

Document No.: D40070
Reference: 160427
Revision:

STORM BRAKES
RAIL BRAKE CLASSIC
BROCHURE

BREL X
Storm Braking Solutions
A Division of the Portal Crane Group



RB-C RAIL BRAKE - CLASSIC BROCHURE



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RELIABILITY THROUGH QUALITY AND INNOVATION

shoe travel is restricted in order to prolong the life of the springs.

WHERE TO USE (APPLICATIONS)

Rail Brakes are Storm Brakes which apply spring force on the top of the rail. They utilize the weight of the crane in the braking process and provide the friction force along the rail. Actual braking capacity depends on the applied force and applicable coefficient of friction (different for static and dynamic braking). Classic Rail Brakes are designed as a parking brakes to apply when crane comes into a full stop position.

SRB Static braking is provided by a shoe with a sharp serrations pushing down on the top of the rail. BRELEX rail brake braking capacity is calculated considering 0.5 coefficient of friction.

DRB Dynamic series of our rail brakes come with a brake shoe with bonded friction material for static braking as well as the emergency brakes to assist a crane in stopping during a run-away situation or power shortage. Braking capacity is calculated considering 0.4 coefficient of friction.

RAIL BRAKE DEFINITION

Rail Brakes are spring set and hydraulically released by Hydraulic Power Unit. Once released, it hangs above the rail at pre-designed clearance. Brake mounting shoe-to-rail clearance and the existing rail vertical deviation affects achievable braking force and the life span of the springs within the brake.

Conventional design and spring selection dictates that shoe to rail clearances are very limited or brake



OPERATIONAL DESCRIPTION

The solenoid valve SV1 is normally open when de-energized to allow setting of the rail brake when power is lost. When the brake release button is pressed by the operator in the cab, crane's PLC will send the signal to energize SV1 solenoid and pull in the motor contactor, starting the HPU Hydraulic Power Unit for all brakes. The HPU will build the pressure until pressure set point to release the brake is reached. The circuit is internally protected and will stop the motor once set-point for the motor is reached.

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MOST IMPORTANT FEATURES

- Brake units have longer stroke for rail variations
- Longer lasting springs for reduced maintenance
- Ultimate gust wind protection for the operator and the crane
- Flow control valve installed on brake for controlled setting time
- Proximity switch for release indication.
- Brake shoes easily removed and replaced.
- Fabricated from high quality structural steel.
- Standard frame painting is good for five years warranty total coat min. 200-275 µm

OPTIONAL ITEMS

- No long hoses/ 4 brakes and 4 power units
- Second Pressure Switch for release signal indication
- Rail Scraper for cleaning the top of the rail
- Steel armor plate for protection of hoses and fittings
- DRB-90-J model with hydraulic system for jacking a corner of a crane in matter of minutes (Brake Jacking capacity: 950kN @ 14Mpa for ~45mm stroke max: Braking capacity: 90kN)
- Built in GPS for positioning
- Auto-set for Over 100% speed
- Auto-set for fast approach to end stops
- Auto-set for gantry in-active for 5-20 minutes
- Auto-set for wind high speed (Tie to anemometer)
- Operator has set/release buttons in cab
- 4 Green/Red lights in cab indicates ready to run
- Can integrate into existing PLC or supply turnkey
- Turnkey includes PLC control system and GPS receiver

BENEFITS

Rail height fluctuations are typically caused over time by settling and fatigue failures of the rail support foundations. Rail height fluctuation has been a big problem for traditional rail brakes. It has either caused the rail brake to impact the rail brake (high rail), causing damage to the rail brake, crane

and rail; or it has resulted in such large gaps between the rail brake and the rail (low rail) that the brake no longer produces adequate force or capacity. Conventional spring set rail brake spring life is also shortened significantly by increased rail brake stroke. That is why their operating range is typically limited.

Our RB-C Classic Rail Brake solves this problem by permitting a large rail deviation while providing balanced braking force / stroke curve. Serrated shoes are fully protected from hitting the top of the rail contributing to less wear and tear.



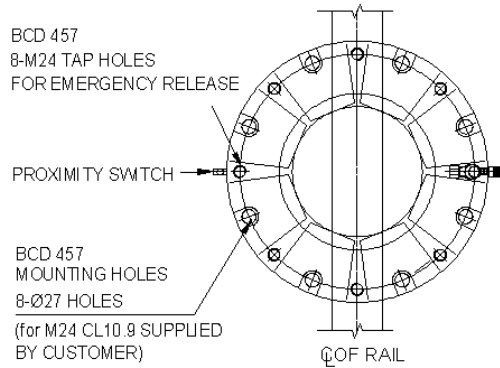
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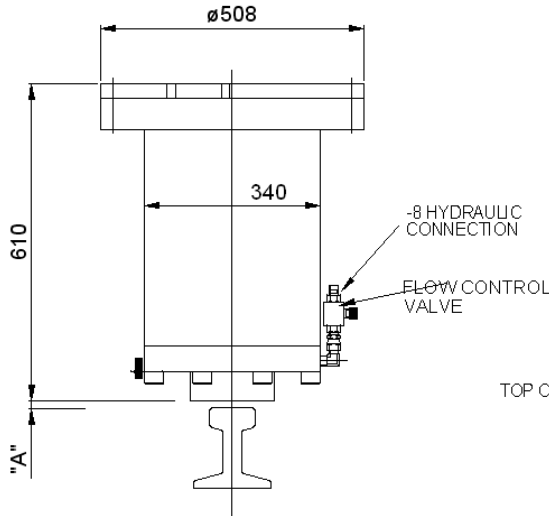


AVAILABLE SIZES:

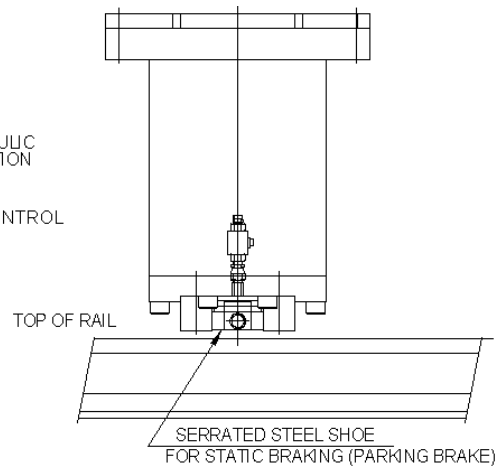
Static Rail Brake SRB: 150kN & 220kN.
 Dynamic Rail Brake DRB: 120kN & 180kN



Shoe Extension "A" mm	Applied force, kN	Braking force, kN
"RELEASED"	0	595
"SET"	10	250
	16	220
	20	198
	30	139
	35	107



- Brakes supplied with Release Spacers for manual release



EASY REPLACEABLE SERRATED OR SMOOTH SHOE

EXAMPLE: SRB-220-C Nominal holding force 220 kN @ 16mm shoe extension & 0.5 Coeff. Of Friction.

Dimensions and capacities subject to change without notification.

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QUALITY

Reliability through Quality and Innovation

All products are quality inspected as per BRELEX standard quality policy. Our brakes are hydraulic proof-tested before shipment. Standard 12 / 18 months warranty applies for all braking systems.

Classic rail brake applied force testing is available upon request.
Please contact us for more details.



PERFORMANCE TEST

Brelx provides functional test for all sizes of Rail Brake Systems at our factory.