

Spring applied, pressure released disc brake

Dellner Bubenzer model SKP 180A spring applied, hydraulically released disc brake offers a reliable and safe method of braking linear or rotary motion.

The brake consists of two symmetrical cylinder Housings and can be supplied with or without a support.

Each Housing has two cylindrical guide pins that transmit the tangential braking force from the brake lining to the brake housing and support. As a result, any radial forces on the brake pistons are minimized which contributes to longer brake life.

Four springs in each Housing retract the brake pads from the disc when pressure is applied.

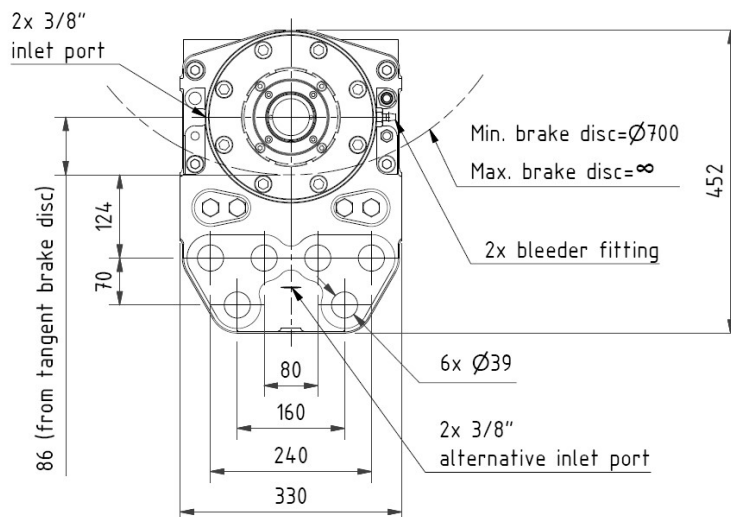
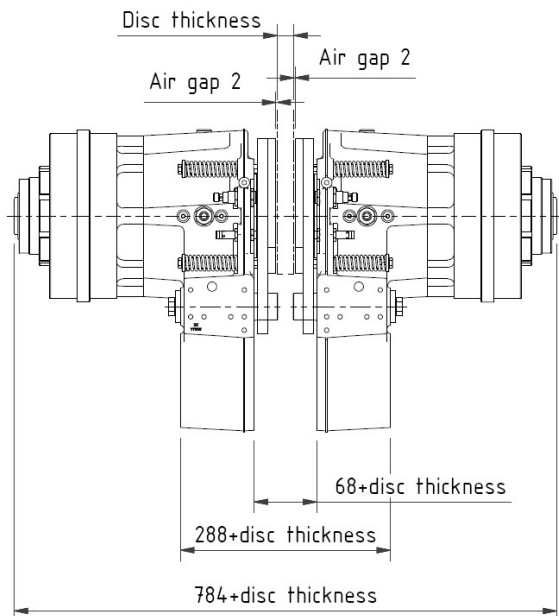
The disc spring pack must be adjusted to compensate for brake lining wear and to maintain full brake capacity. An extension of the brake piston through the adjustment nut gives an easy visual way to tell when adjustment is needed.



Model	Tangential braking force F		Releasing pressure [bar] ⁴⁾	Balancing pressure [bar] ⁵⁾	Airgap between brake disc and lining [mm]		Estimated life of disc spring pack [no. of strokes]		Weight [kg]
	[N] ¹⁾				[mm]		[no. of strokes]		
	max. ²⁾	min. ³⁾			max. ⁶⁾	min. ⁷⁾	max. ⁸⁾	min. ⁹⁾	
SKP 180A-100	141 000	100 800	130	95	2x 2,0	2x 4,0	> 2x10 ⁶	> 2x10 ⁶	315
SKP 180A-130	170 300	131 100	155	115	2x 2,0	2x 4,0	> 2x10 ⁶	701 000	315
SKP 180A-170	208 300	170 300	180	140	2x 2,0	2x 4,0	1 590 000	136 000	315
SKP 180A-190	226 800	189 400	190	155	2x 2,0	2x 4,0	593 000	45 000	315

NOTE: All sizes within range has a total friction area of 1200 cm² / total allowable wear volume of 1200 cm³

- 1) Calculated with an average frictional coefficient $\mu=0,42$. Consideration has not been taken for external factors.
- 2) Braking force with correctly adjusted disc spring pack.
- 3) Braking force with maximum recommended air gap before adjustment is needed.
- 4) Pressure to fully release brake.
- 5) Nominal pressure to balance an adjusted brake.
- 6) Air gap for correctly adjusted brake.
- 7) Maximum recommended air gap before adjustment is needed.
- 8) Valid for minimum spring pack compression.
- 9) Valid for maximum spring pack compression.



Maximum Shaft flange diameter = Brake Disc diameter $\varnothing D - 440$ mm

TORQUES

The braking torque is calculated from the following formula:

$$M_{brake} = \frac{F \times (D_s - 2h)}{2}$$

q = number of brakes
 F1 = braking force according to the table on page 1 [N]
 p = pressure [bar]
 D_s = brake disc diameter [m]
 h = distance disc periphery to piston center [m] (SKP 180: 0,086)

Model	Tangential braking force F		Disc diameter D _s							
	[N] ¹⁾		[mm]							
	max. ²⁾	min. ³⁾	ø800	ø1000	ø1200	ø1500	ø1800	ø2000	ø2250	ø2500
SKP 180A-100	141 000	100 800	31 600	41 700	51 800	66 900	82 000	92 100	104 700	117 300
SKP 180A-130	170 300	131 100	41 100	54 200	67 300	87 000	106 700	119 800	136 200	152 600
SKP 180A-170	208 300	170 300	53 400	70 500	87 500	113 000	138 600	155 600	176 900	198 200
SKP 180A-190	226 800	189 400	59 400	78 400	97 300	125 700	154 100	173 100	196 700	220 400

1) Calculated with an average frictional coefficient $\mu=0,42$. Consideration has not been taken for external factors.

2) Braking force with correctly adjusted disc spring pack.

3) Braking force with maximum recommended air gap before adjustment is needed.

OPTIONS

- Proximity switches for on/off, pad wear or "time to adjust" indication.
- Terminal box for switches.
- Protection cover for indicators.
- Tube connection set (connects the two cylinders to one connection point).
- Supports in different configurations.
- Brake pads in alternative materials.
- Seals in alternative materials.
- Customer specific colour.

SUITABLE APPLICATIONS

The Dellner Bubenzer models SKP are suitable wherever safety brakes are needed, for example in the following types of applications:

Cranes
Winches

Conveyors
Wind mills

Emergency stops
Parking applications

DELLNER BUBENZER AB

Teknikergatan 1 SE-781 70 BORLÄNGE SWEDEN

Phone: +46 (0)23-78 30 50 info.se@dellnerbubenzer.com www.dellnerbubenzer.com