



# THRUSTER BRAKES

FOR HOIST, CRANES AND  
MINING APPLICATIONS



# THRUSTER BRAKES

**Thruster brakes are designed for heavy duty operations** such as:

- Steel works: Cranes, Rolling mills
- Material handling: Ship Loader/Unloader, Stacker/Reclaimer, Bucket Wheel
- Mining and cement applications: Conveyors, Ball Mill / Crusher

These fail-safe brakes are closed by spring application and opened electro-hydraulically. Robust construction brings to these brakes reliability, long life and safe operation. They enable a simple and fast setting of the braking force.

All the SIME Brakes use asbestos free lining pads.

The TDXB disc brakes, with their symmetrical and compact design, enable easy mounting in restricted spaces. They offer various spring/thruster combinations and a large range of options.

TDXB-SioT brakes are fitted with sensors for complete monitoring and optionnally with a Sibrake module and predictive maintenance.

## DISC BRAKES

### TDXB RANGE



**Braking torque 172 - 28192 N.m**  
**Discs Ø220 to 995**

#### Main characteristics:

- Types: TDXB-05, TDXB-I and TDXB-II
- TS or optionally VS thrusters
- Automatic lining wear compensation
- Self-centering / • Opening sensor
- Manual release lever
- Symmetrical design

#### Options:

- Sensors: Closing / Thruster limit stroke
- SIDHT: high temperature Steel Works
- Custom color - painting protection
- Special voltage.

### TDXB-SIoT RANGE



**Braking torque 172 - 28192 N.m**  
**Discs Ø220 to 995**

#### Main characteristics:

- Measure of the clamping force and the braking force
- Temperature monitoring
- Opening and closing monitoring
- Measure of the lining wear
- Measure of the opening air gap

#### SIBRAKE module:

- Collects and processes the raw data of the sensors for real time monitoring or transmission to the PLC or Web page
- Can monitor several brakes.

### DISCS & COUPLINGS

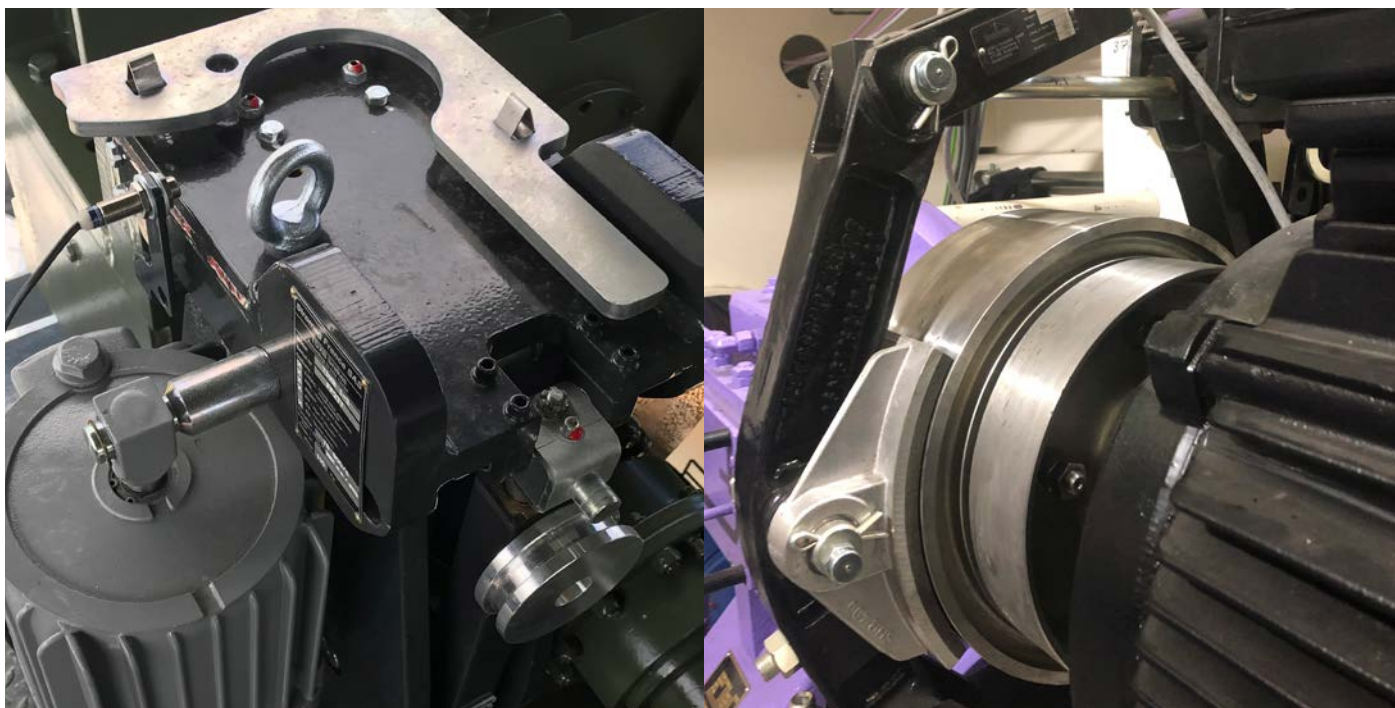


**3 types of discs couplings**  
**Discs Ø175 to 995 mm**

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

- **SDF couplings** are Double Engagement Gear Couplings.
- **Stromag Periflex® Shaft Couplings** are Highly-Flexible rubber / fabric tyre couplings.
- **SVKL-SDKL Couplings** (picture above) are High-ly Flexible couplings equipped with a cam ring and a elastomeric element.





## DRUM BRAKES

### SDB & FNS RANGES



**Braking torque 80 - 9900 N.m**  
**Drums Ø160 to 710**

#### Main characteristics:

- Standard DIN 15435
- Scale for torque adjustment
- Self-lubricated bushings
- Galvanized steel spindles and hinges
- Automatic lining wear compensation (SDB)

#### Options:

- Automatic wear compensation (FNS)
- High temperature - Low temperature
- Opening switch - Wear indicators
- Steel works - Special voltages
- Hand release lever

### FNS-T RANGE



**Braking torque 60 - 4700 N.m**  
**Drums Ø160 to 500**

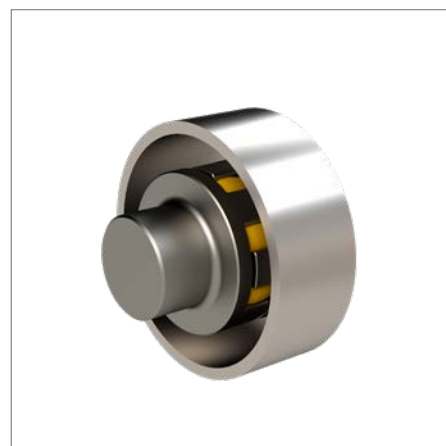
#### Main characteristics:

- Standard DIN 15435
- Horizontal spring and thruster
- Scale for torque adjustment
- Self-lubricated bushings
- Galvanized steel spindles and hinges

#### Options:

- Thruster with ATEX certification
- Opening switch - Wear indicators
- Steel works - Special paint
- Hand release lever
- Thruster descent valve for progressive braking

### DRUMS & COUPLINGS



**Series PB-C & SVT**  
**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 solution :

- PB drums & PB-C drum couplings
- SVT elastic drum couplings

#### Main characteristics:

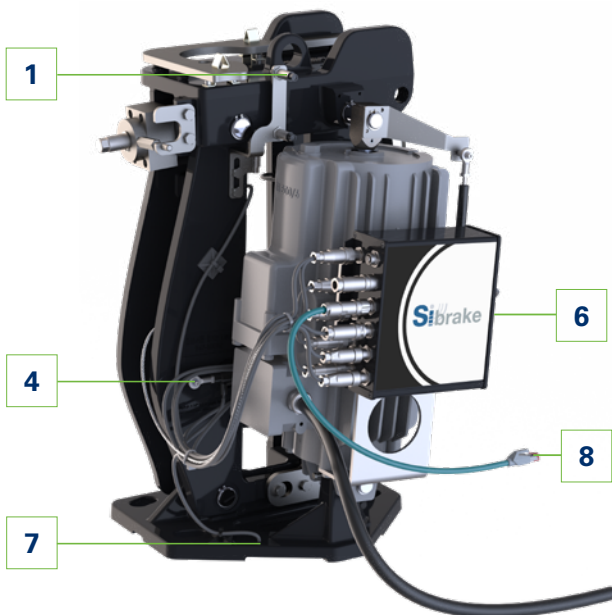
- Standard DIN 15435
- PB-C: flanged hub fitted with rubber bushes
- SVT: with rubber element for torsional vibrations damping

# CONTROL AND MONITORING SOLUTIONS

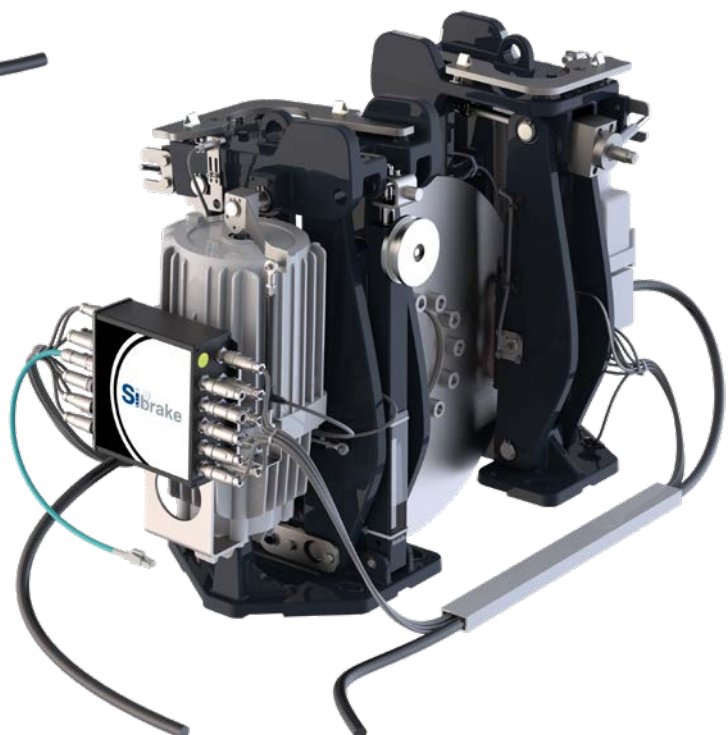
The TDXB-SioT brakes are fitted with sensors, linear potentiometers and a SIBRAKE module for a complete monitoring of the brake operation.

The SIBRAKE module collects and processes the raw data of the sensors into data that can be used for real-time monitoring of the brake (Web page or/and customer PLC) or/and for transmission via a gateway to a IoT cloud platform for historical monitoring.

Two brakes type TDXB-SioT can be connected to the same SIBRAKE module, which can process the parameters of each of the two brakes and analyze their functional consistency.



1	Inductive contact	Brake opening
2	Analog linear potentiometer	Thruster stroke
3	Torque pin(s)	Clamping force
4	Analog linear potentiometer	Opening / pads wear
5	PT100 sensors Indicator wires	Temperature lining wear
6	Module SIBRAKE	Data processing
7	Brake ID	Brake tracking (in progress)
8	MQTT bus mode cable	Transmission







## REGULATED BRAKING

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

For port cranes requiring drum brakes and application of a proportional braking torque, Stromag designs and supplies braking systems, each composed of:

- 2 brakes type **FNS** 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: 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

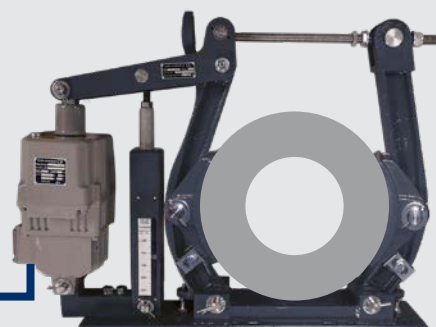
**SIDEOS One**  
+  
**CRD module**



### CONVERTER UNIT



### THRUSTER BRAKE(S)



# TDXB THRUSTER DISC BRAKES

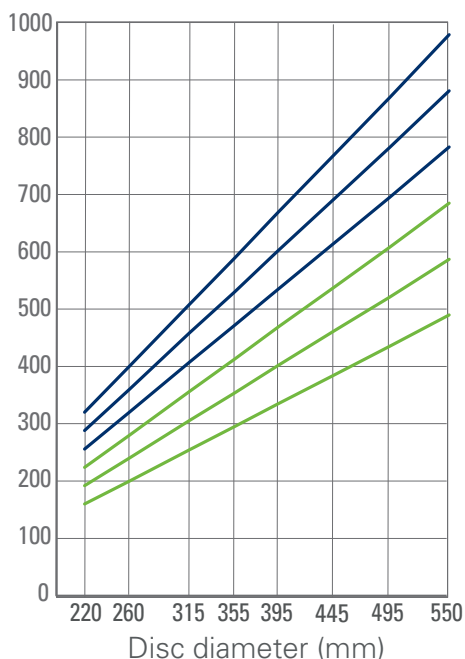
TDXB Thruster Disc Brakes are designed in different configurations, offering a large range of braking torques.

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



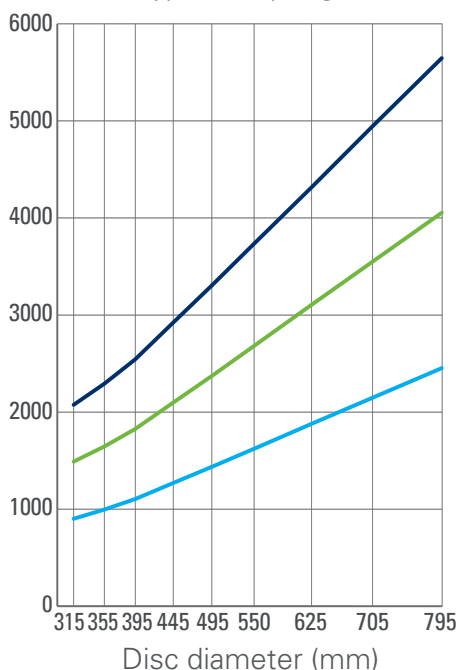
**TDXB-05**

**Braking Torque (N.m)**  
(2 configurations  
x 3 settings)



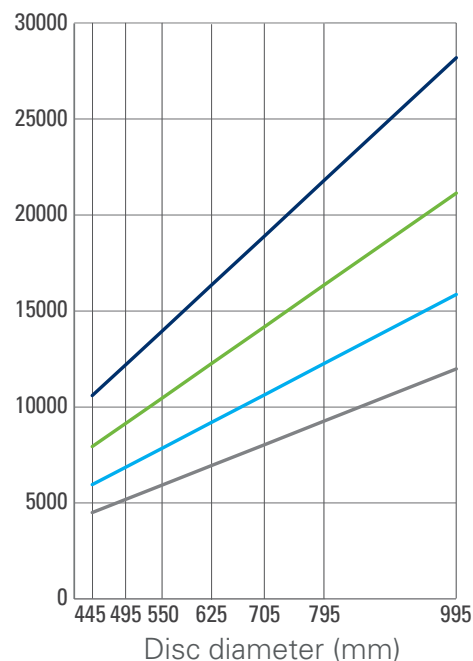
**TDXB-I**

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



**TDXB-II**

**Braking Torque (N.m)**  
(4 types of spring)

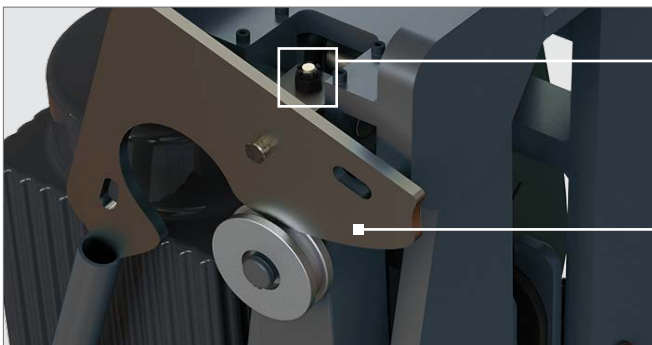


## TDXB Thruster Disc Brakes offer in standard many technical advantages:

- an automatic lining wear compensation
- lining full wear indicators
- a self-centering system
- a manual release lever
- a proximity switch for opening monitoring
- a torque scale

They are proposed with TS thrusters, VS thrusters are optional.

A large range of options allow to meet requirements of every applications.



### CLAMPING FORCE SETTING

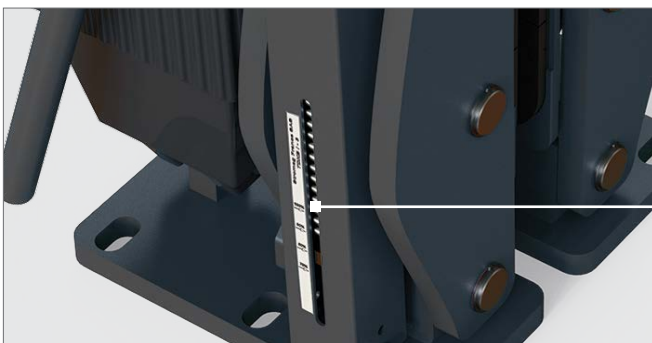
Actuation on the setting nut enables to modify the spring compression to the requested torque value.

### 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.

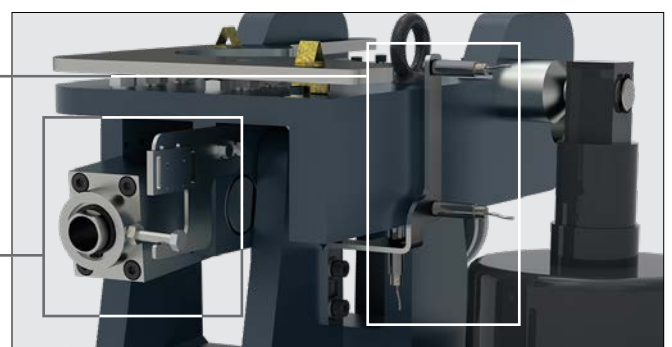
### AUTOMATIC LINING WEAR COMPENSATION SYSTEM

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.



## Stromag Facilities

### Europe

#### Germany

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+49 (0) 23 03 102 0

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Geared Cam Limit Switches, Discs*

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+49 (0) 340 2190 0  
*Electromagnetic Clutches & Brakes*

#### France

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+33 (0)2 48 80 72 72  
*Disc Brakes & Drum Brakes*

#### Great Britain

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Bedford, MK42 9RD - UK  
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Industrial Caliper Brakes*

### North America

#### USA

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

*Electromagnetic Clutches & Brakes*

300 Indiana Highway 212  
Michigan City, IN 46360 - USA  
219-874-5248  
*Couplings*

2800 Fisher Rd.  
Wichita Falls, TX 76302 - USA  
940-723-3400  
*Geared Cam Limit Switches,  
Industrial Caliper & Drum Brakes*

#### South America

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06711-250 - Brasil  
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*Flexible Couplings, Bearing  
Isolators, and Coupling Guards*

### Asia Pacific

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Caliper & Drum Brakes, Discs, Geared  
Cam Limit Switches*

#### India

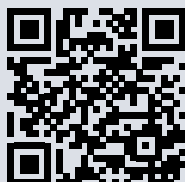
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*Clutches & Brakes, Electromagnetic  
Clutches & Brakes, Couplings, Industrial  
Caliper & Drum Brakes, Discs, Geared  
Cam Limit Switches, Wind Brakes*

### Renewable Energy

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*Wind Brakes*



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