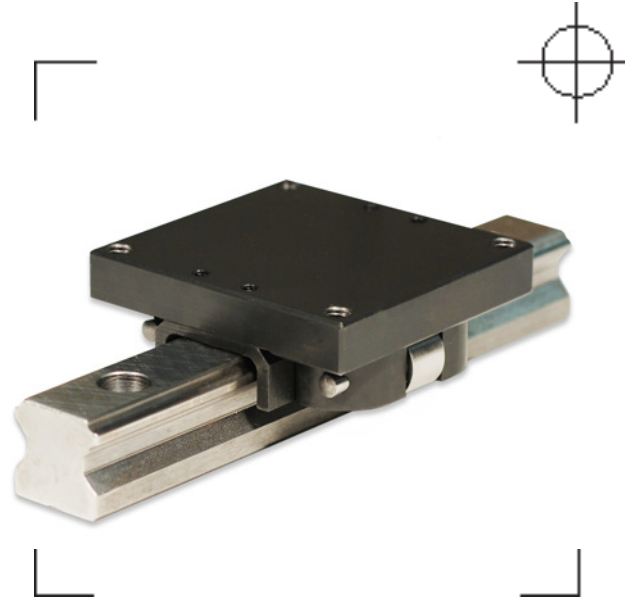


**Profile Rail Brake – RBR Series**  
**Fits 20, 25, 30, and 35 mm Profile Guide Rails**

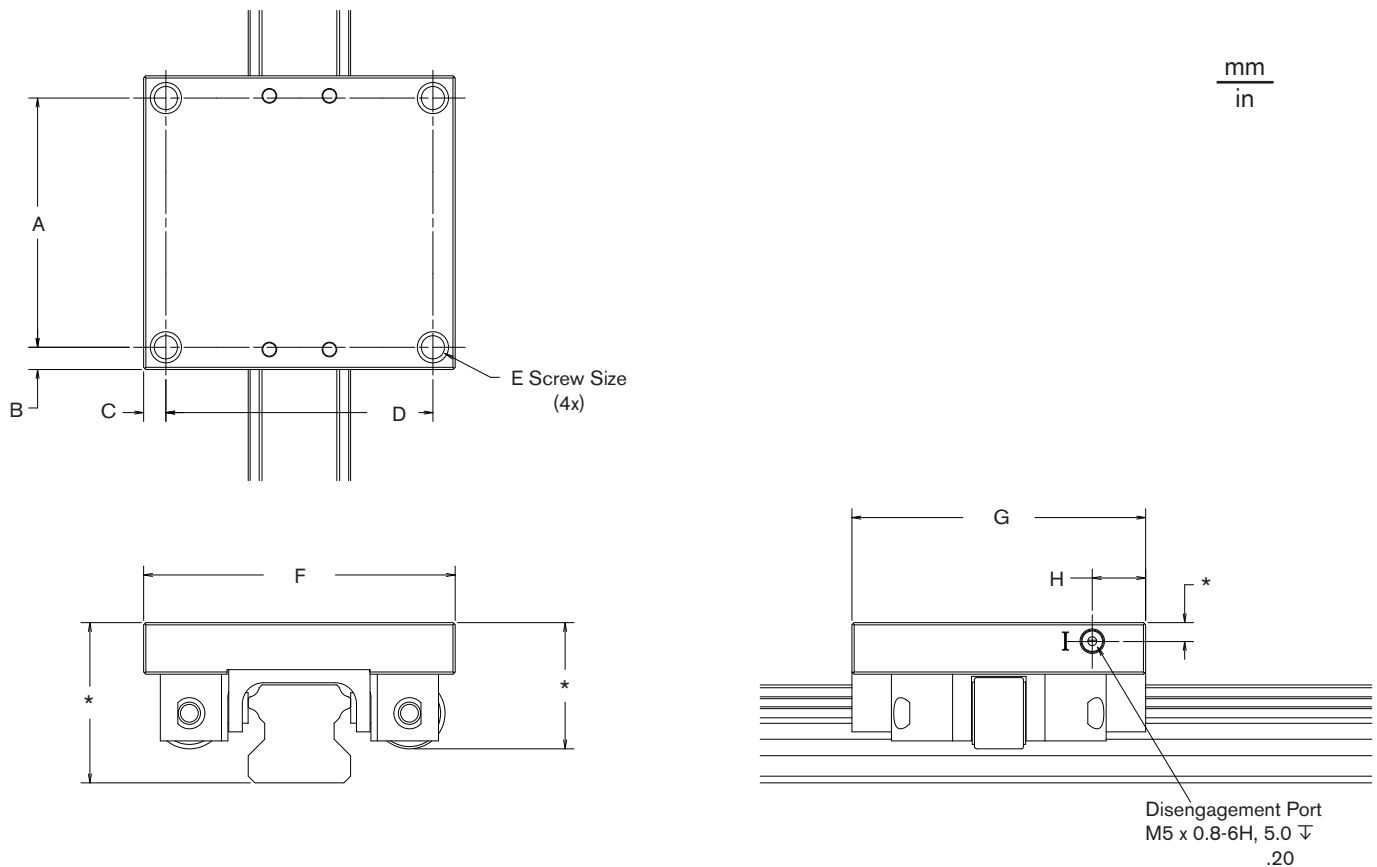
Nexen's RBR-series of Rail Brakes is a cost-effective solution for holding loads on guide rail systems. The spring-engaged, air-released brake is ideal for power-off applications, and clamps directly onto the center of the guide rail to provide positive holding in all axes.

The unique design uses a horizontal air/spring chamber to apply force on the rail through a wedge and roller mechanism, providing low backlash and accurate positioning. The RBR is engineered for dependable performance, easy setup and zero maintenance.



- Static holding only - no dynamic braking capability
- Cannot be used for emergency stopping
- Spring engaged, air released for power-off and holding applications
- Low backlash for accurate positioning, while also providing stiffness and eliminating vibration in linear drives
- Easy to set up, no adjustments necessary
- Low release pressure, compatible with most plant air supplies
- No maintenance required

## Profile Rail Brake – RBR Series, Approximate Dimensions



Model	A	B	C	D	E	F	G	H
RBR20	70.00 [2.756]	5.00 [0.197]	4.88 [0.192]	52.73 [2.076]	M6 x 1.00	62.49 [2.460]	80.0 [3.15]	11.00 [0.433]
RBR25	56.00 [2.205]	5.00 [0.197]	4.75 [0.187]	60.00 [2.362]	M6 x 1.00	69.49 [2.736]	66.0 [2.60]	12.00 [0.472]
RBR30	90.00 [3.543]	5.00 [0.197]	8.75 [0.344]	72.00 [2.835]	M6 x 1.00	89.49 [3.523]	100.0 [3.94]	12.00 [0.472]
RBR35	100.29 [3.948]	10.18 [0.401]	6.00 [0.236]	87.50 [3.445]	M10 x 1.50	99.49 [3.917]	120.6 [4.75]	18.68 [0.736]

\*Additional dimensions and tolerances are available in the drawings and CAD models on the product pages on Nexen's website.

## Product Numbers by Rail Type

Rail/Carriage Manufacturer	Rail Type	RBR20	RBR25	RBR30	RBR35
IKO	LRX	-	-	960642	-
	KUE	-	960613	-	-
INA	KUSE	-	960611	-	-
	KUVE	960631	960611	960641	960652
THK	HSR	960630	960610	960640	960650
	SHS	-	960612	-	960651

Note: Nexen provides RBR-type rail brakes for other rail types by request. Call 800-843-7445 for application assistance.

## Holding Force Conditions

Holding forces are based on rail brakes with clean brake shoes working on clean or lightly-oiled rails. Contaminants such as grease, excessive oil, or debris on the braking surfaces decrease the rail brake's holding force. To account for these factors, Nexen recommends applying the brake with an appropriate service factor (see below).

## Specifications

Model	Rated Holding Force N [lbs]	Backlash at Full Holding Force	Release Pressure / Rail Clearance	*Response Time (1830mm [72"] length tubing)	*Response Time (915mm [36"] length tubing)	Approx. Weight kg [lbs]
RBR20	500 [112]	0.5 mm [0.020 in]	‡4 bar [60psi] to disengage, 5.0 bar [72psi] to ensure .05 mm [.002 in] rail clearance	53 ms	43 ms	.51 [1.12]
RBR25	700 [157]	0.5 mm [0.020 in]	‡4 bar [60psi] to disengage, 5.0 bar [72psi] to ensure .05 mm [.002 in] rail clearance	69 ms	55 ms	.47 [1.04]
RBR30	900 [202]	0.5 mm [0.020 in]	‡4 bar [60psi] to disengage, 5.0 bar [72psi] to ensure .05 mm [.002 in] rail clearance	68 ms	55 ms	1.24 [2.74]
RBR35	1150 [258]	0.5 mm [0.020 in]	‡4 bar [60psi] to disengage, 5.0 bar [72psi] to ensure .05 mm [.002 in] rail clearance	48 ms	42 ms	1.65 [3.63]

\*Response times represent the time to full disengagement of an RBR. Testing was performed using 4mm diameter air tubing. ‡Rail brakes are factory set to disengage at 4 bar [60 psi]. However, an air pressure of 5.0 bar [72 psi] will ensure a minimum facing-to-rail clearance of .05mm [.002"] per side. The additional clearance at 5.0 bar [72 psi] will help reduce facing drag caused by rail variation.

## Service Factor

Nexen recommends a 2:1 service factor when selecting rail brakes.

## Application Example

- Applied load: 500N [112lb]
- Nexen recommended service factor: 2 to 1
- Service factor =  $\frac{\text{Rated force of brake}}{\text{Applied load}}$

Model	Rated Holding Force N [lbs]	Service Factor at 500N [112lbs]	Service Factor Met?
RBR20	600 [135]	1.2	1.2 < 2, No
RBR25	700 [157]	1.4	1.4 < 2, No
RBR30	900 [202]	1.8	1.8 < 2, No
RBR35	1150 [258]	2.3	2.3 > 2, Yes
2-RBR20's	1200 [270]	2.4	2.4 > 2, Yes
2-RBR25's	1400 [314]	2.8	2.8 > 2, Yes
2-RBR30's	1800 [404]	3.6	3.6 > 2, Yes

[www.nexengroup.com](http://www.nexengroup.com)

In accordance with Nexen's established policy of constant product improvement, the specifications contained in this document are subject to change without notice. Technical data listed in this document are based on the latest information available at the time of printing and are also subject to change without notice. For current information, please consult [www.nexengroup.com](http://www.nexengroup.com).

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