



## FLOAT AND THERMOSTATIC STEAM TRAPS FLT45

(Stainless steel; 1" - DN 25)

## DESCRIPTION

The FLT45 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.



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: FLT45-4,5, 10, 14, 21 and 32 – stainless steel.

SIZES: 1": 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 B16.11.

INSTALLATION: Inline horizontal or vertical installation.

Angled horizontal or vertical installation.

See IMI - Installation and maintenance

instructions.

 $\Delta$ PMX: FLT45-4,5 – 4,5 bar

FLT45-10 – 10 bar FLT45-14 – 14 bar FLT45-21 – 21 bar FLT45-32 – 32 bar







| CE MARKING – GROUP 2       |
|----------------------------|
| (PED – European Directive) |

| CLASS 150  | PN 40      | Category      |
|------------|------------|---------------|
| 1" – DN 25 | _          | SEP           |
| _          | 1" – DN 25 | 1 (CE marked) |

| <b>BODY LIMITING</b> | CONDITIONS |
|----------------------|------------|
|----------------------|------------|

| FLANGED<br>PN 40 * | FLANGED<br>CLASS 300 ** | FLANGED<br>CLASS 150 ** | RELAT. |
|--------------------|-------------------------|-------------------------|--------|
| ALLOWABLE PRESSURE | ALLOWABLE PRESSURE      | ALLOWABLE PRESSURE      | TEMP.  |
| 37,9 bar           | 34,4 bar                | 13,3 bar                | 100 °C |
| 31,8 bar           | 28,8 bar                | 11,1 bar                | 200 °C |
| 29,9 bar           | 26,6 bar                | 10,2 bar                | 250 °C |
| 27,6 bar           | 25,2 bar                | 9,7 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.

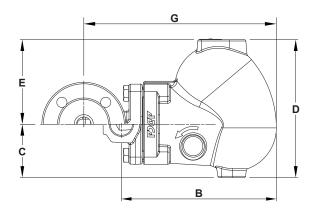


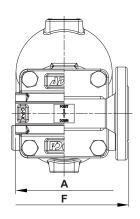


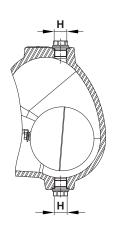


|       |      |  | г | LOW K | AIE CAP | DIFFERENTIAL PRESSU |         |      |
|-------|------|--|---|-------|---------|---------------------|---------|------|
| MODEL | SIZE |  |   |       | DIF     | FERENT              | IAL PRE | SSUR |
| MODEL | SIZE |  |   | _     |         | _                   |         |      |

| MODEL     | SIZE       |     | DIFFERENTIAL PRESSURE (bar) |      |      |      |      |      |      |      |     |     |     |     |
|-----------|------------|-----|-----------------------------|------|------|------|------|------|------|------|-----|-----|-----|-----|
| MODEL     | SIZE       | 0,5 | 1                           | 1,5  | 2    | 4,5  | 7    | 10   | 12   | 14   | 16  | 21  | 25  | 32  |
| FLT45-4,5 | 1" – DN 25 | 900 | 1250                        | 1490 | 1630 | 2490 | _    | _    | _    | _    | _   | _   | _   | _   |
| FLT45-10  | 1" – DN 25 | 445 | 610                         | 705  | 850  | 1285 | 1670 | 1820 | -    | _    | _   | _   | -   | _   |
| FLT45-14  | 1" – DN 25 | 335 | 445                         | 515  | 600  | 885  | 1150 | 1350 | 1500 | 1610 | _   | _   | -   | _   |
| FLT45-21  | 1" – DN 25 | 255 | 335                         | 380  | 410  | 555  | 680  | 745  | 790  | 815  | 895 | 920 | _   | _   |
| FLT45-32  | 1" – DN 25 | 230 | 275                         | 315  | 345  | 440  | 500  | 570  | 600  | 610  | 650 | 705 | 750 | 810 |





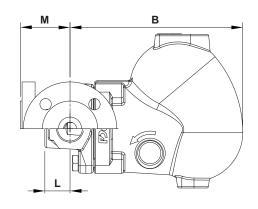


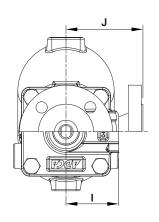
Inline design

|            |     |     |     |       | DIN  | MENSIO | NS – INI     | LINE DE | SIGN (n | nm)          |     |        |              |     |         |              |
|------------|-----|-----|-----|-------|------|--------|--------------|---------|---------|--------------|-----|--------|--------------|-----|---------|--------------|
|            |     |     | THR | EADED | / SW |        |              |         | PN 40   |              | С   | LASS 1 | 50           | С   | LASS 30 | 00           |
| SIZE       | Α   | В   | С   | D     | E    | Н*     | WGT.<br>(kg) | F       | G       | WGT.<br>(kg) | F   | G      | WGT.<br>(kg) | F   | G       | WGT.<br>(kg) |
| 1" _ DN 25 | 120 | 212 | 73  | 180   | 116  | 3/8"   | 8.0          | 160     | 264     | 12           | 160 | 264    | 11 0         | 160 | 264     | 12.6         |

<sup>1&</sup>quot; – DN 25 | 120 | 212 | 73 | 189 | 116 | 3/8" | 8,9 | 160 | 264 | 12 | 160 | 264 | 11,9 | 160 | 264 | 12,6 |

\* 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.





Angled design

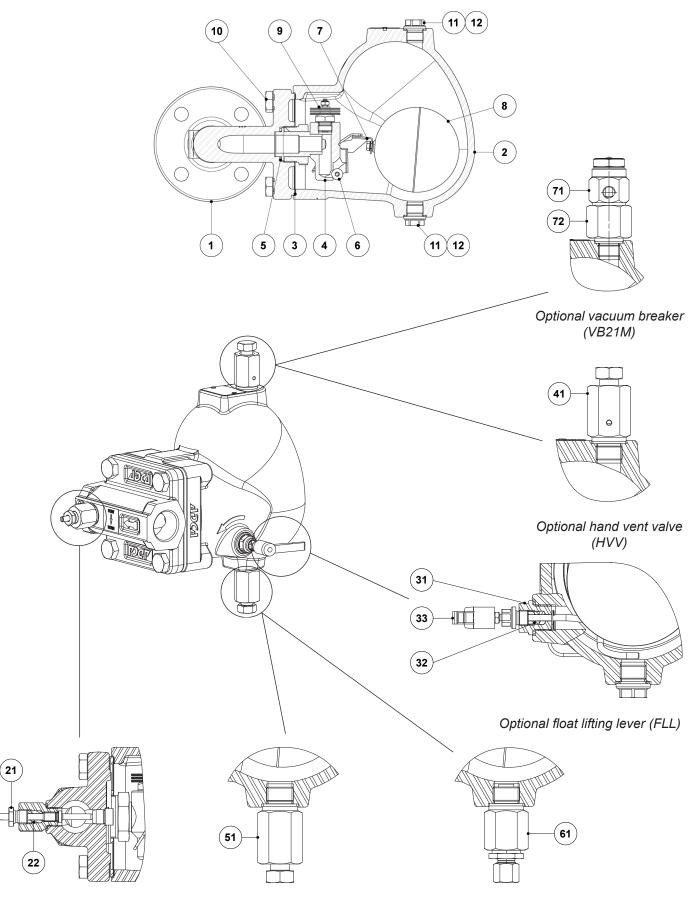
|            |     |    |     |       | D       | IMENSI | ONS - | ANGLE        | D DESI | GN (mn | 1)           |     |        |              |     |       |              |
|------------|-----|----|-----|-------|---------|--------|-------|--------------|--------|--------|--------------|-----|--------|--------------|-----|-------|--------------|
|            |     |    | Т   | HREAD | ED / S\ | N      |       |              |        | PN 40  |              | CI  | LASS 1 | 50           | CI  | ASS 3 | 00           |
| SIZE       | В   | С  | D   | E     | H *     | ı      | L     | WGT.<br>(kg) | J      | М      | WGT.<br>(kg) | J   | М      | WGT.<br>(kg) | J   | М     | WGT.<br>(kg) |
| 1" – DN 25 | 212 | 73 | 189 | 116   | 3/8"    | 65     | 31    | 8,4          | 95     | 61     | 11           | 100 | 66     | 10,5         | 110 | 76    | 11,7         |

<sup>\*</sup> 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.





## **MATERIALS**



Optional steam lock release (SLR)

Optional blowdown valve (BDV); Manual Optional anti-freeze device (AFZ);
Automatic



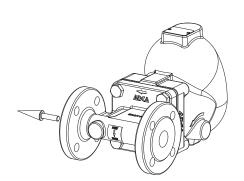




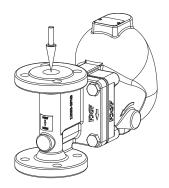
|         | MATERIAL               | s  |
|---------|------------------------|--|
| POS. Nº | DESIGNATION            | MATERIAL   |
|         | Body (inline flanged)  | A351 CF8M / 1.4408                                       |
| 1       | Body (inline threaded) | AISI 316L / 1.4404                                       |
|         | Body (angled)          | AISI 316L / 1.4404                                       |
| 2       | Cover                  | A351 CF8M / 1.4408                                       |
| 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                  | Stainless steel A2-70                                    |
| 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      | Adapter fitting        | AISI 303 / 1.4305  |

<sup>\*</sup> Available spare parts; \*\* Not applicable in NPT version.

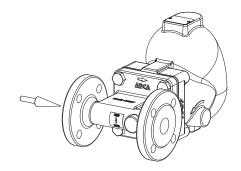
## **FLOW DIRECTION**



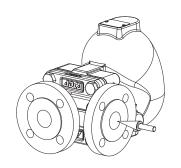
IR - Horizontal from right to left



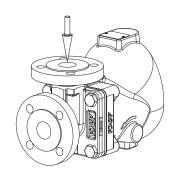
IT - Vertical from top to bottom



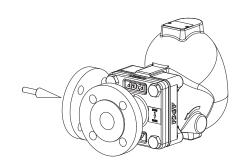
IL - Horizontal from left to right



AR - Angled from right to front



AT - Angled from top to front



AL - Angled from left to front





| ORDERING CO  | DDES FLT45         |          |        |    |   |   |    |   |    |
|--|--------------------|----------|--------|----|---|---|----|---|----|
| Model  | A45                | 2        | ٧      | ХХ | Х | Х | IR | Α | 25 |
| FLT45 – stainless steel  | A45                |          |        |    |   |   |    |   |    |
| Maximum allowable differential pressure (ΔΡΜΧ)                                 |                    |          |        |    |   |   |    |   |    |
| 4,5 bar  |                    | 2        |        |    |   |   |    |   |    |
| 10 bar   |                    | 3        |        |    |   |   |    |   |    |
| 14 bar   |                    | 4        |        |    |   |   |    |   |    |
| 21 bar   |                    | 5        |        |    |   |   |    |   |    |
| 32 bar   |                    | 7        |        |    |   |   |    |   |    |
| Automatic air vent   |                    |          |        |    |   |   |    |   |    |
| Bimetallic air vent (standard)   |                    |          | ٧      |    |   |   |    |   |    |
| None   |                    |          | Х      |    |   |   |    |   |    |
| Cover connections  |                    |          |        |    |   |   |    |   |    |
| None   |                    |          |        | XX |   |   |    |   |    |
| 3/8" threaded connections on top and bottom, closed with plugs (mandator       | y if any options a | re consi | dered) | 10 | ] |   |    |   |    |
| Options  |                    |          |        |    |   |   |    |   |    |
| If any, these have specific separate ordering codes, please refer to the app   | propriate docume   | ntation. |        |    |   |   |    |   |    |
| SLR - Steam lock release   |                    |          |        |    |   |   |    |   |    |
| None   |                    |          |        |    | Х |   |    |   |    |
| With steam lock release assembled  |                    |          |        |    | S |   |    |   |    |
| FLL - Float lifting lever  |                    |          |        |    |   |   |    |   |    |
| 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 |    |   |    |
| Flow direction   |                    |          |        |    |   |   |    |   |    |
| 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 |   |    |
| Pipe connections   | S                  |          |        |    |   |   |    |   |    |
| Female threaded ISO 7 Rp   |                    |          |        |    |   |   |    | Α |    |
| Female threaded NPT  |                    |          |        |    |   |   |    | С |    |
| Socket weld (SW) ASME 16.11  |                    |          |        |    |   |   |    | Н |    |
| Flanged EN 1092-1 PN 40  |                    |          |        |    |   |   |    | N | 1  |
| Flanged ASME B16.5 Class 150   |                    |          |        |    |   |   |    | U |    |
| Flanged ASME B16.5 Class 300   |                    |          |        |    |   |   |    | ٧ |    |
| Size   |                    |          |        |    |   |   |    |   | 1  |
| 1" or DN 25  |                    |          |        |    |   |   |    |   | 25 |
| Special construction / A   | dditional optior   | ıs       |        |    |   |   |    |   |    |
| A full description must to be provided and validated in case of a non-standard | ard construction.  |          |        |    |   |   |    |   |    |