

## FLOAT AND THERMOSTATIC STEAM TRAPS FLT31 (Carbon steel 1/2" – 1"; DN 15 – 25)

### DESCRIPTION

The FLT31 is a series of float and thermostatic steam traps with integral air vent designed for modulating discharge of condensate, ensuring maximum system heat transfer.

Typical applications include unit heaters, heat exchangers, dryers, jacketed vessels and other applications where continuous discharge is essential.

### MAIN FEATURES

- Modulating discharge of condensate at steam temperature.
- Unaffected by sudden or wide load and pressure variations.
- No backing-up with condensate.
- Excellent air discharge through its integrated air vent.
- Flow direction can be easily changed by repositioning the body in relation to the mechanism and cover.

- OPTIONS:
- Equalizing (vent) and drain connections.
  - SLR – Steam lock release.
  - HVV – Hand vent valve.
  - BDV – Blowdown valve.
  - AFZ – Anti-freeze device.
  - FLL – Float lifting lever.
  - VB21M – Vacuum breaker.

- USE: Saturated and superheated steam.

- AVAILABLE MODELS: FLT31-4,5 , 14, 10, 21 and 32 – carbon steel.

- SIZES: 1/2" to 1"; DN 15 to DN 25.

- CONNECTIONS: Female threaded ISO 7 Rp or NPT.  
Flanged EN 1092-1 PN 40.  
Flanged ASME B16.5 Class 150 or 300.  
Socket weld (SW) ASME 16.11.

- INSTALLATION: Inline horizontal or vertical installation.  
Angled horizontal or vertical installation.  
See IMI – Installation and maintenance instructions.

- MAX. ΔP:
- FLT31-4,5 – 4,5 bar
  - FLT31-10 – 10 bar
  - FLT31-14 – 14 bar
  - FLT31-21 – 21 bar
  - FLT31-32 – 32 bar



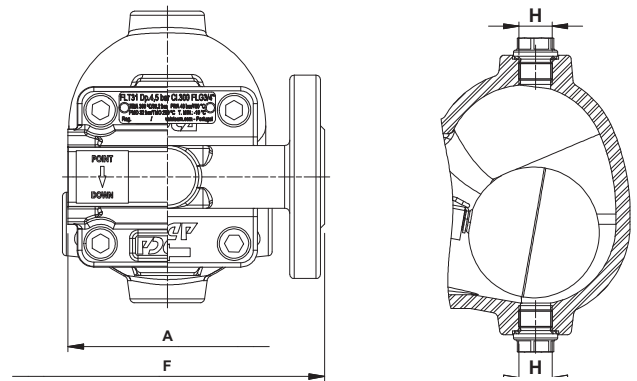
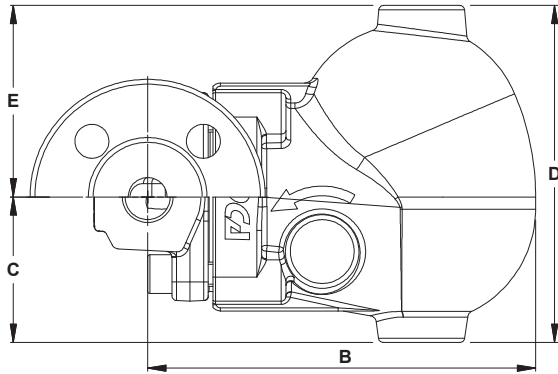
### CE MARKING – GROUP 2 (PED – European Directive)

PN 40	Category
1/2" to 1" – DN 15 to 25	SEP

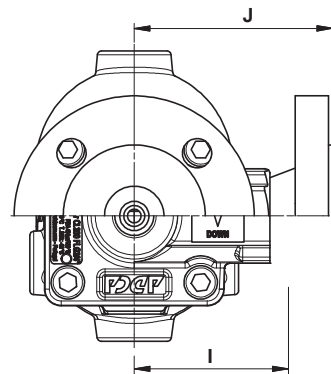
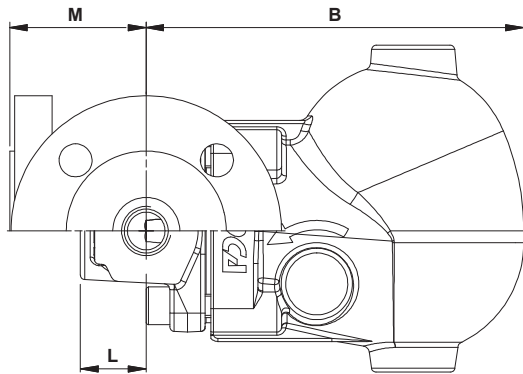
BODY LIMITING CONDITIONS		
FLANGED PN 40 / CLASS 300 *	FLANGED CLASS 150 **	RELATED TEMP.
ALLOWABLE PRESSURE	ALLOWABLE PRESSURE	
37,1 bar	17,7 bar	100 °C
33,3 bar	14 bar	200 °C
30,4 bar	12,1 bar	250 °C
27,6 bar	10,2 bar	300 °C

PMO – Maximum operating pressure: 32 bar.  
TMO – Maximum operating temperature: 250 °C.  
\* Acc. to EN 1092-1:2018; \*\* Acc. to EN 1759-1:2004.  
Body limiting conditions PN 40 or below, depending on the type of connection adopted. Rating PN 40 for threaded and SW versions.

FLOW RATE CAPACITY (kg/h)														
MODEL	SIZE	DIFFERENTIAL PRESSURE (bar)												
		0,5	1	1,5	2	4,5	7	10	12	14	16	21	25	32
FLT31-4,5	1/2" to 1" – DN 15 to 25	305	395	455	500	680	–	–	–	–	–	–	–	–
FLT31-10	1/2" to 1" – DN 15 to 25	235	330	400	440	630	694	705	–	–	–	–	–	–
FLT31-14	1/2" to 1" – DN 15 to 25	220	277	318	365	481	556	654	691	710	–	–	–	–
FLT31-21	1/2" to 1" – DN 15 to 25	148	205	228	255	353	418	485	530	560	595	635	–	–
FLT31-32	1/2" to 1" – DN 15 to 25	72	97	123	155	208	252	323	385	393	410	440	550	595



Inline design

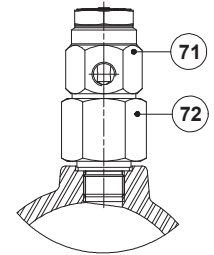
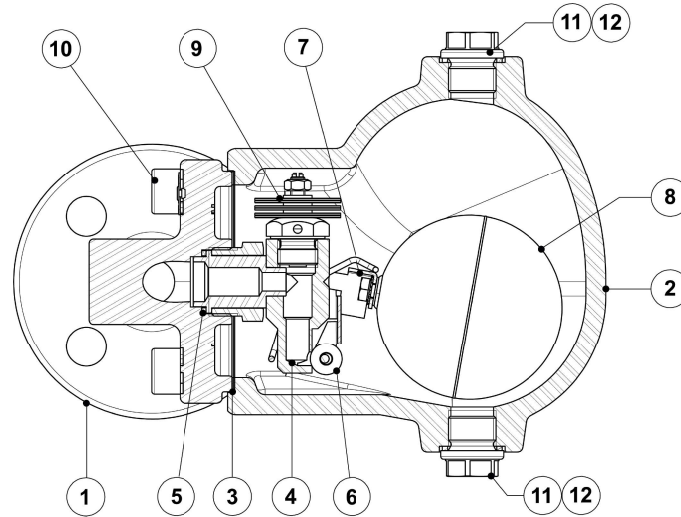


Angled design

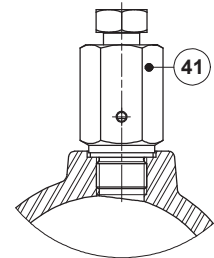
DIMENSIONS (mm) – INLINE DESIGN													
SIZE	THREADED / SW							PN 40		CLASS 150		CLASS 300	
	A	B	C	D	E	H *	WEIGHT (kg)	F	WEIGHT (kg)	F	WEIGHT (kg)	F	WEIGHT (kg)
1/2" – DN 15	95	160	60	139	79	3/8"	4,9	150	6,2	150	5,8	150	6,1
3/4" – DN 20	95	160	60	139	79	3/8"	4,8	150	6,7	150	6,1	150	7,2
1" – DN 25	95	160	60	139	79	3/8"	4,7	160	7,4	160	7,2	160	7,9

DIMENSIONS (mm) – ANGLED DESIGN																	
SIZE	THREADED / SW								PN 40			CLASS 150			CLASS 300		
	B	C	D	E	H *	I	L	WGT. (kg)	J	M	WGT. (kg)	J	M	WGT. (kg)	J	M	WGT. (kg)
1/2" – DN 15	160	60	139	79	3/8"	65	28	4,9	95	58	6,5	95	58	6	95	58	6,5
3/4" – DN 20	160	60	139	79	3/8"	65	28	4,9	95	58	7	95	58	6,4	95	58	7,5
1" – DN 25	160	60	139	79	3/8"	65	28	4,9	95	58	7,5	95	58	6,9	95	58	8

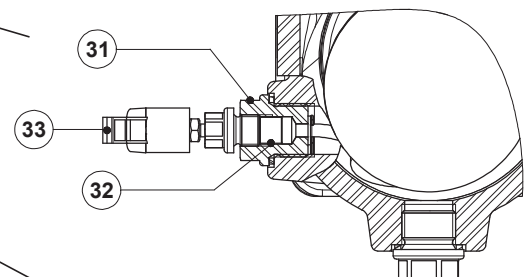
\* As standard, in versions with EN flanges or female ISO 7 Rp threads, these connections are female threaded ISO 228. In versions with ASME flanges, female NPT threads or SW, these connections are female threaded NPT.



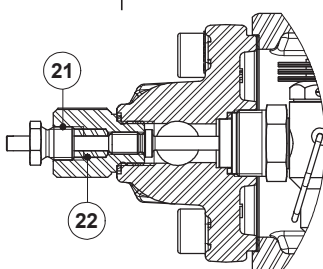
VB21M - Vacuum breaker



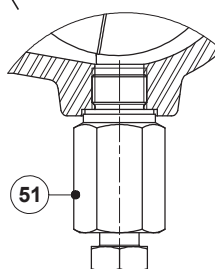
HVV - Hand vent valve



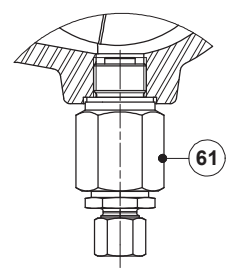
FLL - Float lifting lever



SLR - Steam lock release



BDV - Blowdown valve  
 (Manual)

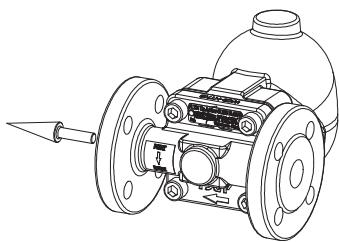


AFZ - Anti-freeze device  
 (Automatic)

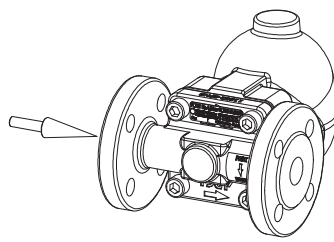
MATERIALS		
POS. N°	DESIGNATION	MATERIAL
1	Body (inline flanged)	A216 WCB / 1.0619
	Body (inline threaded)	P250GH / 1.0460
	Body (angled)	P250GH / 1.0460
2	Cover	A216 WCB / 1.0619
3	* Gasket	Stainless steel / Graphite
4	* Seat	AISI 303 / 1.4305
5	* Gasket	Copper
6	* Valve ball	AISI 316 / 1.4401
7	* Lever	AISI 304 / 1.4301
8	* Float	AISI 304 / 1.4301
9	* Automatic air vent	Stainless steel; Bimetallic
10	Bolts	Zinc plated steel
11	Plug	AISI 316L / 1.4404
12	** Gasket	Copper; AISI 304 / 1.4301
21	Steam Lock Release	AISI 420 / 1.4021 AISI 316L / 1.4404
22	Packing	Graphite
31	Lever mechanism	AISI 303 / 1.4305; AISI 304 / 1.4301; AISI 316L / 1.4404
32	Packing	Graphite
33	Lever	Plastic
41	Hand vent valve	AISI 303 / 1.4305; AISI 316L / 1.4404
51	Blowdown valve	AISI 303 / 1.4305; AISI 316L / 1.4404
61	Anti-freeze device	AISI 303 / 1.4305; AISI 316L / 1.4404
71	Vacuum breaker	AISI 303 / 1.4305
72	Connector	AISI 316L / 1.4404

\* Available spare parts; \*\* Not applicable in NPT version.

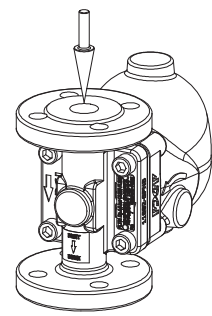
**FLOW DIRECTION**



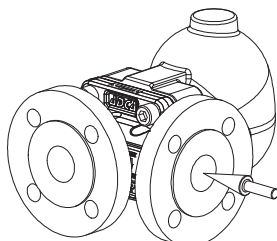
*IR - Horizontal from right to left*



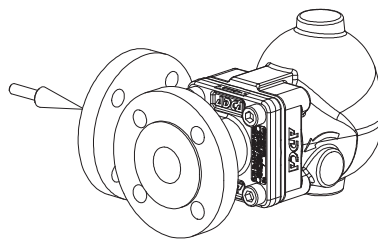
*IL - Horizontal from left to right*



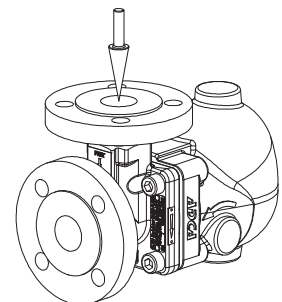
*IT - Vertical from top to bottom*



*AR - Angled from right to front*



*AL - Angled from left to front*



*AT - Angled from top to front*

ORDERING CODES FLT31										
Model	A31	2	V	XX	X	X	IR	A	15	
FLT31 – carbon steel	A31									
<b>Differential pressure</b>										
4,5 bar		2								
10 bar		3								
14 bar		4								
21 bar		5								
32 bar		7								
<b>Automatic air vent</b>										
Bimetallic air vent (standard)			V							
None			X							
<b>Cover connections</b>										
None				XX						
3/8" threaded connections on top and bottom, closed with plugs (mandatory if any options are considered)				10						
<b>Options</b>										
If any, these have specific separate ordering codes, please refer to the appropriate documentation.										
<b>SLR - Steam lock release</b>										
None					X					
With steam lock release assembled					S					
<b>FLL - Float lifting lever</b>										
None						X				
Lifting lever on the right side (when facing the steam trap body)							R			
Lifting lever on the left side (when facing the steam trap body)							L			
<b>Flow direction</b>										
Inline horizontal from right to left (standard)								IR		
Inline horizontal from left to right								IL		
Inline vertical from top to bottom								IT		
Angled from right to front								AR		
Angled from left to front								AL		
Angled from top to front								AT		
<b>Pipe connections</b>										
Female threaded ISO 7 Rp									A	
Female threaded NPT									C	
Socket weld (SW) ASME 16.11									H	
Flanged EN 1092-1 PN 40									N	
Flanged ASME B16.5 Class 150									U	
Flanged ASME B16.5 Class 300									V	
<b>Size</b>										
1/2" or DN 15										15
3/4" or DN 20										20
1" or DN 25										25
<b>Special valves / Extras</b>										
Full description or additional codes have to be added in case of a non-standard combination										E