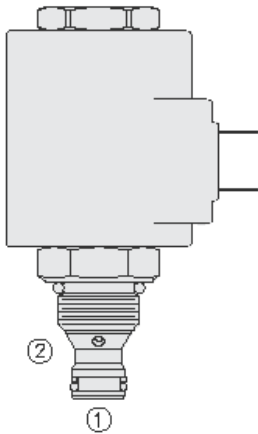




## Overview



### Description

Description: TS38-21 is a direct-acting, spool-type, proportional, pressure relieving valve. The regulated pressure is inversely proportional to the input electrical current. Port 1 is protected by 150 mesh screen.

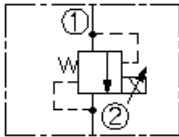
### Operation

The TS38-21 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. With no current applied, the valve will relieve range maximum. Applying current to the coil decreases the induced spring force, thereby reducing the valve setting.

### Features

- o 12 and 24 volt coils standard.
- o Optional waterproof E-Coils rated up to IP69K.
- o Industry common cavity.
- o Hardened parts for long life.

### Symbol



## Ratings

### Pressure Ratings

Pressure rating	248.2 bar (3600 psi)	- Note: A (at port 1)
	172.4 bar (2500 psi)	- Note: B (at port 1)
Proof pressure	75.8 bar (1100 psi)	- Note: C (at port 1)
	289.6 bar (4200 psi)	- Note: D (at port 1)
Burst pressure	344.7 bar (5000 psi)	- Note: Port 1
	241.3 bar (3500 psi)	- Note: Port 2
Adjustable pressure range	758.4 bar (11000 psi)	
	6.9 to 206.8 bar (100 to 3000 psi)	- Note: (a)
	6.9 to 137.9 bar (100 to 2000 psi)	- Note: (b)
	6.9 to 68.9 bar (100 to 1000 psi)	- Note: (c)
	6.9 to 241.3 bar (100 to 3500 psi)	- Note: (c)

### Flow Ratings

Flow rating	1.1 lpm (0.3 gpm)	
Hysteresis per cent	2.5 %	- Note: (a) and (d)
	4 %	- Note: (b)
	5 %	- 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 and urethane seals
Storage temperature	-40 to 70 °C (-40 to 160 °F)	
Ambient temperature	-40 to 100 °C (-40 to 212 °F)	

### Other Ratings

Corrosion protection	960 hr salt spray per ASTM b117
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## Operating Parameters

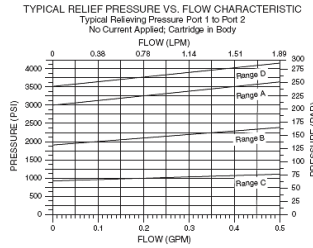
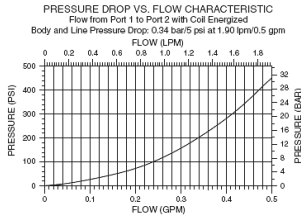
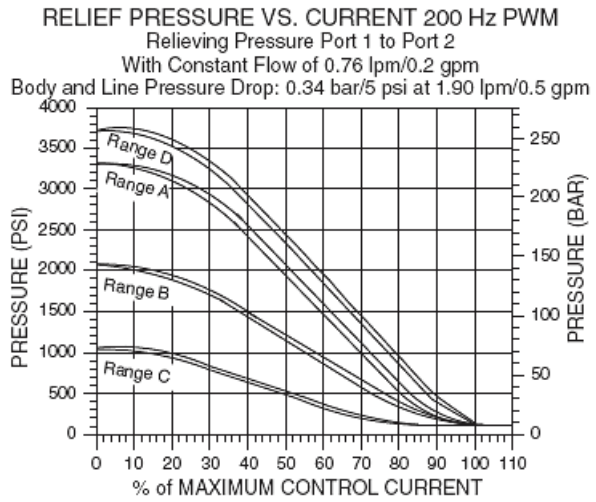
Fluids	Mineral based or synthetic with lubricating properties
Fluid viscosity range	7.4 to 420 cSt
Maximum operating contamination level	18/16/13 per ISO 4406



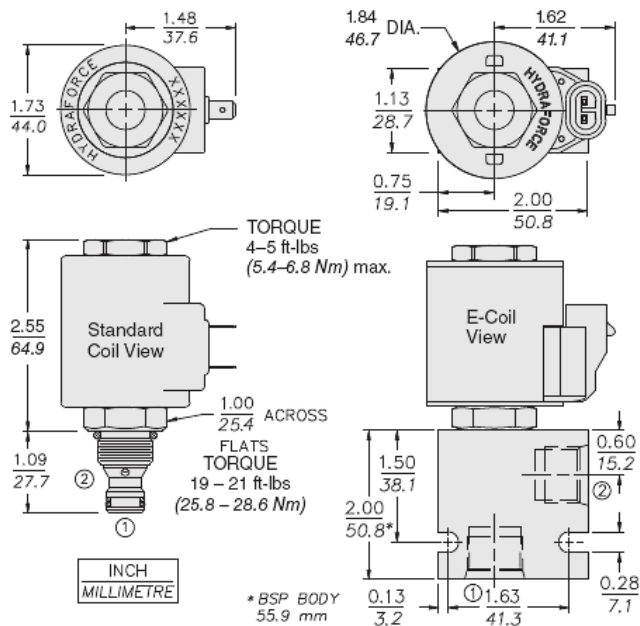
## Properties

Unit weight	0.16 kg (0.35 lb)
Internal wetted surface area	107 cm <sup>2</sup> (16.6 in <sup>2</sup> )

## Performance



## Dimensions



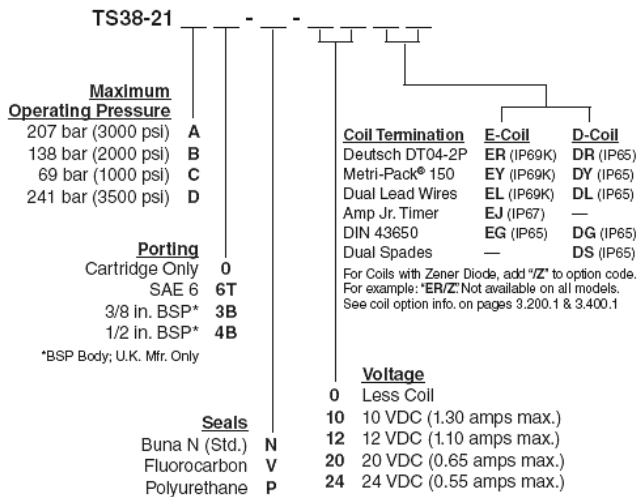
## Installation Specifications

Cavity	VC08-2
Cartridge installation torque	25.8 to 28.6 N-m (19 to 21 ft-lb)
Coil nut torque	5.4 to 6.8 N-m (4 to 5 ft-lb)
Orientation restriction	None

## Accessories

Seal kit	SK08-2N-B SK08-2V-B SK08-2P-B SK08-2U-O
Housings	
Coils	

## Order Code



POSITION	CODE	DESCRIPTION
		TS38-21D-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	D	241.3 to 6.9 bar (3500 to 100 psi) Pressure Range
H		Line Body
H	0	No Body
H	4T	Aluminum SAE 4
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	3BD	Ductile Iron BSPP 3/8" (3)
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