

SIME brakes

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Stromag France, *industrial disc brakes world leader*, has developed, installed and maintained worldwide tens of thousands of safe, performant and complete braking solutions for:

- Port cranes
- Steel works cranes
- Coal and Nuclear power plants
- Pedestrian transport equipments
- Windmills
- Mines, belt conveyors

Stromag France is ISO 9001-V2000 certified

Service disc brakes

Braking torque (N.m)						
	660-650-645 30-1100	5K-5D 65-500	2/3/4 CA 665-8000	3H-4H 550-3600	1/2/3/4 T-TX 500-17000	FAV 20/40/50 650-21300

Emergency disc brakes

Retaining force (kN)						
	OSA-OOSA 26-60	2SA 90-100	TH9 21-80	SH5-15-18-25 14-250	SHD 12-70	BCH/FCHR 30-270



EXPORTATION :

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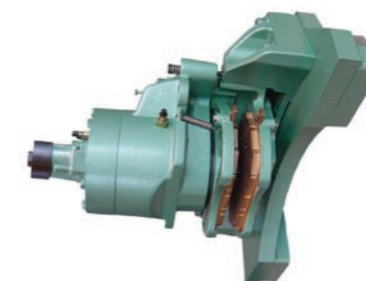
REPRESENTATION:

- | | | |
|-----------|---------------|----------------|
| ALGERIA | GREECE | PAKISTAN |
| AUSTRALIA | INDIA | SOUTH AFRICA |
| AUSTRIA | ITALY | SPAIN |
| BELGIUM | JORDAN | SWEDEN |
| CANADA | KOREA (South) | SWITZERLAND |
| CHINA | LUXEMBURG | TAIWAN |
| DENMARK | MAURITANIA | TUNISIA |
| EGYPT | MOROCCO | UNITED KINGDOM |
| FINLAND | NETHERLANDS | U.S.A. |
| FRANCE | NEW ZEALAND | |
| GERMANY | NORWAY | |



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Disc brakes
for
wind turbines



Because WINDTURBINES need care and protection

Stromag France has designed disc brakes for them!

Stromag France, the world leader in Industrial Disc Brakes, offers:

Unique expertise

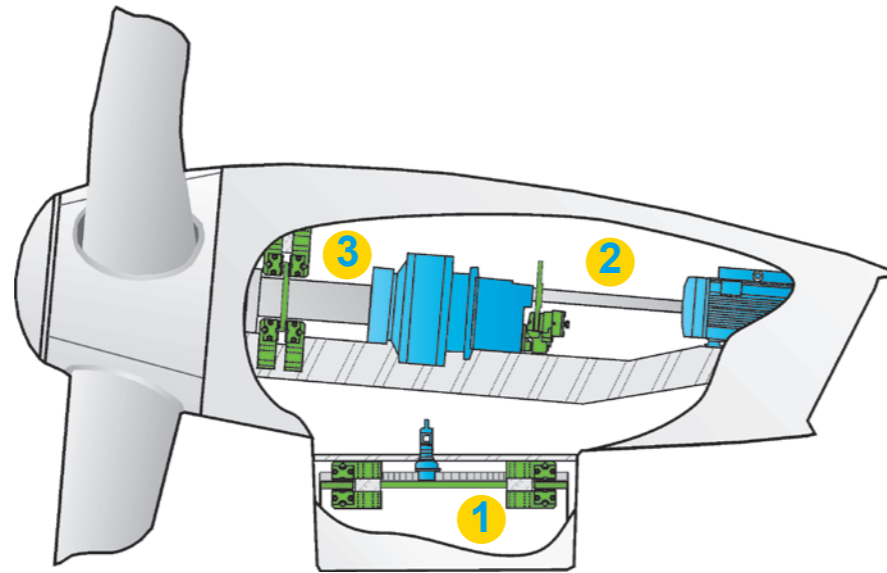
For the last **25 years** our R&D team has designed braking solutions to keep pace with the evolution of wind turbines. SIME brakes equip more than **10.000 wind turbines** worldwide.

Premium brakes quality

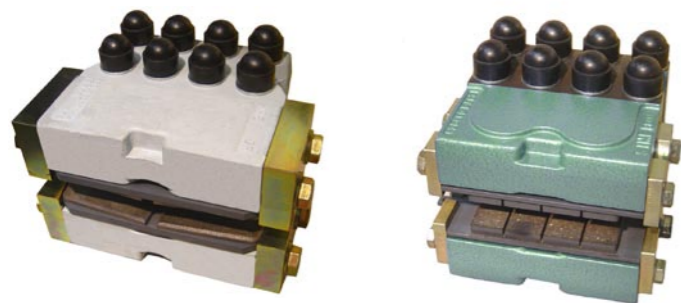
Integration of development and production departments in our plants means top-grade **quality**.

Unmatched worldwide Service

Stromag France's sales force and customer technical support are present **worldwide**.



1 Yaw system braking



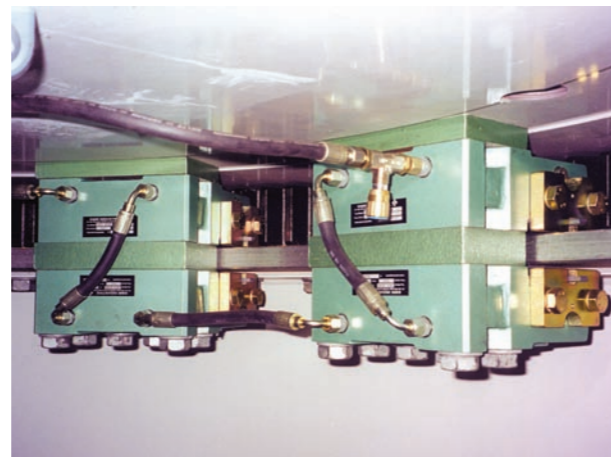
FCHR calipers

BCHR calipers

Motorized drives of nacelle's yaw systems need controlled and powerful braking solutions: Stromag France - with its BCH positive hydraulic brakes - was the first to fit the objective. Various mounting designs meet the specifications of today's and tomorrow's wind turbines. Key features :

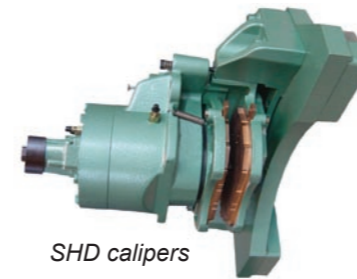
- no oil leaks
- silent braking operation
- superior corrosion protection
- easy replacement of the lining pads
- light weight of calipers for a simple handling

Caliper	Operation		Braking Force
			kN
BCHR85A	Positive	Hydraulic acting	100
FCHR90A			185
FCHR105A			258

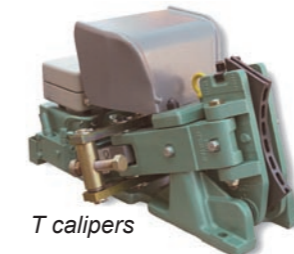


BCH85A / Yaw drive (750 kW wind turbine)

2 High speed shaft braking



SHD calipers



T calipers



BCH calipers

Wind turbine unit power and cost are increasing: uncontrolled overspeed may have disastrous consequences. Stromag France fail-safe brakes mounted onto the high speed shaft are the solution; a wide range of disc brakes has been designed for that purpose. Key features :

- braking torque stability
- WACS (self Wear Adjustment and Centering System SHD calipers, Patent pending)
- high quality linings
- compact mounting on gear box flange or on separate bracket
- easy setting of calipers
- symmetrical and constant gap opening



SHD7 / High speed drive (1,65 MW wind turbine)

Caliper	Operation		Braking Force
		release	kN
SHD2	Fail-safe	Hydraulic	20
SHD5			33
SHD7			70
3/2 TW			10/18
4/3 WD	Electromagnetic	5/10	
SHD7E	Fail-safe + Positive	Hydraulic	70
BCH85	Positive	Hydraulic	76

3 Low speed shaft braking

Wind is unpredictable: overspeeds apply tremendous stress to wind turbines blades and gear boxes; a powerful back-up braking system will then save the day!

Stromag France BCH and SH ranges offer :

- powerful braking torque
- fail safe or positive operation

Caliper	Operation		Braking Force
			kN
BCH85	Positive	Hydraulic acting	100
BCH859			160
SH15	Fail-safe	Hydraulic release	150
SH25			250



BCH calipers

