

GENERAL DESCRIPTION AND DATA

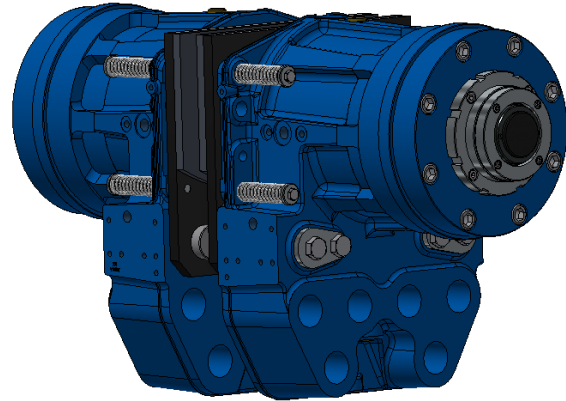
Dellner Brakes spring applied, hydraulically released disc brake, model SKP 180S offers a reliable and safe method of braking linear or rotary motion.

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

Each Housing has two cylindrical guide pins that transmit the tangential braking force from the brake lining to the brake housing and mounting stand. As a result, the brake pistons are not subject to any radial forces which contribute to longer brake life.

Four springs on each brake half retract the brake pads from the disc when pressure is applied.

The SKP 180S allows a brake pad lining wear of up to 3 mm before replacement is required, which could be a lifetime's use in applications where the brakes are purely used statically and/or in emergency situations. The brake piston extends through the rear lock nut to give an easy, visual way to tell when replacement is needed. The SKP 180 series also includes the SKP 180A, where disc spring packs can be adjusted to compensate for lining wear.



Size	Tangential braking force F		Releasing pressure [bar] ⁴⁾	Balancing pressure [bar] ⁵⁾	Air gap between brake disc and lining [mm]		Estimated life of disc spring pack [no. of strokes]		Weight [kg]
	[N] ¹⁾				min. ⁶⁾	max. ⁷⁾	min. ⁸⁾	max. ⁹⁾	
	min. ²⁾	max. ³⁾							
SKP 180S-100	80 100	141 000	130	95	2x 2,0	2x 5,0	> 2x10 ⁶	646 000	325
SKP 180S-130	111 000	170 300	155	115	2x 2,0	2x 5,0	> 2x10 ⁶	205 000	
SKP 180S-170	150 900	208 300	180	140	2x 2,0	2x 5,0	1 590 000	40 000	
SKP 180S-190	170 300	226 800	190	155	2x 2,0	2x 5,0	593 000	12 900	

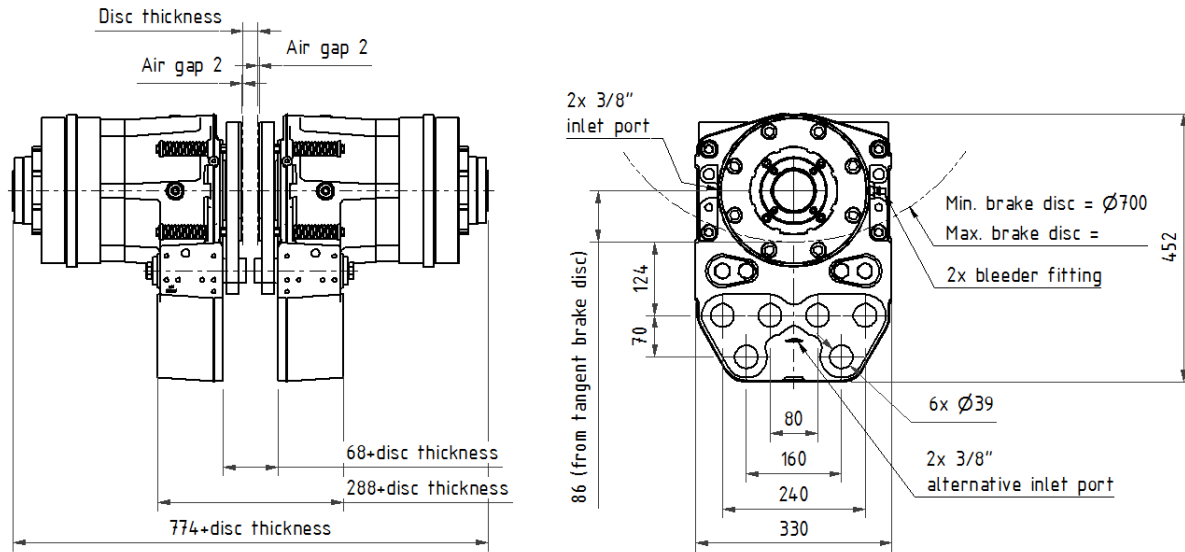
All sizes within range has a: total friction area of 1200 cm² / total allowable wear volume of 1200 cm³

- 1) Calculated with an average frictional coefficient $\mu=0,42$. Consideration has not been taken for external factors.
- 2) Braking force with maximum recommended air gap before adjustment is needed.
- 3) Braking force with correctly adjusted disc spring pack.
- 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 travel.
- 9) Valid for maximum spring pack travel.

OPTIONS (do not hesitate contacting us for more detailed information)

- Brake pads with various friction material.
- Support in various design (single and/or double assemblies).
- Spacers for various brake disc thickness.
- Tube connection set (connects the Housings to one connection point).
- Various cylinder sealing concept (adapt to various hydraulic fluids and/or ambient conditions such as low and/or high temp.)
- Secondary cylinder sealing concept.
- Electrical indicators (brake ON/OFF and/or pad WEAR)

DIMENSIONS (WITHOUT SUPPORT)



Minimum Brake Disc diameter $\phi D = 700$ mm
 Maximum Shaft flange diameter = Brake Disc diameter $\phi D - 440$ mm

TORQUE TABLE

Brake torque is calculated by using following formula:

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

D_s = brake disc diameter [m]

$H = 0.172$ [m]

q = number of brakes

F = braking force, according to product leaflet [N]

Values in below torque table are shown in [Nm].

Size	Braking force F [N] ¹⁾	Disc diameter ϕD [mm]								
		$\phi 800$	$\phi 1000$	$\phi 1200$	$\phi 1500$	$\phi 1600$	$\phi 1800$	$\phi 2000$	$\phi 2250$	$\phi 2500$
SKP 180-100	80 100	25 100	33 100	41 100	53 100	57 100	65 200	73 200	83 200	93 200
	141 000	44 200	58 300	72 400	93 600	100 600	114 700	128 800	146 400	164 100
SKP 180-130	111 000	34 800	45 900	57 000	73 700	79 200	90 300	101 400	115 300	129 200
	170 300	53 400	70 500	87 500	113 000	121 500	138 600	155 600	176 900	198 200
SKP 180-170	150 900	47 300	62 400	77 500	100 100	107 700	122 800	137 900	156 700	175 600
	208 300	65 400	86 200	107 000	138 300	148 700	169 500	190 300	216 400	242 400
SKP 180-190	170 300	53 400	70 500	87 500	113 000	121 500	138 600	155 600	176 900	198 200
	226 800	71 200	93 800	116 500	150 500	161 900	184 600	207 200	235 600	263 900

1) Tangential Braking Force (F) calculated with an average frictional coefficient $\mu=0,42$. Consideration has not been taken for external factors. Values shown represent braking force with correctly adjusted disc spring pack (max.), respectively time to adjust (min).

APPLICATIONS

Dellner Brakes model SKP 180S is suitable wherever safety brakes are needed, for example in the following types of applications:

- Cranes
- Winches
- Conveyors
- Wind mills
- Draglines
- Draw works