

## AB-2-90-105 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>	20-1576
<b>MAX. PRESSURE</b>	21 MPa
<b>MAX. CLAMPING FORCE</b>	267,1 kN
<b>MAX. BRAKING FORCE</b>	213,7 kN
<b>FRICTION COEFFICIENT <math>\mu</math></b>	0,4 [-]
<b>DISC THICKNESS</b>	30 mm
<b>WEIGHT</b>	78 kg
<b>BRAKE HOUSE MATERIAL</b>	EN-GJS-500-7
<b>TEMPERATURE RANGE</b>	-40 / +70 °C
<b>PISTON DIAMETER</b>	90 mm
<b>SINGLE PISTON SURFACE AREA</b>	63,6 cm <sup>2</sup>
<b>LINING TYPE</b>	Organic TR097
<b>LINING DIMENSIONS</b>	215 x 108 mm
<b>LINING THICKNESS</b>	18 mm
<b>FRICTION MATERIAL THICKNESS</b>	10 mm
<b>MAX. PERMITTED LINING WEAR</b>	8 mm

### FEATURES

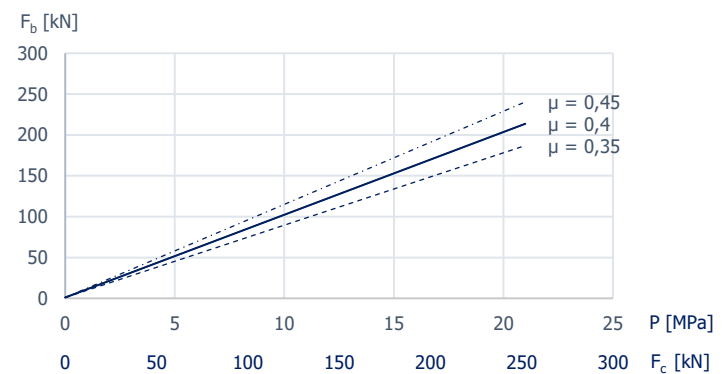
- Several lining materials, including sintered metal and organic
- Spring retracted brake pads
- Applicable for several disc thicknesses
- Air gap brake pads according to customer specification
- Grooved brake pads for redirecting fine dust & contamination
- Lifting eyes for good handling and fitting
- Drain ports for oil leakage, preventing pads contamination
- Brake pads with electric wear indicators

### CALCULATION LEGENDA

- F<sub>b</sub>** = Braking Force
- F<sub>c</sub>** = Clamping Force
- $\mu$**  = Friction Coefficient
- M<sub>b</sub>** = braking Torque
- z** = Number of Brakes
- D<sub>av</sub>** = Effective Diameter of brake



### BRAKING FORCE GRAPH



### BRAKE FORCE CALCULATION

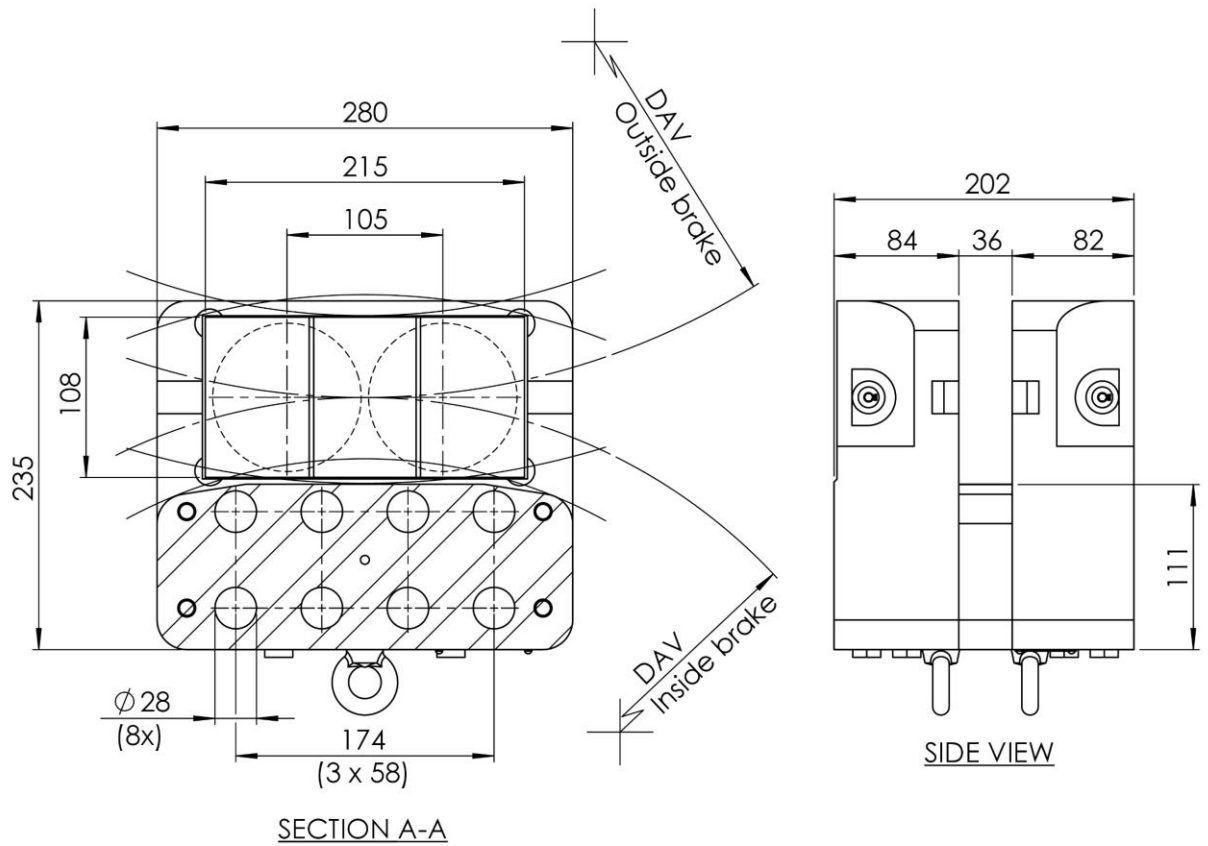
$$F_b = 2 \cdot F_c \cdot \mu^*$$

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

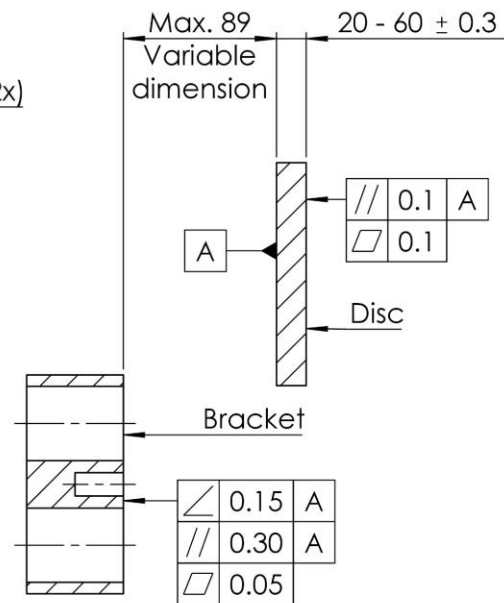
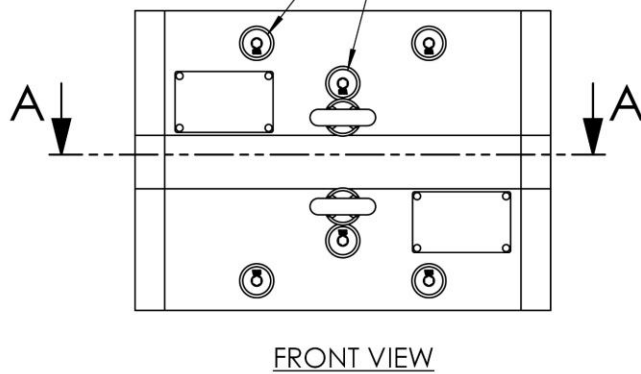
$$M_b = z \cdot F_b \cdot \frac{D_{av}}{2}$$

\*External factors have not been taken into consideration

## GENERAL ARRANGEMENTS



Pressure port 1/4" BSPP (4x)      Drain port 1/4" BSPP (2x)



Mounting specification