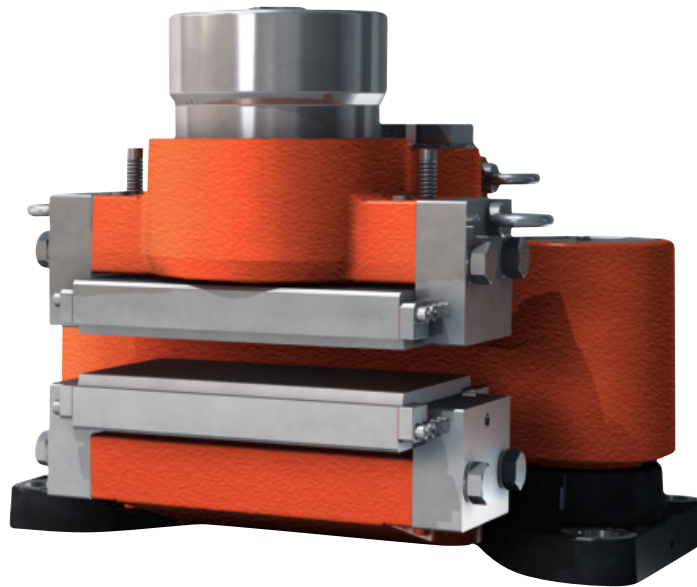


Disc Brake: BSFK 500 MONOspring

Name: DEB-0500-027-MS-MAR

Date: 23.01.2012

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					
BSFK 520	200,000	220,000	160,000	5.5	13.5	8.57	3.07 - 3.05
BSFK 523	230,000	250,000	184,000	6.5	15.5	9.86	3.48 - 3.45
BSFK 525	250,000	270,000	200,000	5.5	15.5	10.72	3.76 - 3.73
BSFK 527	270,000	295,000	216,000	5.5	16.0	11.58	4.11 - 4.07
BSFK 530 ⁵⁾	300,000	320,000	240,000	13.0	20.5	12.86	4.46 - 4.42
BSFK 535 ⁵⁾	350,000	380,000	280,000	11.0	23.5	15.00	5.30 - 5.25

¹⁾ All figures are based on 1 mm air gap (Total)

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)

⁵⁾ Not recommended for general usage

Disc Brake: BSFK 500 MONOspring

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.

$$M_B = a \cdot F_B \cdot \frac{(D_o - 0,23)}{2} \text{ [Nm]}$$

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

CALCULATION FUNDAMENTALS

MONOSPRING

Weight of caliper without bracket:	Approx. 550 kg
Overall dimensions:	710 x 532 x 565 mm
Pad width (width for heat calculation):	230 mm (205 mm)
Pad area: (organic)	71,750 mm ² (*)
Max. wear of pad: (organic)	5 mm (*) "(=52mm thick)"
Pad area: (sintered)	72,400 mm ² (*)
Max. wear of pad: (sintered)	5 mm (*) "(=52mm thick)"
Nominal coefficient of friction:	$\mu = 0.4$
Total piston area - each caliper half:	233 cm ²
Total piston area - each caliper:	233 cm ²
Volume for each caliper at 1 mm stroke:	23 cm ³
Volume for each caliper at 3 mm stroke:	70 cm ³
Actuating time (guide value for calculation):	0.4sec
Pressure connection/port:	3/8" BSP
Drain connection port:	1/4" BSP
Recommended pipe size:	16/12 mm
Maximum operating pressure	23.0 MPa
Maximum operating pressure BSFK 535	26.0 MPa
Operating temperature range - general	from -20°C to +70°C

(For temperatures outside this range contact Svendborg Brakes)

(*) On each brake pad.