

\* 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	250 bar	With KO <sup>1</sup>	190 L/min	With KO <sup>1</sup>	24 sec
Weight	227 kg	Without KO <sup>1</sup>	170 L/min	Without KO <sup>1</sup>	27 sec
Working volume	77 L	With KO <sup>1</sup> below -20°C	133 L/min	With KO <sup>1</sup> below -20°C	34 sec
Total volume	84 L	Without KO <sup>1</sup> below -20°C	119 L/min	Without KO <sup>1</sup> below -20°C	39 sec
Max. cyl. load (start tipping)	345 kN			Allowable lowering time	24 sec
Max. cyl. load (end of stroke) <sup>2</sup>	187 kN				
Max. cyl. load (end of stroke) <sup>3</sup>	218 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

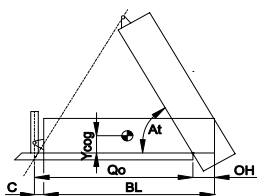
- Bracket options: 015BRA10 & 015BRA13
- Mounting instructions: CYL-0031
- Oil specifications: OIL-0011
- Spec sheet explanation: CYL-0041

Configuration

Extension	1	2	3	4	5	6	7	Total
Effective diameter [mm]	169	149	129	110				4980
Stroke* [mm]	1230	1250	1250	1250				

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
- stroke x 60 / Qo*

BL [mm]	6600	800	6400	800	6200	800
OH [mm]	200	500	200	500	200	500
At [°]	45	48	47	50	49	52
Ycog [mm]	600	72	67	74	69	77
	66	72	71	84	69	77

Tipping weight [ton] at maximum pressure of 250 bar for a vertically mounted cylinder and C is 158 mm

Pos.	Part no.	Description	Qty.
C01	71839130	DUST COVER FE 169-4/191-5	1
P01	74463441	PISTON FL3 S 110-1445-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	71847300	PISTON EYE SPH. FL3 110 L=075	1
P08	01226538K	O-RING 91.67 X 3.53 MM NBR	1
P09	71875450K	SPHERICAL BEARING D.50.3 MAINT. FREE	1
P10	01770560K	CIRCLIP 75 DIN 472 (79.5x2.5)	1
P11	71875012	PIN ROUND HEAD GROOVED 8x15 mm	2

S31	74604440	STAGE FL2 129-1440	1
S32	71802129K	PACKSET FL 129/HP 129	1
S33	71853129K	SLIDER FL 129 (2 X 1/2) A22	1
S34	71851129K	OUTER STOPRING FL 129 A22	1
S35	71852129K	LIFTRING FL 129 A22	1

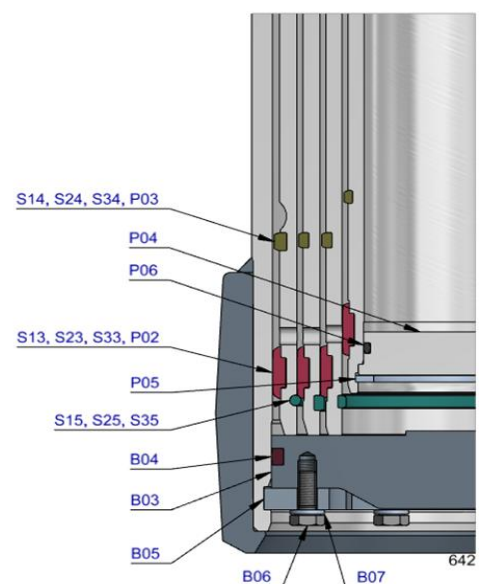
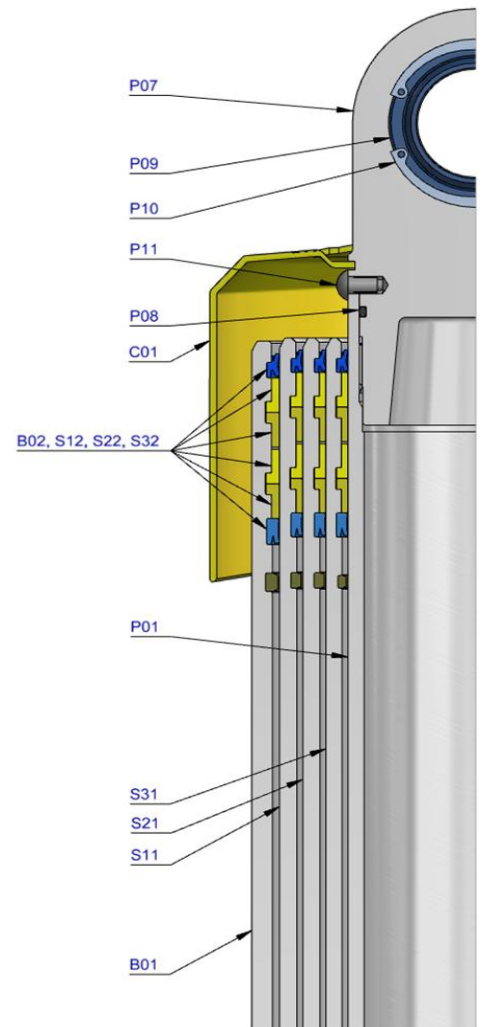
S21	74605440	STAGE FL2 149-1440	1
S22	71802149K	PACKSET FL 149/HP 150	1
S23	71807151K	SLIDER FL 149 A35	1
S24	71851149K	OUTER STOPRING FL 149 A22	1
S25	71852149K	LIFTRING FL 149 A22	1

S11	74606440	STAGE FL2 169-1440	1
S12	71802169K	PACKSET FL 169	1
S13	71807171K	SLIDER FL 169 A35	1
S14	71851169K	OUTER STOPRING FL 169 A22	1
S15	71813169K	LIFTRING FL 169x5	1

B01	74507444	BASE FL2 191-1483-4/4BSAE-290	1
B02	71802191K	PACKSET FL 191	1
B03	71825430	BOTTOM PLATE FL2 191	1
B04	71870040K	SEAL BOTTOM PLATE FL 191	1
B05	71820195	LOCKING PLATE FL2 191	3
B06	01732055K	BOLT HEX M8X20X1.25 SET 6 PCS	1
B07	01732559K	WASHER SPRING M8 SET 6 PCS	1

### Seal kit complete

71908640K	Consists of all packsets with packset grease and O-rings
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### 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.