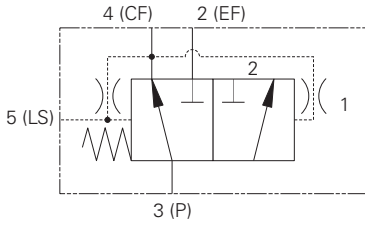


# PFRD/S-12 - Priority Flow Control

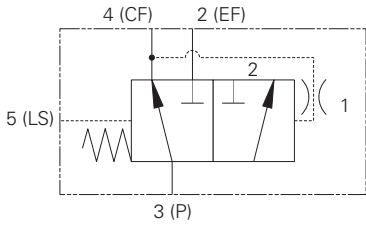
Spool Type, Load Sensing

76 L/min (20 USgpm) • 280 Bar (4000 psi)

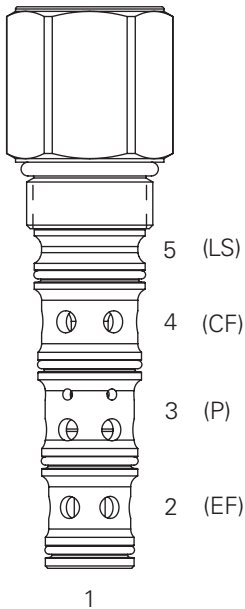
## Dynamic Signal (PFRD)



## Static Signal (PFRS)



## Sectional View



H

Note: Port 1 unused, port should be plugged.

## Description

This is a load sense priority flow regulator designed to provide a controlled pressure compensated flow on demand. The valve is ideal for steering or accumulator charging circuits.

## Operation

This valve is used in the flow control mode. Pump flow from the valve inlet port 3 is delivered first to port 4 at a fixed rate; excess flow is bypassed to port 2. The valve maintains the controlled flow to 4 regardless of inlet pressure change or load pressure changes at 2 or 4. This valve is typically used with open loop load sense systems in steering and braking circuits. The static type is used for less difficult applications where response or circuit stability is not a problem. The dynamic type is used for difficult applications where response or circuit

stability are critical. The load sense line connected to port 5 should not exceed 2 Meters (6 Feet) in length. Overpressure protection for the circuits connected to ports 2 and 4 must be provided by external relief valves. The control pressure is determined by assuring adequate inlet pressure to the steering unit and must be matched to the steering unit's required flow. The control pressure must be supplied to the valve as a minimum inlet pressure. The pressure at port 4 can vary by 10% when the load at the excess flow port 2 varies from 0 to maximum pressure.

## Features

Hardened and ground working parts to limit leakage and extend service life. Robust design with a 280 bar max pressure rating.

## Performance Data

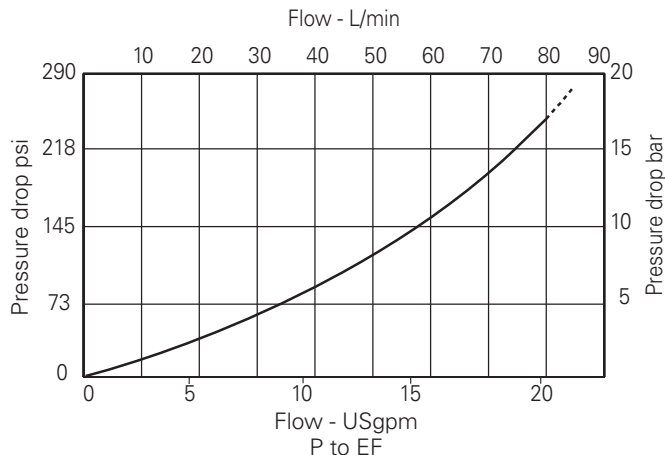
### Ratings and Specifications

Performance data is typical with fluid at 21,8 cSt (105 SUS) and 49°C (120°F)

Typical application pressure (all ports)	280 bar (4000 psi)
Cartridge fatigue pressure (infinite life)	280 bar (4000 psi)
Rated inlet flow	76 L/min (20 USgpm)
Temperature range	-40° to 120°C (-40° to 248°F)
Cavity	C-12-5S
Fluids	All general purpose hydraulic fluids such as: MIL-H-5606, SAE 10, SAE 20 etc.
Filtration	Cleanliness code 18/16/13
Standard housing material	Aluminum or steel
Weight cartridge only	0,36 kg (0.79 lb)
Seal kit	202914-921
Internal leakage	164cc/min (10 in 3/min) @ 3000 PSID
Recommended L/S orifice	0.031" (not included in valve)

## Pressure Drop

### Cartridge only



Note: Minimum inlet flow should not be less than 1/4 of maximum inlet flow. Minimum pressure drop is determined by control pressure.

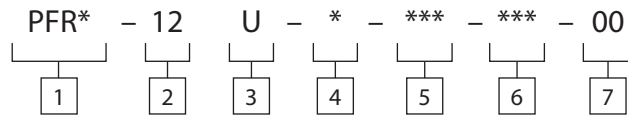
Where measurements are critical request certified drawings. We reserve the right to change specifications without notice.

# PFRD/S-12 - Priority Flow Control

Spool Type, Load Sensing

76 L/min (20 USgpm) • 280 Bar (4000 psi)

## Model Code



**1** Function  
 PFRS - Priority flow regulator  
 Static signal type  
 PFRD - Priority flow regulator  
 Dynamic signal type

**2** Size  
 12 - 12 size

**3** Seal Material  
 U - Urethane (standard)

**4** Valve Housing Material  
 O - Cartridge only  
 A - Aluminum  
 S - Steel (standard)

**5** Port Size

Code	Port Size		Housing Number	
	Port 2, 3, 4	Port 5	Aluminium	Steel
000	No Body	-	-	-
10T	SAE 10	SAE 4	4998820-001	4998821-001
12T	SAE 12	SAE 4	4998820-002	4998821-002
04G	1/2" BSPP	1/4" BSPP	4998820-003	4998821-003
06G	3/4" BSPP	1/4" BSPP	4998820-004	4998821-004

\*These model digits will not be stamped on the valve.  
 See section J for housing details.

**6** Control Pressure  
 PFRS options  
 055 - 55 psi (3.8 bar)  
 078 - 78 psi (5.4 bar)  
 100 - 100 psi (6.9 bar)  
 PFRD options  
 075 - 75 psi (5.2 bar)  
 110 - 110 psi (7.6 bar)  
 145 - 145 psi (10.0 bar)

**7** Special Features  
 00 - None  
 (Only required if valve has special features, omit if ("00"))

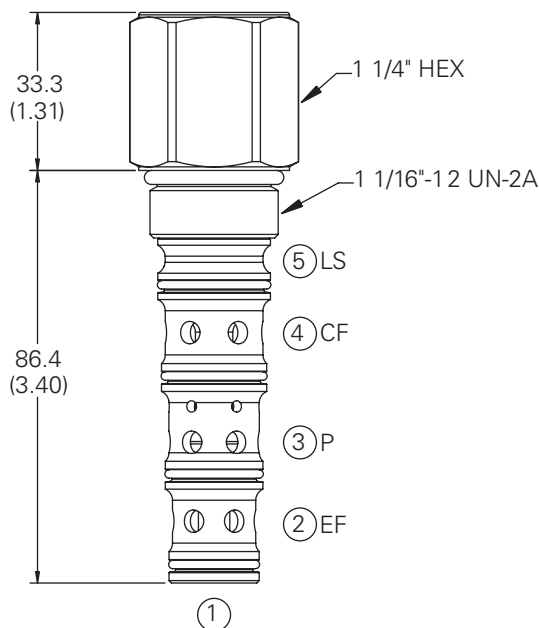
## Dimensions

mm (inch)

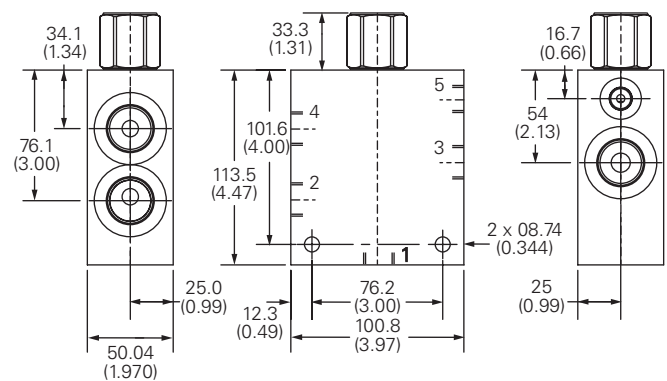
Torque cartridge in housing  
 A - 81-95 Nm (60-70 ft lbs)  
 S - 102-115 Nm (75-85 ft lbs)


Note: Standard housings include port 1, however for most applications this port must be blocked.

Cartridge Only  
 Basic Code  
 PFRD/S-12



## Installation Drawing (Steel)



**WARNING**  
  
 Aluminum housings can be used for pressures up to 210 bar (3000 psi). Steel housings must be used for operating pressures above 210 bar (3000 psi).

