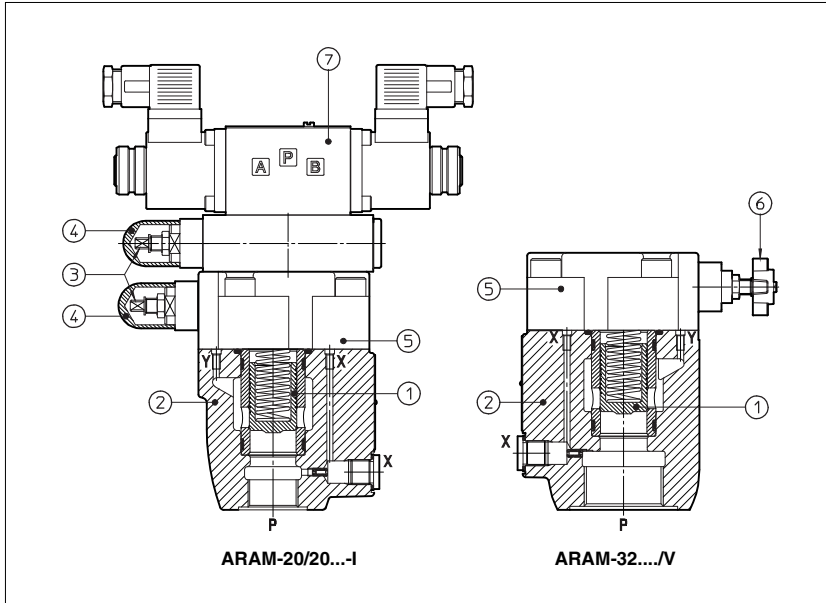




Pressure relief valves type ARAM

two stage, in line mounting - G 3/4" and G 1 1/4" threaded ports



ARAM are double stage pressure relief valve with balanced poppet and GAS threaded ports.

In standard versions the piloting pressure of the poppet ① of the main stage ② is regulated by means of a grub screw ③ protected by cap ④ in the cover ⑤. Optional versions with setting adjustment by handwheel ⑥ instead of the grub screw are available on request. Clockwise rotation increases the pressure.

Also available in safety option with sealed regulation:

- /PED conforming to PED Directive (97/23/CE)

Set pressure at:

- ARAM-20 = 25 l/min
- ARAM-32 = 25 l/min

For this version the P, Q limits are shown in section 8.

ARAM can be equipped with a venting solenoid valve ⑦ (for venting or for different pressure setting). Another setting control can be made through the independent pilot port.

Threaded ports: G 3/4", G 1 1/4".

Max flow: 350, 500 l/min respectively. Pressure up to 350 bar.

1 MODEL CODE

ARAM	- 20 / 2	0	/210/100/100	/V	/*	-I	X	24DC	**	/*	
<p>ARAM = pressure relief valve threaded port connections</p> <p>Size: 20 = port P - G 3/4" 32 = port P - G 1 1/4"</p> <p>Number of the different setting pressure values (not for /PED): 1 = one setting pressure 2 = two setting pressure 3 = three setting pressure</p> <p>0 = venting with de-energized solenoid 1 = venting with energized solenoid 2 = without venting</p> <p>Setting: see section 2 for available setting</p> <p>Pressure range of second/third setting (not for /PED): 50 = 4÷50 bar; 100 = 6÷100 bar; 210 = 7÷210 bar; 350 = 8÷350 bar</p> <p>(1) Only for ARAM with solenoid valve for venting and/or for the selection of the setting pressure</p>	(1)	(1)	(1)			(1)	(1)	(1)	<p>Synthetic fluids: WG = water-glycol PE = phosphate ester</p> <p>Design number</p> <p>Supply voltage, see section 5: 00 = solenoid valve without coils (only for OI solenoid)</p> <p>X = without connector See section 5 for available connectors, to be ordered separately</p> <p>Solenoid of pilot valve (not for /PED): -I = solenoid OI (DHI) for AC and DC supply</p> <p>Only for /PED option p = required set pressure</p> <p>Options, see section 4 /E /PED /V /WP /Y</p>		

2 HYDRAULIC CHARACTERISTICS

Valve model	ARAM-20		ARAM-32
Setting	standard	50; 100; 210; 350	
Pressure range	standard	4÷50; 6÷100; 7÷210; 8÷350	
	/PED	10÷50; 10÷100; 10÷210; 10÷350	
Max flow	standard	350	500

3 MAIN CHARACTERISTICS OF PRESSURE CONTROL VALVES TYPE ARAM

Assembly position / location	Any position
Ambient temperature	-20°C to + 70°C
Fluid	Hydraulic oil as per DIN 51524 . . . 535; for other fluids see section [1]
Recommended viscosity	15 ÷ 100 mm ² /s at 40°C (ISO VG 15 ÷100)
Fluid contamination class	ISO 19/16, achieved with in line filters at 25 µm value and β _{0.5} ≥ 75 (recommended)
Fluid temperature	-20°C +60°C (standard and /WG seals) -20°C +80°C (/PE seals)

3.1 Coils characteristics

Insulation class	H
Connector protection degree	IP 65
Relative duty factor	100%
Supply voltage and frequency	See electric feature [7]
Supply voltage tolerance	± 10%

4 OPTIONS

- /E = external pilot
- /PED = conforming to Directive 97/23/CE
- /V = regulating handwheel instead of grub screw protected by cap (for handwheel features, see table K150)
- /WP = prolonged manual override protected by rubber cap (only for ARAM with pilot solenoid valve)
- /Y = external drain (only for ARAM with pilot solenoid valve)

5 ELECTRIC CONNECTORS ACCORDING TO DIN 43650 FOR ARAM WITH SOLENOID VALVE

The connectors must be ordered separately

Code of connector	Function
SP-666	Connector IP-65, suitable for direct connection to electric supply source
SP-667	As SP-666 connector IP-65 but with built-in signal led, suitable for direct connection to electric supply source

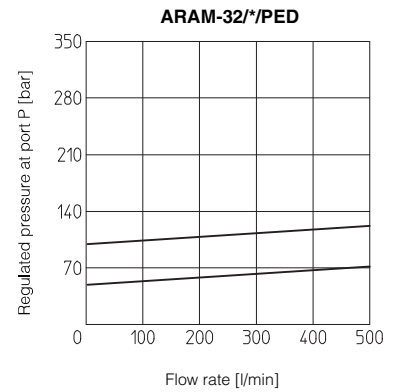
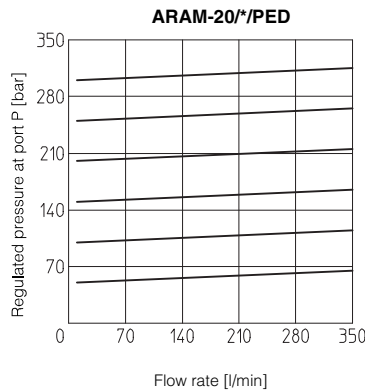
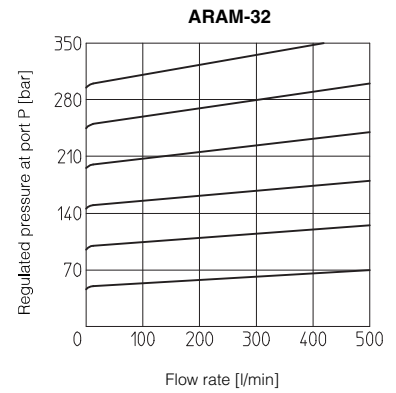
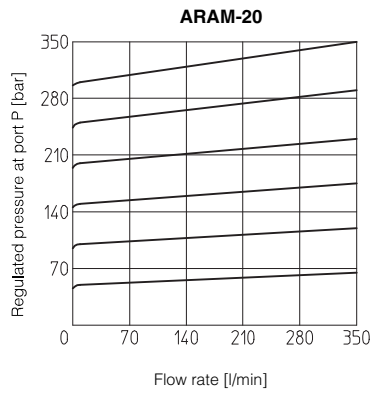
For other available connectors see tab. E010 and K500.

6 ELECTRIC FEATURES FOR ARAM WITH SOLENOID VALVE

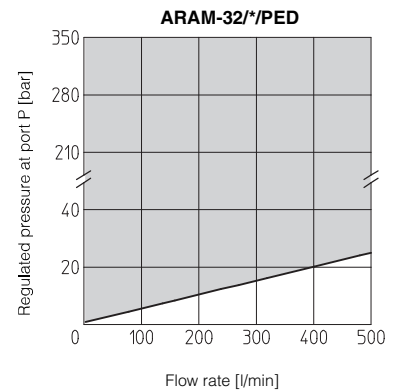
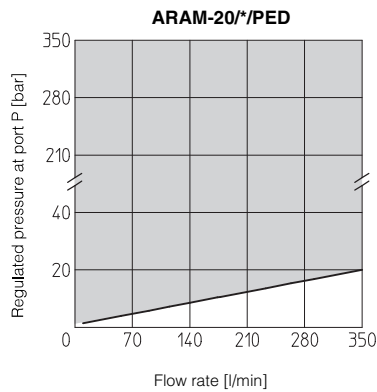
Type of solenoid	External supply nominal voltage ± 10% (1)		Type of connector	Power consumption (34)	Code of spare coil	Colour of coil label
OI	DIRECT CURRENT	6 DC 12 DC 24 DC 48 DC	SP-666 or SP-667	33 W	SP-COU-6DC /80 SP-COU-12DC /80 SP-COU-24DC /80 SP-COU-48DC /80	brown green red silver
		ALTERNATE CURRENT	110/50 AC (2) 120/60 AC 230/50 AC (2) 230/60 AC	SP-666 or SP-667	60 VA (4)	SP-COI-110/50/60AC /80 SP-COI-120/60AC /80 SP-COI-230/50/60AC /80 SP-COI-230/60AC /80

- (1) For other supply voltages available on request see technical table E010.
- (2) Coil can be supplied also with 60 Hz of voltage frequency: in this case the performances are reduced by 10 ÷ 15% and the power consumption is 55 VA.
- (3) Average values based on tests performed at nominal hydraulic condition and ambient/coil temperature of 20°C.
- (4) When solenoid is energized, the inrush current is approx 3 times the holding current. Inrush current values correspond to a power consumption of about 150 VA.

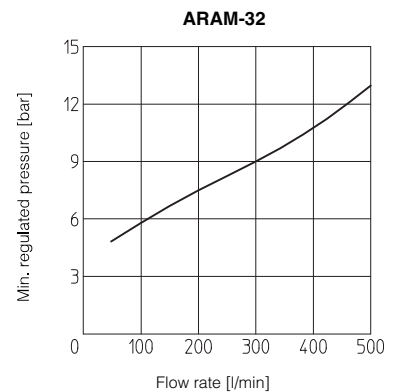
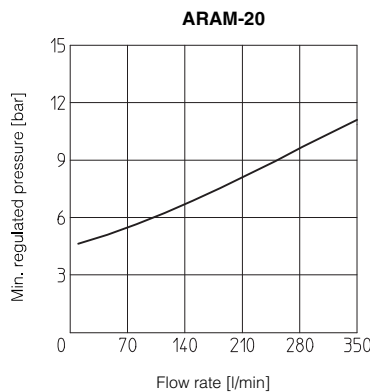
7 REGULATED PRESSURE VERSUS FLOW DIAGRAMS based on mineral oil ISO VG 46 at 50°C



8 PERMISSIBLE RANGE (shared area) based on mineral oil ISO VG 46 at 50°C

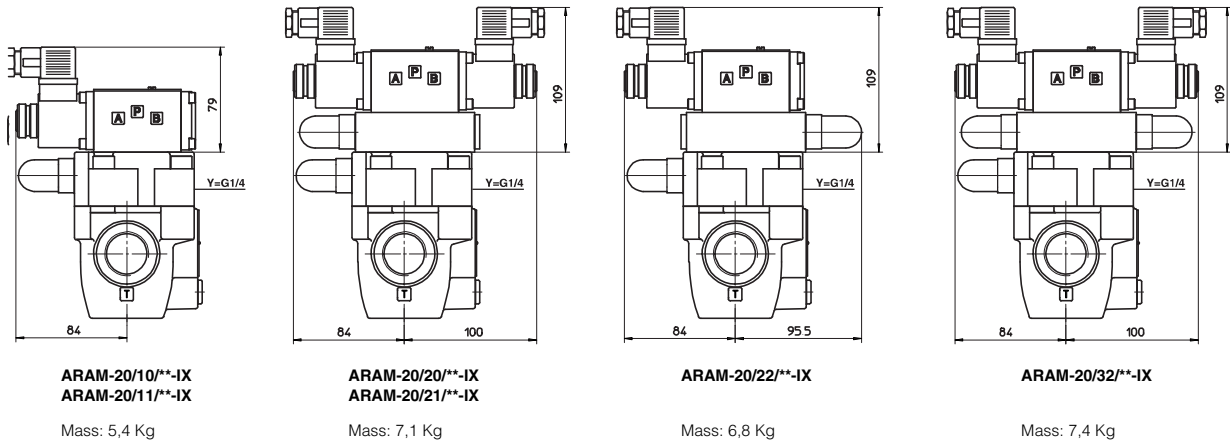
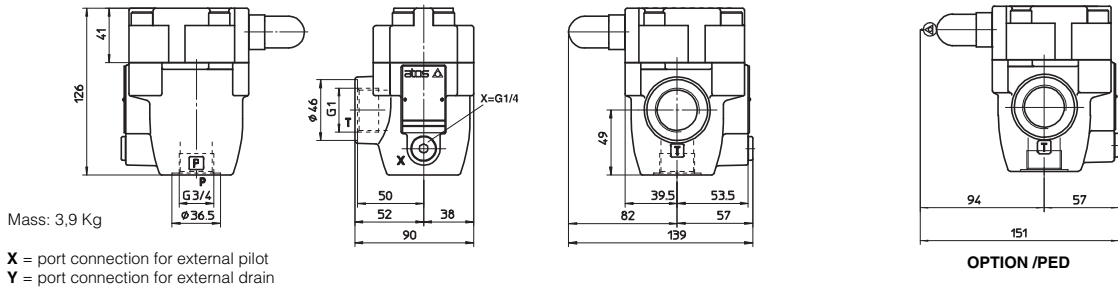


9 MINIMUM PRESSURE VERSUS FLOW DIAGRAMS based on mineral oil ISO VG 46 at 50°C

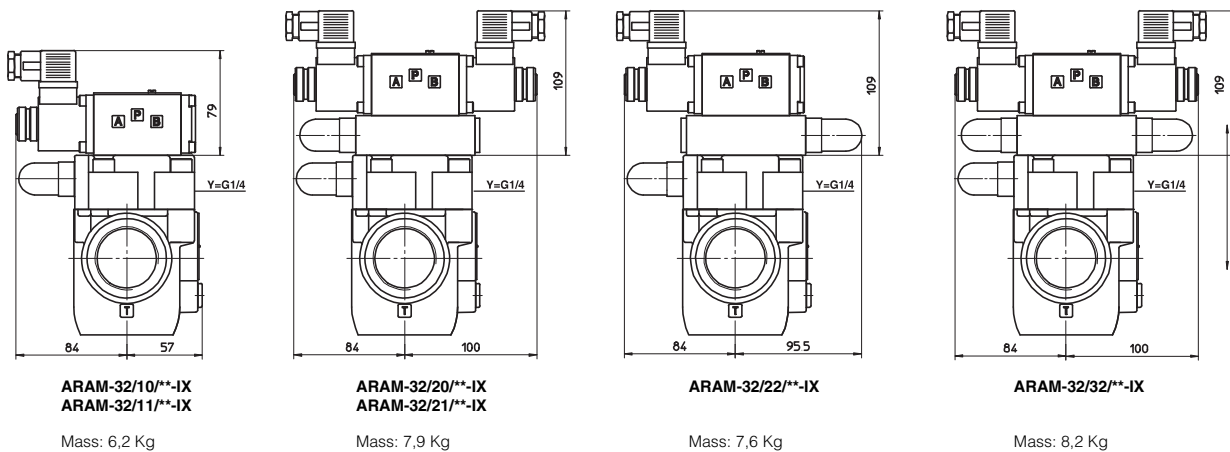
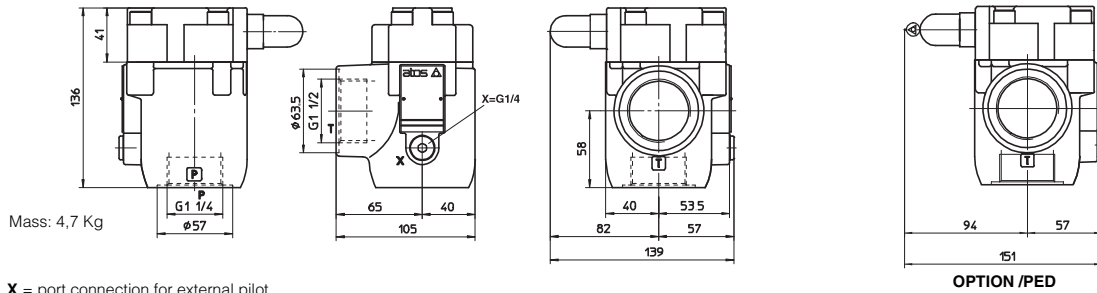


10 DIMENSIONS [mm]

ARAM-20



ARAM-32



Overall dimensions refer to valves with connectors type SP-666