RegalRexnord

INDUSTRIAL BRAKING SYSTEMS

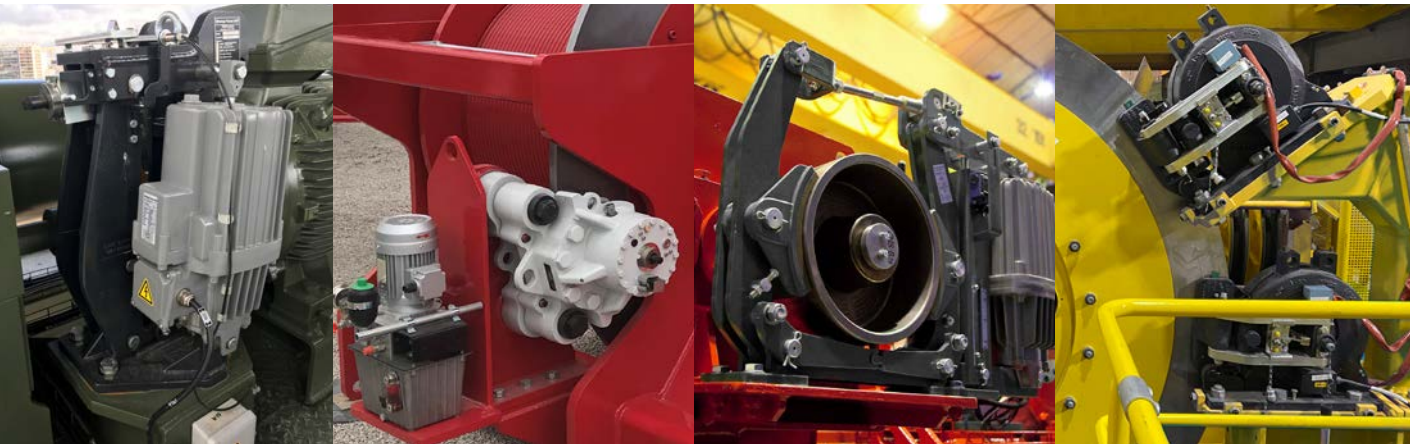
FOR CRANE APPLICATIONS

Stromag

OUR COMPANY

Stromag™ is a global supplier of braking packed solutions for crane market.

Constant attention to evolving needs and its effort to focus its product development on quality and innovation allow our company to meet global supply requirements with standard or fully customised braking systems solutions.



At Stromag, the accent is placed firmly upon research and innovation. That is why every year, the company invests heavily into Research and Development to provide leading edge products.

With in-depth knowledge and experience in all key applications and markets, the company keeps constantly abreast of the every changing needs and market development. The R&D department uses unique test facilities like the braking simulation tower and many dynamic benches allowing to test the brakes under real operating conditions.

In a mutually beneficial way, Stromag creates a strong relationship with its customers in order to understand their needs and provide them the best solution. Stromag engineers and technicians are developing with its customers the brakes of tomorrow.

With more than 60 years of experience in the supply of high efficiency braking systems, Stromag provides disc brakes certified by recognised authorities such as DNV, ABS, TUV, Loyd's Register and EDF. The certification ISO9001 of our Quality management system was renewed under the version ISO 9001 - V2015 in 2018, combined with OHSAS 18001 - V2007 certification.

SOLUTIONS FOR YOUR APPLICATION

Stromag™ is particularly active in traditional areas such as steel industry, nuclear plants, port applications and mass transport as well as on fast-growing markets such as offshore applications. Stromag provides complete braking solutions to ensure the safety of many applications, such as:

STEEL INDUSTRIES

- Service and emergency brakes
- Electromagnetic, hydraulic and thruster brakes
- Control and safety systems

Photo courtesy of REEL

NUCLEAR INDUSTRIES

- Braking systems meeting all safety requirements
- Electromagnetic and hydraulic brakes
- Specific monitoring systems

CONSTRUCTION INDUSTRIES

- Disc brakes and drum brakes
- Soft braking
- Manual Overload Protection System MOPS

Photo courtesy of MORITSCH

MARINE & OFFSHORE

- Electromagnetic and hydraulic brakes
- Reinforced anti-corrosion protection
- Modular braking systems for high power motors

PORTS

- High performance braking
- Disc brakes - Drum brakes - Storm brakes
- Speed monitoring systems

MINING

- Regulated braking system in all conditions of load
- Hydraulic brakes and thruster brakes
- Deceleration control and speed regulation

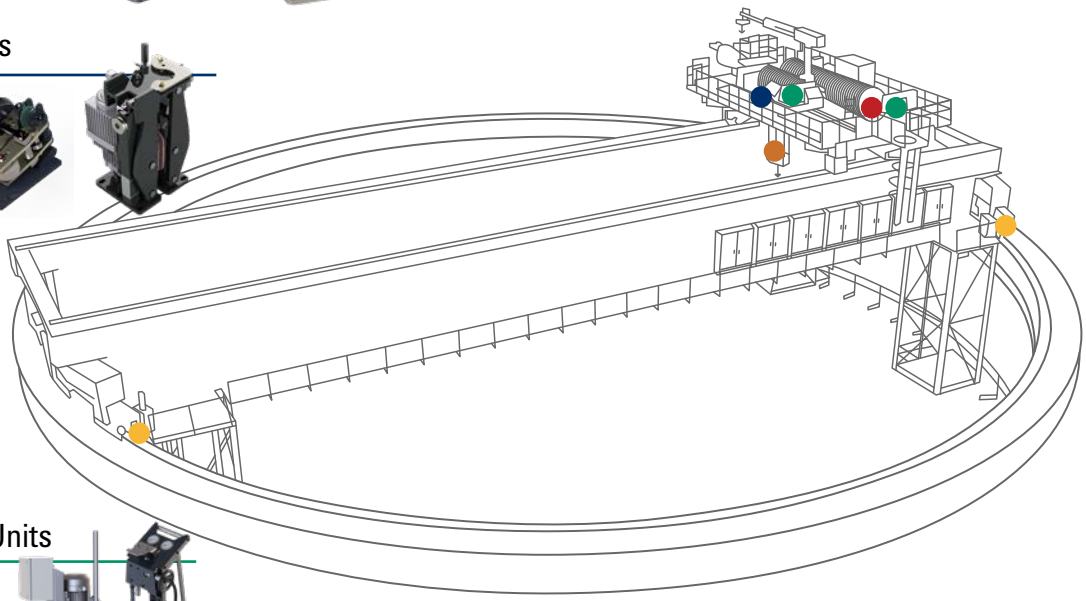
A SOLUTION FOR EACH APPLICATION

Stromag™ offers an extensive range of products to secure all lifting and transmission equipments:

- service brakes and emergency stop brakes,
- modules for monitoring overspeed, the driveline or the operation of hydraulic systems,
- and also peripheral products such as the cardan shafts or the buffers.

Emergency Brakes

Service Brakes



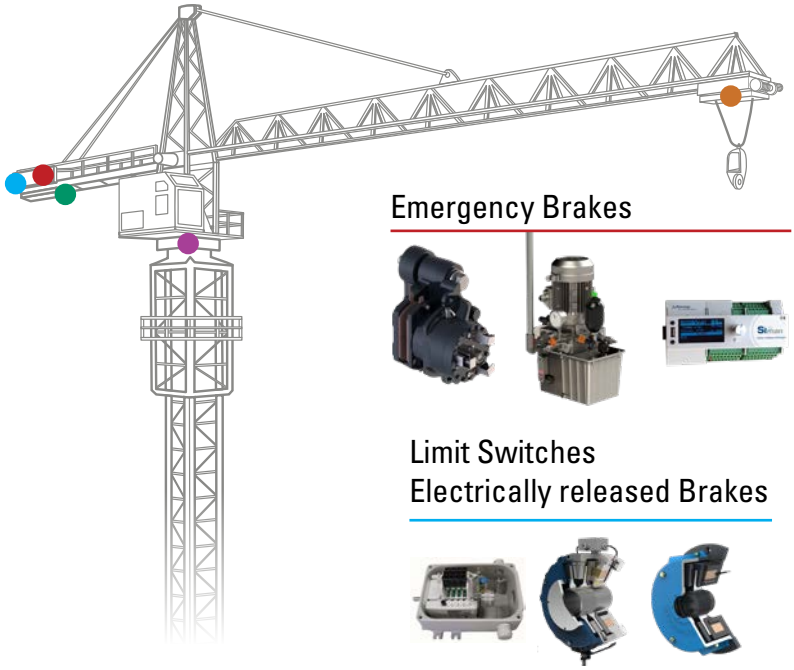
Power Control Units

Drums - Discs - Couplings

SioT - Monitoring Systems

NUCLEAR CRANES - TRAVELLING OVERHEAD CRANES - GANTRY / SEMIN GANTRY CRANES

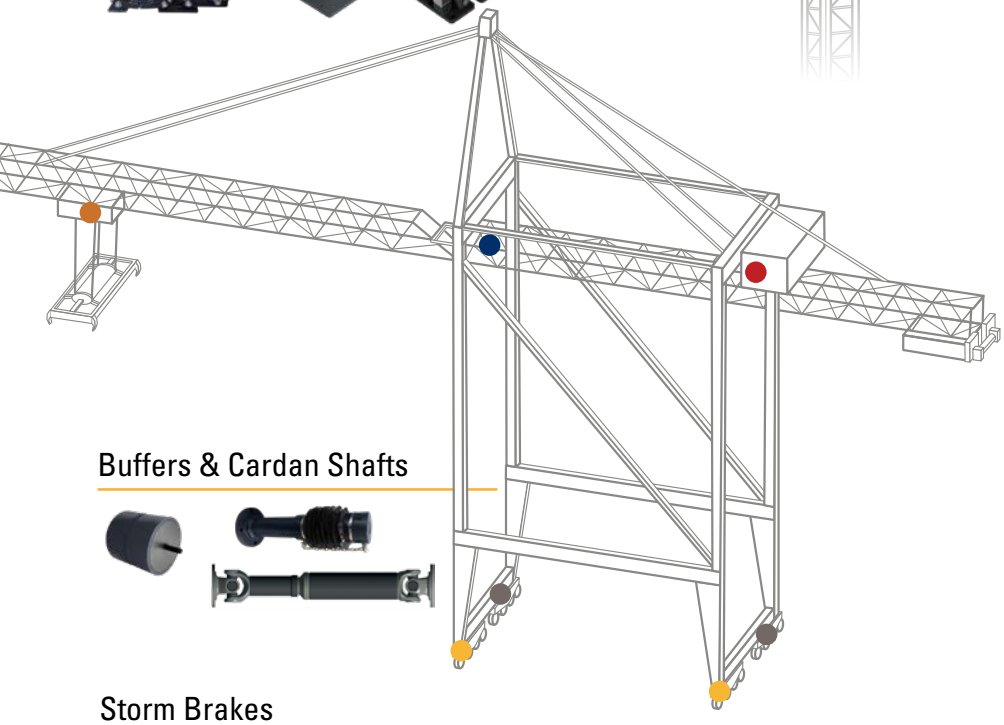
Photo courtesy of REEL



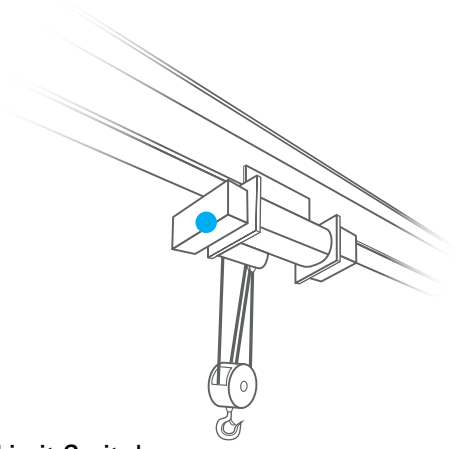
Emergency Brakes

Service Brakes

Limit Switches
Electrically released Brakes



Buffers & Cardan Shafts



Storm Brakes

Limit Switches
Electrically released Brakes

PORTAL CRANES - TOWER CRANES - JIB CRANES - CHAIN AND WIRE ROPE HOISTS

Photo courtesy of COMEDIL

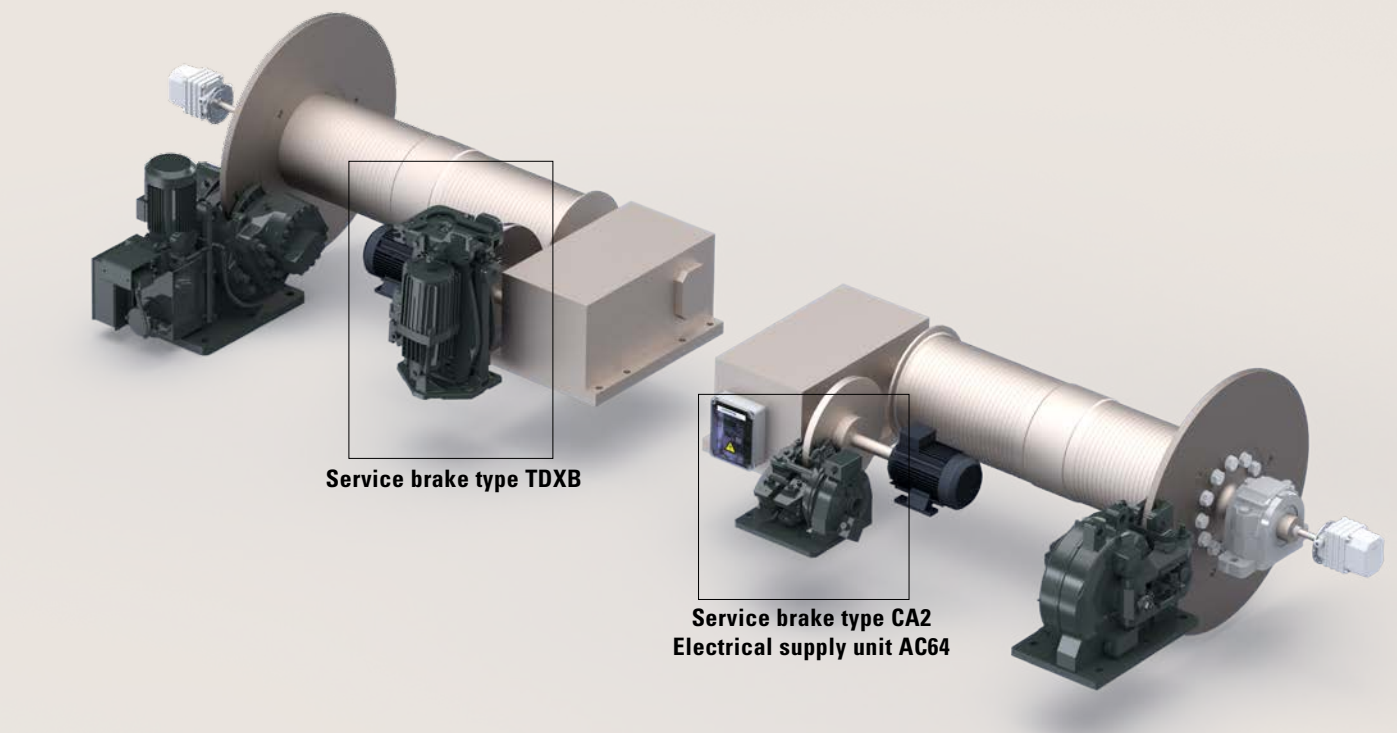
Photo courtesy of COMANSA

Photo courtesy of TAIM WESER

SERVICE BRAKES

Service brakes are installed on the high speed line of the gearbox.
These brakes follow motor ratings and can be equipped with an automatic wear compensation, ensuring a constant torque whatever the wear of the lining pads.
These brakes can be equipped with several options.

- **Electromagnetic brakes** are associated to the electrical power units AC64-FB or AC32. They are mainly used in nuclear and steelworks applications.
- **Hydraulic brakes** offer an incomparable braking torque stability.
- **Thruster brakes** are designed for high braking torque applications such as ports, iron and steel or mining.
- **Drum brakes** are used when the mechanical constraints are not an overriding factor.



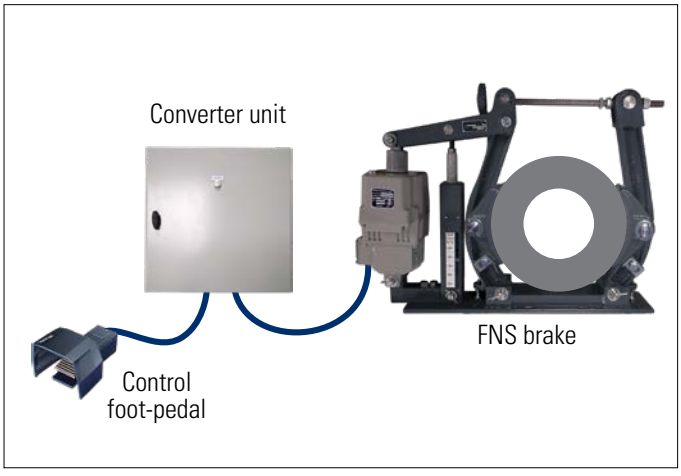
Service brake type TDXB

Service brake type CA2
Electrical supply unit AC64

CONTROLLED BRAKING WITH THRUSTER BRAKES

For installations requiring the smooth and progressive application of the braking force, for example port cranes with drivers cabin, Stromag™ provide braking solutions allowing the proportional application of the braking torque by one (or two) thruster brake (drum brake or disc brake) through a converter unit:

- by action on a potentiometric control foot-pedal, or
- by control from the customer PLC: the required rate of deceleration is set on the CRD™ system and the speed is monitored by the SIDEOS One module supplied by Stromag, consult us.



ELECTROMAGNETIC BRAKES

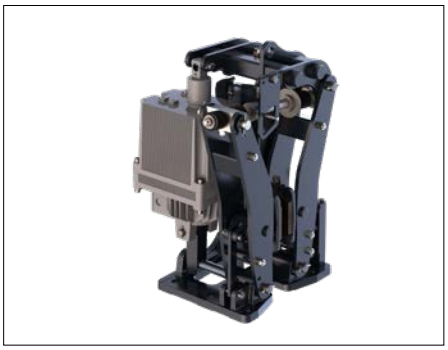
CA2 RANGE
Braking torque 665 - 8040 N.m
Disc Ø445 to 995
• High performance braking • All applications • Vertical mounting in option

600 RANGE
Braking torque 33 - 1104 N.m
Disc Ø175 to 625
• Economical • Manual wear compensation

5D and 45D RANGES
5D Braking torque 48 - 552 N.m 45D Braking torque 287 -1188 N.m
Disc Ø445 to 995
• Compact, simplicity of setting • Vertical mounting in option

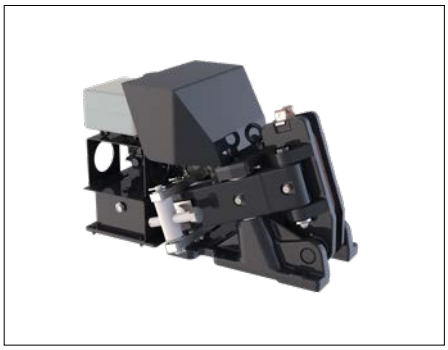
THRUSTER BRAKES

TDXB THRUSTER BRAKES
Braking torque 901 - 21 240 N.m
Disc Ø315 to 995
• Symmetrical design • Weight: TDXB-I: 85 kg / TDXB-II: 190 kg



FAV THRUSTER BRAKES
Braking torque 155 - 21 270 N.m
Disc Ø220 to 995
• Electro-Hydraulic Thruster • Weight: 40 to 224 kg

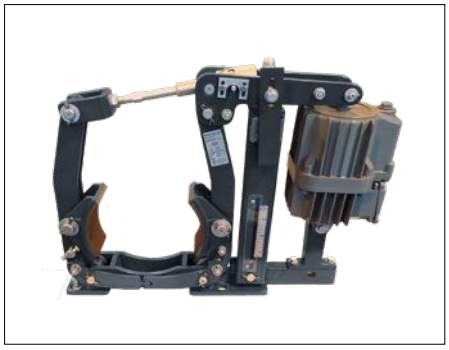
HYDRAULIC BRAKES



T RANGE
Braking torque 775 - 17 300 N.m
Disc Ø445 to 995
• Braking by HYDROSPRING® • Weight: 160 kg

DRUM BRAKES

SDB - FNS DRUM BRAKES
Braking torque 60 -11 000 N.m
Drum Ø150 to 750 mm
• Standard DIN 15435 • Weight: 28 to 441 kg



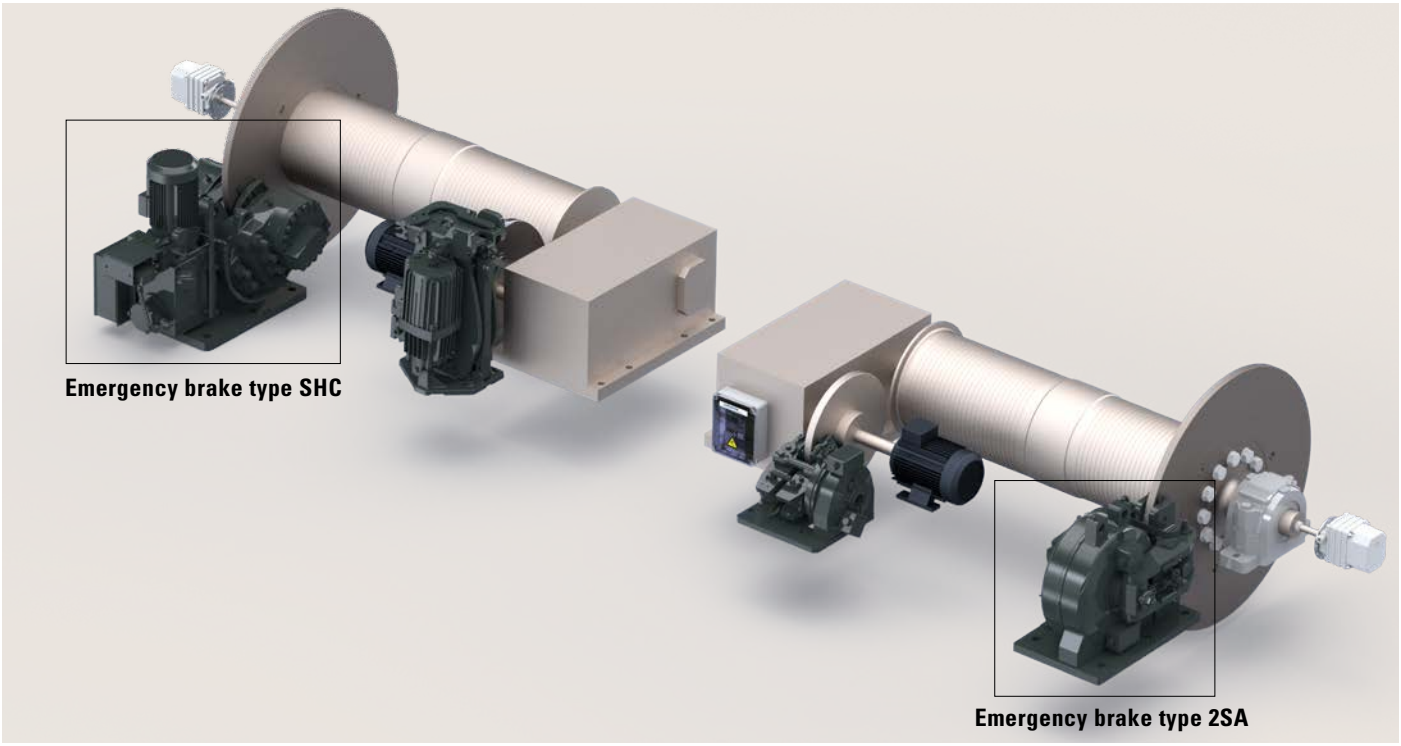
SAB DRUM BRAKES
Braking torque 55 - 8800 lb.-ft.
Drum Ø6" to 30"
• Standard AISE N.11 • Weight: 70 to 980 lb

FNS-T DRUM BRAKES
Braking torque 60 - 4700 N.m
Drum Ø160 to 500 mm
• Standard DIN 15435 • Weight: 30 to 252 kg

EMERGENCY BRAKES

Emergency brakes are installed directly on the flange of the drums, and they are the last safety device in the event of a falling load. These brakes are applied in case of over-speed detection, power failure, mechanical transmission breakage or emergency stop controlled by operator.
Many options are available: breather pot, special painting, protective cover, etc...

- **Electromagnetic brakes** type **SA** are references in the steel and nuclear applications. This range requires little maintenance.
- Stromag™ offers a large range of safety **hydraulic brakes**. Brakes type **SH** are designed to operate in the most severe environmental conditions of steel industry. Brakes type **SHD** can be mounted in restricted space.

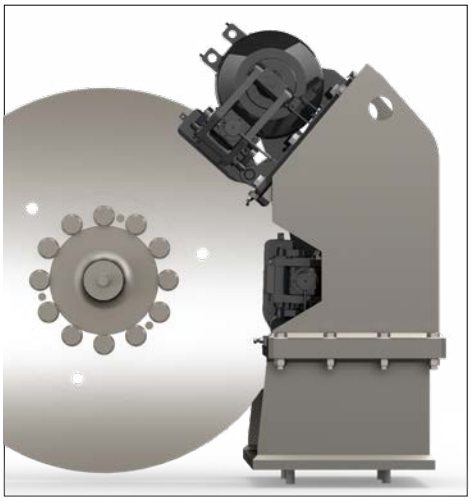


Emergency brake type SHC

Emergency brake type 2SA

SHC RANGE
Integrated Hydraulic Power Pack with hydraulic connections

Adaptation example for hoisting crane
3 calipers **SH25** on a bracket with HPP, disc Ø1600 mm



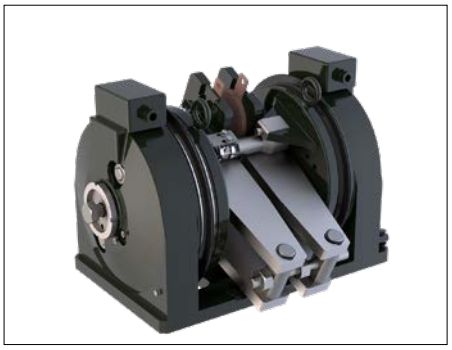
Adaptation ex. for travelling crane
2 calipers **2SA** on a bracket for restricted space - disc Ø1600 mm

ELECTROMAGNETIC BRAKES

2SA

Braking force 100 kN

- The most powerful electromagnetic brake
- Lifting applications of Steel Industry



OOSA

Braking force 60 kN

- Low maintenance level
- Association with **4205** electrical power unit for lowering operations

OSA

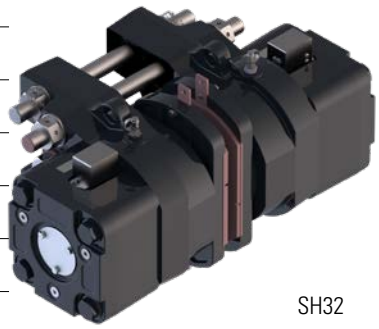
Braking force 31 kN

- Options: Hydraulic release - Breather pot - Special Painting - Steel cover for air gap seal...

HYDRAULIC BRAKES TYPE SH

SH1

Type	*Weight*	*Braking force*
SH32	600 kg	333 kN
SH25	440 kg	134 to 250 kN
SH15/SH18B	270 kg	73 to 180 kN
SH9A/SH13	140 kg	55 to 130 kN
SH5	110 kg	7.3 to 70 kN
SH1	35 kg	2 to 11 kN



SH32

SH RANGE

- Symmetrical design
- Spring application - Hydraulic release
- Opening monitoring switch
- Full lining wear detection
- **Options**: Progressive braking system - Offshore protection High temperatures, steel industry conditions
- **SHS**: caliper mounted on a bracket
- **SHC**: caliper and HPP mounted on the same bracket

HYDRAULIC BRAKES TYPE SHD

SHD1

Type	*Weight*	*Braking force*
SHD18	395 kg	120 to 180 kN
SHD9	148 kg	43 to 100 kN
SHD5A	108 kg	15 to 56 kN
SHD2	60 kg	10 to 23 kN
SHD1	24 kg	3 to 11 kN

SHD18

SHD RANGE

- Compact and modular design
- Spring application - Hydraulic release
- Opening monitoring switch
- Full lining wear detection
- Marine protection and low temperature materials
- Short response time
- Association with discs of different thicknesses
- **Options**: Opening, wear and temperature indication

ELECTRICAL POWER UNITS

Stromag™ electrical power units ensure a fast opening and closing time of the fail safe electromagnetic brakes. They have an "economic" mode which decreases the electric consumption and the heating of the brakes to provide an efficient and long lasting solution. Protected against overload and over-current, this range of power units ensures safe, reliable and high performance of your braking system.

The switch-mode power supply units, type **AC64**, **AC32**, **AS100** and **AS200** are available in Polycarbonate or Steel enclosure. **4205** unit allows a progressive release of electromagnetic calipers to perform lowering operations.

Advantages
• Simplicity of adjustment and use • Weight and size reduced • Quick diagnosis of faults by means of LEDs indications

HYDRAULIC POWER PACKS

The SHPU Hydraulic Power Packs allow a perfect control of the opening and closing times of the hydraulic brakes. Depending on their configuration, they offer different operating modes.

Thanks to its compactness and simple design, the **SHPU1** Hydraulic Power Pack is an economical solution for all braking systems in on/off operation.

Thanks to its modularity, the **SHPU2** Hydraulic Power Pack can equip braking systems with advanced functions such as regulated braking, stepped braking, or lowering of the load. Electric level, temperature or clogging indicators are supplied optionally.

The **SHPU3** Hydraulic Power Pack combines all the options of the SHPU1 and SHPU2 HPP. Thanks to its 35L reservoir, it can be associated with a very large number of brakes (e.g.: up to 30 SH5 calipers, 5 SH32 calipers).

The **SHPU4** Hydraulic Power Pack is designed for steel industry environments. This power pack is equipped with a recirculation system for high cycle rates. It can be combined with a very large number of brakes.

OPTIONS

- Manual lowering
- Delayed closing
- Electrical unit
- Soft braking
- Enhanced security return circuit
- Controlled braking torque
- SIMAN Intelligent system
- MOPS (Manual Overload Protection System)
- Indicators (clogging, oil temperature and oil level indicators)

LOWERING UNIT

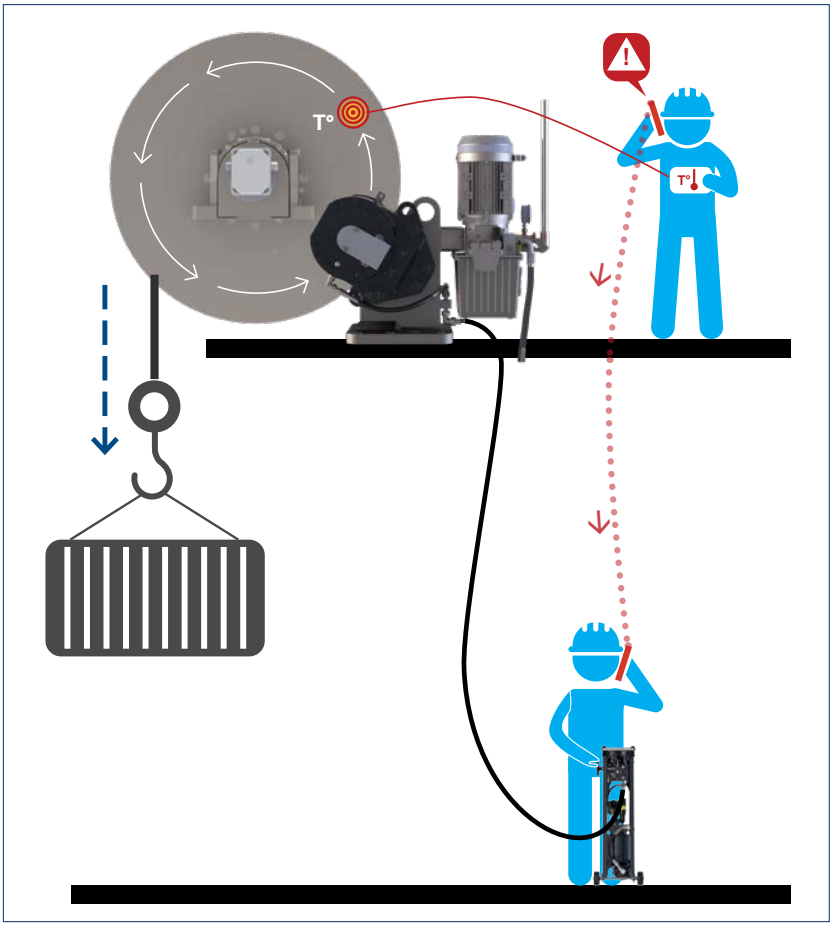
This system allows to control lowering of the load in a simple and safe way.

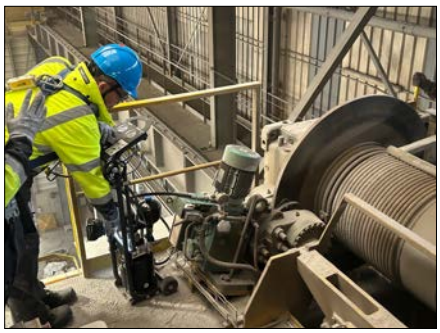
This new autonomous lowering unit includes advantages of ergonomics and safety. In the event of a power failure or special conditions, the technician is able to control the lowering of the load quickly and effortlessly, in optimal safety conditions.

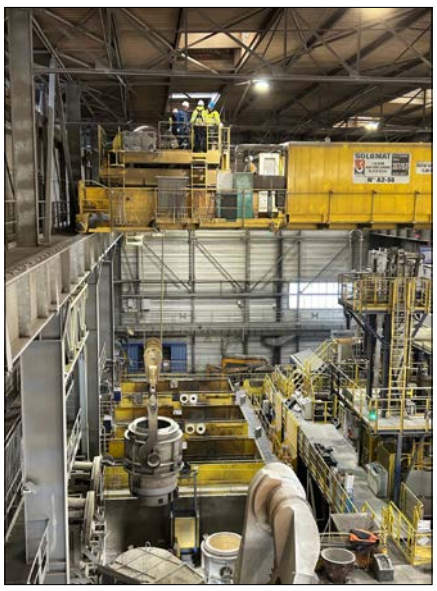
This unit can be brought and connected easily on the installation. It is fitted with a dead man safety device and can be fitted with OP2/OP3 functions for electrical control of the speed and/or the disc temperature. A control wheel and pressure gauges provide utilisation comfort and precise control. Stromag™ offers training in real conditions (load 8 T, lowering hight : 5m), consult us.

BENEFITS INCLUDE

- Ergonomics: steering wheel, pressure gauges
- Comfort in use: effortlessly rechargeable energy reserve
- Lowering controlled with precision
- Dead man safety device
- Lowering possible in case of power failure
- Easy transport and connection
- Adaptation to the installation with quick couplings
- Starting up by our team.
- Options: Accessory kit, OP2/OP3 functions.



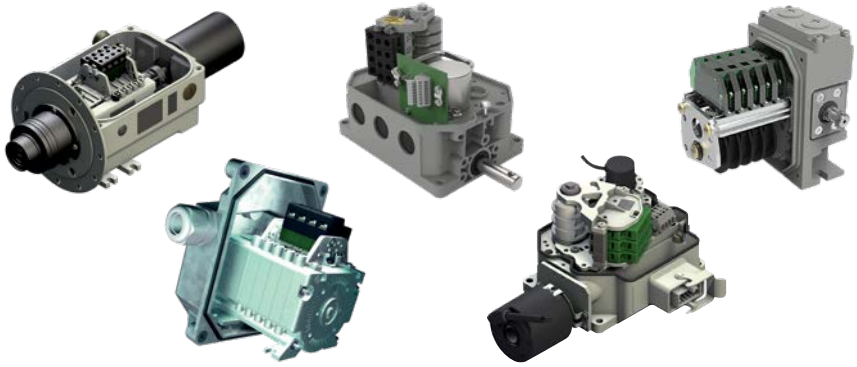




LIMIT SWITCHES

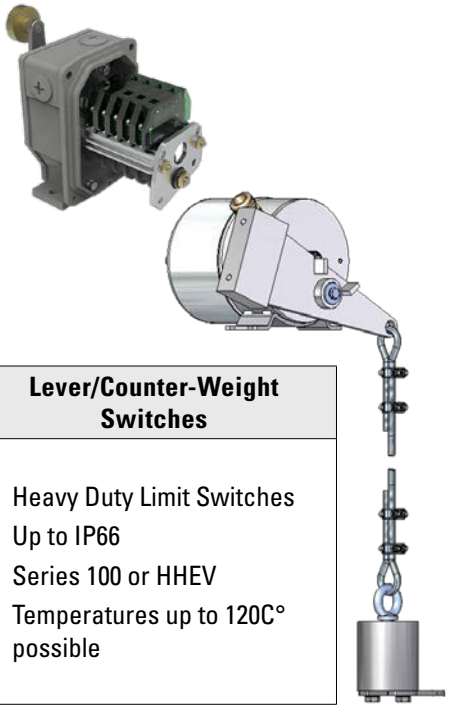
Stromag™ has been building geared cam, lever limit switches and main power switches for over fifty years. With a wide range of gear systems, switching contacts, and housings of metal or polycarbonate, we can offer solutions for every application.

All analogue and digital encoder systems can be integrated.
Our geared cam limit switches reliably switch off sequences of movements, and position or restrict these with independently and precisely adjustable cam discs. These geared cam limit switches can easily determine absolute positions to a high precision that can be converted into reliable additional data like e.g. sense of rotation and overspeed. Data can be transferred to **SIDEOS** monitoring systems.



Geared Cam Limit Switches

- High repeatability due to precise gear design
- High reliability due to form fit design
- Gear ratios from 0.85 to 16000
- Plastic or metal housing
- IP ratings up to IP66
- Change-over and double-make/ double- break contatcs available
- Positive opening contacts



Lever/Counter-Weight Switches

- Heavy Duty Limit Switches
- Up to IP66
- Series 100 or HHEV
- Temperatures up to 120C° possible

Cross Lever Switches

- 5 Positions (4 or 6 optional)
- Position shown on display window and by lever markings
- Silver or gold contacts
- Ratio i=1,25
- IP 66

Main Power Switches

- For direct switching of three phase-motors
- 42 and 62 usable revolutions
- Contacts for up to 200 Amps

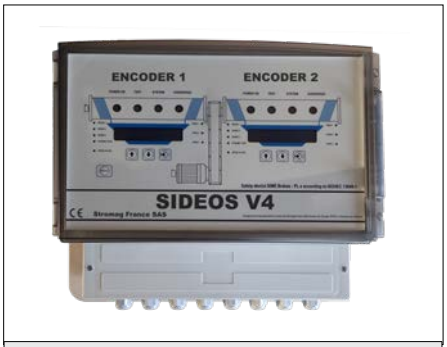
SIDEOS SPEED MONITORING MODULES

The modules SIDEOS are configurable and secure devices for speed monitoring, fitted with an efficient auto control system which secures the overall operation of the over-speed detection system.

They allow to obtain, when installation is correct a speed monitoring system secure up to category 4 with the performance level of PL = e according to the standard ISO/IEC 13849-1.

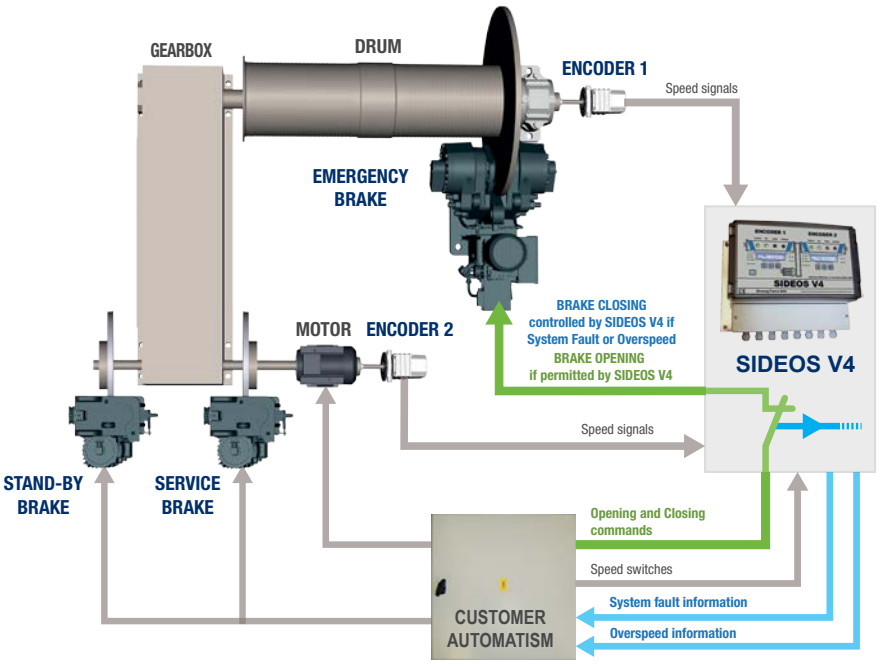
SIDEOS One - SIDEOS SC

- **SIDEOS One** monitors 3 speed thresholds, the stop and the rotation direction of the installation. It detects Overspeed, Static and Dynamic Slipping
- **SIDEOS Sc** monitors the speed according to a variable speed threshold (for ex. in case of joystick control)



SIDEOS V4

SIDEOS V4 is a configurable Monitoring System is designed to secure the kinematic chain of lifting equipment.
It can be used in Drum/Motor or Drum/Drum configurations, see in the opposite diagram a Drum/Motor configuration.



SIDEOS V4 is set according to the lifting characteristics:

- Characteristics on Encoder N°1 side
- Characteristics on Encoder N°2 side

It receives:

- The speed signals from the 2 incremental encoders
- The functional orders of the lifting control of the handling equipment

It detects all the faults of lifting speed:

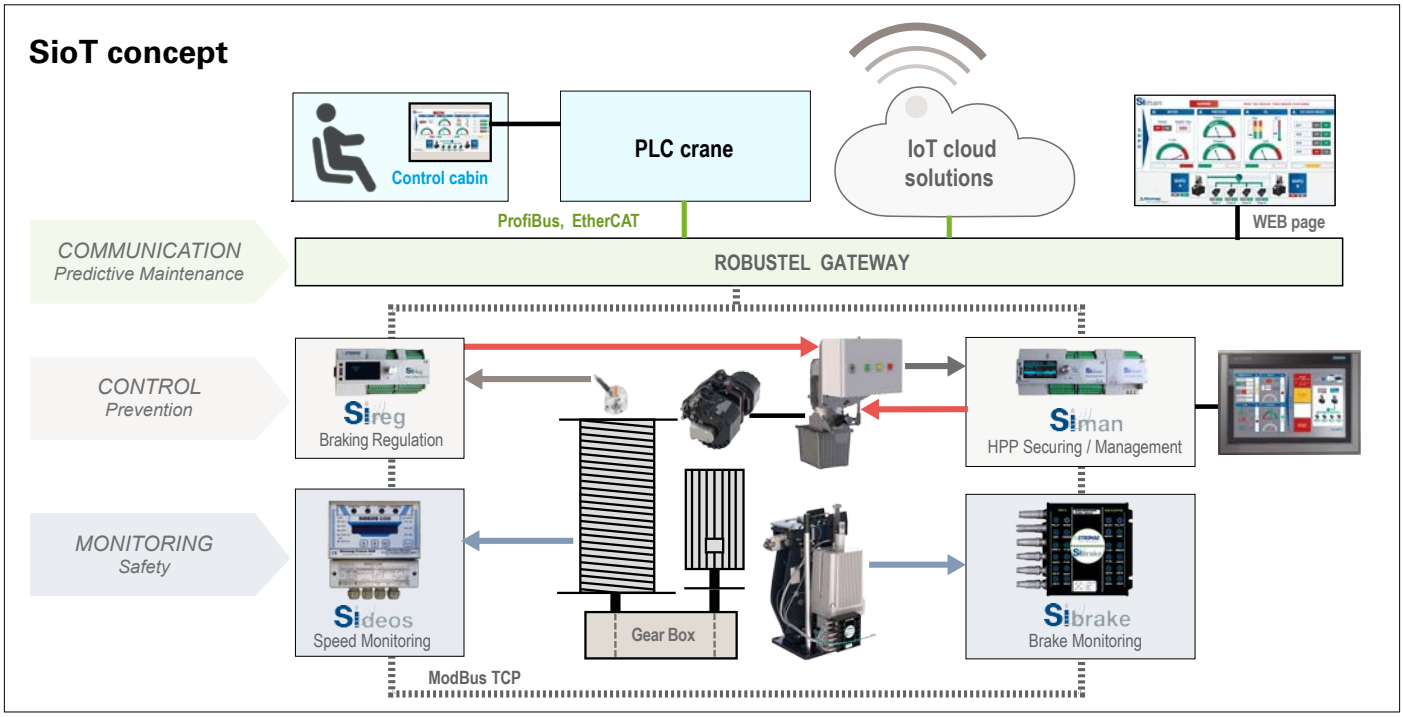
- Overspeed PV and GV
- Static Slipping
- Kinematic Chain Break
- Dynamic Slipping

In case of fault :

- It drives the opening of the braking control circuit downstream the command circuits.
- It transmits the information to the command and signals to the operator the triggering origin via alphanumeric displays

It records the last 3 messages

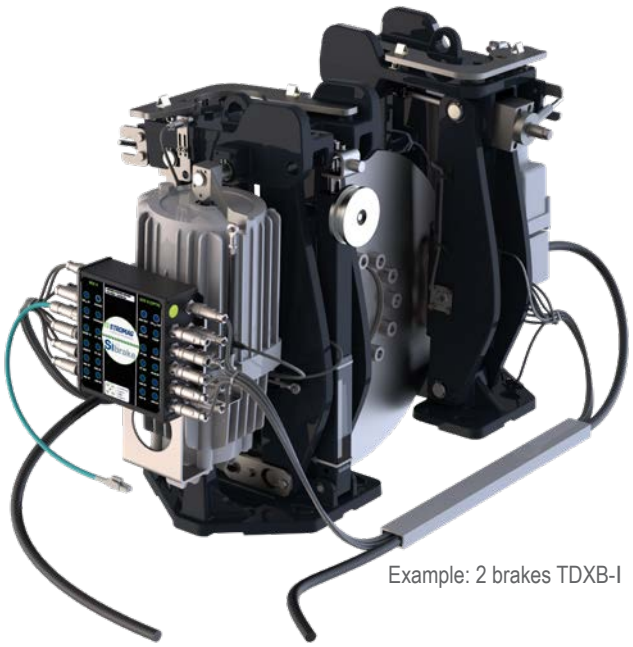
SioT concept includes several modules, each having specific functions.



BRAKES MONITORING

The **SIBRAKE** module collects and processes the raw data of the sensors (dynamo-metric axes, linear potentiometers, limit switches, etc...) into data that can be used for real-time monitoring of the brake and, if requested, for transmission to the IIoT for historical monitoring.

One **SIBRAKE** module can also be used to monitor a set of two brakes (ex.: two TBXB, TB or SHD brakes) associated on the same disc, or a double-spring hydraulic brake (ex. SH brakes).



Example: 2 brakes TDXB-I

Connections :

- M12 connectors
- Connection on one face (standard) or on two faces (optional) (A + B sides)
- With the two faces option: possibility to chain several modules (SIBRAKE, SIMAN, ...etc)
- Basic network functions (ping, NTP, ...)
  - WEB Server + WEB API
  - ModBUS TCP Server
  - IoT functions (Cloud Motion Connect)

STANDARD SIDE A M12 connectors

OPTIONAL SIDE B M12 connectors

HYDRAULIC POWER PACKS MONITORING

SIMAN is an intelligent system for monitoring and management of the good operation of Hydraulic Power Packs whatever their functionalities.

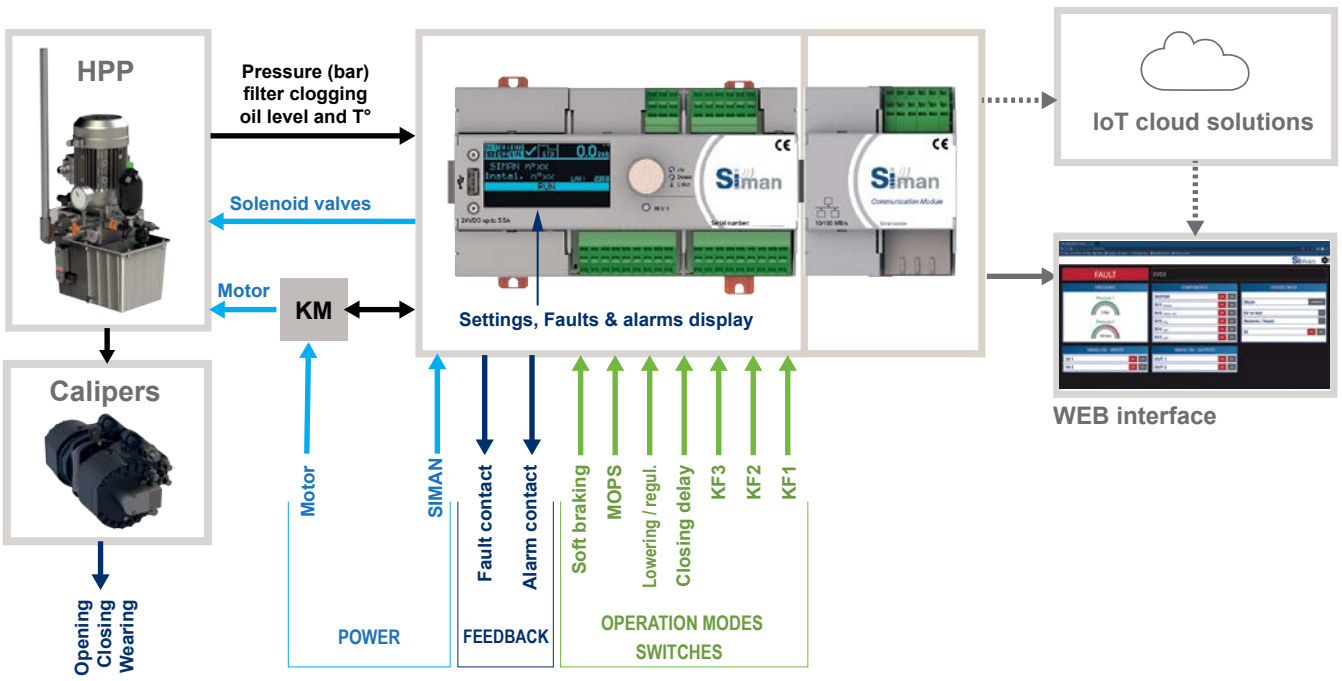
This system is a reliable solution for safety with:

- according to standard NF EN ISO 13849, a performance level PLd, category 2 system, MTBF = high, DC = high
- a service life of 1 million of ON/OFF cycles

It drives the HPP motor pump and the solenoid-valves. To ensure safety, it controls the good operation of the solenoid-valves and the oil return to the tank. For optimal operation, it monitors the HPP parameters.

SIMAN CM communication module allows connection to a Ethernet netwok (ModBus TCP server - WEB interface).

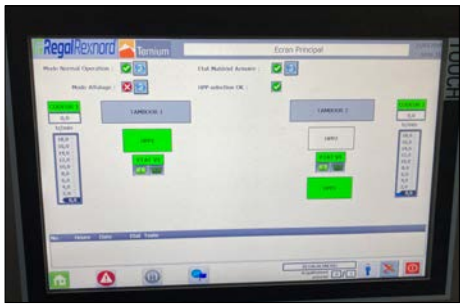
Diagram of the SIMAN inputs and outputs



SIGMA CONCEPT

BRAKING SYSTEM CONTROL AND MONITORING

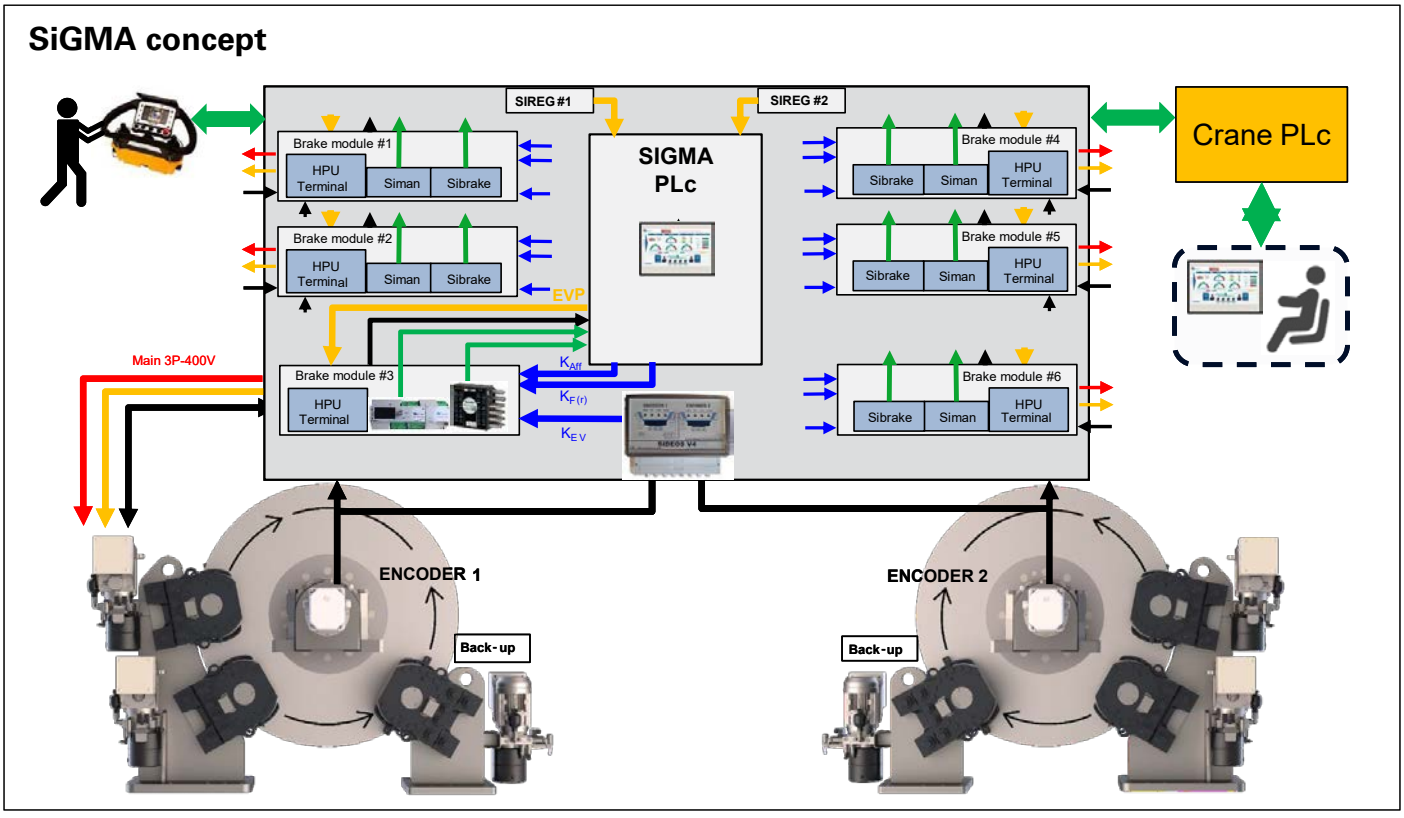
SIGMA concept offers tailor-made solutions to monitor and control complete braking systems to secure the installation in every cases (breakdown, failures, overspeed, etc...)



SIGMA cabinets include:

- Monitoring modules for each brakes assembly:
  - 1 **SIMAN** for braking control and HPP monitoring
  - 1 **SIBRAKE** for brake monitoring
- a **PLC** system, connected to each monitoring module for:
  - data display on local **HMI**
  - data transfer to the crane PLC
  - selection of the brakes in operation or on back-up mode
- a **SIDEOS** module for:
  - continuous monitoring of the drums speed through incremental encoders
  - sending a stop order to the SIMAN to close the brakes in case of fault as overspeed, differential speed or stactic slip
- a system for emergency controlled lowering of the load with:
  - 1 **SIREG** module per drum for drum speed management
  - 1 mobile box (wire connected) for safe operation
  - the drums can be operated separately (load triming) or together (installation safety)

SiGMA concept



STORM BRAKES

Stromag™ provides a large range of storm brakes to secure outdoor cranes such as ship to shore cranes, automated stacking cranes and rail-mounted gantry cranes.

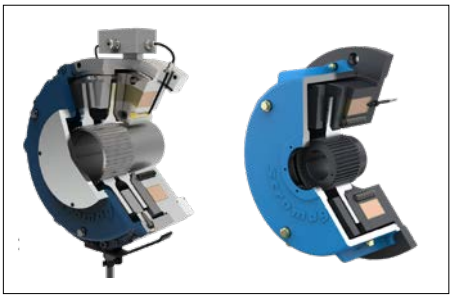
Rail clamps are parking and safety devices which prevent a crane from uncontrolled movement along the rail in case of sudden bursts of wind.

Guided Rail Clamps GRBS
Braking Force: up to 1000 kN
• Braking by spring / Hydraulic release • **Guided with cylindrical low friction rollers** • Float: H: ±30mm / V: ±25mm

Retractable Rail Clamps RRBS
Braking Force: up to 1200 kN
• Braking by spring / Hydraulic release • **Brake pads and complete mechanism is retractable** • Float: H: ±30mm / V: ±25mm

MOTOR BRAKES

With their high degree of protection, the Stromag Motor brakes fullfill the highest requirements for durability, robustness and seawater environment.



HPB Brake is a modular braking system as 2 face and 4 face design for highest performance in smallest space.

Braking Torque: 80 to 5000 Nm
• Spring applied • Electromagnetic release • For high speed applications

Spring-applied **4BZFM** brake is flood- and seawater-proof for offshore and marine applications.

Braking Torque: 63 to 11000 Nm
• Spring applied • Electromagnetic release • For marine applications

ELECTRIC BRAKE

The Warner Electric™ ERX Brake range is a pre-assembled spring-applied Electromagnetic brake used for parking and emergency braking.

ERX Warner brakes
Braking Torque: 5 to 75 Nm
• Spring operated • Electrically released • Compact design • Single or Double brake version • Indoor application • Manual release lever

The **ERX** Brake can be adapted to different application needs in speed, energy or torque, thanks to 3 different friction materials.

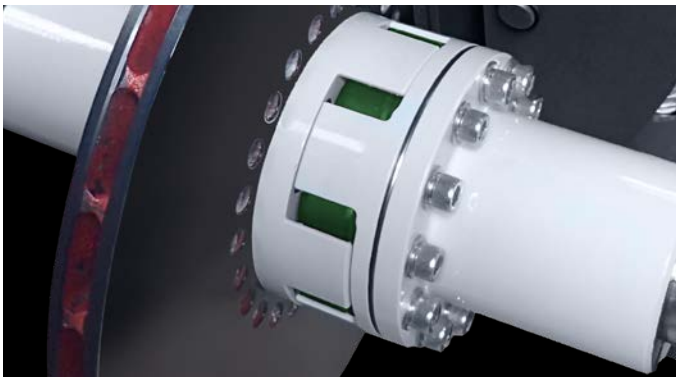
It can be selected with multiple options such as hand-lever release, enclosure protection, detection & redundancy or a combination of those.

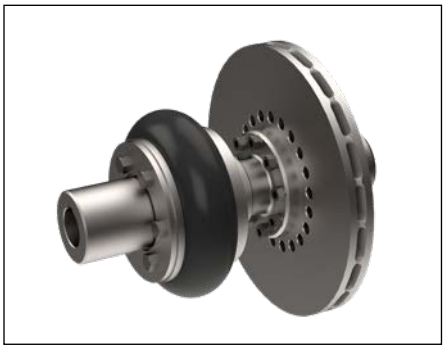
WARNER ELECTRIC™

BRAKE DISCS AND COUPLINGS

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

Stromag provides solid and ventilated discs with an external diameter from 175 to 995 mm, and a thickness of 15 mm (mono-bloc disc), 30 mm (solid and ventilated) or 42 mm (ventilated disc).

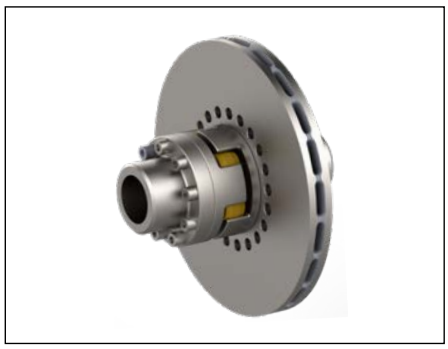




Stromag PERIFLEX™ RANGE

Highly-Flexible couplings

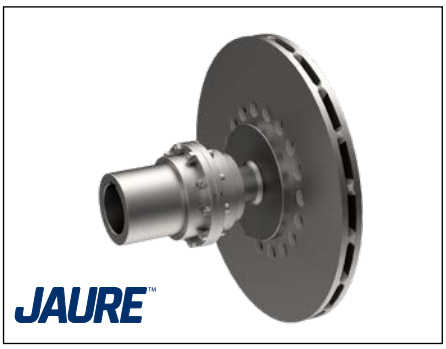
- Rubber-fabric tyre, mounted and removed without moving the machines
- compensate extreme offsets, absorb torque peaks and damp vibrations



SDKL - SVKL RANGE

Highly-Flexible couplings

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

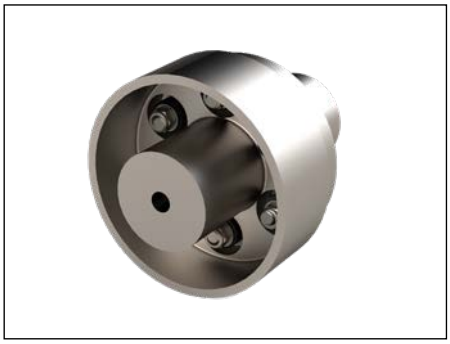


MTDF RANGE

Double Engagement Gear Couplings

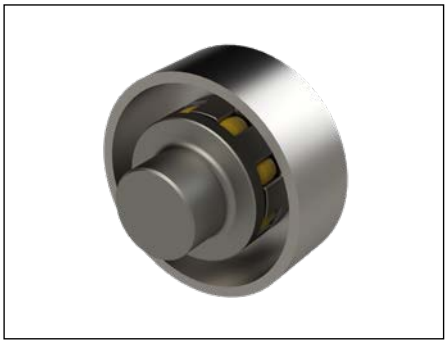
- 2 flanged sleeves with internal spur gear teeth, linked with steel bolts
- 2 crown toothed hubs allowing the best possible alignment

DRUM COUPLINGS



PB-C RANGE

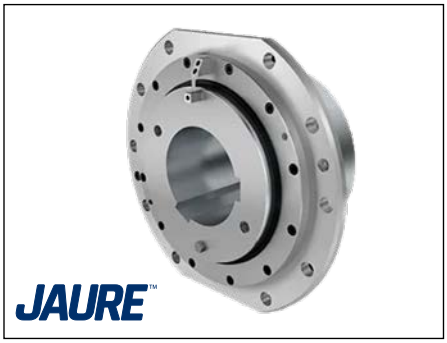
- Drums diameters: Ø200 to 710 mm
- Made of two cast iron hubs mounted with pins fitted with rubber bushes
- Reduction of shock loads and resonance effect of critical velocities



SVT RANGE

- Drums diameters: Ø200 to 630 mm
- Flexible couplings with cam rings and flexible element
- Simple mounting/dismounting
- Shocks and torsional vibrations damping

BARREL COUPLINGS



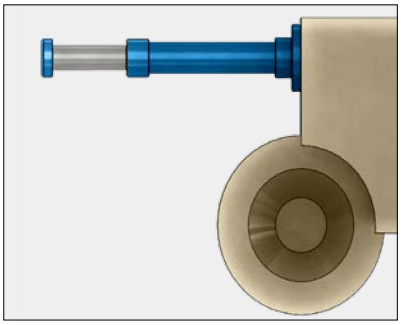
BARFLEX™ TCBR

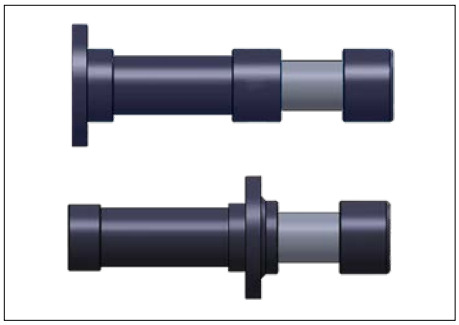
- Flange diameter: Ø250 to 1120 mm
- Shaft housing: Ø68 to 560 mm
- Steel coupling for connection of the slow rotating shaft of a gearbox to the rope drum of hoisting equipment.

HYDRAULIC & POLYURETHANE BUFFERS

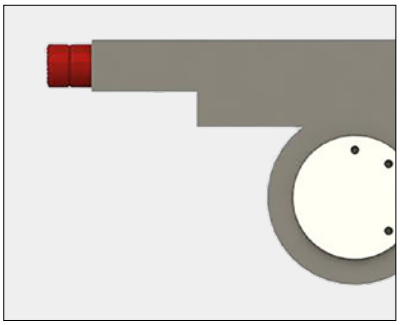
Buffers used to damp the energy resulting from the crash in rail transport systems and crane systems working with various load capacities and in different velocities are very important for extended life of the transport system and for security.

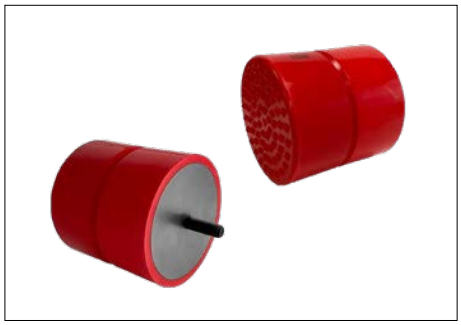
Stromag™ provides 2 types of buffers : polyurethane and hydraulic with many variations according to energy buffering capacities, strokes and connection types. In the selection of buffers, it is important to prefer the buffers with optimum values.





Hydraulic Buffers PHS
Damping force 70 - 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 • Options: Safety chain - Protection cover

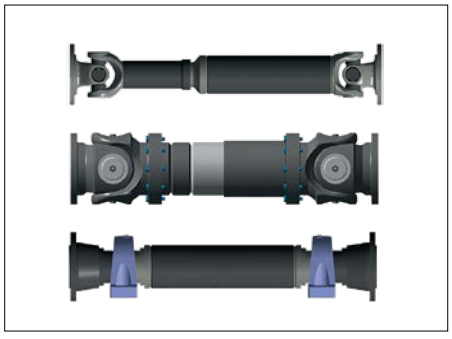




Polyurethane Buffers PPS
Damping force 6 - 40 kN
• Rear mounting with bolts • 4 sizes: 80, 125, 160 and 200 mm • Capacity: 1500 to 25000 J • Total length max.: 80 to 200 mm

CARDAN SHAFTS

Transmission of an angular rotation
Coupling of two rotating non-aligned shafts



Cardan shafts ACS	
Torque 600 - 3 900 000 Nm	
• 7 types: with or without length compensation, with or without flanges	
• 24 sizes	
• Useful diameter:	76 to 840 mm
• Length max.:	190 to 4500 mm

OUR KNOW-HOW AT YOUR DISPOSAL

Reactivity, availability and listening of the customer are values which define our teams. We put all our experience and knowledge at your disposal:

RESEARCH & DEVELOPMENT - TESTS

Stromag™ invests into increasingly sophisticated resources. Unique test facilities like our braking simulation tower and our dynamic test benches enable to:

- test all the brakes in real conditions of operation, in environments that can be extreme (low and high temperatures),
- carry out pads wearing tests as part of our research into friction materials.

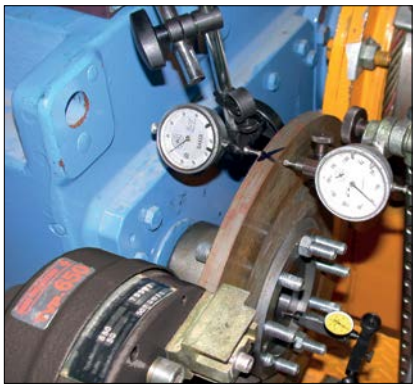
TRAINING

Our after-sale service team provides customers training sessions: upgrade operations on-site or trainings in our production center in France.
Our courses are designed for a wide audience: from the designer to the user with real-use conditions. Recognized as a training organization, the Stromag training team is at your disposal to examine all your specific needs.

RENOVATION

A real renovation is carried out on the brakes to be repaired: After a complete disassembly of the brake, all the constituent parts are checked. The brake is upgraded according to the last technical developments. So the customer receives brakes having the same performances as the new brakes with a new warranty period of 12 months.

Advantages	
• A team of experts at your disposal • Reactivity of the interventions • Study of the specific requirements • Secured installation	• Optimal operation of the braking systems • Preventive maintenance • Expertise sustainability



DIAGNOSIS

For installations including an important fleet of brakes, the diagnosis on-site allows to obtain an accurate picture of the state of the installation and to know the urgency order of the different maintenance operations to be carried out.

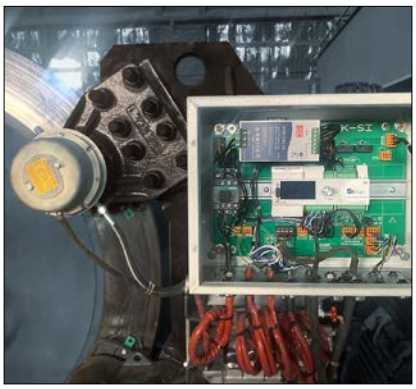
To achieve a maximal reliability in compliance with the safety regulations, our teams help the customer to realise a self-diagnosis of its braking systems.

INTERVENTION

Stromag™ After Sales Service Department operates quickly and efficiently on all installations worldwide for:

- the commissioning of the braking systems,
- all troubleshooting operations.

Our team consists of experts and technicians who work on all applications (steel industry, port cranes, nuclear cranes, cable-way, conveyors...)



REVAMPING

Rehabilitation, modernization, revamping of your braking system, increase the safety, reliabililty and economic performance of your crane without modification of the installation design.

Thanks to its expertise in industrial engeneering and maintenance, our team can manage the revamping of all types of equipment on your site by installing:

- Braking systems offering new performances,
- Monitoring and control systems for prevention and predictive maintenance (as a SiOT system adapted to your requirements).

For any information or intervention needs, please contact us.	sales.LaGureche@regalrexnord.com

TAILOR-MADE SOLUTIONS

Stromag™ offers tailor-made solutions for the more specific requests of the customers. From design to conception of the product, our research and development team focuses all efforts to find the best technical solution to suit the customers requirements.

CUSTOMIZED SOLUTIONS FOR HEAVY DUTY INDUSTRY

Since 1966, Stromag has been supplying braking solutions adapted to the requirements of the iron and steel industry all over the world.

Our tailor-made solutions enable:

- several braking modes: on/off braking, regulated braking, load lowering, with Human Machine Interface
- an easy maintenance: holding tools and hydraulic release tools adapted to all the calipers of the installation.

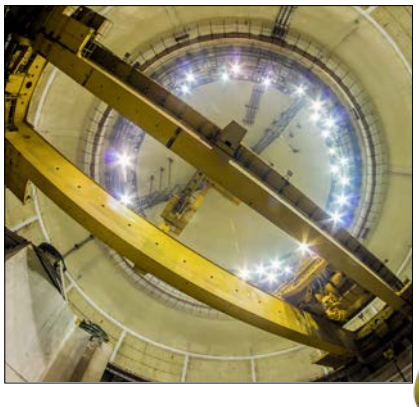
Photo courtesy of TAIM WESER

OUTSTANDING SHIP LIFTS

Stromag was chosen to supply accurate braking systems for the ship lifts of the hydroelectric stations of Silin, Shatuo and Goupitan on the busy Wujang River in China.
For each project, a huge braking system secures the lifting of the boat-reservoir (weight up to 3300 tons), to a maximum height of 79 meters. It is composed of hydraulic brakes types SH32 and SHD5, and specific Hydraulic Power Packs with electrical command and monitoring.

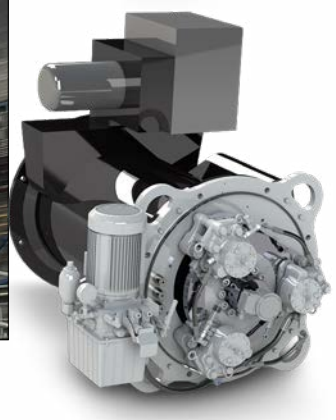
NUCLEAR APPLICATIONS

Stromag provides worldwide braking solutions meeting all safety and quality requirements of Nuclear Industry.
Our braking systems have been selected and certified to equip the polar cranes reactor buildings, as well as cranes of turbine, pumphouse, fuel and auxiliary buildings of Hinlkey-Point EPR.
These braking systems include electromagnetic brakes with or without hydraulic release device, power supplies, specific lowering devices, hydraulic emergency brakes and discs couplings.



HEAVY LIFT OFFSHORE CRANES

Modular Stromag SHD1 braking systems have been selected by several leading global OEM to equip large mass cranes installed on offshore construction vessels which provide heavy lifting capability to support surface or sub-sea asset installations (as for ex.: wind turbines, pipelines).
These braking systems offer an economical braking solution: they are factory-tested and designed to be mounted directly on the rear of the motors (400 kW and up).

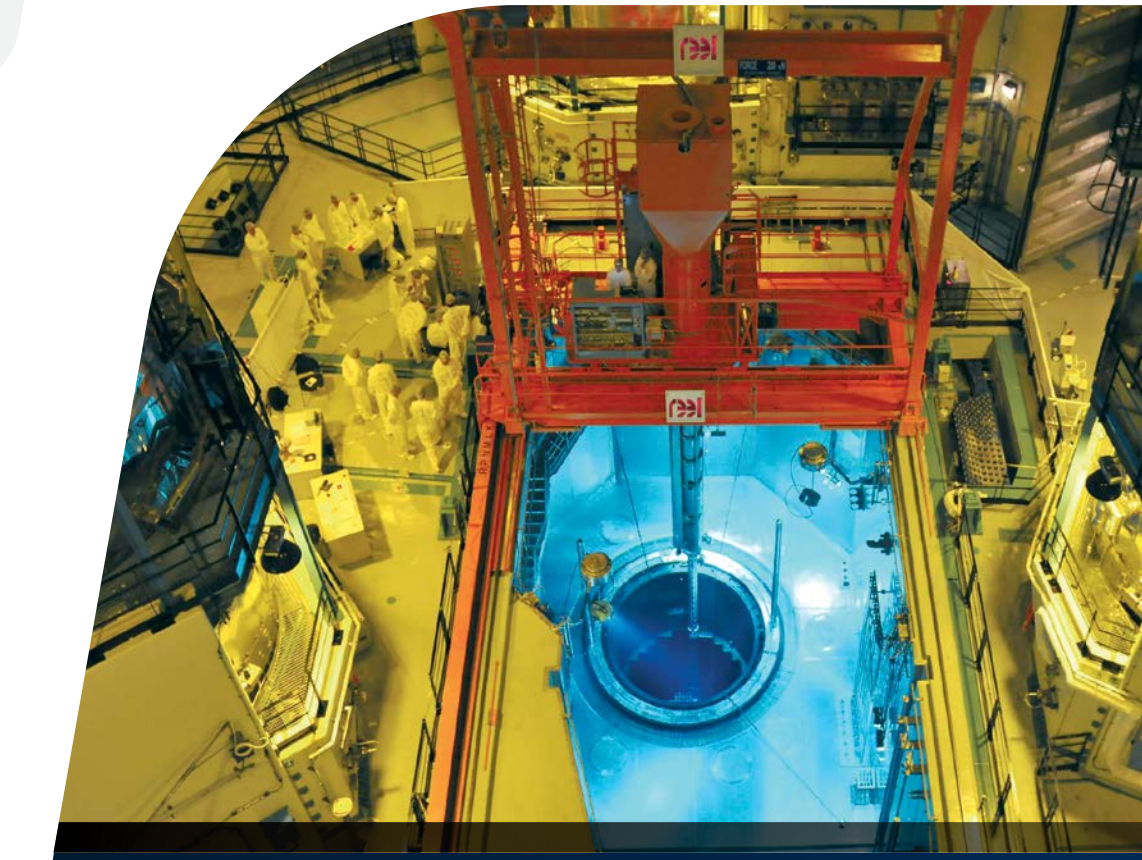


PORT CRANE 10B in TOULON

SIME™ Brakes braking systems ensure the safety of the port crane 10B of the naval base of Toulon. This boom crane has a lifting capacity of 120 tons at 47 meters.
The braking systems, tested on seismic bench, include electromagnetic calipers 3CA2, electrical power units AC32-50, hydraulic calipers SH5 and SH25 and hydraulic power packs CE8L and CE12L especially designed for delayed or full braking, and manual lowering of the load with over-speed safety.

PIONEERING SPIRIT VESSEL

MCH120 type brakes have been specifically developed and manufactured by Stromag to equip the Pioneering Spirit vessel. This huge vessel is the world's largest construction vessel, designed to install and remove offshore oil and gas platforms.
More than 550 MCH120 type brakes ensure a firm holding of the topsides horizontal lifting beams in their transverse motion along the vessel deck under the most adverse weather conditions.



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