



SPRING OPERATED CABLE REELS



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Introduction

Our spring operated cable reels serve the industry for reliable electrification of equipment in motion; for automatic winding of flexible power- and control-cables.

Applications

include Portal- and Gantry Cranes, Dockside-, Ship- and Construction Cranes, Grabs and Magnets, Electric Hoists and other material handling -lifting -stacking and -storing equipment. They fully meet VDE and other safety requirements.

Special applications

- VAHLE Reels on board ships or in the tropics.
- VAHLE Reels in aggressive environments (galvanizing plants, pickling lines, sewage treatment systems).
- VAHLE Reels in explosion-proof versions (slipringless).
- VAHLE Reels for Control-, Signal- and Highfrequency- Transmission.
- VAHLE Reels for Air, Liquids and Gases (Hose Reels).
- VAHLE Reels for handling steel ropes in travel distance-tracking systems and for grab stability on heavy cranes (Tag Line Reels).
- VAHLE Reels for Curves and for Endless Monorails with special swivel base.
- VAHLE Reels with Ratchet and lock mechanism for multi level machine tools and for push-button pendants.
- VAHLE Reels for Platform Cable (especially in the palette stacking and machine tool industry).
- VAHLE Reels in the Monospiral Version.

Vahle welcomes your inquiry on your particular application.

Electrical Properties of Sliprings

Standard sliprings are rated for 415 or 500 V;
Collector Ring Ampere capacities are for 100% nominal rating..

Protection Code

Slipring enclosures are designed to IP 65. The housings are made of fiber-glass reinforced PVC.

Drive System

The Reel Drive is achieved via helical springs of high quality spring steel. Depending on the duty and type of service they will last about 100.000 working cycles.

Cable Payout

is normally following the technical information on page 15 of this catalogue.

Reverse cable payout is available and indicated with index A in code types.

(Refer to type code on page 6)

Limit Switch Assemblies

for switching off travel and hoist motors with one or two safety windings on the reel are optional against surcharge.

Accident Prevention

All moveable parts of the drive system, e.g. chaindrive are covered in accordance with the Accident Prevention Code.

Therefore, the cable reels can be installed in work areas as well as traffic areas. Additional protective devices, such as a cover for the revolving reel body itself, are to be furnished and fitted at site.

Corrosion protection

All steel parts are galvanized. The reel body is powder-coated in addition.

Installation Information

Installation instructions and operation manuals for commissioning advice and assistance are attached to each reel shipment.

Reel Capability

max. speed of travel or lift application

$v = 60 \text{ m/min.}$

max. travel acceleration

$a = 0,2 \text{ m/sec}^2$

max. lift acceleration

$a = 0,2 \text{ m/sec}^2$

Maximum cable length

Reels are designed to handle a certain type and length of cable in a specific manner. Never use reels for more cable than outlined in the selection charts.

Total cable length

The total cable length required results from maximum payout length plus reel installation height plus two safety windings plus free end length for connection.

Safety Advice

According to EEC-regulation 89/392/EWG rotating parts such as reel compartments must be protected against accidents.



Guarantee

Vahle issues guarantee regarding the terms of delivery for material and performance of the electrical industry. The springs are wear parts and therefore excluded from the guarantee.

Reeling cables

Use suitable cables that correspond to the mechanical requirements. Please refer to our Catalogue 8L for all data.

Factors in selecting cable for reel use, considering motor currents, required wire sizes and allowable voltage drop (A. C.):

$$A = \frac{1,73 \cdot L \cdot IG \cdot \cos \varphi}{\Delta U \cdot \chi} \text{ (mm}^2\text{)}$$

Legend to Formula:

- A = Required Wire Size
(Conductor Cross Section in sq. mm)
- L = Total Cable Length (m)
- IG = Total Ampere Load (Amps)
- cos φ = Power Factor = approx. 0,8
- χ = Conductor Conductivity (Copper = 56)
- ΔU = Allowable Voltage Drop (Volts)

Table 1: Continuous cable ampacity for open air installation (100% DC).

Wire Size mm ²	Ampere Capacity in Amps.	
	max. permissible temp. at conductors	
	60° C	80° C
1,5	18	24
2,5	25	32
4	34	43
6	44	56
10	60	78
16	80	104
25	107	138
35	133	171
50	165	213

Cable selection and determining wire size ampacity, considering permissible temperature rise.

The reel selection charts are based on the cable data per table no. 1, indicating continuous ampacity for 3-conductor open air installation with an ambient temperature of 30° C.

For other temperatures refer to derating factors as per table 3. The continuous cable ampacities shown in table 1 are not always applicable for cables under reeling conditions.

The derating for multilayer service is shown in table 4. It is valid if the cable is fully spooled all the time.

However, many applications in practise do not have the cable fully spooled permanently. Therefore it is recommended to calculate with an intermediate factor.

Monospiral winding equals one-layer operation.

All ratings in table no. 1 are valid for 4-core cables. They are also admissible for 5-core cables if one core is used as earth conductor.

As per regulation VDE 0100 § 41 derating factors for multilayer applications must be considered if necessary.

For multiconductor service we recommend to use the derating factors as per table 5 depending on the number of conductors in service.

For continuous ampacities mentioned in table 1 consider multiplier for intermittent service (table 2).

Table 2: Multiplier for intermittent service (as per manufacturer instructions)

Wire Size (mm ²)	at intermittent duty cycle of			
	60%	40%	25%	15%
1,5	1,00	1,00	1,00	1,00
2,5	1,00	1,00	1,04	1,07
4	1,00	1,03	1,05	1,19
6	1,00	1,04	1,13	1,27
10	1,03	1,09	1,21	1,44
16	1,07	1,16	1,34	1,62
25	1,10	1,23	1,46	1,79
35	1,13	1,28	1,53	1,90
50	1,16	1,34	1,62	2,03

Table 3: Derating factor for other ambient temperature for open air installations

Ambient °C	Correction Factors										
	25	30	35	40	45	50	55	60	65	70	75
Derating factors depending on temperature 60 °C	1,08	1,00	0,91	0,82	0,71	0,58	0,41				
Derating factors depending on temperature 80°C	1,05	1,00	0,95	0,89	0,84	0,77	0,71	0,63	0,55	0,45	0,32

Table 4: Derating factor for multilayer service

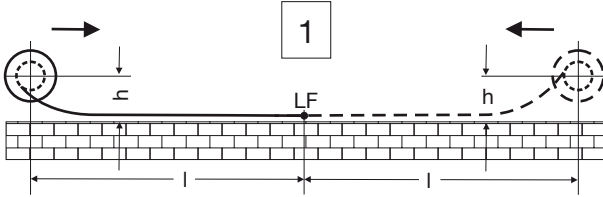
No. of layers on reel	1	2	3	4
Multiplier	0,76	0,58	0,47	0,40

Table 5: Derating factor for multiconductor service

No. of conductors in service	5	7	10	14	19	24	40
Multiplier	0,75	0,65	0,55	0,50	0,45	0,40	0,35

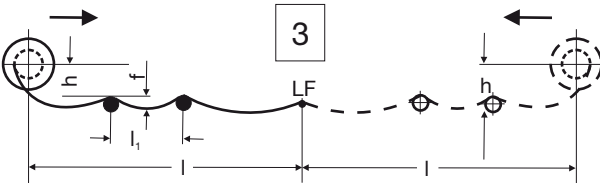
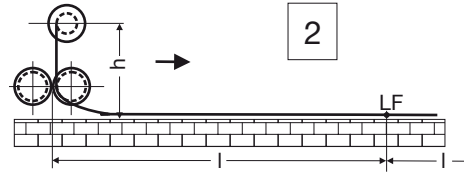


Example arrangements



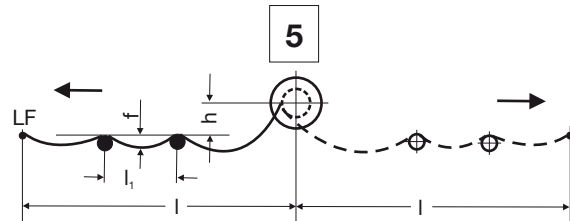
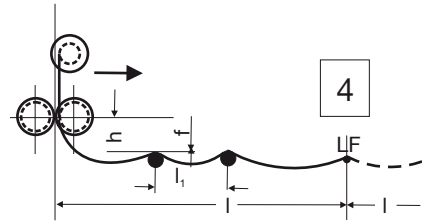
Reel mounted on moving machinery

Winding and pay-out of the cable into a tray or other surface. One- or two-way horizontal payout.



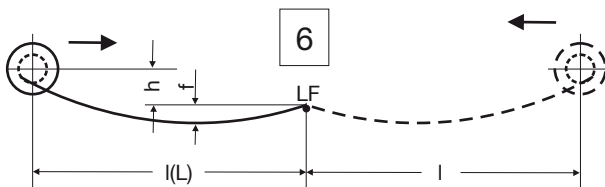
Reel mounted on moving machinery

Cable recovery on round supports brackets ($l_1 = 1$ m), or rollers ($l_1 = 1$ by 3 m) Payout horizontally in one or two travel directions.



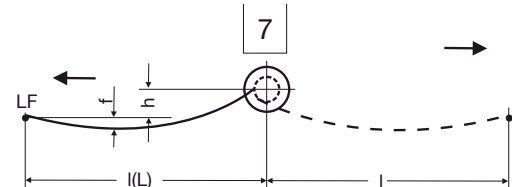
Reel mounted stationary

(Fixpoint of cable at moving machinery) Cable is dragged over round support rollers to and from the reel, horizontally in one or two travel directions ($l_1 = 3$ m).



Reel mounted on moving machinery

Cable is suspended horizontally in the air, payout in one or two directions if the cable sag „L“ exceeds „f“, during cable payout in one direction than „L“ is definitive for the sag „f“



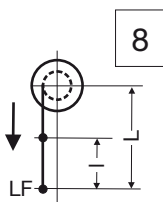
Reel mounted stationary (Fixpoint of cable at moving machinery)

Legends to drawing (example 1-7):

- l = operational max.length of cable [m]
(for cable payout in two directions=half of length of runway).
- L = max. length between reel and end of cable
- h = height of reel = distance between cable tray or cable feed point to center of reel [m]

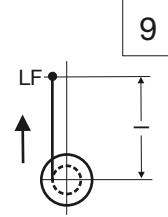
LF = feed point

- f = max. cable sag [m], referring to feed point
- l_1 = support intervals [m]



vertical cable payout or downwards

Vertical operation



vertical cable payout or upwards

Legends to drawing (example 8 and 9)

- LF = feed point
- l = operational max. length of cable [m], lifting height

L = max. suspended cable length [m]. Consider additional weight, if necessary (e.g. control switch)

* Applicable for determining the cable reel is the suspended cable length. Consider additional weight, if necessary (e.g. control switch).

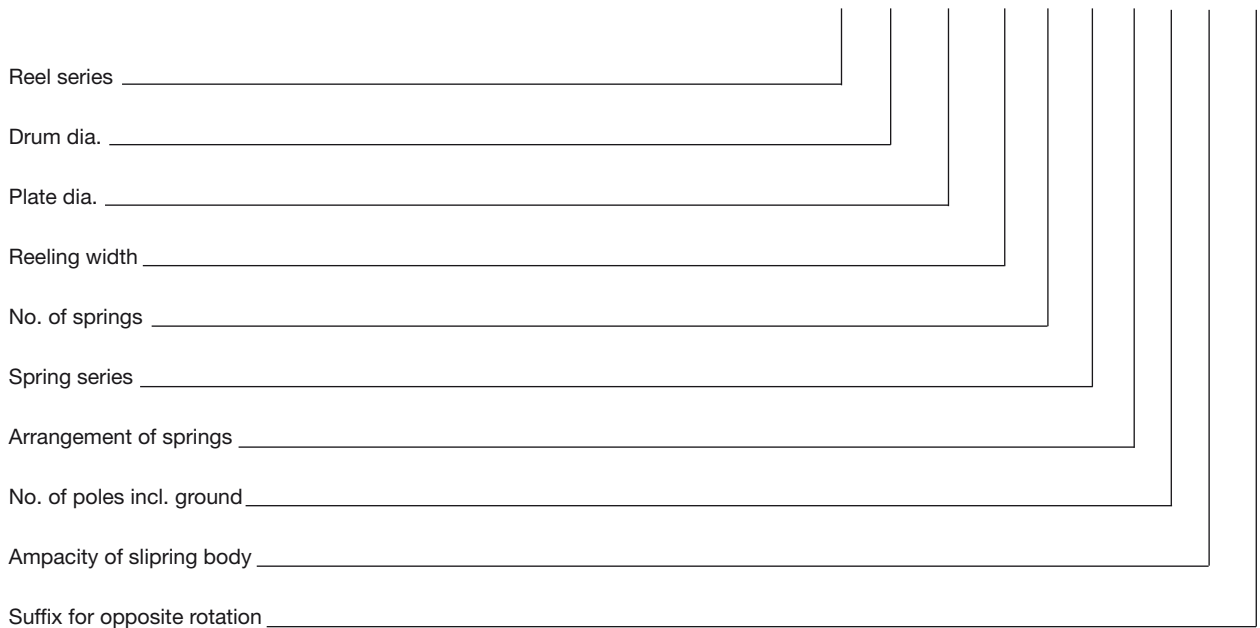


TYPE CODES

Definition of...

Reel Type

VBFLT 220 - 430 - 205 - 4 - 222 - H - 4 - 25 - A



Selection a VAHLE Cable Reel

To select the right Vahle Reel from the Reel Selection Charts you must know the application (see page 5), the length and the type of cable (wire size, number of conductors, outside diameter, weight per meter)

Legend to selection chart:

l = operational max. length of cable (m)

L = max. suspended cable length (m)
 („L“ can also correspond to the max. reeling length „l“)

h = height of reel=distance between cable tray or cable feed point to center of reel (m).
 Measure „h“ might be smaller in case of sufficient clearance height (e.g. cable payout in one travel direction). Consider guide assemblies or tension relief devices for two-way travel directions and passing over the feed point.

LZ = number of layers (might be required to determine cable cross section)

n_v = turns initial spring tension

n = max. operational and permissible turns for max. cable length „l“

Z = max. reel torque in newton (N)

f = max. cable sag in meters referring to feed point „LF (m)

Note:

A broad selection of springs provides many different torque combinations.

Initial spring tension n_v can be increased when reducing the max. cable length to be handled. However, never exceed the total permissible turns n_v+n .

REEL SELECTION CHART Applications

Random wrap, cable payout horizontal, vertical or upwards

1 3 9



l (m)	h (m)	LZ ~	Reel type	nv (U)	n (U)	Z (N)	Order-No.
Cable 4 x 1,5 mm²			Ø 11,1 mm	0,160 kg/m			
7	0,5	2,1	VBFLT 150-290- 90-1-153-H-4-25	15,0	13,0	43	904 006
12	0,5	3,2	VBFLT 150-290- 90-2-152-P-4-25	5,5	20,5	52	904 012
24	0,5	3,1	VBFLT 220-360-125-2-225-H-4-25	8,0	30,0	61	904 023
38	1,0	3,7	VBFLT 220-360-165-3-225-H-4-25	10,5	46,5	61	904 038
45	1,0	3,6	VBFLT 280-460-165-3-283-H-4-25	15,0	45,0	120	904 109
55	1,0	3,6	VBFLT 280-460-205-4-283-H-4-25	25,0	55,0	120	904 120
80	1,0	5,0	VBFLT 280-460-205-4-288-H-4-25	20,0	76,0	90	904 121
90	1,5	2,6	VBFLT 400-630-340-4-406-H-4-25	27,0	67,0	150	904 221
Cable 5 x 1,5 mm²			Ø 11,8 mm	0,180 kg/m			
8	0,5	2,9	VBFLT 150-290- 90-2-152-P-5-25	16,5	12,5	52	904 008
12	0,5	2,9	VBFLT 220-300- 85-1-225-H-5-25	4,0	15,0	61	904 016
20	0,5	3,1	VBFLT 220-360-125-2-225-H-5-25	13,0	25,0	61	904 024
28	1,0	4,0	VBFLT 220-360-165-3-222-H-5-25	10,0	35,0	108	904 037
39	1,0	4,4	VBFLT 280-460-125-2-288-H-5-25	10,0	37,5	90	904 098
50	1,0	4,1	VBFLT 280-460-165-3-283-H-5-25	12,0	48,0	120	904 110
70	1,0	4,6	VBFLT 280-460-205-4-288-H-5-25	29,0	67,0	90	904 119
90	1,5	2,7	VBFLT 400-630-340-4-404-H-5-25	11,0	67,0	240	904 218
Cable 7 x 1,5 mm²			Ø 13,3 mm	0,230 kg/m			
7	0,5	2,4	VBFLT 150-290- 90-1-153-H-7-25	15,0	13,0	43	904 005
10	0,5	1,7	VBFLT 220-300-125-1-225-H-7-25	6,0	13,0	61	904 014
17	1,0	3,0	VBFLT 220-360-125-2-222-H-7-25	9,0	21,0	108	904 022
30	1,0	3,5	VBFLT 220-430-165-3-222-H-7-25	9,0	36,0	108	904 059
41	1,0	5,0	VBFLT 280-460-125-2-288-H-7-25	10,0	38,0	108	904 099
50	1,0	3,6	VBFLT 280-460-165-3-283-H-7-25	13,0	47,0	120	904 111
73	1,0	5,0	VBFLT 280-500-205-4-283-H-7-25	13,0	67,0	120	904 138
82	1,5	4,2	VBFLT 400-630-280-3-406-H-7-25	12,5	57,5	150	904 207
Cable 12 x 1,5 mm²			Ø 16,9 mm	0,360 kg/m			
6	0,5	1,0	VBFLT 220-300-165-1-225-H-12-25	11,0	8,0	61	904 015
10	1,0	1,7	VBFLT 220-360-165-1-225-H-12-25	6,0	13,0	61	904 029
25	1,0	3,8	VBFLT 220-430-165-3-222-H-12-25	17,0	28,0	108	904 056
32	1,0	5,0	VBFLT 280-550-125-2-283-H-12-25	12,0	28,0	108	904 140
55	1,0	4,6	VBFLT 280-550-205-3-283-H-12-25	11,0	49,0	108	904 150
60	1,5	5,0	VBFLT 280-550-205-4-283-H-12-25	27,0	53,0	108	904154
85	1,5	4,0	VBFLT 400-630-280-3-406-H-12-25	12,5	58,0	150	904 202
115	1,5	4,4	VBFLT 400-710-340-4-406-H-12-25	17,0	77,0	150	904 238
Cable 18 x 1,5 mm²			Ø 17,9 mm	0,470 kg/m			
11	1,0	1,5	VBFLT 280-430-165-1-286-H-18-25	4,0	12,0	190	904 073
18	1,0	2,5	VBFLT 280-500-165-2-283-H-18-25	22,0	18,0	120	904 123
23	1,0	3,0	VBFLT 280-500-165-2-286-H-18-25	10,0	22,0	190	904 127
29	1,5	3,6	VBFLT 280-500-205-3-286-H-18-25	21,0	27,0	190	904 135
41	1,5	4,0	VBFLT 280-500-205-3-283-H-18-25	23,0	37,0	120	904 132
87	1,5	4,3	VBFLT 400-710-280-3-406-H-18-25	12,0	58,0	150	904 235
Cable 24 x 1,5 mm²			Ø 22,6 mm	0,590 kg/m			
10	1,0	1,8	VBFLT 280-460-165-1-286-H-24-25	6,0	10,0	190	904 101
24	1,0	3,1	VBFLT 280-550-205-2-286-H-24-25	10,0	22,0	190	904 149
45	1,5	3,1	VBFLT 400-710-280-2-404-H-24-25	8,0	31,0	240	904 223
76	1,5	4,6	VBFLT 400-800-280-3-404-H-24-25	10,5	48,0	240	904240
Cable 30 x 1,5 mm²			Ø 24,2 mm	0,710 kg/m			
20	1,0	1,5	VBFLT 400-630-280-1-404-H-30-25	3,0	15,0	240	904 177
46	1,5	3,3	VBFLT 400-710-280-2-404-H-30-25	8,0	31,0	240	904 224
78	1,5	5,0	VBFLT 400-800-280-3-404-H-30-25	10,0	48,0	240	904 241

Applications

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REEL SELECTION CHART Applications

1 3 9

Random wrap, cable payout horizontal, vertical or upwards

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3
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Applications

l (m)	h (m)	LZ ~	Reel type	nv (U)	n (U)	Z (N)	Order-No.
Cable 4 x 2,5 mm²			Ø 12,1 mm	0,210 kg/m			
5	0,5	1,6	VBFLT 150-240- 90-1-154-H-4-25	2,5	10,0	84	904 001
10	0,5	3,1	VBFLT 150-290- 90-2-153-P-4-25	11,0	17,0	86	904 012
12	0,5	2,9	VBFLT 220-360- 85-1-225-H-4-25	4,0	15,0	61	904 042
29	1,0	2,7	VBFLT 280-430-165-2-283-H-4-25	10,0	30,0	120	904 076
42	1,0	3,6	VBFLT 280-430-205-3-288-H-4-25	30,0	42,0	90	904 094
55	1,0	4,5	VBFLT 280-460-205-3-288-H-4-25	19,0	53,0	90	904 115
70	1,0	2,6	VBFLT 400-630-280-3-406-H-4-25	18,0	52,0	150	904 203
90	1,5	3,2	VBFLT 400-630-340-4-404-H-4-25	12,0	66,0	240	904 217
105	1,5	3,7	VBFLT 400-630-340-4-406-H-4-25	19,0	75,0	150	904 221
Cable 5 x 2,5 mm²			Ø 12,8 mm	0,240 kg/m			
5	0,5	1,6	VBFLT 150-240- 90-1-154-H-5-25	2,5	10,0	84	904 002
12	0,5	2,1	VBFLT 220-360-125-1-225-H-5-25	3,0	16,0	61	904 019
26	1,0	3,0	VBFLT 220-430-165-2-225-H-5-25	6,0	32,0	61	904 054
40	1,0	3,7	VBFLT 280-460-165-2-288-H-5-25	9,0	39,0	90	904 108
50	1,0	4,5	VBFLT 280-460-165-3-283-H-5-25	13,0	47,0	120	904 110
70	1,0	4,8	VBFLT 280-460-205-4-283-H-5-25	14,0	66,0	120	904 116
80	1,5	4,1	VBFLT 400-630-280-3-406-H-5-25	13,0	57,0	150	904 205
Cable 7 x 2,5 mm²			Ø 14 mm	0,310 kg/m			
5	0,5	2,1	VBFLT 150-290- 90-1-153-H-7-25	18,0	9,0	43	904 005
12	0,5	3,3	VBFLT 220-430- 85-1-225-H-7-25	3,0	15,0	61	904 068
17	1,0	3,0	VBFLT 220-360-125-2-225-H-7-25	16,0	21,0	61	904 025
26	1,0	2,9	VBFLT 280-430-165-2-283-H-7-25	13,0	26,0	120	904 077
41	1,0	4,0	VBFLT 280-500-165-3-283-H-7-25	20,0	39,0	120	904 130
62	1,0	4,6	VBFLT 280-500-205-4-283-H-7-25	21,0	58,0	120	904 138
78	1,0	3,2	VBFLT 400-630-280-3-406-H-7-25	14,0	56,0	150	904 207
90	1,5	4,0	VBFLT 240-630-340-4-404-H-7-25	12,0	65,0	240	904 220
Cable 12 x 2,5 mm²			Ø 20,2 mm	0,480 kg/m			
16	1,0	2,5	VBFLT 280-500-165-2-286-H-12-25	15,0	16,0	190	904 126
25	1,0	3,5	VBFLT 280-550-165-2-286-H-12-25	8,0	23,0	190	904 145
35	1,5	3,7	VBFLT 280-550-205-2-283-H-12-25	7,0	32,0	120	904 147
50	1,5	4,0	VBFLT 400-710-280-2-406-H-12-25	13,0	33,0	150	904 229
85	1,5	4,7	VBFLT 400-710-280-3-406-H-12-25	14,0	55,0	150	904 234
Cable 18 x 2,5 mm²			Ø 20,6 mm	0,680 kg/m			
18	1,0	2,8	VBFLT 280-500-165-2-286-H-18-25	14,0	17,0	190	904 127
25	1,0	3,0	VBFLT 280-550-165-2-283-H-18-25	16,0	23,0	120	904 142
35	1,5	3,8	VBFLT 280-550-205-3-286-H-18-25	16,0	31,0	190	904 151
45	1,5	2,8	VBFLT 400-630-280-2-404-H-18-25	7,0	31,0	240	904 184
70	1,5	4,0	VBFLT 400-710-280-3-404-H-18-25	11,0	46,0	240	904 232
Cable 24 x 2,5 mm²			Ø 25,5mm	0,820 kg/m			
22	1,0	1,8	VBFLT 400-630-280-1-404-H-24-25	2,0	16,0	240	904 176
45	1,5	3,5	VBFLT 400-710-280-2-404-H-24-25	8,0	30,0	240	904 223
78	1,5	4,3	VBFLT 400-800-340-3-404-H-24-25	8,0	49,0	240	904 243
Cable 30 x 2,5 mm²			Ø 28,7mm	0,970 kg/m			
20	1,5	1,9	VBFLT 400-630-280-1-404-H-30-25	4,0	14,0	240	904 177
35	1,5	3,0	VBFLT 400-800-280-2-404-H-30-25	16,0	22,0	240	904 239
75	1,5	4,7	VBFLT 400-800-340-3-404-H-30-25	12,0	45,0	240	904 244

REEL SELECTION CHART Applications

Random wrap, cable payout horizontal, vertical or upwards

1 3 9



Applications

1 3 9

l (m)	h (m)	LZ ~	Reel type	nv (U)	n (U)	Z (N)	Order-No.
Cable 4 x 4 mm²			Ø 13,4 mm		0,280 kg/m		
12	0,5	2,1	VBFLT 220-360-125-1-225-H-4-25	3,0	15,0	61	904 018
16	1,0	2,8	VBFLT 220-360-125-2-222-H-4-25	9,0	20,0	108	904 021
30	1,0	3,9	VBFLT 280-460-125-2-283-H-4-25	10,0	29,0	120	904 084
41	1,0	3,8	VBFLT 280-460-165-2-288-H-4-25	7,0	40,0	90	904 107
51	1,0	4,5	VBFLT 280-500-165-3-283-H-4-25	11,0	48,0	120	904 128
65	1,0	4,8	VBFLT 280-500-205-4-283-H-4-25	19,0	60,0	120	904 137
81	1,5	3,3	VBFLT 400-630-280-3-406-H-4-25	11,0	58,0	150	904 203
Cable 5 x 4 mm²			Ø 14,5 mm		0,320 kg/m		
9	0,5	1,8	VBFLT 220-360-125-1-222-H-5-25	2,0	12,0	108	904 017
20	0,5	3,6	VBFLT 220-430-125-2-222-H-5-25	5,0	24,0	108	904 047
30	1,0	3,7	VBFLT 220-430-165-3-222-H-5-25	9,0	35,0	108	904 058
41	1,0	4,0	VBFLT 280-500-165-3-283-H-5-25	20,0	39,0	120	904 129
50	1,0	4,0	VBFLT 280-500-205-3-283-H-5-25	12,0	47,0	120	904 133
81	1,5	3,5	VBFLT 400-630-280-3-406-H-5-25	12,0	57,0	150	904 205
Cable 4 x 6 mm²			Ø 14,8 mm		0,370 kg/m		
10	1,0	1,3	VBFLT 220-360-165-1-225-H-4-50	5,0	13,0	61	904 030
15	1,0	2,2	VBFLT 220-360-165-2-225-H-4-50	18,0	19,0	61	904 036
35	1,0	4,1	VBFLT 220-430-165-3-225-H-4-50	16,0	40,0	61	904 060
61	1,0	4,8	VBFLT 280-500-205-3-288-H-4-50	16,0	55,0	90	904 136
80	1,5	3,5	VBFLT 400-630-280-3-406-H-4-50	12,0	57,0	150	904 204
Cable 5 x 6 mm²			Ø 16,1 mm		0,430 kg/m		
9	1,0	1,8	VBFLT 220-360-125-1-225-H-5-50	6,0	12,0	61	904 020
20	1,0	3,5	VBFLT 220-430-125-2-222-H-5-50	6,0	23,0	108	904 048
36	1,0	4,0	VBFLT 220-430-205-3-225-H-5-50	15,0	41,0	61	904 063
55	1,0	4,7	VBFLT 280-550-205-3-288-H-5-50	21,0	50,0	90	904 153
80	1,5	3,8	VBFLT 400-630-280-3-406-H-5-50	14,0	55,0	150	904 206
90	1,5	3,4	VBFLT 400-630-340-4-404-H-5-50	14,0	63,0	240	904 219
Cable 4 x 10 mm²			Ø 18,8 mm		0,610 kg/m		
10	1,0	1,8	VBFLT 280-430-125-1-283-H-4-50	9,0	10,0	120	904 069
19	1,0	3,0	VBFLT 280-500-165-2-283-H-4-50	21,0	18,0	120	904 124
30	1,0	3,3	VBFLT 280-550-205-2-283-H-4-50	11,0	28,0	120	904 148
40	1,5	4,1	VBFLT 280-550-205-3-286-H-4-50	11,0	36,0	190	904 152
45	1,5	2,7	VBFLT 400-630-280-2-404-H-4-50	6,0	32,0	240	904 185
68	1,5	3,7	VBFLT 400-630-280-3-404-H-4-50	11,0	46,0	240	904 199
Cable 4 x 16 mm²			Ø 23,4 mm		0,920 kg/m		
20	1,0	1,5	VBFLT 400-630-280-1-404-H-4-90	3,0	15,0	240	904 179
35	1,5	2,6	VBFLT 400-630-280-2-404-H-4-90	14,0	24,0	240	904 186
45	1,5	3,2	VBFLT 400-710-280-2-404-H-4-90	8,0	30,0	240	904 226
71	1,5	3,8	VBFLT 400-710-340-3-404-H-4-90	11,0	46,0	240	904 237
Cable 4 x 25 mm²			Ø 27,1 mm		1,270 kg/m		
15	1,5	1,0	VBFLT 400-630-340-1-404-H-4-200	7,0	11,0	240	904 215
20	1,5	1,4	VBFLT 400-630-340-2-409-H-4-200	15,0	15,0	460	904 216
45	1,5	3,0	VBFLT 400-710-340-2-404-H-4-200	8,0	30,0	240	904 236
75	1,5	4,3	VBFLT 400-800-340-3-404-H-4-200	11,0	46,0	240	904 245
Cable 4 x 35 mm²			Ø 29,7 mm		1,720 kg/m		
15	1,5	1,4	VBFLT 400-630-280-1-404-H-4-200	7,0	11,0	240	904 178
31	1,5	2,9	VBFLT 400-710-280-2-404-H-4-200	17,0	21,0	240	904 225
50	1,5	3,4	VBFLT 400-800-280-3-409-H-4-200	13,0	32,0	460	904 242

REEL SELECTION CHART Applications

Random wrap, movable or stationary, horizontal cable payout

6 7



l (m)	~f (m)	LZ ~	Reel type	nv (U)	n (U)	Z (N)	Order-No.
Cable 12 x 2,5 mm² Ø 20,2 mm 0,480 kg/m							
10	0,4	1,0	VBFLT 400-630-280-1-409-H-12-25	7,0	8,0	460	904 180
25	1,0	1,6	VBFLT 400-630-280-3-406-P-12-25	4,0	18,5	450	904 208
Cable 18 x 2,5 mm² Ø 20,6 mm 0,680 kg/m							
15	1,0	1,0	VBFLT 400-630-280-1-404-H-18-25	7,0	11,5	240	904 175
21	1,0	1,3	VBFLT 400-630-280-3-406-P-18-25	7,0	15,5	450	904 209
Cable 24 x 2,5 mm² Ø 25,5 mm 0,820 kg/m							
10	0,3	1,0	VBFLT 400-630-280-1-409-H-24-25	7,0	7,5	460	904 181
20	1,0	1,6	VBFLT 400-630-280-2-404-P-24-25	4,0	14,5	480	904 187
25	1,1	1,6	VBFLT 400-630-340-4-406-P-24-25	4,5	18,0	600	904 222
Cable 30 x 2,5 mm² Ø 28,7 mm 1,300 kg/m							
10	0,4	1,0	VBFLT 400-630-280-1-409-H-30-25	7,0	7,5	460	904 182
20	0,8	1,9	VBFLT 400-630-280-3-404-P-30-25	4,5	14	720	904 200
Cable 4 x 4 mm² Ø 13,4 mm 0,280 kg/m							
7	0,5	2,4	VBFLT 150-290- 90-1-153-H- 4-25	14,0	13,0	43	904 003
10	0,6	1,7	VBFLT 220-360-125-1-225-H- 4-25	5,0	13,0	61	904 018
15	0,8	2,6	VBFLT 220-360-125-2-222-H- 4-25	10,0	19,0	108	904 021
20	0,8	2,1	VBFLT 280-430-165-2-286-H- 4-25	10,0	21,0	190	904 078
30	0,8	1,3	VBFLT 400-560-280-2-409-H- 4-25	7,0	23,0	460	904 164
Cable 5 x 4 mm² Ø 15,4 mm 0,320 kg/m							
8	0,3	1,6	VBFLT 220-430-125-1-222-H- 5-25	3,0	11,0	108	904 043
16	1,0	3,1	VBFLT 220-430-125-2-222-H- 5-25	10,0	19,0	108	904 047
20	1,0	2,4	VBFLT 280-460-165-2-286-H- 5-25	11,0	20,0	190	904 104
30	1,0	1,4	VBFLT 400-630-280-2-409-H- 5-25	8,0	22,0	460	904 195
Cable 4 x 6 mm² Ø 14,8 mm 0,370 kg/m							
10	0,8	2,0	VBFLT 220-430-125-1-225-H- 4-50	5,0	13,0	61	904 045
15	1,0	2,9	VBFLT 220-430-125-2-222-H- 4-50	11,0	18,0	108	904 046
20	1,0	2,4	VBFLT 280-430-165-2-286-H- 4-50	10,0	21,0	190	904 079
30	1,1	1,4	VBFLT 400-630-280-2-409-H- 4-50	7,0	23,0	460	904 193
Cable 5 x 6 mm² Ø 16,1 mm 0,430 kg/m							
8	0,4	1,5	VBFLT 220-430-125-1-222-H- 5-50	3,0	11,0	108	904 044
15	0,9	2,4	VBFLT 280-430-125-2-288-P- 5-50	8,0	15,0	180	904 071
20	1,0	2,4	VBFLT 280-430-165-3-288-P- 5-50	3,0	20,0	270	904 087
25	0,9	1,3	VBFLT 400-630-280-2-409-H- 5-50	11,0	19,0	460	904 196
Cable 4 x 10 mm² Ø 18,8 mm 0,610 kg/m							
10	0,5	1,5	VBFLT 280-460-165-1-286-H- 4-50	5,0	10,0	190	904 102
25	1,3	1,5	VBFLT 400-560-280-2-409-H- 4-50	11,5	18,5	460	904 165
Cable 4 x 16 mm² Ø 23,4 mm 0,920 kg/m							
10	0,3	1,0	VBFLT 400-560-280-1-409-H- 4-90	7,0	7,5	460	904 156
20	1,2	1,5	VBFLT 400-630-280-2-409-H- 4-90	15,0	15,0	460	904 194
Cable 4 x 25 mm² Ø 27,1 mm 1,270 kg/m							
10	0,5	1,0	VBFLT 400-630-280-1-409-H- 4-200	7,0	7,5	460	904 183
20	1,6	1,7	VBFLT 400-630-280-2-404-P- 4-200	4,5	14,0	480	904 189

Applications

6 7



REEL SELECTION CHART Applications

8

Randrom wrap, cable payout vertical or downwards

I (m)	LZ ~	Reel type	nv (U)	n (U)	Z (N)	Order-No.
Cable 4 x 1,5 mm² Ø 11,1 mm 0,160 kg/m						
6	1,7	VBFLT 150-240- 90-1-152-H- 4-25	16,0	12,0	26	904 000
12	3,2	VBFLT 150-290- 90-1-153-H- 4-25	6,0	21,0	43	904 003
25	2,7	VBFLT 220-430-165-3-222-H- 4-25	12,0	32,0	108	904 057
35	3,0	VBFLT 280-430-165-3-283-H- 4-25	23,0	36,0	120	904 082
40	1,4	VBFLT 400-560-280-2-404-H- 4-25	8,5	30,5	240	904 158
64	2,3	VBFLT 400-630-280-3-404-H- 4-25	9,0	48,0	240	904 198
Cable 5 x 1,5 mm² Ø 11,8 mm 0,180 kg/m						
9	3,0	VBFLT 150-290- 90-1-153-H- 5-25	11,0	16,0	43	904 004
12	3,6	VBFLT 150-290- 90-2-153-P- 5-25	7,0	20,0	86	904 010
20	2,3	VBFLT 220-360-165-2-222-H- 5-25	3,0	26,0	108	904 034
35	2,5	VBFLT 280-430-205-3-286-H- 5-25	11,0	36,0	190	904 092
50	3,5	VBFLT 280-430-205-4-286-H- 5-25	13,0	50,0	190	904 096
64	2,3	VBFLT 400-560-280-3-404-H- 5-25	9,0	48,0	240	904 169
Cable 7 x 1,5 mm² Ø 13,3 mm 0,230 kg/m						
8	2,6	VBFLT 150-290- 90-1-153-H- 7-25	13,0	14,0	43	904 005
12	1,8	VBFLT 220-360-165-1-225-H- 7-25	2,0	16,0	61	904 031
20	2,5	VBFLT 220-360-165-2-222-H- 7-25	4,0	25,0	108	904 035
25	3,1	VBFLT 220-430-165-3-222-H- 7-25	13,0	31,0	108	904 059
39	3,3	VBFLT 280-460-165-3-286-H- 7-25	8,0	39,0	190	904 112
45	1,8	VBFLT 400-560-280-2-404-H- 7-25	4,0	34,0	240	904 160
52	2,1	VBFLT 400-560-280-3-409-H- 7-25	6,0	39,0	460	904 174
Cable 12 x 1,5 mm² Ø 16,9 mm 0,360 kg/m						
11	3,6	VBFLT 220-430- 85-1-222-H-12-25	1,0	13,0	108	904 064
23	3,5	VBFLT 220-430-165-3-228-H-12-25	6,0	27,0	150	904 061
28	2,7	VBFLT 280-500-205-3-286-H-12-25	19,0	28,0	190	904 134
35	1,8	VBFLT 400-560-280-2-409-H-12-25	4,0	26,0	460	904 162
54	2,8	VBFLT 400-630-280-3-409-H-12-25	6,0	39,0	460	904 210
Cable 18 x 1,5 mm² Ø 17,9 mm 0,470 kg/m						
9	3,1	VBFLT 220-430- 85-1-222-H-18-25	3,0	11,0	108	904 065
14	3,0	VBFLT 220-430-125-2-228-H-18-25	5,0	17,0	150	904 050
21	2,9	VBFLT 280-500-165-2-286-H-18-25	10,0	21,0	190	904 127
35	1,9	VBFLT 400-560-280-2-409-H-18-25	4,0	26,0	460	904 163
52	2,2	VBFLT 400-630-280-3-409-H-18-25	6,0	39,0	460	904 211
Cable 24 x 1,5 mm² Ø 22,6 mm 0,590 kg/m						
9	1,6	VBFLT 280-430-165-1-286-H-24-25	15,0	10,0	190	904 074
16	2,9	VBFLT 280-550-165-2-283-P-24-25	4,0	15,0	240	904 143
23	1,6	VBFLT 400-630-280-2-404-P-24-25	1,0	17,0	480	904 187
36	2,5	VBFLT 400-630-280-2-409-H-24-25	4,0	26,0	460	904 192
38	2,7	VBFLT 400-630-280-3-409-H-24-25	18,0	27,0	460	904 212
Cable 30 x 1,5 mm² Ø 24,2 mm 0,710 kg/m						
12	2,3	VBFLT 280-550-165-1-286-H-30-25	3,0	12,0	190	904 141
15	2,7	VBFLT 280-550-165-2-283-P-30-25	5,0	14,0	240	904 144
17	1,3	VBFLT 400-630-280-1-409-H-30-25	1,0	13,0	460	904 182
23	1,8	VBFLT 400-630-280-2-404-P-30-25	2,0	17,0	470	904 188
31	2,4	VBFLT 400-710-280-2-409-H-30-25	8,0	22,0	460	904 231
Cable 4 x 2,5 mm² Ø 12,1 mm 0,210 kg/m						
8	2,7	VBFLT 150-290- 90-1-153-H- 4-25	13,0	14,0	43	904 003
12	3,2	VBFLT 150-290- 90-2-153-P- 4-25	2,0	20,0	84	904 009
20	2,5	VBFLT 220-360-165-2-222-H- 4-25	3,0	26,0	108	904 032
24	3,0	VBFLT 220-430-165-3-222-H- 4-25	14,0	30,0	108	904 057
39	3,5	VBFLT 280-430-165-3-286-H- 4-25	8,0	39,0	190	904 083
45	3,1	VBFLT 280-430-205-4-286-H- 4-25	12,0	44,0	190	904 095
52	2,2	VBFLT 400-560-280-3-409-H- 4-25	6,0	39,0	460	904 171

Applications 8

Cable payout direction with view on the slipping body

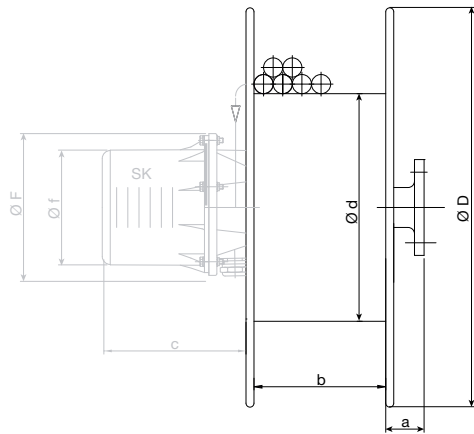
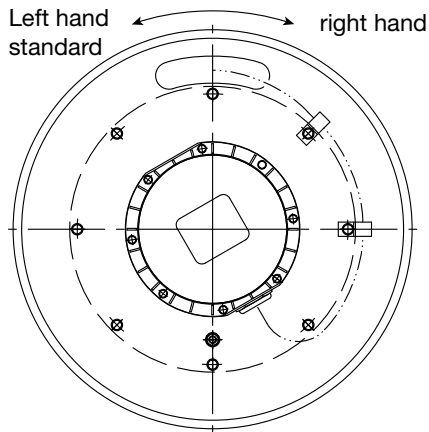
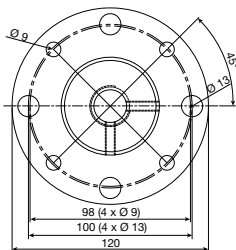


Table 6, dimensions of reeling bobbies

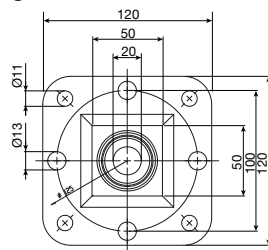
Reel type (1)	Drum dim.				
	Ø d mm	Ø D mm	Ø b mm	a mm	Weight kg
VBFLT 150-240- 90	150	240	90	38,5	3,000
VBFLT 150-290- 90	150	290	90	38,5	3,500
VBFLT 220-300- 85	220	300	85	45,5	4,900
VBFLT 220-300-125	220	300	125	45,5	5,300
VBFLT 220-300-165	220	300	165	45,5	5,700
VBFLT 220-360- 85	220	360	85	45,5	5,300
VBFLT 220-360-125	220	360	125	45,5	5,700
VBFLT 220-360-165	220	360	165	45,5	6,100
VBFLT 220-430- 85	220	430	85	45,5	6,400
VBFLT 220-430-125	220	430	125	45,5	6,750
VBFLT 220-430-165	220	430	165	45,5	7,100
VBFLT 220-430-205	220	430	205	45,5	7,500
VBFLT 280-460-125	280	460	125	45,0	7,600
VBFLT 280-460-165	280	460	165	45,0	8,100
VBFLT 280-460-205	280	460	205	45,0	8,600
VBFLT 280-500-165	280	500	165	45,0	8,750
VBFLT 280-500-205	280	500	205	45,0	9,200
VBFLT 280-550-125	280	550	125	45,0	9,750
VBFLT 280-550-165	280	550	165	45,0	10,200
VBFLT 280-550-205	280	550	205	45,0	10,650
VBFLT 400-560-280	400	560	280	61,0	25,900
VBFLT 400-560-340	400	560	340	61,0	27,700
VBFLT 400-630-280	400	630	280	61,0	28,500
VBFLT 400-630-340	400	630	340	61,0	30,200
VBFLT 400-710-280	400	710	280	61,0	31,300
VBFLT 400-710-340	400	710	340	61,0	33,000
VBFLT 400-800-280	400	800	280	61,0	34,800
VBFLT 400-800-340	400	800	340	61,0	36,600

Dimensional data

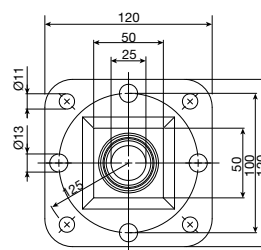
Measurements of mounting flanges



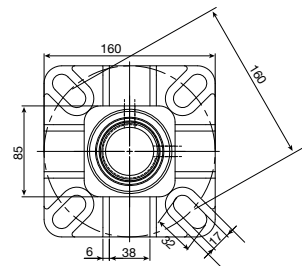
VBFLT 150



VBFLT 220



VBFLT 280



VBFLT 400

(1) Base weight without springs and slipping bodies!
Total weight=base weight + weight of springs and slipping bodies.



REELS with mounting flange

random wrap - size measurement table

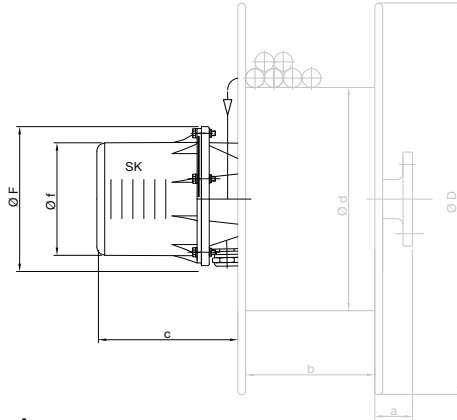


Table 7, dimensions and weights of slipping bodies

Type	Dimensions			Weight kg	max. cable cross sections in sqmm
	c mm	Ø f	Ø F		
VBFLT 150, 220 und 280					
4- 25	130	140	180	1,300	2,5
5- 25	150	140	180	1,400	2,5
7- 25	190	140	180	1,600	2,5
12- 25	245	140	180	2,300	2,5
18- 25	325	140	180	2,900	2,5
4- 25	130	140	180	1,300	4,0
5- 25	150	140	180	1,400	4,0
VBFLT 280					
24- 25	295	205	245	4,700	2,5
30- 25	385	205	245	5,500	2,5
4- 50	205	205	245	3,200	10,0
5- 50	205	205	245	3,400	10,0
4- 90	205	205	245	3,600	16,0
VBFLT 400					
4- 25	205	205	245	2,100	2,5
5- 25	205	205	245	2,200	2,5
7- 25	205	205	245	2,300	2,5
12- 25	295	205	245	2,900	2,5
18- 25	385	205	245	3,700	2,5
4- 25	205	205	245	2,100	4,0
5- 25	205	205	245	2,200	4,0
24- 25	295	205	245	5,100	2,5
30- 25	385	205	245	5,800	2,5
4- 50	205	205	245	3,300	10,0
5- 50	205	205	245	3,400	10,0
4- 90	205	205	245	3,900	16,0
4-200	315	340	360	15,000	35,0

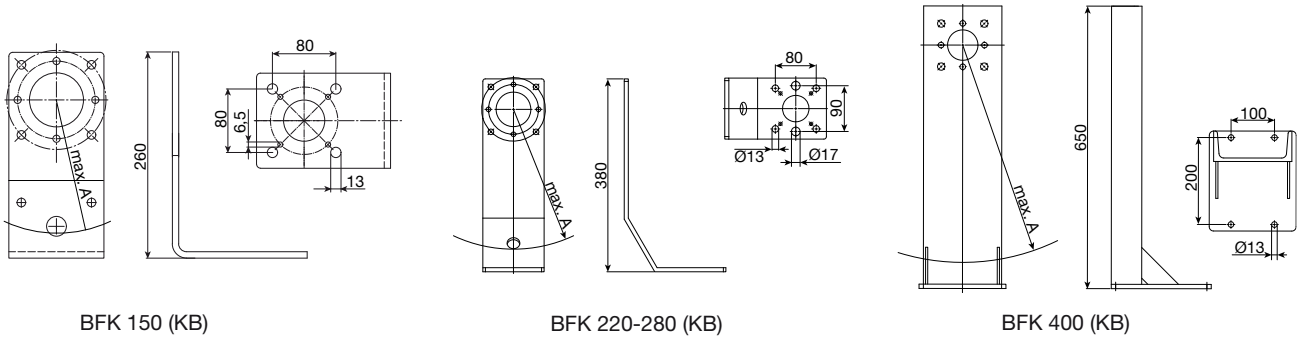
Dimensional data

Ratchet device



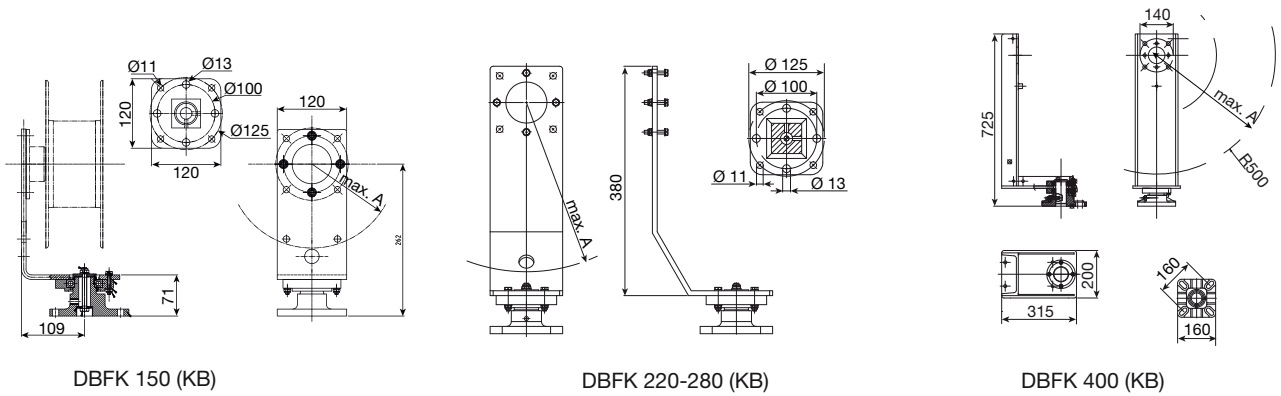
Type	for spring reels	Adjustment per turn	Corrosion prevention	Weight kg	Order-No.
RSP 150	VBFLT 150	1x	galvanized	0,700	904 246
RSP 150 KB			galvanized + plastic-coated	0,750	904 247
RSP 220	VBFLT 220	6x	galvanized	1,300	904 248
RSP 220 KB			galvanized + plastic-coated	1,350	904 249
RSP 280	VBFLT 280	6x	galvanized	1,300	904 250
RSP 280 KB			galvanized + plastic-coated	1,350	904 251
RSP 400	VBFLT 400	5x	galvanized	3,000	904 252
RSP 400 KB			galvanized + plastic-coated	3,050	904 253

Mounting bracket



Type	for spring reels	max. Ø A	Corrosion prevention	Weight kg	Order-No.
BFK 150	VBFLT 150	330 mm	galvanized	3,100	904 338
BFK 150 KB			galvanized + plastic-coated	3,200	904 339
BFK 220 - 280	VBFLT 220 - 280	550 mm	galvanized	3,500	904 344
BFK 220 - 280 KB			galvanized + plastic-coated	3,600	904 345
BFK 400	VBFLT 400	1000 mm	galvanized	17,500	904 346
BFK 400 KB			galvanized + plastic-coated	17,700	904 347

Mounting bracket with swivel



Type	for spring reels	max. Ø A	Corrosion prevention	Weight kg	Order-No.
DBFK 150	VBFLT 150	330 mm	galvanized	4,100	904 348
DBFK 150 KB			galvanized + plastic-coated	4,250	904 349
DBFK 220 - 280	VBFLT 220 - 280	550 mm	galvanized	4,700	904 350
DBFK 220 - 280 KB			galvanized + plastic-coated	4,850	904 351
DBFK 400	VBFLT 400	1000 mm	galvanized	23,600	904 352
DBFK 400 KB			galvanized + plastic-coated	23,800	904 353

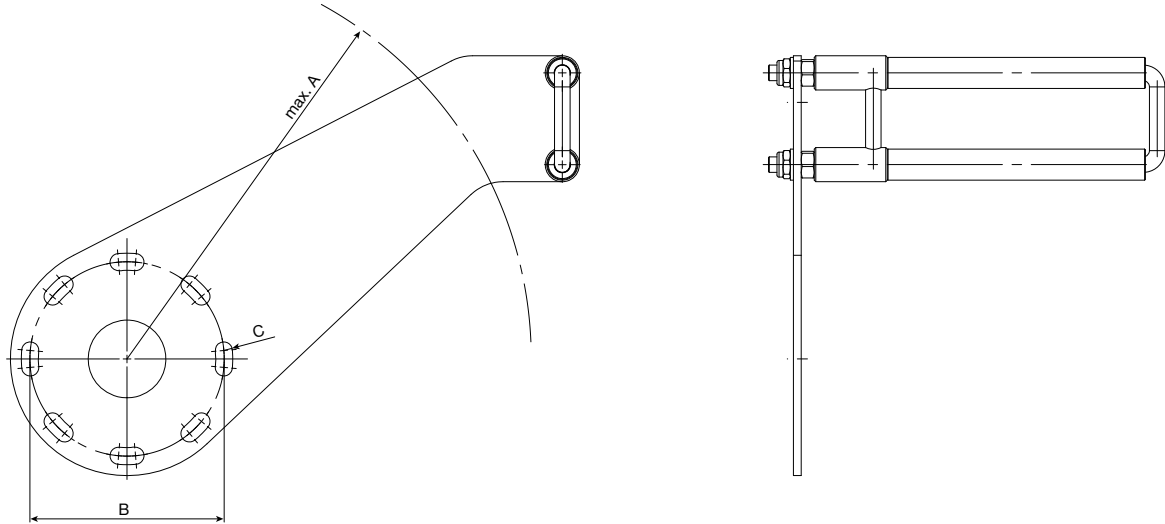


ACCESSORIES

Guide roller arm

Guide roller arm, rigid

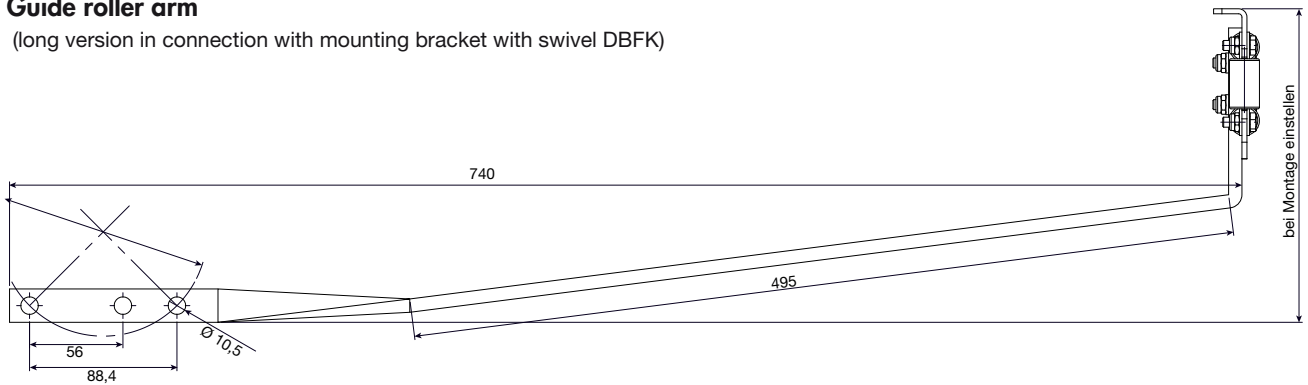
(short version in connection with mounting bracket BFK)



Type	for spring reels	max. Ø A	Reeling width mm	Corrosion prevention	Bolt circle Ø B	Fixing screw	Weight kg	Order-No.
RAKS 300- 60	VBFLT 150-290	300	60	galvanized	100	M 12	0,700	904 366
RAKS 300- 90			90		100	M 12	0,750	904 367
RAKS 360- 85	VBFLT 220-300 by VBFLT 280-360	360	85		125	M 10	1,400	904 368
RAKS 360-125			125		M 10	1,450	904 369	
RAKS 360-165			165		M 10	1,500	904 370	
RAKS 360-205			205		M 10	1,600	904 371	
RAKS 550- 85			85		125	M 10	2,000	904 372
RAKS 550-125	VBFLT 220-430 by VBFLT 280-550	550	125		125	M 10	2,100	904 373
RAKS 550-165			165		M 10	2,150	904 374	
RAKS 550-205			205		M 10	2,250	904 375	
RAKS 800-280	VBFLT 400-560 by VBFLT 400-800	800	280		140	M 16	4,800	904 376
RAKS 800-340			340		M 16	5,000	904 377	
RAKS 1000-280	VBFLT 400-800	1000	280		140	M 16	8,800	904 378
RAKS 1000-340			340		M 16	9,000	904 379	
RAKS 300- 60 KB	VBFLT 150-290	300	60		galvanized + plastic-coated	100	M 12	0,750
RAKS 300- 90 KB			90	100		M 12	0,800	904 381
RAKS 360- 85 KB	VBFLT 220-300 by VBFLT 280-360	360	85	125		M 10	1,450	904 382
RAKS 360-125 KB			125	M 10		1,500	904 383	
RAKS 360-165 KB			165	M 10		1,550	904 384	
RAKS 360-205 KB			205	M 10		1,650	904 385	
RAKS 550- 85 KB			85	125		M 10	2,050	904 386
RAKS 550-125 KB	VBFLT 220-430 by VBFLT 280-550	550	125	125		M 10	2,150	904 387
RAKS 550-165 KB			165	M 10		2,200	904 388	
RAKS 550-205 KB			205	M 10		2,300	904 389	
RAKS 800-280 KB	VBFLT 400-560 by VBFLT 400-800	800	280	140		M 16	4,900	904 390
RAKS 800-340 KB			340	M 16		5,100	904 391	
RAKS 1000-280 KB	VBFLT 400-800	1000	280	140		M 16	8,900	904 392
RAKS 1000-340 KB			340	M 16		9,100	904 393	

Guide roller arm

(long version in connection with mounting bracket with swivel DBFK)



Guide roller arm, rigid

Type	for spring reels	max. Ø D	Corrosion prevention	Weight kg	Order-No.
RALS 550	VBFLT 220	550	galvanized	1,250	904 254
RALS 550 KB	VBFLT 280		galvanized + plastic-coated	1,300	904 255

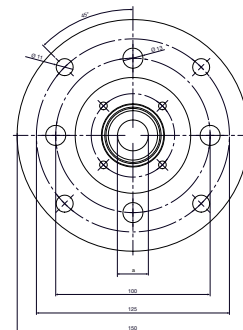
Guide roller arm, movable (as spare part in connection with mounting flange BFRAL)



Guide roller arm, movable (for retrofit only in connection with special mounting flange)

Type	for spring reels	max. Ø D	Corrosion prevention	Weight kg	Order-No.
RAL-Sch 550	VBFLT 220	550	galvanized	2,500	904 256
RAL-Sch 550 KB	VBFLT 400		galvanized+ plastic-coated	2,600	904 257

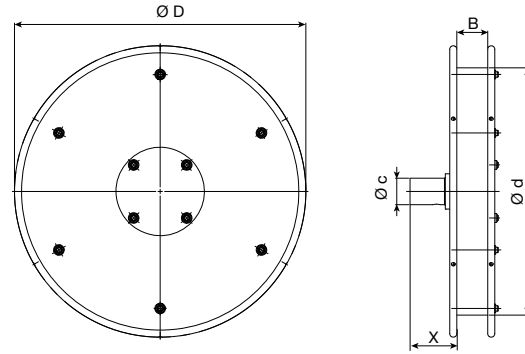
Mounting flange (as spare part) for guide roller arm, movable



Type	for spring reels	max. Ø A	Corrosion prevention	Weight kg	Order-No.
BFRAL 220	VBFLT 220	20	galvanized		904 430
BFRAL 280	VBFLT 280	25	galvanized		904 431

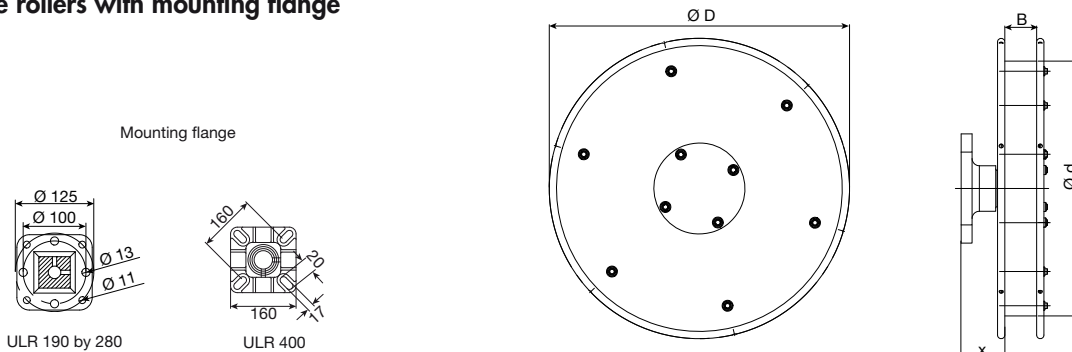


Guide rollers with shaft stubs



Type	Ø d mm	Ø D mm	B mm	Ø c mm	X mm	Corrosion prevention	Weight kg	Order-No.		
ULR 190-W	190	290	35	30	53	galvanized	3,100	904 354		
URL 190-W KB						galvanized + plastic-coated	3,200	904 355		
ULR 280-W	280	330				40	50	galvanized	3,700	904 356
URL 280-W KB								galvanized + plastic-coated	3,800	904 357
ULR 400-W	400	500		40	50	galvanized	9,700	904 358		
URL 400-W KB						galvanized + plastic-coated	9,900	904 359		

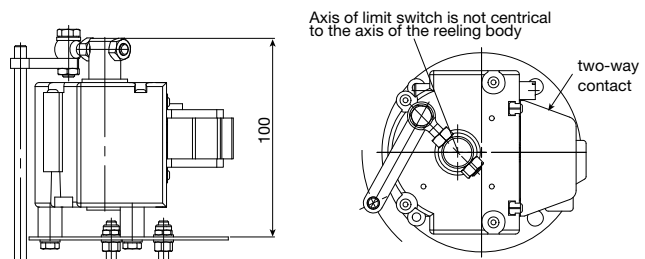
Guide rollers with mounting flange



Type	Ø d mm	Ø D mm	B mm	X mm	Corrosion prevention	Weight kg	Order-No.		
ULR 190-BF	190	290	35	48	galvanized	3,400	904 360		
URL 190-BF KB					galvanized + plastic-coated	3,550	904 361		
ULR 280-BF	280	330			40	50	galvanized	4,000	904 362
URL 280-BF KB							galvanized + plastic-coated	4,150	904 363
ULR 400-BF	400	500			40	50	galvanized	9,500	904 364
URL 400-BF KB							galvanized + plastic-coated	9,700	904 365

Limit switch

(gear transmission 67,1 with 2 switch points)

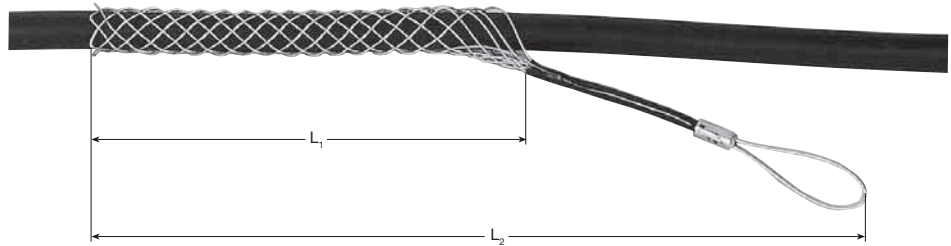


Type	Weight kg	Order-No.
ESCH 220-400	0,700	904 278



Wire Mesh Strain Relief Grips

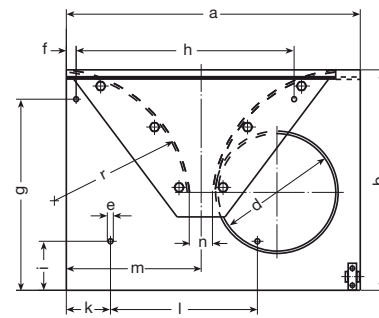
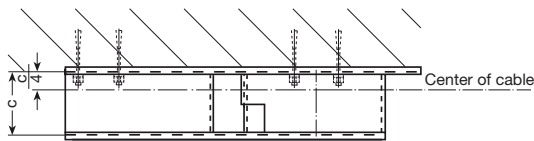
Type	for cable diam. mm	max. permissible tension kg*	Length of mesh Maß L ₁	Total length Maß L ₂	Order-No.
VLZK 6	4 by 7	60	100	275	900 391
VLZK 9	7 by 9	110	120	290	900 392
VLZK 12	9 by 12	130	135	340	900 393
VLZK 15	12 by 15	210	180	390	900 394
VLZK 20	15 by 20	260	220	450	900 395
VLZK 25	20 by 25	260	275	510	900 396
VLZK 30	25 by 30	400	350	610	900 397
VLZK 40	30 by 40	580	370	660	900 398



* 3-times safety factor considered

Feed-point funnel with strain relief

for tension up to 1000 volt
for all travel speeds and frequent passing over centerpoint

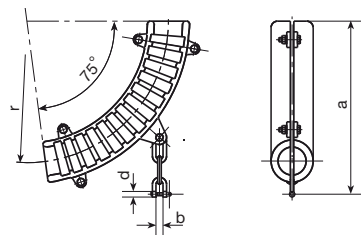


Type	Order-No.	Cable max. Ø mm	a	b	c	d/r	e	f	g	h	i	k	l	m	n	Weight ~ kg
ETZ 3	921 380	34	650	530	106	275	14	40	405	400	200	120	300	270	60	15
ETZ 4	921 390	50	900	700	146	400	18	40	550	740	200	210	400	410	80	28
ETZ 5	921 400	62	1220	900	208	500	18	40	780	900	200	180	600	480	100	52

Turnover anchor clamp

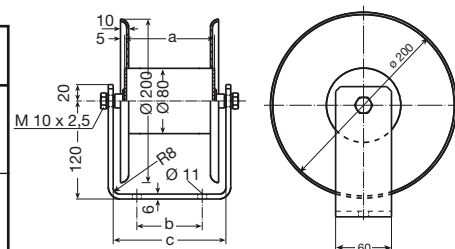
for up to 1000 Volt applications, for two way payout and low travel speeds.
Mainly used in connection with plug & socket service or when feeding from underneath the cable tray is impossible.

Type	Order-No.	Cable-Ø	r	a	d	b	Weight ~ kg
LS 1	921 420	<21,5	100	205	10	14	1,6
LS 2	921 430	>21,5-28	130	225	10	14	2,5
LS 3	921 440	>28 -36,5	170	265	12	17	3,5
LS 4	921 450	>36,5-48	220	300	12	17	5,5



Roller supports

Type	Order-No.	a	b	c	Weight ~ kg	
TR 80/110 B 200	924 450	110	-	130	2,25	without bracket
TR 80/300 B 200	924 460	300	-	320	3,25	
TR 80/500 B 200	924 470	500	-	520	4,50	
TR 80/110 B 200 H	924 480	110	80	130	3,50	with bracket
TR 80/300 B 200 H	924 490	300	250	320	5,15	
TR 80/500 B 200 H	924 500	500	400	520	6,90	





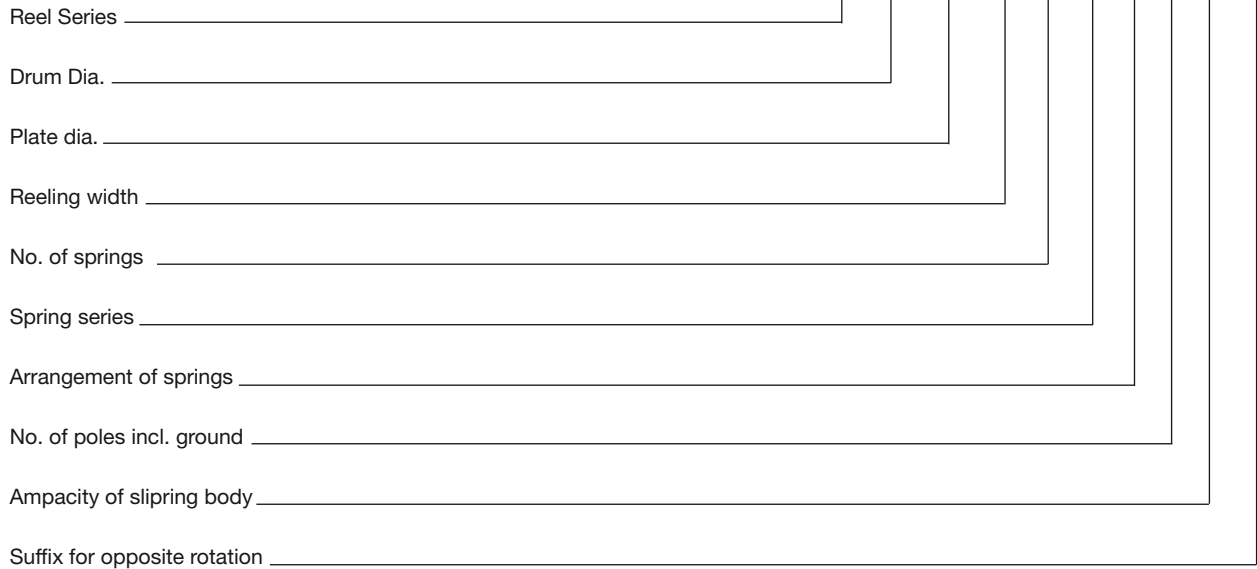
SPARE PARTS

The Reel Type Definition Key is important for the correct spare part selection (please refer to charts, type label and type designation code).

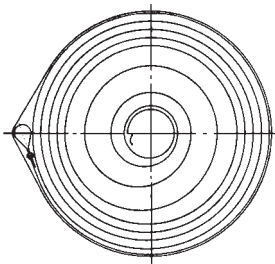
Definition of...

Reel type

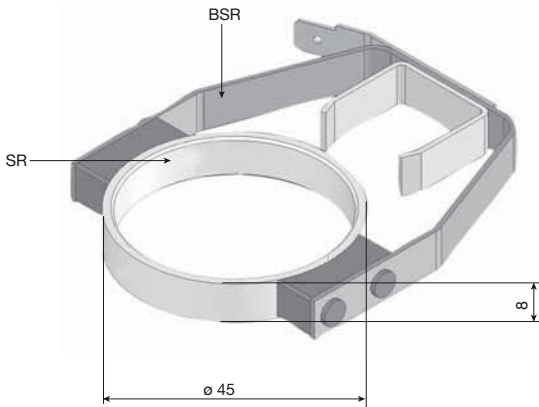
VBFLT 220 - 430 - 205 - 4 - 222 - H - 4 - 25 - A



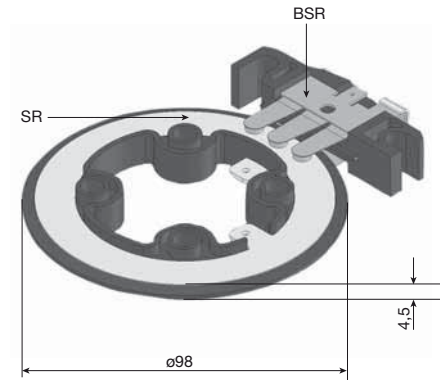
Springs



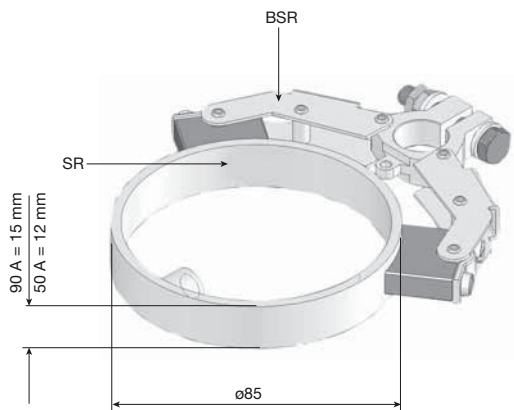
Type	Order-No.	Weight kg	Boring mm	Outer diam. mm	Width mm
152	904 406	0,800	24	107	30
153	904 407	1,200	24	125	30
154	904 408	0,800	24	107	30
222	904 409	2,000	35	177	30
225	904 410	1,900	35	177	30
228	904 411	2,300	35	177	30
283	904 412	3,900	39	239	30
286	904 413	4,900	39	239	30
288	904 414	3,600	39	239	30
404	904 415	10,900	50	332	60
406	904 416	8,700	50	332	60
409	904 417	14,500	50	332	60



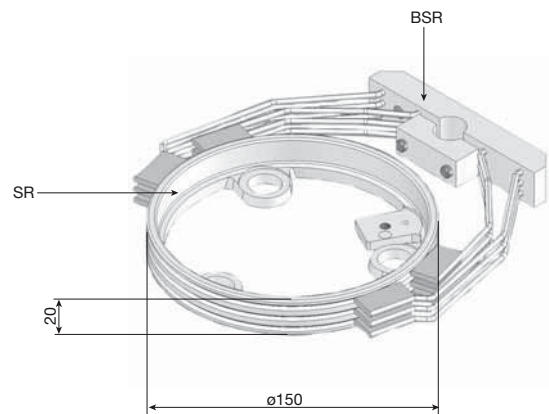
Colector rings 25 A
cable cross section
2,5 mm² up to 18 poles and
4,0 mm² up to 12 poles



Colector ring 25 A
cable cross section 2,5 mm²
up to 24 and 30 poles



Colector rings 50 A cable cross section
10 mm² up to 5 poles
Colector rings 90 A cable cross section
16 mm² up to 5 poles



Colector ring 200 A
cable cross section 35 mm²
up to 4 poles

for slipping body	max. cable cross section mm ²	max. no. of poles	Sliprings			Brush holder		
			Type	Order-No.	Weight kg	Type	Order-No.	Weight kg
25 A	2,5	18	SR 25-2,5-18	904 394	0,020	BSR 25-2,5-18	904 400	0,040
25 A	4,0	12	SR 25-4,0	904 395	0,020	BSR 25-4,0	904 401	0,040
25 A	2,5	30	SR 25-2,5-30	904 396	0,050	BSR 25-2,5-30	904 402	0,040
50 A	10,0	5	SR50-10	904 397	0,080	BSR 50-10	904 403	0,090
90 A	16,0	5	SR90-16	904 398	0,110	BSR 90-16	904 404	0,160
200 A	35,0	4	SR200-35	904 399	0,460	BSR 200-35	904 405	0,540



Questionnaire of VAHLE Cable Reels

1. For what type of moving equipment is the reel ? _____
A rough sketch based on the typical applications shown on page 5 of this catalog is extremely valuable.

2. Reel installation height h = _____ m

3. Travel distance of equipment _____ m

4. Cable payout from center from one end

5. What is the max. cable length on the reel? l = _____ m
Midway feed-point cuts the length of cable needed in half.

6. Type of Cable (number of conductors x wire size) _____ x _____ mm²

weight _____ kg/m

outside dia. _____ mm

7. Power consumption _____ kW

Voltage _____ V

Amperage _____ A

8. Duty Cycle (time on) of full load? _____ %

9. No. of Collector Rings required? _____ pcs
(our slipping assemblies always include one ground)

10. Typ of application ? (see page 5) No.

11. How many movements per hour? _____ times

12. Operating hours per day _____ hours

13. Maximum travel/lift speed _____ m/min.

14. Shortest starting time _____ sec.

Acceleration _____ m/sec.²

Remarks: _____

Questionnaire of VAHLE Cable Reels



Date: _____

Customer: _____

Ref: _____

Motor data	Crane 1			Crane 2			Crane 3		
	Power kW/HP	Current Amps	Duty factor %	Power kW/HP	Current Amps	Duty factor %	Power kW/HP	Current Amps	Duty factor %
Hoist motor									
Auxiliary hoist									
Tavel motor-main-trolley									
Tavel motor-aux.-trolley									
Main travel									
Slewing									
Luffing									

Mark with* any motor that may be in simultaneous operation.

Additional comments: _____



NOTES



Products and Service	Catalog No.
1 Open conductor systems	
Open conductor systems	1a
2 Insulated conductor systems	
U 10	2a
FABA 100	2b
U 15 - U 25 - U 35	2c
U 20 - U 30 - U 40	2d
3 Compact conductor systems	
VKS 10	3a
VKS - VKL	3b
4 Enclosed conductor systems	
KBSL - KSL	4a
KBH	4b
MKLD - MKLF - MKLS	4c
LSV - LSVG	4d
5 Contactless power system	
Contactless power system (CPS®)	5a
6 Data transmission	
VAHLE Powercom®	6a
Slotted Microwave Guide (SMG)	6b
7 Positioning systems	
VAHLE APOS®	7a
8 Festoon systems and cables	
Festoon systems for □- tracks	8a
Festoon systems for flat cables on I- tracks	8b
Festoon systems for round flat cables on I- tracks	8c
Festoon systems for ◇- tracks	8d
Cables	8e
9 Reels	
Spring operated cable reels	9a
Motor powered cable reels	9b
10 Others	
Battery charging systems	10a
Heavy enclosed conductor systems	10b
Tender	10c
Contact wire	10d
Assemblies/Commissioning	
Spare parts/Maintenance service	

