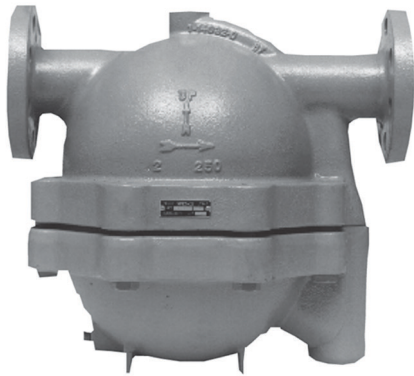




YARWAY FXT700 SERIES STEAM TRAP

INSTALLATION AND MAINTENANCE INSTRUCTIONS

Before installation, these instructions must be carefully read and understood.



WARNING

Failure to follow these instructions or to properly install and maintain this equipment could result in property damage and personal injury or death.

The FXT700 Series Steam Trap must be installed, operated and maintained in accordance with federal, state and local codes, rules and regulations and Emerson instructions

If leak develops in the system, service to the unit may be required. Failure to correct trouble could result in a hazardous condition.

Installation, operation and maintenance procedures performed by unqualified personnel may result in improper adjustment and unsafe operation. Either condition may result in equipment damage or personal injury. Only a qualified person shall install or service the FXT700 Series Steam Trap.

SCOPE OF THE MANUAL

This manual provides instructions for installation, maintenance and parts information for the FXT700 Series.

PRODUCT DESCRIPTION

The FXT700 Series are float and thermostatic steam traps. Float is free of levers, linkages or other mechanical connections. This float is weighted to maintain orientation and acts as the valve being free to modulate condensate through the seat ring. Air vent is balanced-pressure design with stainless steel welded encapsulated bellows capable of discharging air and non-condensable gases continuously within 15°F (-9.4°C) of saturated temperature. Trap contains integral strainer and stainless steel exhaust port sleeve.

SPECIFICATIONS

The specifications section on this page provide the ratings and other specifications for the FXT700 Series.

Available Configurations:	Type FXT701 (Low capacity); Type FXT702 (Medium capacity); Type FXT703 (High capacity)
Body Sizes:	NPS ½, ¾, 1, 1½ and 2 (DN 15, 20, 25, 40 and 50)
End Connection Style:	NPT, Socket Weld, CL300 RF and CL600 RF
Maximum Allowable Pressure ⁽¹⁾ :	650 psig (44.8 barg)
Maximum Operating Pressure ⁽¹⁾ :	See Table 1
Maximum Allowable Temperature ⁽¹⁾ :	750°F (400°C)
Materials of Construction:	Body and Cover (ASTM A216 WCB Carbon steel); Cover Gasket (Spiral Wound 304 Stainless steel with graphite filler); All Internal (Stainless steel) Air Vent (Balanced-pressure Stainless steel)
Options:	SLR Orifice, Blowdown Valve and Continuous Bleed Air Vent Maximum Pressure

1. The pressure/temperature limits in this Installation and Maintenance Instructions Manual and any applicable standard or code limitation should not be exceeded.

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PRINCIPLE OF OPERATION

On startup, the thermostatic air vent (caged stainless welded bellows) is open, allowing air to flow freely through the vent valve orifice. When condensate flows into the trap, the float rises, allowing condensate to be discharged. Once air and non-condensables have been evacuated, hot condensate will cause the thermostatic vent to close. Condensate will continue to be discharged as long as condensation occurs. During normal operation, an increase in the load causes the liquid level in the trap to rise. The float then rises and rolls off the seat ring, allowing more condensate to flow out. The float sinks as the condensate load decreases, moving nearer to the seat ring, decreasing the effective size of the orifice and allowing less condensate to discharge. This provides smooth, continuous operation that reacts instantly to load variation while maintaining a water seal over the seat ring to prevent live steam loss.

INSTALLATION

Install the FXT700 Series Steam trap upright and in a horizontal line with the arrow on the body pointing in the direction of flow. Allowable inclination is 5° or less horizontally and 5° or less at right angles to the plane of the pipe line.

MAINTENANCE

Due to normal wear that may occur, inspect the parts periodically and replace if necessary. The frequency of inspection depends on the severity of service conditions.

CAUTION

Inspection of the thermostatic bellows is not recommended as disassembly generally damages the unit.

1. Disassemble the steam trap. Remove the body bolts and place the lower body on a safe place.
2. Inspect the float and lower seat ring for damage and clean or replace as necessary. Clean the float with a rag and steel wool.
3. Clean the screen using a wire brush.
4. Replace bellows if needed. Use needle nose pliers or similar tool. Insert them into two of the three holes located in the bellows assembly and unscrew it from the upper body.

NOTE

When reassembling, use thread locker on the bellows assembly threads.

5. After inspection/repair, reassemble trap, replacing body gasket and torquing bolts as specified. See Table 2.

FIGURE 2

**FXT700 Series Steam Trap
Operational Schematic**

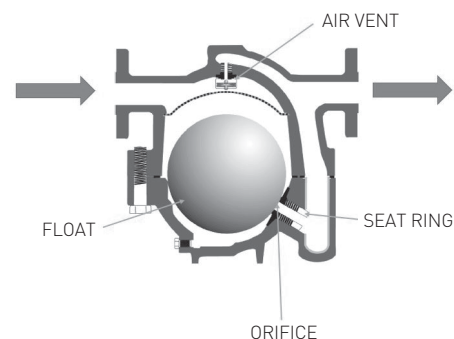


TABLE 1. MAXIMUM OPERATING PRESSURE

ORIFICE	MAXIMUM OPERATING PRESSURE	
	psig	barg
20	20	1.4
50	50	3.5
100	100	6.9
150	150	10.3
175	175	12.1
250	250	17.2
300	300	20.7
400	400	27.6
600	600	41.4

TABLE 2. FXT700 SERIES STREAM TRAP TORQUE VALUES

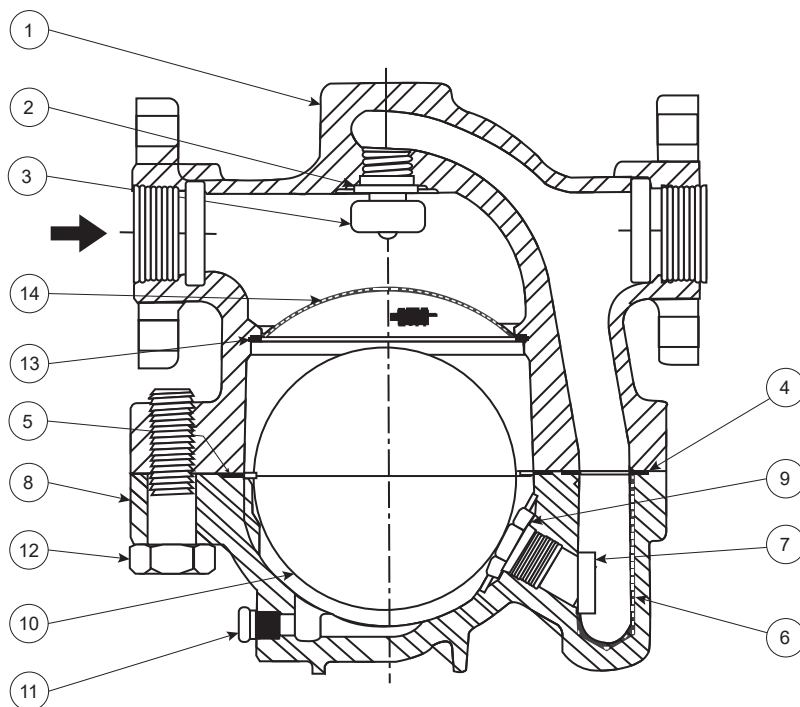
TRAP TYPE	BODY BOLTS		SEAT RING	
	Ft-lb	N•m	Ft-lb	N•m
FXT701	60 to 70	81 to 95	11 to 12	14 to 16
FXT702	265 to 310	359 to 420	21.5 to 23.5	29 to 32
FXT703	265 to 310	359 to 420	37 to 41	50 to 56

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FIGURE 3

FXT700 Series Steam Trap Assembly



PARTS ORDERING

When corresponding with your local Sales Office about FXT700 Series Steam Trap, always reference the assembly number. When ordering replacement parts specify the complete character part number from the following parts list.

PARTS LIST

KEY	DESCRIPTION
1	Body, Cast steel
2	Air Vent Gasket, Copper
3	Air Vent, Steel
4	Vent Gasket, 304 Stainless steel
5	Body Gasket, 304 Stainless steel
6	Sleeve, Copper
7*	Seat Ring, 316 Stainless steel
8	Lower Body, Cast steel
9*	Seat Ring Gasket, Copper
10	Float, 316 Stainless steel
11	Pipe Plug, 1/4 NPT
12	Cap Screw, Steel
13	Retainer Ring, Steel
14	Screen, 304 Stainless steel

TABLE 3. FXT700 SERIES PART NUMBER

PART	MATERIAL	PART NUMBER		
		Type FXT701	Type FXT702	Type FXT703
Body	Cast Steel		See Table 4	
Air Vent	Copper	WAL05-15771-00	WAL05-14627-00	WAL05-14627-00
	Steel	WAL05-15751-00	WAL05-15752-00	WAL05-15752-00
Vent Gasket	304 Stainless steel	WAL05-15778-00	WAL05-15780-00	WAL05-15782-00
Body Gasket	304 Stainless steel	WAL05-15777-00	WAL05-15779-00	WAL05-15781-00
Sleeve	Copper	WAL05-15774-00	WAL05-15775-00	WAL05-15776-00
Seat Ring	Stainless steel		See Table 5	
Lower Body	Cast steel	WAL04-15712-00	WAL04-15725-00	WAL04-15734-00
Seat Ring Gasket	Copper	WAL05-14614-00	WAL05-14627-00	WAL05-14646-00
Float	316 Stainless steel	WAL05-15943-00	WAL05-15946-00	WAL05-14638-00
Pipe Plug	1/4 NPT	WAL04-03772-00	WAL04-03772-00	WAL04-03772-00
Cap Screw	Steel	WAL05-15783-00	WAL05-15784-00	WAL05-15785-00
Retainer Ring	Steel	WAL05-15772-00	WAL05-14662-00	WAL05-14640-00
Screen	304 Stainless steel	WAL05-15773-00	WAL05-14621-00	WAL05-14639-00

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TABLE 4. KEY 1, FXT700 SERIES BODY PART NUMBER

END CONNECTION	PART NUMBER							
	Type FXT701			Type FXT702			Type FXT703	
	NPS ½ (DN 15)	NPS ¾ (DN 20)	NPS 1 (DN 25)	NPS 1 (DN 25)	NPS 1½ (DN 40)	NPS 2 (DN 40)	NPS 1½ (DN 40)	NPS 2 (DN 40)
Screwed	WAL04-15700-00	WAL04-15701-00	WAL04-15702-00	WAL04-15713-00	WAL04-15714-00	WAL04-15715-00	WAL04-15726-00	WAL04-15727-00
CL300 RF	-----	-----	-----	WAL04-15717-00	WAL04-15720-00	WAL04-15723-00	WAL04-15729-00	WAL04-15732-00
CL600 RF	-----	-----	-----	WAL04-15718-00	WAL04-15721-00	WAL04-15724-00	WAL04-15730-00	WAL04-15733-00

TABLE 5. KEY 7, FXT700 SERIES SEAT RING PART NUMBER

TRAP TYPE	PART NUMBER								
	Differential Pressure, ΔP psig (barg)								
	20 (1.38)	50 (3.45)	100 (6.90)	150 (10.3)	175 (12.1)	250 (17.2)	300 (20.7)	400 (27.6)	600 (41.4)
FXT701	WAL04-15750-00	WAL04-15751-00	WAL04-15752-00	WAL04-15753-00	WAL04-15754-00	WAL04-15755-00	WAL04-15756-00	WAL04-15757-00	WAL04-15758-00
FXT702	WAL04-15759-00	WAL04-15760-00	WAL04-15761-00	WAL04-15762-00	WAL04-15763-00	WAL04-15764-00	WAL04-15765-00	WAL04-15766-00	WAL04-15767-00
FXT703	WAL04-14645-00	WAL04-15696-00	WAL04-14644-00	WAL04-15692-00	WAL04-15688-00	WAL04-14643-00	WAL04-15768-00	WAL04-15769-00	WAL04-15770-00

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