

Model 2012 & 2013

1½" to 2"

DN40 to DN50

FPE

**Fluid
Power
Energy**

Three-Way Thermostatic Valves

**3D
Model
Link**



Compact and Reliable Temperature Control

Fluid Power Energy (FPE) thermostatic valves utilize the principle of expanding wax, which in the semi-liquid state undergoes large expansion rates within a relatively narrow temperature range. The self-contained element activates a stainless steel sleeve, which directs flow. All FPE thermostatic valves are factory set at predetermined temperatures: no further adjustments are necessary.

When used in a diverting application, on start-up the total fluid flow is routed back to the main system. As fluid temperature rises to the control range, some fluid is diverted to the cooling system. As fluid temperature continues to increase, more flow is diverted. When the thermostat is in a fully stroked condition, all fluid flow is directed to the cooling system.

FPE thermostatic valves may also be used in a mixing application. Hot fluid enters the "B" port and colder fluid enters the "C" port. The flows mix and the thermostat adjusts flow through ports "B" and "C" to reach the desired temperature, exiting the "A" port.

Standard FPE thermostatic valve housings are made from aluminum and grey iron castings, however, ductile iron, bronze, steel and stainless steel housings are available.

Additional BSP, SAE and JIS threads available.

Including:

2012-1	1½" NPT
2012	2" NPT
2012J24	1½" SAE O-ring
2012J32	2" SAE O-ring
2012M	2" NPT, lever manual override
2012MZ	2" NPT, nut manual override
F2012	2" Flange
F2012M	2" Flange, lever manual override
F2012MZ	2" Flange, nut manual override

Flange options available

Features and Benefits

- Wide range of temperatures
- Heavy duty
- Self-contained
- Replaceable element
- Non-adjustable
- Rugged construction
- Tamper-proof
- Operate in any orientation
- Compact

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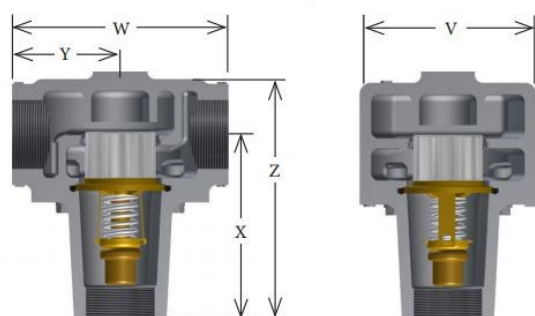
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Model 2012 & 2013 Three-Way Thermostatic Valve Specifications

All units in inches (mm) or lbs (Kg); English (metric)

Model Number	Body Material*	Connection Size	Principal Dimensions Units					Flange Drilling			No. of elements
			X	Y	W	Z	V	No. of holes	Dia. of holes	Bolt circle	
*2012-1 *2012-1M *2012-1MZ	"A, B, D, S, SS"	1 1/2" NPT	5 15/16 (150)	3 1/2 (88)	7 (177)	8 3/8 (212)	5 3/4 (146)	N/A	N/A	N/A	1
*2012 *2012M *2012MZ	"A, B, D, S, SS"	2" NPT	5 15/16 (150)	3 1/2 (88)	7 (177)	8 3/8 (212)	5 3/4 (146)	N/A	N/A	N/A	1
*2012J24 *2012J24M *2012J24MZ	"A, B, D, S, SS"	SAE 24 1 7/8"-12	5 15/16 (150)	3 1/2 (88)	7 (177)	8 3/8 (212)	5 3/4 (146)	N/A	N/A	N/A	1
*2012J32 *2012J32M *2012J32MZ	"A, B, D, S, SS"	SAE 32 2 1/2"-12	5 15/16 (150)	3 1/2 (88)	7 (177)	8 3/8 (212)	5 3/4 (146)	N/A	N/A	N/A	1
*F2012 *F2012M F2012MZ	A	2" 125lbs FF FLANGE	6 1/6 (153)	4 1/2 (113)	8 15/16 (227)	9 1/8 (231)	6 1/2 (165)	4	3/4 (19)	4 15/16 (125)	1
	B	2" 150lbs FF FLANGE	5 7/8 (149)	4 1/2 (109)	8 5/8 (219)	9 1/8 (231)	6 1/2 (165)	4	3/4 (19)	4 15/16 (125)	1
	D	2" 150lbs FF FLANGE	6 (152)	4 1/2 (112)	8 14/16 (225)	9 1/4 (234)	6 1/2 (165)	4	3/4 (19)	4 15/16 (125)	1
	S, SS	2" 150lbs FF FLANGE	5 15/16 (151)	4 3/8 (111)	8 13/16 (223)	9 3/16 (233)	6 1/2 (165)	4	3/4 (19)	4 15/16 (125)	1
*F2012X *F2012XM *F2012XMZ	S, SS	2" 300lbs RF FLANGE	5 15/16 (151)	4 9/16 (115)	9 1/8 (231)	9 3/16 (233)	6 1/2 (165)	8	3/4 (19)	5 (127)	1
*F2012-X5 *F2012-X15M F2012-X5MZ	S, SS	2" 600lbs RF FLANGE	6 1/4 (158)	5 (125)	9 7/8 (250)	9 4/8 (241)	6 1/2 (165)	8	3/4 (19)	4 15/16 (125)	1
*2013-1	"A, B, D, S, SS"	1 1/2" NPT	6 (152)	3 1/2 (88)	7 (177)	8 3/4 (222)	6 1/2 (165)	N/A	N/A	N/A	1
*2013	"A, B, D, S, SS"	2" NPT	6 (152)	3 1/2 (88)	7 (177)	8 3/4 (222)	6 1/2 (165)	N/A	N/A	N/A	1
*2013J24	"A, B, D, S, SS"	SAE 24 1 7/8"-12	6 (152)	3 1/2 (88)	7 (177)	8 3/4 (222)	6 1/2 (165)	N/A	N/A	N/A	1
*2013J32	"A, B, D, S, SS"	SAE 32 2 1/2"-12	6 (152)	3 1/2 (88)	7 (177)	8 3/4 (222)	6 1/2 (165)	N/A	N/A	N/A	1

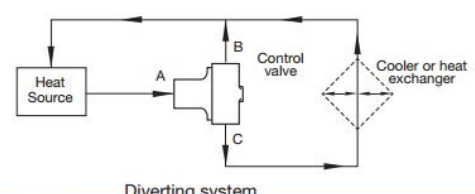
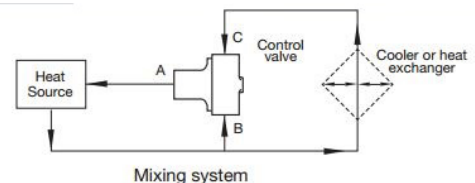
Replace * with body material type: A = Cast iron, B = Bronze, D = Ductile iron, S = Steel, SS = Stainless Steel.



Pressure ratings @ 250°F					
Material	A	B	D	S	SS
psi	150	180	225	670	590
Bar	10.3	12.4	15.5	46.2	40.6

Weights				
	A	B	D	S & SS
	32 (15)	39 (18)	32 (15)	36 (16)

Service Kits (xxx represents temperature °F)				
Model	O-Ring	Gasket	LipSeal	Thermostat
2000-xxx	1 of Buna-N	1	1	1
2000V-xxx	1 of Viton	1	1	1
2000E-xxx	1 of Neoprene	1	1	1



Lip Seal Insertion Tools	
Part Number	Component
2071-IT	Lip Seal Insertion Plug

Lip Seal Extraction Tools	
Part Number	Component
2071-RT	Lip Seal Extraction Plug

NOTE: Service Kits are supplied with Housing O-Rings & Housing Gaskets. Make sure to replace your original housing seal using the same style seal, and discard the extra component. If your valve was originally supplied with a gasket, DO NOT attempt to use an O-Ring, as the seal will leak without a groove to accept the O-Ring

Note: FPE reserves the right to substitute ordered material for better quality.

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