

## Suspension tracks



Overhead conveyor system with Müsing spider assembly.



Our manual suspension tracks are also suitable for small and medium-sized trade companies. They are particularly distinguished by:

- Targeted material flow.
- Shorter transport and handling time.
- Larger ground clearance.
- Modular system: You can "start small" and expand the system at any time.
- Low investment costs.

- **Circular conveyor "Power & Free".**
- **Overhead twin-rail chain conveyors can also be provided.**

Give us a call!



JAB Anstötz marshaling area.

**We put things in motion**

Product similar to illustrations!

## Suspension track - support spacing

### Determining tolerable support spacing

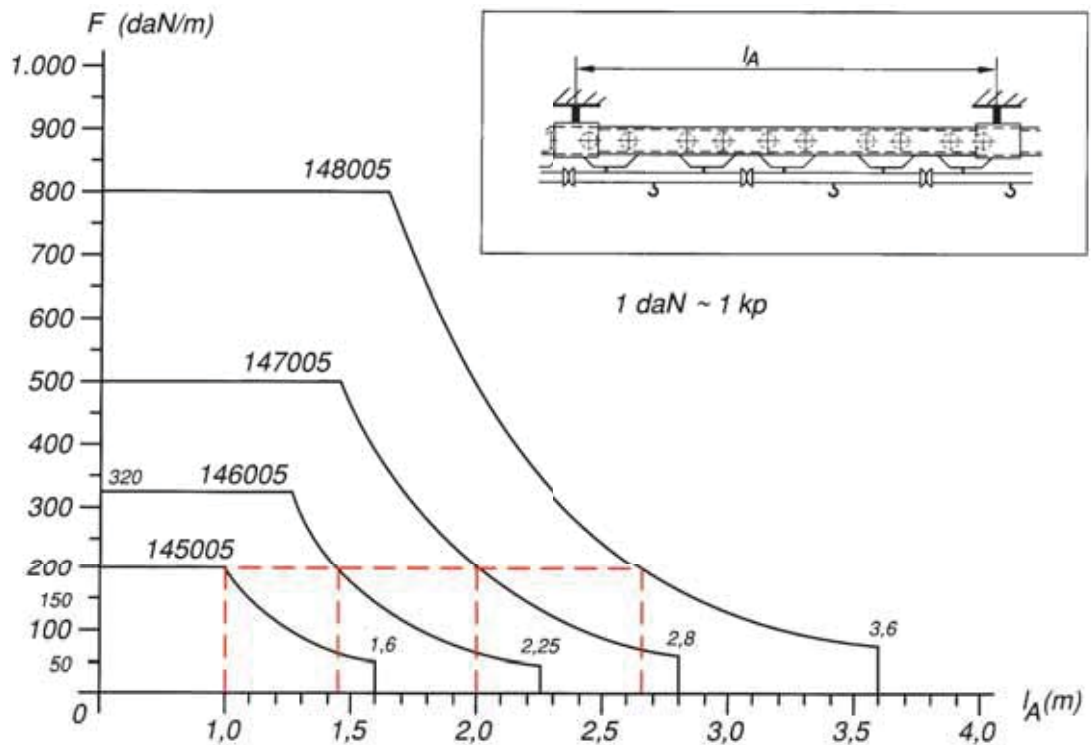
(simplified calculation method).

Basis for calculations:

1. Carrier on 2 supports, with distributed loading that is symmetric with respect to the center of the carrier.
2. The permissible deflection from the distributed load and dead weight of the rail =  $l_A \cdot 1/500$ .
3.  $\delta_{ball} = 100 \text{ N/mm}^2$ , without consideration of the flange stress.

A wide variety of loading cases occur within an overhead conveyor system. Individual loads are transported. These are held up in buffer sections to form line loads. "Empty suspension gear" is transported between unloading and loading stations. Therefore, quite different support spacing can be selected within a system. This means that the permissible support spacing should be calculated for each individual case based on the static values of the rails. **It is advisable to provide us with the design order to achieve an optimum layout.**

### Distributed load diagram



### Example:

Weight of the transported goods = 50 daN  
 Weight of the transport suspension unit = approx. 10 daN (including suspension gear)  
 Total load = 60 daN

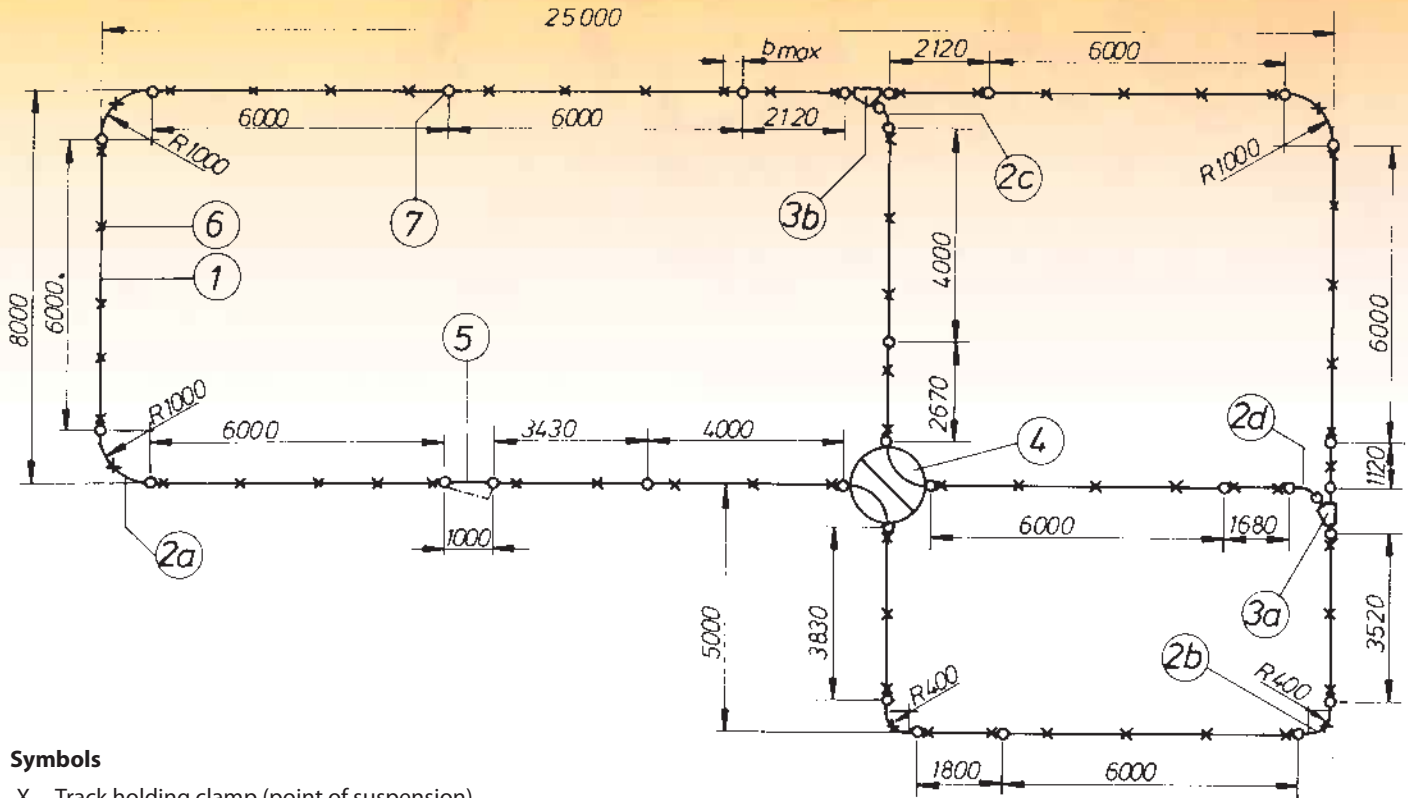
Transport units with cross bar  $l = 300 \text{ mm}$  are to be used.

$$\text{The distributed load } F = \frac{\text{Total load (daN)}}{l \text{ (m)}} = \frac{60 \text{ (daN)}}{0,3 \text{ (m)}} = 200 \text{ daN/m.}$$

According to the diagram the support spacings are  $l_A$ : 1.0 m for C-rail 145005 or 1.45 m for C-rail 146005 or 2.0 m for C-rail 147005 and 2.66 m for C-rail 148005.

## Suspension track - design example

### Track layout



### Symbols

- X Track holding clamp (point of suspension).
- Track connector (no point of suspension).

$b_{max}$  = 200 with full utilization of the ultimate load.

### Design example:

Given – Distributed load 50 daN/m according to the diagram on page H38 results in: Required support spacing  $l_A$  = 1.6 m; selected rail profile 145005.

### Parts list

Position	qty/m	Description	Ident. No.	Order No.	Remark
1a	8	C-rail (6 m length)	0020613	NO 145005-6	We recommend ordering 6-m and 4-m sections and cutting the lengths during assembly.
1b	2	C-rail (4 m length)	0020611	NO 145005-4	
1c	24	C-rail (1 x 3.83 m, 1 x 3.43 m, 1 x 3.52 m, 1 x 2.67 m, 2 x 2.12 m, 1 x 1.8 m, 1 x 1.68 m, 1 x 1.12 m)	0019860	NO 145005	
2a	3	90° elbow (R = 1000 mm)	0019912	NO 145405-1000	
2b	2	90° elbow (R = 400 mm)	0019916	NO 145405-0400	
2c	1	45° elbow (R = 400 mm)	0019916	NO 145405-0400	Divide a 90° elbow at the installation site.
2d	1	45° elbow (R = 400 mm)	0019916	NO 145405-0400	
3a	1	Point switches	0019893	NO 145311-L 45°	
3b	1	Fall switch	0019901	NO 145315-R03 45°	With operating unit.
4	1	Turntable	0019909	NO 145362-01	
5	1	Pivoting piece (insert station)			L = 1000mm
6	64	Track holding clamp	0019917	NO 145511	Selection
7	30	Track connector	0019920	NO 145605	see page H 41 – H 44.

**C-rails/Elbows/Connectors**

**C-rail**

Materials:  
Steel, galvanized

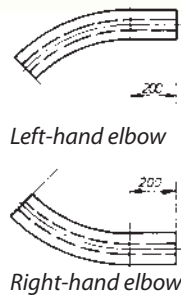


Technical data	Order No.				
	NO 145005	NO 146005	NO 147005	NO 148005	
Dimensions (mm)	a	40	50	63	80
	h	40	50	63	80
	s	2.5	3.2	4	5
Static values	Jx (cm <sup>4</sup> )	7	17.8	44.2	117.6
	Wx (cm <sup>3</sup> )	3.16	6.4	12.9	27.4
	Wgt. (kg/m)	2.55	4.1	6.53	10.52
Load-carrying capacity (daN/m)	200	320	500	800	

**90° elbow**

Materials: Steel, galvanized

Top view



When ordering elbow segments, please include a sketch indicating whether you want a left-hand or a right-hand version. We recommend separating the segments from a 90° elbow on-site.

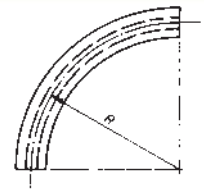
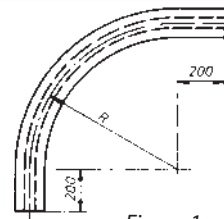
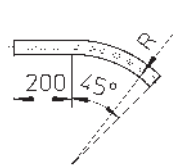


Figure 1

Figure 2

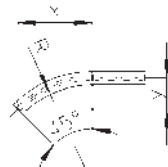
Other radii are available on request.

**Elbow 45°**



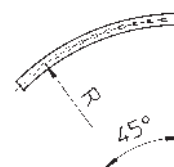
Left-hand design

(straight piece on the left)



Right-hand design

(straight piece on the right)



Elbow without straight piece

Fig. 1 (up to R = 1000 mm)

Fig. 2 (R = 1000 mm and higher)

Project dimensions  
 $x = R \cdot 0,707$   
 $y = R \cdot 0,293$

**90° elbow, galvanized**

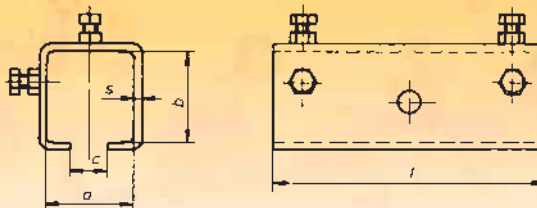
Figure-No.	Radius (mm)	Order No.			
1	400	NO 145405-0400	NO 146405-0400	-	-
	600	NO 145405-0600	NO 146405-0600	NO 147405-0600	-
	800	NO 145405-0800	NO 146405-0800	-	-
	1000	NO 145405-1000	NO 146405-1000	NO 147405-1000	NO 148405-1000
2	1200	NO 145405-1200	NO 146405-1200	NO 147405-1200	NO 148405-1200
	1400	NO 145405-1400	NO 146405-1400	NO 147405-1400	NO 148405-1400
	1600	NO 145405-1600	NO 146405-1600	NO 147405-1600	NO 148405-1600
	2000	NO 145405-2000	NO 146405-2000	NO 147405-2000	NO 148405-2000

**Elbow 45° galvanized**

1	Right	400	NO 145415-0400R	NO 146415-0400R	NO 147415-0400R	NO 148415-0400R
		600	NO 145415-0600R	NO 146415-0600R	NO 147415-0600R	NO 148415-0600R
		800	NO 145415-0800R	NO 146415-0800R	NO 147415-0800R	NO 148415-0800R
	Left	400	NO 145415-0400L	NO 146415-0400L	NO 147415-0400L	NO 148415-0400L
		600	NO 145415-0600L	NO 146415-0600L	NO 147415-0600L	NO 148415-0600L
		800	NO 145415-0800L	NO 146415-0800L	NO 147415-0800L	NO 148415-0800L
2	1000	NO 145415-1000	NO 146415-1000	NO 147415-1000	NO 148415-1000	
	1200	NO 145415-1200	NO 146415-1200	NO 147415-1200	NO 148415-1200	
	1400	NO 145415-1400	NO 146415-1400	NO 147415-1400	NO 148415-1400	
	1600	NO 145415-1600	NO 146415-1600	NO 147415-1600	NO 148415-1600	
	2000	NO 145415-2000	NO 146415-2000	NO 147415-2000	NO 148415-2000	

## Track holding clamp/connector

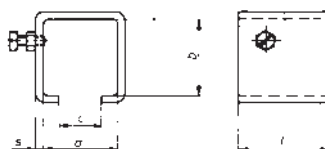
C-rail	NO 145005	NO 146005	NO 147005	NO 148005
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Technical data		Ident. No.	Order No.	Ident. No.	Order No.	Ident. No.	Order No.	Ident. No.	Order No.
Design	Galvanized	0019920	NO 145605	0019976	NO 146605	0020175	NO 147605	0020078	NO 148605
	Bare	0020643	NO 24140	0020776	NO 25140	0020794	NO 25640	0020812	NO 26140
Dimensions (mm)	a	41.3		51.7		65.5		83	
	b	41		51.2		64.2		83	
	c	18.4		24.6		26		34	
	l	125		160		200		250	
	s	4		4		5		6	
Weight (kg)		0.6		1		1.9		3.6	

### Track holding clamp for welding

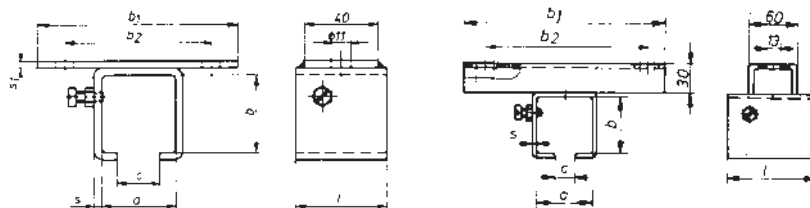
Materials:  
Steel, bare.



Technical data		Ident. No.	Order No.	Ident. No.	Order No.	Ident. No.	Order No.	Ident. No.	Order No.
		0020632	NO 24120	0020771	NO 25120	0020790	NO 25620	0020808	NO 26120
Dimensions (mm)	a	40.5		51.7		64.7		81.7	
	b	40.5		51.7		64.7		81.7	
	c	17		25		25		31	
	l	50		80		100		120	
	s	4		4		5		6	
Load-carrying capacity (daN)		200		250		320		400	
Weight (kg)		0.22		0.5		0.94		1.75	

### Track holding clamp

Materials:  
Steel, galvanized



Version for NO 145511 and NO 146511

Version for NO 147511 and NO 148511

Technical data		Ident. No.	Order No.	Ident. No.	Order No.	Ident. No.	Order No.	Ident. No.	Order No.
		0019917	NO 145511	0019974	NO 146511	0020173	NO 147511	0020076	NO 148511
Dimensions (mm)	a	40.5		51.7		64.7		81.7	
	b	40.5		51.7		64.7		81.7	
	b <sub>1</sub>	110		130		175		175	
	b <sub>2</sub>	80		100		130 +/- 20		130 +/- 20	
	c	17		25		25		31	
	l	50		80		100		120	
	s	4		4		5		6	
	s <sub>1</sub>	6		8		-		-	
Load-carrying capacity (daN)		250		400		630		1000	
Weight (kg)		0.36		0.8		0.65		2.4	

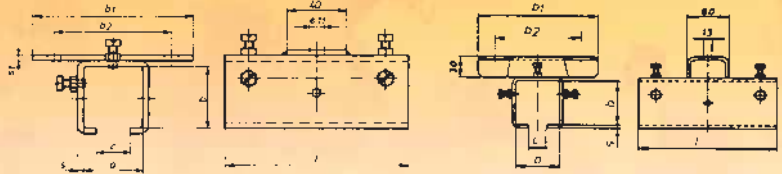
Leaving technical changes!

## Track holding clamp/connector

C-rail	NO 145005	NO 146005	NO 147005	NO 148005
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### Track connector

Materials: Steel.  
Design: Galvanized.



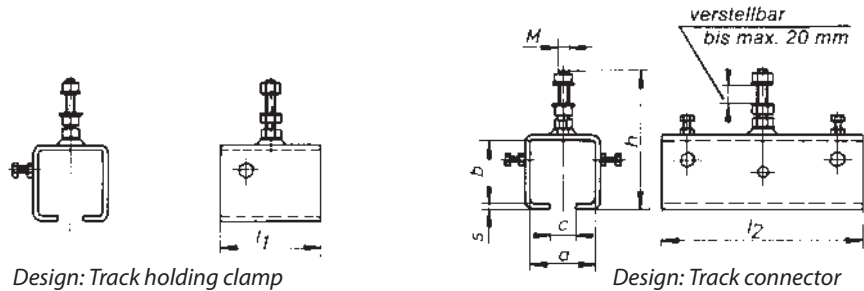
Version for NO 145611 and NO 146611

Version for NO 147611 and NO 148611

Technical data		Ident. No.	Order No.	Ident. No.	Order No.	Ident. No.	Order No.	Ident. No.	Order No.
		0019921	NO 145611	0019977	NO 146611	0020176	NO 147611	0020079	NO 148611
Dimensions (mm)	a	40.5		51.7		64.7		81.7	
	b	40.5		51.7		64.7		81.7	
	b <sub>1</sub>	110		130		175		175	
	b <sub>2</sub>	80		100		130 +/- 20		130 +/- 20	
	c	17		25		25		31	
	l	125		160		200		250	
	s	4		4		5		6	
	s <sub>1</sub>	6		8		-		-	
Load-carrying capacity (daN)		250		400		630		1000	
Weight (kg)		0.66		1.3		2.65		4.15	

### Track holding clamp and track connector

Materials: Steel, galvanized

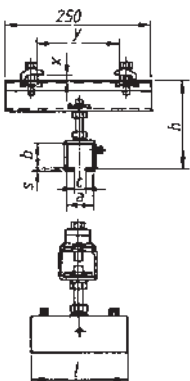


Design: Track holding clamp

Design: Track connector

Technical data		Ident. No.	Order No.	Ident. No.	Order No.	Ident. No.	Order No.	Ident. No.	Order No.
Design	Track holding clamp	0019918	NO 145525	0019975	NO 146525	0020174	NO 147525	0020077	NO 148525
	Track connector	0019922	NO 145625	0019978	NO 146625	0020177	NO 147625	0020080	NO 148625
Dimensions (mm)	a	40.5		51.7		64.7		81.7	
	b	40.5		51.7		64.7		81.7	
	c	17		25		25		31	
	h	110		125		140		170	
	l <sub>1</sub>	50		80		100		120	
	l <sub>2</sub>	125		160		200		250	
	M	M8/M12		M12		M12		M16	
	s	4		4		5		6	
Load-carrying capacity (daN)		200		320		400		500	
Weight (kg)	Track holding clamp	0.32		0.52		0.97		1.8	
	Track connector	0.61		1.02		1.93		3.7	

### Track holding clamp and track connector



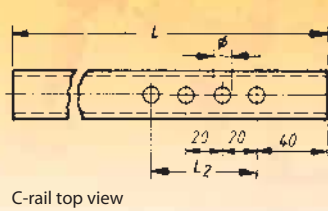
Design		Ident. No.	Order No.	Ident. No.	Order No.	Ident. No.	Order No.	Ident. No.	Order No.
Design	Track holding clamp	0027560	NO 145541	0027561	NO 146541	0027562	NO 147541	0027563	NO 148541
	Track connector	0027564	NO 145641	0027565	NO 146641	0027566	NO 147641	0027567	NO 148641
Dimensions (mm)	a	40.5		51.7		64.7		81.7	
	b	40.5		51.7		64.7		81.7	
	c	17		25		25		31	
	h	127 - 152		138 - 163		-		-	
	l (tr. clamp)	50		80		100		120	
	l (tr. connector)	125		160		200		250	
	s	4		4		5		6	
Load-carrying capacity (daN)	x	Clamping height		6 - 11		-		-	
	y	Clamping width		42 - 130		-		-	
			200		320		-		-

## Track holding clamps/connectors/stops

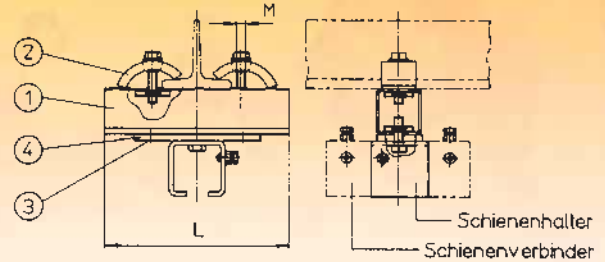
C-rail	NO 145005	NO 146005	NO 147005	NO 148005
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### Track holding clamp and track connector

Materials: Steel, galvanized



C-rail top view



#### ① Clamping arm

Materials: Steel, galvanized.

Dimensions (mm)		NO 145005		NO 146005		NO 147005		NO 148005	
L	L2	Ident. No.	Order No.	Ident. No.	Order No.	Ident. No.	Order No.	Ident. No.	Order No.
250	200	0020381	NO 20186-0250	0020406	NO 20278-0250	0020402	NO 20274-0250	0020402	NO 020274-0250
315	260	0020382	NO 20186-0315	0020407	NO 20278-0315	0020403	NO 20274-0315	0020403	NO 020274-0315
400	340	0020383	NO 20186-0400	0020408	NO 20278-0400	0020404	NO 20274-0400	0020404	NO 020274-0400
500	340	0020384	NO 20186-0500	0020409	NO 20278-0500	0020405	NO 20274-0500	0020405	NO 020274-0500
Hole Ø		9		11		11		11	

#### ④ Track holding clamp and track connector

Materials: Steel, galvanized (for dimensions and data, see page H 00.)

Design	Ident. No.	Order No.	Ident. No.	Order No.	Ident. No.	Order No.	Ident. No.	Order No.
Track holding clamp	0019917	NO 145511	0019974	NO 146511	0020173	NO 147511	0020076	NO 148511
Track connector	0019921	NO 145611	0019977	NO 146611	0020176	NO 147611	0020079	NO 148611

#### ② Clamping jaw

Materials: Steel, galvanized.

Design	Ident. No.	Order No.	Ident. No.	Order No.	Ident. No.	Order No.	Ident. No.	Order No.
Bolt M	0020822	NO 40127-08	0020823	NO 40127-10	0020823	NO 40127-10	0020824	NO 40127-12
		M8 x 50		M10 x 50		M10 x 50		M12 x 60

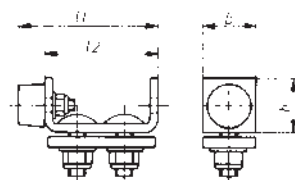
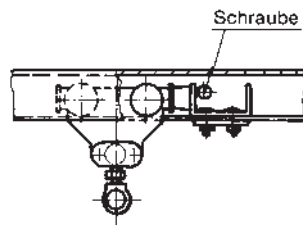
#### ③ Bolt set

With square nut for C-rail. Materials: Steel, galvanized.

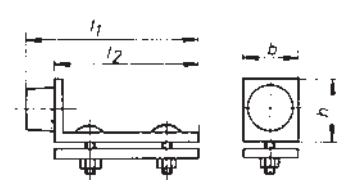
Design	Ident. No.	Order No.	Ident. No.	Order No.	Ident. No.	Order No.	Ident. No.	Order No.
Bolt M	0020819	NO 40125-08x15	0020820	NO 40125-10x12	0020820	NO 40125-10x12	0020820	NO 40125-10x12
		M8 x 25		M10 x 25		M10 x 25		M12 x 25
Max. clamp length		14.5		12		12		12

### End stop

Assembly instructions: End stops must be secured at right angles to the rails via locking screws.



Version for NO 24111 and NO 25115



Version for NO 25617 and NO 26117

Technical data		NO 24111		NO 25115		NO 25617		NO 26117	
		Ident. No.	Order No.	Ident. No.	Order No.	Ident. No.	Order No.	Ident. No.	Order No.
Dimensions (mm)	b	0020630	NO 24111	0020770	NO 25115	0020789	NO 25617	0020807	NO 26117
	h		30		30		45		60
	l1		30		30		50		60
	l2		69		69		100		120
Weight (kg)			0.19		0.19		0.8		0.95
Locking screw		0028346	NO 40150-08x50	0028347	NO 40150-10x65	0020825	NO 40150-12x75	0028348	NO 40150-12x100
Dimensions			M8 x 50		M10 x 65		M12 x 75		M12 x 100
Weight (kg)			0.19		0.19		0.8		0.95

Leaving technical changes!

## Switches

C-rail

NO 145005

NO 146005

NO 147005

NO 148005

### Switches

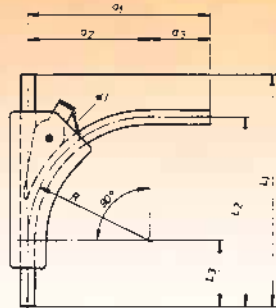
TORWEGGE standard turnouts can be used as both **point switches** and **fall switches**.

When used as a fall switch, only one operating unit with a chain is provided.

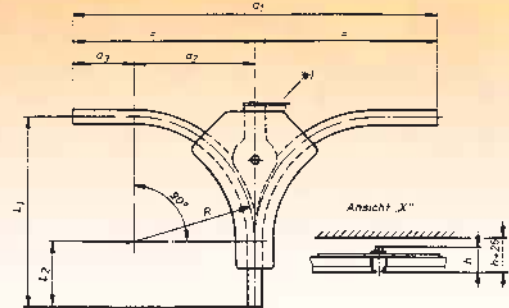
Design: Surface galvanized.

### Point switches

Switched from the chassis; automatically reset to home position via spring; passage only in one direction.



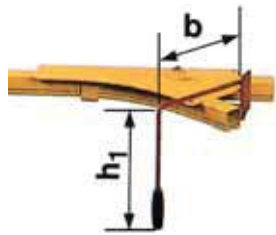
Point switches 90°, Right-hand design.



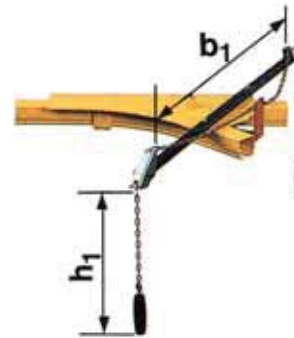
Point switches 90°, Right-/left-hand design.

### Fall switches

Can be set manually via the chain or linkage and remains in the adjusted position; Passage possible in all directions



Fall switch with shift linkage 45° + 90°  
Design: -02, available on request.



Fall switch 45° + 90° with operating unit (chain hoist).  
Design: -03

Design		Ident. No.	Order No.	Ident. No.	Order No.	Ident. No.	Order No.	Ident. No.	Order No.
Point switches 45°	Right	0019894	NO 145311-R45°	0019950	NO 146311-R45°	0020041	NO 147311-R45°	0020204	NO 148311-R45°
	Left	0019893	NO 145311-L45°	0019949	NO 146311-L45°	0020040	NO 147311-L45°	0020203	NO 148311-L45°
	Right-hand/left-hand	0019895	NO 145311-RL45°	0019951	NO 146311-RL45°	0020042	NO 147311-RL45°	0020205	NO 148311-RL45°
Point switches 90°	Right	0019897	NO 145313-R90°	0019953	NO 146313-R90°	0020044	NO 147313-R90°	0020207	NO 148313-R90°
	Left	0019896	NO 145313-L90°	0019952	NO 146313-L90°	0020043	NO 147313-L90°	0020206	NO 148313-L90°
	Right-hand/left-hand	0028699	NO 145313-RL90°	0019954	NO 146313-RL90°	0020045	NO 147313-RL90°	0020208	NO 148313-RL90°
<b>with chain</b>									
Fall switch 45°	Right	0019901	NO 145315-R03 45°	0019958	NO 146315-R03 45°	0020058	NO 147315-R03 45°	0020212	NO 148315-R03 45°
	Left	0019899	NO 145315-L03 45°	0019956	NO 146315-L03 45°	0020047	NO 147315-L03 45°	0020210	NO 148315-L03 45°
	Right-hand/left-hand	0019903	NO 145315-RL03 45°	0019960	NO 146315-RL03 45°	0020060	NO 147315-RL03 45°	0020214	NO 148315-RL03 45°
Fall switch 90°	Right	0019905	NO 145317-R03 90°	0019962	NO 146317-R03 90°	0020062	NO 147317-R03 90°	0020216	NO 148317-R03 90°
	Left	0019904	NO 145317-L03 90°	0019961	NO 146317-L03 90°	0020061	NO 147317-L03 90°	0020215	NO 148317-L03 90°
	Right-hand/left-hand	0019907	NO 145317-RL03 90°	0019963	NO 146317-RL03 90°	0020063	NO 147317-RL03 90°	0020217	NO 148317-RL03 90°

Ordering example: A left-hand fall switch construction is required with chain hoist operation.  
Order No.: Fall switch NO 145315-L03.

Dimensions		mm	mm	mm	mm
Project dimensions	a1	1200	1200	1600	1600
	a2	400	400	600	600
	a3	200	200	200	200
	h	70	81	100	116
	L1	615	650	905	955
	L2	215	250	305	355
	R	400	400	600	600

Pneumatic actuation on request.

Product similar to illustrations!

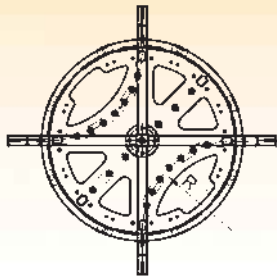
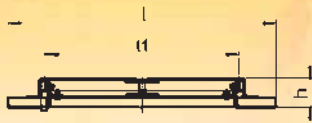
www.torwegge-group.com



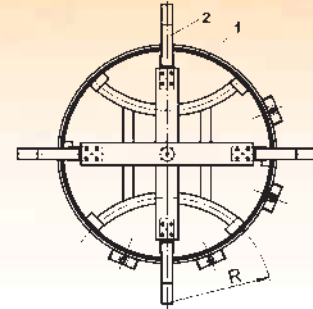
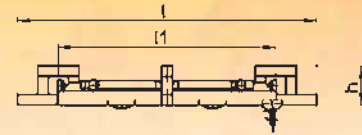
## Switches

C-rail	NO 145005	NO 146005	NO 147005	NO 148005
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### Turntables





Version for 40 x 40 and 50 x 50.  
Materials: Steel, galvanized.



Version for 63 x 63 and 80 x 80.  
Materials: Painted steel, standard silver.

The turnouts are connected to the C-rails via four track connectors. The track connectors necessary for this are to be ordered separately.

Design	Ident. No.	Order No.	Ident. No.	Order No.	Ident. No.	Order No.	Ident. No.	Order No.
 With eyelet	0019908	NO 145361-01	0019964	NO 146361-01	0020064	NO 147361-01	0020218	NO 148361-01
 With eyelet	0019909	NO 145362-01	0019965	NO 146362-01	0020065	NO 147362-01	0020219	NO 148362-01
Dimensions (mm)	a	1150		1200		1700		2550
	D	800		800		1230		2030
	h	123		133		226		243
	R	400		400		600		1000

Other switches and turntables are available, e.g., pneumatic rotating switches.  
You can also request our technical consulting services.



Suspension track system on a beach chair production line.  
Delivery to painting plant.  
Use of rotating and fall switches.

Leaving technical changes!

## Accessories/stops

A number of stops and locking devices may be necessary, depending on requirements and track layout. These are mechanically actuated and can also be operated pneumatically if required.

**Simple stop ...911**



Stops are used if the conveyed product is to be blocked in buffer sections, held in front of discharge sections or positioned at workstations.

**Stop with individual release ...921**



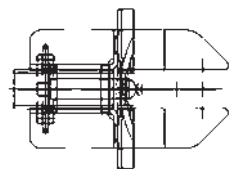
Only suitable for cross beam trolleys measuring 400 mm and 500 mm in length.

**Return stop ...913**



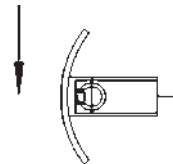
Prevents a transport suspension unit from running back.

**Locking device 1**

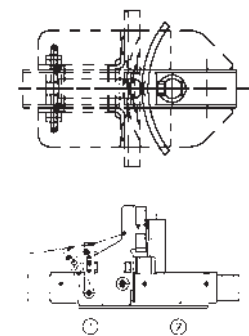


Individual orders of items ① and ② for deviating installation requirements, e.g. if several branch lines are to be connected to an equipment crane.

**Stop piece 2**



**In locked condition**



Pos.	For C-rail	Order No.
① Locking device	NO 145005	<b>NO 145963</b>
	NO 146005	<b>NO 146963</b>
	NO 147005	<b>NO 147963</b>
	NO 148005	<b>NO 148963</b>
② Stop piece	NO 145005	<b>NO 145964</b>
	NO 146005	<b>NO 146964</b>
	NO 147005	<b>NO 147964</b>
	NO 148005	<b>NO 148964</b>

## Accessories/stops

Design	Ident. No.	Order No.	Ident. No.	Order No.	Ident. No.	Order No.	Ident. No.	Order No.
C-rails		<b>NO 145005</b>		<b>NO 146005</b>		<b>NO 147005</b>		<b>NO 148005</b>
Simple stop	<b>0019924</b>	<b>NO 145911</b>	<b>0019979</b>	<b>NO 146911</b>	<b>0020178</b>	<b>NO 147911</b>	<b>0020081</b>	<b>NO 148911</b>
Stop with individual release	<b>0019925</b>	<b>NO 145921</b>	<b>0019981</b>	<b>NO 146921</b>	<b>0020180</b>	<b>NO 147921</b>	<b>0020083</b>	<b>NO 148921</b>
Return stop	<b>0019926</b>	<b>NO 145913</b>	<b>0019980</b>	<b>NO 146913</b>	<b>0020179</b>	<b>NO 147913</b>	<b>0020082</b>	<b>NO 148913</b>
Locking device ①	<b>0019927</b>	<b>NO 145963</b>	<b>0019982</b>	<b>NO 146963</b>	<b>0020181</b>	<b>NO 147963</b>	<b>0020084</b>	<b>NO 148963</b>
Stop piece ②	<b>0019928</b>	<b>NO 145964</b>	<b>0028700</b>	<b>NO 146964</b>	<b>0020182</b>	<b>NO 147964</b>	<b>0020085</b>	<b>NO 148964</b>

## Transport unit

C-rail

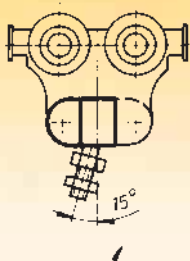
NO 145005

NO 146005

NO 147005

NO 148005

### Transport unit



Versions with pivoting and oscillating ball pins are used as standard transport units (see figure).

Working temperature:  $-30^{\circ}\text{C}$  to  $+60^{\circ}\text{C}$ .

High-temperature transport units and rollers are available for use at higher temperatures (versions up to  $300^{\circ}\text{C}$ ).

For the suspension of electrical devices, e.g., spot welding guns, the trolleys can be supplied in an **insulated version** for isolation of ground currents.

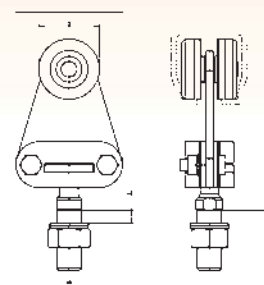
### 2-roller transport unit

Materials: Steel, galvanized

The transport units for C-rail 145005 are available with ball pin threads M12 or M16.

Ordering example: M12 requested

Order number: NO 145010-12B



Technical data		Ident. No.	Order No.	Ident. No.	Order No.	Ident. No.	Order No.	Ident. No.	Order No.
Design	Standard design	0019862	NO 145010-B	0019931	NO 146010-B	0020001	NO 147010-B	0020185	NO 148010-B
	Insulated design	-	-	-	-	0020012	NO 147050-B	0020195	NO 148050-B
	Versions up to $300^{\circ}\text{C}$	0019883	NO 145110-B	0019947	NO 146110-B	0020038	NO 147110-B	0020201	NO 148110-B
Dimensions (mm)	d		32		40		52		62
	$h_1$		75		70		85		80
	l		70		70		70		70
	M		M12 or M16		M16		M16		M16
	$s_{max}$		26		26		26		26
Load-carrying capacity (daN)			50		80		100		125
Weight (kg)			0.5		0.60		0.75		0.85

### 4-roller transport unit

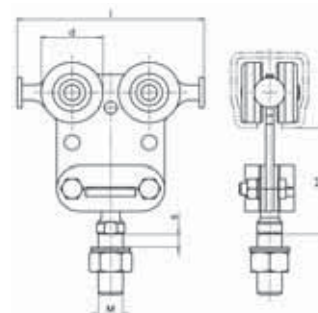
Materials: Steel, galvanized

The transport units for C-rail 145005 are available with ball pin threads M12 or M16.

Ordering example: M12 requested

Order number: NO 145020-12B

**For bends of radius 400 mm and above.**



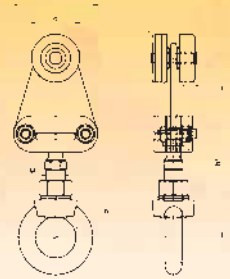
Technical data		Ident. No.	Order No.	Ident. No.	Order No.	Ident. No.	Order No.	Ident. No.	Order No.
Design	Standard design	0019871	NO 145020-B	0019936	NO 146020-B	0020005	NO 147020-B	0020189	NO 148020-B
	Insulated design	-	-	-	-	0020014	NO 147060-B	0020197	NO 148060-B
	Versions up to $300^{\circ}\text{C}$	0019885	NO 145120-B	0019948	NO 146120-B	0020039	NO 147120-B	0020202	NO 148120-B
Dimensions (mm)	d		32		40		52		62
	$h_1$		75		70		85		80
	l		120		120		160		160
	M		M12 or M16		M16		M16		M16
	$s_{max}$		26		26		26		26
Load-carrying capacity (daN)			100		160		200		250
Weight (kg)			0.75		0.85		1		1.2

## Transport unit

C-rail	NO 145005	NO 146005	NO 147005	NO 148005
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### Transport unit with ring nut and 2 rollers

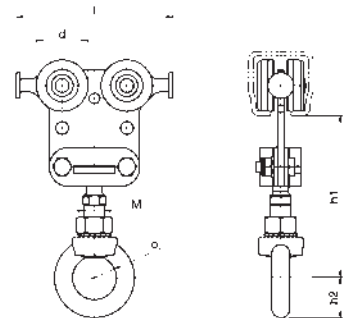
Materials: Steel, galvanized



Technical data		Ident. No.	Order No.	Ident. No.	Order No.	Ident. No.	Order No.	Ident. No.	Order No.
Design	Standard design	0019864	NO 145011-12B	0019932	NO 146011-B	0020002	NO 147011-B	0020186	NO 148011-B
	Insulated design	-	-	-	-	0020013	NO 147051-B	0020196	NO 148051-B
Dimensions (mm)	d	32		40		52		62	
	h <sub>1</sub>	130		125		140		135	
	l	70		70		70		70	
	M	M12		M16		M16		M16	
	Øo	30		35		35		35	
Load-carrying capacity (daN)		50		80		100		125	
Weight (kg)		0.6		0.7		0.85		0.95	

### Transport unit with ring nut and 4 rollers

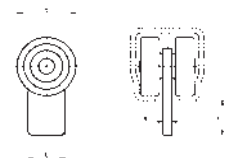
Materials: Steel, galvanized  
For bends starting at 400 mm.



Technical data		Ident. No.	Order No.	Ident. No.	Order No.	Ident. No.	Order No.	Ident. No.	Order No.
Design	Standard design	0019873	NO 145021-12B	0019939	NO 146021-B	0020006	NO 147021-B	0020190	NO 148021-B
	Insulated design	-	-	-	-	0020015	NO 147061-B	0020198	NO 148061-B
Dimensions (mm)	d	32		40		52		62	
	h <sub>1</sub>	130		125		140		135	
	h <sub>2</sub>	32		32		32		32	
	l	120		100		160		160	
	M	M12		M16		M16		M16	
	Øo	30		35		35		35	
Load-carrying capacity (daN)		100		160		200		250	
Weight (kg)		0.85		0.95		1.1		1.3	

### Transport unit to be welded with 2 rollers

Materials:  
Casters: Steel, galvanized.  
Plate: Steel, bare.



Technical data		Ident. No.	Order No.	Ident. No.	Order No.	Ident. No.	Order No.	Ident. No.	Order No.
Dimensions (mm)	a	25		25		40		40	
	d	32		40		52		62	
	h	29		24		32		26	
	s	5		6		8		8	
Load-carrying capacity (daN)		50		80		100		125	
Weight (kg)		0.15		0.25		0.32		0.42	

## Transport unit

C-rail

NO 145005

NO 146005

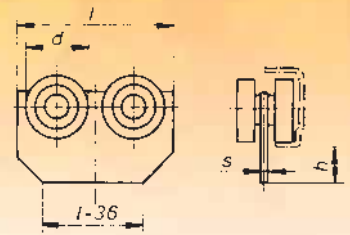
NO 147005

NO 148005

## Transport unit to be welded with 4 rollers

Materials:  
 Casters: Steel, galvanized.  
 Plate: Steel, bare.

Not for bends of radius  
 below 800 mm.

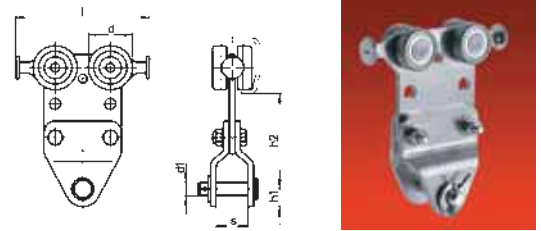


## Technical data

Technical data		Ident. No.	Order No.	Ident. No.	Order No.	Ident. No.	Order No.	Ident. No.	Order No.
		0019880	NO 145092	0019945	NO 146092	0020036	NO 147092	0020199	NO 148092
Dimensions (mm)	d	32		40		52		62	
	h	50		45		51		45	
	l	120		120		160		160	
	s	5		5		8		8	
Load-carrying capacity (daN)		100		160		200		250	
Weight (kg)		0,45		0,55		0,7		0,9	

## Transport unit for load hooks with 4 rollers

Materials:  
 Casters: Steel, galvanized.  
 Load-carrying part: galvanized.

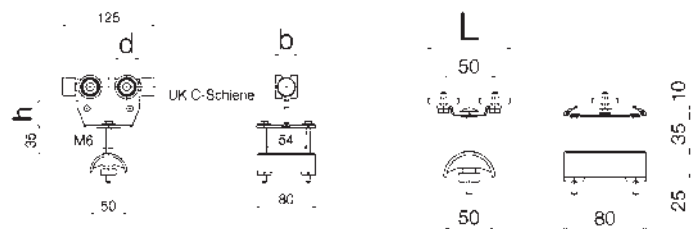


## Technical data

Technical data		Ident. No.	Order No.	Ident. No.	Order No.	Ident. No.	Order No.	Ident. No.	Order No.
		0019875	NO 145024	0019940	NO 146024	0020009	NO 147024	0020192	NO 148024
Dimensions (mm)	s	29		29		40		40	
	h <sub>1</sub>	16		16		22		22	
	h <sub>2</sub>	92		87		107		101	
	d <sub>1</sub>	32		40		52		62	
	d <sub>2</sub>	12		12		20		20	
l		120		120		160		160	
Load-carrying capacity (daN)		100		160		250		400	
Weight (kg)		0,75		0,85		1		1,2	

## Flat cable trolley and end clamp

Materials:  
 Casters: Steel, galvanized.  
 Load-carrying part: Steel, galvanized.  
 Bearing surface: Plastic.  
 Buffer: Rubber.  
 Small parts: Steel, galvanized.



Cable trolleys

End clamp

## Technical data

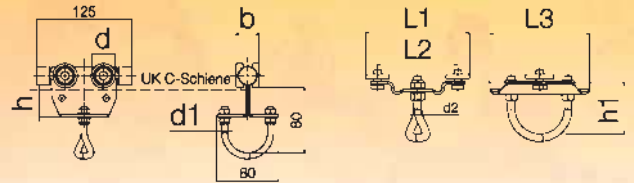
Technical data		Ident. No.	Order No.	Ident. No.	Order No.	Ident. No.	Order No.	Ident. No.	Order No.
Design	Cable trolleys	0020682	NO 24242-125	0028957	NO 25270-125x80	0028958	NO 25770-125x80	0028959	NO 26270-125x80
	End clamp	0020521	NO 23269	0028960	NO 25290	0028961	NO 25790	0028962	NO 26290
Dimensions (mm)	d	30		37		47		62	
	b	32		25		32		32	
	h	40		42		38		38	
	l	75		80		80		80	
Weight (kg)	Cable trolleys	0,54		0,52		0,54		0,54	
	End clamp	0,19		0,18		0,19		0,19	

## Transport unit

C-rail	NO 145005	NO 146005	NO 147005	NO 148005
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### Round cable trolley and end clamp

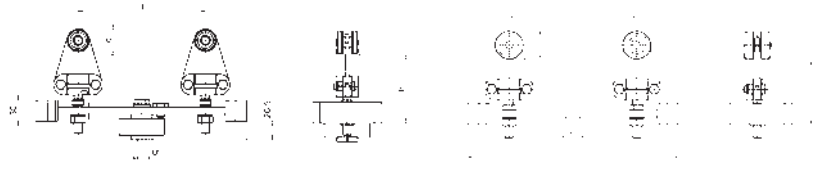
Materials:  
Casters: Steel, galvanized.  
Load-carrying part: Steel, galvanized.  
Bearing surface: Plastic.  
Buffer: Rubber.  
Small parts: Steel, galvanized.



Technical data		Ident. No.	Order No.	Ident. No.	Order No.	Ident. No.	Order No.	Ident. No.	Order No.
Design	Cable trolley	0020705	NO 24316-125	0020780	NO 25396-125	0020799	NO 25896-125	0028953	NO 26396-125
	End clamp	0020708	NO 24318	0028954	NO 25398	0028955	NO 25898	0028956	NO 26398
Dimensions (mm)	d	30		37		47		32	
	b	32		25		32		32	
	d <sub>1</sub>	8		6		8		8	
	d <sub>2</sub>	8		6		8		8	
	h	38		42		38		38	
	h <sub>1</sub>	55		62		60		60	
	l <sub>1</sub>	110		80		110		110	
	l <sub>2</sub>	85		50		85		85	
Weight (kg)	Cable trolley	0,57		0,55		0,57		0,57	
	End clamp	0,32		0,4		0,7		0,7	

### Transport unit WITH and WITHOUT snap-in locking device

Materials: Steel, galvanized

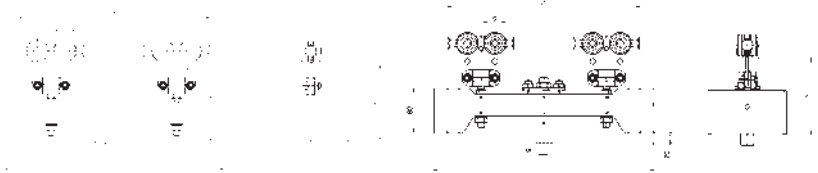


Technical data		Ident. No.	Order No.*	Ident. No.	Order No.*	Ident. No.	Order No.*	Ident. No.	Order No.*
Design	Without snap-in locking device	0019867	NO 145015-B	0019933	NO 146015-B	-		-	
	With snap-in locking device	0019870	NO 145018-..B	0019934	NO 146018-..B	-		-	
Dimensions (mm)	d	32		40		-		-	
	h	95		90		-		-	
	l	300		300		-		-	
	l <sub>1</sub>	180		180		-		-	
M	M12/M14		M12/M14		-		-		
Load-carrying capacity (daN)		100		125		-		-	
Weight (kg)		2,7		2,8		-		-	

\* Please specify thread size M!

### Transport unit WITH and WITHOUT snap-in locking device

Materials: Steel, galvanized



Technical data		Ident. No.	Order No.*	Ident. No.	Order No.*	Ident. No.	Order No.	Ident. No.	Order No.
Design	Without snap-in locking device	0019876	NO 145025-400	0019942	NO 146025-400	0020010	NO 147025-400	0020193	NO 148025-400
	With snap-in locking device	0019878	NO 145028-400	0019943	NO 146028-400	0020011	NO 147028-400	0020194	NO 148028-400
5Dimensions (mm)	d	32		40		52		62	
	h	95		90		155		149	
	l	300		300		400		400	
	l <sub>1</sub>	300		300		388		388	
M	M12/M14		M12/M14		M16		M16		
Load-carrying capacity (daN)		200		250		400		500	
Weight (kg)		3,2		3,3		-		-	

\* Please specify thread size M!

## Transport unit

C-rail

NO 145005

NO 146005

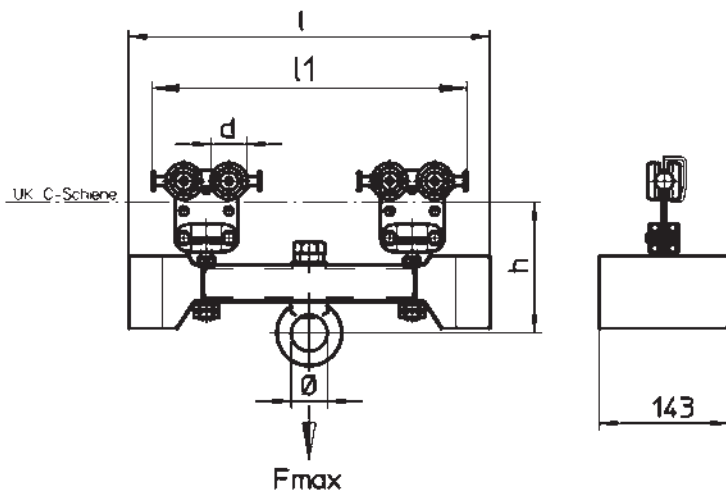
NO 147005

NO 148005

Transport unit with eyelet and 4 rollers



Materials:  
Casters: Steel, galvanized.  
Load-carrying part: galvanized.



Technical data	Ident. No.	Order No.	Ident. No.	Order No.	Ident. No.	Order No.	Ident. No.	Order No.
l = 400	0028993	NO 145026-400	0028994	NO 146026-400	0028995	NO 147026-400	0028996	NO 148026-400
l = 500	0028997	NO 145026-500	0028998	NO 146026-500	0028999	NO 147026-500	0029000	NO 148026-500
l = 630	0029001	NO 145026-630	0029002	NO 146026-630	0029003	NO 147026-630	0029004	NO 148026-630
Project dimensions (mm)								
l <sub>1</sub>		I-52		I-52		I-52		I-52
Ø d		32		40		52		62
h		150		145		160		154
Ø		40		40		40		40
		Max. load on cross bars						
Cross bar lengths (mm)								
l = 400		200		320		400		500
l = 500		200		320		400		500
l = 630		200		320		400		500

Check the max. permissible distributed load of the C-rail.

Fittings for hanging sliding gates (for rails, see page H 41)

**Materials:**

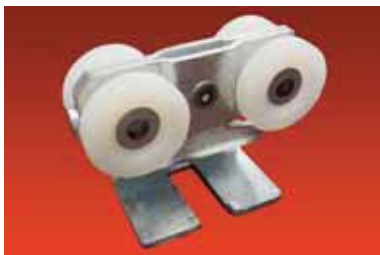
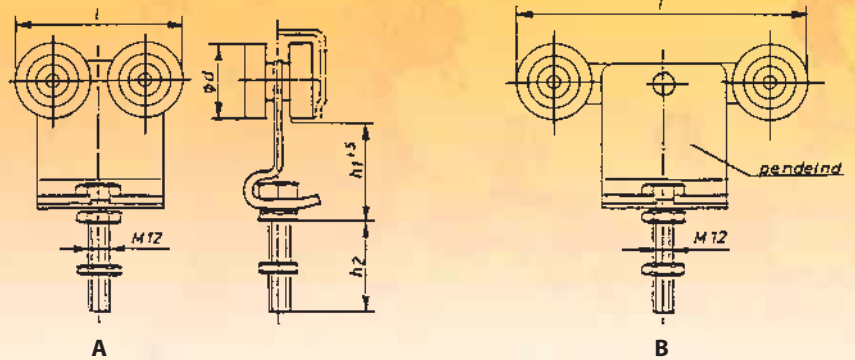
Steel, galvanized.

NO 145005

NO 146005

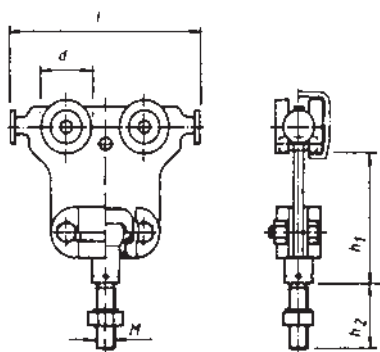
NO 147005

NO 148005



Order No.	For rail	Dimensions				M	Load-carrying capacity daN
		d mm	h <sub>1</sub> mm	h <sub>2</sub> mm	l mm		
<b>Type A</b>							
NO 43925	30	25	35	20	78	M12	50
NO 43935	40	32	56	20	82	M12	100
NO 43945	50	40	51	20	90	M12	125
<b>Type B</b>							
NO 43939	40	32	56	20	157	M12	50
NO 43949	50	40	51	20	170	M12	80
NO 43959	63	52	44	20	182	M12	100
<b>Special running gear</b>							
NO 43935-B	40	35	38	102	90	M12	50

Running gear



With rotating and swinging pin

NO 145020-12B	40	32	75	40	120	M12	100
NO 146020-B	50	40	70	40	120	M16	160
NO 147020-B	63	52	58	40	160	M16	200
NO 148020-B	80	62	80	40	160	M16	250

Lower guide rail

Order No. 1115/6

Sendz.-galv. 6 m length Length



Guide for screwing

Order No. 1059

