

## Specifications

Max. working pressure <sup>4</sup>	210 bar
Weight	436 kg
Working volume	129 L
Total volume	135 L
Max. cyl. load (start tipping)	245 kN
Max. cyl. load (end of stroke) <sup>2</sup>	71 kN
Max. cyl. load (end of stroke) <sup>3</sup>	83 kN

## Max. pump flow

With KO <sup>1</sup>	170 L/min
Without KO <sup>1</sup>	119 L/min
With KO <sup>1</sup> below -20°C	119 L/min
Without KO <sup>1</sup> below -20°C	83 L/min

## Tipping time

With KO <sup>1</sup>	46 sec
Without KO <sup>1</sup>	65 sec
With KO <sup>1</sup> below -20°C	66 sec
Without KO <sup>1</sup> below -20°C	93 sec
Allowable lowering time	45 sec

Extension	1	2	3	4	5	6	7	Total
Effective diameter [mm]	169	149	129	110	85			9530
Stroke* [mm]	1890	1910	1910	1910	1910			

## 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.

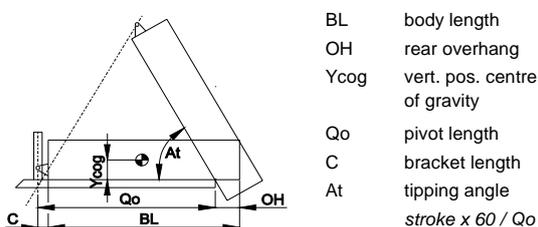
## Related documentation

Bracket options: 015BRA10 & 015BRA12

Mounting instructions: CYL-0030

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

## Tipping weight



	12700			12150			11600			
BL [mm]	200	500	800	200	500	800	200	500	800	
OH [mm]	44	45	46	46	47	49	49	50	51	
At [°]										
Ycog [mm]										
Qo	600	31	33	34	32	34	35	33	35	37
C	900	32	34	36	33	35	37	35	37	39
At	1200	34	35	37	35	37	39	36	39	41

Tipping weight [ton] at maximum pressure of 210 bar for a vertically mounted cylinder and C is 229 mm

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

# Alpha series - Front end cylinder with outer cover

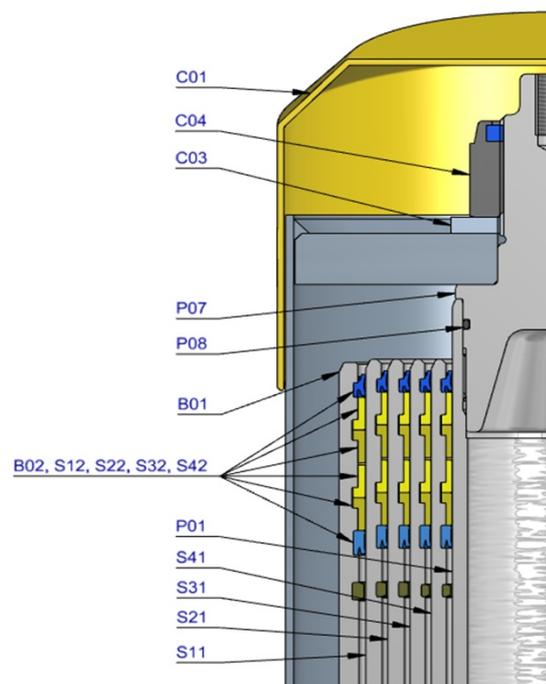


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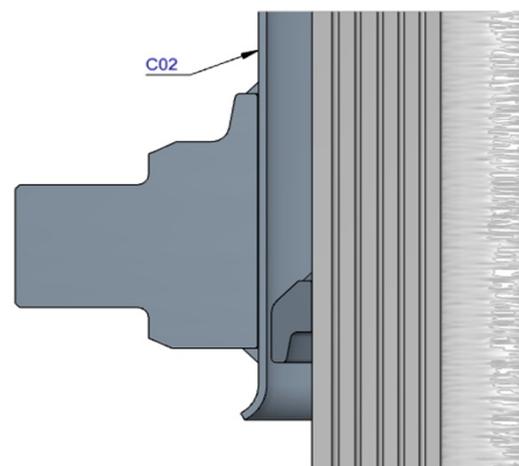
Item no.

70596934

Pos.	Part no.	Description	Qty.
C01	71839030	DUST COVER FC LOW 15-241	1
C02	71709963	COVER 241-1995 PIN60 A340 FIX	1
C03	01702956 K	WASHER M48 DIN 125B ZP	1
C04	01702907 K	TOPNUT NYLOC M48x3 DIN 985 ZP	1
P01	74432921	PISTON FL2 S 085-2195-HC	1
P02	71853085 K	SLIDER FL 085 (2 X 1/2) A22	1
P03	71851085 K	OUTER STOPRING FL 085 A22	1
P04	75322085	BOTTOM PLATE PISTON 085	1
P05	01770560 K	CIRCLIP 75 DIN 472 (79.5x3.0)	1
P06	75372085 K	O-RING PISTON BOTTOM HP 085	1
P07	71848150	PISTON HEAD FL 085 MK2	1
P08	01225807 K	O-RING 66.27 X 3.53 MM	1



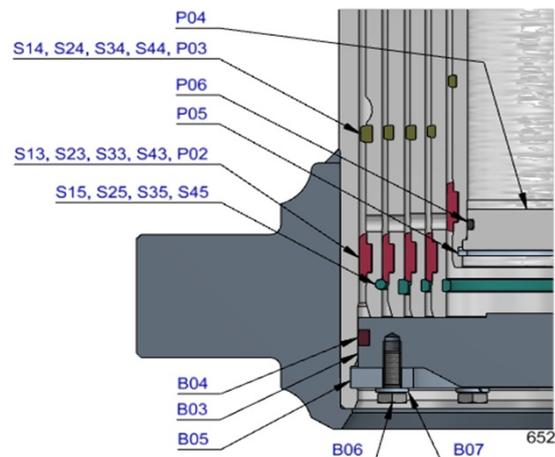
S41	74633920	STAGE FL2 110-2190 ID90	1
S42	75302110 K	PACKSET HP 110	1
S43	71853110 K	SLIDER FL 110 (2 X 1/2) A22	1
S44	71851110 K	OUTER STOPRING FL 110 A22	1
S45	71850111 K	INNER STOPRING/LIFTRING FL 110 ID 90 A22	1



S31	74604920	STAGE FL2 129-2190	1
S32	71802129 K	PACKSET FL 129/HP 129	1
S33	71853129 K	SLIDER FL 129 (2 X 1/2) A22	1
S34	71851129 K	OUTER STOPRING FL 129 A22	1
S35	71852129 K	LIFTRING FL 129 A22	1

S21	74605920	STAGE FL2 149-2190	1
S22	71802149 K	PACKSET FL 149/HP 150	1
S23	71807151 K	SLIDER FL 149 A35	1
S24	71851149 K	OUTER STOPRING FL 149 A22	1
S25	71852149 K	LIFTRING FL 149 A22	1

S11	74606920	STAGE FL2 169-2190	1
S12	71802169 K	PACKSET FL 169	1
S13	71807171 K	SLIDER FL 169 A35	1
S14	71851169 K	OUTER STOPRING FL 169 A22	1
S15	71813169 K	LIFTRING FL 169x5	1



B01	74507922R1895	BASE FL2 191-2233-4/4BSAE-190-90-C242	1
B02	71802191 K	PACKSET FL 191	1
B03	71825430	BOTTOM PLATE FL2 191	1
B04	71870040 K	SEAL BOTTOM PLATE FL 191	1
B05	71820195	LOCKING PLATE FL2 191	3
B06	01732055 K	BOLT HEX M8X20X1.25 SET 6 PCS	1
B07	01732559 K	WASHER SPRING M8 SET 6 PCS	1

## Seal kit complete

	71908652 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.

For repair instructions see: CYL-0040. Serial no. is located on type plate and near type plate support.