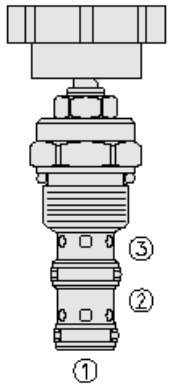
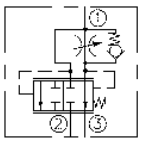
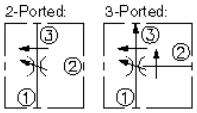
ADJUSTABLE PRESSURE COMPENSATED FLOW REGULATOR VALVE CARTRIDGE

Overview



SYMBOL





Description

FR10-39X is an adjustable, pressure compensated, flow control valve. It CAN be used as a priority type flow regulator, or a restrictive type, 2-way, flow regulator when the bypass line (port 2) is blocked.

Operation

The valve provides set regulated flow regardless of pressure variations at regulated or bypass port. Regulated flow increases from closed to fully open with clockwise rotation of the adjusting screw.

Features

- Bypass port 2 may be fully pressurized.
- Fine low-torque adjustment.
- Hardened steel parts for long life.
- Quiet, modulated response.
- Industry-common cavity.

Ratings

Pressure Ratings

Pressure rating: 241 bar (3500 psi)

Flow Ratings

Flow rating: 34.1 lpm (9.0 gpm) note: Regulated, 2-ported

37.9 lpm (10.0 gpm) note: Regulated, 3-ported

Inlet flow rating: 37.9 lpm (10.0 gpm) note: Nominal, 3-ported

56.8 lpm (15.0 gpm) note: Maximum, 3-ported

Maximum internal leakage: 0.38 lpm (0.10 gpm)

Temperature Ratings

Operating fluid temperature: -40 to 120 °C (-40 to 250 °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 (model number gfr10-39x)

Operating Parameters

Fluids: Mineral based or synthetic hydraulic fluid with lubricating properties

Fluid viscosity range: 7.4 to 420 cSt

Maximum operating contamination level: 18/16/13 per iso4406

ADJUSTABLE PRESSURE COMPENSATED FLOW REGULATOR VALVE CARTRIDGE

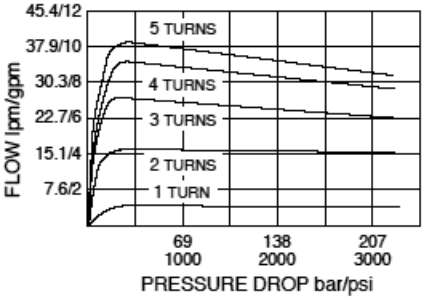
Properties

Unit weight: 0.14 kg (0.31 lb)

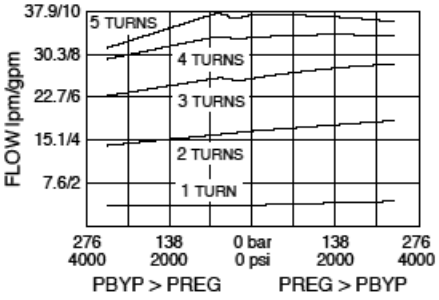
Internal wetted surface area: 135 cm^2 (20.9 in^2)

Performance

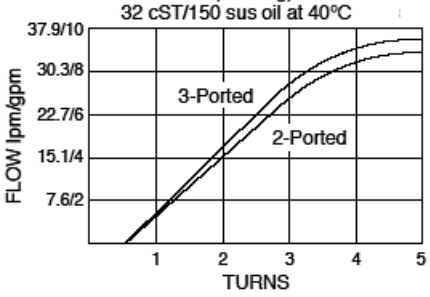
2-Ported
Regulated Flow vs. Pressure Drop
at 240 bar/3500 psi Inlet
32 cST/150 sus oil at 40°C



3-Ported
Regulated Flow vs. Load
at 38 lpm/10 gpm Inlet
32 cST/150 sus oil at 40°C

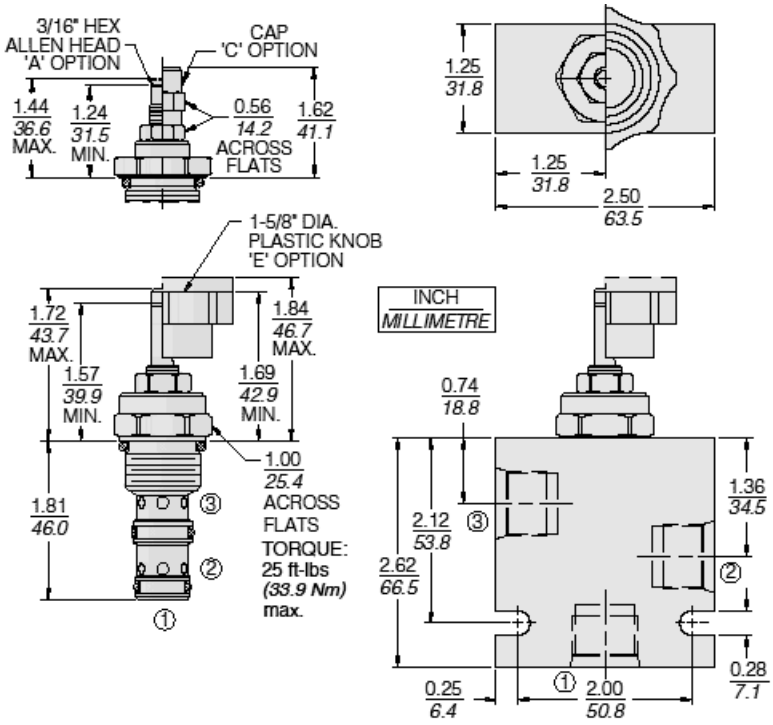


Regulated Flow vs. Turns
103 bar/1500 psi at Port ③
2-Ported: at 123 bar/1800 psi inlet pressure
3-Ported: at 38 lpm/10 gpm inlet flow
32 cST/150 sus oil at 40°C



ADJUSTABLE PRESSURE COMPENSATED FLOW REGULATOR VALVE CARTRIDGE

Dimensions



Installation Specifications

Cavity: VC10-3

10-size-3-way Cavities

Cartridge installation torque: 33 to 35 N-m (24 to 26)

Maximum allowable torque: 61 to 68 N-m (45 to 50)

Orientation restriction: None

Accessories

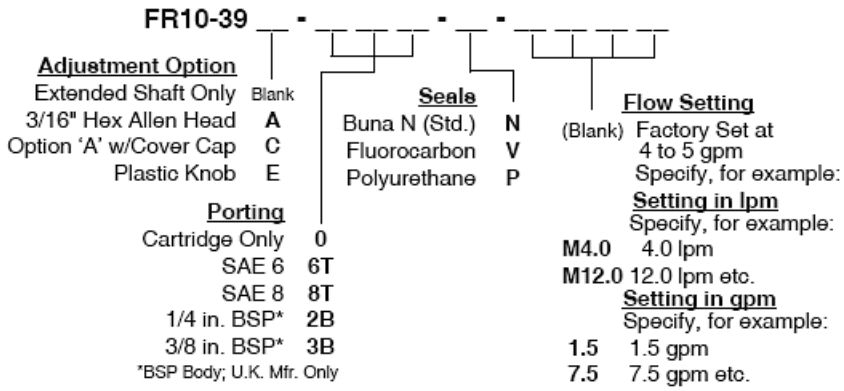
Seal kit: SK10-3X-MM

Seal kit installation instructions

Housings: Available 10-3w valve bodies

ADJUSTABLE PRESSURE COMPENSATED FLOW REGULATOR VALVE CARTRIDGE

Order Code



Model Options

FR10-39F-H-J-/T

F Adjustment Option

CODE	DESCRIPTION
A	3/16" Hex Allen Head
BLANK	Extended Shaft Only
C	3/16" Hex Allen Head with Cover Cap
E	Plastic Knob

H Line Body

CODE	DESCRIPTION
0	No Body
6T	Aluminum SAE 6
8T	Aluminum SAE 8
6TD	Ductile Iron SAE 6
8TD	Ductile Iron SAE 8
3B	Aluminum BSPP 3/8" (3)
3BD	Ductile Iron BSPP 3/8" (3)

J Seal

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

T Flow setting

CODE	DESCRIPTION
XX	Flow setting