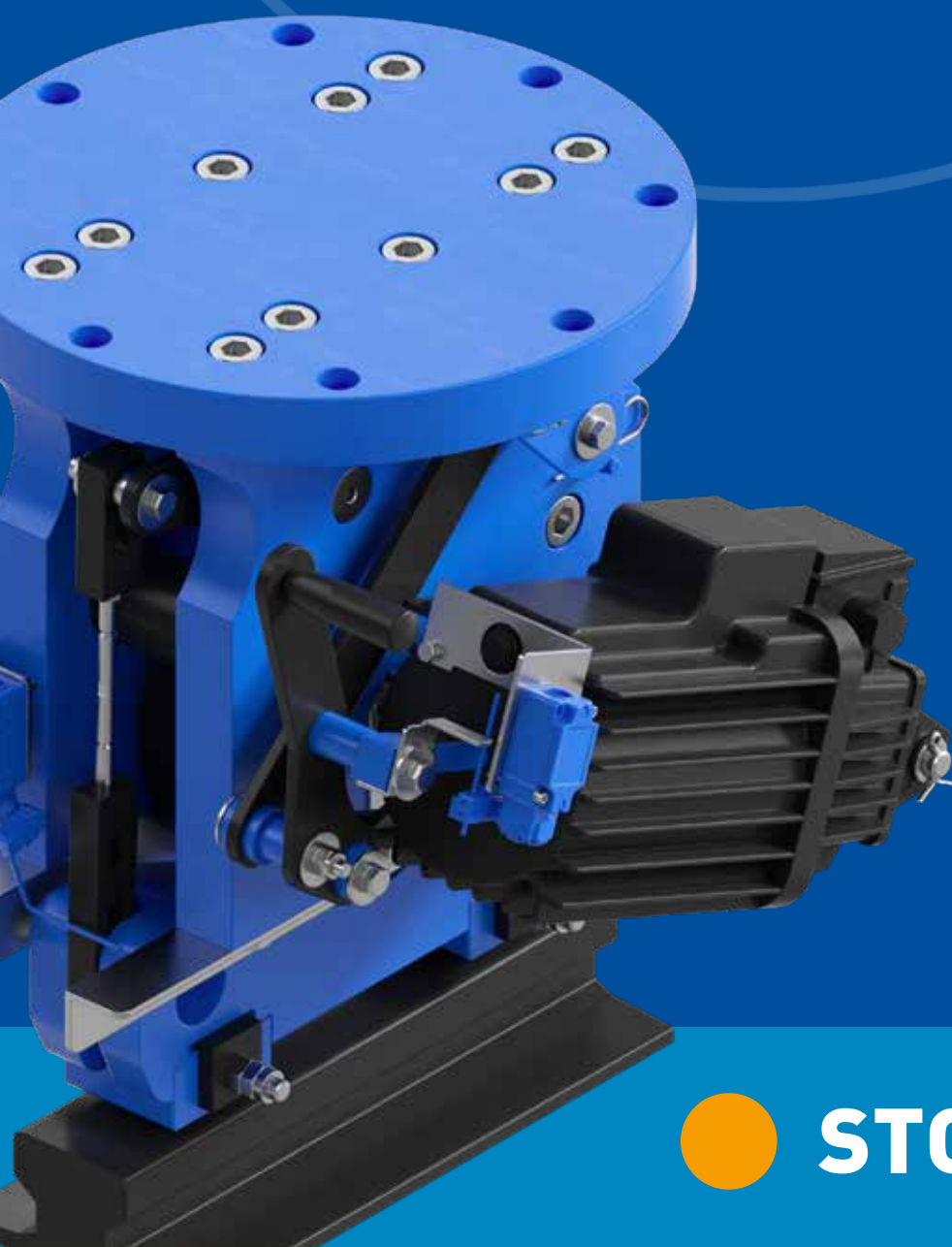


SIBRE

SIBRE – the world of
industrial brakes



STORMBRAKES



SIBRE -

The SIBRE Siegerland Bremsen GmbH is a worldwide operating, medium-sized company

of traditions with meanwhile over 60 years of company history.

From the very first the company engages in the development and production of brake systems for the industry. Right from the start value was set on technical innovation, the most modern manufacturing technology and high customer use. Production procedures are continuously supervised by a quality management system.

The aim of the product development is an optimum combination of a top-quality product, the easiest use and market-driven price both for plant engineers and plant operators.



the world of industrial brakes



CONCEPTION

With a Team of experienced engineers and service technicians we have the knowledge to stand behind our slogan "Sure to be Safe". Through this knowledge and experience the SIBRE Team has a complete understanding of Braking System requirements, and the consequences of an inferior or flawed product. SIBRE has the flexibility to design, build, and test in our own facility, allowing free thinking ideas and concepts to be realized.

ENGINEERING

Based on the collective decades of experience, our engineers, technicians, and input from our customers, the SIBRE R & D department, can develop, manufacture and test products heavy industry can rely on. Using state of the art software and the latest innovative hardware, the SIBRE Team can achieve optimal products. From innovative concepts to detailed construction plans, our R & D department consistently develops reliable SIBRE Products.



PRODUCTION

With a well-trained, long-standing team, and a newly expanded modern production hall, SIBRE is producing quality. From individual components and parts to final assembly, SIBRE stands firm on sustainable product quality.



QUALITY

Being ISO 9001 certified, SIBRE is guaranteeing the highest quality of each individual part and the entire brake assembly. With the most currently available measuring and testing equipment, the SIBRE Team has the capability to check for raw material properties and dimensional accuracy, on each critical component. These capabilities ensure the functional reliability customers have come to depend on from SIBRE.

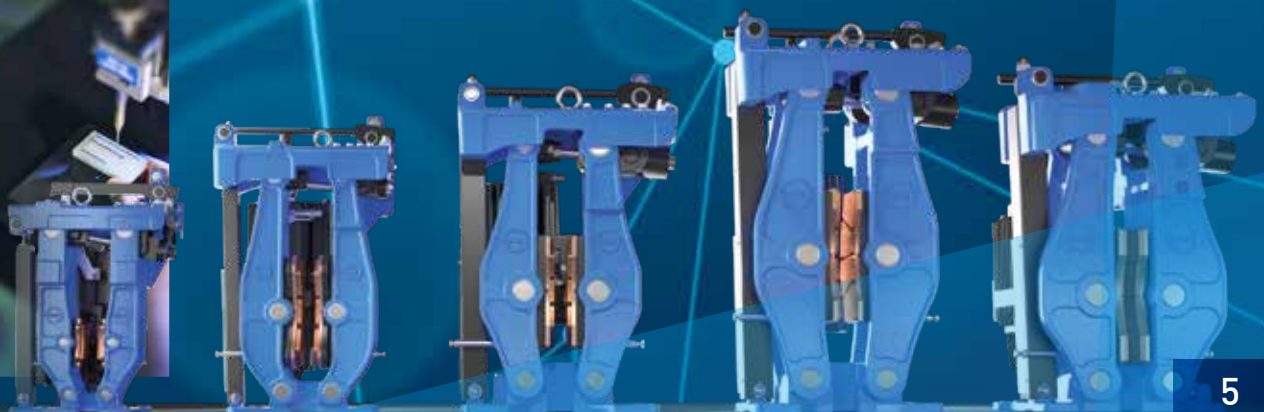
from **conception** to **high quality** brakes



INTERNATIONAL PRESENCE

With 11 offices strategically placed on all continents, SIBRE is truly a renowned Global Player.

We pride ourselves in being a reliable partner for safety relevant components. Through our well-established sales and service locations, we have created solid cooperation, that often exceed customer expectations. Among the industries we support, Container and Material Handling, Mining and Metals, Forestry, Oil and Gas, Wastewater Treatment, Movable Bridges, and Hydropower to name a few, SIBRE's well-situated locations allow for responsive action to serve our customers.



CONCEPTION & ENGINEERING



for **innovative**
brake-systems

CONCEPTION

Sure to Be Safe. The SIBRE slogan and motto.

Realizing People's lives depend on the safest working environments, in some of the most inhospitable places, the SIBRE Team is consistently discussing, consulting, analyzing, and verifying ideas to create new components and systems.

Sure to Be Safe. The lives of real people depend on it.

This ever-flowing conversation is not just an internal practice; we actively seek input from industry. We engage industry leaders, engineering and consulting firms, and the all-important persons responsible for maintaining equipment.

These cooperative discussions create a true partnership between manufacturer and user. The ability of our product developers to engage dynamic thinkers allow the best possible solutions.





ENGINEERING

Implementing ideas and concepts belong to the dynamic engineering team at SIBRE.

This energizing team is always on the mission to safeguard people and equipment. The redesigning of our products is as important as bringing to life new concepts.

With the availability of the most modern hardware and software the engineering team has made the tried and true SIBRE range more efficient and maintenance friendly. This dynamic group of engineers is an important part of SIBRE being a global supplier in the world of industrial brakes, couplings and crane wheels.

Made in Germany, standing behind the heritage of German Engineering.



PRODUCTION & QUALITY

made in **Germany**



PRODUCTION

With a steadily expanding product offering, the extending global network of offices and activities, so to the SIBRE production facilities grow. Our machining facility in Haiger/Germany and our assembly plant, just up the road in Eschenburg/Germany, have also been growing. Both facilities have seen significant modernization and expansion to accommodate the demand for highly engineered integral products. Since 2018 several new lines have been installed. Our central production plant located in Haiger, Germany boasts several state-of-the-art CNC machines. These additions allow for tighter control of production and faster response times to customer requirements. This growth has afforded SIBRE the honor of being a good steward to our local communities, and continuing the solid reputation Made in Germany has been known for the world over for.



QUALITY

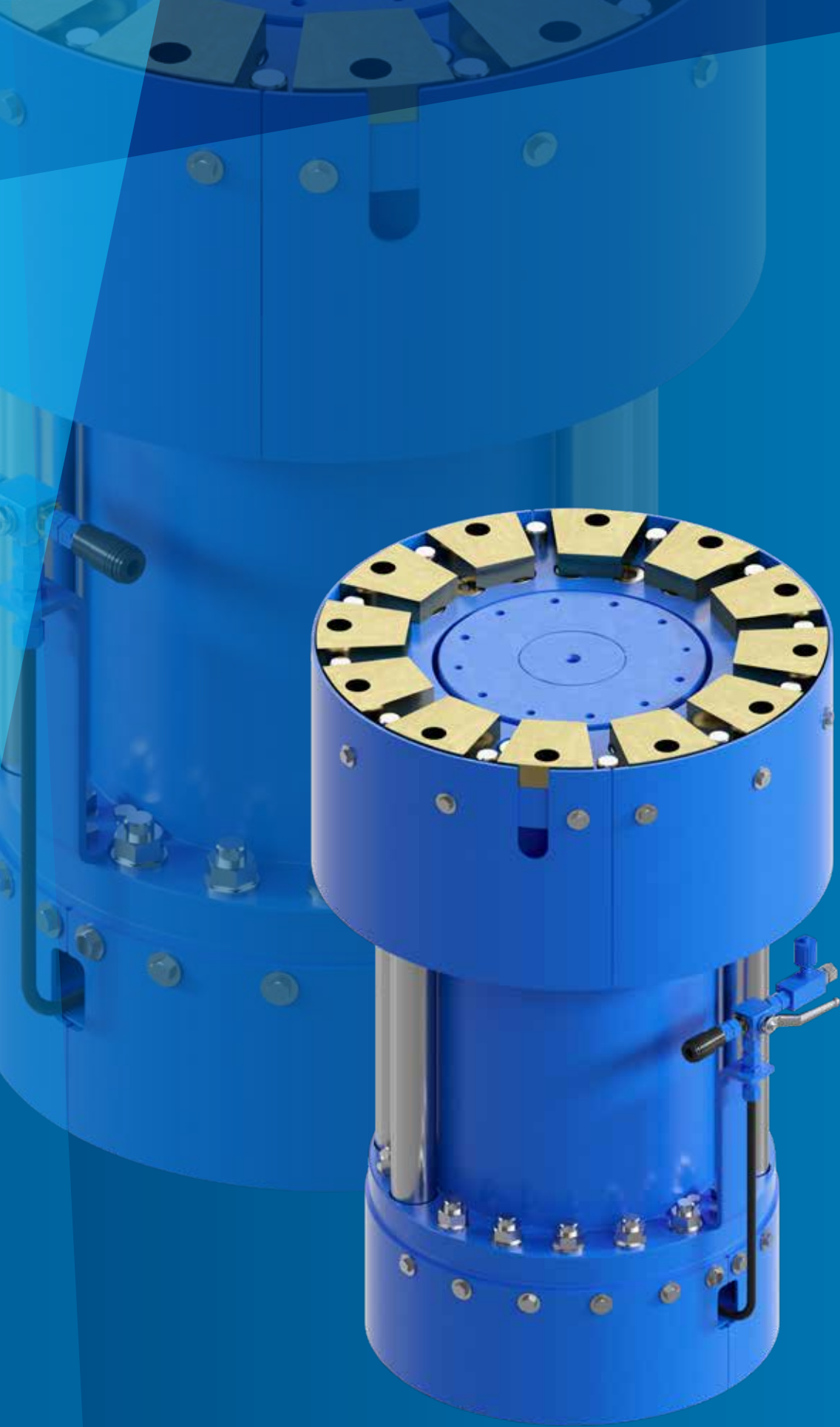
High-quality, reliable braking systems and drive components require a consistent quality standard.

With our internal development and simulation laboratory, both individual components and fully assembled systems are put through their paces.

In addition to function and load simulation, we also focus on checking, reaction times, material properties and dimensional accuracy.

SIBRE quality

– made in Germany



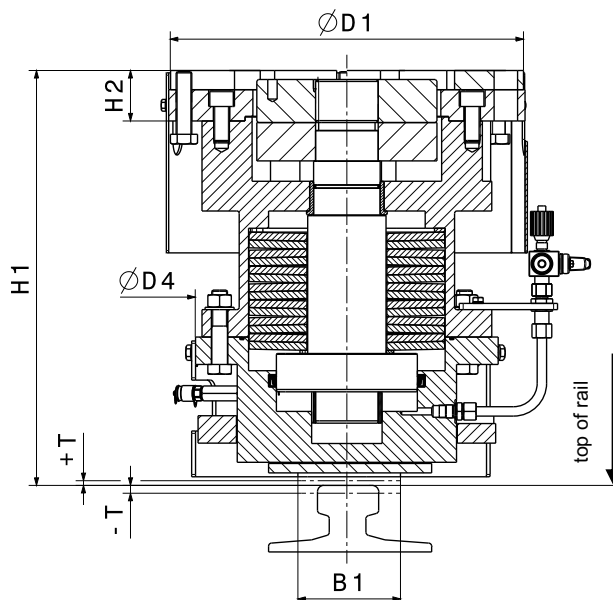
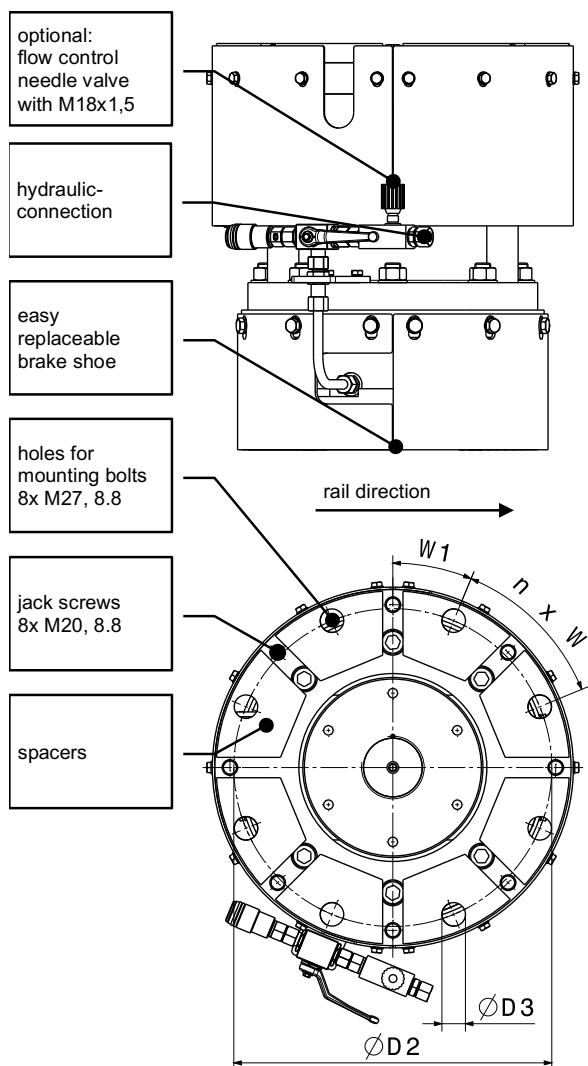
HYDRAULIC RAIL PUSHER



HYDRAULIC RAIL PUSHER

RPS 200 & 300

M 1501 335 E-EN-2017-10



HYDRAULIC DATA:

medium: HLP-hydraulic oil DIN 51524-T2
HLP Synth 32 standard

temperature range: [-15°C.....+40°C]

we recommend: SIBRE-hydraulic power packs
V3.B *) for RPS 200
V3.C *) for RPS 300
with electronic control box acc.
data sheet M 1501 264 E

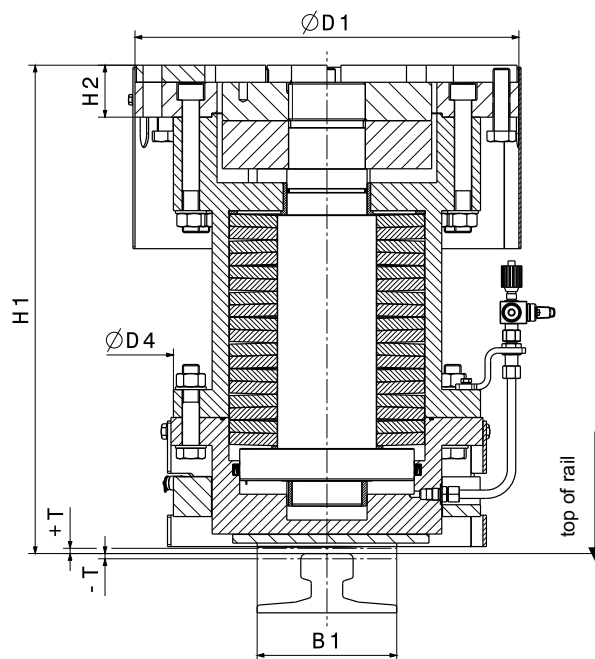
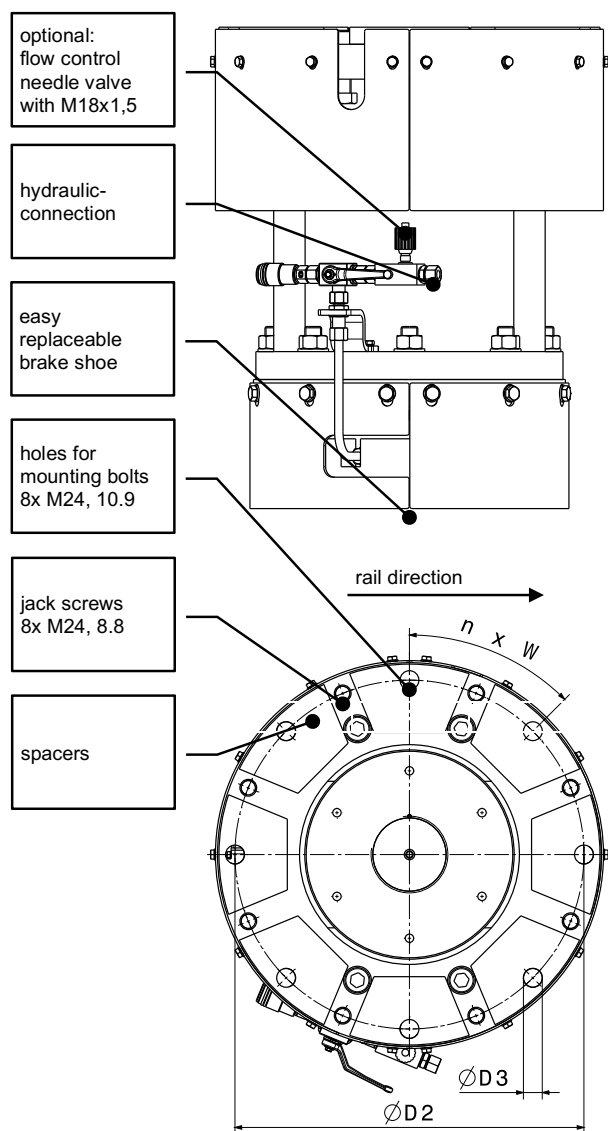
*) max. 4 brakes per power pack
dimensional drawings upon request

Type	H1 mm	H2 mm	B1 mm	+T mm	-T mm	D1 mm	D2 mm	D3 mm	D4 mm	W1	n x W
RPS 200	530	64,5	125	+9	-9	455	406	30	397	22,5°	8 x 45°
RPS 300	630	64,5	125	+9	-9	455	406	30	397	22,5°	8 x 45°
Type	Holding force	Holding force at max. rail tolerance		Release pressure	max. operating pressure	Hydraulic- connection	Weight				
		+T	-T								
RPS 200	100 kN	120 kN	75 kN	110 bar	150 bar	3/8"	395 kg				
RPS 300	160 kN	180 kN	135 kN	160 bar	205 bar	3/8"	440 kg				

HYDRAULIC RAIL PUSHER

RPS 450

M 1501 354 E-EN-2017-10



HYDRAULIC DATA:

medium: HLP-hydraulic oil DIN 51524-T2
HLP Synth 32 standard

temperature range: [-15°C.....+40°C]

we recommend: SIBRE-hydraulic power pack V3.D *) for RPS 450
with electronic control box acc. data sheet M 1501 264 E

*) max. 4 brakes per power pack
dimensional drawings upon request

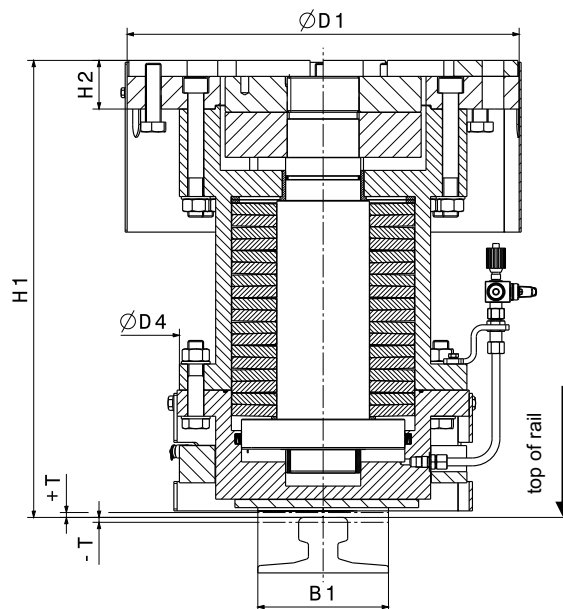
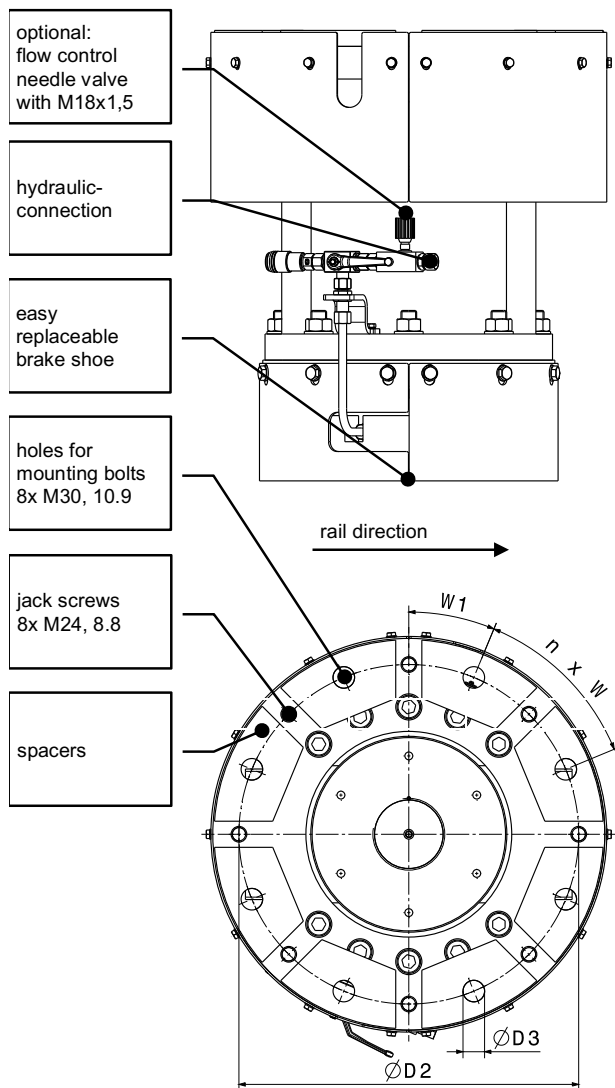
Type	H1 mm	H2 mm	B1 mm	+T mm	-T mm	D1 mm	D2 mm	D3 mm	D4 mm	W1	n x W
RPS 450	700	74,5	200	+7,5	-7,5	550	500	27	457	-	8 x 45°
Type	Holding force	Holding force at max. rail tolerance		Release pressure	max. operating pressure	Hydraulic-connection	Weight				
		+T	-T								
RPS 450	225 kN	299 kN	148 kN	145 bar	175 bar	1/2"	670 kg				



HYDRAULIC RAIL PUSHER

RPS 610

M 1501 448 E-EN-2017-10



HYDRAULIC DATA:

medium: HLP-Hydraulic oil DIN 51524-T2
HLP Synth 32 standard

temperature range: [-15°C.....+40°C]

we recommend: SIBRE-hydraulic power pack
V3.C *) for RPS 610
with electronic control box acc.
data sheet M 1501 264 E

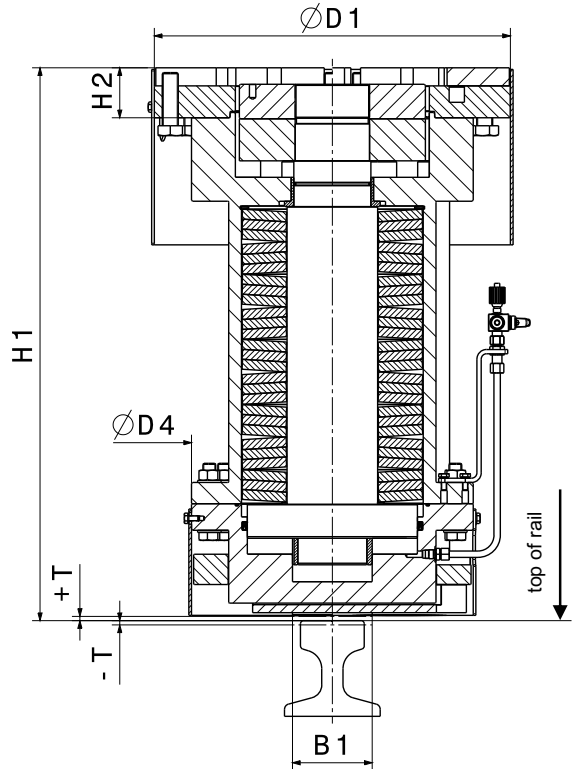
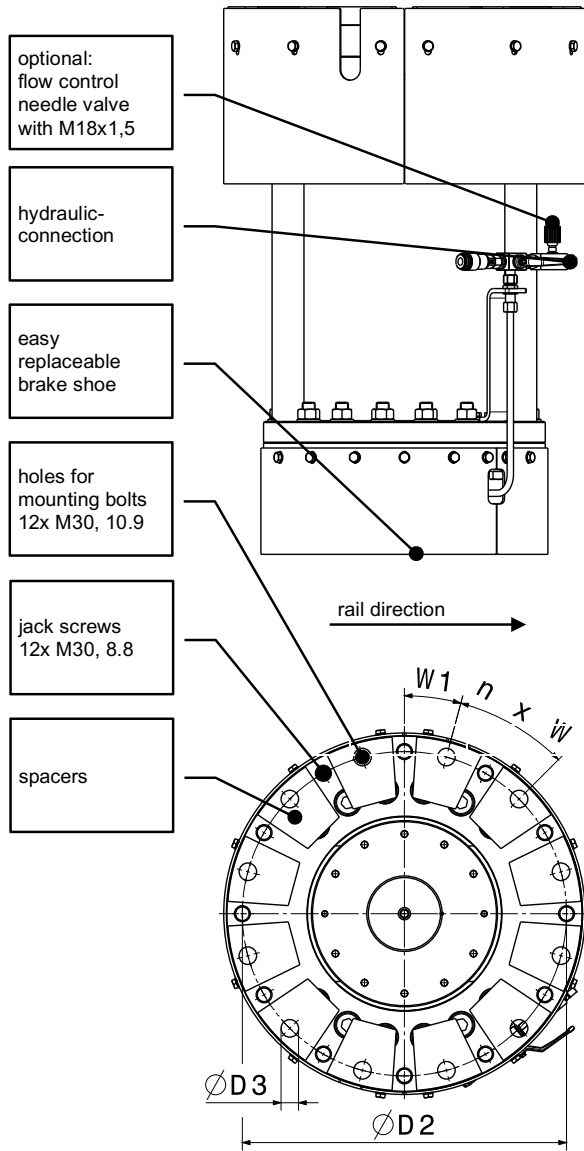
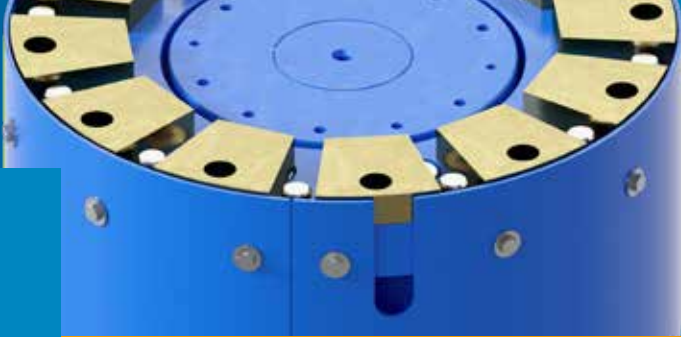
*) max. 4 brakes per power pack
dimensional drawings upon request

Type	H1 mm	H2 mm	B1 mm	+T mm	-T mm	D1 mm	D2 mm	D3 mm	D4 mm	W1	n x W
RPS 610	700	74,5	200	+7,5	-7,5	600	520	33	457	22,5°	8 x 45°
Type	Holding force	Holding force at max. rail tolerance		Release pressure	max. operating pressure	Hydraulic- connection	Weight				
		+T	-T								
RPS 610	275 kN	346 kN	200 kN	165 bar	205 bar	1/2"	690 kg				

HYDRAULIC RAIL PUSHER

RPS 800

M 1501 449 E-EN-2017-10



HYDRAULIC DATA:

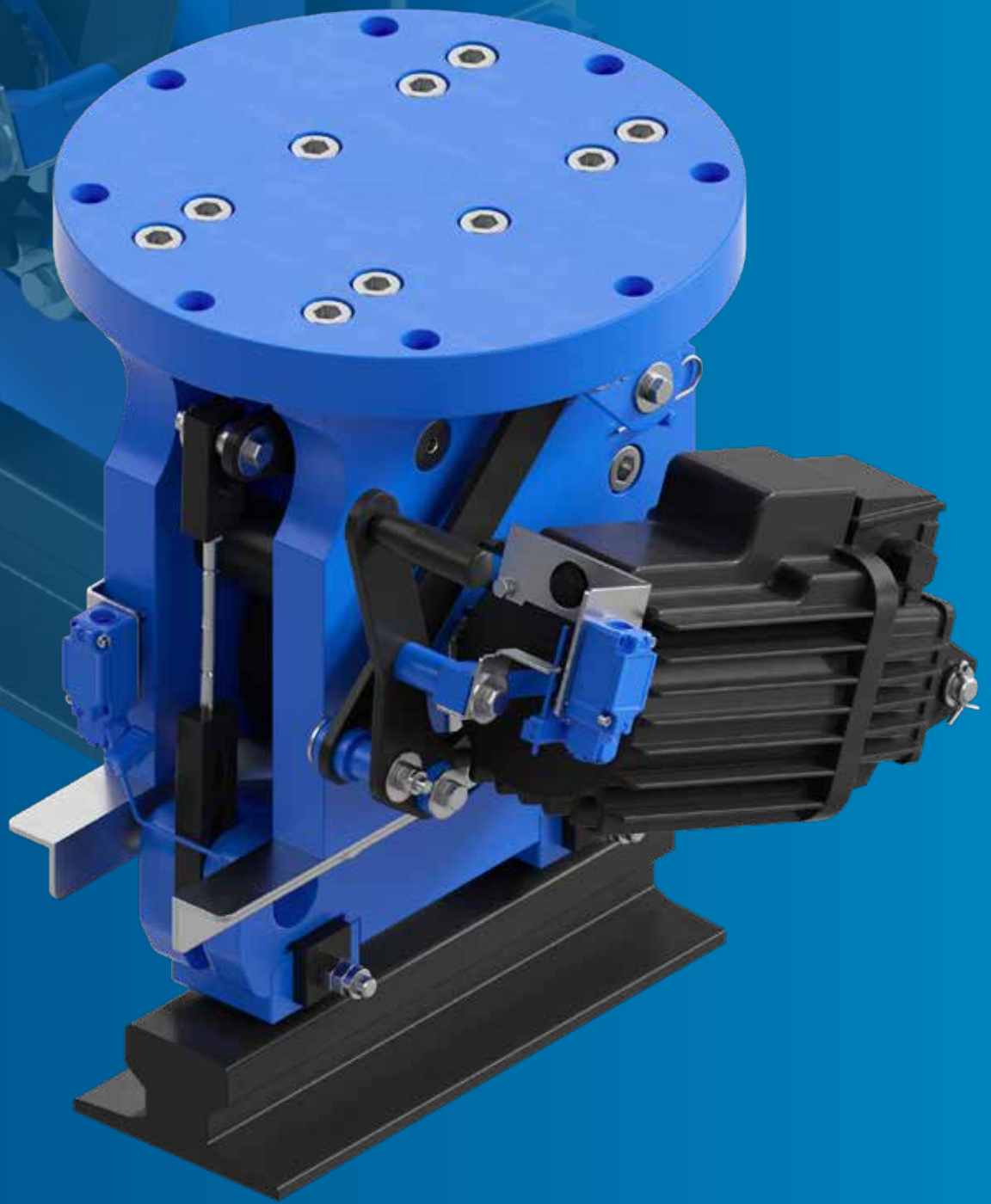
medium: HLP-hydraulic oil DIN 51524-T2
HLP Synth 32 standard

temperature range: [-15°C.....+40°C]

we recommend: SIBRE-hydraulic power pack V3.C-S *) for RPS 800
with electronic control box acc. data sheet M 1501 264 E

*) max. 2 brakes per power pack dimensional drawings upon request

Type	H1 mm	H2 mm	B1 mm	+T mm	-T mm	D1 mm	D2 mm	D3 mm	D4 mm	W1	n x W
RPS 800	1040	94	150	+8	-8	670	610	33	530	15°	12 x 30°
Type	Holding force	Holding force at max. rail tolerance		Release pressure	max. operating pressure	Hydraulic-connection	Weight				
		+T	-T								
RPS 800	400 kN	500 kN	300 kN	180 bar	210 bar	1/2"	1320 kg				



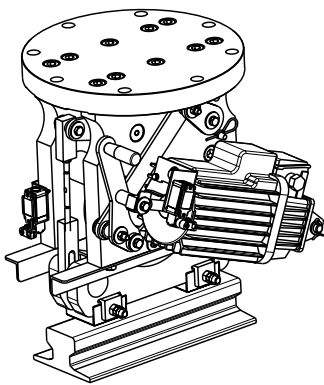
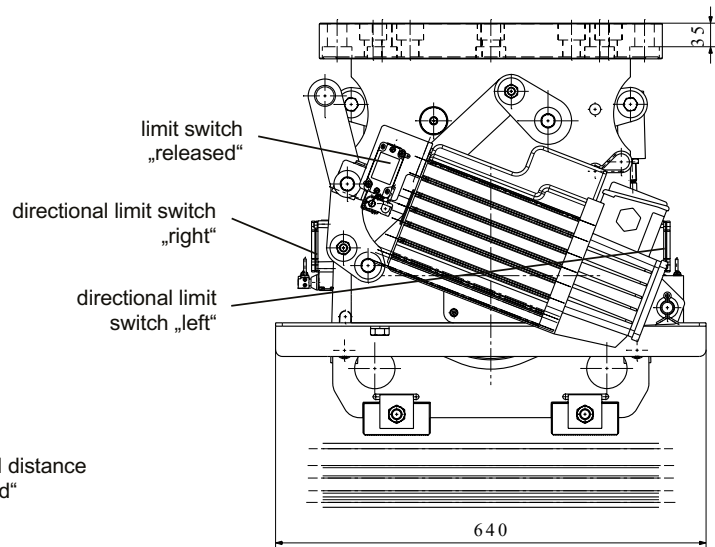
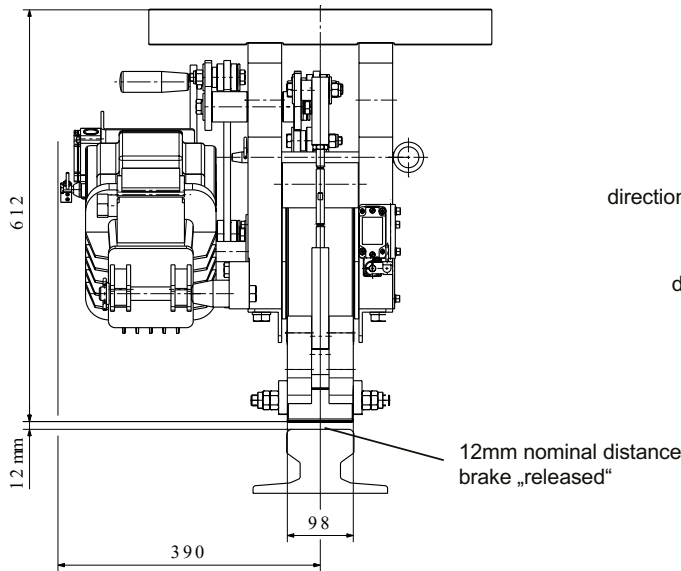
ELECTRIC RAIL PUSHER



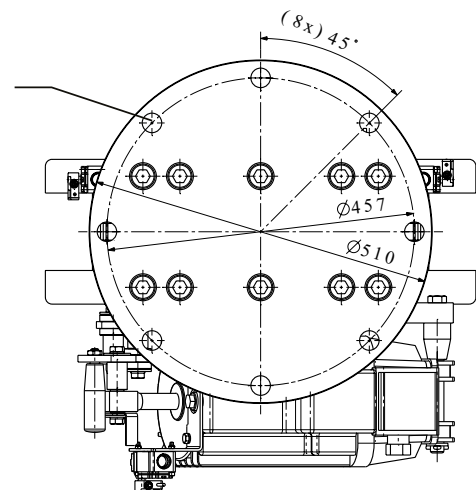
ELECTRIC RAIL PUSHER

RTCB 225-80/6

M 1501 361 E-EN-2009-03



8 bores $\varnothing 29$ for
cylinder-head screws
DIN912-M27x80-10.9
MA= 1250Nm, $\mu 0,14$



TECHNICAL DATA:

- Bi-directionally acting, static storm brake for gantry travel.
- Max. holding force FH =225 KN. It is generated by a wedge clamped between clamp wheel and crane rail.
- Released by Eldro thruster.
- Thruster with lowering valve and c-spring.
- With manual release lockable in released position.
- Field replaceable brake shoes.
- Brake shoes hardened and on the area of support it is carried out with sprockets.
- Limit switch for brake „released“.
- Limit switch for directional indication.
- Weight approx. 400kg.

INFORMATION:

- The crane can travel between 50mm and 100mm before the rail brake is engaged.
- Nominal gap between rail and released brake shoe is 12mm.
- Max. permissible deviation of rail height is +/- 6mm.
- The rail brake is designed for installation under gantry travel cross-beam.

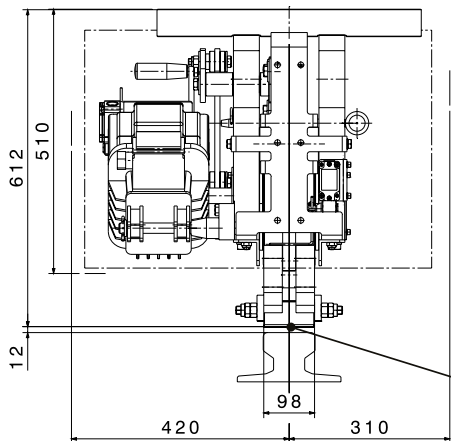
ELECTRIC RAIL PUSHER

RTCB 225-80/6



M 1501 434 E-EN-2016-10

with protection cover

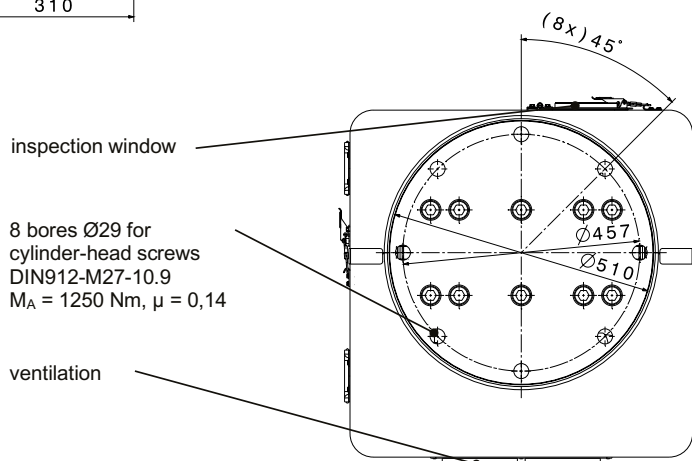
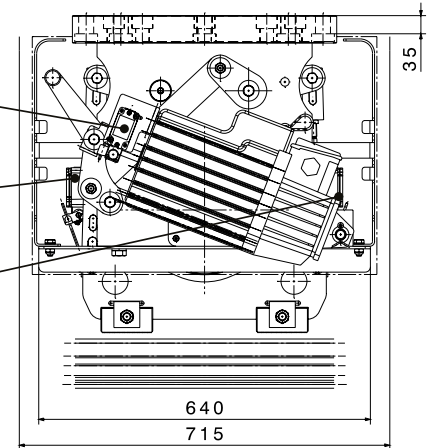


12 mm nominal distance
brake „released“

limit switch:
„released“

directional limit switch
„right“

directional limit switch
„left“



inspection window

8 bores Ø29 for
cylinder-head screws
DIN912-M27-10.9
 $M_A = 1250 \text{ Nm}$, $\mu = 0,14$

ventilation

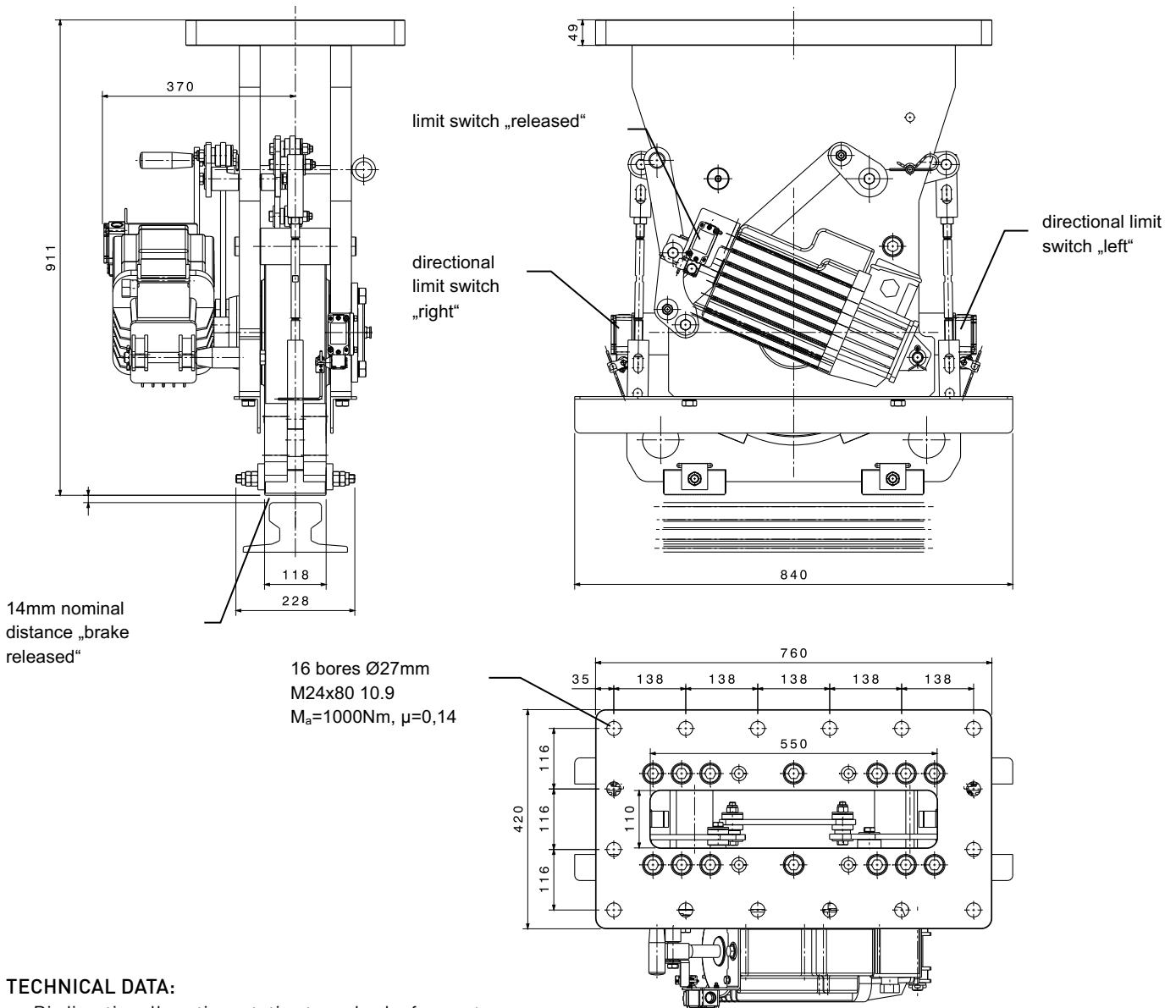
Technical Data:	Information:
Bi-directionally acting, static storm brake for gantry travel	The crane can travel between 50 mm and 100 mm before the rail brake is engaged
Max. holding force $F_H = 225 \text{ kN}$, it is generated by a wedge clamped between clamp wheel and crane rail	Nominal gap between rail and released brake shoe is 12 mm
Released with Eldro thruster	Max. permissible deviation of rail height is +/- 6 mm
Thruster with lowering valve and c-spring	The rail brake is designed for installation under gantry travel cross-beam
With manual release lockable in released position	
Field replaceable brake shoes	
Brake shoes hardened and on the arc of support it is carried out with sprockets	
Limit switch for brake "released"	
Limit switch for directional indication	
Option A: steel version powdered (80µm), fittings, inspection window, ventilation of stainless steel;	
weight approx. 395 kg	
Option B: stainless steel version powdered (80 µm), fittings, inspection window, ventilation of stainless steel;	
weight approx. 395 kg	



ELECTRIC RAIL PUSHER

RTCB 350-80/6

M 1501 384 E-EN-2011-10



TECHNICAL DATA:

- Bi-directionally acting, static storm brake for gantry travel.
- Max. holding force $F_H = 350 \text{ KN}$. It is generated by a wedge clamped between clamp wheel and crane rail.
- Released by Eldro thruster.
- Thruster with lowering valve and c-spring.
- With manual release lockable in released position.
- Field replaceable brake shoes.
- Brake shoes hardened and on the area of support it is carried out with sprockets.
- Limit switch for brake „released“.
- Limit switch for directional indication.
- Weight approx. 600kg.

INFORMATION:

- The crane can travel between 50mm and 90mm before the rail brake is engaged.
- Nominal gap between rail and released brake shoe is 14mm.
- Max. permissible deviation of rail height is $\pm 8 \text{ mm}$.
- The rail brake is designed for installation under gantry travel cross-beam.

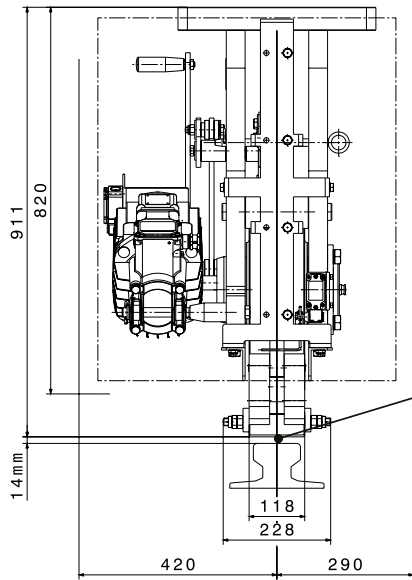
ELECTRIC RAIL PUSHER

RTCB 350-80/6



M 1501 435 E-EN-2016-10

with protection cover

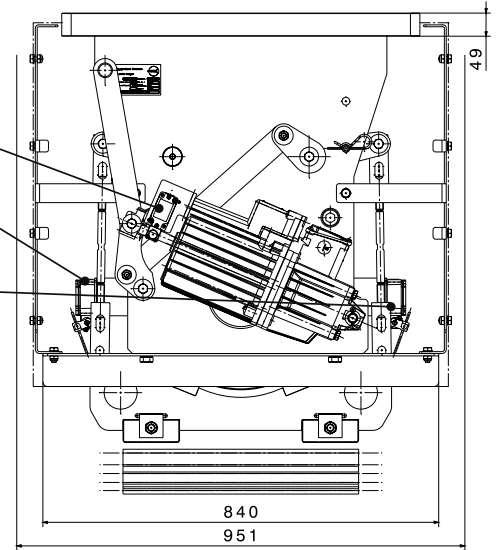


14 mm nominal distance
brake „released“

limit switch:
„released“

directional limit switch
„right“

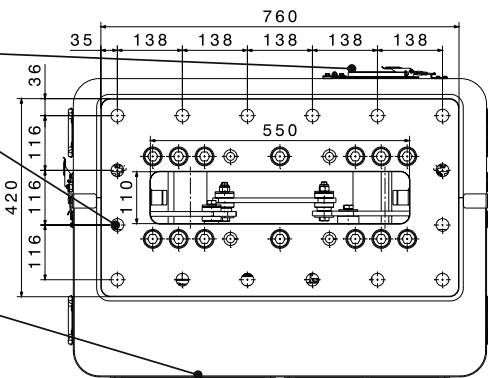
directional limit switch
„left“



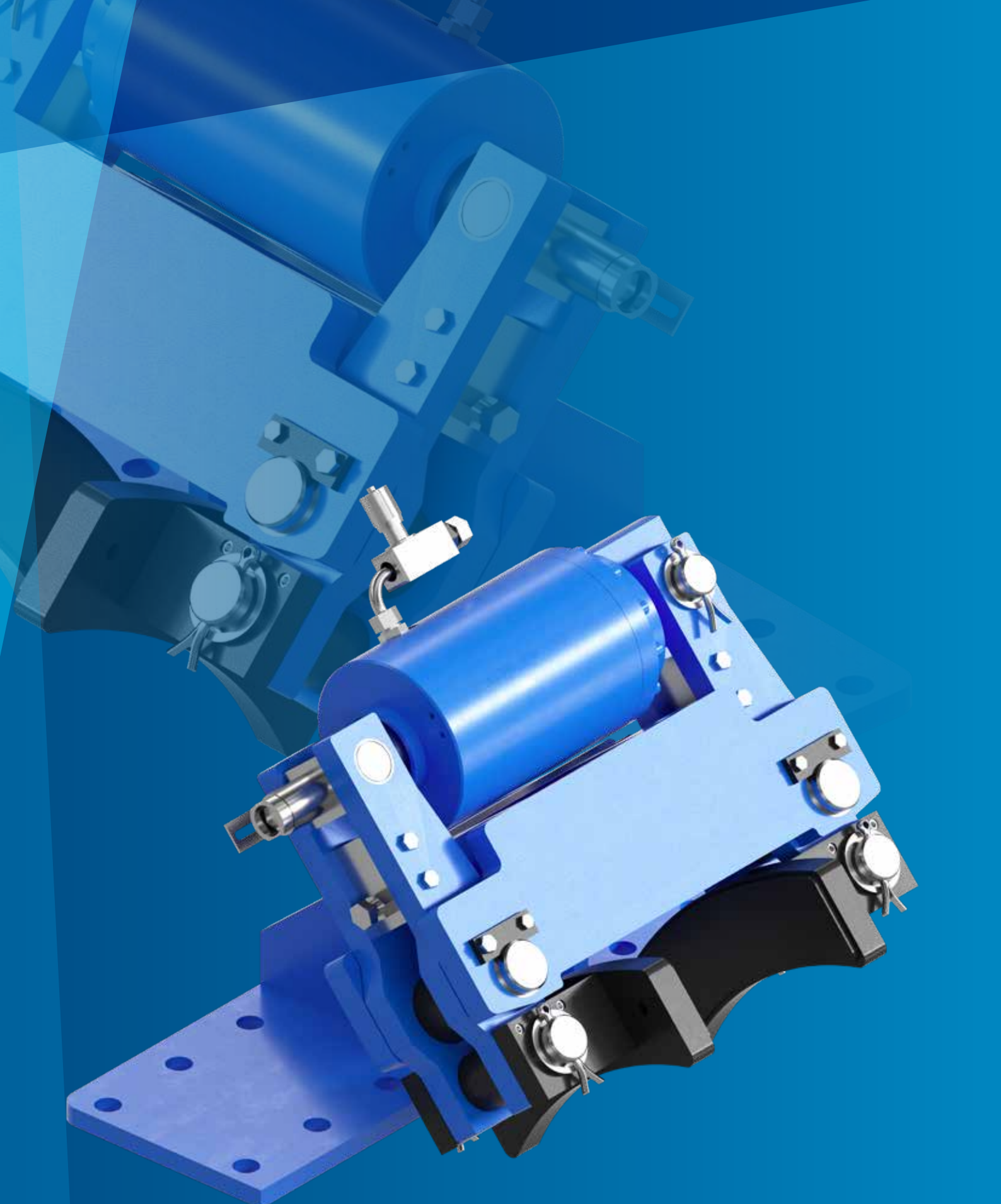
inspection window

16 bores Ø27 for
cylinder-head screws
DIN912-M24-10.9
 $M_A = 1000 \text{ Nm}$, $\mu = 0,14$

ventilation



Technical Data:	Information:
Bi-directionally acting, static storm brake for gantry travel	The crane can travel between 50 mm and 90 mm before the rail brake is engaged
Max. holding force FH = 350 kN, it is generated by a wedge clamped between clamp wheel and crane rail	Nominal gap between rail and released brake show is 14 mm
Released with Eldro thruster	Max. permissible deviation of rail height is +/- 8 mm
Thruster with lowering valve and c-spring	The rail brake is designed for installation under gantry travel cross-beam
With manual release lockable in released position	
Field replaceable brake shoes	
Brake shoes hardened and on the area of support it is carried out with sprockets	
Limit switch for brake "released"	
Limit switch for directional indication	
Option A: steel version powdered (80µm), fittings, inspection window, ventilation of stainless steel; weight approx. 643 kg	
Option B: stainless steel version powdered (80 µm), fittings, inspection window, ventilation of stainless steel; weight approx. 643 kg	

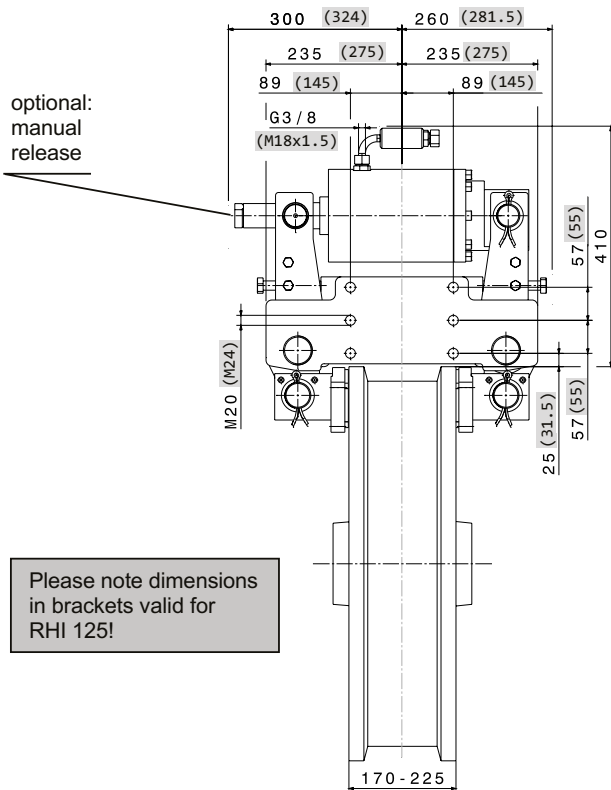


WHEEL BRAKE

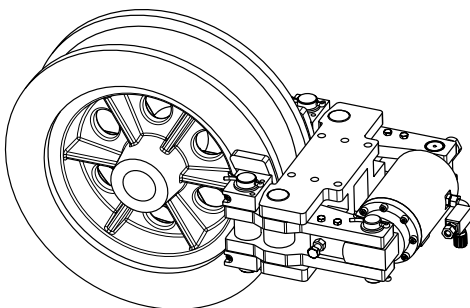
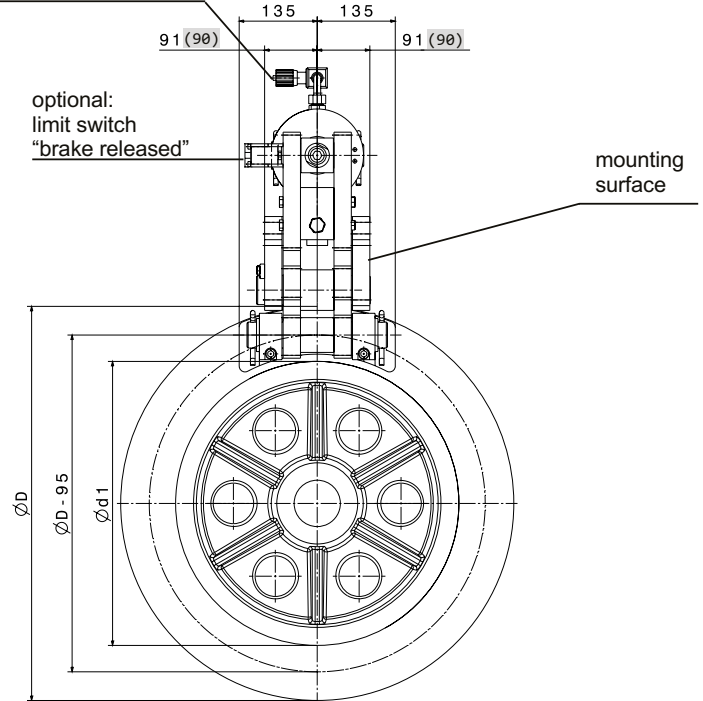
WHEEL BRAKE

RHI 30/56/70/85/125

M 1501 307 E-EN- 2013-11



optional:
adjustable needle valve
for flow control



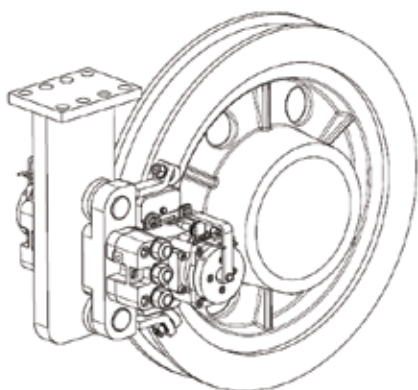
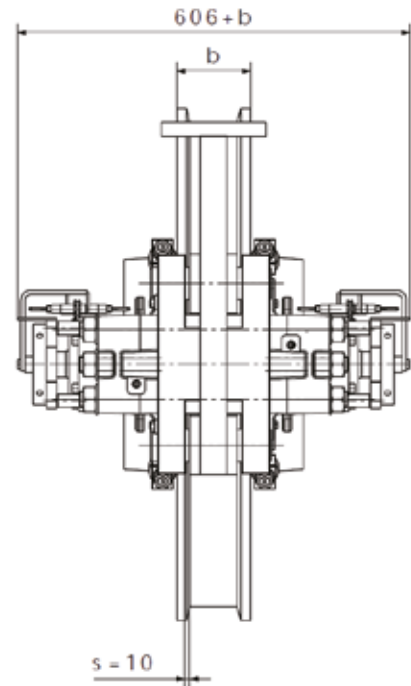
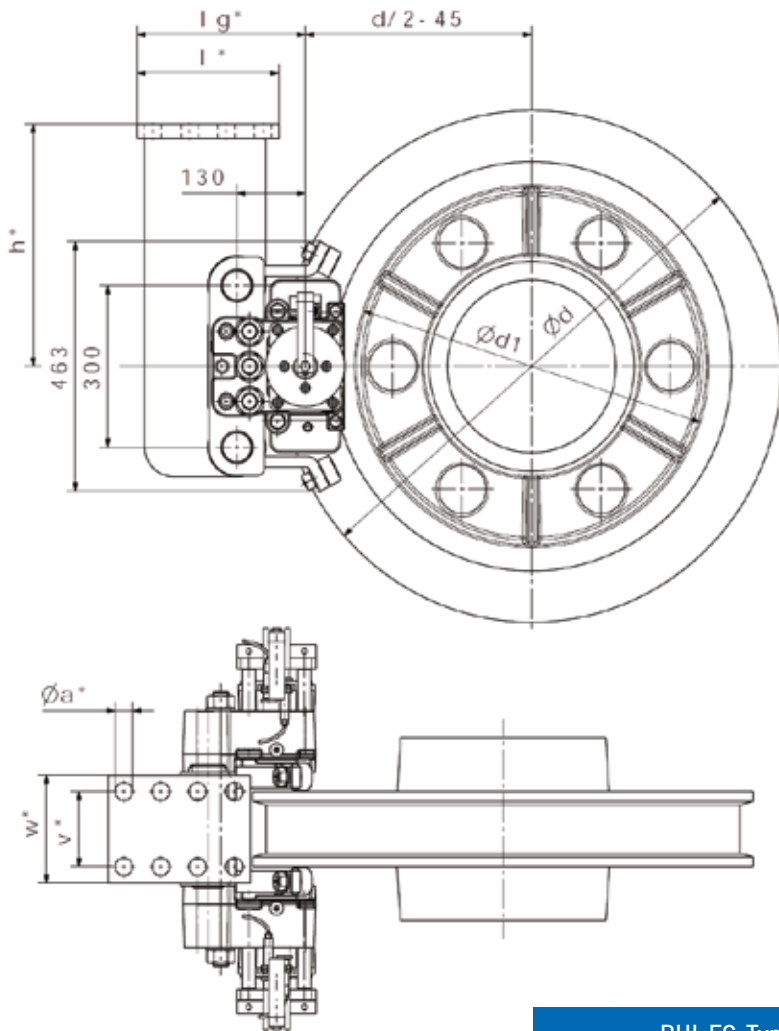
RHI-Type		30	56	70	85	125	
Braking Force FB ($\mu = 035$)							
FB	@ air gap c = 1,5 mm	kN	30	56	70	85	125
Torque Calculation							
MBr	braking torque in Nm	FB x (D-95)/2					
Hydraulic							
PL	req. release pressure	bar	40	65	80	90	90
Pmax	max. operating press.	bar	85	110	110	150	150
Vmax	oil volume @ c=1,5mm	ltr	0,18				
Wheel dimensions							
b	wheel width	mm	170 - 225				
D	wheel diameter	mm	ØD				
d1	max. inner diam.	mm	d- 95 mm				
Mass							
L x W x H = === x (===+b) x === mm							
weight: 180 kg							

Linings		
material		sinter
average friction coeff	μ	0,35

WHEEL BRAKE

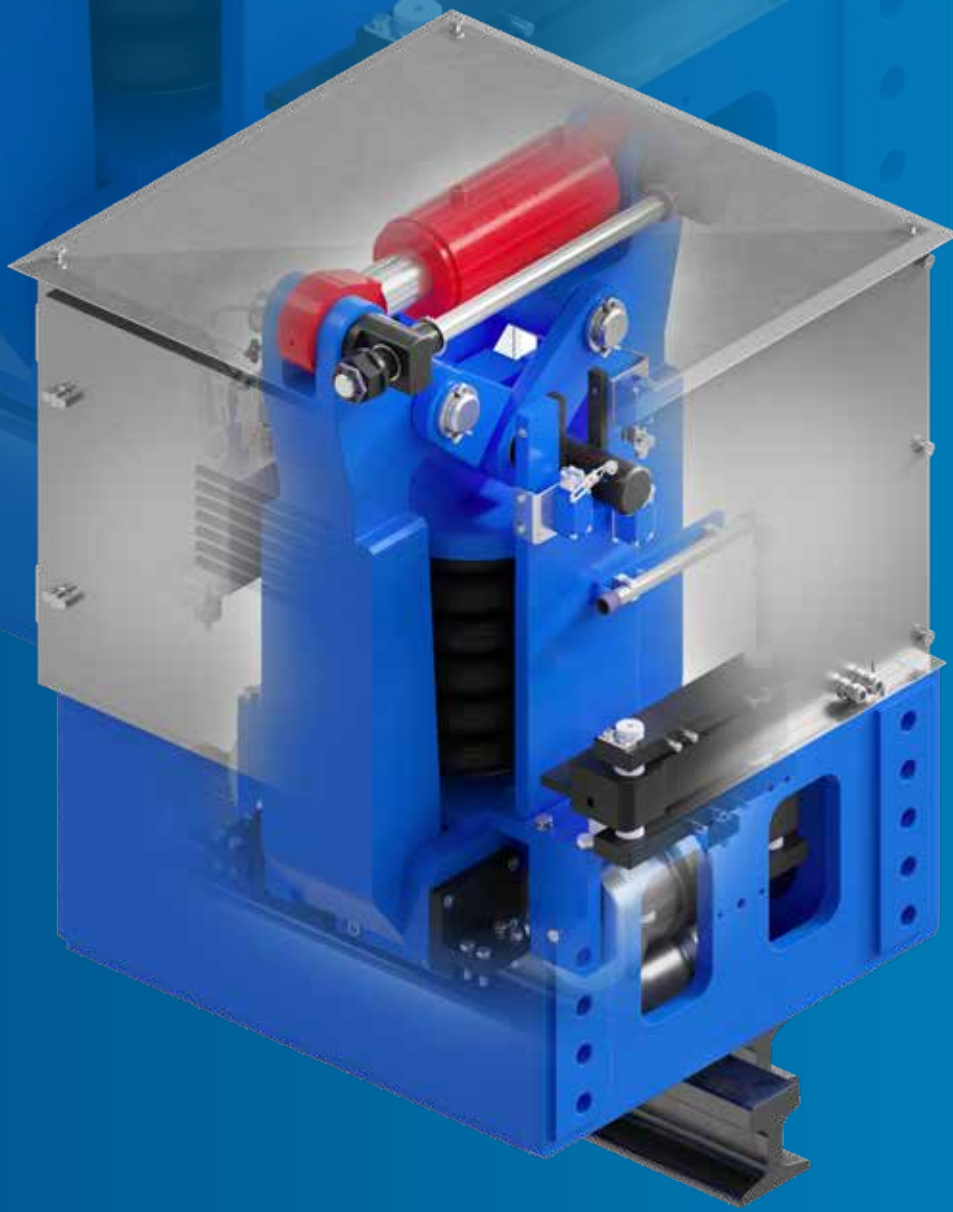
RHI 100 FC

M 1501 308 E-EN-2009-03



RHI-FC-Type			101	102	103	104	105
Clamping Force FA							
FA	Ø air gap c = 1 mm	kN	29,0	45,1	55,4	74,1	83,2
FA	Ø air gap c = 2 mm	kN	28,0	43,7	52,2	68,7	77,0
FA	Ø air gap c = 3 mm	kN	27,0	41,3	48,8	62,7	74,4
Torque Calculation							
MBr	braking torque in Nm	$2 \times FA \times 0,35 \times (d/2 - 60)$					
Hydraulic							
PL	req. release pressure	bar	35	50	60	80	95
Pmax	max. operating press.	bar	85	85	110	110	150
Vmax	oil volume Ø c=2,0mm	ltr	0,046				
Wheel dimensions							
b	wheel width	mm					
d	wheel diameter	mm					
d1	max. hub diam.	mm	d-280mm				
Mass							
$L \times W \times H = \text{---} \times (\text{---} + b) \times \text{---} \text{ mm}$							
weight: 180 kg (with console and floating bracket)							

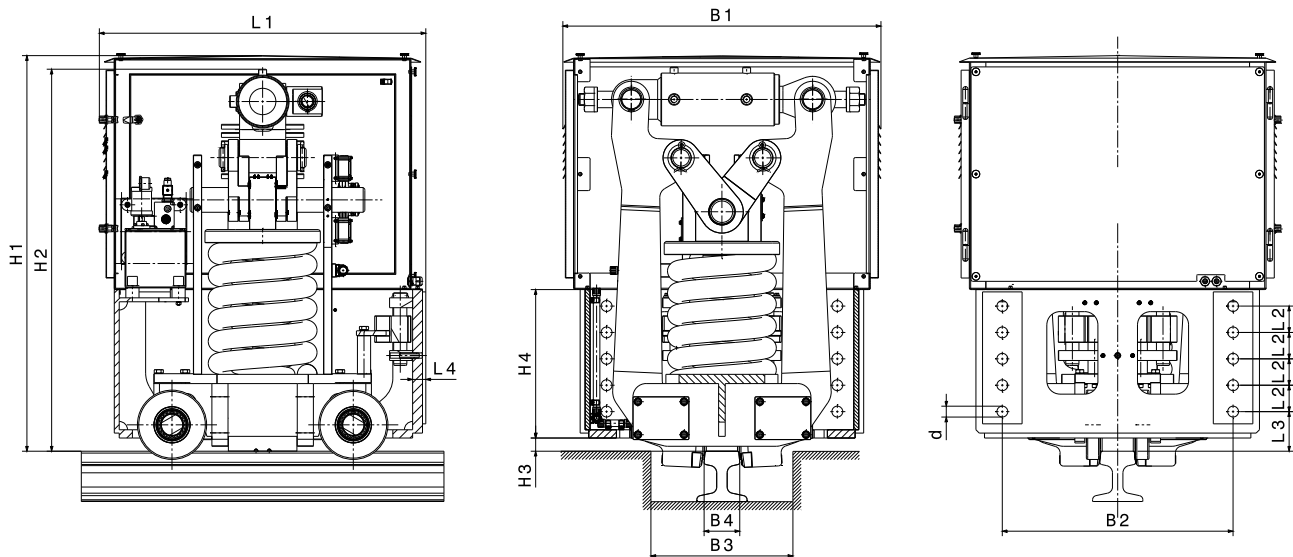
Linings		
material		sinter
average friction coeff	μ	0,35



RAIL CLAMP

RAIL CLAMP RB

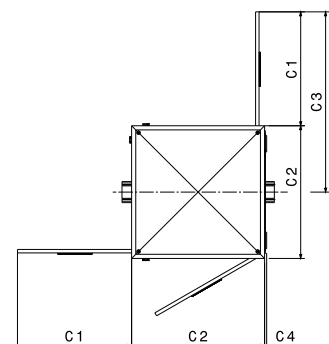
M 1501 450 E-EN-2017-12



TECHNICAL DATA:

- Airgap per side : 4,5 mm – 5 mm
- Max. wear rail/ jaw per side : 5 mm
- Ambient temperature : - 20 °C to + 50 °C
- Closing time setting : 5 s to 30 s
- Opening time : 10 s to 15 s
- Operating cycles : 10 to 20 times per day
- Motor voltage : 230/ 400 V, 50/ 60 Hz, S3 – 30 %
- Valve voltage : 24 V
- *1 At max. rail size acc. information B4. Deviations from the standard upon request.
- *2 Crane rail acc. DIN, other types of crane rails upon request
- *3 Quantity and strength grade of the screws.

o RB 200-50	: 6x M20 – 10.9	Ma = 580 Nm, $\mu = 0,14$
o RB 400-50	: 8x M24 – 10.9	Ma = 1000 Nm, $\mu = 0,14$
o RB 600-50	: 8x M30 – 10.9	Ma = 2000 Nm, $\mu = 0,14$
o RB 800-50	: 10x M30 – 10.9	Ma = 2000 Nm, $\mu = 0,14$
o RB 1000-50	: 12x M30 – 10.9	Ma = 2000 Nm, $\mu = 0,14$



RAIL CLAMP

RB

M 1501 450 E-EN-2017-12



HOLDING FORCE AND DIMENSIONS

Typ:	Holding force [kN]	Weight [kg]	B1 [mm]	B2 [mm]	B3*1 min. [mm]	B4*2 [mm]	C1 [mm]	C2 [mm]	C3 [mm]	C4 [mm]	d*3 [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H4 [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	
μ [-]	0,25	0,5																		
RB 200-50	100	200	520	820	270	A65 A75 A100	649	785	1042	7	22	925	842	40	320	808	100	110	30	
RB 400-50	200	400	760	865	300	A75 A100	694	830	1109	17	26	997	949	40	350	863	80	105	30	
RB 600-50	300	600	1190	955	380	A100 A120 A150	784	920	1244	15	33	1157	1116	40	400	951	90	115	35	
RB 800-50	400	800	1550	995	380	A120 A150	824	960	1304	15	33	1210	1167	40	450	990	80	120	40	
RB 1000-50	500	1000	1850	1035	400	A120 A150	864	1030	1394	0	33	1248	1210	40	530	1046	80	120	40	

DESCRIPTION AND TECHNICAL DATA:

- The rail clamps are released electro-hydraulically and close with spring force.
- When the rail clamp is closed, the compression springs press on the pressure straps (knee lever system) in the middle, between the two clamp levers, thereby generating the clamping force.
- Via this system, the ratio of the lever system is increased as the jaw/ rail wears, thereby more or less compensating for the decreasing spring force. Within the permissible wear range of the jaws/ rail, the clamping force is nearly constant.
- The rail clamp is guided on the rail by the flange wheels; this ensures the mechanics of the rail clamp is afforded horizontal freedom of movement (float) of ± 20 mm and a vertical freedom of movement (float) of ± 20 mm in the rail clamp housing. In the direction parallel to the rails, the clamp is guided with minimal play (5 mm per direction of travel) in the rail clamp housing.
- Lockable protection cover made of stainless steel and three inspections doors.
- The release of the rail clamp occurs via integrated hydraulic power pack (HPU) with hydraulic cylinder. In emergency stop operation, the rail clamp can be released via hand pump connected to the HPU.
- The functional status of the rail clamp is monitored with the signals of the limit switches: „Brake open“, „Brake closed“, and „wear end“.

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