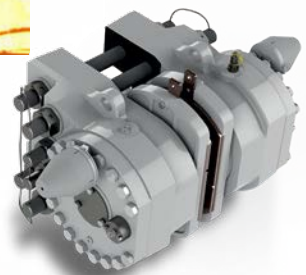
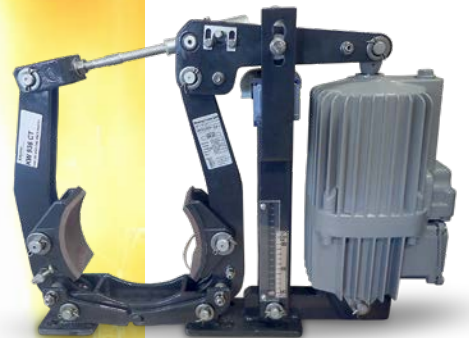


## SIME Brakes North America



# COMPLETE BRAKING SOLUTIONS

**Stromag supplies SIME Brakes solutions for various industrial applications to ensure highest performance and safety in motion:**

- Steel works: cranes, hoists and winches
- Lift Bridges, dams, doors and moveable floors
- Offshore tower cranes
- Mining and cement applications, material handling conveyors
- Nuclear cranes

We are at your disposal for any information or technical support:

<b>Claude Auffret</b> Global Product Manager IP Brakes <a href="mailto:claude.auffret@stromag.com">claude.auffret@stromag.com</a> +33 608 712 315	<b>Wichita Clutch</b> Heavy Duty Clutches & Brakes <a href="mailto:wichita.info@wichitaclutch.com">wichita.info@wichitaclutch.com</a> +1-800-964-3262 (toll free) +1-940-723-3400	<b>Christian Klein</b> Global Technical Business Development Manager Stromag <a href="mailto:c.klein@altramotion.com">c.klein@altramotion.com</a> +49 173 399 1584	<b>Laurent Vinogradoff</b> Product Specialist Brake Solutions <a href="mailto:laurent.vinogradoff@stromag.com">laurent.vinogradoff@stromag.com</a> +33 248 807 315
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## DRUM BRAKES

### SAB RANGE



**Braking torque 55 - 8800 lb.-ft.**  
**Drums Ø6" to 30"**

#### Main characteristics:

- Standard AISE N.11
- Scale for torque adjustment
- Automatic lining wear compensation
- Brake shoe auto-aligning device
- Brake lever synchronisation
- Self-lubricated bushings
- Galvanized steel spindles and hinges

#### Options:

- High temperature - Low temperature
- Opening switch - Lining wear indicators
- Steel works - Special voltages
- Manual release lever with or without stop

### SEMB RANGE



**Braking torque 50 - 9000 lb.-ft.**  
**Discs Ø6" to 30"**

#### Main characteristics:

- Standard AISE N.11
- DC series or shunt coils available, or coils for use with rectifier AC power
- Steel base with laminated steel armatures
- Self-lubricant bushings at main hinge points
- Brake Shoe auto-aligning device
- Aluminium brake shoes with organic linings

#### Options:

- Limit switch release control
- Automatic wear compensator
- Limit switch wear control
- Manual release lever with or without stop

### DRUMS & COUPLINGS



**Series PB-C & SP-C**  
**Drums Ø160 to 710 mm**

As a complement to its drum brakes, Stromag proposes two types of drum couplings to offer a complete braking system:

- **PB** drums & **PB-C** drum couplings
- **SP** drums & **SP-C** drum couplings

#### Main characteristics:

- Standard DIN 15435
- Flanged hub fitted with rubber bushes
- Uniform distribution of loads, even in case of misalignment
- Reduction of resonance effects at critical velocity





## DISC BRAKES

### TDXB RANGE



**Braking torque 660 - 21240 N.m**  
**Discs Ø355 to 995 mm**

#### Main characteristics:

- Types: TDXB-I and TDXB-II
- TS or VS thrustors
- Automatic lining wear compensation
- Self-centering / • Opening sensor
- Low maintenance Teflon bushes
- Manual release lever
- TS thrustors equipped with Viton seals
- Symmetrical design

#### Options:

- Sensors: Closing / Thrustor limit stroke
- SIDHT: high temperature Steel Works
- Custom color

### SH RANGE



**Braking torque 230- 458000 N.m**  
**Discs Ø300 to 3000 mm**

#### Main characteristics:

- Spring application - Hydraulic release
- Opening proving switch
- Lining wear indicators
- SHS: caliper mounted on a support
- SHC: SH with Hydraulic Power pack
- Association with disc thicknesses: 12.7  
15 - 20 - 30 or 42 mm

#### Options:

- Progressive braking system
- Offshore protection
- Lining temperature sensor
- High temperature, iron and steel conditions

### DISCS & COUPLINGS



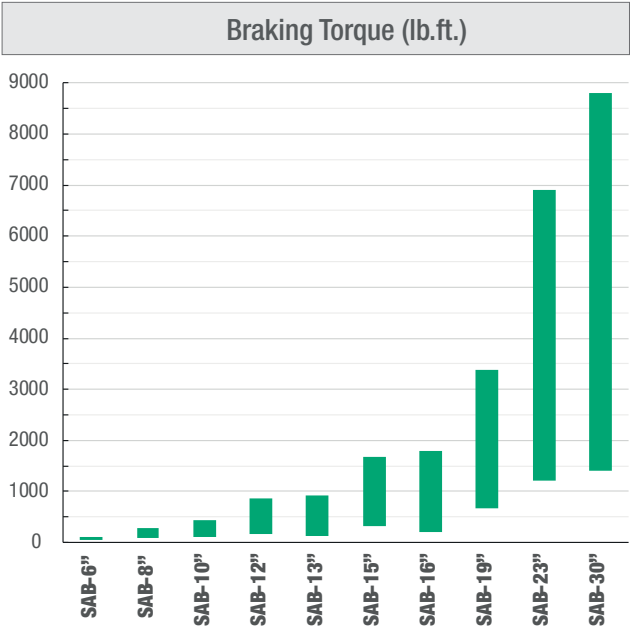
**3 types of discs couplings**  
**Discs Ø175 to 995 mm**

As a complement to its disc brakes, Stromag proposes three types of disc couplings to offer a complete braking system solution:

- **GCS** coupling is a Double Engagement Gear Coupling.
- **Stromag Periflex®** Shaft Coupling is a Highly-Flexible rubber / fabric tyre coupling.
- **SVK-SDK** Coupling (picture above) is a High-ly Flexible coupling equipped with a cam ring and a lastomeric element.

# SAB THRUSTOR DRUM BRAKES

SAB Thrustor Drum Brakes are associated with different thrustors and springs for a large range of braking forces. Protected against adverse environmental effects in their respective applications, they have precision tuned safety functions. They permit easy adjustment of the braking torque with an accurate scale control following the demands of the AISE No. 11.



Standard voltage	230 / 460VAC 60Hz
Weight	From 70 to 980 lb
H x W x D	16.5 x 17 x 6.3 inch to 44.5 x 68 x 9.45 inch
Nominal Braking Torque	55 to 8800 lb.ft
Drums	6 to 30 inch

**SAB Thrustor Drum Brakes offer many technical advantages and options:**

- an automatic system of lining wear compensation
- a torque scale for easy adjustment
- an opening proving switch (option BRLS)
- a manual release lever (option HRL)
- full lining wear indicators (option LWI)
- special paint or protection level (options SPA & SPR)

**TS thrustors offer also a large range of options to meet requirements of every applications.**

**SPA SPECIAL PAINT**  
**SPR PROTECTION LEVEL C4**  
options

**SW-SV-AV-DV**  
Thrustor options

Steel Works - Special Voltage  
Thrustor delay: Ascent Valve or  
Descent Valve

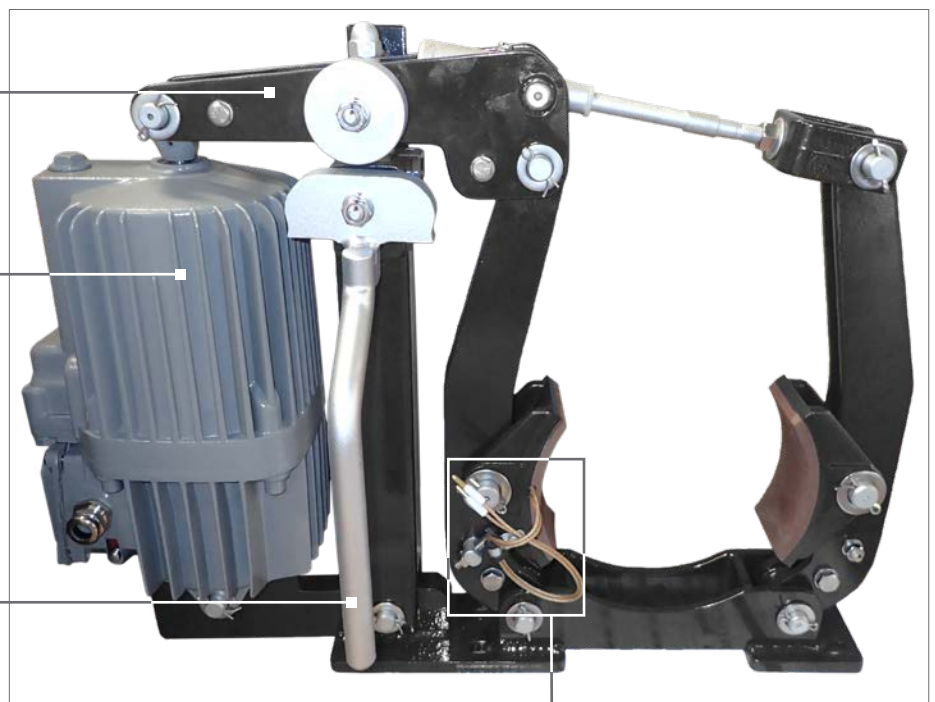
**HRL HAND RELEASE**  
LEVER option

**AUTOMATIC LINING WEAR**  
**COMPENSATION SYSTEM**  
(standard)

**BRLS OPENING SWITCH**  
option

**LWI FULL LINING**  
**WEAR INDICATORS**  
option

**TORQUE SCALE**  
(standard)





## TDXB THRUSTOR DISC BRAKES

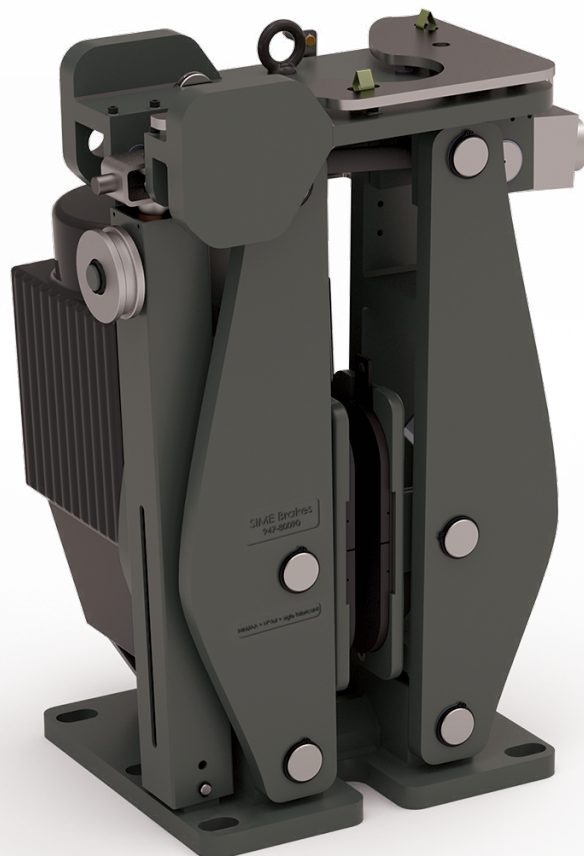
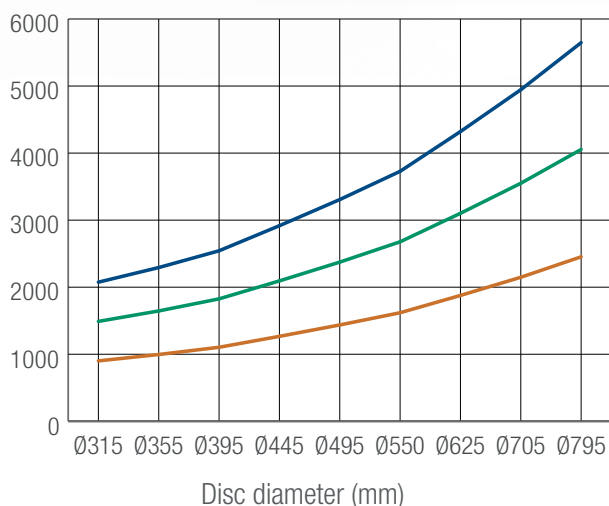
TDXB-I and TDXB-II Thrustor Disc Brakes are equipped with different thrustors and springs for a large range of braking forces.

These symmetrical brakes are designed for easy installation and maintenance. Their robust construction and simple operation bring high reliability.



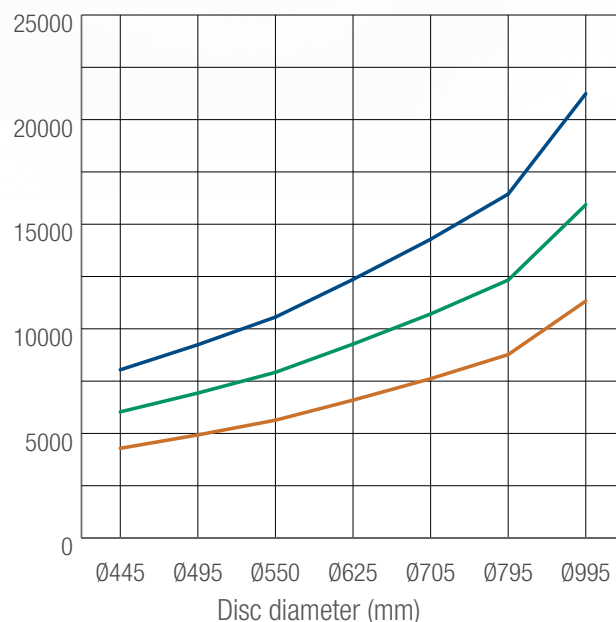
### TDXB-I

Braking Torque (N.m)  
(3 types of spring)



### TDXB-II

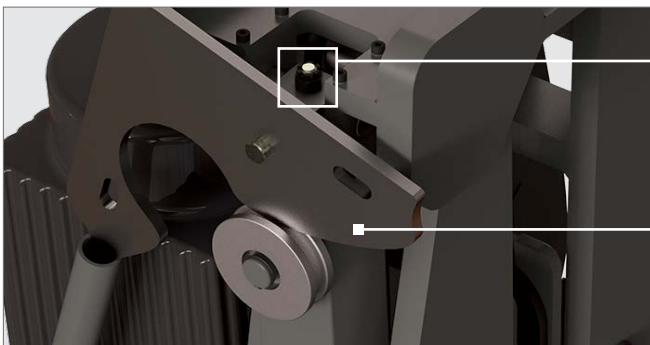
Braking Torque (N.m)  
(3 types of spring)



### TDXB-I and TDXB-II Thrustor Disc Brakes offer in standard multiple technical advantages:

- an automatic system of lining wear compensation
- lining full wear indicators
- a self-centering system
- a manual release lever
- a proximity switch for opening monitoring
- low maintenance Teflon bushes

They are proposed with TS thrustors; VS thrustors are optional. A large range of options allow to meet requirements of every applications.



#### CLAMPING FORCE SETTING

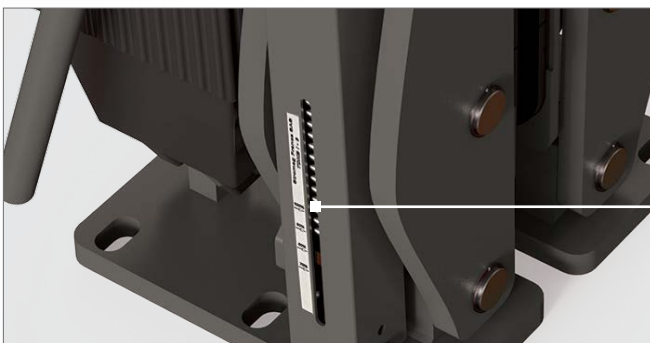
Actuation on the torque setting nut enables to modify the spring compression to the requested torque value.

#### MANUAL RELEASE LEVER

The manual release lever enables to:

- open manually the brake by cancelling the braking force
- lock the brake in open position

It is mounted on the release rod, actuated and locked in position on the roller.



#### SPRING WITH TORQUE SCALE

#### PROXIMITY SWITCHES

Opening switch

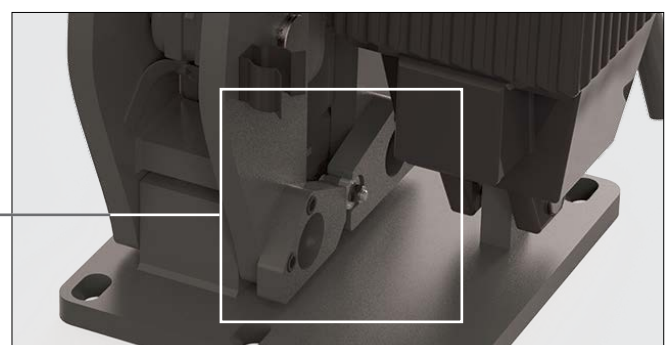
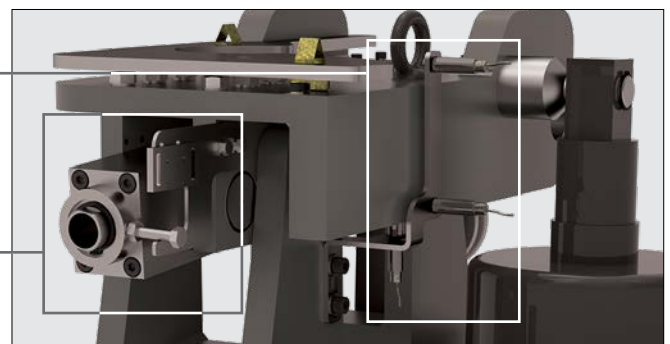
Options: Closing and Stroke switches.

#### AUTOMATIC LINING WEAR COMPENSATION SYSTEM


This system adjusts the opening gap to compensate the lining wear. Thus, it ensures a constant braking force throughout the life of the lining pads.

#### CENTERING SYSTEM

This system balances the lining pads gap on each side of the disc during brake operation.



# EMERGENCY HYDRAULIC BRAKES

	CALIPERS	BRAKING TORQUES (N.m)	
		Ø Disc (mm)	
	SH5	15 000 Ø750	74 000 Ø3000
	SH9A	28 000 Ø750	141 000 Ø3000
	SH15	43 000 Ø750	212 000 Ø3000
	SH18B	51 000 Ø750	254 000 Ø3000
	SH25	62 000 Ø750	343 000 Ø3000
	SH32	82 000 Ø750	455 000 Ø3000



## HYDRAULIC POWER PACKS - CSH

CSH HPP, associated with calipers type SH or SHD, are designed in different configurations to meet the installation requirements, they enable:

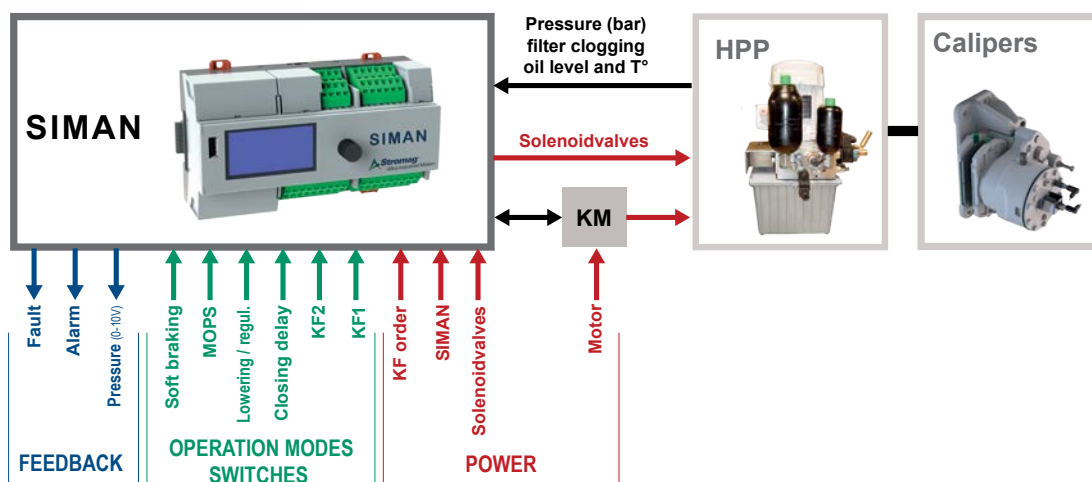
- Soft braking for lifting and lowering the load: adjustable and progressive application of the braking force
- Full braking for boom and hoisting movements
- Manual Overload Protection System for offshore cranes



## SAFETY INTELLIGENT MANAGER - SIMAN

The safety intelligent manager **SIMAN** monitors all the operation parameters of the HPP that provides the hydraulic pressure to open the emergency brakes. It pilots the brakes opening and closing, indicates (LCD display) and records, if they occur, all operation faults or inconsistencies.

It can be associated with all types of Hydraulic Power Packs, whatever their functionalities (lowering, braking delay, soft braking, MOPS, etc..).



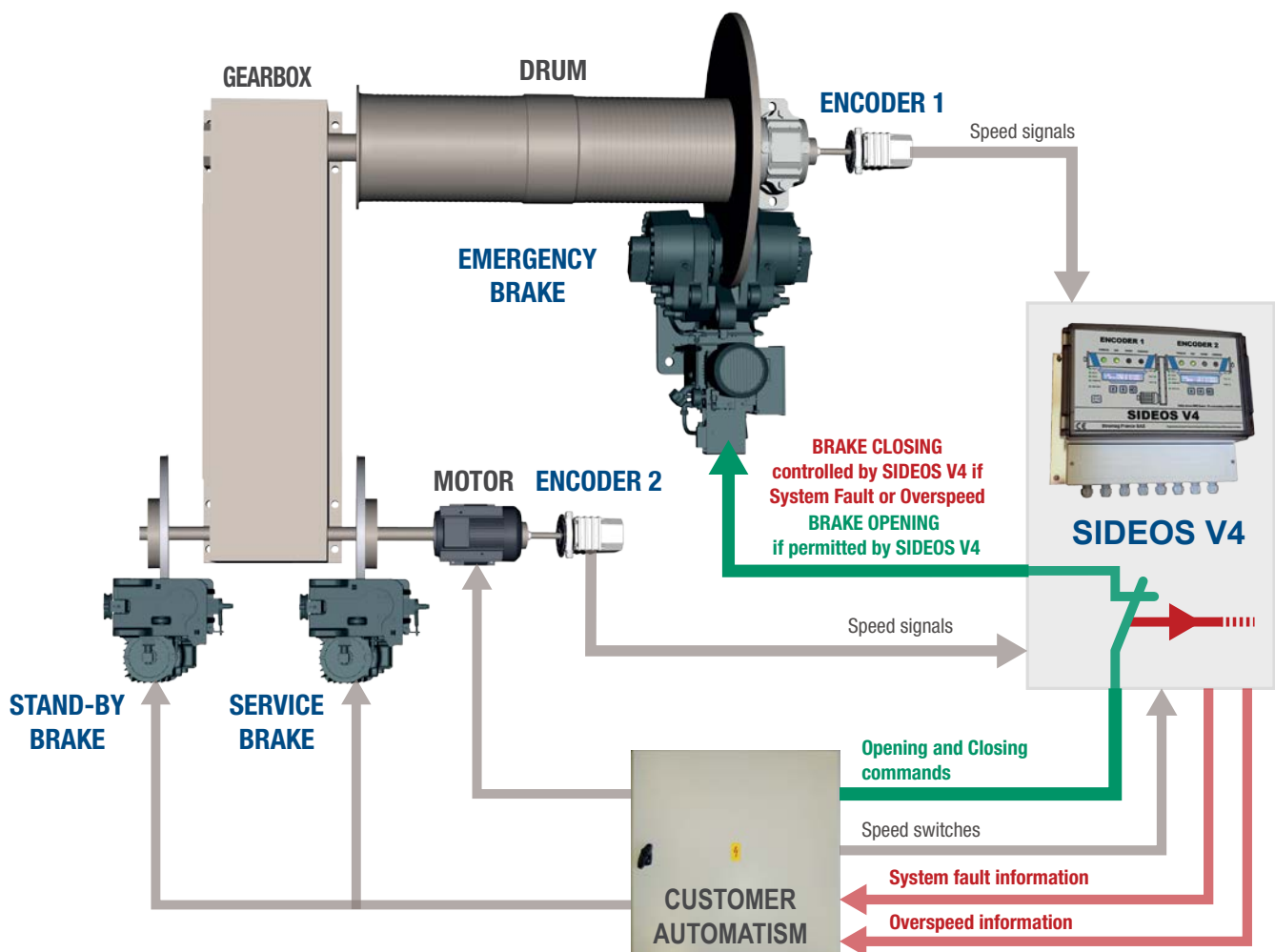


# SIDEOS V4 SPEED MONITORING SYSTEM

The SIDEOS V4 unit is a configurable monitoring system of the kinematic chain: it is designed to secure the kinematic chain of a lifting and handling equipment.

- In case of Speed or System Fault, it pilots the opening of the braking control circuit which is downstream of the control circuits.
- It stops the use of the lifting movement of the handling equipment, if it is unable to perform its function.
- It combines Stromag braking systems with their outstanding limit switch technology.
- It allows to obtain a secured monitoring system of the speed of: **Category 4, Performance Level PL= e according to the standard ISO/IEC 13849-1.**
- It is designed according to the **CRT16 60.C.016 EDF**

**NEW**



## SOLUTION FOR EVERY APPLICATION

Whatever your requirement for safety, performance and reliability is, Stromag offers standard or fully customised braking systems solutions. Here are two examples of Stromag braking systems:

### OUTSTANDING SHIP LIFT

Stromag was chosen to supply accurate braking systems for the ship lifts of the Silin, Shatuo and Goupitan hydroelectric stations on Wujiang river in China.

For each project, a huge braking system, designed to secure hoisting of the ship reservoirs (weight up to 3300 tons), to a maximum height of 79 meters, includes:

- 200 to 240 hydraulic emergency brakes type SH32 (braking force: 334 kN),
- 8 to 20 hydraulic service brakes type SHD5,
- 2 to 5 custom hydraulic power packs with electrical control and monitoring unit.

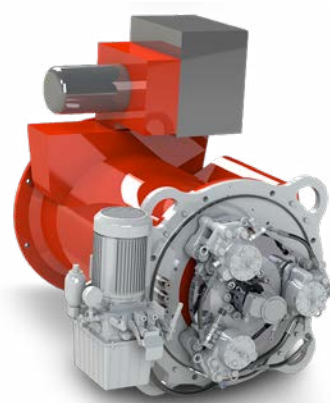
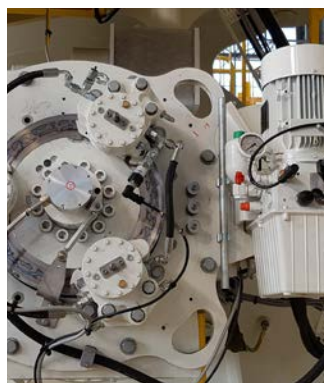


### HEAVY LIFT OFFSHORE CRANES

Modular Stromag SHD1 braking systems equip, for several leading global OEM, large mass cranes installed on offshore construction vessels which provide heavy lifting capability to support surface or sub-sea asset installation.

These braking systems offer an economical braking solutions: they are factory-tested and designed to be mounted directly on the rear of 400kW motors and above.

With years of extensive offshore application experience, Stromag can provide braking systems that meet various certifications including LR, ABS, and DNV-GL.







## CONTROL & MONITORING SYSTEMS

**Stromag can supply a complete braking solution for smooth, controlled and regulated braking, under all load conditions, for specific applications.**

Port crane braking systems require a proportional application of the brake torque. Therefore Stromag developed and supplied to various harbour crane OEM and End-User a unique system consisting of:

- 2 thruster brakes type SAB mounted on the rotation shaft of the drivers cabin of the port crane,
- 1 potentiometric control foot-pedal, in addition to the ON/OFF control of the brakes,

- 1 converter unit which converts the voltage variation of the potentiometric foot-pedal into a frequency variation: the braking force is applied smoothly and progressively to cancel the inertia.

For a proportional braking controlled by the customer PLC, the foot-pedal can be replaced by the CRD® module. The required rate of deceleration is set on the CRD® module. In this way, the equipment deceleration is regulated by the control of the brakes torque, through the converter unit, accordingly to that rate. At the same time, speed can be monitored by the SIDEOS One module.

### PROPORTIONAL BRAKING CONTROL

#### Manual control

Foot-pedal



or

#### Automatic control

SIDEOS One  
+  
CRD module



### CONVERTER UNIT



### THRUSTOR BRAKE(S)





## Stromag Facilities

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Geared Cam Limit Switches, Discs,  
Wind Brakes*

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+49 (0) 340 2190 0

*Electromagnetic Clutches & Brakes*

#### France

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*Disc Brakes & Drum Brakes*

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+44 (0)1234 324347

*Electromagnetic Clutches & Brakes,  
Industrial Caliper Brakes*

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New Hartford, CT 06057 - USA  
860-238-4783

*Electromagnetic Clutches & Brakes*

300 Indiana Highway 212  
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219-874-5248

*Couplings*

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940-723-3400

*Geared Cam Limit Switches,  
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### South America

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Jardim da Glória, Cotia - SP,  
06711-250 - Brasil  
+55 (11) 4615-6300

*Flexible Couplings, Bearing  
Isolators, and Coupling Guards*

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**Guardian Couplings**  
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**Huco**  
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**Lamiflex Couplings**  
[www.lamiflexcouplings.com](http://www.lamiflexcouplings.com)

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**Stromag**  
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**Warner Electric**  
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**Deltran**  
[www.thomsonlinear.com](http://www.thomsonlinear.com)

### Belted Drives

**TB Wood's**  
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### Heavy Duty Clutches & Brakes

**Twiflex**  
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**Stromag**  
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**Svendborg Brakes**  
[www.svendborg-brakes.com](http://www.svendborg-brakes.com)

**Wichita Clutch**  
[www.wichitaclutch.com](http://www.wichitaclutch.com)

### Gearing & Specialty Components

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**Delevan**  
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**Delroyd Worm Gear**  
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**Nuttall Gear**  
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