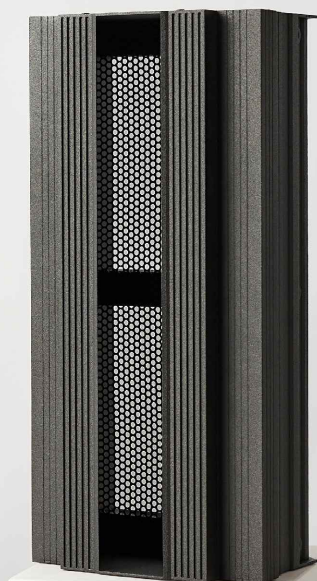


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Technical catalogue

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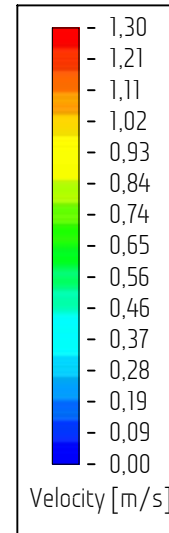
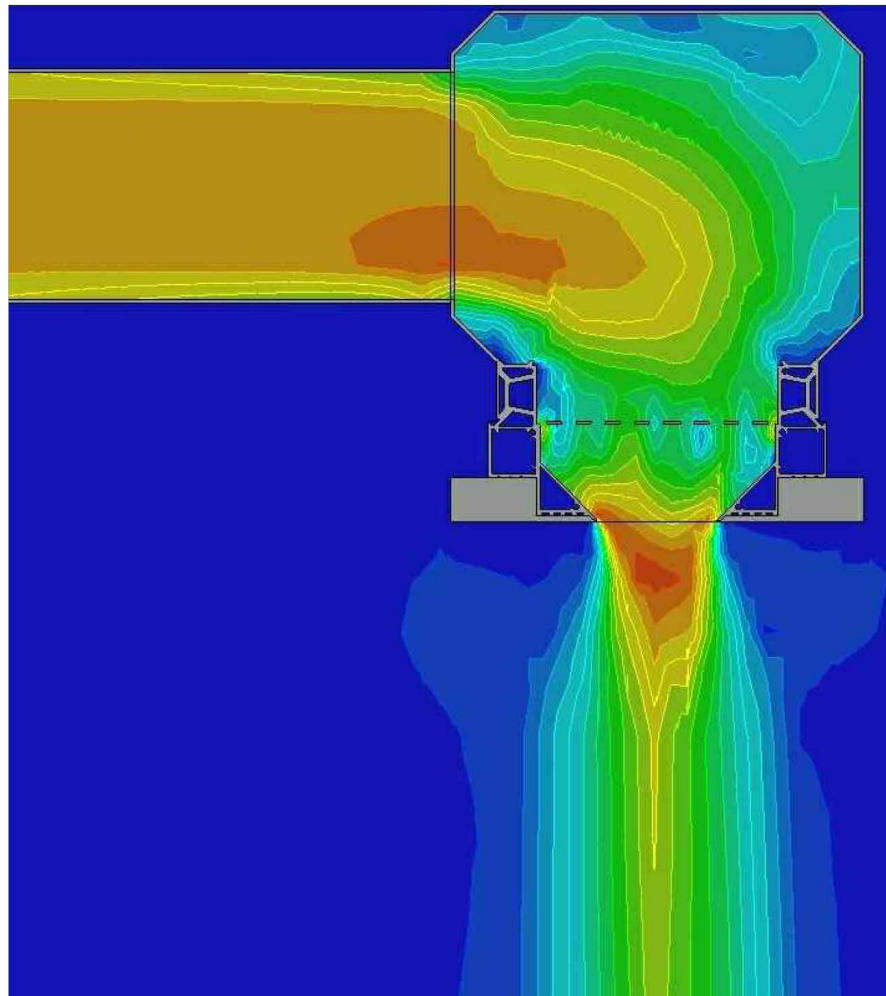
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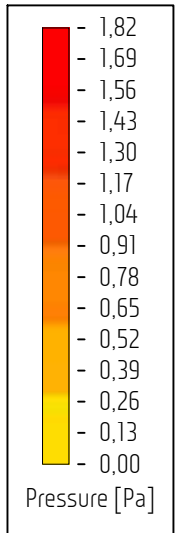
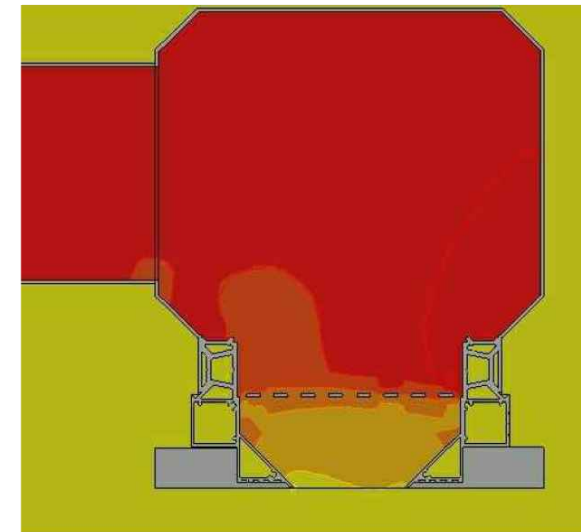
- Simulation of air flows	2
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- BASIC 10-40 linear diffusers specifications	4
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- BASIC 10-40 diffuser installation diagram	12
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Simulation of air flows for Basic 40 diffuser at the air flow rate of 144 (m³/h)/m

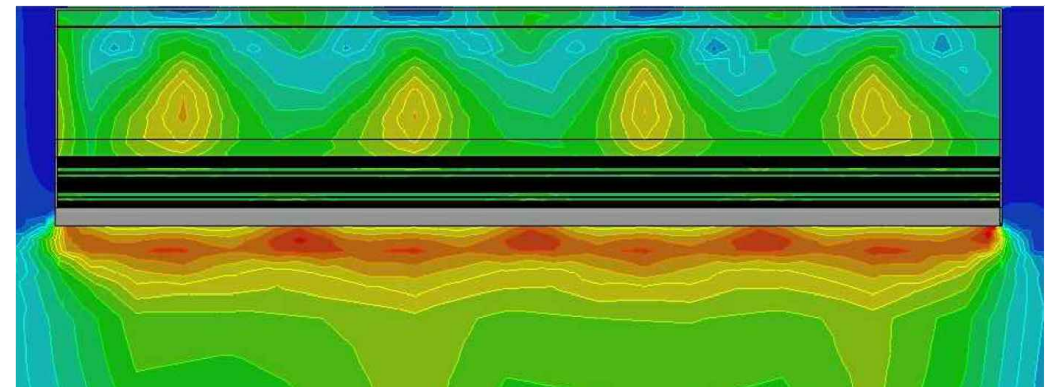
Air flow velocity profile in the diffuser cross section



Pressure drop profile in the diffuser cross section



Air flow velocity profile in the diffuser longitudinal section



BASIC 10-40 linear diffusers specifications

Diffuser cross section

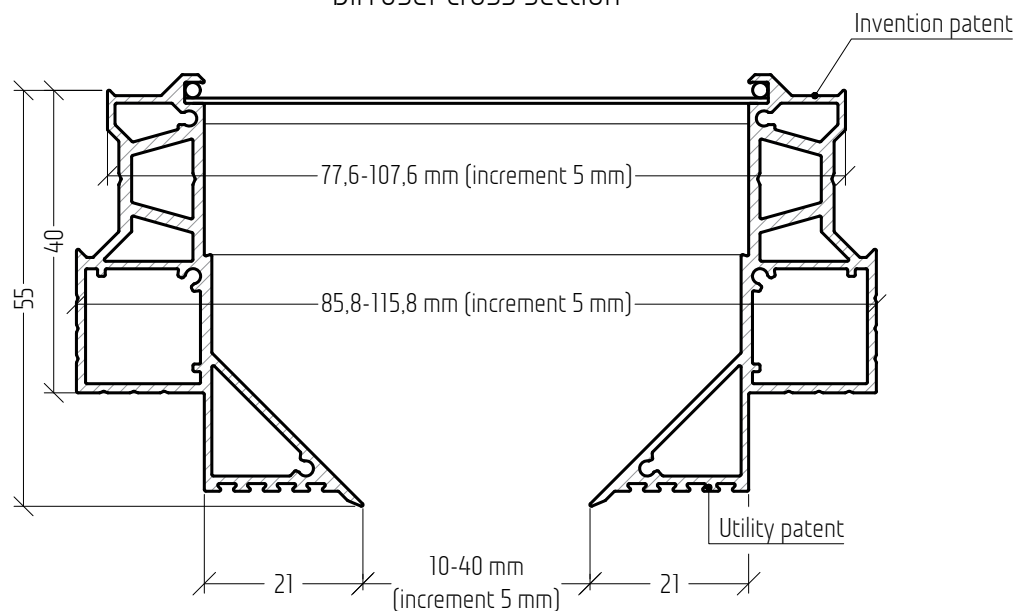
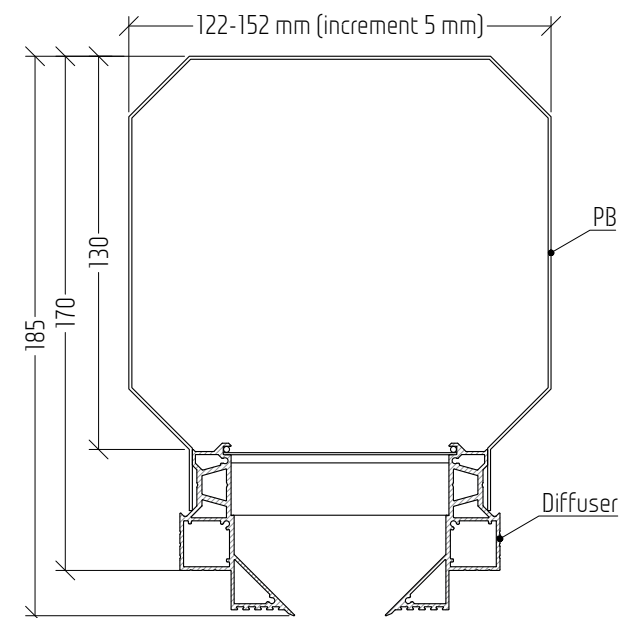


Diagram of the diffuser + PB assembly



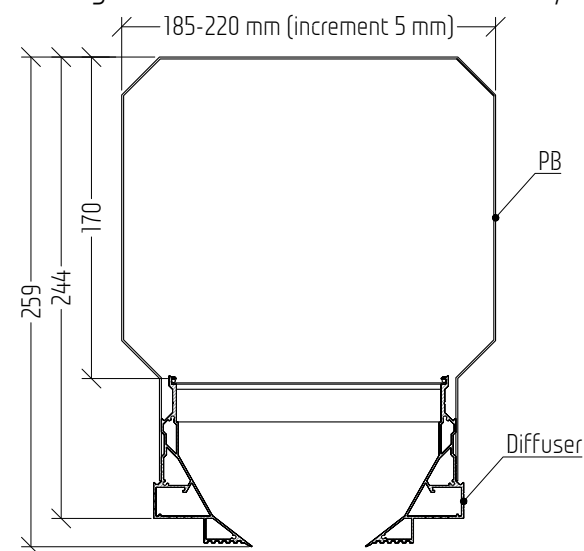
№	Model	Slot width, mm	Data for 1 linear meter															Air throw*, m					
			at V=1.0 m/s			at V=1.5 m/s			at V=2.0 m/s			at V=2.5 m/s			at V=3.0 m/s			at V=1.0 m/s		at V=2.0 m/s		at V=3.0 m/s	
			q _v , m ³ /h	ΔP _t , Pa	L _{WA} , dB(A)	q _v , m ³ /h	ΔP _t , Pa	L _{WA} , dB(A)	q _v , m ³ /h	ΔP _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	BASIC 10	10	36	0,85	21	54	1,70	27	72	2,28	33	90	3,90	37	108	5,52	40	1,30	0,20	2,60	0,95	3,80	1,80
2	BASIC 15	15	54	1,04		81	1,85		108	2,70		135	5,42		162	7,17		1,35	0,24	2,88	1,11	4,13	1,98
3	BASIC 20	20	72	1,23		108	2,16		144	3,30		180	5,60		216	8,81		1,40	0,28	3,16	1,28	4,45	2,15
4	BASIC 25	25	90	1,42		135	2,68		180	4,90		225	6,88		270	10,45		1,45	0,32	3,44	1,44	4,78	2,33
5	BASIC 30	30	108	1,56		162	3,20		216	5,41		270	8,16		324	12,10		1,50	0,35	3,70	1,60	5,10	2,50
6	BASIC 35	35	126	1,69		189	3,72		252	5,95		315	9,44		378	13,74		1,55	0,39	4,00	1,77	5,43	2,68
7	BASIC 40	40	144	1,82		216	4,24		288	6,75		360	10,72		432	15,38		1,60	0,43	4,28	1,93	5,75	2,85

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

*- Air throw is the distance from the supply opening of the diffuser to the section of the air jet, in which the core flow velocity is reduced to 0.2 m/s and 0.5 m/s.

Diagram of the diffuser + PB assembly

Diagram of the diffuser + PB assembly



№	Model	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	BASIC 45	45	162	0,75	21	243	2,44	27	324	4,13	33	405	6,98	37	486	9,83	40	1,03	0,28	1,60	0,99	2,00	1,33
2	BASIC 50	50	180	0,90		270	2,61		360	4,67		450	7,45		540	10,59		1,25	0,35	2,10	1,13	2,90	1,55
3	BASIC 55	55	198	1,06		297	2,78		396	4,90		495	7,93		594	11,36		1,48	0,43	2,60	1,26	3,80	1,78
4	BASIC 60	60	216	1,21		324	2,94		432	5,10		540	8,40		648	12,12		1,70	0,50	3,10	1,40	4,70	2,00
5	BASIC 65	65	234	1,36		351	3,15		468	5,45		585	8,87		702	12,89		1,93	0,58	3,60	1,54	5,60	2,23
6	BASIC 70	70	252	1,51		378	3,28		504	5,68		630	9,35		756	13,65		2,15	0,65	4,10	1,63	6,50	2,45
7	BASIC 75	75	270	1,67		405	3,45		540	5,90		675	9,82		810	14,41		2,38	0,73	4,60	1,81	7,40	2,68
8	BASIC 80	80	288	1,82		432	3,65		576	6,19		720	10,35		864	15,18		2,60	0,80	5,10	1,95	8,30	2,90

* - Air throw is the distance from the supply opening of the diffuser to the section of the air jet, in which the core flow velocity is reduced to 0.2 m/s and 0.5 m/s.

Assembly order code

BASIC -	60 -	B -	1000 -	A	+	BOX-	60 -	1000 -	STD
1	2.	3.	4.	5.					

Plenum box order code formation see page 9

- Series - Model:** "BASIC";
- Slot width:** 10-80 mm, increment 5 mm;
- Diffuser color:**
 - ~ standard black color is indicated with letter: **B** (RAL 9005);
 - ~ non-standard colors RAL are indicated in **0000** format; (painting in a non-standard color increases the cost of the diffuser by 20%).
- BASIC 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.

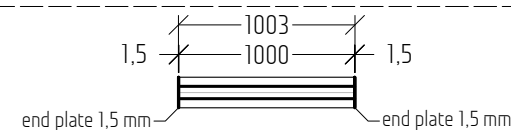
(* - the cost of the modular element with a length of 100 to 495 mm is equal to the cost of the modular element with a length of 500 mm);
- Presence of end plates/separators/connectors:**
 - 2** – stand-alone diffuser: element + 2 end plates on both sides (+3 mm);
 - A** – empty element;
 - B** – end 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 and a separator on one side (+1,5 mm);
 - G** – connectors on both sides;
 - H** – connectors and separators (+3 mm) on both sides;
 - I** – connectors on one side and connectors with a separator on the other side (+1,5 mm).

Note: 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

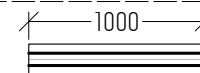
Stand-alone diffuser:

Elements for modular assembly:

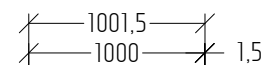
2



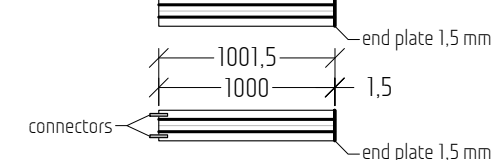
A



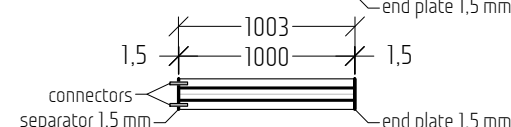
B



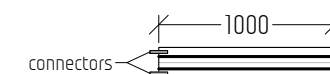
C



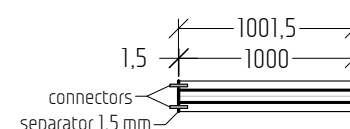
D



E



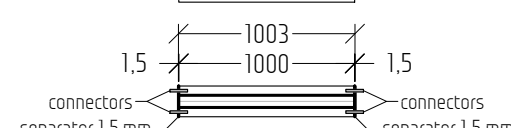
F



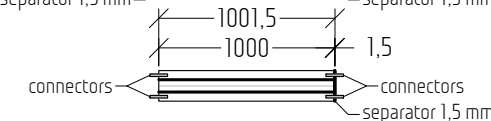
G



H



I



CORNER-BASIC corner diffusers order code formation

Assembly order code

CORNER-BASIC -	60 -	B -	S -	0
1.	2.	3.	4.	5.

- Series - Model: CORNER-BASIC** – "CORNER" – corner element;
"BASIC" – BASIC.
- Slot width:** 10-80 mm, increment 5 mm.
- Difusser color:**
 - ~ standard black color is indicated with letter: **B** (RAL 9005);
 - ~ non-standard colors RAL are indicated in **0000** format;
(painting in a non-standard color increases the cost of the diffuser by 20%).
- Configuration of the corner element:**
 - S** – slot is located in the ceiling;
 - IN** – slot is located in the wall (inside corner);
 - OUT** – slot is located in the wall (outside corner);
 - CUST** – it is possible to produce non-standard corner elements of any configuration with a 20% increase in cost.
- Presence of end plates:** CORNER-BASIC diffusers have no end plates on either side.

S

For models with a slot width of 10-40 mm, the length of each side of the corner element body is 238 mm, the length of the slot on each side is 200 mm (fig. 1);

For models with a slot width of 45-80 mm, the length of each side of the corner section body is 352 mm, the length of the slot on each side is 300 mm (fig. 2).

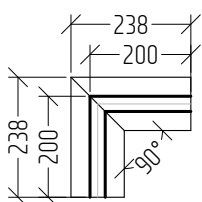


fig. 1

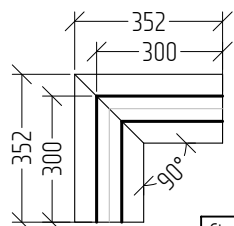


fig. 2

IN

For models with a slot width of 10-40 mm, the length of each side of the corner element body is 255 mm, the length of the slot on each side is 200 mm (fig. 3);

For models with a slot width of 45-80 mm, the length of each side of the corner element body is 390 mm, the length of the slot on each side is 300 mm (fig. 4).

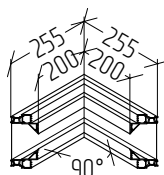


fig. 3

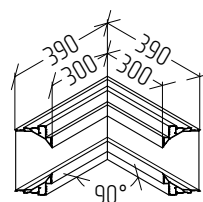


fig. 4

OUT

For models with a slot width of 10-40 mm, the length of both the corner section body and the slot on each side is 250 mm (fig. 5);

For models with a slot width of 45-80 mm, the length of both the corner section body and the slot on each side is 350 mm (fig. 6).

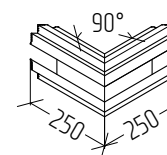


fig. 5

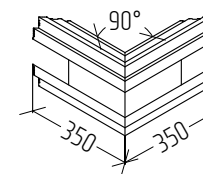


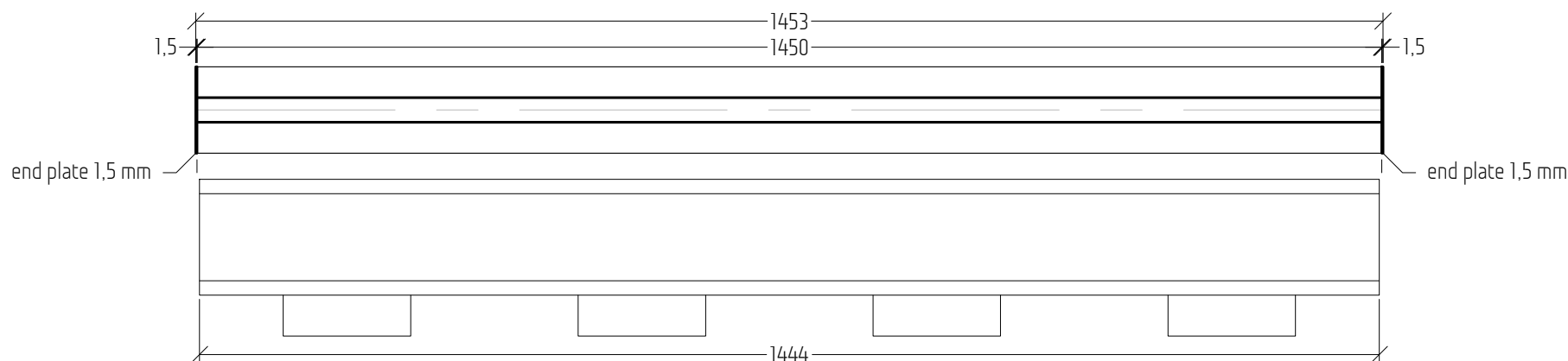
fig. 6

Order example / standard 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 RAL7047; with plenum box (PB) with spigots.

The order code should be: **BASIC-30-7047-1450-2 + BOX-30-1450-STD**

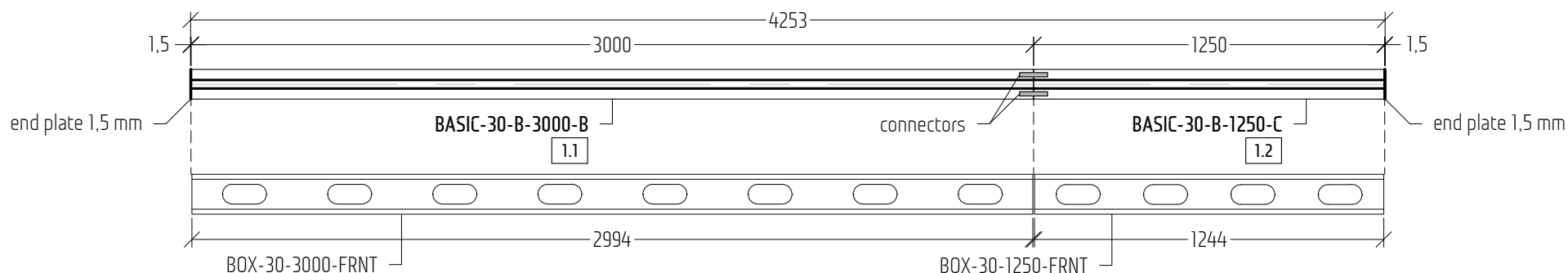


Modular diffuser, from 3000 mm

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

The order code should be: **1.1 BASIC-30-B-3000-B + BOX-30-3000-FRNT**

1.2 BASIC-30-B-1250-C + BOX-30-1250-FRNT



Order example of a 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 black. For the supply and intake air diffuser a separator should be considered on one side.

Solution:

Modular assembly with the individual order code for each element.

1.1 BASIC-60-B-2700-C

Element №1 order code and drawing

end plate 1,5 mm

1.2 CORNER-BASIC-60-B-S-0

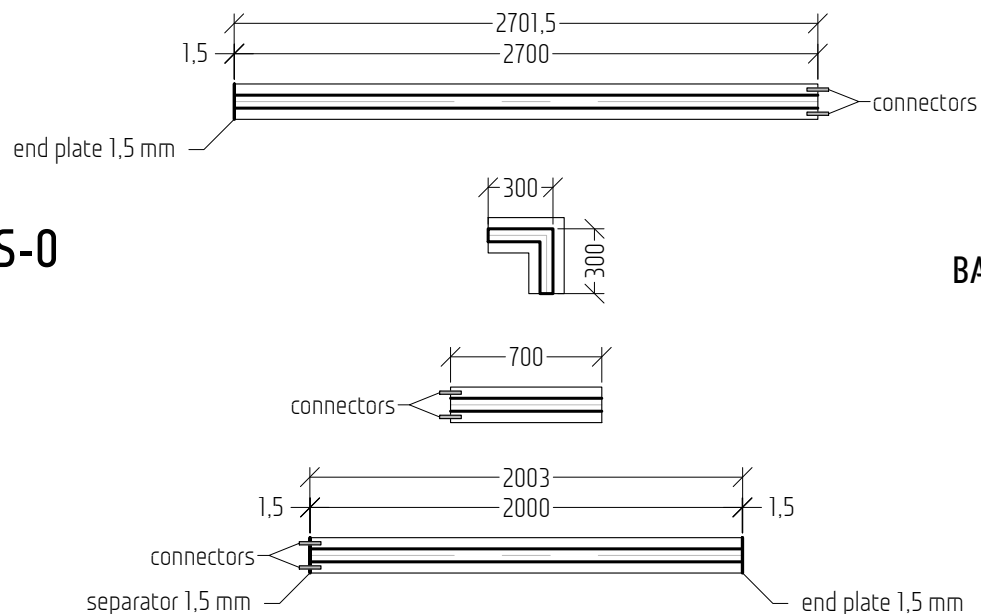
Element №2 order code and drawing

1.3 BASIC-60-B-700-E

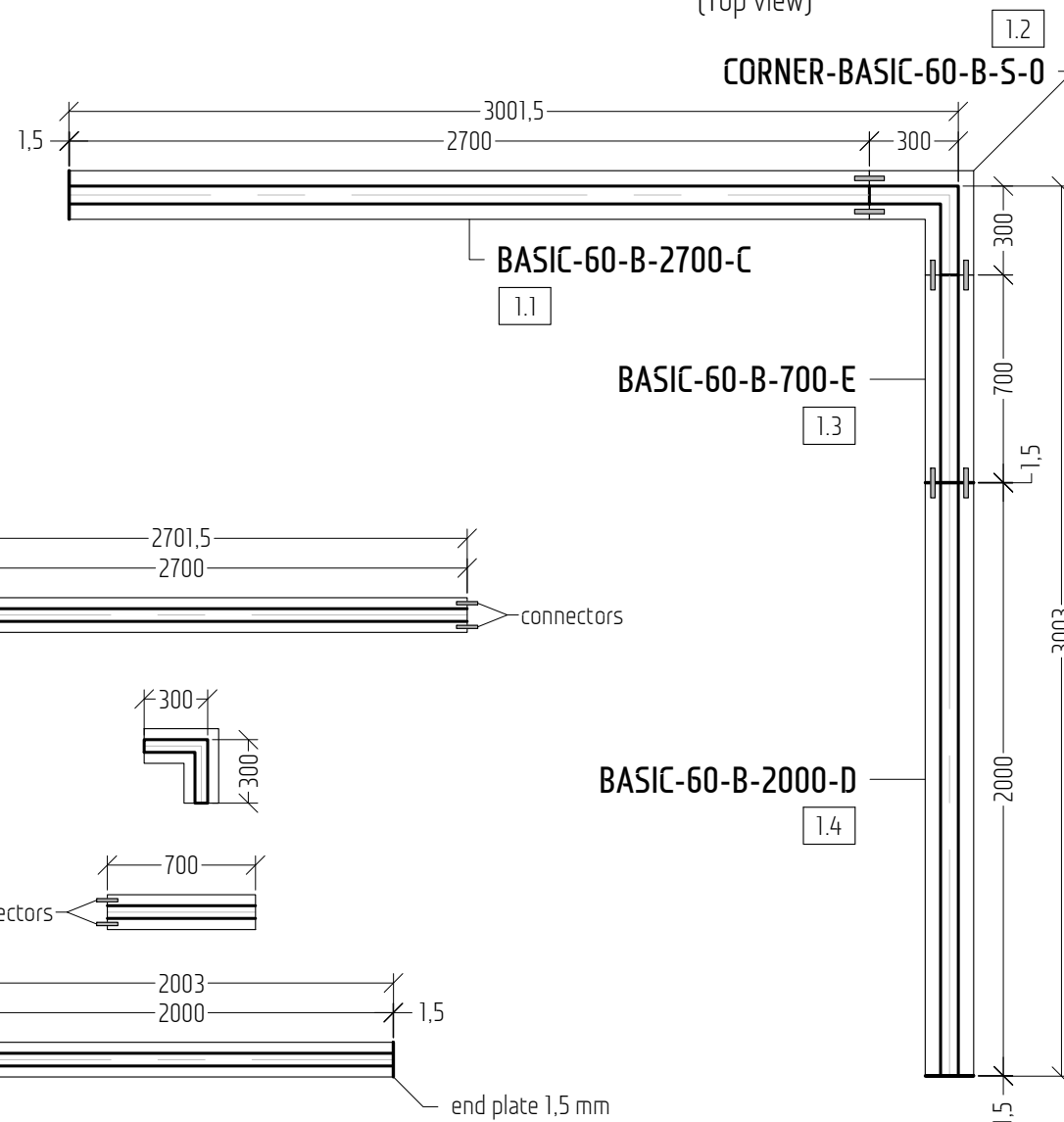
Element №3 order code and drawing

1.4 BASIC-60-B-2000-D

Element №4 order code and drawing



General view of the modular diffuser
(Top view)



Configurations and order codes of plenum boxes for linear diffusers

1. Plenum box (PB) designation: BOX;
2. The slot width of the corresponding diffuser: 10-80 mm, increment 5 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 10, 11);

PB order code

BOX -	60 -	1000 -	STD
1.	2.	3.	4.

4. Plenum box (PB) versions:

STD – PB with side spigots;

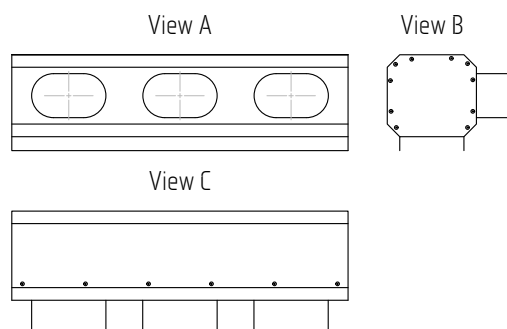
FRNT – PB with top spigots (located opposite the slot);

NULL – PB without spigots;

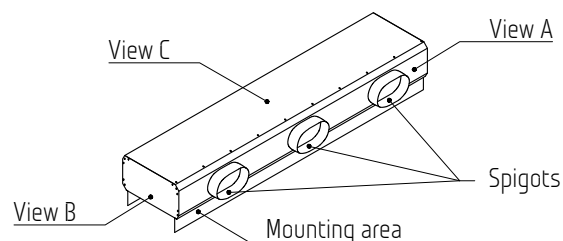
CUST – non-standard PB can be manufactured with a 20% increase in cost.

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

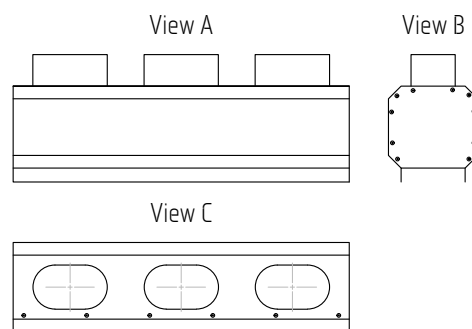
STD - side spigost



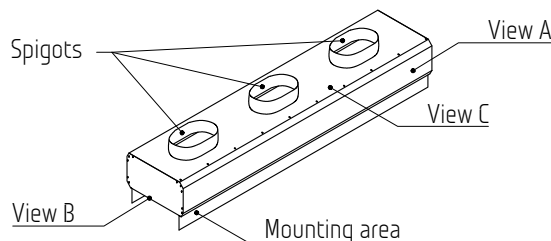
PB with spigots should be selected according to the technical catalogue (see pages 10, 11).



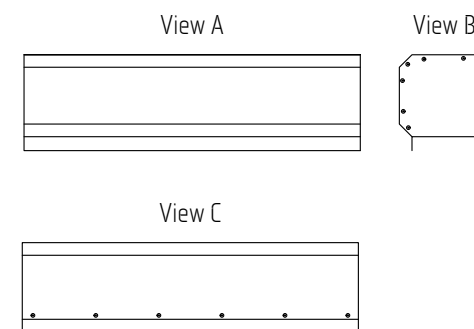
FRNT - top spigost



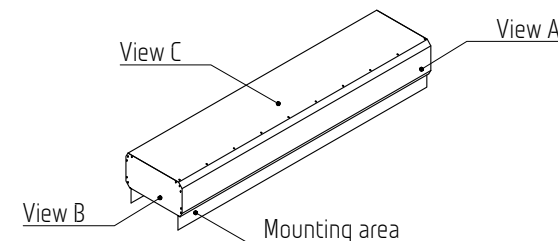
PB with spigots should be selected according to the technical catalogue (see pages 10, 11).



NULL - without spigost

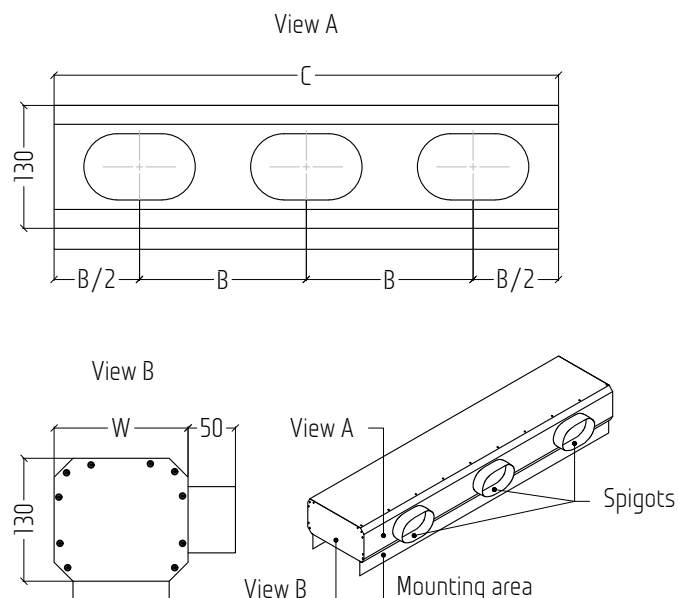


Spigots are installed on the site.
The number and dimensions of the spigots are specified in the technical catalogue (see pages 10, 11).



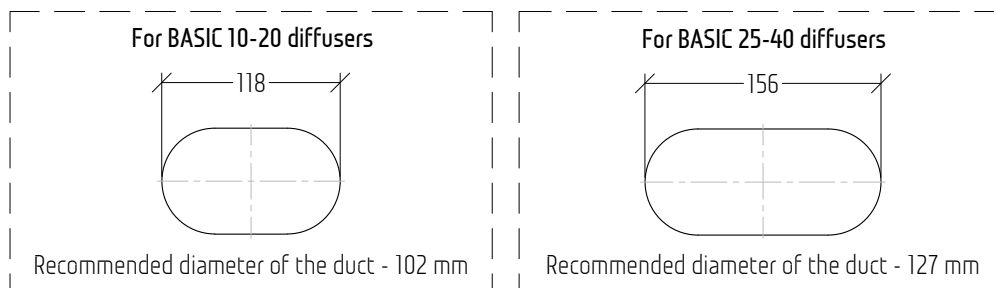
Specifications of PB for BASIC 10-40 linear diffusers

Schematic drawing of PB with side spigots (STD) for BASIC 10-40 diffusers



Plenum box (PB) specifications								
Diffuser slot width, mm	10	15	20	25	30	35	40	Number of spigots (N), pcs
Diffuser length (L), mm	150-900	150-520	150-390	185-490	185-410	185-355	185-355	1
	905-1800	525-1040	395-780	495-980	415-830	360-700	360-610	2
	1805-2700	1045-1560	785-1170	985-1470	835-1245	705-1050	615-915	3
	2705-3000	1565-2080	1175-1560	1475-1960	1250-1660	1055-1400	920-1220	4
		2085-2600	1565-1950	1965-2450	1665-2075	1405-1750	1225-1525	5
		2605-3000	1955-2340	2455-2940	2080-2490	1755-2100	1530-1830	6
			2345-2730	2945-3000	2495-2905	2105-2450	1835-2135	7
			2735-3000		2910-3000	2455-2800	2140-2440	8
						2805-3000	2445-2745	9
							2750-3000	10
PB width (W), mm	122	127	132	137	142	147	152	
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:

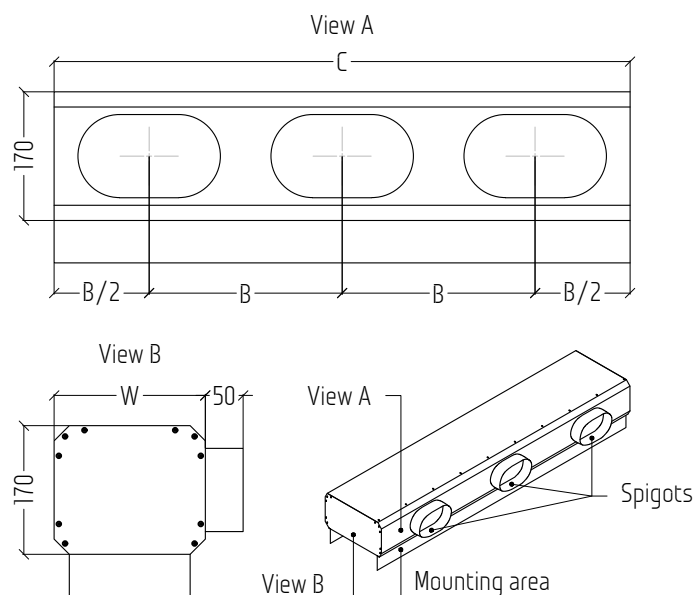


Notes:

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.

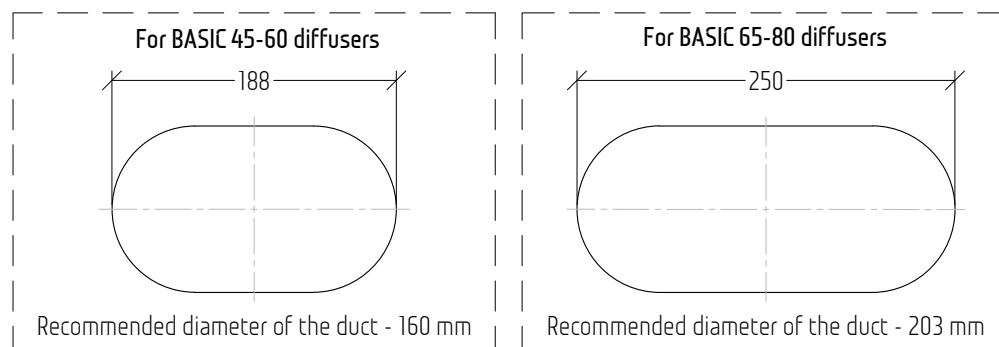
Specifications of PB for BASIC 45-80 linear diffusers

Schematic drawing of PB with side spigots (STD) for BASIC 45-80 diffusers



Plenum box (PB) specifications									
Diffuser slot width, mm	45	50	55	60	65	70	75	80	Number of spigots (N), pcs
Diffuser length (L), mm	220-445	220-420	220-420	220-420	280-545	280-545	280-545	280-545	1
	450-890	425-800	425-730	425-670	550-960	550-900	550-840	550-820	2
	895-1335	805-1200	735-1095	675-1005	965-1440	905-1350	845-1260	825-1170	3
	1340-1780	1205-1600	1110-1460	1010-1340	1445-1920	1355-1800	1265-1680	1175-1560	4
	1785-2225	1605-2000	1465-1825	1345-1675	1925-2400	1805-2250	1685-2100	1565-1950	5
	2230-2670	2005-2400	1830-2190	1680-2010	2405-2880	2255-2700	2105-2520	1955-2340	6
	2675-3000	2405-2800	2195-2555	2015-2345	2885-3000	2705-3000	2525-2940	2345-2730	7
		2805-3000	2560-2920	2350-2680			2945-3000	2735-3000	8
			2925-3000	2685-3000					9
PB width (W), mm	185	190	195	200	205	210	215	220	
PB length (C), mm	L-6								
Distance between the axes of the spigots (B), mm	$\frac{C}{N}$								

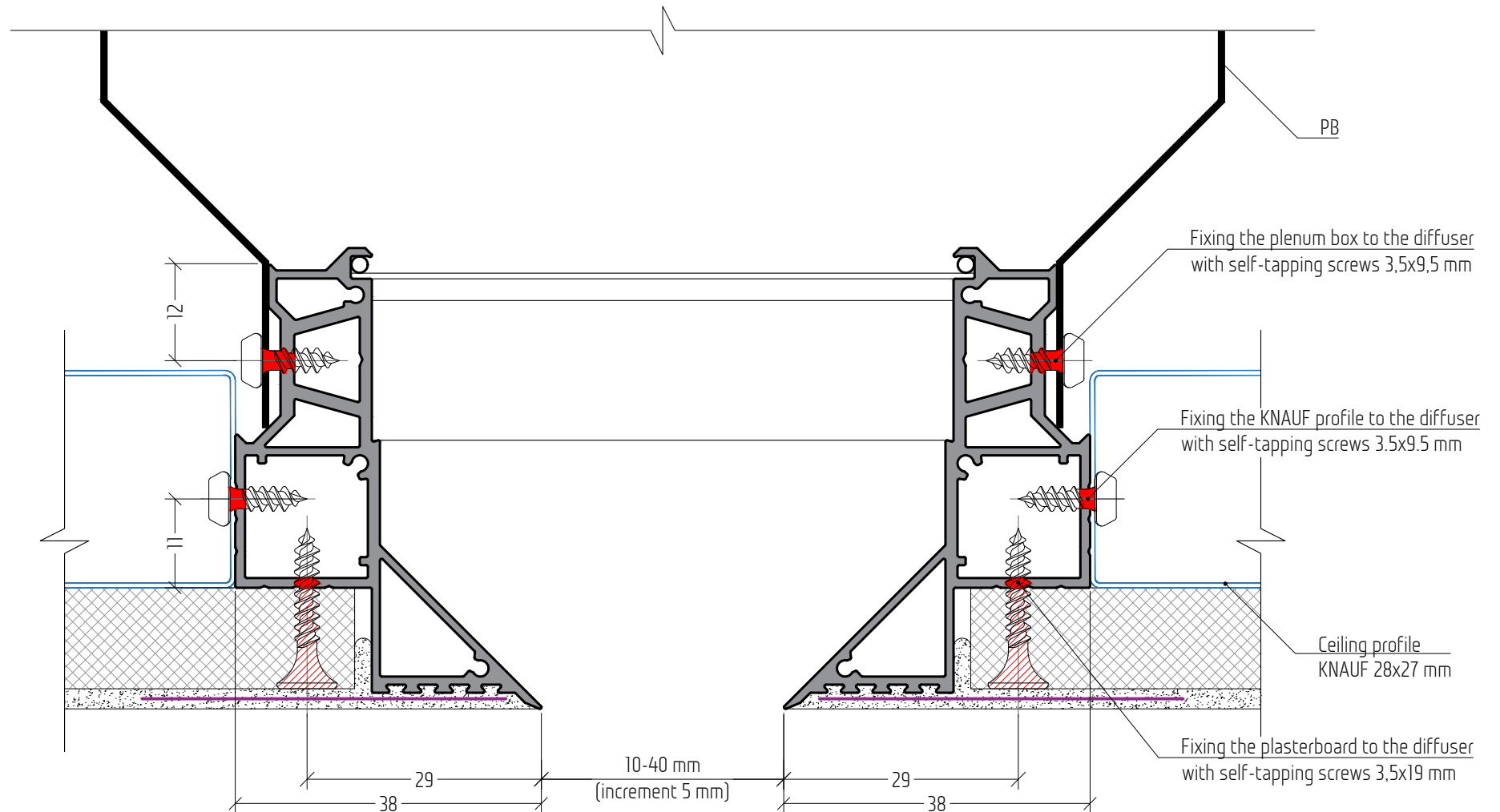
Dimensions of spigots for connection to the flexible duct:



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.

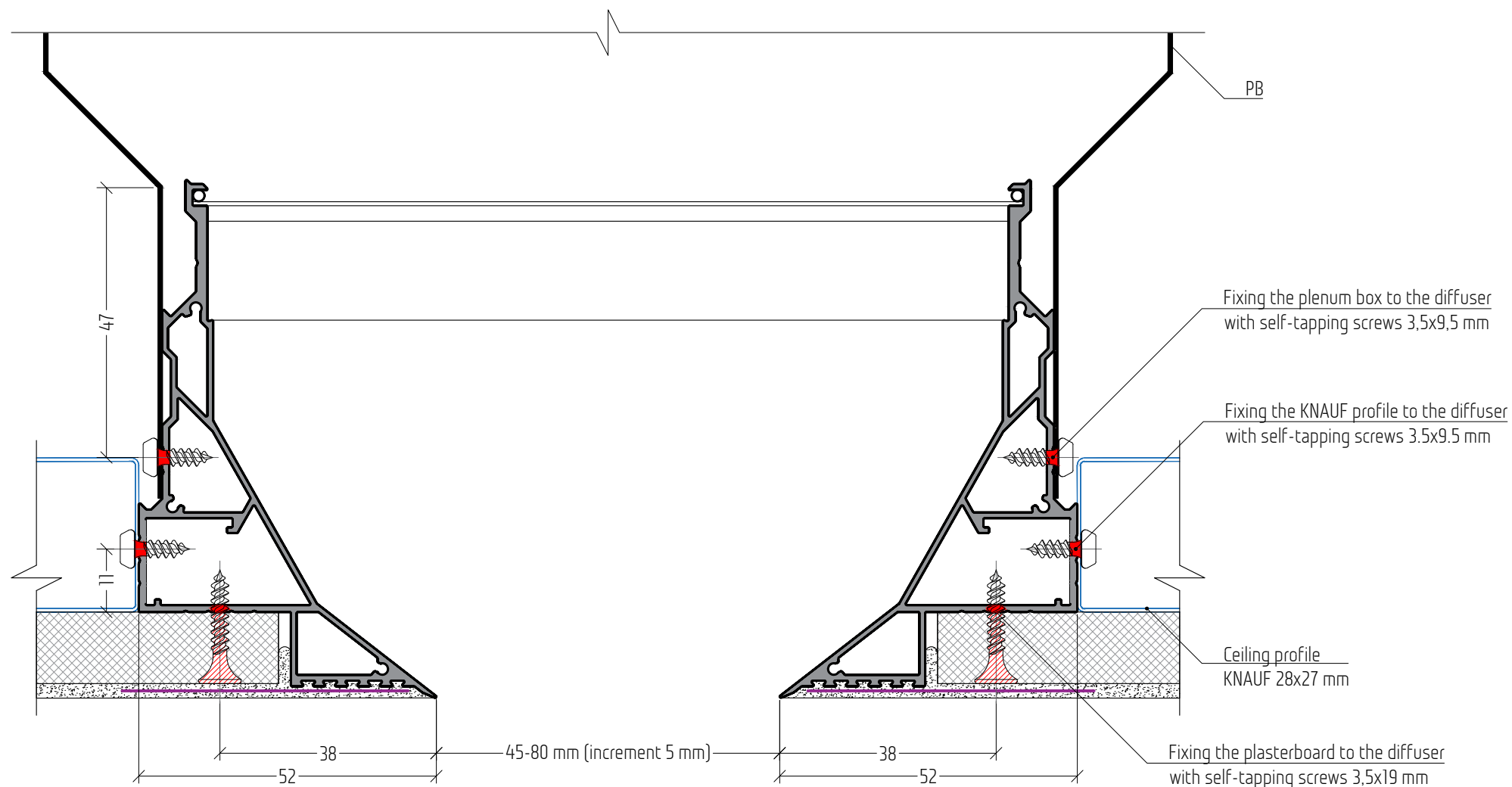
BASIC 10-40 diffuser installation diagram



Legend:

- | | | |
|--------------------------------------|------------------------|-----------------|
| KNAUF plasterboard 12.5 mm | Diffuser | Fiberglass tape |
| Drill points for self-tapping screws | Profile KNAUF 28x27 mm | |
| Putty 2.5 mm | Plenum box (PB) | |

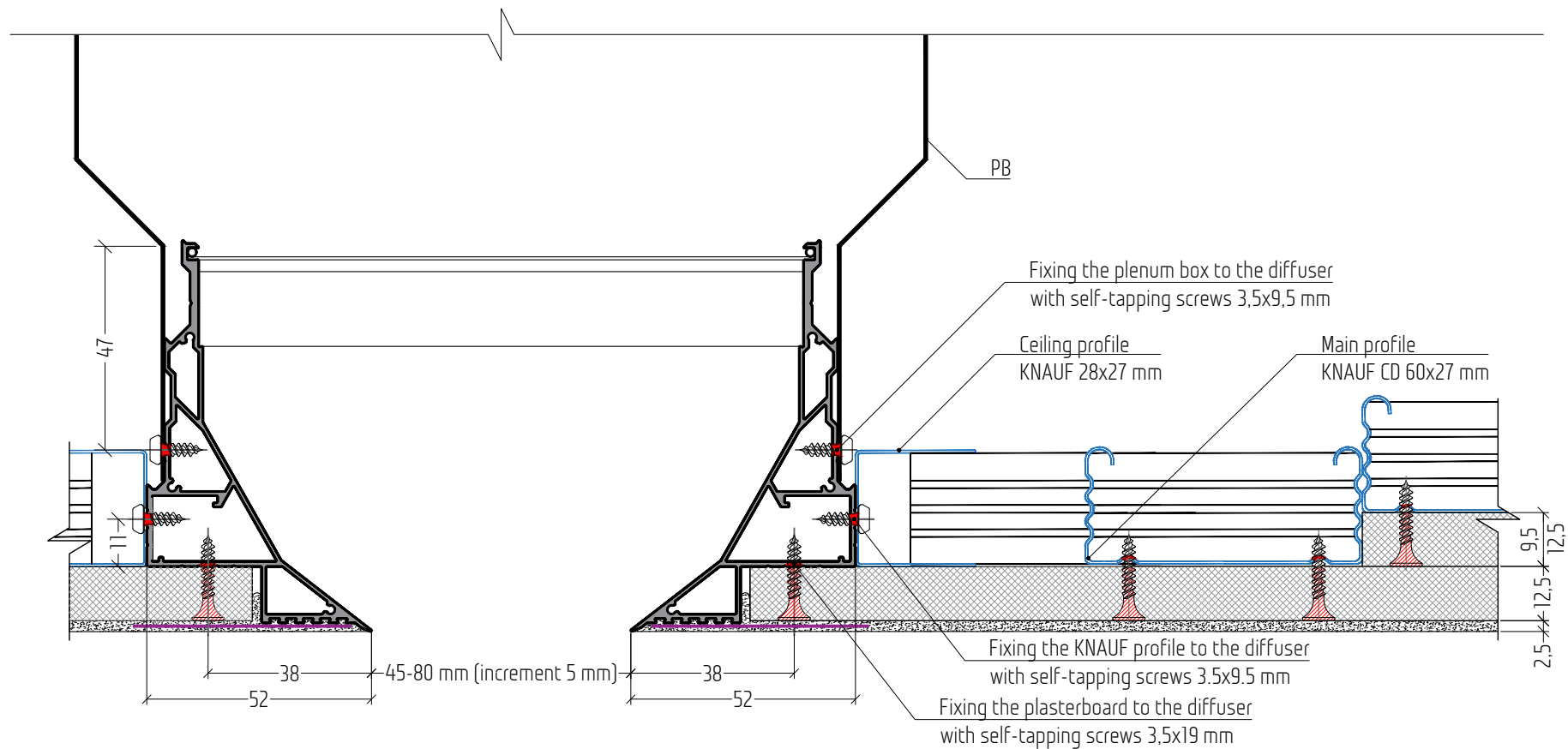
BASIC 45-80 diffuser installation diagram



Legend:

- | | | |
|---|--|---|
|  |  |  |
|  |  | |
|  |  | |

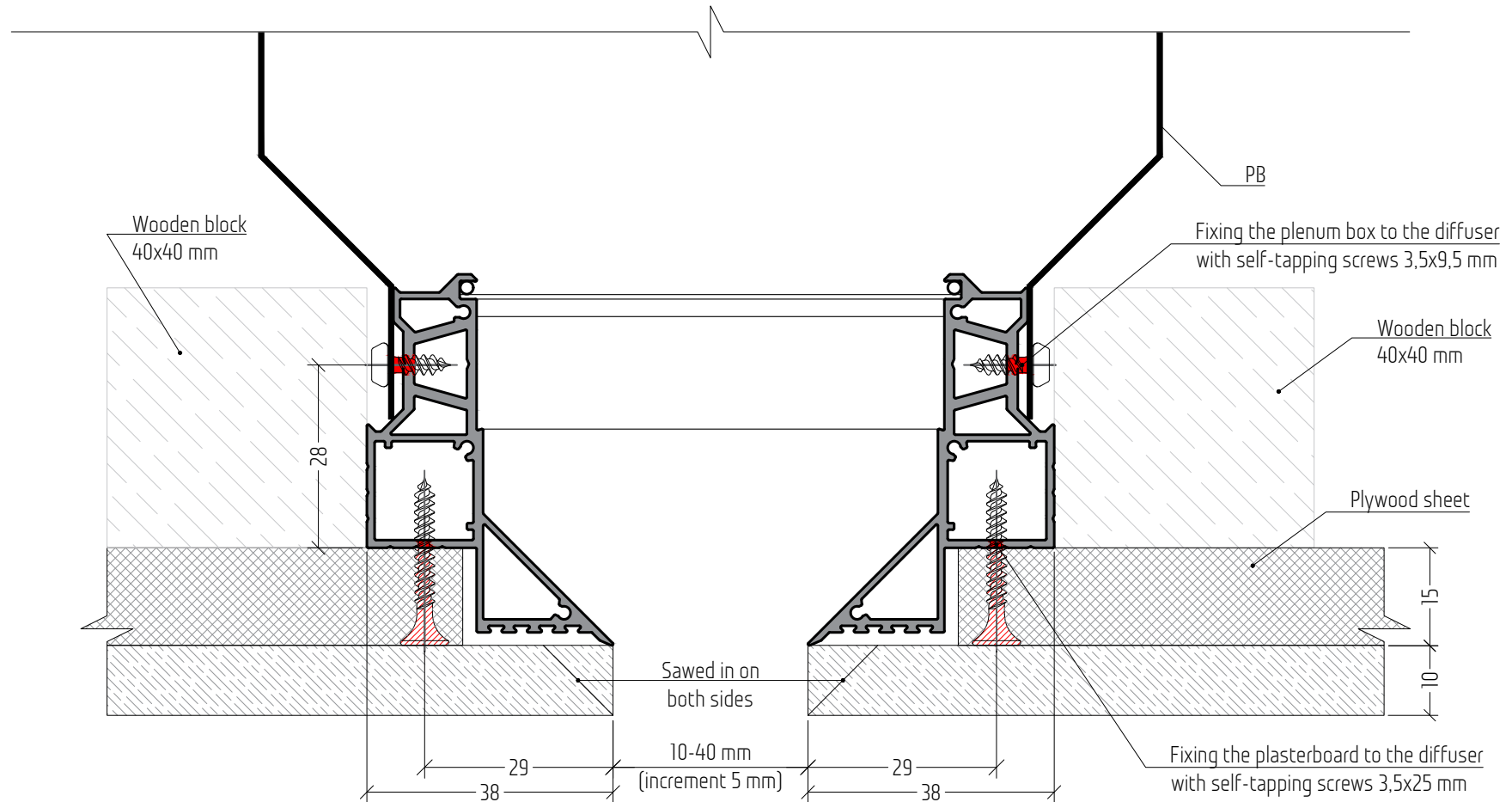
Diffuser installation diagram into the ceiling /gypsum plasterboard, 2 layers/



Legend:

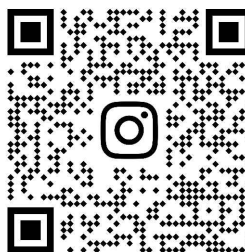
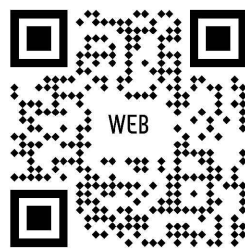
- | | | | | | |
|---|--------------------------------------|---|------------------------|---|-----------------|
|  | KNAUF plasterboard 12.5 mm |  | Diffuser |  | Fiberglass tape |
|  | Drill points for self-tapping screws |  | Profile KNAUF 28x27 mm | | |
|  | Putty 2.5 mm |  | Plenum box (PB) | | |

Diffuser installation diagram into the wooden paneling



Legend:

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



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DIFFUSERS

edition
10.2024