Passive yaw sliding bearing

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Robust, simple, virtually maintenance-free and excellent availability of individual components. This brake is a perfect example of what our solutions bring to the market.

Michael Runde, Engineering

JHS-PC-4x80

- Fully closed passive brake system
- Special epoxy resin pads
- Min. / Max. working temperature -40 / +70 °C

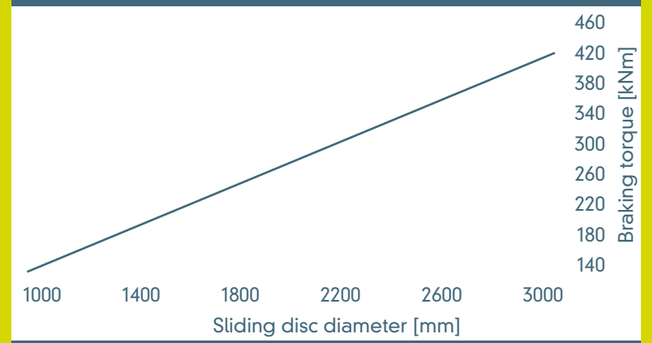
JHS-PC-4x80

The brake torque is applied continuously with passive yaw brakes. Based on robust and simple design, the system is inexpensive and almost maintenance free. Owing to the small number of components needed, the reliability is perfect and therefore, no outage of the wind turbine will occur.

The brake torque is mainly dependent on surface pressure and friction coefficient and allows different variations during design procedure. The system can slide on the yaw bearing and consequently, no extra brake disc is necessary.
The system has a high performance throughout the entire turbine life.

TYPE JHS-PC-4x80		
Contact force F_A	700	kN
Pad area	515,2	cm²
Theor. friction coefficient	0,4	µ
Temperature range	-40 / +70	°C
Weight	200	kg

BRAKING TORQUE



BRAKING TORQUE

Braking torque formula:

$$F_B = F_A \times \mu \times 2$$

$$M_B = a \times F_B \times D_B / 2$$

F_A = Contact force [kN]
F_B = Nominal braking force [kN]
M_B = Braking torque [kNm]
a = Number of passive yaw brakes acting on the disc
D_B = Sliding disc diameter [m]