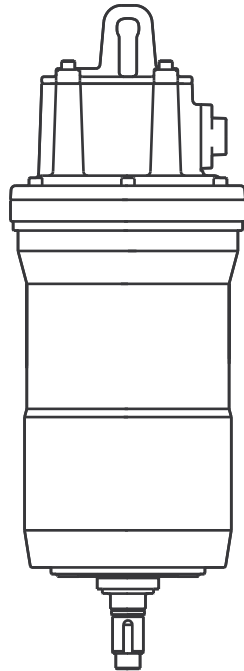
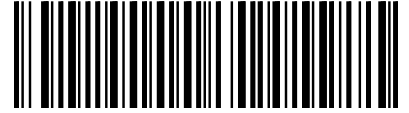
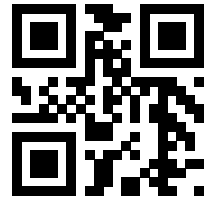


Parts List, Drive Unit

883111_13.0



WS004353A



705/715, 735/745,
765/775

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1 Introduction

Purpose of this manual

The purpose of this manual is to provide necessary information on spare parts and accessories order.

Disclaimer

Always use genuine Flygt parts. The use of other spare parts or accessories can invalidate any claims for warranty or compensation. Xylem does not take any responsibility for damages that are caused by the use of non-original parts. For more information, contact your local sales and service representative.

Data for ordering spare parts

The following information is needed for spare part orders:

- Serial number of the product
- Part number
- Quantity of bulk material, see * in tables

1.1 Specially approved products

Qualification of personnel

Only Xylem or Xylem-authorized service personnel may undertake repair work on specially approved products.

Dimensional accuracy inspection

Spare parts marked with (Ex) after the part number are subject to dimensional accuracy inspection when used in specially approved products.

2 Product Description

2.1 The data plates

The data plates include key product specifications.

Drive unit

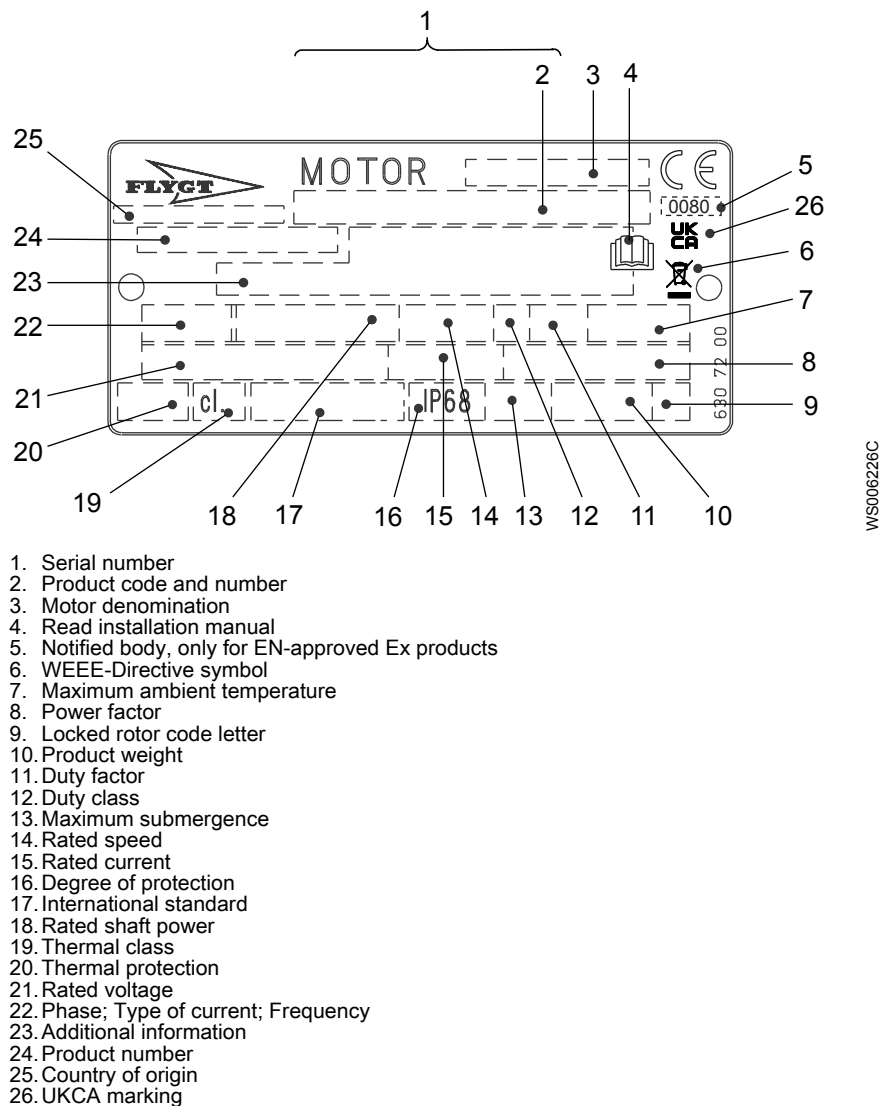
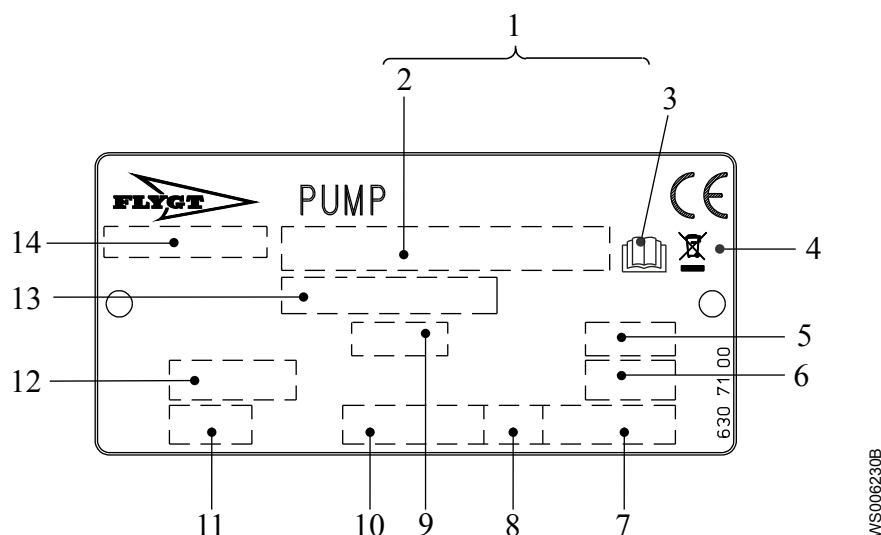


Figure 1: The drive unit plate

Hydraulic unit



1. Serial number
2. Product code and number
3. Read installation manual
4. WEEE-Directive symbol
5. Impeller diameter
6. Propeller blade angle
7. Product weight
8. Direction of rotation: L=left, R=right
9. Impeller or Propeller code
10. Rated speed
11. Pressure class
12. Column diameter or Inlet and outlet diameter
13. Product number
14. Country of origin

Figure 2: The hydraulic unit plate

2.2 Approvals

2.2.1 Product approvals for hazardous locations

7X5 drive units

This section does not apply to H5570 pumps.

This table shows product approvals for pumps with the following drive units:

- 715
- 745
- 775

Type	Approval
European Norm (EN)	• ATEX Directive • EN 60079-0:2012/A11:2013, EN 60079-1:2014, EN ISO 80079-36:2016, EN ISO 80079-37:2016 •  II 2 G Ex db h IIB T3 Gb •  II 2 G Ex db h IIB T4 Gb
IEC	• IECEx scheme • IEC 60079-0:2011, IEC 60079-1:2014; IEC 80079-36:2016; IEC 80079-37:2016 • Ex db h IIB T3 Gb • Ex db h IIB T4 Gb

Type	Approval
FM (FM Approvals)	- Explosion proof for use in Class I, Div. 1, Group C and D - Dust ignition proof for use in Class II, Div. 1, Group E, F and G - Suitable for use in Class III, Div. 1, Hazardous Locations
CSA Ex	Explosion proof for use in Class I, Div. 1, Group C and D
UKEx	- UK SI 2016 No. 1107 - EN 60079-0:2012/A11:2013, EN 60079-1:2014, EN ISO 80079-36:2016, EN ISO 80079-37:2016  II 2 G Ex db h IIB T3 Gb  II 2 G Ex db h IIB T4 Gb

H5570 with 7X5 drive units

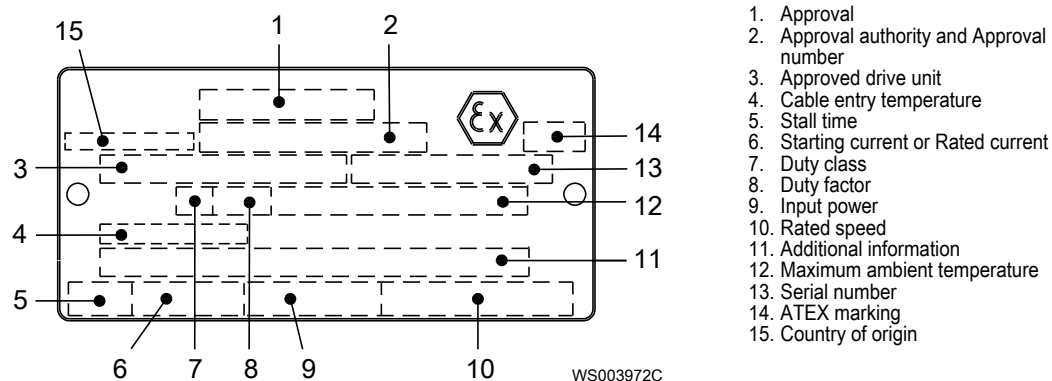
This table shows product approvals for pumps with the following drive units:

- 715
- 745
- 775

Type	Approval
European Norm (EN)	- ATEX Directive - EN 60079-0:2012/A11:2013, EN 60079-1:2014, EN ISO 80079-36:2016, EN ISO 80079-37:2016  II 2 G Ex db h IIB T3 Gb
IEC	- IECEX scheme - IEC 60079-0:2011, IEC 60079-1:2014; IEC 80079-36:2016; IEC 80079-37:2016 - Ex db h IIB T3 Gb
FM (FM Approvals)	- Explosion proof for use in Class I, Div. 1, Group C and D - Dust ignition proof for use in Class II, Div. 1, Group E, F and G - Suitable for use in Class III, Div. 1, Hazardous Locations
UKEx	- UK SI 2016 No. 1107 - EN 60079-0:2012/A11:2013, EN 60079-1:2014, EN ISO 80079-36:2016, EN ISO 80079-37:2016  II 2 G Ex db h IIB T3 Gb

EN approval plate

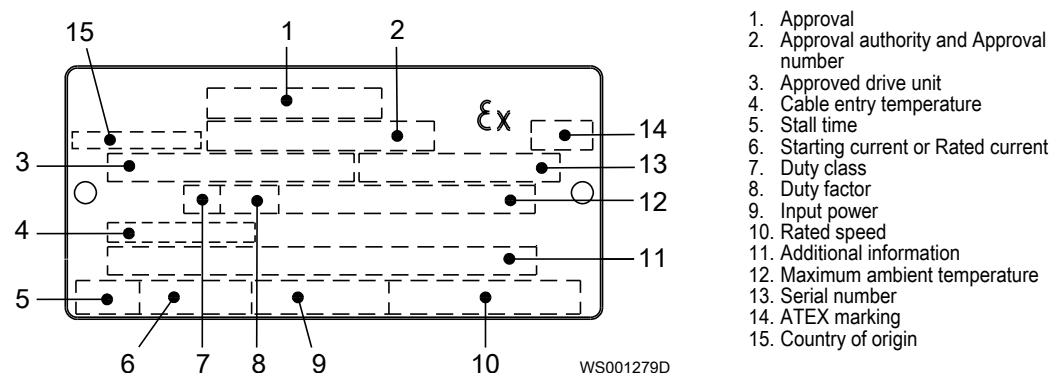
This illustration describes the EN approval plate and the information that is contained in its fields.



IEC approval plate

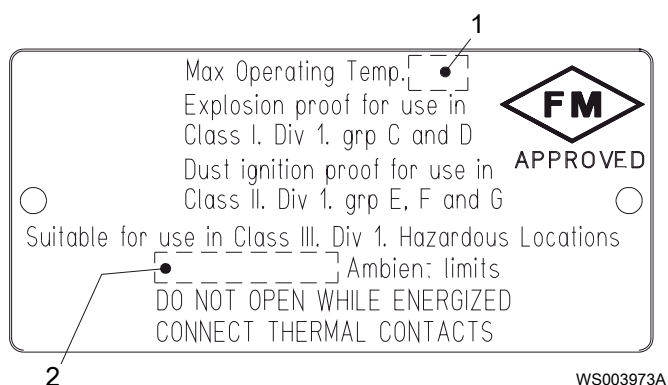
This illustration describes the IEC approval plate and the information that is contained in its fields.

International Norm; not for EU member countries.



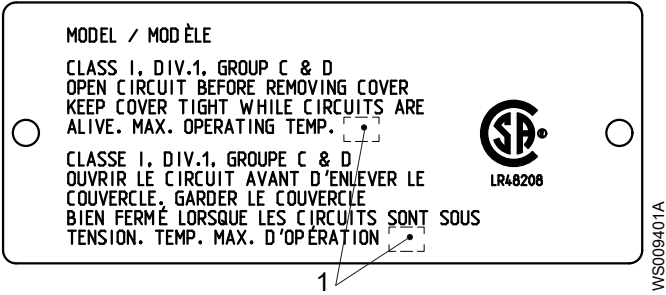
FM approval plate

This illustration describes the FM approval plate and the information that is contained in its fields.



CSA approval plate

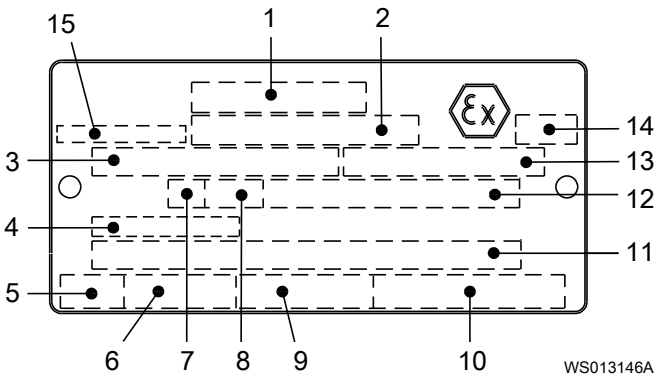
This illustration describes the CSA approval plate and the information that is contained in its fields.



1. Temperature class

United Kingdom: UKEx approval plate

This illustration describes the UKEx approval plate and the information that is contained in its fields.



- 1. Approval
- 2. Approval authority and Approval number
- 3. Approved drive unit
- 4. Cable entry temperature
- 5. Stall time
- 6. Starting current or Rated current
- 7. Duty class
- 8. Duty factor
- 9. Input power
- 10. Rated speed
- 11. Additional information
- 12. Maximum ambient temperature
- 13. Serial number
- 14. UKEx marking
- 15. Country of origin

2.3 Product denomination

Reading instruction

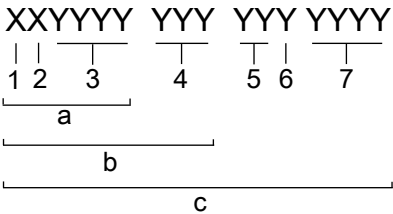
In this section, code characters are illustrated accordingly:

X = letter

Y = digit

The different types of codes are marked up with a, b, and c. Code parameters are marked up with numbers.

Codes and parameters



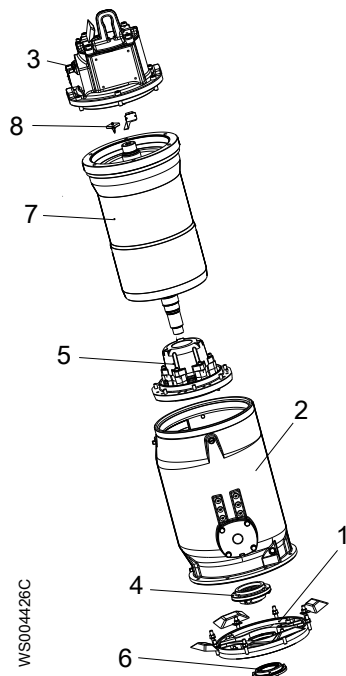
Type of Callout	Number	Indication
Type of code	a	Sales denomination
	b	Product code
	c	Serial number
Parameter	1	Hydraulic end
	2	Type of installation
	3	Sales code
	4	Drive unit
	5	Production year

Type of Callout	Number	Indication
	6	Production cycle
	7	Running number

3 Major Parts

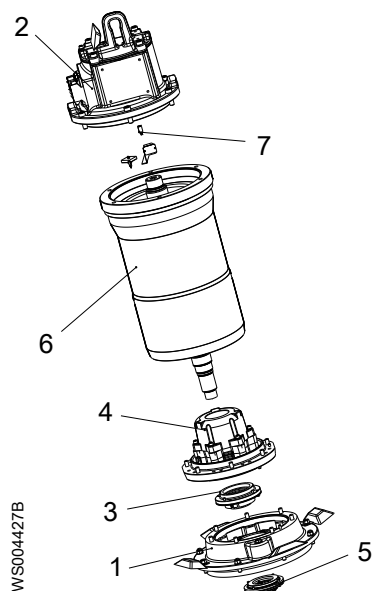
3.1 Small connection house

3.1.1 With cooling jacket



Item	Denomination	Reference
1	Adapter	Adapters on page 52
2	Cooling jacket	Cooling Jacket on page 46
3	Cover	Small Connection House on page 69
4	Inner seal	Mechanical Shaft Seals on page 43
5	Main bearing holder	Bearings on page 33
6	Outer seal	Mechanical Shaft Seals on page 43
7	Stator housing	Stator Housing on page 15
8	Sensor	Monitoring and Sensors on page 132
—	Zinc anodes	Accessories on page 143

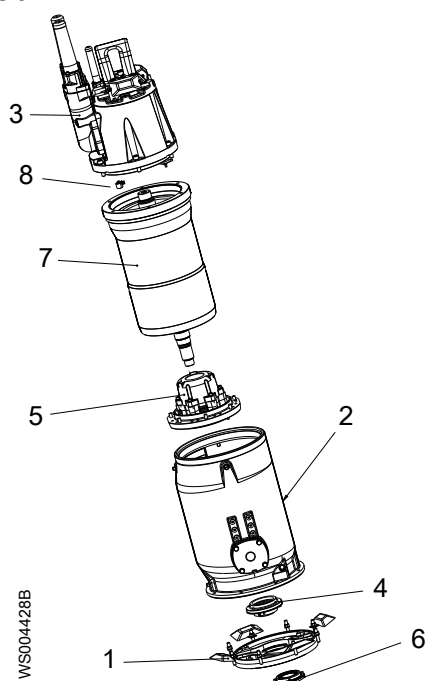
3.1.2 No cooling jacket



Item	Denomination	Reference
1	Adapter	Adapters on page 52
2	Cover	Small Connection House on page 69
3	Inner seal	Mechanical Shaft Seals on page 43
4	Main bearing holder	Bearings on page 33
5	Outer seal	Mechanical Shaft Seals on page 43
6	Stator housing	Stator Housing on page 15
7	Sensor	Monitoring and Sensors on page 132
—	Zinc anodes	Accessories on page 143

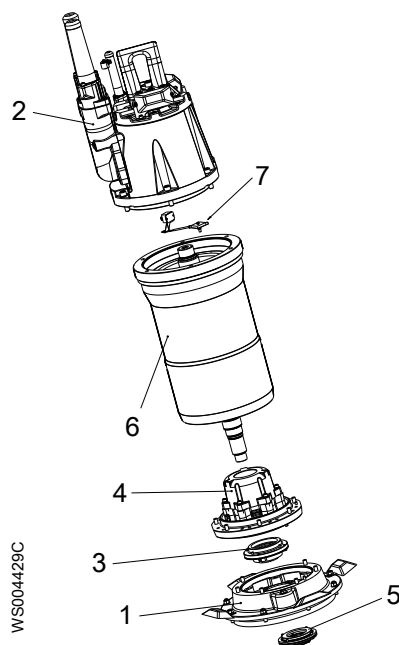
3.2 Large connection house

3.2.1 With cooling jacket



Item	Denomination	Reference
1	Adapter	Adapters on page 52
2	Cooling jacket	Cooling Jacket on page 46
3	Cover	Large Connection House on page 76
4	Inner seal	Mechanical Shaft Seals on page 43
5	Main bearing holder	Bearings on page 33
6	Outer seal	Mechanical Shaft Seals on page 43
7	Stator housing	Bearings on page 33
8	Sensor	Monitoring and Sensors on page 132
—	Zinc anodes	Accessories on page 143

3.2.2 No cooling jacket

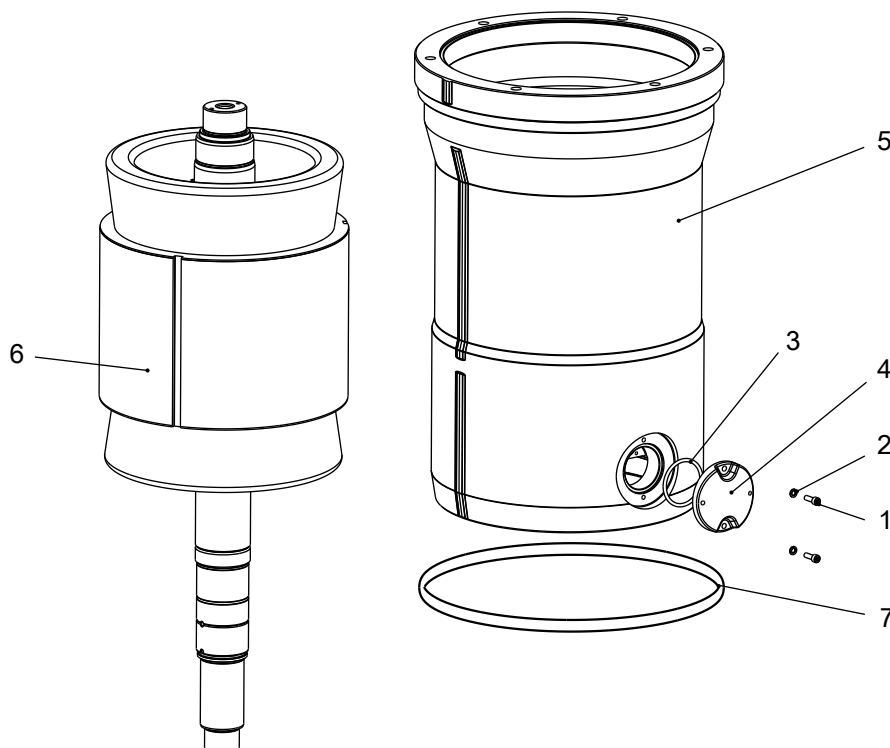


Item	Denomination	Reference
1	Adapter	Adapters on page 52
2	Cover	Large Connection House on page 76
3	Inner seal	Mechanical Shaft Seals on page 43
4	Main bearing holder	Bearings on page 33
5	Outer seal	Mechanical Shaft Seals on page 43
6	Stator housing	Stator Housing on page 15
7	Sensor	Monitoring and Sensors on page 132
—	Zinc anodes	Accessories on page 143

4 Stator Housing

4.1 Vertical

4.1.1 Small connection house



WS004395B

Spare parts marked with EX after the part number are subject to dimensional accuracy inspection.

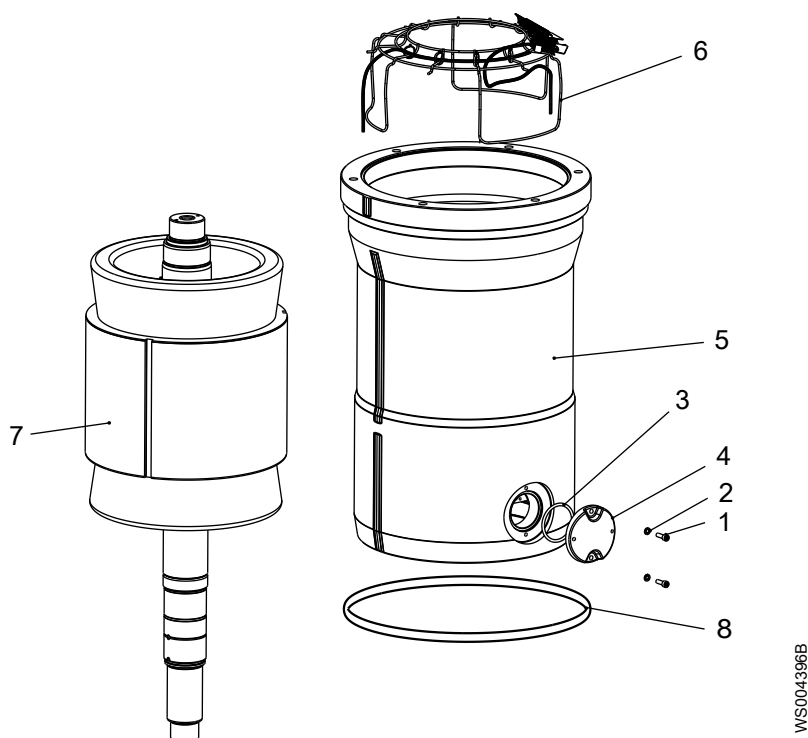
Table 1:

Item	Denomination		Part No. 705, 715	Part No. 735, 745	Part No. 765, 775	Qty.
1	Hexagon socket head cap screw	M8 x 25	82 00 34	82 00 34	82 00 34	2
2	Lock washer		82 50 15	82 50 15	82 50 15	2
3	O-ring	74.20 x 5.70	82 74 07	82 74 07	82 74 07	1
4	Cover	STD: 705, 735, 765	554 07 00	554 07 00	554 07 00	1
		EX: 715, 745, 775	554 07 01 (EX)	554 07 01 (EX)	554 07 01 (EX)	
5	Stator housing: Drive units with cooling jacket	STD: 705, 735, 765	562 50 02	562 49 02	554 02 02	1
		EX: 715, 745, 775	562 50 03 (EX)	562 49 03 (EX)	554 02 03 (EX)	
	Stator housing: Drive units without cooling jacket	STD: 705, 735, 765	562 50 02	562 49 02	554 02 02	
		EX: 715, 745, 775	562 50 03 (EX)	562 49 03 (EX)	554 02 03 (EX)	
6	Motor. See Motors on page 20.		—	—	—	1

Item	Denomination		Part No. 705, 715	Part No. 735, 745	Part No. 765, 775	Qty.
7	O-ring: Drive units with cooling jacket	461.0 x 8.4	82 78 87	82 78 87	82 78 87	1

Spare parts marked with EX after the part number are subject to dimensional accuracy inspection.

4.1.2 Large connection house



Spare parts marked with EX after the part number are subject to dimensional accuracy inspection.

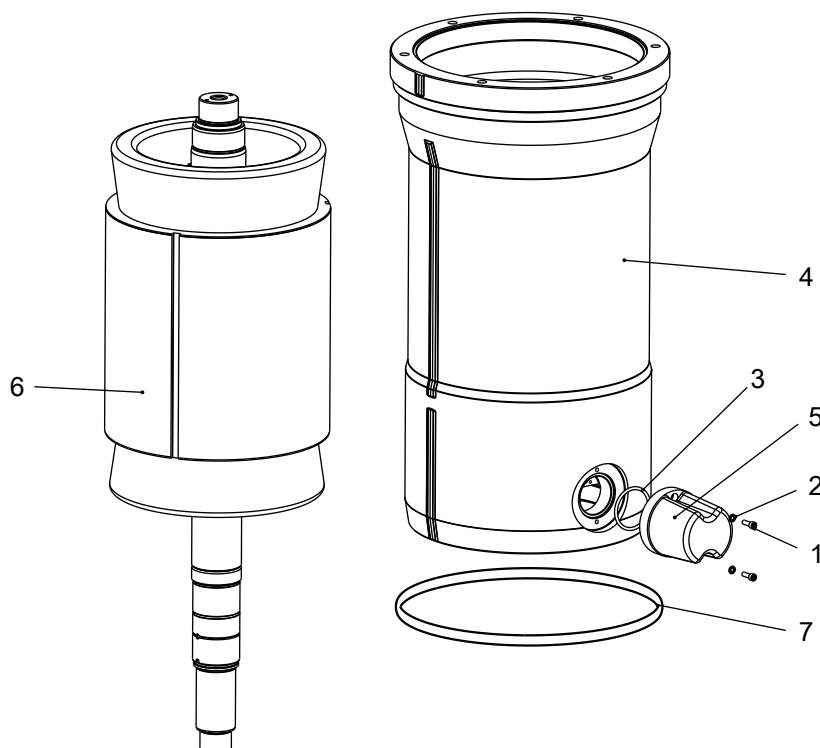
Table 2:

Item	Denomination		Part No. 705, 715	Part No. 735, 745	Part No. 765, 775	Qty.
1	Hexagon socket head cap screw	M8 x 25	82 00 34	82 00 34	82 00 34	2
2	Lock washer		82 50 15	82 50 15	82 50 15	2
3	O-ring	74.20 x 5.70	82 74 07	82 74 07	82 74 07	1
4	Cover	STD: 705, 735, 765	554 07 00	554 07 00	554 07 00	1
		EX: 715, 745, 775	554 07 01 (EX)	554 07 01 (EX)	554 07 01 (EX)	
5	Stator housing: Drive units with cooling jacket	STD: 705, 735, 765	562 50 02	562 49 02	554 02 02	1
		EX: 715, 745, 775	562 50 03 (EX)	562 49 03 (EX)	554 02 03 (EX)	
	Stator housing: Drive units without cooling jacket	STD: 705, 735, 765	562 50 02	562 49 02	554 02 02	
		EX: 715, 745, 775	562 50 03 (EX)	562 49 03 (EX)	554 02 03 (EX)	
6	Electrical components monitoring in stator house. See In stator house on page 134.		—	—	—	1
7	Motor. See Motors on page 20.		—	—	—	1

Item	Denomination		Part No. 705, 715	Part No. 735, 745	Part No. 765, 775	Qty.
8	O-ring: Drive units with cooling jacket	461.0 x 8.4	82 78 87	82 78 87	82 78 87	1

4.2 Horizontal

4.2.1 Small connection house



WS004397B

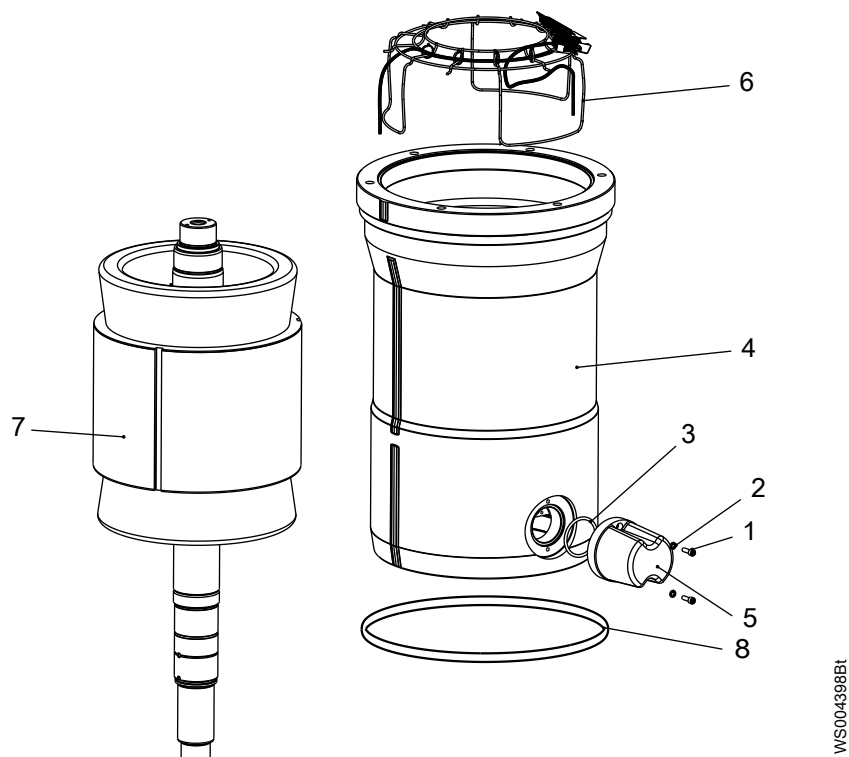
Spare parts marked with EX after the part number are subject to dimensional accuracy inspection.

Table 3:

Item	Denomination		Part No. 705, 715	Part No. 735, 745	Part No. 765, 775	Qty.
1	Hexagon socket head cap screw	M8 x 25	82 00 34	82 00 34	82 00 34	2
2	Lock washer		82 50 15	82 50 15	82 50 15	2
3	O-ring	74.20 x 5.70	82 74 07	82 74 07	82 74 07	1
4	Stator housing: Drive units with cooling jacket	STD: 705, 735, 765	562 50 02	562 49 02	554 02 02	1
		EX: 715, 745, 775	562 50 03 (EX)	562 49 03 (EX)	554 02 03 (EX)	
	Stator housing: Drive units without cooling jacket	STD: 705, 735, 765	562 00 02	562 49 02	554 02 02	
		EX: 715, 745, 775	562 50 03 (EX)	562 49 03 (EX)	554 02 03 (EX)	
5	Lock cover	STD: 705, 735, 765	780 05 00	780 05 00	780 05 00	1
		EX: 715, 745, 775	780 05 01 (EX)	780 05 01 (EX)	780 05 01 (EX)	

Item	Denomination		Part No. 705, 715	Part No. 735, 745	Part No. 765, 775	Qty.
6	Motor. See Motors on page 20.		—	—	—	1
7	O-ring: Drive units with cooling jacket	461.0 x 8.4	82 78 87	82 78 87	82 78 87	1

4.2.2 Large connection house



Spare parts marked with EX after the part number are subject to dimensional accuracy inspection.

Table 4:

Item	Denomination		Part No. 705, 715	Part No. 735, 745	Part No. 765, 775	Qty.
1	Hexagon socket head cap screw	M8 x 25	82 00 34	82 00 34	82 00 34	2
2	Lock washer		82 50 15	82 50 15	82 50 15	2
3	O-ring	74.20 x 5.70	82 74 07	82 74 07	82 74 07	1
4	Stator housing: Drive units with cooling jacket	STD: 705, 735, 765	562 50 02	562 49 02	554 02 02	1
		EX: 715, 745, 775	562 50 03 (EX)	562 49 03 (EX)	554 02 03 (EX)	
	Stator housing: Drive units without cooling jacket	STD: 705, 735, 765	562 50 02	562 49 02	554 02 02	
		EX: 715, 745, 775	562 50 03 (EX)	562 49 03 (EX)	554 02 03 (EX)	
5	Lock cover	STD: 705, 735, 765	780 05 00	780 05 00	780 05 00	1
		EX: 715, 745, 775	780 05 01 (EX)	780 05 01 (EX)	780 05 01 (EX)	

Item	Denomination		Part No. 705, 715	Part No. 735, 745	Part No. 765, 775	Qty.
6	Electrical components monitoring in stator house. See In stator house on page 134.		—	—	—	1
7	Motor. See Motors on page 20.		—	—	—	1
8	O-ring: Drive units with cooling jacket	461.0 x 8.4	82 78 87	82 78 87	82 78 87	1

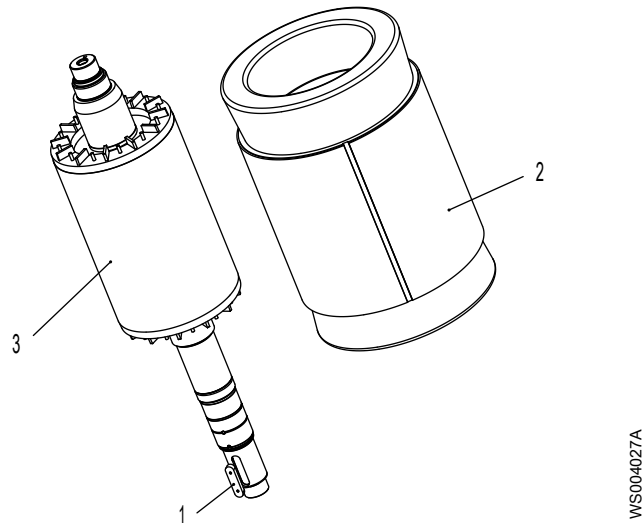
5 Motors

5.1 Major parts

Sensors are not included. For sensor part numbers, see [Monitoring and Sensors](#) on page 132.

For stator part numbers, the last two digits are shown as XX. These depend on the rated voltage. See the data plate.

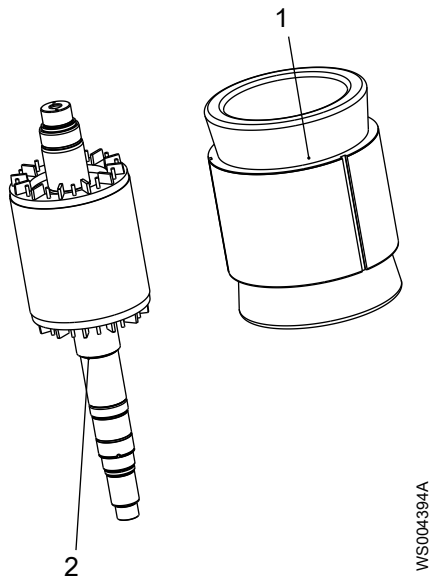
Motors with key



WS004027A

Item	Denomination	70 mm Diameter	75 mm Diameter	Qty-
1	Key	20 x 12 x 63	20 x 12 x 100	1
2	Stator	—	—	1
3	Shaft unit	—	—	1

Motors without key



WS004394A

Item	Denomination	Qty-
1	Stator	1
2	Shaft unit	1

5.2 705, 715

Pumps	Poles	Diameter, mm	Key	Reference
• C3231 • N3231 • R3231 • H5570	4	70	Yes	<i>4 poles, 70 mm diameter, with key</i> on page 21
• P7061, P7065	6	70	No	<i>6 poles, 70 mm diameter, without key</i> on page 22
• C3231, C3306, C3356 • H5570 • N3231, N3306, N3356 • L3356	6	70	Yes	<i>6 poles, 70 mm diameter, with key</i> on page 22
• C3312 • N3312	6	75	Yes	<i>6 poles, 75 mm diameter, with key</i> on page 22
• C3356 • N3356 • L3356 • EL7556	8, 10, 12	70	Yes	<i>8, 10, 12 poles; 70 mm diameter, with key</i> on page 22
• P7061, P7065	8, 10, 12	70	No	<i>8, 10, 12 poles; 70 mm diameter, without key</i> on page 23
• C3312, C3400, C3501, C3531 • N3312, N3400, N3531 • L3400, L3531 • EL7570	8, 10, 12	75	Yes	<i>8, 10, 12 poles; 75 mm diameter, with key</i> on page 24
• P7081	8, 10	75	No	<i>8, 10 poles; 75 mm diameter, without key</i> on page 24
• EL7556	14	70	Yes	<i>14 poles, 70 mm diameter, with key</i> on page 25
• C3400, C3501, C3531 • N3400, N3531 • L3400, L3602 • P7101	14	75	Yes	<i>14 poles, 75 mm diameter, with key</i> on page 25

5.2.1 4 poles, 70 mm diameter, with key

Table 5: 4 poles, 70 mm diameter, with key

Motor	Part No. Key	Part No. Stator	Part No. Shaft Unit	Shaft Material
43-30-4AA	80 78 98	591 10 XX	683 67 00	Martensitic stainless steel
43-30-4AA	80 78 98	591 10 XX	683 67 01	Duplex stainless steel

5.2.2 6 poles, 70 mm diameter, without key

Table 6: 6 poles, 70 mm diameter, without key

Motor	Part No. Stator	Part No. Shaft Unit	Shaft Material
43-30-6BC	592 24 XX	683 67 30	Martensitic stainless steel
43-30-6BC	592 24 XX	683 67 03	Duplex stainless steel

5.2.3 6 poles, 70 mm diameter, with key

Table 7: 6 poles, 70 mm diameter, with key

Motor	Part No. Key	Part No. Stator	Part No. Shaft Unit	Shaft Material
43-30-6BC	80 78 98	592 24 XX	683 67 04	Martensitic stainless steel
43-30-6BC	80 78 98	592 24 XX	683 67 05	Duplex stainless steel

5.2.4 6 poles, 75 mm diameter, with key

Table 8: 6 poles, 75 mm diameter, with key

Motor	Part No. Key	Part No. Stator	Part No. Shaft Unit	Shaft Material
43-30-6BC	80 78 99	592 24 XX	683 71 00	Martensitic stainless steel
43-30-6BC	80 78 99	592 24 XX	683 71 01	Duplex stainless steel

5.2.5 8, 10, 12 poles; 70 mm diameter, with key

Table 9: 8, 10, 12 poles; 70 mm diameter, with key

Motor	Part No. Key	Part No. Stator	Part No. Shaft Unit	Shaft Material
43-30-8AA	80 78 98	591 16 XX	683 67 06	Martensitic stainless steel
43-30-8GA	80 78 98	614 40 XX	683 67 06	Martensitic stainless steel
43-30-8FA	80 78 98	592 26 XX	683 67 06	Martensitic stainless steel
43-30-10GA	80 78 98	614 64 XX	683 67 06	Martensitic stainless steel
43-30-10FA	80 78 98	592 27 XX	683 67 06	Martensitic stainless steel
43-30-12AA	80 78 98	591 18 XX	683 67 06	Martensitic stainless steel
43-30-12FA	80 78 98	592 28 XX	683 67 06	Martensitic stainless steel
43-30-12GA	80 78 98	614 67 XX	683 67 06	Martensitic stainless steel
43-30-8AA	80 78 98	591 16 XX	683 67 07	Duplex stainless steel

Motor	Part No. Key	Part No. Stator	Part No. Shaft Unit	Shaft Material
43-30-8GA	80 78 98	614 40 XX	683 67 07	Duplex stainless steel
43-30-8FA	80 78 98	592 26 XX	683 67 07	Duplex stainless steel
43-30-10GA	80 78 98	614 64 XX	683 67 07	Duplex stainless steel
43-30-10FA	80 78 98	592 27 XX	683 67 07	Duplex stainless steel
43-30-12AA	80 78 98	591 18 XX	683 67 07	Duplex stainless steel
43-30-12GA	80 78 98	614 67 XX	683 67 07	Duplex stainless steel
43-30-12FA	80 78 98	592 28 XX	683 67 07	Duplex stainless steel

5.2.6 8, 10, 12 poles; 70 mm diameter, without key

Table 10: 8, 10, 12 poles; 70 mm diameter, without key

Motor	Part No. Stator	Part No. Shaft Unit	Shaft Material
43-30-8AA	591 16 XX	683 67 31	Martensitic stainless steel
43-30-8GA	614 40 XX	683 67 31	Martensitic stainless steel
43-30-8FA	592 26 XX	683 67 31	Martensitic stainless steel
43-30-10GA	614 64 XX	683 67 31	Martensitic stainless steel
43-30-10FA	592 27 XX	683 67 31	Martensitic stainless steel
43-30-12AA	591 18 XX	683 67 31	Martensitic stainless steel
43-30-12GA	614 67 XX	683 67 31	Martensitic stainless steel
43-30-12FA	592 28 XX	683 67 31	Martensitic stainless steel
43-30-8AA	591 16 XX	683 67 09	Duplex stainless steel
43-30-8GA	614 40 XX	683 67 09	Duplex stainless steel
43-30-8FA	592 26 XX	683 67 09	Duplex stainless steel
43-30-10GA	614 64 XX	683 67 09	Duplex stainless steel
43-30-10FA	592 27 XX	683 67 09	Duplex stainless steel
43-30-12AA	591 18 XX	683 67 09	Duplex stainless steel
43-30-12GA	614 67 XX	683 67 09	Duplex stainless steel
43-30-12FA	592 28 XX	683 67 09	Duplex stainless steel

5.2.7 8, 10, 12 poles; 75 mm diameter, with key

Table 11: 8, 10, 12 poles; 75 mm diameter, with key

Motor	Part No. Key	Part No. Stator	Part No. Shaft Unit	Shaft Material
43-30-8AA	80 78 99	591 16 XX	683 71 04	Martensitic stainless steel
43-30-8GA	80 78 99	614 40 XX	683 71 04	Martensitic stainless steel
43-30-8FA	80 78 99	592 26 XX	683 71 04	Martensitic stainless steel
43-30-10GA	80 78 99	614 64 XX	683 71 04	Martensitic stainless steel
43-30-10FA	80 78 99	592 27 XX	683 71 04	Martensitic stainless steel
43-30-12AA	80 78 99	591 18 XX	683 71 04	Martensitic stainless steel
43-30-12GA	80 78 99	614 67 XX	683 71 04	Martensitic stainless steel
43-30-12FA	80 78 99	592 28 XX	683 71 04	Martensitic stainless steel
43-30-8AA	80 78 99	591 16 XX	683 71 27	Duplex stainless steel
43-30-8GA	80 78 99	614 40 XX	683 71 27	Duplex stainless steel
43-30-8FA	80 78 99	592 26 XX	683 71 27	Duplex stainless steel
43-30-10GA	80 78 99	614 64 XX	683 71 27	Duplex stainless steel
43-30-10FA	80 78 99	592 27 XX	683 71 27	Duplex stainless steel
43-30-12AA	80 78 99	591 18 XX	683 71 27	Duplex stainless steel
43-30-12GA	80 78 99	614 67 XX	683 71 27	Duplex stainless steel
43-30-12FA	80 78 99	592 28 XX	683 71 27	Duplex stainless steel

5.2.8 8, 10 poles; 75 mm diameter, without key

Table 12: 8, 10 poles; 75 mm diameter, without key

Motor	Part No. Stator	Part No. Shaft Unit	Shaft Material
43-30-8AA	591 16 XX	683 71 03	Duplex stainless steel
43-30-8GA	614 40 XX	683 71 03	Duplex stainless steel
43-30-8FA	592 26 XX	683 71 03	Duplex stainless steel
43-30-10FA	592 27 XX	683 71 03	Duplex stainless steel
43-30-10GA	614 64 XX	683 71 03	Duplex stainless steel
43-30-8AA	591 16 XX	683 71 30	Martensitic stainless steel

Motor	Part No. Stator	Part No. Shaft Unit	Shaft Material
43-30-8GA	614 40 XX	683 71 30	Martensitic stainless steel
43-30-8FA	592 26 XX	683 71 30	Martensitic stainless steel
43-30-10FA	592 27 XX	683 71 30	Martensitic stainless steel
43-30-10GA	614 64 XX	683 71 30	Martensitic stainless steel

5.2.9 14 poles, 75 mm diameter, with key

Table 13: 14 poles, 75 mm diameter, with key

Motor	Part No. Key	Part No. Stator	Part No. Shaft Unit	Shaft Material
43-30-14GA	80 78 99	614 41 XX	683 71 05	Martensitic stainless steel
43-30-14GA	80 78 99	614 41 XX	683 71 06	Duplex stainless steel

5.2.10 14 poles, 70 mm diameter, with key

Table 14: 14 poles, 70 mm diameter, with key

Motor	Part No. Key	Part No. Stator	Part No. Shaft Unit	Shaft Material
43-30-14GA	80 78 98	614 41 XX	683 67 10	Martensitic stainless steel
43-30-14GA	80 78 98	614 41 XX	683 67 11	Duplex stainless steel

5.3 735, 745

Pumps	Poles	Diameter, mm	Key	Reference
• C3231, C3306 • N3231, N3306 • R3231 • H5570	4	70	Yes	<i>4 poles, 70 mm diameter, with key</i> on page 26
• P7061, P7065	6	70	No	<i>6 poles, 70 mm diameter, without key</i> on page 26
• P7081	6	75	No	<i>6 poles, 75 mm diameter, without key</i> on page 26
• C3306, C3356 • N3306, N3356 • L3356 • H5570	6	70	Yes	<i>6 poles, 70 mm diameter, with key</i> on page 27
• C3312 • N3312, N3400	6	75	Yes	<i>6 poles, 75 mm diameter, with key</i> on page 27
• P7065	8, 10, 12	70	Yes	<i>8, 10, 12 poles; 70 mm diameter, with key</i> on page 27

Pumps	Poles	Diameter, mm	Key	Reference
• C3312, C3400, C3501, C3531, C3602 • N3312, N3400, N3531 • L3400, L3531, L3602 • P7101	8, 10, 12	75	Yes	<i>8, 10, 12 poles; 75 mm diameter, with key on page 27</i>
• P7065	8, 10	70	No	<i>8, 10 poles; 70 mm diameter, without key on page 28</i>
• P7081	8, 10	75	No	<i>8, 10 poles; 75 mm diameter, without key on page 28</i>
• EL7556	14	70	Yes	<i>14 poles, 70 mm diameter, with key on page 28</i>
• C3501, C3531, C3602 • N3531 • L3602 • P7101	14	75	Yes	<i>14 poles, 75 mm diameter, with key on page 29</i>

5.3.1 4 poles, 70 mm diameter, with key

Table 15: 4 poles, 70 mm diameter, with key

Motor	Part No. Key	Part No. Stator	Part No. Shaft Unit	Shaft Material
43-44-4AA	80 78 98	591 12 XX	683 67 12	Martensitic stainless steel
43-44-4AA	80 78 98	591 12 XX	683 67 13	Duplex stainless steel

5.3.2 6 poles, 70 mm diameter, without key

Table 16: 6 poles, 70 mm diameter, without key

Motor	Part No. Stator	Part No. Shaft Unit	Shaft Material
43-44-6BC	592 30 XX	683 67 32	Martensitic stainless steel
43-44-6BC	592 30 XX	683 67 15	Duplex stainless steel

5.3.3 6 poles, 75 mm diameter, without key

Table 17: 6 poles, 75 mm diameter, without key

Motor	Part No. Stator	Part No. Shaft Unit	Shaft Material
43-44-6BC	592 30 XX	683 71 31	Martensitic stainless steel
43-44-6BC	592 30 XX	683 71 10	Duplex stainless steel

5.3.4 6 poles, 70 mm diameter, with key

Table 18: 6 poles, 70 mm diameter, with key

Motor	Part No. Key	Part No. Stator	Part No. Shaft Unit	Shaft Material
43-44-6BC	80 78 98	592 30 XX	683 67 16	Martensitic stainless steel
43-44-6BC	80 78 98	592 30 XX	683 67 17	Duplex stainless steel

5.3.5 6 poles, 75 mm diameter, with key

Table 19: 6 poles, 75 mm diameter, with key

Motor	Part No. Key	Part No. Stator	Part No. Shaft Unit	Shaft Material
43-44-6BC	80 78 99	592 30 XX	683 71 07	Martensitic stainless steel
43-44-6BC	80 78 99	592 30 XX	683 71 08	Duplex stainless steel

5.3.6 8, 10, 12 poles; 70 mm diameter, with key

Table 20: 8, 10, 12 poles; 70 mm diameter, with key

Motor	Part No. Key	Part No. Stator	Part No. Shaft Unit	Shaft Material
43-44-8AA	80 78 98	591 20 XX	683 67 18	Martensitic stainless steel
43-44-10FA	80 78 98	614 39 XX	683 67 18	Martensitic stainless steel
43-44-12AA	80 78 98	591 22 XX	683 67 18	Martensitic stainless steel
43-44-12GA	80 78 98	614 66 XX	683 67 18	Martensitic stainless steel
43-44-8AA	80 78 98	591 20 XX	683 67 19	Duplex stainless steel
43-44-10FA	80 78 98	614 39 XX	683 67 19	Duplex stainless steel
43-44-12AA	80 78 98	591 22 XX	683 67 19	Duplex stainless steel
43-44-12GA	80 78 98	614 66 XX	683 67 19	Duplex stainless steel

5.3.7 8, 10, 12 poles; 75 mm diameter, with key

Table 21: 8, 10, 12 poles; 75 mm diameter, with key

Motor	Part No. Key	Part No. Stator	Part No. Shaft Unit	Shaft Material
43-44-8AA	80 78 99	591 20 XX	683 71 13	Martensitic stainless steel
43-44-10FA	80 78 99	614 39 XX	683 71 13	Martensitic stainless steel

Motor	Part No. Key	Part No. Stator	Part No. Shaft Unit	Shaft Material
43-44-12AA	80 78 99	591 22 XX	683 71 13	Martensitic stainless steel
43-44-12GA	80 78 99	614 66 XX	683 71 13	Martensitic stainless steel
43-44-8AA	80 78 99	591 20 XX	683 71 14	Duplex stainless steel
43-44-10FA	80 78 99	614 39 XX	683 71 14	Duplex stainless steel
43-44-12AA	80 78 99	591 22 XX	683 71 14	Duplex stainless steel
43-44-12GA	80 78 99	614 66 XX	683 71 14	Duplex stainless steel

5.3.8 8, 10 poles; 70 mm diameter, without key

Table 22: 8, 10 poles; 70 mm diameter, without key

Motor	Part No. Stator	Part No. Shaft Unit	Shaft Material
43-44-8AA	591 20 XX	683 67 33	Martensitic stainless steel
43-44-8AA	591 20 XX	683 67 34	Duplex stainless steel

5.3.9 8, 10 poles; 75 mm diameter, without key

Table 23: 8, 10 poles; 75 mm diameter, without key

Motor	Part No. Stator	Part No. Shaft Unit	Shaft Material
43-44-8AA	591 20 XX	683 71 32	Martensitic stainless steel
43-44-10FA	614 39 XX	683 71 32	Martensitic stainless steel
43-44-8AA	591 20 XX	683 71 12	Duplex stainless steel
43-44-10FA	614 39 XX	683 71 12	Duplex stainless steel

5.3.10 14 poles, 70 mm diameter, with key

Table 24: 70 mm diameter, with key

Motor	Part No. Key	Part No. Stator	Part No. Shaft Unit	Shaft Material
43-44-14AA	80 78 98	591 23 XX	683 67 20	Martensitic stainless steel
43-44-14AA	80 78 98	591 23 XX	683 67 21	Duplex stainless steel

5.3.11 14 poles, 75 mm diameter, with key

Table 25: 14 poles, 75 mm diameter, with key

Motor	Part No. Key	Part No. Stator	Part No. Shaft Unit	Shaft Material
43-44-14AA	80 78 99	591 23 XX	683 71 15	Martensitic stainless steel
43-44-14AA	80 78 99	591 23 XX	683 71 16	Duplex stainless steel

5.4 765, 775

Pumps	Poles	Diameter, mm	Key	Reference
Pumps: • C3231, C3306 • N3231, N3306 • H5570	4	70	Yes	<i>4 poles, 70 mm diameter, with key</i> on page 30
• P7065	6	70	No	<i>6 poles, 70 mm diameter, without key</i> on page 30
• P7081	6	75	No	<i>6 poles, 75 mm diameter, without key</i> on page 30
• C3306, C3356 • N3306, N3356 • L3356 • H5570	6	70	Yes	<i>6 poles, 70 mm diameter, with key</i> on page 30
• C3312 • N3312	6	75	Yes	<i>6 poles, 75 mm diameter, with key</i> on page 30
• EL7556	8, 10, 12	70	Yes	<i>8, 10, 12 poles; 70 mm diameter, with key</i> on page 31
• C3312, C3400, C3501, C3531, C3602 • N3312, N3400, N3531 • L3400, L3531, L3602 • P7101 • EL7570	8, 10, 12	75	Yes	<i>8, 10, 12 poles; 75 mm diameter, with key</i> on page 31
• P7081	8	75	No	<i>8 poles, 75 mm diameter, without key</i> on page 31
• EL7556	14	70	Yes	<i>14 poles, 70 mm diameter, with key</i> on page 32
• C3501, C3531, C3602 • N3531 • L3602 • P7101 • EL7570	14	75	Yes	<i>14 poles, 75 mm diameter, with key</i> on page 32

5.4.1 4 poles, 70 mm diameter, with key

Table 26: 4 poles, 70 mm diameter, with key

Motor	Part No. Key	Part No. Stator	Part No. Shaft Unit	Shaft Material
43-56-4AA	80 78 98	591 14 XX	683 67 22	Martensitic stainless steel
43-56-4AA	80 78 98	591 14 XX	683 67 23	Duplex stainless steel

5.4.2 6 poles, 70 mm diameter, without key

Table 27: 6 poles, 70 mm diameter, without key

Motor	Part No. Stator	Part No. Shaft Unit	Shaft Material
43-56-BC	592 31 XX	683 67 35	Martensitic stainless steel
43-56-BC	592 31 XX	683 67 36	Duplex stainless steel

5.4.3 6 poles, 75 mm diameter, without key

Table 28: 6 poles, 75 mm diameter, without key

Motor	Part No. Stator	Part No. Shaft Unit	Shaft Material
43-56-BC	592 31 XX	683 71 33	Martensitic stainless steel
43-56-BC	592 31 XX	683 71 20	Duplex stainless steel

5.4.4 6 poles, 70 mm diameter, with key

Table 29: 6 poles, 70 mm diameter, with key

Motor	Part No. Key	Part No. Stator	Part No. Shaft Unit	Shaft Material
43-56-BC	80 78 98	592 31 XX	683 67 24	Martensitic stainless steel
43-56-BC	80 78 98	592 31 XX	683 67 25	Duplex stainless steel

5.4.5 6 poles, 75 mm diameter, with key

Table 30: 6 poles, 75 mm diameter, with key

Motor	Part No. Key	Part No. Stator	Part No. Shaft Unit	Shaft Material
43-56-BC	80 78 99	592 31 XX	683 71 17	Martensitic stainless steel
43-56-BC	80 78 99	592 31 XX	683 71 18	Duplex stainless steel

5.4.6 8, 10, 12 poles; 70 mm diameter, with key

Table 31: 8, 10, 12 poles; 70 mm diameter, with key

Motor	Part No. Key	Part No. Stator	Part No. Shaft Unit	Shaft Material
43-56-8AA	80 78 98	591 24 XX	683 67 26	Martensitic stainless steel
43-56-10AA	80 78 98	591 25 XX	683 67 26	Martensitic stainless steel
43-56-12AA	80 78 98	591 26 XX	683 67 26	Martensitic stainless steel
43-56-12GA	80 78 98	614 65 XX	683 67 26	Martensitic stainless steel
43-56-8AA	80 78 98	591 24 XX	683 67 27	Duplex stainless steel
43-56-10AA	80 78 98	591 25 XX	683 67 27	Duplex stainless steel
43-56-12AA	80 78 98	591 26 XX	683 67 27	Duplex stainless steel
43-56-12GA	80 78 98	614 65 XX	683 67 27	Duplex stainless steel

5.4.7 8, 10, 12 poles; 75 mm diameter, with key

Table 32: 8, 10, 12 poles; 75 mm diameter, with key

Motor	Part No. Key	Part No. Stator	Part No. Shaft Unit	Shaft Material
43-56-8AA	80 78 99	591 24 XX	683 71 23	Martensitic stainless steel
43-56-10AA	80 78 99	591 25 XX	683 71 23	Martensitic stainless steel
43-56-12AA	80 78 99	591 26 XX	683 71 23	Martensitic stainless steel
43-56-12GA	80 78 99	614 65 XX	683 71 23	Martensitic stainless steel
43-56-8AA	80 78 99	591 24 XX	683 71 24	Duplex stainless steel
43-56-10AA	80 78 99	591 25 XX	683 71 24	Duplex stainless steel
43-56-12AA	80 78 99	591 26 XX	683 71 24	Duplex stainless steel
43-56-12GA	80 78 99	614 65 XX	683 71 24	Duplex stainless steel

5.4.8 8 poles, 75 mm diameter, without key

Table 33: 8 poles, 75 mm diameter, without key

Motor	Part No. Stator	Part No. Shaft Unit	Shaft Material
43-56-8AA	591 24 XX	683 71 34	Martensitic stainless steel
43-56-8AA	591 24 XX	683 71 22	Duplex stainless steel

5.4.9 14 poles, 75 mm diameter, with key

Table 34: 14 poles, 75 mm diameter, with key

Motor	Part No. Key	Part No. Stator	Part No. Shaft Unit	Shaft Material
43-56-14AA	80 78 99	591 27 XX	683 71 25	Martensitic stainless steel
43-56-14AA	80 78 99	591 27 XX	683 71 26	Duplex stainless steel

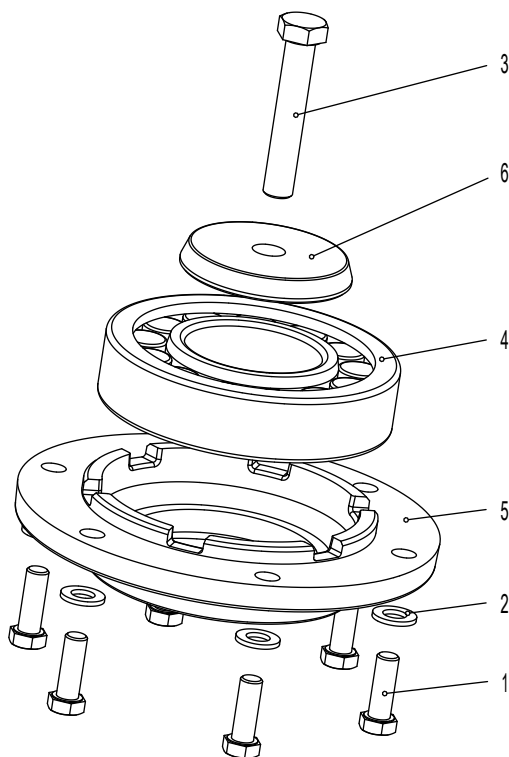
5.4.10 14 poles, 70 mm diameter, with key

Table 35: 14 poles, 70 mm diameter, with key

Motor	Part No. Key	Part No. Stator	Part No. Shaft Unit	Shaft Material
43-56-14AA	80 78 98	591 27 XX	683 67 28	Martensitic stainless steel
43-56-14AA	80 78 98	591 27 XX	683 67 29	Duplex stainless steel

6 Bearings

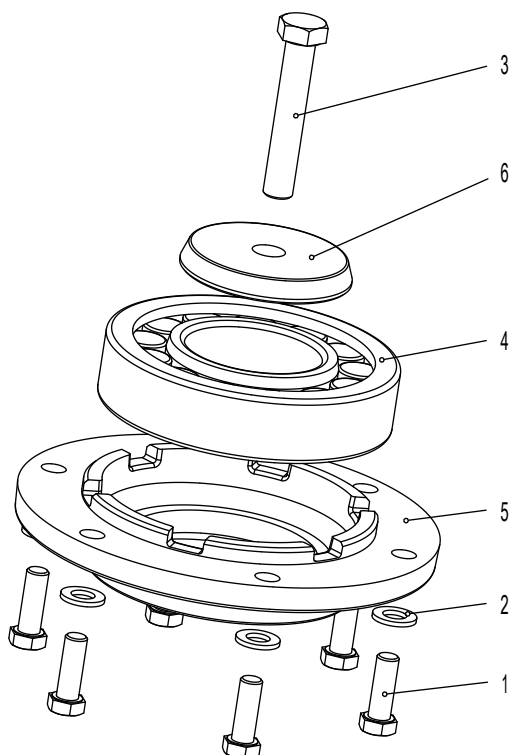
6.1 Support bearing: Large connection house



WS004021A

Item	Denomination		Part No.	Qty.
1	Hexagon head screw	M12 x 35	81 41 56	6
2	Washer, thick	M12	82 35 20	6
3	Hexagon head screw	M16 x 90	84 34 12	1
4	Roller bearing	Standard	84 53 75	1
		Optional: Insulated	83 34 65	
5	Bearing cover		517 84 01	1
6	Washer		570 80 00	1

6.2 Support bearing: Large connection house



WS004021A

Item	Denomination		Part No.	Qty.
1	Hexagon head screw	M12 x 35	81 41 56	6
2	Washer, thick	M12	82 35 20	6
3	Hexagon head screw	M16 x 90	84 34 12	1
4	Roller bearing	Standard	84 53 75	1
		Optional: Insulated	83 34 65	
5	Bearing cover		517 84 01	1
6	Washer		570 80 00	1

6.3 Main bearing

Pump	Installation	CLS	Double Bearing Arrangement	Reference
N	Horizontal or vertical	No	O-arrangement	Variant 1 on page 35
		Yes	O-arrangement	Variant 2 on page 37
C, H, P, L	Horizontal	No	O-arrangement	Variant 1 on page 35
		Yes	O-arrangement	Variant 2 on page 37
	Vertical	No	Tandem	Variant 3 on page 39
		Yes	Tandem	Variant 4 on page 41

6.3.1 Variant 1

705, 735, 765

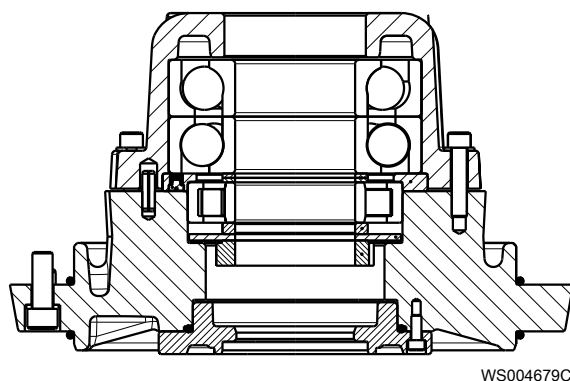


Figure 3: O-arrangement: orientation of ball bearing rows

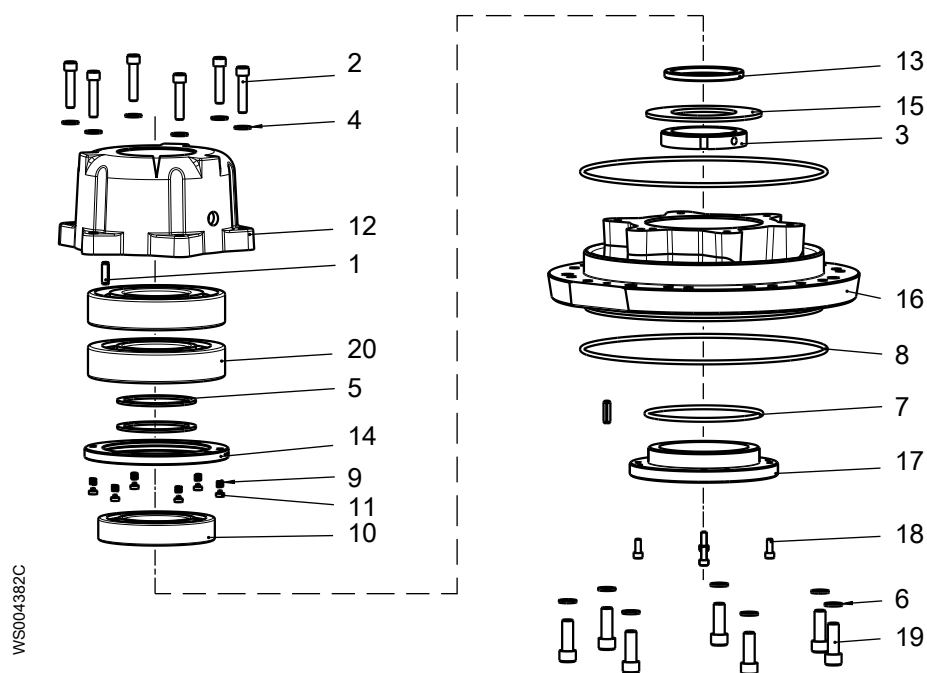


Table 36: 705, 735, 765: N- and horizontal P-, L- and C-pumps. No CLS

Item	Denomination		Part No.	Qty.
1	Tension pin		80 58 95	2
2	Hexagon socket head cap screw	M12 x 55	82 00 74	6
3	Round nut	KMK 19	82 22 40	1
4	Washer	13.0 x 24.0 x 2.5	82 35 20	6
5	Washer	95.1 x 115.0 x 3.5	82 44 28	2
6	Lock washer		82 50 19	7
7	O-ring	159.30 x 5.70	82 74 85	1
8	O-ring	339.30 x 5.70	82 75 05	2
9	Compression spring		83 38 02	6
10	Roller bearing		83 57 59	1
11	Plug		520 08 00	6

Item	Denomination		Part No.	Qty.
12	Bearing cover		551 54 01	1
13	Washer		554 43 00	1
14	Washer		558 15 00	1
15	Supporting washer		558 16 00	1
16	Bearing housing		680 85 00	1
17	Holder		686 25 00	1
18	Hexagon socket head cap screw	M8 x 20	82 00 32	4
19	Hexagon socket head cap screw	M16 x 45	82 01 06	7
20	Single-row angular contact ball bearing		84 23 25	2

715, 745, 775

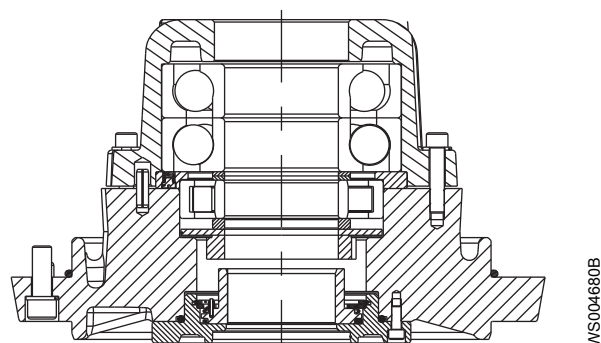
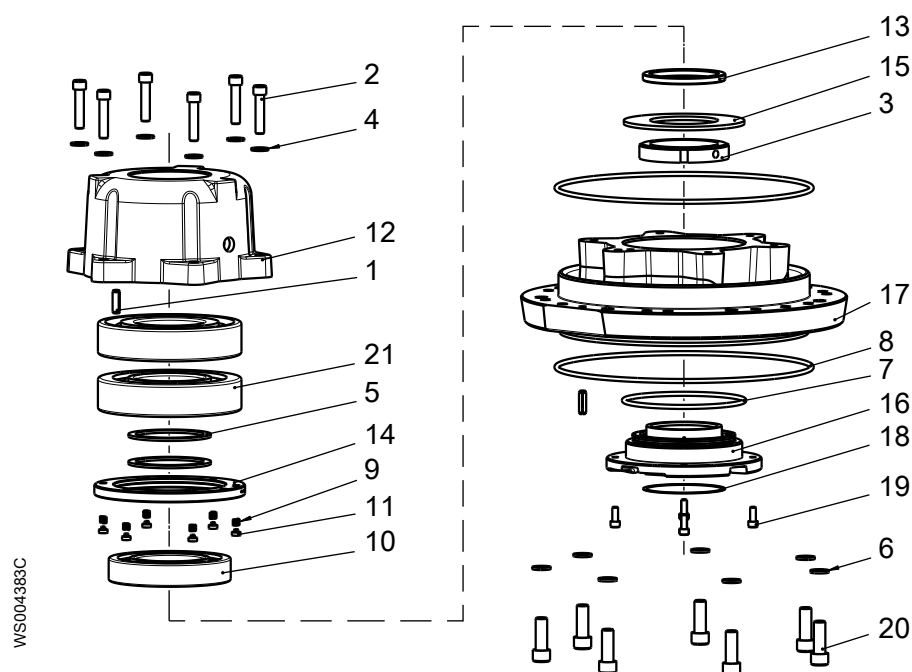


Figure 4: O-arrangement: orientation of ball bearing rows



Spare parts marked with EX after the part number are subject to dimensional accuracy inspection.

Table 37: 715, 745, 775: N- and horizontal P-, L- and C-pumps. No CLS

Item	Denomination		Part No.	Qty.
1	Tension pin		80 58 95	2
2	Hexagon socket head cap screw	M12 x 55	82 00 74	6
3	Round nut	KMK 19	82 22 40	1
4	Washer	13.0 x 24.0 x 2.5	82 35 20	6
5	Washer	95.1 x 115.0 x 3.5	82 44 28	2
6	Lock washer		82 50 19	7
7	O-ring	159.30 x 5.70	82 74 85	1
8	O-ring	339.30 x 5.70	82 75 05	2
9	Compression spring		83 38 02	6
10	Roller bearing		83 57 59	1
11	Plug		520 08 00	6
12	Bearing cover		551 54 01	1
13	Washer		554 43 00	1
14	Washer		558 15 00	1
15	Supporting washer		558 16 00	1
16	Protective sleeve unit		606 47 00	1
	Grease		90 20 74	3 g
17	Bearing housing		680 85 01 (EX)	1
18	Hexagon socket head cap screw	M8 x 20	82 00 32	4
19	Hexagon socket head cap screw	M16 x 45	82 01 06	7
20	Single-row angular contact ball bearing		84 23 25	2

6.3.2 Variant 2

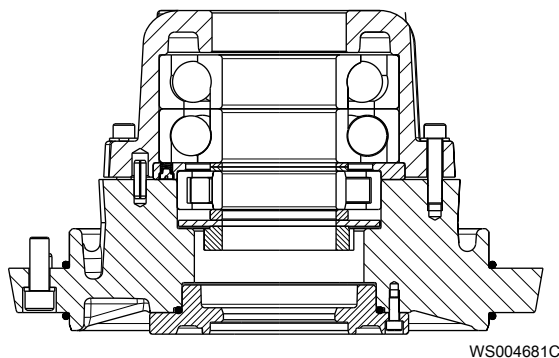


Figure 5: O-arrangement: orientation of ball bearing rows

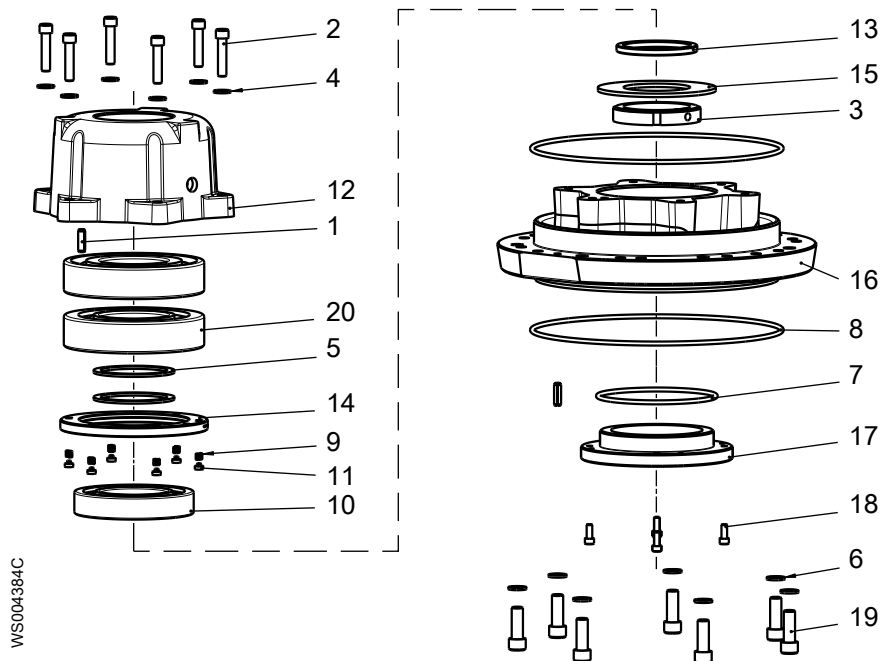


Table 38: 705, 735, 765: N- and horizontal P-, L- and C-pumps. With CLS

Item	Denomination		Part No.	Qty.
1	Tension pin		80 58 95	2
2	Hexagon socket head cap screw	M12 x 55	82 00 74	6
3	Round nut	KMK 19	82 22 40	1
4	Washer	13.0 x 24.0 x 2.5	82 35 20	6
5	Washer	95.1 x 115.0 x 3.5	82 44 28	2
6	Lock washer		82 50 19	7
7	O-ring	159.30 x 5.70	82 74 85	1
8	O-ring	339.30 x 5.70	82 75 05	2
9	Compression spring		83 38 02	6
10	Roller bearing		83 57 59	1
11	Plug		520 08 00	6
12	Bearing cover		558 54 01	1
13	Washer		554 43 00	1
14	Washer		558 15 00	1
15	Supporting washer		558 16 00	1
16	Bearing housing		680 85 02	1
17	Holder		686 25 00	1
18	Hexagon socket head cap screw	M8 x 20	82 00 32	4
19	Hexagon socket head cap screw	M16 x 45	82 01 06	7
20	Single-row angular contact ball bearing		84 23 25	2

6.3.3 Variant 3

705, 735, 765

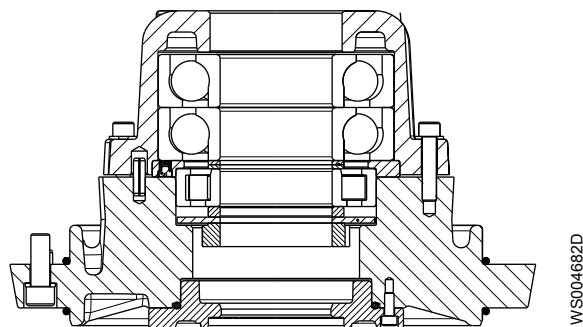


Figure 6: Tandem arrangement: orientation of ball bearing rows

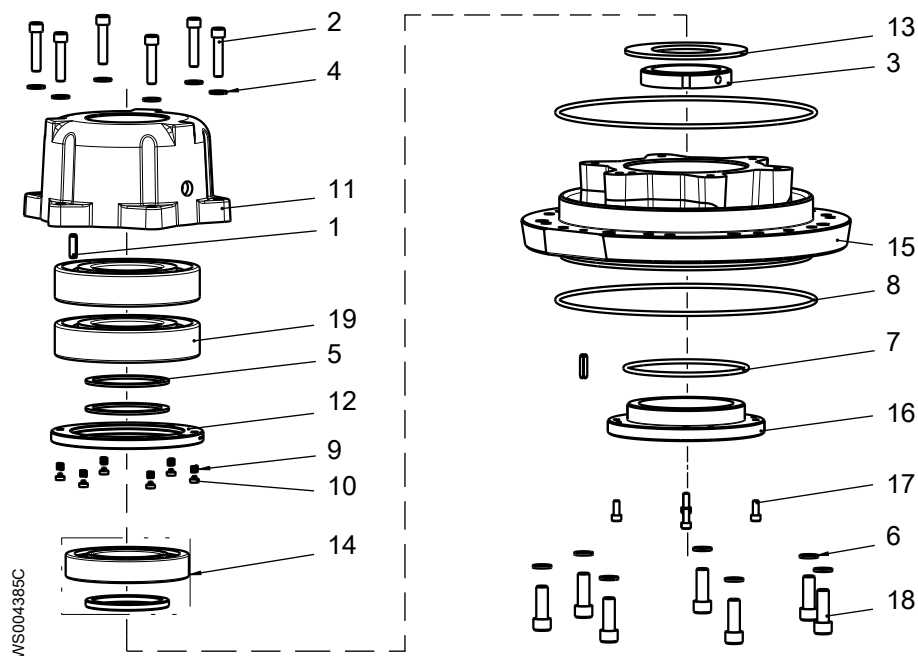


Table 39: 705, 735, 765: Vertical P-, L- and C-, H-pumps

Item	Denomination		Part No.	Qty.
1	Tension pin		80 58 95	2
2	Hexagon socket head cap screw	M12 x 55	82 00 74	6
3	Round nut	KMK 19	82 22 40	1
4	Washer	13.0 x 24.0 x 2.5	82 35 20	6
5	Washer	95.1 x 115.0 x 3.5	82 44 28	2
6	Lock washer		82 50 19	7
7	O-ring	159.30 x 5.70	82 74 85	1
8	O-ring	339.30 x 5.70	82 75 05	2
9	Compression spring		83 38 02	6
10	Plug		520 08 00	6
11	Bearing cover		551 54 00	1
12	Washer		558 15 00	1
13	Supporting washer		558 16 00	1
14	Roller bearing unit		664 33 00	1

Item	Denomination		Part No.	Qty.
15	Bearing housing		680 85 00	1
16	Holder		686 25 00	1
17	Hexagon socket head cap screw	M8 x 20	82 00 32	4
18	Hexagon socket head cap screw	M16 x 45	82 01 06	7
19	Single-row angular contact ball bearing		84 23 25	2

715, 745, 775

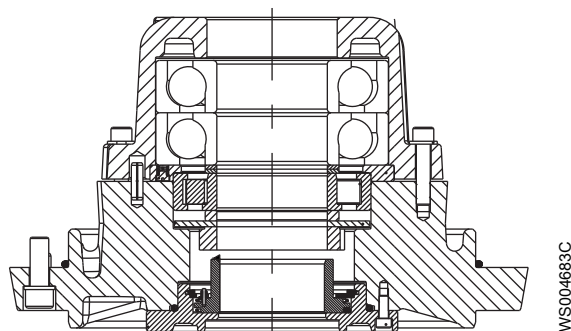


Figure 7: Tandem arrangement: orientation of ball bearing rows

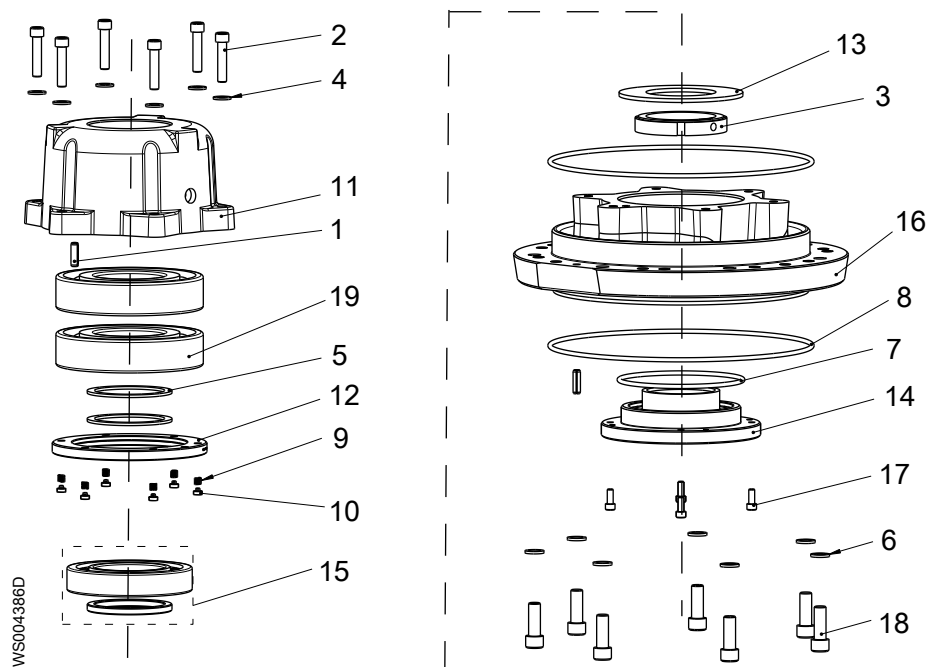


Table 40: 715, 745, 775: Vertical P-, L- and C-, H-pumps

Spare parts marked with EX after the part number are subject to dimensional accuracy inspection.

Item	Denomination		Part No.	Qty.
1	Tension pin		80 58 85	2
2	Hexagon socket head cap screw	M12 x 55	82 00 74	6
3	Round nut	KMK 19	82 22 40	1
4	Washer	13.0 x 24.0 x 2.5	82 35 20	6
5	Washer	95.1 x 115.0 x 3.5	82 44 28	2

Item	Denomination		Part No.	Qty.
6	Lock washer		82 50 19	7
7	O-ring	159.30 x 5.70	82 74 85	1
8	O-ring	339.30 x 5.70	82 75 05	2
9	Compression spring		83 38 02	6
10	Plug		520 08 00	6
11	Bearing cover		551 54 00	1
12	Washer		558 15 00	1
13	Supporting washer		558 16 00	1
14	Protective sleeve unit		606 47 00	1
	Grease		90 20 74	3 g
15	Roller bearing unit		664 33 00	1
16	Bearing housing		680 85 01 (EX)	1
17	Hexagon socket head cap screw	M8 x 20	82 00 32	4
18	Hexagon socket head cap screw	M16 x 45	82 01 06	7
19	Single-row angular contact ball bearing		84 23 25	2

6.3.4 Variant 4

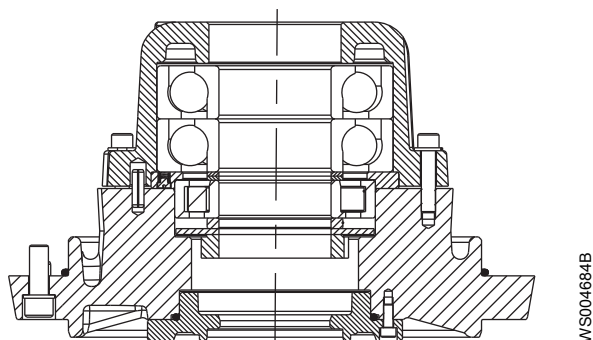


Figure 8: Tandem arrangement: orientation of ball bearing rows

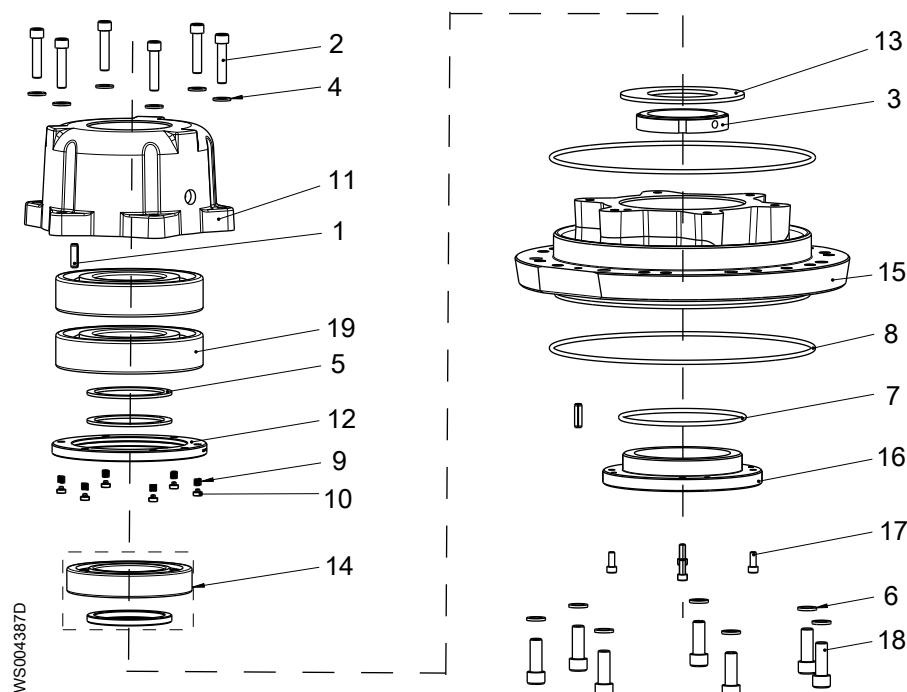
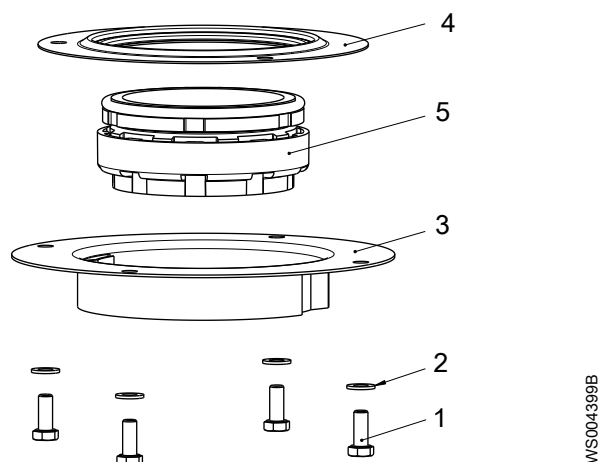


Table 41: 705, 735, 765: Vertical P-, L- and C-, H-pumps. With CLS

Item	Denomination		Part No.	Qty.
1	Tension pin		80 58 95	2
2	Hexagon socket head cap screw	M12 x 55	82 00 74	6
3	Round nut	KMK 19	82 22 40	1
4	Washer	13.0 x 24.0 x 2.5	82 35 20	6
5	Washer	95.1 x 115.0 x 3.5	82 44 28	2
6	Lock washer		82 50 19	7
7	O-ring	159.30 x 5.70	82 74 85	1
8	O-ring	339.30 x 5.70	82 75 05	2
9	Compression spring		83 38 02	6
10	Plug		520 08 00	6
11	Bearing cover		551 54 00	1
12	Washer		558 15 00	1
13	Supporting washer		558 16 00	1
14	Roller bearing unit		664 33 00	1
15	Bearing housing		680 85 02	1
16	Holder		686 25 00	1
17	Hexagon socket head cap screw	M8 x 20	82 00 32	4
18	Hexagon socket head cap screw	M16 x 45	82 01 06	7
19	Single-row angular contact ball bearing		84 23 25	2

7 Mechanical Shaft Seals

7.1 Inner seal



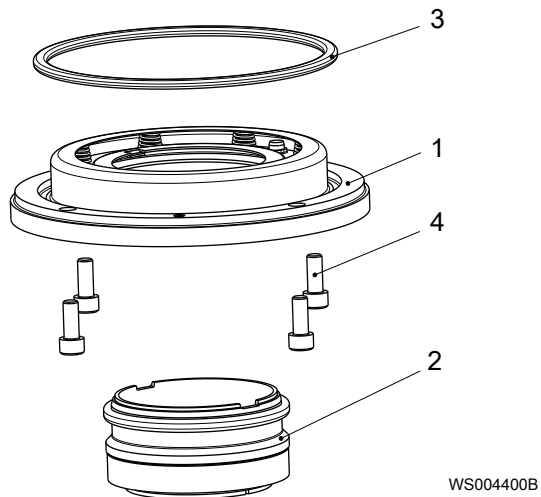
Item	Denomination		Part No.	Qty.
1	Hexagon head screw	M8 x 20	81 41 04	4
2	Washer	8.4 x 16.0 x 1.6	82 35 16	4
3	End washer		319 19 00	1
4	Washer		374 57 00	1
5	Mechanical seal	WCCR	617 99 02	1

7.2 Outer seal

7.2.1 Overview

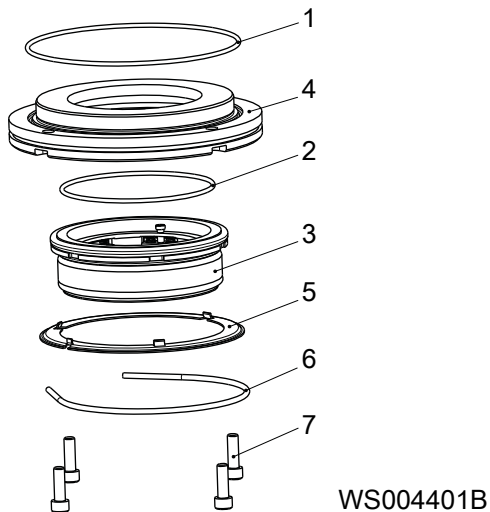
Pump	Reference
L3356 P7061, P7065, P7076 C3306, C3356 N3306, N3356 C/N/R 3231 manufactured before cycle 064 (8 May 2006).	Seals 726 18 00 (WCCR)/726 18 04 (RSiC) on page 44
C/N/R 3231 manufactured from cycle 064 (8 May 2006). H5570	Seals 586 12 04 (WCCR)/586 12 02 (RSiC) on page 44
L3400, L3602 P7081, P7101 C3312, C3400, C3501, C3531, C3602 N3312, N3400, N3531	Seals 578 58 01 (WCCR)/578 58 02 (RSiC) on page 45

7.2.2 Seals 726 18 00 (WCCR)/726 18 04 (RSiC)



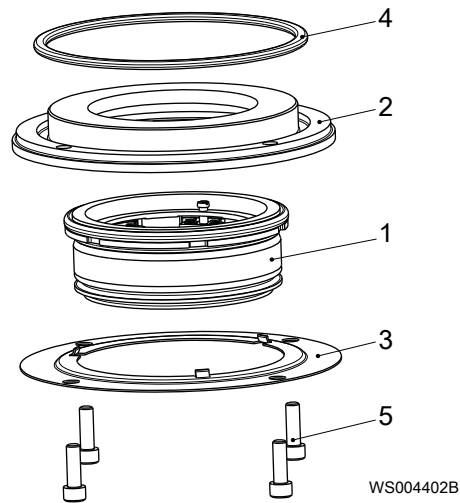
Item	Denomination		Part No., WCCR	Part No., RSiC	Qty.
1	Seal holder	Diameter 80	572 54 00	572 54 00	1
2	Mechanical seal	Diameter 80	726 18 00	726 18 04	1
3	O-ring		82 74 21	82 74 21	1
4	Hexagon socket head cap screw	M8 x 20	82 00 32	82 00 32	4

7.2.3 Seals 586 12 04 (WCCR)/586 12 02 (RSiC)



Item	Denomination		Part No., WCCR	Part No., RSiC	Qty.
1	O-ring	144.50 x 3.0	82 74 82	82 74 82	1
2	O-ring	109.50 x 3.0	82 81 67	82 81 67	1
3	Mechanical seal, WCCR	Diameter 80	586 12 04	586 12 02	1
4	Seal holder		600 51 02	600 51 02	1
5	Lock washer		600 65 01	600 65 01	1
6	Lock ring		600 66 01	600 66 01	1
7	Hexagon socket head cap screw	M8 x 25	82 00 34	82 00 34	4

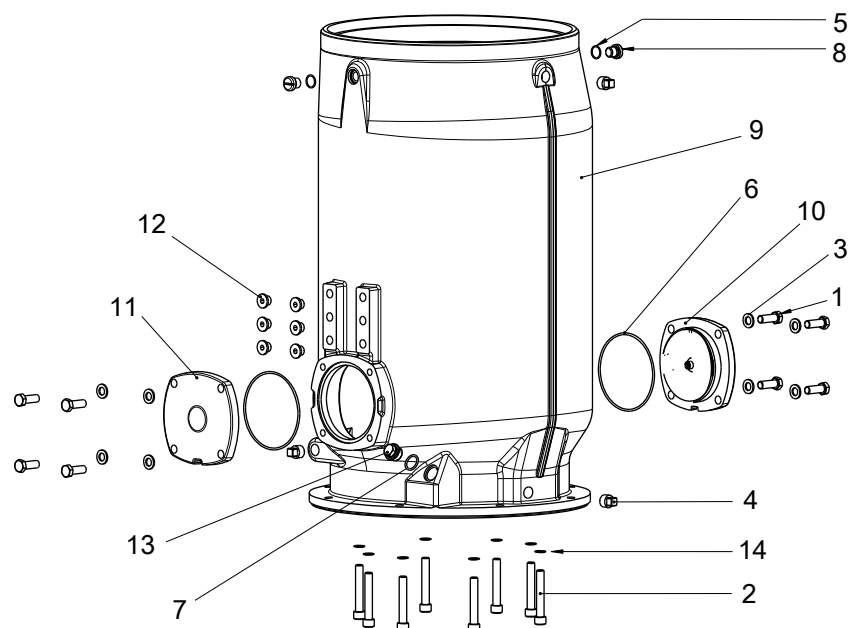
7.2.4 Seals 578 58 01 (WCCR)/578 58 02 (RSiC)



Item	Denomination		Part No., WCCR	Part No., RSiC	Qty.
1	Mechanical seal		578 58 01	578 58 02	1
2	Seal holder		584 90 00	584 90 00	1
3	Lock washer		584 91 00	584 91 00	1
4	O-ring		82 74 21	82 74 21	1
5	Hexagon socket head cap screw	M8 x 25	82 00 34	82 00 34	4

8 Cooling Jacket

8.1 External cooling: Z installation

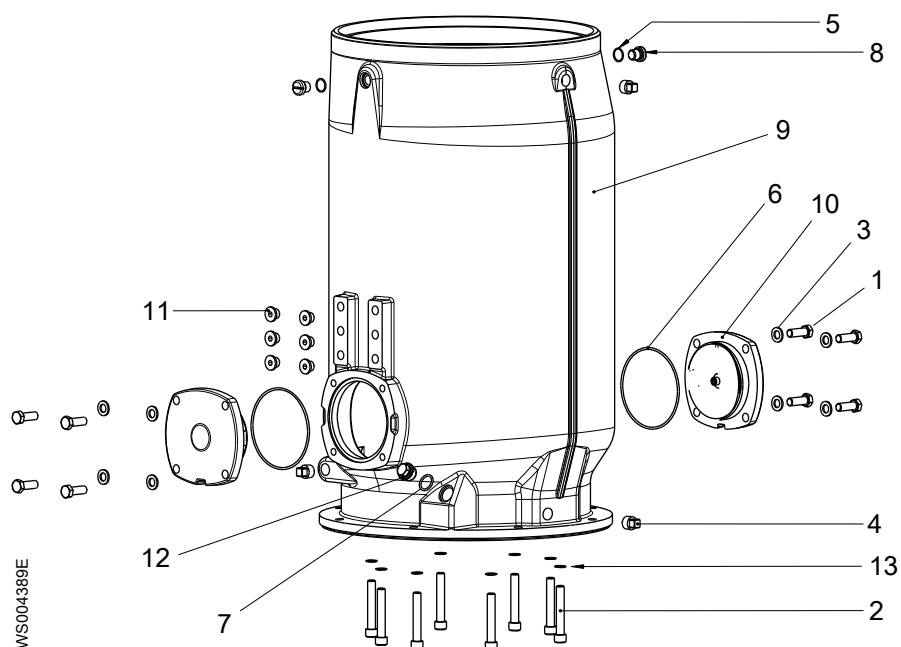


WS004388E

Table 42: External cooling: Z installation

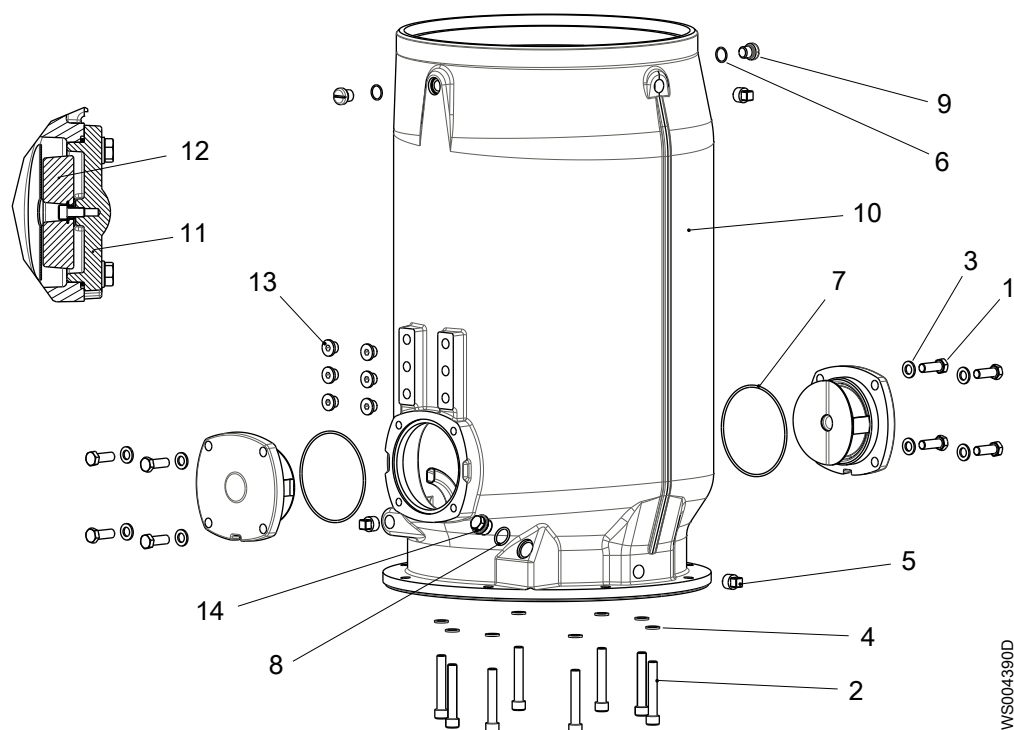
Item	Denomination		Part No.	Qty.
1	Hexagon head screw	M16 x 45	81 49 32	8
2	Hexagon socket head cap screw	M16 x 100	82 01 15	8
3	Washer	17.0 x 30.0 x 3.0	82 35 23	8
4	Plug		82 71 78	3
5	O-ring	22.20 x 3.0	82 73 91	2
6	O-ring	159.30 x 5.70	82 74 85	2
7	O-ring	28.17 x 3.53	82 77 30	2
8	Slotted head screw		283 13 01	2
9	Cooling jacket, unit	Drive unit: 705, 715	843 57 03	1
		Drive unit: 735, 745	843 57 13	
		Drive unit: 765, 775	843 57 23	
10	Cover unit		566 50 00	1
11	Cover		566 54 02	1
12	Plug		679 17 00	12
13	Plug		809 33 00	2
14	Seal washer		82 72 85	8

8.2 External cooling: P, S, and T installations



Item	Denomination		Part No.	Qty.
1	Hexagon head screw	M16 x 45	81 49 32	8
2	Hexagon socket head cap screw	M16 x 100	82 01 15	8
3	Washer	17.0 x 30.0 x 3.0	82 35 23	8
4	Plug		82 71 78	3
5	O-ring	22.20 x 3.0	82 73 91	2
6	O-ring	159.30 x 5.70	82 74 85	2
7	O-ring	28.17 x 3.53	82 77 30	2
8	Slotted head screw		283 13 01	2
9	Cooling jacket, unit	Drive unit: 705, 715	843 57 03	1
		Drive unit: 735, 745	843 57 13	
		Drive unit: 765, 775	843 57 23	
10	Cover unit		566 50 00	2
11	Plug		679 17 00	12
12	Plug		809 33 00	2
13	Seal washer		82 72 85	8

8.3 Integrated cooling: T installation



WS004390D

Table 43: Integrated cooling: T installation. Parts marked with * are optional.

Item	Denomination		Part No.	Qty.
1	Hexagon head screw	M16 x 45	81 49 32	8
2	Hexagon socket head cap screw	M16 x 100	82 01 15	8
3	Washer	17.0 x 30.0 x 3.0	82 35 23	8
4	Lock washer		82 50 19	8
5	Plug		82 71 78	3
6	O-ring	22.20 x 3.0	82 73 91	2
7	O-ring	159.30 x 5.70	82 74 85	2
8	O-ring	28.17 x 3.53	82 77 30	2
9	Slotted head screw		283 13 01	2
10	Cooling jacket, unit	Drive unit: 705, 715	843 57 07	1
		Drive unit: 735, 745	843 57 17	
		Drive unit: 765, 775	843 57 27	
11	Cover unit		566 50 00	2
12	Anode		566 55 00 *	2
13	Plug		679 17 00	12
14	Plug		809 33 00	2

8.4 Integrated cooling: Z installation

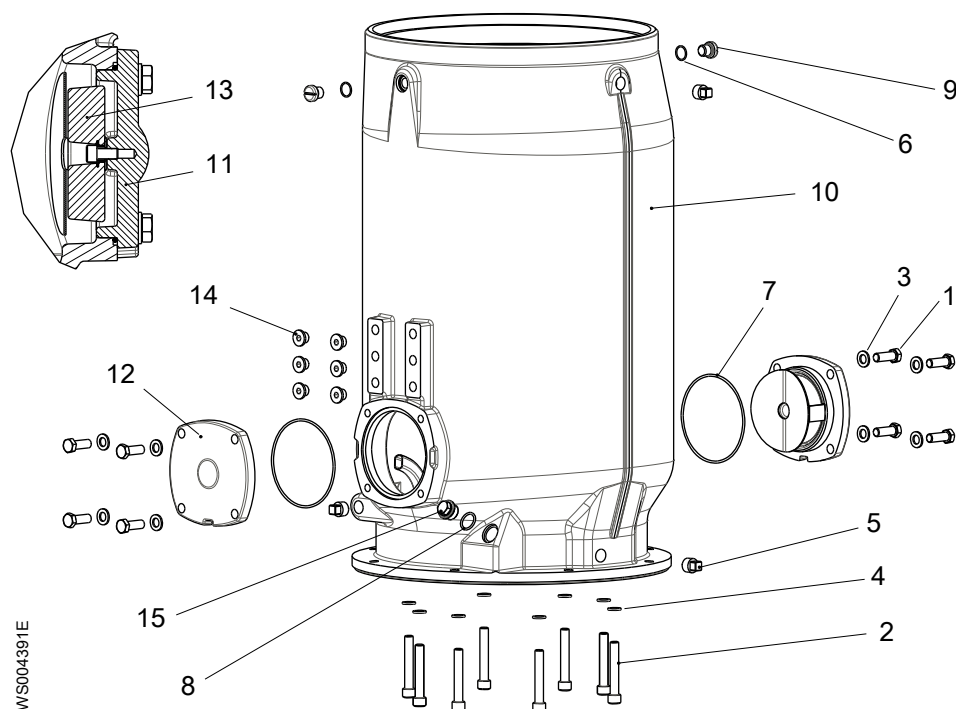
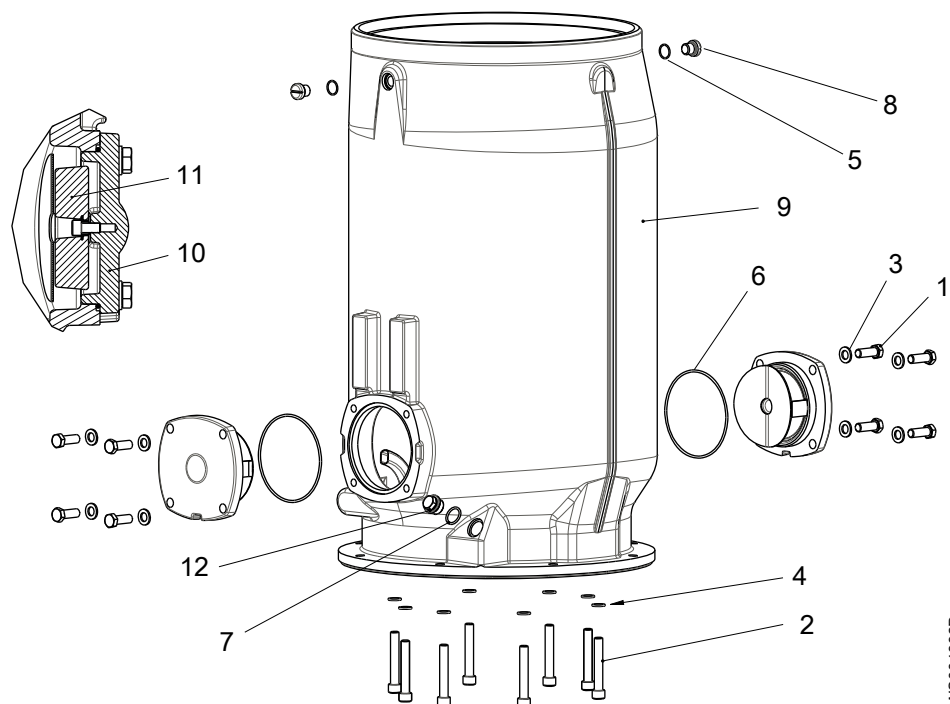


Table 44: Integrated cooling: Z installation. Parts marked with * are optional.

Item	Denomination		Part No.	Qty.
1	Hexagon head screw	M16 x 45	81 49 32	8
2	Hexagon socket head cap screw	M16 x 100	82 01 15	8
3	Washer	17.0 x 30.0 x 3.0	82 35 23	8
4	Lock washer		82 50 19	8
5	Plug		82 71 78	3
6	O-ring	22.20 x 3.0	82 73 91	2
7	O-ring	159.30 x 5.70	82 74 85	2
8	O-ring	28.17 x 3.53	82 77 30	2
9	Slotted head screw		283 13 01	2
10	Cooling jacket, unit	Drive unit: 705, 715	843 57 07	1
		Drive unit: 735, 745	843 57 17	
		Drive unit: 765, 775	843 57 27	
11	Cover unit		566 50 00	1
12	Cover		566 54 02	1
13	Anode		566 55 00 *	1
14	Plug		679 17 00	12
15	Plug		809 33 00	2

8.5 Integrated cooling: P and S installations



WS004392D

Table 45: Integrated cooling: P-S installation. Parts marked with * are optional.

Item	Denomination		Part No.	Qty.
1	Hexagon head screw	M16 x 45	81 49 32	8
2	Hexagon socket head cap screw	M16 x 100	82 01 15	8
3	Washer	17.0 x 30.0 x 3.0	82 35 23	8
4	Lock washer		82 50 19	8
5	O-ring	22.20 x 3.0	82 73 91	2
6	O-ring	159.30 x 5.70	82 74 85	2
7	O-ring	28.17 x 3.53	82 77 30	2
8	Slotted head screw		283 13 01	2
9	Cooling jacket, unit	Drive unit: 705, 715	843 57 06	1
		Drive unit: 735, 745	843 57 16	
		Drive unit: 765, 775	843 57 26	
10	Cover unit		566 50 00	2
11	Anode		566 55 00 *	2
12	Plug		809 33 00	2

8.6 Integrated cooling: P and S installations, and freezing temperatures

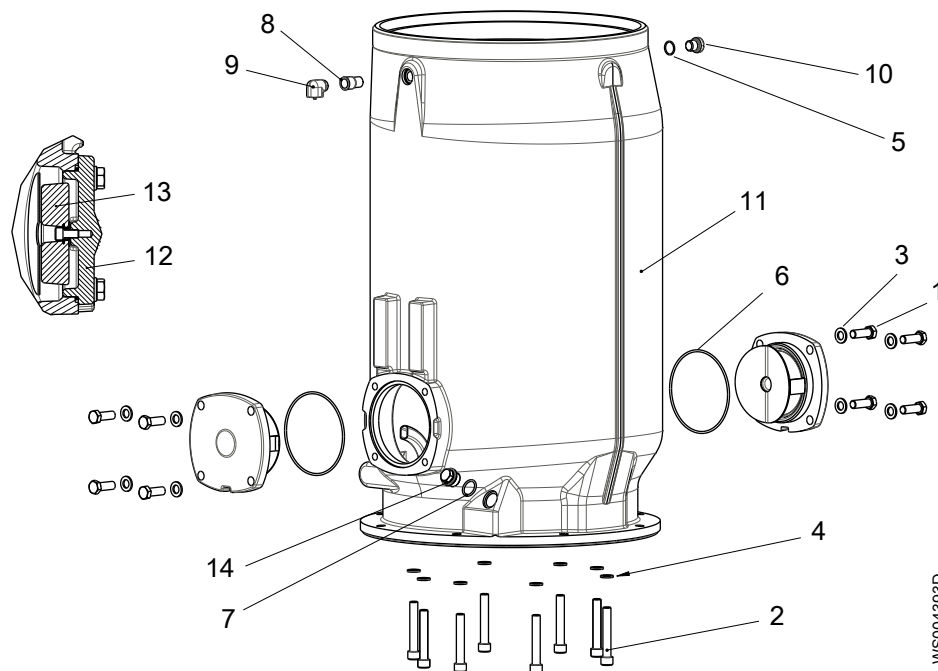


Table 46: P-S installation and freezing temperatures. Parts marked with * are optional.

Item	Denomination		Part No.	Qty.
1	Hexagon head screw	M16 x 45	81 49 32	8
2	Hexagon socket head cap screw	M16 x 100	82 01 15	8
3	Washer	17.0 x 30.0 x 3.0	82 35 23	8
4	Lock washer		82 50 19	8
5	O-ring	22.20 x 3.0	82 73 91	1
6	O-ring	159.30 x 5.70	82 74 85	2
7	O-ring	28.17 x 3.53	82 77 30	2
8	Muff		83 12 92	1
9	Air release valve		83 93 24	1
10	Slotted head screw		283 13 01	1
11	Cooling jacket, unit	Drive unit: 705, 715	843 57 06	1
		Drive unit: 735, 745	843 57 16	
		Drive unit: 765, 775	843 57 26	
12	Cover unit		566 50 00	2
13	Anode		566 55 00 *	2
14	Plug		809 33 00	2

9 Adapters

9.1 C-, N- 3231, 3306, 3356: With cooling jacket

With anodes

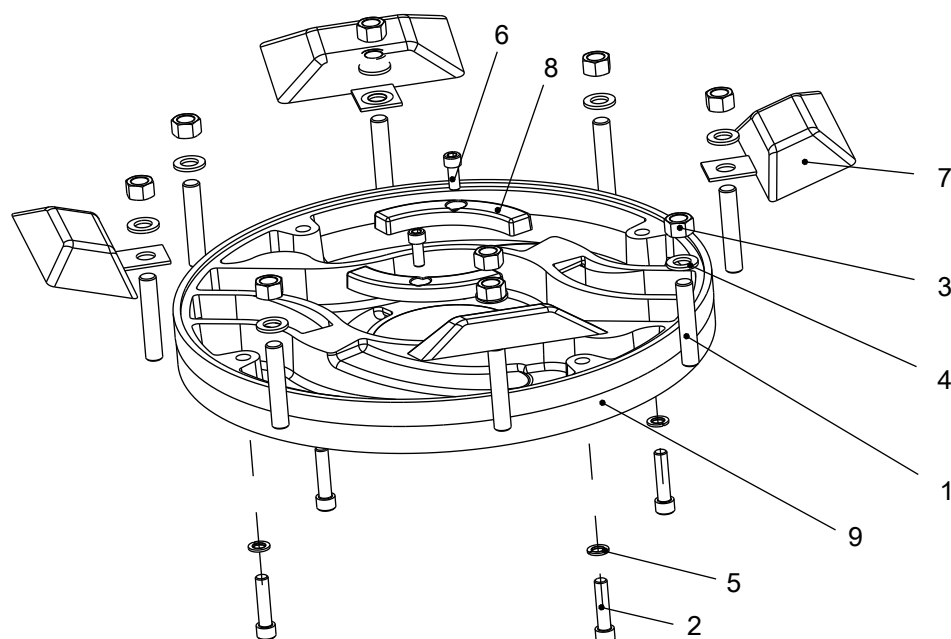


Table 47: C3231, N3231: with cooling jacket and anodes

Item	Denomination		Part No. Internal and external anodes	Part No. Internal anodes	Qty.
1	Stud	M16x85	80 97 62	80 97 62	8
2	Hexagon socket head cap screw	M12 x 50	82 00 73	82 00 73	4
3	Hexagon nut		82 23 37	82 23 37	8
4	Washer	17.0 x 30.0 x 3.0	82 35 78	82 35 78	12
5	Lock washer		82 50 17	82 50 17	4
6	Hexagon socket head cap screw	M10 x 25	83 03 23	83 03 23	2
7	Zinc anode		518 72 00	-	4
8	Anode		572 83 00	572 83 00	2
9	Guide ring		631 10 00	631 10 00	1

Table 48: C3306, C3356, N3306, N3356: with cooling jacket and anodes

Item	Denomination		Part No. Internal and external anodes	Part No. Internal anodes	Qty.
1	Stud	M16x85	80 95 51	80 95 51	8
2	Hexagon socket head cap screw	M12 x 50	82 00 73	82 00 73	4
3	Hexagon nut		82 23 61	82 23 61	8
4	Washer	17.0 x 30.0 x 3.0	82 35 23	82 35 23	12

Item	Denomination		Part No. Internal and external anodes	Part No. Internal anodes	Qty.
5	Lock washer		82 50 17	82 50 17	4
6	Hexagon socket head cap screw	M10 x 25	83 03 23	83 03 23	2
7	Zinc anode		518 72 00	-	4
8	Anode		572 83 00	572 83 00	2
9	Guide ring		631 10 00	631 10 00	1

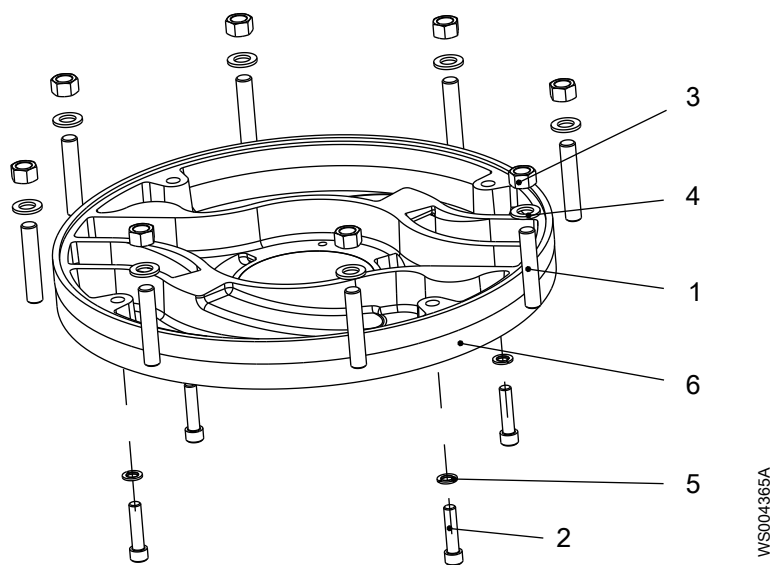
Without anodes

Table 49: C3231, C3306, C3356, N3231, N3306, N3356: with cooling jacket and without anodes

Item	Denomination	Part No. 3231	Part No. 3306, 3356	Qty.
1	Stud M16x85	80 97 62	80 95 51	8
2	Hexagon socket head cap screw M12 x 50	82 00 73	82 00 73	4
3	Hexagon nut	82 23 37	82 23 61	8
4	Washer 17.0 x 30.0 x 3.0	82 35 78	82 35 23	8
5	Lock washer	82 50 17	82 50 17	4
6	Guide ring	631 10 00	631 10 00	1

9.2 C-, N- 3231, 3306, 3356: Without cooling jacket

With anodes

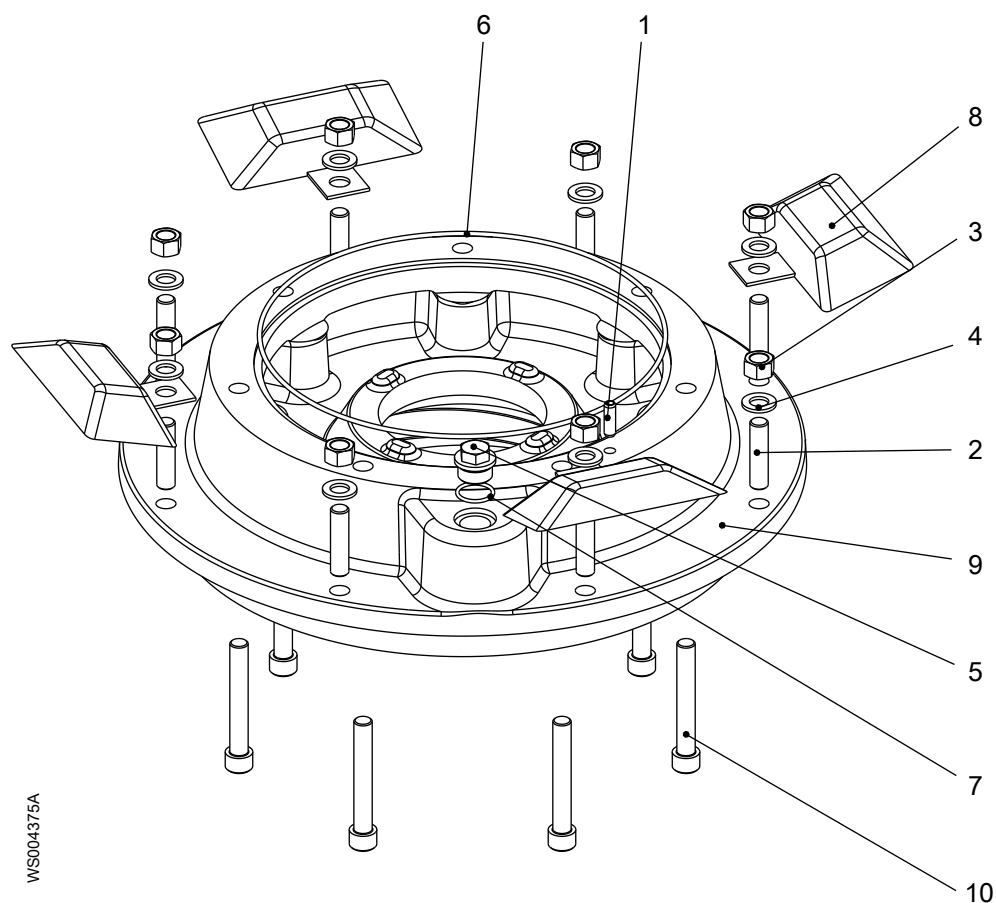


Table 50: 3231, 3306, 3356: Without cooling jacket and with anodes

Item	Denomination		Part No. 3231	Part No. 3306, 3356	Qty.
1	Tension pin		80 58 95	80 58 95	1
2	Stud	M16x65	80 97 62	80 95 51	8
3	Hexagon nut		82 23 37	82 23 37	8
4	Washer	17.0 x 30.0 x 3.0	82 35 23	82 35 23	8
5	Plug		809 33 00	809 33 00	1
6	O-ring	339.30 x 5.70	82 75 05	82 75 05	1
7	O-ring	28.17 x 3.53	82 77 30	82 77 30	1
8	Zinc anode		518 72 00	518 72 00	4
9	Oil housing		646 88 02	646 88 02	1
10	Hexagon socket head cap screw	M16 x 110	82 01 16	82 01 16	7

Without anodes

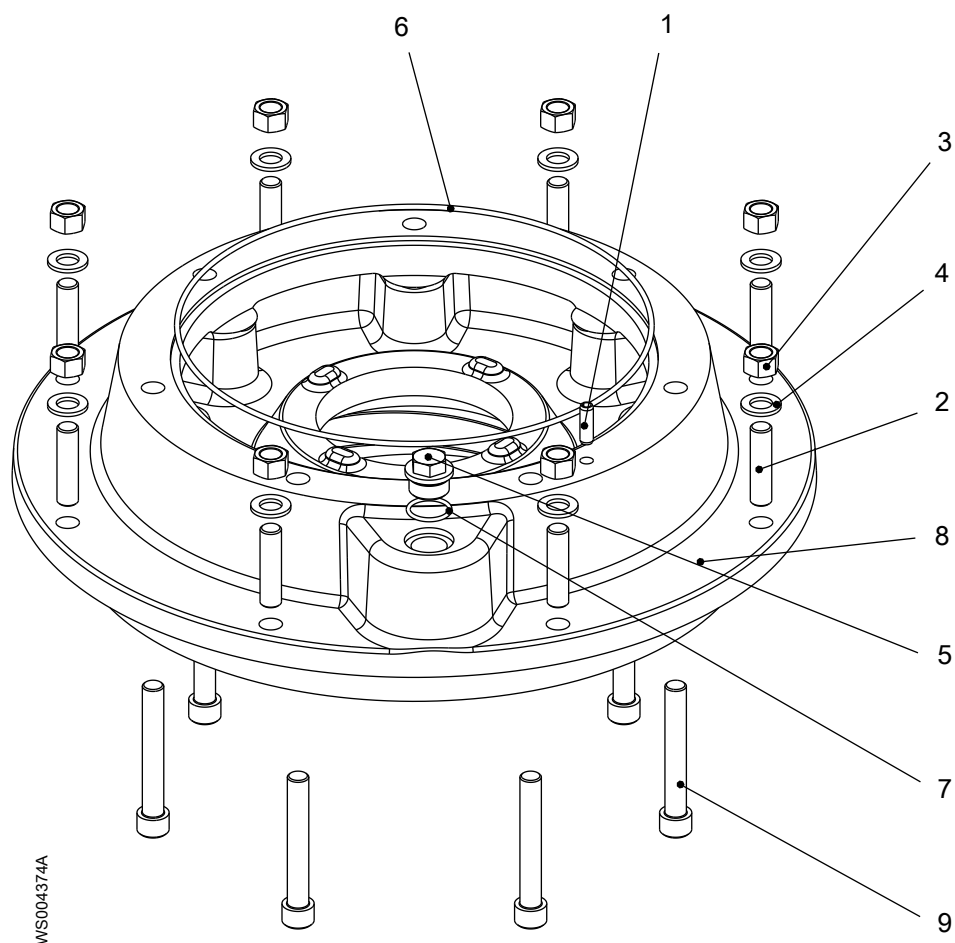


Table 51: 3231, 3306, 3356: Without cooling jacket and without anodes

Item	Denomination		Part No. 3231	Part No. 3306, 3356	Qty.
1	Tension pin		80 58 95	80 58 95	1
2	Stud	M16x65	80 97 62	80 95 51	8
3	Hexagon nut		82 23 37	82 23 37	8
4	Washer	17.0 x 30.0 x 3.0	82 35 23	82 35 23	8
5	Plug		809 33 00	809 33 00	1
6	O-ring	339.30 x 5.70	82 75 05	82 75 05	1
7	O-ring	28.17 x 3.53	82 77 30	82 77 30	1
8	Oil housing		646 88 02	646 88 02	1
9	Hexagon socket head cap screw	M16 x 110	82 01 16	82 01 16	7

9.3 R3231: With cooling jacket

With anodes

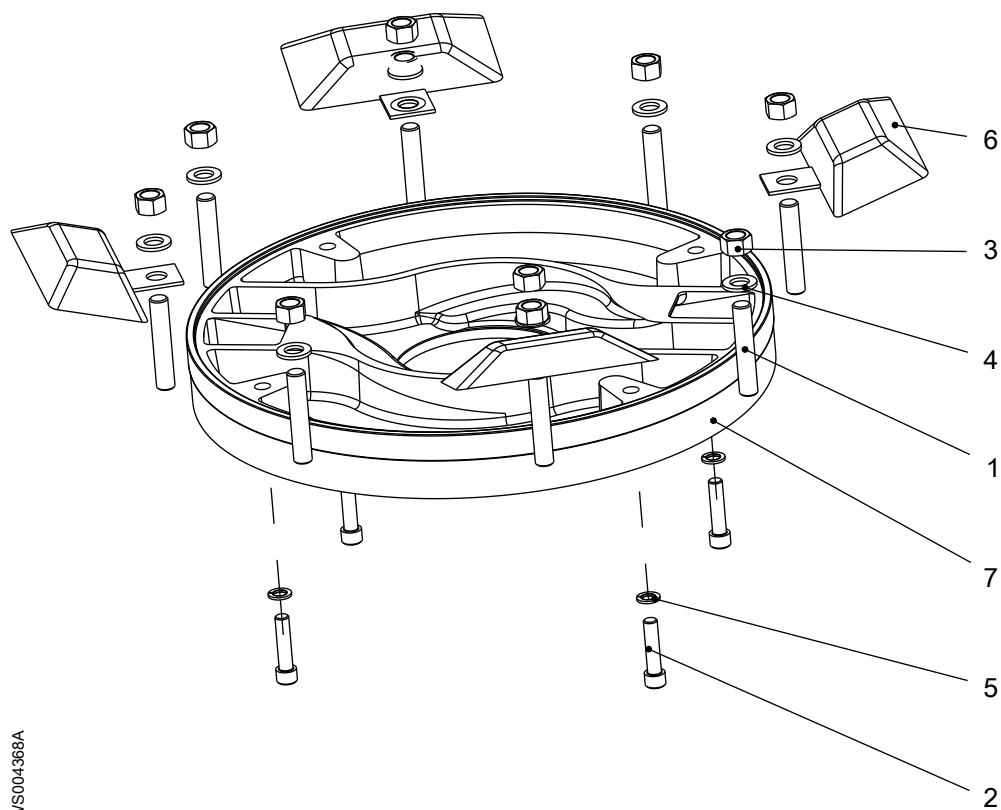
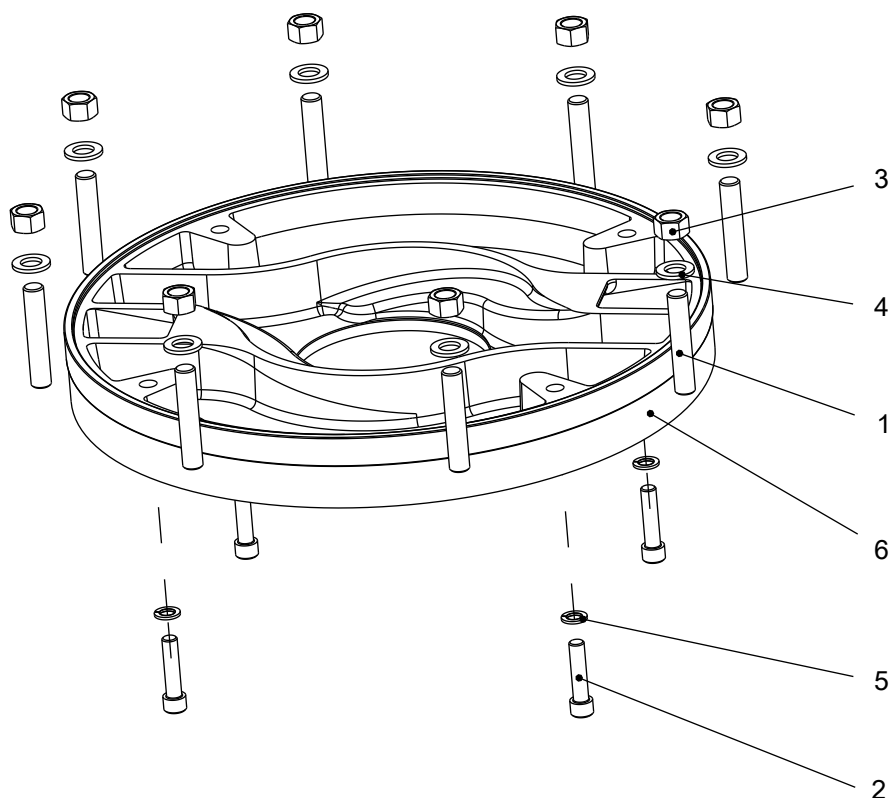


Table 52: R3231: With cooling jacket and anodes

Item	Denomination		Part No.	Qty.
1	Stud	M16x85	809551	8
2	Hexagon socket head cap screw	M12 x 50	820073	4
3	Hexagon nut		822337	8
4	Washer	17.0 x 30.0 x 3.0	823578	8
5	Lock washer		825017	4
6	Zinc anode		5187200	4
7	Guide ring		5638500	1

Without anodes



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Table 53: R3231: With cooling jacket and without anodes

Item	Denomination		Part No.	Qty.
1	Stud	M16x45	80 95 51	8
2	Hexagon socket head cap screw	M12 x 50	82 00 73	4
3	Hexagon nut		82 23 37	8
4	Washer	17.0 x 30.0 x 3.0	82 35 78	8
5	Lock washer		82 50 17	4
6	Guide ring		563 85 00	1

9.4 C-, N- 3312, 3400: With cooling jacket

With anodes

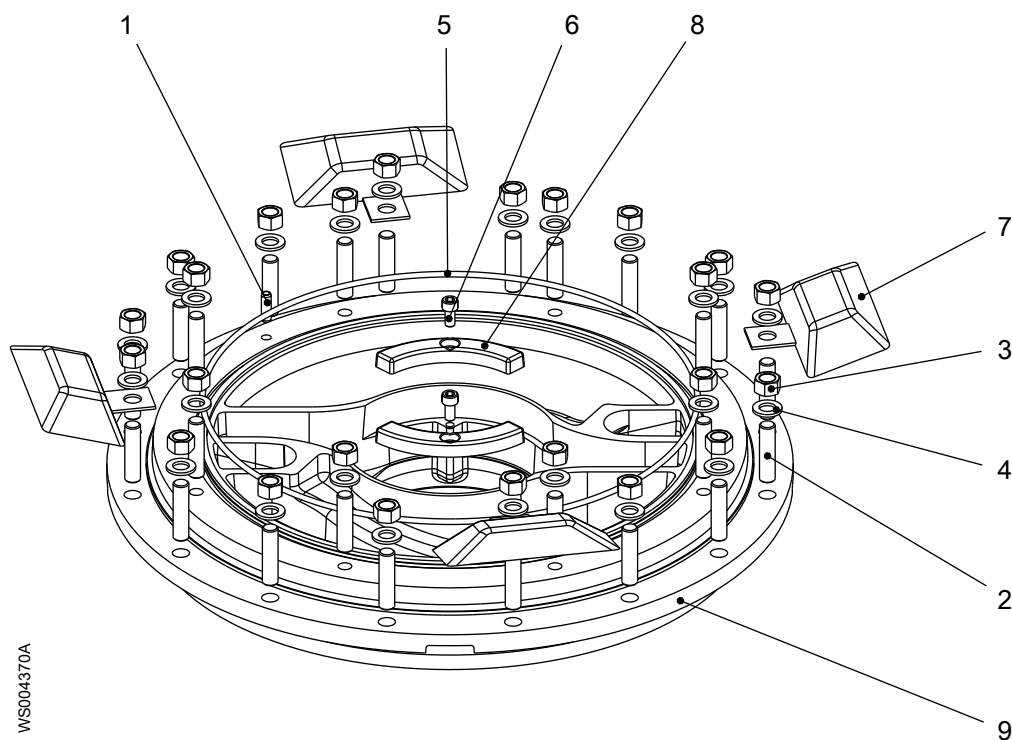
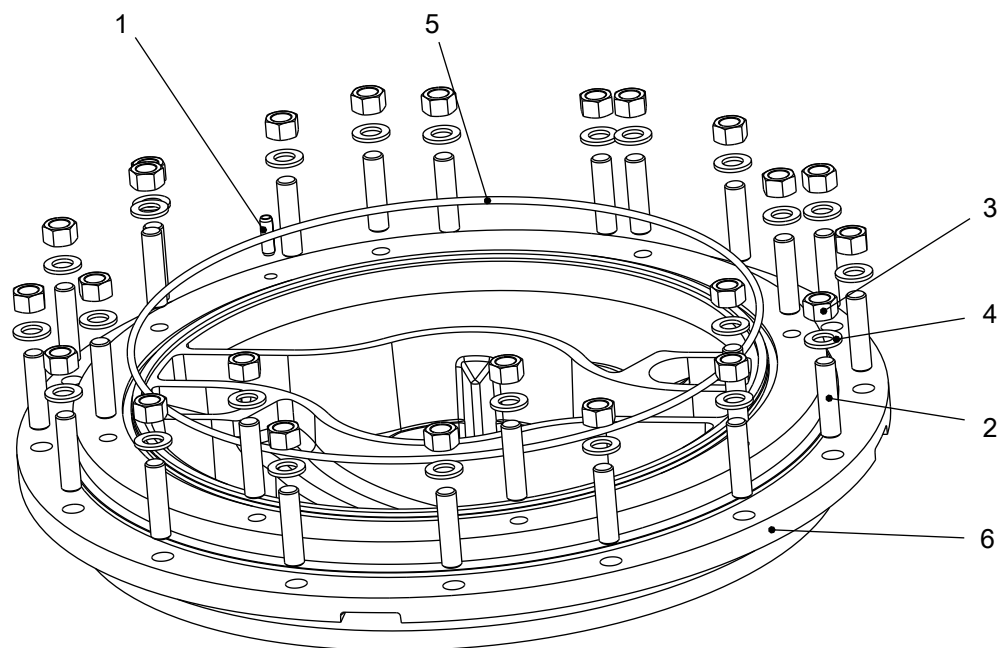


Table 54: 3312, 3400: With cooling jacket and anodes

Item	Denomination		Part No. Internal and External Anodes	Part No. Internal Anodes	Qty.
1	Tension pin		80 58 95	80 58 95	1
2	Stud	M16x65	80 95 51	80 95 51	24
3	Hexagon nut		82 23 61	82 23 61	24
4	Washer	17.0 x 30.0 x 3.0	82 35 23	82 35 23	24
5	O-Ring	499.30 x 5.70	82 75 13	82 75 13	1
6	Hexagon socket head cap screw	M10 x 20	83 03 21	83 03 21	2
7	Zinc anode		518 72 00	-	4
8	Anode		572 83 00	572 83 00	2
9	Guide ring		572 90 01	572 90 01	1

Without anodes



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Table 55: 3312, 3400: With cooling jacket, without anodes

Item	Denomination		Part No.	Qty.
1	Tension pin		80 58 95	1
2	Stud	M16x65	80 95 51	24
3	Hexagon nut		82 23 61	24
4	Washer	17.0 x 30.0 x 3.0	82 35 23	24
5	O-ring	499.30 x 5.70	82 75 13	1
6	Guide ring		572 90 00	1

9.5 C-, N- 3312, 3400: Without cooling jacket

With anodes

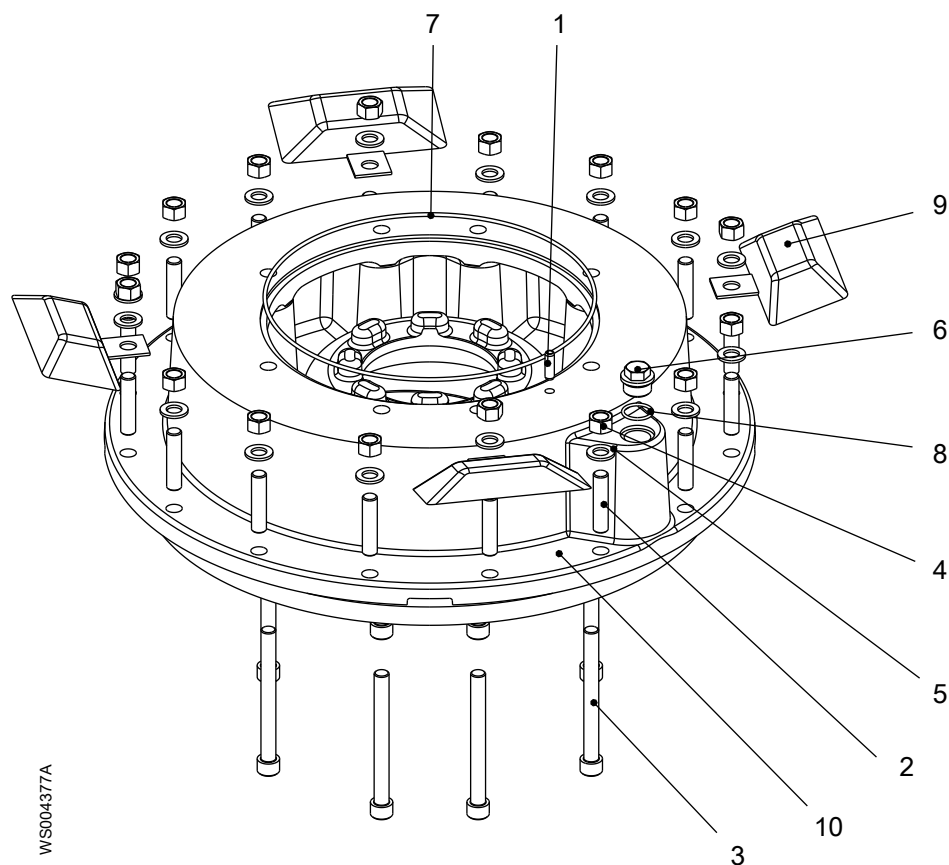


Table 56: 3312, 3400: Without cooling jacket, with anodes

Item	Denomination		Part No.	Qty.
1	Tension pin		80 58 95	1
2	Stud	M16x70	80 95 52	16
3	Hexagon socket head cap screw	M16 x 160	82 01 21	8
4	Hexagon nut		82 23 61	16
5	Washer	17.0 x 30.0 x 3.0	82 35 23	16
6	Plug		809 33 00	1
7	O-ring	339.30 x 5.70	82 75 05	1
8	O-ring	28.17 x 3.53	82 77 30	1
9	Zinc anode		518 72 00	4
10	Oil housing		777 45 00	1

Without anodes

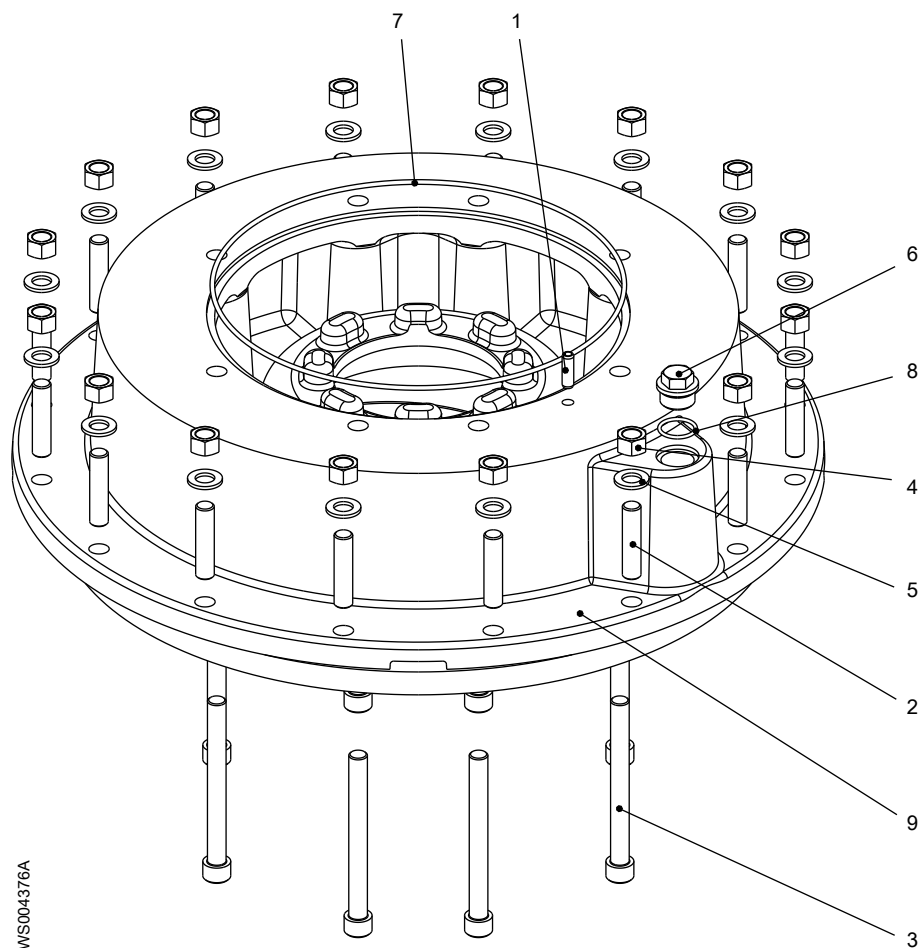
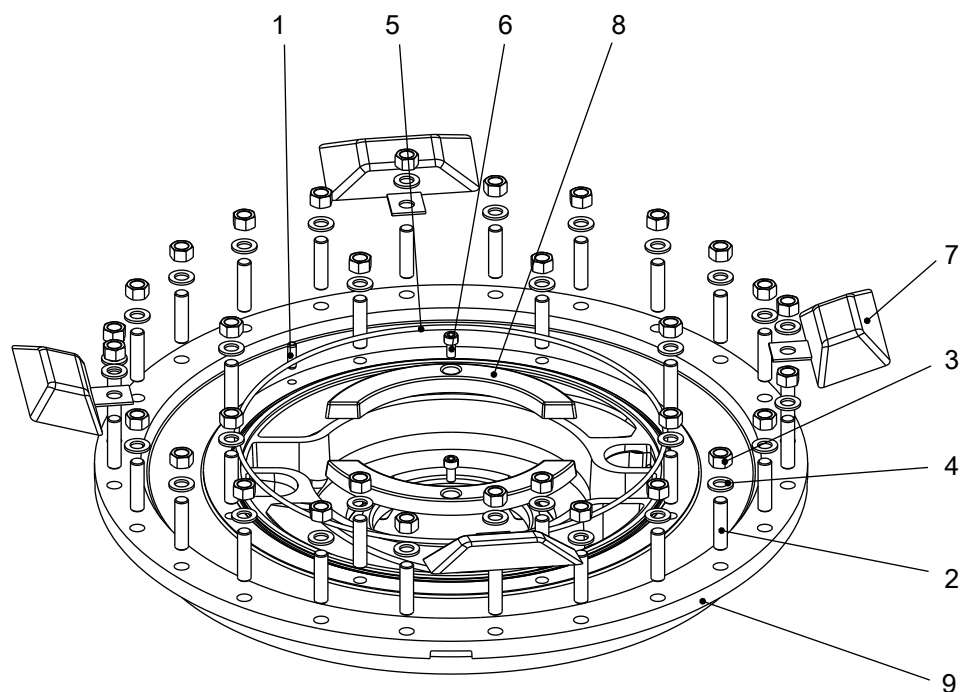


Table 57: 3312, 3400: Without cooling jacket, without anodes

Item	Denomination		Part No.	Qty.
1	Tension pin		80 58 95	1
2	Stud	M16x70	80 95 52	16
3	Hexagon socket head cap screw	M16 x 160	82 01 21	8
4	Hexagon nut		82 23 61	16
5	Washer	17.0 x 30.0 x 3.0	82 35 23	16
6	Plug		809 33 00	1
7	O-ring	339.30 x 5.70	82 75 05	1
8	O-ring	28.17 x 3.53	82 77 30	1
9	Oil housing		777 45 00	1

9.6 C3501, C3531, C3602, N3531: With cooling jacket

With anodes

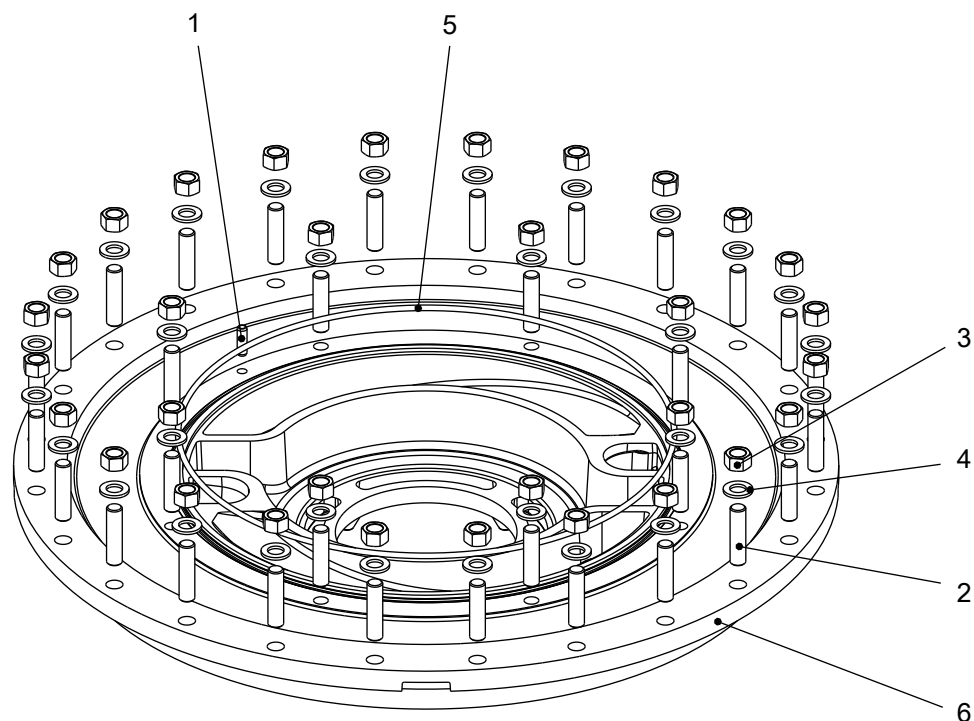


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Table 58: C3501, C3531, C3602, N3531: With cooling jacket and anodes

Item	Denomination		Part No. Internal and External Anodes	Part No. Internal Anodes	Qty.
1	Tension pin		80 58 95	80 58 95	1
2	Stud	M16x65	80 95 51	80 95 51	32
3	Hexagon nut		82 23 61	82 23 61	32
4	Washer	17.0 x 30.0 x 3.0	82 35 23	82 35 23	32
5	O-ring	499.30 x 5.70	82 75 13	82 75 13	1
6	Hexagon socket head cap screw	M10 x 20	83 03 21	83 03 21	2
7	Zinc anode		518 72 00	-	4
8	Anode		557 06 00	557 06 00	2
9	Guide ring		574 95 01	574 95 01	1

Without anodes



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Table 59: C3501, C3531, C3602, N3531: With cooling jacket, without anodes

Item	Denomination		Part No.	Qty.
1	Tension pin		80 58 95	1
2	Stud	M16x65	80 95 51	32
3	Hexagon nut		82 23 61	32
4	Washer	17.0 x 30.0 x 3.0	82 35 23	32
5	O-ring	499.30 x 5.70	82 75 13	1
6	Guide ring		574 95 00	1

9.7 C3501, C3531, C3602, N3531: Without cooling jacket

With anodes

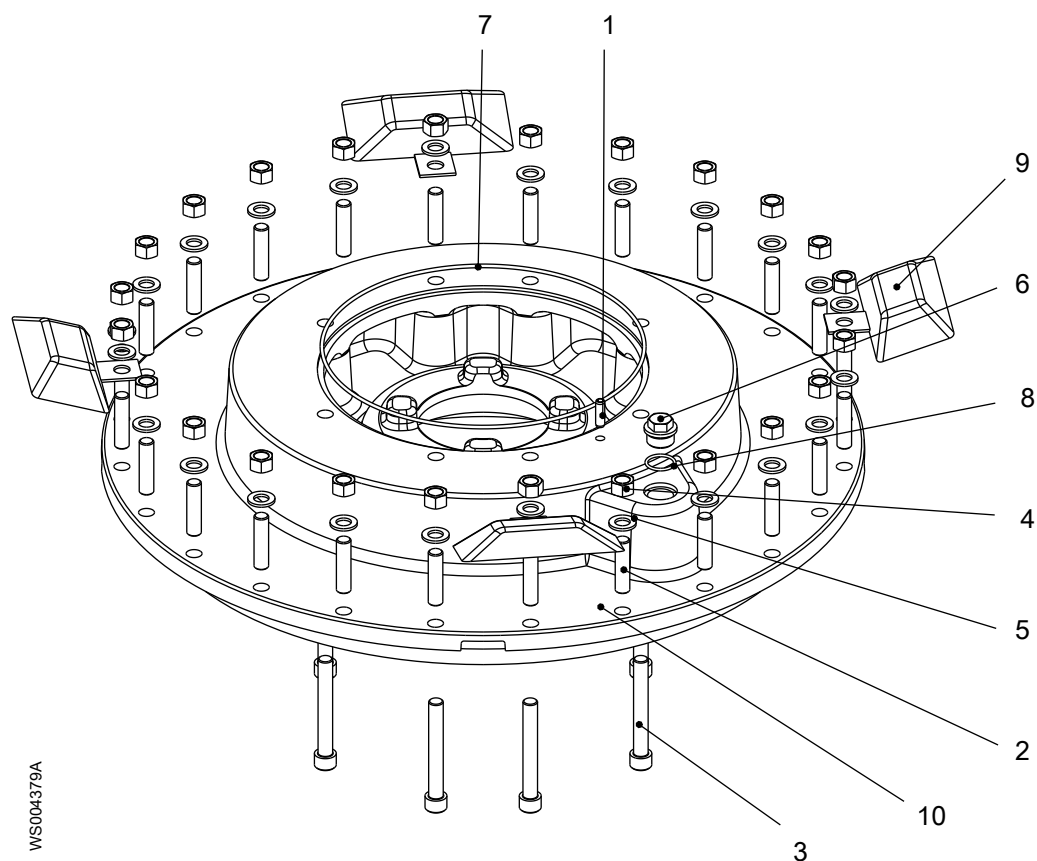
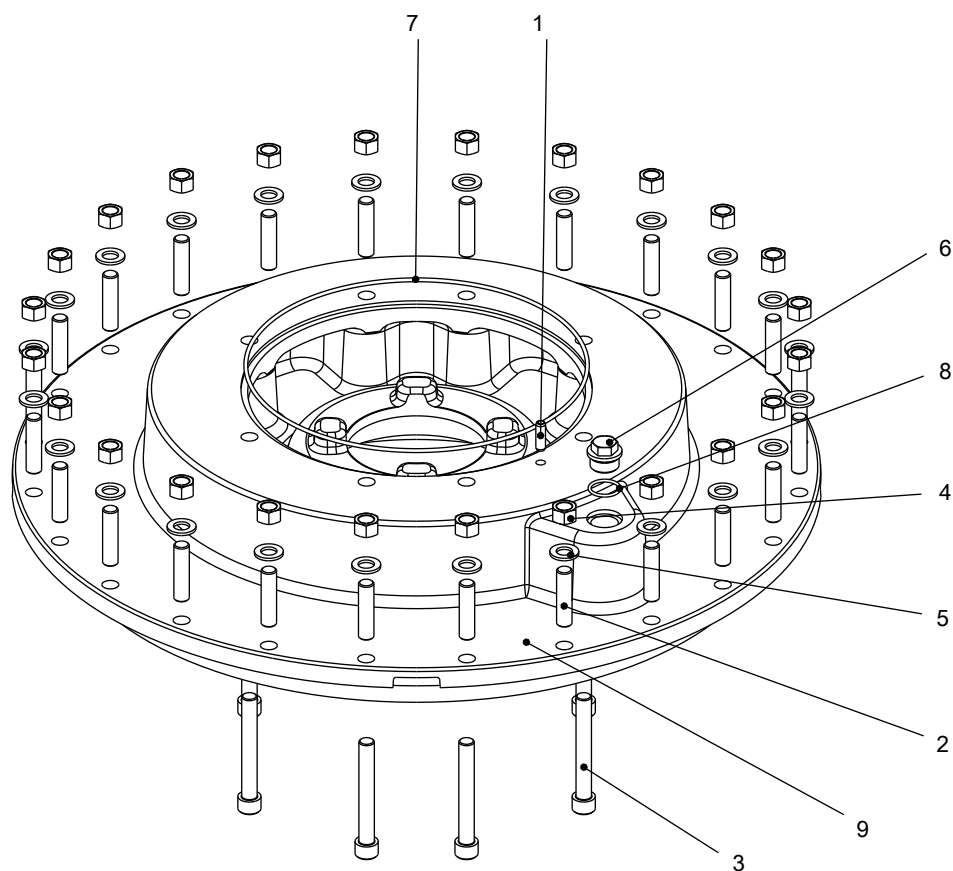


Table 60: C3501, C3531, C3602, N3531: Without cooling jacket, with anodes

Item	Denomination		Part No.	Qty.
1	Tension pin		80 58 95	1
2	Stud	M16x65	80 95 51	24
3	Hexagon socket head cap screw	M16 x 120	82 01 17	8
4	Hexagon nut		82 23 61	24
5	Washer	17.0 x 30.0 x 3.0	82 35 23	24
6	Plug		809 33 00	1
7	O-ring	339.30 x 5.70	82 75 05	1
8	O-ring	28.17 x 3.53	82 77 30	1
9	Zinc anode		518 72 00	4
10	Oil housing		646 92 01	1

Without anodes



WS004378A

Table 61: C3501, C3531, C3602, N3531: Without cooling jacket, without anodes

Item	Denomination		Part No.	Qty.
1	Tension pin		80 58 95	1
2	Stud	M16x65	80 95 51	24
3	Hexagon socket head cap screw	M16 x 120	82 01 17	8
4	Hexagon nut		82 23 61	24
5	Washer	17.0 x 30.0 x 3.0	82 35 23	24
6	Plug		809 33 00	1
7	O-ring	339.30 x 5.70	82 75 05	1
8	O-ring	28.17 x 3.53	82 77 30	1
9	Oil housing		646 92 01	1

9.8
H5570: With cooling jacket

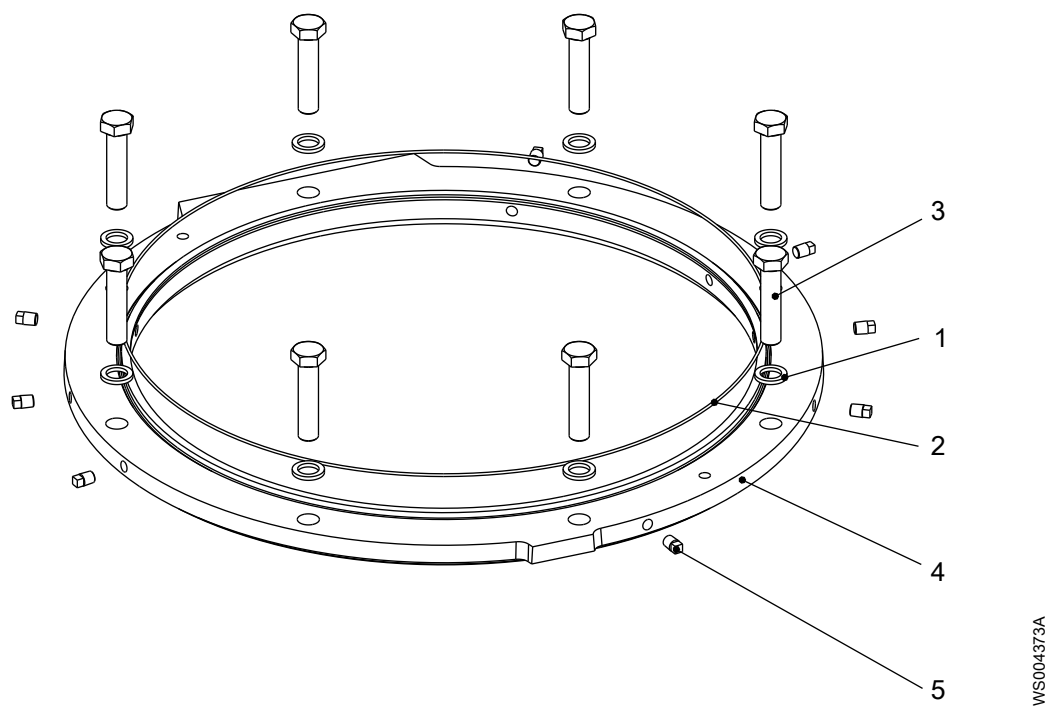


Table 62: H5570: With cooling jacket

Item	Denomination		Part No.	Qty.
1	Lock washer		82 50 19	8
2	O-ring	510.0 x 3.0	83 71 25	1
3	Hexagon head screw	M16 x 70	84 34 09	8
4	Ring		630 84 00	1
5	Plug		83 07 73	8

9.9 H5570: Without cooling jacket

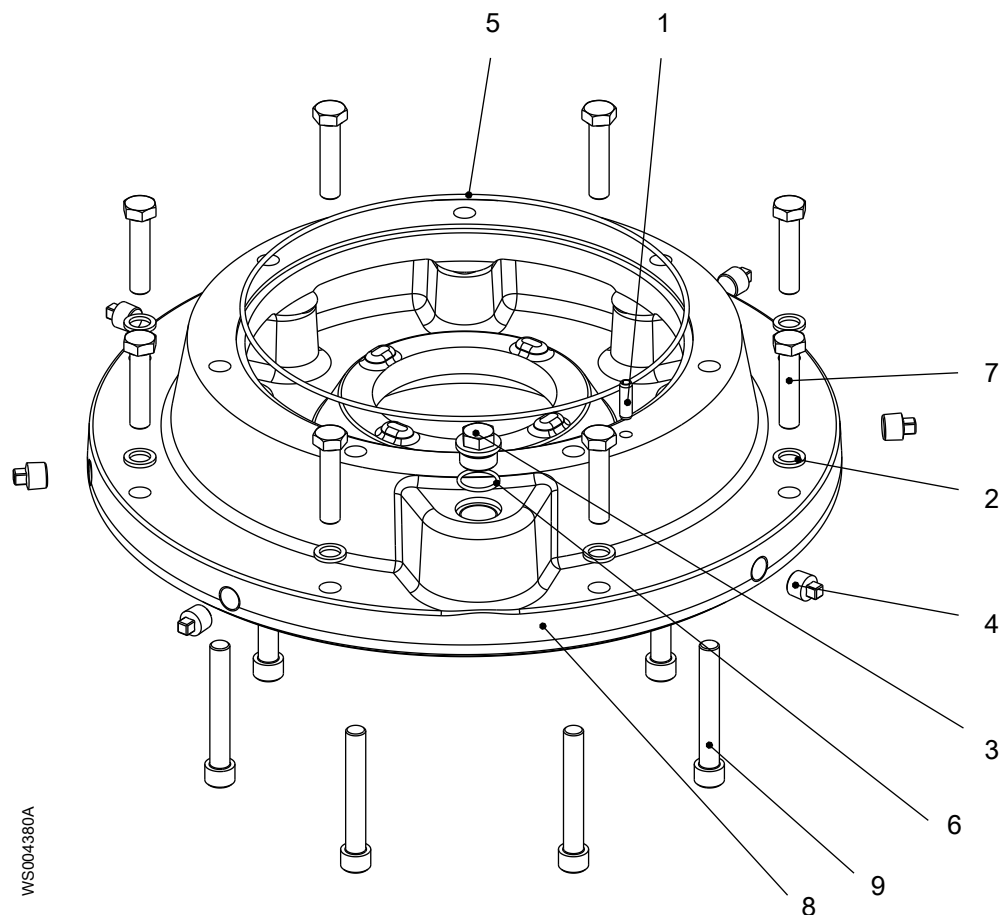


Table 63: H5570: Without cooling jacket

Item	Denomination		Part No.	Qty.
1	Tension pin		80 58 95	1
2	Lock washer		82 50 19	8
3	Plug		809 33 00	1
4	Plug		82 71 77	7
5	O-ring	339.30 x 5.70	82 75 05	1
6	O-ring	28.17 x 3.53	82 77 30	1
7	Hexagon head screw	M16 x 70	84 34 09	8
8	Oil housing		646 88 12	1
9	Hexagon socket head cap screw	M16 x 110	82 01 16	7

9.10 P and L pumps

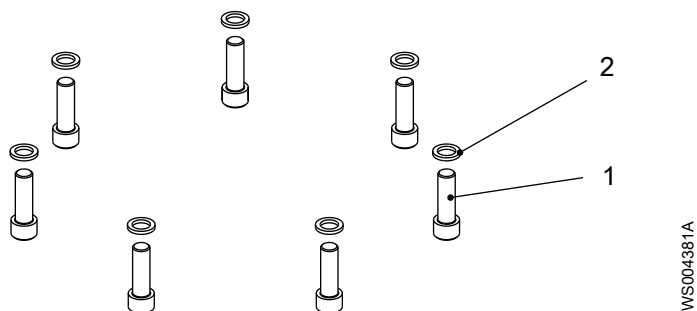


Table 64: P7061, P7065, P7081, P7101

Item	Denomination		Part No. P7061, P7065, P7081	Part No. P7101	Qty.
1	Hexagon socket head cap screw	M16 x 50	82 01 07	—	7
		M16 x 140	—	82 01 19	
2	Lock washer		82 50 19	82 50 19	7

Table 65: L3356, L3400, L3602

Item	Denomination		Part No. L3356	Part No. L3400	Part No. L3602	Qty.
1	Hexagon socket head cap screw	M16 x 120	82 01 17	—	82 01 17	7
		M16 x 140	—	82 01 19	—	
2	Plain washer		82 40 54	82 42 33	82 42 33	7

10 Small Connection House

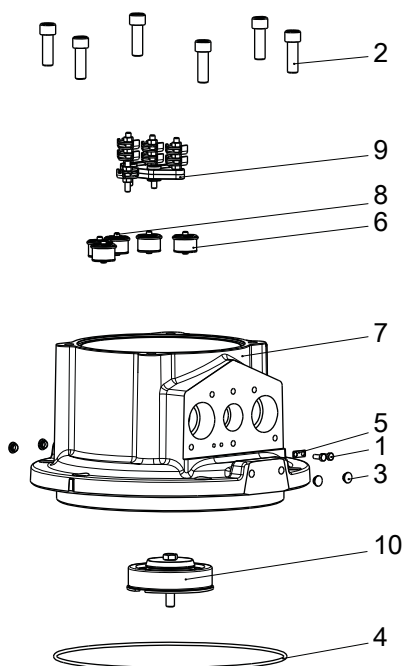
10.1 Overview

Configurations

No. of Power Cables	Installation	Reference
2	Horizontal	2 power cables: Horizontal on page 69
	Vertical	2 power cables: Vertical on page 70
1	Horizontal	1 power cable: Horizontal on page 71
	Vertical	1 power cable: Vertical on page 72

10.2 2 power cables

10.2.1 2 power cables: Horizontal

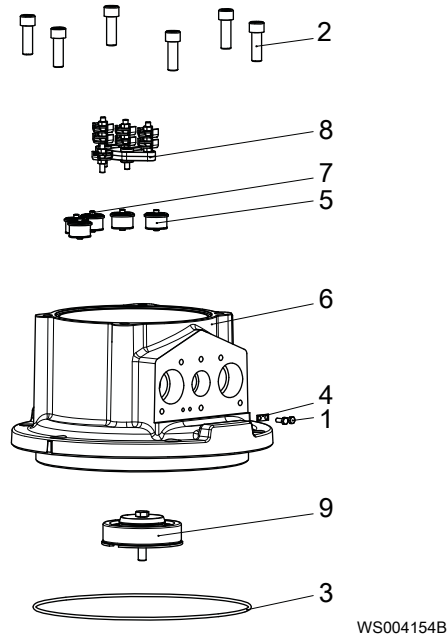


Spare parts marked with EX after the part number are subject to dimensional accuracy inspection.

Item	Denomination		Part No. Standard	Part No. EX	Qty.
1	Hexagon head screw	M8 x 20	-	81 41 04	2
2	Hexagon socket head cap screw	M20 x 60	82 01 29	82 01 29	6
3	Protective plug		82 69 41	82 69 41	4
4	O-ring	419.30 x 5.70	82 75 09	82 75 09	1
5	Earthing plate		-	303 09 00	1
6	Lead through unit		613 73 00	613 73 00	4
7	Connection housing		See Small connection housing variants on page 72.		1
8	Lead through unit		681 13 00	681 13 00	1

Item	Denomination	Part No. Standard	Part No. EX	Qty.
9	Electrical components, power	See Electrical Components: Power, Small Connection House on page 95.		
10	Support bearing holder	See Support bearing: Large connection house on page 33.		

10.2.2 2 power cables: Vertical

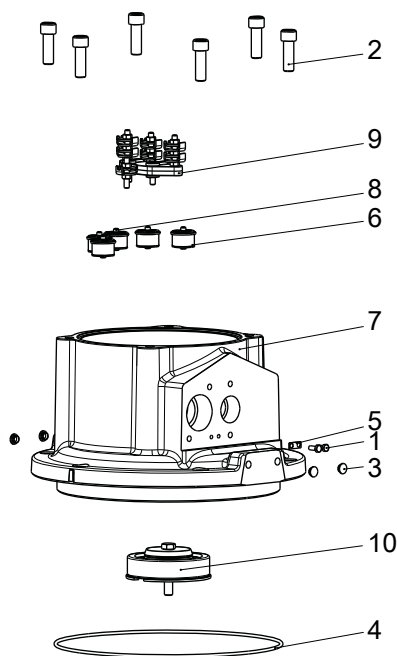


Spare parts marked with EX after the part number are subject to dimensional accuracy inspection.

Item	Denomination		Part No. Standard	Part No. EX	Qty.
1	Hexagon head screw	M8 x 20	-	81 41 04	2
2	Hexagon socket head cap screw	M20 x 60	82 01 29	82 01 29	6
3	O-ring	419.30 x 5.70	82 75 09	82 75 09	1
4	Earthing plate		-	303 09 00	1
5	Lead through unit		613 73 00	613 73 00	4
6	Connection housing		See <i>Small connection housing variants</i> on page 72		1
7	Lead through unit		681 13 00	681 13 00	1
8	Electrical components, power	See <i>Electrical Components: Power, Small Connection House</i> on page 95.			
9	Support bearing holder	See <i>Support bearing: Large connection house</i> on page 33.			

10.3 1 power cable

10.3.1 1 power cable: Horizontal

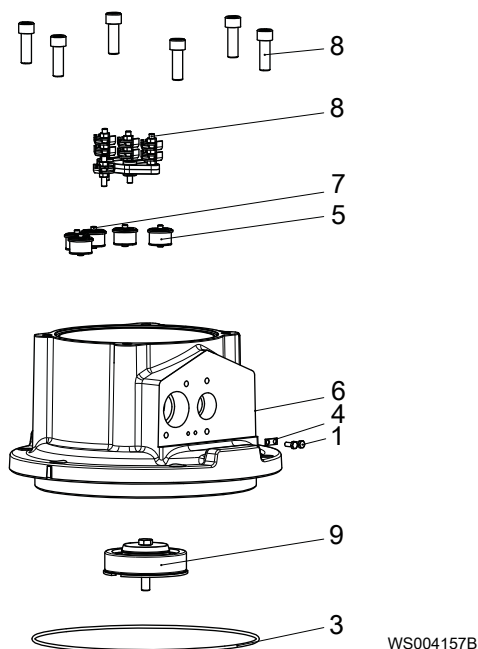


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Spare parts marked with EX after the part number are subject to dimensional accuracy inspection.

Item	Denomination		Part No. Standard	Part No. EX	Qty.
1	Hexagon head screw	M8 x 20	-	81 41 04	2
2	Hexagon socket head cap screw	M20 x 60	82 01 29	82 01 29	6
3	Protective plug		82 69 41	82 69 41	4
4	O-ring	419.30 x 5.70	82 75 09	82 75 09	1
5	Earthing plate		-	303 09 00	1
6	Lead through unit		613 73 00	613 73 00	4
7	Connection housing		See Small connection housing variants on page 72.		1
8	Lead through unit		681 13 00	681 13 00	1
9	Electrical components, power	See Electrical Components: Power, Small Connection House on page 95.			
10	Support bearing holder	See Support bearing: Large connection house on page 33.			

10.3.2 1 power cable: Vertical



Spare parts marked with EX after the part number are subject to dimensional accuracy inspection.

Item	Denomination		Part No. Standard	Part No. EX	Qty.
1	Hexagon head screw	M8 x 20	-	81 41 04	2
2	Hexagon socket head cap screw	M20 x 60	82 01 29	82 01 29	6
3	O-ring	419.30 x 5.70	82 75 09	82 75 09	1
4	Earthing plate		-	303 09 00	1
5	Lead through unit		613 73 00	613 73 00	4
6	Connection housing		See Small connection housing variants on page 72.		1
7	Lead through unit		681 13 00	681 13 00	1
8	Electrical components, power	See Electrical Components: Power, Small Connection House on page 95.			
9	Support bearing holder	See Support bearing: Large connection house on page 33.			

10.4 Small connection housing variants

Spare parts marked with EX after the part number are subject to dimensional accuracy inspection.

Control cable	Power cables	Installation		Part No. Standard drive units	Part No. EX drive units
Yes	1	Vertical		617 50 04	617 50 05
Yes	2	Vertical		617 50 06	617 50 07
Yes	1	Horizontal		617 50 12	617 50 13
Yes	2	Horizontal		617 50 14	617 50 15

Control cable	Power cables	Installation		Part No. Standard drive units	Part No. EX drive units
Yes	1	Vertical or horizontal	Prepared for Pt100 support bearing temperature sensor.	617 50 20	617 50 21
Yes	2	Vertical or horizontal	Prepared for Pt100 support bearing temperature sensor.	617 50 22	617 50 23
No	1	Vertical		617 50 50	617 50 51
No	2	Vertical		617 50 52	617 50 53
No	1	Horizontal		617 50 54	617 50 55
No	2	Horizontal		617 50 56	617 50 57
No	1	Vertical or horizontal	Prepared for Pt100 support bearing temperature sensor.	617 50 58	617 50 59
No	2	Vertical or horizontal	Prepared for Pt100 support bearing temperature sensor.	617 50 60	617 50 61

10.5 Lifting handle

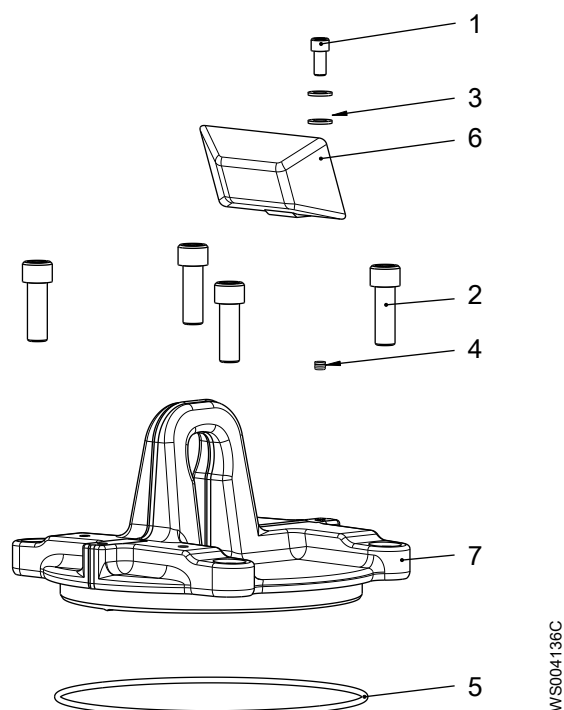


Table 66: C-, N-, R-, H- pumps

Spare parts marked with EX after the part number are subject to dimensional accuracy inspection.

Item	Denomination		Part No. Standard	Part No. EX	Qty.
1	Hexagon socket head cap screw	M12 x 25	82 00 68 *	82 00 68 *	1
2	Hexagon socket head cap screw	M20 x 60	82 01 29	82 01 29	4
3	Washer	13.0 x 24.0 x 2.5	82 35 20 *	82 35 20 *	2
4	Protective plug	With zinc anodes	82 66 73	82 66 73	0
		Without zinc anodes	82 66 73	82 66 73	1
5	O-ring	299.30 x 5.70	82 75 03	82 75 03	1
6	Zinc anode		614 31 00 *	614 31 00 *	1
7	Lifting handle		633 61 00	633 61 01 (EX)	1

* Parts for the optional zinc anodes.

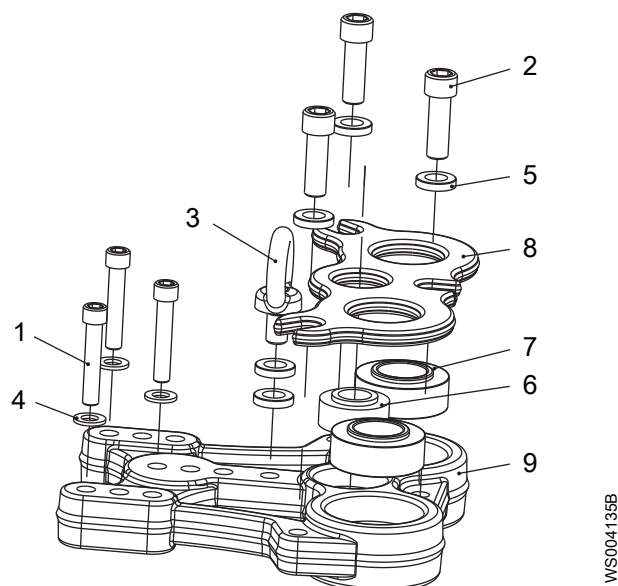
Table 67: P-, L- pumps

Spare parts marked with EX after the part number are subject to dimensional accuracy inspection.

Item	Denomination		Part No. Standard	Part No. EX	Qty.
1	Hexagon socket head cap screw	M12 x 25	82 00 68 *	82 00 68 *	1
2	Hexagon socket head cap screw	M20 x 60	82 01 29	82 01 29	4
3	Washer	13.0 x 24.0 x 2.5	82 35 20 *	82 35 20 *	2
4	Protective plug	With zinc anodes	82 66 73	82 66 73	0
		Without zinc anodes	82 66 73	82 66 73	1
5	O-ring	299.30 x 5.70	82 75 03	82 75 03	1
6	Zinc anode		614 31 00 *	614 31 00 *	1
7	Lifting handle		633 61 00	633 61 01 (EX)	1

* Parts for the optional zinc anodes.

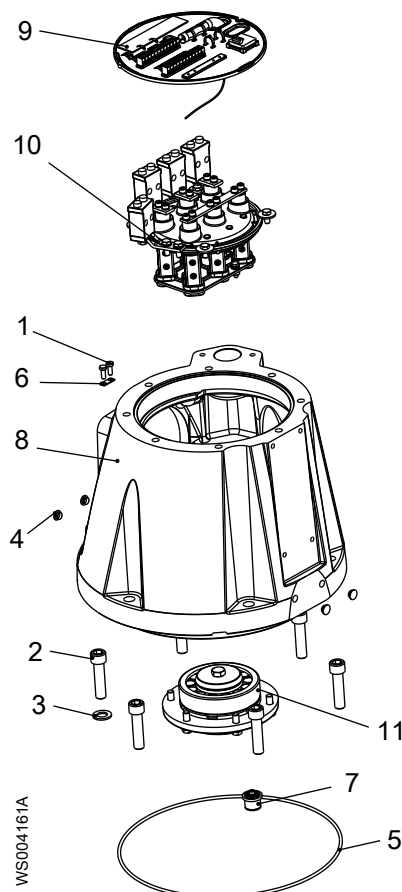
10.6 Cable holder unit for P-, L-pumps



Item	Denomination		Part No.	Qty.
1	Hexagon socket head cap screw	M12 x 65	82 00 76	3
2	Hexagon socket head cap screw	M16 x 50	82 01 07	3
3	Lifting eye bolt		82 31 15	1
4	Washer	13.0 x 24.0 x 2.5	82 35 20	3
5	Washer	17.0 x 30.0 x 6.0	82 37 07	5
6	Seal sleeve	See Seal sleeves and washers on page 86.	84 18 XX	1
7	Seal sleeve	See Seal sleeves and washers on page 86.	84 19 XX	2
8	Cover		627 05 00	1
9	Holder		670 87 00	1

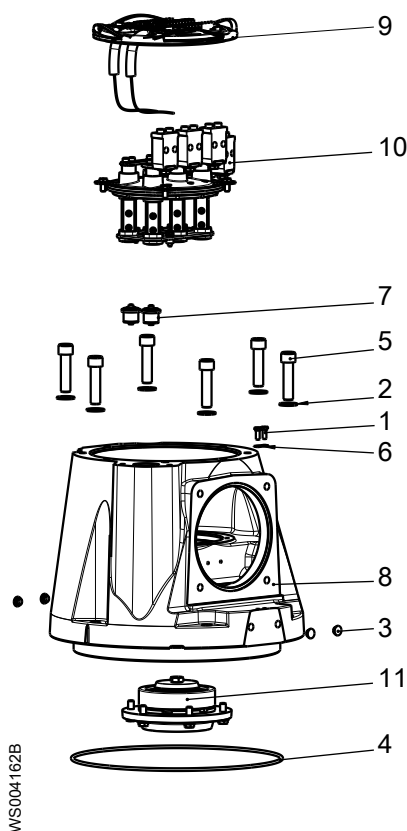
11 Large Connection House

11.1 Up to 16 leads



Item	Denomination		Part No. Horizontal Installation	Part No. Vertical Installation	Qty.
1	Hexagon head screw	M8 x 20	81 41 04	81 41 04	2
2	Hexagon socket head cap screw	M20 x 80	83 03 97	83 03 97	6
3	Washer	21.0 x 37.0 x 3.0	82 35 26	82 35 26	6
4	Protective plug		82 69 41	—	4
5	O-ring	419.3 x 5.7	82 75 09	82 75 09	1
6	Earthing plate		303 09 00	303 09 00	1
7	Electrical lead through unit		544 41 00	544 41 00	1
8	Connection housing		See Large connection housing variants on page 77.		1
9	See #unique_119 .		—	—	1
10	See Electrical Components: Power, Large Connection House on page 121.		—	—	1
11	Support bearing. See Bearings on page 33.		—	—	1

11.2 17-32 leads



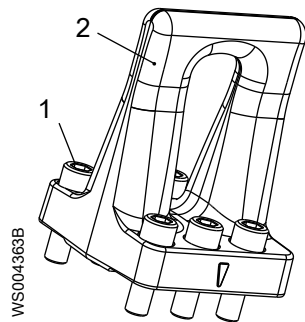
Item	Denomination		Part No. Horizontal Installation	Part No. Vertical Installation	Qty.
1	Hexagon head screw	M8 x 20	81 41 04	81 41 04	2
2	Washer	21.0 x 37.0 x 3.0	82 35 26	82 35 26	6
3	Protective plug		82 69 41	—	4
4	O-ring	419.3 x 5.70	82 75 09	82 75 09	1
5	Hexagon socket head cap screw	M20 x 80	83 03 97	83 03 97	6
6	Earthing plate		303 09 00	303 09 00	1
7	Electrical lead through unit		544 41 00	544 41 00	2
8	Connection housing		See Large connection housing variants on page 77.		1
9	See #unique_119 .		—	—	1
10	See Electrical Components: Power, Large Connection House on page 121.		—	—	1
11	Support bearing. See Bearings on page 33.		—	—	1

11.3 Large connection housing variants

Spare parts marked with EX after the part number are subject to dimensional accuracy inspection.

Control cable	Number of control leads	Installation	Part No. Standard drive units	Part No. EX drive units
Yes	Up to 16	Horizontal	845 93 04	845 93 05 (EX)
Yes	Up to 16	Vertical	845 93 00	845 93 01 (EX)
Yes	17–32	Horizontal	845 93 06	845 93 07 (EX)
Yes	17–32	Vertical	845 93 02	845 93 03 (EX)
No	Up to 16	Horizontal	845 93 14	845 93 15 (EX)
No	Up to 16	Vertical	845 93 10	845 93 11 (EX)
No	17–32	Horizontal	845 93 16	845 93 17 (EX)
No	17–32	Vertical	845 93 12	845 93 13 (EX)

11.4 Lifting handle

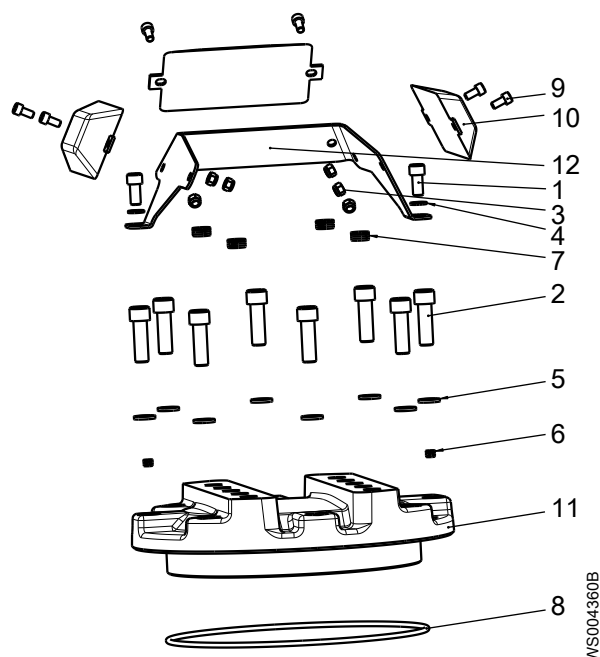


Item	Denomination		Part No. 6 ton	Part No. 12 ton	Qty.
1	Hexagon socket head cap screw	M24 x 80	83 04 44	83 04 44	6
2	Lifting handle		666 34 00 (EX)	663 47 00 (EX)	1

Turbines

The 12-ton lifting handle 663 47 00 must be used with turbines.

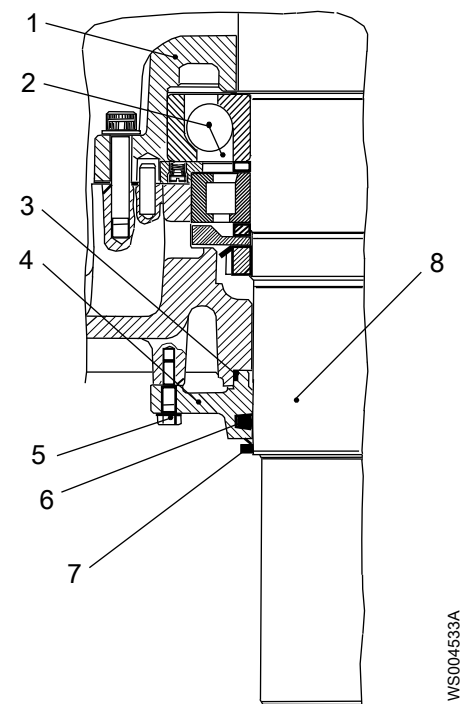
11.5 Lid



Spare parts marked with EX after the part number are subject to dimensional accuracy inspection.

Item	Denomination		Part No. Standard	Part No. EX	Qty.
1	Hexagon socket head cap screw	M12 x 25	82 00 68	82 00 68	2
2	Hexagon socket head cap screw	M16 x 50	82 01 07	82 01 07	8
3	Hexagon nut		82 27 27	82 27 27	6
4	Lock washer		82 50 17	82 50 17	2
5	Lock washer		82 50 19	82 50 19	8
6	Protective plug		82 66 73	82 66 73	2
7	Protective plug		82 71 00	82 71 00	4
8	O-ring	299.3 x 5.7	82 75 03	82 75 03	1
9	Hexagon socket head cap screw	M8 x 16	83 02 97	83 02 97	6
10	Zinc anode		84 55 73	84 55 73	3
11	Cover		679 48 00	679 48 01 (EX)	1
12	Holder		682 47 00	682 47 00	1

11.6 For gear units



Item	Denomination		Part No.	Qty.
1	Bearing cover		553 06 00	1
2	Angular-contact ball bearing		83 36 16	1
	Bearing grease		90 20 54	30 g
3	O-ring	109.5 x 3.0 NBR	82 74 75	1
4	Seal holder		432 94 00	1
5	Hexagon head screw	M8x35-A2-70	81 43 01	
	Washer	8.4 x 16.0 x 1.6	82 35 16	
6	Seal strip		82 73 29	1
7	Seal ring	V-ring V-90 A NBR	84 25 81	1
8	Shaft unit		558 22 00	1
			558 22 02	
			558 22 04	
			558 22 06	
			558 22 08	
			558 22 10	
			558 22 12	
			558 22 14	
			558 22 16	
			558 22 24	
			558 22 26	
			558 22 28	

12 Cables

12.1 Control cables

This section does not apply to units equipped with the MAS 801 system.

Cable part numbers

Type	Cable	Diameter, mm (in)	Part No.	Qty.
SUBCAB	12x1.5 mm ²	18.2 - 21.2 (0.72 - 0.83)	94 19 20	1
	24x1.5 mm ²	24.9 - 28.9 (0.98 - 1.14)	94 19 21	
	S12x1.5 mm ²	29.0 - 31.0 (1.14 - 1.22)	94 08 94	
	S24x1.5 mm ²	35.0 - 37.0 (1.38 - 1.46)	94 08 95	

Support grip

Denomination	Size, mm (in)	Part No.	Qty.
Support grip	19 - 24 mm (0.75 - 0.94 in.)	83 57 24	1
	25 - 36 mm (0.98 - 1.42 in.)	83 57 25	
	37 - 49 mm (1.46 - 1.93)	83 57 26	

12.2 Power cables: small connection house

Cable part numbers

The following cables contain power cores and a screened control element. The control element is used with the MAS 801 system. The control element should be capped when not in use.

Type	Cable	Diameter, mm	Part No.
Screened SUBCAB	S3x16 + 3x16/3 + S(4x0.5) VFD	24 - 26	94 19 93
	S3x25 + 3x16/3 + S(4x0.5) VFD	29 - 31	94 19 94
	S3x35 + 3x16/3 + S(4x0.5) VFD	32 - 34	94 19 95
	S3x50 + 3x25/3 + S(4x0.5) VFD	38 - 40	94 19 96
	S3x70 + 3x35/3 + 2S(2x0.5) VFD	42 - 44	94 19 97
SUBCAB	4G16 + S(2x0.5)	26 - 28	94 19 82
	4G25 + S(2x0.5)	32 - 34	94 19 83
	4G35 + S(2x0.5)	35 - 37	94 19 84
	3x50 + 2G35/2 + S(2x0.5)	35 - 37	94 19 85
	3x70 + 2G35/2 + S(2x0.5)	38 - 41	94 19 86

Caps for unused control elements

Type	Cable	Cap Part No.	Qty.
Screened SUBCAB	S3x16 + 3x16/3 + S(4x0.5)	82 70 88	1
	S3x25 + 3x16/3 + S(4x0.5)	82 70 89	
	S3x35 + 3x16/3 + S(4x0.5)	82 97 60	
	S3x50 + 3x25/3 + S(4x0.5)	82 97 61	
	S3x70 + 3x35/3 + 2S(2x0.5)	82 70 87	
SUBCAB	4G16 + S(2x0.5)	82 70 86	

Type	Cable	Cap Part No.	Qty.
	4G25 + S(2x0.5)	82 70 89	
	4G35 + S(2x0.5)	82 97 60	
	3x50 + 2G35/2 + S(2x0.5)	82 70 86	
	3x70 + 2G35/2 + S(2x0.5)	82 70 86	

Support grip

Denomination	Size, mm (in)	Part No.	Qty.
Support grip	19 - 24 mm (0.75 - 0.94 in.)	83 57 24	1 - 2
	25 - 36 mm (0.98 - 1.42 in.)	83 57 25	
	37 - 49 mm (1.46 - 1.93 in.)	83 57 26	

12.3 Power cables: large connection house

Cable part numbers

The following cables contain power cores and a screened control element. The control element is used with the MAS 801 system. The control element should be capped when not in use.

Table 68: Pumps

Type	Cable		Diameter, mm	Part No.
Screened SUBCAB	S3x95 + 3x50/3 + 2S(2x0.5)	VFD	44 - 47	94 19 98
	S3x120 + 3x70/3 + 2S(2x0.5)	VFD	50 - 52	94 19 99
SUBCAB	3x95 + 2G50/2 + S(2x0.5)		47 - 50	94 19 87
	3x120 + 2G70/2 + S(2x0.5)		54 - 56	94 19 88

Table 69: Turbines

Type	Cable	Diameter, mm	Part No.
SUBCAB	4G35 + S(2x0.5)	35 - 37	94 19 84
	3x50 + 2G35/2 + S(2x0.5)	35 - 37	94 19 85
	3x70 + 2G35/2 + S(2x0.5)	38 - 41	94 19 86
	3x95 + 2G50/2 + S(2x0.5)	47 - 50	94 19 87
	3x120 + 2G70/2 + S(2x0.5)	54 - 56	94 19 88

Caps for unused control elements

Type	Cable	Cap Part No.	Qty.
Screened SUBCAB	S3x95 + 3x50/3 + 2S(2x0.5)	82 70 88	1 cap per cable
	S3x120 + 3x70/3 + 2S(2x0.5)	82 70 89	
SUBCAB	4G35 + S(2x0.5)	82 97 60	
	3x50 + 2G35/2 + S(2x0.5)	82 70 86	
	3x70 + 2G35/2 + S(2x0.5)		
	3x95 + 2G50/2 + S(2x0.5)		
	3x120 + 2G70/2 + S(2x0.5)		

Support grip

Denomination	Size, mm	Part No.	Qty.
Support grip	25 - 36 mm	83 57 25	1 - 2
	37 - 49 mm	83 57 26	
	50 - 59 mm	83 57 27	
	60 - 74 mm	83 57 28	

12.4 Replacement cables for discontinued power cables

The SUBCAB[®] power cables containing only power cores have been replaced by cables containing both power cores and a screened control element. The control element is reserved for future use. For more information, see the Technical Bulletin.

Table 70: Screened SUBCAB[®]

Discontinued Cables			Replacement Cables	
Cable With Power Cores Only	Part No.	Technical Bulletin	Cable With Power and Control Elements	Part No.
S3x16 + 3x16/3 + 4x1.5	94 17 84	TB_8100_06_14	S3x16 + 3x16/3 + S(4x0.5)	94 19 93
S3x25 + 3x16/3 + 4x1.5	94 17 85	TB_8100_06_15	S3x25 + 3x16/3 + S(4x0.5)	94 19 94
S3x35 + 3x16/3 + 4x1.5	94 17 86	TB_8100_06_16	S3x35 + 3x16/3 + S(4x0.5)	94 19 95
S3x50 + 3x25/3 + 4x1.5	94 17 87	TB_600_06_14	S3x50 + 3x25/3 + S(4x0.5)	94 19 96
S3x70 + 3x35/3 + 4x1.5	94 17 88	TB_600_06_15	S3x70 + 3x35/3 + 2S(2x0.5)	94 19 97
S3x95 + 3x50/3 + 4x1.5	94 17 89	TB_800_06_22	S3x95 + 3x50/3 + 2S(2x0.5)	94 19 98
S3x120 + 3x70/3 + 4x1.5	94 17 90	TB_800_06_23	S3x120 + 3x70/3 + 2S(2x0.5)	94 19 99

Table 71: SUBCAB[®]

Discontinued Cables			Replacement Cables	
Cable With Power Cores Only	Part No.	Technical Bulletin	Cable With Power and Control Elements	Part No.
4 G 16	94 20 46	TB_8100_06_03	4G16 + S(2x0.5)	94 19 82
4 G 25	94 20 47	TB_8100_06_04	4G25 + S(2x0.5)	94 19 83
4 G 35	94 20 48	TB_8100_06_05	4G35 + S(2x0.5)	94 19 84
4 G 50	94 20 66	TB_600_06_12	3x50 + 2G35/2 + S(2x0.5)	94 19 85
4 G 70	94 20 67	TB_600_06_13	3x70 + 2G35/2 + S(2x0.5)	94 19 86
4 G 95	92 20 68	TB_700_06_22	3x95 + 2G50/2 + S(2x0.5)	94 19 87
4 G 120	90 20 69	TB_700_06_23	3x120 + 2G70/2 + S(2x0.5)	94 19 88

Table 72: Replacement cables for SUBCAB AWG[®]

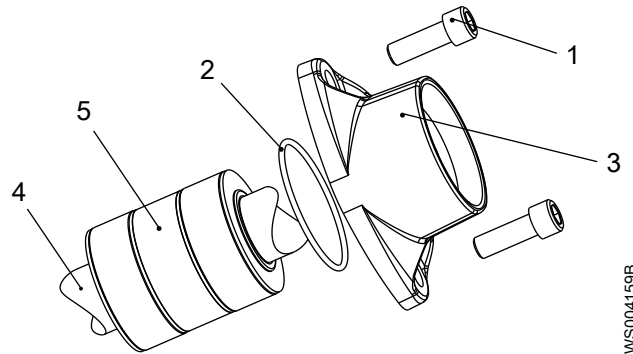
Discontinued Cables		Replacement Cables	
Cable With Power Cores Only	Part No.	Cable With Power and Control Elements	Part No.
4 AWG/3-2-1-GC	94 21 10	4G25 + S(2x0.5)	94 19 83

Discontinued Cables		Replacement Cables	
Cable With Power Cores Only	Part No.	Cable With Power and Control Elements	Part No.
1 AWG/3-2-1-GC	94 21 11	3x50 + 2G35/2 + S(2x0,5)	94 19 85

13 Cable Entry: Small Connection Housing

13.1 Power cable

This section applies for both one-cable and two-cable arrangements.



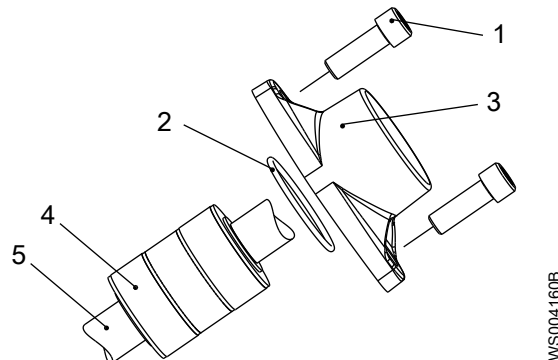
Quantities listed in the table are for one cable.

Spare parts marked with EX after the part number are subject to dimensional accuracy inspection.

Item	Denomination		Part No. Standard	Part No. EX	Qty.
1	Hexagon socket head cap screw	M12 x 35	82 00 70	82 00 70	2
2	O-ring	69.50 x 3.0	82 74 67	82 74 67	1
3	Entrance flange		605 61 00	605 61 01 (EX)	1
4	Cable. See Power cables: small connection house on page 81.		—	—	—
5	See Seal sleeves and washers on page 86.		—	—	—

13.2 Control cable: Pumps equipped with MAS 711

This section does not apply to pumps equipped with the MAS 801 system.

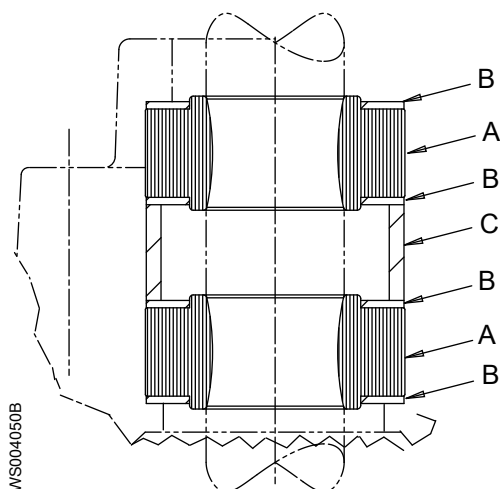


Spare parts marked with EX after the part number are subject to dimensional accuracy inspection.

Item	Denomination		Part No. Standard	Part No. EX	Qty.
1	Hexagon socket head cap screw	M12 x 35	82 00 70	82 00 70	2
2	O-ring	49.50 x 3.0	82 74 63	82 74 63	1
3	Entrance flange		642 17 00	642 17 01 (EX)	1
4	See Seal sleeves and washers on page 86.		—	—	—
5	Cable. See Control cables on page 81.		—	—	—

13.3 Seal sleeves and washers

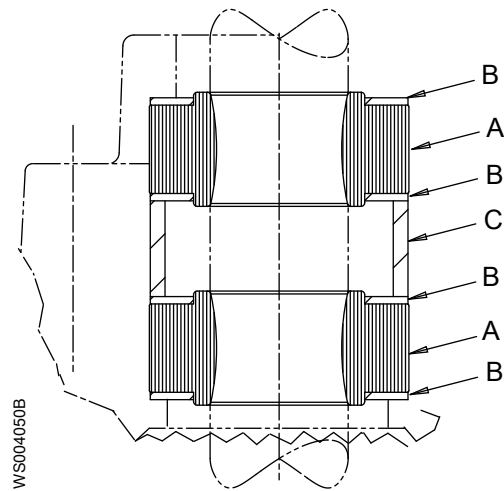
Control cables



The seal sleeves must be combined with washers according to this table.

Cable Diameter	Sleeve (A)	Washer (B)	Ring (C)
(17) - 20 mm	84 18 01 (EX)	82 42 71	597 98 00 (EX)
(20) - 23 mm	84 18 02 (EX)	82 42 72	597 98 00 (EX)
(23) - 26 mm	84 18 03 (EX)	82 42 72	597 98 00 (EX)
(26) - 29 mm	84 18 04 (EX)	82 42 72	597 98 00 (EX)
(29) - 32 mm	84 18 05 (EX)	82 42 72	597 98 00 (EX)
(33) - 35 mm	84 18 06 (EX)	82 42 73	597 98 00 (EX)
(37) - 39 mm	84 18 07 (EX)	82 42 75	597 98 00 (EX)

Power cables, 70 mm



The seal sleeves must be combined with washers according to this table.

Cable Diameter	Sleeve (A)	Washer (B)	Ring (C)
(23) - 26 mm	84 19 29 (EX)	82 43 07	611 14 01 (EX)
(26) - 29 mm	84 19 30 (EX)	82 43 07	611 14 01 (EX)
(29) - 32 mm	84 19 31 (EX)	82 43 07	611 14 01 (EX)
(32) - 35 mm	84 19 32 (EX)	82 43 07	611 14 01 (EX)
(35) - 38 mm	84 19 33 (EX)	82 43 10	611 14 01 (EX)
(38) - 41 mm	84 19 34 (EX)	82 43 10	611 14 01 (EX)
(41) - 44 mm	84 19 35 (EX)	82 43 10	611 14 01 (EX)
(44) - 47 mm	84 19 36 (EX)	82 43 10	611 14 01 (EX)
(47) - 50 mm	84 19 37 (EX)	82 43 10	611 14 01 (EX)

14 Cable Entry: Large Connection Housing

14.1 Power cable

14.1.1 1 cable

90 mm entry

Cable sleeve units must be chosen to fit the precise cable diameter. Measure the replacement cable on site and choose the appropriate cable sleeve unit, see [90 mm](#) on page 91.

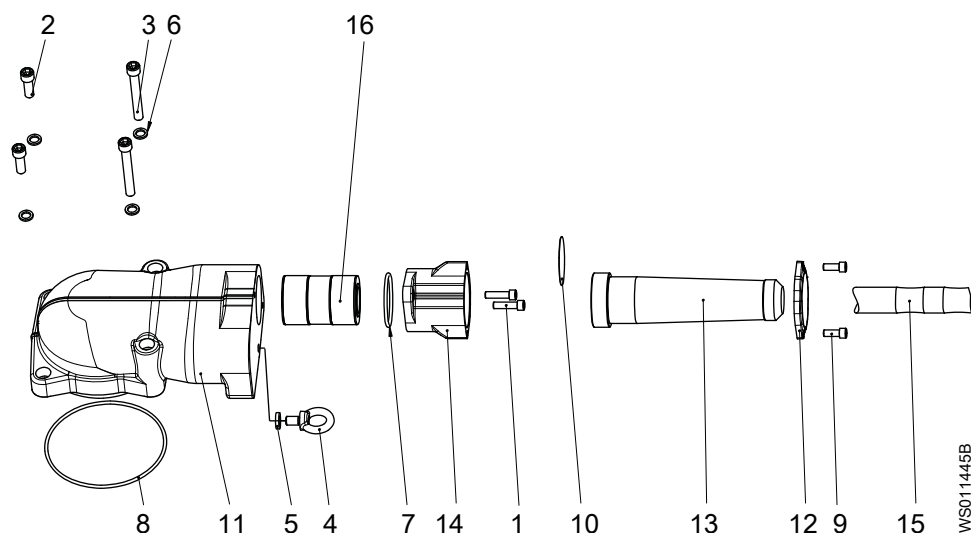


Figure 9: 730 70 00 rev 4, sheet 3.

Spare parts marked with “EX” after the part number are subject to dimensional accuracy inspection.

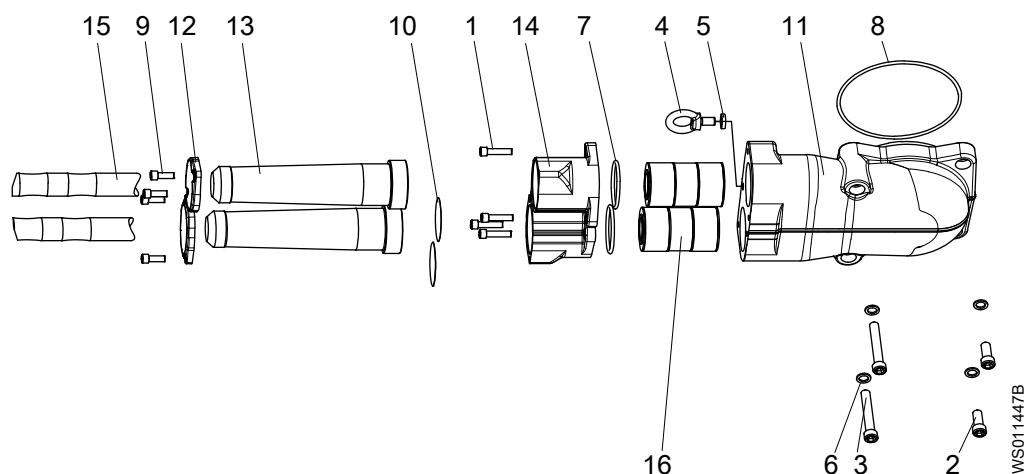
Item	Denomination		Part No. Standard units	Part No. Ex-proof units	Qty.
1	Hexagon socket head cap screw	M12 x 45	82 00 72	82 00 72	2
2	Hexagon socket head cap screw	M16 x 45	82 01 06	82 01 06	2
3	Hexagon socket head cap screw	M16 x 120	82 01 17	82 01 17	2
4	Lifting eye bolt		82 31 15	82 31 15	1
5	Washer	17.0 x 30.0 x 6.0	82 37 07	82 37 07	1
6	Lock washer		82 50 19	82 50 19	4
7	O-ring	89.10 x 5.70	82 74 10	82 74 10	1
8	O-ring	209.30 x 5.70	82 74 94	82 74 94	1
9	Hexagon socket head cap screw	M12 x 30	83 03 46	83 03 46	2
10	Plate		433 47 08 ⁽¹⁾	433 47 08 ⁽¹⁾	1

Item	Denomination		Part No. Standard units	Part No. Ex-proof units	Qty.
11	Entrance flange		543 97 00	543 97 01 (EX)	1
12	Connection flange		627 64 00	627 64 00 (EX)	1
13	Bending protection		627 68 00	627 68 00	1
14	Entrance flange		734 37 00	734 37 01 (EX)	1
15	Cable				1
16	Cable sleeve unit		See <i>Seal sleeves and washers.</i>		1
(1) The plate is used with the no-cable option.					

14.1.2 2 cables

90 mm entry

Cable sleeve units must be chosen to fit the precise cable diameter. Measure the replacement cable on site and choose the appropriate cable sleeve unit, see [90 mm](#) on page 91.



Spare parts marked with “EX” after the part number are subject to dimensional accuracy inspection.

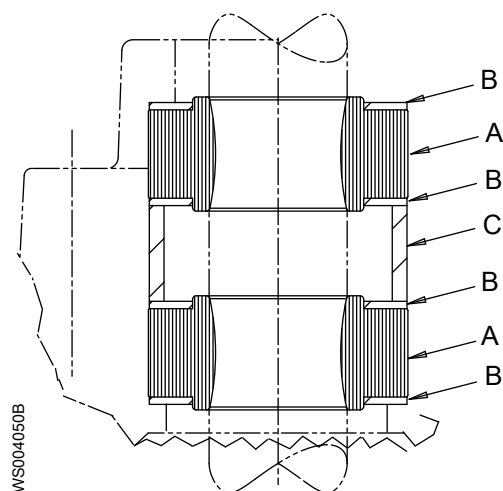
Item	Denomination		Part No. Standard units	Part No. Ex-proof units	Qty.
1	Hexagon socket head cap screw	M12 x 45	82 00 72	82 00 72	4
2	Hexagon socket head cap screw	M16 x 45	82 01 06	82 01 06	2
3	Hexagon socket head cap screw	M16 x 120	82 01 17	82 01 17	2
4	Lifting eye bolt		82 31 15	82 31 15	1
5	Washer	17.0 x 30.0 x 6.0	82 37 07	82 37 07	1
6	Lock washer		82 50 19	82 50 19	4
7	O-ring	89.10 x 5.70	82 74 10	82 74 10	2
8	O-ring	209.30 x 5.70	82 74 94	82 74 94	1

Item	Denomination		Part No. Standard units	Part No. Ex-proof units	Qty.
9	Hexagon socket head cap screw	M12 x 30	83 03 46	83 03 46	4
10	Plate		433 47 08 ⁽¹⁾	433 47 08 ⁽¹⁾	2
11	Entrance flange		543 97 06	543 97 07 (EX)	1
12	Connection flange		627 64 00	627 64 00 (EX)	2
13	Bending protection		627 68 00	627 68 00	2
14	Entrance flange		734 37 00	734 37 01 8EX)	2
15	Cable				2
16	Cable sleeve unit		See <i>Seal sleeves and washers.</i>		2

⁽¹⁾ The plate is used with the no-cable option.

14.1.3 Cable sleeves and washers

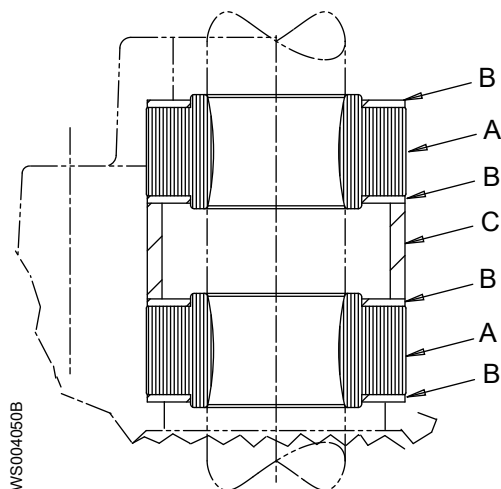
14.1.3.1 70 mm



Cable diameter	Sleeve (A)	Washer (B)	Ring (C)	Material
23-26	84 19 29 (EX)	82 41 36	611 14 05 (EX)	Std. NBR
26-29	84 19 30 (EX)	82 41 36	611 14 05 (EX)	Std. NBR
29-32	84 19 31 (EX)	82 41 36	611 14 05 (EX)	Std. NBR
32-35	84 19 32 (EX)	82 41 36	611 14 05 (EX)	Std. NBR
35-38	84 19 33 (EX)	82 41 39	611 14 05 (EX)	Std. NBR
38-41	84 19 34 (EX)	82 41 39	611 14 05 (EX)	Std. NBR
41-44	84 19 35 (EX)	82 41 39	611 14 05 (EX)	Std. NBR
44-47	84 19 36 (EX)	82 41 39	611 14 05 (EX)	Std. NBR
47-50	84 19 37 (EX)	82 41 39	611 14 05 (EX)	Std. NBR
50-53	84 19 38 (EX)	82 41 39	611 14 05 (EX)	Std. NBR
23-26	84 19 29 (EX)	82 43 07	611 14 05 (EX)	SS.NBR
26-29	84 19 30 (EX)	82 43 07	611 14 05 (EX)	SS.NBR
29-32	84 19 31 (EX)	82 43 07	611 14 05 (EX)	SS.NBR

Cable diameter	Sleeve (A)	Washer (B)	Ring (C)	Material
32-35	84 19 32 (EX)	82 43 07	611 14 05 (EX)	SS.NBR
35-38	84 19 33 (EX)	82 43 10	611 14 05 (EX)	SS.NBR
38-41	84 19 34 (EX)	82 43 10	611 14 05 (EX)	SS.NBR
41-44	84 19 35 (EX)	82 43 10	611 14 05 (EX)	SS.NBR
44-47	84 19 36 (EX)	82 43 10	611 14 05 (EX)	SS.NBR
47-50	84 19 37 (EX)	82 43 10	611 14 05 (EX)	SS.NBR
50-53	84 19 38 (EX)	82 43 10	611 14 05 (EX)	SS.NBR

14.1.3.2 90 mm



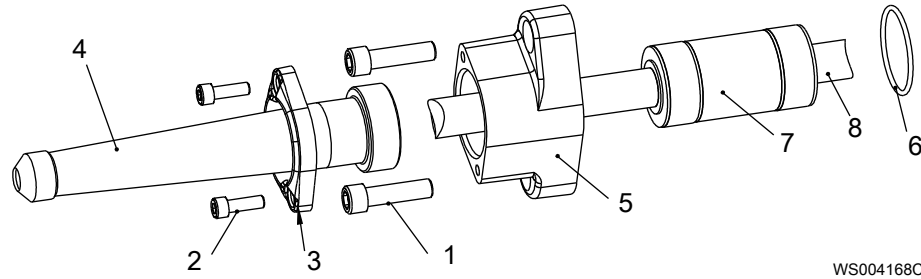
Cable diam	Sleeve (A)	Washer (B)	Ring (C)
48-50	81 08 25 (EX)	82 41 62	604 89 03 (EX)
50-52	81 08 26 (EX)	82 41 62	604 89 03 (EX)
52-54	81 08 27 (EX)	82 41 62	604 89 03 (EX)
54-56	81 08 28 (EX)	82 41 62	604 89 03 (EX)
56-58	81 08 29 (EX)	82 41 62	604 89 03 (EX)
58-60	81 08 30 (EX)	82 41 62	604 89 03 (EX)
60-62	81 08 31 (EX)	82 41 67	604 89 03 (EX)
62-64	81 08 32 (EX)	82 41 67	604 89 03 (EX)
64-66	81 08 33 (EX)	82 41 67	604 89 03 (EX)
66-68	81 08 34 (EX)	82 41 67	604 89 03 (EX)
68-70	81 08 35 (EX)	82 41 67	604 89 03 (EX)

14.2 Control cable

This section does not apply to units equipped with the MAS 801 system.

14.2.1 17-23 mm cables

With cable

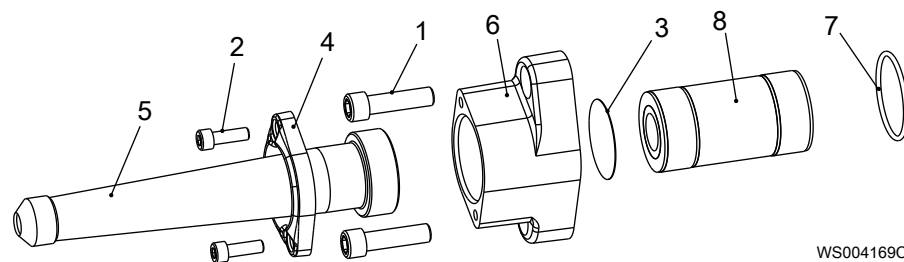


Spare parts marked with EX after the part number are subject to dimensional accuracy inspection.

Table 73: With cable

Item	Denomination		Part No. STD-units	Part No. EX-units	Qty.
1	Hexagon socket head cap screw	M12 x 45	82 00 72	82 00 72	2
2	Hexagon socket head cap screw	M8 x 25	83 02 01	83 02 01	2
3	Connection flange		627 62 00	627 62 00 (EX)	1
4	Bending protection		627 69 00	627 69 00	1
5	Entrance flange		734 65 00	734 65 01 (EX)	1
6	O-ring		82 74 63	82 74 63	1
7	See Cable sleeves and washers on page 94.		—	—	—
8	Cable. See Control cables on page 81.		—	—	—

Without cable



Spare parts marked with EX after the part number are subject to dimensional accuracy inspection.

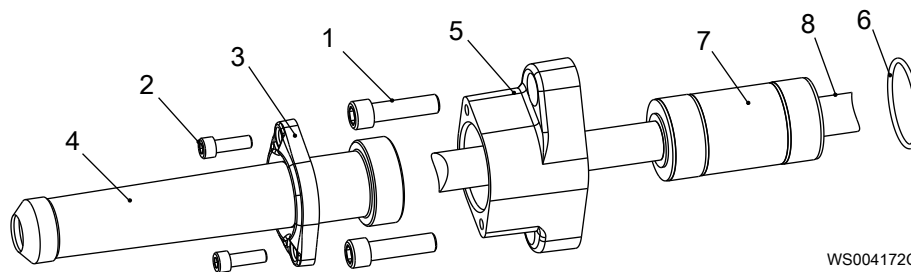
Table 74: Without cable

Item	Denomination		Part No. STD-units	Part No. EX-units	Qty.
1	Hexagon socket head cap screw	M12 x 45	82 00 72	82 00 72	2
2	Hexagon socket head cap screw	M8 x 25	83 02 01	83 02 01	2
3	Plate		433 47 04	433 47 04	1
4	Connection flange		627 62 00	627 62 00 (EX)	1
5	Bending protection		627 69 00	627 69 00	1

Item	Denomination		Part No. STD-units	Part No. EX-units	Qty.
6	Entrance flange		734 65 00	734 65 01 (EX)	1
7	O-ring		82 74 63	82 74 63	1
8	See Cable sleeves and washers on page 94.		—	—	—

14.2.2 23-32 mm cables

With cable

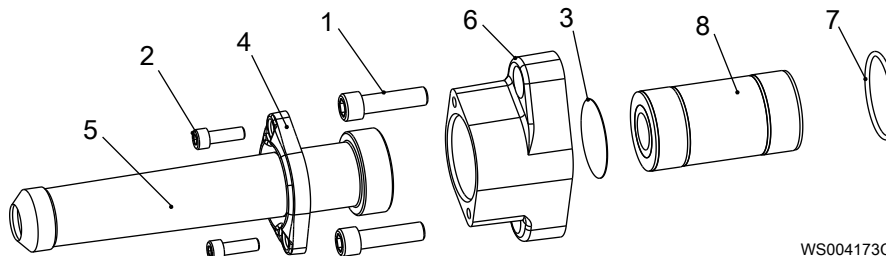


Spare parts marked with EX after the part number are subject to dimensional accuracy inspection.

Table 75: With cable

Item	Denomination		Part No. STD-units	Part No. EX-units	Qty.
1	Hexagon socket head cap screw	M12 x 45	82 00 72	82 00 72	2
2	Hexagon socket head cap screw	M8 x 25	83 02 01	83 02 01	2
3	Connection flange		627 62 00	627 62 00 (EX)	1
4	Bending protection		627 65 00	627 62 00	1
5	Entrance flange		734 65 00	734 65 01 (EX)	1
6	O-ring		82 74 63	82 74 63	1
7	See Cable sleeves and washers on page 94.		—	—	—
8	Cable. See Control cables on page 81		—	—	—

Without cable

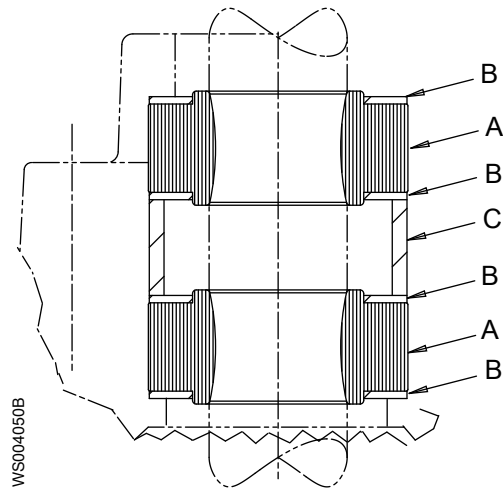


Spare parts marked with EX after the part number are subject to dimensional accuracy inspection.

Table 76: Without cable

Item	Denomination		Part No. STD-units	Part No. EX-units	Qty.
1	Hexagon socket head cap screw	M12 x 45	82 00 72	82 00 72	2
2	Hexagon socket head cap screw	M8 x 25	83 02 01	83 02 01	2
3	Plate		433 47 04	433 47 04	1
4	Connection flange		627 62 00	627 62 00 (EX)	1
5	Bending protection		627 65 00	627 62 00	1
6	Entrance flange		734 65 00	734 65 01 (EX)	1
7	O-ring		82 74 63	82 74 63	1
8	See Cable sleeves and washers on page 94.		—	—	—

14.2.3 Cable sleeves and washers



The seal sleeves must be combined with washers according to this table.

Cable Diameter	Sleeve (A)	Washer (B)	Ring (C)
(17) - 20 mm	84 18 01 (EX)	82 42 71	597 98 04 (EX)
(20) - 23 mm	84 18 02 (EX)	82 42 72	597 98 04 (EX)
(23) - 26 mm	84 18 03 (EX)	82 42 72	597 98 04 (EX)
(26) - 29 mm	84 18 04 (EX)	82 42 72	597 98 04 (EX)
(29) - 32 mm	84 18 05 (EX)	82 42 72	597 98 04 (EX)
(33) - 35 mm	84 18 06 (EX)	82 42 73	597 98 04 (EX)
(37) - 39 mm	84 18 07 (EX)	82 42 75	597 98 04 (EX)

15 Electrical Components: Power, Small Connection House

15.1 Overview

SUBCAB, from cycle 2018-1

Cable Type	Reference
SUBCAB without ground check	D-connection, 1 SUBCAB cable, 6 stator leads, without ground check on page 97
	D-connection, 2 SUBCAB cables, 6 stator leads, without ground check on page 98
	D-connection, 1 SUBCAB cable, 12 stator leads, without ground check on page 100
	D-connection, 2 SUBCAB cables, 12 stator leads, without ground check on page 101
	Y-connection, 1 SUBCAB cable, 6 stator leads, without ground check on page 103
	Y-connection, 1 SUBCAB cable, 12 stator leads, without ground check on page 104
	Y/D-connection, 2 SUBCAB cables, 6 stator leads, without ground check on page 106
	Y/D-connection, 2 SUBCAB cables, 12 stator leads, without ground check on page 107
SUBCAB with ground check	D-connection, 1 SUBCAB cable, 6 stator leads, with ground check on page 109
	D-connection, 2 SUBCAB cables, 6 stator leads, with ground check on page 110
	D-connection, 1 SUBCAB cable, 12 stator leads, with ground check on page 112
	D-connection, 2 SUBCAB cables, 12 stator leads, with ground check on page 113
	Y-connection, 1 SUBCAB cable, 6 stator leads, with ground check on page 115
	Y-connection, 1 SUBCAB cable, 12 stator leads, with ground check on page 116
	Y/D-connection, 2 SUBCAB cables, 6 stator leads, with ground check on page 118
	Y/D-connection, 2 SUBCAB cables, 12 stator leads, with ground check on page 119

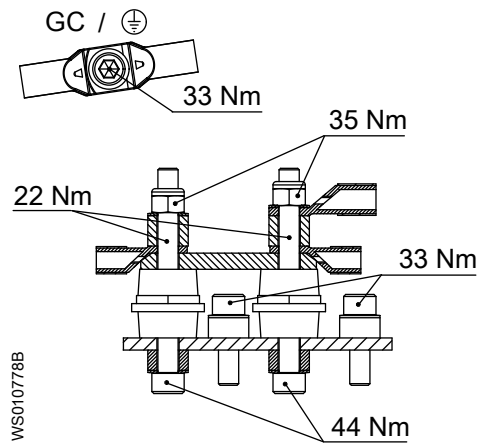
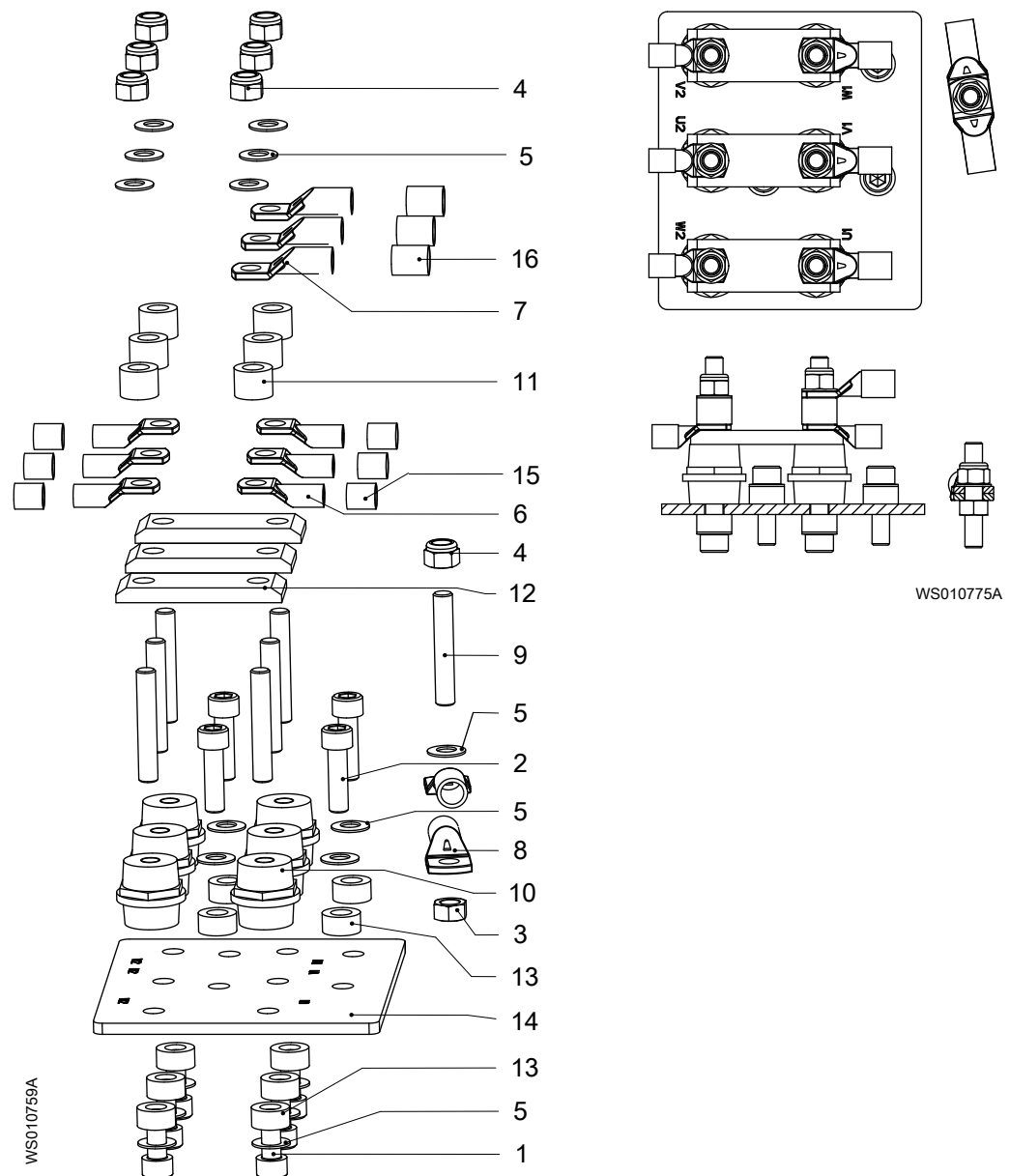


Figure 10: Tightening torques

15.2 SUBCAB without ground check: from cycle 2018–1

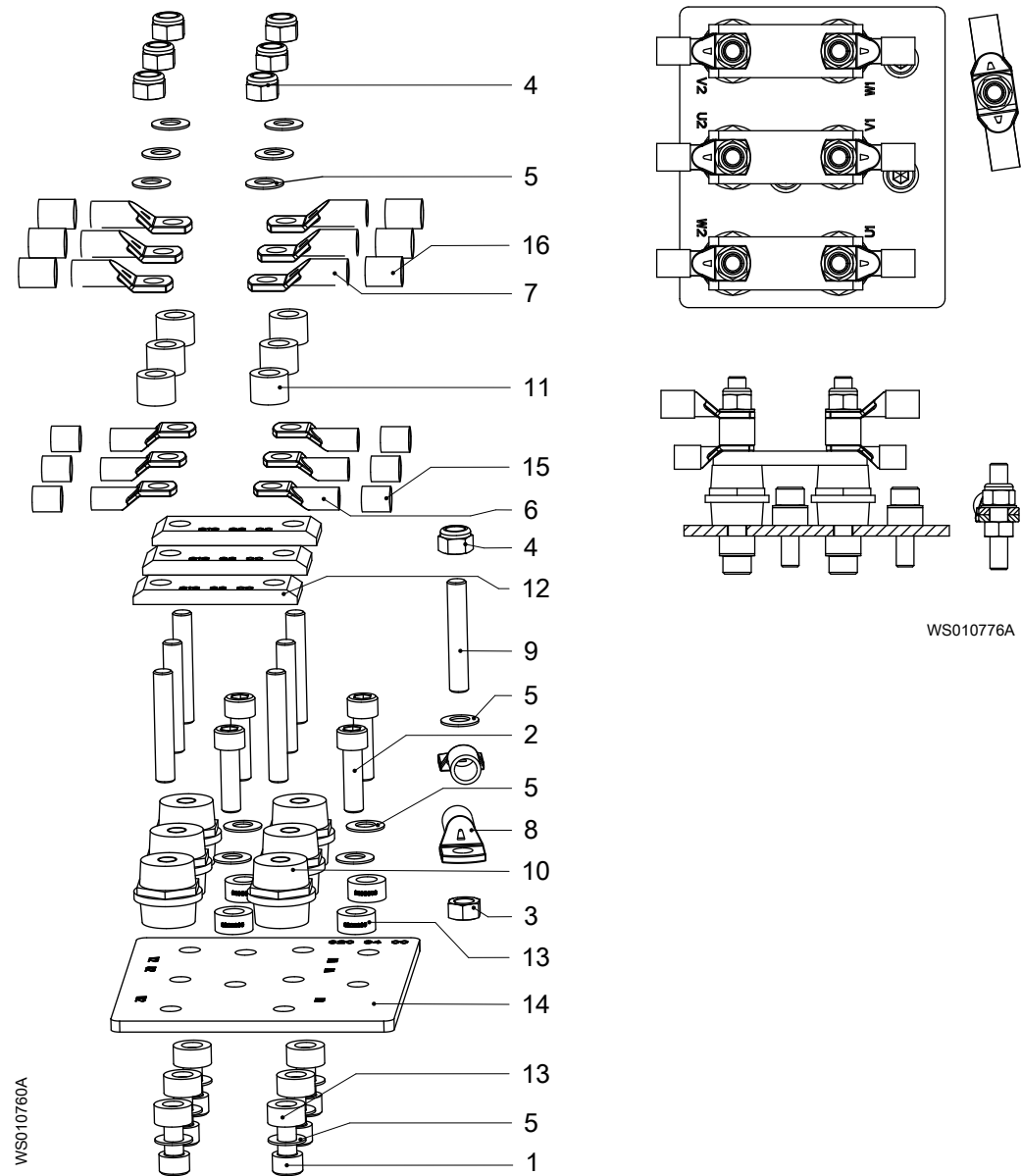
15.2.1 D-connection, 1 SUBCAB cable, 6 stator leads, without ground check



Item	Denomination		Part No.	Qty.
1	Hexagon socket head cap screw	M10 x 25	82 00 51	6
2	Hexagon socket head cap screw	M10 x 35	82 00 53	4
3	Hexagon nut		82 23 83	1
4	Hexagon nut		82 27 28	7
5	Disc spring		83 38 96	17
6	Cable lug		*	6
7	Cable lug		**	3
8	Cable lug		***	2

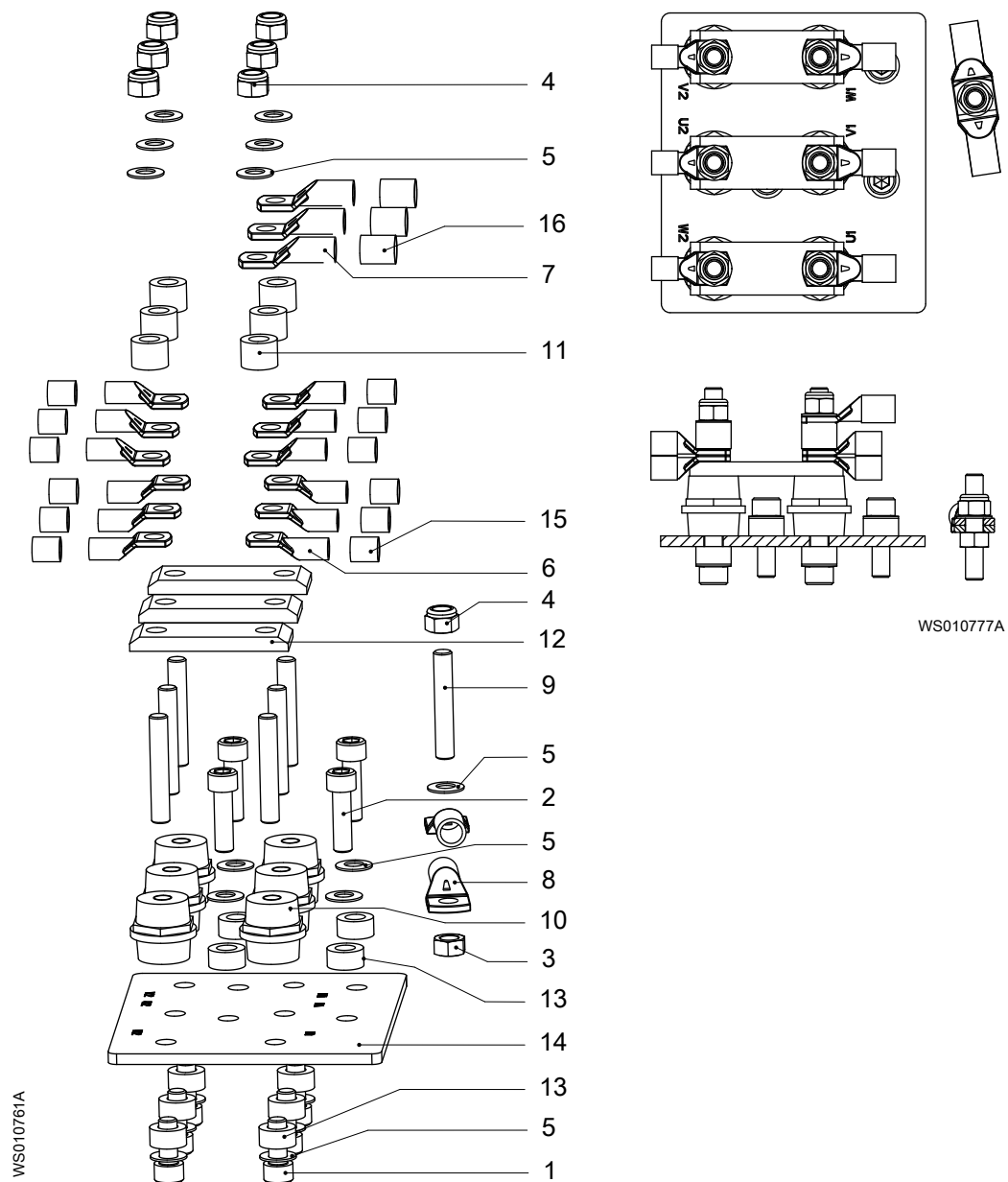
Item	Denomination		Part No.	Qty.
9	Stud	M10 x 60	84 46 18	7
10	Insulator		85 04 11	6
11	Standoff		819 66 00	6
12	Closing Link		819 68 00	3
13	Standoff		820 33 00	10
14	Bottom plate		820 34 00	1
15	Self-vulcanizing tape		85 04 57	Roll
16	Self-vulcanizing tape		85 04 57	Roll
* Depends on stator lead size				
** Depends on SUBCAB size				
*** Depends on ground size				

15.2.2 D-connection, 2 SUBCAB cables, 6 stator leads, without ground check



Item	Denomination		Part No.	Qty.
1	Hexagon socket head cap screw	M10 x 25	82 00 51	6
2	Hexagon socket head cap screw	M10 x 35	82 00 53	4
3	Hexagon nut		82 23 83	1
4	Hexagon nut		82 27 28	7
5	Disc spring		83 38 96	17
6	Cable lug		*	6
7	Cable lug		**	6
8	Cable lug		***	2
9	Stud	M10 x 60	84 46 18	7
10	Insulator		85 04 11	6
11	Standoff		819 66 00	6
12	Closing Link		819 68 00	3
13	Standoff		820 33 00	10
14	Bottom plate		820 34 00	1
15	Self-vulcanizing tape		85 04 57	Roll
16	Self-vulcanizing tape		85 04 57	Roll
* Depends on stator lead size				
** Depends on SUBCAB size				
*** Depends on ground size				

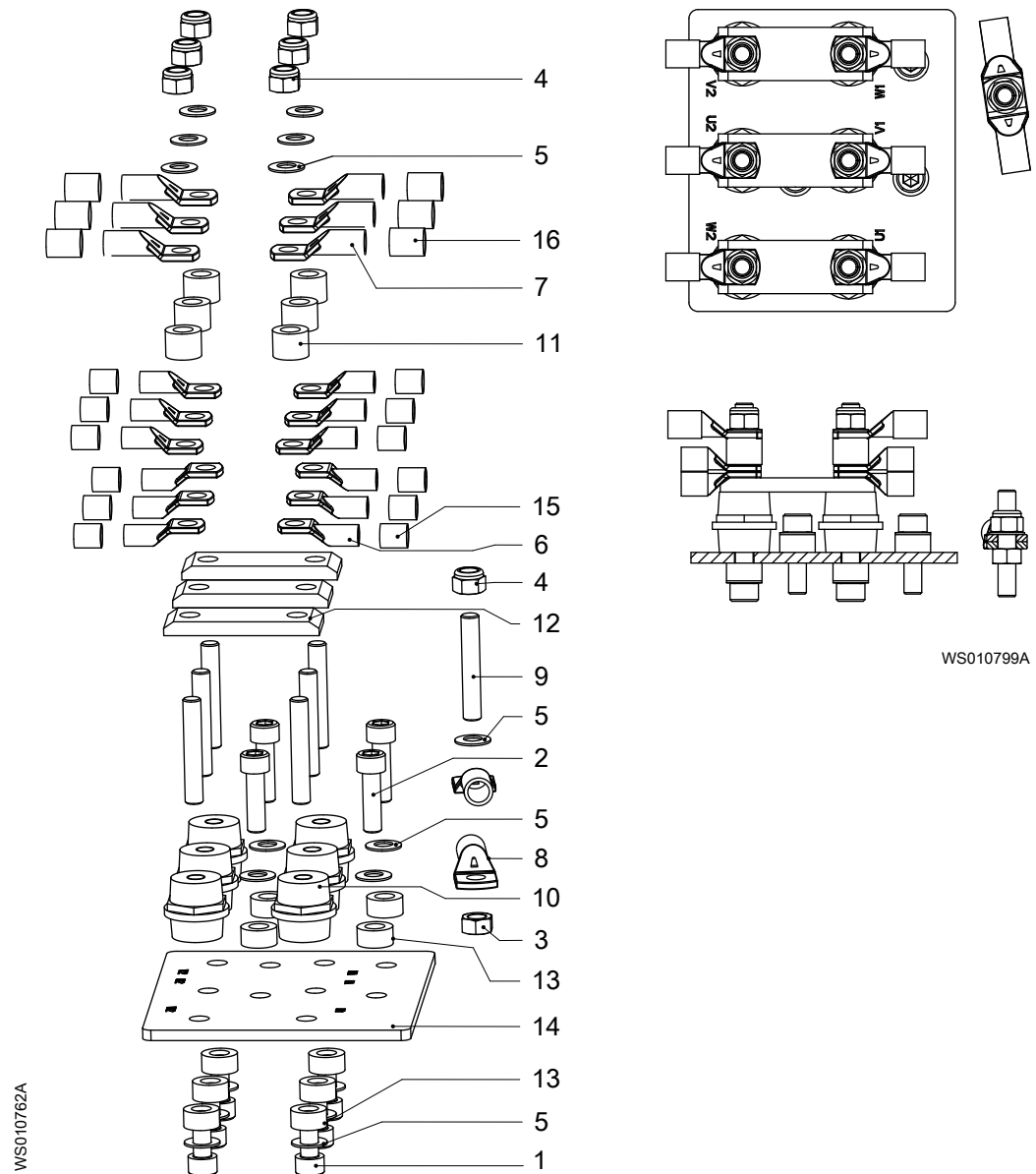
15.2.3 D-connection, 1 SUBCAB cable, 12 stator leads, without ground check



Item	Denomination		Part No.	Qty.
1	Hexagon socket head cap screw	M10 x 25	82 00 51	6
2	Hexagon socket head cap screw	M10 x 35	82 00 53	4
3	Hexagon nut		82 23 83	1
4	Hexagon nut		82 27 28	7
5	Disc spring		83 38 96	17
6	Cable lug		*	12
7	Cable lug		**	3
8	Cable lug		***	2
9	Stud	M10 x 60	84 46 18	7
10	Insulator		85 04 11	6

Item	Denomination	Part No.	Qty.
11	Standoff	819 66 00	6
12	Closing Link	819 68 00	3
13	Standoff	820 33 00	10
14	Bottom plate	820 34 00	1
15	Self-vulcanizing tape	85 04 57	Roll
16	Self-vulcanizing tape	85 04 57	Roll
* Depends on stator lead size ** Depends on SUBCAB size *** Depends on ground size			

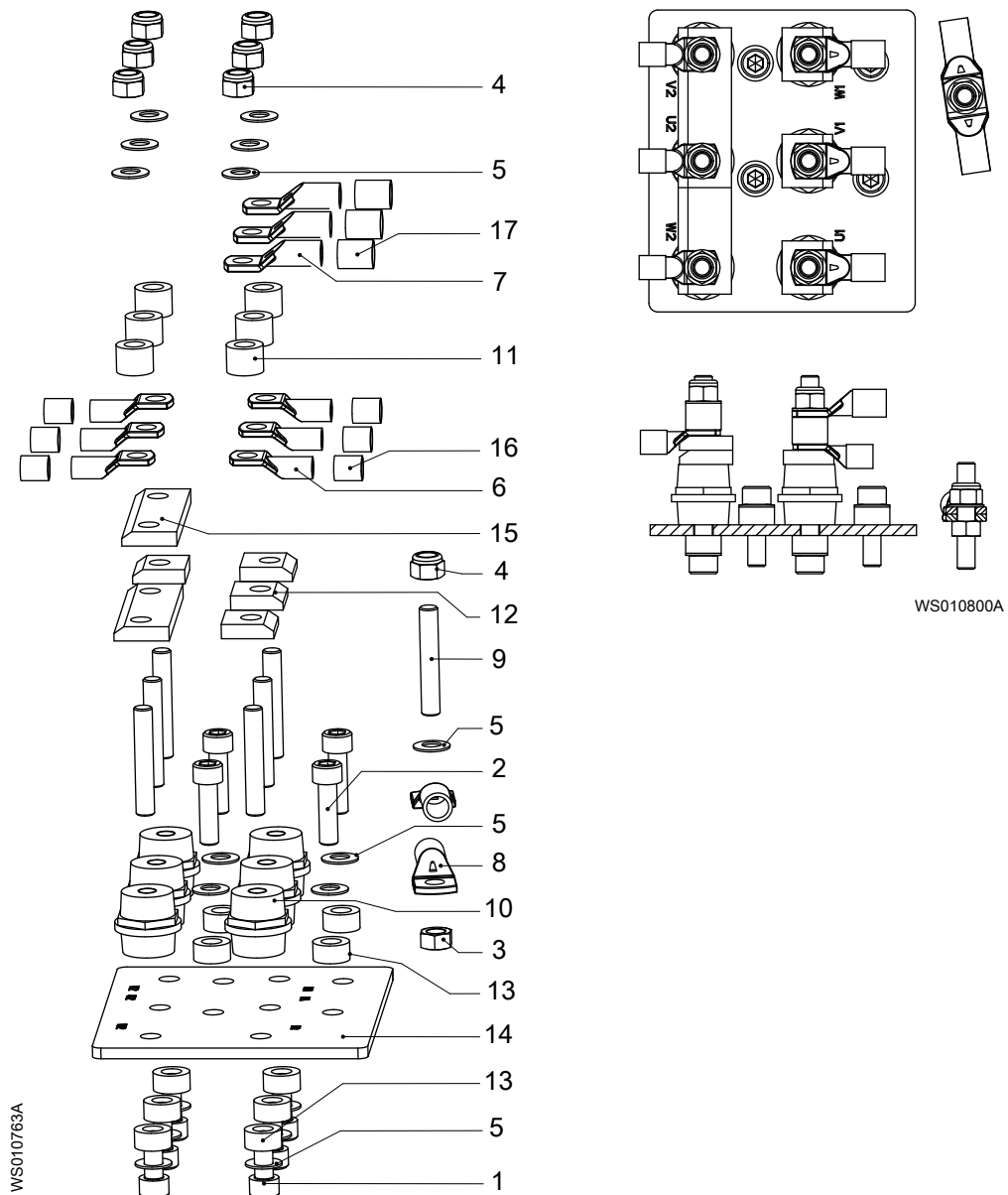
15.2.4 D-connection, 2 SUBCAB cables, 12 stator leads, without ground check



Item	Denomination	Part No.	Qty.
1	Hexagon socket head cap screw	M10 x 25	6

Item	Denomination		Part No.	Qty.
2	Hexagon socket head cap screw	M10 x 35	82 00 53	4
3	Hexagon nut		82 23 83	1
4	Hexagon nut		82 27 28	7
5	Disc spring		83 38 96	17
6	Cable lug		*	12
7	Cable lug		**	6
8	Cable lug		***	2
9	Stud	M10 x 60	84 46 18	7
10	Insulator		85 04 11	6
11	Standoff		819 66 00	6
12	Closing Link		819 68 00	3
13	Standoff		820 33 00	10
14	Bottom plate		820 34 00	1
15	Self-vulcanizing tape		85 04 57	Roll
16	Self-vulcanizing tape		85 04 57	Roll
* Depends on stator lead size				
** Depends on SUBCAB size				
*** Depends on ground size				

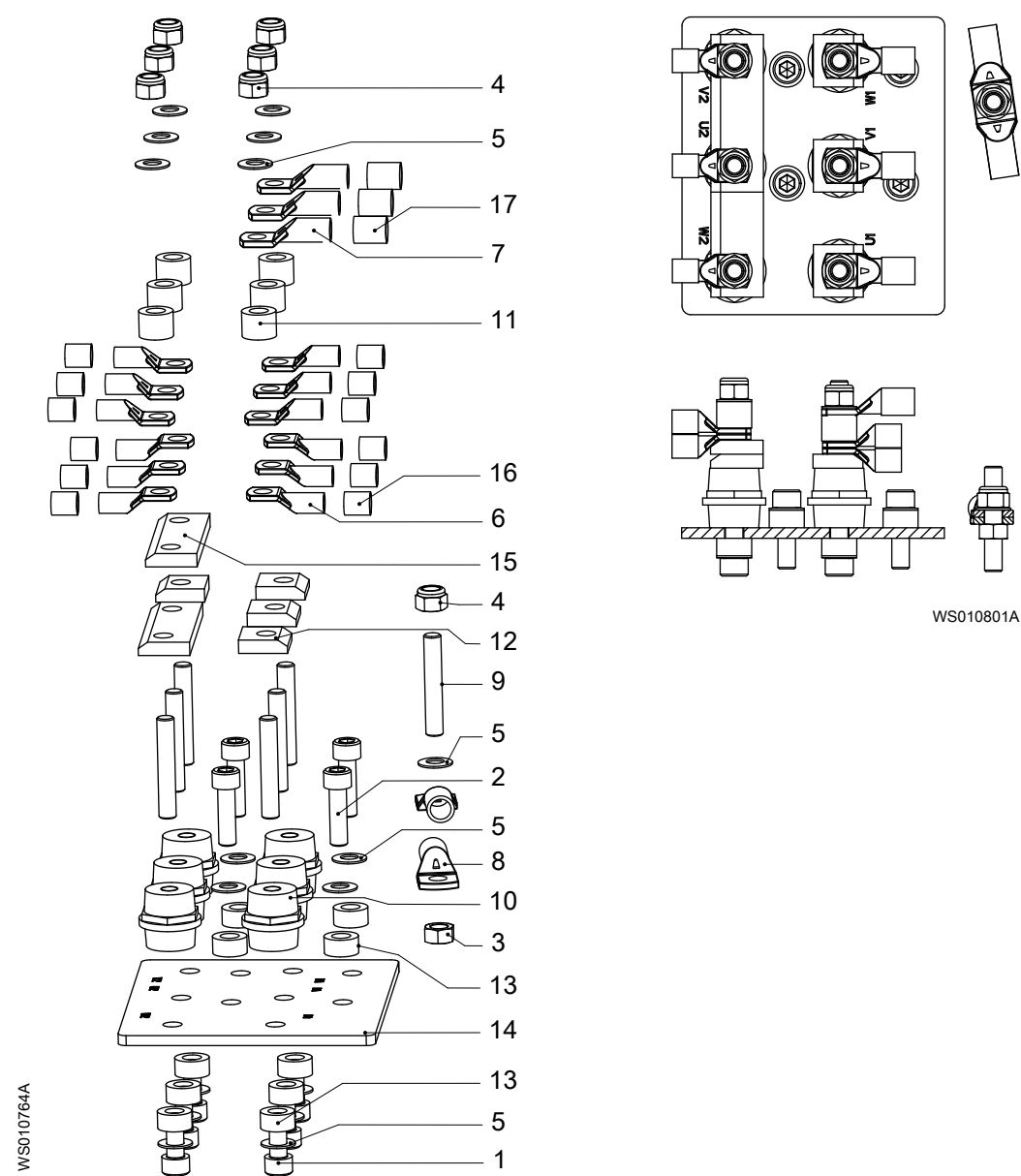
15.2.5 Y-connection, 1 SUBCAB cable, 6 stator leads, without ground check



Item	Denomination		Part No.	Qty.
1	Hexagon socket head cap screw	M10 x 25	82 00 51	6
2	Hexagon socket head cap screw	M10 x 35	82 00 53	4
3	Hexagon nut		82 23 83	1
4	Hexagon nut		82 27 28	7
5	Disc spring		83 38 96	17
6	Cable lug		*	6
7	Cable lug		**	3
8	Cable lug		***	2
9	Stud	M10 x 60	84 46 18	7
10	Insulator		85 04 11	6

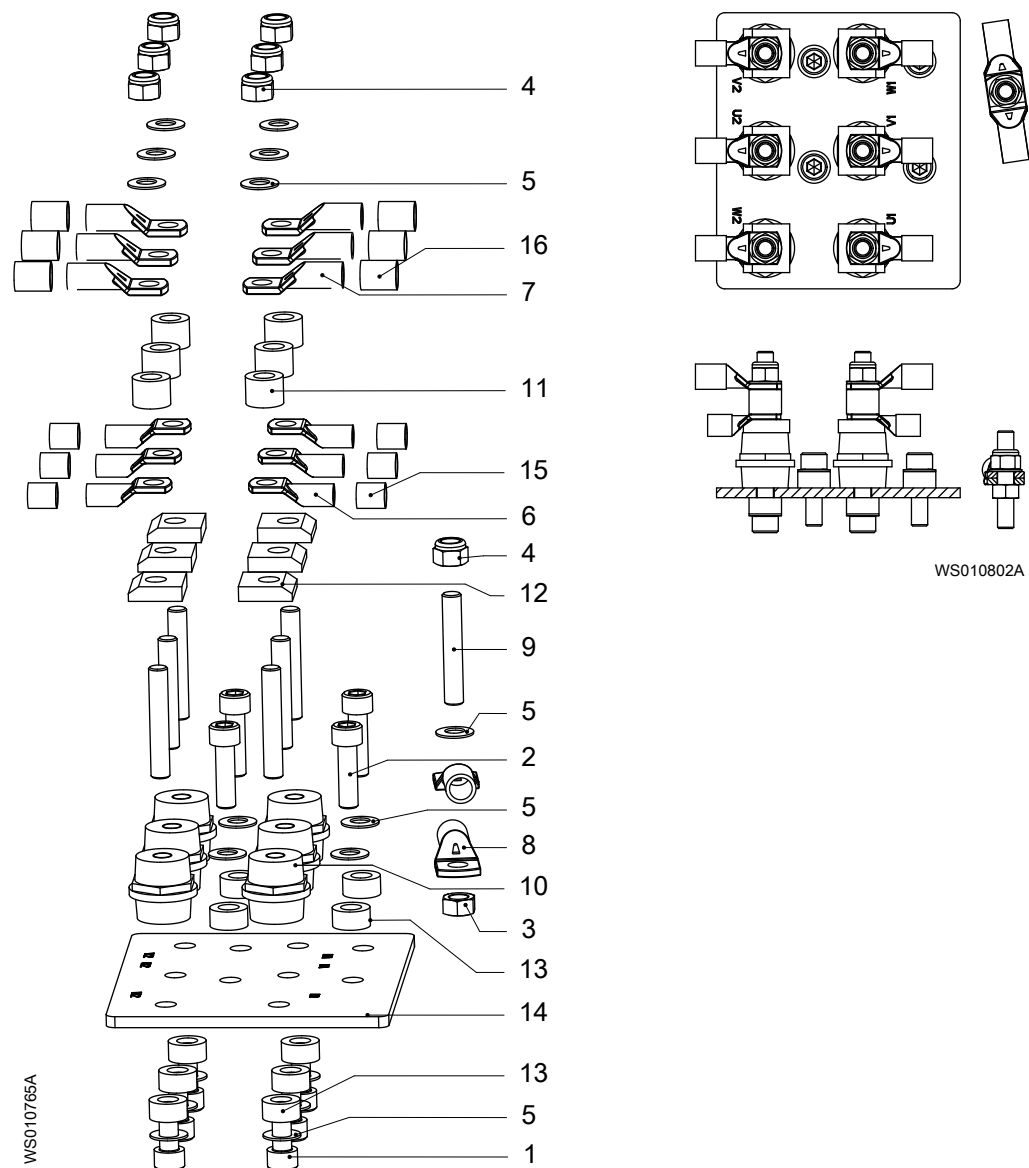
Item	Denomination		Part No.	Qty.
11	Standoff		819 66 00	6
12	Sheet metal		819 69 00	4
13	Standoff		820 33 00	10
14	Bottom plate		820 34 00	1
15	Sheet metal		821 22 00	2
16	Self-vulcanizing tape		85 04 57	Roll
17	Self-vulcanizing tape		85 04 57	Roll
* Depends on stator lead size				
** Depends on SUBCAB size				
*** Depends on ground size				

15.2.6 Y-connection, 1 SUBCAB cable, 12 stator leads, without ground check



Item	Denomination		Part No.	Qty.
1	Hexagon socket head cap screw	M10 x 25	82 00 51	6
2	Hexagon socket head cap screw	M10 x 35	82 00 53	4
3	Hexagon nut		82 23 83	1
4	Hexagon nut		82 27 28	7
5	Disc spring		83 38 96	17
6	Cable lug		*	12
7	Cable lug		**	3
8	Cable lug		***	2
9	Stud	M10 x 60	84 46 18	7
10	Insulator		85 04 11	6
11	Standoff		819 66 00	6
12	Sheet metal		819 69 00	4
13	Standoff		820 33 00	10
14	Bottom plate		820 34 00	1
15	Sheet metal		821 22 00	2
16	Self-vulcanizing tape		85 04 57	Roll
17	Self-vulcanizing tape		85 04 57	Roll
* Depends on stator lead size				
** Depends on SUBCAB size				
*** Depends on ground size				

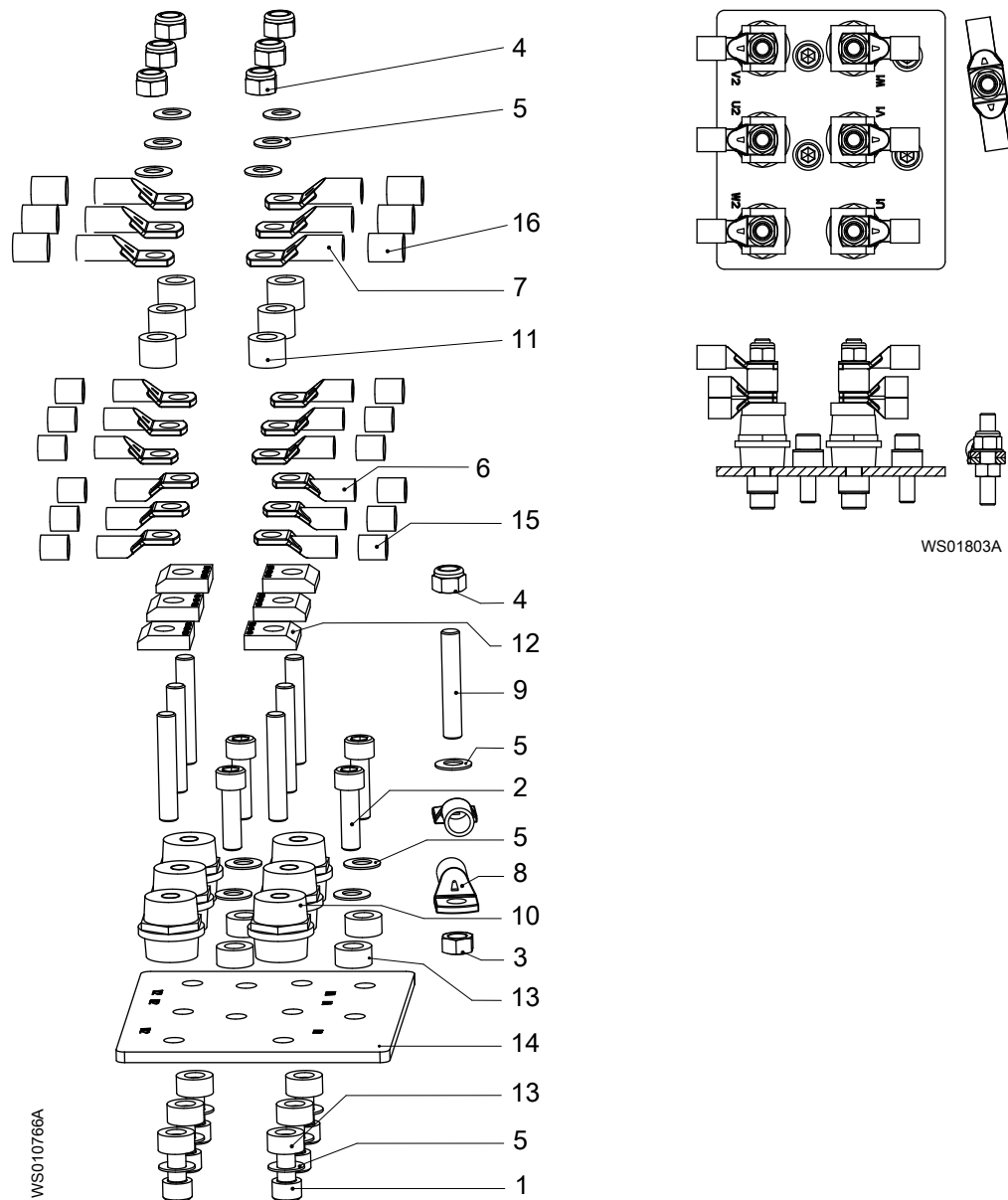
15.2.7 Y/D-connection, 2 SUBCAB cables, 6 stator leads, without ground check



Item	Denomination		Part No.	Qty.
1	Hexagon socket head cap screw	M10 x 25	82 00 51	6
2	Hexagon socket head cap screw	M10 x 35	82 00 53	4
3	Hexagon nut		82 23 83	1
4	Hexagon nut		82 27 28	7
5	Disc spring		83 38 96	17
6	Cable lug		*	6
7	Cable lug		**	6
8	Cable lug		***	2
9	Stud	M10 x 60	84 46 18	7
10	Insulator		85 04 11	6
11	Standoff		819 66 00	6

Item	Denomination		Part No.	Qty.
12	Sheet metal		819 69 00	6
13	Standoff		820 33 00	10
14	Bottom plate		820 34 00	1
15	Self-vulcanizing tape		85 04 57	Roll
16	Self-vulcanizing tape		85 04 57	Roll
* Depends on stator lead size				
** Depends on SUBCAB size				
*** Depends on ground size				

15.2.8 Y/D-connection, 2 SUBCAB cables, 12 stator leads, without ground check

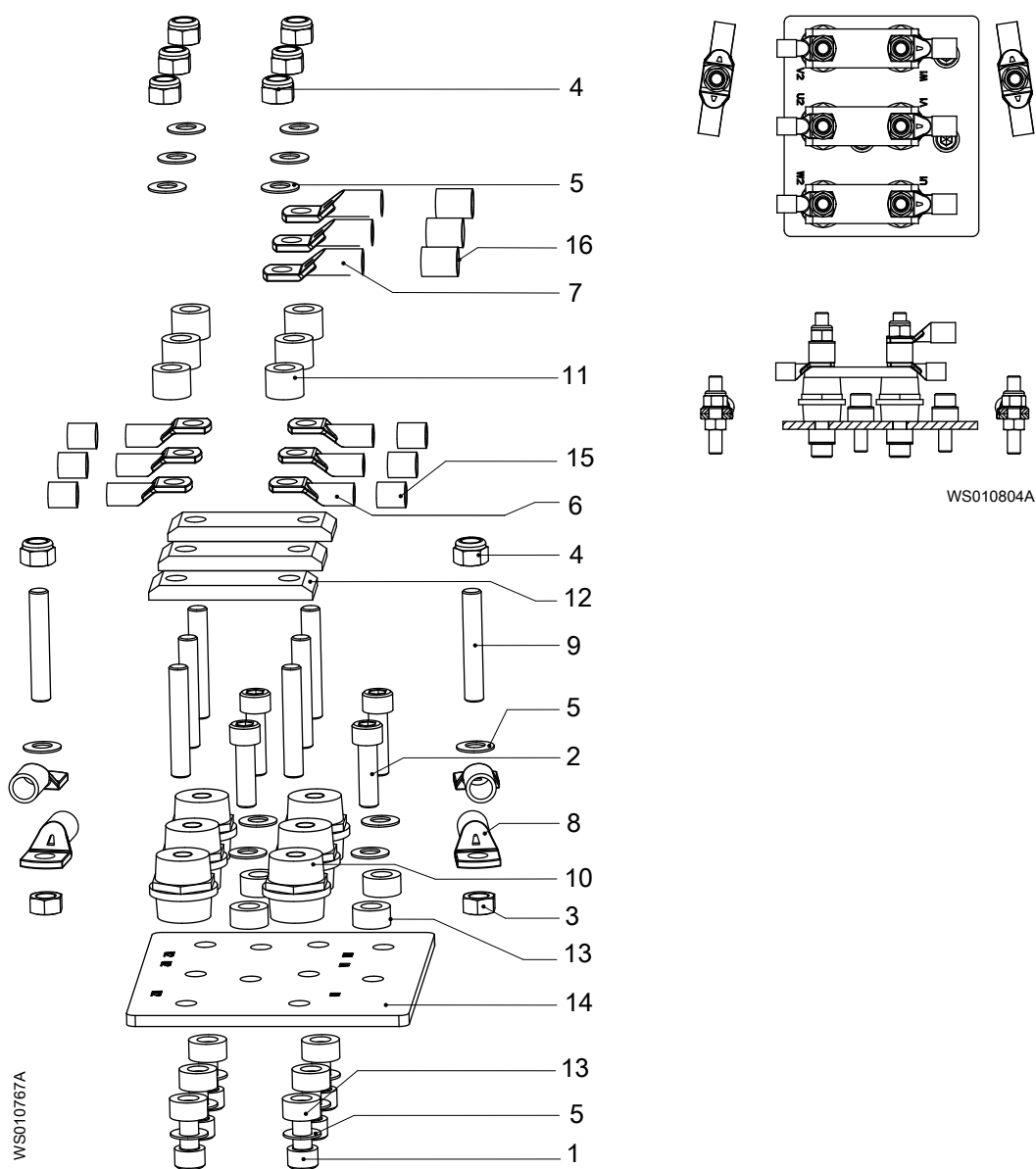


Item	Denomination		Part No.	Qty.
1	Hexagon socket head cap screw	M10 x 25	82 00 51	6

Item	Denomination		Part No.	Qty.
2	Hexagon socket head cap screw	M10 x 35	82 00 53	4
3	Hexagon nut		82 23 83	1
4	Hexagon nut		82 27 28	7
5	Disc spring		83 38 96	17
6	Cable lug		*	12
7	Cable lug		**	6
8	Cable lug		***	2
9	Stud	M10 x 60	84 46 18	7
10	Insulator		85 04 11	6
11	Standoff		819 66 00	6
12	Sheet metal		819 69 00	6
13	Standoff		820 33 00	10
14	Bottom plate		820 34 00	1
15	Self-vulcanizing tape		85 04 57	Roll
16	Self-vulcanizing tape		85 04 57	Roll
* Depends on stator lead size				
** Depends on SUBCAB size				
*** Depends on ground size				

15.3 SUBCAB with ground check: from cycle 2018–1

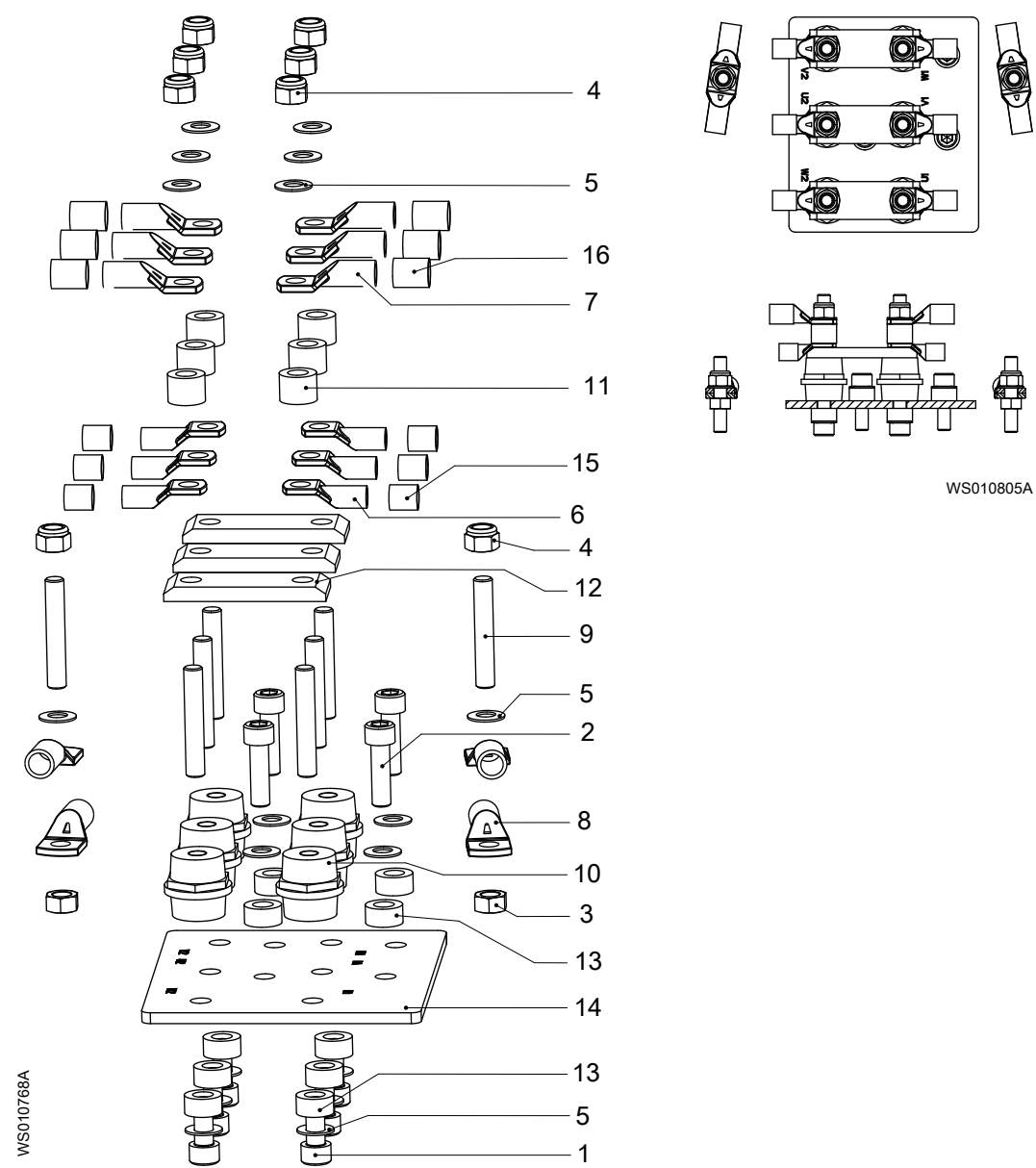
15.3.1 D-connection, 1 SUBCAB cable, 6 stator leads, with ground check



Item	Denomination		Part No.	Qty.
1	Hexagon socket head cap screw	M10 x 25	82 00 51	6
2	Hexagon socket head cap screw	M10 x 35	82 00 53	4
3	Hexagon nut		82 23 83	2
4	Hexagon nut		82 27 28	8
5	Disc spring		83 38 96	18
6	Cable lug		*	6
7	Cable lug		**	3
8	Cable lug		***	4
9	Stud	M10 x 60	84 46 18	8

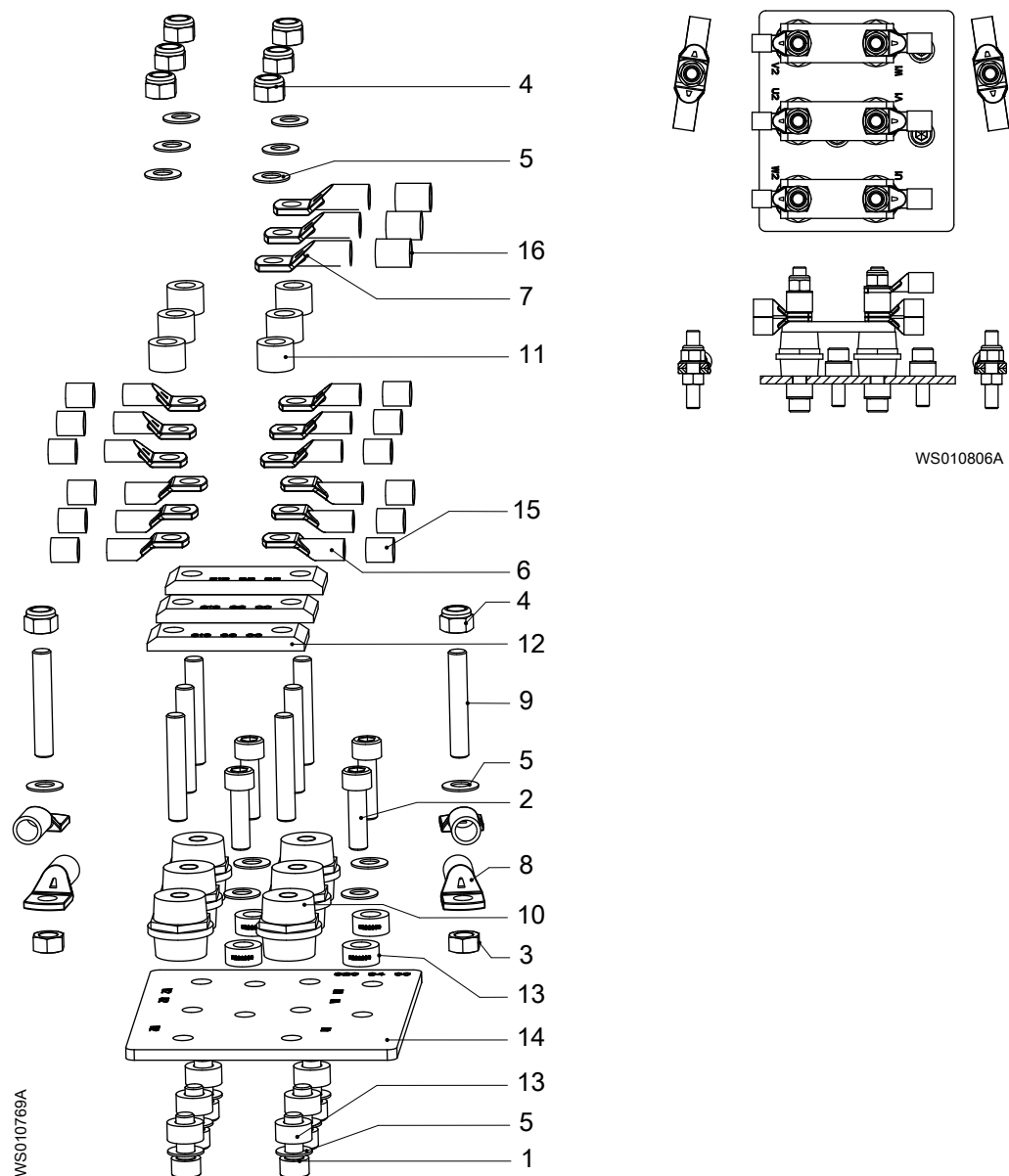
Item	Denomination	Part No.	Qty.
10	Insulator	85 04 11	6
11	Standoff	819 66 00	6
12	Closing link	819 68 00	3
13	Standoff	820 33 00	10
14	Bottom plate	820 34 00	1
15	Self-vulcanizing tape	85 04 57	Roll
16	Self-vulcanizing tape	85 04 57	Roll
* Depends on stator lead size			
** Depends on SUBCAB size			
*** Depends on ground size			

15.3.2 D-connection, 2 SUBCAB cables, 6 stator leads, with ground check



Item	Denomination		Part No.	Qty.
1	Hexagon socket head cap screw	M10 x 25	82 00 51	6
2	Hexagon socket head cap screw	M10 x 35	82 00 53	4
3	Hexagon nut		82 23 83	2
4	Hexagon nut		82 27 28	8
5	Disc spring		83 38 96	18
6	Cable lug		*	6
7	Cable lug		**	6
8	Cable lug		***	4
9	Stud	M10 x 60	84 46 18	8
10	Insulator		85 04 11	6
11	Standoff		819 66 00	6
12	Closing Link		819 68 00	3
13	Standoff		820 33 00	10
14	Bottom plate		820 34 00	1
15	Self-vulcanizing tape		85 04 57	Roll
16	Self-vulcanizing tape		85 04 57	Roll
* Depends on stator lead size ** Depends on SUBCAB size *** Depends on ground size				

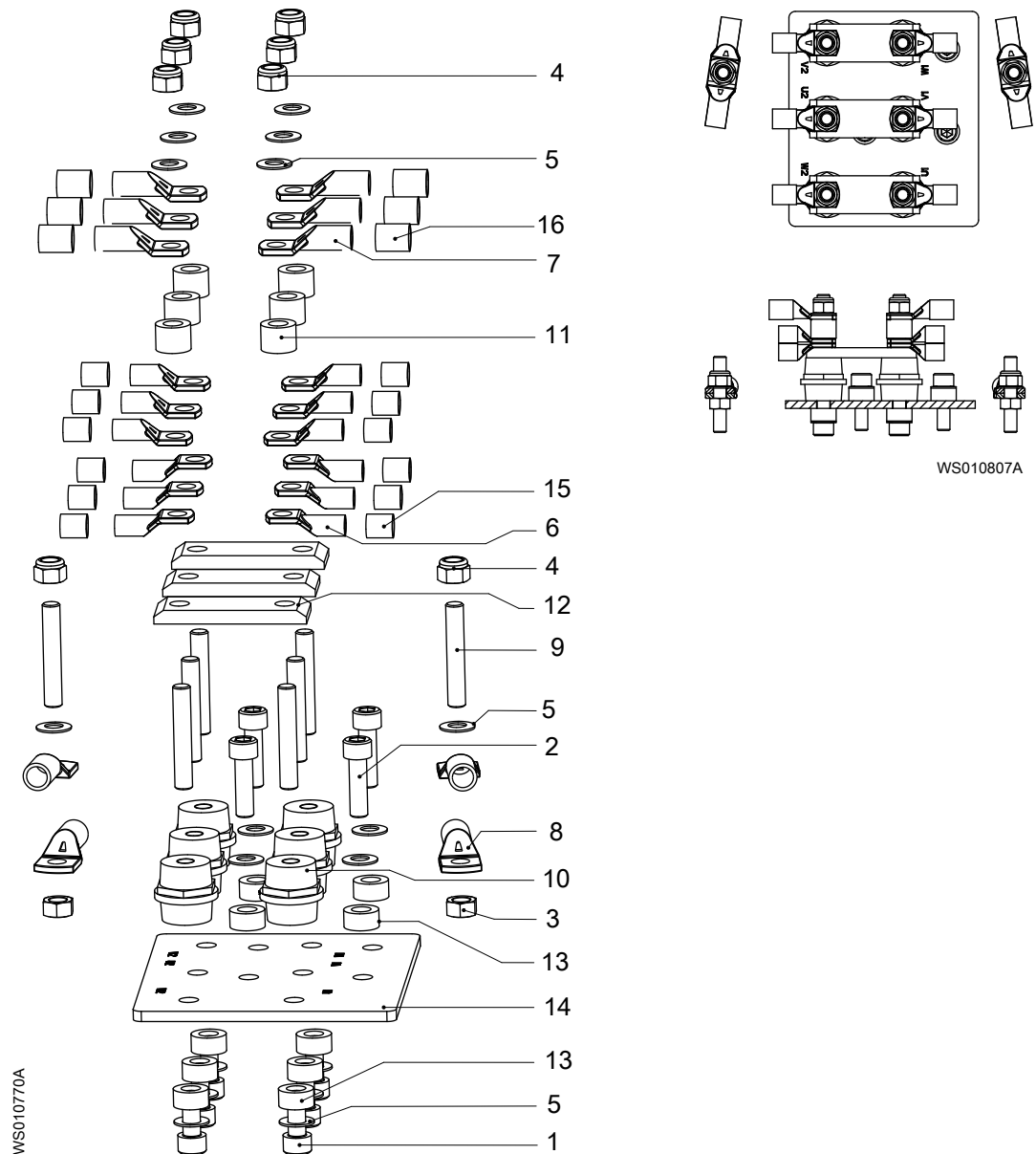
15.3.3 D-connection, 1 SUBCAB cable, 12 stator leads, with ground check



Item	Denomination		Part No.	Qty.
1	Hexagon socket head cap screw	M10 x 25	82 00 51	6
2	Hexagon socket head cap screw	M10 x 35	82 00 53	4
3	Hexagon nut		82 23 83	2
4	Hexagon nut		82 27 28	8
5	Disc spring		83 38 96	18
6	Cable lug		*	12
7	Cable lug		**	3
8	Cable lug		***	4
9	Stud	M10 x 60	84 46 18	8
10	Insulator		85 04 11	6

Item	Denomination	Part No.	Qty.
11	Standoff	819 66 00	6
12	Closing link	819 68 00	3
13	Standoff	820 33 00	10
14	Bottom plate	820 34 00	1
15	Self-vulcanizing tape	85 04 57	Roll
16	Self-vulcanizing tape	85 04 57	Roll
* Depends on stator lead size			
** Depends on SUBCAB size			
*** Depends on ground size			

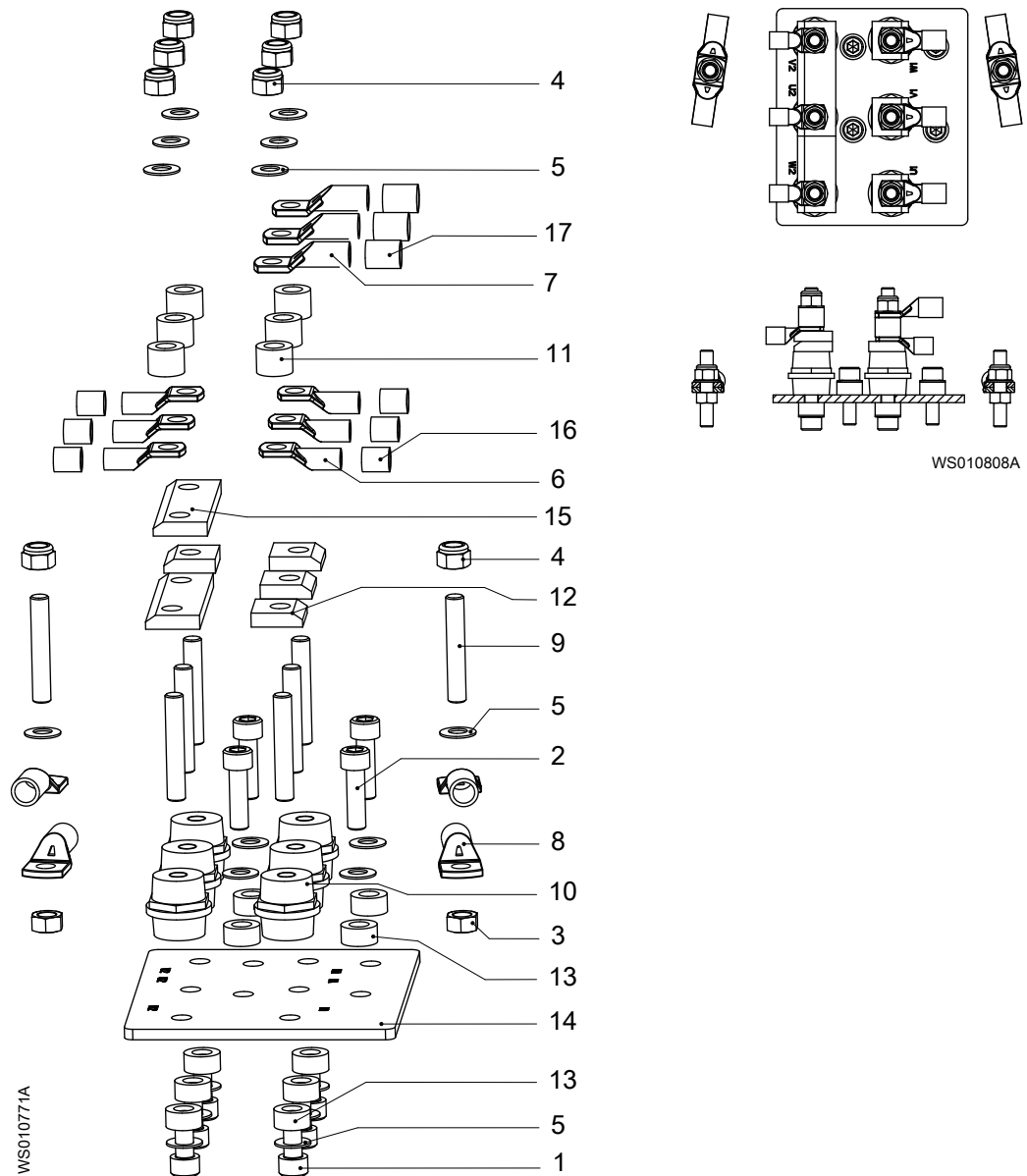
15.3.4 D-connection, 2 SUBCAB cables, 12 stator leads, with ground check



Item	Denomination	Part No.	Qty.
1	Hexagon socket head cap screw	M10 x 25	6

Item	Denomination		Part No.	Qty.
2	Hexagon socket head cap screw	M10 x 35	82 00 53	4
3	Hexagon nut		82 23 83	2
4	Hexagon nut		82 27 28	8
5	Disc spring		83 38 96	18
6	Cable lug		*	12
7	Cable lug		**	6
8	Cable lug		***	4
9	Stud	M10 x 60	84 46 18	8
10	Insulator		85 04 11	6
11	Standoff		819 66 00	6
12	Closing link		819 68 00	3
13	Standoff		820 33 00	10
14	Bottom plate		820 34 00	1
15	Self-vulcanizing tape		85 04 57	Roll
16	Self-vulcanizing tape		85 04 57	Roll
* Depends on stator lead size				
** Depends on SUBCAB size				
*** Depends on ground size				

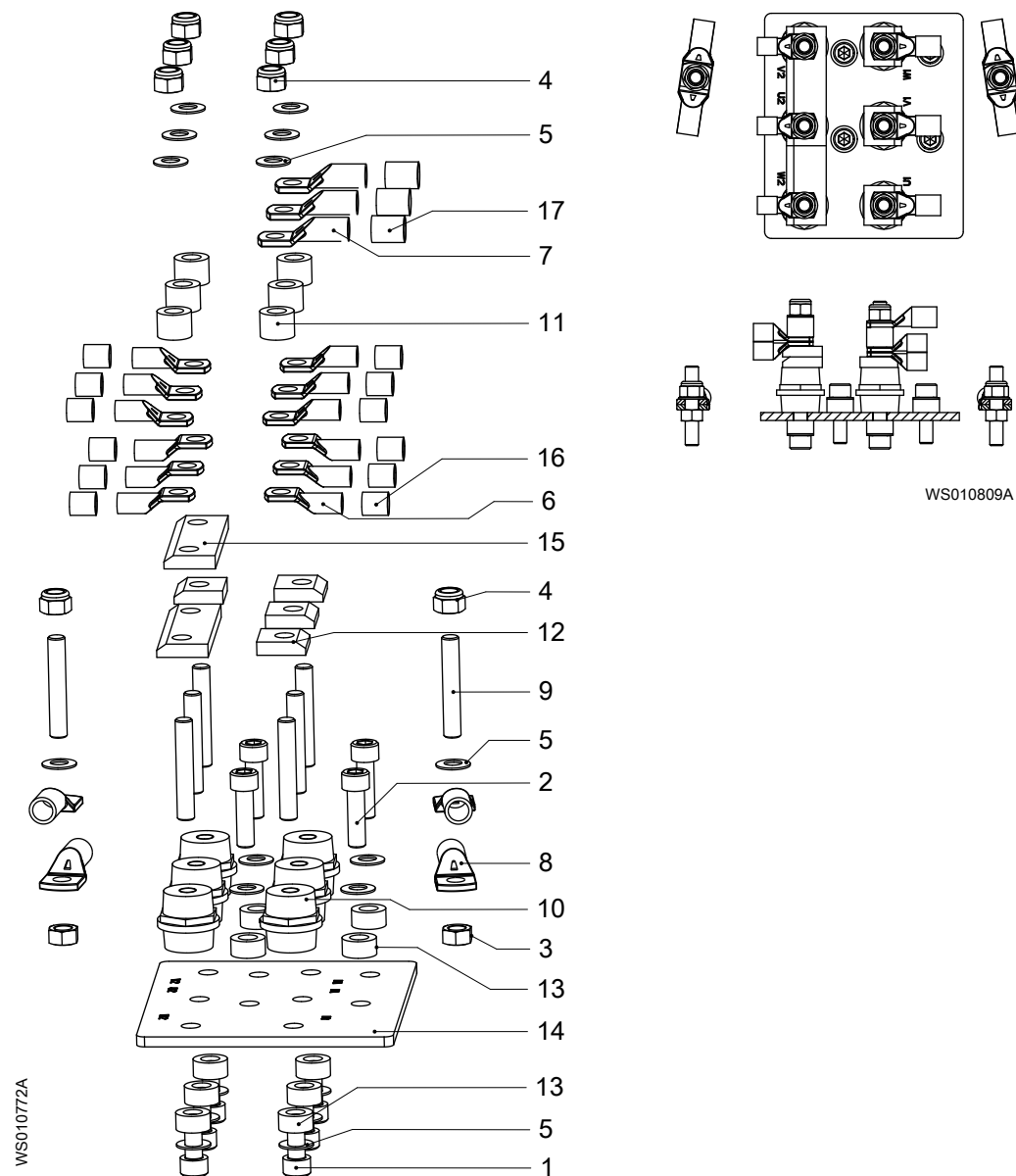
15.3.5 Y-connection, 1 SUBCAB cable, 6 stator leads, with ground check



Item	Denomination		Part No.	Qty.
1	Hexagon socket head cap screw	M10 x 25	82 00 51	6
2	Hexagon socket head cap screw	M10 x 35	82 00 53	4
3	Hexagon nut		82 23 83	2
4	Hexagon nut		82 27 28	8
5	Disc spring		83 38 96	18
6	Cable lug		*	6
7	Cable lug		**	3
8	Cable lug		***	4
9	Stud	M10 x 60	84 46 18	8
10	Insulator		85 04 11	6
11	Standoff		819 66 00	6

Item	Denomination		Part No.	Qty.
12	Sheet metal		819 69 00	4
13	Standoff		820 33 00	10
14	Bottom plate		820 34 00	1
15	Sheet metal		821 22 00	2
16	Self-vulcanizing tape		85 04 57	Roll
17	Self-vulcanizing tape		85 04 57	Roll
* Depends on stator lead size				
** Depends on SUBCAB size				
*** Depends on ground size				

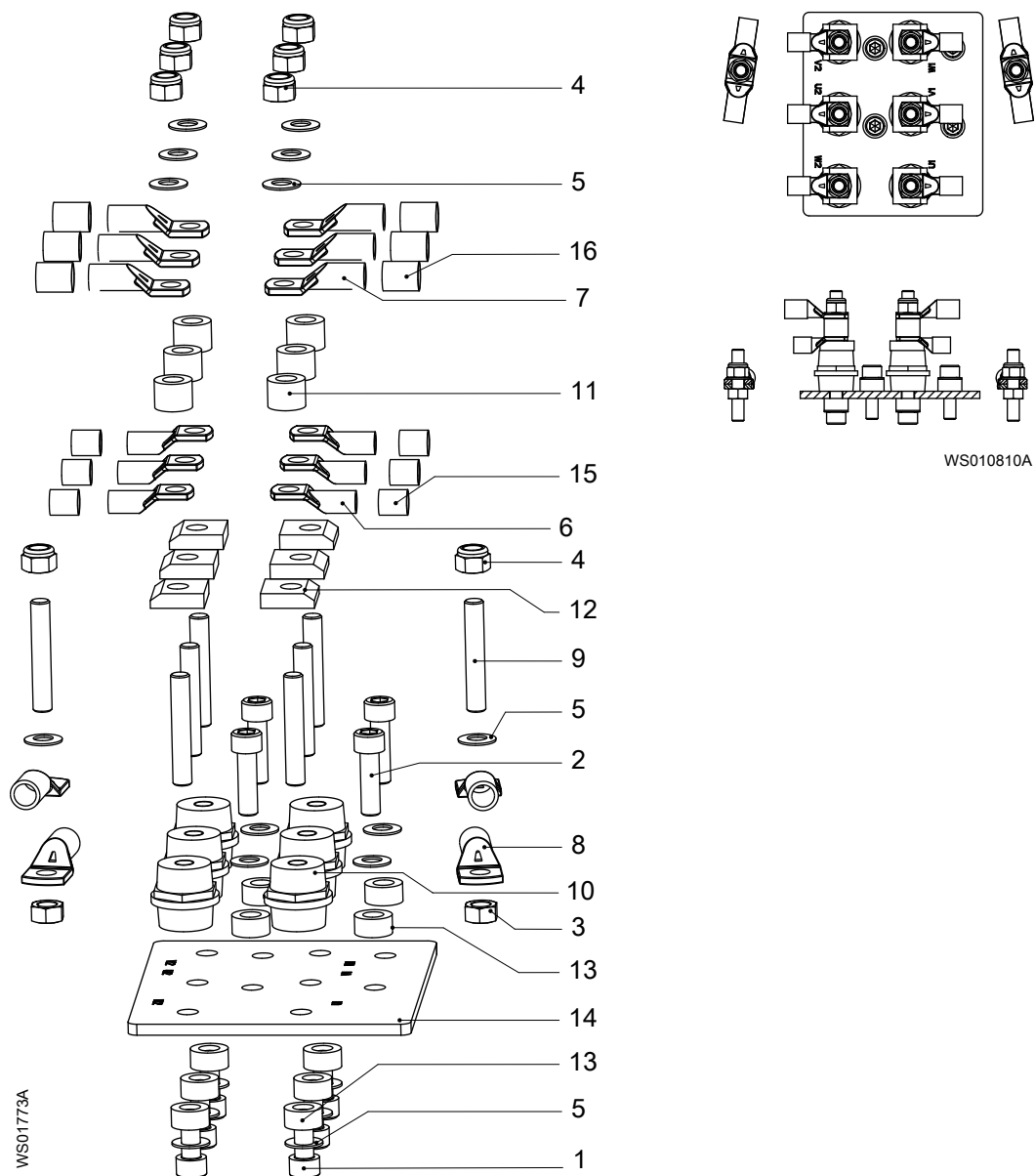
15.3.6 Y-connection, 1 SUBCAB cable, 12 stator leads, with ground check



Item	Denomination		Part No.	Qty.
1	Hexagon socket head cap screw	M10 x 25	82 00 51	6

Item	Denomination		Part No.	Qty.
2	Hexagon socket head cap screw	M10 x 35	82 00 53	4
3	Hexagon nut		82 23 83	2
4	Hexagon nut		82 27 28	8
5	Disc spring		83 38 96	18
6	Cable lug		*	12
7	Cable lug		**	3
8	Cable lug		***	4
9	Stud	M10 x 60	84 46 18	8
10	Insulator		85 04 11	6
11	Standoff		819 66 00	6
12	Sheet metal		819 69 00	4
13	Standoff		820 33 00	10
14	Bottom plate		820 34 00	1
15	Sheet metal		821 22 00	2
16	Self-vulcanizing tape		85 04 57	Roll
17	Self-vulcanizing tape		85 04 57	Roll
* Depends on stator lead size				
** Depends on SUBCAB size				
*** Depends on ground size				

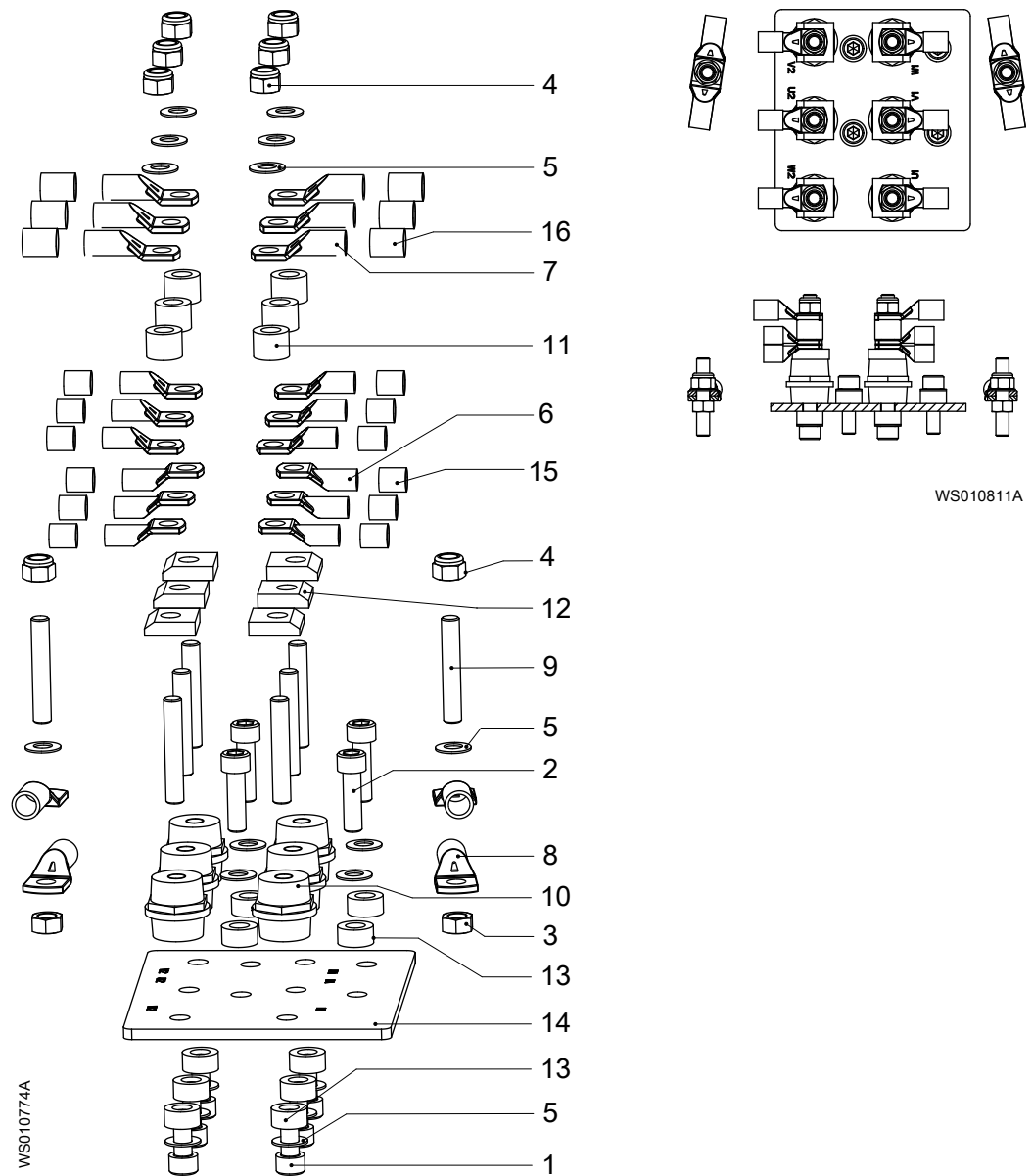
15.3.7 Y/D-connection, 2 SUBCAB cables, 6 stator leads, with ground check



Item	Denomination		Part No.	Qty.
1	Hexagon socket head cap screw	M10 x 25	82 00 51	6
2	Hexagon socket head cap screw	M10 x 35	82 00 53	4
3	Hexagon nut		82 23 83	2
4	Hexagon nut		82 27 28	8
5	Disc spring		83 38 96	18
6	Cable lug		*	6
7	Cable lug		**	6
8	Cable lug		***	4
9	Stud	M10 x 60	84 46 18	8
10	Insulator		85 04 11	6
11	Standoff		819 66 00	6

Item	Denomination	Part No.	Qty.
12	Sheet metal	819 69 00	6
13	Standoff	820 33 00	10
14	Bottom plate	820 34 00	1
15	Self-vulcanizing tape	85 04 57	Roll
16	Self-vulcanizing tape	85 04 57	Roll
* Depends on stator lead size			
** Depends on SUBCAB size			
*** Depends on ground size			

15.3.8 Y/D-connection, 2 SUBCAB cables, 12 stator leads, with ground check



Item	Denomination	Part No.	Qty.
1	Hexagon socket head cap screw	M10 x 25	6

Item	Denomination		Part No.	Qty.
2	Hexagon socket head cap screw	M10 x 35	82 00 53	4
3	Hexagon nut		82 23 83	2
4	Hexagon nut		82 27 28	8
5	Disc spring		83 38 96	18
6	Cable lug		*	12
7	Cable lug		**	6
8	Cable lug		***	4
9	Stud	M10 x 60	84 46 18	8
10	Insulator		85 04 11	6
11	Standoff		819 66 00	6
12	Sheet metal		819 69 00	6
13	Standoff		820 33 00	10
14	Bottom plate		820 34 00	1
15	Self-vulcanizing tape		85 04 57	Roll
16	Self-vulcanizing tape		85 04 57	Roll
* Depends on stator lead size				
** Depends on SUBCAB size				
*** Depends on ground size				

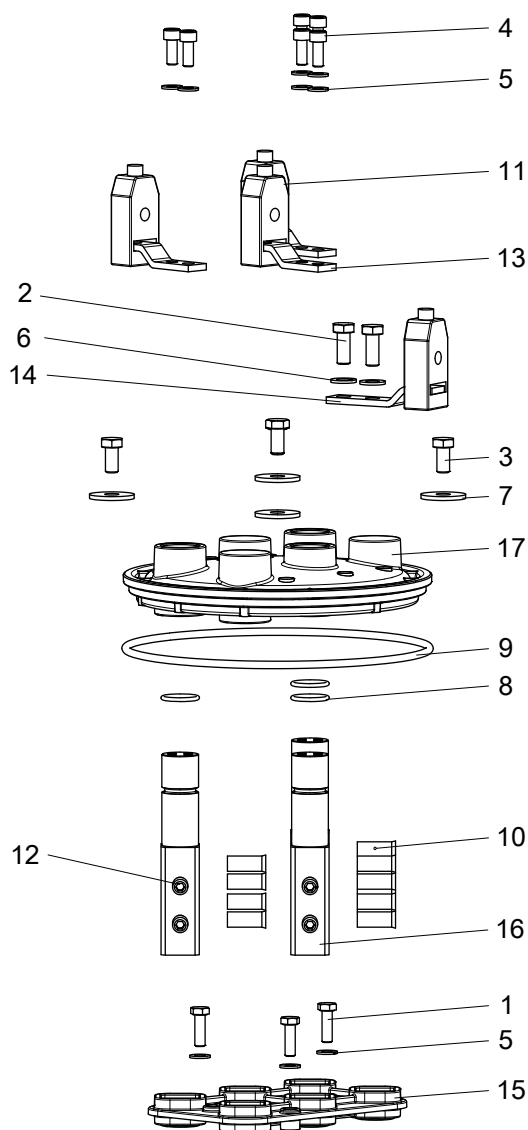
16 Electrical Components: Power, Large Connection House

16.1 D-connection

Table 77: D-connection configurations

Number of cables	Sizes	Reference
1	• 4 x 70 mm² • 4 x 95 mm² • 4 x 120 mm²	D: 3 on page 122
2	• 4 x 25 mm² • 4 x 35 mm²	D: 3 on page 122
	• 4 x 50 mm² • 4 x 70 mm² • 4 x 95 mm² • 4 x 120 mm²	D: 4 on page 123
3	• 4 x 70 mm² • 4 x 95 mm² • 4 x 120 mm² • 3 x 150 mm² + 3 x 70 mm²/3 • 3 x 185 mm² + 3 x 95 mm²/3	D: 6 on page 125

16.1.1 D: 3



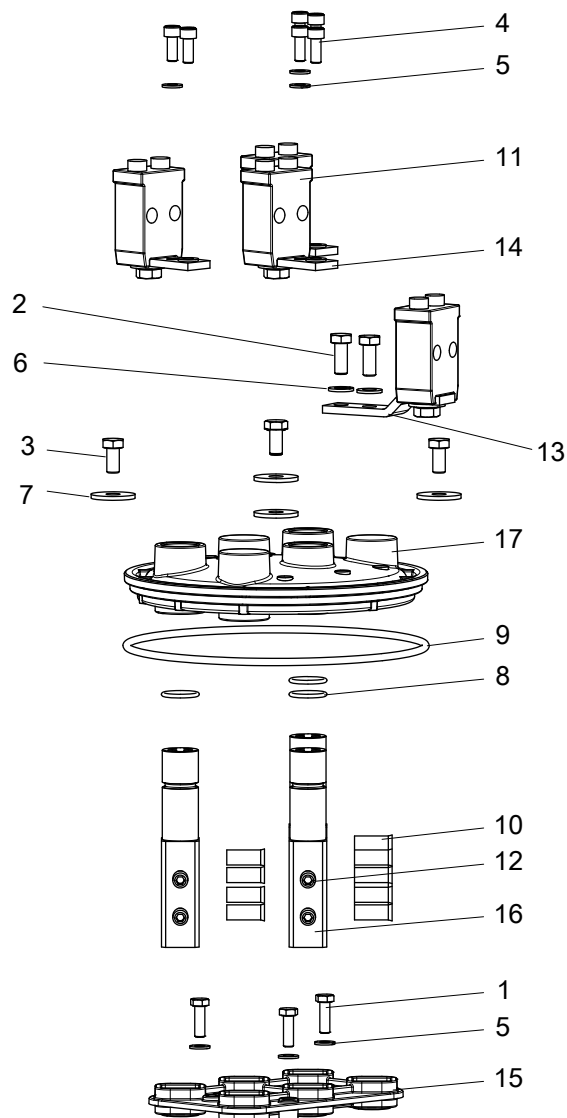
WS004035B

Item	Denomination		Part No.	Qty.
1	Hexagon head screw	M8 x 25	81 41 06	3
2	Hexagon head screw	M10 x 25	81 41 31	2
3	Hexagon head screw	M10 x 20	81 48 79	4
4	Hexagon socket head cap screw	M8 x 20	82 00 32	6
5	Washer	8.4 x 16.0 x 1.6	82 35 16	9
6	Washer	10.5 x 20.0 x 2.0	82 35 76	2
7	Plain washer		82 37 44	4
8	O-ring	24.20 x 3.0	82 73 92	3
9	O-ring	229.30 x 5.70	82 81 82	1
10	End-sleeve ⁽¹⁾	6 mm ²	83 43 28	12
		10 mm ²	83 43 29	
		16 mm ²	83 43 25	
		25 mm ²	83 43 26	
		35-50 mm ²	83 43 27	

Item	Denomination		Part No.	Qty.
		50 mm ²	83 42 22	
11	Cable clamp		84 66 51	4
12	Set screw		498 87 01	12
13	Plate		548 93 00	3
14	Earthing plate		548 95 00	1
15	Holder		550 14 00	1
16	Terminal		550 15 00	3
17	Terminal plate		550 19 01	1

(1) Select the end-sleeve to fit the stator lead size.

16.1.2 D: 4

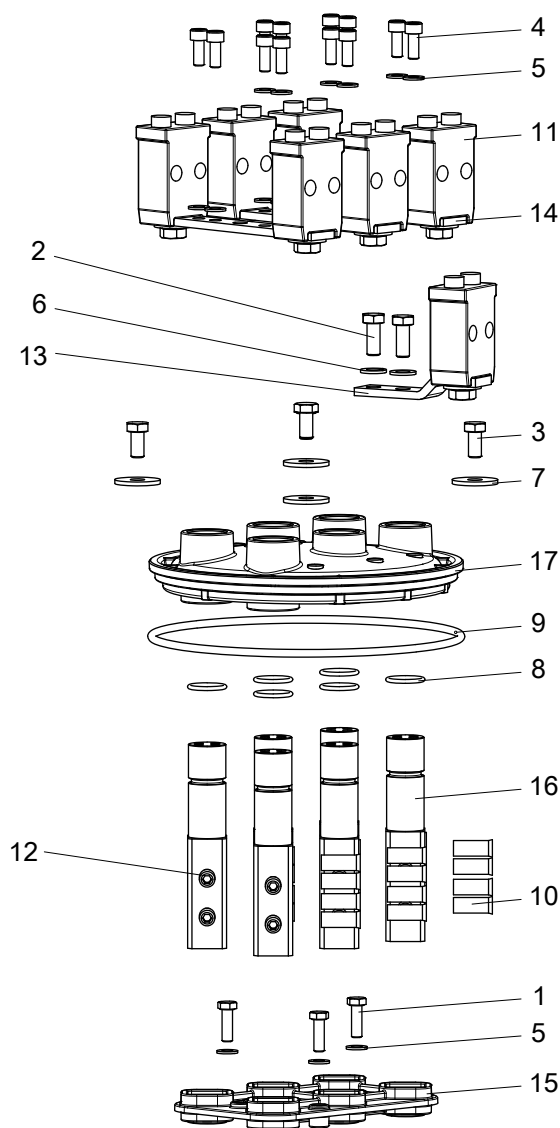


WS004036B

Item	Denomination		Part No.	Qty.
1	Hexagon head screw	M8 x 25	81 41 06	3
2	Hexagon head screw	M10 x 25	81 41 31	2
3	Hexagon head screw	M10 x 20	81 48 79	4

Item	Denomination		Part No.	Qty.
4	Hexagon socket head cap screw	M8 x 20	82 00 32	6
5	Washer	8.4 x 16.0 x 1.6	82 35 16	9
6	Washer	10.5 x 20.0 x 2.0	82 35 76	2
7	Plain washer		82 37 44	4
8	O-ring	24.20 x 3.0	82 73 92	3
9	O-ring	229.30 x 5.70	82 81 82	1
10	End-sleeve ⁽¹⁾	6 mm ²	83 43 28	12
		10 mm ²	83 43 29	
		16 mm ²	83 43 25	
		25 mm ²	83 43 26	
		35-50 mm ²	83 43 27	
		50 mm ²	83 42 22	
11	Cable clamp		84 66 52	4
12	Set screw		498 87 01	12
13	Earthing plate		548 94 00	1
14	Plate		548 96 01	3
15	Holder		550 14 00	1
16	Terminal		550 15 00	3
17	Terminal plate		550 19 01	1
⁽¹⁾ Select the end-sleeve to fit the stator lead size.				

16.1.3 D: 6



WS004038B

Item	Denomination		Part No.	Qty.
1	Hexagon head screw	M8 x 25	81 41 06	3
2	Hexagon head screw	M10 x 25	81 41 31	2
3	Hexagon head screw	M10 x 20	81 48 79	4
4	Hexagon socket head cap screw	M8 x 20	82 00 32	12
5	Washer	8.4 x 16.0 x 1.6	82 35 16	15
6	Washer	10.5 x 20.0 x 2.0	82 35 76	2
7	Plain washer		82 37 44	4
8	O-ring	24.20 x 3.0	82 73 92	6
9	O-ring	229.30 x 5.70	82 81 82	1
10	End-sleeve	6 mm ²	83 43 28	24
		10 mm ²	83 43 29	
		16 mm ²	83 43 25	
		25 mm ²	83 43 26	
		35-50 mm ²	83 43 27	

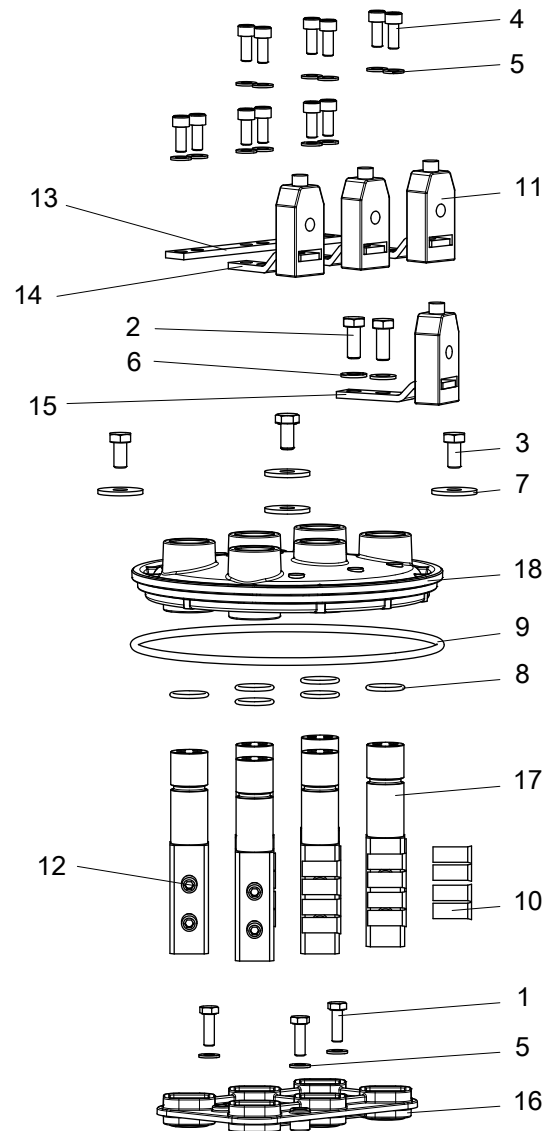
Item	Denomination	Part No.	Qty.
	50 mm ²	83 42 22	
11	Cable clamp	84 6 652	7
12	Set screw	498 87 01	24
13	Earthing plate	548 94 00	1
14	Plate	548 96 00	3
15	Holder	550 14 00	1
16	Terminal	550 15 00	6
17	Terminal plate	550 19 00	1

16.2 Y-connection

Table 78: Y-connection configurations

Number of cables	Sizes	Reference
1	• 4 x 70 mm² • 4 x 95 mm² • 4 x 120 mm²	Y: 3 on page 127
2	• 4 x 50 mm² • 4 x 70 mm² • 4 x 95 mm² • 4 x 120 mm² • 3 x 150 mm² + 3 x 70 mm²/3	Y: 4 on page 128

16.2.1 Y: 3

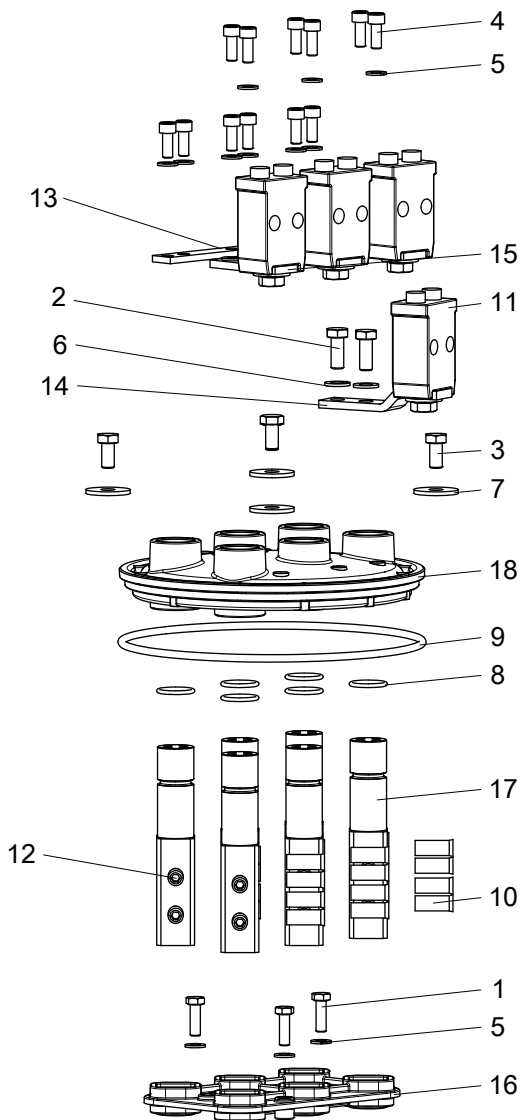


WS0004041B

Item	Denomination		Part No.	Qty.
1	Hexagon head screw	M8 x 25	81 41 06	3
2	Hexagon head screw	M10 x 25	81 41 31	2
3	Hexagon head screw	M10 x 20	81 48 79	4
4	Hexagon socket head cap screw	M8 x 20	82 00 32	12
5	Washer	8.4 x 16.0 x 1.6	82 35 16	15
6	Washer	10.5 x 20.0 x 2.0	82 35 76	2
7	Plain washer		82 37 44	4
8	O-ring	24.20 x 3.0	82 73 92	6
9	O-ring	229.30 x 5.70	82 81 82	1
10	End-sleeve	6 mm ²	83 43 28	24
		10 mm ²	83 43 29	
		16 mm ²	83 43 25	
		25 mm ²	83 43 26	
		35-50 mm ²	83 43 27	

Item	Denomination		Part No.	Qty.
		50 mm ²	83 42 22	
11	Cable clamp		84 66 51	4
12	Set screw		498 87 01	24
13	Plate		536 65 00	1
14	Plate		548 93 00	3
15	Earthing plate		548 95 00	1
16	Holder		550 14 00	1
17	Terminal		550 15 00	6
18	Terminal plate		550 19 00	1

16.2.2 Y: 4



WS004042B

Item	Denomination		Part No.	Qty.
1	Hexagon head screw	M8 x 25	81 41 06	3
2	Hexagon head screw	M10 x 25	81 41 31	2
3	Hexagon head screw	M10 x 20	81 48 79	4

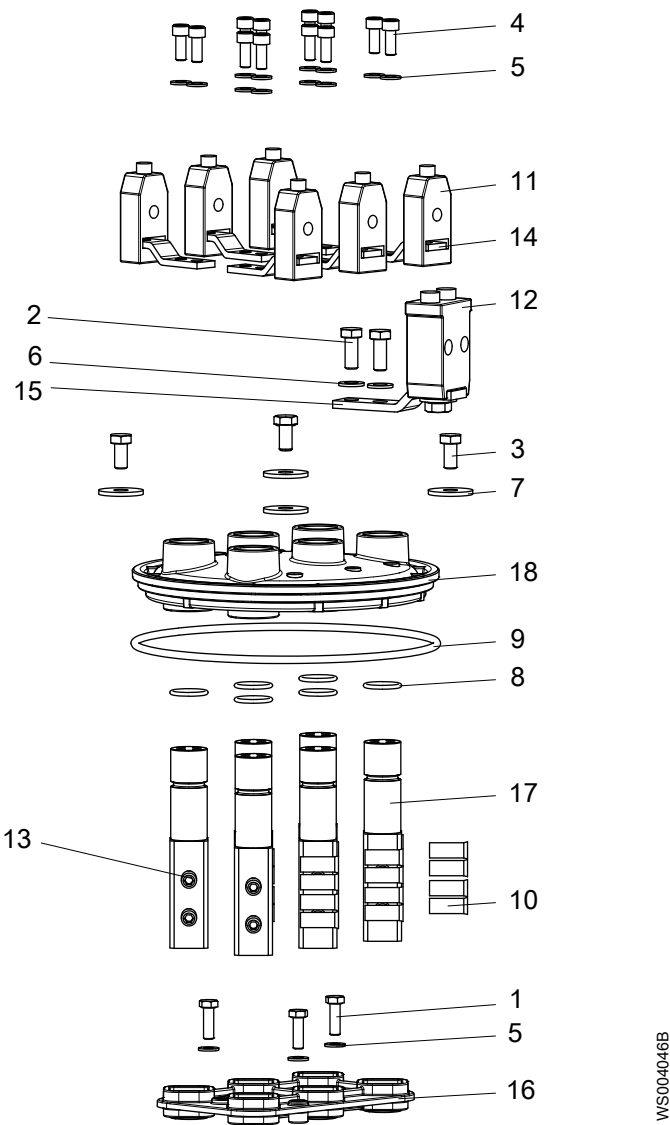
Item	Denomination		Part No.	Qty.
4	Hexagon socket head cap screw	M8 x 20	82 00 32	12
5	Washer	8.4 x 16.0 x 1.6	82 35 16	15
6	Washer	10.5 x 20.0 x 2.0	82 35 76	2
7	Plain washer		82 37 44	4
8	O-ring	24.20 x 3.0	82 73 92	6
9	O-ring	229.30 x 5.70	82 81 82	1
10	End-sleeve ⁽¹⁾	6 mm ²	83 43 28	24
		10 mm ²	83 43 29	
		16 mm ²	83 43 25	
		25 mm ²	83 43 26	
		35-50 mm ²	83 43 27	
		50 mm ²	83 42 22	
11	Cable clamp		84 66 52	4
12	Set screw		498 87 01	24
13	Plate		536 65 00	1
14	Earthing plate		548 94 00	1
15	Plate		548 96 01	3
16	Holder		550 14 00	1
17	Terminal		550 15 00	6
18	Terminal plate		550 19 00	1
⁽¹⁾ Select the end-sleeve to fit the stator lead size.				

16.3 Y/D-connection

Table 79: Y/D-connection configurations

Number of cables	Sizes	Reference
2	• 4 x 70 mm² • 4 x 95 mm² • 4 x 120 mm²	Y/D: 4 on page 130

16.3.1 Y/D: 4



WS004046B

Item	Denomination		Part No.	Qty.
1	Hexagon head screw	M8 x 25	81 41 06	3
2	Hexagon head screw	M10 x 25	81 41 31	2
3	Hexagon head screw	M10 x 20	81 48 79	4
4	Hexagon socket head cap screw	M8 x 20	82 00 32	12
5	Washer	8.4 x 16.0 x 1.6	82 35 16	15
6	Washer	10.5 x 20.0 x 2.0	82 35 76	2
7	Plain washer		82 37 44	4
8	O-ring	24.20 x 3.0	82 73 92	6
9	O-ring	229.30 x 5.70	82 81 82	1
10	End-sleeve	6 mm ²	83 43 28	24
		10 mm ²	83 43 29	
		16 mm ²	83 43 25	
		25 mm ²	83 43 26	
		35-50 mm ²	83 43 27	

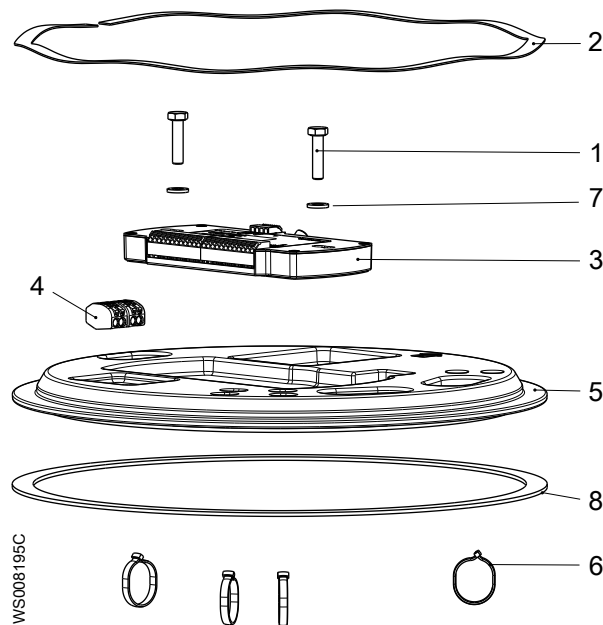
Item	Denomination		Part No.	Qty.
		50 mm ²	83 42 22	
11	Cable clamp		84 66 51	6
12	Cable clamp		84 66 52	1
13	Set screw		498 87 01	24
14	Plate		548 93 00	6
15	Earthing plate		548 94 00	1
16	Holder		550 14 00	1
17	Terminal		550 15 00	6
18	Terminal plate		550 19 00	1

17 Monitoring and Sensors

17.1 Electrical components: Monitoring

17.1.1 In connection house: Pumps equipped with MAS 801

This section is applicable for drive units equipped with the MAS 801.



Item	Denomination		Part No.	Qty.
1	Hexagon socket head cap screw	M6 x 25	81 48 30	2
2	Spring	Small connection house	82 30 14	1
2	Spring	Large connection house	82 30 13	1
3	PEM		823 05 00	1
4	Terminal block	Ex-proof drive units only	83 42 65	2
5	Terminal plate		777 04 00	1
6	Cable tie		83 45 60	4
7	Washer	6.4 x 12.0 x 1.6	82 35 73	2
8	Gasket		846 85 00	1

17.1.2 In connection house: Pumps not equipped with MAS 801

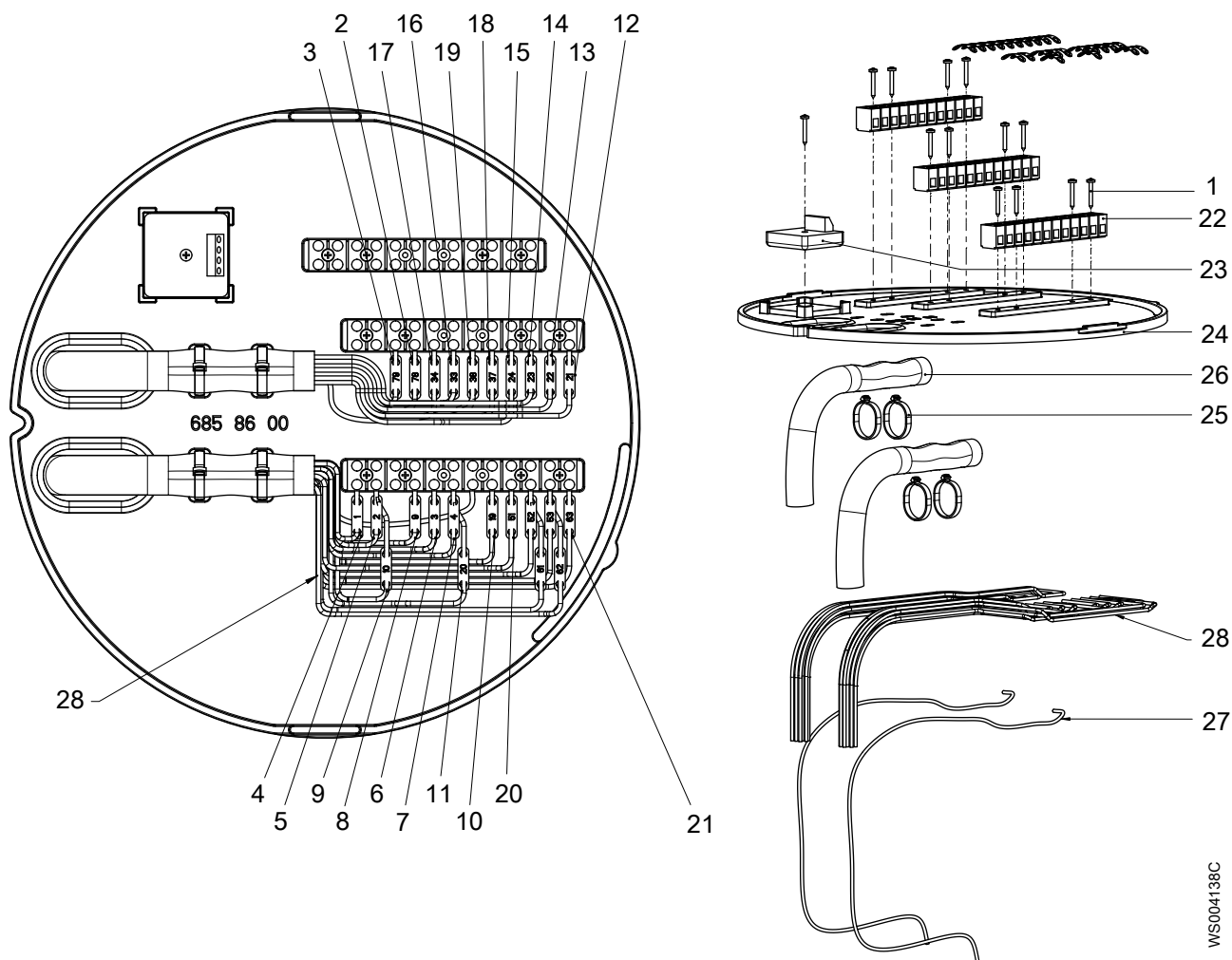


Table 80:

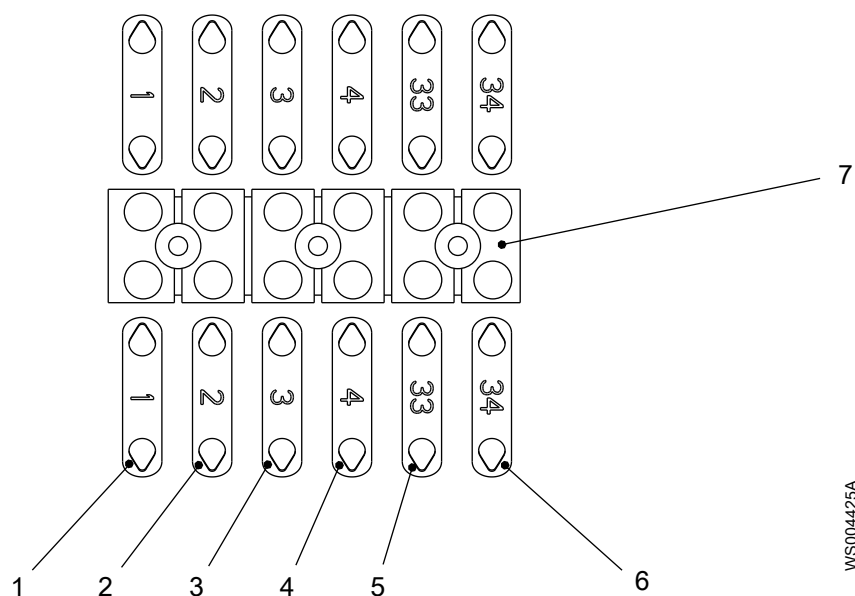
Item	Denomination	Part No.	Qty.
1	Tapping screw ST2.9x19	82 20 05	9
2	Marking plate	82 97 59	1
3	Marking plate	82 98 50	1
4	Marking plate	83 50 11	1
5	Marking plate	83 50 12	1
6	Marking plate	83 50 13	1
7	Marking plate	83 50 14	1
8	Marking plate	83 50 19	1
9	Marking plate	83 50 20	1
10	Marking plate	83 50 29	1
11	Marking plate	83 50 30	1
12	Marking plate	83 50 31	1
13	Marking plate	83 50 32	1
14	Marking plate	83 50 33	1
15	Marking plate	83 50 34	1
16	Marking plate	83 50 43	1

WS004138C

Item	Denomination	Part No.	Qty.
17	Marking plate	83 50 44	1
18	Marking plate	83 50 47	1
19	Marking plate	83 50 48	1
20	Marking plate	83 50 51	1
21	Marking plate	83 50 56	1
22	Terminal block	83 53 70	2 or 3 ⁽¹⁾
23	Pump memory	84 00 90	1
24	Terminal plate	685 86 00	1
25	Cable tie	83 45 60	2 or 4 ⁽²⁾
26	Insulation hose	94 05 89	1 or 2 ⁽³⁾
27	Single conductor	94 18 29	2 ⁽⁴⁾
28	Sensor cables	—	
⁽¹⁾ Three if RPM is used ⁽²⁾ Two cable ties per insulation hose ⁽³⁾ One hose, if 16 leads are used. Two hoses, if 17–32 leads are used. ⁽⁴⁾ Number used depends upon the number of lead.			

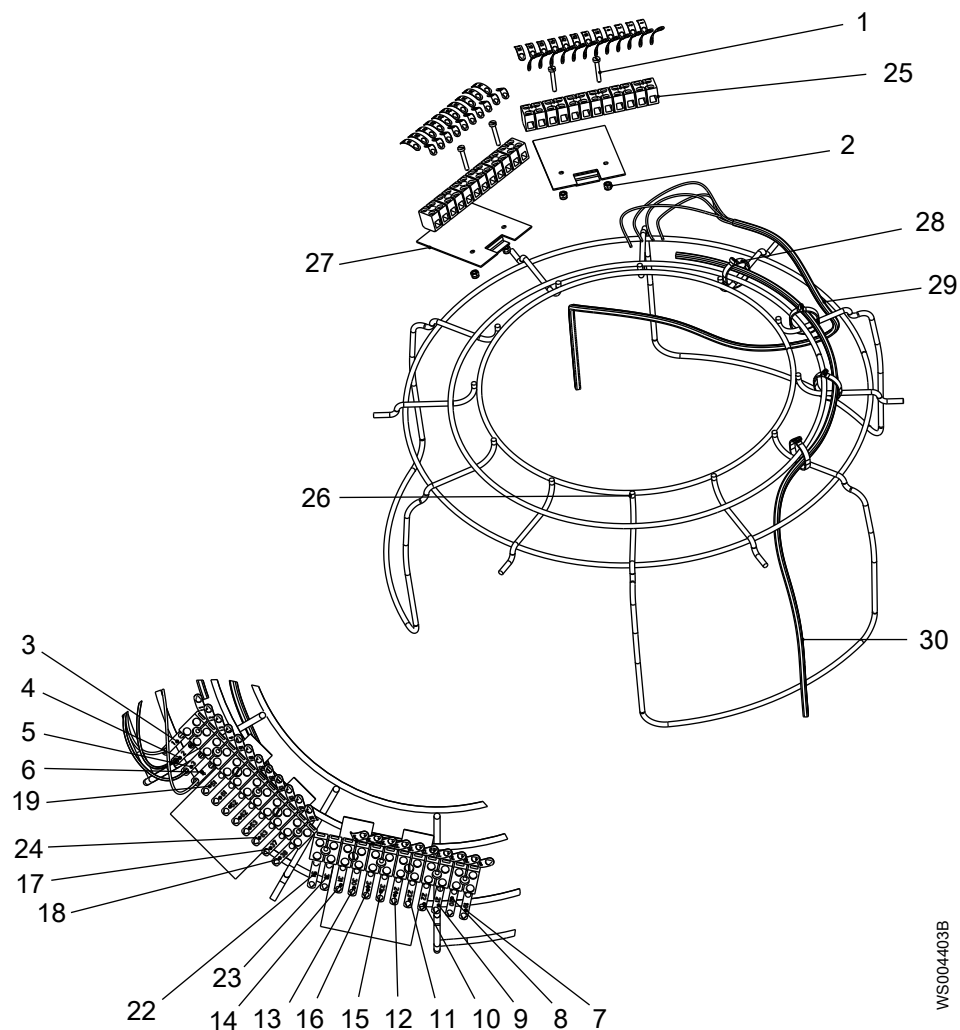
17.1.3 In stator house

Below stator



Item	Denomination		Part No. With CLS	Part No. With Oil Flow Sensor	Qty.
1	Marking plate		83 50 11	83 50 11	2
2	Marking plate		83 50 12	83 50 12	2
3	Marking plate		83 50 13	83 50 13	2
4	Marking plate		83 50 14	83 50 14	2
5	Marking plate	Optional	83 50 43	83 50 40	2
6	Marking plate	Optional	83 50 44	83 50 41	2
7	Terminal block		83 53 71	83 53 71	1

Above stator: large connection house only



WS004403B

Table 81: Large connection house only

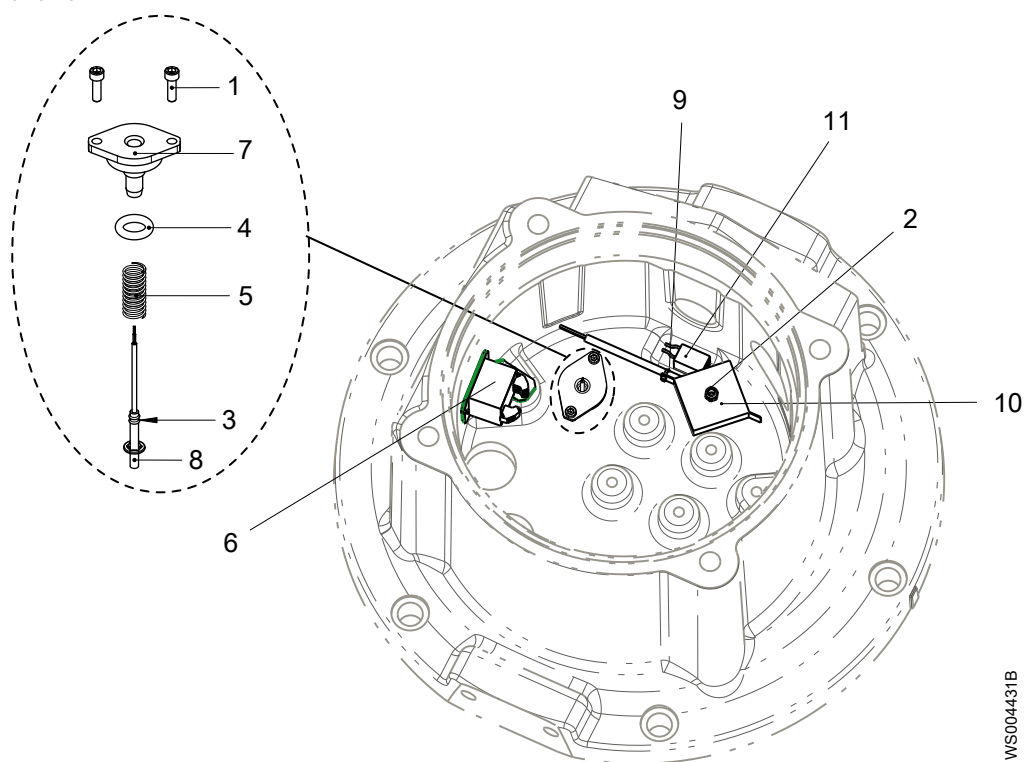
Item	Denomination		Part No.	Qty.
1	Slotted head screw	MCS M3 x 20	81 73 32	4
2	Hexagon nut		82 27 25	4
3	Marking plate		83 50 11	2
4	Marking plate		83 01 12	2
5	Marking plate		83 50 13	2
6	Marking plate		83 50 14	2
7	Marking plate		83 50 29	2
8	Marking plate		83 50 30	2
9	Marking plate		83 50 31	2
10	Marking plate		83 50 32	2
11	Marking plate		83 50 33	2
12	Marking plate		83 50 34	2
13	Marking plate		83 50 40	2
14	Marking plate		83 50 41	2
15	Marking plate		83 50 43	2
16	Marking plate		83 50 44	2

Item	Denomination	Part No.	Qty.
17	Marking plate	83 50 47	2
18	Marking plate	83 50 48	2
19	Marking plate	83 50 51	2
22	Marking plate	85 06 12	2
23	Marking plate	85 06 13	2
24	Marking plate	83 50 56	2
25	Terminal block	83 53 70	2
26	Grating	571 11 00	1
27	Plate	579 56 00	2
28	Cable tie	83 45 60	4
29	Control cable	94 17 40	1
30	Control cable	94 17 40	1

17.2 Sensors

17.2.1 Small connection house

17.2.1.1 Vertical installation

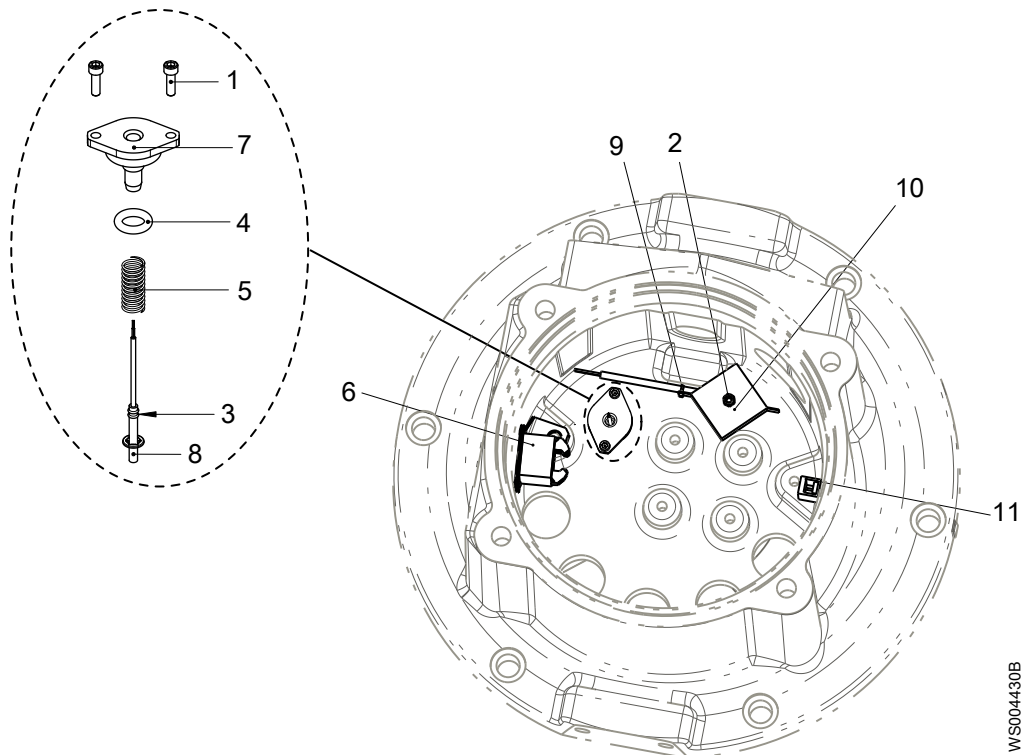


WS004431B

Item	Denomination	Part No.	Qty.
1	Hexagon socket head cap screw	M6 x 20	2
2	Hexagon nut		1
3	O-ring	4.10 x 1.60	2
4	O-ring	13.30 x 5.70	1
5	Compression spring		1
6	Noise suppression filter unit		1
7	Sleeve		1

Item	Denomination		Part No.	Qty.
8	Sensor unit	Pt100	648 55 00	1
9	Vibrations sensor VIS10	MAS 711 only.	669 88 01	1
10	Screw		690 25 00	1
11	Leakage detection unit		518 89 02	1

17.2.1.2 Horizontal installation

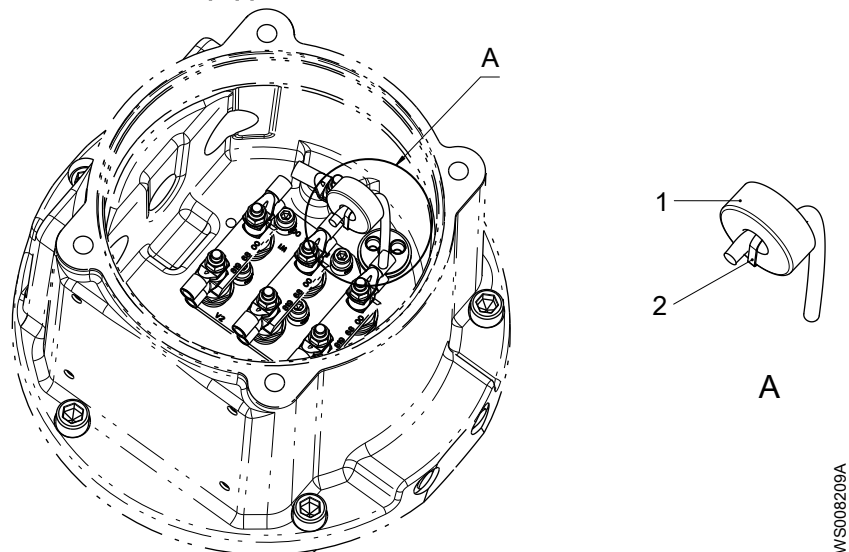


WS004430B

Table 82:

Item	Denomination		Part No.	Qty.
1	Hexagon socket head cap screw	M6 x 20	82 00 15	2
2	Hexagon nut		82 27 26	1
3	O-ring	4.10 x 1.60	82 74 40	2
4	O-ring	13.30 x 5.70	82 76 82	1
5	Compression spring		544 46 01	1
6	Noise suppression filter unit		604 68 04	1
7	Sleeve		825 51 03	1
8	Sensor unit	Pt100	648 55 00	1
9	Vibrations sensor VIS10	MAS 711 only.	669 88 01	1
10	Screw		690 25 00	1
11	Leakage detection unit		518 89 02	1

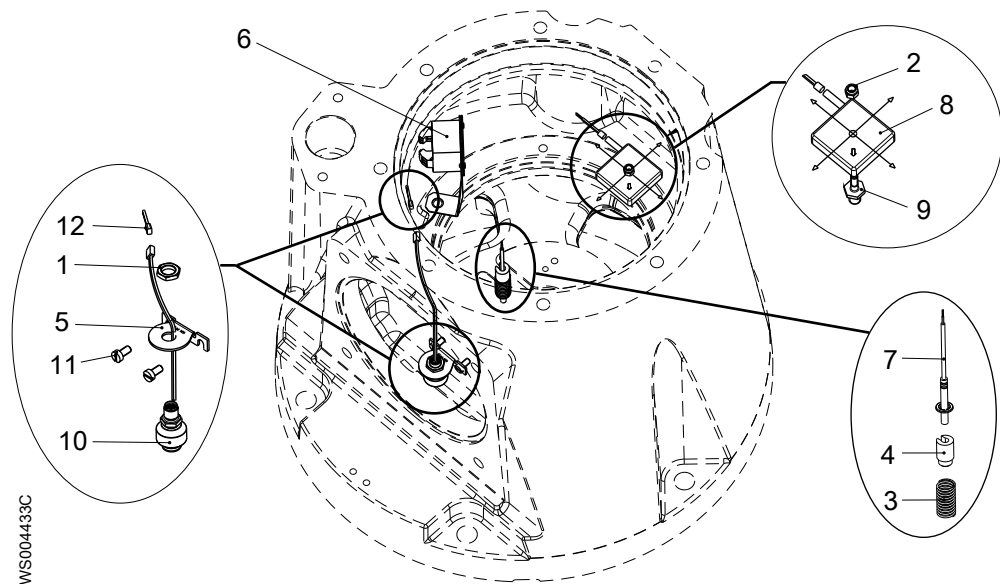
17.2.1.3 Current transformer: Units equipped with MAS 801



Item	Denomination	Part No.	Qty.
1	Current transformer	82 62 75	1
2	Cable tie	83 45 60	1

17.2.2 Large connection house

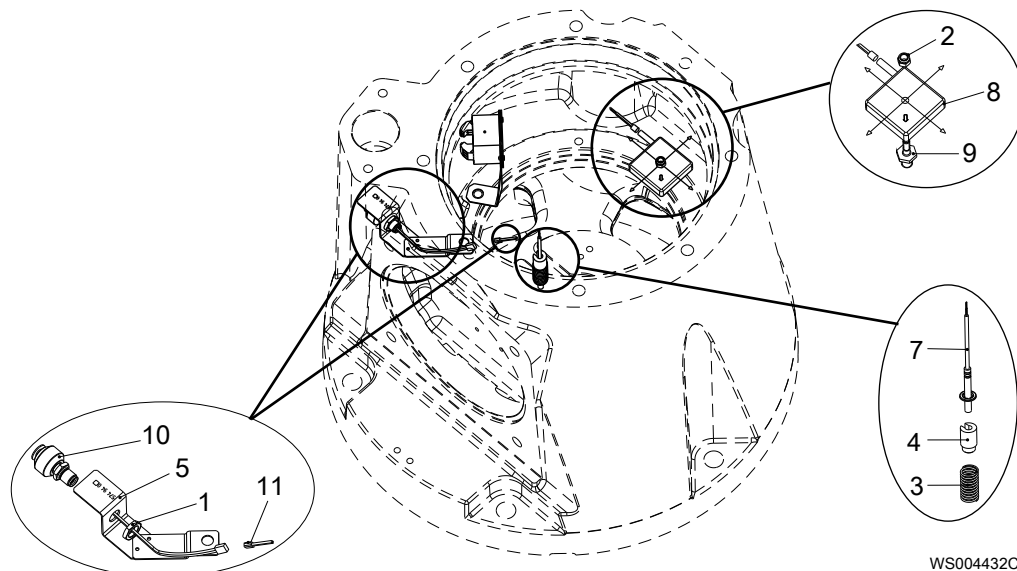
17.2.2.1 Vertical installation



Item	Denomination		Part No.	Qty.
1	Nut	M12	82 25 99	1
2	Hexagon nut		82 27 26	1
3	Compression spring		544 46 02	1
4	Sleeve		545 26 00	1
5	Holder complete		684 71 00	1
6	Noise suppression filter unit	Standard drive units Part of CLS	604 68 04	1
7	Sensor unit	Pt100	648 55 00	1
8	Vibrations sensor VIS10	MAS 711 only.	669 88 01	1

Item	Denomination		Part No.	Qty.
9	Screw		690 25 00	1
10	Level sensor FLS-10	EX drive units	663 04 00	1
		Standard drive units	791 99 00	
11	Slotted head screw	MCS M6 x 12	81 71 48	2
12	Cable unit		650 51 00	1

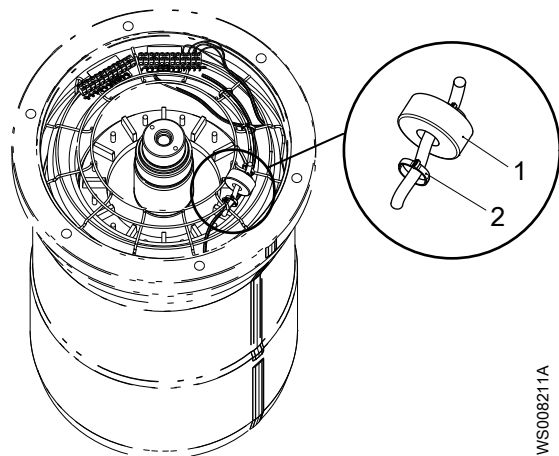
17.2.2.2 Horizontal installation



Item	Denomination		Part No.	Qty.
1	Nut	M12	82 25 99	1
2	Hexagon nut		82 27 26	1
3	Compression spring		544 46 02	1
4	Sleeve		545 26 00	1
5	Holder		574 94 00	1
6	Noise suppression filter unit	Standard drive units Part of CLS	604 68 04	1
7	Sensor unit	Pt100	648 55 00	1
8	Vibrations sensor VIS10	MAS 711 only.	669 88 01	1
9	Screw		690 25 00	1
10	Level sensor FLS-10	EX drive units	663 04 00	1
		Standard drive units	791 99 00	
11	Cable unit		650 51 00	1

17.2.2.3 Current transformer: Units equipped with MAS 801

If the current transformer was installed at the factory, then it is located in the stator house.
The current transformer is installed on one stator lead, as shown in the following figure.

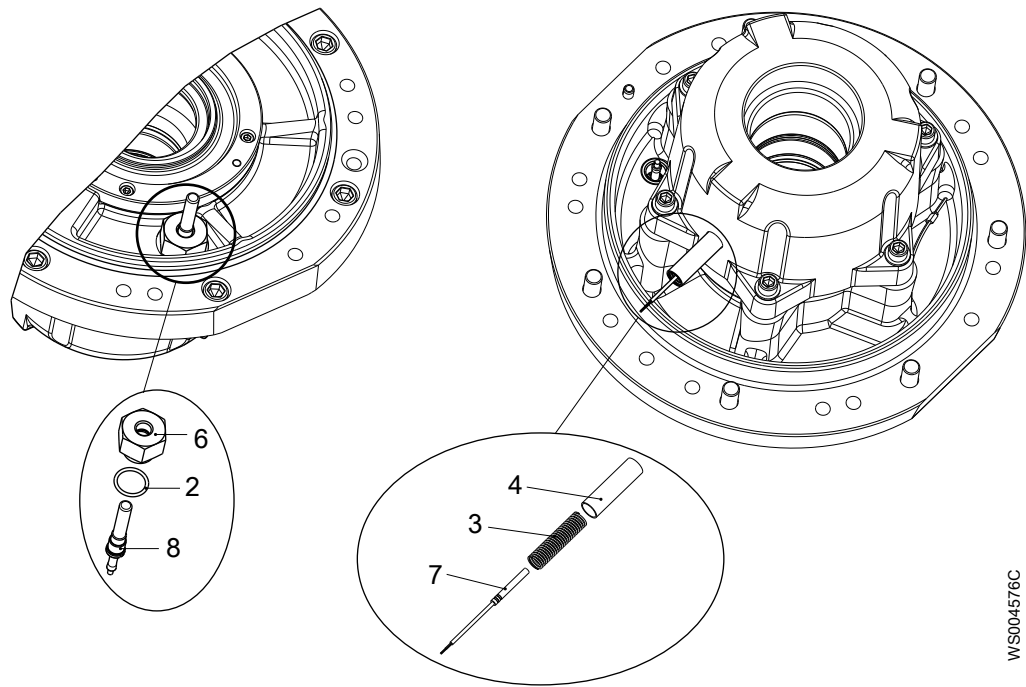


WS008211A

Item	Denomination	Part No.	Qty.
1	Current transformer	82 62 75	1
2	Cable tie	83 45 60	2

If the drive unit has been retrofitted with MAS 801, then the current transformer is in the connection house.

17.2.3 Main bearing temperature and CLS

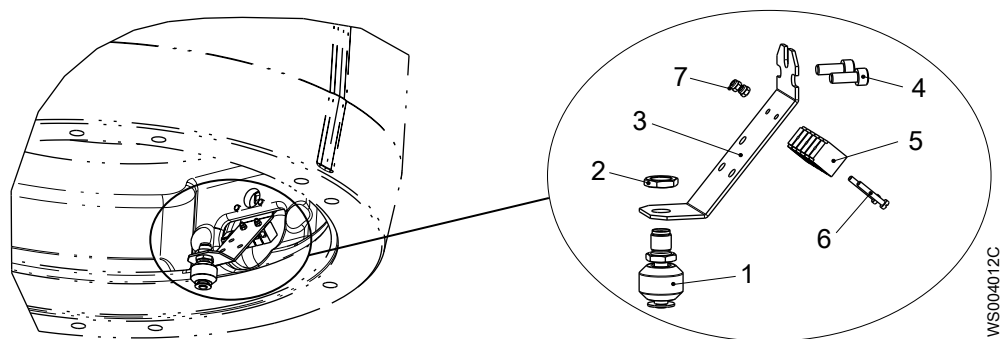


WS004576C

Item	Denomination		Part No. Pt-100 and CLS	Part No. Pt-100	Qty.
2	O-ring	26.20 x 3.0	82 73 93	—	1
3	Compression spring		544 46 03	544 46 03	1
4	Pipe		544 48 02	544 48 02	1
6	Gland screw		622 67 00	—	1
7	Pt100 sensor unit		648 55 00	648 55 00	1
8	Leakage sensor	CLS	505 12 03	—	1

17.2.4 Stator housing sensors

Vertical installation



Item	Denomination		Part No.	Qty.
1	Slotted head screw	MCS M3 x 20	81 73 32	2
2	Hexagon socket head cap screw	M6 x 16	82 00 13	2
3	Nut	M12	82 25 99	1
4	Hexagon nut		82 27 25	2
5	Terminal block		83 53 71	1
6	Holder		578 09 01	1
7	Level sensor FLS-10	EX drive units	663 04 00	1
		Standard drive units	791 99 00	

Horizontal installation

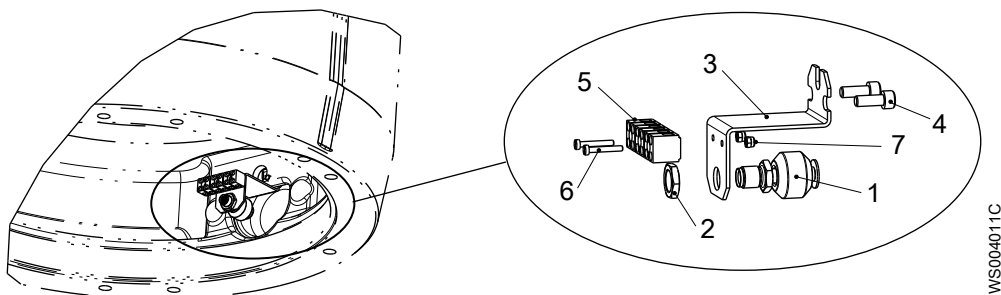
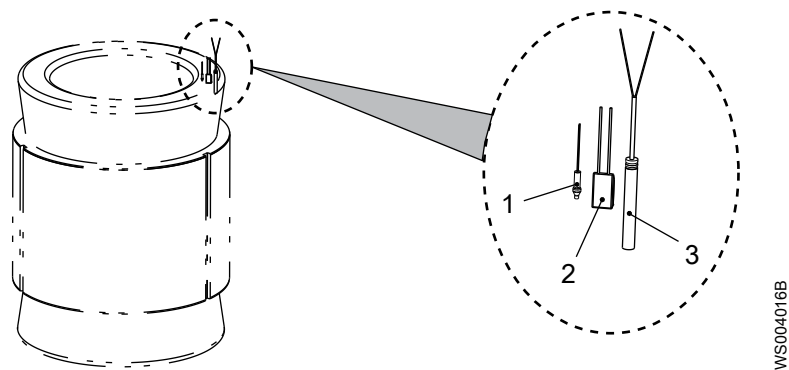


Table 83: Horizontal installation

Item	Denomination		Part No.	Qty.
1	Slotted head screw	MCS M3 x 20	81 73 32	2
2	Hexagon socket head cap screw	M6 x 16	82 00 13	2
3	Nut	M12	82 25 99	1
4	Hexagon nut		82 27 25	2
5	Terminal block		83 53 71	1
6	Holder		582 96 01	1
7	Level sensor FLS-10	EX drive units	663 04 00	1
		Standard drive units	791 99 00	

17.2.5 Stator winding temperature



Item	Denomination		Part No.	Qty.
1	Thermistor	85 06 37 is 3 thermistors in series.	85 06 37	1
2	Thermal contact	85 06 38 is 3 thermal contacts in series.	85 06 38	1
3	Thermal detectors	Pt100	83 97 84	1 or 3

The drive unit is equipped with Pt100 thermal detectors, and one of the following:

- Thermistors
- Thermal contacts

Contact your local sales representative with the serial number, to find out which temperature sensors are in the drive unit.

18 Accessories

18.1 Zinc anodes

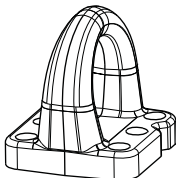
In connection house

Connection House	Anode Location	Reference
Small	Lifting handle	See Lifting handle on page 73.
Large	Lid	See Lid on page 79.

Guide ring, oil housing

Pump	Cooling Jacket	Anode Location	Reference
C3231, C3306, C3356 N3231, N3306, N3356	Yes	Guide ring	See C-, N- 3231, 3306, 3356: With cooling jacket on page 52.
C3231, C3306, C3356 N3231, N3306, N3356	No	Oil housing	See C-, N- 3231, 3306, 3356: Without cooling jacket on page 54.
R3231	Yes	Guide ring	See R3231: With cooling jacket on page 56.
C3312, C3400 N3312, N3400	Yes	Guide ring	See C-, N- 3312, 3400: With cooling jacket on page 58.
C3312, C3400 N3312, N3400	No	Oil housing	See C-, N- 3312, 3400: Without cooling jacket on page 60.
C3501, C3531, C3602, N3531	Yes	Guide ring	See C3501, C3531, C3602, N3531: With cooling jacket on page 62.
C3501, C3531, C3602, N3531	No	Oil housing	See C3501, C3531, C3602, N3531: Without cooling jacket on page 64.

18.2 Lifting eye bracket



WS011502B

Part number:

- 1 bracket: 584 61 00
- 2 brackets: 584 61 01



WS002323B

18.3 Parts for service

Part No.	Denomination		Qty.
83 05 85	O-ring kit	For P- and L-pumps, and turbines	1

Part No.	Denomination		Qty.
83 05 86	O-ring kit	For C- and N-pumps	1

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