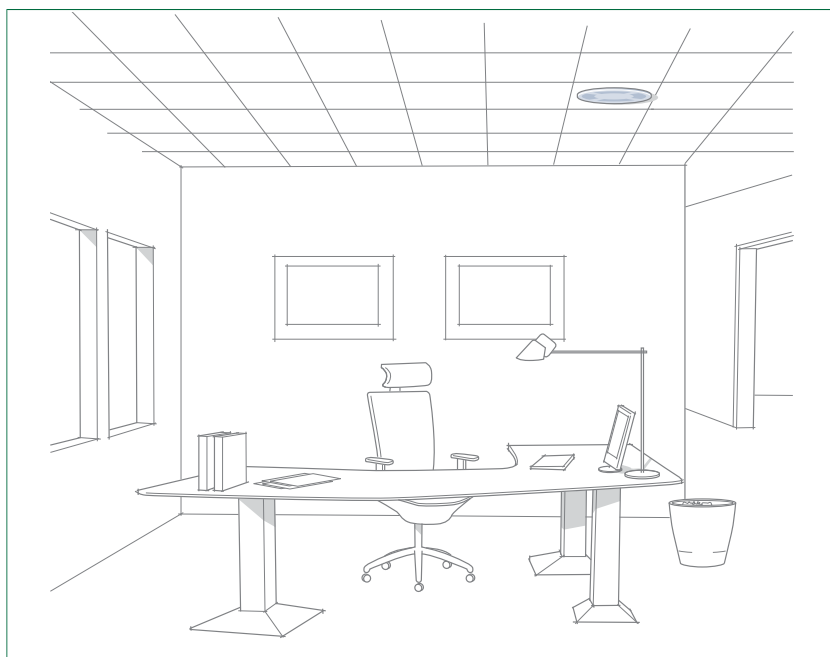


Supply air diffusers RPPH and ROPH / Supply air units RPPA/ROPA (=RPPH/ROPH+ATTD)



The RPPA and ROPA are quiet, ceiling-mounted supply air units that consist of a supply air diffuser, RPPH or ROPH, and a plenum box, ATTD. The diffuser RPPH, with a perforated diffuser plate, comes with the supply air unit RPPA. The diffuser ROPH, with an unperforated diffuser plate, comes with the supply air unit ROPA. The slot height of the diffuser can be set at 25 or 40 mm. Fixed to the diffuser body with magnets, the diffuser plate is easy to open. The RPPH and ROPH supply air diffusers are also available without the plenum box. The RPPH and ROPH diffusers can also be used for exhaust air.

Quick Selection

RPPA, ROPA with 25 mm slot, 1:3 plenum box ATTD (50 Pa)

Supply air unit	Diffuser	Connection ATTD		Air flow l/s at sound level		
		inlet mm	outlet mm	25 dB(A)	30 dB(A)	35 dB(A)
R(P)OPA-	R(P)PH-					
100-3	160	100	160	23	-	-
125-3	200	125	200	46	-	-
160-3	250	160	250	50	87	-
200-3	315	200	315	86	124	-
250-3	400	250	400	91	123	161

RPPA, ROPA with 25 mm slot, 1:2 plenum box ATTD (50 Pa)

Supply air unit	Diffuser	Connection ATTD		Air flow l/s at sound level		
		inlet mm	outlet mm	25 dB(A)	30 dB(A)	35 dB(A)
R(P)OPA-	R(P)PH-					
100-2	125	100	125	29	-	-
125-2	160	125	160	52	-	-
160-2	200	160	200	42	57	77
200-2	250	200	250	71	98	120
250-2	315	250	315	90	117	145
315-2	400	315	400	112	136	163

- = outside working area

Specifications

- Easy to install and adjust
- Low sound level
- Adjustable air slot 25 or 40 mm
- Can also be used as exhaust air diffusers
- 6 connection sizes and 2 diffuser sizes (Ø363 or Ø563)
- All connection sizes are suitable for suspended ceiling systems (595x595), false ceiling plate available for all sizes
- Available with CleanVent coating
- Silent plenum box ATTD with air flow control
- Also available with the extremely compact plenum box ATTS

Product code example

Bundle code:

Supply air unit RPPA-200-3

Ordering codes:

Supply air diffuser RPPH-315

Plenum box ATTD-200-315-1

Air flow, throw, pressure drop, sound level - SUPPLY AIR

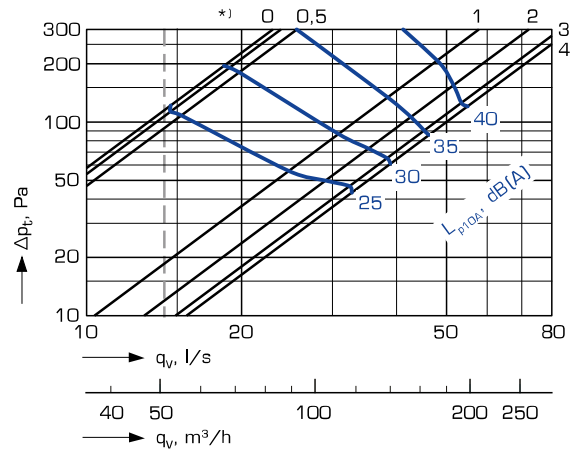
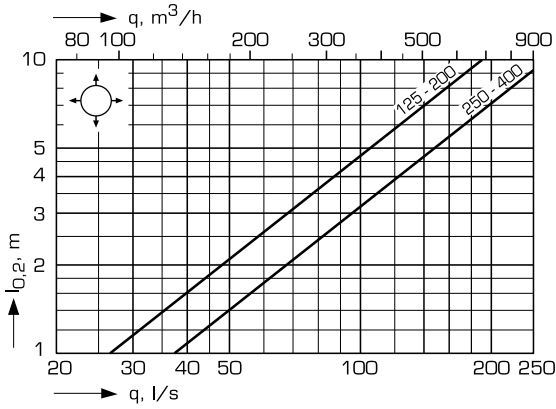
Supply air unit RPPA, ROPA with 25 mm slot, 4-way diffusion

Throw (isothermal)

Sizes in the diagram below refer to air diffuser connection in mm.

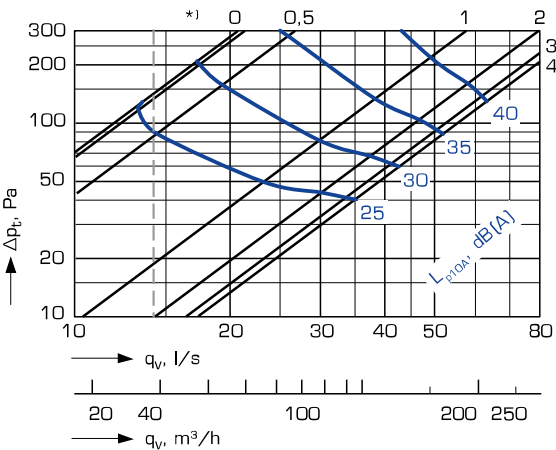
R(P,O)PA-100-2 - with 25 mm slot

[R(P,O)PH-125 + ATTD-100-125-1]



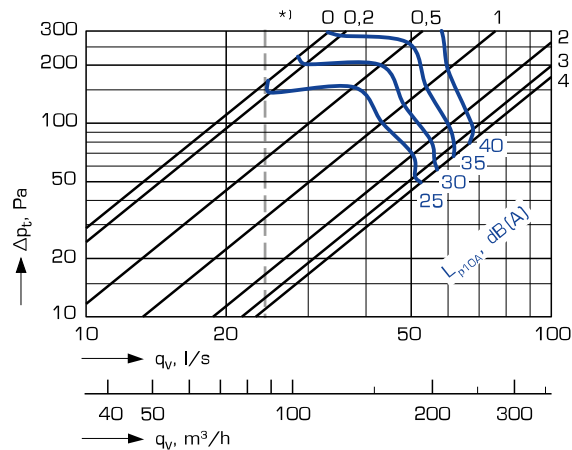
R(P,O)PA-100-3 - with 25 mm slot

[R(P,O)PH-160 + ATTD-100-160-1]



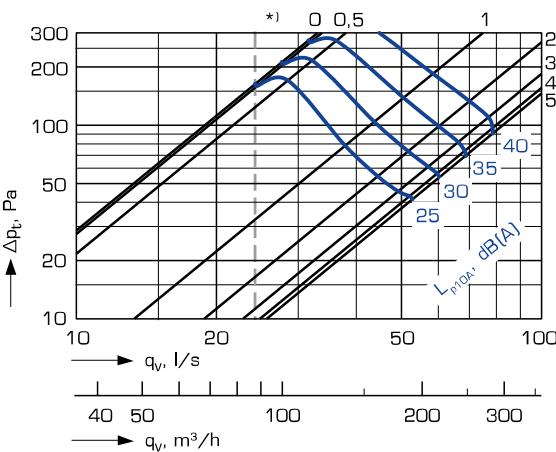
R(P,O)PA-125-2 - with 25 mm slot

[R(P,O)PH-160 + ATTD-125-160-1]



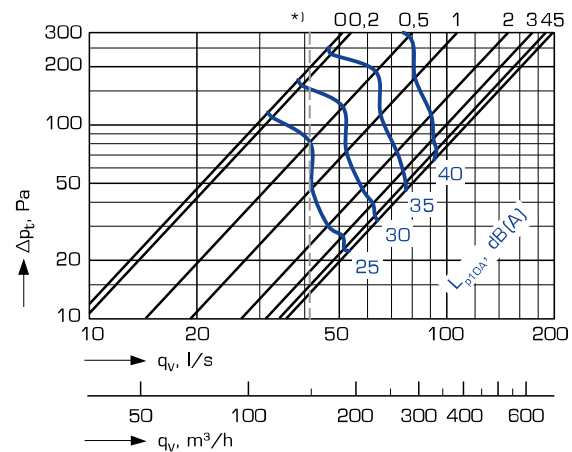
R(P,O)PA-125-3 - with 25 mm slot

[R(P,O)PH-200 + ATTD-125-200-1]



R(P,O)PA-160-2 - with 25 mm slot

[R(P,O)PH-200 + ATTD-160-200-1]



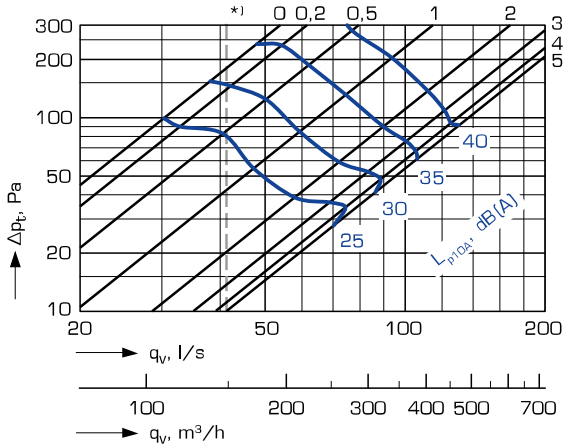
*) adjustment position

--- Min. airflow required to obtain sufficient measuring pressure.

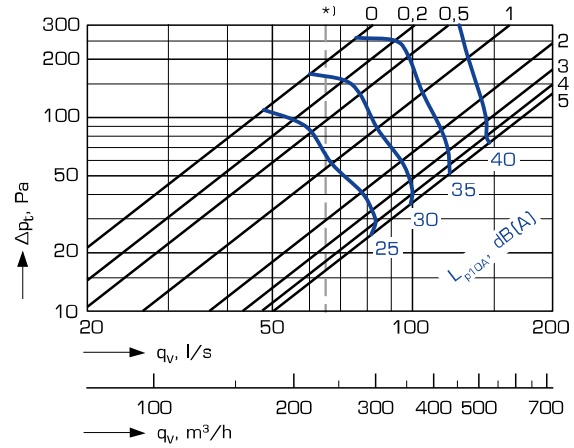
Air flow, pressure drop, sound level - SUPPLY AIR

Supply air unit RPPA, ROPA with 25 mm slot, 4-way diffusion

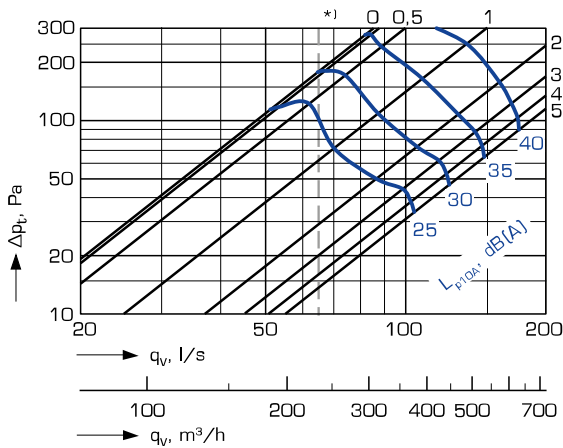
R(P,O)PA-160-3 - with 25 mm slot
[R(P,O)PH-250 + ATTD-160-250-1]



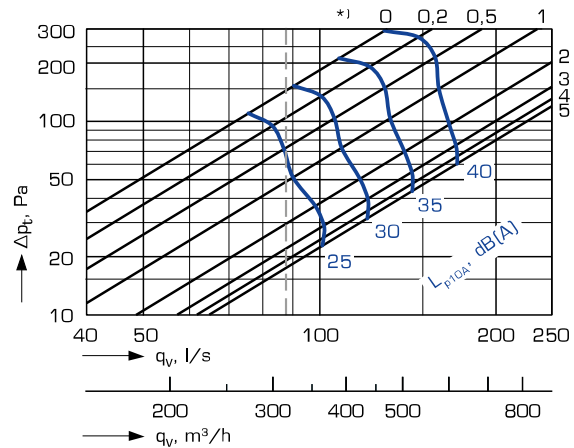
R(P,O)PA-200-2 - with 25 mm slot
[R(P,O)PH-250 + ATTD-200-250-1]



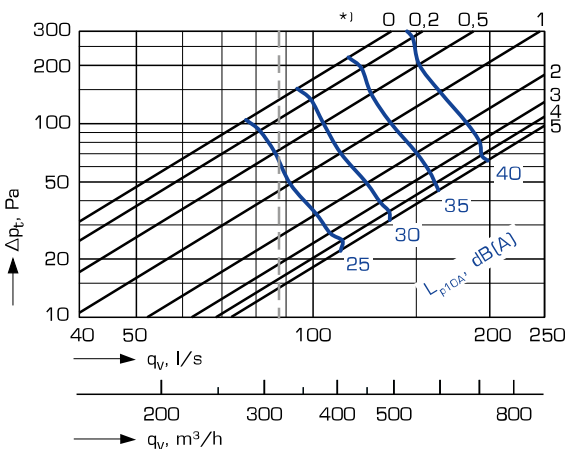
R(P,O)PA-200-3 - with 25 mm slot
[R(P,O)PH-315 + ATTD-200-315-1]



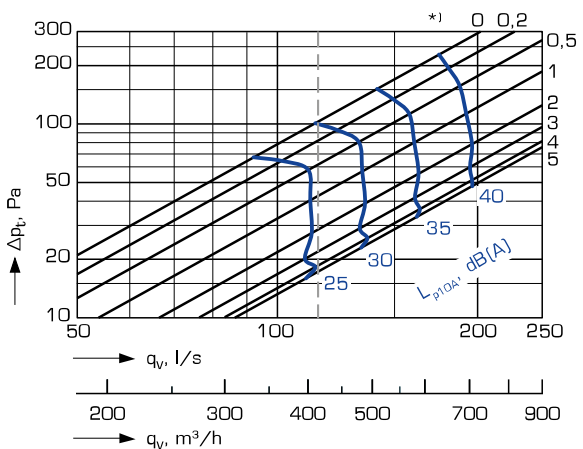
R(P,O)PA-250-2 - with 25 mm slot
[R(P,O)PH-315 + ATTD-250-315-1]



R(P,O)PA-250-3 - with 25 mm slot
[R(P,O)PH-400 + ATTD-250-400-1]



R(P,O)PA-315-2 - with 25 mm slot
[R(P,O)PH-400 + ATTD-315-400-1]



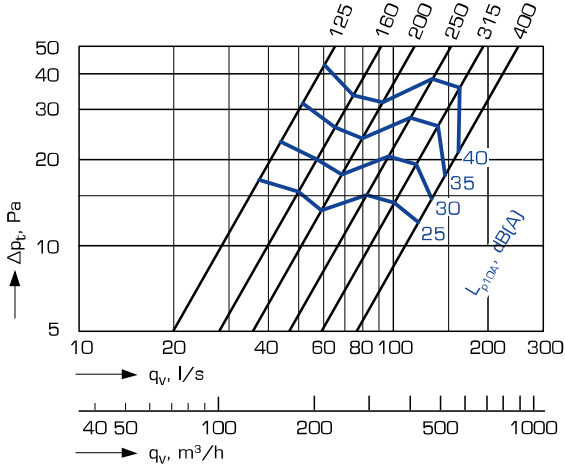
*) adjustment position

--- Min. airflow required to obtain sufficient measuring pressure.

Air flow, pressure drop, sound level - SUPPLY AIR

Supply air diffuser RPPH, ROPH with 25 mm slot, 4-way diffusion

Supply air diffuser RPPH, ROPH with 25 mm slot
4-way diffusion



Effect of the plenum box's lower profile on sound level (ATTD-aaa-bbb-3)

Size (duct connection)	Sound pressure level L_{p10A}
100-315	+5 dB(A)

Sound power level L_w - SUPPLY AIR

Supply air unit ROPA, RPPA with 25 mm slot, 1:3 plenum box

R(P,O)PA-	Correction of sound level K (dB)							
	63	125	250	500	1000	2000	4000	8000
100-3	13	8	8	-2	-5	-6	-8	-8
125-3	11	8	8	0	-3	-6	-12	-11
160-3	14	9	9	-2	-4	-8	-10	-9
200-3	14	7	7	0	-2	-8	-10	-7
250-3	11	9	9	-1	-4	-9	-12	-10
Tolerance ±	6	3	2	2	2	2	2	3

Supply air unit ROPA, RPPA with 25 mm slot, 1:2 plenum box

R(P,O)PA-	Correction of sound level K (dB)							
	63	125	250	500	1000	2000	4000	8000
100-2	12	8	8	1	-4	-7	-8	-8
125-2	12	6	6	0	-2	-5	-8	-8
160-2	14	9	9	-1	-5	-8	-10	-9
200-2	10	9	9	0	-3	-10	-12	-10
250-2	12	8	8	1	-2	-9	-13	-10
315-2	14	9	9	0	-4	-11	-14	-12
Tolerance ±	6	3	2	2	2	2	2	3

Supply air diffuser ROPH, RPPH with 25 mm slot

R(P,O)PH-	Correction of sound level K (dB)							
	63	125	250	500	1000	2000	4000	8000
125	9	5	0	-1	1	-4	-11	-10
160	10	4	1	-1	1	-5	-14	-12
200	17	6	7	0	-2	-6	-14	-11
250	7	3	0	-1	2	-7	-14	-11
315	11	9	5	1	0	-8	-14	-11
400	7	12	11	-1	-10	-19	-20	-14
Tolerance ±	6	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 correction K_{oct} presented in the table according to the following formula:

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

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

Sound attenuation ΔL - SUPPLY AIR

Supply air unit ROPA, RPPA with 25 mm slot, 1:3 plenum box

R(P,O)PA-	Sound attenuation (dB)							
	63	125	250	500	1000	2000	4000	8000
100-3	23	9	10	17	20	14	13	16
125-3	22	12	7	15	7	11	11	14
160-3	18	10	12	16	11	11	11	13
200-3	14	5	11	14	12	9	10	14
250-3	11	7	10	13	11	9	10	12
Tolerance ±	6	3	2	2	2	2	2	3

Supply air unit ROPA, RPPA with 25 mm slot, 1:2 plenum box

R(P,O)PA-	Sound attenuation (dB)							
	63	125	250	500	1000	2000	4000	8000
100-2	24	16	12	17	20	17	15	18
125-2	21	10	9	20	11	14	14	16
160-2	17	12	11	15	12	9	11	15
200-2	15	9	11	12	12	13	12	16
250-2	10	8	11	12	12	10	11	13
315-2	9	8	10	10	10	9	10	12
Tolerance ±	6	3	2	2	2	2	2	3

Supply air diffuser ROPH, RPPH with 25 mm slot

R(P,O)PH-	Sound attenuation (dB)							
	63	125	250	500	1000	2000	4000	8000
125	20	12	8	5	2	1	3	5
160	18	12	8	6	3	2	4	5
200	16	10	6	5	3	1	3	6
250	16	10	8	6	3	3	4	6
315	13	8	6	5	3	4	4	6
400	12	9	8	6	6	4	4	6
Tolerance ±	6	3	2	2	2	2	2	3

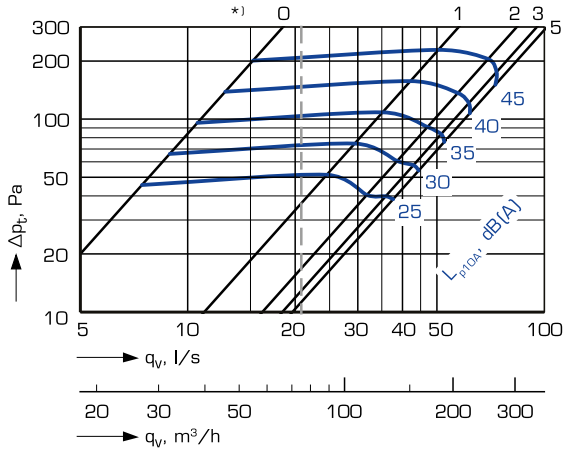
The average sound attenuation ΔL from duct to room including the orifice attenuation of the connecting duct in ceiling installation, is obtained in the table above.

More technical data can be found in our selection tool. Contact our nearest sales office for further information.

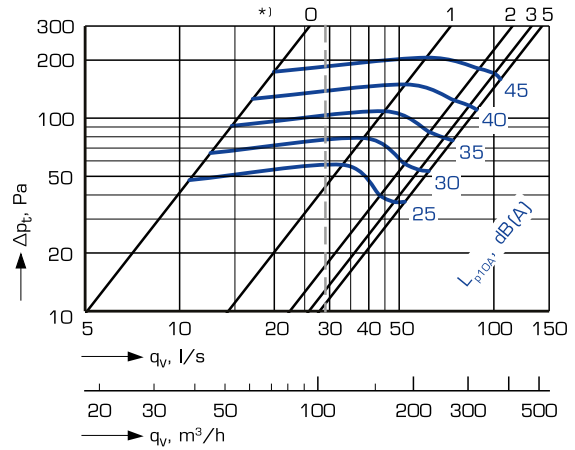
Air flow, pressure drop, sound level - EXHAUST AIR

Exhaust air unit ROPA, RPPA with 25 mm slot

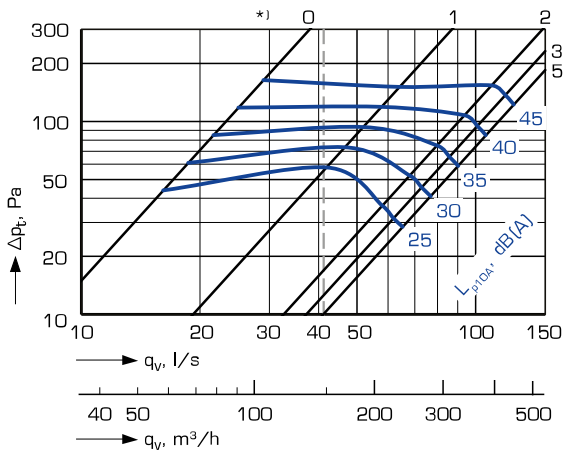
R(P,O)PA-100-2 - with 25 mm slot
[R(P,O)PH-125 + ATTD-100-125-1]



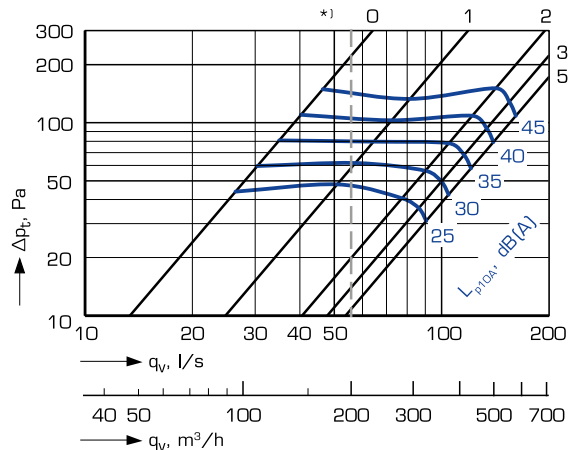
R(P,O)PA-125-2 - with 25 mm slot
[R(P,O)PH-160 + ATTD-125-160-1]



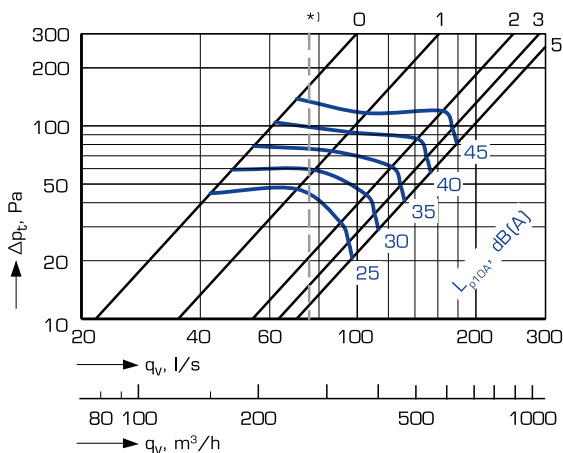
R(P,O)PA-160-2 - with 25 mm slot
[R(P,O)PH-200 + ATTD-160-200-1]



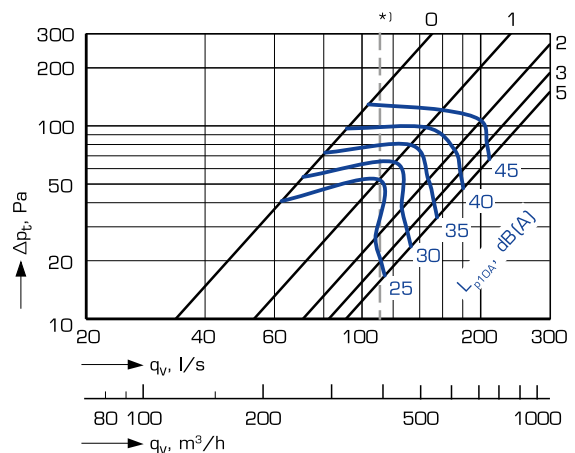
R(P,O)PA-200-2 - with 25 mm slot
[R(P,O)PH-250 + ATTD-200-250-1]



R(P,O)PA-250-2 - with 25 mm slot
[R(P,O)PH-315 + ATTD-250-315-1]



R(P,O)PA-315-2 - with 25 mm slot
[R(P,O)PH-400 + ATTD-315-400-1]



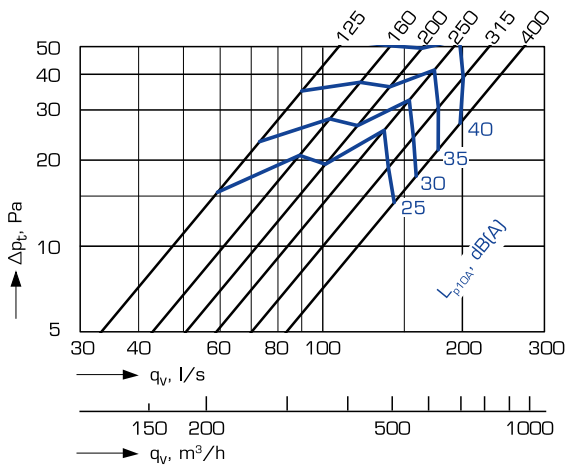
*) adjustment position

- - - - Min. airflow required to obtain sufficient measuring pressure.

Air flow, pressure drop, sound level - EXHAUST AIR

Exhaust air diffuser ROPH, RPPH with 25 mm slot

Exhaust air diffuser ROPH, RPPH with 25 mm slot



Sound power level L_w - EXHAUST AIR

Exhaust air unit ROPA, RPPA with 25 mm slot, 1:2 plenum box

R(P,O)PA-	Correction of sound level K (dB)							
	63	125	250	500	1000	2000	4000	8000
100-2	14	8	6	1	-2	-5	-12	-14
125-2	8	6	4	0	-2	-2	-11	-19
160-2	6	5	1	-2	-1	-1	-13	-20
200-2	7	4	0	-2	0	-1	-12	-20
250-2	7	3	-2	-2	0	-2	-14	-20
315-2	7	2	0	-1	0	-2	-15	-20
Tolerance ±	6	3	2	2	2	2	2	3

Sound attenuation ΔL - EXHAUST AIR

Exhaust air unit ROPA, RPPA with 25 mm slot, 1:2 plenum box

R(P,O)PA-	Sound attenuation (dB)							
	63	125	250	500	1000	2000	4000	8000
100-2	24	16	12	17	20	17	15	18
125-2	21	10	9	20	11	14	14	16
160-2	17	12	11	15	12	9	11	15
200-2	15	9	11	12	12	13	12	16
250-2	10	8	11	12	12	10	11	13
315-2	9	8	10	10	10	9	10	12
Tolerance ±	6	3	2	2	2	2	2	3

Exhaust air diffuser ROPH, RPPH with 25 mm slot

R(P,O)PH-	Correction of sound level K (dB)							
	63	125	250	500	1000	2000	4000	8000
125	20	9	4	0	-1	-7	-11	-10
160	9	1	-3	-3	0	-2	-11	-12
200	10	0	1	-2	0	-2	-11	-11
250	15	2	-5	2	1	-8	-14	-11
315	12	5	8	2	-2	-10	-14	-11
400	10	1	10	-1	-5	-9	-18	-13
Tolerance ±	6	3	2	2	2	2	2	3

Exhaust air diffuser ROPH, RPPH with 25 mm slot

R(P,O)PH-	Sound attenuation (dB)							
	63	125	250	500	1000	2000	4000	8000
125	20	12	8	5	2	1	3	5
160	18	12	8	6	3	2	4	5
200	16	10	6	5	3	1	3	6
250	16	10	8	6	3	3	4	6
315	13	8	6	5	3	4	4	6
400	12	9	8	6	6	4	4	6
Tolerance ±	6	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 correction K_{oct} presented in the table according to the following formula:

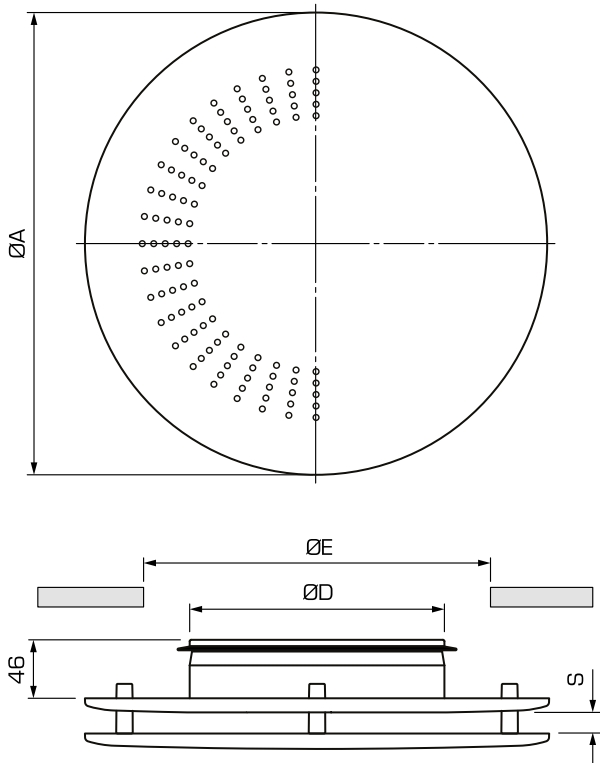
$$L_w = L_{p10A} + K_{oct}$$

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

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.

Dimensions and weights

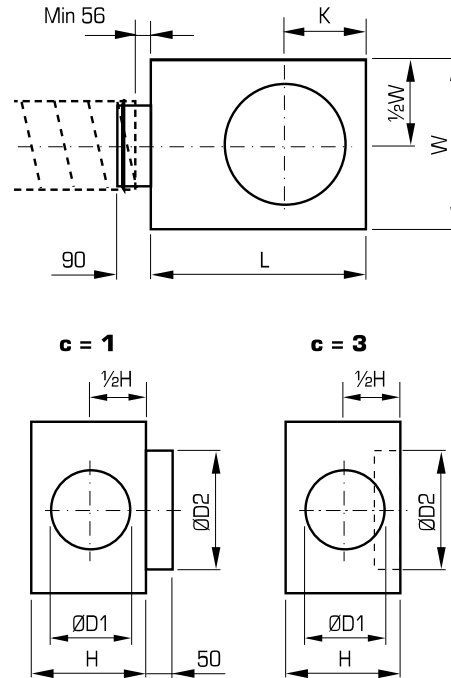
Supply air diffuser RPPH, ROPH



s = 25 or 40 mm

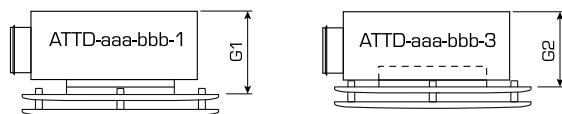
Size	ØA [mm]	ØD [mm]	ØE _{min} [mm]	ØE _{max} [mm]	Weight [kg]
125	363	124.3	145	300	1.4
160	363	159.3	180	300	1.4
200	363	199.3	220	300	1.4
250	563	249.3	270	500	3.1
315	563	314.3	335	500	3.0
400	563	393.3	420	500	2.8

Plenum box ATTD



Size	ØD1 [mm]	ØD2 [mm]	H [mm]	L [mm]	W [mm]	K [mm]	Weight [kg]
100-125	99.3	125	170	350	320	132	2.5
100-160	99.3	160	170	350	320	132	2.3
125-160	124.3	160	170	450	320	152	3.0
125-200	124.3	200	170	450	320	152	2.9
160-200	159.3	200	205	480	440	177	4.0
160-250	159.3	250	205	480	440	177	4.0
200-250	199.3	250	245	630	480	210	5.5
200-315	199.3	315	245	630	480	210	5.4
250-315	249.3	315	295	680	570	252	6.9
250-400	249.3	400	295	680	570	252	6.9
315-400	314.3	400	360	680	570	252	8.0

Supply air unit R(P,O)PA



R(P,O)PA	G1 min [mm]	G1 max [mm]	G2 min [mm]	G2 max [mm]	
100-2	100-3	220	250	170	200
125-2	125-3	220	250	170	200
160-2	160-3	255	285	205	235
200-2	200-3	295	325	245	275
250-2	250-3	345	375	295	325
315-2	-	410	440	360	390

Execution and function

The RPPA and ROPA are quiet, ceiling-mounted supply air units that consist of a supply air diffuser, RPPH or ROPH, and a plenum box, ATTD. The diffuser RPPH, with a perforated diffuser plate, comes with the supply air unit RPPA. The diffuser ROPH, with an unperforated diffuser plate, comes with the supply air unit ROPA. The slot height of the diffuser can be set at 25 or 40 mm. Fixed to the diffuser body with magnets, the diffuser plate is easy to open. The RPPH and ROPH supply air diffusers are also available without the plenum box. These supply air units are suitable for both suspended ceiling systems and false ceilings built on site. The diffusers can also be used for exhaust air.

The ATTD plenum box features an extremely quiet patented measurement and adjustment damper for multipoint measuring with balanced and accurate values. The adjustment handle of the measurement and adjustment damper has a position indicator and a locking device. The measurement and adjustment damper can be easily removed for inspection and cleaning without changing the setting or removing the sound attenuation elements. The sound attenuation elements (made of polyester fibre) are designed to direct the air flow in order to provide an air distribution that is as uniform as possible. The diffuser connection collar is either outwards or inwards in the plenum box – in the latter case, the plenum box needs less space. The ATTD plenum box is applicable for supply and exhaust air alike. In exhaust air use, the position of the measuring hose is changed to the measuring connector inside the box. The unit is also available with the extremely compact plenum box ATTS – please see the plenum box technical catalogues for more details.

General

Material and surface finish

Both the diffuser and the plenum box are made from steel sheet.

The diffuser is powder-coated for a high surface finish.

The standard colour is RAL 9010. Other diffuser colours and CleanVent coating are available on special order.

Installation, adjustment and maintenance

The instructions for installation, adjustment and maintenance are available at www.flaktgroup.com. The k-factors for supply air are also provided on the plenum box.

Technical data and design

For complete design details, please see the FläktGroup product selection program. The program can be found on the Internet at www.flaktgroup.com.

Product description

The RPPA/ROPA supply air unit by FläktGroup consists of a round supply air diffuser, RPPH/ROPH, and a plenum box, ATTD. The slot of the diffuser can be set at 25 or 40 mm. The diffuser plate, fixed to the diffuser body with magnets, is easy to open. The ATTD plenum box includes a quiet, easily removable measurement and adjustment damper (ZAEF). The effective sound attenuation elements of the ATTD box direct the air flow in order to provide an air distribution that is as uniform as possible.

Product code and accessories

Product code

Supply air diffuser	R(O,P)PH-aaa
Supply air diffuser, CleanVent	R(O,P)PH-aaa-C
Supply air diffuser, special colour	R(O,P)PH-aaa-E

Execution

O = unperforated air diffuser

P = perforated air diffuser

Size (aaa)

125, 160, 200, 250, 315, 400 (diffuser connection)

CleanVent coated (C)

Special colour (E)

Plenum box	ATTD-aaa-bbb-c
------------	----------------

Duct connection in mm (aaa)

Diffuser connection in mm (bbb)

Type (c)

1 = collar outwards

3 = low, collar inwards (only 1:2 model)

Bundle codes for example for design:

Supply air unit	R(O,P)PA-aaa-b
Supply air unit, CleanVent	R(O,P)PA-aaa-b-C

(includes diffuser and plenum box)

Execution

O = unperforated air diffuser

P = perforated air diffuser

Size (aaa)

100, 125, 160, 200, 250, 315 (duct connection)

Plenum box model (b)

2 = 1:2 collar outwards

3 = 1:3 collar outwards

4 = 1:2 low, collar inwards

CleanVent coated diffuser (C)

Accessories

Strip for setting the diffusion pattern (kit, 3 pieces)	RHSZ-03
---	---------

Length 3 x 370 mm

(Two size-adapted strips are always supplied with a diffuser.)

False ceiling plate	UTPZ-3
---------------------	--------

for sizes 125, 160 and 200

(body size of diffuser Ø363)

False ceiling plate	UTPZ-5
---------------------	--------

for sizes 250, 315 and 400

(body size of diffuser Ø563)

Order example

Bundle code is R(O,P)PA-200-3.

Size indication in the code refers to the size of the supply air duct.

Diffuser and plenum box are ordered separately:

Supply air diffuser	R(O,P)PH-315
Plenum box	ATTD-200-315-1

duct connection (200)

diffuser connection (315)

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