GENERAL DESCRIPTION AND DATA

Dellner Brakes spring applied, hydraulically released disc brake, model SKP 180A offers a reliable and safe method of braking linear or rotary motion.

The brake consists of two symmetrical cylinder Housings and can be supplied with or without a mounting stand.

Each Housing has two cylindrical guide pins that transmit the tangential braking force from the brake lining to the brake housing and mounting stand. As a result, the brake pistons are not subject to any radial forces which contribute to longer brake life.

Four 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.

<table>
<thead>
<tr>
<th></th>
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<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>SKP 180A-100</td>
<td>100 800 141 000</td>
<td>130</td>
<td>95</td>
<td>2x 2,0</td>
<td>&gt; 2x10⁶</td>
<td>315</td>
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<tr>
<td>SKP 180A-130</td>
<td>131 100 170 300</td>
<td>155</td>
<td>115</td>
<td>2x 2,0</td>
<td>&gt; 2x10⁶</td>
<td>701 000</td>
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<tr>
<td>SKP 180A-170</td>
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<td>190</td>
<td>155</td>
<td>2x 2,0</td>
<td>593 000</td>
<td>45 000</td>
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</tbody>
</table>

All sizes within range has a: total friction area of 1200 cm² / total allowable wear volume of 1200 cm³

1) Calculated with an average frictional coefficient μ=0,42. Consideration has not been taken for external factors.
2) Braking force with maximum recommended air gap before adjustment is needed.
3) Braking force with correctly adjusted disc spring pack.
4) Pressure to fully release brake.
5) Nominal pressure to balance an adjusted brake.
6) Air gap for correctly adjusted brake.
7) Maximum recommended air gap before adjustment is needed.
8) Valid for minimum spring pack travel.
9) Valid for maximum spring pack travel.

OPTIONS (do not hesitate contacting us for more detailed information)

- Brake pads with various friction material.
- Support in various design (single and/or double assemblies).
- Spacers for various brake disc thickness.
- Tube connection set (connects the Housings to one connection point).
- Various cylinder sealing concept (adapt to various hydraulic fluids and/or ambient conditions such as low and/or high temp.)
- Secondary cylinder sealing concept.
- Electrical indicators (brake ON/OFF, and/or NEED OF ADJUSTMENT, and/or pad WEAR)
DATA SHEET
DISC BRAKE MODEL SKP 180A
DS-140-03E (page 2 of 2)
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DIMENSIONS (WITHOUT SUPPORT)

Minimum Brake Disc diameter \( \phi D = 700 \text{ mm} \)
Maximum Shaft flange diameter = Brake Disc diameter \( \phi D – 440 \text{ mm} \)

TORQUE TABLE
Brake torque is calculated by using following formula:

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

\( D_s = \text{brake disc diameter} \ [\text{m}] \)
\( H = 0.172 \ [\text{m}] \)
\( q = \text{number of brakes} \)
\( F = \text{braking force, according to product leaflet} \ [\text{N}] \)

Values in below torque table are shown in \([\text{Nm}]\).

<table>
<thead>
<tr>
<th>Size</th>
<th>Braking force ( F ) [N](^1)</th>
<th>Disc diameter ( \phi D ) [mm]</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>( \phi 800 )</td>
<td>( \phi 1000 )</td>
</tr>
<tr>
<td>SKP 180A-100</td>
<td>100 800</td>
<td>31 600</td>
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<tr>
<td></td>
<td>141 000</td>
<td>44 200</td>
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<td>41 100</td>
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<tr>
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<td>59 400</td>
</tr>
<tr>
<td></td>
<td>226 800</td>
<td>71 200</td>
</tr>
</tbody>
</table>

\(^1\) Tangential Braking Force \( F \) calculated with an average frictional coefficient \( \mu = 0.42 \). Consideration has not been taken for external factors. Values shown represent braking force with correctly adjusted disc spring pack (max.), respectively time to adjust (min).

APPLICATIONS
Dellner Brakes model SKP 180A is suitable wherever safety brakes are needed, for example in the following types of applications:

- Cranes
- Winches
- Conveyors
- Wind mills
- Draglines
- Draw works