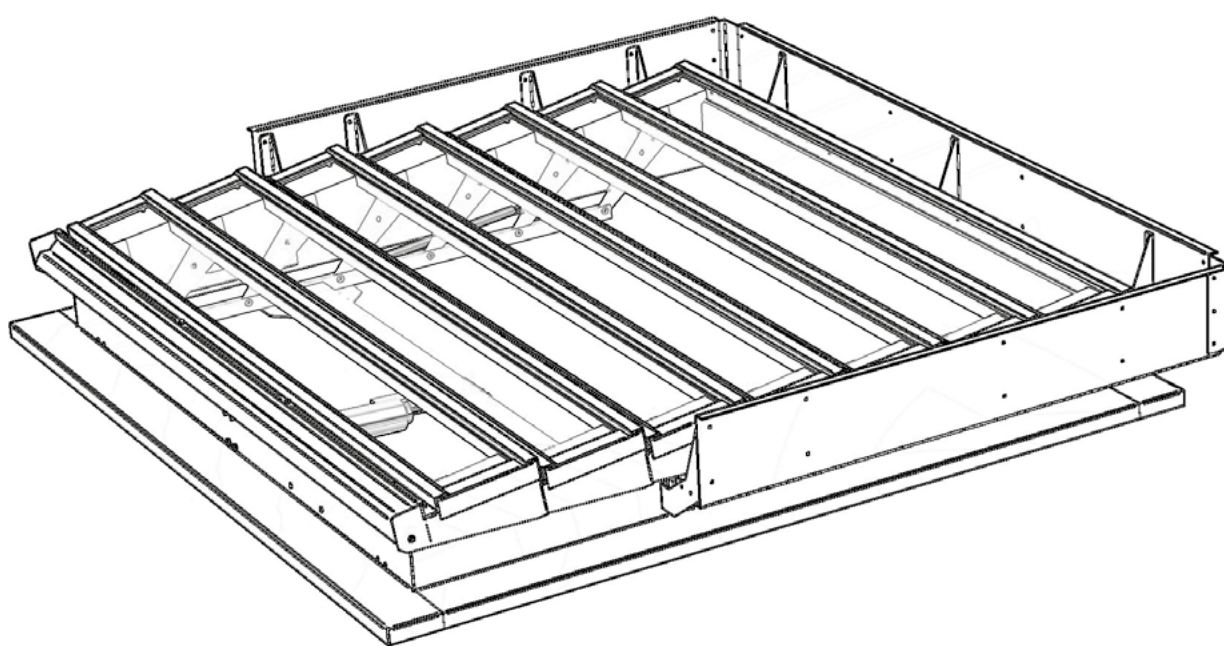


# Technical catalogue

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**mcr LAM**  
LOUVERED SMOKE VENTS

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„MERCOR“ S.A. – Export Department  
2022 MERCOR Gdańsk

# Technical catalogue

2022

Dear Clients,

We are pleased to present to you our technical catalogue for smoke exhaust, heat removal and skylight systems. This publication presents in detail „MERCOR“ S.A. products, starting from smoke vents and skylights, through smoke curtains, new generation roof hatches, all the way to the comprehensive review of our control systems. We believe the form in which we present our offer facilitates finding all the necessary information on the individual product series, their components, as well as detailed specifications for the elements of each product offered.

Every merchandise delivered from „MERCOR“ S.A. to the Client is meticulously controlled in accordance with the highest quality assurance standards, and undergoes a number of approval tests. We take pride in providing safety through our business.

We invite you to see the full extent of our offer.


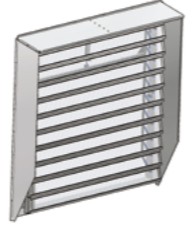
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**1.1 | Louvered smoke vents**

mcr LAM smoke vents are an element of natural smoke exhaust system. Their purpose is to remove smoke, hot combustion gases and heat energy outside the building. They allow to:

- » maintain emergency routes in a state of moderate smoke level, permitting effective evacuation,
- » enabling rescue operations by ensuring bottom passage of moderate smoking level,w
- » reduce the risk of damaging or destroying the building structure by a sudden decrease in indoor temperature,
- » limit fire losses caused by smoke and hot burning fumes.

	Roof mounted louvered vents	Façade mounted louvered vents
Parameters		
Product classification	<p>Certificate of Conformity CE 1396-CPR-0032 (as per EN 12101-2)</p> <ul style="list-style-type: none"> <li>» <b>Re300</b> – operational reliability during 300 cycles of opening and closing to smoke exhaust position (vent with E1 electric control and C1, C2 pneumatic control),</li> <li>» <b>Re1000</b> – operational reliability during 1000 cycles of opening and closing to smoke exhaust position (vent with C3 pneumatic control with gas spring),</li> <li>» <b>10 000</b> – operational reliability during 10 000 cycles of opening and closing to ventilation position (double -function vent),</li> <li>» <b>SL</b> – operational certainty of vents under snow load N/ m<sup>2</sup></li> <li>- <b>SL250 ÷ SL1300</b> – vents equipped with E1 electric control</li> <li>- <b>SL550 ÷ SL2000</b> – vents equipped with C1, C2 pneumatic control</li> <li>- <b>SL125 ÷ SL250</b> – vents equipped with C3 pneumatic control with gas spring</li> <li>» <b>WL</b> – operational certainty of vents under wind load</li> <li>- <b>WL1500</b> – for all louvered vent types</li> <li>- <b>WL3000</b> – vents (max. 12 blades) of length 150 cm</li> <li>- <b>WL4000</b> – vents (max. 12 blades) of length 100 cm</li> <li>» <b>B300</b> – resistance of vents to high temperature of 300°C,</li> <li>» <b>T(-25) or T(00)</b> – resistance of vents to low temperature of -25°C or 0°C,</li> <li>» <b>Aa</b> – active smoke exhaust area</li> <li>» <b>60s</b> – maximum vent opening time to working position</li> </ul>	<ul style="list-style-type: none"> <li>» <b>Re300</b> – operational reliability during 300 cycles of opening and closing to smoke exhaust position (vent with E1 electric control and C1, C2 pneumatic control),</li> <li>» <b>Re1000</b> – operational reliability during 1000 cycles of opening and closing to smoke exhaust position (vent with C3 pneumatic control with gas spring),</li> <li>» <b>10 000</b> – operational reliability during 10 000 cycles of opening and closing to ventilation position (double-function vent),</li> <li>» <b>SL</b> – operational certainty of vents under snow load N/m<sup>2</sup></li> <li>- SL 0 – façade vents</li> <li>» <b>WL</b> – operational certainty of vents under wind load</li> <li>- <b>WL1500</b> – for all louvered vent types</li> <li>- <b>WL3000</b> – vents (max. 12 blades) of length 150 cm</li> <li>- <b>WL4000</b> – vents (max. 12 blades) of length 100 cm</li> <li>» <b>B300</b> – resistance of vents to high temperature of 300°C,</li> <li>» <b>T(-25) or T(00)</b> – resistance of vents to low temperature of -25°C or 0°C,</li> <li>» <b>Aa</b> – active smoke exhaust area</li> <li>» <b>60s</b> – maximum vent opening time to working position</li> </ul>
Control	<p>pneumatic</p> <p>electric 24 V-- (ventilation)</p>	
Glazing	<p>polycarbonate panel (PCA 16 mm)</p> <p>polycarbonate panel (PCA 25 mm)</p> <p>non-insulated aluminum profile (SO)(*)</p> <p>insulated aluminum profiles (SO+IZO)(**)</p>	

(\*) Opaque glazing – two layers of aluminum sheet with air gap between  
 (\*\*) Opaque glazing – two layers of aluminum sheet with IZO panel (extruded polystyrene 20 mm) between

**1.1. | mcr LAM louvered smoke vents**

**1.1.1 | Technical description of standard**

- » classification as per Certificate of Conformity in accordance with EN 12101-2 (CE Certificate),
- » base of height 150–250 mm, made of galvanized steel sheet of thickness 1.25 mm or aluminum sheet of th. 2 mm (grade AlMg3),
- » bottom part of the base has a circumferential flange of width 100 mm, through which the base is fitted to the roof structure,
- » upper part of base has shape enabling water runoff,
- » thermal insulation of base made of mineral wool of thickness 20 mm; heat transfer coefficient U=1.41 W/m<sup>2</sup>K
- » leaf glazing: PCA 16 mm or 25 mm multi-chamber polycarbonate panel, non-insulated aluminum sheets (opaque glazing - SO), aluminum sheets insulated with IZO panel of th. 20 mm (SO+IZO opaque glazing),
- » vent blades opening angle 90°,
- » smoke exhaust control: pneumatic, electric 24 V-

**1.1.2 | Smoke vent design**

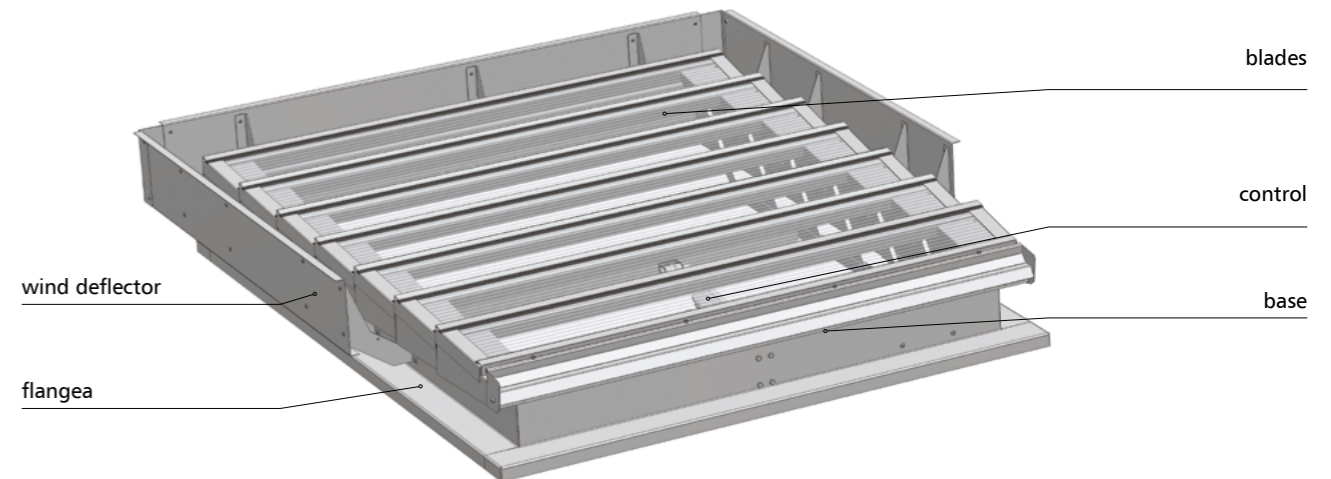


Fig. 1 Design of mcr LAM louvered smoke vent

**1.1.3 | Non-standard options**

- » vent elements (base, wind deflectors) painted to any RAL color
- » metal blade elements painted
- » non-insulated base (H)
- » optional production and delivery of bottom base (plinth) of maximum height 700 mm, made of galvanized steel sheet of thickness 1.25 mm, or aluminum sheet of th. 2 mm (non-insulated element)
- » custom blade lengths – every 50 mm
- » wide selection of base flange types (for upper and lower [plinth] base) and its width (min. 70 mm)
- » limit switch – open/closed indication
- » possible connection of louvered vent with a continuous rooflights through special flange

1.1.4 | Technical drawings

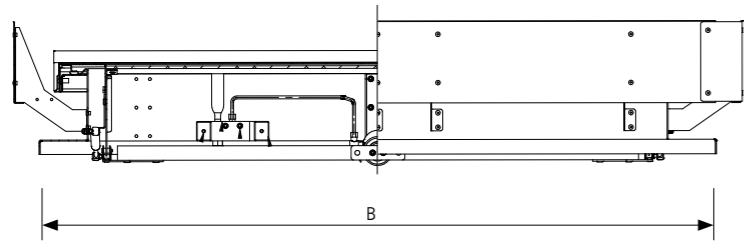


Fig. 2 Section B-B of mcr LAM louvered smoke vent in closed position (roof installation)

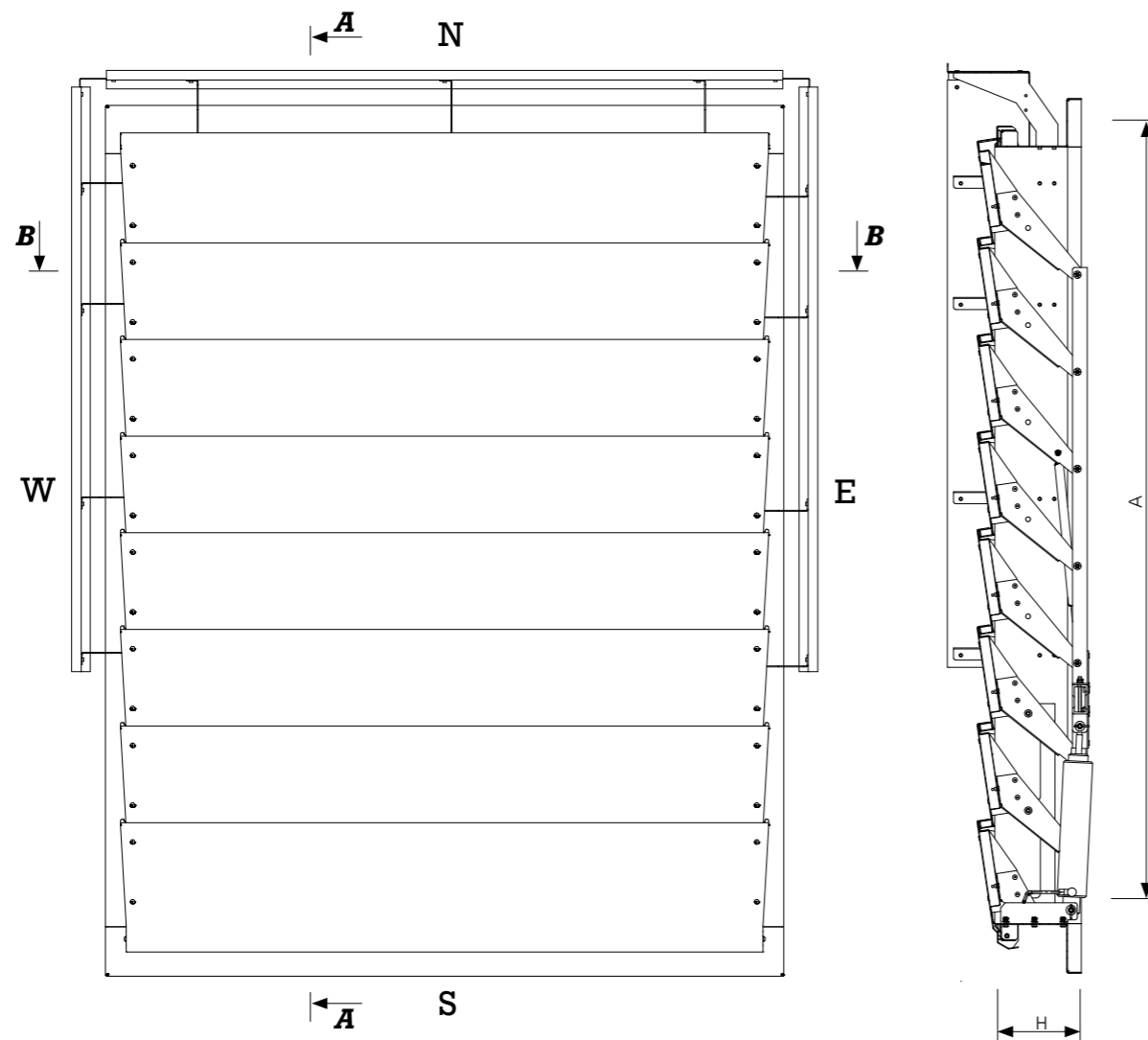


Fig. 3 Top view of mcr LAM louvered smoke vent in closed position

Fig. 4 Section A-A of mcr LAM louvered smoke vent in closed position (roof installation)

A – width of louvered smoke vent [mm]  
 B – length of louvered smoke vent [mm]  
 H – louvered vent base height [mm]  
 N, S, W, E - template to define correctly each flange detail

1.2. | mcr LAM façade mounted louvered smoke vents

1.2.1 | Technical description of standard

- » classification as per Certificate of Conformity in accordance with EN 12101-2 (CE Certificate),
- » base of height 150-250mm, made of galvanized steel sheet of thickness 1.25 mm, or of aluminum sheet of th. 2 mm,
- » thermal insulation of base made of mineral wool of thickness 20 mm; heat transfer coefficient  $U=1.41 \text{ W/m}^2\text{K}$ ,
- » leaf glazing: PCA 16 mm multi-chamber polycarbonate panel, non-insulated aluminum sheets (opaque glazing - SO), aluminum sheets insulated with IZO panel of th. 20 mm (SO+IZO opaque glazing),
- » vent blades opening angle  $90^\circ$ ,
- » control: electric 24V-, pneumatic,
- » rain shields extending vent's protection against weather conditions.

1.2.2 | Façade mounted vent design

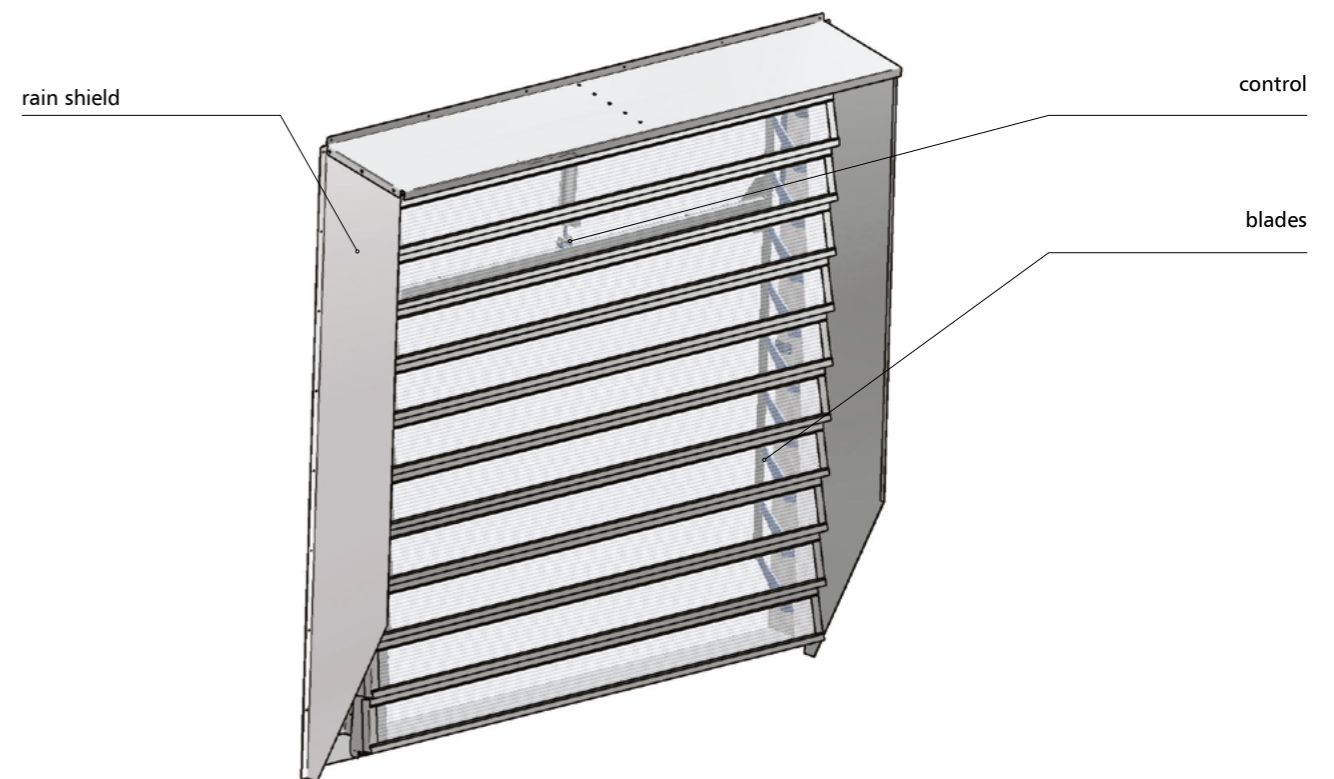


Fig. 5 Design of mcr LAM louvered smoke vent with rain shield

1.2.3 | Non-standard options

- » vent elements (base, rain shield, blades) painted to any RAL color,
- » non-insulated base (H),
- » custom blade lengths – every 50 mm,
- » wide variety of flange types and its' width (min. 70 mm),
- » limit switch – open/closed indication.



1.2.4 | Technical drawings

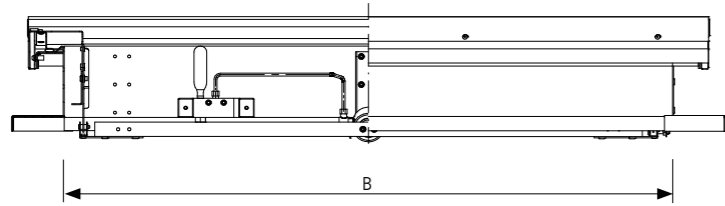


Fig. 6 Section B-B of mcr LAM louvered vent in closed position (façade installation)

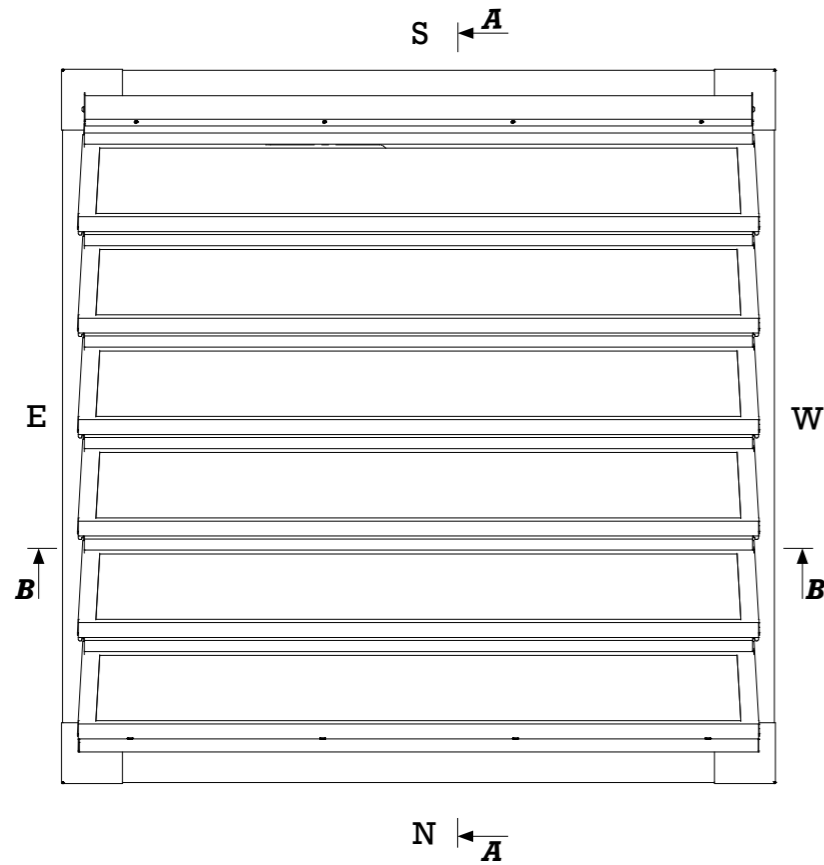


Fig. 7 Top view of mcr LAM louvered vent in closed position (façade installation)

A – width of louvered smoke vent [mm]  
 B – length of louvered smoke vent [mm]  
 H – louvered vent base height [mm]  
 N, S, W, E - template to define correctly each flange detail

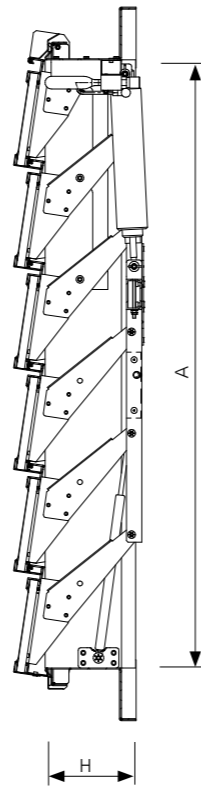


Fig. 8 Section A-A of mcr LAM louvered vent in closed position (façade installation)

1.3 | Technical details

VENT TYPE	NUMBER OF BLADES	NOMINAL DIMENSIONS (width x length) [mm]	ACTIVE AREA ROOF [Aa] [m <sup>2</sup> ]	ACTIVE AREA FAÇADE [Aa] [m <sup>2</sup> ]	ELECTRIC CONTROL - POWER CONSUMPTION [A] BY ELECTRIC ACTUATOR							ESTIMATED WEIGHT MIN(*)-MAX(**) [kg]
					SL 1300	SL 950	SL 750	SL 500	SL 250	SL 125	SL 0 (installation in façade)	
					[A]	[A]	[A]	[A]	[A]	[A]	[A]	
mcr LAM 4 50	4	800 x 500	0,240	0.24	0.8	0.8	0.8	0.8	0.8	-	0.8	23 - 27
mcr LAM 4 80	4	800 x 800	0,390	0.39	1.3	1.0	0.8	0.8	0.8	-	0.8	27 - 32
mcr LAM 4 100	4	800 x 1000	0,496	0.49	1.3	1.0	0.8	0.8	0.8	-	0.8	30 - 36
mcr LAM 4 120	4	800 x 1200	0,595	0.60	2.0	1.3	1.0	0.8	0.8	-	0.8	33 - 40
mcr LAM 4 140	4	800 x 1400	0,694	0.70	2.0	1.3	1.0	0.8	0.8	-	0.8	35 - 43
mcr LAM 4 160	4	800 x 1600	0,806	0.80	2.6	1.8	1.3	1.0	0.8	-	0.8	38 - 47
mcr LAM 4 170	4	800 x 1700	0,857	0.85	2.6	1.8	1.3	1.0	0.8	-	0.8	40 - 49
mcr LAM 5 50	5	1000 x 500	0,300	0.30	1.0	0.8	0.8	0.8	0.8	-	0.8	26 - 31
mcr LAM 5 100	5	1000 x 1000	0,620	0.62	2.0	1.3	1.0	0.8	0.8	-	0.8	34 - 41
mcr LAM 5 120	5	1000 x 1200	0,756	0.75	2.0	1.3	1.3	1.0	0.8	-	0.8	37 - 46
mcr LAM 5 140	5	1000 x 1400	0,882	0.88	2.6	2.0	1.6	1.0	0.8	-	0.8	40 - 50
mcr LAM 5 160	5	1000 x 1600	1,008	1.01	2 x 1.3	2.0	1.6	1.3	0.8	-	0.8	43 - 54
mcr LAM 5 180	5	1000 x 1800	1,134	1.14	2 x 1.3	2.6	2.0	1.3	0.8	-	0.8	47 - 58
mcr LAM 5 200	5	1000 x 2000	1,260	1.27	1 x 2.0	2.6	2.0	1.3	0.8	-	0.8	50 - 63
mcr LAM 5 210	5	1000 x 2100	1,323	1.32	2 x 2	2 x 1.3	2.6	2.0	1.0	-	0.8	52 - 67
mcr LAM 6 50	6	1200 x 500	0,366	0.36	2.0	1.3	1.3	1.0	0.8	-	0.8	26 - 32
mcr LAM 6 100	6	1200 x 1000	0,756	0.75	2.0	1.3	1.3	1.0	0.8	-	0.8	38 - 47
mcr LAM 6 120	6	1200 x 1200	0,907	0.91	2.6	2.0	1.6	1.0	0.8	-	0.8	42 - 52
mcr LAM 6 140	6	1200 x 1400	1,058	1.06	2 x 1.3	2.0	2.0	1.3	0.8	-	0.8	45 - 57
mcr LAM 6 160	6	1200 x 1600	1,210	1.22	2 x 1.6	2.6	2.0	1.3	0.8	-	0.8	49 - 61
mcr LAM 6 180	6	1200 x 1800	1,382	1.37	2 x 2.0	2 x 1.3	2.0	1.6	0.8	-	0.8	53 - 66
mcr LAM 6 200	6	1200 x 2000	1,536	1.53	2 x 2.0	2 x 1.3	2.6	2.0	1.0	-	0.8	56 - 71
mcr LAM 6 220	6	1200 x 2200	1,690	1.68	-	2 x 2.0	2 x 1.3	2.6	1.0	-	0.8	60 - 76
mcr LAM 6 240	6	1200 x 2400	1,843	1.84	-	2 x 2.0	2 x 1.3	2.6	1.0	-	0.8	63 - 81
mcr LAM 6 250	6	1200 x 2500	1,920	1.92	-	2 x 2.0	2 x 1.3	2.6	1.0	-	0.8	67 - 85
mcr LAM 7 50	6	1400 x 500	0,427	0.42	2.6	2.0	1.6	1.0	0.8	-	0.8	30 - 36
mcr LAM 7 60	7	1400 x 600	0,521	0.52	2.6	2.0	1.6	1.0	0.8	-	0.8	32 - 38
mcr LAM 7 100	7	1400 x 1000	0,882	0.88	2.6	2.0	1.6	1.0	0.8	-	0.8	42 - 52
mcr LAM 7 120	7	1400 x 1200	1,058	1.06	2 x 1.3	2.0	2.0	1.3	0.8	-	0.8	47 - 58
mcr LAM 7 140	7	1400 x 1400	1,235	1.24	2 x 2.0	2.6	2.0	1.3	0.8	-	0.8	51 - 63
mcr LAM 7 160	7	1400 x 1600	1,434	1.43	2 x 2.0	2 x 1.3	2.6	2.0	0.8	-	0.8	54 - 68
mcr LAM 7 180	7	1400 x 1800	1,613	1.61	2 x 2.0	2 x 1.3	2 x 1.3	2.0	1.0	-	0.8	58 - 73
mcr LAM 7 200	7	1400 x 2000	1,792	1.79	2 x 2.6	2 x 2.0	2 x 1.3	2.0	1.0	-	0.8	61 - 78
mcr LAM 7 220	7	1400 x 2200	1,971	1.97	-	2 x 2.0	2 x 2.0	2 x 1.3	1.3	-	0.8	65 - 83
mcr LAM 7 240	7	1400 x 2400	2,150	2.15	-	2 x 2.0	2 x 2.0	2 x 1.3	1.3	-	0.8	69 - 89
mcr LAM 7 250	7	1400 x 2500	2,240	2.24	-	2 x 2.0	2 x 2.0	2 x 1.3	1.3	-	0.8	72 - 93
mcr LAM 8 55	8	1600 x 550	0,537	0.53	2 x 1.3	2.0	1.6	1.3	0.8	-	0.8	32 - 38
mcr LAM 8 70	8	1600 x 700	0,694	0.69	2 x 1.3	2.0	1.6	1.3	0.8	-	0.8	40 - 50
mcr LAM 8 100	8	1600 x 1000	1,008	1.01	2 x 1.3	2.0	1.6	1.3	0.8	-	0.8	46 - 57
mcr LAM 8 120	8	1600 x 1200	1,210	1.22	2 x 1.6	2.6	2.0	1.3	0.8	-	0.8	52 - 65
mcr LAM 8 140	8	1600 x 1400	1,434	1.43	2 x 2.0	2 x 1.3	2.6	2.0	0.8	-	0.8	58 - 72
mcr LAM 8 160	8	1600 x 1600	1,638	1.63	2 x 2.0	2 x 1.6	2 x 1.3	2.0	1.0	-	0.8	63 - 79
mcr LAM 8 180	8	1600 x 1800	1,843	1.84	2 x 2.6	2 x 2.0	2 x 1.3	2.0	1.0	-	0.8	69 - 86
mcr LAM 8 200	8	1600 x 2000	2,048	2.05	-	2 x 2.0	2 x 1.6	2.6	1.3	-	0.8	74 - 94

VENT TYPE	NUMBER OF BLADES	NOMINAL DIMENSIONS (width x length)	ACTIVE AREA ROOF [Aa]	ACTIVE AREA FAÇADE [Aa]	ELECTRIC CONTROL - POWER CONSUMPTION [A] BY ELECTRIC ACTUATOR							ESTIMATED WEIGHT MIN(*)-MAX(**)
					SL 1300	SL 950	SL 750	SL 500	SL 250	SL 125	SL 0 (installation in façade)	
					[A]	[A]	[A]	[A]	[A]	[A]	[A]	
[pcs.]	[mm]	[m²]	[m²]	[A]	[A]	[A]	[A]	[A]	[A]	[A]	[kg]	
mcr LAM 8 220	8	1600 x 2200	2,253	2.26	-	2 x 2.6	2 x 2.0	2 x 1.3	1.3	-	0.8	80 - 101
mcr LAM 8 240	8	1600 x 2400	2,458	2.47	-	2 x 2.6	2 x 2.0	2 x 1.3	1.3	-	0.8	86 - 108
mcr LAM 8 250	8	1600 x 2500	2,560	2.57	-	2 x 2.6	2 x 2.0	2 x 1.3	1.3	-	0.8	91 - 114
mcr LAM 9 60	9	1800 x 600	0,670	0,67	-	2,0	1,3	1,3	0,8	-	0,8	42 - 52
mcr LAM 9 80	9	1800 x 800	0,907	0,9	-	2,0	1,3	1,3	0,8	-	0,8	45 - 55
mcr LAM 9 100	9	1800 x 1000	1,134	1.14	2 x 1.6	2.6	2.0	1.3	0.8	-	0.8	51 - 63
mcr LAM 9 120	9	1800 x 1200	1,382	1.37	2 x 2.0	2 x 1.3	2.6	1.6	0.8	-	0.8	57 - 71
mcr LAM 9 140	9	1800 x 1400	1,613	1.61	2 x 2.0	2 x 1.6	2 x 1.3	2.0	1.0	-	0.8	63 - 79
mcr LAM 9 160	9	1800 x 1600	1,843	1.84	2 x 2.6	2 x 2.0	2 x 1.3	2.0	1.0	-	0.8	69 - 86
mcr LAM 9 180	9	1800 x 1800	2,074	2.08	-	2 x 2.0	2 x 1.6	2.6	1.3	-	0.8	75 - 94
mcr LAM 9 200	9	1800 x 2000	2,304	2.31	-	2 x 2.6	2 x 2.0	2 x 1.3	1.3	-	1.0	81 - 102
mcr LAM 9 220	9	1800 x 2200	2,534	2.55	-	2 x 2.6	2 x 2.0	2 x 1.3	1.3	-	1.0	87 - 110
mcr LAM 9 240	9	1800 x 2400	2,765	2.78	-	2 x 2.6	2 x 2.0	2 x 1.3	1.3	-	1.0	93 - 118
mcr LAM 9 250	9	1800 x 2500	2,880	2.90	-	2 x 2.6	2 x 2.0	2 x 1.3	1.3	-	1.0	99 - 125
mcr LAM 10 65	10	2000 x 650	0,806	0,8	2 x 2.0	2 x 1.3	2.0	1.3	0.8	-	0.8	52 - 64
mcr LAM 10 100	10	2000 x 1000	1,260	1.27	2 x 2.0	2 x 1.3	2.0	1.3	0.8	-	0.8	55 - 68
mcr LAM 10 120	10	2000 x 1200	1,536	1.53	2 x 2.0	2 x 1.3	2.6	2.0	1.0	-	0.8	61 - 77
mcr LAM 10 140	10	2000 x 1400	1,792	1.79	2 x 2.6	2 x 2.0	2 x 1.3	2.0	1.0	-	0.8	68 - 85
mcr LAM 10 160	10	2000 x 1600	2,048	2.05	-	2 x 2.0	2 x 1.6	2.6	1.3	-	0.8	74 - 94
mcr LAM 10 180	10	2000 x 1800	2,304	2.31	-	2 x 2.6	2 x 2.0	2 x 1.3	1.3	-	1.0	81 - 102
mcr LAM 10 200	10	2000 x 2000	2,560	2.57	-	2 x 2.6	2 x 2.0	2 x 1.3	1.3	-	1.0	88 - 111
mcr LAM 10 220	10	2000 x 2200	2,816	2.84	-	-	2 x 2.0	2 x 2.0	1.3	-	1.3	94 - 120
mcr LAM 10 240	10	2000 x 2400	3,120	3.10	-	-	2 x 2.0	2 x 2.0	1.3	-	1.3	101 - 128
mcr LAM 10 250	10	2000 x 2500	3,250	3.23	-	-	2 x 2.0	2 x 2.0	1.3	-	1.3	107 - 136
mcr LAM 11 70	11	2200 x 700	0,970	0,97	2 x 2.0	2 x 1.3	2.6	2.0	0.8	-	0.8	59 - 73
mcr LAM 11 100	11	2200 x 1000	1,386	1.40	2 x 2.0	2 x 1.3	2.6	2.0	0.8	-	0.8	59 - 73
mcr LAM 11 120	11	2200 x 1200	1,690	1.68	2 x 2.6	2 x 2.0	2 x 1.3	2.0	1.0	-	0.8	66 - 83
mcr LAM 11 140	11	2200 x 1400	1,971	1.97	-	2 x 2.0	2 x 1.3	2.6	1.0	-	0.8	73 - 92
mcr LAM 11 160	11	2200 x 1600	2,253	2.26	-	2 x 2.6	2 x 2.0	2 x 1.3	1.3	-	0.8	80 - 101
mcr LAM 11 180	11	2200 x 1800	2,534	2.55	-	2 x 2.6	2 x 2.0	2 x 1.3	1.3	-	1.0	87 - 110
mcr LAM 11 200	11	2200 x 2000	2,816	2.84	-	-	2 x 2.6	2 x 1.6	1.6	-	1.0	94 - 120
mcr LAM 11 220	11	2200 x 2200	3,146	3.12	-	-	-	2 x 2.0	2	-	1.3	101 - 129
mcr LAM 11 240	11	2200 x 2400	3,432	3.41	-	-	-	2 x 2.0	2	-	1.3	109 - 138
mcr LAM 11 250	11	2200 x 2500	3,575	3.56	-	-	-	2 x 2.0	2.0	-	1.3	116 - 146
mcr LAM 12 80	12	2400 x 800	1,210	1,21	-	2 x 2.0	2 x 1.3	2.6	1.0	-	0.8	63 - 79
mcr LAM 12 100	12	2400 x 1000	1,536	1.52	-	2 x 2.0	2 x 1.3	2.6	1.0	-	0.8	63 - 79
mcr LAM 12 120	12	2400 x 1200	1,843	1.84	2 x 2.6	2 x 2.0	2 x 1.3	2.0	1.0	-	0.8	70 - 89
mcr LAM 12 140	12	2400 x 1400	2,150	2.15	-	2 x 2.0	2 x 2.0	2 x 1.3	1.3	-	0.8	78 - 99
mcr LAM 12 160	12	2400 x 1600	2,458	2.47	-	2 x 2.6	2 x 2.0	2 x 1.3	1.3	-	1.0	86 - 109
mcr LAM 12 180	12	2400 x 1800	2,765	2.78	-	-	2 x 2.0	2 x 1.6	1.6	-	1.0	93 - 118
mcr LAM 12 200	12	2400 x 2000	3,120	3.10	-	-	2 x 2.6	2 x 2.0	2.0	-	1.3	101 - 128
mcr LAM 12 220	12	2400 x 2200	3,432	3.41	-	-	-	2 x 2.6	2.6	-	1.3	109 - 138
mcr LAM 12 240	12	2400 x 2400	3,744	3.73	-	-	-	2 x 2.6	2.6	-	1.3	116 - 148

VENT TYPE	NUMBER OF BLADES	NOMINAL DIMENSIONS (width x length)	ACTIVE AREA ROOF [Aa]	ACTIVE AREA FAÇADE [Aa]	ELECTRIC CONTROL - POWER CONSUMPTION [A] BY ELECTRIC ACTUATOR							ESTIMATED WEIGHT MIN(*)-MAX(**)
					SL 1300	SL 950	SL 750	SL 500	SL 250	SL 125	SL 0 (installation in façade)	
					[A]	[A]	[A]	[A]	[A]	[A]	[A]	
[pcs.]	[mm]	[m²]	[m²]	[A]	[A]	[A]	[A]	[A]	[A]	[A]	[kg]	
mcr LAM 12 250	12	2400 x 2500	3,900	3.88	-	-	-	2 x 2.6	2.6	-	1.3	124 - 157
mcr LAM 13 85	13	2600 x 850	1,392	1,39	-	-	2 x 2.0	2 x 1.3	1.3	-	1.0	75 - 95
mcr LAM 13 120	13	2600 x 1200	1,997	1.99	-	-	2 x 2.0	2 x 1.3	1.3	-	1.0	75 - 95
mcr LAM 14 90	14	2800 x 900	1,588	1,58	-	-	2 x 2.6	2 x 2.0	2.0	-	1.3	80 - 101
mcr LAM 14 120	14	2800 x 1200	2,150	2.15	-	-	2 x 2.6	2 x 2.0	2.0	-	1.3	80 - 101
mcr LAM 14 140	14	2800 x 1400	2,509	2.52	-	-	2 x 2.6	2 x 2.0	2.0	-	1.3	88 - 112
mcr LAM 14 160	14	2800 x 1600	2,867	2.88	-	-	2 x 2.6	2 x 2.0	2.0	-	1.3	97 - 123
mcr LAM 14 180	14	2800 x 1800	3,276	3.25	-	-	-	2 x 2.0	2.0	-	1.3	106 - 135
mcr LAM 14 200	14	2800 x 2000	3,640	3.62	-	-	-	2 x 2.6	2.6	-	1.3	114 - 146
mcr LAM 14 220	14	2800 x 2200	4,004	3.99	-	-	-	2 x 2.6	2.6	-	1.3	123 - 157
mcr LAM 14 240	14	2800 x 2400	4,368	4.35	-	-	-	-	2 x 1.3 (SL400)	-	1.3	131 - 168
mcr LAM 14 250	14	2800 x 2500	4,550	4.54	-	-	-	-	2 x 1.3 (SL400)	-	1.3	140 - 178
mcr LAM 15 95	15	3000 x 950	1,824	1,82	-	-	2 x 2.6	2 x 2.0	2.0	-	1.3	84 - 107
mcr LAM 15 120	15	3000 x 1200	2,304	2.30	-	-	2 x 2.6	2 x 2.0	2.0	-	1.3	84 - 107
mcr LAM 15 140	15	3000 x 1400	2,688	2.70	-	-	2 x 2.6	2 x 2.0	2.0	-	1.3	93 - 119
mcr LAM 15 160	15	3000 x 1600	3,072	3.09	-	-	2 x 2.6	2 x 2.0	2.0	-	1.3	103 - 131
mcr LAM 15 180	15	3000 x 1800	3,510	3.49	-	-	-	2 x 2.0	2.0	-	1.3	112 - 143
mcr LAM 15 200	15	3000 x 2000	3,900	3.88	-	-	-	2 x 2.6	2.6	-	1.3	121 - 155
mcr LAM 15 210	15	3000 x 2100	4,095	4.08	-	-	-	2 x 2.6	2.6	-	1.3	125 - 160
mcr LAM 15 220	15	3000 x 2200	4,290	4.27	-	-	-	2 x 2.6	2.6	-	1.3	130 - 166
mcr LAM 15 230	15	3000 x 2300	4,485	4.47	-	-	-	-	2 x 1.3 (SL400)	-	1.3	134 - 172
mcr LAM 15 240	15	3000 x 2400	4,680	4.67	-	-	-	-	2 x 1.3 (SL400)	-	1.3	139 - 178
mcr LAM 15 250	15	3000 x 2500	4,875	4.87	-	-	-	-	2 x 1.3 (SL400)	-	1.3	148 - 189
mcr LAM 16 105	16	3200 x 1050	2,150	2,15	-	-	-	-	2 x 1.3	2 x 0.8	0.8	89 - 113
mcr LAM 16 120	16	3200 x 1200	2,458	2.46	-	-	-	-	2 x 1.3	2 x 0.8	0.8	89 - 113
mcr LAM 16 140	16	3200 x 1400	2,867	2.88	-	-	-	-	2 x 1.3	2 x 0.8	0.8	98 - 125
mcr LAM 16 160	16	3200 x 1600	3,277	3.30	-	-	-	-	2 x 1.3	2 x 0.8	0.8	108 - 138
mcr LAM 16 180	16	3200 x 1800	3,744	3.72	-	-	-	-	2 x 1.3	2 x 0.8	0.8	118 - 150
mcr LAM 16 200	16	3200 x 2000	4,160	4.14	-	-	-	-	2 x 1.3	2 x 0.8	0.8	127 - 163
mcr LAM 16 220	16	3200 x 2200	4,576	4.56	-	-	-	-	2 x 1.3	2 x 0.8	0.8	137 - 176
mcr LAM 16 240	16	3200 x 2400	4,992	4.98	-	-	-	-	2 x 1.3	2 x 1.0	0.8	146 - 188
mcr LAM 16 250	16	3200 x 2500	5,200	5.19	-	-	-	-	2 x 1.3	2 x 1.0	0.8	156 - 199
mcr LAM 17 110	17	3400 x 1100	2,394	2,39	-	-	-	-	2 x 1.3	2 x 0.8	0.8	93 - 119
mcr LAM 17 120	17	3400 x 1200	2,611	2.61	-	-	-	-	2 x 1.3	2 x 0.8	0.8	93 - 119
mcr LAM 17 140	17	3400 x 1400	3,046	3.06	-	-	-	-	2 x 1.3	2 x 0.8	0.8	104 - 132
mcr LAM 17 160	17	3400 x 1600	3,536	3.51	-	-	-	-	2 x 1.3	2 x 0.8	0.8	114 - 145
mcr LAM 17 180	17	3400 x 1800	3,978	3.96	-	-	-	-	2 x 1.3	2 x 0.8	0.8	124 - 158
mcr LAM 17 200	17	3400 x 2000	4,420	4.40	-	-	-	-	2 x 1.3	2 x 0.8	0.8	134 - 172
mcr LAM 17 220	17	3400 x 2200	4,862	4.85	-	-	-	-	2 x 1.3	2 x 1.0	0.8	144 - 185
mcr LAM 17 240	17	3400 x 2400	5,304	5.30	-	-	-	-	2 x 1.3	2 x 1.0	0.8	154 - 198
mcr LAM 17 250	17	3400 x 2500	5,525	5.52	-	-	-	-	2 x 1.3	2 x 1.0	0.8	159 - 205

VENT TYPE	NUMBER OF BLADES	NOMINAL DIMENSIONS (width x length)	ACTIVE AREA ROOF [Aa]	ACTIVE AREA FAÇADE [Aa]	ELECTRIC CONTROL - POWER CONSUMPTION [A] BY ELECTRIC ACTUATOR							ESTIMATED WEIGHT MIN(*)-MAX(**)
					SL 1300	SL 950	SL 750	SL 500	SL 250	SL 125	SL 0 (installation in façade)	
					[A]	[A]	[A]	[A]	[A]	[A]	[A]	
mcr LAM 18 115	18	3600 x 1150	2,650	2,65	-	-	-	-	2 x 1.3	2 x 0.8	0.8	98 - 125
mcr LAM 18 120	18	3600 x 1200	2,765	2,77	-	-	-	-	2 x 1.3	2 x 0.8	0.8	98 - 125
mcr LAM 18 140	18	3600 x 1400	3,226	3,24	-	-	-	-	2 x 1.3	2 x 0.8	w0.8	109 - 139
mcr LAM 18 160	18	3600 x 1600	3,744	3,72	-	-	-	-	2 x 1.3	2 x 0.8	0.8	119 - 153
mcr LAM 18 180	18	3600 x 1800	4,212	4,19	-	-	-	-	2 x 1.3	2 x 0.8	0.8	130 - 167
mcr LAM 18 200	18	3600 x 2000	4,680	4,66	-	-	-	-	2 x 1.3	2 x 0.8	0.8	140 - 181
mcr LAM 18 220	18	3600 x 2200	5,148	5,14	-	-	-	-	2 x 1.3	2 x 1.0	0.8	151 - 195
mcr LAM 18 240	18	3600 x 2400	5,616	5,61	-	-	-	-	2 x 1.3	2 x 1.0	0.8	162 - 209
mcr LAM 18 250	18	3600 x 2500	5,850	5,85	-	-	-	-	2 x 1.3	2 x 1.0	0.8	167 - 216
mcr LAM 19 120	19	3800 x 1200	2,918	2,93	-	-	-	-	2 x 1.3	2 x 0.8	2 x 0.8	103 - 131
mcr LAM 19 140	19	3800 x 1400	3,405	3,43	-	-	-	-	2 x 1.3	2 x 0.8	2 x 0.8	114 - 145
mcr LAM 19 160	19	3800 x 1600	3,952	3,93	-	-	-	-	2 x 1.3	2 x 0.8	2 x 0.8	125 - 160
mcr LAM 19 180	19	3800 x 1800	4,446	4,43	-	-	-	-	2 x 1.3	2 x 0.8	2 x 0.8	136 - 175
mcr LAM 19 200	19	3800 x 2000	4,940	4,93	-	-	-	-	2 x 1.3	2 x 1.0	2 x 0.8	147 - 189
mcr LAM 19 220	19	3800 x 2200	5,434	5,43	-	-	-	-	2 x 1.3	2 x 1.0	2 x 0.8	158 - 204
mcr LAM 19 240	19	3800w x 2400	5,928	5,93	-	-	-	-	2 x 1.3	-	2 x 0.8	169 - 219
mcr LAM 19 250	19	3800 x 2500	6,175	6,18	-	-	-	-	2 x 1.3	-	2 x 0.8	175 - 226

(\*) minimum weight value: mcr LAM louvered smoke vent with wind deflectors on aluminum base of height 20 cm; base without insulation (H), blades without insulation (S)  
 (\*\*) maximum weight value: mcr LAM louvered smoke vent with wind deflectors on aluminum base of height 20 cm insulated with mineral wool of thickness 20 mm (HO); blades insulated with IZO of 20 mm thickness (SO+IZO)

### 1.3.1 | Louvered smoke vents control

For correct operation, louvered smoke vents require connecting to devices controlling their opening and closing. A set of such devices constitutes a system for smoke exhaust control or smoke exhaust and ventilation control.

Depending on the type of devices used, it may be designed as a:

- » pneumatic smoke exhaust control system,
- » 24V electric smoke exhaust control system with ventilation function,
- » pneumatic and electric control system; the pneumatic part is responsible for smoke exhaust, while the 230V~ electric part - for ventilation.

Smoke exhaust control systems are activated as follows:

- 4) **automatic** – through a thermo switch installed in the vent (pneumatic system) or by optical smoke sensors (electric system),
- 5) **manual** – by a release of CO2 cartridges in alarm box (pneumatic system) or by operation of RPO emergency pushbutton (electric system),
- 6) **FAS signal** – by external impulse from fire alarm system (FAS) sent to an electromagnet installed in the alarm box (pneumatic system), or directly to smoke exhaust control unit (electric system).

Louvered smoke vent control types

- C1 – vent with pneumatic actuator with ampule and CO2 cartridge installed in a thermal fuse - CO2 opening only (manual closing from roof)
- C2 – vent with pneumatic actuator with ampule and CO2 cartridge installed in a thermal fuse - CO2 opening and closing
- C3 – vent with pneumatic actuator with ampule and CO2 cartridge installed in a thermal fuse - CO2 opening only, with gas spring for closing
- E1 – vent with 24 V- electric actuator
- E2 – vent with 230 V~ electric actuator for daily ventilation

### 1.4 | Installation

#### 1.4.1 | Installation of louvered vents on a roof

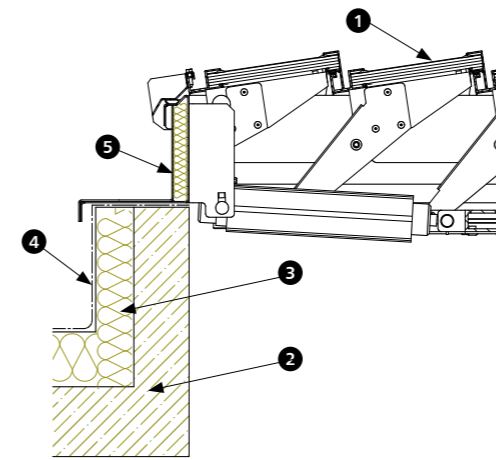


Fig. 9 Installation of louvered vent with plinth type insulated base on a roof, on a pre-existing plinth

1. louvered vent
2. roof plinth
3. thermal insulation of plinth
4. waterproof insulation of plinth and roof
5. thermal insulation of vent base

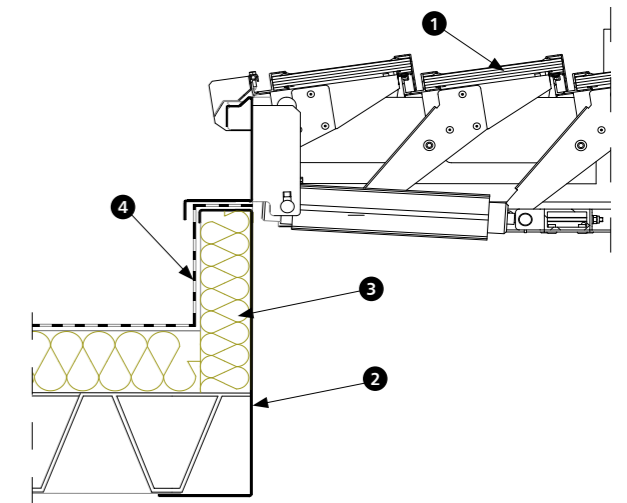


Fig. 10 Installation of louvered vent with plinth type non-insulated base on a roof, on a steel plinth

1. louvered vent
2. bottom base of vent
3. thermal insulation
4. waterproof insulation

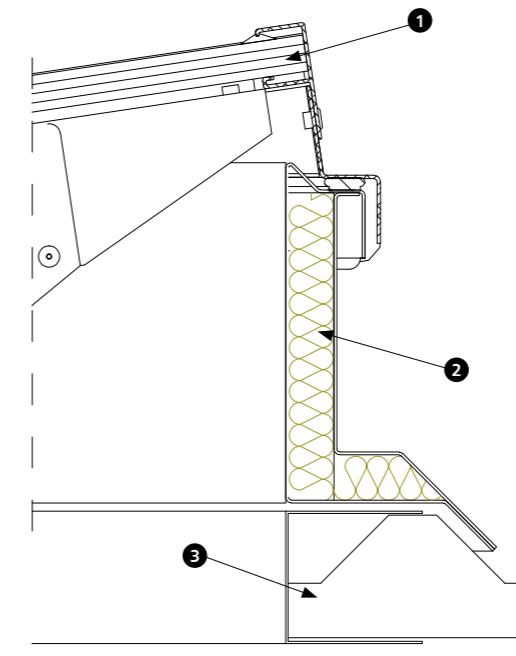


Fig. 11 Installation of louvered vent on a sheet-covered system roof

1. louvered vent
2. base insulation
3. system roofing



1.4.2 | Installation of louvered vents in a wall (façade)

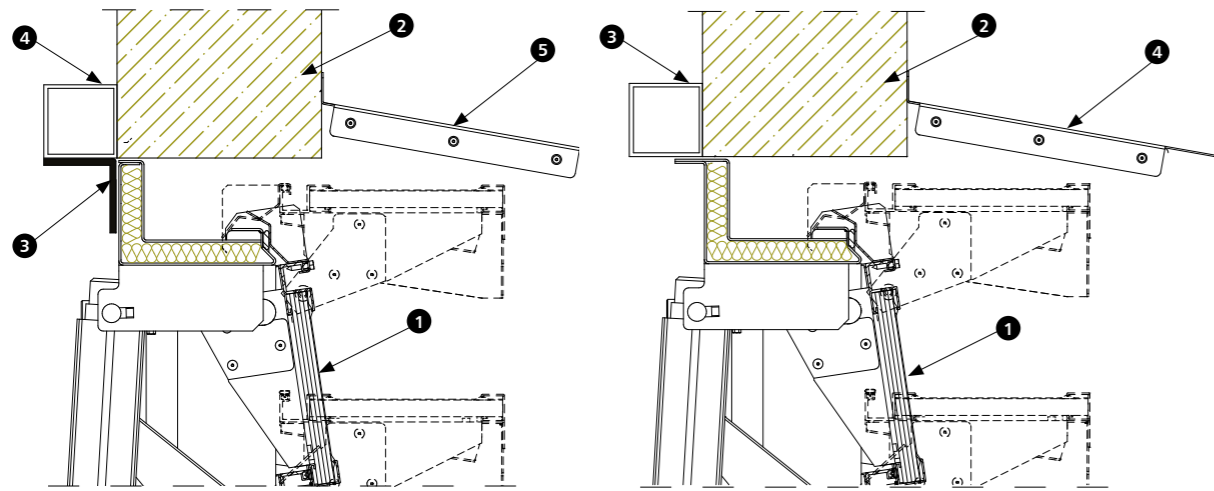


Fig. 12 Installation of louvered vent in a wall (façade) using additional steel section

1. louvered vent
2. wall (façade)
3. fixing angle profile
4. supporting steel profile
5. rain shield (optional)

Fig. 13 Installation of louvered vent in a wall (façade) to a supporting steel profile

1. louvered vent
2. wall (façade)
3. supporting steel profile
4. rain shield (optional)

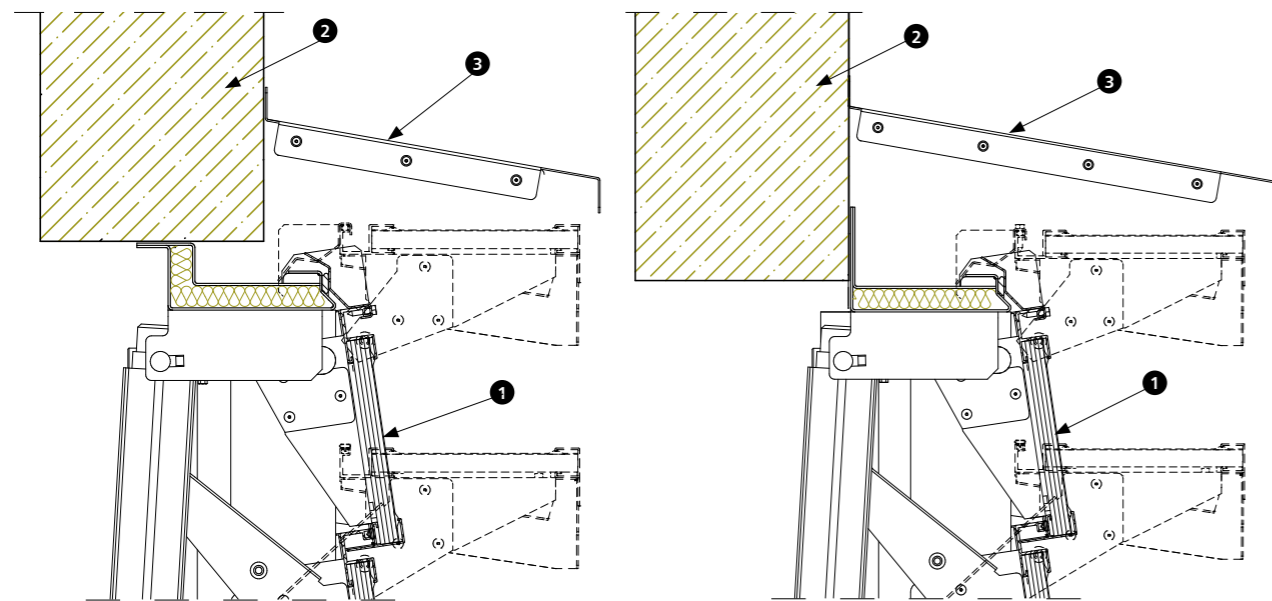


Fig. 14 Installation of louvered vent directly to a wall (façade)

1. louvered vent
2. wall (façade)
3. rain shield (recommended)

Fig. 15 Installation of louvered vent directly to a wall (façade) from the outside

1. louvered vent
2. wall (façade)
3. rain shield (recommended)

1.5 | Flange types

TYPE	FLANGE WITH INSULATION		FLANGE WITHOUT INSULATION	APPLICATION
	V(*)	H(**)		
P1				plinth type roof vents (installation onto existing plinth)
P2				vents installed on trapezoidal roofs (sandwich type)
P3				façade vents, vents installed on trapezoidal roofs (sandwich type)
P4				façade vents
P11				vents connected with continuous rooflights

TYPE	MULTI-CHAMBER POLYCARBONATE PCA16 (*)	MULTI-CHAMBER POLYCARBONATE PCA25 (*)	ALUMINUM SHEET NON-INSULATED (S0) (**)	ALUMINUM SHEET INSULATED (S0+XPS) (***)
	SMOKE VENTS MCR LAM	•	•	•

(\*) Blade glazing with multi-chamber polycarbonate panel of 16 mm or 25 mm thickness, OPAL or CLEAR;  
 (\*\*) Opaque glazing – two layers of aluminum sheet with air gap between  
 (\*\*\*) Opaque glazing – two layers of aluminum sheet with IZO panel (extruded polystyrene) between





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