ARE
Pressure valves
Relief, direct, poppet type, in line



Sizes	Qmax	Pmax
G1/4" ÷ G1/2"	40 ÷ 100 l/min	500 bar

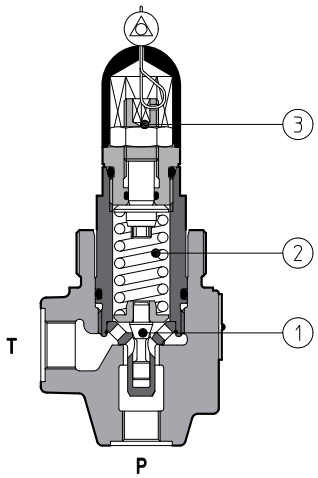
Features

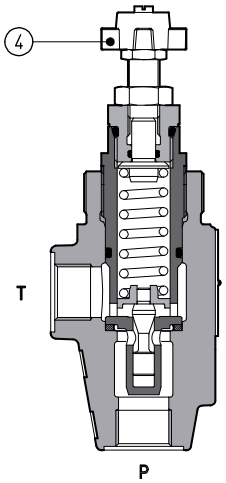
- Threaded ports, in-line mounting
- Optional Leak-free execution
- Optional version conforming to 2006/42/EC
- Handwheel and Knobs options for pressure regulation
- Low temperature option -40°C

Description

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 overcomes the force of the spring.
Regulation is operated by means of a screw or optionally by means of a handwheel 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".
Option RS, conforms to the Machine Directive (2006/42/CE), with factory preset and lead sealed regulation.
The factory pressure setting required by the costumer corresponds to the valve's cracking pressure.

Overview





1 - Poppet
2 - Spring
3 - Pressure adjustment screw (lead sealed)
4 - Handwheel manual override, option V

1 MODEL CODE

ARE	6	/	300	/	RS	/	280	*	/	*
1	2		3		4		5	6		7

1 - **Valve type**	
ARE	pressure relief valve with thread connections

2 - **Valve size and ports dimensions**	
06	port P = G1/4"
15	port P = G1/2"

3 - **Max pressure setting [bar]**				
Max pressure	standard	option /R	option /RS	Valve type
50	√		-	ARE-06
100	√		-	
210	√		-	
220	-		√	
270	-		√	
330	-		√	
350	√			
500	√		-	
15	√		-	ARE-15
50	√		-	
75	√		-	
150	√			
190	-		√	
230	-		√	
250	√		-	
350	√	-		
420	√		-	

4 - **Construction options**		
R	leak free execution	
RS	leak free execution plus lead sealed regulation conforming to 2006/42/CE	
V	regulating handwheel	not for RS
VF	regulating knob	
VS	regulating knob with safety locking	

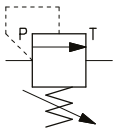
5 - **Factory pressure setting** - only for RS option [bar]	
300	value of setting pressure.

The customer define the setting value.
min step: 1 bar, min pressure setting 25 bar
Example **300** = 300 bar

6 - **Series identification** - not required for ordering	
.....	series number

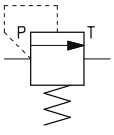
7 - **Seals material**	
-	NBR
PE	FKM
BT	NBR low temperature

2 HYDRAULIC SYMBOLS



ARE-06

ARE-15



ARE-06 **/RS

ARE-15 **/RS

3 GENERAL CHARACTERISTICS

Assembly position	Any position
Ambient temperature range	Standard = -30°C ÷ +70°C; /PE option = -20°C ÷ +70°C; /BT option = -40°C ÷ +70°C
Storage temperature range	Standard = -30°C ÷ +80°C /PE option = -20°C ÷ +80°C /BT option = -40°C ÷ +80°C
Compliance	Comply with Directive 2011/65/EU as amended (RoHS 2), including Delegated Directive (EU) 2015/863 and all subsequent Delegated Directives in force on the date of this statement REACH Regulation (EC) n°1907/2006
MTTFd values according to EN ISO 13849	150 years, for further details see technical table P007
Surface protection	Zinc coating with black passivation

4 HYDRAULIC CHARACTERISTICS

Valve model		**ARE-06**	**ARE-15**
Max pressure setting [bar]	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
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 **(1)**	2÷50; 3÷100; 10÷210; 15÷350; 30÷500	2÷15; 3÷50; 4÷75; 8÷150; 8÷250; 30÷420
	/RS **(1)**	200÷250; 250÷290; 290÷350; 310÷370	130÷170; 170÷210; 210÷250
Max. pressure at port T [bar]		250	
Max flow [l/min]	Standard	40	75
	/R	40	75
	/RS	60	100

(1) The values correspond to the min and max regulation of the valve's craking pressure

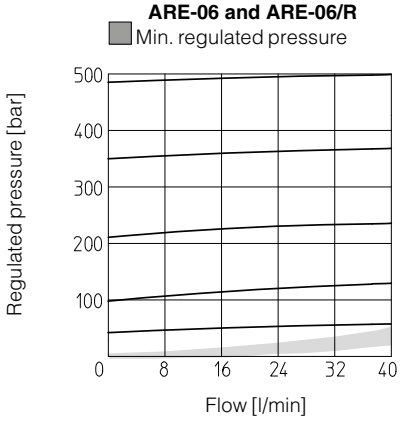
SEALS AND HYDRAULIC FLUIDS - for other fluids not included in below table, consult our technical office

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 NBR low temp. seals (/BT option) = -40°C ÷ +60°C, with HFC hydraulic fluids = -40°C ÷ +50°C
Recommended viscosity	15÷100 mm^2/s - max allowed range 2,8 ÷ 500 mm^2/s
Max fluid contamination level	ISO4406 class 20/18/15 NAS1638 class 9, see also filter section at www.atos.com or KTF catalog

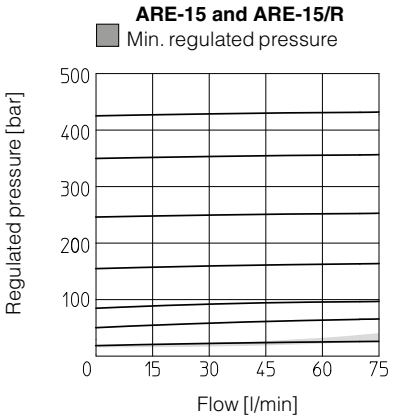
Hydraulic fluid	**Suitable seals type**	Classification	Ref. Standard
Mineral oils	NBR, FKM, NBR low temp.	HL, HLP, HLPD, HVLP, HVLPD	DIN 51524
Flame resistant without water	FKM	HFDU, HFDR	ISO 12922
Flame resistant with water	NBR, NBR low temp.	HFC	

5 REGULATED PRESSURE VERSUS FLOW DIAGRAMS (based on mineral oil ISO VG 46 at 50°C)

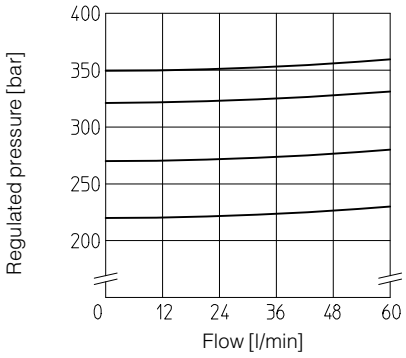
ARE-06 and ARE-06/R



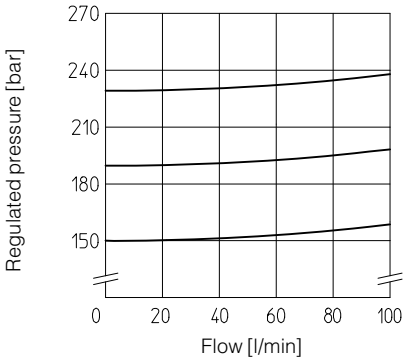
ARE-15 and ARE-15/R



ARE-06 /RS

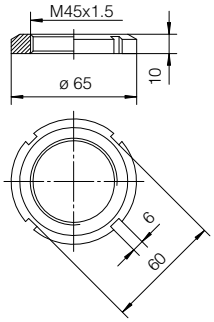


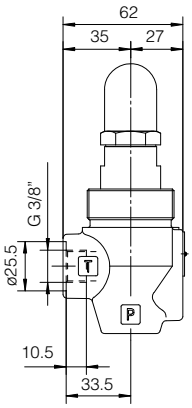
ARE-15 /RS

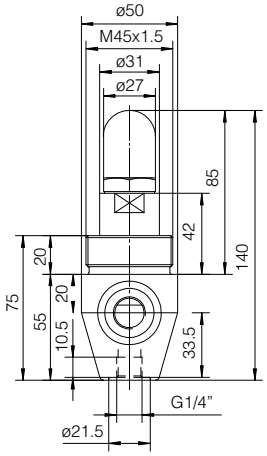


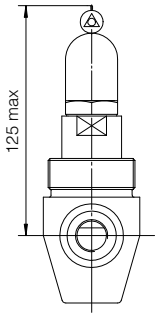
6 DIMENSIONS [mm]

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

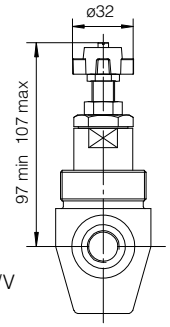




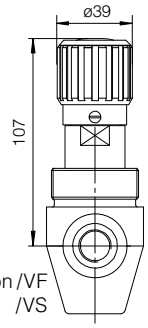




Option /RS



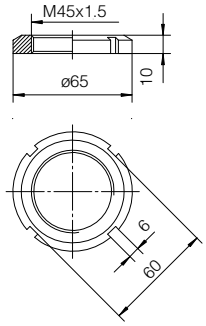
Option /V

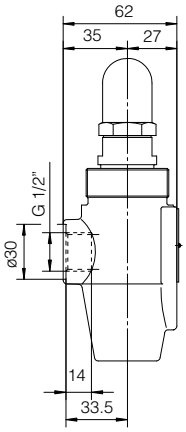


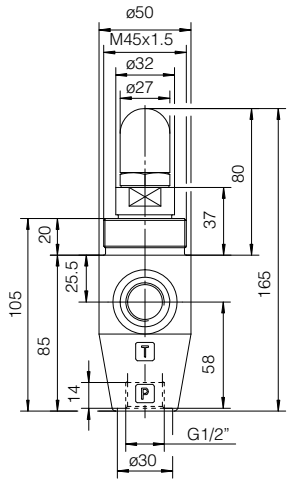
Option /VF
/VS

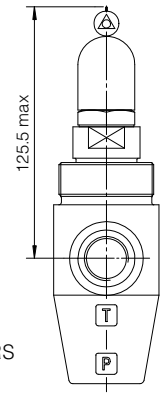
Mass: 1 Kg

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

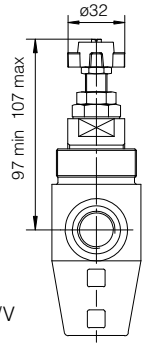




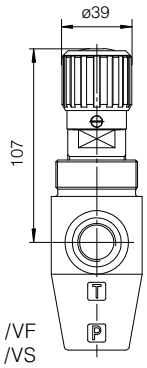




Option /RS



Option /V



Option /VF
/VS

Mass: 1.3 Kg

Note:
For handwheel features, see technical table K150.