

SOFT31 (DN 15-25)

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 flow downwards. As an alternative a manual needle valve can be added and used as a steam lock release.

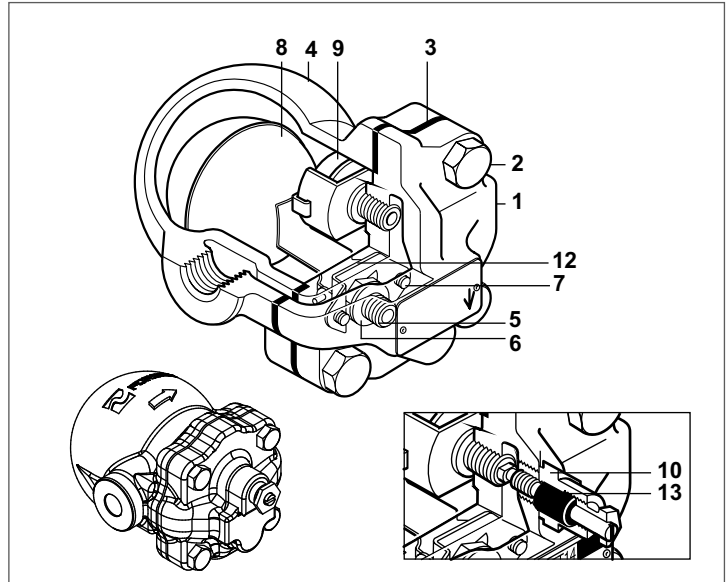
Sizes and Pipe Connection

DN 15, 20 and 25 Screwed BSPT/NPT/BSP
Flange connection: #125, PN16

Note: Available with IBR certificate on request

Available Types

SOFT31 TV with Thermostatic air Vent (TV)
SOFT31 with Steam Lock Release (SLR)
SOFT31 with combined TV and SLR



Material

S.No	Part	Material	Standard
1.	Cover	Cast Iron	IS 210 FG 260
2.	Cover bolts	B7	ASTM A 193
3.	Cover gasket	Asbestos free synthetic fibre	
4.	Base	Cast Iron	IS 210 FG 260
5.	Main valve seat	Stainless Steel	ASTM A743 Gr. CA40
6.	Main valve seat gasket	Stainless Steel	ASTM A240 Type 410
7.	Main valve assembly screws	Stainless Steel	IS-1364 Type 304
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 410
12.	Pivot frame	Stainless Steel Type 304	ASTM A240
13.	SLR Seal	Graphite	

Dimensions (approx.) in mm: (Screwed Version)

Size (DN)	A	B	C	D	E	F	Wt.(kg)
15/20	130	109	72	152	120	20	2.9
25	141	109	72	160	135	20	4.0

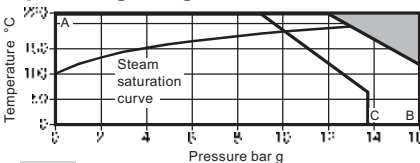
General Tol : ±3

Limiting Conditions

	Screwed Version	# 125 Flange	PN16 Flange
PMA Maximum Allowable pressure	13 bar g at 220°C	10.2 bar g at 180°C	13.4 bar g at 180°C
TMA Maximum Allowable temperature	220°C at 13 bar g	180°C at 10.2 bar g	180 at 13.4 bar g
PMO Maximum Operating pressure	13 bar g	10.2 bar g	13.4 bar g
TMO Maximum Operating temperature	220°C at 13 bar g	180°C at 10.2 bar g	180°C at 13.4 bar g
Minimum Operating Temperature	0°C	0°C	0°C
Δ PMX Maximum differential pressure			
	SOFT31-4.5		4.5 bar g
	SOFT31-10		10 bar g
	SOFT31-13		13 bar g

Cold hydraulic test pressure : 1.5 times Operating Pressure

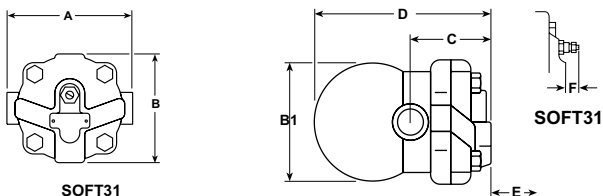
Operating range



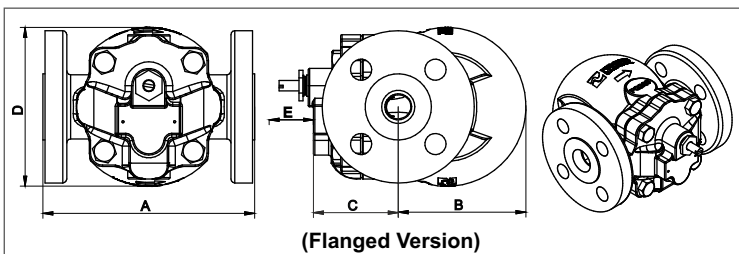
The product must not be used in this region.

A - B Flanged EN 1092 PN16.

A - C Flanged ASME 125.



(Screwed Version)



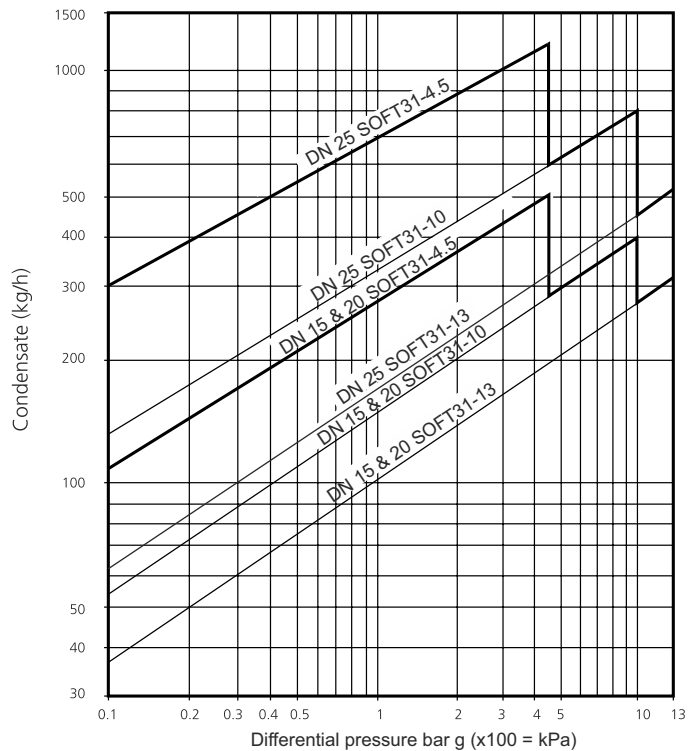
(Flanged Version)

Dimensions (approx.) in mm: (Flanged Version)

Size (DN)	A	B	C	D	E	Wt.(kg)
15/20	150	55	127	109	120	4.5
25	160	97	90	120	135	6.5

General Tol : ±3

Capacity Chart



How to Order

Example: DN15 Single Orifice Float Trap, SOFT31-T-4.5 bar g, TV, screwed BSPT

Available Spares

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

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

How to Fit - General

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 U and lift off cover and screen
- 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 F, element H and spacer plate M.
- Unscrew seat, frame N assemble spacer plate, fit element and clip.
- Align complete air vent horizontally so that the frame clears the cover.

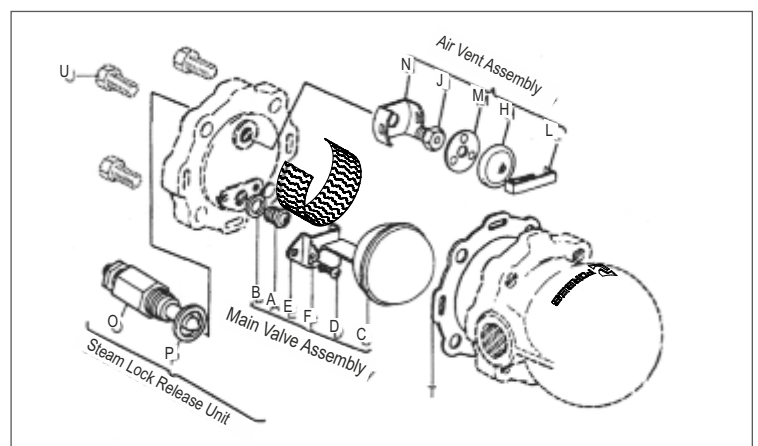
Recommended Tightening Torques

Part	Key	Torque (Nm)
Main Valve Seat (A)	18mm A/F	50/55
Main Valve Assembly Screws (D)		2.5/3
Air Vent Seat (J)	17 mm A/F	50/55
Steam Lock Release Seat (S)	17mm A/F	50/55
Cover Bolts	17 mm A/F	40/55

How to Order Spares

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

Example : Main valve assembly for DN 15 Single Orifice Float Trap SOFT31-T-4.5



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