Transfer Air Device Type LDO-T

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LDO-T-E-TP-01 (06/09) 419-152

Transfer Air Device LDO-T

Function

The Transfer Air Device type LDO-T is an acoustically treated air transfer device for mounting into walls.

LDO-T devices may be used to transfer room air to adjacent corridors, false ceilings or adjacent interior zones using either mechanical or natural ventilation systems.

Transfer Air Devices reduce the pressure difference between two rooms connected by the device and thus avoid excessive door opening forces

The Transfer Air Device type LDO-T prevents noise/ voice transmission to adjacent rooms.

Features

- High transmission loss with low pressure loss
- Easy installation
  - fascia grille, suitable for easy retrofit installation without tools using clips
- Aesthetic design
  - finish of fascia grille either painted, anodized aluminum or stainless steel;
  - modification of device shape/size possible to special order
- Standard sizes for dry wall thicknesses of 100 mm and 125 mm
  - installation between 625 mm grid metal stud sections.
- Non-flammable version
  - abrasion resistant sound absorber material A1

Design / Range of Products

Ready-to-install unit including:

- aesthetically designed fascia grille of galvanized sheet steel, painted (either anodized aluminum or stainless steel)
- transfer base element of galvanized sheet steel with integrated sound absorber providing excellent acoustic effectiveness

standard length: 550 mm

Figure: wall installation LDO-T

Tolerances

- For the dimensions stated in this technical brochure DIN ISO 2768-vL General Tolerances apply.
- Length tolerances: ≤ 1.5 m ± 1.5 mm;
  ≥ 1.5 m ± 2.0 mm.
- Straightness and twist tolerances according to DIN EN 12020-2.

Finish

- The surface finish of the Transfer Air Device has been designed for use in room climates according to DIN EN ISO 7730.
- Other surface finishes of the Transfer Air Device to meet specific requirements on demand.

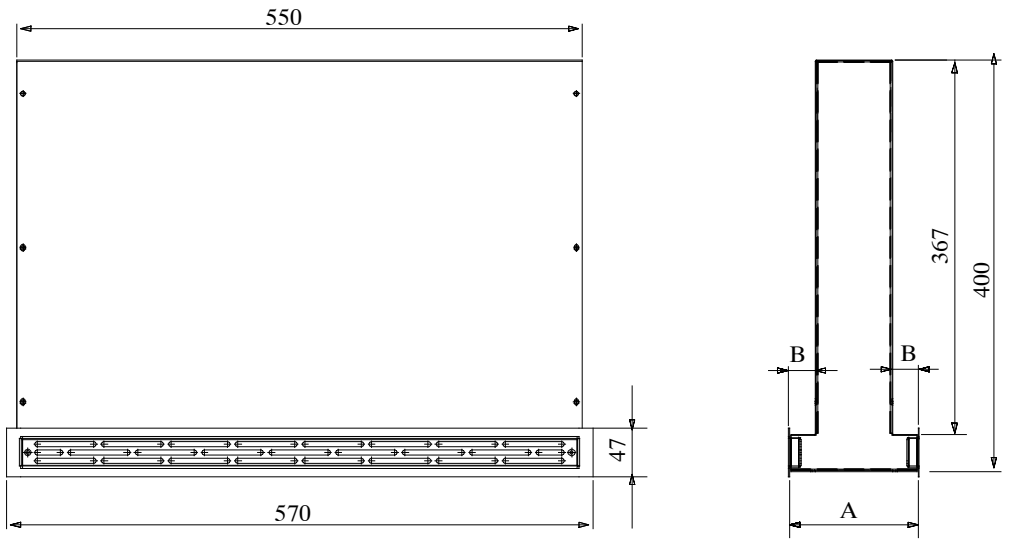
Installation

- Flush insertion of the transfer base element in dry walls of 100 mm and 125 mm.
- Clip on the front side device element from inside the room.

You will find the actual ***tender documentations*** at the end of this document.
They are available in word format at your local dealership or at www.LTG-AG.de.

Transfer Air Device LDO-T

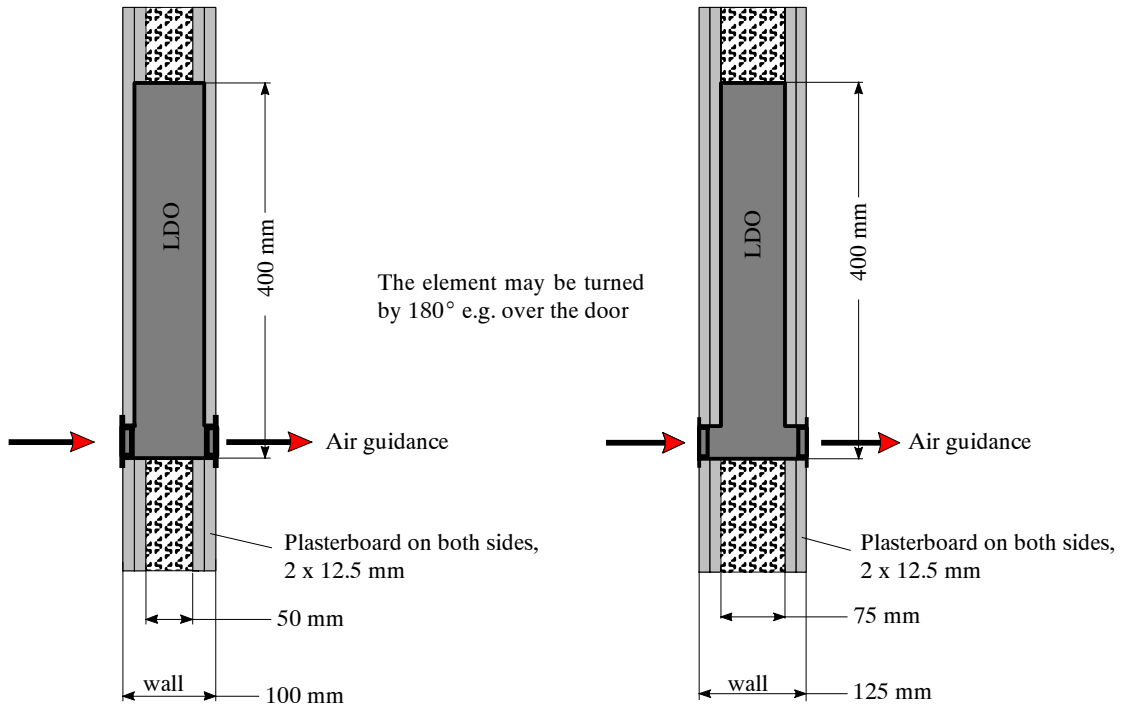
Dimensions



Weight:
Size 550 abt. 5 kg

Wall thickness	Dim. A	Dim. B
125	125	25
100	100	12.5

Installation situation

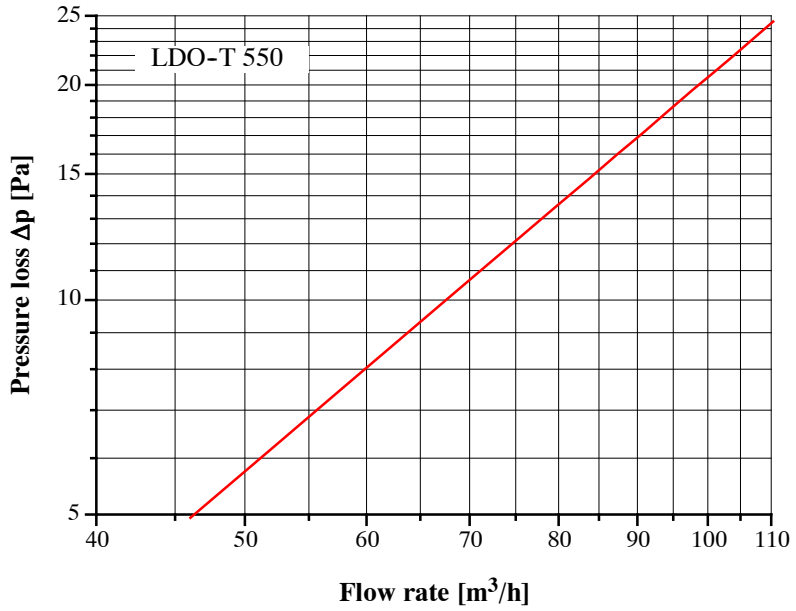


Dry wall, width 100 mm

Dry wall, width 125 mm

Transfer Air Device LDO-T

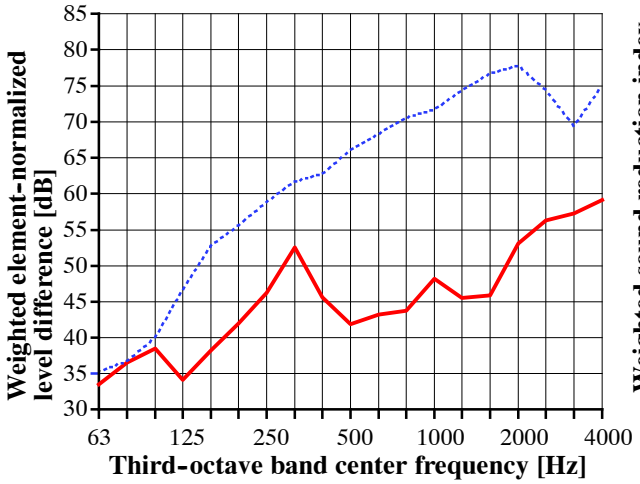
Pressure loss selection diagram



The sound power level in the above mentioned area is below 30 dB(A)

Selection diagrams

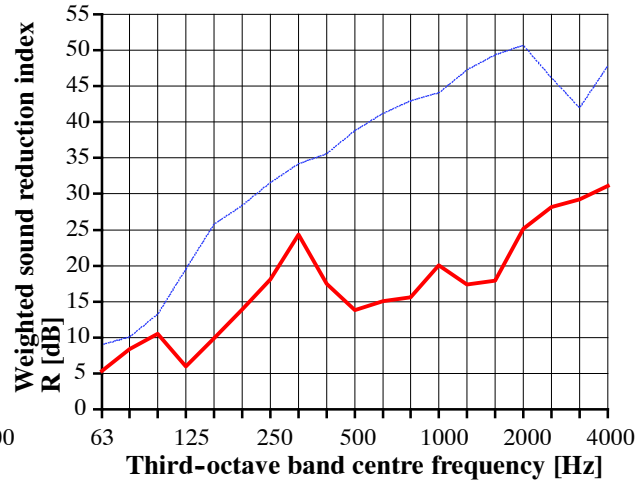
Weighted element-normalized level difference $D_{n,e}$



LDO-T 550
Limiting- insulation value of the wall during lab measurement

Weighted element-normalized level difference $D_{n,e,w}$ = 47 dB
(measurements acc. to DIN EN 20140/10)

Third-octave band centre frequency R

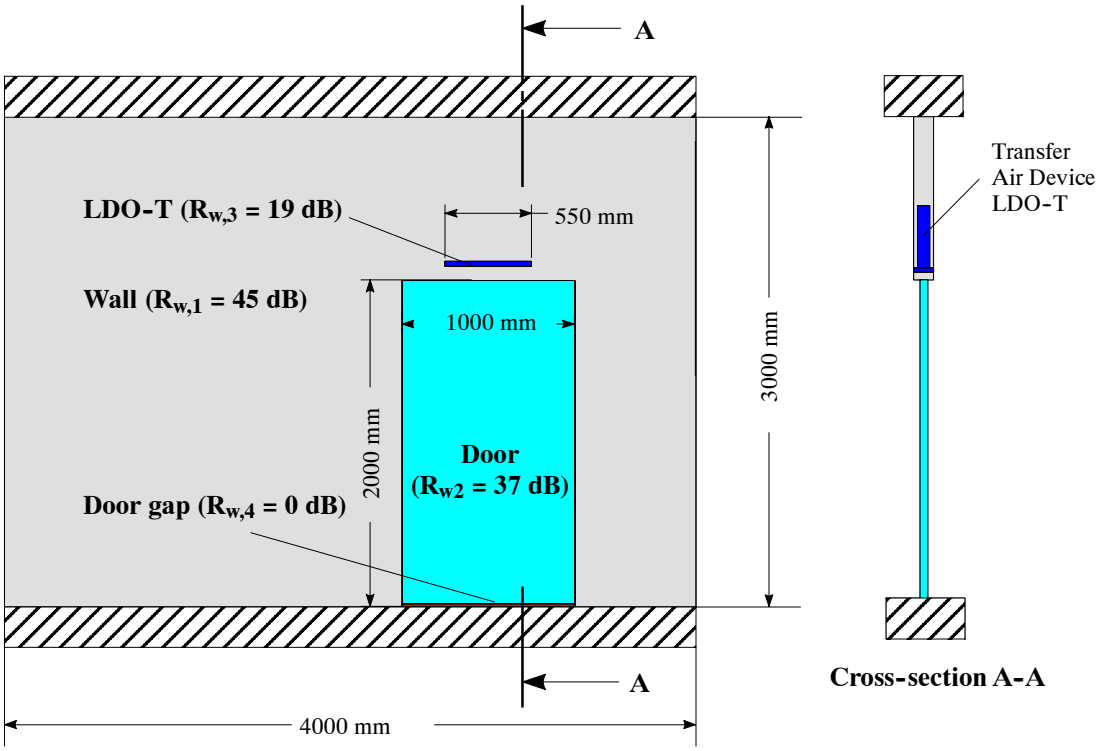


LDO-T 550
Limiting- insulation value of the wall during lab measurement

Weighted sound reduction index R_w = 19 dB
(measurements acc. to DIN EN 20140/10)

Transfer Air Device LDO-T

Dimensioning Examples



Example 1	- **Wall:** - **Door:**	- 10 m^2 with $R_{w,1}$ = 45 dB - 2 m^2 with $R_{w,2}$ = 37 dB	Resulting weighted sound reduction index: **$R_{w, res}$ = 42 dB**
Example 2	- **Wall:** - **Door:** - **LDO-T 550:**	- 9,98 m^2 - 2 m^2 with $R_{w,2}$ = 37 dB - 0.016 m^2 with $R_{w,3}$ = 19 dB	Resulting weighted sound reduction index: **$R_{w, res}$ = 41 dB**
Example 3	- **Wall:** - **Door:** - **2 x LDO-T 550:**	- 9.97 m^2 with $R_{w,1}$ = 45 dB - 2 m^2 with $R_{w,2}$ = 37 dB - 2 x 0,016 m^2 with $R_{w,3}$ = 19 dB	Resulting weighted sound reduction index: **$R_{w, res}$ = 40 dB**
Example 4	- **Wall:** - **Door:** - **Door gap:**	- 10 m^2 with $R_{w,1}$ = 45 dB - 1.98 m^2 with $R_{w,2}$ = 37 dB - 0.02 m^2 with $R_{w,4}$ = 0 dB	Resulting weighted sound reduction index: **$R_{w, res}$ = 28 dB**

Calculation is based on the following equation: $R_{w,\,res} = -10\,\lg\left(\frac{1}{S_{ges}} \cdot \sum_{i=1}^{n} \cdot S_i \cdot 10^{(-Rw,i/10)}\right)$

Nomenclature

LDO-T /550 /....

Type

Size

Colour

L = painted acc. to RAL
P = powder coated acc. to RAL

Specification and Schedule of Prices

Transfair Air Device LDO-T

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Qty.	Description	Unit price in €	Total price in €
	Sound insulating device for the transfer of room air to hallway areas and hallway intermediate ceilings. Low pressure loss while maintaining the sound insulation features of the partition walls. For flush installation in vertical room surfaces with dry wall thicknesses of 100 mm or 125 mm. Nominal Flow Rate V_{Nenn} = 90 m^3/h with a pressure loss of Δp = 20 Pa. Device comprising of : - transfer base element of 0.6 mm galvanized sheet steel with integrated sound absorber of abrasion resistant, non flammable A1 material, height: 400 mm, width to suit: 100 mm, 125 mm - device element of 0.6 mm galvanized sheet steel with sub-frame, powder coated or painted acc. to RAL - device element may be clipped in place from inside the room. Width: 30 mm, length: 550 mm **Manufacturer: LTG Aktiengesellschaft** **Type: LDO-T**		