

## 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.

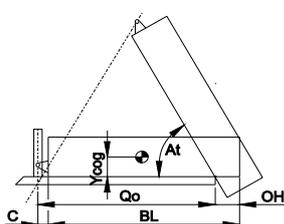
## Related documentation

Bracket options: 015BRA10 & 015BRA12

Mounting instructions: CYL-0030

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

## Tipping weight



BL	body length
OH	rear overhang
Ycog	vert. pos. centre of gravity
Qo	pivot length
C	bracket length
At	tipping angle
	stroke x 60 / Qo

	12700			12150			11600		
	BL [mm]	OH [mm]	At [°]	BL [mm]	OH [mm]	At [°]	BL [mm]	OH [mm]	At [°]
Ycog [mm]									
600	31	33	34	32	34	35	33	35	37
900	32	34	36	33	35	37	35	37	39
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

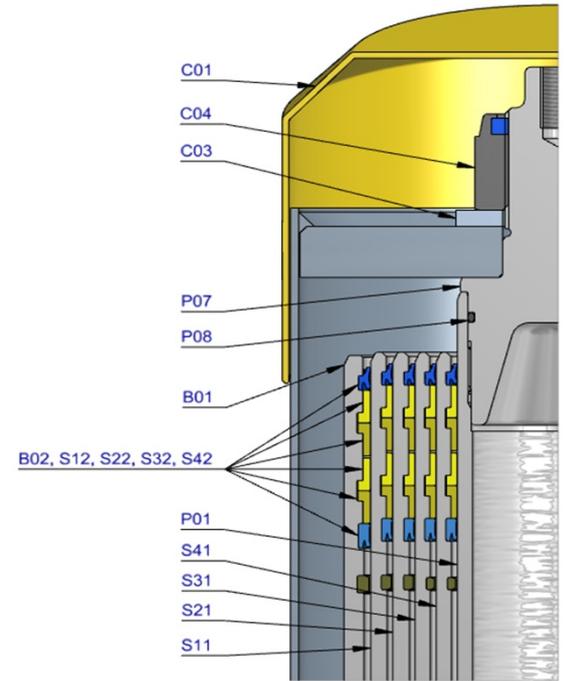


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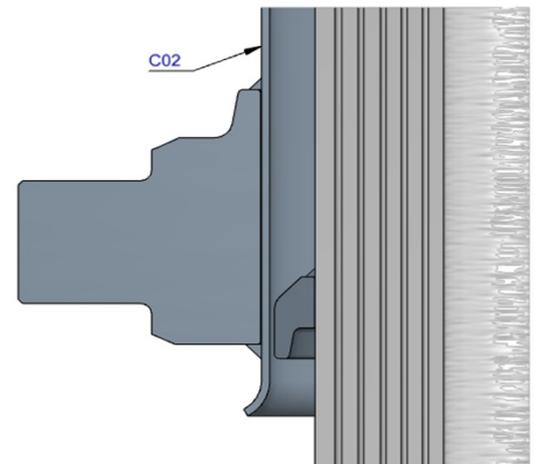
Item no.

70596928

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



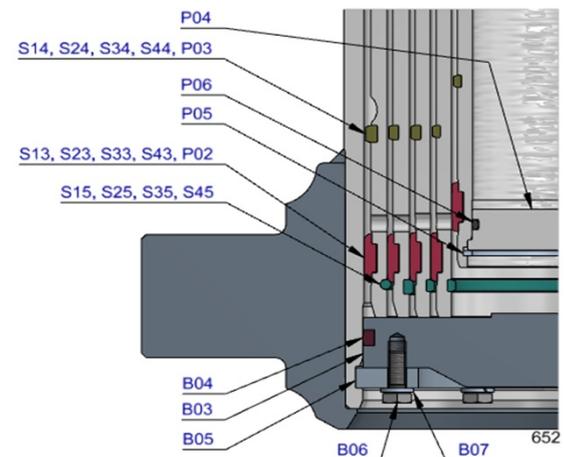
S41	74633920	STAGE FL2 110-2190 ID90	1
S42	75302110 K	PACKSET HP 110	1
S43	71853110 K	SLIDER FL 110 (2 X 1/2) A22	1
S44	71851110 K	OUTER STOPRING FL 110 A22	1
S45	71850111 K	INNER STOPRING/LIFTRING FL 110 ID 90 A22	1



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	74507920R1895	BASE FL2 191-2233-4/4BSAE-190-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.