

From (department, name)	Replaces bulletin	Date
RWTS Jens Gunnarsson	TB_8100_06_14	2017-11-28
Product		
605,615,665,675,705,715,735,745,765,775,3153,3171,3202,3301,4680,5100,5150,7030,7040,8148,8149,8150,8151, 8152,8153,2250 (Applies also to phased out products)		
Subject		
SUBCAB S3x16+3x16/3+4x1,5 replaced with SUBCAB S3x16+3x16/3+S(4x0,5)		

Appendix

Appendix 1 – Cable support Grip


Appendix 2 – Twisted pair of control cores

Background

SUBCAB cable S3x16+3x16/3+4x1,5 with part number 941784 has been replaced with SUBCAB cable S3x16+3x16/3+S(4x0,5) with part number 941993. The change is in effect from 9th November 2012.

Description

The cable has been changed in the following way.

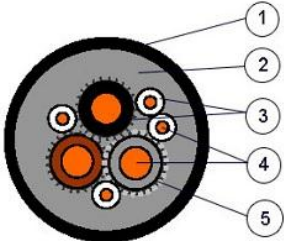
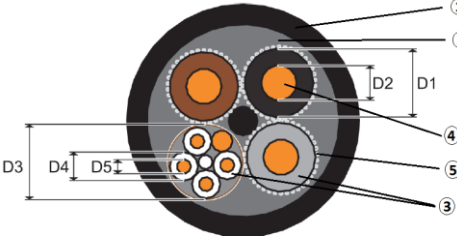
1. The insulation material around each core is changed from EPR to HEPR. HEPR is a better insulation material than EPR, therefore less material is used. This leads to a thinner cable and a smaller tolerance span for the cable.
2. The control cores (4x1,5) have been replaced with a screened twisted pair of control cores (S(4x0,5)). This is to prepare for future developments where control cores inside the motor cable can be used for digital communication, allowing several sensors to communicate via only two cores.
3. The screened twisted pair of control cores should be cut and capped when not in use.
4. If screened twisted pair of control cores T1/T2 (and/or T3/T4 if applicable) are used, the 0.75 mm² drain wire have to be connected to:  or GC in pump. Please see Appendix 2 – twisted pair of control cores

Solution

As the outer diameter changes for the cable there will be some surrounding parts that change as well. See tables on following pages for changes in different product lines:

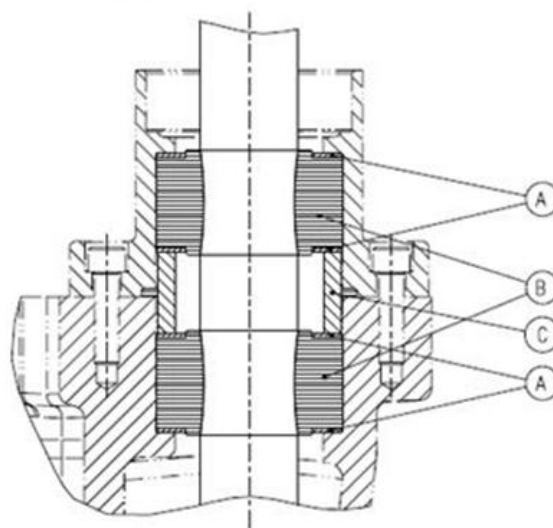
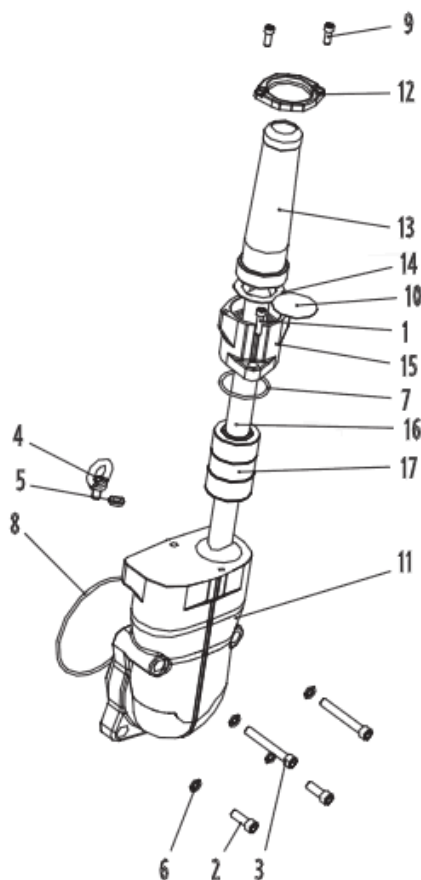
Comparison between old and new cable

Cable	Part number	Denomination	Outer Ø	Conductor		Weight (kg/km)
				Size mm ²	Quantity	
Old	941784	S3x16+3x16/3+4x1,5	29-32	16+16/3+1,5	3+3+4	1500
New	941993	S3x16+3x16/3+S(4x0,5)	24-26	16+16/3+0,5	3+3+4	1100

 <ol style="list-style-type: none"> 1. Outer Sheat 2. Inner Sheat 3. Insulation 4. Copper conductor 5. Screen 	 <ol style="list-style-type: none"> 1. Outer Sheath 2. Outer Sheath 3. HEPR insulation 4. Copper conductor 5. Screen
S3x16+3x16/3+4x1,5	S3x16+3x16/3+S(4x0,5)

Great and Grey Pumps (large connection housing)

Cable entry, Ø70 mm



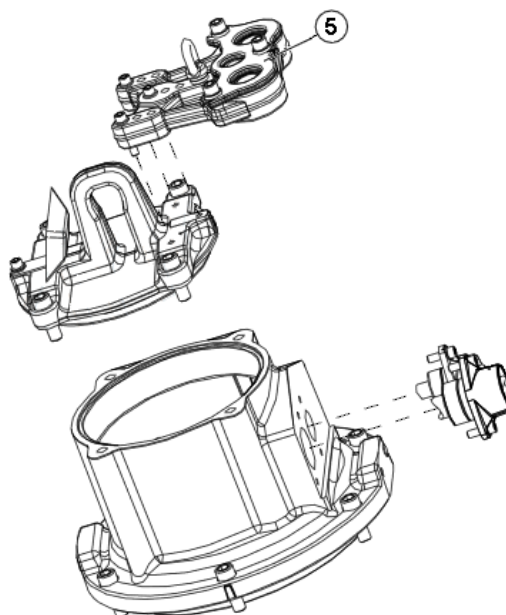
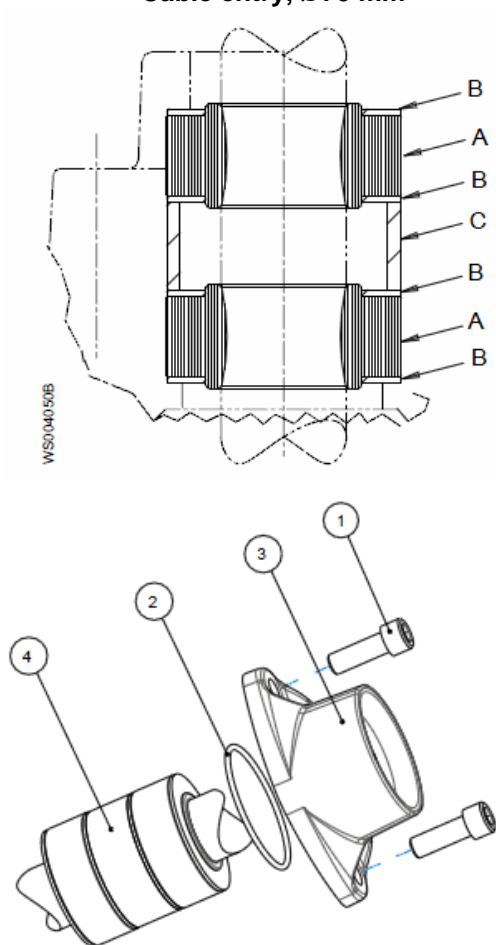
Cable Ø [mm]	Washer (A)	Sleeve (B)	Washer iØ [± 0,2 mm]
(23)-26	82 41 36	84 19 29	46,5
(26)-29	82 41 36	84 19 30	46,5
(29)-32	82 41 36	84 19 31	46,5
(32)-35	82 41 36	84 19 32	46,5
(35)-38	82 41 39	84 19 33	54,5
(37)-41	82 41 39	84 19 34	54,5
(41)-44	82 41 39	84 19 35	54,5
(44)-47	82 41 39	84 19 36	54,5
(47)-50	82 41 39	84 19 37	54,5
(50)-53	82 41 39	84 19 38	54,5

When replacing S3x16+3x16/3+4x1,5 with S3x16+3x16/3+S(4x0,5) choose new parts as per below and refer to the cable entry replacement chart above for **great and grey pumps** with large connection housing (7X5, 8X5,9X5).

Old SUBCAB cable S3x16+3x16/3+4x1,5				New SUBCAB cable S3x16+3x16/3+S(4x0,5		
Pos	Denomination	Part nr Out	Qty/cable	Denomination	Part nr IN	Qty/cable
16	Cable (Ø29-32)	94 17 84	1	Cable (Ø24-26)	94 19 93	1
17	Sleeve	84 19 31	2	Sleeve	84 19 29	2
	Washer	82 43 07	4	Washer	82 43 07	4
	Ring	611 14 05	1	Ring	611 14 05	1
N/A				Cap (for unused control element)	82 70 88	1
				Closed end splice	83 42 62	2
N/A	Cable Support Grip	See Appendix 1		Cable Support Grip	See Appendix 1	

Great and Grey Pumps (small connection housing)

Cable entry, Ø70 mm



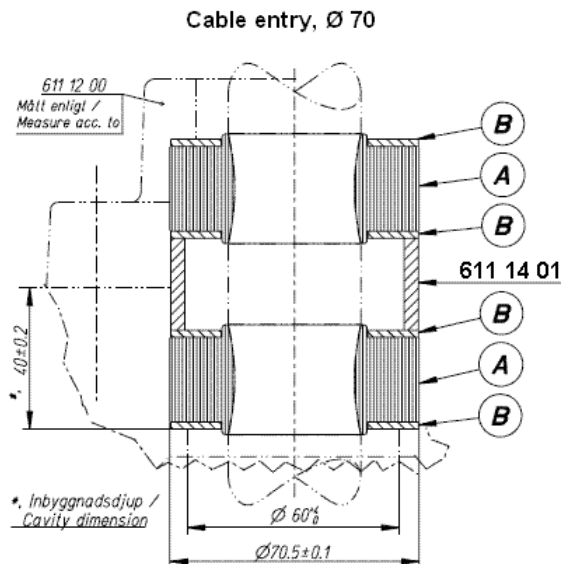
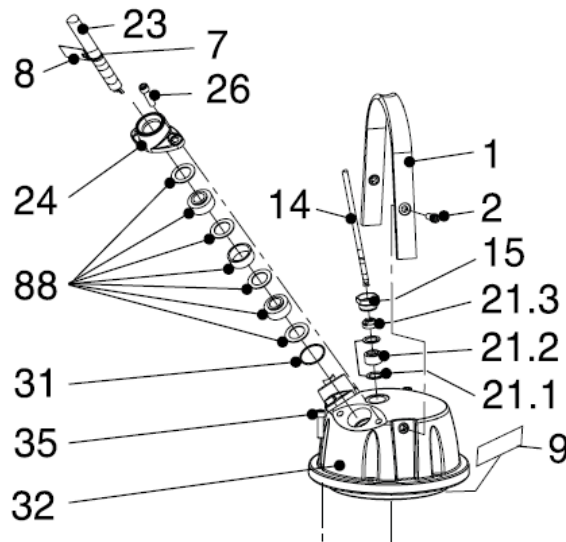
Cable Ø [mm]	Sleeve (A)	Washer (B)	Washer iØ [± 0,2 mm]
(23)-26	84 19 29	82 41 36	46,5
(26)-29	84 19 30	82 41 36	46,5
(29)-32	84 19 31	82 41 36	46,5
(32)-35	84 19 32	82 41 36	46,5
(35)-38	84 19 33	82 41 39	54,5
(37)-41	84 19 34	82 41 39	54,5
(41)-44	84 19 35	82 41 39	54,5
(44)-47	84 19 36	82 41 39	54,5
(47)-50	84 19 37	82 41 39	54,5
(50)-53	84 19 38	82 41 39	54,5

When replacing S3x16+3x16/3+4x1,5 with S3x16+3x16/3+S(4x0,5) choose new parts as per below and refer to the cable entry replacement chart above for **great and grey pumps** with small connection housing (6X5, 7X5). If the pump have a cable holder (5), make sure to change seal sleeves in the cable holder as well (should be the same one as for the cable entrance unit).

entrance only.

	Old SUBCAB cable S3x16+3x16/3+4x1,5			New SUBCAB cable S3x16+3x16/3+S(4x0,5		
Pos	Denomination	Part nr Out	Qty/cable	Denomination	Part nr IN	Qty/cable
16	Cable (Ø29-32)	94 17 84	1	Cable (Ø24-26)	94 19 93	1
17	Sleeve	84 19 31	2	Sleeve	84 19 29	2
	Washer	82 43 07	4	Washer	82 43 07	4
	Ring	611 14 05	1	Ring	611 14 05	1
N/A				Cap (for unused control element)	82 70 88	1
				Closed end splice	83 42 62	2
N/A	Cable Support Grip	See Appendix 1		Cable Support Grip	See Appendix 1	

Midrange Pumps (Ø70 Cable entry)

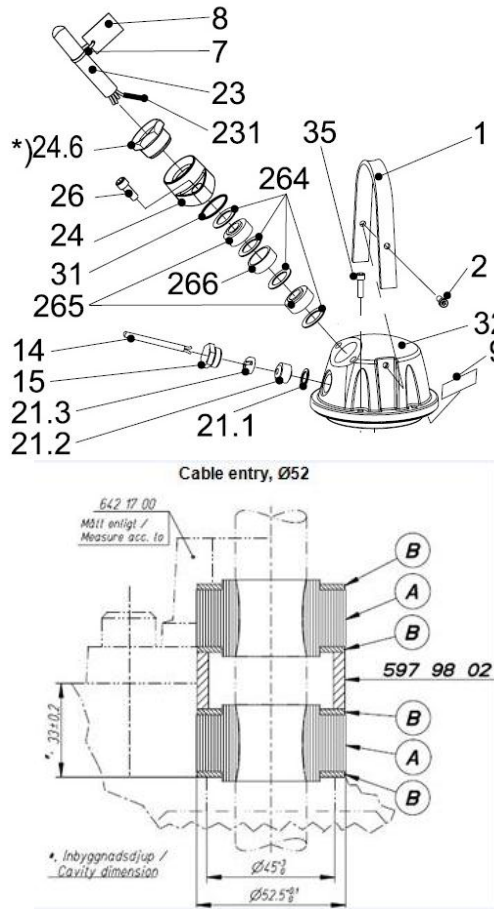


	Cable Ø [mm]	Sleeve (A)	Washer (B)	Washer iØ [± 0,2 mm]
Std (A2-70).NBR	(23)-26	84 19 29	82 41 36	46,5
	(26)-29	84 19 30	82 41 36	46,5
	(29)-32	84 19 31	82 41 36	46,5
	(32)-35	84 19 32	82 41 36	46,5
	(35)-38	84 19 33	82 41 39	54,5
	(37)-41	84 19 34	82 41 39	54,5
	(41)-44	84 19 35	82 41 39	54,5
	(44)-47	84 19 36	82 41 39	54,5
	(47)-50	84 19 37	82 41 39	54,5
	(50)-53	84 19 38	82 41 39	54,5
Stainless Steel (A4-70).NBR	(23)-26	84 19 29	82 43 07	46,5
	(26)-29	84 19 30	82 43 07	46,5
	(29)-32	84 19 31	82 43 07	46,5
	(32)-35	84 19 32	82 43 07	46,5
	(35)-38	84 19 33	82 43 10	54,5
	(37)-41	84 19 34	82 43 10	54,5
	(41)-44	84 19 35	82 43 10	54,5
	(44)-47	84 19 36	82 43 10	54,5
	(47)-50	84 19 37	82 43 10	54,5
	(50)-53	84 19 38	82 43 10	54,5

When replacing S3x16+3x16/3+4x1,5 with S3x16+3x16/3+S(4x0,5) choose new parts as per below and refer to the cable entry replacement chart above for **Midrange pumps** (3301, 5150.350, 5150.360, 7040, 8153).

Old SUBCAB cable S3x16+3x16/3+4x1,5				New SUBCAB cable S3x16+3x16/3+S(4x0,5)		
Pos	Denomination	Part nr Out	Qty/cable	Denomination	Part nr IN	Qty/cable
23	Cable (Ø29-32)	94 17 84	1	Cable (Ø24-26)	94 19 93	1
88	Cable entry unit	655 80 02	1	Cable entry unit	655 80 00	1
N/A				Cap (for unused control element) Closed end splice	82 70 88 83 42 62	1 2
N/A	Cable Support Grip	See Appendix 1		Cable Support Grip	See Appendix 1	

Midrange Pumps (Ø52 Cable entry)



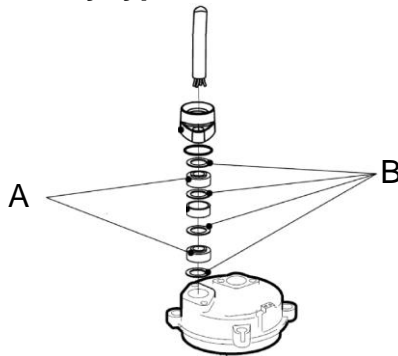
	Cable Ø [mm]	Sleeve (A)	Washer (B)	Washer iØ [± 0,2 mm]
Std (A2-70).NBR	(14)-17	84 18 00	82 40 81	32,5
	(17)-20	84 18 01	82 40 81	32,5
	(20)-23	84 18 02	82 40 82	34,5
	(23)-26	84 18 03	82 40 82	34,5
	(26)-29	84 18 04	82 40 82	34,5
	(29)-32	84 18 05	82 40 82	34,5
	(32)-35	84 18 06	82 40 69	35,5
	(36)-38	84 18 07	82 40 71	39,5
	(38)-41	84 18 08	82 40 73	44,5
	(41)-43	84 18 09	82 40 73	44,5
Stainless Steel (A4-70).NBR	(14)-17	84 18 00	82 42 71	32,5
	(17)-20	84 18 01	82 42 71	32,5
	(20)-23	84 18 02	82 42 72	34,5
	(23)-26	84 18 03	82 42 72	34,5
	(26)-29	84 18 04	82 42 72	34,5
	(29)-32	84 18 05	82 42 72	34,5
	(32)-35	84 18 06	82 42 73	35,5
	(36)-38	84 18 07	82 42 75	39,5
	(14)-17	84 19 40	82 40 81	32,5
	(17)-20	84 19 41	82 40 81	32,5
Std (A2-70). FPM	(20)-23	84 19 42	82 40 82	34,5
	(23)-26	84 19 43	82 40 82	34,5
	(26)-29	84 19 44	82 40 82	34,5
	(29)-32	84 19 45	82 40 82	34,5
	(32)-35	84 19 46	82 40 69	35,5
	(36)-38	84 19 47	82 40 71	39,5
Stainless Steel (A4-70).FPM	(14)-17	84 19 40	82 42 71	32,5
	(17)-20	84 19 41	82 42 71	32,5
	(20)-23	84 19 42	82 42 72	34,5
	(23)-26	84 19 43	82 42 72	34,5
	(26)-29	84 19 44	82 42 72	34,5
	(29)-32	84 19 45	82 42 72	34,5
	(32)-35	84 19 46	82 42 73	35,5
	(36)-38	84 19 47	82 42 75	39,5

When replacing S3x16+3x16/3+4x1,5 with S3x16+3x16/3+S(4x0,5) choose new parts as per below and refer to the cable entry replacement chart above for **Midrange pumps** (3153,3171, 3202,5100,5150.300,5150.310,7030,8148,8149,8150,8151, 8152).

	Old SUBCAB cable S3x16+3x16/3+4x1,5			New SUBCAB cable S3x16+3x16/3+S(4x0,5)		
Pos	Denomination	Part nr Out	Qty/cabl e	Denomination	Part nr IN	Qty/cable
23	Cable (Ø29-32)	94 17 84	1	Cable (Ø24-26)	94 19 93	1
264	Sleeve	84 18 05	2	Sleeve	84 18 03	2
	Washer	82 40 82	4	Washer	82 40 79	4
	Ring	597 98 02	1	Ring	597 98 02	1
N/A				Cap (for unused control element)	82 70 88	1
				Closed end splice	83 42 62	2
N/A	Cable Support Grip	See Appendix 1		Cable Support Grip	See Appendix 1	

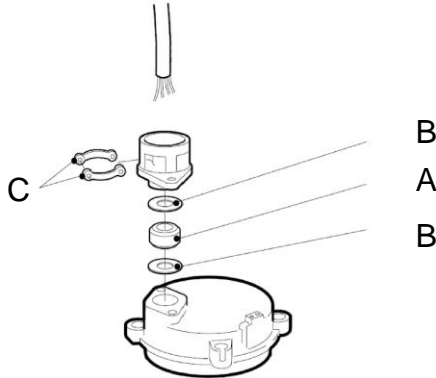
Old Midrange (3201)

Cable Entry type 1



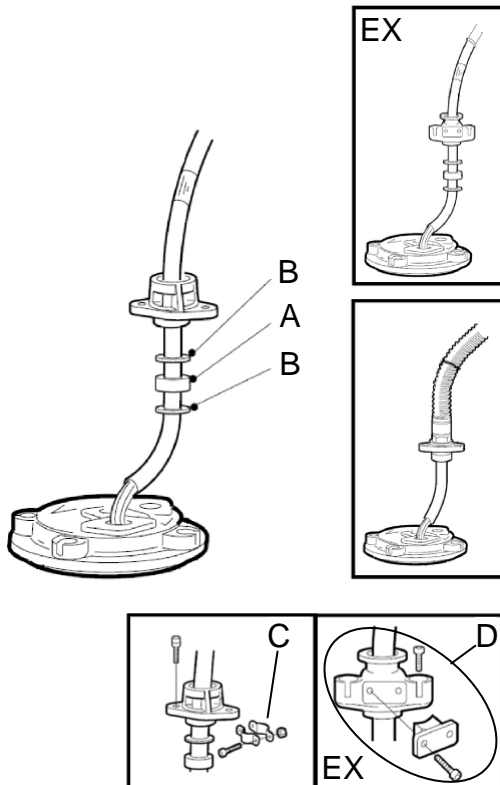
Cable Ø [mm]	Sleeve (A)	Washer (A2 mtrl.) (B)	Washer (A4 mtrl.) (B)	Washer iØ [± 0,2 mm]
52 mm Cable Entry (Current 3152, 3170 and 3201)				
(14)-17	84 18 00	82 40 81	82 42 71	32,5
(17)-20	84 18 01	82 40 81	82 42 71	32,5
(20)-23	84 18 02	82 40 82	82 42 72	34,5
(23)-26	84 18 03	82 40 82	82 42 72	34,5
(26)-29	84 18 04	82 40 82	82 42 72	34,5
(29)-32	84 18 05	82 40 82	82 42 72	34,5
(32)-35	84 18 06	82 40 69	82 42 73	35,5
(36)-38	84 18 07	82 40 71	82 42 75	39,5
(38)-41	84 18 08	82 40 73	-	44,5
(41)-43	84 18 09	82 40 73	-	44,5

Cable Entry type 2



Cable Ø [mm]	Sleeve (A)	Washer (A2 mtrl.) (B)	Cable Clip (C)	Washer (A4 mtrl.) (B)	Was iØ [± 0,2 mm]
52 mm Cable Entry (Current 3152.350 and old versions)					
(14)-17	84 18 00	82 40 81	306 77 42	82 42 71	32,5
(17)-20	84 18 01	82 40 81	306 77 20	82 42 71	32,5
(20)-23	84 18 02	82 40 82	306 77 20	82 42 72	34,5
(23)-26	84 18 03	82 40 82	306 77 20	82 42 72	34,5
(26)-29	84 18 04	82 40 82	306 77 01	82 42 72	34,5
(29)-32	84 18 05	82 40 82	306 77 01	82 42 72	34,5
(32)-35	84 18 06	82 40 69	306 77 01	82 42 73	35,5
(36)-38	84 18 07	82 40 71	306 77 22	82 42 75	39,5
(38)-41	84 18 08	82 40 73	306 77 22	-	44,5
(41)-43	84 18 09	82 40 73	306 77 22	-	44,5

Cable Entry type 3



Cable Ø [mm]	Sleeve (A)	Washer (A2 mtrl.) (B)	Cable Clip (C)	Washer (A4 mtrl.) (B)	Was iØ [± 0,2 mm]
60 mm Cable Entry (3300) – Nitrile Rubber (NBR)					
(22)-24	84 44 09	82 41 49	306 77 27	-	24,5
(24)-26	84 44 10	82 41 27	306 77 27	82 42 85	26,5
(26)-28	84 44 11	82 41 28	306 77 27	82 42 86	28,5
(28)-30	84 44 12	82 41 48	306 77 27	82 42 87	30,5
(30)-32	84 44 13	82 41 29	306 77 25	82 42 88	32,5
(32)-34	84 44 14	82 41 00	306 77 25	82 42 89	34,5
(33)-35	84 44 15	82 41 01	306 77 25	82 42 90	36,5
(35)-37	84 44 16	82 41 02	306 77 25	82 42 91	38,5
(37)-39	84 44 17	82 41 03	306 77 25	82 42 92	40,5
(40)-42	84 44 18	82 41 04	306 77 26	82 42 93	42,5
(42)-44	84 44 19	82 41 05	306 77 26	-	44,5
(45)-47	84 44 20	82 40 74	306 77 26	82 42 95	47,5
(47)-49	84 44 21	82 40 75	306 77 26	-	49,5
60 mm Cable Entry (3300) – Chloroprene Rubber CR Type 64					
(22)-24	84 36 36	82 41 49	306 77 27	-	24,5
(24)-26	84 35 71	82 41 27	306 77 27	82 42 85	26,5
(26)-28	84 35 73	82 41 28	306 77 27	82 42 86	28,5
(28)-30	84 36 35	82 41 48	306 77 27	82 42 87	30,5
(30)-32	84 35 68	82 41 29	306 77 25	82 42 88	32,5
(32)-34	84 35 60	82 41 00	306 77 25	82 42 89	34,5
(33)-35	84 35 61	82 41 01	306 77 25	82 42 90	36,5
(35)-37	84 35 62	82 41 02	306 77 25	82 42 91	38,5
(37)-39	84 35 63	82 41 03	306 77 25	82 42 92	40,5
(40)-42	84 35 64	82 41 04	306 77 26	82 42 93	42,5
(42)-44	84 35 65	82 41 05	306 77 26	-	44,5
(45)-47	84 35 49	82 40 74	306 77 26	82 42 95	47,5
(47)-49	84 35 50	82 40 75	306 77 26	-	49,5

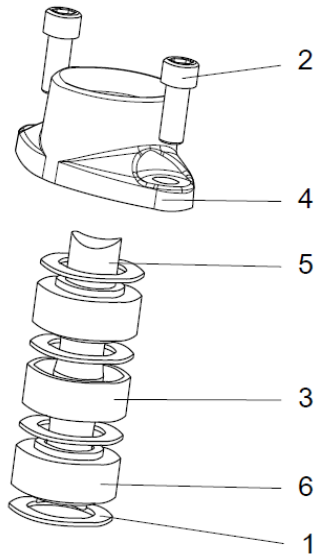
Cable Ø [mm]	Cable Entry Unit (D)
Cable Entry for 3300 EX	
(23)-30	591 56 03
(32)-35	591 56 02
(36)-43	591 56 01
(40)-44	591 56 00

Old Midrange (3201) - Continued

When replacing S3x16+3x16/3+4x1,5 with S3x16+3x16/3+S(4x0,5) choose new parts as per below and refer to the cable entry replacement chart above for **Old Midrange pumps** (3201 (only current versions listed)).

	Old SUBCAB cable S3x16+3x16/3+4x1,5			New SUBCAB cable S3x16+3x16/3+S(4x0,5)		
Pos	Denomination	Part nr Out	Qty/cable	Denomination	Part nr IN	Qty/cable
23	Cable (Ø29-32)	94 17 84	1	Cable (Ø24-26)	94 19 93	1
N/A				Cap (for unused control element)	82 70 88	1
				Closed end splice	83 42 62	2
N/A	Cable Support Grip	See Appendix 1		Cable Support Grip	See Appendix 1	

Mixers (4680)



Pos id	Description	Old cable 29-32 mm	New cable 24-26 mm
1	Washer	82 42 72	82 42 72
2	Hexagon screw	83 04 49	83 04 49
3	Ring	597 98 02	597 98 02
4	Entrance flange	642 17 03	642 17 03
5	Cable	94 17 84	94 19 93
6	Seal sleeve	84 18 05	84 18 03

When replacing S3x16+3x16/3+4x1,5 with S3x16+3x16/3+S(4x0,5) choose new parts as per below and refer the cable entry replacement parts.

Note: The outer diameter of the cable is changed from (29-32) to (24-26) so the current seal sleeve 84 18 05 is replaced with 84 18 03.

Cable and cable entrance parts:

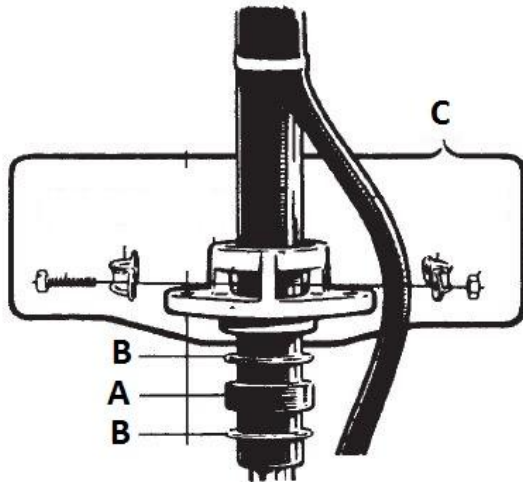
Old SUBCAB cable S3x16+3x16/3+4x1,5				New SUBCAB cable S3x16+3x16/3+S(4x0,5)		
Pos	Denomination	Part nr	Qty	Denomination	Part nr	Qty
1	Washer	82 42 72	4	Washer	82 42 72	4
2	Hexagon screw	83 04 49	2	Hexagon screw	83 04 49	2
3	Ring	597 98 02	1	Ring	597 98 02	1
4	Entrance flange	Acc. To variant	1	Entrance flange	Acc. To variant	1
5	Cable (Ø29-32)	94 17 84	1	Cable (Ø24-26)	94 19 93	1
6	Seal sleeve	84 18 05	2	Seal sleeve	84 18 03	2
N/A	Cable support grip	482 02 03	1	Cable support grip	482 02 01	1
N/A	Cap	82 97 76	1	Cap	82 97 73	1

In addition to above changes some more parts are changed and added to cable module for connecting new screened control elements of new SUBCAB S3x16+3x16/3+S(4x0,5) See detail below.

Cable connection parts:

Old SUBCAB cable S3x16+3x16/3+4x1,5			New SUBCAB cable S3x16+3x16/3+S(4x0,5)		
Denomination	Part nr Out	Qty/cable	Denomination	Part nr IN	Qty/cable
			Cable lug	83 43 61	1
			Screw	83 02 58	1
			Washer	82 50 13	1
			Closed end splice	83 42 62	2
Closed end splice	83 44 24	1	-	-	-

Drainage Pumps (2250)



Cable Ø [mm]	Sleeve (A)	Washer (B)	Cable entry (C)
(18)-20	84 35 58	82 40 83	394 77 06
(20)-22	84 35 51	82 40 76	394 77 06
(22)-24	84 35 52	82 40 77	394 77 06
(24)-26	84 35 53	82 40 78	394 77 06
(26)-28	84 35 54	82 40 79	394 77 07
(28)-30	84 35 55	82 40 80	394 77 07
(30)-32	84 35 56	82 40 81	394 77 07
(32)-34	84 35 57	82 40 82	394 77 07
(33)-35	84 35 44	82 40 69	394 77 08
(35)-37	84 35 45	82 40 70	394 77 08
(37)-39	84 35 46	82 40 71	394 77 08

When replacing S3x16+3x16/3+4x1,5 with S3x16+3x16/3+S(4x0,5) choose new parts as per below and refer to the cable entry replacement chart above for **Dewatering pumps (2250)**.

Pos	Old SUBCAB cable S3x16+3x16/3+4x1,5			New SUBCAB cable S3x16+3x16/3+S(4x0,5)		
	Denomination	Part nr Out	Qty/cable	Denomination	Part nr IN	Qty/cable
66	Cable (Ø29-32)	94 17 84	1	Cable (Ø24-26)	94 19 93	1
N/A				Cap (for unused control element)	82 70 88	1
				Closed end splice	83 42 62	2

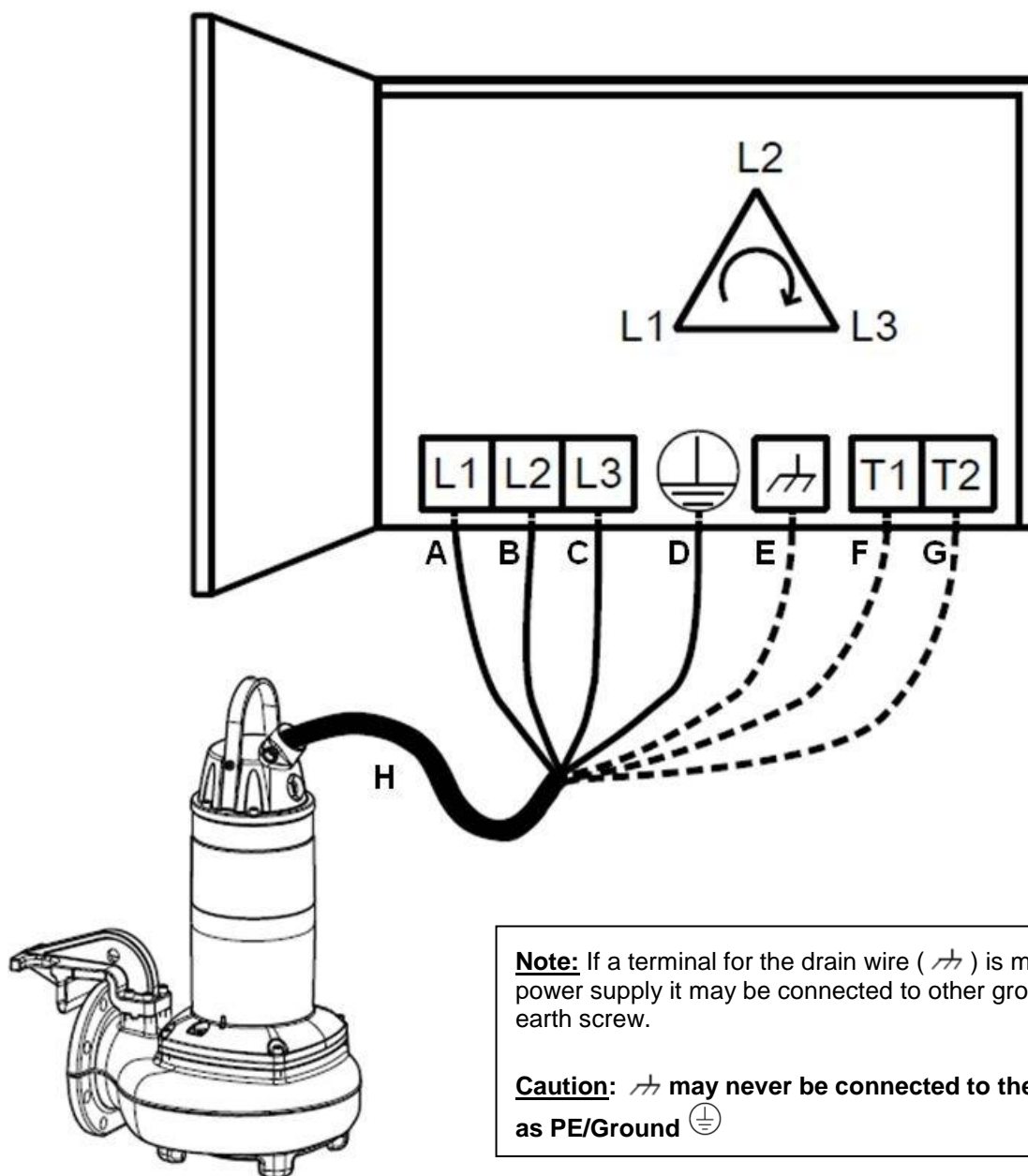
As cable diameter is changed, so respective cable entry module span is also changed. See detail below.

Cable entry module	Cable entry module old span	Cable entry module new span
2250011454	28-(32)	24-(26)
2250011463	28-(32)	24-(26)

In addition to above changes some more parts are added to cable module for connection of new SUBCAB S3x16+3x16/3+S(4x0,5) See detail below.

Pos	Denomination	Part nr	Qty/cable
N/A	Cable lug	83 43 60	1
N/A	Closed end splice	83 42 62	2
N/A	End sleeve	83 42 36	2

Connection to Power Supply



Item	Description	Color/markings of cable cores			
		SUBCAB	SUBCAB AWG	SUBCAB S3x16+3x16/3+S(4x0,5)	NTSCGEWTOEUS
A	L1 cable core	Brown	Red	Brown	Black (L1)
B	L2 cable core	Black	Black	Black	Black (L2)
C	L3 cable core	Grey	White	Grey	Black (L3)
D	Earth PE or ground cable core	Green/yellow	Green/yellow	Blank, Make sure to cover with green/yellow hose	Green/yellow
N/A	Ground check GC cable core	-	Yellow	-	-
E	Drain wire 0,75 mm ²	-	-	Blank, see Appendix 2 – twisted pair of control cores	-
F	T1 control core 0,5 mm ²	-	-	White, see Appendix 2 – twisted pair of control cores	-
G	T2 control core 0,5 mm ²	-	-	White, see Appendix 2 – twisted pair of control cores	-
H	Power cable to pump				

General Notes

- ☐ For general information about different electrical connections check “installation, operation and maintenance” manual for the drive unit.
- ☐ Make sure to check whether or not surrounding parts (such as; connection boxes, lead throughs etc.) are affected by the change in outer diameter for the cable.
- ☐ Please also see the Power Cable web page for further information regarding cable preparation and installation.

Search path: Oasis > Our Offer > Installation & Accessories > Installation & Accessories Overview > Power cable

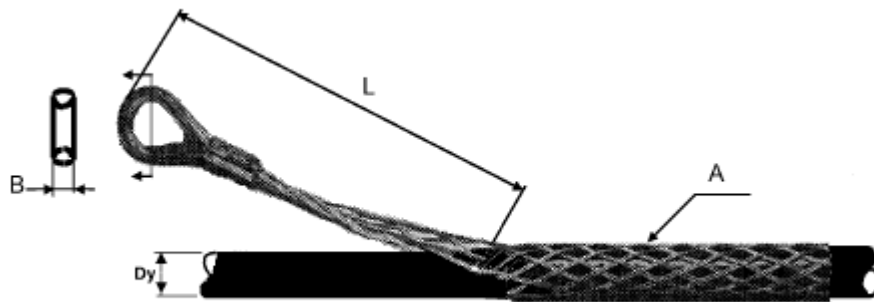
Direct link: http://oasis.xyleminc.com/en-us/Home/our-offer/installation_accessories/installation-accessories-overview/Pages/Power-cable.aspx

- ☐ The bulletins are written for the existing product range per release date. However, for older (phased out) products this bulletin applies for the cable entries covered although the product code may not be listed.

Appendix 1 – Cable support grip

Material:

- Support grip: stainless steel SS 14 2343
- Thimble: Stainless steel SS 14 2333
- Press lock: Copper



For Cable D_y (mm)	Thickness B (mm)	Length of loop L (mm)	Number of meshes A (pcs)	Tot. cable weight (Kg)	Part number
11-18	8	250	18	100	83 57 23
19-24	9	300	18	150	83 57 24
25-36	11	300	18	150	83 57 25
37-49	15	500	25	300	83 57 26
50-59	16	500	25	300	83 57 27
60-74	17	600	25	150	83 57 28

Appendix 2 – Twisted pair of control cores

Control cable insulation in Pump/Mixer

<p>SUBCAB® Pump/Mixer without sensors, or with separate control cable</p> <p>FLYGT a xylem brand</p> <p>WS004.660C</p>	<p>SUBCAB® Pump/Mixer with sensors</p> <p>FLYGT a xylem brand</p> <p>WS004.661C</p>
<p>Screened SUBCAB® Pump/Mixer without sensors, or with separate control cable</p> <p>FLYGT a xylem brand</p> <p>WS004.662C</p>	<p>Screened SUBCAB® Pump/Mixer with sensors</p> <p>FLYGT a xylem brand</p> <p>WS004.663C</p>
<p>ScreenFlex® Pump/Mixer without sensors, or with separate control cable</p> <p>FLYGT a xylem brand</p> <p>WS004.664C</p>	<p>ScreenFlex® Pump/Mixer with sensors</p> <p>FLYGT a xylem brand</p> <p>WS004.665C</p>