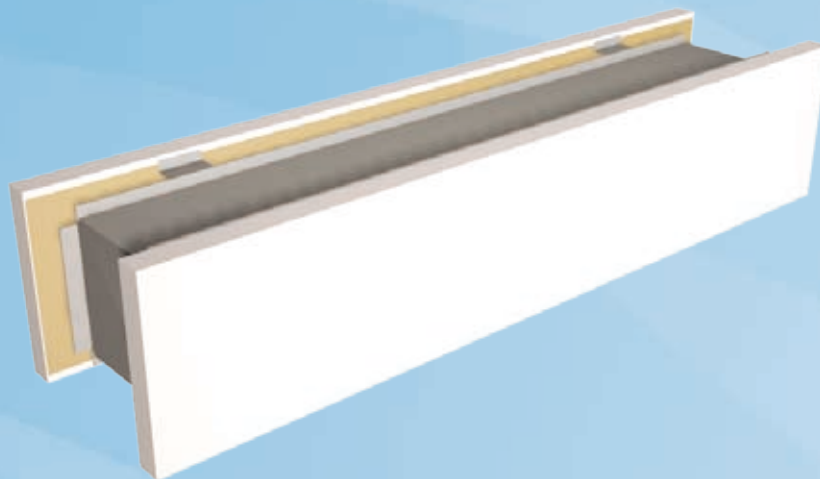


TVA

Transfer Unit



- Transfer unit for partition wall installation
- Adjustable casing depth adapts to the thickness of the wall
- Large free area, minimal pressure drop
- Detachable front panel allows cleaning of the unit

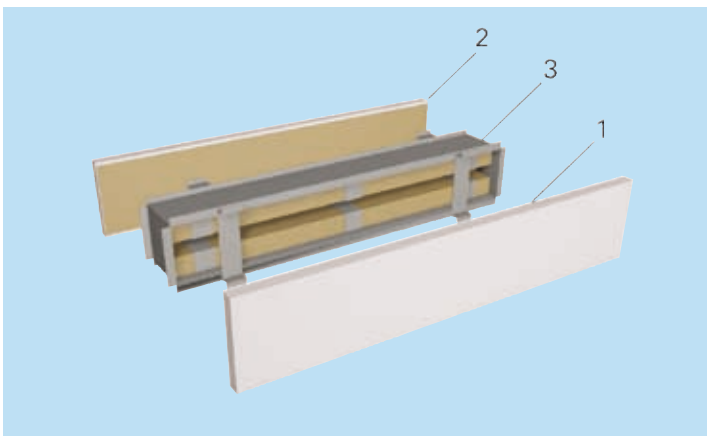
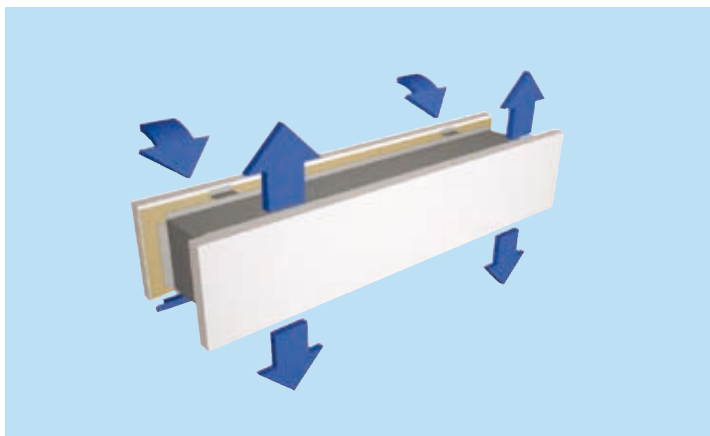
- Effective sound attenuation; reduced noise propagation between the adjacent rooms
- No visibility through the transfer unit

Product Models

- Model with front panels only

MATERIAL AND FINISHING

PART	MATERIAL	NOTE
Casing	Galvanised steel	
Front panel	Galvanised steel	
Attenuation material	Mineral wool	
Finishing	Front panels epoxy-painted/White RAL 9010	Special colours available



Function

Air moves to adjoining rooms through the transfer unit due to pressure difference.

The transfer unit attenuates sound and reduces air-borne noise between rooms.

The transfer unit distributes air evenly in different directions.

The transfer unit prevents vision from room to room.

Installation

CODE DESCRIPTION

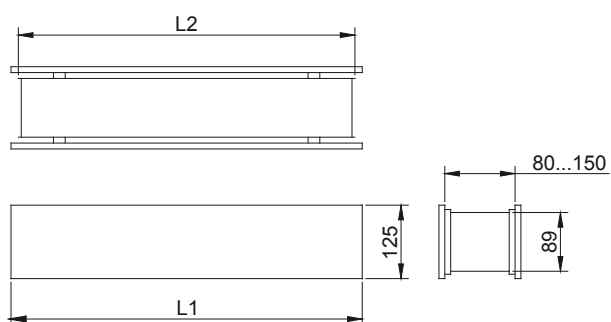
1, 2	Front panels
3	Casing

The transfer unit is installed in an opening made in a wall or door. The dimensions for installation holes are:

	TVA	TVA-B
Installation hole	$(L2+5) \times 95$ mm	$(L2+5) \times 30... 60$ mm
Wall thickness	80...150 mm	unlimited

The two models are identical in appearance when installed.

DIMENSIONS



LxH	L1	L2
600x100	600	545
700x100	700	660
800x100	800	460
900x100	900	860
1000x100	1000	960

Product Models

- TVA/N: complete unit with 2 front panels and attenuation casing

- TVA/B: front panels without casing, when less sound attenuation are required.

SOUND ATTENUATION

	ΔL [(dB) f [Hz]]					
	125	250	500	1000	2000	4000
TVA-600x100	20	19	17	26	38	39
TVA-700x100	19	19	16	26	37	38
TVA-800x100	17	18	16	26	36	37
TVA-900x100	16	17	15	26	34	37
TVA-1000x100	15	16	14	25	33	37

	ΔL [(dB) f [Hz]]					
	125	250	500	1000	2000	4000
TVA/B-600x100	18	21	17	22	31	36
TVA/B-700x100	17	20	16	21	31	35
TVA/B-800x100	16	19	15	20	30	34
TVA/B-900x100	15	18	14	19	30	33
TVA/B-1000x100	14	17	13	19	29	33

The unit attenuation D_1 is calculated in accordance with Nordtest method NT ACOU 037. The total attenuation of the wall in each frequency band can be calculated using this formula :

$$R_p = 10 \times \log \left(\frac{S}{S \times 10^{-R/10} + 10^{-D_1/10}} \right)$$

R_p = total attenuation of wall in considered frequency band (dB)

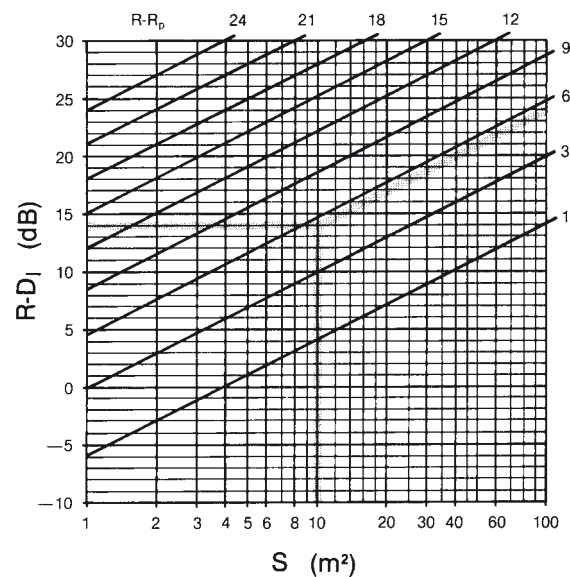
S = wall area (m²)

R = attenuation of wall in considered frequency band without transfer unit (dB)

D_1 = attenuation of transfer unit in considered frequency band (dB)

This formula is valid when the area of the transfer unit is less than 15% of the wall area. The total attenuation of the wall in each frequency band may also be obtained from the chart.

WALL SOUND ATTENUATION



Example

TVA 800x100

Frequency band : $f = 1000$ Hz

Wall area : $S = 10$ m²

Attenuation of the wall : $R = 40$ dB ($f=1000$ Hz)

Unit attenuation : $D_1 = 26$ dB ($f=1000$ Hz)

$$R_p = 10 \times \log \left(\frac{10}{10 \times 10^{-40/10} + 10^{-26/10}} \right) = 34,5 \text{ dB}$$

or from the chart :

$$R-D_1 = (40-26) \text{ dB} = 14 \text{ dB}$$

$$R-R_p = 5,5 \text{ dB}$$

$$R_p = R - 5,5 = 40 - 5,5 = 34,5 \text{ dB}$$

Servicing

Detach the front panels for cleaning.
 Clean the unit using a vacuum cleaner.
 Wipe the front panels with a damp cloth instead of immersing into water.

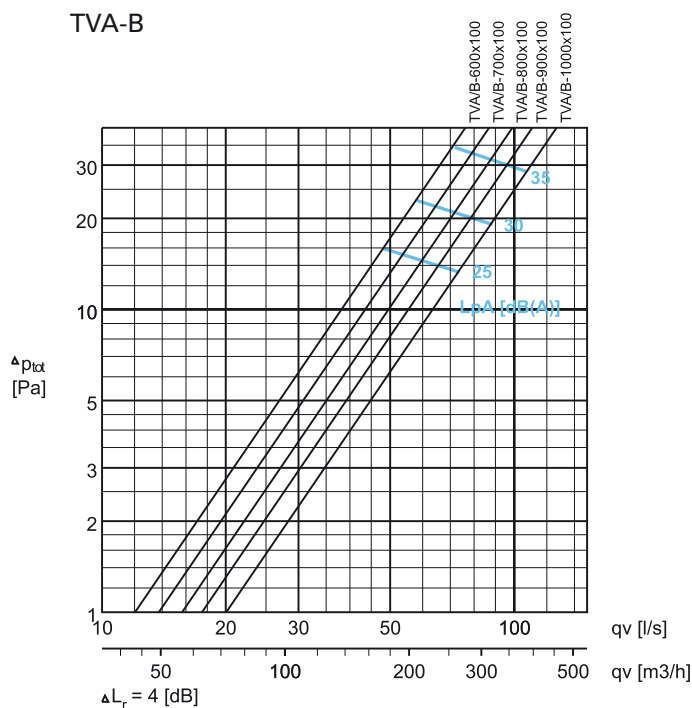
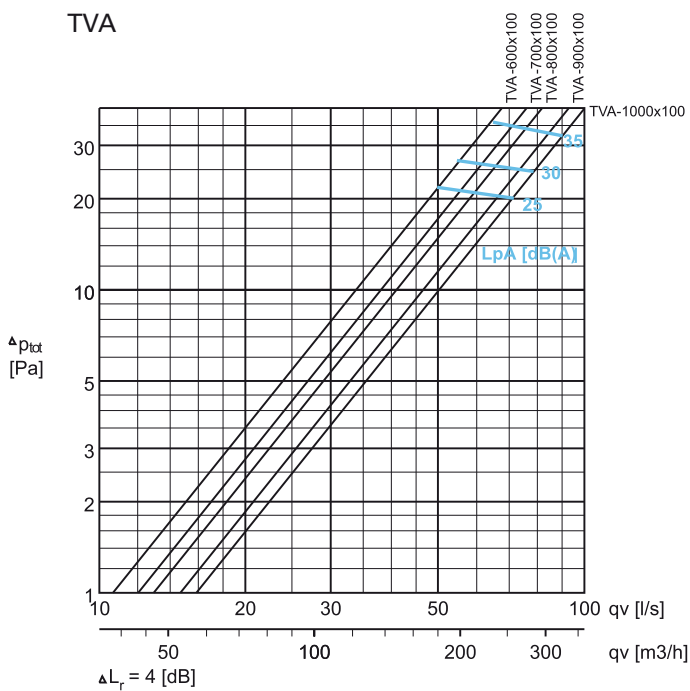
Suggested Specifications

The transfer unit shall have a sound attenuating casing and two exposed front panels with side openings.
 The transfer unit shall be manufactured from hot galvanised steel with a white (RAL 9010) colour.
 Sound attenuation material shall be coated mineral wool.
 The depth of the casing shall be adjustable according to the thickness of the wall.

Option

The transfer unit shall have two exposed front panels without casing.

Pressure drop and sound data



Product Code

TVA/S-W-H

S = Construction

- N Standard (front panels + casing)
- B Front panels without casing

W = Width

- S=N: 600, 700, 800, 900, 1000
- S=B: 300, 400, 500, 600, 700, 800, 900

H = Height

100

Specifics and accessories

CO = Colour

- W White
- X Special colour

Code example

TVA/N-600-100, CO=W

TVB

Transfer Unit

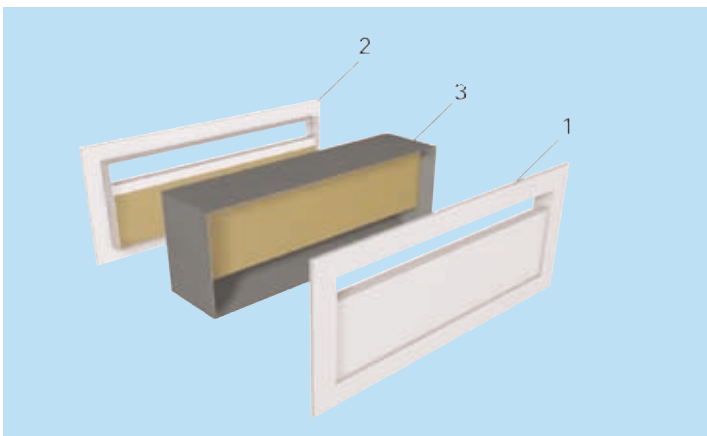
20/TVB/7000/0306/EN



- Transfer unit for partition wall installation
- Adjustable casing depth adapts to the thickness of the wall
- Large free area, minimal pressure drop
- Detachable front panel allows cleaning of the unit
- Effective sound attenuation; reduced noise propagation between the adjacent rooms
- No visibility through the transfer unit

MATERIAL AND FINISHING

PART	MATERIAL	NOTE
Casing	Galvanised steel	
Front panel	Aluminium	
Attenuation material	Mineral wool	Cutting edges protected
Finishing	Front panels epoxy-painted/White RAL 9010	Special colours available



Function

Air moves to adjoining rooms through the transfer unit due to pressure difference.

The unit attenuates sound and reduces air-borne noise between rooms.

Air flows into the room through a rectangular slot on the front panel.

The transfer unit prevents vision from room to room.

Installation

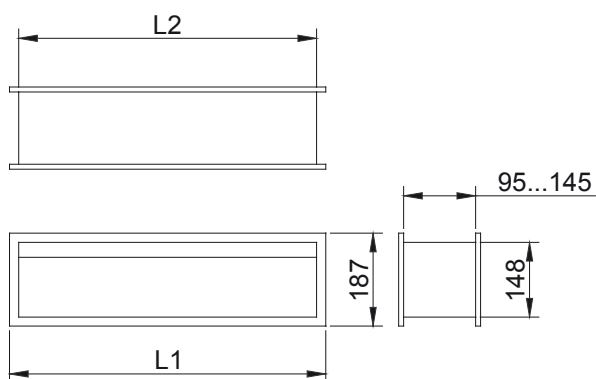
CODE DESCRIPTION

1, 2	Front panels
3	Casing

The transfer unit is installed into an opening made in a wall or door.

TVB	
Installation hole	(L2+5) x 155 mm
Wall thickness	90...145 mm

DIMENSIONS



LxH	L1	L2
400x150	437	397
500x150	537	497
600x150	637	597
700x150	737	697
800x150	837	797
900x150	937	897
1000x150	1037	997

Servicing

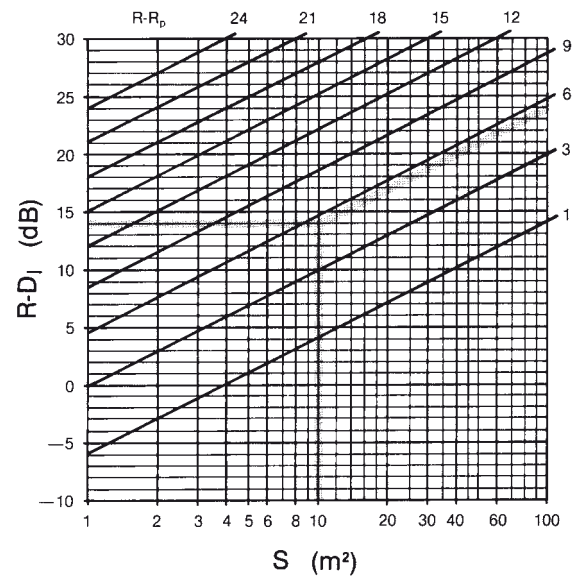
Detach the front panels for cleaning.
Clean the unit using a vacuum cleaner.

Wipe the front panels with a damp cloth instead of immersing into water.

SOUND ATTENUATION

	ΔL [(dB)]					
	f [Hz]					
	125	250	500	1000	2000	4000
TVB-400x150	24	22	21	34	42	42
TVB-500x150	23	20	20	33	42	42
TVB-600x150	21	19	19	31	42	42
TVB-700x150	20	18	19	30	41	42
TVB-800x150	19	18	18	30	40	42
TVB-900x150	18	18	17	30	40	42
TVB-1000x150	17	17	17	28	38	42

WALL SOUND ATTENUATION



The unit attenuation D_1 is calculated in accordance with Nordtest method NT ACOU 037. The total attenuation of the wall in each frequency band can be calculated using this formula :

$$R_p = 10 \times \log \left(\frac{S}{S \times 10^{-R/10} + 10^{-D_1/10}} \right)$$

R_p = total attenuation of wall in considered frequency band (dB)

S = wall area (m²)

R = attenuation of wall in considered frequency band without transfer unit (dB)

D_1 = attenuation of transfer unit in considered frequency band (dB)

This formula is valid when the area of the transfer unit is less than 15% of the wall area. The total attenuation of the wall in each frequency band may also be obtained from the chart.

Example

TVB 800x100

Frequency band : $f = 1000$ Hz

Wall area : $S = 10$ m²

Attenuation of the wall : $R = 40$ dB ($f=1000$ Hz)

Unit attenuation : $D_1 = 31$ dB ($f=1000$ Hz)

$$R_p = 10 \times \log \left(\frac{10}{10 \times 10^{-40/10} + 10^{-26/10}} \right) = 34,5 \text{ dB}$$

or from the chart :

$$R-D_1 = (40-31) \text{ dB} = 9 \text{ dB}$$

$$R-R_p = 2,5 \text{ dB}$$

$$R_p = R - 2,5 = 40 - 2,5 = 37,5 \text{ dB}$$

Suggested Specifications

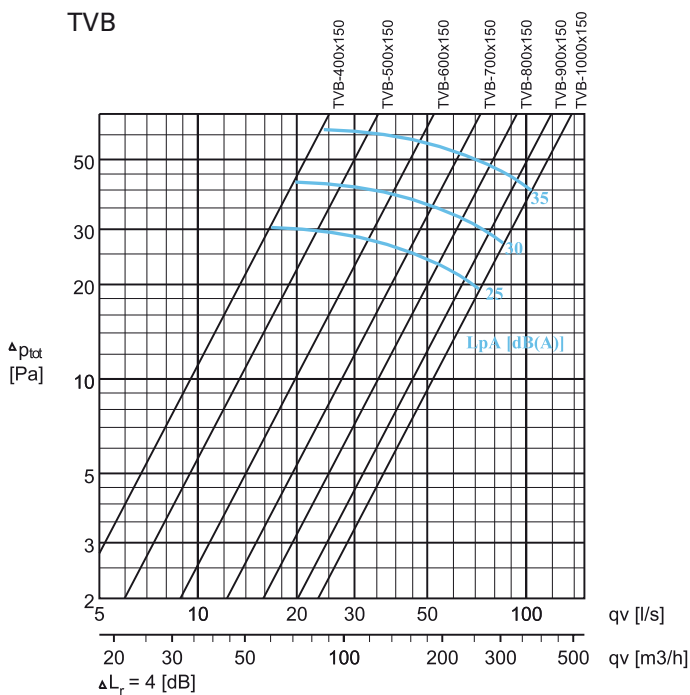
The transfer unit shall have a sound attenuating casing with two front panels for installation flush to the wall surface.

The transfer unit shall be manufactured from hot galvanised steel and aluminium with a white (RAL 9010) colour.

Sound attenuation material shall be coated mineral wool.

The depth of the casing shall be adjustable (95 to 145 mm) according to the thickness of the wall.

Pressure drop and sound data



Product Code

TVB-W-H

W = Width
400, 500, 600, 700, 800, 900, 1000

H = Height
150

Specifics and accessories

CO = Colour
W White
X Special colour

Code example

TVB-400-150, CO=W

TVC

Transfer Grille



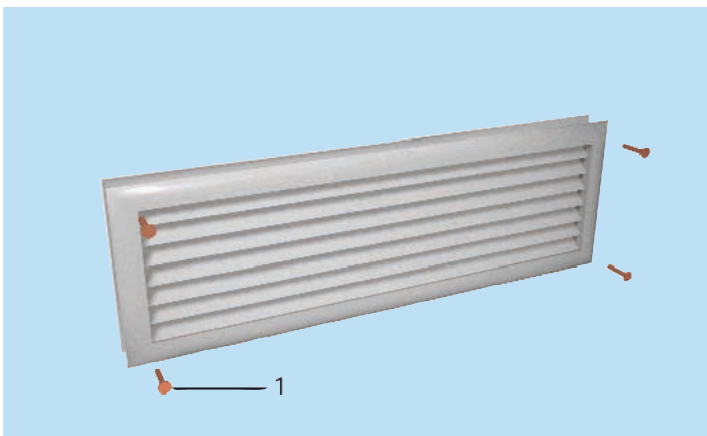
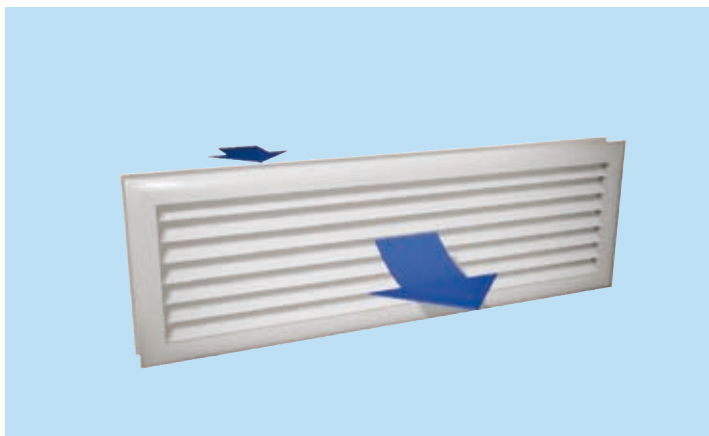
- Transfer grille for partition wall and door installations
- Adjustable casing depth adapts to the thickness of the wall/door
- Large free area, minimal pressure drop
- No visibility through the transfer grille

Accessories

- Opposite grille for installation depths 25...50 mm

MATERIAL AND FINISHING

PART	MATERIAL	FINISHING	NOTE
Frame	Aluminium	Anodised Polyester-painted / White RAL 9010, 50% gloss Mill finished	Special colours available
Vanes	Aluminium	Anodised Polyester-painted / White RAL 9010, 50% gloss Mill finished	Special colours available
Opposite grille	Aluminium		Accessory



Function

Air moves to adjoining rooms through the transfer grille due to pressure difference.

The transfer unit does not permit vision from room to room.

ACCESSORIES

ACCESSORY	CODE	DESCRIPTION
Opposite grille	OF	Used in installation depths 25...50 mm

Installation

TVC transfer grilles are screwed (1) either to the wall or door, on both sides (2 x TVC, if required).

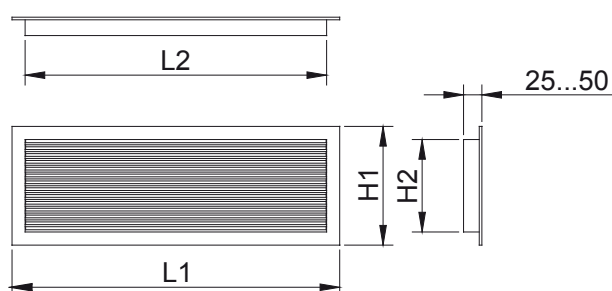
If necessary, a rectangular duct can be installed between the grilles.

The TVC transfer grille can also be used together with an OF opposite grille accessory as a complete transfer unit for 25 to 50 mm thick doors or partition walls.

Both the TVC grille and OF opposite grille are screwed to the wall or door.

For the size of the installation hole, see Dimensions (L1xH1).

DIMENSIONS



LxH	L1	L2	H1	H2
200x100	226	176	126	76
300x100	326	276	126	76
300x150	326	276	176	126
300x200	326	276	226	176
400x200	426	376	226	176
400x300	426	376	326	276
500x200	526	476	226	176
500x300	526	476	326	276
600x200	626	576	226	176
600x300	626	576	326	276
600x400	626	576	426	376

In addition to these standard sizes, other dimensions can be specially ordered.

The maximum dimensions are 1000x600 mm.

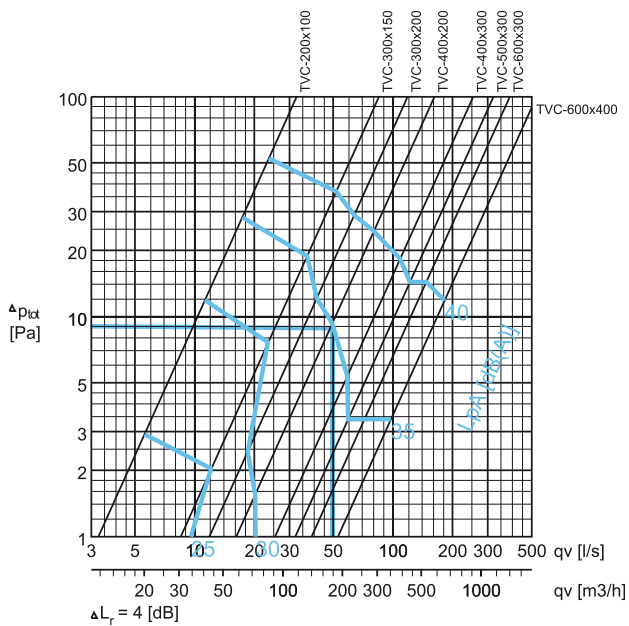
Dimensions for installation holes are L1xH1.

SOUND LEVEL DATA

	qv		ΔP_{st} (Pa)	ΔP_{tot} (Pa)	F (Hz)					LpA [dB(A)]	NR	NC	
	(l/s)	(m ³ /h)			125	250	500	1000	2000				4000
200X100	10	36	1,0	9	37	40	27	17	15	9	29	26	18
	14	50	1,5	20	40	42	34	27	23	17	33	30	
	19	68	2,0	35	42	43	40	34	29	24	35	32	24
	24	86	2,5	54	43	44	44	39	33	28	40	36	29
	29	104	3,0	77	44	45	47	43	36	32	44	39	34
300x150	25	90	1,0	9	41	44	31	21	19	12	32	30	18
	38	137	1,5	20	43	46	38	30	26	21	36	32	
	50	180	2,0	35	45	47	43	37	32	27	40	35	24
	63	227	2,5	54	47	48	47	42	36	32	44	40	29
	75	270	3,0	77	48	48	50	47	40	36	47	43	34
300X200	35	126	1,0	9	42	45	32	22	20	13	34	32	18
	52	187	1,5	20	45	47	39	32	28	22	37	33	23
	70	252	2,0	35	46	48	4	38	33	28	42	37	
	87	313	2,5	54	48	49	48	44	38	33	45	41	29
	105	378	3,0	77	49	50	52	48	41	37	49	44	34
400X200	48	173	1,0	9	43	46	33	23	21	15	35	33	18
	71	256	1,5	20	46	48	41	33	29	23	39	35	
	95	342	2,0	35	48	49	46	40	35	30	42	39	23
	119	428	2,5	54	49	50	50	45	39	35	46	42	29
	143	515	3,0	77	50	51	53	49	42	38	50	45	34
400X300	75	270	1,0	9	45	48	35	25	23	16	37	35	17
	112	403	1,5	20	48	50	42	35	31	25	40	37	23
	149	536	2,0	35	49	51	47	41	36	31	44	40	
	187	673	2,5	54	51	52	51	47	41	36	48	44	29
	224	806	3,0	77	52	53	55	51	44	40	51	47	34
500X300	95	342	1,0	9	47	50	37	27	25	18	39	37	18
	142	511	1,5	20	49	52	44	36	32	27	42	38	23
	189	680	2,0	35	51	53	49	43	38	33	46	42	
	236	850	2,5	54	53	54	53	48	42	38	50	46	29
	284	1022	3,0	77	54	54	56	53	46	42	53	49	34
600X300	114	410	1,0	9	47	50	37	27	25	18	39	37	19
	172	619	1,5	20	49	52	44	36	32	27	42	38	24
	229	824	2,0	35	51	53	49	43	38	33	46	42	
	286	1030	2,5	54	53	54	53	48	42	38	50	46	29
	343	1235	3,0	77	54	54	56	53	46	42	53	49	34
1000x150	156	562	1,0	9	48	51	38	28	26	19	40	38	18
	234	842	1,5	20	51	53	45	38	34	28	43	40	
	312	1123	2,0	35	52	54	50	44	39	34	46	43	24
	390	1404	2,5	54	54	55	54	50	44	39	51	47	29
	468	1685	3,0	77	55	56	58	54	47	43	54	50	35

LpA values presented with room attenuation 4 dB (red 10m² - sab). When using room attenuation 8 dB (red 10m² - sab): LpA - 4dB.
NR/NC noise criteria

Pressure drop and sound data



Selection example :

Requirements : $qv = 50 \text{ l/s}$
 $LpA \leq 35 \text{ dB(A)}$

Selection : TVC-400x200
 $LpA < 31 \text{ dB(A)}$
 $\Delta Ptot = 10 \text{ Pa}$

Servicing

Detach the grille for cleaning.
 Wipe the grille with a damp cloth instead of immersing in water.

Suggested Specifications

The transfer grille shall consist of a frame with V-shaped vanes and opposite side closure.
 The transfer unit shall be manufactured from profiled aluminium with a white (RAL 9010) colour. The depth of the casing shall be adjustable (25 to 50mm) according to the thickness of the door or partition wall.

Product Code

TVC-W-H

W = Width
 200,+50,...,800

H = Height
 100,+50,...,400

Specifics and accessories

FI = Finishing
 AN Anodised
 PN Painted
 MF Mill finished

CO = Colour
 W White
 X Special colour
 N No painting

AC = Accessories
 OF Opposite frame

Code example

TVC-200-100, FI=AN,CO=N