

Guide troughs are necessary when a suitable surface for the unrolling of the energy chain is not present and to give guidance and support throughout the chain length.

gliding arrangement

The designing and assembling of the filing and guide channels should be handled with great care, because this is the only chance for a smooth operation of the system. ekd gelenkrohr manufactures troughs for all applications made of steel (galvanized), stainless steel or aluminum. The individual channel segments are mounted with connecting elements.

Trough for steel chains

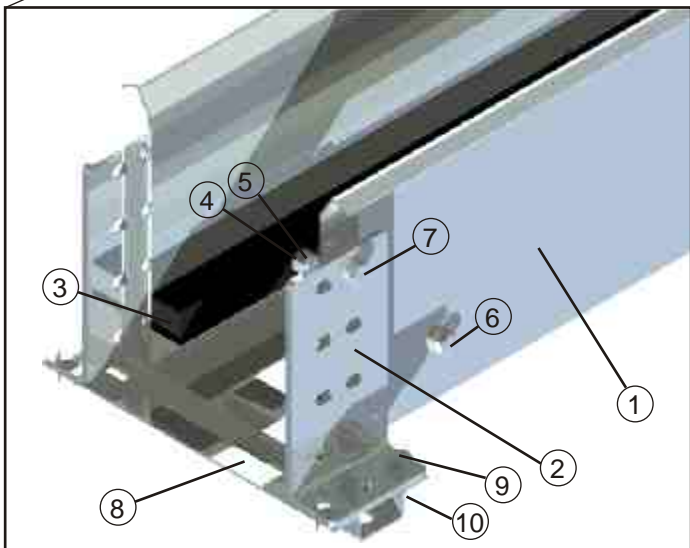
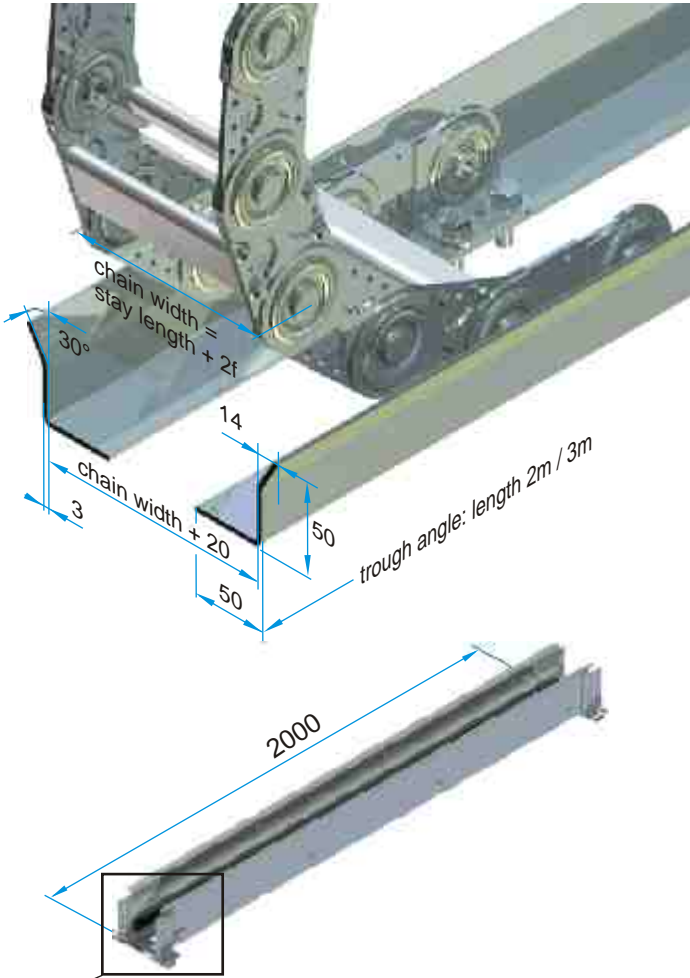
Troughs for steel chains are made of edged groove angles that are bolted directly on the floor or on the corresponding substructures.

Steel-trough

The steel-trough is universally applicable. Besides the standard channel steel troughs (galvanized). Special dimensions and stainless steel guide troughs are available.

A simple on-site assembly is guaranteed by the top-hat profiles on which the trough segments can be accurately aligned. For this first preassembly the connection angle is finger tight then screw on the angles with the welded inserts. Then the groove is aligned and the connection angle can be fixed.

For gliding applications the angles are supplied with mounted slide bars.



item	name	weight [kg/m]		
		height 2mm	3mm	
1	trough angle 2mm ¹⁾			
2	connection angle ²⁾	100	4.1	5.5
3	slide bar 25x25x2000			
4	washer DIN 125	150	5.3	7.2
5	nut M8 DIN 985			
6	DIN 931 M8x40	200	6.5	8.8
7	DIN 931 M8x12			
8	hat profile	250	7.7	10.4
9	DIN 931 M8x16			(weight incl. slide bar)
10	nut M8			(slide bar 25x25 0.6kg/m)

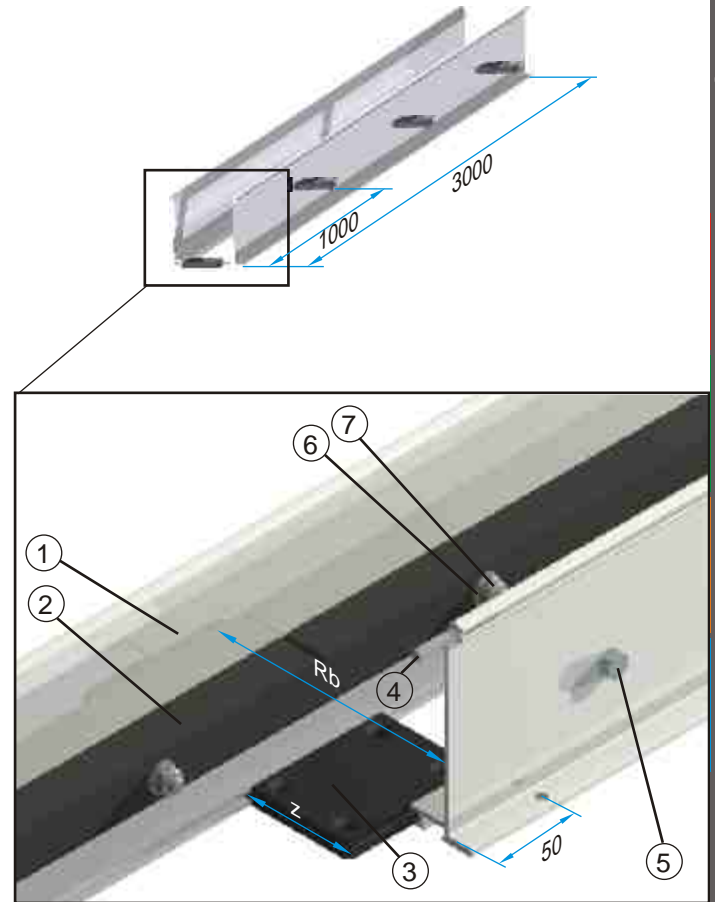
1) standard heights 100 / 150 / 200/250, L=2000mm, alternative L=3000mm, t= 3 mm
 2) connection angles 40 / 80 / 120 / 160 / 200
 3m standard height 200

Aluminum trough

The aluminum trough (trough height 120mm) is perfectly adapted to floor assembly for long travels with energy chains of the type Kolibri.

Constructed with 3 m long channel segments, the width corresponds to the chain size, a fast and easy installation is performed. The connection of the single channel segments is with center bolts.

The first half of travel is fitted with gliding bars so that a smooth transition at the fixed connector (usually mid-travel) is guaranteed.

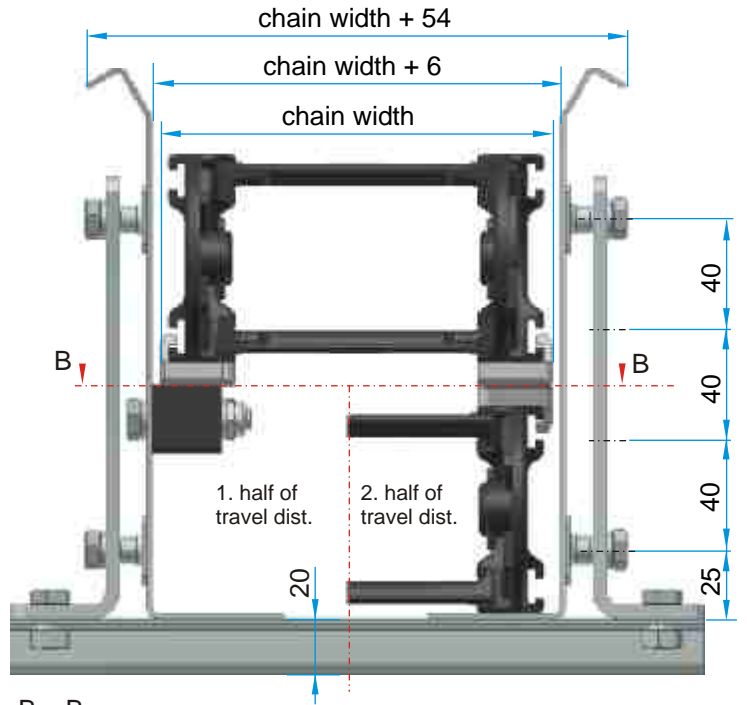


item	name	part no.	weight [kg]
	aluminium tough	1361	
1	alu-trough angle 120x3000	-	3.5
2	slide bar 20x20x3000	1606	1.2
3	distance profile DP (s.b.)	(s.b.)	(s.b.)
4	groov. pin DIN1474 6x40	-	0.008
5	screw DIN 931 M6 x 35	-	0.010
6	washer DIN 125 - 1 A6	-	0.001
7	nut DIN 987 M6	-	0.004

distance profiles for aluminium troughs						
Rb	name	part no.	energy chain ¹⁾	c x d ²⁾	z	[kg]
54	DP 54	1367	Kolibri 30.050.X	30 x 50	20	0.017
64	DP 64	1551	Kolibri 30.060.X	30 x 60	30	0.020
66	DP 66	1368	Kolibri 40.062.X	40 x 62	32	0.022
70	DP 70	1552	Kolibri 50.065.X	50 x 65	36	0.026
80	DP 80	1553	Kolibri 40.075.X	40 x 75	46	0.037
84	DP 84	1554	Kolibri 30.080.X	30 x 80	50	0.042
100	DP100	1369	Kolibri XX.095.X	30 x 95, 50 x 95	66	0.059
130	DP130	1555	Kolibri XX.125.X	30 / 40 / 50 x 125	96	0.092
154	DP154	1556	Kolibri 50.150.X	50 x 150	120	0.118
116	DP116	1557	PKK 210 stay 90	50 x 110	82	0.076
160	DP160		PKK 228 stay 120	55 x 156	126	0.124
210	DP210	1558	PKK 228 stay 170	55 x 206	176	0.179

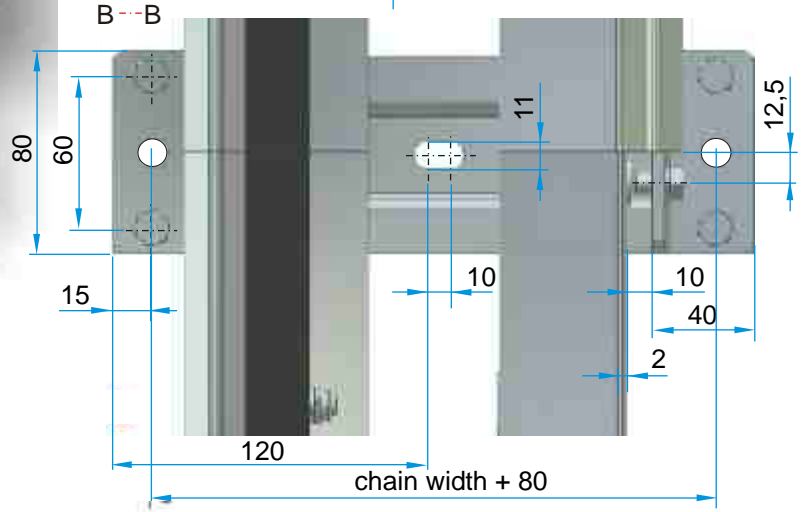
1) example arrangement. Other energy chains can also be used with corresponding outside dimensions.
2) Outside dimensions of the energy chain

dimensions steel trough

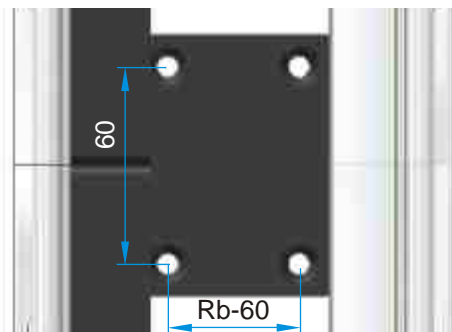
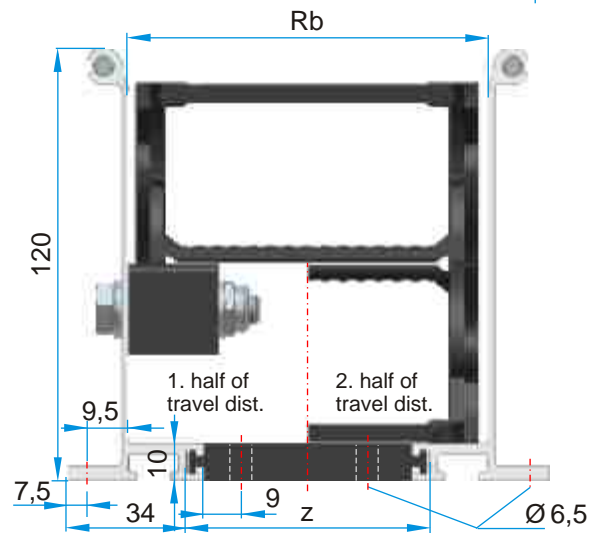
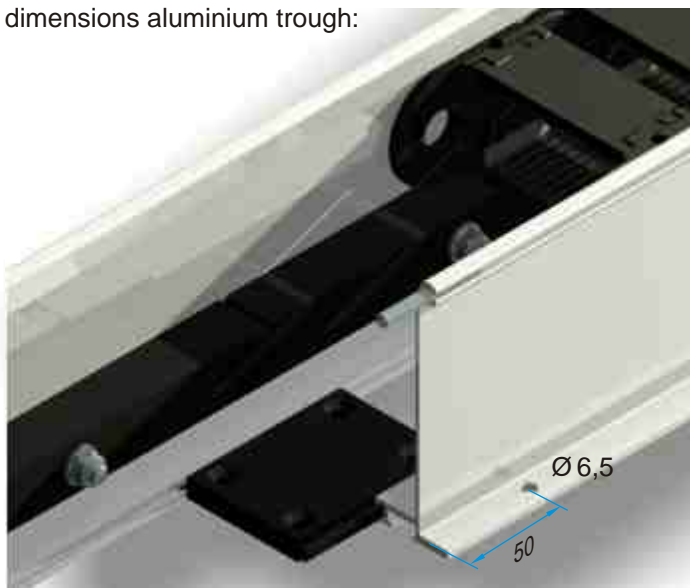


dimensions steel trough:
the height of the trough angle depends on the energy chain used:
example: PKK 328

- trough angle height 200 mm
- connector angle height 160 mm



dimensions aluminium trough:



Gliding arrangements

For travels up to about 60 meters, speeds of $v_{max} = 1.5 \text{ m/s}$ and accelerations of a $max = 1 \text{ m/s}^2$ energy chains and troughs can be used.

Exceeding these values contact *ekd gelenkrohr* when planning your application.

The upper part of the chain runs up to half of the travel on slide bars that are bolted to the channel segments.

For long travels and heavy chains a lower connector assembling is required to guide driver initiated forces in the energy chain direction. A reduction to the height of the chain radius is usually sufficient.

The fixed connector area is designed to ensure a smooth transition of the energy chain. In addition, the slide bars in the end zone are contour adjusted. The energy chain can be attached separately with a countersunk screw or be mounted together with the slide bar. In addition, the glide bar must be provided with a corresponding reduction.

Lower connectors need an additional chain length:

Not to burden the energy chain in the end position some (according to the application) chain links have to be fitted with an reverse bending radius, so that the driver stops at a sufficient distance in front of the chain bow end.

