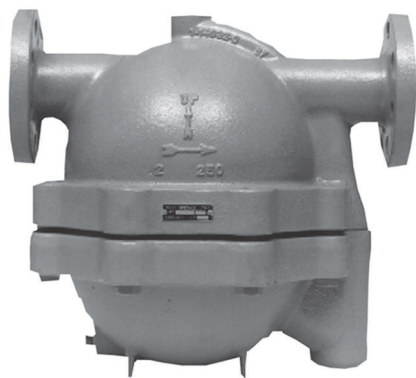




## YARWAY FXT SERIES STEAM TRAP

### 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 FXT 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 FXT Series Steam Trap.*

#### SCOPE OF THE MANUAL

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

#### PRODUCT DESCRIPTION

The FXT 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 (8.33°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 FXT Series.

##### Materials of Construction

Body and Cover:	FXT300 Series: Cast iron ASTM A126B FXT700 Series: 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

**TABLE 1. PRODUCT CONFIGURATIONS AND PRESSURE / TEMPERATURE RATINGS**

TYPE	CAPACITY	AVAILABLE SIZES	END CONNECTIONS	MAXIMUM ALLOWABLE PRESSURE/TEMPERATURE	MAXIMUM OPERATING PRESSURE OPTIONS
FXT300	Low	NPS ½ and ¾ (DN 15 and 20)	NPT, BSPT	250 psig (17.2 barg) 450°F (232°C)	20, 50, 100, 150, 175 and 250 psig (1.4, 3.5, 6.9, 10.3, 12.1 and 17.2 barg)
FXT301	Medium	NPS ¾ and 1 (DN 20 and 25)	NPT, BSPT		
FXT302	High	NPS 1 and 1½ (DN 25 and 40)	NPT, BSPT		
FXT303	Super High	NPS 1½ and 2 (DN 40 and 50)	NPT, BSPT, CL250 RF	650 psig (44.8 barg) 750°F (400°C)	20, 50, 100, 150, 175, 250, 300, 400 and 600 psig (1.4, 3.5, 6.9, 10.3, 12.1, 17.2, 20.7, 27.6 and 41.4 barg)
FXT701	Low	NPS ½, ¾ and 1 (DN 15, 20 and 25)	NPT, SWE		
FXT702	Medium	NPS 1 and 1½ (DN 25 and 40)	NPT, SWE, CL300 RF, CL600 RF		
FXT703	High	NPS 1½ and 2 (DN 40 and 50)	NPT, SWE, CL300 RF, CL600 RF		

# YARWAY FXT SERIES STEAM TRAP

## INSTALLATION AND MAINTENANCE INSTRUCTIONS

### 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 FXT 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**

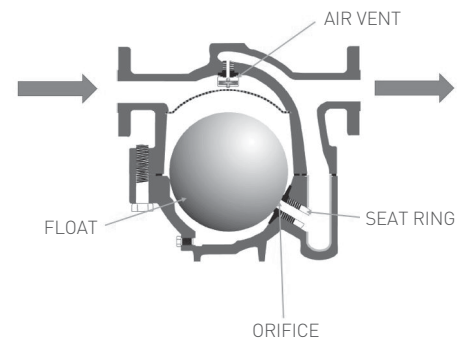
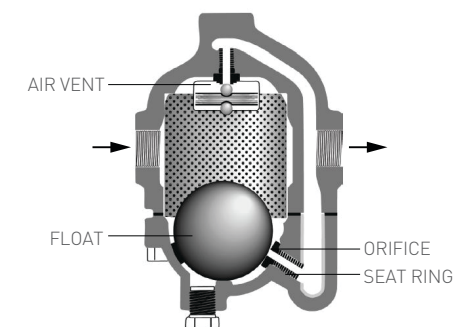


FIGURE 3

**FXT300 and FXT301 Series Steam Trap**  
**Operational Schematic**



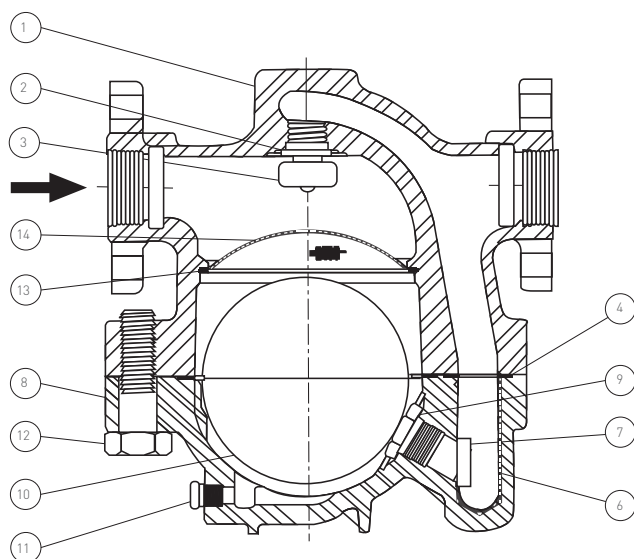
**TABLE 2. FXT SERIES STREAM TRAP TORQUE VALUES**

TRAP TYPE	BODY BOLT		SEAT RING	
	Ft-lb	N•m	Ft-lb	N•m
FXT300	25 to 30	33.9 to 40.7	6.5 to 7	8.8 to 9.5
FXT301	60 to 70	81 to 95	11 to 12	14 to 16
FXT302	60 to 70	81 to 95	21.5 to 23.5	29 to 32
FXT303	115 to 135	156 to 183	37 to 41	50 to 56
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

# YARWAY FXT SERIES STEAM TRAP

## INSTALLATION AND MAINTENANCE INSTRUCTIONS

FIGURE 4  
FXT700 Series Steam Trap Assembly



### PARTS ORDERING

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

TABLE 3. FXT700 SERIES PART NUMBER

KEY	PART	MATERIAL	PART NUMBER		
			Type FXT701	Type FXT702	Type FXT703
1	Body	Cast Steel	See Table 4	See Table 4	See Table 4
3	Air Vent	Copper	WAL05-15771-00	WAL05-14627-00	WAL05-14627-00
3	Air Vent	Steel	WAL05-15751-00	WAL05-15752-00	WAL05-15752-00
2*	Vent Gasket	304 Stainless steel	WAL05-15778-00	WAL05-15780-00	WAL05-15782-00
4*	Body Gasket	304 Stainless steel	WAL05-15777-00	WAL05-15779-00	WAL05-15781-00
6	Sleeve	Copper	WAL05-15774-00	WAL05-15775-00	WAL05-15776-00
7*	Seat Ring	Stainless steel	See Table 5	See Table 5	See Table 5
8	Lower Body	Cast steel	WAL04-15712-00	WAL04-15725-00	WAL04-15734-00
9*	Seat Ring Gasket	Copper	WAL05-14614-00	WAL05-14627-00	WAL05-14646-00
10	Float	316 Stainless steel	WAL05-15943-00	WAL05-15946-00	WAL05-14638-00
11	Pipe Plug	¼ NPT	WAL04-03772-00	WAL04-03772-00	WAL04-03772-00
12	Cap Screw	Steel	WAL05-15783-00	WAL05-15784-00	WAL05-15785-00
13	Retainer Ring	Steel	WAL05-15772-00	WAL05-14662-00	WAL05-14640-00
14	Screen	304 Stainless steel	WAL05-15773-00	WAL05-14621-00	WAL05-14639-00

\* Recommended spare part

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)
NPT	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

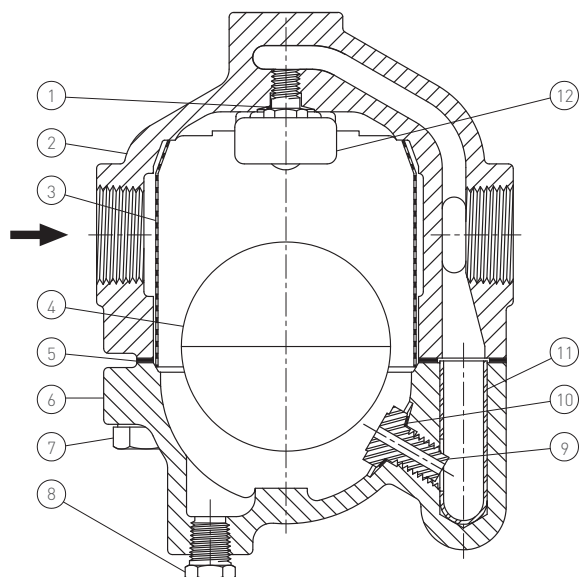
TABLE 5. KEY 7, FXT700 SERIES SEAT RING PART NUMBER

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

# YARWAY FXT SERIES STEAM TRAP

## INSTALLATION AND MAINTENANCE INSTRUCTIONS

FIGURE 5  
FXT300 and FXT301 Series Steam Trap ½ to 2 NPT Assembly



### PARTS ORDERING

When corresponding with your local Sales Office about FXT300 Series Steam Trap, always reference the assembly number. When ordering replacement parts specify the complete character part number from the following parts list.

TABLE 6. FXT300 SERIES PART NUMBER

KEY	PART	PART NUMBER		
		Type FXT300	Type FXT302	Type FXT303
1*	Air Vent Gasket	-----	WAL05-14599-00	-----
2	Upper Body	-----	-----	-----
3	Screen	WAL05-14594-01	WAL05-14621-00	WAL05-14639-00
4	Float	WAL05-17318-00	WAL05-17321-00	WAL05-14638-00
5*	Body Gasket	WAL05-13402-00	WAL05-13404-00	WAL05-14637-00
6	Lower Body	WAL04-14586-01	WAL04-14617-01	WAL04-14633-01
7	Hex Cap Screw	WAL05-14650-00 [Quantity: 4]	WAL05-14647-00 [Quantity: 6]	WAL05-14641-00 [Quantity: 8]
8	Pipe Plug [Quantity: 2]	WAL04-03772-00	WAL04-03772-00	WAL04-03772-00
9*	Seat Ring, 20 psi	WAL04-14598-01	WAL04-14626-00	WAL04-14645-00
9*	Seat Ring, 50 psi	WAL04-15693-00	WAL04-15695-00	WAL04-15696-00
9*	Seat Ring, 100 psi	WAL04-14597-01	WAL04-14625-00	WAL04-14644-00
9*	Seat Ring, 150 psi	WAL04-15685-00	WAL04-15691-00	WAL04-15692-00
9*	Seat Ring, 175 psi	-----	WAL04-15687-00	WAL04-15688-00
9*	Seat Ring, 250 psi	WAL04-14596-01	WAL04-14624-00	WAL04-14643-00
10*	Seat Ring Gasket	WAL05-14599-00	WAL05-14627-00	WAL05-14646-00
11	Sleeve	WAL05-14595-00	WAL05-14623-00	WAL05-14642-00
12	Air Vent, Standard	WAL05-14603-00	WAL05-14936-00	WAL05-14936-00
12	Air Vent, SLR	WAL04-15601-00	WAL04-15602-00	WAL04-15602-00
12	Air Vent, SLR (high capacity)	WAL04-18447-00	WAL04-18455-00	WAL04-18455-00
12	Air Vent, Air Vent Bushing	-----	WAL05-01088-00	WAL05-01088-00
13	Screen Retaining Ring	-----	WAL05-14622-00	WAL05-14640-00

\* Recommended spare part

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