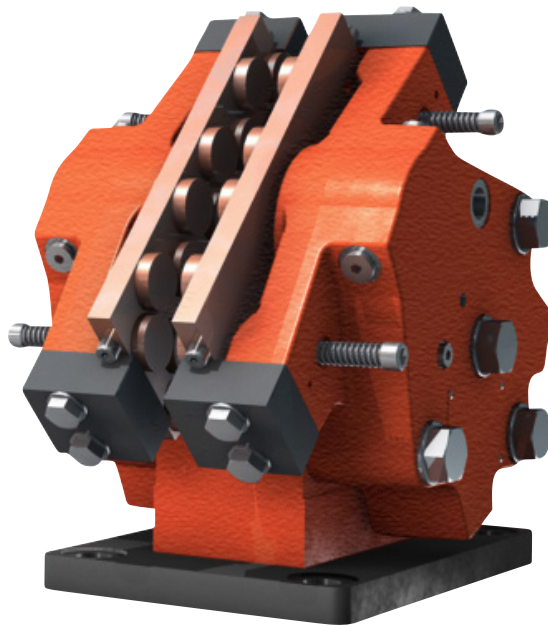


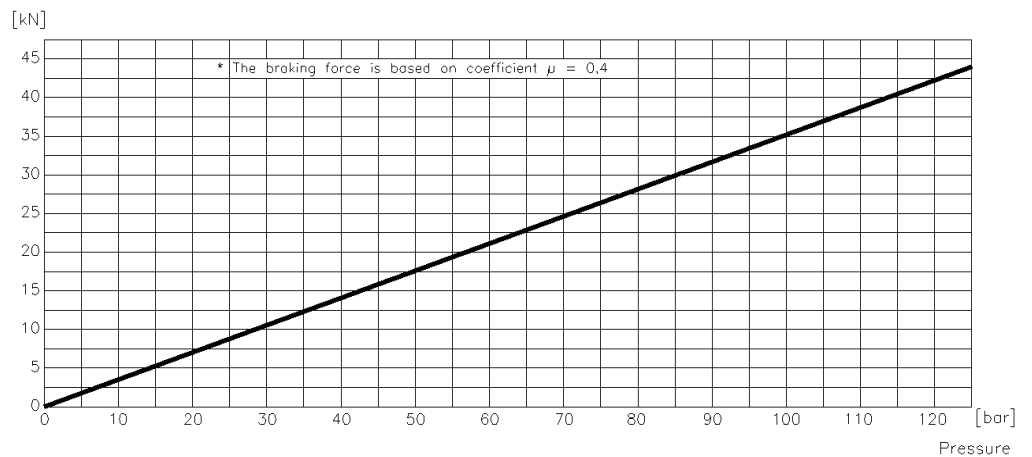
# Disc Brake: BSAK 300 DUAL-action

Name: DEB-0300-043-DA-MAR  
Date: 15.05.2009  
Revision: A



TECHNICAL  
DATA AND  
CALCULATION  
FUNDAMENTALS

Braking Force  $F_b$  kN\*



## Disc Brake: BSAK 300 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]

$A$  [cm<sup>2</sup>],  $P$  [bar] and  $\mu$  see values below

The actual braking torque may vary depending on friction coefficient.

$$M_B = a \cdot F_B \cdot \frac{(D_o - 0,13)}{2} \text{ [Nm]}$$

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

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

#### CALCULATION FUNDAMENTALS

#### DUAL-ACTION

Weight of caliper without bracket:	Approx. 55 kg
Overall dimensions:	331 x 320 x 321 mm
Pad width:	130 mm
Pad area: (organic)	29,000 mm <sup>2</sup> (*)
Max. wear of pad: (organic)	10 mm (*) "(=14 mm thick)"
Pad area: (sinter)	20,000 mm <sup>2</sup> (*)
Max. wear of pad: (sinter)	7 mm (*) "(=17 mm thick)"
Nominal coefficient of friction:	$\mu = 0.4$
Total piston area - each caliper half:	$A=44.2 \text{ cm}^2$
Total piston area - each caliper:	88.4 cm <sup>2</sup>
Volume for each caliper at 1 mm stroke:	8.8 cm <sup>3</sup>
Volume for each caliper at 3 mm stroke:	24.6 cm <sup>3</sup>
Actuating time (guide value for calculation):	0.3 sec
Pressure connection/port:	1/4" BSP
Drain connection/port:	1/8" BSP
Max. operating pressure:	12.5 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.