

### Spring applied, pressure released disc brake

Dellner Bubenzer model SKP 140 spring applied, hydraulically released disc brake offers a reliable and safe method of braking linear or rotary motion.

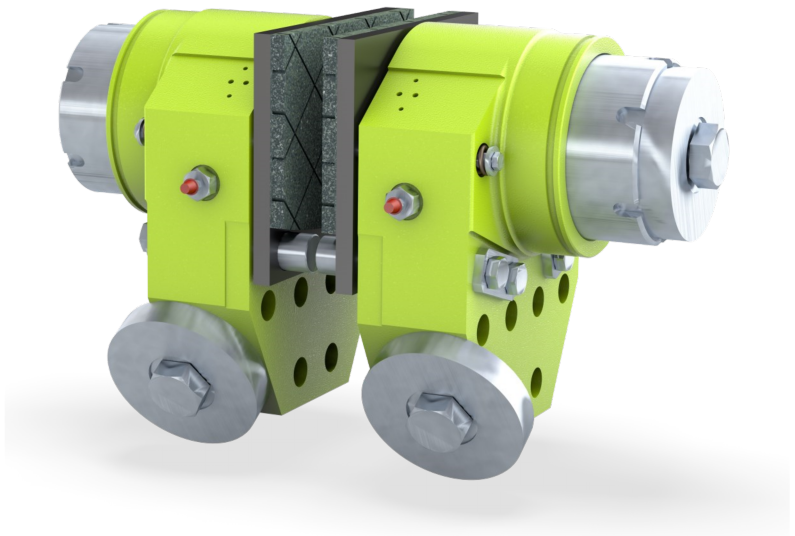
The brake consists of two symmetrical halves and can be supplied with or without a support. The brakes supplied with a support are adjusted for a 12 -30 mm thick brake disc. When used with thicker discs the brakes can be supplied with spacers.

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. The SKP 140 is equipped with "Easy Adjustment-arrangement" as standard.

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		Releasing pressure	Airgap between brake disc and lining		Estimated life of disc spring pack		Friction area per brake	Weight	
	[N] <sup>1)</sup>			[mm]	[no. of strokes]		[cm <sup>2</sup> ]			[kg]
	max. <sup>2)</sup>	min. <sup>3)</sup>			max. <sup>5)</sup>	min. <sup>6)</sup>				
SKP 140-26	32800	26200	50	2x2,0	2x4,0	>2x10 <sup>6</sup>	>2x10 <sup>6</sup>	828	150	
SKP 140-42	46400	41900	65	2x2,0	2x4,0	>2x10 <sup>6</sup>	>2x10 <sup>6</sup>	828	150	
SKP 140-53	62900	53200	90	2x2,0	2x4,0	>2x10 <sup>6</sup>	>2x10 <sup>6</sup>	828	150	
SKP 140-63	72100	62900	100	2x2,0	2x4,0	>2x10 <sup>6</sup>	>2x10 <sup>6</sup>	828	150	
SKP 140-71	90600	71200	135	2x2,0	2x4,0	≤1,12x10 <sup>6</sup>	≤1,12x10 <sup>6</sup>	828	150	
SKP 140-86	104600	85900	150	2x2,0	2x4,0	≤3,97x10 <sup>5</sup>	≤3,97x10 <sup>5</sup>	828	150	
SKP 140-95	113600	95300	160	2x2,0	2x4,0	≤1,38x10 <sup>5</sup>	≤1,38x10 <sup>5</sup>	828	150	

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.

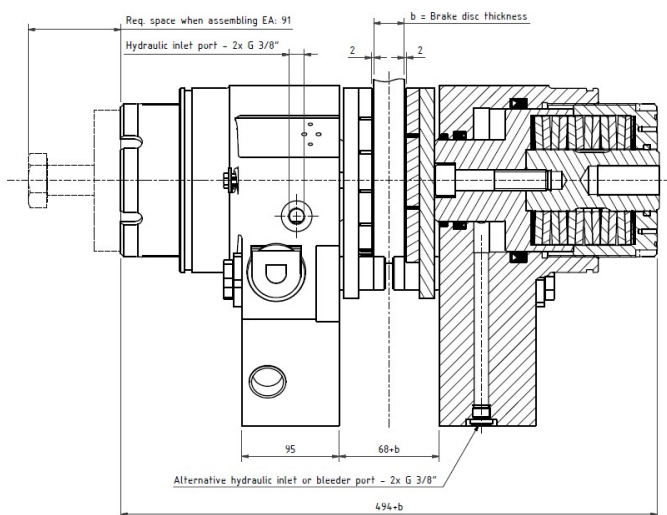
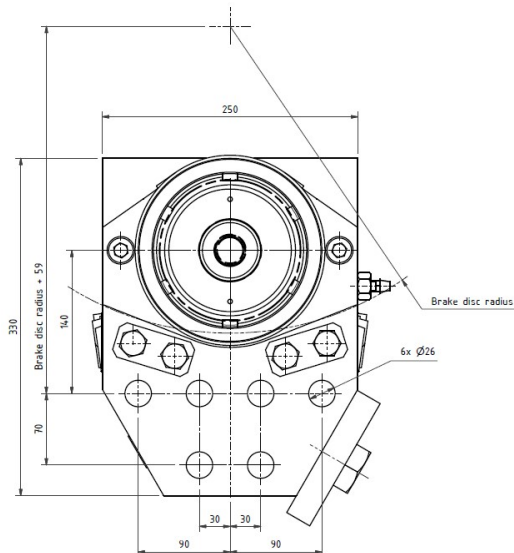
5) Air gap for correctly adjusted brake.

6) Maximum recommended air gap before adjustment is needed.

7) Valid for minimum spring pack compression.

8) Valid for maximum spring pack compression.

9) With optional extended brake pads the friction area per brake is 1194 cm<sup>2</sup>



## 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<sub>s</sub> = brake disc diameter [m]  
 h = distance disc periphery to piston center [m] (SKP 140: 0,081)

Model	Tangential braking force F [N] <sup>1)</sup>		Disc diameter D <sub>s</sub> [mm]							
	max. <sup>2)</sup>	min. <sup>3)</sup>	ø700	ø800	ø900	ø1000	ø1200	ø1400	ø1600	ø1800
SKP 140-26	32800	26200	7045 8820	8355 10460	9665 12100	10970 13740	13590 17020	16210 20300	18830 23580	21450 26860
SKP 140-42	46400	41900	11270 12480	13660 14800	15460 17120	17550 19440	21740 24080	25930 28720	30120 33360	34310 38000
SKP 140-53	62900	53200	14310 16920	16970 20060	19630 23210	22290 26350	27610 32640	32930 38930	38250 45220	43570 51510
SKP 140-63	72100	62900	16920 19390	20060 22990	23210 26600	26350 30200	32640 37410	38930 44620	45220 51830	51510 59040
SKP 140-71	90600	71200	19150 24370	22710 28900	26270 33430	29830 37960	36950 47020	44070 56080	51190 65140	58310 74200
SKP 140-86	104600	85900	23100 28130	27400 33360	31690 38590	35990 43820	44580 54280	53170 64740	61760 75200	70350 85660
SKP 140-95	113600	95300	25630 30550	30400 36230	35160 41910	39930 47590	49460 58950	58990 70310	68520 81670	78050 93030

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

- Brake pads with extended area
- Proximity switches for on/off, pad wear or "time to adjust" indication.
- Tube connection set (connects the two cylinders to one connection point).
- Supports in different configurations.
- Adjustment nut protection cover
- Customer specific colour

## SUITABLE APPLICATIONS

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

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