



Linear Grilles

BM-LM

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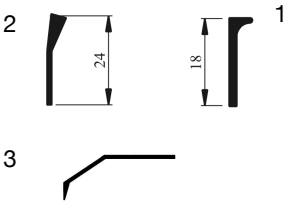


BM-LM Linear grilles are mostly preferred products that are used in heating, cooling and ventilation systems because of their aesthetic appearance. They can be used as supply or exhaust grilles on air ducts in large spaces for heating and cooling. Besides, they are the mostly preferred products on and next to fan coils and radiators. The distance between the blades and the thickness of the profile that is used on blades provides a durable structure and the aesthetic appearance ensures ideal ventilation equipment. For the spaces when linear appearance is required, many grilles can be combined and long grilles can be formed as needed.

Properties

- They are used as supply and exhaust grilles on air ducts. *They can be manufactured with large and narrow cases. *Can be manufactured with or without frames.
- Extruded aluminum profile is used.
- Blades are produced as 0° or 15° angle according to product type.
- They can be manufactured as anodized or with electrostatic powder coating (colors from RAL catalogue can be chosen).
- To adjust the blowing air damper can be added. Also, dampers can be manufactured with parallel or opposite blades.

* No	Model	Application
1	Linea S100	0° Angle Blade Standard Linear Grille For Wall and Ceiling
2	Linea S115	15° Angle Blade Standard Linear Grille For Wall and Ceiling
3	Linea S300	15° Angle Blade Standard Linear Grille For Floor, Wall and Ceiling



* Specially designed blades according to product type

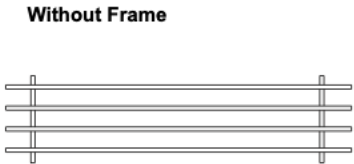
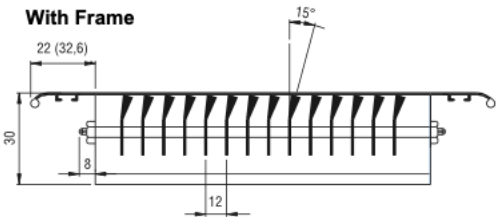
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Standard Sizes

Each grille is named by W*H

W	300	500	500	750	750	1000	1000	1000	1000
H	75	75	150	150	250	150	250	300	500



Installation

Screw system is the standard mounting type, however according to the application place, there are different mounting types as; Clip system and Plate spring system.

Screw Mounting

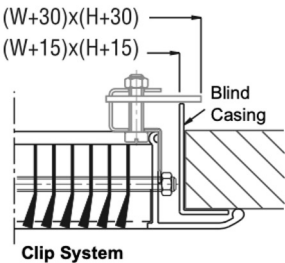
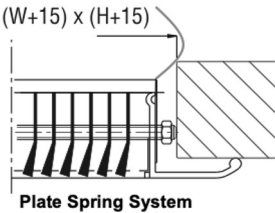
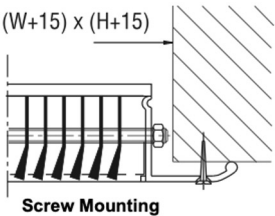
It is the standard mounting type and with the holes on the frame for Ø4mm they can be installed. They can be used without screws on radiators.

Plate Spring System

They are good solutions for deep surfaces. This type of mounting is done by steel plates on the side surfaces of the grilles case. They can be used with or without case.

Installation with Clip System

They can be applied with blind case. Blind case is mounted to mounting holes. For mounting, clip mounted on the grille and by the help of screwdriver clip installed to the blind casing



Plaster-in Linear Grilles

BM-LM S100 / S300 (+ZC)



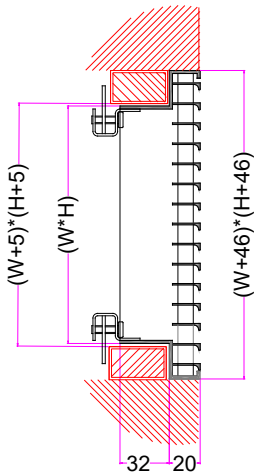
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Framless Linear Grilles

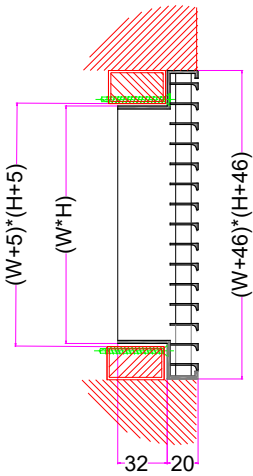
BM-LM S100 / S300 (+ZC)

BM-LM S100+ZC

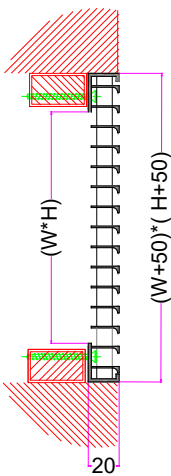
Clips (Plate Spring Fixing)



Screw Fixing

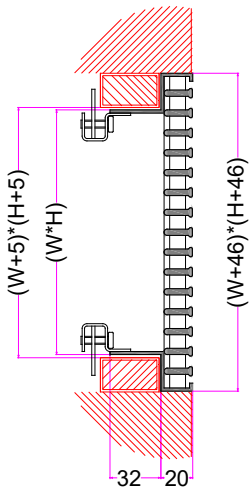


Without Neck

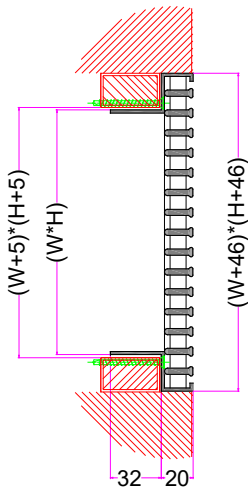


BM-LM S300+ZC

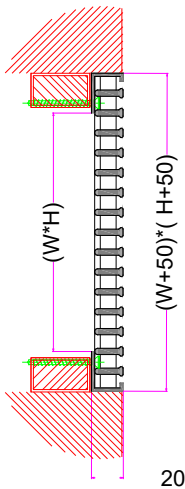
Clips (Plate Spring Fixing)



Screw Fixing



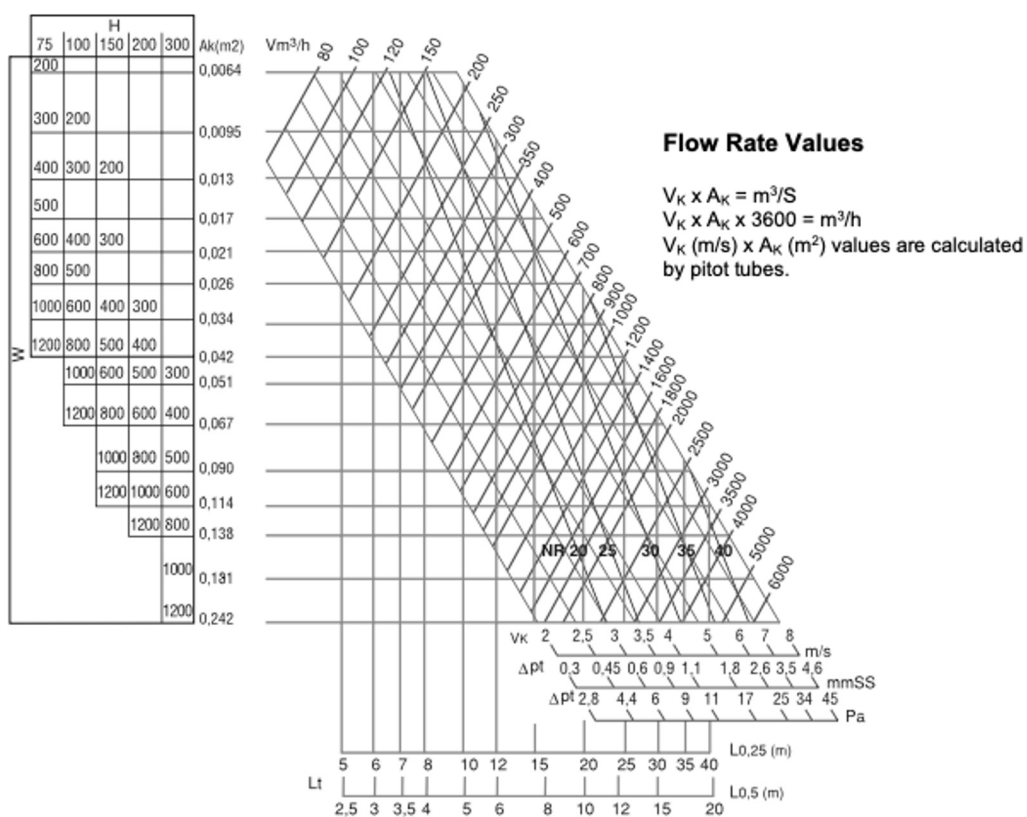
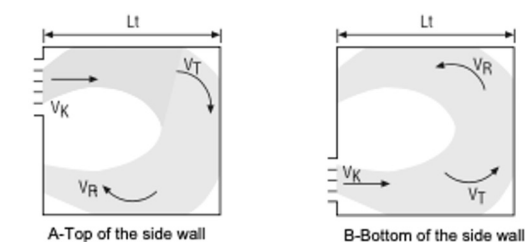
Without Neck



Selection Graph

BM-LM

15° Angle Blade Standard Linear Grille For Wall and Ceiling

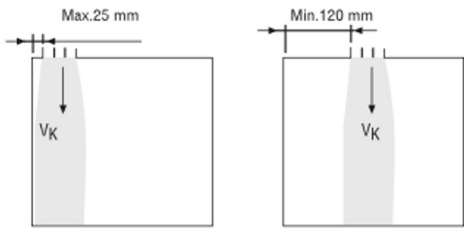


$V_T(\text{m/s})$	0,25	0,375	0,5	0,625	
Lt	A	x1	x0,67	x0,5	x0,4
	B	x0,7	x0,47	x0,35	x0,28

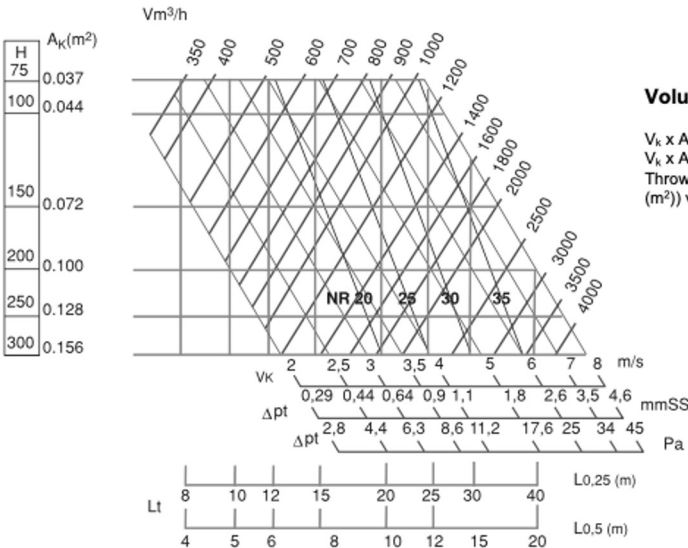
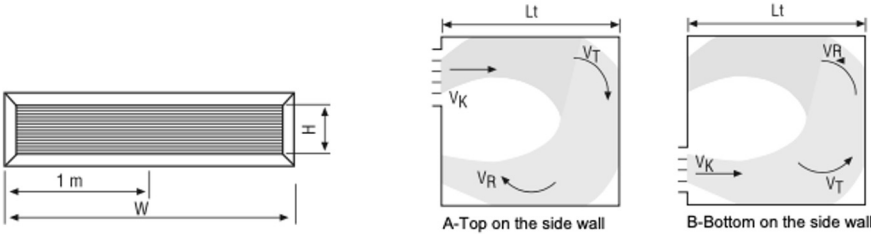
Selection Graph

BM-LM / S100

0° Angle Blade Standard Linear Grille For Wall and Ceiling



All datas in the selection graph had given for 1m length



Volume Flow Rate Calculation

$V_k \times A_k = m^3/s$
 $V_k \times A_k \times 3600 = m^3/h$
Throwing velocity (V_k) and A_k (Effective Area (m^2)) values are measured with pitot tubes.

For Correction Factor W

W (m)	1	1,5	2	2,5	3	4	5	6	8	10
Lt (m)	x1	x1,05			x1,1				x1,15	
NR	0	+2	+3	+4	+5	+6	+7	+8	+9	+10

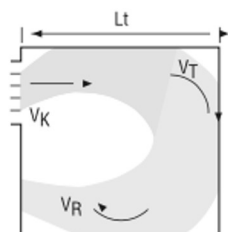
Correction Factor V_T

V _T (m/s)	0,25	0,375	0,5	0,625
Lt	A	x1	x0,67	x0,5
	B	x0,7	x0,47	x0,35

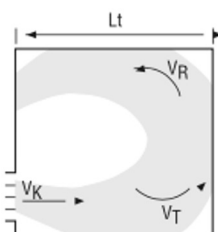
Selection Graph

BM-LM S300

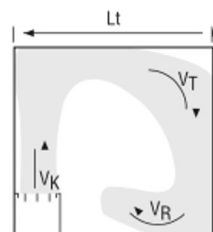
0° Angle Blade Standard Linear Grille For Wall and Ceiling



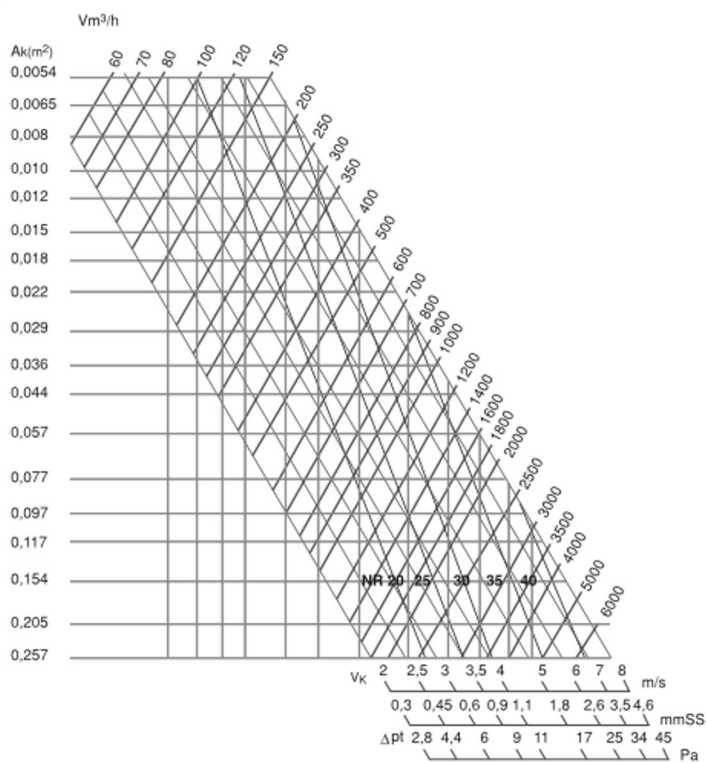
A-Top on the side wall



B-Bottom on the side wall



C-On the floor

[illegible]**Correction Factor V_T**

V _T (m/s)		0,25	0,375	0,5	0,625
Lt	A	x1	x0,67	x0,5	x0,4
	B	x0,7	x0,47	x0,35	x0,28



Accessories

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BM-LM-03 calibration damper
BM-LM-03 calibration damper with
fins with opposing movement

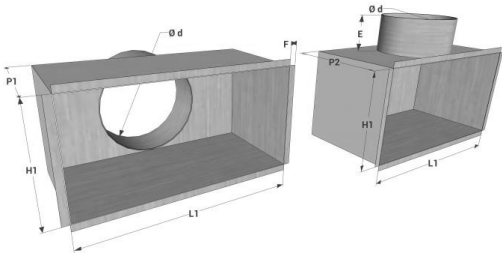


Installation sub frame



Plenum box

- Can be used for both supply and extract air
- Easy-to-detach the grilles for access to the plenum
- Same box used for several type of grilles
- Special lip bend allow an easy clips mounting of all grilles model



All dimensions are expressed in mm.

model L1 x H1	upper air connection			side air connection			E	F	model L1 x H1	upper air connection			side air connection			E	F
	P1	n° connection	Ø d	P2	n° connection	Ø d				P1	n° connection	Ø d	P2	n° connection	Ø d		
200x100	200	1	98	200	1	98	80	12	1000x200	200	2	198	300	2	198	80	12
300x100	200	1	98	200	1	98	80	12	300x300	200	1	248	350	1	248	80	12
400x100	200	2	98	200	2	98	80	12	400x300	200	1	248	350	1	248	80	12
500x100	200	2	98	200	2	98	80	12	500x300	200	1	248	350	1	248	80	12
600x100	200	2	98	200	2	98	80	12	600x300	200	2	198	350	2	248	80	12
800x100	200	2	98	200	2	98	80	12	800x300	200	2	248	350	2	248	80	12
200x200	200	1	198	300	1	198	80	12	1000x300	200	2	248	350	2	248	80	12
300x200	200	1	198	300	1	198	80	12	400x400	200	1	298	350	1	298	80	12
400x200	200	1	198	300	1	198	80	12	500x400	200	1	298	350	1	298	80	12
500x200	200	1	198	300	1	198	80	12	600x400	200	2	198	350	2	248	80	12
600x200	200	2	198	300	2	198	80	12	800x400	200	2	298	350	2	298	80	12
800x200	200	2	198	300	2	198	80	12	1000x400	200	2	298	400	2	298	80	12
560x560	-	-	-	300	1	248	80	12									

SELECTION GUIDE											
Spigot Velocity (m/s)	1,5	2	2,5	3	3,5	4	4,5	5	6		
Pressure Drop (Pa)	2	4	6	8	12	16	20	28	36		

*The pressure drop given is for supply diffuser with damper fully open.
When the diffuser is installed with plenum box the pressure loss of the box has to be added to the diffuser.



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