

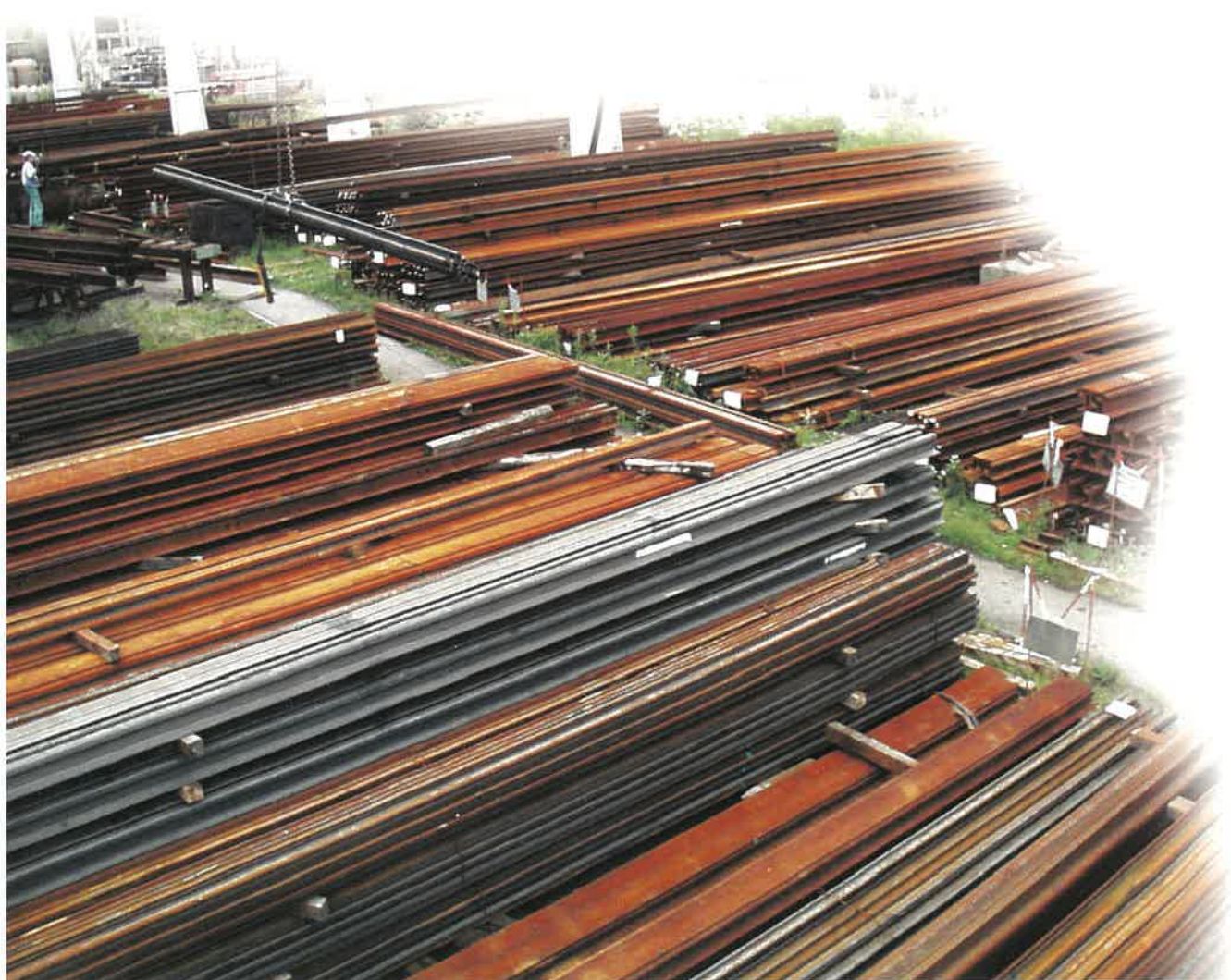


Heinrich Krug

PRODUCT

CATALOGUE

Track material
Crane rail fastenings
Turnouts





CONTACT PERSONS

Aktuelle AnsprechpartnerInnen finden Sie unter

<https://www.heinrich-krug.de/kontakt/ansprechpartner/>



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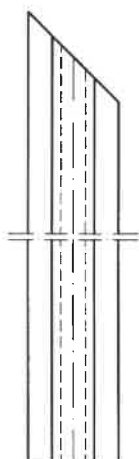
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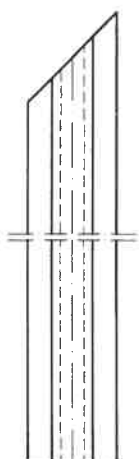
RAILS

1. Direction of cut view from centre of rail to the end

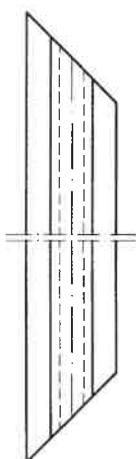
version a)
„point left”



version b)
„point right”



version c)



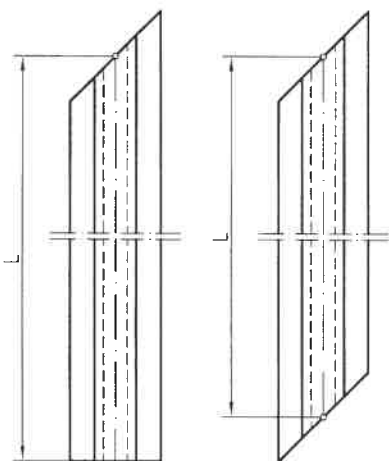
Important notice for the diagonal cutting of rails

The rails must be measured
at the center line of top side
=> L = usable length

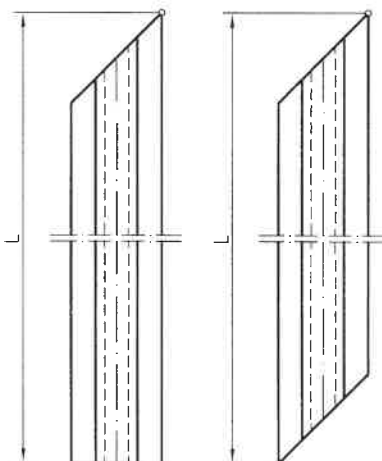
Please state the usable lengths
and the direction of cuts
in all your inquiries as well as
purchase orders

2. Definition of length

measured at
centre of rail head

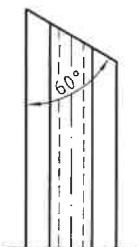


measured
point to point

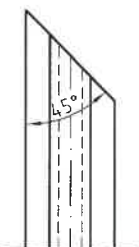


3. Definition of angle

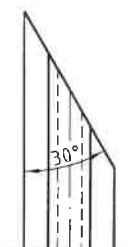
60°



45°



30°



Surcharges for

- rectangular cuts
- 45° mitre cuts
- drilling of holes

on request



RAILS

New crane rails in stock lengths,

rail ends rectangular cold sawn

rail section	stock-length m	min. tensile-strength N/mm ²	rail height mm	base width mm	head width mm	web thickness mm	weight kg/m
A 45	10/12/15	690/880	55	125	45	24	22,10
A 55	10/12/15	690/880	65	150	55	31	31,80
A 65	10/12/15	690/880	75	175	65	38	43,10
A 75	10/12/15	690/880	85	200	75	45	56,20
A 100	10/12/15	690/880	95	200	100	60	74,30
A 120	10/12/15	690/880	105	220	120	72	100,00
A 150	12/15	690/880	150	220	150	80	150,30
MRS 51 (PRI 7/CR 104)	12/15	690/880	127	127	63,5	25,4	51,59
MRS 52 (CR 105)	12/15	690/880	131,76	131,76	65,09	23,81	52,09
MRS 67	12/15	690/880	146,05	131,76	87,31	31,75	66,97
MRS 85	12/15	690/880	152,4	152,4	109,22	31,75	84,83
MRS 87A (PRI 85)	12/15	690/880	152,4	152,4	101,6	34,93	86,80
MRS 87B (CR 175)	12/15	690/880	152,4	152,4	102,4	38,1	86,80
MRS 125	12/15	690/880	180	180	120	40	125,00
MRS 221	12/15	690/880	160	220	220	145	221,40
SP 100	10/12/15	690/880	150	150	100	38	89,05
SP 120	12/12/15	690/880	170	170	120	44	118,28

New rails in stock lengths,

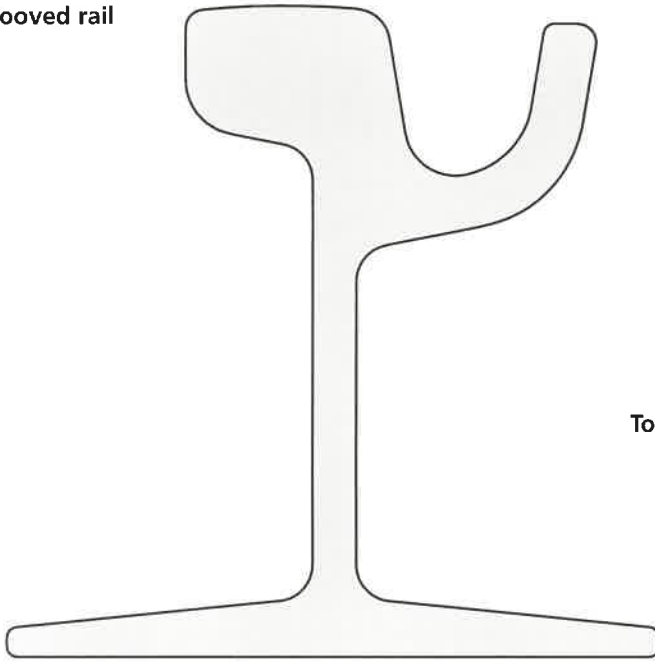
rail ends rectangular cold sawn, with/without standard holes for fish plates

rail section	stock-length m	min. tensile-strength N/mm ²	rail height mm	base width mm	head width mm	web thickness mm	weight kg/m
S 7	5/6	540	65	50	25	5	7,00
S 10	6/8/10/12	540	70	58	32	6	10,00
S 14	6/8/10/12	690	80	70	38	9	14,00
S 18	6/8/10/12	540/690	93	82	43	10	18,30
S 20	6/8/10/12	690	100	82	44	10	19,84
S 24	8/12	690	115	90	53	10	24,43
30E1	12/15	690	108	108	60,3	12,3	30,13
33E1	12/15	690	134	105	58	11	33,47
41E1	12/15	690	138	125	67	12	41,24
ASCE 85 (GX 42)	12/15	835	131,76	131,76	65,09	14,16	42,16
49E1/E5	12/15/18/30	880	149	125	67	14	49,39/49,13
54E4	12/15/18/30	880	154	125	67	16	54,31
60E1/60E2	12/15/18/30	880	172	150	72	16,5	60,21/60,03
54E1	12/15/18	880	159	140	70	16	54,77
R65	12/15	880	180	150	73	18	64,86

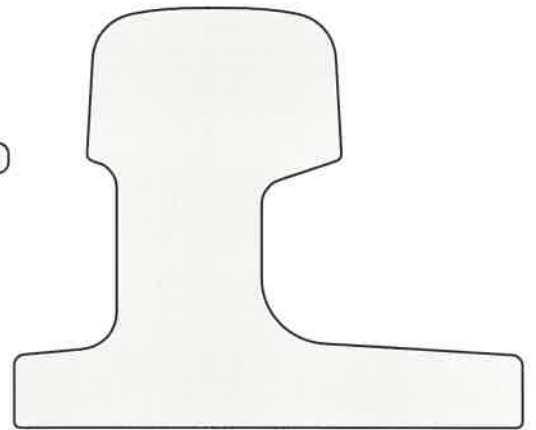


RAILS

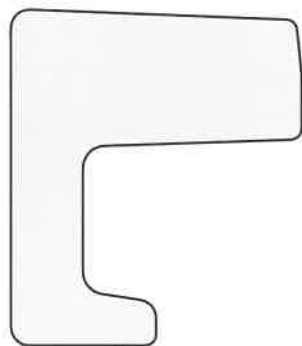
Grooved rail



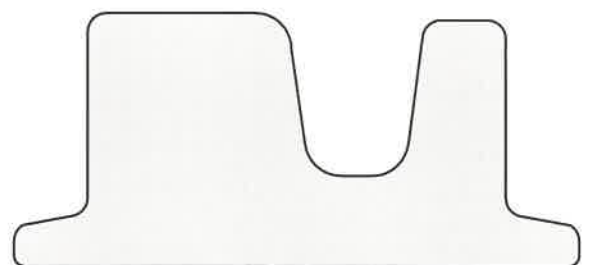
Tongue rail



Guard rail



U-Type-Rail



RAILS

New grooved rails in stock lengths,

rail ends rectangular cold sawn, with/without standard holes for fish plates and gauge bars

rail section	stock-length m	min. tensile-strength N/mm ²	rail height mm	base width mm	head width mm	passage-head mm	Rillen-width mm	web thickness mm	weight kg/m
57R1	12/15/18	690/880	182	150	127	52,5	60,5	11	56,50
67R1	12/15/18	690/880	180	180	135	60	60	13	66,90
59R2	12/15/18	690/780/880	180	180	113	55,8	42,5	12	58,14
60R1	12/15/18	690/780/880	180	180	113	56	36	12	60,59
60R2	12/15/18	690/780/880	180	180	113	55,8	36,3	12	59,74
Ri55NK	12/15/18	690/780/880	150	150	113	56	36	12	55,45

Tongue rails

rail section	standard-length m	min. tensile-strength N/mm ²	rail height mm	base width mm	head width mm	web-thickness mm	weight kg/m
49E1A1	on request	880/1080	116	140	67	40	63,14
54E1A2		880/1080	121	140	67	40	65,82
60E1A1		880/1080	134	140	72	44	72,97

Guard rails

rail section	standard-length m	min. tensile-strength N/mm ²	rail height mm	base width mm	head width mm	web-thickness mm	weight kg/m
33C1/ R11-60/UIC33	on request	880/1080	93	40	80	20	32,99

U-Type-Rails

rail section	standard-length m	min. tensile-strength N/mm ²	rail height mm	base width mm	head width mm	U-width mm	weight kg/m
LK1	up to 18 m	690/880	70/72	156	56/23	36	57,68



SPECIAL GROOVED SECTION „SPURRILLENSCHIENEN“

The Special grooved section „Spurrillenschienen“ brand „Krug“ to be used to separate flat bottom rails from asphalt, concrete and pavement at operating yards, workshop areas and cross overs.

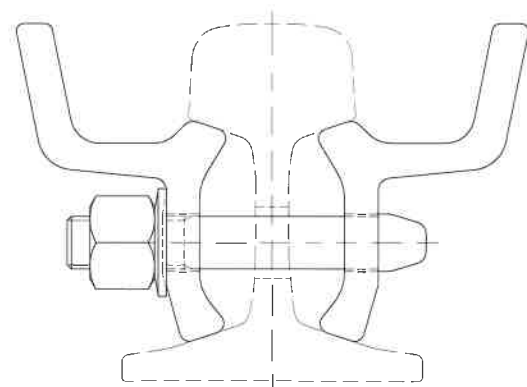
The combination with most of flat bottomed rail types is possible by using adaptors or by slight machining of the section.

Maximum length: 15 m

Holes for mounting to the rail and openings at the beginning and end of the section ends will be machined on request. Suitable fastening materials for all loads and stress is also available.

New fastening method to meet a higher fastening strength:

- a) The fastening distance is reduced from former 1,50 m to 1,00 m
- b) The former double spring washer is replaced by a special washer, to avoid a loosening of the nut.





SPECIAL GROOVED SECTION „SPURRILLENSCHIENEN“

Spezial grooved section „Spurrillenschienen“

in stock lengths of 15 m or short length

for rail section		weight/m
49E1/E5	with 56,0 mm width of groove	22,30
41E1	with 53,7 mm width of groove	22,30
54E4	with 56,5 mm width of groove	22,30
54E1	with 56,0 mm width of groove	22,30
60E1/E2	with 56,0 mm width of groove	22,30

machined special grooved section „Spurrillenschienen“		weight/m
49E1/E5	with 45,0 mm width of groove	21,00
NP46/46E3	with 53,0 mm width of groove	21,50

machining for special grooved section „Spurrillenschienen“

- cutting to length
- drilling of fastening holes
- opening of groove at one end

fastening sets for special grooved section „Spurrillenschienen“	weight /set
a)	
bolt M 22 x 90 mm, with nut and special washer	0,650
b)	
bolt M 22 x 100 mm, with nut, forged reinforcing plate and special washer	1,240

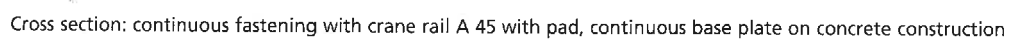
- further fastenings and prices on request



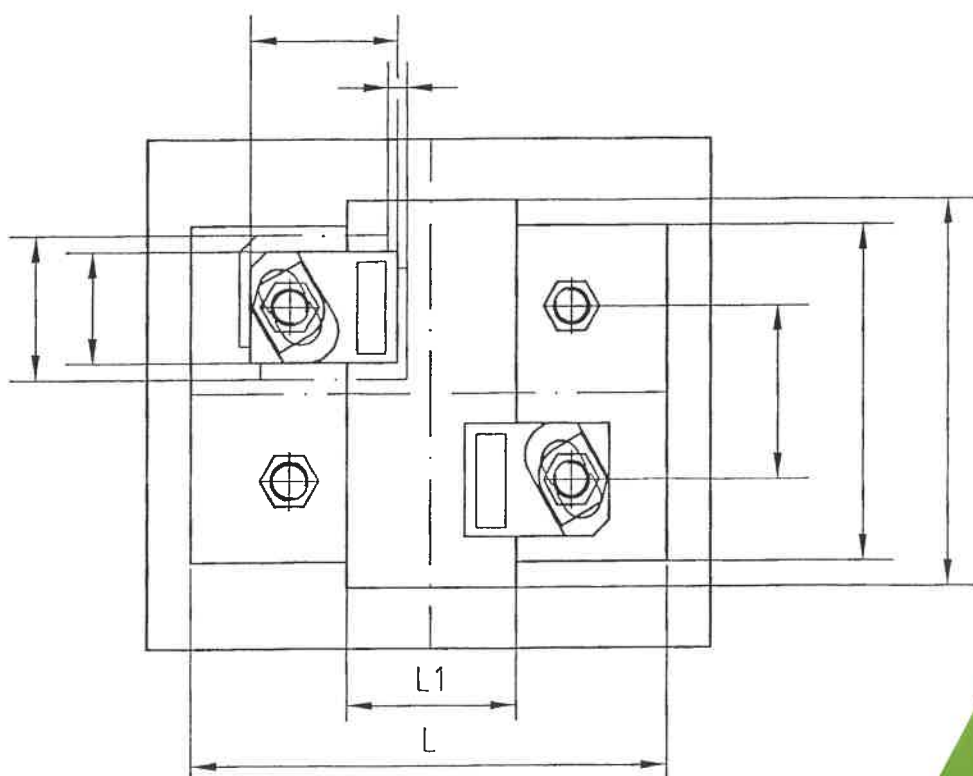
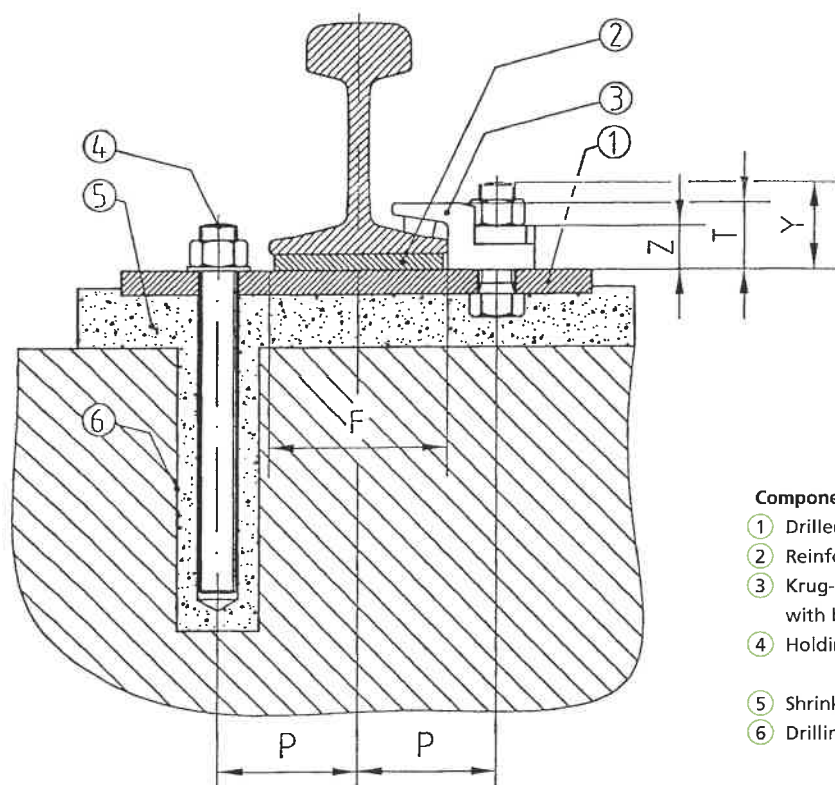
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Telefax: +49 (0) 2 31/8 38 07-27
www.krug-weichenbau.de
info@krug-weichenbau.de



- forged/casted clips for highest forces
- a special vulcanised/bonded rubber nose applies a controlled force to the rail
- a large choice of clips for various rail types
- weldable and bolted types available
- reinforced pad for reduction of noise and vibrations



KRUG FASTENING SYSTEM





GANTRAIL RAIL MOUNTING SYSTEMS

GANTRAIL®



3112 Clip

- Simple light clip for use on small rail sections, can be fixed with bolt or stud and offers limited lateral adjustment.



3116 Clip

- Suitable for small rail sections this compact self locking clip offers 10 mm adjustment and can be fixed with a bolt or welded stud.



3120 Clip

- Suitable for use with small and medium rail section, self locking and giving 15 mm adjustment - can be fixed with a bolt or welded stud.



3124 Clip

- Suitable for fixing larger rail sections this self locking clip offers 20 mm adjustment and can be fixed with a bolt or welded stud.



3224 Clip

- The heavy-weight of the bolted or stud fixing range this self locking clip is suitable for the largest rails and has 20 mm of adjustment. It is fixed with two 24 mm bolts or studs and it's low profile allows it to be used with cranes fitted with guide rollers.



7120 Clip

- This two part clip was designed to fix heavy rails on narrow girders. It has 10 mm of adjustment and can be fixed with bolt or welded stud.

GANTRAIL RAIL MOUNTING SYSTEMS

GANTRAIL®



9116 Clip

- The compact in our welded base range this self locking clip was designed for use with light weight rails on narrow beams or base plates. It offers 10 mm of adjustment and is supplied with captive bolts, nuts and washers. A 9116/08 is also available with 8 mm adjustment.



9120 Clip

- A weldable base clip designed to fix heavy rails in arduous conditions. This self locking clip offers 15 mm of adjustment and is supplied with bolt, washer and nut.



9124 Clip

- The strongest of the single bolt clips this heavy-weight was designed to fix the largest rails. This self locking welded base clip has 20 mm adjustment and is supplied with a captive bolt, washer and nut.



9216 Clip

- The first of the double bolt welded base range, this clip was designed to fix heavy rails on narrow girders. It offers 8 mm adjustment and is supplied with captive bolts, washers and nuts.



9220 Clip

- The heavy-weight in the welded base range this clip is suitable for the heaviest rails in the most arduous applications. A range of sizes allows maximum flexibility to accommodate most of the big rail sections, supplied with either 20 or 18 mm adjustment, captive bolts, washers and nuts.



MK VII

- Gantrail steel reinforced continuous pad reduces pressure below the rail allows controlled rail movements. This ensures longer life for crane bearings, wheels, rail and the supporting structure.



GANTRAIL REINFORCED PAD MK 7

The MK 7 pad was developed particularly for the flexible mounting of crane rails

Major tasks for MK 7 pad:

- Centring the load into the crane support structure
- To compensate for production tolerances of rail and rail support
- Reduction of the fatigue stresses in the support structure
- Reduction of pressure below the rail by up to 25%
- Reduction of rail and crane wheel wear
- Reduction of impact loads on the crane wheel bearings and mechanisms
- Reduction of sound and vibration transmitted from crane wheels and rails

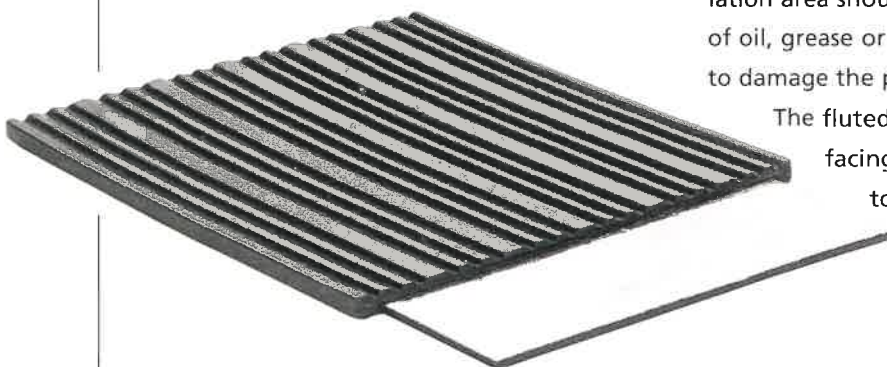
The pad should fulfil these requirements to reach the highest wear resistance:

- The MK 7 pad is designed with a fluted top surface and a continuous steel reinforcement inside.
- The pad is resistant to high wheel loads, liquids, oils, grease, oxygen and ultraviolet damage.
- Gantrail pads are manufactured with a continuous steel reinforcement, which prevents lateral squeezing-of the pad from below the rail. The steel reinforcement is bonded to the rubber during vulcanisation.
- The fluted top surface assures wear resistance and controls bending and tension stresses in the rail.
- The Gantrail-clips apply the necessary preload to the pad through the rail.
- A permanent contact between the rail and the MK 7 pad assists in the reduction of rail wear. During loading the grooves in the pad tend to fill making the pad stiffer and preventing high rail bending stresses.

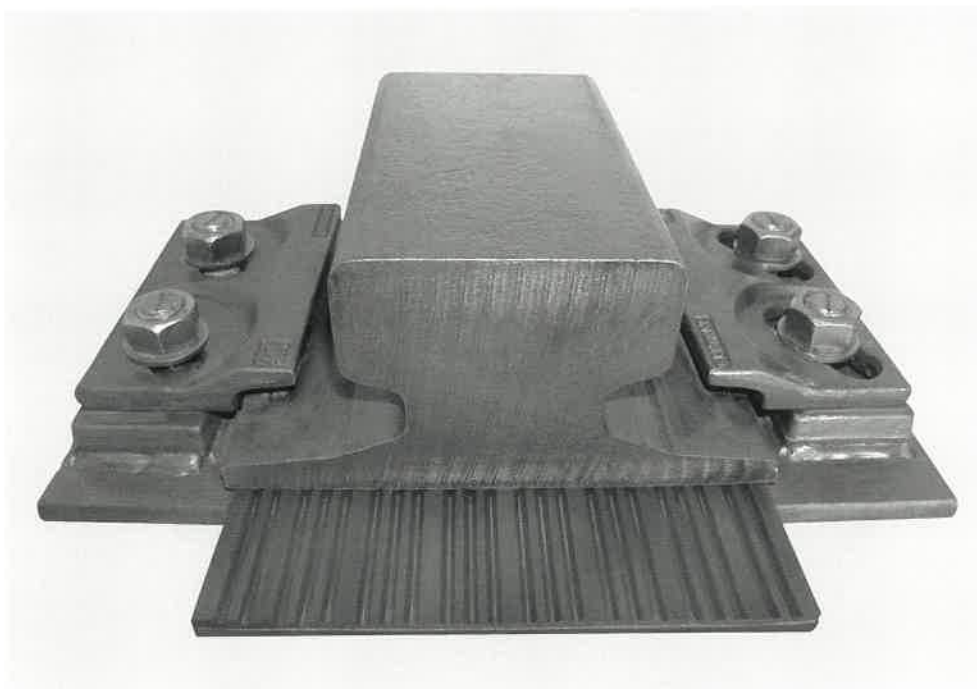
Installation guide

Before installing Mark 7 pad, the installation area should be clean and free of oil, grease or any projections likely to damage the pad.

The fluted surface is positioned facing upwards; the pad has to be installed centrally to the rail.



GANTRAIL REINFORCED PAD MK 7



Mechanical and physical properties

leaving works

• Shore IRHD:	75° ± 5° (DIN 53505)
• Tensile strength:	16 N/mm ²
• Elongation:	305 %
• Deformation:	max. 5% bei 23° C

After Aging

• Shore IRHD:	75° ± 5° (DIN 53505)
• Tensile strength:	15 N/mm ²
• Elongation:	240 %

Reduction of sound and vibration

• sound decrease dBA:	approx. 12%
• vibration decrease:	approx. 48%

Application temperature

- Temperature Range: – 25° C and 105° C
- For higher or lower temperatures please contact us

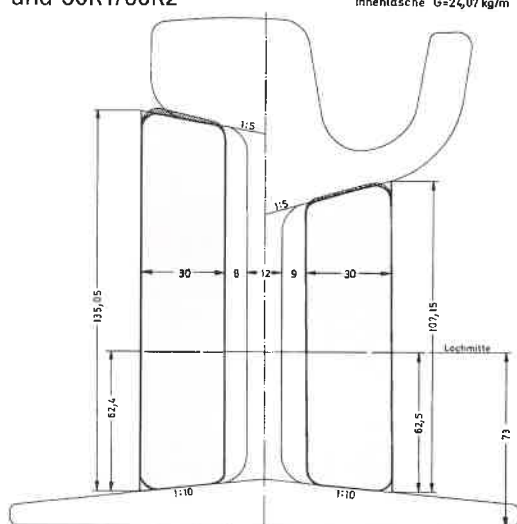
Rights to change technical specification are reserved.

[illegible]

Technical drawing of a shaft with four holes. The shaft has a diameter of 26 mm. The holes are spaced 100 mm apart, with a total length of 320 mm. The holes have a diameter of 10 mm. The drawing shows the shaft in two views: a side view and a front view.

[illegible]

Außenlasche $G=30,64 \text{ kg/m}$
Innenlasche $G=24,07 \text{ kg/m}$



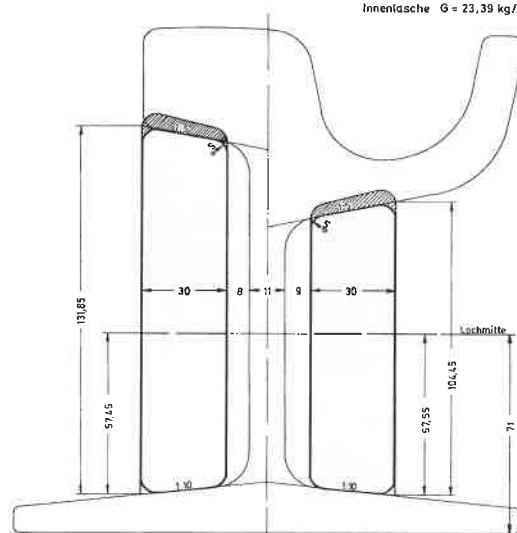
Außenlasche

 G = 22,090 kg/Stück

Innenlasche

 G = 16,650 kg/Stück

Außenlasche $G = 29,85 \text{ kg/m}$
Innenlasche $G = 23,39 \text{ kg/m}$



Außenlasche  $G = 21,550 \text{ kg/Stück}$

Innenlasche  $G = 16,640 \text{ kg/Stück}$

FISH PLATES

New fish plates for flat bottomed rails

type	corresponding rail section	length mm	distances of holes			weight/pair approx. kg
			mm A	mm B	mm C	
FL 7	S 7	280	70,0	70	35,0	1,42
FL 10	S 10	300	75,0	75	37,5	1,55
FL 14	S 14	330	75,0	90	37,5	2,72
FL 18	S 18	330	75,0	90	37,5	3,68
FL 20	S 20	330	75,0	90	37,5	4,26
FL 30	30E1	530	128,6	127	73,7	9,50
FL 33	Form 8a • 33E1	530	130,0	120	80,0	12,69
FL 41/49	41E1 • 49E1/E5	580	100,0	165	75,0	17,44
FL 14a	49E1/E5 • 54E4	630	100,0	165	100,0	25,52
FL 14c	49E1/E5 • 54E4	245	40,0	165	40,0	9,80
FL 30a	60E1/E2	610	100,0	165	90,0	33,10

New fish plates for grooved rails

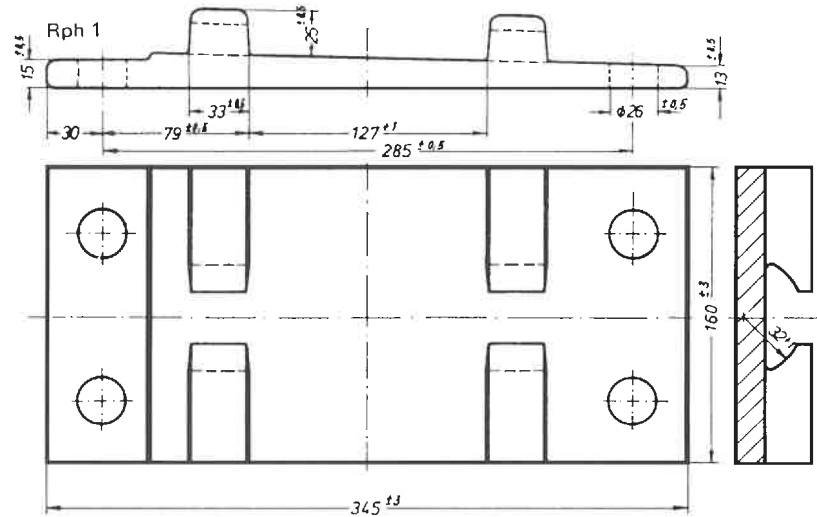
machined type

type	corresponding rail section	length mm (ca.)	distances of holes			weight/pair approx. kg
			mm A	mm B	mm C	
FL 37	57R1	760	180	120	120	40,05
FL 37a	67R1	760	180	120	120	38,19
FL Ri 59/60	59R2 • 60R1/60R2	760	180	120	120	38,94
FL NP 4/4a	NP 4/4a	760	180	120	120	40,47



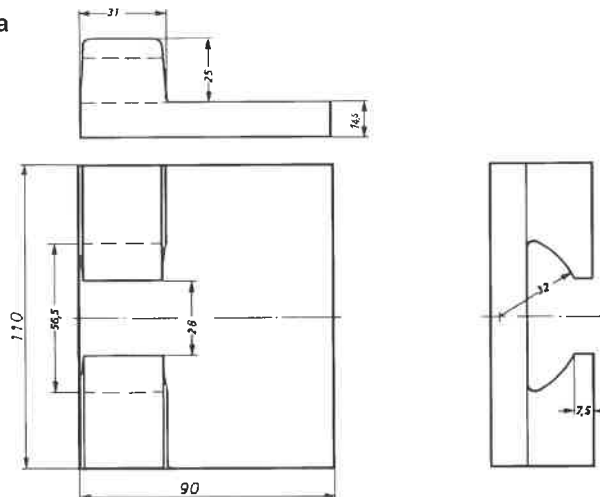
RIBBED BASE PLATES

Ribbed base plate Rph 1



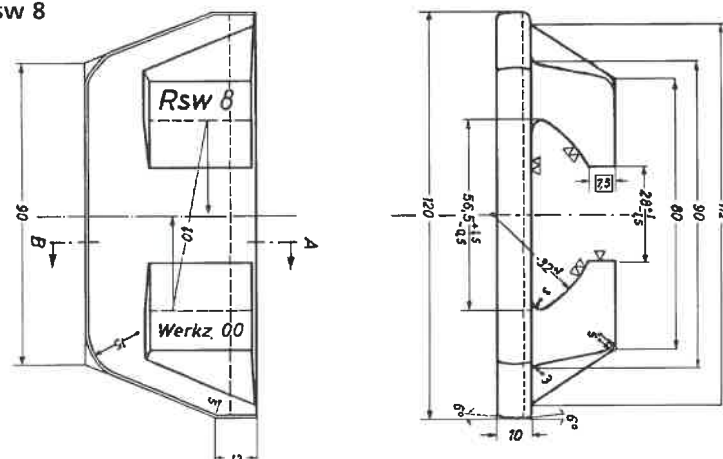
Ribbed base plate Rus 66a

to be welded on
steel sleepers or
steel beams



Ribbed base plate Rsw 8

acc. to Rus 66a





RIBBED BASE PLATES

Ribbed base plates

type	dimension mm	holes	inclination	rail section	weight kg/pc.
PS 60/160	375/310/152x16	4 x 26,0	1:00	60E1/E2	8,77
Rp PT/180/2	400/340/183x110x15	2 x 26,0	1:00	60R1/60R2 • 67R1	6,00
Rp PT/180/4	400/340/183x160x15	4 x 26,0	1:00	60R1/60R2 • 67R1	8,60
Rpb 1/110	345/285/127x110	2 x 26,0	1:00	49E1/E5 • 54E4	4,836
Rpb 1/160	345/285/127x160	4 x 26,0	1:00	49E1/E5 • 54E4	7,700
Rph 1/150	345/285/127/150x15/13	4 x 26,0	1:40	49E1/E5 • 54E4	7,328
Rph 1/160	345/285/127/160x15/13	4 x 26,0	1:40	49E1/E5 • 54E4	7,857
Rp 01/01/160	345/285/127/160x15/13	4 x 26,0	1:00	49E1/E5 • 54E4	7,70
Rph 1/210	345/285/127x210x15/13	4 x 26,0	1:40	49E1/E5 • 54E4	10,549
Rph 1/210	345/285/127x210x15/13	2 x 36,3 _{diagonal}	1:40	49E1/E5 • 54E4	10,549
Rph 1/210 FVZ	345/285/127x210x15/13	4 x 26,0	1:40	49E1/E5 • 54E4	10,687
special plate Sph 1(a)	345/350/127x410x15/13	8 x 26,0	1:40	49E1/E5 • 54E4	20,600
Rph 6/160	370/310/152x160x15/13	4 x 26,0	1:40	60E1/E2	8,44
Rph 6/210	370/310/152x210x15/13	4 x 26,0	1:40	60E1/E2	11,316
special plate SZ 60	370/350/152x420x15/13	8 x 26,0	1:40	60E1/E2	22,727
Rph 11 Ü	664/554x160	4 x 26,0	1:40	54E4	15,373
Rph 13 Ü	690/570x160	4 x 26,0	1:40	60E1/E2	15,268
Rpo 5 (similar)	345/285/127x160x15/13	4 x 26,0	1:20	49E1/E5 • 54E4	8,720

type	dimension mm	inclination	rail section	weight kg/pc.
Rus 66a	110/115x90x15 mm without rounded edges			1,530
Rus 108a	110/115x60x15 mm without rounded edges			1,140
Rus 26a	110/115x235x15 mm without rounded edges	1:00	49E1/E5 • 54E4	3,860

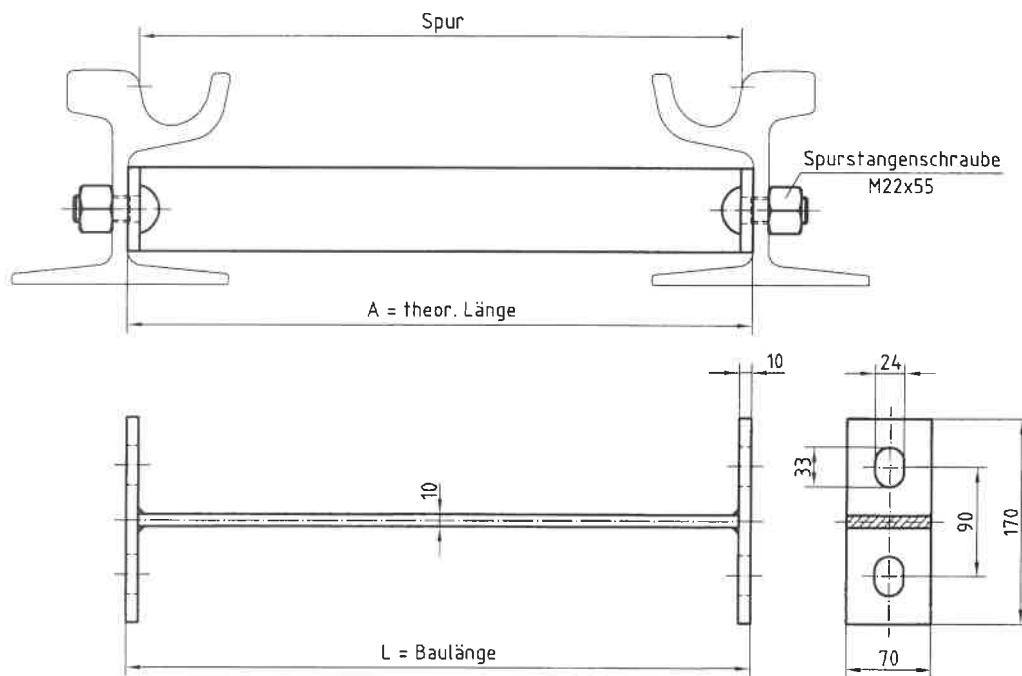


ACCESSORIES

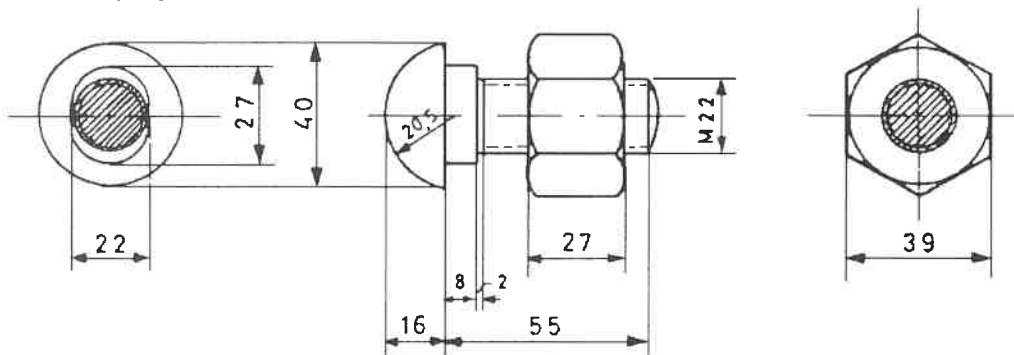
for grooved rails 57R1 • 67R1

Gauge bars

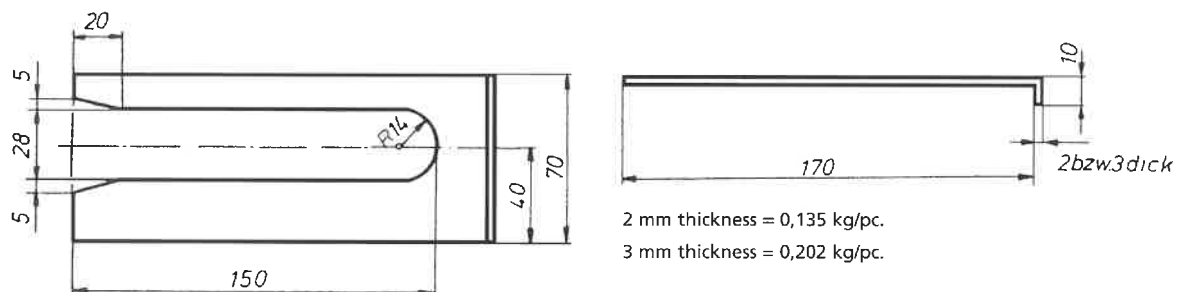
- 70 x 10 mm, for track gauge 1.435 mm,
total length: 1.439 mm



Bolts for gauge bars



Adjusting plates





ACCESSORIES

Gauge bars

	weight (kg/pc.)
made of flat steel 70 x 10 mm, for grooved rails 57R1 • 67R1 gauge: 1.435 mm; total length: 1.440 mm	approx. 9,8
made of flat steel 70 x 10 mm, for grooved rails 59R2 • 60R1/60R2 gauge: 1.000 mm; total length: 1.015 mm	approx. 7,4
made of flat steel 70 x 10 mm, for grooved rails 59R2 • 60R1/60R2 gauge: 1.435 mm; total length: 1.450 mm	approx. 9,8

Bolts for gauge bars

type	weight (kg/pc.)
S M22 x 55/35 Mu M22 • Mh 27 • SW 39	0,456

S = Screw, Mu = nut, Mh = nut height, SW = key width

New adjusting plates

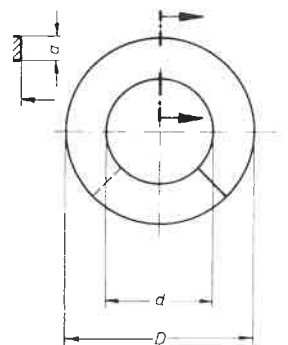
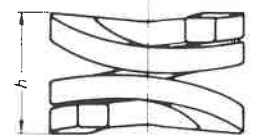
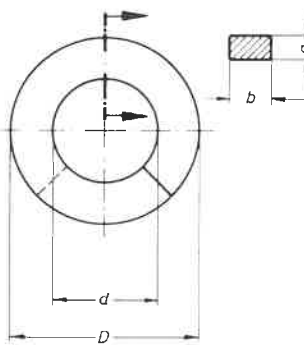
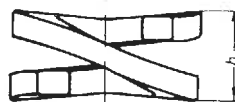
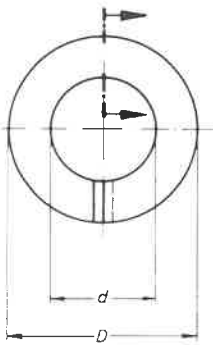
with slit

type	weight (kg/pc.)
a) 1 mm thickness	0,065
b) 2 mm thickness	0,135
c) 3 mm thickness	0,195



ACCESSORIES

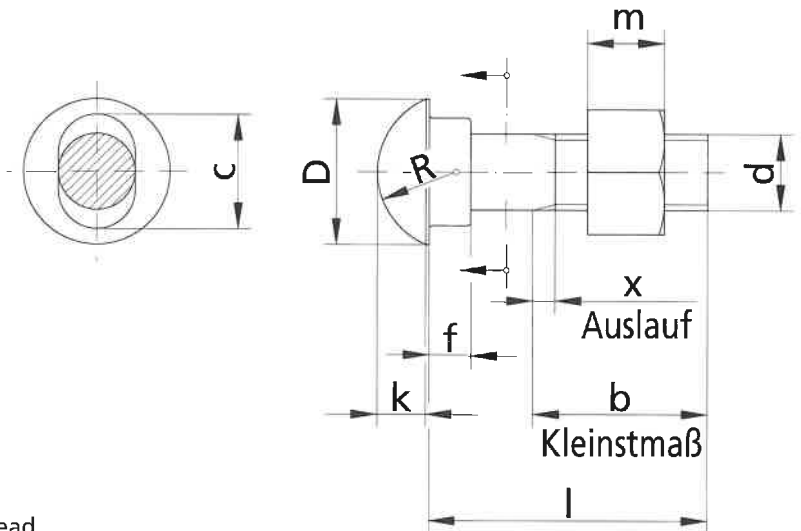
Spring washers



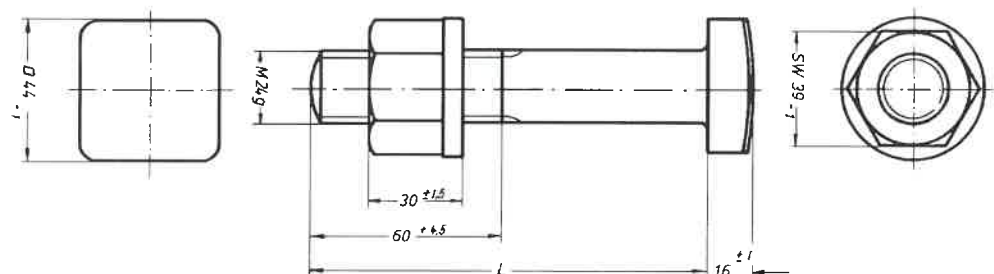
type	material	d	D	a	b	weight (kg/pc.)
Fe 7 ordinary	steel f.e. 38 Si 7	25	45	6	10	0,050
Fe 6 double		25	45	6	10	0,090
Fe 8 double		21	39	5	9	0,058
Fe 15 double		28	52	6	12	0,126
Fe 19 triple		26	46	6	10	0,145

Fish bolts

acc. to DIN 5903 Bl. 1 with rounded head, oval neck and hexagonal nut, not mounted



acc. to DIN 5903 Bl. 2 with square head, with or without oval neck and hexagonal nut, not mounted



ACCESSORIES

New fish bolts acc. to DIN 5903 Bl. 1 with rounded head,
oval neck and hexagonal nut

dimension	for rail profile	weight (kg/pc.)
10 x 40 mm	S 7	0,040
12 x 40/45 mm	S 10	0,070
12 x 55 mm	S 14	0,075
16 x 65 mm	S 18 • S 20	0,159
20 x 90 mm	S 24 • 30E1	0,351
27 x 130 mm	57R1 • 67R1	0,932

New fish bolts acc. to DIN 5903 Bl. 2 with square head,
with or without oval neck, with hexagonal nut

dimension	for rail profile	weight (kg/pc.)
22 x 105 mm, with/without neck	33E1	0,667
22 x 115 mm, with neck	Form 8	0,696
24 x 125 mm, without neck	41E1 • 49E1/E5	0,864
24 x 130 mm, without neck	49E1/E5 • 54E4	0,882
24 x 140 mm, without neck	49E1/E5 • 54E4	0,916

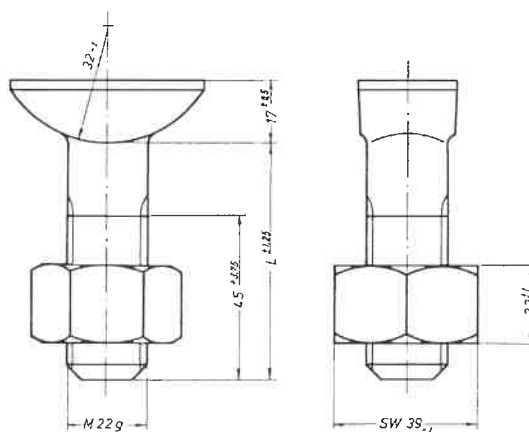
Spring washers & washers

type	outer-diameter	inner-diameter	thickness	weight (kg/pc.)
Fe 7 single	45	25	6	0,050
Fe 9 single	39	21	5	0,030
Fe 16 single	52	28	6	0,070
Fe 6 double	47	25	5	0,090
Fe 6 galvanised	47	25	5	0,095
Fe 8 double	39	21	5	0,058
Fe 15 double	52	28	6	0,126
Uls 6	47	23	4	0,042
Uls 7	47	25	4	0,039

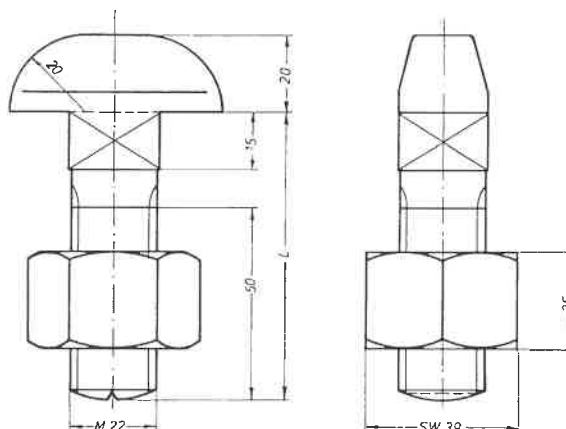


ACCESSORIES

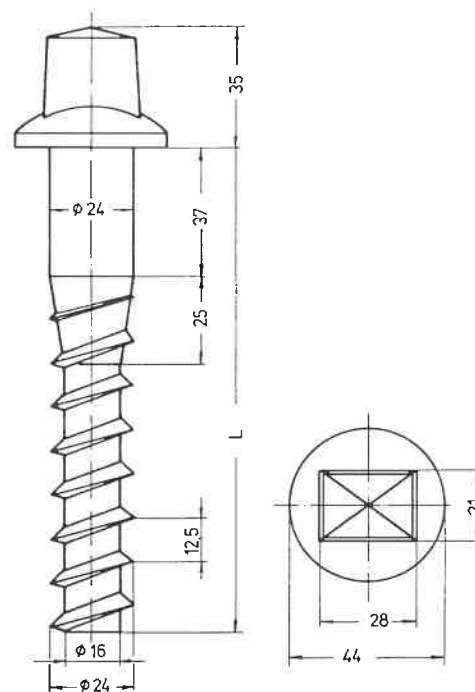
T-headed bolt Hs 26



T-headed bolt Hs 40W



Sleeper screw





ACCESSORIES

T-headed bolts

for ribbed based plates

type		weight (kg/pc.)
Hs 26	22 x 65 mm with 1 hexagonal nut	0,475
Hs 32	22 x 55 mm with 1 hexagonal nut	0,469

T-headed bolts

for punched steel sleepers

type		weight (kg/pc.)
Hs 40w	22 x 80 mm with square neck and hexagonal nut	0,561
Hs 50w	22 x 75 mm with square neck and hexagonal nut	0,352

Sleeper screws

type		weight (kg/pc.)
Ss 1	22 x 150 mm	0,465
Ss 2	22 x 180 mm	0,555
Ss 5	24 x 150 mm	0,545
Ss 8	24 x 150 mm	0,556
Ss 12	22 x 150 mm	0,487
Ss Form 6/7	20 x 120 mm	0,385
Ssk	20 x 150 mm	0,195
Ss	16 x 100 mm	0,195

Anchor bolts acc. DIN 529

form C (with 2 nuts each)

type	weight (kg/pc.)
M 12 x 120 mm	0,140
M 16 x 150 mm	0,300
M 20 x 200 mm	0,620
M 22 x 250 mm	0,825
M 24 x 250 mm	1,000

Anchor bolts acc. DIN 529

form E (with 2 nuts each)

type	weight (kg/pc.)
M 22 x 250 mm	0,835
M 24 x 250 mm	1,100

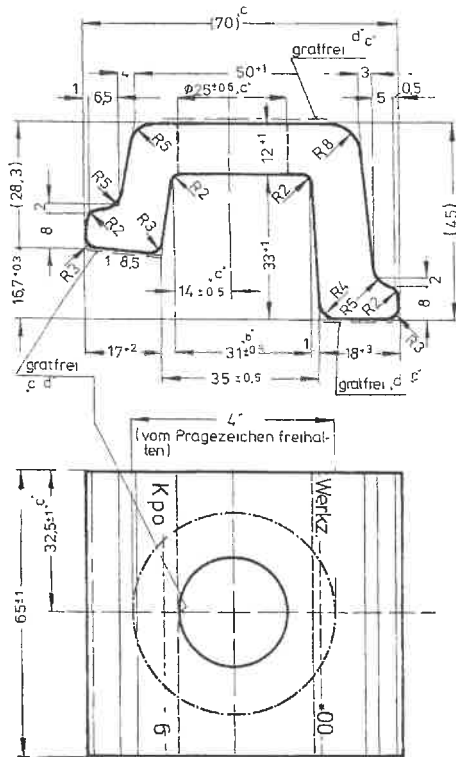


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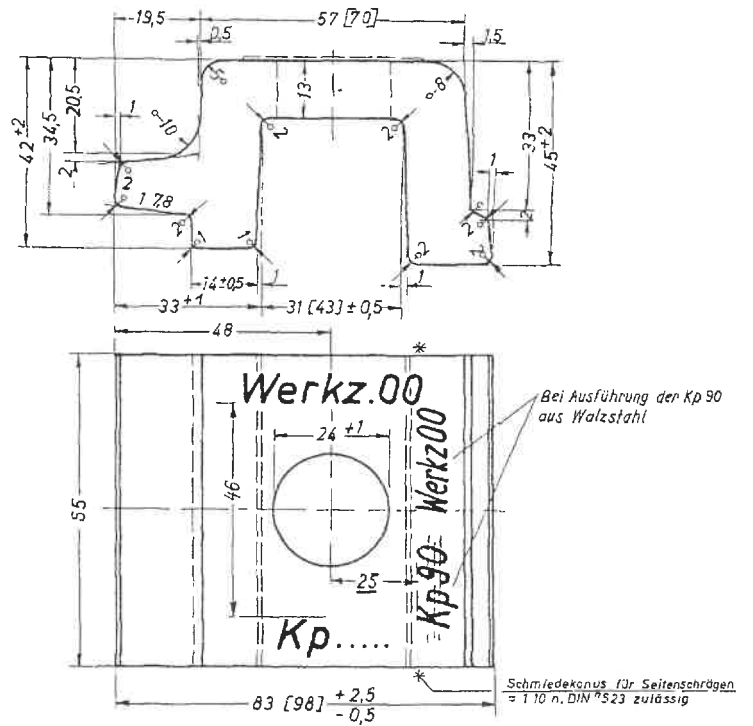


RAIL CLIPS • ELASTIC CLAMPS

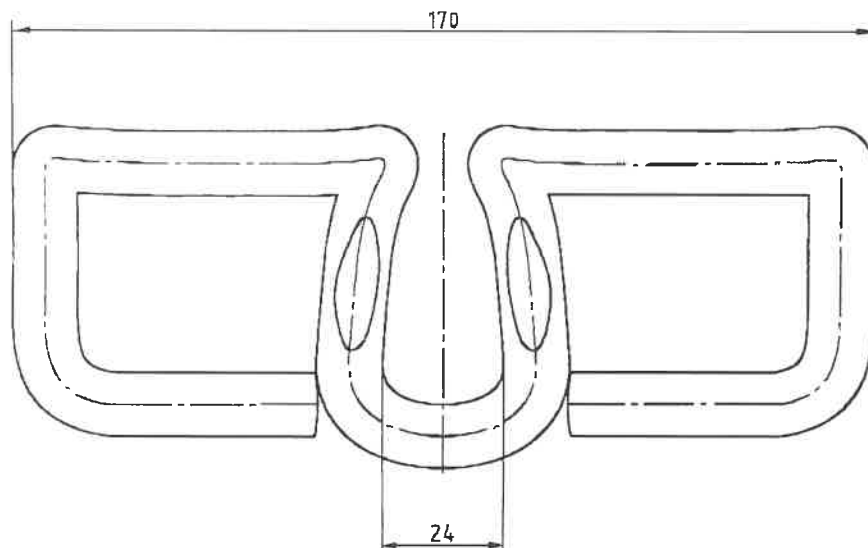
Clip type Kpo 6



Clip types Kp 89 and Kp 90



Elastic clamp Skl 12





RAIL CLIPS • ELASTIC CLAMPS

Rail clips for ribbed base plates

type		weight (kg/pc.)
Kpo 6		0,648
Kp 70		0,760
Kpo 9		0,650
Kp 89	with 14 mm compensation	0,760
Ksp 3a - 7,5	with 7,5 mm compensation	0,753
Ksp 3-6	with 6 mm compensation	0,805
Ksp 3-9	with 9 mm compensation	0,819
Ksp 6-1	with 5,5 mm compensation	0,686
Ksp 6-2	with 10,5 mm compensation	0,738
Ksp 6-3	with 15,5 mm compensation	0,810

Rail clips with cone

for punched steel sleepers and drilled base plates

type	weight (kg/pc.)
turnout clip Form 6d Nr. 0	0,341
turnout clip Form 6d Nr. 2	0,363
Kl 49-1/Rw 1	0,595
Kp S 30x36 – for rail type S 30	0,275

Crane rail clips

for pre-drilled steel girder or concrete foundation

new crane rail clip dimension 66 x 64 mm, with one hole, diameter from 18 – 24 mm, for mounting of crane rails without elastic pad on pre-drilled steel girder or concrete foundation, for steel by using hexagonal bolts, for concrete by using anchor bolts:

type	weight (kg/pc.)
crane rail clip A 45 – A 120	0,580

Elastic clamps

type		weight (kg/pc.)
SkI 3	acc. drawing lotkv 184	0,520
SkI 3	acc. drawing lotkv 184 coated	0,532
SkI 12	acc. drawing lotkv 53	0,520
SkI 12	acc. drawing lotkv 53 coated	0,532

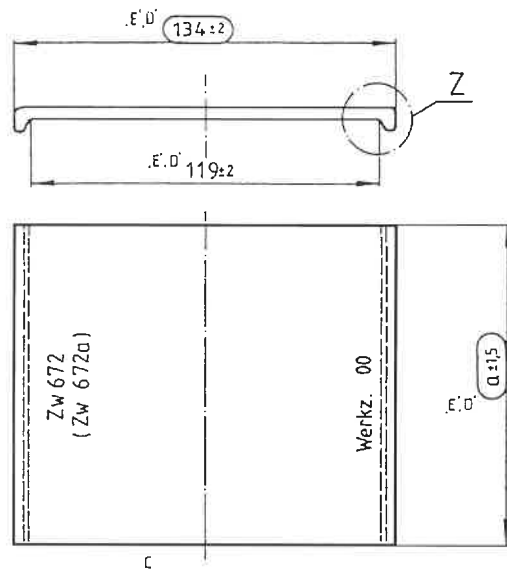


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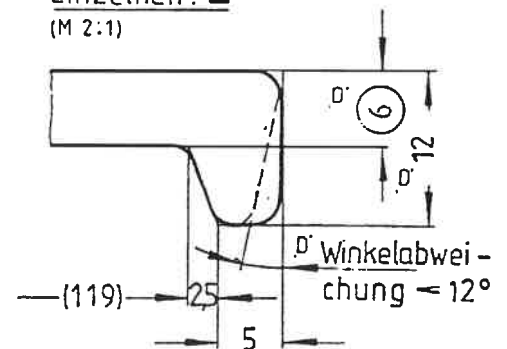


RAIL PADS

Rail pad Zw 672 (Zw 672a)



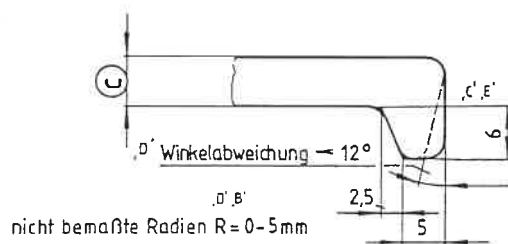
Einzelheit: Z
(M 2:1)



nicht vermaßte Radien $R=0-5\text{mm}$

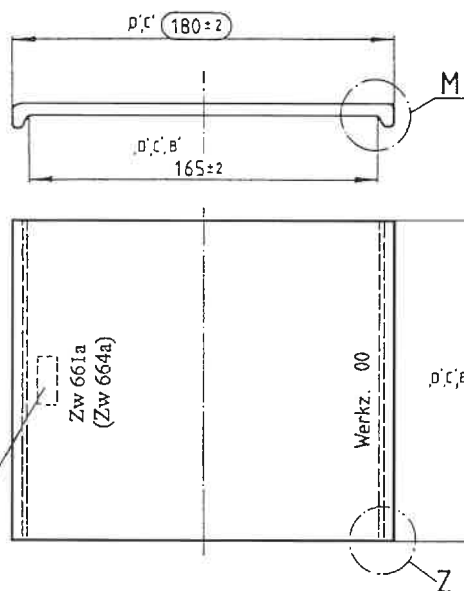
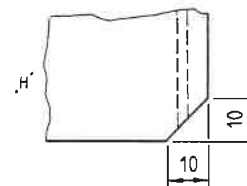
Rail pad Zw 661a (Zw 664a)

(2:1)



Z 1:1

Nur für Zw 661g und Zw 664g



Gottungszeichen (siehe Stückliste)



RAIL PADS • SPECIAL PADS • SLEEPER DOWELS

Rail pad

type	outer length mm	inner length mm	width mm	height mm	thickness mm	rail type	weight kg/pc.	
661a	180	165	148	12,0	6,0	60E1/E2	0,163	
661b	180	165	148	9,0	3,0	60E1/E2	0,100	
661c	180	165	148	10,0	4,0	60E1/E2	0,112	
661d	180	165	148	11,0	5,0	60E1/E2	0,137	
661e	180	165	148	13,0	7,0	60E1/E2	0,188	
661f	180	165	148	14,0	8,0	60E1/E2	0,213	
664a	180	165	123	12,0	6,0	49E1/E5 • 54E4	0,135	
664b	180	165	123	9,0	3,0	49E1/E5 • 54E4	0,072	
664c	180	165	123	10,0	4,0	49E1/E5 • 54E4	0,093	
664d	180	165	123	11,0	5,0	49E1/E5 • 54E4	0,114	
664e	180	165	123	13,0	7,0	49E1/E5 • 54E4	0,156	
664f	180	165	123	14,0	8,0	49E1/E5 • 54E4	0,177	
Zw 666	175	165	123	16,0	6,0	49E1/E5 • 54E4	0,100	correction of gauge
Zw 667	175	165	123	15,5	5,5	49E1/E5 • 54E4	0,098	correction of gauge
Zw 671	180	165	148	23,0	7,0	60E1/E2	0,153	correction of gauge
Zw 672	134	119	123	12,0	6,0	49E1/E5 • 54E4	0,105	
Zw 672a			148	12,0	6,0	60E1/E2	0,126	
Zw 676	230	215	148	12,0	6,0	60E1/E2	1,679	
Zw 677	230	215	123	12,0	6,0	49E1/E5 • 54E4	1,392	
Zw 686	180	165	123	12,0	6,0	49E1/E5 • 54E4	0,132	
Zw 687	180	165	148	12,0	6,0	60E1/E2	0,159	
Zw 690	134	119	148	12,0	6,0	60E1/E2	0,148	
Zw 691	134	119	123	12,0	6,0	49E1/E5 • 54E4	0,123	
Zwpl 5	157	142	123	12,0	6,0	49E1/E5 • 54E4	0,125	
Zwpl 6	157	142	148	12,0	6,0	60E1/E2	0,150	
Zw 180/165	180	165	178	12,0	6,0	67R1	0,250	
Zw 180/110	134	119	178	12,0	6,0	67R1	0,180	

Special pad

type	dimension mm	rail type	weight (kg/pc.)
Zwp 29	345/285 x 100 x 1,5		0,600
Zwp 29	345/285 x 110 x 3,0		0,120
Zwp 72	372/310 x 162 x 2,0	60E1/E2	0,115
Zwp 73	347/285 x 162 x 2,0	49E1/E5 • 54E4	0,107
Zwp 77	347/285 x 212 x 2,0	49E1/E5 • 54E4	0,135
Zwp 78	372/310 x 212 x 2,0	60E1/E2	0,145

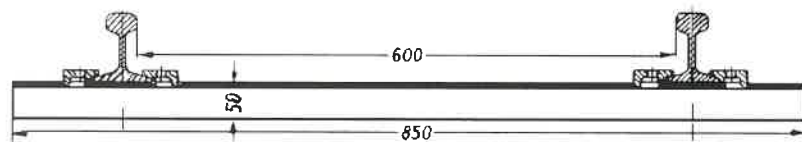
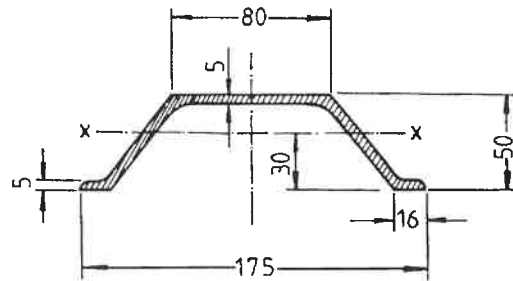
Sleeper dowels

type	length	diameter	weight (kg/pc.)
plastic turn-in dowels			
Sdü 9	165 mm	31 mm	0,063
Sdü 21	135 mm	31 mm	0,045
plastic dowels, waved			
Wdü 2	145 mm	38 mm	0,160
Wd	140 mm	38 mm	0,155

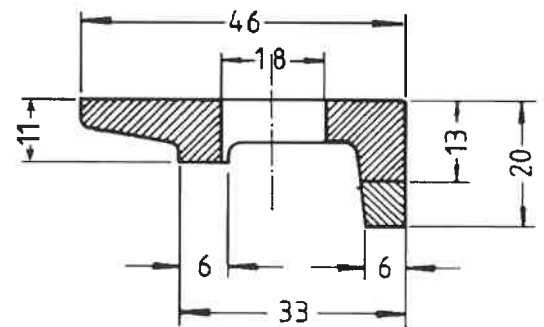
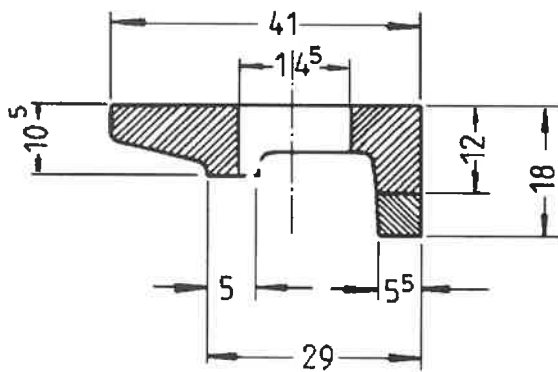


STEEL SLEEPERS AND COMPONENTS

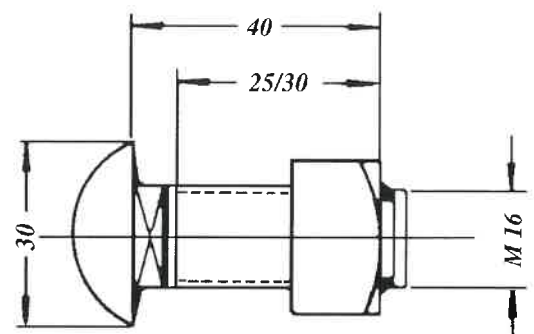
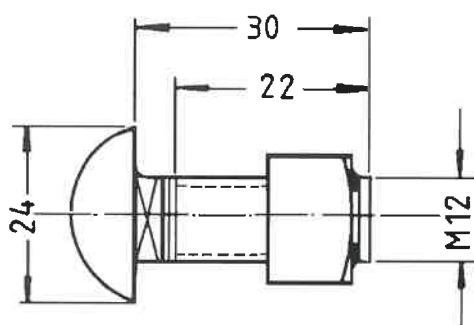
Steel sleepers Ds 9



Clips for light rails



Bolts for rail clips





STEEL SLEEPERS • CLIPS FOR LIGHT RAILS AND BOLTS

Steel sleeper Ds 9

steel sleeper Ds 9	weight (kg/m)
holed for rails S 14 • S 18 and S 20 for track gauge of 850 mm – 1.800 mm	approx. 6,74
steel sleeper Ds 9	weight (kg/m)
holed for rails S 14 • S 18 and S 20 but usable length 1.000 mm	approx. 6,74

Clips for light rails

type	weight (kg/pc.)
No. 5 with cone	0,085
No. 5 without cone	0,080
No. 6 with cone	0,118
No. 6 without cone	0,110

- hot dipped galvanised on request

Bolts for rail clips

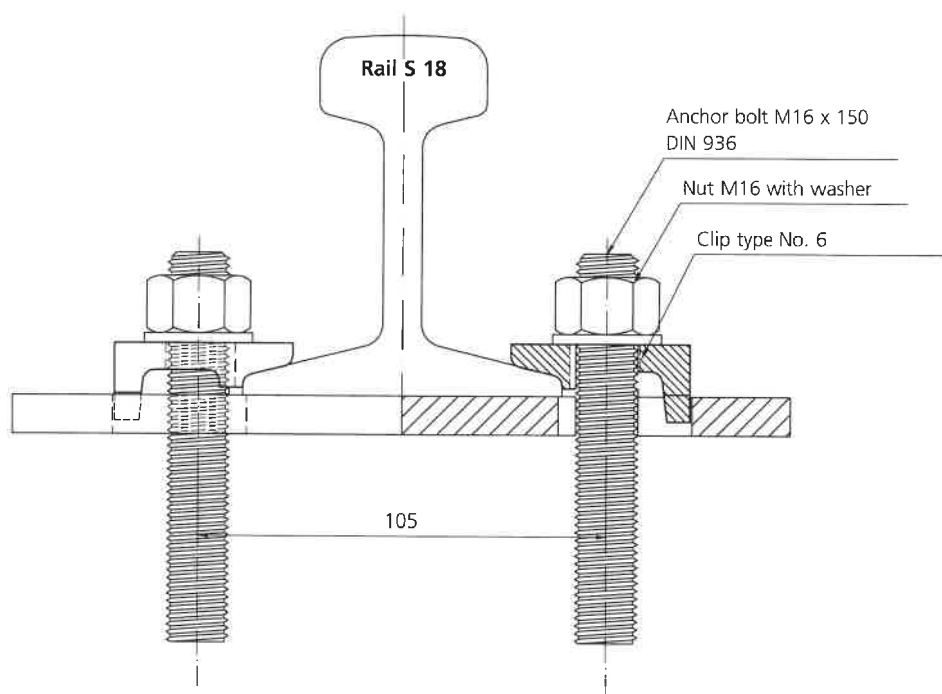
type	weight (kg/pc.)
12 x 30 mm, DIN 5906, with rounded head and square neck	0,055
12 x 35 mm, DIN 5906, with rounded head and square neck	0,060
16 x 35 mm, DIN 5906, with rounded head and square neck	0,123
16 x 40 mm, DIN 5906, with rounded head and square neck	0,129



FASTENING SYSTEMS FOR LIGHT RAILS – BASE PLATES

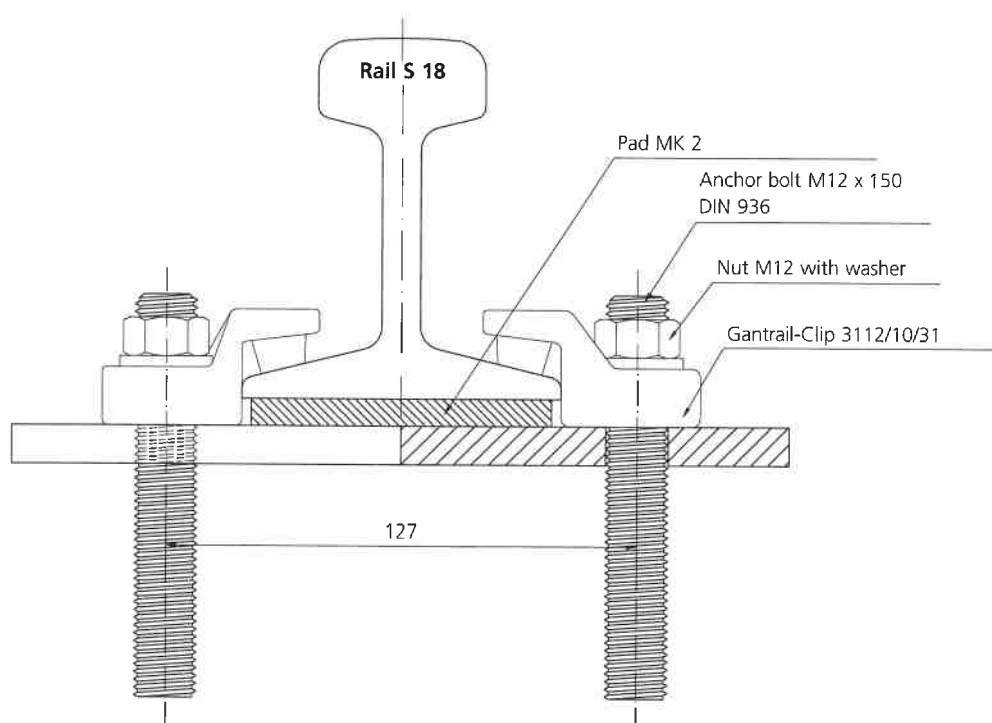
Fastening standard

for rails S 18 • 82 mm base width



Gantrail Fastening

for rails S 18 • 82 mm base width





FASTENING SYSTEMS FOR LIGHT RAILS

to be mounted on wooden sleeper or concrete foundation

For rail types S 7 • S 10

each set consisting of:		weight (kg/set)
1 piece	steel base plate 160 x 80 x 10 mm, 2 x rectangular punched	
2 pieces	rail clips No. 5 with cone	
b) 2 pieces	anchor bolts M 12 x 120 mm, with nut and washer for concrete foundation	1,50

For rail type S 14

each set consisting of:		weight (kg/set)
1 piece	steel base plate 180 x 80 x 10 mm, 2 x rectangular punched, otherwise as mentioned before	1,60

For rail types S 18 • S 20

each set consisting of:		weight (kg/set)
1 piece	steel base plate 200 x 80 x 10 mm, 2 x rectangular punched	
2 pieces	rail clips No. 6 with cone	
2 Stück	anchor bolts M 16 x 150 mm, with nut and washer	2,05

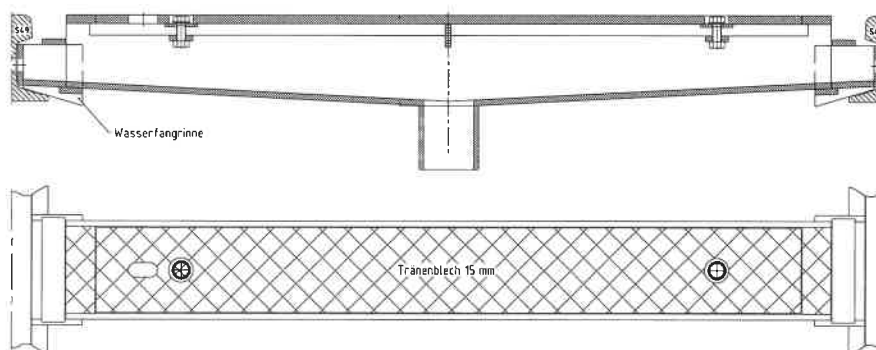
- Gantrail-Fastening-Systems on request



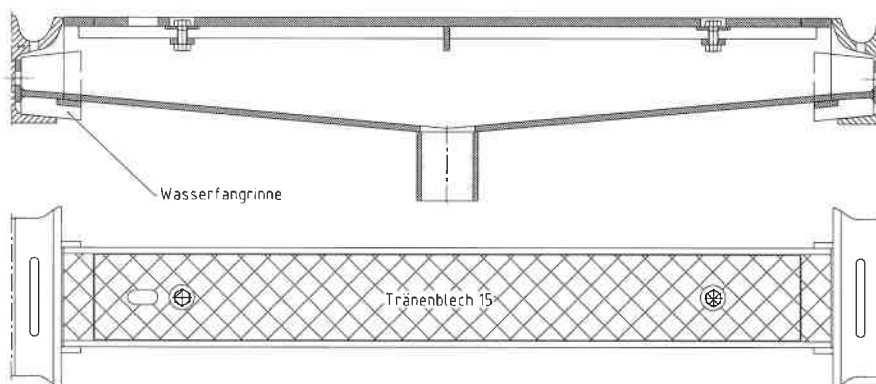
ACCESSORIES

Track drainage box – welded type

for Vignol rail tracks

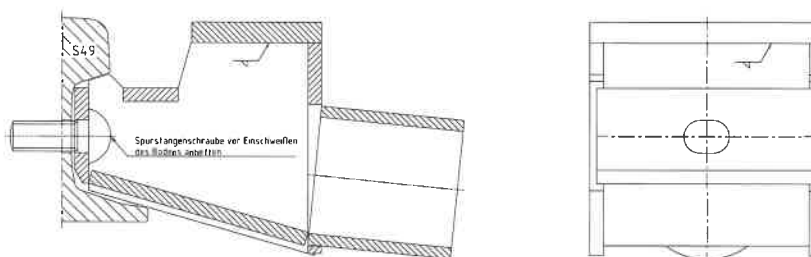


for grooved rail tracks

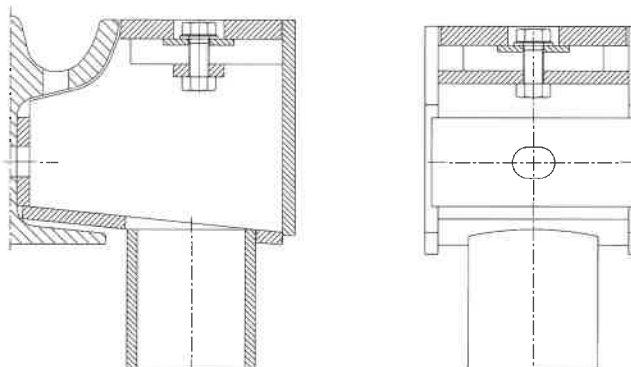


Rail drainage box – welded type

for Vignol rail tracks



for grooved rail tracks





ACCESSORIES

Drainage boxes

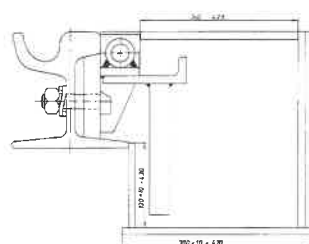
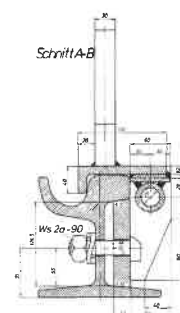
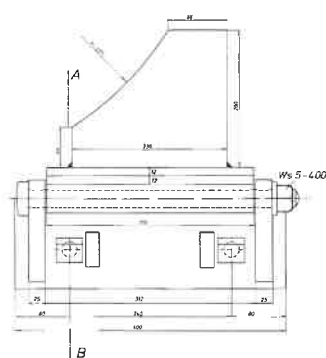
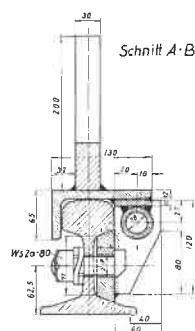
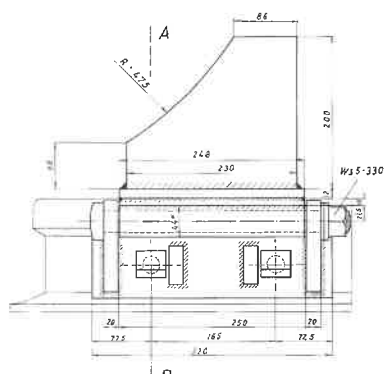
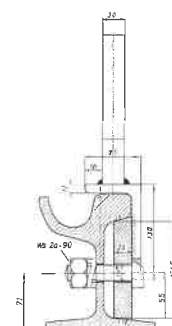
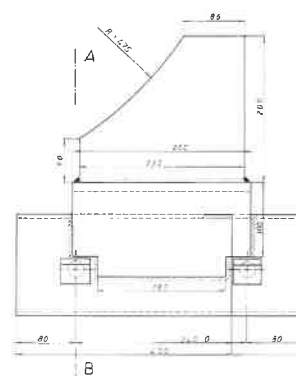
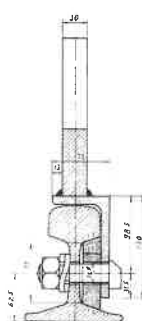
Track drainage boxes, welded design	weight (kg/pc.)
Suitable for Vignol Rail-Track gauge: 1.435 mm	approx. 90
Suitable for Vignol Rail-Track mounted with 300 mm grooved rail grooved rail section on both sides, gauge: 1.435 mm	approx. 90 - 100
for grooved Rail-Tracks gauge: 1.435 mm	approx. 85 - 105

Rail drainage boxes	weight (kg/pc.)
for Vignol Rail-Tracks	approx. 18
for grooved Rail-Tracks	approx. 17

- Available for standard gauges and individual gauges for all Rail sections, grooved rail sections and special sections.
- The standard drainage boxes out of 10 mm metal sheets have a central drainage-pipe (diameter 101,6 mm x 8 mm) and a lid out of tearplates with a thickness of 15 mm. The water channels are screwed at the rail-web; the box will be inserted and fixed with bolts.
- Special designs on request
- Lateral drainage pipes, pipes with individual diameter and special lids: on request.



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TRACK STOPS • PROTECTIVE CASINGS

Track stops

track stops	weight (kg/pair)
non-swivelling type, for rail type 49E1/E5, acc. our drwg. M3 Bl. 1504	36
non-swivelling type, for grooved rail type 57R1 • 67R1, acc. our drwg. M3 Bl. 1505	46
swivelling type, for rail type 49E1/E5, acc. our drwg. M3 Bl. 1496	50
swivelling type, for grooved rail type 57R1 • 67R1, acc. our drwg. M3 Bl. 1498 res. M3 Bl. 1498b	65

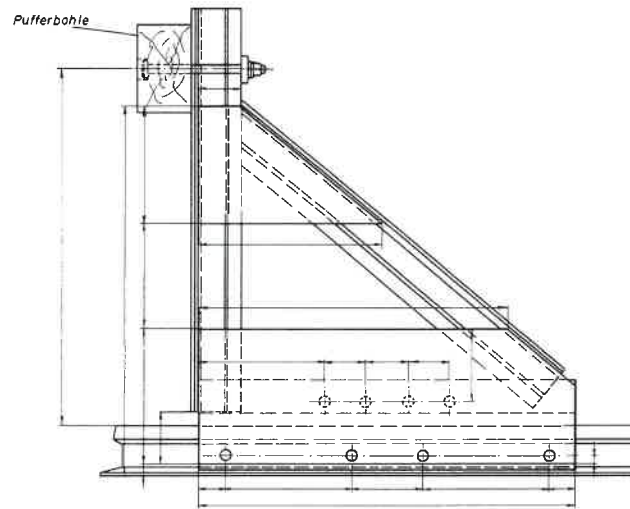
Protective casings

protective casings	weight (kg/pair)
welded design, for track stops swivelling type, rail type 49E1/E5 • 57R1 • 67R1, acc. our drwg. M3 Bl. 1496 res. M3 Bl. 1498a	120

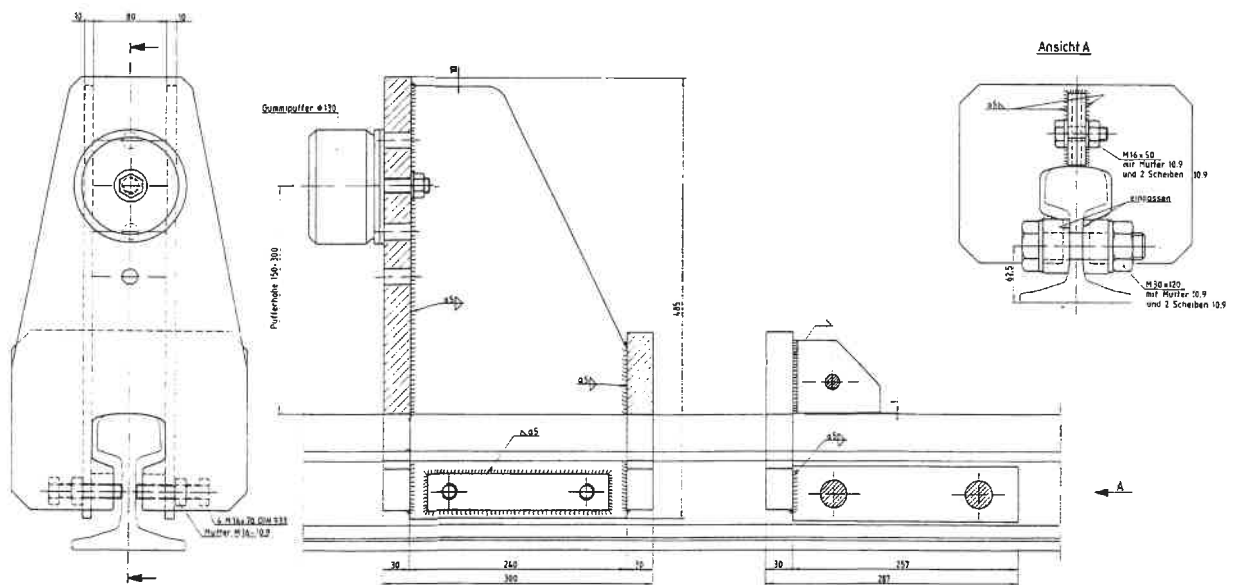


BUFFER STOPS • STOPS FOR CRANE WAYS • DRAG SHOES

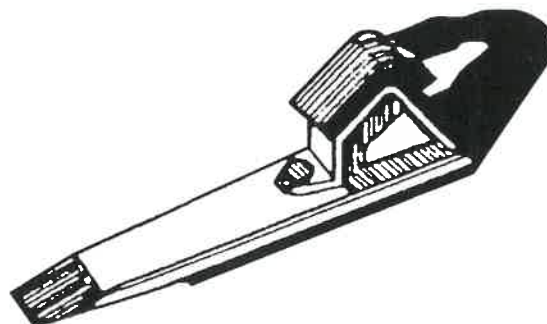
Buffer stop



Stop for crane ways



Drag shoe





BUFFER STOPS • STOPS FOR CRANE WAYS • DRAG SHOES

Buffer stops

buffer stops	weight (kg/pc.)
welded design, to be mounted on track, made of rail type 49E1/E5	750
welded design, to be mounted on track, made of grooved rail type 57R1 • 67R1	780

Stops for crane ways

stops for crane ways	weight (kg/pc.)
with adjustable rubber bumper, height: 150 mm - 250 mm, dimension: 470 x 170 x 300 mm, to be clamped on rails 49E1/E5 • 54E4, complete with screwable final locking dimension 170 x 170 x 100 mm	34

Drag shoes

drag shoes	weight (kg/pc.)
double flanged drag shoe LIBO 2 (standard drag shoe of DB), for rails Form 6, Form 8 or 49E1/E5	8

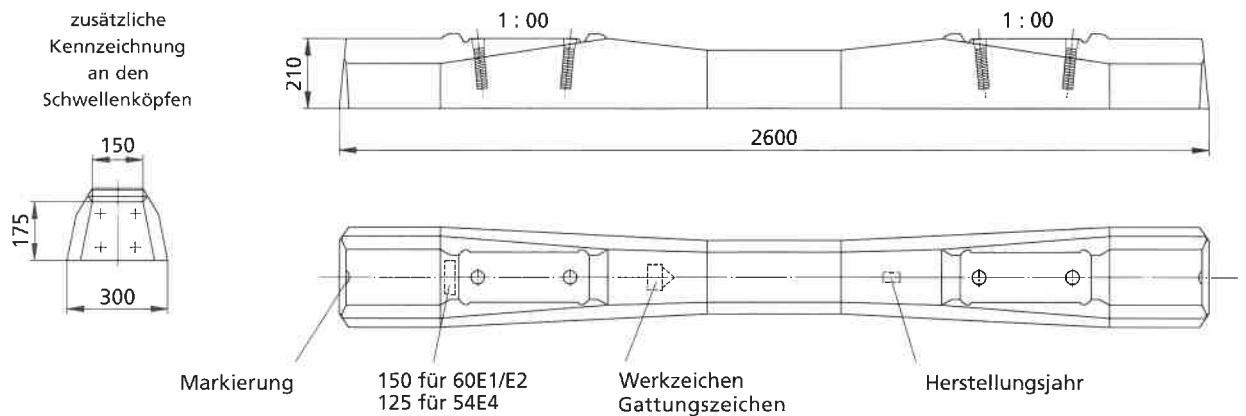
Other types on request



PRE-STRESSED CONCRETE SLEEPERS

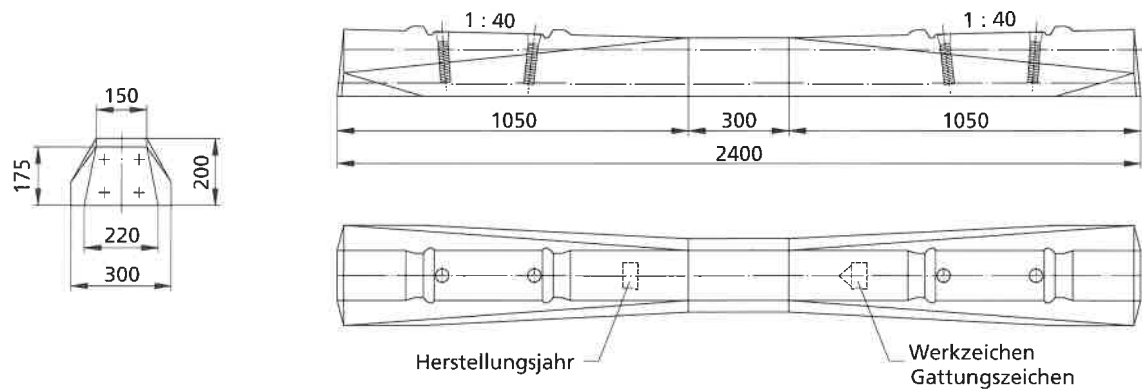
Pre-stressed concrete sleepers B 70 W - (60 + 54)

- type:
B 70 W-60 for rails 60E1/E2 – 150 mm width of foot
B 70 W-54 for rails 54E4 • 49E1/E5 – 125 mm width of foot
- fastening type:
W-type,
with elastic clamp Skl 14 and synthetic Wfp
- weight:
pre-mounted approx. 304 kg



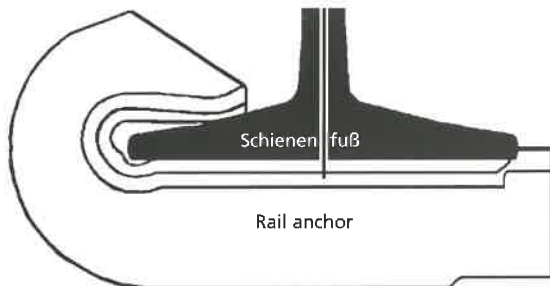
Pre-stressed concrete sleepers B 58 W-54

- fastening type:
W-type
- weight:
pre-mounted approx. 249 kg



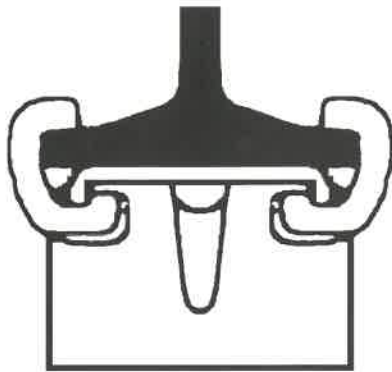
Other types on request

RAIL ANCHORS AND SAFETY CAPS



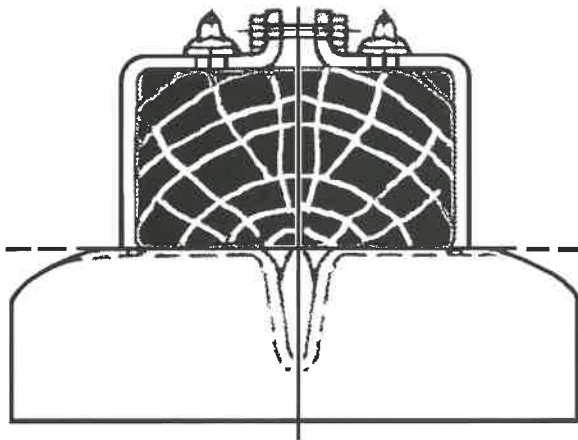
Rail anchor CAN

- one piece rail anchor, especially for wooden sleepers with K-type fastening, available for rail section 49E1/E5 • 54E4 • 60E1/E2
For other rail types on request



Rail anchor type Mathèe

- 3-piece rail anchor, for wooden- or concrete sleepers, available for rail section 49E1/E5 • 54E4 • 60E1/E2
For other rail types on request



Safety cap Sik 1a

Without picture

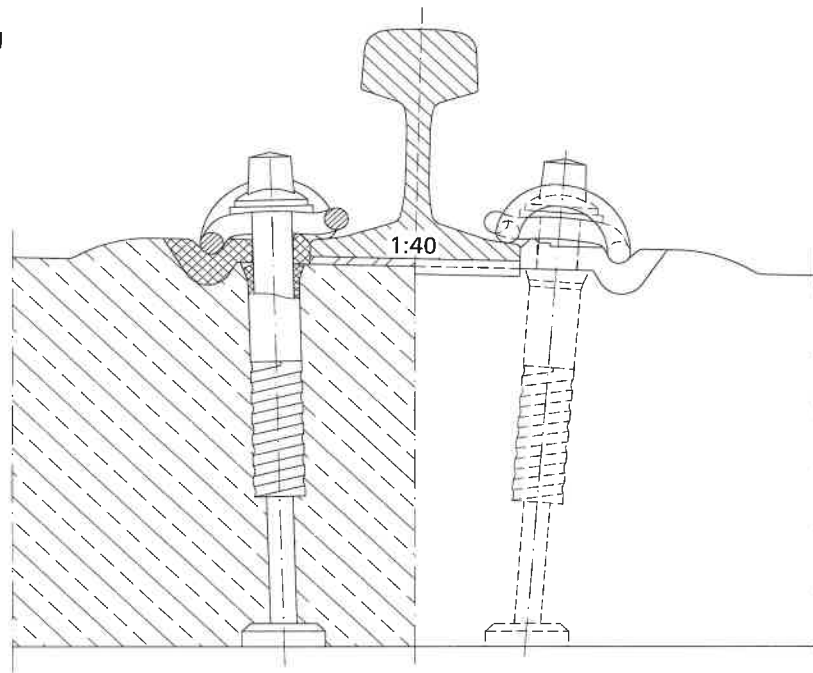
Safety cap Sik 10

Technical design subject to change without notice

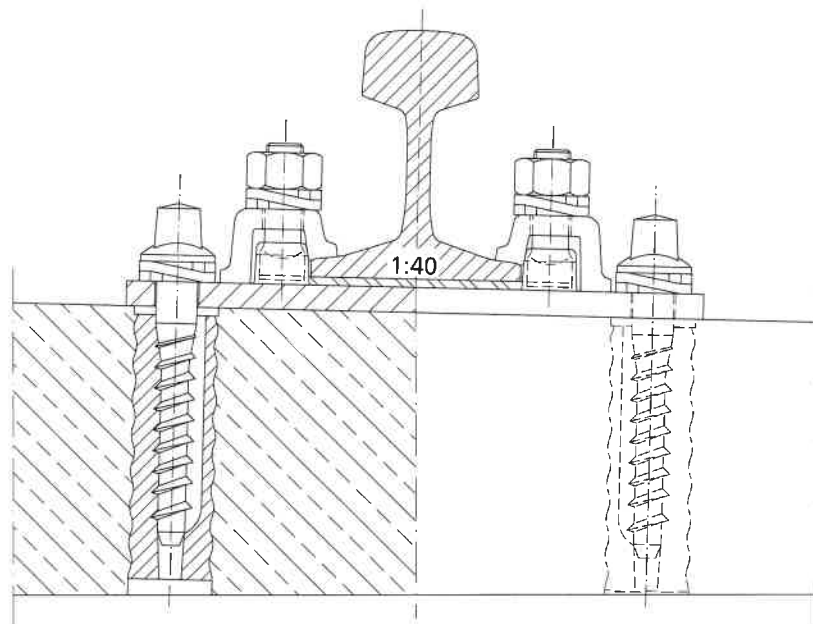


W-TYPE FASTENING • K-TYPE FASTENING

W-type fastening



K-type fastening





W – TYPE FASTENING • K – TYPE FASTENING

W-type fastening	
rails	60E1/E2 • 54E4 • 49E1/E5
rail pads	Zw 661a • Zw 664a • Zw 686a • Zw 687a • Zw 787a • Zw 700 • Zw 900
plastic dowels	Sdü 9 • Sdü 9a • Sdü 20 • Sdü 21 • Sdü 22
sleeper screws	Ss 23 • Ss 25 with Uls 7
elastic clamps	Skl 1 • Skl 14
angel guide plates	Wfp 2 • Wfp 3b • Wfp 14K • Wfp 14S • Wfp 14K 900
isolation inserts (for steel angel guide plates only)	Ei 19 • Ei 27 Ei 31 (inner) Ei 32 (outer)
K – type fastening	
rails	60E1/E2
ribbed base plate	Rph 6 (inclination 1:40)
rails	54E4 • 49E1/E5
ribbed base plates	Rpb 1 • Rph 1 (1:40) • Rp 01/01 flat
rail pads	Zw 672 • Zw 12 • Zw 661a/664a
dowels	made of wood, made of plastic: Sdü 9 • Srd 1
T-headed bolts	Hs 26 22 x 65 M 22
spring washer	Fe 6 • A 25
rail clip	Kpo 6
sleeper screws	Ss 8 24 x 150
spring washer	Fe 6 • A 25



TRACK-/POINT SIGNALS AND COMPONENTS



Fastening clamp

- for rails within 125 mm base width, self coloured



Point signal RA 12

- red/white enamel



Track signal SH 2

- 440 x 550 x 2 mm, reflecting foil, type 1



Concrete pile for track- and point signals

- acc. to BZA-drawing 524.1.4, concrete C 34/45, head drilled (d=14 mm), length: 500 mm

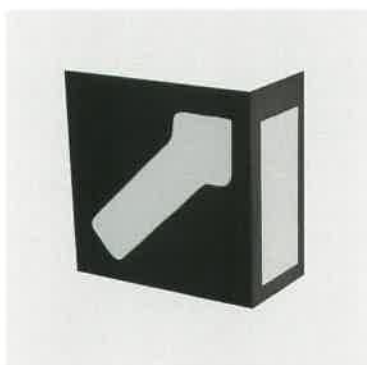
Other signals on request

POINT SIGNALS AND COMPONENTS



Point signal Wn 1/2

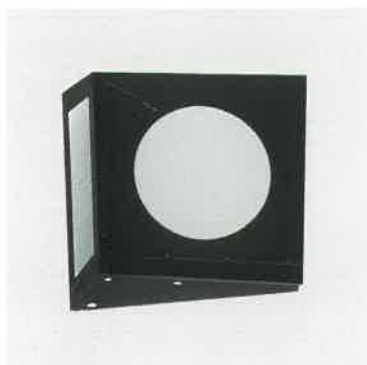
- for left- or right-handed turnout directions, galvanized, black varnished, with reflecting foil and covering (roof)



Day signal

for left- or right-handed turnout directions

- with reflecting foil





KRUG TURNOUTS

Manufacturing of turnouts in our workshops

- Turnouts and crossings with standard gauge, made of flat bottomed rails or grooved rails
- Turnouts with narrow gauges for mining industry, sand- and peat suppliers

made from new or used material



DIN EN ISO 9001:2000
Zertifikat: 01 100 70397

KRUG TURNOUTS



Stadler Bussnang, Schweiz
• Double track turnout



CRANE RAIL-CROSSING



2008/2009

Schiffahrtsamt Brake-Unterweser

- Crane rail crossing with Gantrail fastening

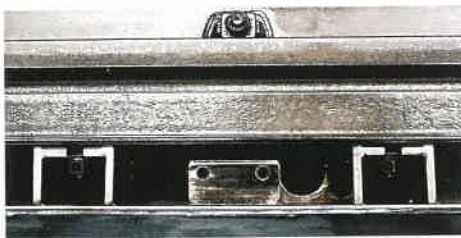
ADJUSTABLE GUARDRAILS

for Turnouts made of Grooved rails
(European Patent No. 0830480)

The guard Rail section 33C1 (R11-60 / UIC 33) (Hardness 880 respectively 1080 N/mm²) will be screwed on supports. By inserting of shims it is possible to adjust the width of groove in this area.

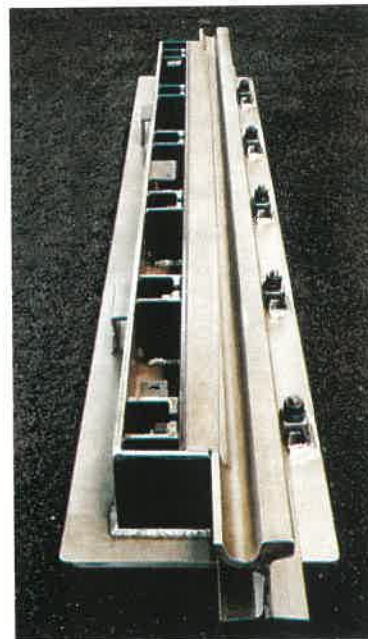


Inserting of an adjusting shim



Drainage hole in the base plate

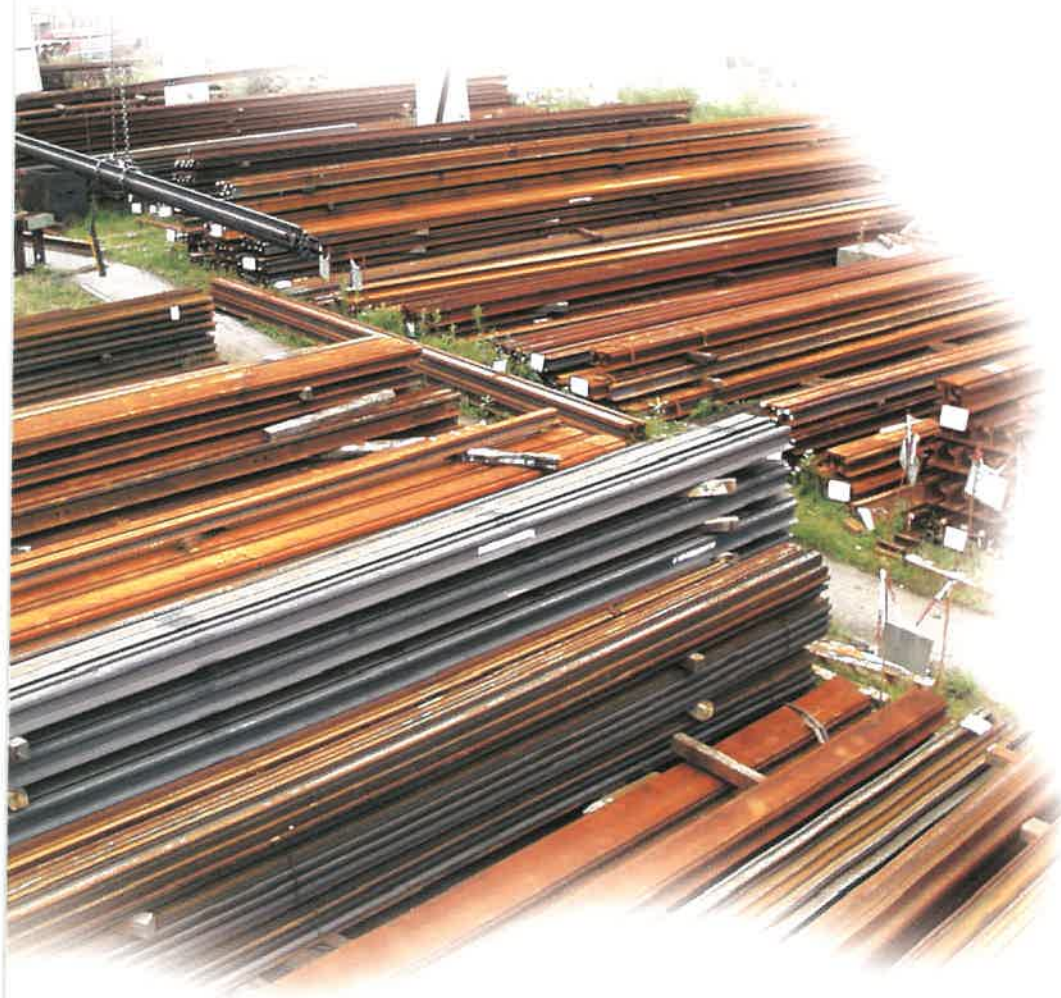
By arrangement on a continuous base plate in a covered closed box it is also possible, if necessary, to replace the guardrail without structural works at the pavement.



Demonstration without cover



Arrangement in a double-track diversion made of grooved rails 67R1



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