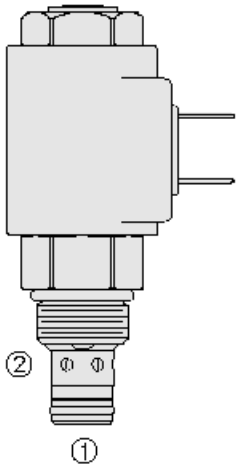




## Overview



### 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

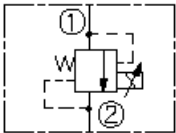
The TS08-27F blocks flow from port 1 to port 2 until sufficient pressure is present at port 1 to open the valve by overcoming the preset induced spring force. Applying current to the coil decreases the induced spring force, thereby reducing the valve setting.

### 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)	- <b>Note:</b> Port 1
Proof pressure	413.7 bar (6000 psi)	- <b>Note:</b> Port 1
	206.8 bar (3000 psi)	- <b>Note:</b> Port 2
Burst pressure	814 bar (11800 psi)	- <b>Note:</b> 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 %	- <b>Note:</b> (A)
	3.0 %	- <b>Note:</b> (B)
	4.8 %	- <b>Note:</b> (C)

### 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
	-54 to 107 °C (-65 to 225 °F)	- <b>Note:</b> 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

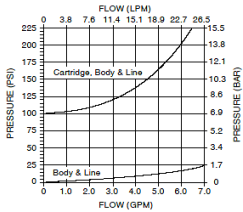
Unit weight	0.15 kg (0.33 lb)
Internal wetted surface area	124 cm <sup>2</sup> (19.2 in <sup>2</sup> )

## Electrical Parameters

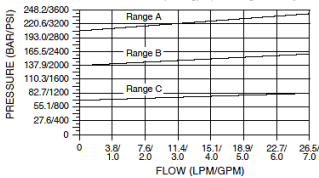
Dither PWM frequency	200 Hz	
Valve inductance	134 mH	- <b>Note:</b> D-series coil 12 V
	500 mH	- <b>Note:</b> D-series coil 24 V
	139 mH	- <b>Note:</b> E-series coil 12 V
	560 mH	- <b>Note:</b> E-series coil 24 V
Maximum control current	1.15 A	- <b>Note:</b> D-series coil 12 V
	0.57 A	- <b>Note:</b>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

## Performance

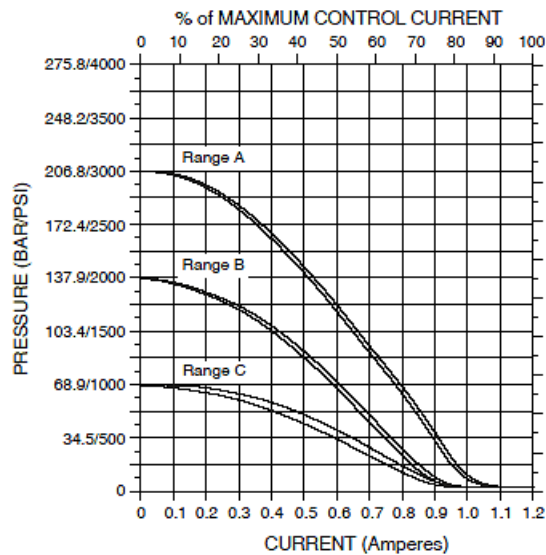
PRESSURE DROP VS. FLOW CHARACTERISTIC  
Flow from Port 1 to Port 2 with Coil Energized,  
at Maximum Set Current



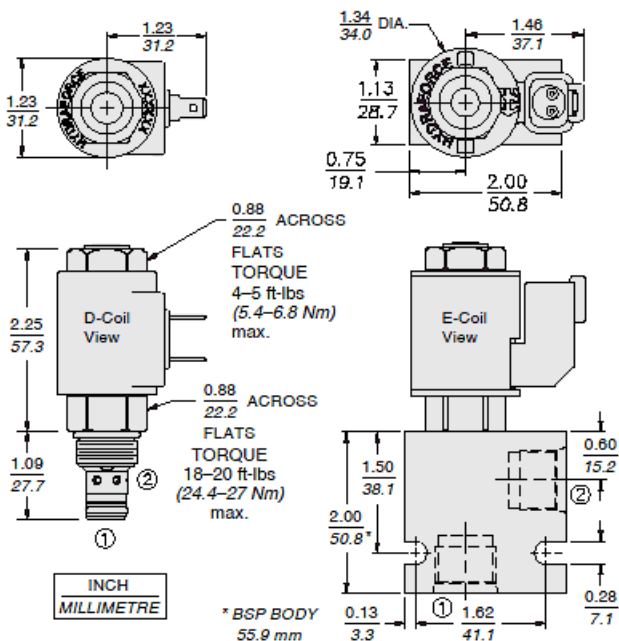
TYPICAL RELIEF PRESSURE VS. FLOW CHARACTERISTIC  
Typical Relieving Pressure Port 1 to Port 2 at No Current Applied  
With Constant Flow 7.1 lpm/2 gpm, Cartridge in Body



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



## Dimensions





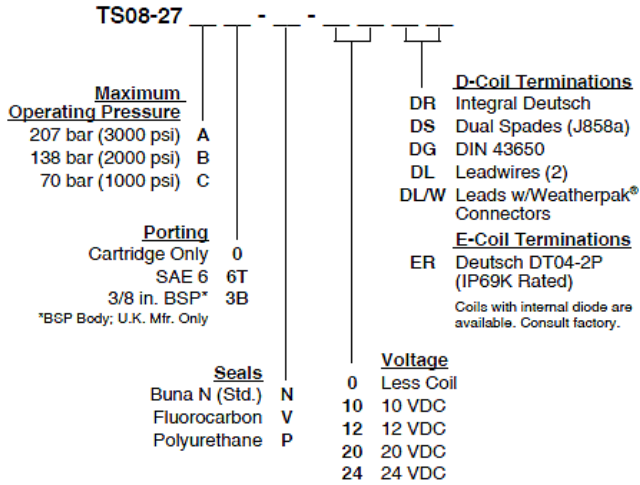
## Installation Specifications

Cavity	VC08-2	
Cartridge installation torque	25.8 to 28.5 N-m (19 to 21 ft-lb)	- <b>Note:</b> 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	- <b>Note:</b> X=seal option
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## Order Code



### 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