

Disc Brake: BSAB 120 DUAL-action

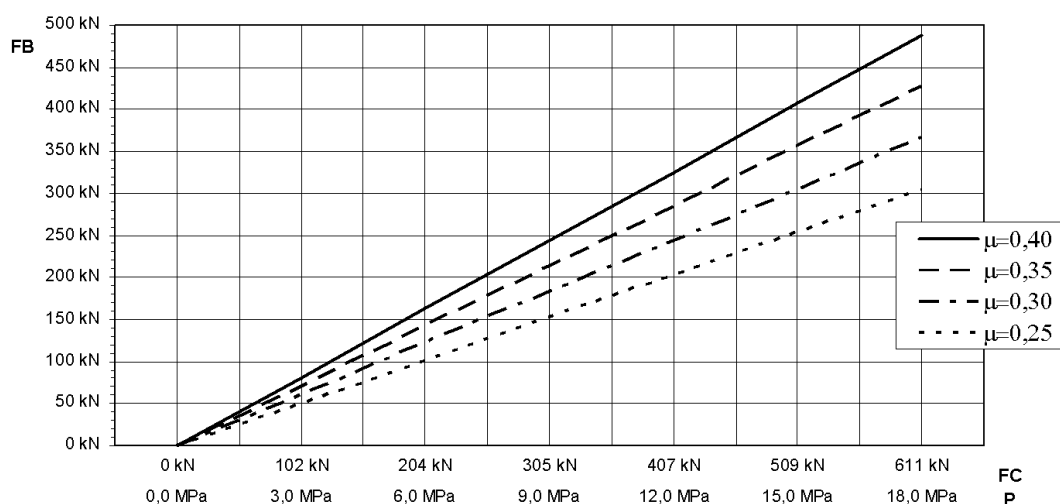
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TECHNICAL DATA AND CALCULATION FUNDAMENTALS



Disc Brake: BSAB 120 DUAL-action

Specification

BRAKING TORQUE

The braking torque M_B is calculated from following formula where:
 a is the number of brakes acting on the disc
 F_B is the braking force according to table above [N] or calculated from formula
 D_o is the brake disc outer diameter [m]
 F_C is the clamping force [N]
 A [cm²], P [bar] and μ see values below
 The actual braking torque may vary depending on friction coefficient.

$$M_B = a \cdot F_B \cdot \frac{(D_o - 0,136)}{2} \text{ [Nm]}$$

$$F_B = F_C \cdot 2 \cdot \mu \text{ [N]}$$

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

CALCULATION FUNDAMENTALS

| | |
|---|----------------------------|
| Weight of caliper without bracket: | Approx. 210 kg |
| Overall dimensions: | 500 x 310 x 274 mm |
| Pad width: | 138 mm |
| Pad area: (organic) | 50,000 mm ² (*) |
| Max. wear of pad: (organic) | 7 mm (*) "(=14 mm thick)" |
| Nominal coefficient of friction: | $\mu = 0.4$ |
| Total piston area - each caliper half: | $A = 339.3 \text{ cm}^2$ |
| Total piston area - each caliper: | 678.6 cm^2 |
| Volume for each caliper at 1 mm stroke: | 67.86 cm^3 |
| Volume for each caliper at 3 mm stroke: | 203.5 cm^3 |
| Actuating time (guide value for calculation): | 0.8 sec |
| Pressure connection/port: | 1/4" BSP |
| Drain connection/port: | 1/4" BSP |
| Max. operating pressure: | 16.0 MPa |
| Recommended pipe size: | 10 mm |

| | |
|--|---------------------|
| Operating temperature range - general | from -20°C to +70°C |
| Operating temperature range - wind turbine | from -40°C to +60°C |

(For temperatures outside this range contact Svendborg Brakes)

(*) On each brake pad.