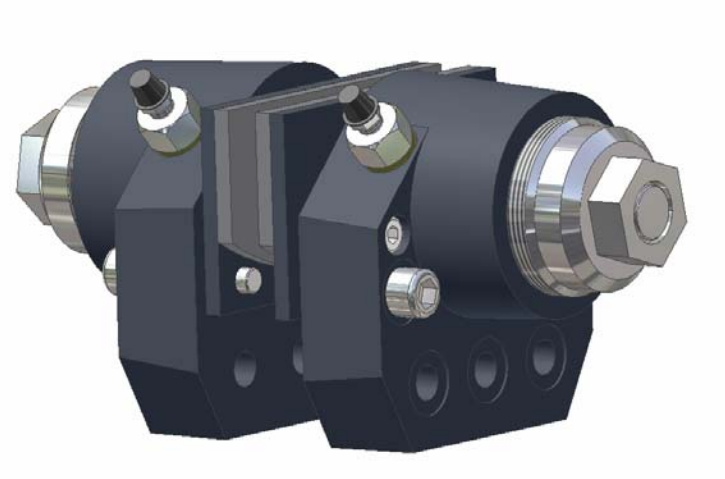
DISC BRAKE – MODEL SKP 50

SPRING APPLIED, HYDRAULIC PRESSURE RELEASED DISC BRAKE

Dellner Brakes model SKP 50 spring applied, hydraulically released disc brake offers a reliable and safe method of braking linear or rotary motion.



The brake consists of two symmetrical halves and can be supplied with or without a support. The brakes supplied with a support are adjusted for a 12 mm thick brake disc. When used with thicker discs the brakes can be supplied with spacers.

Each brake half 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.

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

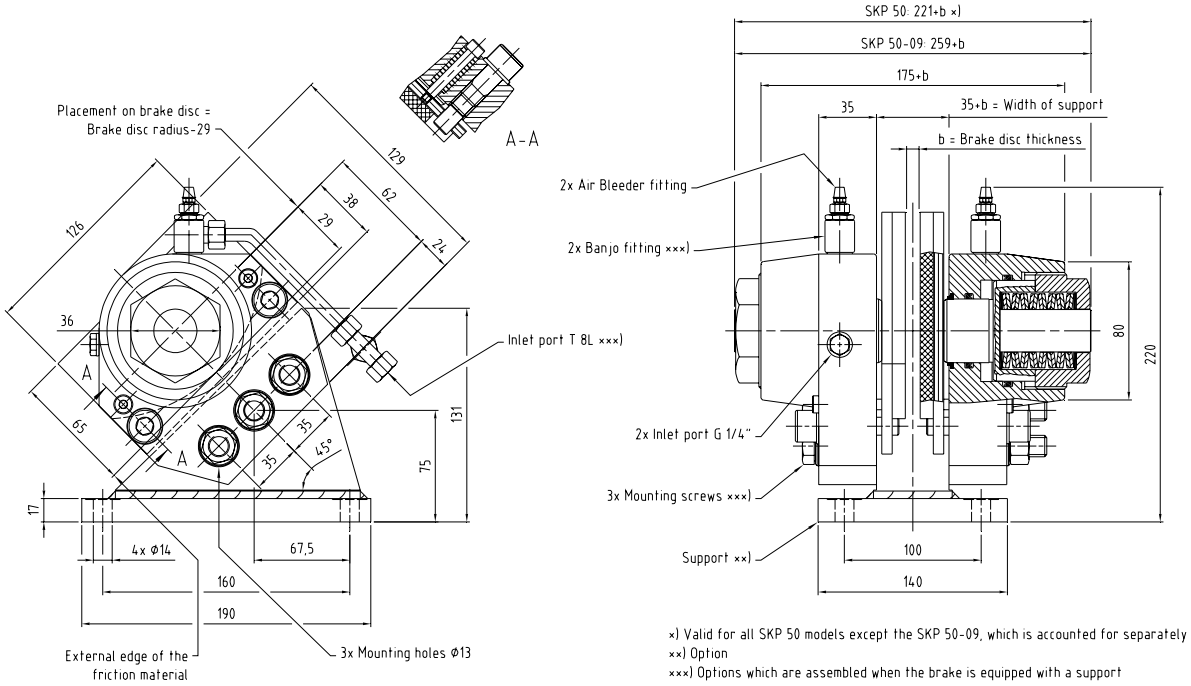
The disc spring pack must be adjusted to compensate for brake lining wear and to maintain full brake capacity. An extension of the brake piston through the adjustment nut gives an easy visual way to tell when adjustment is needed.

As an option, the brakes can be equipped with proximity or mechanical switches to indicate brake ON/OFF and/or NEED OF ADJUSTMENT.

Model	Tangential braking force F [N][1]		Releasing pressure [bar][4]	Air gap between brake disc and lining [mm]		Estimated life of disc spring pack [no. of strokes]		Friction area per brake [cm^2]	Weight [kg]	
	max.[2]	min.[3]		min.[5]	max.[6]	min.[7]	max.[8]		Excl. support	Incl. support
SKP 50-02	3600	2700	30	2x1,0	2x2,5	>$2x10^6$	>$2x10^6$	152	12	18
SKP 50-05	6900	5000	60	2x1,0	2x2,5	>$1,8x10^6$	>$2x10^6$	152	12	18
SKP 50-06	8100	6200	70	2x1,0	2x2,5	>$2x10^5$	>$1x10^6$	152	12	18
SKP 50-09	12400	9200	110	2x1,0	2x2,5	>$3x10^4$	>$2x10^5$	152	12	18

1) Calculated with an average frictional coefficient μ=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) Air gap for correctly adjusted brake.
6) Maximum recommended air gap before adjustment is needed.
7) Valid for minimum spring pack compression.
8) Valid for maximum spring pack compression.

SKP 50 with optional support



×) Valid for all SKP 50 models except the SKP 50-09, which is accounted for separately
××) Option
×××) Options which are assembled when the brake is equipped with a support

Torque table

The braking torque is calculated from the following formula:

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

q = number of brakes
F = braking force according to the table below [N]
D_s = brake disc diameter [m]
H = brake pad height [m] (SKP 50 = 0,075)

Brake model	Tangential braking force F [N][1]		Disc diameter D [mm]							
	max.[2]	min.[3]	ø300	ø350	ø400	ø450	ø500	ø600	ø700	ø800
SKP 50-02	3600	2700	300 400	370 490	430 580	500 670	570 760	700 940	840 1120	970 1300
SKP 50-05	6900	5000	560 770	680 940	810 1120	930 1290	1060 1460	1310 1810	1560 2150	1810 2500
SKP 50-06	8100	6200	690 910	850 1110	1000 1310	1160 1510	1317 1720	1620 2120	1930 2530	2240 2930
SKP 50-09	12400	9200	1030 1390	1260 1700	1490 2010	1720 2320	1950 2630	2410 3250	2870 3870	3330 4490

1) Calculated with an average frictional coefficient μ=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

- Support
- Proximity or mechanical switches for indicating on/off, pad wear or “time to adjust”.
- Tube connection set (connects the two cylinders to one connection point)

Suitable applications

Dellner Brakes model SKP 50 is suitable wherever safety brakes are needed, for example in the following types of applications:

- Cranes
- Winches
- Conveyors
- Wind mills
- Emergency stops
- Parking applications

Issue 1

Dellner Brakes AB
Skyfallsvägen 2
SE-791 77 FALUN
SWEDEN
Tel: +46 23 783050 • Fax: +46 23 770690