

\* 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 <sup>4</sup>	170 bar	With KO <sup>1</sup>	190 L/min	With KO <sup>1</sup>	35 sec
Weight	290 kg	Without KO <sup>1</sup>	162 L/min	Without KO <sup>1</sup>	41 sec
Working volume	110 L	With KO <sup>1</sup> below -20°C	133 L/min	With KO <sup>1</sup> below -20°C	50 sec
Total volume	119 L	Without KO <sup>1</sup> below -20°C	113 L/min	Without KO <sup>1</sup> below -20°C	59 sec
Max. cyl. load (start tipping)	295 kN			Allowable lowering time	35 sec
Max. cyl. load (end of stroke) <sup>2</sup>	91 kN				
Max. cyl. load (end of stroke) <sup>3</sup>	106 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.
- <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**

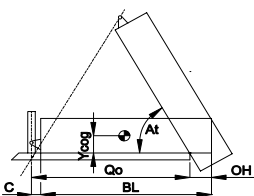
- Bracket options: 015BRA10 & 015BRA13
- Mounting instructions: CYL-0031
- Oil specifications: OIL-0011
- Spec sheet explanation: CYL-0041

**Configuration**

Extension	1	2	3	4	5	6	7	Total
Effective diameter [mm]	179	157	137	118	99			7030
Stroke* [mm]	1410	1430	1430	1430	1330			

For detailed tipping calculations please refer to: <https://tipper.hyva.com>

**Tipping weight**



- 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]	9300			9100			8900		
OH [mm]	200	500	800	200	500	800	200	500	800
At [°]	45	47	49	46	48	50	48	49	51
Ycog [mm]	600			900			1200		
	35	37	40	36	38	41	36	39	42
	37	40	43	38	41	44	38	42	46
	39	43	47	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

Pos.	Part no.	Description	Qty.
C01	71839131	DUST COVER FE 169-5/179-5/191-6	1
P01	70433653	PISTON MN3 S 099-1645-HC (SR=100)	1
P02	70209310K	SLIDER MN 099 (2 x 1/2) A22	1
P03	70216099K	OUTER STOPRING MN 099 A22	1
P04	70224099	BOTTOM PLATE PISTON MN 099	1
P05	01770580K	CIRCLIP 90 DIN 472 (95.5x3.5)	1
P06	70260215K	O-RING PISTON BOTTOM 099	1
P07	70235400	PISTON EYE SPH. MN3 099 L=075	1
P08	70260115K	O-RING 82.14 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	70664640	STAGE MN2 118-1640	1
S42	70203118K	PACKSET MN 118	1
S43	70209320K	SLIDER MN 118 (2 x 1/2) A22	1
S44	70216118K	OUTER STOPRING MN 118 A22	1
S45	70217118K	LIFTRING MN 118 A22	1

S31	70665640	STAGE MN2 137-1640	1
S32	70203137K	PACKSET MN 137	1
S33	70207137K	SLIDER MN 137 A35	1
S34	70216137K	OUTER STOPRING MN 137 A22	1
S35	70217137K	LIFTRING MN 137 A22	1

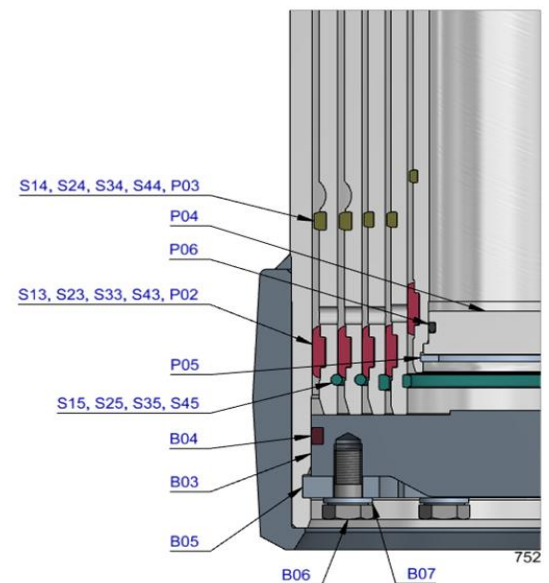
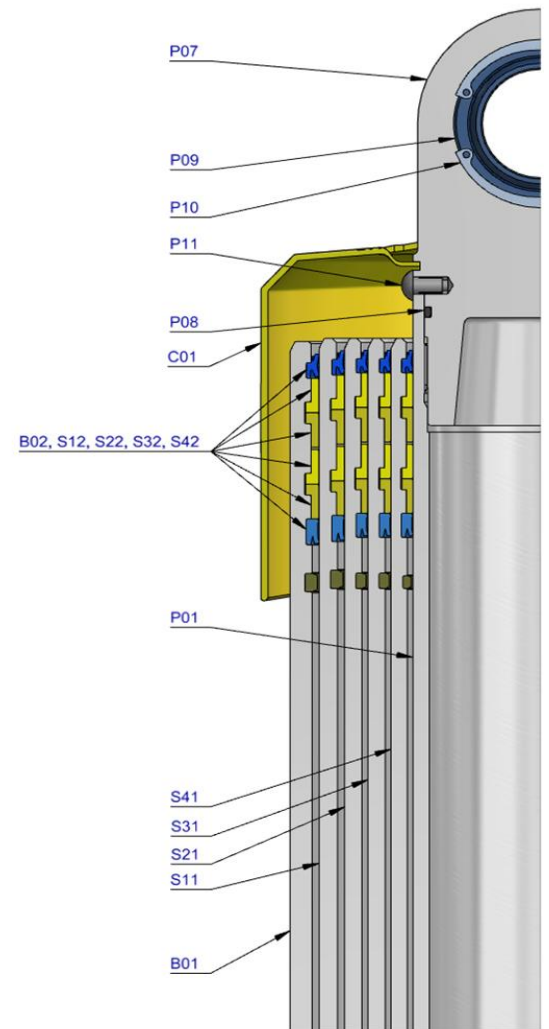
S21	70666640	STAGE MN2 157-1640	1
S22	70203157K	PACKSET MN 157	1
S23	70207157K	SLIDER MN 157 A35	1
S24	70216157K	OUTER STOPRING MN 157 A22	1
S25	70213157K	LIFTRING MN 157x5 MK2	1

S11	70667640	STAGE MN2 179-1640	1
S12	70203179K	PACKSET MN 179	1
S13	70207179K	SLIDER MN 179 A35	1
S14	70216179K	OUTER STOPRING MN 179 A22	1
S15	70213179K	LIFTRING MN 179x5 MK2	1

B01	70368654	BASE MN2 202-1691-4/4BSAE-290	1
B02	70203202K	PACKSET MN 202	1
B03	70225365	BOTTOM PLATE MN2 202	1
B04	70270202K	SEAL BOTTOM PLATE MN 202	1
B05	70220205	LOCKING PLATE MN2 202	3
B06	01732020K	BOLT HEX M12X25X1.25 SET 6 PCS	1
B07	01732523K	WASHER SPRING M12 SET 6 PCS	1

Seal kit complete

71907750K	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.