# TECHNICAL DATA FOR GEA VENT TERMINALS

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International Gas Consultancy and Training

GEA vent terminals, are designed to ensure good safe dispersion of venting gases whilst ensuring minimal water and material ingress.

The stainless steel SVT model comes in ½" bsp, 1" bsp (also for use on 1 ½" lines), 2" bsp and 3" flanged sizes, with larger units available for 80 and 100 mm pipework with flanged connections. Terminals are suitable for terminal pressures up to 20 bar, for higher pressures consult GEA.

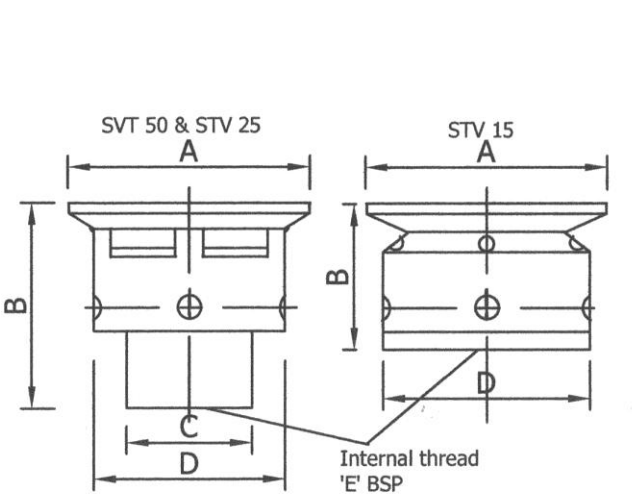
The smaller SVT15 vent terminal has been designed to meet National Grid E28 and IGEM/GM/8 Part 1 Breathers requirements. This is of stainless steel construction and the flow rate can be adjusted to meet flow rates of 2.5, 10 or 15 $m^3/h$ by changing the internal jet.

The SVT15 terminal has been tested by one of UK's larger gas suppliers and confirmed to be ideally suitable for Medium Pressure domestic type meter installations. The limitation of vent flows with the SVT15 assists in reducing emissions and any hazardous area as required by IGEM/SR/25 and DSEAR.

**STV 15**

**STV 25**

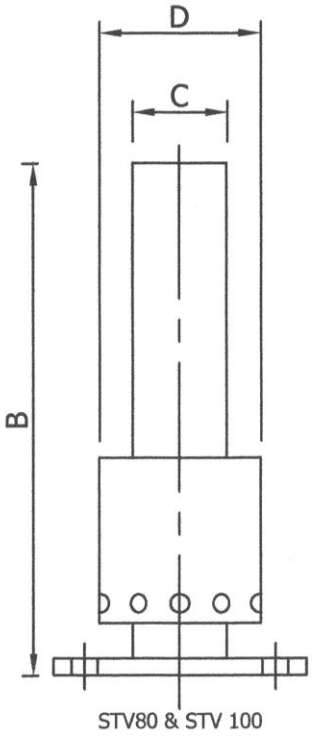
**STV 50**




| Model | A | B | C | D | E BSP |
|---|---|---|---|---|---|
| SVT 15 | 52 | 36.5 | N/A | 42 | 1/2" |
| SVT 25 | 80 | 75 | 53 | 63 | 1" |
| SVT 50 | 140 | 136 | 114.5 | 65 | 2" |
| SVT 80 | N/A | 550 | 88.9 | 125 | 80F |
| SVT 100 | N/A | 642 | 114.3 | 190 | 100F |

Dimensions in mm
Flanges Class 300

Overall dimensions may be subject to slight modification



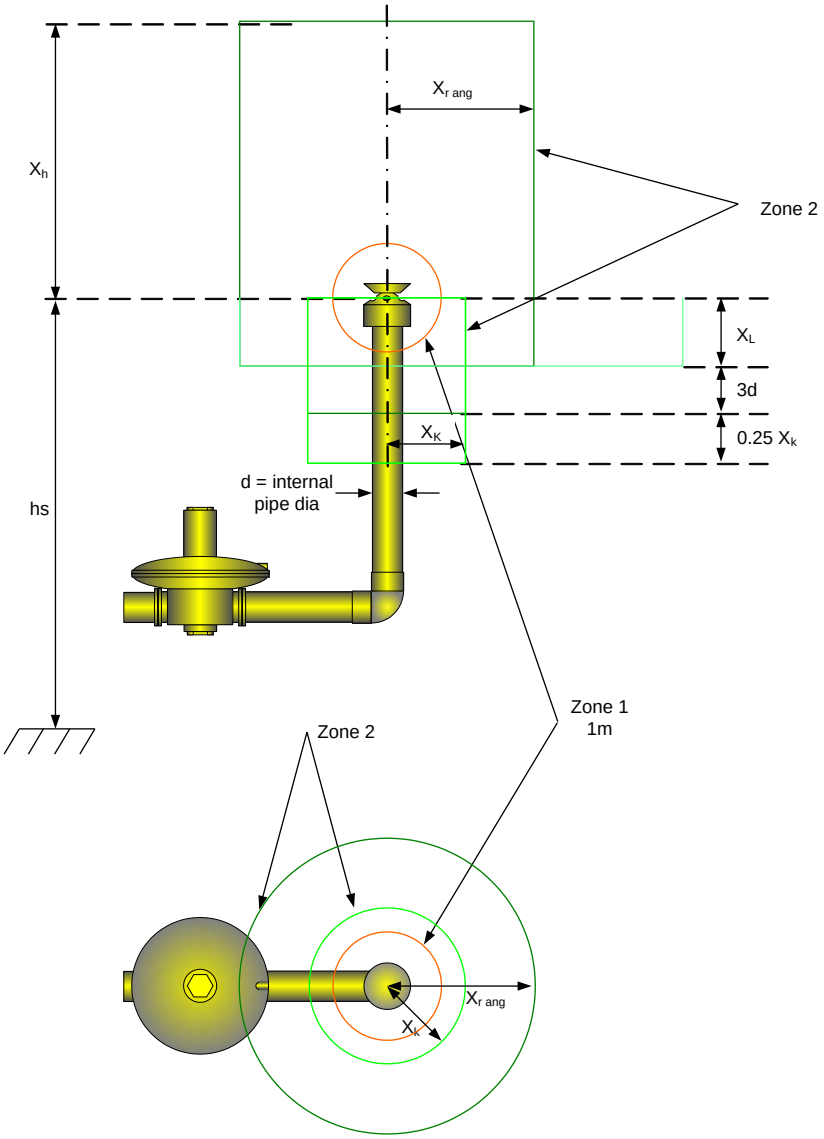

**Predicted Zoning areas for GEA Terminals ( For guidance only)**

| Model | Flow Rate $m^3/h$ | Cross wind condition | Vertical distance m | | Horizontal radius m | | Downwash radius m |
|---|---|---|---|---|---|---|---|
| | | | $X_H$ | | $X_R$ | | $X_K$ |
| | | | 50% LEL | 100 % LEL | 50% LEL | 100 % LEL | |
| | | | | | | | |
| SVT 15 | 2.5 | 2 m/s | NA | NA | NA | NA | 0.75 |
| | | 5 m/s | 0.6 | 0.4 | 1 | NA | |
| SVT 25 | 10 | 2 m/s | 2 | 0.18 | 0.16 | 0.11 | 1.00 |
| | | 5 m/s | 0.16 | 0.11 | 4 | 2.4 | |
| SVT 40/50 | 15 | 2 m/s | 0.31 | 0.22 | 2.2 | 1.3 | 3.00 |
| | | 5 m/s | 2.2 | 1.3 | 4.4 | 2.6 | |

VT 15 conforms to "ideal" venting parameters and therefore cross wind conditions are only quoted for the worst condition.

The flow rates are those achieved under low pressure flow conditions. At higher pressures where higher pressure drops may be acceptable, a smaller terminal will provide better dispersion.

SVT 80 and 100 have been designed as "ideal" SR25 Ed2 termunals and predicted zoning can be calculated in accordance with Institution of Gas Engineers & Managers document SR/25 Edition 2. GEA can provide data for the terminals for customer specific installations.



**Downwash Considerations.**

Vent pipe terminations are subject to some downward dispersion.

**For momentum-driven dispersion**,
Downward dispersion exists only when the duration of venting duration exceeds 1 minute

$X_L$ = 1 m or 0.2 $h_s$ (m) whichever is the greater
$h_s$ = height of vent tip above ground level (m)

$X_L$ should not exceed $X_r$

**Wind-driven dispersion**
This may occur at start-up and shut-down where the radial dispersion distance is represented by $X_k$

$X_k$ should not exceed $X_r$

The downward dispersion distance is is the smaller of
$X_L$ + 3d (m), where d = nominal diameter of vent (m).
Or $X_K$

**Addition downwash due to nearby structures**

Vent pipe terminations which are located close to a structure may be subject to additional downward dispersion due to downwash.

The criteria determining whether or not downwash exists is:

D < X, or D < 10 m, whichever is the smaller.

D = distance from the vent to a structure (m)
$X_r$ = horizontal radius of the momentum-driven hazardous area (m).

Additional downward dispersion should be of extent (radius) $X_k$ and a height = 0.25$X_k$.

($X_L$ + 3d + 0.25 $X_k$) should not exceed $X_k$ as given in Table 12 of SR/25..