

## Specifications

Max. working pressure <sup>4</sup>	170 bar
Weight	291 kg
Working volume	110 L
Total volume	119 L
Max. cyl. load (start tipping)	295 kN
Max. cyl. load (end of stroke) <sup>2</sup>	89 kN
Max. cyl. load (end of stroke) <sup>3</sup>	104 kN

## Max. pump flow

With KO <sup>1</sup>	190 L/min
Without KO <sup>1</sup>	162 L/min
With KO <sup>1</sup> below -20°C	133 L/min
Without KO <sup>1</sup> below -20°C	113 L/min

## Tipping time

With KO <sup>1</sup>	35 sec
Without KO <sup>1</sup>	41 sec
With KO <sup>1</sup> below -20°C	50 sec
Without KO <sup>1</sup> below -20°C	59 sec
Allowable lowering time	35 sec

Extension	1	2	3	4	5	6	7	Total
Effective diameter [mm]	179	157	137	118	99			7080
Stroke* [mm]	1410	1430	1430	1430	1380			

## 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. • <sup>4</sup> Max. working pressure does not relate to max. cyl. load (end of stroke); substantial unloading required before tipping to end of stroke.

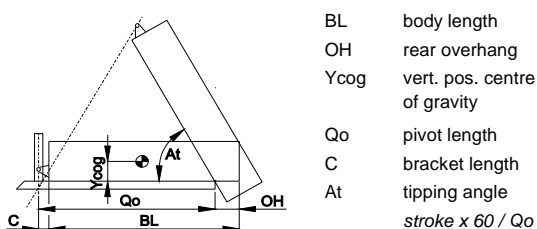
## Related documentation

Bracket options: 015BRA10 & 015BRA13

Mounting instructions: CYL-0031

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

## Tipping weight



BL [mm]	9400			9150			8900		
OH [mm]	200	500	800	200	500	800	200	500	800
At [°]	45	47	49	47	48	50	48	50	52
Ycog [mm]									
600	35	37	40	36	38	41	36	39	42
900	37	40	43	38	41	44	39	42	46
1200	39	42	46	40	44	48	41	45	50

Tipping weight [ton] at maximum pressure of 170 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	70463693	PISTON MN2 S 099-1705-HC (SR=50)	1
P02	70209310 K	SLIDER MN 099 (2 x 1/2) A22	1
P03	70216099 K	OUTER STOPRING MN 099 A22	1
P04	70224099	BOTTOM PLATE PISTON MN 099	1
P05	01770580 K	CIRCLIP 90 DIN 472 (95.5x3.5)	1
P06	70260215 K	O-RING PISTON BOTTOM 099	1
P07	70235400	PISTON EYE SPH. MN 099 MK2 L=075	1
P08	70260115 K	O-RING 82.14 X 3.53 MM	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

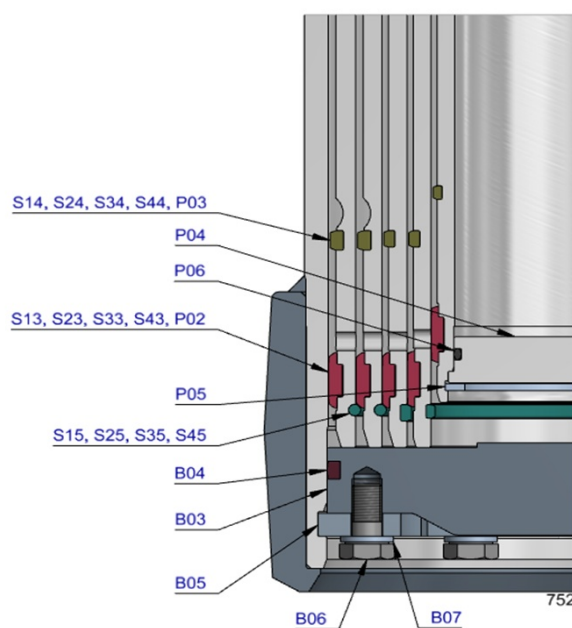
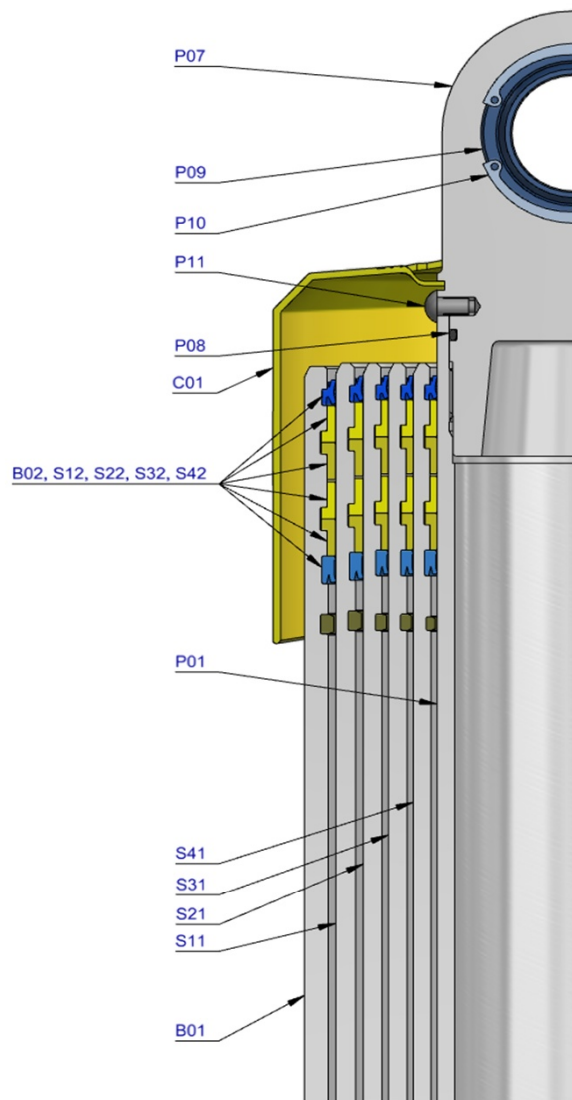
S41	70664641	STAGE MN2 118-1640-HC	1
S42	70203118 K	PACKSET MN 118	1
S43	70209320 K	SLIDER MN 118 (2 x 1/2) A22	1
S44	70216118 K	OUTER STOPRING MN 118 A22	1
S45	70217118 K	LIFTRING MN 118 A22	1

S31	70665641	STAGE MN2 137-1640-HC	1
S32	70203137 K	PACKSET MN 137	1
S33	70207137 K	SLIDER MN 137 A35	1
S34	70216137 K	OUTER STOPRING MN 137 A22	1
S35	70217137 K	LIFTRING MN 137 A22	1

S21	70666641	STAGE MN2 157-1640-HC	1
S22	70203157 K	PACKSET MN 157	1
S23	70207157 K	SLIDER MN 157 A35	1
S24	70216157 K	OUTER STOPRING MN 157 A22	1
S25	70213157 K	LIFTRING MN 157x5 MK2	1

S11	70667641	STAGE MN2 179-1640-HC	1
S12	70203179 K	PACKSET MN 179	1
S13	70207179 K	SLIDER MN 179 A35	1
S14	70216179 K	OUTER STOPRING MN 179 A22	1
S15	70213179 K	LIFTRING MN 179x5 MK2	1

B01	70368658	BASE MN2 202-1691-4/4BSAE-700	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

	71907750 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.