Series **86P40-2, 86P60-2** Product Overview

**Pneumatic pin packages, single units**

**Models:** 86P40-2  
86P60-2

**Application:**  
Accurate positioning of sheet metal parts in welding equipment and handling systems. At the end of the welding process, the pins are retracted from the pin holes. The component can thus be easily removed from the jig.

**Key areas of application:**  
Automotive manufacturing, sheet processing industry, jig and general mechanical engineering.

**Features:**
- Compact, low weight design
- High accuracy due to twin piston rod guide
- Lateral and front-face mounting areas
- Length of stroke: 20, 40 and 60 mm
- Various mounting bases for centering pin including precision bore holes and grooves or integrated thread
- Inductive sensing module with LED display

**Order no. for 86P40/60-2 pin packages**

Example Model no.: 86P40-2 02 CB 00 A - K  

**Base model**  
Piston rod adaptor

**Inductive sensing system**

**Accessories**
- D6 = with sensing system  
  86P0-200D6  
  (for stroke 20 / 40)
  86P0-200D606  
  (for stroke 60)

**Instructions**
- K = ceramic coated pin

**Series 86P40-2, 86P60-2**
Pneumatic pin packages, single units

Series 86P40/60-2 Technical Information

<table>
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</thead>
<tbody>
<tr>
<td>86P40-2...L4...</td>
<td>620 [139]</td>
<td>520 [117]</td>
<td>6 [87]</td>
<td>40 [1.57]</td>
<td>20 [0.79]</td>
<td>1.6 [3.52]</td>
<td>0.5 [0.02]</td>
</tr>
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<td>86P40-2...L6...</td>
<td>620 [139]</td>
<td>520 [117]</td>
<td>6 [87]</td>
<td>40 [1.57]</td>
<td>40 [1.57]</td>
<td>1.6 [3.52]</td>
<td>0.7 [0.02]</td>
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<tr>
<td>86P60-2...L4...</td>
<td>1550 [348]</td>
<td>1400 [315]</td>
<td>6 [87]</td>
<td>63 [2.48]</td>
<td>20 [0.79]</td>
<td>2.0 [4.48]</td>
<td>0.9 [0.04]</td>
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<tr>
<td>86P60-2...L6...</td>
<td>1550 [348]</td>
<td>1400 [315]</td>
<td>6 [87]</td>
<td>63 [2.48]</td>
<td>40 [1.57]</td>
<td>2.0 [4.48]</td>
<td>1.4 [0.05]</td>
</tr>
</tbody>
</table>

Series 86P40-2, 86P60-2 Standard Pin Package Dimensions

Medium: Operation with oil free air permissible

<table>
<thead>
<tr>
<th>Model no.</th>
<th>B1</th>
<th>B2</th>
<th>B3</th>
<th>B4 + 0.02</th>
<th>B5</th>
<th>B6</th>
<th>B7</th>
<th>B8</th>
<th>B10</th>
<th>L1 max.</th>
<th>L2</th>
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</thead>
<tbody>
<tr>
<td>86P40-2...L4...</td>
<td>114</td>
<td>97</td>
<td>45</td>
<td>32.5</td>
<td>45</td>
<td>45</td>
<td>47</td>
<td>74</td>
<td>37.5</td>
<td>207</td>
<td>95</td>
</tr>
<tr>
<td>86P40-2...L6...</td>
<td>114</td>
<td>97</td>
<td>45</td>
<td>32.5</td>
<td>45</td>
<td>45</td>
<td>47</td>
<td>74</td>
<td>37.5</td>
<td>247</td>
<td>115</td>
</tr>
<tr>
<td>86P60-2...L4...</td>
<td>124</td>
<td>107</td>
<td>94</td>
<td>32.5</td>
<td>52</td>
<td>45</td>
<td>47</td>
<td>74</td>
<td>37.5</td>
<td>213</td>
<td>95</td>
</tr>
<tr>
<td>86P60-2...L6...</td>
<td>124</td>
<td>107</td>
<td>94</td>
<td>32.5</td>
<td>52</td>
<td>45</td>
<td>47</td>
<td>74</td>
<td>37.5</td>
<td>253</td>
<td>115</td>
</tr>
</tbody>
</table>
Series 86P40-2, 86P60-2 Accessories

Piston Rod Model -202 Detail mounting base Ø16 mm for 86P40-2, 86P60-2

Piston Rod Model -205 Detail mounting base Ø10 mm for 86P40-2, 86P60-2

Max deflection for centering pin for 86P40-2, 86P60-2

<table>
<thead>
<tr>
<th>Model no.</th>
<th>Sheer force N [lbs]</th>
<th>L [mm] [in]</th>
<th>Stroke [mm] [in]</th>
<th>Deviation [mm] [in]</th>
</tr>
</thead>
<tbody>
<tr>
<td>86P40 / 60-2...B / 2</td>
<td>200 [45]</td>
<td>52 [2.0]</td>
<td>20 [0.08]</td>
<td>0.06 [0.002]</td>
</tr>
<tr>
<td>86P40 / 60-2...A / 4</td>
<td>200 [45]</td>
<td>70 [2.8]</td>
<td>40 [1.60]</td>
<td>0.09 [0.004]</td>
</tr>
<tr>
<td>86P40 / 60-2...C / 6</td>
<td>200 [45]</td>
<td>90 [3.5]</td>
<td>60 [2.40]</td>
<td>0.12 [0.007]</td>
</tr>
</tbody>
</table>

**Caution:** Generally we recommend using an external guide when the transverse force is more than 200 N [45 lbs]. Also independently of the stroke, less transverse forces, when the overall height L2 > 120 mm [4.7 in] (L2 = extended piston rod plus centering pin).
Pneumatic pin packages, single units

Series 86P40-2, 86P60-2 Accessories

Example application of an off-center centering pin for 86P40-2, 86P60-2

The component shown in this example is to be made by the customer.

Internal anti-rotation device

External guide 82ZB-009-2, 82ZB-010-2, 82ZB-090-1

Caution: Generally we recommend using an external guide when the transverse force is more than 200 N [45 lbs] Also independently of the stroke, less transverse forces, when the overall height L2 > 120 mm [4.7 in] (L2 = extended piston rod plus centering pin).

* J1 is not available with stroke 60 mm.
Series 86P40-2, 86P60-2 Accessories

Piston rod cover (Bellow) 82ZB-013-3

Specifications

| External guide (use w/o bellows) | 82ZB-009-2  
82ZB-010-2 (only with A+B)  
82ZB-090-1 (with C) |
<table>
<thead>
<tr>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>Bellows (use w/o external guide only)</td>
<td>82ZB-013-3 (only strokes 20 und 40)</td>
</tr>
<tr>
<td>Connecting cable (1 connector socket &amp; 5 m cable)</td>
<td>8EL-002-1</td>
</tr>
<tr>
<td>Connector socket M12x1 straight, 5-pin</td>
<td>8EL-003-1</td>
</tr>
<tr>
<td>Connector socket M12x1 90 angular, 4-pin</td>
<td></td>
</tr>
</tbody>
</table>

Wiring diagram of electrical sensing system

Sensing system immune to interference from d.c. arc welding and a.c. arc welding

Inductive design:
- C8 Connector plug M12x1, parallel with piston rod
- D8 Connector plug M12x1, 90° swivel

Major spare parts for 86P40/60-2...

<table>
<thead>
<tr>
<th>Specifications</th>
<th>Order no. for 86P40/60-2...</th>
</tr>
</thead>
</table>
| End position sensing system | 86P-200C8 (stroke 20/40)  
86P-200C806 (stroke 60)  
86P-200D8 (stroke 20/40)  
86P-200D806 (stroke 60)  
8PW-079-1-00 (for 82P40-2)  
8PW-080-1-00 (for 82P60-2) |
| C8 connector plug M12x1, parallel with piston rod |  
D8 connector plug M12x1, 90° swivel |  
Seal kit |