

# spirax sarco

## Steel Liquid Drain Trap FA450

The **float-operated liquid drain trap** discharges continuously in direct response to variations in liquid flow rate, assuring thorough drainage of the system.

Model	FA450
<b>PMO</b>	465 psig (see below)
<b>Sizes</b>	3/4" to 2"
<b>Connections</b>	NPT
<b>Construction</b>	Carbon Steel Body Stainless Steel Internals
<b>Options</b>	ANSI 150, 300 or 600 flanges SW Connections to ANSI B16.11 1/2" Bottom Drain

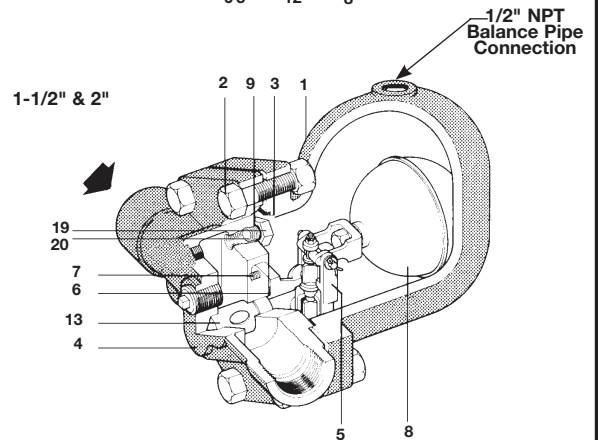
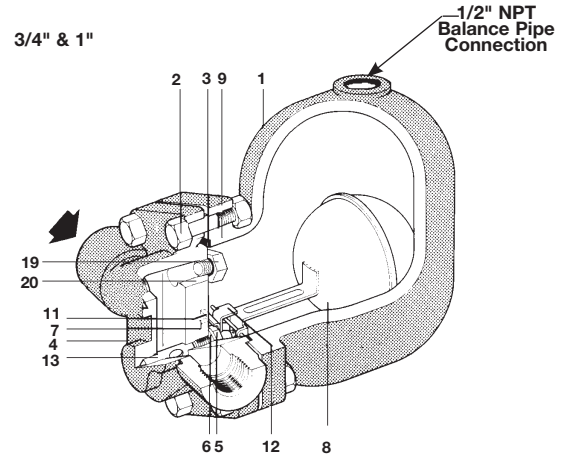
**Note:** 1-1/2" and 2" valves are double-seated, and may not shut tight under no-load conditions. Normally, the liquid load will always be greater than the small residual leakage.

### Construction Materials

No.	Part	Material	
1	Body	Steel	ASTM A216 WCB
2	Cover Bolts	Steel	ASTM A 193 B7
	Cover Nuts 3/4" & 1"	7/16 - 14 UNC-2A	ASTM A 194 2H
	1-1/2" & 2"	5/8-11UNC-2A	
3	Cover Gasket	Stainless Steel Reinforced Exfoliated Graphite	
4	Cover	Steel	ASTM A216 WCB
5	Valve Seat (3/4" & 1")	Stainless Steel	ASTM A276 Type 420F
	Main Valve Assembly w/ erosion deflector (1-1/2" & 2")	Stainless Steel	AISI 431
6	Valve Seat Gasket (3/4" & 1")	Stainless Steel	ASTM A240 Type 301
	Main Valve Assy Gasket 1-1/2" & 2"	Stainless Steel Reinforced Exfoliated Graphite	
7	Pivot Frame Assy	Stainless Steel	AISI 18-8
	Set Screws (3/4" & 1")	10-24 Fillister Head	ANSI B 18.6.3
	Main Valve Assembly Cap Screws (1-1/2")	1/4-20	ASTM 276 Type 304
	Studs & Nuts (2")	5/16-18	ASTM 276 Type 431 & 304
8	Ball Float & Lever	Stainless Steel	ASTM A240 Type 304
11	Support Frame	Stainless Steel	ASTM A240 Type 304
12	Pivot Frame	Stainless Steel	ASTM A240 Type 304
13	Erosion Deflector	Stainless Steel	ASTM A582 Type 303
19	Plug	Stainless Steel	
20	Plug Gasket	Stainless Steel	ASTM A240

### Typical Applications

Receiver and air line drainage, draining a liquid from its vapor phase



### Limiting Operating Conditions\*

**Max. Operating Pressure (PMO)** Up to 465 psig. The PMO depends on the model selected and the specific gravity of the liquid being drained. See TIS 7.318.

**Max. Operating Temperature** 750 °F (400°C)

### Pressure Shell Design Conditions\*

**PMA** 535 psig/650°F 37 barg/343°C  
Max. allowable pressure 505 psig/750°F 35 barg/400°C

**TMA** 750°F/0-505 psig 400°C/0-34 barg  
Max. allowable temperature

\* The limiting operating and design conditions for ANSI 150 flanged units will be limited by the flange rating

# Steel Liquid Drain Trap FA450

## Capacity

The discharge capacity depends on the differential pressure (inlet pressure minus outlet pressure) and the specific gravity of the liquid being drained. See TIS 7.318.

## Sample Specification

Liquid drain traps shall be of the mechanical ball float type having steel bodies, horizontal in-line connections, and stainless steel valve heads, seats and ball floats. Internals of the trap shall be completely servicable without disturbing the piping.

## Installation

The trap must be fitted in a horizontal pipe line with direction of flow as indicated and so that the float mechanism is free to rise and fall in a vertical plane. Full-flow isolating valves should be placed to permit servicing.

The high point of the body is provided with a 1/2" NPT tapping for a balance pipe, which is essential for satisfactory operation of this unit. The balance pipe must be connected with a continuous rise between the tapping provided on the body of the trap and the vessel being drained. The trap discharge should be piped to a safe place.

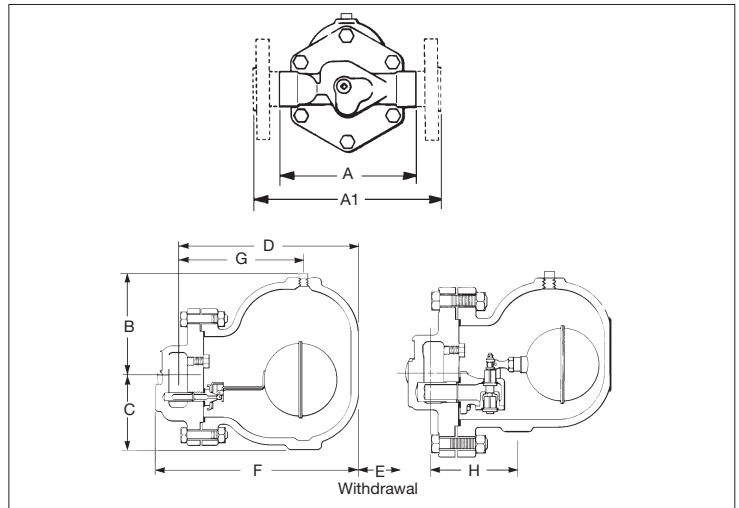
## Maintenance

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.

Worn or damaged parts should be replaced using a complete valve mechanism kit.

**Complete installation and maintenance instructions are given in IMI 7.306, which accompanies the product.**



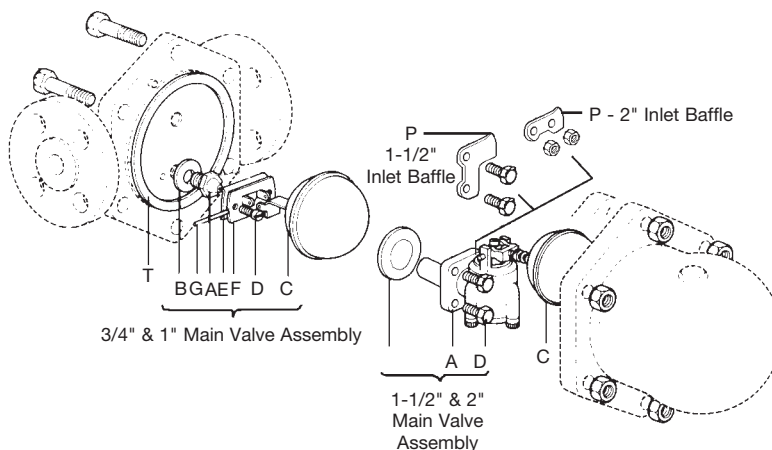
## Dimensions

(nominal) in inches and millimeters

Size-DN	A	A1	B	C	D	E	F	G	H	NPT/SW	Flg
3/4"	6.1	10.0	2.6	2.6	6.4	4.7	7.4	4.0	-	18.0 lb	23.8 lb
20	155	254	66	66	163	119	188	102	-	8.2 kg	10.8 kg
1"	6.5	10.4	4.5	3.3	8.2	6.3	9.2	5.8	-	28.0 lb	33.0 lb
25	165	264	114	84	208	160	234	147	-	12.7 kg	15.0 kg
1 1/2"	9.8	14.0	5.1	3.1	9.7	7.7	11.0	6.4	4.7	55.1 lb	64.0 lb
40	249	356	130	79	246	196	280	163	119	25.0 kg	29.0 kg
2"	11.8	16.0*	5.5	3.6	9.9	7.7	11.5	6.5	6.0	68.0 lb	82.0 lb
50	300	406*	140	91	251	196	292	165	152	31.0 kg	37.3 kg

\*ANSI 600 16.5" 419 mm

## Spare Parts



Valve Mechanism Kit w/ Float (3/4" & 1")	A,B,C,D,E,F,G
Valve Mechanism Kit (1-1/2" & 2")	A,B,D,P
Gasket Kit (3 sets of cover and Mechanism Gaskets)	B,T
Float Kit (1-1/2" & 2")	C

The erosion deflector is pressed into the body during manufacture and not available as a spare.

Liquid drain traps can be used to drain liquids from most gases. However, some applications, particularly those involving hazardous or unusual fluids, may be subject to regulation or may otherwise require special consideration. Spirax Sarco will endeavor to provide whatever data is necessary to assist in product selection.