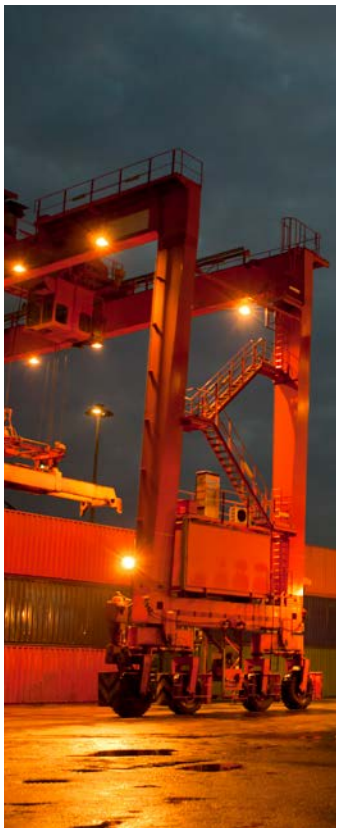
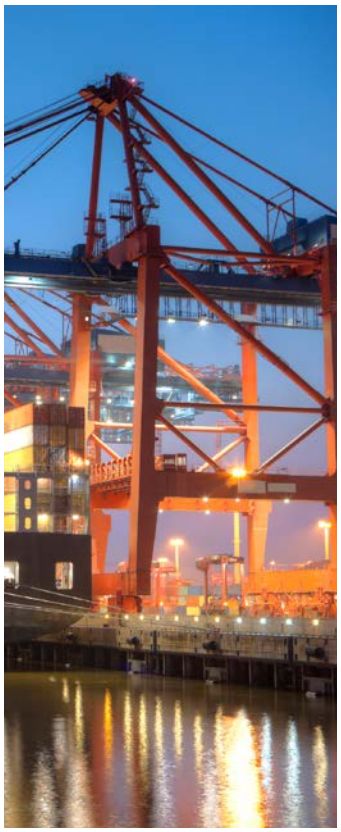
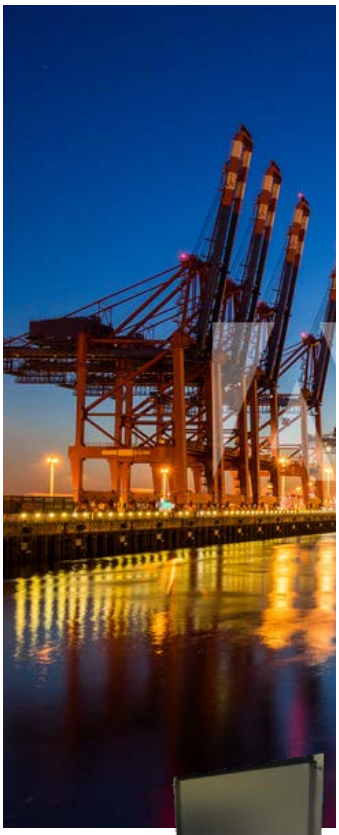
Stromag Storm Brakes







Stromag®
Altra Industrial Motion

Stromag

Founded in 1932, Stromag has grown to become a globally recognized leader in the development and manufacture of innovative power transmission components for industrial drivetrain applications. Stromag engineers utilize the latest design technologies and materials to provide creative, energy-efficient solutions that meet their customer's most challenging requirements.

Stromag's extensive product range includes flexible couplings, disc brakes, limit switches, an array of hydraulically, pneumatically, and electrically actuated brakes, and a complete line of electric, hydraulic and pneumatic clutches.

Stromag engineered solutions improve drivetrain performance in a variety of key markets including energy, off-highway, metals, marine, transportation, printing, textiles, and material handling on applications such as wind turbines, conveyor systems, rolling mills, agriculture and construction machinery, municipal vehicles, forklifts, cranes, presses, deck winches, diesel engines, gensets and stage machinery.

VISIT US ON THE WEB AT **STROMAG.COM**

Altra Motion

Altra is a leading global designer and producer of a wide range of electromechanical power transmission and motion control components and systems. Providing the essential control of equipment speed, torque, positioning, and other functions, Altra products can be used in nearly any machine, process or application involving motion. From engine braking systems for heavy duty trucks to precision motors embedded in medical robots to brakes used on offshore wind turbines, Altra has been serving customers around the world for decades.

Altra's leading brands include **Ameridrives**, **Bauer** Gear Motor, **Bibby** Turboflex, **Boston** Gear, **Delevan**, **Delroyd** Worm Gear, **Deltran**, **Formsprag** Clutch, **Guardian** Couplings, **Huco**, **Jacobs** Vehicle Systems, **Kilian**, **Kollmorgen**, **Lamiflex** Couplings, **Marland** Clutch, **Matrix**, **Nuttall** Gear, **Portescap**, **Stieber**, **Stromag**, **Svendborg** Brakes, **TB Wood's**, **Thomson**, **Twiflex**, **Warner** Electric, **Warner** Linear and **Wichita** Clutch

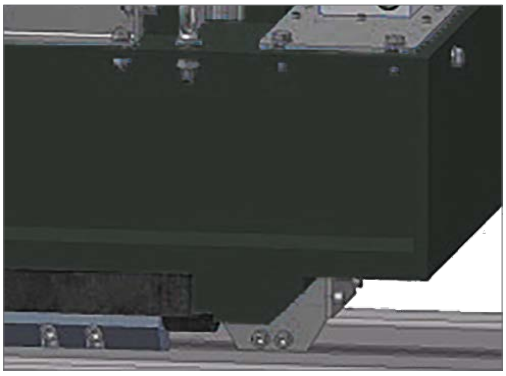
VISIT US ON THE WEB AT **ALTRAMOTION.COM**

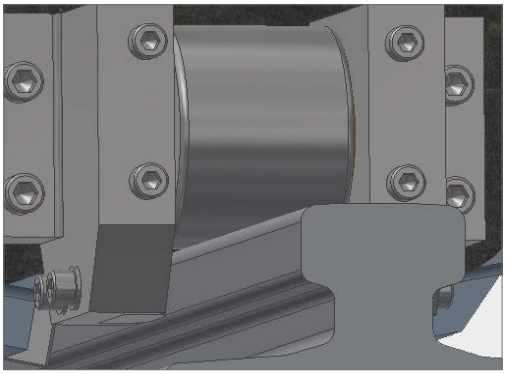
CONTENT

RBS RAIL BRAKES

RBS Rail Brakes prevent the crane from uncontrolled motion along the rail in case of sudden bursts of wind

RBS rail brakes are designed to apply friction forces on both sides of a rail. They are spring set and hydraulically released.
They ride above the rail with two flangeless rollers which continuously make contact with the rail. Hardened guides, attached to the cylindrical roller frame, protect serrated shoes from hitting the rail. As the clamp mechanism can float laterally with very little friction, guides wear is very low. This increases rail brakes safety and reliability and reduces the maintenance costs.





Applications

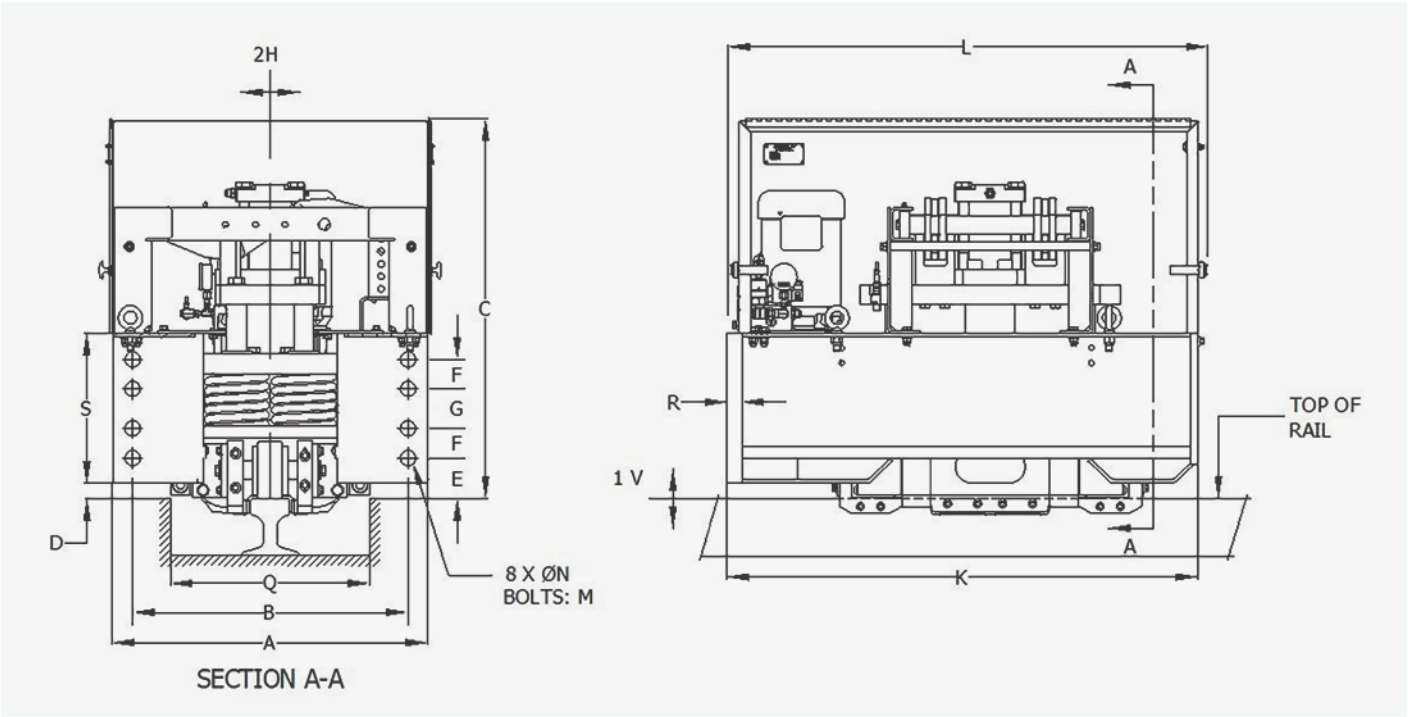
- Ship to shore cranes
- Automated stacking cranes
- Rail-mounted gantry cranes
- Shiploaders
- Rail-mounted material handling equipment

Benefits

- Floating mechanism allowing compensation of horizontal ±30mm and vertical ±30mm
- Roller and guide assembly can be easily lifted out of the clamp body for ease maintenance
- No need for lubrification point for the floating mechanism
- Rail clamp shoes retract beyond the guide frames and are protected from hitting the side of a rail during crane traversing
- Robust levers made from quality structural steel
- Frame painted with marine grade painting system for superior corrosion protection
- Hand pump for manual hydraulic release of the rail brake if power is not available

TECHNICAL DATA

- Springs application
- Hydraulic release
- Integrated Hydraulic Power Unit
- Stainless steel removable cover with inspection doors
- IFM proximity switch for opening monitoring
- Prewired junction box
- Hand pump for manual release
- Adjustable clamp by flow control valve
- Relief valve pressure set at 125% above the operating pressure



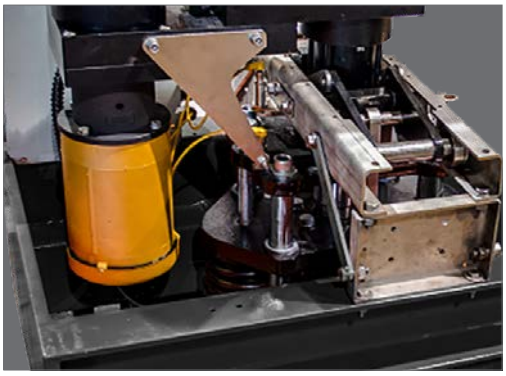
1V Vertical Rail Deviation (Float) ±25mm relative to Rail Clamp enclosure at full rated capacity.
2H Horizontal Rail Position Deviation (Float) ±25mm relative to Rail Clamp enclosure at full rated capacity.

MODEL	HOLDING CAPACITY (kN)	A	B	C	D	E	F	G	K	L	M	N	Q	R	S
RBS-HS-50-SF	50	578	530	687	40	85	50	65	896	916	M20	22	260	22	254
RBS-HS-100-SF	100														
RBS-HS-150-SF	150	711	635	735		85	65	90	885	909	M27	29	340	25	318
RBS-HS-200-SF	200														
RBS-HS-250-SF	250														
RBS-HS-300-SF	300														
RBS-HS-350-SF	350	800	700	816		105	75	100	1099	1118	M36	39	360	32	380
RBS-HS-400-SF	400														
RBS-HS-450-SF	450														
RBS-HS-500-SF	500														
RBS-HS-600-SF	600														
RBS-HS-800-SF	800	850	730	1050		120	110	170	1200	1230	M42	45	400	46	530
RBS-HS-900-SF	900														
RBS-HS-1000-SF	1000														

RRBS RETRACTABLE RAIL BRAKES

RRBS Retractable Rail Brakes are the obvious choice especially for high speeds machines

RRBS rail brakes are designed to clamp on both sides of a rail.
They are spring set and hydraulically released.
They are designed to release and retract fully from the rail head. This eliminates mechanical guiding means at rail level. So there is no wear and tear to guide means, brake shoes or the rails head itself.
The RRBS rail clamp mechanism is top supported and float laterally with ease. All the features of these brakes allow reliability and low maintenance.



Applications

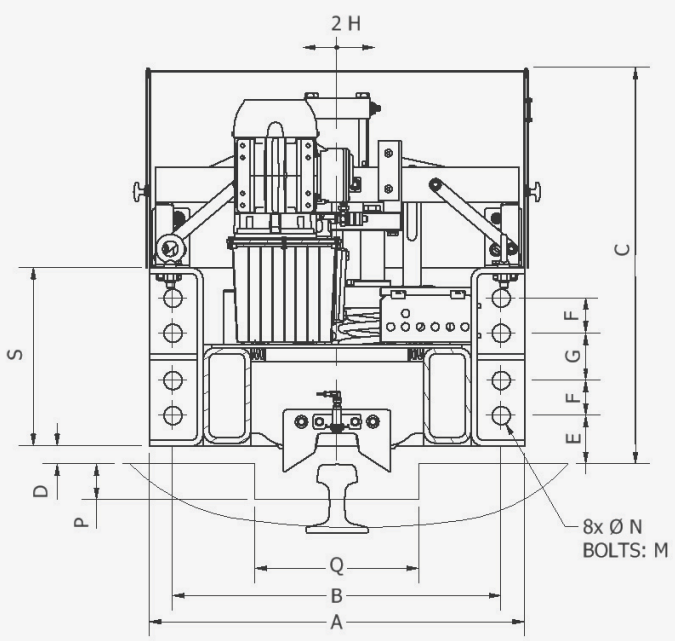
- Ship to shore cranes
- Automated stacking cranes
- Rail-mounted gantry cranes
- Shiploaders
- Rail-mounted material handling equipment

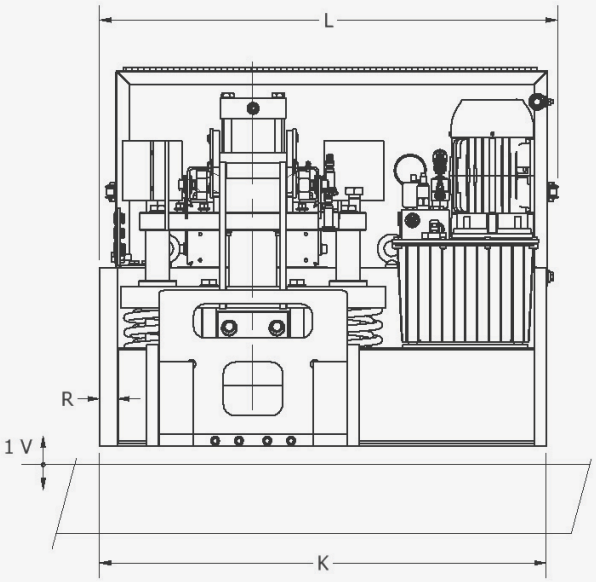
Benefits

- No mechanical guiding means at rail level at any speed: paramount for high speed, modern cranes
- Floating mechanism allowing compensation of horizontal ±30mm and vertical ±25mm (up to ±40 mm upon request)
- No need for lubrification point for the floating mechanism
- Serrated shoes protected from hitting the rails sides for less wear
- Hydraulic cylinder easily removable for quick maintenance and replacement
- Clamp release, positioning and reserve stroke monitoring by proximity switches
- Stainless steel removable cover with inspection doors

TECHNICAL DATA

- Springs application
- Hydraulic release
- Integrated Hydraulic Power Unit
- Stainless steel removable cover with inspection doors
- IFM proximity switch for opening monitoring
- Prewired junction box
- Hand pump for manual release
- Adjustable clamp by flow control valve
- Relief valve pressure set at 125% above the operating pressure





1V Vertical Rail Deviation (Float) ±25mm relative to Rail Clamp enclosure at full rated capacity.
2H Horizontal Rail Position Deviation (Float) ±25mm relative to Rail Clamp enclosure at full rated capacity. Larger floats available upon request.
P* & **Q*** Dimensions are subject to a specific rail size.

MODEL	HOLDING CAPACITY (kN)	A	B	C	D	E	F	G	K	L	M	N	Q*	P*	R	S
RRBS-HS-50-SF	50	578	530	735	30	75	50	65	710	735	20	22	280	65	22	254
RRBS-HS-100-SF	100															
RRBS-HS-150-SF	150	705	635	775	40	85	65	90	860	895	27	29	340	75	25	310
RRBS-HS-200-SF	200															
RRBS-HS-250-SF	250															
RRBS-HS-300-SF	300															
RRBS-HS-350-SF	350	800	700	860		105	75	100	950	976	36	39	360	75	40	380
RRBS-HS-400-SF	400															
RRBS-HS-450-SF	450															
RRBS-HS-500-SF	500															
RRBS-HS-600-SF	600															
RRBS-HS-800-SF	800	850	730	1050		120	110	170	1200	1230	39	42	380	75	46	540
RRBS-HS-900-SF	900															
RRBS-HS-1000-SF	1000															
RRBS-HS-1200-SF	1200	900	780	1050		115	100	180	1400	1430	42	45	400	75	46	530

RPS RAIL PRESS BRAKES

RPS Rail Press Brakes apply spring force on the top of the rail while permitting a large rail deviation

RPS rail brakes use the weight of the crane in the braking process and provide the braking force along the rail.
They are spring set and hydraulically released. Once released, the brake hangs above the rail at a pre-designed clearance.
Actual braking capacity depends on the applied force and applicable coefficient of friction (different for static and dynamic braking).
RPS brakes are parking brakes designed to apply when a crane comes into a full stop position.

Applications

- Ship to shore cranes
- Automated stacking cranes
- Rail-mounted gantry cranes
- Shiploaders
- Rail-mounted material handling equipment

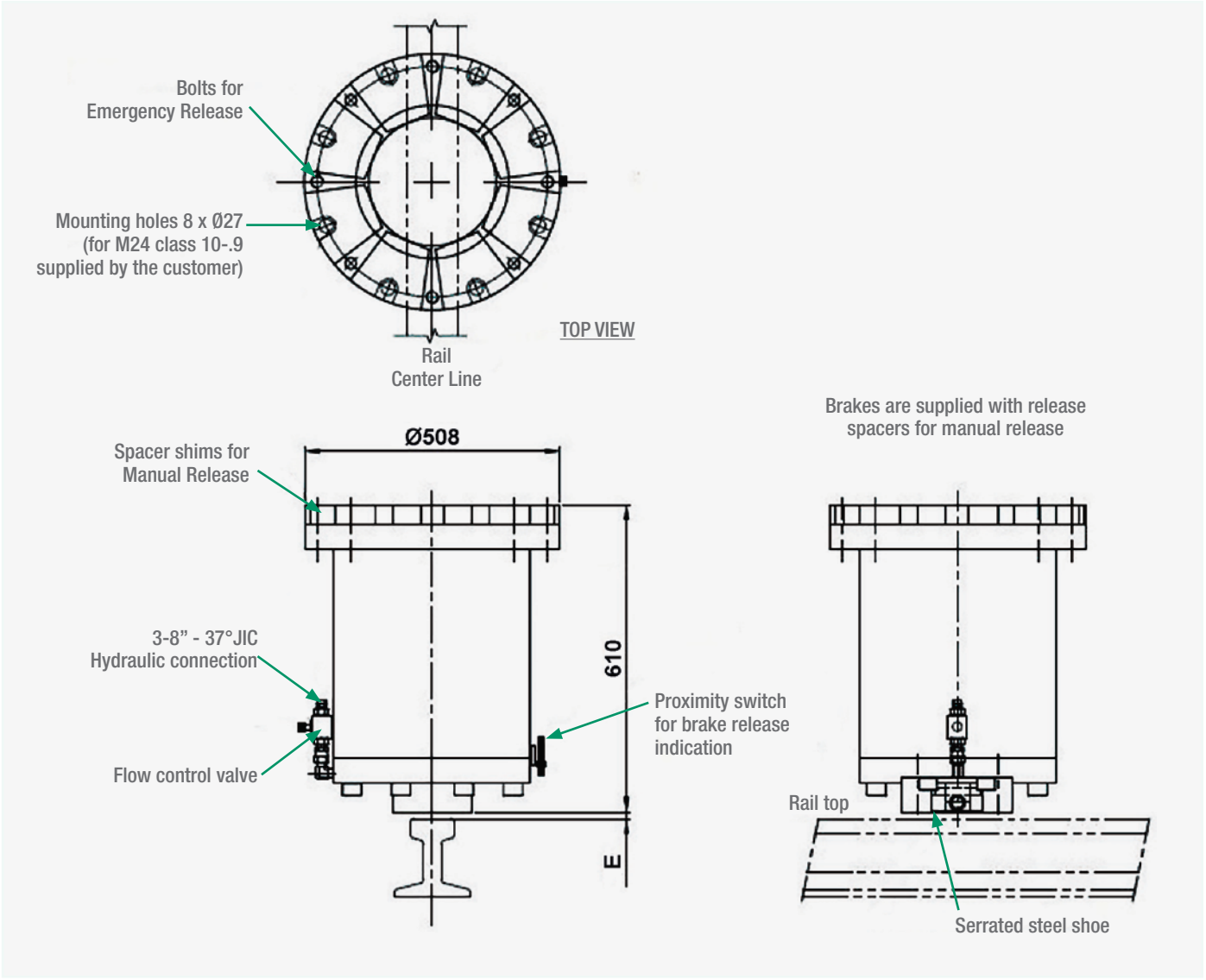
Benefits

- Permit large variations of the rail height by means of a longer spring stroke and provide a balanced braking force / stroke curve
- Serrated shoes fully protected from hitting the top of the rail for less wear and tear
- Longer lasting springs for reduced maintenance
- Ultimate gust wind protection for the operator and the crane
- Flow control valve installed on the brake for controlled setting time
- Proximity switch for release indication
- Brake shoes easily removed and replaced
- Made with high quality structural steel
- Standard frame painting total coat min. 200-275 µm

TECHNICAL DATA

- Springs application
- Hydraulic release
- Proximity switch

- SRPS Static Rail Press: 150 kN, 220 kN, 300 kN
- DRPS Dynamic Rail Press: 120 kN, 180 kN, 240kN



SRPS -220 BRAKING FORCE at various stroke extensions			
Shoe extension: E mm		Applied force kN	Braking force kN
BRAKE RELEASED	0	595	
BRAKE APPLIED	10	500	250
	16	439	220
	20	396	198
	30	278	139
	35	214	107

Ex.: **Nominal holding force** = 220 kN @ 16mm shoe extension & 0.5 Coeff. of Friction
Actual acchievable brake force depends on available crane weight. Thus can be affected by brake mounting position and wind loading of crane.

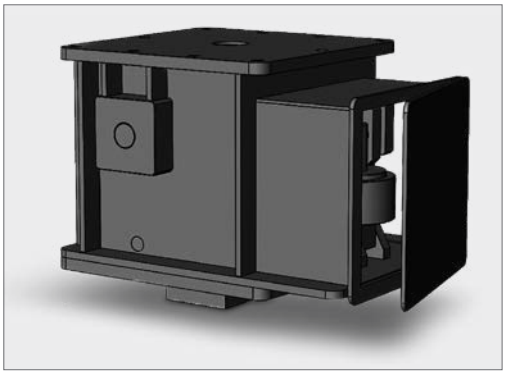
RPS-SA RAIL BRAKES - SELF ADJUSTING

RPS-SA Rail Brakes compensate high variations of rail height, they are automatocally adjusted before braking

RPS-SA rail brakes are completely spring set brakes.
These brakes apply spring force on the top of the rail, they use the weight of the crane in the braking process and provide the friction force along the rail.
Two step braking ensures that the shoe is in contact with the rail before spring force is applied.
The design of these brakes allows a small and consistent spring stroke for spring durability.

Applications

- Ship to shore cranes
- Automated stacking cranes
- Rail-mounted gantry cranes
- Shiploaders
- Rail-mounted material handling equipment

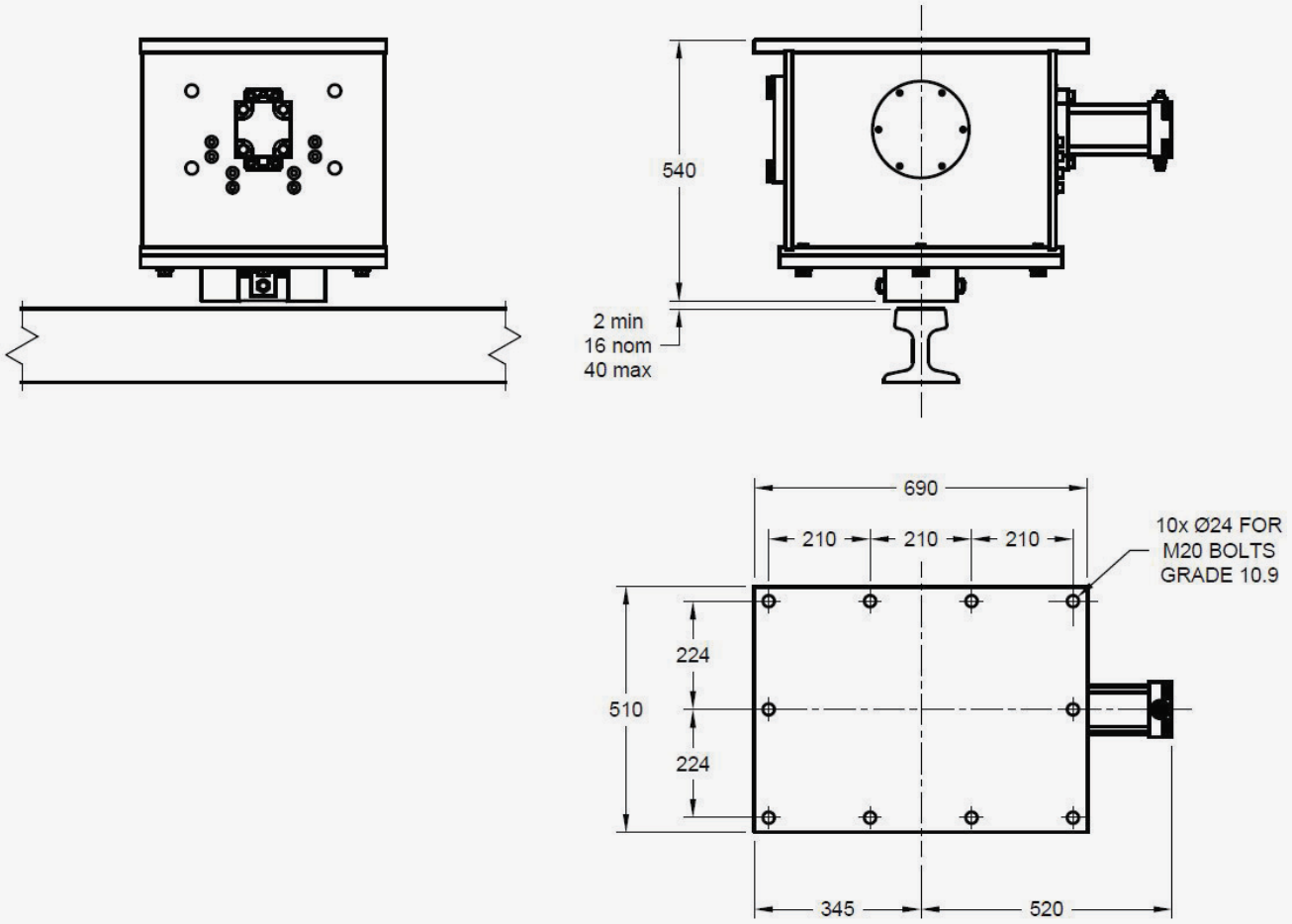


Benefits

- Compensation of ±19 mm of rail height variations with full rated capacity
- All components are fully enclosed in a sealed housing
- No release shims, 3 methods for emergency release: HPU hand pump Internal jacking screws & shoe removal - External hand pump & screws
- Serrated shoes protected from hitting the rails sided for less wear
- Compact design: Low height allows retrofitting for adapter flanges
- Proximity switch for release indication
- Brake shoes easily removed and replaced
- Made with high quality structural steel

TECHNICAL DATA

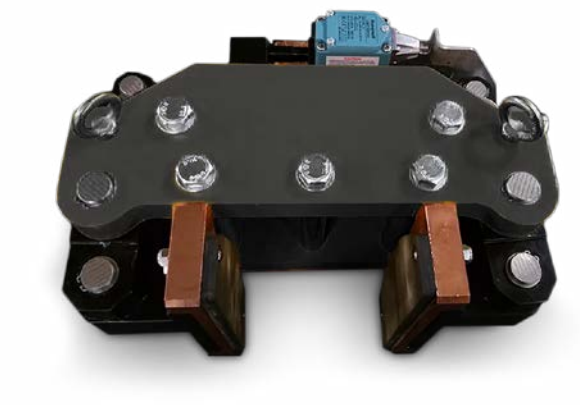
- Springs application
- Hydraulic release
- Proximity switch for release monitoring
- SRPS-SA Static Rail Press: 150 kN & 220 kN
- DRPS-SA Dynamic Rail Press: 120 kN & 180 kN



RPS-SA-220 BRAKING FORCE at various stroke extensions			
Shoe extension: E mm		Applied force kN	Braking force kN
BRAKE RELEASED	0	470	235
BRAKE APPLIED	2	450	225
	8	445	222
	16	440	220
	28	420	210
	40	410	205

Ex.: **Nominal holding force** = 220 kN @ 16mm shoe extension & 0.5 Coeff. of Friction
Actual acchievable brake force depends on available crane weight. Thus can be affected by brake mounting position and wind loading of crane.

WBES WHEEL BRAKES ELECTRICAL



WBES Wheel Brakes are parking and safety devices that can be used as dynamic brakes in case of emergency

WBES Wheel Brakes are spring applied, with braking force generated by the multiplied forces of springs. Mounted on the idler wheels of rail mounted equipment, they work in conjunction with the existing gantry motor brakes to prevent movement in case of wind microbursts.
They are electrically released. An electro-mechanical actuator retracts the brake pads off the wheel and an actuator holding brake is engaged to hold the spring load. Electric actuator replaces hydraulic power unit or thruster and eliminates the possibility of hydraulic leakage.

Applications

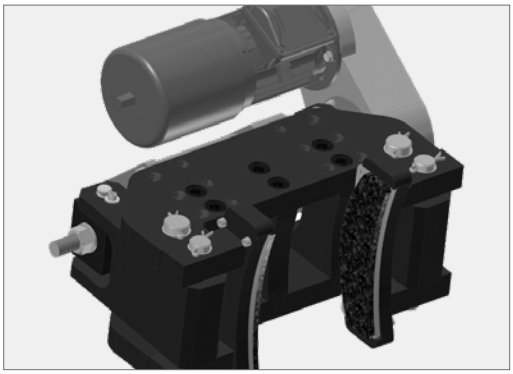
- Ship to shore cranes
- Automated stacking cranes
- Rail-mounted gantry cranes
- Shiploaders
- Rail-mounted material handling equipment

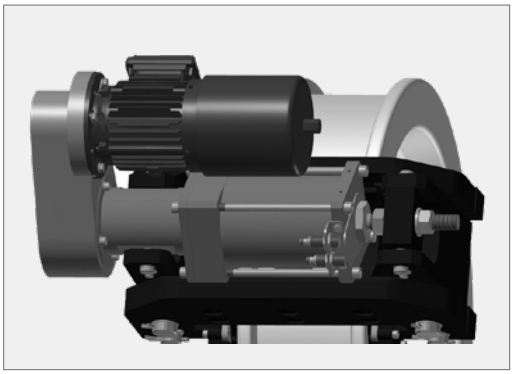
Benefits

- Simple and compact design
- No hydraulic components, so no environmental or fire liabilities
- Equipped with shoe alignment device
- Release nut for mechanical release
- Proximity switch for release monitoring
- Replacement of the brake pad, made from abestos-free composite, without brake removal from the crane
- Spring pack designed for long life
- On all pivot points: stainless steel pins and self-lubricating bushings
- Means for adjusting the air gap
- Left hand / right hand orientation
- Made from good quality structural steel

TECHNICAL DATA

- Springs application
- Electrical release
- Parking brake, can be used as dynamic brake in an emergency situation
- Proximity switch for release monitoring
- For wheel diameter from 500 mm to1200 mm and wheel width from 140 mm to 240 mm
- Available horizontal float: ± 6mm
- Shoe to wheel flange clearance: 1 mm per side (must be adjusted for wear on regular basis)
- Maximum pad wear limits: 6 mm per side
- Main power voltage: AC / DC voltage available
- Control voltage: single phase AC or DC available
- Operating temperature: -20 to 70° C





MODEL	BRAKING FORCE kN
WBES-30	30
WBES-60	60
WBES-90	90
WBES-120	120

Braking force calculated using theoretical coefficient of friction μ=0.4

NOTES

Premier Industrial Company Leading Brands

OTHER PRODUCT SOLUTIONS FROM **ALTRA MOTION**

Our comprehensive product offerings include various types of clutches and brakes, overrunning clutches, engineered bearing assemblies, gearing and gear motors along with linear motion products, belted drives, couplings, limit switches, precision motors, drives & controls, miniature motors and engine braking systems.With thousands of product solutions available, Altra provides true single source convenience while meeting specific customer requirements. Many major OEMs and end users prefer Altra products as their No. 1 choice for performance and reliability.

WWW.ALTRAMOTION.COM

Electric Clutches & Brakes
Inertia Dynamics
Matrix
Stromag
Warner Electric

Precision Motors & Automation
Kollmorgen

Heavy Duty Clutches & Brakes
Industrial Clutch
Stromag
Svendborg Brakes
Twiflex
Wichita Clutch

Miniature Motors
Portescap

Overrunning Clutches
Formsprag Clutch
Marland Clutch
Stieber

Linear Systems
Thomson

Engineered Couplings & Universal Joints
Ameridrives
Bibby Turboflex
Guardian Couplings
Huco
Lamiflex Couplings
Stromag
TB Wood's

Engine Braking Systems
Jacobs Vehicle Systems

Gear Drives & Gear Motors
Bauer Gear Motor
Boston Gear
Delroyd Worm Gear
Nuttall Gear

Specialty Components
Kilian
Stromag
TB Wood's

Stromag Facilities

Europe

Germany

Hansastraße 120
59425 Unna - Germany
+49 (0) 23 03 102 0
Clutches & Brakes, Couplings, Geared Cam Limit Switches, Discs, Wind Brakes

Dessauer Str. 10
06844 Dessau-Roßlau - Germany
+49 (0) 340 2190 0
Electromagnetic Clutches & Brakes

France

Avenue de l'Europe
18150 La Guerche sur L'Aubois - France
+33 (0)2 48 80 72 72
Disc Brakes & Drum Brakes

Great Britain

Ampthill Road
Bedford, MK42 9RD - UK
+44 (0)1234 324347
Electromagnetic Clutches & Brakes, Industrial Caliper Brakes

North America

USA

31 Industrial Park Road
New Hartford, CT 06057 - USA
860-238-4783
Electromagnetic Clutches & Brakes

300 Indiana Highway 212
Michigan City, IN 46360 – USA
219-874-5248
Couplings

2800 Fisher Rd.
Wichita Falls, TX 76302 - USA
940-723-3400
Geared Cam Limit Switches, Industrial Caliper & Drum Brakes

South America

Brasil

Avenida João Paulo Ablas, 2970
Jardim da Glória, Cotia - SP,
06711-250 - Brasil
+55 (11) 4615-6300
Flexible Couplings, Bearing Isolators, and Coupling Guards

Asia Pacific

China

T40B -5, No. 1765 Chuan Qiao Road
Pudong 201206, Shanghai - China
Tel +86 21-60580600
Clutches & Brakes, Electromagnetic Clutches & Brakes, Couplings, Industrial Caliper & Drum Brakes, Discs, Geared Cam Limit Switches, Wind Brakes

India

Gat No.: 448/14, Shinde Vasti, Nighoje
Tal Khed, Pune- 410 501
+91 2135 622100
Clutches & Brakes, Electromagnetic Clutches & Brakes, Couplings, Industrial Caliper & Drum Brakes, Discs, Geared Cam Limit Switches, Wind Brakes

The Brands of Altra Motion

Couplings

Ameridrives
www.ameridrives.com

Bibby Turboflex
www.bibbyturboflex.com

Guardian Couplings
www.guardiancouplings.com

Huco
www.huco.com

Lamiflex Couplings
www.lamiflexcouplings.com

Stromag
www.stromag.com

TB Wood's
www.tbwoods.com

Linear Systems

Thomson
www.thomsonlinear.com

Geared Cam Limit Switches

Stromag
www.stromag.com

Engineered Bearing Assemblies

Kilian
www.kilianbearings.com

Electric Clutches & Brakes

Matrix
www.matrix-international.com

Stromag
www.stromag.com

Warner Electric
www.warnerelectric.com

Deltran
www.thomsonlinear.com

Belted Drives

TB Wood's
www.tbwoods.com

Heavy Duty Clutches & Brakes

Twiflex
www.twiflex.com

Stromag
www.stromag.com

Svendborg Brakes
www.svendborg-brakes.com

Wichita Clutch
www.wichitaclutch.com

Gearing & Specialty Components

Bauer Gear Motor
www.bauergears.com

Boston Gear
www.bostongear.com

Delevan
www.delevan.com

Delroyd Worm Gear
www.delroyd.com

Nuttall Gear
www.nuttallgear.com

Engine Braking Systems

Jacobs Vehicle Systems
www.jacobsvehiclesystems.com

Precision Motors & Automation

Kollmorgen
www.kollmorgen.com

Miniature Motors

Portescap
www.portescap.com

Overrunning Clutches

Formsprag Clutch
www.formsprag.com

Marland Clutch
www.marland.com

Stieber
www.stieberclutch.com

Stromag® Altra Industrial Motion
www.stromag.com