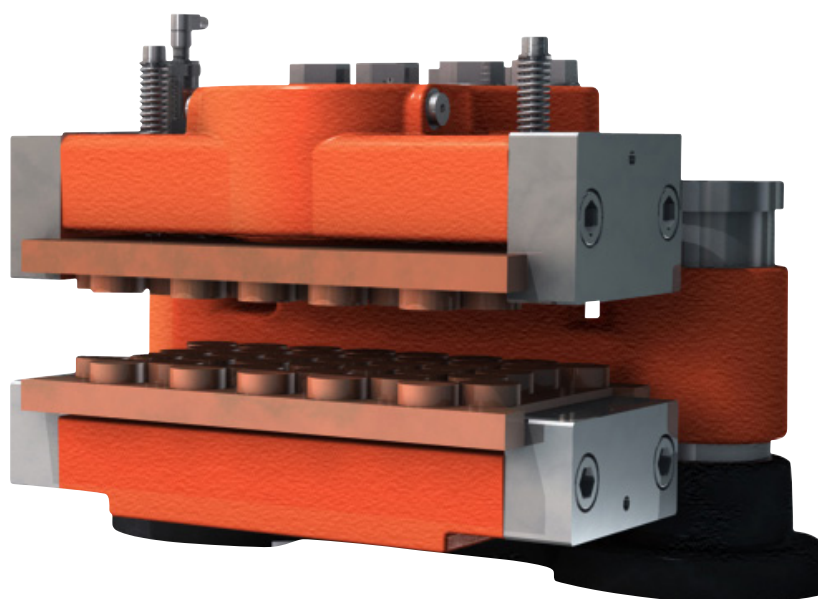


Disc Brake: **BSAK 3000 DUAL-action**

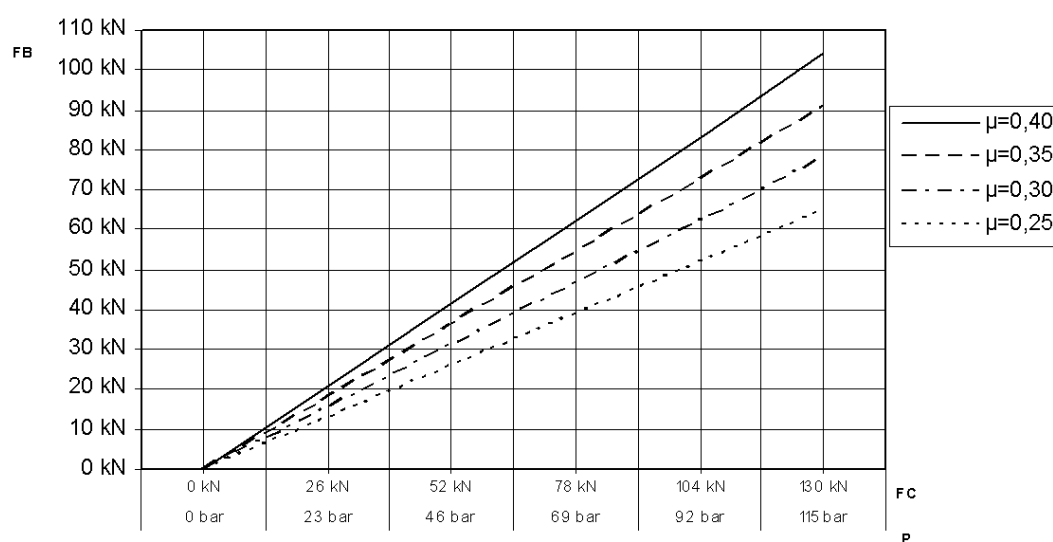
Name: DEB-3000-020-DA-MAR

Date: 15.05.2009

Revision: A



TECHNICAL DATA AND CALCULATION FUNDAMENTALS



Disc Brake: BSAK 3000 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.

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

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

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

CALCULATION FUNDAMENTALS

DUAL-ACTION

Weight of caliper without bracket:	Approx. 130 kg
Pad width:	200 mm
Pad area: (organic)	59,600 mm ² (*)
Max. wear of pad: (organic)	10 mm (*) "(=22 mm thick)"
Pad area: (sinter)	36,000 mm ² (*)
Max. wear of pad: (sinter)	10 mm (*) "(=22 mm thick)"
Nominal coefficient of friction:	$\mu = 0.4$
Total piston area - each caliper half:	$A = 113.1 \text{ cm}^2$
Total piston area - each caliper:	226.2 cm ²
Volume for each caliper at 1 mm stroke:	22.6 cm ³
Volume for each caliper at 3 mm stroke:	67.9 cm ³
Actuating time (guide value for calculation):	0.3 sec
Pressure connection/port:	1/4" BSP
Max. operating pressure:	11.5 MPa

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.