

## Specifications

Max. working pressure	190 bar
Weight	344 kg
Working volume	148 L
Total volume	158 L
Max. cyl. load (start tipping)	345 kN
Max. cyl. load (end of stroke) <sup>2</sup>	148 kN
Max. cyl. load (end of stroke) <sup>3</sup>	173 kN

## Max. pump flow

With KO <sup>1</sup>	190 L/min
Without KO <sup>1</sup>	170 L/min
With KO <sup>1</sup> below -20°C	133 L/min
Without KO <sup>1</sup> below -20°C	119 L/min

## Tipping time

With KO <sup>1</sup>	47 sec
Without KO <sup>1</sup>	52 sec
With KO <sup>1</sup> below -20°C	67 sec
Without KO <sup>1</sup> below -20°C	74 sec
Allowable lowering time	47 sec

Extension	1	2	3	4	5	6	7	Total
Effective diameter [mm]	214	191	169	149	129	110		7000
Stroke* [mm]	1150	1170	1170	1170	1170	1170		

## 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.

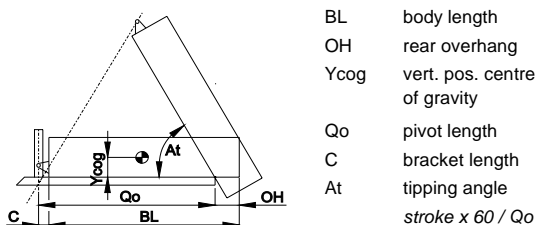
## Related documentation

Bracket options: 015BRA10 & 015BRA13

Mounting instructions: CYL-0031

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

## Tipping weight



BL [mm]	9300			9050			8800		
OH [mm]	200	500	800	200	500	800	200	500	800
At [°]	45	47	48	46	48	50	48	50	52
Ycog [mm]									
600	49	53	57	50	54	58	52	55	60
900	52	56	61	54	58	64	55	60	66
1200	56	61	67	57	63	70	59	65	74

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>

Pos.	Part no.	Description	Qty.
C01	71839151	DUST COVER FE 214-6	1
P01	74403441	PISTON FL2 S 110-1445-HC	1
P02	71853110 K	SLIDER FL 110 (2 X 1/2) A22	1
P03	71851110 K	OUTER STOPRING FL 110 A22	1
P04	71822110	BOTTOM PLATE PISTON FL 110	1
P05	01745050 K	CIRCLIP 100 DIN 472 (105.5x3.0)	1
P06	71870220 K	O-RING PISTON BOTTOM 110	1
P07	71847300	PISTON EYE SPH. FL 110 MK2 L=075	1
P08	01226538 K	O-RING 91.67 X 3.53 MM NBR	1
P09	71875450 K	SPHERICAL BEARING D.50 MAINT. FREE	1
P10	01770560 K	CIRCLIP 75 DIN 472 (79.5x3.0)	1
P11	71875012	PIN ROUND HEAD GROOVED 8x15 mm	2

S51	74604370	STAGE FL2 129-1360	1
S52	71802129 K	PACKSET FL 129/HP 129	1
S53	71853129 K	SLIDER FL 129 (2 X 1/2) A22	1
S54	71851129 K	OUTER STOPRING FL 129 A22	1
S55	71852129 K	LIFTRING FL 129 A22	1

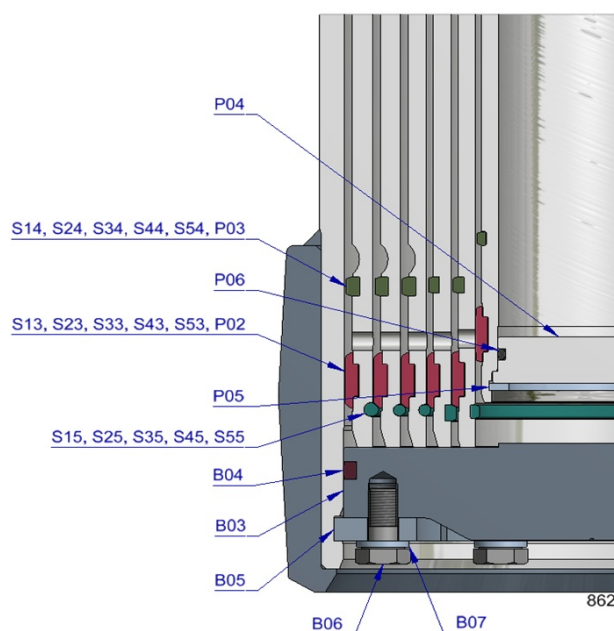
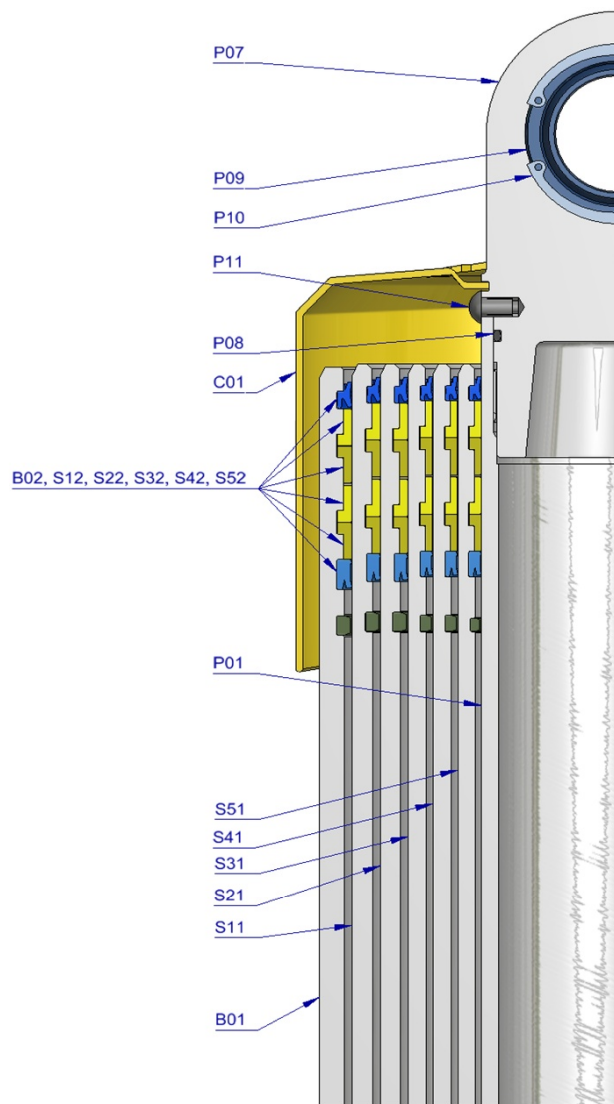
S41	74605370	STAGE FL2 149-1360	1
S42	71802149 K	PACKSET FL 149/HP 150	1
S43	71807151 K	SLIDER FL 149 A35	1
S44	71851149 K	OUTER STOPRING FL 149 A22	1
S45	71852149 K	LIFTRING FL 149 A22	1

S31	74606370	STAGE FL2 169-1360	1
S32	71802169 K	PACKSET FL 169	1
S33	71807171 K	SLIDER FL 169 A35	1
S34	71851169 K	OUTER STOPRING FL 169 A22	1
S35	71813169 K	LIFTRING FL 169x5	1

S21	74607370	STAGE FL2 191-1360	1
S22	71802191 K	PACKSET FL 191	1
S23	71807193 K	SLIDER FL 191 A35	1
S24	71851191 K	OUTER STOPRING FL 191 A22	1
S25	71813191 K	LIFTRING FL 191x5	1

S11	74608370	STAGE FL2 214-1360	1
S12	71802214 K	PACKSET FL 214	1
S13	71807216 K	SLIDER FL 214 A35	1
S14	71851214 K	OUTER STOPRING FL 214 A22	1
S15	71813214 K	LIFTRING FL 214x6	1

B01	74509378	BASE FL2 238-1411-4/4BSAE-700	1
B02	71802238 K	PACKSET FL 238	1
B03	71825440	BOTTOM PLATE FL2 238	1
B04	71870050 K	SEAL BOTTOM PLATE FL 238	1
B05	71820238	LOCKING PLATE FL 238	3
B06	01732020 K	BOLT HEX M12X25X1.25 SET 6 PCS	1
B07	01732523 K	WASHER SPRING M12 SET 6 PCS	1



### Seal kit complete

	71908860 K	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.