

DISC BRAKE SYSTEM – COMPACT SIZE 50

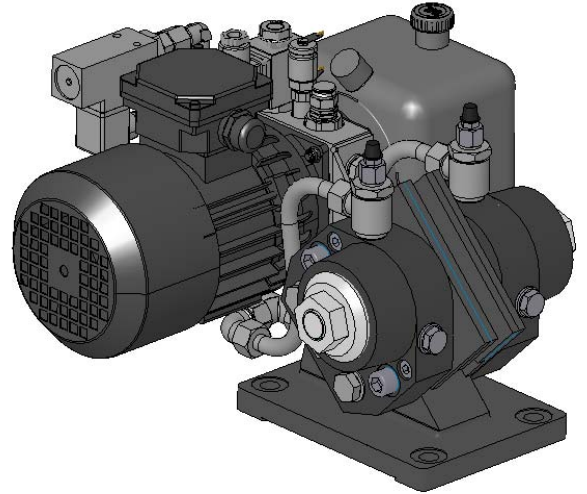
SPRING APPLIED, HYDRAULIC PRESSURE RELEASED DISC BRAKE WITH SUPPORT AND HYDRAULIC POWER PACK

Dellner Compact 50 is a complete, ready to use, safety brake system which includes disc brake, support and hydraulic power pack (HPP) with one interface.

The system is very compact, light weight, durable and suitable for outdoor / dirty environments (IP65).

The HPP is capable to actuate a second brake through a hose (twin mounting). It is also possible to separate the HPP, and mount it remote from the support. (In this case hydraulic tubing is not included).

The Compact 50 systems are designed for 12 mm thick brake discs. When used with thicker discs the systems can be supplied with spacers.



To maintain full brake torque the brakes should be adjusted when below mentioned maximum air gap value is exceeded. An extension of the brake piston through the adjustment nut gives an easy visual way to tell when adjustment is needed.

Compact 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⁾		
50-02	3600	2700	30			>2x10 ⁶	>2x10 ⁶		
50-05	6900	5000	65	2x1,0	2x2,5	>2x10 ⁶	>2x10 ⁶	152	40
50-06	8100	6200	90			>2x10 ⁶	>2x10 ⁶		
50-09	12400	9200	115			>6x10 ⁵	>1x10 ⁶		

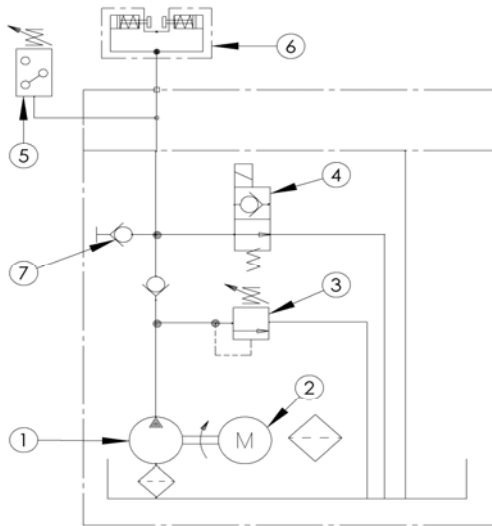
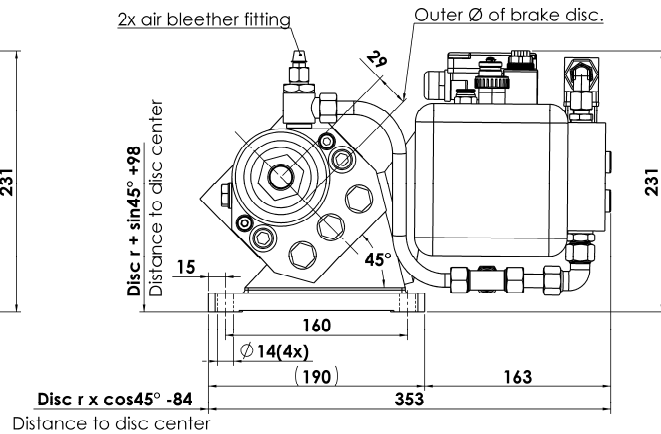
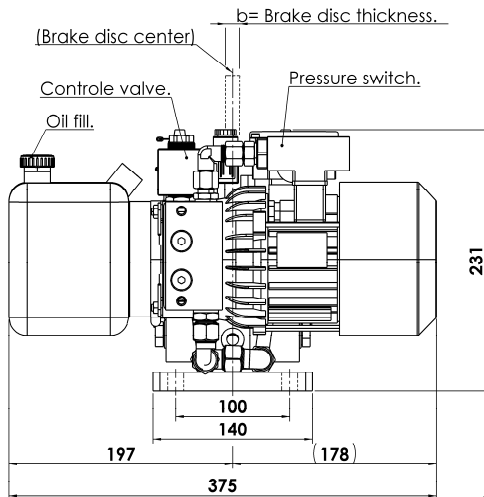
- 1) Calculated with an average frictional coefficient $\mu=0,42$. Consideration has not been taken for external factors.
- 2) Braking force with correctly adjusted disc spring pack.
- 3) Braking force with maximum recommended air gap before adjustment is needed.
- 4) Pressure to fully release brake.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

Options

- ✚ Proximity or mechanical switches for indicating on/off, pad wear or “time to adjust”.
- ✚ HPP for remote mounting
- ✚ Console for remote mounting of vertical or horizontal HPP
- ✚ Other voltages for motor and solenoids than standard.
- ✚ For ATEX approval, please consult DELLNER
- ✚ Cover for HPP



Dimensions / Hydraulic Circuit



Detail	Description
1	Pump 1.4 l/min
2	Electric motor 230/400 V, 50 Hz, 0.37 kW
3	Pressure relief valve 150 bar
4	Control valve (solenoid valve) 24 VDC
5	Pressure switch (Set value 120 bar decreasing)
6	Caliper Disc Brake SKP 50
7	Test connector M16-1/4"

Torque table (Nm)

The braking torque is calculated from the following formula:

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

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

- 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.