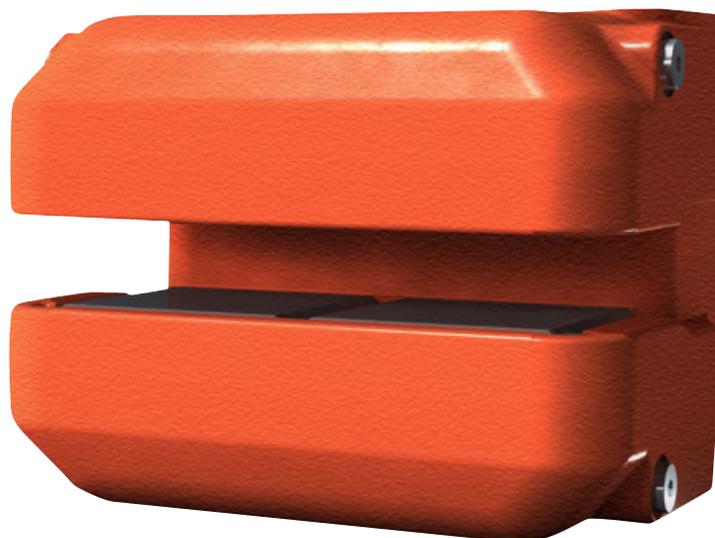


Disc Brake: BSAB 90 DUAL-action

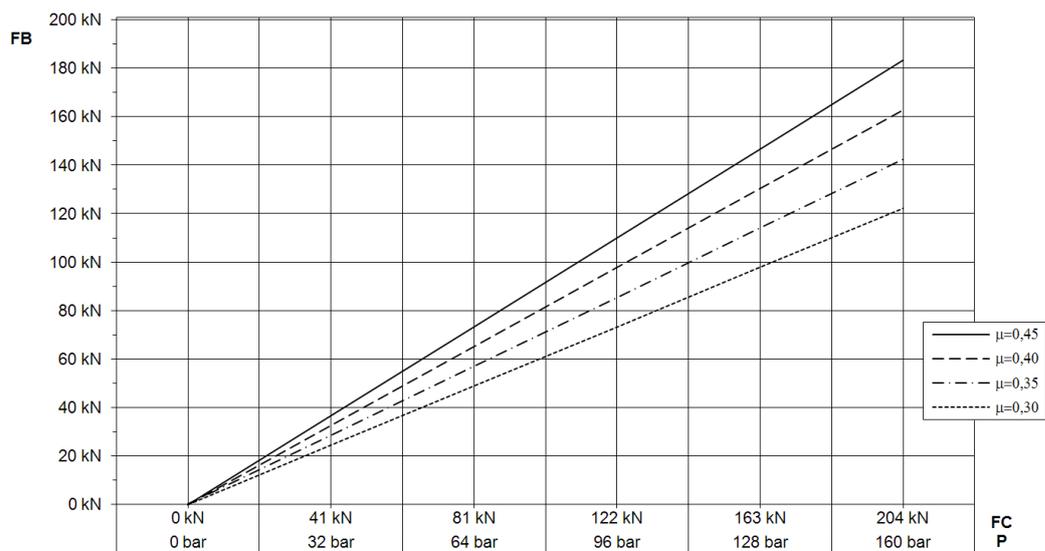
Name: DEB-0090-001-DA-MAR

Date: 09.12.2009

Revision: B



TECHNICAL
DATA AND
CALCULATION
FUNDAMENTALS



Disc Brake: BSAB 90 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.

$$M_B = a \cdot F_B \cdot \frac{(D_o - 0,102)}{2} \text{ [Nm]}$$

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

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

CALCULATION FUNDAMENTALS

Weight of caliper without bracket:	Approx. 60 kg
Overall dimensions:	220 x 240 x 260 mm
Pad width:	102 mm
Pad area: (organic)	20,300 mm ² (*)
Max. wear of pad: (organic)	7 mm (*) "(=14 mm thick)"
Pad area: (sinter)	16,350 mm ² (*)
Max. wear of pad: (sinter)	6 mm (*) "(=12 mm thick)"
Nominal coefficient of friction:	$\mu = 0.4$
Total piston area - each caliper half:	$A=127 \text{ cm}^2$
Total piston area - each caliper:	254 cm ²
Volume for each caliper at 1 mm stroke:	25 cm ³
Volume for each caliper at 3 mm stroke:	76 cm ³
Actuating time (guide value for calculation):	0.4 sec
Pressure connection/port:	1/4" BSP
Drain connection/port:	1/4" BSP
Max. operating pressure:	15.7 MPa
Recommended pipe size:	10/8 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.