# **SIBRE –** the world of industrial brakes

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The SIBRE Siegerland Bremsen GmbH is a worldwide operating, medium-sized company of traditions with meanwhile over 60 years of company history. From the very first the company engages in the development and production of brake systems for the industry. Right from the start value was set on technical innovation, the most modern manufacturing technology and high customer use. Production procedures are continuously supervised by a quality management system. The aim of the product development is an optimum combination of a top-quality product, the easiest use and market-driven price both for plant engineers and plant operators.

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# the world of industrial brakes



#### CONCEPTION

With a Team of experienced engineers and service technicians we have the knowledge to stand behind our slogan "Sure to be Safe". Through this knowledge and experience the SIBRE Team has a complete understanding of Braking System requirements, and the consequences of an inferior or flawed product. SIBRE has the flexibility to design, build, and test in our own facility, allowing free thinking ideas and concepts to be realized.

#### ENGINEERING

Based on the collective decades of experience, our engineers, technicians, and input from our customers, the SIBRE R & D department, can develop, manufacture and test products heavy industry can rely on. Using state of the art software and the latest innovative hardware, the SIBRE Team can achieve optimal products. From innovative concepts to detailed construction plans, our R & D department consistently develops reliable SIBRE Products.



#### PRODUCTION

With a well-trained, long-standing team, and a newly expanded modern production hall, SIBRE is producing quality. From individual components and parts to final assembly, SIBRE stands firm on sustainable product quality.



#### QUALITY

Being ISO 9001 certified, SIBRE is guaranteeing the highest quality of each individual part and the entire brake assembly. With the most currently available measuring and testing equipment, the SIBRE Team has the capability to check for raw material properties and dimensional accuracy, on each critical component. These capabilities ensure the functional reliability customers have come to depend on from SIBRE.



# high quality brakes



#### INTERNATIONAL PRESENCE

With 11 offices strategically placed on all continents, SIBRE is truly a renowned Global Player.

We pride ourselves in being a reliable partner for safety relevant components. Through our well-established sales and service locations, we have created solid cooperation, that often exceed customer expectations. Among the industries we support, Container and Material Handling, Mining and Metals, Forestry, Oil and Gas, Wastewater Treatment, Movable Bridges, and Hydropower to name a few, SIBRE's well-situated locations allow for responsive action to serve our customers.

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# CONCEPTION & ENGINEERING



#### CONCEPTION

Sure to Be Safe. The SIBRE slogan and motto. Realizing People's lives depend on the safest working environments, in some of the most inhospitable places, the SIBRE Team is consistently discussing, consulting, analyzing, and verifying ideas to create new components and systems. Sure to Be Safe. The lives of real people depend on it. This ever-flowing conversation is not just an internal practice; we actively seek input from industry. We engage industry leaders, engineering and consulting firms, and the all-important persons responsible for maintaining equipment.

These cooperative discussions create a true partnership between manufacturer and user. The ability of our product developers to engage dynamic thinkers allow the best possible solutions.

#### for **innovative** brake-systems











#### ENGINEERING

Implementing ideas and concepts belong to the dynamic engineering team at SIBRE.

This energizing team is always on the mission to safeguard people and equipment. The redesigning of our products is as important as bringing to life new concepts.

With the availability of the most modern hardware and software the engineering team has made the tried and true SIBRE range more efficient and maintenance friendly. This dynamic group of engineers is an important part of SIBRE being a global supplier in the world of industrial brakes, couplings and crane wheels.

Made in Germany, standing behind the heritage of German Engineering.

# PRODUCTION & QUALITY made in **Germany**



#### PRODUCTION

With a steadily expanding product offering, the extending global network of offices and activities, so to the SIBRE production facilities grow. Our machining facility in Haiger/Germany and our assembly plant, just up the road in Eschenburg/Germany, have also been growing. Both facilities have seen significant modernization and expansion to accommodate the demand for highly engineered integral products. Since 2018 several new lines have been installed. Our central production plant located in Haiger, Germany boasts several stateof-the-art CNC machines. These additions allow for tighter control of production and faster response times to customer requirements. This growth has afforded SIBRE the honor of being a good steward to our local communities, and continuing the solid reputation Made in Germany has been known for the world over for. 454

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High-quality, reliable braking systems and drive components require a consistent quality standard.

With our internal development and simulation laboratory, both individual components and fully assembled systems are put through their paces. In addition to function and load simulation, we also focus on checking, reaction times, material properties and dimensional accuracy. SIBRE quality – made in Germany

### AS A ONE STOP SUPPLIER, SIBRE DELIVERS COMPREHENSIVE SOLUTIONS FOR ALL DRIVES IN CRANES.





#### SAFETY-BRAKES

#### SNAG LOAD PROTECTION

#### WHEELS & SHEAVES



COUPLINGS

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# SERVICE BRAKES





#### disc brakes TYPE USB 5

Standardized functional principle, available in 5 different sizes Designed for all applications in a crane (gantry, boom, slewing, hoist)

- Improved brake linings
- Parallel opening of brake shoes
- Optimized spring guiding unit
- Upgraded manual release system
- Enhanced corrosion protection
- Additional options for status monitoring Load cells for measuring the brake torque PT100 temperature sensors for the brake linings Linear position sensor for monitoring of thruster stroke Linear position sensor for torque adjustment



#### disc brakes TYPE TEXU

Service- or emergency stop brake for container cranes, conveyor belts, bucket wheel excavators etc.

- Reduced gear box costs due to reduced distance between input and output shaft
- Reduced costs for brake disc, electrical connection and PLC
- Reduced initial costs
- Higher friction coefficient = higher torque = increased safety even under emergency stop conditions
- Torque range 8000 30000 Nm on discs 500 900 mm
- Pins and rods made of stainless steel
- Pivot points with teflon-coated bushings
- Sinter-linings

# SERVICE BRAKES

#### disc brakes TYPE CB8

#### Calliper brakes e.g. for gantry travel drives.

- Compact design
- Universal mounting position
- Completely closed housing
- Sinter linings for high rotation speed and temperature
- Switches for position control
- Release:
  - Magnetic
  - Electrohydraulic
  - Hydraulic
  - Pneumatic
- Universal mounting position



#### drum brakes TYPE TE

#### Versatile brake for general industrial applications, steel and material handling, cranes and conveyors

- Robust version: the "workinghorse"
- According DIN 15 435
- Pins & Rods made of stainless steel
- Lightweight Aluminium brake shoes
- Important bearings bushed with maintenance-free bushes
- Synchronisation linkage of brake shoe lever
- Options:
  - Wear compensator
  - Manual release level
  - limit switches





# SAFETY BRAKES & PROTECTION SYSTEMS



#### snag load protection TYPE SLP

Detection and release of upcoming snag load Complete hoist drive protection

- Ultra fast response time for maximum safety
- Protection performed before inertia affects steel structure and ropes
- No manual re-coupling or other inventions
- Minimally invasive intervention in crane PLC
- Advanced 360° sensor technology
- Completely installed in the hoist
- Suitable for retrofit of STS cranes

#### disc brakes TYPE SHI

Emergency brakes for rope drums and conveyor belts, also available as floating calliper (SHI-FC)

- Fast response time for maximum safety
- Suitable for different disc thickness
- No tangential forces onto pistons and seals during dynamic braking
- Low spare parts and maintenance requirement due to only one dynamic seal per cylinder
- Simple and fast manual wear compensation
- Easy and quick replacement of brake pads
- High thermal capacity sinter-linings
- Clamping forces 4,3 555 kN

#### hydraulic POWER UNIT

#### Brake component for the opening of spring-applied brakes and closing of active brakes

- Well-proven in the field
- Environmental temperature from -40° C up to +70° C
- Robust welded cover & housing (e.g. optional for HPU V 3)
- Explosion protected design (optional)



# STORM BRAKES

#### rail pushers TYPE RPS

Static storm brake for railmounted cranes and machines to prevent runaway in a storm or in case of power failure

- Spring applied, release with hydraulic power unit
- Virtually maintenance-free
- With well proven advantages of the disc brake SHI

#### wheel brakes TYPE RHI

Storm wheel brake for railmounted cranes and machines to prevent runaway in a storm or in case of power failure

- Spring applied, release with hydraulic power unit
- Manual lining wear adjustment
- Floating calliper design available with up to +/- 10 mm axial float compensation

#### RAIL PUSHERS TYPE RTCB

#### Static storm brake for railmounted cranes and machines to prevent runaway in a storm or in case of power failure

- Self energizing device: Weight of crane ensures braking force reliably
- Twin chock working in both directions
- Integrated manual release
- Easy installation: No hydraulic power unit, no hydraulic field piping, no springs

#### rail clamps TYPE RB

#### Static storm brake for rail mounted cranes and machines to prevent runaway in a storm or in case of power failure

- Spring applied, released by internal HPU
- With hand pump for manual release
- Incl. stainless steel housing
- Suitable for compensation of high horizontal and vertical rail misalignments
- Constant clamping force due to solid arms and a knee lever system









# WHEELS & SHEAVES





## CRANE WHEELS

#### Separate wheels or complete assemblies incl. shaft and bearings

- According international standards, customer drawings or design drafts made by Sibre
- Quenched and tempered, pre-machined wheels on stock (open or close die forged)
- Seamless deep hardening of rolling surface for extension of life time
- Cost effective CNC machining with highest accuracy
- Latest measuring instruments (UT, HT, LP, DI, etc.)



# ROPE SHEAVES

Rope sheaves made of steel, also available with bearings, bushes and covers

- For harsh environments
- DIN / customized
- Forged, casted or welded
- Diameter: 225 mm up to 2.000 mm
- High economic advantages with welded sheaves

## COUPLINGS

### DRUM COUPLINGS

Rope drum couplings for crane hoisting gear, conveyance, stackers, ship unloaders, container cranes as well as in heavy, rough smelting work

- Increased capacity due to optimized geometry of torque-transmitting components
- Torques of up to 1025 kNm and radial loads of up to 550 kN can be transferred with a maximum coupling diameter of 1025 mm
- High wear resistance due to quenched and tempered hub- and gear teeth
- Compatible fitting sizes
- Performed on the basis of the steel iron guidelines (Stahl Eisen Betriebsblatt) SEB 666 212



# FLEXIBLE COUPLINGS

#### Brake discs, brake drums, several couplings and hubs

- Elastic couplings with flexible insert, three and five part version (ALC & AFC)
- Pin couplings (APC)
- Flexible buckle couplings (S)
- Gear couplings (ZKES)
- Lamella couplings (ASC)





# The SIBRE world of industrial brakes

#### **GERMANY - HEADQUARTER**

SIBRE – Siegerland Bremsen GmbF Auf der Stücke 1-5 35708 Haiger Phone: +49 2773 9400-0 Email: info@sibre.de

#### USA

SIBRE Brakes USA P.O. Box 164 Cedarville NJ 08331 207 Bogden Blvd. Suite D Millville NJ 08332

Phone: +1 856 3677354 Email: megan.watson@sibreusa.com

#### SPAIN

SIBRE Brakes Spain S.L. Pol. Ind. Trevenez C/Actriz Amelia de la Torre 3 E-29004 Malaga Phone: +34 952 203912 Email: jtoscano@sibre.es

#### ITALY

SIBRE Italia S.r.l. Via Zanardelli 102 I-25089 – Villanuova sul Clisi, BS Phone: +39 347 8847455 Email: sales@sibre.it

#### SWEDEN

SIBRE Brakes Scandinavia AB Strandvägen 10 475 40 Hönö Sweden Phone: +46 31 96 21 90 Email: goran @ sibre.se

#### SERBIA

SIBRE Fluidotehnic d.o.o. Rudijinci 175 / A 36210 Vrnjacka Banja Phone: +381 36 63 17 10 Email: office @ fluidotehnic.com

#### INDIA

SIBRE Brakes (India) Pvt Ltd "Sukh Sagar" 7th Floor, 7-A 2/5, Sarat Bose Road Kolkata 700 020 India

Phone: +91 33 24 54 32 80 Email: info@sibre.in

#### SINGAPORE

SIBRE Brakes (S.E.A.) Pte. Ltd. No.5, Soon Lee Street, #02-38, Pioneer Point Singapore 627607 Singapore Phone: +65 6710 44 61 Email: info@sibre.com.sg

CHINA

SIBRE Brakes Tianjin Co. Ltd. No. 8, Haitong Street,TEDA, CN-Tianjin 300457, P.R. China Phone: +86 22 59 81 31 00 Email: info@sibre.cn

# **SIBRE –** the world of industrial brakes



sure to be safe

SIBRE Siegerland Bremsen GmbH Auf der Stücke 1 - 5 D-35708 Haiger / Germany Tel. +49 2773 9400-0

info@sibre.de | www.sibre.de