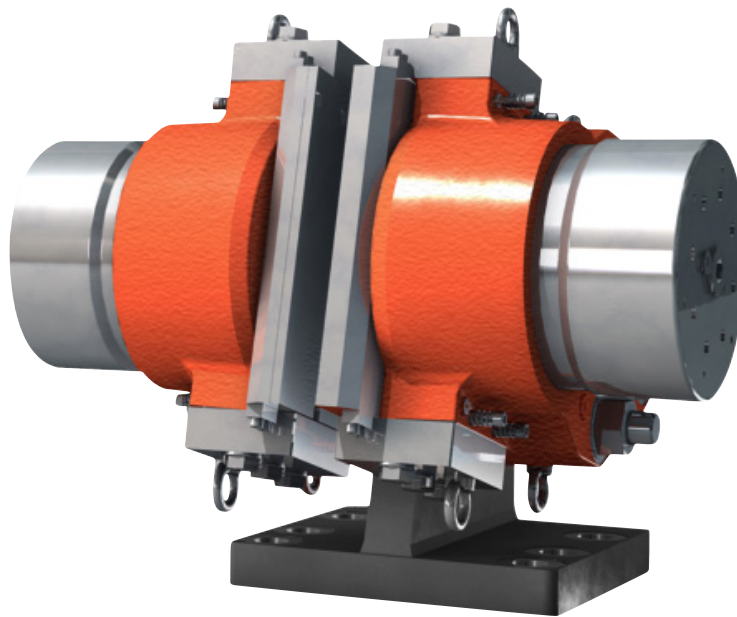


Disc Brake: BSFB 600 DUALspring

Name: DEB-0600-016-DS-MAR

Date: 24.05.2012

Revision: A



TECHNICAL DATA AND CALCULATION FUNDAMENTALS

CALIPER TYPE	CLAMPING FORCE ¹⁾ [N]		BRAKING FORCE ²⁾ [N]	LOSS OF FORCE PER 1MM [%]	OPERATING PRESSURE ³⁾ MPa	BALANCING PRESSURE ¹⁾ MIN MPa	PAD SURFACE PRESSURE ⁴⁾ [N/mm ²]
	MIN	MAX					
BSFB 630	300,000	320,000	240,000	4.5	11.0	7.23	2.71 - 3.05
BSFB 635	350,000	380,000	280,000	5.5	12.5	8.44	3.05 - 3.22
BSFB 640	400,000	430,000	320,000	4.5	13.5	9.65	3.64 - 4.10
BSFB 645	450,000	490,000	360,000	8.5	16.0	10.85	3.81 - 4.29
BSFB 650	500,000	540,000	400,000	7.5	17.5	12.06	4.58 - 5.14

¹⁾ All figures are based on 2 mm air gap (Each side)

²⁾ Braking force is based on a min clamping force, nominal coefficient of friction $\mu = 0.4$ and 2 brake surfaces.

³⁾ The operating pressure is the minimum needed for operating the brake

⁴⁾ Pad pressure for organic / sintered pads respectively (based on max. clamping force)

Disc Brake: BSFB 600 DUALspring

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]

The actual braking torque may vary depending on adjustment of brake and friction coefficient.

$$M_B = a \cdot F_B \cdot \frac{(D_o - 0,3)}{2} \text{ [Nm]}$$

$$F_B = F_C \cdot 2 \cdot \mu$$

CALCULATION FUNDAMENTALS

DUALSPRING

Weight of caliper without bracket:	Approx. 765 kg
Overall dimensions:	584 x 565 x 797 mm
Pad width (width for heat calculation):	300 mm
Pad area: (organic)	118,000 mm ² (*)
Max. wear of pad: (organic)	10 mm (*) "(=37 mm thick)"
Pad area: (sintered)	105,000 mm ² (*)
Max. wear of pad: (sintered)	10 mm (*) "(=37 mm thick)"
Nominal coefficient of friction:	$\mu = 0.4$
Total piston area - each caliper half:	415 cm ²
Total piston area - each caliper:	830 cm ²
Volume for each caliper at 1 mm stroke:	83 cm ³
Volume for each caliper at 3 mm stroke:	249 cm ³
Actuating time (guide value for calculation):	0.3 - 0,5 sec
Pressure connection/port:	1/2" BSP
Drain connection port:	1/4" BSP
Recommended pipe size:	16 mm
Maximum operating pressure	18.5 MPa
Operating temperature range - general	from -20°C to +70°C

(For temperatures outside this range contact Svendborg Brakes)

(C=disc thickness)

(*) On each brake pad.