2.6

50ER07-20 TYPE

Proportional Relief Valve

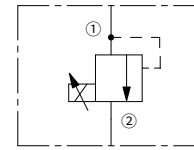
Rated pressure(bar / psi)	**345 / 5000**
Peak flow (L/min / gpm)	See performance chart

Features

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

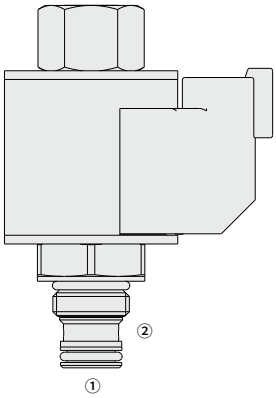
Contents

Symbol



Description

A screw-in, cartridge-style, direct acting, poppet-type hydraulic relief valve, which can be infinitely adjusted across a Inverse proportion range using a variable electric input. Pressure output is proportional to DC current input.



Operation

The 50ER07-20 blocks flow from port ① to port ② until sufficient pressure is present at port ① to offset the electrically induced solenoid force. With no current applied to the solenoid, the valve will free flow from port ① to port ② .

Note: Back pressure on port 2 becomes additive to the pressure setting at a 1 :1 ratio.

Ordering code

50ER07-20 □ – □□ – □ – □ – □□ □ □ □

Option
None — Blank

Pressure setting
1600psi — 16

Cartridge only — 0

Seals
Buna N (Std.) — N
Fluorocarbon — V
EPDM — E

Voltage
0 — Less Coil
10 — 10VDC (1.30 amps，max.)
12 — 12VDC (1.10 amps，max.)
20 — 20VDC (0.65 amps，max.)
24 — 24VDC (0.55 amps，max.)

E-Coil
ER (IP69K)
EL (IP69K)

Coil termination
Deutsch DT04-2P
Lead wires (2)

Technical data

Hydraulic

Rated pressure	345bar (5000 psi)
Peak flow	See performance chart
Rated current	1000±100 mA
Internal leakage	⩽ 5 drops/min @ 80% relief pressure
Magnetic hysteresis	⩽ 5% @ 150 ~ 250Hz PWM
Cavity	VC07-2
Flow path	Free Flow: Port ① to port ② coil de-energized; Relieving: Port ① to port ② coil energized
Temperature range	-40 to 100 °C (Buna N seals)
	-26 to 204 °C (Fluorocarbon seals)
	-50 to 130 °C (EPDM seals)
Fluids	Mineral-based or synthetics with lubricating properties at viscosities of 7.4 to 420 cSt (50 to or 2000 sus)
Installation recommendation	When possible, the valve should be mounted below the reservoir oil level.This will maintain oil in the armature preventing trapped air instability. If this is not feasible, mount the valve horizontally for best results.

Electric

Coil		E-Coil
Maximum current (A)	12VDC	1.10
	24VDC	0.55
Electric resistance (Ω) @20° C	12VDC	8.8±5%
	24VDC	33.8±5%

Materials

Cartridge:
Weight: 0.11 kg ; Steel with hardened work surfaces.
Zinc-plated exposed surfaces. Buna N O-rings and polyester elastomer back-up standard.

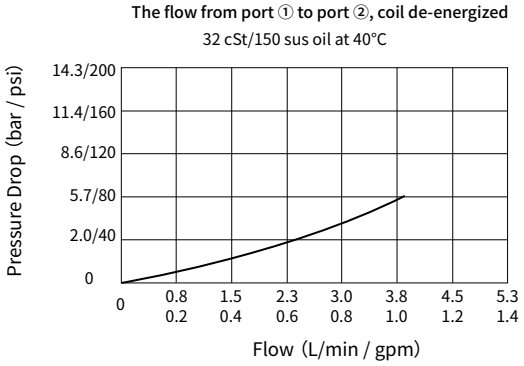
Standard Ported Body:
Anodized high-strength aluminum alloy, rated to 240 bar; Ductile iron and steel bodies available; Dimensions may differ, consult factory.

Standard Coil: Consult factory.

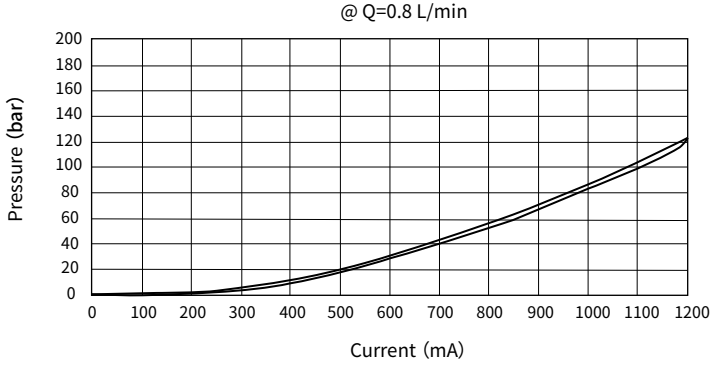
E-Coil:
Weight: 0.14 kg; Perfect wound, fully encapsulated with rugged external metal shell; Rated up to IP69K with Deutsch sockets.

Characteristic curves

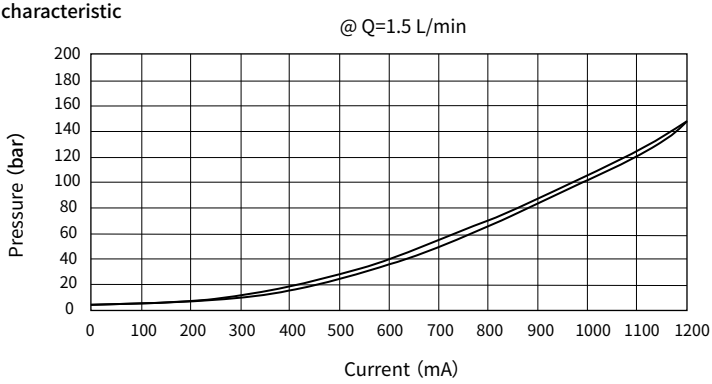
Pressure Loss



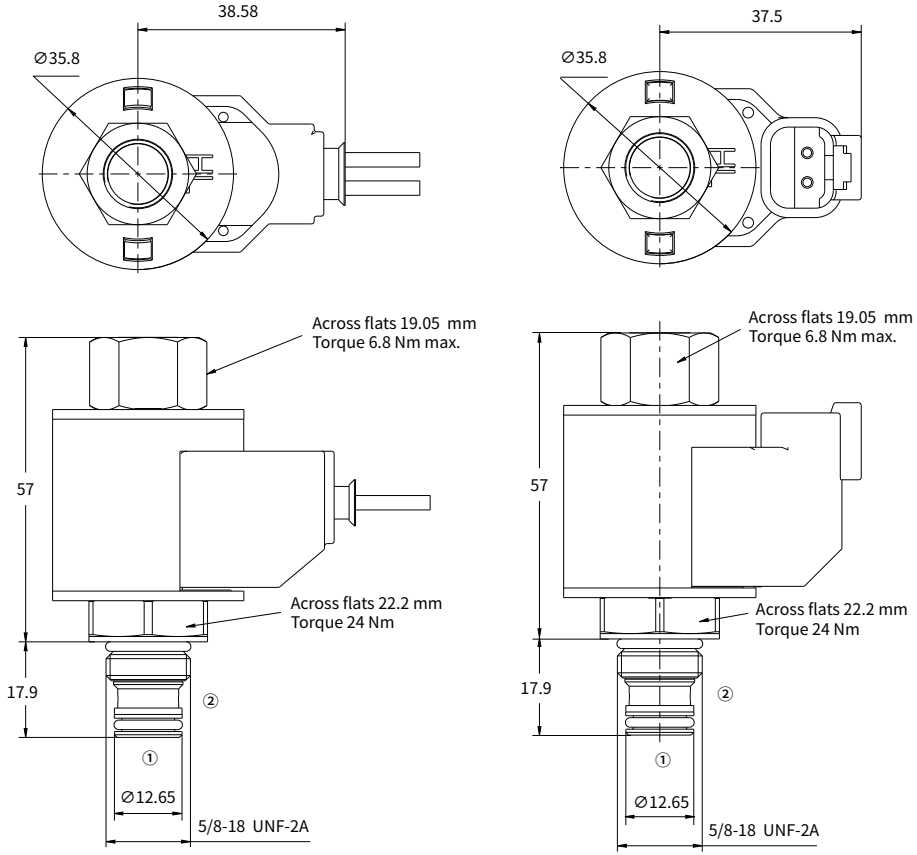
Pressure and current characteristic



Pressure and current characteristic

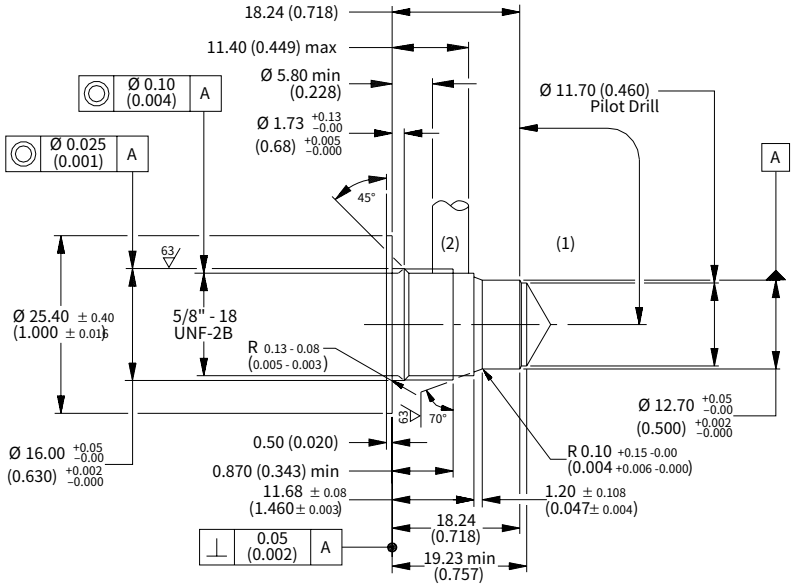


Unit dimensions



Cavity dimensions

VC07-2



Millimetre（Inch）