

## Specifications

Max. working pressure	250 bar
Weight	246 kg
Working volume	87 L
Total volume	94 L
Max. cyl. load (start tipping)	295 kN
Max. cyl. load (end of stroke) <sup>2</sup>	143 kN
Max. cyl. load (end of stroke) <sup>3</sup>	167 kN

## Max. pump flow

With KO <sup>1</sup>	220 L/min
Without KO <sup>1</sup>	162 L/min
With KO <sup>1</sup> below -20°C	154 L/min
Without KO <sup>1</sup> below -20°C	113 L/min

## Tipping time

With KO <sup>1</sup>	24 sec
Without KO <sup>1</sup>	32 sec
With KO <sup>1</sup> below -20°C	34 sec
Without KO <sup>1</sup> below -20°C	46 sec
Allowable lowering time	19 sec

Extension	1	2	3	4	5	6	7	Total
Effective diameter [mm]	179	157	137	118	99			5625
Stroke* [mm]	1100	1125	1130	1135	1135			

## 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.

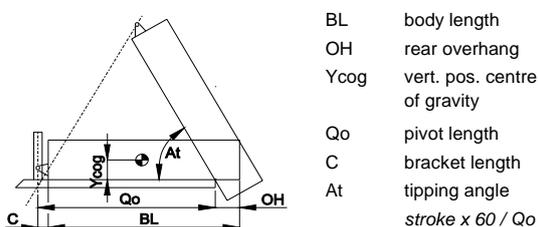
## Related documentation

Bracket options: 015BRA10 & 015BRA13

Mounting instructions: CYL-0031

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

## Tipping weight



BL [mm]	7400			7150			6900		
OH [mm]	200	500	800	200	500	800	200	500	800
At [°]	46	48	50	47	50	52	49	52	55
Ycog [mm]									
600	54	59	65	55	61	68	57	63	
900	58	64		60			62		
1200	63								

Tipping weight [ton] at maximum pressure of 250 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	71839131	DUST COVER FE 169-5/179-5/191-6	1
P01	70473371	PISTON MN2 S 099-1365-HD-HC	1
P02	70207099 K	SLIDER MN 099 (2 x 1/2) A35	1
P03	70216099 K	OUTER STOPRING MN 099 A22	2
P04	70230099	BOTTOM PLATE PISTON MN 099 MK2 HD	1
P05	01745042 K	CIRCLIP 85 DIN 472 (90.5x3.0)	1
P06	70260215 K	O-RING PISTON BOTTOM 099	1
P07	70235401	PISTON EYE SPH. MN 099 MK2 L=075 GR	1
P08	70260115 K	O-RING 82.14 X 3.53 MM	1
P09	01770085 K	SPHERICAL BEARING D.50 DO GREASED	1
P10	01770560 K	CIRCLIP 75 DIN 472 (79.5x3.0)	1
P11	71875012	PIN ROUND HEAD GROOVED 8x15 mm	2
P12	56288044 K	GREASE NIPPLE M8x1 DIN 71412	1
P13	01317670 K	GREASER PROTECTION CAP	1

S41	70674370	STAGE MN2 118-1360-HD	1
S42	70202118 K	PACKSET MN 118 TANDEM SEAL	1
S43	70207118 K	SLIDER MN 118 (2 x 1/2) A35	1
S44	70216118 K	OUTER STOPRING MN 118 A22	2
S45	70217118 K	LIFTRING MN 118 A22	1

S31	70675370	STAGE MN2 137-1360-HD	1
S32	70202137 K	PACKSET MN 137 TANDEM SEAL	1
S33	70207137 K	SLIDER MN 137 A35	1
S34	70216137 K	OUTER STOPRING MN 137 A22	2
S35	70217137 K	LIFTRING MN 137 A22	1

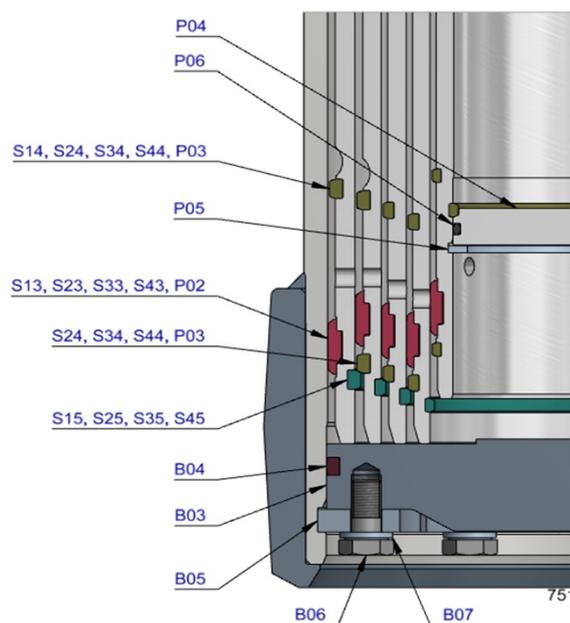
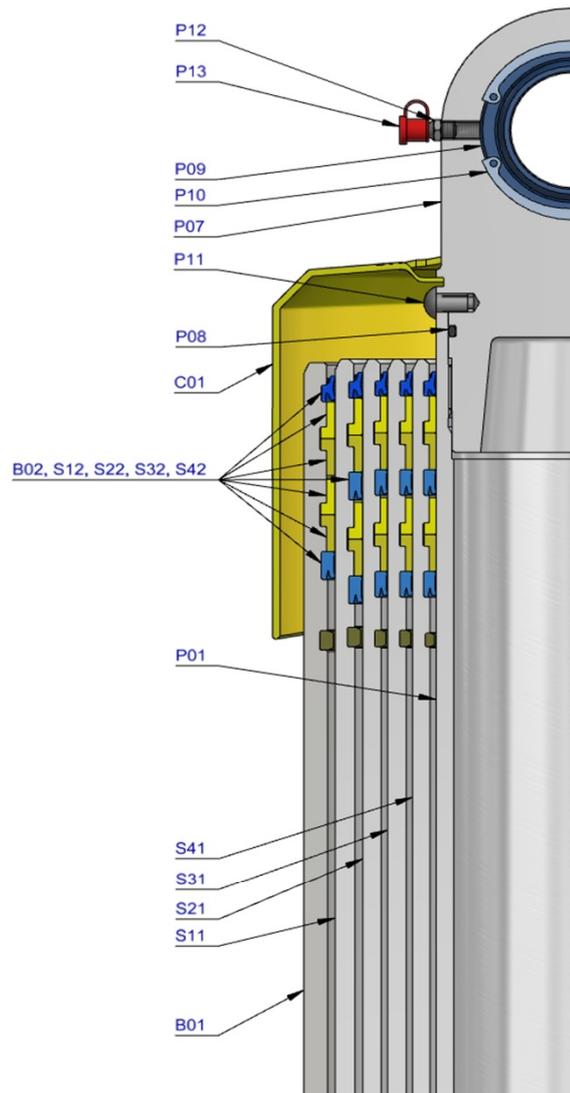
S21	70676370	STAGE MN2 157-1360-HD	1
S22	70202157 K	PACKSET MN 157 TANDEM SEAL	1
S23	70207157 K	SLIDER MN 157 A35	1
S24	70216157 K	OUTER STOPRING MN 157 A22	2
S25	70217157 K	LIFTRING MN 157 A22	1

S11	70677370	STAGE MN2 179-1360-HD	1
S12	70202179 K	PACKSET MN 179 TANDEM SEAL	1
S13	70207179 K	SLIDER MN 179 A35	1
S14	70216179 K	OUTER STOPRING MN 179 A22	1
S15	70217179 K	LIFTRING MN 179 A22	1

B01	70378377	BASE MN2 202-1411-4/4BSAE-390-HD	1
B02	70203202 K	PACKSET MN 202	1
B03	70225365	BOTTOM PLATE MN2 202	1
B04	70270202 K	SEAL BOTTOM PLATE MN 202	1
B05	70220205	LOCKING PLATE MN2 202	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

	71907751 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.