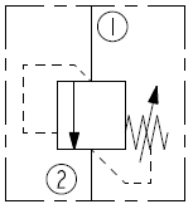
PILOT OPERATED RELIEF VALVE

Overview



SYMBOL



Description

RV12-26XX is a screw in, cartridge style, pilot operated (two stage), spool type relief valve, intended for use as a pressure limiting device in demanding hydraulic circuits which require fast response and low hysteresis.

Operation

The RV12-26XX blocks flow from port 1 to port 2 until sufficient pressure is present at port 1 to force the pilot relief off its seat, allowing the main stage to shift, opening port 1 to port 2.

NOTE: this valve cannot be used in cross-over relief applications.

Features

- Adjustments cannot be backed out of the valve.
- Adjustments prohibit springs from going solid.
- Hardened spool and cage for long life.
- Optional spring ranges to 240 bar (3500 psi).
- Rapid, smooth response to pressure surges.
- Rapid response spool available.
- Cost-effective cavity.

Ratings

Pressure Ratings

Pressure rating: 241.3 bar (3500 psi) note: Port 1

103.4 bar (1500 psi) note: Port 2

Proof pressure: 689.5 bar (10000 psi)

Burst pressure: 1379.0 bar (20000 psi)

Crack pressure defined: Pressure evident at 7.6 lpm (2 gpm)

Flow Ratings

Flow rating: 170.3 lpm (45 gpm)

Maximum internal leakage: 197 ml/min (12 in^3/min)

Temperature Ratings

Operating fluid temperature: -40 to 100 °C (-40 to 212 °F) note: With buna N seals

-26 to 204 °C (-15 to 400 °F) note: With fluorocarbon seals

-54 to 107 °C (-65 to 225 °F) note: With polyurethane seals

Storage temperature: -40 to 70 °C (-40 to 160 °F)

Ambient temperature: -40 to 70 °C (-40 to 160 °F)

Other Ratings

Corrosion protection: 960 hr salt spray per ASTM b117 (GRV12-26xx)

Operating Parameters

Fluids: Mineral based or synthetic with lubricating properties

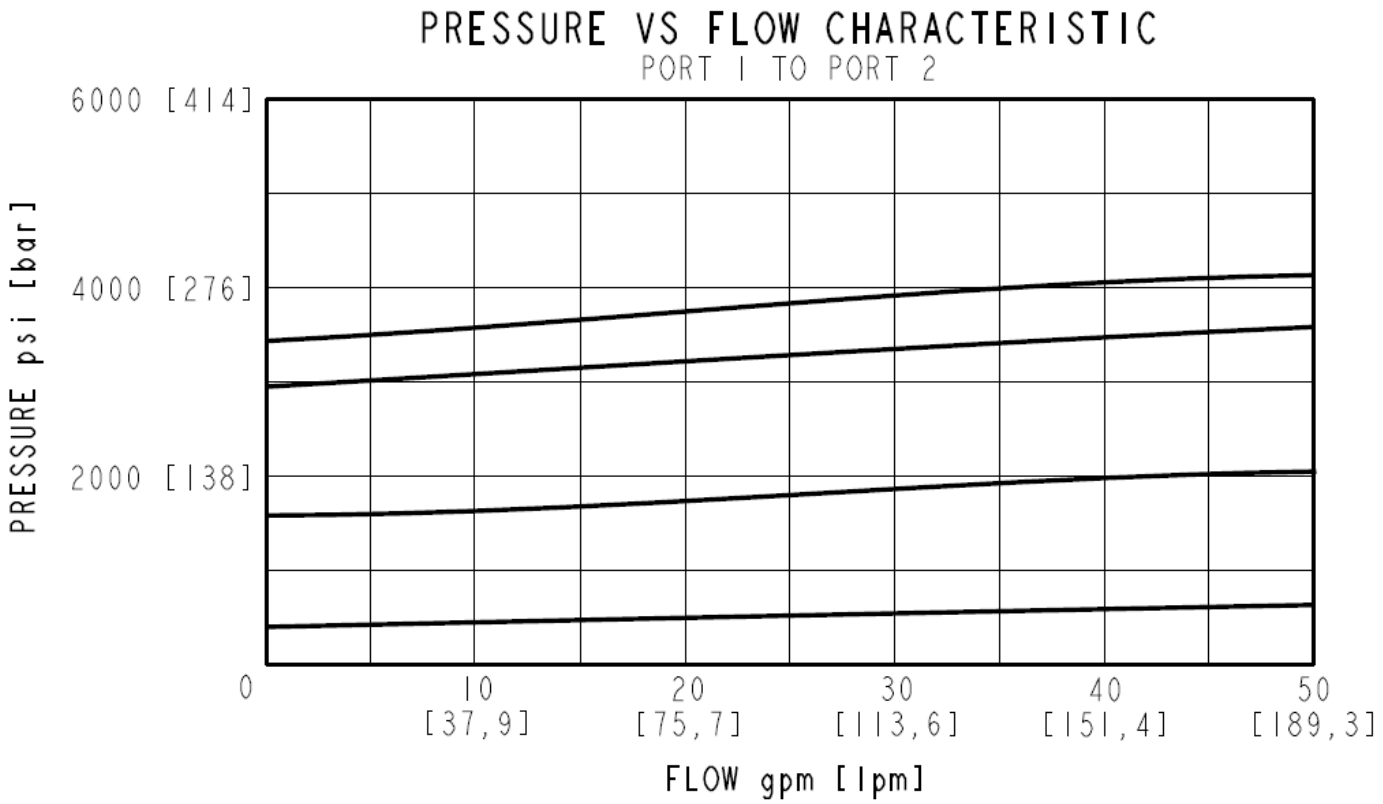
PILOT OPERATED RELIEF VALVE

Fluid viscosity range: 7.4 to 420 cSt
Maximum operating contamination level: 18/16/13 per ISO 4406

Properties

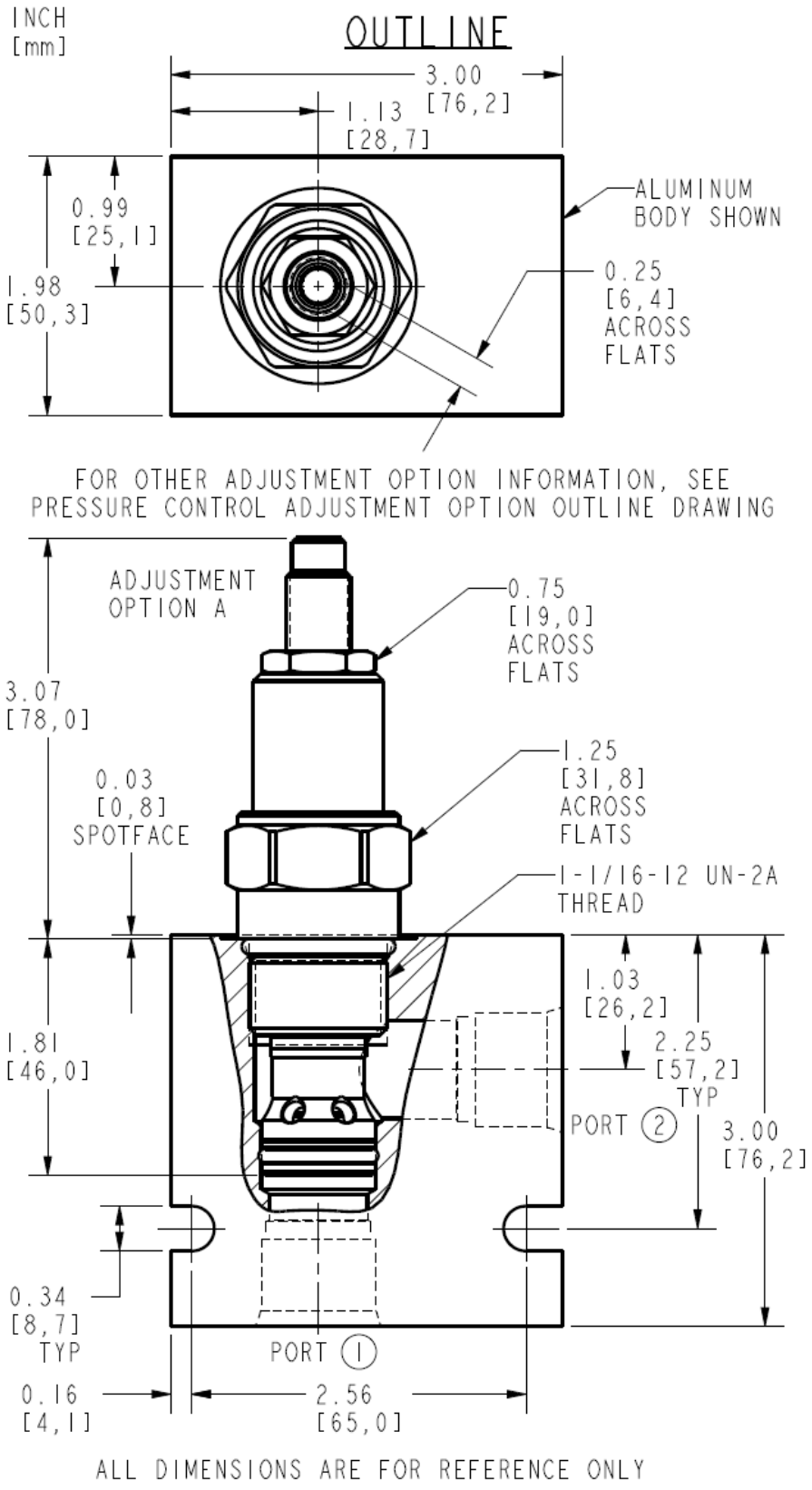
Unit weight: 0.35 kg (0.78 lb) note: A
0.38 kg (0.83 lb) note: B
0.40 kg (0.88 lb) note: C, L
0.40 kg (0.89 lb) note: F, H
Internal wetted surface area: 209 cm^2 (32.4 in^2) note: A, B, C, L
221 cm^2 (34.3 in^2) note: F, H

Performance



PILOT OPERATED RELIEF VALVE

Dimensions



PILOT OPERATED RELIEF VALVE

Installation Specifications

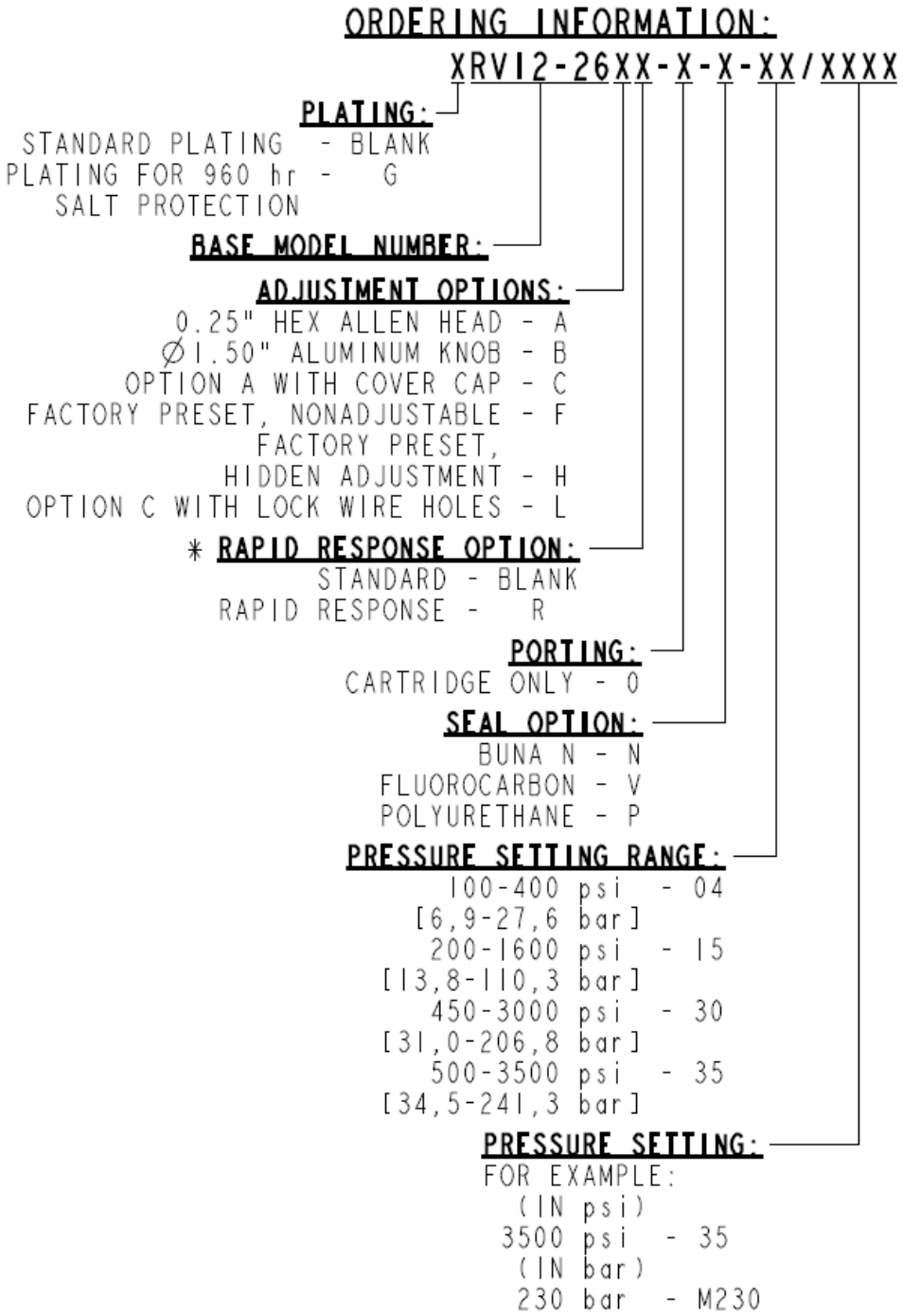
Cavity: VC12-2
12-size-2-way Cavities
Cartridge installation torque: 44.7 to 50.2 N-m (33 to 37 ft-lb)
32.5 to 35.3 N-m (24 to 26 ft-lb) note: H-style plug
Orientation restriction: None

Accessories

Seal kit: SK12-2X-B
Seal kit installation instructions
Housings: Available 12-2w valve bodies

PILOT OPERATED RELIEF VALVE

Order Code



(CONSULT FACTORY OR CATALOG FOR OTHER AVAILABLE OPTIONS)

* THE RAPID RESPONSE OPTION MAY CAUSE THE VALVE TO BECOME UNSTABLE. CONSULT FACTORY FOR APPLICATION ASSISTANCE WHEN SELECTING THIS OPTION

PILOT OPERATED RELIEF VALVE

Model Options

ARV12-26DF-H-J-R/S

A Plating Option

CODE	DESCRIPTION
Blank	Standard
G	960 h Salt-spray rating

D Rapid Response Option

CODE	DESCRIPTION
Blank	Standard
R	Rapid response

F Adjustment Option

CODE	DESCRIPTION
A	1/4" Hex Allen Head
B	1-1/2" Diameter Aluminum Knob with Aluminum Lock Knob
C	1/4" Hex Allen Head with Cover Cap
F	Factory Preset Non-Adjustable
H	Factory Preset Hidden Adjustment
L	1/4" Hex Allen Head with Cover Cap and Lockwire Holes

H Line Body

CODE	DESCRIPTION
0	No Body
10T	Aluminum SAE 10
12T	Aluminum SAE 12
16T	Aluminum SAE 16
12TD	Ductile Iron SAE 12
16TD	Ductile Iron SAE 16
8B	Aluminum BSPP 1" (8)
8BD	Ductile Iron BSPP 1" (8)

J Seal

CODE	DESCRIPTION
N	Buna-N
V	Fluorocarbon
P	Polyurethane
U	PPDI Urethane

R Spring

CODE	DESCRIPTION
04	6.9 to 27.6 bar (100 to 400 psi) Spring Range
15	3.8 to 110.3 bar (200 to 1600 psi) Spring Range
30	31 to 206.9 bar (450 to 3000 psi) Spring Range
35	34.5 to 241.5 bar (500 to 3500 psi) Spring Range

S Setting

CODE	DESCRIPTION
MXXX	Spring Setting in XXX bar
XX	Spring Setting in XX psi (x 100)