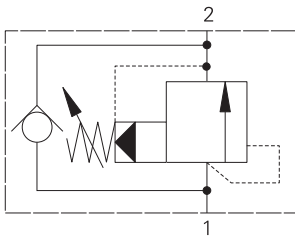


# 1ARC100 - Relief valve

Spool, pilot operated with reverse flow check  
 150 L/min (40 USgpm) • 400 bar (5800 psi)



### Operation

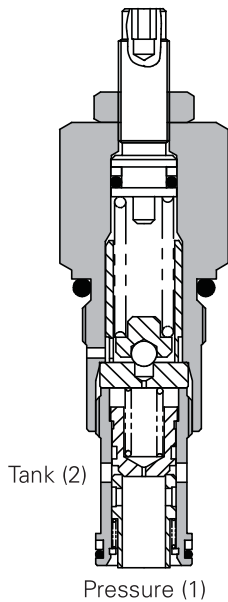
When the inlet reaches the valve setting, the pilot section opens, causing a small flow across the orifice in the spool.

The subsequent pressure drop moves the spool, opening a ring of radial holes in the sleeve, allowing relief flow to tank.

### Features

Very low pressure rise for any increase in flow giving accurate pressure control. Hardened working parts give long, reliable, trouble-free life. Cartridge construction giving maximum flexibility in mounting.

### Sectional view



### Performance data

#### Ratings and specifications

Performance data is typical with fluid at 32 cST (150 SUS)

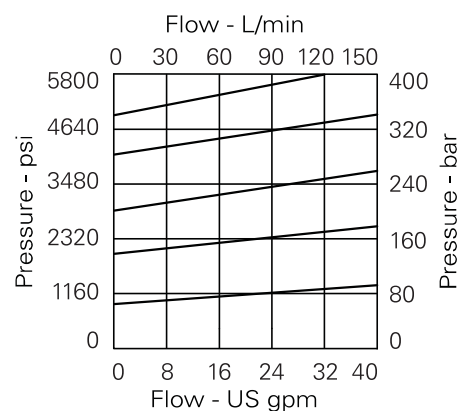
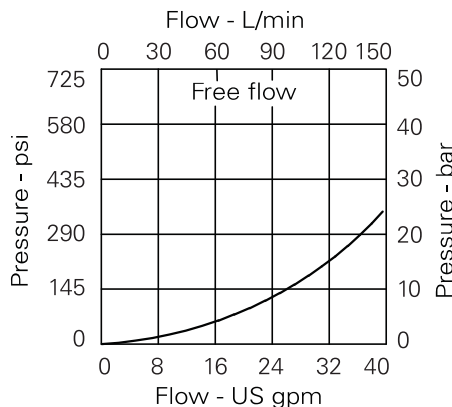
Rated flow	150 L/min (40 USgpm)	
Max setting	400 bar (5800 psi)	
Cartridge material	Working parts hardened and ground steel. External surfaces zinc plated.	
Body material	Standard aluminium (up to 210 bar*). Add suffix "377" for steel option.	
Mounting position	Unrestricted	
Cavity	A881 (See Section M)	
Torque cartridge into cavity	60 Nm (44 lbs ft)	
Weight	1ARC100	0.14 kg (0.3 lbs)
	1ARC145	0.54 kg (1.2 lbs)
	1ARC150	0.65 kg (1.4 lbs)
	1ARC155	0.91 kg (2.0 lbs)
Seal kit	SK164 (Nitrile) SK164V (Viton®)	
Recommended filtration level	BS5540/4 Class 18/13 (25 micron nominal)	
Operating temp	-30°C to +90°C (-22° to +194°F)	
Leakage	125 milliliters/min @ 280 bar	
Nominal viscosity range	5 to 500 cSt	

Viton is a registered trademark of E.I. DuPont

### Description

This is a pilot operated relief valve with an integral free flow check designed to limit pressure in a system. Good for continuous duty and accurate pressure control with constant or varying flows. With integral reverse flow check.

### Pressure drop curves

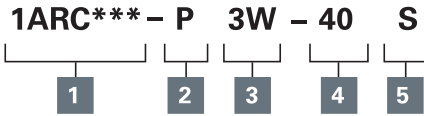


Where measurements are critical request certified drawings. We reserve the right to change specifications without notice.

# 1ARC100 - Relief valve

Spool, pilot operated with reverse flow check  
150 L/min (40 USgpm) • 400 bar (5800 psi)

## Model code



### 1 Function

**1ARC100** - Cartridge Only  
**1ARC145** - Cartridge and Body  
**1ARC150/1ARC155**  
- Cartridge and Body  
Through ported

### 2 Adjustment means

**P** - Leakproof Screw Adjustment  
**R** - Handknob Adjustment  
**G** - Tamperproof Cap  
(See page E-7 for dimensions)

### 3 Port size

Code	Port size	Housing number - body only				
		Aluminium 1AR145	Aluminium 1AR150	Steel 1AR150	Aluminium 1AR155	Steel 1AR155
<b>3W</b>	3/8" BSP		C1084			
<b>4W</b>	1/2" BSP	B4851	C1044	C593		
<b>6W</b>	3/4" BSP	B3954	C1086	C4917		
<b>8W</b>	1" BSP				B1617	B4596
<b>6T</b>	3/8" SAE		B10784			
<b>8T</b>	1/2" SAE	B19403	C7140			
<b>12T</b>	3/4" SAE	B19404	B10506	B10742		
<b>16T</b>	1" SAE				B1037	B24040

### 4 Pressure range

**Note:** Code based on pressure in bar.  
**7** - 10-70 bar.  
Std setting 35 bar  
**20** - 10-210 bar.  
Std setting 100 bar  
**40** - 50-400 bar.  
Std setting 280 bar Std setting made at 14 L/min

### 5 Seals

**S** - Nitrile (For use with most industrial hydraulic oils)  
**SV** - Viton (For high temperature and most special fluid applications)

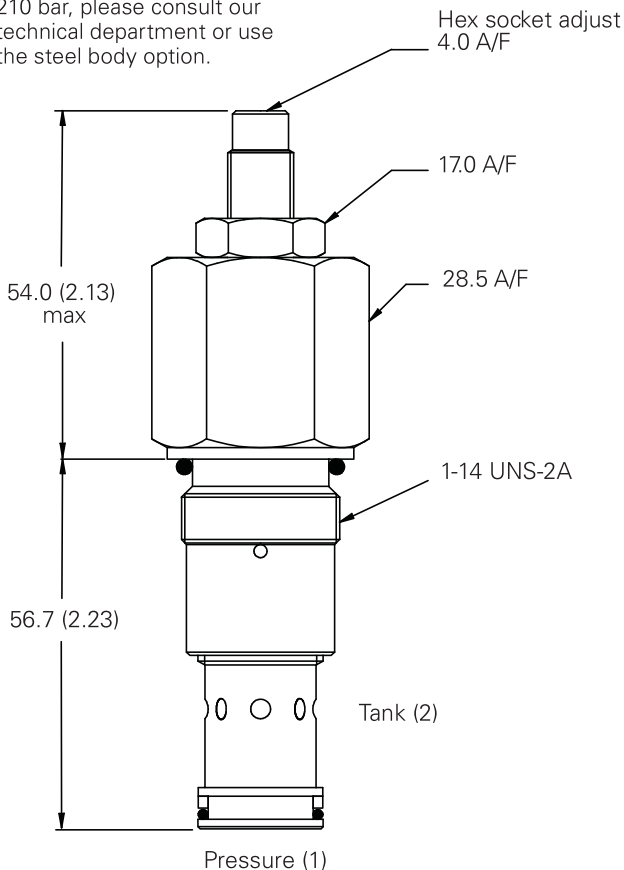
## Dimensions

mm (inch)

### Cartridge only

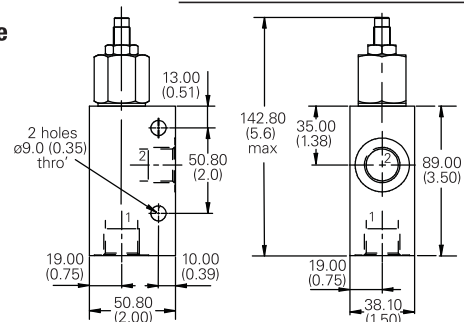
Basic Code  
**1ARC100**

**Note:** For applications above 210 bar, please consult our technical department or use the steel body option.



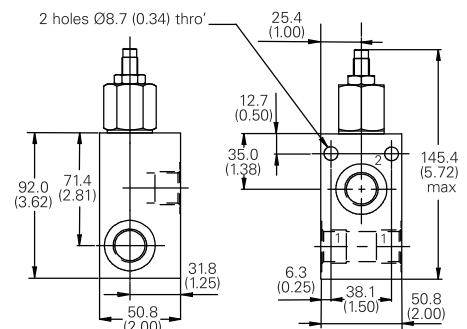
### Complete valve

1/2", 3/4" Ports  
Basic Code  
**1ARC145**



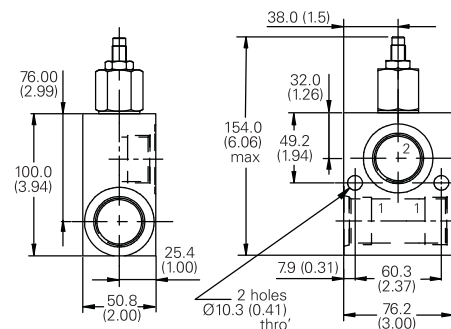
### Complete valve

3/8", 1/2", 3/4" Ports  
Basic Code  
**1ARC150**



### Complete valve

1" Ports  
Basic Code  
**1ARC155**



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