



walvoil
MOTION BY PEOPLE

NEW

RP..X

Proportional Pressure reducing/relieving valve



RP..X VALVES

- External zinc-plated and corrosion-proof components
- Hardened parts to ensure minimal wear and long life
- Spool profile optimized through CFD analysis
- Industry common cavities
- Heavy duty polyurethane seals
- Excellent stability throughout the entire flow range
- Excellent dynamic response
- 4 pressure ranges available
- Air bleeding system
- Manual override available



RP..X PROPORTIONAL PRESSURE REDUCING/RELIEVING VALVE



DESCRIPTION:

Walvoil launches the new RP..X proportional piloted pressure reducing valve series, solenoid operated, spool-type, with relieving function.

The valve supplies the pressure depending on the electrical current input; the reduced pressure can be continuously adjusted within a preset pressure range.

OPERATION:

When current is applied to the coil, the RP..X valve manages the flow from port 2 to port 1 until the required pressure value at port 1 is reached. If this pressure exceeds the preset value due to external forces, the pilot stage opens and the flow is sent to the tank through port 3. This operation (reducing/relieving) continues until the pressure value established by the electric signal is reached. Any back pressure on port 3 is additive to the valve setting pressure.

Thanks to accurate tuning, optimization through CFD analysis and the adoption of the Walvoil proportional system, the new RP..X series ensures a reduction in pressure drops and (overall) dimensions compared to the previous valve version.

These valves are available in SAE 08, 10, 12 & 16 size and the 4 different pressure ranges available allow to obtain a precise pressure setting for the whole pressure range.

RP..X valves are used for mobile and industrial applications for system pressure reduction, where low pressure drops and high flow rates are required.

WORKING CONDITIONS

Technical specifications and diagrams are measured with mineral oil of 46 cSt viscosity at 40°C (104°F) temperature.

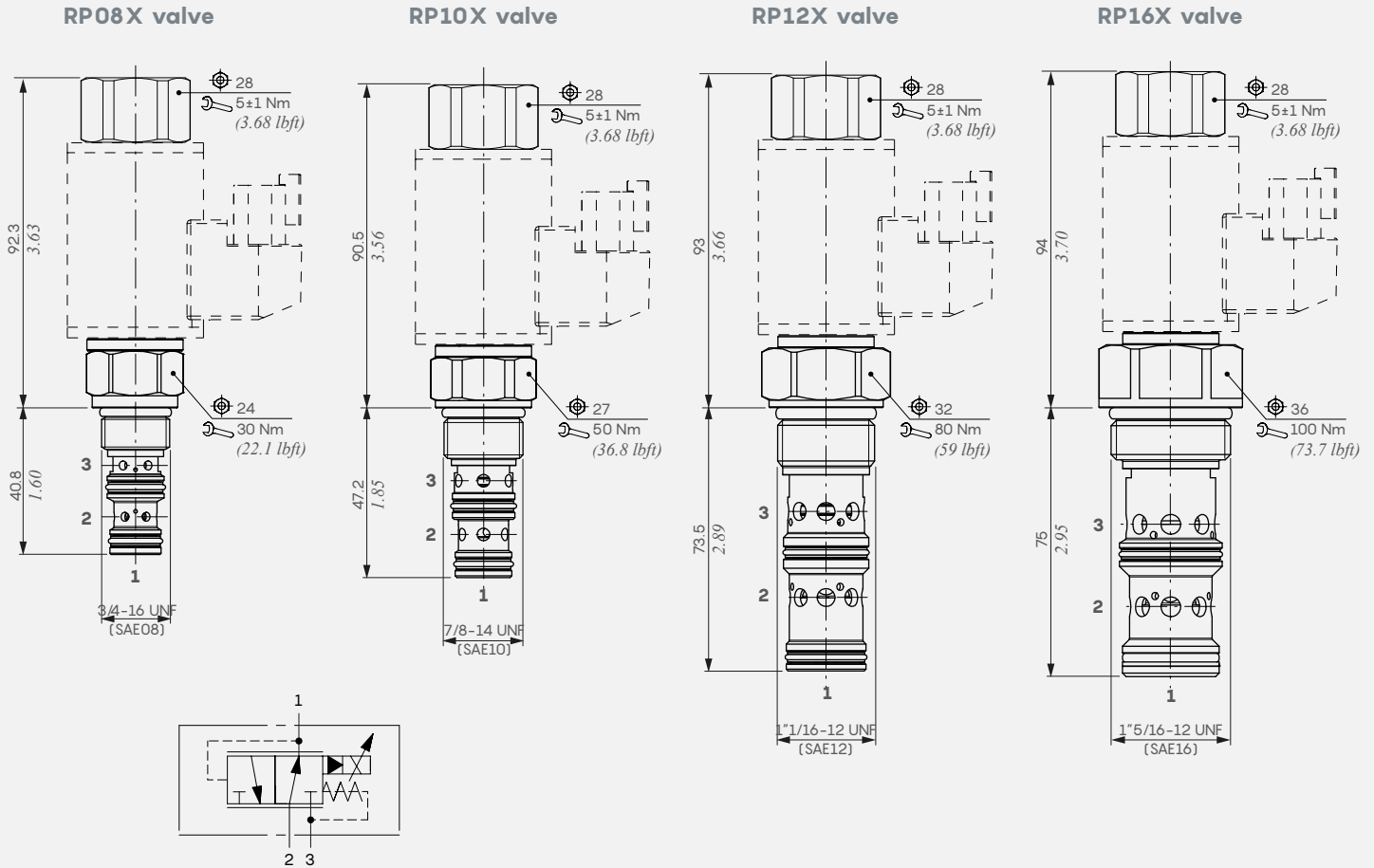
	RP08X	RP10X	RP12X	RP16X
Nominal flow	30 l/min 7.9 US gpm	50 l/min 13.2 US gpm	100 l/min 26.4 US gpm	150 l/min 40 US gpm
Max. pressure	350 bar - 5100 psi			
Setting range	from 5 bar to 50 bar from 72.5 psi to 725 psi	from 20 bar to 100 bar from 290 psi to 1450 psi	from 50 bar to 200 bar from 725 psi to 2900 psi	from 80 bar to 350 bar from 1150 psi to 5100 psi
Fluid	mineral based oil			
Viscosity	10-200 cSt			
Max level of contamination	18/16/13 ISO4406			
Fluid temperature	Polyurethane + NBR seals		from -40°C to 85°C / from -40°F to 185°F	
	FPM seals		from -40°C to 85°C / from -40°F to 185°F	
Environmental temperature for working conditions	from -40°C to 105°C / from -40°F to 221°F			
Cavity	SAE 08/3	SAE 10/3	SAE 12/3	SAE 16/3
Coils type	(BH)		(BQP19)	
Power rating	(proportional)	33 W (12/24 VDC)		22.5 W (12/24 VDC)
Connector types	ISO4400 - DEUTSCH DT - AMP JPT - Flying leads		ISO4400 - DEUTSCH DT - AMP JPT	

Note: For different conditions, please contact Sales Department.

RP..X PROPORTIONAL PRESSURE REDUCING/RELIEVING VALVE

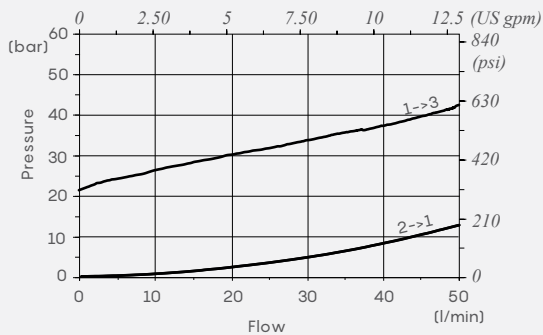


DIMENSIONAL DATA AND HYDRAULIC CIRCUIT

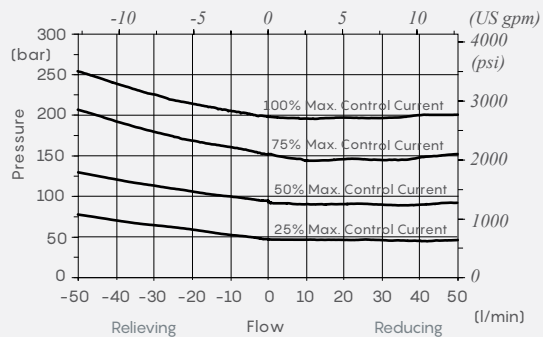


PERFORMANCE DATA

RP10X valve
 Pressure drop vs. flow

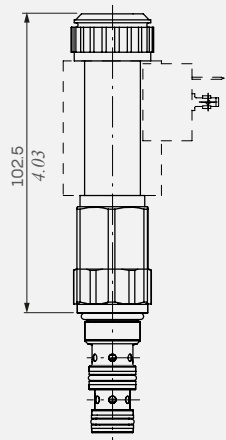


Reducing/relieving pressure vs. flow rate on port 1 (range 2)

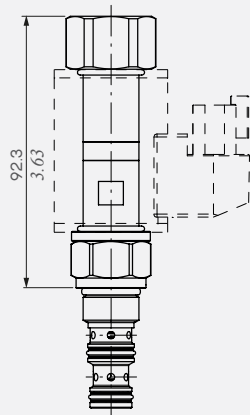


VALVES COMPARISON

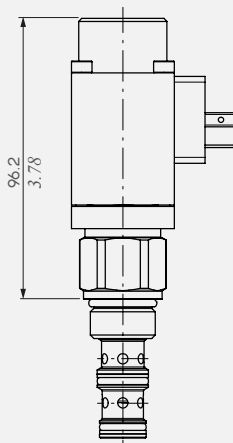
RP08X - OLD
P= 350 bar (5100 psi)



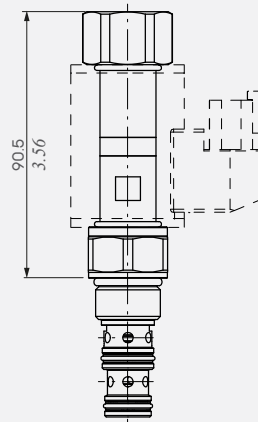
RP08X - NEW
P= 350 bar (5100 psi)



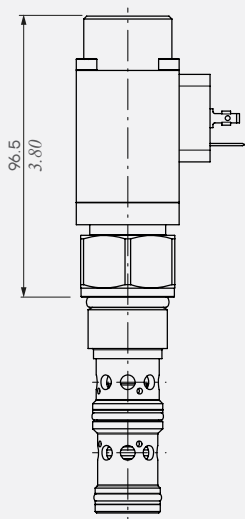
RP10W - OLD
P= 350 bar (5100 psi)



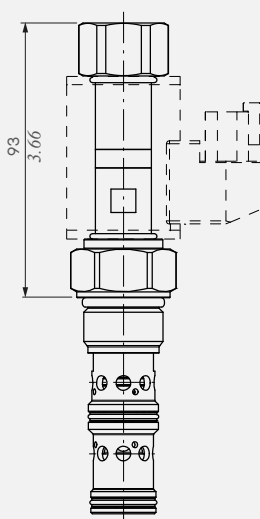
RP10X - NEW
P= 350 bar (5100 psi)



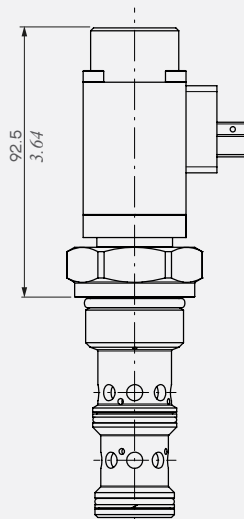
RP12W - OLD
P= 350 bar (5100 psi)



RP12X - NEW
P= 350 bar (5100 psi)



RP16W - OLD
P= 350 bar (5100 psi)



RP16X - NEW
P= 350 bar (5100 psi)

