

## Specifications

|   |         |
|---|---------|
| Max. working pressure                       | 250 bar |
| Weight                                      | 328 kg  |
| Working volume                              | 98 L    |
| Total volume                                | 106 L   |
| Max. cyl. load (start tipping)              | 245 kN  |
| Max. cyl. load (end of stroke) <sup>2</sup> | 121 kN  |
| Max. cyl. load (end of stroke) <sup>3</sup> | 141 kN  |

## Max. pump flow

|                                     |           |
|-------------------------------------|-----------|
| With KO <sup>1</sup>                | 190 L/min |
| Without KO <sup>1</sup>             | 137 L/min |
| With KO <sup>1</sup> below -20°C    | 133 L/min |
| Without KO <sup>1</sup> below -20°C | 96 L/min  |

## Tipping time

|                                     |        |
|-------------------------------------|--------|
| With KO <sup>1</sup>                | 31 sec |
| Without KO <sup>1</sup>             | 43 sec |
| With KO <sup>1</sup> below -20°C    | 44 sec |
| Without KO <sup>1</sup> below -20°C | 61 sec |
| Allowable lowering time             | 31 sec |

| Extension               | 1    | 2    | 3    | 4    | 5    | 6 | 7 | Total |
|-------------------------|------|------|------|------|------|---|---|-------|
| Effective diameter [mm] | 169  | 149  | 129  | 110  | 91   |   |   |       |
| Stroke* [mm]            | 1410 | 1430 | 1430 | 1430 | 1430 |   |   | 7130  |

## 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. • <sup>1</sup> Hyva knock-off. • <sup>2</sup> Unsubstantial unloading (sticky load).
- <sup>3</sup> Substantial unloading.

## Related documentation

Bracket options: 015BRA10 & 015BRA12

Mounting instructions: CYL-0030

Oil specifications: OIL-0011  
Spec sheet explanation: CYL-0041

## Tipping weight



|      |                              |
|------|------------------------------|
| BL   | body length                  |
| OH   | rear overhang                |
| Ycog | vert. pos. centre of gravity |
| Qo   | pivot length                 |
| C    | bracket length               |
| At   | tipping angle                |
|      | stroke x 60 / Qo             |

| BL [mm]   | 9500 |     |     | 9150 |     |     | 8800 |     |     |
|-----------|------|-----|-----|------|-----|-----|------|-----|-----|
| OH [mm]   | 200  | 500 | 800 | 200  | 500 | 800 | 200  | 500 | 800 |
| At [°]    | 44   | 46  | 47  | 46   | 48  | 49  | 48   | 50  | 52  |
| Ycog [mm] |      |     |     |      |     |     |      |     |     |
| 600       | 44   | 47  | 50  | 45   | 48  | 52  | 47   | 50  | 54  |
| 900       | 47   | 50  | 54  | 48   | 52  | 56  | 50   | 54  |     |
| 1200      | 49   | 53  |     | 51   |     |     |      |     |     |

Tipping weight [ton] at maximum pressure of 250 bar for a vertically mounted cylinder and C is 229 mm

For detailed tipping calculations please refer to: <https://tipper.hyva.com>

# Alpha series - Front end cylinder with outer cover

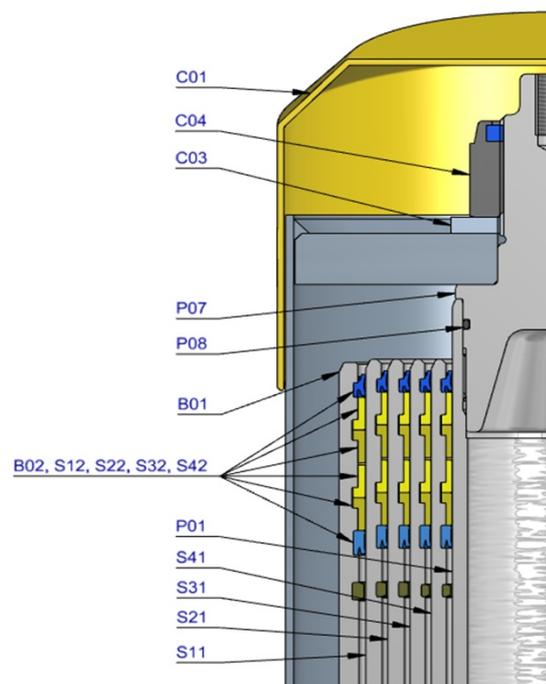


FC A169-5-07130-070-K0343

Item no.

70526574

| Pos. | Part no.   | Description                   | Qty. |
|------|------------|-------------------------------|------|
| C01  | 71839030   | DUST COVER FC LOW 15-241      | 1    |
| C02  | 71709632   | COVER 241-1445 PIN60 A340 FIX | 1    |
| C03  | 01702956 K | WASHER M48 DIN 125B ZP        | 1    |
| C04  | 01702907 K | TOPNUT NYLOC M48x3 DIN 985 ZP | 1    |
| P01  | 74402651   | PISTON FL2 S 091-1645-HC      | 1    |
| P02  | 71853091 K | SLIDER FL 091 (2 X 1/2) A22   | 1    |
| P03  | 71851091 K | OUTER STOPRING FL 091 A22     | 1    |
| P04  | 71822091   | BOTTOM PLATE PISTON FL 091    | 1    |
| P05  | 01745012 K | CIRCLIP 82 DIN 472 (87.5x2.5) | 1    |
| P06  | 71870215 K | O-RING PISTON BOTTOM 091      | 1    |
| P07  | 71848200   | PISTON HEAD FL 091 MK2        | 1    |
| P08  | 01226430 K | O-RING 72.62 X 3.53 MM        | 1    |



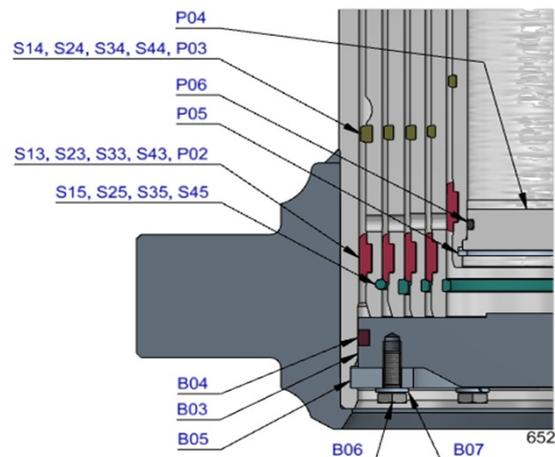
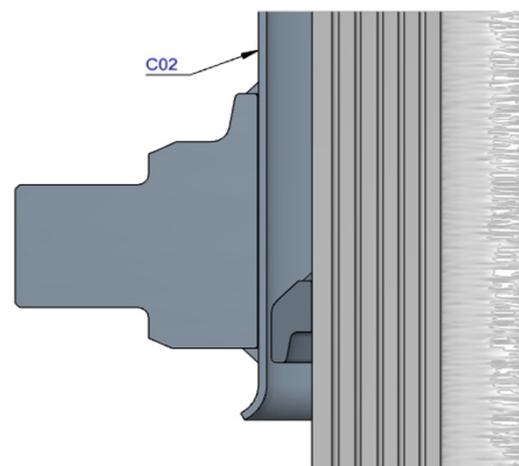
|     |            |                             |   |
|-----|------------|-----------------------------|---|
| S41 | 74603650   | STAGE FL2 110-1640          | 1 |
| S42 | 71802110 K | PACKSET FL 110              | 1 |
| S43 | 71853110 K | SLIDER FL 110 (2 X 1/2) A22 | 1 |
| S44 | 71851110 K | OUTER STOPRING FL 110 A22   | 1 |
| S45 | 71852110 K | LIFTRING FL 110 A22         | 1 |

|     |            |                             |   |
|-----|------------|-----------------------------|---|
| S31 | 74604650   | STAGE FL2 129-1640          | 1 |
| S32 | 71802129 K | PACKSET FL 129/HP 129       | 1 |
| S33 | 71853129 K | SLIDER FL 129 (2 X 1/2) A22 | 1 |
| S34 | 71851129 K | OUTER STOPRING FL 129 A22   | 1 |
| S35 | 71852129 K | LIFTRING FL 129 A22         | 1 |

|     |            |                           |   |
|-----|------------|---------------------------|---|
| S21 | 74605650   | STAGE FL2 149-1640        | 1 |
| S22 | 71802149 K | PACKSET FL 149/HP 150     | 1 |
| S23 | 71807151 K | SLIDER FL 149 A35         | 1 |
| S24 | 71851149 K | OUTER STOPRING FL 149 A22 | 1 |
| S25 | 71852149 K | LIFTRING FL 149 A22       | 1 |

|     |            |                           |   |
|-----|------------|---------------------------|---|
| S11 | 74606650   | STAGE FL2 169-1640        | 1 |
| S12 | 71802169 K | PACKSET FL 169            | 1 |
| S13 | 71807171 K | SLIDER FL 169 A35         | 1 |
| S14 | 71851169 K | OUTER STOPRING FL 169 A22 | 1 |
| S15 | 71813169 K | LIFTRING FL 169x5         | 1 |

|     |               |                                       |   |
|-----|---------------|---------------------------------------|---|
| B01 | 74507652R1345 | BASE FL2 191-1683-4/4BSAE-190-90-C242 | 1 |
| B02 | 71802191 K    | PACKSET FL 191                        | 1 |
| B03 | 71825430      | BOTTOM PLATE FL2 191                  | 1 |
| B04 | 71870040 K    | SEAL BOTTOM PLATE FL 191              | 1 |
| B05 | 71820195      | LOCKING PLATE FL2 191                 | 3 |
| B06 | 01732055 K    | BOLT HEX M8X20X1.25 SET 6 PCS         | 1 |
| B07 | 01732559 K    | WASHER SPRING M8 SET 6 PCS            | 1 |



## Seal kit complete

|  |            |  |  |
|--|------------|--|--|
|  | 71908650 K | Consists of all packsets with packset grease and O-rings |  |
|--|------------|--|--|

## 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.

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