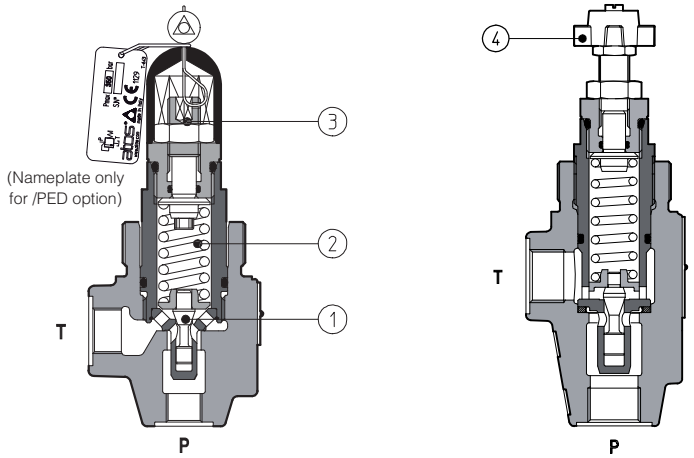
# Pressure relief valves type ARE

direct operated, in line mounting - G 1/4" and G 1/2" threaded ports




ARE-06-***/RS /PED

ARE-15-***/V

**ARE** are poppet type, directed operated pressure relief valves, with threaded ports for in line mounting.

The flow P→T is permitted when pressure force acting on the poppet ① overcomes the force of the spring ②.

Regulation is operated by means of a screw ③ or optionally by means of a handwheel ④ acting on the spring.

Clockwise rotation increases the pressure.

These valves are available in two sizes, with port P=G 1/4" or G 1/2".

Also available in safety options with sealed regulation:

**/RS** conforming to Machine Directive (2006/42/CE). The factory preset regulation required by the costumer corresponds to the valve's cracking pressure.

**/PED** conforming to PED Directive (97/23/CE). The valves are factory set at the pressure level required by the costumer with a flow through the valve as shown in section 5.

For this version, the P, Q limits are shown in section 7.

Max flow: up to **100 l/min**:

Max pressure: ARE-06 up to **500 bar**
ARE-15 up to **420 bar**

## 1 MODEL CODE

| ARE | - | 06 | / | 350 | / | * | / | * | | ** | / | * |
|---|---|---|---|---|---|---|---|---|---|---|---|---|

**ARE** = pressure relief valve with thread connections
Available also in cartridge execution, see tab. C010

Size:
**06** = port P G 1/4" **15** = port P G 1/2"

Setting:

for size 06:
**50** = 2 → 50 bar
**100** = 3 → 100 bar
**210** = 10 → 210 bar
**350** = 15 → 350 bar
**500** = 30 → 500 bar

for size 15:
**15** = 2 → 15 bar
**50** = 3 → 50 bar
**75** = 4 → 75 bar
**150** = 8 → 150 bar
**250** = 8 → 250 bar
**350** = 30 → 350 bar
**420** = 30 → 420 bar

Options **(1)(2)**:
**R** = reduced leakage for special applications
**RS** = as /R, plus conforming to 2006/42/CE
**PED** = as /R, plus conforming to 97/23/CE

Only for standard and /R option:
**V** = regulating handwheel
**VF** = regulating knob
**VS** = regulating knob with safety locking

Only for RS, PED options:
**280** = factory pressure setting to be defined depending to the customer requirement (example 280 = 280 bar)

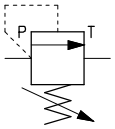
Series number

Seals material, see section 4:
**-** = NBR
**PE** = FKM
**BT** = HNBR

**(1)** For handwheel and knob features and avaibility, see section 7 and technical table K150.
**(2)** Possible combined options:
**RV** = reduced leakages and regulating handweel
**RVF** = reduced leakages and regulating knob
**RVS** = reduced leakages and regulating knob with safety locking

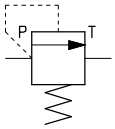
## 2 HYDRAULIC SYMBOLS

Hydraulic symbol




**ARE-06**

**ARE-15**




**ARE-06 **/RS /PED**

**ARE-15 **/RS /PED**

## 3 HYDRAULIC CHARACTERISTICS

| Valve model | | ARE-06 | | | | | ARE-15 | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Setting | **Standard** | /50 | /100 | /210 | /350 | /500 | /15 | /50 | /75 | /150 | /250 | /350 | /420 |
| | **/R** | /50 | /100 | /210 | /350 | /500 | /15 | /50 | /75 | /150 | /250 | /420 | |
| | **/RS** | /220 | /270 | /330 | /350 | | | | /150 | /190 | /230 | | |
| | **/PED** | /100 | /210 | /350 | /500 | | | /75 | /150 | /250 | /350 | /420 | |
| Pressure range [bar] | **Standard** | 2÷50 | 3÷100 | 10÷210 | 15÷350 | 30÷500 | 2÷15 | 3÷50 | 4÷75 | 8÷150 | 8÷250 | 30÷350 | 30÷420 |
| | **/R** | 2÷50 | 3÷100 | 10÷210 | 15÷350 | 30÷500 | 2÷15 | 3÷50 | 4÷75 | 8÷150 | 8÷250 | 30÷420 | |
| | **/RS** | 200÷250 | 250÷290 | 290÷350 | 310÷370 | | | 130÷170 | 170÷210 | 210÷250 | | | |
| | **/PED** | 25÷100 | 100÷210 | 210÷350 | 350÷500 | | 25÷75 | 75÷150 | 150÷250 | 250÷350 | 350÷420 | | |
| Max pressure port T [bar] | | 50 | | | | | 50 | | | | | | |
| Max flow [l/min] | **Standard, /R** | 40 | | | | | 75 | | | | | | |
| | **/RS, /PED** | 60 | | | | | 100 | | | | | | |

## 4 MAIN CHARACTERISTICS, SEALS AND FLUIDS - for other fluids not included in above table, consult our technical office

| | |
|---|---|
| Assembly position | Any position |
| Ambient temperature | Standard execution = -30°C ÷ +70°C<br>/PE option = -20°C ÷ +70°C<br>/BT option = -40°C ÷ +70°C |
| Seals, recommended fluid temperature | NBR seals (standard) = -20°C ÷ +60°C, with HFC hydraulic fluids = -20°C ÷ +50°C<br>FKM seals (/PE option) = -20°C ÷ +80°C<br>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 |
| Fluid contamination class | ISO 4406 class 21/19/16 NAS 1638 class 10, in line filters of 25 μm (β10 ≥75 recommended) |

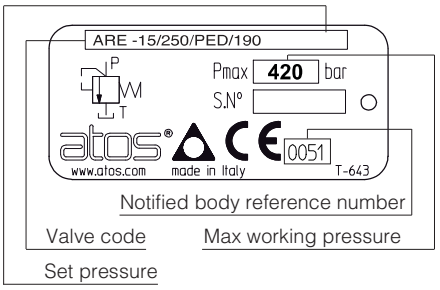
| Hydraulic fluid | Suitable seals type | Classification | Ref. Standard |
|---|---|---|---|
| Mineral oils | NBR, FKM, HNBR | HL, HLP, HLPD, HVLP, HVLPD | DIN 51524 |
| Flame resistant without water | FKM | HFDU, HFDR | ISO 12922 |
| Flame resistant with water | NBR, HNBR | HFC | |

## 5 SETTING OF VALVES WITH /PED OPTION

The /PED valves are factory set at the pressure level required by the costumer (every 1 bar) at the following flow shown in the table.
The set pressure is marked on the valve nameplate, see section 5.1

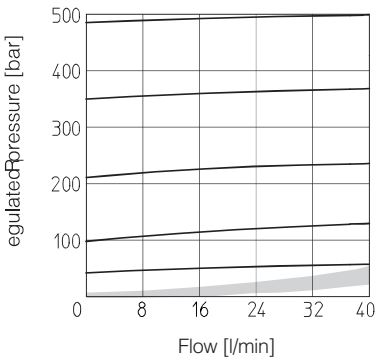
| VALVE MODEL | FLOW FOR FACTORY PRESSURE SETTING (l/min) |
|---|---|
| **ARE-06** | 12 |
| **ARE-15** | 12 |

### 5.1 EXAMPLE OF NAMEPLATE FOR /PED OPTION

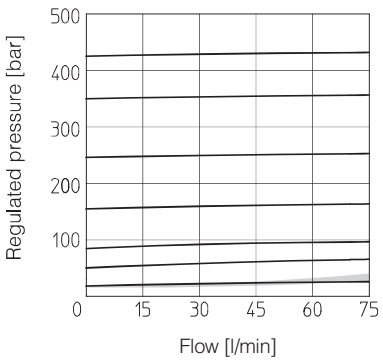


**6** **REGULATED PRESSURE VERSUS FLOW DIAGRAMS** based on mineral oil ISO VG 46 at 50°C

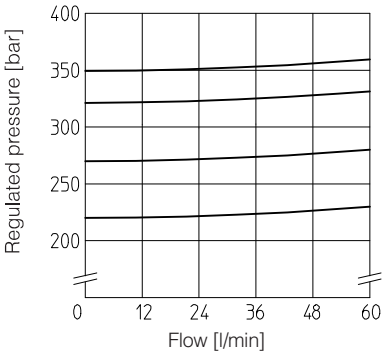
**ARE-06 and ARE-06/R**



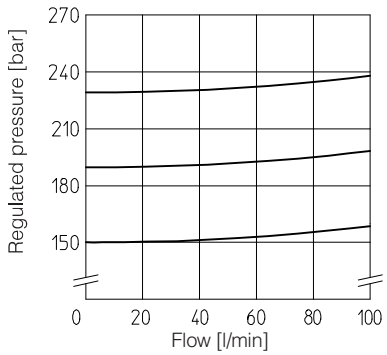

**ARE-15 and ARE-15/R**



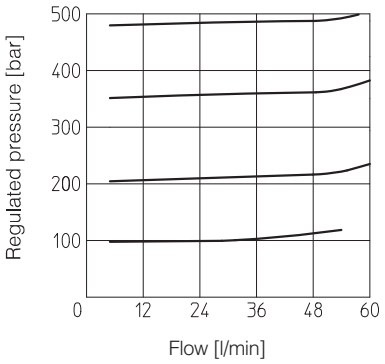

**ARE-06 /RS**



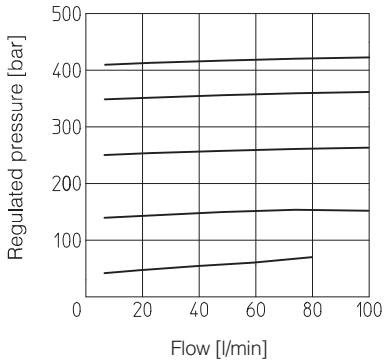

**ARE-15 /RS**




**ARE-6 /PED**

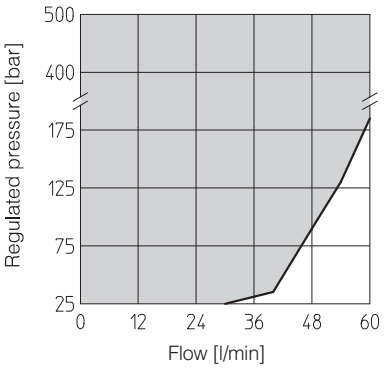



**ARE-15 /PED**

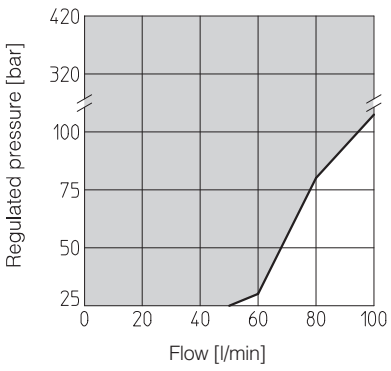



**7** **PERMISSIBLE RANGES** (shaded area)
based on mineral oil ISO VG 46 at 50°C

**ARE-6 /PED**

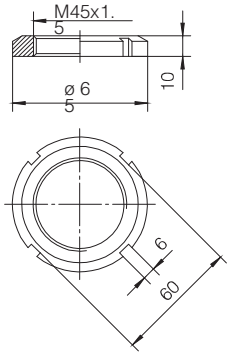


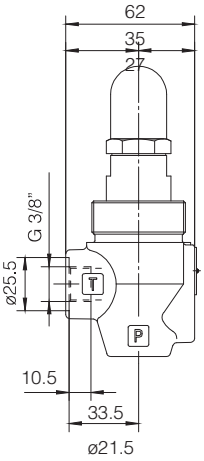

**ARE-15 /PED**

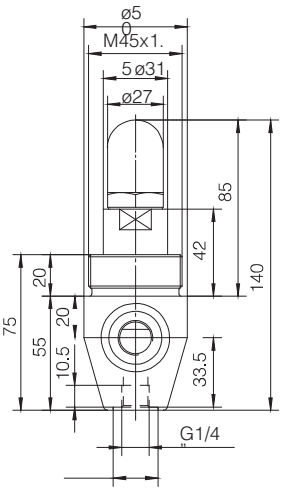


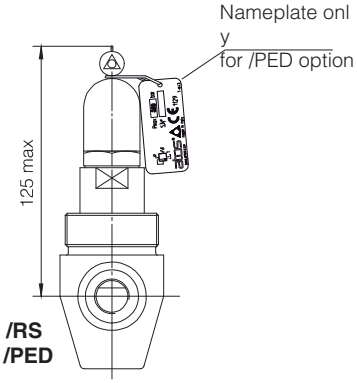
## 8 DIMENSIONS [mm]

**ARE-0**
**P** = INLET PORT G 1/4”
**T** = OUTLET PORT G 3/8”
Locking ring for fastening the valv
e. Model code: SP-6-RE-310030

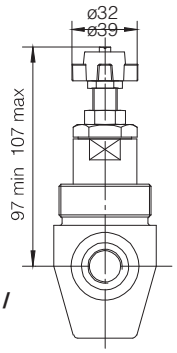


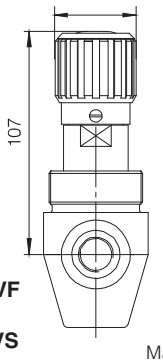




**Option /RS /PED**



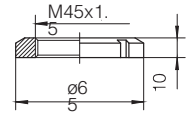

**Option /V**

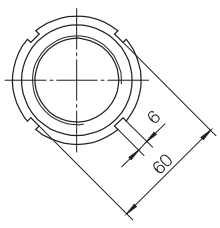


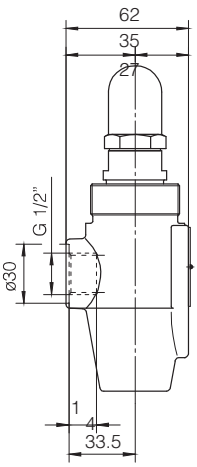

**Option /VF /VS**

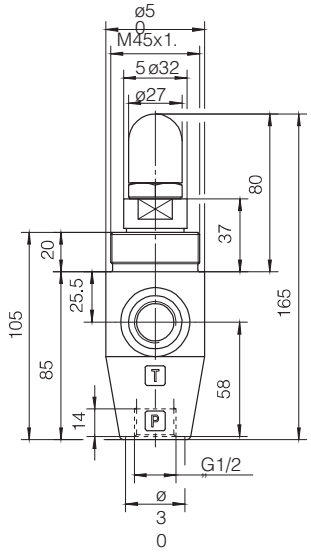
Mass: 1 K g

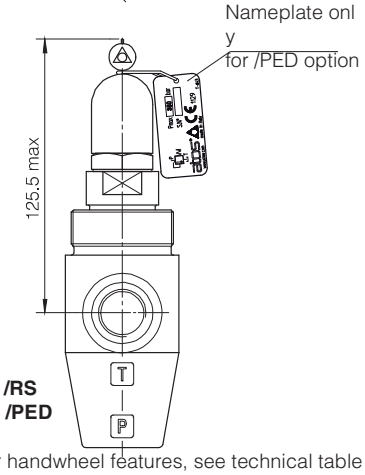
**ARE-1**
**P** = INLET PORT G 1/2”
**T** = OUTLET PORT G 1/2”
Locking ring for fastening the valv
e. Model code: SP-6-RE-310030



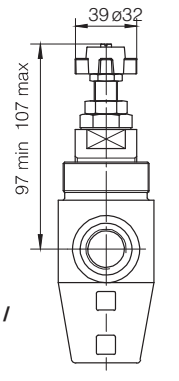



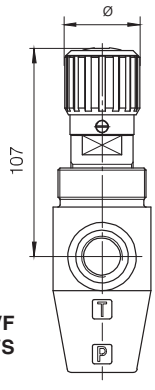




**Option /RS /PED**




**Option /V**




**Option /VF /VS**

Note: For handwheel features, see technical table K1 50.

Mass: 1,3 K g