



Regal Rexnord™ Solutions **For Port Cranes** 



**FALK**<sup>™</sup> **Stromag SVENDBORG** 

WARNER ELECTRIC

**PERCEPTIV** 

**BRAKES** 

**BAUER GEAR MOTOR** 

**STEARNS** 

**JAURE** 

#### **Regal Rexnord**

Customer Service: 800-626-2120 Technical Service: 800-626-2093

<u>CustomerService.PTSolutions@regalrexnord.com</u>

#### regalrexnord.com

The proper selection and application of products and components, including assuring that the product is safe for its intended use, are the responsibility of the customer. To view our Application Considerations, please visit https://www.regalrexnord.com/Application-Considerations.

To view our Standard Terms and Conditions of Sale, please visit https://www.regalrexnord.com/Terms-and-Conditions-of-Sale which may redirect to other website locations based on product family)

"Regal Rexnord" is not indicative of legal entity. Refer to product purchase documentation for the applicable legal entity. Regal Rexnord, Bauer Gear Motors<sup>TM</sup>, CENTA<sup>TM</sup>, Falk<sup>TM</sup>, Perceptive<sup>TM</sup>, Stearns<sup>TM</sup>, Stromag<sup>TM</sup>, Svendborg Brakes<sup>TM</sup> and Warner Electric<sup>TM</sup> are trademarks of Regal Rexnord Corporation or one of its affiliated companies.









FALK Stromag SVENDBORG BRAKES WARNER ELECTRIC











Regal Rexnord™ Products	Ship to Shore (STS) Cranes	Gantry Cranes	Straddle Carriers	Mobile Container Cranes	Ship Loaders & Unloaders
SERVICE BRAKES					
Svendborg Brakes™ FAV Thruster Disc Brakes	•	•	•	•	•
Svendborg Brakes™ SDB Thruster Disc Brakes	•	•	•	•	•
Stromag <sup>™</sup> PT Series Electro Hydraulic Thrusters	•	•	•	•	•
ELECTROMAGNETIC BRAKES					
Stromag <sup>™</sup> HPB Brakes	•	•	•	•	•
Warner Electric™ERX Spring Applied Electrically Released Brakes		•	•		
Stearns™AAB 361, SAB 82,000 & SAB 86,000 Motor Brakes	•	•	•	•	•
RAIL CLAMPS, RAIL & WHEEL BRAKES					
Svendborg Brakes™ Limited Rail Clamps (LRC)	•	•		•	•
Svendborg Brakes™ Retractable Rail Clamps (RRC)	•	•		•	•
Svendborg Brakes™ Guided Rail Clamps (GRC)	•	•		•	•
Svendborg Brakes <sup>™</sup> Rail Brakes (RB)	•	•		•	•
Svendborg Brakes™ Electric Wheel Brakes (EWB)	•	•		•	•
Svendborg Brakes™ Hydraulic Wheel Brakes (HWB)	•	•		•	•
EMERGENCY BRAKES					
Svendborg Brakes™ BSFL 500 Hydraulic Caliper Brakes	•	•	•	•	
Svendborg Brakes™ BSFC 600 Hydraulic Caliper Brakes	•	•		•	
Svendborg Brakes™ BSFC 3000 Hydraulic Caliper Brakes	•	•	•	•	
Svendborg Brakes™ Hydraulic Power Units (Size Small)	•	•	•	•	
Svendborg Brakes™ Hydraulic Power Units (Size Medium)	•	•		•	
Svendborg Brakes™ Hydraulic Power Units (Size Large)	•	•		•	
COUPLINGS					
Stromag <sup>™</sup> Periflex <sup>™</sup> Highly-Flexible Couplings		•	•		
Stromag™ SDKL – SVKL Highly-Flexible Couplings	•	•	•	•	•
Stromag <sup>™</sup> MTDF Double Engagement Gear Couplings	•	•	•	•	•
Stromag™ SVT Drum Couplings	•				
CENATFLEX™-A Rubber-In-Compression Couplings				•	
CENTAFLEX™-TIR Roller Coupling				•	
Jaure™ BARFLEX™ TCBR Barrel Couplings	•	•	•	•	•
Jaure <sup>™</sup> Lamidisc <sup>™</sup> Disc Couplings		•	•		
Jaure™ MT Gear Couplings	•	•	•	•	•
FALK™ Lifelign Gear Couplings	•	•	•	•	•
GEARED MOTORS	-			_	
Bauer Gear Motor™ Parallel Shaft BF Series	•	•	•	•	•
Bauer Gear Motor™ Bevel BK Series	•	•	•	•	•
HYDRAULIC BUFFERS					
Svendborg Brakes™ PHS	•	•			•
GEARED CAM LIMIT SWITCHES					
Stromag™ Series 51 Planetary Gears	•	•	•		•
Stromag™ Light Cam™ and Light Cam™ M Worm Gears	•	•		•	•
Stromag™ HGE Worm/Lever Gears	•	•		•	•
PERECEPTIV MONITORING SOLUTIONS	-			•	•

# **ELECTROMAGNETIC BRAKES**

# SVENDBORG BRAKES

THRUSTER DISC BRAKES

#### **FAV SERIES**

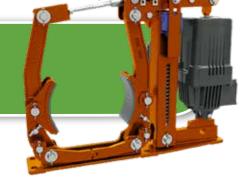


Thruster disc brakes are designed for high braking torque applications such as ports, steel and mining.

Energizing the electro-hydraulic thruster releases the brake pads from the brake disc. When the electro-hydraulic thruster is de-energized, the brake is activated, as the levers apply the brake pads to the brake disc.

# THRUSTER DRUM BRAKES

**SDB SERIES** 



Electro-hydraulic thruster drum brakes are designed to withstand the severe conditions of heavy-duty machinery in various industries.

Energizing the electro-hydraulic thruster releases the brake shoes from the drum. When the electro-hydraulic thruster is deenergized, the brake is activated, as the levers apply the brake shoes to the drum.

# **Stromag**

**ELECTRO-HYDRAULIC THRUSTERS** 

PT SERIES 230/5 - 3010/6

- The PT series electro-hydraulic thrusters are capable of replacing most thrusters currently used in the industry
- The power is converted from electric to hydraulic via cylinder-piston arrangement
- Designed according to DIN 15430

# **Stromag**

#### MODULAR BRAKING SYSTEMS

# **HIGH PERFORMANCE BRAKE (HPB)**

HPB brakes offer an optimized design for maximum performance in a small space.

Available in 2-face or 4-face designs, these compact modular are brakes designed for high speed applications.

- Torque range from 80 to 6400 Nm
- IP67 rating for harsh environment
- Type approvals for lifting appliances available
- Optimal heat dissipation ensures superior dynamic performance
- Wide range of options such as tachometer mounting, terminal box, anti-condensation heater, proximity-switch to monitor switching states and/or wear indication
- Rectifiers and quick switching units enhance switching comfort

# WARNER ELECTRIC

# SPRING-APPLIED ELECTRICALLY RELEASED BRAKES

ERX series brakes offer a wide range of spring-applied, power-off electromagnetic brakes designed for parking and holding applications.

**ERX SERIES** 



- Torque range from 5 to 800 Nm
- Manual release
- Modular, available in single or double brake options
- Easy installation
- Indoor applications, UP64 option available
- CE / UL / CSA approved
- Limited e-stop/wear capable
- Non-sticking friction material
- Configurable (modular)

# **STEARNS**

MOTOR MOUNTED BRAKES

**AAB 361 SERIES SAB 82,000 SERIES SAB 86,000 SERIES** 

Stearns armature (AAB) and solenoid (SAB) actuated brakes are specifically designed for bulk handling and high outreach port applications.

- Torque range 35 to 1,000 lb-ft (47 to 1356 Nm)
- Optional encoder, additional gaskets, corrosionresistant paint and internal space heater
- Cast & ductile iron enclosures
- Full crane duty side release and manual reset
- Brakes self adjust for wear
- Brass pressure plate and stationary discs
- IP56 rating
- IEEE 45, Federal Standard 46 & ABS compliant

regalrexnord.com | **5** | MCB-10929-C-EN-A4 03/25 regalrexnord.com | **6** | MCB-10929-C-EN-A4 03/25

# **EMERGENCY BRAKES**

# SVENDBORG BRAKES

#### RAIL CLAMPS

Regal Rexnord provides a large range of rail clamps (storm brakes) to secure outdoor cranes by preventing uncontrolled movement along the rail in case of sudden bursts of wind.

# LIMITED RAIL **CLAMPS (LRC)**

Braking Force up to 650 kN

- Spring set/hydraulic release
- Guided along rail via guiding blocks
- Compensation: Horizontal +/- 30 mm Vertical +/- 5 mm

# **RETRACTABLE RAIL CLAMPS (RRC)**

Braking Force up to 1200 kN

- Spring set and hydraulic release of serrated clamps
- Retracted above rail and setting time 2 30 seconds
- Compensation: Horizontal +/- 30 mm Vertical +/- 25 mm



- Spring set and hydraulic release of serrated clamps
- Guided above rail via low wear rollers
- Compensation: Horizontal +/- 30 mm Vertical +/- 25 mm

#### RAIL BRAKES

Rail brakes are used on cranes to secure and stabilize them, preventing unwanted movement during loading and unloading operations.

#### RAIL BRAKES (RB)

Braking Force up to 300 kN



- Hydraulic release
- Braking by spring on the top of the rail
- Balanced braking force
- Oversized longer lasting springs for reduced maintenance

# WHEEL BRAKES

Wheel brakes are used to control and halt the movement of the crane, ensuring precise positioning and safety during operation.

### **ELECTRIC WHEEL BRAKES (EWB)**

Braking Force up to 120 kN



- Spring set patented fully electric release
- No hydraulic components
- Setting time adjustable from 3 to 30 seconds
- Shoe alignment device

# **HYDRAULIC WHEEL BRAKES (HWB)**



- Spring set hydraulic release
- Self lubricating bushings and stainless steel pins on all pivot points
- Setting time adjustable from 3 to 30 seconds
- Shoe alignment device

# SVENDBORG BRAKES

# HYDRAULIC CALIPER BRAKES

Emergency brakes are the last safety device to prevent a falling load and are installed directly on the flange of the drums. These brakes are applied in case of overspeed detection, power failure, mechanical transmission breakage or emergency stop controlled by operator.

# **BSFL 500 Dual Spring**

Brake	Clamping Force Fc [kN]			Pressure [MPa]		
	at airgap 1 mm	at airgap 2 mm	at airgap 3 mm	Operating	Maximum	
BSFL 517	170	160	150	12.5	23.0	
BSFL 524	240	218	197	16.5	23.0	

# HYDRAULIC POWER UNITS

Hydraulic power units provide the necessary force to activate emergency brakes, ensuring rapid and reliable stopping power in critical situations.

#### Hydraulic power units offer several advantages:

- Redundant return valves for fast and safe operation
- Hand pump for manual release of brake in case of power failure
- Safe manual opening for crane lowering
- Reliable closed loop system no external piping on hydraulic systems
- Standard components spare parts in stock

SIZE SMALL 3L tank with junction box



Brake	Clamping Force Fc [kN]			Pressure [MPa]		
	at airgap 1 mm	at airgap 2 mm	at airgap 3 mm	Operating	Maximum	
BSFC 633	335	310	285	12.5	23.0	
BSFC 644	440	411	383	18.5	23.0	

**BSFC 600** 

**Dual Spring** 

**BSFC 3000** 

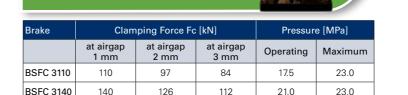
**Dual Spring** 

SIZE MEDIUM 6L tank with junction box









**COUPLINGS COUPLINGS** 

# **Stromag**



- Rubber-fabric tyre, mounted and removed without moving the machines
- Compensate extreme offsets, absorb torque peaks, and dampen vibrations



- Cam rings and flexible element, mounted and removed without moving the machines
- Damping of shocks and torsional vibrations

#### **MTDF**

**SVT** 

**Double Engagement Gear Couplings** 



- Two flanged sleeves with internal spur gear teeth, linked with steel bolts
- Two crown toothed hubs allowing the best possible alignment

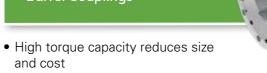


- Flexible couplings with cam rings and flexible element
- Drum diameters: Ø 200 to 630 mm
- Simple mounting/dismounting
- Damping of shocks and torsional vibrations

# **JAURE**

#### **BARFLEX™ TCBR**

**Barrel Couplings** 



- Assembly time reduction
- Increased axial misalignment
- Improved visual wear indicator



# • Torsionally rigid and backlash-free

**LAMIDISC™** 

Disc Couplings

- Non-lubricated design reduces maintenance
- No need to disassemble the coupling to inspect. Discs can be checked during operation by using a strobe light



**Gear Couplinas** 



MT gear couplings are the most compact coupling solution for critical applications that demand high torque transmission.

- -30°C to 70°C temperature change
- Made in C45/55 material as a standard
- Maximum bore size of 275 mm
- Maximum torque capacity of 407,000 Nm



#### **CENTAFLEX™-A**

**Torsional Couplings** 



CENTAFLEX-A couplings are designed for high performance and exceptional torsional elasticity. Built to dampen torsional vibrations and shocks, these couplings effectively protect your equipment.

- Split rubber element simplifies installation and maintenance
- Compensate for significant axial, radial, and angular misalignment
- Electrically-insulating and thermally resistant silicone or rubber design offers backlash free torque transmission



CENTAFLEX-TIR is a next-generation coupling featuring a robust design and progressive torsional characteristics, specifically engineered to help achieve efficiency goals.

- Soft progressive characteristics
- High allowable power loss
- Reduction of idling speed

# FALK

#### **LIFELIGN**

**Gear Couplings** 



Falk Lifelign gear couplings feature triple-crowned teeth that are crowned on the root, tip and face to articulate freely and minimize wear caused by misalignment.

- Large flex hubs accommodate high-torque applications in space-limited installations
- Bore capacity up to 43 inches (1,067 mm)
- Maximum torque capacity of 8,185,763 Nm

regalrexnord.com | **9** | MCB-10929-C-EN-A4 03/25 regalrexnord.com | **10** | MCB-10929-C-EN-A4 03/25

# **GEARED CAM LIMIT SWITCHES**

### **BAUER GEAR MOTOR**

#### **GEARED MOTORS**

Robust Bauer geared motors use IM2 paint which provides corrosion protection, allowing for use in harbors, lock gates, piers and offshore installations.

Available IP68 protection is also available to allow submersible operation.

## **PARALLEL SHAFT GEARED MOTORS BF SERIES**



Shaft mounted geared motors with integrated torque arm can be easily attached and installed.

- Motor power from 0.03 kW to 75 kW
- 10 gearbox sizes for torques from 90 Nm 18500 Nm
- Gearbox housing with integral torque arm
- High efficiency through 2 stage base design
- High enclosure IP65 as standard

# **BEVEL GEARED MOTORS BK SERIES**

Power dense, right angle, bevel geared motors ensure the highest efficiency especially when used with frequency inverters.

- Motor power from 0.03 kW to 75 kW
- 10 gearbox sizes for torques from 80 Nm to 18500 Nm
- Right angle gearbox with optional universal attachment
- High efficiency through 2 stage base design
- High enclosure IP65 as standard

# SVENDBORG BRAKES

# HYDRAULIC BUFFERS

#### PHS HYDRAULIC BUFFERS

Buffers are used to absorb the energy from collisions in rail transport and crane systems. They are suitable for various load capacities and speeds, playing a crucial role in safety and extending the lifespan of these systems.

- Damping force 70 to 670 kN
- 2 types: rear or front mounting
- 4 sizes: 063, 080, 100 and 125
- 15 strokes (that makes 120 different models)
- Strokes: 100 to 800 mm
- Total length max.: 456 to 2114 mm
- Safety chain and protection cover available

# **Stromag**

#### **GEARED CAM LIMIT SWITCHES**

Compact hoists must be limited at their top and bottom cutoff points to protect the equipment in use. Stromag geared cam limit switches attach directly to the drum to ensure these needs are met.



Planetary gears are used everywhere angles or distances cannot be limited with switchgear, only indirectly on the basis of the measured shaft angle. An example of this application involves limiting the hook lift of a crane hoist.

These geared cam limit switches can easily determine absolute positions with great precision when integrated with available monitoring technologies. These positional values can be converted into additional data points such as degree of rotation and overspeed.



The classical applications include crane hoists, traversing, and slewing drives. In particular, where EN 60947 T5-1/ IEC 947-5-1 prescribe forced opening switches to eliminate

# HGE

Worm/Lever Gears

Worm/lever gears reduce the number of rotations transferred to the geared cam limit switchs input shaft to a maximum angle of 320° at the cam disc (on 40° cam discs). The adjustable cam discs then actuate the mechanical switching contacts.

When equipped with mechanical forced opening switches that comply with EN 60947-5-1, geared cam limit switches are the ideal choice for compact hoists.

potential harm to persons, there is no more economical alternative than Geared Cam Limit Switches.

regalrexnord.com | **11** | MCB-10929-C-EN-A4 03/25 regalrexnord.com | **12** | MCB-10929-C-EN-A4 03/25

# THE ALTERNATIVE

by SVENDBORG BRAKES

To address environmental and health concerns, we have developed a series of friction materials that comply with **REACH** legislation.

Available for all OEM and aftermarket applications.

- Asbestos free
- Less than 0.1% Mercury
- Less than 0.1% Chromium 6+

Corrosion protected

- Less than 0.1% Lead
- Less than 0.01% Cadmium

Strives to comply with

automotive directives

**Cut-off corners** Comply with RoHS directive Comply with EU REACH legislation Reduced weight Visual wear indicator

# We predict a more reliable tomorrow.

# PREDICTIVE MAINTENANCE DRIVES RESULTS:

Reduces maintenance costs by

Increases machine life up to

Cuts repair and overhaul time by

**Decreases** spare parts inventory by

Reduces unexpected failures by

### **INTELLIGENT SENSORS**



- **F** Vibration
- Temperature
- Torque
- Torsional vibration
- **F** Lubrication
- Current
- F Speed

# **PERCEPTIV PLATFORM**



- **F** Condition monitoring
- Fredictive maintenance
- Machine health dashboard
- F Analytics & reports
- F Alerts (dashboard, SMS, email)
- Fig. Enterprise, site, and user management
- F API available for cloud-to-cloud integration capabilities
- Web & mobile access

## **RELIABILITY SERVICES**

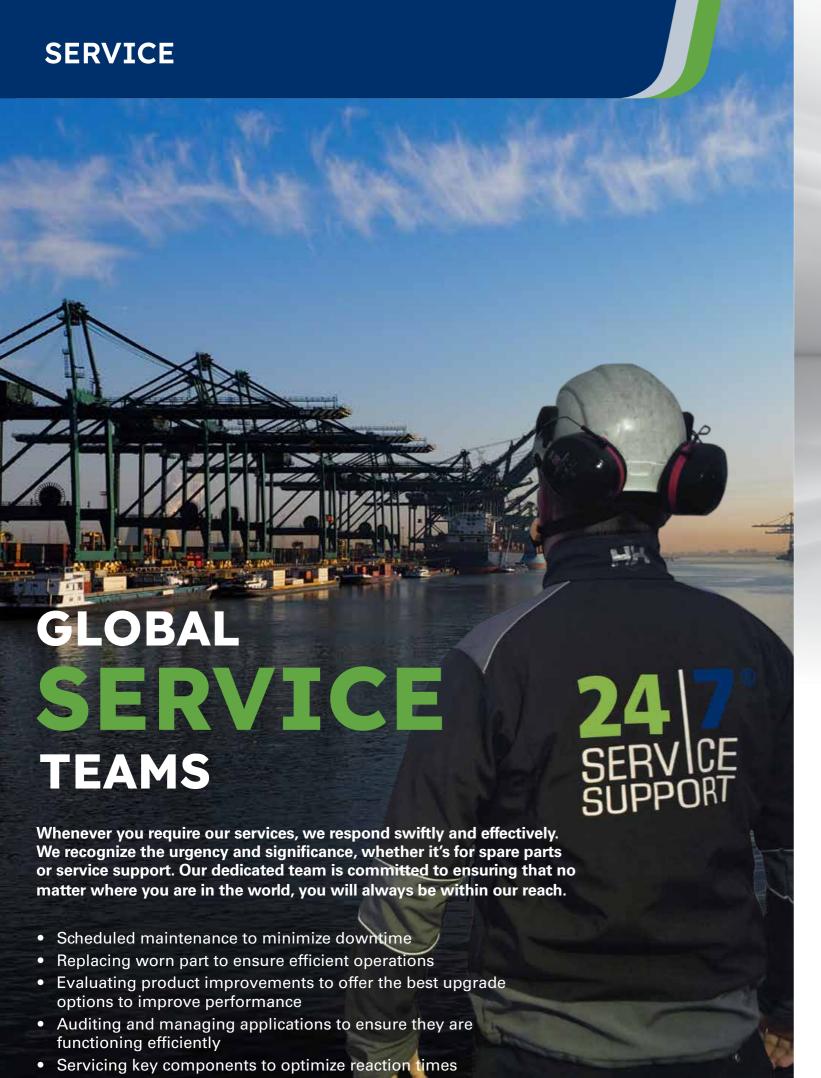






Severity	Status	Analyst Recommended Actionable Insights
Critical		Excessive vibration, replace bearing
Warning		Inspect gearbox and verify lubrication
Advise		Continue monitoring motor
Good		No issues

- To On-site diagnostics
- **F** Solutions design
- Fig. Expert installation & implementation
- **F** Asset tagging
- F Statistical alarm calculation
- Fredictive & prescriptive analysis with actionable recommendations
- Find-to-end services (i.e. turnkey implementation)







# Stop seeing individual parts. Start seeing unlimited possibilities.

Regardless of your objectives or the challenges with your application, Powertrain Solutions can help you achieve your unique goals. No matter what your application looks like, it relies on many components, all working together. But not all components are made to work together reliably and efficiently. Powertrain Solutions has the insight, experience and expertise to engineer your collection of components into a fully optimized system — giving you solutions that boost efficiency, improve reliability and performance, lower costs and simplify ordering and logistics.

#### WHERE OTHERS SEE PARTS, WE SEE A SYSTEM

















Speed Re

Monitoring & Diagnostics

#### It's time to see the bigger picture.

Get started at RegalRexnord.com/Powertrain