

\* incl. 20 [-5; +30] mm pull out

3D model is available on request or [www.hyva.com](http://www.hyva.com)

| Specifications                              | Max. pump flow |                                     | Tipping time |                                     |        |
|---|----------------|-------------------------------------|--------------|-------------------------------------|--------|
| Max. working pressure                       | 220 bar        | With KO <sup>1</sup>                | 190 L/min    | With KO <sup>1</sup>                | 47 sec |
| Weight                                      | 468 kg         | Without KO <sup>1</sup>             | 170 L/min    | Without KO <sup>1</sup>             | 52 sec |
| Working volume                              | 148 L          | With KO <sup>1</sup> below -20°C    | 133 L/min    | With KO <sup>1</sup> below -20°C    | 67 sec |
| Total volume                                | 159 L          | Without KO <sup>1</sup> below -20°C | 119 L/min    | Without KO <sup>1</sup> below -20°C | 74 sec |
| Max. cyl. load (start tipping)              | 345 kN         |                                     |              | Allowable lowering time             | 47 sec |
| Max. cyl. load (end of stroke) <sup>2</sup> | 150 kN         |                                     |              |                                     |        |
| Max. cyl. load (end of stroke) <sup>3</sup> | 175 kN         |                                     |              |                                     |        |

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

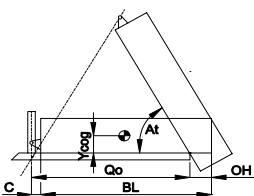
- Bracket options: 015BRA10 & 015BRA12
- Mounting instructions: CYL-0030
- Oil specifications: OIL-0011
- Spec sheet explanation: CYL-0041

Configuration

| Extension               | 1    | 2    | 3    | 4    | 5    | 6 | 7 | Total |
|-------------------------|------|------|------|------|------|---|---|-------|
| Effective diameter [mm] | 191  | 169  | 149  | 129  | 110  |   |   | 8130  |
| Stroke* [mm]            | 1610 | 1630 | 1630 | 1630 | 1630 |   |   |       |

Tipping weight

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

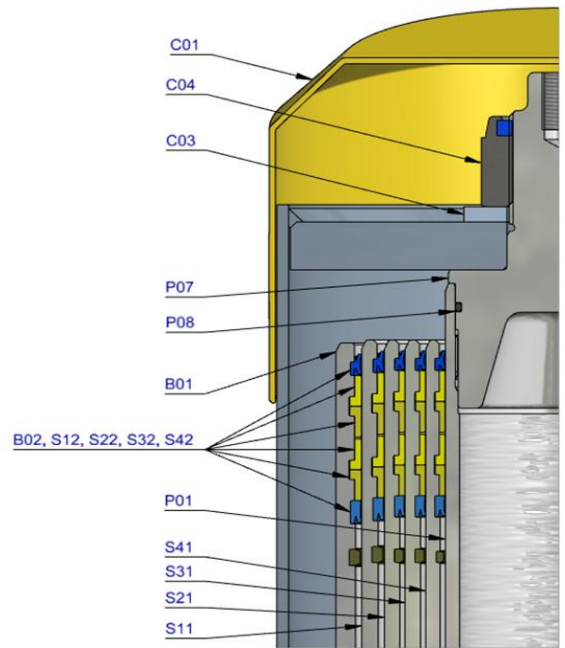


- BL body length
- OH rear overhang
- Ycog vert. pos. centre of gravity
- Qo pivot length
- C bracket length
- At tipping angle

| BL [mm]   | 10800 |     |     | 10350 |     |     | 9900 |     |     |
|-----------|-------|-----|-----|-------|-----|-----|------|-----|-----|
| OH [mm]   | 200   | 500 | 800 | 200   | 500 | 800 | 200  | 500 | 800 |
| At [°]    | 44    | 46  | 47  | 46    | 48  | 49  | 49   | 50  | 52  |
| Ycog [mm] |       |     |     |       |     |     |      |     |     |
| 600       | 56    | 59  | 62  | 57    | 61  | 65  | 59   | 63  | 67  |
| 900       | 59    | 62  | 66  | 60    | 64  | 69  | 63   | 67  | 73  |
| 1200      | 61    | 65  | 70  | 64    | 68  | 74  | 67   | 72  | 79  |

Tipping weight [ton] at maximum pressure of 220 bar for a vertically mounted cylinder and C is 229 mm

| Pos. | Part no.  | Description                           | Qty. |
|------|-----------|---------------------------------------|------|
| C01  | 71839050  | DUST COVER FC LOW 15-273              | 1    |
| C02  | 71737793  | COVER 273-1685 PIN60 A360 SPH LOCK    | 1    |
| C03  | 01702956K | WASHER M48 DIN 125B ZP                | 1    |
| C04  | 01702907K | TOPNUT NYLOC M48x3 DIN 985 ZP         | 1    |
| C05  | 01791953  | O-RING COVER D.273                    | 1    |
| C06  | 15014550K | BOLT HSHC M12X30X1.75 Q8.8 DIN 912 ZP | 1    |
| P01  | 74463771  | PISTON FL3 S 110-1885-HC              | 1    |
| P02  | 71853110K | SLIDER FL 110 (2 X 1/2) A22           | 1    |
| P03  | 71851110K | OUTER STOPRING FL 110 A22             | 1    |
| P04  | 71822110  | BOTTOM PLATE PISTON FL 110            | 1    |
| P05  | 01745050K | CIRCLIP 100 DIN 472 (105.5x3.0)       | 1    |
| P06  | 71870220K | O-RING PISTON BOTTOM 110              | 1    |
| P07  | 71848300  | PISTON HEAD FL3 110                   | 1    |
| P08  | 01226538K | O-RING 91.67 X 3.53 MM NBR            | 1    |



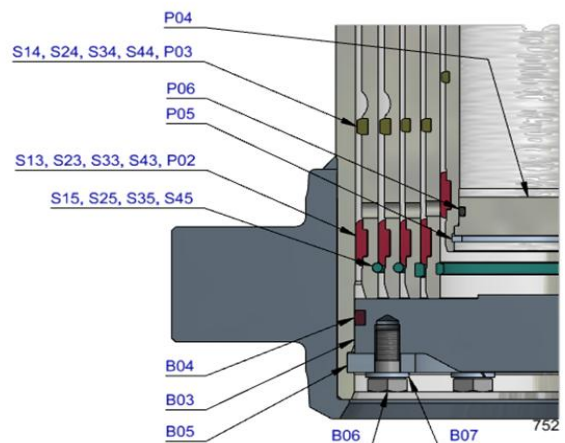
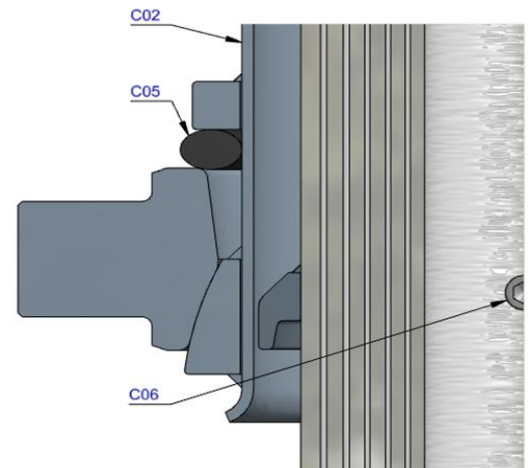
|     |           |                             |   |
|-----|-----------|-----------------------------|---|
| S41 | 74604770  | STAGE FL2 129-1880          | 1 |
| S42 | 71802129K | PACKSET FL 129/HP 129       | 1 |
| S43 | 71853129K | SLIDER FL 129 (2 X 1/2) A22 | 1 |
| S44 | 71851129K | OUTER STOPRING FL 129 A22   | 1 |
| S45 | 71852129K | LIFTRING FL 129 A22         | 1 |

|     |           |                           |   |
|-----|-----------|---------------------------|---|
| S31 | 74605770  | STAGE FL2 149-1880        | 1 |
| S32 | 71802149K | PACKSET FL 149/HP 150     | 1 |
| S33 | 71807151K | SLIDER FL 149 A35         | 1 |
| S34 | 71851149K | OUTER STOPRING FL 149 A22 | 1 |
| S35 | 71852149K | LIFTRING FL 149 A22       | 1 |

|     |           |                           |   |
|-----|-----------|---------------------------|---|
| S21 | 74606770  | STAGE FL2 169-1880        | 1 |
| S22 | 71802169K | PACKSET FL 169            | 1 |
| S23 | 71807171K | SLIDER FL 169 A35         | 1 |
| S24 | 71851169K | OUTER STOPRING FL 169 A22 | 1 |
| S25 | 71813169K | LIFTRING FL 169x5         | 1 |

|     |           |                           |   |
|-----|-----------|---------------------------|---|
| S11 | 74607770  | STAGE FL2 191-1880        | 1 |
| S12 | 71802191K | PACKSET FL 191            | 1 |
| S13 | 71807193K | SLIDER FL 191 A35         | 1 |
| S14 | 71851191K | OUTER STOPRING FL 191 A22 | 1 |
| S15 | 71813191K | LIFTRING FL 191x5         | 1 |

|     |               |                                    |   |
|-----|---------------|------------------------------------|---|
| B01 | 74508770R1585 | BASE FL2 214-1931-4/4BSAE-190-C273 | 1 |
| B02 | 71802214K     | PACKSET FL 214                     | 1 |
| B03 | 71825435      | BOTTOM PLATE FL2 214               | 1 |
| B04 | 71870045K     | SEAL BOTTOM PLATE FL 214           | 1 |
| B05 | 71820214      | LOCKING PLATE FL 214               | 3 |
| B06 | 01732020K     | BOLT HEX M12X25X1.25 SET 6 PCS     | 1 |
| B07 | 01732523K     | WASHER SPRING M12 SET 6 PCS        | 1 |



Seal kit complete

|           |  |
|-----------|--|
| 71908750K | Consists of all packsets with packset grease and O-rings |
|-----------|--|

Notes

The inner stopring and piston bottom are pre-mounted on spare bases, stage and pistons. Therefore, when ordering new tubes, it is not required to order these parts separately.

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