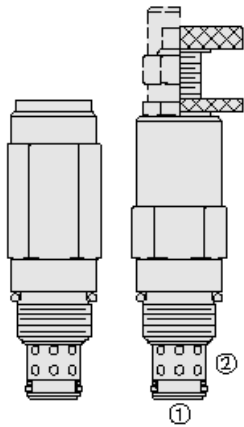




Overview



Description

CR10-28 is a screw in, cartridge style, direct-acting, differential area, poppet type, bidirectional hydraulic relief valve.

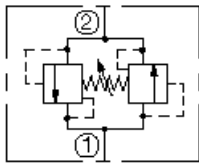
Operation

When pressure at either port exceeds the nominal setting value, flow will be transmitted to the opposite port. Back pressure at either port will affect the nominal setting of the opposite port on a 1:1 basis.

Features

- Adjustments cannot be backed out of the valve.
- Adjustments prohibit springs from going solid.
- Hardened spool and cage for long life.
- Industry-common size.

Symbol



Ratings

Pressure Ratings

Pressure rating	241.3 bar (3500 psi)	
Proof pressure	345.6 bar (5000 psi)	
Burst pressure	896.3 bar (16000 psi)	
Reseat pressure	90% of crack pressure at 0.95 lpm (0.25 gpm)	
Crack pressure	10.5 bar (150 psi)	- Note: Maximum difference both directions

Flow Ratings

Flow rating	60 lpm (16 gpm)	
Maximum internal leakage	33 ml/min (2 in ³ /min)	- Note: When reseal to 80% of crack pressure

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)	

Operating Parameters

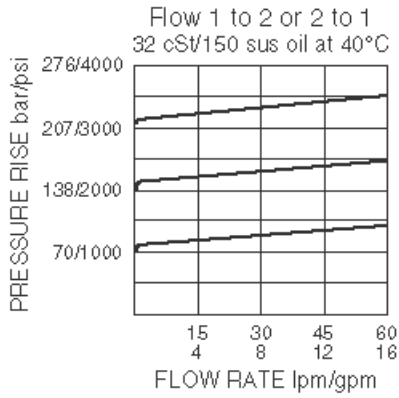
Fluids	Mineral based or synthetic with lubricating properties
Fluid viscosity range	7.4 to 420 cSt
Maximum operating contamination level	18/16/13 per ISO 4406

Properties

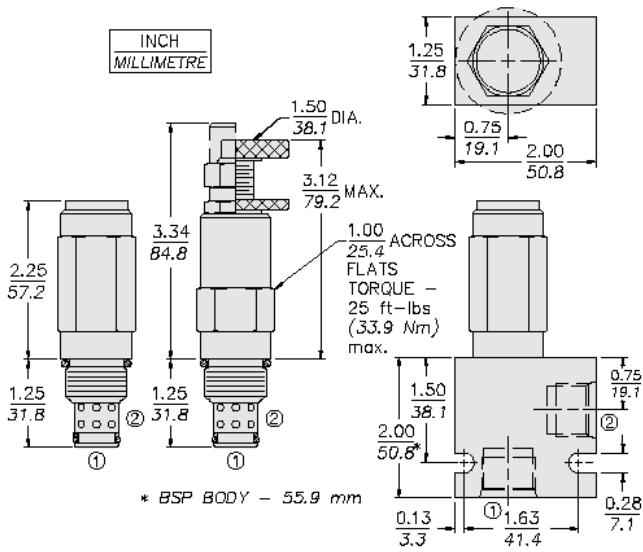
Unit weight	0.25 kg (0.55 lb)	- Note: CR10-28A
	0.28 kg (0.61 lb)	- Note: CR10-28B
	0.29 kg (0.65 lb)	- Note: Cr10-28c/l
	0.24 kg (0.53 lb)	- Note: Cr10-28f/h
Internal wetted surface area	193 cm ² (29.9 in ²)	- Note: Cr1028a/b/c/l
	189 cm ² (29.3 in ²)	- Note: Cr1028f/h



Performance



Dimensions



Installation Specifications

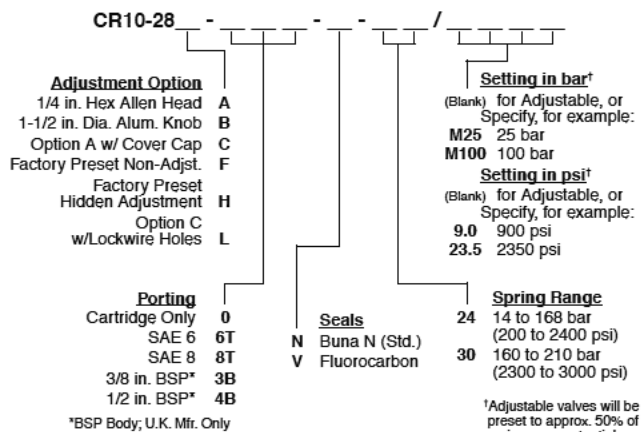
Cavity	VC10-2
Cartridge installation torque	33.9 to 36.6 N-m (25 to 27 ft-lb) 68 N-m (50 ft-lb)
Plug torque	33.9 N-m (25 ft-lb)
Orientation restriction	None

Accessories

Seal kit	SK10-2X-M	- Note: X = seal option
Housings		



Order Code



POSITION	CODE	DESCRIPTION
		CR10-28F-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	2B	Aluminum BSPP 1/4" (2)
H	3B	Aluminum BSPP 3/8" (3)
H	4B	Aluminum BSPP 1/2" (4)
H	4BD	Ductile Iron BSPP 1/2" (4)
J		Seal
J	N	Buna-N
J	V	Fluorocarbon
J	P	Polyurethane
J	U	PPDI Urethane
R		Spring
R	24	14 to 168 bar (200 to 2400 psi) Spring Range
R	30	160 to 210 bar (2300 to 3000 psi) Spring Range
S		Setting
S	MXXX	Spring Setting in XXX bar
S	XX	Spring Setting in XX psi (x 100)