



**Wind Energy
Products
Disc
Brakes and
Rotorlocks**



Stromag

Founded in 1932, Stromag has grown to become a globally recognized leader in the development and manufacture of innovative power transmission components for industrial drivetrain applications. Stromag engineers utilize the latest design technologies and materials to provide creative, energy-efficient solutions that meet their customer's most challenging requirements.

Stromag's extensive product range includes flexible couplings, disc brakes, limit switches, an array of hydraulically, pneumatically, and electrically actuated brakes, and a complete line of electric, hydraulic and pneumatic clutches.

Stromag engineered solutions improve drivetrain performance in a variety of key markets including energy, off-highway, metals, marine, transportation, printing, textiles, and material handling on applications such as wind turbines, conveyor systems, rolling mills, agriculture and construction machinery, municipal vehicles, forklifts, cranes, presses, deck winches, diesel engines, gensets and stage machinery.



VISIT US ON THE WEB AT STROMAG.COM

Altra Industrial Motion

Altra is a leading global designer and manufacturer of quality power transmission and motion control products utilized on a wide variety of industrial drivetrain applications. Altra clutches and brakes, couplings, gearing and PT component product lines are marketed under the industries most well known manufacturing brands. Each brand is committed to the guiding principles of operational excellence, continuous improvement and customer satisfaction. Highly-engineered Altra solutions are sold in over 70 countries and utilized in a variety of major industrial markets, including food processing, material handling, packaging machinery, mining, energy, automotive, primary metals, turf and garden and many others.

Altra's leading brands include **Ameridrives**, **Bauer** Gear Motor, **Bibby** Turboflex, **Boston** Gear, **Delroyd** Worm Gear, **Formsprag** Clutch, **Guardian** Couplings, **Huco**, **Industrial** Clutch, **Inertia** Dynamics, **Kilian**, **Lamiflex** Couplings, **Marland** Clutch, **Matrix**, **Nuttall** Gear, **Stieber**, **Stromag**, **Svendborg** Brakes, **TB Wood's**, **Twiflex**, **Warner** Electric, **Warner** Linear and **Wichita** Clutch.

VISIT US ON THE WEB AT ALTRAMOTION.COM



SOLUTION FOR EVERY APPLICATION

Stromag has played a very active role in the wind power market since its concept in the early 80s.

Today we offer brakes for all movements of the turbine. This covers the yaw movement, the high speed shaft and the low speed shaft along with special tailor-made solutions for individual customers as well as brakes and rotorlocks that fit into many different turbines.

Our products are GL2010 certified and we accompany our customers through the certification process of their turbine.

We are proud of our long history with a broad customer base and will continue our commitment developing new innovative ideas together with our customers. Our latest products include the CB 90RS, CB 90A and CB 120A Ultra brake which yet again offer unique features with the reassurance of Stromag quality.

YAW BRAKE CB 90 A ULTRA

The strong solution for an economical brake system

Benefits include

- Braking Force up to 205kN
- Compact and weight optimized design
- Fast and easy cleaning to reduce service downtime
- Fast and easy change of lining pads
- Designed for highly economical wind turbines – The powerful solution for wind auctions



YAW BRAKE CB 120 A ULTRA

The efficient answer for economical braking and yawing

Benefits include

- Braking force up to 515kN
- Compact and cost optimized design
- Fast and easy cleaning reduces service effort
- Lifetime cost optimized design
- Wear detection with integrated wear sensors



YAW BRAKES CB 90 A / CB 120 A STRONG

Benefits include

- CB90A strong – braking forces up to 209kN
- CB120A Strong – braking forces up to 543kN
- Easy and fast lining change
- Easy wear check via feeler
- Assured assembly of lining pads (Poka Yoke)



YAW BRAKE FCHM 90 A / FCHM 120 A

Benefits include

- FCHM90A braking force up to 192 kN
- FCHM120A braking force up to 542 kN
- End stops for easy and fast maintenance
- Lining change without removing the brake from its bracket



ROTORBRAKE CB90R ULTRA

The modular solution for energy and parking brake systems

Benefits include

- Braking force up to 190kN
- Leveled response time due to a constant air gap to the brake disc
- Parking or energy braking versions available
- Auto centering device to adjust missalignments
- Flexibility through modular design





ROTOR BRAKE BCH 85 CRT

Benefits include

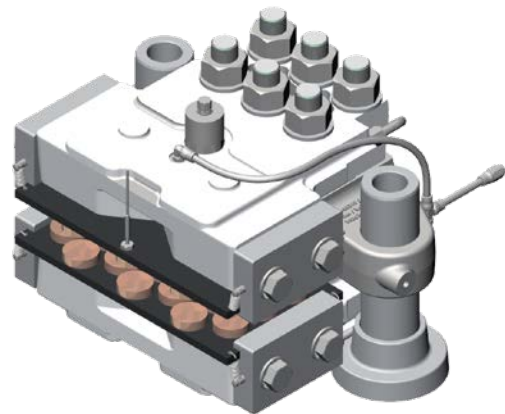
- Braking force up to 84 kN
- Constant air gap between disc and lining pads
- Automatic wear compensation
- Self-centring system
- Lining change without removing the brake from its bracket
- Compact design
- High energy capacity
- Electrical wear and temperatur control



ROTOR BRAKE BCHM 90 CRT

Benefits include

- Braking force up to 122 kN
- Constant air gap between disc and lining pads
- Automatic wear compensation
- Self-centring system
- Lining change without removing the brake from its bracket
- High energy capacity
- Electrical wear and temperatur control



ROTOR BRAKE FCH 120

Benefits include

- Braking force up to 811kN
- Constant air gap between disc and lining pads
- Automatic wear compensation
- Self-centring system
- Lining change without removing the brake from its bracket
- Full return system as an option

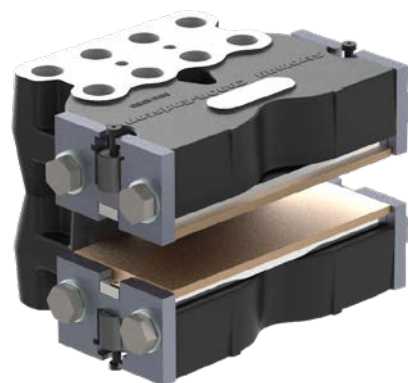


ROTORBREMSE CB 90 RS

The solution for a fast maintenance of a brake system

Benefits include

- Braking force up to 190kN
- Leveled response time due to a constant air gap to the brake disc
- Fast and easy change of lining pads without dismantling the caliper
- Lining pads cannot be installed incorrectly (Poka Yoke)
- Flexibility through modular design



ROTORLOCK H 280 / 240 / 200 / 160

Benefits include

- Rotor lock system for wind turbines
- Hydraulically operated
- Locking is free of clearance due to conical pin shape
- No sticking of the pin due to non-stick coating
- No corrosion of the pin
- Long life time
- Position monitoring of the pin by means of a linear potentiometer
- Proven quality for on- and offshore
- Lock and Unlock monitoring with position sensors



The Power Of One, The Strength Of Many.

OTHER PRODUCT SOLUTIONS FROM
ALTRA INDUSTRIAL MOTION

WWW.ALTRAMOTION.COM

Our comprehensive product offerings include various types of clutches and brakes, overrunning clutches, engineered bearing assemblies, gearing and gear motors along with linear products, belted drives, couplings and limit switches. With thousands of product solutions available, Altra provides true single source convenience while meeting specific customer requirements. Many major OEMs and end users prefer Altra products as their No. 1 choice for performance and reliability.



ELECTRIC CLUTCHES AND BRAKES

Inertia Dynamics
Matrix
Stromag
Warner Electric



HEAVY DUTY CLUTCHES AND BRAKES

Industrial Clutch
Stromag
Svendborg Brakes
Twiflex
Wichita Clutch



OVERRUNNING CLUTCHES

Formsprag Clutch
Marland Clutch
Stieber



ENGINEERED COUPLINGS AND UNIVERSAL JOINTS

Ameridrives
Bibby Turboflex
Guardian Couplings
Huco
Lamiflex Couplings
Stromag
TB Wood's



GEAR DRIVES

Bauer Gear Motor
Boston Gear
Delroyd Worm Gear
Nuttall Gear



GEAR MOTORS

Bauer Gear Motor



POWER TRANSMISSION COMPONENTS

LINEAR ACTUATORS AND CONTROLS

Warner Linear



ENGINEERED BEARING ASSEMBLIES

Kilian



AIR MOTORS

Huco



BELTED DRIVES AND SHEAVES

TB Wood's



GEARED CAM LIMIT SWITCHES

Stromag

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

The Brands of Altra Industrial Motion

Couplings

Ameridrives
www.ameridrives.com

Bibby Turboflex
www.bibbyturboflex.com

Guardian Couplings
www.guardiancouplings.com

Huco
www.huco.com

Lamiflex Couplings
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Stromag
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TB Wood's
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Geared Cam Limit Switches

Stromag
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Electric Clutches & Brakes

Inertia Dynamics
www.idicb.com

Matrix
www.matrix-international.com

Stromag
www.stromag.com

Warner Electric
www.warnerelectric.com

Linear Products

Warner Linear
www.warnerlinear.com

Engineered Bearing Assemblies

Kilian
www.kilianbearings.com

Heavy Duty Clutches & Brakes

Industrial Clutch
www.indclutch.com

Twiflex
www.twiflex.com

Stromag
www.stromag.com

Svendborg Brakes
www.svendborg-brakes.com

Wichita Clutch
www.wichitacutch.com

Belted Drives

TB Wood's
www.tbwoods.com

Gearing

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www.bauergears.com

Boston Gear
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Delroyd Worm Gear
www.delroyd.com

Nuttall Gear
www.nuttallgear.com

Overrunning Clutches

Formsprag Clutch
www.formsprag.com

Marland Clutch
www.marland.com

Stieber
www.stieberclutch.com

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