

Hyva tipping valves

Hyva offers a complete range of tipping valves to be used for different cylinder volumes. The PT 1220 & 2200 valve can be used for flows up to 220 litre per minute. The pressure settings are from 150 to 350 bar. The PT-valve has fully interchangeable pressure cartridges, so you can adjust the pressure settings yourself. Dual pressure valves are available as well. For smaller flows you can use the JT valve.

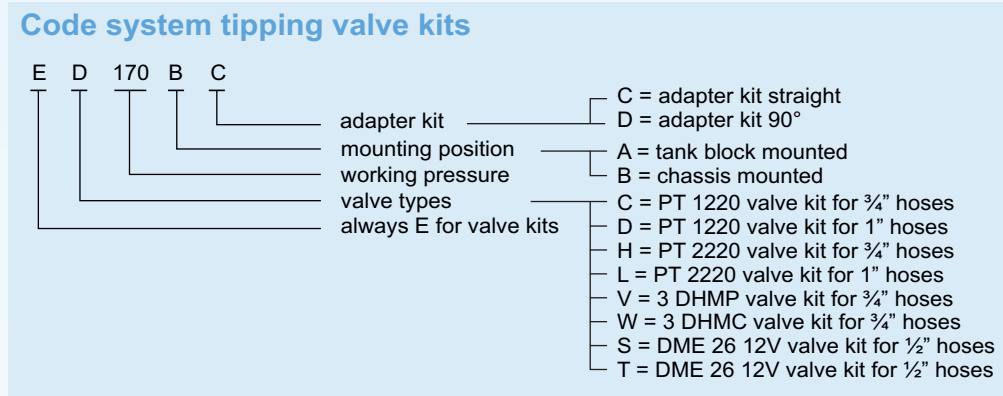
The Hyva PT and JT tipping valves are constructed with a pilot operated pressure relief valve with fixed pressure setting (by means of cartridges), which protects both the cylinder and the pump for overpressure. This tipping valve is also designed to allow proportional lowering, which is of main importance when lowering (half) loaded bodies. This tipping valve can be directly fitted to the Hyva oil tank, which reduces the number of hoses and fittings and consequently the possibility of leakages.

The Hyva PT-valves & DHM valves can be mounted in line or directly on the oil tank. The PT-valve and the DHM-valve can be mounted on the same block. The PT-valves are operated by Hyva air control. The DHM-valves are operated by cable control or by Hyva air control.

The JT valves can also be mounted directly on the cylinder port (SAE). In this assembly it offers a hose burst safety function.

Tipping valve kits

To simplify the process of choosing the right adaptors and mounting equipment Hyva has prepared tipping valve kits for tank mounted and chassis mounted valves. We have options with straight or 90° connections for 3/4" & 1" high pressure hoses.



Other valves

Apart from special tipping valves, Hyva also supplies a variety of flow-, pressure and motion control valves such as knock-off valves, sequence valves, series and parallel flow control valves, pressure relief valves, hose failure valves, non return valves, overcentre valves etc.

Hyva also supplies a full range of monoblock and bankable spool valves up to 12 sections with flows from 45 to 160 l/m, various controls and options such as port relief valves and flow control sections.

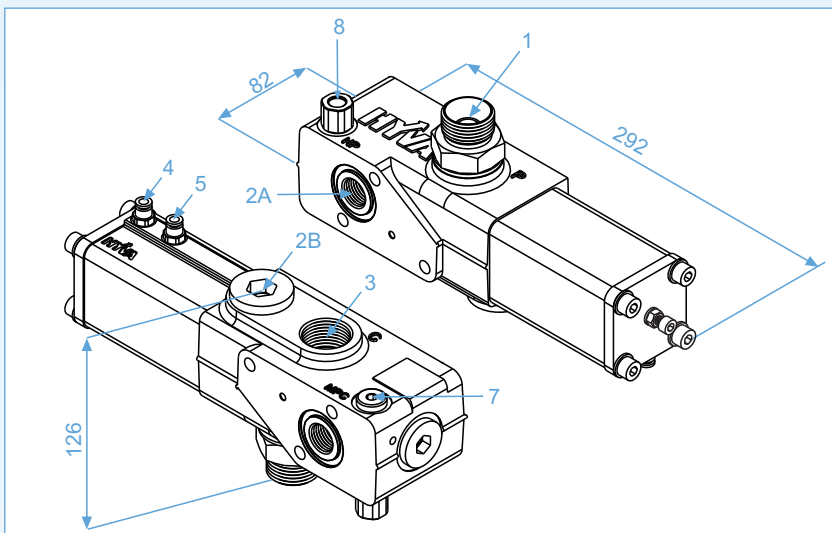
Hyva Valves

PT 1220 valve

PT 1220 valve single pressure

Part no.	Description	Max. press. (bar)	Kit no. 3/4" connect.	Kit no. 1" connect.
147 67 315	Tipping valve - PT1220 - 150	150	EC150	ED150
147 67 317	Tipping valve - PT1220 - 170	170	EC170	ED170
147 67 319	Tipping valve - PT1220 - 190	190	EC190	ED190
147 67 322	Tipping valve - PT1220 - 220	220	EC220	ED220
147 67 325	Tipping valve - PT1220 - 250	250	EC250	ED250
147 67 328	Tipping valve - PT1220 - 280	280	EC280	ED280
147 67 335	Tipping valve - PT1220 - 350	350	EC350	ED350

Flow	220 L/min.	Ports	G1"	Weight	6.4 kg
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- 1 : pump connection (P)
- 2A : return tank connection (T)
- 2B : alternative return tank connection (T)
- 3 : cylinder connection (C)
- 4 : connection to pneumatic control - tip (6mm push-in)
- 5 : connection to pneumatic control - lower (6mm push-in)
- 7 : pressure gauge point
- 8 : cartridge

Pressure cartridge for PT/JT-valve

Part no.	Description
147 71 135	Pressure cartridge PT/JT - 135 bar
147 71 150	Pressure cartridge PT/JT - 150 bar
147 71 170	Pressure cartridge PT/JT - 170 bar
147 71 190	Pressure cartridge PT/JT - 190 bar
147 71 220	Pressure cartridge PT/JT - 220 bar
147 71 250	Pressure cartridge PT/JT - 250 bar
147 71 280	Pressure cartridge PT/JT - 280 bar
147 71 300	Pressure cartridge PT/JT - 300 bar
147 71 320	Pressure cartridge PT/JT - 320 bar
147 71 350	Pressure cartridge PT/JT - 350 bar

All cartridges need a bonded seal

Part no.	Description
148 42 209	Bonded seal PT/KL pressure cartridge

Additional part

Part no.	Description
147 99 175	Allen plug for PT valve 1/2"



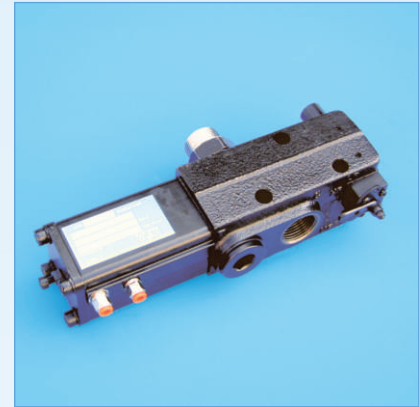
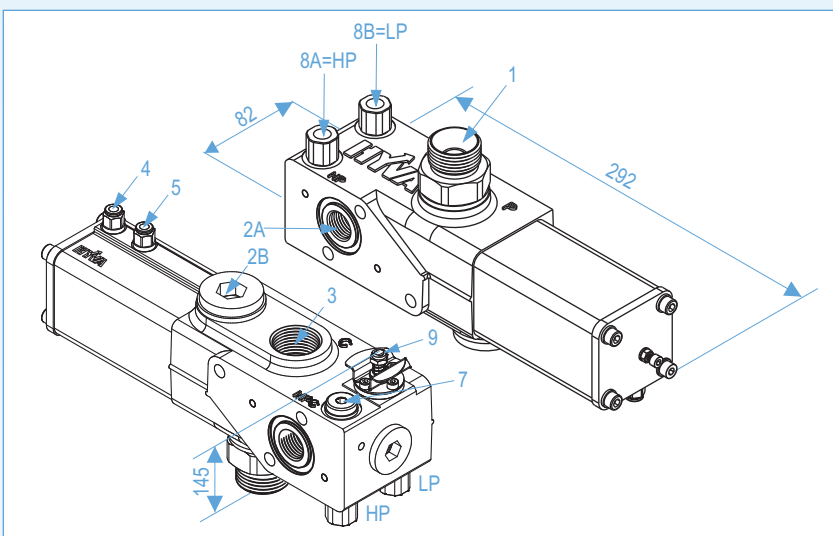
Hyva Valves

PT 2220 & PT 1140 valve

Tipping valve PT 2220 double pressure

Part no.	Description	Max. press. (bar)	Kit no. 3/4"HP hose	Kit no. 1"HP hose
147 67 352	Tipping valve - PT2220 - 150-220	150-220	EH220	EL220
147 67 355	Tipping valve - PT2220 - 150-250	150-250	EH250	EL250
147 67 358	Tipping valve - PT2220 - 150-280	150-280	EH280	EL280
147 67 365	Tipping valve - PT2220 - 150-350	150-350	EH350	EL350
147 67 372	Tipping valve - PT2220 - 170-220	170-220	EH372	EL372
147 67 375	Tipping valve - PT2220 - 170-250	170-250	EH375	EL375

Flow	220 L/min.	Ports	G1"	Weight	6.4 kg
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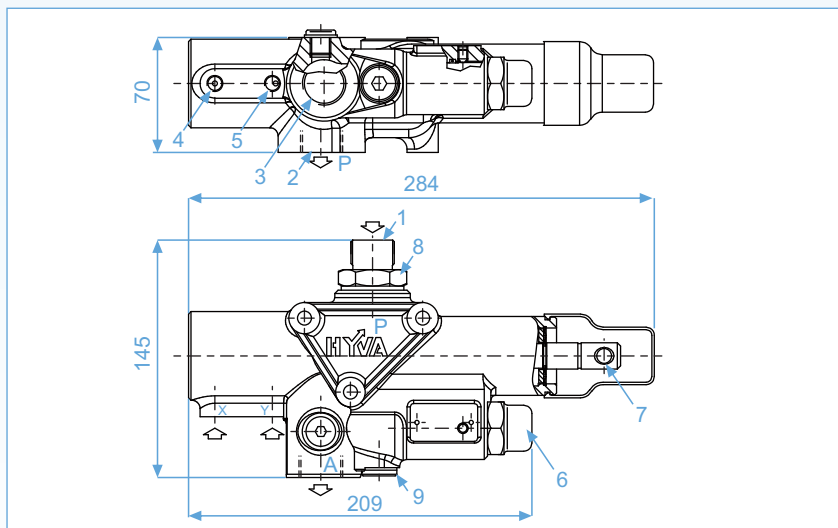


- 1 : pump connection (P)
- 2A : return tank connection (T)
- 2B : alternative return tank connection (T)
- 3 : cylinder connection (C)
- 4 : connection to pneumatic control - tip (6mm push-in)
- 5 : connection to pneumatic control - lower (6mm push-in)
- 7 : pressure gauge point
- 8 : cartridge
- 9 : pressure selector

Tipping valve PT 1140

Part no.	Description	Max. press. (bar)	Kit no. 3/4"HP hose	Kit no. 1"HP hose
147 08 255 H	Tipping valve - PT1140 - 170	170	EP170	ER170
147 08 256 H	Tipping valve - PT1140 - 190	190	EP190	ER190

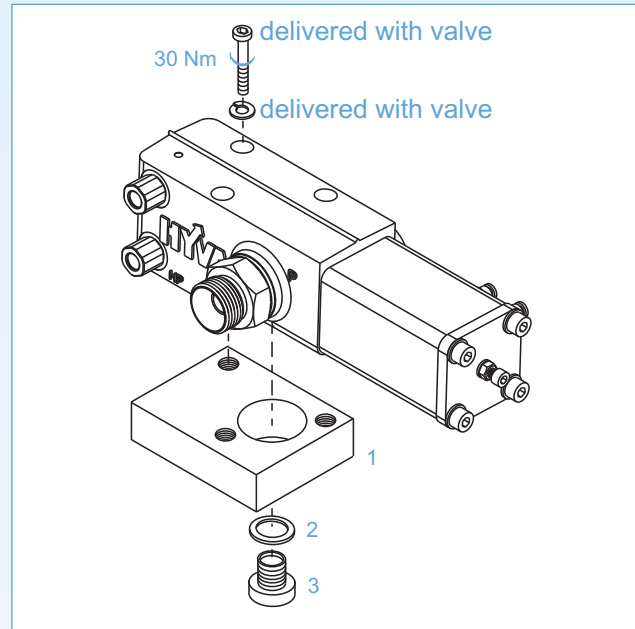
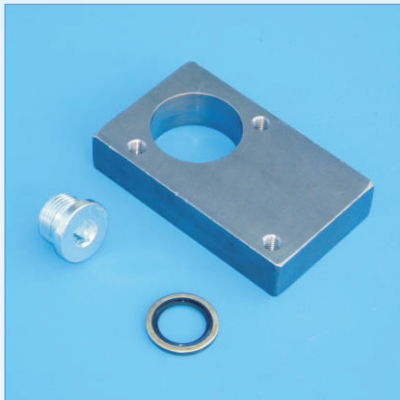
Flow	140 L/min.	Ports hydraulic	G3/4"	Ports pneum.	G1/8"	Weight	4.8 kg
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- 1 : pump connection (P)
- 2 : return tank connection (T)
- 3 : cylinder connection (A)
- 4 : pneumatic connection of air control-lower (X)
- 5 : pneumatic connection of air control-tipping (Y)
- 6 : pressure relief valve (C)
- 7 : eye for cable knock-off
- 8 : non-return valve
- 9 : pressure relief valve (P)

Chassis mounting kit PT-valve

Pos.	Part no.	Description	Qty.
	147 35 208	chassis mounting kit PT-valve consisting of:	
1	147 35 210	mounting plate	1
2	012 06 837	bonded seal	1
3	147 99 180	allen plug with collar 1/2"	1

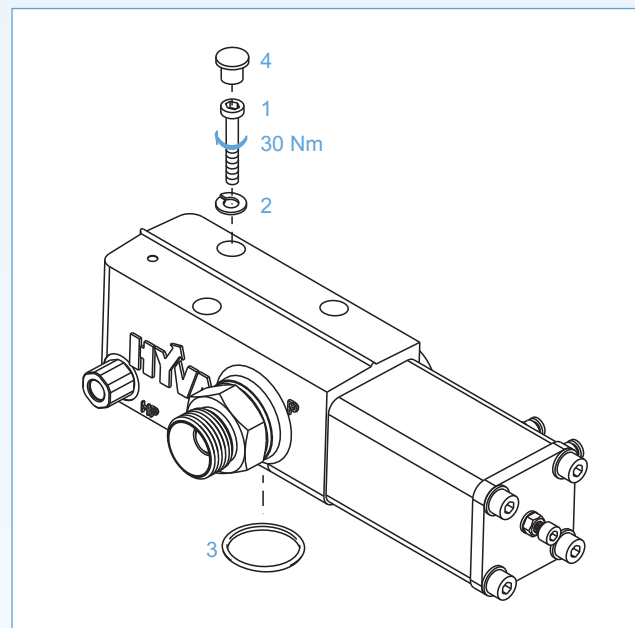


Tank mounting kit PT-valve *

Pos.	Part no.	Description	Qty.
	147 35 168	Tank mounting kit PT-valve consisting of:	
1	150 13 645	Bolt	3
2	150 24 080	Locking ring	3
3	012 25 607	O-ring	1
4		PVC plug	3



* This mounting kit is standard in the supply of the PT-valve



Pressure test equipment

Part no.	Description	Qty.
147 45 008	Pressure gauge complete consisting of:	
	Pressure gauge 400 bar	1
	Adapter 3/8"BSPOT - 1/8"BSPOT	1
	Adapter 3/8"BSPOT - 1/4"BSPOT	1

Test equipment for pneumatic parts (148 80 790) can be found in the air control part of this catalogue.



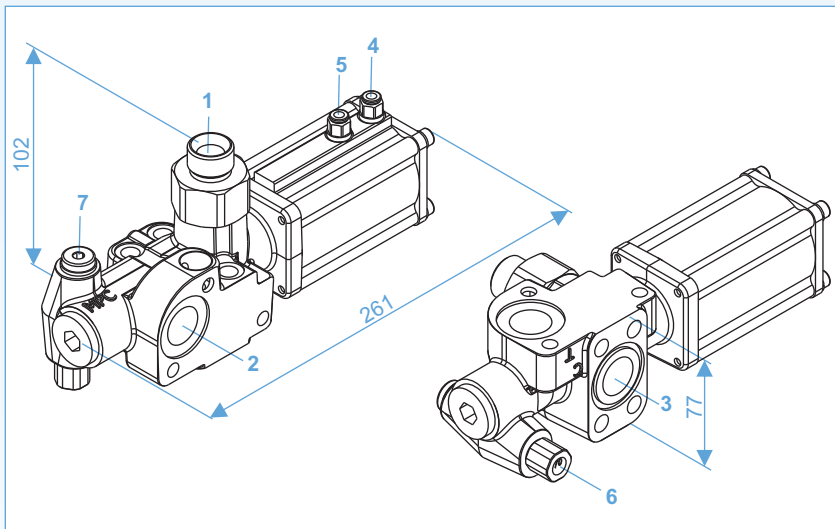
Tipping valve JT 1150 single pressure

Part no.	Description	Max. press. (bar)	Ports		
			P	T	C
147 67 515	Tip valve JT1150 - 150-P $\frac{3}{4}$ "	150	$\frac{3}{4}$ "	$\frac{3}{4}$ "	$\frac{3}{4}$ "
147 67 517	Tip valve JT1150 - 170-P $\frac{3}{4}$ "	170	$\frac{3}{4}$ "	$\frac{3}{4}$ "	$\frac{3}{4}$ "
147 67 519	Tip valve JT1150 - 190-P $\frac{3}{4}$ "	190	$\frac{3}{4}$ "	$\frac{3}{4}$ "	$\frac{3}{4}$ "
147 67 522	Tip valve JT1150 - 220-P $\frac{3}{4}$ "	220	$\frac{3}{4}$ "	$\frac{3}{4}$ "	$\frac{3}{4}$ "
147 67 525	Tip valve JT1150 - 250-P $\frac{3}{4}$ "	250	$\frac{3}{4}$ "	$\frac{3}{4}$ "	$\frac{3}{4}$ "
147 67 528	Tip valve JT1150 - 280-P $\frac{3}{4}$ "	280	$\frac{3}{4}$ "	$\frac{3}{4}$ "	$\frac{3}{4}$ "
147 67 565	Tip valve JT1150 - 150-P1"	150	1"	$\frac{3}{4}$ "	$\frac{3}{4}$ "
147 67 567	Tip valve JT1150 - 170-P1"	170	1"	$\frac{3}{4}$ "	$\frac{3}{4}$ "
147 67 569	Tip valve JT1150 - 190-P1"	190	1"	$\frac{3}{4}$ "	$\frac{3}{4}$ "
147 67 572	Tip valve JT1150 - 220-P1"	220	1"	$\frac{3}{4}$ "	$\frac{3}{4}$ "
147 67 575	Tip valve JT1150 - 250-P1"	250	1"	$\frac{3}{4}$ "	$\frac{3}{4}$ "
147 67 578	Tip valve JT1150 - 280-P1"	280	1"	$\frac{3}{4}$ "	$\frac{3}{4}$ "

Flow	150 L/min.	Weight	3.7 kg
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These valves are suitable for mounting on:

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



- 1 : pump connection (P)
- 2 : return tank connection (T)
- 3 : cylinder connection (C)
- 4 : connection to pneumatic control - tip (6mm push-in)
- 5 : connection to pneumatic control - lower (6mm push-in)
- 6 : pressure cartridge
- 7 : pressure gauge

JT mounting kits

Part no.	Description	Containing
147 35 160	JT on tank	Bolts - washers and o-ring
147 35 162	JT on SAE cylinder port	Bolts - washers and o-ring
147 35 207	JT on chassis	Bolts - washers - o-ring and plate

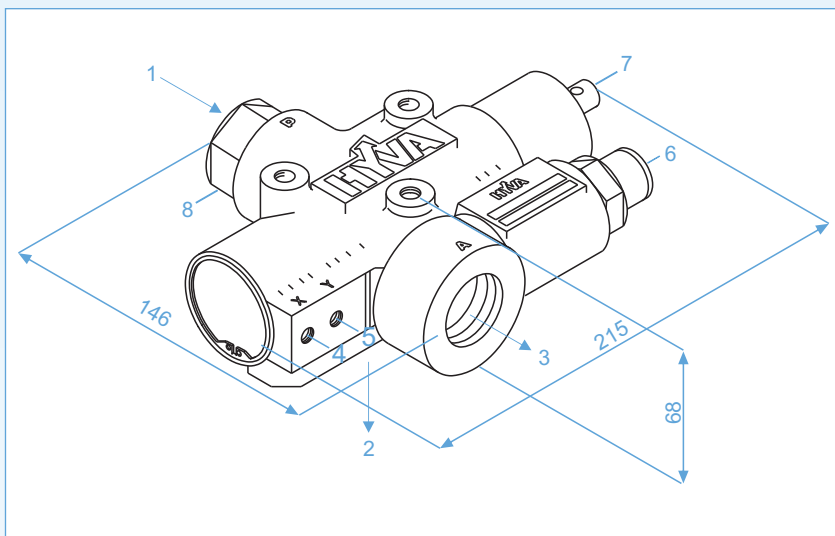
Hyva Valves

3 DHMP & 3 DHMC valve

Tipping valve 3 DHMP - pneumatic operated

Part no.	Description	Max. press. (bar)	Kit no. $\frac{3}{4}$ "HP hose
147 08 313 H	Tipping valve 3 DHMP 70 - 130	130	EV130
147 08 316 H	Tipping valve 3 DHMP 70 - 160	160	EV160
147 08 317 H	Tipping valve 3 DHMP 70 - 170	170	EV170
147 08 319 H	Tipping valve 3 DHMP 70 - 190	190	EV190
147 08 322 H	Tipping valve 3 DHMP 70 - 220	220	EV220
147 08 328 H	Tipping valve 3 DHMP 70 - 280	280	EV280

Flow	110L/min.	Ports hydraulic	G $\frac{3}{4}$ "	Ports pneum.	G $\frac{1}{8}$ "	Weight	3.5 kg
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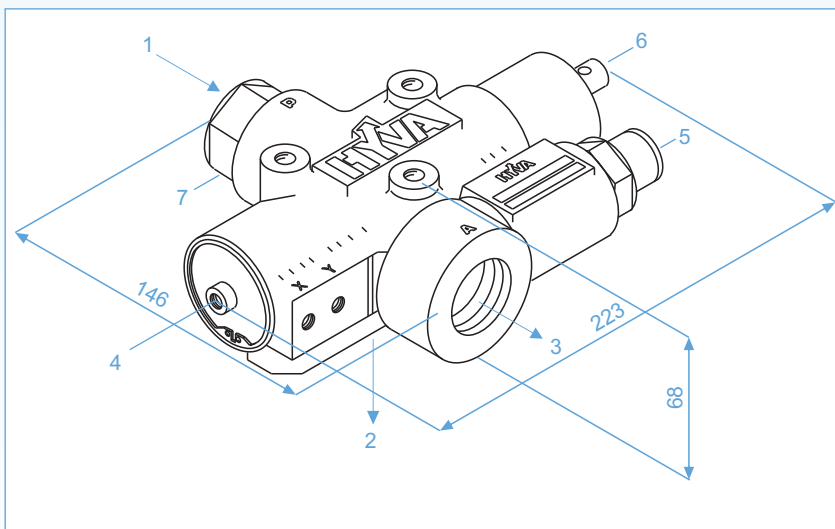


- 1 : pump connection (P)
- 2 : return tank connection (T)
- 3 : cylinder connection (A)
- 4 : pneumatic connection of air control-lower (X)
- 5 : pneumatic connection of air control-tipping (Y)
- 6 : pressure relief valve cap
- 7 : knock-off connection (cable)
- 8 : non-return valve

Tipping valve 3 DHMC - cable operated

Part no.	Description	Max. press. (bar)	Kit no. $\frac{3}{4}$ "HP hose
147 08 513 H	Tipping valve 3 DHMC 70 - 130	130	EW130
147 08 517 H	Tipping valve 3 DHMC 70 - 170	170	EW170

Flow	110L/min.	Ports	G $\frac{3}{4}$ "	Weight	3.5 kg
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- 1 : pump connection (P)
- 2 : return tank connection (T)
- 3 : cylinder connection (A)
- 4 : cable control connection*
- 5 : pressure relief valve cap
- 6 : knock-off connection (cable)
- 7 : non-return valve

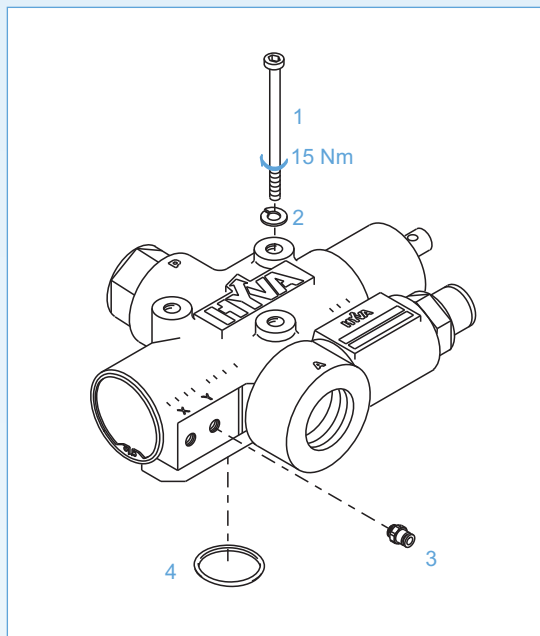
* Consult Hyva for cable type

Hyva Valves

Mounting kit 3DHM valve

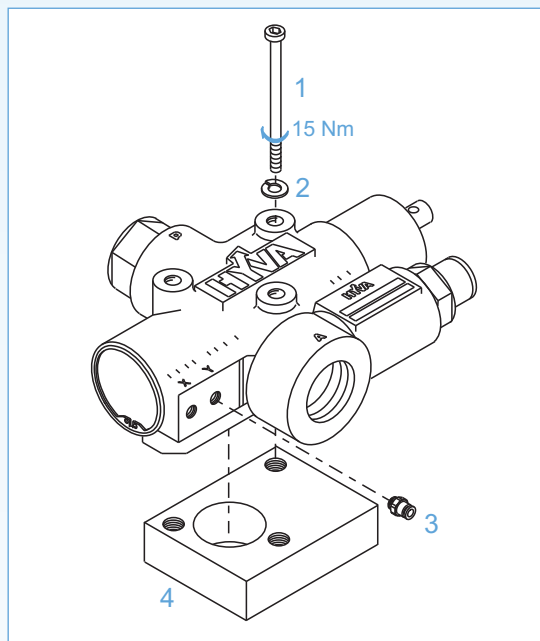
Mounting kit 3DHMP/C70 - valve on tank

Pos.	Part no.	Description	Qty.
	147 35 395	Mounting kit 3DHMP/C - on tank consisting of:	
1	150 13 650	Bolt M8 x 80 x 1.25	3
2	150 22 020	Washer M8	3
3	148 10 517	Air coupling 1/8"-6mm-00	2
4	012 25 601	O-ring	1



Mounting kit 3DHMP/C70 - valve on chassis

Pos.	Part no.	Description	Qty.
	147 35 398	Mounting kit 3DHMP/C - on chassis consisting of:	
1	150 13 650	Bolt M8 x 80 x 1.25	3
2	150 22 020	Washer M8	3
3	148 10 517	Air coupling 1/8"-6mm-00	2
4	147 35 210	Chassis mounting plate	1



Hyva Valves

Mechanical valves

Tipping Valve mechanical 40Ltr - cable knock-off

Part no.	Description	Relief valve setting
021 418 150	Tipping valve 3/3-40-140 cable	140 bar

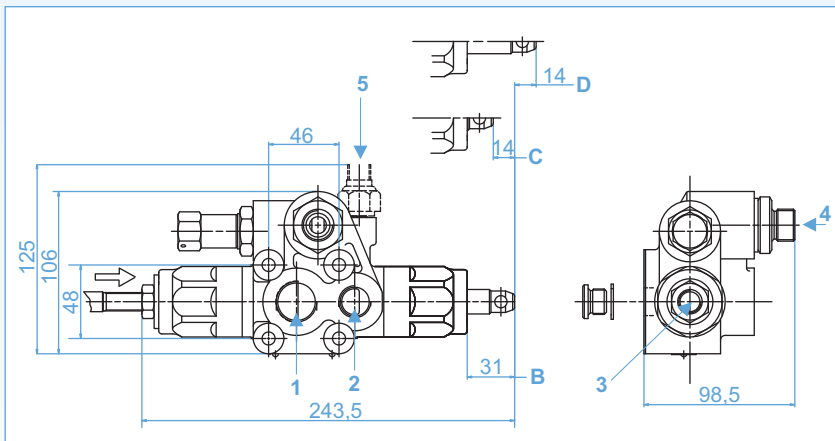
Flow	Ports	G $\frac{1}{2}$ "	Weight
40L/min.			2.77 kg



Tipping Valve mechanical 80Ltr - cable knock-off

Part no.	Description	Relief valve sett.
021 418 160	Tipping valve 3/3-80-140 cable	140 bar
021 418 161	Tipping valve 3/3-80-170 cable	170 bar

Flow	Weight
80 L/min.	2.5 kg



A : cable control attachment
 B : rest position
 C : tipping
 D : lowering

1 : tank 1 connection $\frac{3}{4}$ "G
 2 : out $\frac{1}{2}$ "G
 3 : tank 2 connection $\frac{3}{8}$ "G
 4 : in $\frac{1}{2}$ "G
 5 : test point connection $\frac{1}{8}$ "G

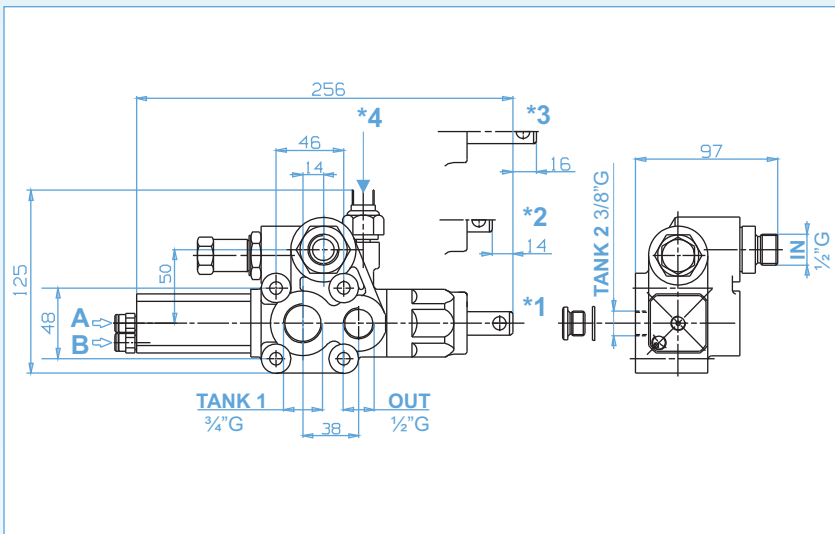
Hyva Valves

Pneumatic valves

Tipping valve - pneumatic 80 Ltr - cable knock-off

Part no.	Description	Relief valve setting
147 67 620	Tip valve 080-140-1/2" top - pneumatic	140 bar

Flow	80 L/min.	Weight	2.5 kg
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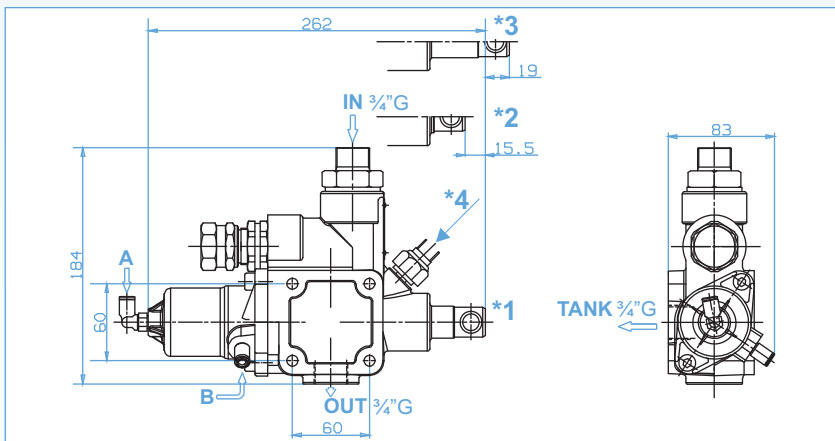


- A : Proportional Lowering
- B : Tipping
- *1 : Rest position
- *2 : Tipping
- *3 : Lowering
- *4 : test point connection 1/8" G

Tipping valve - pneumatic 150 Ltr - cable knock-off

Part no.	Description	Relief valve setting
147 67 630	Tip valve 150-170-3/4" side - pneumatic	170 bar

Flow	150 L/min.	Ports	G 3/4"	Weight	5.8 kg
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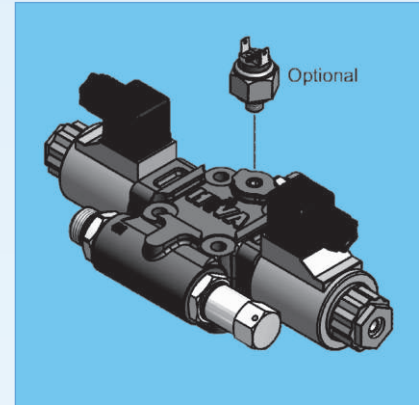
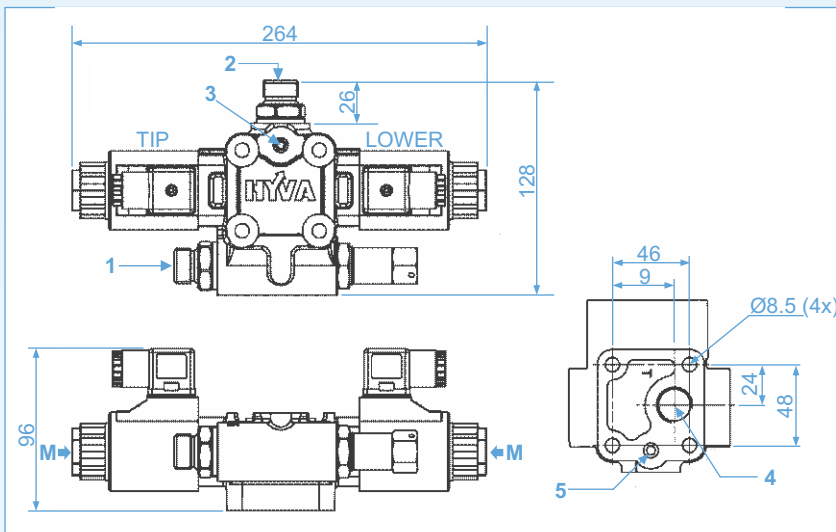
- A : Proportional Lowering
- B : Tipping
- *1 : Rest position
- *2 : Tipping
- *3 : Lowering
- *4 : test point connection 1/8" G

Electrical tipping Valve ET1040

Part no.	Description	Relief valve sett.	Volt (V)
021 418 100	Tipping valve electrical 12V-140	140 bar	12
021 418 140	Tipping valve electrical 24V-140	140 bar	24

Flow	40 L/min.	Ports	G $\frac{1}{2}$ "	Weight	3.38 kg
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The valve is suitable for remote and tank mounting. For fitment to a standard 3-hole (PT) mounting plate, use mounting kit 021.418.180. For installations using the native 4-hole pattern shown above, use mounting kit 021.418.185.



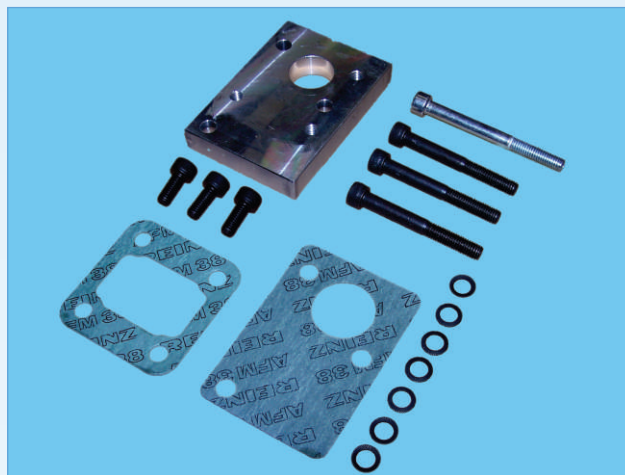
- 1 : in $\frac{1}{2}$ "G
- 2 : out $\frac{1}{2}$ "G
- 3 : test point connection $\frac{1}{8}$ "G
- 4 : tank connection $\frac{1}{2}$ "G
- 5 : test point connection $\frac{1}{8}$ "G
- M : manual (emergency) override

Hyva Valves

Mounting equipment 40-80-150L tip valves

Adapter kit

Part no.	Description
021 418 180	Adapter kit 4 hole valve to Hyva 3 hole plate



Mounting kits for 40L / 80L / 150L valves

Part no.	Description
021 418 185	Mounting kit for valve 40L and pneumatic 80L
021 418 186	Mounting kit for mechanical valve 80L
021 418 187	Mounting kit for pneumatic valve 150L



Mounting flange

Part no.	Description
021 418 188	Tank mounting flange 40 - 80 - 150L tip valve

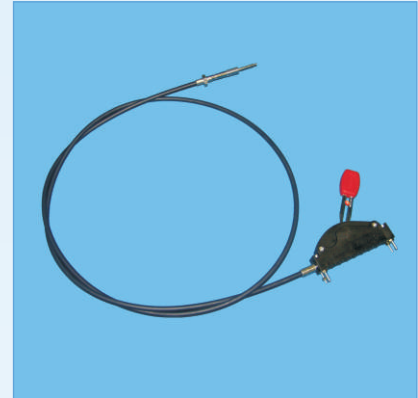
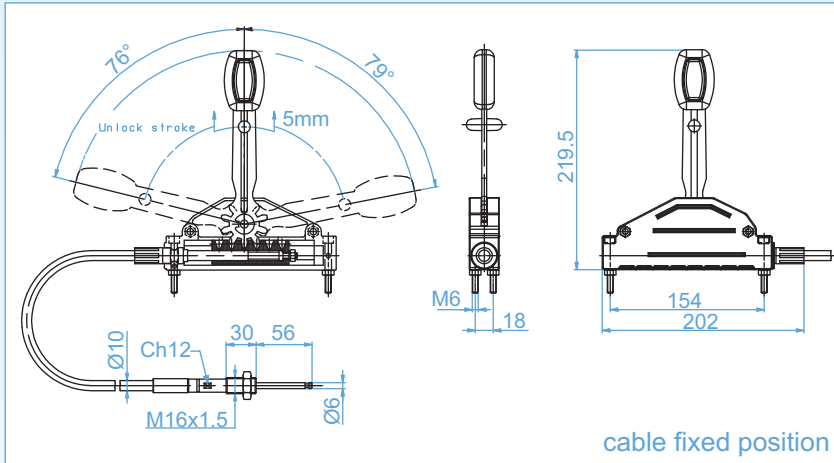


Hyva Valves

Cable and electric parts

Cable Control for valve with fixed position - bayonet

Part no.	Description	Stroke (mm)	Transmitted force	
			pull	push
021 419 372	Cable control fixed position 1.5 m	40-45	600 N	350 N
021 419 374	Cable control fixed position 2.5 m	40-45	600 N	350 N
021 419 376	Cable control fixed position 3.5 m	40-45	600 N	350 N
021 419 378	Cable control fixed position 4.5 m	40-45	600 N	350 N



Alternative cable controls

Part no.	Description	Stroke (mm)	Transmitted force	
			pull	push
021 419 300	Cable control PTO push-pull 2.5 m - M6	40	400 N	350 N
021 419 402	Cable control PTO push-pull 3 m, bayonet	40	600 N	350 N
021 419 353	Cable control 3 positions 2.5 m, bayonet	40	600 N	350 N
021 419 355	Cable control 3 positions 3.5 m, bayonet	40	600 N	350 N

Switch panel electric TIP/LOWER

Part no.	Description
020 70 121	switch panel electric

This panel can be used in combination with our electric tipping valves



Hydraulic pressure indicator

Part no.	Description
148 80 790 DS	Pressure switch for control light 300bar-¼ BSPOT
148 80 791	Protective cap with dual cable entries

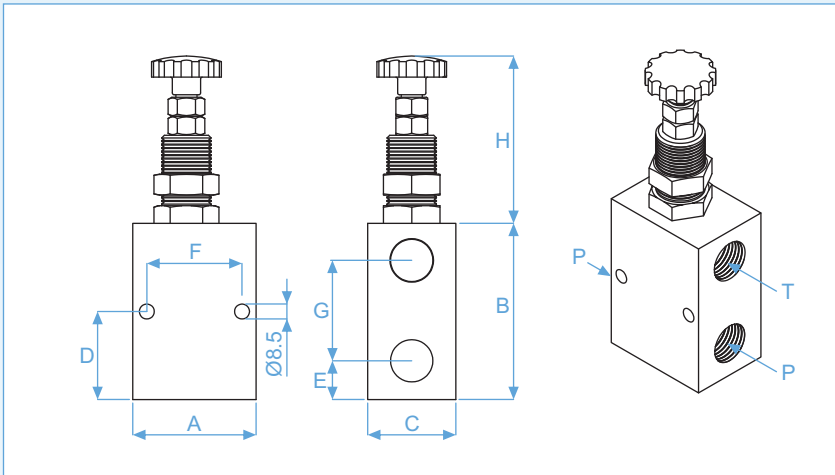


Hyva Valves

Pressure relief valves

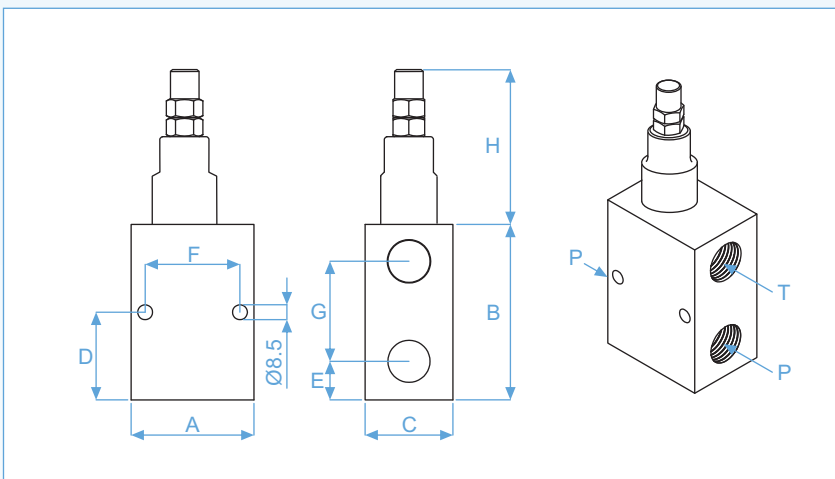
Pressure relief valve - adjustable

Part no.	Description	Press. (Bar)	Ports		Flow (L/min)	Weight (kg)	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)	G (mm)	H (mm)
			P	T										
013 19 875	Valve pres. relief 100L-250 bar KNOB (alu)	50-250	3/4"	3/4"	100	1.1	70	100	50	50	22	54	57	95



Pressure relief valve

Part no.	Description	Press. (bar)	Ports		Flow (L/min)	Weight (kg)	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)	G (mm)	H (mm)
			P	T										
013 19 880	Valve pres. relief 100L-210 bar BOLT (alu)	50-210	3/4"	3/4"	100	1.1	70	100	50	50	22	54	57	76.5
013 19 885	Valve pres. relief 100L-350 bar BOLT (steel)	180-350	3/4"	3/4"	100	2.4	70	100	50	50	22	54	57	76.5
013 19 890	Valve pres. relief 100L-350 bar BOLT (steel)	180-350	1"	1"	100	2.4	85	120	60	63	30	65	65	76.5

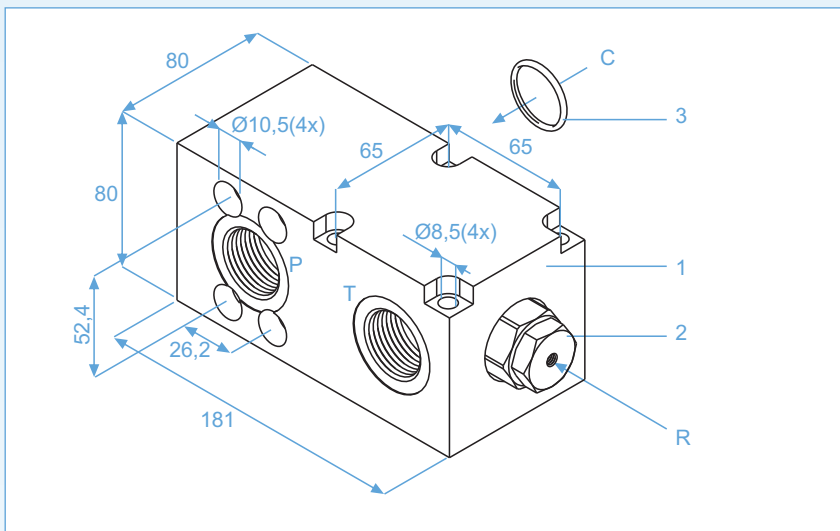


Hyva Valves

Pressure relief valves

Pressure relief valve CM-SAE

Part no.	Description	Max. press. (bar)	Port		Flow (L/min)	Weight (kg)
			Hydr.	Cyl.		
147 01 130	Valve pressure relief CM-SAE-150	150	G1"	1"SAE	150	2.5
147 01 150	Valve pressure relief CM-SAE-170	170	G1"	1"SAE	150	2.5



P : pump connection = 1"
 C : cyl. SAE connect. = 1"
 T : tank connection = 1"
 R : pressure relief cartridge

Spare parts

pos.	part no.	description
1	147 01 155	body
2	147 01 154	cartridge 150
	147 01 156	cartridge 170
3	147 01 157	O-ring

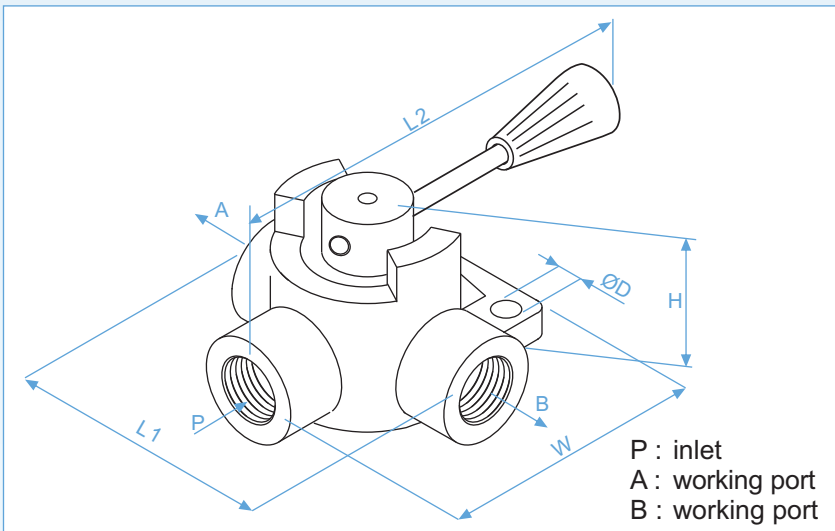
Hyva Valves

Diverter valves

Manual operated diverter valve

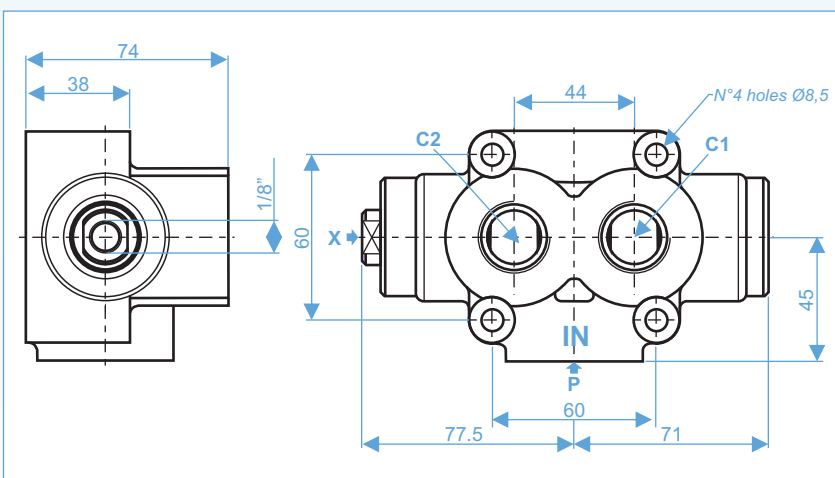
Part no.	Description	Max. press	Ports			Flow (L/min)	L1 (mm)	L2 (mm)	W (mm)	H (mm)	Weight (kg)
			P	A	B						
021 418 010	Diverter valve 3-way man.-1/2"	400 bar	G1/2"	G1/2"	G1/2"	110	86	154.5	91.6	73.3	1.80
021 418 011	Diverter valve 3-way man.-3/4"	400 bar	G3/4"	G3/4"	G3/4"	110	88	154.5	99	78.8	2.15
021 418 012	Diverter valve 3-way man.-1"	400 bar	G1"	G1"	G1"	150	98	204	108.5	90.5	3.70

These 3/3 diverter valves have an open middle position



Pneumatic operated diverter valve

Part no.	Description	Press. (Bar)	Ports		Flow (L/min)	Weight (kg)
			P	C1 / C2		
021 418 000	Diverter valve 1"-3/4" 250L-350B OC	350	G1"	G3/4"	250	2.5



P : pump connection = 1"
C1 : cylinder connection = 3/4"
C2 : cylinder connection = 3/4"
X : air connection = 1/8" BSP

Hyva Valves

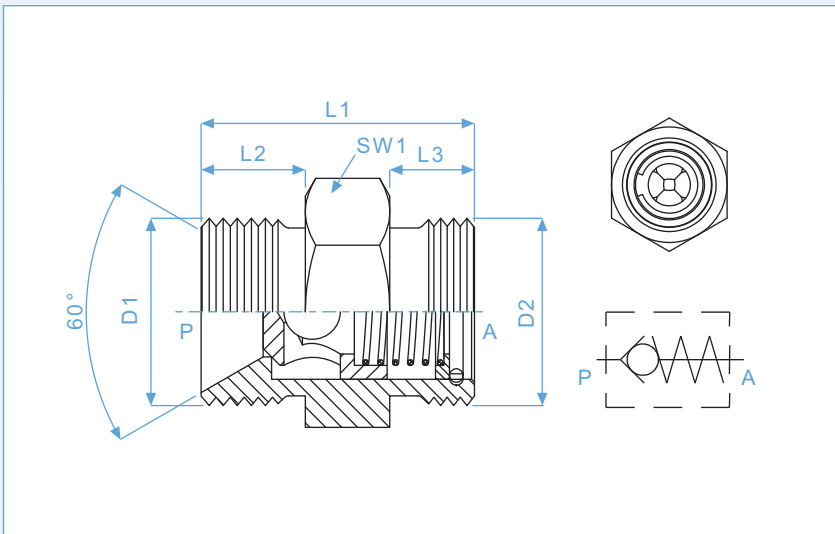
Non return valve & knock-off valves

Non return valve

Part no.	Description	Max. press.	Flow (L/min)	Weight (kg)	L1 (mm)	L2 (mm)	L3 (mm)	SW1 (mm)	ØD1 (")	ØD2 (")
147 39 975 A	Non return valve 1" BSPOT	350	220	0.3	48.5	18.5	15	41	1	1

This valve ensures that the oil flow can only travel through the hydraulic system in one direction (from P to A).

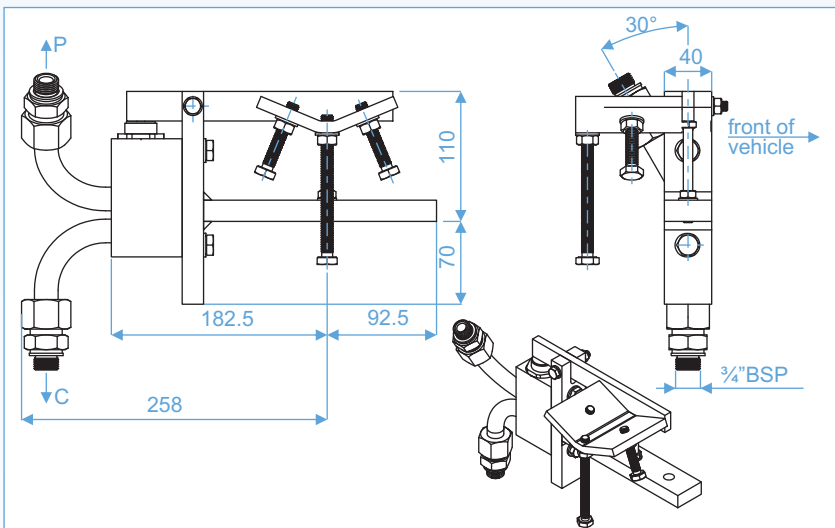
The 60° tapered P-port can be connected to a 1" swivel with internal 60° cone without a bonded seal. For all other types of connection a 1" bonded seal (013 13 848) is needed to prevent leakage of oil. The A-port of the valve must always have a 1" bonded seal. Mounting torque of the valve is 100 Nm.



Knock-off hydraulic UCB 145/165 cylinders

Part no.	Description	Max. press. (bar)	Ports	Flow (L/min)	Weight (kg)
147 52 800	Hydraulic knock/off UCB 145/165*)	200 bar	3/4"	60	6.1
147 52 805	Hydraulic knock/off UCB 126*)	200 bar	3/4"	60	6.0

*) This 1-line hydraulic knock-off can only be used in combination with UCB cylinders with cradle brackets (part no. 014 14 665 (145/165) and 014 14 663 (126))
Pneumatic knock-off's are listed in the air control section of the catalogue.



C : C-port; connect to cylinder
P : P-port; connect to hose

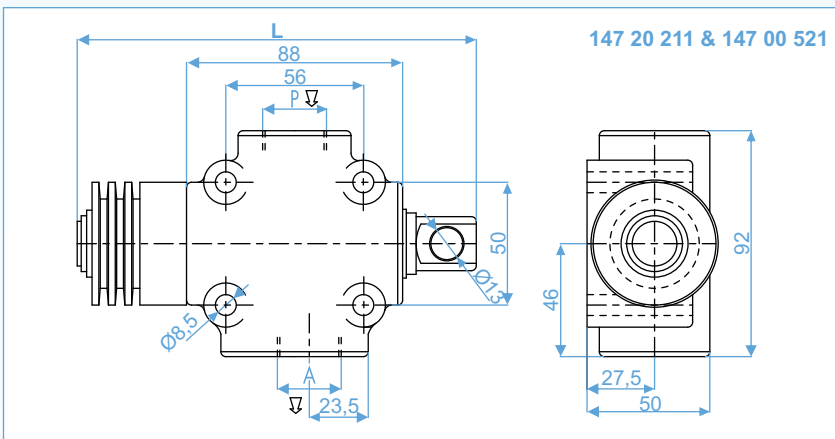
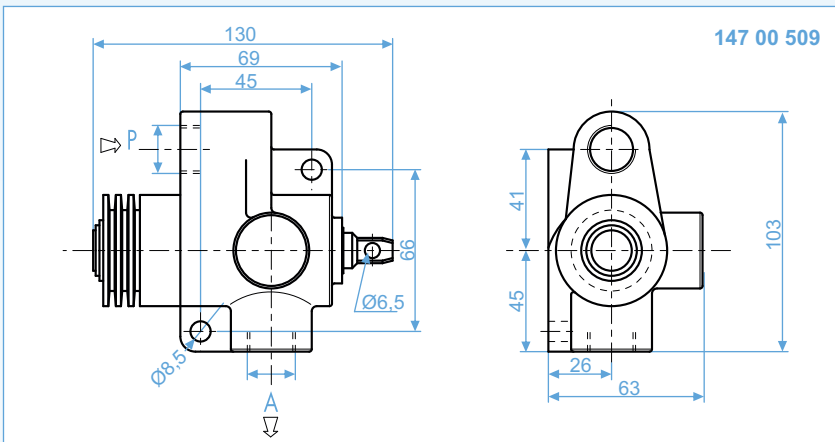
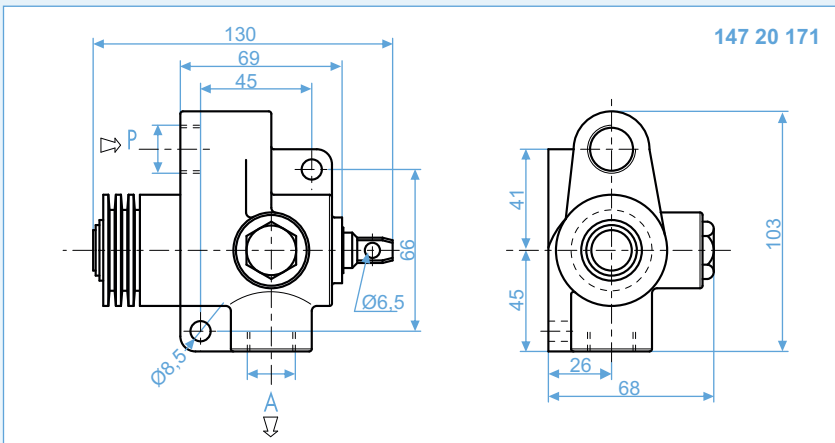
Hyva Valves

Hydraulic Knock-off valves

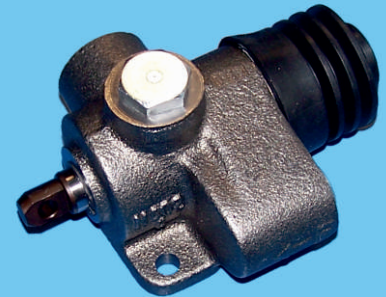
Knock-off valve

Part no.	Description	Type normally	Press (bar)	Ports	Flow (L/min)	Weight (kg)	L (mm)
147 20 171	Knock-off valve 2/2 60L 3/8"	opened	350	3/8"	60	1.628	-
147 20 211	Knock-off valve 2/2 120L 3/4"	opened	350	3/4"	120	2.112	173
147 00 509	Knock-off valve 2/2 60L 3/8"	closed	350	3/8"	60	1.648	-
147 00 521	Knock-off valve 2/2 120L 3/4"	closed	350	3/4"	120	2.204	179

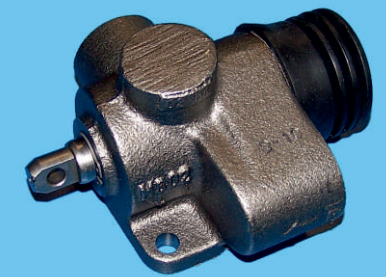
The pneumatic knock-off's can be found in the air control part of the catalogue



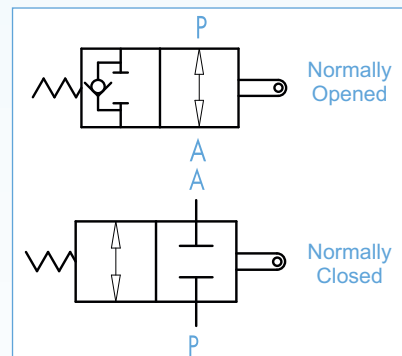
147 20 171



147 00 509



147 20 211 & 147 00 521

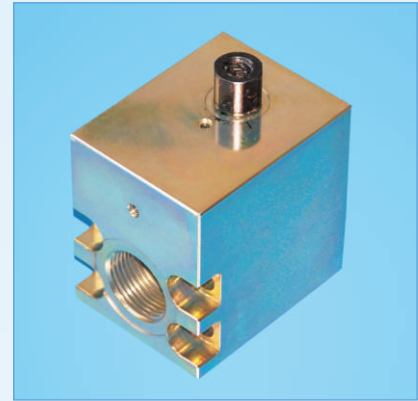
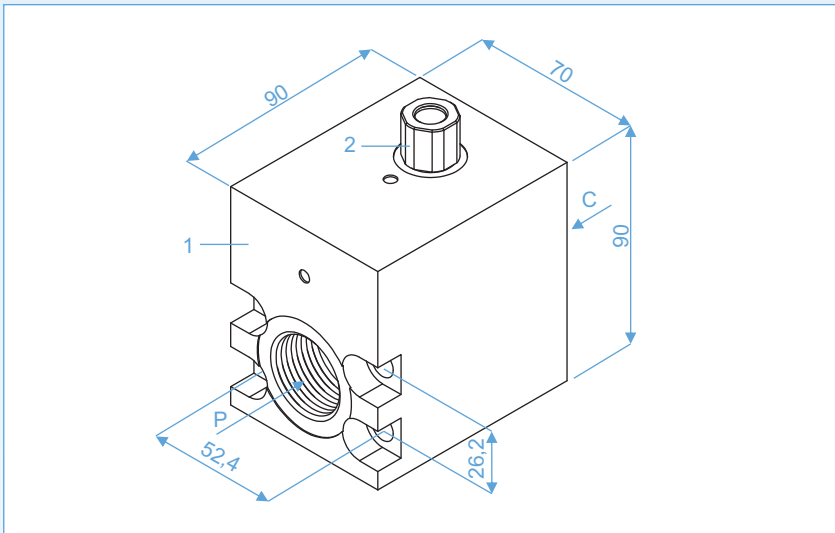


Hyva Valves

Hose burst valves

Hose burst valve with relief

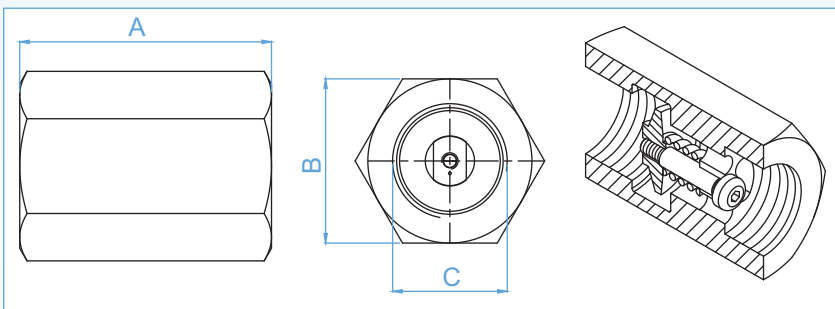
Part no.	Description	Max. press. (bar)	Ports	Flow (L/min)	Weight (kg)
147 42 101	Hose burst valve 1"SAE	190 bar	1"	215	4.0



- 1 : valve housing
- 2 : pressure cartridge (14771190)
- C : C-port; connect direct to cylinder
- P : P-port; connect to hose

Hose burst valve

Part no.	Description	Max. press (bar)	Flow (L/min)	Ports C	A (mm)	B (mm)
147 42 105	Hose burst valve ½"	315 bar	90	½"BSPIT	57	27
147 41 410	Hose burst valve 1"	250 bar	200	1"BSPIT	74	41
147 41 435	Hose burst valve 1¼"	250 bar	250	1¼"BSPIT	92	60

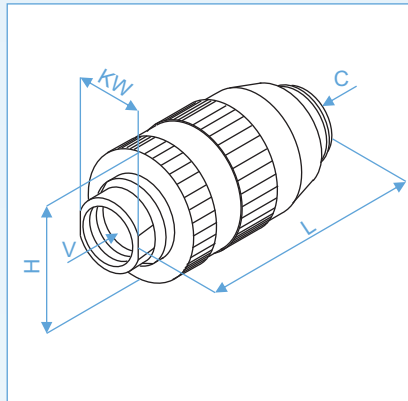
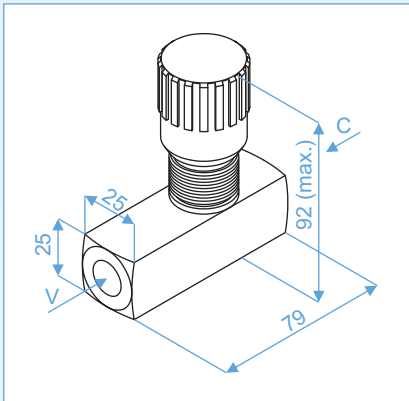


Hyva Valves

Flow restrict. & Multi-section

Flow restrictor valve

Part no.	Description	Max.press (bar)	Ports	Dimensions			Flow (L/min)	Weight (kg)
				L	H	KW		
147 00 485	Flow restrictor valve	400 bar	G3/8"	72	42	24	40	0.6
147 00 484	Flow restrictor valve	300 bar	G3/4"	100	55	36	100	0.5

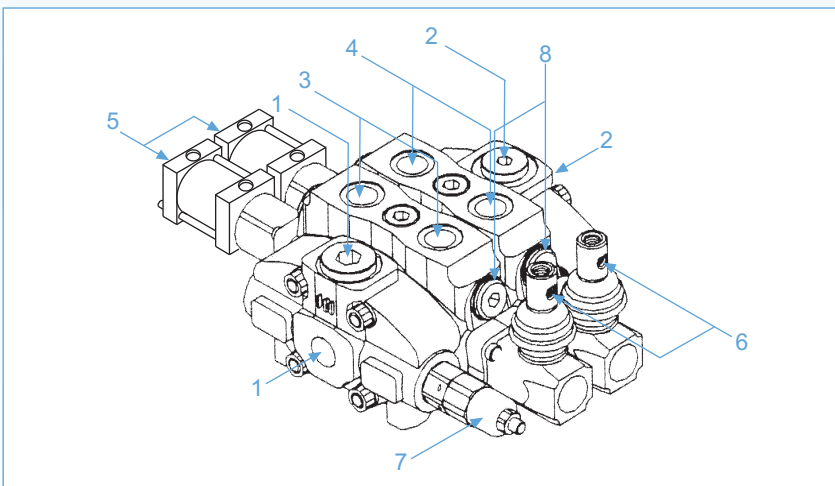


C : cylinder connection
V : valve connection

Part no.	Description	Max. press. (bar)	Ports	Flow (L/min)	Weight (kg)
092 35 651	Flow restrictor valve	400 bar	3/8"	40	0.5

Multi-section valve

Part no.	Description	Press. (bar)	Ports			Flow (L/min)
			P	A/B	T	
147 02 610	Section valve-080-2-DA/SA-180-PN	180	1/2"	1/2"	3/4"	80
147 02 620	Section valve-080-2-SA/DA-280-PN	280	1/2"	1/2"	3/4"	80
147 02 710	Section valve-080-3-DA/SA/SA-180-PN	180	1/2"	1/2"	3/4"	80
147 02 810	Section valve-080-4-DA/DA/SA/SA-180-PN	180	1/2"	1/2"	3/4"	80
147 02 815	Section valve-080-4-DA/DA/SA/SA-280-PN	280	1/2"	1/2"	3/4"	80
147 02 820	Section valve-080-4-SA/SA/DA/DA-280-PN	280	1/2"	1/2"	3/4"	80
147 03 120	Section valve-140-2-DA/SA-280-PN	280	3/4"	3/4"	1"	140
147 03 125	Section valve-140-2-DA/SA-170-PN	170	3/4"	3/4"	1"	140
147 03 210	Section valve-140-3-SA/DA/DA-170-L	170	3/4"	3/4"	1"	140
147 03 220	Section valve-140-3-SA/SA/DA-280-PN	280	3/4"	3/4"	1"	140
147 03 310	Section valve-140-4-DA/DA/SA/SA-280-PN	280	3/4"	3/4"	1"	140
147 05 500	Section valve-160-3-DA/DA/SA-170-PN	170	1"	1"	1"	160
147 05 550	Section valve-160-3-DA/SA/DA-135-L	135	1"	1"	1"	160



- 1 : pump connection (P)
- 2 : tank connection" (T)
- 3 : section 1 connection (A/B)
- 4 : section 2 connection (A/B)
- 5 : air actuator
- 6 : socket for handle
- 7 : pressure relief valve
- 8 : port relief valve

DA = double acting section
SA = single acting section
PN = pneumatic operated
L = lever operated

