

Cable Trolleys

Program 0314 / 0320 / 0325 / 0330

Flat Cable Trolleys 0314
Round Cable Trolleys 0314
Flat Cable Trolleys 0320, 0325 and 0330
Round Cable Trolleys 0320, 0325 and 0330
Accessories
Wear Parts



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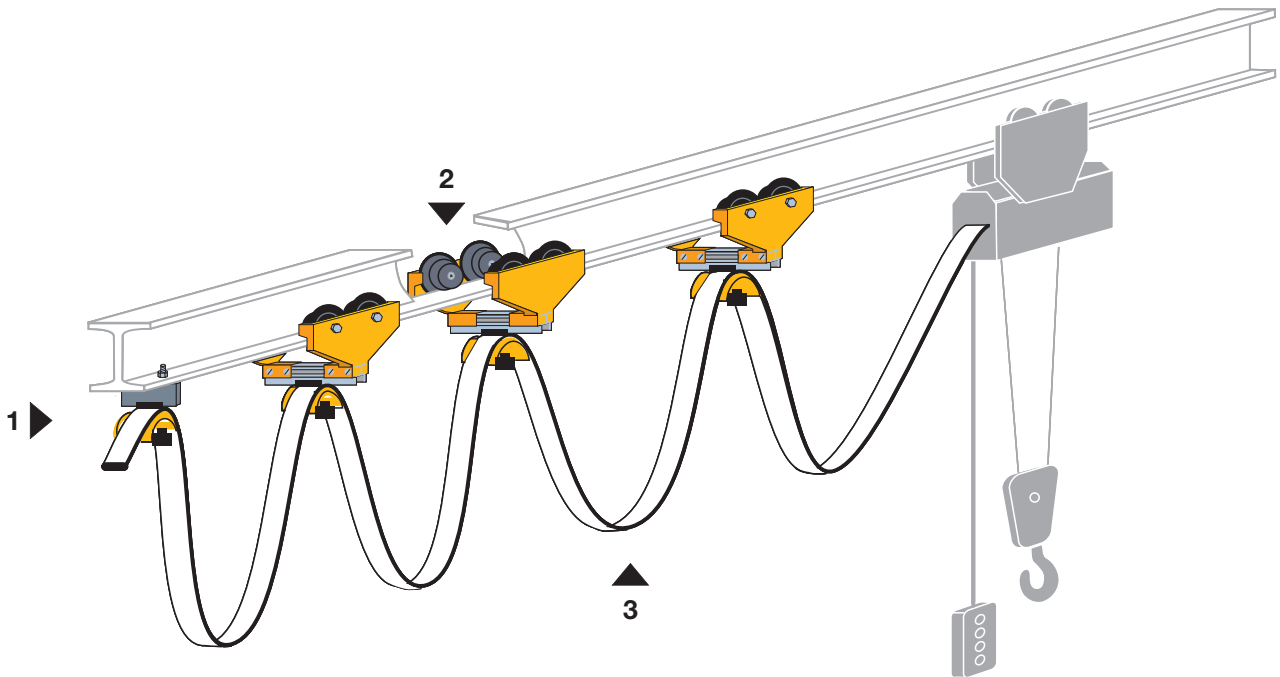
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Program 0314 Flat Cable Trolleys

Festoon System for Flat Cables

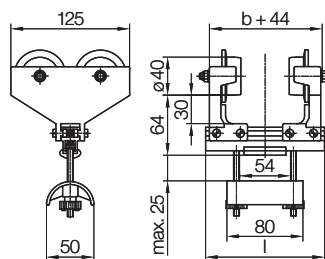


- 1. End Clamp
- 2. Cable Trolleys
- 3. Flat Cable

Material Cable Trolleys

Side Shield:	Plastic
Roller:	Nylon, Friction Bearing
Shaft:	Stainless Steel
Support Rail:	Aluminum
Saddle:	Plastic
Clamping Piece:	Rubber
Fasteners:	Galvanized Steel
Split Nut:	Plastic

4 Wheel Plastic Trolley



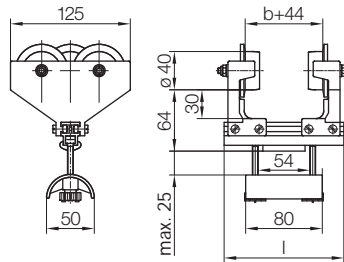
Application

The trolleys 022134 are designed for use with flat cables. They have a maximum cable package window opening of 54 mm wide by 25 mm high.

Standard Order No.	Acid Resistant Order No.	l [mm]	Flange max. Width b [mm]	Travel Speed max.	Load Capacity approx.
022134-125	---	125	81	50 m/min	20 kg
022134-160	022434-160	160	116		
022134-200	022434-200	200	156		
022134-250	---	250	206		
022134-280	---	280	236		
022134-320	---	320	276		
022134-350	---	350	306		

Program 0314 Flat Cable Trolleys

3 Wheel Plastic Trolley

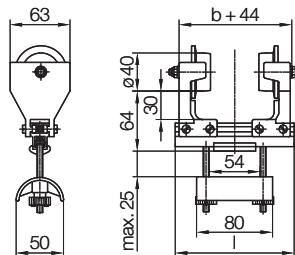


Application

The trolleys 022133 are designed for use with flat cables. They have a maximum cable package window opening of 54 mm wide by 25 mm high.

Standard Order No.	Acid Resistant Order No.	l [mm]	Flange max. Width b [mm]	Travel Speed max.	Load Capacity approx.
022133-125	---	125	81	50m/min	10kg
022133-160	022433-160	160	116		
022133-200	022433-200	200	156		
022133-250	---	250	206		
022133-280	---	280	236		
022133-320	---	320	276		

2 Wheel Plastic Trolley

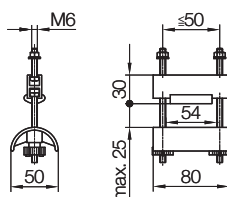


Application

The trolleys 022132 are designed for use with flat cables. They have a maximum cable package window opening of 54 mm wide by 25 mm high.

Standard Order No.	Acid Resistant Order No.	l [mm]	Flange max. Width b [mm]	Travel Speed max.	Load Capacity approx.
022132-125	---	125	81	50m/min	10kg
022132-160	022432-160	160	116		
022132-200	022432-200	200	156		
022132-250	---	250	206		
022132-280	---	280	236		
022132-320	---	320	276		

End Clamp



Standard Order No.

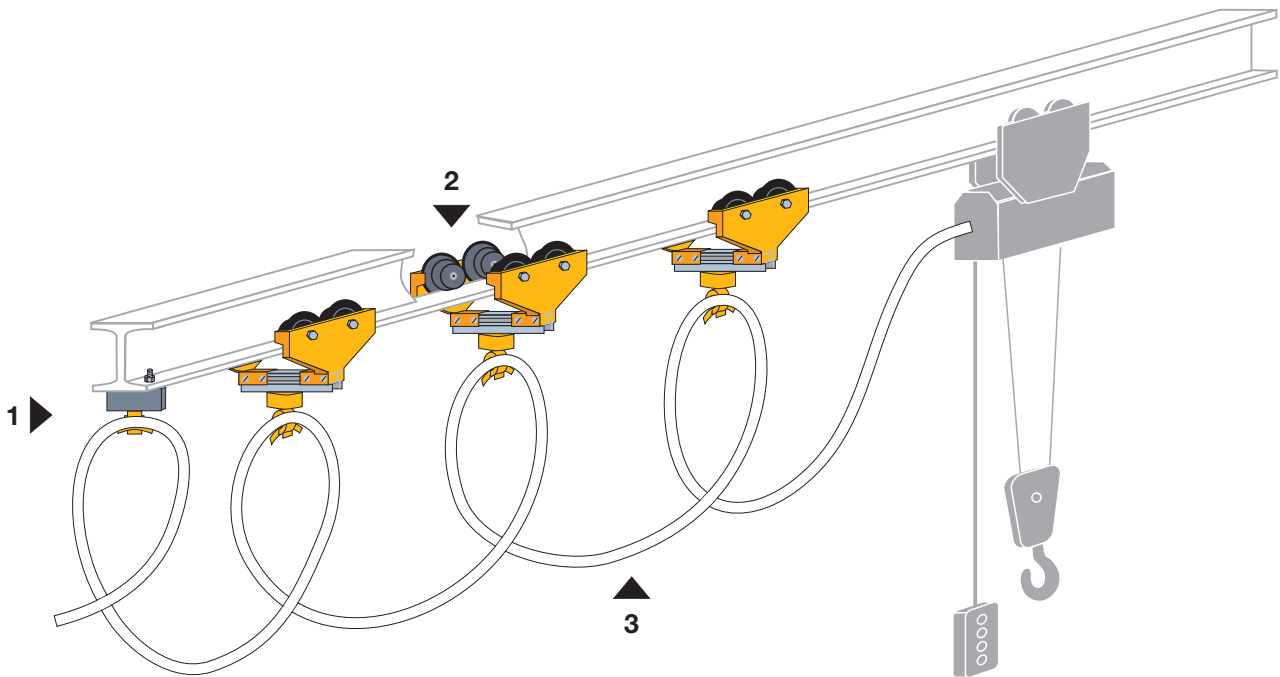
020221-080

Acid Resistant Order No.

020421

Program 0314 Round Cable Trolleys

Festoon System for Round Cables

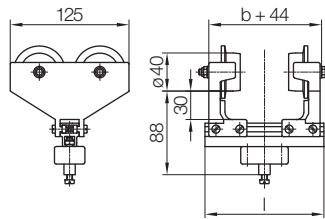


- 1. End Clamp
- 2. Cable Trolleys
- 3. Round Cable

Material Round Cable Trolleys

Side Shield	Plastic
Roller:	Nylon, Friction Bearing
Shaft:	Stainless Steel
Support Rail:	Aluminum
Ball Joint Housing:	Plastic
Clamping Piece:	Rubber
Fasteners:	Galvanized Steel

4 Wheel Plastic Trolley with Ball Joint Attachment



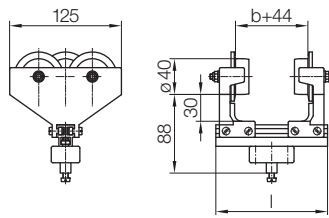
Application

Trolley with ball joint are designed for use with round cables or hoses. Cable clip type 020131 for supporting cables or hoses must be ordered separately.

Standard Order No.	Acid Resistant Order No.	l [mm]	Flange max. Width b [mm]	Travel Speed max.	Load Capacity approx.
022124-125	---	125	81	50m/min	20kg
022124-160	022424-160	160	116		
022124-200	022424-200	200	156		
022124-250	---	250	206		

Program 0314 Round Cable Trolleys

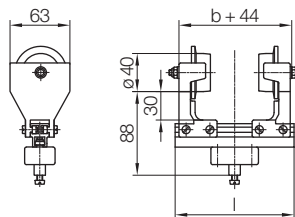
3 Wheel Plastic Trolley with Ball Joint Attachment



Application
Trolley with ball joint are designed for use with round cables or hoses. Cable clip type 020131 for supporting cables or hoses must be ordered separately.

Standard Order No.	Acid Resistant Order No.	l [mm]	Flange max. Width b [mm]	Travel Speed max.	Load Capacity approx.
022123-125	---	125	81	50m/min	10kg
022123-160	022423-160	160	116		
022123-200	022423-200	200	156		
022123-250	---	250	206		

2 Wheel Plastic Trolley with Ball Joint Attachment

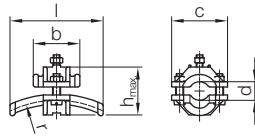


Application
Trolley with ball joint are designed for use with round cables or hoses. Cable clip type 020131 for supporting cables or hoses must be ordered separately.

Standard Order No.	Acid Resistant Order No.	l [mm]	Flange max. Width b [mm]	Travel Speed max.	Load Capacity approx.
022122-125	---	125	81	50m/min	10kg
022122-160	022422-160	160	116		
022122-200	022422-200	200	156		
022122-250	---	250	206		

Program 0314 Round Cable Trolleys

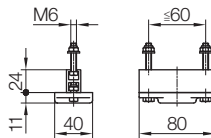
Cable Clip



It is possible to fit multiple cable clips onto a trolley. When fitting different size cable clips, the largest cable clip must be fitted on top.

Standard Order No.	Acid Resistant Order No.	d [mm]	r [mm]	l [mm]	h [mm]	b [mm]	c [mm]	Material Cable Clip
020131-16	020431-16	10 - 16	80	70	38	35	42	Plastic
020131-25	020431-25	17 - 25	125	100	47	50	50	
020131-36	020431-36	26 - 36	180	140	58	70	64	

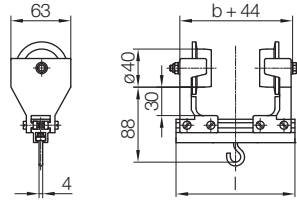
End Clamp



Standard Order No.	Acid Resistant Order No.
020214-080	020414

Program 0314 Round Cable Trolleys

2 Wheel Plastic Trolley with Hook Attachment

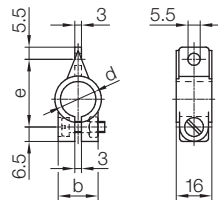


Application

Trolleys with hook are designed for use with cable collars for round cables or hoses. Cable collar type 020111 for cables or hoses must be ordered separately.

Order No.	l [mm]	Flange max. Width b [mm]	Travel Speed max.	Load Capacity approx.
022112-125	125	81	50m/min	10kg
022112-160	160	116		
022112-200	200	156		

Cable Collar

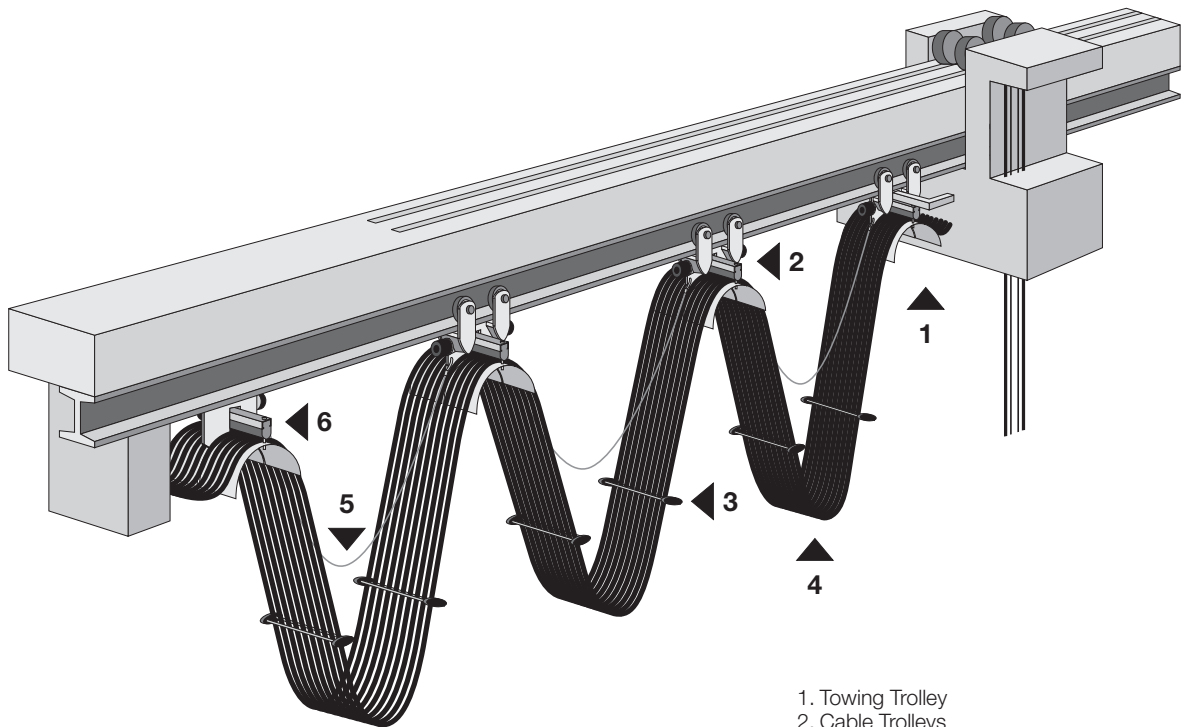


Cable collars for cables or hoses will attach to the hook on the trolley. It is possible to fit multiple cable clips onto a trolley. When stacking multiple cable collars, the largest cable collar must be fitted on top.

Order No.	d [mm]	b [mm]	e [mm]	Material	
				Cable Collar	Fasteners
020111-08	8	18	23.0	Plastic	Galvanized Steel
020111-10	10		24.5		
020111-11	11		25.5		
020111-12.5	12.5		27.5		
020111-14	14		28.5		
020111-16	16		30.5		
020111-18	18		32.5		
020111-20	20	23	34.5		
020111-22	22		36.5		
020111-25	25		39.5		
020111-28	28		42.5		
020111-32	32		46.5		
020111-36	36		50.5		

Program 0320, 0325 and 0330 Cable Trolleys

Festoon System



1. Towing Trolley
2. Cable Trolleys
3. Cable Organizer
4. Cables
5. Tow Rope Assembly
6. End Clamp

Design Features

- Base trolley and saddles are of all steel construction, hot-dipped galvanized
- Fasteners: galvanized steel
- Running gear spacers are made of aluminum
- Clamping Piece: Rubber
- Flange guided rollers made of hardened steel
- Cylindrical main rollers made of hardened steel with plastic bandage and ball bearings
- Anti-lift rollers made of hardened steel with ball bearings

Ordering Example Program 0320

Example:
Trolley selection for a flat cable package size of 110 mm wide x 45 mm high set for a IPE100 I-Beam with flanged rollers.

Selection:
Saddle diameter $d_A = 125$ mm,
according to minimum bend diameter of cable.
 $b_2 = 130$ mm;
 $s = 60$ mm from table above.

Order No.:

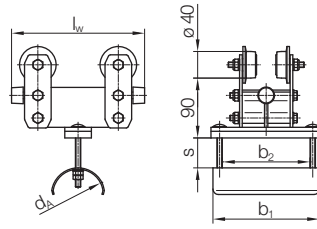
Cable Trolley without anti-lift rollers	
032252-250x160/30-E100	
Base Trolley	_____
Running Gear Designation	_____
Beam Suffix	_____
Corresp. Tow Trolley with anti-lift rollers	
032262-250x160 /31-E100	
Corresponding End Clamp	
032242-250x160	

Program 0320 Cable Trolleys

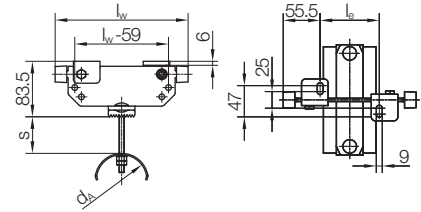
Steel Trolleys for Flat Cable



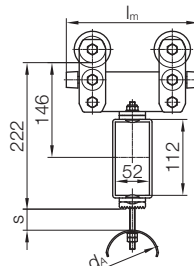
- Nominal Load Capacity 50 kg
- Maximal Load Capacity 80 kg (See Page 19)
- Travel Speed 100 m/min Maximum
- Other Trolley Sizes Available upon request.



Cable Trolley



End Clamp



Towing Trolley

Cable Trolley Order No.	End Clamp Order No.	Towing Trolley Order No.	d _A [mm]	l _w [mm]	b ₁ [mm]	b ₂ [mm]	s [mm]	l _e [mm]	l _m [mm]	
032250-160x100/...	032240-160x100	032260-200x100/...	80	160	100	70	35	49	200	
032250-160x160/...	032240-160x160	032260-200x160/...			160	130				
032250-200x100/...	032240-200x100	032260-200x100/...		200	100	70	55	89		
032250-200x160/...	032240-200x160	032260-200x160/...			160	130				
032252-200x100/...	032242-200x100	032262-200x100/...	125	200	100	70	35	89	200	
032252-200x160/...	032242-200x160	032262-200x160/...			160	130				
032252-250x100/...	032242-250x100	032262-250x100/...		250	100	70	60	139		250
032252-250x160/...	032242-250x160	032262-250x160/...			160	130				
032252-250x200/...	032242-250x200	032262-250x200/...	200		170					
032253-250x160/...	032243-250x160	032263-250x160/...	160	250	175	130	40	139	250	
032253-250x200/...	032243-250x200	032263-250x200/...			215	170				
032253-280x160/...	032243-280x160	032263-280x160/...		280	175	130	55	169		280
032253-280x200/...	032243-280x200	032263-280x200/...			215	170				

Running Gear with ø40/55 mm Flanged Rollers for tapered flange I-Beams	
Without Anti-Lift Rollers	
Running Gear Designation with Hardened Steel Rollers .../30-...	
With Anti-Lift Rollers	
Running Gear Designation with Hardened Steel Rollers .../31-...	

Running Gear with ø40 mm Cylindrical Main Rollers for tapered flange I-Beams only	
Without Anti-Lift Rollers	
Running Gear Designation with Hardened Steel Rollers .../10-... with Plastic Bandage .../12-...	
With Anti-Lift Rollers	
Running Gear Designation with Hardened Steel Rollers .../11-... with Plastic Bandage .../13-...	

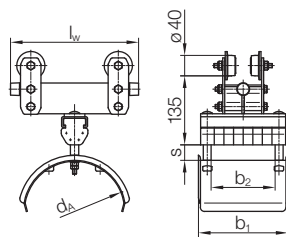
Beam Suffix	Beam Size
...-N080	INP 080
...-N100	INP 100
...-N120	INP 120
...-N140	INP 140
...-N160	INP 160
...-N180	INP 180
...-E080	IPE 080
...-E100	IPE 100
...-E120	IPE 120
...-E140	IPE 140
...-E160	IPE 160
...-E180	IPE 180
...-E200	IPE 200
---	---

Program 0320 Cable Trolleys

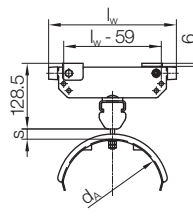
Steel Trolleys for Round Cable



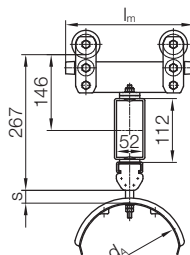
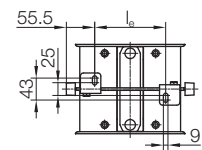
- Nominal Load Capacity 50 kg
- Maximal Load Capacity 80 kg (See Page 19)
- Travel Speed 100m/min Maximum
- Other Trolley Sizes Available upon request.



Cable Trolley



End Clamp



Towing Trolley

Cable Trolley Order No.	End Clamp Order No.	Towing Trolley Order No.	d _A [mm]	l _w [mm]	b ₁ [mm]	b ₂ [mm]	s [mm]	l _e [mm]	l _m [mm]
032464-250x160/...	032494-250x160	032474-250x160/...	200	250	175	125	20	139	250
032464-250x200/...	032494-250x200	032474-250x200/...			215	165			
032465-320x160/...	032495-320x160	032475-320x160/...	250	320	175	125	25	209	320
032465-320x200/...	032495-320x200	032475-320x200/...			215	165			
032465-320x250/...	032495-320x250	032475-320x250/...			265	215			
032467-400x160/...	032497-400x160	032477-400x160/...	320	400	175	125	32	289	400
032467-400x200/...	032497-400x200	032477-400x200/...			215	165			
032467-400x250/...	032497-400x250	032477-400x250/...			265	215			

Pictures and drawings on this page show various styles of running gear. In practice, any combination of running gear is available. Trolleys from Program 0320 with running gear of Program 0325 (Roller diameter 50 mm) can be supplied, see pages 11 and 12. It is suggested that tow trolley running gear be selected with anti-lift rollers. Running gear to fit other beam styles are also available. Please consult factory.

Running Gear with $\varnothing 40/55$ mm Flanged Rollers for tapered flange I-Beams	
Without Anti-Lift Rollers	
Running Gear Designation with Hardened Steel Rollers .../30-...	
With Anti-Lift Rollers	
Running Gear Designation with Hardened Steel Rollers .../31-...	

Running Gear with $\varnothing 40$ mm Cylindrical Main Rollers for tapered flange I-Beams only	
Without Anti-Lift Rollers	
Running Gear Designation with Hardened Steel Rollers .../10-... with Plastic Bandage .../12-...	
With Anti-Lift Rollers	
Running Gear Designation with Hardened Steel Rollers .../11-... with Plastic Bandage .../13-...	

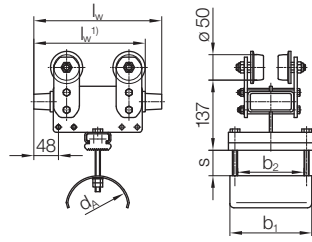
Beam Suffix	Beam Size
...-N080	INP 080
...-N100	INP 100
...-N120	INP 120
...-N140	INP 140
...-N160	INP 160
...-N180	INP 180
...-E080	IPE 080
...-E100	IPE 100
...-E120	IPE 120
...-E140	IPE 140
...-E160	IPE 160
...-E180	IPE 180
...-E200	IPE 200
---	---

Program 0325 Cable Trolleys

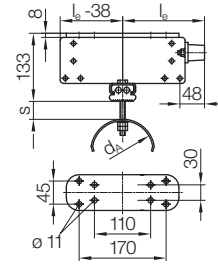
Steel Trolleys for Flat Cable



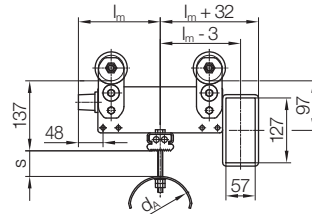
- Nominal Load Capacity 80 kg
- Maximal Load Capacity 125 kg (See Last Page 19)
- Travel Speed 120 m/min Maximum
- Other Trolley Sizes Available upon request.



Cable Trolley



End Clamp



Towing Trolley

Cable Trolley Order No.	End Clamp Order No.	Towing Trolley Order No.	d _A [mm]	l _w [mm]	b ₁ [mm]	b ₂ [mm]	s [mm]	l _e [mm]	l _m [mm]
032652-220x160/...	032642-320x160	032662-320x160/...	125	220 ¹⁾	160	128	35	160	160
032652-220x200/...	032642-320x200	032662-320x200/...			200	168			
032652-250x160/...	032642-320x160	032662-320x160/...		250	160	128	50		
032652-250x200/...	032642-320x200	032662-320x200/...			200	168			
032653-290x160/...	032643-320x160	032663-320x160/...	160	290 ¹⁾	175	128	50		
032653-290x200/...	032643-320x200	032663-320x200/...			215	168			
032653-290x250/...	032643-320x250	032663-320x250/...			265	218			
032653-320x160/...	032643-320x160	032663-320x160/...		320	175	128	70		
032653-320x200/...	032643-320x200	032663-320x200/...			215	168			
032653-320x250/...	032643-320x250	032663-320x250/...			265	218			
032654-320x160/...	032644-320x160	032664-320x160/...	200	320	175	128	50		
032654-320x200/...	032644-320x200	032664-320x200/...			215	168			
032654-320x250/...	032644-320x250	032664-320x250/...			265	218			

1) Trolley With Only One Bumper

Running Gear with ø50/63 mm Flanged Rollers for tapered flange I-Beams	
Without Anti-Lift Rollers	
Running Gear Designation with Hardened Steel Rollers .../70-...	
With Anti-Lift Rollers	
Running Gear Designation with Hardened Steel Rollers .../71-...	

Running Gear with ø50 mm Cylindrical Main Rollers for tapered flange I-Beams only	
Without Anti-Lift Rollers	
Running Gear Designation with Hardened Steel Rollers .../50-... with Plastic Bandage .../60-...	
With Anti-Lift Rollers	
Running Gear Designation with Hardened Steel Rollers .../51-... with Plastic Bandage .../61-...	

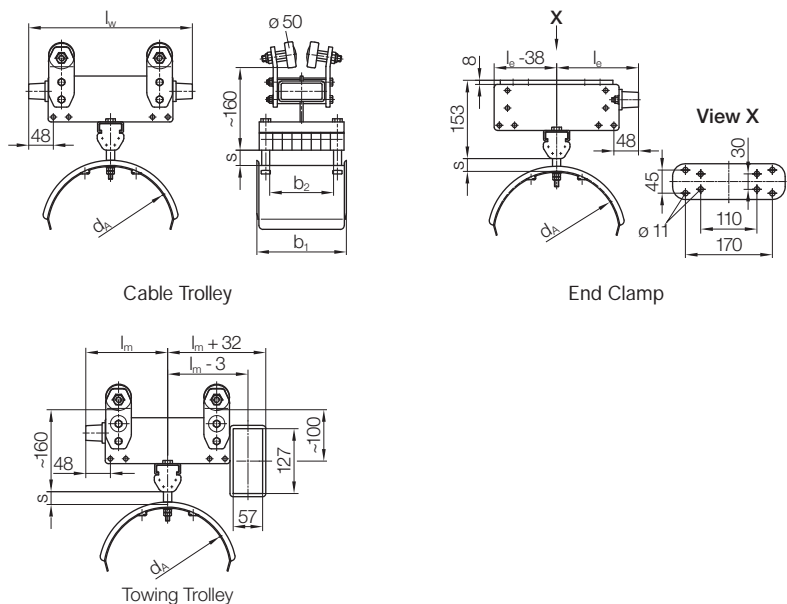
Beam Suffix	Beam Size
...-N100	INP 100
...-N120	INP 120
...-N140	INP 140
...-N160	INP 160
...-N180	INP 180
...-E080	IPE 080
...-E100	IPE 100
...-E120	IPE 120
...-E140	IPE 140
...-E160	IPE 160
...-E180	IPE 180
...-E200	IPE 200
---	---
---	---

Program 0325 Cable Trolleys

Steel Trolleys for Round Cable



- Nominal Load Capacity 80 kg
- Maximal Load Capacity 125 kg (See Last Page 19)
- Travel Speed 120m/min Maximum
- Other Trolley Sizes Available upon request.



Cable Trolley Order No.	End Clamp Order No.	Towing Trolley Order No.	d_A [mm]	l_w [mm]	b_1 [mm]	b_2 [mm]	s [mm]	l_e [mm]	l_m [mm]
032865-320x160/...	032895-320x160	032875-320x160/...	250	320	175	121	25	160	160
032865-320x200/...	032895-320x200	032875-320x200/...			215	161			
032865-320x250/...	032895-320x250	032875-320x250/...			265	211			
032867-400x160/...	032897-400x160	032877-400x160/...	320	400	175	121	32	200	200
032867-400x200/...	032897-400x200	032877-400x200/...			215	161			
032867-400x250/...	032897-400x250	032877-400x250/...			265	211			

Pictures and drawings on this page show various styles of running gear. In practice, any combination of running gear is available. Trolleys from Program 0325 with running gear of Program 0330 (Roller diameter 63 mm) can be supplied, see pages 13 and 14. It is suggested that tow trolley running gear be selected with anti-lift rollers. Running gear to fit other beam styles are also available. Please consult factory.

Running Gear with $\phi 50/63$ mm Flanged Rollers for tapered flange I-Beams	
Without Anti-Lift Rollers	
Running Gear Designation with Hardened Steel Rollers .../70-...	
With Anti-Lift Rollers	
Running Gear Designation with Hardened Steel Rollers .../71-...	

Running Gear with $\phi 50$ mm Cylindrical Main Rollers for tapered flange I-Beams only	
Without Anti-Lift Rollers	
Running Gear Designation with Hardened Steel Rollers .../50-... with Plastic Bandage .../60-...	
With Anti-Lift Rollers	
Running Gear Designation with Hardened Steel Rollers .../51-... with Plastic Bandage .../61-...	

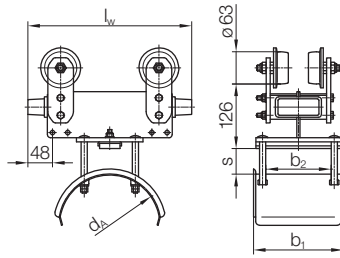
Beam Suffix	Beam Size
...-N100	INP 100
...-N120	INP 120
...-N140	INP 140
...-N160	INP 160
...-N180	INP 180
...-E080	IPE 080
...-E100	IPE 100
...-E120	IPE 120
...-E140	IPE 140
...-E160	IPE 160
...-E180	IPE 180
...-E200	IPE 200
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Program 0330 Cable Trolleys

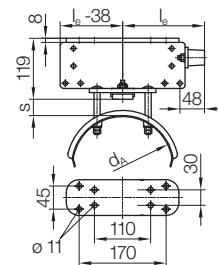
Steel Trolley for Flat Cable



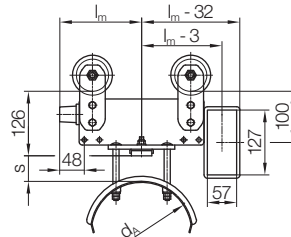
- Nominal Load Capacity 125 kg
- Maximal Load Capacity 200 kg (See Last Page 19)
- Travel Speed 150m/min Maximum
- Other Trolley Sizes Available upon request.



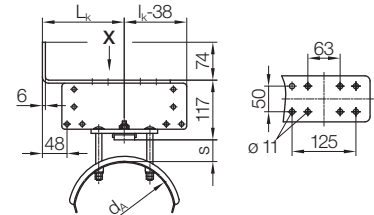
Cable Trolley



End Clamp



Towing Trolley



Towing Clamp

Cable Trolley Order No.	End Clamp Order No.	Towing Trolley Order No.	Towing Clamp Order No.	d _A [mm]	l _w [mm]	b ₁ [mm]	b ₂ [mm]	s [mm]	l _e [mm]	l _m [mm]	l _k [mm]
033252-250x160/...	033242-320x160	033262-320x160/...	033272-320x160	125	250	175	128	50	160	160	160
033252-250x200/...	033242-320x200	033262-320x200/...	033272-320x200			215	168				
033252-250x250/...	033242-320x250	033262-320x250/...	033272-320x250			265	218				
033252-320x160/...	033242-320x160	033262-320x160/...	033272-320x160		320	175	128	85			
033252-320x200/...	033242-320x200	033262-320x200/...	033272-320x200			215	168				
033252-320x250/...	033242-320x250	033262-320x250/...	033272-320x250			265	218				
033253-320x160/...	033243-320x160	033263-320x160/...	033273-320x160	160	320	175	128	70	160	160	160
033253-320x200/...	033243-320x200	033263-320x200/...	033273-320x200			215	168				
033253-320x250/...	033243-320x250	033263-320x250/...	033273-320x250			265	218				
033254-400x160/...	033244-400x160	033264-400x160/...	033274-400x160	200	400	175	128	85	200	200	200
033254-400x200/...	033244-400x200	033264-400x200/...	033274-400x200			215	168				
033254-400x250/...	033244-400x250	033264-400x250/...	033274-400x250			265	218				

Running Gear with ø63/80mm Flanged Rollers for tapered flange I-Beams	
Without Anti-Lift Rollers	
Running Gear Designation with Hardened Steel Rollers .../90-...	
With Anti-Lift Rollers	
Running Gear Designation with Hardened Steel Rollers .../91-...	

Running Gear with ø63mm Cylindrical Main Rollers for tapered flange I-Beams only	
Without Anti-Lift Rollers	
Running Gear Designation with Hardened Steel Rollers .../80-... with Plastic Bandage .../82-...	
With Anti-Lift Rollers	
Running Gear Designation with Hardened Steel Rollers .../81-... with Plastic Bandage .../83-...	

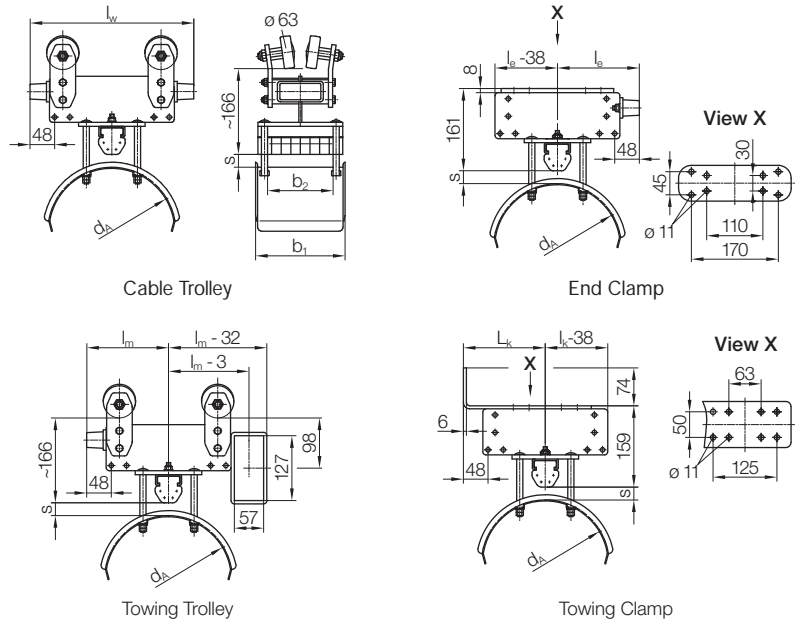
Beam Suffix	Beam Size
...-N120	INP 120
...-N140	INP 140
...-N160	INP 160
...-N180	INP 180
...-N200	INP 200
...-E100	IPE 100
...-E120	IPE 120
...-E140	IPE 140
...-E160	IPE 160
...-E180	IPE 180
...-E200	IPE 200
...-E220	IPE 220
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Program 0330 Cable Trolleys

Steel Trolley for Round Cable



- Nominal Load Capacity 125 kg
- Maximal Load Capacity 200 kg (See Last Page 19)
- Travel Speed 150m/min
- Other Trolley Sizes Available upon request.



Cable Trolley Order No.	End Clamp Order No.	Towing Trolley Order No.	Towing Clamp Order No.	d_A [mm]	l_w [mm]	b_1 [mm]	b_2 [mm]	s [mm]	l_e [mm]	l_m [mm]	l_k [mm]
033465-320x160/...	033495-320x160	033475-320x160/...	033485-320x160	250	320	175	121	25	160	160	160
033465-320x200/...	033495-320x200	033475-320x200/...	033485-320x200			215	161				
033465-320x250/...	033495-320x250	033475-320x250/...	033485-320x250			265	211				
033467-400x160/...	033497-400x160	033477-400x160/...	033487-400x160	320	400	175	121	32	200	200	200
033467-400x200/...	033497-400x200	033477-400x200/...	033487-400x200			215	161				
033467-400x250/...	033497-400x250	033477-400x250/...	033487-400x250			265	211				

Pictures and drawings on this page show various styles of running gear. In practice, any combination of running gear is available. It is suggested that tow trolley running gear be selected with anti-lift rollers. Running gear to fit other beam styles are also available. Please consult factory.

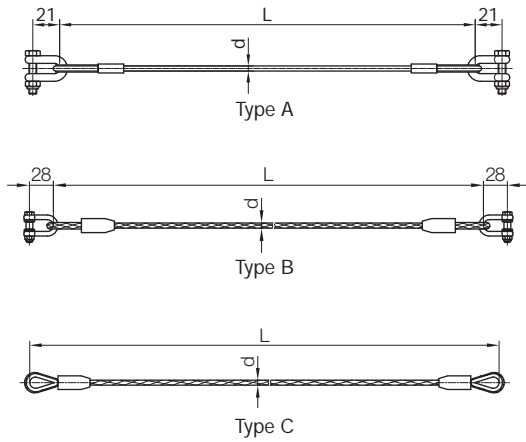
Running Gear with $\phi 63/80$ mm Flanged Rollers for tapered flange I-Beams	
Without Anti-Lift Rollers	
Running Gear Designation with Hardened Steel Rollers .../90-...	
With Anti-Lift Rollers	
Running Gear Designation with Hardened Steel Rollers .../91-...	

Running Gear with $\phi 63$ mm Cylindrical Main Rollers for tapered flange I-Beams only	
Without Anti-Lift Rollers	
Running Gear Designation with Hardened Steel Rollers .../80-... with Plastic Bandage .../82-...	
With Anti-Lift Rollers	
Running Gear Designation with Hardened Steel Rollers .../81-... with Plastic Bandage .../83-...	

Beam Suffix	Beam Size
...-N120	INP 120
...-N140	INP 140
...-N160	INP 160
...-N180	INP 180
...-N200	INP 200
...-E100	IPE 100
...-E120	IPE 120
...-E140	IPE 140
...-E160	IPE 160
...-E180	IPE 180
...-E200	IPE 200
...-E220	IPE 220
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Accessories for Program 0320, 0325 and 0330

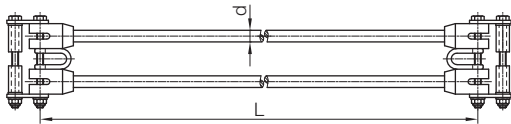
Towing Ropes



Different types and lengths available upon request.
Type C suggested for use with shock cord assembly.

Order No.	d [mm]	Material Rope	Type	for Program
020328-04	4	Galvanized Steel	A	0320
020329-04	4	Galvanized Steel (w/PVC Jacket)		
020328-06	6	Galvanized Steel	B	0325, 0330
020329-08	8	Galvanized Steel (w/PVC Jacket)		
020325-08	8	Galvanized Steel (w/PVC Jacket)	C	

Damping Devices

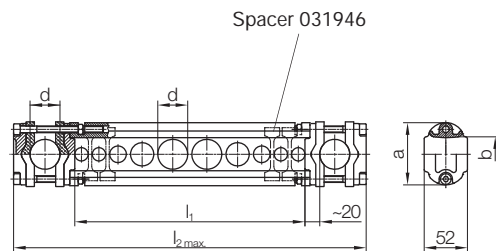


Different types and lengths available upon request.

Order No.	d [mm]	Material Rope	for Program
020337-10	10	Rubber core with a Nylon jacket	0325, 0330
020337-14	14		

Accessories for Program 0320, 0325 and 0330

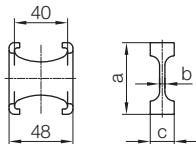
Round Cable Clamps



Order No.	d _{max.} [mm]	l ₁ [mm]	l ₂ [mm]	a [mm]	b [mm]	Σd ¹⁾ [mm]	Support Rail	Material Cable Clip	Fasteners
031941-026x100/400	26	100	236	64	30	34	Aluminum	Rubber	Galvanized Steel/ Stainless Steel
031941-026x150/400		150	286						
031941-026x200/400		200	336						
031941-026x250/400		250	386						
031941-036x100/400	36	100	256	74	40	46			
031941-036x150/400		150	306						
031941-036x200/400		200	356						
031941-036x250/400		250	406						

1) A cable separator is required between cables if the sum of the diameters of two adjacent cables is smaller than the value Σd.

Spacer



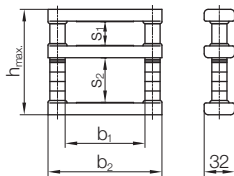
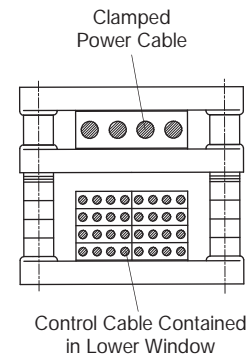
Order No.	a [mm]	b [mm]	c [mm]	Material	Used with Round Cable Clamp
031946-26	54	4	18	Plastic	031941-026x...
031946-36	64	5	19		031941-036x...

Accessories for Program 0320, 0325 and 0330

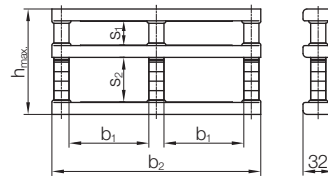
Flat Cable Clamps



Power cable(s) are clamped in upper window (s_1), control cable(s) are contained in lower window (s_2) with sufficient space ($> 2\text{ mm}$) to allow the cables to move freely. Flat cable clamps are supplied pre-assembled with upper window (s_1) of minimum size and lower window (s_2) of maximum size. The cable clamps can be adjusted to fit individual cables and/or cable packages by transferring spacers from window (s_2) to window (s_1).



020126...
031953...

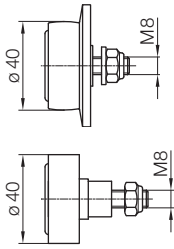


031955...

Order No.	b_1 [mm]	b_2 [mm]	$s_1 + s_2$ [mm]		$s_{1\text{min}}$ [mm]	h_{max} [mm]	Material	
							Cable Clamps	Fasteners
020126-054x018	54	90	18	+2.5	3	50	Plastic	Galvanized Steel/ Stainless Steel
020126-054x028			28			60		
020126-054x038			38			70		
031953-084x025/400	84	120	25	+2.5	5	60		
031953-084x035/400			35			70		
031953-084x045/400			45			80		
031953-084x055/400			55			90		
031953-084x065/400			65			100		
031953-136x025/400	136	172	25	+2.5	5	60		
031953-136x035/400			35			70		
031953-136x045/400			45			80		
031953-136x055/400			55			90		
031953-136x065/400			65			100		
031953-136x075/400			75			110		
031953-136x085/400			85			120		
031955-084x035/400	84	220	35	+2.5	5	70		
031955-084x045/400			45			80		
031955-084x055/400			55			90		
031955-084x065/400			65			100		
031955-084x075/400			75			110		
031955-103x025/400	103	258	25	+2.5	5	60		
031955-103x035/400			35			70		
031955-103x045/400			45			80		
031955-103x055/400			55			90		
031955-103x065/400			65			100		
031955-103x075/400			75			110		

Wear Parts

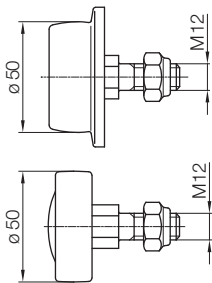
Replacement Rollers for Program 0320



ø40mm Flanged Roller	Order No.	Type with
	030101-040	Hardened Steel Roller

ø40mm Cylindrical Main Rollers	Order No.	Type with	Beam Size INP
	030102-040.1	Hardened Steel Roller	80 - 120
	030102-040.2		140 - 180
	030103-040.1	Plastic-Bandage	80 - 120
	030103-040.2		140 - 180

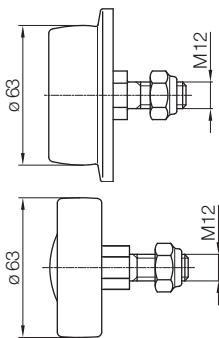
Replacement Rollers for Program 0325



ø50/63mm Flanged Roller	Order No.	Type with
	030101-050	Hardened Steel Roller

ø50mm Cylindrical Main Rollers	Order No.	Type with	Beam Size INP
	030102-050.1	Hardened Steel Roller	100
	030102-050.2		120 - 180
	030103-050.1	Plastic-Bandage	100
	030103-050.2		120 - 180

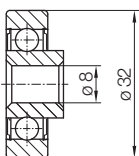
Replacement Rollers for Program 0330



ø63/80mm Flanged Roller	Order No.	Type with
	030101-063	Hardened Steel Roller

ø63mm Cylindrical Main Rollers	Order No.	Type with	Beam Size INP
	030102-063.1	Hardened Steel Roller	120 - 140
	030102-063.2		160 - 200
	030103-063.1	Plastic-Bandage	120 - 140
	030103-063.2		160 - 200

Replacement Anti-Lift Roller for Program 0320, 0325 and 0330



Order No.
02-K012-0062

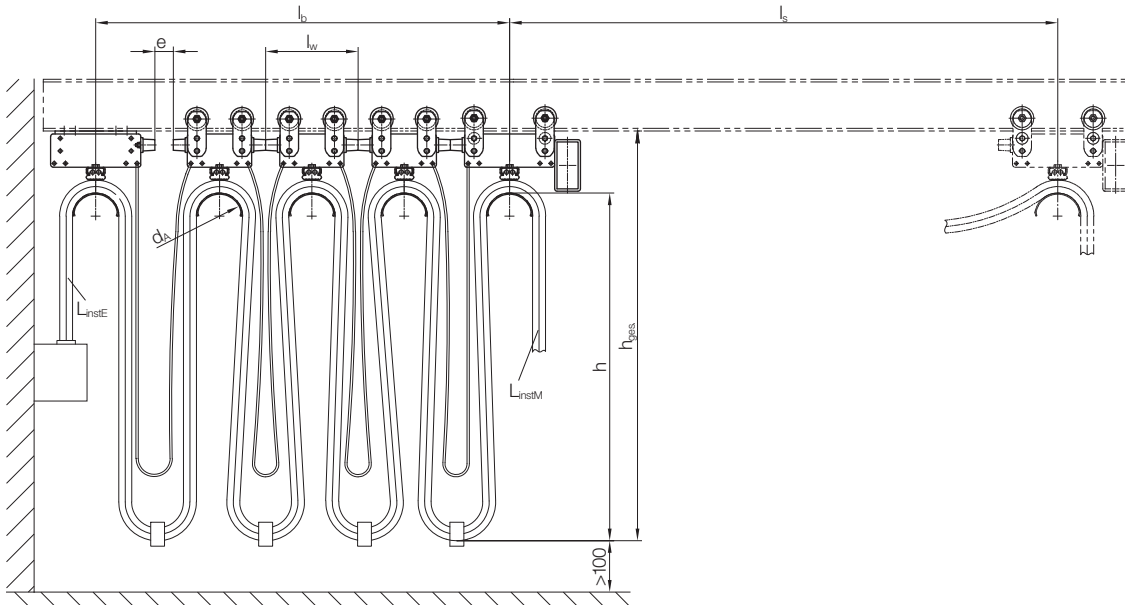
Shock Cords for Program 0325 and 0330



Order No.	d [mm]
020336-10	10
020336-14	14

Helpful Hints

Technical Data



Formulas to Determine Number of Loops, Cable Length and Loop Depth

Number of Loops:

$$n = \frac{f (l_s + e)}{2 \cdot h + 1.25 d_A - f \cdot l_w}$$

Storage Distance:

$$l_b \approx n \cdot l_w + e \quad [\text{m}]$$

- d_A [m] = Saddle diameter
- e [m] = Free space in storage distance
- f = cable factor
- h [m] = Loop depth (measured from top of support saddle)
- h_{ges} [m] = Loop depth (measured from lower beam flange)
- l_b [m] = Storage distance
- l_s [m] = Active travel
- l_w [m] = Cable trolley length
- L_{Best} [m] = Total cable length
- L_{instE} [m] = End clamp side hook-up footage
- L_{instM} [m] = Towing trolley side hook-up footage
- L_{Schl} [m] = Loop length
- L_{Syst} [m] = System cable length
- n = Number of Loops

System Cable Length:

$$L_{Syst} = f (l_s + l_b) \quad [\text{m}]$$

Total Cable Length:

$$L_{Best} = L_{Syst} + L_{instE} + L_{instM} \quad [\text{m}]$$

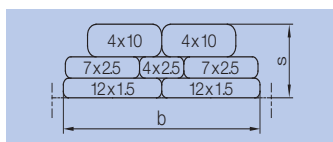
Loop Length:

$$L_{Schl} = \frac{L_{Syst}}{n} \quad [\text{m}]$$

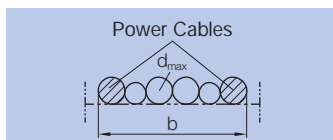
Loop Depth:

$$h = \frac{L_{Schl}}{2} \cdot 0.63 d_A \quad [\text{m}]$$

Trolley Selection Process



Example for Flat Cable Trolleys



Example for Round Cable Trolleys

1. Formula for calculating the approximate load per trolley F_{LW} :

$$F_{LW} \approx 2 \times h \times G_L \quad [\text{kg}]$$

G_L [kg/m] = Weight of the cable package

2. Selection of base trolley type from Program 0320, 0325 or 0330.
3. Saddle selection based upon cable minimum bend diameter.
4. Saddle with selection (b_2) to accommodate cable package width.
5. Determine cable trolley length l_w .

For Flat Cable Trolleys:

$$l_w \geq d_A + 2 \cdot d_{max} + 10 \quad [\text{mm}]$$

For Round Cable Trolleys:

$$l_w \geq d_A + 2 \cdot s + 10 \quad [\text{mm}]$$

Helpful Hints

Additional Length Factor f

Speed v [m/min]	Additional Length Factor (f) Cable Loop Depth h in meters				
	< 0.8	0.8 - 1.2	1.3 - 2	2.1 - 3.2	3.3 - 5
< 32	1.10	1.10	1.10	1.10	1.10
32 - 40	1.15	1.10	1.10	1.10	1.10
41 - 50	1.20	1.15	1.10	1.10	1.10
51 - 63	1.25	1.20	1.15	1.10	1.10
64 - 80	-	1.25	1.20	1.15	1.10
81 - 100	-	-	1.25	1.20	1.15
101 - 125	-	-	-	1.25	1.20
126 - 150	-	-	-	-	1.25

Depending on the operating conditions and parameters, energy supply systems must be installed with additional cable length. This length is calculated by taking into account the cable factor (f) we have presented on the table to the left. Special precautions must be made for flexible cable systems in the gray area. One such precaution might be installation of shock cords.

Permissible Loads per Trolley

Speed v [m/min]	Average Running Time per Day (hours) [h]				
	4 - 8	9 - 16	>16	-	
< 25	4 - 8	9 - 16	>16	-	
25 - 50	2 - 4	5 - 8	9 - 16	>16	
51 - 100	< 2	2 - 4	5 - 8	9 - 16	>16
101 - 150	-	< 2	2 - 4	5 - 8	9 - 16

The lifetime of the main roller and the beam depend on the diameter of the roller, the load and the frequency of operation. The proper selection, based on mean traveling speed, running time per day, load, and roller diameter can be made by using the tables on this page.

Program	Steel Roller ø [mm]	Permissible Load per Trolley [kg]				
		80	63	50	40	32
0320	40	80	63	50	40	32
0325	50	125	100	80	63	50
0330	63	200	160	125	100	80

Program	Plastic Roller ø [mm]	Permissible Load per Trolley [kg]				
		63	50	40	32	25
0320	40	63	50	40	32	25
0325	50	100	80	63	50	40
0330	63	160	125	100	80	63

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