

Products under the LUFTOMET® Flat name offer a comprehensive system of compatible components – plenum boxes and grilles. The Flat system is designed to solve ventilation needs primarily in wooden buildings and the renovation of family houses and apartments. It is ideal for situations where minimal spatial requirements for the ventilation distribution are essential. Additionally, LUFTOMET® Flat grilles provide an excellent aesthetic solution.

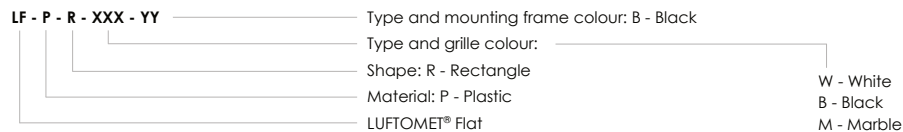
## Our Flat grilles are:

- elegant aesthetic solution for air supply and exhaust
- suitable for wall and ceiling installation
- in rectangular shape with an external dimension of 232 x 132 mm
- fully compatible with all types of LUFTOMET® Flat Plenum Boxes and extension pieces
- supplied with a mounting frame with neodymium magnets
- available in a wide range of colours and shapes
- for the Hexagon variant - possibility to regulate the air flow rate and throw lengths
- made of flame-retardant PETG

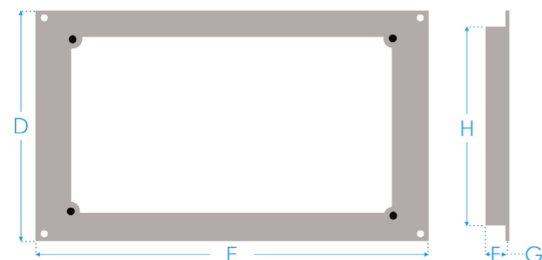
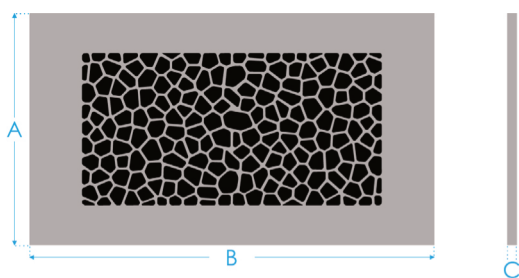
### Package includes:

Grille with frame (inset). Packed in bubble wrap.

## Coding:



## Grille and Mounting Frame Dimensions:

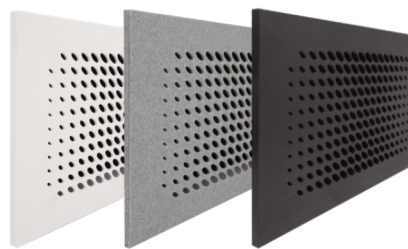


units (mm)	
A	132
B	232
C	5.6
D	125
E	225
F	15
G	2
H	107

## Basic Types:

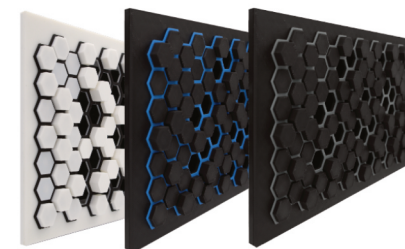
### DROPLETS - DX

ID: LF-P-R-DW-PB  
LF-P-R-DB-PB  
LF-P-R-DM-PB



### HEXAGON - HXX

ID: LF-P-R-HBB-PB  
LF-P-R-HBW-PB  
LF-P-R-HWB-PB



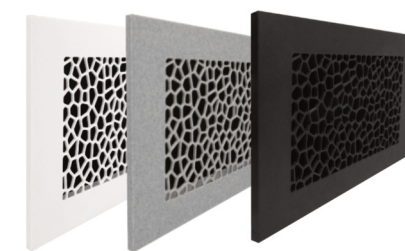
### STITCHES - SX

ID: LF-P-R-SW-PB  
LF-P-R-SB-PB  
LF-P-R-SM-PB



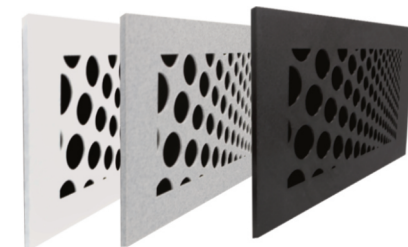
### VORONOI - VX

ID: LF-P-R-VW-PB  
LF-P-R-VB-PB  
LF-P-R-VM-PB



### BUBBLES - BX

ID: LF-P-R-BB-PB  
LF-P-R-BW-PB  
LF-P-R-BM-PB



MADE IN CZECH REPUBLIC

LUFTOMET® Flat Grilles



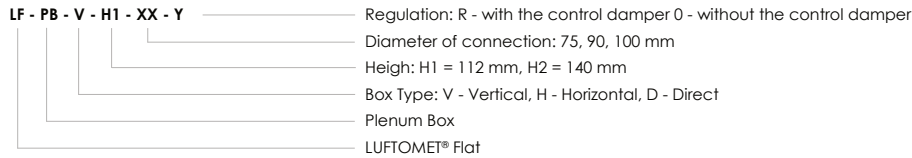
## Our Flat Plenum Boxes are:

- sized for flexible plastic pipes with a diameter of 75 and 90 mm and metal ducting SPIRO 100 mm
- manufactured in 15 basic variants, where it is possible to choose whether the spigot contains a control damper or not
- sized to be easily installed in plasterboard, drywall, partitions or bulkhead, boxes or false ceiling
- thanks to the extension pieces, it can also be used in masonry constructions
- equipped with sealing rings to ensure a high tightness of the connection between the plenum box and the duct
- suitable for the supply and exhaust of normally polluted air (without chemical substances, etc.)
- compatible with all types of LUFTOMET® Flat Grilles
- made of hygienic ABS

### Package includes:

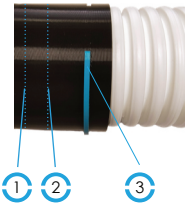
Box with spigot with or without a control damper. The package for the 75 and 90 mm dimensions includes a sealing and a locking ring. For the 100 mm size, the sealing ring is fitted on the spigot. Supplied without anchoring accessories. Packed in stretch film.

### Coding:



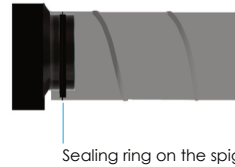
### Duct Connection:

FLEXIBLE PLASTIC PIPES:  
 Ø 75 mm  
 Ø 90 mm



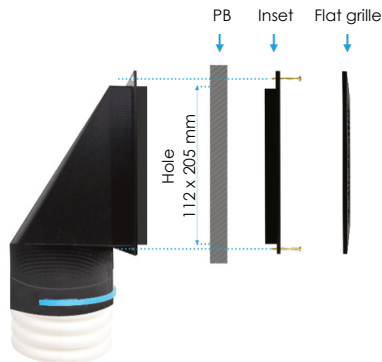
- 1 Stop on the pipe
- 2 Sealing ring between the 1st and 2nd rib of the pipe
- 3 Locking ring

SPIRAL WOUND METAL DUCT:  
 Ø 100 mm

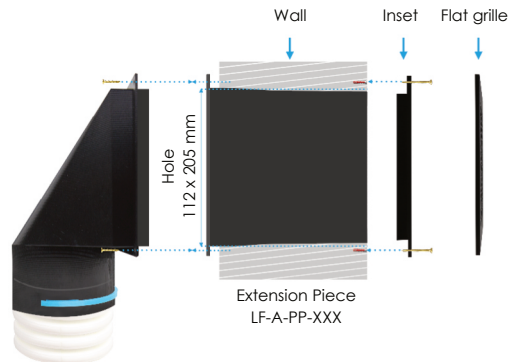


### Examples of Grille Installation:

Plasterboard



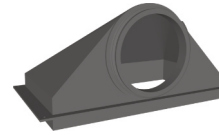
Wall



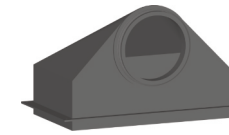
### Basic Types:

VERTICAL

LF-PB-V-H1



LF-PB-V-H2

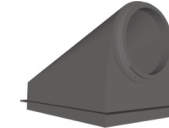


HORIZONTAL

LF-PB-H-H1

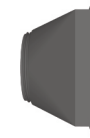
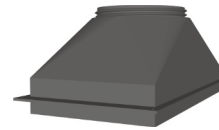


LF-PB-H-H2



DIRECT

LF-PB-D-H1



### LUFTOMET® Flat Extension Piece

It is used to extend LUFTOMET® Flat plenum boxes. It is mainly used in cases of passage through masonry constructions. The extension piece is made of galvanized steel.

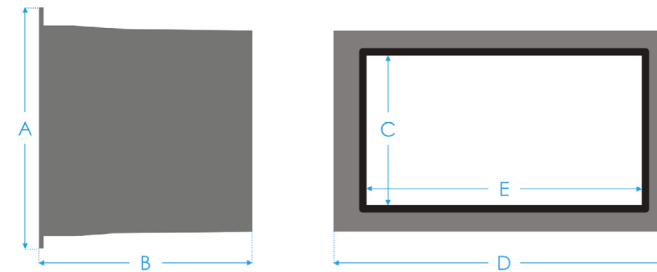
#### Installation:

On one side of the wall, the box is connected to the extension piece with screws. The hole in the wall must be filled with low-expansion mounting foam to prevent deformation. The mounting frame and the Flat grille are then inserted into the extension piece.

#### Package includes:

Extension piece, 4x dowels, 4x anchor screw, 4x self-tapping screw.

The extension piece is NOT included in the delivery of LUFTOMET® Flat plenum boxes and grilles.



ID: LF-A-PP-100  
 LF-A-PP-150  
 LF-A-PP-200

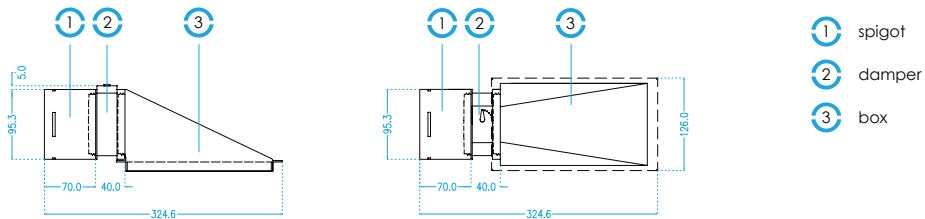
	LF-A-PP	A	B	C	D	E
units (mm)	100	154	123	108	245	197
	150	154	173	108	245	197
	200	154	223	108	245	197



## Dimensions:

Box type/ connection	Horizontal - H1	Horizontal - H2	Vertical - H1	Vertical - H2	Direct	Connecting Spigots
75 mm						
90 mm						
100 mm						
View into the box						

### Example of installation of manually adjustable damper on the LUFTOMET® Flat box



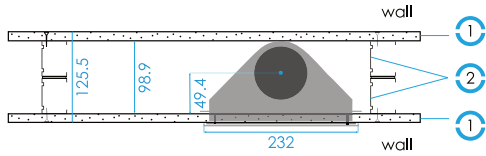
MADE IN CZECH REPUBLIC  
LUFTOMET® Flat Box



## Construction Details:

Installation in partition or bulkhead

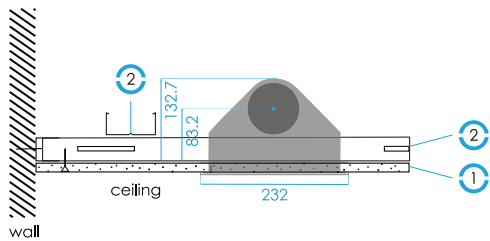
**LF-PB-V-H1** / floor plan



- ① plasterboard 12,5 mm
- ② profile CW 50 mm

Ceiling installation, under profile installation

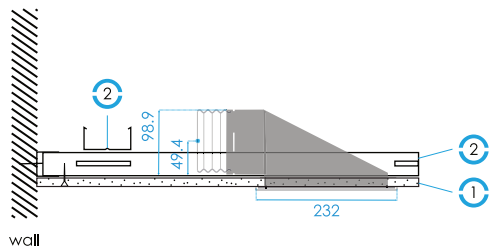
**LF-PB-V-H2** / section view



- ① plasterboard 12,5 mm
- ② profile R-CD 27 mm

Ceiling installation, installation between profiles

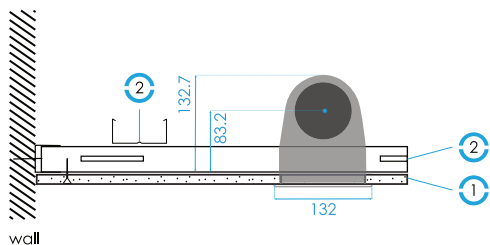
**LF-PB-H-H1** / section view



- ① plasterboard 12,5 mm
- ② profile R-CD 27 mm

Ceiling installation, installation between profiles

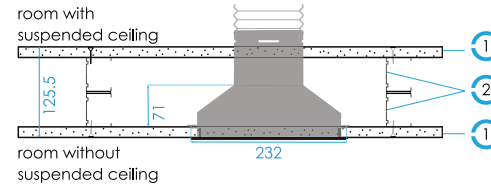
**LF-PB-H-H2** / section view



- ① plasterboard 12,5 mm
- ② profile R-CD 27 mm

Installation in partition or bulkhead

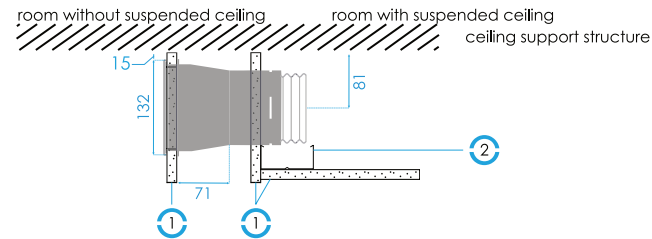
**LF-PB-D-H1** / floor plan



- ① plasterboard 12,5 mm
- ② profile CW 50 mm

Installation in partition or bulkhead

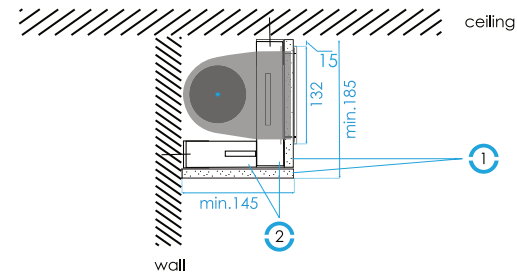
**LF-PB-D-H1** / section view



- ① plasterboard 12,5 mm
- ② profile CW 50 mm

Installation in the box (false beam)

**LF-PB-H-H2** / section view



- ① plasterboard 12,5 mm
- ② profile CW 50 mm

## Sound Power Levels A, LWA (dB):

(values for supply air)

Type	Size	Variant	Air flow (m³/h)						
			15	30	45	60	75	90	105
Grilles FLAT	100	Voronoi	<20	<20	<20	<20	<23	<26	<30
		Hexagon 1	<20	<20	<20	<20	<23	<27	<31
		Hexagon 2	<20	<20	<20	<21	<25	<31	<35
		Droplets	<20	<20	<20	<21	<24	<28	<33

Measured according to: EN ISO 5135  
Background correction according to: EN ISO 3741  
Calculation of levels according to: EN ISO 3741

MADE IN CZECH REPUBLIC  
Construction details:



## Pressure Drop Values $\Delta P$ (Pa) Box + Grille:

$P_{tot} = P_{stat} + P_{dyn}$  Values for supply and exhaust air.

LUFTOMET® Flat		Air flow (m³/h)														
Boxes	Grilles	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150
Vertical 75	Voronoi	0.8	1.9	3.7	6.3	9.6	13.5	18.2	23.6	29.7	36.5	44.0	52.1	61.0	70.6	81.0
	Hexagon 1	0.9	2.1	4.1	6.8	10.1	14.2	19.0	24.5	30.8	37.7	45.4	53.8	62.9	72.7	83.2
	Hexagon 2	1.3	3.4	6.3	10.3	15.2	21.1	28.0	35.9	44.8	54.8	65.8	77.8	91.0	105.2	120.6
	Droplets	1.6	3.0	5.1	7.8	11.2	15.4	20.4	26.3	33.3	41.2	50.4	60.7	72.4	85.4	99.8
	Stitches	1.5	3.0	5.0	7.6	10.9	14.9	19.8	25.5	32.2	40.0	48.9	58.9	70.2	82.9	97.0
	Bubbles	1.6	3.0	5.1	7.9	11.3	15.5	20.6	26.6	33.6	41.6	50.8	61.3	73.0	86.1	100.7
Vertical 90	Voronoi	0.8	1.9	3.6	6.0	9.0	12.7	17.1	22.2	28.0	34.6	41.9	50.0	58.8	68.5	79.1
	Hexagon 1	0.9	2.1	3.9	6.4	9.6	13.4	17.9	23.1	29.0	35.7	43.2	51.5	60.6	70.5	81.3
	Hexagon 2	1.3	3.3	6.1	9.8	14.4	19.9	26.3	33.8	42.3	51.9	62.7	74.6	87.7	102.1	117.8
	Droplets	1.6	3.0	4.9	7.4	10.6	14.5	19.2	24.8	31.4	39.1	48.0	58.2	69.8	82.8	97.5
	Stitches	1.6	2.9	4.8	7.2	10.3	14.0	18.6	24.0	30.4	37.9	46.5	56.5	67.7	80.4	94.7
	Bubbles	1.6	3.0	5.0	7.5	10.7	14.6	19.3	25.0	31.7	39.5	48.4	58.7	70.4	83.5	98.3
Vertical 100	Voronoi	0.6	1.5	3.0	5.2	8.1	11.6	15.7	20.4	25.8	31.7	38.1	45.2	52.7	60.8	69.4
	Hexagon 1	0.7	1.7	3.3	5.6	8.6	12.2	16.4	21.3	26.7	32.7	39.4	46.6	54.3	62.6	71.4
	Hexagon 2	1.1	2.6	5.1	8.6	12.9	18.1	24.1	31.1	38.9	47.6	57.1	67.4	78.6	90.6	103.4
	Droplets	1.2	2.4	4.1	6.5	9.5	13.2	17.6	22.8	28.9	35.8	43.7	52.6	62.5	73.5	85.6
	Stitches	1.2	2.3	4.0	6.3	9.2	12.8	17.0	22.1	28.0	34.7	42.4	51.0	60.7	71.4	83.2
	Bubbles	1.2	2.4	4.2	6.5	9.5	13.3	17.7	23.0	29.1	36.1	44.1	53.1	63.1	74.1	86.4
Horizontal 75	Voronoi	0.7	2.0	4.1	7.0	10.5	14.8	19.8	25.5	31.9	39.1	47.0	55.6	64.9	75.0	85.8
	Hexagon 1	0.8	2.3	4.5	7.5	11.2	15.6	20.7	26.5	33.1	40.4	48.5	57.3	66.8	77.2	88.2
	Hexagon 2	1.2	3.6	7.0	11.4	16.7	23.1	30.4	38.8	48.2	58.7	70.3	83.0	96.8	111.7	127.8
	Droplets	1.4	3.3	5.6	8.6	12.3	16.8	22.2	28.5	35.8	44.2	53.8	64.7	77.0	90.6	105.8
	Stitches	1.3	3.2	5.5	8.4	12.0	16.3	21.5	27.6	34.7	42.9	52.2	62.8	74.7	88.0	102.8
	Bubbles	1.4	3.3	5.7	8.7	12.4	17.0	22.4	28.7	36.1	44.6	54.3	65.3	77.6	91.4	106.7
Horizontal 90	Voronoi	0.9	2.2	4.1	6.7	9.8	13.5	17.9	22.9	28.5	34.8	41.8	49.5	58.0	67.3	77.3
	Hexagon 1	1.0	2.5	4.5	7.2	10.4	14.2	18.7	23.8	29.5	36.0	43.2	51.1	59.7	69.2	79.5
	Hexagon 2	1.5	3.9	7.1	10.9	15.6	21.1	27.5	34.8	43.0	52.3	62.6	74.0	86.5	100.2	115.1
	Droplets	1.8	3.5	5.7	8.3	11.5	15.4	20.0	25.5	31.9	39.4	47.9	57.7	68.8	81.3	95.3
	Stitches	1.8	3.5	5.5	8.1	11.2	14.9	19.4	24.7	30.9	38.2	46.5	56.0	66.8	78.9	92.6
	Bubbles	1.8	3.5	5.7	8.4	11.6	15.5	20.2	25.7	32.2	39.7	48.4	58.2	69.4	82.0	96.1

LUFTOMET® Flat		Air flow (m³/h)														
Boxes	Grilles	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150
Horizontal 100	Voronoi	0.7	1.5	3.0	5.1	7.8	11.1	15.1	19.6	24.6	30.3	36.6	43.4	50.9	58.9	67.5
	Hexagon 1	0.8	1.7	3.3	5.5	8.3	11.7	15.7	20.3	25.6	31.4	37.8	44.8	52.4	60.6	69.4
	Hexagon 2	1.1	2.7	5.1	8.4	12.5	17.4	23.1	29.7	37.2	45.5	54.8	64.8	75.8	87.7	100.5
	Droplets	1.3	2.5	4.1	6.4	9.2	12.7	16.9	21.8	27.6	34.3	41.9	50.6	60.3	71.1	83.2
	Stitches	1.3	2.4	4.0	6.2	8.9	12.3	16.3	21.2	26.8	33.3	40.7	49.1	58.5	69.1	80.8
	Bubbles	1.3	2.5	4.2	6.4	9.3	12.8	17.0	22.0	27.9	34.6	42.3	51.0	60.8	71.8	83.9
Direct 75	Voronoi	0.7	2.0	3.9	6.6	9.9	13.9	18.5	23.9	30.0	36.7	44.2	52.4	61.4	71.0	81.4
	Hexagon 1	0.8	2.2	4.3	7.0	10.5	14.6	19.4	24.9	31.1	38.0	45.6	54.0	63.2	73.1	83.7
	Hexagon 2	1.2	3.5	6.7	10.7	15.7	21.6	28.5	36.4	45.2	55.2	66.2	78.2	91.4	105.8	121.3
	Droplets	1.4	3.2	5.3	8.1	11.6	15.7	20.8	26.7	33.6	41.6	50.7	61.0	72.7	85.8	100.4
	Stitches	1.4	3.1	5.2	7.9	11.2	15.3	20.1	25.9	32.6	40.3	49.2	59.2	70.6	83.4	97.6
	Bubbles	1.4	3.2	5.4	8.2	11.7	15.9	20.9	26.9	33.9	41.9	51.1	61.6	73.4	86.6	101.3
Direct 90	Voronoi	0.6	1.5	3.3	5.7	8.9	12.9	17.5	22.8	28.8	35.4	42.7	50.6	59.1	68.1	77.7
	Hexagon 1	0.7	1.7	3.6	6.1	9.5	13.5	18.3	23.7	29.9	36.6	44.1	52.1	60.8	70.1	79.9
	Hexagon 2	1.0	2.7	5.5	9.4	14.2	20.0	26.9	34.7	43.5	53.2	63.9	75.5	88.0	101.4	115.8
	Droplets	1.1	2.5	4.4	7.1	10.5	14.6	19.6	25.5	32.3	40.1	48.9	58.9	70.0	82.3	95.8
	Stitches	1.1	2.4	4.3	6.9	10.2	14.2	19.0	24.7	31.3	38.9	47.5	57.1	68.0	79.9	93.1
	Bubbles	1.1	2.5	4.5	7.1	10.5	14.7	19.8	25.7	32.6	40.4	49.4	59.4	70.6	83.0	96.6
Direct 100	Voronoi	0.5	1.3	2.8	4.8	7.4	10.6	14.3	18.7	23.6	29.0	35.0	41.6	48.7	56.4	64.7
	Hexagon 1	0.5	1.5	3.0	5.2	7.9	11.1	15.0	19.4	24.4	30.0	36.2	42.9	50.2	58.1	66.5
	Hexagon 2	0.8	2.4	4.7	7.9	11.8	16.5	22.0	28.4	35.6	43.6	52.4	62.1	72.7	84.1	96.3
	Droplets	0.9	2.1	3.8	5.9	8.7	12.0	16.1	20.8	26.4	32.8	40.2	48.5	57.8	68.2	79.7
	Stitches	0.9	2.1	3.7	5.8	8.4	11.7	15.6	20.2	25.6	31.8	38.9	47.0	56.1	66.2	77.5
	Bubbles	0.9	2.1	3.8	6.0	8.8	12.1	16.2	21.0	26.6	33.1	40.5	48.9	58.3	68.8	80.4

Measured according to: EN ISO 12238  
 Measured for a reference air density of 1.2 kg/m³.  
 Hexagon 1 = 10 pcs  
 Hexagon 2 = 25 pcs



## Pressure Drop Values $\Delta P$ (Pa) Plenum box:

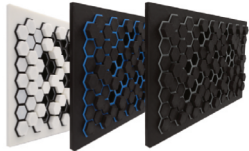
$$P_{tot} = P_{stat} + P_{dyn}$$

Values for supply and exhaust air.

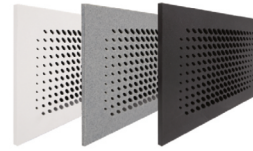
LUFTOMET® Flat box		Air flow (m³/h)															Aeff
Type:	Size	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	m2
Vertical	75	0.8	2.2	4.2	6.8	10.0	13.9	18.4	23.6	29.5	36.1	43.4	51.5	60.3	69.9	80.3	0.013840
	90	0.8	2.1	4.0	6.5	9.5	13.1	17.3	22.2	27.9	34.2	41.4	49.3	58.1	67.8	78.4	0.011030
	100	0.6	1.7	3.4	5.6	8.5	11.9	15.9	20.5	25.6	31.4	37.7	44.6	52.1	60.2	68.9	0.012660
Horizontal	75	0.7	2.3	4.6	7.5	11.0	15.2	20.0	25.5	31.8	38.7	46.4	54.9	64.1	74.2	85.1	0.008687
	90	0.9	2.5	4.6	7.2	10.3	13.9	18.1	22.9	28.3	34.5	41.3	48.9	57.3	66.5	76.6	0.007790
	100	0.7	1.8	3.4	5.5	8.2	11.4	15.2	19.6	24.5	30.0	36.2	42.9	50.3	58.3	66.9	0.008390
Direct	75	0.7	2.3	4.4	7.1	10.3	14.2	18.8	23.9	29.8	36.4	43.7	51.8	60.6	70.3	80.8	0.004726
	90	0.6	1.8	3.6	6.2	9.4	13.2	17.7	22.8	28.6	35.1	42.2	49.9	58.3	67.4	77.1	0.004910
	100	0.5	1.5	3.1	5.2	7.8	10.9	14.5	18.7	23.4	28.7	34.6	41.1	48.2	55.8	64.1	0.004937

Measured according to: EN ISO 12238  
Measured for a reference air density of 1,2 kg/m³.

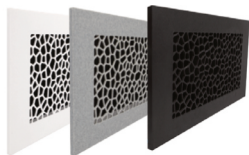
## Accessories:



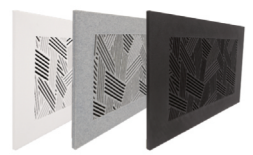
**Grilles - Hexagon**  
ID: LF-P-R-HBB-PB  
LF-P-R-HBW-PB  
LF-P-R-HWB-PB



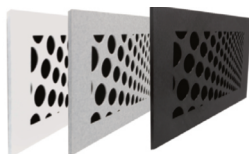
**Grilles - Droplets**  
ID: LF-P-R-DW-PB  
LF-P-R-DB-PB  
LF-P-R-DM-PB



**Grilles - Voronoi**  
ID: LF-P-R-VW-PB  
LF-P-R-VB-PB  
LF-P-R-VM-PB



**Grilles - Stitches**  
ID: LF-P-R-SW-PB  
LF-P-R-SB-PB  
LF-P-R-SM-PB



**Grilles - Bubbles**  
ID: LF-P-R-BB-PB  
LF-P-R-BW-PB  
LF-P-R-BM-PB



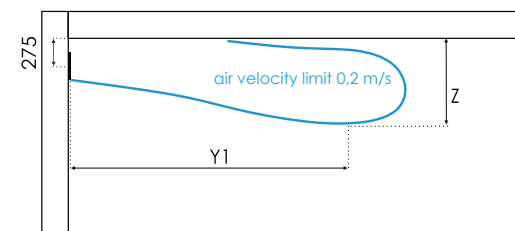
**LUFTOMET Flat Extension Piece**  
ID: LF-A-PP-100  
LF-A-PP-150  
LF-A-PP-200  
4x screws for anchoring LP-S-4 and 4x screws for anchoring LP-SM-4.

## Throw Length- Terminal Velocity:

Flow rate	Type (m³/h)	mm	Droplets	Voronoi	Hexagon 1	Hexagon 2	Bubbles	Stitches
	15	Z	100	150	100	75	110	100
Y1		530	765	495	440	545	500	
X		100	100	75	105	100	80	
30	Y2	453	455	430	300	445	425	
	Z	200	225	225	190	205	220	
	Y1	1410	1450	1190	1320	1400	1230	
45	X	100	115	100	140	110	90	
	Y2	1350	1067	893	980	128	925	
	Z	180	225	250	125	175	250	
60	Y1	1573	2110	2100	2300	1495	2090	
	X	128	100	75	160	105	80	
	Y2	1573	1507	2100	1633	1510	2080	
75	Z	250	300	225	200	245	220	
	Y1	2950	3080	2800	3000	3005	2750	
	X	150	155	160	200	150	155	
90	Y2	2067	2120	1967	2100	2080	1970	
	Z	270	450	300	355	265	295	
	Y1	1650	3000	1690	2035	1730	1740	
105	X	150	225	180	160	145	185	
	Y2	1650	2790	1690	2035	1720	1650	
	Z	300	450	330	320	320	325	
150	Y1	2400	3200	2170	2370	2420	2205	
	X	175	220	220	240	170	230	
	Y2	2220	2790	2170	2370	2340	2290	
200	Z	300	450	350	370	320	360	
	Y1	3200	3800	2500	2760	3350	2660	
	X	250	280	240	270	265	255	
275	Y2	2710	3270	2500	2760	2830	2650	

Measured according to: EN ISO 12238  
Measured for isothermal air flow  $\Delta T$  max 2 °C

**Flat Grilles**  
Side view



**Flat Grilles**  
Top view

