

CABLE CARRIERS FOR FLAT CABLE

I-BEAM SUPPORTED



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General

This series of Vahle cable carriers and components integrating our worldwide job proven flatcable per catalog no. 8L provides a safe, efficient and maintenance free method of mobile electrification.

The minimum bending radius permissible for flatcable is 5 times the thickness of the cable, thus allowing a considerably smaller bend radius compared to round cable of equal conductor size. Large quantities of conductors are handled and the high Vahle quality of I-beam track supported festoon cable equipment guarantees extra long life.

Layout

Refer to pages 35 thru 39 of this catalog or send us the completed Questionnaire of page 3 for detailed quotations.

Selection of all system components needs to meet your electrical and mechanical requirements. Depending on the application grid type cable loop clamps for neat guiding and tow rope facilities for cable tension relief should be considered as up-grading features.

Vahle welcomes your inquiry on your particular application.

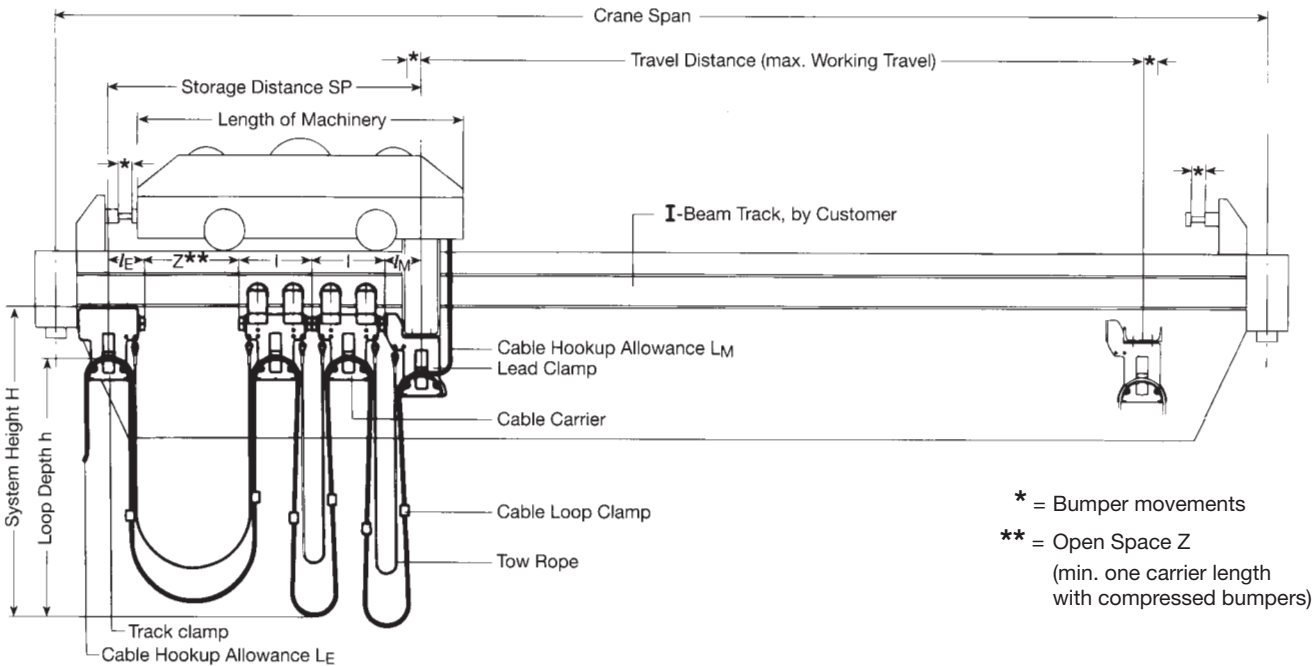
Catalog No. 8a: Cable Carriers on □ -Tracks

Catalog No. 8bF: Cable Carriers for flatform cable on I-Beam Tracks

Catalog No. 8bR: Cable Carriers for round cable on I-Beam Tracks

Catalog No. 8c: Cable Carriers on ◇ -Tracks

Catalog No. 8L: Conductor Cables & Fittings



Name and address of customer: _____

Ref.: _____

- | | |
|---|--|
| <p>1. Type of application:</p> <p>2. Operation
indoor <input type="checkbox"/> outdoor <input type="checkbox"/></p> <p>3. Temperature conditions:</p> <p>4. Platform cable <input type="checkbox"/> (Specification below)
round cable <input type="checkbox"/></p> <p>5. What is the max. possible storage length? (SP)
_____ m</p> <p>6. Is it possible to extend the track for the festoon cable system in case the length of machinery is insufficient for storage?
<input type="checkbox"/> no <input type="checkbox"/> yes, by _____ m</p> <p>7. Special operating/environmental conditions:</p> | <p>8. Length of machinery: _____ m</p> <p>9. Working travel (S): _____ m</p> <p>10. Travel speed (v): _____ m/min</p> <p>11. Acceleration (a): _____ m/s²</p> <p>12. Max. loop depth (h): _____ m</p> <p>13. Max. system height (H): _____ m</p> <p>14. Cable hookup allowance
Track clamp side (L_E): _____ m
Lead clamp side (L_M): _____ m</p> <p>15. Type of I-Beam track
<input type="checkbox"/> I NP standard beam <input type="checkbox"/> I PE flat flange beam</p> |
|---|--|

Cable Specification:

Quantity of Cables	Cable Specification Type/Number of Conductors/Size of Conductors	Height x Width mm	Weight kg/m	Total Weight kg/m

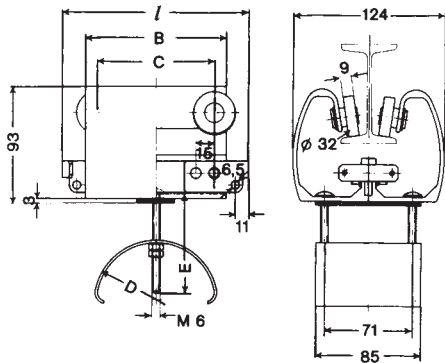


CABLE CARRIERS W 20



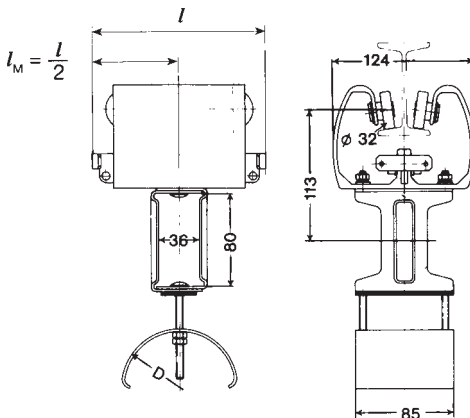
Engineering data

Type	WN 20 F for standard beam I NP 80-160
Carrying capacity	25 kg
Wheels	Hardened and galvanized steel, \varnothing 32 mm, with sealed precision ball bearings
Material	Carrier body: aluminium Bumpers: galvanized steel Cable saddle: galvanized steel, anodized hardware
Operating ambients	-30° C thru + 100° C
Travel speed	max. 80 m/min



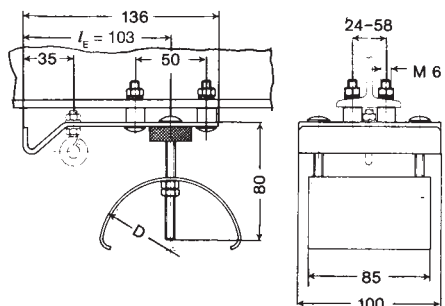
Cable carrier

Type	max. allow. thickness of individual cable mm	max. clamping capacity mm (window dim.) height x width	mm					Weight kg	Order-no.
			l	B	C	D	E		
WN 20 F/ 50-125	7.9	37 x 65	125	89	69	50	60	0.900	341 450
WN 20 F/ 80-125	10.0	22 x 65	125	89	69	80	60	0.970	341 460
WN 20 F/ 50-150	7.9	50 x 65	150	114	94	50	80	1.010	341 710
WN 20 F/ 80-150	10.0	35 x 65	150	114	94	80	60	1.080	341 720
WN 20 F/100-150	12.5	25 x 65	150	114	94	100	60	1.110	341 730
WN 20 F/ 80-180	10.0	50 x 65	180	114	94	80	80	1.080	341 750
WN 20 F/100-180	12.5	40 x 65	180	114	94	100	80	1.110	341 760



Lead carrier

Type	for cable carrier	mm		Weight kg	Order-no.
		l	D		
MN 20 F/ 50-125	WN 20 F/ 50-125	125	50	1.270	341 340
MN 20 F/ 80-125	WN 20 F/ 80-125	125	80	1.340	341 380
MN 20 F/ 50-150	WN 20 F/ 50-150	150	50	1.380	341 550
MN 20 F/ 80-150	WN 20 F/ 80-150	150	80	1.450	341 560
MN 20 F/100-150	WN 20 F/100-150	150	100	1.480	341 570
MN 20 F/ 80-180	WN 20 F/ 80-180	180	80	1.450	345 220
MN 20 F/100-180	WN 20 F/100-180	180	100	1.480	345 230

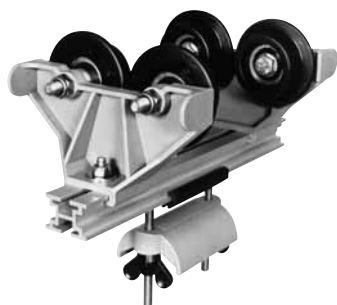


Track clamp

Type	for cable carrier	D mm	Weight kg	Order-no.
E 20 F/ 50	WN 20 F/ 50-125	50	0.590	345 240
	WN 20 F/ 50-150			
E 20 F/ 80	WN 20 F/ 80-125	80	0.660	345 250
	WN 20 F/ 80-150			
	WN 20 F/ 80-180			
E 20 F/100	WN 20 F/100-150	100	0.690	345 260
	WN 20 F/100-180			

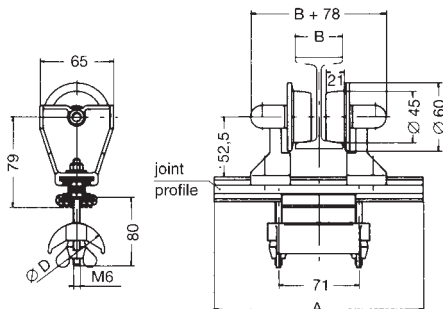


CABLE CARRIERS W 25 F, W 26 F, W 30 F



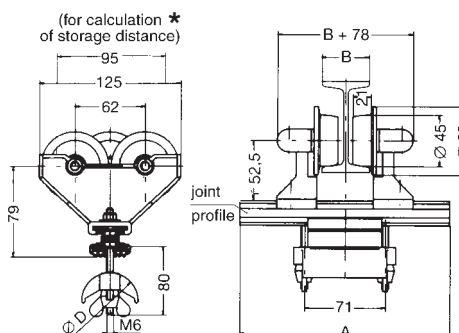
Engineering data

Type	W 25 F (2 wheels)	W 26 F (3 wheels)	W 30 F (4 wheels)
Carrying capacity	10 kg	10 kg	20 kg
Wheels	K	Flanged polyamid wheels Ø 45/60 mm on stainless steel bushed bearings	
	KL	Flanged polyamid wheels Ø 45/60 mm on sealed (2 RS) precision ball bearings	
Material	Polyamid carrier body adjustable on light metal profile. Cable support saddles: polyamid Hardware: galvanized		
Operating ambients	-30° C thru +100° C		
Travel speed	max. 60 m/min		



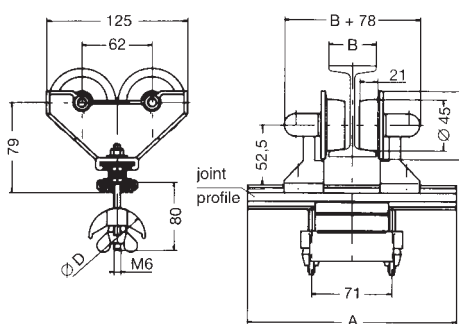
Cable carrier for flatform cable Type W 25 F (2 wheels)

Type	wheels	max. clamping capacity mm height x width	A mm	D mm	for Track Profile		Weight kg	Order-no.
					INP	IPE		
W 25 F/65-50 K -1	K	25x65	185	50	80-220	80-200	0.420	346 647
W 25 F/65-50 K -2			235		240-380	220-300	0.450	346 648
W 25 F/65-50 KL-1	KL		185		80-220	80-200	0.500	346 649
W 25 F/65-50 KL-2			235		240-380	220-300	0.530	346 650



Cable carrier for flatform cable Type W 26 F (3 wheels)

Type	wheels	max. clamping capacity mm height x width	A mm	D mm	for Track Profile		Weight kg	Order-no.
					INP	IPE		
W 26 F/125-50 K -1	K	25x65	185	50	80-220	80-200	0.490	346 651
W 26 F/125-50 K -2			235		240-380	220-300	0.520	346 652
W 26 F/125-50 KL-1	KL		185		80-220	80-200	0.610	346 653
W 26 F/125-50 KL-2			235		240-380	220-300	0.640	346 654

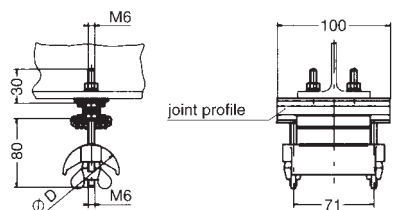


Cable carrier for flatform cable Type W 30 F (4 wheels)

Type	wheels	max. clamping capacity mm height x width	A mm	D mm	for Track Profile		Weight kg	Order-no.
					INP	IPE		
W 30 F/125-50 K -1	K	35x65	185	50	80-220	80-200	0.560	346 655
W 30 F/125-50 K -2			235		240-380	220-300	0.590	346 656
W 30 F/125-50 KL-1	KL		185		80-220	80-200	0.720	346 657
W 30 F/125-50 KL-2			235		240-380	220-300	0.750	346 658
W 30 F/125-80 K -1	K	25x65	185	80	80-220	80-200	0.570	346 659
W 30 F/125-80 K -2			235		240-380	220-300	0.610	346 660
W 30 F/125-80 KL-1	KL		185		80-220	80-200	0.730	346 661
W 30 F/125-80 KL-2			235		240-380	220-300	0.770	346 662

Track clamp for flatform cable Type E 25-30 F

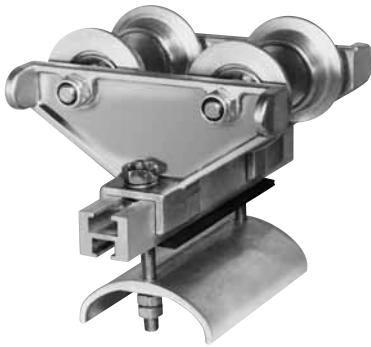
(to be used as well as towing arm)



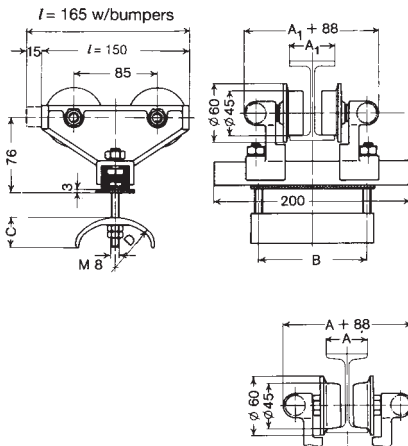
Type	for cable carrier	D mm	Weight kg	Order-no.
E 25-30 F/50	W 25 F/ 65-50 ...	50	0.180	346 663
	W 26 F/125-50 ...			
	W 30 F/125-50 ...			
E 25-30 F/80	W 30 F/125-80 ...	80	0.200	346 664

* alternately installation of cable carriers necessary

Engineering data



Type	WE 35 F for flat flange beam I PE 80-200 WN 35 F for standard beam INP 80-220
Carrying capacity	30 kg
Wheels	a) Polyamid wheels on stainless steel bush bearing b) hardened and galvanized steel wheels with sealed ball bearing, sealed against dust and splash water – spherical form
Material	Carrier body: aluminium – seawater resistant Support saddle: aluminium 100 mm Ø, or steel galvanized 50 mm Ø Hardware: galvanized
Operating ambients	-30° C thru +100° C
Travel speed	max. 80 m/min.



Cable carrier

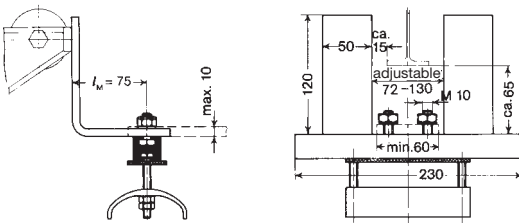
Type*	wheels	max.perm. thickness of cable in mm	max. clamping capacity mm height x width	B	C	D	Weight kg	Order-no.	Order-no. with bumper	
				mm						
Cable carrier Standard beam	WN 35 F/ 50 WN 35 F/ 100	a	8.0 12.0	45 x 100 25 x 100	110	25 30	50 100	1.170	345 481 345 482	345 492 345 493
Cable carrier Fl. fl. beam	WE 35 F/ 50 WE 35 F/ 100	a	8.0 12.0	45 x 100 25 x 100	110	25 30	50 100	1.170	345 483 345 484	345 494 345 495
Cable carrier Standard- and Fl. fl. beam	W 35 F/ 50 S W 35 F/100 S	b	8.0 12.0	45 x 100 25 x 100	110	25 30	50 100	1.940	345 485 345 486	345 496 345 497

Standard beam

Beam INP	80	100	120	140	160	180	200	220
Dim. A	42	50	58	66	74	82	90	98

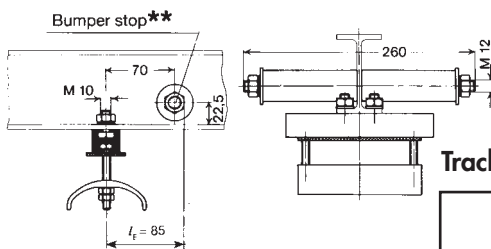
Flat flange beam

Beam IPE	80	100	120	140	160	180	200
Dim. A ₁	46	55	64	73	82	91	100



Lead clamp

Type	for Cable carrier	B	C	D	Weight kg	Order-no.
		mm				
Lead clamp	M 35 F/ 50 M 35 F/100	W (N, E) 35 F/ 50 (S) W (N, E) 35 F/100 (S)	110	25 30	50 100	2.160 345 487 345 488



Track clamp and Bumper stop

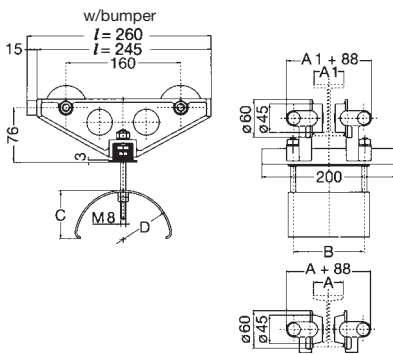
Type	for Cable carrier	B	C	D	Weight kg	Order-no.
		mm				
Track clamp	E 35 F/ 50** E 35 F/100**	W (N, E) 35 F/ 50 (S) W (N, E) 35 F/100 (S)	110	25 30	50 100	0.490 345 489 345 490
Bumper stop	PS 3-4	-	-	-	0.410	340 100



Engineering data

Type	WE 40 F for flat flange beam IPE 80-200 WN 40 F for standard beam INP 80-220
Carrying capacity	30 kg
Wheels	a) Polyamid wheels on stainless steel bushed bearing b) hardened and galvanized steel wheels with sealed ball bearing spherical form
Material	Carrier body: aluminium – seawater resistant Support saddle: steel galvanized Hardware: galvanized
Operating ambients	-30° C thru +100° C
Travel speed	max. 80 m/min.

Cable carrier



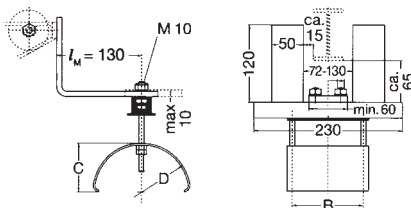
Type*	wheels	max.perm. thickness of cable in mm	max. clamping capacity mm height x width	B	C	D	Weight kg	Order-no.	Order-no. with Bumper	
				mm						
Cable carrier Standard beam	WN 40 F/140 WN 40 F/170	a	14 17	50 x 100 35 x 100	110	70 85	140 170	1.820 2.040	345 904 345 905	345 910 345 911
Cable carrier Fl. fl. beam	WE 40 F/140 WE 40 F/170	a	14 17	50 x 100 35 x 100	110	70 85	140 170	1.830 2.050	345 906 345 907	345 912 345 913
Cable carrier Standard- and Fl. fl. beam	W 40 F/140 S W 40 F/170 S	b	14 17	50 x 100 35 x 100	110	70 85	140 170	2.820 2.600	345 908 345 909	345 914 345 915

Standard beam

Beam INP	80	100	120	140	160	180	200	220
Dim. A	42	50	58	66	74	82	90	98

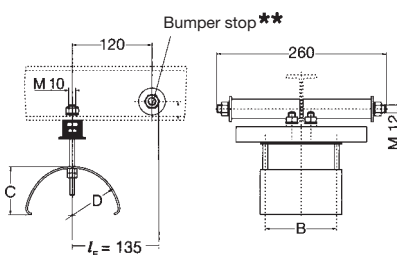
Flat flange beam

Beam IPE		80	100	120	140	160	180	200
Dim. A 1		46	55	64	73	82	91	100



Lead clamp

Type	for Cable carrier	B	C	D	Weight kg	Order-no.	
		mm					
Lead clamp	M 40 F/140 M 40 F/170	W (N, E) 40 F/140 (S) W (N, E) 40 F/170 (S)	110	70 85	140 170	2.180 2.400	345 916 345 917



Track clamp and Bumper stop

Type	for Cable carrier	B	C	C	Weight kg	Order-no.	
		mm					
Track clamp	E 40 F/140** E 40 F/170**	W (N, E) 40 F/140 (S) W (N, E) 40 F/170 (S)	110	70 85	140 170	0.920 1.140	345 918 345 919
Bumper stop	PS 3-4	-	-	-	0.410	340 100	

* Use suffix -P for bumper version (example: W 40 F/170 S-P Order-no. 345 915).
** Bumper stop PS 3-4 to be ordered separately.

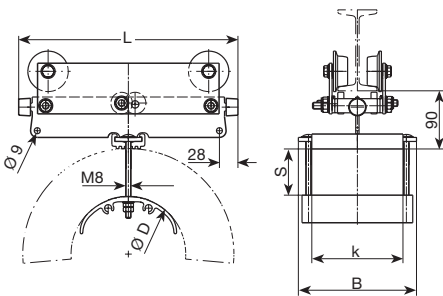


CABLE CARRIERS W 45 FR



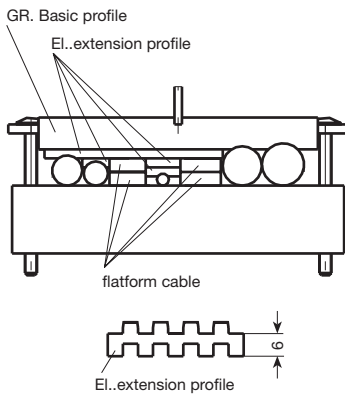
Engineering data

Type	W 45 FR on I-profil for flatform and round cable
Carrying capacity	50 kg (max. 80 kg - consult factory)
Travel speed	max. 120 m/min. when using appropriate cable tension relief
Wheel sets	for standard tracks INP 80 to INP 200 and for flat flange beams IPE 80 to IPE 200 other profiles on request on stainless steel bushed bearing
Wheels	flanged steel wheels Ø 45/60 mm, hardened and galvanized, steel kick-up rollers Ø 32 mm with bushed bearing and tread hardened and galvanized
Material	Carrier body: steel galvanized Support saddle: aluminium
Operating ambients	-30 °C thru +100 °C



Collecting clamp for round cables

Extension rubber profile can be ordered per meter (Order-no.: 348 845)

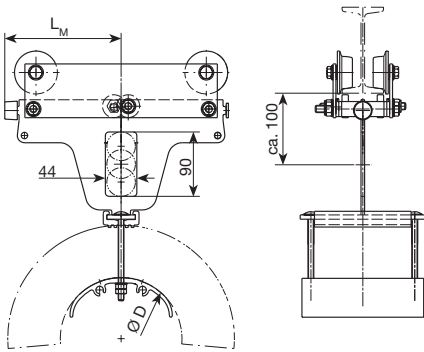


Cable carrier W 45 FR

Type	max. clamping capacity mm height x width (s x k)	L mm	B mm	D mm	Weight kg	Order-no. w/o kick-up rollers	Order-no. w/kick-up rollers
W 45 FR/160- 80 B 175	35 x 135	160	175	80	2.750	348 663	348 685
W 45 FR/160- 80 B 225	35 x 185	160	225	80	2.880	348 664	348 686
W 45 FR/160-100 B 175	25 x 135	160	175	100	2.830	348 665	348 687
W 45 FR/160-100 B 225	25 x 185	160	225	100	3.000	348 666	348 688
W 45 FR/200- 80 B 175	55 x 135	200	175	80	3.050	348 667	348 689
W 45 FR/200- 80 B 225	55 x 185	200	225	80	3.180	348 668	348 690
W 45 FR/200-100 B 175	45 x 135	200	175	100	3.130	348 669	348 691
W 45 FR/200-100 B 225	45 x 185	200	225	100	3.300	348 670	348 692
W 45 FR/200-140 B 175	25 x 135	200	175	140	3.370	348 671	348 693
W 45 FR/200-140 B 225	25 x 185	200	225	140	3.610	348 672	348 694
W 45 FR/250-100 B 175	70 x 135	250	175	100	3.490	348 673	348 695
W 45 FR/250-100 B 225	70 x 185	250	225	100	3.660	348 674	348 696
W 45 FR/250-140 B 175	50 x 135	250	175	140	3.730	348 675	348 697
W 45 FR/250-140 B 225	50 x 185	250	225	140	3.970	348 676	348 698
W 45 FR/250-170 B 175	35 x 135	250	175	170	3.790	348 677	348 699
W 45 FR/250-170 B 225	35 x 185	250	225	170	4.040	348 678	348 700
W 45 FR/290-140 B 175	70 x 135	290	175	140	4.010	348 679	348 701
W 45 FR/290-140 B 225	70 x 185	290	225	140	4.250	348 680	348 702
W 45 FR/290-170 B 175	55 x 135	290	175	170	4.070	348 681	348 703
W 45 FR/290-170 B 225	55 x 185	290	225	170	4.230	348 682	348 704
W 45 FR/325-170 B 175	72 x 135	325	175	170	4.290	348 683	348 705
W 45 FR/325-170 B 225	72 x 185	325	225	170	4.540	348 684	348 706

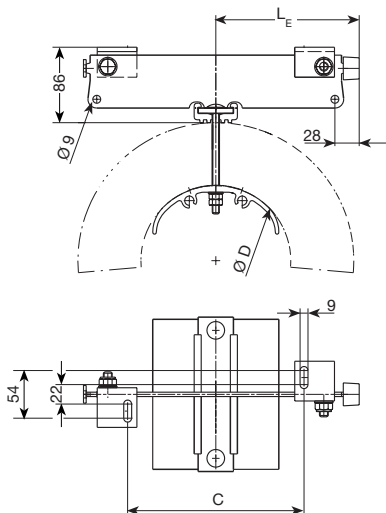


Lead clamp MW 45



Type	for Cable carrier	L _M mm	D mm	Weight kg	Order-no.
MW 45 FR/200- 80 B 175	W 45 FR/160- 80 B 175	100	80	3.290	348 741
	W 45 FR/200- 80 B 175				
MW 45 FR/200- 80 B 225	W 45 FR/160- 80 B 225	100	80	3.430	348 742
	W 45 FR/200- 80 B 225				
MW 45 FR/200-100 B 175	W 45 FR/160-100 B 175	100	100	3.370	348 743
	W 45 FR/200-100 B 175				
MW 45 FR/200-100 B 225	W 45 FR/160- 100 B 225	100	100	3.550	348 744
	W 45 FR/200- 100 B 225				
MW 45 FR/200-140 B 175	W 45 FR/200-140 B 175	100	140	3.610	348 745
MW 45 FR/200-140 B 225	W 45 FR/200-140 B 225	100	140	3.860	348 746
MW 45 FR/325-100 B 175	W 45 FR/250-100 B 175	162	100	4.280	348 747
MW 45 FR/325-100 B 225	W 45 FR/250-100 B 225	162	100	4.450	348 748
MW 45 FR/325-140 B 175	W 45 FR/250-140 B 175	162	140	4.510	348 749
	W 45 FR/290-140 B 175				
MW 45 FR/325-140 B 225	W 45 FR/250-140 B 225	162	140	4.760	348 750
	W 45 FR/290-140 B 225				
MW 45 FR/325-170 B 175	W 45 FR/250-170 B 175	162	170	4.570	348 751
	W 45 FR/290-170 B 175				
	W 45 FR/325-170 B 175				
MW 45 FR/325-170 B 225	W 45 FR/250-170 B 225	162	170	4.830	348 752
	W 45 FR/290-170 B 225				
	W 45 FR/325-170 B 225				

Track clamp E 45



Type	for Cable carrier	L _E mm	D mm	C mm	Weight kg	Order-no.
E 45 FR/160- 80 B 175	W 45 FR/160- 80 B 175	80	80	35	1.120	348 786
E 45 FR/160- 80 B 225	W 45 FR/160- 80 B 225	80	80	35	1.250	348 787
E 45 FR/160-100 B 175	W 45 FR/160-100 B 175	80	100	35	1.200	348 788
E 45 FR/160-100 B 225	W 45 FR/160-100 B 225	80	100	35	1.370	348 789
E 45 FR/200- 80 B 175	W 45 FR/200- 80 B 175	100	80	75	1.220	348 790
E 45 FR/200- 80 B 225	W 45 FR/200- 80 B 225	100	80	75	1.350	348 791
E 45 FR/200-100 B 175	W 45 FR/200-100 B 175	100	100	75	1.300	348 792
E 45 FR/200-100 B 225	W 45 FR/200-100 B 225	100	100	75	1.470	348 793
E 45 FR/200-140 B 175	W 45 FR/200-140 B 175	100	140	75	1.540	348 794
E 45 FR/200-140 B 225	W 45 FR/200-140 B 225	100	140	75	1.780	348 795
E 45 FR/250-100 B 175	W 45 FR/250-100 B 175	125	100	125	1.420	348 796
E 45 FR/250-100 B 225	W 45 FR/250-100 B 225	125	100	125	1.590	348 797
E 45 FR/250-140 B 175	W 45 FR/250-140 B 175	125	140	125	1.660	348 798
E 45 FR/250-140 B 225	W 45 FR/250-140 B 225	125	140	125	1.900	348 799
E 45 FR/250-170 B 175	W 45 FR/250-170 B 175	125	170	125	1.720	348 800
E 45 FR/250-170 B 225	W 45 FR/250-170 B 225	125	170	125	1.970	348 801
E 45 FR/290-140 B 175	W 45 FR/290-140 B 175	145	140	165	1.760	348 802
E 45 FR/290-140 B 225	W 45 FR/290-140 B 225	145	140	165	2.000	348 803
E 45 FR/290-170 B 175	W 45 FR/290-170 B 175	145	170	165	1.820	348 804
E 45 FR/290-170 B 225	W 45 FR/290-170 B 225	145	170	165	2.070	348 805
E 45 FR/325-170 B 175	W 45 FR/325-170 B 175	162	170	200	1.900	348 806
E 45 FR/325-170 B 225	W 45 FR/325-170 B 225	162	170	200	2.150	348 807

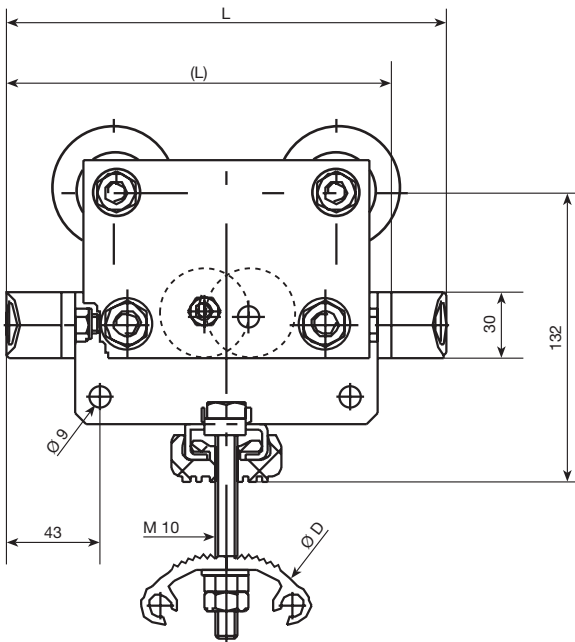


CABLE CARRIERS W 55 · HEAVY DUTY

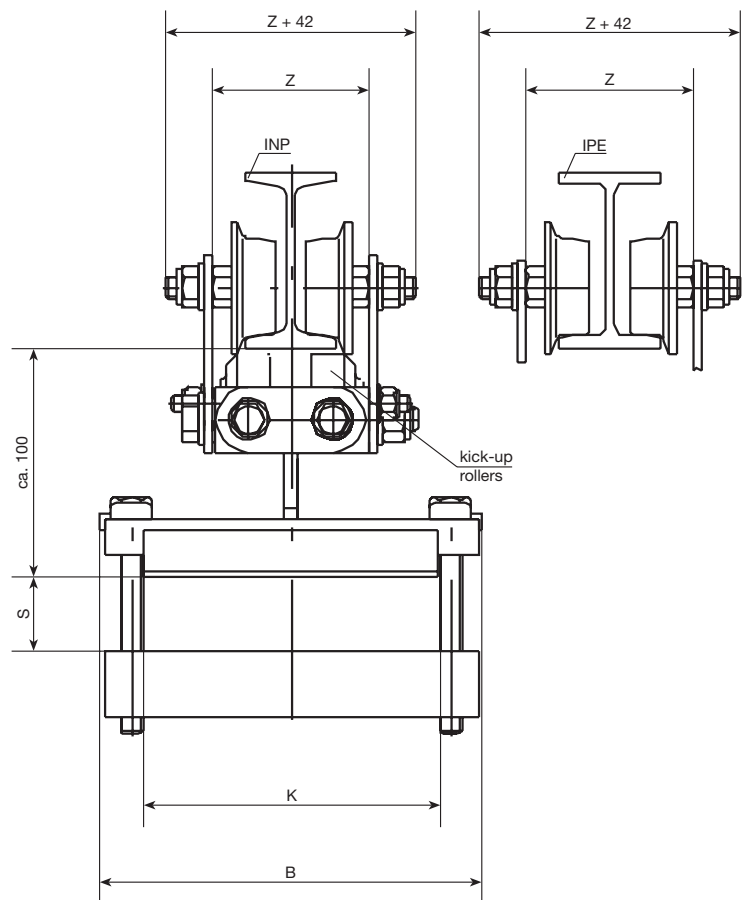


Engineering data

Type	W 55
Carrying capacity	70 kg
Travel speed	max. 120 m/min when using appropriate cable tension relief
Wheel sets	for standard tracks INP 80 to 200* for flat flange beams IPE 80 to 200*
Wheels	flanged steel wheels Ø 45/60 mm, on stainless steel, bushed bearing, tread hardened and galvanized
Kick-up rollers	Polyamid-kick-up-rollers Ø 45 mm on stainless bushed bearings
Material	Carrier body: steel galvanized Support saddle: aluminium
Operating ambients	-30° C thru +100° C



(L) = with one bumper



Beam	Z
INP 80	71
INP 100	79
INP 120	87
INP 140	95
INP 160	103
INP 180	111
INP 200	119
IPE 80	76
IPE 100	85
IPE 120	94
IPE 140	103
IPE 160	112
IPE 180	121
IPE 200	130

Please specify with your order:	
Cable carrier: Type	Order-no.
Wheel sets: Type	Order-no.
I-Beam Size:	



CABLE CARRIERS W 55 • HEAVY DUTY

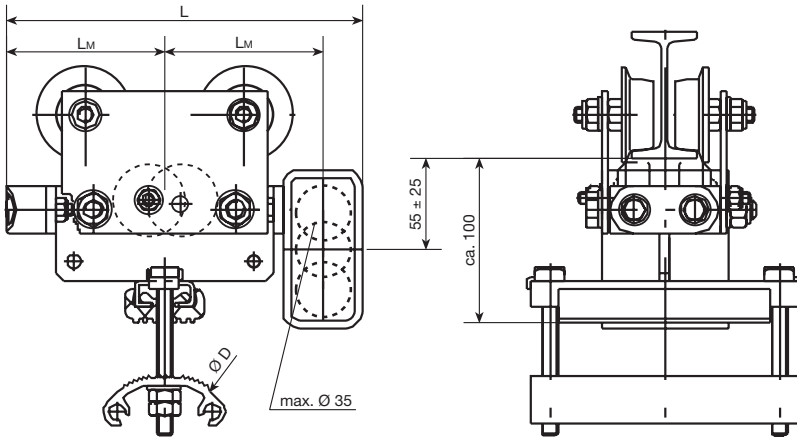


Cable carrier W 55

Type	max. perm. thickness of cable in mm (s x k)	L mm	(L) mm	B mm	D mm	Weight kg	Order-no. w/o kick-up roller	Order-no. w/ kick-up roller		
W 55 F/175-100-B 175	30 x 135		175	175	100	4.000	346 101	346 115		
W 55 F/175-100-B 225	30 x 185			225		4.100	348 885	348 604		
W 55 F/175-100-B 275	30 x 235			275		4.300	348 899	348 918		
W 55 F/200-100-B 175	45 x 135	200		175	100	4.100	346 102	346 116		
W 55 F/200-100-B 225	45 x 185			225		4.200	348 886	348 137		
W 55 F/200-100-B 275	45 x 235			275		4.400	348 900	348 466		
W 55 F/200-140-B 175	25 x 135			175	140	4.200	346 103	346 117		
W 55 F/200-140-B 225	25 x 185			225		4.400	348 887	348 913		
W 55 F/200-140-B 275	25 x 235			275		4.500	348 901	348 919		
W 55 F/250-140-B 175	50 x 135			250		175	140	4.800	346 104	346 118
W 55 F/250-140-B 225	50 x 185					225		5.000	348 888	348 905
W 55 F/250-140-B 275	50 x 235					275		5.100	348 902	348 086
W 55 F/250-170-B 175	35 x 135	175	170			5.000	346 105	346 119		
W 55 F/250-170-B 225	35 x 185	225				5.200	348 889	348 914		
W 55 F/250-170-B 275	35 x 235	275				5.500	348 903	348 920		
W 55 F/250-200-B 175	20 x 135	175	200			5.700	346 106	346 120		
W 55 F/250-200-B 225	20 x 185	225				5.900	348 890	348 915		
W 55 F/250-200-B 275	20 x 235	275				6.200	348 904	348 921		
W 55 F/275-140-B 175	60 x 135	275				175	140	4.900	346 107	346 121
W 55 F/275-140-B 225	60 x 185					225		5.100	348 891	347 241
W 55 F/275-140-B 275	60 x 235					275		5.200	348 905	348 922
W 55 F/275-170-B 175	45 x 135			175	170	5.100	346 108	346 122		
W 55 F/275-170-B 225	45 x 185			225		5.300	348 892	348 270		
W 55 F/275-170-B 275	45 x 235			275		5.600	348 906	348 923		
W 55 F/275-200-B 175	30 x 135			175	200	5.800	346 109	346 123		
W 55 F/275-200-B 225	30 x 185			225		6.200	348 893	348 916		
W 55 F/275-200-B 275	30 x 235			275		6.700	348 907	348 085		
W 55 F/325-170-B 175	70 x 135			325		175	170	5.600	346 110	346 124
W 55 F/325-170-B 225	70 x 185					225		5.800	348 894	347 552
W 55 F/325-170-B 275	70 x 235					275		6.100	348 908	348 924
W 55 F/325-200-B 175	55 x 135					175	200	6.300	346 111	346 125
W 55 F/325-200-B 225	55 x 185					225		6.700	348 895	346 763
W 55 F/325-200-B 275	55 x 235					275		7.200	348 909	348 925
W 55 F/325-230-B 175	40 x 135	175	230			6.600	346 112	346 126		
W 55 F/325-230-B 225	40 x 185	225				7.100	348 896	348 917		
W 55 F/325-230-B 275	40 x 235	275				7.600	348 910	348 926		
W 55 F/350-200-B 175	70 x 135	350				175	200	6.400	346 113	346 127
W 55 F/350-200-B 225	70 x 185					225		6.800	348 897	347 370
W 55 F/350-200-B 275	70 x 235					275		7.300	348 911	348 927
W 55 F/350-230-B 175	55 x 135					175	230	6.700	346 114	346 128
W 55 F/350-230-B 225	55 x 185					225		7.200	348 898	346 897
W 55 F/350-230-B 275	55 x 235					275		7.700	348 912	348 928

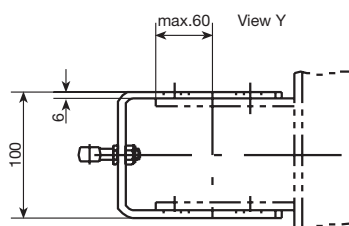
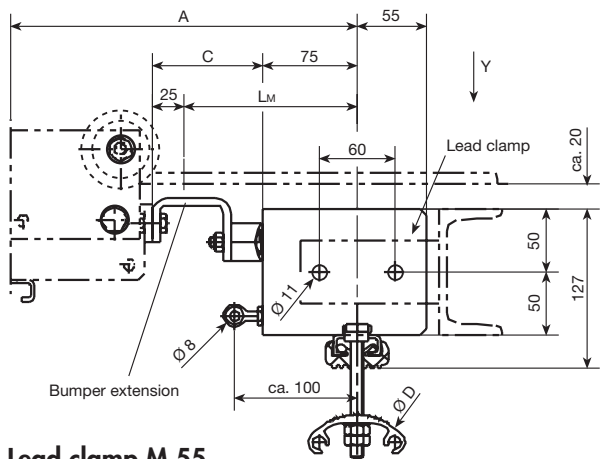


CABLE CARRIERS W 55 • HEAVY DUTY



Lead clamp MW 55

Type	for Cable carriers	L	LM	D	Weight kg	Order-no.
MW 55 F/200-100-B 175	W 55 F/175-100-B 175 W 55 F/200-100-B 175	225	100	100	4.800	346 716
MW 55 F/200-100-B 225	W 55 F/175-100-B 225 W 55 F/200-100-B 225				4.900	348 953
MW 55 F/200-100-B 275	W 55 F/175-100-B 275 W 55 F/200-100-B 275				5.100	348 960
MW 55 F/200-140-B 175	W 55 F/200-140-B 175	225	100	140	5.000	346 734
MW 55 F/200-140-B 255	W 55 F/200-140-B 225				5.200	348 954
MW 55 F/200-140-B 275	W 55 F/200-140-B 275				5.300	348 961
MW 55 F/275-140-B 175	W 55 F/250-140-B 175 W 55 F/275-140-B 175	300	138	140	5.700	346 584
MW 55 F/275-140-B 225	W 55 F/250-140-B 225 W 55 F/275-140-B 225				5.900	348 955
MW 55 F/275-140-B 275	W 55 F/250-140-B 275 W 55 F/275-140-B 275				6.000	348 962
MW 55 F/275-170-B 175	W 55 F/250-170-B 175 W 55 F/275-170-B 175	300	138	170	5.000	346 735
MW 55 F/275-170-B 225	W 55 F/250-170-B 225 W 55 F/275-170-B 225				5.200	348 956
MW 55 F/275-170-B 275	W 55 F/250-170-B 275 W 55 F/275-170-B 275				5.500	348 963
MW 55 F/275-200-B 175	W 55 F/250-200-B 175 W 55 F/275-200-B 175	300	138	200	5.600	346 736
MW 55 F/275-200-B 225	W 55 F/250-200-B 225 W 55 F/275-200-B 225				6.000	348 957
MW 55 F/275-200-B 275	W 55 F/250-200-B 275 W 55 F/275-200-B 275				6.500	348 964
MW 55 F/350-170-B 175	W 55 F/325-170-B 175	375	175	170	6.400	346 733
MW 55 F/350-170-B 225	W 55 F/325-170-B 225				6.600	348 958
MW 55 F/350-170-B 275	W 55 F/325-170-B 275				6.900	348 965
MW 55 F/350-200-B 175	W 55 F/325-200-B 175 W 55 F/350-200-B 175	375	175	200	7.100	346 737
MW 55 F/350-200-B 225	W 55 F/325-200-B 225 W 55 F/350-200-B 225				7.500	347 371
MW 55 F/350-200-B 275	W 55 F/325-200-B 275 W 55 F/350-200-B 275				8.000	348 966
MW 55 F/350-230-B 175	W 55 F/325-230-B 175 W 55 F/350-230-B 175	375	175	230	7.400	346 738
MW 55 F/350-230-B 225	W 55 F/325-230-B 225 W 55 F/350-230-B 225				7.900	348 959
MW 55 F/350-230-B 275	W 55 F/325-230-B 275 W 55 F/350-230-B 275				8.400	348 967



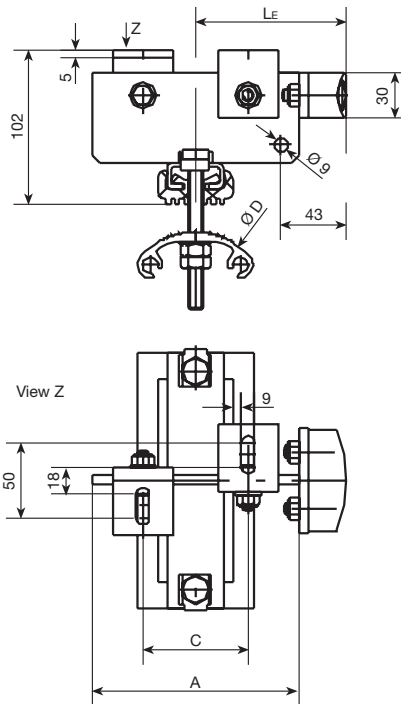
Lead clamp M 55

Type	für Cable carrier	A	D	Weight kg	Order-no.	
M 55 F/100-1 B 175	W 55 F/175-100-B 175	238	100	2.200	346 140	
M 55 F/100-1 B 225	W 55 F/175-100-B 225			2.300	348 605	
M 55 F/100-1 B 275	W 55 F/175-100-B 275			2.500	348 970	
M 55 F/100-2 B 175	W 55 F/200-100-B 175		100	2.200	346 141	
M 55 F/100-2 B 225	W 55 F/200-100-B 225			2.300	347 681	
M 55 F/100-2 B 275	W 55 F/200-100-B 275			2.500	348 971	
M 55 F/140-1 B 175	W 55 F/200-140-B 175		140	2.300	346 142	
M 55 F/140-1 B 225	W 55 F/200-140-B 225			2.500	348 968	
M 55 F/140-1 B 275	W 55 F/200-140-B 275			2.600	348 972	
M 55 F/140-2 B 175	W 55 F/250-140-B 175 W 55 F/275-140-B 175	275	140	2.300	346 143	
M 55 F/140-2 B 225	W 55 F/250-140-B 225 W 55 F/275-140-B 225			2.500	347 242	
M 55 F/140-2 B 275	W 55 F/250-140-B 275 W 55 F/275-140-B 275			2.600	348 973	
M 55 F/170-1 B 175	W 55 F/250-170-B 175	275	170	3.000	346 144	
	W 55 F/275-170-B 175	350				
	W 55 F/325-170-B 175					
M 55 F/170-1 B 225	W 55 F/250-170-B 225	275		3.200	347 553	
	W 55 F/275-170-B 225 W 55 F/325-170-B 225	350				
	M 55 F/170-1 B 275	W 55 F/250-170-B 275		275	3.500	348 491
W 55 F/275-170-B 275 W 55 F/325-170-B 275		350				
M 55 F/200-1 B 175		W 55 F/250-200-B 175 W 55 F/275-200-B 175		275	200	3.200
	M 55 F/200-1 B 225	W 55 F/250-200-B 225 W 55 F/275-200-B 225				3.600
		M 55 F/200-1 B 275	W 55 F/250-200-B 275 W 55 F/275-200-B 275			4.100
M 55 F/200-2 B 175	W 55 F/325-200-B 175 W 55 F/350-200-B 175	350	200	3.200	346 146	
	M 55 F/200-2 B 225			W 55 F/325-200-B 225 W 55 F/350-200-B 225	3.600	346 765
				M 55 F/200-2 B 275	W 55 F/325-200-B 275 W 55 F/350-200-B 275	4.100
M 55 F/230-1 B 175	W 55 F/325-230-B 175 W 55 F/350-230-B 175	350	230	3.400	346 147	
	M 55 F/230-1 B 225			W 55 F/325-230-B 225 W 55 F/350-230-B 225	3.900	346 898
M 55 F/230-1 B 275				W 55 F/325-230-B 275 W 55 F/350-230-B 275	4.400	348 979



Bumper extension PV 55 (see graph page 13)

Type	for Cable carrier	C	L _M	Weight kg	Order-no.
PV 55-1	W 55 F/175-100 (all types)	88	138	0.500	346 148
	W 55 F/200-100 (all types)				
	W 55 F/200-140 (all types)				
	W 55 F/250-140 (all types)				
	W 55 F/250-170 (all types)				
	W 55 F/250-200 (all types)				
	W 55 F/275-140 (all types)				
	W 55 F/275-170 (all types)				
PV 55-2	W 55 F/325-170 (all types)	125	175	0.600	346 149
	W 55 F/325-200 (all types)				
	W 55 F/325-230 (all types)				
	W 55 F/350-200 (all types)				
	W 55 F/350-230 (all types)				

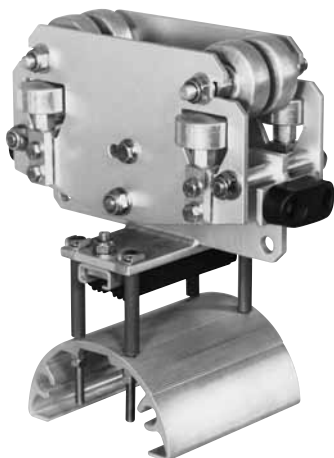


Track clamp E 55

Type	for Cable carrier	L _E	A	C	D	Weight kg	Order-no.
E 55 F/175-100-B 175	W 55 F/175-100-B 175	100	138	70	100	1.900	346 150
E 55 F/175-100-B 225	W 55 F/175-100-B 225					2.000	348 935
E 55 F/175-100-B 275	W 55 F/175-100-B 275					2.200	348 944
E 55 F/200-100-B 175	W 55 F/200-100-B 175	100	138	70	100	2.000	346 151
E 55 F/200-100-B 225	W 55 F/200-100-B 225					2.100	348 936
E 55 F/200-100-B 275	W 55 F/200-100-B 275					2.300	348 945
E 55 F/200-140-B 175	W 55 F/200-140-B 175	100	138	70	140	2.100	346 152
E 55 F/200-140-B 225	W 55 F/200-140-B 225					2.300	348 937
E 55 F/200-140-B 275	W 55 F/200-140-B 275					2.400	348 946
E 55 F/275-140-B 175	W 55 F/250-140-B 175 W 55 F/275-140-B 175	138	213	145	140	2.400	346 153
E 55 F/275-140-B 225	W 55 F/250-140-B 225 W 55 F/275-140-B 225					2.600	348 938
E 55 F/275-140-B 275	W 55 F/250-140-B 275 W 55 F/275-140-B 275					2.700	348 947
E 55 F/275-170-B 175	W 55 F/250-170-B 175 W 55 F/275-170-B 175	138	213	145	170	3.100	346 154
E 55 F/275-170-B 225	W 55 F/250-170-B 225 W 55 F/275-170-B 225					3.300	348 939
E 55 F/275-170-B 275	W 55 F/250-170-B 275 W 55 F/275-170-B 275					3.600	348 948
E 55 F/275-200-B 175	W 55 F/250-200-B 175 W 55 F/275-200-B 175	138	213	145	200	3.200	346 155
E 55 F/275-200-B 225	W 55 F/250-200-B 225 W 55 F/275-200-B 225					3.600	348 940
E 55 F/275-200-B 275	W 55 F/250-200-B 275 W 55 F/275-200-B 275					4.100	348 949
E 55 F/325-170-B 175	W 55 F/325-170-B 175	175	288	220	170	3.600	346 156
E 55 F/325-170-B 225	W 55 F/325-170-B 225					3.800	348 941
E 55 F/325-170-B 275	W 55 F/325-170-B 275					4.100	348 950
E 55 F/350-200-B 175	W 55 F/325-200-B 175 W 55 F/350-200-B 175	175	288	220	200	3.700	346 157
E 55 F/350-200-B 225	W 55 F/325-200-B 225 W 55 F/350-200-B 225					4.100	348 942
E 55 F/350-200-B 275	W 55 F/325-200-B 275 W 55 F/350-200-B 275					4.600	348 951
E 55 F/350-230-B 175	W 55 F/325-230-B 175 W 55 F/350-230-B 175	175	288	220	230	4.000	346 158
E 55 F/350-230-B 225	W 55 F/325-230-B 225 W 55 F/350-230-B 225					4.500	348 943
E 55 F/350-230-B 275	W 55 F/325-230-B 275 W 55 F/350-230-B 275					5.000	348 952

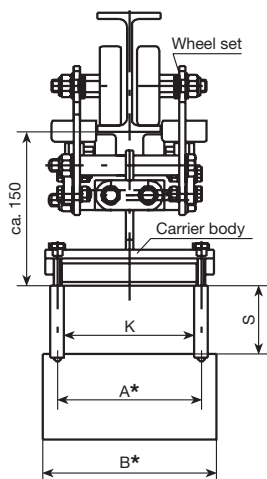
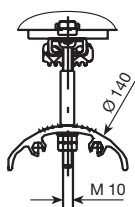
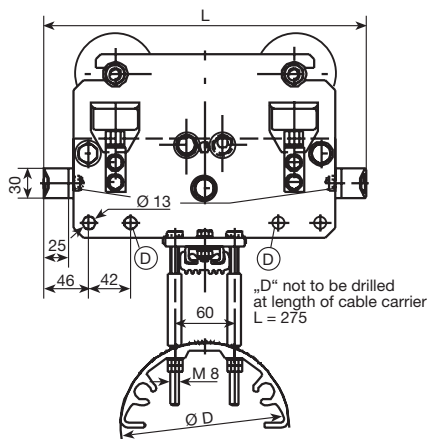


CABLE CARRIERS W 65 • HEAVY DUTY



Engineering data

Type	W 65	
Carrying capacity	wheels Ø 65 mm: max. 200 kg 80 mm: max. 300 kg	see wheel sets page 25
Travel speed	max. 160 m/min	
Wheel sets	for standard track (INP) and flat flange beam (IPE) available with or without lateral & vertical guide rollers	
Wheels	flanged steel wheels Ø 65/80 mm or cylindrical steel wheels 80 mm OD with sealed precision ball bearings hardened and galvanized or with polyurethane-covering	
Material	Carrier body: steel galvanized Support saddle: aluminium	
Operating ambients	-30° C thru +100° C	



* Other width on request

Carrier body W 65 (w/o wheel set)

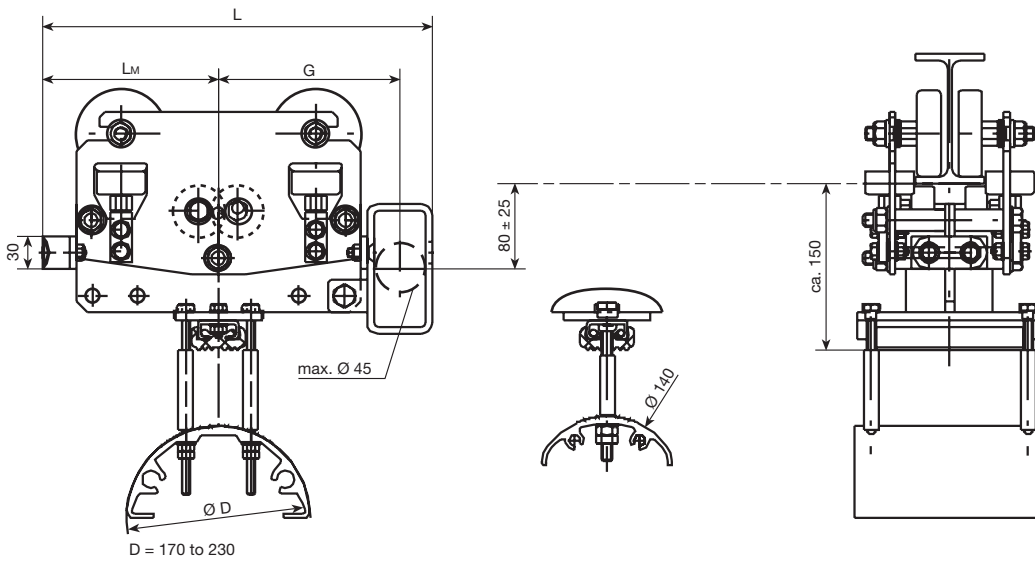
(wheel set see page 25)

Type	max. clamping capacity mm height x width (s x k)	L mm	A mm	B mm	D mm	Weight kg	Order-no.
W 65 F/275-140-B 175	60 x 130	275	145	175	140	3.600	346 164
W 65 F/275-140-B 225	60 x 180		195	225		4.000	348 153
W 65 F/275-140-B 275	60 x 230		245	275		4.400	347 730
W 65 F/275-170-B 175	45 x 130	275	145	175	170	4.300	346 165
W 65 F/275-170-B 225	45 x 180		195	225		4.700	348 038
W 65 F/275-170-B 275	60 x 230		245	275		5.000	348 986
W 65 F/275-200-B 175	30 x 130	275	145	175	200	4.500	346 166
W 65 F/275-200-B 225	30 x 180		195	225		4.900	348 983
W 65 F/275-200-B 275	30 x 230		245	275		5.300	348 987
W 65 F/325-140-B 175	85 x 130	325	145	175	140	3.900	346 167
W 65 F/325-140-B 225	85 x 180		195	225		4.400	348 645
W 65 F/325-140-B 275	85 x 230		245	275		4.700	348 988
W 65 F/325-170-B 175	70 x 130	325	145	175	170	4.600	346 168
W 65 F/325-170-B 225	70 x 180		195	225		5.000	348 869
W 65 F/325-170-B 275	70 x 230		245	275		5.350	348 534
W 65 F/325-200-B 175	55 x 130	325	145	175	200	4.800	346 169
W 65 F/325-200-B 225	55 x 180		195	225		5.200	347 583
W 65 F/325-200-B 275	55 x 230		245	275		5.600	348 989
W 65 F/325-230-B 175	40 x 130	325	145	175	230	5.000	346 170
W 65 F/325-230-B 225	40 x 180		195	225		5.400	348 984
W 65 F/325-230-B 275	40 x 230		245	275		5.800	348 990
W 65 F/375-140-B 175	110 x 130	375	145	175	140	4.300	346 171
W 65 F/375-140-B 225	110 x 180		195	225		4.700	348 245
W 65 F/375-140-B 275	110 x 230		245	275		5.200	348 991
W 65 F/375-170-B 175	95 x 130	375	145	175	170	5.000	346 172
W 65 F/375-170-B 225	95 x 180		195	225		5.400	348 478
W 65 F/375-170-B 275	95 x 230		245	275		5.800	347 760
W 65 F/375-200-B 175	80 x 130	375	145	175	200	5.200	346 173
W 65 F/375-200-B 225	80 x 180		195	225		5.600	348 985
W 65 F/375-200-B 275	80 x 230		245	275		6.000	348 992
W 65 F/375-230-B 175	65 x 130	375	145	175	230	5.400	346 174
W 65 F/375-230-B 225	65 x 180		195	225		5.800	348 576
W 65 F/375-230-B 275	65 x 230		245	275		6.200	348 993



CABLE CARRIERS W 65 · HEAVY DUTY

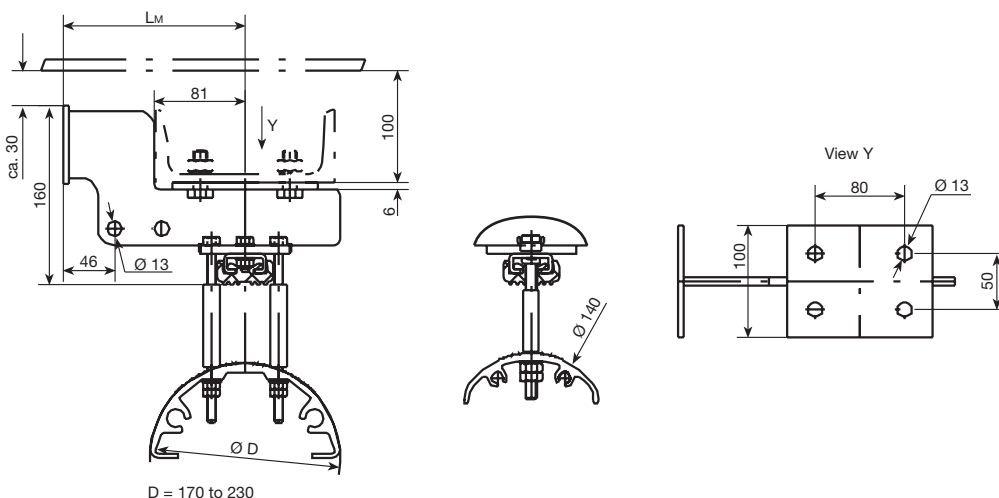
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Lead carrier MW 65 (w/o wheel set)

(wheel set see page 25)

Type	for Cable carrier	L mm	L _m mm	G mm	D mm	Weight kg	Order-no.
MW 65 F/325-140-B 175	W 65 F/275-140-B 175 W 65 F/325-140-B 175	360	163	168	140	4.200	347 863
MW 65 F/325-140-B 225	W 65 F/275-140-B 225 W 65 F/325-140-B 225					5.700	348 155
MW 65 F/325-140-B 275	W 65 F/275-140-B 275 W 65 F/325-140-B 275					5.000	347 731
MW 65 F/325-170-B 175	W 65 F/275-170-B 175 W 65 F/325-170-B 175				170	5.900	347 696
MW 65 F/325-170-B 225	W 65 F/275-170-B 225 W 65 F/325-170-B 225					6.300	349 023
MW 65 F/325-170-B 275	W 65 F/275-170-B 275 W 65 F/325-170-B 275					6.600	348 532
MW 65 F/325-200-B 175	W 65 F/275-200-B 175 W 65 F/325-200-B 175				200	6.100	348 093
MW 65 F/325-200-B 225	W 65 F/275-200-B 225 W 65 F/325-200-B 225					6.500	349 024
MW 65 F/325-200-B 275	W 65 F/275-200-B 275 W 65 F/325-200-B 275					6.900	349 033
MW 65 F/325-230-B 175	W 65 F/325-230-B 175				230	6.300	348 092
MW 65 F/325-230-B 225	W 65 F/325-230-B 225					6.700	349 025
MW 65 F/325-230-B 275	W 65 F/325-230-B 275					7.000	349 034
MW 65 F/375-140-B 175	W 65 F/375-140-B 175	410	188	193	140	5.700	348 091
MW 65 F/375-140-B 225	W 65 F/375-140-B 225					6.000	349 026
MW 65 F/375-140-B 275	W 65 F/375-140-B 275					6.500	349 035
MW 65 F/375-170-B 175	W 65 F/375-170-B 175				170	6.300	347 312
MW 65 F/375-170-B 225	W 65 F/375-170-B 225					6.700	349 027
MW 65 F/375-170-B 275	W 65 F/375-170-B 275					7.000	347 761
MW 65 F/375-200-B 175	W 65 F/375-200-B 175				200	6.500	348 007
MW 65 F/375-200-B 225	W 65 F/375-200-B 225					6.900	349 028
MW 65 F/375-200-B 275	W 65 F/375-200-B 275					7.300	349 036
MW 65 F/375-230-B 175	W 65 F/375-230-B 175				230	6.700	348 088
MW 65 F/375-230-B 225	W 65 F/375-230-B 225					7.100	349 029
MW 65 F/375-230-B 275	W 65 F/375-230-B 275					7.500	349 037

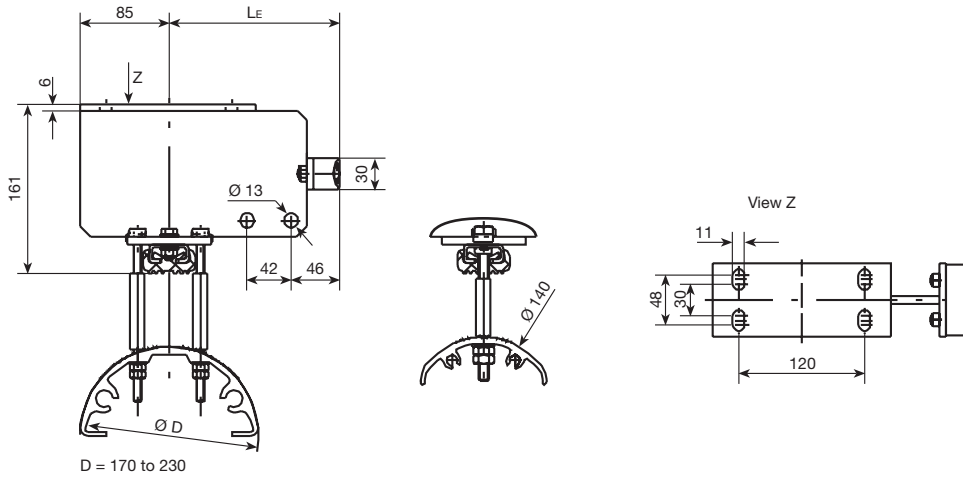


Lead clamp M 65

Type	for Cable carrier	L _M mm	D mm	Weight kg	Order-no.	
M 65 F/325-140-B 175	W 65 F/275-140-B 175 W 65 F/325-140-B 175	163	140	4.000	346 244	
M 65 F/325-140-B 225	W 65 F/275-140-B 225 W 65 F/325-140-B 225			4.400	349 005	
M 65 F/325-140-B 275	W 65 F/275-140-B 275 W 65 F/325-140-B 275			4.800	349 010	
M 65 F/325-170-B 175	W 65 F/275-170-B 175 W 65 F/325-170-B 175		170	170	4.700	346 245
M 65 F/325-170-B 225	W 65 F/275-170-B 225 W 65 F/325-170-B 225				5.100	348 711
M 65 F/325-170-B 275	W 65 F/275-170-B 275 W 65 F/325-170-B 275				5.400	349 011
M 65 F/325-200-B 175	W 65 F/275-200-B 175 W 65 F/325-200-B 175		200	200	4.900	346 246
M 65 F/325-200-B 225	W 65 F/275-200-B 225 W 65 F/325-200-B 225				5.300	347 585
M 65 F/325-200-B 275	W 65 F/275-200-B 275 W 65 F/325-200-B 275				5.700	349 012
M 65 F/325-230-B 175	W 65 F/325-230-B 175		230	230	5.100	346 247
M 65 F/325-230-B 225	W 65 F/325-230-B 225				5.500	349 006
M 65 F/325-230-B 275	W 65 F/325-230-B 275				5.900	349 013
M 65 F/375-140-B 175	W 65 F/375-140-B 175	188	140	4.300	346 248	
M 65 F/375-140-B 225	W 65 F/375-140-B 225			4.700	348 247	
M 65 F/375-140-B 275	W 65 F/375-140-B 275			5.100	349 014	
M 65 F/375-170-B 175	W 65 F/375-170-B 175		170	170	5.000	346 249
M 65 F/375-170-B 225	W 65 F/375-170-B 225				5.400	349 007
M 65 F/375-170-B 275	W 65 F/375-170-B 275				5.800	349 015
M 65 F/375-200-B 175	W 65 F/375-200-B 175		200	200	5.200	346 250
M 65 F/375-200-B 225	W 65 F/375-200-B 225				5.600	349 008
M 65 F/375-200-B 275	W 65 F/375-200-B 275				6.000	349 016
M 65 F/375-230-B 175	W 65 F/375-230-B 175		230	230	5.400	346 251
M 65 F/375-230-B 225	W 65 F/375-230-B 225				5.800	349 009
M 65 F/375-230-B 275	W 65 F/375-230-B 275				6.200	349 017



CABLE CARRIERS W 65 · HEAVY DUTY



Track clamp E 65

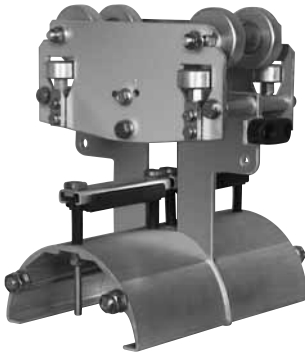
Type	for Cable carrier	L _M mm	D mm	Weight kg	Order-no.	
E 65 F/325-140-B 175	W 65 F/275-140-B 175 W 65 F/325-140-B 175	163	140	4,400	346 252	
E 65 F/325-140-B 225	W 65 F/275-140-B 225 W 65 F/325-140-B 225			4,800	348 156	
E 65 F/325-140-B 275	W 65 F/275-140-B 275 W 65 F/325-140-B 275			5,200	349 041	
E 65 F/325-170-B 175	W 65 F/275-170-B 175 W 65 F/325-170-B 175		170	170	5,100	346 253
E 65 F/325-170-B 225	W 65 F/275-170-B 225 W 65 F/325-170-B 225				5,500	348 712
E 65 F/325-170-B 275	W 65 F/275-170-B 275 W 65 F/325-170-B 275				5,850	348 537
E 65 F/325-200-B 175	W 65 F/275-200-B 175 W 65 F/325-200-B 175		200	200	5,300	346 254
E 65 F/325-200-B 225	W 65 F/275-200-B 225 W 65 F/325-200-B 225				5,700	349 038
E 65 F/325-200-B 275	W 65 F/275-200-B 275 W 65 F/325-200-B 275				6,100	349 042
E 65 F/325-230-B 175	W 65 F/325-230-B 175		230	230	5,100	346 255
E 65 F/325-230-B 225	W 65 F/325-230-B 225				5,500	349 039
E 65 F/325-230-B 275	W 65 F/325-230-B 275				5,900	349 043
E 65 F/375-140-B 175	W 65 F/375-140-B 175	188	140	5,600	346 256	
E 65 F/375-140-B 225	W 65 F/375-140-B 225			6,000	348 248	
E 65 F/375-140-B 275	W 65 F/375-140-B 275			6,400	349 044	
E 65 F/375-170-B 175	W 65 F/375-170-B 175		170	170	4,600	346 257
E 65 F/375-170-B 225	W 65 F/375-170-B 225				5,000	348 480
E 65 F/375-170-B 275	W 65 F/375-170-B 275				5,350	347 764
E 65 F/375-200-B 175	W 65 F/375-200-B 175		200	200	5,600	346 258
E 65 F/375-200-B 225	W 65 F/375-200-B 225				6,000	349 040
E 65 F/375-200-B 275	W 65 F/375-200-B 275				6,400	349 045
E 65 F/375-230-B 175	W 65 F/375-230-B 175		230	230	5,900	346 259
E 65 F/375-230-B 225	W 65 F/375-230-B 225				6,300	348 578
E 65 F/375-230-B 275	W 65 F/375-230-B 275				6,700	349 046



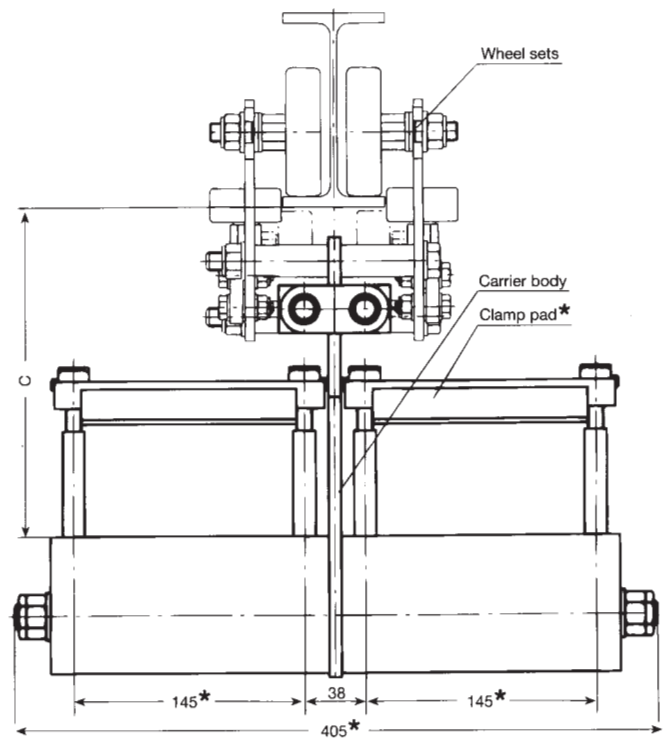
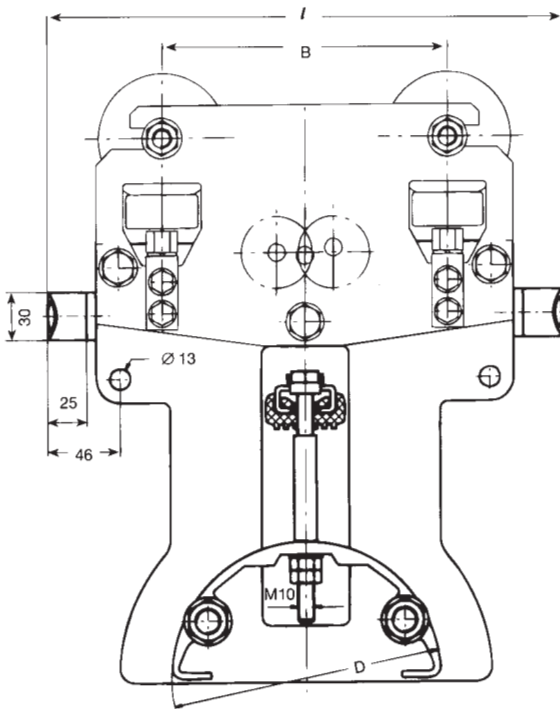
CABLE CARRIERS W 75 • HEAVY DUTY



Engineering data



Type	W 75	
Carrying capacity	wheels Ø 65 mm: max. 200 kg 80 mm: max. 300 kg	see wheel sets page 25
Travel speed	max. 160 m/min	
Wheel sets	for standard track (INP) and flat flange beam (IPE), Type LWB available with or without lateral & vertical guide rollers	
Wheels	flanged steel wheels Ø 65/80 mm or cylindrical steel wheels 80 mm OD with sealed precision ball bearings hardened and galvanized or with polyurethane-covering	
Material	Carrier body: steel galvanized Support saddle: aluminium	
Operating ambients	-30° C thru +100° C	



Carrier body W 75 **

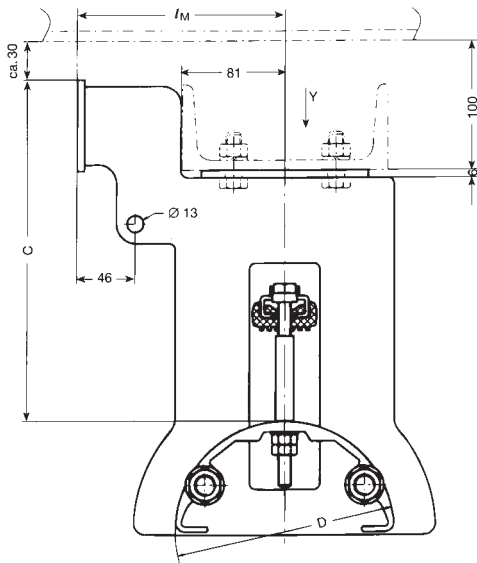
Type	max. clamping capacity mm height x width	I	B	C	D	Weight kg	Order-no.
W 75 F/275-170	45 x 130	275	130	ca. 180	170	7.700	346 211
W 75 F/275-200	30 x 130			ca. 165	200	7.900	346 212
W 75 F/325-170	70 x 130	325	180	ca. 205	170	8.200	346 213
W 75 F/325-200	55 x 130			ca. 190	200	8.400	346 214
W 75 F/325-230	40 x 130	375	230	ca. 175	230	8.900	346 215
W 75 F/375-170	95 x 130			ca. 230	170	8.700	346 216
W 75 F/375-200	80 x 130	375	230	ca. 215	200	8.900	346 217
W 75 F/375-230	65 x 130			ca. 200	230	9.400	346 218

Please specify with your order:
Carrier body: Type
Order-no.
Wheel sets: Type
Order-no.
I-Beam Size:

* Extra wide carriers and continuous clamp pads are available; please consult the factory.
** Wheel sets not included; see page 25.

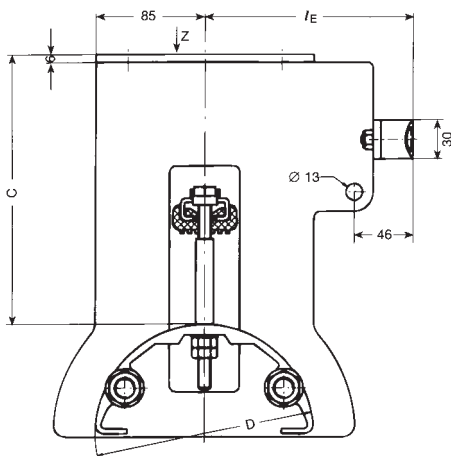
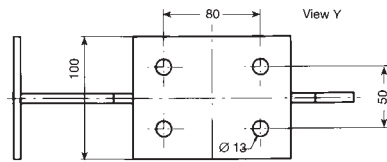


CABLE CARRIERS W 75 · HEAVY DUTY



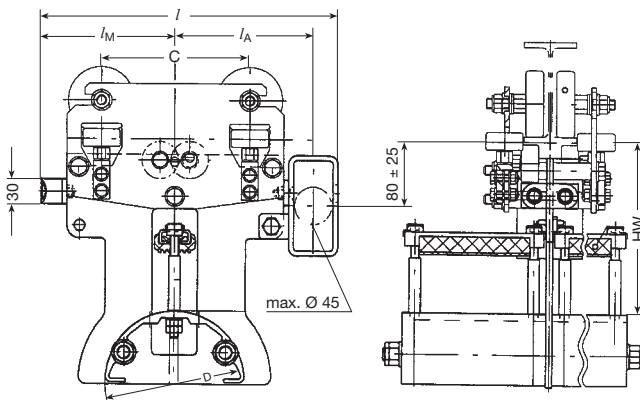
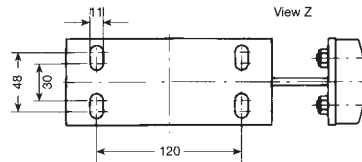
Track clamp M 75

Type	for Cable carrier	l_M	C	D	Weight kg	Order-no.
		mm				
M 75 F/325-170	W 75 F/275-170	163	ca. 265	170	8.900	346 260
	W 75 F/325-170					
M 75 F/325-200	W 75 F/275-200	163	ca. 250	200	9.100	346 261
	W 75 F/325-200					
M 75 F/325-230	W 75 F/325-230	163	ca. 235	230	9.600	346 262
M 75 F/375-170	W 75 F/375-170	188	ca. 290	170	9.200	346 263
M 75 F/375-200	W 75 F/375-200		ca. 275	200	9.400	346 264
M 75 F/375-230	W 75 F/375-230		ca. 260	230	9.900	346 265



Track clamp E 75

Type	for Cable carrier	l_E	C	D	Weight kg	Order-no.
		mm				
E 75 F/325-170	W 75 F/275-170	163	ca. 211	170	8.600	346 266
	W 75 F/325-170					
E 75 F/325-200	W 75 F/275-200	163	ca. 196	200	8.800	346 267
	W 75 F/325-200					
E 75 F/325-230	W 75 F/325-230	163	ca. 181	230	9.300	346 268
E 75 F/375-170	W 75 F/375-170	188	ca. 236	170	8.900	346 269
E 75 F/375-200	W 75 F/375-200		ca. 221	200	9.100	346 270
E 75 F/375-230	W 75 F/375-230		ca. 206	230	9.600	346 271



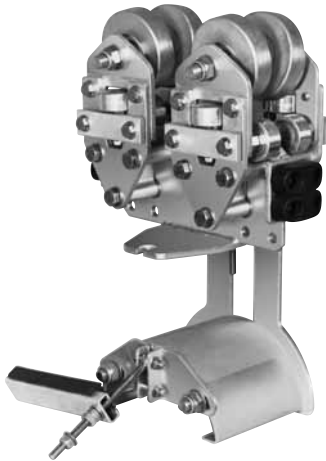
Carrier body MW 75*

Type ^①	for Cable carrier	I	l_A	l_M	C	D	HW	Weight kg	Order-no.
		mm							
MW 75 F/375-230	W 75 F/375-230	410	167.5	187.5	230	230	200	9.7	348 099
MW 75 F/375-200	W 75 F/375-200					200	215		348 100
MW 75 F/375-170	W 75 F/375-170					170	230		348 101
MW 75 F/325-230	W 75 F/325-230	360	167.5	162.5	180	230	175	9.2	348 102
MW 75 F/325-200	W 75 F/325-200					200	190		348 103
	W 75 F/275-200					200	190		
MW 75 F/325-170	W 75 F/325-170					170	205	9.0	348 104
	W 75 F/275-170					170	205		

^① Carrier body M 75

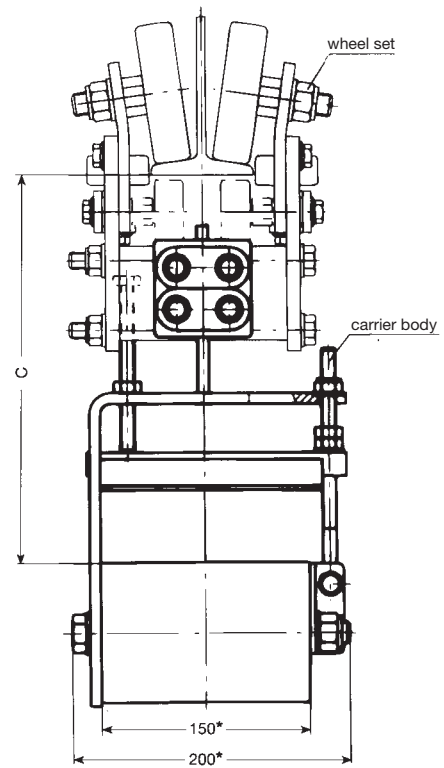
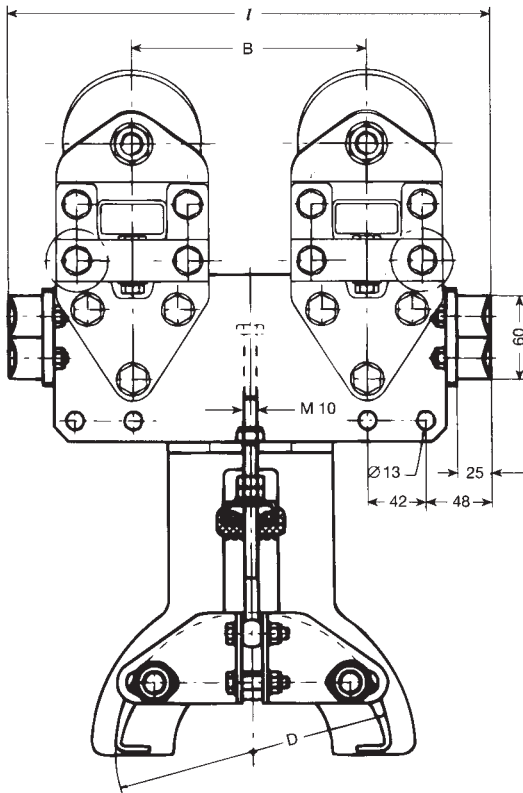


CABLE CARRIERS W 85 • HEAVY DUTY



Engineering data

Type	W 85	
Carrying capacity	max. 500 kg	see wheel sets page 26
Travel speed	max. 160 m/min	
Wheel sets	for standard track (INP) and flat flange beam (IPE), Type LWA	
Wheels	cylindrical steel wheels 100 mm OD with sealed precision ball bearings, hardened and galvanized or with polyurethane-covering	
Guide rollers	cylindrical steel wheels 45 mm OD hardened and galvanized with sealed ball bearings	
Material	Carrier body: steel galvanized Support saddle: aluminium	
Operating ambients	-30° C thru +100° C	



Carrier body W 85 **

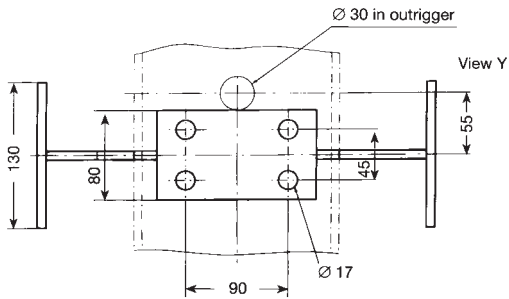
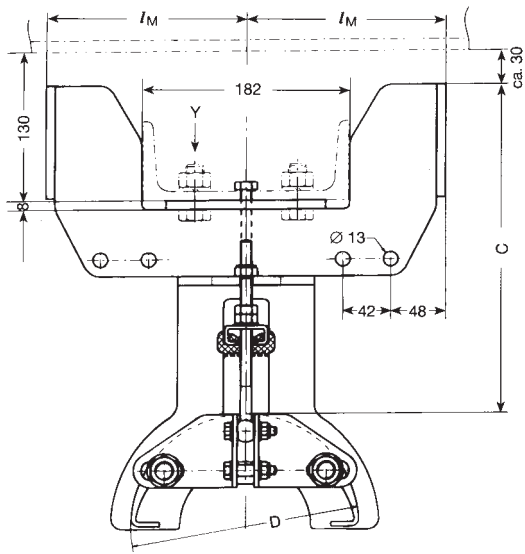
Type	max. clamping capacity mm height x width	I	B	C	D	Weight kg	Order-no.
W 85 F/300-170	55 x 150	300	120	ca. 300	170	9.100	346 219
W 85 F/300-200	40 x 150			ca. 285	200	9.200	346 220
W 85 F/350-170	80 x 150	350	170	ca. 300	170	9.500	346 221
W 85 F/350-200	65 x 150			ca. 285	200	9.600	346 222
W 85 F/350-230	50 x 150			ca. 270	230	9.700	346 223
W 85 F/400-170	105 x 150	400	220	ca. 350	170	10.100	346 224
W 85 F/400-200	90 x 150			ca. 335	200	10.200	346 225
W 85 F/400-230	75 x 150			ca. 320	230	10.300	346 226
W 85 F/450-200	115 x 150			450	270	ca. 335	200
W 85 F/450-230	100 x 150	ca. 320	230			10.700	346 228

Please specify with your order:	
Carrier body: Type	Order-no.
Wheel sets: Type	Order-no.
I-Beam Size:	

* Extra wide side loading carriers are available; please consult the factory.
 ** Wheel sets not included; see page 25.

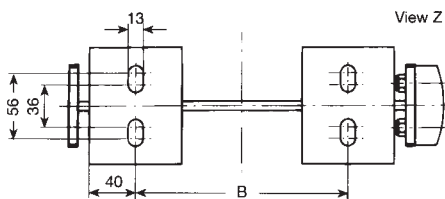
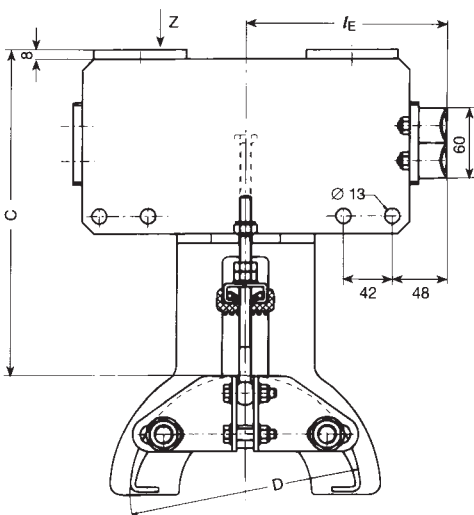


CABLE CARRIERS W 85 · HEAVY DUTY



Lead clamp M 85

Type	for Cable carrier	l_M	C	D	Weight kg	Order-no.
		mm				
M 85 F/350-170	W 85 F/300-170	175	ca. 310	170	10.500	346 272
	W 85 F/350-170					
M 85 F/350-200	W 85 F/300-200	175	ca. 295	200	10.600	346 273
	W 85 F/350-200					
M 85 F/350-230	W 85 F/350-230	175	ca. 280	230	10.700	346 274
M 85 F/450-200	W 85 F/400-170	225	ca. 345	200	12.000	346 275
	W 85 F/400-200					
	W 85 F/450-200					
M 85 F/450-230	W 85 F/400-230	225	ca. 330	230	12.100	346 276
	W 85 F/450-230					

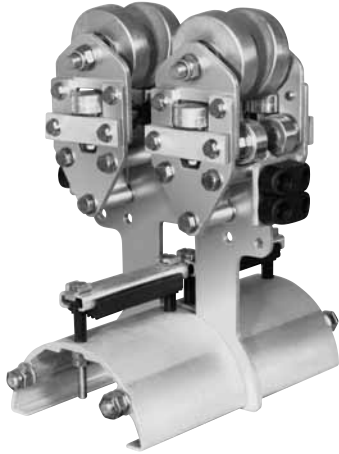


Track clamp E 85

Type	for Cable carrier	l_E	B	C	D	Weight kg	Order-no.
		mm					
E 85 F/350-170	W 85 F/300-170	175	184	ca. 298	170	9.800	346 277
	W 85 F/350-170						
E 85 F/350-200	W 85 F/300-200	175	184	ca. 283	200	9.900	346 278
	W 85 F/350-200						
E 85 F/350-230	W 85 F/350-230	175	184	ca. 268	230	10.000	346 279
E 85 F/450-200	W 85 F/400-170	225	284	ca. 333	200	11.100	346 280
	W 85 F/400-200						
	W 85 F/450-200						
E 85 F/450-230	W 85 F/400-230	225	284	ca. 318	230	11.200	346 281
	W 85 F/450-230						

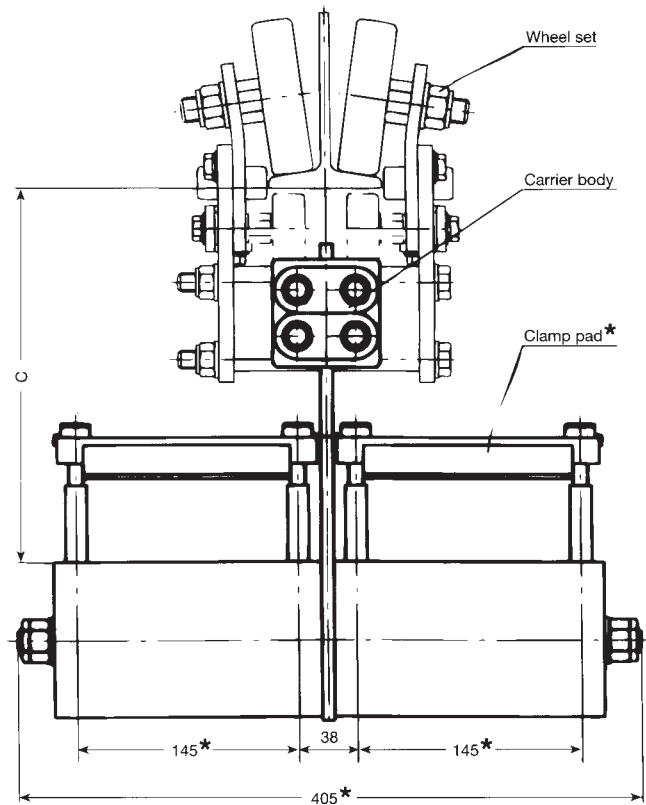
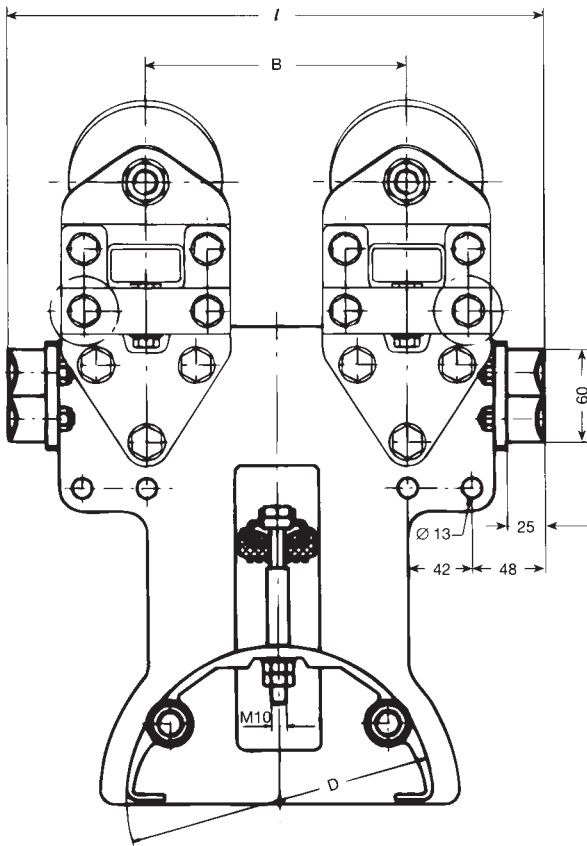


CABLE CARRIERS W 95 • HEAVY DUTY



Engineering data

Type	W 95	
Carrying capacity	max. 500 kg	see wheel sets page 26
Travel speed	max. 160 m/min	
Wheel sets	for standard track (INP) and flat flange beam (IPE); Type LWA	
Wheels	cylindrical steel wheels 100 mm OD with sealed precision ball bearings, hardened and galvanized or with polyurethane-covering	
Material	Carrier body: steel galvanized Support saddle: aluminium	
Operating ambients	-30° C thru +100° C	



Carrier body W 95 **

Type	max. clamping capacity mm height x width	I	B	C	D	Weight kg	Order-no.
W 95 F/300-170	55 x 130	300	120	ca. 240	170	10.700	346 229
W 95 F/300-200	40 x 130			ca. 225	200	11.000	346 230
W 95 F/350-170	80 x 130	350	170	ca. 265	170	11.300	346 231
W 95 F/350-200	65 x 130			ca. 250	200	11.600	346 232
W 95 F/350-230	50 x 130			ca. 235	230	11.900	346 233
W 95 F/400-170	105 x 130	400	220	ca. 290	170	11.800	346 234
W 95 F/400-200	90 x 130			ca. 275	200	12.100	346 235
W 95 F/400-230	75 x 130	450	270	ca. 260	230	12.400	346 236
W 95 F/450-200	115 x 130			ca. 315	200	12.700	346 237
W 95 F/450-230	100 x 130			ca. 285	230	13.000	346 238

Please specify with your order:

Carrier body: Type
Order-no.

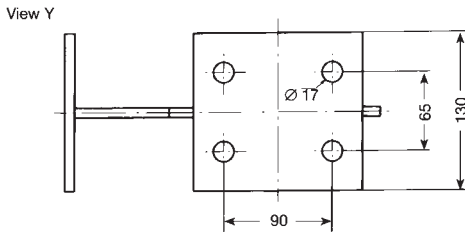
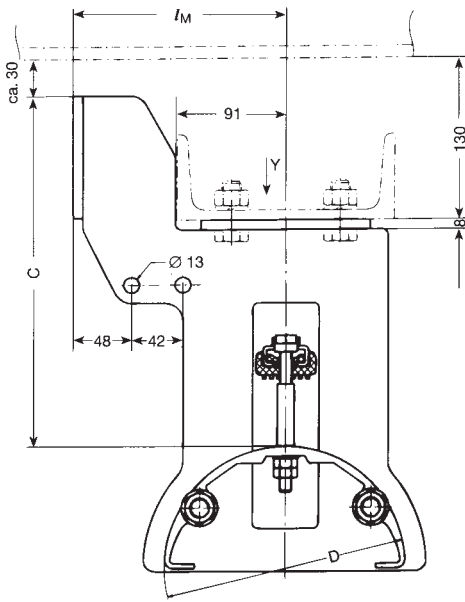
Wheel sets: Type
Order-no.

I-Beam Size:

* Extra wide carriers and continuous clamp pads are available; please consult the factory.
** Wheel sets not included; see page 26.



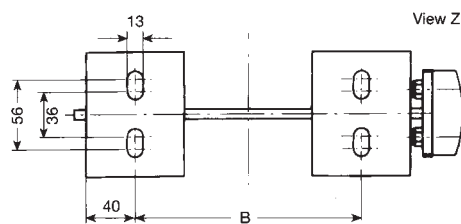
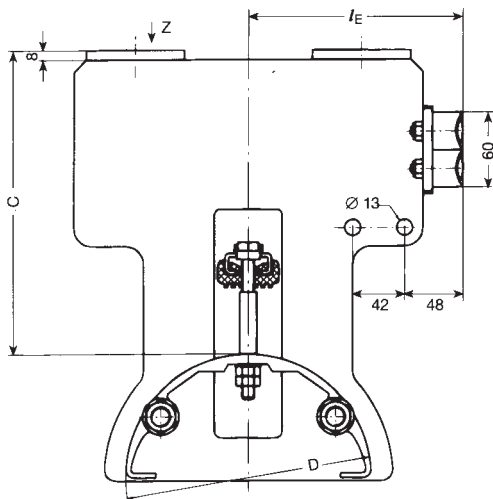
CABLE CARRIERS W 95 · HEAVY DUTY



Lead clamp M 95

Type	for Cable carrier	l_M	C	D	Weight kg	Order-no.
M 95 F/350-170	W 95 F/300-170	175	ca. 305	170	12.000	346 282
	W 95 F/350-170					
M 95 F/350-200	W 95 F/300-200	175	ca. 290	200	12.300	346 283
	W 95 F/350-200					
M 95 F/350-230	W 95 F/350-230		ca. 275	230	12.600	346 284
M 95 F/450-200	W 95 F/400-170	225	ca. 340	200	13.200	346 285
	W 95 F/400-200					
	W 95 F/450-200					
M 95 F/450-230	W 95 F/400-230	225	ca. 325	230	13.400	346 286
	W 95 F/450-230					

Track clamp E 95



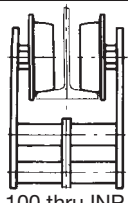
Type	for Cable carrier	l_E	B	C	D	Weight kg	Order-no.
E 95 F/350-170	W 95 F/300-170	175	184	ca. 263	170	11.800	346 287
	W 95 F/350-170						
E 95 F/350-200	W 95 F/300-200	175	184	ca. 248	200	12.100	346 288
	W 95 F/350-200						
E 95 F/350-230	W 95 F/350-230			ca. 233	230	12.400	346 289
E 95 F/450-200	W 95 F/400-170	225	284	ca. 298	200	13.300	346 290
	W 95 F/400-200						
	W 95 F/450-200						
E 95 F/450-230	W 95 F/400-230	225	284	ca. 283	230	13.600	346 291
	W 95 F/450-230						

WHEEL SETS FOR CABLE CARRIERS W 65 UND W 75

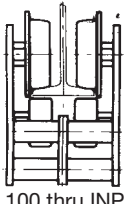


Diameter of Wheels 65 mm

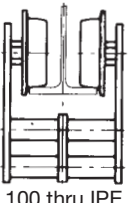
Carrying capacity	max. 200 kg tread of steel
Travel speed	max. 120 m/min when using appropriate cable tension relief
Wheel Type	machined and hardened flange type steel wheels Ø 65/80 mm, galvanized and equipped with precision ball bearings, protected against dust and splash water
Kick-up Rollers	cylindrical steel wheels Ø 45 mm, hardened and galvanized with ball bearings; polyurethane on special request.

Wheel sets for standard beam w/o kick-up-roller				
Type	I** mm	Wght. kg	Order-no.	
LWB- 3/65-275	275	5.400	346 181	
LWB- 3/65-325	325	6.000	346 182	
LWB- 3/65-375	375	6.700	346 183	

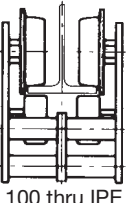
INP 100 thru INP 120

Wheel sets for standard beam w/ kick-up-roller				
Type	I** mm	Wght. kg	Order-no.	
LWB- 4/65-275	275	5.800	346 184	
LWB- 4/65-325	325	6.500	346 185	
LWB- 4/65-375	375	7.100	346 186	

INP 100 thru INP 200

Wheel sets for flat flange beam w/o kick-up-roller				
Type	I** mm	Wght. kg	Order-no.	
LWB- 7/65-275	275	5.400	346 193	
LWB- 7/65-325	325	6.000	346 194	
LWB- 7/65-375	375	6.700	346 195	

IPE 100 thru IPE 120

Wheel sets for flat flange beam w/ kick-up-roller				
Type	I** mm	Wght. kg	Order-no.	
LWB- 8/65-275	275	5.800	346 196	
LWB- 8/65-325	325	6.500	346 197	
LWB- 8/65-375	375	7.100	346 198	

IPE 100 thru IPE 200

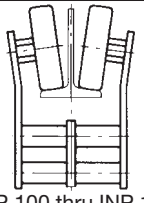
Side and Kick-up Rollers serve for retaining and stabilization purposes.

All Types and Order-Numbers comprising TWO wheels sets for one carrier.

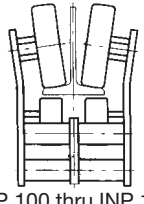
Wheel sets for additional I-Beam sizes are ready available; please consult the factory.

Diameter of Wheels 80 mm

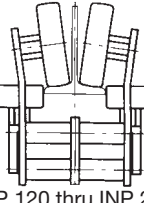
Carrying capacity	300 kg tread of steel 200 kg tread of polyurethane
Travel speed	max. 160 m/min when using appropriate cable tension relief
Wheel Type	machined and hardened cylindrical type steel wheels Ø 80 mm, galvanized and equipped with precision ball bearings, protected against dust and splash water – polyurethane optional.
Side and Kick-up Rollers	cylindrical steel wheels Ø 45 mm, hardened and galvanized with ball bearings; polyurethane on special request.

Wheel sets for standard beam w/o side roller and w/o kick-up-roller					
Type*	I** mm	Wght. kg	Order-no.	Order-no. w/polyurethane wheels	
LWB- 1/80-275	275	6.400	346 175	346 292	
LWB- 1/80-325	325	7.100	346 176	346 293	
LWB- 1/80-375	375	7.700	346 177	346 294	

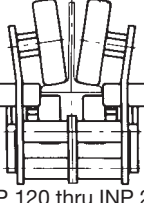
INP 100 thru INP 180

Wheel sets for standard beam w/o side roller and w/ kick-up-roller					
Type*	I** mm	Wght. kg	Order-no.	Order-no. w/polyurethane wheels	
LWB- 2/80-275	275	6.800	346 178	346 295	
LWB- 2/80-325	325	7.500	346 179	346 296	
LWB- 2/80-375	375	8.100	346 180	346 297	

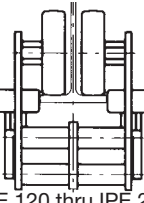
INP 100 thru INP 180

Wheel sets for standard beam w/ side roller and w/o kick-up-roller					
Type*	I** mm	Wght. kg	Order-no.	Order-no. w/polyurethane wheels	
LWB- 5/80-275	275	7.600	346 187	346 298	
LWB- 5/80-325	325	8.300	346 188	346 299	
LWB- 5/80-375	375	9.000	346 189	346 300	

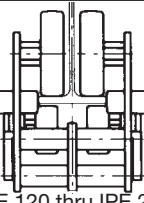
INP 120 thru INP 200

Wheel sets for standard beam w/ side roller and w/ kick-up-roller					
Type*	I** mm	Wght. kg	Order-no.	Order-no. w/polyurethane wheels	
LWB- 6/80-275	275	8.000	346 190	346 301	
LWB- 6/80-325	325	8.700	346 191	346 302	
LWB- 6/80-375	375	9.400	346 192	346 303	

INP 120 thru INP 200

Wheel sets for flat flange beam w/ side roller and w/o kick-up-roller					
Type*	I** mm	Wght. kg	Order-no.	Order-no. w/polyurethane wheels	
LWB- 9/80-275	275	7.600	346 199	346 304	
LWB- 9/80-325	325	8.300	346 200	346 305	
LWB- 9/80-375	375	9.000	346 201	346 306	

IPE 120 thru IPE 200

Wheel sets for flat flange beam w/ side roller and w/ kick-up-roller					
Type*	I** mm	Wght. kg	Order-no.	Order-no. w/polyurethane wheels	
LWB-10/80-275	275	8.000	346 202	346 307	
LWB-10/80-325	325	8.700	346 203	346 308	
LWB-10/80-375	375	9.400	346 204	346 309	

IPE 120 thru IPE 200

* To order with Polyurethane Wheels, add -V suffix to the Type (e.g. LWB 1/80-275-V for Order-no. 346 292).
 ** Make sure dimension I coincides with length of Carrier body.



WHEEL SETS FOR CABLE CARRIERS W 85 & W 95

Diameter of Wheels 100 mm

Carrying capacity	500 kg w/steel wheels 350 kg w/polyurethane wheels
Travel speed	max. 160 m/min. when using appropriate cable tension relief
Wheel Type	machined and hardened cylindrical type steel wheels Ø 100 mm, galvanized and equipped with precision ball bearings, protected against dust and splash water – polyurethane optional
Side and Kick-up Rollers	cylindrical steel wheels Ø 45 mm, hardened and galvanized with ball bearings; polyurethane on special request

Wheel sets for standard beam w/o side roller and w/o kick-up-roller				
Type*	Weight kg	Order- no.	Order-no. w/polyure- thane wheels	
LWA- 0/100	12.300	346 239	346 310	INP 140 thru INP 200

Wheel sets for standard beam w/o side roller and w/o kick-up-roller				
Type*	Weight kg	Order- no.	Order-no. w/polyure- thane wheels	
LWA- 1/100	13.800	346 240	346 311	INP 140 thru INP 200

Wheel sets for standard beam w/o side roller and w/ kick-up-roller				
Type*	Weight kg	Order- no.	Order-no. w/polyure- thane wheels	
LWA- 2/100	14.700	346 241	346 312	INP 140 thru INP 200

Wheel sets for standard beam w/ side roller and w/o kick-up-roller				
Type*	Weight kg	Order- no.	Order-no. w/polyure- thane wheels	
LWA- 5/100	15.400	346 242	346 313	INP 140 thru INP 200

Wheel sets for standard beam w/ side roller and w/ kick-up-roller				
Type*	Weight kg	Order- no.	Order-no. w/polyure- thane wheels	
LWA- 6/100	16.300	346 243	346 314	INP 140 thru INP 200

Side and Kick-up Rollers serve for retaining and stabilization purposes.

All Types and Order-Numbers comprising TWO wheel sets for one carrier.

Wheel sets for additional I-Beam size are ready available; please consult the factory.

Wheel sets for flat flange beam w/side roller and w/o kick-up-roller				
Type*	Weight kg	Order- no.	Order-no. w/polyure- thane wheels	
LWA- 9/100	15.700	346 205	346 315	IPE 140 thru IPE 200

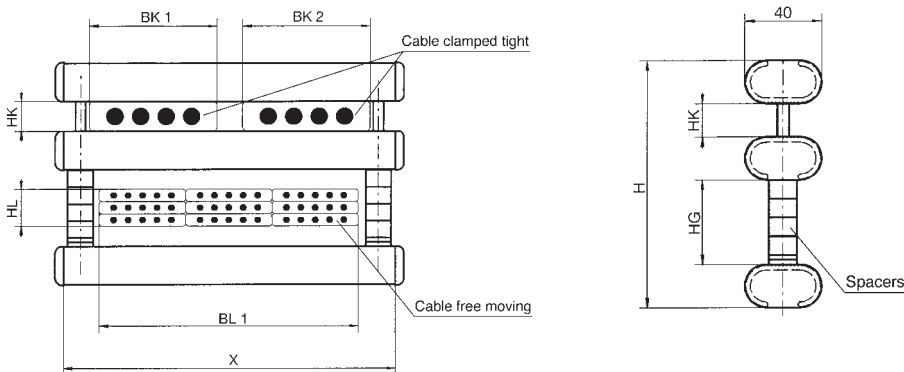
Wheel sets for flat flange beam w/ side roller and w/ kick-up-roller				
Type*	Weight kg	Order- no.	Order-no. w/polyure- thane wheels	
LWA-10/100	16.500	346 206	346 316	IPE 140 thru IPE 200



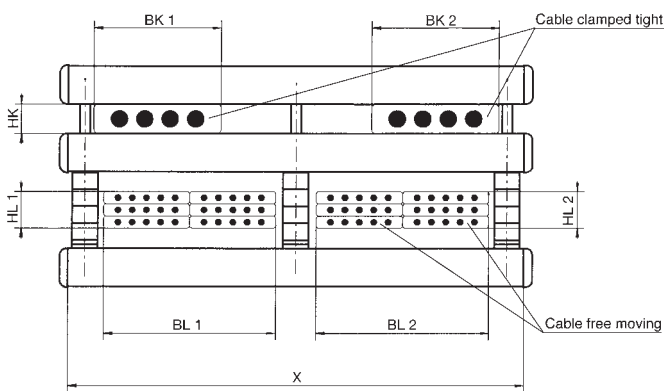
CABLE LOOP CLAMPS



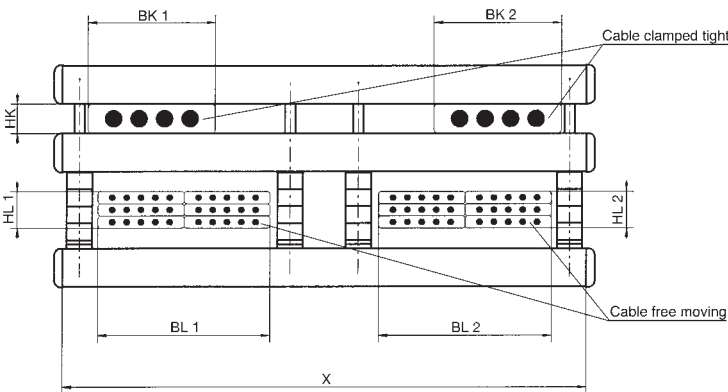
Material:
Clamping parts of aluminium
Spacers and end caps of plastic
Hardware of galvanized steel



Type	GIK 2 - AI
Order-No.	346 961
	2 clamping bolts



Type	GIK 3 - AI
Order-No.	346 971
	3 clamping bolts



Type	GIK 4 - AI
Order-No.	346 972
	4 clamping bolts

The cable loop clamps are supplied with a clamping height $HK = 5$ mm.
Larger clamping heights HK reduce the space HG accordingly.
For correct adjustment of space HG remove spacers.
Space reduction = cable thickness - 5 mm.
Available reductions of space HG in mm:

2,5 / 5 / 10 / 12,5 / 15 / 20 / 22,5 / 25

General dimensions of cable loop clamps on request.

Please specify with your order:			
Cable Loop Clamp:	: Type	Order-no.	
Dimensions of cable packs: $HK \times BK 1$ / $HK \times BK 2$:		/	mm
$HL 1 \times BL 1$ / $HL 2 \times BL 2$:		/	mm



TENSION RELIEF

1. Steel Ropes (Tow Cables)

Recommended for applications with

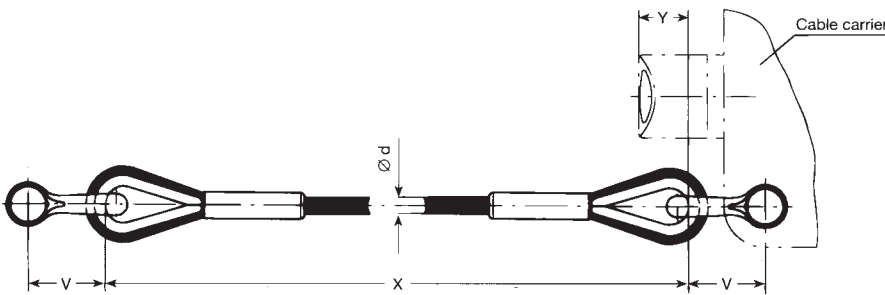
- Over 30 m Travel Distance (Working Travel)
or in general for mechanical sensitive cables and/or in very dusty environments
- Travel Speeds up to 80 m/min
- Accelerations up to 0.3 m/s²

For higher speeds or accelerations please consult the factory.

Type	Z 4	Z 4-PVC	Z 5	Z 5-PVC	Z 6	Z 6-PVC
Ø d =	6 mm	6/8 mm	6 mm	6/8 mm	8 mm	8/10 mm
Weight	0,125 kg/m	0,150 kg/m	0,125 kg/m	0,150 kg/m	0,221 kg/m	0,250 kg/m
V =	28 mm		42 mm		42 mm	
Material and finish	steel galvanized	steel galvanized PVC-shrouded	steel galvanized	steel galvanized PVC-shrouded	steel galvanized	steel galvanized PVC-shrouded
Admissible tension force (6 times safety factor)	3500 N		3500 N		6100 N	
Type of shackle lock	safety nut		hex. nut and split-pin			
for Cable carrier	W 45 / W 55		W 65 thru W 95			

Design: Round cord rope made of steel wires with fibre layers, galvanized or additional PVC-shrouding, in prefabricated length, incl. rope-clips, thimbles and shackles.

Weight: Shackles, thimbles, bush = 0.5 kgs on both sides



Projecting bumper:

Cable Carrier Type	Y mm
W 45	0
W 55 (1 bumper)	3
W 55 (2 bumper)	15
W 65 and W 75	4
W 85 and W 95	6

How to determine the Tow rope Length:

$$X = \frac{S(f - 0,1) + Z}{n} + 2 Y$$

- X = Length of tow rope mm
- S = working travel mm
- f = Cable safety factor (≥ 1.15)
- Z = open space mm (min. one carrier)
- n = number of cable loops
- Y = projecting bumper (mm; see table)

Length of Two Rope mm	Order-no.					
	for Cable carrier W 55		for Cable Carrier W 65 thru W 95			
	Z 4	Z 4-PVC	Z 5	Z 5-PVC	Z 6	Z 6-PVC
bis - 2000	346 372	346 383	346 394	346 368	346 405	346 367
2001 - 3000	346 373	346 384	346 395	346 346	346 406	346 356
3001 - 4000	346 374	346 385	346 396	346 347	346 407	346 357
4001 - 5000	346 375	346 386	346 397	346 348	346 408	346 358
5001 - 6000	346 376	346 387	346 398	346 349	346 409	346 359
6001 - 7000	346 377	346 388	346 399	346 350	346 410	346 360
7001 - 8000	346 378	346 389	346 400	346 351	346 411	346 361
8001 - 9000	346 379	346 390	346 401	346 352	346 412	346 362
9001 - 10000	346 380	346 391	346 402	346 353	346 413	346 363
10001 - 11000	346 381	346 392	346 403	346 354	346 414	346 364
11001 - 12000	346 382	346 393	346 404	346 355	346 415	346 365

Please specify with your order

Tow rope:	Type
Length of rope X:	mm
Order-no.	

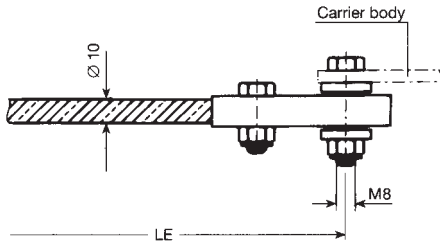
2. Elastic Tow Ropes

2.1. Material and Finish: Rope 10 mm Dia.
complete, cut to suit the application, incl. attachments in galvanized steel

Preferably used for Cable Carriers Type W 55. Job adapted Finish on request.

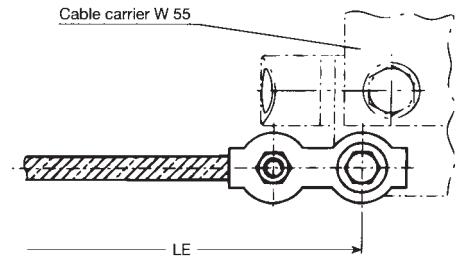
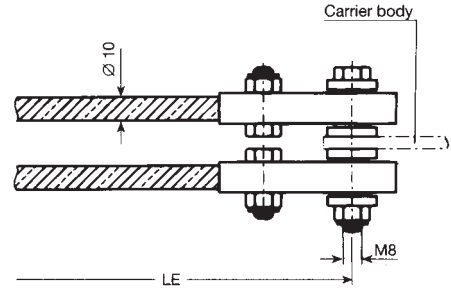
Type: ZE 1

1 Elastic Tow Rope for each Cable Loop



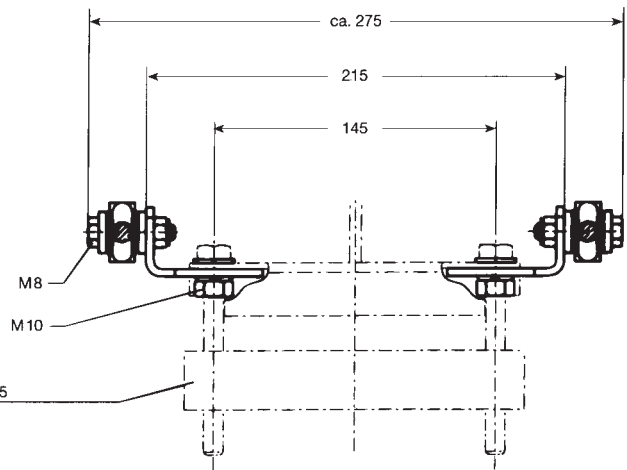
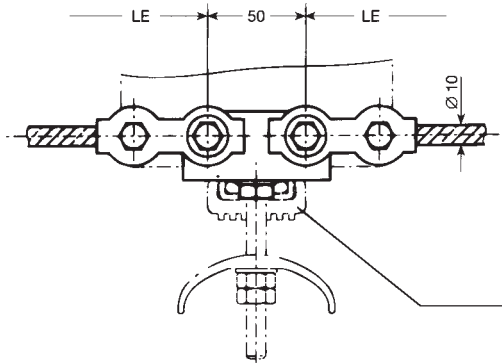
Type: ZE 2

2 Elastic Tow Ropes for each Cable Loop



Type: ZE 3

2 Elastic Tow Ropes for each Cable Loop
(steel tow cable optional)



Length of Tow Rope mm	Order-no.		
	ZE 1	ZE 2	ZE 3
1500 – 2000	346 416	346 427	346 438
2001 – 2500	346 417	346 428	346 439
2501 – 3000	346 418	346 429	346 440
3001 – 3500	346 419	346 430	346 441
3501 – 4000	346 420	346 431	346 442
4001 – 4500	346 421	346 432	346 443
4501 – 5000	346 422	346 433	346 444
5001 – 5500	346 423	346 434	346 445
5501 – 6000	346 424	346 435	346 446
6001 – 6500	346 425	346 436	346 447
6501 – 7000	346 426	346 437	346 448

Please specify with your order

Elastic Tow rope: Type

Length of rope LE: mm

Order-no.



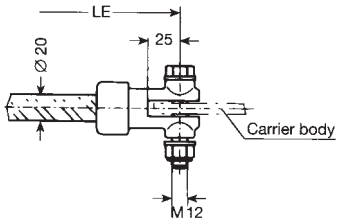
TENSION RELIEF

2.2. Material and Finish: Rope 20 mm Dia. complete, cut to suit the application, incl. attachments in stainless steel

Preferably used for Cable Carriers Type W 65 thru W 95. Job adapted Finish on request.

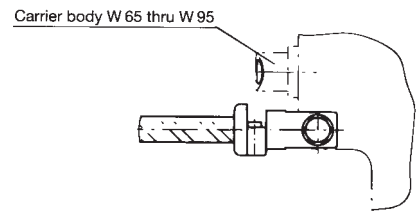
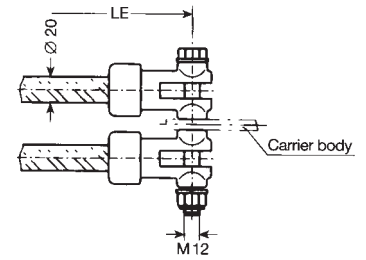
Type: ZE 5

1 Elastic Tow Rope for each Cable Loop



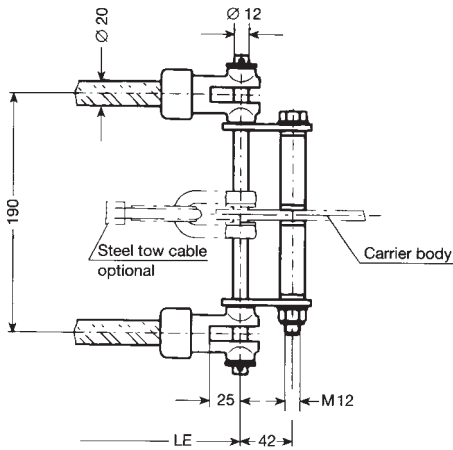
Type: ZE 6

2 Elastic Tow Ropes for each Cable Loop



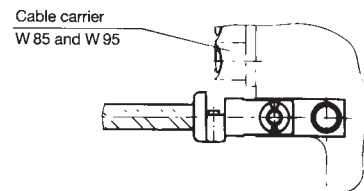
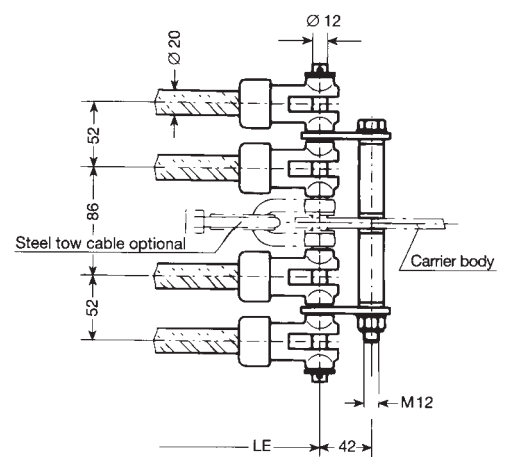
Type: ZE 7

2 Elastic Tow Ropes for each Cable Loop (steel tow cable optional)



Type: ZE 8

4 Elastic Tow Ropes for each Cable Loop (steel tow cable optional)



Length of Tow Rope mm	Order-no.			
	ZE 5	ZE 6	ZE 7	ZE 8
1500 – 2000	346 449	346 460	346 471	346 482
2001 – 2500	346 450	346 461	346 472	346 483
2501 – 3000	346 451	346 462	346 473	346 484
3001 – 3500	346 452	346 463	346 474	346 485
3501 – 4000	346 453	346 464	346 475	346 486
4001 – 4500	346 454	346 465	346 476	346 487
4501 – 5000	346 455	346 466	346 477	346 488
5001 – 5500	346 456	346 467	346 478	346 489
5501 – 6000	346 457	346 468	346 479	346 490
6001 – 6500	346 458	346 469	346 480	346 491
6501 – 7000	346 459	346 470	346 481	346 492

Please specify with your order

Elastic Tow rope: Type

Length of rope LE: mm

Order-no.



1. Wheels

	for Cable carriers	Construction and Finish	Shape	Dimension mm						Weight kg	Order-no.
				A	B	C	D	E	F		
	W 25-30 K WN-WE 35 WN-WE 40	Flanged polyamid wheel Ø 45/60 x 24,5 mm, bushed bearing	spherical	21	24,5	16	Ø 45	Ø 60	Ø 10	0.027	346 731
	W 25 KL W 26 KL W 30 KL	Flanged polyamid wheel Ø 45/60 x 22,5 mm on sealed (2 RS) precision ball bearing	spherical	21	22,5	13,4	Ø 45	Ø 60	Ø 10	0.065	346 732
	W 45	Cyl. Kick-up Roller Steel, w/ precision ball bearings	cylindrical		9	40	Ø 32		M 10	0.040	348 709
	W 55	Cyl. Kick-up Roller Ø 45 x 23,5 mm Polyamid, bushed bearing	cylindrical	20	23,5	16	Ø 45	-	Ø 10	0.030	346 506
	W 65 W 75 W 85 W 95	Cyl. Side and Kick-up Rollers Ø 45 x 21 mm Steel, w/ precision ball bearing (inner thread M 10)	cylindrical hardened steel	-	21	36	Ø 45	17	SW M10	0.200	346 507
			cylindrical polyurethane covered						Thread Length 13 mm	0.120	347 651
	W 45	Cyl. wheel Ø 45/60 x 21 mm Steel, precision ball bearing, galvanized	spherical hardened steel		21	23	Ø 45	Ø 60	M10	0.240	348 708
	W 30 S W 35 S W 40 S W 55	Cyl. wheel Ø 45/60 x 21 mm, Steel; w/ precision ball bearing, galvanized	spherical hardened steel	29	21	50	Ø 45	Ø 60	M10	0.250	344 750
	W 65 W 75	Cyl. wheel, Ø 65/80 x 23 mm, Steel, galvanized, on sealed (2 RS), with sealed ball bearing.		31,5	23	63	Ø 65	Ø 80	M12	0.520	346 509
	W 65 W 75	Cyl. wheel, Ø 80 x 22 mm, Steel, galvanized, on sealed (2 RS), with sealed ball bearing.	spherical hardened steel cylindrical, poly- urethane covered	37	22	69	Ø 80	19	SW M12	0.840	346 510
										0.450	346 511
	W 85 W 95	Cyl. wheel, Ø 100 x 27 mm, Steel, galvanized equipped with precision ball bearing	spherical hardened steel cylindrical, poly- urethane covered	42	27	80	Ø 100	24	SW M16	1.600	346 512
										1.020	346 513



2. Bumpers

	for Cable carriers	Construction and Finish	Dimension mm						Weight kg	Order-no.
			A	B	C	D	E	F		
	W 35 W 40	Neoprene Bumper Ø 20 x 15 mm compl. with hardware	Ø 20	-	15	-	15	M6	0.012	346 001
	W 45	EPDM	Ø 26		18				0.010	349 335
	W 55 W 65 W 75 W 85 W 95	Neoprene Bumper 30 x 68 x 25 mm compl. with hardware M 8 x 25	30	68	25	38	15	M8	0.090	346 137



Cable carrier at a container crane

I-Beam Track

1. Install **I**-beam track parallel with runway of equipment; the side clearance to be sufficient to avoid interference with swinging cables.
2. The support structure of the **I**-beam must be adequately designed for the anticipated loads. Smooth out welded joints to ensure smooth traversing of cable carriers.

Cable Carriers

Carriers type W 20

Installation procedure:

1. Lead carrier; MN 20 factory pre-adjusted.
2. Intermediate carriers; WN 20 factory pre-adjusted.
3. Track clamp; E 20 to be bolted to the lower flange of the **I**-beam.

4. Connect lead carrier to equipment by an outrigger-tube of 25-30 mm Ø. The outrigger should fit centrally into the rectangular opening of the lead carrier. Make sure that the distance between the outrigger and the track clamp is not less than the calculated storage distance for the cable carriers.

Carriers type W 25-30, W 35, W 40

Installation procedure:

1. Intermediate carriers; adjustable per customer's **I**-beam.
2. Track clamp; to be bolted to the lower flange of the **I**-beam.
3. Install bumper stop to the web of the **I**-beam. (W 35, W 40 only)

4. The lead clamps M 35 and M 40 are to be attached to an outrigger (e.g. channel iron) on the moving equipment and function as the first moving cable carrier element on the system. Installation in accordance to the **I**-beam size and per the detail drawings in this catalog.
5. Track clamps E 25-30 F serve the same way for W 25 thru W 30 installations.

Carriers type W 55 thru W 95

Installation procedure:

1. Intermediate carriers; factory pre-adjusted.
2. Track clamp; to be bolted to the lower flange of the **I**-beam.
3. The lead clamps of this series are to be attached to an outrigger (e.g. channel iron) on the moving equipment and

function as the first moving cable carrier element on the system. Installation in accordance to the **I**-beam size and per the detail drawings in this catalog. Also see bumper extension PV 55 for installation to the first intermediate carrier W 55 only.

Cables

Cables to be installed in accordance to the pre-designed package, considering stability of the cable set when clamped via pads to the carrier saddles. Use counter-nuts for safety.

Make sure the cable length (L) is equally distributed from track clamp to lead clamp forming equal loops between the carriers.

A free space of 10-15 mm between the stacked cable layers should be considered in the lower vertex of the loops.

Cable Loop Clamps:

Cable Loop Clamps are used inside the loops for cable arrangement. The quantity per loop depends on the loop depth, cable package and installation conditions of the system. Single clamps will be installed in the lower peak of the cable loop. Stagger cable clamps, if more than one clamp is used, e.g. in the lower third of the loop. The installation can be realized either in the lower or the upper part of the loop.

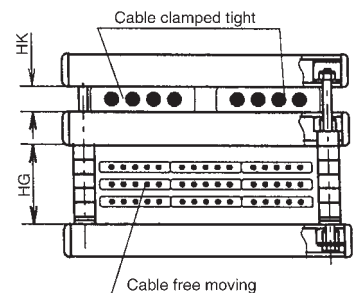
The cables have to be fixed at the clamping screws with approx. 2 mm air gap.

To avoid cable damages during operation, the thread ends of the clamping screws must not protrude the aluminium profile. (see sketch)

Make sure free movement of the cables.

The cable loop clamps will be delivered with a clamp height $HK = 5$ mm. In case of bigger clamp heights the grid distance (HG) will be reduced accordingly. For reduced cable clamp setting remove spacers in grid distance = cable width - 5 mm.

Possible reduction of the grid distance HG in mm: 2.5 / 5 / 10 / 12.5 / 15 / 20 / 22.5 / 25 (see page 27).



Steel Ropes

Using tow cables means tension relief on your conductor cables. The tow ropes must be untwisted and are attached by means of shackles to the cable carriers. Shackle locking by hex nut and split pin or by safety nut.

Elastic Ropes

See principle arrangements in this catalog. When in doubt ask the factory.

Pre-installed System

Vahle cable festoon systems can be completely pre-installed and shipped on an **I**-beam stand. In this case it is important to consider adequate support of the hookup cable lengths during shipping and installation; do not overload individual carriers.

Test runs

Check smooth running of cable carriers and accurate passing over **I**-beam joints.

Maintenance

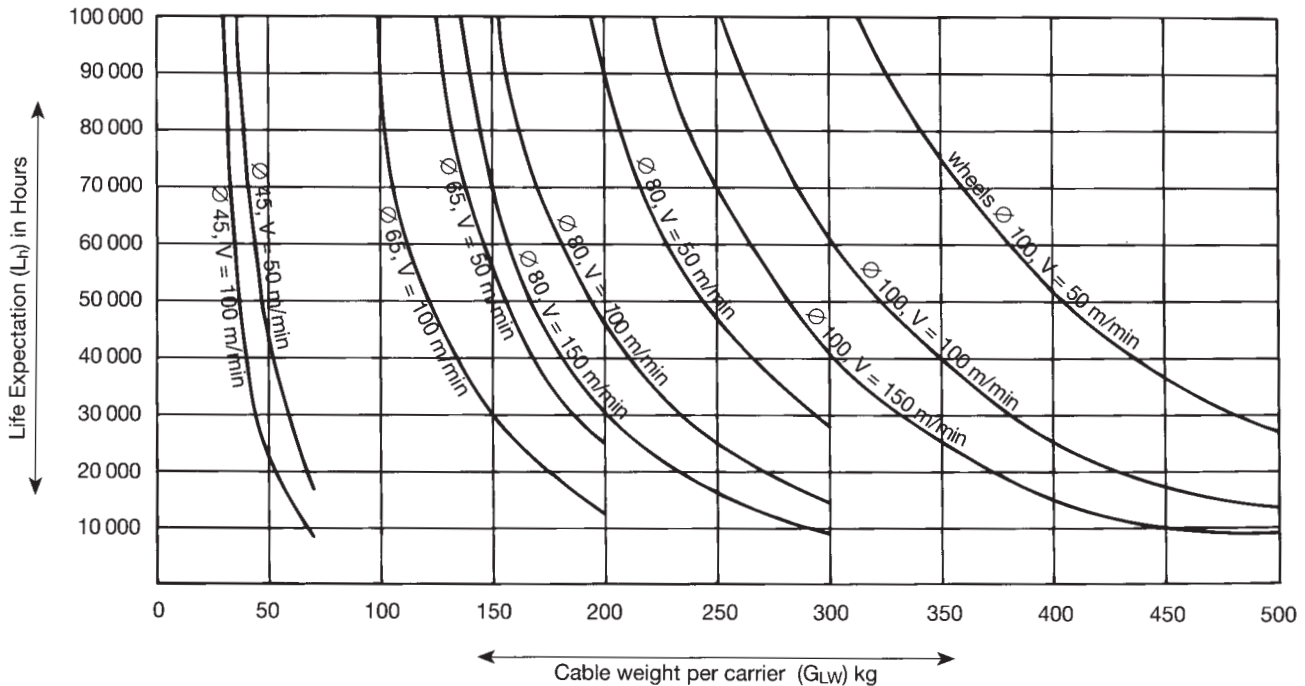
All wheels and rollers are lubricated for life and do not need re-greasing. However, the following check-up should be arranged in 3 months intervals:

1. Check wear of wheels and rollers
2. Check all hardware
3. Check cable clamping at carriers, lead- & track-clamp and counter nuts if necessary
4. Check the cable loop clamps
5. Check the tension relief equipment and attachments
6. Check the cables



TYPICAL APPLICATION AND HOW TO ORDER

Analytical Life Expectation (L_T) of Wheel Bearings*



Example for ordering

Application: Electrification for mobile stacker/reclaimer system

Cables:	2 Neoprene flat cables 4 x 35 mm ² 6 Neoprene flat cables 12 x 2.5 mm ² 3 Neoprene flat cables 8 x 1.5 mm ² , screened
Cable allowance for hookup (each end):	2 x 5 m
Working travel:	60 m
Loop depth:	3 m
Travel speed:	max. 30 m/min
I-Beam track:	INP 100

How to select the correct cable festoon system:

1. Draw a sketch of your cable package inside the window (clamping capacity) of your carrier and make a rough calculation of the cable weight per carrier.	
2. Specify cable carriers (see page 11)	W 55 F / 325 - 170 - B 175
3. Safety factor cable length (see page 35)	f = 1.15
4. Cable loops (diagram page 37)	n = 12
5. Storage distance (formula page 34)	SP = min. 4.25 m
6. Cable loop clamps required? (see page 27)	yes, 2 per cable loop
7. Tension relief required? (see page 28)	yes
Specify diameter of tow rope	Ø 6/8
Specify length of tow rope (formula page 34)	X = 5300 mm
8. Determine length of cable required (formula page 34)	$L_{total} = 84$ m

Material to order:	Type	Order-no.
11 Cable carriers for I-Beam track INP 100	W 55 F/325 - 170 - B 175	346 124
1 Lead clamp	M 55 F/170 - 1 - B 175	346 144
1 Bumper extension	PV 55 - 2	346 149
1 Track clamp	E 55 F/325 - 170 - B 175	346 156
24 Cable loop clamps 18 x 117/35 x 127 mm	Gik 2 - Al	346 961
12 Tow ropes Ø 6/8 mm; X = 5300 mm	Z 4-PVC	346 387
2 x 84 m Neoprene flat cable	NGFLGöu-J 4 x 35 mm ²	330 770
6 x 84 m Neoprene flat cable	NGFLGöu-J 12 x 2.5 mm ²	330 720
3 x 84 m Neoprene flat cable	MCHöu-J 8 x 1.5 mm ²	331 374
2 Group connectors	FL 21	331 241



Engineering Data

Cable Specification

Travel distance (max. working travel)	S =	m	Qty	Type and Size of Cables	Dimensions mm Height x Width	Weight kg/m	Total weight kg/m	
Travel speed	v =	m/min						
Acceleration	a =	m/s ²						
Loop depth	h =	m						
Storage distance	SP =	m						
Open space*	Z =	m						
Cable safety factor	f =							
Number of loops	n =							
Cable carrier	Type							
Length of carrier	l =	m						
Dia. Support saddle	D =	m						
Cable hookup length – track clamp side	l _E =	m						
Cable hookup length – lead clamp side	l _M =	m						
Length of tow rope	X =	m						
Projectin bumper	Y =	m	Total weight of all cables per meter G _L =					

1. Number of loops (see diagram or formula)

$n = \frac{f \times S}{2h - f \times l + 1,254 D} = \frac{x}{2x - x + 1,254 x} =$	determined
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2. Loop depth (see diagram or formula)

$h = \frac{f}{2} \left(\frac{S}{n} + l \right) - 0,627 \times D = \frac{\quad}{2} \left(\frac{\quad}{\quad} + \quad \right) - 0,627 \times \quad =$	m
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3. Storage distance (center track clamp to center lead clamp)

$SP = l(n - 1) + l_E + l_M + Z = (\quad) + \quad + \quad + \quad =$	m
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4. Cable length

Cable length w/o hookup ends $L = (S + SP) \times f = (\quad + \quad) \times \quad =$	m
Hookup length – track clamp side	L _E = m
Hookup length – lead clamp side	L _M = m
Total cable length	L _{total} = m

5. Cable weight per carrier

$G_{LW} = \frac{L}{n} \times G_L = \quad \times \quad =$	kg
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6. Length of tow rope

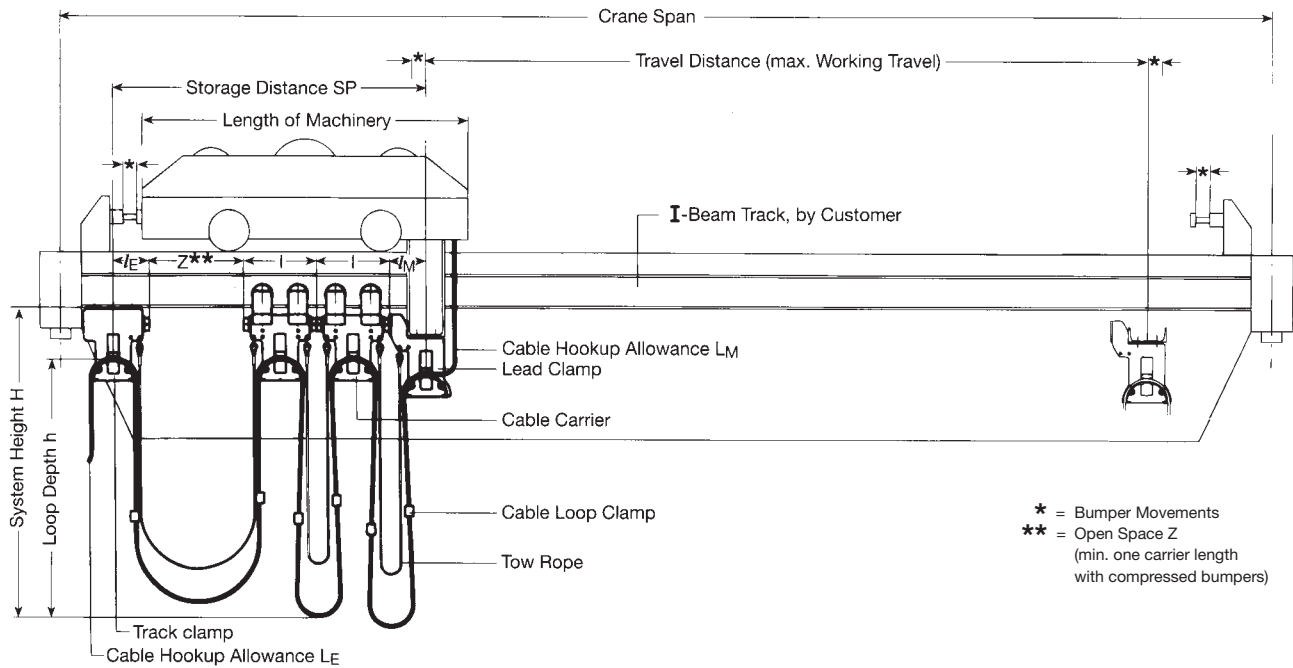
$X = \frac{S(f - 0,1) + Z}{n} + 2Y = \frac{(\quad - 0,1) + \quad}{\quad} + 2 \times \quad =$	m
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* Min. one carrier length with compressed bumpers (see page 36).
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HOW TO DETERMINE

Number and Depth of Loops, Storage Distance, Cable Length, Number of Carriers



Cable Safety Length Directions

Travel speed	cable loop depth	safety factor
up to 35 m/min	more than 0,3 m	f = 1,1 (1,15 with tow ropes)
up to 50 m/min	up to 0,8 m	f = 1,15
up to 50 m/min	more than 0,8 m	f = 1,1 (1,15 with tow ropes)
up to 80 m/min	up to 0,8 m	f = 1,2
up to 80 m/min	more than 0,8 m	f = 1,15

For higher speed (> 80 m/min) and/or acceleration (> 0,3 m/s²) factors please consult factory.

Number of loops

$$n = \frac{f \times S}{2h - f \times l + 1,254 D}$$

Cable loop depth

$$h = \frac{f}{2} \left(\frac{S}{n} + l \right) - 0,627 \times D$$

Storage distance

$$SP = l(n - 1) + l_E + l_M + Z$$

Cable length

(c/c track clamp – lead clamp without hookup ends)

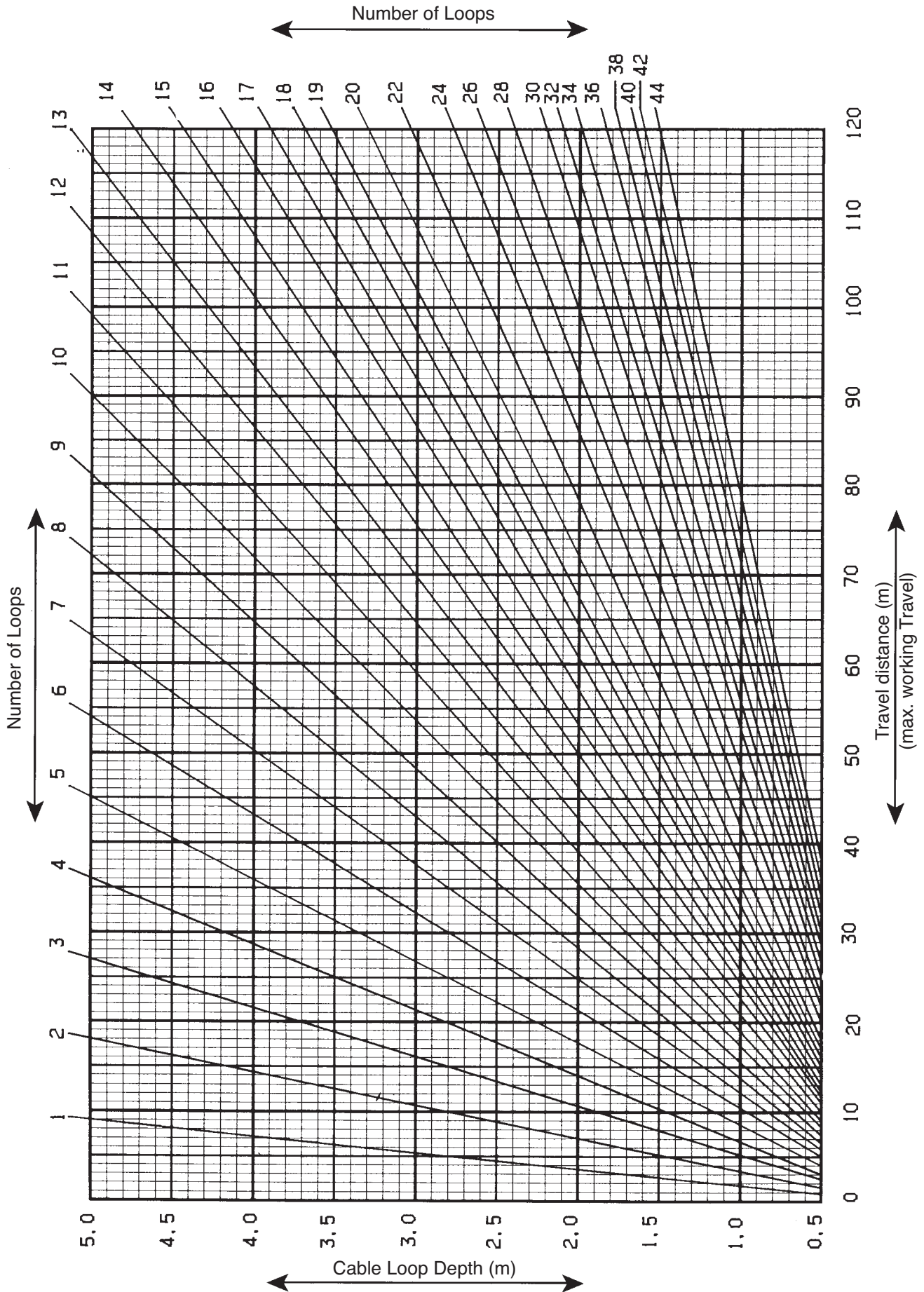
$$L = (S + SP) \times f$$

Number of carriers

(w/o lead carrier and track clamp)

$$= n - 1$$

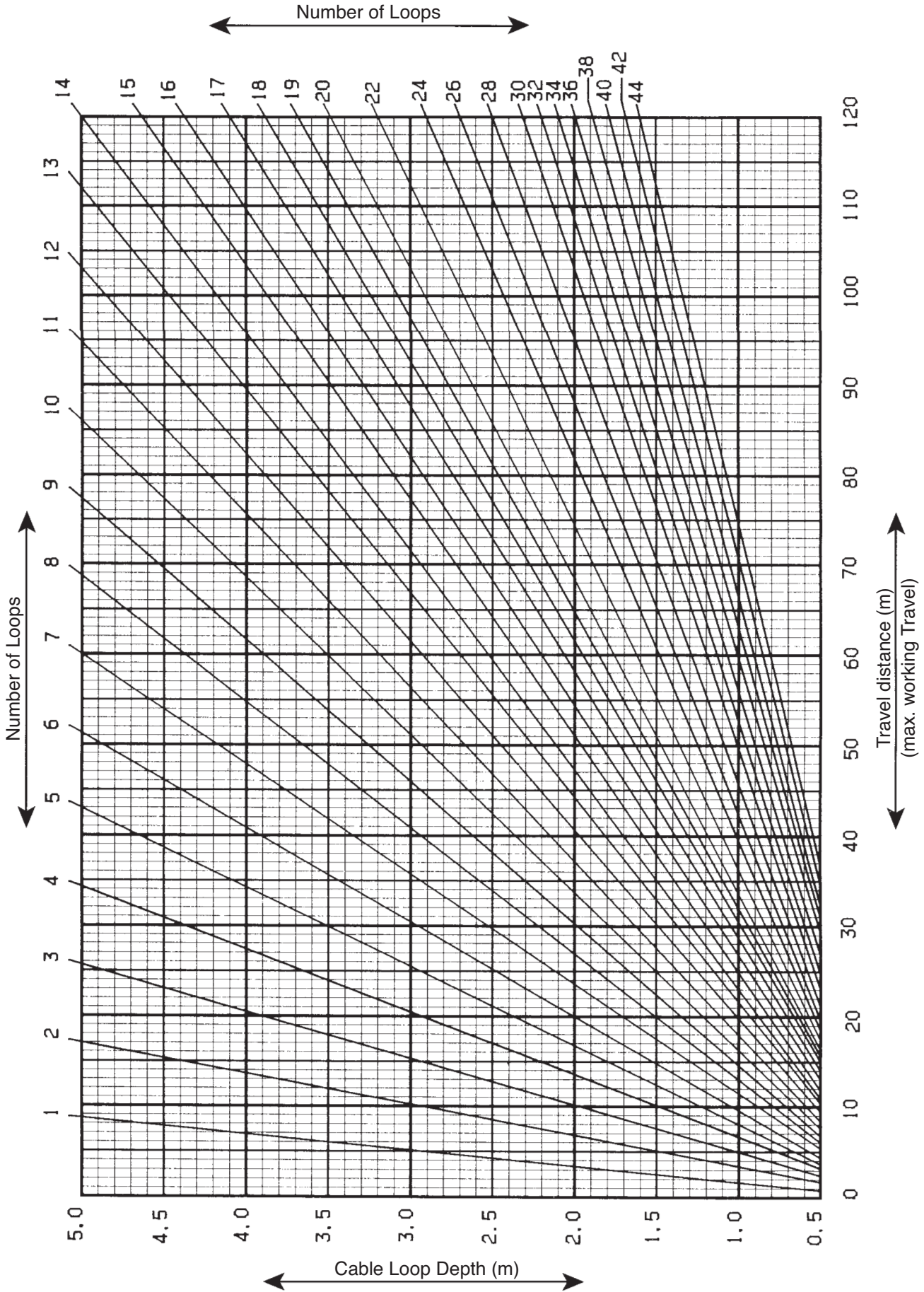
- S = travel distance (m)
- h = cable loop depth (m)
- SP = storage distance (m)
- Z = open space (m)
(min. one carrier length)
- n = number of loops
- l = length of carrier (m)
- D = diameter of support saddle (m)
- f = cable length safety factor
- l_E = cable hookup length – track clamp side (m)
- l_M = cable hookup length – lead clamp side (m)
- H = system height (m)



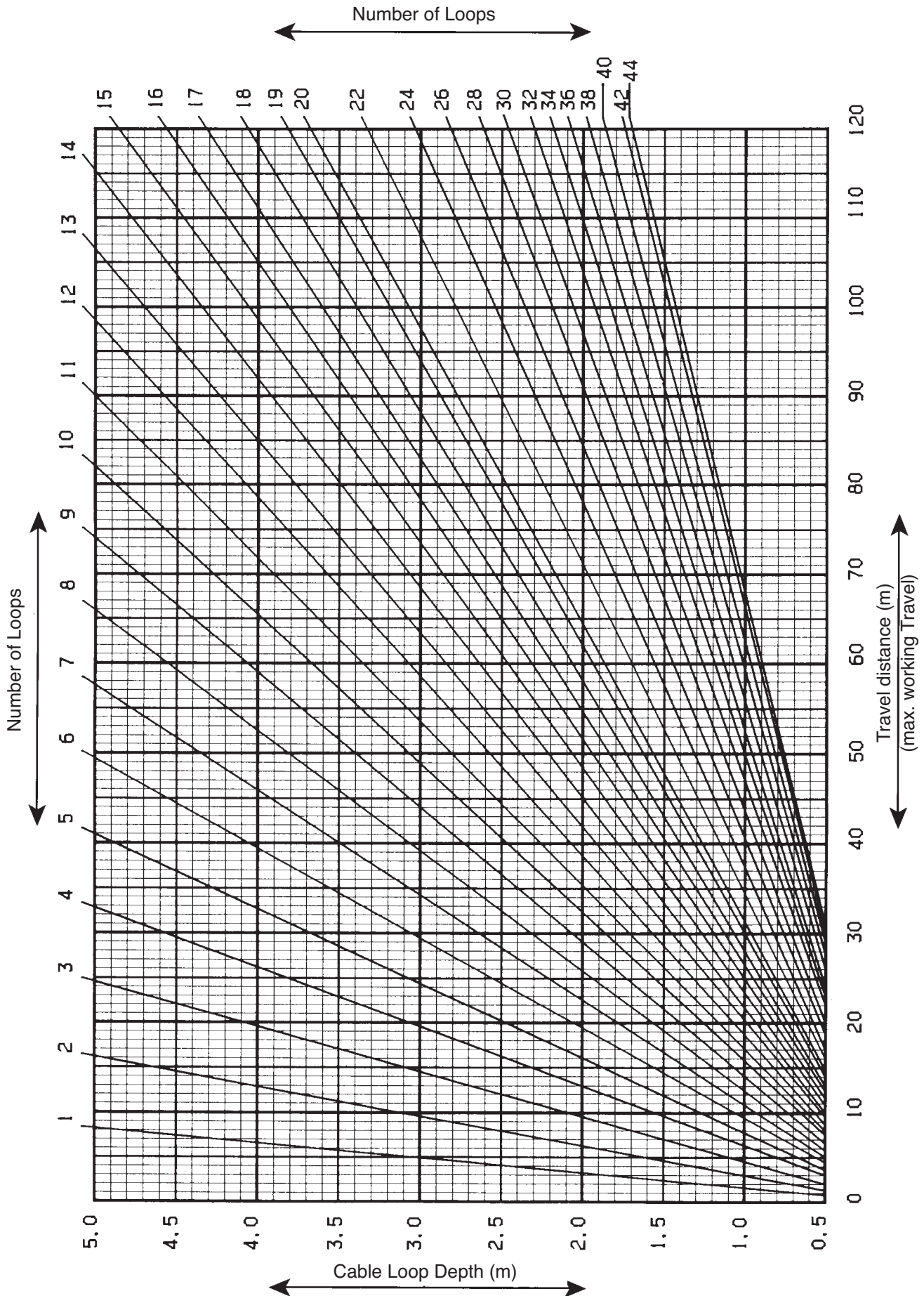
The diagram considers a cable safety length factor of $f = 1.1$



CABLE LOOPS



The diagram considers a cable safety length factor of $f = 1.15$



The diagram considers a cable safety length factor of $f = 1.2$



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Catalog No.

Copperhead Conductor Systems	1 a
Battery Charging Systems	1 b
Insulated Conductor Systems U 10	2 a
Insulated Conductor Systems U 20 – U 30 – U 40	2 b
Insulated Conductor Systems U 15 – U 25 – U 35	2 c
Aluminium Enclosed Conductor Systems LSV – LSVG	3 a
Powerail Enclosed Conductor Systems KBSL – KSL – KSLT	4 a
Powerail Enclosed Conductor Systems VKS – VKL	4 b
Powerail Enclosed Conductor Systems MKLD – MKLF – MKLS	4 c
Powerail Enclosed Conductor System VKS 10	4 d
Powerail Enclosed Conductor System KBH	4 e
Heavy Enclosed Conductor Systems	5
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Cable Carriers for Round Cable on I-beams	8 bR
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