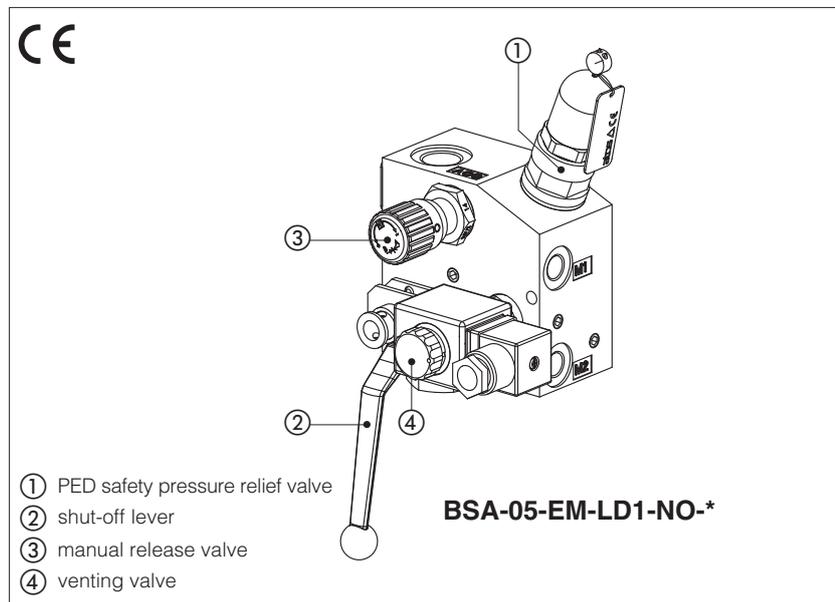


# PED safety manifolds for accumulators type BSA

In line mounting - G 1/2" and G 1" threaded ports

**Availability and price only on request**



PED safety manifolds for accumulators type BSA are equipped with relief valves conforming to PED Directive 2014/68/EU (see tab. CY900).

The safety function is ensured by discharging the excess flow across the relief valve, at required pressure setting value at request ①.

They are equipped with manual shut-off valves to isolate the accumulator from the charging circuit ②, manual release valve ③ to drain the accumulator, and venting solenoid valve with electric driving ④ (optional).

These manifolds are suitable for any hydraulic circuit where there are one or more accumulators.

The manifolds are designed to work in hydraulic systems with oil or synthetic fluids having similar lubricating characteristics.

Max flow BSA-05: **70 l/min**  
 BSA-10: **200 l/min**

Pressure up to **350 bar**

## 1 MODEL CODE

<b>BSA</b>	-	<b>10</b>	-	<b>EM</b>	-	<b>LD1</b>	-	<b>NO</b>	-	<b>24 DC</b>	/	<b>235</b>	/	<b>PED</b>		**	/	*
Safety manifold																		
Size: <b>05</b> = G 1/2" <b>10</b> = G 1"																		
Release mode: <b>EM</b> = electric/manual <b>M</b> = manual																		
Option: <b>LD1</b> = with lock key on shut-off lever																		
Venting solenoid valve (only for EM): <b>NO</b> =normally open <b>NC</b> =normally closed																		
Voltage code (only for EM): <b>12 DC</b> = 12 VDC <b>24 DC</b> = 24 VDC <b>110 RC</b> = 110 VAC <b>220 RC</b> = 220 VAC																		
<b>Seals material,</b> see section 5: - = NBR PE = FKM																		
<b>PED</b> = Safety valve covered by EU Type examination to 2014/68/EU																		
<b>Factory pressure setting (bar):</b> to be defined by the customer min step 1 bar (example <b>280</b> = 280 bar) min pressure setting: <b>25</b> = for BSA-10 <b>30</b> = for BSA-20																		

## 2 HYDRAULIC CHARACTERISTICS

	<b>BSA*-M</b>	<b>BSA*-EM-NC</b>	<b>BSA*-EM-NO</b>
<b>Model</b>		<b>05</b>	<b>10</b>
Pressure range of safety valve [bar]		25 ÷ 350	
Max flow of safety valve [l/min]		60	150
Max flow recommended P←ACC [l/min]		70	200
Max pressure [bar]		350	

**3 GENERAL CHARACTERISTICS**

Installation position	Any position
Hydraulic connection	<b>BSA-05:</b> P = G 1/2" T = G 3/8" A = G 3/8" ACC = G 1/2" M* = G 1/4" <b>BSA-10:</b> P = G 1" T = G 3/4" A = G 3/8" ACC = G 1" M* = G 1/4"
Ambient temperature	<b>Standard</b> execution = -20°C ÷ +70°C <b>/PE</b> option = -20°C ÷ +70°C
Compliance	CE to Low Voltage Directive 2014/35/EU RoHS Directive 2011/65/EU as last update by 2015/863/EU REACH Regulation (EC) n°1907/2006

**4 SEALS AND HYDRAULIC FLUID** - for other fluids not included in below table, consult Atos Technical Office

Seals, recommended fluid temperature	NBR seals (standard) = -20°C ÷ +80°C, with HFC hydraulic fluids = -20°C ÷ +50°C FKM seals (/PE option) = -40°C ÷ +60°C, with HFC hydraulic fluids = -40°C ÷ +50°C		
Recommended viscosity	15 ÷ 100 mm <sup>2</sup> /s - max allowed range 2.8 ÷ 500 mm <sup>2</sup> /s		
Max fluid contamination level	ISO 4406 class 20/18/15 NAS 1638 class 9, see also filter section www.atos.com or KTF catalog		
<b>Hydraulic fluid</b>	<b>Suitable seals type</b>	<b>Classification</b>	<b>Ref. Standard</b>
Mineral oils	NBR, FKM	HL, HLP, HLPD, HVLP, HVLPD	DIN 51524
Flame resistant without water	FKM	HFDU, HFDR	ISO 12922
Flame resistant with water	NBR	HFC	

**5 ELECTRIC CHARACTERISTICS**

Relative duty factor	100%
Supply voltage	See model code at section 1
Supply voltage tolerance	±10%
Max power	20 Watt
Power connector	<b>to be ordered separately</b> DC voltage: 666 (plastic); 3 pins, cable clamp PG11, cable max ø 11mm RC voltage: 669 (plastic, with built-in rectifier bridge); 3 pins, cable clamp PG11, cable max ø 11mm
Connectors features	DIN 43650 - ISO 4400; IP65 (DIN 40050); VDE 0110C

**6 OPTION**

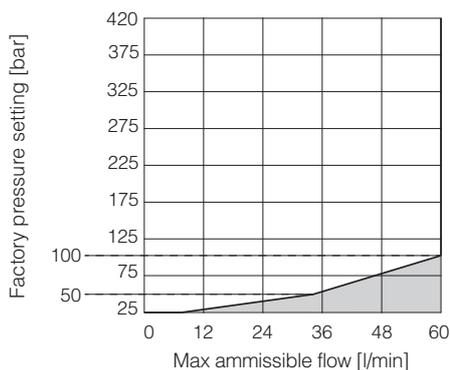
**LD1** option allows to mechanically lock the lever position, and consequently the opening or closing condition of the shut-off valve.

the hole to insert the padlock is 6.5 mm

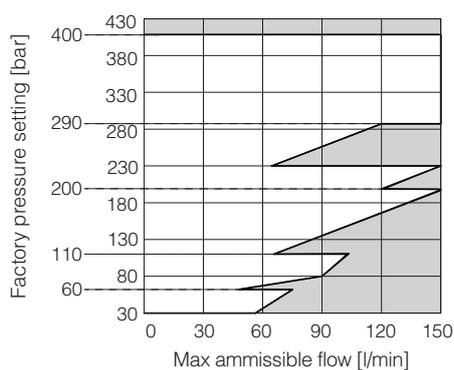
Pull and rotate the shut-off lever

**7 DIAGRAMS**

**BSA-05-\*/PED**

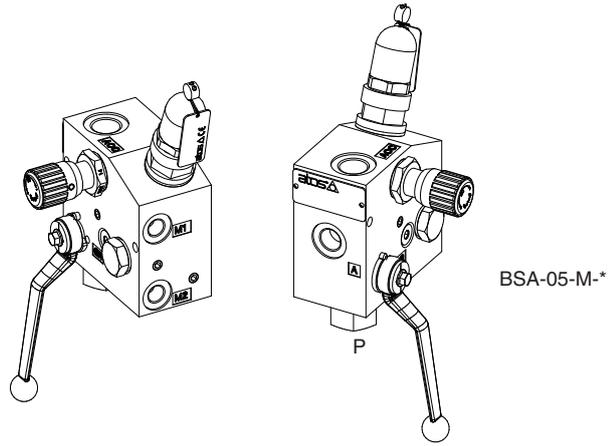


**BSA-10-\*/PED**

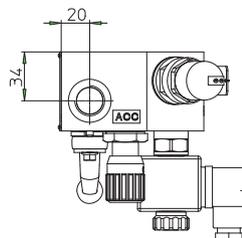
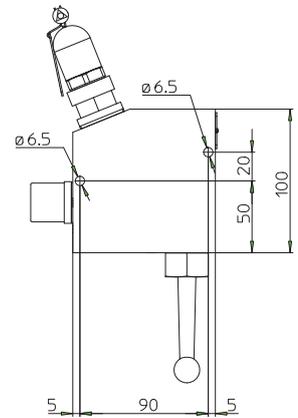
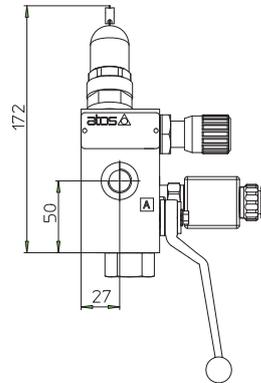
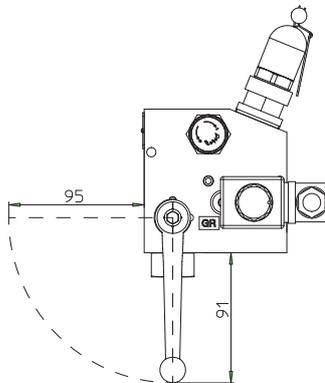
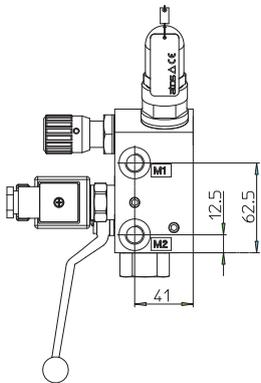
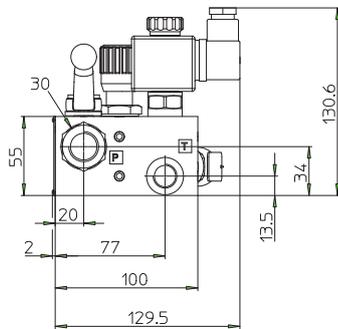


**BSA-05**

ACC	A	P	T	M*	Mass [Kg]
G 1/2"	G 3/8"	G 1/2"	G 3/8"	G 1/4"	4,6



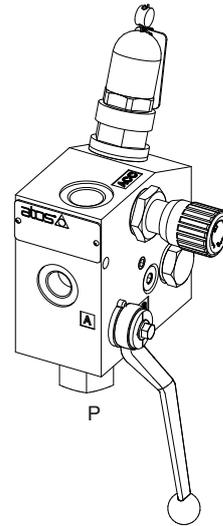
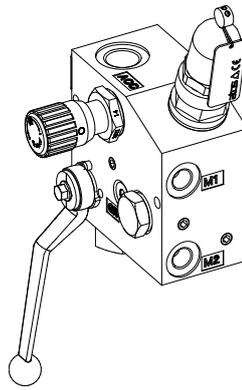
BSA-05-EM-\*



Electric connector according to DIN 43650  
(must be ordered separately)

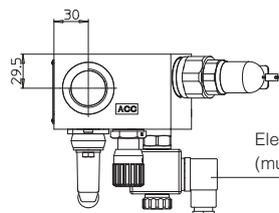
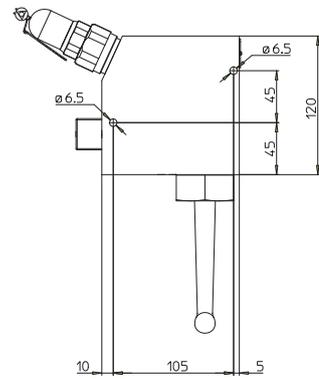
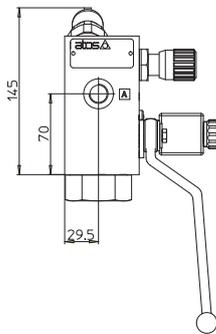
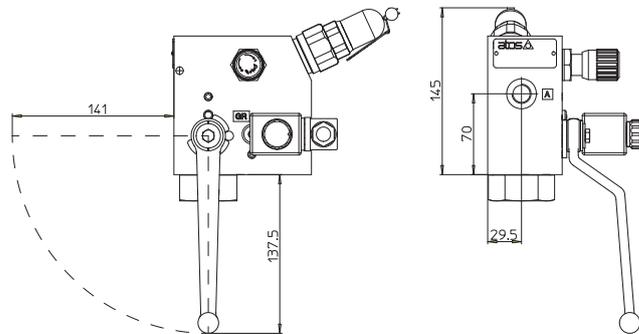
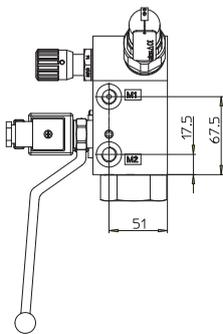
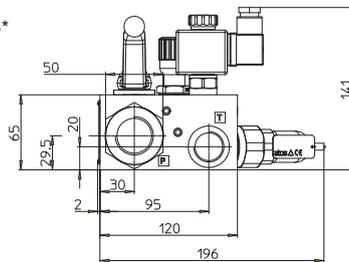
# BSA-10

ACC	A	P	T	M*	Mass [Kg]
G 1"	G 3/8"	G 3/4"	G 1/2"	G 1/4"	7,5



BSA-10-M\*

BSA-10-EM\*



Electric connector according to DIN 43650  
(must be ordered separately)

## 9 INSTRUCTIONS AND MAINTENANCE

For safety reasons BSA manifold is provided with shut-off lever locked in **open position**.

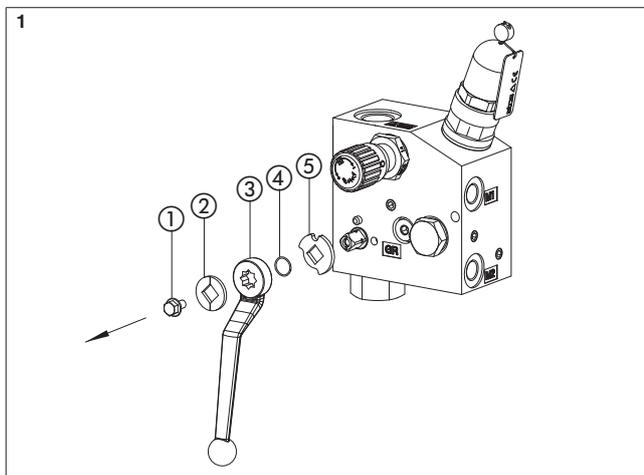
In case you need to unlock the lever, follow these instructions



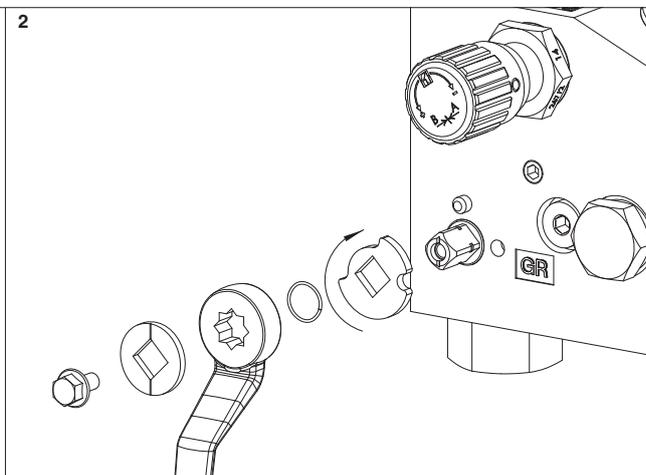
### ATTENTION:

- System under pressure before performing any operation turn off and discharge the pressure of the circuit.

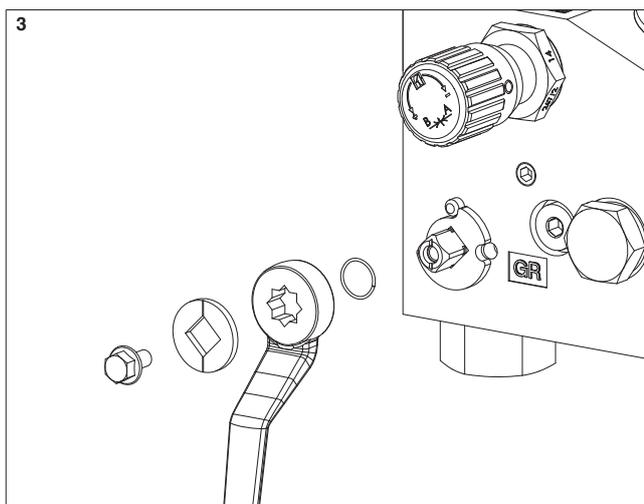
### 9.1 START-UP



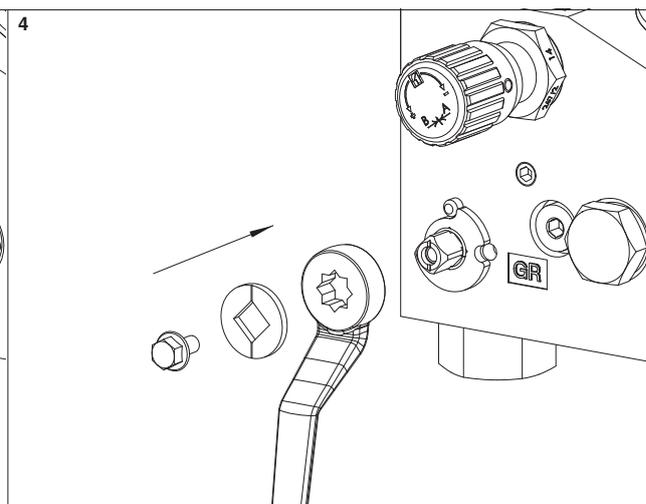
Remove the screw ① and the flow indicator washer ②, pull out the shut-off lever ③, the snap ring ④ and the stopping disk ⑤



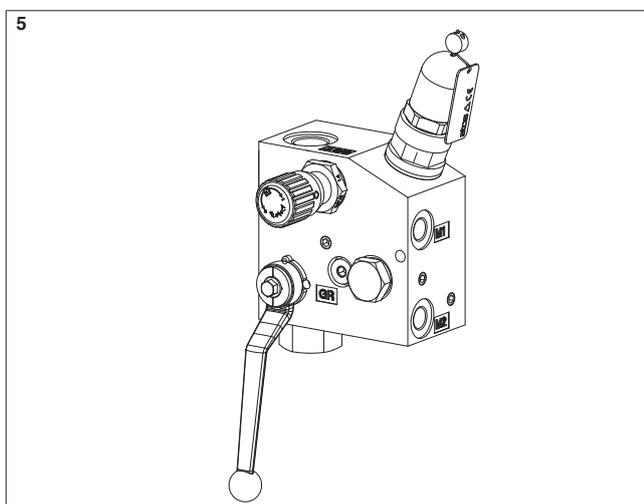
Rotate 90° clockwise the stopping disk



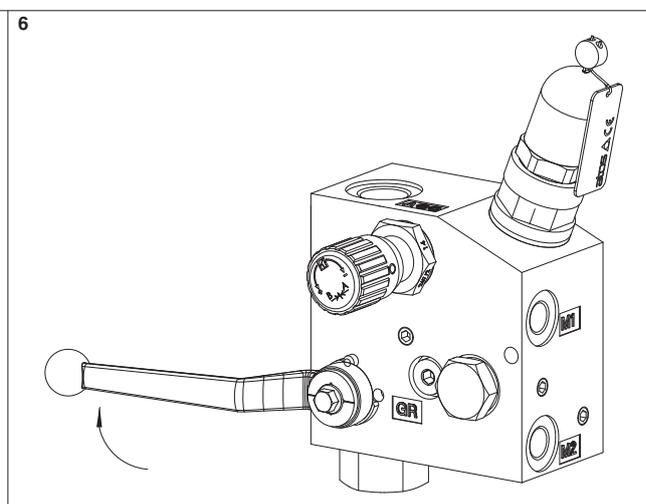
Reinsert the stopping disk



Reinsert the snap ring



Reinsert the shut-off lever, the flow indicator washer and the fixing screw



Shut-off lever can be rotated

## 9.2 MAINTENANCE



### **ATTENTION:**

- System under pressure before performing any operation turn off and discharge the pressure of the circuit.

In case of any operating problems, after having emptied and depressurized the system, check the following conditions:

- check the seals and replace them if damaged
- remove the venting solenoid valve (for **EM** option)
- remove GR plug, check the screw hole is not clogged

## 10 RELATED DOCUMENTATION

**CY900** Operating and maintenance information for PED certified valves