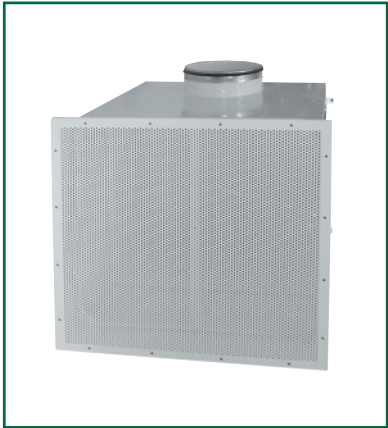


SPW Exhaust air device for clean rooms



Exhaust air device SPW for clean rooms is intended for ceiling or wall installation in premises where the requirements for very clean air are high, for example clean rooms, pharmaceutical industries, etc. The device includes a HEPA filter of class H13 according to EN1822-1, which ensures a very high degree of filtration. The device can be supplied with a HEPA filter of class H14 on request.

Integral measurement sockets in the device 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.

SPW is made from painted steel sheet, and its construction makes filter replacement rapid and easy.

Quick-selection

Size	Air flow l/s (m3/h) at sound level				Max air flow for SPN,	
	20 dB	25 dB	30 dB		l/s	m³/h
SPW-1	106	130	(468)	155	181	650
SPW-2	139	185	(666)	230	333	1200

Product facts

Exhaust air device SPW

Intended for ceiling or wall installation

Has an integrated connection box

Equipped as standard with a HEPA filter of class H13

Two sizes with a broad air flow range

Available with both circular and rectangular connections

Product code example:

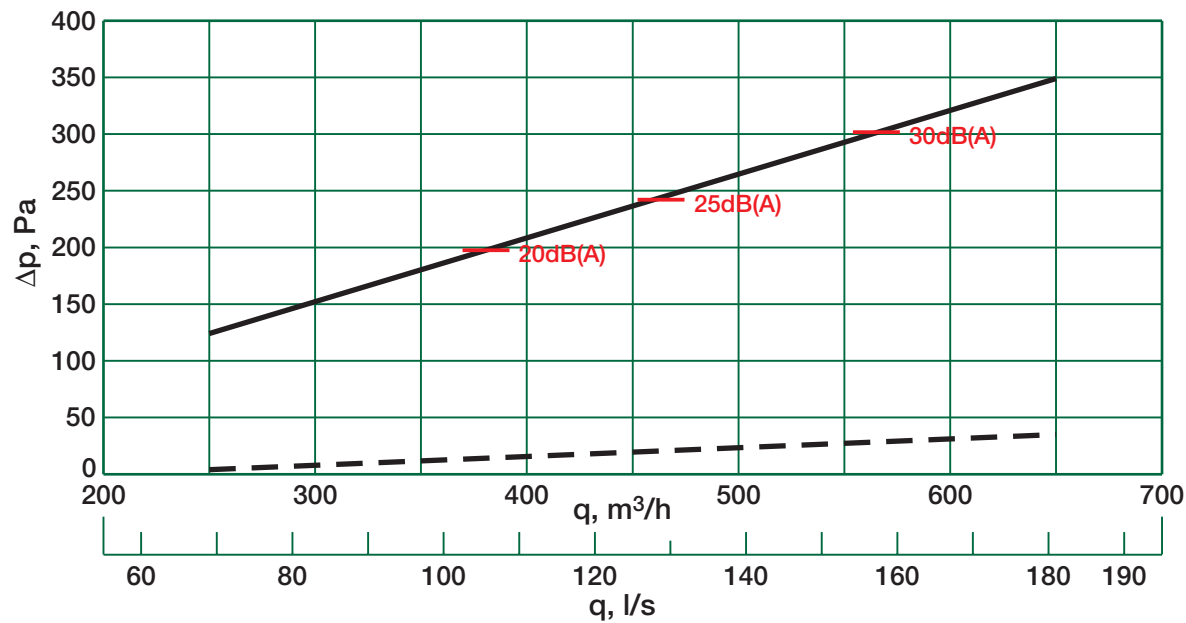
Exhaust air device SPW-250-1-1-13-1-1-1.

Device of size 250 with circular rubber-sealed connection with a HEPA filter of class H13, filter height 150 mm. The device has a measurement socket on the inside (standard).

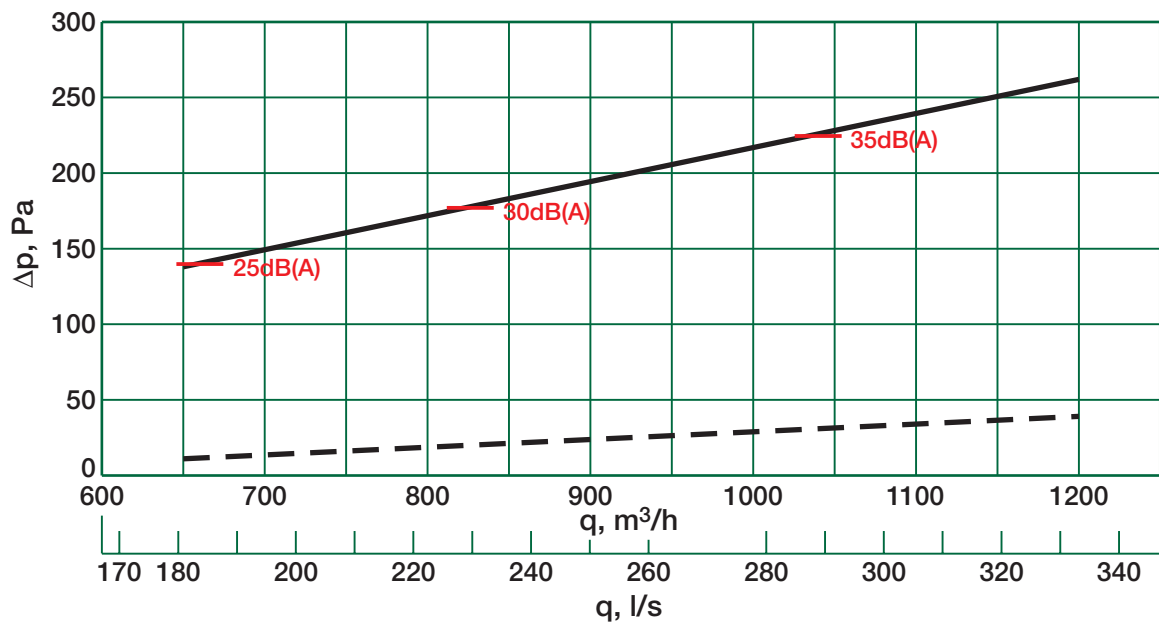
The diffuser is painted in colour RAL 9010.

Air flow, pressure drop, sound levels

SPW-1



SPW-2



- Pressure drop for a complete SPW device with an original filter of class H13 with height $H = 150$ mm.
- - - Pressure drop for an SPW device without filter insert.

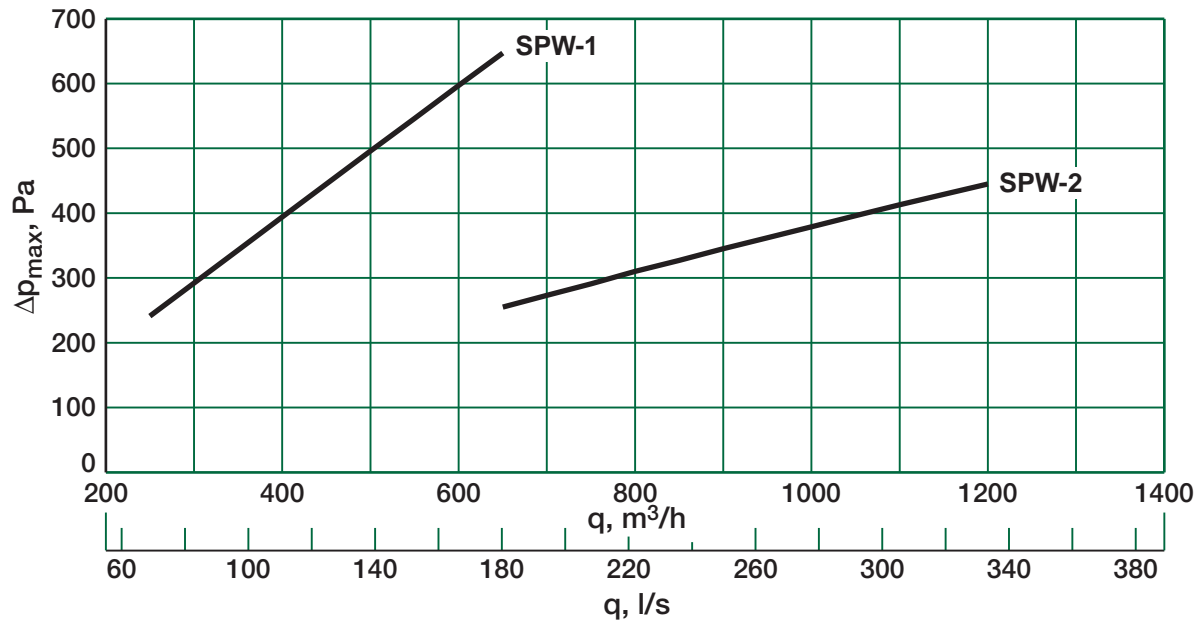
The total pressure drop with different filters installed is calculated by adding the pressure indicated by the broken line to the actual pressure drop for the filter concerned.

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. $L_W = L_{A10} + K_{OK}$

Air flow, final pressure drop, sound data

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

The final pressure drop for the device indicates when the filter requires replacement. Measurement is performed with the help of the measurement socket marked in red in the device.



Sound power level L_W , dB per octave band

Size SPW	Air flow		Sound power level L_W in octave bands						
	l/s	m^3/h	125	250	500	1000	2000	4000	
1	111.1	400	38	27	21	17	13	–	
	166.7	600	43	36	33	30	23	16	
	180.6	650	46	37	34	33	28	20	
2	166.7	600	39	31	19	13	13	–	
	250.0	900	50	40	30	24	21	12	
	333.3	1200	52	47	36	30	28	21	

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:

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

Definitions

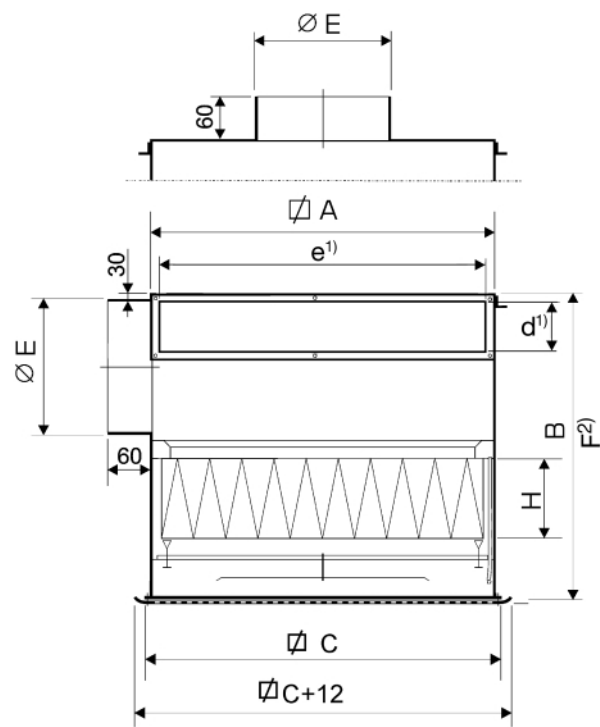
q	air flow	$\text{l/s}, \text{m}^3/\text{h}$
Δp	pressure drop	Pa
Δp_{\max}	final pressure drop (indicates filter replacement)	Pa
L_{A10}	sound pressure level with a room attenuation of 4 dB (10 m^2 room absorption area)	dB(A)
L_W	sound power level	dB
K_{ok}	octave band correction	dB

Correction K_{OK}

Size SPW	Correction K_{ok} in dB for octave bands, mean frequency, Hz							
	63	125	250	500	1000	2000	4000	8000
1	14	13	4	0	-2	-7	-14	-23
2	17	16	9	-3	-9	-11	-19	-23

Structure and dimensions, descriptive text, product code

Structure and dimensions



Device dimensions

Size	A	B	C	E	d ¹⁾	e ¹⁾	F ²⁾	kg
1	485	530	526	199	80	460	380	20.4
2	639	580	680	249	80	615	380	30.0

¹⁾ Connection dimensions for rectangular duct connection with flange.
²⁾ Applies for reduced height of the filter, H = 90 mm
All dimensions are indicated in mm.

Filter dimensions

Size	length x width H	H
1	457 x 457	150
2	610 x 610	150

Descriptive text

Supply air device SPW for clean rooms for ceiling/wall installation with a HEPA filter of class H13 and with circular/rectangular duct connection manufactured by Fläkt Woods.

Product code

Supply air terminalSPW-aaa-b-c-d-ee-f-g-h

Size250, 315, 355, 400

Duct connection shape1 = round2 = rectangular

Duct connection type0 = without rubber seal1 = with rubber seal

Connection duct position1 = on the side2 = at the top

Filter class13 = H1314 = H14

Sealing1 = rubber seal2 = gel seal

Measurement joint1 = inside the box2 = outside the box

Colour1 = standard colour 9010 (if any other colour is wanted this is indicated with X in the code and the proper RAL-code)