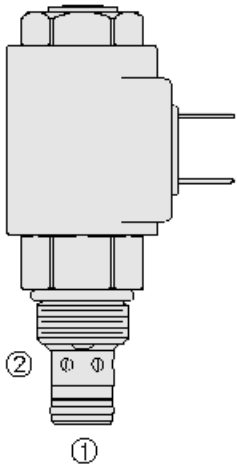




Overview



Description

TS08-27F is a pilot operated spool type, proportional pressure relieving valve. The regulated pressure is inversely proportional to the input electrical current.

Operation

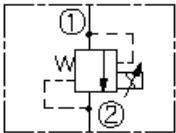
The TS08-27F blocks flow from port 1 to port 2 until sufficient pressure is present at port 1 to open the valve by overcoming the preset induced spring force. Applying current to the coil decreases the induced spring force, thereby reducing the valve setting.

Features

- Several adjustable pressure settings plus factory preset fixed pressure model.
- Hardened parts for long life.
- 12 and 24 volt coils standard.
- Industry common cavity.
- Optional waterproof E-coils rated up to IP69K.

Symbol

USAS/ISO:



Ratings

Pressure Ratings

Pressure rating	241 bar (3500 psi)	- Note: Port 1
Proof pressure	413.7 bar (6000 psi)	- Note: Port 1
	206.8 bar (3000 psi)	- Note: Port 2
Burst pressure	814 bar (11800 psi)	- Note: At all ports
Pressure setting	41.4 to 248.2 bar (600 to 3600 psi)	

Flow Ratings

Flow rating	26.5 lpm (7 gpm)	
Hysteresis per cent	3.2 %	- Note: (A)
	3.0 %	- Note: (B)
	4.8 %	- Note: (C)

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
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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

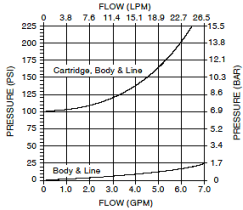
Unit weight	0.15 kg (0.33 lb)
Internal wetted surface area	124 cm ² (19.2 in ²)

Electrical Parameters

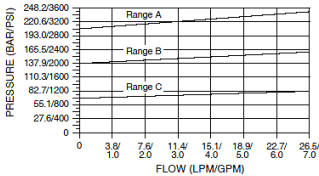
Dither PWM frequency	200 Hz	
Valve inductance	134 mH	- Note: D-series coil 12 V
	500 mH	- Note: D-series coil 24 V
	139 mH	- Note: E-series coil 12 V
	560 mH	- Note: E-series coil 24 V
Maximum control current	1.15 A	- Note: D-series coil 12 V
	0.57 A	- Note: D-series coil 24 V
	1.20 A	- Note: E-series coil 12 V
	0.60 A	- Note: E-series coil 24 V

Performance

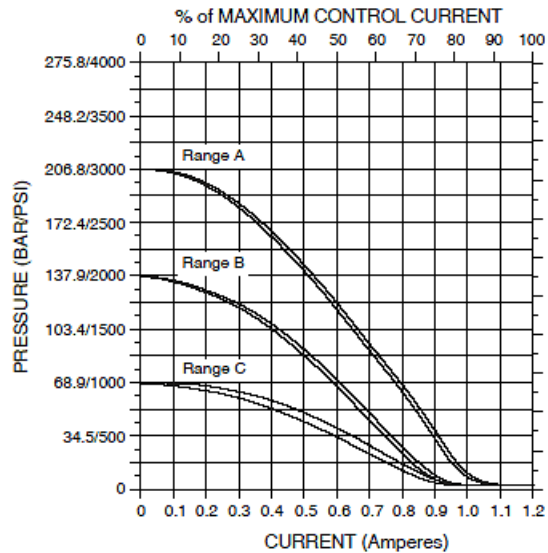
PRESSURE DROP VS. FLOW CHARACTERISTIC
Flow from Port 1 to Port 2 with Coil Energized,
at Maximum Set Current



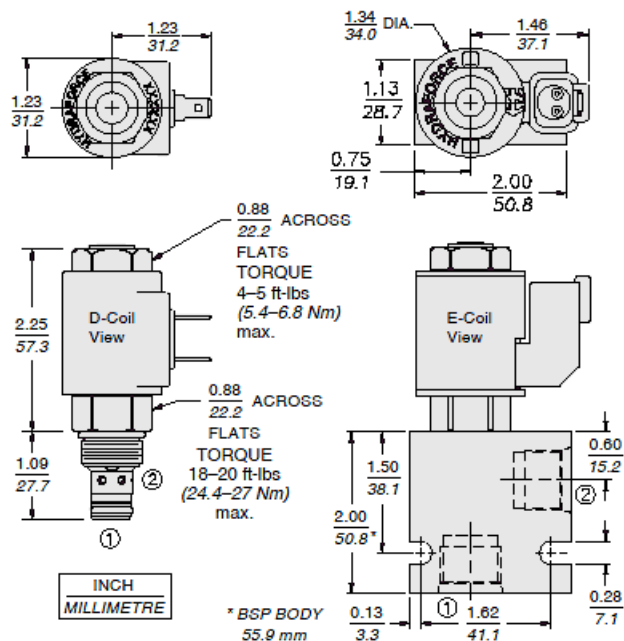
TYPICAL RELIEF PRESSURE VS. FLOW CHARACTERISTIC
Typical Relieving Pressure Port 1 to Port 2 at No Current Applied
With Constant Flow 7.1 lpm/2 gpm, Cartridge in Body



RELIEF PRESSURE
vs. CURRENT (DC) CHARACTERISTIC
Relieving Pressure Port 1 to Port 2
With Constant Flow 7.6 lpm/2 gpm



Dimensions





Installation Specifications

Cavity	VC08-2	
Cartridge installation torque	25.8 to 28.5 N-m (19 to 21 ft-lb)	- Note: Per 7708xxx
Coil nut torque	5.4 to 6.8 N-m (4 to 5 ft-lb)	
Orientation restriction	None	

Accessories

Seal kit	SK08-2X-B	- Note: X=seal option
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Order Code

TS08-27		-	-	-	-	-
<u>Maximum Operating Pressure</u>	A					<u>D-Coil Terminations</u>
207 bar (3000 psi)	B					DR Integral Deutsch
138 bar (2000 psi)	C					DS Dual Spades (J858a)
70 bar (1000 psi)						DG DIN 43650
						DL Leadwires (2)
						DL/W Leads w/Weatherpak® Connectors
<u>Porting</u>	0					<u>E-Coil Terminations</u>
Cartridge Only	6T					ER Deutsch DT04-2P (IP69K Rated)
SAE 6	3B					Coils with internal diode are available. Consult factory.
3/8 in. BSP*						
*BSP Body; U.K. Mfr. Only						
<u>Seals</u>	N					<u>Voltage</u>
Buna N (Std.)	V	0	10	12	20	0 Less Coil
Fluorocarbon	P	10	12	20	24	10 VDC
Polyurethane		12	20	24		12 VDC
		20				20 VDC
		24				24 VDC

Model Options

TS08-27D-H-J-L

D Regulating Pressure Range

CODE	DESCRIPTION
A	206.8 to 6.9 bar (3000 to 100 psi) Pressure Range
B	137.9 to 6.9 bar (2000 to 100 psi) Pressure Range
C	68.9 to 6.9 bar (1000 to 100 psi) Pressure Range
F	248.2 to 41.1 bar (3600 to 600 psi) Crack Pressure at Zero Current

H Line Body

CODE	DESCRIPTION
0	No Body
4T	Aluminum SAE 4
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)
3BD	Ductile Iron BSPP 3/8" (3)

J Seal

CODE	DESCRIPTION
N	Buna-N
V	Fluorocarbon



CODE	DESCRIPTION
P	Polyurethane
U	PPDI Urethane

L Coil

CODE	DESCRIPTION
0	No Coil
12DG	12 VDC, D-Coil, DIN 43650
12ER	12 VDC, E-Coil, Deutsch
12EY	12 VDC, E-Coil, Metri-Pack 150
24DG	24 VDC, D-Coil, DIN 43650
24DL	24 VDC, D-Coil, Dual Lead Wires
24DS	24 VDC, D-Coil, Dual Spade
24ER	24 VDC, E-Coil, Deutsch