### Specifications

<table>
<thead>
<tr>
<th>Feature</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max. working pressure</td>
<td>190 bar</td>
</tr>
<tr>
<td>Weight</td>
<td>277 kg</td>
</tr>
<tr>
<td>Working volume</td>
<td>96 L</td>
</tr>
<tr>
<td>Total volume</td>
<td>101 L</td>
</tr>
<tr>
<td>Max. cyl. load (start tipping)</td>
<td>245 kN</td>
</tr>
<tr>
<td>Max. cyl. load (end of stroke)²</td>
<td>82 kN</td>
</tr>
<tr>
<td>Max. cyl. load (end of stroke)³</td>
<td>96 kN</td>
</tr>
<tr>
<td>Max. pump flow</td>
<td></td>
</tr>
<tr>
<td>With KO¹</td>
<td>170 L/min</td>
</tr>
<tr>
<td>Without KO¹</td>
<td>119 L/min</td>
</tr>
<tr>
<td>With KO¹ below -20°C</td>
<td>119 L/min</td>
</tr>
<tr>
<td>Without KO¹ below -20°C</td>
<td>83 L/min</td>
</tr>
<tr>
<td>Tipping time</td>
<td></td>
</tr>
<tr>
<td>With KO¹</td>
<td>34 sec</td>
</tr>
<tr>
<td>Without KO¹</td>
<td>48 sec</td>
</tr>
<tr>
<td>With KO¹ below -20°C</td>
<td>49 sec</td>
</tr>
<tr>
<td>Without KO¹ below -20°C</td>
<td>69 sec</td>
</tr>
<tr>
<td>Allowable lowering time</td>
<td>34 sec</td>
</tr>
<tr>
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<td>277 kg</td>
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<tr>
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<td>34 sec</td>
</tr>
</tbody>
</table>

### Technical notes
- This cylinder is a lifting device only. It should not be used as a structural member and should not be subjected to side loads.
- Tipping valve must have a pressure relief at the cylinder port set not higher than max. working pressure.
- Verify max. cyl. load.
- Working temperature range is between -40°C and +80°C.
- Max. duration of extension is 0.5 hours (excluded hard chromed stages).
- Cylinder is painted black (RAL9005) with a min. thickness conforming to the 480 hours neutral salt spray test as per ISO 9227.
- ¹ Hyva knock-off.
- ² Unsubstantial unloading (sticky load).
- ³ Substantial unloading.

### Related documentation
- Bracket options: 015BRA10 & 015BRA13
- Mounting instructions: CYL-0031
- Spec sheet explanation: CYL-0041

### Tipping weight

<table>
<thead>
<tr>
<th>BL [mm]</th>
<th>OH [mm]</th>
<th>Ycog [mm]</th>
<th>Qo [mm]</th>
<th>C [mm]</th>
<th>At [°]</th>
<th>stroke x 60 / Qo</th>
</tr>
</thead>
<tbody>
<tr>
<td>900</td>
<td>600</td>
<td>1200</td>
<td>200</td>
<td>45</td>
<td>9300</td>
<td>500 800 9100 800</td>
</tr>
</tbody>
</table>

### Tipping weight [ton] at maximum pressure of 190 bar for a vertically mounted cylinder and C is 158 mm

For detailed tipping calculations please refer to: [https://tipper.hyva.com](https://tipper.hyva.com)
### Alpha series - Front end cylinder with single eye

**FE A169-5-07030-019-K1729-P85**

<table>
<thead>
<tr>
<th>Pos.</th>
<th>Part no.</th>
<th>Description</th>
<th>Qty.</th>
</tr>
</thead>
<tbody>
<tr>
<td>C01</td>
<td>71839131</td>
<td>DUST COVER FE 169-5/179-5/191-6</td>
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</tr>
<tr>
<td>P01</td>
<td>74432653</td>
<td>PISTON FL2 S 085-1645-HC (SR=100)</td>
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<tr>
<td>P02</td>
<td>71853085</td>
<td>SLIDER FL 085 (2 X 1/2) A22</td>
<td>1</td>
</tr>
<tr>
<td>P03</td>
<td>71851085</td>
<td>OUTER STOPRING FL 085 A22</td>
<td>1</td>
</tr>
<tr>
<td>P04</td>
<td>75322085</td>
<td>BOTTOM PLATE PISTON 085</td>
<td>1</td>
</tr>
<tr>
<td>P05</td>
<td>01770560</td>
<td>CIRCLIP 75 DIN 472 (79.5x3.0)</td>
<td>1</td>
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<tr>
<td>P06</td>
<td>75372085</td>
<td>O-RING PISTON BOTTOM HP 085</td>
<td>1</td>
</tr>
<tr>
<td>P07</td>
<td>71847150</td>
<td>PISTON EYE SPH. FL 085 MK2 L=075</td>
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<tr>
<td>P08</td>
<td>01225807</td>
<td>O-RING 66.27 X 3.53 MM</td>
<td>1</td>
</tr>
<tr>
<td>P09</td>
<td>71875450</td>
<td>SPHERICAL BEARING D.50 MAINT. FREE</td>
<td>1</td>
</tr>
<tr>
<td>P10</td>
<td>01770560</td>
<td>CIRCLIP 75 DIN 472 (79.5x3.0)</td>
<td>1</td>
</tr>
<tr>
<td>P11</td>
<td>71875012</td>
<td>PIN ROUND HEAD GROOVED 8x15 mm</td>
<td>2</td>
</tr>
</tbody>
</table>

| S01  | 74633650 | STAGE FL2 110-1640 ID90 | 1 |
| S02  | 75302110 | PACKSET HP 110 | 1 |
| S03  | 71853110 | SLIDER FL 110 (2 X 1/2) A22 | 1 |
| S04  | 71851110 | OUTER STOPRING FL 110 A22 | 1 |
| S05  | 71850111 | INNER STOPRING/LIFTRING FL 110 ID 90 A22 | 1 |

| S11  | 74604650 | STAGE FL2 129-1640 | 1 |
| S12  | 71802129 | PACKSET FL 129/HP 129 | 1 |
| S13  | 71853129 | SLIDER FL 129 (2 X 1/2) A22 | 1 |
| S14  | 71851129 | OUTER STOPRING FL 129 A22 | 1 |
| S15  | 71852129 | LIFTRING FL 129 A22 | 1 |

| S12  | 74606650 | STAGE FL2 169-1640 | 1 |
| S13  | 71802169 | PACKSET FL 169 | 1 |
| S14  | 71807171 | SLIDER FL 169 A35 | 1 |
| S15  | 71851169 | OUTER STOPRING FL 169 A22 | 1 |

| B01  | 74507658 | BASE FL2 191-1683-4/4BSAE-700 | 1 |
| B02  | 71802191 | PACKSET FL 191 | 1 |
| B03  | 71825430 | BOTTOM PLATE FL2 191 | 1 |
| B04  | 71870040 | SEAL BOTTOM PLATE FL 191 | 1 |
| B05  | 71820195 | LOCKING PLATE FL2 191 | 3 |
| B06  | 01732055 | BOLT HEX M8X20X1.25 SET 6 PCS | 1 |
| B07  | 01732559 | WASHER SPRING M8 SET 6 PCS | 1 |

**Seal kit complete**

- Consists of all packsets with packset grease and O-rings

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**Notes**

- The inner stopring is pre-mounted in the grooves on spare bases and stages. Therefore, when ordering new tubes, it is not required to order inner stoprings separately.

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For repair instructions see: CYL-0040. Serial no. is located on type plate and near type plate support.