

# Cable Reeling Drums

## Heavy Duty Type 'LT' Spring Operated Cable Reeling Drums

SIMBAL type 'LT' spring operated cable reeling drums are designed for cylindrical or spiral winding of any suitable reeling cable for transmission of power, control or data signals. They are also available for hoses with liquid or gaseous media. The mechanical drive occurs via spiral leaf springs manufactured from a special spring band steel. Under normal working conditions, expected spring life would be approx. 120,000 cycles.



### Technical detail

#### Spring cable reels by SIMBAL

Spring cable reels serve as reliable energy and data transfer systems for the orderly winding of flexible cables, hoses or ropes. The mechanical drive itself operates via spiral leaf springs made of a high-quality texture-milled spring band steel, guaranteeing an average of 100.000 spring operations at high levels of functionality and a long service life.

### Recommended applications

Spring driven cable reels are particularly suitable, in comparison to motor driven cable reels, for smaller cable cross sections, limited installation space, shorter transfer distances as well as for lower travel speed and acceleration. They are the ideal solution for continuous operation (100% ED) in industrial applications for a wide range of demanding lifting and logistic tasks.

### Quality

With regard to quality we make no compromises: All series and sizes of our spring cable reels are equipped with extremely rugged and durable reel bodies and slip ring housings made from galvanised steel sheet.

### Optional extras

Standard options which can be fitted to SIMBAL spring operated drums include locking devices, and wall or ceiling mounting brackets with or without swivel devices. A range of ancillary items including roller guides and turnover anchors is also available to complement the full range of drums.

### Availability

Many of the SIMBAL spring operated cable drums are available on an express shipment programme with despatch from our warehouse within 5-7 working days of receipt of order, the drums available on this programme are indicated as 'E type' drums on the following pages. All other drums are generally available on a 2-3 week lead time.



Motorised cable reels



Spring cable reels



Slip ring assemblies

We reserve the right to amend all technical details without prior notification.

# Cable Reeling Drums

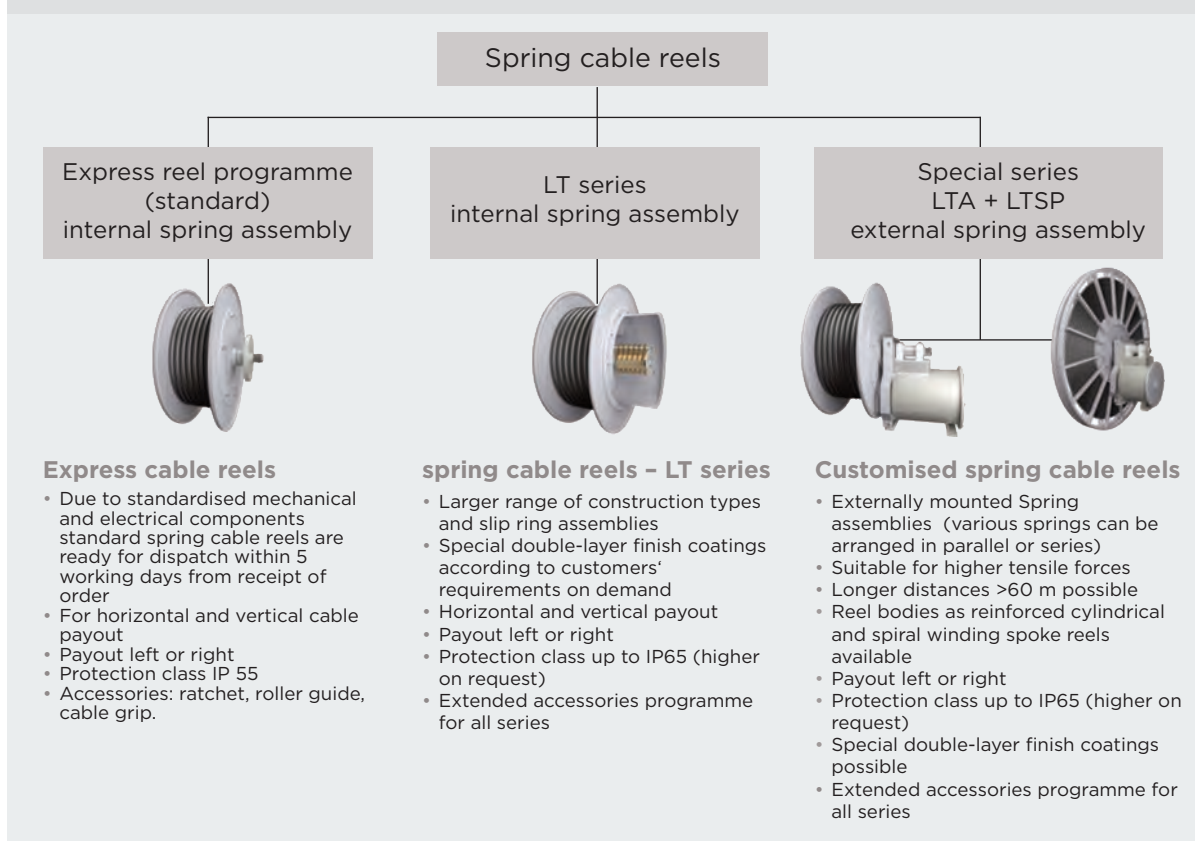
## Heavy Duty Type 'LT' Spring Operated Cable Reeling Drums



## Spring cable reels

### Product Portfolio

A wide range of standard and special solutions



### Matchcode spring cable reels

In our offer text or confirmation of order the type keys are written as follows: LT220/251H4-25 or LTAI530/424-5-150...

LT	220	2	551H	4	25
LTAI	530	4	524	5	150
LTAII	700	6	525	4	220

Construction type \_\_\_\_\_

Cable reel dimension \_\_\_\_\_

Number of springs \_\_\_\_\_

Type and arrangement of springs (in a row = H, or parallel) \_\_\_\_\_

Pole number of slip ring assembly (including protective earth conductor (PE)) \_\_\_\_\_

Max. current of slip ring assembly (A) \_\_\_\_\_

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### Spring cable reels

#### Application fields and performance

##### Typical applications

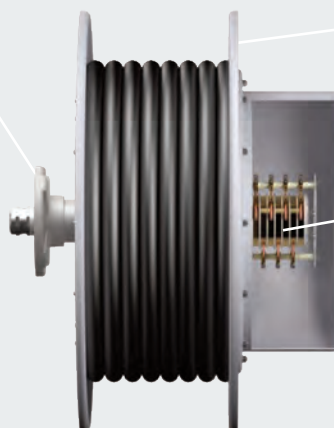
- Power supply of extension arms on cranes and mobile construction vehicles
- Lifting technology: energy and data transfer for grabs and magnets
- Fassade cranes
- E-mobility: battery charging cable reels for workshops, car garages, parking facilities, bus depots ...
- Entertainment technology: mobile power & data for stage equipment (lighting bridges, lifting podiums ...)
- Integrated cable reel into emergency vehicles (fire engines ...)

##### Product features at a glance

- Standard spring cable reels for distances up to 60 m
- Maximum speed 60 m/min
- Maximum acceleration 0,2 m/s<sup>2</sup>
- Ambient temperature from -40 bis +60°C
- Available with payout left / payout right
- For horizontal and vertical cable payout
- Maximal corrosion protection in C3 / C5
- Protection class IP55 / IP65 for industrial applications
- Special designed spring cable reels without slip ring assemblies for potentially explosive environmental conditions

Mounting flange made from cast iron is included as standard

(cable reels are equipped with mounting flanges for an easy, quick and safe installation)



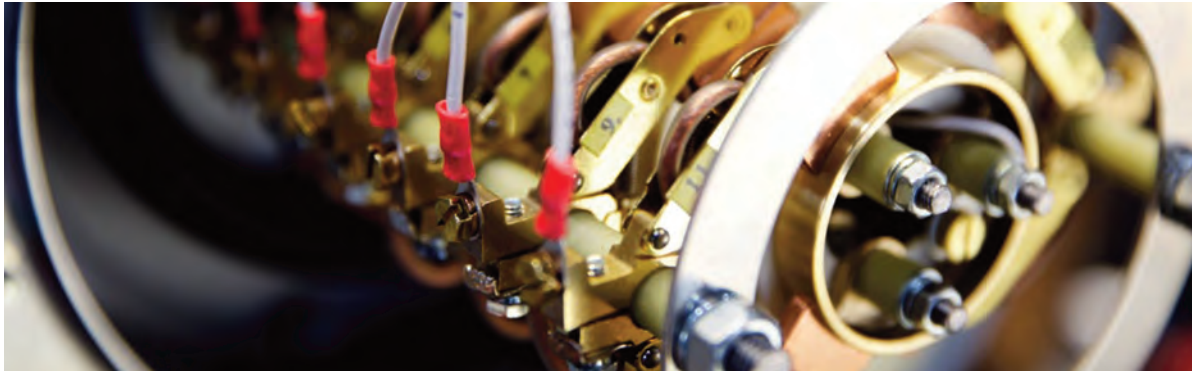
Reel bodies made from galvanised steel sheet, or on demand from stainless steel or with additional double-layer coatings

Slip ring assembly (standard material combination: metal (brass) rings and copper-graphite brushes)

Robust slip ring housing made from deep drawn, galvanised steel sheet

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## Heavy Duty Type 'LT' Spring Operated Cable Reeling Drums



### Technical components

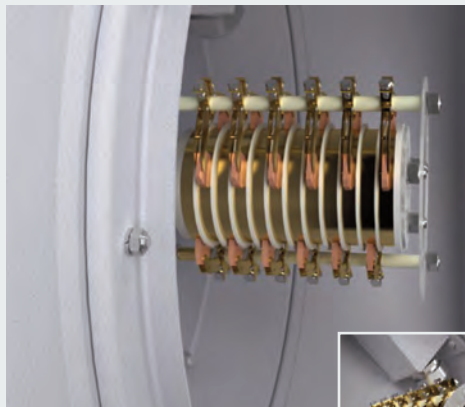
#### Slip ring assemblies and cable basics at a glance

##### Slip ring assemblies

- Integrated into spring cable reels
- Safe and reliable transfer of power, control signals, data, bus and video signals
- Power supply in the range of 16 A up to 220 A
- High wear resistance and vibration strength
- Suitable for continuous operation (100% ED)
- All cable reels can be assembled with multi-pole slip ring assemblies according to the appropriate cables
- The number of poles and cross section of cables determine the design of slip ring assembly

##### Cables for challenging applications

- We offer a wide range of reeling cables with approved characteristics for enhanced mechanical requirements
- Total cable length includes: max. payout length between reel and end of cable + 2 additional windings for mechanical strain relief of the cable (security winding) + 1 m normally connecting length to slip ring assembly + cable length for connection into the feed-in point (depending on the application)
- Number of poles correspond to the number of isolated poles (for example 3 pole + PE); protective earth conductor is clearly identifiable and not possible to replace with a phase
- Mandatory cable specifications for individual designed spring cable reels can be requested by contacting our sales office on **01298 813883** or by email at [sales@simbal.net](mailto:sales@simbal.net)



Arrangement example of slip rings in a slip ring assembly (series type YB / blocked design) for power transfer from 26 A up to 220 A



Compact slip ring assembly design with pancake/flat slip ring assemblies 16 A, with collectors & clamp plate



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### Express delivery programme

#### Our spring cable reel standard

Article-no.	Horizontal payout	Vertical payout	Reel type	Article-no.	Horizontal payout	Vertical payout	Reel type
Coiling length in meter				Coiling length in meter			
<b>4 x 1.5mm<sup>2</sup>, Ø10.6mm, 0.16 kg/m</b>				<b>18 x 1.5mm<sup>2</sup>, Ø17.2mm, 0.47 kg/m</b>			
E1075-5000	7	7	LT155/108-4-26	E1077-5004	8	8	LT220/151-18-26
E1076-5000	12	12	LT180/131-4-26	E1078-5004	18	12	LT221/251H18-26
E1076-5005	27	18	LT180/231H4-26	E1079-5005	23	23	LT300/252-18-26
E1077-5008	26	26	LT220/251H4-26	E1079-5024	29	21	LT300/272H18-26
E1079-5011	47	35	LT300/252H4-26	E1081-5006	73	14	LT420/283H18-36
<b>5 x 1.5mm<sup>2</sup>, Ø11.2mm, 0.18 kg/m</b>				<b>24 x 1.5mm<sup>2</sup>, Ø19.8mm, 0.59 kg/m</b>			
E1075-5001	7	7	LT155/108-5-26	E1079-5006	24	19	LT300/252-24-36
E1076-5001	12	12	LT180/131-5-26	E1081-5011	41	22	LT420/253-24-36
E1076-5006	20	18	LT180/231H5-26	<b>30 x 1.5mm<sup>2</sup>, Ø21.8mm, 0.71 kg/m</b>			
E1077-5009	26	25	LT220/251H5-26	E1079-5007	20	16	LT300/252-30-36
E1079-5012	47	31	LT300/252H5-26	E1081-5012	38	20	LT420/253-30-36
<b>7 x 1.5mm<sup>2</sup>, Ø12.8mm, 0.23 kg/m</b>				<b>4 x 2.5mm<sup>2</sup>, Ø11.7mm, 0.21 kg/m</b>			
E1075-5002	7	7	LT155/108-7-26	E1075-5000	7	7	LT155/108-4-26
E1076-5002	10	10	LT180/131-7-26	E1076-5000	10	10	LT180/131-4-26
E1077-5002	12	12	LT220/151-7-26	E1076-5005	18	16	LT180/231H4-26
E1077-5010	20	20	LT220/251H7-26	E1077-5008	26	26	LT220/251H4-26
E1078-5002	26	24	LT221/251H7-26	E1079-5011	46	27	LT300/252H4-26
E1079-5022	35	34	LT300/272H7-26	<b>5 x 2.5mm<sup>2</sup>, Ø12.4mm, 0.24 kg/m</b>			
E1079-5013	49	24	LT300/252H7-26	E1075-5001	7	7	LT155/108-5-26
<b>12 x 1.5mm<sup>2</sup>, Ø16.2mm, 0.36 kg/m</b>				E1076-5001	11	11	LT180/131-5-26
E1076-5003	7	7	LT180/131-12-26	E1076-5006	18	14	LT180/231H5-26
E1077-5003	12	12	LT220/151-12-26	E1077-5009	26	23	LT220/251H5-26
E1077-5011	22	15	LT220/251H12-26	E1079-5012	46	23	LT300/252H5-26
E1078-5003	29	15	LT221/251H12-26	<b>7 x 2.5mm<sup>2</sup>, Ø14mm, 0.31 kg/m</b>			
E1079-5004	22	22	LT300/252-12-26	E1076-5002	10	10	LT180/131-7-26
E1079-5014	50	15	LT300/252H12-26	E1077-5002	12	12	LT220/151-7-26

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### Express cable reels with payout left & right

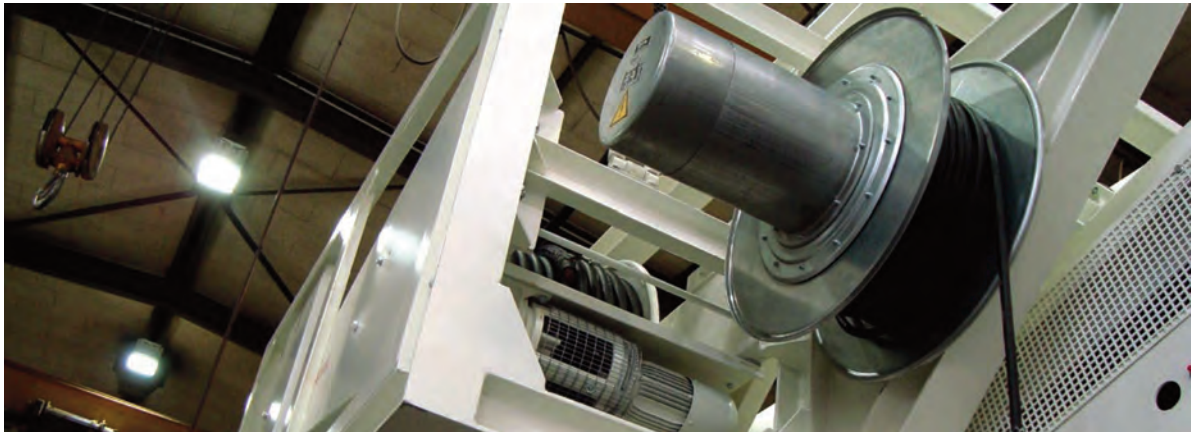
#### Essential accessories for express reels with short-term availability

Article-no.	Horizontal payout	Vertical payout	Reel type	Article-no.	Horizontal payout	Vertical payout	Reel type
Coiling length in meter				Coiling length in meter			
E1077-5010	17	17	LT220/251H7-26	<b>4 x 10mm<sup>2</sup>, Ø18.0mm, 0.61 kg/m</b>			
E1078-5002	26	18	LT221/251H7-26	E1077-5006	7	7	LT220/151-4-60
E1079-5013	47	18	LT300/252H7-26	E1077-5007	13	13	LT220/251-4-60
E1079-5022	36	30	LT300/272H7-26	E1078-5006	20	9	LT221/251H4-60
<b>12 x 2.5mm<sup>2</sup>, Ø19.4mm, 0.48 kg/m</b>				E1079-5026	29	15	LT300/272H4-60
E1077-5003	10	10	LT220/151-12-26	E1081-5013	40	24	LT420/253-4-60
E1078-5003	16	12	LT221/251H12-26	<b>4 x 16mm<sup>2</sup>, Ø21.0mm, 0.92 kg/m</b>			
E1079-5004	25	23	LT300/252-12-26	E1079-5010	20	12	LT300/252-4-125
<b>18 x 2.5mm<sup>2</sup>, Ø19.5 mm, 0.68 kg/m</b>				E1079-5020	18	18	LT300/272-4-125
E1077-5004	8	8	LT220/151-18-26	<b>Accessory programme &amp; payout right</b>			
E1078-5004	15	8	LT221/251H18-26	Cable reels and accessories with payout 'right' have the same article-no. like payout 'left' with an additional suffix <b>-RE</b> behind each item number.			
E1079-5015	26	8	LT300/252H18-26	<b>Reel type</b>	<b>Ratchet</b>	<b>Roller yoke</b>	
<b>24 x 2.5mm<sup>2</sup>, Ø22.4mm, 0.82 kg/m</b>				LT155	E2315-2000	E2350-2000	
E1079-5018	22	22	LT300/272-24-36	LT180	E2316-2000	E2351-2000	
<b>4 x 4mm<sup>2</sup>, Ø12.9mm, 0.28 kg/m</b>				LT220	E2317-2000	E2352-2000	
E1076-5004	10	10	LT180/131-4-40	LT221	E2317-2000	E2353-2000	
E1077-5005	12	12	LT220/151-4-40	LT300	E2319-2000	E2354-2000	
E1078-5005	26	20	LT221/251H4-40	LT420	E2321-2000	E2356-2000	
E1079-5016	47	22	LT300/252H4-40	<b>Cable dia.</b>	<b>Cable grip</b>	<b>Cable dia.</b>	<b>Cable grip</b>
E1079-5025	35	34	LT300/272H4-40	6-10 mm	LS3/06	38-44 mm	LS3/38
<b>4 x 6mm<sup>2</sup>, Ø13.8mm, 0.37 kg/m</b>				10-13 mm	LS3/10	44-52 mm	LS3/44
E1077-5006	12	12	LT220/151-4-60	13-16 mm	LS3/13	50-65 mm	LS3/50
E1077-5013	21	15	LT220/251H4-60	16-20 mm	LS3/16	64-77 mm	LS3/64
E1078-5006	26	15	LT221/251H4-60	20-25 mm	LS3/20	76-89 mm	LS3/76
E1079-5021	50	15	LT300/252H4-60	25-32 mm	LS3/25	89-102 mm	LS3/89
E1079-5026	36	25	LT300/272H4-60	32-38 mm	LS3/32		
E1081-5007	69	18	LT420/283H4-60				

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## Express delivery programme

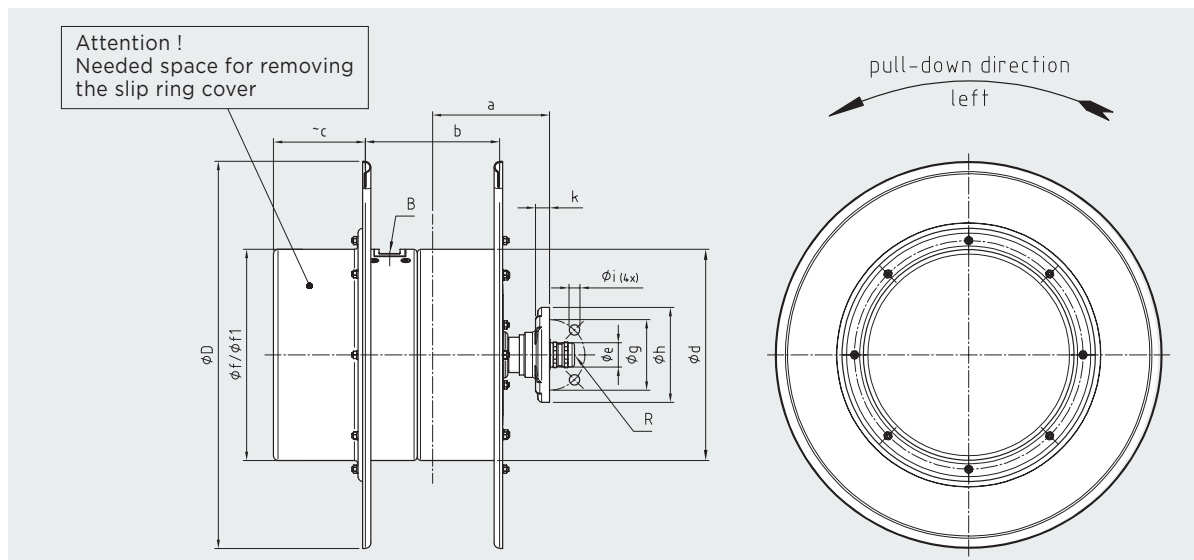
### Cable reel and covering dimensions of our express cable reels

Dimensions for cable reels (according to dimension sheet below)

Type	Ø d	Ø D	a	b	Ø e	Ø f	Ø g	Ø h	Ø i	k
LT155-	155	260	101	110	35	155	65	85	4 x Ø 9	5
LT180-	180	300	109	130	35	180	65	85	4 x Ø 9	5
LT220-	220	400	114	120	35	220	100	130	4 x Ø 13.5	12
LT221-	220	450	129	150	35	220	100	130	4 x Ø 13.5	12
LT300-	300	550	165	190	50	300	100	135	4 x Ø 15.5	20
LT420-	420	680	200	240	60	420	135	178	4 x Ø 17.5	20

Covering dimension 'c' (in mm) in relation to the number of poles

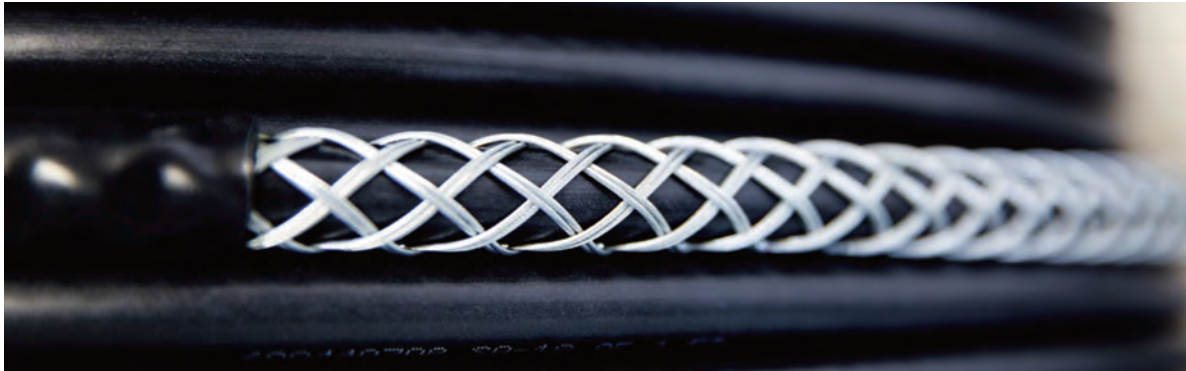
Type	3+PE 26A	3+PE 40A	3+PE 60A	3+PE 125A	4+PE 26A	6+PE 26A	11+PE 26A	17+PE 26A	23+PE 36A	29+PE 36A
LT155-	60	60	/	/	60	100	150	/	/	/
LT180-	90	90	/	/	90	100	150	/	/	/
LT220-	50	50	100	/	75	100	150	260	350	/
LT221-	50	50	75	/	50	75	130	210	350	/
LT300-	80	80	80	120	80	80	150	262	320	400
LT420-	/	85	85	/	/	/	/	/	355	435



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## Accessory programme spring cable reels

### Ratchet

The ratchet ensures a defined cable length, by default with one notch per rotation. Several ratchets can be installed on request. The ratchet also ensures the strain relief of the cable during the operation.



### Fixed attachments

Our fixed attachments can be used for ceiling and ground mounting, for example in workshops or automated facilities in order to cover a maximum working range of 1500.

### Roller guide

The roller guide is rigidly installed to the fixing flange. The roller yoke ensures the even winding and unwinding of the cable and, at the same time, it prevents the cable from 'jumping' over the external flange of the reel. The roller yoke is fitted with plastic rollers which preserve the cable and also make sure that, up to certain extent, the cable can be unwound sideways.



### Cable Anchor stocking

The cable anchor stocking ensures the strain relief for the cable at the feed point. The surface clamping prevents any point loads on the cable. It preserves the cable sheath and extends the cable's service life. The galvanised cable pulling grip is adjusted to the cable diameter and, for safety reasons, it is calculated with 3 times the maximum tensile force.

### Rotating ceiling attachment

The rotating ceiling attachment has a swivelling range of 300° and a stop. It is used for ceiling mounting, for example in workshops or automated facilities, and covers a maximum working range of 300°.

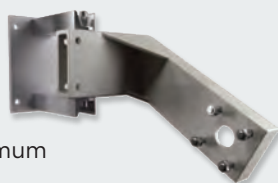


### Cam limit switch

This switch is used for monitoring the reel positions 'full' and 'empty' as well as for other monitoring functions (it is not a safety switch.) Alternatively, other limit switches, proximity switches or transmitters can be installed.

### Rotating wall attachment

The rotating wall attachment has a swivelling range of 150°. It is used for wall mounting, for example in workshops or automated facilities, and covers a maximum working range of 150°.



### Heating unit

Thermally controlled stationary heaters at various output levels. Insulated installation in the slip ring housing. We recommend that a heater is installed in locations where low temperatures can occur or where the temperature fluctuates across a very wide range (within a short period of time).