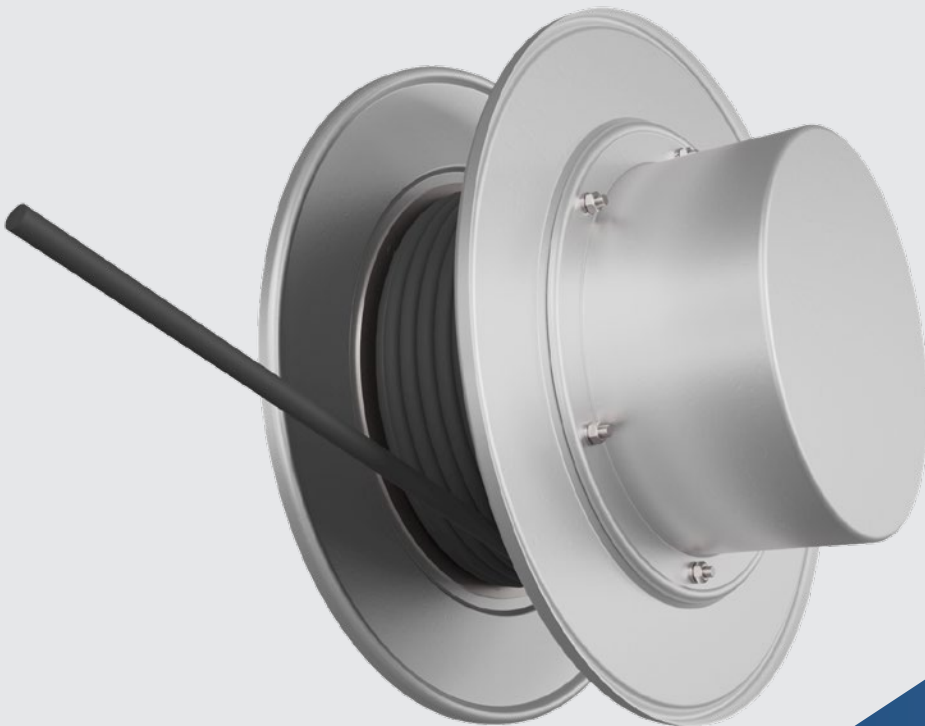




SPRING OPERATED CABLE REELS





SPRING OPERATED CABLE REELS

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APPLICATION

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

APPLICATION AREAS

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 UVV 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 explosionproof 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 of the ratchet type with a lock mechanism for multi level machine tools and for push-button pendants
- VAHLE Reels for flatform cable (especially in the palette stacking and machine tool industry)
- VAHLE Reels in monospiral version

Vahle welcomes your inquiry on your particular application.

ELECTRICAL PROPERTIES OF SLIPRINGS

Standard sliprings are rated for 500 Volt AC and 600 Volt DC, control rings in block system for 230 Volts.

Collector ring ampere capacities are for 100 % nominal rating.

PROTECTION TYPE

Slipring enclosures are designed to IP 55.

Higher grade protection – available upon request.

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 120.000 working cycles.

CABLE PAYOUT

is normally following the technical information on pages 25 and 27 of this catalog.

Other requirements can be fulfilled; add suffix A in the type designation for opposite hand rotation. (See model code on page 7).

LIMIT SWITCH ASSEMBLIES

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

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.

CORRISON PROTECTION

The all-steel construction of the VLF 155 to VLF 530 reel series is galvanized. All other reels come with one primer coat and one finishing paint of epoxy-resin RAL 7031 blue-grey varnish.

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 m/min.
max. travel acceleration:	a = 0.2 m/sec ²
max. lift acceleration:	a = 0.2 m/sec ²

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 tables. Two safety windings are included on the reeling body.

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

We provide guarantee according to the general conditions of delivery for products and services of the electrical industry. The reel springs are as a wear part excluded from this guarantee.

REELING CABLES

Reeling cables which correspond to the mechanical requirements should be used.

Factors in selecting cable for reel use, considering motor currents, required wire sizes and allowable voltage drop.

$$A = \frac{1.73 \cdot L \cdot IG \cdot \cos \phi}{\Delta U \cdot \chi} \text{ (mm}^2\text{)}$$

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)

CABLE SELECTION AND DETERMINING WIRE SIZE AMPACITY, CONSIDERING PERMISSIBLE TEMPERATURE RISE

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

The continuous ampacities as per table no. 1 are only applicable to a limited extent for cables under reeling operation.

The derating factors for multilayer service are shown in table no. 4. They are valid for permanently and fully spooled cables.

However, as many applications in practice do not have the cable fully spooled all the time, it is recommended to use an intermediate factor only. For monospiral winding refer to the same continuous ampacities than for one-layer operation.

The continuous ampacities as per table 1 are suitable also for 4-core cables. Also 5-core arrangements are permissible, if one core is used as ground. If necessary consider the cable accumulation for dimensioning of the cables according to VDE 0100 §41 regulation.

The following derating factors (table no. 5) are nearly suitable for multi-core cables, depending on the quantity of cores.

The following derating factors (table no. 2) are valid for intermittent service in relation to the continuous ampacities for permanent load as per table no. 1.

REEL SELECTION TABLES

for arrangement samples – random wrap, horizontal or vertical cable payout or steeply rising –

**TABLE 1: CONTINUOUS CABLE AMPACITY (100% CD) FOR OPEN AIR INSTALLATION
(WITHOUT CONSIDERATION OF THE VOLTAGE DROP)**

Wire size (mm ²)	Ampere Capacity (A)
	30 °C
1.5	23
2.5	30
4	41
6	53
10	74
16	99
25	131
35	162
50	202

TABLE 2: MULTIPLIER FOR INTERMITTENT SERVICE (ACCORDING TO MANUFACTURERS' INSTRUCTIONS)

Wire size (mm ²)	At intermittent duty cycle of (according to manufacturers' instructions)			
	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 FOR OTHER AMBIENT TEMPERATURE FOR OPEN AIR INSTALLATION

Ambient temperature °C	Conversion factor									
	25	30	35	40	45	50	55	60	65	70
Conversion factor f_t	1.05	1.00	0.95	0.89	0.84	0.77	0.71	0.63	0.55	0.45

TABLE 4: DERATING FOR MULTILAYER SERVICE

No. of Cond. in service	1	2	3	4
Multiplier	0.80	0.61	0.49	0.42

TABLE 5: DERATING FOR MULTICONDUCTOR SERVICE

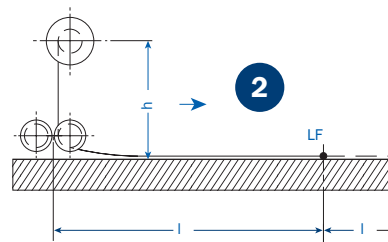
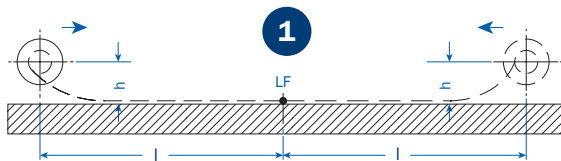
No. of Cond. in service	5	7	10	14	19	24	40
Multiplier	0.75	0.65	0.55	0.50	0.45	0.40	0.35

TYPICAL APPLICATIONS

REEL ON MOVING EQUIPMENT

Cable on the ground or in a continuous tray

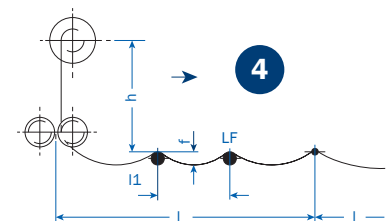
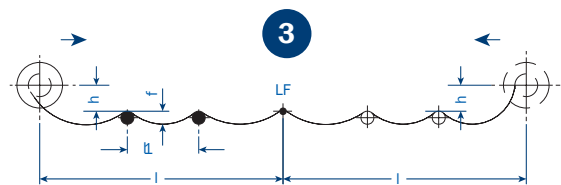
Horizontal cable payout in one or two directions



REEL ON MOVING EQUIPMENT

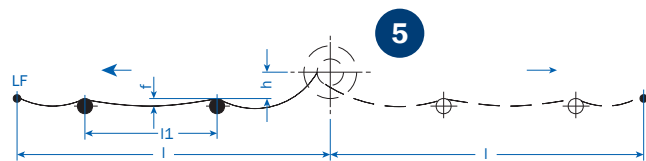
Cable on supports ($l_1 = 1$ m), or rather rolls or rounded smooth supports ($l_1 = 1$ to 3 m)

Horizontal cable payout in one or two directions



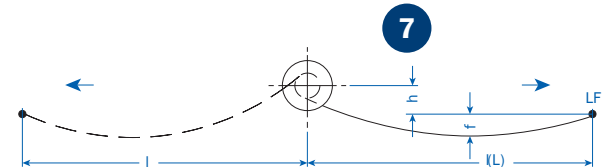
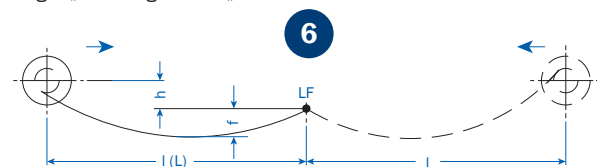
REEL STATIONARY

(Cable fixpoint at moving equipment), horizontal cable payout in one or two directions on rolls or smooth supports ($l_1 = 3$ m)



REEL ON MOVING EQUIPMENT (6) OR REEL STATIONARY (7) – (CABLE FIXPOINT AT MOVING EQUIPMENT)

Free horizontal cable payout in one or two directions. For payout in one travel direction: „f“ is determining the loop depth if the suspended cable length „L“ is larger than „l“.



LEGEND TO DRAWINGS (EXAMPLES 1–7)

- l = max. operational length of cable (m)
(with cable payout in two travel directions = half travel length)
- L = max. operational length [m] between reel and cable fixpoint
- h = Installation height = distance from cable tray or cable fixpoint to reel center [m]
- LF = Cable fixpoint
- f = max. cable loop depth [m], relating to cable fixpoint “LF”
- l_1 = Rolls or support distance [m]

NOTE

For applications 2, 4, 5 and reels beyond the listed capacities please fill in the questionnaire on page 36 and consult your local agent or our factory.

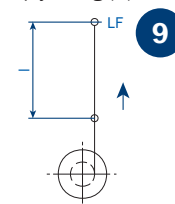
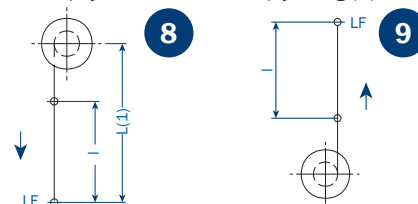
LEGEND TO DRAWINGS (EXAMPLES 8 AND 9)

- l = operational length of cable
- L = max. sloping cable length (m). Also consider additional weight (e.g. control switch)
- LF = Cable fixpoint

LIFTING OPERATION

Cable payout vertical or steeply sloping (8)

Cable payout vertical or steeply rising (9)



1) The sloping cable length is relevant for cable reel selection. Also consider additional weight (control switch).

MODEL EXPLANATION

	REEL TYPE									
	VLF	220	-	2	-	951H	-	4	-	26
	VLF	530	-	2	-	985	-	4	-	150
	VLKG	700	-	6	-	915	-	4	-	220 - A
Reel series	_____									
Drum diameter	_____									
Number of springs	_____									
Spring series	_____									
Number of poles including ground	_____									
Amps	_____									
Suffix for opposite rotation	_____									

SELECTING A VAHLE CABLE REEL

To select the right Vahle Reel from the Reel Selection Tables you must know the application (see page 6), the length and the type of cable (wire size, number of conductors, outside diameter, weight per meter).

LEGEND TO SELECTION TABLE

l = max. operational length of cable

L = max. sloping cable length (m). („L“ can coincide with max. operational reeling length „l“).

h = max. mounting height = distance from cable tray or cable fix point to center of reel (m).

Measure „h“ might be exceeded if ground clearance is sufficient (e.g. for cable payout in one travel direction). Provide guide- or tension relief devices for cable payout in two travel directions or passing over the cable fix point.

LZ = No. of layers on reel (partly required for determination of cable cross section).

n_v = required initial spring tension turns

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

Z = max. reel torque for cable payout (N)

f = max. cable loop depth relating to cable fixpoint „LF“ (m)

NOTE

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 TABLE 1.3.9

for application 1, 3 and 9, random wrap, horizontal/vertical cable payout or steeply rising

TROMMELFLEX PUR - HF 4X1.5 MM², Ø 11.2 MM, 0.155 KG/M

	l(m)	h(m)	LZ~	Reel type	Weight (kg)	nv(U)	n(U)	Z(N)	Order No.
•	7	0.5	1.7	VLf155-1-908-4-26	3.1	2	13	40	902010
•	12	0.5	2.0	VLf180-1-931-4-26	9.0	2	19	60	902020
•	27	0.5	4.0	VLf180-2-931H4-26	11.0	4	38	60	902022
•	28	1.0	5.0	VLf220-2-951H4-26	15.5	4	36	100	902102
	44	1.0	3.9	VLf222-3-951H4-26	23.1	6	54	100	901514
•	47	1.0	3.0	VLf300-2-952H4-26	28.0	4	45	100	902291
	72	1.0	4.0	VLf301-3-952H4-26	34.2	6	69	100	901515
	83	1.5	3.0	VLf420-2-953H4-36	56.0	4	58	120	902401

TROMMELFLEX PUR - HF 5X1.5 MM², Ø 11.8 MM, 0.178 KG/M

	l(m)	h(m)	LZ~	Reel type	Weight (kg)	nv(U)	n(U)	Z(N)	Order No.
•	7	0.5	1.7	VLf155-1-908-5-26	3.5	2	13	40	902016
•	12	0.5	2.0	VLf180-1-931-5-26	9.0	2	19	60	902040
•	20	0.5	4.0	VLf180-2-931H5-26	11.0	4	37	60	902042
•	26	1.0	3.0	VLf220-2-951H5-26	19.0	4	33	100	902132
	39	1.0	4.0	VLf222-3-951H5-26	22.0	6	49	100	901521
•	47	1.0	3.0	VLf300-2-952H5-26	28.0	4	45	100	902322
	73	1.0	4.0	VLf301-3-952H5-26	34.2	6	69	100	901376
	83	1.5	2.9	VLf420-2-953H5-36	56.0	4	58	120	902441

TROMMELFLEX PUR - HF 7X1.5 MM², Ø 13.5 MM, 0.218 KG/M

	l(m)	h(m)	LZ~	Reel type	Weight (kg)	nv(U)	n(U)	Z(N)	Order No.
•	7	0.5	1.9	VLf155-1-908-7-26	3.5	2	13	40	902008
•	10	0.5	3.0	VLf180-1-931-7-26	10.5	2	16	60	902043
•	12	1.0	3.0	VLf220-1-951-7-26	19.5	2	16.5	100	902160
•	20	1.0	3.0	VLf220-2-951H7-26	21.5	4	25	100	902116
•	26	1.0	4.0	VLf221-2-951H7-26	22.8	2	33	100	902282
	41	1.0	5.0	VLf222-3-951H7-26	23.1	6	49	100	901516
•	49	1.0	3.5	VLf300-2-952H7-26	28.0	4	45	100	902352
	73	1.0	4.0	VLf301-3-952H7-26	34.2	6	67	100	901517
	80	1.5	4.0	VLf420-2-953H7-36	57.0	4	57	120	902481

TROMMELFLEX PUR - HF**12 X 1.5 MM², Ø 17 MM, 0.363 KG/M**

	l(m)	h(m)	LZ~	Reel type	Weight (kg)	nv(U)	n(U)	Z(N)	Order No.
•	7	0.5	2.0	VLf180-1-931-12-26	10.5	2	12	60	902058
•	12	1.0	3.0	VLf220-1-951-12-26	19.5	2	16.5	100	902183
•	22	1.0	4.0	VLf220-2-951H12-26	22.5	2	30	100	901364
•	29	1.0	4.0	VLf221-2-951H12-26	23.5	4	33	100	902283
	32	1.0	4.0	VLf222-3-951H12-26	26.0	6	38	100	901518
•	50	1.0	4.0	VLf300-2-952H12-26	30.0	4	45	100	902372
	56	1.5	4.0	VLf301-3-972H12-26	44.0	6	35	170	901519
	71	1.5	4.0	VLf420-2-983H12-36	57.0	4	49	120	902504
	79	1.5	4.0	VLf420-2-953H12-36	59.0	4	54	120	902502
	85	1.5	5.0	VLf421-2-953H12-36	63.0	4	57	120	902570
	106	1.5	3.5	VLK530-4-924-12-36	128.0	5	57	160	901520

TROMMELFLEX PUR - HF**18 X 1.5 MM², Ø 18.1 MM,****0.459 KG/M**

	l(m)	h(m)	LZ~	Reel type	Weight (kg)	nv(U)	n(U)	Z(N)	Order No.
•	8	1.0	2.0	VLf220-1-951-18-26	20.5	2	16.5	100	902115
	11	1.0	2.5	VLf220-2-951-18-36	22.0	2	13	200	902193
•	18	1.0	3.0	VLf221-2-951H18-26	25.0	4	22	100	902281
•	23	1.0	3.0	VLf300-2-952-18-26	31.0	4	22.5	210	902377
•	29	1.5	3.0	VLf300-2-972H18-26	38.0	4	28	180	901435
	33	1.5	3.0	VLf420-1-983-18-36	55.0	2	24	120	902506
•	40	1.5	4.0	VLf420-1-953-18-36	56.0	2	29	120	901436
•	73	1.5	4.0	VLf420-2-983H18-36	58.0	4	49	120	902509
	87	1.5	5.0	VLf421-2-953H18-36	61.0	4	57	120	901522

TROMMELFLEX PUR - HF**24 X 1.5 MM², Ø 20.9 MM,****0.590 KG/M**

	l(m)	h(m)	LZ~	Reel type	Weight (kg)	nv(U)	n(U)	Z(N)	Order No.
	14	1.0	2.0	VLf300-1-952-24-36	29.0	2	16	100	902378
•	24	1.0	3.0	VLf300-2-952-24-36	31.0	2	22	210	902380
	35	1.5	3.0	VLf420-2-983-24-36	59.0	2	24	240	902521
•	41	1.5	3.0	VLf420-2-953-24-36	61.0	2	28	240	902520
	45	1.5	3.1	VLf421-2-953-24-36	68.0	2	29	240	901523
	76	1.5	3.3	VLf530-2-986H24-36	117.0	4	40	245	903804
	89	1.5	3.8	VLKG530-6-924-24-36	152.0	4	46	305	901524

REEL SELECTION TABLE 1.3.9

for application 1, 3 and 9, random wrap, horizontal/vertical cable payout or steeply rising

TROMMELFLEX PUR - HF 30X1.5 MM², Ø 24.0 MM, 0.720 KG/M

	l(m)	h(m)	LZ~	Reel type	Weight (kg)	nv(U)	n(U)	Z(N)	Order No.
	12	1.0	2.0	VLF300-1-952-30-36	29.5	2	12	100	902390
•	20	1.0	2.0	VLF300-2-952-30-36	31.0	2	19	210	900316
	36	1.5	3.0	VLF420-2-983-30-36	60.0	2	24	240	901115
•	38	1.5	3.0	VLF420-2-953-30-36	62.0	2	25	240	901437
	46	1.5	3.4	VLF421-2-953-30-36	68.0	2	29	240	901526
	78	1.5	3.6	VLF530-2-986H30-36	118.0	4	40	245	901527
	91	1.5	4.0	VLKG530-6-924-30-36	152.0	4	46	305	901528

TROMMELFLEX PUR - HF 4X2.5 MM², Ø 12.3 MM, 0.208 KG/M

	l(m)	h(m)	LZ~	Reel type	Weight (kg)	nv(U)	n(U)	Z(N)	Order No.
•	7	0.5	2.0	VLF155-1-908-4-26	4.0	2	11.5	40	902010
•	10	0.5	2.0	VLF180-1-931-4-26	9.0	2	18	60	902020
•	18	0.5	3.0	VLF180-2-931H4-26	10.0	4	28	60	902022
•	26	1.0	4.0	VLF220-2-951H4-26	19.5	4	34	100	902102
	42	1.0	4.0	VLF222-3-951H4-26	23.0	6	50	100	901514
•	46	1.0	4.0	VLF300-2-952H4-26	25.0	4	45	100	902291
	68	1.0	4.0	VLF301-3-952H4-26	34.0	6	67	100	901515
	83	1.5	4.0	VLF420-2-953H4-36	56.0	4	58	120	902401
	88	1.5	3.0	VLF530-2-985H4-36	110.0	4	50	130	903780
	102	1.5	2.6	VLK530-3-924-4-36	116.0	5	58	120	901529

TROMMELFLEX PUR - HF 5X2.5 MM², Ø 13.0 MM, 0.230 KG/M

	l(m)	h(m)	LZ~	Reel type	Weight (kg)	nv(U)	n(U)	Z(N)	Order No.
•	7	0.5	1.0	VLF155-1-908-5-26	6.0	2	12	40	902016
•	10	0.5	2.0	VLF180-1-931-5-26	10.0	2	18	60	902040
•	18	0.5	3.0	VLF180-2-931H5-26	11.0	4	28	60	902042
•	26	1.0	2.9	VLF220-2-951H5-26	16.0	4	25	100	902132
	40	1.0	3.5	VLF222-3-951H5-26	18.5	6	33	100	901521
•	46	1.0	4.0	VLF300-2-952H5-26	25.5	4	45	100	902322
	69	1.0	4.0	VLF301-3-952H5-26	28.0	6	67.5	100	902329
	80	1.5	3.5	VLF420-2-953H5-36	56.0	4	57	120	902441
	103	1.5	2.6	VLK530-3-924-5-36	116.0	6	58	120	901844

TROMMELFLEX PUR - HF 7 X 2.5 MM², Ø 14.7 MM, 0.315 KG/M

	l(m)	h(m)	LZ~	Reel type	Weight (kg)	nv(U)	n(U)	Z(N)	Order No.
•	10	0.5	2.0	VLf180-1-931-7-26	9.0	2	18	60	902043
•	12	0.5	3.0	VLf220-1-951-7-26	15.5	2	16.5	100	902160
•	17	1.0	3.0	VLf220-2-951H7-26	19.0	4	33	100	902116
•	26	1.0	4.0	VLf221-2-951H7-26	20.0	4	33	100	902282
	41	1.0	5.0	VLf222-3-951H7-26	21.0	6	49	100	901516
•	47	1.0	4.0	VLf300-2-952H7-26	29.0	4	45	100	902352
	71	1.0	4.0	VLf301-3-952H7-26	35.0	6	67	100	901517
	81	1.5	4.0	VLf420-2-953H7-36	55.0	4	57	120	902481
	104	1.5	2.9	VLK530-4-924-7-36	129.0	5	58	160	901531

TROMMELFLEX PUR - HF 12 X 2.5 MM², Ø 20.5 MM, 0.485 KG/M

	l(m)	h(m)	LZ~	Reel type	Weight (kg)	nv(U)	n(U)	Z(N)	Order No.
•	10	1.0	3.0	VLf220-1-951-12-26	19.5	2	16.5	100	902183
•	16	1.0	3.0	VLf221-2-951H12-26	23.5	4	33	100	902283
•	25	1.0	2.7	VLf300-2-952-12-26	30.0	2	22	210	902371
	29	1.0	4.0	VLf301-3-972H12-26	34.0	6	52	100	901519
	34	1.5	3.0	VLf420-1-983-12-36	53.0	2	24	120	902512
•	41	1.5	2.8	VLf420-1-953-12-36	55.0	2	28	120	902500
	83	1.5	5.0	VLf421-2-953H12-36	60.0	4	57	120	902570
	85	1.5	5.0	VLf530-2-985H12-36	66.0	4	57	200	903819
	107	1.5	4.0	VLK530-5-924-12-36	142.0	5	56	200	901532

TROMMELFLEX PUR - HF 18 X 2.5 MM², Ø 20.6 MM, 0.679 KG/M

	l(m)	h(m)	LZ~	Reel type	Weight (kg)	nv(U)	n(U)	Z(N)	Order No.
•	8	1.0	2.0	VLf220-1-951-18-26	20.5	2	16.5	100	902115
•	15	1.0	3.0	VLf221-2-951H18-26	23.0	4	22	100	902281
•	26	1.0	3.0	VLf300-2-952H18-26	32.0	4	32	100	901428
	27	1.0	3.0	VLf300-2-972H18-26	36.0	4	35	170	901435
	34	1.5	3.0	VLf420-2-983-18-36	58.0	2	24	240	902510
	45	1.5	3.0	VLf420-2-953H18-36	60.0	4	57	120	901533
	69	1.5	3.0	VLf530-2-986H18-36	65.0	4	40	245	901534
	87	1.5	3.4	VLK530-4-924-18-36	140.0	4	46	200	901535
	104	1.5	4.0	VLK530-5-924-18-36	150.0	5	54	200	901536

REEL SELECTION TABLE 1 · 3 · 9

for application 1, 3 and 9, random wrap, horizontal/vertical cable payout or steeply rising

TROMMELFLEX PUR - HF 24 X 2.5 MM², Ø 23.6 MM, 0.860 KG/M

	l(m)	h(m)	LZ~	Reel type	Weight (kg)	nv(U)	n(U)	Z(N)	Order No.
•	12	1.0	2.0	VLf300-1-972-24-36	35.0	2	19	165	901438
•	22	1.0	3.0	VLf300-2-972-24-36	35.0	2	19	330	902294
	36	1.5	3.0	VLf421-2-983-24-36	63.0	2	24	240	901537
	43	1.5	3.6	VLf421-2-953-24-36	70.0	2	29	240	901523
	79	1.5	3.8	VLf530-2-986H24-36	133.0	4	40	245	903804
	88	1.5	4.0	VLKG530-5-925-24-36	144.0	5	44	300	901538

TROMMELFLEX PUR - HF 30 X 2.5 MM², Ø 28.2 MM, 1.080 KG/M

	l(m)	h(m)	LZ~	Reel type	Weight (kg)	nv(U)	n(U)	Z(N)	Order No.
•	8	1.5	1.0	VLf420-1-983-30-36	68.0	2	24	120	902525
	20	1.5	2.0	VLf420-2-983-30-36	68.0	2	24	240	901115
	33	1.5	4.0	VLf421-2-953-30-36	75.0	2	28	240	901526
	77	1.5	4.0	VLf530-2-986H30-36	135.5	4	38	245	901527
	98	1.5	3.6	VLKG700-6-925-30-36	238.0	4	39	340	901227

TROMMELFLEX PUR - HF 4 X 4 MM², Ø 13.6 MM, 0.281 KG/M

	l(m)	h(m)	LZ~	Reel type	Weight (kg)	nv(U)	n(U)	Z(N)	Order No.
•	10	0.5	2.0	VLf180-1-931-4-40	8.5	2	18	60	901102
•	12	0.5	3.0	VLf220-1-951-4-40	18.0	2	25	100	902110
	16	1.0	3.0	VLf220-2-951H4-40	20.0	4	33	100	902114
•	26	1.0	4.0	VLf221-2-951H4-40	22.0	4	33	100	902214
•	47	1.0	4.0	VLf300-2-952H4-40	31.0	4	45	100	902302
	73	1.0	3.5	VLf301-3-952H4-40	37.0	6	67	100	901402
	81	1.5	4.0	VLf420-2-953H4-42	55.0	4	58	120	902411
	103	1.5	2.7	VLK530-4-924-4-42	156.0	5	58	160	901539

TROMMELFLEX PUR - HF 5 X 4 MM², Ø 14.5 MM, 0.318 KG/M

	l(m)	h(m)	LZ~	Reel type	Weight (kg)	nv(U)	n(U)	Z(N)	Order No.
	4	0.5	1.0	VLf180-1-931-5-40	7.8	2	18	60	901287
	9	0.5	2.0	VLf180-2-931-5-40	8.5	2	18	120	902050
	12	0.5	3.0	VLf220-1-951-5-40	17.5	2	16	100	902140
	26	1.0	4.0	VLf221-2-951H5-40	21.0	4	33	100	902251
	41	1.0	5.0	VLf222-3-951H5-40	24.0	6	49	100	901540
	50	1.0	3.9	VLf300-2-952H5-40	28.0	4	45	100	902331
	70	1.0	4.0	VLf301-3-952H5-40	36.5	6	67	100	901541
	81	1.5	4.0	VLf420-2-953H5-42	55.5	4	57	120	902451
	104	1.5	3.0	VLK530-4-924-5-42	156.0	5	58	160	901542

TROMMELFLEX PUR - HF 4 X 6 MM², Ø 14.9 MM, 0.372 KG/M

	l(m)	h(m)	LZ~	Reel type	Weight (kg)	nv(U)	n(U)	Z(N)	Order No.
•	12	1.0	3.0	VLf220-1-951-4-60	16.0	2	16	100	902120
•	21	1.0	3.0	VLf220-2-951H4-60	18.0	4	33	100	902107
•	26	1.0	4.0	VLf221-2-951H4-60	22.0	4	33	100	901439
•	50	1.0	3.9	VLf300-2-952H4-60	31.0	4	45	100	902312
	57	1.0	4.0	VLf301-3-952H4-60	37.0	6	55	100	901543
•	69	1.5	4.0	VLf420-2-983H4-60	54.0	4	48	120	902425
	82	1.5	4.0	VLf420-2-953H4-60	56.0	4	57	120	902422
	105	1.5	3.1	VLK530-4-924-4-60	156.0	5	58	180	901544

TROMMELFLEX PUR - HF 5 X 6 MM², Ø 16.1 MM, 0.435 KG/M

	l(m)	h(m)	LZ~	Reel type	Weight (kg)	nv(U)	n(U)	Z(N)	Order No.
	9	1.0	2.9	VLf220-1-951-5-60	19.1	2	16	100	902150
	12	1.0	3.0	VLf221-1-951-5-60	20.0	2	16	100	901545
	27	1.0	4.0	VLf221-2-951H5-60	20.5	4	33	100	901546
	32	1.0	4.0	VLf222-3-951H5-60	24.0	6	48	100	901547
	37	1.0	4.0	VLf300-2-972H5-60	30.0	4	35	170	902326
	55	1.0	4.0	VLf301-3-972H5-60	36.0	6	52	170	901548
	71	1.5	4.0	VLf420-2-983H5-60	55.0	4	49	120	902465
	84	1.5	5.0	VLf420-2-953H5-60	57.0	4	57	120	902462
	106	1.5	3.3	VLKG530-5-924-5-60	168.0	5	58	200	901549

TROMMELFLEX PUR - HF 4 X 10 MM², Ø 18.9 MM, 0.615 KG/M

	l(m)	h(m)	LZ~	Reel type	Weight (kg)	nv(U)	n(U)	Z(N)	Order No.
•	7	1.0	2.0	VLf220-1-951-4-60	19.0	2	16	100	902120
•	13	1.0	3.0	VLf220-2-951-4-60	21.0	2	16	200	902123
•	20	1.0	3.0	VLf221-2-951H4-60	22.0	4	33	100	901439
	17	1.0	2.0	VLf300-1-972-4-60	26.0	2	17	170	901401
	23	1.0	3.0	VLf300-2-952-4-60	28.0	2	22	200	902311
•	29	1.0	3.0	VLf300-2-972H4-60	30.0	4	34	170	901309
	34	1.5	4.0	VLf420-2-983-4-60	55.0	2	23	240	902424
•	40	1.5	3.0	VLf420-2-953-4-60	57.0	2	28	240	902421
	45	1.5	3.0	VLf420-2-984H4-60	59.0	4	32	235	902414
	68	1.5	3.0	VLf530-2-986H4-60	131.0	4	40	245	903783
	85	1.5	4.0	VLK530-4-924-4-60	156.0	4	46	200	901544
	110	1.5	3.9	VLKG530-5-924-4-60	168.0	5	58	200	901550

REEL SELECTION TABLE 1.3.9

for application 1, 3 and 9, random wrap, horizontal/vertical cable payout or steeply rising

TROMMELFLEX PUR - HF 4 X 16 MM², Ø 22.1 MM, 0.924 KG/M

	l(m)	h(m)	LZ~	Reel type	Weight (kg)	nv(U)	n(U)	Z(N)	Order No.
	14	1.0	2.0	VL300-1-952-4-125	25.0	2	15	100	901443
	18	1.0	2.0	VL300-2-972-4-125	36.0	3	17	330	901267
•	20	1.0	3.0	VL300-2-952-4-125	28.0	2	22	200	901122
	25	1.0	2.0	VL420-2-983-4-150	58.0	2	24	240	902430
	35	1.5	2.0	VL421-2-983-4-150	60.0	2	24	240	902541
	42	1.5	4.0	VL421-2-953-4-150	62.0	2	28	240	902540
	71	1.5	4.0	VL530-2-986H4-150	131.0	4	40	245	903788
	90	1.5	3.9	VL530-4-924-4-150	156.0	4	46	200	901551

TROMMELFLEX PUR - HF 4 X 25 MM², Ø 25.5 MM, 1.222 KG/M

	l(m)	h(m)	LZ~	Reel type	Weight (kg)	nv(U)	n(U)	Z(N)	Order No.
•	15	1.5	2.0	VL420-2-983-4-150	58.0	2	14	240	902430
	20	1.5	2.0	VL420-1-984-4-150	58.0	2	16	230	901552
	33	1.5	3.0	VL421-2-983-4-150	60.0	2	25	240	902541
	42	1.5	2.6	VL530-2-985-4-150	112.0	2	25	260	903784
	80	1.5	4.0	VL530-4-924-4-150	138.0	4	46	200	901551
	117	1.5	4.0	VL700-6-924-4-150	240.0	4	46	230	901553

TROMMELFLEX PUR - HF 4 X 35 MM², Ø 30.0 MM, 1.780 KG/M

	l(m)	h(m)	LZ~	Reel type	Weight (kg)	nv(U)	n(U)	Z(N)	Order No.
	8	1.5	1.0	VL420-1-983-4-150	55.0	2	8	120	901554
	20	1.5	2.0	VL420-2-983-4-150	58.0	2	15	240	902430
	31	1.5	2.0	VL530-1-986-4-150	111.0	2	19	245	901555
	49	1.5	2.8	VL530-2-985-4-150	112.0	2	25	265	903784
	70	1.5	3.7	VL700-4-925-4-150	188.0	4	39	230	903190

REEL SELECTION TABLE 6 - 7

for the application samples 6 and 7, random wrap, horizontal cable payout

TROMMELFLEX PUR - HF 4 X 1.5 MM², Ø 11.2 MM, 0.155 KG/M

	l(m)	h(m)	~f(m)	LZ~	Reel type	Weight (kg)	nv(U)	n(U)	Z(N)	Order No.
•	7	1.0	0.5	1.7	VLF155-1-908-4-26	3.1	2	13	40	902010
•	12	1.0	0.6	1.9	VLF180-1-931-4-26	9.0	2	19	60	902020
•	22	1.5	1.0	3.0	VLF220-2-951H4-26	19.0	4	31	100	902102
	30	1.5	1.1	2.0	VLF300-2-972H4-26	52.0	12	30	165	902293
	35	1.5	1.0	1.4	VLF420-2-983-4-36	56.0	2	25	240	901595
	40	1.5	1.2	1.0	VLF530-2-985-4-36	110.0	3	24	260	901592

TROMMELFLEX PUR - HF 5 X 1.5 MM², Ø 11.8 MM, 0.178 KG/M

	l(m)	h(m)	~f(m)	LZ~	Reel type	Weight (kg)	nv(U)	n(U)	Z(N)	Order No.
•	7	1.0	0.5	1.7	VLF155-1-908-5-26	3.1	2	13	40	902016
	8	1.0	0.7	2.0	VLF155-2-908H5-26	3.7	10	15	40	902015
•	12	0.5	0.6	2.1	VLF180-1-931-5-26	10.5	2	19	60	902040
	16	0.5	0.3	2.4	VLF220-2-951-5-26	19.0	2	18	200	902131
	28	1.5	1.1	2.0	VLF300-2-972H5-26	52.0	11	28	165	902325
	34	1.5	1.0	1.4	VLF420-2-983-5-36	56.0	2	24	240	902442
	37	1.5	1.2	1.0	VLF530-2-985-5-36	110.0	3	22	260	901593

TROMMELFLEX PUR - HF 7 X 1.5 MM², Ø 13.5 MM, 0.218 KG/M

	l(m)	h(m)	~f(m)	LZ~	Reel type	Weight (kg)	nv(U)	n(U)	Z(N)	Order No.
•	7	0.5	0.5	1.8	VLF155-1-908-7-26	3.1	2	13	40	902008
•	12	1.0	0.4	2.0	VLF220-1-951-7-26	18.0	3	16	100	902160
•	22	1.0	1.0	1.8	VLF300-2-972H7-26	34.0	10	22	165	902295
	35	1.5	2.0	1.6	VLF420-2-953-7-36	57.0	6	25	240	901567
	43	1.5	2.0	1.2	VLF530-2-985-7-36	111.0	2	25	260	901594

REEL SELECTION TABLE 6 - 7

for the application samples 6 and 7, random wrap, horizontal cable payout

TROMMELFLEX PUR - HF 12X1.5 MM², Ø 17 MM, 0.363 KG/M

	l(m)	h(m)	~f(m)	LZ~	Reel type	Weight (kg)	nv(U)	n(U)	Z(N)	Order No.
•	7	1.0	0.4	2.0	VLf180-1-931-12-26	10.0	10	12	60	902058
•	20	1.5	0.9	2.0	VLf300-2-952-12-26	30.0	3	19	210	902371
	28	2.0	1.5	1.6	VLf420-2-983-12-36	58.0	5	20	240	902503
	34	1.5	1.1	1.3	VLf530-2-986-12-36	132.0	2	20	490	903799
	40	2.0	1.7	1.8	VLKG530-5-925-12-36	150.0	15	23	430	901557

TROMMELFLEX PUR - HF 4X2.5 MM², Ø 12.3 MM, 0.208 KG/M

	l(m)	h(m)	~f(m)	LZ~	Reel type	Weight (kg)	nv(U)	n(U)	Z(N)	Order No.
•	7	1.0	0.5	2.0	VLf155-1-908-4-26	3.1	2	13	40	902010
•	10	1.0	0.5	2.0	VLf180-1-931-4-26	10.5	3	18	60	902020
	14	0.5	0.3	2.2	VLf220-2-951-4-26	19.5	2	18	200	902101
	25	1.5	1.0	1.9	VLf300-2-972H4-26	52.0	17	25	165	902293
	33	1.5	1.2	1.4	VLf420-2-983-4-36	56.0	3	24	240	901595
	37	2.0	1.4	1.0	VLf530-2-985-4-36	110.0	5	22	265	901592

TROMMELFLEX PUR - HF 5X2.5 MM², Ø 13 MM, 0.23 KG/M

	l(m)	h(m)	~f(m)	LZ~	Reel type	Weight (kg)	nv(U)	n(U)	Z(N)	Order No.
•	7	1.0	0.5	1.9	VLf155-1-908-5-26	3.1	2	13	40	902016
•	10	1.0	0.6	3.0	VLf180-1-931-5-26	10.8	3	18	120	902040
•	14	0.5	0.6	2.2	VLf220-2-951H5-26	19.5	4	18	100	902132
	22	1.0	0.7	1.7	VLf300-2-952-5-26	31.0	2	22	210	902321
	25	1.5	1.1	1.9	VLf300-2-972H5-26	52.0	17	25	165	902325
	30	1.5	1.1	1.4	VLf420-2-983-5-36	56.0	5	22	240	902442
	37	2.0	1.5	1.1	VLf530-2-985-5-36	110.0	5	22	267	901593

TROMMELFLEX PUR - HF 7X2.5 MM², Ø 14.7 MM, 0.315 KG/M

	l(m)	h(m)	~f(m)	LZ~	Reel type	Weight (kg)	nv(U)	n(U)	Z(N)	Order No.
•	10	1.0	0.7	3.0	VLf180-1-931-7-26	11.0	3	18	60	902043
	14	1.0	0.4	2.5	VLf220-2-951-7-26	20.0	2	18	200	902162
	22	1.5	0.9	1.9	VLf300-2-952-7-26	31.0	2	22	210	902351
•	26	2.0	1.6	2.2	VLf300-2-972H7-26	52.0	17	25	165	902295
	31	2.0	1.6	1.6	VLf420-2-983-7-36	57.0	4	23	240	902483
	34	2.0	1.7	1.1	VLf530-2-985-7-36	110.0	7	20	267	901594

TROMMELFLEX PUR - HF 12 X 2.5 MM², Ø 20.5 MM, 0.485 KG/M

	l(m)	h(m)	~f(m)	LZ~	Reel type	Weight (kg)	nv(U)	n(U)	Z(N)	Order No.
•	10	1.5	1.0	2.0	VLF220-1-951-12-26	19.5	4	15	100	902183
•	20	1.5	1.1	2.4	VLF300-2-952-12-26	30.0	6	18	210	902371
	25	2.0	1.6	1.7	VLF300-2-972-12-36	58.0	10	17	240	902375
	35	2.0	1.5	1.5	VLF530-2-986-12-36	132.0	2	20	490	903799

TROMMELFLEX PUR - HF 4 X 4 MM², Ø 13.4 MM, 0.28 KG/M

	l(m)	h(m)	~f(m)	LZ~	Reel type	Weight (kg)	nv(U)	n(U)	Z(N)	Order No.
	7	1.0	0.5	2.0	VLF155-1-908-4-40	3.1	2	13	40	901573
•	10	2.0	0.5	2.0	VLF180-1-931-4-40	8.5	4	17	60	901102
	17	1.5	1.0	2.7	VLF220-2-951H4-40	20.0	14	21	100	902114
	22	1.5	1.0	1.8	VLF300-2-952-4-40	31.0	2	22	200	902301
	29	1.5	1.7	1.4	VLF420-2-983-4-42	57.0	7	20	240	902412
	33	1.5	1.6	1.0	VLF530-2-986-4-42	90.0	2	20	245	903806

TROMMELFLEX PUR - HF 4 X 6 MM², Ø 14.9 MM, 0.372 KG/M

	l(m)	h(m)	~f(m)	LZ~	Reel type	Weight (kg)	nv(U)	n(U)	Z(N)	Order No.
•	10	1.5	0.5	2.0	VLF220-1-951-4-60	19.0	3	16	100	902120
	19	1.5	1.0	1.8	VLF300-1-972-4-60	28.0	2	19	165	901401
	25	1.5	1.2	1.3	VLF420-2-983-4-60	57.0	8	18	240	902424
	30	1.5	1.6	1.0	VLF530-2-985-4-60	110.0	9	18	267	901581

TROMMELFLEX PUR - HF 4 X 10 MM², Ø 18.8 MM, 0.61 KG/M

	l(m)	h(m)	~f(m)	LZ~	Reel type	Weight (kg)	nv(U)	n(U)	Z(N)	Order No.
•	10	1.5	0.9	2.0	VLF220-1-951-4-60	19.0	3	15	100	902120
	20	1.5	1.0	2.2	VLF300-2-972-4-60	28.0	2	19	330	902313
•	23	1.5	1.7	1.6	VLF420-2-953-4-60	55.0	10	17	260	902421
	30	1.5	1.4	1.3	VLF530-2-986-4-60	131.0	4	18	490	903782

TROMMELFLEX PUR - HF 4 X 16 MM², Ø 22.1 MM, 0.924 KG/M

	l(m)	h(m)	~f(m)	LZ~	Reel type	Weight (kg)	nv(U)	n(U)	Z(N)	Order No.
•	12	1.5	1.0	2.0	VLF300-2-952-4-125	32.0	13	12	200	901122
•	16	1.5	1.0	2.0	VLF300-2-972-4-125	36.0	4	16	330	901267
	20	1.5	1.0	1.1	VLF530-2-986-4-150	131.0	10	12	490	903785

TROMMELFLEX PUR - HF 4 X 25 MM², Ø 25.5 MM 1.222 KG/M

	l(m)	h(m)	~f(m)	LZ~	Reel type	Weight (kg)	nv(U)	n(U)	Z(N)	Order No.
•	10	1.5	0.8	2.0	VLF420-2-983-4-150	62.0	19	8	240	902430
	18	1.5	1.0	1.1	VLF530-2-986-4-150	132.0	19	10	490	903785

REEL SELECTION TABLE 8

for the application sample 8, random wrap, horizontal/vertical cable payout or steeply sloping

TROMMELFLEX PUR - HF 4 X 1.5 MM², Ø 11.2 MM, 0.155 KG/M

	l(m)	LZ~	Reel type	Weight (kg)	nv(U)	n(U)	Z(N)	Order No.
•	7	2.0	VLf155-1-908-4-26	3.1	2	13	40	902010
	9	2.0	VLf155-2-908H4-26	3.7	4	16	40	902012
•	12	2.0	VLf180-1-931-4-26	9.0	2	19	60	902020
•	18	2.0	VLf180-2-931H4-26	11.0	4	30	60	902022
•	26	4.0	VLf220-2-951H4-26	19.0	6	31	100	902102
•	35	4.0	VLf300-2-952H4-26	28.0	4	36	100	902291
	50	2.0	VLf301-3-972H4-26	58.0	9	51	165	901587
	64	1.0	VLf530-2-986H4-36	115.0	4	38	250	901566

TROMMELFLEX PUR - HF 5 X 1.5 MM², Ø 11.8 MM, 0.178 KG/M

	l(m)	LZ~	Reel type	Weight (kg)	nv(U)	n(U)	Z(N)	Order No.
•	7	3.0	VLf155-1-908-5-26	3.1	2	13	40	902016
	8	3.0	VLf155-2-908H5-26	3.7	6	16	40	902015
•	12	2.0	VLf180-1-931-5-26	9.5	3	18	60	902040
•	18	3.0	VLf180-2-931H5-26	11.3	4	30	60	902042
•	25	4.0	VLf220-2-951H5-26	19.0	4	33	100	902132
•	31	3.0	VLf300-2-952H5-26	28.0	4	33	100	902322
	33	2.0	VLf300-2-972H5-26	32.0	6	34	165	902325
	50	3.0	VLf301-3-972H5-26	38.0	9	51	165	901525
	64	2.0	VLf530-2-986H5-36	115.0	6	38	260	903818

TROMMELFLEX PUR - HF 7 X 1.5 MM², Ø 13.5 MM, 0.218 KG/M

	l(m)	LZ~	Reel type	Weight (kg)	nv(U)	n(U)	Z(N)	Order No.
•	7	2.0	VLf155-1-908-7-26	3.1	2	13	40	902008
•	10	2.0	VLf180-1-931-7-26	10.0	3	15	60	902043
•	12	2.0	VLf220-1-951-7-26	18.0	3	16	100	902160
•	20	4.0	VLf220-2-951H7-26	20.0	4	25	100	902116
•	24	5.0	VLf221-2-951H7-26	22.8	4	33	100	902282
•	34	3.0	VLf300-2-972H7-26	34.0	4	34	165	902295
	41	3.0	VLf301-3-972H7-26	40.0	9	51	165	901556
	49	3.0	VLf420-2-984H7-36	59.0	4	36	240	902486
	63	2.0	VLf530-2-986H7-36	115.0	4	38	260	903796

TROMMELFLEX PUR - HF 12X1.5 MM², Ø 17.0 MM, 0.363 KG/M

	l(m)	LZ~	Reel type	Weight (kg)	nv(U)	n(U)	Z(N)	Order No.
•	7	2.0	VLf180-1-931-12-26	10.0	10	12	60	902058
•	12	3.0	VLf220-1-951-12-26	19.0	2	17	100	902183
•	15	3.0	VLf220-2-951H12-26	22.5	14	22	100	901364
•	22	3.0	VLf300-2-952-12-26	30.0	3	22	100	902371
	26	3.0	VLf300-2-972H12-26	36.0	6	26	165	901588
	32	2.0	VLf420-2-983-12-36	58.0	3	24	240	902503
	40	3.0	VLf420-2-953-12-36	60.0	3	29	260	902501
	50	1.8	VLKG530-5-925-12-36	128.0	4	29	400	901557

TROMMELFLEX PUR - HF 18X1.5 MM², Ø 18.1 MM, 0.459 KG/M

	l(m)	LZ~	Reel type	Weight (kg)	nv(U)	n(U)	Z(N)	Order No.
•	7	2.0	VLf220-1-951-18-26	20.5	7	10	100	902115
•	12	2.7	VLf221-2-951H18-26	25.0	18	17	200	902281
•	23	3.0	VLf300-2-952-18-26	31.0	3	22	200	902377
	28	2.0	VLf420-2-983-18-36	58.0	3	24	240	902510
	31	3.0	VLf420-2-953-18-36	61.0	3	29	255	901151
	34	2.0	VLf530-2-985-18-36	126.0	3	23	280	903801
	48	2.0	VLKG530-5-925-18-36	150.0	6	27	500	901558

TROMMELFLEX PUR - HF 24X1.5 MM², Ø 20.9 MM, 0.590 KG/M

	l(m)	LZ~	Reel type	Weight (kg)	nv(U)	n(U)	Z(N)	Order No.
	9	2.0	VLf300-1-952-24-36	28.0	8	10	100	902378
•	19	3.0	VLf300-2-952-24-36	31.0	7	18	200	902380
•	22	2.0	VLf420-2-953-24-36	61.0	12	19	260	902520
	25	2.0	VLf420-2-984-24-36	67.0	3	18	465	901409
	32	2.0	VLf530-2-986-24-36	118.0	3	19	490	903803
	36	1.7	VLK530-4-925-24-36	128.0	5	20	480	901559
	45	2.1	VLKG530-6-925-24-36	155.0	8	25	600	901560

REEL SELECTION TABLE 8

for the application sample 8, random wrap, horizontal/vertical cable payout or steeply sloping

TROMMELFLEX PUR - HF 30X1.5 MM², Ø 24.0 MM, 0.720 KG/M

	l(m)	LZ~	Reel type	Weight (kg)	nv(U)	n(U)	Z(N)	Order No.
	8	2.0	VLf300-1-952-30-36	28.0	10	10	100	902390
	16	2.0	VLf300-2-952-30-36	31.0	12	13	210	900316
	18	3.0	VLf300-2-972-30-36	33.0	3	17	330	901561
•	20	2.0	VLf420-2-953-30-36	65.0	9	16	260	901437
	22	2.0	VLf420-2-984-30-36	66.0	3	17	470	901453
	25	3.0	VLf421-2-984-30-36	69.0	3	18	470	901562
	32	1.5	VLf530-2-986-30-36	118.0	3	19	500	903805
	30	1.8	VLK530-4-925-30-36	128.0	10	17	480	901563
	38	1.9	VLKG530-6-925-30-36	155.0	6	21	600	901564

TROMMELFLEX PUR - HF 4X2.5 MM², Ø 12.3 MM, 0.208 KG/M

	l(m)	LZ~	Reel type	Weight (kg)	nv(U)	n(U)	Z(N)	Order No.
•	7	2.0	VLf155-1-908-4-26	3.1	2	13	40	902010
•	10	2.0	VLf180-1-931-4-26	10.5	3	18	60	902020
•	16	2.0	VLf180-2-931H4-26	11.0	10	28	60	902022
•	26	4.0	VLf220-2-951H4-26	19.5	6	32	100	902102
•	27	4.0	VLf300-2-952H4-26	25.0	9	28	100	902291
	34	4.0	VLf300-2-972H4-26	52.0	6	28	165	902293
	45	3.0	VLf301-3-972H4-26	55.0	9	51	165	901587
	48	2.0	VLf420-2-984H4-36	56.0	6	36	235	901393
	64	2.0	VLf530-2-986H4-36	114.0	6	38	250	901566

TROMMELFLEX PUR - HF 5X2.5 MM², Ø 13.0 MM, 0.230 KG/M

	l(m)	LZ~	Reel type	Weight (kg)	nv(U)	n(U)	Z(N)	Order No.
•	7	2.0	VLf155-1-908-5-26	3.1	2	13	40	902016
•	11	2.0	VLf180-1-931-5-26	10.0	3	18	60	902040
•	14	2.0	VLf180-2-931H5-26	11.0	13	25	60	902042
•	23	3.0	VLf220-2-951H5-26	19.5	6	32	100	902132
	34	3.0	VLf300-2-972H5-26	52.0	6	34	165	902325
	39	3.0	VLf301-3-972H5-26	58.0	9	51	165	901525
	49	3.0	VLf420-2-984H5-36	61.0	6	36	240	900825
	61	2.0	VLf530-2-986H5-36	112.0	6	38	250	903818

TROMMELFLEX PUR - HF 7 X 2.5 MM², Ø 14.7 MM, 0.315 KG/M

	l(m)	LZ~	Reel type	Weight (kg)	nv(U)	n(U)	Z(N)	Order No.
	5	2.0	VLf155-1-908-7-26	4.0	4	10	40	902008
•	10	2.0	VLf180-1-931-7-26	10.0	4	17	60	902043
•	12	3.0	VLf220-1-951-7-26	18.0	3	16	100	902160
•	17	3.0	VLf220-2-951H7-26	19.0	10	25	100	902116
•	18	4.0	VLf221-2-951H7-26	20.0	10	25	100	902282
•	30	3.0	VLf300-2-972H7-26	34.0	8	30	240	902295
	39	2.0	VLf420-2-953-7-36	59.0	3	29	260	901567
	43	2.0	VLf420-2-984H7-36	62.0	6	36	240	902486
	47	2.0	VLf530-2-986H7-36	115.0	6	38	250	903796
	50	1.3	VLKG530-5-925-7-36	130.5	4	29	400	901568

TROMMELFLEX PUR - HF 12 X 2.5 MM², Ø 20.5 MM, 0.485 KG/M

	l(m)	LZ~	Reel type	Weight (kg)	nv(U)	n(U)	Z(N)	Order No.
•	10	3.0	VLf220-1-951-12-26	19.5	4	15	100	902183
•	12	3.0	VLf221-2-951H12-26	23.5	15	17	100	902283
•	23	3.0	VLf300-2-952-12-26	30.0	3	22	210	902371
	28	2.0	VLf420-2-983-12-36	58.0	7	20	240	902503
	30	3.0	VLf420-2-953-12-36	69.0	10	22	260	902501
	33	2.0	VLf530-2-985-12-36	110.0	7	19	280	903810
	40	1.8	VLK530-4-925-12-36	128.0	4	23	480	901569
	50	2.1	VLKG530-6-925-12-36	145.0	5	28	600	901570

TROMMELFLEX PUR - HF 18 X 2.5 MM², Ø 20.6 MM, 0.679 KG/M

	l(m)	LZ~	Reel type	Weight (kg)	nv(U)	n(U)	Z(N)	Order No.
•	8	2.0	VLf220-1-951-18-26	20.5	7	10	100	902115
	16	3.0	VLf300-2-952-18-36	32.0	10	15	200	903836
	17	3.0	VLf300-2-972-18-36	34.0	3	17	330	901129
	20	2.0	VLf420-2-983-18-36	60.0	13	14	240	902510
	21	2.0	VLf420-2-953-18-36	62.0	14	16	260	901151
	24	2.0	VLf420-2-984-18-36	63.0	3	18	470	902522
	32	2.0	VLf530-2-986-18-36	110.0	3	19	500	903802
	35	1.5	VLKG530-5-925-18-36	143.0	7	20	600	901558
	43	1.9	VLKG530-6-925-18-36	145.0	3	24	725	901571

REEL SELECTION TABLE 8

for the application sample 8, random wrap, horizontal/vertical cable payout or steeply sloping

TROMMELFLEX PUR - HF 24 X 2.5 MM², Ø 23.6 MM, 0.860 KG/M

	l(m)	LZ~	Reel type	Weight (kg)	nv(U)	n(U)	Z(N)	Order No.
•	11	2.0	VLf300-1-972-24-36	35.0	5	10	165	902438
•	22	3.0	VLf300-2-972-24-36	38.0	2	18	330	902294
	25	3.0	VLf421-2-984-24-36	64.0	3	18	470	901572
	33	2.0	VLf530-2-986-24-36	110.0	3	19	490	903803
	28	1.6	VLKG530-5-925-24-36	143.0	11	16	600	901538
	38	2.0	VLKG530-6-925-24-36	145.0	6	21	725	901560

TROMMELFLEX PUR - HF 30 X 2.5 MM², Ø 28.2 MM, 1.080 KG/M

	l(m)	LZ~	Reel type	Weight (kg)	nv(U)	n(U)	Z(N)	Order No.
•	7	1.0	VLf420-1-983-30-36	57.0	19	6	120	902525
	14	2.0	VLf420-2-983-30-36	60.0	17	10	240	901115
	15	2.0	VLf420-2-953-30-36	62.0	20	11	260	901437
	20	2.0	VLf420-2-984-30-36	65.0	7	14	470	901453
	26	3.0	VLf421-2-984-30-36	67.0	3	18	470	901562
	30	2.0	VLf530-2-986-30-36	110.0	5	17	500	903805
	32	2.0	VLKG530-6-925-30-36	145.0	9	18	725	901564

TROMMELFLEX PUR - HF 4 X 4 MM², Ø 13.6 MM, 0.281 KG/M

	l(m)	LZ~	Reel type	Weight (kg)	nv(U)	n(U)	Z(N)	Order No.
	5	2.0	VLf155-1-908-4-40	3.5	3	11	40	901573
•	10	3.0	VLf180-1-931-4-40	10.5	4	17	60	901102
•	12	3.0	VLf220-1-951-4-40	18.0	3	16	100	902110
	17	2.0	VLf220-2-951H4-40	20.0	12	22	100	902114
•	20	3.0	VLf221-2-951H4-40	21.0	10	26	100	902214
•	22	1.9	VLf300-2-952H4-40	31.0	2	23	100	902302
•	34	3.0	VLf300-2-972H4-40	37.0	6	34	180	901315
	39	2.0	VLf420-2-953-4-42	60.0	3	29	260	901574
	48	3.0	VLf420-2-984H4-42	64.0	6	36	470	901575
	52	2.0	VLf530-2-986H4-42	104.0	6	38	250	901576

TROMMELFLEX PUR - HF 5X4 MM², Ø 14.5 MM, 0.318 KG/M

	l(m)	LZ~	Reel type	Weight (kg)	nv(U)	n(U)	Z(N)	Order No.
	5	2.0	VLF155-1-908-5-40	4.0	3	11	40	902019
	8	2.0	VLF180-1-931-5-40	11.0	7	14	60	901287
	12	3.0	VLF220-1-951-5-40	18.0	3	16	100	902140
	17	3.0	VLF220-2-951H5-40	20.0	12	22	100	902143
	21	2.0	VLF300-2-952-5-40	28.0	3	22	200	902330
	29	3.0	VLF300-2-972H5-40	31.0	8	29	165	901363
	32	2.0	VLF420-2-983-5-42	58.0	3	24	240	902452
	39	2.0	VLF420-2-953-5-42	60.0	3	29	260	901577
	42	3.0	VLF420-2-984H5-42	63.0	6	36	240	901578
	45	2.0	VLF530-2-986H5-42	110.0	6	38	250	901579

TROMMELFLEX PUR - HF 4X6 MM², Ø 14.9 MM, 0.372 KG/M

	l(m)	LZ~	Reel type	Weight (kg)	nv(U)	n(U)	Z(N)	Order No.
•	12	3.0	VLF220-1-951-4-60	19.0	3	16	100	902120
	15	3.0	VLF220-2-951H4-60	20.0	14	18	100	902107
•	25	3.0	VLF300-2-972H4-60	59.0	13	25	165	901309
	32	2.0	VLF420-2-983-4-60	56.0	3	24	240	902424
	39	2.0	VLF420-2-953-4-60	59.0	3	29	260	902421
	42	1.6	VLK530-4-925-4-60	130.5	3	24	400	901565

TROMMELFLEX PUR - HF 5X6 MM², Ø 16.1 MM, 0.435 KG/M

	l(m)	LZ~	Reel type	Weight (kg)	nv(U)	n(U)	Z(N)	Order No.
	9	2.0	VLF220-1-951-5-60	18.0	7	12	100	902150
	12	3.0	VLF220-2-951-5-60	20.0	3	16	200	902142
	13	3.0	VLF220-2-951H5-60	22.0	16	18	100	901499
	22	3.0	VLF300-2-952-5-60	31.0	3	22	200	902341
	31	2.0	VLF420-2-983-5-60	57.0	3	24	240	902464
	34	2.0	VLF420-2-953-5-60	59.0	6	26	260	902461
	37	2.0	VLF530-2-985-5-60	112.0	3	23	280	903808
	42	1.4	VLK530-4-925-5-60	130.5	3	24	480	901580

REEL SELECTION TABLE 8

for the application sample 8, random wrap, horizontal/vertical cable payout or steeply sloping

TROMMELFLEX PUR - HF 4 X 10 MM², Ø 18.9 MM, 0.615 KG/M

	l(m)	LZ~	Reel type	Weight (kg)	nv(U)	n(U)	Z(N)	Order No.
•	7	2.0	VLf220-1-951-4-60	19.0	9	10	100	902120
•	13	3.0	VLf220-2-951-4-60	21.0	2	16	200	902123
•	15	2.0	VLf300-2-972H4-60	30.0	18	17	165	901309
	18	2.0	VLf300-2-952-4-60	31.0	5	20	200	902311
	22	2.0	VLf420-2-983-4-60	56.0	11	16	240	902424
•	24	2.0	VLf420-2-953-4-60	59.0	16	16	260	902421
	26	2.0	VLf530-2-985-4-60	108.0	11	15	280	901581
	32	2.0	VLf530-2-986-4-60	110.0	3	19	500	903782
	42	1.7	VLKG530-5-925-4-60	135.0	3	24	600	901582
	44	2.1	VLKG530-6-925-4-60	148.0	8	25	600	901583

TROMMELFLEX PUR - HF 4 X 16 MM², Ø 22.1 MM, 0.924 KG/M

	l(m)	LZ~	Reel type	Weight (kg)	nv(U)	n(U)	Z(N)	Order No.
	6	1.0	VLf300-1-952-4-125	29.0	17	7	100	901443
•	12	2.0	VLf300-2-952-4-125	32.0	13	12	200	901122
•	18	2.0	VLf300-2-972-4-125	36.0	3	17	330	901267
	25	2.0	VLf420-2-984-4-150	64.0	3	18	470	901317
	31	2.0	VLf530-2-986-4-150	115.0	4	18	500	903785
	35	2.1	VLKG530-6-925-4-150	150.0	3	24	720	901586

TROMMELFLEX PUR - HF 4 X 25 MM², Ø 25.5 MM, 1.222 KG/M

	l(m)	LZ~	Reel type	Weight (kg)	nv(U)	n(U)	Z(N)	Order No.
•	10	2.0	VLf420-2-983-4-150	62.0	19	8	240	902430
	20	2.0	VLf420-2-984-4-150	64.0	6	15	470	901317
	21	2.0	VLf421-2-984-4-150	67.0	4	17	470	901585
	23	2.0	VLf530-2-986-4-150	115.0	10	12	500	903785
	25	1.5	VLKG530-6-925-4-150	150.0	13	14	720	901586

TROMMELFLEX PUR - HF 4 X 35 MM², Ø 30.0 MM, 1.780 KG/M

	l(m)	LZ~	Reel type	Weight (kg)	nv(U)	n(U)	Z(N)	Order No.
	8	1.0	VLf420-2-953-4-150	66.0	24	7	260	902427
	15	2.0	VLf420-2-984-4-150	68.0	10	11	470	901317
	17	2.0	VLf530-2-986-4-150	115.0	12	10	500	903785
	19	1.3	VLKG530-6-925-4-150	150.0	17	10	720	901586

CABLE REELS (WITH FIXING FLANGE)

Random wrap – Dimensions

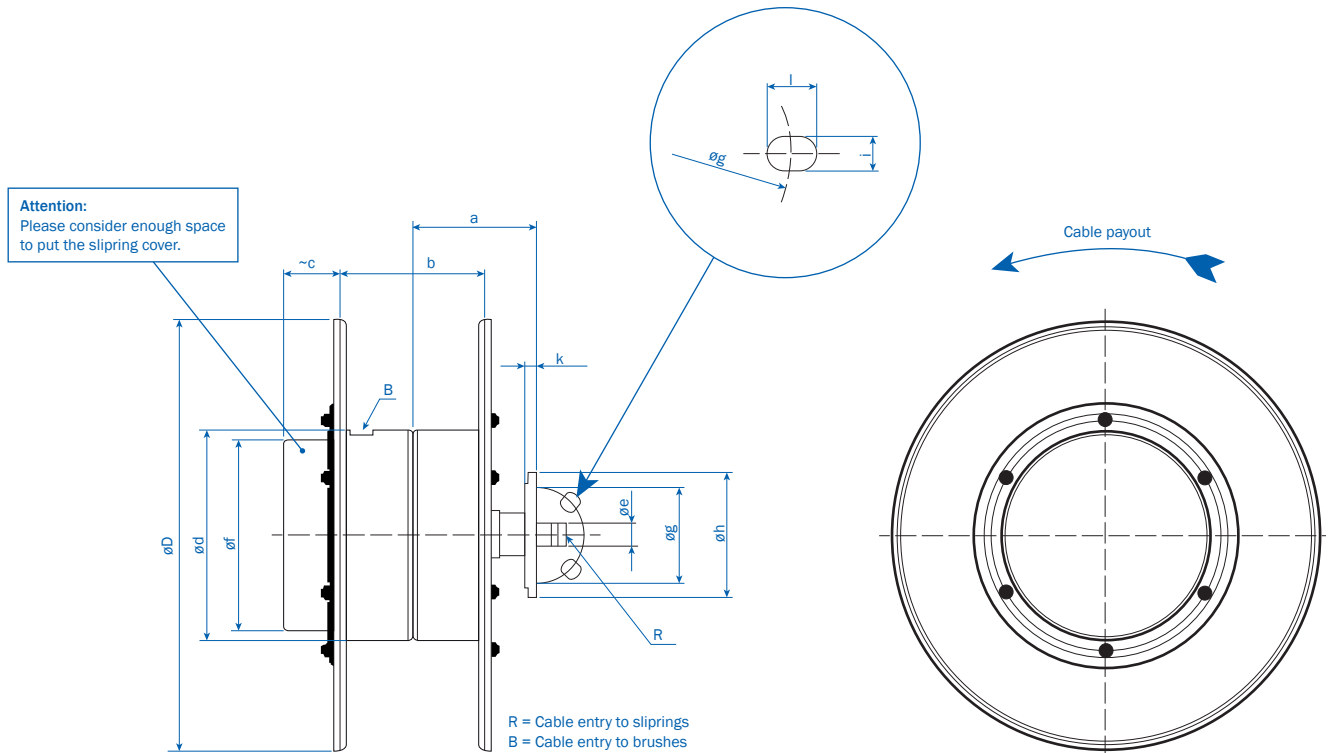


TABLE 6: REEL DIMENSIONS (MM)

Type ⁽¹⁾	$\varnothing d$	$\varnothing D$	b	a	$\sim c$	$\varnothing f$	e	$\varnothing g$	$\varnothing h$	i	l	k	Weight ⁽²⁾ kg
VLF 155	155	260	110	101.5	80	155	25	65	85	4 x $\varnothing 9$	-	10	2.5
VLF 180	180	290	130	113	110	170	25	65	85	4 x $\varnothing 9$	-	10	6.5
VLF 220	220	400	120	114	80	220	25	100	130	4 x $\varnothing 13$	20	9	13.0
VLF 221	220	450	150	130	80	220	25	100	130	4 x $\varnothing 13$	20	9	14.0
VLF 222	220	450	170	139	50	220	25	100	130	4 x $\varnothing 13$	20	12	14.0
VLF 300	300	550	190	165	125	300	35	100	135	4 x $\varnothing 13$	20	20	16.0
VLF 301	300	550	285	213	80	300	35	100	135	4 x $\varnothing 13$	21	20	18.0
VLF 420	420	680	240	200	165	420	45	130	178	4 x $\varnothing 17$	23	20	35.0
VLF 421	420	770	240	200	165	420	45	130	178	4 x $\varnothing 17$	23	20	40.0
VLF 530	530	900	310	255	85	420	70	185	250	4 x $\varnothing 18$	32	23	80.0

Spring reference	908	931	951	952	953	972	983	984	985	986
weight approx. kg	0.868	2.286	2.994	5.288	10.610	5.891	8.532	10.846	15.120	21.510

1) Full type details in selection table

2) Base weight w/o springs (3 poles + PE)

Total weight = Base weight + weight of springs

CABLE REELS (WITH FIXING FLANGE)

Random wrap – Dimensions

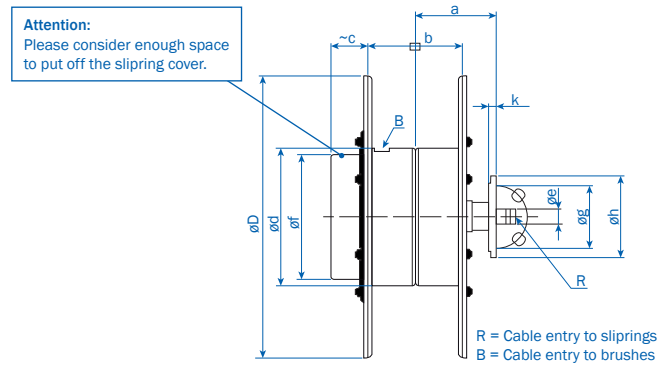


TABLE 7: MAX. POLE AMOUNTS · COVER DIMENSIONS (MM)

Type ⁽¹⁾	Amps ⁽²⁾	Dim. "c" of enclosures (mm) for Std. Assys incl. Ground (staggered)								Drilling drum shaft mm	Cable gland M	
		3	4	6	7	11	17	23	29		R	B
VLF 155	26	60	80	80	100					14	M20x1.5	M20x1.5
VLF 180	26	50	50	90						18	M20x1.5	M20x1.5
VLF 180	40	50	50	90	90					18	M20x1.5	M20x1.5
VLF 220	26	50	50	100	100	150				18	M20x1.5	M32x1.5
VLF 220	42	75	75	100	100	200				18	M20x1.5	M32x1.5
VLF 220	40	50	50	100	100	150				18	M20x1.5	M32x1.5
VLF 220	60	75	100							18	M20x1.5	M32x1.5
VLF 221	26	50	50	75	75	130				18	M20x1.5	M32x1.5
VLF 221	42	50	50	75	100	130				18	M20x1.5	M32x1.5
VLF 221	40	50	50	75						18	M20x1.5	M32x1.5
VLF 221	60	50	75	100						18	M20x1.5	M32x1.5
VLF 222	26	50	50	100	100	150				18	M20x1.5	M32x1.5
VLF 222	42	75	75	100	100	200				18	M20x1.5	M32x1.5
VLF 222	40	50	50	100	100	150				18	M20x1.5	M32x1.5
VLF 222	60	75	100							18	M20x1.5	M32x1.5
VLF 300	26	80	80	80	120	150				24	M32x1.5 ⁽³⁾	M40x1.5
VLF 300	42	80	80	120	120	200		320		24	M32x1.5 ⁽³⁾	M40x1.5
VLF 300	40	80	80	80	120					24	M32x1.5 ⁽³⁾	M40x1.5
VLF 300	60	80	80							24	M32x1.5 ⁽³⁾	M40x1.5
VLF 301	26	20	20	90	90	130				16	M20x1.5	M40x1.5
VLF 301	42	20	90	90	90	90		180		16	M20x1.5	M40x1.5
VLF 301	40	20	20	90	90	130				16	M20x1.5	M40x1.5
VLF 301	60	20	90	90	90					16	M20x1.5	M40x1.5
VLF 420/421	42	85	85	135	135	165	265	335		32	M32x1.5 ⁽³⁾	M50x1.5
VLF 420/421	60	85	85							32	M32x1.5 ⁽³⁾	M50x1.5
VLF 420/421	150	85	85							32	M32x1.5 ⁽³⁾	M50x1.5
VLF 530	42	85	85	85	85	85	155	270	400	40	M50x1.5	M63x1.5
VLF 530	60	85								40	M50x1.5	M63x1.5
VLF 530	150	85								40	M50x1.5	M63x1.5

- 1) Full type details in selection table
- 2) Current rating with 100% duty cycle
- 3) Springs with 3 drive spring -> R = M20x1.5

CABLE REELS (WITH CONSOLE)

Random wrap – Dimensions

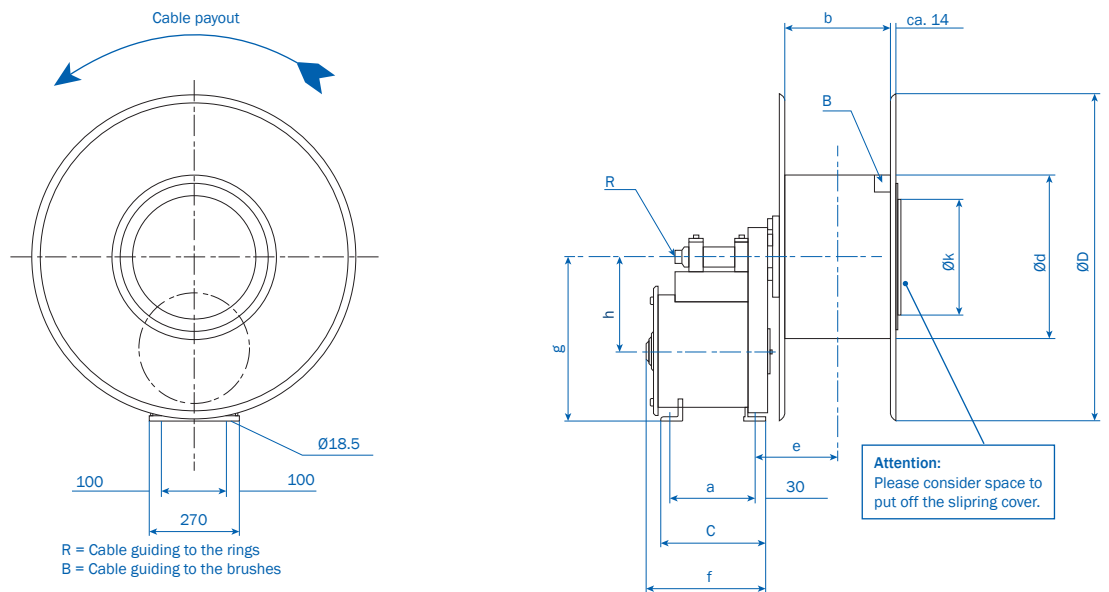


TABLE 8: REEL DIMENSIONS (MM)

Type ⁽¹⁾	Drum Dimensions			a	c	e	f	g	h	k	Weight ⁽²⁾ kg
	Ø d	Ø D	Ø b								
VLK 530	530	900	310	260	320	248	358	500	290	420	135
VLKG 530	530	1000	310	390	446	248	488	500	290	420	140
VLKG 700	700	1200	350	390	446	255	488	500	290	370	170

Spring reference	924	925
weight approx. kg	11.900	14.000

TABLE 9: MAX. POLE AMOUNTS · COVER DIMENSIONS (MM)

Type ⁽¹⁾	Amps ⁽³⁾	Dim. of enclosures (mm) for Std. Assys incl. Ground (staggered)					Cable gland M	
		7	11	17	23	29	R	B
VLK 530	42	27	27	50	105	200	M50x1.5	depending on reel body (measurement upon request)
VLKG 530	42	27	27	50	105	200	M50x1.5	
VLKG 700	42	27	27	50	105	200	M50x1.5	

1) Full type details in selection table
 2) Base weight w/o springs (3 poles + PE)
 Total weight = Base weight + weight of springs
 3) Current rating with 100% duty cycle

ACCESSORIES

Ratchet device, rotating, wall mounting



RATCHET DEVICE (ONE LOCK POSITION PER FULL REEL TURN)

Type	For reel	Order No.
EKV 155	VLf 155	901720
EKV 180	VLf 180	901721
EKV 220	VLf 220/221/222	901722
EKV 300	VLf 300/301	901723
EKV 420	VLf 420/421	901724
EKV 530	VLf 530	901726



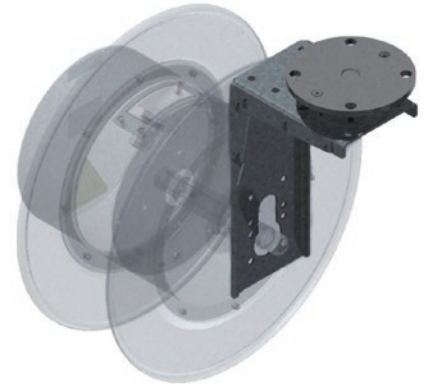
SWIVEL BASE · ROTATION 150° · WALL MOUNTING⁽¹⁾

Type	For reel	Order No.
SWB 155	VLf 155	901730
SWB 180	VLf 180	901731
SWB 220	VLf 220/221	901732
SWB 300	VLf 300	901733
SWB 420	VLf 420/421	901734
SWB 530	VLf 530	901736

1) cable guide arm must be used

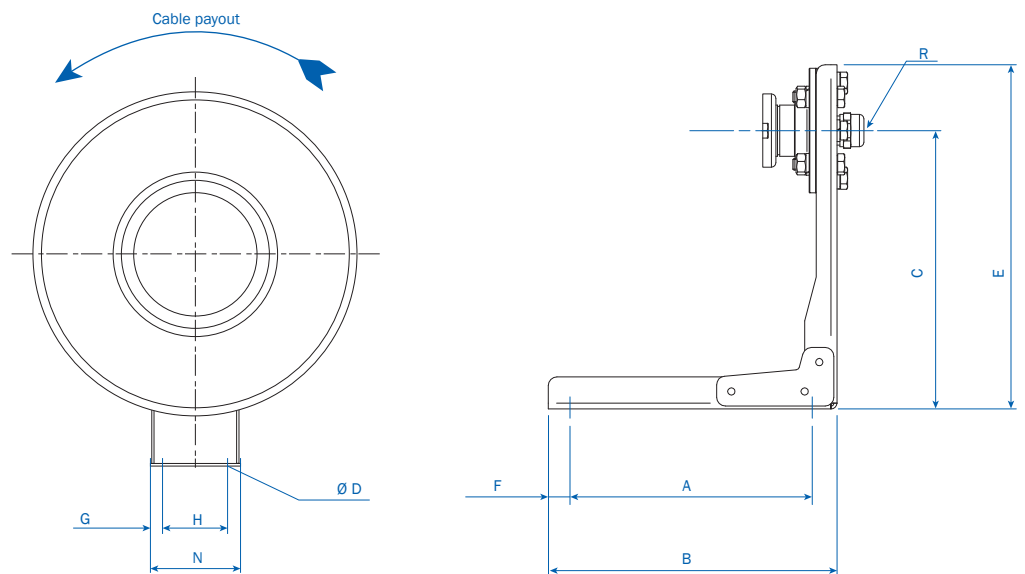
ACCESSORIES

Rotating ceiling mounting, rigid wall or floor mounting



PIVOT BASE- ROTATION 300° · CEILING MOUNTING⁽¹⁾

Type	For reel	Order No.
SDB 155	VLf 155	901740
SDB 180	VLf 180	901741
SDB 220	VLf 220/221	901742
SDB 300	VLf 300	901743
SDB 420	VLf 420/421	901744
SDB 530	VLf 530	901746



RIGID WALL OR FLOOR MOUNTING

Type	A	B	C	E	F	H	N	Ø D	Order No.
STB 155	165	197	190	235	15	110	154	8.5	901867
STB 180	165	197	190	235	15	110	154	8.5	900694
STB 220	210	249	279	409	15	110	165	13	901063
STB 221	210	249	279	409	15	110	165	13	901868
STB 300	210	249	329	409	15	110	165	13	901870
STB 301	210	249	329	409	15	110	165	13	901871
STB 420	310	379	454	564	35	200	283	17	901872
STB 421	310	379	454	564	35	200	283	17	901869
STB 530	310	380	565	705	35	200	283	17	901598

1) cable guide arm must be used

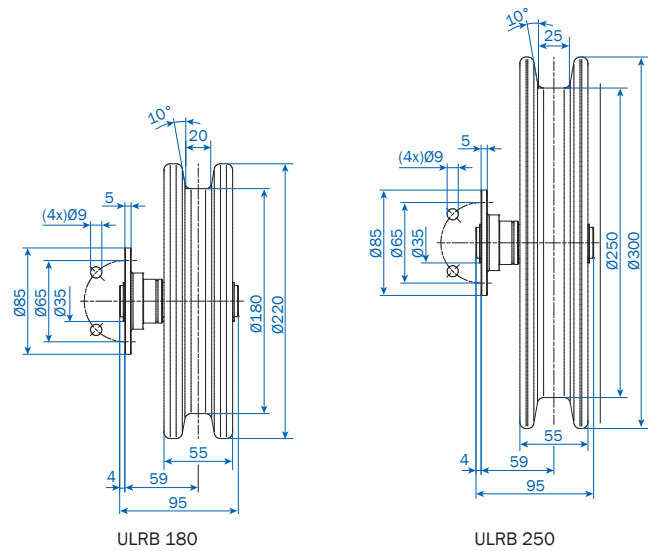
ACCESSORIES

Cable guide arm for free swinging roller type



CABLE GUIDE ARM FOR FREE SWINGING ROLLER TYPE

Type	For reel	Order No.
RFAS 155	VLF 155	902062
RFAS 180	VLF 180	902063
RFAS 220	VLF 220	902064
RFAS 221	VLF 221	902065
RFAS 300	VLF 300	902066
RFAS 420	VLF 420	902067
RFAS 421	VLF 421	902068
RFAS 530	VLF 530	902069

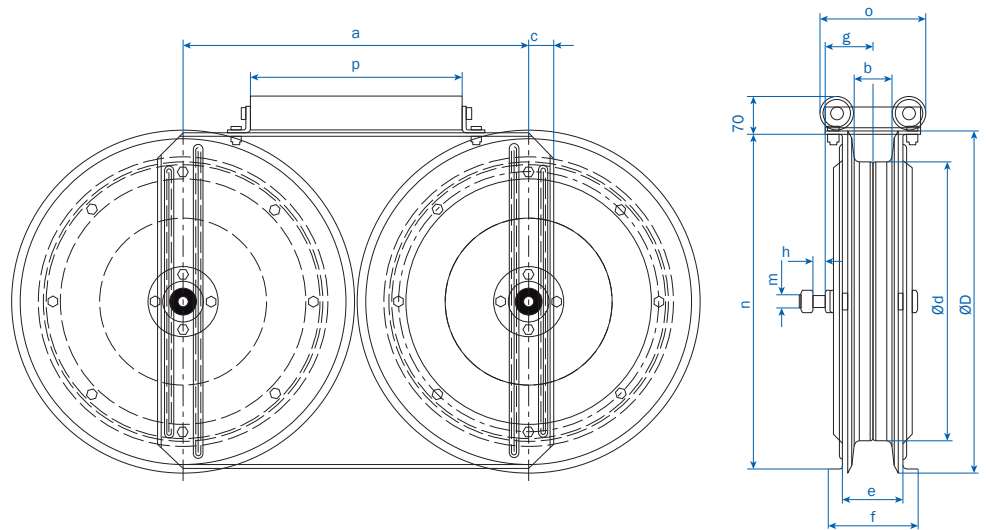


GUIDE ROLLER WITH MOUNTING FLANGE

Type	Description	Order No.
ULRB 180	Roll diameter 180 mm	901978
ULRB 250	Roll diameter 250 mm	901979

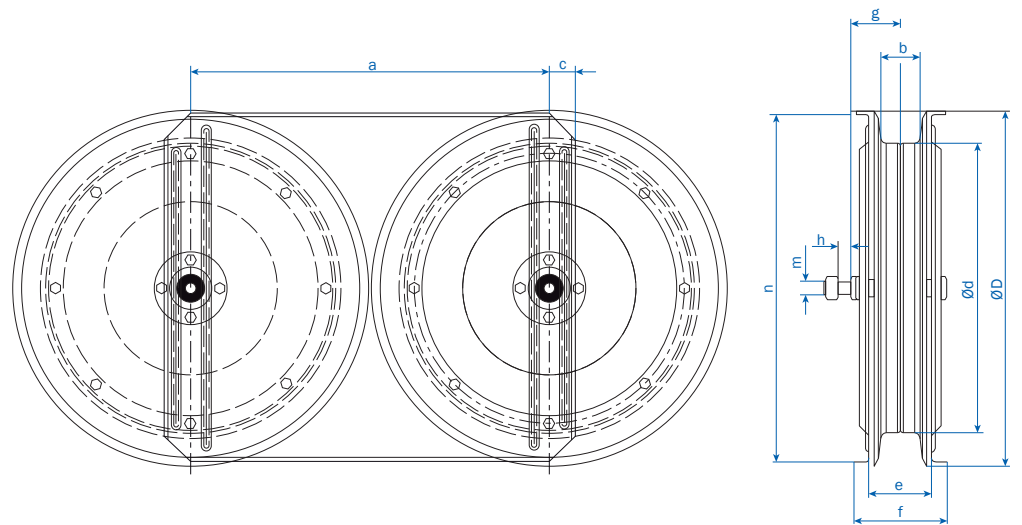
ACCESSORIES

Sheave guide



SHEAVE GUIDE WITH ADDITIONAL TOP GUIDE ROLLER

Type	mm ²	a	b	c	Ø d	Ø D	e	f	g	h	m	n	o	p	Weight kg	Order No.
SU-R 1	4 x 6	455	70	32.5	350	450	114	170	85	50	M 24	445	180	315	53	901630
SU-R 2	4 x 16	655	70	47.5	503	650	114	170	85	50	M 24	640	180	400	84	901631
SU-R 3	4 x 35	785	70	80	663	780	114	170	85	50	M 24	770	180	500	105	901632
SU-R 4	4 x 70	905	75	80	783	900	114	170	85	50	M 24	890	180	600	140	901633
SU-R 5	4 x 95	1105	80	73	900	1100	134	192	103	62	M 30	1090	210	800		901634

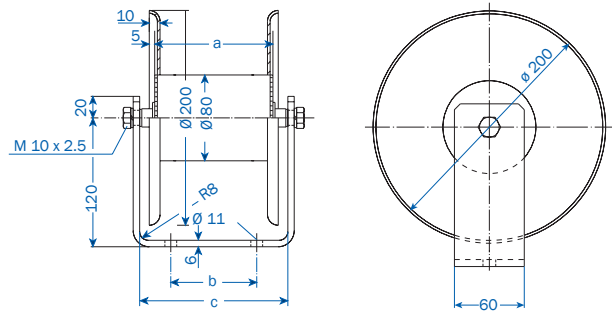


SHEAVE GUIDE W/O TOP GUIDE ROLLER

Type	mm ²	a	b	c	Ø d	Ø D	e	f	g	h	m	n	o	p	Weight kg	Order No.
SU 1	4 x 6	455	70	32.5	350	450	114	170	85	50	M 24	445	180	315	48	901635
SU 2	4 x 16	655	70	47.5	503	650	114	170	85	50	M 24	640	180	400	76	901636
SU 3	4 x 35	785	70	80	663	780	114	170	85	50	M 24	770	180	500	90	901637
SU 4	4 x 70	905	75	80	783	900	114	170	85	50	M 24	890	180	600	120	901638
SU 5	4 x 95	1105	80	73	900	1100	134	192	103	62	M 30	1090	210	800	160	901639

ACCESSORIES

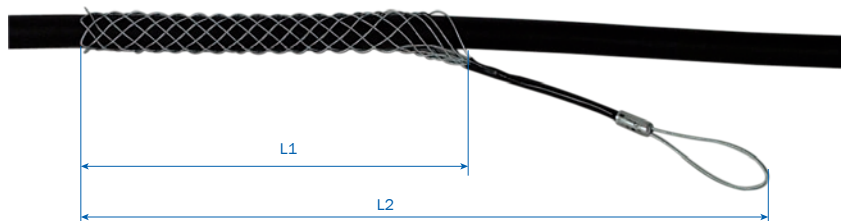
CABLE SUPPORT ROLLER, CABLE WIRE GRIP



The support rollers will be supplied with screws and spring washers

CABLE SUPPORT ROLLER

Type		Weight kg	a	b	c	Order No.
TR 80/110 B 200	without bracket	2.25	110	-	130	924450
TR 80/300 B 200		3.25	300	-	320	924460
TR 80/500 B 200		4.50	500	-	520	924470
TR 80/110 B 200 H	with bracket	3.50	110	80	130	924480
TR 80/300 B 200 H		5.15	300	250	320	924490
TR 80/500 B 200 H		6.90	500	400	520	924500



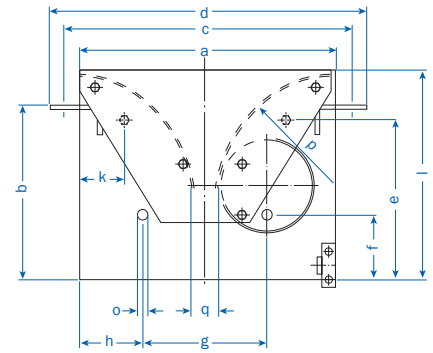
CABLE WIRE GRIP

Type	For cable diameter (mm)	Max. allowed tension ⁽¹⁾ kg	Meshwork length dimension L ₁	Meshwork length dimension L ₂	Order No.
VLZK 6	4 - 7	60	100	275	900391
VLZK 9	7 - 9	110	120	290	900392
VLZK 12	9 - 12	130	135	340	900393
VLZK 15	12 - 15	210	180	390	900394
VLZK 20	15 - 19	260	220	450	900395
VLZK 25	19 - 25	260	275	510	900396
VLZK 30	25 - 30	400	350	610	900397
VLZK 40	30 - 40	580	370	660	900398

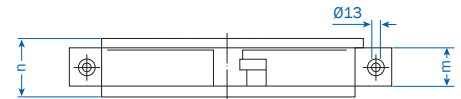
1) calculated with three-fold safety

ACCESSORIES

FEED-IN FUNNEL, TURNOVER ANCHOR CLAMPS

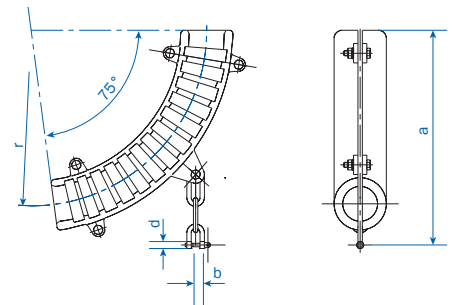


For all travel speeds and frequent passing over center point.



FEED-IN FUNNEL INCL. TENSION RELIEF REEL (FOR VOLTAGES UPTO 1000V)

Type	cable dia. max Ø mm	a	b	c	d	e	f	g	h	i	k	l	m	n	o	p	q	Weight kg	Order No.
ETZV 1	19	350	240	390	430	220	90	170	85	220	60	290	50	80	13	150	40	4.93	928248
ETZV 2	21	425	270	465	505	220	78	202	98	360	20	300	70	110	13	175	40	9.00	928249
ETZV 3	29	540	495	670	720	405	310	300	360	400	70	530	100	140	13	270	55	16.00	928250
ETZV 4	38	820	650	920	970	550	200	400	210	740	40	700	140	180	17	400	80	30.00	928251

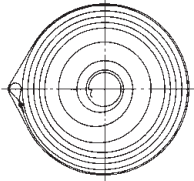


TURNOVER ANCHOR CLAMPS (FOR VOLTAGES UPTO 1000V)

Type	Weight kg	Cable diameter (mm)	r	a	d	b	Order No.
LS 1	1.6	21.5	100	205	10	14	921420
LS 2	2.5	>21.5 - 28	130	225	10	14	921430
LS 3	3.5	>28 - 36.5	170	265	12	17	921440
LS 4	5.5	>36.5 - 48	220	300	12	17	921450

SPARE PARTS

The following spare parts are available for all reelers listed in this catalogue. For determination refer to related table, type label and type code.



REEL TYPE

VLF	220	-	2	-	951H	-	4	-	26
VLF	530	-	2	-	985	-	4	-	150
VLKG	700	-	6	-	915	-	4	-	220 - A

Reel series _____

Drum diameter _____

Number of springs _____

Spring series _____

Number of poles including ground _____

Amps _____

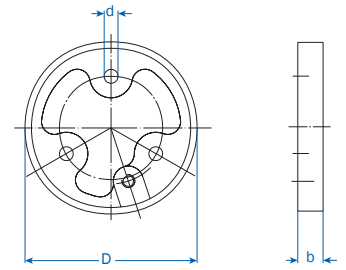
Suffix for opposite rotation _____

SPRINGS

Type ⁽¹⁾	Weight	Drill hole mm	Outer-Ø mm	Width mm	Order No.
908	0.600	35	126	18	901640
910	0.500	25	114	18	901641
931	2.300	35	160	25	901642
951	2.950	35	190	30	901643
952	5.500	45	280	45	901645
972	6.000	45	280	45	901646
953	13.200	60	400	60	901684
983	10.350	60	400	60	901685
924	11.900	50	315	60	901687
925	15.000	50	315	60	901689
965	10.800	65	315	60	901704
975	18.000	65	315	60	901705
984	12.000	85	380	60	900618
985	17.000	85	450	60	901706
986	25.500	85	450	60	901707

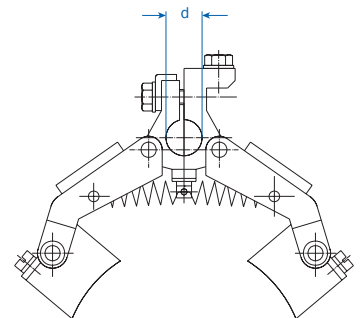
Note! Never remove springs from protection bandage and handle replaced springs carefully.
 1) The spring types 908 to 986 substitute former types 508 to 586.

SPARE PARTS



SLIPRINGS

Amps A	Dimensions				Order No.	
	D mm	d		b mm	Phase	Ground
		Phase	Ground			
26 ⁽¹⁾	50	8.5	5.5	10	901670	901671
36 ⁽²⁾	80	12.5	8.5	10	901672	901673
40	50	8.5	5.5	10	901674	901675
42	80	12.5	8.5	10	901682	901683
60	80	12.5	8.5	12	901676	901677
125	97	8.5	12.5	15	970765	970766
150	130	12.5	8.5	15	901678	901679
220	130	12.5	8.5	20	901680	901681



BRUSH ASSEMBLIES

Amps A	Dimensions d (mm)		Order No.	
	Phase	Ground	Phase	Ground
26 ⁽¹⁾	10	8	901690	901691
36 ⁽²⁾	10	8	901692	901693
40	10	8	901694	901695
42	10	8	901702	901703
60	13	12	901696	901697
125	16	15	970767	970768
150	16	15	901698	901699
220	17	16	901700	901701

1 Corresponds to former type 25 A or 30 A

2 Corresponds to former type 30 A (max. cross section 2,5 mm²)
For larger cross sections use 42A brush assembly.

QUESTIONNAIRE

Company: _____ Date: _____
 Phone: _____ Fax: _____
 Email: _____ Website: _____

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 diameter _____ mm
7. Electrical load _____ kW
 Voltage _____ V
 Amps _____ A
8. Reduction factor due to cranes working simultaneously? _____ %
9. No. of Collector Rings required? _____ pc.
 (our slipring assemblies always include one ground)
10. Type of application ? (see page 7) No.
11. How many movements per hour? _____ times
12. Operating hours per day? _____ h
13. Maximum travel/lift speed? _____ m/min
14. Acceleration 0 to full in _____ sec
15. Acceleration rate _____ m/sec²

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									
Travel motor - main-trolley									
Travel motor - aux.-trolley									
Main travel									
Slewing									
Luffing									

Mark with an "E" any motor that may be in simultaneous operation.

NOTES



A large grid of small dots for taking notes, covering most of the page. The dots are arranged in a regular pattern, forming a grid that is approximately 30 columns wide and 40 rows high. The grid is intended for writing notes.

NOTES

NOTES



A large grid of small dots for taking notes, covering most of the page. The dots are arranged in a regular pattern, forming a grid that is approximately 30 columns wide and 40 rows high. The grid is intended for writing notes.



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