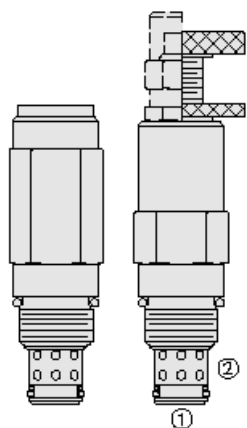




Overview



Description

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

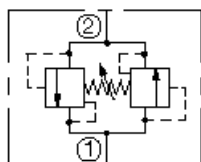
Operation

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

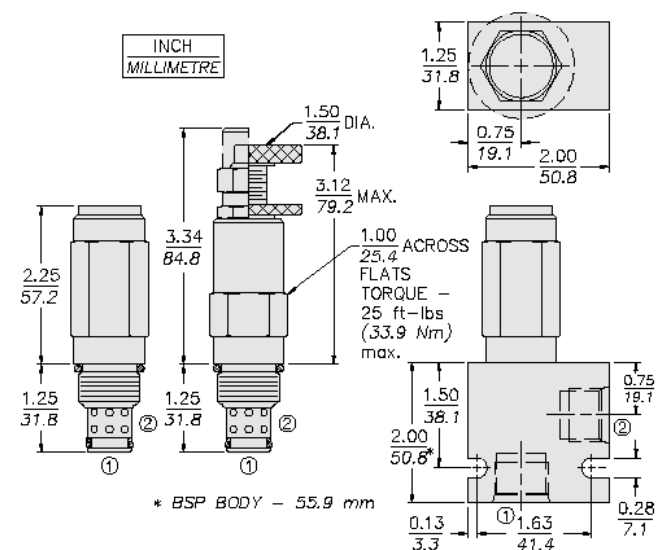
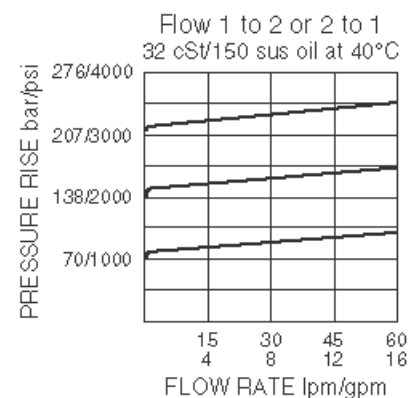
Operating fluid temperature	-40 to 100 °C (-40 to 212 °F)	- Note: With buna N seals
	-26 to 204 °C (-15 to 400 °F)	- Note: With fluorocarbon seals
	-54 to 107 °C (-65 to 225 °F)	- Note: With polyurethane seals
Storage temperature	-40 to 70 °C (-40 to 160 °F)	
Ambient temperature	-40 to 70 °C (-40 to 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



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

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

CR10-28		-	-	-	-	/
		-	-	-	-	-
<u>Adjustment Option</u>						<u>Setting in bar*</u>
1/4 in. Hex Allen Head	A					(Blank) for Adjustable, or
1-1/2 in. Dia. Alum. Knob	B					Specify, for example:
Option A w/ Cover Cap	C					M25 25 bar
Factory Preset Non-Adjst.	F					M100 100 bar
Factory Preset						<u>Setting in psi*</u>
Hidden Adjustment	H					(Blank) for Adjustable, or
Option C						Specify, for example:
w/Lockwire Holes	L					9.0 900 psi
						23.5 2350 psi
<u>Porting</u>						<u>Spring Range</u>
Cartridge Only	0				24	14 to 168 bar
SAE 6	6T		N	Seals		(200 to 2400 psi)
SAE 8	8T		V	Buna N (Std.)	30	160 to 210 bar
3/8 in. BSP*	3B			Fluorocarbon		(2300 to 3000 psi)
1/2 in. BSP*	4B					
*BSP Body; U.K. Mfr. Only						*Adjustable valves will be preset to approx. 50% of



Model Options

CR10-28F-H-J-R/S

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
6T	Aluminum SAE 6
8T	Aluminum SAE 8
6TD	Ductile Iron SAE 6
8TD	Ductile Iron SAE 8
2B	Aluminum BSPP 1/4" (2)
3B	Aluminum BSPP 3/8" (3)
4B	Aluminum BSPP 1/2" (4)
4BD	Ductile Iron BSPP 1/2" (4)

J Seal

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

R Spring

CODE	DESCRIPTION
24	14 to 168 bar (200 to 2400 psi) Spring Range
30	160 to 210 bar (2300 to 3000 psi) Spring Range

S Setting

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