

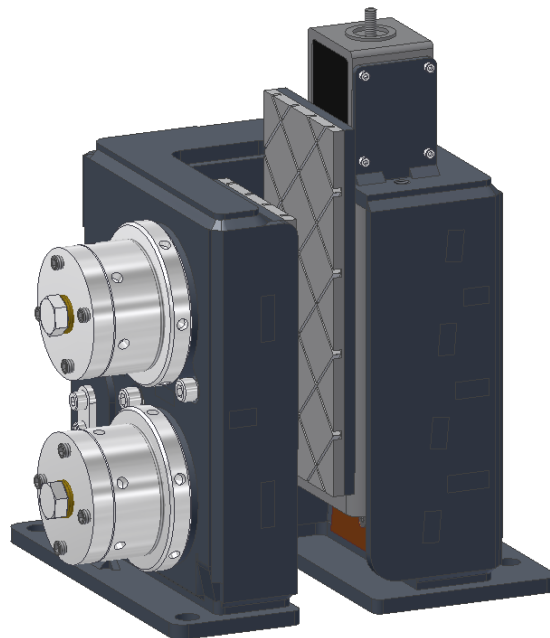


# DISC BRAKE – MODEL EFP

ELECTRIC ACTIVATED, SPRING APPLIED,  
MANUAL RELEASED DISC BRAKE

The Dellner Brakes electric activated, spring applied, manual released disc brake, model EFP, offer a reliable and safe method of braking a linear or rotation movement. The Single Acting brake is self aligning and is thus well suited for applications with axial movements or limited installation space.

The disc brake unit consists of one active side and one passive, placed on a support. The active side includes two spring packs and the passive one sliding unit. The sliding unit is dropped by de-energising the solenoid when braking is requested. The unit will slide downwards and align the disc brake and compress the spring packs differently dependent on requested brake torque. The sliding unit design offers an instant applied brake force, which raises progressive until maximum.



The EFP disc brake is available in four sizes which all are, as standard, delivered with on/off proximity switches and solenoid voltage 230 V AC.

The EFP 2x40 and EFP 2x60 are designed for brake disc thickness 12 mm and the EFP 2x75 and EFP 2x100 are designed for 25 mm brake disc thickness.

Model	Tangential braking force F [N] <sup>1)2)</sup>	Electric Power [V AC]	Air gap between brake disc and lining [mm]		Estimated life of disc spring pack [no. of strokes]	Friction area per brake [cm <sup>2</sup> ]
			Active <sup>3)</sup>	Passive <sup>3)</sup>		
EFP 2x40	14000	230	0	1	≥2x10 <sup>6</sup>	184
EFP 2x60	27400	230	0	1	≥2x10 <sup>6</sup>	276
EFP 2x75	88000	230	0	1	≥2x10 <sup>6</sup>	561
EFP 2x100	120000	230	0	1	≥2x10 <sup>6</sup>	910

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

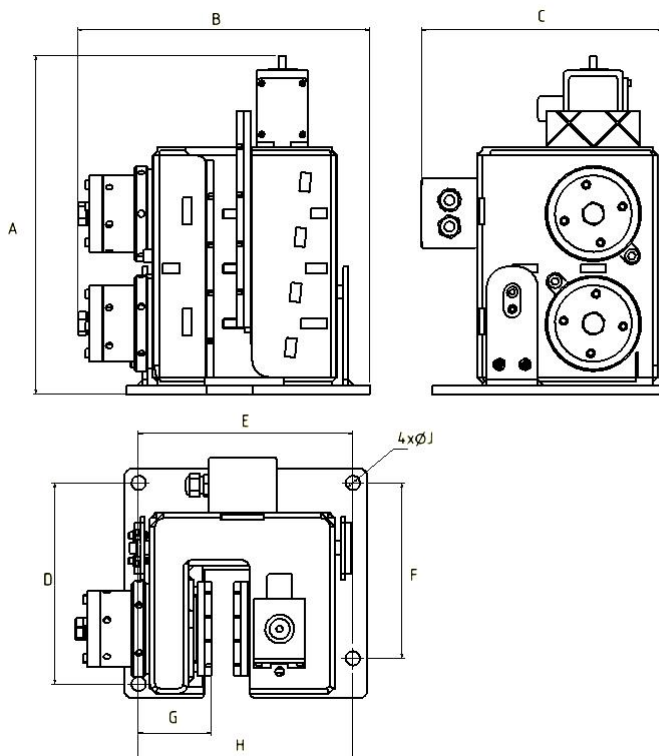
2) Braking force with correctly adjusted disc spring pack.

3) Air gap for correctly adjusted brake.





## Dimensions



### NOTE!

In reality the model EFP 2x40 is flipped (mirror) relative to what the drawing shows!

Dimensions [mm]	Brake Model			
	EFP 2x40	EFP 2x60	EFP 2x75	EFP 2x100
A	319	329	457	584
B	214	241	382	433
C	215	256	283	505
D	145	200	236	264
E	124	160	251	319
F	145	200	206	264
G	41,5	66	88	135
H	124	160	251	319
J	8	11	17	M16
Brake disc thickness	12	12	25	25

## Torque table in Nm

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<sub>s</sub> = brake disc diameter [m]

H = brake pad height [m] (see table below)

Brake model	Tangential braking force F [N] <sup>1)2)</sup> max. <sup>2)</sup>	Brake pad height H [m]	Disc diameter D							
			[mm]							
			ø400	ø450	ø500	ø600	ø700	ø800	ø900	ø1000
EFP 2x40	14000	0,068	2320	2670	3020	3720	4420	5120	5820	6520
EFP 2x60	27400	0,075	4450	5140	5820	7190	8560	9930	11300	12670
EFP 2x75	88000	0,110	12760	14960	17160	21560	25960	30360	34760	39160
EFP 2x100	120000	0,130	16200	19200	22200	28200	34200	40200	46200	52200

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.

## Suitable applications

Dellner Brakes EFP brakes are suitable, for example in the following types of applications:

-  Winches
-  Elevators