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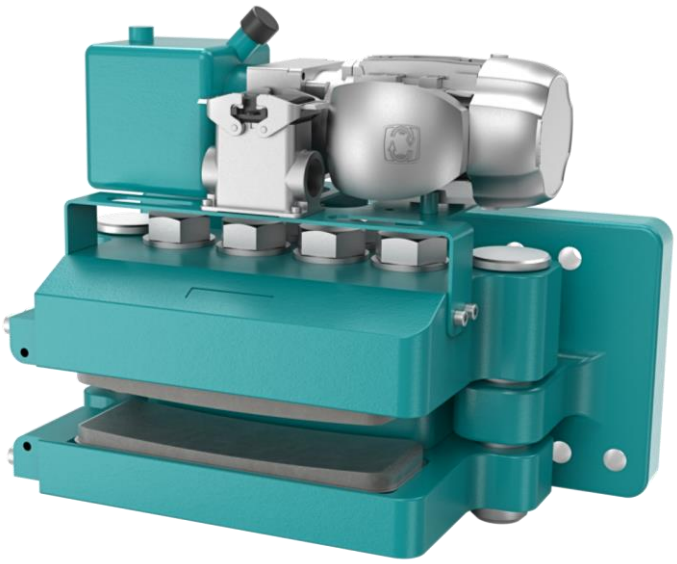
EHB-3-80-100 ROTOR BRAKE

Rotor brakes are a complement to the aerodynamic braking system of the rotor of a wind turbine. This active brake is hydraulic applied and spring released, meaning that the braking force depends on the hydraulic pressure. The hydraulic pressure is generated by a compact closed HPU system design, which can be connected to the PLC of the wind turbine by Harting connectivity.

DATASHEET SPECIFICATION

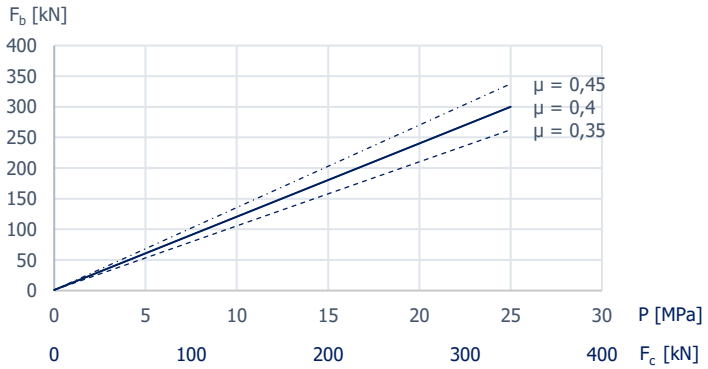
ARTICLE NUMBER	20-1553
MAX. PRESSURE	25 MPa
MAX. CLAMPING FORCE	377 kN
MAX. BRAKING FORCE	300 kN
FRICTION COEFFICIENT μ	0,4 [-]
DISC THICKNESS	35 mm
WEIGHT	120 kg
BRAKE HOUSE MATERIAL	EN-GJS-500-7
TEMPERATURE RANGE	-40 / +70 °C
MOTOR TYPE	Asynchronous IE2
MOTOR POWER	0,37 kW
MOTOR VOLTAGE	230 / 400 V
MOTOR FREQUENCY	50 / 60 Hz
MOTOR PHASES	3
TANK CAPACITY	1,5 L
PUMP CAPACITY (AT 1500 RPM)	0,8 L/min



FEATURES

- Several lining materials, including sintered metal and organic
- Applicable for several disc thicknesses
- Air gap brake pads according to customer specification
- Drain ports for oil leakage, preventing pads contamination
- Integrated low maintenance closed loop HPU system
- Harting connectivity for easy installation
- Pressure switches and sensors for pressure monitoring
- Handpump integration for emergency operations

BRAKING FORCE GRAPH



CALCULATION LEGENDA

- **F_b** = Braking Force
- **F_c** = Clamping Force
- **μ** = Friction Coefficient
- **M_b** = braking Torque
- **z** = Number of Brakes
- **D_{av}** = Effective Diameter of brake

BRAKE FORCE CALCULATION

$$F_b = 2 \cdot F_C \cdot \mu^*$$

$$F_c = A \cdot P \cdot 10\ [N]$$

$$M_b = z \cdot F_b \cdot \frac{D_{av}}{2}$$

*External factors have not been taken into consideration

GENERAL ARRANGEMENTS