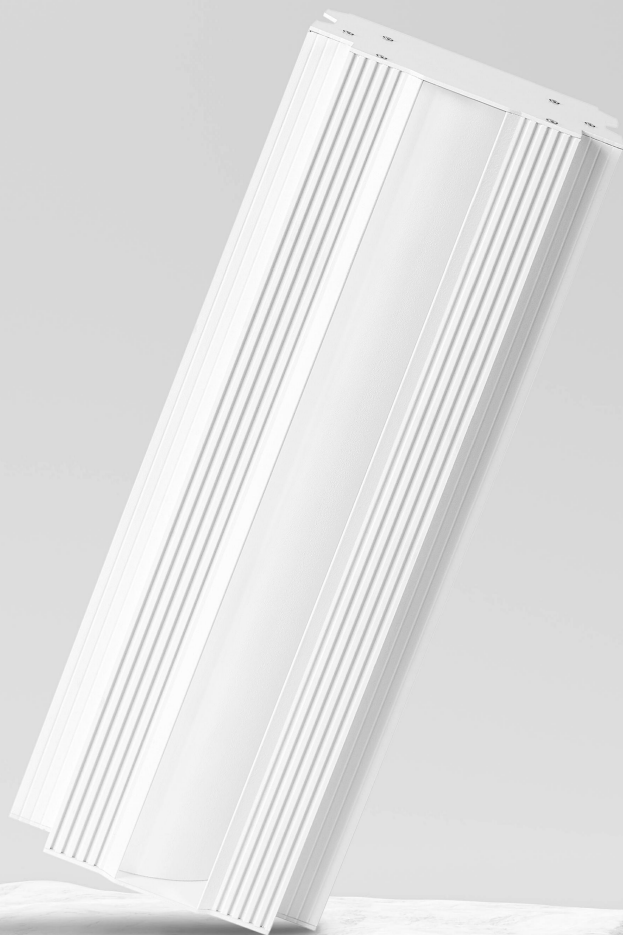


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BLANCPRO

Perfection of the white

Technical catalogue

Air flow direction with Coanda effect

Radius deflector shifted to the ceiling plane minimizes the “shadow effect” in the diffuser

Design elements are not visible at any angle

The patented frame profile provides maximum structural rigidity, mounting reliability and perfect modular system geometry for any diffuser length

Moscow

31 (building 2), Skolkovskoe highway

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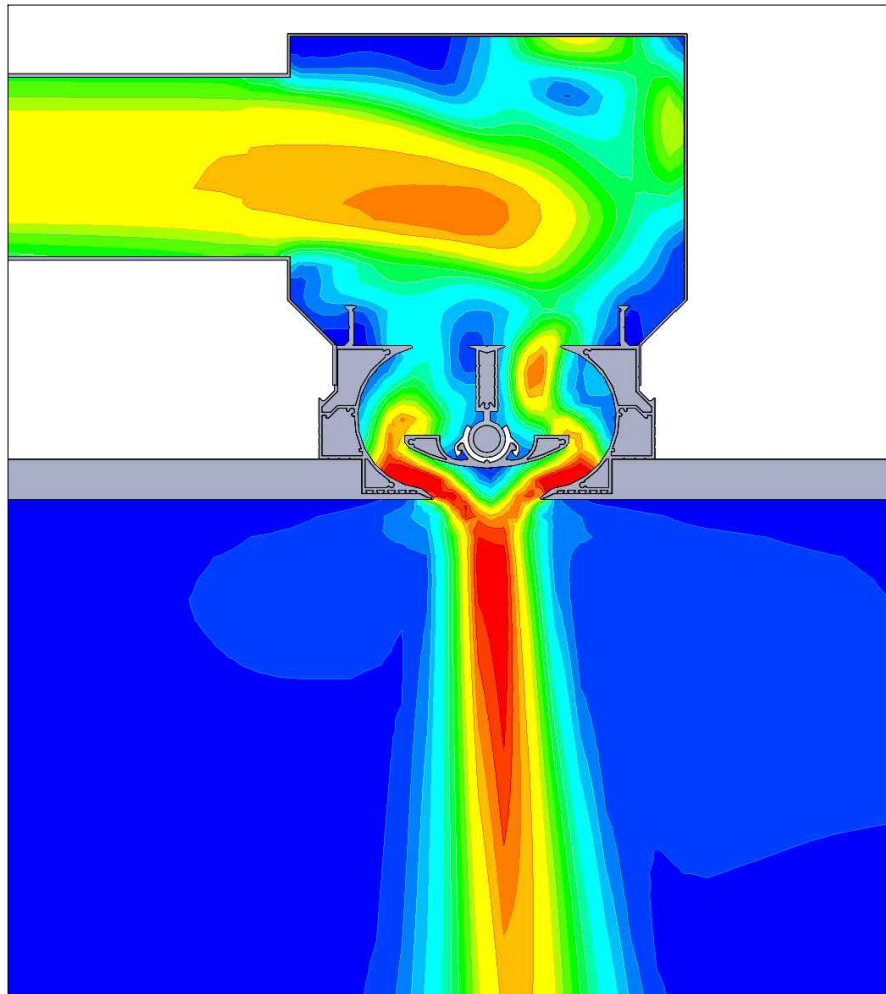
Patented

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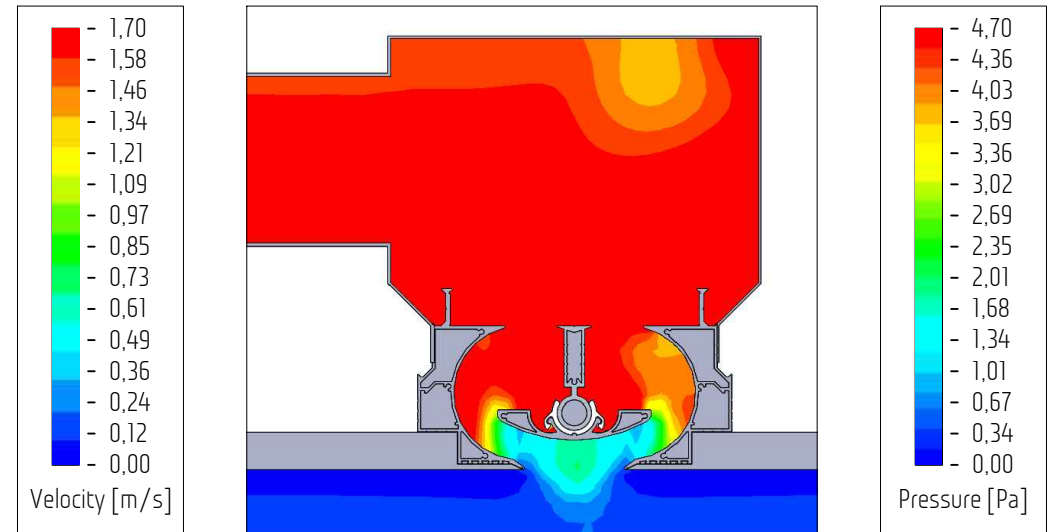
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Simulation of air flows for BLANCPRO diffuser 40 at the air flow rate of 144 (m³/h)/m/vertical air flow/

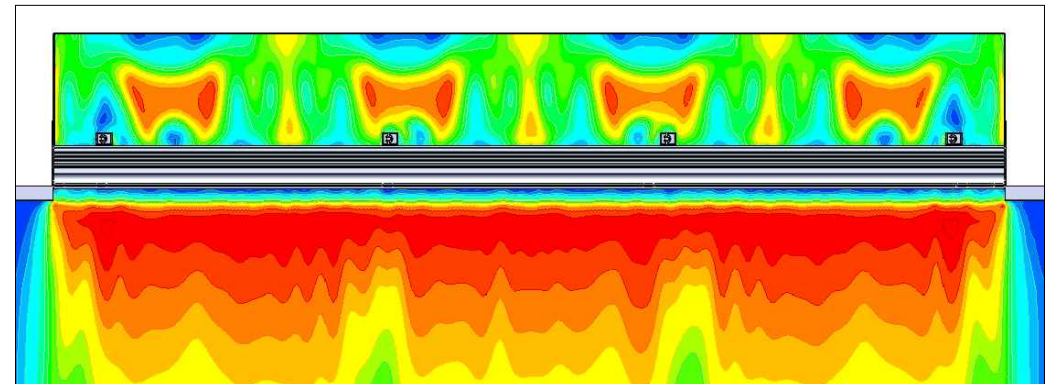
Air flow velocity profile in the diffuser cross section



Pressure drop profile in the diffuser cross section

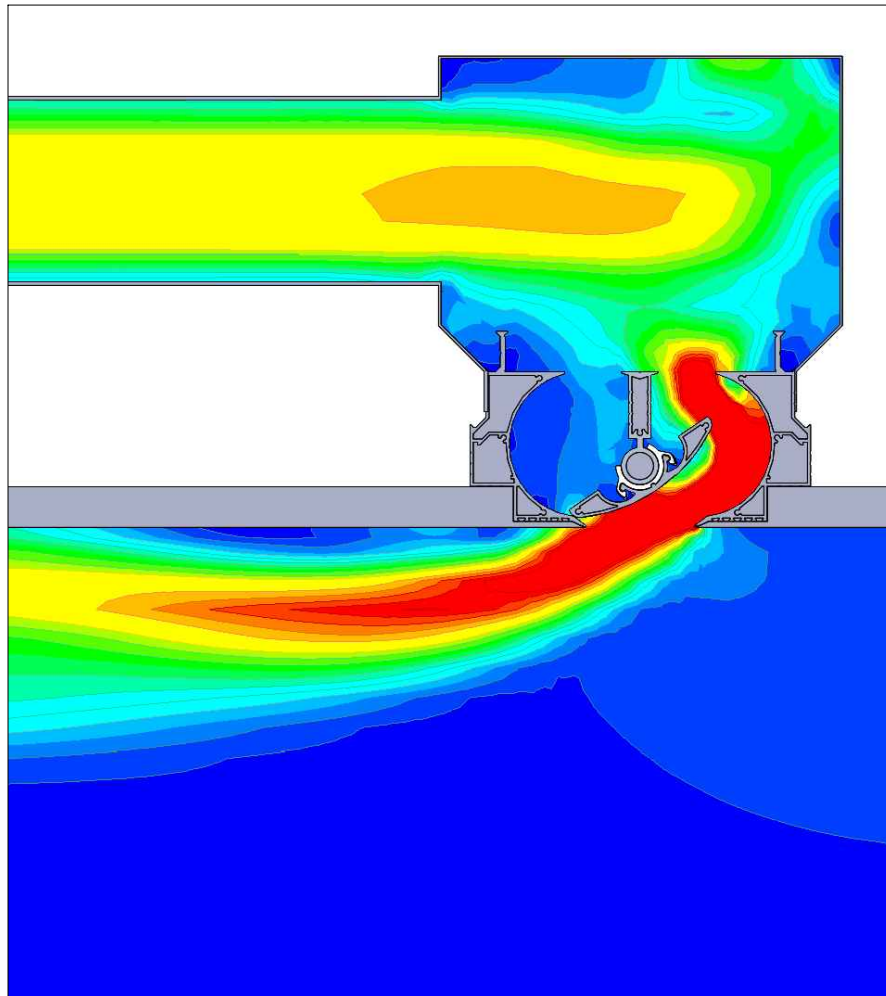


Air flow velocity profile in the diffuser longitudinal section

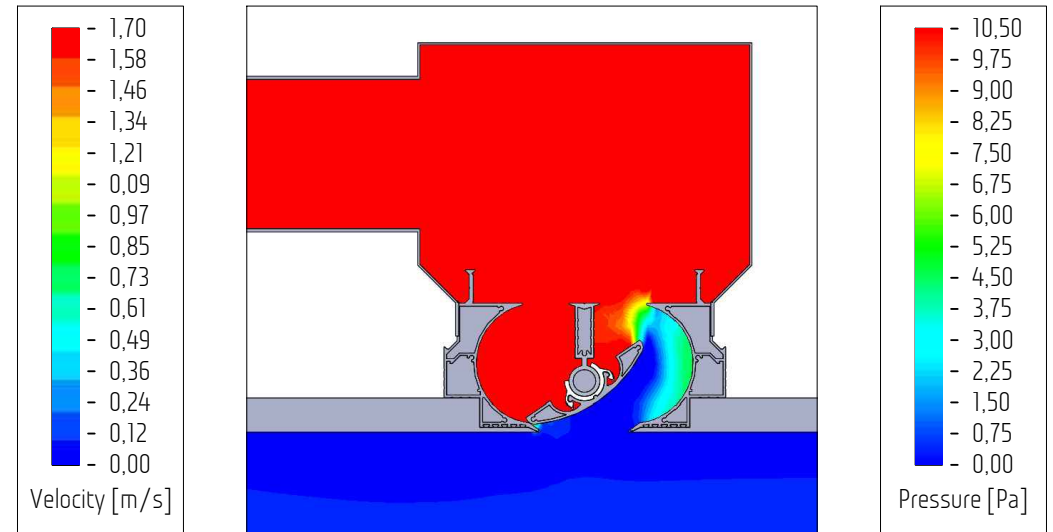


Simulation of air flows for BLANCPRO diffuser 40 at the air flow rate of 144 (m³/h)/m/horizontal air flow/

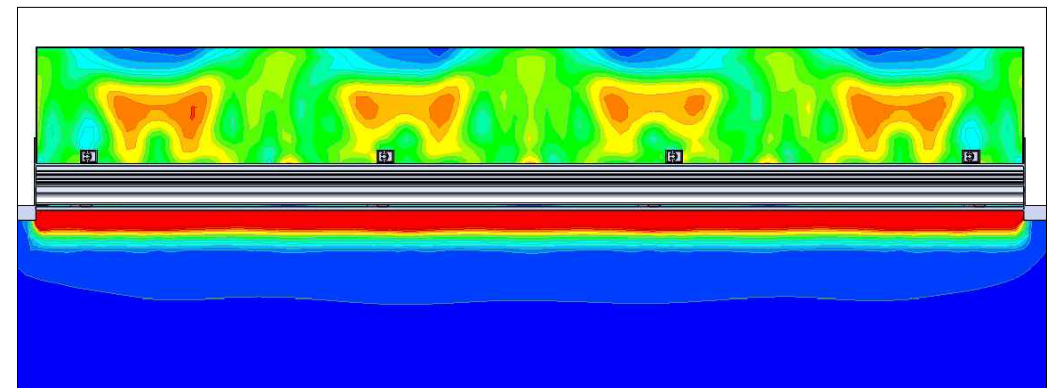
Air flow velocity profile in the diffuser cross section



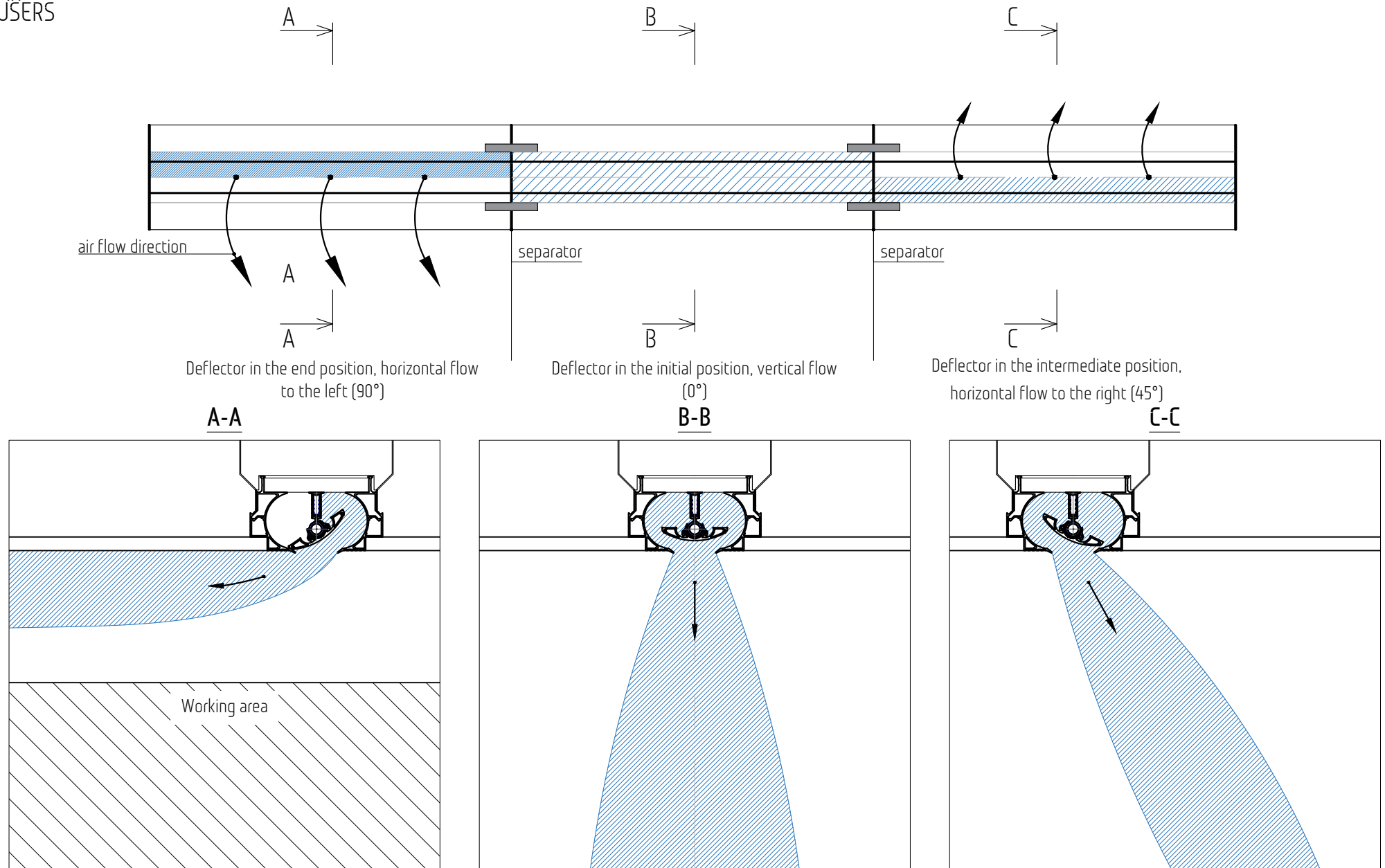
Pressure drop profile in the diffuser cross section



Air flow velocity profile in the diffuser longitudinal section



Deflector position and air flow distribution



BLANCPRO 20-40 diffusers specifications /vertical flow/

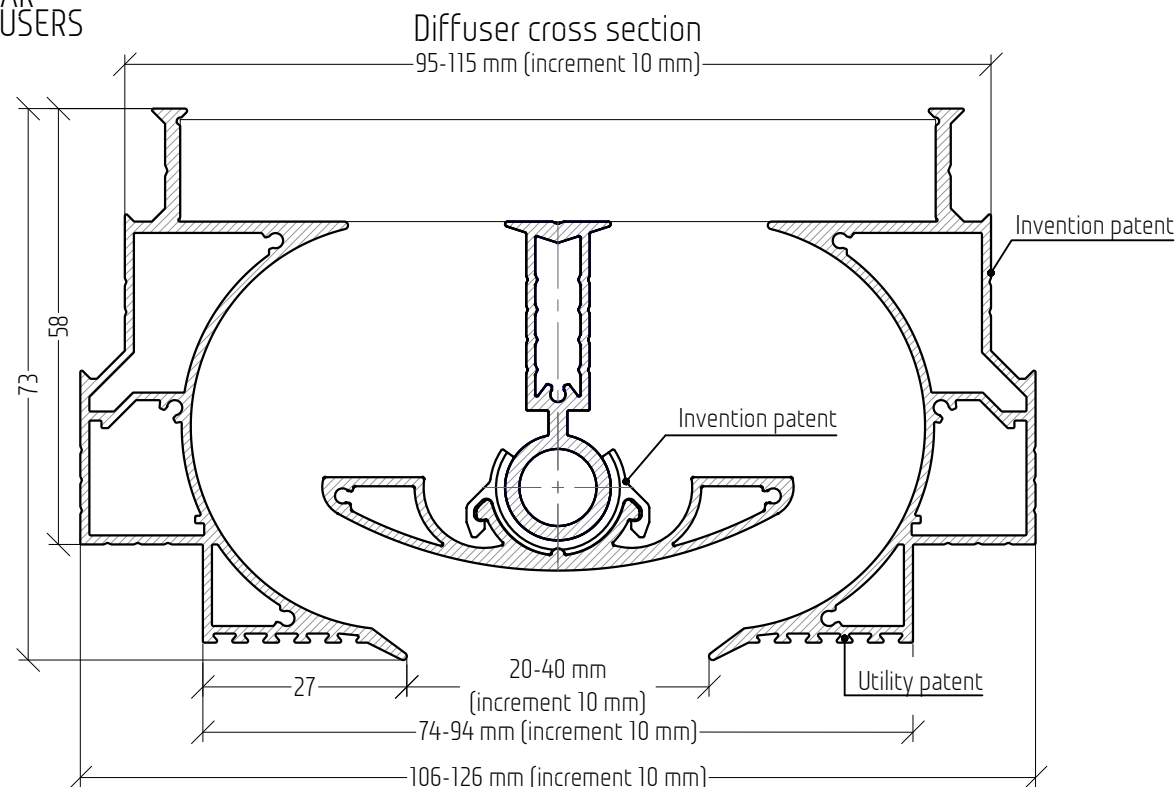
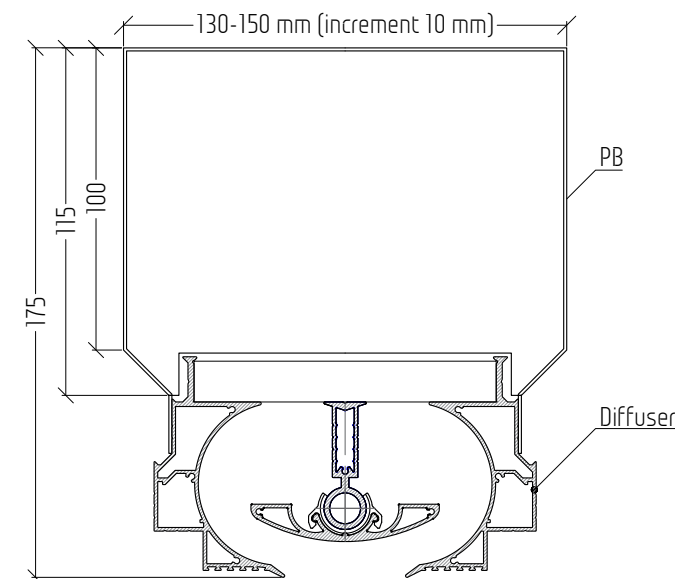


Diagram of the diffuser + PB assembly

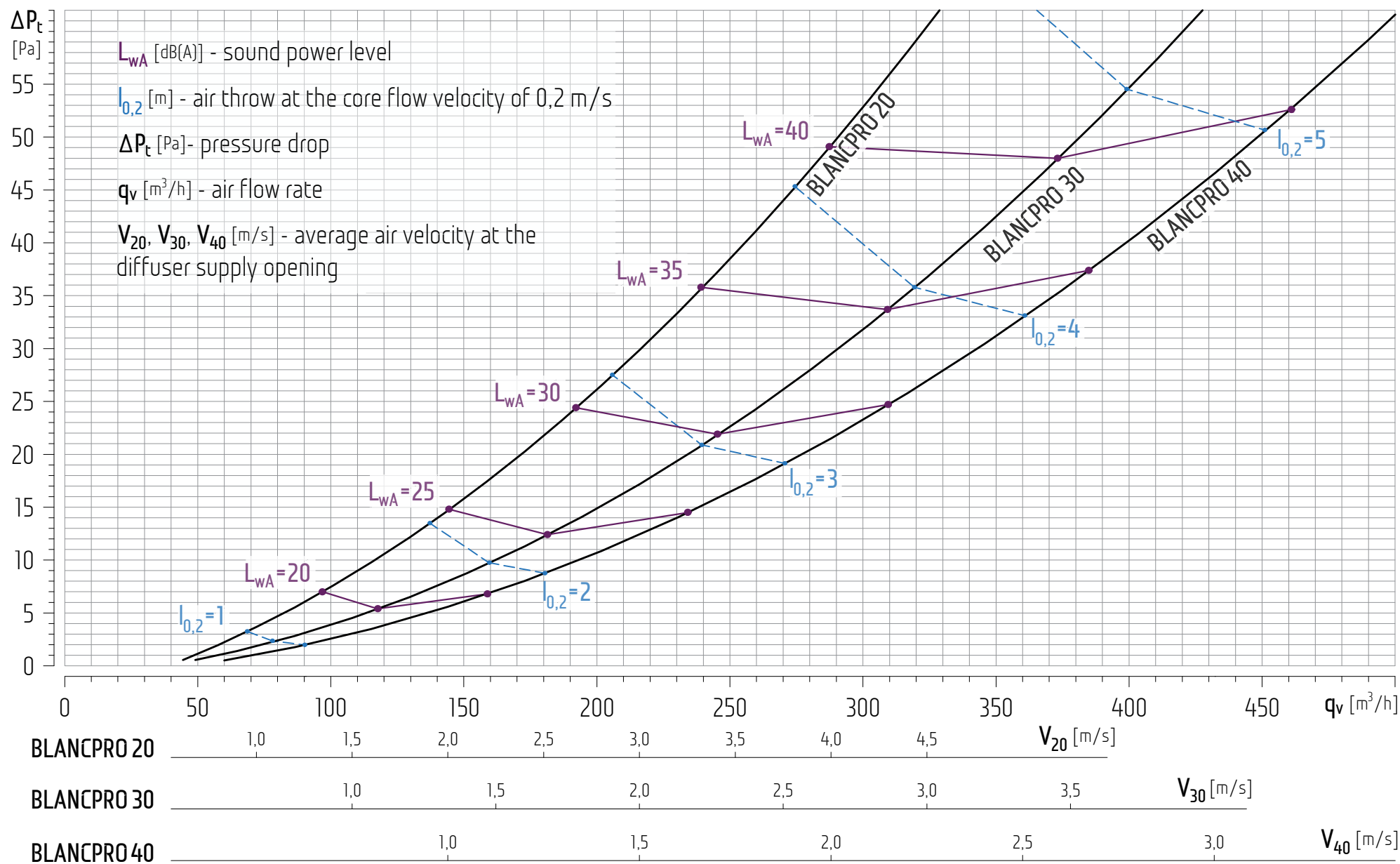


№	Product name	Slot width, mm	Data for 1 linear meter															Air throw*, m					
			at V=1,0 m/s			at V=1,5 m/s			at V=2,0 m/s			at V=2,5 m/s			at V=3,0 m/s			at V=1,0 m/s		at V=2,0 m/s		at V=3,0 m/s	
			q _v , m ³ /h	ΔP _t , Pa	L _{WA} , dB(A)	q _v , m ³ /h	ΔP _t , Pa	L _{WA} , dB(A)	q _v , m ³ /h	ΔP _t , Pa	L _{WA} , dB(A)	q _v , m ³ /h	ΔP _t , Pa	L _{WA} , dB(A)	q _v , m ³ /h	ΔP _t , Pa	L _{WA} , dB(A)	0,2 m/s	0,5 m/s	0,2 m/s	0,5 m/s	0,2 m/s	0,5 m/s
1	BLANCPRO 20	20	72	3,7	17,4	108	8,7	21,2	144	14,7	25,0	180	21,8	28,7	216	29,9	32,5	1,05	0,35	2,10	0,69	3,15	1,04
2	BLANCPRO 30	30	108	4,5	19,3	162	10,0	23,5	216	17,2	27,7	270	26,2	31,9	324	36,8	36,2	1,35	0,61	2,71	1,22	4,06	1,84
3	BLANCPRO 40	40	144	5,6	19,0	216	12,4	23,8	288	21,6	28,6	360	33,0	33,4	432	46,7	38,1	1,60	0,82	3,19	1,63	4,79	2,45

q_v - air flow rate [m³/h]; ΔP_t - pressure drop [Pa]; L_{WA} - sound power level [dB(A)];

*- Air throw is the maximum distance between the air outlet plane of the diffuser and the plane tangent to the corresponding surface of equal velocities (0,2 or 0,5 m/s)

Aerodynamic and acoustic specifications of BLANCPRO 20-40 diffusers with a length of 1000 mm depending on the air flow rate /vertical flow/



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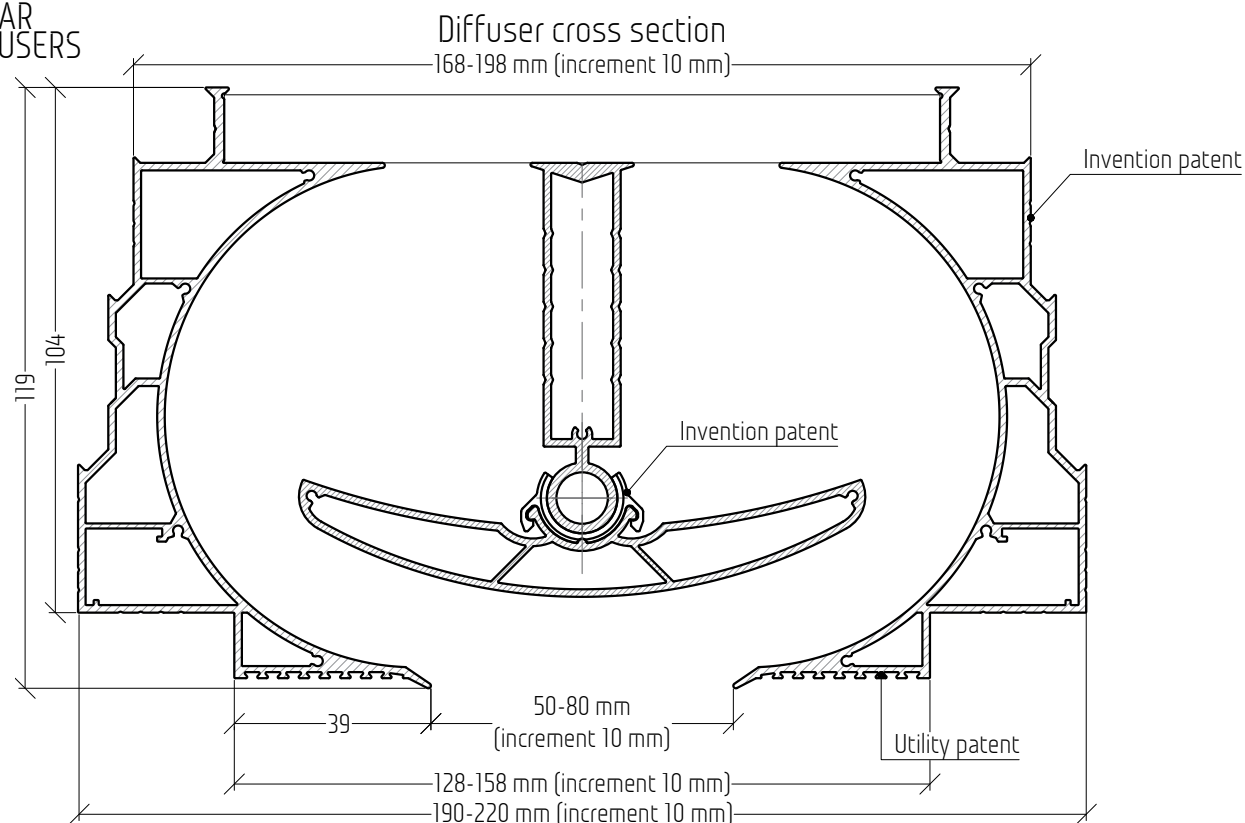
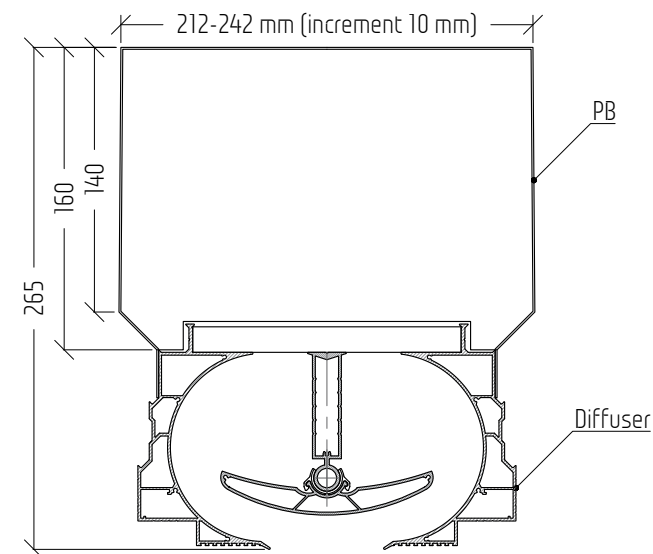


Diagram of the diffuser + PB assembly

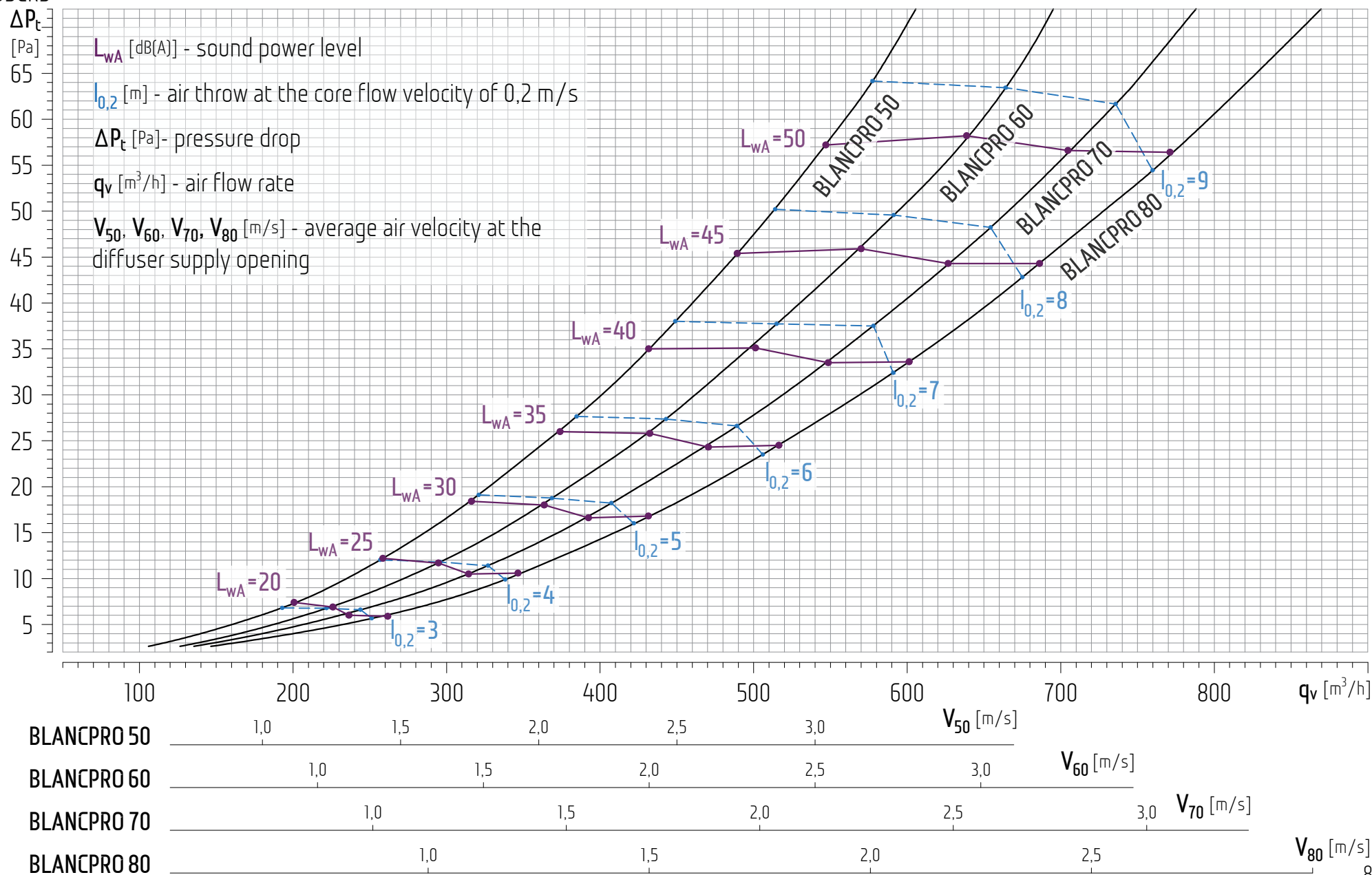


№	Product name	Slot width, mm	Data for 1 linear meter															Air throw*, m					
			at V=1,0 m/s			at V=1,5 m/s			at V=2,0 m/s			at V=2,5 m/s			at V=3,0 m/s			at V=1,0 m/s		at V=2,0 m/s		at V=3,0 m/s	
			q _v , m ³ /h	ΔP _t , Pa	L _{WA} , dB(A)	q _v , m ³ /h	ΔP _t , Pa	L _{WA} , dB(A)	q _v , m ³ /h	ΔP _t , Pa	L _{WA} , dB(A)	q _v , m ³ /h	ΔP _t , Pa	L _{WA} , dB(A)	q _v , m ³ /h	ΔP _t , Pa	L _{WA} , dB(A)	0,2 m/s	0,5 m/s	0,2 m/s	0,5 m/s	0,2 m/s	0,5 m/s
1	BLANCPRO 50	50	180	6,0	18,2	270	13,3	26,0	360	24,0	33,8	450	38,1	41,6	540	55,7	49,4	2,80	1,58	5,61	3,15	8,41	4,73
2	BLANCPRO 60	60	216	6,4	19,3	324	14,2	27,1	432	25,7	35,0	540	41,0	42,8	648	60,0	50,7	2,92	1,67	5,85	3,34	8,77	5,01
3	BLANCPRO 70	70	252	6,8	21,0	378	15,4	29,1	504	28,1	37,1	630	44,8	45,2	756	65,5	53,3	3,09	1,91	6,17	3,82	9,26	5,73
4	BLANCPRO 80	80	288	7,2	21,5	432	16,8	30,0	576	30,8	38,5	720	48,9	47,0	864	71,3	55,5	3,41	2,14	6,83	4,28	10,24	6,43

q_v - air flow rate [m³/h]; ΔP_t - pressure drop [Pa]; L_{WA} - sound power level [dB(A)];

*- Air throw is the maximum distance between the air outlet plane of the diffuser and the plane tangent to the corresponding surface of equal velocities (0,2 or 0,5 m/s)

Aerodynamic and acoustic specifications of BLANCPRO 50-80 diffusers with a length of 1000 mm depending on the air flow rate / vertical flow /



BLANCPRO 20-40 diffusers specifications /horizontal flow/

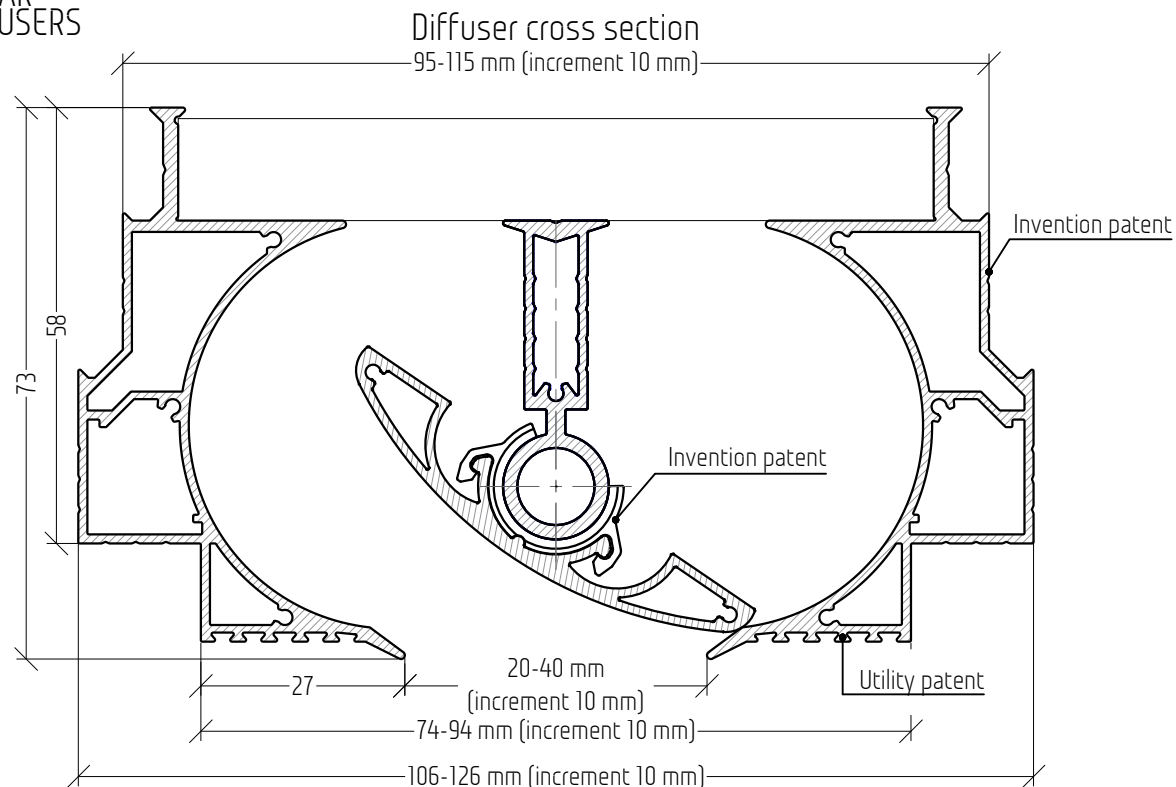
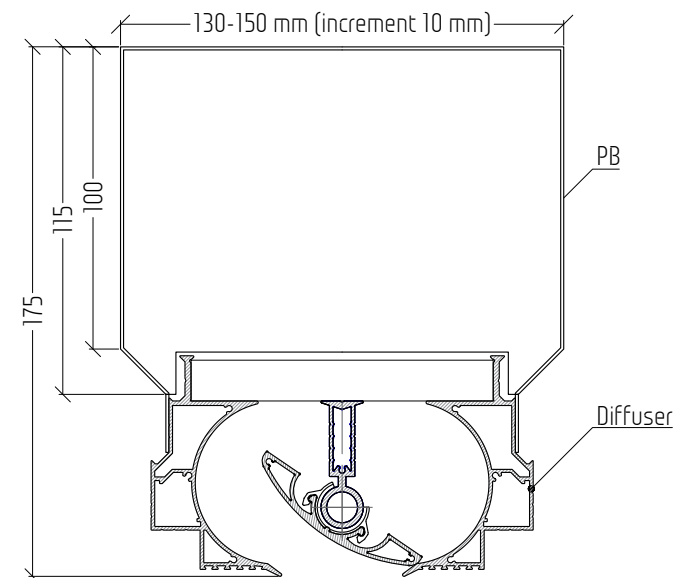


Diagram of the diffuser + PB assembly

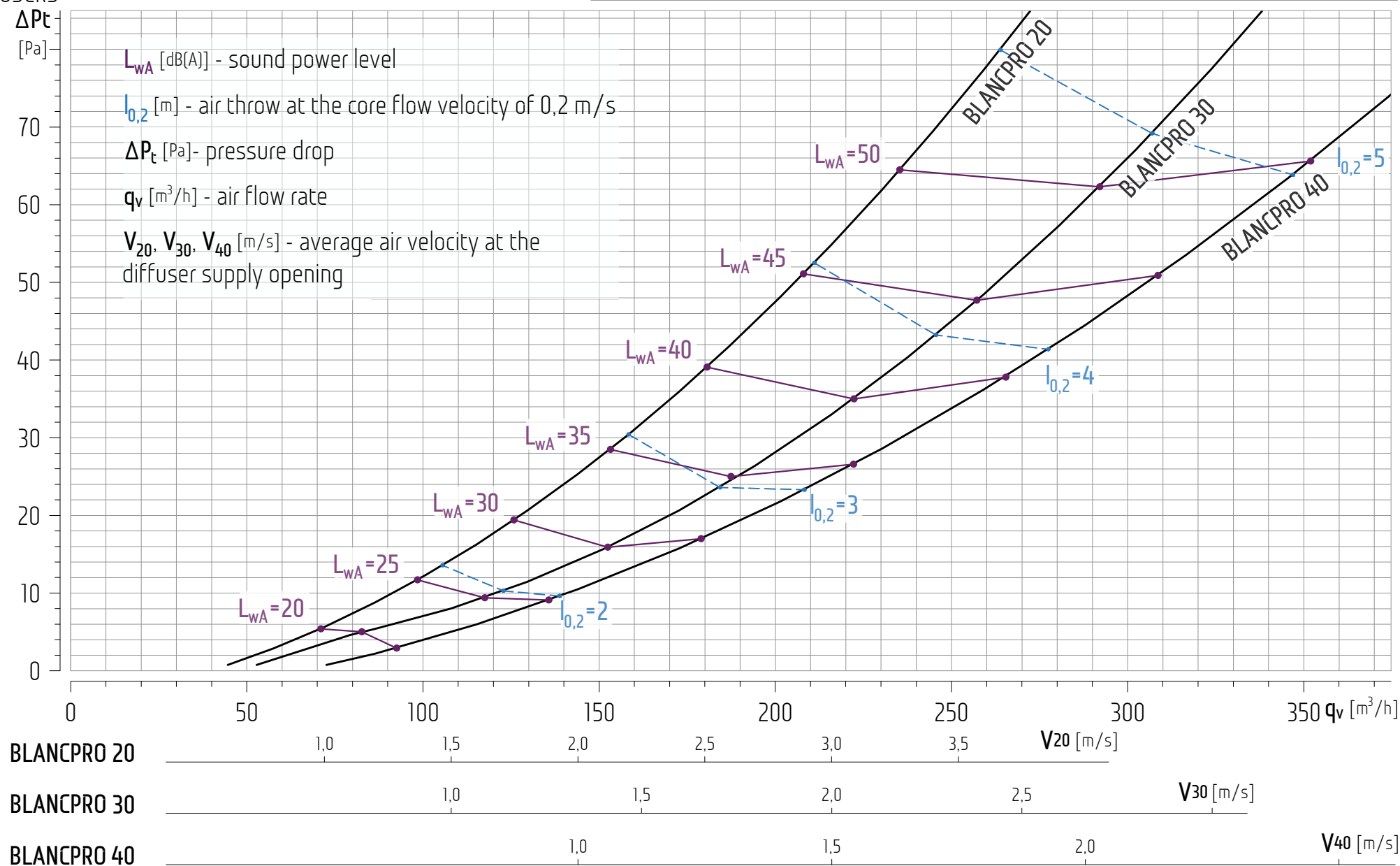


№	Product name	Slot width, mm	Data for 1 linear meter															Air throw*, m					
			at V=1,0 m/s			at V=1,5 m/s			at V=2,0 m/s			at V=2,5 m/s			at V=3,0 m/s			at V=1,0 m/s		at V=2,0 m/s		at V=3,0 m/s	
			q _v , m ³ /h	ΔP _t , Pa	L _{WA} , dB(A)	q _v , m ³ /h	ΔP _t , Pa	L _{WA} , dB(A)	q _v , m ³ /h	ΔP _t , Pa	L _{WA} , dB(A)	q _v , m ³ /h	ΔP _t , Pa	L _{WA} , dB(A)	q _v , m ³ /h	ΔP _t , Pa	L _{WA} , dB(A)	0,2 m/s	0,5 m/s	0,2 m/s	0,5 m/s	0,2 m/s	0,5 m/s
1	BLANCPRO 20	20	72	5,6	20,2	108	14,2	26,8	144	25,3	33,3	180	38,8	39,9	216	54,8	46,5	1,36	0,45	2,73	0,90	4,09	1,35
2	BLANCPRO 30	30	108	8,0	23,6	162	18,1	31,4	216	33,0	39,1	270	52,8	46,8	324	77,5	54,6	1,76	0,80	3,52	1,59	5,28	2,39
3	BLANCPRO 40	40	144	10,5	26,0	216	25,1	34,3	288	44,5	42,6	360	68,6	50,9	432	97,4	59,3	2,08	1,06	4,15	2,12	6,23	3,19

q_v - air flow rate [m³/h]; ΔP_t - pressure drop [Pa]; L_{WA} - sound power level [dB(A)];

*- Air throw is the maximum distance between the air outlet plane of the diffuser and the plane tangent to the corresponding surface of equal velocities (0,2 or 0,5 m/s)

Aerodynamic and acoustic specifications of BLANCPRO 20-40 diffusers with a length of 1000 mm depending on the air flow rate /horizontal flow/



BLANCPRO 50-80 diffusers specifications /horizontal flow/

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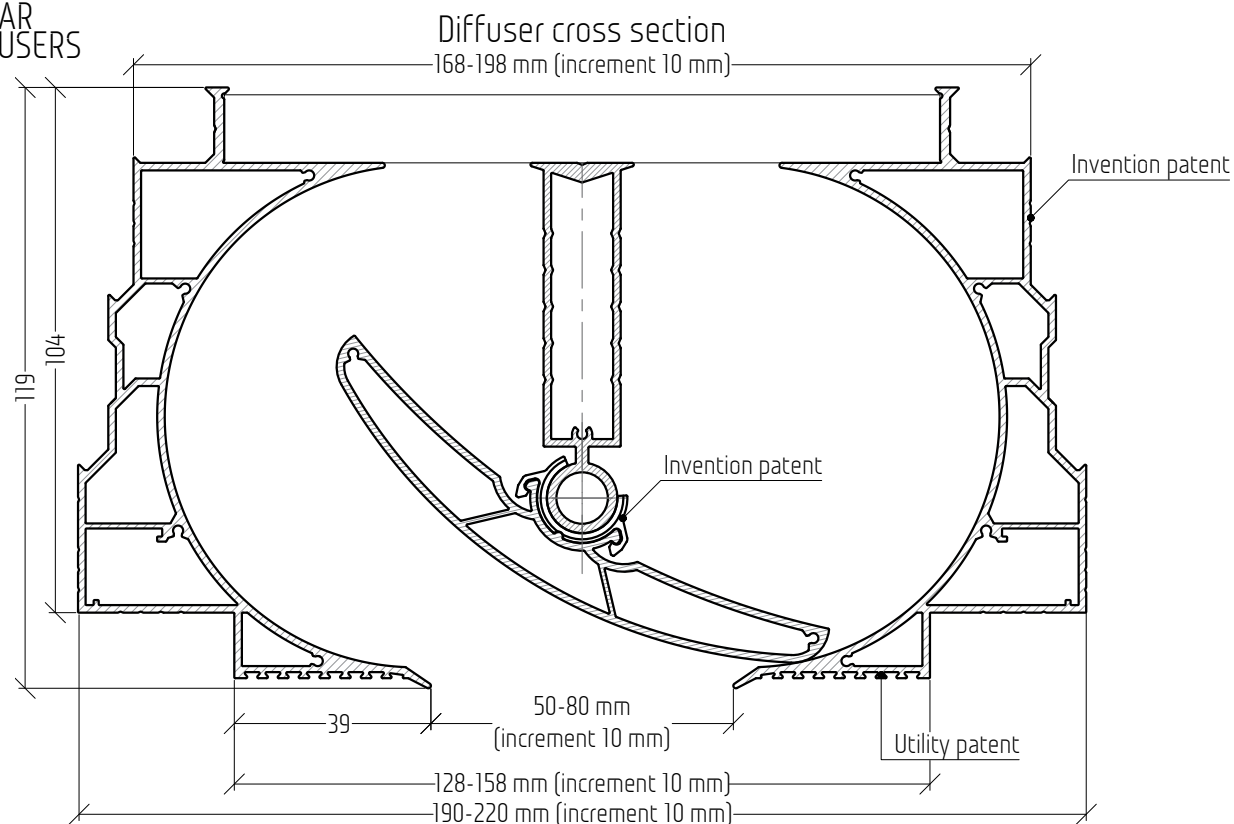
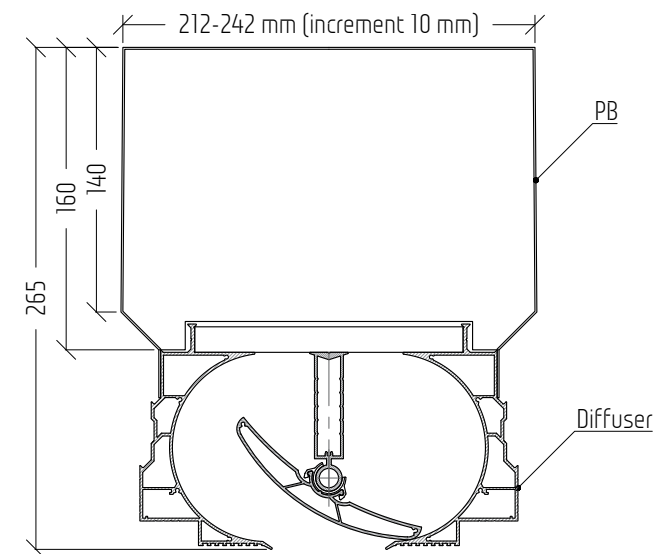


Diagram of the diffuser + PB assembly

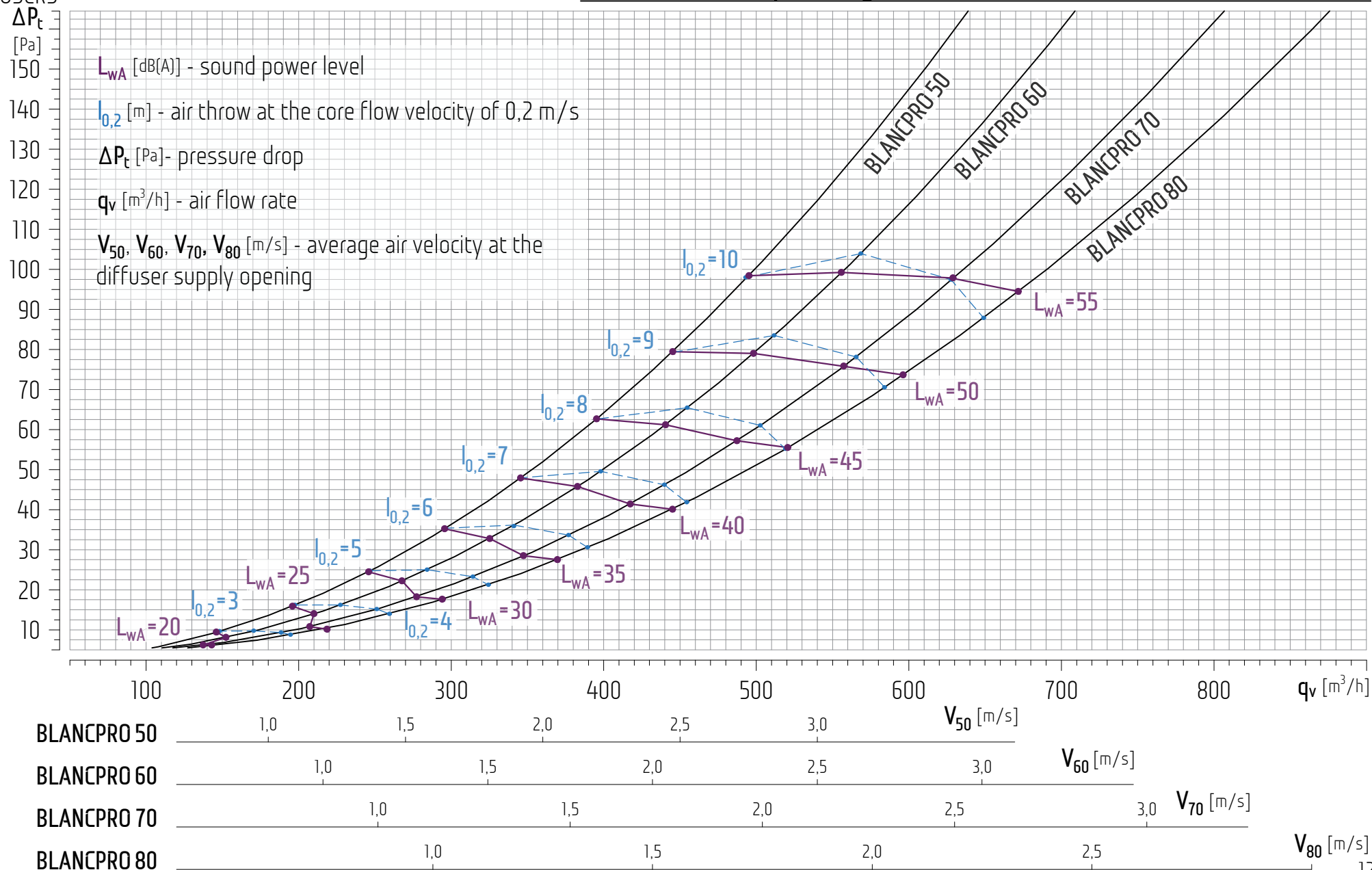


№	Product name	Slot width, mm	Data for 1 linear meter															Air throw*, m					
			at V=1,0 m/s			at V=1,5 m/s			at V=2,0 m/s			at V=2,5 m/s			at V=3,0 m/s			at V=1,0 m/s		at V=2,0 m/s		at V=3,0 m/s	
			q _v , m ³ /h	ΔP _t , Pa	L _{WA} , dB(A)	q _v , m ³ /h	ΔP _t , Pa	L _{WA} , dB(A)	q _v , m ³ /h	ΔP _t , Pa	L _{WA} , dB(A)	q _v , m ³ /h	ΔP _t , Pa	L _{WA} , dB(A)	q _v , m ³ /h	ΔP _t , Pa	L _{WA} , dB(A)	0,2 m/s	0,5 m/s	0,2 m/s	0,5 m/s	0,2 m/s	0,5 m/s
1	BLANCPRO 50	50	180	13,6	23,4	270	29,4	32,4	360	52,0	41,4	450	81,2	50,5	540	117,2	59,5	3,64	2,05	7,29	4,10	10,93	6,15
2	BLANCPRO 60	60	216	14,7	25,5	324	32,6	34,9	432	58,8	44,3	540	93,4	53,6	648	136,4	63,0	3,80	2,17	7,60	4,34	11,40	6,51
3	BLANCPRO 70	70	252	15,2	28,2	378	33,8	37,2	504	61,4	46,2	630	98,0	55,2	756	143,6	64,2	4,01	2,48	8,02	4,96	12,03	7,45
4	BLANCPRO 80	80	288	16,9	29,6	432	37,7	39,1	576	68,5	48,7	720	109,2	58,2	864	159,8	67,7	4,44	2,78	8,88	5,57	13,31	8,35

q_v - air flow rate [m³/h]; ΔP_t - pressure drop [Pa]; L_{WA} - sound power level [dB(A)];

*- Air throw is the maximum distance between the air outlet plane of the diffuser and the plane tangent to the corresponding surface of equal velocities (0,2 or 0,5 m/s)

Aerodynamic and acoustic specifications of BLANCPRO 50-80 diffusers with a length of 1000 mm depending on the air flow rate / horizontal flow /



1. Aerodynamic characteristics were obtained as a result of full-scale tests on the aerodynamic installation developed in accordance with the National Standard of the Russian Federation GOST P EH 12238-2012 "Ventilation for buildings - Air terminal devices. Aerodynamic testing and rating for mixed flow application."
2. Acoustic characteristics were obtained as a result of full-scale tests conducted in a semi-anechoic room according to the internal methodology of our company based on the National Standard of the Russian Federation GOST 32112-2013 "Acoustics. Determination of noise performance for air-terminal devices. Precision methods for anechoic rooms".

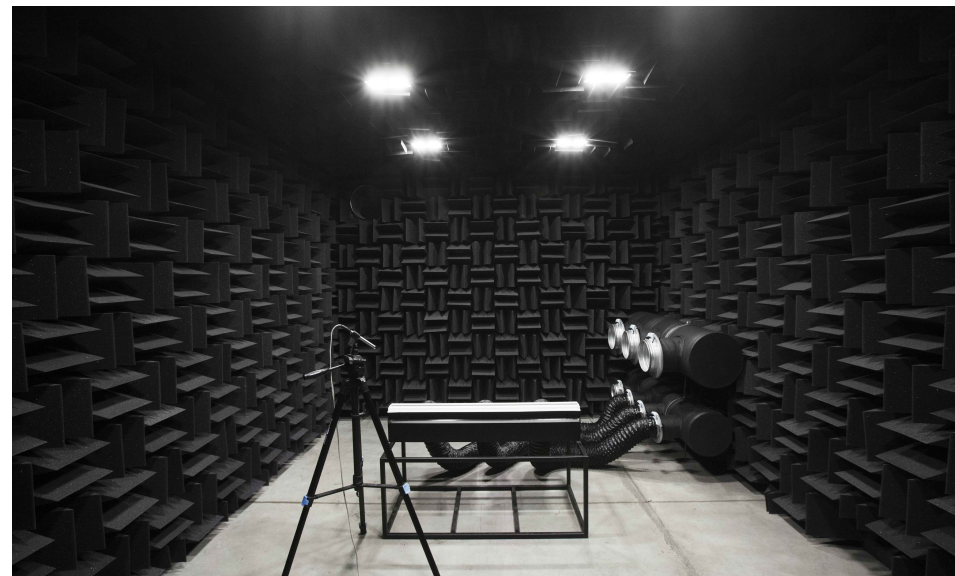
Detailed test data is available on request.

The following measuring instruments were used for the tests:

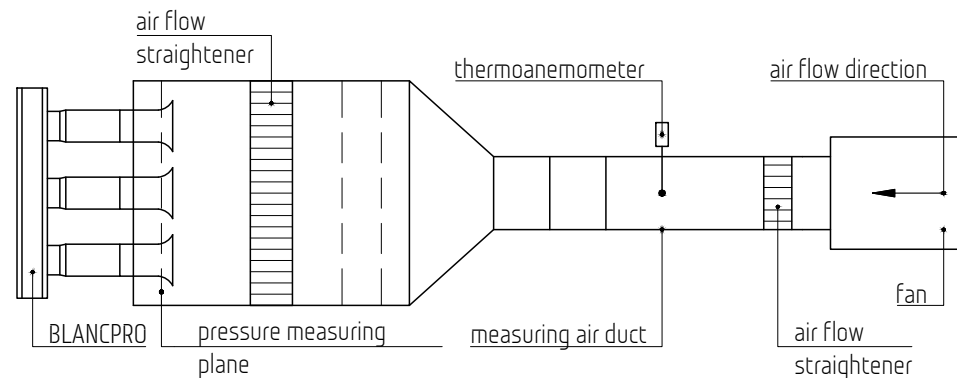
№	Measured parameter	Name of measuring instrument
1	Air flow velocity	Thermo-anemometer TTM-2-01 T
2	Pressure drop	Differential pressure meter Testo 512 (0...2 GPa)
3	Sound pressure level	Noise meter Oktava-111
4	Temperature, relative humidity, atmospheric pressure	Thermo-hygrometer ИВТМ-7 М 5-Д

Methods of measuring aerodynamic and acoustic characteristics of the diffusers

Photo of the installation for acoustic parameters measurement



Schematic diagram of the installation for measuring aerodynamic characteristics



Assembly order code

BLANCPRO -	40 -	W -	1000 -	A	+	BOXBLC-	40 -	1000 -	STD
1	2.	3.	4.	5.		Plenum box order code formation see page 18			

1. **Series - Model:** "BLANCPRO";

2. **Slot width:** 20-80 mm (increment 10 mm);

3. **Diffuser color:**

~ Standard colors are indicated with letters:

W - white (RAL 9003); **B** - black (RAL 9005);

N - at the stage of commercial offer the color (RAL 9003 or RAL 9005) is not defined;

~ non-standard colors **RAL** are indicated in 0000 format;

non-standard color undefined at the stage of commercial offer is indicated in **0000** format;

(Painting in a non-standard color increases the cost of the diffuser by 20%).

4. **BLANCPRO element length:**

the code specifies the length of the element without the end plates and separators.

From 100* mm to 3000 mm, increment 5 mm.

(* - the cost of the modular element with a length of 100 to 495 mm is equal to the cost of the modular element with a length of 500 mm);

5. **Presence of end plates, separators and connectors:**

2 - stand-alone diffuser: end plates on both sides (+3 mm);

A - empty element;

B - end plate on one side (+1,5 mm);

C - connectors on one side and an end plate on the other side (+1,5 mm);

D - connectors and a separator on one side (+1,5 mm), an end plate on the other side (+1,5 mm);

E - connectors on one side;

F - connectors on one side (+1,5 mm);

G - connectors on both sides;

H - connectors and separators on both sides (+3 mm);

I - connectors on one side and connectors with a separator on the other side (+1,5 mm).

Notes: End plates are not visible after installation. The separators remain visible.

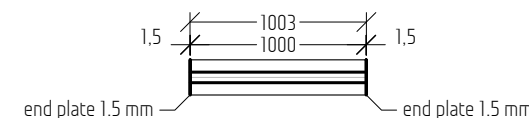
If you would like to order an element without plenum box only the code of the element should be specified.

Warning: If the elements are joined without a separating plate, all deflectors must be turned to the same side.

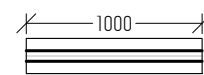
Stand-alone diffuser:

Elements for modular assembly:

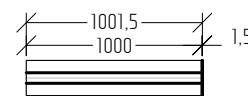
2



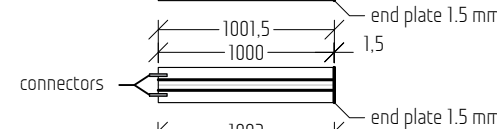
A



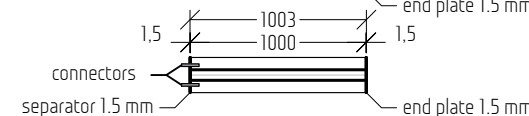
B



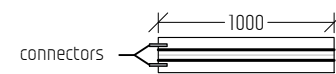
C



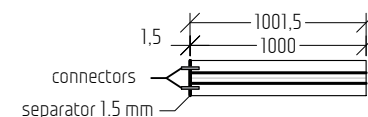
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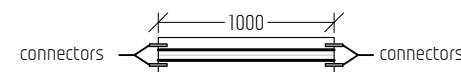
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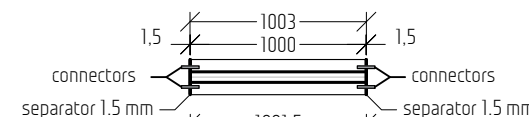
F



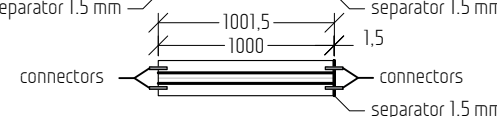
G



H



I



CORNER-BLANCPRO corner element order code formation

Assembly order code:

1. **Series - Model: CORNER-BLANCPRO** - "CORNER" – corner element;
2. **Slot width:** 20-80 mm (increment 10 mm)
3. **Element color:**
 - ~ standard colors are indicated with letters:
W - white (RAL 9003); **B** - black (RAL 9005);
N - at the stage of commercial offer the color (RAL 9003 or RAL 9005) is not defined;
 - ~ non-standard colors **RAL** are indicated in 0000 format;
non-standard color undefined at the stage of commercial offer is indicated in **0000** format;
(Painting in a non-standard color increases the cost of the diffuser by 20%).
4. **Configuration of the corner element:**
 - S** – the element installation into the ceiling;
 - IN** – the element installation into the wall (inside corner);
 - OUT** – the element installation into the wall (outside corner);
 - CUST** – it is possible to produce non-standard corner sections of any configuration. The cost is calculated on request.
5. **Presence of end plates:** CORNER-BLANCPRO elements are supplied with separators and connectors.

CORNER-BLANCPRO -	40 -	W -	S -	H
1.	2.	3.	4.	5.

Warning! Deflector of the CORNER-BLANCPRO corner element is non-rotatable.

S

For models with a slot width of 20-40 mm, the length of each side of the corner element body is 243 (+1.5) mm, the length of the slot on each side is 200 mm (fig.1);

For models with a slot width of 50-80 mm, the length of each side of the corner element body is 370 (+1.5) mm, the length of the slot on each side is 300 mm (fig.2).

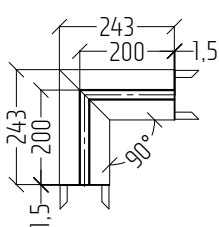


fig.1

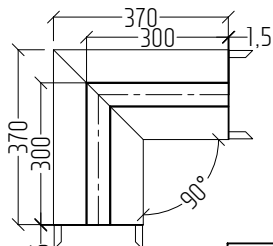


fig.2

IN

For models with a slot width of 20-40 mm, the length of each side of the corner element body is 273 (+1.5) mm, the length of the slot on each side is 200 mm (fig. 3);

For models with a slot width of 50-80 mm, the length of each side of the corner element body is 420 (+1.5) mm, the length of the slot on each side is 300 mm (fig. 4).

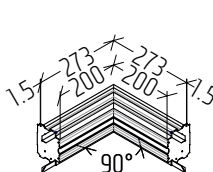


fig.3

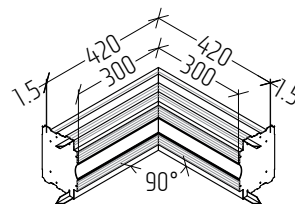


fig.4

OUT

For models with a slot width of 20-40 mm, the length of both the corner element body and the slot on each side is 250 (+1.5) mm (fig. 5);

For models with a slot width of 50-80 mm, the length of both the corner section body and the slot on each side is 350 (+1.5) mm (fig.6).

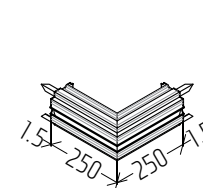


fig.5

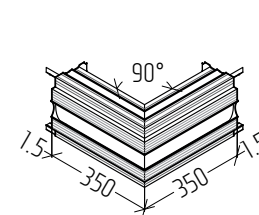


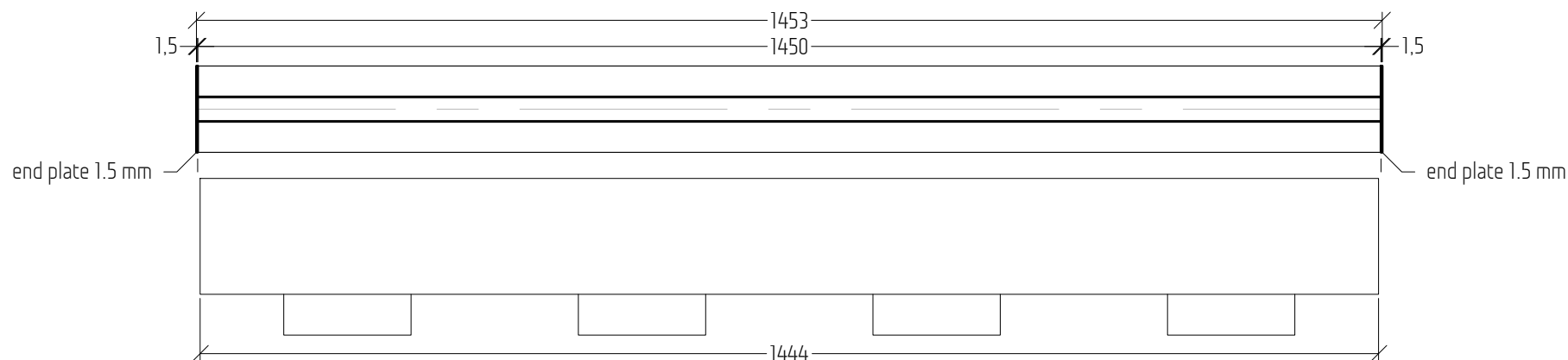
fig.6

Order example / stand-alone and modular diffusers /

Standard diffuser, up to 3000 mm

If you would like to order a diffuser with a slot width of 30 mm; a length of 1450 mm; color RAL 7047; with a plenum box (PB) with side spigots.

The order code should be: **BLANCPRO-30-7047-1450-2 + BOXBLC-30-1450-STD**

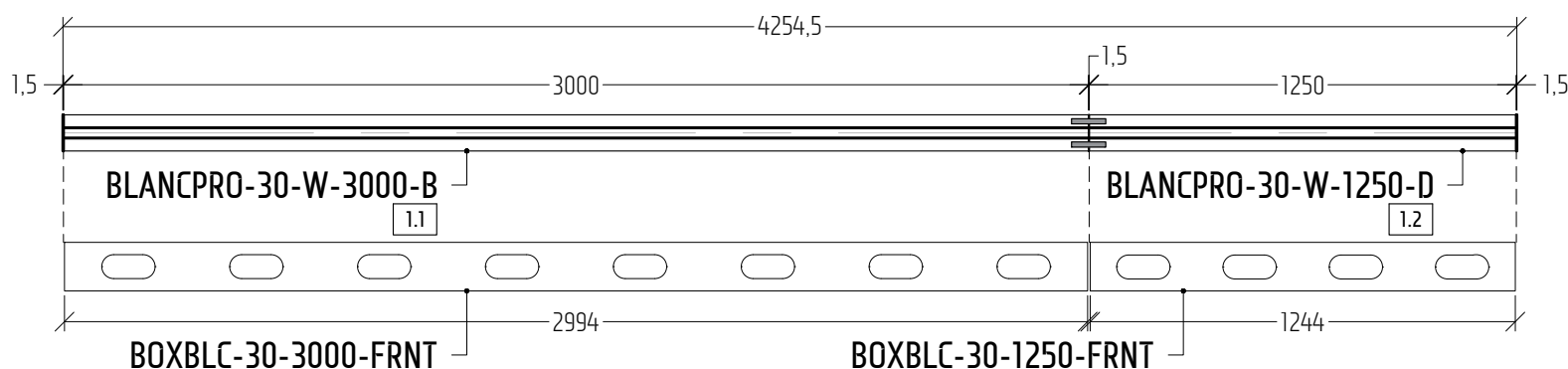


Modular diffuser, from 3000 mm

If you would like to order a diffuser with a slot width of 30 mm; a length of 4250 mm; color WHITE; with a plenum box (PB) with top spigots.

The order code should be: **1.1 BLANCPRO-30-W-3000-B + BOXBLC-30-3000-FRNT**

1.2 BLANCPRO-30-W-1250-D + BOXBLC-30-1250-FRNT



Order example of modular system with corner elements

If you want to order:

"L-shaped" diffuser with a slot width of 60 mm, length of each side from the corner of 3000 mm, color white. For the supply and intake air diffuser a separator should be considered on one side at a distance of 2000 mm from the edge.

Solution:

Modular assembly with the individual order code for each element.

1.1 BLANCPRO-60-W-2700-B

Element №1 order code and drawing

1.2 CORNER-BLANCPRO-60-W-S-H

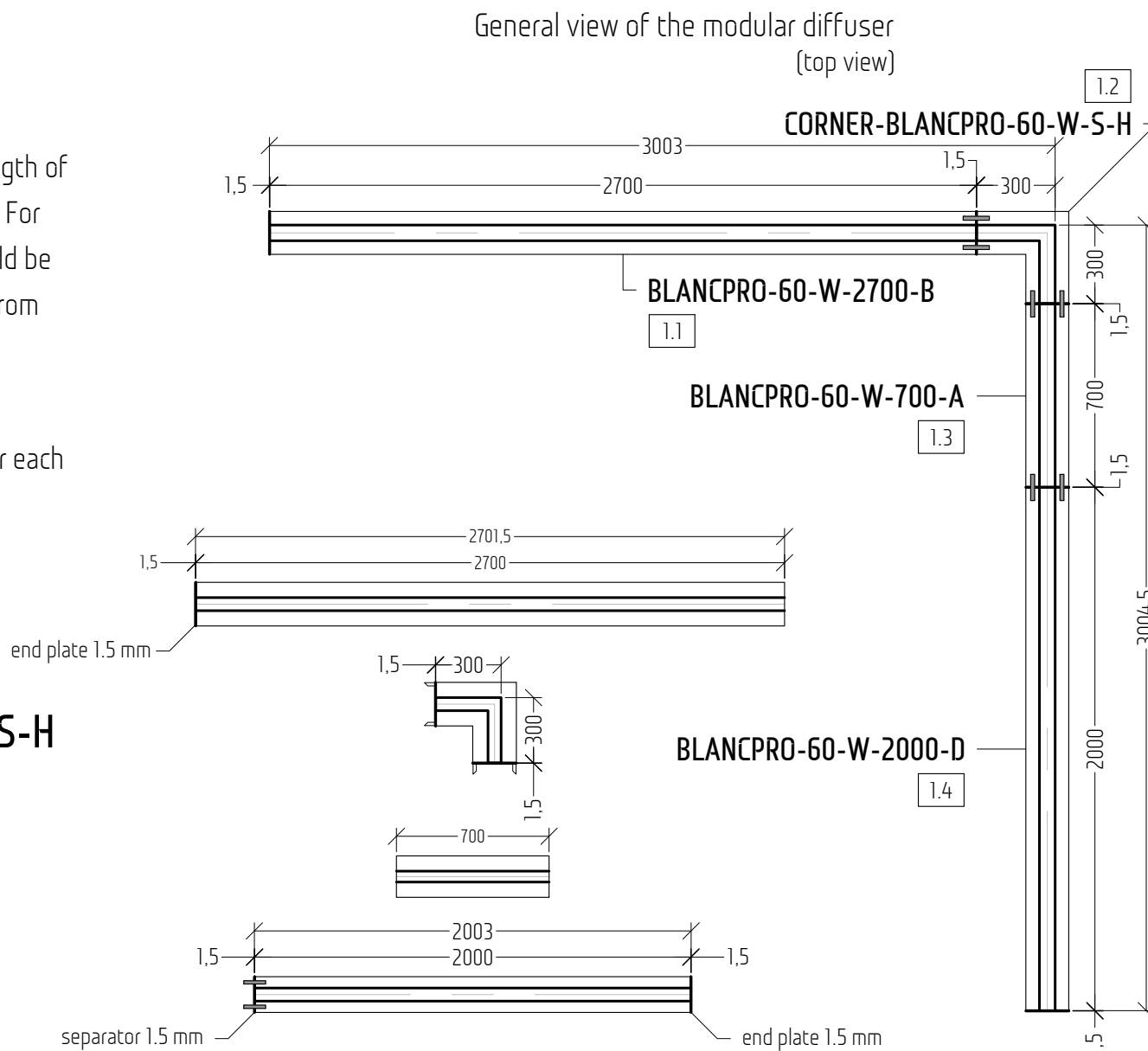
Element №2 order code and drawing

1.3 BLANCPRO-60-W-700-A

Element №3 order code and drawing

1.4 BLANCPRO-60-W-2000-D

Element №4 order code and drawing



Configurations and order codes of plenum boxes

1. Plenum box (PB) designation: BOXBLC;
2. The slot width of the corresponding diffuser: 20-80 mm (increment 10 mm);
3. PB length: the code specifies the length of the diffuser **without the end plates and separators**, the actual length of the PB is 6 mm shorter (see pages 19, 20);

PB order code

BOXBLC -	40 -	1000 -	STD
1.	2.	3.	4.

4. Plenum box (PB) versions:

STD – PB with side spigots;

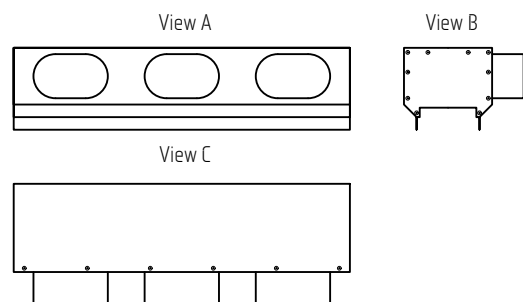
FRNT – PB with top spigots (located opposite the slot);

NULL – PB without spigots;

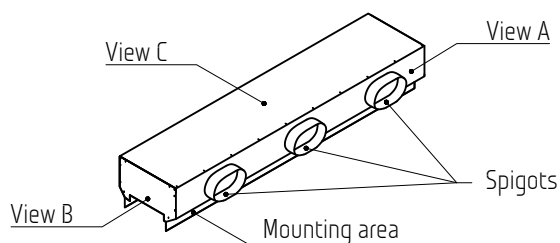
CUST – non-standard PB can be manufactured with a 20% increase in cost.

— **N** - at the stage of commercial offer the version of PB is not defined.

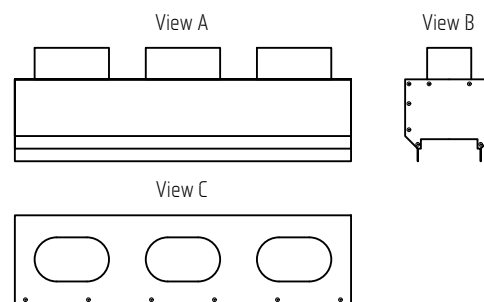
STD - side spigots



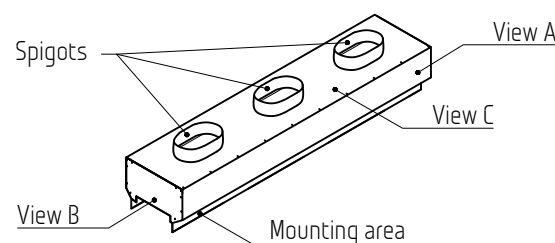
PB with spigots should be selected according to the technical catalogue (see pages 19, 20).



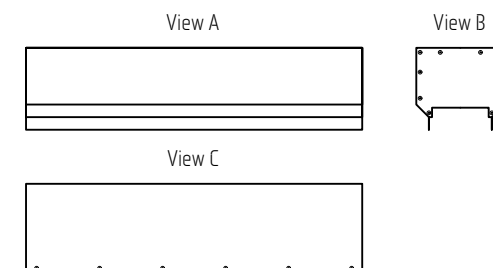
FRNT - top spigots



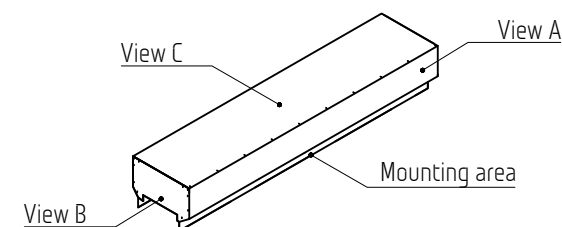
PB with spigots should be selected according to the technical catalogue (see pages 19, 20).



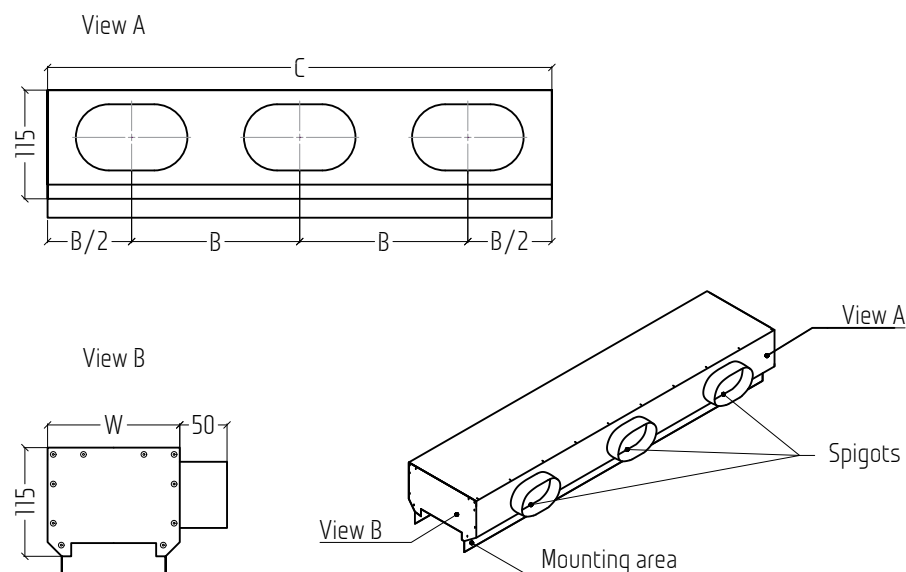
NULL - PB without spigots



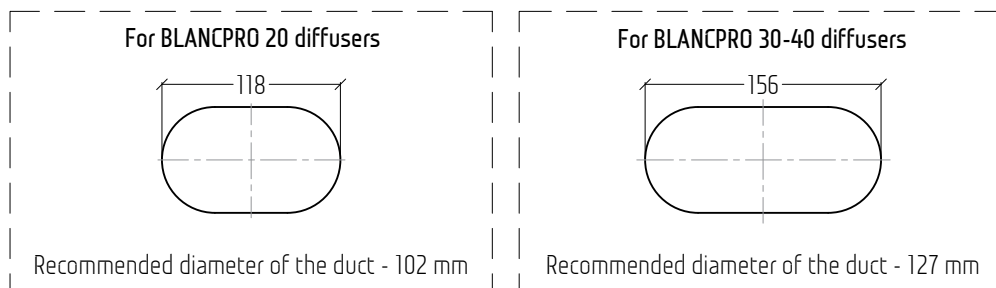
Spigots are installed on the site. The number and dimensions of the spigots are specified in the technical catalogue (see pages 19, 20).



Schematic drawing of PB with side spigots (STD) for BLANCPRO 20-40 diffusers



Dimensions of spigots for connection to the flexible duct:



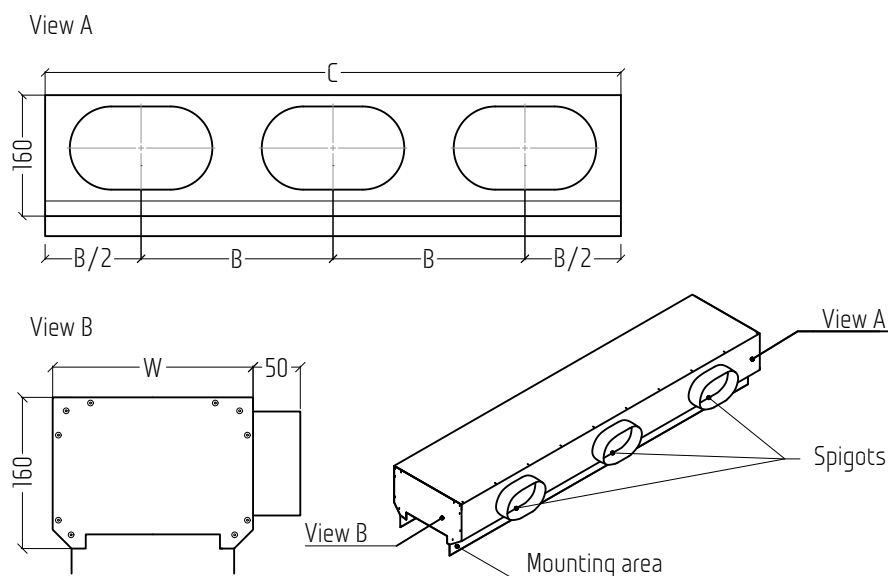
Specifications of PB for BLANCPRO 20-40 diffusers

Plenum box (PB) specification				
Diffuser slot width, mm	20	30	40	Number of spigots (N), pcs
Diffuser length (L), mm	165-390	205-410	205-395	1
	395-780	415-830	400-610	2
	785-1170	835-1245	615-915	3
	1175-1560	1250-1660	920-1220	4
	1565-1950	1665-2075	1225-1525	5
	1955-2340	2080-2490	1530-1830	6
	2345-2730	2495-2905	1835-2135	7
	2735-3000	2910-3000	2140-2440	8
			2445-2745	9
			2750-3000	10
PB width (W), mm	130	140	150	
PB length (C), mm	L-6			
Distance between the axes of the spigots, mm	$\frac{C}{N}$			

Notes:

1. Dimensions of the spigots and the distance between their axes are similar for all PB with top spigots (FRNT)
2. Correct air distribution and acoustic comfort are guaranteed only if the PB configuration and sizes according to the catalog have not been modified. The customer is fully responsible for any modification of the plenum box configuration or number of spigots.

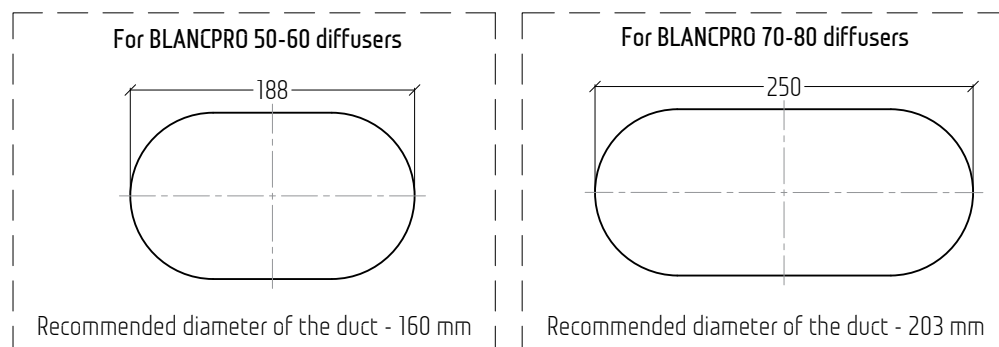
Schematic drawing of PB with side spigots (STD) for BLANCPRO 50-80 diffusers



Specifications of PB for BLANCPRO 50-80 diffusers

Plenum box(PB) specification					
Diffuser slot width, mm	50	60	70	80	Number of spigots (N), pcs
Diffuser length (L), mm	235-460	235-460	300-585	300-585	1
	465-800	465-685	590-900	590-875	2
	805-1200	690-1005	905-1350	880-1170	3
	1205-1600	1010-1340	1355-1800	1175-1560	4
	1605-2000	1345-1675	1805-2250	1565-1950	5
	2005-2400	1680-2010	2255-2700	1955-2340	6
	2405-2800	2015-2345	2705-3000	2345-2730	7
	2805-3000	2350-2680		2735-3000	8
		2685-3000			9
PB width (W), mm	212	222	232	242	
PB length (C), mm	L-6				
Distance between the axes of the spigots (B), mm	$\frac{C}{N}$				

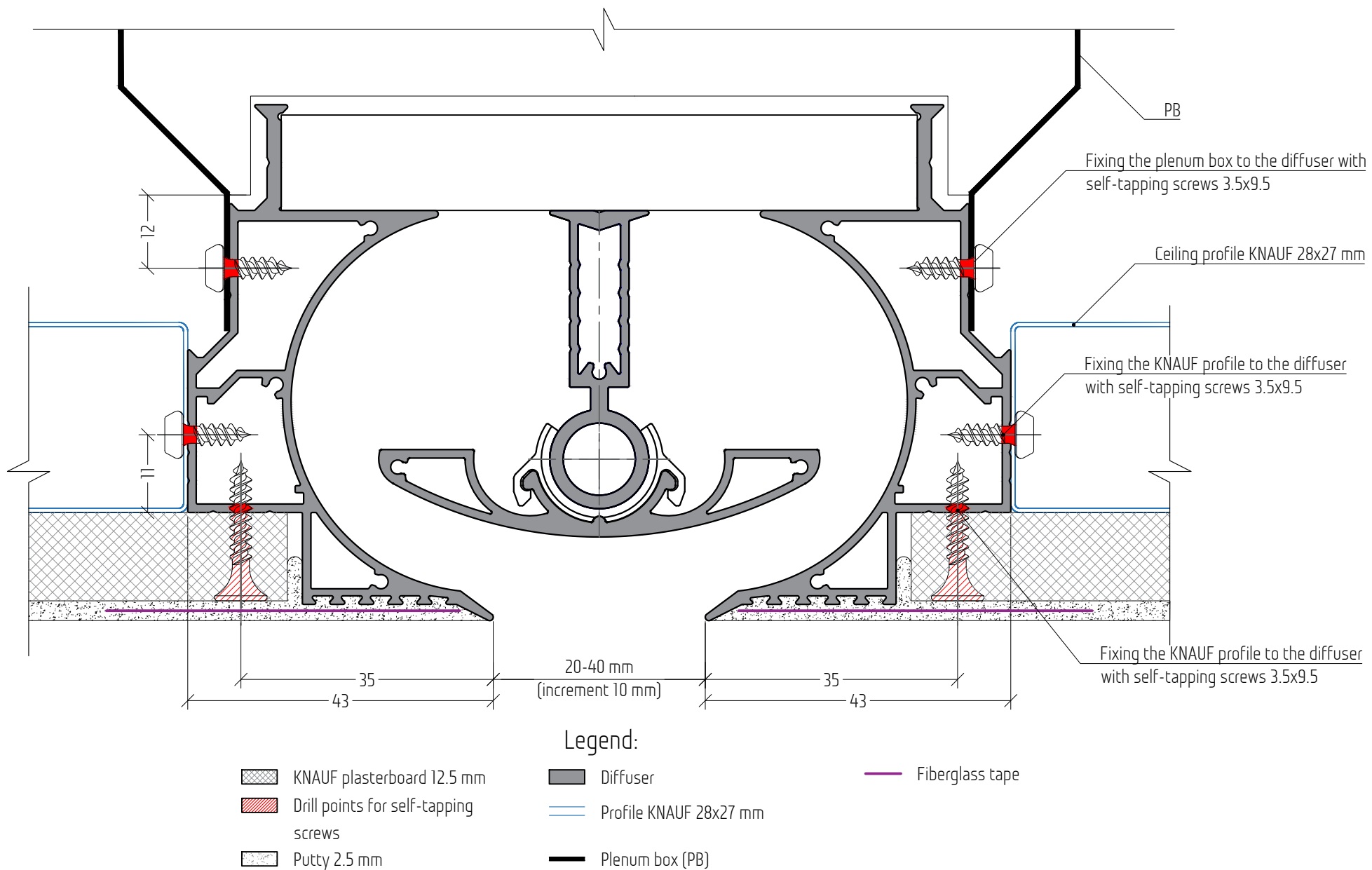
Dimensions of spigots for connection to the flexible duct:



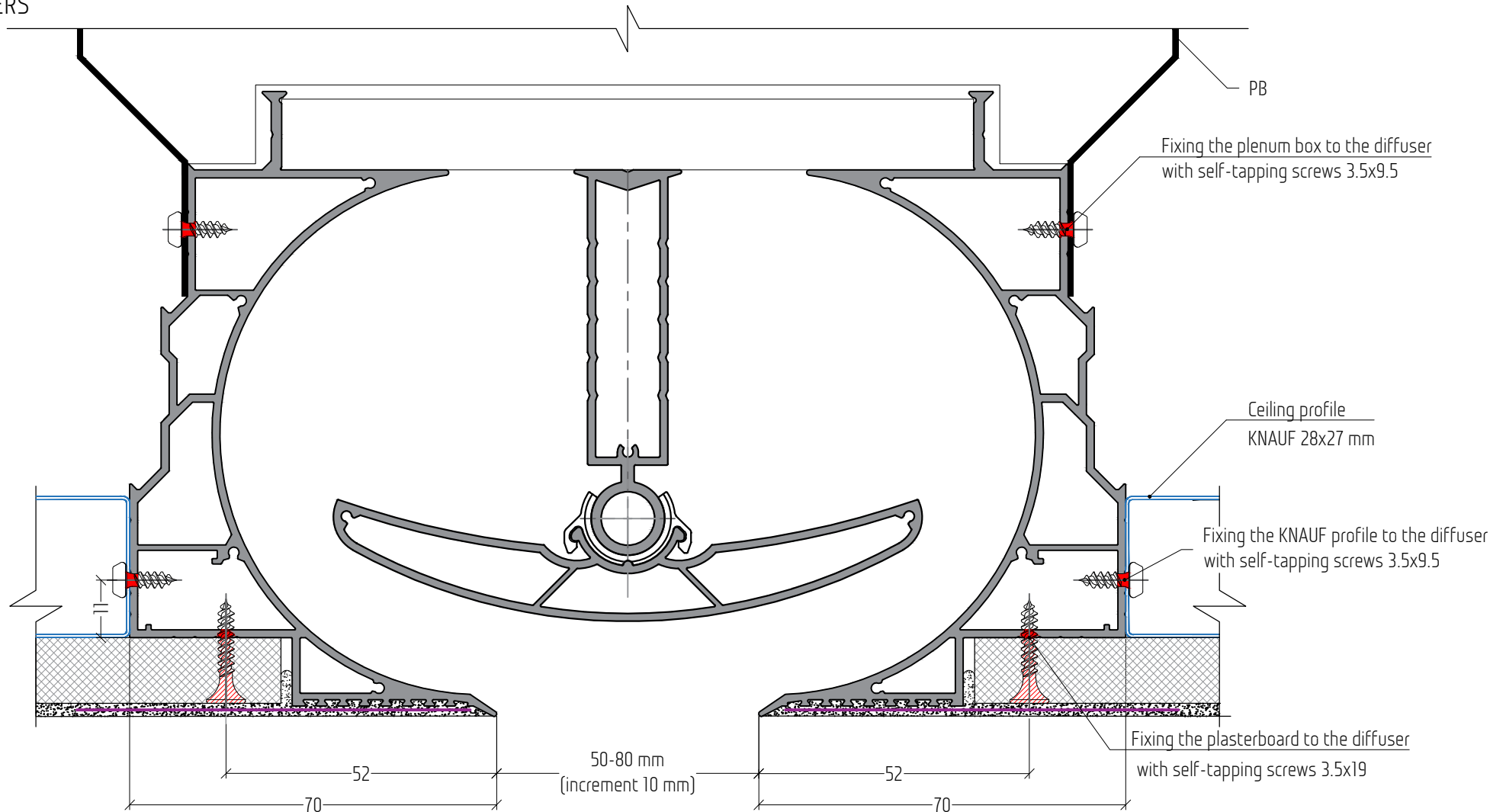
Notes:

1. Dimensions of the spigots and the distance between their axes are similar for all PB with top spigots (FRNT).
2. Correct air distribution and acoustic comfort are guaranteed only if the PB configuration and sizes according to the catalog have not been modified. The customer is fully responsible for any modification of the plenum box configuration or number of spigots.

BLANCPRO 20-40 diffuser installation diagram



BLANCPRO 50-80 diffuser installation diagram



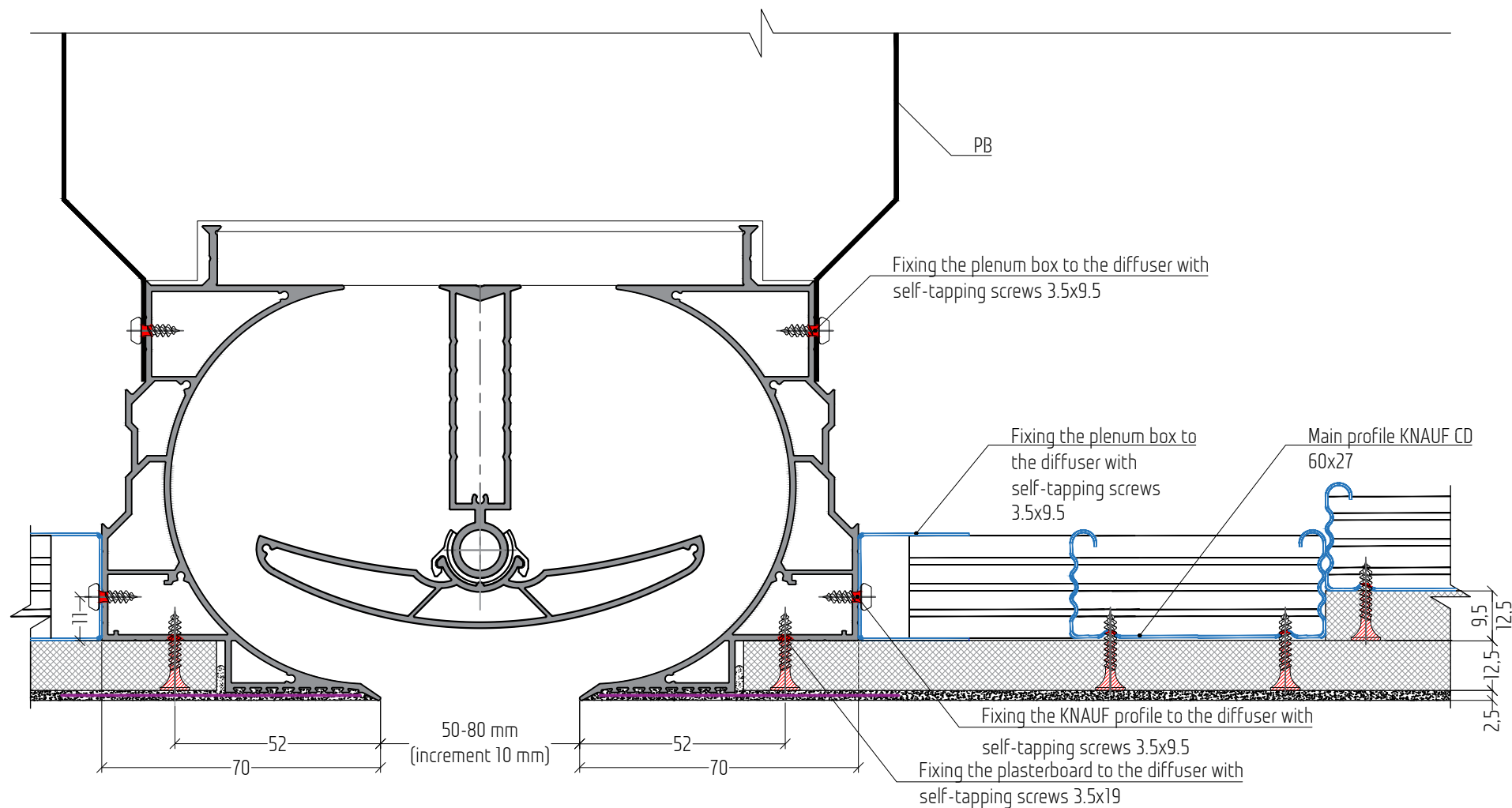
Legend:

- KNAUF plasterboard 12.5 mm
- Drill points for self-tapping screws
- Putty 2.5 mm

- Diffuser
- Profile KNAUF 28x27 mm
- Plenum box (PB)

- Fiberglass tape

Diffuser installation diagram into the ceiling / gypsum plasterboard, 2 layers /



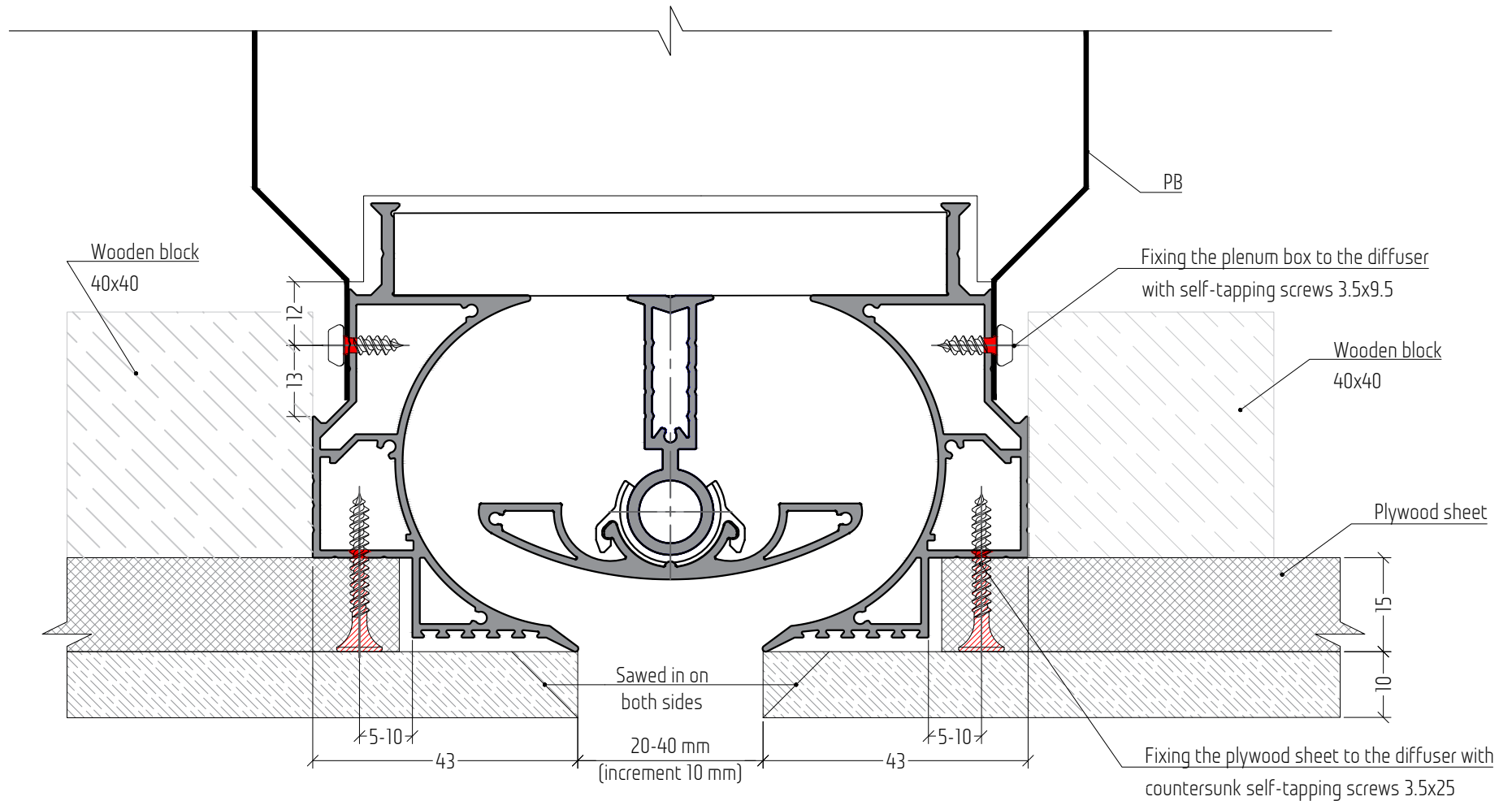
Legend:

- KNAUF plasterboard 12.5 mm
- Drill points for self-tapping screws
- Putty 2.5 mm

- Diffuser
- Profile KNAUF 28x27 mm
- Plenum box (PB)

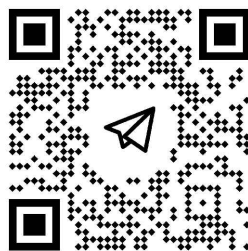
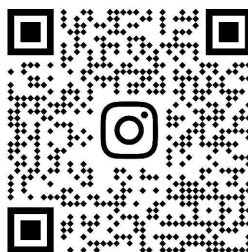
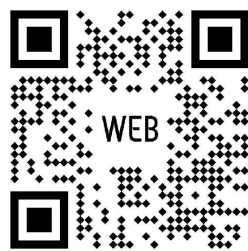
- Fiberglass tape

Diffuser installation diagram into the wooden paneling



Legend:

- | | |
|--|---|
|  Wooden block |  Diffuser |
|  Drill points for self-tapping screws |  Plywood sheet 15 mm |
|  Wooden panel (up to 10 mm thick) |  Plenum box (PB) |



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