

## AB-1-75-100 ROTOR BRAKE

Active brakes are a complement to the aerodynamic braking system of the rotor of a wind turbine. Active brakes are hydraulic applied and spring released, meaning that the braking force depends on the hydraulic pressure.

### DATASHEET SPECIFICATION

<b>ARTICLE NUMBER</b>	20-1568
<b>MAX. PRESSURE</b>	21 MPa
<b>MAX. CLAMPING FORCE</b>	92,8 kN
<b>MAX. BRAKING FORCE</b>	74,2 kN
<b>FRICTION COEFFICIENT <math>\mu</math></b>	0,4 [-]
<b>DISC THICKNESS</b>	30 mm
<b>WEIGHT</b>	32 kg
<b>BRAKE HOUSE MATERIAL</b>	C45
<b>TEMPERATURE RANGE</b>	-40 / +70 °C
<b>PISTON DIAMETER</b>	75 mm
<b>SINGLE PISTON SURFACE AREA</b>	44,2 cm <sup>2</sup>
<b>LINING TYPE</b>	Organic TR097
<b>LINING DIMENSIONS</b>	129 x 83 mm
<b>LINING THICKNESS</b>	18 mm
<b>FRICTION MATERIAL THICKNESS</b>	10 mm
<b>MAX. PERMITTED LINING WEAR</b>	8 mm

### FEATURES

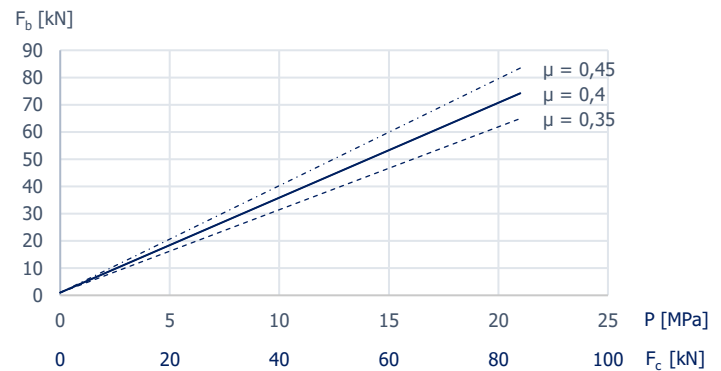
- Replaceable brake pads, without loosening mounting bolts
- Spring retracted brake pads
- Applicable for several disc thicknesses
- Air gap brake pads according to customer specification
- Grooved brake pads for redirecting fine dust & contamination
- Drain ports for oil leakage, preventing pads contamination
- Brake pads with electric wear indicators

### CALCULATION LEGENDA

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



### BRAKING FORCE GRAPH



### BRAKE FORCE CALCULATION

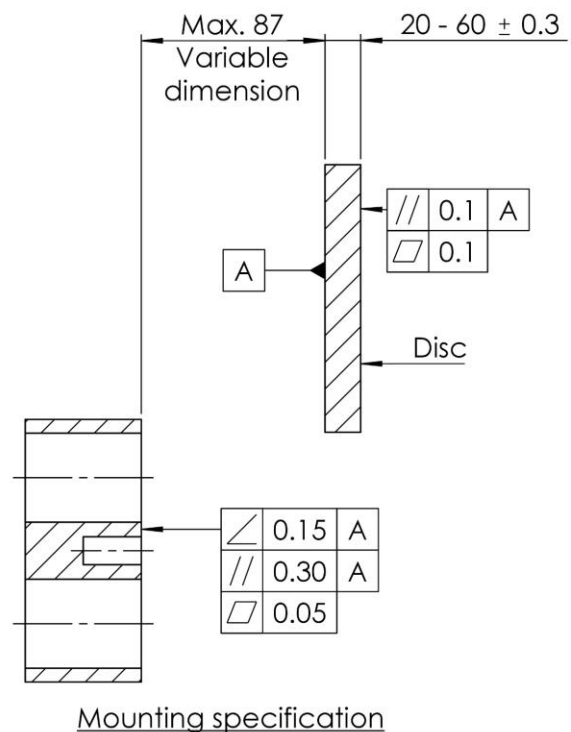
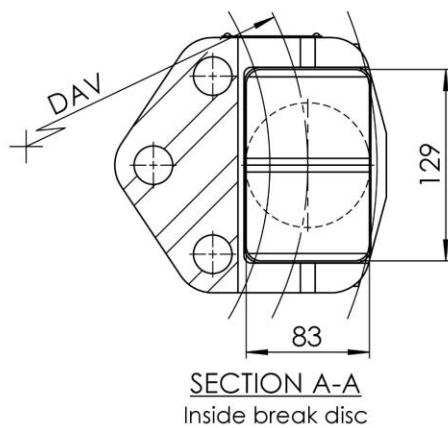
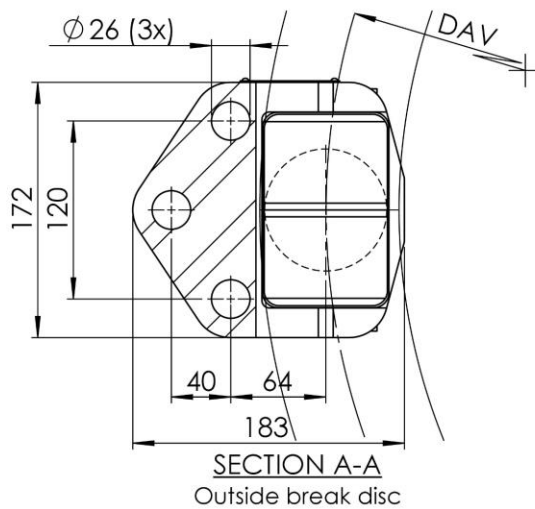
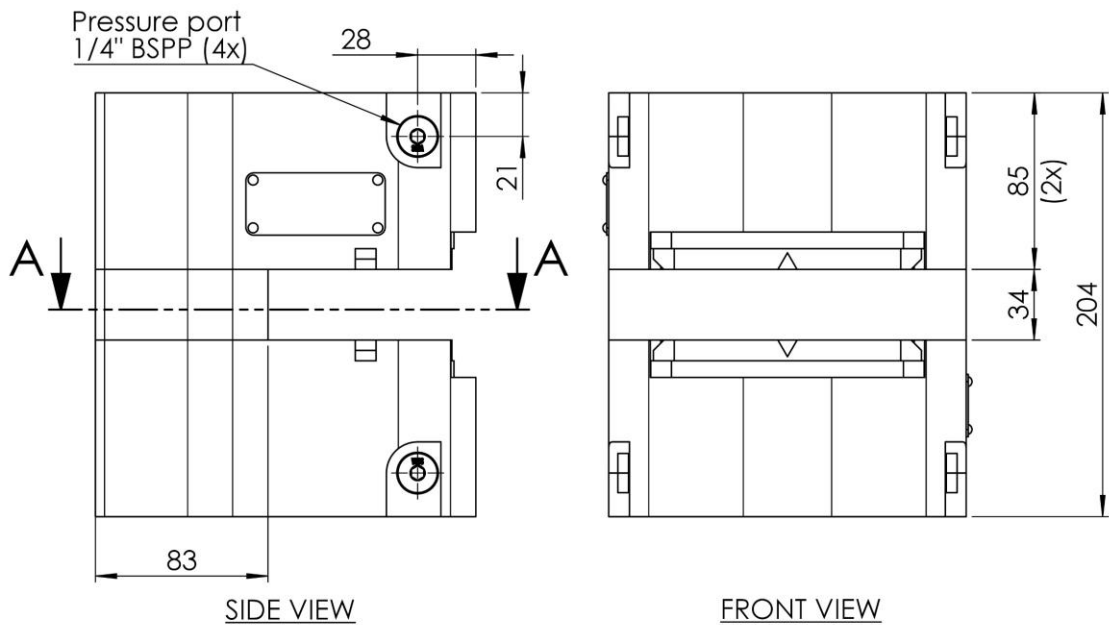
$$F_b = 2 \cdot F_c \cdot \mu^*$$

$$F_c = A \cdot P \cdot 10 \text{ [N]}$$

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

\*External factors have not been taken into consideration

## GENERAL ARRANGEMENTS



Trebu reserves the rights to modification without prior notification