

## **Including:**

2510 2 1/2" Flange 2510M 2 1/2" Flange

with manual override

## **Features and Benefits**

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



# Compact, reliable temperature control

Fluid Power Energy (FPE) thermostatic valves use 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. A wide range of temperatures are available for water and oil temperature control applications.

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.

In a mixing application, hot fluid enters the "B" port and colder fluid enters the "C" port. The flows mix and the thermostat adjusts to reach the desired temperature, exiting the "A" port.

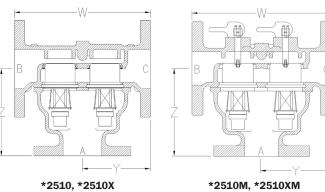
Standard FPE thermostatic valve housings are made from aluminum and grey iron castings, however, ductile iron, bronze, steel and stainless steel housings are available.

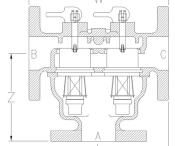
Available Connections: 125# FF Flange, 150# RF Flange, 300# RF Flange, Navy and Metric Flanges.

Optional features: Manual Override, High Over Temp element, Plated element. Other options available upon request.

## **Specification**

Body Material	Nominal Pipe Size	Principal Dimensions Units - inches (mm)				Max. width in	Flange Drilling			No. of elements	Approx. shipping weight	Notes for numbered end
(*)		"X"	"Y"	"W"	"Z"	other plane	No. of holes	Dia. of holes	Bolt circle			notes
A, B, D	2 1/2" 125# FF Flange	N/A	5 (127.00)	10 (254.00)	6 1/2 (165.10)	8 (203.20)	4	3/4 (19.05)	5 1/2 (139.70)	2	A=47#, B=54#, D=47#	
S, SS	2 1/2" 150# RF Flange	N/A	5 3/16 (131.76)	10 3/8 (263.53)	6 5/8 (168.28)	8 (203.20)	4	3/4 (19.05)	5 1/2 (139.70)	2	S & SS=51#	
A, B, D	2 1/2" 125# FF Flange	N/A	5 (127.00)	10 (254.00)	6 1/2 (165.10)	8 (203.20)	4	3/4 (19.05)	5 1/2 (139.70)	2	A=48#, B=55#, D=48#	Manual override
S, SS	2 1/2" 150# RF Flange	N/A	5 3/16 (131.76)	10 3/8 (263.53)	6 5/8 (168.28)	8 (203.20)	4	3/4 (19.05)	5 1/2 (139.70)	2	S & SS=52#	
S, SS	2 1/2" 300# RF Flange	N/A	5 3/16 (131.76)	10 3/8 (263.53)	6 5/8 (168.28)	8 (203.20)	8	7/8 (22.23)	5 7/8 (149.23)	2	S & SS=59#	
S, SS	2 1/2" 300# RF Flange	N/A	5 3/16 (131.76)	10 3/8 (263.53)	6 5/8 (168.28)	8 (203.20)	8	7/8 (22.23)	5 7/8 (149.23)	2	S & SS=60#	Manual override
	A, B, D S, SS A, B, D S, SS S, SS	A, B, D 2 1/2" 125# FF Flange S, SS 2 1/2" 150# RF Flange A, B, D 2 1/2" 125# FF Flange S, SS 2 1/2" 150# RF Flange S, SS 2 1/2" 300# RF Flange S, SS 2 1/2" 300#	(*)  A, B, D  2 1/2" 125# FF Flange  S, SS  2 1/2" 150# RF Flange  A, B, D  2 1/2" 125# FF Flange  N/A RF Flange  N/A RF Flange  S, SS  2 1/2" 150# RF Flange  S, SS  2 1/2" 300# N/A RF Flange  S, SS  2 1/2" 300# N/A RF Flange  N/A	(*) "X" "Y"  A, B, D 2 1/2" 125# FF Flange	(*)  A, B, D  2 1/2" 125# FF Flange  S, SS  2 1/2" 150# RF Flange  A, B, D  2 1/2" 150# RF Flange  A, B, D  2 1/2" 125# FF Flange  A, B, D  2 1/2" 125# FF Flange  A, B, D  2 1/2" 125# FF Flange  A, B, D  2 1/2" 125# A, B, D  2 1/2" 150# A, B, D  2 1/2" 150# A, B, D  3 10 A, B, D  4 10 3/8 A, B, D  5 3/16 A, B, D  5 3/16 A, B, D  7 10 3/8 A, B, D  8 10 3/8 A, B, D  8 10 3/8 A, B, D  9 10 3/8 A, B, D  10 3/8 A, B	(*)         "X"         "Y"         "W"         "Z"           A, B, D         2 1/2" 125# FF Flange         N/A         5 (127.00)         10 (254.00)         6 1/2 (165.10)           S, SS         2 1/2" 150# RF Flange         N/A         5 3/16 (131.76)         10 3/8 (263.53)         6 5/8 (168.28)           A, B, D         2 1/2" 125# FF Flange         N/A         5 (127.00)         10 (254.00)         6 1/2 (165.10)           S, SS         2 1/2" 150# RF Flange         N/A         5 3/16 (131.76)         10 3/8 (263.53)         6 5/8 (168.28)           S, SS         2 1/2" 300# RF Flange         N/A         5 3/16 (131.76)         10 3/8 (263.53)         6 5/8 (168.28)           S, SS         2 1/2" 300# RF Flange         N/A         5 3/16 (131.76)         10 3/8 (263.53)         6 5/8 (168.28)	(*)         "X"         "Y"         "W"         "Z"         other plane           A, B, D         2 1/2" 125# FF Flange         N/A         5 (127.00)         10 (254.00)         6 1/2 (165.10)         8 (203.20)           S, SS         2 1/2" 150# RF Flange         N/A         5 3/16 (131.76)         10 3/8 (263.53)         6 5/8 (168.28)         8 (203.20)           A, B, D         2 1/2" 125# FF Flange         N/A         5 10 (127.00)         6 1/2 (254.00)         8 (165.10)         (203.20)           S, SS         2 1/2" 150# RF Flange         N/A         5 3/16 (131.76)         10 3/8 (263.53)         6 5/8 (168.28)         (203.20)           S, SS         2 1/2" 300# RF Flange         N/A         5 3/16 (131.76)         10 3/8 (263.53)         6 5/8 (168.28)         8 (203.20)           S, SS         2 1/2" 300# RF Flange         N/A         5 3/16 (131.76)         10 3/8 (263.53)         6 5/8 (168.28)         8           S, SS         2 1/2" 300# RF Flange         N/A         5 3/16 (131.76)         10 3/8 (263.53)         6 5/8 (168.28)         8	(*)         "X"         "Y"         "W"         "Z"         other plane         No. of holes           A, B, D         2 1/2" 125# FF Flange         N/A         5 (127.00)         10 (254.00)         6 1/2 (165.10)         8 (203.20)         4           S, SS         2 1/2" 150# RF Flange         N/A         5 3/16 (131.76)         10 3/8 (263.53)         6 5/8 (168.28)         8 (203.20)         4           A, B, D         2 1/2" 125# FF Flange         N/A         5 (127.00)         10 (254.00)         6 1/2 (165.10)         8 (203.20)         4           S, SS         2 1/2" 150# RF Flange         N/A         5 3/16 (131.76)         10 3/8 (263.53)         6 5/8 (168.28)         8 (203.20)         4           S, SS         2 1/2" 300# RF Flange         N/A         5 3/16 (131.76)         10 3/8 (263.53)         6 5/8 (168.28)         8 (203.20)         8           S, SS         2 1/2" 300# RF Flange         N/A         5 3/16 (131.76)         10 3/8 (263.53)         6 5/8 (168.28)         8 (203.20)         8           S, SS         2 1/2" 300# RF Flange         N/A         5 3/16 (131.76)         10 3/8 (263.53)         6 5/8 (168.28)         8         8	(*)         "X"         "Y"         "W"         "Z"         other plane         No. of holes         Dia. of holes           A, B, D         2 1/2" 125# FF Flange         N/A         5 (127.00) (254.00) (165.10) (203.20)         4 3/4 (19.05)           S, SS         2 1/2" 150# RF Flange         N/A         5 3/16 (131.76) (263.53) (168.28) (168.28)         6 5/8 (168.28) (203.20)         4 3/4 (19.05)           A, B, D         2 1/2" 125# FF Flange         N/A         5 3/16 (127.00) (254.00) (165.10) (203.20)         4 3/4 (19.05)           S, SS         2 1/2" 150# RF Flange         N/A         5 3/16 (131.76) (263.53) (168.28) (203.20)         4 3/4 (19.05)           S, SS         2 1/2" 300# RF Flange         N/A         5 3/16 (131.76) (263.53) (168.28) (203.20)         4 3/4 (19.05)           S, SS         2 1/2" 300# RF Flange         N/A         5 3/16 (131.76) (263.53) (168.28) (203.20)         8 8 8 7/8 (22.23)           S, SS         2 1/2" 300# N/A         5 3/16 (131.76) (263.53) (168.28) (203.20)         8 8 8 7/8	(*)         "X"         "Y"         "W"         "Z"         other plane         No. of holes         Dia. of holes         Bolt circle           A, B, D         2 1/2" 125# FF Flange         N/A         5 (127.00)         (254.00)         (165.10)         8 (203.20)         4 (19.05)         3/4 (19.05)         5 1/2 (139.70)           S, SS         2 1/2" 150# RF Flange         N/A         5 3/16 (131.76)         10 3/8 (263.53)         6 5/8 (203.20)         8 (203.20)         4 3/4 (19.05)         5 1/2 (139.70)           A, B, D         2 1/2" 125# RF Flange         N/A         5 10 (254.00)         6 1/2 (203.20)         8 (203.20)         4 3/4 (19.05)         5 1/2 (19.05)         (139.70)           S, SS         2 1/2" 150# RF Flange         N/A         5 3/16 (131.76)         10 3/8 (263.53)         6 5/8 (203.20)         4 3/4 (19.05)         5 1/2 (19.05)         (139.70)           S, SS         2 1/2" 300# RF Flange         N/A         5 3/16 (131.76)         10 3/8 (263.53)         6 5/8 (203.20)         8 (19.00)         4 3/4 (19.05)         139.70)         139.70)           S, SS         2 1/2" 300# RF Flange         N/A         5 3/16 (131.76)         10 3/8 (263.53)         6 5/8 (203.20)         8 (203.20)         7/8 (22.23)         149.23)           S, SS         2 1/2	(*)         ***         "Y"         "W"         "Z"         other plane         No. of holes         Dia. of holes         Bolt circle           A, B, D         2 1/2" 125# FF Flange         N/A         5 (127.00)         (254.00)         (165.10)         8 (203.20)         4         3/4 (19.05)         5 1/2 (139.70)         2           S, SS         2 1/2" 150# RF Flange         N/A         5 3/16 (131.76)         10 3/8 (263.53)         6 5/8 (203.20)         8 (203.20)         4         3/4 (19.05)         5 1/2 (139.70)         2           A, B, D         2 1/2" 125# FF Flange         N/A         5 10 (127.00)         6 1/2 (203.20)         8 (203.20)         4         3/4 (19.05)         5 1/2 (139.70)         2           S, SS         2 1/2" 150# RF Flange         N/A         5 3/16 (131.76)         10 3/8 (263.53)         6 5/8 (203.20)         4         3/4 (19.05)         5 1/2 (139.70)         2           S, SS         2 1/2" 300# RF Flange         N/A         5 3/16 (131.76)         10 3/8 (263.53)         6 5/8 (203.20)         8         7/8 (19.05)         5 1/2 (19.05)         139.70)         2           S, SS         2 1/2" 300# RF Flange         N/A         5 3/16 (131.76)         10 3/8 (263.53)         6 5/8 (203.20)         8         7/8 (22.23)         <	(*)         Composition of the plane         No. of holes         Dia. of holes         Bolt circle           A, B, D         2 1/2" 125# FF Flange         N/A         5 (127,00)         10 (254.00)         (165.10)         (203.20)         4         3/4 (19.05)         5 1/2 (139.70)         2 A=47#, B=54#, D=47#           S, SS         2 1/2" 150# RF Flange         N/A         5 3/16 (131.76)         10 3/8 (263.53)         6 5/8 (168.28)         8 (203.20)         4         3/4 (19.05)         5 1/2 (139.70)         2         A=48#, B=55#, D=44#           A, B, D         2 1/2" 125# FF Flange         N/A         5 3/16 (127.00)         6 1/2 (165.10)         8 (203.20)         4         3/4 (19.05)         5 1/2 (139.70)         2         A=48#, B=55#, D=44#           S, SS         2 1/2" 150# RF Flange         N/A         5 3/16 (10 3/8) (263.53)         (166.28) (203.20)         4         3/4 (19.05)         5 1/2 (139.70)         2         A=48#, B=55#, D=48#           S, SS         2 1/2" 150# RF Flange         N/A         5 3/16 (10 3/8) (263.53)         (168.28) (203.20)         4         3/4 (19.05)         5 1/2 (139.70)         2         A=48#, B=55#, D=48#           S, SS         2 1/2" 300# RF Flange         N/A         5 3/16 (10 3/8) (263.53)         (168.28) (203.20)         8         7/8 (19.05) (





A, B, D S, SS SX, SSX

Flow vs. Pressure Drop

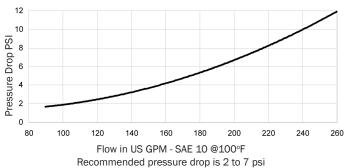
Pressure Ratings Material

PSI

125

275

720



B = Bronze, D = Ductile iron, S = Steel, SS = Stainless Steel

# Heat Control Source Valve Cooler or heat exchanger Oil Pump Miving System

·	Mixing System
Heat Source Oil Pump	Control Valve C Cooler or heat exchange
	Diverting System

## **Spare Parts**

Part Number	Description
*2510	Valve body (*See table for material)
*2520	Valve cover (*See table for material)
2071	Lip seal
3080-C	Gasket
2050-Temp	Thermostat (Temp to follow dash)
1604	Hex bolt
1605	Lock washer
1590	Nameplate
FPE Model 2500	Replacement kit (includes the following:)
3080C	Gasket
(2) 2071	Lip seal
(2) 2050-Temp	Thermostat (Temp to follow dash)

### Americas

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