



## DTS SUPPLY AIR VALVE

AIR MANAGEMENT SYSTEMS

### PRODUCT PROPERTIES

**DTS** valve is a supply air valve for ceiling mounting in offices, houses etc.

### CONSTRUCTION

The body is equipped with cellular plastic gasket to form an airtight seal with the mounting ring.

The valve is equipped with a sector plate for direction of the air flow. Adjustment of the valve or sector plate is achieved by simply rotating the disc and/or sector plate to the desired setting and secured by means of a single lock nut.

The DTS is manufactured from sheet steel and stove enameled in white.

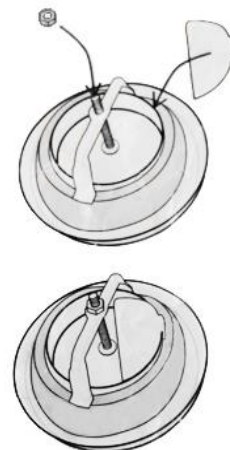
- Equipped with a sector plate for direction of the air flow
- Equipped with a nut to fixate the disk
- Manufactured of powder coated steel

The sector plate as well as the nut is separately packed.

This needs to be assembled with the valve. Please view the assembling instructions.

### QUICK SELECTION

| Size   |                      | Air flow l/s (m3/h)<br>at sound level |          |      |
|--------|----------------------|---------------------------------------|----------|------|
|        |                      | 25dB                                  | 30dB     | 35dB |
| DTS100 | With sector plate    | 15                                    | 22 (79)  | -    |
| DTS100 | Without sector plate | 19                                    | 29 (104) | -    |
| DTS125 | With sector plate    | 20                                    | 28 (101) | -    |
| DTS125 | Without sector plate | 25                                    | 42 (151) | -    |
| DTS160 | With sector plate    | 20                                    | 42 (151) | -    |
| DTS160 | Without sector plate | 40                                    | 66 (238) | -    |



### INSTALLATION

Mounting ring is fitted into the duct with screws or rivets. The valve is fitted into the mounting ring by a "screwing action" to locate lugs into indents in the mounting ring. The valve can also be fitted with springs (**model DTS-J**) and the mounting ring is not needed.

### Measurement and regulation of air flow

The measurement of air flow is made by a pressure difference measurement with a separate measuring tube. Air flow can be adjusted by changing the adjustments by rotating the disc.

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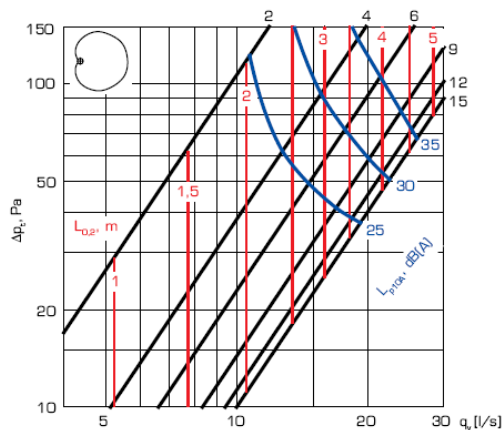


## DTS SUPPLY AIR VALVE

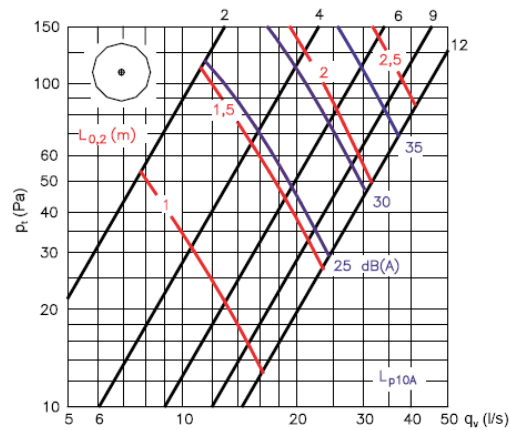
AIR MANAGEMENT SYSTEMS

### SELECTION DIAGRAMS

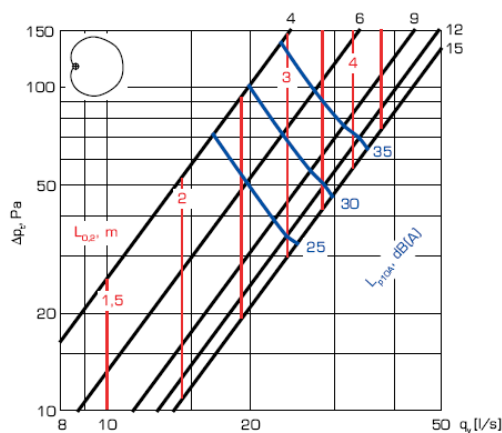
DTS-100 with sector plate



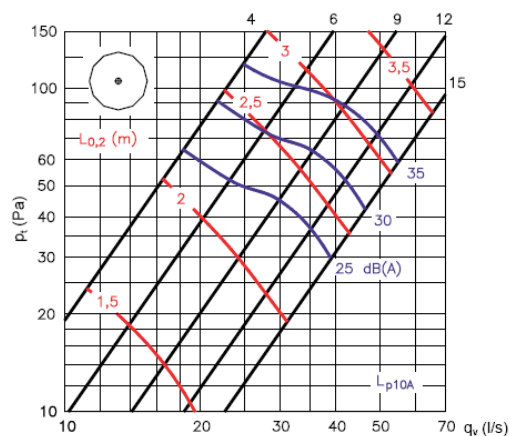
DTS-100 without sector plate



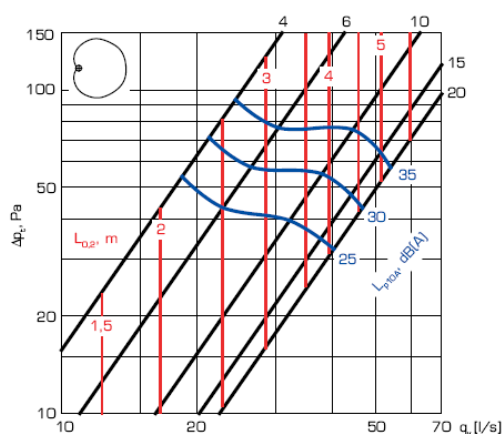
DTS-125 with sector plate



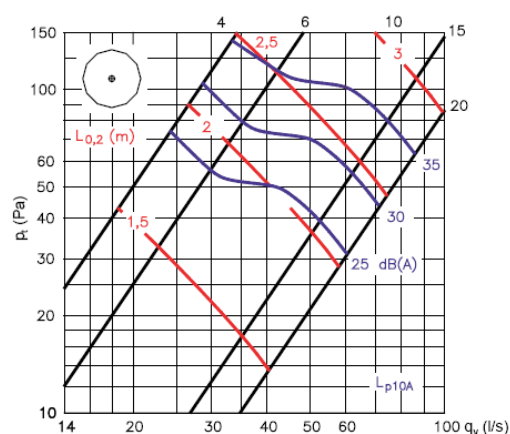
DTS-125 without sector plate



DTS-160 with sector plate



DTS-160 without sector plate



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## DTS SUPPLY AIR VALVE

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### Acoustical data, dimensions and weight

Sound power level  $L_W$

DTS with sector plate

| DTS    | Correction of sound level in dB at<br>octave bands, middle frequency, Hz |     |     |      |      |      |      |
|--------|--|-----|-----|------|------|------|------|
|        | 125  | 250 | 500 | 1000 | 2000 | 4000 | 8000 |
| 100    | 2  | 2   | 0   | -2   | -4   | -4   | -12  |
| 125    | 3  | 3   | 3   | 0    | -8   | -15  | -29  |
| 160    | 7  | 4   | 2   | -1   | -6   | -17  | -31  |
| Tol. ± | 3  | 2   | 2   | 2    | 2    | 2    | 3    |

DTS without sector plate

| DTS    | Correction of sound level in dB at<br>octave bands, middle frequency, Hz |     |     |      |      |      |      |
|--------|--|-----|-----|------|------|------|------|
|        | 125  | 250 | 500 | 1000 | 2000 | 4000 | 8000 |
| 100    | -2   | 2   | 1   | -1   | -4   | -5   | -11  |
| 125    | 4  | 5   | 3   | -1   | -11  | -17  | -29  |
| 160    | 7  | 6   | 3   | -2   | -11  | -19  | -32  |
| Tol. ± | 3  | 2   | 2   | 2    | 2    | 2    | 3    |

Sound power levels by octave bands are obtained by adding to total sound pressure level  $L_{p10A}$ , dB(A), the corrections  $K_{oct}$  presented in the table according to the following formula:

$$L_{Woct} = L_{p10A} + K_{oct}$$

Correction  $K_{oct}$  is average value in range of use of the unit.

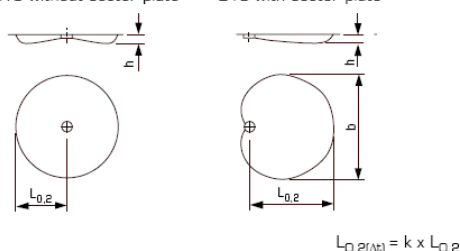
### Sound attenuation $\Delta L$

| DTS    | Correction of sound level in dB at |     |     |     |      |      |      |         |
|--------|------------------------------------|-----|-----|-----|------|------|------|---------|
|        | 63                                 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 Hz |
| 100    | 22                                 | 18  | 13  | 11  | 9    | 8    | 7    | 8       |
| 125    | 20                                 | 16  | 11  | 9   | 9    | 7    | 6    | 5       |
| 160    | 18                                 | 14  | 10  | 9   | 9    | 7    | 6    | 6       |
| Tol. ± | 6                                  | 3   | 2   | 2   | 2    | 2    | 2    | 3       |

The average sound attenuation  $\Delta L$  from duct to room including the orifice attenuation of the connecting duct in ceiling installation, is obtained in the table above.

### Diffusion pattern

DTS without sector plate      DTS with sector plate



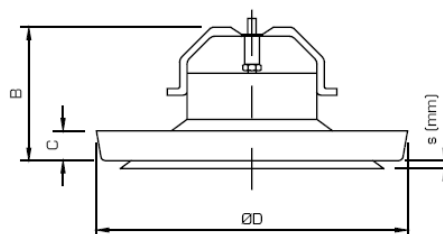
| Regulation | $\Delta t$ (C°) | b                               | h                               | k    |
|------------|-----------------|---------------------------------|---------------------------------|------|
| s = 4      | 0               | $1.45 \times L_{0.2}$           | $0.04 \times L_{0.2}$           | 1.0  |
| s = 4      | -10             | $1.45 \times L_{0.2(\Delta t)}$ | $0.08 \times L_{0.2(\Delta t)}$ | 0.8  |
| s = 15     | 0               | $1.45 \times L_{0.2}$           | $0.04 \times L_{0.2}$           | 1.0  |
| s = 15     | -10             | $1.45 \times L_{0.2(\Delta t)}$ | $0.1 \times L_{0.2(\Delta t)}$  | 0.75 |

### Throw in free space mounting

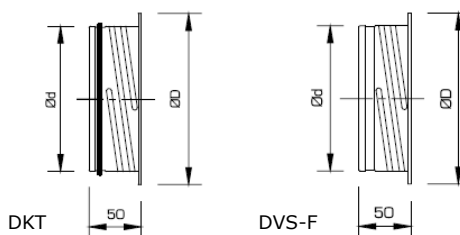
In case of free space mounting the throw can be calculated by using the following factors: when  $\Delta t = 0^\circ\text{C}$ :

| Adjustment s (mm) | factor |
|-------------------|--------|
| 4                 | 0.5    |
| 9                 | 0.45   |
| 15                | 0.4    |

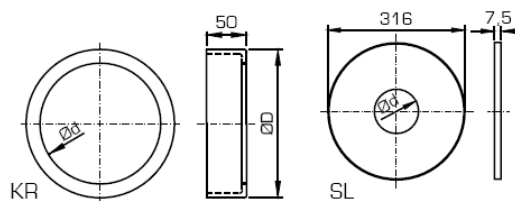
### Dimensions and weight



| Size | ØD  | Ød | B  | Weight g |
|------|-----|----|----|----------|
| 100  | 143 | 67 | 17 | 270      |
| 125  | 173 | 76 | 18 | 430      |
| 160  | 216 | 80 | 19 | 580      |



| Size | Ød  | ØD  | DKT (g) | DVS-F (g) |
|------|-----|-----|---------|-----------|
| 100  | 99  | 122 | 75      | 71        |
| 125  | 124 | 148 | 102     | 97        |
| 160  | 159 | 184 | 131     | 125       |



| Size | ØD  | Ød  |
|------|-----|-----|
| 100  | 150 | 100 |
| 125  | 180 | 125 |
| 160  | 223 | 160 |

| Size | ØD  |
|------|-----|
| 100  | 102 |
| 125  | 130 |
| 160  | 160 |

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