



TI-P034-01-US
Issue 2

Cast Iron Float and Thermostatic Steam Traps FTB Super Capacity Series

Description

The trap contains a float valve mechanism which modulates to discharge condensate continuously at steam temperature. Non-condensable gases are released by a separate internal balanced pressure thermostatic air vent.

Model	FTB-20	FTB-30	FTB-125	FTB-175	FTB-200
PMO	20 psi g	30 psi g	125 psi g	175 psi g	200 psi g
Sizes	2"	2"	1½"	2", 2½"	1½"
Connections	NPT				
Construction	Cast iron body				
	Stainless steel internals				
Options	Gauge glass, vacuum breaker				

Limiting operating conditions

Maximum operating pressure (PMO)	FTB-20: 20 psi g	(1.4 bar g)
	FTB-30: 30 psi g	(2.1 bar g)
	FTB-125: 125 psi g	(8.6 bar g)
	FTB-175: 175 psi g	(12.1 bar g)
	FTB-200: 200 psi g	(14.0 bar g)
Maximum operating temperature	450 °F @ 200 psi g	(232 °C @ 14 bar g)

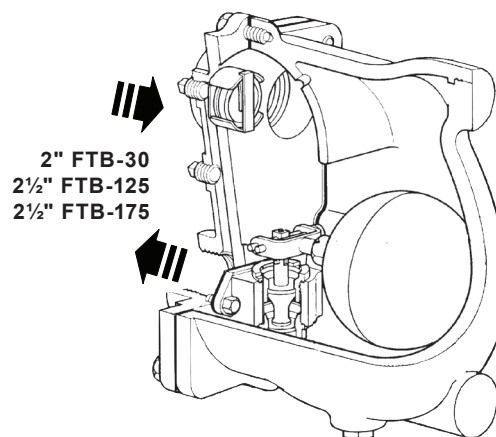
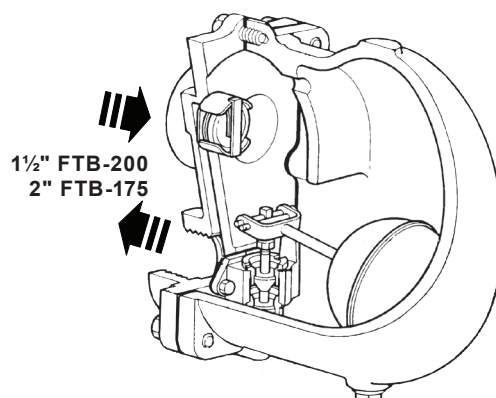
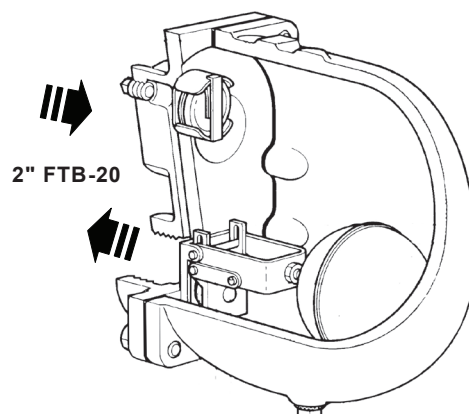
Pressure shell design conditions

PMA	Maximum allowable temperature	FTB-125	175 psi g/up to 450 °F (12.1 bar g/up to 232 °C)
		FTB-175	
		FTB-200	200 psi g/up to 450 °F (14 bar g/up to 232 °C)
		FTB-20	125 psi g/up to 450 °F (8.6 bar g/up to 232 °C)
		FTB-30	
TMA	Maximum allowable temperature	FTB-125	
		FTB-175	450 °F/0-175 psi g (232 °C/0-12.1 bar g)
		FTB-20	
		FTB-30	450 °F/0-125 psi g (232 °C/0-8.6 bar g)
		FTB-200	450 °F/0-200 psi g (232 °C/0-8.6 bar g)

Typical applications

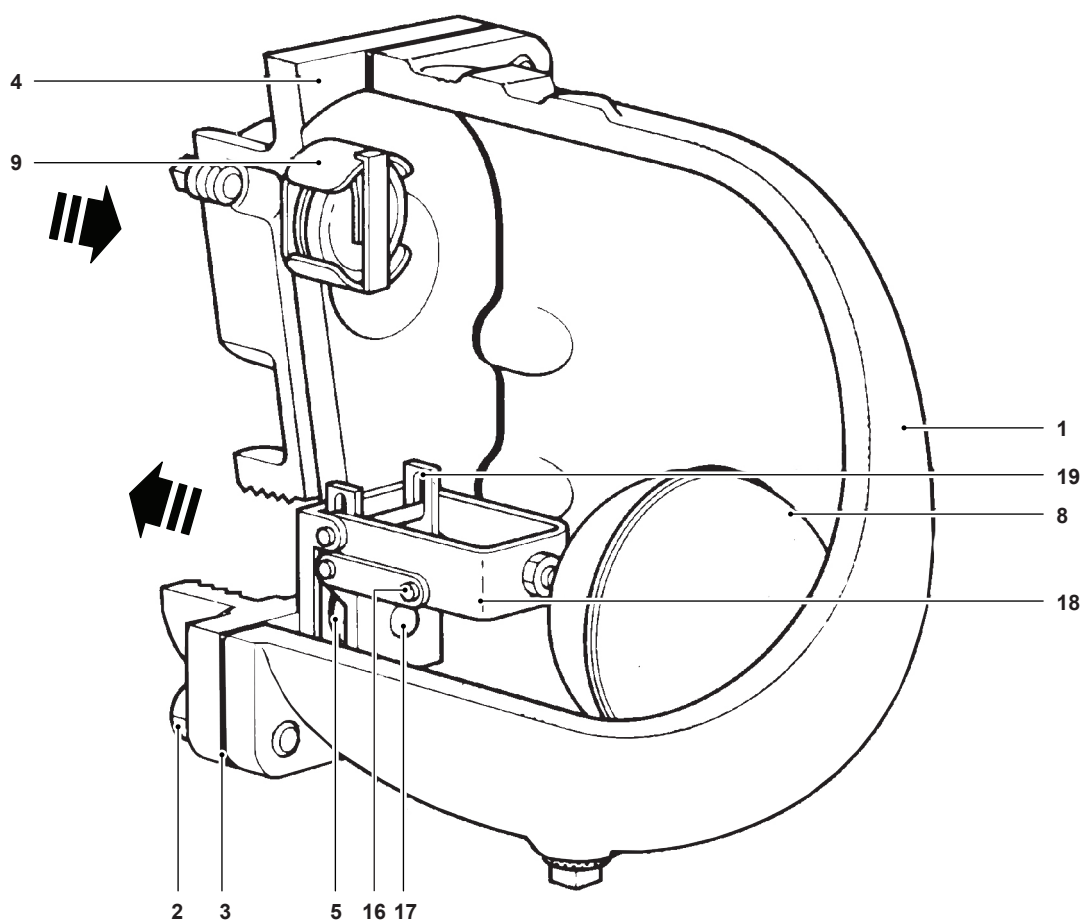
All process heat exchange equipment, particularly when controlled by modulating temperature control valves; unit heaters and air heating coils.

For capacities, see TI-2-317-US



Materials

2" FTB-20



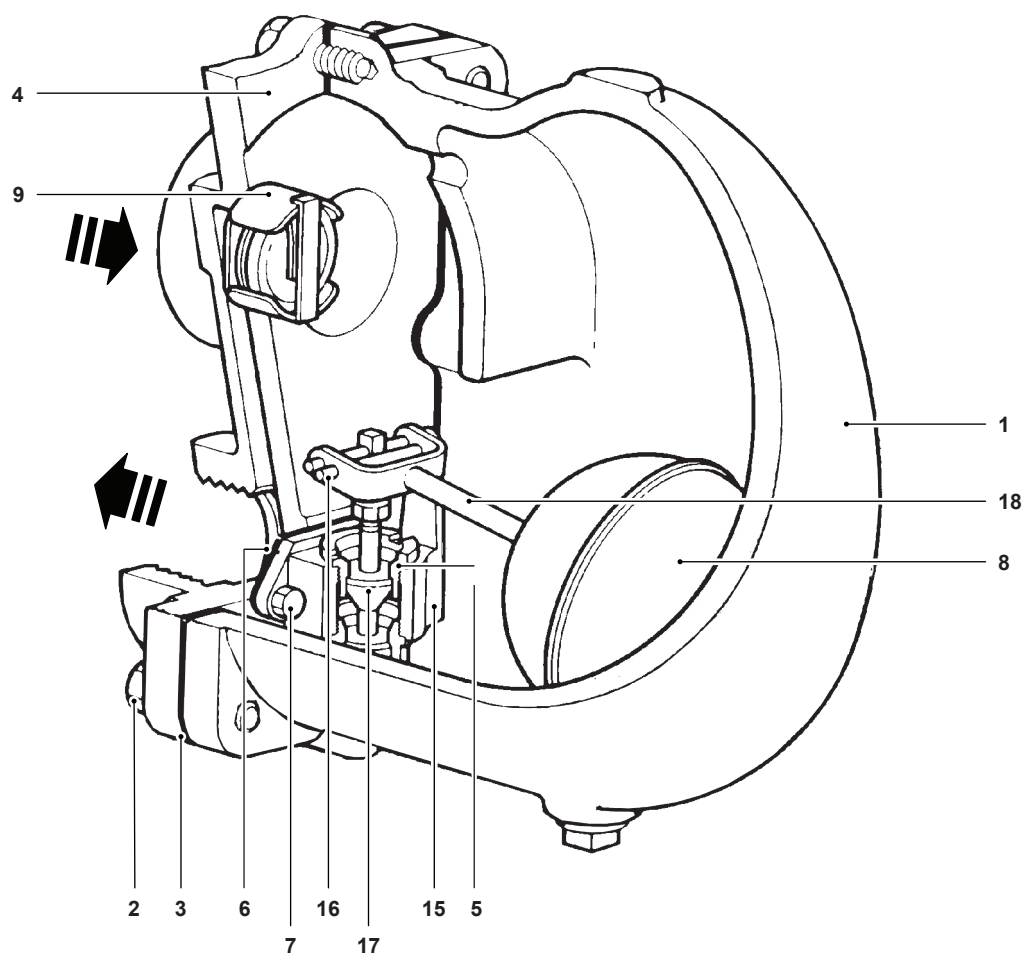
No.	Part	Material
1	Body	Cast iron ASTM A126 CL B
2	Cover screws	Carbon steel ASTM A449 Type 1
3	Cover gasket	Graphite
4	Cover	Cast iron ASTM A126 CL B
5	Valve seat	Stainless steel
8	Ball float	Stainless steel

No.	Part	Material
9	Air vent assembly	Stainless steel
	Air vent head	Stainless steel
	Air vent seat	Stainless steel
16	Pivot pin	Stainless steel
17	Valve head	Stainless steel (FTB-20, 175, 200)
		Cast stainless steel (FTB-30, 125, 200)
18	Float arm	Stainless steel
19	Seat bracket, head bracket, stop, link	Stainless steel (FTB-20)

Materials

1½" FTB-200

2" FTB-175



No.	Part	Material
1	Body	Cast iron ASTM A126 CL B
2	Cover screws	Carbon steel ASTM A449 Type 1
3	Cover gasket	Graphite
4	Cover	Cast iron ASTM A126 CL B
5	Valve seat	Stainless steel
6	Valve seat gasket	Stainless steel (FTB-20)
	Valve assembly gasket	Graphite
7	Main valve assembly screws	Stainless steel ASTM A193 Grade B8
8	Ball float	Stainless steel

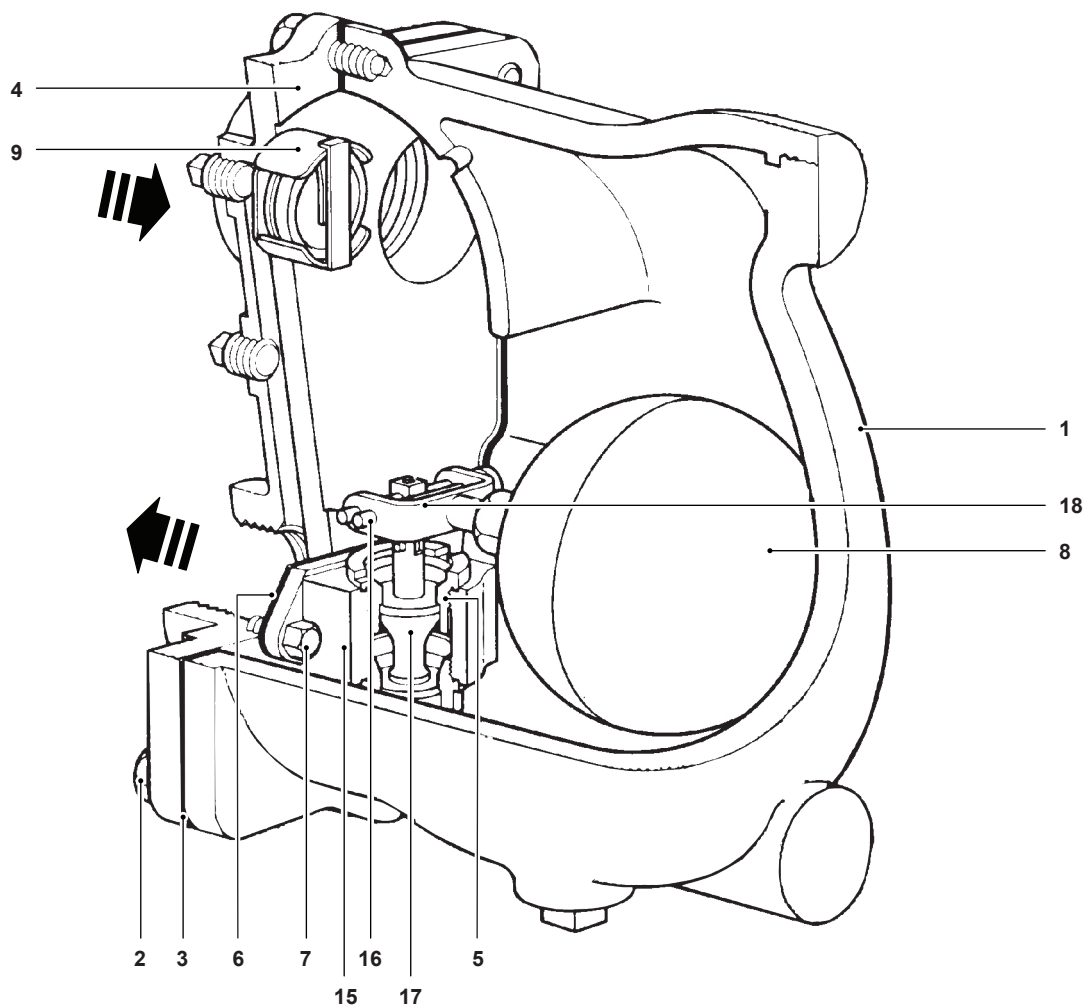
No.	Part	Material
9	Air vent assembly	Stainless steel
	Air vent head	Stainless steel
	Air vent seat	Stainless steel
15	Main valve assembly housing	Stainless steel
16	Pivot pin	Stainless steel
17	Valve head	Stainless steel (FTB-20, 175, 200)
		Cast stainless steel (FTB-30, 125, 200)
18	Float arm	Stainless steel

Materials

2" FTB-30

2½" FTB-125

2½" FTB-175



No.	Part	Material
1	Body	Cast iron ASTM A126 CL B
2	Cover screws	Carbon steel ASTM A449 Type 1
3	Cover gasket	Graphite
4	Cover	Cast iron ASTM A126 CL B
5	Valve seat	Stainless steel
	Valve seat gasket	Stainless steel (FTB-20)
6	Valve assembly gasket	Graphite
7	Main valve assembly screws	Stainless steel ASTM A193 Grade B8
8	Ball float	Stainless steel

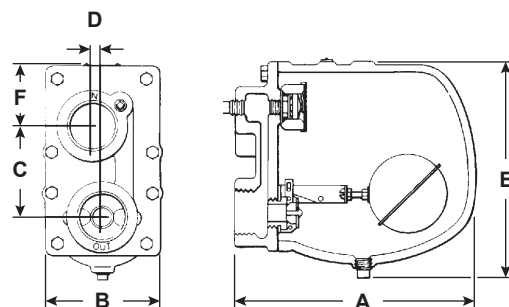
No.	Part	Material
	Air vent assembly	Stainless steel
9	Air vent head	Stainless steel
	Air vent seat	Stainless steel
15	Main valve assembly housing	Stainless steel
16	Pivot pin	Stainless steel
		Stainless steel (FTB-20, 175, 200)
17	Valve head	Cast stainless steel (FTB-30, 125, 200)
18	Float arm	Stainless steel

Dimensions (nominal) in inches (millimeters) and lbs (kg)

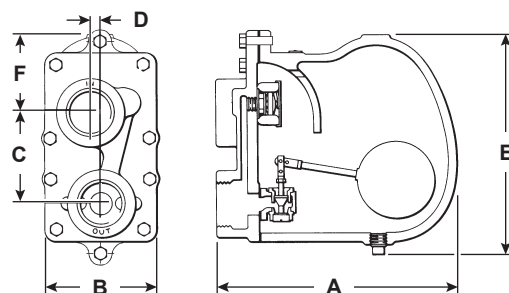
Type & Size	A	B	C	D
FTB-20 2"	12.2 (309)	5.9 (150)	4.5 (114)	0.5 (13)
FTB-30 2"	15.25 (387)	9.25 (235)	7.25 (184)	1.4 (35)
FTB-125 2½"	15.6 (396)	9.25 (235)	7.25 (184)	1.4 (35)
FTB-175 2"	12.1 (307)	5.9 (150)	4.5 (114)	0.5 (13)
FTB-175 2½"	15.4 (390)	9.25 (235)	7.25 (184)	1.4 (35)
FTB-200 1½"	10.8 (274)	5.8 (147)	3 (76)	0.6 (14)

Type & Size	E	F	Weight
FTB-20 2"	10.7 (272)	3 (76)	43 lb (19.5 kg)
FTB-30 2"	15.6 (396)	3.75 (95)	89 lb (40.4 kg)
FTB-125 2½"	15.6 (396)	3.75 (95)	90 lb (40.8 kg)
FTB-175 2"	11.8 (300)	4 (102)	48 lb (21.8 kg)
FTB-175 2½"	15.6 (396)	3.75 (95)	90 lb (40.8 kg)
FTB-200 1½"	9.1 (231)	2.3 (58)	31 lb (14.1 kg)

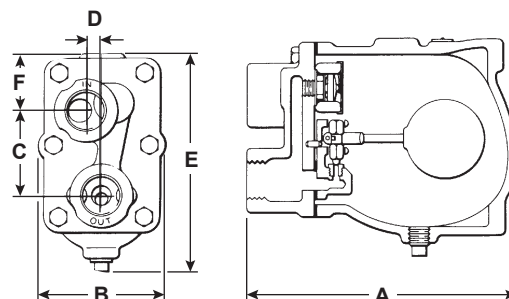
2" FTB-20



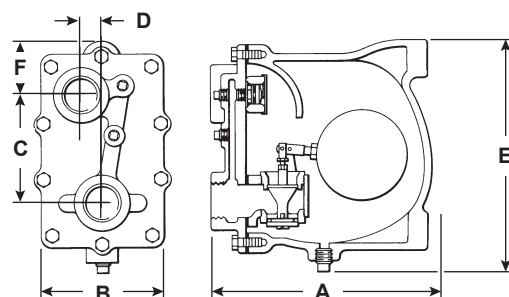
2" FTB-175



1½" FTB-200



2" FTB-30,
2½" FTB-125 & 175



Installation

A pipeline strainer should be installed ahead of any steam trap. Full-port isolating valves should be placed to permit servicing. The trap should be installed below the drainage point of the equipment with a collecting leg before the trap, in a position with the float arm in a horizontal plane so that the float rises and falls vertically, and with the direction of flow as indicated on the cover. Refer to IM-2-300-US for complete instructions.

Maintenance

This product can be maintained without disturbing the piping connections. Complete isolation from both supply and return line is required before any servicing is performed.

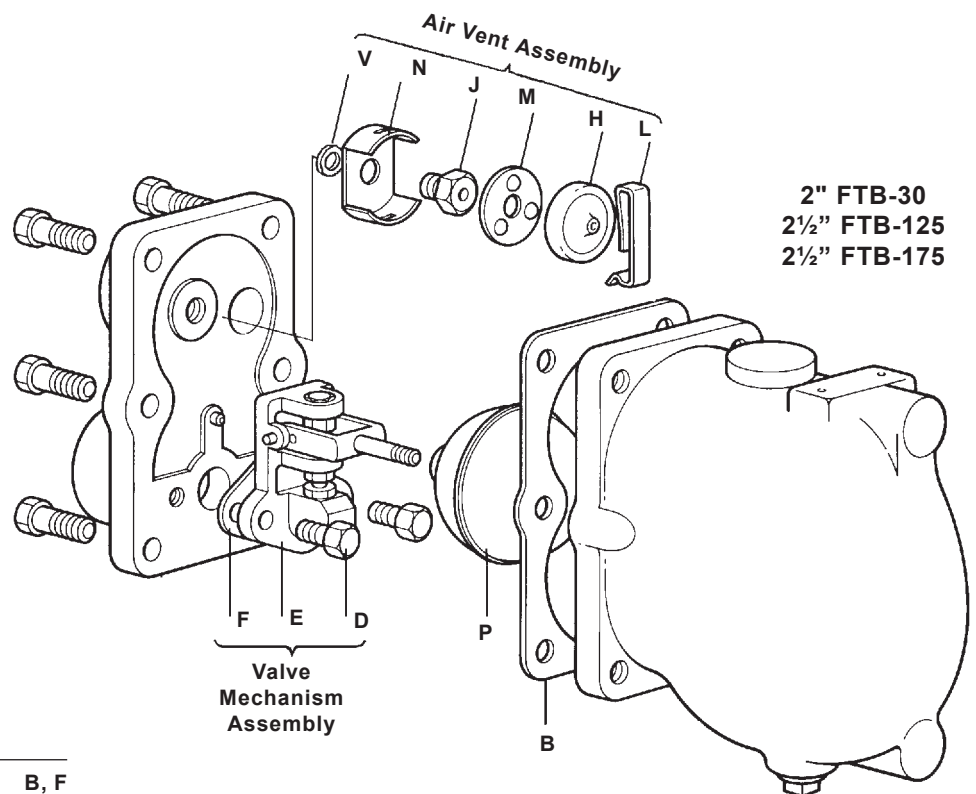
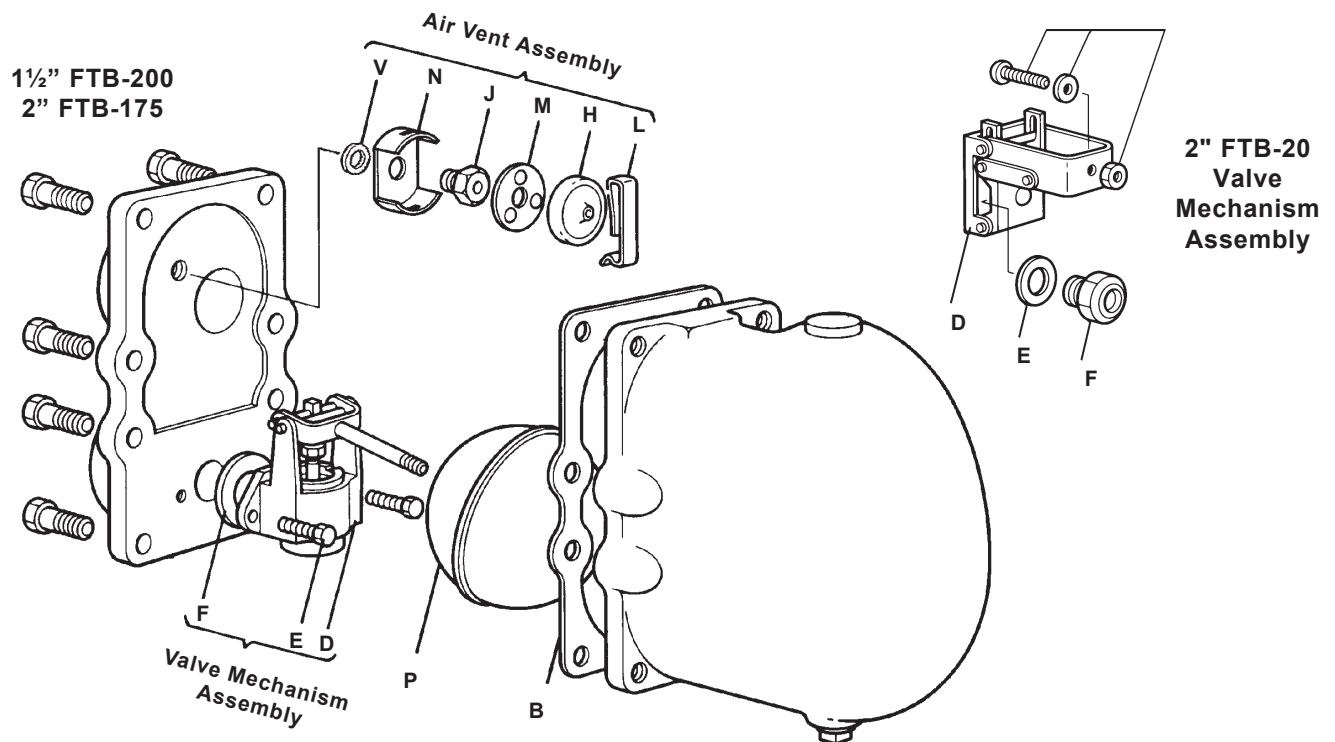
The trap should be disassembled periodically for inspection and cleaning of the valve head and seat, and operating mechanism. Worn or damaged parts should be replaced using a complete valve mechanism assembly and/or air vent assembly.

Complete installation and maintenance instructions are given in IM-2-300-US, which accompanies the product.

Sample specification

Steam traps shall be of the mechanical float type having Cast iron bodies, NPT connections, and Stainless steel valve heads and seats. Incorporated into the trap body shall be a Stainless steel balanced pressure thermostatic air vent capable of withstanding 450 °F and resisting waterhammer without sustaining damage. Internals of the trap shall be completely servicable without disturbing the piping.

Spare parts



Gasket Kit (3 of each)	B, F
Gasket Kit (3 of each) FTB-20	B, F
Air Vent Kit	V, N, J, M, H, L
Valve Mechanism Kit (less float)	D, E, F
Float	P