

Proportional Flow Control Cartridge Valve

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T2PV70-30A Proportional flow control valve slide valve type

Description:

A solenoid operated, 3-way, 2 position, spool-type cartridge valve.

Operation:

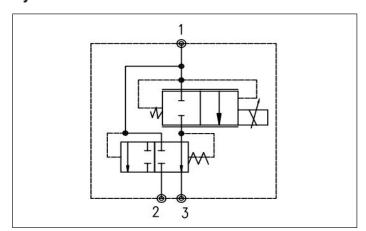
The T2PV70-30A will regulate the flow of oil port 3, independent of the operating pressure of the system. As the current in the solenoid valve increases, the output flow of the KPV70-30A will also increase.

Operation of Manual Override Option:

When staring: rotate clockwise about 1 turn to reach the starting point. Continue to rotate for about 5 more turns to reach the maximum displacement.

End: Rotate counterclockwise for about 6 cycles to a forward stop.

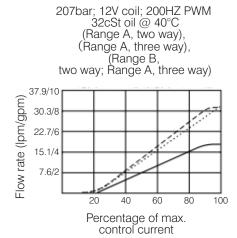
Symbol:

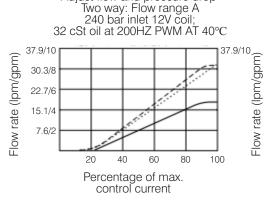


Specifications

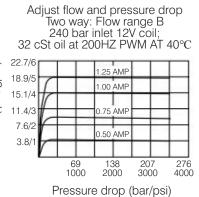
Operating Pressure	207 Bar	
Max. Input Flow	50L/min	
Max. Priority Flow	26L/min	
Sol. valve voltage	24V±15%DC	
Max. Cont. Current	800mA±100mA	
Internal Leakage	(Per land)82cc/min.(ml/) max. at 207bar	
Temperature	-20°C to +90°C	
Filtration	Reference filter requirements	
Fluids	Mineral-based fluids with viscosities of 7.4 to 420 cSt.	
Cavity	VC10-3	
Sol. val. connector	DT04-2P	

Charge Flow Curve



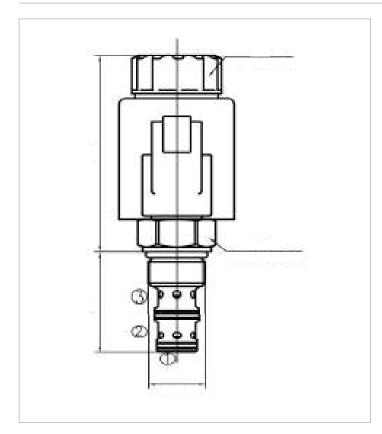


Adjust flow and pressure drop

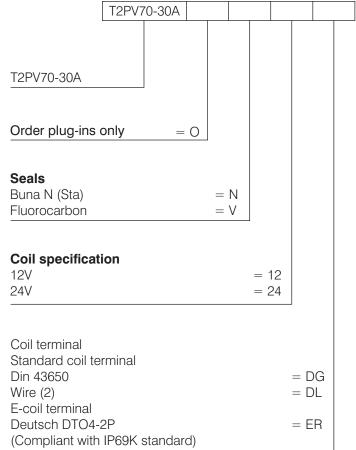




Installation Dimensions



Ordering code





T2PV72-20 Proportional Flow Control Cartridge Valve

Describe

Solenoid-driven, variable electrical parameters, two-way, pressure-compensated, slide-valve type, normally closed when powered off, proportional flow control valve.

How it works

T2PV72-20 will regulate the flow rate at port ② and will not be affected by the system working pressure. As the current in the solenoid valve increases, The output flow rate of T2PV72-20 will also increase. Operation of the emergency manual override option:

When starting: Rotate clockwise for about 1 circle to reach the starting point, and continue to rotate for about 5 circles to reach the maximum displacement.

At the end: Rotate counterclockwise for about 6 revolutions until the positive stop occurs.

Features

- Excellent linearity and hysteresis characteristics.
- The valve core and valve sleeve are hardened and durable.
- Highly efficient wet armature structure.
- Solenoid coil voltage and terminals are selectable.
- The voltage of the cartridge valves is interchangeable.
- Unified coil casting design.
- Waterproof coil standard.
- Emergency manual override option.

Characteristics:

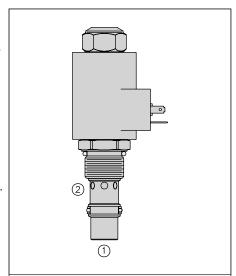
- Working pressure: Oil port (1): 240 bar (3500 psi); Oil port (2): 207 bar (3000 psi).
- Adjustable flow rate: 0~56 lpm (0~15 gpm).
- Internal Leakage: 0.38 lpm (0.1 gpm) at 207 bar (3000 psi) with valve fully closed.
- Electrical characteristics: 2 voltage standards.

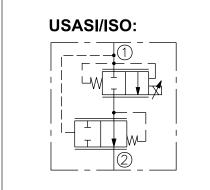
Coil voltage	Threshold current	Max. control current
12 VDC	$250 \pm 100 \text{mA}$	1500 ± 100 mA
24 VDC	125 ± 50 mA	750 ± 50 mA

- Medium: Viscosity between 7.4~420 cSt(50~2000ssu) of mineral oil or synthetic oil with lubricating properties.
- Valve hole: VC12-2 valve hole changes "B";

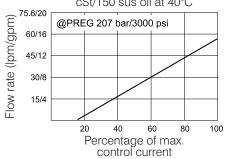
Performance graph

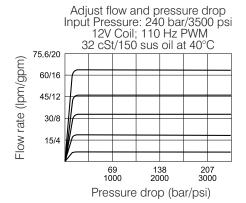
Input signal With 12V coil	DIN coil Installation	PCB Board	Metal Box	DIN rail Mounting
0-5 VDC	7114950	4000046	4000049	4000136
0-10 VDC	4000070	4000141	4000124	4000137
4-20 mA	4000123	4000143	4000130	4000139
PWM		4000144	4000133	4000140
With 24V coi				
0-5 VDC	4000161	4000194	4000174	4000136
0-10 VDC	4000165	4000141	4000182	4000137
4-20 mA	4000169	4000143	4000186	4000139
PWM	_	4000144	4000133	4000140



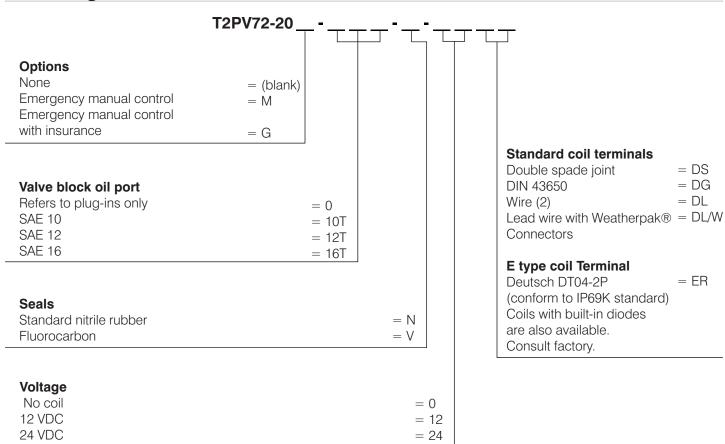


Flow and current Input Pressure: 240 bar/3500 psi 12V Coil; 110 Hz PWM 32 cSt/150 sus oil at 40°C

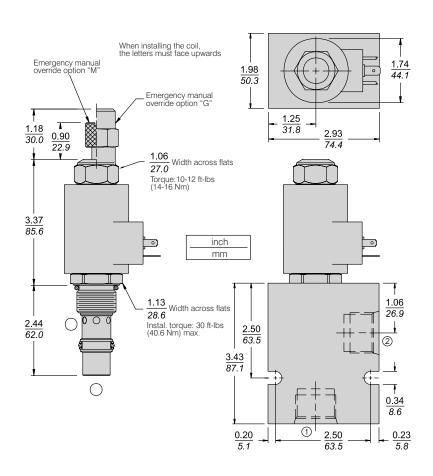








Unit Dimensions





T2PV72-21 Proportional Flow Control Cartridge Valve

Describe

Solenoid-driven, variable electrical parameters, two-way, pressure-compensated, spool-type, normally open when powered off, proportional flow control valve.

How it works

T2PV72-20 will regulate the flow rate at port ② and will not be affected by the system working pressure. As the current in the solenoid valve increases, The output flow rate of T2PV72-21 will decrease. Operation of the emergency manual override option:.

When starting: Rotate clockwise for about 1 circle to reach the starting point, and continue to rotate for about 5 circles to reach the maximum displacement.

At the end: Rotate counterclockwise for about 6 revolutions until the positive stop occurs.

Features

- Excellent linearity and hysteresis characteristics.
- The valve core and valve sleeve are hardened and durable.
- Highly efficient wet armature structure.
- Solenoid coil voltage and terminals are selectable.
- The voltage of the cartridge valves is interchangeable.
- Unified coil casting design.
- Waterproof coil standard.
- Emergency manual override option.

Characteristics:

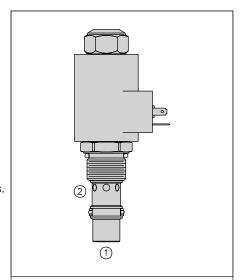
- Working pressure: Oil port ①: 240 bar (3500 psi); Oil port ②: 207 bar (3000 psi).
- Regulated flow rate: 56 lpm (15 gpm)
- Internal Leakage: 0.38 lpm (0.1 gpm) at 207 bar (3000 psi) with valve fully closed.
- Electrical characteristics: 2 voltage standards.

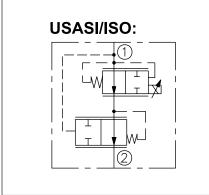
Coil voltage	Threshold current	Max. control current
12 VDC	150 ± 100 mA	1350 ± 150 mA
24 VDC	$75\pm50~\text{mA}$	675 ± 75 mA

- Medium: Viscosity between 7.4~420 cSt (50~2000ssu) of mineral oil or synthetic oil with lubricating properties.
- Valve hole: VC12-2 valve hole variation "B";

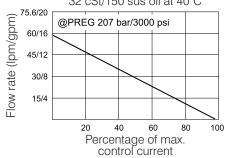
Performance graph

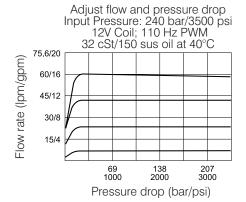
Input signal With 12V coil	DIN coil Installation	PCB Board	Metal Box	DIN rail Mounting
0-5 VDC	7114950	4000046	4000049	4000136
0-10 VDC	4000070	4000141	4000124	4000137
4-20 mA	4000123	4000143	4000130	4000139
PWM		4000144	4000133	4000140
With 24V coi				
0-5 VDC	4000161	4000194	4000174	4000136
0-10 VDC	4000165	4000141	4000182	4000137
4-20 mA	4000169	4000143	4000186	4000139
PWM	_	4000144	4000133	4000140



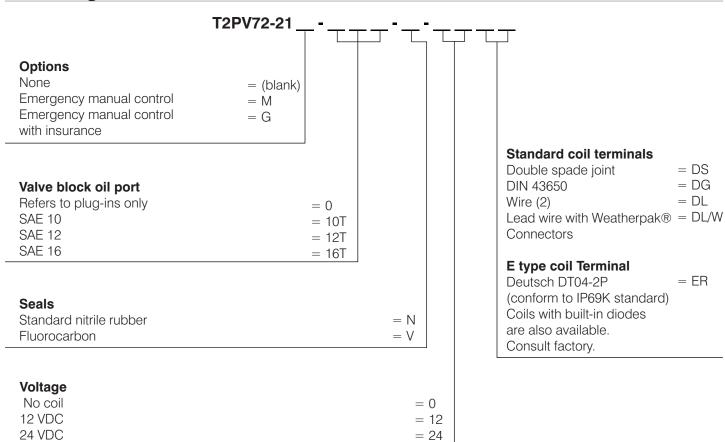


Flow and current Input Pressure: 240 bar/3500 psi 12V Coil; 110 Hz PWM 32 cSt/150 sus oil at 40°C

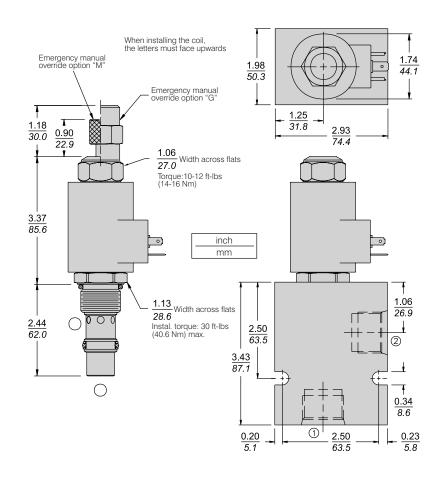








Unit Dimensions





T2PV08-30 Proportional Flow Control Cartridge Valve

Describe

Solenoid-driven, variable electrical parameters, three-way, pressure-compensated, spool-type, normally closed when powered off, proportional flow control valve, can be used as a priority flow regulator with pressure compensation, regulation and bypass flow. When the bypass line (oil port ②) is closed, it can also be used as a throttling type, 2-way, pressure compensated flow regulator.

How it works

T2PV08-30 will regulate the flow rate at port ③ and will not be affected by the system working pressure. As the current in the solenoid valve increases, The output flow rate of T2PV08-30 will also increase.

Note: If the equipment's priority flow port is blocked (dead point) by an external valve, a small oil relief hole needs to be set at the priority port (port ③) when the valve is used for bypass flow control. Please consult the factory.

Features

- Excellent linearity and hysteresis characteristics.
- The valve core and valve sleeve are hardened and durable.
- Solenoid coil voltage and terminals are selectable.
- Highly efficient wet armature structure.

Characteristics:

- Working pressure: Inlet: 240 bar (3500 psi); Oil port (2): 207 bar (3000 psi).
- Adjust the flow rate: Bypass cutoff, range A: 11.4 lpm (3.0 gpm)
 Bypass cutoff, range B: 5.7 lpm (1.5 gpm), Bypass open, range
 A:11.4 lpm (3.0 gpm), Bypass open, range B: 5.7 lpm (1.5 gpm)
- Rated input flow: Bypass open, range A: 15.2 lpm (4.0 gpm) Bypass on, range B: 7.6 lpm (2.0 gpm)
- Internal Leakage: 100 ml/min (6 cu. in./min) at 207 bar (3000 psi) with valve fully closed.
- Electrical characteristics: 2 voltage standards. (using EHPR Series coils)

Coil voltage	Threshold current	Max. control current
12 VDC	400 ± 100 mA	1400 ± 150 mA
24 VDC	200 ± 50 mA	700 ± 75 mA

- Medium: Viscosity between 7.4~420 cSt(50~2000ssu) of mineral oil or synthetic oil with lubricating properties.
- Valve hole: VC08-3;

Performance graph

control current

Rated flow and current

Two way: Flow range A
240 bar/ 3500 psi inlet
2V coil; 200 Hz PWM
32 cSt / 150 sus oil at 40°C

15.2/4

1.5 AMP

1.1 AMP

7.6/2

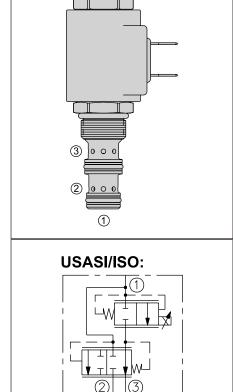
0.8 AMP

3.8/1

69
138
207
276
1000
2000
3000
4000

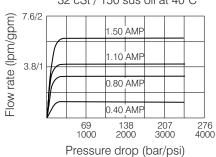
Pressure drop (bar/psi)

Adjust flow and pressure drop

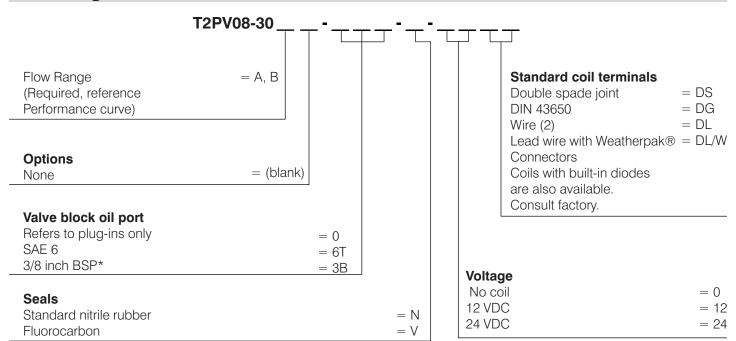


2-Ported

Adjust flow and pressure drop Two way: Flow range A 240 bar/ 3500 psi inlet 12V coil; 200 Hz PWM 32 cSt / 150 sus oil at 40°C



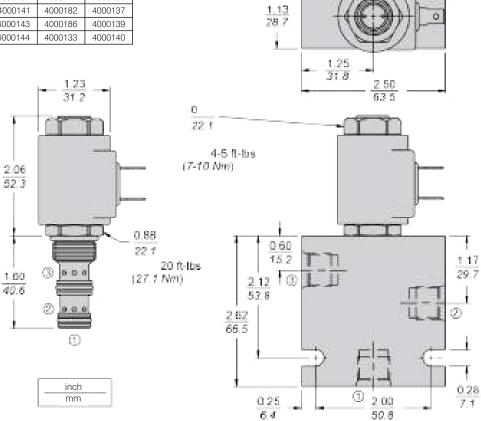




Recommened controller (see section 3)

Input signal With 12V coil	DIN coil Installation	PCB Board	Metal Box	DIN rail Mounting
0-5 VDC	7114950	4000046	4000049	4000136
0-10 VDC	4000070	4000141	4000124	4000137
4-20 mA	4000123	4000143	4000130	4000139
PWM	_	4000144	4000133	4000140
With 24V coi				
0-5 VDC	4000161	4000194	4000174	4000136
0-10 VDC	4000165	4000141	4000182	4000137
4-20 mA	4000169	4000143	4000186	4000139
PWM		4000144	4000133	4000140

Unit Dimensions





T2PV72-30 Proportional Flow Control Cartridge Valve

Describe

Solenoid-driven, variable electrical parameters, two-way, pressure-compensated, spool-type, normally closed when powered off, proportional flow control valve. It can be used as a priority flow control valve with pressure compensation to regulate and bypass flow, when the bypass line is closed (Oil port ②), it can also be used as 2-way throttling type pressure compensated flow control valve.

How it works

T2PV72-30 will adjust the flow rate at port ③ and will not be affected by the system working pressure. As the current in the solenoid valve increases, The output flow rate of T2PV72-30 will also increase.

Note: If the unit's priority flow port is blocked by an external valve, the bypass pressure drop will increase if the valve is used for bypass flow control without causing a small amount of leakage from the priority port. Consult factory. Emergency manual control operation:

When starting: Rotate clockwise for about 1 circle to reach the starting point, and continue to rotate for about 5 circles to reach the maximum displacement.

At the end: Rotate counterclockwise for about 6 revolutions until the positive stop occurs.

Features

- Excellent linearity and hysteresis characteristics and waterproof coil standard.
- The valve core and valve sleeve are hardened and durable.
- Highly efficient wet armature structure and unified coil casting design.
- Solenoid coil voltage and terminals are selectable and
- The voltage of the cartridge valves is interchangeable.
- Emergency manual override option

Characteristics:

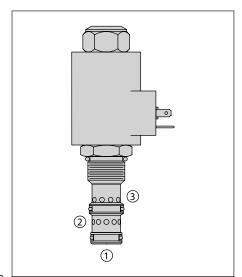
- Working pres.: Oil port (1): 240 bar (3500 psi); Oil port (2)&(3): 207 bar (3000 psi)
- Regulated flow rate of three-way mode:
 Range A: 57 lpm (15 gpm) Range B: 38 lpm (10 gpm)
- Maximum input flow rate of three-way mode: Range A and B:114 lpm (30 gpm)
- Maximum flow rate in two-way mode:
- Range A: 53 lpm (14 gpm) Range B: 31 lpm (8 gpm)
- Note: To increase the flow rate of a two-way flow control, see model T2V72-20,
- Internal Leakage: 0.38 lpm (0.1 gpm) at 207 bar (3000 psi) with valve fully closed.
- Electrical characteristics: 2 voltage standards.

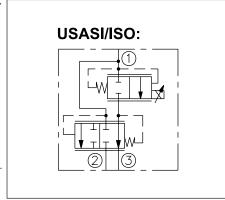
Coil voltage	Threshold current	Max. control current
12 VDC	350 ± 100 mA	1600 ± 200 mA
24 VDC	$175 \pm 50 \text{mA}$	$800 \pm 100 \text{mA}$

- Medium: Viscosity between 7.4~420 cSt (50~2000ssu) of mineral oil or synthetic oil with lubricating properties.
- Valve hole: VC12-3;

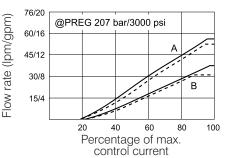
Performance graph

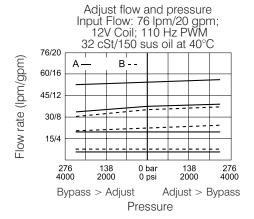
riccommence controller (acc acction a)			
DIN coil Installation	PCB Board	Metal Box	DIN rail Mounting
7114950	4000046	4000049	4000136
4000070	4000141	4000124	4000137
4000123	4000143	4000130	4000139
	4000144	4000133	4000140
4000161	4000194	4000174	4000136
4000165	4000141	4000182	4000137
4000169	4000143	4000186	4000139
_	4000144	4000133	4000140
	DIN coil Installation 7114950 4000070 4000123 — 4000161 4000165	DIN coil Installation Board 7114950 4000046 4000070 4000141 4000123 4000143 — 4000144 4000161 4000194 4000165 4000141 4000169 4000143	DIN coil Installation Board Box 7114950 4000046 4000049 4000070 4000141 4000124 4000123 4000143 4000130 — 4000144 4000133 4000161 4000194 4000174 4000165 4000141 4000182 4000169 4000143 4000186



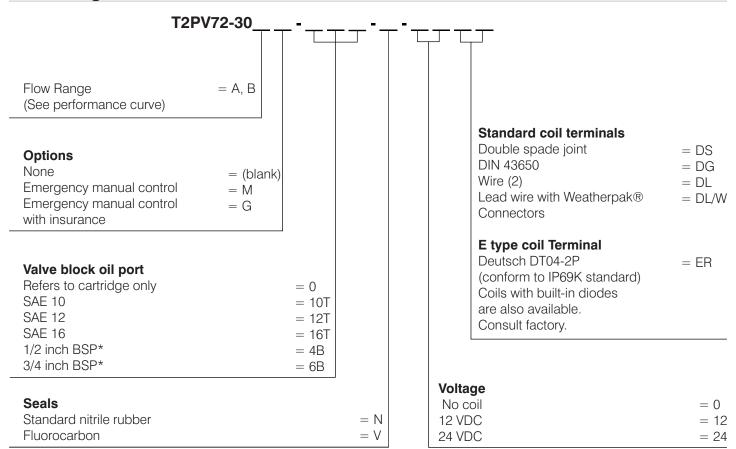


Flow and current
Input Flow: 76 lpm/20 gpm
12V Coil; 110 Hz PWM
Three way——; Two way---32 cSt/150 sus oil at 40°C

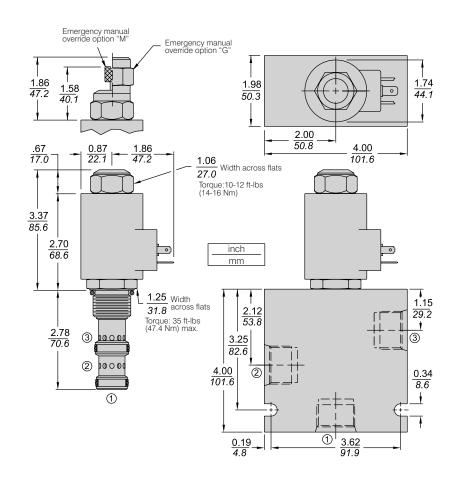








Unit Dimensions





T2PV76-30A Proportional Flow Control Cartridge Valve

Describe

Solenoid-driven, variable electrical parameters, three-way, pressure-compensated, spool-type, normally closed when powered off, proportional flow control valve. It can be used as a priority flow control valve with pressure compensation to regulate and bypass flow. When the bypass line (oil port ②) is closed, it can also be used as a throttling type, 2-way, pressure compensated flow control valve.

How it works

T2PV76-30A will regulate the flow rate at port ③ and will not be affected by the system working pressure. As the current in the solenoid valve increases, The output flow rate of T2PV08-30 will also increase.

Note: If the equipment's priority flow port is blocked (dead point) by an external valve, when the valve is used for bypass flow control, The bypass pressure drop will increase if a small amount of leakage is not allowed from the priority port. Please consult the factory.

Emergency manual control operation:

When starting: Rotate clockwise for about 1 circle to reach the starting point, and continue to rotate for about 5 circles to reach the maximum displacement.

At the end: Rotate counterclockwise for about 6 revolutions until the positive stop occurs.

Features

- Excellent linearity and hysteresis characteristics.
- The valve core and valve sleeve are hardened and durable.
- Solenoid coil voltage and terminals are selectable.
- Highly efficient wet armature structure.

Characteristics

- Working pressure: Inlet: 240 bar (3500 psi);
 Oil ports (2) and (3): 207 bar (3000 psi).
- Adjust the flow rate: Range A: 94.6 lpm (25.0 gpm)
 Range A: Two-way: 85.2 lpm (22.5 gpm),
- Rated input flow: Bypass open, three-way: 121 lpm (32.0 gpm)
- Maximum input flow: Bypass open, three-way:151.4 lpm (40.0 gpm)
- Internal Leakage: 0.38 lpm (0.10 gpm) at zero current
- Electrical characteristics: 2 voltage standards.

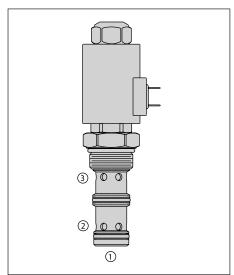
Coil voltage	Threshold current	Max. control current
12 VDC 300 ± 100 mA		1600 ± 100 mA
24 VDC	$150\pm50\mathrm{mA}$	$800 \pm 50 \text{mA}$

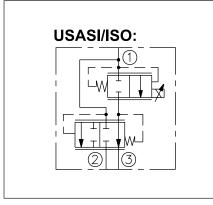
- Medium: Viscosity between 7.4~420 cSt(50~2000ssu) of mineral oil or synthetic oil with lubricating properties.
- Valve hole: VC16-3;

Performance graph

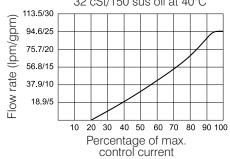
Recommened controller (see section 3)

Input signal With 12V coil	DIN coil Installation	PCB Board	Metal Box	DIN rail Mounting	
0-5 VDC	7114950	4000046	4000049	4000136	
0-10 VDC	4000070	4000141	4000124	4000137	
4-20 mA	4000123	4000143	4000130	4000139	
PWM	_	4000144	4000133	4000140	
With 24V coi	With 24V coil				
0-5 VDC	4000161	4000194	4000174	4000136	
0-10 VDC	4000165	4000141	4000182	4000137	
4-20 mA	4000169	4000143	4000186	4000139	
PWM		4000144	4000133	4000140	





3-way valve
Adjust flow and current
240bar/3500psi, oil inlet
207bar/3000psi, port ③; port ② no load
12V Coil; 110 Hz PWM
32 cSt/150 sus oil at 40°C



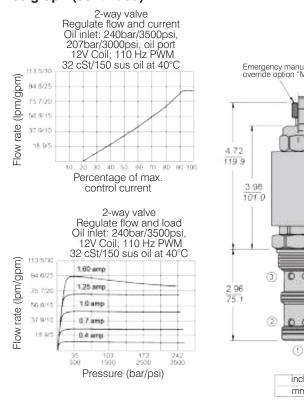
3-way valve Adjust flow and load 240bar/3500psi, oil inlet 12V Coil; 110 Hz PWM 32 cSt/150 sus oil at 40°C 113.5/30 1.60 amp Flow rate (lpm/gpm) 94.6/25 1.25 amp 75.7/20 56.8/15 1.0 amp 37 9/10 0.7 amp 18.9/5 0.4 amp 138 2000 Pressure (bar/psi) Bypass > Adjust Adjust > Bypass

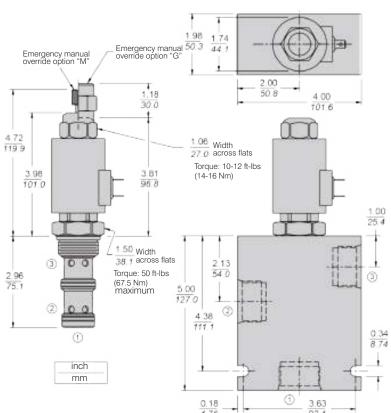


T2PV76-30A Proportional Flow Control Cartridge Valve

Performance graph (continued)

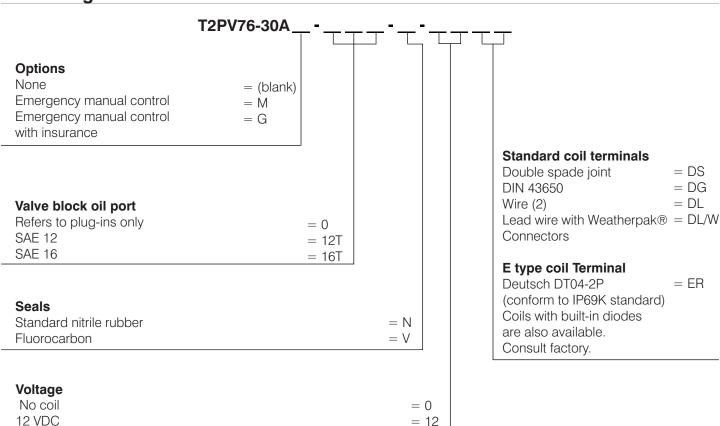
Unit Dimensions





Ordering code

24 VDC



= 24



T2PV42-M30 Proportional Flow Control Cartridge Valve

Describe

Solenoid-driven, two-stage, three-way, pressure-compensated, spool-type, normally closed when powered off, proportional flow control valve. Can be used as a priority flow regulator with pressure compensation, regulation and bypass flow.

How it works

Regardless of the system operating pressure or the system operating pressure at bypass port ②, The T2PV42-M30 will regulate the outflow at the port ③. To improve accuracy, the valve provides two priority flow ranges: Range A with a priority flow of up to 190lpm/50gpm and Range B with a priority flow of up to 132lpm/35gpm. For any range, the input flow rate at ① can reach 225 lpm/60 gpm. Note: If the equipment's priority flow port is blocked (dead point) by an external valve, when the valve is used for bypass flow control, The bypass pressure drop will increase if a small amount of leakage is not allowed from the priority port. Please consult the factory.

Emergency manual control operation:

When starting: Rotate clockwise for about 3 circles to reach the starting point, and continue to rotate for about 2 circles to reach the maximum displacement.

At the end: Rotate counterclockwise for about 5 circles until the positive stop occurs.

Features

- Excellent linearity and hysteresis characteristics.
- The valve core and valve sleeve are hardened and durable.
- Solenoid coil voltage and terminals are selectable.
- Highly efficient wet armature structure.

Characteristics

- Working pressure: Inlet: 240 bar (3500 psi);
 Oil ports (2) and (3): 207 bar (3000 psi).
- Adjust the flow rate:
 - Range A: 190 lpm (50 gpm), Range B: 132 lpm (35 gpm)
- Maximum input flow: 225 lpm (60 gpm)
- Maximum internal leakage: 1.52 lpm (0.40 gpm) at zero current
- Electrical characteristics: 2 voltage standards.

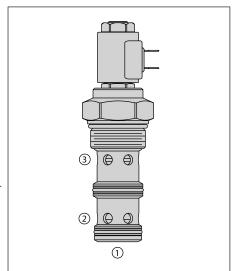
Coil voltage	Threshold current	Max. control current
12 VDC	400 ± 100 mA 1400 ± 150 mA	
24 VDC	200 ± 50 mA	700 ± 75 mA

- Medium: Viscosity between 7.4~420 cSt(50~2000ssu) of mineral oil or synthetic oil with lubricating properties.
- Valve hole: VC42-M3;

Performance graph

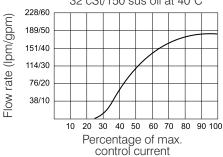
Recommened controller (see section 3)

Input signal With 12V coil	DIN coil Installation	PCB Board	Metal Box	DIN rail Mounting
0-5 VDC	7114950	4000046	4000049	4000136
0-10 VDC	4000070	4000141	4000124	4000137
4-20 mA	4000123	4000143	4000130	4000139
PWM		4000144	4000133	4000140
With 24V coi				
0-5 VDC	4000161	4000194	4000174	4000136
0-10 VDC	4000165	4000141	4000182	4000137
4-20 mA	4000169	4000143	4000186	4000139
PWM	_	4000144	4000133	4000140

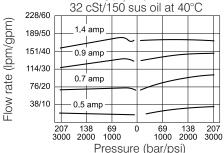


USASI/ISO:

Range A
Regulate flow and current
207bar/3000psi, port ③;
Input flow: 190 lpm/50 gpm
12V Coil; 110 Hz PWM
32 cSt/150 sus oil at 40°C



Range A, 3-way valve
Regulate flow and current
240bar/3500psi, 190 lpm/50 gpm oil inlet
12V Coil; 110 Hz PWM
32 cSt/150 sus oil at 40°C

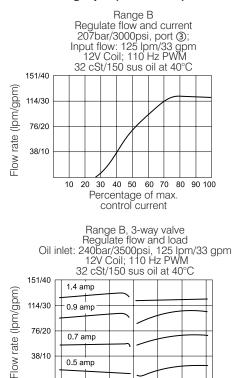


Bypass > Regulated Regulated > Bypass

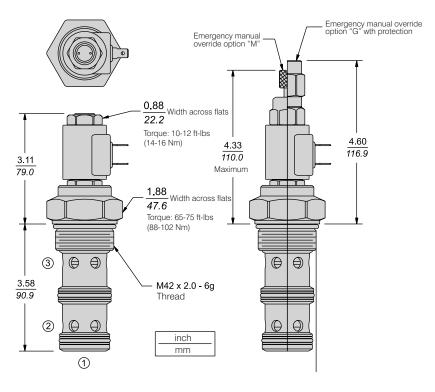


T2PV42-M30 Proportional Flow Control Cartridge Valve

Performance graph (continued)



Unit Dimensions



Ordering code

114/30

76/20

38/10

0.9 amp

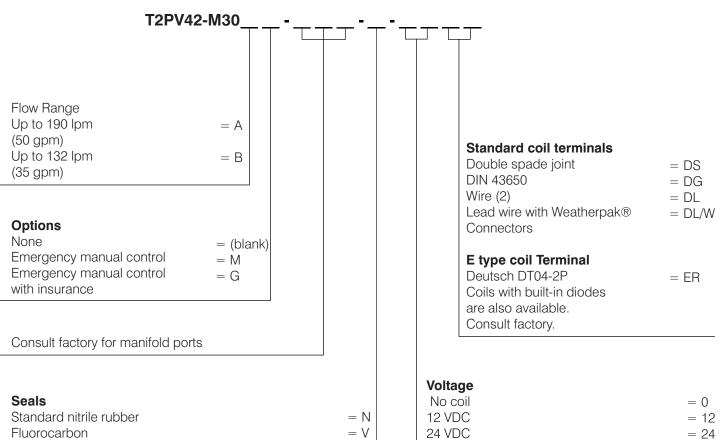
0.7 amp

0.5 amp

207 138 69 3000 2000 1000

Pressure (bar/psi) Bypass > Regulated Regulated > Bypass

69 138 207 1000 2000 3000





T2PV08-31 Proportional Flow Control Cartridge Valve

Describe

Solenoid-driven, variable electrical parameters, three-way, pressure-compensated, spool-type, normally open when powered off, proportional flow control valve. It can be used as a priority flow control valve with pressure compensation, regulation and bypass flow. When the bypass line (oil port ②) is closed, it can also be used as a throttling type, 2-way, pressure compensated flow control valve.

How it works

T2PV08-31 will regulate the flow rate at port ③ and will not be affected by the system working pressure. As the current in the solenoid valve increases, The output flow rate of T2PV08-31 will decrease.

Note: If the equipment's priority flow port is blocked (dead point) by an external valve, a small oil relief hole needs to be set at the priority port (port ③) when the valve is used for bypass flow control. Please consult the factory.

Features

- Excellent linearity and hysteresis characteristics.
- The valve core and valve sleeve are hardened and durable.
- Solenoid coil voltage and terminals are selectable.
- Highly efficient wet armature structure.

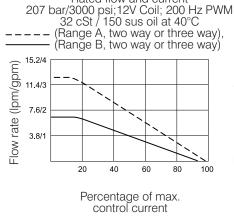
Characteristics:

- Working pressure: Inlet: 240 bar (3500 psi); Oil port (2) and (3): 207 bar (3000 psi).
- Adjust the flow rate: Bypass cutoff, range A: 11.4 lpm (3.0 gpm)
 Bypass cutoff, range B: 5.7 lpm (1.5 gpm), Bypass open, range
 A: 11.4 lpm (3.0 gpm), Bypass open, range B: 5.7 lpm (1.5 gpm)
- Rated input flow: Bypass open, range A: 15.2 lpm (4.0 gpm) Bypass open, range B: 7.6 lpm (2.0 gpm)
- Max. input flow: Bypass open, range A: 22.8 lpm (6.0 gpm)
 Bypass open, range B: 22.8 lpm (6.0 gpm)
- Internal Leakage: 100 ml/min (6 cu. in./min) at 207 bar (3000 psi) with valve fully closed.
- Electrical characteristics: 2 voltage standards. (using EHPR Series coils)

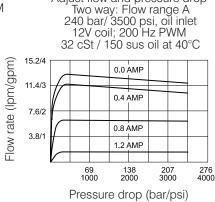
Coil voltage	Threshold current	Max. control current
12 VDC 250 ± 150 mA		1350 ± 150 mA
24 VDC	125 ± 75 mA	700 ± 75 mA

- Medium: Viscosity between 7.4~420 cSt(50~2000ssu) of mineral oil or synthetic oil with lubricating properties.
- Valve hole: VC08-3;

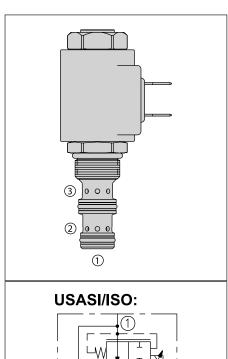
Performance graph

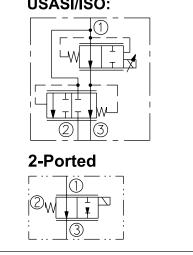


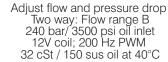
Rated flow and current

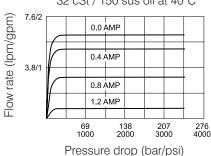


Adjust flow and pressure drop

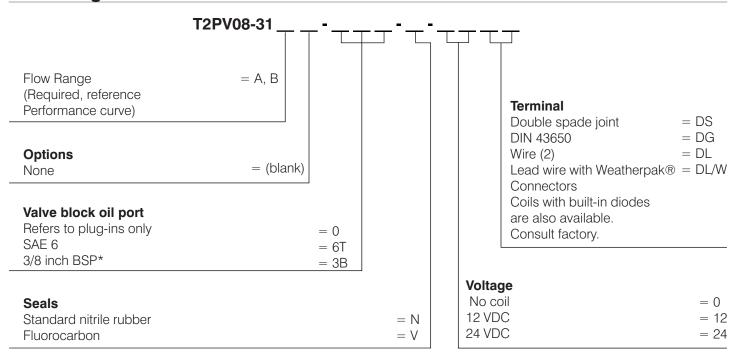








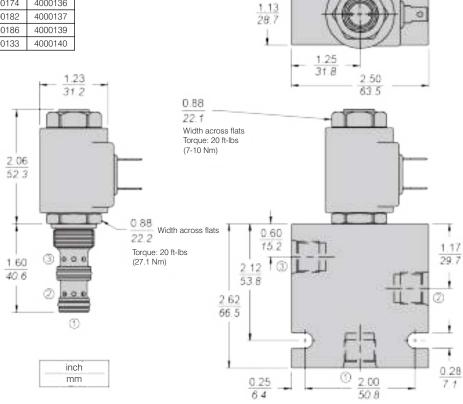




Recommened controller (see section 3)

Input signal With 12V coil	DIN coil Installation	PCB Board	Metal Box	DIN rail Mounting
0-5 VDC	7114950	4000046	4000049	4000136
0-10 VDC	4000070	4000141	4000124	4000137
4-20 mA	4000123	4000143	4000130	4000139
PWM	_	4000144	4000133	4000140
With 24V coi				
0-5 VDC	4000161	4000194	4000174	4000136
0-10 VDC	4000165	4000141	4000182	4000137
4-20 mA	4000169	4000143	4000186	4000139
PWM	_	4000144	4000133	4000140

Unit Dimensions





T2PV70-31 Proportional Flow Control Cartridge Valve

Describe

Solenoid-driven, variable electrical parameters, three-way, pressure compensation, spool-type, normally open when powered off, proportional flow control valve. It can be used as a priority flow control valve with pressure compensation, regulation and bypass flow. When the bypass line (oil port ②) is closed, it can also be used as 2 - way throttling type pressure compensated flow control valve.

How it works

T2PV70-31 will adjust the flow rate of oil port ③ and will not be affected by the system working pressure. As the current in the solenoid valve increases, The output flow rate of T2PV70-31 will decrease.

Note: If the machine's priority flow port is blocked by an external valve, the bypass pressure drop will increase if the valve is used for bypass flow control without causing a small amount of leakage from the priority port.

Please consult the factory.

Emergency manual control operation: When starting: Rotate clockwise for about 1 circle to reach the starting point, and continue to rotate for about 5 more circles to reach the maximum displacement.

At the end: Rotate counterclockwise for about 6 circles until the positive stop occurs.

Features

- Excellent linearity and hysteresis characteristics and waterproof coil standard.
- The valve core and valve sleeve are hardened and durable.
- Highly efficient wet armature structure and unified coil casting design.
- Solenoid coil voltage and terminals are selectable and
- The voltage of the cartridge valves is interchangeable.
- Emergency manual override option

Characteristics

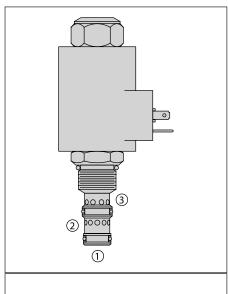
- Working pressure: Inlet: 240 bar (3500 psi);
 Oil ports ② and ③: 207 bar (3000 psi).
- Adjust the flow rate:
 - Bypass cutoff, range A: 26 lpm (7 gpm), Bypass cutoff, range B: 17 lpm (4.5 gpm) Bypass on, range A: 30 lpm (8 gpm), Bypass on, range B: 17 lpm (4.5 gpm)
- Maximum input flow: Bypass on, range A: 50 lpm (13 gpm), Bypass on, range B: 26 lpm (7 gpm)
- Internal leakage: 197 ml/min (12 cu.in/min) at 207 bar (3000 psi) with valve fully closed
- Electrical characteristics: 2 voltage standards.

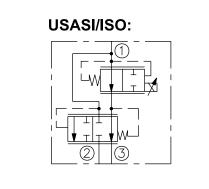
Coil voltage	Threshold current	Max. control current
12 VDC	150 ± 70 mA	1400 ± 200 mA
24 VDC	$75\pm35\mathrm{mA}$	700 ± 100 mA

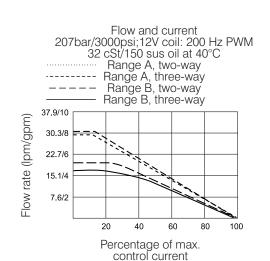
- Medium: Viscosity between 7.4~420 cSt(50~2000ssu) of mineral oil or synthetic oil with lubricating properties.
- Valve hole: VC10-3;

Performance graph

Input signal With 12V coil	DIN coil Installation	PCB Board	Metal Box	DIN rail Mounting
0-5 VDC	7114950	4000046	4000049	4000136
0-10 VDC	4000070	4000141	4000124	4000137
4-20 mA	4000123	4000143	4000130	4000139
PWM	_	4000144	4000133	4000140
With 24V coi				
0-5 VDC	4000161	4000194	4000174	4000136
0-10 VDC	4000165	4000141	4000182	4000137
4-20 mA	4000169	4000143	4000186	4000139
PWM		4000144	4000133	4000140



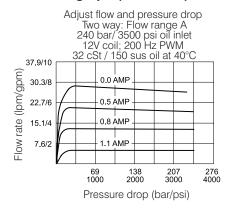


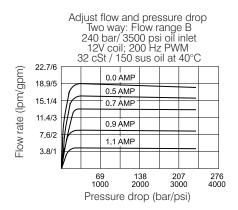




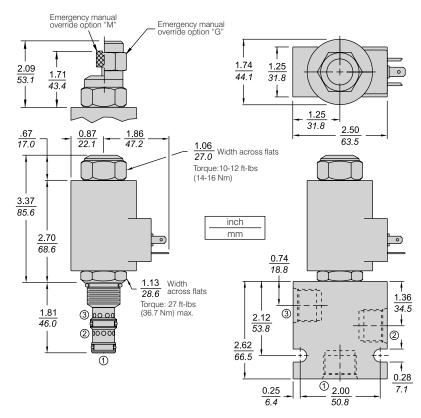
T2PV70-31 Proportional Flow Control Cartridge Valve

Performance graph (continued)

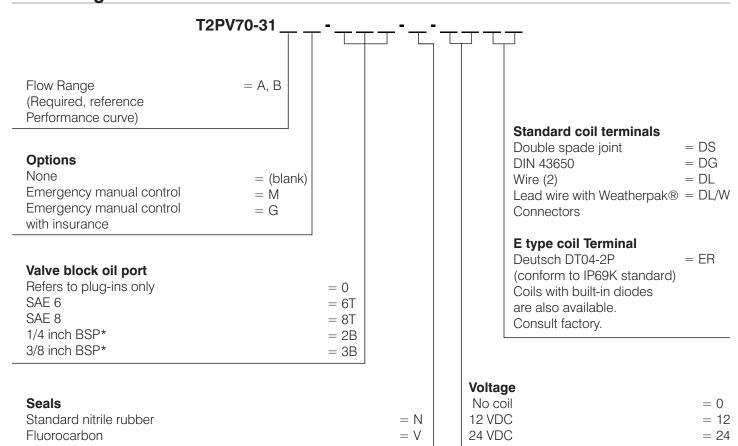




Unit Dimensions



Ordering code





T2PV72-31 3 Pass

Describe

Solenoid-driven, variable electrical parameters, three-way, pressure compensation, spool-type, normally open when powered off, proportional flow control valve. It can be used as a priority flow control valve with pressure compensation, regulation and bypass flow. When the bypass line (oil port ②) is closed, it can also be used as 2 - way throttling type pressure compensated flow control valve.

How it works

T2PV70-31 will regulate the flow at oil port ③ independent of the system operating pressure. As the current in the solenoid increases, the output flow of the T2PV72-31 will decrease.

Note: If the unit's priority flow port is blocked by an external valve, the bypass pressure drop will increase if the valve is used for bypass flow control without causing a small amount of leakage at the priority port. Please consult the factory.

When starting: Rotate clockwise for about 1 circle to reach the starting point, and continue to rotate for about 5 more circles to reach the maximum displacement.

At the end: Rotate counterclockwise for about 6 circles until the positive stop occurs.

Characteristics:

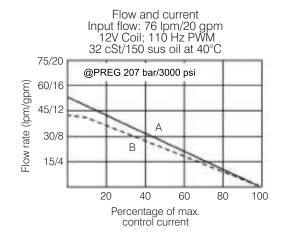
Emergency manual control operation:

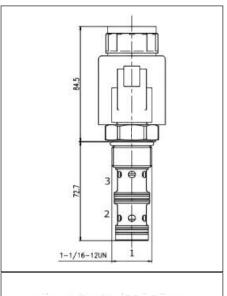
- Work. pres.: Oil port (1): 240 bar (3500 psi); Oil port (2) and (3): 207 bar (3000 psi).
- Regulated flow in three-way mode: Range A: 53 lpm (15 gpm)
 Range B: 38 lpm (10 gpm)
- Maximum input flow for 3-way mode: Ranges A and B: 114 lpm (30 gpm)
- Maximum flow for 2 way mode: Range A: 53 lpm (14 gpm)
 Range B: 31 lpm (8 gpm)
 - Note: To increase flow for 2-way flow control, see model T2PV72-20.
- Internal leakage: 0.38 lpm (0.1 gpm) at 207 bar (3000 psi) with valve fully closed. valve fully closed.
- Electrical characteristics: 2 voltage standards. (using EHPR Series coils)

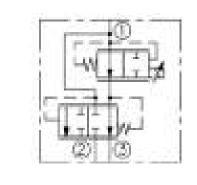
Coil voltage	Threshold current	Max. control current
12 VDC	350 ± 100 mA	1600 ± 200 mA
24 VDC	175 ± 50 mA	800 ± 100 mA

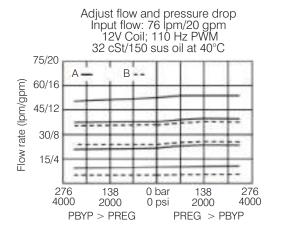
- Medium: Viscosity between 7.4~420 cSt(50~2000ssu) of mineral oil or synthetic oil with lubricating properties.
- Valve hole: VC12-3;

Performance graph (plug-in)

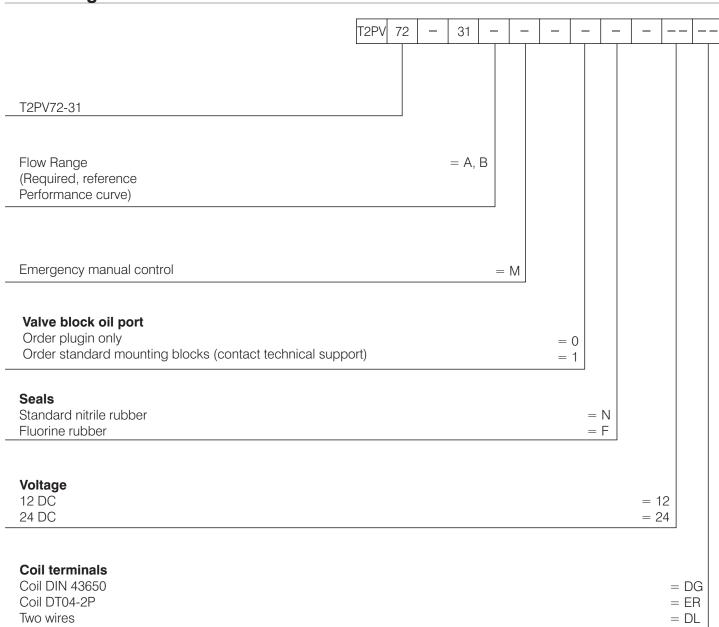


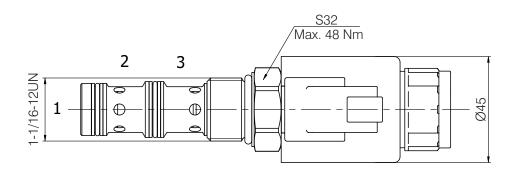














T2PV76-31 Proportional Flow Control Cartridge Valve

Describe

Solenoid-driven, variable electrical parameters, three-way, pressure-compensated, spool-type, normally open when powered off, proportional flow control valve. It can be used as a priority flow control valve with pressure compensation to regulate and bypass flow. When the bypass line (oil port ②) is closed, it can also be used as a 2-way throttling type pressure compensated flow control valve.

How it works

T2PV76-31 will adjust flow of oil port ③ will be regulated and will not be affected by the system working pressure. As the current in the solenoid valve increases, the output flow rate will decrease.

Note: If the equipment's priority flow port is blocked by an external valve, when the valve is used for bypass flow control, The bypass pressure drop will increase if a small amount of leakage is not allowed from the priority port.

Please consult the factory.

Emergency manual control operation:

When starting: Rotate clockwise for about 1 circle to reach the starting point, and continue to rotate for about 5 circles to reach the maximum displacement.

At the end: Rotate counterclockwise for about 6 circles until the positive stop occurs.

Features

- Excellent linearity and hysteresis characteristics.
- The valve core and valve sleeve are hardened and durable.
- Solenoid coil voltage and terminals are selectable.
- Highly efficient wet armature structure.

Characteristics

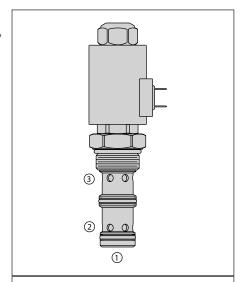
- Working pressure: Inlet: 240 bar (3500 psi);
 Oil ports (2) and (3): 207 bar (3000 psi).
- Adjust the flow rate:
 - Three-way: 75.7 lpm (20.0 gpm), Two-way: 79.5 lpm (21.0 gpm)
- Maximum input flow: Bypass open, Three-way 151.4 lpm (40.0 gpm)
- Internal leakage: Max. current, 207 bar (3000 psi) at pres. 0.38 lpm (0.10 gpm)
- Electrical characteristics: 2 voltage standards.

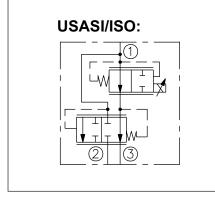
Coil voltage	Threshold current	Max. control current
12 VDC	100 ± 50 mA	1500 ± 100 mA
24 VDC	50 ± 25 mA	$750 \pm 50 \text{mA}$

- Medium: Viscosity between 7.4~420 cSt(50~2000ssu) of mineral oil or synthetic oil with lubricating properties.
- Valve hole: VC16-3;

Performance graph

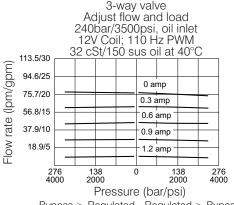
Input signal With 12V coil	DIN coil Installation	PCB Board	Metal Box	DIN rail Mounting
0-5 VDC	7114950	4000046	4000049	4000136
0-10 VDC	4000070	4000141	4000124	4000137
4-20 mA	4000123	4000143	4000130	4000139
PWM	_	4000144	4000133	4000140
With 24V coi				
0-5 VDC	4000161	4000194	4000174	4000136
0-10 VDC	4000165	4000141	4000182	4000137
4-20 mA	4000169	4000143	4000186	4000139
PWM	_	4000144	4000133	4000140





3-way valve
Regulate flow and current
240bar/3500psi, oil inlet
207bar/3000psi, port ③; port ②;
no load 12V Coil; 110 Hz PWM
32 cSt/150 sus oil at 40°C

75.7/20
94.6/25
pt 37.9/10
10 20 30 40 50 60 70 80 90 100
Percentage of max.
control current

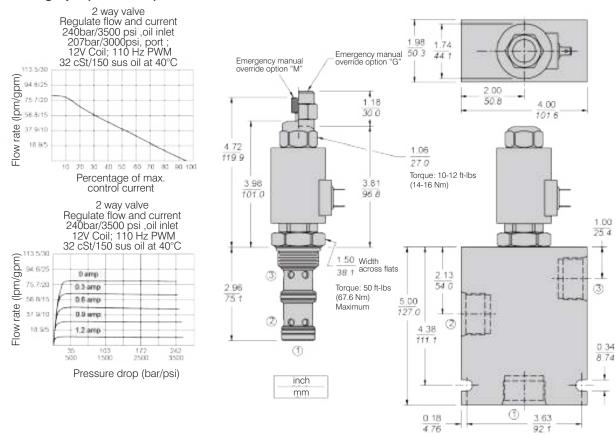




T2PV76-31 Proportional Flow Control Cartridge Valve

Performance graph (continued)

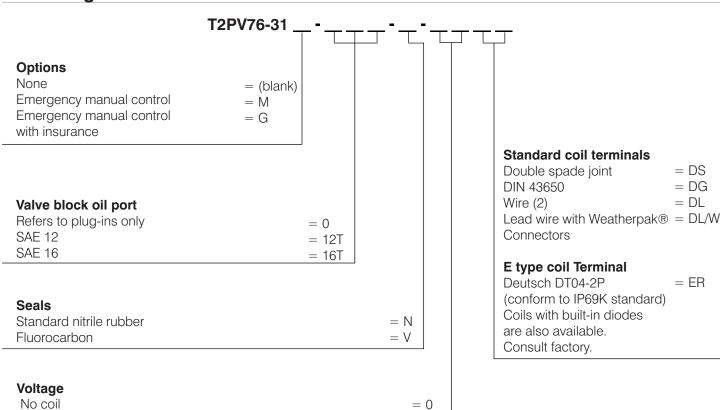
Unit Dimensions



Ordering code

12 VDC

24 VDC



= 12

= 24

92.1



T2PV70-35 Proportional Flow Control Cartridge Valve

Describe

A linear solenoid-actuated, 2-way normally open, threaded cartridge valve for used with a pressure compensator, as a throttle valve with an electrically controlled valve core with adjustable spool opening.

How it works

As the current increases, the flow from oil port ② to oil port ③ in the T2PV70-35 changes from fully open to fully closed. Port ① is only used to balance the valve core pressure and must be plugged. The proportional valve is used in series with a standard pressure compensator with a pressure differential of 21 bar (300 psis) or less, or it can be used alone in a variable flow pressure compensation circuit with load sensing function. The valve is used with an industrial general purpose controller and the typical current value is 2 amps (12 VDC, PWM)), with start/stop trip adjustment (minimum/maximum current). Please consult factory.

Emergency manual control operation:

When starting: Rotate clockwise for about 1 circle to reach the starting point, and continue to rotate for about 5 more circles to reach the maximum displacement.

At the end: Rotate counterclockwise for about 6 circles until the positive stop occurs.

Features

- Excellent linearity and hysteresis characteristics.
- Control orifice size is optional.
- The valve core and valve sleeve are hardened and durable.
- Highly efficient wet armature structure.
- Integrally molded coil design.
- Solenoid coil voltage and terminals are selectable and
- The voltage of the cartridge valves is interchangeable.
- Emergency manual override option
- Waterproof coil standard.

Characteristics

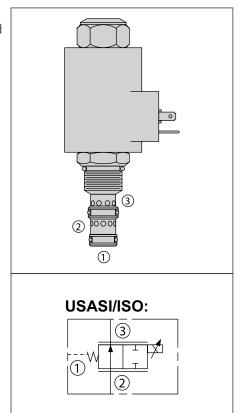
- Working pressure: 207 bar (3000 psi).
- Internal leakage: 197 ml/min (12 cu.in/min) at 207 bar (3000 psi) with valve fully closed
- Electrical characteristics: 2 voltage standards.

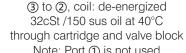
Coil voltage	Threshold current	Max. control current
12 VDC	300 ± 200 mA	1500 ± 200 mA
24 VDC	150 ±100 mA	$750 \pm 50 \text{mA}$

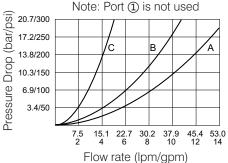
- Medium: Viscosity between 7.4~420 cSt(50~2000ssu) of mineral oil or synthetic oil with lubricating properties.
- Valve hole: VC10-3;

Performance graph

Input signal With 12V coil	DIN coil Installation	PCB Board	Metal Box	DIN rail Mounting
0-5 VDC	7114950	4000046	4000049	4000136
0-10 VDC	4000070	4000141	4000124	4000137
4-20 mA	4000123	4000143	4000130	4000139
PWM		4000144	4000133	4000140
With 24V coi				
0-5 VDC	4000161	4000194	4000174	4000136
0-10 VDC	4000165	4000141	4000182	4000137
4-20 mA	4000169	4000143	4000186	4000139
PWM	_	4000144	4000133	4000140



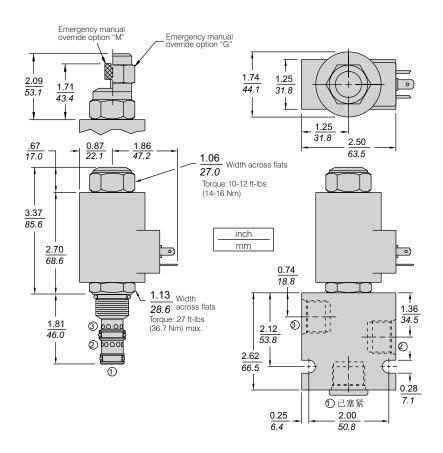




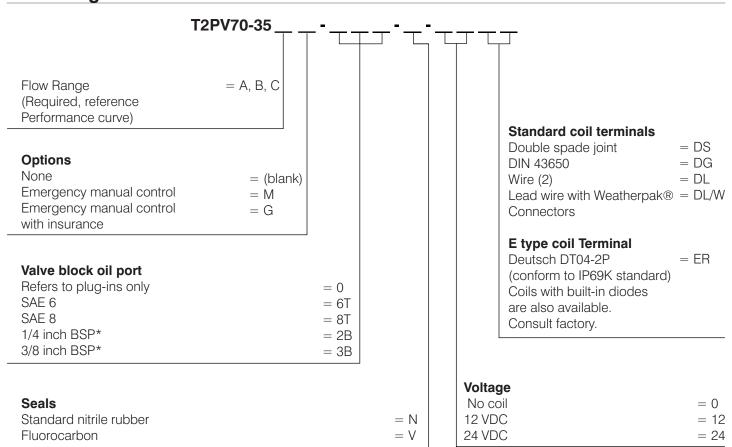


T2PV70-35 Proportional Flow Control Cartridge Valve

Unit Dimensions



Ordering code





T2PV72-35 Proportional Flow Control Cartridge Valve

Describe

Linear electromagnetic drive,2Normally open, threaded cartridge valve, used with a pressure compensator, as a throttle valve with an electrically controlled valve core with adjustable opening.

How it works

As the current increases, T2PV72-35The flow from the oil port ② to the oil port ③ changes from fully open to fully closed. ① Only used to balance the valve core pressure, need to be blocked. Proportional valve and pressure difference21 bar (300 psi)Or smaller standard pressure compensators are used in series, or alone in variable flow pressure compensation loops with load sensing function. The valve is used with an industrial general purpose controller. The typical current value is2install(12 VDC,PWM), with start/stop trip adjustment (min/max current). Consult factory for further details and purchasing information. Operation of the emergency manual override option: When starting: rotate clockwise about 1 Continue rotating for approx.5 The maximum displacement can be achieved by rotating the counterclockwise direction for approx. 6 Zhouzhi positive stop.

Features

- Excellent linearity and hysteresis characteristics.
- Control orifice size is optional.
- The valve core and valve sleeve are hardened and durable.
- Solenoid coil voltage and terminals are selectable.
- Highly efficient wet armature structure.
- The voltage of the cartridge valves is interchangeable.
- Integrally molded coil design.
- Waterproof coil standard.
- Emergency manual override option

Characteristics:

Work Pressure: 207 bar (3000 psi)

Internal leakage: Fully closed, pressure is 207 bar (3000 psi)hour, 328mL/min (20cubic inches per minute), Electrical characteristics: 2 Voltage Standard

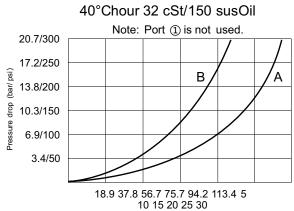
Coil voltage	Threshold current	Maximum Control Current
12 VDC 300 ±200 mA		1500 ±100 mA
24 VDC	150 ±100 mA	750 ±50 mA

Medium: Viscosity between 7.4~420 cSt (50~2000ssu) mineral oil or synthetic oil with lubricating effect Valve hole: VC12-3;

Performance Graph

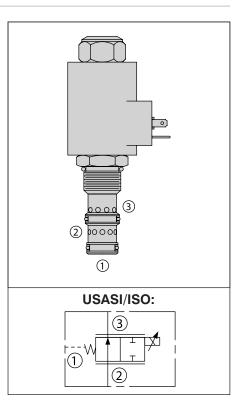
② to ③, the coil is de-energized

Through inserts and valve blocks



flow(lpm/gpm)

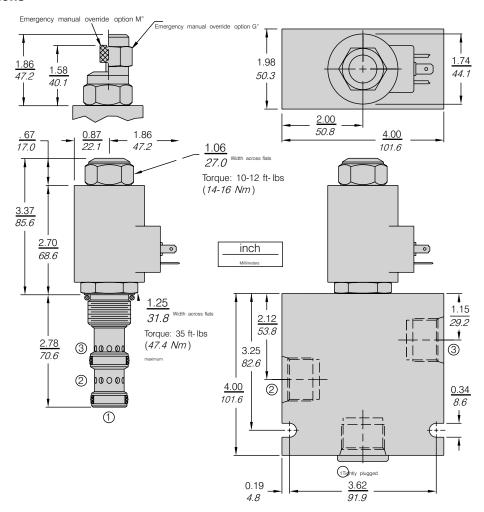
Inputsignal	DIN Coil	PCB	Metal	DIN guide
bring 12VCoil	Install	plate	Cassette	Install
0-5 VDC	7114950	4000046	4000049	4000136
0-10 VDC	4000070	4000141	4000124	4000137
4-20 mA	4000123	4000143	4000130	4000139
PWM	_	4000144	4000133	4000140
bring 24V Coil				
0-5 VDC	4000161	4000194	4000174	4000136
0-10 VDC	4000165	4000141	4000182	4000137
4-20 mA	4000169	4000143	4000186	4000139
PWM	_	4000144	4000133	4000140



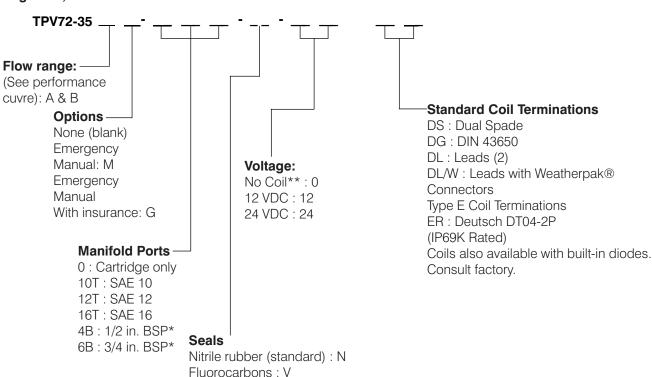


T2PV72-35 Proportional Flow Control Cartridge Valve

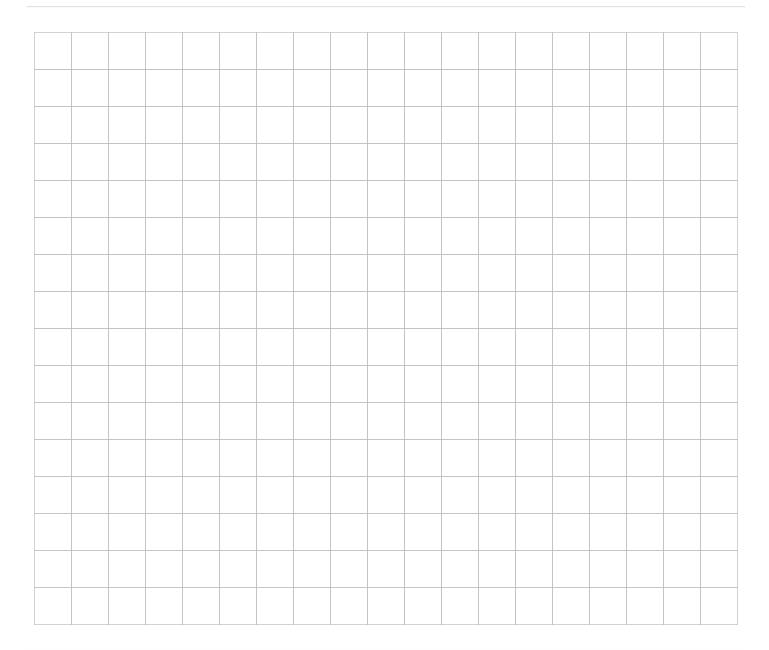
Unit Dimensions



Ordering code;







The specified data is for product description purposes only and may not be deemed to be guaranteed unless expressly confirmed in the contract.



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