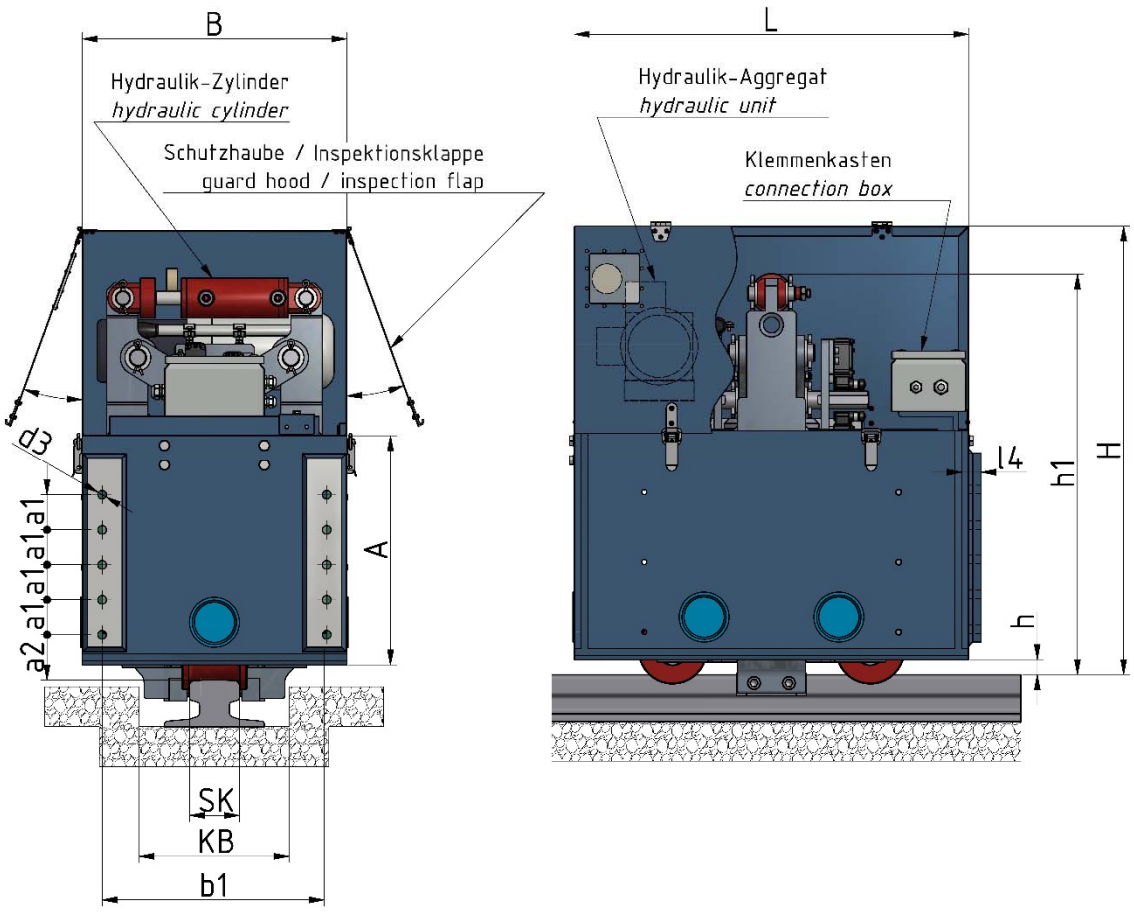
Rail Clamp
Type ZWA



Functional principle

- Closing by spring force with toggle lever system – adjustable by throttle, closing time 9 – 25 s.
- Opening by hydraulic-cylinder, hydraulic unit inclusive. An emergency hand-pump can be used in case of emergency.
- No loss of clamping force resulting from jaw wear, because the reduced spring force is compensated by the increasing toggle lever transmission.
- Limit switches control the position of rail clamp “clamp open“, “clamp closed“ and “jaw wear”.
- Vertical movement compensation ± 20 mm
- Horizontal movement compensation ± 25 mm floating by guidance of idlers

Holding force and dimensions

Size	Holding force			Gew.	A	a1	a2	B	b1	d3	H	h	h1	SK	KB	L	l4
μ =	0,25	0,4	0,5											max	1)		
	kN	kN	kN	kg	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm
ZWA - 40	40	64	80														
ZWA - 60	60	96	120	640	**460**	70	90	**550**	450	M20	**910**	30	805	**100**	> 300	**820**	40
ZWA - 80	80	128	160														
ZWA - 100	100	160	200														
ZWA - 130	130	208	260	950	**455**	70	100	**650**	500	M24	**970**	35	870	**120**	> 350	**920**	45
ZWA - 160	160	256	320														
ZWA - 200	200	320	400														
ZWA - 260	260	416	520														
ZWA - 320	320	512	640														
ZWA - 400	400	640	800	1600	**510**	80	110	**820**	700	M30	**1080**	40	980	**120**	> 370	**1060**	50
ZWA - 500	500	800	1000														
ZWA - 600	600	960	1200														

Note: 1) Limiting size is valid for clamping jaw cassettes – variation of standard dimension on request as a special design.

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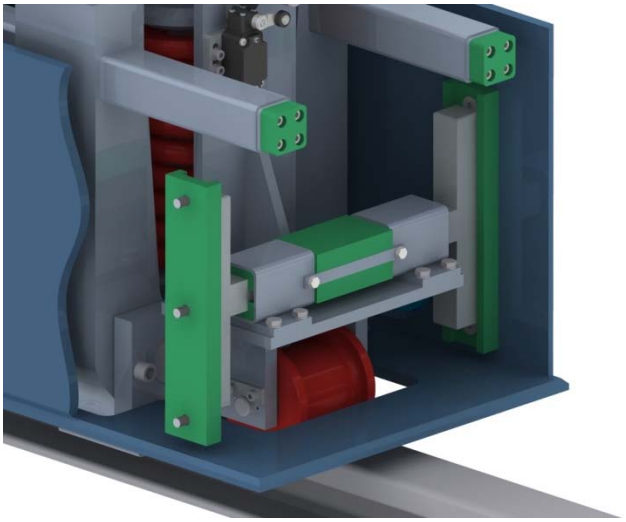
Guide idlers align the rail clamp and compensate vertical and horizontal movement in relation to the rail. The clamp car mounted inside the clamp housing, which is attached to the crane, is guided so it floats free horizontally and vertically within limits.

In addition there is a guidance system (IFS) between clamp car and housing to assure a vertical position by prohibiting the clamp car from tilting round the longitudinal axis (parallel to the rail). The general arrangement of the guidance system shows the horizontal guidance of the clamp car by a rod IFS. The rod stays in horizontal position by a support IFS connected to a guide bar to keep it from tipping.

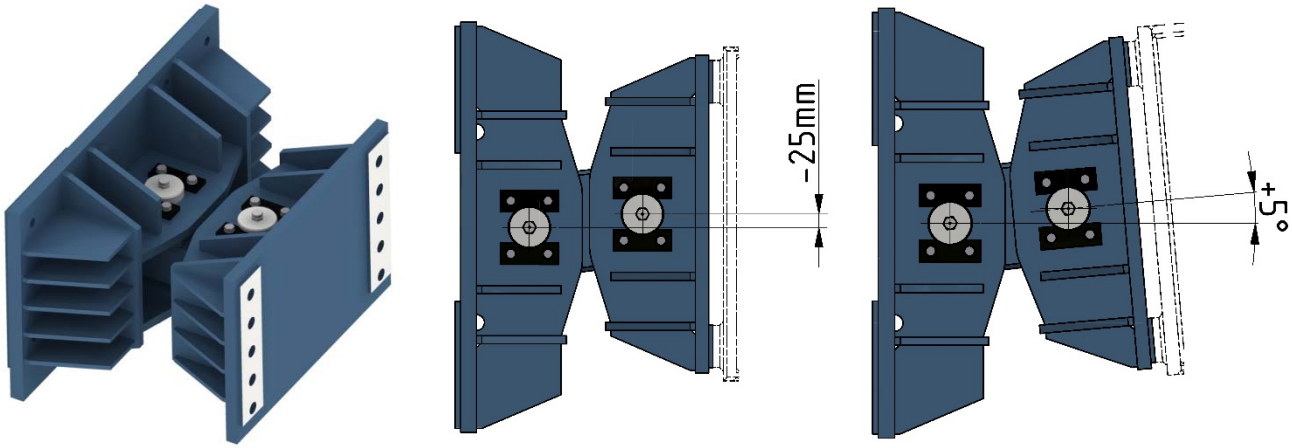
ZWA carriage guide system (IFS) belongs to the scope of supply and is specially designed for speeds > 240m/min.

The prevention of clamp car tilting assures an even wear on both guide idler and avoids rubbing wear at the linings of the clamping jaws.



Picture 1: Rail clamp floating guidance system IFS

OPTIONS



Picture 2: Articulating joint

The Articulating joint connection allows the entire lateral compensation of ± 50 mm and an angular compensation of ±5°. The Articulating joint is offered as an option and adapted to each project.

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