



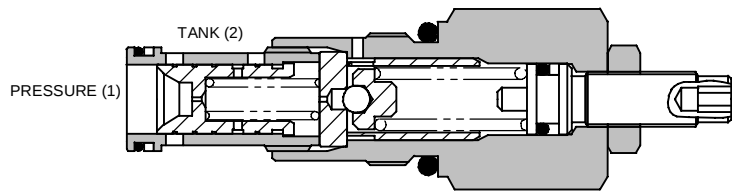
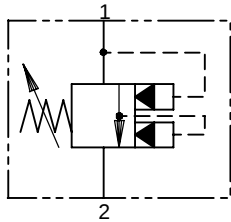
1UAR SERIES RELIEF VALVE

OFF-LOADING PILOT OPERATED

1UAR100

SLIDING SPOOL TYPE

2



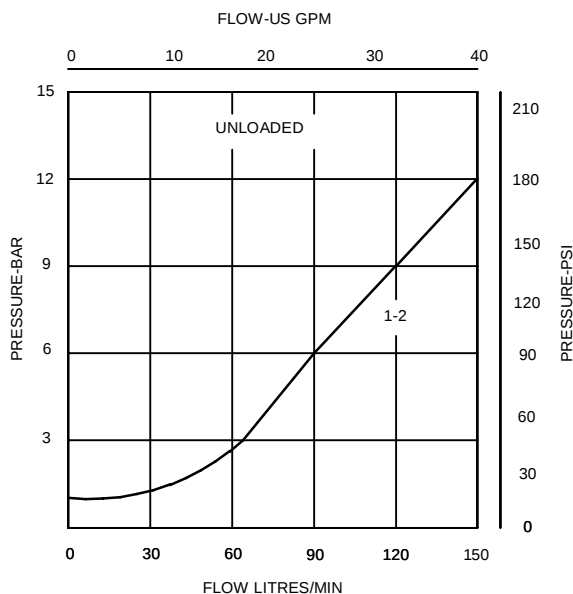
APPLICATION

The off-loading 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.

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.

PRESSURE DROP



FEATURES

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

SPECIFICATIONS

Figures based on: Oil Temp = 40°C Viscosity = 40 cSt

Rated Flow	150 litres/min (40 US GPM)
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 Number	A881 (See Section 17)
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 Number	SK164 (Nitrile) SK164V (Viton)
Recommended Filtration Level	BS5540/4 Class 18/13 (25 micron nominal)
Operating Temp	-20°C to +90°C (Standard seals)
Leakage	100 millilitres/min nominal
Nominal Viscosity Range	5 to 500 cSt

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

Integrated Hydraulics Ltd

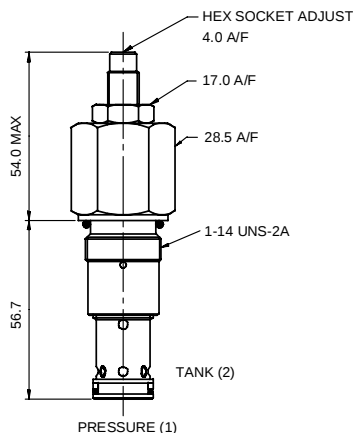
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CARTRIDGE ONLY

BASIC CODE: 1UAR100



COMPLETE VALVE

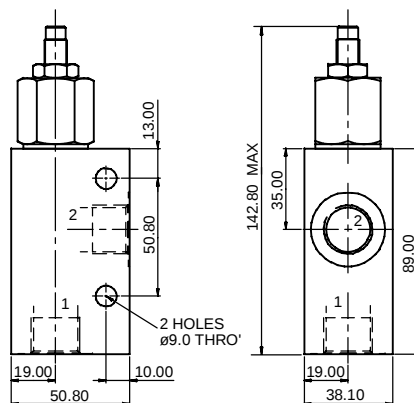
1/2" 3/4" PORTS

BASIC CODE: 1UAR145

Body ONLY part numbers

BSP, aluminium
1/2" B4851
3/4" B3954

SAE, aluminium
1/2" B19403
3/4" B19404



2

COMPLETE VALVE 3/8" 1/2" 3/4" PORTS

BASIC CODE: 1UAR150

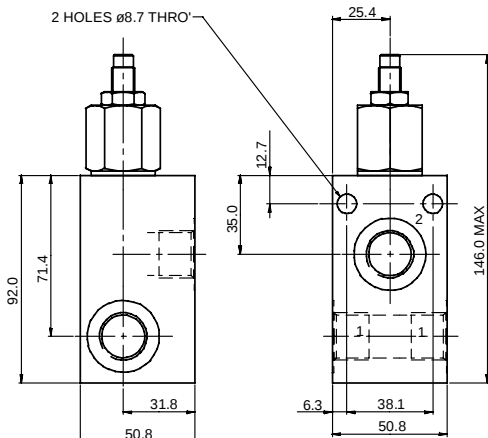
Body ONLY part numbers

BSP, aluminium
3/8" C1084
1/2" C1044
3/4" C1086

SAE, aluminium
3/8" B10784
1/2" C7140
3/4" B10506

BSP, steel
1/2" C593
3/4" C4917

SAE, steel
3/4" B10742



COMPLETE VALVE 1" PORTS

BASIC CODE: 1UAR155

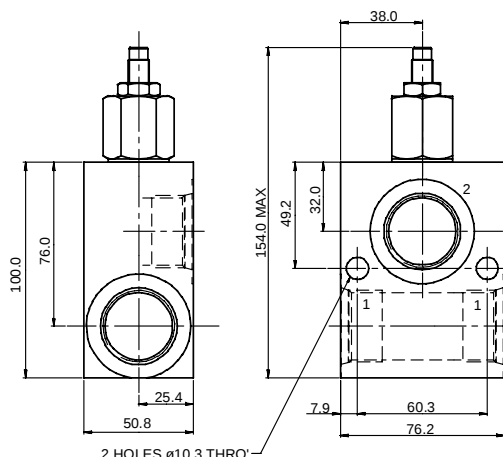
Body ONLY part numbers

BSP, aluminium
1" B1617

SAE, aluminium
1" B1037

BSP, steel
1" B4596

SAE, steel
1" B24040



Where measurements are critical request certified drawings

ORDERING CODE EXAMPLE

1UAR* P 3W 35 S**

Basic Code

1UAR100 = Cartridge Only

1UAR145 = Cartridge and Body

1UAR150 = Cartridge and Body Through ported

1UAR155 = Cartridge and Body Through ported

Adjustment Means

P = Leakproof Screw Adjustment

R = Handknob Adjustment

G = Tamperproof Cap

(See page 2-102 for dimensions)

Port Sizes - Bodied Valves Only

3W = 3/8" BSP 6T = 3/8" SAE

4W = 1/2" BSP 8T = 1/2" SAE

6W = 3/4" BSP 12T = 3/4" SAE

8W = 1" BSP 16T = 1" SAE

Seals

S = Nitrile (For use with most industrial hydraulic oils)

SV = Viton (For high temperature and most special fluid applications)

Pressure Range @ 14 l/min

7 = 2-70 bar. Std setting 35 bar

20 = 10-210 bar. Std setting 100 bar

35 = 50-350 bar. Std setting 210 bar

Std setting made at 14 litres/min

We reserve the right to change specifications without notice