

\* 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	190 bar	With KO <sup>1</sup>	190 L/min	With KO <sup>1</sup>	27 sec
Weight	237 kg	Without KO <sup>1</sup>	137 L/min	Without KO <sup>1</sup>	38 sec
Working volume	86 L	With KO <sup>1</sup> below -20°C	133 L/min	With KO <sup>1</sup> below -20°C	39 sec
Total volume	93 L	Without KO <sup>1</sup> below -20°C	96 L/min	Without KO <sup>1</sup> below -20°C	54 sec
Max. cyl. load (start tipping)	245 kN			Allowable lowering time	27 sec
Max. cyl. load (end of stroke) <sup>2</sup>	94 kN				
Max. cyl. load (end of stroke) <sup>3</sup>	110 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

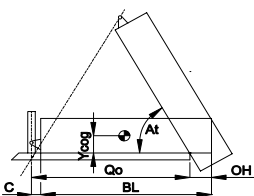
Bracket options:	015BRA10 & 015BRA13
Mounting instructions:	CYL-0031
Oil specifications:	OIL-0011
Spec sheet explanation:	CYL-0041

Configuration

Extension	1	2	3	4	5	6	7	Total
Effective diameter [mm]	169	149	129	110	91			6230
Stroke* [mm]	1230	1250	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  
 $stroke \times 60 / Qo$

BL [mm]	200	8200		200	7850		200	7500	
OH [mm]	46	500	800	48	500	800	50	500	800
At [°]	46	48	50	48	50	52	50	53	55
Ycog [mm]	34	37	40	35	38	42	36	40	45
	36	39	44	38	41	47	40	44	51
	39	43	48	41	46	52	43	49	

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

Pos.	Part no.	Description	Qty.
C01	71839131	DUST COVER FE 169-5/179-5/191-6	1
P01	74462471	PISTON FL3 S 091-1475-HC	1
P02	71853091K	SLIDER FL 091 (2 X 1/2) A22	1
P03	71851091K	OUTER STOPRING FL 091 A22	1
P04	71822091	BOTTOM PLATE PISTON FL 091	1
P05	01745012K	CIRCLIP 82 DIN 472 (87.5x2.5)	1
P06	71870215K	O-RING PISTON BOTTOM 091	1
P07	71847200	PISTON EYE SPH. FL3 091 L=075	1
P08	01226430K	O-RING 72.62 X 3.53 MM	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

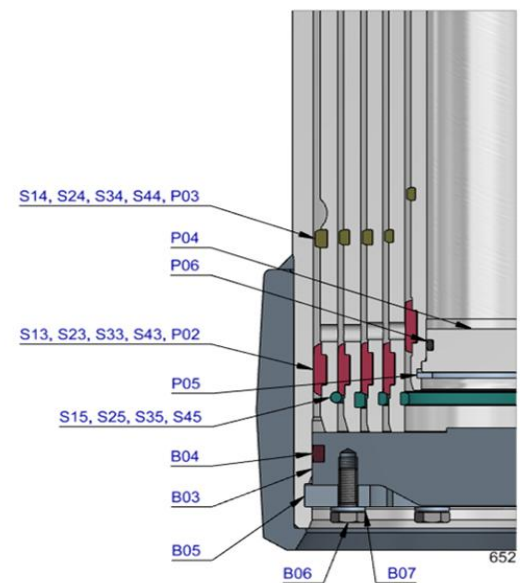
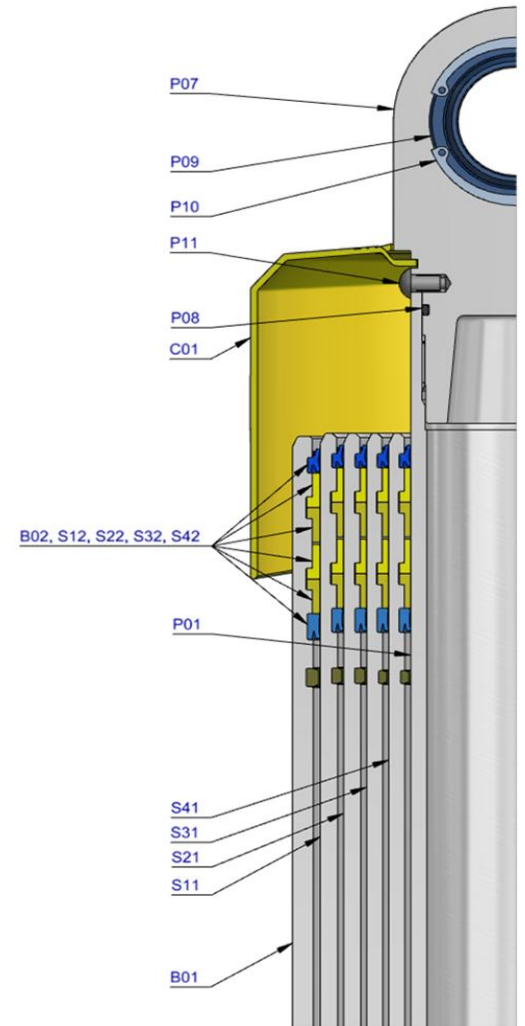
S41	74603440	STAGE FL2 110-1440	1
S42	71802110K	PACKSET FL 110	1
S43	71853110K	SLIDER FL 110 (2 X 1/2) A22	1
S44	71851110K	OUTER STOPRING FL 110 A22	1
S45	71852110K	LIFTRING FL 110 A22	1

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

71908650K	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.