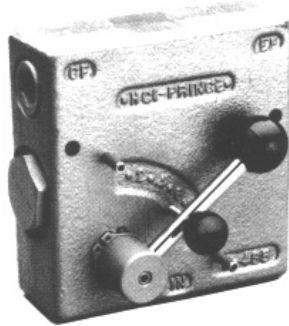
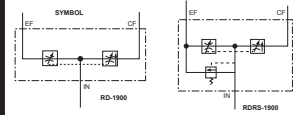




Pressure Compensated Adjustable Flow Control Valves

RD1900 Series



Features

The Prince valve model RD1900 series are a range of pressure compensated flow control valves. By rotating the handle through 90° the flow from the 'CF' or controlled flow port can be varied within the range given in the table following. Any remaining oil is by-passed to the 'EF' or excess flow port. This flow can be used to power another circuit or can be returned to tank. Once the controlled flow is set, it will remain nearly constant despite variations in pressure at either the controlled flow or excess flow port.

NOTE: If during operation the controlled flow port is blocked the valve will compensate in such a way as to shut-off flow to the excess port.

These valves can also be used as a restrictive flow control by plugging the excess flow port. The valve series RDRS1900 have an in-built adjustable relief valve relieving from the 'Inlet' to the 'EF' (excess flow) port. These valve models must have the excess flow port connected to tank. When selecting a valve, the controlled flow range should exceed the maximum flow requirement by as little as possible to gain maximum flow control.

It should be noted that whenever these or any valve is used to by-pass or restrict flow, heat will be generated. Steps may be required to prevent the oil temperature from becoming too high.

General Specifications

Maximum Operating Pressure	207 bar (3000 psi)
Maximum Inlet Flow	114 l/min (30 gpm)
Maximum Controlled Flow	114 l/min (30 gpm)
Weight	4.5 kg

Material Specifications

Housing	High Tensile Cast Iron
Poppet	Hardened and Ground Steel
Seals	Buna-N

Standard Features

NPT (BSPT) Porting
Graduated Scale for Flow Control Repeatability
Screw Lock on the Adjustment Lever

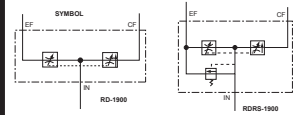
Optional Features

Adjustable Relief Valve on the Inlet Port, Factory Set at 103 bar (1500 psi) @ 38 l/min (10 gpm)
Controlled Flow Ranges: 0 to 15 l/min (0 to 4 gpm) 0 to 30 l/min (0 to 8 gpm) 0 to 60 l/min (0 to 16 gpm) 0 to 114 l/min (0 to 30 gpm)



Pressure Compensated Adjustable Flow Control Valves

RD1900 Series

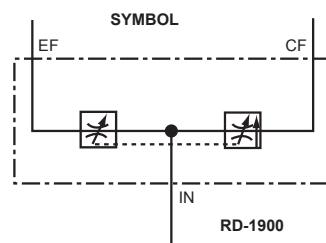
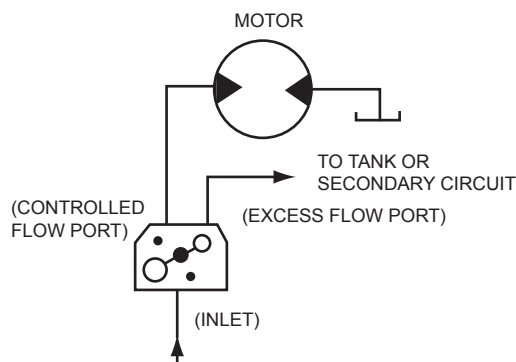


Applications

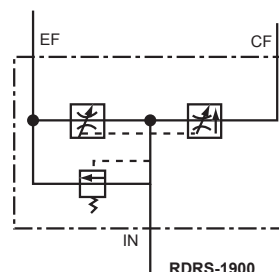
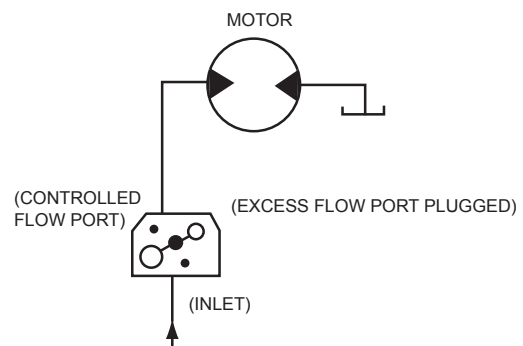
As illustrated in the circuit below the RD1900 adjustable flow control valves can be used to control the speed of a hydraulic motor. In this circuit oil from a source is directed into the inlet of the valve. By moving the handle the flow can be varied from zero when the handle is vertical to maximum when the handle is horizontal. Oil not going to the controlled flow port is by-passed to the excess flow port where it can be used to supply another circuit or returned to tank. Alternatively, instead of the controlled flow supplying a motor it can be used as adjustable priority flow to a directional control bank.

Also as illustrated, the RD1900 valve can be used as a restrictive flow control. In this circuit the excess flow port is blocked. This type of circuit is normally used with a pressure compensated pump in a closed centre system.

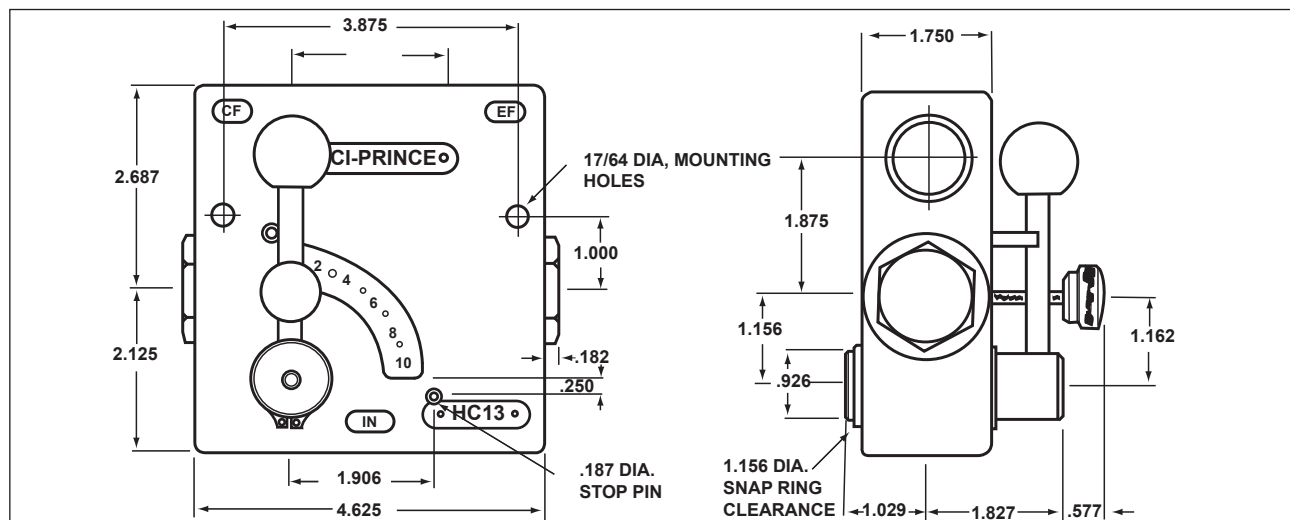
Bypass Flow Circuit



Restrictive Flow Circuit

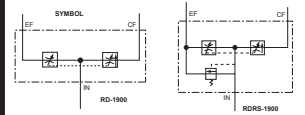


Dimensional Details (inches)

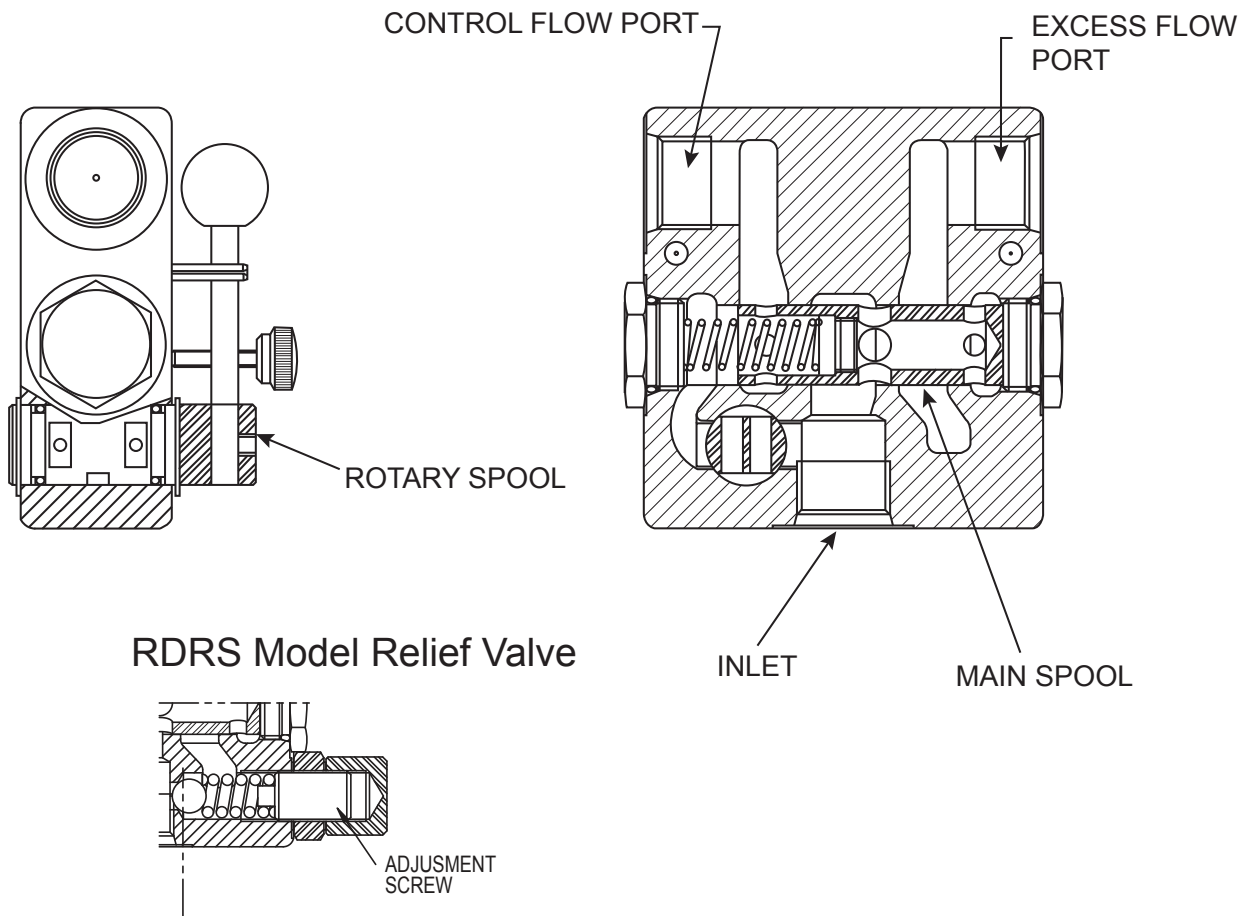




Pressure Compensated Adjustable Flow Control Valves RD1900 Series



Cross - Sectional View



HOW TO ORDER

Model Code	With Relief Valve	Omit - Without	Valve Series	Controlled Flow Range	Port Sizes
RD	RS	19	50	16	
					50 = 1/2" NPT 75 = 3/4" NPT

Code	Adjustment Range
4	0 - 4 GPM
8	0 - 8 GPM
16	0 - 16 GPM
30	0 - 30 GPM