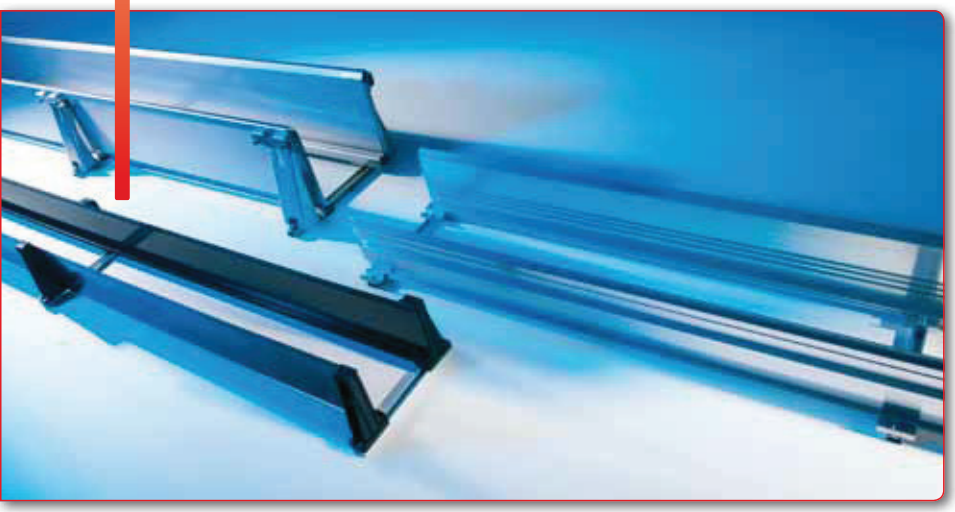
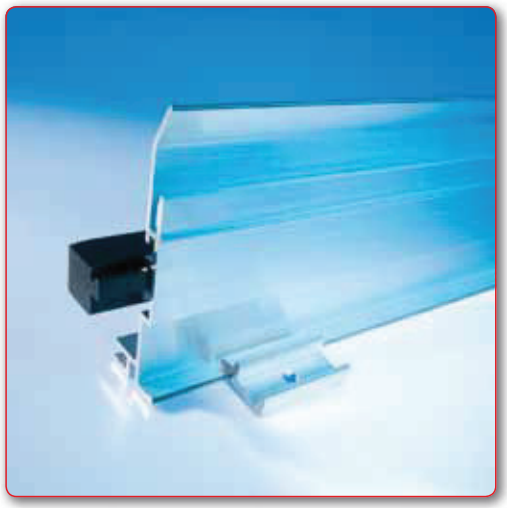
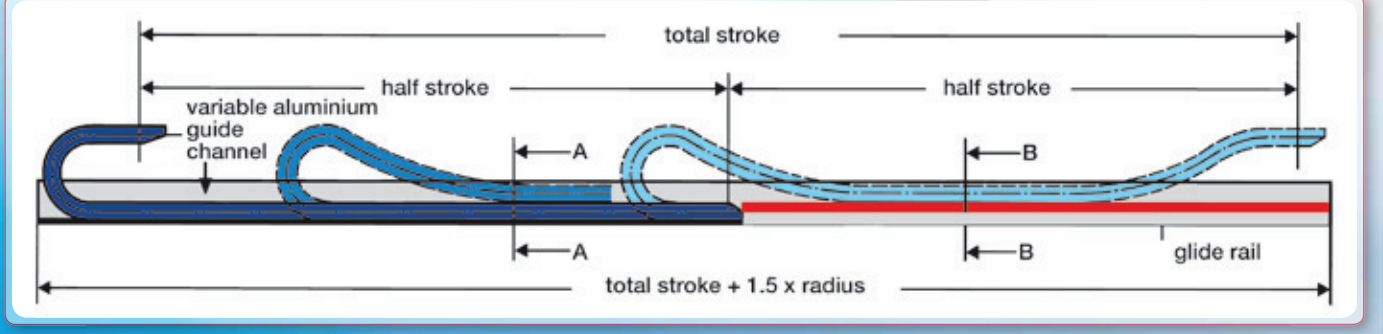
Variable guide channel systems





VAW Variable guide channel systems



All versions of our guide channel systems for cable drag chains are used as stacking for short travel distances and also as guide channels for long travel distances.

If a guide channel is not used, the chain links cannot be guaranteed to stack properly. This is especially true for large bend radii as the side guidance does not exist.

The combination of the individual VAW type aluminium channel sides, the integrated groove system and the glide rail sections forms an extremely variable guide channel system which provides a safe, stable and visually appealing chain guide system requiring few accessories. In combination with fixing elements on the inside, the VAW type makes installation highly space-saving.

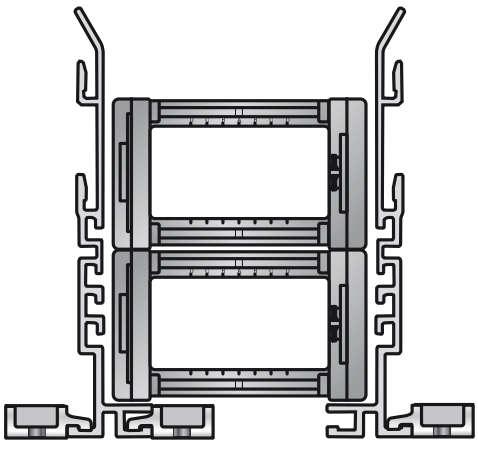
Our guide channels from steel (type VAW-Z) and stainless steel (type VAW-E) are an excellent choice for more demanding mechanical requirements. We can also supply V4a models on request for saltwater applications.

In most applications the cables enter the chain at a position central to the travel. This gives the shortest length of chain. In this case the chain is about half as long as the travel distance.
If the chain is moved to the left (see illustration below) it simply rolls in the channel.

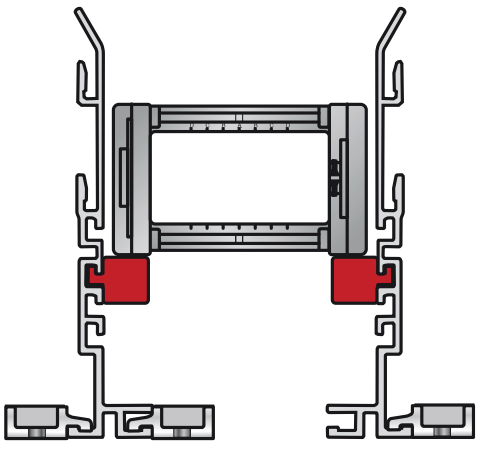
If it is moved to the right, then it stacks on top of itself once the unsupported length has been exceeded (see cross-section A-A).

If the travel veers further to the right, then the glide rail compensates for the height difference of the chain link, thus ensuring low friction (see cross-section B-B).

As such, optimal running of the cable drag chain is guaranteed at all times.



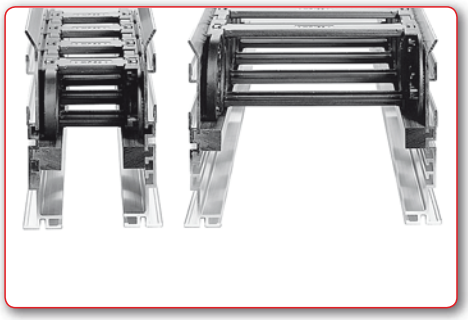
Cross-section A–A: *The cable drag chain glides on itself.*



Cross-section B–B: *The cable drag chain runs on the glide rail section.*

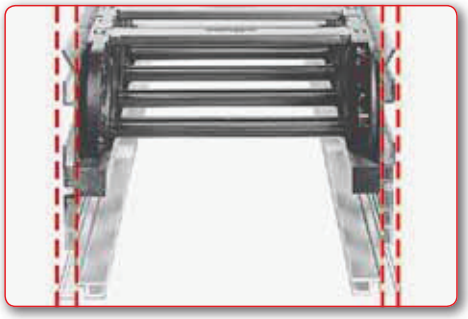

Compatible profile

A variable guide channel system is required if the self-supporting length of a cable drag chain is exceeded. The system parts comprise a range of sections and materials. Each one is structurally tailored to the Murrplastik cable drag chain systems. The use of highly durable aluminium (VAW) or stainless steel (VAW-E) makes corrosion protection unnecessary.



Variable in the chain widths and heights

Our guide channel sections can be modified to fit a range of chain types and chain widths.



Minimal space requirements

The deployment of our variable aluminium guide channel systems requires very little space. If inside clamping is used, the complete system is barely wider than the cable drag chain itself.


Simple handling

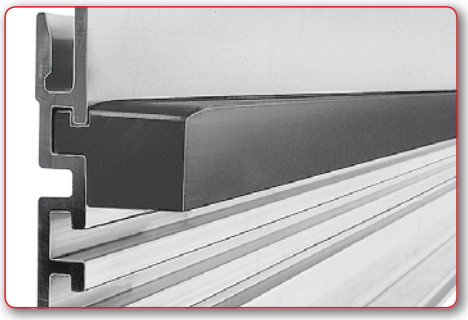
The glide rail is simply slid into the guide channel section. Optionally, the construction is then secured with a screw in the first and last guide rail.

Centre piece VAW-MT

If multiple cable drag chains need to be routed in parallel, past one another or separately from one another, then the guide channel centre piece is used for our aluminium models. It enables the secure, separated routing of cable drag chains past/next to one another and chains can also be of different dimensions.

Lower friction – less motive force

Low-friction glide rails support the cable drag chain outside the self-supporting area. Frictional forces can be lowered even further by deploying roller wheels (also available as an ATEX model). This can result in further reductions to the motive power required for the cable drag chain.

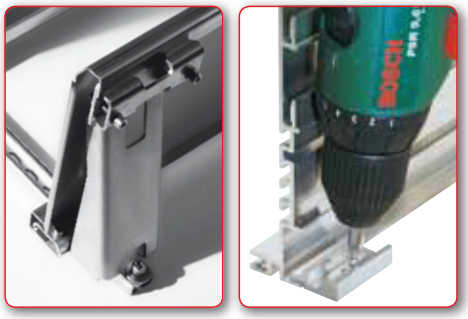


Low noise level

The glide rail's guide groove creates a level surface for the chain to run on. This guarantees snag-free gliding for the cable drag chains over the entire travel distance. The noise level is decreased. The integration of rubber dampening elements (available in two designs) on the cable drag chain's stacking surfaces can further reduce the noise level.

Accurate and snag-free alignment

No screwing or welding is required for the individual sections in our variable guide channel system. For aluminium channels, the channel sections are perfectly aligned thanks to special plastic connectors that are snap-fit into a specially-designed groove. For (stainless) steel and plastic channels, special channel brackets are used for this purpose.



Fast installation

The variable guide channel systems are fixed in place with special clamping pieces. When installing the aluminium models, the mounting holes of the clamping pieces can be used as drill templates.

Cost-effective

The use of standard components enables cost savings of up to 70% in comparison to conventional systems.

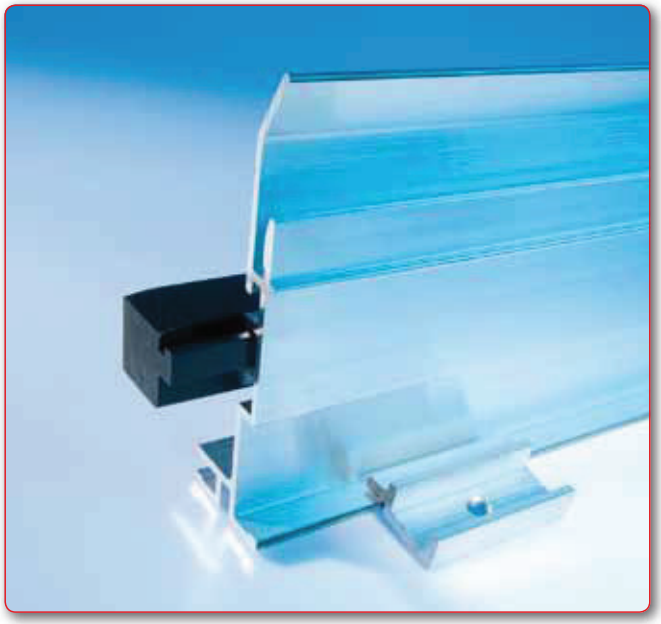
Selection criteria

Variable in the chain widths and heights

The basic idea in designing the VAW variable guide channel system has been to develop a profile that fits various types and widths of cable drag chains. In addition, the whole installation procedure was to be as simple as possible.

Each profile contains various grooves into which you may enter a gliding rail. The type of cable drag chain determines into which groove you must enter the gliding rail.

The tables given on the following pages provide a quick summary of the VAW guide channel system suitable for each type of cable drag chain.



Layout

Information on the following parameters is required for the correct layout of a variable guide channel system:

- Cable drag chain type (width, radius, installation)
- Travel distance
- Chain contents/weight per metre
- Speed of travel
- Acceleration/retardation
- Lateral acceleration yes/no
- Environmental influences

It is advisable to use a guide channel system for the entire travel distance.

If the cable entry is at the centre of the traverse, then a glide rail is required of a length equal to half of the travel distance.

Lowered fixing point

With longer travel distances, it may be advisable in some cases to lower the height of the moving end bracket.

In such cases, modifications to the chain layout should be noted (e. g. extension of chain, number of chain links).

Please contact our application engineers!

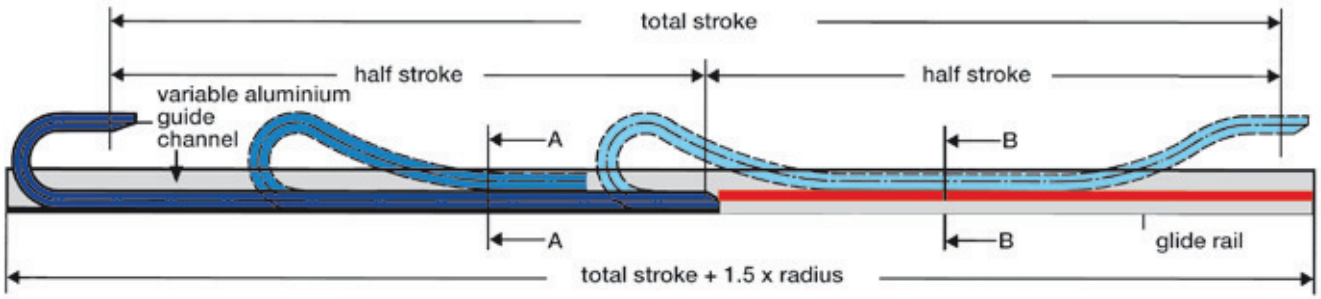
Sample calculation:

Travel distance:	20 m
Entry point:	At centre of travel distance
Chain type:	MP 35086 R 100 without bias with 176 links = 10.2 m

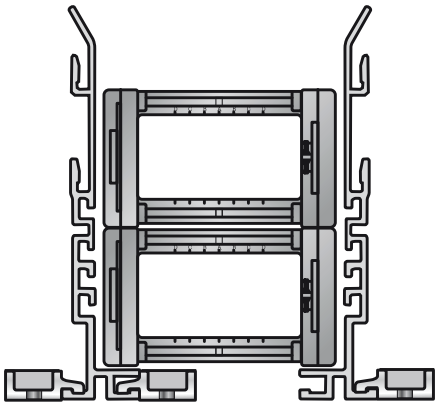
Suitable VAW system parts:

40 m guide channel VAW 80106 (20 m/side)
20 m glide rail GSP 20/20 (10 m/side)

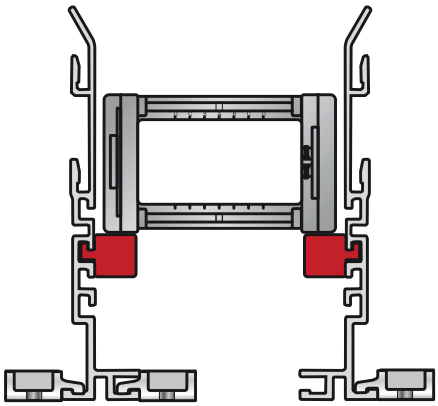
Design / structure



VAW longitudinal cross-section: *The gliding behaviour of the cable drag chain over the entire travel distance.*



Cross-section A–A: *The cable drag chain runs on itself.*



Cross-section B–B: *The cable drag chain runs on the glide rail.*

Guide to system design

To properly install the guide channel, a level support surface is required. The channel elements (standard length of 2 m) are arranged one after the other.

The guide channels are connected to each other on the outside contour by means of longitudinal connectors. This eliminates any offset and impact. The method of assembly also prevents any inherent deformation of the channel.

The guide channel inside width should exceed the chain outside width by 3 to 12 mm, depending on chain type (see Channel Clearance Table, page 304).

Clamping pieces are used to secure the guide channel sections directly to the base construction (e. g. the ground or support arms) or to C-rails.

This clamping should occur from the inside or additionally from the outside if necessary. The holes in the clamping pieces are used as drill templates. They are easily accessible with a hand drill.

If the self-supporting length of the chain is exceeded, for the part of the guide channel where the upper run cannot glide on the lower, a glide rail must be used (see cross-section B-B).

The GSP glide rail does not require screws, apart from in the first and last rail. Depending on the type of chain, the glide rail section is inserted into the guide channel groove provided. The continuous guide groove provides an even surface. This enables the chain system to run smoothly , even at high travel speeds.

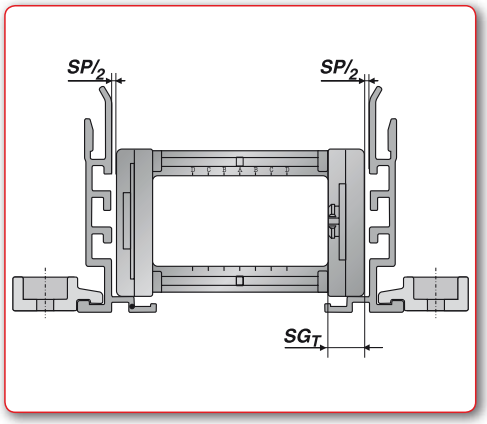
Channel clearance SP and temperature factors

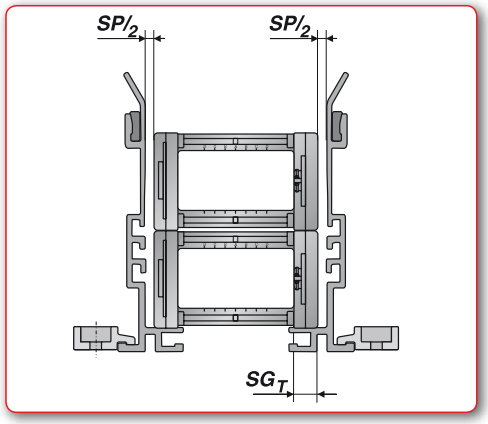
Chain type	Channel clearance SP
MP 10	3 mm
MP 14	3 mm
MP 15	3 mm
MP 18	3 mm
MP 25	4 mm
MP 25 G	4 mm
MP 30	4 mm
MP 32	6 mm
MP 32.2	6 mm
MP 32.3	6 mm
MP 35	4 mm
MP 36 G	4 mm
MP 41	8 mm
MP 41.2	8 mm
MP 41.3	8 mm
MP 43 G	8 mm
MP 44	8 mm
MP 52.1	8 mm
MP 52.2	8 mm
MP 52.3	8 mm
MP 62.1	8 mm
MP 62.2	8 mm
MP 62.3	8 mm
MP 65 G	8 mm
MP 66	8 mm
MP 72	8 mm
MP 82.2	12 mm
MP 82.3	12 mm
MP 102	12 mm
MP 3000	4 mm

Channel clearance

As a general rule, there must be enough clearance (SP) between the channel and the cable drag chain to prevent the chain ever jamming in the channel during the process cycle.

Possible consequences include shortened useful life through increased wear, plus increased running noise. Please consult the adjacent table for recommended values for your application.

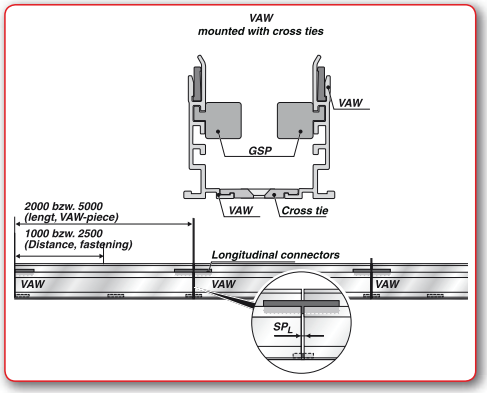


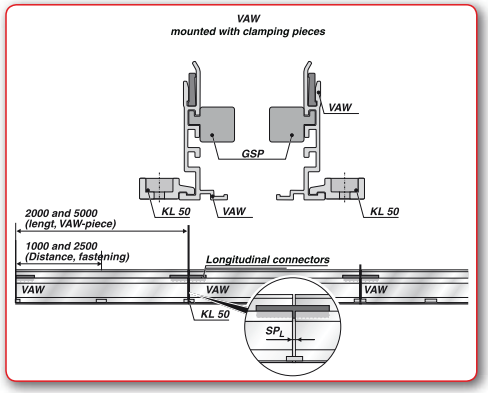


Temperature factors

Having the channel side sections "floating" by using a clamping piece (KL) or cross tie (DBP) compensates for possible longitudinal expansion caused by temperature fluctuations. The channel sections can move slightly in the longitudinal direction.

Accordingly, channel parts must be assembled using an expansion joint. The exact joint dimensions depend on the temperature fluctuations experienced during use and the length of the side sections used. Please contact our application engineers!





Selection of the matching VAW guide channel system

VAW selection for self-supporting applications

Chain type	Radius mm	VAW plastic from page		VAW aluminium from page		VAW-E stainless steel VAW-Z steel from page	
MP 10.1	– –	– –		– –		– –	
MP 14	25–75	VAWK-120	p. 308	VAW 25	p. 311	– –	
MP 15	25–75	VAWK-120	p. 308	VAW 25	p. 311	– –	
MP 18	28–78	VAWK-120	p. 308	VAW 25	p. 311	– –	
MP 25	50–300	VAWK-120	p. 308	VAW 35	p. 312	VAW-E 120/VAW-Z 120	p. 330
MP 25 G	60–250	VAWK-120	p. 308	VAW 35	p. 312	VAW-E 120/VAW-Z 120	p. 330
MP 30	60–300	VAWK-120	p. 308	VAW 35	p. 312	VAW-E 120/VAW-Z 120	p. 330
MP 32	80–250			VAW 106	p. 317	VAW-E 120/VAW-Z 120	p. 330
MP 32.2	80–250			VAW 106	p. 317	VAW-E 120/VAW-Z 120	p. 330
MP 32.3	120–250			VAW 106	p. 317	VAW-E 120/VAW-Z 120	p. 330
MP 35	70–300			VAW 35	p. 312	VAW-E 120/VAW-Z 120	p. 330
MP 36 G	80–200			VAW 35	p. 312	VAW-E 120/VAW-Z 120	p. 330
MP 41	80–600			VAW 122	p. 318	VAW-E 120/VAW-Z 120	p. 330
MP 41.2	80–600			VAW 122	p. 318	VAW-E 120/VAW-Z 120	p. 330
MP 41.3	96–600			VAW 122	p. 318	VAW-E 120/VAW-Z 120	p. 330
MP 43 G	125–250			VAW 122	p. 318	VAW-E 120/VAW-Z 120	p. 330
MP 44	70–600			VAW 122	p. 318	VAW-E 120/VAW-Z 120	p. 330
MP 52.1	100–350			VAW 122	p. 318	VAW-E 120/VAW-Z 120	p. 330
MP 52.2	100–350			VAW 122	p. 318	VAW-E 120/VAW-Z 120	p. 330
MP 52.3	150–350			VAW 122	p. 318	VAW-E 120/VAW-Z 120	p. 330
MP 62.1	150–500			VAW 122	p. 318	VAW-E 120/VAW-Z 120	p. 330
MP 62.2	150–500			VAW 122	p. 318	VAW-E 120/VAW-Z 120	p. 330
MP 62.3	200–500			VAW 122	p. 318	VAW-E 120/VAW-Z 120	p. 330
MP 65 G	200–350			VAW 122	p. 318	VAW-E 120/VAW-Z 120	p. 330
MP 66	150–350			VAW 122	p. 318	VAW-E 120/VAW-Z 120	p. 330
MP 66	150–350			VAW 122	p. 318	VAW-E 120/VAW-Z 120	p. 330
MP 72	150–500			VAW 122	p. 318	VAW-E 120/VAW-Z 120	p. 330
MP 82.2	150–500			VAW 150	p. 320	VAW-E 170/VAW-Z 170	p. 334
MP 82.3	200–500			VAW 150	p. 320	VAW-E 170/VAW-Z 170	p. 334
MP 102	250–500			VAW 150	p. 320	VAW-E 170/VAW-Z 170	p. 334
MP 3000	50-300	VAWK-120	p. 308	VAW 35	p. 312	VAW-E 120/VAW-Z 120	p. 330

VAW selection for gliding applications

Chain type	Radius mm	VAW plastic from page		VAW aluminium from page		VAW-E stainless steel VAW-Z steel from page	
MP 10.1	– –	– –		– –		– –	
MP 14	25–75	VAWK-120	p. 308	– –		– –	
MP 15	25–75	VAWK-120	p. 308	– –		– –	
MP 18	28–78	VAWK-120	p. 308	VAW 80	p. 314	VAW-E 120/VAW-Z 120	p. 330
MP 25	50–75			VAW 80	p. 314	VAW-E 120/VAW-Z 120	p. 330
	100–125			VAW 122	p. 318	VAW-E 120/VAW-Z 120	p. 330
	150			VAW 150	p. 320	VAW-E 170/VAW-Z 170	p. 334
	200			VAW 177	p. 322	VAW-E 170/VAW-Z 170	p. 334
	250–300			VAW 248	p. 326	VAW-E 220/VAW-Z 220	p. 338
MP 25 G	60–100			VAW 80	p. 314	VAW-E 120/VAW-Z 120	p. 330
	125–150			VAW 122	p. 318	VAW-E 120/VAW-Z 120	p. 330
	200			VAW 150	p. 320	VAW-E 170/VAW-Z 170	p. 334
	250			VAW 177	p. 322	VAW-E 170/VAW-Z 170	p. 334
MP 30	60–75			VAW 80	p. 314	VAW-E 120/VAW-Z 120	p. 330
	100–125			VAW 122	p. 318	VAW-E 120/VAW-Z 120	p. 330
	150			VAW 150	p. 320	VAW-E 170/VAW-Z 170	p. 334
	200			VAW 177	p. 322	VAW-E 170/VAW-Z 170	p. 334
	250–300			VAW 248	p. 326	VAW-E 220/VAW-Z 220	p. 338
MP 32	80–150			VAW 122	p. 318	VAW-E 120/VAW-Z 120	p. 330
	200–250			VAW 177	p. 322	VAW-E 170/VAW-Z 170	p. 334
MP 32.2	80–150			VAW 122	p. 318	VAW-E 120/VAW-Z 120	p. 330
	200–250			VAW 177	p. 322	VAW-E 170/VAW-Z 170	p. 334
MP 32.3	120–150			VAW 122	p. 318	VAW-E 120/VAW-Z 120	p. 330
MP 35	70–100			VAW 80	p. 314	VAW-E 120/VAW-Z 120	p. 330
	150			VAW 122	p. 318	VAW-E 120/VAW-Z 120	p. 330
	200			VAW 150	p. 320	VAW-E 170/VAW-Z 170	p. 334
	300			VAW 248	p. 326	VAW-E 220/VAW-Z 220	p. 338
MP 36 G	80–100			VAW 80	p. 314	VAW-E 120/VAW-Z 120	p. 330
	150			VAW 122	p. 318	VAW-E 120/VAW-Z 120	p. 330
	200			VAW 150	p. 320	VAW-E 170/VAW-Z 170	p. 334
MP 41	80–150			VAW 122	p. 318	VAW-E 120/VAW-Z 120	p. 330

(Continued on the next page)

Selection of the matching VAW guide channel system

VAW selection for gliding applications

Chain type	Radius mm	VAW plastic from page		VAW aluminium from page		VAW-E stainless steel VAW-Z steel from page	
MP 41	200	VAW 150	p. 320	VAW-E 170/VAW-Z 170	p. 334		
	250	VAW 177	p. 322	VAW-E 170/VAW-Z 170	p. 334		
	300	VAW 248	p. 326	VAW-E 220/VAW-Z 220	p. 338		
MP 41.2	80–150	VAW 122	p. 318	VAW-E 120/VAW-Z 120	p. 330		
	200	VAW 150	p. 320	VAW-E 170/VAW-Z 170	p. 334		
	250	VAW 177	p. 322	VAW-E 170/VAW-Z 170	p. 334		
MP 41.2	300	VAW 248	p. 326	VAW-E 220/VAW-Z 220	p. 338		
MP 41.3	96–150	VAW 122	p. 318	VAW-E 120/VAW-Z 120	p. 330		
	200	VAW 150	p. 320	VAW-E 170/VAW-Z 170	p. 334		
	250	VAW 177	p. 322	VAW-E 170/VAW-Z 170	p. 334		
	300	VAW 248	p. 326	VAW-E 220/VAW-Z 220	p. 338		
MP 43 G	125–150	VAW 122	p. 318	VAW-E 120/VAW-Z 120	p. 330		
	200	VAW 150	p. 320	VAW-E 170/VAW-Z 170	p. 334		
	250	VAW 177	p. 322	VAW-E 170/VAW-Z 170	p. 334		
MP 44	70–150	VAW 80	p. 314	VAW-E 120/VAW-Z 120	p. 330		
	200	VAW 150	p. 320	VAW-E 170/VAW-Z 170	p. 334		
	250	VAW 177	p. 322	VAW-E 170/VAW-Z 170	p. 334		
MP 52.1	100–150	VAW 122	p. 318	VAW-E 120/VAW-Z 120	p. 330		
	200–250	VAW 177	p. 322	VAW-E 170/VAW-Z 170	p. 334		
	300	VAW 248	p. 326	VAW-E 220/VAW-Z 220	p. 338		
MP 52.2	100–150	VAW 122	p. 318	VAW-E 120/VAW-Z 120	p. 330		
	200–250	VAW 177	p. 322	VAW-E 170/VAW-Z 170	p. 334		
	300	VAW 248	p. 326	VAW-E 220/VAW-Z 220	p. 338		
MP 52.3	150	VAW 122	p. 318	VAW-E 120/VAW-Z 120	p. 330		
	200–250	VAW 177	p. 322	VAW-E 170/VAW-Z 170	p. 334		
	300	VAW 248	p. 326	VAW-E 220/VAW-Z 220	p. 338		
MP 62.1	150–250	VAW 177	p. 322	VAW-E 170/VAW-Z 170	p. 334		
	300–500	VAW 248	p. 326	VAW-E 220/VAW-Z 220	p. 338		
MP 62.2	150–250	VAW 177	p. 322	VAW-E 170/VAW-Z 170	p. 334		
	300–500	VAW 248	p. 326	VAW-E 220/VAW-Z 220	p. 338		
MP 62.3	200–250	VAW 177	p. 322	VAW-E 170/VAW-Z 170	p. 334		

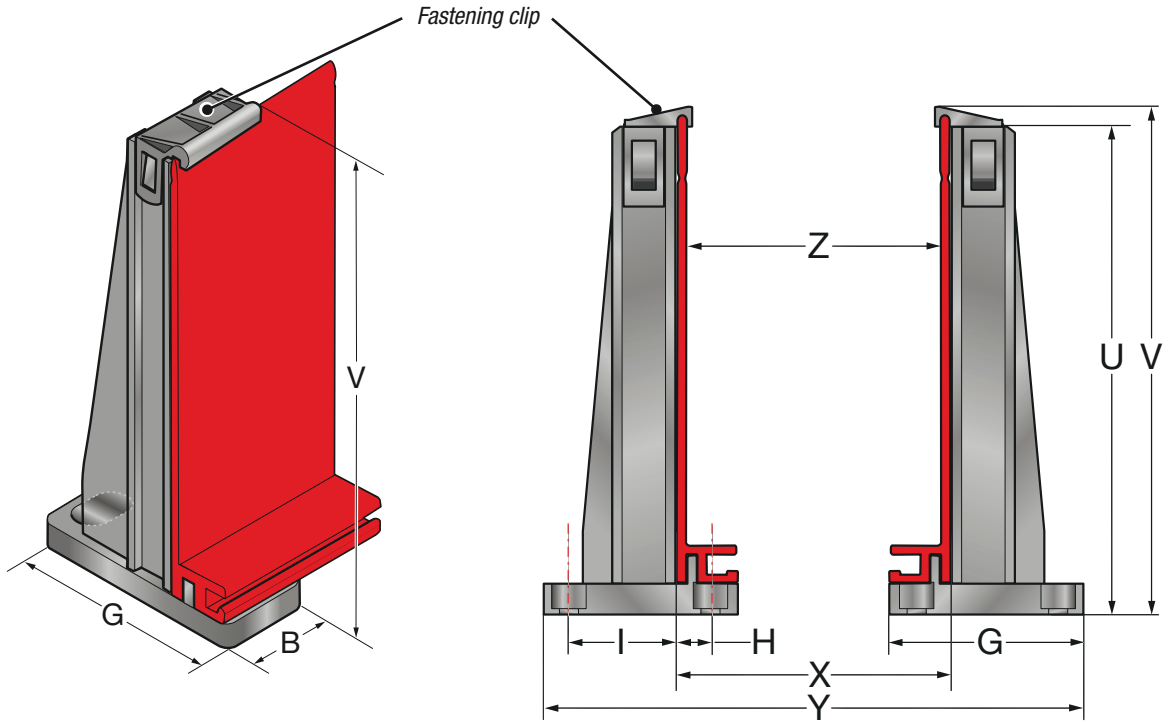
(Continued on the next page)

Which VAW guide channel system matches my cable drag chain?

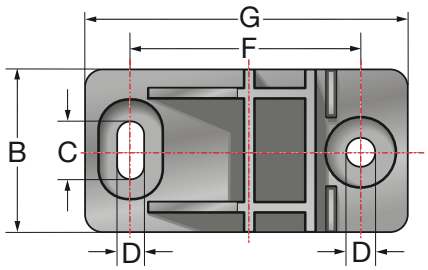
VAW selection for gliding applications

Chain type	Radius mm	VAW plastic from page		VAW aluminium from page		VAW-E stainless steel VAW-Z steel from page	
	300–500			VAW 248	p. 326	VAW-E 220/VAW-Z 220	p. 338
MP 65 G	200–240			VAW 177	p. 322	VAW-E 170/VAW-Z 170	p. 334
	280–350			VAW 248	p. 326	VAW-E 220/VAW-Z 220	p. 338
MP 66	150–240			VAW 177	p. 322	VAW-E 170/VAW-Z 170	p. 334
	280–350			VAW 248	p. 326	VAW-E 220/VAW-Z 220	p. 338
MP 72	150–500			VAW 248	p. 326	VAW-E 220/VAW-Z 220	p. 338
MP 82.2	150–500			VAW 248	p. 326	VAW-E 220/VAW-Z 220	p. 338
MP 82.3	200–500			VAW 248	p. 326	VAW-E 220/VAW-Z 220	p. 338
MP 102	250–500			VAW 248	p. 326	VAW-E 220/VAW-Z 220	p. 338
MP 3000	50–95	VAWK-120	p. 308	VAW 80	p. 314	VAW-E 120/VAW-Z 120	p. 330
	120–150	VAWK-120	p. 308	VAW 122	p. 318	VAW-E 120/VAW-Z 120	p. 330
	200			VAW 150	p. 320	VAW-E 170/VAW-Z 170	p. 334
	300			VAW 248	p. 326	VAW-E 220/VAW-Z 220	p. 338

Variable guide channel system, type VAWK-120



Guide channel side section	
Type	VAWK-120
Length	2000 mm
Order no.	111490100700



Channel bracket type WHK-120
includes fastening clip
Order no.: 111210400000
A = – –
B = 35 mm
C = 12 mm
D = 6.6 mm
E = – –
F = 53 mm
G = 70.15 mm

AB = Chain outside width
SP = Channel clearance*

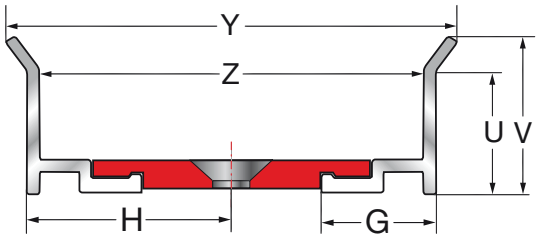
Z = AB + SP
Y = AB + SP + 108.5 mm
X = AB + SP + 5 mm

V = 147 mm
U = 142 mm

G = 70.15 mm
H = 11.15 mm
I = 42 mm

** See page 304 for further details of channel clearance (SP)*

Variable guide channel system, type VAW 25, one-piece inside clamping



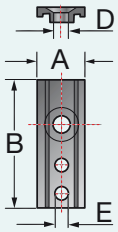
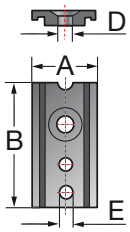
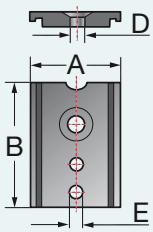
One-piece inside clamping:
the channel side sections on both sides are secured to the mounting surface using a clamping piece.

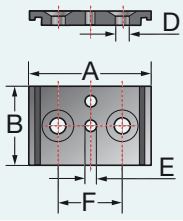
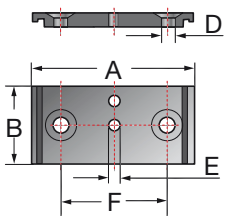
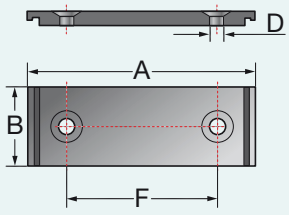
Z = See VAW-DBP table
Y = VAW 25 outside width for one-piece inside clamping

V = 25 mm
U = 20 mm
G = 10.7 mm
H = See VAW-DBP table

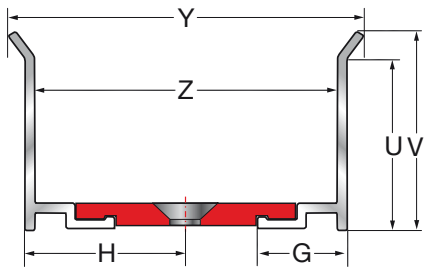
See page 304 for further details of channel clearance (SP)

	Guide channel side section
Type	VAW 25
Length	2000 mm
Order no.	1114101907004

Distance fixing plate	VAW-DBP 14016	VAW-DBP 1420/18018	VAW-DBP 1430/18025
Dimensional drawing			
Order no.	111212220000	111212240000	111212260000
Dimensions in mm	A = 14.0 B = 37.0	A = 18.8 B = 37.0	A = 27.2 B = 37.0
Ø Bore holes / spacing in mm	D = 5.2 E = 4.2	D = 5.2 E = 4.2	D = 5.2 E = 4.2
Channel dimensions	Z = 26.0 Y = 34.0 H = 14.2	Z = 31.0 Y = 39.0 H = 16.6	Z = 39.0 Y = 47.0 H = 20.8
suitable for CDC types with outside widths	from 22 to 24 mm	from 27 to 29 mm	from 35 to 37 mm

Distance fixing plate	VAW-DBP 14040/18037	VAW-DBP 14050/18050	VAW-DBP 18070
Dimensional drawing			
Order no.	111212280000	111212300000	111212320000
Dimensions in mm	A = 38.2 B = 25.0	A = 51.7 B = 25.0	A = 71.9 B = 25.0
Ø Bore holes / spacing in mm	D = 5.2 ¦ E = 3.5 ¦ F = 20.0	D = 5.2 ¦ E = 3.5 ¦ F = 34.0	D = 5.2 F = 48.0
Channel dimensions	Z = 50.0 Y = 58.0 H = 16.3	Z = 64.0 Y = 72.0 H = 16.05	Z = 84.0 Y = 92.0 H = 19.1
suitable for CDC types with outside widths	from 46 to 48 mm	from 60 to 62 mm	from 80 to 82 mm

Variable guide channel system, type VAW 35, one-piece inside clamping



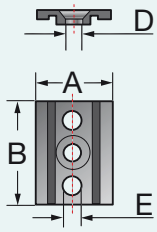
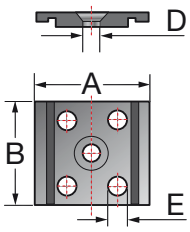
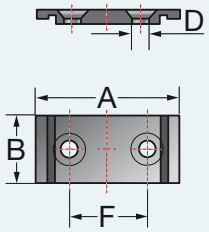
One-piece inside clamping:
the channel side sections on both sides are secured to the mounting surface using a clamping piece.

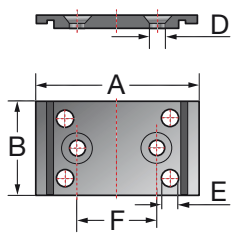
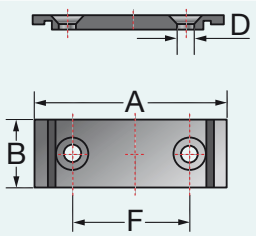
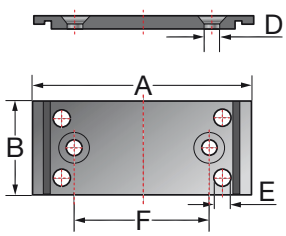
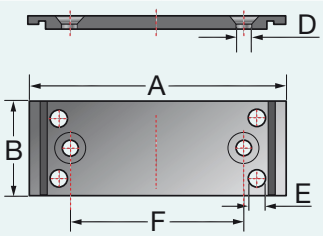
Z = See VAW-DBP table
Y = VAW outside width for one-piece inside clamping

V = 35 mm
U = 30 mm
G = 18 mm
H = See VAW-DBP table

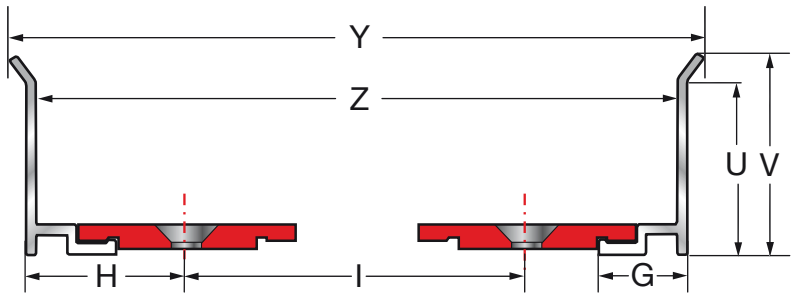
See page 304 for further details of channel clearance (SP)

	Guide channel side section
Type	VAW 35
Length	2000 mm
Order no.	111420100700

Distance fixing plate	VAW-DBP 3001	VAW-DBP 3002	VAW-DBP 3002.5
Dimensional drawing			
Order no.	111212100000	111212120000	111212130000
Dimensions in mm	A = 30.0 B = 40.0	A = 43.5 B = 40.0	A = 62.0 B = 30.0
Ø Bore holes / spacing in mm	D = 6.2 E = 6.5	D = 6.2 E = 6.5	D = 6.2 F = 34.0
Channel dimensions	Z = 46.0 Y = 56.0 H = 25.1	Z = 60.0 Y = 70.0 H = 31.8	Z = 78.0 Y = 88.0 H = 24.1
suitable for CDC types with outside widths	from 42 to 44 mm	from 53 to 57 mm	from 72 to 75 mm

VAW-DBP 3003/35062	VAW-DBP 3003.5	VAW-DBP 3004/35086	VAW-DBP 3005/35102
			
111212140000	111212150000	111212160000	111212180000
A = 68.0 B = 40.0	A = 82.0 B = 30.0	A = 93.5 B = 40.0	A =109.6 B = 40.0
D = 6.2 ¦ E = 6.5 ¦ F = 34.0	D = 6.2 F = 50.0	D = 6.2 ¦ E = 6.5 ¦ F = 58.5	D = 6.2 ¦ E = 6.5 ¦ F = 73.5
Z = 84.0 Y = 94.0 H = 27.1	Z = 98.0 Y =108.0 H = 26.1	Z =110.0 Y =120.0 H = 27.6	Z =126.0 Y =136.0 H = 28.1
from 76 to 82 mm	from 91 to 95 mm	from 101 to 107 mm	from 116 to 123 mm

Variable guide channel system, type VAW 35, two-part inside clamping



	Guide channel side section
Type	VAW 35
Length	2000 mm
Order no.	111420100700

Examples for two-part inside clamping with clamping piece type VAW-DBP 3001				
Channel dimensions	Z =149.0 I =103.0	Y =159.0	Z =151.0 I =178.0	Y =161.0
Sample applications: (IB = Inside width in mm) (AB = Outside width in mm)	MP 25 (IB = 125, AB = 141) MP 36 G (IB = 125, AB = 141)		MP 3000 (IB = 125, AB = 143)	

Examples for two-part inside clamping with clamping piece type VAW-DBP 3001				
Channel dimensions	Z =174.0 I =128.0	Y =184.0	Z =224.0 I =128.0	Y =234.0
Sample applications: (IB = Inside width in mm) (AB = Outside width in mm)	MP 25 (IB = 150, AB = 166)		MP 25 (IB = 200, AB = 216)	

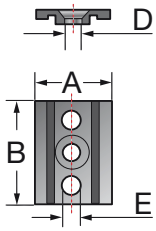
Two-part inside clamping:
The channel side sections are secured to the mounting surface using two clamping pieces of the same type.

Z = Chain outside width + SP*
Z_{Min} = 77 mm**
Y = Z + 10 mm
I = Z - 46 mm
V = 35 mm
U = 30 mm
G = 18 mm
H = 25.1 mm

* *See page 304 for further details of channel clearance (SP)*

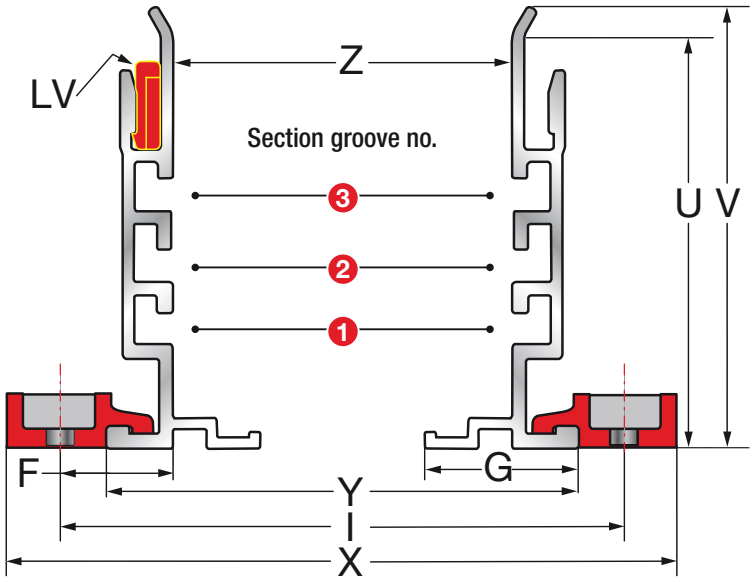
** *Smallest channel inside width for two-part inside clamping. Smaller inside widths are possible only with one-piece inside clamping.*

Clamping piece type VAW-DBP 3001



Order no.: 111212100000
A =30.0 mm
B =40.0 mm
D = 6.2 mm
E = 6.5 mm

Variable guide channel system, type VAW 80, outside clamping



Outside clamping:
The channel side sections are secured to the mounting surface outside using two type KL 50 clamping pieces.

AB = Chain outside width
SP = Channel clearance*

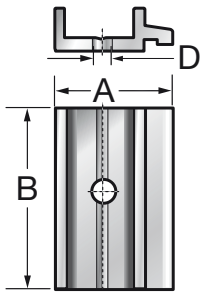
Z = AB + SP
Y = AB + SP + 24 mm
X = AB + SP + 70 mm
V = 80 mm
U = 74 mm
I = Z + 2*F = Z + 47 mm
F = 23.5 mm
G = 28.0 mm

* *See page 304 for further details of channel clearance (SP)*

	Guide channel side section
Type	VAW 80
Length	2000 mm
Order no.	111430100700

	Longitudinal connectors
Type	LV
	
Order no.	111210100000

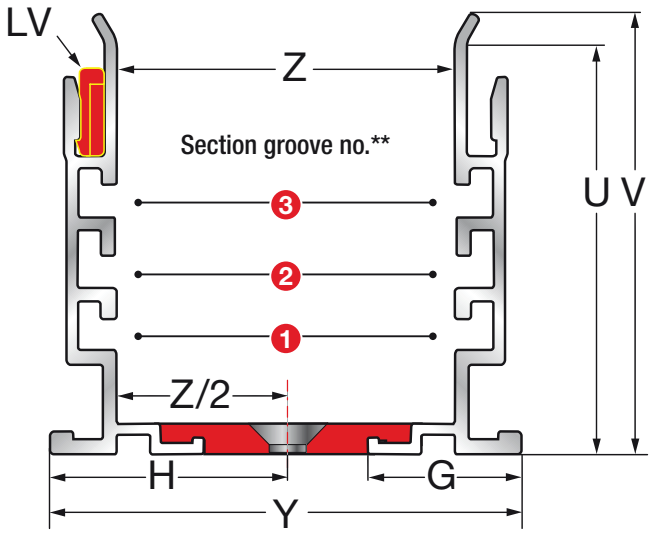
Clamping piece type KL 50



Order no.: 111210300000
A =32.4 mm
B =50.0 mm
D = 6.2 mm

Glide rail section		GSP 20/20	GSP 20/24
			
Order no.		111010100000	111010140000
	For use with in connection with cable drag chains of these types		
Installation of glide rail in section groove number	1	MP 18	– –
	2	MP 25 G, MP 3000	MP 30
	3	MP 35, MP 36 G	– –

Variable guide channel system, type VAW 80, one-piece inside clamping



One-piece inside clamping:
the channel side sections on both sides are secured to the mounting surface using a clamping piece.

AB = Chain outside width
SP = Channel clearance*

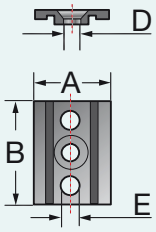
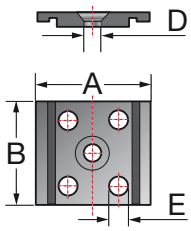
Z = AB + SP
Y = AB + SP + 24 mm
X = AB + SP + 70 mm
V = 80 mm
U = 74 mm
I = Z + 2*H = Z + 47 mm
H = 23.5 mm
G = 28.0 mm

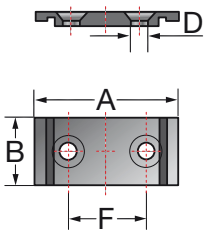
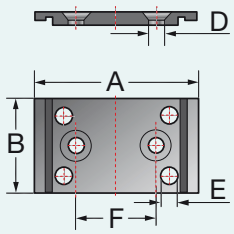
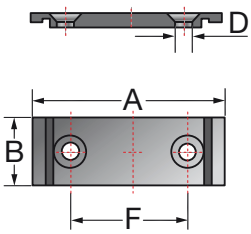
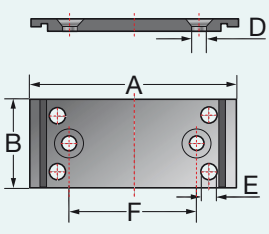
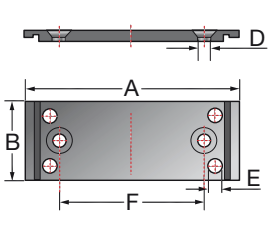
* *See page 304 for further details of channel clearance (SP)*

** *See page 314 for further details of section groove numbers*

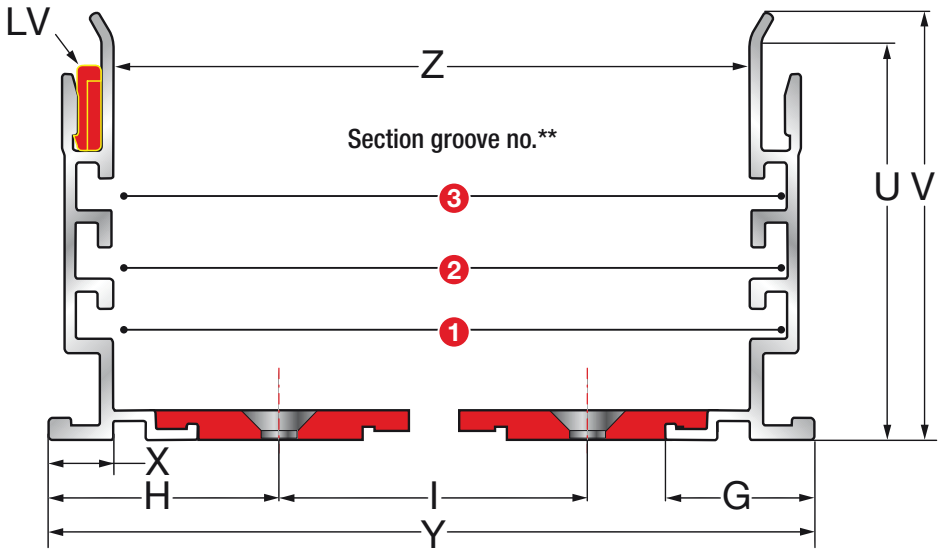
	Guide channel side section
Type	VAW 80
Length	2000 mm
Order no.	111430100700

	Longitudinal connectors
Type	LV
	
Order no.	111210100000

DBP type	VAW-DBP 3001		VAW-DBP 3002	
Dimensional drawing				
Order no.	111212100000		111212120000	
Dimensions in mm	A = 30.0	B = 40.0	A = 43.5	B = 40.0
Ø hole / spacing in mm	D = 6.2	E = 6.5	D = 6.2	E = 6.5
Channel dimensions	Z = 46.0	H = 35.5	Z = 60.0	H = 41.9
suitable for CDC types with outside widths	from 42 to 44 mm		from 53 to 57 mm	

VAW-DBP 3002.5	VAW-DBP 3003/35062	VAW-DBP 3003.5	VAW-DBP 3004/35086	VAW-DBP 3005/35102
				
111212130000	111212140000	111212150000	111212160000	111212180000
A = 62.0 B = 30.0	A = 68.0 B = 40.0	A = 82.0 B = 30.0	A = 93.0 B = 40.0	A = 109.0 B = 40.0
D = 6.2 F = 34.0	D = 6.2 ¦ E = 6.5 ¦ F = 50.0	D = 6.2 F = 50.0	D = 6.2 ¦ E = 6.5 ¦ F = 58.5	D = 6.2 ¦ E = 6.5 ¦ F = 73.5
Z = 78.0 H = 34.1	Z = 84.0 H = 36.1	Z = 98.0 H = 37.1	Z = 110.0 H = 37.6	Z = 126.0 H = 38.2
from 72 to 75 mm	from 76 to 82 mm	from 91 to 95 mm	from 101 to 107 mm	from 116 to 123 mm

Variable guide channel system, type VAW 80, two-part inside clamping



	Guide channel side section
Type	VAW 80
Length	2000 mm
Order no.	111430100700

	Longitudinal connectors
Type	LV
	
Order no.	111210100000

Two-part inside clamping:
The channel side sections are secured to the mounting surface using two clamping pieces of the same type.

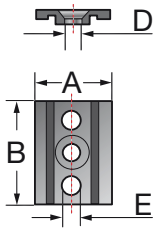
- Z = Chain outside width + SP*
- Z_{Min} = 77 mm***
- Y = Z + 25 mm
- I = Z - 46 mm
- X = 12.5 mm
- V = 35 mm
- U = 30 mm
- G = 18 mm
- H = 25.1 mm

* *See page 304 for further details of channel clearance (SP)*

** *See page 314 for further details of section groove numbers*

*** *Smallest channel inside width for two-part inside clamping. Smaller inside widths are possible only with one-piece inside clamping.*

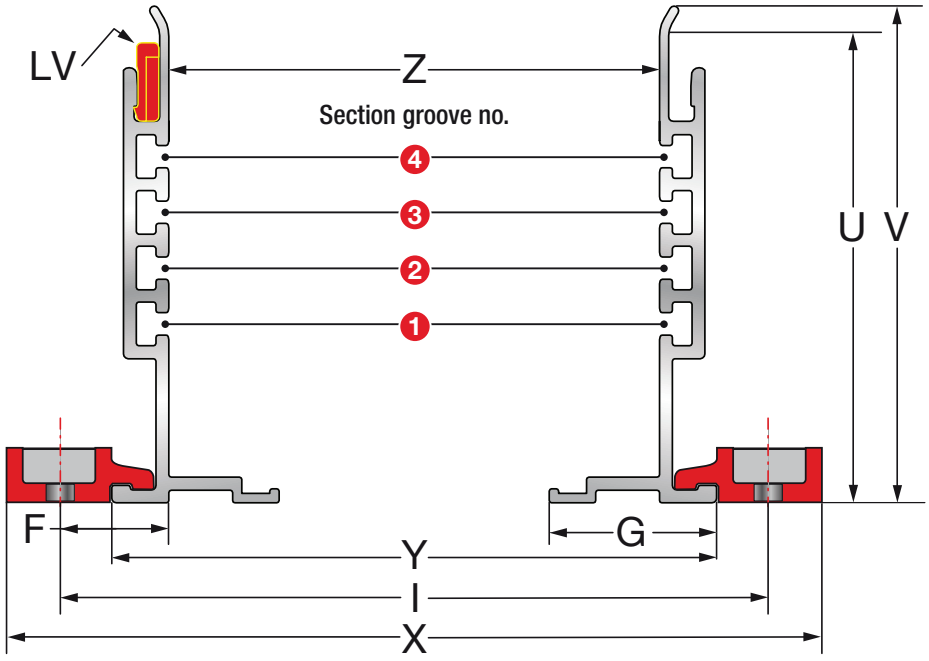
Clamping piece type VAW-DBP 3001



Order no.: 111212100000

- A =30.0 mm
- B =40.0 mm
- D = 6.2 mm
- E = 6.5 mm

Variable guide channel system, type VAW 106, outside clamping



Outside clamping:
The channel side sections are secured to the mounting surface outside using two type KL 50 clamping pieces.

AB = Chain outside width
SP = Channel clearance*

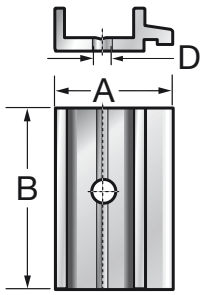
Z = AB + SP
Y = AB + SP + 26 mm
X = AB + SP + 72 mm
V = 106 mm
U = 100 mm
I = Z + 2*F = Z + 49 mm
F = 24.5 mm
G = 36.7 mm

* *See page 304 for further details of channel clearance (SP)*

	Guide channel side section
Type	VAW 106
Length	2000 mm
Order no.	111435100700

	Longitudinal connectors
Type	LV
Order no.	111210100000

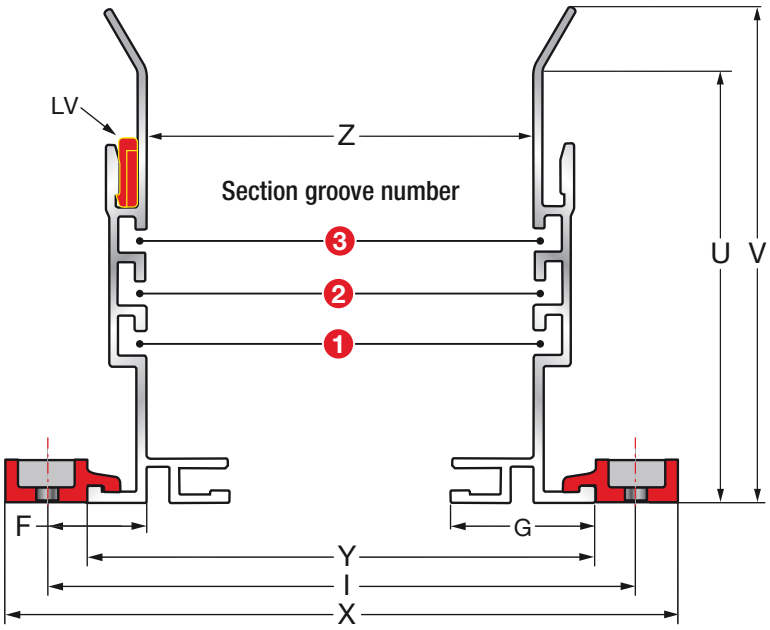
Clamping piece type KL 50



Order no.: 111210300000
A =32.4 mm
B =50.0 mm
D = 6.2 mm

Glide rail section		GSP 5/15	GSP 5/15	GSP 7/13	GSP 9/11
Order no.		111010180000	111010180000	111010200000	111010220000
	For use with in connection with cable drag chains of these types				
Installation of glide rail in section groove number	1	MP 25	MP 35, MP 36 G	– –	MP 30
	2	– –	– –	MP 32.X	– –
	3	MP 41.X, MP 43 G, MP 44	– –		
	4	MP 52.X			

Variable guide channel system, type VAW 122



Outside clamping:
The channel side sections are secured to the mounting surface outside using two type KL 50 clamping pieces.

AB = Chain outside width
SP = Channel clearance*

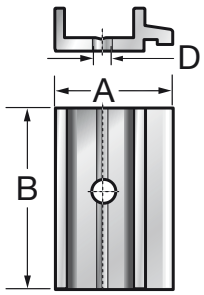
Z = AB + SP*
Y = AB + SP + 30 mm
X = AB + SP + 76 mm
V = 122 mm
U = 105 mm
I = Z + 2*F = Z + 53 mm
F = 26.5 mm
G = 35 mm

* *See page 304 for further details of channel clearance (SP)*

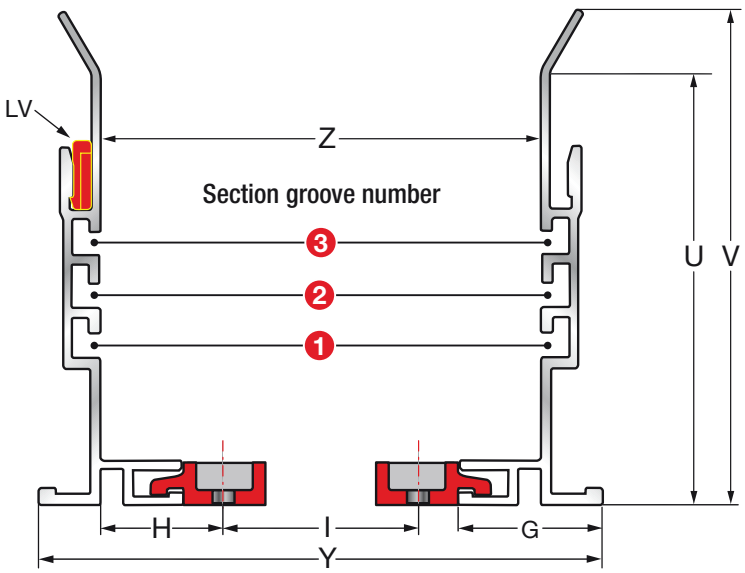
	Guide channel side section
Type	VAW 122
Length	2000 mm
Order no.	111440100700

	Longitudinal connectors	Dampening sections	
Type	LV	4 mm	9 mm
			
Order no.	111210100000	111012100001	111012100002

Clamping piece type KL 50



Order no.: 111210300000
A =32.4 mm
B =50.0 mm
D = 6.2 mm



Two-part inside clamping:
The channel side sections are secured to the mounting surface using two clamping pieces of the same type.

Z = AB + SP*
Z_{Min} = 87 mm**
Y = AB + SP + 30 mm
I = Z - 2*H = Z - 63 mm
V = 122 mm
U = 105 mm
H = 31.5 mm
G = 35 mm

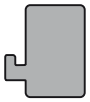
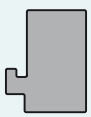
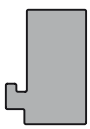
** *Smallest channel inside width for two-part inside clamping. Smaller inside widths are possible only with outside clamping.*

For explanation see Sample order

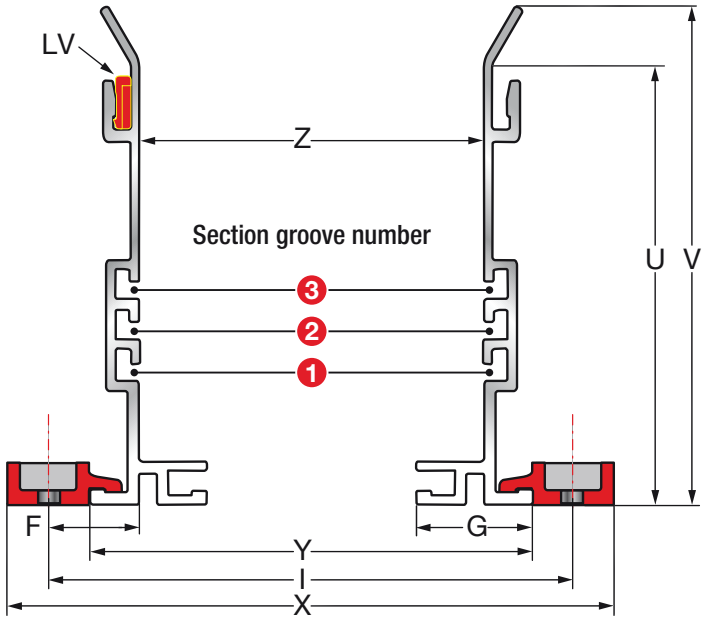
Chain type	Dampening sections: without	Dampening sections: Height 4 mm	Dampening sections: Height 9 mm	Glide rail sections: GSP 20/15	Glide rail sections: GSP 20/20	Glide rail sections: GSP 20/24	Glide rail sections: GSP 20/29	Glide rail sections: GSP 20/34	Glide rail sections: GSP 20/38	Section groove number
MP 25	●			●						1
MP 25 G		◐			◐					1
MP 3000			○	○						2
MP 30	●				●					1
		◐		◐						2
			○		○					2
MP 32	●				●					2
MP 32.2		◐		◐						3
MP 32.3			○		○					3
MP 35	●			●						2
MP 36 G		◐			◐					2
			○	○						3
MP 41.x	●			●						3
MP 43 G		◐			◐					3
MP 44			○					○		2
MP 52.x	●					●				3
		◐					◐			3
			○					○		3

Example: A cable drag chain is to be installed in a VAW 122 unit. Which glide rail needs to be installed in which section groove?

The glide rail for supporting the upper run must (after exceeding the self-supporting length) be installed in the guide channel at the right height. First, locate your application's chain type in the adjacent table (column 1). To determine the matching section groove number, you next need to decide whether or not you are planning to use a (noise) dampening section. The next three columns in the table are used for this purpose. If you then look further to the right in the table, you will find the associated glide rail section and matching section groove number for installing the glide rails.

Glide rail section	GSP 20/15	GSP 20/20	GSP 20/24	GSP 20/29	GSP 20/34	GSP 20/38
						
Order no.	111010280000	111010100000	111010140000	111010120000	111010300000	111010320000

Variable guide channel system, type VAW 150



Outside clamping:
The channel side sections are secured to the mounting surface outside using two type KL 50 clamping pieces.

AB = Chain outside width
SP = Channel clearance*

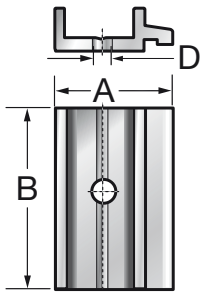
Z = AB + SP*
Y = AB + SP + 30 mm
X = AB + SP + 76 mm
V = 150 mm
U = 133 mm
I = Z + 2*F = Z + 53 mm
F = 26.5 mm
G = 35 mm

* *See page 304 for further details of channel clearance (SP)*

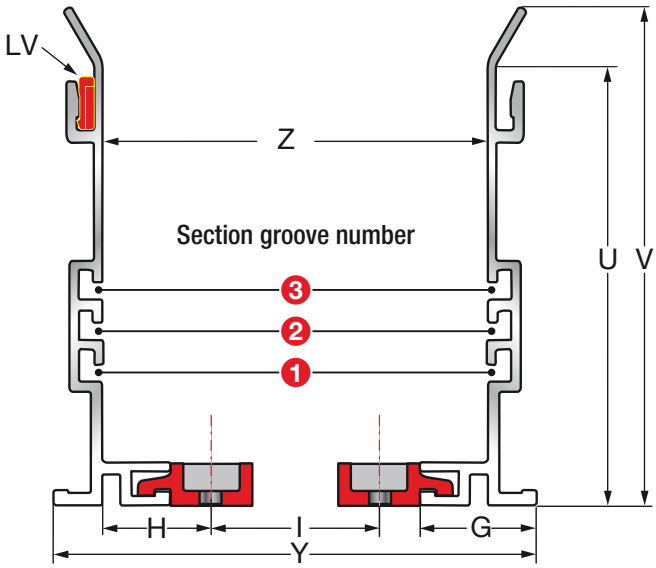
	Guide channel side section
Type	VAW 150
Length	2000 mm
Order no.	111470100700

	Longitudinal connectors	Dampening sections	
Type	LV	4 mm	9 mm
			
Order no.	111210100000	111012100001	111012100002

Clamping piece type KL 50



Order no.: 111210300000
A =32.4 mm
B =50.0 mm
D = 6.2 mm



Two-part inside clamping:
The channel side sections are secured to the mounting surface inside using two type KL 50 clamping pieces.

Z = AB + SP*
Z_{Min} = 87 mm**
Y = AB + SP + 30 mm
I = Z - 2*H = Z - 63 mm
V = 150 mm
U = 133 mm
H = 31.5 mm
G = 35 mm

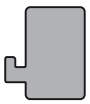
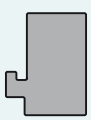
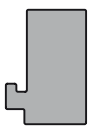
** *Smallest channel inside width for two-part inside clamping. Smaller inside widths are possible only with outside clamping.*

For explanation see Sample order

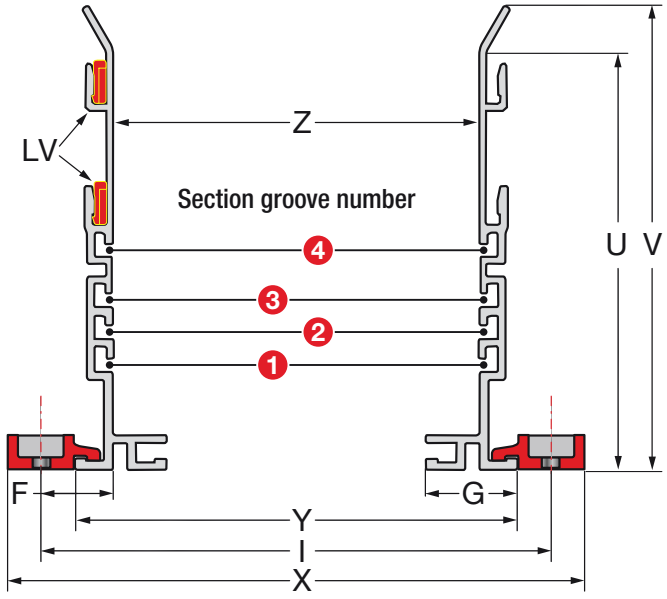
Chain type	Dampening sections: without	Dampening sections: Height 4 mm	Dampening sections: Height 9 mm	Glide rail sections: GSP 20/15	Glide rail sections: GSP 20/20	Glide rail sections: GSP 20/24	Glide rail sections: GSP 20/29	Glide rail sections: GSP 20/34	Glide rail sections: GSP 20/38	Section groove number
MP 25	●			●						1
MP 25 G		◐			◐					1
MP 3000			○	○						2
MP 30	●				●					1
		◐		◐						2
			○		○					2
MP 32	●				●					2
MP 32.2		◐		◐						3
MP 32.3			○		○					3
MP 35	●			●						2
MP 36 G		◐			◐					2
			○	○						3
MP 41.x	●			●						3
MP 43 G		◐			◐					3
MP 44			○					○		2
MP 52.x	●					●				3
		◐					◐			3
			○					○		3

Example: A cable drag chain is to be installed in a VAW 150 unit. Which glide rail section needs to be installed in which section groove?

The glide rail for supporting the upper run must (after exceeding the self-supporting length) be installed in the guide channel at the right height. First, locate your application's chain type in the adjacent table (column 1). To determine the matching section groove number, you next need to decide whether or not you are planning to use a (noise) dampening section. The next three columns in the table are used for this purpose. If you then look further to the right in the table, you will find the associated glide rail section and matching section groove number for installing the glide rails.

Glide rail section	GSP 20/15	GSP 20/20	GSP 20/24	GSP 20/29	GSP 20/34	GSP 20/38
						
Order no.	111010280000	111010100000	111010140000	111010120000	111010300000	111010320000

Variable guide channel system, type VAW 177



Outside clamping:
The channel side sections are secured to the mounting surface outside using two type KL 50 clamping pieces.

AB = Chain outside width
SP = Channel clearance*

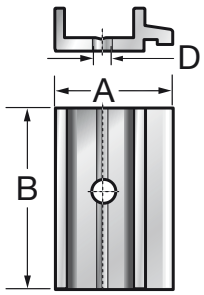
Z = AB + SP*
Y = AB + SP + 30 mm
X = AB + SP + 76 mm
V = 177 mm
U = 160 mm
I = Z + 2*F = Z + 53 mm
F = 26.5 mm
G = 35 mm

* *See page 304 for further details of channel clearance (SP)*

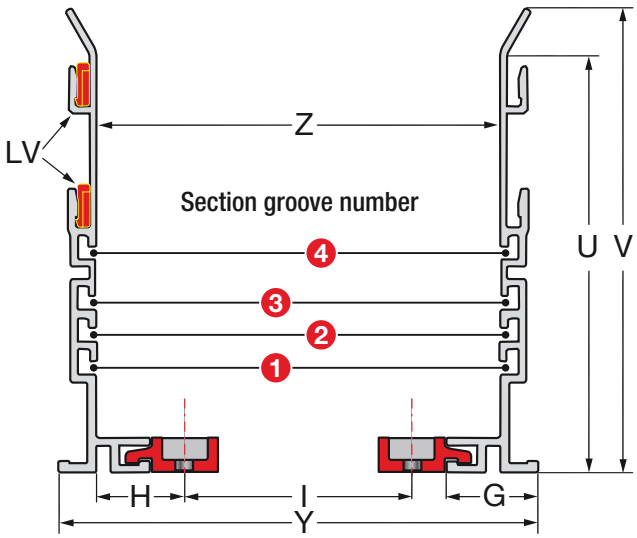
	Guide channel side section	
Type	VAW 177	VAW 177
Length	2000 mm	5000 mm
Order no.	111450100700	111450120700

	Longitudinal connectors	Dampening sections	
Type	LV	4 mm	9 mm
			
Order no.	111210100000	111012100001	111012100002

Clamping piece type KL 50



Order no.: 111210300000
A =32.4 mm
B =50.0 mm
D = 6.2 mm



Two-part inside clamping:
The channel side sections are secured to the mounting surface inside using two type KL 50 clamping pieces.

Z = AB + SP*
Z_{Min} = 87 mm**
Y = AB + SP + 30 mm
I = Z - 2*H = Z - 63 mm
V = 177 mm
U = 160 mm
H = 31.5 mm
G = 35 mm

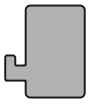
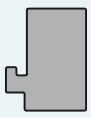
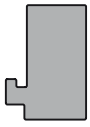
** *Smallest channel inside width for two-part inside clamping. Smaller inside widths are possible only with outside clamping.*

For explanation see Sample order

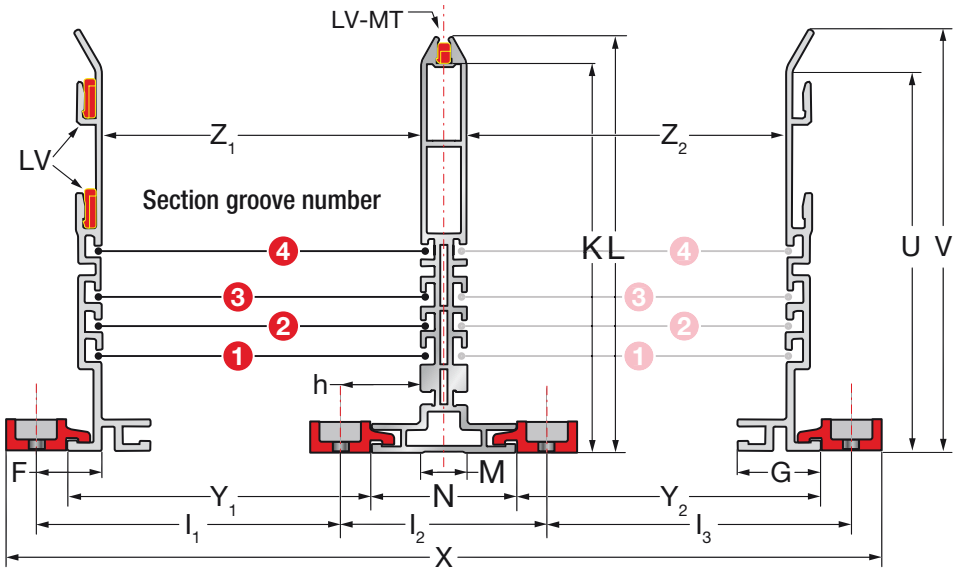
Chain type	Dampening sections: without	Dampening sections: Height 4 mm	Dampening sections: Height 9 mm	Glide rail sections: GSP 20/15	Glide rail sections: GSP 20/20	Glide rail sections: GSP 20/24	Glide rail sections: GSP 20/29	Glide rail sections: GSP 20/34	Glide rail sections: GSP 20/38	Section groove number
MP 25	●			●						1
MP 25 G		◐			◐					1
MP 3000			○	○						2
MP 30	●				●					1
		◐		◐						2
			○		○					2
MP 32	●				●					2
MP 32.2		◐		◐						3
MP 32.3			○		○					3
MP 35	●			●						2
MP 36 G		◐			◐					2
			○	○						3
MP 41.x	●			●						3
MP 43 G		◐			◐					3
MP 44			○					○		2
MP 52.x	●					●				3
		◐					◐			3
			○		○					4
MP 62.x	●				●					4
		◐					◐			4
			○					○		4
MP 65 G	●			●						4
MP 66		◐			◐					4

Example: A cable drag chain is to be installed in a VAW 177 unit. Which glide rail needs to be installed in which section groove?

The glide rail for supporting the upper run must (after exceeding the self-supporting length) be installed in the guide channel at the right height. First, locate your application's chain type in the adjacent table (column 1). To determine the matching section groove number, you next need to decide whether or not you are planning to use a (noise) dampening section. The next three columns in the table are used for this purpose. If you then look further to the right in the table, you will find the associated glide rail section and matching section groove number for installing the glide rails.

Glide rail section	GSP 20/15	GSP 20/20	GSP 20/24	GSP 20/29	GSP 20/34	GSP 20/38
						
Order no.	111010280000	111010100000	111010140000	111010120000	111010300000	111010320000

Variable guide channel system, type VAW 177, with centre piece



	Guide channel side section		Guide channel centre piece	
Type	VAW 177	VAW 177	VAW MT 177	VAW MT 177
Length	2000 mm	5000 mm	2000 mm	5000 mm
Order no.	111450100700	111450120700	111450140700	111450160700

	Longitudinal connectors		Dampening sections	
Type	LV	LV-MT	4 mm	9 mm
				
Order no.	111210100000	111210120000	111012100001	111012100002

Outside clamping:
The channel side sections are secured to the mounting surface outside using two type KL 50 clamping pieces.

AB = Chain outside width
SP = Channel clearance*

Z_1 = AB + SP*
Z_2 = AB + SP*
$Y_1 = Z_1$ - 5 mm
$Y_2 = Z_2$ - 5 mm
$X = Z_1 + N + Z_2$ + 76 mm

V = 177 mm
U = 160 mm
U = 176 mm
K = 165 mm

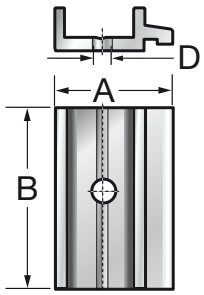
N = 62 mm
M = 22 mm

$l_1 = Z_1$ - 5 mm
l_2 = 85 mm
$l_3 = Z_2$ - 5 mm

F = 26.5 mm
h = 31.5 mm
G = 35 mm

* *See page 304 for further details of channel clearance (SP)*

Clamping piece type KL 50



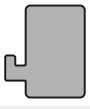
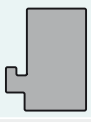
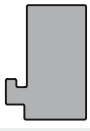
Order no.: 111210300000
A =32.4 mm
B =50.0 mm
D = 6.2 mm

For explanation see Sample order

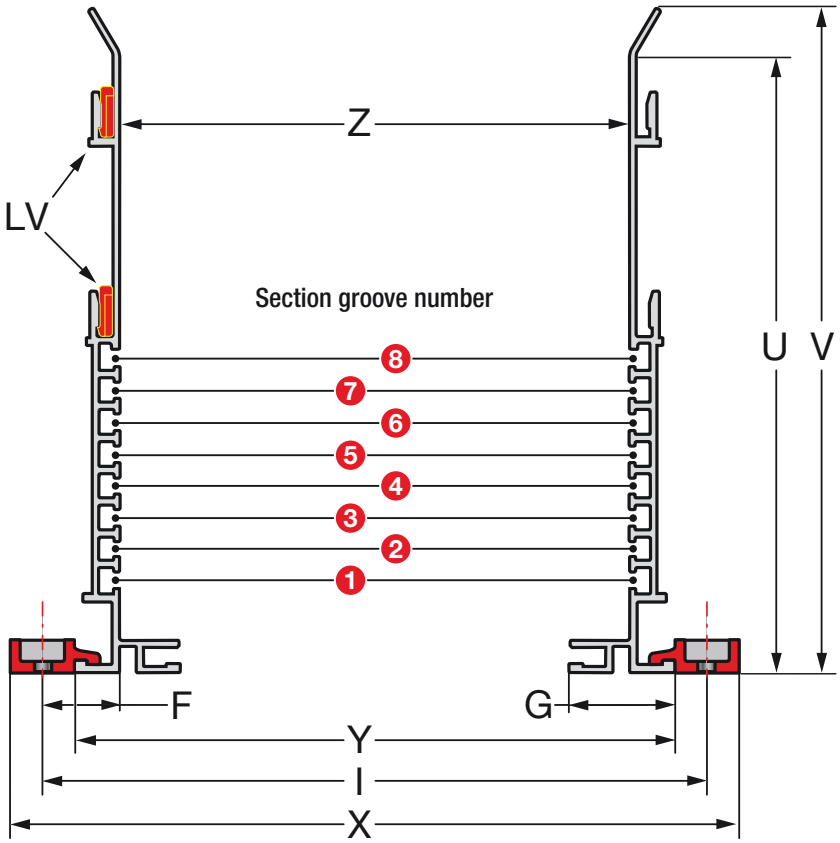
Chain type	Dampening sections: without	Dampening sections: Height 4 mm	Dampening sections: Height 9 mm	Glide rail sections: GSP 20/15	GSP 20/20	GSP 20/24	GSP 20/29	GSP 20/34	GSP 20/38	Section groove number
MP 25 MP 25 G MP 3000	●	◐	○	●	◐	○				1 1 2
MP 30	●	◐	○	◐	●	○				1 2 2
MP 32 MP 32.2 MP 32.3	●	◐	○	◐	●	○				2 3 3
MP 35 MP 36 G	●	◐	○	●	◐	○				2 2 3
MP 41.x MP 43 G MP 44	●	◐	○	●	◐			○		3 3 2
MP 52.x	●	◐	○		●	◐		○		3 3 4
MP 62.x	●	◐	○		●	◐		○		4 4 4
MP 65 G MP 66	●	◐		●	◐					4 4

Example: A cable drag chain is to be installed in a VAW 177 unit. Which glide rail needs to be installed in which section groove?

The glide rail for supporting the upper run must (after exceeding the self-supporting length) be installed in the guide channel at the right height. First, locate your application's chain type in the adjacent table (column 1). To determine the matching section groove number, you next need to decide whether or not you are planning to use a (noise) dampening section. The next three columns in the table are used for this purpose. If you then look further to the right in the table, you will find the associated glide rail section and matching section groove number for installing the glide rails.

Glide rail section	GSP 20/15	GSP 20/20	GSP 20/24	GSP 20/29	GSP 20/34	GSP 20/38
						
Order no.	111010280000	111010100000	111010140000	111010120000	111010300000	111010320000

Variable guide channel system, type VAW 248, outside clamping



Outside clamping:
The channel side sections are secured to the mounting surface outside using two type KL 50 clamping pieces.

AB = Chain outside width
SP = Channel clearance*

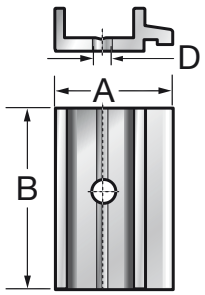
Z = AB + SP*
Y = AB + SP + 30 mm
X = AB + SP + 76 mm
V = 248 mm
U = 229 mm
I = Z + 2*F = Z + 53 mm
F = 26.5 mm
G = 35 mm

* *See page 304 for further details of channel clearance (SP)*

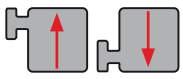
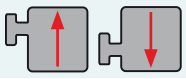
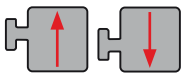
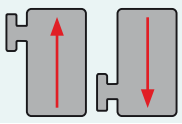
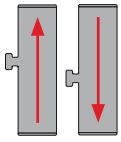
	Guide channel side section	
Type	VAW 248	VAW 248
Length	2000 mm	5000 mm
Order no.	111480100700	111480120700

	Longitudinal connectors	Dampening sections	
Type	LV	4 mm	9 mm
			
Order no.	111210100000	111012100001	111012100002

Clamping piece type KL 50

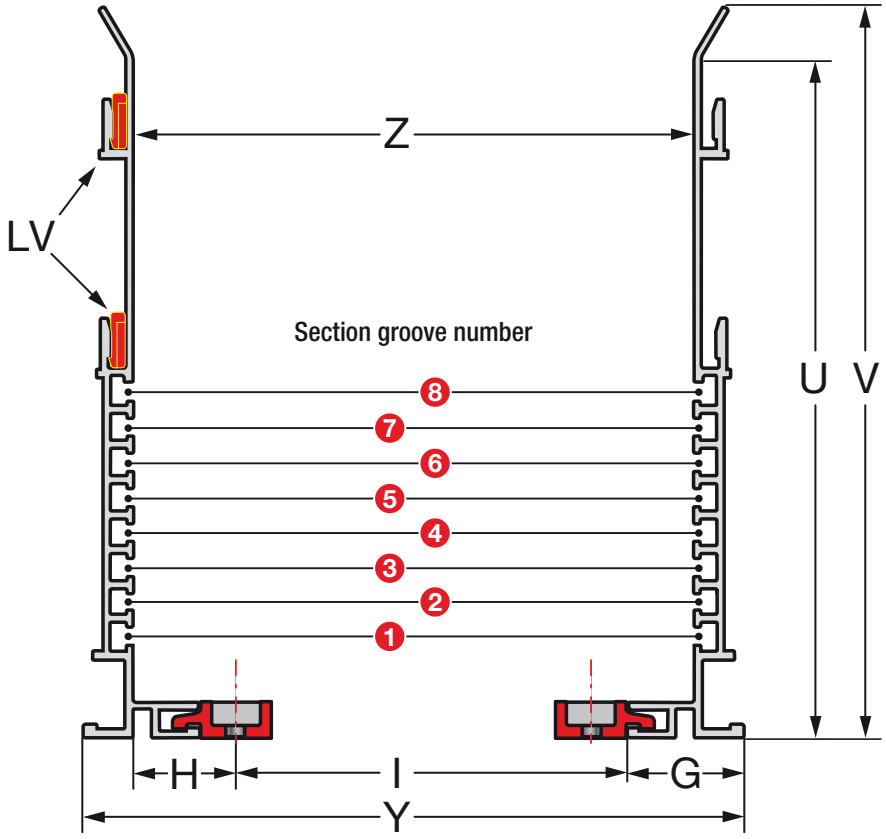


Order no.: 111210300000
A =32.4 mm
B =50.0 mm
D = 6.2 mm

Glide rail section	GSP 5/15	GSP 7/13	GSP 9/11	GSP 33/9	GSP 30/39
					
Order no.	111010180000	111010200000	111010220000	111010240000	111010340000

Note: A cable drag chain is to be installed in a VAW 248 unit. Which glide rail needs to be installed in which section groove?
See assignment table on page 329.

Variable guide channel system, type VAW 248, two-part inside clamping



Two-part inside clamping:
The channel side sections are secured to the mounting surface inside using two type KL 50 clamping pieces.

Z = AB + SP*
Z_{Min} = 87 mm**
Y = AB + SP + 30 mm
I = Z - 2*H = Z - 63 mm
V = 248 mm
U = 229 mm
H = 31.5 mm
G = 35 mm

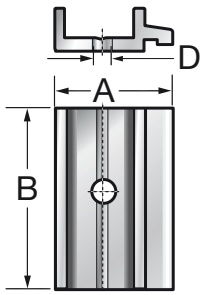
* *See page 304 for further details of channel clearance (SP)*

** *Smallest channel inside width for two-part inside clamping. Smaller inside widths are possible only with outside clamping.*

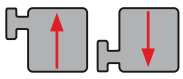
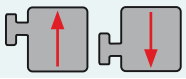
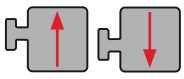
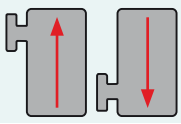
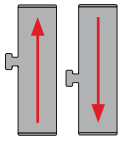
	Guide channel side section	
Type	VAW 248	VAW 248
Length	2000 mm	5000 mm
Order no.	111480100700	111480120700

	Longitudinal connectors	Dampening sections	
Type	LV	4 mm	9 mm
			
Order no.	111210100000	111012100001	111012100002

Clamping piece type KL 50

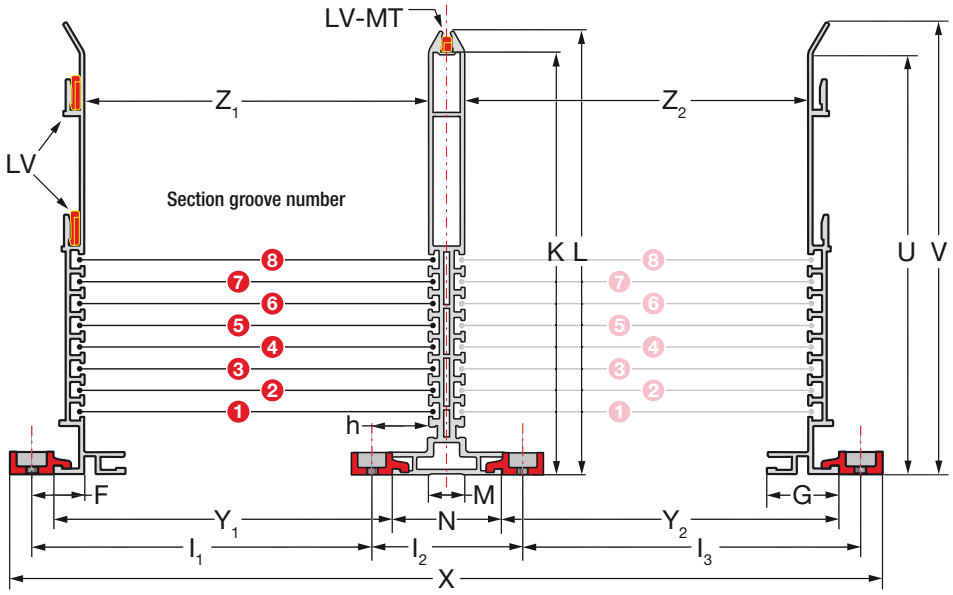


Order no.: 111210300000
A =32.4 mm
B =50.0 mm
D = 6.2 mm

Glide rail section	GSP 5/15	GSP 7/13	GSP 9/11	GSP 33/9	GSP 30/39
					
Order no.	111010180000	111010200000	111010220000	111010240000	111010340000

Note: A cable drag chain is to be installed in a VAW 248 unit. Which glide rail needs to be installed in which section groove?
See assignment table on page 329.

Variable guide channel system, type VAW 248, with centre piece



Outside clamping:
The channel side sections are secured to the mounting surface outside using two type KL 50 clamping pieces.

AB = Chain outside width
SP = Channel clearance*

Z_1 = AB + SP*
Z_2 = AB + SP*
$Y_1 = Z_1$ - 5 mm
$Y_2 = Z_2$ - 5 mm
$X = Z_1 + N + Z_2 + 76$ mm

V = 248 mm
U = 229 mm
L = 246 mm
K = 235 mm

N = 62 mm
M = 22 mm

$I_1 = Z_1$ - 5 mm
I_2 = 85 mm
$I_3 = Z_2$ - 5 mm

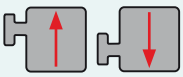
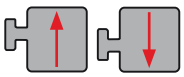
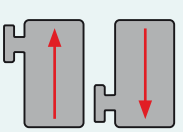
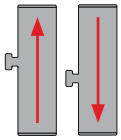
F = 26.5 mm
h = 31.5 mm
G = 35 mm

* *See page 304 for further details of channel clearance (SP)*

	Guide channel side section		Guide channel centre piece	
Type	VAW 248	VAW 248	VAW MT 248	VAW MT 248
Length	2000 mm	5000 mm	2000 mm	5000 mm
Order no.	111480100700	111480120700	111480140700	111480160700

	Longitudinal connectors		Dampening sections	
Type	LV	LV-MT	4 mm	9 mm
				
Order no.	111210100000	111210120000	111012100001	111012100002

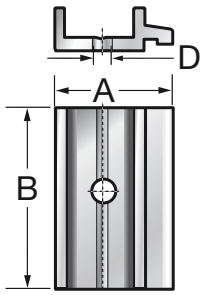
Glide rail sections, mounting direction and order no.

GSP 5/15	GSP 7/13	GSP 9/11	GSP 33/9	GSP 30/39
				
111010180000	111010200000	111010220000	111010240000	111010340000

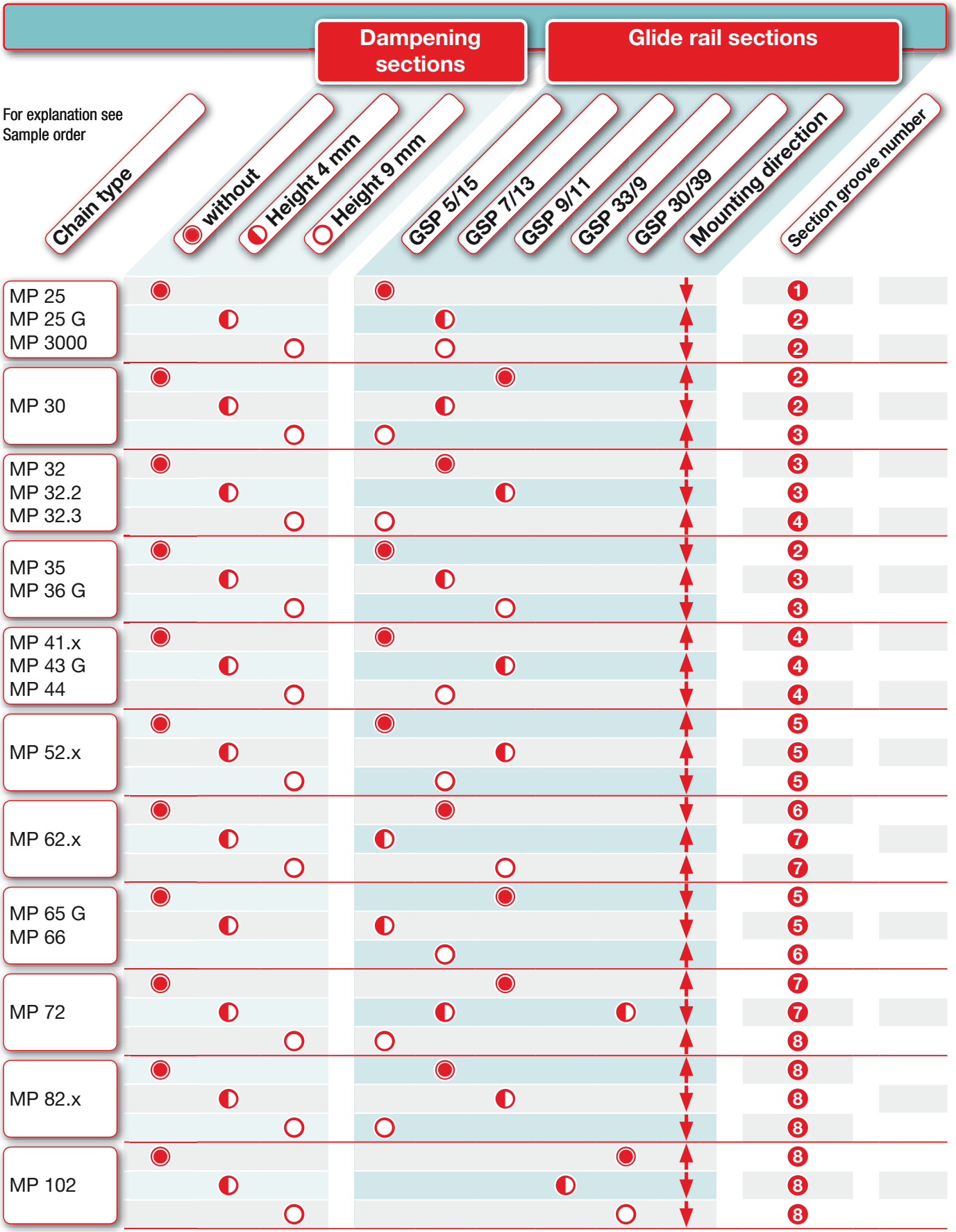
Example: A cable drag chain is to be installed in a VAW 248 unit. Which glide rail needs to be installed in which section groove?

The glide rail for supporting the upper run must (after exceeding the self-supporting length) be installed in the guide channel at the right height. First, locate your application's chain type in the adjacent table (column 1). To determine the matching section groove number, you next need to decide whether or not you are planning to use a (noise) dampening section. The next three columns in the table are used for this purpose. If you then look further to the right in the table, you will find the associated glide rail section, the mounting direction and matching section groove number for installing the glide rails.

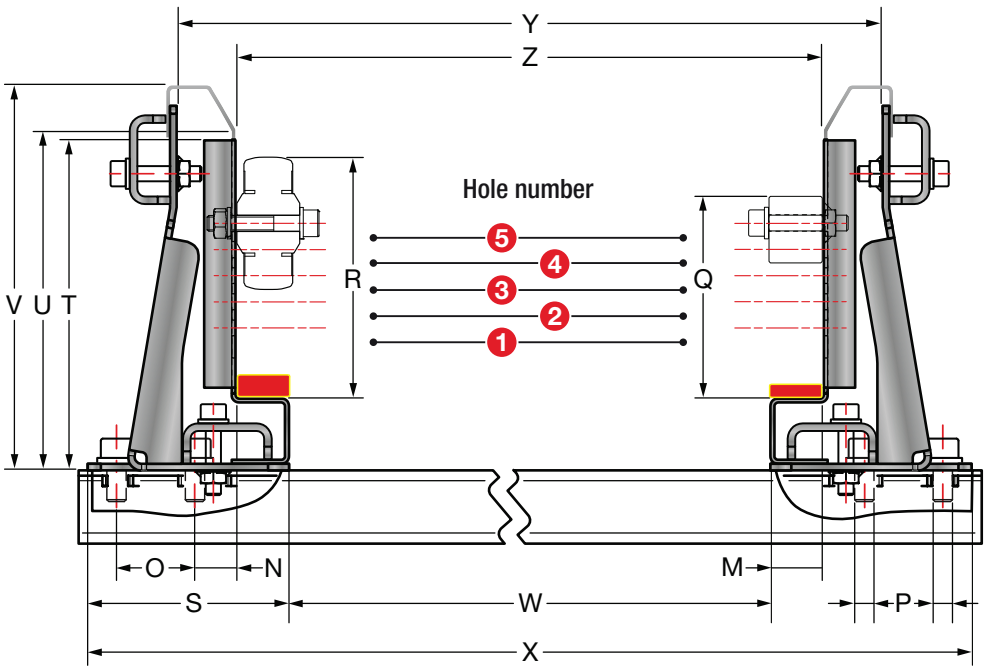
Clamping piece type KL 50



Order no.: 111210300000
A =32.4 mm
B =50.0 mm
D = 6.2 mm


Dampening sections
Glide rail sections
For explanation see Sample order
Chain type
without
Height 4 mm
Height 9 mm
GSP 5/15
GSP 7/13
GSP 9/11
GSP 33/9
GSP 30/39
Mounting direction
Section groove number
MP 25
MP 25 G
MP 3000
MP 30
MP 32
MP 32.2
MP 32.3
MP 35
MP 36 G
MP 41.x
MP 43 G
MP 44
MP 52.x
MP 62.x
MP 65 G
MP 66
MP 72
MP 82.x
MP 102

Variable guide channel system, type VAW-E 120/VAW-Z 120



AB = Chain outside width
SP = Channel clearance*

Z = AB + SP
Y = AB + SP + 45 mm
X = AB + SP + 154 mm
W = AB + SP – 41 mm

V = 147.5 mm
U = 131.3 mm
T = 126.3 mm
S = 77 mm

R = See table p. 331
Q = See table p. 331

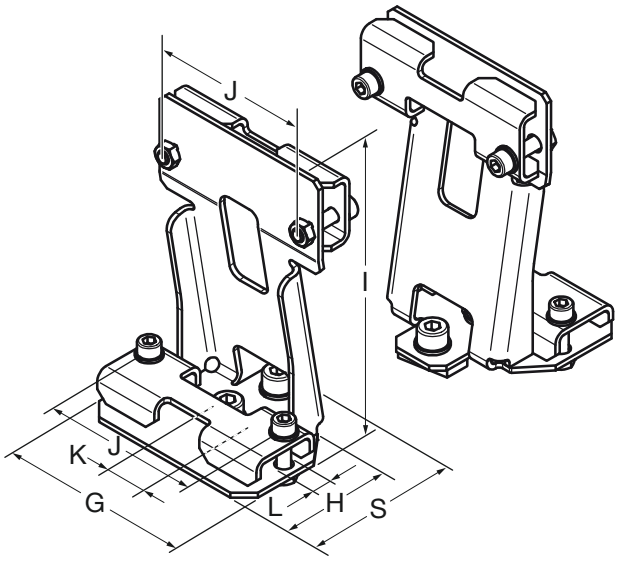
P = 9 mm Ø
O = 29 mm

N = 16.0 mm
M = 20.5 mm

** See page 304 for further details of channel clearance (SP)*

	Stainless steel guide channel, side section	Steel guide channel, side section
Type	VAW-E 120	VAW-Z 120
Length	2000 mm	2000 mm
Order no.	111510100700	111510100710
Material	Stainless steel V2A	Galvanised steel
	If saltwater resistance is required, V4A stainless steel is available on request.	

Channel bracket set WHE-120	Channel bracket set WHZ-120
Order no.: 80124088	Order no.: 80124089
Material: Stainless steel V2A	Material: Galvanised steel
G = 92 mm	G = 92 mm
H = 55 mm	H = 55 mm
I = 139.5 mm	I = 139.5 mm
J = 78 mm	J = 78 mm
K = 20 mm	K = 20 mm
L = 9 mm	L = 9 mm
S = 77 mm	S = 77 mm



Accessories for type VAW-E 120 and VAW-Z 120

Rubber dampeners for lowering the noise level, for installation on the running surfaces of variable guide channels.
Glide rails and ball-bearing mounted rollers in a range of designs as a surface for the upper run of the cable drag chain.
See Accessories, page 333.

Type VAW-E 120/VAW-Z 120

For explanation see Sample order

Chain type	Rubber dampener: none	Rubber dampener: Height 4 mm	Rubber dampener: Height 9 mm	Roller wheel: Roller wheel Ø 50 mm	Roller wheel: Dimension R mm	Roller wheel: GSP 10/15	Glide rail: Dimension Q mm	Glide rail: Mounting direction	Glide rail: Hole number
MP 25 MP 25 G	●				●	37.0	E above		1
		◐			◐	42.0	F above		1
			○		○	47.0	E above		2
			○	○ 52.0					1
MP 30	●				●	42.0	F above		1
		◐			◐	47.0	E above		2
			○		○	52.0	F above		2
		◐		◐ 52.0					1
			○	○ 52.0					1
MP 32 MP 32.2 MP 32.3	●				●	52.0	F above		2
		◐			◐	57.0	E above		3
			○		○	62.0	F above		3
	●			● 62.0					2
		◐		◐ 62.0					2
			○	○ 62.0					2
MP 35 MP 36 G	●				●	47.0	E above		2
		◐			◐	52.0	F above		2
			○		○	57.0	E above		3
	●			● 52.0					1
		◐		◐ 52.0					1
			○	○ 62.0					2
MP 41 MP 41.2 MP 41.3	●				●	62.0	F above		3
		◐			◐	67.0	E above		4
			○		○	72.0	F above		4
	●			● 62.0					2
		◐		◐ 72.0					3
			○	○ 72.0					3

(Continued on the next page)

Type VAW-E 120/VAW-Z 120

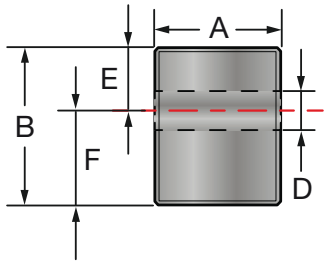
Chain type	Rubber dampener: none	Rubber dampener: Height 4 mm	Rubber dampener: Height 9 mm	Roller wheel: Roller wheel Ø 50 mm	Roller wheel: Dimension R mm	Glide rail: GSP 10/15	Glide rail: Dimension Q mm	Glide rail: Mounting direction	Glide rail: Hole number
MP 52.1 MP 52.2 MP 52.3	●			●	77.0	E above		5	
		◐		◐	77.0	E above		5	
			○	○	82.0	F above		5	
	●			●	82.0			4	
		◐		◐	82.0			4	
			○	○	92.0			5	
MP 3000		○		○	37.0	E above		1	
			◐	◐	42.0	F above		1	
			○	○	52.0			1	

Example: An MP 32 is to be installed in a VAW-E 120 unit. What options are available?

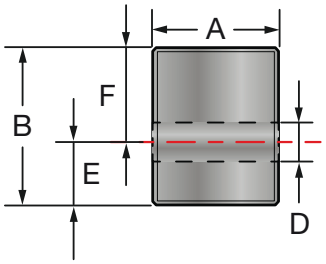
A glide rail (the appropriate type to use is GSP 10/15 with asymmetrically drilled holes) can be used here both with and without a rubber dampener. Without a rubber dampener, the glide rail is secured in hole number 2, with the larger hole spacing located above (dimension F in the drawing, F^{above} in the table). This ensures the upper edge has a clearance of 52 mm above the chain support.
If a rubber dampener is to be utilised (to achieve lower levels of running noise), then the glide rail's upper edge needs to be positioned higher. This is achieved either by turning the glide rail over and/or by securing it in a hole located higher up.

For using a roller wheel instead of a glide rail, the installation options are listed in the same way: the roller wheel is secured in hole number 2 with or without a rubber dampener, with an upper edge clearance of 62 mm from the chain support surface.

Accessories for all variable guide channels, type VAW-E 120/VAW-Z 120

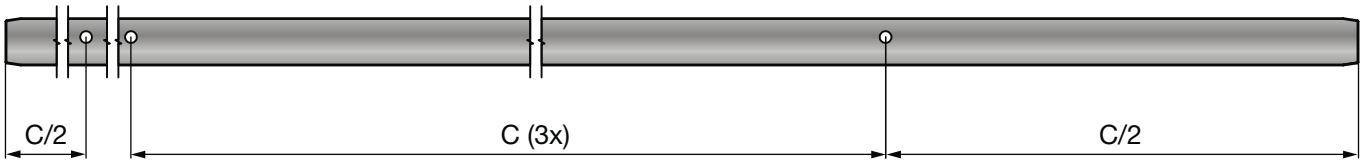


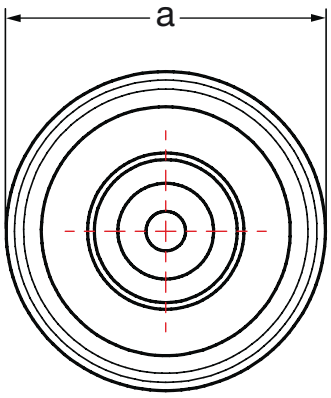
Mounting direction: E *above*

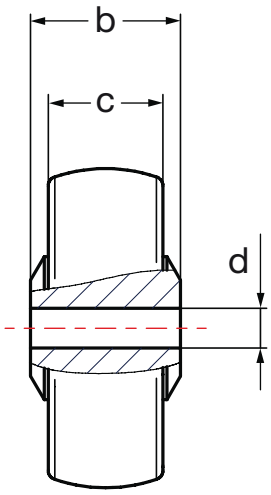


Mounting direction: F *above*

Glide rail GSP 10/15	Order no. 111010260000
Length: 2000 mm	
A = 20 mm	
B = 25.0 mm	
C = 500.0 mm	
D = 6.2 mm	
E = 10 mm	
F = 15 mm	

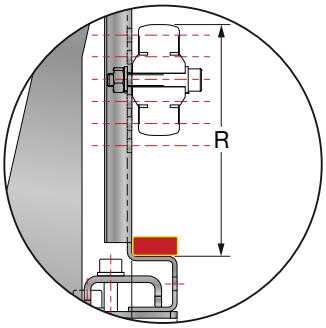


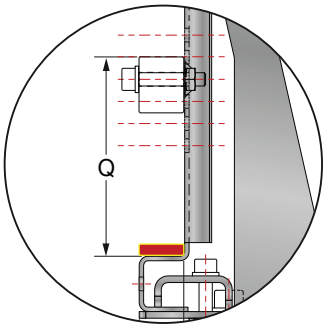




Roller wheel
for standard applications
Order no.: by request
a = 50.0 mm
b = 23.5 mm
c = 18.0 mm
d = 6.0 mm

Roller wheel
electrically conductive, for EMC applications
Order no.: by request
a = 50.0 mm
b = 23.5 mm
c = 18.0 mm
d = 6.0 mm

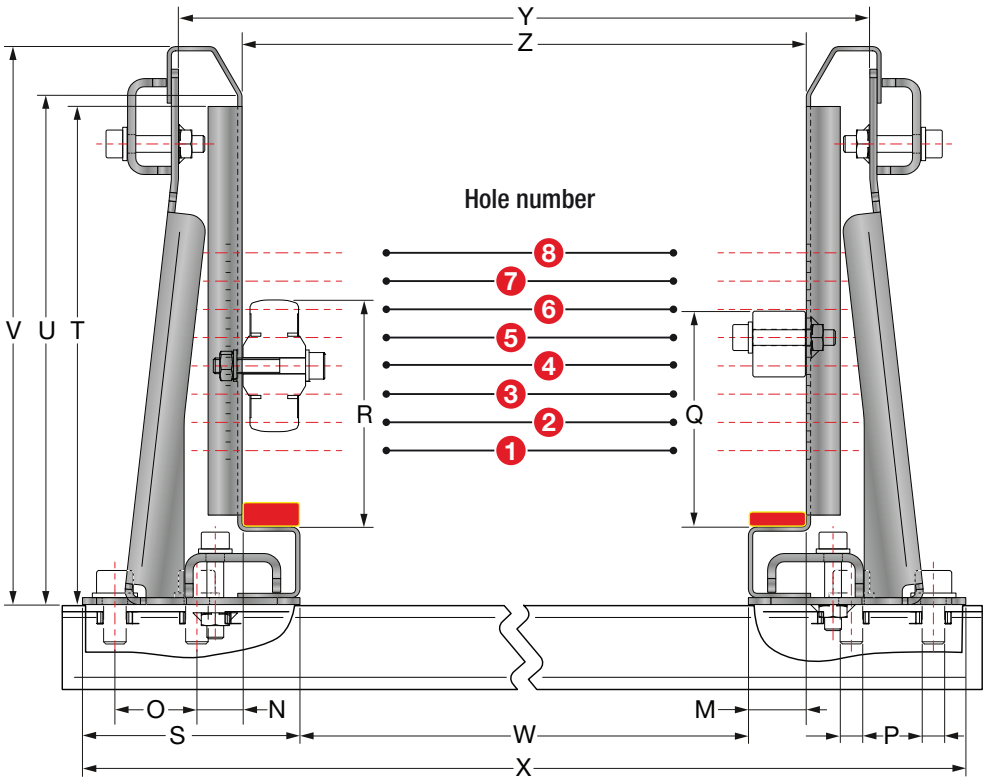




VAW rubber pyramid, self-adhesive
Roller: 10 m, width: 20 mm, height: 4 mm
Order no.: 111012100000
Material: NR/SBR

VAW 2K dampener section, self-adhesive
Length: 2000 mm, width: 20 mm, height: 9 mm
Order no.: 111012100002
Material: EPDM/TPE/acrylate

Variable guide channel system, type VAW-E 170/VAW-Z 170



AB = Chain outside width
SP = Channel clearance*

Z = AB + SP
Y = AB + SP + 45 mm
X = AB + SP + 154 mm
W = AB + SP – 41 mm

V = 197.5 mm
U = 181.3 mm
T = 176.3 mm
S = 77 mm

R = See table p. 335
Q = See table p. 335

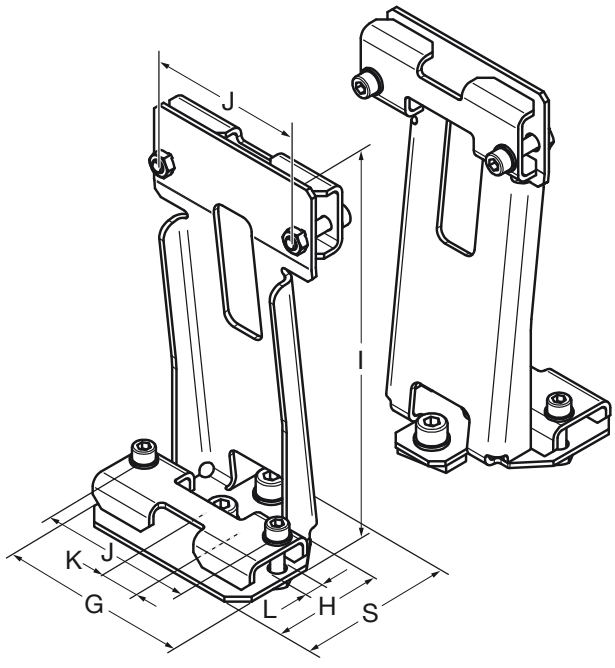
P = 9 mm Ø
O = 35.5 mm

N = 16.0 mm
M = 20.5 mm

** See page 304 for further details of channel clearance (SP)*

	Stainless steel guide channel, side section	Steel guide channel, side section
Type	VAW-E 170	VAW-Z 170
Length	2000 mm	2000 mm
Order no.	111520100700	111520100710
Material	Stainless steel V2A	Galvanised steel
	If saltwater resistance is required, V4A stainless steel is available on request.	

Channel bracket set WHE-170	Channel bracket set WHZ-170
Order no.: 80124091	Order no.: 80124092
Material: Stainless steel V2A	Material: Galvanised steel
G = 92 mm	G = 92 mm
H = 55 mm	H = 55 mm
I = 189.5 mm	I = 189.5 mm
J = 78 mm	J = 78 mm
K = 20 mm	K = 20 mm
L = 9 mm	L = 9 mm
S = 77 mm	S = 77 mm



Accessories for type VAW-E 170 and VAW-Z 170

Rubber dampeners for lowering the noise level, for installation on the running surfaces of variable guide channels.
Glide rails and ball-bearing mounted rollers in a range of designs as a surface for the upper run of the cable drag chain.
See Accessories, page 337.

Type VAW-E 170/VAW-Z 170

For explanation see Sample order

Chain type	Rubber dampener: none	Rubber dampener: Height 4 mm	Rubber dampener: Height 9 mm	Roller wheel: Roller wheel Ø 50 mm	Roller wheel: Dimension R mm	Roller wheel: GSP 10/15	Glide rail: Dimension Q mm	Glide rail: Mounting direction	Glide rail: Hole number
MP 25 MP 25 G	●				●	37.0	E above		1
		◐			◐	42.0	F above		1
			○		○	47.0	E above		2
			○	○ 52.0					1
MP 30	●				●	42.0	F above		1
		◐			◐	47.0	E above		2
			○		○	52.0	F above		2
		◐		◐ 52.0					1
			○	○ 52.0					1
MP 32 MP 32.2 MP 32.3	●				●	52.0	F above		2
		◐			◐	57.0	E above		3
			○		○	62.0	F above		3
	●			● 62.0					2
		◐		◐ 62.0					2
			○	○ 62.0					2
MP 35 MP 36 G	●				●	47.0	E above		2
		◐			◐	52.0	F above		2
			○		○	57.0	E above		3
	●			● 52.0					1
		◐		◐ 52.0					1
			○	○ 62.0					2
MP 41 MP 41.2 MP 41.3	●				●	62.0	F above		3
		◐			◐	67.0	E above		4
			○		○	72.0	F above		4
	●			● 62.0					2
		◐		◐ 72.0					3
			○	○ 72.0					3

(Continued on the next page)

Type VAW-E 170/VAW-Z 170

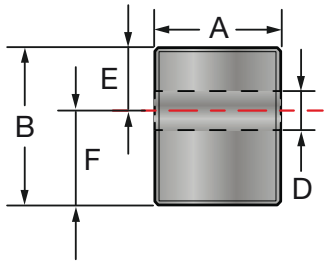
Chain type	Rubber dampener: none	Rubber dampener: Height 4 mm	Rubber dampener: Height 9 mm	Roller wheel: Roller wheel Ø 50 mm	Roller wheel: Dimension R mm	Glide rail: GSP 10/15	Glide rail: Dimension Q mm	Glide rail: Mounting direction	Glide rail: Hole number
MP 52.1 MP 52.2 MP 52.3	●				●	77.0	E above		5
		◐			◐	77.0	E above		5
			○		○	82.0	F above		5
	●			●	82.0				4
		◐		◐	82.0				4
			○	○	92.0				5
MP 62.1 MP 62.2 MP 62.3	●				●	92.0	F above		6
		◐			◐	97.0	E above		7
			○		○	102.0	F above		7
	●			●	102.0				6
		◐		◐	102.0				6
			○	○	112.0				7
MP 72	●				●	102.0	F above		7
		◐			◐	107.0	E above		8
			○		○	112.0	F above		8
	●			●	102.0				6
		◐		◐	112.0				7
			○	○	112.0				7
MP 3000	●				●	37.0	E above		1
		◐			◐	37.0	E above		1
			○		○	42.0	F above		1
			○	○	52.0				1

Example: An MP 32 is to be installed in a VAW-E 170 unit. What options are available?

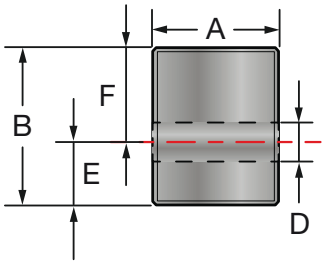
A glide rail (the appropriate type to use is GSP 10/15 with asymmetrically drilled holes) can be used here both with and without a rubber dampener. Without a rubber dampener, the glide rail is secured in hole number 2, with the larger hole spacing located above (dimension F in the drawing, F above in the table). This ensures the upper edge has a clearance of 52 mm above the chain support.
If a rubber dampener is to be utilised (to achieve lower levels of running noise), then the glide rail's upper edge needs to be positioned higher. This is achieved either by turning the glide rail over and/or by securing it in a hole located higher up.

For using a roller wheel instead of a glide rail, the installation options are listed in the same way: the roller wheel is secured in hole number 2 with or without a rubber dampener, with an upper edge clearance of 62 mm from the chain support surface.

Accessories for all variable guide channels, type VAW-E 170/VAW-Z 170

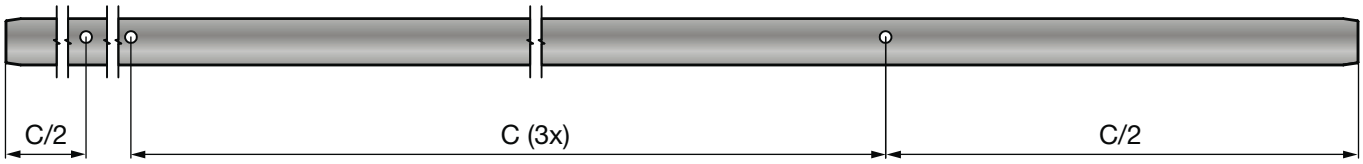


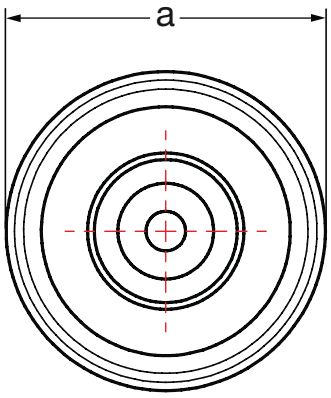
Mounting direction: E *above*

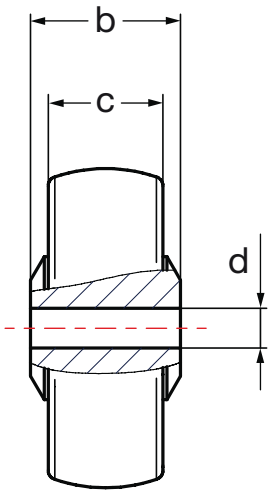


Mounting direction: F *above*

Glide rail GSP 10/15	Order no. 111010260000
Length: 2000 mm	
A = 20 mm	
B = 25.0 mm	
C = 500.0 mm	
D = 6.2 mm	
E = 10 mm	
F = 15 mm	

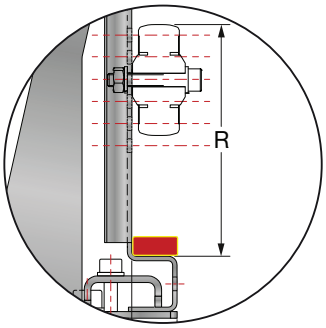


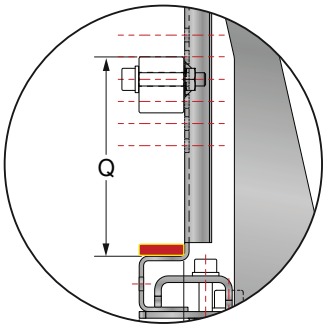




Roller wheel
for standard applications
Order no.: by request
a = 50.0 mm
b = 23.5 mm
c = 18.0 mm
d = 6.0 mm

Roller wheel
electrically conductive, for EMC applications
Order no.: by request
a = 50.0 mm
b = 23.5 mm
c = 18.0 mm
d = 6.0 mm

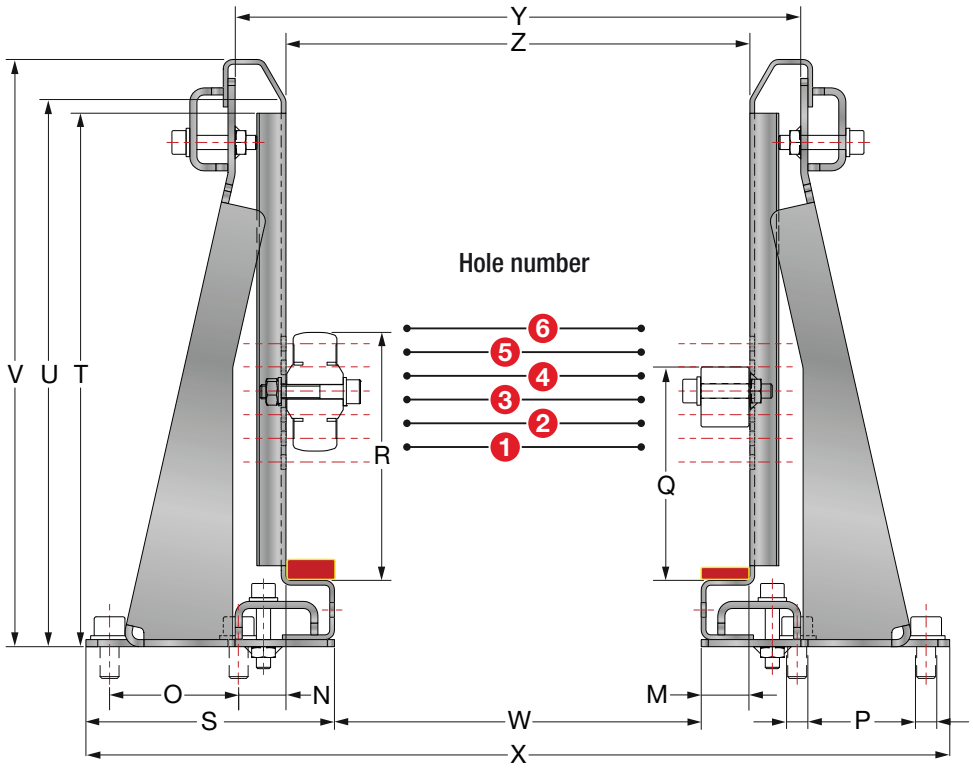




VAW rubber pyramid, self-adhesive
Roller: 10 m, width: 20 mm, height: 4 mm
Order no.: 111012100000
Material: NR/SBR

VAW 2K dampener section, self-adhesive
Length: 2000 mm, width: 20 mm, height: 9 mm
Order no.: 111012100002
Material: EPDM/TPE/acrylate

Variable guide channel system, type VAW-E 220/VAW-Z 220



AB = Chain outside width
SP = Channel clearance*

Z = AB + SP
Y = AB + SP + 85 mm
X = AB + SP + 169 mm
W = AB + SP – 41 mm

V = 248 mm
U = 231 mm
T = 220 mm
S = 105 mm

R = See table p. 339
Q = See table p. 339

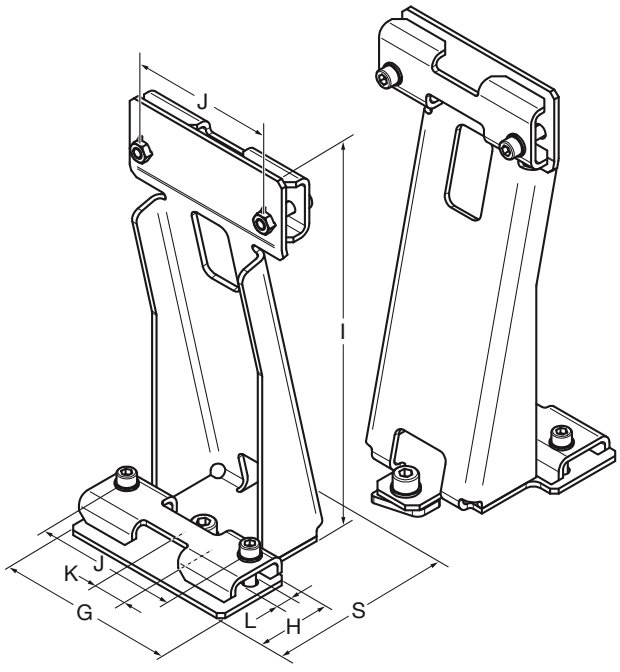
P = 9 mm Ø
O = 55 mm

N = 20 mm
M = 20.5 mm

** See page 304 for further details of channel clearance (SP)*

	Stainless steel guide channel, side section	Steel guide channel, side section
Type	VAW-E 220	VAW-Z 220
Length	2000 mm	2000 mm
Order no.	111500100700	111500100710
Material	Stainless steel V2A	Galvanised steel
	If saltwater resistance is required, V4A stainless steel is available on request.	

Channel bracket set WHE-220	Channel bracket set WHZ-220
Order no.: 80124094	Order no.: 80124095
Material: Stainless steel V2A	Material: Galvanised steel
G = 105 mm	G = 105 mm
H = 45 mm	H = 45 mm
I = 240 mm	I = 240 mm
J = 85 mm	J = 85 mm
K = 20 mm	K = 20 mm
L = 9 mm	L = 9 mm
S = 105 mm	S = 105 mm



Accessories for type VAW-E 220 and VAW-Z 220

Rubber dampeners for lowering the noise level, for installation on the running surfaces of variable guide channels.
Glide rails and ball-bearing mounted rollers in a range of designs as a surface for the upper run of the cable drag chain.
See Accessories, page 341.

Type VAW-E 220/VAW-Z 220

For explanation see Sample order

Chain type	Rubber dampener: none	Rubber dampener: Height 4 mm	Rubber dampener: Height 9 mm	Roller wheel: Roller wheel Ø 50 mm	Roller wheel: Dimension R mm	Roller wheel: GSP 10/15	Glide rail: Dimension Q mm	Glide rail: Mounting direction	Glide rail: Hole number
MP 25 MP 25 G	●				●	37.0	E above		1
		◐			◐	42.0	F above		1
			○		○	47.0	E above		2
			○	○ 52.0					1
MP 30	●				●	42.0	F above		1
		◐			◐	47.0	E above		2
			○		○	52.0	F above		2
		◐		◐ 52.0					1
			○	○ 52.0					1
MP 32 MP 32.2 MP 32.3	●				●	52.0	F above		2
		◐			◐	57.0	E above		3
			○		○	62.0	F above		3
	●			● 62.0					2
		◐		◐ 62.0					2
			○	○ 62.0					2
MP 35 MP 36 G	●				●	47.0	E above		2
		◐			◐	52.0	F above		2
			○		○	57.0	E above		3
	●			● 52.0					1
		◐		◐ 52.0					1
			○	○ 62.0					2
MP 41 MP 41.2 MP 41.3	●				●	62.0	F above		3
		◐			◐	67.0	E above		4
			○		○	72.0	F above		4
	●			● 62.0					2
		◐		◐ 72.0					3
			○	○ 72.0					3

(Continued on the next page)

Type VAW-E 220/VAW-Z 220

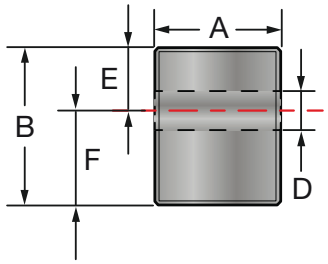
Chain type	Rubber dampener: none	Rubber dampener: Height 4 mm	Rubber dampener: Height 9 mm	Roller wheel: Roller wheel Ø 50 mm	Roller wheel: Dimension R mm	Glide rail: GSP 10/15	Glide rail: Dimension Q mm	Glide rail: Mounting direction	Glide rail: Hole number
MP 52.1 MP 52.2 MP 52.3	●				●	77.0	E above		5
		◐			◐	77.0	E above		5
			○		○	82.0	F above		5
	●			●	82.0				4
		◐		◐	82.0				4
			○	○	92.0				5
MP 62.1 MP 62.2 MP 62.3	●				●	92.0	F above		6
		◐			◐	97.0	E above		7
			○		○	102.0	F above		7
	●			●	102.0				6
		◐		◐	102.0				6
			○	○	112.0				7
MP 72	●				●	102.0	F above		7
		◐			◐	107.0	E above		8
			○		○	112.0	F above		8
	●			●	102.0				6
		◐		◐	112.0				7
			○	○	112.0				7
MP 3000	●				●	37.0	E above		1
		◐			◐	37.0	E above		1
			○		○	42.0	F above		1
			○	○	52.0				1

Example: An MP 32 is to be installed in a VAW-E 220 unit. What options are available?

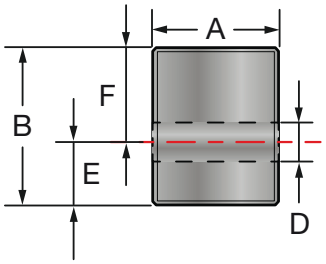
A glide rail (the appropriate type to use is GSP 10/15 with asymmetrically drilled holes) can be used here both with and without a rubber dampener. Without a rubber dampener, the glide rail is secured in hole number 2, with the larger hole spacing located above (dimension F in the drawing, F above in the table). This ensures the upper edge has a clearance of 52 mm above the chain support.
If a rubber dampener is to be utilised (to achieve lower levels of running noise), then the glide rail's upper edge needs to be positioned higher. This is achieved either by turning the glide rail over and/or by securing it in a hole located higher up.

For using a roller wheel instead of a glide rail, the installation options are listed in the same way: the roller wheel is secured in hole number 2 with or without a rubber dampener, with an upper edge clearance of 62 mm from the chain support surface.

Accessories for all variable guide channels, type VAW-E 220/VAW-Z 220

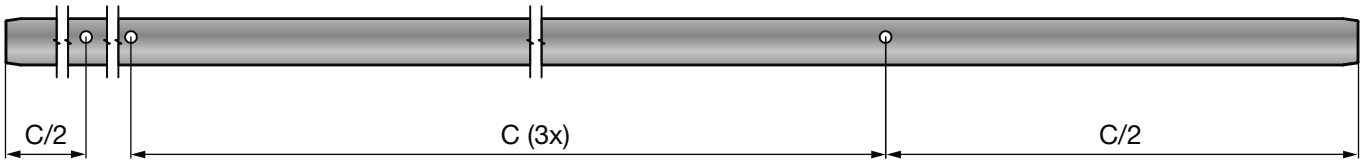


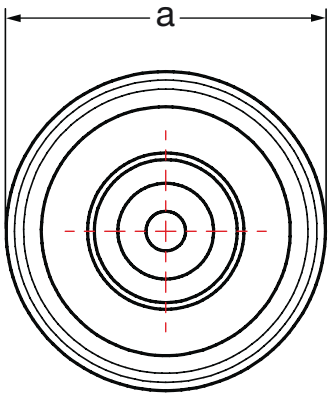
Mounting direction: E *above*

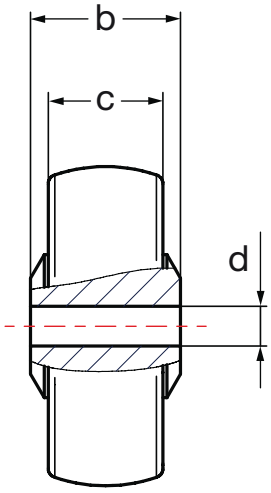


Mounting direction: F *above*

Glide rail GSP 10/15	Order no. 111010260000
Length: 2000 mm	
A = 20 mm	
B = 25.0 mm	
C = 500.0 mm	
D = 6.2 mm	
E = 10 mm	
F = 15 mm	

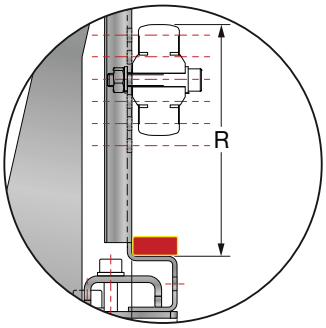


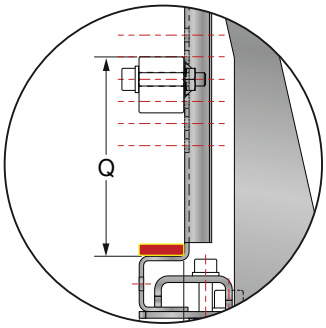




Roller wheel
for standard applications
Order no.: by request
a = 50.0 mm
b = 23.5 mm
c = 18.0 mm
d = 6.0 mm

Roller wheel
electrically conductive, for EMC applications
Order no.: by request
a = 50.0 mm
b = 23.5 mm
c = 18.0 mm
d = 6.0 mm





VAW rubber pyramid, self-adhesive
Roller: 10 m, width: 20 mm, height: 4 mm
Order no.: 111012100000
Material: NR/SBR

VAW 2K dampener section, self-adhesive
Length: 2000 mm, width: 20 mm, height: 9 mm
Order no.: 111012100002
Material: EPDM/TPE/acrylate


EFK