



Secoroc Rock Drilling Tools

For site investigation  
***TERRACORE  
CORE DRILLING  
TOOLS***

*Atlas Copco*





# ***SECOROC ROCK DRILLING TOOLS***

We have a long tradition of supplying geotechnical engineers with a wide range of equipment and services. Our product offer consists of rigs, grouting solutions, casing advancement systems, DTH hammers and a full range of high tech and high quality site investigation tools.

All our products are designed to minimize down-time and maximize productivity and your profitability. When we are needed, we will quickly be at your site thanks to our worldwide Atlas Copco organization. Just contact your local Atlas Copco representative.

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# TERRACORE

## ***TERRACORE – A COMPREHENSIVE RANGE OF CORE DRILLING TOOLS FOR RELIABLE SITE INVESTIGATION***

Atlas Copco is among the world's leading manufacturers of core drilling equipment. We have supplied our market with high performance products during many generations. Our aim has always been clear – to develop safe and environmentally friendly products with sustainable productivity. The Terracore drilling system is a result from this effort.

### **The market's most diverse and comprehensive range**

Terracore range covers a complete package of in-the-hole equipment. Conventional and wire line core barrels, drill rods and casings, core boxes, additives, adapters and fishing tools, not to mention a wide range of drilling bits to make core drilling reliable and fast.

### **A multitude of applications**

Terracore can be used in a wide range of applications – as long as the ground and depth correspond to the product design. Here are just a few examples; carrying out site investigation in urban construction sites, drilling grout holes

in tunnels and on hydroelectric power projects. Core drilling for undisturbed sampling and hole making is often a preferred solution for straight holes and where noise and vibrations are subject to legislation. Terracore is ideal for traditional exploration in soft and shallow formations (100–150m), where large core sample is required for acceptable core quality.

### **Atlas Copco Solutions**

The combination of Terracore with Atlas Copco's all-round drilling rigs offers opportunities for both site investigation and ground stabilization. Diamec range can utilize Terracore single tube system

for straight deep grouting holes.

### **Get the best from your drilling equipment**

Atlas Copco is a global company with Customer Centers in more than 150 countries. Our dedicated sales engineers are always on hand to discuss and solve your drilling problems. We offer service support, spare parts and consumables packages for sustainable productivity. And with our rigorously field tested products, you can be assured of the market's best geotechnical sampling and drilling equipment.

# HOW TO SELECT TERRACORE PRODUCTS

## Introduction

In this catalogue you will mainly find In-The-Hole tools (ITH) and bits suitable for geotechnical core sampling in soft unconsolidated to medium hard consolidated formations.

ITH for mineral exploration in deep hard formations can be found in the separate Exploration catalogue (6991 1792 01).

Detailed parts information can be found in the respective product section. Select core barrel, drill rods, casing and sockets, accessories and diamond products to match the application from respective sub section.

The hole/core diameter chart (see di-

mension guide on page 103) will allow you to quickly reference what sizes are available in a given system.

Each product section will start with basic application information with technical data and some helpful hints for proper product selection. The last page of each section will provide a summary of the spare part kits and options for the systems.

## STEP 1

### Systems

Atlas Copco offers a full range of core barrels for geotechnical core sampling. Your first choice of core barrel depends

on whether you use a conventional or wire line core barrel system.

## STEP 1

### Core Barrels

#### Conventional

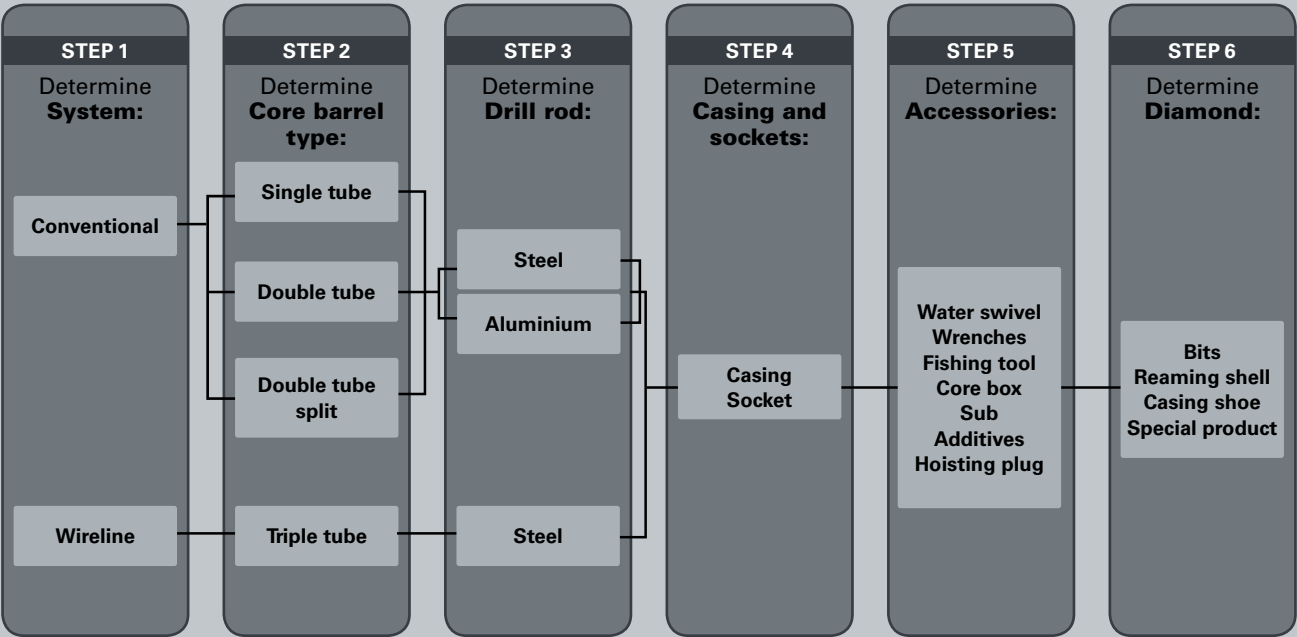
Conventional core barrels produce a larger core diameter compared to equivalent wire line size. The rugged construction and design features ensure optimization of productivity in applications where the use of wire line system is not practical or cost effective. Conventional core barrels are typically used in shorter bore holes. The core barrels can drill in all directions.

## How to select your system

Determine if the application requires conventional or wireline system.  
Determine what tube design the application requires.  
If double tube design is preferred, then choose if thin wall or standard wall is needed.

Determine drill rod based on the preferred core barrel design and connection thread in core barrel head. For wireline only one size of rods suitable for the selected core barrel design can be selected. Determine suitable casing and socket if required for the drilling operation.

Determine accessories that you require to complement the ITH equipment to perform a trouble free and cost effective drilling operation. Finally determine your drill bit by guidelines through the Terracore classification chart.



The T2 double tube conventional core barrel is a thin-wall all round core barrel for most type of homogenous or somewhat broken formations where water flush can be used. The thin wall design offer features as:

- Faster penetration
- Lower diamond cost
- Larger core

Atlas Copco's T2 core barrels are available in metric hole sizes 46 to 101 mm.

The T6 double tube conventional system is a standard wall all round core barrel for core sampling in all formations. Despite the relatively thin wall, T6 can very well be used with high viscous mud or in special cases with air flushing. T6 core barrels are manufactured in metric sizes 76 to 146 mm (S-size).

The T6S double tube conventional system is a standard wall core barrel designed for applications as soil sampling and site investigation in very loose, unconsolidated formations. T6S uses core lifter cases and bits designed to direct the drilling fluid through the bit blank (FD face discharge) instead of through the bit throat. This is done to return un-

disturbed samples and prevent sample washing. The split aluminium inner tube offers features as easy and increased core recovery and a larger core size in comparison to equivalent hole size with triple tube. T6S is a sturdy core barrel and can very well be used with high viscous mud flushing or in special cases with air flushing. T6S core barrels are manufactured in metric sizes 76, 101, 116 and 131 mm.

The B single tube conventional system is suitable for drilling straight holes e.g. grouting holes for dam constructions. Typical situations are when core examination is of less importance or when concrete core extraction is required. The B system is based upon the metric casing and can be extended one length or more by adding suitable length of casing rods. B core barrels are manufactured in metric sizes 46 to 146 mm. Wire line rods B, N, H can easily be converted to single tube core barrels. See page 101, "Special bit tools"

#### Wireline

The S Geobor wire line core drilling system from Atlas Copco has been specially developed for core drilling and undis-

turbed sampling in soft formations. The core barrel is of "triple tube design" type consisting of an outer tube and an inner tube with liner.

There is a plastic "liner" in the inner tube which considerably reduces friction between the core and the inner tube. This means that a maximum core recovery is guaranteed. The plastic tube can also be used as a core container when provided with plugs at both ends. Split liners in steel are also available as alternatives to our standard solid round plastic liners – see page 64 for optional 'End caps'.

Geobor core barrels are manufactured in one dimension S (146mm) only.

The core barrel is designed for flushing with water, mud and in special cases with air. Geobor core barrels can easily be adapted to fit all ground and rock conditions with different types of bits and conversion kits.

With the available options, the Geobor core barrel is the most versatile in its field.





### STEP 3

## Drill Rods

Atlas Copco drill rods and casings are designed to deliver top performance to your equipment and your drill site.

### Conventional drill rods

Conventional drill rods are available in light-weight steel or aluminium, providing you an ergonomic flexibility which will improve your handling capabilities under the most strenuous conditions. Steel drill rods are manufactured with friction welded hardened steel coupling. Aluminium drill rods are manufactured with glued, threaded hardened steel couplings. For conventional core barrels the rod OD size is recommended to be as large as possible. However it must not restrict the annulus circulation flow. You also have to consider machine capacity.

*Note! If chosen drill rods does not match the corresponding core barrel's connection threads you have to choose cross-over subs.*

You have to consider the rod length to fit the overall length that can be handled efficiently. It is recommended to select a few smaller rods to compensate the drill string length even though the main part of selected rods are longer. We recommend conical thread double WJ design for easier jointing and safer sealing.

### Wire line drill rods

Wire line drill rods are manufactured from highest available carbon seamless steel tubes for superior yield capacity and ultimate strength. Wire line rods are always flush jointed to allow inner

tube and other tools to pass through. Pin threads are surface treated, for easy jointing and extended life.

In this catalogue we only have two types of wire line rods, PG rods for PG wire line and SG rods for Geobor wire line.

### STEP 4

## Casing and sockets

Casings are flush jointed and manufactured in standard steel quality. The physical properties are:

- Lower yield point 550 N/mm<sup>2</sup>
- Tensile strength 690 N/mm<sup>2</sup>
- Elongation A5 min 15 %

In this catalogue you find metric casing 44–143 mm and imperial casing PW and SGW (SW). For all conventional core barrels up to 131 mm you select casing from the metric casing range.

For S Geobor, you select casing from the imperial casing range. In the casing section you will also find casing sockets to fit corresponding drill rods connections.

Casing shoes are selected from the Terracore bit section Step 6.

#### STEP 5

### Accessories

Details often make the difference in quality of the drilling operation. In this section, we offer products selected for their quality and technical superiority. It is important to use recommended wrenches, to avoid risk of equipment damage.

*Note! Wrenches always used in pairs.*

Don't forget trouble shooting tools, (recovery taps etc), which might save you some problems.

This sections also include a selection of subs, core boxes, additives and water swivels.

Water swivels should be selected in accordance with type of drill rig used and fluid demands for the application.

#### STEP 6

### Diamond Products

Bit selection for impregnated bits is guided by the Terracore classification chart. The rock formation characteristics with corresponding samples of rock types are organized in application rock groups 1–10.

Choose suitable bit based on application number that matches your forma-

tion characteristics. Basically the scale indicates a harder formation for a higher number. In application range 1–4, diamond surface set, PDC and TC should be considered as well.





# CONVENTIONAL DOUBLE TUBE CARE BARREL TYPE T2

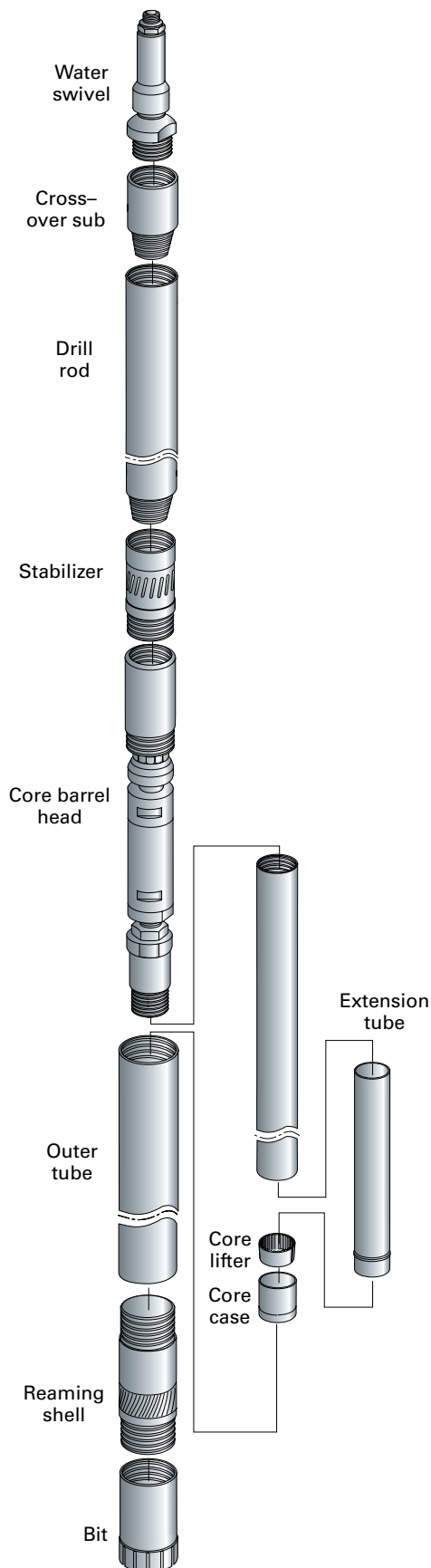
## Core Barrels

Atlas Copco T2 core barrels are of thin-wall core barrel system for most types of homogenous or somewhat broken formations where water flush can be used.

Metric system (mm)					
Size	Description				
	Hole diameter	Core diameter	Core barrel connection box	Recommended drill rod	Outer diameter drill rod
46T2	46.5	31.7	cr42	43/AWJ43*	43.0
56T2	56.5	41.7	cr50	53/BWJ53*	53.0
66T2	66.5	51.7	cr50	53/BWJ53*	53.0
76T2	76.5	61.7	cr50	NWJ70*	70.0
86T2	86.5	71.7	cr50	NWJ70*	70.0
101T2	101.5	83.7	nw/2 3/8"	NWJ70*	70.0
Imperial system (in)					
46T2	1.82	1.25	cr42	43/AWJ43*	1.69
56T2	2.22	1.64	cr50	53/BWJ53*	2.09
66T2	2.61	2.04	cr50	53/BWJ53*	2.09
76T2	3.00	2.43	cr50	NWJ70*	2.76
86T2	3.40	2.82	cr50	NWJ70*	2.76
101T2	3.99	3.30	nw/2 3/8"	NWJ70*	2.76

\*) Cross-over SUB needed.

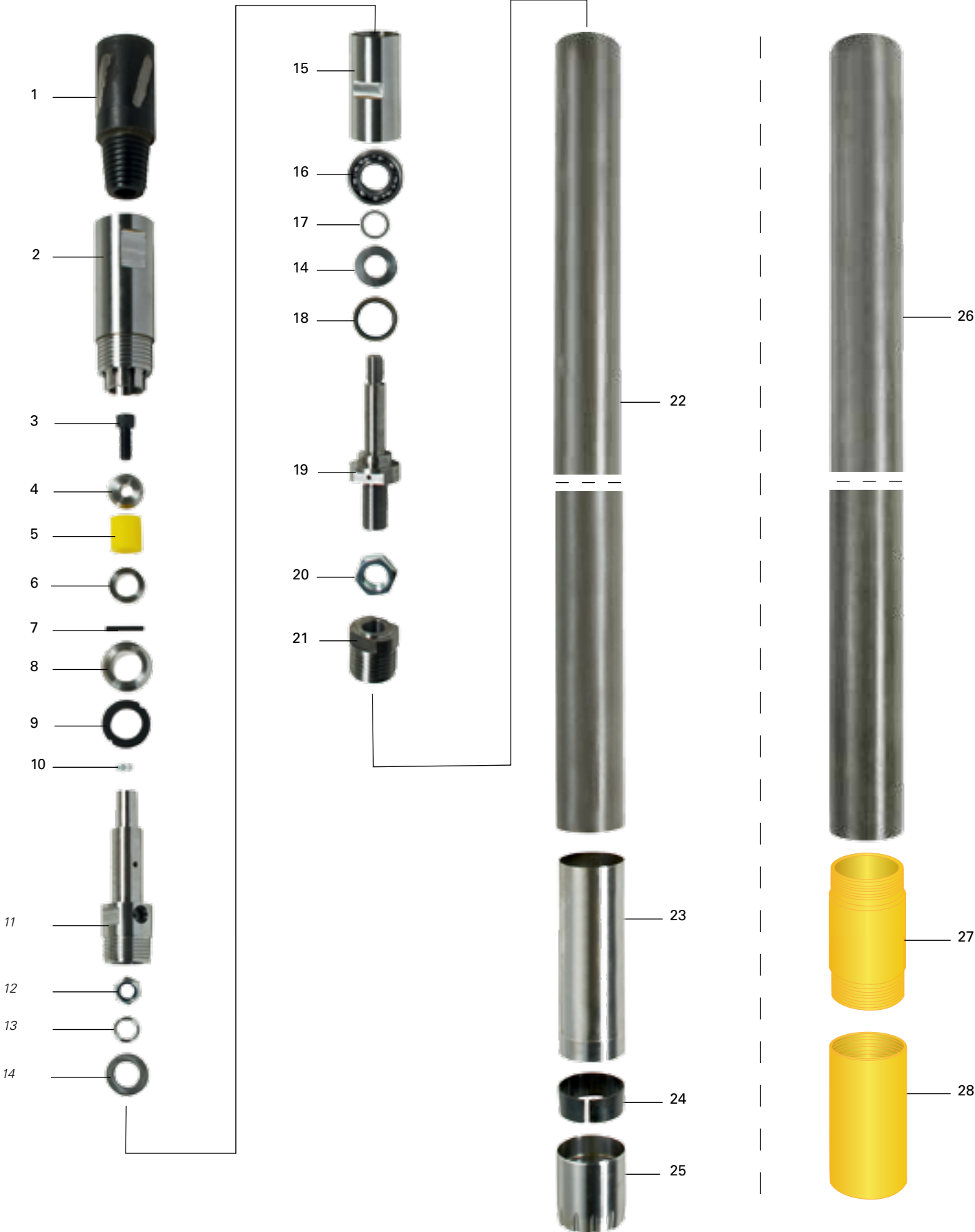
Size	Typical drilling parameters (Indicative values)							
	Rotation speed, impregnated bit(rpm)		Weight on bit: kN		Water flow: Litres/min		Penetration rate (cm/min)	
	Min	Max	Min	Max	Min	Max	Min	Max
46T2	1250	2100	9	14	6	9	14	26
56T2	100	1700	11	17	7	11	11	21
66T2	850	1450	14	20	9	20	9	20
76T2	750	1250	16	24	16	25	8	20
86T2	650	1100	18	27	20	35	7	18
101T2	550	950	26	38	25	45	7	15



## Spare parts list 46T2

Item	Description	Qty	Part number
1-28	1.5 m / 5 ft Core barrel complete, conn. CR42 box	1	8393 0815 20
1-28	3.0 m / 10 ft Core barrel complete, conn. CR42 box	1	8393 0815 21
2-21	Core barrel head complete, conn. AWJ box excl. adapter stabilizer	1	8393 0815 12
1	Adapter / Stabilizer, conn CR42 box	1	8393 0816 15
1	Option adapter/stabilizer, conn. AWJ box	1	8393 0816 16
2	Coupling AWJ box	1	8393 0814 83
3	Cap screw	1	0211 1323 00
4	Washer	1	8393 0811 65
5	Spring plastic	1	8393 0811 63
6	Washer	1	8393 0811 64
7	Spring pin	1	0108 3298 00
8	Washer	1	8393 0810 51
9	Shut-off valve	1	8393 0815 71
10	Lubricating nipple	1	0544 2106 00
11	Guide shaft	1	8393 0810 52
12	Lock nut	1	0291 1112 00
13	Washer	1	8393 0816 03
14	Ball bearing	2	0502 1102 00
15	Housing	1	8393 0810 54
16	Bearing	1	0510 0402 00
17	Spacer	1	0324 1551 17
18	Washer seal	1	8393 0810 60
19	Shaft	1	8393 0810 57
20	Hex. nut	1	0261 1099 11
21	IT connection	1	8393 0814 86
22	Inner tube 1500	1	3863 1117 00
22	Inner tube 3000	1	3863 1122 00
23	Extension tube	1	3863 1131 00
24	Core lifter	1	3863 1135 00
25	Core lifter case	1	3863 1133 00
26	Outer tube 1500	1	8393 0815 90
26	Outer tube 3000	1	8393 0815 91
27	Sleeve (plastic)	1	3702 0159 00
28	Protector (plastic)	1	3702 0160 00

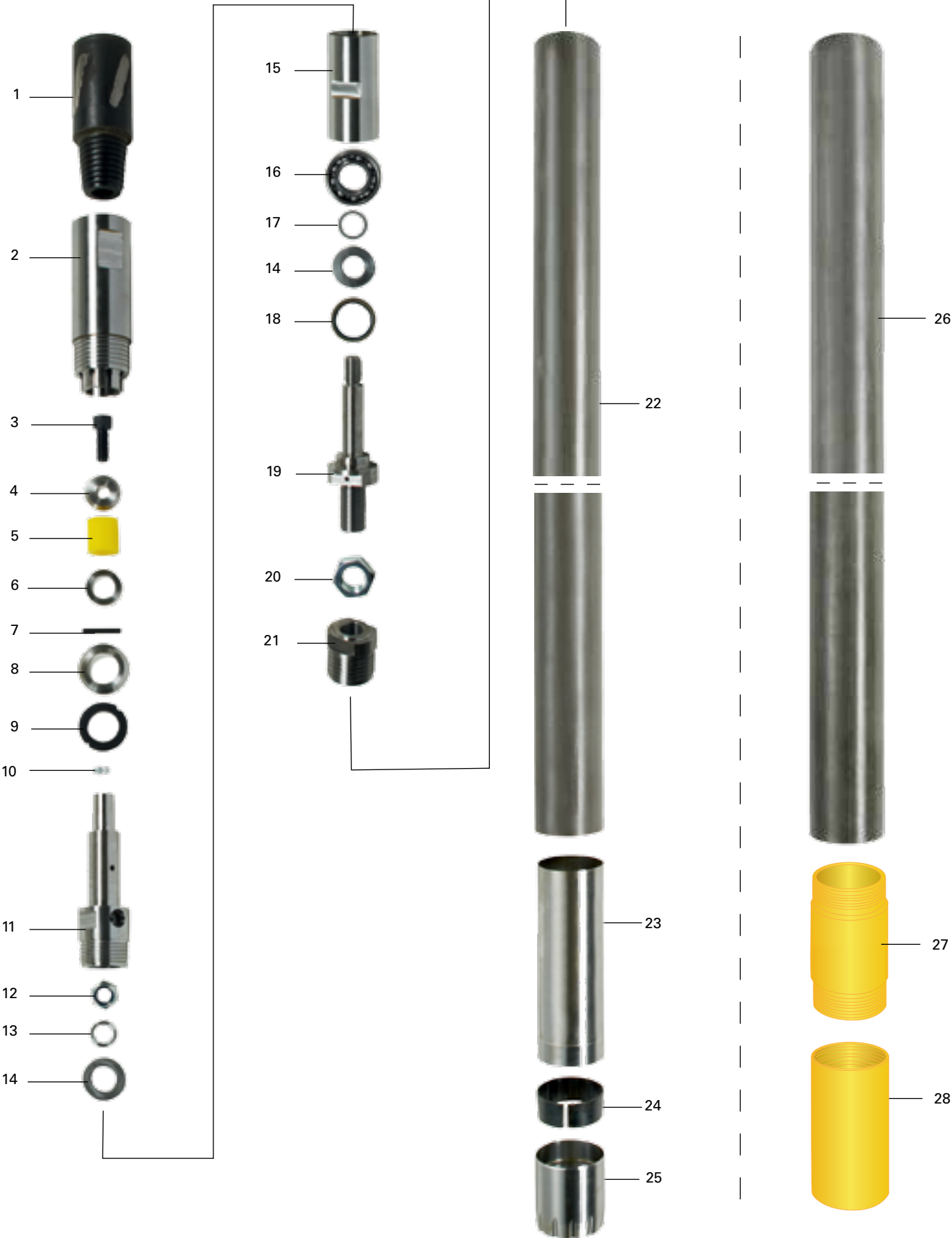
Spare parts 46T2



## Spare parts list 56T2

Item	Description	Qty	Part number
1–28	1.5 m / 5 ft Core barrel complete, conn. CR50 box	1	8393 0815 26
1–28	3.0 m / 10 ft Core barrel complete, conn. CR50 box	1	8393 0815 27
2–21	Core barrel head complete, conn. BWJ box excl. adapter stabilizer	1	8393 0814 54
1	Adapter / Stabilizer, conn CR50 box	1	8393 0816 17
1	Option adapter/stablizer, conn. BWJ box	1	8393 0815 03
2	Coupling BWJ box	1	8393 0814 95
3	Cap screw	1	0211 1401 00
4	Washer	1	8393 0814 51
5	Spring plastic	1	8393 0814 52
6	Washer	1	8393 0814 53
7	Spring pin	1	0108 1303 00
8	Washer	1	8393 0814 49
9	Shut–valve	1	8393 0814 50
10	Lubricating nipple	1	0544 2106 00
11	Guide shaft	1	8393 0814 48
12	Lock nut	1	0291 1114 00
13	Washer	1	8393 0816 04
14	Ball bearing	2	0502 1104 00
15	Housing	1	8393 0814 47
16	Bearing	1	0510 0404 00
17	Spacer	1	0324 1551 48
18	Washer seal	1	8393 0814 55
19	Shaft	1	8393 0814 46
20	Hex. nut	1	0261 1099 23
21	IT connection	1	8393 0816 04
22	Inner tube 1500	1	3863 1197 00
22	Inner tube 3000	1	3863 1202 00
23	Extension tube	1	3863 1213 00
24	Core lifter	1	3863 1215 00
25	Core lifter case	1	3863 1211 00
26	Outer tube 1500	1	8393 0815 92
26	Outer tube 3000	1	8393 0815 93
27	Sleeve (plastic)	1	3702 0190 00
28	Protector (plastic)	1	3702 0191 00

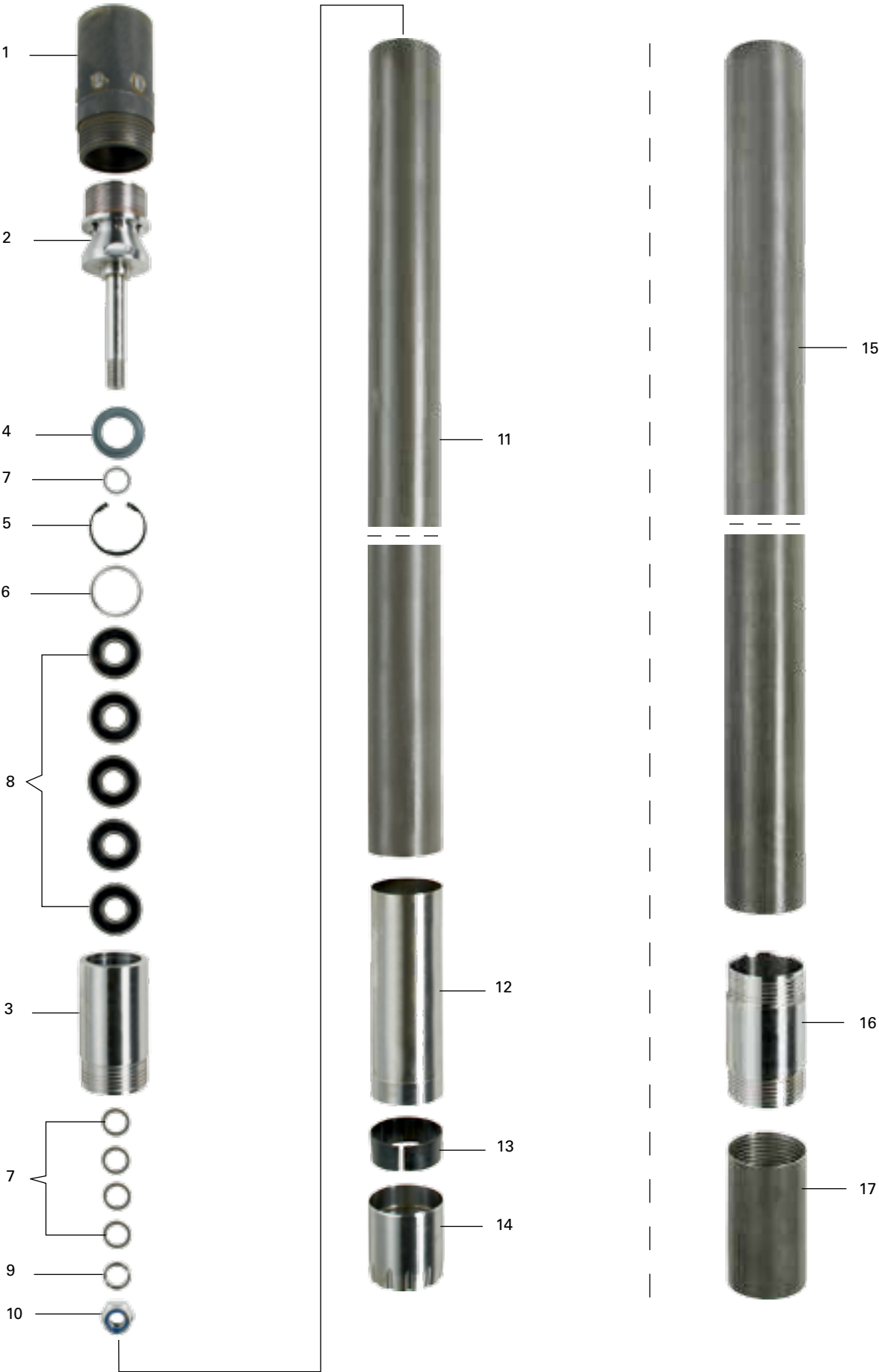
Spare parts 56T2



## Spare parts list 66T2

Item	Description	Qty	Part number
1-17	1.5 m / 5 ft Core barrel complete, conn. CR50 box	1	8392 0214 01
1-17	3.0 m / 10 ft Core barrel complete, conn. CR50 box	1	8392 0215 00
1-10	Core barrel head complete, conn. CR50 box excl. adapter stabilizer	1	3863 2298 80
1	Core barrel coupling, conn. CR50 box	1	3863 2298 00
2	Bearing shaft	1	3863 2296 00
3	Bearing housing	1	3863 2297 00
4	Washer seal	1	3863 2299 00
5	Circlip	1	0335 2143 00
6	Spacer	1	0324 1551 58
7	Adjusting washer	5	0324 1551 47
8	Ball bearing	5	0502 3156 00
9	Washer	1	3702 0027 00
10	Nut	1	0291 1114 00
11	Inner tube 1500 mm	1	3863 1276 00
11	Inner tube 3000 mm	1	3863 1281 00
12	Extension tube	1	3863 1292 00
13	Core lifter	1	3863 1291 00
14	Core lifter case	1	3863 1293 00
15	Outer tube 1500 mm	1	3863 1277 00
15	Outer tube 3000 mm	1	3863 1282 00
16	Reamings shell blank	1	3863 1290 00
17	Protector, steel	1	3863 1294 00

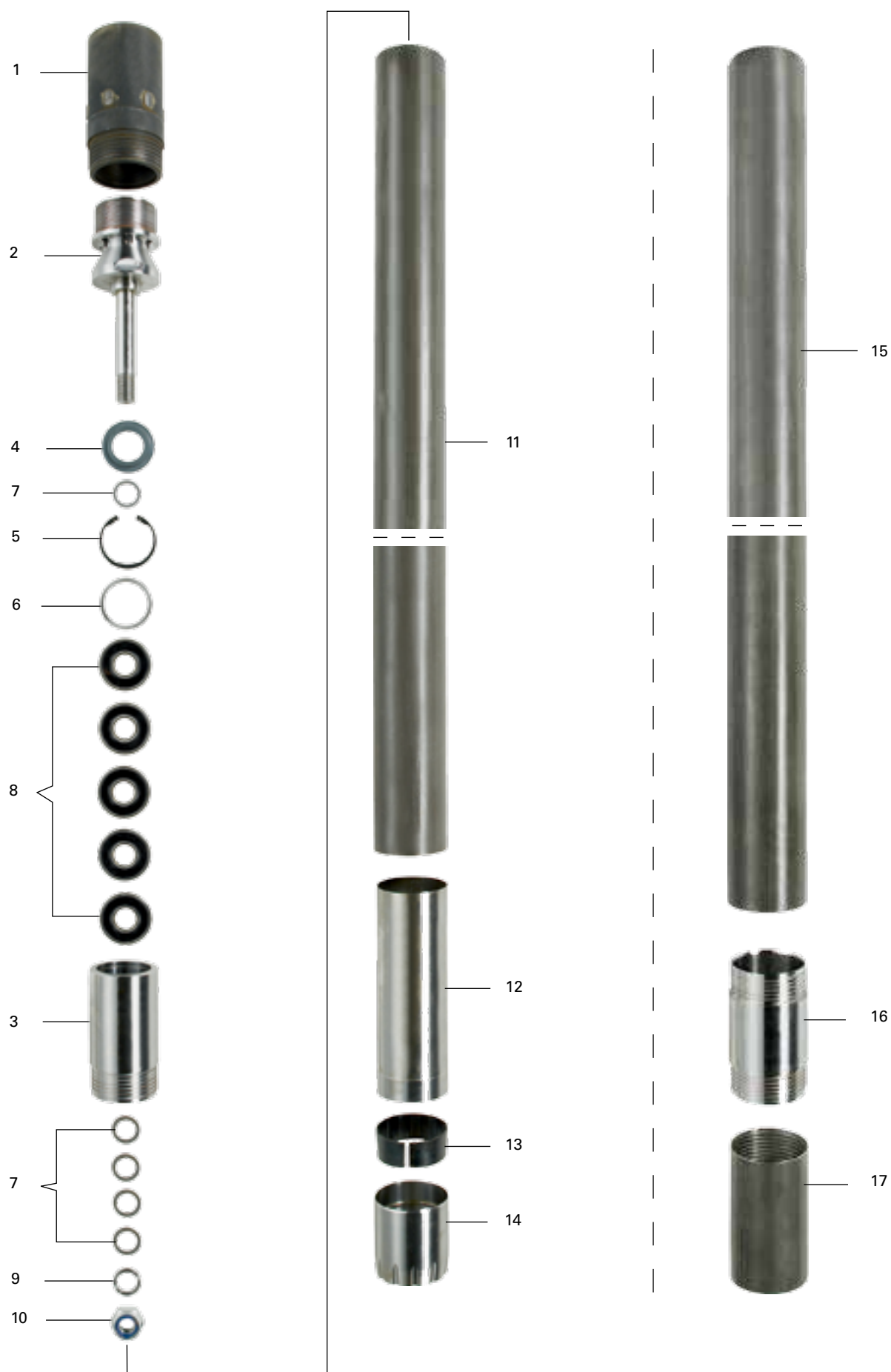
Spare parts 66T2



## Spare parts list 76T2

Item	Description	Qty	Part number
1-17	1.5 m / 5 ft Core barrel complete, conn. CR50 box	1	8392 0220 03
1-17	3.0 m / 10 ft Core barrel complete, conn. CR50 box	1	8392 0221 02
1-10	Core barrel head complete, conn. CR50 box excl. adapter stabilizer	1	3863 2317 80
1	Core barrel coupling, conn. CR50 box	1	3863 2317 00
2	Bearing shaft	1	3863 2315 00
3	Bearing housing	1	3863 2316 00
4	Washer seal	1	3863 2318 00
5	Circlip	1	0335 2146 00
6	Spacer	1	0324 1551 60
7	Adjusting washer	5	0324 1551 48
8	Ball bearing	5	0502 3159 00
9	Washer	1	3702 0028 00
10	Nut	1	0291 1116 00
11	Inner tube 1500 mm	1	3863 1356 00
11	Inner tube 3000 mm	1	3863 1361 00
12	Extension tube	1	3863 1372 00
13	Core lifter	1	3863 1376 00
14	Core lifter case	1	3863 1373 00
15	Outer tube 1500 mm	1	3863 1357 00
15	Outer tube 3000 mm	1	3863 1362 00
16	Reamings shell blank	1	3863 1370 00
17	Protector, steel	1	3863 1374 00
18	Protector, steel	1	3863 1454 00

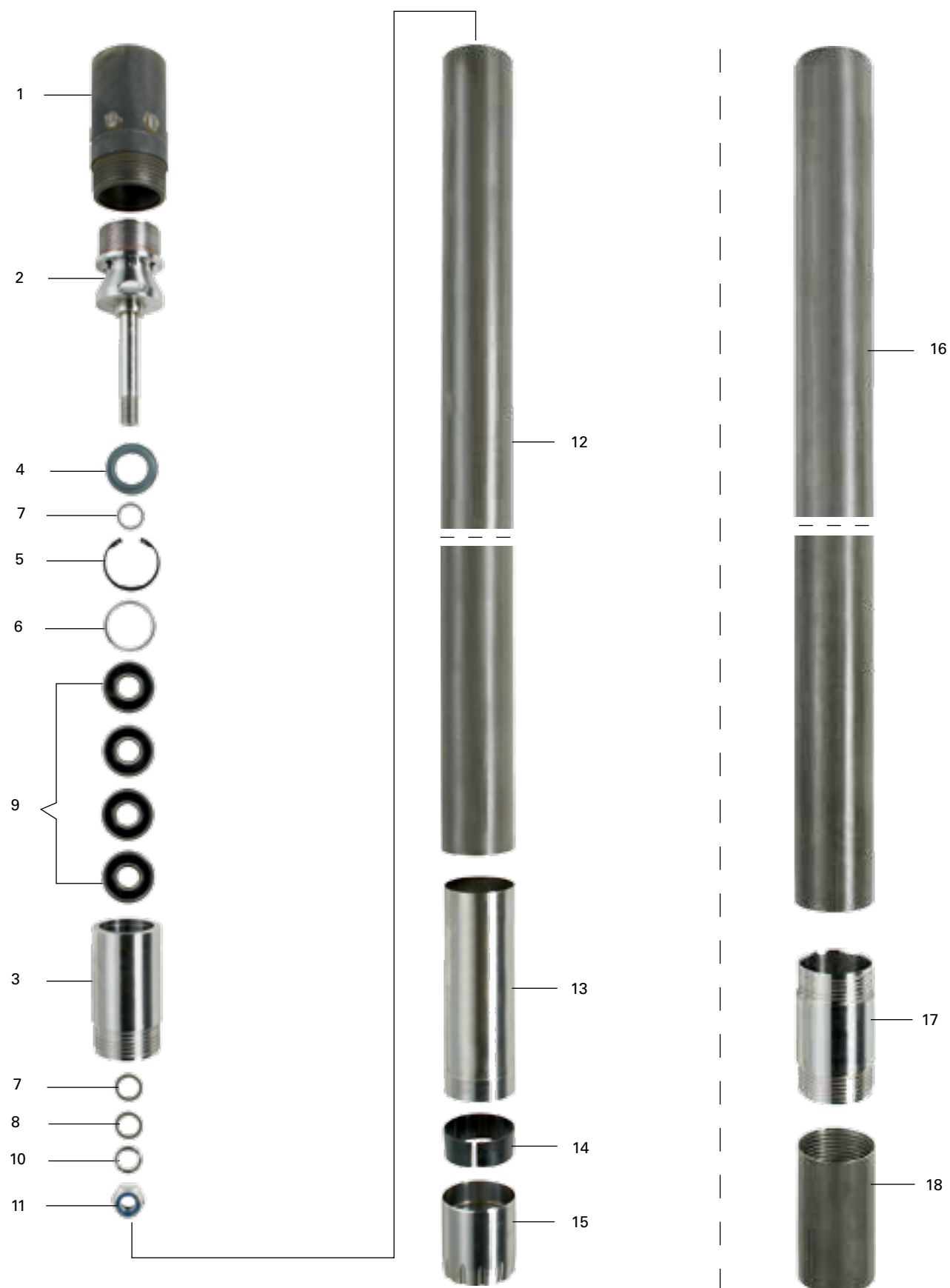
## Spare parts 76T2



## Spare parts list 86T2

Item	Description	Qty	Part number
1-18	1.5 m / 5 ft Core barrel complete, conn. CR50 box	1	8392 0226 07
1-18	3.0 m / 10 ft Core barrel complete, conn. CR50 box	1	8392 0227 06
1-11	Core barrel head complete, conn. CR50 box excl. adapter stabilizer	1	3863 2179 80
1	Core barrel coupling, conn. CR50 box	1	3863 2179 00
2	Bearing shaft	1	3863 2180 00
3	Bearing housing	1	3863 2181 00
4	Washer seal	1	3863 2182 00
5	Circlip	1	0335 2152 00
6	Spacer	1	0324 1551 61
7	Adjusting washer	2	0324 1551 56
8	Adjusting washer	1	0324 1551 36
9	Ball bearing	4	0502 3161 00
10	Washer	1	3702 0029 00
11	Nut	1	0291 1118 00
12	Inner tube 1500 mm	1	3863 1436 00
12	Inner tube 3000 mm	1	3863 1441 00
13	Extension tube	1	3863 1452 00
14	Core lifter	1	3863 1455 00
15	Core lifter case	1	3863 1453 00
16	Outer tube 1500 mm	1	3863 1437 00
16	Outer tube 3000 mm	1	3863 1442 00
17	Reamings shell blank	1	3863 1450 00
18	Protector, steel	1	3863 1454 00

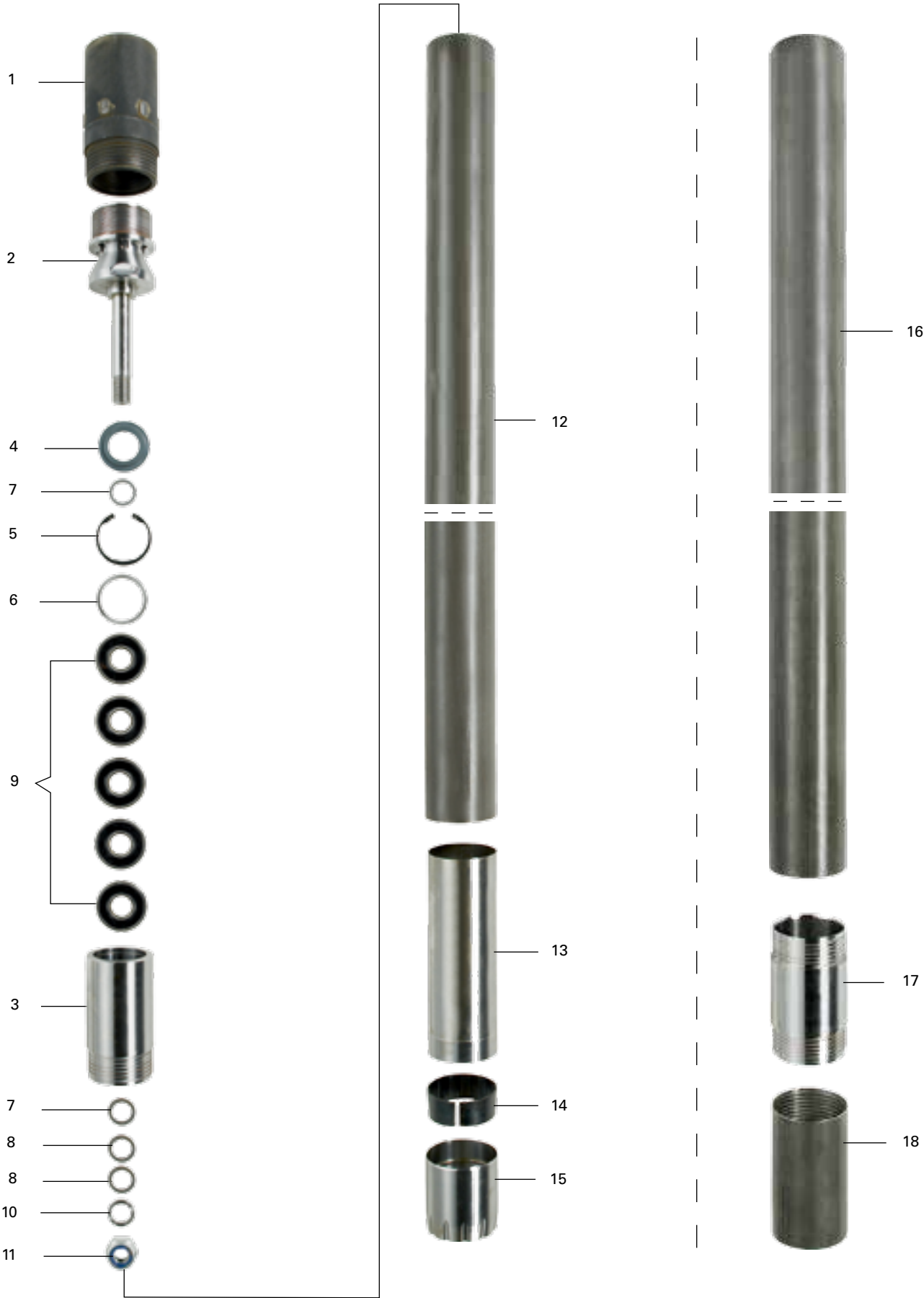
## Spare parts 86T2



## Spare parts list 101T2

Item	Description	Qty	Part number
1-18	1.5 m / 5 ft Core barrel complete, conn. NW box	1	8392 0232 09
1-18	1.5 m / 5 ft Core barrel complete, conn. 2 3/8" API REG box	1	8393 0825 71
1-18	3.0 m / 10 ft Core barrel complete, conn. NW box	1	8392 0233 08
1-18	3.0 m / 10 ft Core barrel complete, conn. 2 3/8" API REG box	1	8393 0825 70
1-11	Core barrel head complete, conn. NW box	1	3863 2341 80
1-11	Core barrel head complete, conn. 2 3/8" API REG box	1	8393 0825 95
1	Core barrel coupling, conn. NW box	1	3863 2341 00
1	Core barrel coupling, conn. 2 3/8" API REG box	1	8393 0825 72
2	Bearing shaft	1	3863 2331 00
3	Bearing housing	1	3863 2332 00
4	Washer seal	1	3863 2335 00
5	Circlip	1	0335 2157 00
6	Spacer	1	0324 1551 62
7	Adjusting washer	2	0324 1551 40
8	Adjusting washer	2	0324 1551 39
9	Ball bearing	5	0502 3162 00
10	Washer	1	0301 2405 00
11	Nut	1	0291 1118 00
12	Inner tube 1500 mm	1	3863 1849 00
12	Inner tube 3000 mm	1	3863 1854 00
13	Extension tube	1	3863 1872 00
14	Core lifter	1	3863 1879 00
15	Core lifter case	1	3863 1873 00
16	Outer tube 1500 mm	1	3863 2326 00
16	Outer tube 3000 mm	1	3863 2327 00
17	Reamings shell blank	1	3863 1870 00
18	Protector, steel	1	3863 1874 00

Spare parts 101T2



## Optional equipment

### Optional

Description	46 T2	56 T2	66 T2	76 T2	86 T2	101 T2
Sub AWJ box to CR 42 pin	3862 6694 00	–	–	–	–	–
Sub BWJ box to CR 50 pin	–	3862 6696 00	3862 6696 00	–	–	–
Sub NWJ box to CR 50 pin	–	–	–	3862 6636 00	3862 6636 00	–
Sub NWJ box to NW pin	–	–	–	–	–	3862 6635 00
Inner tube 350 mm (Starter)*	3863 1112 00	3863 1192 00	3863 1271 00	3863 1351 00	3863 1431 00	3863 1844 00
Outer tube 350 mm (Starter)*	8393 0816 37	8393 0816 39	3863 1272 00	3863 1352 00	3863 1432 00	3863 2325 00
Full grip wrench, inner tube**	8393 0813 89	3869 7087 01	3869 7088 02	3869 7089 00	3869 7090 00	3869 7091 01
Full grip wrench, outer tube**	3869 7087 01	3869 7088 00	3869 7089 00	3869 7090 00	3869 7091 00	3869 7092 00

\*) Non stocked items. \*\*) Should be used in pairs.

### Spare parts kits core barrel (500 m)

Description	46 T2		56 T2		66 T2		76 T2		86 T2		101 T2	
	Qty	3702 0536 92	Qty	3702 1036 92	Qty	3863 1291 90	Qty	3863 1371 90	Qty	3863 1451 90	Qty	3863 1875 90
Parts included												
Shut-off valve	1	●	1	●								
Spring	1	●	1	●								
Lock nut	1	●	1	●	1	●	1	●	1	●	1	●
Ball bearing	2	●	2	●	5	●	5	●	4	●	5	●
Bearing	1	●	1	●								
Spacer	1	●	1	●	1	●	1	●	1	●	1	●
Adjusting washer					5	●	1	●	3	●	3	●
Seal	1	●	1	●	1	●	1	●		●	1	●
Spring pin	1	●	1	●								
Lub. nipple	1	●	1	●								
Circlip					1	●	1	●	1	●	1	●
Core lifter	10	●	10	●	10	●	10	●	10	●	10	●
Core lifter case	4	●	4	●	4	●	4	●	4	●	4	●
Extension tube	4	●	4	●	4	●	4	●	4	●	4	●

● = included in kit

# CONTENTIONAL DOUBLE TUBE CORE BARREL TYPE T6

## Information

### Conventional mud core barrel

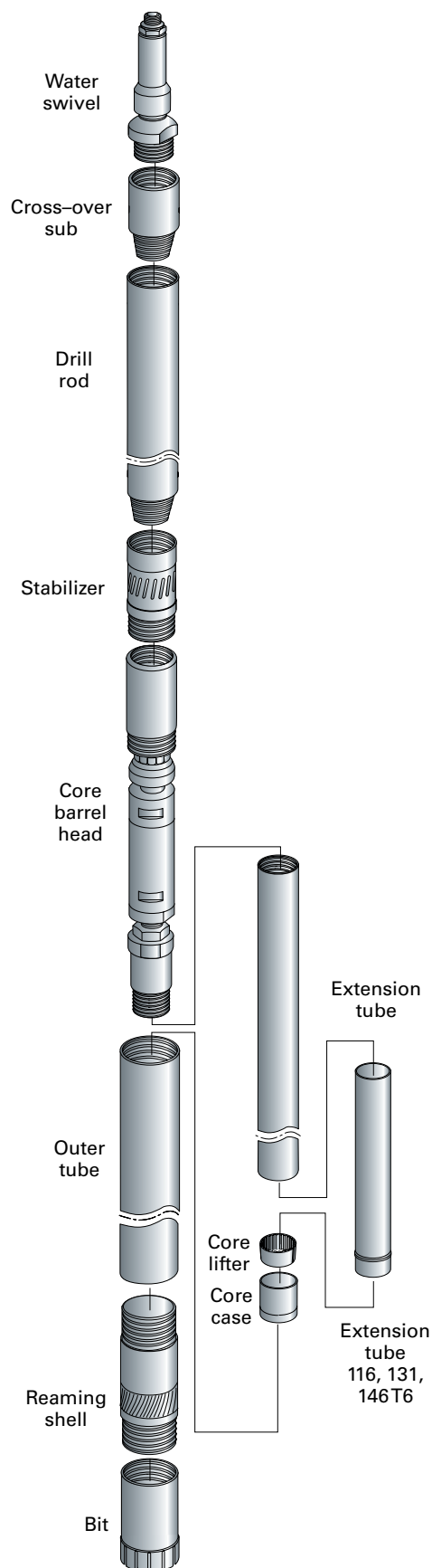
The sturdy core barrels type T6 are of allround application for core sampling in all formations. Despite the relatively thin wall, T6 can very well be used with mud or air flushing. For air flushing oversize bits and core barrel couplings are recommended. T6 core barrels are available in metric sizes 76 to 146 mm.

### Technical data

Metric system (mm)					
Size	Description				
	Hole diameter	Core diameter	Core barrel connection box	Recommended drill rod	Outer diameter drill rod
76T6	76.3	57.0	CR50	NWJ70*	70.0
86T6	86.3	67.0	CR50	NWJ70*	70.0
101T6	101.3	79.0	NW/2 3/8"	NWJ70*	70.0
116T6	116.3	93.0	NW/2 3/8"	NWJ70*	70.0
131T6	131.3	108.0	NW/2 3/8"	NWJ70*/ HW*	70.0/89.0
146T6	146.3	123.0	NW/2 3/8"	NWJ70*/ HW*	70.0/89.0
Imperial system (in)					
76T6	3.00	2.24	CR50	NWJ70*	2.76
86T6	3.40	2.64	CR50	NWJ70*	2.76
101T6	3.99	3.11	NW/2 3/8"	NWJ70*	2.76
116T6	4.58	3.66	NW/2 3/8"	NWJ70*	2.76
131T6	5.17	4.25	NW/2 3/8"	NWJ70*/ HW*	2.76/3.50
146T6	5.76	4.84	NW/2 3/8"	NWJ70*/ HW*	2.76/3.50

\*) Cross-over SUB needed.

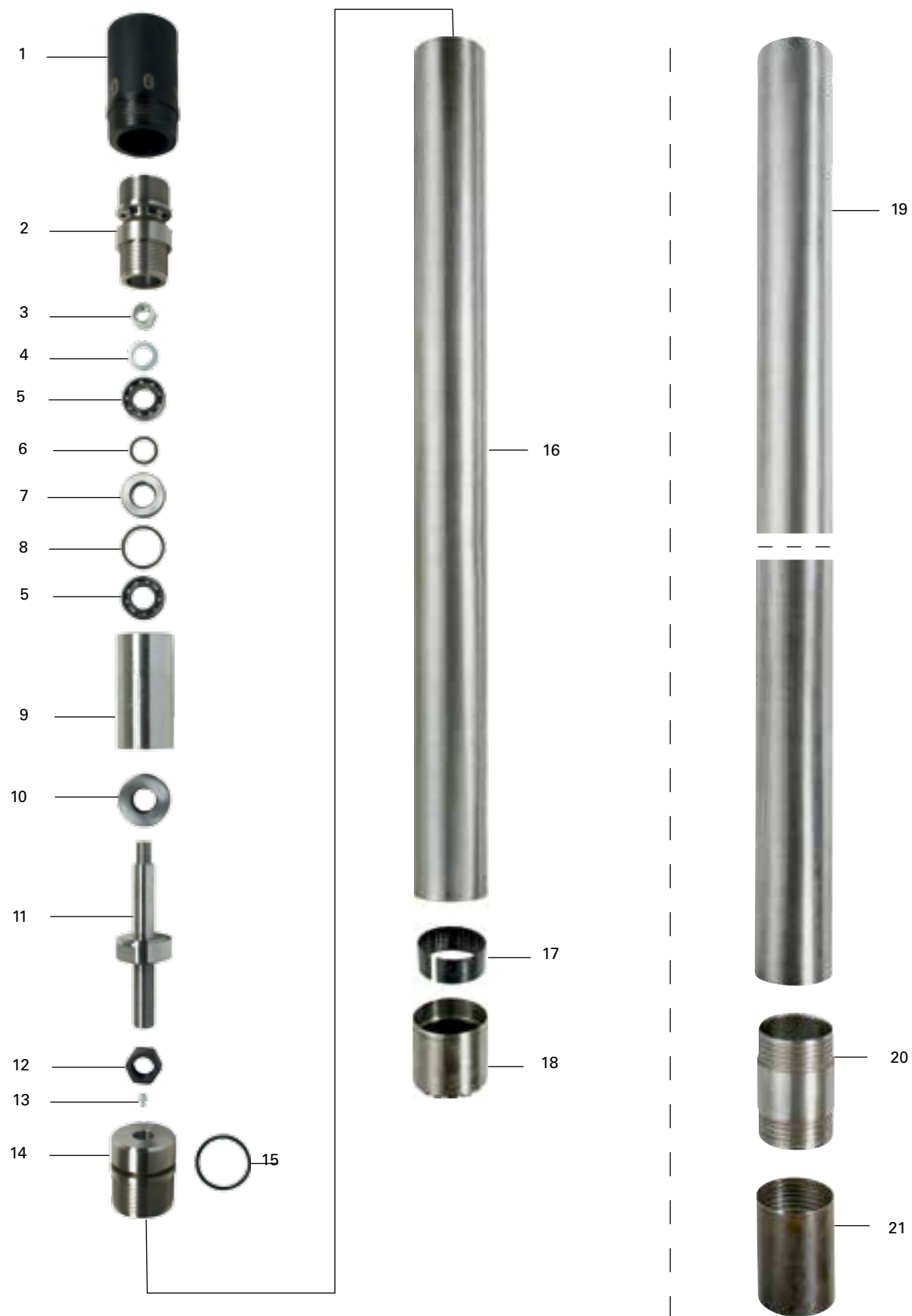
Size	Typical drilling parameters (Indicative values)							
	Rotation speed, impregnated bit (rpm)		Weight on bit: kN		Water flow: Litres/min.		Penetration rate (cm/min.)	
	Min	Max	Min	Max	Min	Max	Min	Max
76T6	750	1250	20	30	16	25	8	16
86T6	650	1100	23	35	44	70	7	14
101T6	550	950	25	38	84	118	6	12
116T6	500	800	31	46	136	190	6	10
131T6	400	700	35	53	146	205	4	9
146T6	400	600	34	59	212	297	4	8



## Spare parts list 76T6

Items	Description	Qty	Part number
1-21	1.5 m / 5 ft Core barrel complete, conn. CR 50 box	1	8392 0268 14
1-21	3.0 m / 10 ft Core barrel complete, conn. CR 50 box	1	8392 0268 06
1-15	Core barrel head complete, conn. CR50 box	1	3867 6084 80
1	Core barrel coupling, conn. CR50 box	1	3867 6084 00
2	Head	1	3867 6085 00
3	Lock nut	1	0292 1410 00
4	Washer	1	0301 2378 00
5	Ball bearing	2	0502 1105 00
6	Spacer	1	0324 1551 56
7	Ball bearing	1	0510 0405 00
8	Spacer	1	3867 4108 00
9	Bearing housing	1	3867 4107 00
10	Ball bearing	1	0510 0605 00
11	Bearing shaft	1	3867 4109 00
12	Nut	1	0268 4113 00
13	Lubricating nipple	1	0544 2162 00
14	Adjusting coupling	1	3867 6086 00
15	O-ring	1	0663 2136 00
16	Inner tube 1500 mm	1	3867 6091 00
16	Inner tube 3000 mm	1	3867 6092 00
17	Core lifter	1	3867 6108 00
18	Core lifter case	1	3867 6095 00
19	Outer tube 1500 mm	1	3867 6088 00
19	Outer tube 3000 mm	1	3867 6089 00
20	Reaming shell blank	1	3867 6094 00
21	Protector, steel	1	3867 6097 00

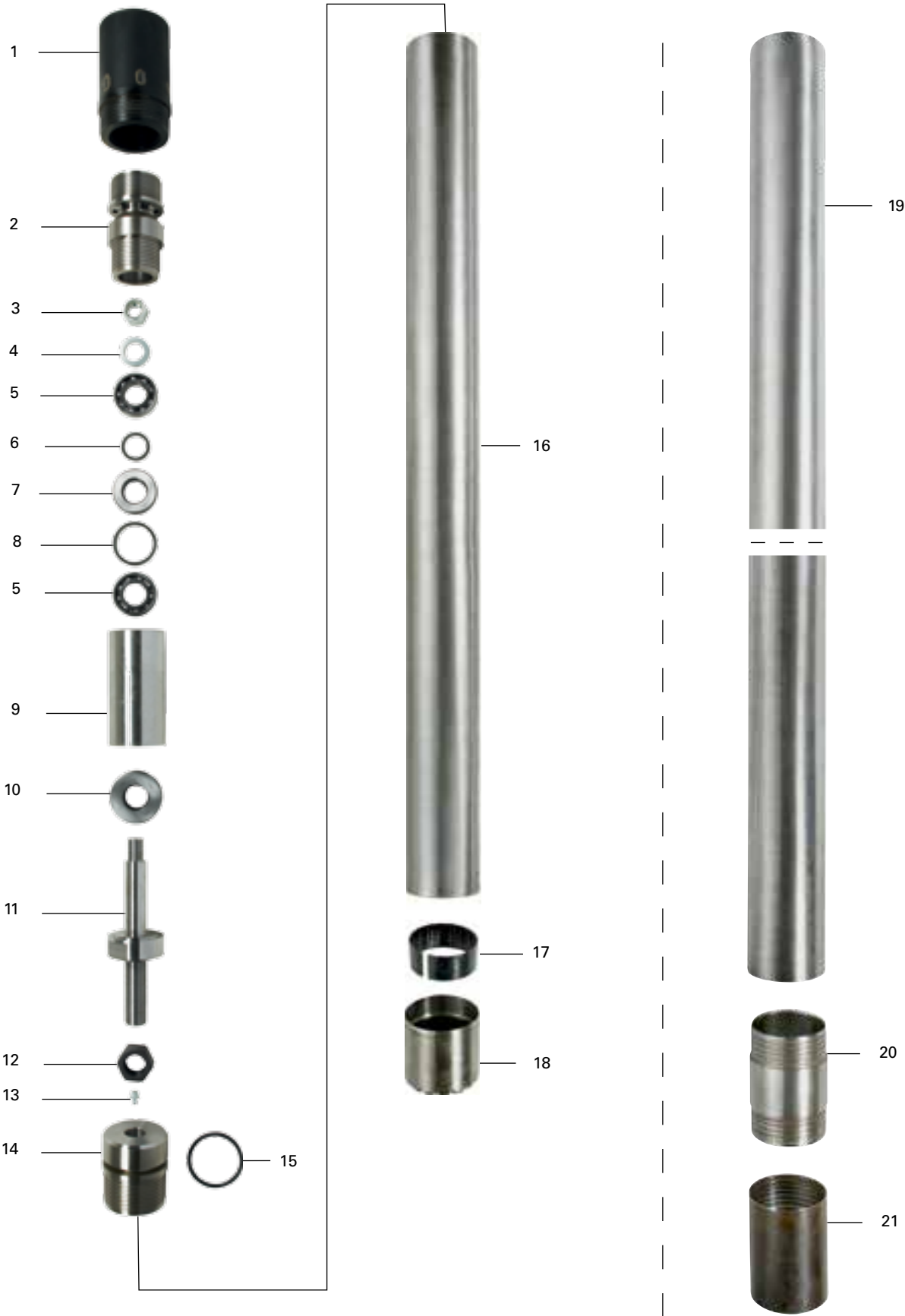
## Spare parts 76T6



## Spare parts list 86T6

Item	Description	Qty	Part number
1-21	1.5 m / 5 ft Core barrel complete, conn. CR 50 box		8392 0269 13
1-21	3.0 m / 10 ft Core barrel complete, conn. CR 50 box		8392 0269 05
1-15	Core barrel head completg, conn. CR50 box	1	3867 6164 80
1	Core barrel coupling, conn. CR50 box	1	3867 6164 00
2	Head	1	3867 6165 00
3	Lock nut	1	0292 1411 00
4	Washer	1	0301 2588 00
5	Ball bearing	2	0502 2105 00
6	Washer	1	0324 1551 56
7	Ball bearing	1	0510 0605 00
8	Spacer	1	0324 1551 60
9	Bearing housing	1	3867 4207 00
10	Ball bearing	1	0510 1405 00
11	Bearing shaft	1	3867 4209 00
12	Nut	1	0268 4113 00
13	Lubricating nipple	1	0544 2162 00
14	Adjusting coupling	1	3867 6166 00
15	O-ring	1	0663 2138 00
16	Inner tube 1500 mm	1	3867 6171 00
16	Inner tube 3000 mm	1	3867 6172 00
17	Core lifter	1	3867 6187 00
18	Core lifter case	1	3867 6175 00
19	Outer tube 1500 mm	1	3867 6168 00
19	Outer tube 3000 mm	1	3867 6169 00
20	Reaming shell blank	1	3867 6174 00
21	Protector, steel	1	3867 6177 00

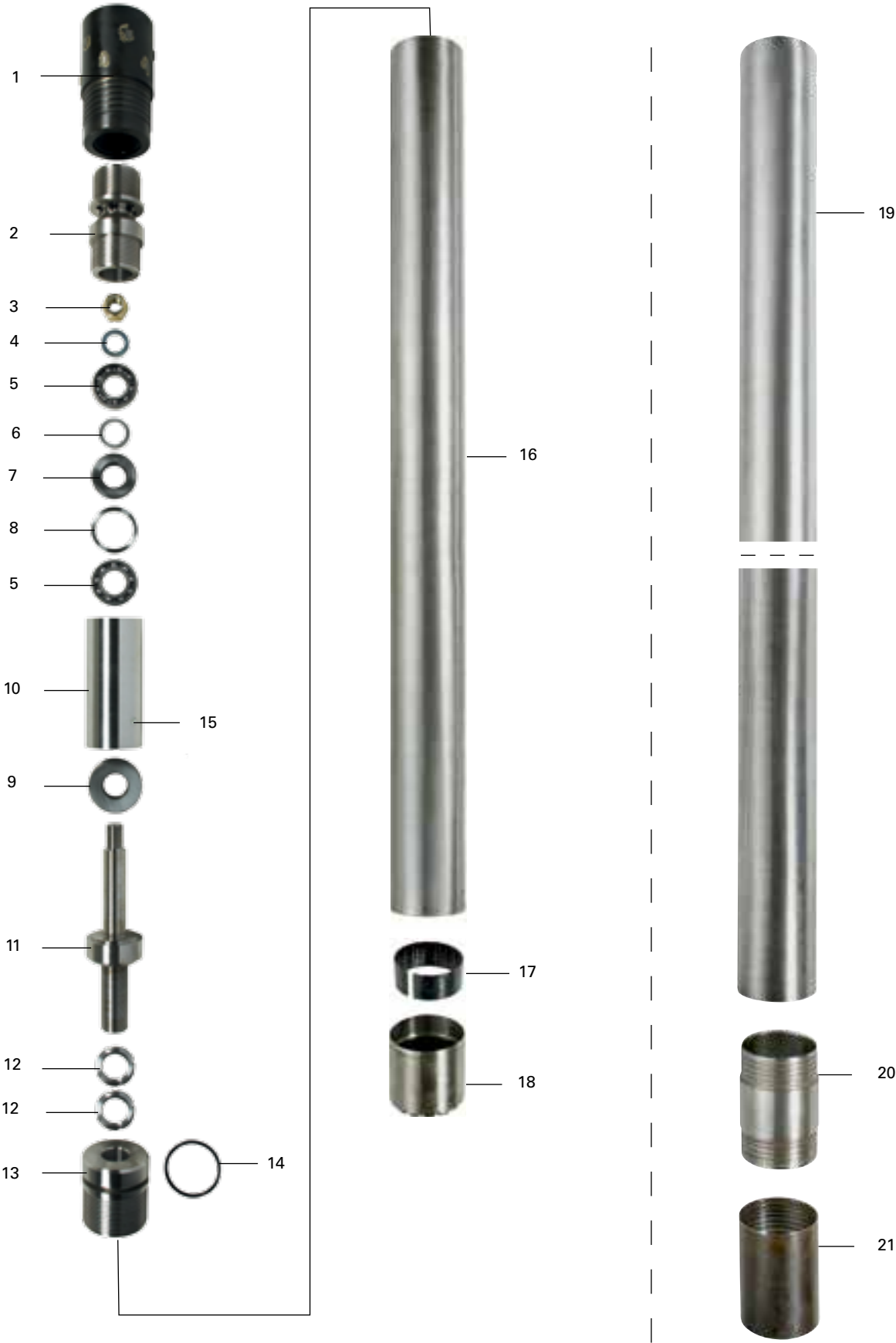
Spare parts 86T6



## Spare parts list 101T6

Item	Description	Qty	Part number
1-20	1.5 m / 5 ft Core barrel complete, conn. NW box	1	8392 0270 10
1-20	1.5 m / 5 ft Core barrel complete, conn. 2 3/8" API REG box	1	8393 0825 74
1-20	3.0 m / 10 ft Core barrel complete, conn. NW box	1	8392 0270 02
1-20	3.0 m / 10 ft Core barrel complete, conn. 2 3/8" API REG box	1	8393 0825 73
1-14	Core barrel head complete, conn. NW box	1	3867 6244 80
1-14	Core barrel head complete, conn. 2 3/8" API REG box	1	8393 0825 96
1	Core barrel coupling, conn. NW box	1	3867 6244 00
1	Core barrel coupling, conn. 2 3/8" API REG box	1	8393 0825 75
2	Head	1	3867 6245 00
3	Lock nut	1	0292 1412 00
4	Washer	1	0302 1198 00
5	Ball bearing	2	0502 2106 00
6	Washer	1	0324 1551 40
7	Ball bearing	1	0510 0606 00
8	Spacer	1	3867 4312 00
9	Ball bearing	1	0510 1406 00
10	Bearing housing	1	3867 4311 80
11	Bearing shaft	1	3702 3139 00
12	Nut	2	0295 3108 00
13	Adjusting coupling	1	3702 3140 00
14	O-ring	1	0663 2140 00
15	Lubricating nipple	1	0544 5865 00
15	Inner tube 1500 mm	1	3867 6251 00
16	Inner tube 3000 mm	1	3867 6252 00
17	Core lifter	1	3867 6264 00
18	Core lifter case	1	3867 6255 00
19	Outer tube 1500 mm	1	3867 6248 00
19	Outer tube 3000 mm	1	3867 6249 00
20	Reaming shell blank	1	3867 6254 00
21	Protector, steel	1	3867 6257 00

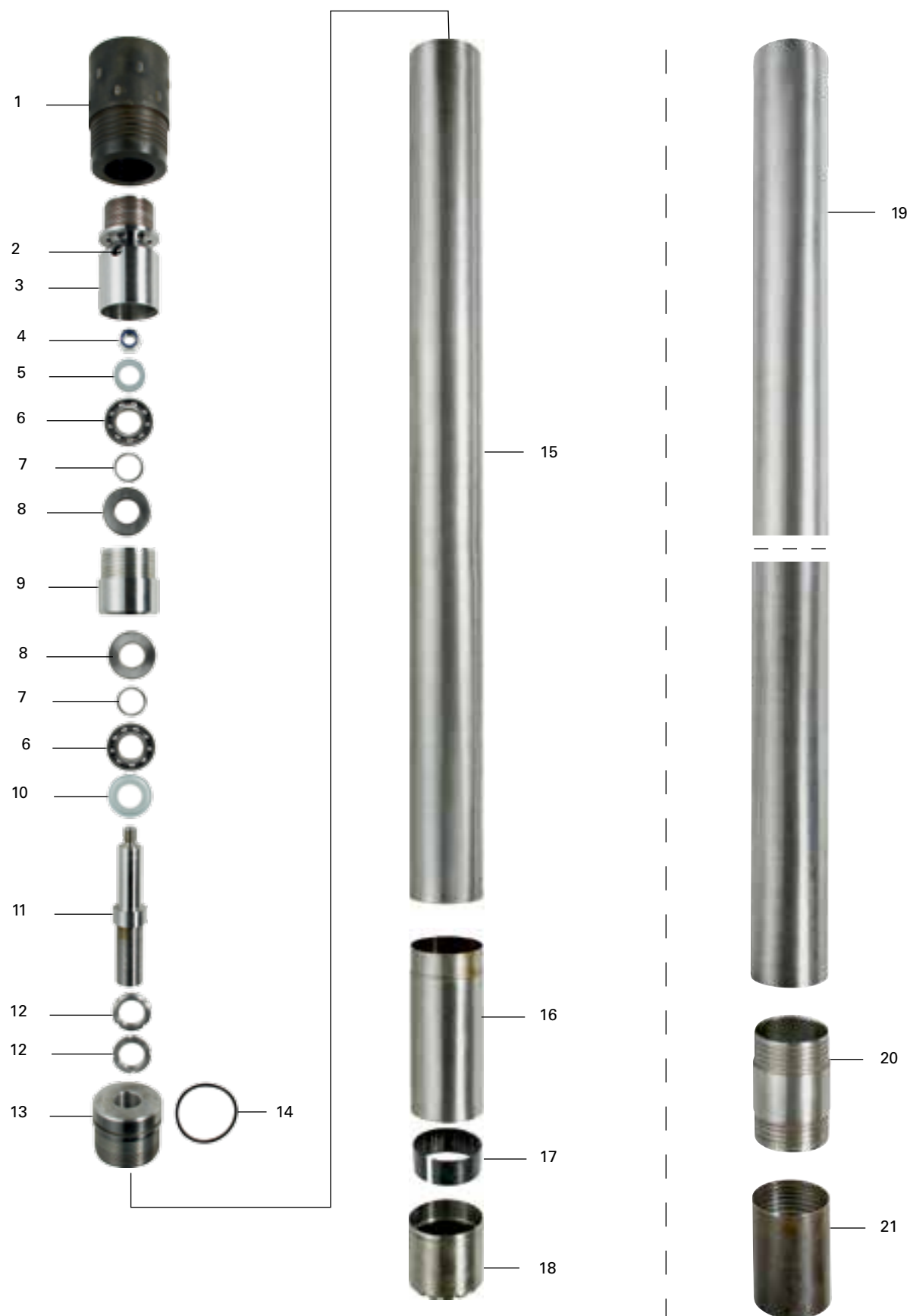
Spare parts 101T6



## Spare parts list 116T6

Item	Description	Qty	Part number
1-21	1.5 m / 5 ft Core barrel complete, conn. NW box	1	8392 0271 19
1-21	1.5 m / 5 ft Core barrel complete, conn. 2 3/8" API REG box	1	8393 0825 77
1-21	3.0 m / 10 ft Core barrel complete, conn. NW box	1	8392 0271 01
1-21	3.0 m / 10 ft Core barrel complete, conn. 2 3/8" API REG box	1	8393 0825 76
1-14	Core barrel head complete, conn. NW box	1	3867 6324 80
1-14	Core barrel head complete, conn. 2 3/8" API REG box	1	8393 0825 97
1	Core barrel coupling, conn. NW box	1	3867 6324 00
1	Core barrel coupling, conn. 2 3/8" API REG box		8393 0825 78
2	Lubricating nipple	1	0544 2162 00
3	Head	1	3867 6406 00
4	Lock nut	1	0291 1118 00
5	Washer	1	0301 2421 00
6	Ball bearing	2	0502 2108 00
7	Washer	2	0324 1551 59
8	Ball bearing	2	0510 0608 00
9	Bearing housing	1	3867 6407 00
10	Seal ring	1	0518 1058 00
11	Bearing shaft	1	3867 6409 00
12	Nut	2	0295 3110 00
13	Adjusting coupling	1	3867 6325 00
14	O-ring	1	0663 2143 00
15	Inner tube 1500 mm	1	3867 6342 00
15	Inner tube 3000 mm	1	3867 6343 00
16	Extension tube	1	3867 6345 00
17	Core lifter	1	3867 6348 00
18	Core lifter case	1	3867 6335 00
19	Outer tube 1500 mm	1	3867 6328 00
19	Outer tube 3000 mm	1	3867 6329 00
20	Reaming shell blank	1	3867 6334 00
21	Protector, steel	1	3867 6337 00

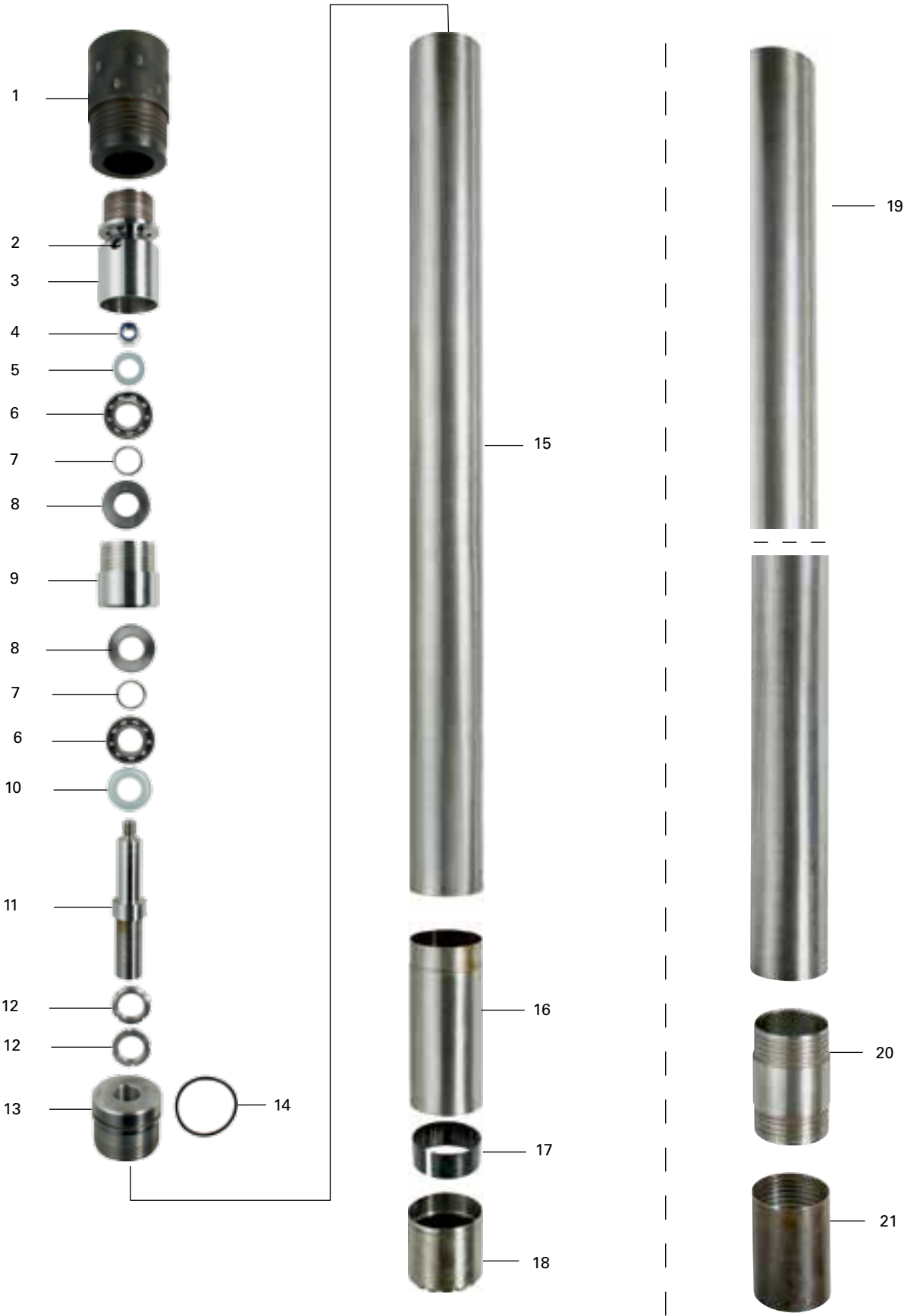
## Spare parts 116T6



## Spare parts list 131T6

Item	Description	Qty	Part number
1-21	1.5 m / 5 ft Core barrel complete, conn. NW box	1	8392 0272 18
1-21	1.5 m / 5 ft Core barrel complete, conn. 2 3/8" API REG box	1	8393 0825 80
1-21	3.0 m / 10 ft Core barrel complete, conn. NW box	1	8392 0272 00
1-21	3.0 m / 10 ft Core barrel complete, conn. 2 3/8" API REG box	1	8393 0825 79
1-14	Core barrel head complete, conn. NW box	1	3867 6404 80
1-14	Core barrel head complete, conn. 2 3/8" API REG box	1	8393 0825 98
1	Core barrel coupling, conn. NW box	1	3867 6404 00
1	Core barrel coupling, conn. 2 3/8" API REG box	1	8393 0825 81
2	Lubricating nipple	1	0544 2162 00
3	Head	1	3867 6406 00
4	Lock nut	1	0291 1118 00
5	Washer	1	0301 2421 00
6	Ball bearing	2	0502 2108 00
7	Washer	2	0324 1551 59
8	Ball bearing	2	0510 0608 00
9	Bearing housing	1	3867 6407 00
10	Seal ring	1	0518 1058 00
11	Bearing shaft	1	3867 6409 00
12	Nut	2	0295 3110 00
13	Adjusting coupling	1	3867 6410 00
14	O-ring	1	0663 2146 00
15	Inner tube 1500 mm	1	3867 6427 00
15	Inner tube 3000 mm	1	3867 6428 00
16	Extension tube	1	3867 6430 00
17	Core lifter	1	3867 6424 00
18	Core lifter case	1	3867 6419 00
19	Outer tube 1500 mm	1	3867 6412 00
19	Outer tube 3000 mm	1	3867 6413 00
20	Reaming shell blank	1	3867 6418 00
21	Protector, steel	1	3867 6421 00

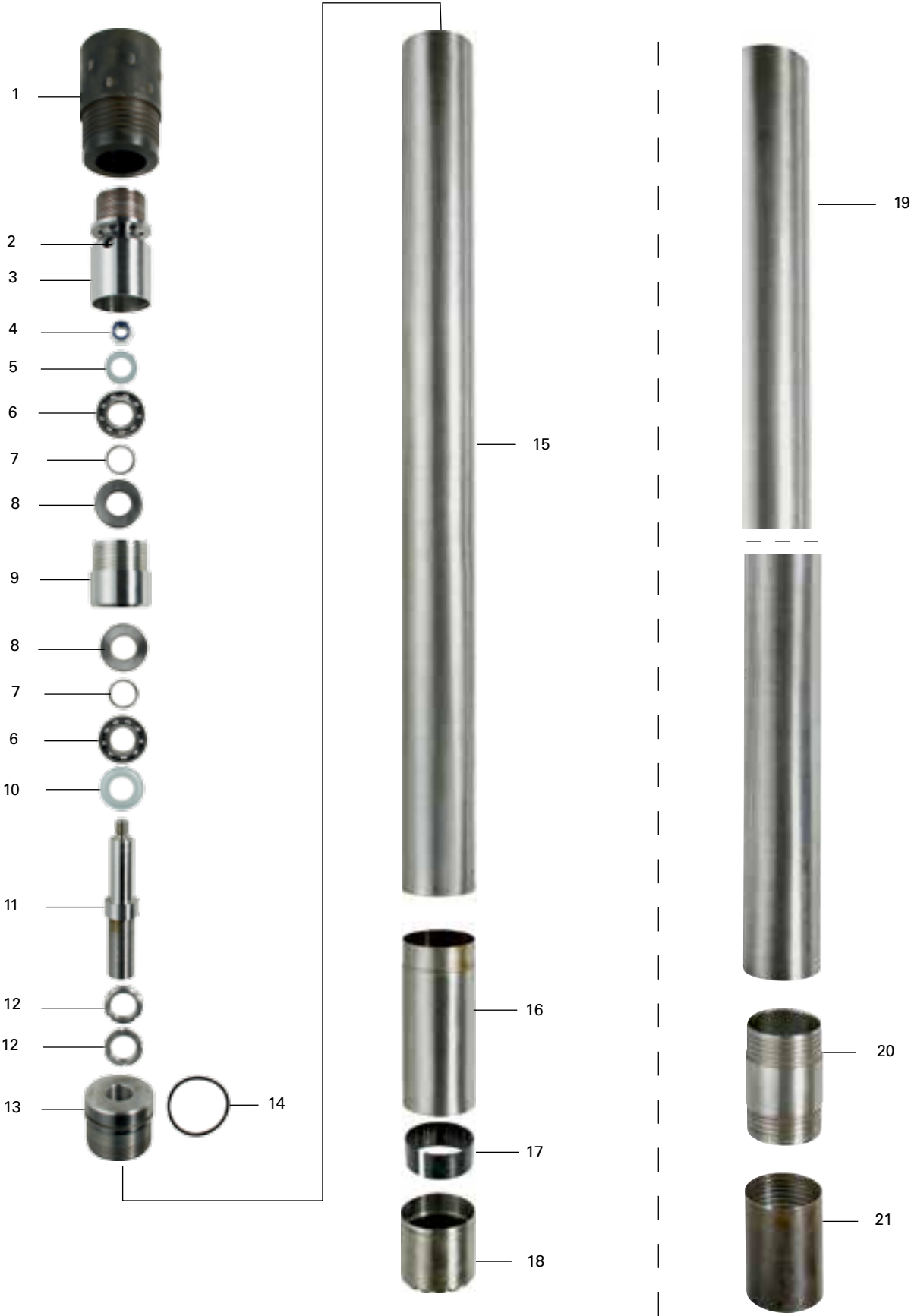
Spare parts 131T6



## Spare parts list 146T6

Item	Description	Qty	Part number
1-21	1.5 m / 5 ft Core barrel complete, conn. NW box	1	8392 0273 17
1-21	1.5 m / 5 ft Core barrel complete, conn. 2 3/8" API REG box	1	8393 0825 83
1-21	3.0 m / 10 ft Core barrel complete, conn. NW box	1	8392 0273 09
1-21	3.0 m / 10 ft Core barrel complete, conn. 2 3/8" API REG box	1	8393 0825 82
1-14	Core barrel head complete, conn. NW box	1	3867 6484 80
1-14	Core barrel head complete, conn. 2 3/8" API REG box	1	8393 0825 99
1	Core barrel coupling, conn. NW box	1	3867 6484 00
1	Core barrel coupling, conn. 2 3/8" API REG box	1	8393 0825 84
2	Lubricating nipple	1	0544 2162 00
3	Head	1	3867 6406 00
4	Lock nut	1	0291 1118 00
5	Washer	1	0301 2421 00
6	Ball bearing	2	0502 2108 00
7	Washer	2	0324 1551 59
8	Ball bearing	2	0510 0608 00
9	Bearing housing	1	3867 6407 00
10	Seal ring	1	0518 1058 00
11	Bearing shaft	1	3867 6409 00
12	Nut	2	0295 3110 00
13	Adjusting coupling	1	3867 6485 00
14	O-ring	1	0663 2149 00
15	Inner tube 1500 mm	1	3867 6502 00
15	Inner tube 3000 mm	1	3867 6503 00
16	Extension tube	1	3867 6505 00
17	Core lifter	1	3867 6513 00
18	Core lifter case	1	3867 6495 00
19	Outer tube 1500 mm	1	3867 6488 00
19	Outer tube 3000 mm	1	3867 6489 00
20	Reaming shell blank	1	3867 6494 00
21	Protector, steel	1	3867 6497 00

Spare parts 146T6



## Optional equipment

### Optional

Description	76 T6	86 T6	101 T6	116 T6	131 T6	146 T6
Sub NWJ box to CR 50 pin	3862 6636 00	3862 6636 00	–	–	–	–
Sub NWJ box to NW pin	–	–	3862 6635 00	3862 6635 00	3862 6635 00	3862 6635 00
Sub NWJ box to 2 3/8" API REG pin	–	–	8393 0825 11	8393 0825 11	8393 0825 11	8393 0825 11
Sub HW box to NW pin	–	–	–	–	3702 0041 00	3702 0041 00
Core lifter, basket type	3867 6099 00	3867 6178 00	3867 6258 00	3867 6338 00	3867 6422 00	3867 6498 00
Inner tube 350 mm (Starter)*	3867 6090 00	3867 6170 00	3867 6250 00	3867 6330 00	3867 6414 00	3867 6490 00
Outer tube 350 mm (Starter)*	3867 6087 00	3867 6167 00	3867 6247 00	3867 6327 00	3867 6411 00	3867 6487 00
Full grip wrench, inner tube**	3869 7089 00	3869 7090 00	3869 7091 00	3869 7092 00	3869 7093 00	3869 7094 00
Full grip wrench, outer tube**	3869 7090 00	3869 7091 00	3869 7092 00	3869 7093 00	3869 7094 00	3869 7095 00

\*) Non stocked items. \*\*) Should be used in pairs.

### Spare parts kits core barrel (500 m)

Description	76 T6		86 T6		101 T6		116 T6		131 T6		146 T6	
	Qty	3867 6096 90	Qty	3867 6176 90	Qty	3867 6256 90	Qty	3867 6336 90	Qty	3867 6420 90	Qty	3867 6496 90
Parts included												
O-ring	1	●	1	●	1	●	1	●	1	●	1	●
Ball bearing	2	●	2	●	2	●	2	●	2	●	2	●
Ball bearing	1	●	1	●	1	●	2	●	2	●	2	●
Ball bearing	1	●	1	●	1	●						
Lock nut	1	●	1	●	1	●	1	●	1	●	1	●
Lock nut	1	●	1	●	2	●	2	●	2	●	2	●
Lub. nipple	1	●	1	●	1	●	1	●	1	●	1	●
Seal ring							1	●	1	●	1	●
Extension tube							4	●	4	●	4	●
Core lifter case	4	●	4	●	4	●	4	●	4	●	4	●
Core lifter	10	●	10	●	10	●	10	●	10	●	10	●
● = included in kit												

# CONTENTIONAL DOUBLE TUBE CORE BARREL TYPE T6S

## Information

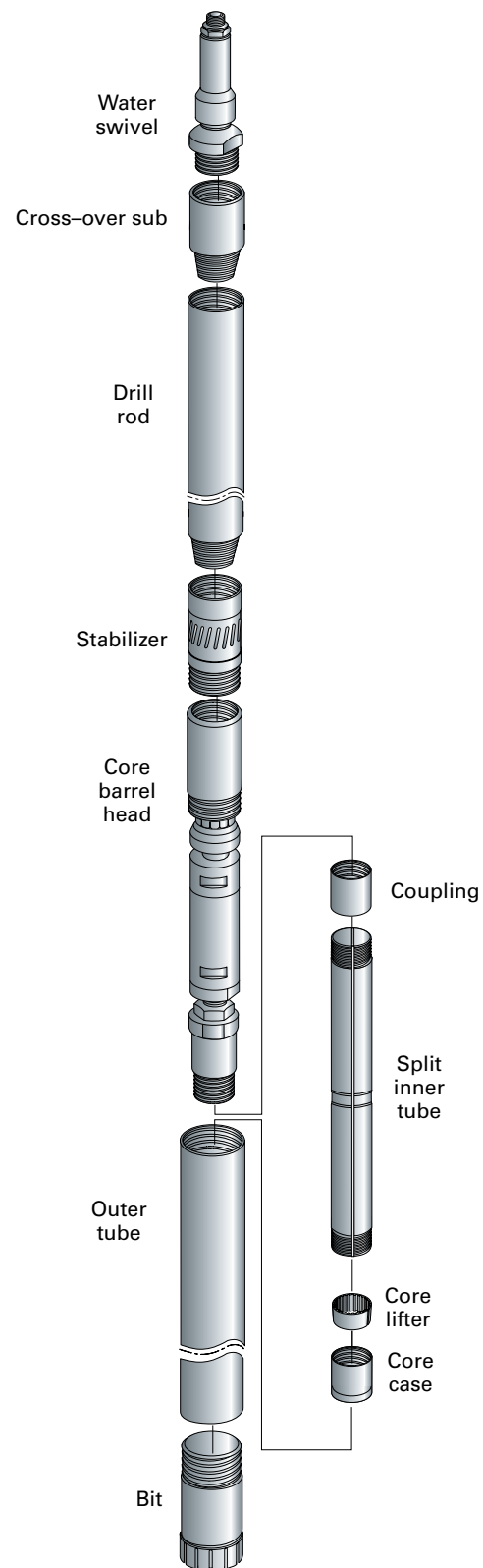
### Conventional mud core barrel

Atlas Copco T6S core barrels are designed for sampling and site investigations in very loose formations. The split aluminium inner tube combined with face discharge bit gives a very undisturbed sample. This core barrel is used without reaming shell. T6S can be used with mud flushing.

### Technical data

Metric system (mm)					
Size	Description				
	Hole diameter	Core diameter	Core barrel connection box	Recommended drill rod	Outer diameter drill rod
76T6S	76.3	47.7	CR50	53/NWJ70*	53.0/70.0
101T6S	101.3	71.7	NW/2 3/8"	NWJ70*	70.0
131T6S	131.3	100.7	NW/2 3/8"	NWJ70*/HW*	70.0/89.0
Imperial system (in)					
76T6S	3.00	1.88	CR50	53/NWJ70*	2.09/2.76
101T6S	3.99	2.82	NW/2 3/8"	NWJ70*	2.76
131T6S	5.17	3.96	NW/2 3/8"	NWJ70*/HW*	2.76/3.50
*) Cross-over SUB needed.					

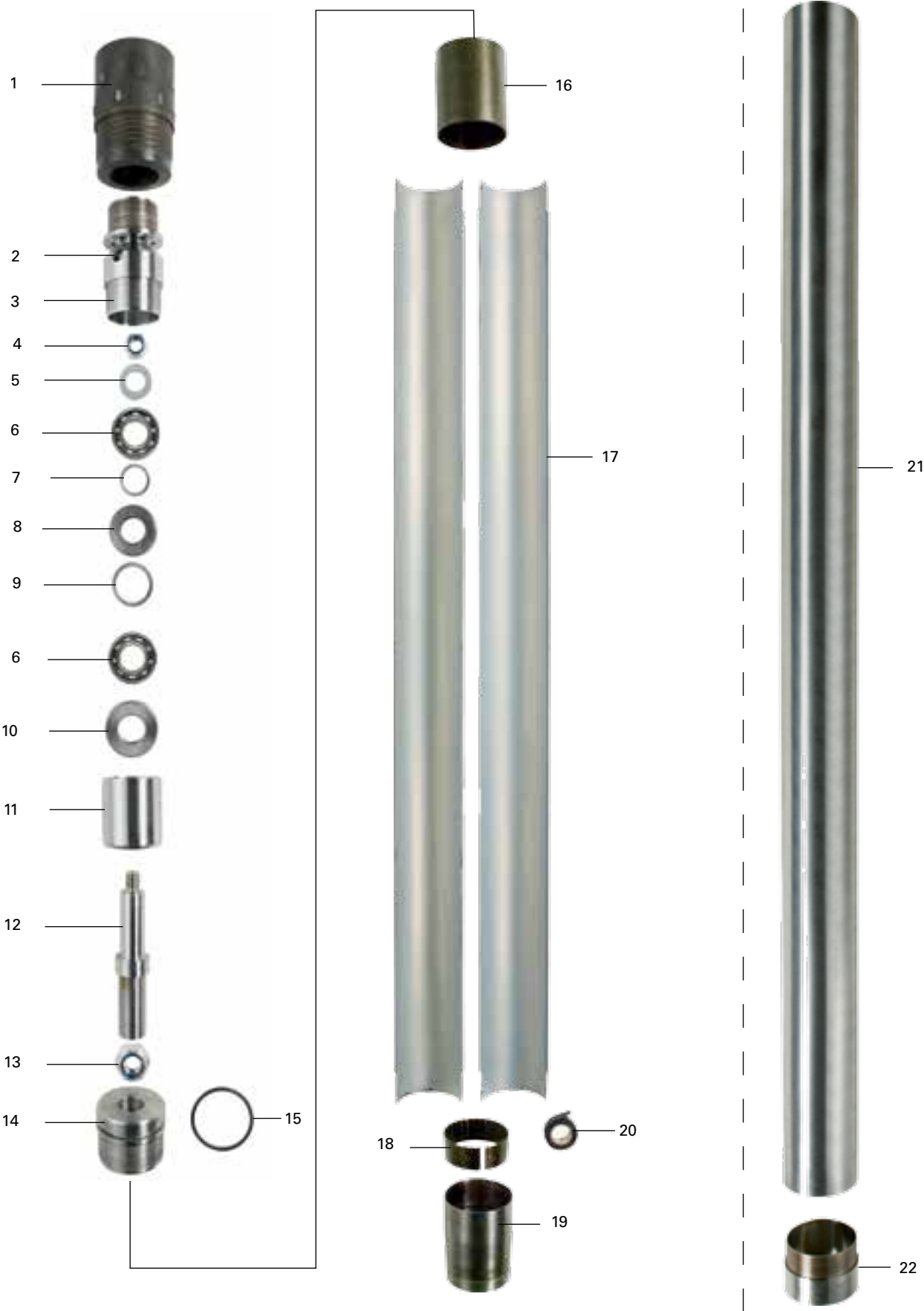
Size	Typical drilling parameters (Indicative values)							
	Rotation speed, impregnated bit (rpm)		Weight on bit: kN		Water flow: Litres/min.		Penetration rate (cm/min.)	
	Min	Max	Min	Max	Min	Max	Min	Max
76T6S	600	1100	20	30	16	25	8	16
101T6S	500	850	25	38	84	118	6	12
131T6S	400	600	35	53	146	205	4	9



## Spare parts list 76T6S

Item	Description	Qty	Part number
1-22	1.5 m / 5 ft Core barrel complete, conn. CR 50 box		8392 0275 07
1-15	Core barrel head complete, conn. CR 50 box	1	3867 6084 81
1	Core barrel coupling, conn. CR 50 box	1	3867 6084 00
2	Lubricating nipple	1	0544 2162 00
3	Head	1	3867 6085 00
4	Lock nut	1	0292 1410 00
5	Washer	1	0301 2378 00
6	Ball bearing	2	0502 1105 00
7	Washer	1	0324 1551 56
8	Ball bearing	1	0510 0405 00
9	Spacer	1	3867 4108 00
10	Ball bearing	1	0510 0605 00
11	Bearing housing	1	3867 4107 00
12	Bearing shaft	1	3867 4109 00
13	Nut	1	0268 4113 00
14	Adjusting coupling	1	3867 6134 00
15	O-ring	1	0663 2136 00
16	Coupling	1	3863 3624 00
17	Split inner tube 1500 mm	1	3863 3617 00
18	Core lifter	1	3863 3173 00
19	Core lifter case	1	3863 3626 00
20	Tape	1	3766 0041 00
21	Outer tube 1500 mm	1	3867 6137 00
22	Protector, steel	1	3863 3178 00

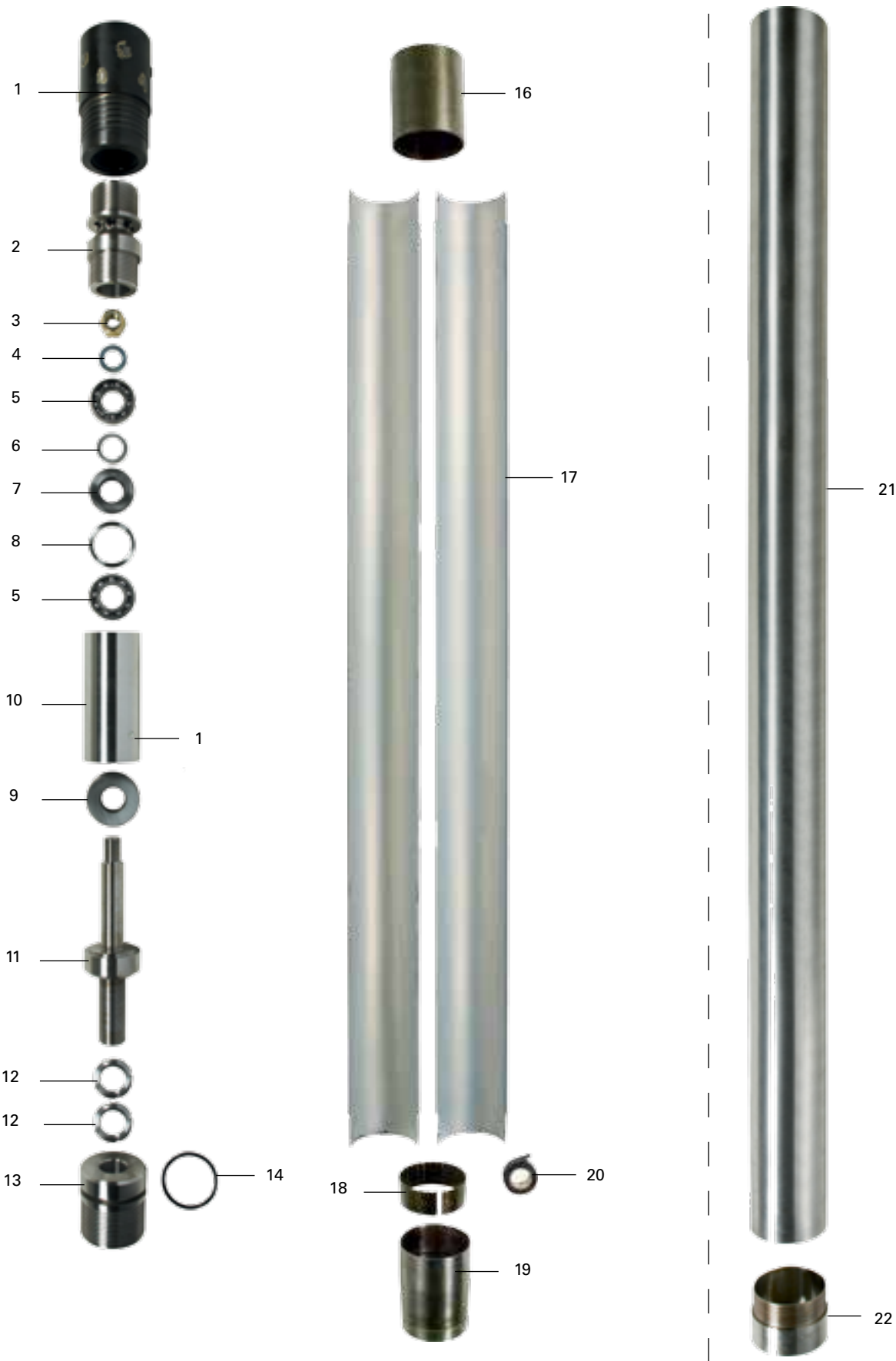
Spare parts 76T6S



## Spare parts list 101T6S

Item	Description	Qty	Part number
1-21	1.5 m / 5 ft Core barrel complete, conn. NW box	1	8392 0277 05
1-21	1.5 m / 5 ft Core barrel complete, conn. 2 3/8" API REG box	1	8393 0825 86
1-14	Core barrel head complete, conn. NW box	1	3867 6244 81
1-14	Core barrel head complete, conn. 2 3/8" API REG box	1	8393 0826 00
1	Core barrel coupling, conn. NW box	1	3867 6244 00
1	Core barrel coupling, conn. 2 3/8" API REG box	1	8393 0825 75
2	Head	1	3867 6245 00
3	Lock nut	1	0292 1412 00
4	Washer	1	0302 1198 00
5	Ball bearing	2	0510 0606 00
6	Washer spacer	1	0324 1551 40
7	Ball bearing	1	0510 0606 00
8	Spacer	1	3867 4312 00
9	Ball bearing	1	0510 1406 00
10	Bearing housing incl. lubricating nipple	1	3867 4311 80
11	Bearing shaft	1	3702 3139 00
12	Nut	2	0295 3108 00
13	Adjusting coupling	1	3702 3141 00
14	O-ring	1	0663 2140 00
15	Lubricating nipple	1	0544 5865 00
16	Coupling	1	3867 6295 00
17	Split inner tube 1500 mm	1	3867 6299 00
18	Core lifter	1	3863 3286 00
19	Core lifter case	1	3867 6301 00
20	Tape	1	3766 0041 00
21	Outer tube 1500 mm	1	3867 6297 00
22	Protector, steel	1	3863 3287 00

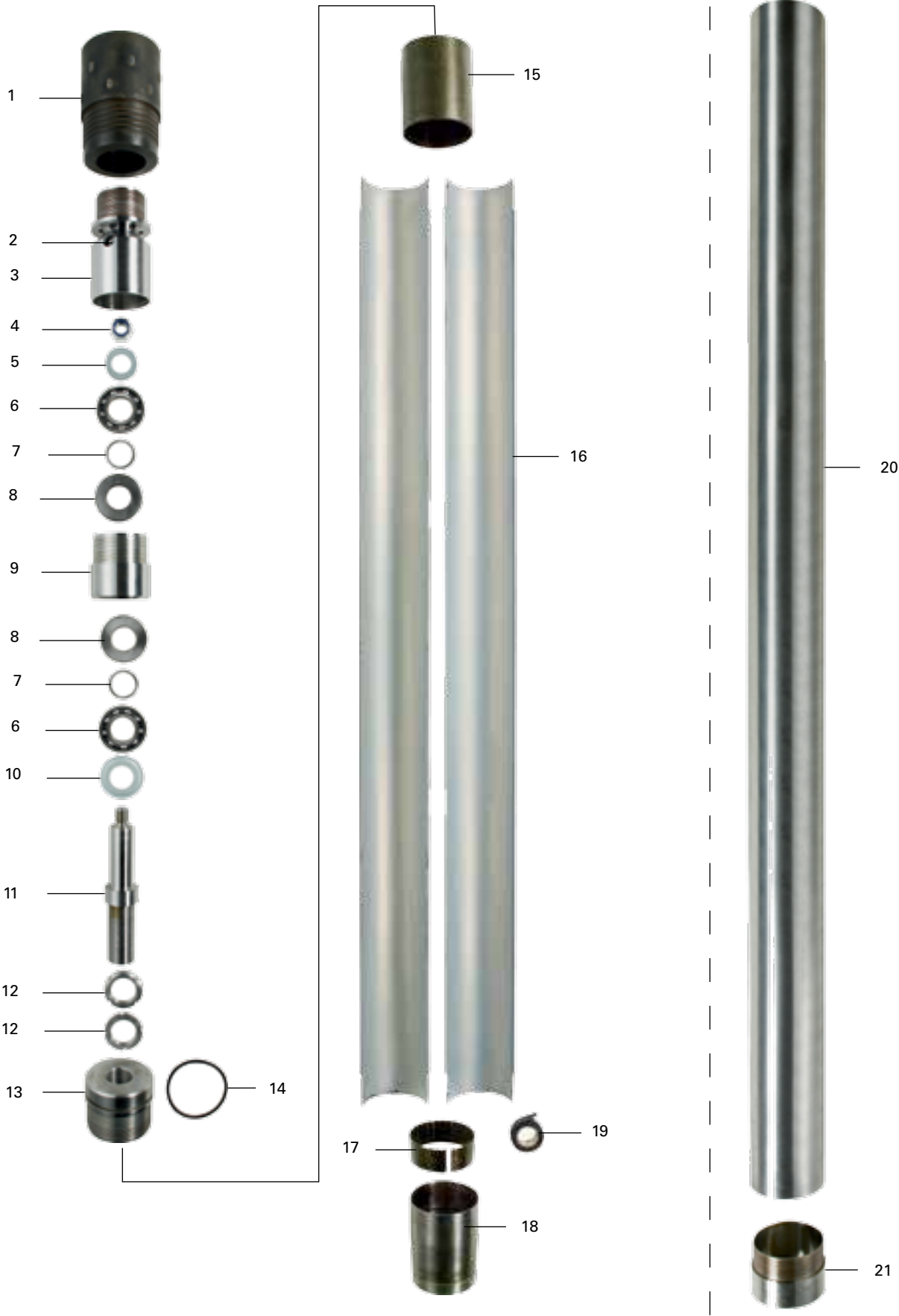
Spare parts 101T6S



## Spare parts list 131T6S

Item	Description	Qty	Part number
1-21	1.5 m / 5 ft Core barrel complete, conn. NW box	1	8392 0279 03
1-21	1.5 m / 5 ft Core barrel complete, conn. 2 3/8" API REG box	1	8393 0825 90
1-14	Core barrel head complete, conn. NW box	1	3867 6404 81
1-14	Core barrel head complete, conn. 2 3/8" API REG box	1	8393 0826 02
1	Core barrel coupling, conn. NW box	1	3867 6404 00
1	Core barrel coupling, conn. 2 3/8" API REG box	1	8393 0825 81
2	Lubricating nipple	1	0544 2162 00
3	Head	1	3867 6406 00
4	Lock nut	1	0291 1118 00
5	Washer	1	0301 2421 00
6	Ball bearing	2	0502 2108 00
7	Washer spacer	2	0324 1551 59
8	Ball bearing	2	0510 0608 00
9	Bearing housing	1	3867 6407 00
10	Seal ring	1	0518 1058 00
11	Bearing shaft	1	3867 6409 00
12	Nut	2	0295 3110 00
13	Adjusting coupling	1	3867 6454 00
14	O-ring	1	0663 2146 00
15	Coupling	1	3867 6455 00
16	Split inner tube 1500 mm	1	3867 6459 00
17	Core lifter	1	3867 2827 00
18	Core lifter case	1	3867 6461 00
19	Tape	1	3766 0041 00
20	Outer tube 1500 mm	1	3867 6457 00
21	Protector, steel	1	3863 3387 00

Spare parts 131T6S



## Optional equipment

### Optionals

Description	76 T6S	101 T6S	131 T6S
Sub NWJ box to CR 50 pin	3862 6636 00	–	–
Sub NWJ box to NW pin	–	3862 6635 00	3862 6635 00
Sub NWJ box to 2 3/8" API REG pin	–	8393 0825 11	8393 0825 11
Sub HW box to NW pin	–	–	3702 0041 00
Core lifter, basket type	3863 3168 00	3863 3288 00	3867 2841 00
Full grip wrench, inner tube**	3869 7089 00	3869 7091 00	3869 7091 00
Full grip wrench, outer tube**	3869 7090 00	3869 7092 00	3869 7092 00

\*\*) Should be used in pairs.

### Spare parts kits core barrel (500 m)

Description	76 T6S		101 T6S		131 T6S	
	Qty.	3867 6096 91	Qty.	3867 6256 91	Qty.	3867 6420 91
Parts included						
O-ring	1	●	1	●	1	●
Ball bearing	4	●	4	●	4	●
Lock nut	2	●	2	●	3	●
Lub. nipple	1	●	1	●	1	●
Seal ring					1	●
Tape	2		2	●	2	●
Core lifter case	4	●	4	●	4	●
Core lifter	10	●	10	●	10	●

● = included in kit

# CONTENTIONAL SINGLE TUBE CORE BARREL TYPE B

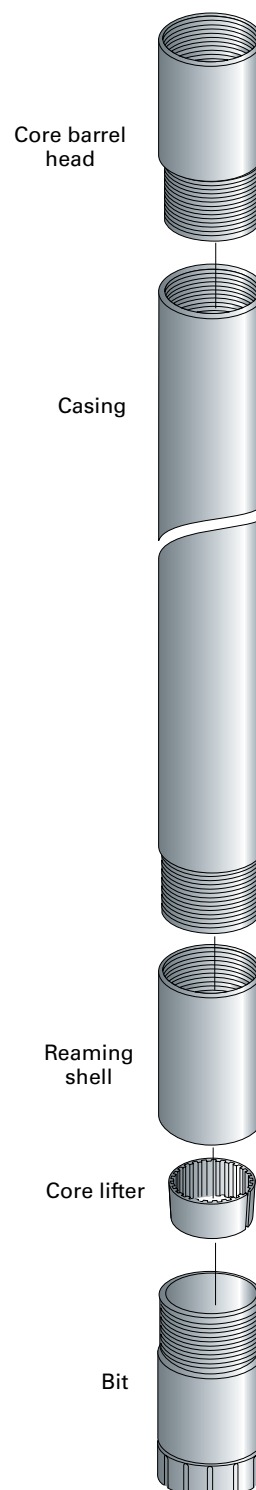
## Information

### Extendable core barrel

B–single tube is suitable for drilling straight holes e.g. grout hole drilling or for concrete drilling when core examination is of less importance. The system is built upon metric casings and extendable by adding additional casing pipes.

### Technical data

Metric system (mm)				
Size	Description			
	Hole diameter	Core diameter	Core tube outer diameter	Core barrel connection box
46 B	46.3	31.7	44.4	CR42
56 B	56.3	41.7	54.4	CR50
66 B	66.3	51.7	64.4	CR50
76 B	76.3	61.7	74.4	NWJ
86 B	86.3	71.7	84.4	NWJ
101 B	101.3	86.7	98.2	NWJ
116 B	116.3	101.7	113.5	NWJ
131 B	131.5	116.7	128.0	NWJ
146 B	146.5	131.7	143.0	NWJ
Imperial system (in)				
46 B	1.82	1.25	1.75	CR42
56 B	2.22	1.64	2.14	CR50
66 B	2.61	2.04	2.54	CR50
76 B	3.00	2.43	2.93	NWJ
86 B	3.40	2.82	3.33	NWJ
101 B	3.99	3.41	3.87	NWJ
116 B	4.58	4.0	4.47	NWJ
131 B	5.17	4.56	5.04	NWJ
146 B	5.76	5.19	5.63	NWJ



## Spare parts list 46B, 56B, 66B

### 46B

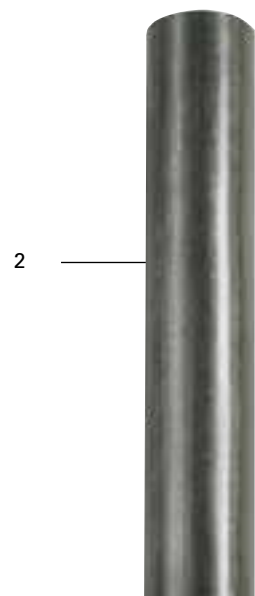
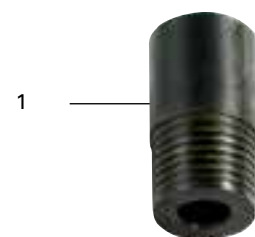
Item	Description	Qty	Part number
1-4	1.5 m / 5 ft Core barrel complete / Conn. CR 42 box	1	8393 0814 29
1-4	3.0 m / 10 ft Core barrel complete / Conn. CR 42 box	1	8393 0814 30
1	Coupling, CR 42 box – 44/37 casing pin	1	8393 0814 21
2	Casing, 44/37 x 500 mm	1	8393 8101 09
2	Casing, 44/37 x 1500 mm	1	8393 8102 08
2	Casing, 44/37 x 3000 mm	1	8393 8103 07
3	Reaming shell, blank	1	3702 6273 00
4	Core lifter	1	3863 7201 00

### 56B

Item	Description	Qty	Part number
1-4	1.5 m / 5 ft Core barrel complete / Conn. CR 50 box	1	8393 0814 32
1-4	3.0 m / 10 ft Core barrel complete / Conn. CR 50 box	1	8393 0814 33
1	Coupling, CR 50 box – 54/47 casing pin	1	8393 0814 22
2	Casing, 54/47 x 500 mm	1	8393 8105 05
2	Casing, 54/47 x 1500mm	1	8393 8106 04
2	Casing, 54/47 x 3000 mm	1	8393 8107 03
3	Reaming shell, blank	1	3702 6261 00
4	Core lifter	1	3863 7202 00

### 66B

Item	Description	Qty	Part number
1-4	1.5 m / 5 ft Core barrel complete / Conn. CR 50 box	1	8393 0814 35
1-4	3.0 m / 10 ft Core barrel complete / Conn. CR 50 box	1	8393 0814 36
1	Coupling, CR 50 box – 64/57 casing pin	1	8393 0814 23
2	Casing, 64/57 x 500 mm	1	8393 8109 01
2	Casing, 64/57 x 1500 mm	1	8393 8110 08
2	Casing, 64/57 x 3000 mm	1	8393 8111 07
3	Reaming shell, blank	1	3702 6274 00
4	Core lifter	1	3863 7203 00



## Spare parts list 76B, 86B, 101B

### 76B

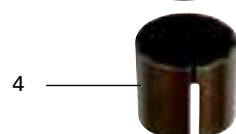
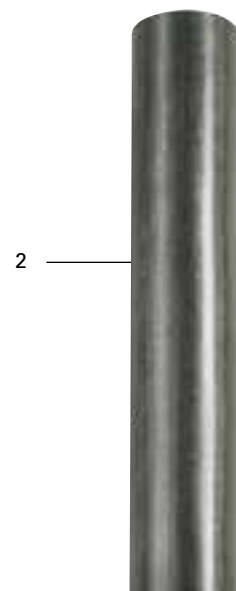
Item	Description	Qty	Part number
1-4	1.5 m / 5 ft Core barrel complete / Conn. NWJ box	1	8393 0814 38
1-4	3.0 m / 10 ft Core barrel complete / Conn. NWJ box	1	8393 0814 39
1	Coupling, NWJ box – 74/67 casing pin	1	8393 0814 24
2	Casing, 74/67 x 500 mm	1	8393 8113 05
2	Casing, 74/67 x 1500 mm	1	8393 8114 04
2	Casing, 74/67 x 3000 mm	1	8393 8115 03
3	Reaming shell, blank	1	3702 6262 00
4	Core lifter	1	3863 7211 00

### 86B

Item	Description	Qty	Part number
1-4	1.5 m / 5 ft Core barrel complete / Conn. NWJ box	1	8393 0814 41
1-4	3.0 m / 10 ft Core barrel complete / Conn. NWJ box	1	8393 0814 42
1	Coupling, NWJ box – 84/77 casing pin	1	8393 0814 25
2	Casing, 84/77 x 500 mm	1	8393 8117 01
2	Casing, 84/77 x 1500 mm	1	8393 8118 00
2	Casing, 84/77 x 3000 mm	1	8393 8119 09
3	Reaming shell, blank	1	3702 6275 00
4	Core lifter	1	3863 7212 00

### 101B

Item	Description	Qty	Part number
1-4	1.5 m / 5 ft Core barrel complete / Conn. NWJ box	1	8393 0814 44
1-4	3.0 m / 10 ft Core barrel complete / Conn. NWJ box	1	8393 0814 45
1	Coupling, NWJ box – 98/89 casing pin	1	8393 0814 26
2	Casing, 98/89 x 500 mm	1	8393 8121 05
2	Casing, 98/89 x 1500 mm	1	8393 8122 04
2	Casing, 98/89 x 3000 mm	1	8393 8123 03
3	Reaming shell, blank	1	3702 6276 00
4	Core lifter	1	3863 7213 00



## Spare parts list 116B, 131B, 146B

### 116B

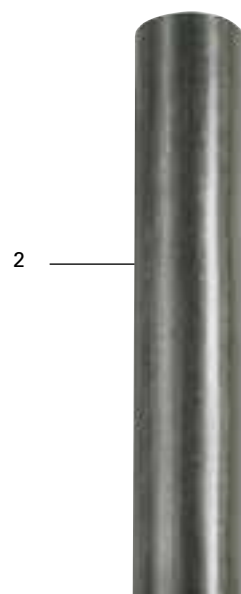
Item	Description	Qty	Part number
1-4	1.5 m / 5 ft Core barrel complete / Conn. NWJ box	1	8393 0823 31
1	Coupling, NWJ box – 113/104 casing pin	1	8393 0823 59
2		1	8393 8125 01
2	Casing, 113/104 x 1500 mm	1	8393 8126 00
2	Casing, 113/104 x 3000 mm	1	8393 8127 09
3	Reaming shell, blank	1	8393 0821 00
4	Core lifter	1	3863 7214 00

### 131B

Item	Description	Qty	Part number
1-4	1.5 m / 5 ft Core barrel complete / Conn. NWJ box		8393 0823 32
1	Coupling, NWJ box – 128/119 casing pin	1	8393 0823 57
2	Casing, 128/119 x 500 mm	1	8393 8129 07
2	Casing, 128/119 x 1500 mm	1	8393 8130 04
2	Casing, 128/119 x 3000 mm	1	8393 8131 03
3	Reaming shell, blank	1	8393 0821 01
4	Core lifter	1	3863 7224 00

### 146B

Item	Description	Qty	Part number
1-4	1.5 m / 5 ft Core barrel complete / Conn. NWJ box		8393 0823 33
1	Coupling, NWJ box – 143/134 casing pin	1	8393 0823 58
2	Casing, 143/134 x 500 mm	1	8393 8133 01
2	Casing, 143/134 x 1500 mm	1	8393 8134 00
2	Casing, 143/134 x 3000 mm	1	8393 8135 09
3	Reaming shell, blank	1	8393 0822 58
4	Core lifter	1	3863 7225 00



# WIRELINE TRIPLE TUBE CORE BARREL, S GEOBOR

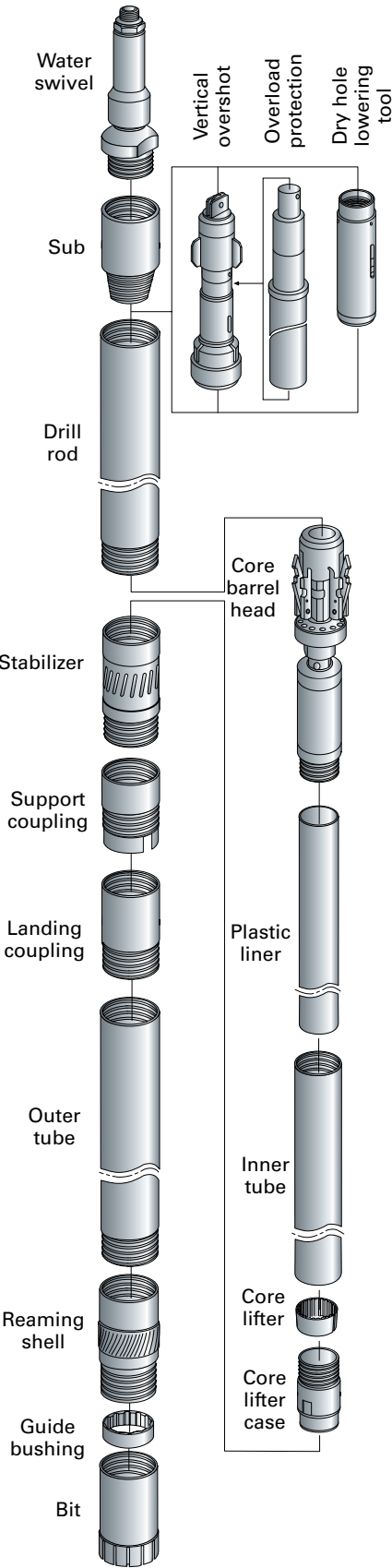
## Information

### S Geobor (146–150 mm)

Atlas Copco S Geobor wireline is a core barrel system intended for core drilling and sampling in soft formations.

### Technical data

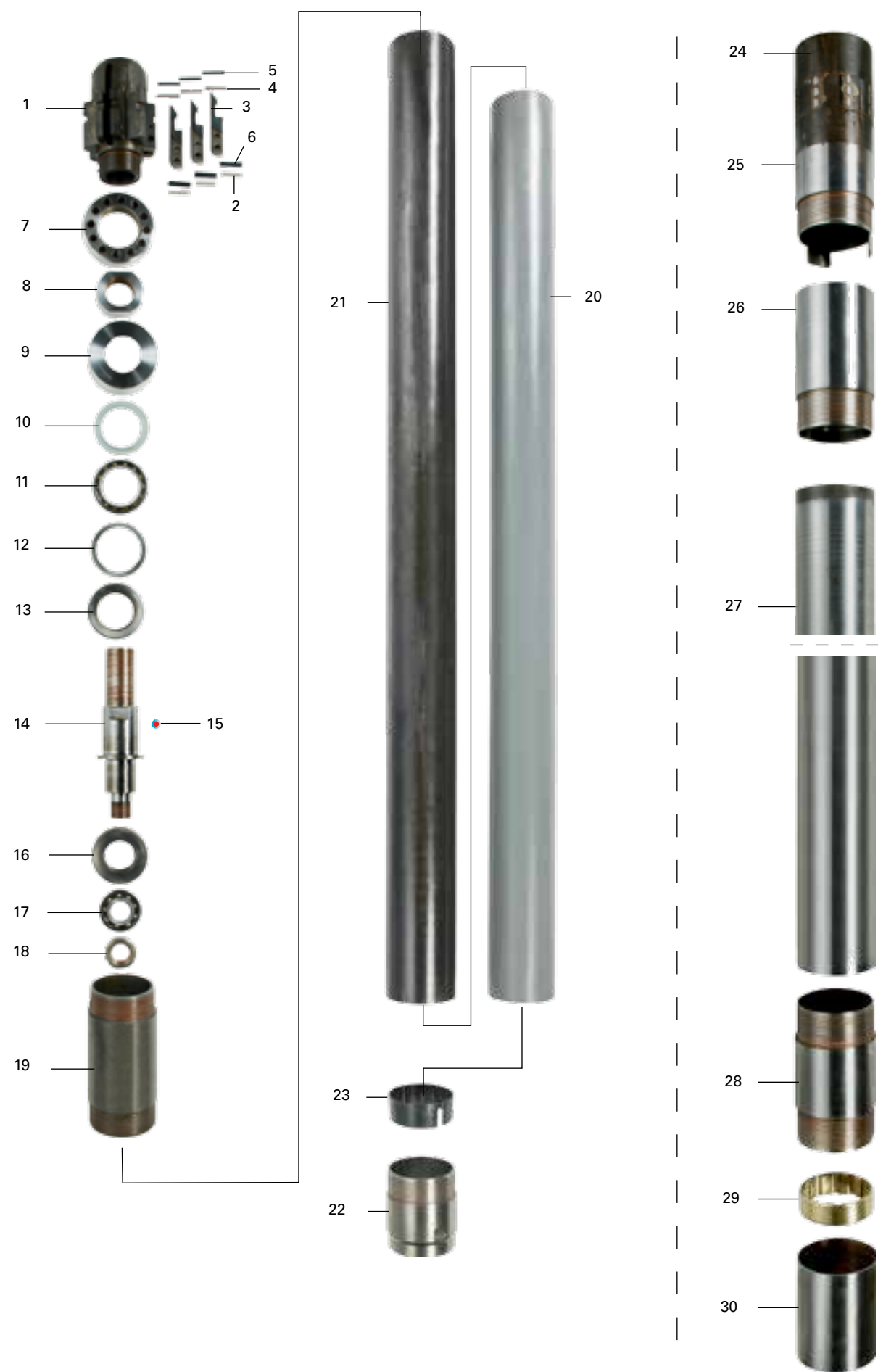
Metric system (mm)				
Size	Description			
	Hole diameter method 1, 5 – 6	Hole diameter, method 2 – 3	Core diameter	Outer diameter drill rod
Geobor S	146.5	150.0	102.0	139.7
Imperial system (in)				
Geobor S	5.76	5.90	4.02	5.58
Drilling parameters, see Operators manual PMI 6991 1721 01				



## Spare parts list Method 1

Item	Description	Qty	Part number
1–30	1.5 m / 5 ft Core barrel complete, basic unit – including release line		8393 0827 49
1–30	3.0 m / 10 ft Core barrel complete, basic unit – including release line		8393 0827 50
24–28, 30	1.5 m / 5 ft Outer core barrel complete		3702 1297 80
24–28,30	3.0 m / 10 ft Outer core barrel complete		3702 1242 80
1–23	1.5 m / 5 ft Inner core barrel complete		8393 0827 51
1–23	3.0 m / 10 ft Inner core barrel complete		8393 0827 52
1–19	Core barrel head complete – including release line		8393 0827 53
1	Latch housing	1	3702 1291 00
2	Spring	3	3702 0311 00
3	Latch	3	3702 1271 00
4	Spring pin	3	0108 1248 00
5	Spring pin	3	3766 0187 00
6	Spring pin	3	3766 0184 00
7	Landing shoulder	1	3702 1294 00
8	Locking nut	1	3702 1293 00
9	Sleeve	1	3702 1295 00
10	Seal ring	1	3766 0263 00
11	Ball bearing	1	0502 1112 00
12	Support ring	1	0324 1551 69
13	Ball bearing	1	3766 0261 00
14	Shaft	1	3702 1292 00
15	Lubricating nipple	1	0544 2106 00
16	Ball bearing	1	3766 0262 00
17	Ball bearing	1	0502 2107 00
18	Lock nut	2	0295 3108 00
19	Bearing housing including back valves	1	8393 0827 54
20	Lining, 1500 mm	1	3867 2837 00
20	Lining, 3000 mm	1	3702 1299 00
21	Inner tube, 1500 mm	1	3867 2824 00
21	Inner tube, 3000 mm	1	3702 1243 00
22	Core lifter case	1	3867 2826 00
23	Core lifter	1	3867 2827 00
24	Stabilizer	1	3702 1274 00
25	Support coupling	1	3702 1216 00
26	Landing sleeve	1	3702 1217 00
27	Outer tube, 1500 mm	1	3867 2872 00
27	Outer tube, 3000 mm	1	3702 1242 00
28	Reaming shell blank	1	3867 2846 00
29	Guide bushing	1	3744 0013 41
30	Protector	1	3867 2848 00
<b>Optional</b>			
	Pump out kit complete	1	3702 1404 80
	– adapter	1	3702 1429 00
	– piston	1	3702 1430 00
	– O-ring	1	3766 0268 00
* Refer to page 60 for more options.			

Spare parts list Method 1



## Spare parts list Method 2, 3, 4

### Method 2 – (OD 150 mm) Coring in soft to very soft formations

Item	Description	Qty	Part number
1	Core lifter case	1	3867 2876 00
2	Core bit type, pilot and reamer with TC inserts	1	8372 0902 10

### Method 3 – (OD 150 mm) Coring in very soft and loose formations

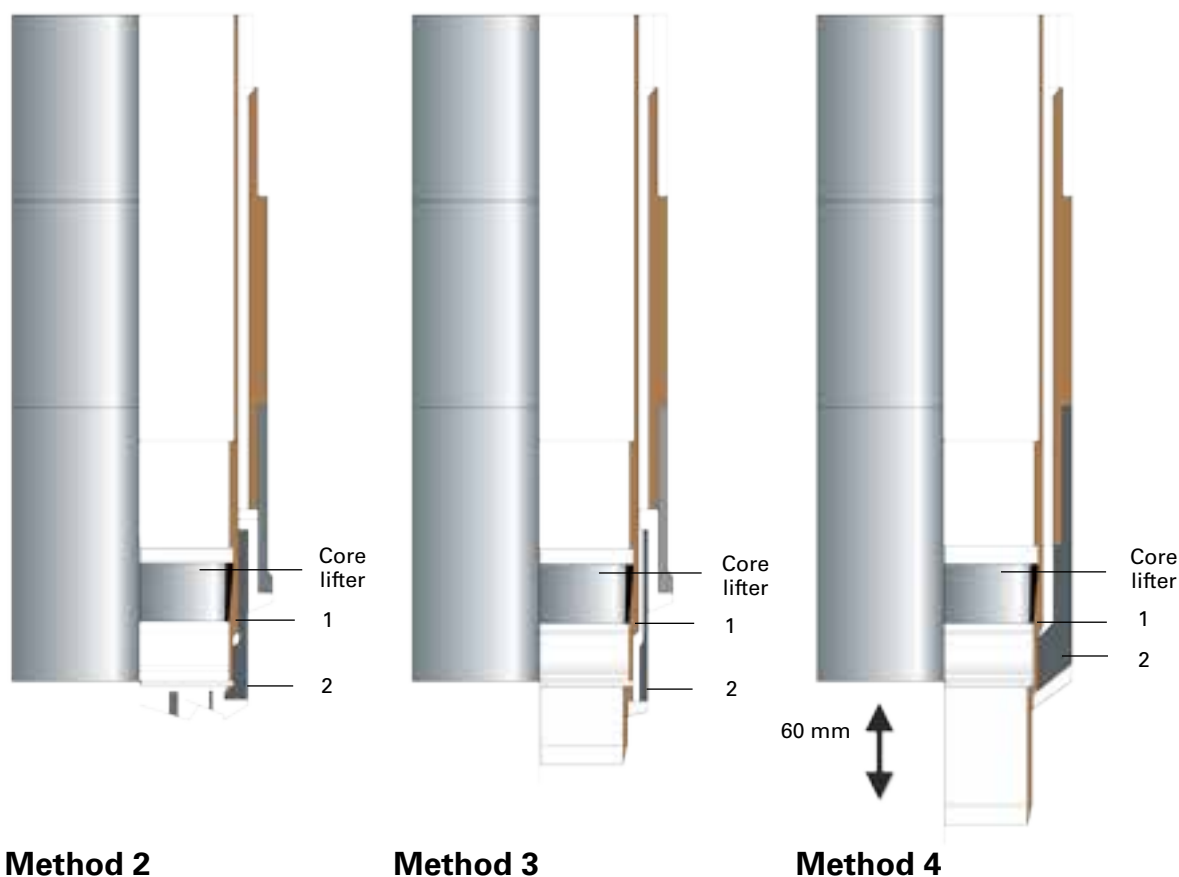
Item	Description	Qty	Part number
1	Core lifter case	1	3867 2881 00
2	Core bit type, pilot and reamer with TC inserts	1	8372 0941 40

\*) Core lifter case protrudes about 25 mm in front of the pilot bit

### Method 4 – (OD 146 mm) Coring in soft varying formations (Mazier method)

Item	Description	Qty	Part number
	Conversion kit complete	1	3702 1405 80
	– Coupling	1	3702 1418 00
	– Spring	1	3702 1425 00
	– Shaft	1	3702 1419 00
	– Coupling	1	3702 1420 80
	– Washer	1	0301 2230 00
1	– Lock nut	2	0295 3108 00
2	– Outer tube extension, 360 mm	1	3702 1424 00
	– Guide bushing	1	3744 0013 41
1	– Core lifter case*	1	3702 1421 00
2	Core bit type, single bit with TC inserts**	1	8372 0942 30

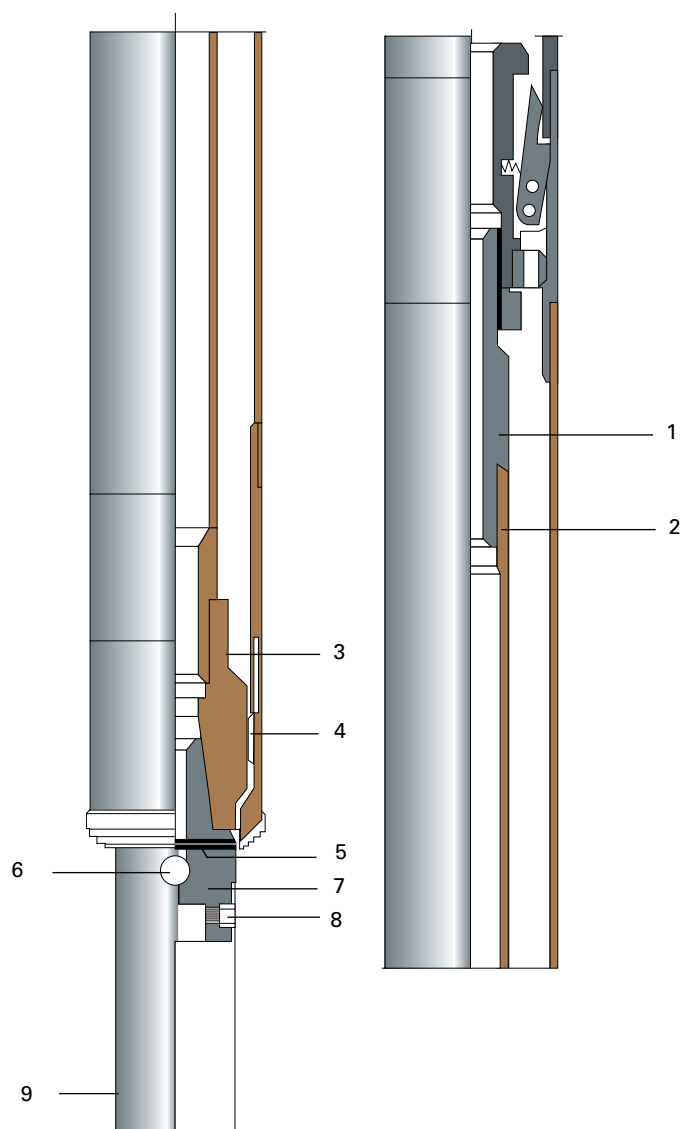
\*) Core lifter case protrudes about 60 mm in front of the pilot bit  
 \*\*) Not included in the kit



## Spare parts Method 5

**Method 5 – Core barrel with Shelby tube. Push sampling method.**  
**Core bit set Ø 146/102 and core: Ø 95 mm, Core length 762 mm**

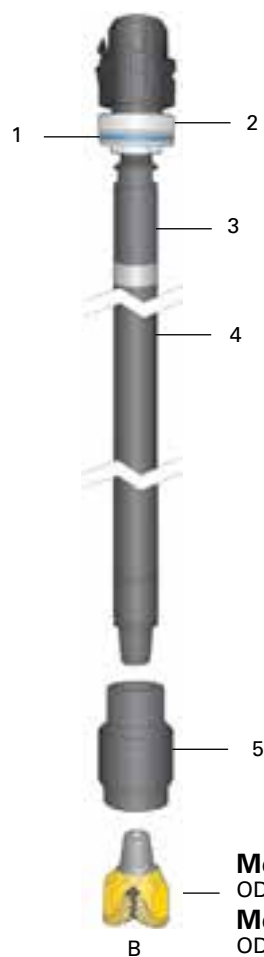
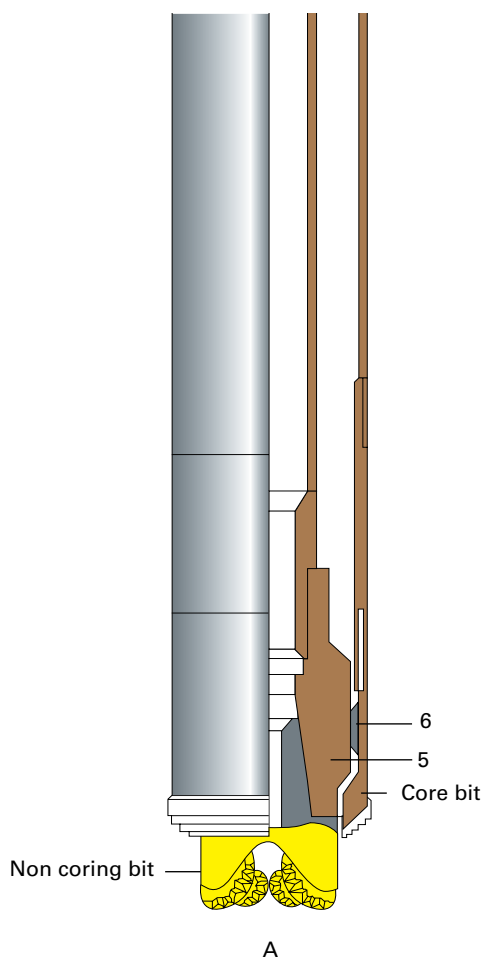
Item	Description	Qty	Part number
1-9	Conversion kit 762 / 1500 mm (excluding head)	1	3702 1441 80
1-9	Conversion kit 762 / 3000 mm (excluding head)	1	3702 7545 12
1	Adaptor	1	8393 0829 04
2	Steel drill rod (NWJ 70x1500)	1	8393 0810 73
2	Steel drill rod (NWJ 70x3000)	1	8373 0810 74
3	Adaptor – to be used with Method 1	1	8393 0829 05
3	Adaptor – to be used with Method 2 and Method 3	1	8393 0829 08
4	Guide bushing	1	3744 0013 41
5	Spring pin (6x100)	1	3766 0265 00
6	Rubber ball	1	3766 0266 00
7	Adaptor	1	3702 1441 00
8	Screw (MC6S 10x16)	4	0211 1359 00
9	Sampler (L=762 mm)	1	3702 1445 00
9	Optional sampler (L=914 mm)	1	3702 1446 00



## Spare parts list Method 6

**Method 6 – Non coring (OD 146 mm) To be used with OD 3 7/8" non coring bit, conn. 2 3/8" API REG pin**

Item	Description	Qty	Part number
A	Non-coring assembly complete, 1500 mm (excluding bit)	1	8392 0630 00
A	Non-coring assembly complete, 3000 mm (excluding bit)	1	8392 0630 10
B	Non-coring inner tube assembly complete, 1500mm (excluding bit)	1	3702 1417 80
B	Non-coring inner tube assembly complete, 3000mm (excluding bit)	1	3702 1417 81
1-6	Conversion kit complete, 1500 mm	1	3702 1403 80
1-6	Conversion kit complete, 3000 mm		3702 1403 81
1	Seal ring	1	0665 0999 55
2	Support ring	1	3744 0015 14
3	Adapter	1	8393 0829 04
4	Steel rod, NWJ 70 x 1500	1	8393 0810 73
4	Steel rod, NWJ 70 x 3000	1	8393 0810 74
5	Adapter connection 2 3/8" API REG box – to be used with Method 1	1	8393 0829 05
5	Adapter connection 2 3/8" API REG box – to be used with Method 2 and Method 3	1	8393 0829 08
6	Guide bushing	1	3744 0013 41



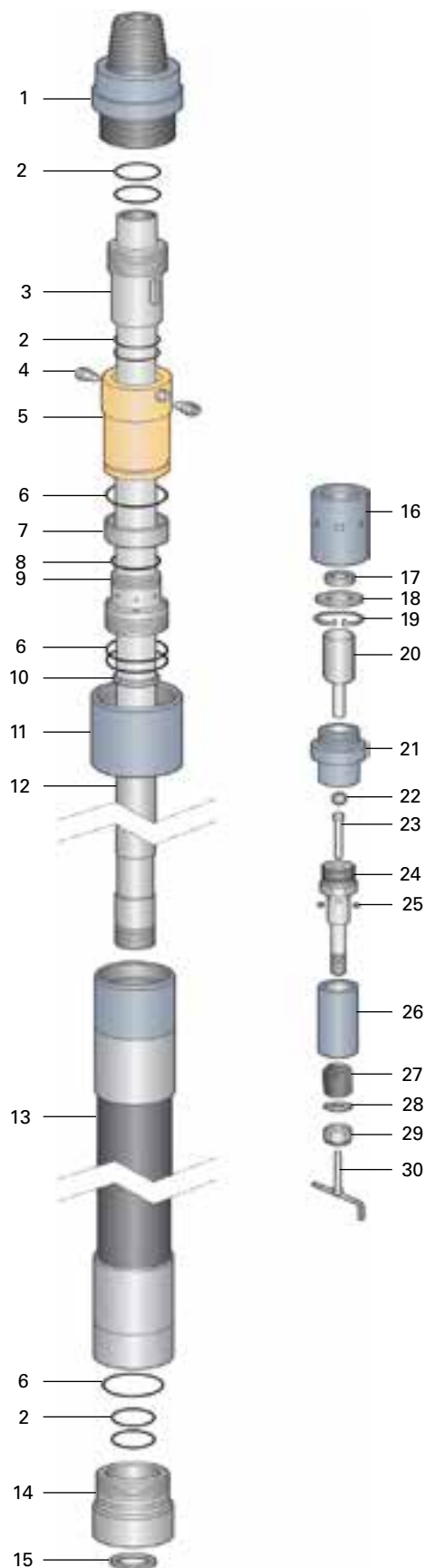
**Pilot coring with core barrel 101 T6/T2** (Optional Subs for pilot-coring with method 6)

Item	Description	Qty	Part number
	Sub 2 3/8" API REG pin to NW pin	1	3702 0088 00
	Sub 2 3/8" API REG pin to 2 3/8" API REG pin	1	3702 0070 00

## Spare parts list Method 7

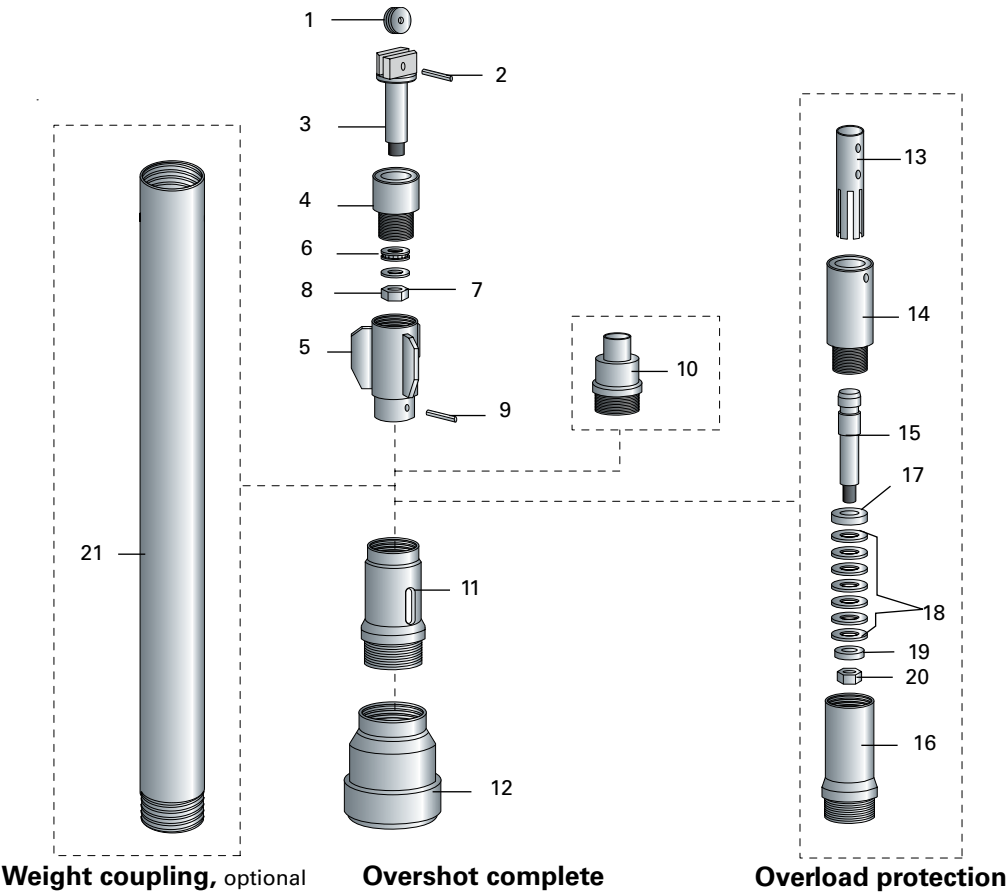
**Method 7 – Packer system (Wirepac) for water loss “Lugeon” test and fluid control test. Assembled to Non coring inner tube complete item B (See page 60)**

Item	Description	Qty	Part number
1	Packer 1m complete	1	3716 4054 00
2	O-ring	6	
3	Sliding plunger	1	
4	Pin	2	
5	Body	1	
6	O-ring	4	
7	Check valve membrane	1	
8	O-ring	1	
9	Check-valve body	1	
10	Seal	1	
11	Lining	1	
12	Inner tube	1	
13	Wirepac Inflatable element	1	
14	Sliding end	1	
15	Scraper seal	1	
16	Valve head	1	
17	Seal	1	
18	Washer	1	
19	Spring ring	1	
20	Valve plunger	1	
21	Reducer	1	
22	Ball 16mm dia	6	
23	Stick	1	
24	Valve body	1	
25	Ball O 6,35 mm	6	
26	Valve lining	1	
27	Spring	1	
28	Washer	1	
29	Nut	1	
30	Resetting tool	1	
Item	Description	Qty	Part number
Spare Seal kit			
2	O-ring	6	
4	Pin	2	
6	O-ring	4	
7	Check valve membrane	1	
8	O-ring	1	
10	Seal	1	
15	Scraper seal	1	
17	Seal	1	
19	Spring ring	1	
29	Nut	1	
30	Resetting tool	1	
Item	Description	Qty	Part number
13	Inflatable element	1	8393 0829 11



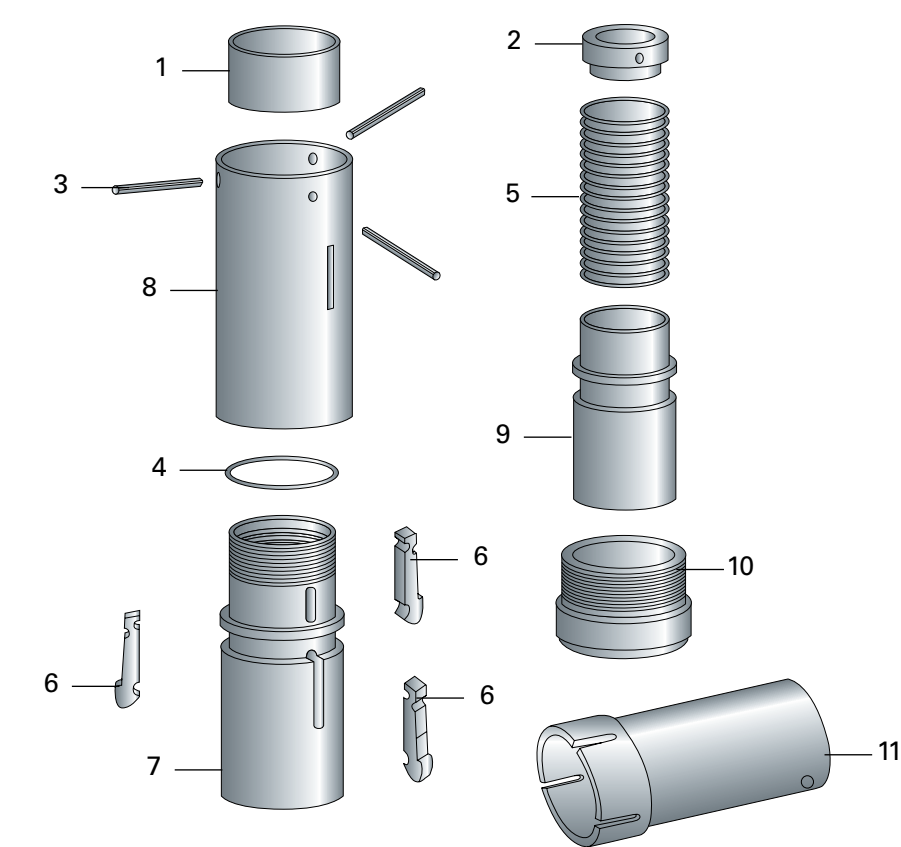
Spare parts list Overshot

Item	Description	Qty	Part number
1-12	Overshot complete	1	3702 1249 80
1	Wire attachment	1	3702 1230 00
2	Spring pin	1	3766 0225 00
3	Shaft	1	3702 1231 00
4	Coupling	1	3702 1232 00
5	Coupling	1	3702 1233 00
6	Ball bearing	1	0510 0105 00
7	Washer	1	0302 1188 00
8	Lock nut	1	0291 1116 00
9	Spring pin	1	3766 0226 00
10	Coupling	1	3702 1247 00
11	Sleeve	1	3702 1248 00
12	Catch sleeve	1	3702 1238 00
Optional equipment			
13-20	Overload protection	1	3702 1250 80
13	Retainer	1	3702 1234 00
14	Retainer sleeve	1	3702 1235 00
15	Plunge	1	3702 1236 00
16	Spring casing	1	3702 1237 00
17	Washer	1	3702 1239 00
18	Disc spring	24	0384 3382 00
19	Washer	1	0302 1274 04
20	Lock nut	1	0291 1114 00
21	Weight coupling, optional	1	3702 1452 00



# Spare parts list Dry hole device

Item	Description	Qty	Part number
1-11	Dry hole device complete	1	3702 1220 80
1	Nut	1	3702 1221 00
2	Driving disc	1	3702 1222 00
3	Spring pin	3	0108 1360 00
4	O-ring	1	0663 6142 00
5	Compression spring	1	3702 1223 00
6	Latch	3	3702 1224 00
7	Body	1	3702 1225 00
8	Sleeve	1	3702 1226 00
9	Sleeve	1	3702 1227 00
10	Catch sleeve	1	3702 1228 00
11	Tool	1	3702 1229 00



## Optional equipment

### Optionals

Description	S Geobor
Dry hole lowering tool complete	3702 1220 80
Overload protection for overshot complete	3702 1250 80
Releasing line	3702 1438 00
Basket core lifter with short springs	3867 2839 00
Basket core lifter with long springs	3867 2841 00
Head locking tool	8393 0829 09
Wrench inner tube, SG**	3869 7093 00
Wrench outer tube, SG**	3869 7095 00
Pumpout kit complete	3702 1404 80
Safety catch device for std overshot	8393 0827 82
Kit for Safety catch device to fit Dry hole device	8393 0827 83
Shut off valve kit complete	3702754505
Lining split steel 1,5m complete	8393082788
Lining split steel 3,0m complete	8393082789
Ring key core lifter case M2,M3	3869700108
Ring key core lifter case M1	3869700107
End caps for plastic lining (100pcs)	3702754509
**) Should be used in pairs.	

Description	S Geobor	
	Qty.	3702 1224 90
Parts included		
O-ring	1	●
Spring pin	3	●
Compression spring	1	●
Latch	3	●
● = Included in kit		

### Spare parts for shutoff valve

Description	S Geobor	
	Qty.	Part numbers
Shut off valve seal	2	3702 7545 06
Shut off valve spring	1	3702 7545 07
Shut off valve locking pin	1	3702 7545 10

### Spare parts kits core barrel method 1 (500 m)

Description	S Geobor	
	Qty.	3702 1271 90
Parts included		
Spring pin	3	●
Ball bearing	4	●
Lubricating nipple	1	●
O-ring	2	●
Lock nut	2	●
Spring	3	●
Latch	3	●
Pin	6	●
Seal	1	●
Core lifter case	4	●
Core lifter	10	●
● = Included in kit		

### Spare parts kit overshot

Description	S Geobor	
	Qty.	3702 1249 90
Parts included		
Bearing	1	●
Spring pin	2	●
Lock nut	1	●
● = Included in kit		

### Spare parts kit dry hole device

# DRILL RODS

## Application information

Atlas Copco drill rods are manufactured from the highest quality materials and designed to give trouble free performance under the most demanding drilling conditions.

They are available in metric and imperial standard sizes.

Steel drill rods are manufactured with friction welded couplings.

The couplings have a higher material quality than the mid body. The result is a lighter rod with higher depth capacity and wear resistance.

Aluminium drill rods weigh only about half as much as a steel rod of the same dimension but is equal in strength, due to exceptionally high quality of the aluminium.

The couplings are of high tensile strength steel, threaded and glued on the aluminium rods.

The proper selection of drill rods primarily depends on drill rig type, core barrel design and physical space limitations.

Atlas Copco casings are manufactured of high standard casing steel quality to suit the most demanding of overburden drilling requirements. They are all of flush joint type, i.e. no separate couplings.



## Bundle packaging

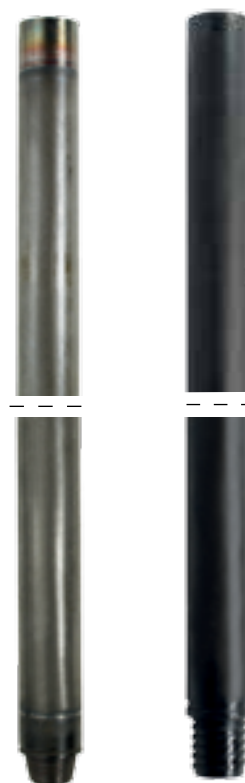
Atlas Copco rods and casings are packed in hexagonal bundles with self-supporting end caps in steel in order to improve handling and provide better protection during transport and storage. Each bundle include quantities as shown in the table to the right.

Type of rod/casing	Number of rods per bundle
AW, AWJ, 43	37
BW, BWJ, 53, AW casing	24
NW, NWJ, BW casing	19
PG, HW casing	10
SG, PW casing	10
SGW casing	4

## Specifications – Conventional drill rods – Steel

Type	Part Number		
	Length: 500 mm	Length: 1500 mm	Length: 3000 mm
43	8393 0133 08	8393 0133 16	8393 0133 24
AW 43	8393 0265 32	8393 0265 40	8393 0265 57
AWJ 43	8393 0810 27	8393 0282 50	8393 0282 60
53	8393 0134 07	8393 0134 15	8393 0134 23
BW 53	8393 0283 40	8393 0283 50	8393 0283 60
BWJ 53	8393 0810 30	8393 0810 29	8393 0810 28
BWJ 55	8393 0812 12	8393 0812 13	8393 0812 14
NW 70	8393 0810 38	8393 0810 39	8393 0810 40
NWJ 70	8393 0810 72	8393 0810 73	8393 0810 74
HW	8393 0810 77	8393 0810 78	8393 0810 79

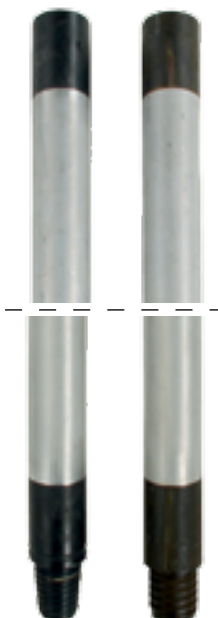
Type	Part Number		
	Length: 500 mm	Length: 1500 mm	Length: 3000 mm
43	8393 0305 00	8393 0306 09	8393 0307 08
53	8393 0309 06	8393 0310 03	8393 031 1 02
AWJ 43	8393 0812 80	8393 0812 81	8393 0812 82
BWJ 53	8393 0812 83	8393 0812 84	8393 0812 85



## Specifications – Conventional drill rods – Aluminium

Type	Outer diameter (mm)	Inner diameter (mm)		Weight	Thread conn.	TPI
		Rods	Coupling and welded ends	kg/3m		
43	43.1	36.1	22.0	10.2	CR 42	4
AW 43	43.1	36.1	16.0	1 1.0	AW	3
AWJ 43	43.1	36.1	16.0	1 1.0	AWJ	5
53	53.0	46.0	22.0	14.1	CR 50	3
BW 53	53.0	46.0	19.0	15.0	BW	3
BWJ 53	53.0	46.0	19.0	15.0	BWJ	5
BWJ 55	55.5	46.0	19.0	18.4	BWJ	5
NW 70	69.9	60.3	35.0	24.4	NW	3
NWJ 70	69.9	60.3	30.0	24.4	NWJ	4
HW	88.9	77.8	54.0	36.9	HW	3

Type	Outer diameter (mm)	Inner diameter (mm)		Weight	Thread conn.	TPI
		Rods	Coupling and welded ends	kg/3m		
43	43.2	30.8	22.0	7.4	CR42	4
53	53.3	37.5	22.0	12.0	CR50	3
AWJ 43	43.2	30.8	16.1	7.4	AWJ	5
BWJ 53	53.3	37.5	19.3	12.0	BWJ	5



## Specifications – Wireline drill rods – Steel

Type	Outer diameter (mm)	Inner diameter (mm)	Weight	Thread conn.	TPI
		Rods	kg/3m		
PG	117,5	103.2	57.9	PO	3
SG	139.7	125.5	69.7	S Geobor	3

Type	Part Number		
	Length: 500 mm	Length: 1500 mm	Length: 3000 mm
PG	8393 0810 11	8393 0810 12	8393 0810 13
SG	8393 0528 00	8393 0528 20	8393 0528 30
SG/HP*	8393 0528 40	8393 0528 60	8393 0528 70
*) High pressure			



# CASING TUBES AND SOCKETS

## Information

Metric casing tubes are thinner than imperial casing tubes, but offer instead several additional dimensions within the diameter range. Metric casing is named by outer and inner diameter while an imperial casing is named by inner diameter.

### Specifications – Metric casings and sockets

Type	Outer diameter (mm)	Inner diameter (mm)	Weight kg/3m	Content (L/m)
44x37	44.4	37.4	10.7	3.3
54x37	54.4	47.4	13.2	5.3
64x57	64.5	57.5	15.8	7.8
74x67	74.5	67.5	18.4	10.7
84x77	84.5	77.5	21.0	14.2
98x89	98.2	89.2	31.2	18.7
113x104	113.5	103.6	39.8	25.2
128x119	128.0	118.5	43.3	33.1
143x134	143.0	133.5	48.6	42.0



Socket



Casing

### Part number

Type	Metric casing			Sockets	
	Length: 500 mm	Length: 1500 mm	Length: 3000 mm	Box/pin	Drill rod box to casing pin
44x37	8393 8101 09	8393 8102 08	8393 8103 07	CR 42 / 44x37	3862 6452 00
54x47	8393 8105 05	8393 8106 04	8393 8107 03	CR 50 / 54x37	3862 6457 00
64x57	8393 8109 01	8393 8110 08	8393 8111 07	CR 50 / 64x57	3862 6458 00
74x67	8393 8113 05	8393 8114 04	8393 8115 03	NWJ / 74x67	8393 0814 24
84x77	8393 8117 01	8393 8118 00	8393 8119 09	NWJ / 84x77	8393 0814 25
98x89	8393 8121 05	8393 8122 04	8393 8123 03	NWJ / 98x89	8393 0814 26
113x104	8393 8125 01	8393 8126 00	8393 8127 09	NWJ / 113x104	8393 0823 59
128x119	8393 8129 07	8393 8130 04	8393 8131 03	NWJ / 128x119	8393 0823 57
143x134	8393 8133 01	8393 8134 00	8393 8135 09	NWJ / 143x134	8393 0823 58

### Specifications – Imperial casings and sockets

Type	Outer diameter (mm)	Inner diameter (mm)	Weight kg/3m	Content (L/m)
PW	139.7	125.5	69.7	38.6
SGW	168.3	155.7	75.0	57.1

### Part number

Type	Imperial casing			Sockets	
	Length: 500 mm	Length: 1500 mm	Length: 3000 mm	Box/pin	Drill rod box to casing pin
PW	8393 8276 08	8393 8276 16	8393 8276 24	NWJ / PW	8393 0824 67
SGW	8393 0810 80	8393 0810 81	8393 0810 82	NWJ / SW	8393 0824 68

# ACCESSORIES

## Application information

Accessories play a vital role in drilling and are to be chosen to match the application and to provide a cost efficient and trouble free drilling operation.

The water swivels presented on the following pages, WS 18/0 and WS 25/0 are not equipped with lifting bails and are best suited for automatic rod handling systems, similar to that of the Diamec rigs. If instead using a drilling rig equipped with a rod handling main hoist, you need to select a water swivel with a bail which can be found in the Exploration Catalogue (6991 1792 01).

Make sure that subs and sockets for drill rods, core barrels, casings, recovery taps and other threaded connections are selected to properly mate together

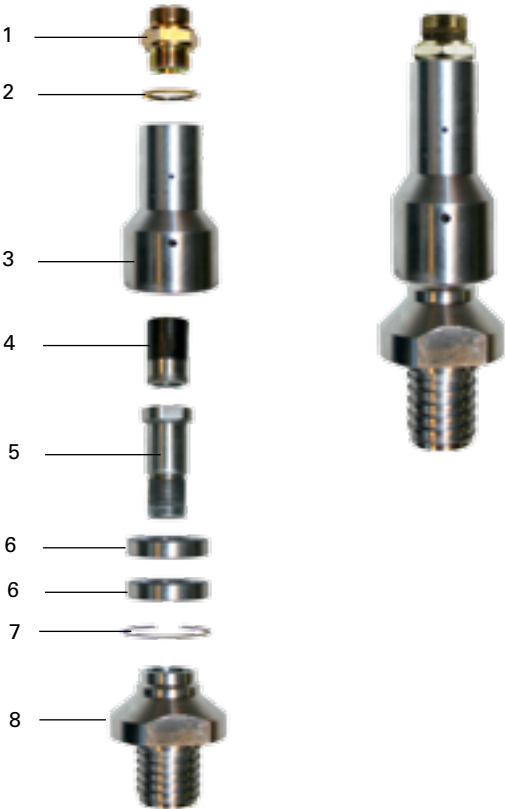
Proper handling and use of threaded drilling tools require selection of appropriate wrenches for making and breaking joints.

In this section you will find other accessories to improve quality of core sampling such as additives, thread grease, core boxes, fishing tools etc.



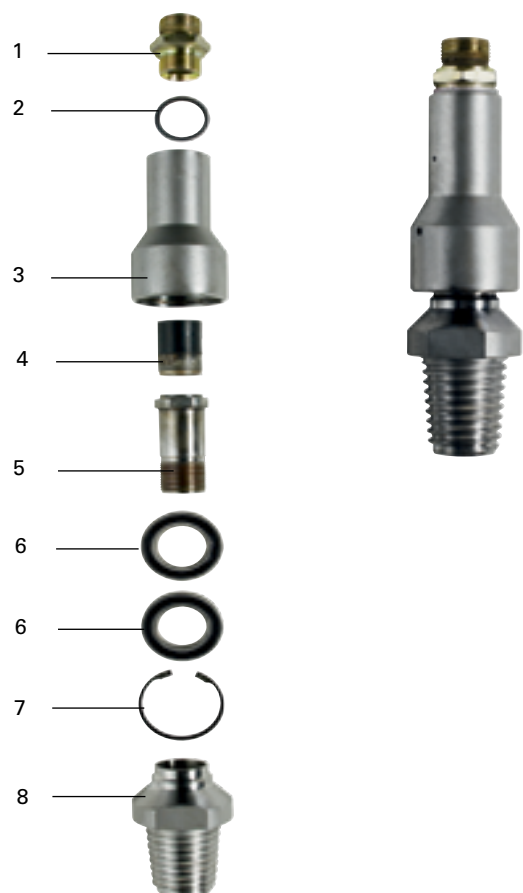
Spare parts list – Water swivel WS 18/0

Item	Description	Qty	Part number
1-8	Water swivel complete, conn. CR42 pin (Inner diameter 18 mm, no bail)	1	8070 0107 42
1	Nipple	1	3715 2545 00
2	Seal ring	1	0661 1038 00
3	Housing	1	3702 0162 00
4	Rotary seal	1	3702 0163 00
5	Rotary sleeve	1	3702 0164 00
6	Ball bearing	2	0502 1221 01
7	Circlip	1	0335 2143 00
8	Coupling CR42 pin	1	3702 0165 00
Spare parts kit			
	Spare parts kit complete	1	3702 0162 90
1	Nipple	1	3715 2545 00
2	Seal ring	1	0661 1038 00
4	Rotary seal	1	3702 0163 00
6	Ball bearing	2	0502 1221 01
7	Circlip	1	0335 2143 00
Service instructions			
The water swivel is fitted with cemented carbide flat seals to ensure longer service life and effective sealing. Adjustment of the seals is not necessary. The ball bearings are sealed and embedded in grease, thus they do not require lubricating.			
Replacement of bearing and seals: 1. Remove the circlip (7) then remove the bearing housing (3) 2. Unthread the rotary sleeve (5) from the coupling (8).		NB: The parts are left-hand threaded 3. The ball bearings (6) can now be removed 4. Remove the nipple (1). The seal (2) can now be removed by pressing it out with a screwdriver.	



## Spare parts list – Water swivel WS 25/0

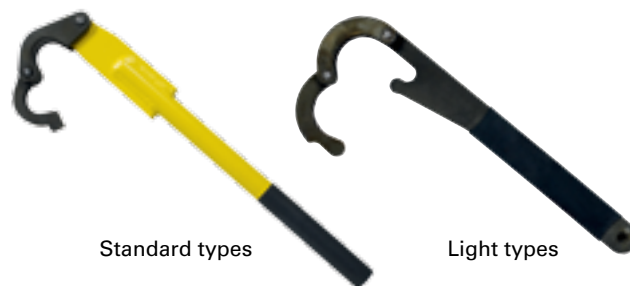
Item	Description	Qty	Part number
1-8	Water swivel complete, conn. NWJ pin (Inner diameter 25 mm, no bail)	1	8393 0815 82
1	Nipple	1	8393 0815 81
2	Seal ring	1	0661 1049 00
3	Housing	1	8393 0815 79
4	Rotary seal	1	8393 0815 77
5	Rotary sleeve	1	8393 0815 80
6	Ball bearing	2	0502 1226 00
7	Circlip	1	0335 2152 00
8	Coupling NWJ pin	1	8393 0815 83
<b>Spare parts kit</b>			
	Spare parts kit complete	1	8393 0816 51
1	Nipple	1	8393 0815 81
2	Seal ring	1	0661 1049 00
4	Rotary seal	1	8393 0815 77
6	Ball bearing	2	0502 1226 00
7	Circlip	1	0335 2152 00
<p>The water swivel is fitted with cemented carbide flat seals to ensure longer service life and effective sealing. Adjustment of the seals is not necessary. The ball bearings are sealed and embedded in grease, thus they do not require lubricating.</p>			
<p>Replacement of bearing and seals</p> <p>1. Remove the circlip (7) then remove the bearing housing (3)</p> <p>2. Unthread the rotary sleeve (5) from the coupling (8).</p>		<p>NB: The parts are left-hand threaded</p> <p>3. The ball bearings (6) can now be removed</p> <p>4. Remove the nipple (1). The seal (2) can now be removed by pressing it out with a screwdriver.</p>	



## Rod wrenches

### Information

The design of this wrench allows jointing and breaking of thin wall bits, core barrels and casing without risk for damage. The wrenches should be used in pairs.



Standard types

Light types

### Full grip wrenches with steel shaft

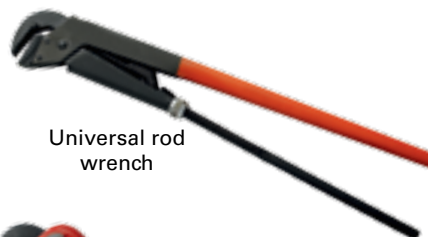
Tube OD min-max mm	Part Number	For inner tube	For outer tube	For casing tube	
				Metric	Imperial
42.90 – 45.00	3869 7087 00	BO	AGM	44x37	
45.00 – 47.00	3869 7087 01	56T2, BGM	46TT, 46T2, 48TT		
54.50 – 56.00	3869 7088 00	NO	56TT, 56T2	54x47	
56.00 – 57.50	3869 7088 02	66T2	BGM, BO		AW
57.00 – 61.50	3869 7088 01	NGM, 66T2	BGM, BO		
63.70 – 67.20	3869 7089 00	76T2, 76T6, TNW	66T2	64x57	
73.00 – 77.50	3869 7090 00	HO, 86T2, 86T6	NO, NGM, 76T2, 76T6, 76T6S	74x67	BW
84.00 – 87.00	3869 7091 00	101T6	86T2, 86T6, 86T6S	84x77	
87.00 – 90.30	3869 7091 01	101T2	–		NW
92.00 – 95.50	3869 7098 00	PG	HO		
98.00 – 100.00	3869 7092 00	116T6	101T2, 101T6, 101T6S	98x99	
113.00 – 117.50	3869 7093 00	131T6, S-Geobor	PG, 116T6, T6S	113x104	HW
128.00 – 130.00	3869 7094 00	146T6	131T6, 131T6S	128x119	
139.70 – 143.00	3869 7095 00	–	S Geobor, 146T6, 146T6S	143x134	PW
168.00 – 169.00	3869 7097 00	–		SGW	SW

### Full grip wrenches, Light types

Tube OD min-max mm	Part Number	For inner tube	For outer tube	For casing tube	
				Metric	Imperial
32.50 – 34.50	3742 0002 18	AGM	–		
38.00 – 40.00	8393 0813 89	46TT, 48TT, 46T2	–		
42.90 – 46.50	3742 0002 26	BO, BGM	AGM		
57.00 – 58.00	3742 0002 29	66T2	–		
59.50 – 60.00	3742 0002 22	–	60TT		

### Universal rod wrenches

Type Number	Part Number	Max pipe O.D. (mm)	Max pipe O.D. (in)
141	3766 0073 00	36	1.38
142	3766 0074 00	52	2.06
143	3766 0075 00	78	3.06
144	3766 0076 00	110	4.31
147	3766 0077 00	160	6.31



Universal rod  
wrench

### Rigid rod wrenches with steel shaft

Type Number	Part Number	Max pipe O.D. (mm)	Max pipe O.D. (in)
18"	3766 0237 00	63	2.5
24"	3766 0239 00	76	3.0
36"	3766 0241 00	127	5.0
48"	3766 0243 00	152	6.0



Rigid rod  
wrench

## Additives Hoisting plug

### Additives

Type	Form	Packing	Part number
Superdrill*	Liquid	25 kg/26 litres/can	3742 0021 92
Supermix	Liquid	25 kg/24 litres/can	3742 0001 60
Supermix	Powder	25 kg/bag	3742 0021 90
Claystab	Liquid	25 kg/20 litres/can	3742 0021 91
Superfoam	Liquid	25 kg/25 litres/can	8393 0813 20



Superdrill

### Thread grease

Description	Part number
Thread grease 4 kg/Pail	8393 0827 65



Thread grease

### Hoisting plug, connection CR50 pin (Certified)

Type	Connection	Max load		Weight		Part number
		kN	lb	Kg	lbs	
HS 50/50	CR50	50	11 000	3.8	8.5	8070 0106 35

A wider range of hoisting plugs is presented in the Exploration catalogue (6991 1245 01).



Hoisting plug

Certificate available upon request

## Core boxes

### Core boxes based on core barrel design

Box	Wireline	Conventional
36	AGM, AOTK, AO, BOTK, BK, BO	46B, 46TT, 46T2, 48TT, 48LTK
48	BGM, NO	56B, 56TT, 56T2, 76T6S, 60LTK
64	NGM, HO, NO-2	66B, 76B, 66T2, 76T2, 76T6, 86T6S, TNW
102	PG, PO, S-Geobor	86B, 101B, 116B, 86T2, 101T2, 86T6, 101T6, 101T6S, 116T6, 116T6S, 131T6S

Box	Part number	Core range	Core capacity (m)	Weight (kg)	Dimension (cm)
36 (1 13/32")	3742 0001 56	26 to 36	6x1	1.6	107x34x5.1 cm
48 (1 7/8")	3742 0001 55	37 to 48	5x1	1.8	107x34x6.2 cm
64 (2 1/2")	3742 0001 54	49 to 64	4x1	2.0	107x34x7.7 cm
102(4")	3742 0001 53	65 to 102	2x1	2,5	107x27x11,7cm
Lid					
36/64	3742 0001 58		Box 36-64 (1 13/32"-2 1/2")	0.9	107.6x34.6x1.6 cm
102	3742 0001 57		Box 102(4")	1.2	107.7x29.4x2.15 cm

### Packing specification (The boxes are supplied in standard packs as follows)

Box	Quantity	Weight (kg)	Dimensions (cm)	Volume (cu.m)
36	25	40	107x34x51	0.19
48	25	45	107x34x65	0.24
64	25	50	107x34x88	0.32
102	20	50	1 07x57.4x51	0.32
Lid				
39/64	25	22.5	107.6x34.6x33	0.12
102	20	24	107.7x29.4x36	0.11



## Fishing tools

### Recovery taps for steel drill rods and casings

Working range	Part number		Recommended for	Drill rod box thread
	Right-hand thread	Left-hand thread		
15–22	3862 5866 00		Rod coupling 43 mm, AW, AWJ, 53 mm, BW, BWJ Alu rod coupling 43 mm, AWJ, 53 mm, BWJ	CR 42
30–42	3862 5874 00	3862 5875 00	Drill rods 43 mm, AW, AWJ, AGM Casing tubes 44 mm Core barrels 46 mm Drill rod couplings NW, NW70, NWJ	CR 42
37–52	3862 5880 00	3862 5881 00	Drill rods 53 mm, BW, BWJ, BK, BGM Casing tubes 54 mm, AW Core barrels 56 mm, BK Drill rod couplings HWJ	CR 50
49–50	3862 5886 00	3862 5887 00	Casing tubes 64 mm Core barrels 66 mm	CR 50
51–69	3862 5891 00	3862 5892 00	Drill rods NW, NW70, NWJ, NK, NGM Casing tubes 74 mm, BW Core barrels 76 mm, TNW, NK	NW
67–81	3862 5900 00		Drill rods HW, HWJ, HK Casing tubes 84 mm, NW, NWJ Core barrels 86 mm	NW
73–87	3702 0012 00		Drill rods HK, HO Core barrel HK	NW
87–93	3862 5902 00		Casing tubes 98 mm Core barrels 101 mm	NW
100–105	3862 5904 00		Casing tubes 113 mm, HW Wireline drill rod PG Core barrel 116 mm, PG	NW
114–120	3862 5906 00		Casing tubes 128 mm Core barrels 131 mm	NW
125–134	3862 5908 00		Wireline drill rod S-geobor Casing tube 143 mm Core barrel 146 mm	NW



Recovery tap for steel drill rod

### Recovery taps for aluminium drill rod blanks

Part Number	Recommended for	Drill rod box thread
3862 5911 00	43 mm, AWJ	CR 42
3862 5913 00	53 mm, BWJ	CR 50

### Recovery taps for coupling pin

Part Number	Recommended for	Drill rod box thread	Drill rod thread
16–26	3862 5874 00	BW/BWJ	CR 42
30–42	3862 5918 00	NW/NWJ	BW



Recovery tap for aluminium drill rod

## Recovery bell taps for pin coupling welded rods

Working range		Part Number	Outer Ø (mm)	For hole Ø (mm)	Drill rod conn. box
Min. I.D. (mm)	Max. I.D. (mm)				
27	36	3862 5080 00	44	46–66	CR 42
55	45	3862 5081 00	54	56–76	CR 42
40	55	3862 5082 00	64	66–86	CR 50
40	55	3862 5083 00	84	86–101	CR 50
54	69	3862 5084 00	84	86–101	NW
54	69	3862 5085 00	114	116–146	NW



Recovery bell tap

## Subs for drill rods

Part Number	Metric rod box to metric rod pin (mm) R.H.
3862 6019–00	CR42/CR50
3862 6099–00	CR50/CR42

Part Number	Metric rod box to DCDMA rod pin (mm) R.H.
3862 6141 00	CR42/AW
3862 6675 00	CR42/AWJ
3862 6371 00	CR42/BW
3862 6676 00	CR42/BWJ
3862 6392 00	CR42/NW
3862 6677 00	CR42/NWJ
3862 6362 00	CR50/BW
3862 6678 00	CR50/BWJ
3862 6388 00	CR50//NW
3862 6637 00	CR50/NWJ

Part Number	DCDMA rod box to metric rod pin R.H.
3862 6345 00	AW/CR42
3862 6694 00	AWJ/CR42
38626347 00	AW/CR50
8393 0813 91	AWJ/CR50
3862 6338 00	BW/CR42
3862 6341 00	BW/CR50
3862 6695 00	BWJ/CR42
3862 6696 00	BWJ/CR50
3862 6275 00	NW/CR42
3862 6342 00	NW/CR50
3862 6343 00	NW/CR60
3862 6636 00	NWJ/CR50



Sub box to pin

## Subs for drill rods

Part Number	Metric rod box to WL rod pin R.H.
3862 6217 00	CR42/AO
3862 6218-00	CR42/BO
3862 6640 00	CR42/AGM
3862 6641 00	CR42/BGM
3862 6642 00	CR42/NGM
3862 6393 00	CR42/NO
3862 6711 00	CR42/HO
3862 6219 00	CR50/BO
3862 6220 00	CR50/NO
3862 6254 00	CR50/HO
3862 6643 00	CR50/BGM
3862 6644 00	CR50/NGM
3862 6857 00	CR50/PG (PO)
3862 6212 00	CR50/S Geobor



Sub box to pin

Part Number	WL rod box to WL rod pin R.H.
3862 6662 00	AGM/BO
3862 6663 00	AGM/NO
3862 6664 00	AGM/HO
3862 6665 00	AGM/BGM
3862 6666 00	AGM/NGM
8393 0829 06	PWT/SG



Sub box to pin

Part Number	WL rod box to metric rod pin R.H.
3702 0035 00	AO/CR42
3862 6863 00	AGM/CR42
3702 0019 00	BO/CR50
3744 0400 64	BGM/CR50
3702 0020 00	NO/CR50
3862 6877 00	NGM/CR50
3862 6418 00	HO/CR50
8393 0816 53	NWJ/HO
8393 0820 52	NWJ/SG
8393 0829 10	NWY/SG



Sub box to pin

Part Number	DCDMA rod box to WL rod pin R.H.
3862 6227 00	AW/AO
8393 0814 13	AWJ/AO
3862 6267 00	AW/BO
3862 6228 00	BW/BO
3862 6265 00	BW/NO
3862 6229 00	NW/NO
3862 6266 00	NW/HO
3862 6858 00	NW/PG (PO)
3862 6230 00	NW/SG
8393 0816 52	NWJ/NO

## Subs for drill rods

Part Number	WL rod box to DCDMA rod pin R.H.
3862 6279 00	AO/AW
3702 0011 00	BO/BW
3702 0021 00	NO/NW
3702 0022 00	HO/NW
3862 6549 00	HO/HW
8393 0824 04	PG(PO)/NW
8393 0825 38	S Geobor/NW

Part Number	DCDMA rod box to DCDMA rod box R.H.
3862 6832 00	AW/AW
3862 6833 00	AW/BW
3862 6834 00	AW/NW
3862 6835 00	BW/BW
3862 6836 00	BW/NW
3862 6837 00	NW/NW
3862 6856 00	N/NW

Part Number	DCDMA rod box to DCDMA rod pin R.H.
8393 0813 07	AW/AWJ
3862 6697 00	AWJ/AW
3862 6223 00	AW/BW
3862 6685 00	AW/NWJ
3862 6687 00	BW/AW
8393 0813 96	BWJ/BW
3862 6224 00	BW/NW
3862 6689 00	BW/NWJ
3862 6691 00	NW/AW
3862 6692 00	NW/NWJ
3862 6693 00	NW/BW
3862 6225 00	NW/HW
3862 6635 00	NWJ/NW
3702 0041 00	HW/NW

Part Number	API REG pin to imperial pin
3744 0402 02	2 3/8"/NO
3862 6591 00	2 3/8"/HO
8393 0816 02	2 3/8"/NWJ
3862 6444 00	2 3/8"/SG
3702 0070 00	2 3/8"/2,3/8"
8393 0826 03	2 3/8"/CR 60
3702 0088 00	2 3/8"/NW
8393 0826 17	2 3/8"/PO
8393 0826 15	2 3/8"/BW
8393 0826 16	2 3/8"/BWJ
8393 0826 19	3 1/2"/PO
8393 0825 18	3 1/2"/NWJ
8393 0826 18	3 1/2"/SG
8393 0827 64	23/8"/HW CSG



Sub box to pin



Sub pin to pin

## Sockets for casing

Part Number	DCDMA rod box to DCDMA casing pin R.H.
3862 6481-00	AW/AW
3862 6839-00	AW/BW
3862 6840-00	AW/NW
3862 6482-00	BW/BW
3862 6842-00	BW/NW
3862 6483-00	NW/NW
3862 6485-00	NW/HW
3862 6864-00	NW/PW



Socket box to pin

Part Number	WL drill rod box to casing pin R.H.
8393 0815 01	AGM/AW
3862 6489 00	BO/BW
8393 0816 05	BGM/BW
3702 2871 00	NO/NW
3862 6473 00	HO/HW
8393 0818 01	PG(PO)/PW
8393 0825 53	SG/SW

Part Number	Metric rods box to metric casing pin R.H.
3862 6452 00	CR42/44x37
3862 6453 00	CR42/54x47
3862 6454 00	CR42/64x57
3862 6457 00	CR50/54x47
3862 6458 00	CR50/64x57
3862 6459 00	CR50/74x67
3862 6460 00	CR50/84x77

Part Number	DCDMA rod box to metric casing pin R.H.
3862 6465 00	NW/98x89
3862 6466 00	NW/113x104
38626467 00	NW/128x119
3862 6468 00	NW/143x134

# DRILLING BITS PRODUCT RANGE

## Diamond Products

### Terracore drilling bits range

Thanks to the Terracore bit range there is always a solution to match the variety of rock conditions encountered. The main focus is on soft to medium hard rock formations – both consolidated and fragmented. There are also tools for drilling in concrete.

### Drilling bits and reamings shells

The Terracore bit range offers a wide selection of drilling bits

- Surface set diamond drill bits for soft to medium hard rock
- Poly-crystalline diamond composite (PDC) drill bits for non consolidated medium to hard rock.

- Tungsten carbide (TC) for soft rock formations and overburden drilling.

### Special bit tools

- Special bits for non coring drilling, diamond surface set, PDC and Tungsten set drag bits.
- Rod shoes for wireline drill rods.
- Hole opener to ream-up hole to larger to standard hole size.
- Diamond products to convert wireline rods to single tube core barrel.

### Casing shoes








- Casing shoe range: diamond impregnated, diamond surface set and tungsten carbide.



## Terracore application classification system based on rock groups 1–10

- Rock characteristics are organized in rock groups 1–10.
- Each number identify a certain rock group.
- Terracore bits are marked with a number or number combination referring to applicable rock group.



Rock group	Formation description	Rock type
 <b>1 – 4</b>	Soft to medium hard Very abrasive to slightly abrasive Very fractured to slightly broken	Unmetamorphosed or weakly metamorphosed shales, Sandstone and limestone
 <b>5</b>	Medium hard Abrasive Moderately fractured to slightly broken	Limestone and dolomite. Weathered granite and gneiss. Serpentine and metaperidotite.
 <b>6</b>	Medium hard Moderately abrasive Moderately fractured to slightly broken	Unmetamorphosed or weakly metamorphosed diorite, Gabbro, peridotite and gneiss. Basalt, andesite.
 <b>7</b>	Medium hard – hard Moderately abrasive Slightly fractured to competent	Metabasalt, amphibolite. Metamorphosed diorite and gabbro. Diabase.
 <b>8</b>	Hard Slightly abrasive Competent	Quartz rich skarn. Granite and pegmatite
 <b>9</b>	Very hard Slightly abrasive Very competent	Metamorphosed granitic rock and quartz rich gneiss.
 <b>10</b>	Extremely hard Non-abrasive, fine grained Very competent	Chert and jasperite. Quartzite. Highly metamorphosed volcanic.

# BITS AND REAMING SHELLS

## Impregnated (IMP) bits – 46T2

Size	Design	Rock formation	Rock Group/Height	Waterways	Product No.
46	T2	Extremely hard, Non abrasive	10/10	8ECF	3702 6725 00
46	T2	Hard–Very hard, Slightly abrasive	9/10	8CF	8370 2300 21
46	T2	Medium hard–Hard, Abrasive+mixed	6–8/10	6CF	3702 6879 00
46	T2	Medium soft–Hard, Abrasive, Fractured	5–6/10	6CF	8370 0643 60
46	T2	Soft–Medium soft, Abrasive, Highly fractured	4/10	6CF	3702 5997 00
46	T2	Extremely abrasive, Highly fractured	2/10	6CF	3702 7201 00

## Surface set (SS) bits – 46T2

Size	Design	Rock formation	Diamond size / Quality / Profile	Waterways	Product No.
46	T2	Medium–Hard	30–50 / S / Semi round	CF	8370 0679 96
46	T2	Soft–Medium	20–25 / S / Semi round	CF	8370 0650 65

## Tungsten carbide bits – 46T2

Size	Design	Rock formation	Type	Waterways	Product No.
46	T2	Soft	Tungsten Carbide inserts (TCI)	CF	8372 0102 00
46	T2	Soft–Medium	Tungsten Carbide chips (CRB)	CF	8372 0120 08

## Reaming shell (RES) – 46T2

Size	Design	Setting	Type		Product No.
46	T2	Diamond surface set	Standard (STD)		3702 7128 00

## Impregnated (IMP) bits – 56T2

Size	Design	Rock formation	Rock Group/Height	Waterways	Product No.
56	T2	Extremely hard, Non abrasive	10/10	10ECF	3702 6705 00
56	T2	Hard–Very hard, Slightly abrasive	9/10	10CF	8370 2300 22
56	T2	Medium hard–Hard, Abrasive+mixed	6–8/10	8CF	3702 6826 00
56	T2	Medium soft–Hard, Abrasive, Fractured	5–6/10	8CFF	3702 7318 00
56	T2	Soft–Medium soft, Abrasive, Highly fractured	4/10	8CF	3702 6801 00
56	T2	Extremely abrasive, Highly fractured	2/10	8CF	3702 7203 00

## Surface set (SS) bits – 56T2

Size	Design	Rock formation	Diamond size / Quality / Profile	Waterways	Product No.
56	T2	Medium–Hard	30–50 / S / Semi round	CF	8370 0680 02
56	T2	Soft–Medium	20–25 / S / Semi round	CF	8370 0650 73

## Tungsten carbide bits – 56T2

Size	Design	Rock formation	Type	Waterways	Product No.
56	T2	Soft	Tungsten Carbide inserts (TCI)	CF	8372 0103 09
56	T2	Soft–Medium	Tungsten Carbide chips (CRB)	CF	8372 0121 07

## Reaming shell (RES) – 56T2

Size	Design	Setting	Type		Product No.
56	T2	Diamond surface set	Standard (STD)		3702 7129 00

**Impregnated (IMP) bits – 66T2**

Size	Design	Rock formation	Rock Group/Height	Waterways	Product No.
66	T2	Extremely hard, Non abrasive	10/10	12CF	3702 7192 00
66	T2	Hard–Very hard, Slightly abrasive	9/10	8CF	3702 7020 00
66	T2	Medium hard–Hard, Abrasive+mixed	6–8/10	8CF	3702 7019 00
66	T2	Medium soft–Hard, Abrasive, Fractured	5–6/10	8CF	3702 7198 00
66	T2	Soft–Medium soft, Abrasive, Highly fractured	4/10	8CF	3702 7018 00
66	T2	Extremely abrasive, Highly fractured	2/10	8CF	3702 7017 00

**Surface set (SS) bits – 66T2**

Size	Design	Rock formation	Diamond size / Quality / Profile	Waterways	Product No.
66	T2	Medium–Hard	30–50 / S / Semi round	CF	8370 0680 85
66	T2	Soft–Medium	20–25 / S / Semi round	CF	8370 0650 81

**Tungsten carbide bits – 66T2**

Size	Design	Rock formation	Type	Waterways	Product No.
66	T2	Soft	Tungsten Carbide inserts (TCI)	CF	8372 0104 08
66	T2	Soft–Medium	Tungsten Carbide Chips (CRB)	CF	8372 0122 06

**Reaming shell (RES) – 66T2**

Size	Design	Setting	Type		Product No.
66	T2	Diamond surface set	Standard (STD)		3702 7130 00

**Impregnated (IMP) bits – 76T2**

Size	Design	Rock formation	Rock Group/Height	Waterways	Product No.
76	T2	Extremely hard, Non abrasive	10/10	12ECF	3702 6715 00
76	T2	Hard–Very hard, Slightly abrasive	9/10	10CF	3702 6907 00
76	T2	Medium hard–Hard, Abrasive+mixed	6–8/10	10CF	3702 6900 00
76	T2	Medium soft–Hard, Abrasive, Fractured	5–6/10	10CF	3702 7197 00
76	T2	Medium soft, Abrasive, fractured	4/10	10CF	3702 6772 00
76	T2	Soft–Medium soft, Very abrasive, Highly fractured	2/10	10CF	8370 0620 39

**Surface set (SS) bits – 76T2**

Size	Design	Rock formation	Diamond size / Quality / Profile	Waterways	Product No.
76	T2	Medium–Hard	30–50 / S / Semi round	CF	8370 0680 93
76	T2	Soft–Medium	20–25 / S / Semi round	CF	8370 0650 99

**Tungsten carbide bits – 76T2**

Size	Design	Rock formation	Type	Waterways	Product No.
76	T2	Soft	Tungsten Carbide inserts (TCI)	CF	8372 0105 07
76	T2	Soft–Medium	Tungsten Carbide Chips (CRB)	CF	8372 0123 05

**Reaming shell (RES) – 76T2**

Size	Design	Setting	Type		Product No.
76	T2	Diamond surface set	Standard (STD)		3702 7131 00

**Impregnated (IMP) bits – 86T2**

Size	Design	Rock formation	Rock Group/Height	Waterways	Product No.
86	T2	Extremely hard, Non abrasive	10/6	14 ECF	3702 6698 00
86	T2	Hard–Very hard, Slightly abrasive	9/6	12CF	3702 7072 00
86	T2	Medium hard–Hard, Abrasive + mixed	6–8/6	12CF	3702 7093 00
86	T2	Medium soft–Hard, Abrasive, Fractured	5–6/6	12CF	3702 7410 00
86	T2	Soft–Medium soft, Abrasive, Highly fractured	4/6	12CF	3702 6774 00
86	T2	Extremely abrasive, Highly fractured	2/6	12CF	8370 0620 47

**Surface set (SS) bits – 86T2**

Size	Design	Rock formation	Diamond size / Quality / Profile	Waterways	Product No.
86	T2	Medium–Hard	30–50 / S / Semi round	CF	8370 0681 01
86	T2	Soft–Medium	20–25 / S / Semi round	CF	8370 0651 07

**Tungsten carbide bits – 86T2**

Size	Design	Rock formation	Type	Waterways	Product No.
86	T2	Soft	Tungsten Carbide inserts (TCI)	CF	8372 0106 06
86	T2	Soft–Medium	Tungsten Carbide chips (CRB)	CF	8372 0124 04

**Reaming shell (RES) – 86T2**

Size	Design	Setting	Type		Product No.
86	T2	Diamond surface set	Standard (STD)		3702 7132 00

**Impregnated (IMP) bits – 101T2**

Size	Design	Rock formation	Rock Group/Height	Waterways	Product No.
101	T2	Extremely hard, Non abrasive	10/6	15ECF	3702 6827 00
101	T2	Hard–Very hard, Slightly abrasive	9/6	14CF	3702 7073 00
101	T2	Medium hard–Hard, Abrasive + mixed	6–8/6	14CF	3702 7092 00
101	T2	Medium soft–Hard, Abrasive, Fractured	5–6/6	14CF	3702 7459 00
101	T2	Soft–Medium soft, Abrasive, Highly fractured	4/6	14CF	3702 6776 00
101	T2	Extremely abrasive, Highly fractured	2/6	14CF	8370 0620 54

**Surface set (SS) bits – 101T2**

Size	Design	Rock formation	Diamond size / Quality / Profile	Waterways	Product No.
101	T2	Medium–Hard	30–50 / S / Semi round	CF	8370 0681 19
101	T2	Soft–Medium	16–30 / S / Semi round	CF	3761 0014 08

**Tungsten carbide bits – 101T2**

Size	Design	Rock formation	Type	Waterways	Product No.
101	T2	Soft	Tungsten Carbide inserts (TCI)	CF	8372 0107 05
101	T2	Soft–Medium	Tungsten Carbide chips (CRB)	CF	8372 0125 03

**Reaming shell (RES) – 101T2**

Size	Design	Setting	Type		Product No.
101	T2	Diamond surface set	Standard (STD)		3702 7133 00

**Impregnated (IMP) bits – 76T6**

Size	Design	Rock formation	Rock Group/Height	Waterways	Product No.
76	T6	Extremely hard, Non abrasive	10/6	8CF	3702 7411 00
76	T6	Hard-Very hard, Slightly abrasive	9/6	8CF	3702 7412 00
76	T6	Medium hard-Hard, Abrasive+mixed	6-8/6	8CF	3702 7228 00
76	T6	Medium soft-Hard, Abrasive, Fractured	5-6/6	8CF	3702 7413 00
76	T6	Soft-Medium soft, Abrasive, Highly fractured	4/6	8CF	3702 7229 00
76	T6	Extremely abrasive, Highly fractured	2/6	8CF	3702 7414 00

**Surface set (SS) bits – 76T6**

Size	Design	Rock formation	Diamond size / Quality / Profile	Waterways	Product No.
76	T6	Medium-Hard	30-50 / S / Semi round	CF	8370 0686 14
76	T6	Soft-Medium	20-25 / S / Semi round	CF	8370 0663 45

**Tungsten carbide bits – 76T6**

Size	Design	Rock formation	Type	Waterways	Product No.
76	T6	Soft	Tungsten Carbide inserts (TCI)	CF	8372 0133 03
76	T6	Soft-Medium	Tungsten Carbide Chips (CRB)	CF	8372 0133 11

**Reaming shell (RES) – 76T6**

Size	Design	Setting	Type		Product No.
76	T6	Diamond surface set	Standard (STD)		8370 2300 62

**Impregnated (IMP) bits – 86T6**

Size	Design	Rock formation	Rock Group/Height	Waterways	Product No.
86	T6	Extremely hard, Non abrasive	10/6	9CF	3702 7415 00
86	T6	Hard-Very hard, Slightly abrasive	9/6	9CF	3702 7416 00
86	T6	Medium hard-Hard, Abrasive+mixed	6-8/6	9CF	3702 7230 00
86	T6	Medium soft-Hard, Abrasive, Fractured	5-6/6	9CF	3702 7417 00
86	T6	Soft-Medium soft, Abrasive, Highly fractured	4/6	9CF	3702 7231 00
86	T6	Extremely abrasive, Highly fractured	2/6	9CF	3702 7189 00

**Surface set (SS) bits – 86T6**

Size	Design	Rock formation	Diamond size / Quality / Profile	Waterways	Product No.
86	T6	Medium-Hard	30-50 / S / Semi round	CF	8370 0686 22
86	T6	Soft-Medium	20-25 / S / Semi round	CF	8370 0663 52

**Tungsten carbide bits – 86T6**

Size	Design	Rock formation	Type	Waterways	Product No.
86	T6	Soft	Tungsten Carbide inserts (TCI)	CF	8372 0134 02
86	T6	Soft-Medium	Tungsten Carbide Chips (CRB)	CF	8372 0134 10

**Reaming shell (RES) – 86T6**

Size	Design	Setting	Type		Product No.
86	T6	Diamond surface set	Standard (STD)		8370 2300 63

**Impregnated (IMP) bits – 101T6**

Size	Design	Rock formation	Rock Group/Height	Waterways	Product No.
101	T6	Extremely hard, Non abrasive	10/6	10ECF	3702 7418 00
101	T6	Hard-Very hard, Slightly abrasive	9/6	10CF	3702 6474 00
101	T6	Medium hard-Hard, Abrasive+mixed	6-8/6	10CF	3702 7191 00
101	T6	Medium soft-Hard, Abrasive, Fractured	5-6/6	10CF	3702 7419 00
101	T6	Soft-Medium soft, Abrasive, Highly fractured	4/6	10ECF	3702 6652 00
101	T6	Extremely abrasive, Highly fractured	2/6	10CF	3702 6375 00

**Surface set (SS) bits – 101T6**

Size	Design	Rock formation	Diamond size / Quality / Profile	Waterways	Product No.
101	T6	Medium-Hard	30-50 / S / Semi round	CF	8370 0686 30
101	T6	Soft-Medium	20-25 / S / Semi round	CF	8370 0663 60

**Tungsten carbide bits – 101T6**

Size	Design	Rock formation	Type	Waterways	Product No.
101	T6	Soft	Tungsten Carbide inserts (TCI)	CF	8372 0135 01
101	T6	Soft-Medium	Tungsten Carbide chips (CRB)	CF	8372 0135 19

**Reaming shell (RES) – 101T6**

Size	Design	Setting	Type		Product No.
101	T6	Diamond surface set	Standard (STD)		8370 2300 64

**Impregnated (IMP) bits – 116T6**

Size	Design	Rock formation	Rock Group/Height	Waterways	Product No.
116	T6	Extremely hard, Non abrasive	10/6	14ECF	3702 6868 00
116	T6	Hard-Very hard, Slightly abrasive	9/6	11CF	3702 6913 00
116	T6	Medium hard-Hard, Abrasive+mixed	6-8/6	11CF	3702 7219 00
116	T6	Medium soft-Hard, Abrasive, Fractured	5-6/6	11CF	3702 7420 00
116	T6	Soft-Medium soft, Abrasive, Highly fractured	4/6	11CF	3702 7232 00
116	T6	Extremely abrasive, Highly fractured	2/6	11CF	3702 7188 00

**Surface set (SS) bits – 116T6**

Size	Design	Rock formation	Diamond size / Quality / Profile	Waterways	Product No.
116	T6	Medium-Hard	30-50 / S / Semi round	CF	8370 0686 48
116	T6	Soft-Medium	20-25 / S / Semi round	CF	8370 0663 78

**Tungsten carbide bits – 116T6**

Size	Design	Rock formation	Type	Waterways	Product No.
116	T6	Soft	Tungsten Carbide inserts (TCI)	CF	8372 0136 00
116	T6	Soft-Medium	Tungsten Carbide chips (CRB)	CF	8372 0136 18

**Reaming shell (RES) – 116T6**

Size	Design	Setting	Type		Product No.
116	T6	Diamond surface set	Standard (STD)		8370 2300 65

**Impregnated (IMP) bits – 131T6**

Size	Design	Rock formation	Rock Group/Height	Waterways	Product No.
131	T6	Extremely hard, Non abrasive	10/6	12CF	3702 7421 00
131	T6	Hard–Very hard, Slightly abrasive	9/5	12CF	3702 7422 00
131	T6	Medium hard–Hard, Abrasive+mixed	6–8/6	12CF	3702 7221 00
131	T6	Medium soft–Hard, Abrasive, Fractured	5–6/6	12CF	3702 7423 00
131	T6	Soft–Medium soft, Abrasive, Highly fractured	4/6	12CF	3702 7233 00
131	T6	Soft–Medium soft, Very abrasive, Highly fractured	2/6	12CF	8370 0621 87

**Surface set (SS) bits – 131T6**

Size	Design	Rock formation	Diamond size / Quality / Profile	Waterways	Product No.
131	T6	Medium–Hard	30–50 / S / Semi round	CF	8370 0686 55
131	T6	Soft–Medium	20–25 / S / Semi round	CF	8370 0663 86

**Tungsten carbide bits – 131T6**

Size	Design	Rock formation	Type	Waterways	Product No.
131	T6	Soft	Tungsten Carbide inserts (TCI)	CF	8372 0137 09
131	T6	Soft–Medium	Tungsten Carbide Chips (CRB)	CF	8372 0137 17

**Reaming shell (RES) – 131T6**

Size	Design	Setting	Type		Product No.
131	T6	Diamond surface set	Standard (STD)		8370 2300 66

**Impregnated (IMP) bits – 146T6**

Size	Design	Rock formation	Rock Group/Height	Waterways	Product No.
146	T6	Extremely hard, Non abrasive	10/6	13CF	3702 7354 00
146	T6	Hard–Very hard, Slightly abrasive	9/6	13CF	3702 7223 00
146	T6	Medium hard–Hard, Abrasive+mixed	6–8/6	13CF	3702 7234 00
146	T6	Medium soft–Hard, Abrasive, Fractured	5–6/6	13CF	3702 7424 00
146	T6	Soft–Medium soft, Abrasive, Highly fractured	4/6	13CF	3702 6692 00
146	T6	Extremely abrasive, Highly fractured	2/6	13CF	3702 7425 00

**Surface set (SS) bits – 146T6**

Size	Design	Rock formation	Diamond size / Quality / Profile	Waterways	Product No.
146	T6	Medium–Hard	30–50 / S / Semi round	CF	8370 0686 63
146	T6	Soft–Medium	16–30 / 2 step	CF	8424 9114 72

**Tungsten carbide bits – 146T6**

Size	Design	Rock formation	Type	Waterways	Product No.
146	T6	Soft	Tungsten Carbide inserts (TCI)	CF	8372 0138 08
146	T6	Soft–Medium	Tungsten Carbide Chips (CRB)	CF	8372 0138 16

**Reaming shell (RES) – 146T6**

Size	Design	Setting	Type		Product No.
146	T6	Diamond surface set	Standard (STD)		8370 2300 67

### Impregnated (IMP) bits – 76T6S\*

Size	Design	Rock formation	Rock Group/Height	Waterways	Product No.
76	T6S	Extremely hard, Non abrasive	10/6	10FD	3702 7426 00
76	T6S	Hard–Very hard, Slightly abrasive	9/6	10FD	3702 3175 00
76	T6S	Medium hard–Hard, Abrasive+mixed	6–8/10	10FD	3702 6950 00
76	T6S	Medium soft–Hard, Abrasive, Fractured	5–6/6	10FD	3702 7427 00
76	T6S	Soft–Medium soft, Abrasive, Highly fractured	4/6	10FD	3702 7428 00
76	T6S	Extremely abrasive, Highly fractured	2/6	10FD	3702 7429 00

### Surface set (SS) bits – 76T6S\*

Size	Design	Rock formation	Diamond size / Quality / Profile	Waterways	Product No.
76	T6S	Medium–Hard	30–40 / S / 2–step	FD	3760 9551 42
76	T6S	Soft–Medium	20–25 / S / Semi round	FD	8370 0903 03

### Tungsten carbide bits – 76T6S\*

Size	Design	Rock formation	Type	Waterways	Product No.
76	T6S	Soft	Tungsten Carbide inserts (TCI)	FD	8372 0211 08
76	T6S	Soft–Medium	Tungsten Carbide chips (CRB)	FD	8372 0226 01

### Impregnated (IMP) bits – 101T6S\*

Size	Design	Rock formation	Rock Group/Height	Waterways	Product No.
101	T6S	Extremely hard, Non abrasive	10/6	10FD	3702 7430 00
101	T6S	Hard–Very hard, Slightly abrasive	9/6	10FD	3702 7346 00
101	T6S	Medium hard–Hard, Abrasive+mixed	6–8/6	10FD	3702 5137 00
101	T6S	Medium soft–Hard, Abrasive, Fractured	5–6/6	10FD	3702 7431 00
101	T6S	Soft–Medium soft, Abrasive, Highly fractured	4/6	10FD	3702 7432 00
101	T6S	Extremely abrasive, Highly fractured	2/6	10FD	3702 7433 00

### Surface set (SS) bits – 101T6S\*

Size	Design	Rock formation	Diamond size / Quality / Profile	Waterways	Product No.
101	T6S	Medium–Hard	30–40 / S / 2–STEP	FD	8424 9115 12
101	T6S	Soft–Medium	20–25 / S / Semi round	FD	8370 0907 17

### Tungsten carbide bits – 101T6S\*

Size	Design	Rock formation	Type	Waterways	Product No.
101	T6S	Soft	Tungsten Carbide inserts (TCI)	FD	8372 0213 06
101	T6S	Soft–Medium	Tungsten Carbide chips (CRB)	FD	8372 0228 09

\*) T6S used without reaming shell

### Impregnated (IMP) bits – 116T6S\*

Size	Design	Rock formation	Rock Group/Height	Waterways	Product No.
116	T6S	Extremely hard, Non abrasive	10/6	10FD	3702 7434 00
116	T6S	Hard–Very hard, Slightly abrasive	9/6	10FD	3702 7435 00
116	T6S	Medium hard–Hard, Abrasive+mixed	6–8/6	10FD	3702 7436 00
116	T6S	Medium soft–Hard, Abrasive, Fractured	5–6/6	10FD	3702 7406 00
116	T6S	Soft–Medium soft, Abrasive, Highly fractured	4/6	10FD	3702 7437 00
116	T6S	Extremely abrasive, Highly fractured	2/6	10FD	3702 7438 00

### Surface set (SS) bits – 116T6S\*

Size	Design	Rock formation	Diamond size / Quality / Profile	Waterways	Product No.
116	T6S	Medium–Hard	30–40 / S / 2–STEP	FD	8424 9115 18
116	T6S	Soft–Medium	20–25 / S / Semi round	FD	8370 0907 25

### Tungsten carbide bits – 116T6S\*

Size	Design	Rock formation	Type	Waterways	Product No.
116	T6S	Soft	Tungsten Carbide inserts (TCI)	FD	8372 0214 05
116	T6S	Soft–Medium	Tungsten Carbide Chips (CRB)	FD	8372 0229 08

### Impregnated (IMP) bits – 131T6S\*

Size	Design	Rock formation	Rock Group/Height	Waterways	Product No.
131	T6S	Extremely hard, Non abrasive	10/6	FD	3702 7439 00
131	T6S	Hard–Very hard, Slightly abrasive	9/6	FD	3702 7440 00
131	T6S	Medium hard–Hard, Abrasive+mixed	6–8/6	FD	3702 7441 00
131	T6S	Medium soft–Hard, Abrasive, Fractured	5–6/6	FD	3702 7442 00
131	T6S	Soft–Medium soft, Abrasive, Highly fractured	4/6	FD	3702 7443 00
131	T6S	Extremely abrasive, Highly fractured	2/6	FD	3702 7444 00

### Surface set (SS) bits – 131T6S\*

Size	Design	Rock formation	Diamond size / Quality / Profile	Waterways	Product No.
131	T6S	Medium–Hard	30–40 / S / 2–step	FD	3760 9551 43
131	T6S	Soft–Medium	20–25 / S / Semi round	FD	8370 0907 33

### Tungsten carbide bits – 131T6S\*

Size	Design	Rock formation	Type	Waterways	Product No.
131	T6S	Soft	Tungsten Carbide inserts (TCI)	FD	8372 0215 04
131	T6S	Soft–Medium	Tungsten Carbide Chips (CRB)	FD	8372 0230 05

\*) T6S used without reaming shell

**Impregnated (IMP) bits – 46B**

Size	Design	Rock formation	Rock Group/Height	Waterways	Product No.
46	B	Extremely hard, Non abrasive	10/10	6CFF	3702 7468 00
46	B	Hard–Very hard, Slightly abrasive	9/10	6CFF	3702 6683 00
46	B	Medium hard–Hard, Abrasive+mixed	6–8/6	6CFF	3702 7445 00
46	B	Medium soft–Hard, Abrasive, Fractured	5–6/10	6CFF	3702 7360 00
46	B	Soft–Medium soft, Abrasive, Highly fractured	4/6	6CFF	3702 7224 00
46	B	Extremely abrasive, Highly fractured	2/6	6CFF	8370 2300 39

**Surface set (SS) bits – 46B**

Size	Design	Rock formation	Diamond size / Quality / Profile	Waterways	Product No.
46	B	Soft–Medium	20–25 / S / Semi round	CF	8370 0251 27

**Tungsten carbide bits – 46B**

Size	Design	Rock formation	Type	Waterways	Product No.
46	B	Soft	Tungsten Carbide inserts (TCI)	CF	8372 0302 08
46	B	Soft–Medium	Tungsten Carbide chips (CRB)	CF	8372 0318 00

**Reaming shell (RES) – 46B**

Size	Design	Setting	Type		Product No.
46	B	Diamond surface set Ext.	Standard (STD)		3702 6540 00

**Impregnated (IMP) bits – 56B**

Size	Design	Rock formation	Rock Group/Height	Waterways	Product No.
56	B	Extremely hard, Non abrasive	10/6	8CFF	3760 9551 45
56	B	Hard–Very hard, Slightly abrasive	9/10	8CFF	3702 7350 00
56	B	Medium hard–Hard, Abrasive+mixed	6–8/6	8CFF	3702 7447 00
56	B	Medium soft–Hard, Abrasive, Fractured	5–6/10	8CFF	3702 7361 00
56	B	Soft–Medium soft, Abrasive, Highly fractured	4/6	8CFF	8370 2300 40
56	B	Extremely abrasive, Highly fractured	2/6	8CFF	8370 0210 19

**Surface set (SS) bits – 56B**

Size	Design	Rock formation	Diamond size / Quality / Profile	Waterways	Product No.
56	B	Soft–Medium	20–25 / S / Semi round	CF	8370 0251 35

**Tungsten carbide bits – 56B**

Size	Design	Rock formation	Type	Waterways	Product No.
56	B	Soft	Tungsten Carbide inserts (TCI)	CF	8372 0303 07
56	B	Soft–Medium	Tungsten Carbide chips (CRB)	CF	8372 0319 09

**Reaming shell (RES) – 56B**

Size	Design	Setting	Type		Product No.
56	B	Diamond surface set Ext.	Standard (STD)		3702 6541 00

**Impregnated (IMP) bits – 66B**

Size	Design	Rock formation	Rock Group/Height	Waterways	Product No.
66	B	Extremely hard, Non abrasive	10/6	10CF	3760 9551 46
66	B	Hard-Very hard, Slightly abrasive	9/6	10CF	8370 0212 58
66	B	Medium hard-Hard, Abrasive+mixed	6-8/6	10CF	3702 7448 00
66	B	Medium soft-Hard, Abrasive, Fractured	5-6/6	10CF	3702 7449 00
66	B	Soft-Medium soft, Abrasive, Highly fractured	4/6	10CF	3702 6783 00
66	B	Extremely abrasive, Highly fractured	2/6	10CF	8370 2300 41

**Surface set (SS) bits – 66B**

Size	Design	Rock formation	Diamond size / Quality / Profile	Waterways	Product No.
66	B	Soft-Medium	20-25 / S / Semi round	CF	8370 0251 43

**Tungsten carbide bits – 66B**

Size	Design	Rock formation	Type	Waterways	Product No.
66	B	Soft	Tungsten Carbide inserts (TCI)	CF	8372 0304 06
66	B	Soft-Medium	Tungsten Carbide Chips (CRB)	CF	8372 0320 06

**Reaming shell (RES) – 66B**

Size	Design	Setting	Type		Product No.
66	B	Diamond surface set Ext.	Standard (STD)		3702 6542 00

**Impregnated (IMP) bits – 76B**

Size	Design	Rock formation	Rock Group/Height	Waterways	Product No.
76	B	Extremely hard, Non abrasive	10/6	12CF	3760 9551 47
76	B	Hard-Very hard, Slightly abrasive	9/6	12CF	3702 6684 00
76	B	Medium hard-Hard, Abrasive+mixed	6-8/6	12CF	3702 6986 00
76	B	Medium soft-Hard, Abrasive, Fractured	5-6/6	12CF	3702 7450 00
76	B	Soft-Medium soft, Abrasive, Highly fractured	4/6	12CF	3702 6771 00
76	B	Extremely abrasive, Highly fractured	2/6	12CF	8370 0210 35

**Surface set (SS) bits – 76B**

Size	Design	Rock formation	Diamond size / Quality / Profile	Waterways	Product No.
76	B	Soft-Medium	20-25 / S / Semi round	CF	8370 0251 50

**Tungsten carbide bits – 76B**

Size	Design	Rock formation	Type	Waterways	Product No.
76	B	Soft	Tungsten Carbide inserts (TCI)	CF	8372 0305 05
76	B	Soft-Medium	Tungsten Carbide Chips (CRB)	CF	8372 0321 05

**Reaming shell (RES) – 76B**

Size	Design	Setting	Type		Product No.
76	B	Diamond surface set Ext.	Standard (STD)		3702 6543 00

**Impregnated (IMP) bits – 86B**

Size	Design	Rock formation	Rock Group/Height	Waterways	Product No.
86	B	Extremely hard, Non abrasive	10/6	12CF	3760 9551 48
86	B	Hard–Very hard, Slightly abrasive	9/6	12CF	3702 7451 00
86	B	Medium hard–Hard, Abrasive+mixed	6–8/6	12CF	3702 7452 00
86	B	Medium soft–Hard, Abrasive, Fractured	5–6/6	12CF	3702 7453 00
86	B	Soft–Medium soft, Abrasive, Highly fractured	4/6	12CF	3702 6773 00
86	B	Extremely abrasive, Highly fractured	2/6	12CF	8370 0210 43

**Surface set (SS) bits – 86B**

Size	Design	Rock formation	Diamond size / Quality / Profile	Waterways	Product No.
86	B	Soft–Medium	20–25 / S / Semi round	CF	8370 0251 68

**Tungsten carbide bits – 86B**

Size	Design	Rock formation	Type	Waterways	Product No.
86	B	Soft	Tungsten Carbide inserts (TCI)	CF	8372 0306 04
86	B	Soft–Medium	Tungsten Carbide chips (CRB)	CF	8372 0322 04

**Reaming shell (RES) – 86B**

Size	Design	Setting	Type		Product No.
86	B	Diamond surface set Ext.	Standard (STD)		3702 6544 00

**Impregnated (IMP) bits – 101B**

Size	Design	Rock formation	Rock Group/Height	Waterways	Product No.
101	B	Extremely hard, Non abrasive	10/6	14CF	3760 9551 49
101	B	Hard–Very hard, Slightly abrasive	9/6	14CF	3702 7013 00
101	B	Medium hard–Hard, Abrasive+mixed	6–8/6	14CF	3702 7014 00
101	B	Medium soft–Hard, Abrasive, Fractured	5–6/6	14CF	3702 7454 00
101	B	Soft–Medium soft, Abrasive, Highly fractured	4/6	14CF	3702 6775 00
101	B	Extremely abrasive, Highly fractured	2/6	14CF	8370 0210 50

**Surface set (SS) bits – 101B**

Size	Design	Rock formation	Diamond size / Quality / Profile	Waterways	Product No.
101	B	Soft–Medium	20–25 / S / Semi round	CF	8370 0251 76

**Tungsten carbide bits – 101B**

Size	Design	Rock formation	Type	Waterways	Product No.
101	B	Soft	Tungsten Carbide inserts (TCI)	CF	8372 0307 03
101	B	Soft–Medium	Tungsten Carbide chips (CRB)	CF	8372 0323 03

**Reaming shell (RES) – 101B**

Size	Design	Setting	Type		Product No.
101	B	Diamond surface set Ext.	Standard (STD)		3702 6545 00

**Impregnated (IMP) bits – 116B**

Size	Design	Rock formation	Rock Group/Height	Waterways	Product No.
116	B	Extremely hard, Non abrasive	10/6	16CF	3760 9551 50
116	B	Hard–Very hard, Slightly abrasive	9/6	16CF	8370 0212 90
116	B	Medium hard–Hard, Abrasive+mixed	6–8/6	16CF	3702 6881 00
116	B	Medium soft–Hard, Abrasive, Fractured	5–6/6	16CF	8370 0220 60
116	B	Soft–Medium soft, Abrasive, Highly fractured	4/6	16CF	3702 7225 00
116	B	Extremely abrasive, Highly fractured	2/6	16CF	8370 0210 68

**Surface set (SS) bits – 116B**

Size	Design	Rock formation	Diamond size / Quality / Profile	Waterways	Product No.
116	B	Soft–Medium	20–25 / S / Semi round	CF	8370 0251 84

**Tungsten carbide bits – 116B**

Size	Design	Rock formation	Type	Waterways	Product No.
116	B	Soft	Tungsten Carbide inserts (TCI)	CF	8372 0308 02
116	B	Soft–Medium	Tungsten Carbide Chips (CRB)	CF	8372 0324 02

**Reaming shell (RES) – 116B**

Size	Design	Setting	Type		Product No.
116	B	Diamond surface set Ext.	Standard (STD)		3702 6744 00

**Impregnated (IMP) bits – 131B**

Size	Design	Rock formation	Rock Group/Height	Waterways	Product No.
131	B	Extremely hard, Non abrasive	10/6	16CF	3760 9551 51
131	B	Hard–Very hard, Slightly abrasive	9/6	16CF	3702 7220 00
131	B	Medium hard–Hard, Abrasive+mixed	6–8/6	16CF	3702 7455 00
131	B	Medium soft–Hard, Abrasive, Fractured	5–6/6	16CF	3702 7456 00
131	B	Soft–Medium soft, Abrasive, Highly fractured	4/6	16CF	3702 7226 00
131	B	Extremely abrasive, Highly fractured	2/6	16CF	8370 0210 76

**Surface set (SS) bits – 131B**

Size	Design	Rock formation	Diamond size / Quality / Profile	Waterways	Product No.
131	B	Soft–Medium	20–25 / S / Semi round	CF	8370 0251 92

**Tungsten carbide bits – 131B**

Size	Design	Rock formation	Type	Waterways	Product No.
131	B	Soft	Tungsten Carbide inserts (TCI)	CF	8372 0309 01
131	B	Soft–Medium	Tungsten Carbide Chips (CRB)	CF	8372 0325 01

**Reaming shell (RES) – 131B**

Size	Design	Setting	Type		Product No.
131	B	Diamond surface set Ext.	Standard (STD)		3702 6821 00

**Impregnated (IMP) bits – 146B**

Size	Design	Rock formation	Rock Group/Height	Waterways	Product No.
146	B	Extremely hard, Non abrasive	10/6	18CF	3702 7401 00
146	B	Hard-Very hard, Slightly abrasive	9/6	18CF	3702 7222 00
146	B	Medium hard-Hard, Abrasive+mixed	6-8/6	18CF	3702 7457 00
146	B	Medium soft-Hard, Abrasive, Fractured	5-6/6	18CF	3702 7458 00
146	B	Soft-Medium soft, Abrasive, Highly fractured	4/6	18CF	3702 7227 00
146	B	Extremely abrasive, Highly fractured	2/6	18CF	8370 0210 84

**Surface set (SS) bits – 146B**

Size	Design	Rock formation	Diamond size / Quality / Profile	Waterways	Product No.
146	B	Soft-Medium	20-25 / S / Semi round	CF	8370 0252 00

**Tungsten carbide bits – 146B**

Size	Design	Rock formation	Type	Waterways	Product No.
146	B	Soft	Tungsten Carbide inserts (TCI)	CF	8372 0310 08
146	B	Soft-Medium	Tungsten Carbide chips (CRB)	CF	8372 0326 00

**Reaming shell (RES) – 146B**

Size	Design	Setting	Type		Product No.
146	B	Diamond surface set Ext.	Standard (STD)		3702 6817 00

**Impregnated (IMP) bits – NO**

Size	Design	Rock formation	Rock Group/Height	Waterways	Product No.
N	O/V	Extremely hard, Non abrasive	10/10	10ECF	3760 9182 68
N	O/V	Hard-Very hard, Slightly abrasive	9/8	9ECF	3761 0013 10
N	O/V	Medium hard-Hard, Abrasive+mixed	6-8/8	9ECF	3761 0013 09
N	O/V	Medium soft-Hard, Abrasive, Fractured	5-6/8	9ECF	3761 0013 08
N	O/V	Soft-Medium soft, Abrasive, Highly fractured	2-4/8	9ECF	3761 0013 07
N	O/V	Extremely abrasive, Highly fractured	2/8	9ECF	3761 0013 06

**Surface set (SS) bits – NO**

Size	Design	Rock formation	Diamond size / Quality / Profile	Waterways	Product No.
N	O/V	Medium-Hard	30-50 / S / Multi step	CF	8370 2007 95
N	O/V	Soft-Medium	16-30 / S / 4 step	CF	8424 9110 60

**Tungsten carbide bits – NO**

Size	Design	Rock formation	Type	Waterways	Product No.
N	O/V	Soft	Tungsten Carbide inserts (TCI)	CF	8372 0906 08
N	O/V	Soft-Medium	Tungsten Carbide chips (CRB)	CF	8372 0922 08

**Reaming shell (RES) – NO**

Size	Design	Setting	Type		Product No.
N	O/V	Diamond surface set	Standard		3761 0014 64

### Impregnated (IMP) bits – NO2

Size	Design	Rock formation	Rock Group/Height	Waterways	Product No.
N	O2/V2	Extremely hard, Non abrasive	10/10	6CF	3760 9183 08
N	O2/V2	Hard-Very hard, Slightly abrasive	9/8	9ECF	3761 0012 33
N	O2/V2	Medium hard-Hard, Abrasive+mixed	6-8/8	9ECF	3761 0012 32
N	O2/V2	Medium soft-Hard, Abrasive, Fractured	5-6/8	9ECF	3761 0012 31
N	O2/V2	Soft-Medium soft, Abrasive, Highly fractured	2-4/8	9ECF	3761 0012 30
N	O2/V2	Extremely abrasive, Highly fractured	2/8	9ECF	3761 0012 29

### Surface set (SS) bits – NO2

Size	Design	Rock formation	Diamond size / Quality / Profile	Waterways	Product No.
N	O2/V2	Medium-Hard	30-50 / S /	CF	T.B.A.
N	O2/V2	Soft-Medium	16-30 / S / 4-step	CF	8424 9110 76.
N RSG	O2/V2	Soft	10-15/S/Semi round	CF	3761 0012 06

### Tungsten carbide bits – NO2

Size	Design	Rock formation	Type	Waterways	Product No.
N	O2/V2	Soft	Tungsten Carbide inserts (TCI)	CF	3702 7478 00
N	O2/V2	Soft-Medium	Tungsten Carbide Chips (CRB)	CF	3702 7200 00

### Reaming shell (RES) – NO2

Size	Design	Setting	Type		Product No.
N	O2/V2	Diamond surface set	Standard		3761 0014 64

### Impregnated (IMP) bits – NO3

Size	Design	Rock formation	Rock Group/Height	Waterways	Product No.
N	O3/V3	Extremely hard, Non abrasive	10/10	10CF	3760 9183 59
N	O3/V3	Hard-Very hard, Slightly abrasive	9/8	6CF	3761 0012 35
N	O3/V3	Medium hard-Hard, Abrasive+mixed	6-8/8	6CF	3761 0012 34
N	O3/V3	Medium soft-Hard, Abrasive, Fractured	5-6/8	6CF	3761 0013 23
N	O3/V3	Soft-Medium soft, Abrasive, Highly fractured	2-4/8	6CF	3761 0013 22
N	O3/V3	Extremely abrasive, Highly fractured	2/8	6CF	3761 0013 21

### Surface set (SS) bits – NO3

Size	Design	Rock formation	Diamond size / Quality / Profile	Waterways	Product No.
N	O3/V3	Medium-Hard	30-50 / S / Multi step	FD	3702 5721 00
N	O3/V3	Soft-Medium	16-30 / S / 4 step	FD	8424 9110 86

### Tungsten carbide bits – NO3

Size	Design	Rock formation	Type	Waterways	Product No.
N	O3/V3	Soft	Tungsten Carbide inserts (TCI)	FD	3702 5841 00
N	O3/V3	Soft-Medium	Tungsten Carbide Chips (CRB)	FD	8372 0935 03

### Reaming shell (RES) – NO3

Size	Design	Setting	Type		Product No.
N	O3/V3	Diamond surface set	Standard		3761 0014 64

### Impregnated (IMP) bits – HO

Size	Design	Rock formation	Rock Group/Height	Waterways	Product No.
H	O/V	Extremely hard, Non abrasive	10/10	10CF	3760 9188 86
H	O/V	Hard–Very hard, Slightly abrasive	9/8	11ECF	3761 0013 15
H	O/V	Medium hard–Hard, Abrasive+mixed	6–8/8	11ECF	3761 0013 14
H	O/V	Medium soft–Hard, Abrasive, Fractured	5–6/8	11ECF	3761 0013 13
H	O/V	Soft–Medium soft, Abrasive, Highly fractured	2–4/8	11ECF	3761 0013 12
H	O/V	Extremely abrasive, Highly fractured	2/8	11ECF	3761 0013 11

### Surface set (SS) bits – HO

Size	Design	Rock formation	Diamond size / Quality / Profile	Waterways	Product No.
H	O/V	Medium–Hard	30–50 / S / Multi step	CF	8370 2008 03
H	O/V	Soft–Medium	16–30 / S / 4 step	CF	8424 9108 52

### Tungsten carbide bits – HO

Size	Design	Rock formation	Type	Waterways	Product No.
H	O/V	Soft	Tungsten Carbide inserts (TCI)	CF	8372 0907 07
H	O/V	Soft–Medium	Tungsten Carbide chips (CRB)	CF	8372 0923 07

### Reaming shell (RES) – HO

Size	Design	Setting	Type		Product No.
H	O/V	Diamond surface set	Standard		3761 0014 65

### Impregnated (IMP) bits – HO3

Size	Design	Rock formation	Rock Group/Height	Waterways	Product No.
H	O3/V3	Extremely hard, Non abrasive	10/10	18ECF	3760 9041 54
H	O3/V3	Hard–Very hard, Slightly abrasive	9/8	8CF	3761 0012 37
H	O3/V3	Medium hard–Hard, Abrasive+mixed	6–8/8	8CF	3761 0012 36
H	O3/V3	Medium soft–Hard, Abrasive, Fractured	5–6/8	8CF	3761 0013 26
H	O3/V3	Soft–Medium soft, Abrasive, Highly fractured	2–4/8	8CF	3761 0013 25
H	O3/V3	Extremely abrasive, Highly fractured	2/8	8CF	3761 0013 24

### Surface set (SS) bits – HO3

Size	Design	Rock formation	Diamond size / Quality / Profile	Waterways	Product No.
H	O3/V3	Medium–Hard	20/S/7 step SPR	8CF	3761 0013 91
H	O3/V3	Soft–Medium	15 / S / 4 step	8FD	8424 9109 17

### Tungsten carbide bits – HO3

Size	Design	Rock formation	Type	Waterways	Product No.
H	O3/V3	Soft	Tungsten Carbide inserts (TCI)	FD	8372 0940 30
H	O3/V3	Soft–Medium	Tungsten Carbide chips (CRB)	FD	3702 7157 00

### Reaming shell (RES) – HO3

Size	Design	Setting	Type		Product No.
H	O3/V3	Diamond surface set	Standard		3761 0014 65

**Impregnated (IMP) bits – PO/PG**

Size	Design	Rock formation	Rock Group/Height	Waterways	Product No.
P	O/V	Extremely hard, Non abrasive	10/10	12ECF	3760 9185 48
P	O/V	Hard–Very hard, Slightly abrasive	9/8	13ECF	3761 0013 20
P	O/V	Medium hard–Hard, Abrasive+mixed	6–8/8	13ECF	3761 0013 19
P	O/V	Medium soft–Hard, Abrasive, Fractured	5–6/8	13ECF	3761 0013 18
P	O/V	Soft–Medium soft, Abrasive, Highly fractured	2–4/8	13ECF	3761 0013 17
P	O/V	Extremely abrasive, Highly fractured	2/8	13ECF	3761 0013 16

**Surface set (SS) bits – PO/PG**

Size	Design	Rock formation	Diamond size / Quality / Profile	Waterways	Product No.
P	O/V	Medium–Hard	15 / S / 4–step	10CF	3760 9551 52
P	O/V	Soft–Medium	20–25 / S / Multi step	CF	8370 2020 10

**Tungsten carbide bits – PO/PG**

Size	Design	Rock formation	Type	Waterways	Product No.
P	O/V	Soft	Tungsten Carbide inserts (TCI)	CF	8372 0931 07
P	O/V	Soft–Medium	Tungsten Carbide Chips (CRB)	CF	8372 0932 06

**Reaming shell (RES) – PO/PG**

Size	Design	Setting	Type		Product No.
P	O/V	Diamond surface set	Standard (FH)		3702 7000 00

**Impregnated (IMP) bits – PO3/PG3**

Size	Design	Rock formation	Rock Group/Height	Waterways	Product No.
P	O3/V3	Extremely hard, Non abrasive	10–8	12CF	3760 9185 69
P	O3/V3	Hard–Very hard, Slightly abrasive	9/8	10CF	3761 0012 39
P	O3/V3	Medium hard–Hard, Abrasive+mixed	6–8/8	10CF	3761 0012 38
P	O3/V3	Medium soft–Hard, Abrasive, Fractured	5–6/8	10CF	3761 0013 29
P	O3/V3	Soft–Medium soft, Abrasive, Highly fractured	2–4/8	10CF	3761 0013 28
P	O3/V3	Extremely abrasive, Highly fractured	2/8	10CF	3761 0013 27

**Surface set (SS) bits – PO3/PG3**

Size	Design	Rock formation	Diamond size / Quality / Profile	Waterways	Product No.
P	O3/V3	Medium–Hard	30–50 / S /	FD	T.B.A.
P	O3/V3	Soft–Medium	16–30 / S / 4–step	8FD	8424 9112 38

**Tungsten carbide bits – PO3/PG3**

Size	Design	Rock formation	Type	Waterways	Product No.
P	O3/V3	Soft	Tungsten Carbide inserts (TCI)	FD	3740 8003 59
P	O3/V3	Soft–Medium	Tungsten Carbide Chips (CRB)	FD	3702 7165 00

**Reaming shell (RES) – PO3/PG3**

Size	Design	Setting	Type		Product No.
P	O3/V3	Diamond surface set	Standard (FH)		3702 7000 00

### Impregnated (IMP) bits – S Geobor

Size	Design	Method	Rock formation	Rock Group/Height	Waterways	Product No.
S	Geobor	1	Extremely hard, Non abrasive	10/10	12CD	3702 7477 00
S	Geobor	1	Hard–Very hard, Slightly abrasive	9/10	12FD	8370 2300 38
S	Geobor	1	Medium hard–Hard, Abrasive+mixed	KX/6	12FD	8370 2300 12
S	Geobor	1	Medium hard–Hard, Abrasive+mixed	6–8/10	12CF	3702 6978 00
S	Geobor	1	Medium soft–Hard, Abrasive, Fractured	5–6/6	12SCAL	3740 4007 63
S	Geobor	1	Soft–Medium soft, Abrasive, Highly fractured	4/6	9FD	3740 4007 61
S	Geobor	1	Extremely abrasive, Highly fractured	2/6	9FD	3702 7186 00

### Surface set (SS) bits

Size	Design	Method	Rock formation	Diamond size / Quality / Profile	Waterways	Product No.
S	Geobor	1	Medium–Hard	20–25 / S / Step	10 FD	3702 1901 62
S	Geobor	1	Soft–Medium	20–25 / S / Semi round	10 FD	3702 1901 67

### Poly diamond chrystalline (PDC) bits

Size	Design	Method	Rock formation	Type	Waterways	Product No.
S	Geobor	1	Soft	Tripax 77INS CUB SAW	FD	3702 5066 00
S	Geobor	1	Soft	Tripax 96INS Semi round	FD	3702 5085 00
S	Geobor	1	Soft	Tripax 60INS CUB Semi round	12CF	3702 6461 00
S	Geobor	1	Soft	Diapax 8INS 13mm	13SCAL	3702 6391 00
LS	Geobor	1	Soft	Diapax 12INS 13mm	12FD	3702 1901 17

### Tungsten carbide bits

Size	Design	Method	Rock formation	Type	Waterways	Product No.
S	Geobor	1	Soft	Tungsten Carbide inserts (TCI)	FD	8372 0941 10
S	Geobor	1	Soft	Tungsten Carbide chips (CRB)	FD	8372 0925 05
S (150)	Geobor	2	Very soft	Tungsten Carbide inserts (TCI)	FD	8372 0902 10
S (150)	Geobor	3	Loose	Tungsten Carbide inserts (TCI)	FD	8372 0941 40
S	Geobor	4	Lose	Tungsten Carbide inserts (TCI)	FD	8372 0942 30
S	Geobor	4	Soft	Tungsten Carbide chips (CRB)	FD	8372 0942 20

### Reaming shell (RES)

Size	Design	Setting	Type	Product No.
S	Geobor	Diamond surface set	Standard (STD)	3761 0014 77

# SPECIAL BIT TOOLS

## Non coring bit and rod shoes



Diamond surface bit



Poly diamond chrystalline (PDC) bit



Tungsten carbide 3-wing drag bit

### Diamond surface bit – Non coring bit

Size	Conn. box	Rock formation	Diamond size / Quality	Profile	Product No.
46	CR 42	Soft/Medium hard	20–25 / S	Concave	3702 6718 00
48	AWJ	Soft/Medium hard	20–25 / S	Concave	3702 6746 00
56	CR 50	Soft/Medium hard	20–25 / S	Concave	3702 6867 00
56	CR 50	Soft/Medium hard	20–25 / S	Concave	3702 6867 00
60	BVO ROD	Soft/Medium hard	20–25 / S	Concave	3702 7515 00
66	CR 50	Soft/Medium hard	20–25 / S	Concave	3702 6880 00
76	CR 50	Soft/Medium hard	20–25 / S	Concave	3702 6720 00
86	CR 50	Soft/Medium hard	20–25 / S	Concave	3702 7175 00

### Poly diamond chrystalline (PDC) bits – Non coring bit

Size	Conn. box	Rock formation	Type	Product No.
46	CR 42	Soft/Medium hard	7x8 mm	3702 7525 00
48	AWJ	Soft/Medium hard	7x8 mm	3702 7524 00
56	CR 50	Soft/Medium hard	10x8 mm	3702 7527 00
60	BWJ	Soft/Medium hard	10x8 mm	3702 7535 00
76	NWJ	Soft/Medium hard	13x8 mm	3702 7526 00
86	NWJ	Soft/Medium hard	16x8 mm	3702 7528 00

### Tungsten carbide 3-wing drag bits – Non coring bit

Size	Conn. pin	Rock formation	Type	Product No.
54	AW	Soft/Medium hard	3-wing	3702 7375 00
2 15/16"	N	Soft/Medium hard	3-wing step	3751 0000 04
3 5/8"	2 3/8" API reg	Soft/Medium hard	3-wing step	3751 0000 06
3 3/4"	2 3/8" API reg	Soft/Medium hard	3-wing step	3751 0000 07
4 1/2"	2 3/8" API reg	Soft/Medium hard	3-wing step	3751 0000 11
4 3/4"	2 3/8" API reg	Soft/Medium hard	3-wing step	3751 0000 13
6"	2 3/8" API reg	Soft/Medium hard	3-wing step	3751 0000 19
6"	3 1/2" API reg	Soft/Medium hard	3-wing step	3751 0000 27

### Impregnated – Rod shoes

Size	Rod conn. box	Inner diameter (mm)	Type	Product No.
P	PG, PO	101	SC HD	3702 7183 00
S	SG	125	SC HD	3702 6918 00

## Hole opener

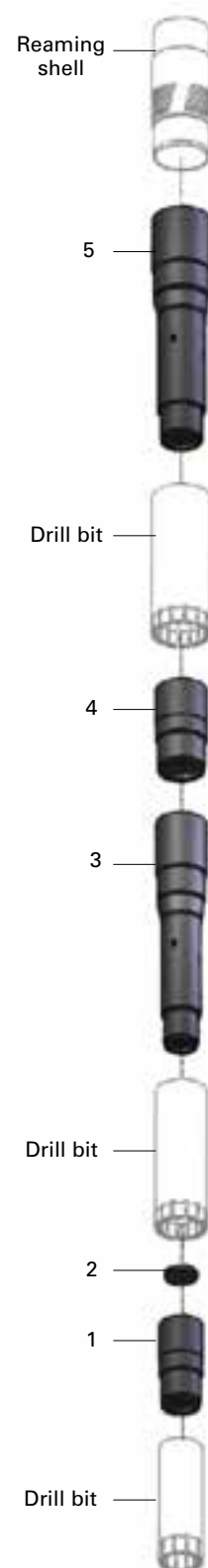
### Information

A flexible and economic solution to get a larger hole size with a combination from the catalogue selected standard reaming shells and bits.

### Samples of application

1. Not able to reach TD (Total depth) with present hole size, and need to case.
2. Earlier drilled hole needs larger hole size for new investigation.
3. Machine capacity to weak too drill required hole size, reaming a solution.

Opening	Size	Diamond products to be used (ordered separately from bit range in earlier pages)	Adapter kit	
			Position no.	Product No.
A – B		Core bit AO. BO and Reaming shell BO	1. 5	3702 6914 00
B – N		Core bit BO. NO and Reaming shell NO	1. 5	3702 6915 00
N – H		Core bit NO. HO and Reaming shell HO	1. 5	3702 6916 00
46 – 56	(mm)	Core bit 46T2. 56T2 and Reaming shell 56T2	1. 5	3702 6889 00
46 – 66	(mm)	Core bit 46T2. 56T2. 66T2 and Reaming shell 66T2	1. 3. 4. 5	3702 6890 00
56 – 66	(mm)	Core bit 56T2. 66T2 and Reaming shell 66T2	1. 2. 5	3702 6891 00
56 – 76	(mm)	Core bit 56T2. 66T2. 76T2 and Reaming shell 76T2	1. 2. 3. 4. 5	3702 6892 00
66 – 76	(mm)	Core bit 66T2. 76T2 and Reaming shell 76T2	1. 2. 5	3702 6893 00
66 – 86	(mm)	Core bit 66T2. 76T2. 86T2 and Reaming shell 86T2	1. 2. 3. 4. 5	3702 6894 00
76 – 86	(mm)	Core bit 76T2. 86T2 and Reaming shell 86T2	1. 2. 5	3702 6895 00
76 – 101	(mm)	Core bit 76T2. 86T2. 101T2 and Reaming shell 101T2	1. 2. 3. 4. 5	3702 6896 00
86 – 101	(mm)	Core bit 86T2. 101T2 and Reaming shell 101T2	1. 2. 5	3702 6897 00



## Convert standard wire line rods to a single tube core barrel

### Information

Combine A (special bits) + B (special stab/reaming shells) + C (core lifter) with selected wire line rod (BO, NO or HO).

#### A. Impregnated (Diaborit) bits for single tube drilling with wireline rods BS, NS, HS

Size	Design	OD (mm)	ID(mm)	Rocke formation	Matrix type/Height	Waterways	Product No.
B	S	60.0	41.7	Hard – Very hard, polishing	9/10	CF	3702 6784 00
B	S	60.0	41.7	Soft – Medium soft, abrasive, highly fractured	4–5/10	CF	3702 7299 00
N	S	75.6	51.7	Hard – Very hard, polishing	9/10	CF	3702 6785 00
N	S	75.6	51.7	Extremely abrasive, highly fractured	2/10	CF	3702 7185 00
H	S	96.1	71.6	Hard – Very hard, slightly abrasive	8–9/10	CF	3702 6912 00

#### B. Stabilizer/Reaming shell BS. NS. HS

Size	Design	OD (mm)	Rod conn.	Type	Product No.
B	S	60.0	BO/BO	Blank	3702 6557 00
N	S	75.6	NO/NO	Blank	3702 6558 00
N	S	76.0	NO/NO	Diamond surface set	3702 6810 00
H	S	96.1	HO/HO	Diamond surface set	3702 6809 00

#### C. Core lifter BS. NS. HS

Size	Design	ID (mm)	Product No.
B	S	41.7	3863 7202 00
N	S	51.7	3863 7203 00
H	S	71.6	3863 7212 00

#### Deep hole “safety” Reaming shell (RES)

Reaming shell with shearer function to recover drill string in case of beeing stuck.

Size	Design	Setting	Type	Product No.
B	O/V	Diamond surface set	Shear	8424 9147 60
N	O/V	Diamond surface set	Shear	8424 9103 70



# CASING SHOES

## Impregnated (IMP) shoe

Size	Casing	Rock formation	Type	Waterways	Product No.
46	44/37	Hard-Very hard (Heavy Duty recommended for drilling)	HD	4CF	3702 7140 00
56	54/47	Hard-Very hard (Heavy Duty recommended for drilling)	HD	4CF	3702 7142 00
66	64/57	Hard-Very hard (Heavy Duty recommended for drilling)	HD	6CF	3702 7144 00
76	74/67	Hard-Very hard (Heavy Duty recommended for drilling)	HD	6CF	3702 7146 00
86	84/77	Hard-Very hard (Heavy Duty recommended for drilling)	HD	6CF	3702 7148 00
101	98/89	Hard-Very hard (Heavy Duty recommended for drilling)	HD	6CF	3702 7150 00
116	113/104	Hard-Very hard (Heavy Duty recommended for drilling)	HD	8CF	3702 7152 00
131	128/119	Hard-Very hard (Heavy Duty recommended for drilling)	HD	8CF	3702 7154 00
146	143/134	Hard-Very hard (Heavy Duty recommended for drilling)	HD	10CF	3702 7156 00
P	W	Hard-Very hard	HD	15CF	3702 6991 00
S	W,WG	Hard-Very hard (Heavy Duty recommended for drilling)	HD	20CF	8370 1791 97

## Surface set (SS) shoe

Size	Casing	Rock formation	Diamond size / Quality	Product No.
76	74/67	Medium-Hard	30/50 S	8370 1788 27
86	84/77	Medium-Hard	30/50 S	8370 1788 35
101	98/89	Medium-Hard	30/50 S	8370 1788 43
116	113/104	Medium-Hard	30/50 S	8370 1788 50
N	W	Medium-Hard	30/50 S	8370 1789 00
H	W	Medium-Hard	30/50 S	8370 1789 18

## Tungsten carbide (CRB) shoe

Size	Casing	Rock formation	Type	Waterways	Product No.
46	44/37	Soft	Corborit	4CF	8372 0820 01
56	54/47	Soft	Corborit	6CF	8372 0822 09
66	64/57	Soft	Corborit	6CF	8372 0824 07
76	74/67	Soft	Corborit	6CF	8372 0826 05
86	84/77	Soft	Corborit	6CF	8372 0828 03
101	98/89	Soft	Corborit	6CF	8372 0830 09
116	113/104	Soft	Corborit	8CF	8372 0832 07
131	128/119	Soft	Corborit	8CF	8372 0834 05
146	143/134	Soft	Corborit	10CF	8372 0836 03
N	W	Soft	Corborit	10CF	8372 0854 00
H	W	Soft	Corborit	12CF	8372 0856 08
P	W	Soft	Corborit	15CF	8372 0858 06

# GENERAL TECHNICAL INFORMATION, DIMENSIONAL GUIDE

## Core barrels and drill rods

### Conventional Core barrels

Double thin wall core barrel					
Type	Metric (mm)		Imperial (in)		Rod conn.
	Hole diameter	Core diameter	Hole diameter	Core diameter	Box
46T2	46.5	31.7	1.82	1.25	CR42
56T2	56.5	41.7	2.22	1.64	CR50
66T2	66.5	51.7	2.61	2.04	CR50
76T2	76.5	61.7	3.0	2.43	CR50
86T2	86.5	71.7	3.4	2.82	CR50
101T2	101.5	83.7	3.99	3.3	NW/2 3/8"
Double tube standard wall core barrel					
76T6	76.5	57.0	3.0	2.43	CR50
86T6	86.5	67.0	3.4	2.64	CR50
101T6	101.5	79.0	3.99	3.11	NW/2 3/8"
116T6	116.5	93.0	4.58	3.66	NW/2 3/8"
131T6	131.5	108.0	5.17	4.25	NW/2 3/8"
146T6	146.5	123.0	5.76	4.84	NW/2 3/8"
Double split tube standard wall core barrel					
116T6	116.5	93.0	4.58	3.66	NW/2 3/8"
131T6	131.5	108.0	5.17	4.25	NW/2 3/8"
146T6	146.5	123.0	5.76	4.84	NW/2 3/8"

### Conventional Drill rods

Steel						
Type	Outer Ø mm Rod	Inner Ø mm Rod	Inner Ø mm Coupling	Weight kg/3 m	TPI	Thread conn.
BWJ	55.5	46.0	19.0	18.4	5	BWJ
NW70	69.9	60.3	35.0	24.4	3	NW
NWJ70	69.9	60.3	30.0	24.4	4	NWJ
HW	88.9	77.8	54.0	36.9	3	HW
43	43.1	36.1	22.0	10.2	4	CR42
AW43	43.1	36.1	16.0	11.0	3	AW
AWJ43	43.1	36.1	16.0	11.0	5	AWJ
53	53.0	46.0	22.0	14.1	3	CR50
BW53	53.0	46.0	19.0	15.0	3	BW
Aluminium						
43	43.2	30.8	22.0	7.4	4	CR42
53	53.3	37.5	22.0	12.0	3	CR50
AWJ43	43.2	30.8	16.1	7.4	5	AWJ

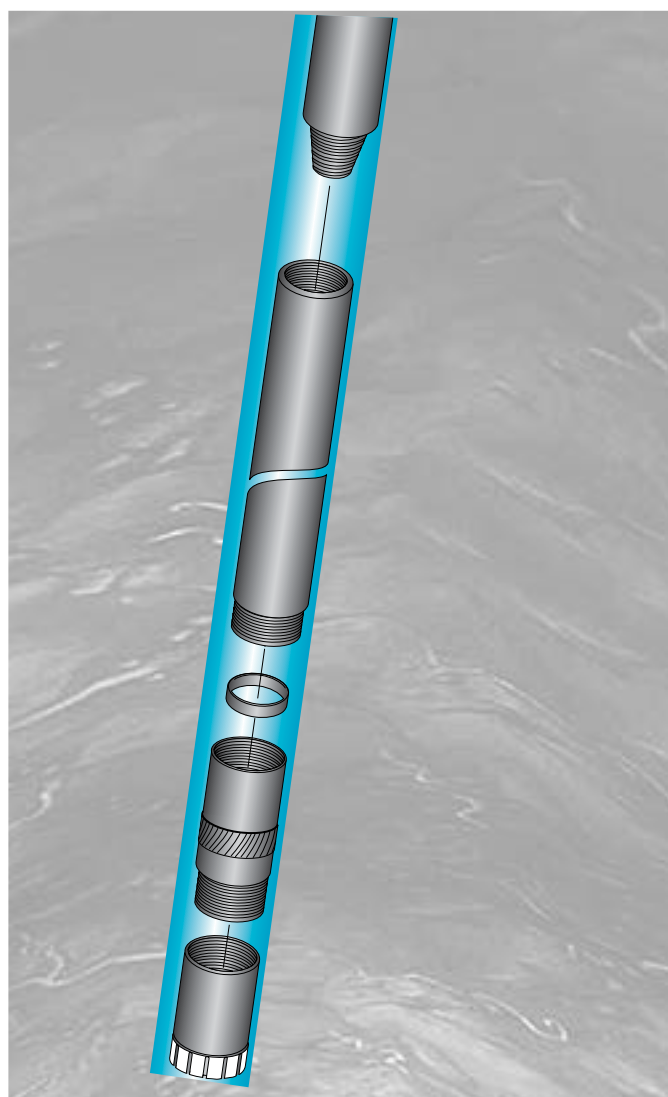
### Wire line Core barrels

Triple tube core barrel					
Size	Metric (mm)		Imperial (in)		Rod conn.
	Hole diameter	Core diameter	Hole diameter	Core diameter	Box
S Geobor	146	102	5.75	4.02	SG
S Geobor	150*)	102	5.91	4.02	SG

\*) Method 2 & 3

### Wire line drill rods

Type	Outer Ø mm Rod	Inner Ø mm Rod	Inner Ø mm Coupling	Weight kg/3 m	TPI	Thread conn.
PG	117.5	103.2	–	57.9	3	PO
SG	139.7	125.5	–	69.7	3	S Geobor



# CONVERSION FACTORS

## Length

This unit	Times	Equals
mm (millimetres)	x 0.001	= m
cm (centimetres)	x 0.01	= m
dm (decimetres)	x 0.1	= m
km (kilometres)	x 1000	= m
in (inches)	x 25.4	= m
ft (feet)	x 0.305	= m
yd (yard)	x 0.914	= m
miles	x 1609	= m

## Power

This unit	Times	Equals
kW (kilowatts)	x 1000	= W
Horsepower, metric	x 735.5	= W
Horsepower, UK	x 745.7	= W
ft.lbf/sec	x 1.36	= W
Btu/h	x 0.29	

## Volume

This unit	Times	Equals
l (litres)	x 0.001	= m <sup>3</sup>
ml (millilitres)	x 0.001	= l
dm <sup>3</sup> (cubic decimetres)	x 1.0	= l
cm <sup>3</sup> (cubic centimetres)	x 1.0	= ml
mm <sup>3</sup> (cubic millimetres)	x 0.001	= ml
in <sup>3</sup> (cubic inches)	x 16.39	= ml
ft <sup>3</sup> (cubic feet)	x 28.316	= l
Imperial gallon	x 4.546	= l
U.S. gallon	x 3.785	= l
Ounces (Imp. fluid liq)	x 28.41	= ml
Ounces (U.S. fluid liq)	x 29.57	= ml
Pints (U.S. liq)	x 0.4732	= l
Quarts (U.S. liq)	x 0.9463	= l
yd <sup>3</sup> (cubic yards)	x 0.7646	= m <sup>3</sup>

## Area

This unit	Times	Equals
mm <sup>2</sup> (square mm)	x 0.000001	= m <sup>2</sup>
cm <sup>2</sup> (square cm)	x 0.00001	= m <sup>2</sup>
in <sup>2</sup> (square inches)	x 645	= mm <sup>2</sup>
ft <sup>2</sup> (square feet)	x 0.929	= m <sup>2</sup>
yd <sup>2</sup> (square yards)	x 0.8361	= m <sup>2</sup>
Acres	x 4047	= m <sup>2</sup>
Square miles	x 2.590	= km <sup>2</sup>

## Mass (weight)

This unit	Times	Equals
g (grammes)	x 0.001	= kg
t (tonnes, metric)	x 1000	= kg
grains	x 0.0648	= kg
oz (ounze)	x 28.35	= g
lb (pounds)	x 0.4536	= g
tons (long, US)	x 1016	= kg
tons (UK)	x 1016	= kg
tons (short)	x 907	= kg

## Speed

This unit	Times	Equals
km/h (kilometres/hour)	x 0.2777	= m/s
m/s	x 3.6	= km/h
mph (miles/hour)	x 0.45	= m/s
ft/s (foot/second)	x 0.3048	= m/s
ft/s (foot/second)	x 18.29	= ft/min
ft/min (foot/minute)	x 0.3048	= m(min

## Frequency

This unit	Times	Equals
blows/minute	x 0.017	= Hz
khz (kiloHertz)	x 1000	= Hz
r/min (rev./minute)	x 0.1667	= r/s
degrees/second	x 0.1667	= r/min
radians/second	x 0.1592	= r/s
Pressure	x	

## Pressure

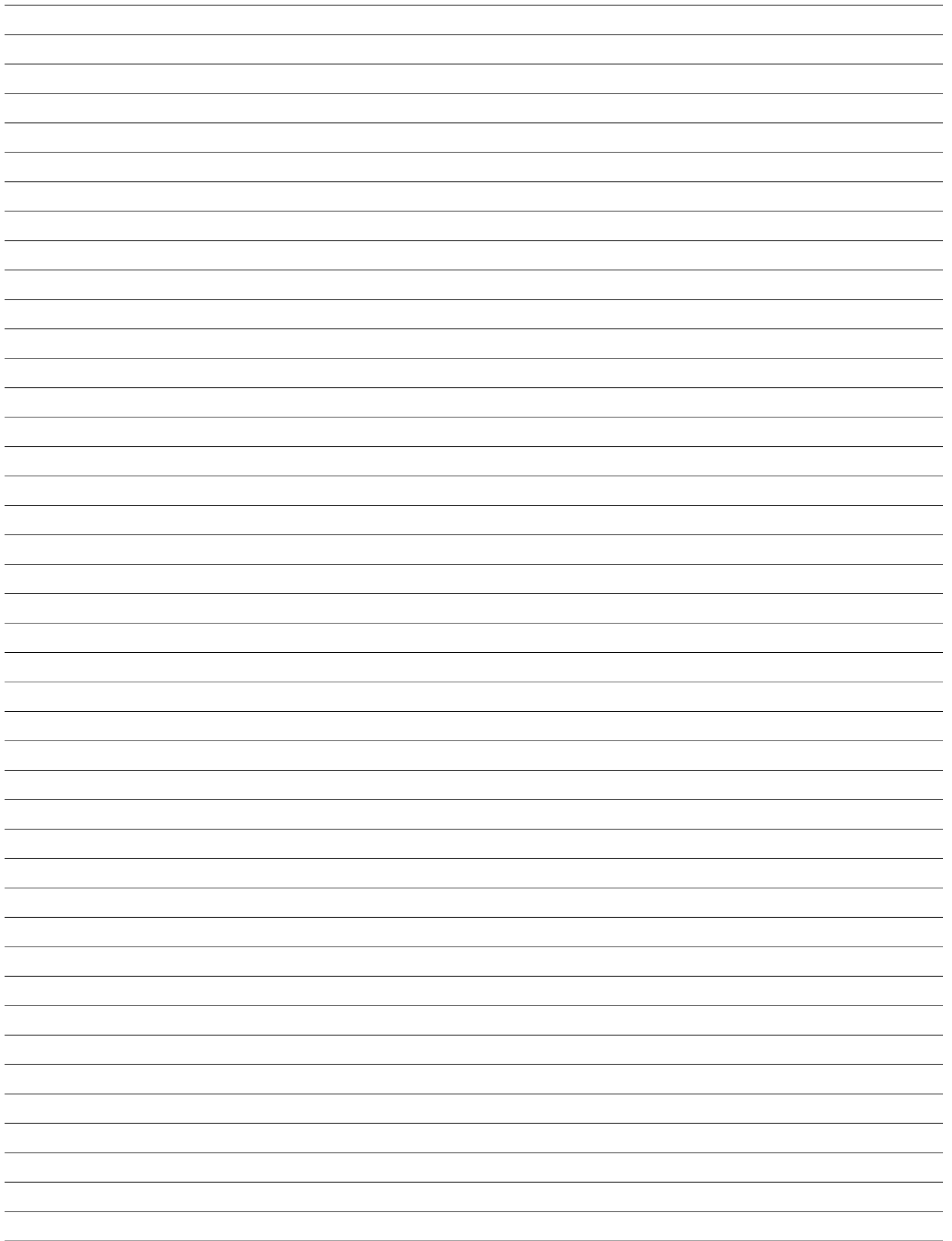
This unit	Times	Equals
bar	x 100	= kPa
bar	x 100 000	= Pa
kp/cm <sup>2</sup>	x 0.98	= bar
atm (atmosperes)	x 1.01	= bar
psi (pounds/in <sup>2</sup> )	x 6.895	= kPa
psi	x 0.06895	= bar

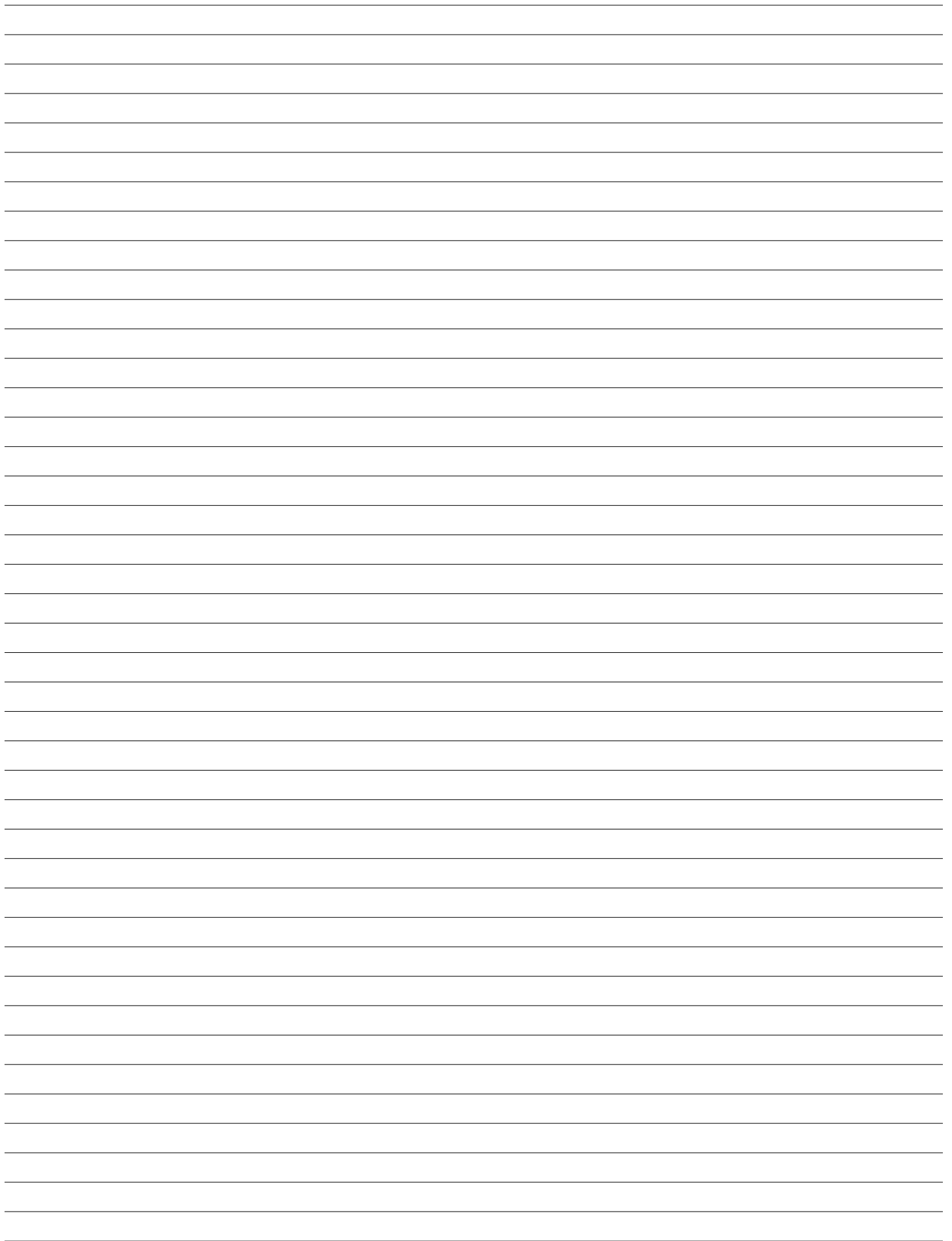
## Force

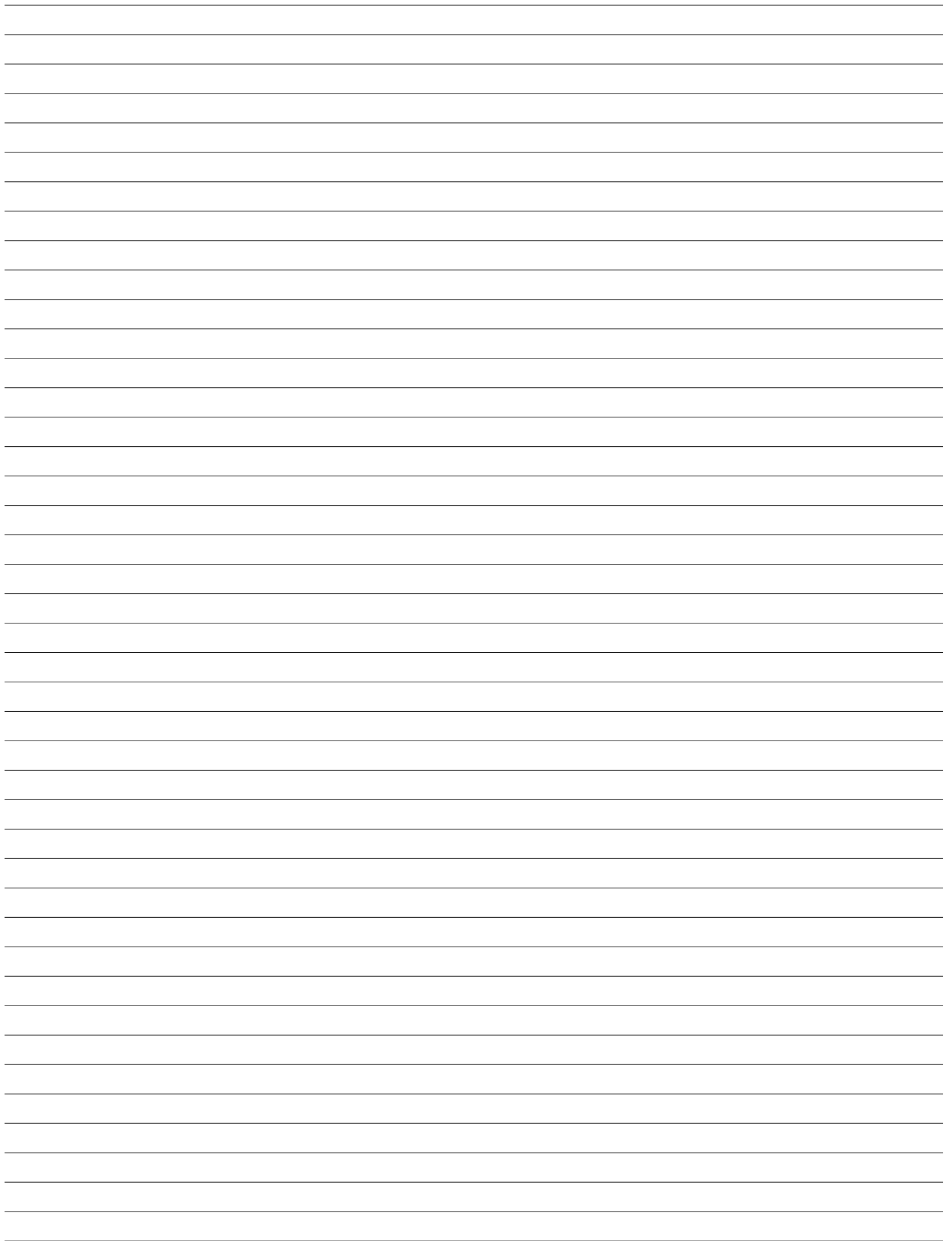
This unit	Times	Equals
kN (kilonewton)	x 1000	N
kp (kilopond)	x 9.81	N
kgf (kilogramme force)	x 4.45	N

## Torque

This unit	Times	Equals
kpm (kilopondmetres)	x 9.81	Nm
lbf in (poundforce/inch)	x 0.11	Nm
lbf ft (poundforce/foot)	x 1.36	Nm







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