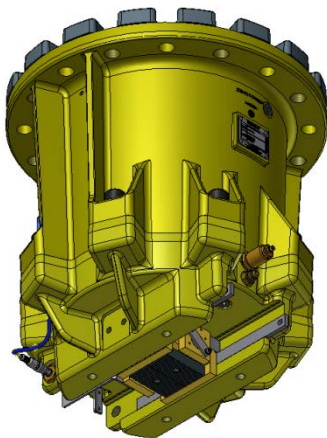


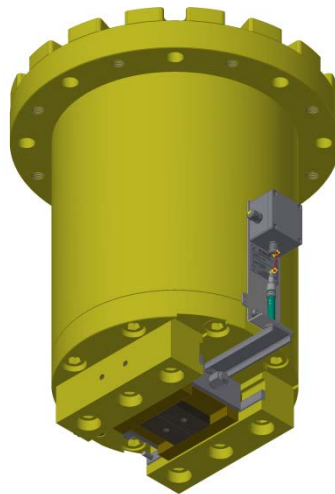
2 RAIL BRAKES STATIC

INTERNATIONAL PATENTS APPLY

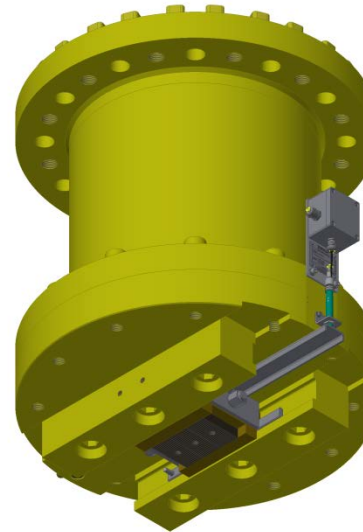
1.0 Rail Brakes Models



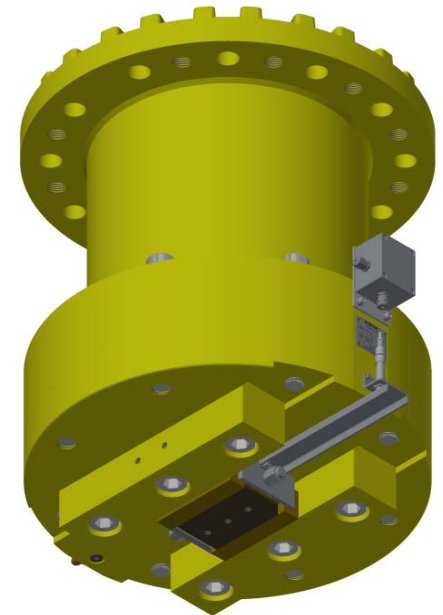
RBHS-DTSR-060-050
RBHS-DTSR-075-050
RBHS-DTSR-090-050
RBHS-DTSR-100-050



RBHS-STSR-200-050

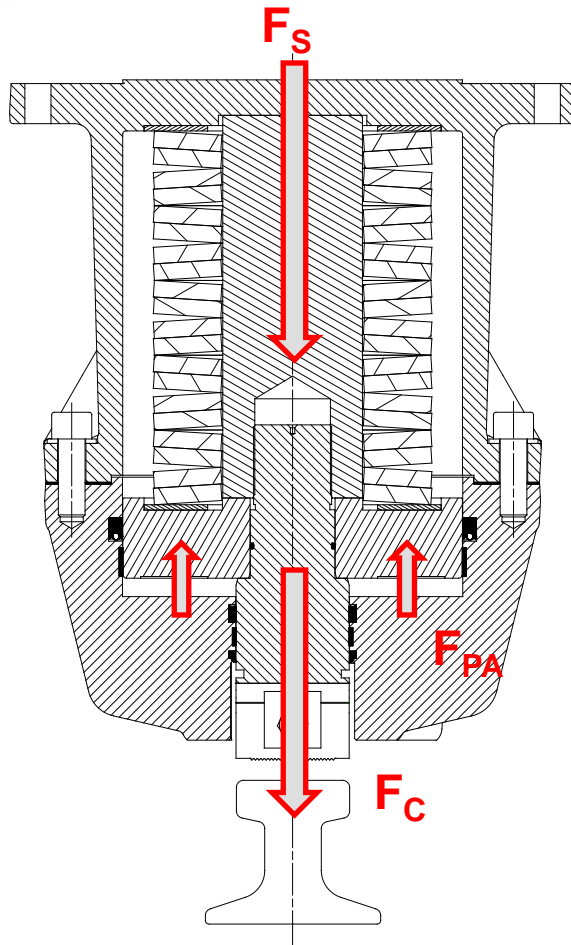


RBHS-STSR-300-050



RBHS-STSR-400-050

2.0 Principle Of Operation



International patents apply.

F_S = Spring Force

F_{PA} = Cylinder pressure to compress the springs

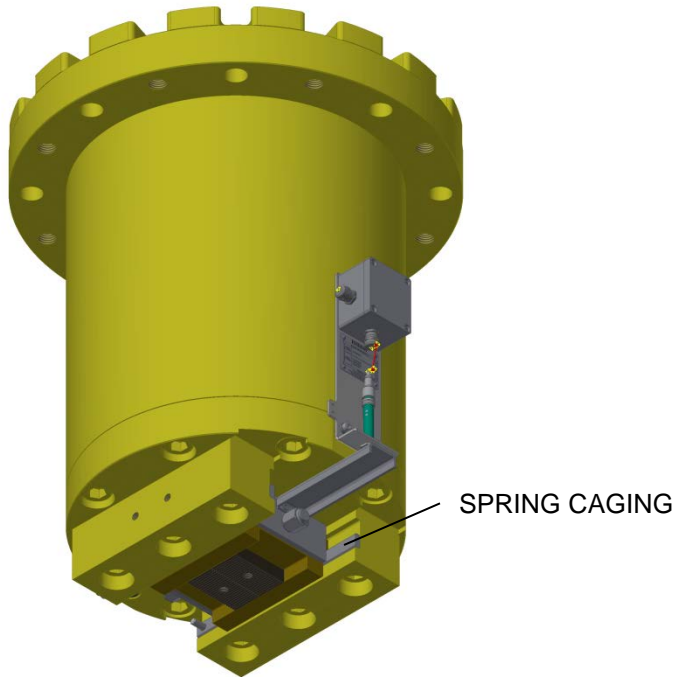
F_C = Clamping Force

F_H = Holding Force

$F_H = F_C \times \mu$

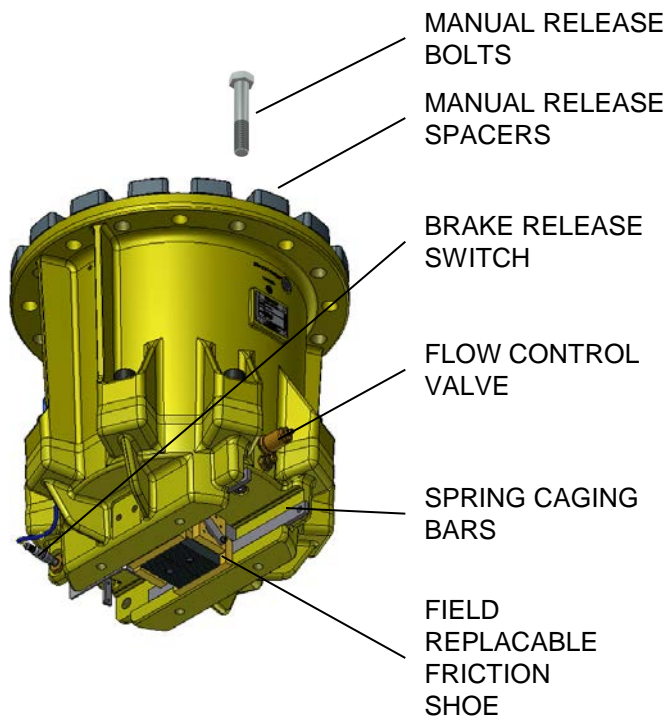
STATIC $\mu = 0.5$ (serrated shoe)

3.0 Design Highlights



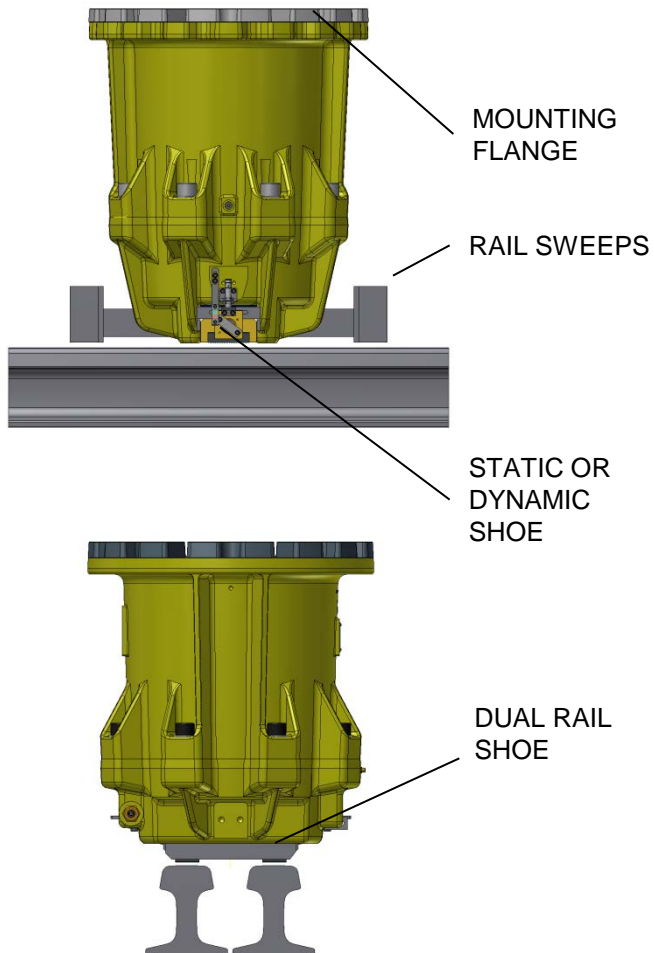
- Patented spring caging feature mechanical lock. This allows rail brake to be shipped in released position and or locked released should a brake fault be detected during operation.
- Brake designed static braking.
- Dynamic braking application can be achieved by installing dynamic friction shoes.
- Spring stack designed for over 1 million cycles rated at nominal $8\text{mm} \pm 2\text{mm}$ design retracted clearance.
- Complete corrosion protection including 5 year structural enclosure paint system (option).
- Compact design fits easily between trucks under equalizer beam.
- Friction shoe completely field replaceable.
- Back pressure test connection fitting standard.
- Design to operate at low pressures.
- All hydraulic systems provided with bleed ports.
- Single hydraulic cylinder to ensure no possibility of unbalanced release force due to cylinder failure.
- Cartridge flow control valve, thus full corrosion protection.

4.0 Standard Features



- Patented spring caging bars to allow for mechanical lock and easy field installation & field service.
- Brake can be easily be taken out of service by the simple installation of the spring caging bars.
- Disc spring design – spring design life ~1 million cycles.
- Compact bolted design – ease of maintenance.
- All springs completely protected against corrosion.
- Flow control valve standard.
- Brake release switch standard prewired to junction box.
- Nominal design release clearance 8mm.
- Field replaceable friction shoes.
- Low operating pressure.
- Manual release bolts stored with power unit.
- Manual release spacers.
- All disc spring stack per lubricated with molybdenum disulphide paste.
- No pre-compressed spring stack.

5.0 Design Options

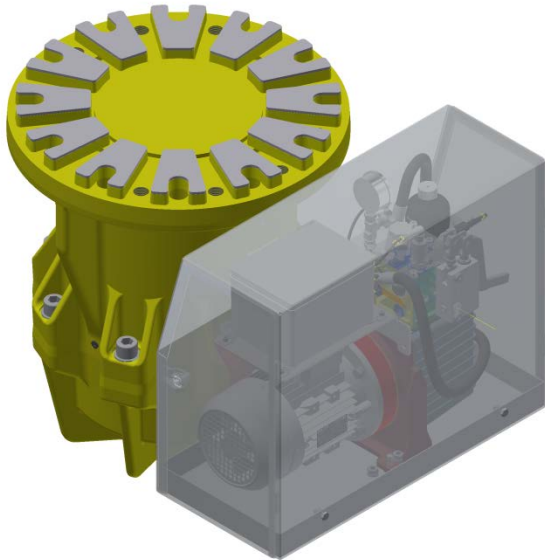


- Mechanical limit switch
- Rail sweeps
- Custom mounting flange
- Back pressure test equipment
- Custom paint color
- Complete 5 year structural corrosion protection.
- Dual rail design
- Hose & fitting packages
- Electro hydraulic option, see section 5.1.
- For dynamic rail brake refer to dynamic rail brake product line

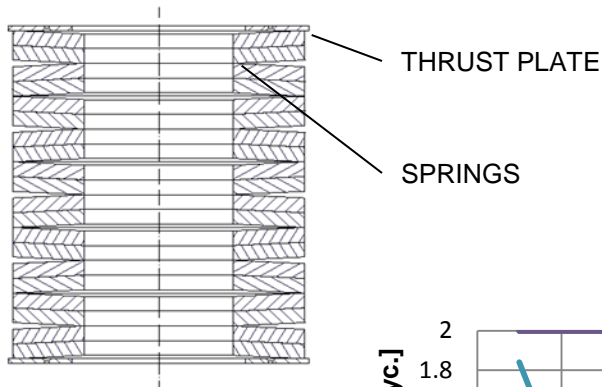
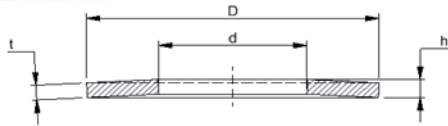
5.1 Electro Hydraulic Unit

Rail Brake with integrally mounted hydraulic power units.

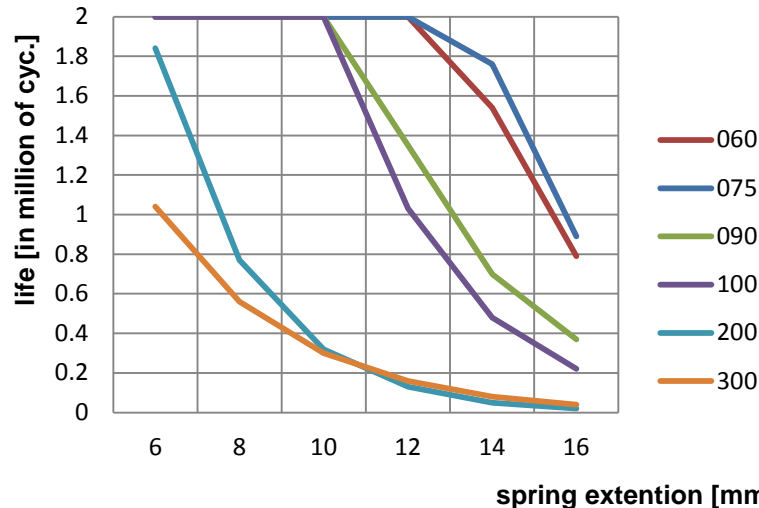
- Simple field installation.
- Shipped fully tested in released position complete with hydraulic fluid.
- Elimination of field flushing of hydraulic system.
- Eliminating external piping
- Brake shipped in brake release position, no power is required to install the brake.
- All power units equipped with standard features such as hand pump, temp level switch, pressure switch, sight level gauge, etc.
- All hydraulic components completely field replaceable.
- All units completely pre wired to SS junction box including proximity switch.



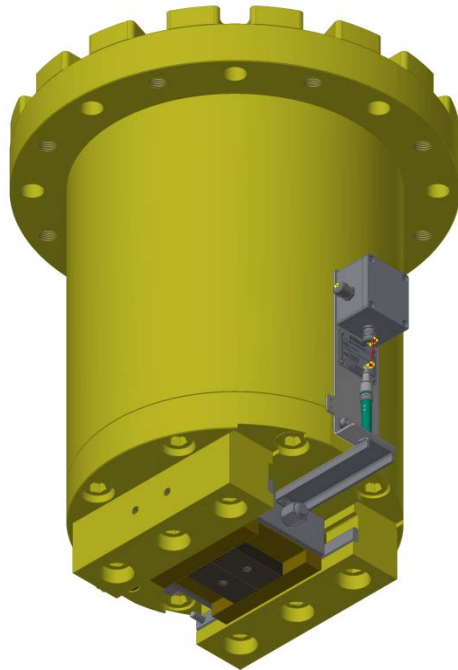
6.0 Spring Life



- The RBH series of rail brakes incorporate stacks of disc springs,
- Each stack is designed to provide 1 million cycles at nominal retracted clearance of $8\text{mm} \pm 2\text{mm}$,
- Should the friction shoes become worn or damaged or rail deviations exceed $\pm 2\text{mm}$, this life will be greatly reduced.



7.0 Standards



All Hillmar products are designed & manufactured in accordance with the following standards.

7.1 Design standards.

7.2 Performance standards.

7.3 Document standards.

7.4 Production & Quality standards.

7.5 Packaging standards.

All Hillmar products are delivered with Hillmar commitment to customer satisfaction.

All Hillmar products manufactured in accordance with DIN 10204-2.1

Hillmar is an ISO 9001:2008 certified company.