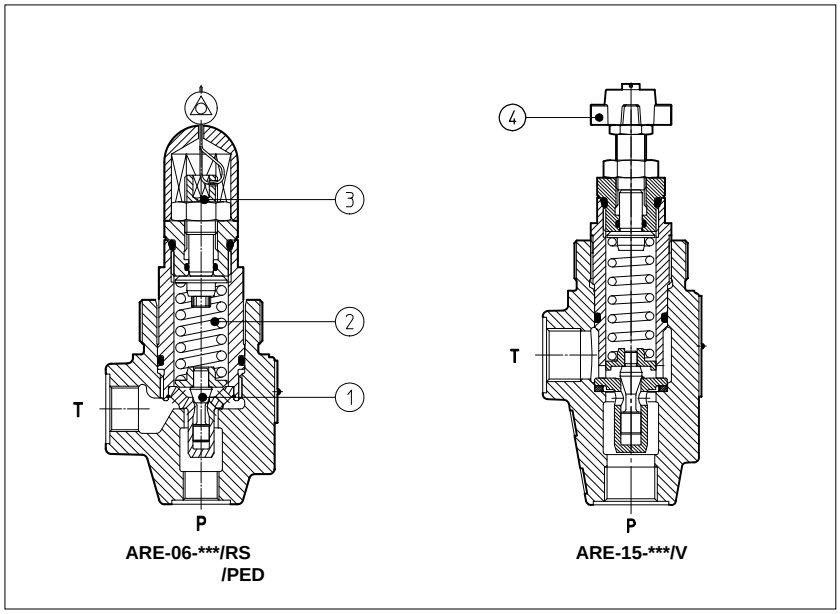
Atos spa
21018 Sesto Calende, Italy - Fax 0331 920005

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 pressure relief valves, direct operated, designed to operate in oil hydraulic circuits.

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 nut 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 plumbed regulation:
/RS conforming to Machine Directive (98/37/CE). The set pressure corresponds to the cracking pressure.
/PED conforming to PED Directive (97/23/CE). Set pressure at:
ARE-06: 30 l/min; ARE-15: 50 l/min.
For this version, the p, Q limits are shown in section 4.

Max flow: 100 l/min:
Max pressure: 500 bar.

1 MODEL CODE

ARE – 06 / 350 * /* ** / *

ARE= pressure relief valve with thread connections
Availble also in cartridge execution, see table 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

Synthetic fluids:
/WG = water-glycol
/PE = phosphate ester

Design number

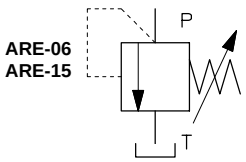
Only for RS, PED options:
p = required set pressure inside the pressure range

Options (1):
/R = reduced leakage for special applications
/RS = as /R, plus conforming to 98/37/CE
/PED = as /R, plus conforming to 97/23/CE
not for /RS, /PED options:
/V = regulating handwheel
/VF = regulating knob
/VS = regulating knob with safety locking

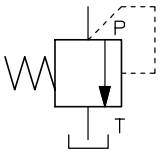
(1) For handwheel and knob features and avaibility, see section 6 and technical table K150.

2 HYDRAULIC CHARACTERISTICS

Hydraulic symbol



ARE-06
ARE-15



ARE-06 **/RS /PED
ARE-15 **/RS /PED

Valve model		ARE-06					ARE-15				
Setting		/50	/100	/210	/350	/500	/15	/50	/75	/150	/250
	/RS		/220	/270	/320	/350		/150	/190	/230	
	/PED		/100	/210	/350	/500			/75	/150	/250
Pressure range [bar]		2÷50	3÷100	10÷210	15÷350	30÷500	2÷15	3÷50	4÷75	8÷150	8÷250
	/RS		200÷250	250÷290	290÷350	310÷370		130÷170	170÷210	210÷250	
	/PED		25÷100	100÷210	210÷350	350÷500			15÷75	75÷150	150÷250
Max flow [l/min]		40					75				
	/RS, /PED	60					100				

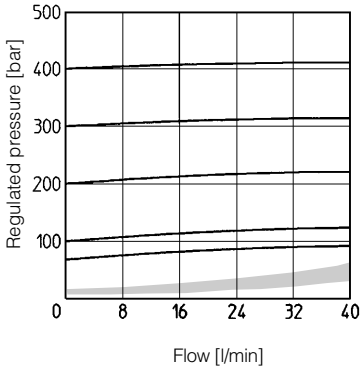
3 MAIN CHARACTERISTICS OF PRESSURE RELIEF VALVES TYPE ARE

Assembly position	Any position
Subplate surface finishing	Roughness index $\sqrt{}^{0.4}$, flatness ratio 0,01/100 (ISO 1101)
Ambient temperature	-20°C + 70°C
Fluid	Hydraulic oil as per DIN 51524...535; for other fluids see section 1
Recommended viscosity	15÷100 mm²/s at 40°C (ISO VG 15÷100)
Fluid contamination class	ISO 19/16, achieved with in line filters at 25 μm value and $\beta_{25} \geq 75$ (recommended)
Fluid temperature	T ≤ 80°C if T ≥ 60°C select /PE seals

4 **REGULATED PRESSURE VERSUS FLOW DIAGRAMS** based on fluid viscosity of 25 mm²/sec at 40°C

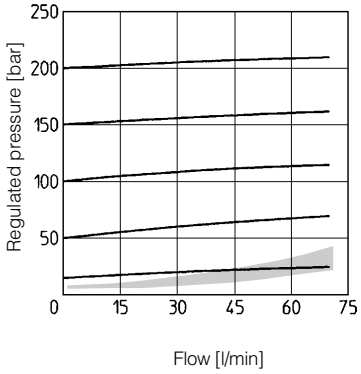
ARE-06

Min. regulated pressure

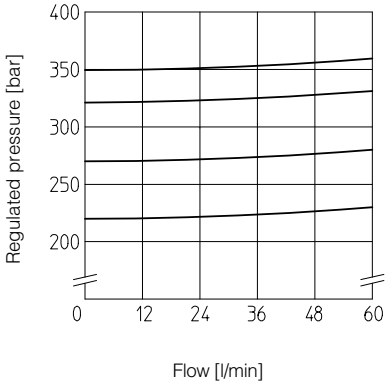


ARE-15

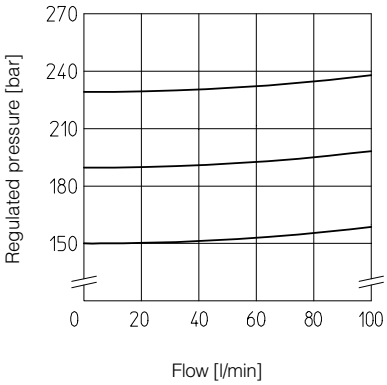
Min. regulated pressure



ARE-06 **/RS

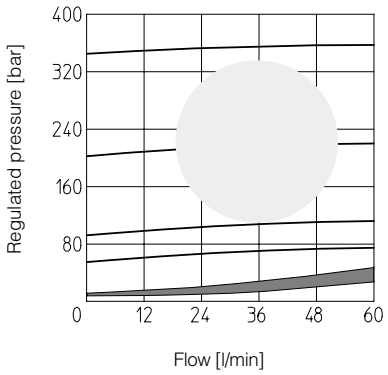


ARE-15 **/RS



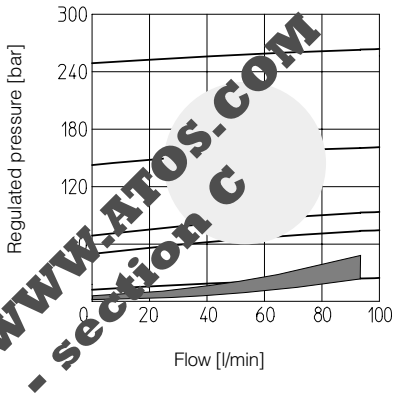
ARE-6 **/PED

Min. regulated pressure



ARE-15 **/PED

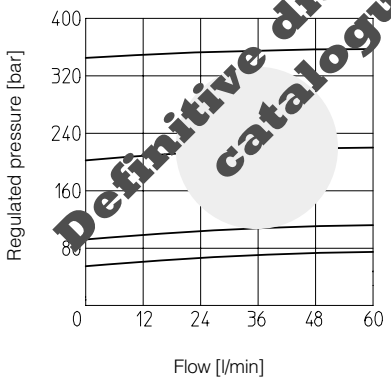
Min. regulated pressure



5 **PERMISSIBLE RANGES** based on fluid viscosity of 25 mm²/sec at 40°C

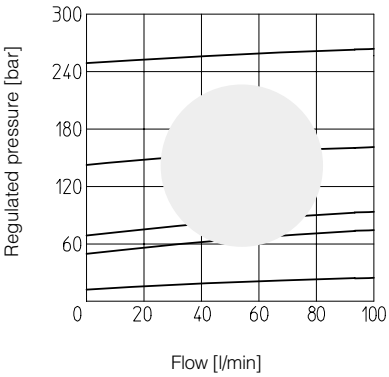
ARE-6 **/PED

Min. regulated pressure



ARE-15 **/PED

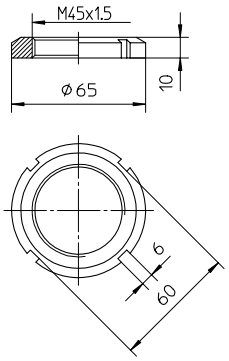
Min. regulated pressure

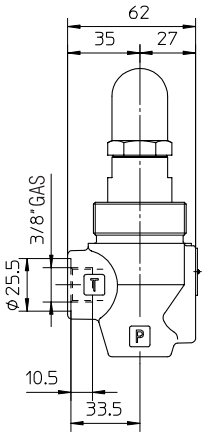


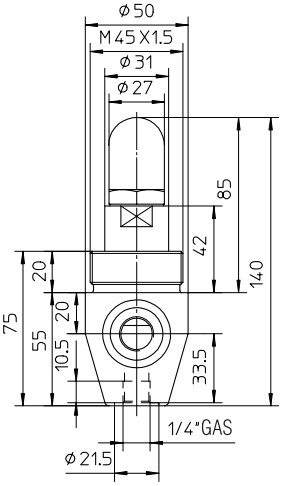
6 DIMENSIONS [mm]

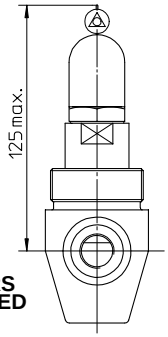
ARE-06

P = INLET PORT G 1/4"
T = OUTLET PORT G 3/8"
Locking ring for fastening the valve.
Model code: SP-6-RE-310030

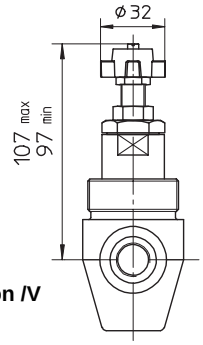




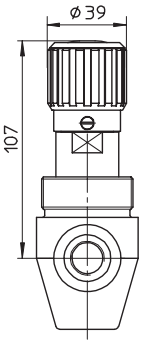




Option /RS /PED



Option /V

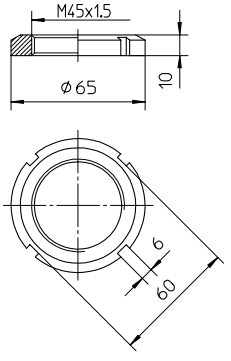


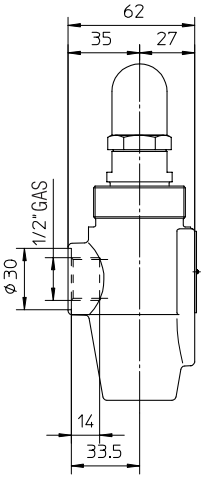
Option /VF /VS

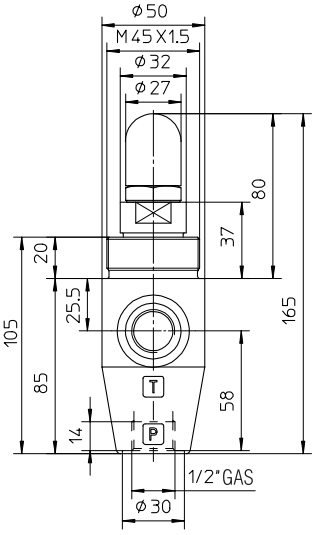
Weight: 1 Kg

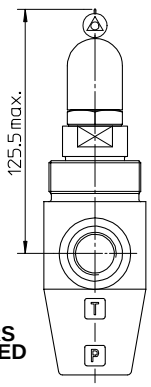
ARE-15

P = INLET PORT G 1/2"
T = OUTLET PORT G 1/2"
Locking ring for fastening the valve.
Model code: SP-6-RE-310030

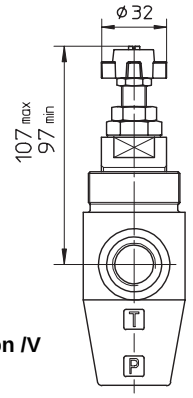




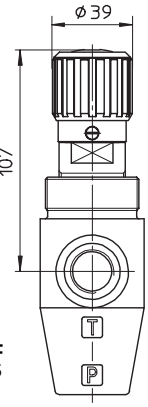




Option /RS /PED



Option /V



Option /VF /VS

Weight: 1,3 Kg

Note
For handwheel features, see technical table K150.