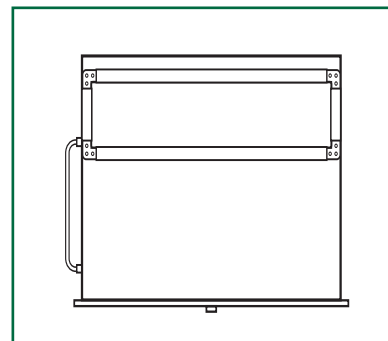
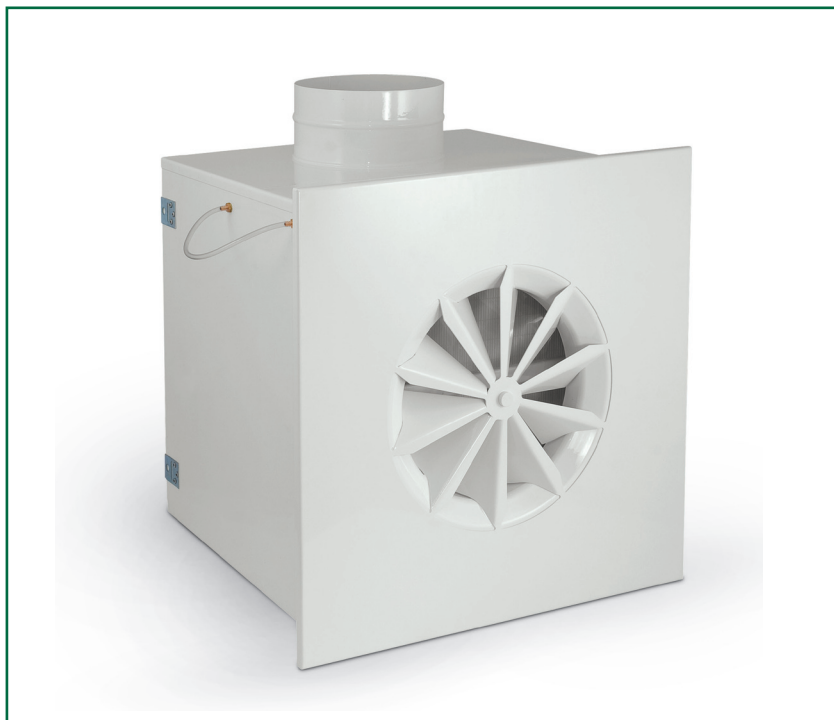


Supply air terminal for clean rooms SPNH, SPNV



Supply air terminals SPNH and SPNV for clean rooms are intended for ceiling installation in premises where the requirements for very clean air are high, for example clean rooms, pharmaceutical industries, etc. SPNH has duct connection placed at the side of the terminal box and SPNV has duct connection positioned on the top.

The terminal includes a HEPA filter of class H13 or H14 according to PN-EN1822-1, which ensures a very high degree of filtration.

The diffuser is intended for ventilation systems for clean rooms of class 5÷8 according to PN-EN ISO 14644-1. The maximum number of air replacements per hour with diffuser SPNH(V) is 60.

Integral measurement sockets in the terminal mean that the pressure drop can be measured and that any filter leakage can be identified. Excessively high pressure drops across the filter also indicate that it should be replaced.

Supply air terminal SPNH(V) is intended for installations in a false ceiling at a height of 2.3 – 4.6 m above the floor. The supply air flow has the form of a diffusion jet, which gives a turbulent air flow in the premises.

SPNH(V) is made from painted steel sheet, and its construction makes filter replacement quick and easy. On request diffuser can be also equipped with filter class H11.

Quick selection

Size	Max airflow for SPNH(V) with filter H13		Max airflow for SPNH(V) with filter H14		Airflow l/s (m ³ /h) at sound level		
	l/s	m ³ /h	l/s	m ³ /h	25dB(A)	30dB(A)	35dB(A)
SPNH(V) 18-30	78	280	46	165	54 (195)	68 (243)	–
SPNH(V) 25-45	133	480	103	370	92 (332)	115 (413)	–
SPNH(V) 31-45	175	630	103	370	128 (462)	153 (550)	–
SPNH(V) 31-53	181	650	142	510	128 (462)	153 (550)	182 (656)
SPNH(V) 35-61	264	950	181	650	182 (654)	210 (755)	243 (873)
SPNH(V) 40-61	308	1110	181	650	194 (697)	231 (832)	276 (992)

In order to keep the work of diffuser normal, it is recommended to not exceed the maximum airflow values given in above table.

Product facts

Supply air terminal SPNH(V)

Intended for ceiling installation.

Has an integral connection box.

Equipped as standard with a HEPA filter of class H13 or H14.

Six sizes with a broad air flow range.

Available with both circular and rectangular connections.

Product code example:

Supply air terminal with filter
SPNV-31-45-1-13-1

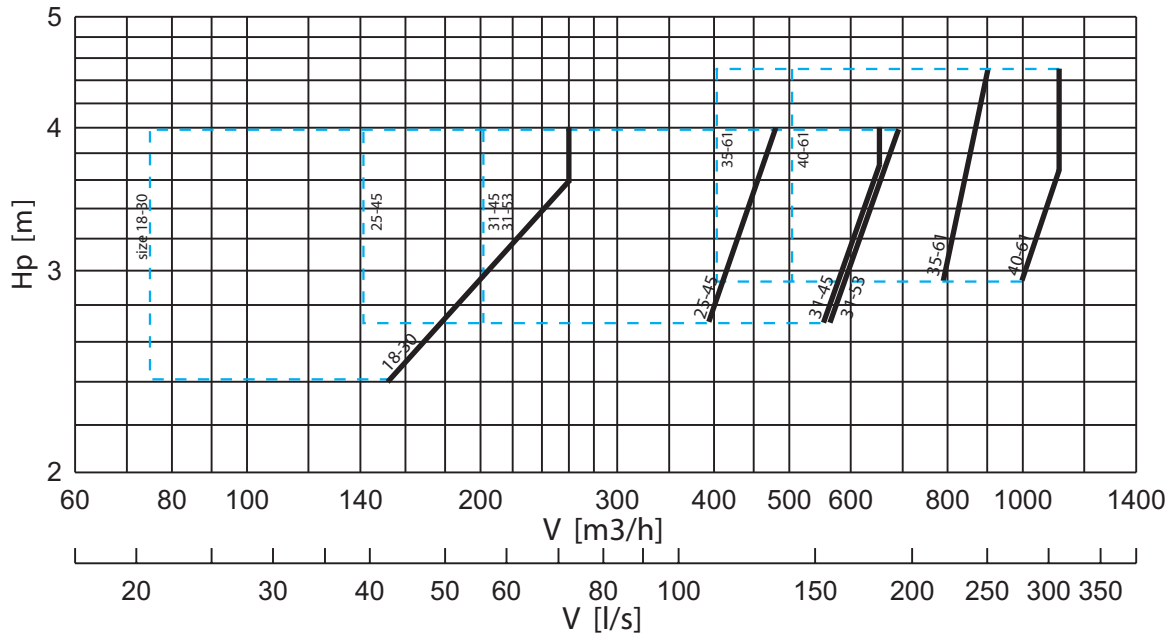
Terminal of size 31 with circular connection with rubber gasket, HEPA filter of class H13 size 457x457x69 mm. Duct connection at the top. The diffuser is painted in colour RAL 9010.

AIRTREND Ltd

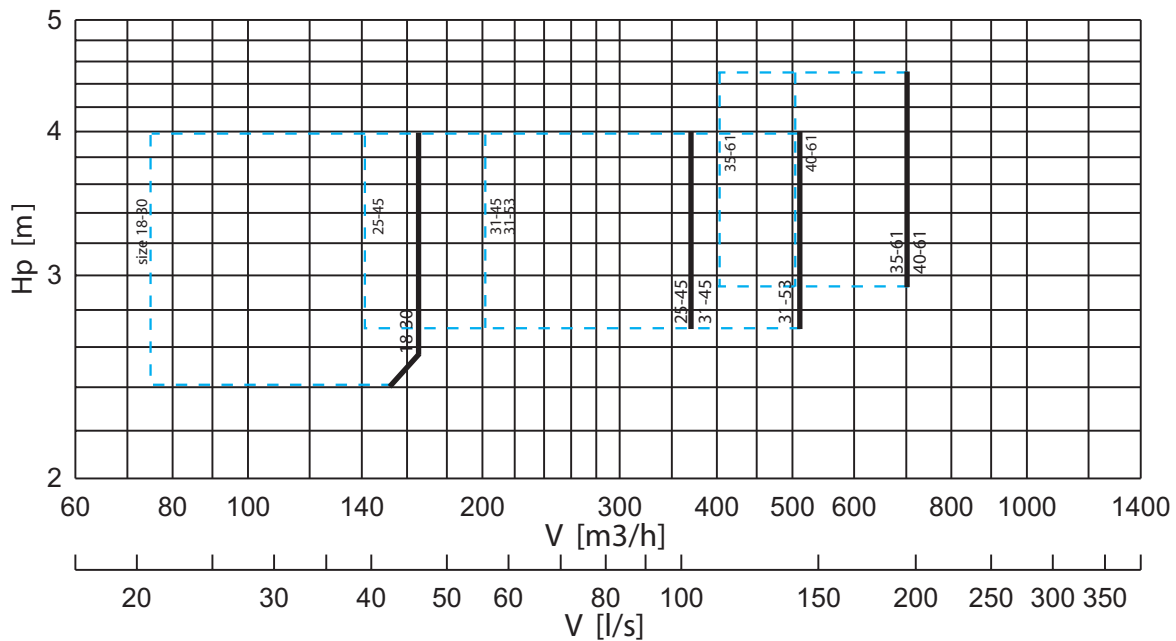
Predstavništvo u Beogradu
Kumanovska 14, 11000 Beograd
Tel: 011/3836886, 3085740
Faks: 011/3444113
e-mail: gobrid@eunet.rs
web: www.airtrend.rs

Operation range

Operation range of SPNH, SPNV with filter pack class H13

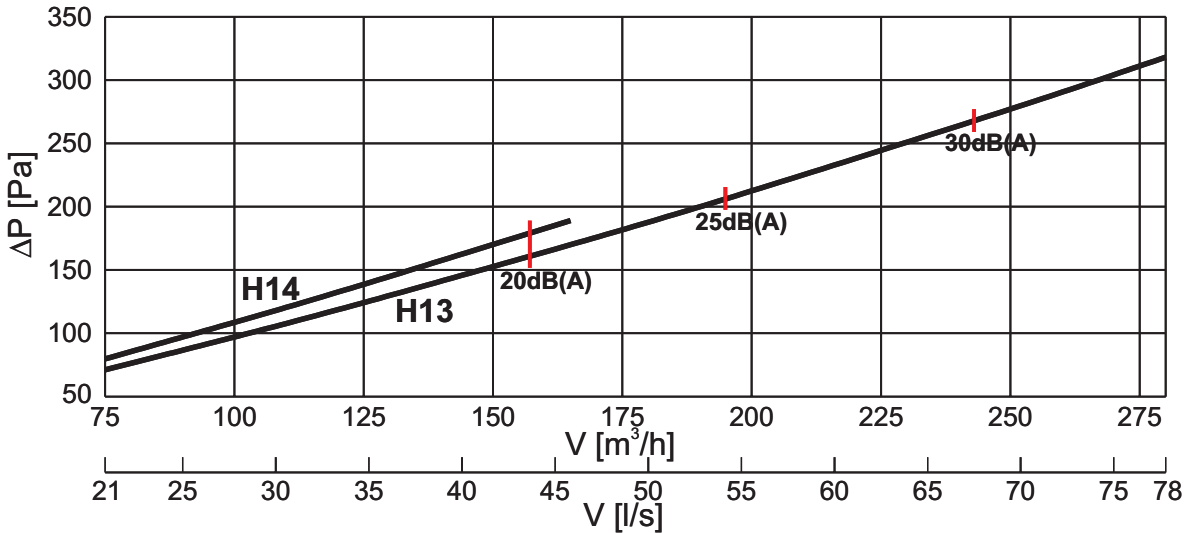


Operation range of SPNH, SPNV with filter pack class H14

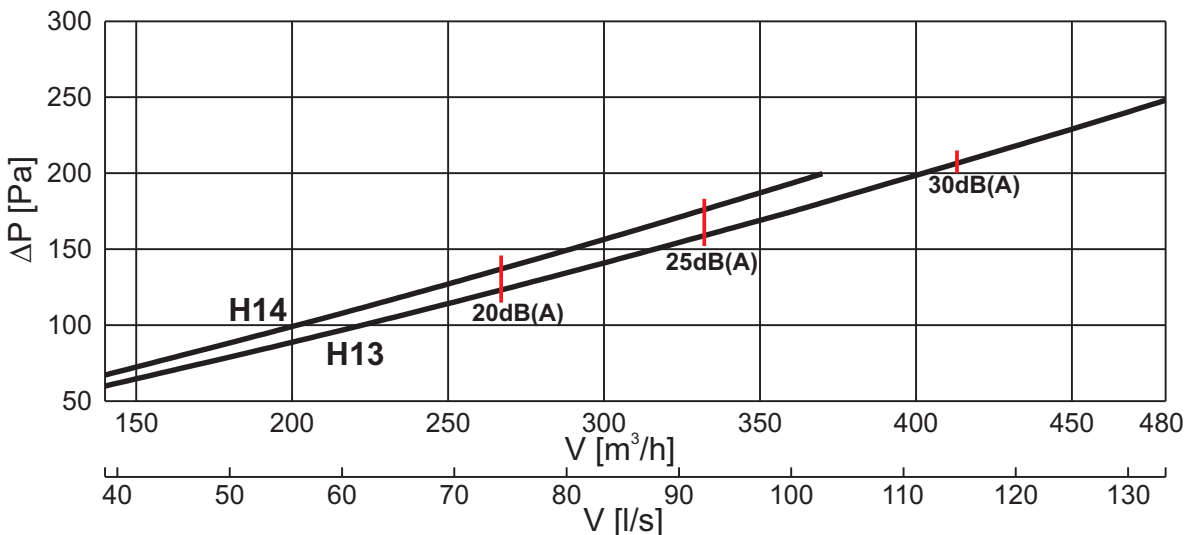


Airflow, pressure drop, sound levels

SPNH, SPNV 18-30



SPNH, SPNV 25-45

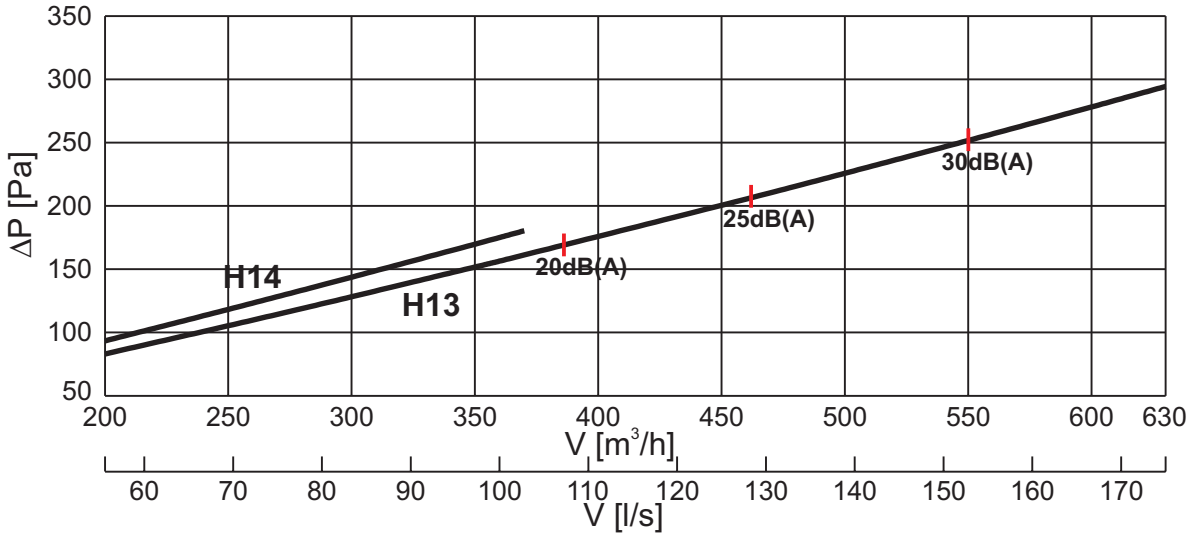


Pressure drop for a complete SPNH, SPNV terminal with an original filter of class H13 and H14 with height $H = 69\text{mm}$.

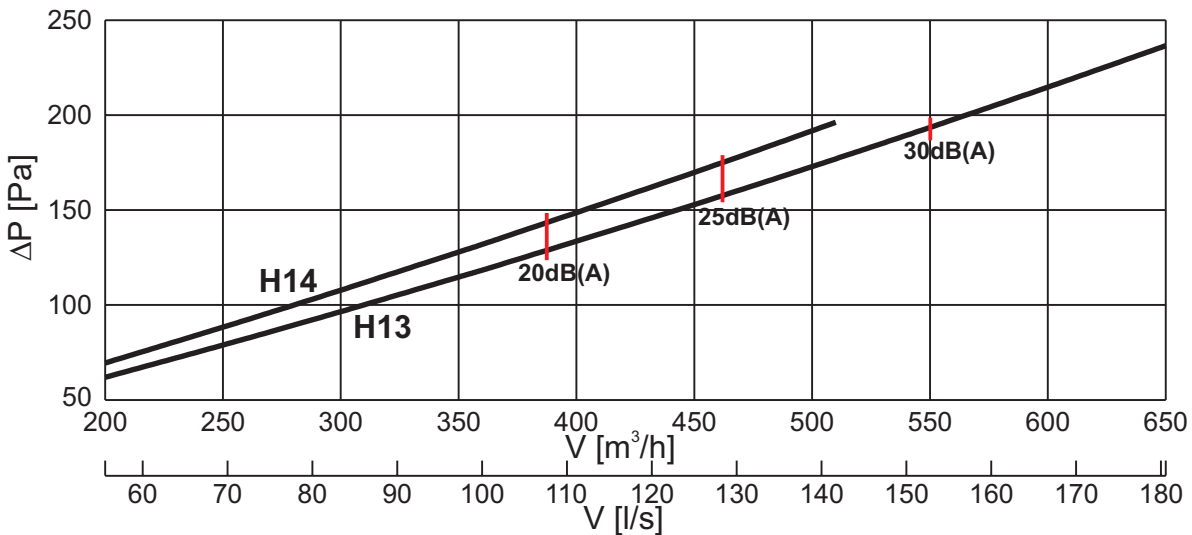
In the above graphs the sound levels in dB(A) are indicated for a reference room with 10 m^2 room absorption, equivalent to 4 dB room attenuation. $L_W = L_{A10} + K_{OK}$

Airflow, pressure drop, sound levels

SPNH, SPNV 31-45



SPNH, SPNV 31-53

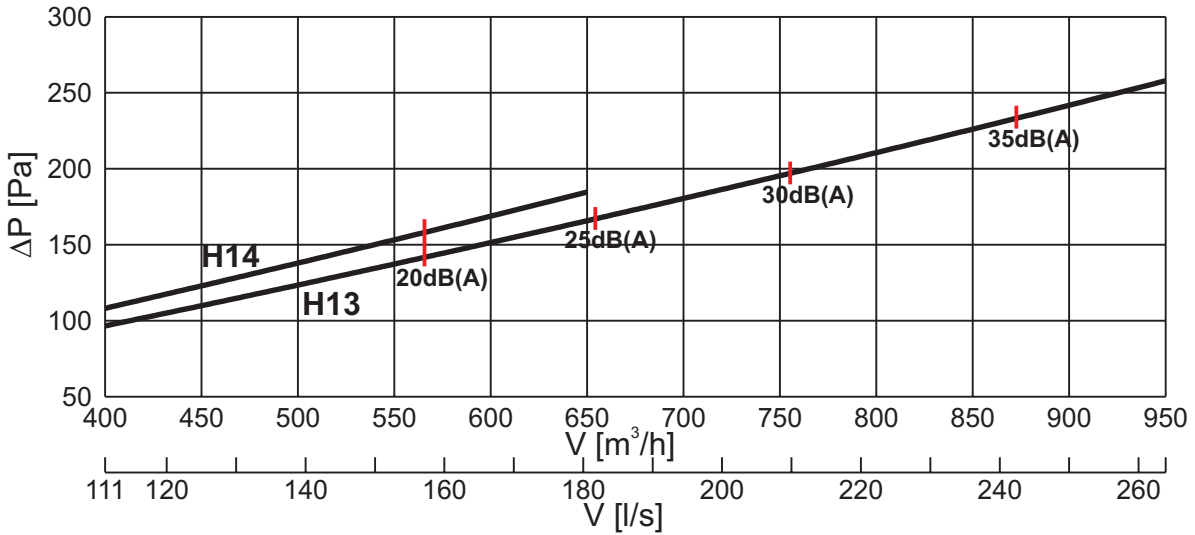


Pressure drop for a complete SPNH, SPNV terminal with an original filter of class H13 and H14 with height H = 69 mm.

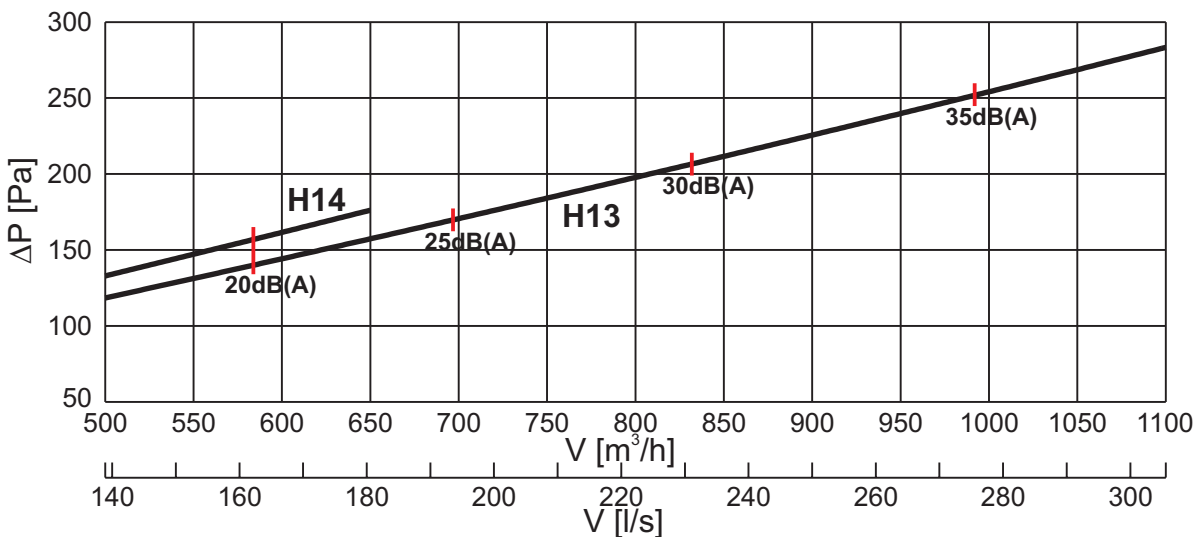
In the above graphs the sound levels in dB(A) are indicated for a reference room with 10 m² room absorption, equivalent to 4 dB room attenuation. $L_w = L_{A10} + K_{OK}$

Airflow, pressure drop, sound levels

SPNH, SPNV 35-61



SPNH, SPNV 40-61



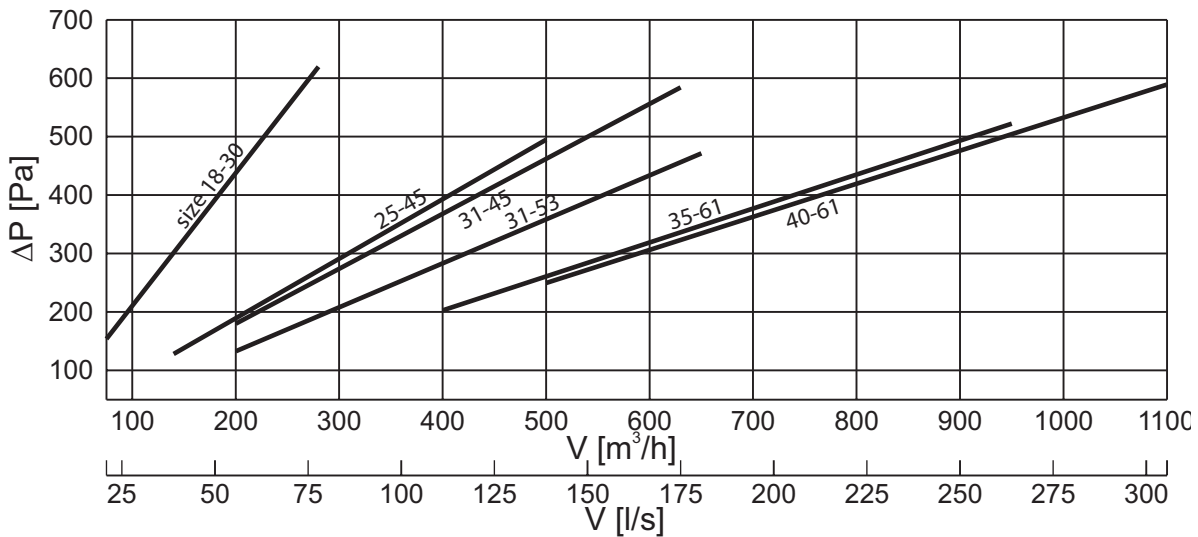
Pressure drop for a complete SPNH, SPNV terminal with an original filter of class H13 and H14 with height $H = 69$ mm.

In the above graphs the sound levels in dB(A) are indicated for a reference room with 10 m² room absorption, equivalent to 4 dB room attenuation. $L_w = L_{A10} + K_{OK}$

Final pressure drop

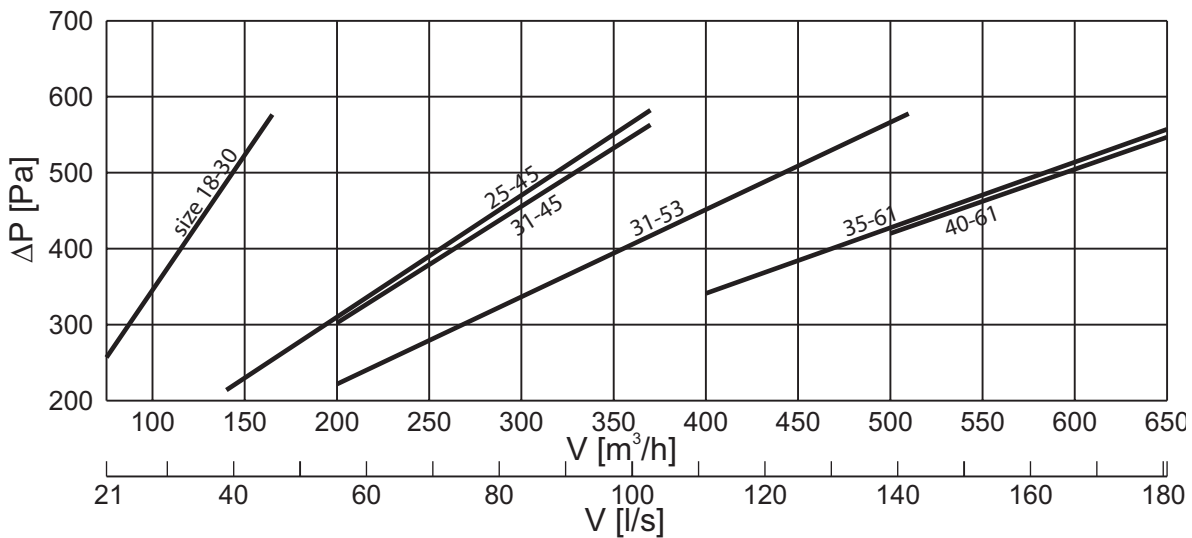
Final pressure drop for terminal with a HEPA filter of class H13

The final pressure drop for the terminal indicates when the filter requires replacement. Measurement is performed with the help of the measurement tube.



Final pressure drop for terminal with a HEPA filter of class H14

The final pressure drop for the terminal indicates when the filter requires replacement. Measurement is performed with the help of the measurement tube.



Acoustical data and dimensions

The sound power levels for different octave bands are obtained by adding together the sound pressure level L_{A10} , dB(A), from the graphs, and the corrections K_{ok} for the octave bands in the table with the help of the following formula:

$$L_W = L_{A10} + K_{ok}$$

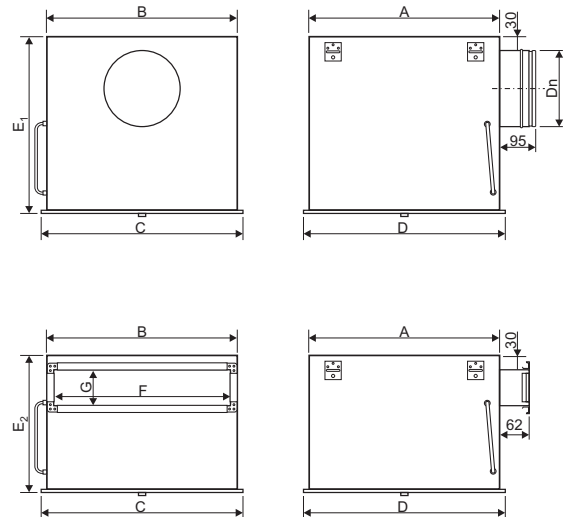
Correction K_{ok}

Size	Correction K_{ok} in dB for octave bands, mean frequency, Hz							
	63	125	250	500	1000	2000	4000	8000
18-30	14	11	7	2	-3	-10	-16	-23
25-45	12	11	9	1	-4	-9	-17	-24
31-45	15	14	7	0	-3	-9	-15	-25
31-53	15	14	7	0	-3	-9	-15	-25
35-61	13	12	6	1	-2	-8	-17	-24
40-61	16	15	6	0	-4	-8	-15	-25

Definitions

q	air flow	$l/s, m^3/h$
Δp	pressure drop	Pa
Δp_{max}	final pressure drop (indicates filter replacement)	Pa
L_{02}	throw	m
L_{A10}	sound pressure level with a room attenuation of 4 dB (10 m ² room absorption area)	dB(A)
L_W	sound power level	dB
K_{ok}	octave band correction	dB

Terminal dimensions



Size	A	B	C	D	E ₁	E ₂	F	G	Dn
18-30	334	334	384	384	405	330	300	80	160
25-45	486	486	536	536	445	330	450	80	200
31-45	486	486	536	536	445	330	450	80	200
31-53	556	556	606	606	497	330	520	80	250
35-61	640	640	690	690	497	330	600	80	250
40-61	640	640	690	690	497	330	600	80	250

All dimensions are indicated in mm.

Filter dimensions

Size	length x width (mm)	H (mm)
18-30	305 x 305	69
25-45	457 x 457	69
31-45	457 x 457	69
31-53	535 x 535	69
35-61	610 x 610	69
40-61	610 x 610	69

Descriptive text, product code

Descriptive text

Supply air terminal SPNH, SPNV for clean rooms for ceiling installation with a HEPA filter of class H13 or H14 and with circular/rectangular duct connection manufactured by Fläkt Woods.

Product code

Supply air terminal **SPNH-aa-bb-c-dd-e**

(spigot at the side)

Diffuser size - Filter size
(18-30, 25-45, 31-45,
31-53, 35-61, 40-61)

Duct connection shape

1 = round

2 = rectangular

Filter class

13 = H13

14 = H14

Colour

1 = standard RAL 9010

X = any other colour from RAL palette

Supply air terminal **SPNV-aa-bb-c-dd-e**

(spigot on the top)

Diffuser size - Filter size
(18-30, 25-45, 31-45,
31-53, 35-61, 40-61)

Duct connection shape

1 = round

2 = rectangular

Filter class

13 = H13

14 = H14

Colour

1 = standard RAL 9010

X = any other colour from RAL palette