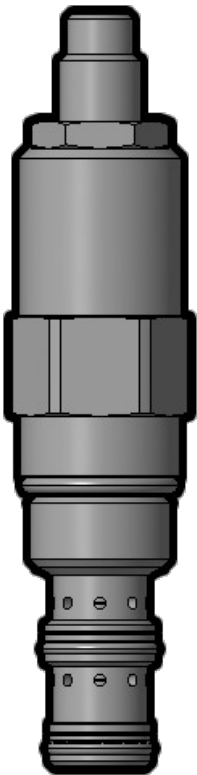




## Overview



### Description

The PS10-31X is a screw-in, cartridge style, direct acting, spool type, hydraulic sequence valve with internal pilot and spring chamber drain. It is designed to direct flow to a secondary circuit once a predetermined pressure is attained in the primary circuit.

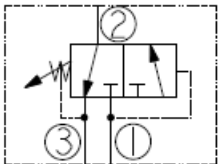
### Operation

In its steady state, the ps10-31x blocks flow at port 1, while allowing flow between port 2 and port 3. On attainment of a predetermined pressure at port 1, the valve shifts to open port 1 to port 2 and to close port 3.

### Features

- Adjustments cannot be backed out of the valve.
- Adjustments prohibit springs from going solid.
- Optional spring ranges to 144.8 bar (2100 psi).
- Hardened spool and cage for long life.
- Industry-common size.

### Symbol



## Ratings

### Pressure Ratings

Pressure rating	213.7 bar (3100 psi)	- <b>Note:</b> At ports 1, 2
	68.9 bar (1000 psi)	- <b>Note:</b> At port 3
Proof pressure	517.1 bar (7000 psi)	- <b>Note:</b> At ports 1, 2
	103.4 bar (1500 psi)	- <b>Note:</b> At port 3
Burst pressure	965.3 bar (14000 psi)	
Crack pressure defined	Pressure evident at 0.95 lpm (0.25 gpm) attained port 1 to port 2	

### Flow Ratings

Flow rating	37.9 lpm (10 gpm)	
Maximum internal leakage	82 ml/min (5 in <sup>3</sup> /min)	- <b>Note:</b> Port 2 to 3 at $\hat{P}$ 206.8 bar (3000 psi)

### Temperature Ratings

Operating fluid temperature	-40 to 100 °C (-40 to 212 °F)	- <b>Note:</b> With Buna N seals
	-26 to 204 °C (-15 to 400 °F)	- <b>Note:</b> With fluorocarbon seals
Storage temperature	-40 to 70 °C (-40 to 160 °F)	
Ambient temperature	-40 to 70 °C (-40 to 160 °F)	



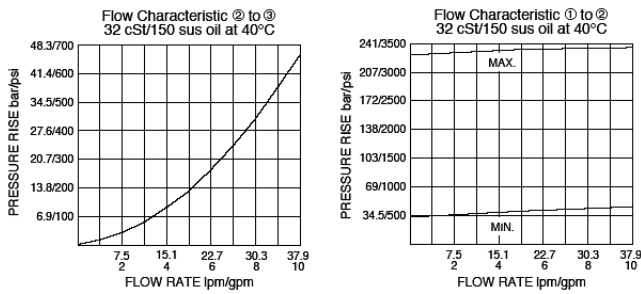
## Operating Parameters

Fluids	Mineral based or synthetic with lubricating properties
Fluid viscosity range	7.4 to 420 cSt
Maximum operating contamination level	18/16/13 per ISO 4406

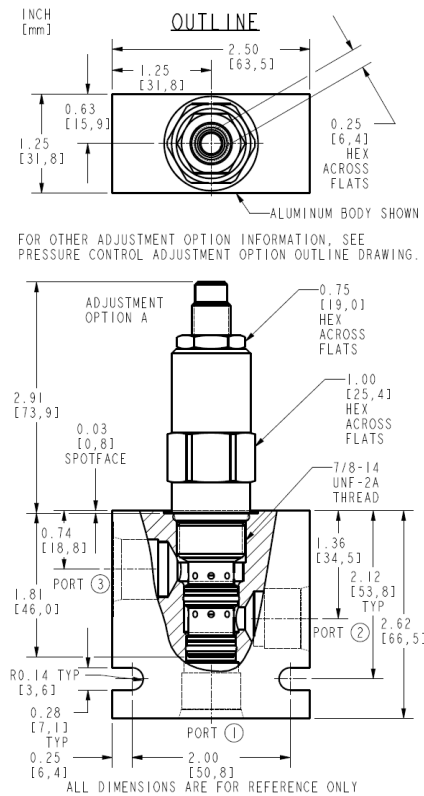
## Properties

Unit weight	0.268 kg (0.59 lb) 0.313 kg (0.69 lb) 0.290 kg (0.64 lb) 0.259 kg (0.57 lb)	- <b>Note:</b> PS10-31A - <b>Note:</b> PS10-31C - <b>Note:</b> PS10-31B - <b>Note:</b> PS10-31F PS10-31H
Internal wetted surface area	161 cm <sup>2</sup> (25 in <sup>2</sup> ) 181 cm <sup>2</sup> (28 in <sup>2</sup> )	- <b>Note:</b> PS10-31A/B/C - <b>Note:</b> PS10-31F/H
Pressure change per adjuster turn	22.4 bar (324.33 psi) 28 bar (405.42 psi)	- <b>Note:</b> Spring code 35, A adaptor - <b>Note:</b> Spring code 35, H adaptor

## Performance



## Dimensions



## Installation Specifications

Cavity	VC10-3
Cartridge installation torque	32.5 to 35.3 N-m (24 to 26 ft-lb)
H style plug torque	32.5 to 35.3 N-m (24 to 26 ft-lb)
Orientation restriction	None



## Accessories

Seal kit SK10-3X-BB - **Note:** X=seal options  
Housings



**Order Code**

ORDERING INFORMATION:

PS10-31X-X-X-XX/XXXX

BASE MODEL NUMBER:

ADJUSTMENT OPTIONS:

- 0.25 [6,4] HEX ALLEN HEAD - A
- Ø 1.50 [38,1] ALUMINUM KNOB - B
- OPTION A WITH COVER CAP - C
- FACTORY PRESET NON-ADJUSTABLE - F
- FACTORY PRESET HIDDEN ADJUSTMENT - H

PORTING:

- CARTRIDGE ONLY - 0

SEAL OPTION:

- BUNA N - N
- FLUOROCARBON - V

SPRING RANGE:

- 250-3100 psi - 35
- [17,2-213,7 bar]

PRESSURE SETTING:

- (IN 100 psi)
- 500 psi [34,5 bar] - 05
- (IN bar)
- 100 bar - M100

POSITION	CODE	DESCRIPTION
		PS10-31F-H-J-R/S
F		Adjustment Option
F	A	1/4" Hex Allen Head
F	B	1-1/2" Diameter Aluminum Knob with Aluminum Lock Knob
F	C	1/4" Hex Allen Head with Cover Cap
F	F	Factory Preset Non-Adjustable
F	H	Factory Preset Hidden Adjustment
F	L	1/4" Hex Allen Head with Cover Cap and Lockwire Holes
H		Line Body
H	0	No Body
H	6T	Aluminum SAE 6
H	8T	Aluminum SAE 8
H	6TD	Ductile Iron SAE 6
H	8TD	Ductile Iron SAE 8
H	3B	Aluminum BSPP 3/8" (3)
H	3BD	Ductile Iron BSPP 3/8" (3)
J		Seal
J	N	Buna-N
J	V	Fluorocarbon
J	P	Polyurethane
J	U	PPDI Urethane
R		Spring
R	35	35 to 240 bar (500 to 3500 psi) Spring Range
S		Setting
S	MXXX	Spring Setting in XXX bar
S	XX	Spring Setting in XX psi (x 100)