

# FRONT END TIPPING SOLUTIONS

# ALPHA WET KIT CATALOGUE



**HYVA**<sup>®</sup> TIPPING  
SOLUTIONS



<b>TIPPING SOLUTIONS INFORMATION</b> .....	4
<b>OIL TANKS</b>	
140CMT01 - CRADLE MOUNTED TANKS .....	7
140RMT01 - REAR MOUNTED TANKS .....	9
140TMT01 - TOP MOUNTED TANKS .....	11
140SMT01 - SIDE MOUNTED TANKS ALPHA STANDARD .....	13
140SMT02 - SIDE MOUNTED TANKS ALPHA PLUS .....	16
08102116 - HYVA AIR BREATHERS .....	19
RFILTE01 - HYVA RETURN FILTERS .....	20
<b>HYVA GEAR PUMP</b>	
145GPBRITE - HYVA GEAR PUMPS .....	21
<b>HYVA TIPPING VALVES</b>	
HT-1150-TNK-SAE .....	25
HT-1220-SAE .....	27
HT-1220-TNK .....	29
HT-2220-TNK .....	31
<b>HYVA KNOCK-OFF</b>	
14700506 - KNOCK-OFF STANDARD .....	33
14700575 - KNOCK-OFF HEAVY DUTY .....	34
<b>HYVA AIR CONTROLS</b>	
147AIR-51-52 AIR - CONTROLS ALU HOUSING .....	35
021AIR-51-52 AIR - AIR CONTROL PLASTIC HOUSING .....	37
<b>TECHNOLOGY</b> .....	39
<b>HYVA HOSES</b>	
00000LP-H - LOW PRESSURE HOSES .....	41
00000H-I - HIGH PRESSURE HOSES .....	42
<b>HYVA ADAPTERS</b>	
LPADAP01 - LOW PRESSURE ADAPTERS .....	44
HPADAP01 - HIGH PRESSURE ADAPTERS .....	47
<b>HYVA BRACKETS</b>	
015BRA10 - CHASSIS BRACKETS .....	53
015BRA11 - CHASSIS BRACKETS .....	54
015BRA12 - LIFTING BRACKETS .....	55
015BRA13 - TOP BRACKETS .....	56
<b>MARKETS</b> .....	57

# TIPPING SOLUTIONS

ALPHA Series delivers lighter, faster, safer and more efficient front end tipping solutions.

## Heritage, innovation and leadership

The ALPHA Series extends and consolidates Hyva's record of innovation and leadership in front end cylinders. This is the fifth generation of front end tipping solutions which Hyva has brought to the market in more than 30 years.

Development has focused on **optimising transport efficiency, safety and reliability** for the typical duty and conditions prevailing in each market segment.

Year	HYVA Cylinder	Operating Pressure	Dry Weight	Wet Weight
1990	162-4 at 170 bar	170	316	394
2005	149-4 at 190 bar	190	257	322
2014	137-4 at 250 bar	250	222	274

Note: Based on the same/equal lifting capacity

## Tried and tested

The ALPHA solution was reached only after extensive **research, design and analysis**.

Every design was laboratory tested to verify that performance matched design specification. And, **extensive field trials** were conducted in China, India and the UK.

## Solution approach to Technology development

The new ALPHA Series is more than a new hydraulic cylinder. The total system – **cylinder, brackets and wet kit** – has been re-designed and re-engineered for higher efficiency and safer operating at lower cost.

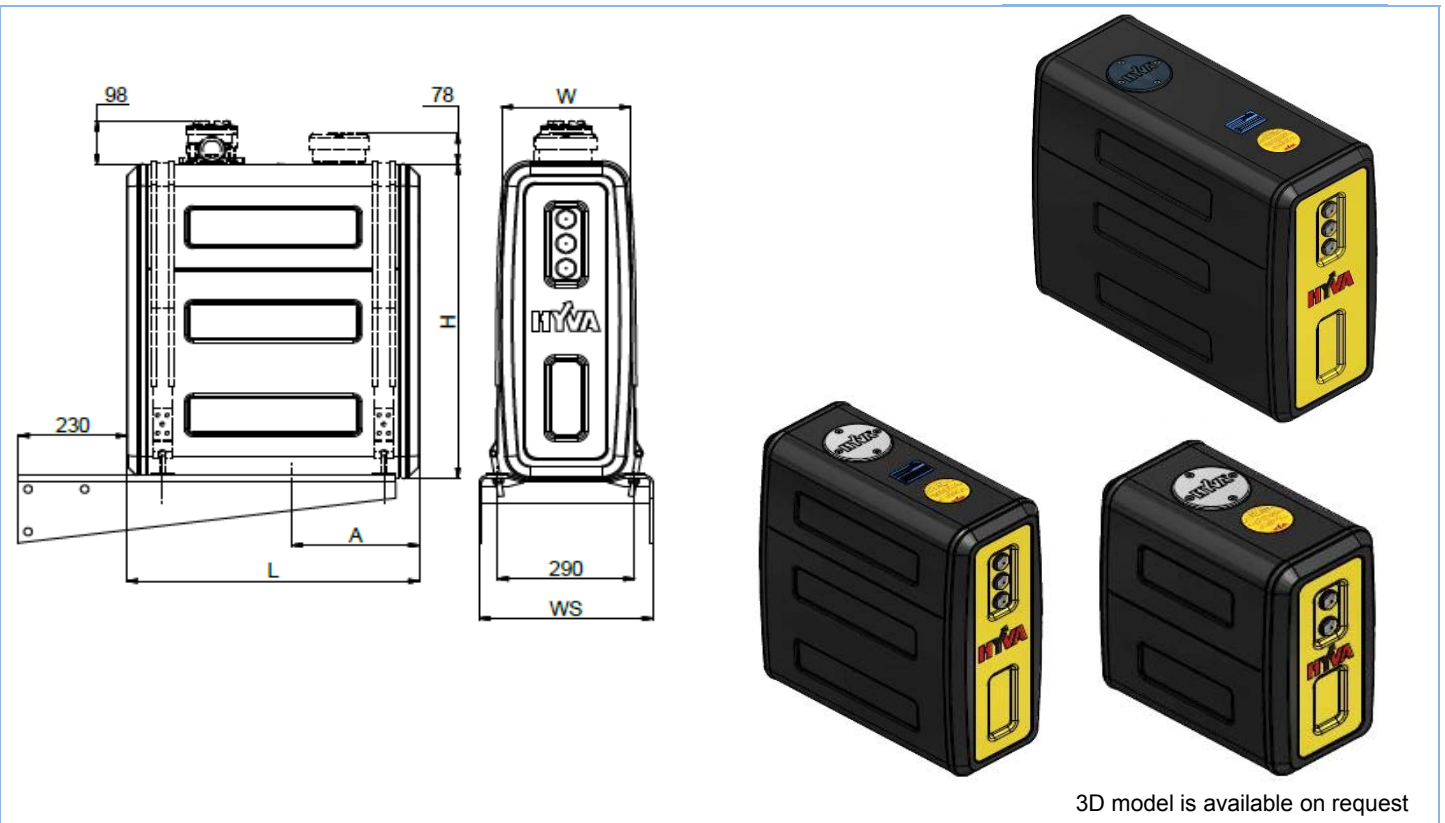
## Solution for each Market segment

Through customer visits and consultation, Hyva has taken time to understand the different requirements of different users in different application areas and to use this knowledge to create product ranges for **Construction, Transportation** and **Mining** segments.

## Performance, efficiency and customer value

Lower dead weight	higher payload
Faster tipping and lowering	shorter cycle time
Longer service intervals	increased operating time
Safer and more reliable	reduced downtime
Cost effective	can reduce operating costs
Lower oil & fuel consumption	environmentally friendly





3D model is available on request

### Specifications

Part Number		14016500	14016505	14016520	14016540	14016550	
Width	W	280	280	280	340	340	mm
	WS	368	368	368	400	400	mm
Height	H	525	525	700	700	700	mm
Length	L	500	620	620	710	820	mm
Outer-Section port distance	A	270	270	270	270	270	mm
Gross Volume		66	83	108	154	179	Liters
Working volume 1		47	59	86	122	142	Liters
Working volume 2		39	48	78	110	127	Liters
Working volume 3		-	-	69	97	113	Liters
Weight tank		17.7	22.1	27.3	33	36.4	Kg
Suction port		1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	BSPIT

### Technical notes

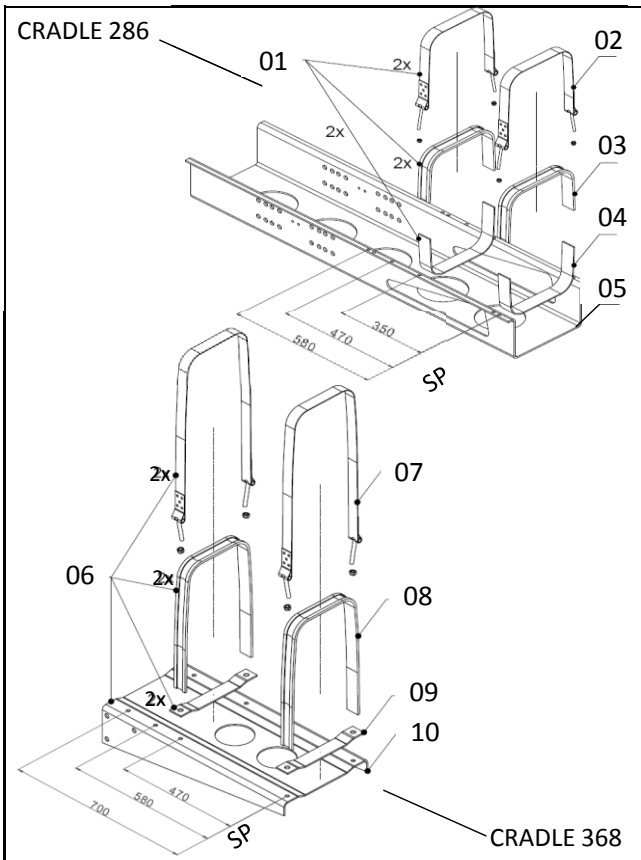
- Mount the tank according the mounting instructions
  - Fill the tank with the recommended hydraulic oil to the centre of the level indicator
  - Change the oil once a year
  - Replace the air breather and return filter element twice a year
  - Do not use the tank as a support or to stand on
  - Do not weld on the oil tank
- Paint spec: TNO00\_00001

### Related documentation

Mounting instructions: OIL-0021

Oil specifications: OIL-0011

### Support, straps & rubbers



			Part No. Oil Tank					Weight (Kg)
			140'16500	140'16505	140'16520	140'16540	140'16550	
Cradle 286 + tank in cradle	01	KIT full	14021010	•	•			1.8
	02	Strap	14020470	•	•			0.7
	03	Rubbers strap	14020475	•	•			0.1
		strap pos. (SP)		350	470			
04	Support rubbers	14020450	•	•			0.1	

Cradle to be ordered separate from the kit above:

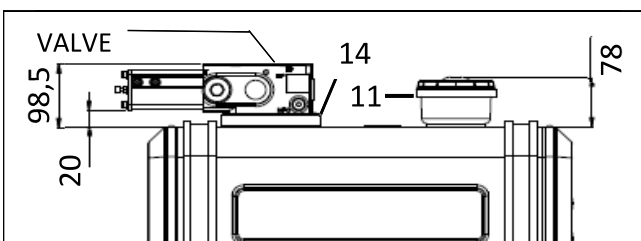
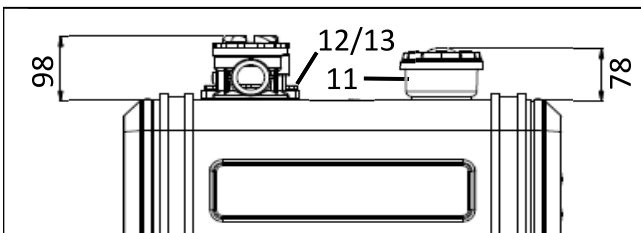
05	Cradle 286	01507538	•	•	•			36.7
----	------------	----------	---	---	---	--	--	------

Cradle 368 + support	06	KIT full	14021013	•	•			20.0	
		14021014			•			20.0	
		14021015				•	•	22.0	
	07	Strap	14020460	•	•			1.2	
			14020340			•		1.4	
			14020330				•	•	1.4
	08	Rubbers strap	14020465	•	•			0.2	
			14020335	350	470	470	560	670	0.2
	09	Rubbers support	14020485	•	•	•			0.1
			14020495				•	•	0.1
10	support	14020480	•	•	•			17.0	
		14020490				•	•	18.0	

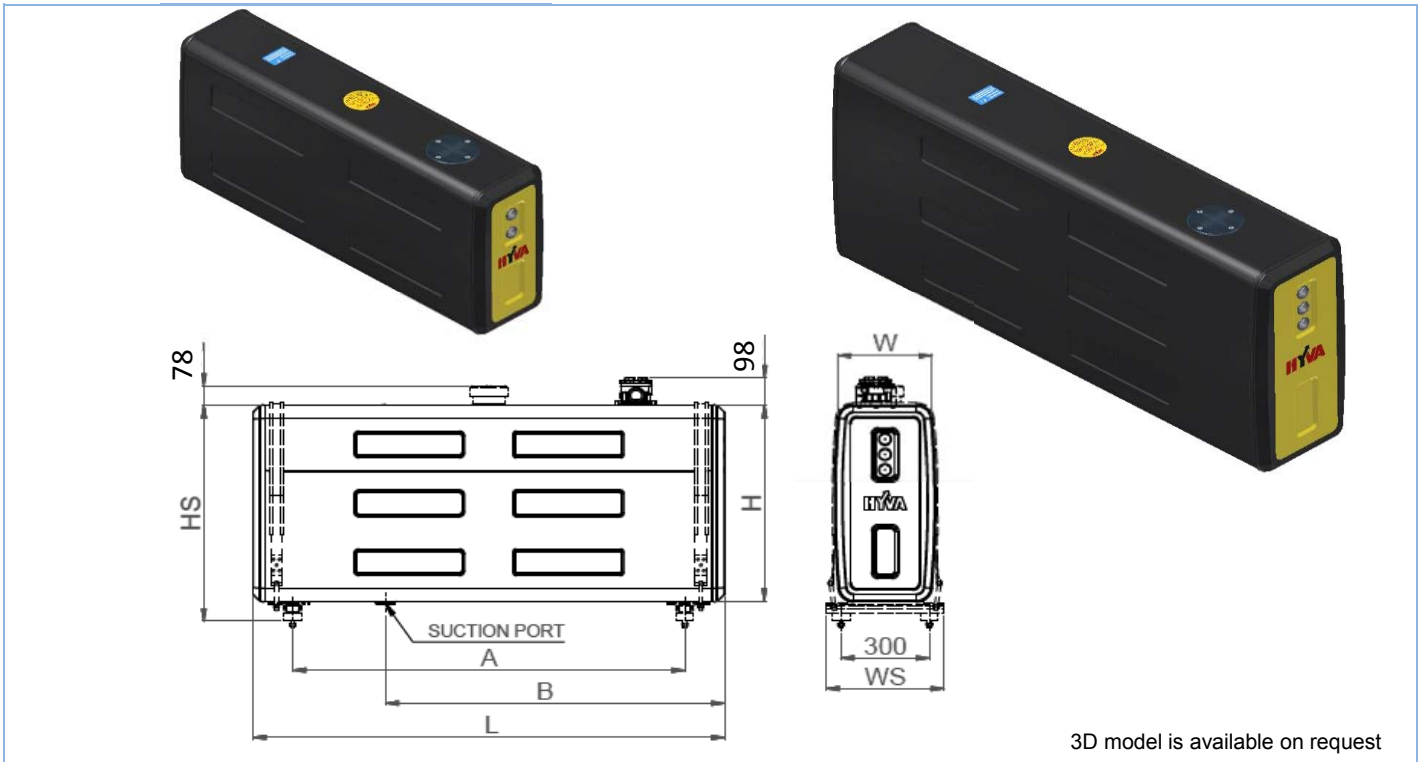
### Air breather & return filters



		Tank Height =		Tank Height = 700			Weight (Kg)
		140'16500	140'16505	140'16520	140'16540	140'16550	
11	Air Breather	08102116					0.4
12	Return filter 150L/m	14780302		14780304			1.0
13	Return filter high capacity 250L/m	14780332		14780334			1.2
14	Return filter valve mounting plate 150 L/m	14895919		14895921			1.9







### Specifications

Part Number		14016022	14016030	14016160	
Width	W	280	280	340	mm
Overall Width	WS	360	360	400	mm
Height	H	525	700	700	mm
Overall Height	HS	770	595	770	mm
Length	L	1286	1300	1600	mm
Distance between support	A-Min	860	950	1100	mm
	A-Max	940	1040	1330	mm
Outer-Suction port distance	B	878	885	1150	mm
Gross Volume		174	232	353	Liters
Working volume 1		125	185	280	Liters
Working volume 2		103	169	252	Liters
Working volume 3		-	148	223	Liters
Weight tank		34.6	49	63.1	Kg
Suction port		1.5"	1.5"	1.5"	BSPIT

### Technical notes

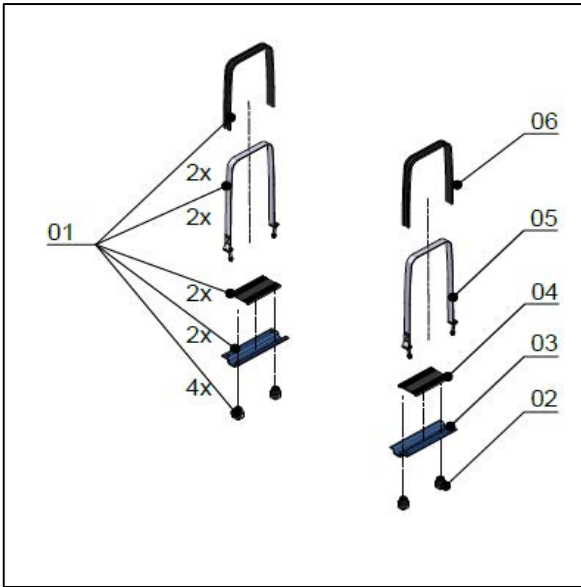
- Mount the tank according the mounting instructions
- Fill the tank with the recommended hydraulic oil to the centre of the level indicator
- Change the oil once a year
- Replace the air breather and return filter element twice a year
- Do not use the tank as a support or to stand on
- Do not weld on the oil tank

### Related documentation

Mounting instructions: OIL-0021

Oil specifications: OIL-0011

### Support, straps & rubbers

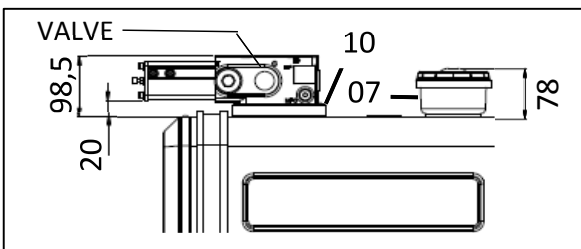
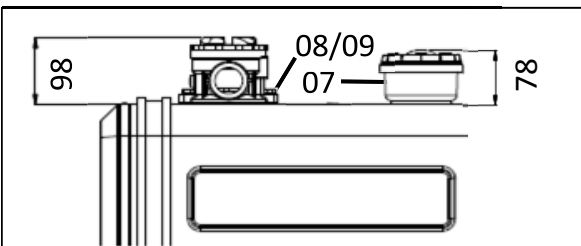


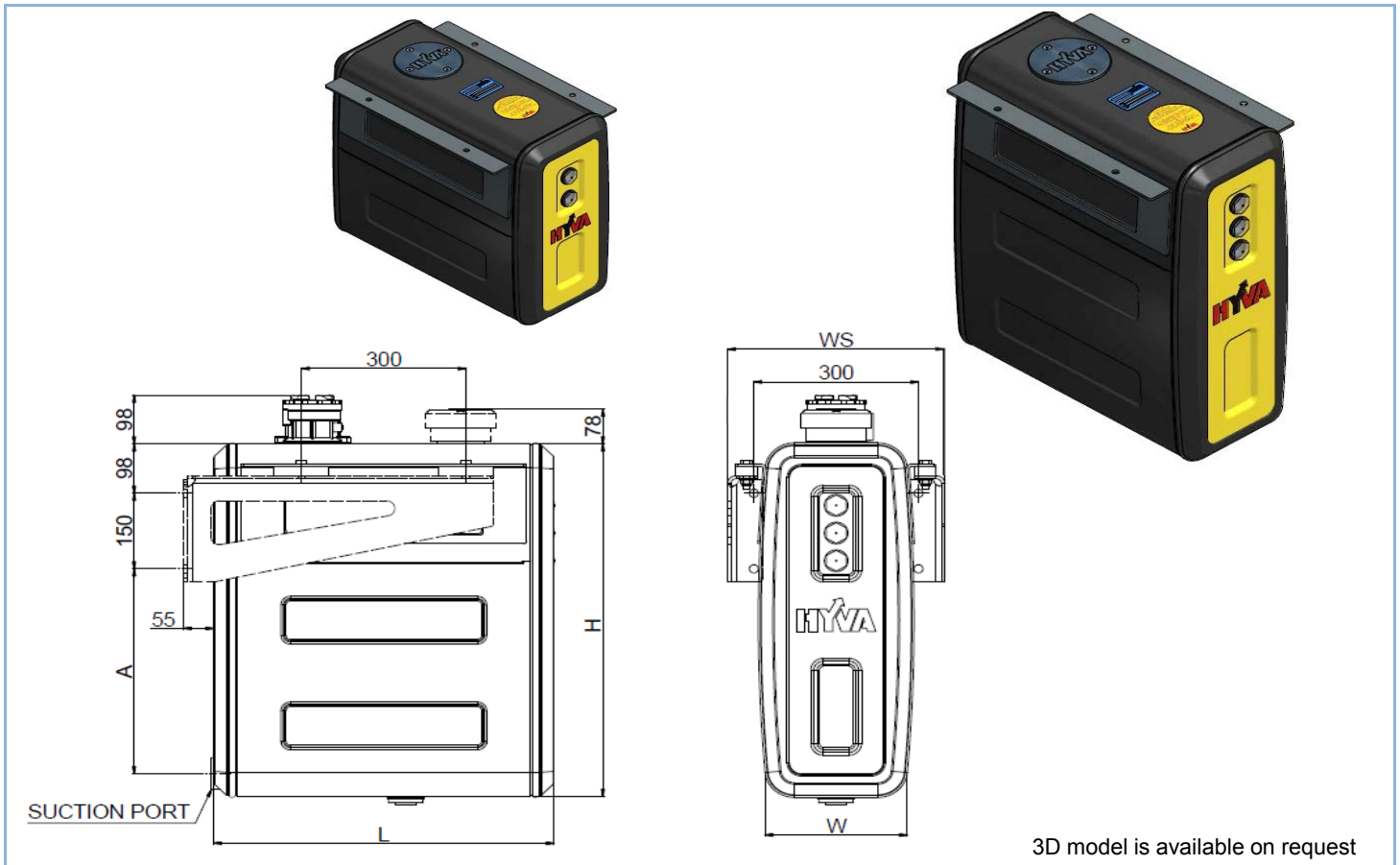
			Part No. Oil Tank			Weight (Kg)
			14016022	14016030	14016160	
01	Full KIT	14021020	•			7.8
		14021021		•		8.4
		14021022			•	8.9
02	Vibration Damper	08101078	•	•	•	0.2
03	Support Bracket	14221600	•	•		2.5
		14221605			•	2.8
04	Support Rubber	14221602	•	•	•	0.2
05	Strap	14020460	•			0.9
		14020330			•	1.5
		14020340		•		1.2
06	Rubber strap	14020465	•			0.2
		14020335		•	•	0.2

### Air breather & return filters



		Tank Height =525		Tank Height =700		Weight (Kg)
		14016022		14016030	14016160	
07	Air Breather	08102116				0.4
08	Return filter 150L/m	14780302		14780304		1
09	Return filter 250L/m	14780332		14780334		1.2
10	Return filter valve mounting plate 150 L/m	14895919		14895921		1.9





3D model is available on request

### Specifications

Part Number		14016515	14016525	
Width	W	280	280	mm
	WS	396	396	mm
Height	H	525	700	mm
Length	L	620	620	mm
Outer-Suction port distance	A	232	407	mm
Gross Volume		83	108	Liters
Working volume 1		59	86	Liters
Working volume 2		48	78	Liters
Working volume 3			69	Liters
Weight tank		29	34,2	Kg
Suction port		1"	1"	BSPIT

### Technical notes

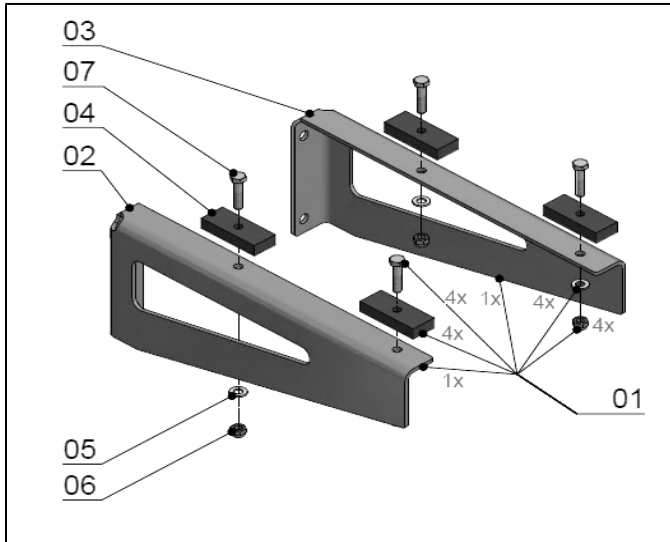
- Mount the tank according the mounting instructions
- Fill the tank with the recommended hydraulic oil to the centre of the level indicator
- Change the oil once a year
- Replace the air breather and return filter element twice a year
- Do not use the tank as a support or to stand on
- Do not weld on the oil tank
- Paint spec: TNO00\_00001

### Related documentation

Mounting instructions: OIL-0022

Oil specifications: OIL-0011

### Support, straps & rubbers

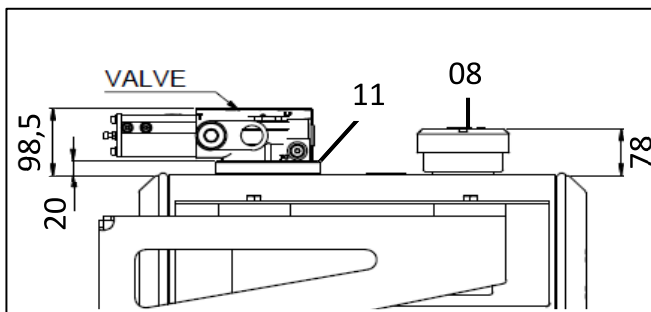
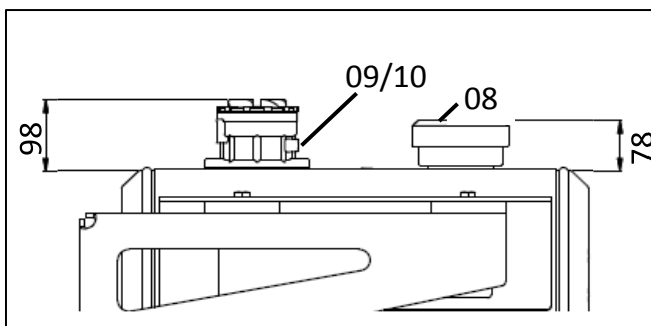


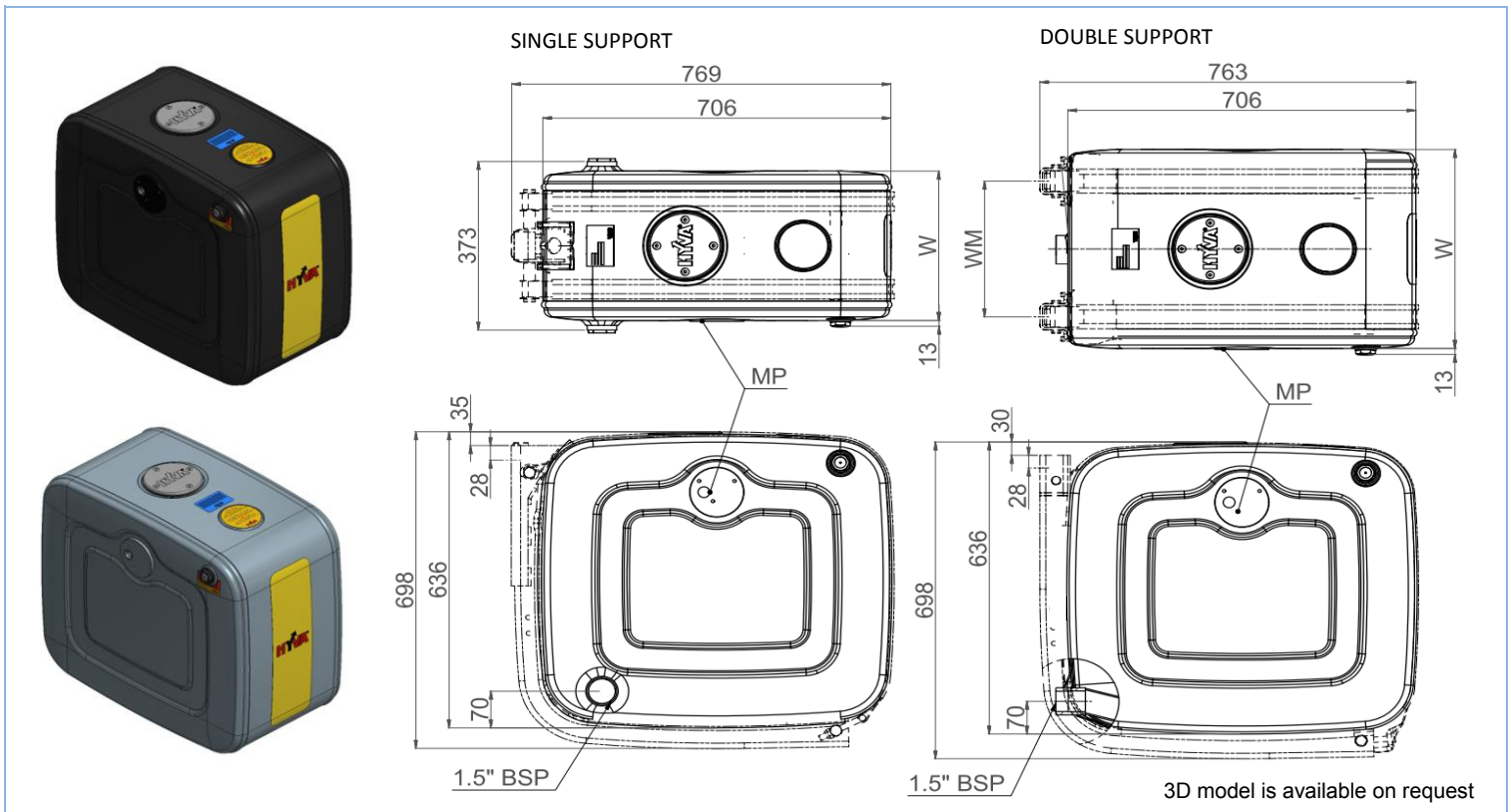
		Part no. Tank	Weight (Kg)
		14016515 & 14016525	
01	Full kit	14021030	10,6
02	Support left	14020500	5,0
03	Support right	14020502	5,0
04	Tank rubber	08101050	0,1
05	Washer	15020070	0,1
06	Locking Nut	15026535	0,1
07	Bolt	89250078	0,1

### Air breather & return filters



		Tank Height=525	Tank Height=700	Weight (Kg)
		14016515	14016525	
08	Air Breather	08102116		0,4
09	Return filter 150L/m	14780302	14780304	1,1
10	Return filter high capacity 250L/m	14780332	14780334	1,2
11	Return filter valve mounting plate 150 L/m	14895919	14795921	1,2





### Specifications

Part numbers Steel	14017246*	14017254	14017258	14017262	14017266	
Part numbers Aluminium	14018246*	14018254	14018258	14018262	14018266	
Support configuration	Single	Double	Double	Double	Double	
Width	330	380	440	495	580	mm
Mounting Width	WM-Min	-	195	220	250	mm
	WM-Max	-	225	275	330	mm
Gross Volume	132	155	179	201	236	Liters
Working volume 1	110	130	150	170	200	Liters
Weight tank (Steel)	30	32	34	36	39	kg
Weight tank (Aluminium)	14	15	16	17	18	kg
Suction port	1.5" (2x)	1.5"	1.5"	1.5"	1.5"	BSP

MP: Mounting plate for valve mounting with 3/4" threaded port.

\* Tank kit which includes tank, all support components and air breather. One of the two suction ports is closed with a permanent plastic plug.

All other holes are closed with temporary plastic plugs.

### Technical notes

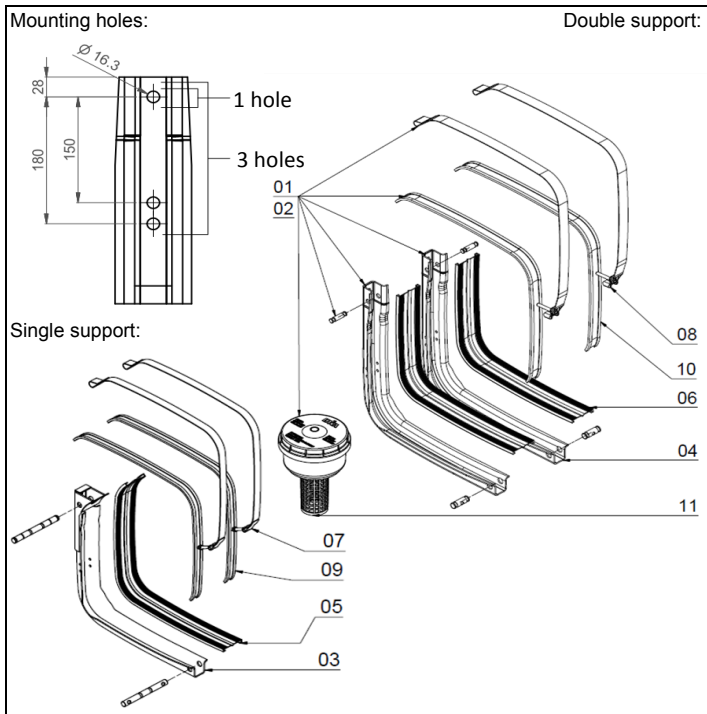
- Mount the tank according the mounting instructions
- Fill the tank with the recommended hydraulic oil to the centre of the level indicator
- Change the oil once a year
- Replace the air breather and return filter element twice a year
- Do not use the tank as a support or to stand on
- Do not weld on the oil tank
- Paint spec: TN00\_00001

### Related documentation

Mounting instructions: OIL-0014 & OIL-0015

Oil specifications: OIL-0011

### Supports, straps, rubbers & air breather



		Part No.	Oil Tank	Part No. Oil Tank				Weight (kg)										
				14017246	14018246	14017254	14017258		14017262	14017266	14018254	14018258	14018262	14018266				
01	Full kits	14020160	1 hole															22,5
02		14020161	3 holes															22,5

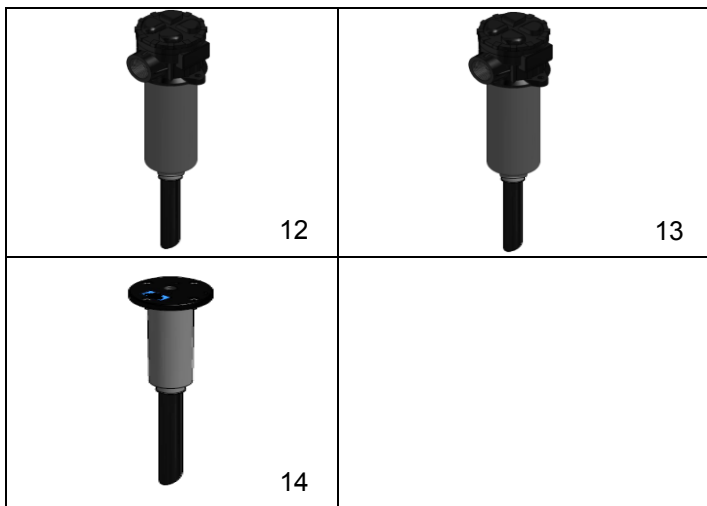
#### Separate spare parts:

No.	Description	Part No.	Oil Tank	Weight (kg)
03	Support & rubber	14020326	1 hole	11,7
04	Support & rubber	14020320	1 hole	8,7
04	Support & rubber	14020321	3 holes	8,7
05	Support rubber	14020339		0,4
06	Support rubber	14020435		0,4
07	Strap & rubber	14020301		1,2
08	Strap & rubber	14020308		1,4
09	Strap rubber	14020426		0,2
10	Strap rubber	14020425		0,2
11	Air Breather	08102116		0,4
	Mounting kit**	14020377		1,7
		14020327		1,1

\*\* Mounting kit contains every other fastening components like bolts & pins

When support is connected to the chassis by M16 bolts instead of M14 bolts, Hyva advises to use the washer kit from option list below.

### Return filters

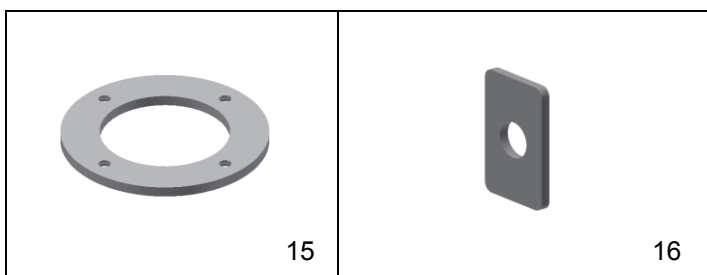


No.	Description	Part no.	Weight (kg)
12	Return filter 150L/m	14780303	1
13	Return filter 250L/m	14780331	1,1
14	Return filter valve mounting plate 150 L/m	14895920	1,9

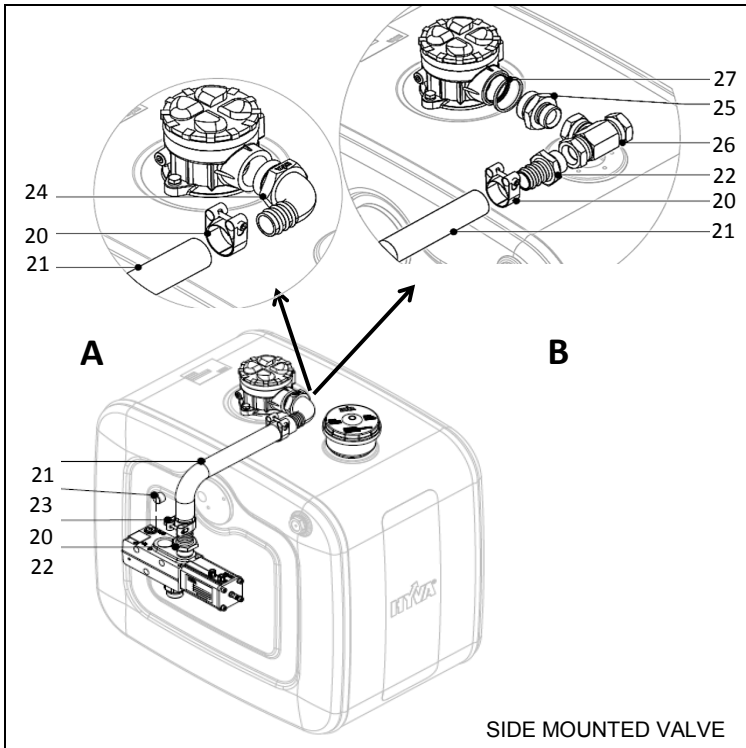
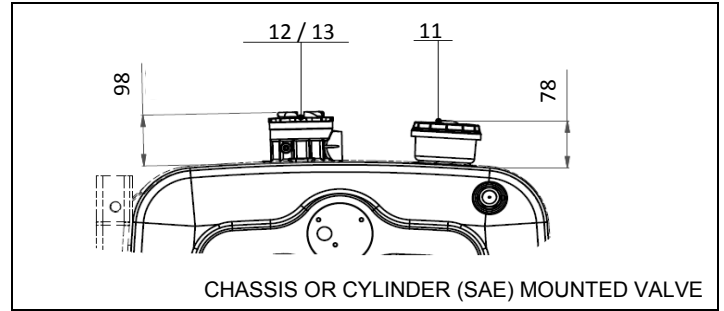
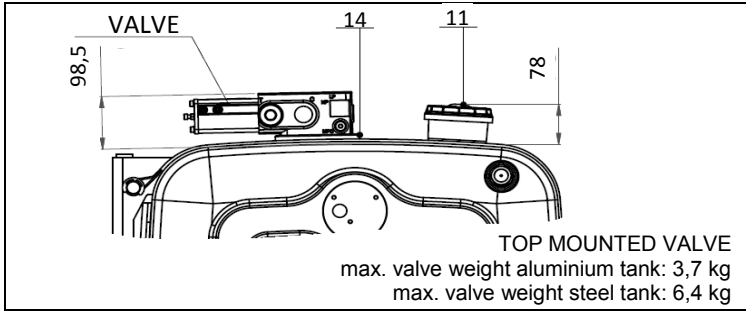
When hoses larger than 3/4" or multiple hoses are connected to the return filter, HYVA advises to use the strengthening ring from the option list below.

For configuration, see Page 3

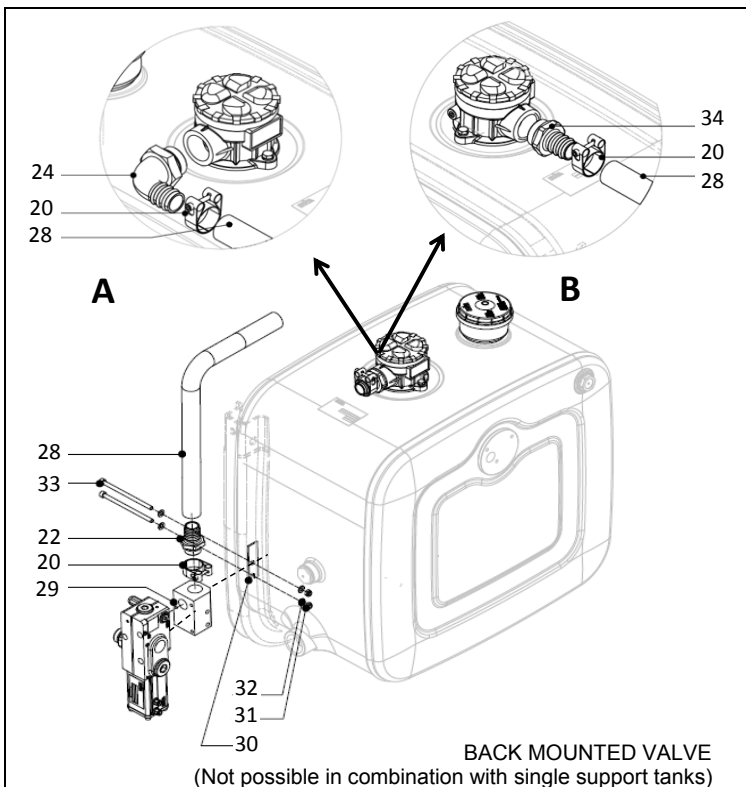
### Options



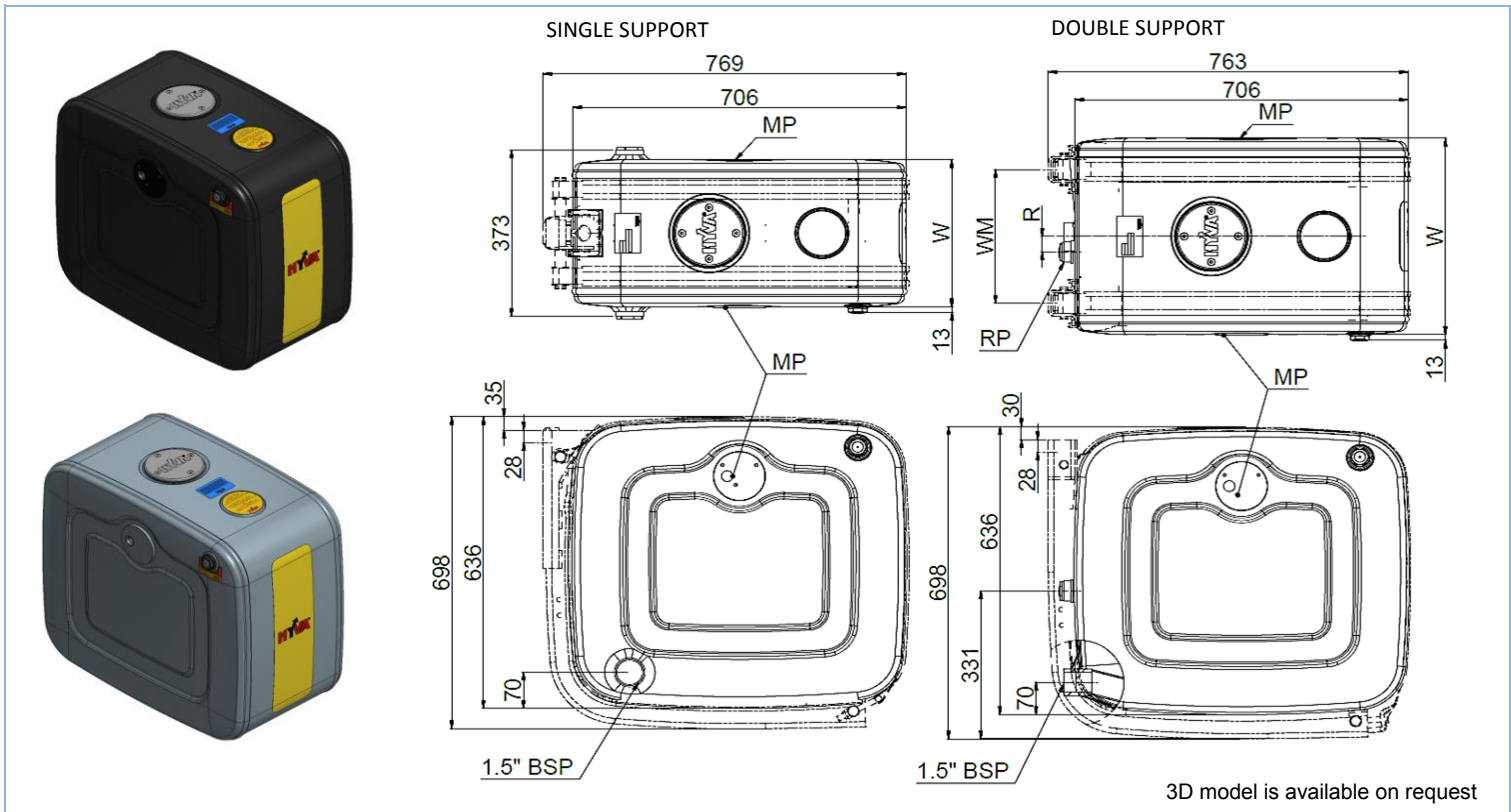
No.	Description	Part no.	Weight (kg)
15	Strengthening ring SM tank RF kit	14020509	0,2
	- Spacer 295x60x40 for MAN	01040002	0,8
	- Spacer 295x60x27 for MAN	01040003	0,5
	- Spacer 160x60x8 for Renault	01040004	0,1
	- Spacer 230x60x20/16 for Mercedes	01040005	0,3
	- Spacer 230x60x6/2 for Mercedes	01040006	0,1
	- Spacer Flat 67MM Iveco	01040007	0,7
16	Washer kit for M16 bolt	14020125	0,2



SIDE MOUNTED VALVE			Qty. per KIT	
No.	Description	Part No.	Option A	Option B
	Full kit option A	14021045	•	•
	Full kit option B	14021046		•
20	Worm Clamp	01238120	2	2
21	Return Hose LP20	14797010	1	1
22	Hose Pillar LP20 - 1"	14500587	1	2
23	Allen Plug 1/2"	14799175	1	1
24	Hose Pillar LP20 - 1 1/4"	14799322	1	-
25	Adapter 1 1/4" - 1"	01222107	-	1
26	Adapter T 3x 1"	01318251	-	1
27	Bonded Seal 1 1/4"	01206874	-	1



BACK MOUNTED VALVE			Qty. per KIT	
No.	Description	Part No.	Option A	Option B
	Full kit option A	14021047	•	•
	Full kit option B	14021048		•
20	Worm Clamp	01238120	2	2
22	Hose Pillar LP20 - 1"	14500587	1	1
24	Hose Pillar LP20 - 1 1/4"	14799322	1	-
28	Hose LP20	14795020	1	1
29	Mounting Block	14020550	1	1
30	Rubber for valve block	14020551	1	1
31	Nut M8	15026510	2	2
32	Washer M8	15020051	4	4
33	Bolt M8x140	15013700	2	2
34	Hose Pillar LP20 - 1 1/4"	14500585	-	1



3D model is available on request

### Specifications

Part numbers Steel	14017248*	14017256	14017260	14017264	14017268		
Part numbers Aluminium	14018248*	14018256	14018260	14018264	14018268		
Support configuration	Single	Double	Double	Double	Double		
Width	W	330	380	440	495	580	mm
	WM-Min	-	195	200	220	250	mm
Mounting Width	WM-Max	-	225	275	330	415	mm
Gross Volume		132	155	179	201	236	Liters
Working volume 1		110	130	150	170	200	Liters
Weight tank (Steel)		33	35	37	39	42	kg
Weight tank (Aluminium)		15	16	17	18	19	kg
Suction port		1.5" (2x)	1.5"	1.5"	1.5"	1.5"	BSP
Extra Return Port (RP) offset	R	N/A	20	20	10	0	mm
Extra Return Port (RP) Size		N/A	1"	1"	1"	1"	BSP

MP: Mounting plate for valve mounting with 3/4" threaded port.

\* Tank kit which includes tank, all support components and air breather. One of the two suction ports is closed with a permanent plastic plug.

Ports with steel plug and sealing: the port of the left Mounting Plate (MP) & the extra return port.

Ports with temporary plastic plug: all other ports.

### Technical notes

- Mount the tank according to the mounting instructions
- Fill the tank with the recommended hydraulic oil to the centre of the level indicator
- Change the oil once a year
- Replace the air breather and return filter element twice a year
- Do not use the tank as a support or to stand on
- Do not weld on the oil tank
- Paint spec: TN00\_00001

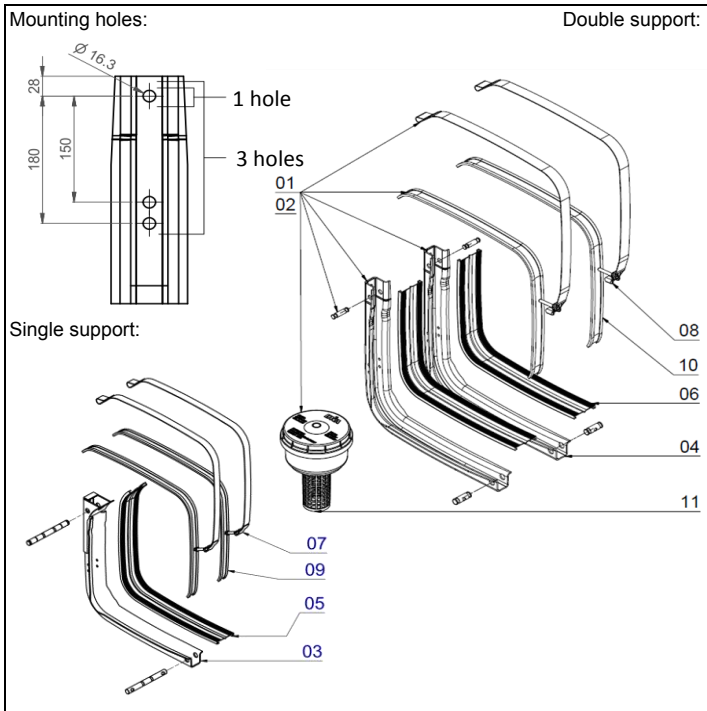
### Related documentation

Mounting instructions: OIL-0014 & OIL-0015

Oil specifications: OIL-0011



### Supports, straps, rubbers & air breather



		Part No.	Oil Tank	Part No. Oil Tank						Weight (kg)		
				14017248	14018248	14017256	14017260	14017264	14017268		14018256	14018260
01	Full kits	14020160	1 hole									22,5
02		14020161	3 holes									22,5

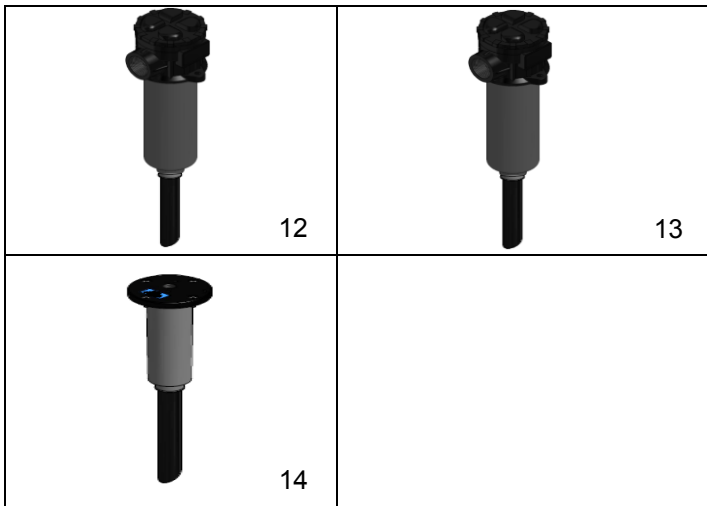
Separate spare parts:

03	Support & rubber	14020326	1 hole	•						11,7
04		14020320	1 hole							8,7
04		14020321	3 holes							8,7
05	Support	14020339		•						0,4
06	rubber	14020435								0,4
07	Strap & rubber	14020301		•						1,2
08		14020308								1,4
09	Strap	14020426		•						0,2
10	rubber	14020425								0,2
11	Air Breather	08102116		•						0,4
	Mounting kit**	14020377		•						1,7
		14020327								1,1

\*\* Mounting kit contains every other fastening components like bolts & pins

When support is connected to the chassis by M16 bolts instead of M14 bolts, Hyva advises to use the washer kit from option list below.

### Return filters

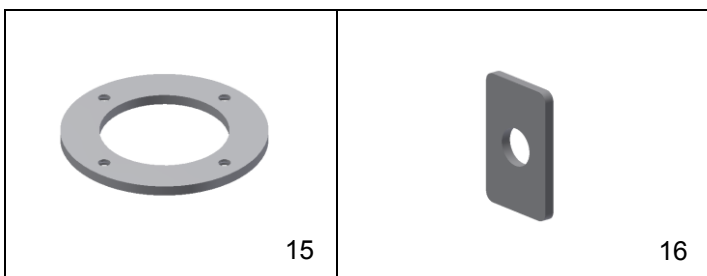


No.	Description	Part no.	Weight (kg)
12	Return filter 150L/m	14780303	1
13	Return filter 250L/m	14780331	1,1
14	Return filter valve mounting plate 150 L/m	14895920	1,9

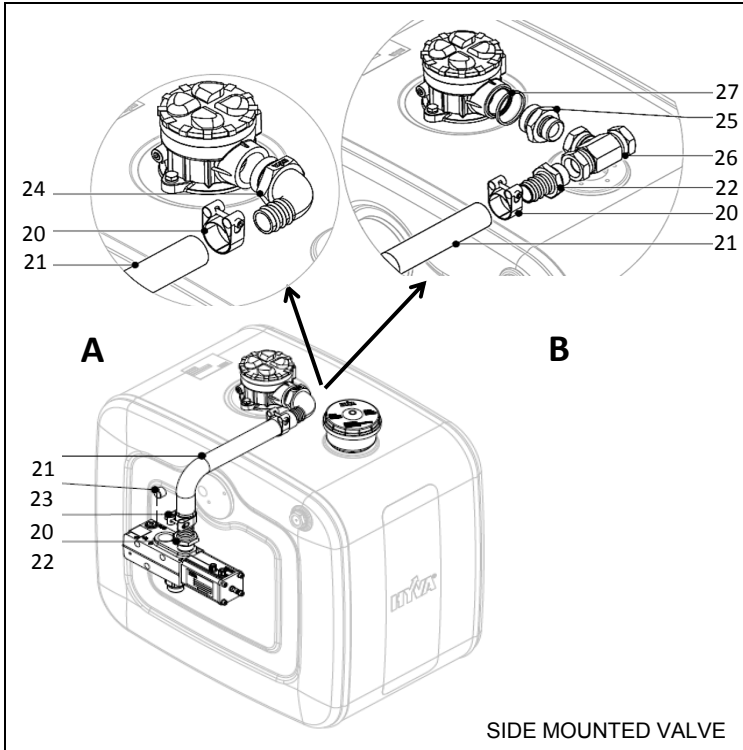
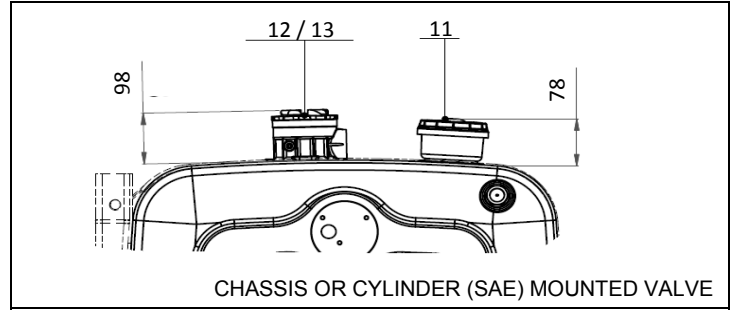
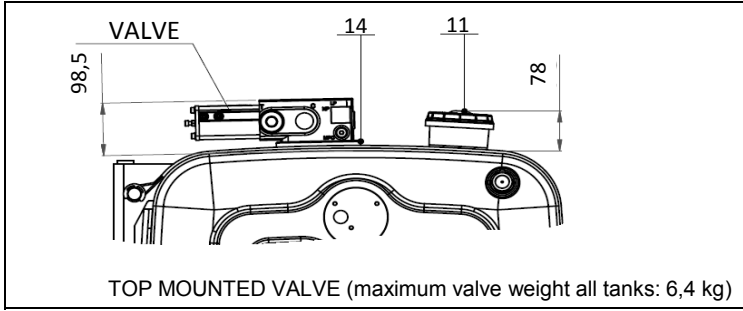
When hoses larger than 3/4" or multiple hoses are connected to the return filter, HYVA advises to use the strengthening ring from the option list below.

For configuration, see Page 3

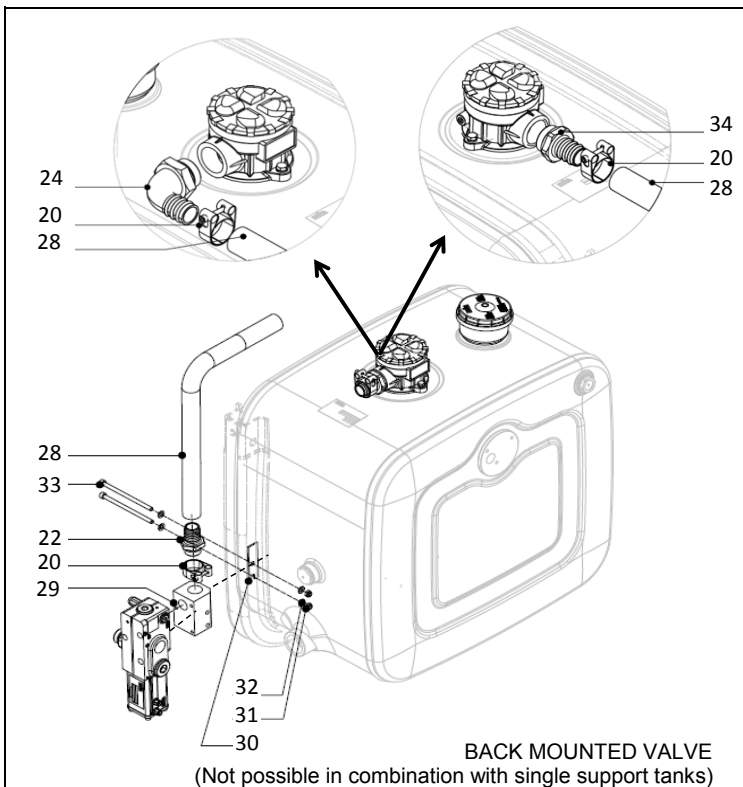
### Options



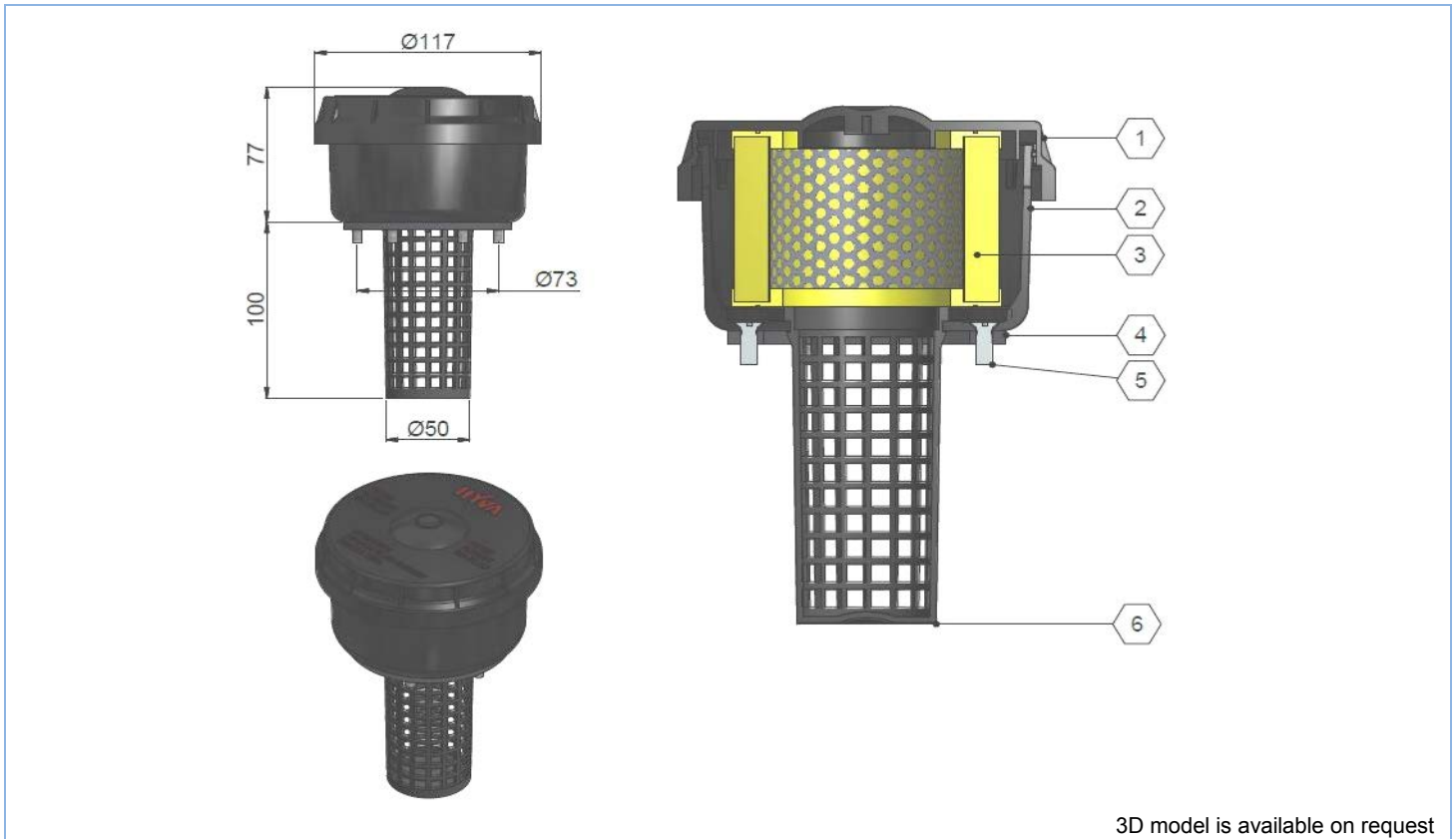
No.	Description	Part no.	Weight (kg)
15	Strengthening ring SM tank RF kit	14020509	0,2
	- Spacer 295x60x40 for MAN	01040002	0,8
	- Spacer 295x60x27 for MAN	01040003	0,5
	- Spacer 160x60x8 for Renault	01040004	0,1
	- Spacer 230x60x20/16 for Mercedes	01040005	0,3
	- Spacer 230x60x6/2 for Mercedes	01040006	0,1
	- Spacer Flat 67MM Iveco	01040007	0,7
16	Washer kit for M16 bolt	14020125	0,2



SIDE MOUNTED VALVE			Qty. per KIT	
No.	Description	Part No.	Option A	Option B
	Full kit option A	14021045	•	•
	Full kit option B	14021046		
20	Worm Clamp	01238120	2	2
21	Return Hose LP20	14797010	1	1
22	Hose Pillar LP20 - 1"	14500587	1	2
23	Allen Plug 1/2"	14799175	1	1
24	Hose Pillar LP20 - 1 1/4"	14799322	1	-
25	Adapter 1 1/4" - 1"	01222107	-	1
26	Adapter T 3x 1"	01318251	-	1
27	Bonded Seal 1 1/4"	01206874	-	1



BACK MOUNTED VALVE			Qty. per KIT	
No.	Description	Part No.	Option A	Option B
	Full kit option A	14021047	•	•
	Full kit option B	14021048		
20	Worm Clamp	01238120	2	2
22	Hose Pillar LP20 - 1"	14500587	1	1
24	Hose Pillar LP20 - 1 1/4"	14799322	1	-
28	Hose LP20	14795020	1	1
29	Mounting Block	14020550	1	1
30	Rubber for valve block	14020551	1	1
31	Nut M8	15026510	2	2
32	Washer M8	15020051	4	4
33	Bolt M8x140	15013700	2	2
34	Hose Pillar LP20 - 1 1/4"	14500585	-	1



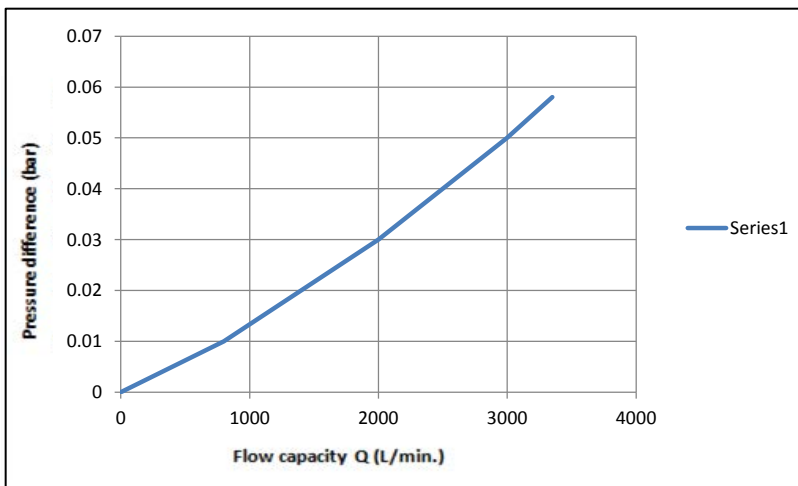
**Specifications**

Part no.		08102116
Filter action		10 µm
Filter capacity		1350 L/min.
Temperature range	min	-40 °C
	max	+100 °C
max. filling quantity		40 L/min.

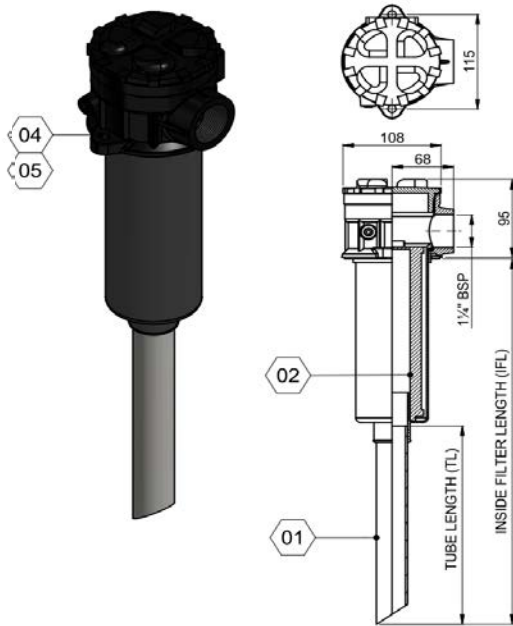
**Spare parts**

No.	Part no.	Description	Qty.
1	08102119	cover	1
2	08102125	filter house	1
3	08102117	filter element	1
4	08102126	seal	1
5	08102127	bolt	6
6	08102128	sleeve	1

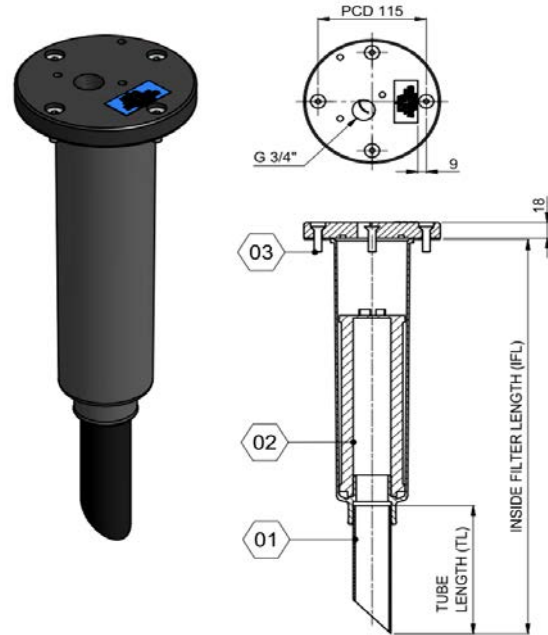
**Pressure difference vs. flow**



Return filter + top housing



Return filter + valve housing



3D model is available on request

### Types & components

	TL	IFL	SQ*	HQ**	Full kit	Weight (kg)
Return filter + top housing	No tube		•	•	14780306 14780305	1.2 1.4
	250	460	•	•	14780301 14780331	1.3 1.5
	350	560	•	•	14780303 14780333	1.3 1.5
	400	610	•	•	14780304 14780334	1.3 1.5
	No tube		•	•	14895918	1.7
Return filter + valve mounting	150	460	•	•	14895919	1.8
	250	560	•	•	14895920	1.9
	350	660	•	•	14895921	2.0

SQ\* = Standard Quality

HQ\*\* = High Quality

### Spare parts per type

Tube only number (1)	Filter Only number (2)
-	14896991A 14896990
14780319	14896991A 14896990
14780320	14896991A 14896990
14780307	14896991A 14896990
-	14896991A
14895915	14896991A
14895916	14896991A
14895917	14896991A

### General spare parts

No.	Part no	Description	Qty
03	15012790	Countersunk bolt	4
04	15004010	Hex. bolt	2
05	15022020	Washer	2

### Specification

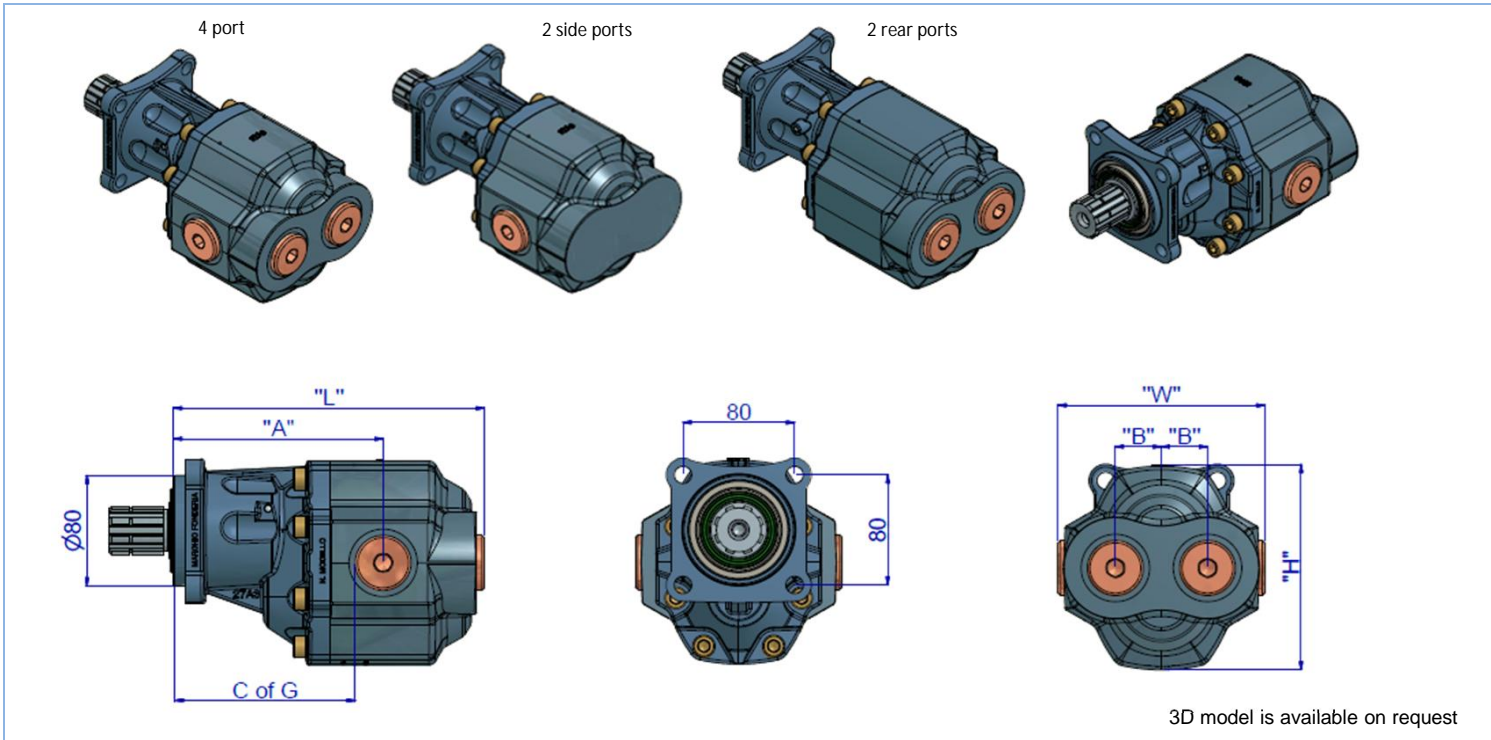
	SQ*	HQ**	
Nominal flow (clean element)	150	250	L/min
Peak flow	300	375	L/min
By-pass pressure	1.75	2.5	bar +/-10%
Collapse pressure element	10	8	bar
Filter element	25	25	μ
Temperature range	min	-40	°C
	max	+100	°C
Dirt holding capacity	25	37,4	gr @ 2 bar
Filter area	1730	2500	mm <sup>2</sup>

### Technical notes

Replace element twice a year

# HYVA GEAR PUMP

ALPHA Gear pump 4H ISO



## Specifications

	14562005	14562010	14562015	14571224	14562091	14562030	14562093	14562095	14562041	
Displacement per revolution	34,56	51,88	61,26	81,68	81,68	91,56	100,52	100,52	112,85	cm <sup>3</sup>
Max. Pressure for tipping applications (intermittent)	275	275	250	250	250	250	250	250	250	bar
Max. continuous pressure	255	255	230	230	230	230	230	230	230	bar
Max. flow (@ max. rpm)	80	119	141	188	188	190	213	213	213	l/m
Mass	12,5	13,5	14	16	16	19	19	19	20,5	kg
Port configuration	4 port	4 port	4 port	2 side	2 rear	4 port	2 rear	2 side	2 rear	
Length pump	L	189	200	206	221,5	221,5	236	239	246	mm
Width pump	W	128	128	128	138	138	140,5	140	140,5	mm
Height pump	H	149,4	149,4	149,4	149,4	149,4	166,5	149,4	166,5	mm
Position side port	A	130,5	132,5	138,5	151,5		155	161	165	mm
Position rear port	B	30	30	30		33	33	33	33	mm
Maximum peak pressure		280	280	260	255	255	255	255	255	bar
Max. speed at intermittent press.		2500	2500	2500	2500	2500	2250	2250	2000	rpm
Min. speed at intermittent press.		300	300	300	300	300	400	400	400	rpm
Oil temperature range		min -40	min -40	min -40	min -40	min -40	min -40	min -40	min -40	°C
		max 80	max 80	max 80	max 80	max 80	max 80	max 80	max 80	°C
Inlet pressure range (suction side)		min 0,7	min 0,7	min 0,7	min 0,7	min 0,7	min 0,7	min 0,7	min 0,7	bar
		max 3	max 3	max 3	max 3	max 3	max 3	max 3	max 3	bar
Recommended oil viscosity range		min 12	min 12	min 12	min 12	min 12	min 12	min 12	min 12	mm <sup>2</sup> /s
		max 100	max 100	max 100	max 100	max 100	max 100	max 100	max 100	mm <sup>2</sup> /s
Maximum starting viscosity		750	750	750	750	750	750	750	750	mm <sup>2</sup> /s
Min. Filtration		25	25	25	25	25	25	25	25	µm
Connection:										
inlet - straight internal thread		3/4	1	1	1	1 1/4	1 1/4	1 1/4	1 1/4	BSP
outlet - straight internal thread		3/4	1	1	1	1 1/4	1 1/4	1 1/4	1 1/4	BSP
Minimum suction hose bore diameter		1 1/4	1 3/4	1 3/4	1 3/4	1 3/4	1 3/4	1 3/4	1 3/4	inch
Shaft DIN 5462		8*32*36	8*32*36	8*32*36	8*32*36	8*32*36	8*32*36	8*32*36	8*32*36	mm
Centre of gravity distance (CofG)		99,3	105,2	106,5	117,8	117,8	126	128	131	mm
Noise level at 1000 min-1 and 100 bar		62,5	62,6	65,1	66,6	66,6	64,8	66,6	66,6	dB
noise level at 1500 min-1 and 100 bar		67,6	67,5	69,4	71	71	68,3	69,5	69,5	dB

## Technical notes

• The mentioned data on page 1 is for mineral based oil, for other fluids please contact our engineering dept. • The filtration as mentioned is for tippers only. For different application we advise filtration according ISO 4406 class 17/14. • To avoid the cavitation, the suction hose must be kept as short and straight as possible, and the minimum oil level in the oil tank must be above the inlet of the pump. • Paint spec: TNO00\_00001

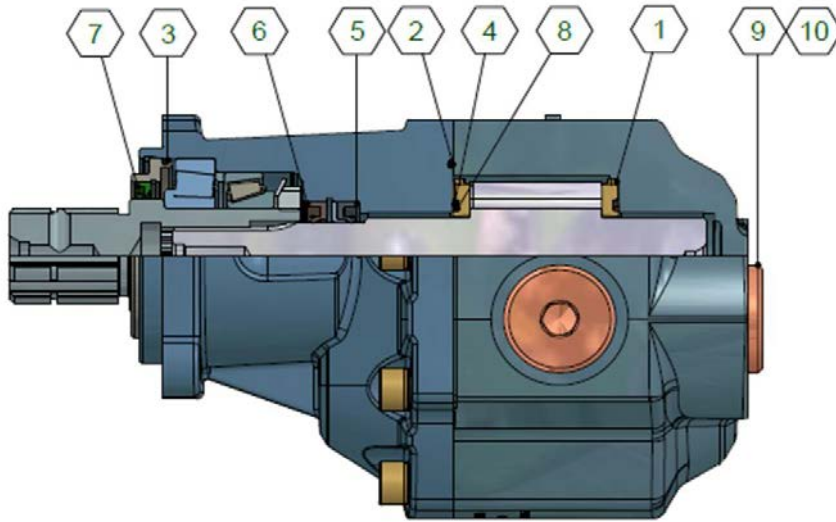
## Related documents

Mounting Instructions: PUM-0020

Oil Specifications: OIL-0011

# HYVA GEAR PUMP

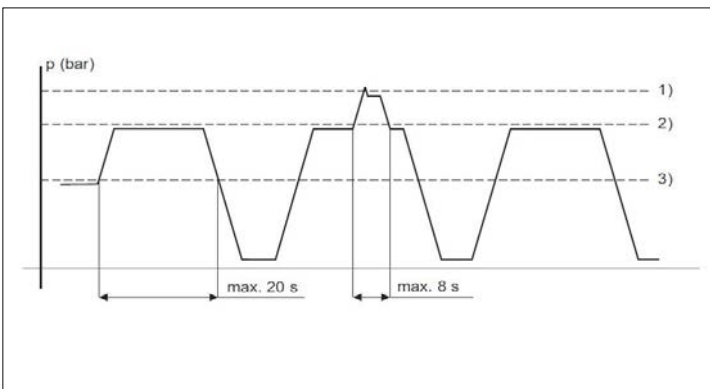
ALPHA Gear pump 4H ISO



## Spare parts

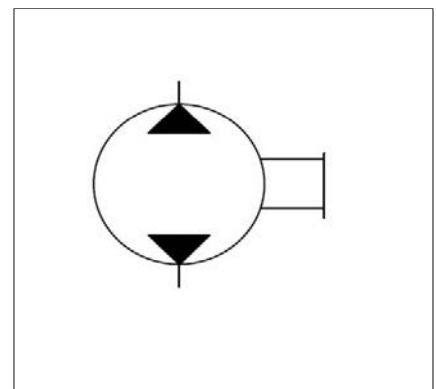
Description	35cc	52cc	61cc	82cc	92cc	100cc	113cc
Seal kit (parts: 2, 3, 4, 5, 6, 7 & 8)	02460000	02460000	02460000	02460000	02460005	02460007	02460005
1 Thrust plate	02059415	02059415	02259400	02259400	02259405	-	02259405
2 OR-seal	02391720	02391720	02391720	02391720	02391721	02391720	02391721
3 O-ring	02395800	02395800	02395800	02395800	-	02395800	-
4 seal	02396570	02396570	02396570	02396570	02396571	02396570	02396571
5 shaft seal	02404819	02404819	02404819	02404819	02404826	02404819	02404826
6 shaft seal	02404825	02404825	02404825	02404825	02404841	02404825	02404841
7 shaft seal	02391675	02391675	02391675	02391675	02404839	02391675	02404839
8 back-up ring	02396527	02396527	02396527	02396527	02396528	02396527	02396528
9 Bonded Seal	01206850	01313848	01313848	01313848	01206874	01206874	01206874
10 Steel plug	01702841	01702853	01702853	01702853	01702856	01702856	01702856
11 leak indicator kit	02470180	02470180	02470180	02470180	02470180	02470180	02470180

## Pressure definition

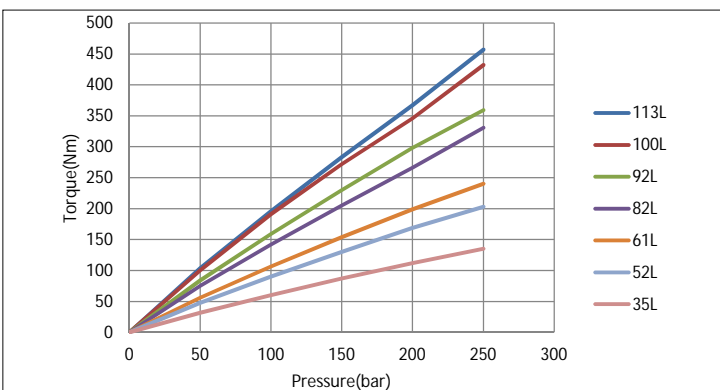


- P1** = Peak Pressure
- P2** = Intermittent Pressure
- P3** = Continuous Pressure

## hydraulic pump symbol

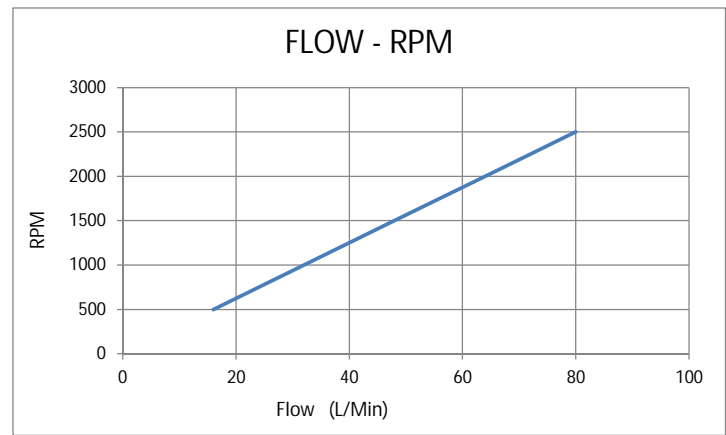
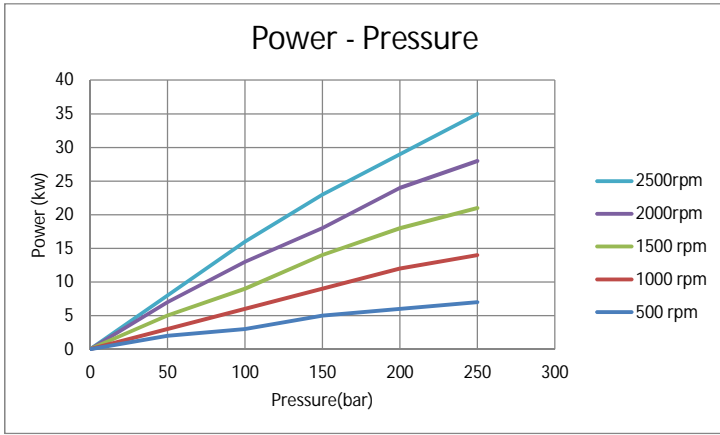


## Torque - Pressure characteristics

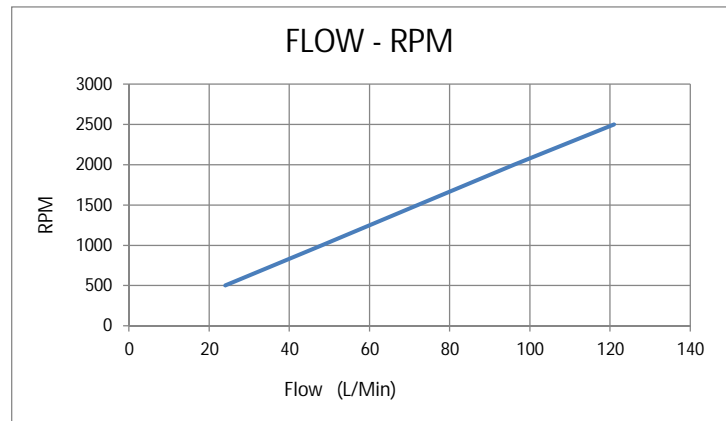
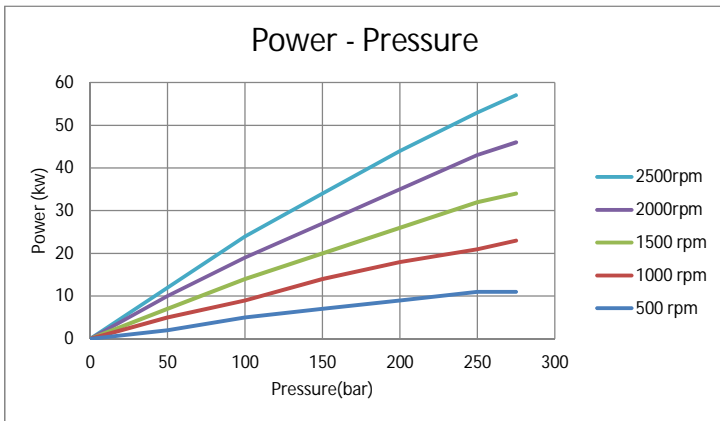


Repair instructions: PUM-0006 (35cc to 82 cc) / 0009 (92 cc to 113 cc)

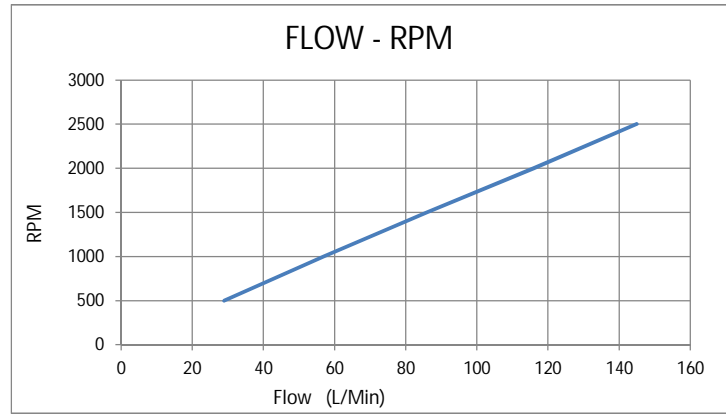
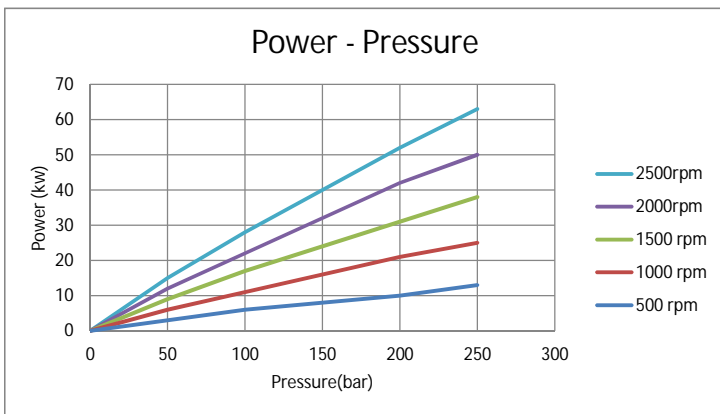
35 cc (145620005)



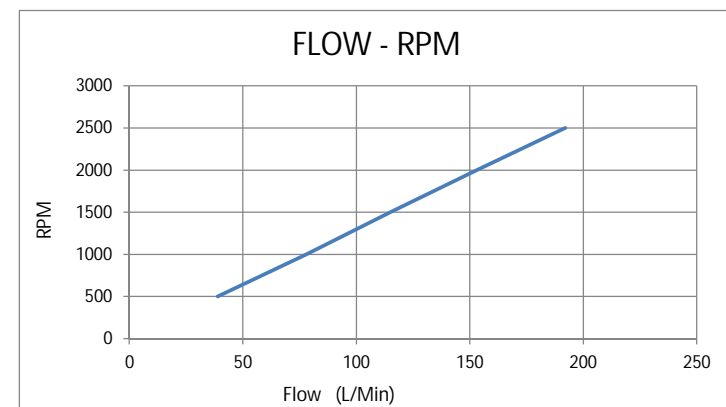
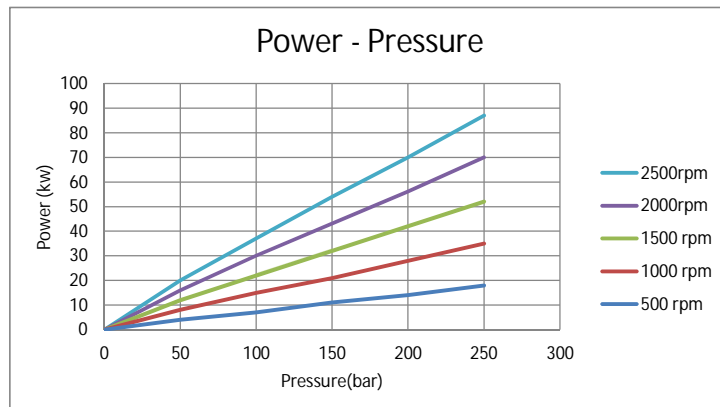
52 cc (14562010)



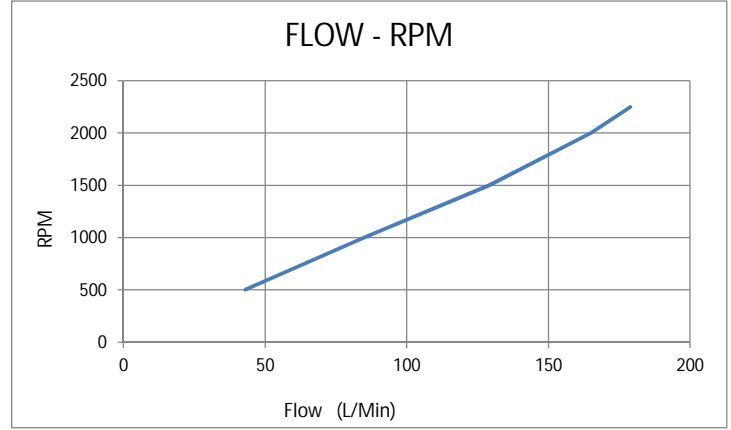
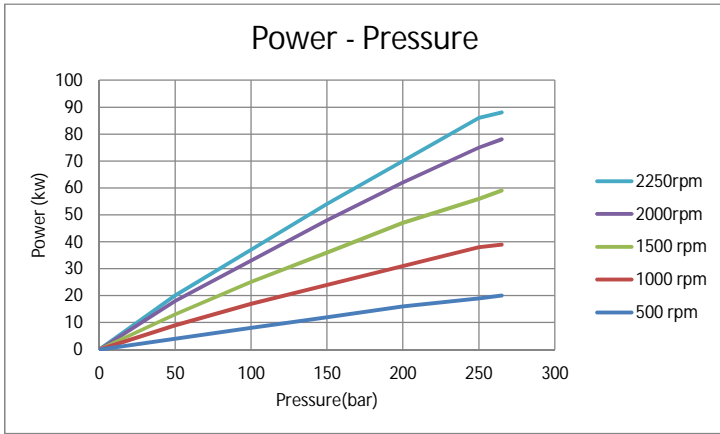
61 cc (14562015)



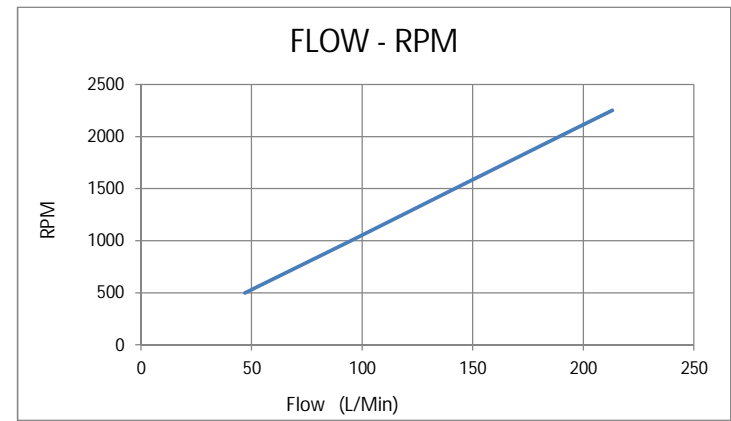
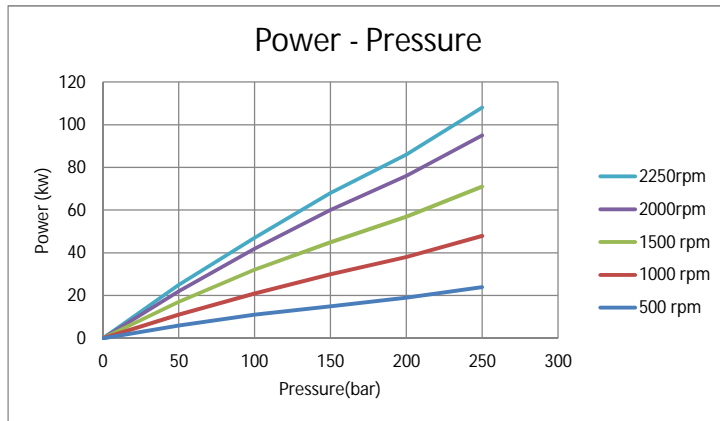
82 cc (14571224 & 14562091)



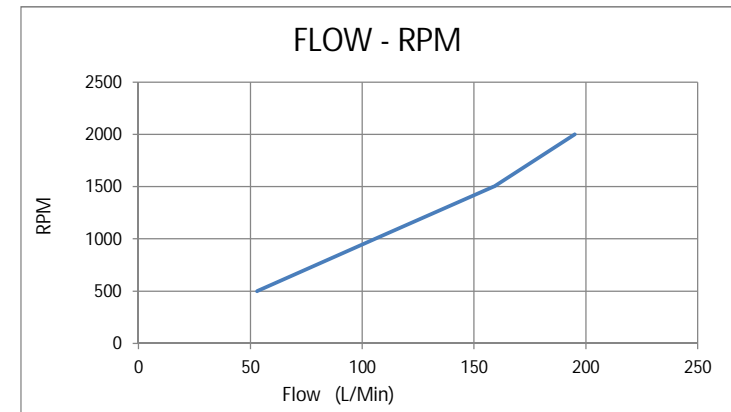
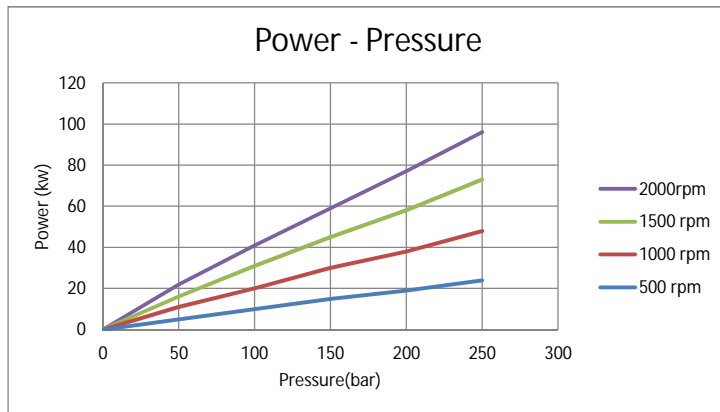
92 cc (14562030)



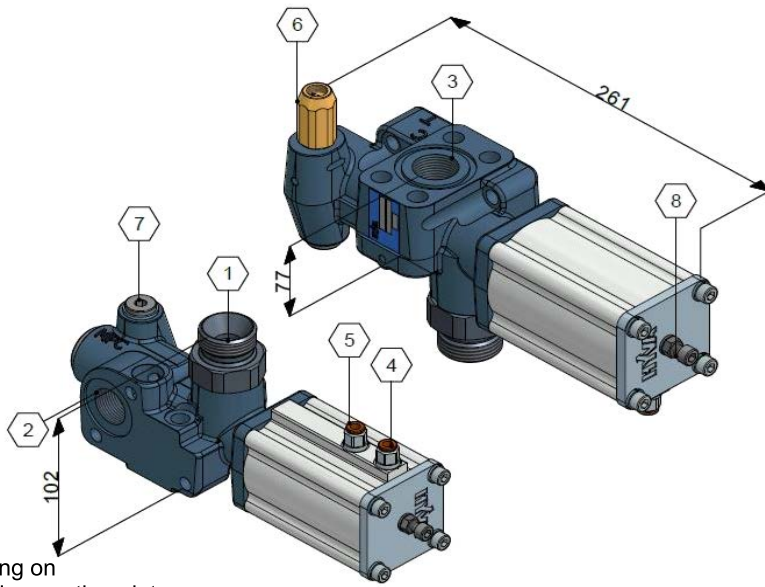
100 cc (14562093 & 14562095)



113 cc (14562041)







For mounting on

- Hyva tank mounting plate
- Directly on Hyva cylinder with SAE inlet

3D model is available on request

- 1 Pump connection (P)
- 2 Tank connection (T)
- 3 Cylinder connection SAE(C)
- 4 Pneumatic connection (Tip)
- 5 Pneumatic connection (Lower)
- 6 Pressure cartridge
- 7 Pressure gauge point
- 8 Adjustment screw (To adjust the lowering speed)

### SAFETY

HT valve fitted on cylinder (SAE)  
Valve offers hose burst safety function

### Types

Hydraulic connections	Pressure (BAR)		Part Number	Description
		Max.		
P, T & C = 3/4" C = SAE		135	14767213	TIP VALVE HT-TNK/SAE-1150-135-P3/4"
		150	14767215	TIP VALVE HT-TNK/SAE-1150-150-P3/4"
		170	14767217	TIP VALVE HT-TNK/SAE-1150-170-P3/4"
		190	14767219	TIP VALVE HT-TNK/SAE-1150-190-P3/4"
		220	14767222	TIP VALVE HT-TNK/SAE-1150-220-P3/4"
		250	14767225	TIP VALVE HT-TNK/SAE-1150-250-P3/4"
T, C=3/4"& P=1" C = SAE		135	14767263	TIP VALVE HT-TNK/SAE-1150-135-P1"
		150	14767265	TIP VALVE HT-TNK/SAE-1150-150-P1"
		170	14767267	TIP VALVE HT-TNK/SAE-1150-170-P1"
		190	14767269	TIP VALVE HT-TNK/SAE-1150-190-P1"
		220	14767272	TIP VALVE HT-TNK/SAE-1150-220-P1"
		250	14767275	TIP VALVE HT-TNK/SAE-1150-250-P1"

Optional adapter kits	Kit number
3/4" Straight TNK	AK5212TS
3/4" 90 degree TNK	AK5212TE
3/4" Straight SAE	AK5212SS
3/4" 90 degree SAE	AK5212SE
1" Straight TNK	AK5216TS
1" 90 degree TNK	AK5216TE
1" Straight SAE	AK5216SS
1" 90 degree SAE	AK5216SE

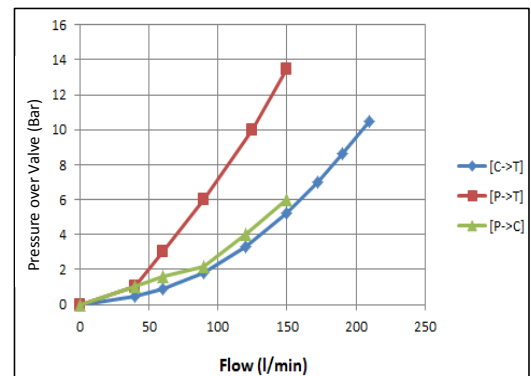
Mounting kits	Kit number
Cylinder (SAE)*	14735162
Tank (TNK)*	14735160

\* = NOT included with valve

### Specifications

Type	Spool valve with pressureless bypass in neutral. Oil flow in lowering position is proportional with pneumatic pilot pressure.	
Max. peak pressure	300 bar	
Pneumatic pilot pressure	6-12 bar	
Max. pump flow	150 L/min	
Max. pressure on T-connection	10 bar	
Min. filtration (ISO 18/13)	25 µm	
Viscosity range	min	12 mm <sup>2</sup> /s (cst)
	max	100 mm <sup>2</sup> /s (cst)
	Temperature range	min
	max	80 °C
Mass	3,7 kg	

### Δp - Q characteristic



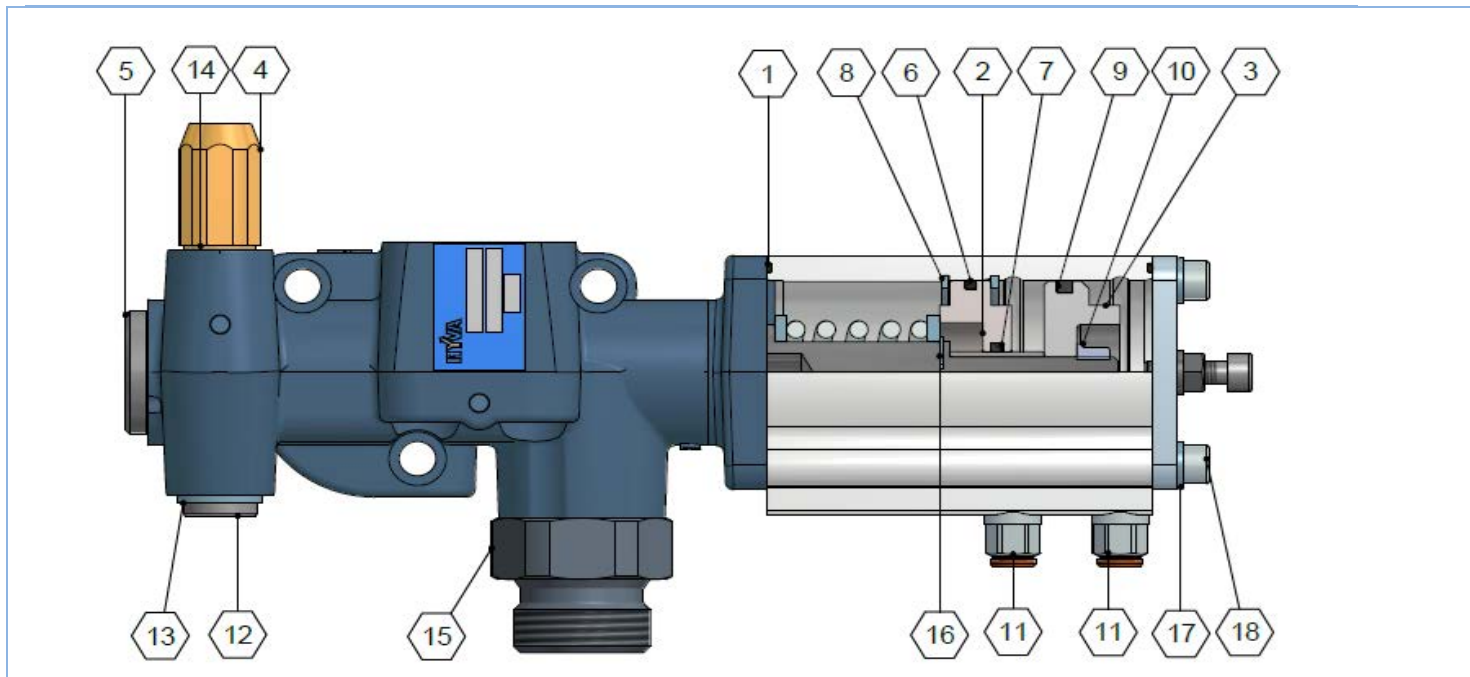
### Technical notes

- Mount the valve according the mounting instructions
- Use the correct washers and adapters in the ports to prevent housing deformation. Do not use adapters with tapered threads
- To further prevent deformation of the valve housing, the mounting plate surface or block must be completely flat and plane.
- Do not weld to the valve.
- Ideal air pressure for valve is 8 bar.
- Make sure inlet air is dry.
- Paint Spec: TN00\_00001

### Related documentation

Mounting instructions: VAL-0022

OIL Specifications: OIL:0011

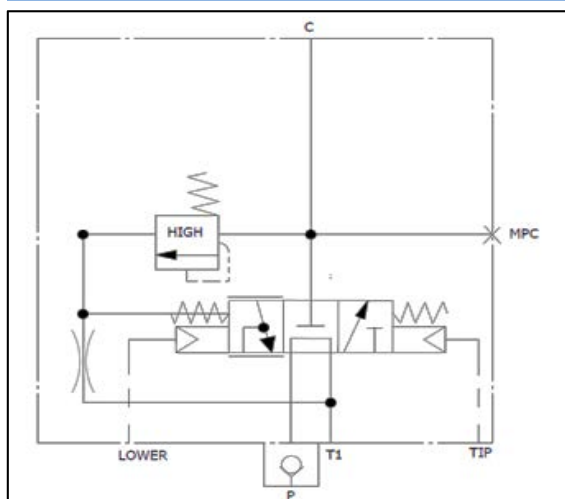


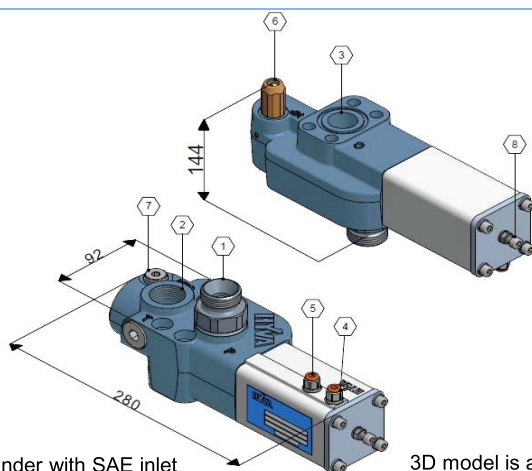
### Spare Parts

No.	Part no.	Description	Qty
1	01226200	O-ring	2
2	14845005	Closing plate for HT-valve	1
3	14845007	Piston air cylinder	1
4	14772...	Cartridge pressure relief	1
	14772135	135 bar	
	14772150	150 bar	
	14772170	170 bar	
	14772190	190 bar	
	14772220	220 bar	
	14772250	250 bar	
	14772280	280 bar	
5	14845024	Plug	1
6	14845013	O-ring	1

No.	Part no.	Description	Qty
7	14845018	Quadrant	1
8	14845019	Circlip	2
9	14845020	Quadrant	1
10	14845015	Sealing nut M8 for HT-valve	1
11	14810517	Air coupling 1/8"	2
12	14845039	Plug	1
13	01206813	Bonded seal	1
14	14841215	O-ring 10,82 x 1,78	1
15	14739980	Non return valve 3/4"	1
	14739975A	Non return valve 1"	1
16	15029046	Circlip	1
17	15022015	Washer spring	4
18	15013639	Bolt HSHC	4

### Hydraulic symbol of the HT valve





- 1 Pump connection (P)
- 2 Tank connection (T)
- 3 Cylinder connection SAE(C)
- 4 Pneumatic connection (Tip)
- 5 Pneumatic connection (Lower)
- 6 pressure cartridge
- 7 Pressure gauge point
- 8 Adjustment screw  
(To adjust the lowering speed)

For mounting on

- Directly on Hyva cylinder with SAE inlet

3D model is available on request

### SAFETY

HT valve fitted on cylinder (SAE)  
Port offers hose burst safety function

### Types

Hydraulic connections	Pressure (BAR)	Part Number	Description
	Max.		
P = 3/4" & T=1" C = SAE	150	14767454	TIP VALVE HT-SAE-1220-150-P3/4"
	170	14767456	TIP VALVE HT-SAE-1220-170-P3/4"
	190	14767458	TIP VALVE HT-SAE-1220-190-P3/4"
	220	14767460	TIP VALVE HT-SAE-1220-220-P3/4"
	250	14767462	TIP VALVE HT-SAE-1220-250-P3/4"
T & P=1" C = SAE	150	14767455	TIP VALVE HT-SAE-1220-150-P1"
	170	14767457	TIP VALVE HT-SAE-1220-170-P1"
	190	14767459	TIP VALVE HT-SAE-1220-190-P1"
	220	14767461	TIP VALVE HT-SAE-1220-220-P1"
	250	14767463	TIP VALVE HT-SAE-1220-250-P1"

Optional adapter kits	Kit number
3/4" Straight SAE	AK5112SS
3/4" 90 degree SAE	AK5112SE
1" Straight SAE	AK5116SS
1" 90 degree SAE	AK5116SE

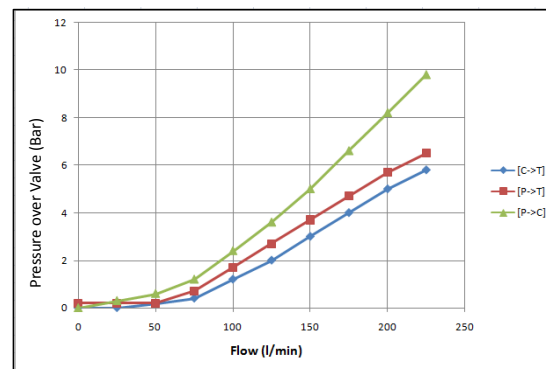
Mounting kits	Kit number
Cylinder (SAE)*	14735175

\* = included with valve

### Specifications

Type	Spool valve with pressureless bypass in neutral. Oil flow in lowering position is proportional with pneumatic pilot pressure	
Max. peak pressure	300 bar	
Pneumatic pilot pressure	6-12 bar	
Max. pump flow	220 L/min	
Max. pressure on T-connection	10 bar	
Min. filtration (ISO 18/13)	25 µm	
Viscosity range	min	12 mm <sup>2</sup> /s (cst)
	max	100 mm <sup>2</sup> /s (cst)
Temperature range	min	-40 °C
	max	80 °C
Mass	5,5 kg	

### Δp - Q characteristic



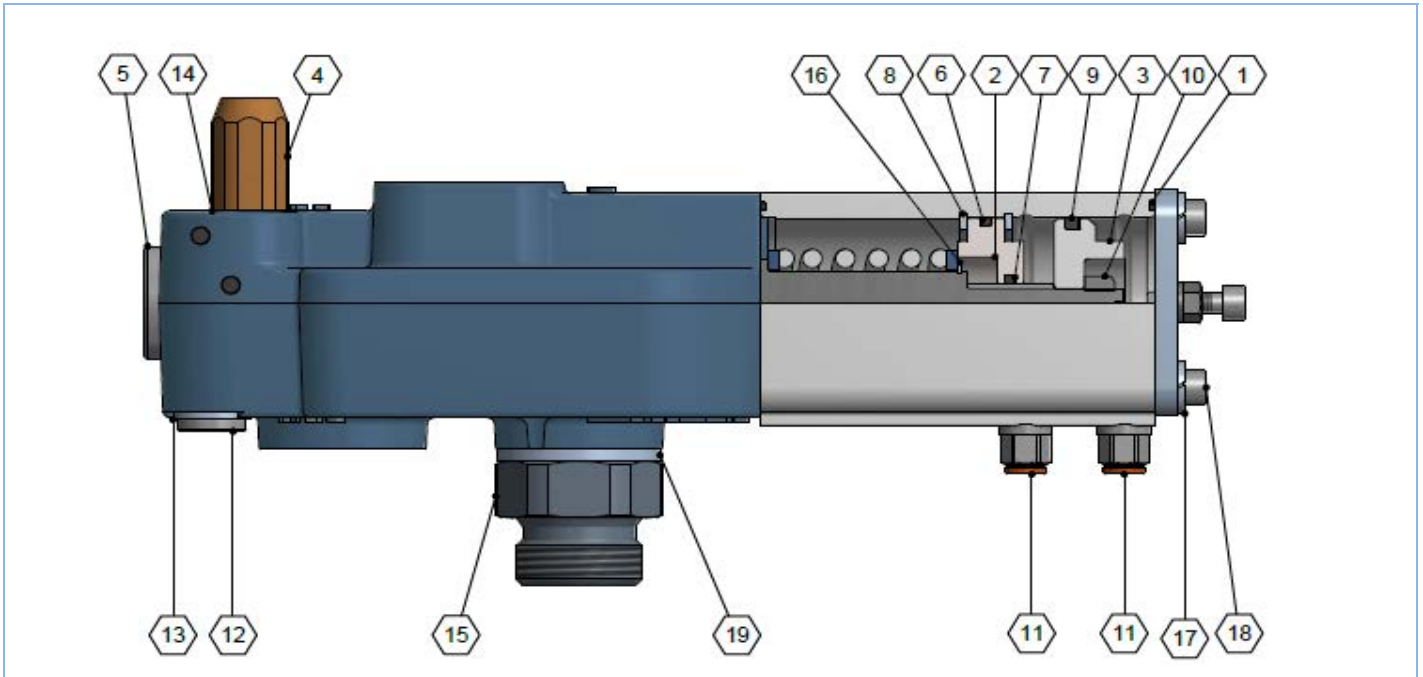
### Technical notes

- Mount the valve according the mounting instructions
- Use the correct washers and adapters in the ports to prevent housing deformation. Do not use adapters with tapered threads
- To further prevent deformation of the valve housing, the mounting plate surface or block must be completely flat and plane.
- Do not weld to the valve.
- Ideal air pressure for valve is 8 bar.
- Make sure inlet air is dry.
- Paint spec: TNO00\_00001

### Related documentation

Mounting instructions: VAL-0021

OIL Specifications: OIL:0011

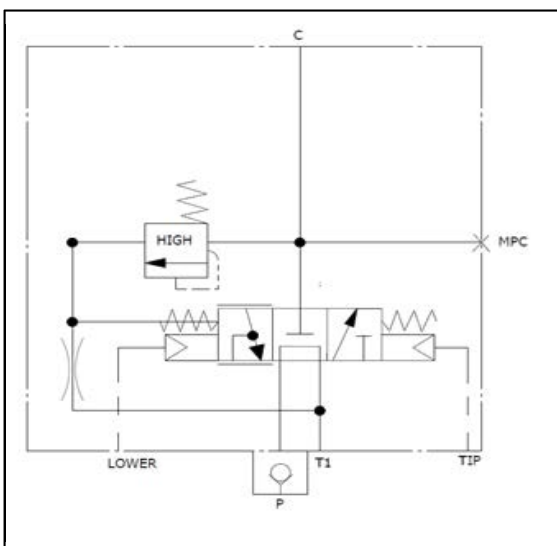


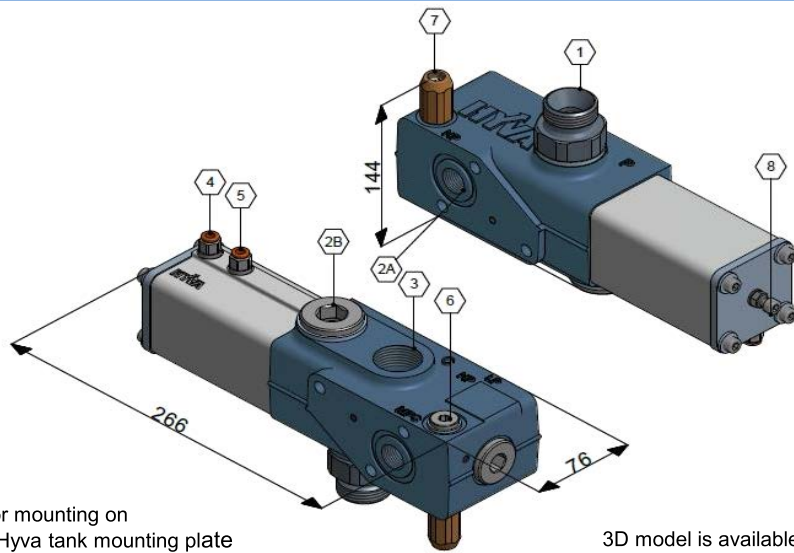
### Spare Parts

No.	Part no.	Description	Qty
1	01226200	o-ring	2
2	14845005	closing plate	1
3	14845007	piston air cylinder	1
4	14772...	cartrige pressure relief	1
	14772150	150 bar	
	14772170	170 bar	
	14772190	190 bar	
	14772220	220 bar	
	14772250	250 bar	
5	14845024	blind plug	1
6	14845013	O-ring	1

No.	Part no.	Description	Qty
7	14845018	quadring	1
8	14845019	circlip	2
9	14845020	quadring	1
10	14845015	sealing nut M8 for HT-valve	1
11	14810517	air coupling 1/8"	2
12	14845039	blind plug	1
13	01206813	bonded seal	1
14	14841215	o-ring 10,82 x 1,78	1
15	14739980	non return valve 3/4"	1
15	14739975A	non return valve 1"	1
16	15029046	circlip	1
17	15022015	washer spring	4
18	15013639	bolt HSHC	4
19	01313848	bonded seal	1

### Hydraulic symbol of the HT valve





For mounting on  
 • Hyva tank mounting plate

3D model is available on request

- 1 Pump connection (P)
- 2A Return tank connection (T)
- 2B Alternative return tank connection (T)
- 3 Cylinder connection (C)
- 4 Pneumatic connection (Tip)
- 5 Pneumatic connection (Lower)
- 6 Pressure gauge point
- 7 High pressure cartridge
- 8 Adjustment screw  
(To adjust the lowering speed)

### Types

Hydraulic connections	Pressure (BAR)	Part Number	Description
	Max.		
T, C & P=1"	110	14767111	TIP VALVE HT-TNK-1220-110-P1"
	135	14767113	TIP VALVE HT-TNK-1220-135-P1"
	150	14767115	TIP VALVE HT-TNK-1220-150-P1"
	170	14767117	TIP VALVE HT-TNK-1220-170-P1"
	190	14767119	TIP VALVE HT-TNK-1220-190-P1"
	220	14767122	TIP VALVE HT-TNK-1220-220-P1"
	250	14767125	TIP VALVE HT-TNK-1220-250-P1"
	280	14767128	TIP VALVE HT-TNK-1220-280-P1"
	350	14767135	TIP VALVE HT-TNK-1220-350-P1"

Optional adapter kits	Kit number
1" Straight TNK	AK5016TS
1" 90 degree TNK	AK5016TE
1" Straight CHASSIS	AK5016CS
1" 90 degree CHASSIS	AK5016CE

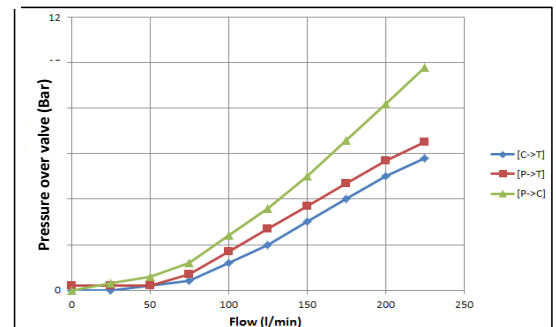
Mounting kits	Kit number
Tank (TNK) *	14735168
Chassis	14735208

\* = included with valve

### Specifications

Type	Spool valve with pressureless bypass in neutral. Oil flow in lowering position is proportional with pneumatic pilot pressure.	
Max. peak pressure	350 bar	
Pneumatic pilot pressure	6-12 bar	
Max. pump flow	220 L/min	
Max. pressure on T-connection	10 bar	
Filtration (ISO 18/13)	25 µm	
Viscosity range	min	12 mm <sup>2</sup> /s (cst)
	max	100 mm <sup>2</sup> /s (cst)
Temperature range	min	-40 °C
	max	80 °C
Mass	6,1 kg	

### Δp - Q characteristic



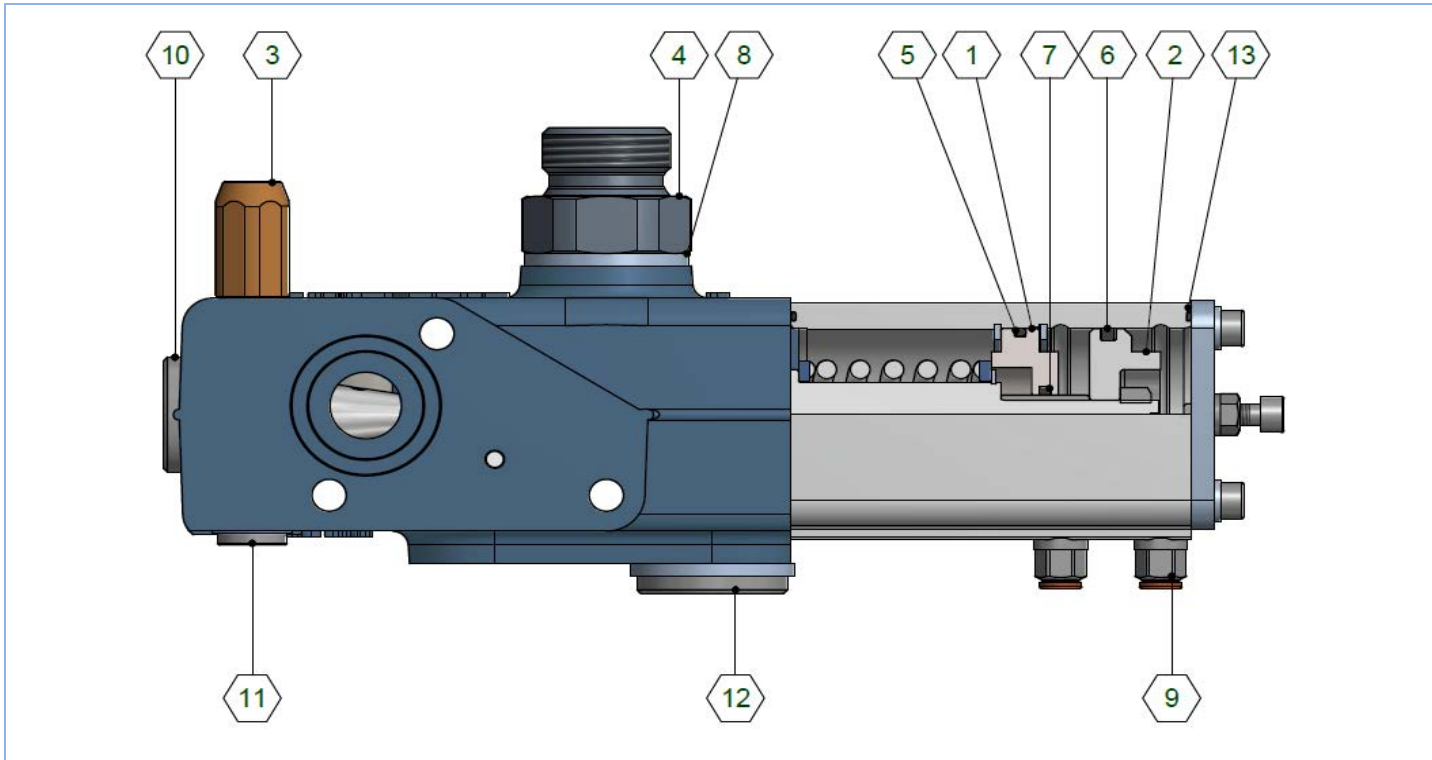
### Technical notes

- Mount the valve according the mounting instructions
- Use the correct washers and adapters in the ports to prevent housing deformation. Do not use adapters with tapered threads
- To further prevent deformation of the valve housing, the mounting plate surface or block must be completely flat and plane.
- Do not weld to the valve.
- Ideal air pressure for valve is 8 bar.
- Make sure inlet air is dry.
- Paint spec: TNO00\_00001

### Related documentation

Mounting instructions: VAL-0022

OIL Specifications: OIL:0011

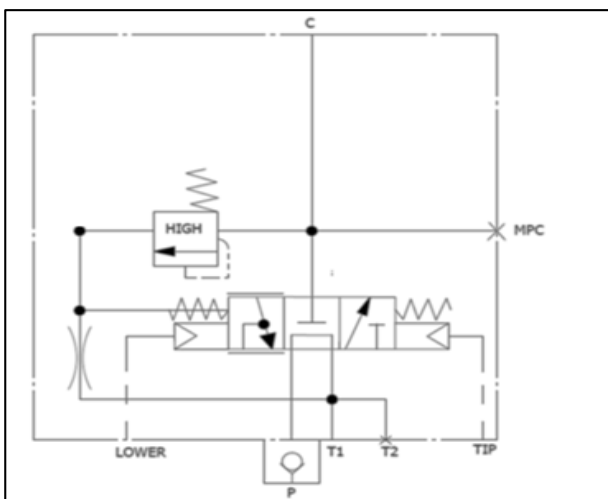


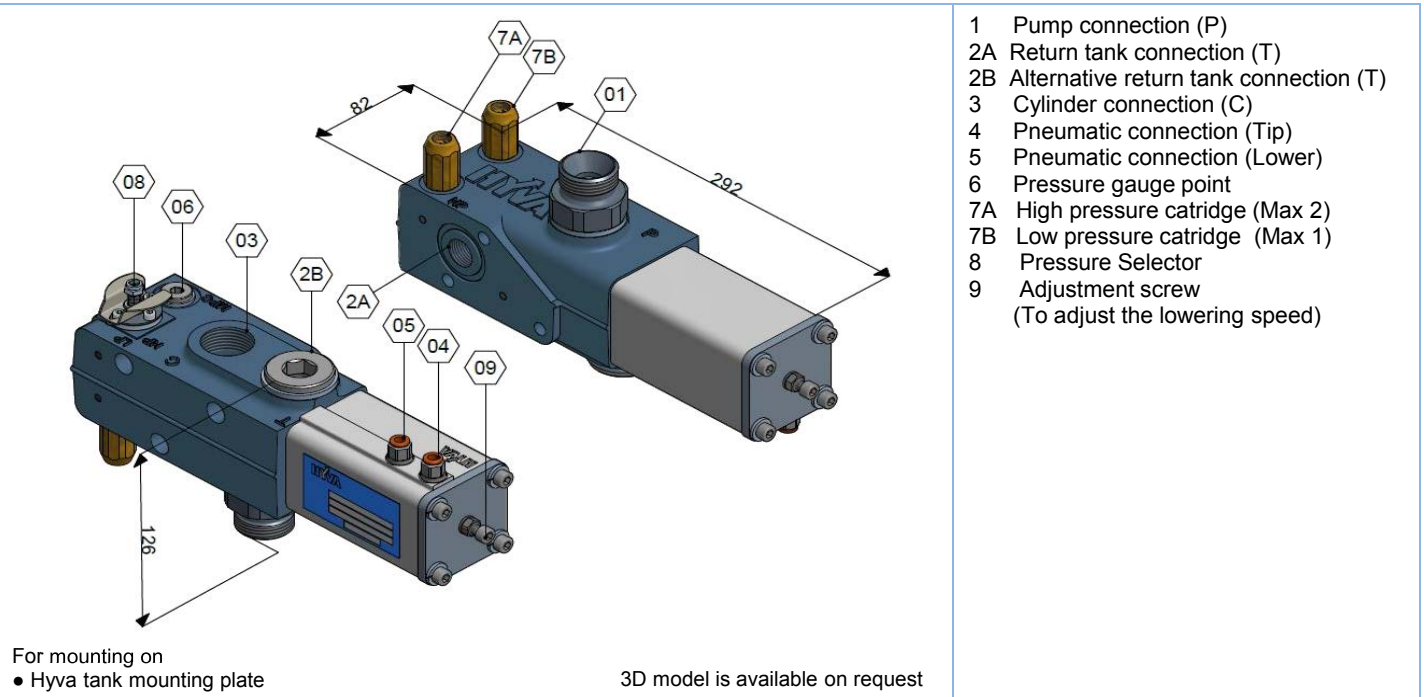
### Spare Parts

No.	Part no.	Description	Qty
1	14845005	closing plate	1
2	14845007	piston air cylinder	1
3	14772...	cartridge pressure relief	1
	14772110	110 bar	1
	14772135	135 bar	
	14772150	150 bar	
	14772170	170 bar	
	14772190	190 bar	
	14772220	220 bar	
	14772250	250 bar	
	14772280	280 bar	
	14772350	350 bar	

No.	Part no.	Description	Qty
4	14739975A	non return valve	1
5	14845013	O-ring	1
6	14845020	Quadring	1
7	14845018	Quadring	1
8	01313848	bonded seal	2
9	14810517	straight coupling	2
10	14845024	blind plug	1
11	14845039	blind plug	1
12	14845040	blind plug	1
13	01226200	O-ring	2

### HT valve: Hydraulic symbol





- 1 Pump connection (P)
- 2A Return tank connection (T)
- 2B Alternative return tank connection (T)
- 3 Cylinder connection (C)
- 4 Pneumatic connection (Tip)
- 5 Pneumatic connection (Lower)
- 6 Pressure gauge point
- 7A High pressure cartridge (Max 2)
- 7B Low pressure cartridge (Max 1)
- 8 Pressure Selector
- 9 Adjustment screw (To adjust the lowering speed)

### Types

Hydraulic connections	Pressure (BAR)		Part Number	Description
	Max. 1*	Max. 2*		
T, C & P=1"	150	220	14767152	TIP VALVE HT-TNK-2220-150-220-P1"
		250	14767155	TIP VALVE HT-TNK-2220-150-250-P1"
		280	14767158	TIP VALVE HT-TNK-2220-150-280-P1"
		350	14767165	TIP VALVE HT-TNK-2220-150-350-P1"
	170	220	14767172	TIP VALVE HT-TNK-2220-170-220-P1"
		250	14767175	TIP VALVE HT-TNK-2220-170-250-P1"
		280	14767178	TIP VALVE HT-TNK-2220-170-280-P1"
		350	14767185	TIP VALVE HT-TNK-2220-170-350-P1"
	190	220	14767192	TIP VALVE HT-TNK-2220-190-220-P1"
		250	14767195	TIP VALVE HT-TNK-2220-190-250-P1"
		280	14767198	TIP VALVE HT-TNK-2220-190-280-P1"
		350	14767200	TIP VALVE HT-TNK-2220-190-350-P1"

Optional adapter kits	Kit number
1" Straight TNK mounting	AK5016TS
1" 90 degree TNK mounting	AK5016TE
1" Straight CHASSIS mounting	AK5016CS
1" 90 degree CHASSIS mount.	AK5016CE

Mounting kits	Kit number
Tank (TNK) **	14735168
Chassis	14735208

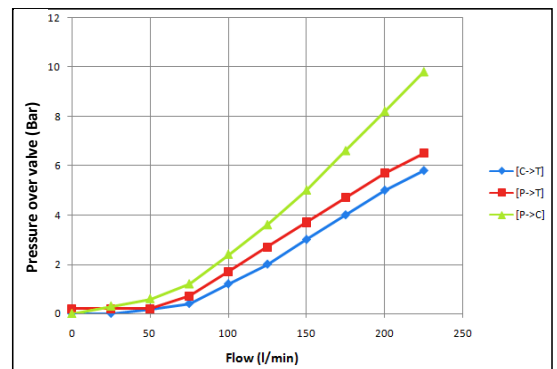
\*\* = included with valve

\* = The user can choose the maximum pressure limit by using the Pressure Selector (8)

### Specifications

Type	Spool valve with pressureless bypass in neutral. Oil flow in lowering position is proportional with pneumatic pilot pressure
Max. peak pressure	350 bar
Pneumatic pilot pressure	6-12 bar
Max. pump flow	220 L/min
Max. pressure on T-connection	10 bar
Min. filtration (ISO 18/13)	25 µm
Viscosity range	min 12 mm <sup>2</sup> /s (cst) max 100 mm <sup>2</sup> /s (cst)
Temperature range	min -40 °C max 80 °C
Mass	6,4 kg

### Δp - Q characteristic



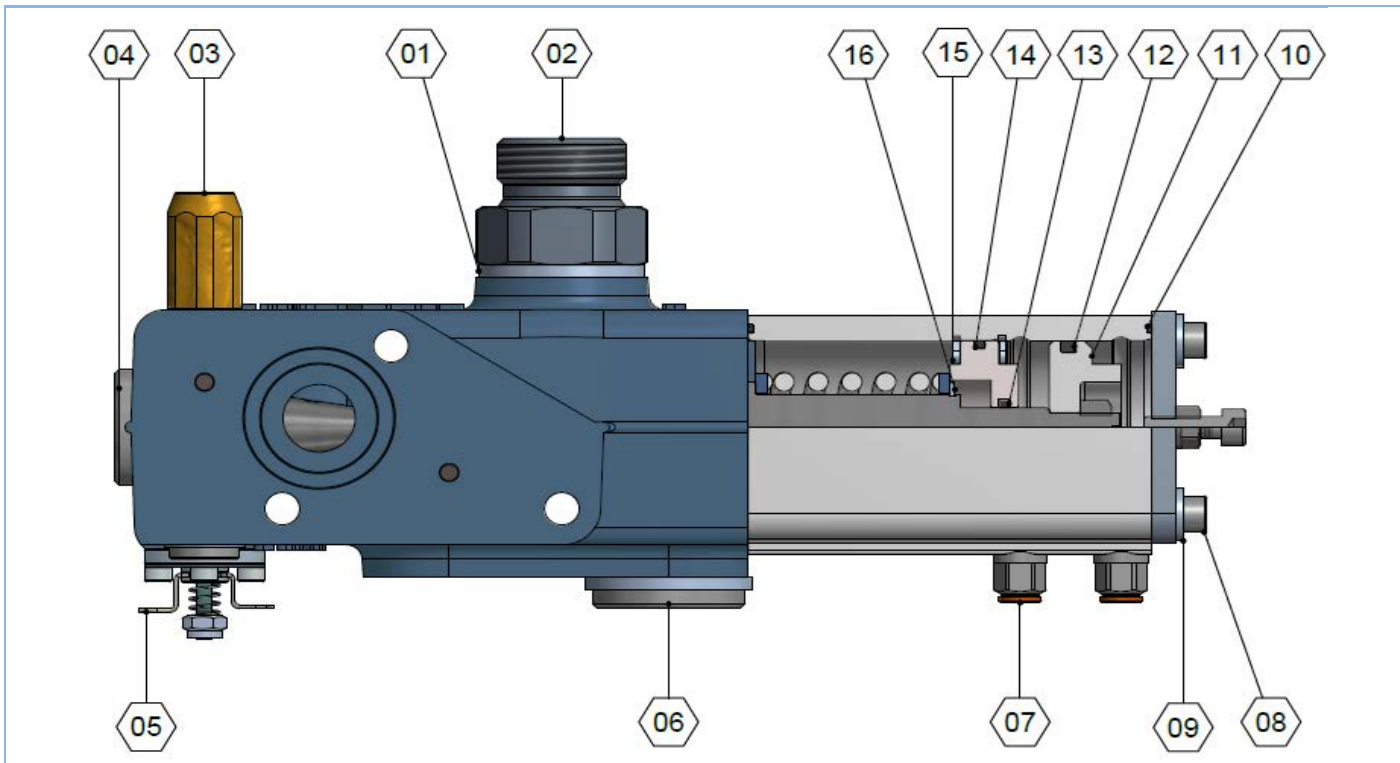
### Technical notes

- Mount the valve according the mounting instructions • Use the correct washers and adapters in the ports to prevent housing deformation. Do not use adapters with tapered threads • To further prevent deformation of the valve housing, the mounting plate surface or block must be completely flat and plane. • Do not weld to the valve. • Ideal air pressure for valve is 8 bar. • Make sure inlet air is dry.
- Paint spec: TNO00\_00001

### Related documentation

Mounting instructions: VAL-0022

OIL Specifications: OIL:0011

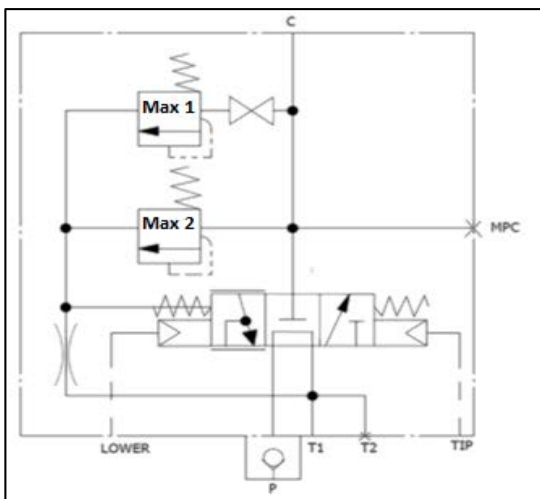


### Spare Parts

No.	Part no.	Description	Qty
1	01313848	Bonded Seal	2
2	14739975A	Non return valve	1
3	14772...	Pressure cartridge	2
3	14772150	150 bar	
3	14772170	170 bar	
3	14772190	190 bar	
3	14772220	220 bar	
3	14772250	250 bar	
3	14772280	280 bar	
3	14772350	350 bar	
4	14845024	Blind Plug	1
5	14845050	PR. Adj. KIT	1

No.	Part no.	Description	Qty
6	14845040	Bling Plug	1
7	14810517	Straight coupling	2
8	15013638	Bolt	4
9	15022015	Washer	4
10	01226200	O-ring	2
11	14845007	Piston air cylinder	1
12	14845020	Quadring	1
13	14845018	Quadring	1
14	14845013	O-ring	1
15	14845019	Retaining ring	2
16	14845031	Retaining ring	3

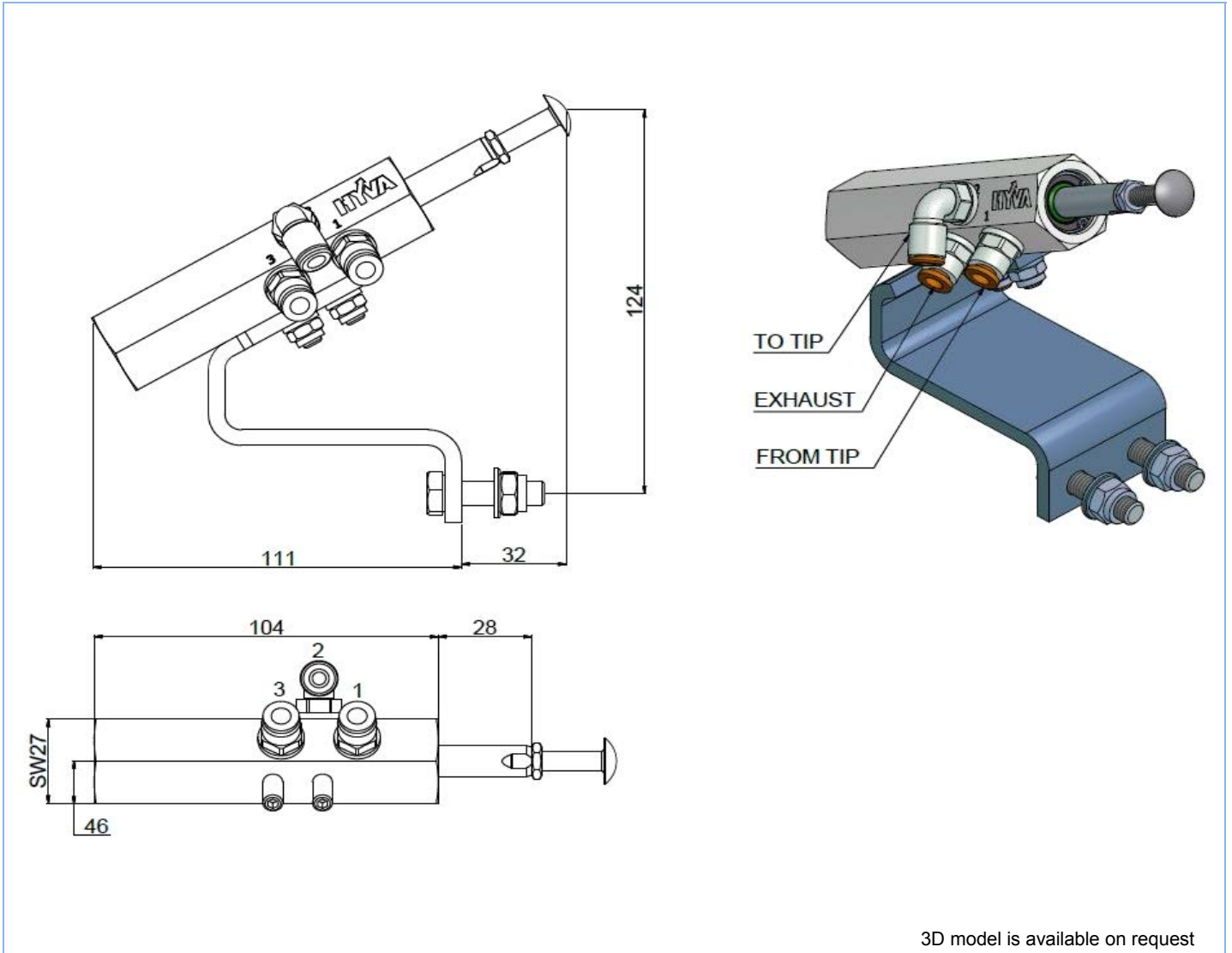
### Hydraulic symbol of the HT valve



Max 1 = the pressure cartridge with the lowest BAR value

Max 2 = the pressure cartridge with the highest BAR value



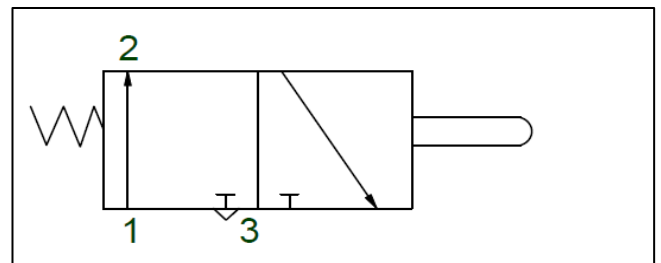


3D model is available on request

### Specification

Part No.		14700506
Mounting		Cradle
Max working pressure		10 bar
Connections (tube)		6 x 4 mm
Temperature range	Max	+80 °C
	Min	-40 °C
Weight		0,6 kg

### Pneumatic symbol



### Spare Parts

Part No.	Description	Qty	Weight (KG)
14700508	Knock-off (no bracket)	1	0,25
14700507	Seal kit	1	
14810517	Air coupling straight - 6 mm	1	0,01
14810566	Air coupling 90 degrees - 6 mm	1	0,01

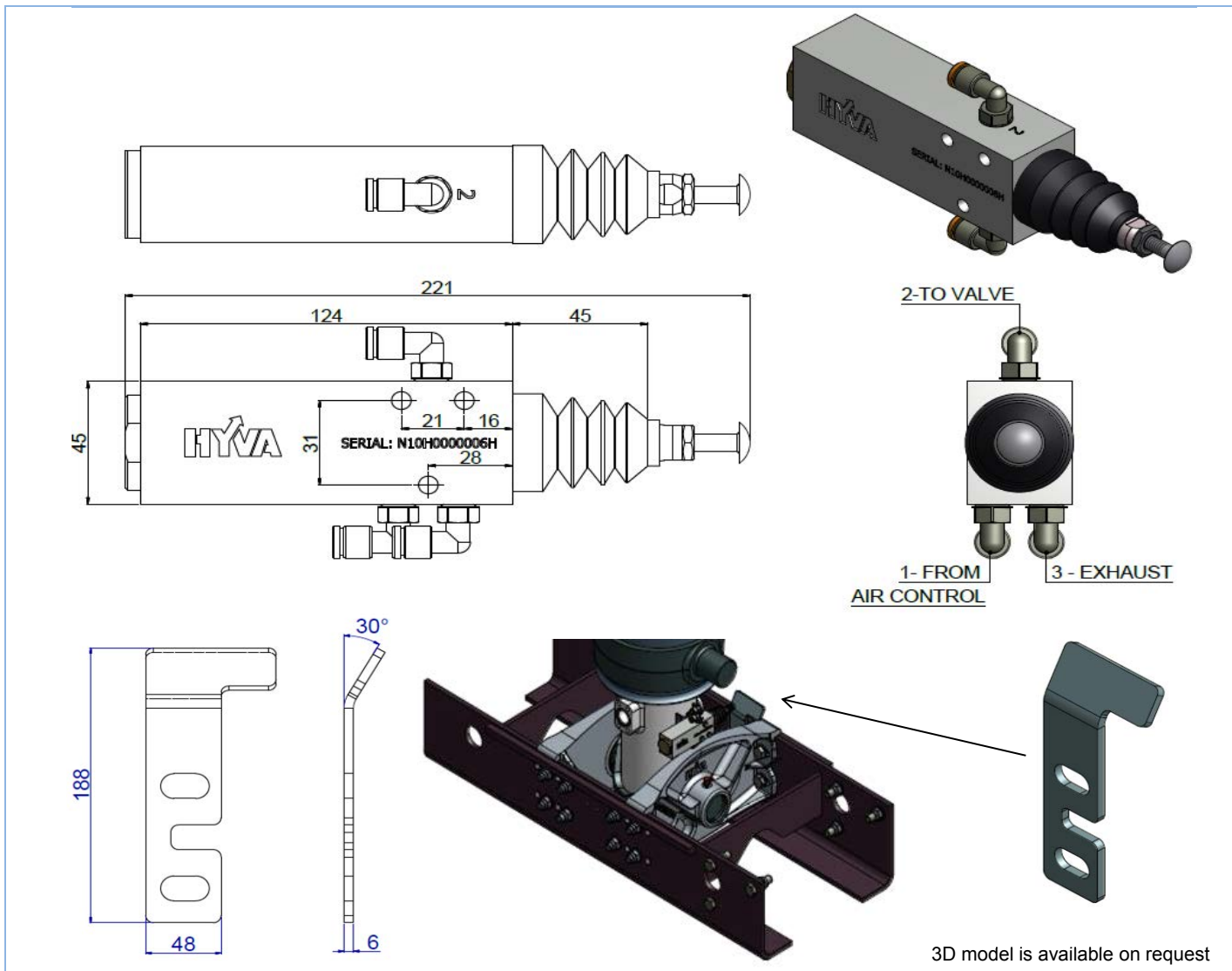
### Technical notes

Make sure inlet air is dry and clean

### Related documentation

Mounting instructions: KNO-0020

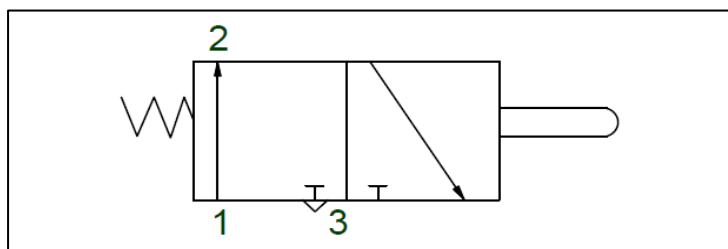
Repair instructions: KNO-0005



### Specification

Part No.	14700578
Mounting	Cylinder
Max working pressure	10 bar
Connections (tube)	6 x 4 mm
Temperature range	Max +80 °C Min -40 °C
Weight	0,95 kg

### Pneumatic symbol



### Spare Parts

Part No.	Description	Qty	Weight (KG)
14700575	Knock-off (no bracket)	1	0,73
75375015	Stop Plate - KnockOff	1	0,05
14700577	Seal Kit	1	
14810517	Air coupling straight - 6 mm	1	0,01
14810566	Air coupling 90 degrees - 6 mm	1	0,01

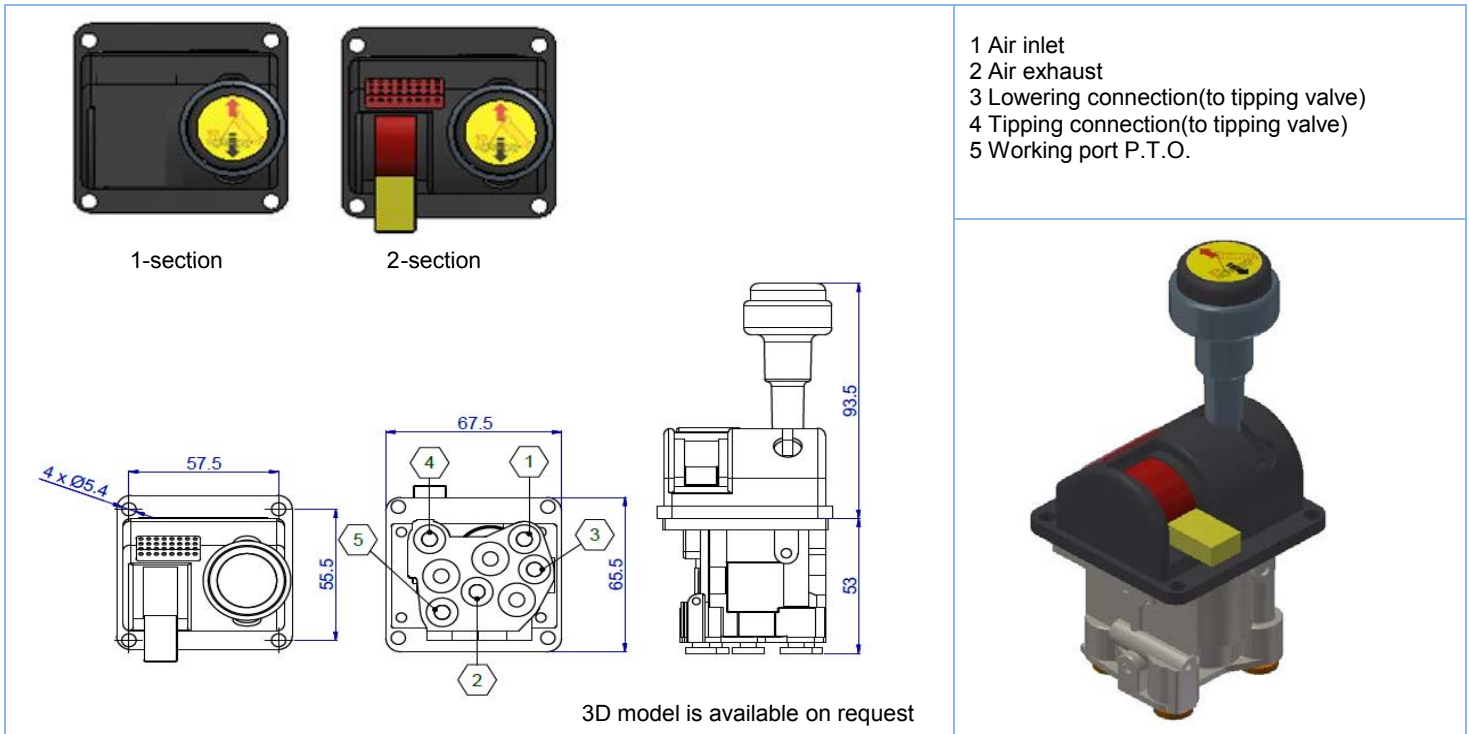
### Technical notes

Make sure inlet air is dry and clean

### Related documentation

Mounting instructions: KNO-0021

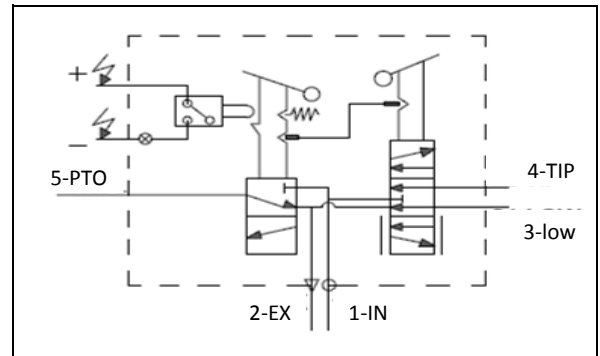
Repair instructions: KNO-0007



### Specification

Max. air pressure	12 Bar	Connections	6 mm hose
Min. air pressure	5 Bar	Mounting holes	M6
Max. temperature	80 °C	Voltage lamp	24 VDC
Min. temperature	-40 °C	Weight	0,4 KG

### Pneumatic symbol



Section	Lever characteristic		PTO control		Part no.
	TS/LF	TF/LF	PNL	PAL	
1-section	•	•			14750667H 14750665H
2-section	•	•	•	•	14750646H 14750652H 14750644H 14750650H

TF	Lever is fixed in tipping position
TS	Lever has spring return in tipping position
LF	Lever is fixed in lowering position
PNL	P.T.O control has no automatic disengage P.T.O has a lamp
PAL	P.T.O control has an automatic disengage P.T.O has a lamp

### NOTE:

The air control TF/LF is not allowed to be used on a tipper in the EU according Machinery Directive 2006/42/EC, chapter 3.3.1

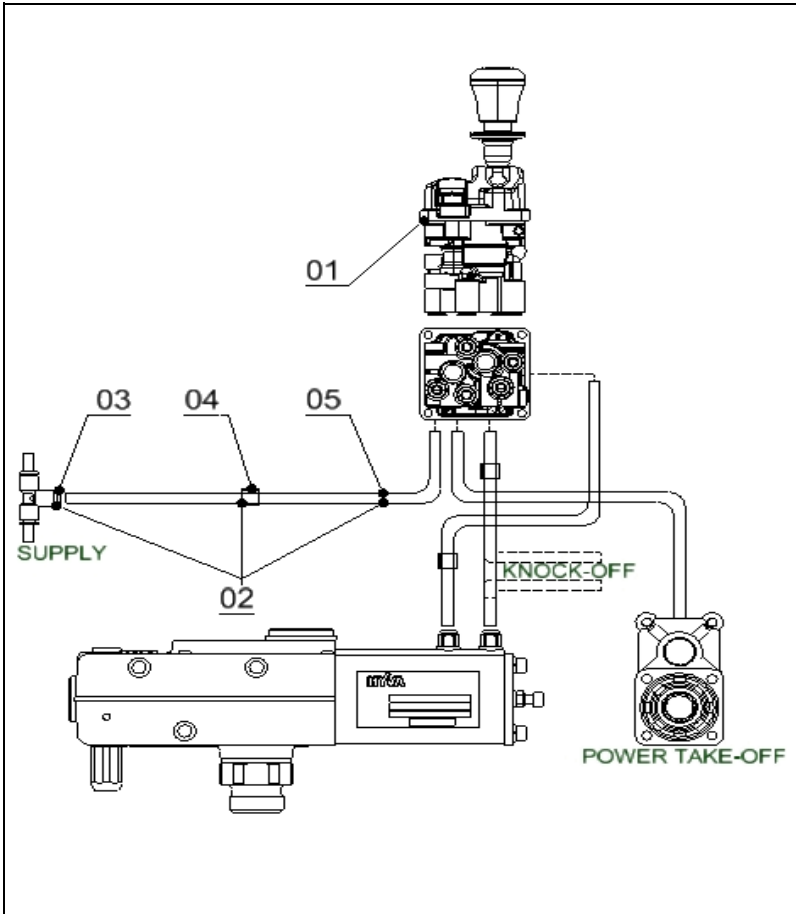
### Technical notes

- When used with a compatible tipping valve with proportional lowering, the speed of descent of the body can be regulated by the proportional movement of the air control lever.
- The air control includes an electrical indicator to show P.T.O. engagement.
- The functions of Hyva air controls are clearly indicated on the type plate.
- Make sure inlet air is dry.

### Related documentation

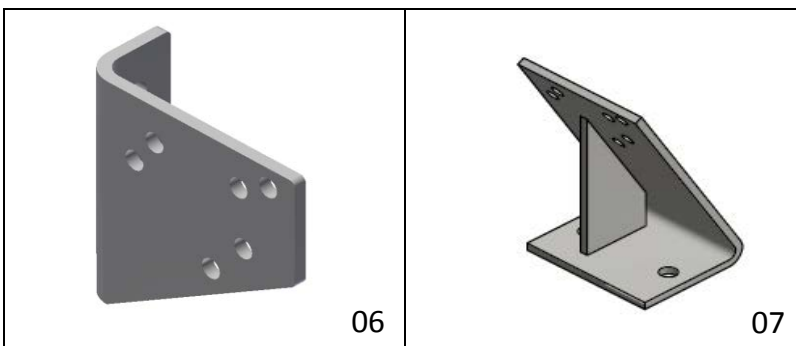
Mounting instructions: AIR- 0002

### Options

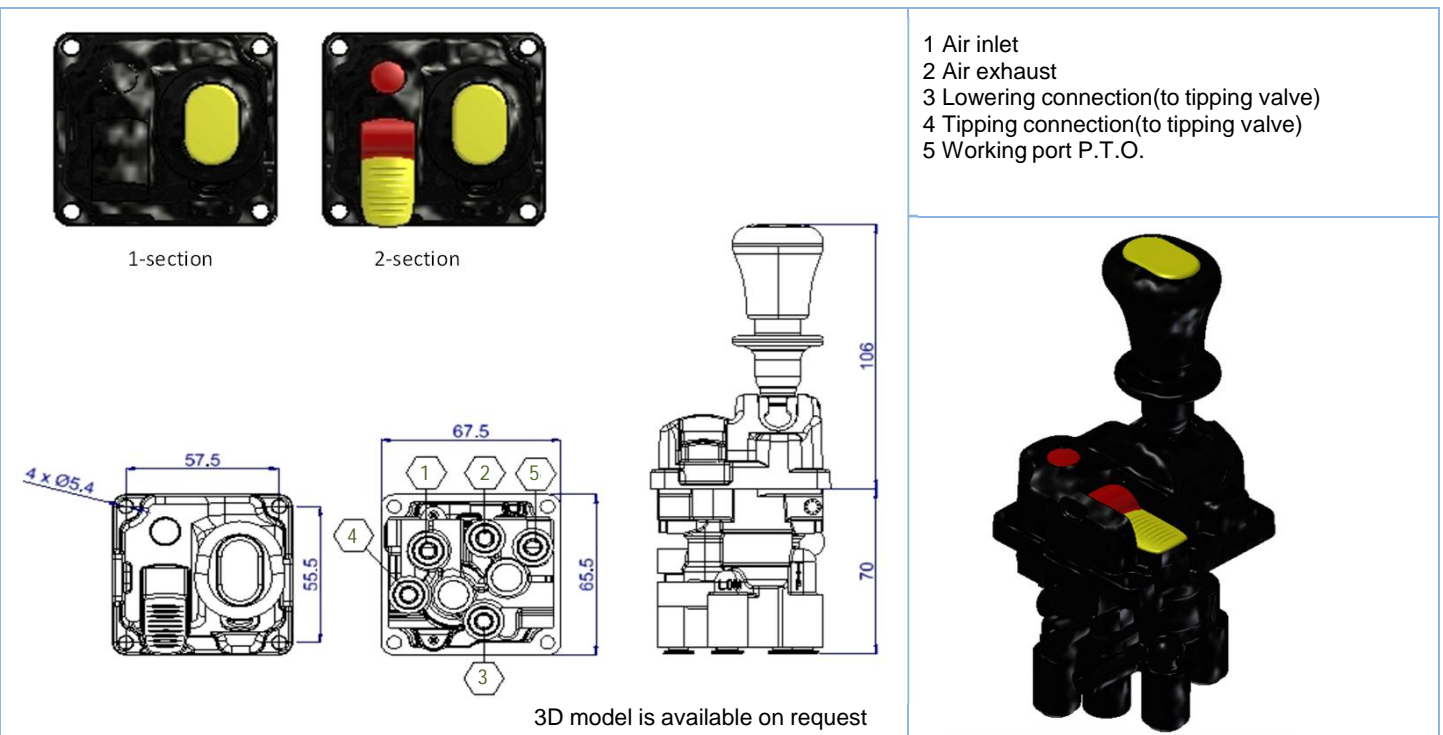


POS	Part no.	Description	Qty.
01	147506xxH	Air control	1
02	14750119K	Air tube kit 6mm 25 meter single tube	1
02	14750120K	Air tube kit 6mm 9 meter (3 in 1)	1
02	14750121K	Air tube kit 6mm 9 meter (2 in 1)	1
03	09225005	T-piece 6mm	1
04	14875500	Air tube tie	8
05	1487500715	Air tube 15m - 4x6 mm	1
05	1487500720	Air tube 20m - 4x6 mm	1
05	1487500725	Air tube 25m - 4x6 mm	1
05	1487500735	Air tube 35m - 4x6 mm	1

### Mounting Support



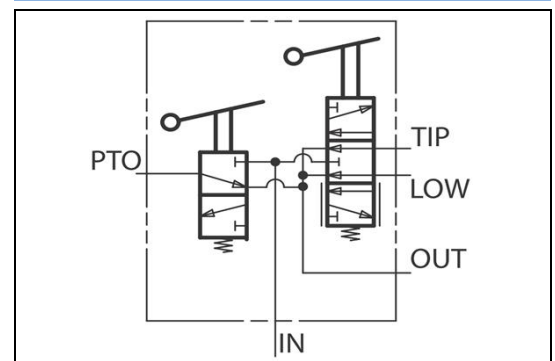
POS	Part no.	Description	Weigth (kg)
06	09232002	Support tip control	0,18
07	09205002	Support tip control	0.44



### Specification

Max. air pressure	12 Bar	Connections	6 mm hose
Min. air pressure	5 Bar	Mounting holes	M6
Max. temperature	80 °C	Voltage lamp	24 VDC
Min. temperature	-40 °C	Weight	0,37 KG

### Pneumatic symbol



Section	Lever characteristic		PTO control		Safety switch	Part no.
	TS/LF	TF/LF	PNL	PAL		
1-section	•	•				02119065 02119064
2-section	•		•	•		02119061
	•		•			02119063
		•		•		02119060
		•		•		02119062
		•		•	•	02119035

TF	Lever is fixed in tipping position
TS	Lever has spring return in tipping position
LF	Lever is fixed in lowering position
PNL	P.T.O control has no automatic disengage P.T.O has a lamp
PAL	P.T.O control has an automatic disengage P.T.O has a lamp

### NOTE:

The air control TF/LF is not allowed to be used on a tipper in the EU according Machinery Directive 2006/42/EC, chapter 3.3.1

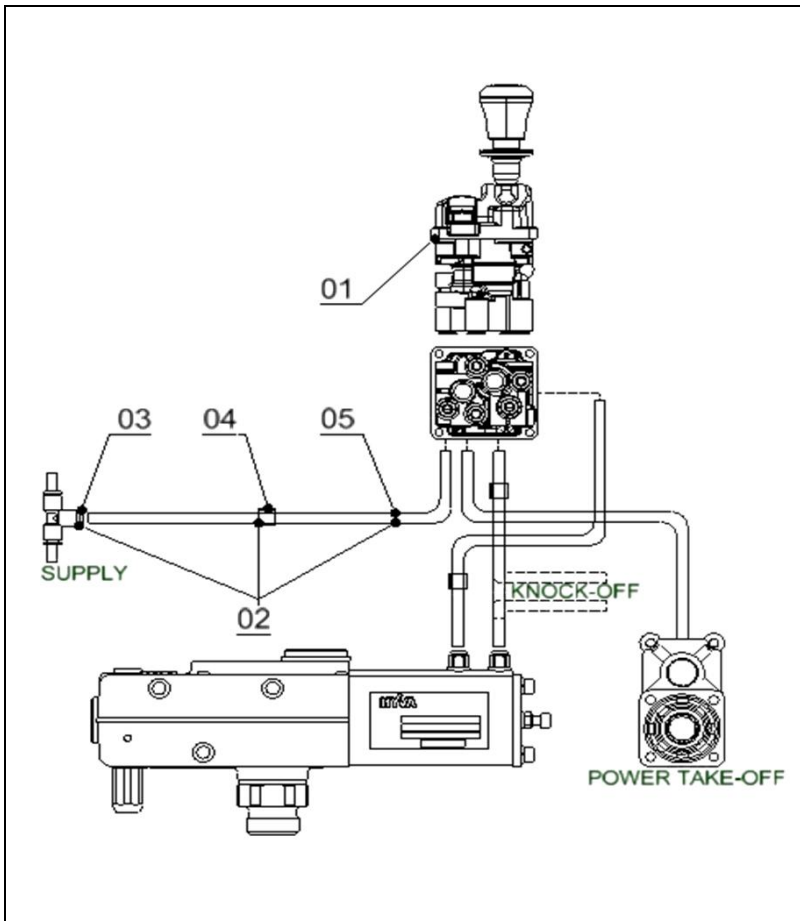
### Technical notes

- When used with a compatible tipping valve with proportional lowering, the speed of descent of the body can be regulated by the proportional movement of the air control lever.
- The air control includes an electrical indicator to show P.T.O. engagement.
- The functions of Hyva air controls are clearly indicated on the type plate.
- Make sure inlet air is dry.

### Related documentation

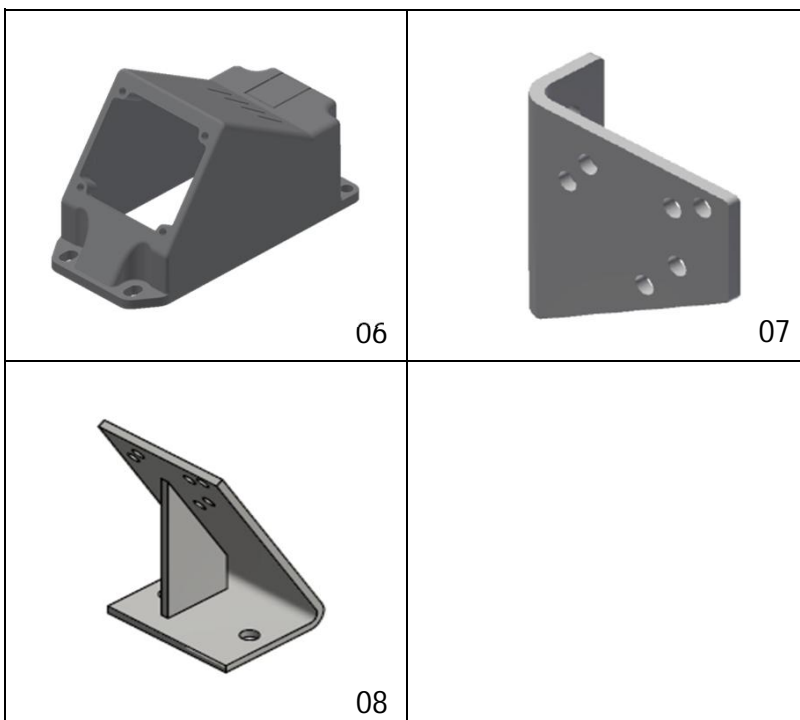
Mounting instructions: AIR- 0002

### Options



POS	Part no.	Description	Qty.
01	021190xx	Air control	1
02	14750119K	Air tube kit 6mm 25 meter single tube	1
02	14750120K	Air tube kit 6mm 9 meter (3 in 1)	1
02	14750121K	Air tube kit 6mm 9 meter (2 in 1)	1
03	09225005	T-piece 6mm	1
04	14875500	Air tube tie-wrap	8
05	1487500715	Air tube 15m - 4x6 mm	1
05	1487500720	Air tube 20m - 4x6 mm	1
05	1487500725	Air tube 25m - 4x6 mm	1
05	1487500735	Air tube 35m - 4x6 mm	1

### Mounting Support



POS	Part no.	Description	Weight (kg)
06	02119000	Bracket kit for air control	0,15
07	09232002	Support tip control	0,18
08	09205002	Support tip control	0,44

# ALPHA Series TECHNOLOGY

ALPHA Series presents front end tipping solutions capable of operating at pressures up to 250 bar.



**ALL NEW** front end tipping solution in which hydraulic cylinders are smaller, lighter, stronger, operate at higher pressure and consume less oil. Brackets are stronger, lighter and can be maintenance free.

Wet kits have improved knock-off and control options, cylinder mounted tipping valves, new tank and filter options, and, pumps operating at up to 250 bar.

New cylinder diameters (118, 137, 157 and 179mm) in combination with the operating pressure at 250 bar have not only increased the range but also the optimisation of tipping solutions to specific applications.

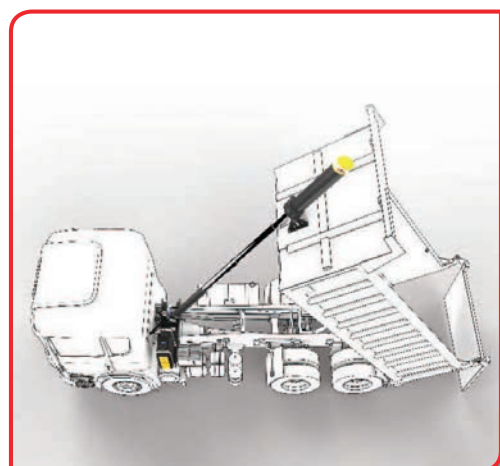
The range includes Standard and Heavy Duty (HD) cylinders. HD cylinders have larger overlaps and stop and lift faces which have been redesigned to permit exceptionally high tipping and lowering speeds.

These improvements deliver faster tipping, shorter cycle times and reduced system size and weight which can translate into more efficient working routines, increased payloads and reduced operating costs.

Smaller space installations, quick connections of valves, cylinders and hoses, maintenance free seals and longer service intervals all contribute to lower levels of downtime.

Performance improvement has been achieved through re-design and re-engineering of the complete hydraulic system, down to the component and sub-assembly level, together with improvements to installation and service procedures.

New cylinder diameters				
110	118	129	137	149
157	169	179	191	214





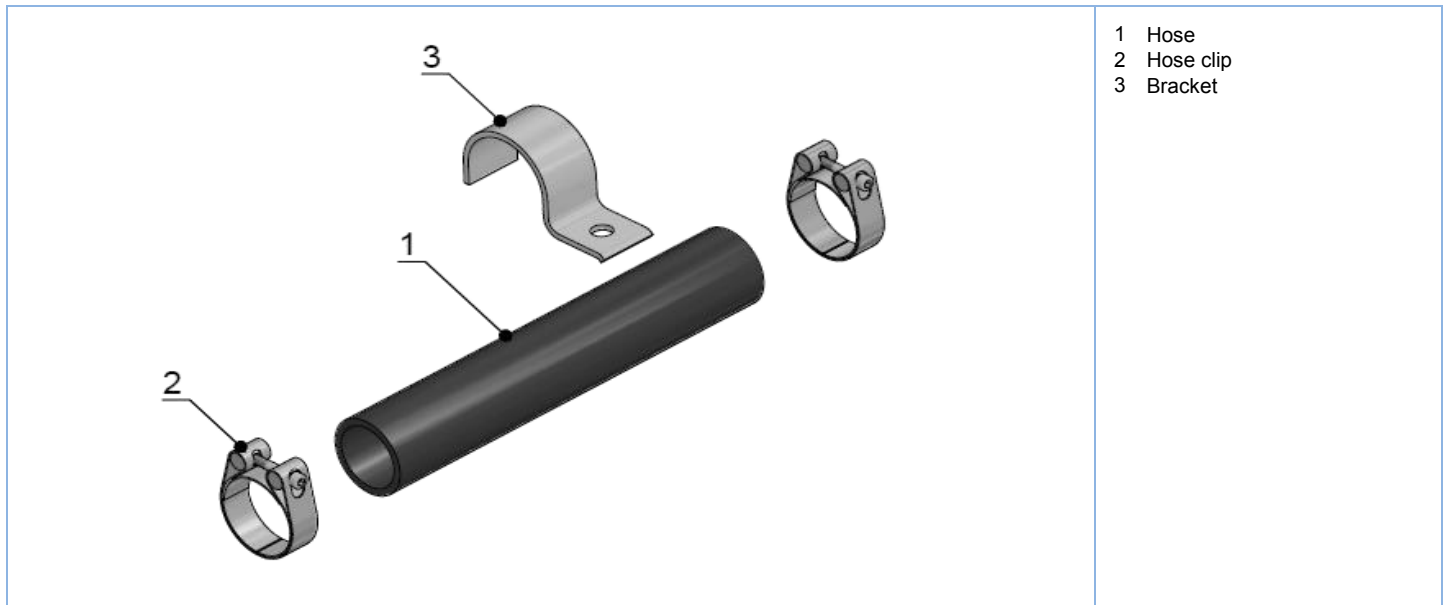
**LIGHTER** Reduced components weight through a combination of new materials and improved design has produced a lighter hydraulic system which can translate into higher payloads and can reduce operating costs.

**FASTER** Higher operating pressures, up to 250 bar, enable faster tipping and lowering and can deliver shorter cycle times.

**SAFER** Enhanced safety with re-designed cylinder overlaps and guide systems and new cylinder mounted HT tipping valves.

**MORE EFFICIENT** Reduced weight, increased operating speed, more reliable components, longer service intervals and lower fuel and oil consumption all contribute to improved efficiency and environmental performance.





- 1 Hose
- 2 Hose clip
- 3 Bracket

### Specification

Type	Size ID	Working pressure (bar)	Min. Bending radius (mm)
LP-20	1 1/4" (31,75mm)	14	205
LP-28	1 3/4" (44,45mm)	7	280
LP-32	2" (50,8mm)	7	305

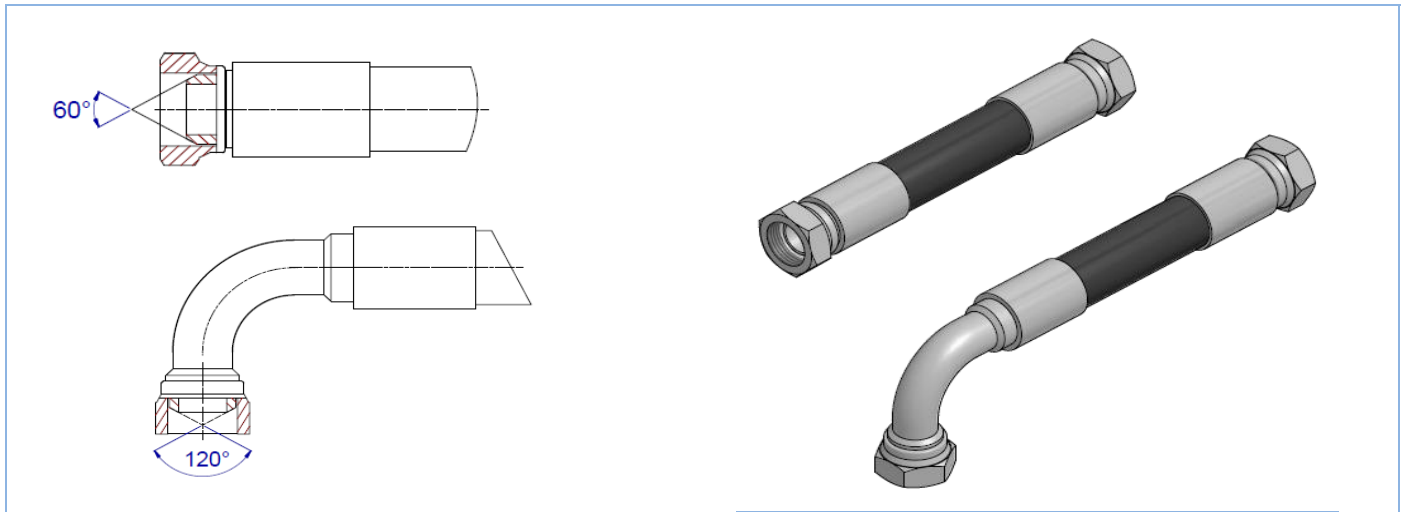
Hose	Length (mm)	Part no. (1)	Hose clip (2)			Bracket hose fixing (3)		Weight (kg)
			14796594	14796600	14796612	09223006	09223001	
LP-20	500	14795030	•			•		0.9
	1000	14795032	•			•		1.5
	1500	14795034	•			•		2.2
	2000	14795036	•			•		2.9
	2250	14795038	•			•		3.2
	2500	14795040	•			•		3.5
LP-28	1000	14795116		•			•	1.8
	1380	14795137		•			•	2.4
	1500	14795118		•			•	2.6
	2000	14795120		•			•	3.3
	2250	14795130		•			•	3.7
	2500	14795131		•			•	4.1
	3000	14795132		•			•	4.8

Hose	Length (mm)	Part no. (1)	Hose clip (2)			Bracket hose fixing (3)		Weight (kg)
			14796594	14796600	14796612	09223006	09223001	
LP-32	1500	14795852				•		3.2
	2000	14795853				•		4.1
	2225	14795860				•		4.5
	2500	14795854				•		5.0
	3000	14795855				•		5.9
	3500	14795856				•		6.8

### Related documentation

Mounting instructions: HOS- 0020

Oil specifications: OIL-0011



**Specification**

Type	Size ID	Thread	Max pressure (bar)	Min. Bending radius (mm)
HP-08	1/2" (12,7mm)	BSP	310	145
HP-12	3/4" (19,0mm)	BSP	280	195

Hose	Pressure	Length (mm)	Connections		Part no.	Weight (kg)
			Straight	Straight & Elbow		
HP-08	310 bar	700	•	•	14789483	0.6
					14789589	0.6
		1000	•	•	14789486	0.8
					14789570	0.9
		1500	•	•	14789504	1.0
					14789582	1.0
		2000	•	•	14789510	1.2
					14789583	1.3
		2500	•	•	14789530	1.6
					14789535	1.6
		3000	•	•	14789549	1.7
					14789550	1.8
3500	•	•	14789553	2.2		
			14789591	2.0		
4000	•	•	14789555	2.4		
			14789592	2.5		
HP-12	280 bar	500	•	•	14790010	0.5
					14790011	0.6
		700	•	•	14790014	0.9
					14790017	1.0

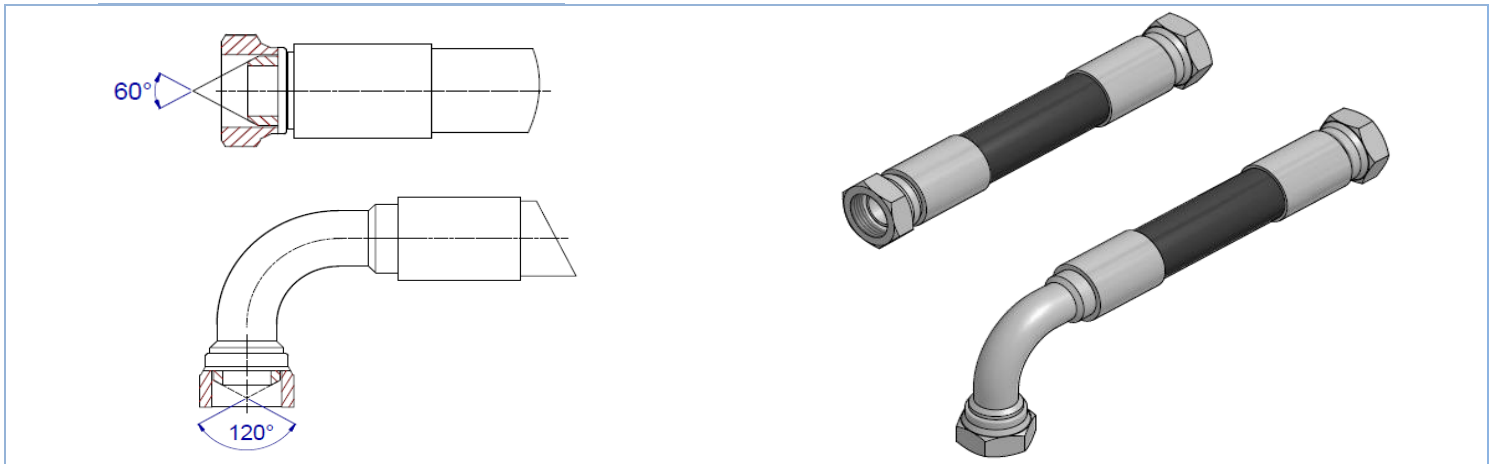
Hose	Pressure	Length (mm)	Connections		Part no.	Weight (kg)
			Straight	Straight & Elbow		
HP-12	280 bar	1000	•	•	14790026	1.1
					14790129	1.2
		1500	•	•	14790038	1.5
					14790130	1.6
		2000	•	•	14790040	1.9
					14790142	2.0
		2500	•	•	14790051	2.3
					14790154	2.4
		3000	•	•	14790063	2.7
					14790166	2.9
		3500	•	•	14790087	3.2
					14790170	3.4
		4000	•	•	14790075	3.6
					14790178	3.8
		4500	•	•	14790078	4.1
					14790079	4.3
		5000	•	•	14790081	4.5
					14790191	4.8
6000	•	•	14790086	5.4		
			14790195	5.8		

See next page for more types

**Related documentation**

Mounting instructions: HOS- 0020

Oil specifications: OIL-0011



**Specification**

Type	Size ID	Thread	Max pressure (bar)	Min. Bending radius (mm)
HP-16	1" (25,4mm)	Metric (M36x2)	88	230
HP-16	1" (25,4mm)	BSP	250	240

Hose	Pressure	Length (mm)	Connections		Part no.
			Straight	Straight & Elbow	
HP-16	88 bar	700	•	•	14790452
					14794513
		1000	•	•	14790450
					14794515
		1500	•	•	14790455
					14790335
		2000	•	•	14790460
					14794525
		2500	•	•	14790465
					14794530
		3000	•	•	14790470
					14794535
		3500	•	•	14790475
					14794540
		4000	•	•	14790480
					14794545

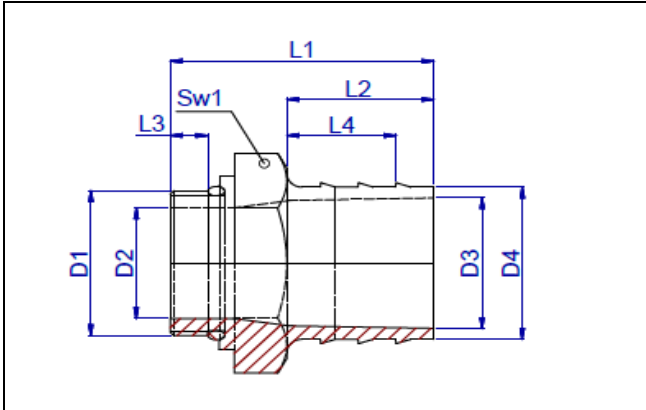
Hose	Pressure	Length (mm)	Connections		Part no.
			Straight	Straight & Elbow	
HP-16	250 bar	700	•	•	14790484
					14790486
		1000	•	•	14790485
					14794432
		1500	•	•	14790490
					14794434
		2000	•	•	14790495
					14794436
		2500	•	•	14790500
					14794437
		3000	•	•	14790505
					14794438
		3500	•	•	14790510
					14794439
		4000	•	•	14790515
					14794440

**Related documentation**

Mounting instructions: HOS- 0020

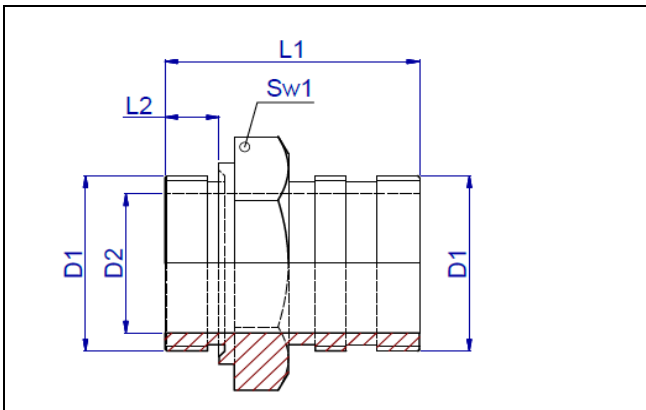
Oil specifications: OIL-0011

### Straight hose pillar BSPOT



Part no.	Description	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	D1 (inch)	D2 (mm)	D3 (mm)	D4 (mm)	Sw1 (mm)	Weight (KG)
14500587	Hose pillar LP20-00-1"-NYLON	70	39	14	29	1	22	24	33	46	0.04
14500589	Hose pillar LP20-00-1"	82	50	17	37	1	23	26	32	41	0.27
14500585	Hose pillar LP20-00-1 1/4"-NYLON	67	39	11	29	1 1/4	24	24	33	50	0.05
14799310	Hose pillar LP28-00-1"-NYLON	70	39	13	29	1	23	38	44	50	0.05
14799000	Hose pillar LP28-00-1"	70	40	11	30	1	23	38	44	50	0.13
14799312	Hose pillar LP28-00-1 1/4"-NYLON	70	39	13	29	1 1/4	32	38	44	55	0.06
14799005	Hose pillar LP28-00-1 1/4"	70	40	11	30	1 1/4	32	38	44	55	0.16
14799314	Hose pillar LP28-00-1 1/2"-NYLON	70	39	13	29	1 1/2	36	38	44	60	0.07
14799015	Hose pillar LP28-00-1 1/2"	70	40	11	30	1 1/2	36	38	44	60	0.16
14535328	Hose pillar LP32-00-1 1/4"	79	45	19	27	1 1/4	32	44	50	55	0.45
14500492	Hose pillar LP32-00-1 1/2"	84	52	11	35	1 1/2	38	43	50	60	0.51

### Straight adapter BSPOT-BSPOT



Part no.	Description	L1 (mm)	L2 (mm)	D1 (inch)	D2 (mm)	Sw1 (mm)	Weight (KG)
14799038	Adapter LP-00-1 1/2"-1 1/2"	66	12	1 1/2"	38	60	0.64

### O-ring straight adapter

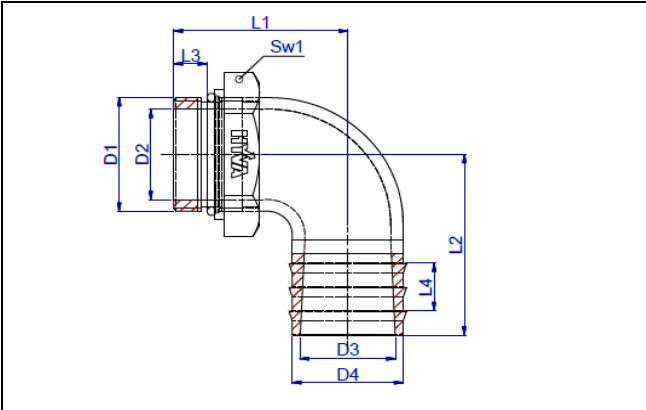
Part no.	Description
01226165	O-ring 1" -3,53mm
01226185	O-ring 1 1/4"-3,53mm
01225650	O-ring 1 1/2"-3,53mm

### Related documentation

Mounting instructions: HOS- 0020

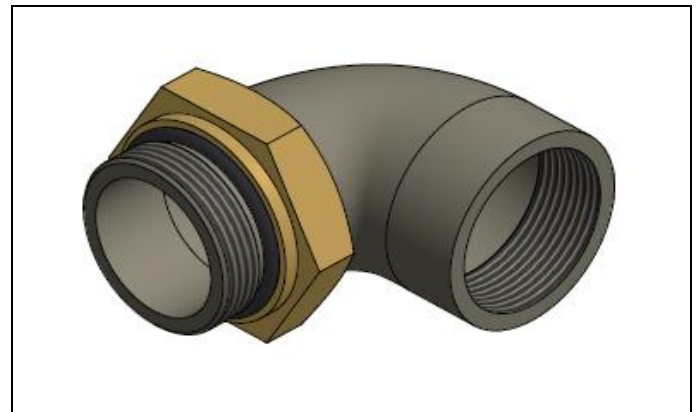
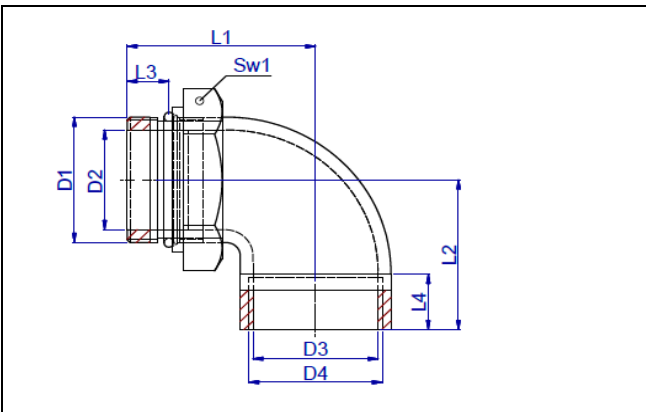
Oil specifications: OIL-0011

### 90° Hose Pillar BSPOT



Part no.	Description	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	D1 (inch)	D2 (mm)	D3 (mm)	D4 (mm)	Sw1 (mm)	Weight (KG)
14799284	Hose pillar LP20-90-1/2"	65	65	11	30	1/2"	13	27	30	40	0.34
14799322	Hose pillar LP20-90-1 1/4"-NYLON	70	71	16	25	1 1/4"	32	24	33	55	0.08
14799028	Hose pillar LP20-90-1 1/4"	70	75	11	25	1 1/4"	32	27	32	55	0.32
14799316	Hose pillar LP28-90-1"-NYLON	76	79	16	40	1"	23	38	44	50	0.10
14799020	Hose pillar LP28-90-1"	77	80	11	30	1"	23	38	44	50	0.63
14799318	Hose pillar LP28-90-1 1/4"-NYLON	72	79	16	40	1 1/4"	32	38	44	55	0.11
14799025	Hose pillar LP28-90-1 1/4"	77	77	11	30	1 1/4"	32	38	44	55	0.70
14799320	Hose pillar LP28-90-1 1/2"-NYLON	76	69	16	40	1 1/2"	32	38	44	60	0.12
14799050	Hose pillar LP28-90-1 1/2"	77	75	11	30	1 1/2"	32	38	44	60	0.69
14500625	Hose pillar LP32-90-1"	63	80	18	35	1"	26	43	50	41	0.50
14535327	Hose pillar LP32-90-1 1/4"	60	81	18	20	1 1/4"	19	30	50	38	1.70

### 90° Adapter BSPIT-BSPOT



Part no.	Description	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	D1 (inch)	D2 (mm)	D3 (mm)	D4 (inch)	Sw1 (mm)	Weight (KG)
14799035	Adapter LP-90-1/2"-1/2"	66	62	11	20	1 1/2"	38	45	1 1/2"	60	0.71

### O-ring 45° & 90° adapter

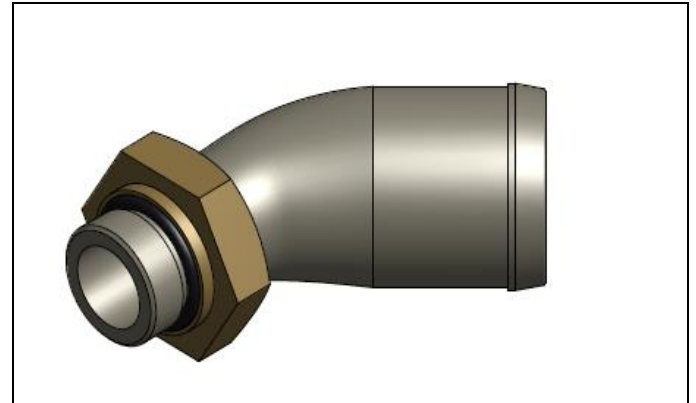
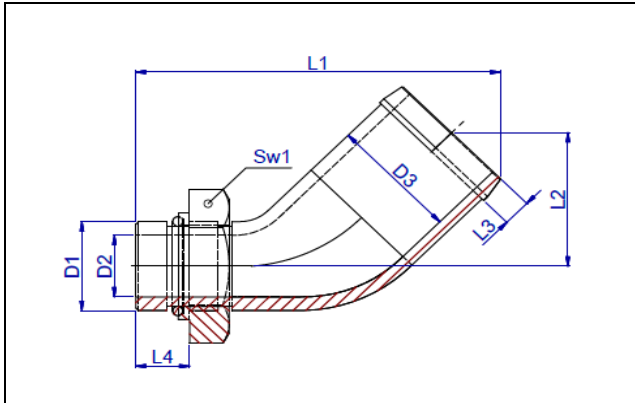
Part no.	Description
01226165	O-ring 1" -3,53mm
01226185	O-ring 1 1/4"-3,53mm
01225650	O-ring 1 1/2"-3,53mm

### Related documentation

Mounting instructions: HOS- 0020

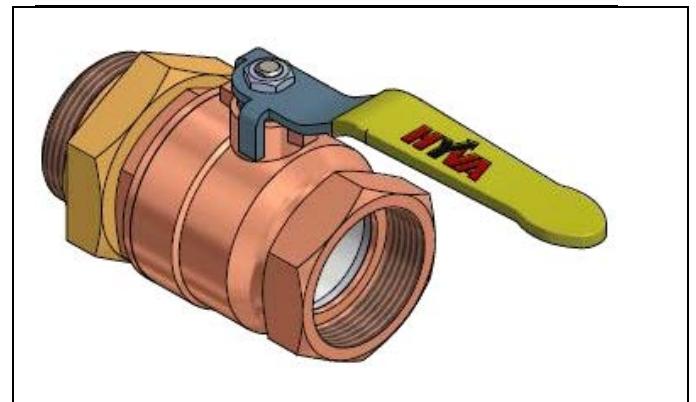
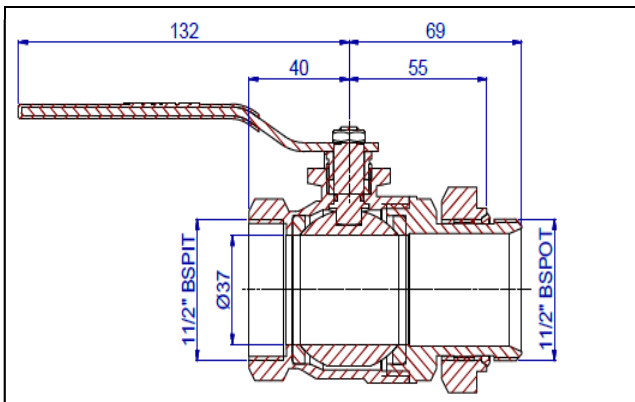
Oil specifications: OIL-0011

## 45° Hose pillar BSPOT



Part no.	Description	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	D1 (inch)	D2 (mm)	D3 (mm)	D4 (mm)	Sw1 (mm)	Weight (KG)
14799043	Hose pillar LP32-45-1"	112	50	11	35	1"	23	41	50	50	0.36
14799044	Hose pillar LP32-45-1 1/4"	112	50	11	35	1 1/4"	33	41	50	50	0.40

## Ball valve BSPIT-BSPOT



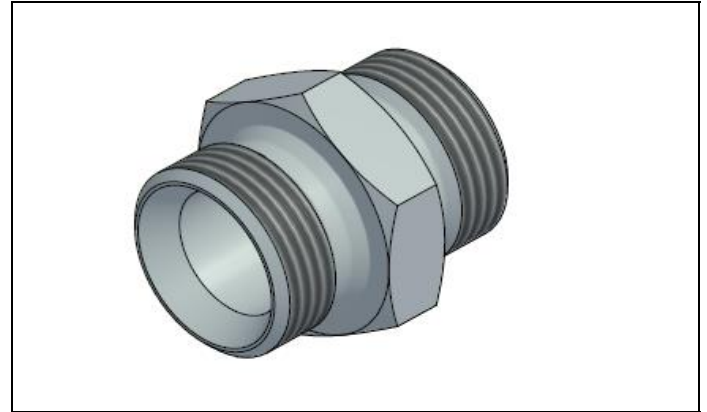
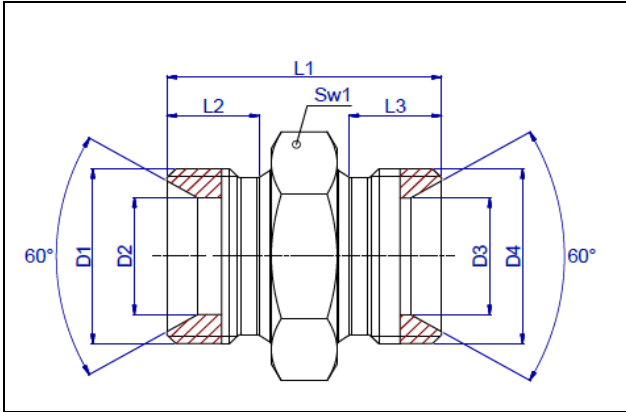
Part no.	Description	SW	Weight
14780981	Ball valve 1 1/2"-1 1/2"	60	1.20

### Related documentation

Mounting instructions: HOS- 0020

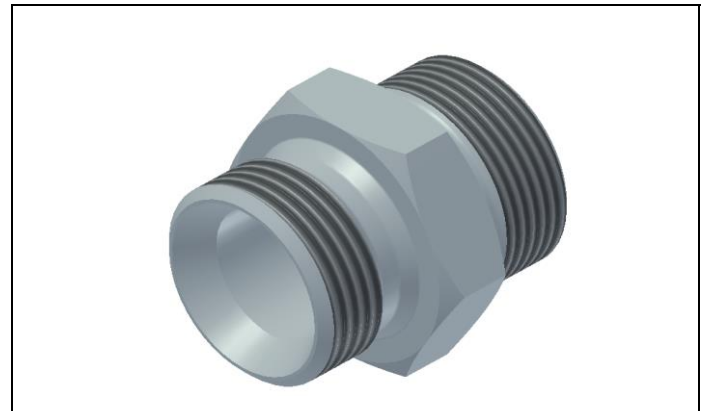
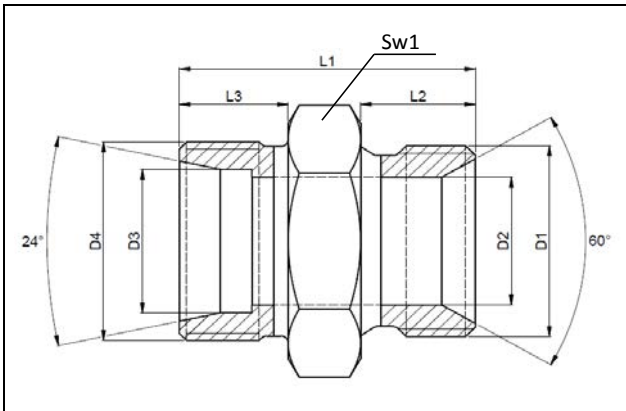
Oil specifications: OIL-0011

### Straight adapter BSPOT



Part no.	Description	L1 (mm)	L2 (mm)	L3 (mm)	D1 (inch)	D2 (mm)	D3 (mm)	D4 (mm)	Sw1 (mm)	Weight (KG)
01317690	Adapter HP-00-3/8"-3/8"	34	11	11	3/8"	9.5	9.5	3/8"	22	0,04
01317805	Adapter HP-00-3/8"-1/2"	38	12	14	3/8"	7.9	11	1/2"	27	0,07
01317700	Adapter HP-00-3/8"-3/4"	40	12	16	3/8"	7.9	16.5	3/4"	32	0,06
01317704	Adapter HP-00-1/2"-1/4"	35	13	14	1/4"	7	11	1/2"	27	0,06
01221838	Adapter HP-00-1/2"-1/2"	40	14	14	1/2"	11	11	1/2"	27	0,07
01317714	Adapter HP-00-1/2"-3/4"	42	14	16	1/2"	11	16.5	3/4"	32	0,10
01222105	Adapter HP-00-3/4"-1/4"	41	13	16	1/4"	7	16.5	3/4"	32	0,09
01222661	Adapter HP-00-3/4"-3/4"	44	16	16	3/4"	16.5	16.5	3/4"	32	0,12
14799080	Adapter HP-00-3/4"-1"	47	16	19	3/4"	16.5	22	1"	41	0,17
01317959	Adapter HP-00-3/4"-1 1/4"	48	16	20	3/4"	16.5	28.5	1 1/4"	50	0,28
01317933	Adapter HP-00-1"-1"	50	19	19	1"	22	22	1"	41	0,18
01222107	Adapter HP-00-1"-1 1/4"	51	19	20	1"	22	28.5	1 1/4"	50	0,28
14799093	Adapter HP-00-1 1/4"-1 1/4"	52	20	20	1 1/4"	28.5	28.5	1 1/4"	50	0,28

### M- Thread BSP



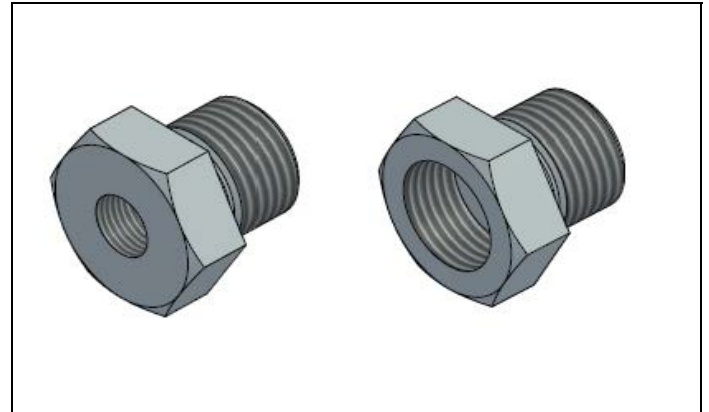
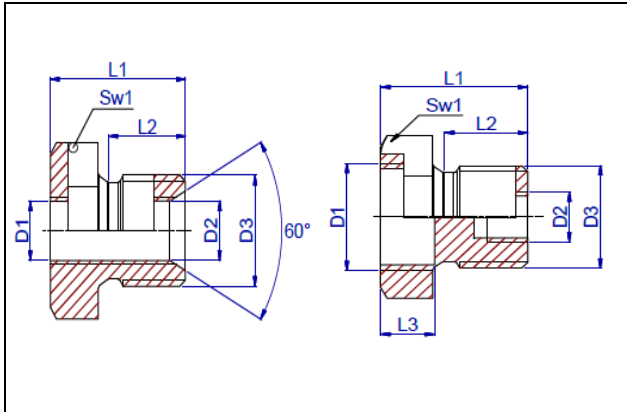
Part no.	Description	L1 (mm)	L2 (mm)	L3 (mm)	D1 (inch)	D2 (mm)	D3 (mm)	D4 (mm)	Sw1 (mm)	Weight (KG)
01317920	Adapter HP-00-3/4"-M36	46	16	18	3/4"	17	25	M36	41	0.22
01317921	Adapter HP-00-1"-M36	49	19	18	1"	22	25	M36	41	0.22
01317922	Adapter HP-00-1-1/4"-M36	50	20	18	1-1/4"	29	25	M36	50	0.31

### Related documentation

Mounting instructions: HOS- 0020

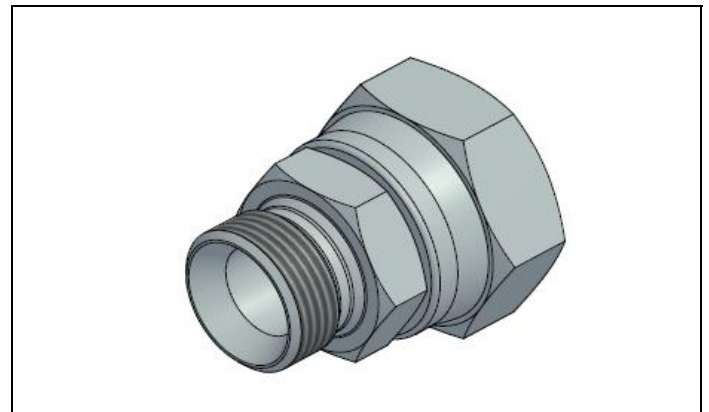
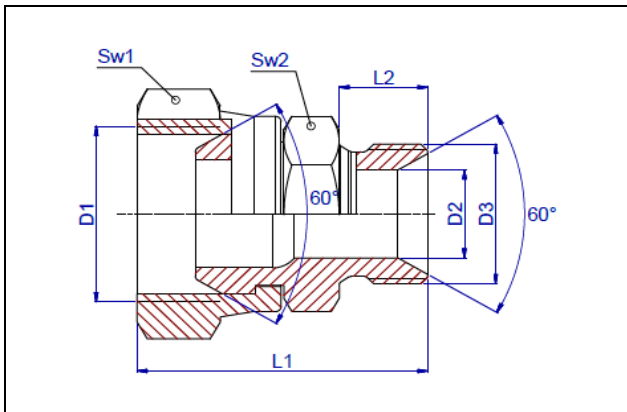
Oil specifications: OIL-0011

### Straight adapter BSPOT-BSPIT



Part no.	Description	L1 (mm)	L2 (mm)	L3 (mm)	D1 (inch)	D2 (mm)	D3 (mm)	Sw1 (mm)	Weight (KG)
14958010	Adapter HP-00-1/2"-1/4"	24	14	-	1/2"	12	1/4"	27	0,06
14958000	Adapter HP-00-3/4"-3/8"	26	15	-	3/4"	15	3/8"	32	0,08
14958112	Adapter HP-00-3/4"-1/2"	26	15	-	3/4"	16	1/2"	32	0,15
14958095	Adapter HP-00-1"-1/4"	29	18	-	1"	11.5	1/4"	41	0,19
14958100	Adapter HP-00-1"-1/2"	29	18	-	1"	19	1/2"	41	0,15
14958102	Adapter HP-00-1"-3/4"	49	19	21	1"	30	3/4"	41	0,28
14958120	Adapter HP-00-1 1/4"-1"	52	20	24	1 1/4"	25	1"	50	0,45

### Straight Swivel adapter BSPIT-BSPOT



Part no.	Description	L1 (mm)	L2 (mm)	D1 (inch)	D2 (mm)	D3 (inch)	Sw1 (mm)	Sw2 (mm)	Weight (KG)
01223648	Adapter HP-00-SW-1/2"-3/8"	46	11	1/2"	9.5	3/8"	27	22	0,10
01223650	Adapter HP-00-SW-3/4"-1/2"	49	15	3/4"	11	1/2"	32	27	0,15
01222909	Adapter HP-00-SW-3/4"-3/4"	51	17	3/4"	17	3/4"	32	32	0,17
01223660	Adapter HP-00-SW-3/4"-1"	54	17	3/4"	17	1"	32	41	0,25
01223675	Adapter HP-00-SW-1"-1/2"	60	18	1"	11	1/2"	41	27	0,20
01223677	Adapter HP-00-SW-1"-3/4"	53	18	1"	17	3/4"	41	32	0,22
14799108	Adapter HP-00-SW-1"-1"	56	19	1"	22	1"	41	41	0,26

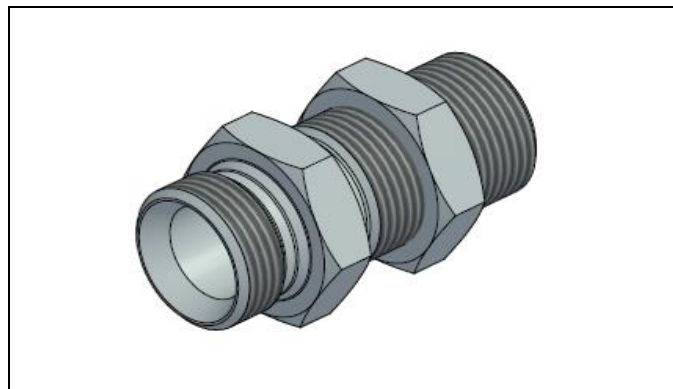
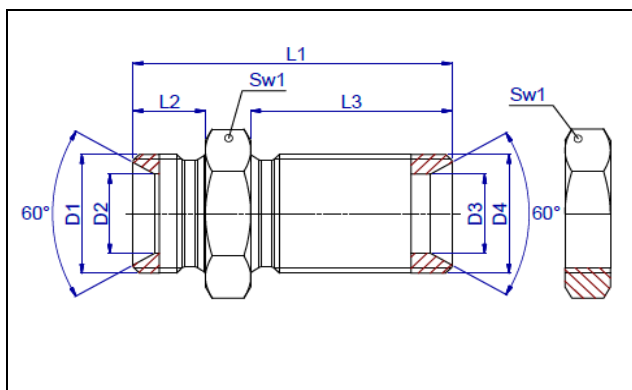
### Related documentation

Mounting instructions: HOS- 0020

Oil specifications: OIL-0011

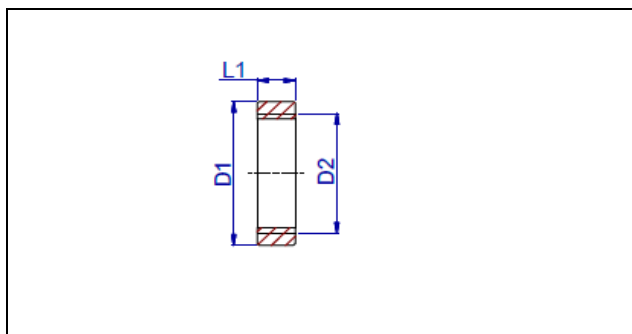


### Straight bulkhead adapter BSPOT-BSPOT



Part no.	Description	L1 (mm)	L2 (mm)	L3 (mm)	D1 (inch)	D2 (mm)	D3 (mm)	D4 (inch)	Sw1 (mm)	Weight (KG)
14950180	Adapter HP-00-3/4"-3/4"-BH	65	16	38	3/4"	16	16	3/4"	32	0,18
01317946	Adapter HP-00-1"-1"-BH	84	19	53	1"	22	22	1"	41	0,35
14950182	Adapter HP-00-1 1/4"-1 1/4"-BH	74	20	40	1 1/4"	29	29	1 1/4"	52	0,47

### Threaded bush BSPIT



Part no.	Description	L1 (mm)	D1 (mm)	D2 (inch)	Weight (KG)
09223010	Threaded bush HP-00-3/4"-L=37	37	32	3/4"	0,10
09223002	Threaded bush HP-00-1"-L=70	70	45	1"	0,40
09223003	Threaded bush HP-00-1"-L=25	25	45	1"	0,15

### Bonded seal

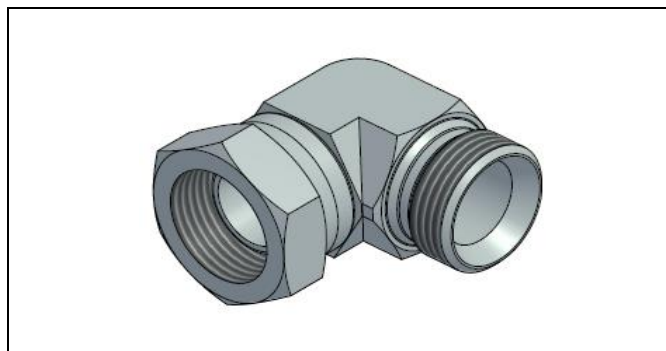
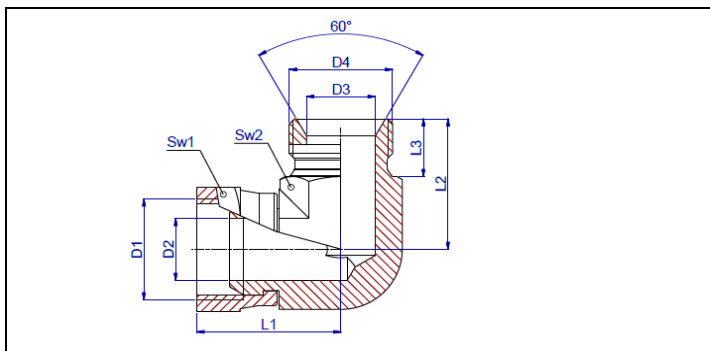
Part no.	Description
01206801	Bonded seal 1/8"
01206825	Bonded seal 3/8"
01206837	Bonded seal 1/2"
01206850	Bonded seal 3/4"
01313848	Bonded seal 1"
01206874	Bonded seal 1 1/4"
01206898	Bonded seal 1 1/2"

### Related documentation

Mounting instructions: HOS- 0020

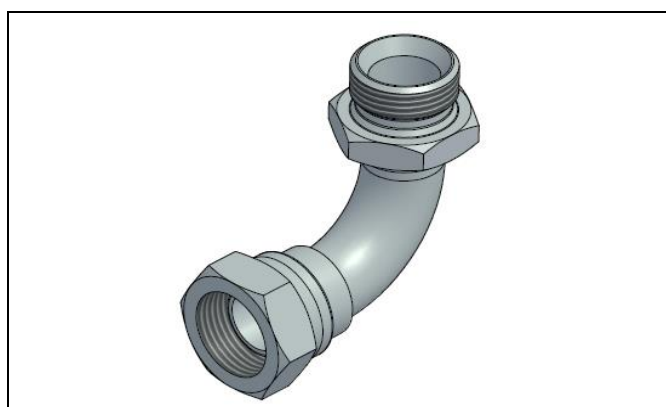
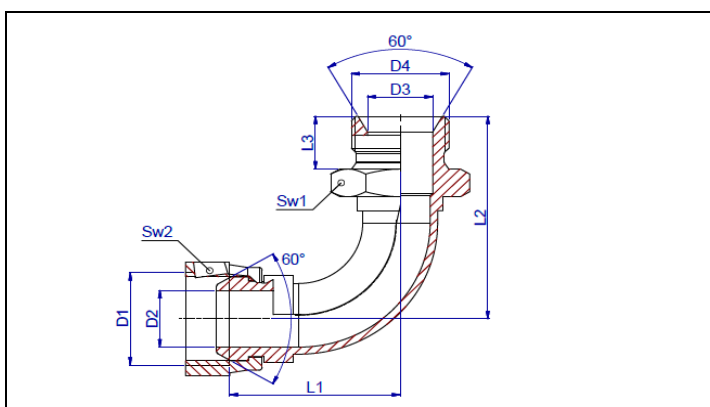
Oil specifications: OIL-0011

### 90° Swivel adapter BSPIT-BSPOT



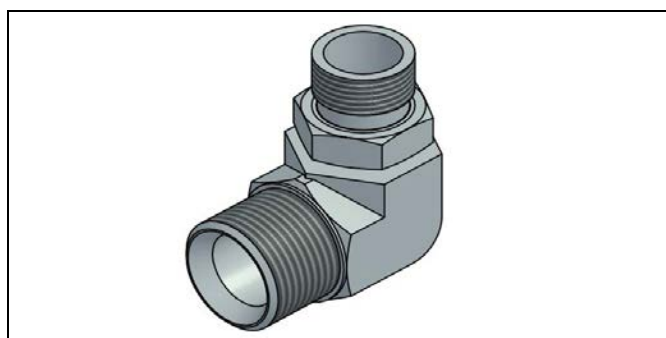
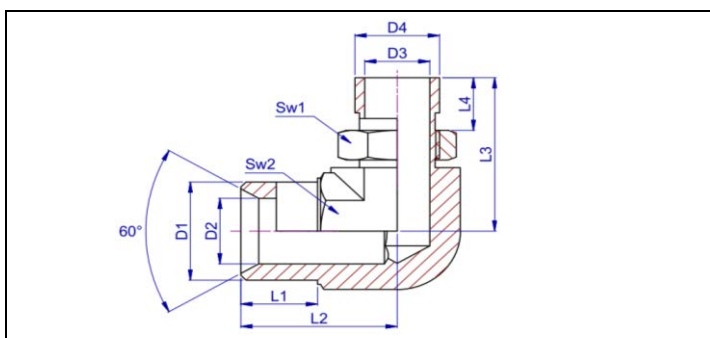
Part no.	Description	L1 (mm)	L2 (mm)	L3 (mm)	D1 (inch)	D2 (mm)	D3 (mm)	D4 (inch)	Sw1 (mm)	Sw2 (mm)	Weight (KG)
01317971	Adapter HP-90-SW-1/2"-1/2"	39	30.5	14	1/2"	10	11	1/2"	27	24	0,17
01317969	Adapter HP-90-SW-3/4"-3/4"	41	37	16	3/4"	15.5	17	3/4"	32	27	0,22
14799054	Adapter HP-90-SW-1"-3/4"	45	40	17	1"	21.5	17	3/4"	41	41	0,45
01317982	Adapter HP-90-SW-1"-1"	46.5	43	19	1"	20.5	22	1"	41	36	0,45

### Elbow swivel adapter BSPIT-BSPOT



Part no.	Description	L1 (mm)	L2 (mm)	L3 (mm)	D1 (inch)	D2 (mm)	D3 (mm)	D4 (inch)	Sw1 (mm)	Sw2 (mm)	Weight (KG)
01317962	Adapter HP-90-SW-3/8"-3/8"-EL	35	58	13	3/8"	8	9	3/8"	22	22	0,09
01317970	Adapter HP-90-SW-1/2"-1/2"-EL	52	50	14	1/2"	10	11	1/2"	27	27	0,15
01317973	Adapter HP-90-SW-3/4"-3/4"-EL	57	65	16	3/4"	15.5	17	3/4"	32	32	0,24
01317974	Adapter HP-90-SW-1"-1"-EL	73	73	19	1"	20.5	22	1"	41	41	0,41
01317975	Adapter HP-90-SW-1 1/4"-1 1/4"-EL	81	76	20	1 1/4"	27.5	28.5	1 1/4"	50	50	0,55

### 45° Swivel adapter BSPIT-BSPOT



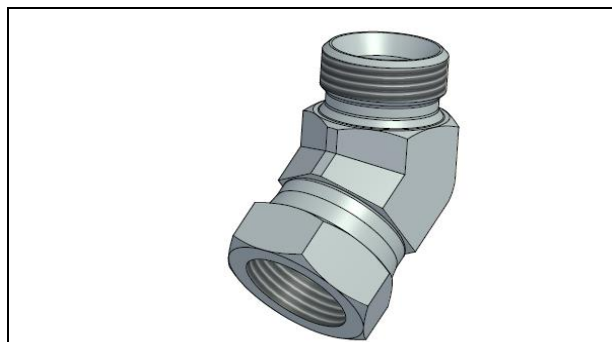
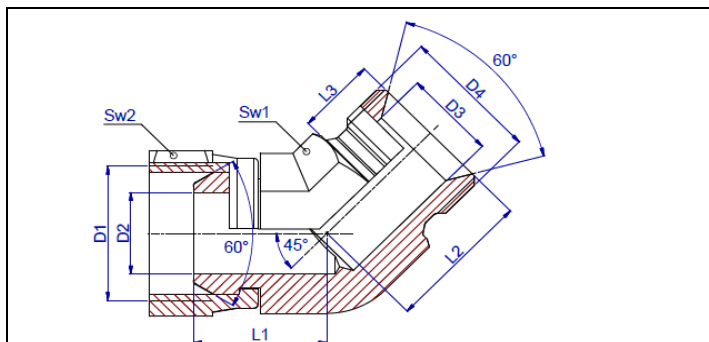
Part no.	Description	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	D1 (inch)	D2 (mm)	D3 (mm)	D4 (inch)	Sw1 (mm)	Sw2 (mm)	Weight (KG)
01317997	Adapter HP- 90 – SW 3/4" BSPOTC – 3/4" BSPOTF	20	40	50	16	3/4"	16	16	3/4"	32	27	0.31
01317998	Adapter HP- 90 – SW 1" BSPOTC – 1" BSPOTF	24	45	52	19	1"	21	21	1"	41	36	0.46

### Related documentation

Mounting instructions: HOS- 0020

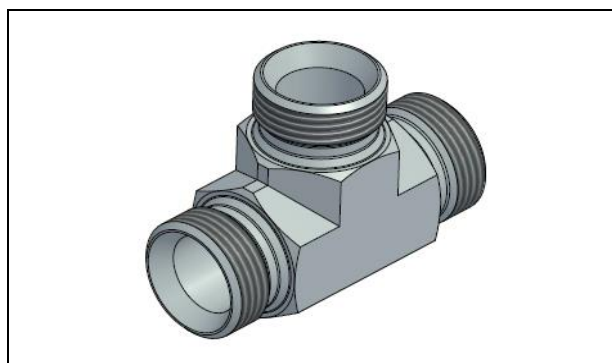
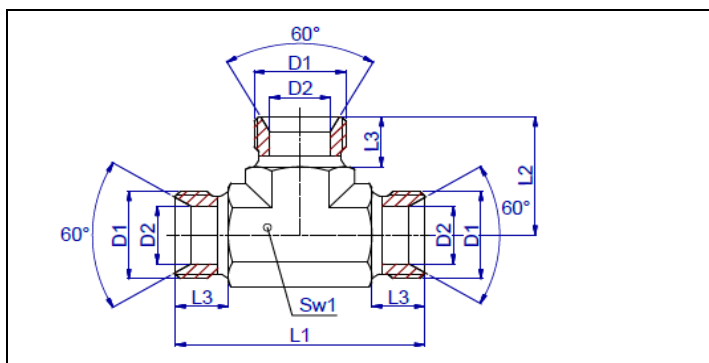
Oil specifications: OIL-0011

### 45° Swivel adapter BSPIT-BSPOT



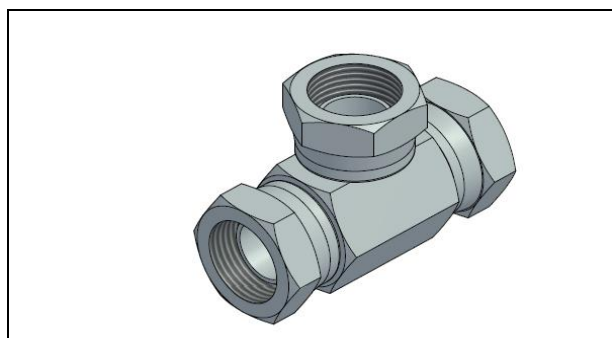
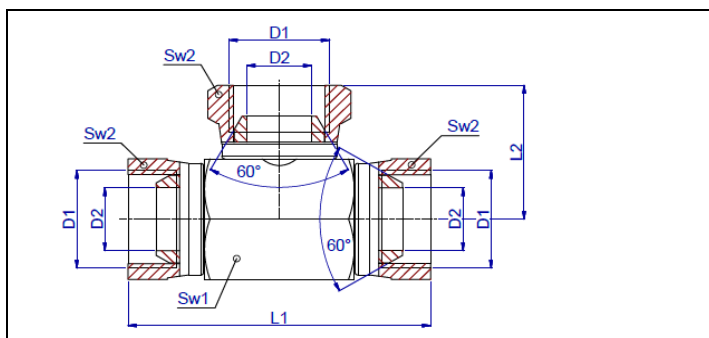
Part no.	Description	L1 (mm)	L2 (mm)	L3 (mm)	D1 (inch)	D2 (mm)	D3 (mm)	D4 (inch)	Sw1 (mm)	Sw2 (mm)	Weight (KG)
01318410	Adapter HP-45-SW-3/4"-3/4"	39	32	16	3/4"	15.5	17	3/4"	32	27	0,11
01317815	Adapter HP-45-SW-1"-1"	42.5	35	19	1"	20.5	22	1"	41	36	0,38

### T-piece BSPOT



Part no.	Description	L1 (mm)	L2 (mm)	L3 (mm)	D1 (inch)	D2 (mm)	Sw1 (mm)	Weight (KG)
01318292	Adapter HP-T-3/8" (3x)	46	28	11	3/8"	8	17	0,07
01318295	Adapter HP-T-1/2" (3x)	68	34	14	1/2"	11	22	0,17
01318300	Adapter HP-T-3/4" (3x)	80	40	16	3/4"	16.5	27	0,24
01318310	Adapter HP-T-1" (3x)	84	42	19	1"	22	36	0,42
01318315	Adapter HP-T-1 1/4" (3x)	104	52	20	1 1/4"	28.5	50	0,55

### T-piece BSPIT



Part no.	Description	L1 (mm)	L2 (mm)	D1 (inch)	D2 (mm)	Sw1 (mm)	Sw2 (mm)	Weight (KG)
01318293	Adapter HP-T-SW-3/8" (3x)	66	33	3/8"	8	22	19	0,11
01318297	Adapter HP-T-SW-1/2" (3x)	80	40	1/2"	11	27	22	0,26
01318240	Adapter HP-T-SW-3/4" (3x)	80	40	3/4"	15.5	32	27	0,38
01318251	Adapter HP-T-SW-1" (3x)	100	45	1"	21.5	41	36	0,78

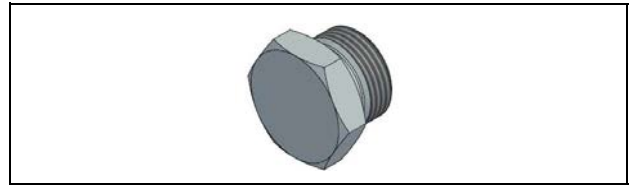
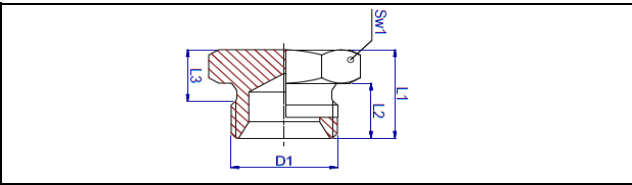
### Related documentation

Mounting instructions: HOS- 0020

Oil specifications: OIL-0011

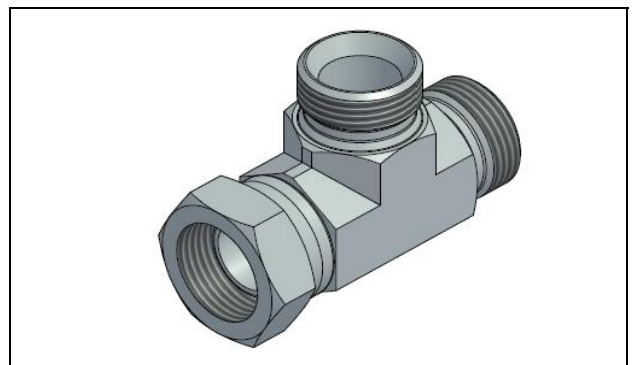
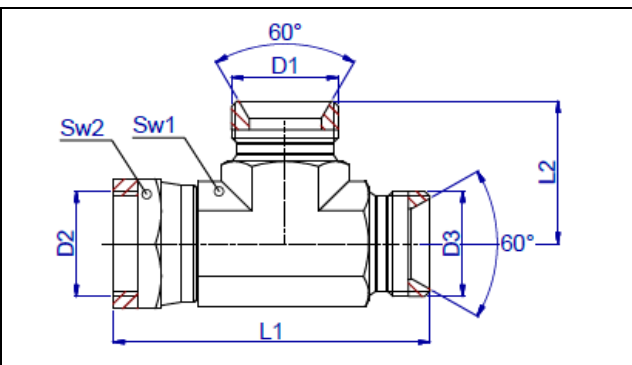
## High Pressure

### Plug BSPOT



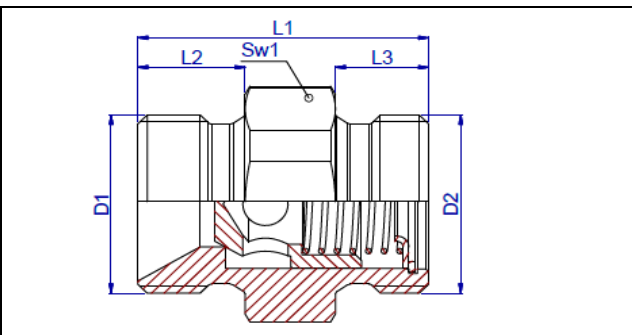
Part no.	Description	L1 (mm)	L2 (mm)	L3 (mm)	D1 (inch)	Sw1 (mm)	Allen (mm)	Weight (KG)
14799176	Adapter HP-00-1/4"-plug	10	10	-	1/4"	-	7	0,01
14799175	Adapter HP-00-1/2"-plug	10	10	-	1/2"	-	10	0,02
14799180	Adapter HP-00-1/2"-plug	18	13	8	1/2"	-	10	0,04
01702838	Adapter HP-00-1/2"-plug	27	12	17	1/2"	27	-	0,06
01702841	Adapter HP-00-3/4"-plug	28	18	15	3/4"	32	-	0,12
01702853	Adapter HP-00-1"-plug	30	19	16	1"	41	-	0,18
14799190	Adapter HP-00-1"-plug	21	16	9	1"	-	17	0,12
01702856	Adapter HP-00-1 1/4"-plug	32	20	17	1 1/4"	20	-	0,30

### T-piece Swivel BSPIT-BSPOT



Part no.	Description	L1 (mm)	L2 (mm)	D1 (inch)	D2 (mm)	D3 (mm)	Sw1 (mm)	Sw2 (mm)	Weight (KG)
01318303	Adapter -HP-T-SW-3/4"-3/4"(2x)	88	40	BSPOT	BSPIT	BSPOT	32	27	0,34
01318305	Adapter -HP-T-SW-3/4"-3/4"(2x)	92	40	BSPOT	BSPOT	BSPIT	32	27	0,34
01318195	Adapter -HP-T-SW-1"-1"(2x)	90	48	BSPIT	BSPOT	BSPOT	41	36	0,59
01318253	Adapter -HP-T-SW-1"-1"(2x)	94	44	BSPOT	BSPIT	BSPOT	41	36	0,60
01318307	Adapter -HP-T-SW-1"(2x)-1"	98	40	BSPOT	BSPIT	BSPIT	41	36	0,60

### Non-return valve BSPOT



Part no.	Description	L1 (mm)	L2 (mm)	L3 (mm)	D1 (inch)	D2 (inch)	Sw1 (mm)	Weight (KG)
14739980	Non return valve 1"-3/4"	57.5	16.5	16	1"	3/4"	41	0,21
14739975A	Non return valve 1"	51.5	19	16.5	1"	1"	41	0,25

### Related documentation

Mounting instructions: HOS- 0020

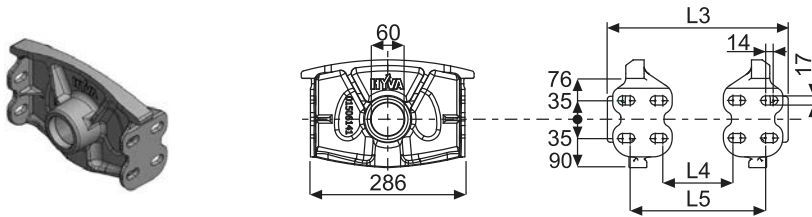
Oil specifications: OIL-0011

# Chassis Brackets

Front end cylinder chassis brackets

Note : Please verify quoted dimensions with your local Hyva subsidiary or agent prior to use

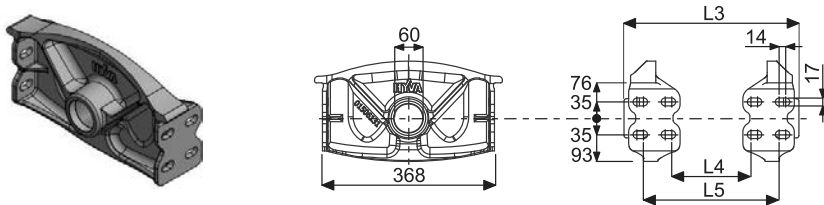
## Chassis bracket for cylinder type: FC/FE 110/118/129/137/149



Cylinder type	L3 (mm)	L4 (mm)	L5 (mm)
FC/FE 110	307	103	223
FC/FE 118	324	120	240
FC/FE 129	345	141	261
FC/FE 137	345	141	261
FC/FE 149	345	141	261

Bracket Type	Part no. Bracket	Mass (Kg)	Part no. Replacement bush
Maintenance free	015 06 141	7.5	017 94 240
Greased version	015 06 146	7.7	017 94 020

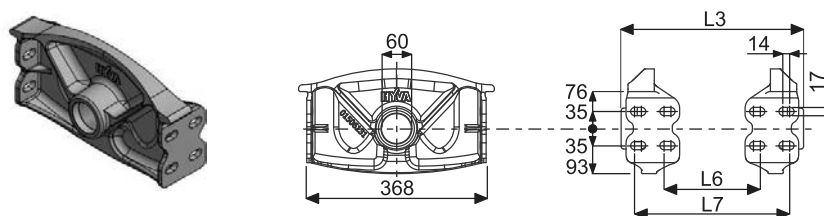
## Chassis bracket for cylinder type FC/FE 137/149



Cylinder type	L3 (mm)	L4 (mm)	L5 (mm)
FC/FE 137	345	141	261
FC/FE 149	345	141	261

Bracket Type	Part no. Bracket	Mass (Kg)	Part no. Replacement bush
Maintenance free	015 06 131	11.0	017 94 240
Greased version	015 06 136	11.2	017 94 020

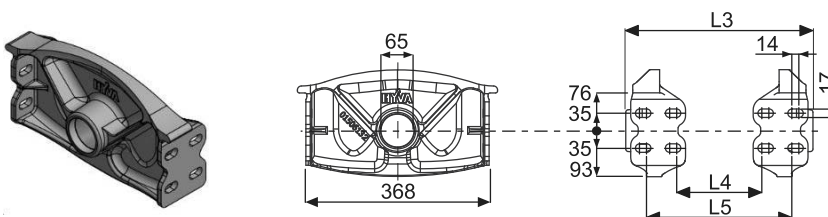
## Chassis bracket for cylinder type FC/FE 157/169/179/191



Cylinder type	L3 (mm)	L6 (mm)	L7 (mm)
FC/FE 157	387	211	331
FC/FE 169	387	211	331
FC/FE 179	387	211	331
FC/FE 191	387	211	331

Bracket Type	Part no. Bracket	Mass (Kg)	Part no. Replacement bush
Maintenance free	015 06 131	11.0	017 94 240
Greased version	015 06 136	11.2	017 94 020

## Chassis bracket for cylinder type FC/FE 214



Cylinder type	L3 (mm)	L4 (mm)	L5 (mm)
FC/FE 214	412	211	331

Bracket Type	Part no. Bracket	Mass (Kg)	Part no. Replacement bush
Maintenance free	015 06 132	10.8	017 94 210
Greased version	015 06 133	11.0	017 94 025

### General information

**For all chassis brackets use:**

- Bolts M16x1.5 Property Class 8.8 or higher.
- Self-locking nuts M16 Property Class 8 or higher.
- Washer 17x30 over slotted holes in the bracket.

**Bolts kits are available:**

- Q005: 16 bolts M16x50, nuts and washers for chassis brackets (2.3 kg).

**Note:**

- Brackets are painted black (RAL 9005 / gloss 25%).
- Weight can vary as per casting process.
- Greased versions includes M8x1 grease nipple.
- For mounting, see instructions CYL-0030 or CYL-0031.
- For bush replacement, see instruction BRA-0002.

### Cylinder load Specifications

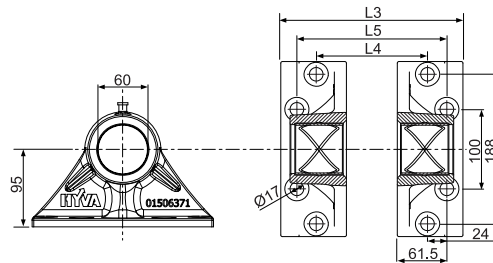
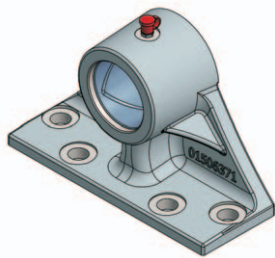
Part no. Bracket	Max. Cylinder Load (kN)
015 06 131 / 141	235
015 06 132	255
015 06 146	290
015 06 133 / 136	440

# Chassis Brackets

Front end cylinder chassis brackets

Note : Please verify quoted dimensions with your local Hyva subsidiary or agent prior to use

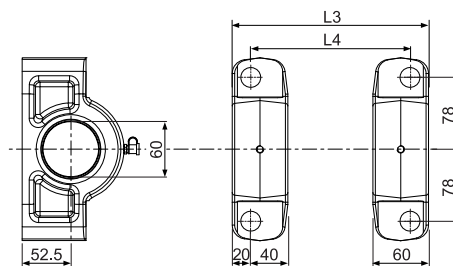
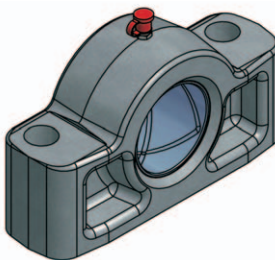
## Chassis bracket for cylinder type FC/FE 110 - 191



Cylinder Type	L3 (mm)	L4 (mm)	L5 (mm)
110	328	240	288
118	345	257	305
129	366	278	326
137	366	278	326
149	366	278	326
157	410	322	370
169	410	322	370
179	410	322	370
191	410	322	370

Bracket Type	Part no. Bracket	Mass (Kg)	Part no. Replacement bush
Greased version	015 06 371	4.4	017 94 020

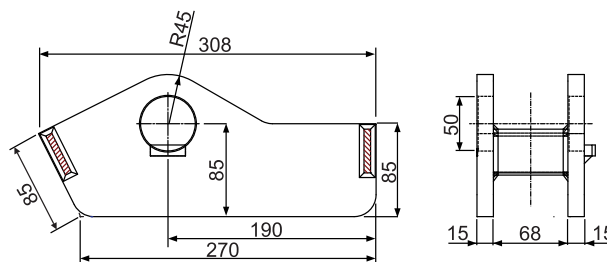
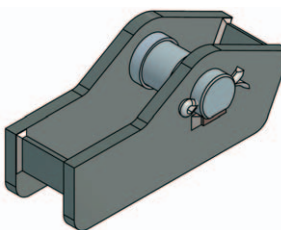
## Chassis bracket for cylinder type FC/FE 110 - 191



Cylinder Type	L3 (mm)	L4 (mm)
110	284	244
118	301	261
129	322	282
137	322	282
149	322	282
157	366	326
169	366	326
179	366	326
191	366	326

Bracket Type	Part no. Bracket	Mass (Kg)	Part no. Replacement bush
Greased version	015 06 166	4.6	017 94 020

## Chassis bracket for cylinder type FSE 110 - 191



Bracket Type	Part no. Bracket	Mass (Kg)	Part no. Replacement axle kit
Welded chassis bracket	015 06 206	8.9	015 06 776

### General information

**For all chassis brackets use:**

- Bolts M16x1.5 Property Class 8.8 or higher.
- Self-locking nuts M16 Property Class 8 or higher.

**Note:**

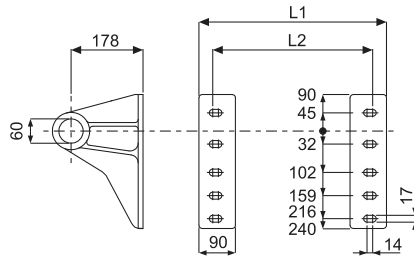
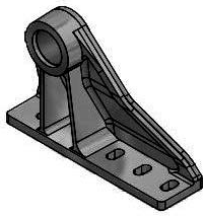
- Brackets are painted black (RAL 9005 / gloss 25%).
- Weight can vary as per casting process.
- Greased versions includes M8x1 grease nipple.
- For mounting, see instructions CYL-0030, CYL-0031 or CYL-0033.
- For bush replacements, see instruction BRA-0002.

# Lifting Brackets

Front end cylinder lifting brackets

Note : Please verify quoted dimensions with your local Hyva subsidiary or agent prior to use

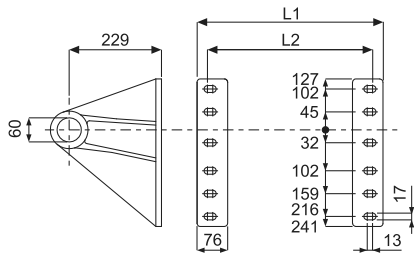
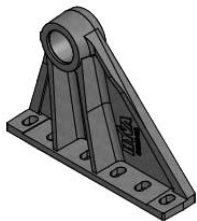
## Lifting bracket for cylinder type: FC 110/118/129



Cover	A-dimension	L1 (mm)	L2 (mm)
168	201	305	237
219	340	444	376
241	340	444	376
242	340	444	376

Bracket Type	Part no. Bracket Right	Part no. Bracket Left	Mass (Kg)	Part no. Replacement bush
Maintenance free	015 09 120	015 09 121	7.7	017 94 230
Greased version	015 09 124	015 09 125	7.9	None

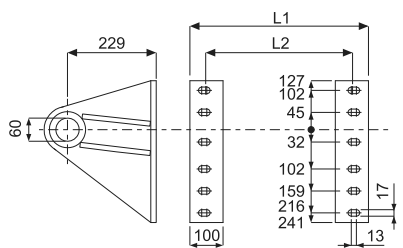
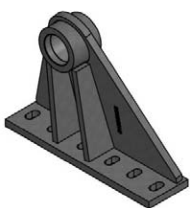
## Lifting bracket for cylinder type: FC 118/129/137/149/157/169/179/191



Cover	A-dimension	L1 (mm)	L2 (mm)
219	340	462	410
241	340	462	410
242	340	462	410

Bracket Type	Part no. Bracket Right	Part no. Bracket Left	Mass (Kg)	Part no. Replacement bush
Maintenance free	015 09 130	015 09 131	9.8	017 94 240
Greased version	015 09 136	015 09 137	10.0	None

## Lifting bracket for cylinder type: FC 191/214



Cover	A-dimension	L1 (mm)	L2 (mm)
241	340	490	386
242	340	490	386
273	360	510	410

Bracket Type	Part no. Bracket Right	Part no. Bracket Left	Mass (Kg)	Part no. Replacement bush
Maintenance free	015 06 728	015 06 726	13.5	017 94 240
Greased version	5629 800 122	5629 800 123	13.7	017 94 020

## General information

### For all lifting brackets use:

- Bolts M16x1.5 Property Class 8.8 or higher.
- Self-locking nuts M16 Property Class 8 or higher.
- Washer 17x30 over slotted holes in the bracket.

### Bolts kits are available:

- Q006: 12 bolts M16x60, nuts and washers for lifting brackets (2.0 kg).
- Q007: 12 bolts M16x70, nuts and washers for lifting brackets (2.2 kg).

### Note:

- Brackets are painted black (RAL 9005 / gloss 25%).
- Weight can vary as per casting process.
- Greased versions includes grease nipple.
- For mounting, see instructions CYL-0030.
- For bush replacement, see instruction BRA-0002.

## Cylinder load Specifications

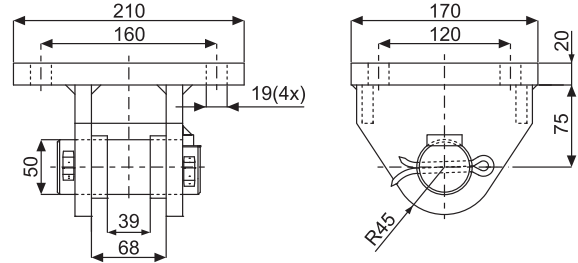
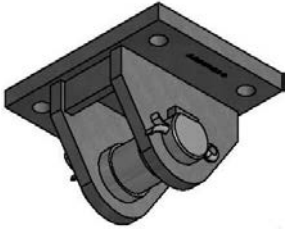
Part no. Bracket	Max. Cylinder Load (kN)
015 06 120	190
015 06 130 / 015 06 728	235
015 09 124	255
015 09 134	290
5629 000 0123	440

# Top Brackets

Front end cylinder Top brackets

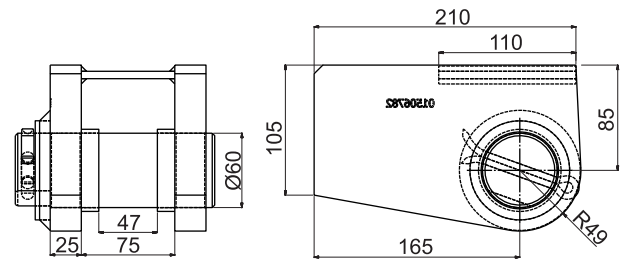
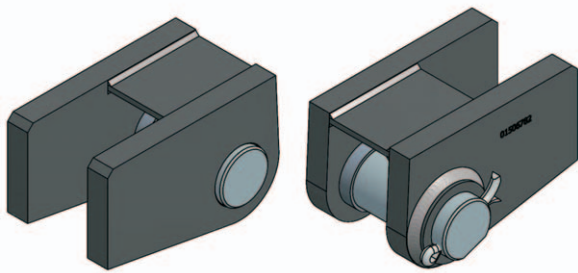
Note : Please verify quoted dimensions with your local Hyva subsidiary or agent prior to use

## Top bracket for cylinder type FE/FEE/FSE with eye Ø 50 mm



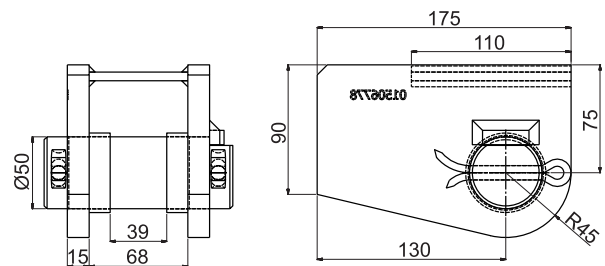
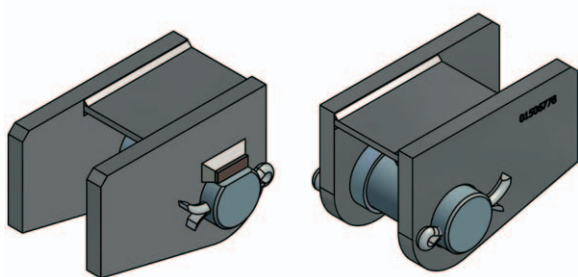
Bracket Type	Part no. Bracket	Mass (Kg)	Part no. Replacement axle kit
Top bracket	015 06 777	11.0	015 06 776

## Top bracket for cylinder type FE/FEE/FSE with eye Ø 60 mm



Bracket Type	Part no. Bracket	Mass (Kg)	Part no. Replacement axle kit
Top bracket	015 06 782	13.4	015 06 781

## Top bracket for cylinder type FE/FEE/FSE with eye Ø 50 mm



Bracket Type	Part no. Bracket	Mass (Kg)	Part no. Replacement axle kit
Top bracket	015 06 778	6.7	015 06 776

## General information

**Note:**

- The filler rings, pin and split pins are included.
- Brackets are painted black (RAL 9005 / gloss 25%).
- Weight can vary as per production process.
- For mounting, see instructions CYL-0031, CYL-0032 or CYL-0033.



ALPHA  
Series

# MARKETS

ALPHA Series offers front end tipping solutions for Construction, Transportation and Mining.

## Tailored solutions

There is no single solution which can efficiently serve the full range of applications in all market segments. Extensive **research and consultation** with customers has been conducted to **optimise transport efficiency, safety and reliability** for the typical duty and conditions in all market segments.

## CONSTRUCTION

Solutions, with the standard operating pressure up to 250bar, providing best all round performance through the combination of **reduced weight, increased tipping speed** and the stability required for the application.

Maximum performance and more payload from a smaller package.



## TRANSPORTATION

Solutions designed to maximise payload in standard, silo and heavy duty trailers. **Weight saving** derived from lightweight brackets and from the new cylinders with lighter internal components.

The reduced weight of cover tubes on FC cylinders can achieve savings of up to 40kg. ALPHA tractor kits are ideally suited to all the latest Euro 6 truck chassis.



## MINING

Solutions designed to perform at **high speed in heavy duty conditions**. The solutions consist of high quality filters, heavy duty knock-off and heavy duty brackets.

The heavy duty ALPHA Series cylinder has larger overlaps and the stop and lift faces are redesigned to permit exceptionally high tipping and lowering increases up to 50%. For extra safety, the tipping valve is now mounted directly onto the base of the tipping cylinder.



DEALER STAMP

