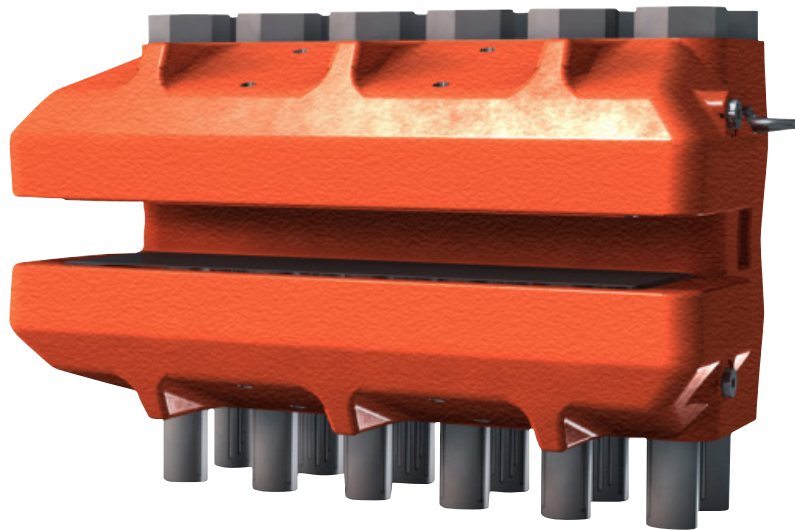


Disc Brake: BSAB 120 DUAL-action

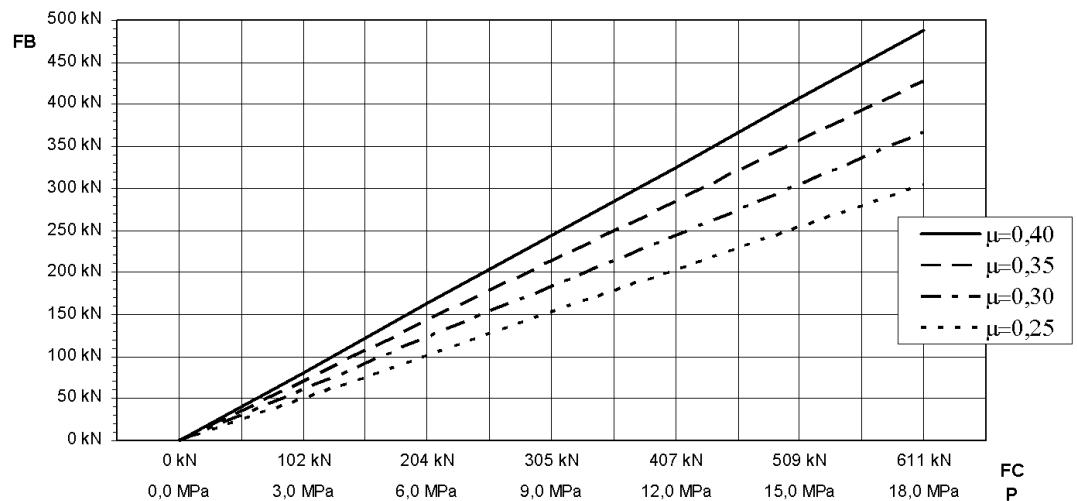
Name: DEB-0120-001-DA-MAR

Date: 03.12.2009

Revision: B



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.

