

NEW

# MC08R MC09R MC10R MC10M

Cartridge pressure relief valves



**A simple and flexible solution for  
different applications**



# MC08R-MC09R-MC10R-MC10M Cartridge

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

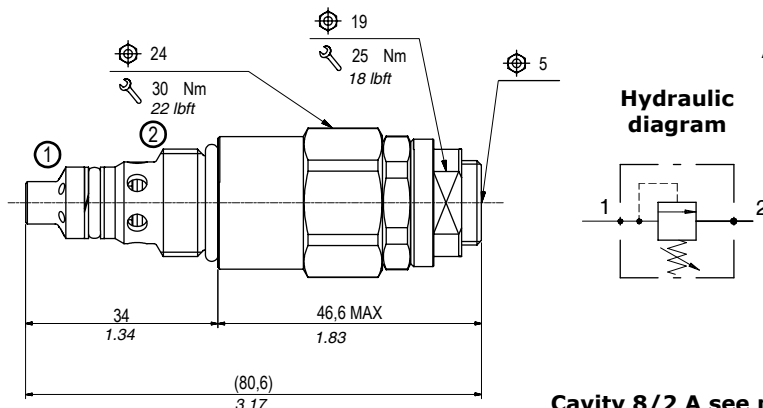
This catalogue shows technical specifications and diagrams measured with mineral oil of 46 cSt viscosity at 40° (104°F) temperature.

	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 cm <sup>3</sup> /min. (0.122 in <sup>3</sup> /min) at 100 bar-1450 psi			4 cm <sup>3</sup> /min. (0.244 in <sup>3</sup> /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

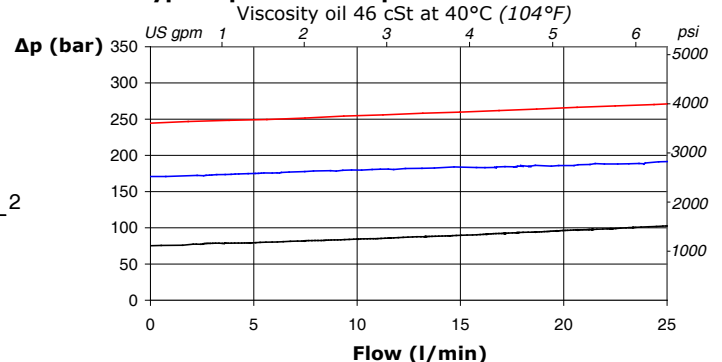
## Performance data

### Dimensions mm (in)



Cavity 8/2 A see pag. 4

### Typical pressure drop vs. flow characteristics

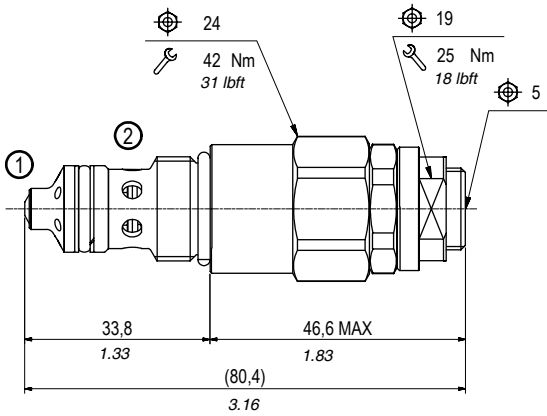


— Range 1 10-120 bar (145-1740 psi) - standard setting 80 bar (1160 psi)  
 — Range 2 40-200 bar (580-2900 psi) - standard setting 175 bar (2530 psi)  
 — Range 3 200-350 bar (2900-5100 psi) - standard setting 250 bar (3600 psi)

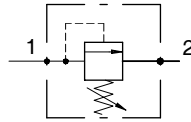


## MC09R-Dimensional data and hydraulic circuit

### Dimensions mm (in)



### Hydraulic diagram

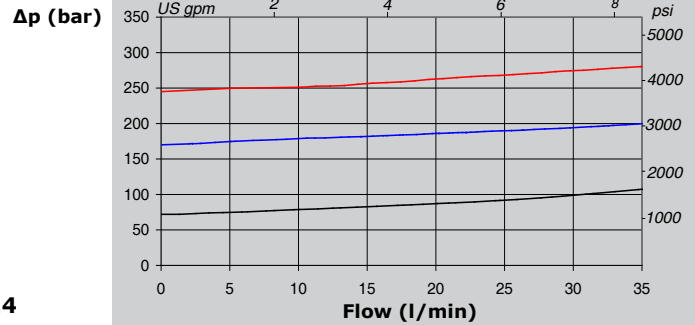


Cavity 9/2 A see pag.4

## Performance data

### Typical pressure drop vs. flow characteristics

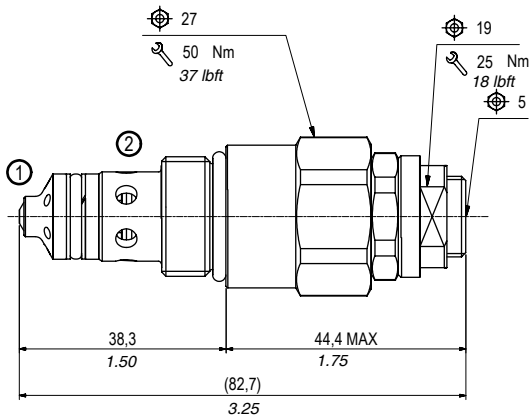
Viscosity oil 46 cSt at 40°C (104°F)



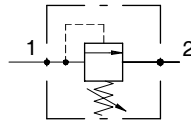
- Range 1 10-120 bar (145-1740 psi) - standard setting 80 bar (1160 psi)
- Range 2 40-200 bar (580-2900 psi) - standard setting 175 bar (2530 psi)
- Range 3 200-350 bar (2900-5100 psi) - standard setting 250 bar (3600 psi)

## MC10R-Dimensional data and hydraulic circuit

### Dimensions mm (in)



### Hydraulic diagram

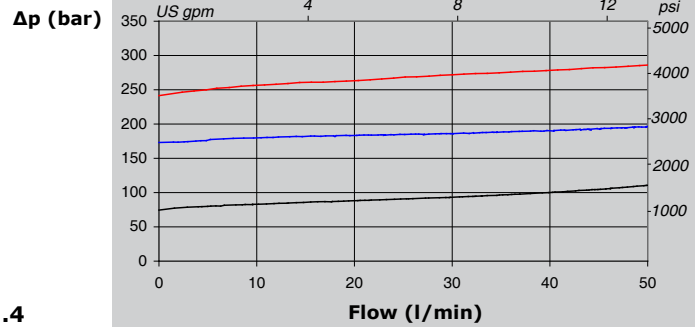


Cavity 10/2 A see pag.4

## Performance data

### Typical pressure drop vs. flow characteristics

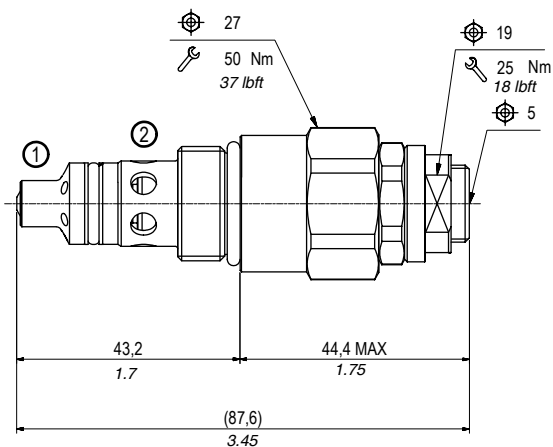
Viscosity oil 46 cSt at 40°C (104°F)



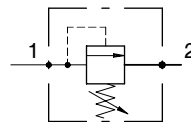
- Range 1 10-120 bar (145-1740 psi) - standard setting 80 bar (1160 psi)
- Range 2 40-200 bar (580-2900 psi) - standard setting 175 bar (2530 psi)
- Range 3 200-350 bar (2900-5100 psi) - standard setting 250 bar (3600 psi)

## MC10M-Dimensional data and hydraulic circuit

### Dimensions mm (in)



### Hydraulic diagram

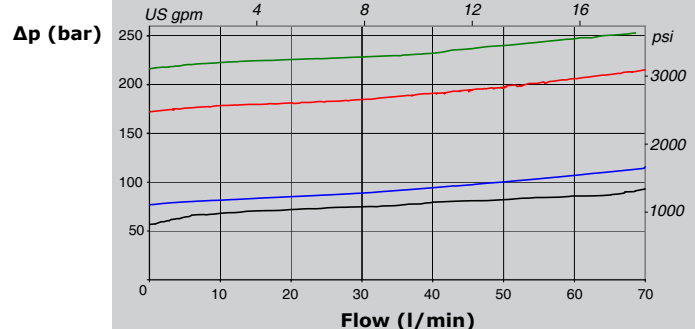


Cavity 10/2 A see pag.4

## Performance data

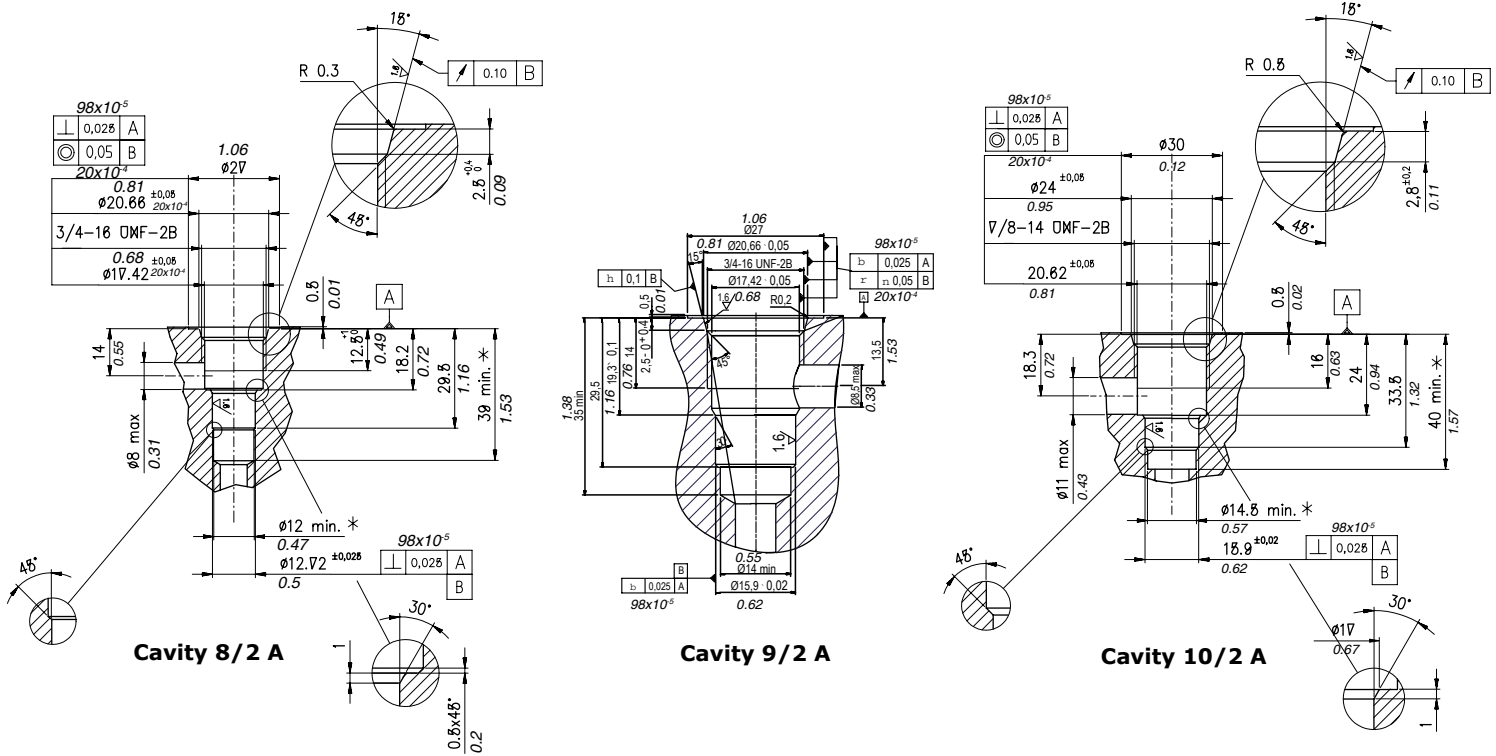
### Typical pressure drop vs. flow characteristics

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)

## Cavities



## Description composition

