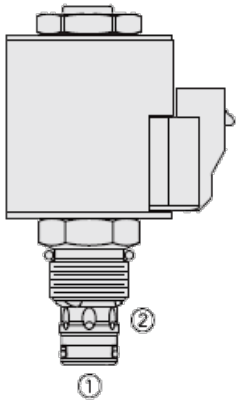




Overview



Description

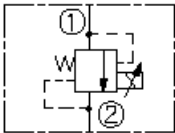
This is a pilot operated spool type, proportional pressure relieving valve. It is intended for use in mineral based or synthetic (with lubricating properties) hydraulic fluids. The regulated pressure is inversely proportional to the input electrical current in the pressure ranges shown

Features

- 12 and 24 volt coils standard.
- Industry common cavity.
- Corrosion-resistant, 960 hour-salt-spray-rated protective coating standard.
- Adjustable or fixed relief pressure settings.
- Higher pressure 330.9 bar (4800 psi) factory-set model F available.

Symbol

USAS/ISO:



Ratings

Pressure Ratings

Pressure rating	241 bar (3500 psi)	
Regulated pressure range	6.9 to 206.8 bar (100 to 3000 psi)	- Note: (a) from zero to maximum control current
	6.9 to 138 bar (100 to 2000 psi)	- Note: (b) from zero to maximum control current
	6.9 to 69 bar (100 to 1000 psi)	- Note: (c) from zero to maximum control current
Relief pressure range	6.9 to 206.8 bar (100 to 3000 psi)	- Note: A (from zero to imax)
	6.9 to 138 bar (100 to 2000 psi)	- Note: B (from zero to imax)
	6.9 to 69 bar (100 to 1000 psi)	- Note: C (from zero to imax)
Maximum tank port pressure	103.4 bar (1500 psi)	- Note: Dynamic condition
Pressure rise	0.48 bar/lpm (26.5 psi/gpm)	- Note: A
	0.36 bar/lpm (20 psi/gpm)	- Note: B
	0.46 bar/lpm (25 psi/gpm)	- Note: C

Flow Ratings

Flow rating	75.7 lpm (20 gpm)	- Note: $\hat{a}^{-3}p$ (cartridge only) port 1 to port 2 (coil energized)
	24.1 bar (300 to 350 psi)	20.7 to
Maximum pilot flow	0.76 lpm (0.2 gpm)	
Hysteresis per cent	3.2 %	- Note: (a)
	3.0 %	- Note: (a)
	4.8 %	- Note: (c)

Temperature Ratings

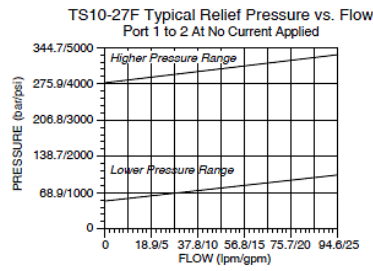
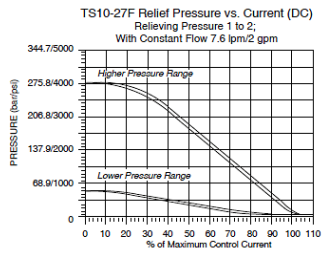
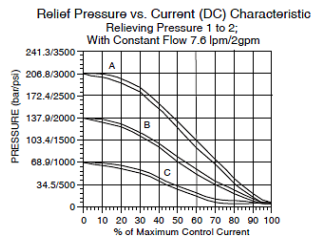
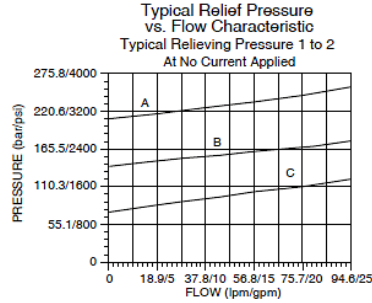
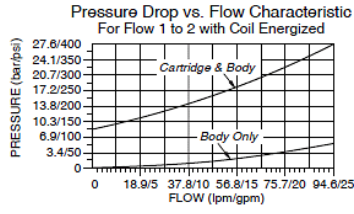
Operating fluid temperature	-40 to 120 °C (-40 to 250 °F)	- Note: With buna N seals
	-35 to 204 °C (-31 to 400 °F)	- Note: With viton seals

Electrical Parameters

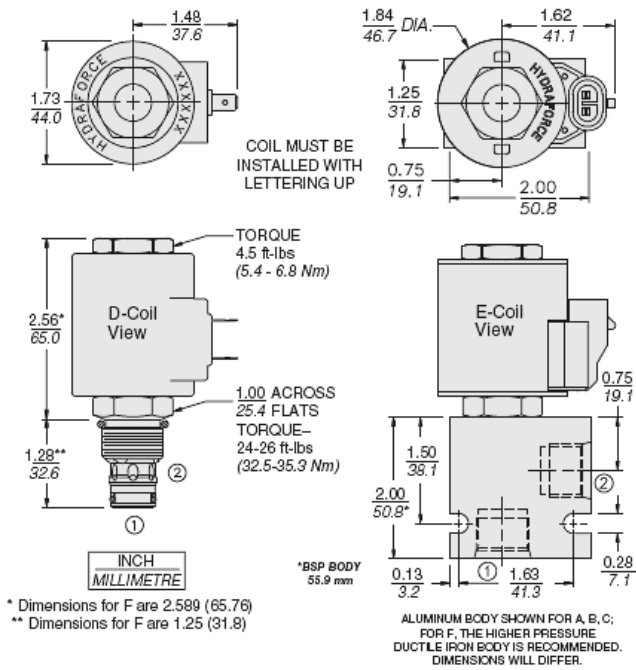
Maximum control current	1.10 A	- Note: D-series coil 12 Vdc
	0.55 A	- Note: D-series coil 24 Vdc
Dither PWM frequency	200 Hz	



Performance



Dimensions





Materials

Materials

Cartridge: Weight: 0.18 kg (0.4 lb); Steel with hardened work surfaces. Zinc-plated exposed surfaces; Buna N O-rings and polyester elastomer back-ups standard. Optional polyurethane seals with fluorocarbon back-up recommended for pressures over 240 bar (3500 psi).

Standard Ported Body: Weight: 0.16 kg (0.35 lb); Anodized high-strength 6061 T6 aluminum alloy, rated to 207 bar (3000 psi); Ductile iron bodies available; dimensions may differ.

D-Coil: Weight each: 0.27 kg (0.6 lb); Unitized thermoplastic encapsulated, Class H high temperature magnet wire.

E-Coil: Weight: 0.41 kg (0.9 lb); Perfect wound, fully encapsulated with rugged external metal shell; Rated up to IP69K with integral connectors.

Order Code

POSITION	CODE	DESCRIPTION
		TS10-27D-H-J-L
D		Regulating Pressure Range
D	A	206.8 to 6.9 bar (3000 to 100 psi) Pressure Range
D	B	137.9 to 6.9 bar (2000 to 100 psi) Pressure Range
D	C	68.9 to 6.9 bar (1000 to 100 psi) Pressure Range
D	E	Adjustable Crack Pressure at Zero Current
D	F	275.8 to 27.6 bar (4000 to 400 psi) Crack Pressure at Zero Current
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
L		Coil
L	0	No Coil
L	10DG	10 VDC, D-Coil, DIN 43650
L	10DL	10 VDC, D-Coil, Dual Lead Wires
L	10DS	10 VDC, D-Coil, Dual Spade
L	10EL	10 VDC, E-Coil, Dual Lead Wires
L	10ER	10 VDC, E-Coil, Deutsch
L	12DG	12 VDC, D-Coil, DIN 43650
L	12DL	12 VDC, D-Coil, Dual Lead Wires, 18 inches long
L	12DL/36	12 VDC, D-Coil, Dual Lead Wires, 36 inches long
L	12DL/W	12 VDC, D-Coil, Dual Lead Wires with Weatherpak



POSITION	CODE	DESCRIPTION
L	12DR	12 VDC, D-Coil, Deutsch
L	12DS	12 VDC, D-Coil, Dual Spade
L	12EG	12 VDC, E-Coil, DIN 43650
L	12EJ	12 VDC, E-Coil, AMP Jr.
L	12EL	12 VDC, E-Coil, Dual Lead Wires, 18 inches long
L	12EL/36	12 VDC, E-Coil, Dual Lead Wires, 36 inches long
L	12ER	12 VDC, E-Coil, Deutsch
L	12EY	12 VDC, E-Coil, Metri-Pack 150
L	20DS	20 VDC, D-Coil, Dual Spade
L	20ER	20 VDC, E-Coil, Deutsch
L	24AG	24 VDC, D-Coil, DIN 43650
L	24AP	24 VDC, D-Coil, 1/2" Conduit and Dual Lead Wires
L	24DG	24 VDC, D-Coil, DIN 43650
L	24DL	24 VDC, D-Coil, Dual Lead Wires
L	24DL/W	24 VDC, D-Coil, Dual Lead Wires with Weatherpak
L	24DP	24 VDC, D-Coil, 1/2" Conduit and Dual Lead Wires
L	24DR	24 VDC, D-Coil, Deutsch
L	24DS	24 VDC, D-Coil, Dual Spade
L	24EG	24 VDC, E-Coil, DIN 43650
L	24EJ	24 VDC, E-Coil, AMP Jr.
L	24EL	24 VDC, E-Coil, Dual Lead Wires, 18 inches long
L	24EL/36	24 VDC, E-Coil, Dual Lead Wires, 36 inches long
L	24ER	24 VDC, E-Coil, Deutsch
L	24EY	24 VDC, E-Coil, Metri-Pack 150
L	36DS	36 VDC, D-Coil, Dual Spade

