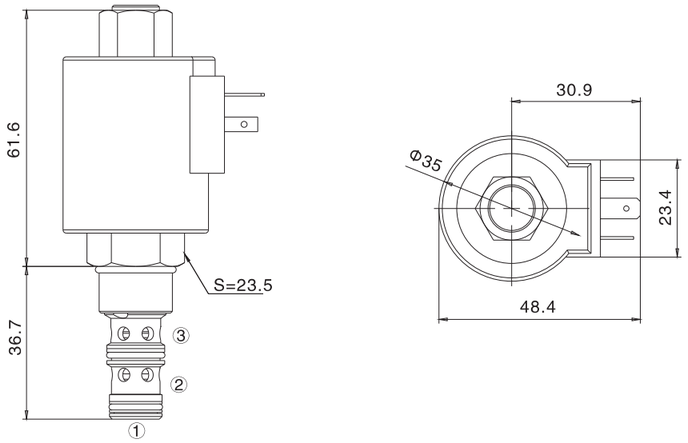
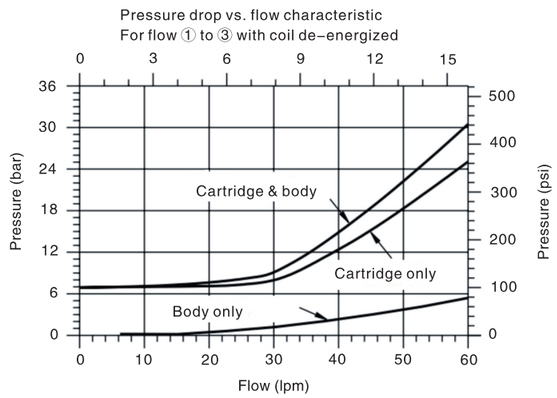
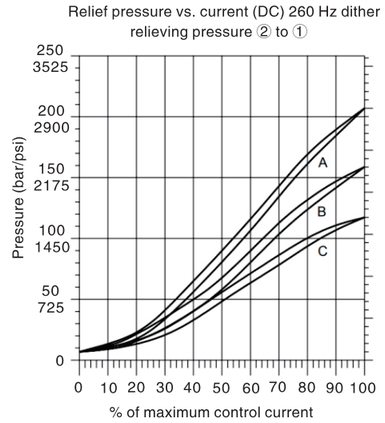
HY–TS10–36 (Proportional Pilot–operated Pressure Reducing/ Relief Valve)

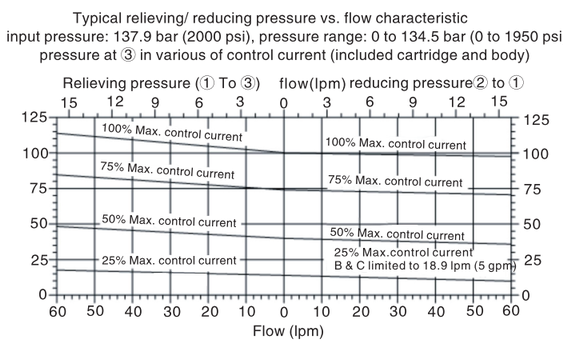
External dimensions



Specification performance







HY–TS38–20 (Proportional Relief Valve)

Introduction

Description:
A screw–in, cartridge–style, direct acting, single stage, poppet–type hydraulic relief valve, which can be infinitely adjusted across a prescribed range using a variable electric Pressure output is proportional to DC current input. This valve is intended for use as a pressure limiting device in demanding applications.

Opeartion:
The TS38–20 blocks flow from ① to ② until sufficient pressure is present at ? to offset the electrically induced solenoid force. With no current applied to the solenoid, the valve will free flow from ① to ②.
Note: Back pressure on ② becomes additive to the pressure setting at a 1:1 ratio.

Technical specification (for application beyond these parameters, please contact with us)

Model	HY–TS38–20
Installation position	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.
Storage temperature (℃)	–20℃ To +55℃
Ambient temperature (℃)	–20℃ To +50℃

Hydraulic specification

Max.operating pressure	241 Bar (3500 psi)
Rated flow	A: 11.4 lpm (3 gpm) at 20 bar (290 psi) pressure drop; B: 11.4 lpm (3 gpm) at 10 bar (150 psi) pressure drop; C: 11.4 lpm (3 gpm) at 5.5 bar (80 psi) pressure drop
Flow path	Free flow: ① to ② coil de–energized; Relieving: ① to ② coil energized
Hysteresis (with dither of 250 Hz)	3.3% (Without dither: 7% maximum)
Dither frequency	150 Hz or higher
Step reponse	T on <50 ms; T off <7 ms
Hydraulic fluid	Mineral oil, phosphate–ester
Fluids	7.4~420 cSt (50~2000 sus)
Temperature	–40℃~+120℃（–40~250°F），With NBR seals
Cavity	HY08–2,see page H.1.2
Max. pilot flow	0.76 Lpm (0.2 gpm)

Electrical specification

Max. control current	12 VDC coils:1.10A; 24 VDC coils: 0.55A
Relief pressure range (from zero to max. control current)	A:0–207 bar (0–3000 psi); B:0–138 bar (0–2000 psi); C:0–69 bar (0–1000 psi)
Control signal	DC or PWM (Significant improvements in valve performance occur with superimposed dither, with either control method.)

HY–TS38–20 (Proportional Relief Valve)

Model instruction

HY–TS38–20 – * – * – * – * * *

Proportional relief valve

Maximum relief pressure
A 207 bar (3000psi)
B 138 bar (2000psi)
C 69 bar (1000psi)

Option
Vent screw blank
Manual override M

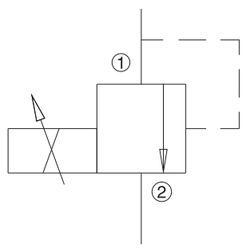
Porting
0 Cartridge only
6T SAE6
8T SAE8
3B 3/8 in. BSP*
4B 1/2 in. BSP*

Std. coil termination (VDC)
DG DIN 43650
ER Deutsch DT04–2P

Voltage
0 Less coil
12 12 VDC(1.10 amps max.)
24 24 VDC(0.55 amps max.)

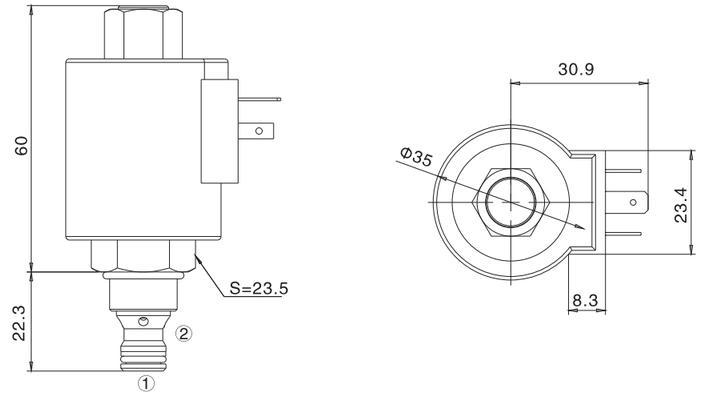
Seals
N NBR Seals
V FPM Seals

Code symbol



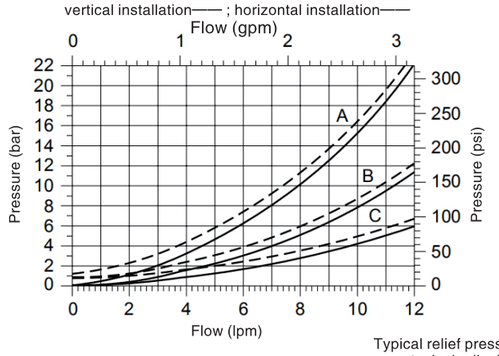
HY–TS38–20 (Proportional Relief Valve)

External dimensions

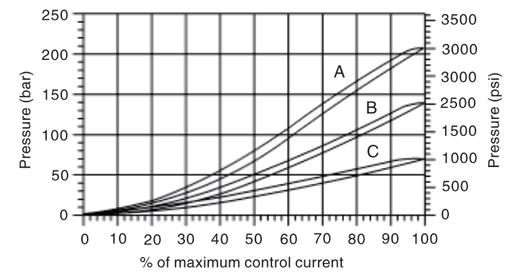


Specification performance

Pressure drop vs. flow characteristic
for flow ① to ② with coil de–energized
vertical installation—— ; horizontal installation——



Relief pressure vs. current (DC) 250 Hz dither
relieving pressure ① to ②



Typical relief pressure vs. flow characteristic
typical relieving pressure ① to ②
at various % 's of maximum control current
pressure range A: (207 bar/ 3000 psi); B: (138 bar/ 2000 psi);
C: (69 bar/ 1000 psi); cartridge in body