

# SOFT31 (1/2"-1")

## Single Orifice Float Trap with SLR and/or TV

### Description

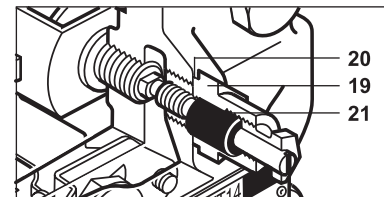
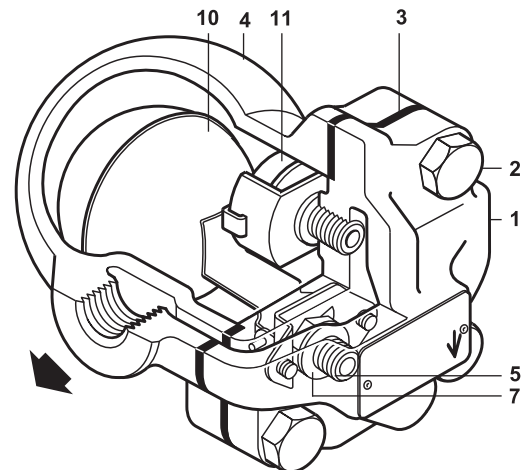
The Forbes Marshall Single Orifice Float Trap, SOFT31, is a cast iron single orifice float trap available with an integral automatic air venting facility. It is available with horizontal or vertical connections with downwards flow. As an alternative a manual needle valve can be added and used as a steam lock release.

### Sizes and Pipe Connection

1/2", 3/4", and 1" Screwed BSPT/NPT

### Available Types

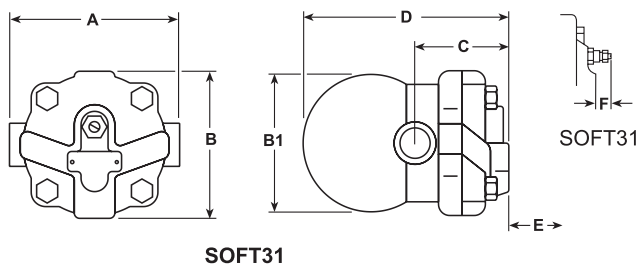
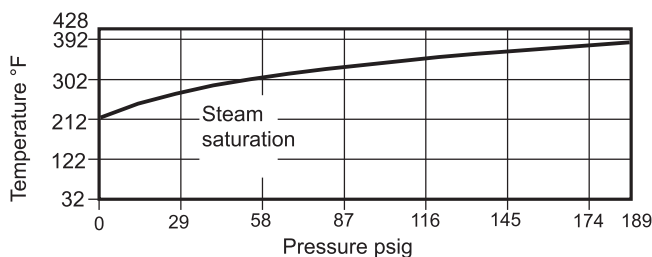
SOFT31-T TV with Thermostatic air Vent (TV)  
SOFT31-S with Steam Lock Release (SLR)  
SOFT31-ST combined TV and SLR



### Limiting Conditions

PMA Maximum allowable pressure	189 Psig at 428° F
TMA Maximum allowable temperature	428° F at 189 Psig
PMO Maximum operating pressure	189 Psig
TMO Maximum operating temperature	428° F at 189 Psig
Minimum operating temperature	32° F
DPMX Maximum differential pressure	
SOFT31-4.5	65 Psig
SOFT31-10	145 Psig
SOFT31-13	189 Psig
Cold hydraulic test pressure	377 Psig

### Operating range



### Material

Sr.No	Part	Material	Standard
1.	Cover	Cast Iron	IS 210 FG 260 (ASTMA48 d.35)
2.	Cover bolts	Carbon Steel	H.T.IS1367, Gr. 8.8 (ASTMA193 B7)
3.	Cover gasket	Asbestos free synthetic fibre	(ASTM F 104)
4.	Base	Cast Iron	IS 210 FG 260 (ASTM A48 d.35)
5.	Main valve seat	Stainless Steel	ASTM A743 Gr. CA40, Type 304
6.	Main valve seat gasket	(ASTM F 104)	
7.	Main valve assembly screws	Stainless Steel	IS-1364, Type 304 (UNSS 43100)
8.	Ball float & lever	Stainless Steel	ASTM A240, Type 304
9.	Air vent element	Stainless Steel	ASTM A240, Type 316
10.	SLR unit	Stainless Steel	ASTM A276, Type 410
11.	SLR unit gasket	Stainless Steel	ASTM A240, Type 304
12.	Pivot frame	Stainless Steel	ASTM A240, Type 304
13.	SLR Seal	Graphite	

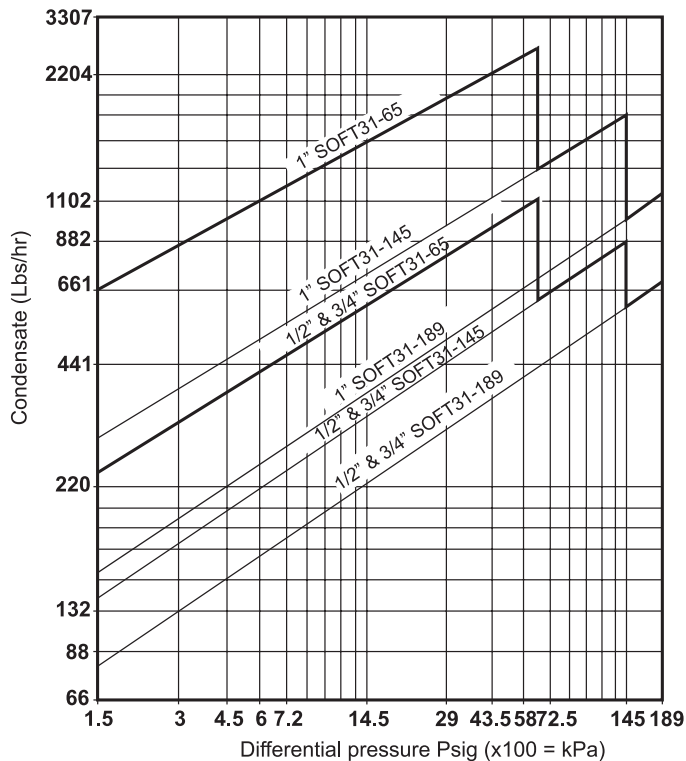
**Note:** Material specification mentioned in bracket are for reference only.

### Dimensions (approx.) Inches

Size	A	B	C	D	E	F	Wt. (Lbs)
1/2, 3/4	4.8	4.2	2.6	5.8	4.1	1.2	5.5
1	5.6	4.3	2.8	6.3	5.3	0.8	8.8

**General Tol: ± 1/8"**

## Capacity Chart



## How to Order

1/2" Single Orifice Float Trap, SOFT31-T-65 Psig, TV, NPT

## Available Spares

The parts available as spares are shown in heavy outline. Parts drawn in dotted line are not available as spares.

Main valve assembly with Float	A, B, C, D, (2 of) E, F
Air Vent Assembly	H, J, L, M, N
Steam Lock Release Unit	O, P
Cover Gasket (packet of 5)	T
Float	C
Screen (Packet of 5)	-

## How to Fit - General

With suitable isolation, repairs can be carried out with the trap on line. When reassembling it is advisable to make sure that all joint faces are clean.

## How to fit Main Valve Assembly

- Remove cover bolts and lift off cover
- Remove complete float assembly by undoing the two screws D.
- Remove main valve seat A and replace with a new one supplied with a new gasket B.
- Fit complete new float assembly by tightening the assembly set screws D.
- Refit the cover using new gasket T.

## How to fit Air Vent Assembly

- Remove spring clip L, element H and spacer plate M.
- Unscrew seat, frame N assemble spacer plate, fit element and di.
- Align complete air vent horizontally to that the frame clears the cover.

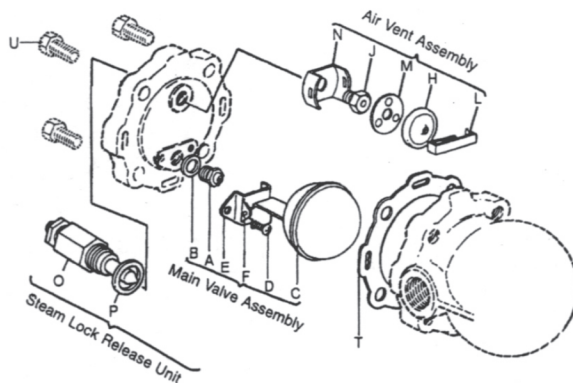
## Recommended Tightening Torques

Part	Inches	Torque (Ft-Lbs)
Main Valve Seat (A)	11/16 A/F	37-41
Main Valve Assembly Screws (D)		2-3
Air Vent Seat (J)	11/16 A/F	37-41
Steam Lock Release Seat (S)	11/16 A/F	37-41
Cover Bolts	11/16 A/F	30-41

## How to Order Spares

Always order spares by using the description given in the column above and stating the size of the trap.

Example: Main valve assembly for 1/2" Single Orifice Float Trap SOFT31-T-65



Forbes Marshall  
Krohne Marshall  
Forbes Marshall Arca  
Codel International  
Forbes Solar  
Forbes Vyncke  
Forbes Marshall Steam Systems

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