



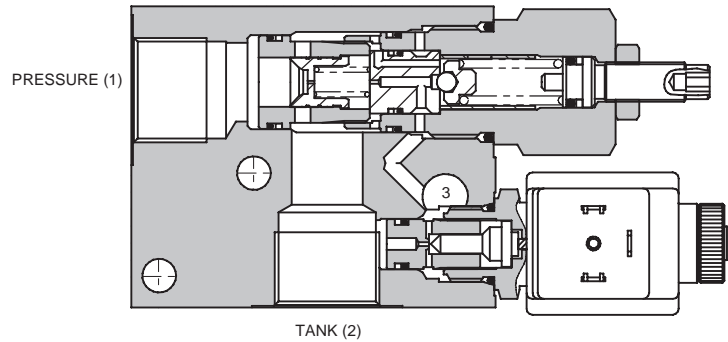
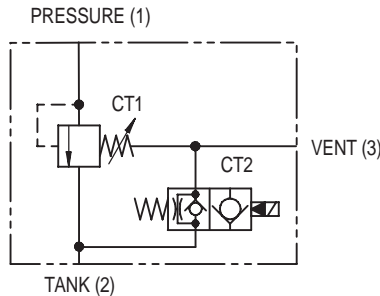
7VR SERIES VENTABLE RELIEF VALVE

PILOT OPERATED

2

7VR150

SLIDING SPOOL TYPE



APPLICATION

For use in circuits which require relief protection and a solenoid vent feature for unloading and dumping system flow to tank. The external vent port can be referenced to either a remote pilot section for two pressure systems, or to an external directional valve to allow manual pressure unload.

OPERATION

The valve consists of a ventable relief cartridge and a two-way normally closed or normally open solenoid. The main section spool spring chamber is referenced to tank, pilot flow across the main section spool causes a pressure imbalance and the spool shifts open allowing inlet flow to tank.

SOLENOID VENTING

The solenoid vent feature allows system flow to be dumped to tank at a minimum pressure drop. When the normally closed solenoid is energised, pilot flow is bypassed around the relief pilot section to tank and the main section spool is vented fully open dumping inlet flow at low pressure (see curve). If a normally open solenoid is used, the main spool shifts open and continuously dumps inlet flow to tank until the solenoid is energised. When the solenoid is energised, it closes and prevents pilot flow causing the main section spool to close.

REMOTE OPERATIONS

A two-pressure system is created by connecting a remote pilot section (set at less than main relief setting and isolated by a two-way valve) to the external vent port. The main section spool opens when inlet pressure reaches the setting of the remote pilot valve. The vent port can also be connected to a manual two-way valve. When the two-way valve is opened, the spool is 'vented' open and inlet flow is dumped to tank. This feature permits manual unloading of the pump or system pressure.

RELIEF VALVE

When used as a conventional relief valve, the solenoid is closed. When the inlet pressure exceeds the valve setting, the main section spool opens allowing relief flow to tank.

FEATURES

Ventable for remote unloading, two-pressure systems. Combined functions simplify circuit. High capacity for relieving or unloading. Hardened and ground working parts for long life.

SPECIFICATIONS

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

Rated Flow	100 litres/min (26 US GPM)
Max Setting	350 bar (5000 psi)
Working Pressure	280 bar (4000 psi) Continuous 350 bar (5000 psi) Intermittent
Cartridge Material	Working parts hardened and ground steel. External steel surfaces zinc plated
Body Material	Standard aluminium (up to 210 bar*) Add Suffix '377' for steel option
Mounting Position	Unrestricted
Weight	1.45 kg (3.2 lbs)
Seal Kit Number	SK405 (Nitrile) SK405V (Viton)
Recommended Filtration Level	BS5540/4 Class 18/13 (25 micron nominal)
Operating Temp	-20°C to +90°C
Leakage	35 millilitres/min @ 280 bar
Nominal Viscosity Range	5 to 500 cSt

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

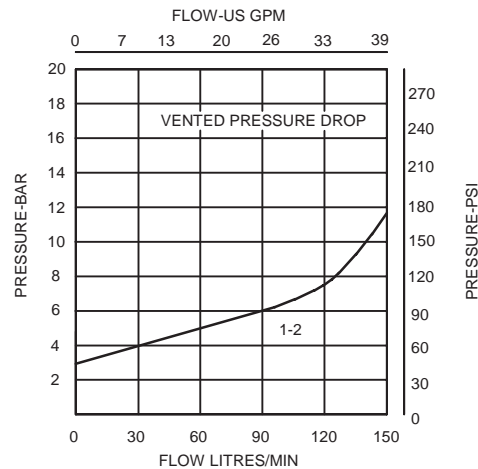
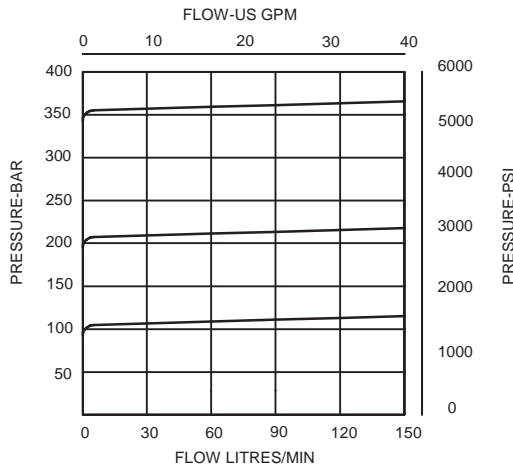
Integrated Hydraulics Ltd

Collins Road, Heathcote Ind. Est., Warwick, CV34 6TF, UK.
Tel: +44 (0) 1926 881171 Fax: +44 (0) 1926 315729
Website: www.integratedhydraulics.com

Integrated Hydraulics Inc

7047 Spinach Drive, Mentor, Ohio 44060, USA
Tel: (440) 974 3171 Fax: (440) 974 3170
Website: www.integratedhydraulics.com

PRESSURE DROP



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COMPLETE VALVE 1/2" 3/4" PORTS

BASIC CODE: 7VR150

Sub-assembly part numbers

BSP, aluminium

1/2" AXP 24048-4W-S

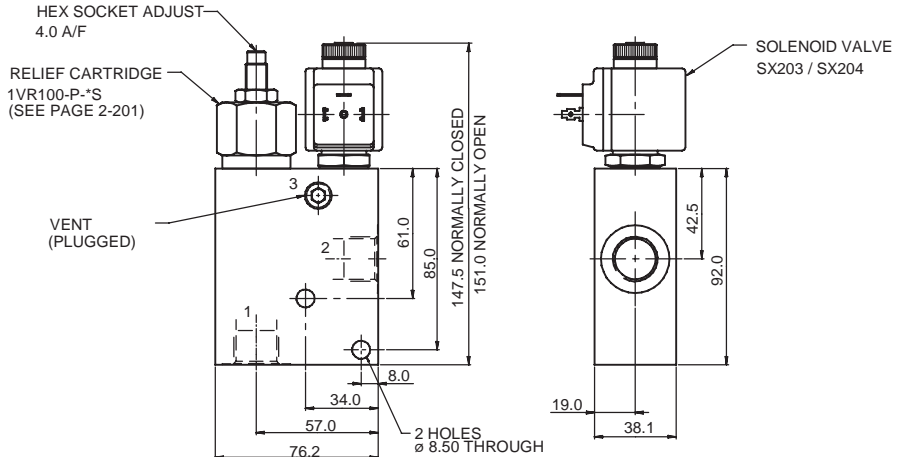
3/4" AXP 24048-6W-S

SAE, aluminium

3/4" AXP 24048-12T-S

SAE, steel

3/4" AXP 24048-12T-S-377



Where measurements are critical request certified drawings

ORDERING CODE EXAMPLE

7VR150 P 4W 20 1 H 24 S

Basic Code

7VR150

Adjustment Means

P = Leakproof Screw Adjustment

G = Tamperproof Cap

(See page 2-102 for dimensions)

Port Sizes - Bodied Valves Only

4W = 1/2" BSP, 1/4" BSP vent

6W = 3/4" BSP, 1/4" BSP vent **12T** = 3/4" SAE, 1/4" SAE vent

Pressure Range @ 14 l/min

20 = 10-210 bar. Std setting 100 bar

35 = 30-350 bar. Std setting 210 bar

Std setting made at 14 litres/min

Solenoid Configuration

1 = Normally open

2 = Normally closed

Seals

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

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

Coil Voltage

12 = 12VDC

24 = 24VDC

110 = 110VAC 50 Hz

220 = 220VAC 50 Hz

Other voltages available on request

Coil Termination

H = ISO4400/ DIN43650

F = Flying Leads DC only

DM = Deutsch Moulded

Other terminals available on request

We reserve the right to change specifications without notice