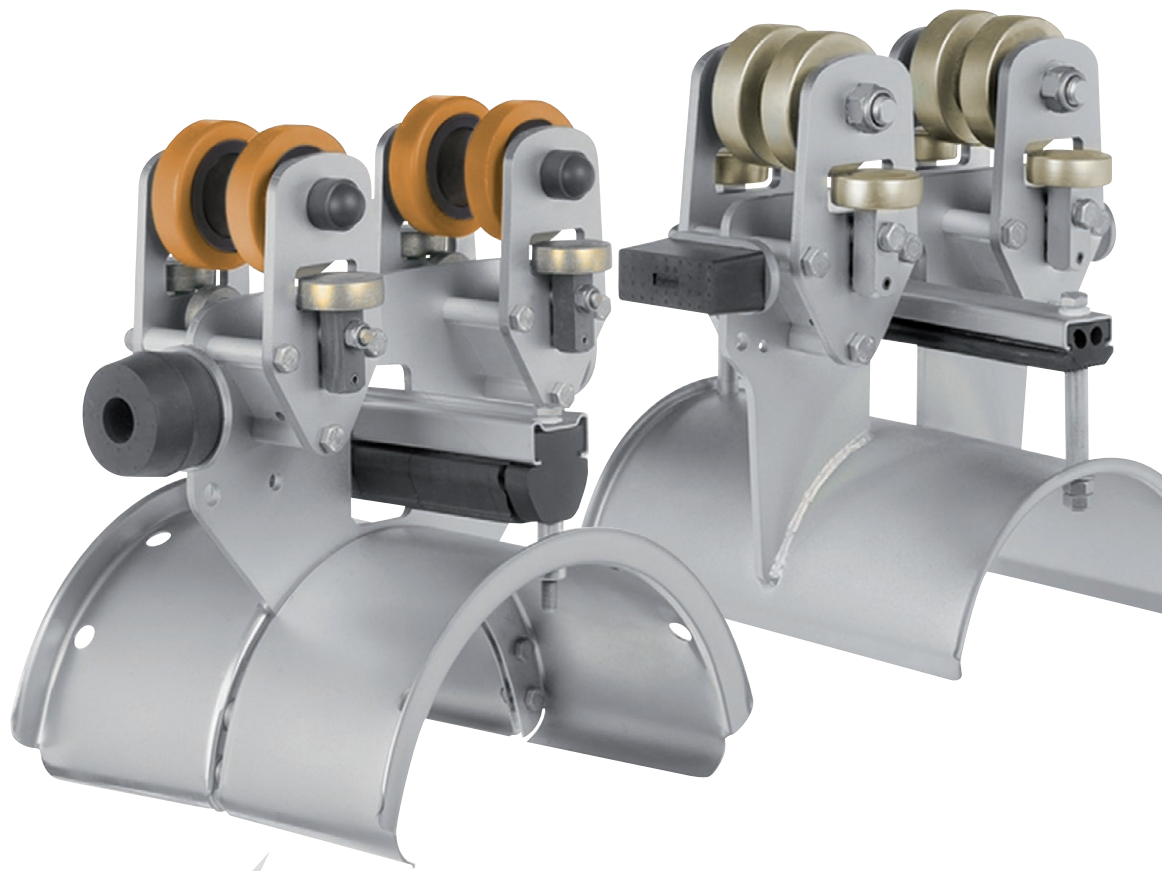


Festoon Systems for I-Beams

Program 0350 | 0360 | 0364



CONDUCTIX
wampfler

Ⓞ DELACHAUX GROUP

Contents

Festoon Systems

Festoon System for Flat and Round Cables	4
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Program 0350 with Main Rollers \varnothing 50 and 63 mm

Single Layer Cable Trolleys for Flat Cables with a Load Capacity up to 125 kg	5
Selection of Cable Trolleys and Towing Trolleys	6
Selection of End Clamps and Towing Clamps	7
Selection of Running Gear	8

Program 0350 with Main Rollers \varnothing 80 and 100 mm

Single or Dual Layer Cable Trolleys for Flat Cables with a Load Capacity up to 350 kg	9
Selection of Cable Trolleys and Towing Trolleys	10
Selection of End Clamps and Towing Clamps	11
Additional Supports	11
Selection of Running Gear	12

Program 0360 with Main Rollers \varnothing 50 and 63 mm

Single or Dual Layer Cable Trolleys for Round Cables with a Load Capacity up to 125 kg	13
Selection of Cable Trolleys and Towing Trolleys	14
Selection of End Clamps and Towing Clamps	15
Additional Supports	15
Selection of Running Gear	16

Program 0360 with Main Rollers \varnothing 80, 100, 112 and 125 mm

Single, Dual or Tripple Layer Cable Trolleys for Round Cables with a Load Capacity up to 500 kg	17
Selection of Cable Trolleys and Towing Trolleys	18
Selection of End Clamps and Towing Clamps	19
Additional Supports	19
Selection of Running Gear	20

Program 0364 with Main Rollers \varnothing 100 and 112 mm

Single Layer Cable Trolley with Round Cables with a Load Capacity up to 125 kg	23
Selection of Cable Trolleys, Towing Trolleys and Towing Trolleys for Catenary Trolley	24
Selection of End Clamps and Towing Clamps	25
Selection of Running Gear	25

Accessories for Program 0350, 0360 and 0364

Towing Ropes	26
Damping Devices	26
Cable Organizers for Cable Loops	27
Additional Clamping Pieces for Round Cable Clamps	27
Round Cable Clamps	28
Spacers	29
Flat Cable Clamps	29

Wear Parts for Program 0350, 0360 and 0364

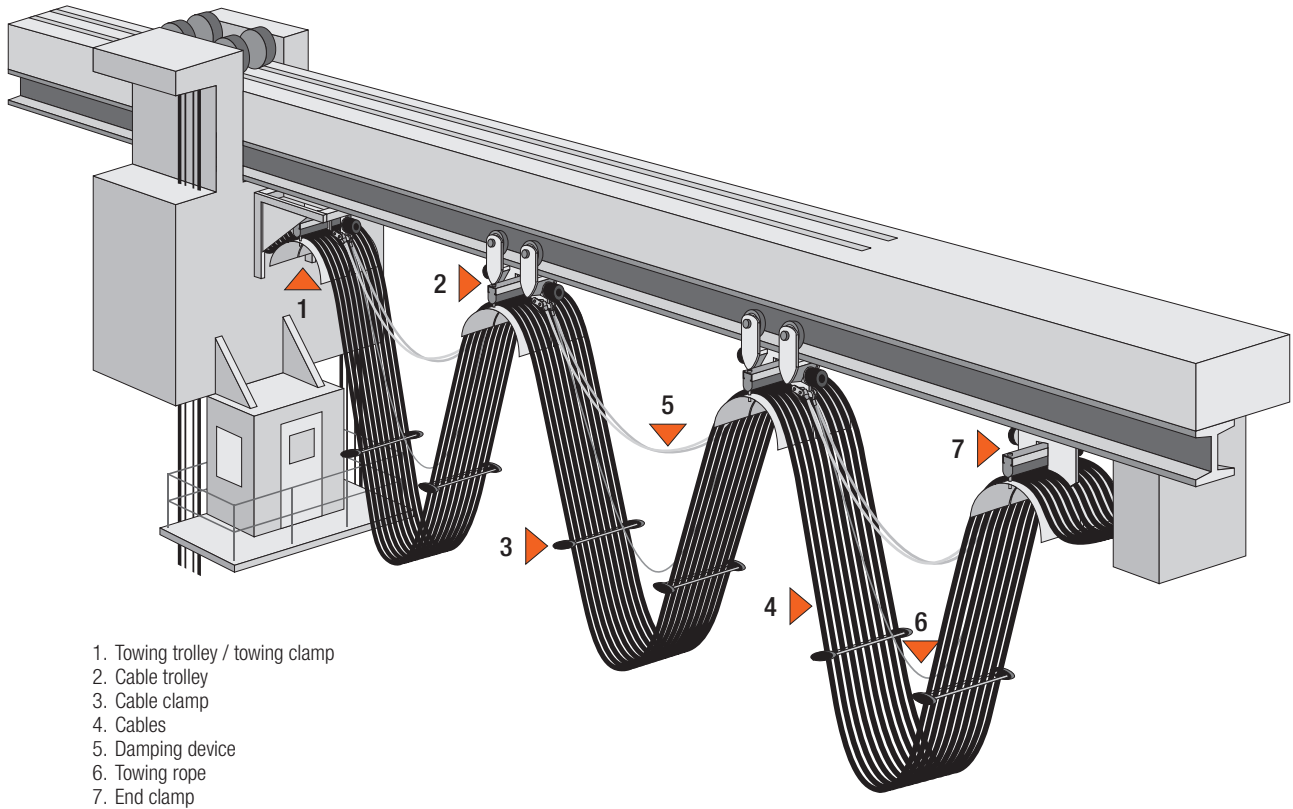
Replacement Rollers for Running Gear	31
Shock Cords	32
Rectangular Buffer	33
Round Buffer	33

Spare Parts for Program 0350, 0360 and 0364

Cable Supports including Clamping Bar	34
Clamping Bars (Complete)	34
Side Shields (Complete)	34
Running Gears (Complete)	34

System Arrangement

Festoon System for Flat and Round Cables



1. Towing trolley / towing clamp
2. Cable trolley
3. Cable clamp
4. Cables
5. Damping device
6. Towing rope
7. End clamp

A festoon system consists of the following components:

- 1 x end clamp
- X x cable trolleys
- 1 x towing trolley or alternatively 1 x towing clamp
- cable trolley and towing trolley require a running gear, which must be selected in addition to the trolley under part
- cable trolleys and towing trolleys are set to fit the exact track beam, in all cases the track beam must be specified
- the system components can be equipped with one or two additional cable supports depending on the program.

To ensure optimum operation of the system, depending upon the application, various accessories must be added, e.g. flat or round cable clamps, towing ropes or damping devices.

The Order No. of the system components is determined by the combination of the following single sub-assemblies:

Cable Trolley Underpart	Additional Support 1	Additional Support 2	Running Gear	Track Beam Designation
Also:				
Towing trolley underpart	optional	optional	only for cable trolleys and towing trolleys	
Towing clamp				
End clamp				

For Order No. see the respective catalog pages of the programs.
The system components are completely assembled prior to delivery, cable trolleys and towing trolleys are adjusted to the respective track beam.

Program 0350 with Main Rollers $\varnothing 50$ and 63 mm

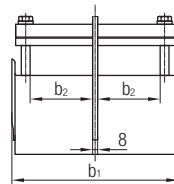
Single Layer Cable Trolleys for Flat Cables with a Load Capacity up to 125 kg



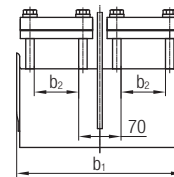
Technical details

Cable Supports	welded to the center plate, lateral-loading
Buffers	single-sided rectangular buffer
Max. Travel Speed ¹⁾	160 m/min
Max. Load Capacity ¹⁾	125 kg
Cable Trolley Underpart and Running Gear	hot-dip galvanized steel
Fasteners	stainless steel
Temperature Range ¹⁾	-30°C to + 80°C

¹⁾ depending on roller size/ roller material



Clamping bar
version 1
(continuous)



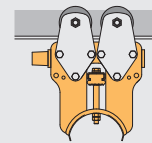
Clamping bar
version 2
(divided)

Ordering Example

Order No. **0350215-34 - 431 - 0114**

A cable trolley underpart with the following dimensions shall be used:

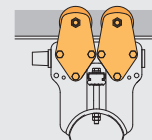
- Support diameter: $d_s = 160$ mm
- Clamping width: $b_2 = 152$ mm;
- Clamping height: $s = 70$ mm
- Order No.: **0350215-34** (chosen from catalog page 6)



The following running gear has been chosen:
Type S, flanged main rollers $\varnothing 63$ mm made of steel

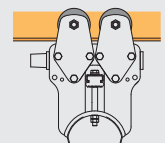
- without anti-lift rollers

Order No. **431** (chosen from catalog page 8)



The following track beam has been chosen:

- IPE 140
- I-beam code: **0114** (chosen from catalog page 8)



The Order No. of the appropriate towing trolley is
the running gear must always be equipped with anti-lift rollers:

0350315-34-432-0114

The Order No. of the appropriate end clamp is:

0350115-34

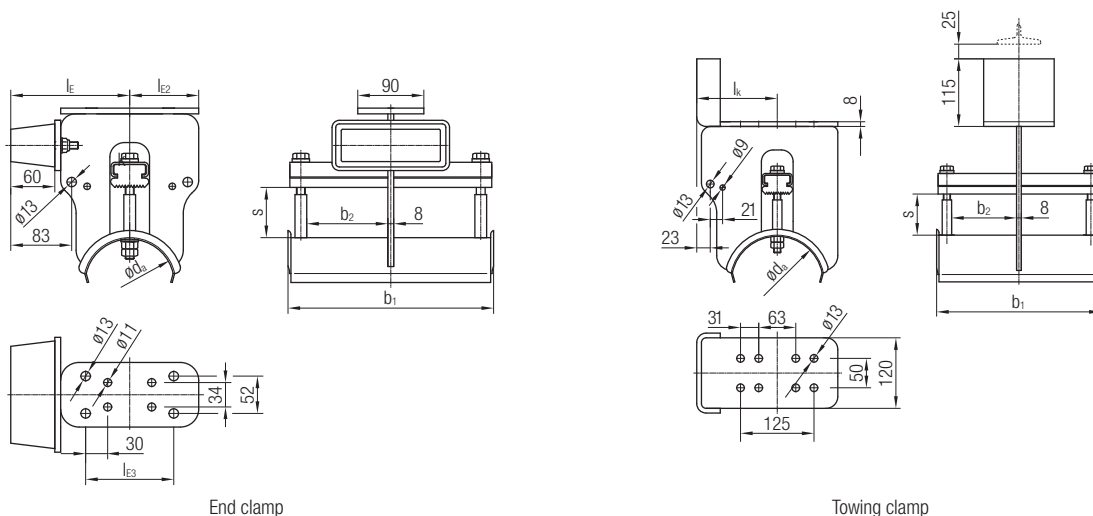
As an alternative to the towing trolley a towing clamp can be used.
The Order No. of the appropriate towing clamp is:

0350415-34

For calculation and selection please refer to our Engineering Guidelines for Festoon Systems KAT0300-0101

Program 0350 with Main Rollers $\varnothing 50$ and 63 mm

Selection of End Clamps and Towing Clamps









End Clamp Complete		Towing Clamp Complete		da	l _E	l _{E2}	l _{E3}	b ₁	b ₂	s	Clamping Bar Version	l _k
Order No.	[kg]	Order No.	[kg]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]		[mm]
0350113-20	5.6	0350413-20	6.0	125	162	94	120	215	72	52	1	102
0350113-22	5.9	0350413-22	6.3					280	105			
0350113-24	6.5	0350413-24	6.9					375	152			
0350112-30	5.7	0350412-30	6.2					35	215	72		
0350112-32	6.1	0350412-32	6.5						280	105		
0350112-34	6.8	0350412-34	7.2						375	152		
0350115-30	7.1	0350415-30	7.3	160	197	103	160	215	72	70	1	137
0350115-32	7.5	0350415-32	7.8					280	105			
0350115-34	8.4	0350415-34	8.5					375	152			
0350113-40	7.2	0350413-40	7.5					52	215	72		
0350113-42	7.6	0350413-42	8.0						280	105		
0350123-43	8.5	0350423-43	8.8						375	125		
0350113-44	8.3	0350413-44	8.6	200	237	130	230	375	152	1	1	177
0350116-42	8.4	0350416-42	9.1					280	105			
0350126-43	10.1	0350426-43	10.6					375	125			
0350116-44	9.8	0350416-44	10.3	90				375	152			
0350114-50	8.6	0350414-50	8.8					65	215	72		
0350114-52	8.8	0350414-52	9.7						280	105		
0350124-53	10.2	0350424-53	8.9	375	125							
0350114-54	10.0	0350414-54	8.7	375	152							

Program 0350

with Main Rollers $\varnothing 50$ and 63 mm

Selection of Running Gear

Running Gear		Order No.	Main Roller		Weight approx. [kg]	Parallel Flange	Preference Range I-beams		
			$\varnothing d$ [mm]	Material Bandage			I-beam Code	Tapered Flange	I-beam Code
	Type H with cylindrical main rollers	311	50	Steel	3.8	-	-	INP 120	0012
		351	50	Polyurethane	3.5				
		411	63	Steel	5.1	-	-	INP 120	0012
		451	63	Polyurethane	4.7			INP 140	0014
	Type HG with cylindrical main rollers and anti-lift rollers	312	50	Steel	4.3	-	-	INP 120	0012
		352	50	Polyurethane	4.1				
		412	63	Steel	5.6	-	-	INP 120	0012
		452	63	Polyurethane	4.9			INP 140	0014
	Type HF with cylindrical main rollers and horizontal guide rollers	313	50	Steel	4.0	IPE 100	0110	-	-
				IPE 120		0112	INP 120	0012	
		357	50	Polyurethane	3.8	IPE 140	0114	INP 140	0014
				IPE 160		0116	INP 160	0016	
		413	63	Steel	5.1	IPE 180	0118	INP 180	0018
				IPE 120		0112	INP 120	0012	
		457	63	Polyurethane	4.4	IPE 140	0114	INP 140	0014
				IPE 160		0116	INP 160	0016	
IPE 180	0118	INP 180	0018						
IPE 200	0120	-	-						
	Type HFG with cylindrical main rollers, horizontal guide rollers and anti-lift rollers	314	50	Steel	4.5	IPE 100	0110	-	-
				IPE 120		0112	INP 120	0012	
		358	50	Polyurethane	4.0	IPE 140	0114	INP 140	0014
				IPE 160		0116	INP 160	0016	
		414	63	Steel	5.6	IPE 180	0118	INP 180	0018
				IPE 120		0112	INP 120	0012	
		458	63	Polyurethane	4.9	IPE 140	0114	INP 140	0014
				IPE 160		0116	INP 160	0016	
IPE 180	0118	INP 180	0018						
IPE 200	0120	-	-						
	Type S with flanged main rollers	331	50	Steel	4.2	IPE 100	0110	-	-
						IPE 120	0112	INP 120	0012
		431	63	Steel	5.5	IPE 140	0114	INP 140	0014
						IPE 160	0116	INP 160	0016
IPE 180	0118	INP 180	0018						
IPE 200	0120	-	-						
	Type SG with flanged main rollers and anti-lift rollers	332	50	Steel	4.4	IPE 100	0110	-	-
						IPE 120	0112	INP 120	0012
		432	63	Steel	6.1	IPE 140	0114	INP 140	0014
						IPE 160	0116	INP 160	0016
IPE 180	0118	INP 180	0018						
IPE 200	0120	-	-						

Note/design

- The running gear of the towing trolley must always be equipped with anti-lift rollers.
- The anti-lift rollers $\varnothing 40$ mm are made of steel.
- The horizontal guide rollers $\varnothing 40$ mm are made of steel.
- Other materials of the horizontal guide rollers, e.g. Polyurethane on request.
- The rollers are equipped with precision ball bearings and additional sealing disks (2RS1). The ball bearings are lifetime lubricated.
- Running gear for other I-beam types or beam sizes on request.

Program 0350 with Main Rollers $\varnothing 80$ and 100 mm

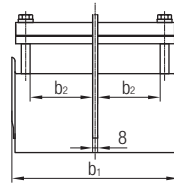
Single or Dual Layer Cable Trolleys for Flat Cables with a Load Capacity up to 350 kg



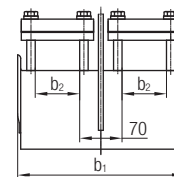
Technical details

Cable Supports	welded to the center plate, lateral-loading
Buffers	single-sided rectangular buffer
Max. Travel Speed ¹⁾	160 m/min
Max. Load Capacity ¹⁾	350 kg
Cable Trolley Underpart and Running Gear	hot-dip galvanized steel
Fasteners	stainless steel
Temperature Range ¹⁾	-30°C to + 80°C

¹⁾ depending on roller size/ roller material



Clamping bar
version 1
(continuous)



Clamping bar
version 2
(divided)

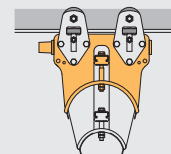
Ordering Example

Order No.

0352214-52 32 - 613 - 0116

A cable trolley underpart with the following dimensions shall be used:

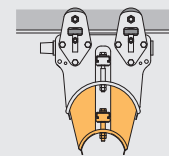
- Support diameter: $d_s = 250$ mm
- Clamping width: $b_2 = 105$ mm;
- Clamping height: $s = 65$ mm
- Order No.: 0352214-52 (chosen from catalog page 10)



An additional support

with a diameter of $d_{s2} 160$ mm shall be used. The width b_1 of the additional supports must always be chosen identical with the upper support

Order No. 32 (chosen from catalog page 11)

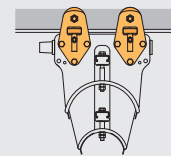


The following running gear has been chosen:

Type HF, cylindrical main rollers $\varnothing 100$ mm made of steel

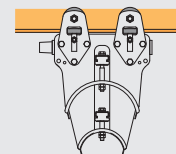
- with horizontal guide rollers made of steel
- without anti-lift rollers

Order No. 613 (chosen from catalog page 12)



The following track beam has been chosen:

- IPE 160
- I-beam code: 0116 (chosen from catalog page 12)



The Order No. of the appropriate towing trolley is the running gear must always be equipped with anti-lift rollers:

0352314-5232-614-0116

The Order No. of the appropriate end clamp is:

0350114-5232

As an alternative to the towing trolley a towing clamp can be used.

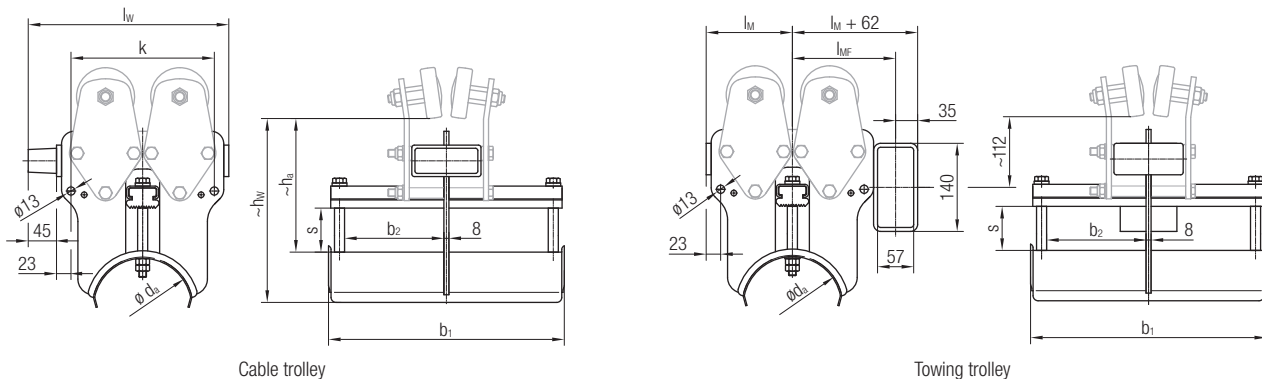
The Order No. of the appropriate towing clamp is:

0350414-5232

For calculation and selection please refer to our Engineering Guidelines for Festoon Systems KAT0300-0101

Program 0350 with Main Rollers $\varnothing 80$ and 100 mm

Selection of Cable Trolleys and Towing Trolleys



Cable trolley

Towing trolley

Cable Trolley Underpart ¹⁾		Towing Trolley Underpart ¹⁾		d _a	l _w	b ₁	b ₂	s	k	Clamping Bar Version	h _a	h _w	l _M	l _{MF}
Order No.	[kg]	Order No.	[kg]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]		[mm]	[mm]	[mm]	[mm]
0352215-30	5.2	0352315-30	6.6	160	320	215	72	70	228	1	215	295	137	164
0352215-32	5.7	0352315-32	7.0			280	105			1				
0352215-34	6.4	0352315-34	7.7			375	152			1				
0352213-40	5.2	0352313-40	6.8	200	320	215	72	52	228	1	195	295	137	164
0352213-42	5.7	0352313-42	7.2			280	105			1				
0352223-43	6.7	0352323-43	8.0			375	125			2				
0352213-44	6.4	0352313-44	7.8	200	320	375	152	52	228	1	195	295	137	164
0352216-42	7.3	0352316-42	7.9			280	105			2				
0352226-43	8.3	0352326-43	9.4			375	125							
0352216-44	8.0	0352316-44	9.1	375	152	1								
0352214-50	6.6	0352314-50	8.1	250	400	215	72	65	308	1	190	315	177	204
0352214-52	7.1	0352314-52	8.4			280	105			1				
0352224-53	8.1	0352324-53	9.4			375	125			2				
0352214-54	8.1	0352314-54	9.2	250	400	375	152	65	308	1	190	315	177	204
						375	152			1				

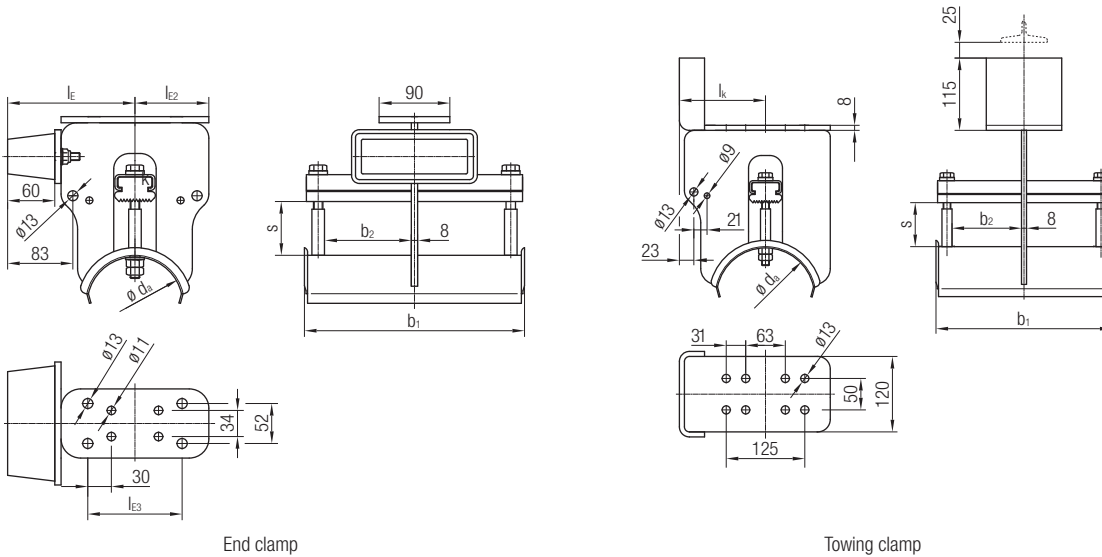
1) without running gear

Notes

- The table only refers to the cable trolley or towing trolley underpart, the running gear must be selected and added.
See page 12 of this catalog.
- The system components can be equipped with one or two additional supports.
See page 11 of this catalog.

Program 0350 with Main Rollers $\varnothing 80$ and 100 mm

Selection of End Clamps and Towing Clamps

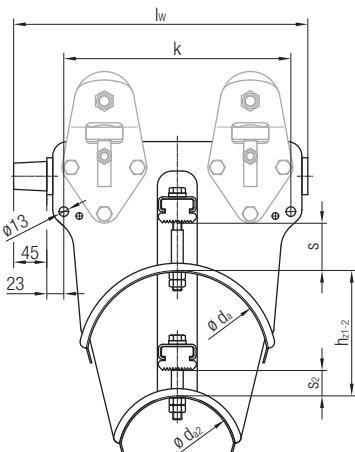


End clamp

Towing clamp

End Clamp Complete		Towing Clamp Complete		d_a	l_E	l_{E2}	l_{E3}	b_1	b_2	s	Clamping Bar Version	l_k
Order No.	[kg]	Order No.	[kg]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]		[mm]
0350115-30	7.1	0350415-30	7.3	160	197	103	160	215	72	70	1	137
0350115-32	7.5	0350415-32	7.8					280	105		1	
0350115-34	8.4	0350415-34	8.5					375	152		1	
0350113-40	7.2	0350413-40	7.5	200	197	103	160	215	72	52	1	137
0350113-42	7.6	0350413-42	8.0					280	105		1	
0350123-43	8.5	0350423-43	8.8					375	125		2	
0350113-44	8.3	0350413-44	8.6	200	197	103	160	375	152	52	1	137
0350116-42	8.4	0350416-42	9.1					280	105		1	
0350126-43	10.1	0350426-43	10.6					375	125		2	
0350116-44	9.8	0350416-44	10.3	250	237	130	230	375	152	90	1	177
0350114-50	8.6	0350414-50	8.8					215	72		1	
0350114-52	8.8	0350414-52	9.7					280	105		1	
0350124-53	10.2	0350424-53	8.9	250	237	130	230	375	125	65	2	177
0350114-54	10.0	0350414-54	8.7					375	152		1	

Additional Supports









Additional Support Order No.	[kg]	d_a	d_{a2}	b_1	b_2	s_2	Clamping Bar Version	h_{Z1-2}
		[mm]	[mm]	[mm]	[mm]	[mm]		[mm]
20	2.8	200	125	215	72	35	1	170
22	3.2			280	105		1	
23	3.8			375	125		2	
24	3.7	250	160	375	152	35	1	170
30	3.0			215	72		1	
32	3.4			280	105		1	
33	4.2	250	160	375	125	35	2	170
34	4.1			375	152		1	

The support width as well as the clamping bar design of the additional support must correspond to the upper support of the cable trolley.

Program 0350

with Main Rollers $\varnothing 80$ and 100 mm

Selection of Running Gear

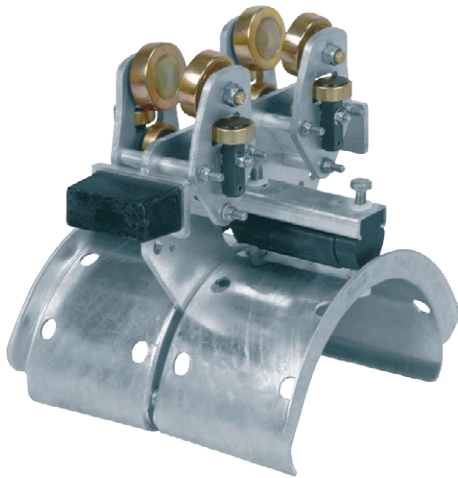
Running Gear		Order No.	Main Roller		Weight approx. [kg]	Parallel Flange	Preference Range I-beams		
			$\varnothing d$ [mm]	Material Bandage			I-beam Code	Tapered Flange	I-beam Code
	Type H with cylindrical main rollers	511	80	Steel	8.3	-	-	INP 140	0014
		551	80	Polyurethane	7.7			INP 160	0016
		611	100	Steel	12.3	-	-	INP 140	0014
		651	100	Polyurethane	11.8			INP 160	0016
	Type HG with cylindrical main rollers and anti-lift rollers	512	80	Steel	9.5	-	-	INP 140	0014
		552	80	Polyurethane	8.1			INP 160	0016
		612	100	Steel	13.8	-	-	INP 140	0014
		652	100	Polyurethane	13.3			INP 160	0016
	Type HF with cylindrical main rollers and horizontal guide rollers	513	80	Steel	9.7	IPE 140 IPE 160	0114 0116	INP 140 INP 160	0014 0016
		557	80	Polyurethane	8.3	IPE 180 IPE 200	0118 0120	INP 180 INP 200	0018 0020
		613	100	Steel	13.3	IPE 160 IPE 180 IPE 200	0116 0118 0120	INP 160 INP 180 INP 200	0016 0018 0020
		657	100	Polyurethane	12.8	IPE 220 IPE 240	0122 0124	INP 220 INP 240	0022 0024
	Type HFG with cylindrical main rollers, horizontal guide rollers and anti-lift rollers	514	80	Steel	9.8	IPE 140 IPE 160	0114 0116	INP 140 INP 160	0014 0016
		558	80	Polyurethane	9.3	IPE 180 IPE 200	0118 0120	INP 180 INP 200	0018 0020
		614	100	Steel	14.3	IPE 160 IPE 180 IPE 200	0116 0118 0120	INP 160 INP 180 INP 200	0016 0018 0020
		658	100	Polyurethane	13.8	IPE 220 IPE 240	0122 0124	INP 220 INP 240	0022 0024
	Type S with flanged main rollers	531	80	Steel	9.9	IPE 140 IPE 160 IPE 180 IPE 200	0114 0116 0118 0120	INP 140 INP 160 INP 180 INP 200	0014 0016 0018 0020
		631	100	Steel	16.0	IPE 160 IPE 180 IPE 200 IPE 220 IPE 240	0116 0118 0120 0122 0124	INP 160 INP 180 INP 200 INP 220 INP 240	0016 0018 0020 0022 0024
	Type SG with flanged main rollers and anti-lift rollers	532	80	Steel	11.3	IPE 140 IPE 160 IPE 180 IPE 200	0114 0116 0118 0120	INP 140 INP 160 INP 180 INP 200	0014 0016 0018 0020
		632	100	Steel	17.3	IPE 160 IPE 180 IPE 200 IPE 220 IPE 240	0116 0118 0120 0122 0124	INP 160 INP 180 INP 200 INP 220 INP 240	0016 0018 0020 0022 0024

Note/design

- The running gear of the towing trolley must always be equipped with anti-lift rollers.
- Main roller $\varnothing 80$ mm: anti-lift rollers $\varnothing 50$ mm and horizontal guide rollers $\varnothing 50$ mm made of steel
- Main roller $\varnothing 100$ mm: anti-lift rollers $\varnothing 50$ mm and horizontal guide rollers $\varnothing 63$ mm made of steel
- Other materials of the horizontal guide rollers, e.g. Polyurethane on request.
- The rollers are equipped with precision ball bearings and additional sealing disks (2RS1).
The ball bearings are lifetime lubricated.
- Running gear for other I-beam types or beam sizes on request.

Program 0360 with Main Rollers $\varnothing 50$ and 63 mm

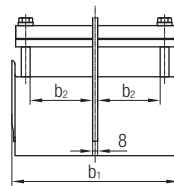
Single or Dual Layer Cable Trolleys for Round Cables with a Load Capacity up to 125 kg



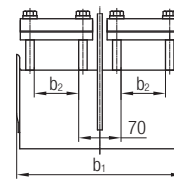
Technical details

Cable Supports	bolted to the center plate, lateral-loading
Buffers	single-sided rectangular buffer
Max. Travel Speed ¹⁾	160 m/min
Max. Load Capacity ¹⁾	125 kg
Cable Trolley Underpart and Running Gear	hot-dip galvanized steel
Fasteners	stainless steel
Temperature Range ¹⁾	-30°C to + 80°C

¹⁾ depending on roller size/ roller material



Clamping bar
version 1
(continuous)



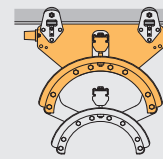
Clamping bar
version 2
(divided)

Ordering Example

Order No. **036022-86 66 - 414 - 0014**

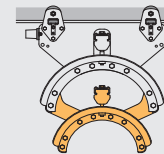
A cable trolley underpart with the following dimensions shall be used:

- Support diameter: $d_s = 360$ mm
- Clamping width: $b_2 = 200$ mm;
- Clamping height: $s = 36$ mm
- Order No.: 036022-86 (chosen from catalog page 14)



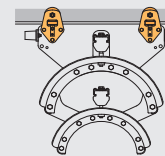
An additional support

- with a diameter $d_{a2} 260$ mm shall be used.
- The width b_1 of the additional supports must always be chosen identical with the upper support
- Order No. 66 (chosen from catalog page 15)



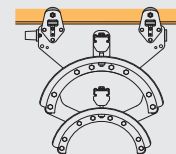
The following running gear has been chosen:

- Type HFG, cylindrical main rollers $\varnothing 63$ mm, made of steel
- with horizontal guide rollers made of steel
- with anti-lift rollers made of steel
- Order No. 414 (chosen from catalog page 16)



The following track beam has been chosen:

- INP 140
- I-beam code: 0014 (chosen from catalog page 16)



The Order No. of the appropriate towing trolley is
the running gear must always be equipped with anti-lift rollers:

036032-8666-414-0014

The Order No. of the appropriate end clamp is:

036012-8666

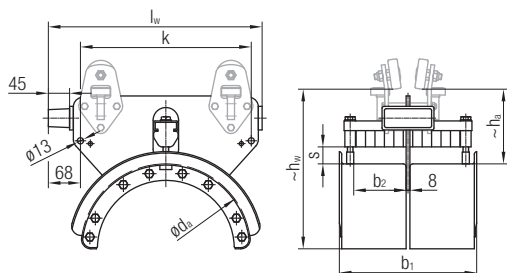
As an alternative to the towing trolley a towing clamp can be used.
The Order No. of the appropriate towing clamp is:

036042-8666

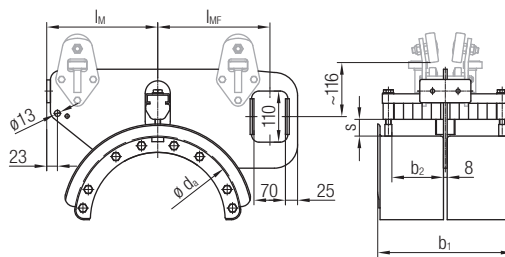
For calculation and selection please refer to our Engineering Guidelines for Festoon Systems KAT0300-0101

Program 0360 with Main Rollers $\varnothing 50$ and 63 mm

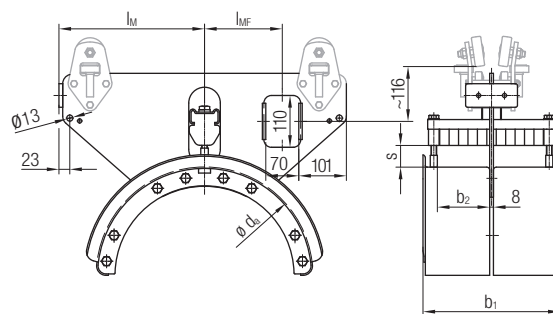
Selection of Cable Trolleys and Towing Trolleys



Cable trolley



Towing trolley d_a 260 mm and 360 mm



Towing trolley d_a 460 mm

Cable Trolley Underpart ¹⁾		Towing Trolley Underpart ¹⁾		d_a	l_w	b_1	b_2	s	k	Clamping Bar Version	h_a	h_w	l_M	l_{MF}
Order No.	[kg]	Order No.	[kg]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]		[mm]	[mm]	[mm]	[mm]
036021-62	8.2	036031-62	11.5	260	334	291	110	26	242	1	150	276	170	172
036021-64	9.4	036031-64	14.2			384	155			2				
036022-66	12.2	036032-66	15.8			532	200			2				
036022-68	13.4	036032-68	17.1			632	250			2				
036021-82	10.6	036031-82	17.0	360	454	291	110	36	362	1	160	336	239	241
036021-84	12.0	036031-84	18.6			384	155			1				
036022-86	15.7	036032-86	22.6			532	200			2				
036022-88	17.3	036032-88	24.3			632	250			2				
036021-92	13.7	036031-92	23.2	460	574	291	110	46	482	1	180	410	309	165
036021-94	15.7	036031-94	25.0			384	155			1				
036022-96	20.5	036032-96	30.4			532	200			2				
036022-98	21.1	036032-98	31.9			632	250			2				

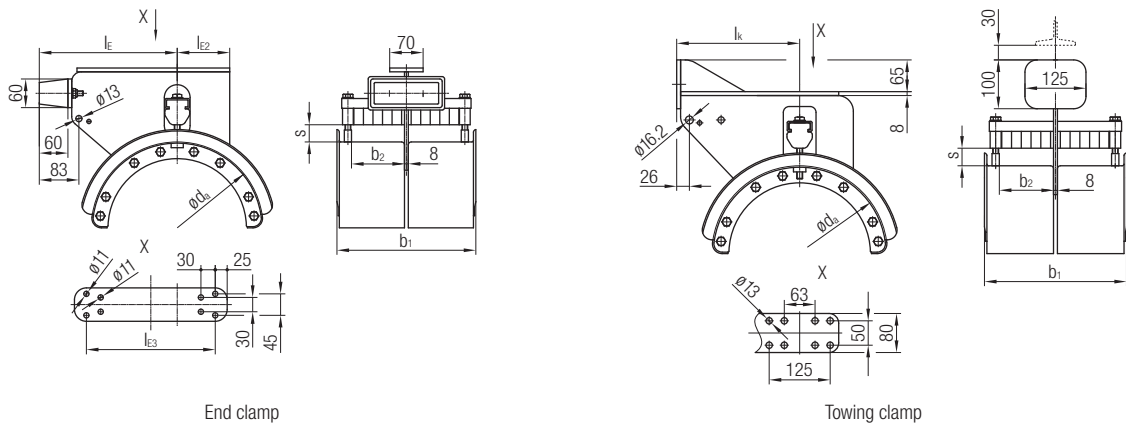
1) without running gear

Notes

- The table only refers to the cable trolley or towing trolley underpart, the running gear must be selected and added. See page 16 of this catalog.
- The system components can be equipped with an additional support. See page 15 of this catalog.

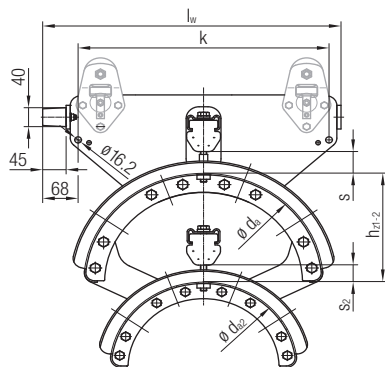
Program 0360 with Main Rollers $\varnothing 50$ and 63 mm

Selection of End Clamps and Towing Clamps



End Clamp Complete		Towing Clamp Complete		d_a	l_E	l_{E2}	l_{E3}	b_1	b_2	s	Clamping Bar Version	l_k
Order No.	[kg]	Order No.	[kg]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]		[mm]
036011-62	10.6	036041-62	10.0	260	219	81	170	291	110	26	1	182
036011-64	12.9	036041-64	11.8					384	155		2	
036012-66	14.5	036042-66	14.2					532	200		2	
036012-68	15.8	036042-68	15.6					632	250		2	
036011-82	15.7	036041-82	15.3	360	289	110	270	291	110	36	1	252
036011-84	17.2	036041-84	17.4					384	155		1	
036012-86	21.2	036042-86	21.7					532	200		2	
036012-88	22.9	036042-88	23.9					632	250		2	
036011-92	24.0	036041-92	20.6	460	359	125	360	291	110	46	1	322
036011-94	25.3	036041-94	22.4					384	155		1	
036012-96	29.4	036042-96	27.2					532	200		2	
036012-98	31.0	036042-98	30.0					632	250		2	

Additional Supports








Additional Support Order No.		d_a	d_{a2}	b_1	b_2	s_2	Clamping Bar Version	h_{Z1-2}
	[kg]	[mm]	[mm]	[mm]	[mm]	[mm]		[mm]
32	4.8	260	160	291	110	16	1	180
34	5.6			384	155		1	
62	10.9	360	260	291	110	26	1	178
64	13.0			384	155		1	
66	17.2			532	200		2	
68	19.1			632	250		2	
82	11.9	460	360	291	110	36	1	205
84	14.0			384	155		1	
86	18.3			532	200		2	
88	20.2			632	250		2	

The support width as well as the clamping bar design of the additional support must correspond to the upper support of the cable trolley.

Program 0360

with Main Rollers $\varnothing 50$ and 63 mm

Selection of Running Gear

Running Gear		Order No.	Main Roller		Weight approx. [kg]	Parallel Flange	Preference Range I-beams		
			$\varnothing d$ [mm]	Material Binding			I-beam Code	Tapered Flange	I-beam Code
	Typ H mit zylindrischen Haupttragrollen	311	50	Steel	3.8	-	-	INP 120	0012
		351	50	Polyurethane	3.5				
		411	63	Steel	5.1				
		451	63	Polyurethane	4.7				
	Typ HG mit zylindrischen Haupttragrollen und Gegendruckrollen	312	50	Steel	4.3	-	-	INP 120	0012
		352	50	Polyurethane	4.1				
		412	63	Steel	5.6				
		452	63	Polyurethane	4.9				
	Typ HF mit zylindrischen Haupttragrollen und horizontalen Führungsrollen	313	50	Steel	4.0	IPE 100 IPE 120 IPE 140	0110 0112 0114	- INP 120 INP 140	- 0012 0014
		357	50	Polyurethane	3.8	IPE 160 IPE 180	0116 0118	INP 160 INP 180	0016 0018
		413	63	Steel	5.1	IPE 120 IPE 140 IPE 160	0112 0114 0116	INP 120 INP 140 INP 160	0012 0014 0016
		457	63	Polyurethane	4.4	IPE 180 IPE 200	0118 0120	INP 180 -	0018 -
		314	50	Steel	4.5	IPE 100 IPE 120 IPE 140	0110 0112 0114	- INP 120 INP 140	- 0012 0014
		358	50	Polyurethane	4.0	IPE 160 IPE 180	0116 0118	INP 160 INP 180	0016 0018
		414	63	Steel	5.6	IPE 120 IPE 140 IPE 160	0112 0114 0116	INP 120 INP 140 INP 160	0012 0014 0016
		458	63	Polyurethane	4.9	IPE 180 IPE 200	0118 0120	INP 180 -	0018 -
	Typ S mit Spurkranz- Haupttragrollen	331	50	Steel	4.2	IPE 100 IPE 120 IPE 140 IPE 160 IPE 180	0110 0112 0114 0116 0118	- INP 120 INP 140 INP 160 INP 180	- 0012 0014 0016 0018
		431	63	Steel	5.5	IPE 120 IPE 140 IPE 160 IPE 180 IPE 200	0112 0114 0116 0118 0120	INP 120 INP 140 INP 160 INP 180 -	0012 0014 0016 0018 -
	Typ SG mit Spurkranz- Haupttragrollen und Gegendruckrollen	332	50	Steel	4.4	IPE 100 IPE 120 IPE 140 IPE 160 IPE 180	0110 0112 0114 0116 0118	- INP 120 INP 140 INP 160 INP 180	- 0012 0014 0016 0018
		432	63	Steel	6.1	IPE 120 IPE 140 IPE 160 IPE 180 IPE 200	0112 0114 0116 0118 0120	INP 120 INP 140 INP 160 INP 180 -	0012 0014 0016 0018 -

Note/design

- The running gear of the towing trolley must always be equipped with anti-lift rollers.
- The anti-lift rollers $\varnothing 40$ mm are made of steel.
- The horizontal guide rollers $\varnothing 40$ mm are made of steel.
- Other materials of the horizontal guide rollers, e.g. Polyurethane on request.
- The rollers are equipped with precision ball bearings and additional sealing disks (2RS1). The ball bearings are lifetime lubricated.
- Running gear for other I-beam types or beam sizes on request.

Program 0360 with Main Rollers $\varnothing 80, 100, 112$ and 125 mm

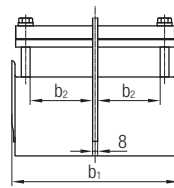
Single, Dual or Tripple Layer Cable Trolleys for Round Cabes with a Load Capacity up to 500 kg



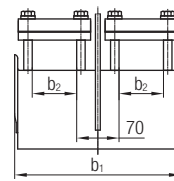
Technical details

Cable Supports	bolted to the center plate, lateral-loading
Buffers	single-sided round buffer
Max. Travel Speed ¹⁾	160 m/min
Max. Load Capacity ¹⁾	500 kg
Cable Trolley Underpart and Running Gear	hot-dip galvanized steel
Fasteners	stainless steel
Temperature Range ¹⁾	-30°C to + 80°C

¹⁾ depending on roller size/ roller material



Clamping bar
version 1
(continuous)



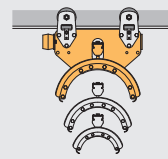
Clamping bar
version 2
(divided)

Ordering Example

Order No. **036222-96 8666 - 658 - 0018**

A cable trolley underpart with the following dimensions shall be used:

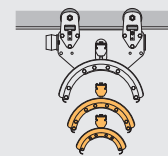
- Support diameter: $d_{a1} = 460$ mm
- Clamping width: $b_2 = 200$ mm;
- Clamping height: $s = 46$ mm
- Order No.: **036222-96** (chosen from catalog page 18)



Two additional supports

with a diameter d_{a2} 360 mm and d_{a3} 260 mm shall be used. The width b_1 of the additional supports must always be chosen identical with the upper support

Order No. **8666** (chosen from catalog page 19)

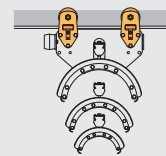


The following running gear has been chosen:

Type HFG, cylindrical main rollers $\varnothing 100$ mm with Polyurethane bandage

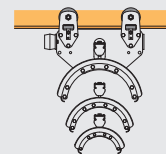
- with horizontal guide rollers made of steel
- with anti-lift rollers made of steel

Order No. **658** (chosen from catalog page 20)



The following track beam has been chosen:

- INP 180
- I-beam code: **0018** (chosen from catalog page 20)



The Order No. of the appropriate towing trolley is the running gear must always be equipped with anti-lift rollers:

036232-968666-658-0018

The Order No. of the appropriate end clamp is:

036212-968666

As an alternative to the towing trolley a towing clamp can be used.

The Order No. of the appropriate towing clamp is:

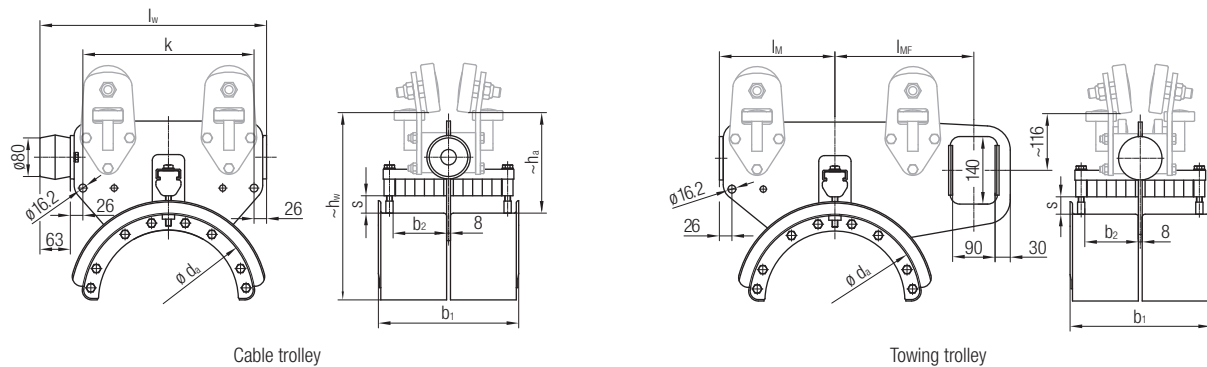
036042-968666

For calculation and selection please refer to our Engineering Guidelines for Festoon Systems KAT0300-0101

Program 0360

with Main Rollers $\varnothing 80, 100, 112$ and 125 mm

Selection of Cable Trolleys and Towing Trolleys



Cable trolley

Towing trolley

Cable Trolley Underpart ¹⁾ Order No.	[kg]	Towing Trolley Underpart ¹⁾ Order No.	[kg]	d _a	l _w	b ₁	b ₂	s	k	Clamping Bar Version	h _a	h _w	l _M	l _{MF}
				[mm]	[mm]	[mm]	[mm]	[mm]	[mm]		[mm]	[mm]	[mm]	[mm]
036221-62	10.8	036231-62	11.4	260	350	291	110	26	235	1	200	326	170	218
036221-64	12.6	036231-64	13.2			384	155			1				
036222-66	15.2	036232-66	15.6			532	200			2				
036222-68	16.3	036232-68	16.9			632	250			2				
036222-69	18.7	036232-69	17.8			772	320			2				
036221-82	14.9	036231-82	19.0	360	470	291	110	36	355	1	210	388	239	288
036221-84	17.2	036231-84	19.6			384	155			1				
036222-86	22.0	036232-86	23.9			532	200			2				
036222-88	23.9	036232-88	25.8			632	250			2				
036222-89	26.8	036232-89	28.7			772	320			2				
036221-92	21.6	036231-92	23.9	460	590	291	110	46	475	1	220	448	310	358
036221-94	23.3	036231-94	25.7			384	155			1				
036222-96	28.8	036232-96	31.1			532	200			2				
036222-98	30.9	036232-98	33.2			632	250			2				
036222-99	34.2	036232-99	36.5			772	320			2				

1) without running gear

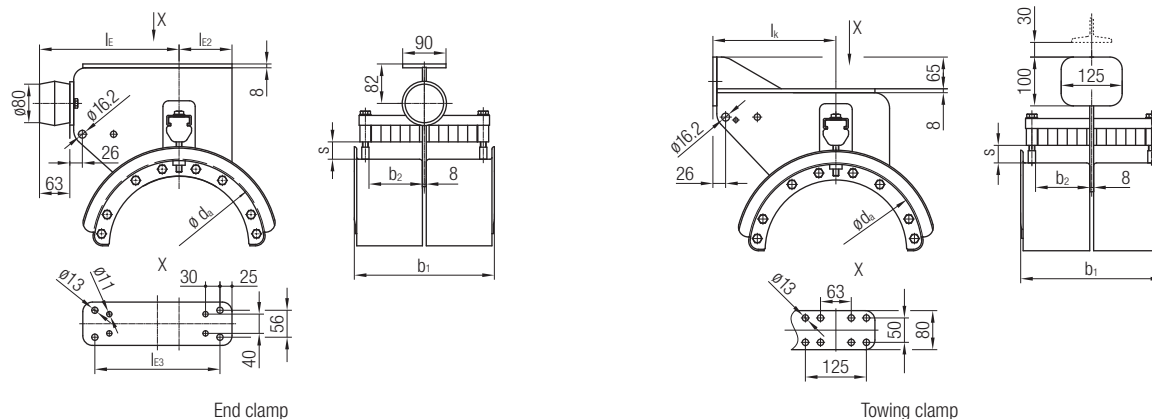
Notes

- The table only refers to the cable trolley or towing trolley underpart, the running gear must be selected and added. See page 20 of this catalog.
- The system components can be equipped with one or two additional supports. See page 19 of this catalog.

Program 0360

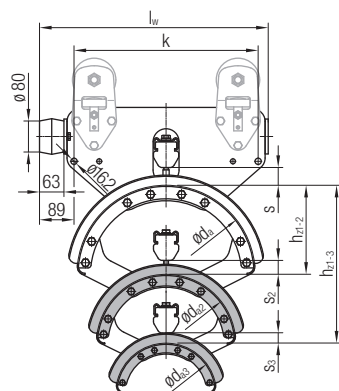
with Main Rollers $\varnothing 80$, 100, 112 and 125 mm

Selection of End Clamps and Towing Clamps



End Clamp Complete Order No.	[kg]	Towing Clamp Complete Order No.	[kg]	d_a	l_E	l_{E2}	l_{E3}	b_1	b_2	s	Clamping Bar Version	l_k
				[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]		[mm]
036211-62	11.2	036041-62	10.0	260	220	81	160	291	110	26	1	182
036211-64	13.0	036041-64	11.8					384	155		1	
036212-66	15.4	036042-66	14.2					532	200		2	
036212-68	16.4	036042-68	15.6					632	250		2	
036212-69	18.9	036042-69	17.8					772	320		2	
036211-82	17.3	036041-82	15.3	360	290	110	260	291	110	36	1	252
036211-84	19.3	036041-84	17.4					384	155		1	
036212-86	23.6	036042-86	21.7					532	200		2	
036212-88	25.5	036042-88	23.9					632	250		2	
036212-89	28.0	036042-89	26.4					772	320		2	
036211-92	23.0	036041-92	20.6	460	361	125	350	291	110	46	1	322
036211-94	24.7	036041-94	22.4					384	155		1	
036212-96	30.2	036042-96	27.2					532	200		2	
036212-98	32.3	036042-98	30.0					632	250		2	
036212-99	35.6	036042-99	33.2					772	320		2	

Additional Supports









The support width as well as the clamping bar version of the additional support must correspond to the upper support of the cable trolley.

Additional Supports Order No.	[kg]	d_a	d_{a2}	d_{a3}	b_1	b_2	s_2	s_3	Clamping Bar Version	h_{z1-2}	h_{z1-3}
		[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]		[mm]	[mm]
One Additional Support											
32	4.8	260	160	-	291	110	16	-	1	180	-
34	5.6				384	156			1		
62	10.9	360	260	-	291	110	26	-	1	178	-
64	13.0				384	155			1		
66	17.2				532	200			2		
68	19.1				632	250			2		
69	22.0				772	320			2		
82	11.9	460	360	-	291	110	36	-	1	205	-
84	14.0				384	155			1		
86	18.3				532	200			2		
88	20.2				632	250			2		
89	26.4				772	320			2		
Two Additional Supports											
8262	22.8	460	360	260	291	110	36	26	1	205	408
8464	27.0				384	155			1		
8666	35.5				532	200			2		
8868	39.3				632	250			2		
8969	45.1				772	320			2		

Program 0360

with Main Rollers $\varnothing 80$ and 100 mm

Selection of Running Gear

Running Gear		Order No.	Main Roller		Weight approx. [kg]	Parallel Flange	Preference Range I-beams		
			$\varnothing d$ [mm]	Material Bandage			I-beam Code	Tapered Flange	I-beam Code
	Typ H mit zylindrischen Haupttragrollen	511	80	Steel	8.3	-	-	INP 140	0014
		551	80	Polyurethane	7.7	-	-	INP 160	0016
		611	100	Steel	12.3	-	-	INP 140	0014
		651	100	Polyurethane	11.8	-	-	INP 160 INP 180	0016 0018
	Typ HG mit zylindrischen Haupttragrollen und Gegendruckrollen	512	80	Steel	9.5	-	-	INP 140	0014
		552	80	Polyurethane	8.1	-	-	INP 160	0016
		612	100	Steel	13.8	-	-	INP 140	0014
		652	100	Polyurethane	13.3	-	-	INP 160 INP 180	0016 0018
	Typ HF mit zylindrischen Haupttragrollen und horizontalen Führungsrollen	513	80	Steel	9.7	IPE 140 IPE 160	0114 0116	INP 140 INP 160	0014 0016
		557	80	Polyurethane	8.3	IPE 180 IPE 200	0118 0120	INP 180 INP 200	0018 0020
		613	100	Steel	13.3	IPE 160 IPE 180 IPE 200	0116 0118 0120	INP 160 INP 180 INP 200	0016 0018 0020
		657	100	Polyurethane	12.8	IPE 220 IPE 240	0122 0124	INP 220 INP 240	0022 0024
	Typ HFG mit zylindrischen Haupttragrollen horizontalen Führungsrollen und Gegendruckrollen	514	80	Steel	9.8	IPE 140 IPE 160	0114 0116	INP 140 INP 160	0014 0016
		558	80	Polyurethane	9.3	IPE 180 IPE 200	0118 0120	INP 180 INP 200	0018 0020
		614	100	Steel	14.3	IPE 160 IPE 180 IPE 200	0116 0118 0120	INP 160 INP 180 INP 200	0016 0018 0020
		658	100	Polyurethane	13,8	IPE 220 IPE 240	0122 0124	INP 220 INP 240	0022 0024
	Typ S mit Spurkranz-Haupttragrollen	531	80	Steel	9.9	IPE 140 IPE 160 IPE 180 IPE 200	0114 0116 0118 0120	INP 140 INP 160 INP 180 INP 200	0014 0016 0018 0020
		631	100	Steel	16.0	IPE 160 IPE 180 IPE 200 IPE 220 IPE 240	0116 0118 0120 0122 0124	INP 160 INP 180 INP 200 INP 220 INP 240	0016 0018 0020 0022 0024
	Typ SG mit Spurkranz-Haupttragrollen und Gegendruckrollen	532	80	Steel	11.3	IPE 140 IPE 160 IPE 180 IPE 200	0114 0116 0118 0120	INP 140 INP 160 INP 180 INP 200	0014 0016 0018 0020
		632	100	Steel	17.3	IPE 160 IPE 180 IPE 200 IPE 220 IPE 240	0116 0118 0120 0122 0124	INP 160 INP 180 INP 200 INP 220 INP 240	0016 0018 0020 0022 0024


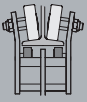



Note/design

- Main roller $\varnothing 80$ mm: anti-lift rollers $\varnothing 50$ mm and horizontal guide rollers $\varnothing 50$ mm made of steel.
- Main roller $\varnothing 100$ mm: anti-lift rollers $\varnothing 50$ mm and horizontal guide rollers $\varnothing 63$ mm made of steel.
- Other materials of the horizontal guide rollers, e.g. Polyurethane on request.
- The rollers are equipped with precision ball bearings and additional sealing disks (2RS1). The ball bearings are lifetime lubricated.
- Running gear for other I-beam types or beam sizes on request.

Program 0360

with Main Rollers \varnothing 112 and 125 mm

Selection of Running Gear

Running Gear		Order No.	Main Roller		Weight approx. [kg]	Parallel Flange	Preference Range I-beams		
			d [mm]	Material Bandage			I-beam Code	Tapered Flange	I-beam Code
	Typ H mit zylindrischen Haupttragrollen	751	112	Polyurethane	14.4	-	-	INP 180	0018
			-	-	-	-	INP 200	0020	
			-	-	-	-	INP 220	0022	
	Typ HG mit zylindrischen Haupttragrollen und Gegendruckrollen	752	112	Polyurethane	15.4	-	-	INP 180	0018
			-	-	-	-	INP 200	0020	
			-	-	-	-	INP 220	0022	
	Typ HF mit zylindrischen Haupttragrollen und horizontalen Führungsrollen	757	112	Polyurethane	14.4	IPE 160	0116	INP 180	0018
			-	-	-	IPE 180	0118	INP 200	0020
			-	-	-	IPE 200	0120	INP 220	0022
	Typ HFG mit zylindrischen Haupttragrollen horizontalen Führungsrollen und Gegendruckrollen	758	112	Polyurethane	15.4	IPE 160	0116	INP 180	0018
			-	-	-	IPE 180	0118	INP 200	0020
			-	-	-	IPE 200	0120	INP 220	0022
	Typ HFG mit zylindrischen Haupttragrollen horizontalen Führungsrollen und Gegendruckrollen	814	125	Steel	25.2	IPE 180	0118	INP 200	0020
			-	-	-	IPE 200	0120	INP 220	0022
			858	125	Polyurethane	18.7	IPE 180	0118	INP 200
-	-	-	-	-	IPE 200	0120	INP 220	0022	

Note/design

- The running gear of the towing trolley must always be equipped with anti-lift rollers.
- Main roller \varnothing 112 mm: anti-lift rollers \varnothing 50 mm and horizontal guide rollers \varnothing 63 mm made of steel
- Main roller \varnothing 125 mm: anti-lift rollers \varnothing 63 mm and horizontal guide rollers \varnothing 80 mm made of steel
- Other materials of the horizontal guide rollers, e.g. Polyurethane on request.
- The rollers are equipped with precision ball bearings and additional sealing disks (2RS1). The ball bearings are lifetime lubricated.
- Running gear for other I-beam types or beam sizes on request.



Program 0364 with Main Rollers $\varnothing 100$ and 112 mm

Single Layer Cable Trolley with Round Cables with a Load Capacity up to 125 kg

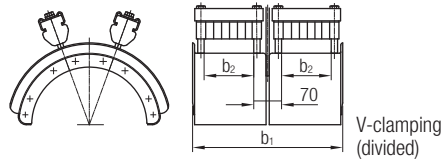


For STS container cranes with rope-driven main trolley and catenary trolley. A connection between catenary trolley and festoon system by an additional towing trolley is required.

Technical details

Cable Supports	bolted to the center plate, lateral-loading and reinforced
Buffers	double-sided round buffer
Max. Travel Speed ¹⁾	180 m/min
Max. Load Capacity ¹⁾	125 kg
Cable Trolley Underpart and Running Gear	hot-dip galvanized steel
Fasteners	stainless steel
Temperature Range	-30°C to + 50°C

¹⁾ depending on roller size/ roller material



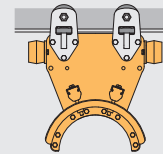
V-clamping (divided)

Ordering Example

Order No. **036423-83 - 758 - 0018**

A cable trolley underpart with the following dimensions shall be used:

- Support diameter: $d_a = 360$ mm
- Clamping width: $b_2 = 125$ mm;
- Clamping height: $s = 36$ mm
- Order No.: 036423-83 (chosen from catalog page 24)

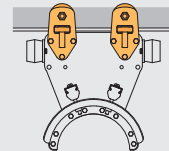


The following running gear has been chosen:

Type HFG, cylindrical main rollers $\varnothing 112$ mm with Polyurethane bandage

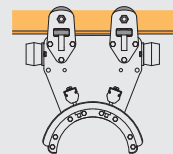
- with horizontal guide rollers made of steel
- with anti-lift rollers made of steel

Order No. 758 (chosen from catalog page 25)



The following track beam has been chosen:

- INP 180
- I-beam code: 0018 (chosen from catalog page 25)



The Order No. of the appropriate towing trolley is the running gear must always be equipped with anti-lift rollers:

036433-83-758-0018

The Order No. of the appropriate towing trolley for the connection to the catenary trolley is:

036453-83-758-0018

The Order No. of the appropriate end clamp is:

036413-83

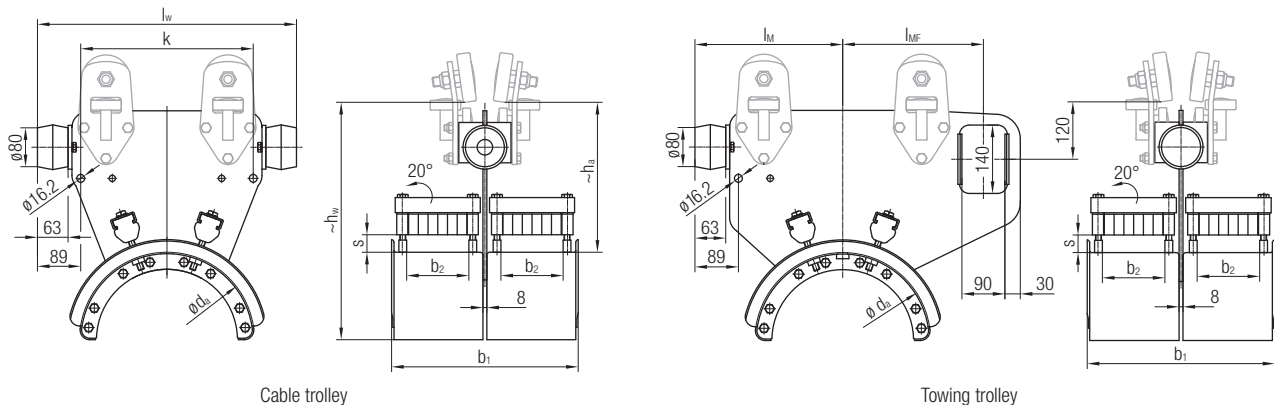
As an alternative to the towing trolley a towing clamp can be used. The Order No. of the appropriate towing clamp is:

036443-83

For calculation and selection please refer to our Engineering Guidelines for Festoon Systems KAT0300-0101

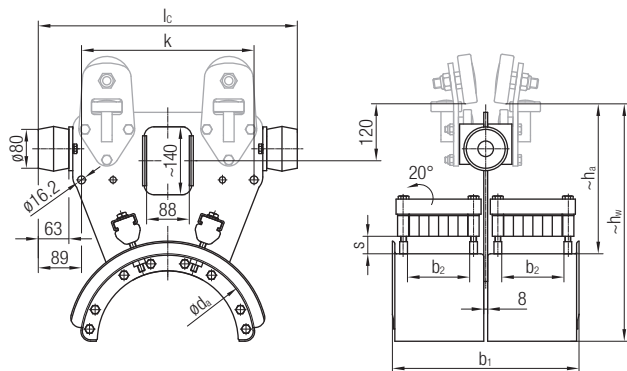
Program 0364 with Main Rollers $\varnothing 100$ and 112 mm

Selection of Cable Trolleys, Towing Trolleys and Towing Trolleys for Catenary Trolley



Cable Trolley Underpart ¹⁾ Order No.	[kg]	Towing Trolley Underpart ¹⁾ Order No.	[kg]	d_a [mm]	l_w [mm]	b_1 [mm]	b_2 [mm]	s [mm]	k [mm]	h_a [mm]	h_w [mm]	l_M [mm]	l_{MF} [mm]
036423-83	21	036433-83	25	360	533	384	125	36	355	320	500	302	288
036423-86	25	036433-86	29			532	200						
036423-88	29	036433-88	31			632	250						
036423-93	24	036433-93	26	460	653	384	125	46	475	220	450	372	358
036423-96	30	036433-96	31			532	200						
036423-98	45	036433-98	46			632	250						

1) without running gear



Towing trolley for catenary trolley

Towing Trolley Underpart for Catenary Trolley without Running Gear Order No.	[kg]	d_a [mm]	l_c [mm]	b_1 [mm]	b_2 [mm]	s [mm]	k [mm]	h_a [mm]	h_w [mm]
036453-83	21	360	533	384	125	36	355	320	500
036453-86	25			532	200				
036453-88	29			632	250				
036453-93	34	460	653	384	125	46	475	220	450
036453-96	38			532	200				
036453-98	46			632	250				

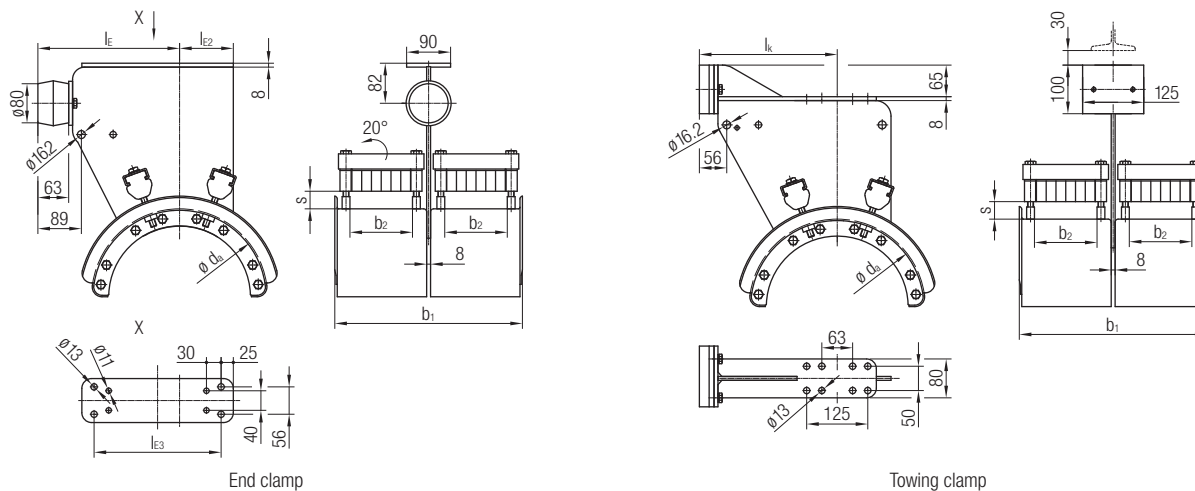
Note/design

- The table only refers to the cable trolley or towing trolley underpart, the running gear must be selected and added. See page 25 of this catalog.
- Additional supports are not available in this program.

Program 0364

with Main Rollers $\varnothing 100$ and 112 mm

Selection of End Clamps and Towing Clamps



End clamp

Towing clamp

End Clamp Complete Order No.	[kg]	Towing Clamp Complete Order No.	[kg]	d_a [mm]	l_E [mm]	l_{E2} [mm]	l_{E3} [mm]	b_1 [mm]	b_2 [mm]	s [mm]	l_k [mm]
036413-83	21.0	036443-83	21.0	360	290	146	260	384	125	36	282
036413-86	25.0	036443-86	25.0					532	200		
036413-88	36.0	036443-88	36.0					632	250		
036413-93	20.0	036443-93	22.0	460	361	208	350	384	125	46	352
036413-96	24.0	036443-96	25.0					532	200		
036413-98	44.5	036443-98	44.0					632	250		

Selection of Running Gear

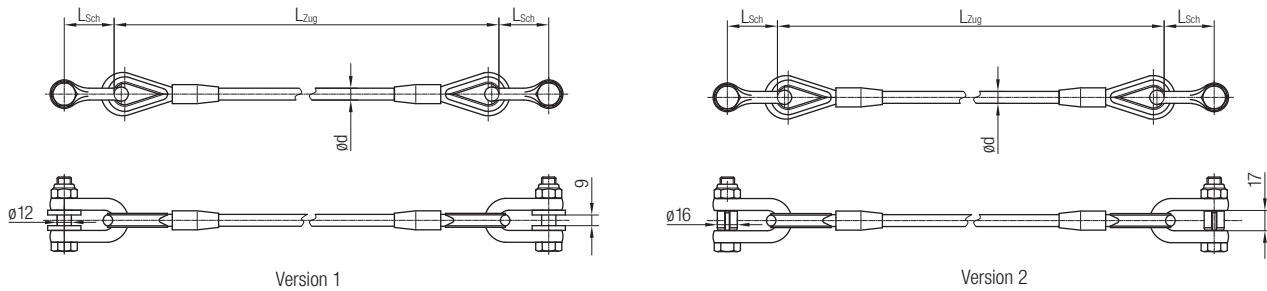
Running Gear		Order No.	Main Roller $\varnothing d$ [mm]	Main Roller Material Bandage	Weight approx. [kg]	Parallel Flange	Preference Range I-beams		I-beam Code
							I-beam Code	Tapered Flange	
	Type HFG with cylindrical main rollers, horizontal guide rollers and anti-lift rollers	658	100	Polyurethane	13.8	IPE 160 IPE 180 IPE 200 IPE 220	0116 0118 0120 0122	INP 160 INP 180 INP 200 INP 220	0016 0018 0020 0022
		758	112	Polyurethane	15.4	IPE 160 IPE 180 IPE 200 IPE 220	0116 0118 0120 0122	INP 180 INP 200 INP 220 -	0018 0020 0022 -

Note/design

- Main roller $\varnothing 100$ mm: anti-lift rollers $\varnothing 50$ mm and horizontal guide rollers $\varnothing 63$ mm made of steel
- Main roller $\varnothing 112$ mm: anti-lift rollers $\varnothing 50$ mm and horizontal guide rollers $\varnothing 63$ mm made of steel
- Other materials of the horizontal guide rollers, e.g. Polyurethane on request.
- The rollers are equipped with precision ball bearings and additional sealing disks (2RS1). The ball bearings are lifetime lubricated.
- Running gear for other I-beam types or beam sizes on request.

Accessories for Program 0350, 0360 and 0364

Towing Ropes

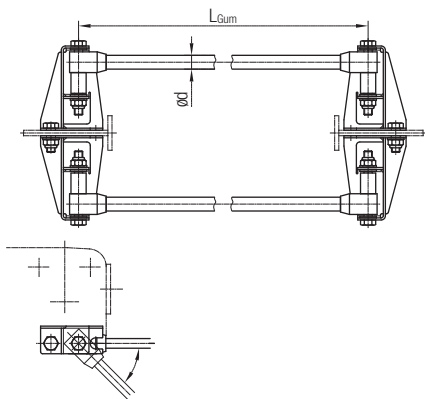


Order No.	$\varnothing d$ [mm]	L_{Sch}	Material			Version	Program	for Main Rollers $\varnothing d$ [mm]
			Rope	Shackle	Fasteners			
031962	10	42	Galvanized steel	Galvanized steel	Galvanized steel/ aluminum	1	0350	50, 63, 80, 100
031963			PVC-coated	steel			0360	50, 63
031965/1	8/10	48	Stainless Steel	Stainless Steel	Stainless Steel Aluminum - Seawater resistant	1	0350	50, 63, 80, 100
031965/2			PVC-coated				Aluminum - Seawater resistant	2
							0364	100, 112

Notes

- We recommend the installation of towing ropes for a speed from 50 m/min or a travel distance >30 m
- The towing ropes are PVC-coated for a better protection against corrosion and to prevent the cables from damage
- For the calculation of the lengths please refer to our Engineering Guidelines for Festoon Systems KAT0300-0101
- In case of order please state the lengths L_{Zug} of the respective towing ropes

Damping Devices



Technical details

- Shock cord: rubber with plastic plait
- Console: hot-dip galvanized steel
- Fasteners: stainless steel

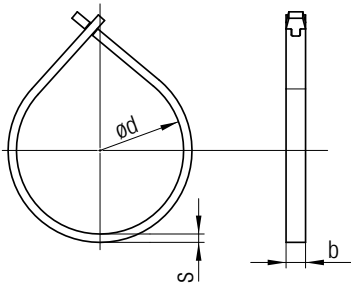
Notes

- We recommend the installation of damping devices for high speed and/or short cable loops
- For the calculation of the length please refer to our Engineering Guidelines
- In case of order please state the length of the respective shock cords
- Number and diameter are defined by weight load, cable loop and speed

Order No.	Number of Shock Cords	$\varnothing d$ [mm]	Program	for Main Rollers $\varnothing d$ [mm]
031966	2	14	0350	50, 63, 80, 100
031970-2	2	20	0350	50, 63, 80, 100
031966	2	14	0360	50, 63
031970-2	2	20	0360	50, 63
031976-2	2	20	0360, 0364	80, 100, 112, 125
031977-2	4	20	0360, 0364	80, 100, 112, 125
031978-2	6	20	0360, 0364	80, 100, 112, 125

Accessories for Program 0350, 0360 and 0364

Cable Organizers for Cable Loops

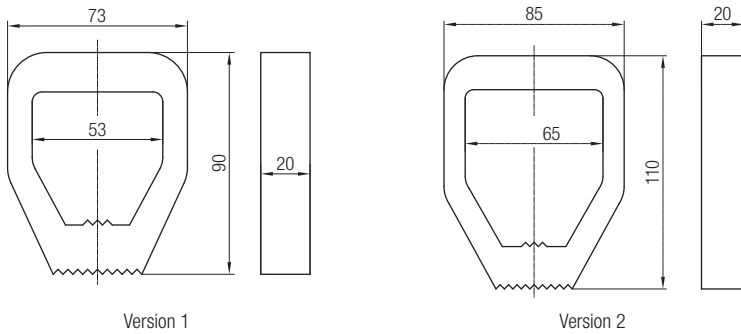


Order No.	ød [mm]	b [mm]	S [mm]	Material	Fasteners	Weight [kg]
031942-0300x15	300	30	20	Rubber	-	0.59

Note

For cable loops > 4 m, the cable organizer in addition to the flat and round cable clamps prevents an expansion of the cables at the lower section of the cable loop.

Additional Clamping Pieces for Round Cable Clamps



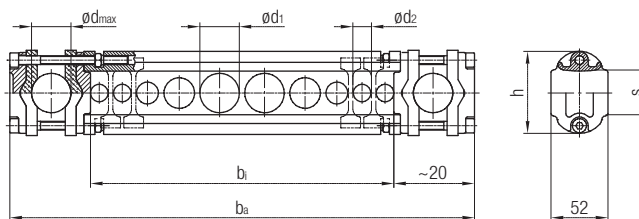
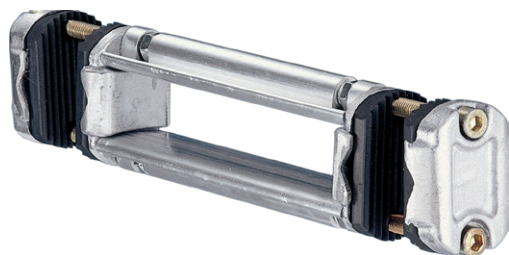
Note

Differences in diameter between adjacent cables of more than 15 mm require additional clamping pieces for a tight clamping.

Order No.	For Systems with Main Roller Diameter ød [mm]	Support diameter ød _a [mm]	Version	Material	Weight [kg]
031899-053x020/514	50 and 63	260 and 360	1	Rubber	0.06
031899-065x020/514	80, 100, 112 and 125	360 and 460	2		0.08

Accessories for Program 0360 and 0364

Round Cable Clamps



Technical details

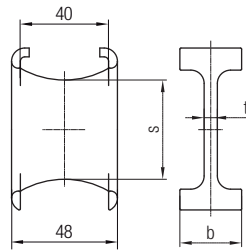
- Clamping: aluminum/rubber
- Guiding profile: aluminum
- Fasteners: stainless steel

Order No.	$\varnothing d_{max}$ [mm]	b_i [mm]	b_a [mm]	h [mm]	s [mm]	$\sum d^{1)}$ [mm]	Weight [kg]
031941-026x100/400	26	100	236	64	30	34	0.95
031941-026x150/400		150	286				1.07
031941-026x200/400		200	336				1.09
031941-026x250/400		250	386				1.31
031941-026x300/400		300	436				1.45
031941-026x350/400		350	486				1.57
031941-026x400/400		400	536				1.71
031941-026x450/400		450	586				1.83
031941-026x500/400		500	636				1.95
031941-026x550/400		550	686				2.07
031941-026x600/400		600	736				2.19
031941-026x650/400		650	786				2.33
031941-026x700/400	700	836	2.45				
031941-036x100/400	36	100	256	74	40	46	1.04
031941-036x150/400		150	306				1.16
031941-036x200/400		200	356				1.28
031941-036x250/400		250	406				1.40
031941-036x300/400		300	456				1.54
031941-036x350/400		350	506				1.66
031941-036x400/400		400	556				1.80
031941-036x450/400		450	606				1.92
031941-036x500/400		500	656				2.04
031941-036x550/400		550	706				2.16
031941-036x600/400		600	756				2.28
031941-036x650/400		650	806				2.42
031941-036x700/400	700	856	2.54				
031941-046x100/400	46	100	276	84	50	56	2.37
031941-046x150/400		150	326				2.49
031941-046x200/400		200	376				2.61
031941-046x250/400		250	426				2.73
031941-046x300/400		300	476				2.87
031941-046x350/400		350	526				2.99
031941-046x400/400		400	576				3.13
031941-046x450/400		450	626				3.25
031941-046x500/400		500	676				3.37
031941-046x550/400		550	726				3.50
031941-046x600/400		600	776				3.63
031941-046x650/400		650	826				3.75
031941-046x700/400	700	876	3.87				

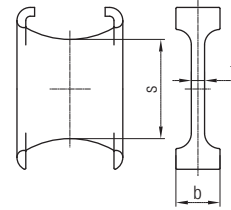
1) If the total of two adjacent cables ($d_1 + d_2$) is smaller than the value $\varnothing d$ of the table, spacers are required to separate the cables.
See page 29.

Accessories for Program 0350, 0360 and 0364

Spacers



Broad version



Small version

Order No.	s [mm]	t [mm]	b [mm]	Appropriate Cable Clamp	Material	Version	Weight [kg]
031946-26	25	4	18	031941-026x...	Plastic	Small	0.010
031946-36	35	5	19	031941-036x...			0.015
031946-46	45	6	20	031941-046x...			0.025
031947-26	25	4	26	031941-026x...	Plastic	Broad	0.015
031947-36	35	5	27	031941-036x...			0.020
031947-46	45	6	28	031941-046x...			0.025

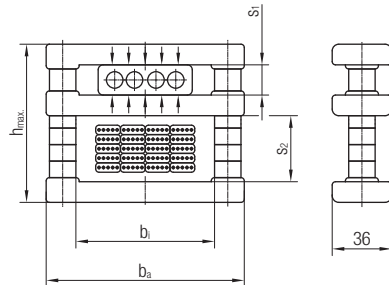
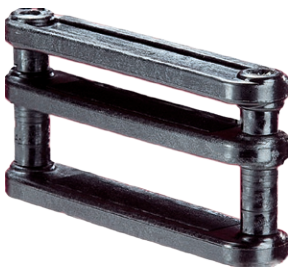
Notes

The above drawings are examples for illustration only.

Small version for cables with outer diameter smaller 14 mm and larger 22 mm.

Broad version for cables with outer diameter larger 14 mm and smaller 22 mm.

Flat Cable Clamps



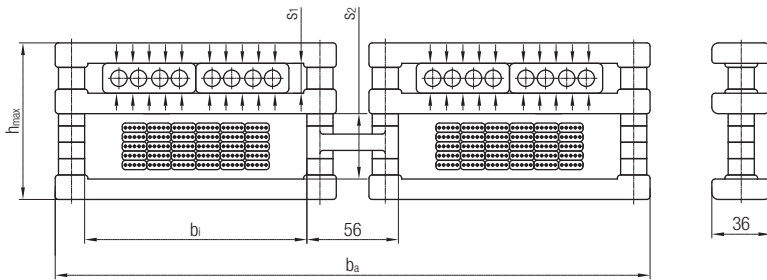
Notes

- By changing the distance tubes from window s_2 to window s_1 , the flat cable clamp can be adjusted to fit the cable package.
- The window with the dimension s_2 must be adjusted to an appropriate dimension, so that the cables can move with sufficient clearance (> 15 mm).

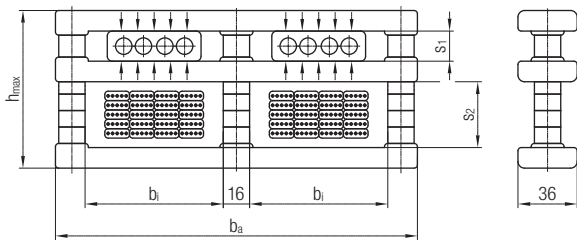
Order No.	b_1 [mm]	b_a [mm]	$s_1 + s_2$ [mm]		$s_{1min.}$ [mm]	$h_{max.}$ [mm]	Weight [kg]
031953-084x045/400	84	120	45	+2.5	5	80	0.18
031953-084x055/400			55			90	0.19
031953-084x065/400			65			100	0.21
031953-084x075/400			75			110	0.22
031953-084x085/400			85			120	0.23
031953-136x045/400	136	172	45	+2.5	5	80	0.24
031953-136x055/400			55			90	0.25
031953-136x065/400			65			100	0.27
031953-136x075/400			75			110	0.28
031953-136x085/400			85			120	0.29

Accessories for Program 0350

Flat Cable Clamps



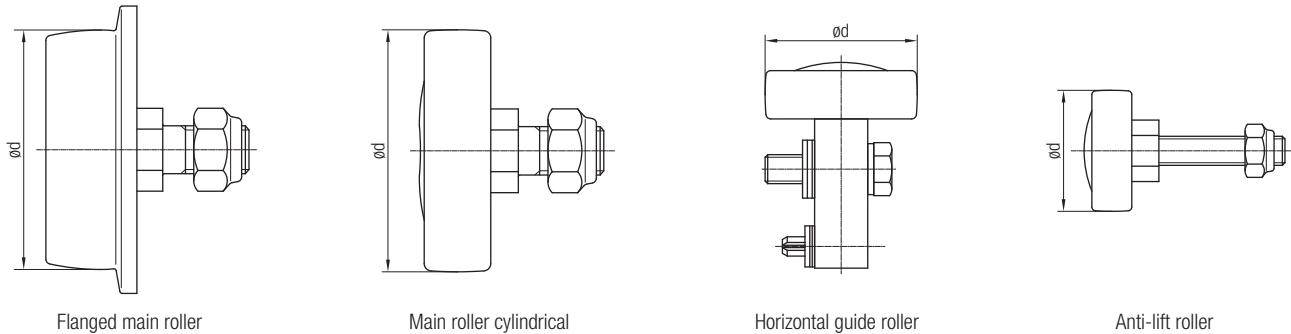
Order No.	b_i [mm]	b_a [mm]	$s_1 + s_2$ [mm]		s_1 min. [mm]	h_{max} [mm]	Weight [kg]
031954-084x045/400	84	257	45	+2.5	5	80	0.42
031954-084x055/400			55			90	0.44
031954-084x065/400			65			100	0.46
031954-084x075/400			75			110	0.48
031954-084x085/400			85			120	0.52
031954-136x045/400	136	364	45	+2.5	5	80	0.53
031954-136x055/400			55			90	0.57
031954-136x065/400			65			100	0.60
031954-136x075/400			75			110	0.63
031954-103x085/400			85			120	0.66
031954-184x045/400	184	460	45	+2.5	5	80	0.85
031954-184x055/400			55			90	0.88
031954-184x065/400			65			100	0.91
031954-184x075/400			75			110	0.94
031954-184x085/400			85			120	0.97



Order No.	b_i [mm]	b_a [mm]	$s_1 + s_2$ [mm]		s_1 min. [mm]	h_{max} [mm]	Weight [kg]
031955-084x045/400	84	220	45	+2.5	5	80	0.43
031955-084x055/400			55			90	0.44
031955-084x065/400			65			100	0.46
031955-084x075/400			75			110	0.48
031955-084x085/400			85			120	0.49
031955-103x045/400	103	258	45	+2.5	5	80	0.46
031955-103x055/400			55			90	0.47
031955-103x065/400			65			100	0.49
031955-103x075/400			75			110	0.51
031955-103x085/400			85			120	0.52

Wear Parts for Program 0350, 0360 and 0364

Replacement Rollers for Running Gear



Flanged main roller

Main roller cylindrical

Horizontal guide roller

Anti-lift roller

Replacement Rollers for Running Gear $\varnothing 50$ mm and $\varnothing 63$ mm

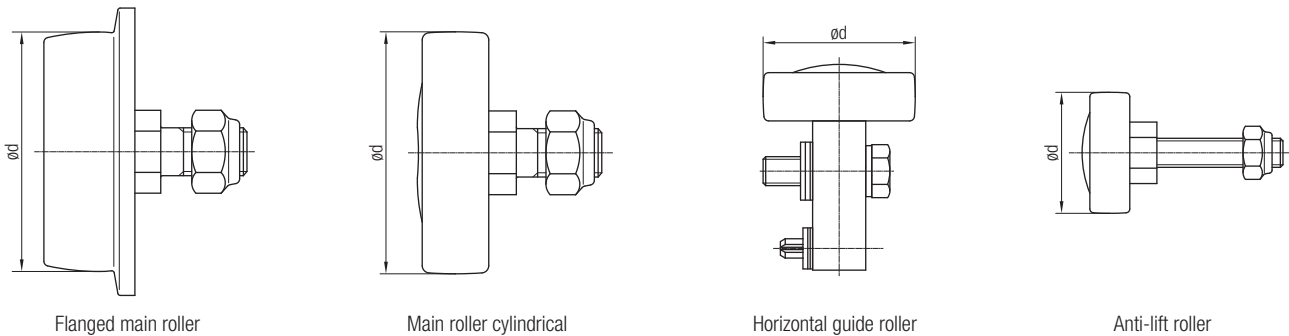
Running Gear Type		Order No.	Description	Rollers			For I-beams	
				\varnothing [mm]	Material Bandage	Weight approx. [kg]	Parallel Flange	Tapered Flange
 H	 HG	030102-050.1	Main roller cylindrical	50	Steel	0.28	-	120
		030113-050.1		50	Polyurethane	0.19		
		030102-063.1		63	Steel	0.30		
		030113-063.1		63	Polyurethane	0.22		
		030108-040.1	Anti-lift roller	40	Steel	0.13		
 HF	 HFG	030102-050.3	Main roller cylindrical	50	Steel	0.27	100 - 180	120 - 180
		030113-050.2		50	Polyurethane	0.16		
		030102-063.3		63	Steel	0.48	120 - 200	120 - 180
		030113-063.2		63	Polyurethane	0.21		
		030105-040	Horizontal guide roller	40	Steel	0.21	120 - 200	120 - 180
030108-040.2	Anti-lift roller	40	Steel	0.13				
 S	 SG	030101-050	Flanged main roller	50	Steel	0.42	100 - 180	120 - 180
		030101-063		63	Steel	0.74	120 - 200	
		030108-040.1	Anti-lift roller	40	Steel	0.13	100 - 200	120 - 180

Replacement Rollers for Running Gear $\varnothing 80$ mm and $\varnothing 100$ mm

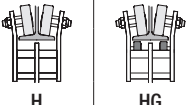
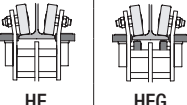
Running Gear Type		Order No.	Description	Rollers			For I-beams		
				\varnothing [mm]	Material Bandage	Weight approx. [kg]	Parallel Flange	Tapered Flange	
 H	 HG	030102-080.1	Main roller cylindrical	80	Steel	0.65	-	140 - 160	
		030113-080.1		80	Polyurethane	0.41			
		030102-100.1		100	Steel	1.13		-	180
		030113-100.3		100	Polyurethane	0.68			
		030108-050.1	Anti-lift roller	50	Steel	0.31		-	140 - 180
 HF	 HFG	030102-080.2	Main roller cylindrical	80	Steel	0.64	140 - 200	140 - 200	
		030113-080.2		80	Polyurethane	0.40			
		030105-050.1	Horizontal guide roller	50	Steel	0.36			
		030102-100.2	Main roller cylindrical	100	Steel	1.10	160 - 240	160 - 240	
		030113-100.2		100	Polyurethane	0.62			
		030105-063.1	Horizontal guide roller	63	Steel	0.63	140 - 240	140 - 240	
		030108-050.1	Anti-lift roller	50	Steel	0.31			
030101-080	Flanged main roller	80	Steel	1.27	140 - 200	140 - 200			
030101-100		100	Steel	2.25	160 - 240	160 - 240			
030108-050.1	Anti-lift roller	50	Steel	0.31	140 - 240	140 - 240			

Wear Parts for Program 0350, 0360 and 0364

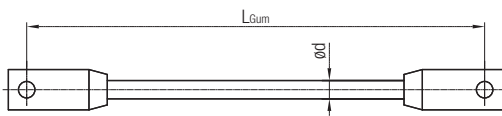
Replacement Rollers for Running Gear



Replacement Rollers for Running Gear $\varnothing 112$ mm and $\varnothing 125$ mm

Running Gear Type	Order No.	Description	Rollers		Approx. Weight [kg]	For I-beams	
			$\varnothing d$ [mm]	Material Bandage		Parallel Flange	Tapered Flange
 H HG	030113-112.1	Main roller cylindrical	112	Polyurethane	1.00	-	180
	030113-112.2					-	200 - 220
	030108-050.1	Anti-lift roller	50	Steel	0.27	-	180 - 220
	030102-125.1	Main roller cylindrical	125	Steel	3.00	-	200 - 220
	030113-125.1			Polyurethane	1.11		
	030108-063.1	Anti-lift roller	63	Steel	0.50		
 HF HFG	030113-112.2	Main roller cylindrical	112	Polyurethane	1.00	160 - 200	180 - 220
	030105-063.1	Horizontal guide roller	63	Steel	0.63		
	030108-050.1	Anti-lift roller	50	Steel	0.50		
	030102-125.2	Main roller cylindrical	125	Steel	3.00	180 - 200	200 - 220
	030113-125.2			Polyurethane	1.20		
	030105-080.1	Horizontal guide roller	80	Steel	0.82		
	030108-063.1	Anti-lift roller	63	Steel	0.50		

Shock Cords



Technical details

- Shock cord: rubber with plastic plait
- Fasteners: stainless steel/hot-dip galvanized steel

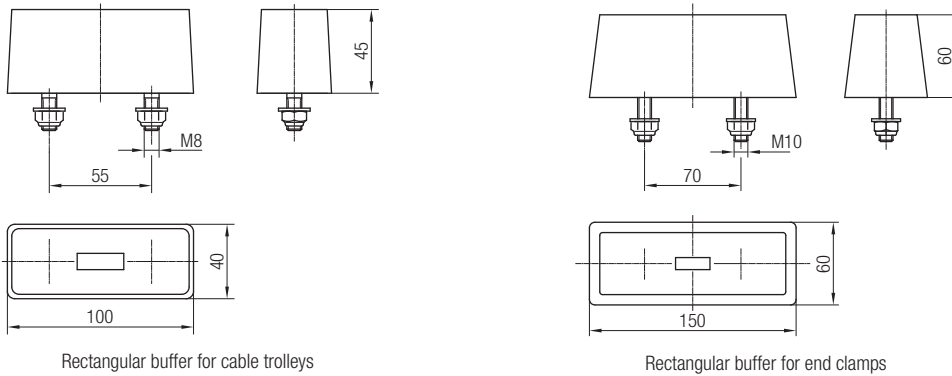
Note

In case of order please state the lengths L_{Gum} of the respective shock cords.

Order No.	$\varnothing d$ [mm]	Weight [kg/m]
031987	14	0.2
031989-2	20	0.4

Wear Parts for Program 0350, 0360 and 0364

Rectangular Buffer



Program 0350, Main Rollers $\varnothing 50$ mm up to $\varnothing 100$ mm

Order No.	Shore Hardness A	Material	Weight [kg]	Component
031980-045x100/517	70	Rubber	0.5	Cable trolley
031980-060x150/617	70		0.7	End clamp

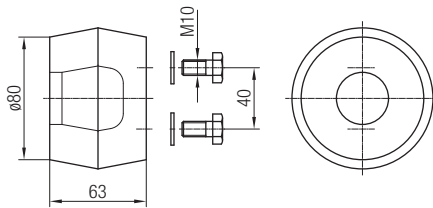
Program 0360, Main Rollers $\varnothing 50$ mm up to $\varnothing 63$ mm

Order No.	Shore Hardness A	Material	Weight [kg]	Component
031980-045x100/517	70	Rubber	0.5	Cable trolley
031980-060x150/617	70		0.7	End clamp

Notes

- Rollers, shock cords and buffers are maintenance items and must be inspected and/or replaced regularly.
- Please follow our maintenance instructions.

Round Buffer



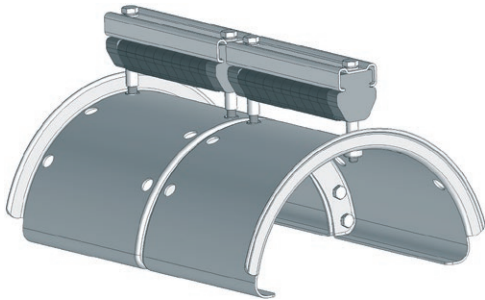
Order No.	Shore Hardness A	Material	Weight [kg]	Program	For Main Roller Diameter d [mm]
031980-080x063/514	40	Rubber	0.5	0360	80 - 125
031980-080x063/517	70		0.5	0364	100 - 112

Notes

- Rollers, shock cords and buffers are maintenance items and must be inspected and/or replaced regularly.
- Please follow our maintenance instructions.

Spare Parts for Program 0350, 0360 and 0364

Cable Supports including Clamping Bar

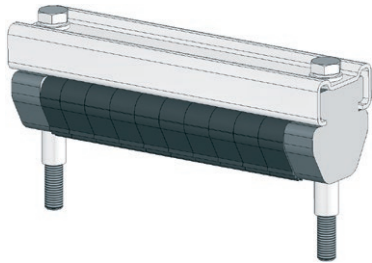


Order No.	for Main Rollers ø [mm]	Program
039002-	50/63	0360
039003-	80/100/112/125	0360
039004-	100/112	0364

Consisting of:

- 2 x cable support
- 2 x clamping bar
- Fasteners

Clamping Bars (Complete)

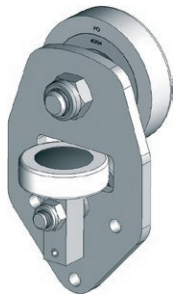


Order No.	Program	Cable type
039010-	0360	round
039012-	0350	flat

Consisting of:

- C-Rail
- Clamping rubber
- Fasteners

Side Shields (Complete)

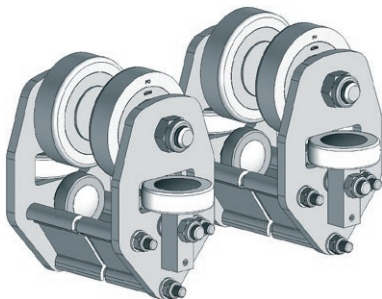


Order No.	Program	Running Gears Type	Main Roller Material Binding
039051-	0350/0360	S/SG	Steel
039052-	0350/0360	H/HG/HF/HFG	Steel
039055-	0350/0360	H/HG/HF/HFG	Polyurethane

Consisting of:

- Side shield
- Rollers assembled

Running Gears (Complete)



Consisting of:

- 4 x side shields (complete)
- Distance pieces
- Fasteners

Notes

- Spare parts are parts that are not subject to natural wear and are usually damaged by outside influence.
- In the case that a spare item is required, please provide the system component (e.g. cable trolley) for which the replacement part is required together with the item's designation.

Your Applications – our Solutions

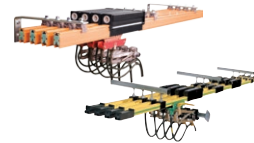
Festoon Systems from Conductix-Wampfler represent only one of the many solutions made possible by the broad spectrum of Conductix-Wampfler components for the transport of energy, data and fluid media. The solutions we deliver for your applications are based on your specific requirements. In many cases, a combination of several different Conductix-Wampfler systems can prove advantageous. You can count on all of Conductix-Wampfler's Business Units for hands-on engineering support - coupled with the perfect solution to meet your energy management and control needs.



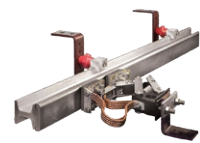
Cable reels
Motorized reels and spring reels by Conductix-Wampfler hold their own wherever energy, data and media have to cover the most diverse distances within a short amount of time - in all directions, fast and safe.



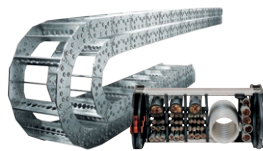
Festoon systems
It's hard to imagine Conductix-Wampfler cable trolleys not being used in virtually every industrial application. They're reliable and robust and available in an enormous variety of dimensions and designs.



Conductor rails
Whether they're enclosed conductor rails or expandable single-pole systems, the proven conductor rails by Conductix-Wampfler reliably move people and material.



Non-insulated conductor rails
Extremely robust, non-insulated conductor rails with copper heads or stainless steel surfaces provide the ideal basis for rough applications, for example in steel mills or shipyards.



Energy guiding chains
The "Jack of all trades" when it comes to transferring energy, data, air and fluid hoses. With their wide range, these energy guiding chains are the ideal solution for many industrial applications.



Slip ring assemblies
Whenever things are really "moving in circles", the proven slip ring assemblies by Conductix-Wampfler ensure the flawless transfer of energy and data. Here, everything revolves around flexibility and reliability!



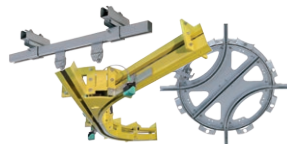
Inductive Power Transfer IPT®
The no-contact system for transferring energy and data. For all tasks that depend on high speeds and absolute resistance to wear.



Reels, retractors and balancers
Whether for hoses or cables, as classical reels or high-precision positioning aids for tools, our range of reels and spring balancers take the load off your shoulders.



Jib boom
Complete with tool transporters, reels, or an entire media supply system – here, safety and flexibility are key to the completion of difficult tasks.



Conveyor systems
Whether manual, semiautomatic or with Power & Free – flexibility is achieved with full customization concerning layout and location.

www.conductix.com

Conductix-Wampfler

has just one critical mission:
To provide you with energy and
data transmission systems that
will keep your operations up
and running 24/7/365.

To contact your nearest
sales office, please refer to:

**[www.conductix.com/
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