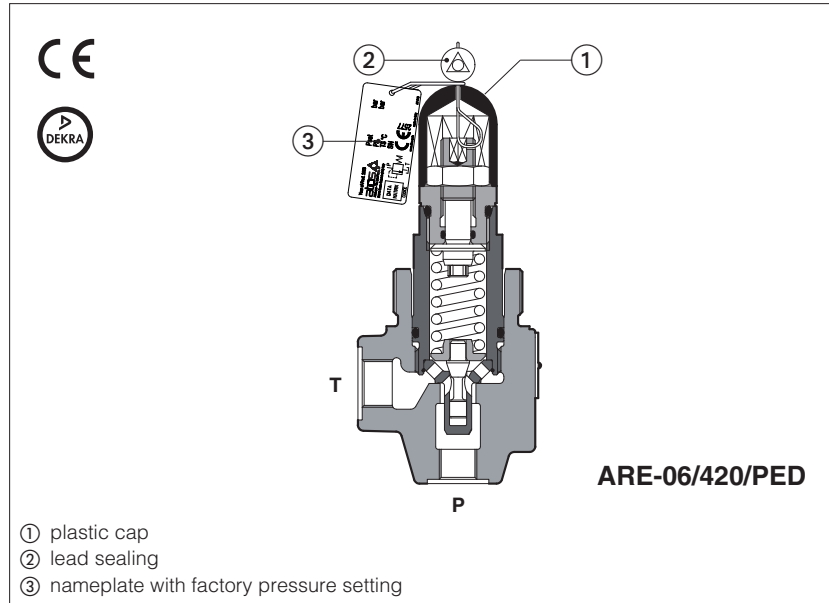


## Safety pressure relief valves

in line, direct, conforming to PED Directive 2014/68/EU - certified by 



### ARE /PED

Safety pressure relief valves, certified by DEKRA according to Pressure Equipment Directive 2014/68/EU (PED).

They are designed to operate as safety components, limiting the maximum system pressure or to protect parts of the hydraulic circuit and accumulators from overpressure.

The valves are provided with threaded ports for in-line mounting.

The valves are factory set at the pressure level required by the customer, see section 6.

The pressure adjustment screw is protected with a lead sealed plastic cap to avoid any tampering.

**ARE-06:** Size: **G 1/4"**

Max flow: **60 l/min**

Max pressure: **420 bar**

**ARE-15:** Size: **G 1/2"**

Max flow: **100 l/min**

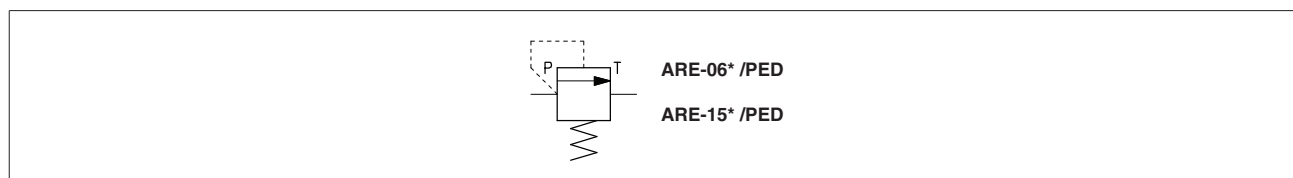
Max pressure: **420 bar**

### 1 MODEL CODE

ARE	-	06	/	420	/	PED	/	280	*	/	*
Safety pressure relief valves, in-line											<b>Seals material, (1)</b> see section 5: - = NBR PE = FKM BT = HNBR:
<b>Size:</b> <b>06</b> = Port P G 1/4" <b>15</b> = Port P G 1/2"											Series number
<b>Max pressure:</b> <b>420</b> = 420 bar											<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 25 bar
											<b>PED</b> = EU Type examination to 2014/68/EU - certified by DEKRA

(1) EPDM seals, code **EP**, are available on request for applications with HFDR fire-resistant phosphate ester-based fluids used in ground aviation hydraulic equipment (e.g., Skydrol or HyJet) – Max factory pressure setting = 350 bar.  
Valves are identified by number **000400** before the model code, e.g.: 000400 ARE-06/420/PED/350 /EP

### 2 HYDRAULIC SYMBOL



### 3 GENERAL CHARACTERISTICS

Assembly position	Any position
MTTFd valves according to EN ISO 13849	150 years, for further details see technical table P007
Ambient temperature range	<b>Standard</b> = -30°C ÷ +80°C <b>/PE</b> option = -20°C ÷ +80°C <b>/BT</b> option = -40°C ÷ +70°C
Storage temperature range	<b>Standard</b> = -30°C ÷ +80°C <b>/PE</b> option = -20°C ÷ +80°C <b>/BT</b> option = -40°C ÷ +70°C
Surface protection	Zinc coating with black passivation - salt spray test (EN ISO 9227) > 200h
Compliance	PED Directive 2014/68/EU - EU type-examination certificate <b>(1)</b> RoHS Directive 2011/65/EU as last update by 2015/863/EU REACH Regulation (EC) n°1907/2006

**(1)** The type-examination certificate can be download from [www.atos.com](http://www.atos.com)

### 4 HYDRAULIC CHARACTERISTICS

Valve model		<b>ARE-06</b>	<b>ARE-15</b>
Max pressure on port P [bar]		420	420
Factory pressure setting range [bar]		25÷420	25÷420
Max pressure on port T <b>(1)</b> [bar]		50	50
Max flow. <b>(2)</b> [l/min]		60	100

**(1)** Ped valves should be operated without counterpressure on T line, see note 2 at section **[8]**

**(2)** For PED valves see diagrams at section **[8]**

### 5 SEALS AND HYDRAULIC FLUIDS - for other fluids not included in below table, consult our 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) = -20°C ÷ +80°C HNBR seals (/BT option) = -40°C ÷ +60°C, with HFC hydraulic fluids = -40°C ÷ +50°C		
Recommended viscosity	15÷100 mm²/s - max allowed range 2,8 ÷ 500 mm²/s		
Max fluid contamination level	ISO 4406 class 20/18/15 NAS 1638 class 9, see also filter section <a href="http://www.atos.com">www.atos.com</a> or KTF catalog		
Hydraulic fluid	Suitable seals type	Classification	Ref. Standard
Mineral oils	NBR, FKM, HNBR	HL, HLP, HLPD, HVLP, HVLPD	DIN 51524
Flame resistant without water	FKM	HFDR, HFDR	ISO 12922
Flame resistant with water	NBR, HNBR	HFC	

### 6 FACTORY PRESSURE SETTING

The /PED valves are factory set at the pressure level required by the costumer (min step: 1bar). The factory pressure setting is performed at the flow shown in the following table. The factory pressure setting is marked on the valve nameplate, see section **[7]**

VALVE MODEL	FLOW FOR FACTORY PRESSURE SETTING (l/min)
ARE-06	2
ARE-15	2



Any tampering of the lead sealing invalidates the certification

## 7 NAMEPLATE MARKING

Valve code

ARE-15/420/PED/190 ** /BT	
Year of Prod. 2023	
<b>atos</b>	
Atos s.p.a. - Via alla Piave, 57 21018 Sesto Calende (Va) Italy	
DATA MATRIX	
COOCE	
<b>CE</b>	
2577	
www.atos.com	
made in Italy	
AT-043	

Factory pressure setting

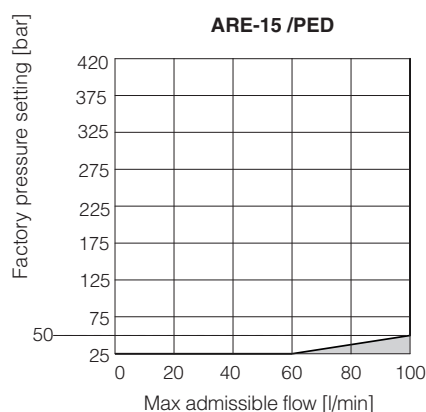
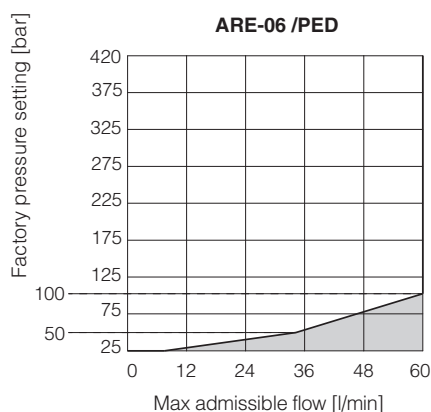
Burst pressure

Min ÷ Max fluid or ambient temperature range

Notified body reference number

Note: **TS** values are referred to the extreme temperatures, regardless of whether the fluid or the ambient

## 8 PERMITTED WORKING RANGE (based on mineral oil ISO VG 46 at 50°C)



### Notes:

- 1) The valves can operate only in the white area of the above diagrams.

The max admissible flow values within the white area are those for which the pressure increase remains within **+10% with respect to the factory pressure setting**.

Pressure / flow values located in gray areas cannot be performed.



Before ordering the valve, check that the maximum admissible flow at the required pressure setting, is greater than the maximum flow rate of the system or the accumulator to be protected.

- 2) The working range in above diagrams is valid without counterpressure in T line.

The factory pressure setting is increased by the counterpressure valve in T line.

As general rule PED valves should be operated without counter pressure in the T line.

In case of counter pressure in T line, the maximum admissible flow has to be reduced with respect to the values reported in the diagram, so as not to exceed the limit of +10% with respect to the factory pressure setting. Contact Atos technical office for details.

## 9 INSTALLATION DIMENSIONS [mm]

### ARE-06

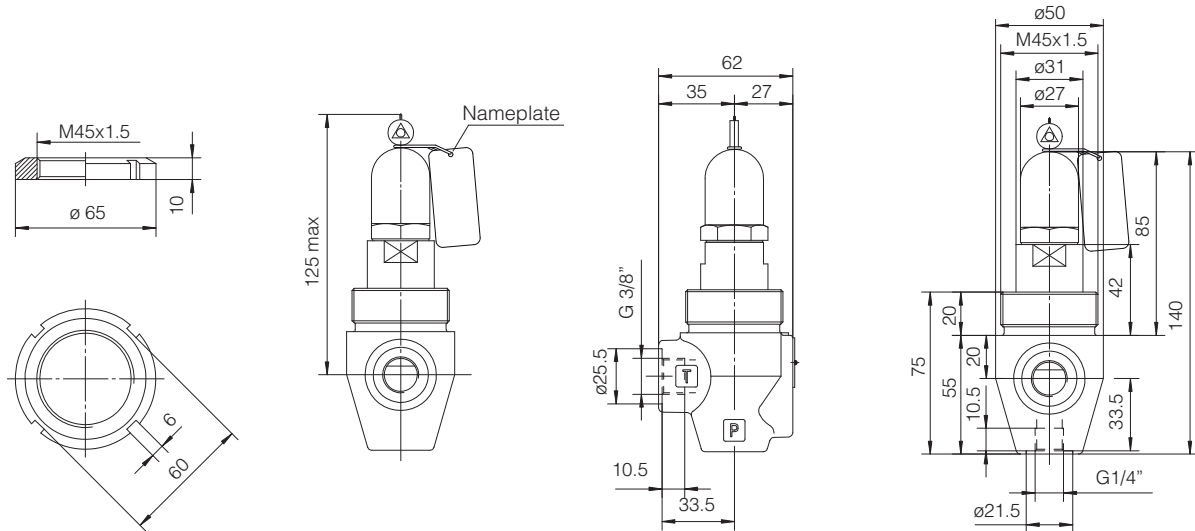
**P** = INLET PORT G 1/4"

**T** = OUTLET PORT G 3/8"

Locking ring for fastening the valve.

Model code: SP-6-RE-310030

Mass [kg]	
ARE-06	1,0



### ARE-15

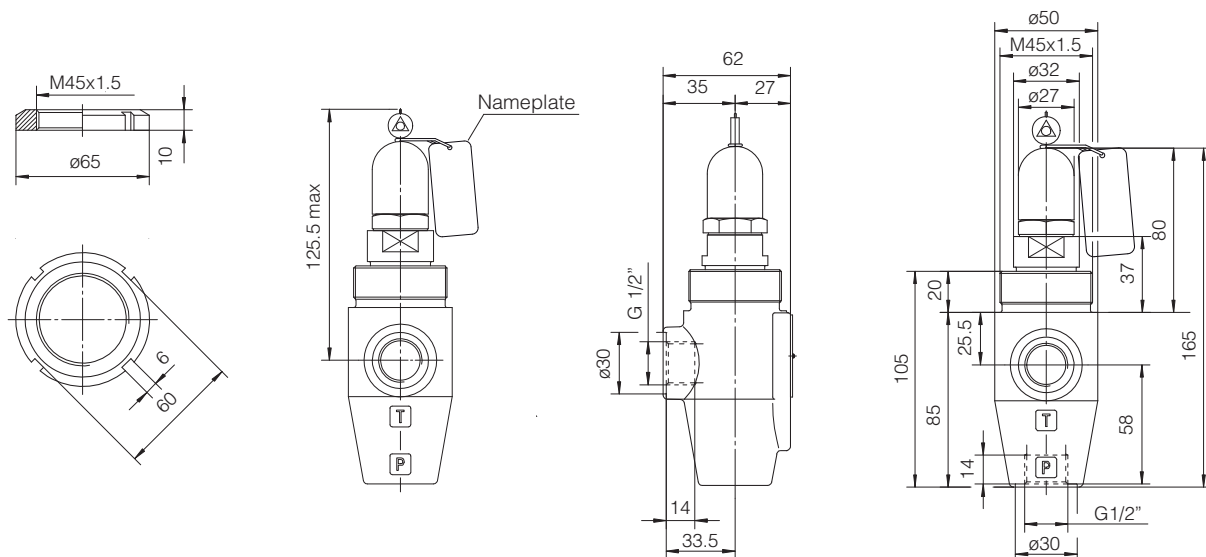
**P** = INLET PORT G 1/2"

**T** = OUTLET PORT G 1/2"

Locking ring for fastening the valve.

Model code: SP-6-RE-310030

Mass [kg]	
ARE-15	1,3



## 10 RELATED DOCUMENTATION

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