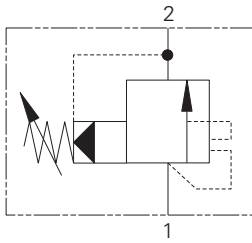


# IUAR100 - Relief valve

Spool, pilot operated, unloading  
 150L/min (40 USgpm) • 350 bar (5000 psi)



## Operation

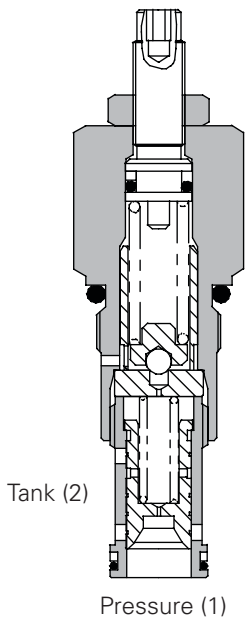
System pressure acts on the pilot section of the valve. When the valve setting is reached, the pilot section opens and the pilot flow causes the spool to move back uncovering the radial vent port.

The main section then opens fully with pilot flow passing through the vent port. When the system pressure is reduced to zero the valve will close.

## Features

High accuracy of pilot operated design. Hardened working parts give long, reliable, trouble-free life. Cartridge construction for installation into your own manifold.

## Sectional view



## Performance data

### Ratings and specifications

Figures based on: Oil Temp = 40°C Viscosity = 32 cSt (150 SUS)

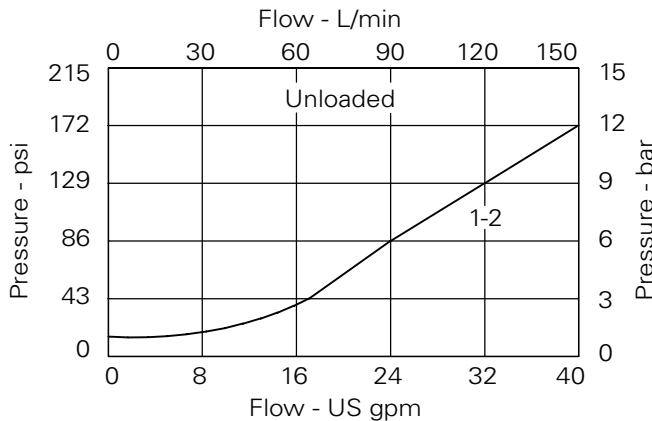
Rated flow	150 L/min (40 USgpm)
Max setting	350 bar (5000 psi)
Cartridge material	Working parts hardened and ground steel. External surfaces zinc plated.
Body material	Standard aluminium (up to 210 bar*). Add suffix "377" for steel option.
Mounting position	Unrestricted
Cavity	A881 (See Section M)
Torque cartridge into cavity	60 Nm (44 lbs ft)
Weight	1UAR100 0.14 kg (0.30 lbs) 1UAR145 0.34 kg (0.75 lbs) 1UAR150 0.65 kg (1.40 lbs) 1UAR155 0.91 kg (2.00 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	100 milliliters/min nominal
Nominal viscosity range	5 to 500 cSt

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## Description

The off-loading (kick-down) relief valve opens to unload a hydraulic system if the system pressure exceeds the valve setting. It acts as a fuse to protect persons and machinery where prolonged operation at excess pressure cannot be tolerated.

## Pressure drop curves

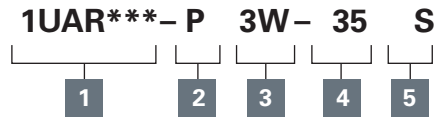


Where measurements are critical request certified drawings. We reserve the right to change specifications without notice.

# 1UAR100 - Relief valve

Spool, pilot operated, unloading  
150L/min (40 USgpm) • 350 bar (5000 psi)

## Model code



### 1 Function

- 1UAR100** - Cartridge Only
- 1UAR145** - Cartridge and Body
- 1UAR150** - Cartridge and Body Through Ported
- 1UAR155** - 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 1UAR145	Aluminium 1UAR150	Steel 1UAR150	Aluminium 1UAR155	Steel 1UAR155
<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** - 2-70 bar.  
Std setting 35 bar
- 20** - 10-210 bar.  
Std setting 100 bar
- 40** - 50-350 bar.  
Std setting 210 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)

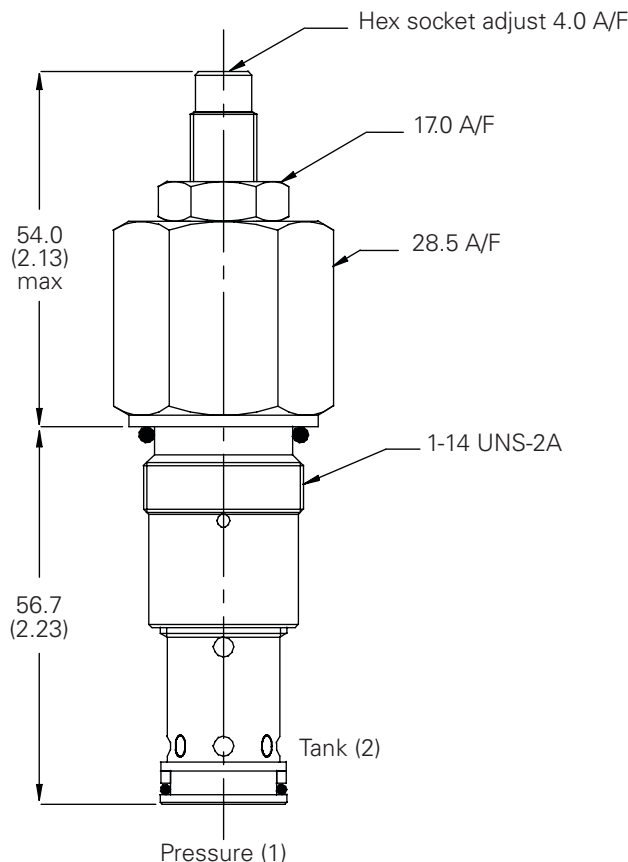
## Dimensions

mm (inch)

### Cartridge only

Basic Code  
**1UAR100**

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

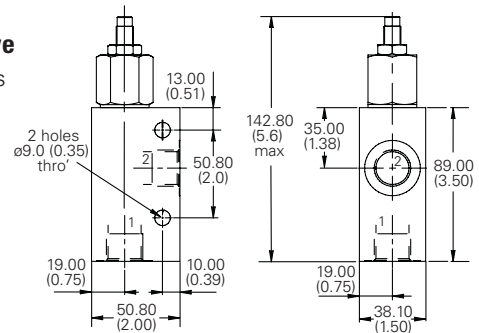


### Complete valve

1/2", 3/4" Ports

Basic Code

**1UAR145**

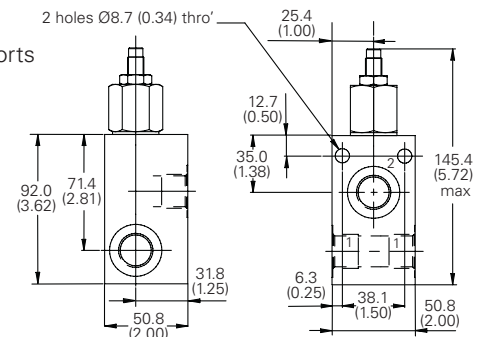


### Complete valve

3/8", 1/2", 3/4" Ports

Basic Code

**1UAR150**

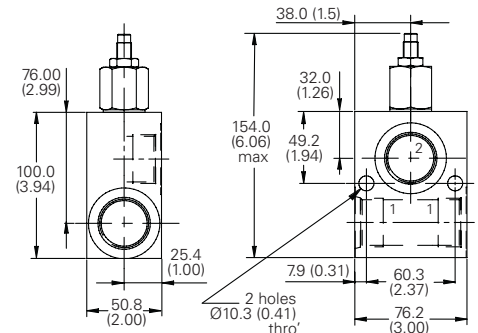


### Complete valve

1" Ports

Basic Code

**1UAR155**



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