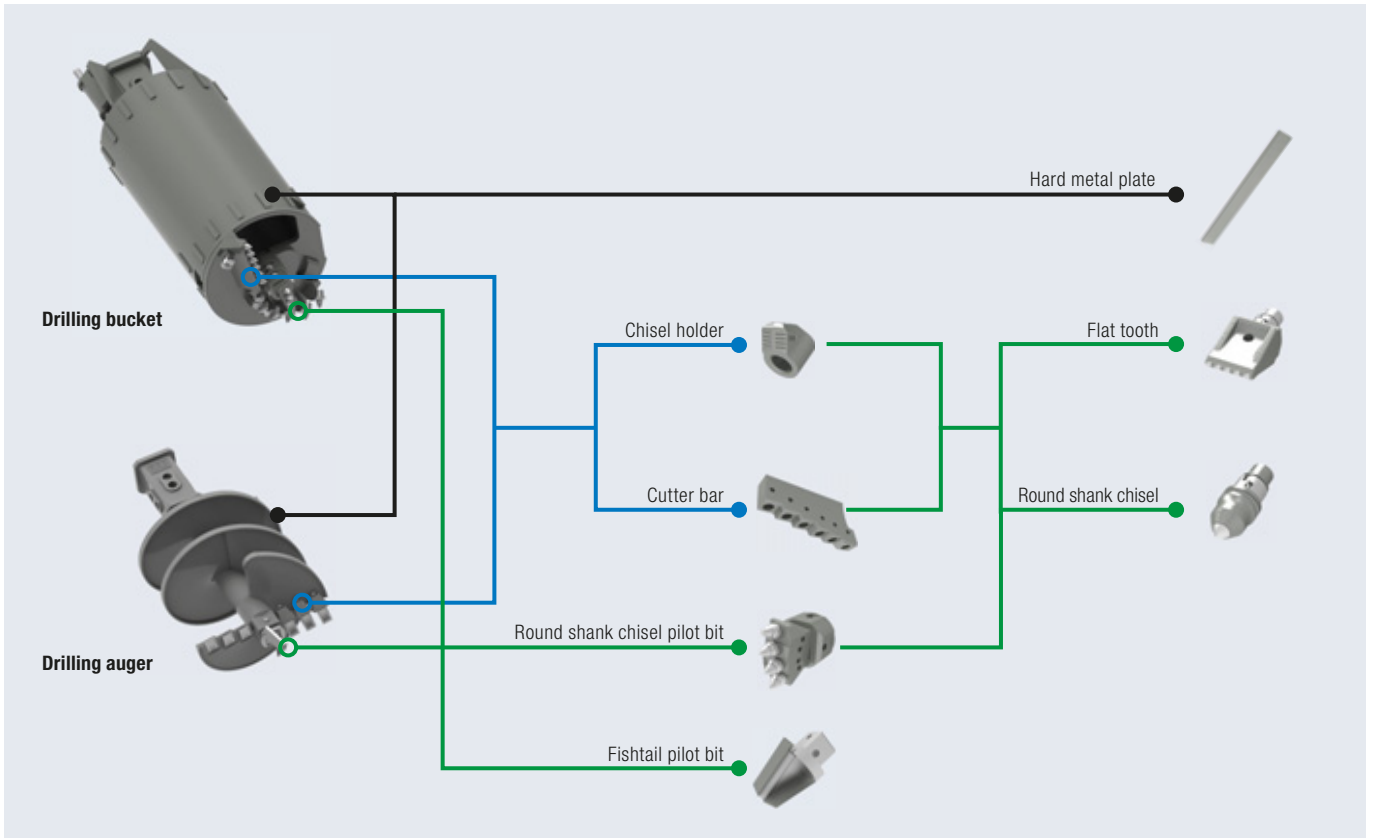
Max. diameter (protection ring) =
Outside diameter casing + 420 mm



Ø mm	Weight kg
620	853
750	1015
800	1055
880	1120
1000	1370
1080	1482
1180	1550
1300	1703
1500	2162
1800	2835
2000	3225

Wear parts for drilling tools

pinned — bolted — welded —



Hydraulic retaining clamps for casings

In order to avoid unintended dropping while the casings are uncoupled from the casing string, hydraulic retaining clamps, type SPA, can be used. The hydraulic retaining clamps are driven either by the carrier machine or by a separate power pack. The retaining clamps are available for various casing diameters and adapters.



SPA 1180 for casing diameter 1180 mm

Available adapters	for casing diameter
1180 / 1080	1080 mm
1180 / 1000	1000 mm
1180 / 880	880 mm
1180 / 800	800 mm
1180 / 750	750 mm
1180 / 620	620 mm

SPA 1500 for casing diameter 1500 mm

Available adapters	for casing diameter
1500 / 1300	1300 mm
1500 / 1200	1200 mm
1500 / 1180	1180 mm
1500 / 1080	1080 mm
1500 / 1000	1000 mm
1500 / 880	880 mm
1500 / 800	800 mm
1500 / 750	750 mm
1500 / 620	620 mm

SPA 2000 for casing diameter 2000 mm

Available adapters	for casing diameter
2000 / 1800	1800 mm
2000 / 1500	1500 mm
2000 / 1200	1200 mm
2000 / 1180	1180 mm
2000 / 1080	1080 mm
2000 / 1000	1000 mm
2000 / 880	880 mm

Hydraulic power pack

Model E-PP 5/5

Three-phase motor

380-420 / 660-720 V @ 50 Hz

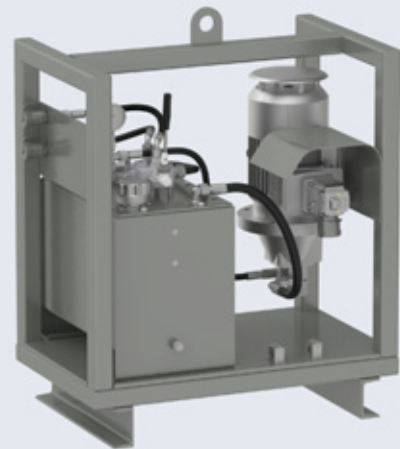
Power

kW (hp) 3.7 (5.0)

Dimensions L x W x H

850 x 500 x 1050 mm

Further electric motors for various supply voltages available on request



Tremie pipes

Tremie pipes are used for filling fresh concrete when installing drilled piles and, when correctly applied, prevent it from separating.



Tremie pipe ESR 250 (standard)

Tremie pipe	Ø mm	NL mm	GL mm	Weight kg
ESR 250 NL 1000	298.5 / 267	1000	1105	57
ESR 250 NL 2000	298.5 / 267	2000	2105	97
ESR 250 NL 3000	298.5 / 267	3000	3105	138
ESR 250 NL 4000	298.5 / 267	4000	4105	178
ESR 250 NL 5000	298.5 / 267	5000	5105	219
ESR 250 NL 6000	298.5 / 267	6000	6105	259

Tremie pipe ESR 200 for boreholes < 880 mm

Tremie pipe	Ø mm	NL mm	GL mm	Weight kg
ESR 200 NL 1000	254 / 219.1	1000	1105	48
ESR 200 NL 2000	254 / 219.1	2000	2105	81
ESR 200 NL 3000	254 / 219.1	3000	3105	114
ESR 200 NL 4000	254 / 219.1	4000	4105	147
ESR 200 NL 5000	254 / 219.1	5000	5105	180
ESR 200 NL 6000	254 / 219.1	6000	6105	213

Other diameters available on request



Starter pipe ESR 250

Model	Ø mm	NL mm	Weight kg
ESR 250Z NL 2000	298.5 / 267	2000	100
ESR 250Z NL 4000	298.5 / 267	4000	180

Starter pipe ESR 200

Model	Ø mm	NL mm	Weight kg
ESR 200Z NL 2000	254 / 219.1	2000	77
ESR 200Z NL 4000	254 / 219.1	4000	143

Other lengths available on request



Lifting cap ESR 250 standard	Weight kg
for max. pull force of 200 kN	23.5

Lifting cap ESR 250 heavy-duty design	Weight kg
for max. pull force of 300 kN	31.0

Lifting cap ESR 200 standard	Weight kg
for max. pull force of 200 kN	20.0

Lifting cap ESR 200 heavy-duty design	Weight kg
for max. pull force of 300 kN	28.0

Other designs available on request



Tremie hopper ESR 250

	Dimensions	NL mm	Hose channel
ESR 250Z D650 L1200-0	Ø 662 / L 1200	1095	no
ESR 250Z D650 L1200-K	Ø 662 / L 1200	1095	yes
ESR 250Z D900 L1200-0	Ø 912 / L 1200	1095	no
ESR 250Z D900 L1200-K	Ø 912 / L 1200	1095	yes
ESR 250Z D1200 L1200-0	Ø 1212 / L 1200	1095	no
ESR 250Z D1200 L1200-K	Ø 1212 / L 1200	1095	yes

Tremie hopper ESR 200

	Dimensions	NL mm	Hose channel
ESR 200Z D400 L1200-0	Ø 412 / L 1200	1095	no
ESR 200Z D400 L1200-K	Ø 412 / L 1200	1095	yes
ESR 200Z D650 L1200-0	Ø 662 / L 1200	1095	no
ESR 200Z D650 L1200-K	Ø 662 / L 1200	1095	yes
ESR 200Z D900 L1200-0	Ø 1212 / L 1200	1095	no
ESR 200Z D900 L1200-K	Ø 1212 / L 1200	1095	yes

Other hopper diameters and lengths available on request



Suspension jig ESR 250 (made of aluminium) without flap

Model	Pipe mm	Max. casing Ø mm	GL mm	Weight kg
ESR 250 L 1200	250	880	1200	17.5
ESR 250 L 1600	250	1180	1600	20.5
ESR 250 L 2000	250	1500	2000	21.5
ESR 250 L 2500	250	2000	2500	23.0

Suspension jig ESR 200 (made of aluminium) without flap

Model	Pipe mm	Max. casing Ø mm	GL mm	Weight kg
ESR 200 L 1200	200	880	1200	14.5
ESR 200 L 1600	200	1180	1600	17.5
ESR 200 L 2000	200	1500	2000	18.5
ESR 200 L 2500	200	2000	2500	20.0

Other designs available on request



Tremie pipe rack ESR 250

Tremie pipe racks for tremie pipe Ø 250

Tremie pipe rack ESR 200

Tremie pipe racks for tremie pipe Ø 200

Accessories for ESR 250

Female connector ESR 250	Connector wire for ESR 250
Male connector ESR 250	Concreting ball for ESR 250
O-ring for ESR 250	Spacer for ESR 250 (for inclined drilling)

Accessories for ESR 200

Female connector ESR 200	Connector rope for ESR 200
Male connector ESR 200	Concreting ball for ESR 200
O-ring for ESR 200	Spacer for ESR 200 (for inclined drilling)

Other designs available on request

