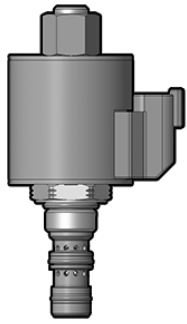
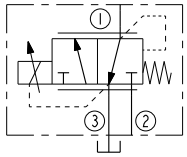


Pressure reducing/relieving proportional valve

Overview



SYMBOL



Description

The HTS38-34X is a screw-in, cartridge style, direct-operated, spool-type, proportional pressure reducing/relieving valve which can be infinitely adjusted across a predescribed range using a variable electric input. The regulated pressure is proportional to the input electrical current applied to the valve coil.

Operation

The HTS38-34X allows flow from port 1 to port 3 when no current is applied to the coil. With coil energized, port 2 is connected to port 1. Increasing current to the coil will increase the control (reduced) pressure at port 1 proportionally. If pressure at port 1 exceeds the setting induced by the coil, pressure from port 1 is relieved to port 3. Pressure at port 3 is additive to the control pressure.

Ratings

Pressure Ratings

Pressure rating: 5075 psi [350 bar] note: Port 2

3000 psi [207 bar] note: Port 1

1000 psi [68.9 bar] note: Port 3

Burst pressure: 18000 psi [1241 bar]

Flow Ratings

Flow rating: 5 gpm [18.9 lpm]

Maximum internal leakage: 5.8 in³/min [95 ml/min] note: With inlet pressure of 3045 psi [210 bar] at deadheaded condition.

Cycle life: 3 million cycles

Temperature Ratings

Operating fluid temperature: -40 °f to 212 °f [-40 °c to 100 °c] note: With Buna N seals

-15 °f to 400 °f [-26 °c to 204 °c] note: With fluorocarbon seals

-65 °f to 225 °f [-54 °c to 107 °c] note: With urethane seals

Storage temperature: -40 °f to 160 °f [-40 °c to 70 °c]

Ambient temperature: -40 °f to 149 °f [-40 °c to 65 °c]

Pressure Ratings

Proof pressure: 69 bar (1000 psi)

Control pressure at maximum current: 148 bar (2150 psi) note: Range A

85.5 bar (1240 psi) note: Range B

51 bar (740 psi) note: Range C

Operating Parameters

Adjustable pressure range: 2150 psi [148 bar] note: A

1240 psi [85.5 bar] note: B

Pressure reducing/relieving proportional valve

740 psi [51 bar] note: C

Fluids: Mineral based or synthetic note: With Lubricating properties.

Fluid viscosity range: 7.4-420 cSt

Maximum operating contamination level: 18/16/13 per ISO 4406

Properties

Unit weight: 0.41 lb [0.186 kg] note: Without coil

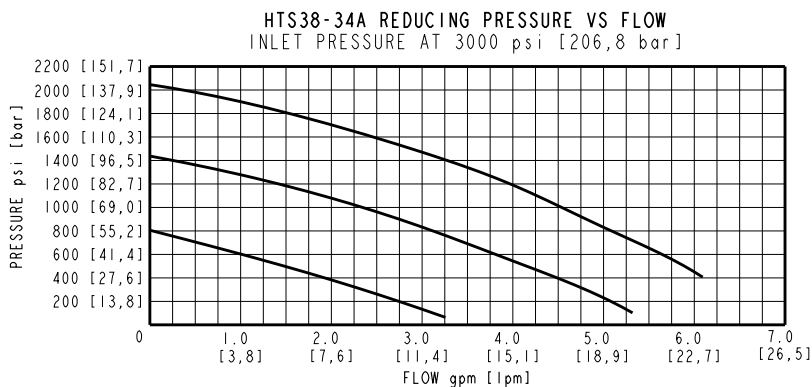
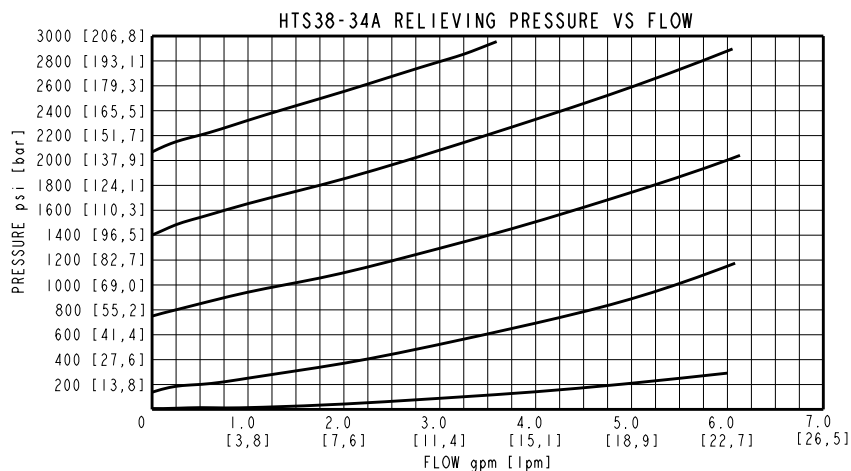
Internal wetted surface area: 25.7 in [166 cm]

Electrical Specifications

Dither PWM frequency: 130 Hz

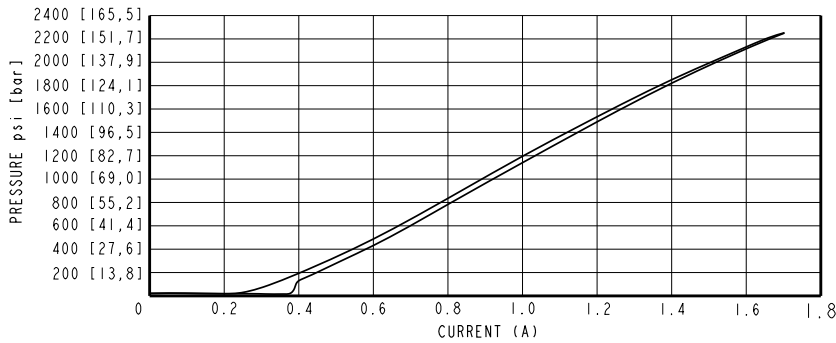
Coil	Coil resistance at 68°F [20°C]	Valve inductance	Maximum control current
E-Coil 10 VDC	4.8 ohms ±5%	135 mH	1.6 A
E-Coil 20 VDC	19.1 ohms ±5%	530 mH	0.8 A

Performance

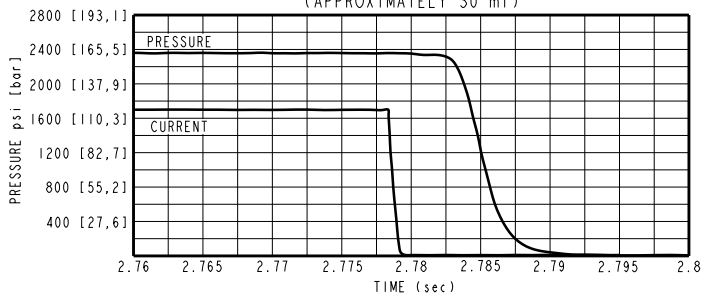


Pressure reducing/relieving proportional valve

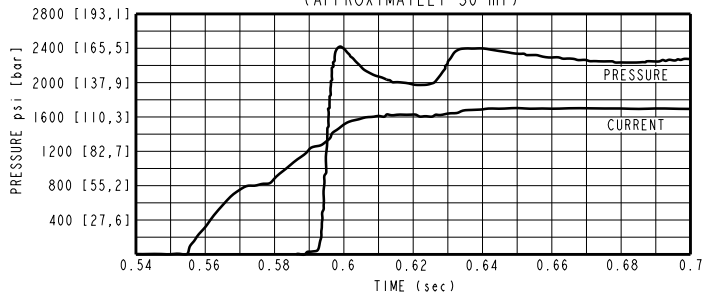
TYPICAL HTS38-34A REDUCING PRESSURE VS CURRENT
(130 Hz PWM)



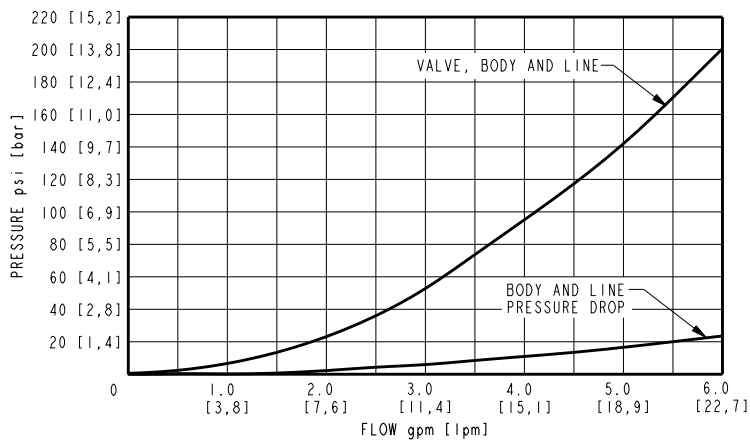
HTS38-34A CURRENT STEP RESPONSE-OFF TIME
3600 psi [248 bar] INLET PRESSURE
DC CURRENT, REGULATED PRESSURE: BLOCKED
(APPROXIMATELY 30 ml)



HTS38-34A CURRENT STEP RESPONSE-ON TIME
3600 psi [248 bar] INLET PRESSURE
DC CURRENT, REGULATED PRESSURE: BLOCKED
(APPROXIMATELY 30 ml)

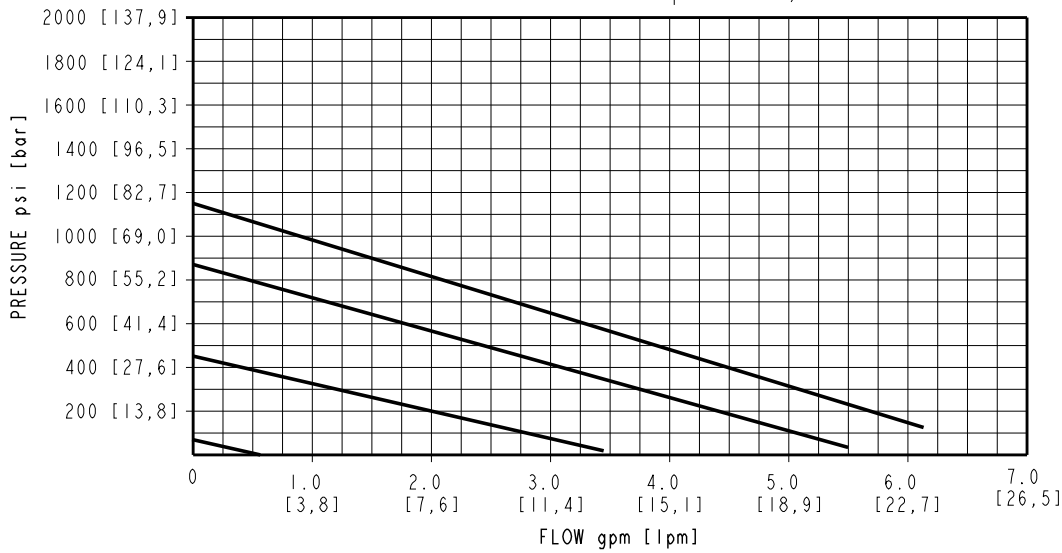


HTS38-34X REDUCING MODE PRESSURE DROP

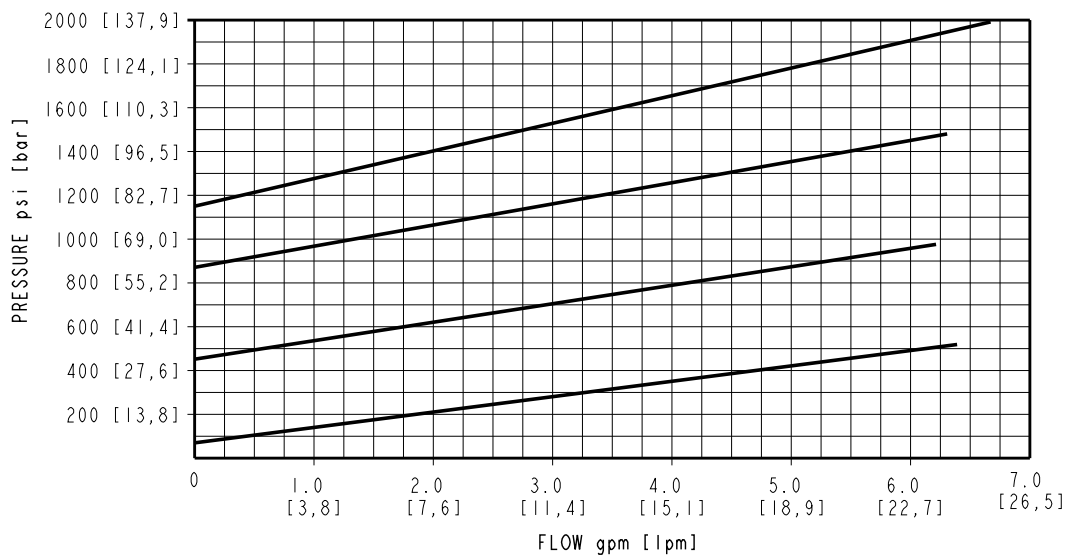


Pressure reducing/relieving proportional valve

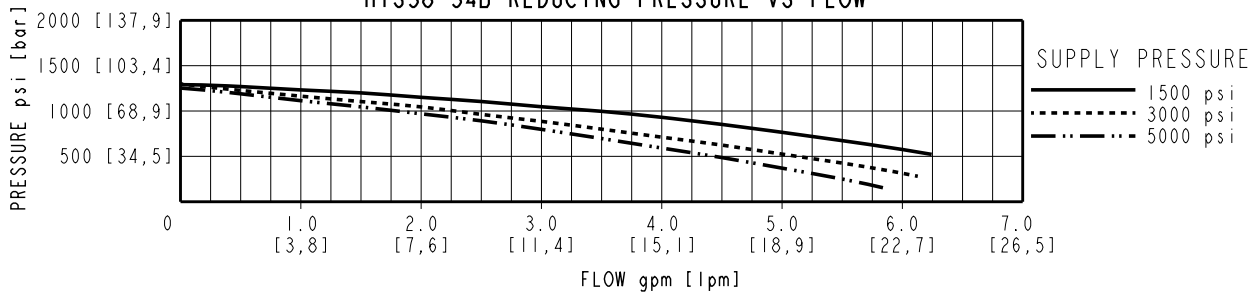
HTS38-34B REDUCING PRESSURE VS FLOW
INLET PRESSURE AT 3000 psi [206,8 bar]



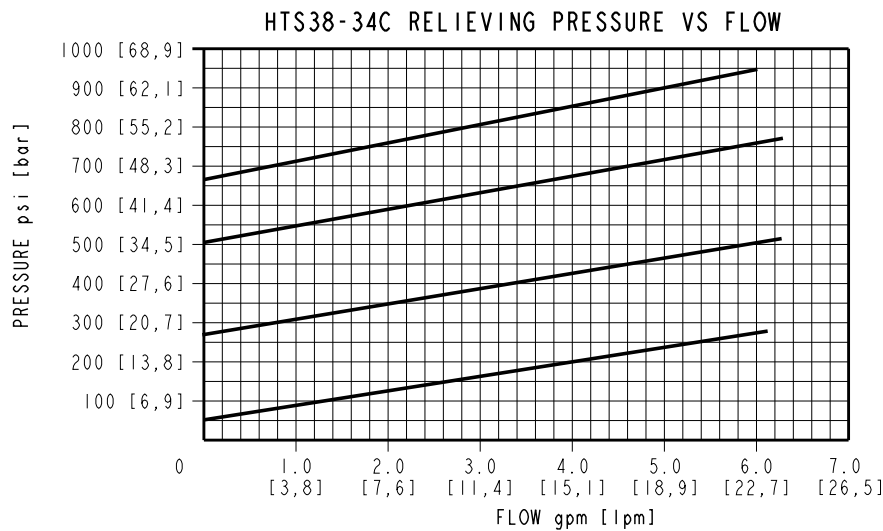
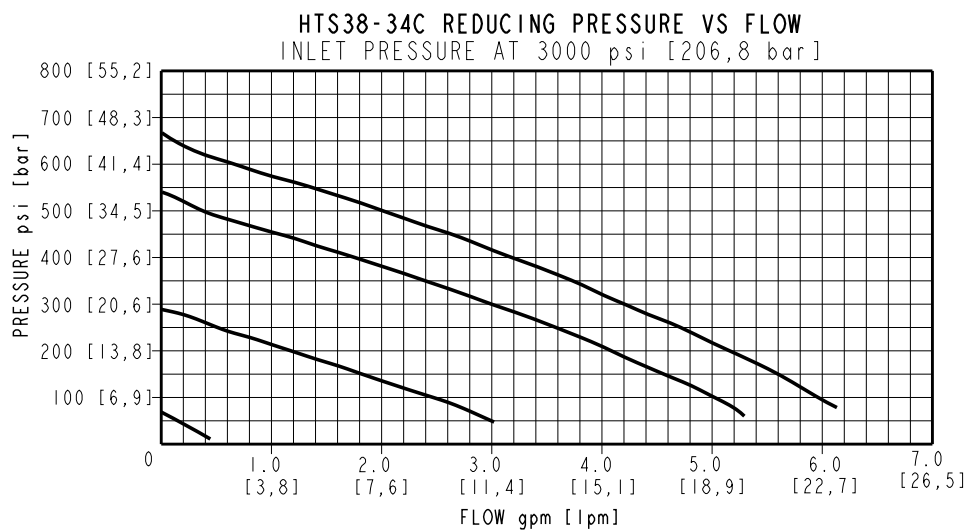
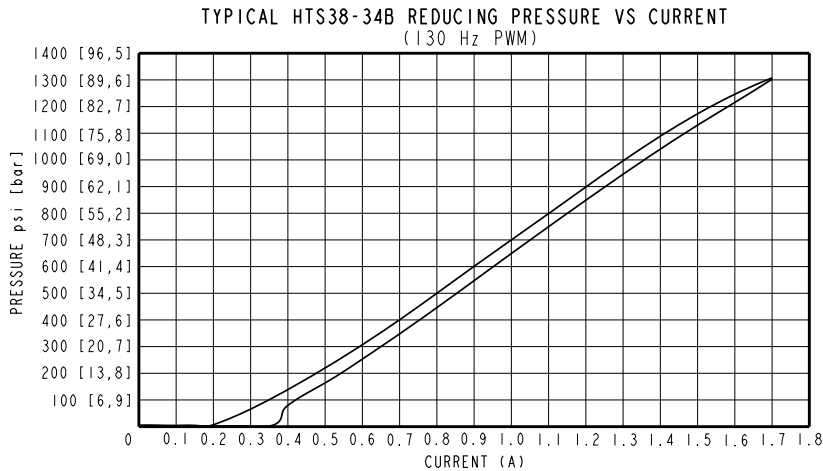
HTS38-34B RELIEVING PRESSURE VS FLOW



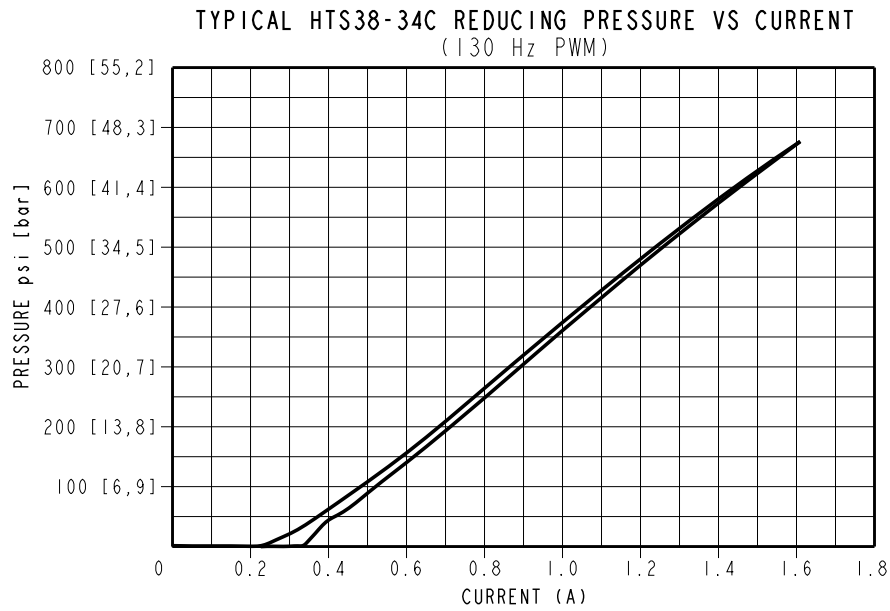
HTS38-34B REDUCING PRESSURE VS FLOW



Pressure reducing/relieving proportional valve

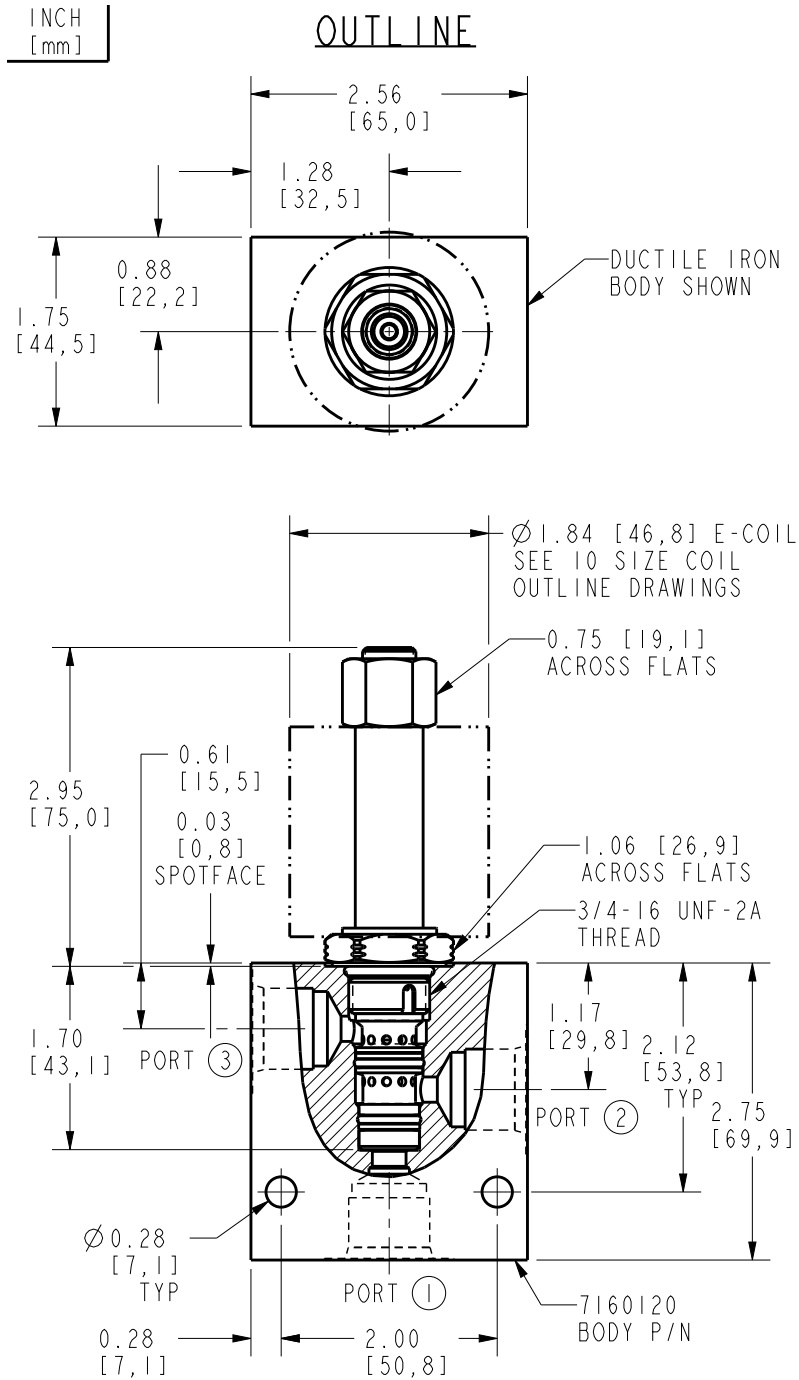


Pressure reducing/relieving proportional valve



Pressure reducing/relieving proportional valve

Dimensions



ALL DIMENSIONS ARE FOR REFERENCE ONLY

Installation Specifications

Cavity: HVC08-3

Cartridge installation torque: 40-45 ft-lb [54-61 N-m]

Coil nut torque: 7-10 ft-lb [9.5-13.6 N-m]

Orientation restriction: None

Pressure reducing/relieving proportional valve

Accessories

Seal kit: SK08-3X-OO note: (X = N, U seal option)

SK08-3V-BT note: V seal option

Order Code

ORDERING INFORMATION:

HTS38-34X-X-X-XXXX

BASE MODEL NUMBER:

MAXIMUM REGULATED PRESSURE:

2150 psi [148 bar] - A

1240 psi [85,5 bar] - B

740 psi [51 bar] - C

PORTING:

CARTRIDGE ONLY - 0

SEAL OPTION:

BUNA N - N

FLUOROCARBON - V

URETHANE - U

COIL VOLTAGE:

LESS COIL - 00

10 VDC (FOR 12V SYSTEM) - 10

20 VDC (FOR 24V SYSTEM) - 20

COIL TERMINATIONS:

LEAD WIRES (18 GAUGE) - EL

DEUTSCH DT04-2P - ER

Model Options

HTS38-34D-H-J-L

D Maximum Regulated Pressure

CODE	DESCRIPTION
A	152 bar (2200 psi)
B	75 bar (1085 psi)
C	48 bar (690 psi)

H Line Body

CODE	DESCRIPTION
0	No Body
8HT	Ductile Iron SAE 8

J Seal

CODE	DESCRIPTION
N	Buna-N
V	Fluorocarbon
U	PPDI Urethane

L Coil

CODE	DESCRIPTION
0	No Coil
10EL	10 VDC, E-Coil, Dual Lead Wires, 18 inches long
10ER	10 VDC, E-Coil, Deutsch
20EL	20 VDC, E-Coil, Dual Lead Wires, 18 inches long
20ER	20 VDC, E-Coil, Deutsch