



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.

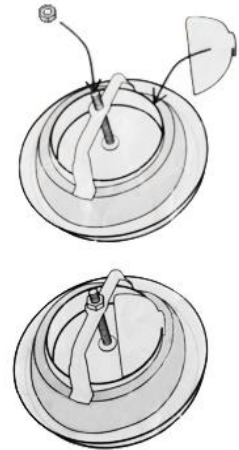
The valve is equipped with a sector plate for direction of the air flow. Adjustment of the valve or sector plate is achieved by simply rotating the disc and/or sector plate to the desired setting and secured by means of a single lock nut.

The DTS is manufactured from sheet steel and stove enameled in white. Other colors are available to special order.

- 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 (m ³ /h) 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.

LIABILITY:

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PLEASE NOTICE:

The consultant is responsible for the actual installation and mounting of the product. The mentioned values with respect to temperatures are not appropriate to be used to determine the physical properties. These properties are also dependent on humidity and the temperature of the air inside and outside of the H.V.A.C. system.

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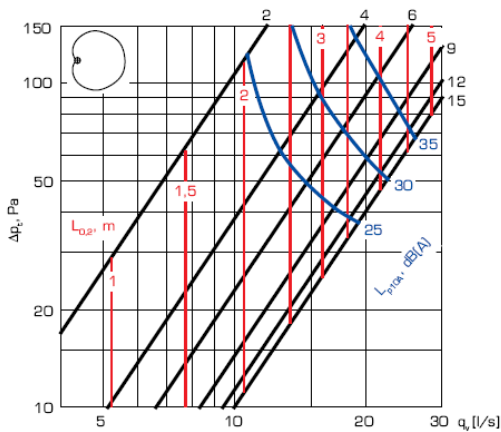


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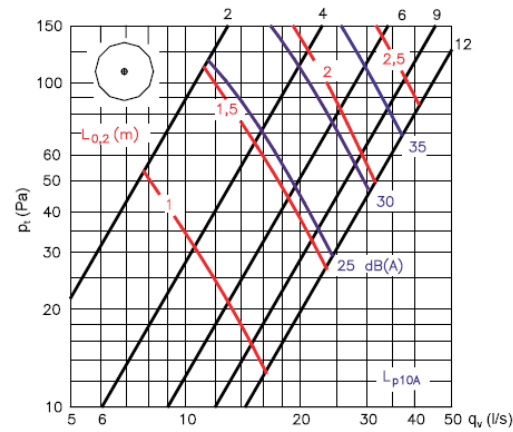
AIR MANAGEMENT SYSTEMS

SELECTION DIAGRAMS

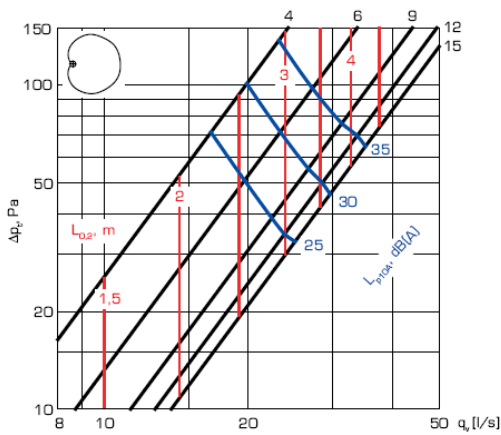
DTS-100 with sector plate



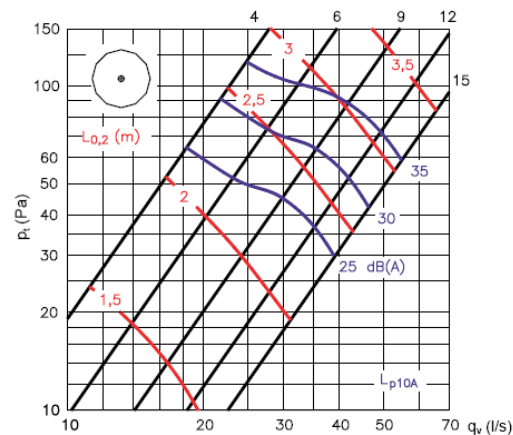
DTS-100 without sector plate



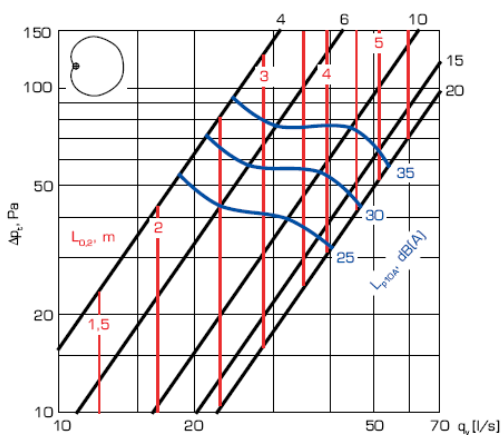
DTS-125 with sector plate



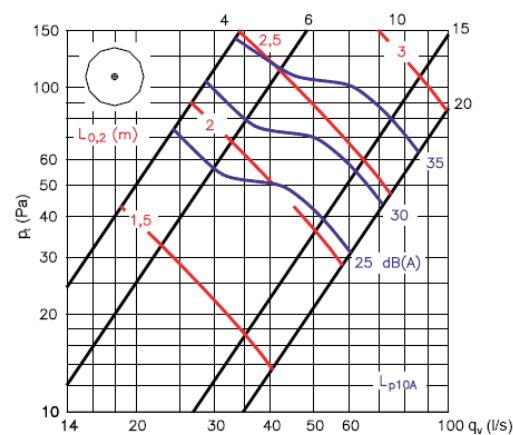
DTS-125 without sector plate



DTS-160 with sector plate



DTS-160 without sector plate



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Acoustical data, dimensions and weight

Sound power level L_w

DTS with sector plate

DTS	Correction of sound level in dB at 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 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:

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

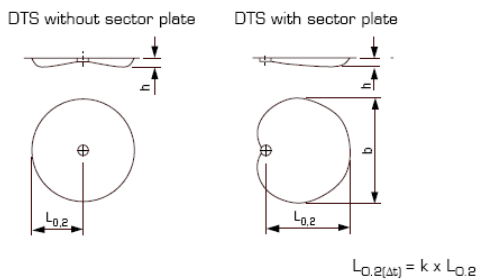
Correction K_{oct} is average value in range of use of the unit.

Sound attenuation ΔL

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 ΔL from duct to room including the orifice attenuation of the connecting duct in ceiling installation, is obtained in the table above.

Diffusion pattern



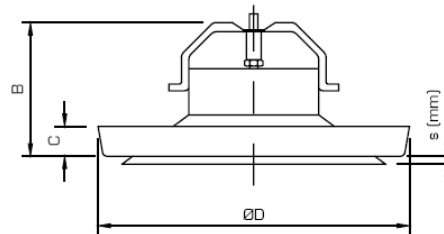
Regulation	Δt (C°)	b	h	k
s = 4	0	1.45 x $L_{0,2}$	0.04 x $L_{0,2}$	1.0
s = 4	-10	1.45 x $L_{0,2(\Delta t)}$	0.08 x $L_{0,2(\Delta t)}$	0.8
s = 15	0	1.45 x $L_{0,2}$	0.04 x $L_{0,2}$	1.0
s = 15	-10	1.45 x $L_{0,2(\Delta t)}$	0.1 x $L_{0,2(\Delta t)}$	0.75

Throw in free space mounting

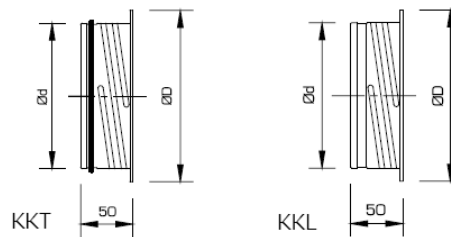
In case of free space mounting the throw can be calculated by using the following factors: when $\Delta t = 0^\circ C$:

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

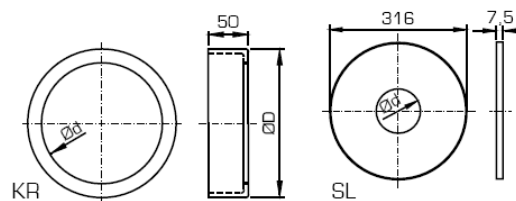
Dimensions and weight



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



Size	Ød	ØD	Weight KKT (g)	Weight KKL (g)
100	99	122	75	71
125	124	148	102	97
160	159	184	131	125



Size	ØD	Ød	Size	ØD
100	150	100	100	102
125	180	125	125	130
160	223	160	160	160

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