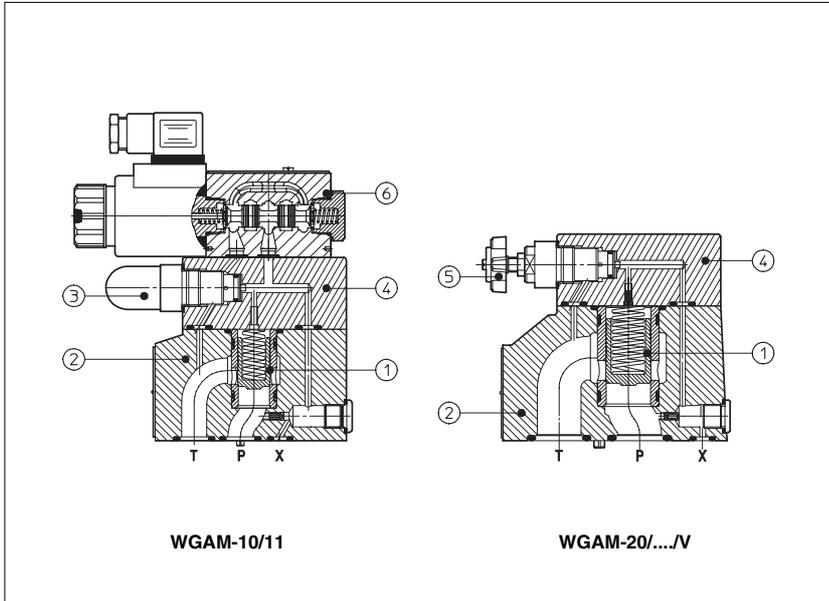


Pressure relief valves type **WGAM**

two stage, subplate mounting - ISO 6264 size 10, 20 and 32



WGAM are double stage pressure relief valves with balanced poppet, designed to operate in oil hydraulic systems.

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

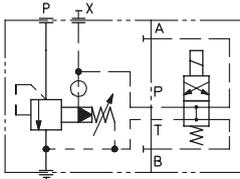
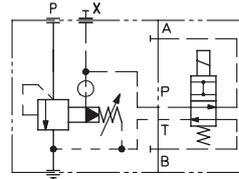
WGAM can be equipped with a solenoid valve type WDHE ⑥ (for venting).
 Mounting surface: ISO 6264 size 10, 20 and 32.
 Max flow: 200, 400 and 600 l/min respectively.
 Pressure up to 350 bar.

1 MODEL CODE

WGAM	-	20		10	/	210		/V		-N		24DC		**		/*
WGAM = pressure relief valve subplate mounting Size: 10 20 32 Only for valves with venting 10 = venting with de-energized solenoid 11 = venting with energized solenoid Pressure range: 100 = 6 ÷ 100 bar 210 = 7 ÷ 210 bar 350 = 8 ÷ 350 bar		(1)								(1)				Synthetic fluids: PE = phosphate ester Design number		
											(1)		Supply voltage, see section 7			
											Options: V = regulating handwheel instead of a grub screw protected by a cap					

(1) Only for WGAM with solenoid valve for venting

2 HYDRAULIC CHARACTERISTICS

WGAM							
Size		10	20	32			
Max flow	[l/min]	200	400	600			
Pressure range	[bar]	6÷100; 7÷210; 8÷350					

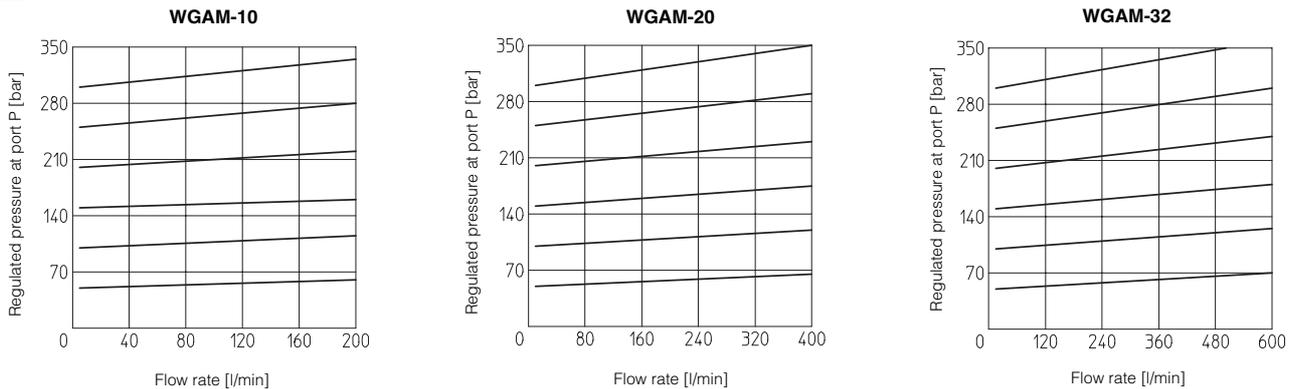
3 MAIN CHARACTERISTICS OF PRESSURE CONTROL VALVES TYPE WGAM

Assembly position / location	Any position
Subplate surface finishing	Roughness index $\sqrt{0.4}$, flatness ratio 0,01/100 (ISO 1101)
Ambient temperature	-20°C to + 70°C
Fluid	Hydraulic oil as per DIN 51524 . . . 535; for other fluids see section 11
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 $\beta_{10} \geq 75$ (recommended)
Fluid temperature	-20°C +60°C (standard seals) -20°C +80°C (PE seals)

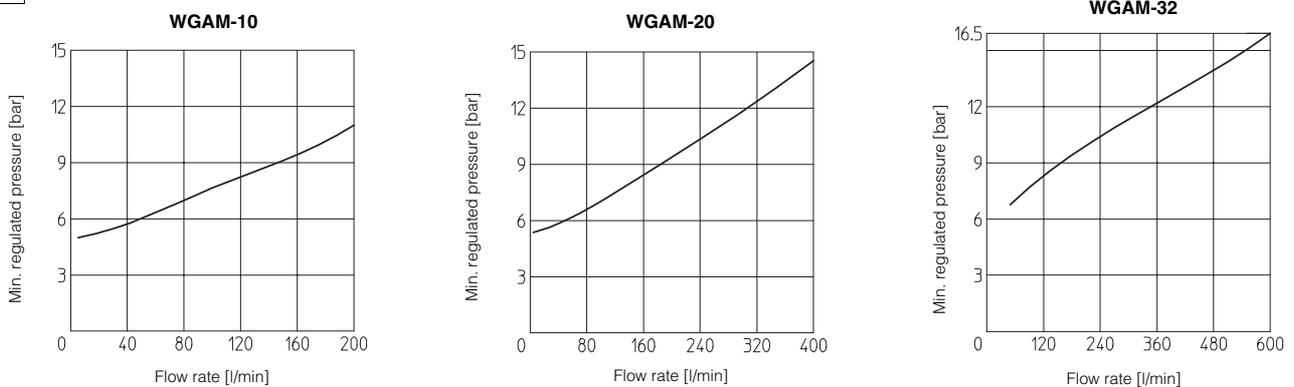
3.1 Coils characteristics (only for WGAM with solenoid valve)

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



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



6 ELECTRIC CONNECTORS ACCORDING TO DIN 43650 FOR WGAM WITH SOLENOID VALVE

The connectors are supplied with the valve

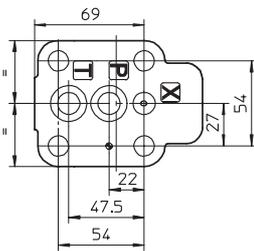
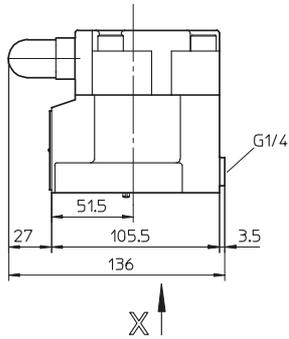
Code of connector	Function
WP-666 (option -N)	Connector IP-65, suitable for direct connection to electric supply source
WP-667 (option -P)	As WP-666 connector IP-65 but with built-in signal led, suitable for direct connection to electric supply source
WP-669 (option -Q)	With built-in rectifier bridge for supplying DC coils by alternate current (AC 110V and 220V - I _{max} 1A).

7 ELECTRIC FEATURES FOR WGAM WITH SOLENOID VALVE

External supply nominal voltage ± 10%	Type of connector	Power consumption (2)	Code of spare coil
12 DC	WP-666	30 W	SP-WCOE-12DC
24 DC			SP-WCOE-24DC
110/50/60 AC	or WP-667	58 VA	SP-WCOE-110/50/60AC (1)
220/50/60 AC			SP-WCOE-220/50/60AC (1)
110/50/60 AC	WP-669	30 W	SP-WCOE-110DC
220/50/60 AC			SP-WCOE-220DC

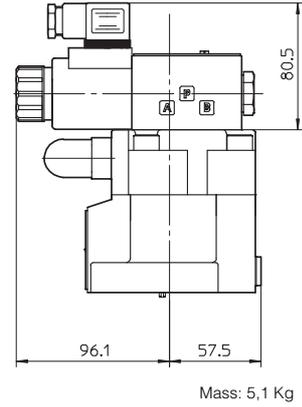
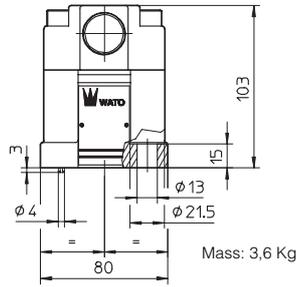
- (1) Coil can be supplied also with 60 Hz of voltage frequency: in this case the performances are reduced by 10 ÷ 15% and the power consumption is 52 VA.
- (2) Average values based on tests performed at nominal hydraulic condition and ambient/coil temperature of 20°C.
- (3) When solenoid is energized, the inrush current is approx 3 times the holding current. Inrush current values correspond to a power consumption of about 160 VA.

WGAM-10

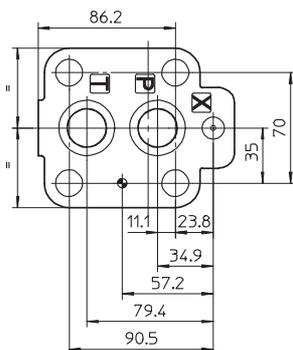
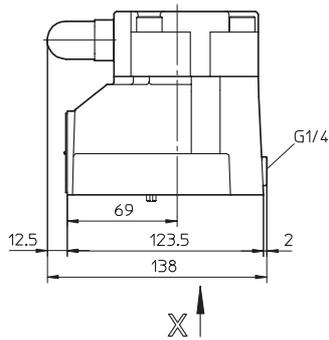


Mounting surface
ISO 6264-AR-06-2-A size 10
 Fastening bolts:
 4 socket head screws M12x35
 Seals: 2 OR 123; 1 OR 109/70
 Ports P, T: $\varnothing = 14.5$ mm
 Ports X: $\varnothing = 3.2$ mm

WGAM-10 /10
 WGAM-10 /11

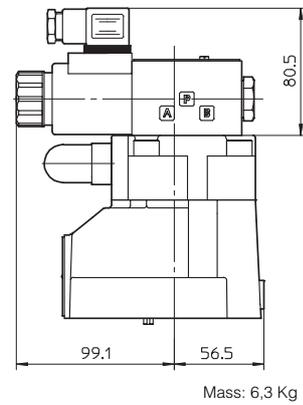
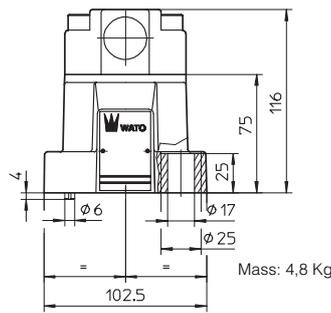


WGAM-20

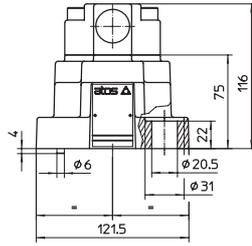
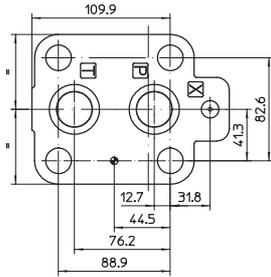
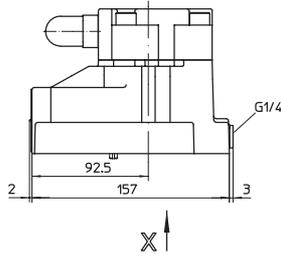


Mounting surface
ISO 6264-AS-08-2-A size 20
 Fastening bolts:
 4 socket head screws M16x50
 Seals: 2 OR 4112; 1 OR 109/70
 Ports P, T: $\varnothing = 24$ mm
 Ports X: $\varnothing = 3.2$ mm

WGAM-20 /10
 WGAM-20 /11

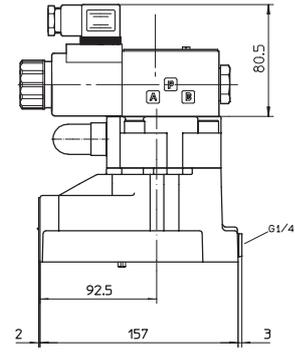


WGAM-32



Mass: 6,2 Kg

WGAM-32 /10
WGAM-32 /11



Mass: 7,7 Kg

Mounting surface
ISO 6264-AT-10-2-A size 32
Fastening bolts:
4 socket head screws M20x60
Seals: 2 OR 4131; 1 OR 109/70
Ports P, T: $\varnothing = 28,5$ mm
Ports X: $\varnothing = 3,2$ mm