NEW

MC08R
MC09R
MC10R
MC10M

Cartridge pressure relief valves

A simple and flexible solution for different applications

walvoil
HYDRAULIC CONTROL SYSTEMS

MC08R-MC09R-MC10R-MC10M Ca

Walvoil is pleased to present the new cartridge pressure relief valves **MC08R, MC09R, MC10R** and **MC10M.** These valves can be used in many applications: agriculture, earth moving machines and industrial vehicles.

Working conditions

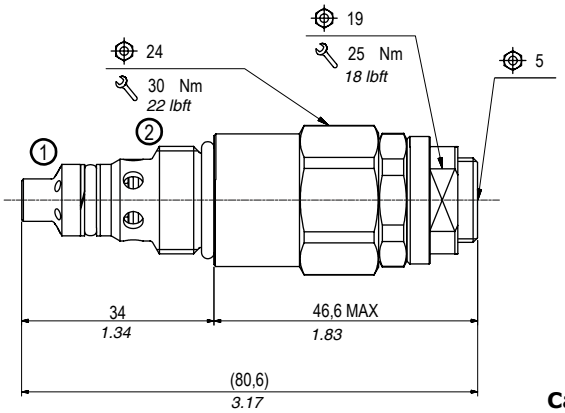
This catalogue shows technical specifications and diagrams measured with mineral oil of 46 cSt viscosity at 40° *(104°F)* temperature.

	MC08R	MC09R	MC10R	MC10M
Nominal flow rating	25 l/min *(6.6 US gpm)*	35 l/min *(9.2 US gpm)*	50 l/min *(13.2 US gpm)*	70 l/min *(18.5 US gpm)*
Operating pressure (max.)	350 bar *(5100 psi)*			260 bar *(3770 psi)*
Pressure setting available	Range 1: 10-120 bar *(145-1740 psi)* (standard setting 80 bar-*1160 psi*) Range 2: 40-200 bar *(580-2900 psi)* (standard setting 175 bar-*2500 psi*) Range 3: 200-350 bar *(2900-5100 psi)* (standard setting 250 bar-*3600 psi*)			Range 1:10-60 bar *(145-870 psi)* (standard setting 50 bar-*725 psi)* Range 2: 40-110 bar *(580-1600 psi)* (standard setting 80 bar-*1160 psi*) Range 3: 110-220 bar (*1600-3200 psi)* (standard setting 175 bar-*2500 psi*) Range 4: 200-260 bar *(2900-3770 psi)* (standard setting 220 bar-*3200 psi*)
Pressure increase	Range 1: 18.3 bar/screw *(265 psi/screw)* Range 2: 30.3 bar/screw *(439 psi/screw)* Range 3: 50.3 bar/screw *(730 psi/screw)*			Range 1: 11.3 bar/*screw (164 psi/screw)* Range 2: 18.7 bar/*screw (271 psi/screw)* Range 3: 33 bar/*screw (478 psi/screw)* Range 4: 39.5 bar/*screw (573 psi/screw)*
Max. pressure on port 2	350 bar *(5100 psi)*			260 bar *(3800 psi)*
Oil leakage	2 cm³/min. *(0.122 in³/min)* at 100 bar-*1450 psi*			4 cm³/min. *(0.244 in³/min)* at 100 bar *(1450 psi)*
Hysteresis	90% of the setting value for flow capacity 1 l/min.*(0.26 US gpm)*			
Fluid	*mineral based oil*			
Viscosity	*min.* 10 cSt *max.* 400 cSt			
Max level of contamination	-/18/14 ISO4406			
Fluid temperature	*BUNA N* from -25°C *(-13°F)* to 90°C *(194°F)* *VITON* from -20°C *(-4°F)* to 200°C *(392°F)*			
Ambient temperature	from -20°C *(-4°F)* to 60°C *(140°F)*			
Cavity	SAE 8/2 A	SAE 9/2 A	SAE 10/2 A	SAE 10/2 A
Weight	0,14 kg *(0.308 lb)*	0,16 kg *(0.352 lb)*	0,20 kg *(0.440 lb)*	0,18 kg *(0.396 lb)*

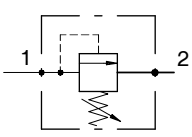
MC08R-Dimensional data and hydraulic circuit

Performance data

Dimensions mm *(in)*

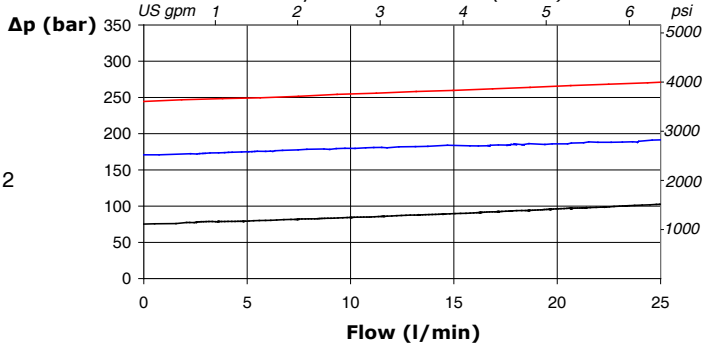


Hydraulic diagram



Typical pressure drop vs.flow characteristics

Viscosity oil 46 cSt at 40°C *(104°F)*



Range 1 10-120 bar *(145-1740 psi)* - standard setting 80 bar *(1160 psi)*
Range 2 40-200 bar *(580-2900 psi)* - standard setting 175 bar *(2530 psi)*
Range 3 200-350 bar (2900-5100 psi) - standard setting 250 bar *(3600 psi)*

Cavity 8/2 A see pag. 4

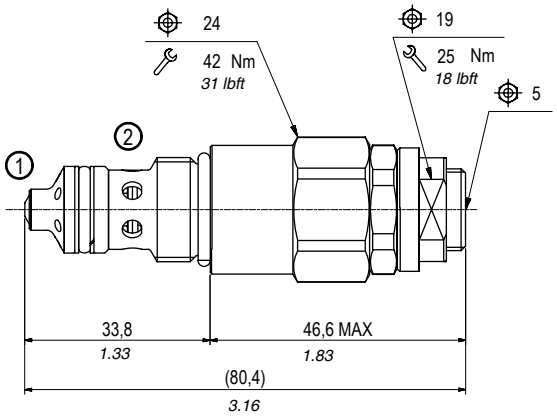
rtridge pressure relief valves

NEW

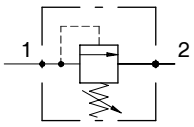
MC09R-Dimensional data and hydraulic circuit

Performance data

Dimensions mm *(in)*



Hydraulic diagram

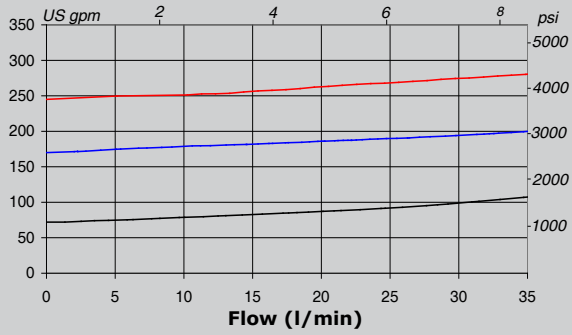


Δp (bar)

Cavity 9/2 A see pag.4

Typical pressure drop vs.flow characteristics

Viscosity oil 46 cSt at 40°C *(104°F)*

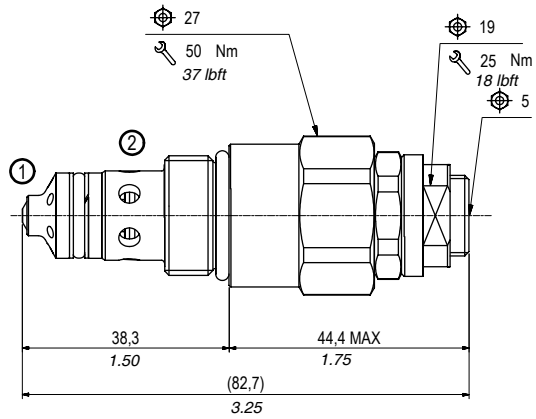


Range 1 10-120 bar *(145-1740 psi)* - standard setting 80 bar *(1160 psi)*
Range 2 40-200 bar *(580-2900 psi)* - standard setting 175 bar *(2530 psi)*
Range 3 200-350 bar (2900-5100 psi) - standard setting 250 bar *(3600 psi)*

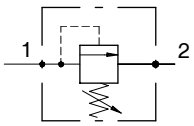
MC10R-Dimensional data and hydraulic circuit

Performance data

Dimensions mm *(in)*



Hydraulic diagram

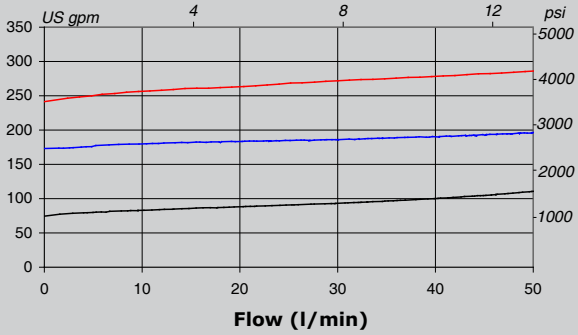


Δp (bar)

Cavity 10/2 A see pag.4

Typical pressure drop vs.flow characteristics

Viscosity oil 46 cSt at 40°C *(104°F)*

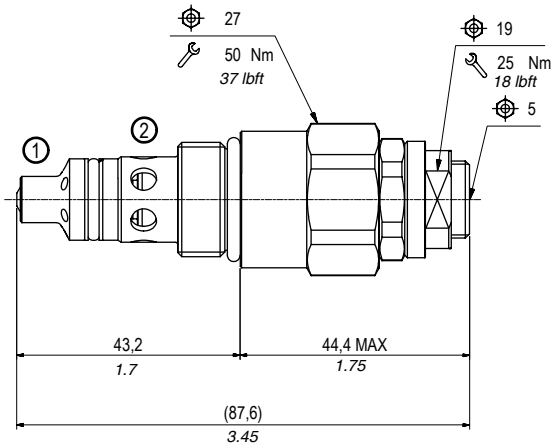


Range 1 10-120 bar *(145-1740 psi)* - standard setting 80 bar *(1160 psi)*
Range 2 40-200 bar *(580-2900 psi)* - standard setting 175 bar *(2530 psi)*
Range 3 200-350 bar (2900-5100 psi) - standard setting 250 bar *(3600 psi)*

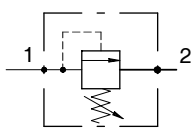
MC10M-Dimensional data and hydraulic circuit

Performance data

Dimensions mm *(in)*



Hydraulic diagram

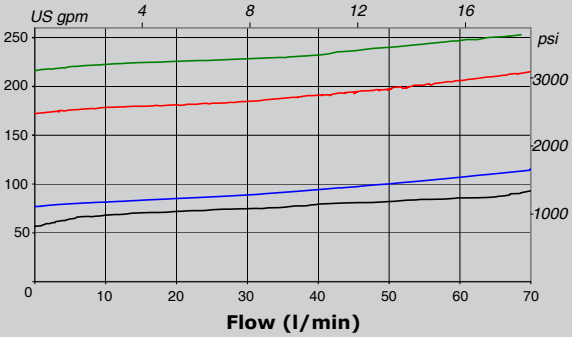


Δp (bar)

Cavity 10/2 A see pag.4

Typical pressure drop vs.flow characteristics

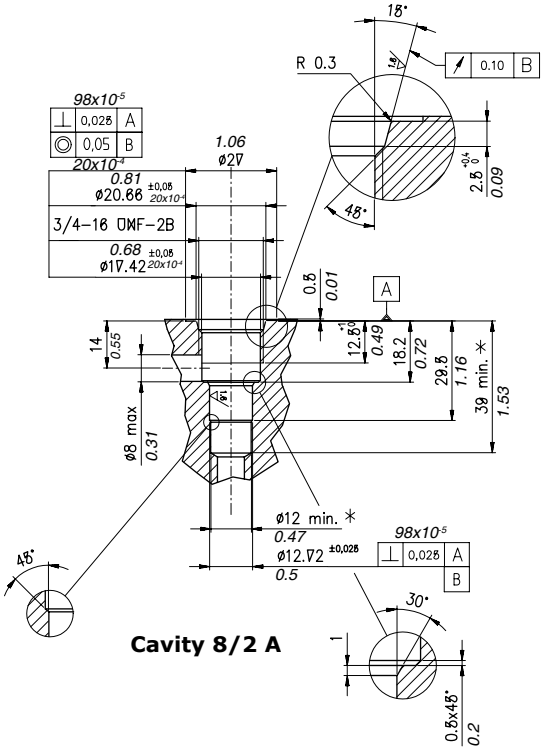
Viscosity oil 46 cSt at 40°C *(104°F)*



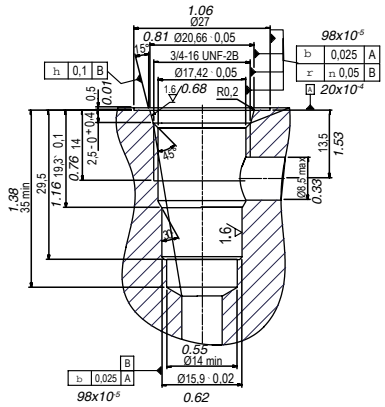
Range 1 10-60 bar *(145-870 psi)* - standard setting 50 bar *(725 psi)*
Range 2 40-110 bar *(580-1600 psi)* - standard setting 80 bar *(1160 psi)*
Range 3 110-220 bar *(1600-3200 psi)* - standard setting 175 bar *(2500 psi)*
Range 4 200-260 bar *(2900-3770 psi)* - standard setting 220 bar *(3200 psi)*

walvoil
HYDRAULIC CONTROL SYSTEMS

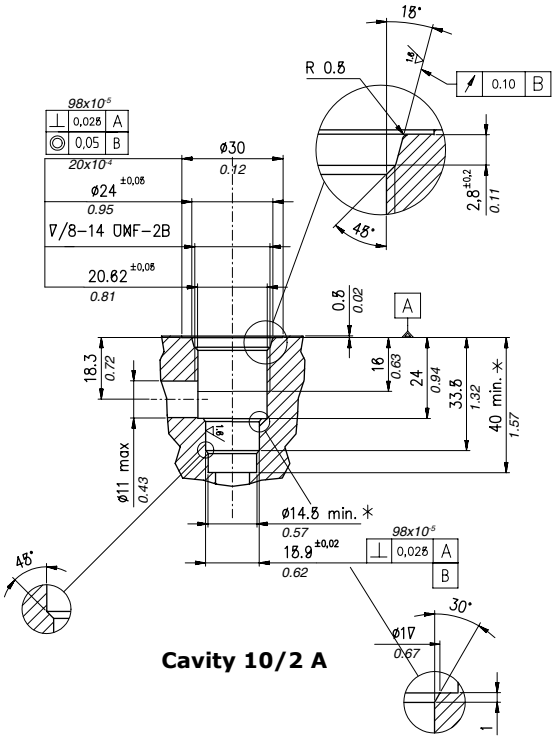
Cavities



Cavity 8/2 A



Cavity 9/2 A



Cavity 10/2 A

Description composition

MC□□ R/0 □ -□ - □

Cavity

08) SAE 8/2A (25 l/min.)
09) SAE 9/2A (35 l/min.)
10) SAE 10/2A (50 l/min.)

Adjustments

Y) Standard
X) Copped adjustment

Pressure range (bar)

1) 10÷120 bar *(145÷1740 psi)* standard setting 80 bar at 5 l/min.*(1160 psi at 1.32 US gpm)*
2) 40÷200 bar *(580÷2900 psi)* standard setting 175 bar at 5 l/min.*(2500 psi at 1.32 US gpm)*
3) 200÷350 bar *(2900÷5100 psi)* standard setting 250 bar a 5 l/min.*(3600 psi at 1.32 US gpm)*

Seals

B) Buna
V) Viton

MC10M/0 - □ -□ - □

Adjustments

Y) Standard
X) Copped adjustment

Pressure range (bar)

1) 10÷60 bar *(145-870 psi)* standard setting 50 bar at 5 l/min.*(725 psi at 1.32 US gpm)*
2) 40÷110 bar *(580-1600 psi)* standard setting 80 bar at 5 l/min.*(1160 psi at 1.32 US gpm)*
3) 110÷220 bar *(1600-3200 psi)* standard setting 175 bar at 5 l/min. *(2500 psi at 1.32 US gpm)*
4) 200÷260 bar *(2900-3770 psi)* (standard setting 220 bar at 5 l/min. *(3200 psi at 1.32 US gpm)*

Seals

B) Buna
V) Viton