## Pressure applied, spring released disc brake

Dellner Bubenzer model SKD 90 disc brake is a direct acting, hydraulic applied, spring released unit. The braking force achieved is directly proportional to the applied pressure.

The brakes consist of two symmetrical halves between which the support structure with variable thickness can be installed to accommodate any brake disc thickness.

Each brake half has two cylindrical guide pins that transmit the tangential braking force from the brake pad to the brake housing and mounting stand. As a result, the brake pistons are not subject to any radial forces which contributes to longer brake life.
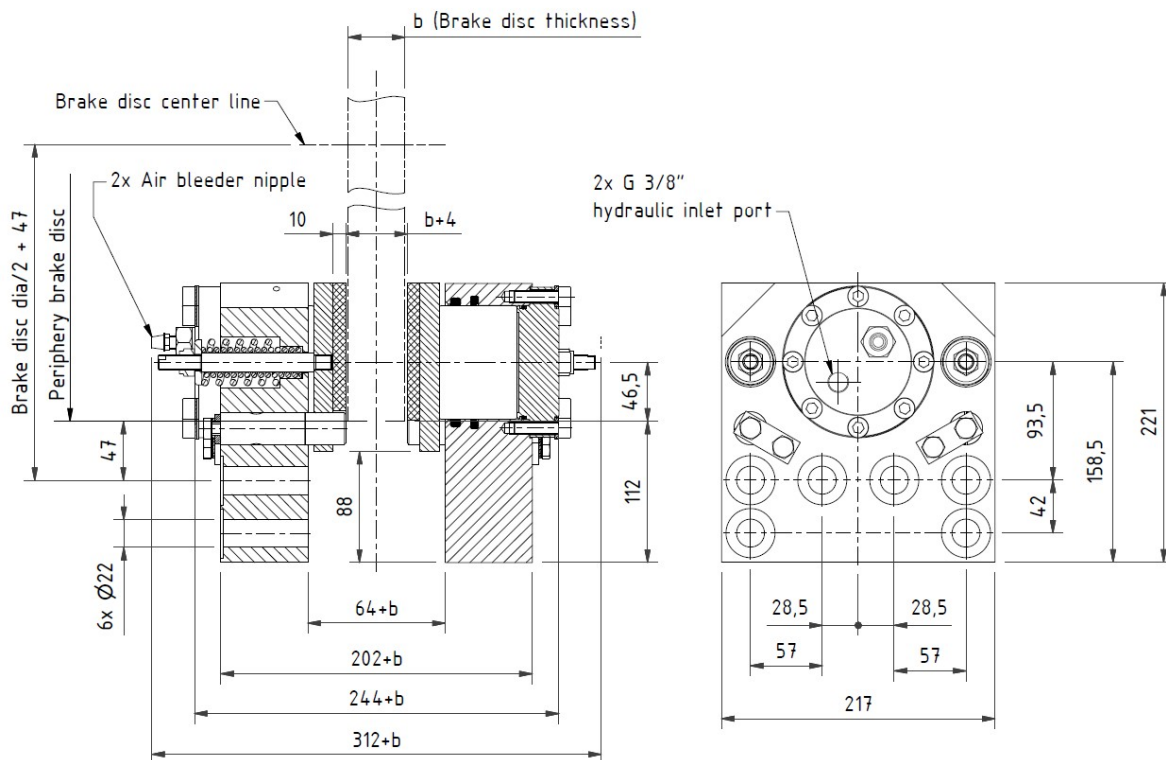
Two springs on each brake half retract the brake pads from the disc when pressure is released. Brake pad wear is automatically compensated for with increased piston stroke.
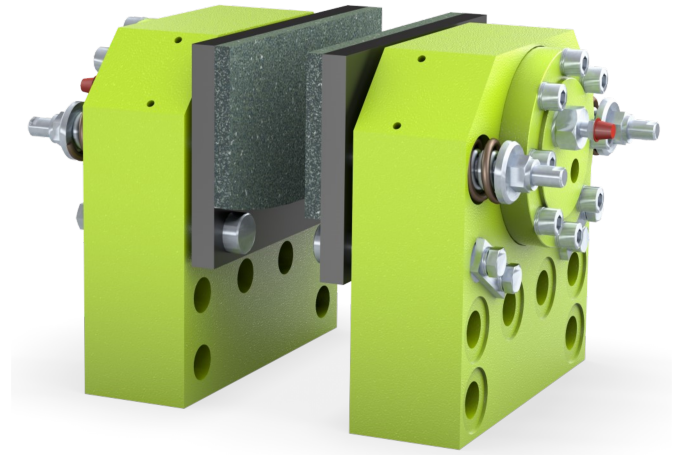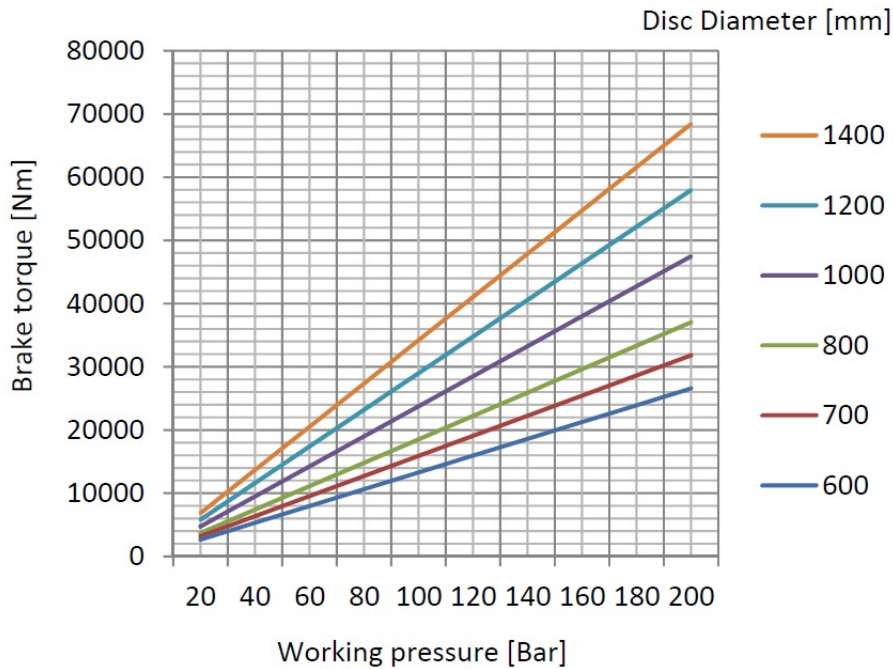
Model	Braking force [1]		Max hydraulic pressure	Friction area per brake	Max. working oil volume per brake [2]	Piston area per brake half	Weight
	F_1 [N/bar]	F_{max} [N]	[bar]	[cm²]	[cm³]	[cm²]	[kg]
SKD 90	524	104800	200	452	128	64	59

1) Calculated with an average frictional coefficient µ=0,42. Consideration has not been taken for external factors.
2) Oil volume required to engage the brake with fully worn friction pads.

Dellner Bubenzer AB reserves the rights to modification without special notice.

DS-020-01E

TORQUES

Disc Diameter [mm]

Brake torque [Nm] (y-axis: 0, 10000, 20000, 30000, 40000, 50000, 60000, 70000, 80000)

Working pressure [Bar] (x-axis: 20, 40, 60, 80, 100, 120, 140, 160, 180, 200)

- 1400
- 1200
- 1000
- 800
- 700
- 600

The braking torque is calculated from the following formula:

$$M_{brake} = \frac{q \times F_1 \times p \times (D_s - 2h)}{2}$$

q = number of brakes
F1 = braking force according to the table on page 1 [N]
p = pressure [bar]
Ds = brake disc diameter [m]
h = distance disc periphery to piston center [m] (SKD 90: 0,047)

OPTIONS

- Proximity switches for on/off or pad wear indication
- Brake pads in alternative materials.
- Seals in alternative materials.
- Supports in different configurations (see figure).
- Customer specific colour.
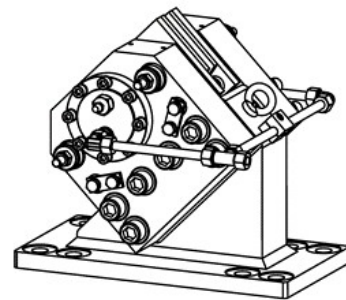
SUITABLE APPLICATIONS

Dellner Bubenzer models SKD are suitable wherever service, stopping, holding and tensioning brakes are needed, for example in the following types of applications:

Propulsion propeller shafts	Wind mills	Top drives
Chipping machines	Amusement rides	Unwinding systems