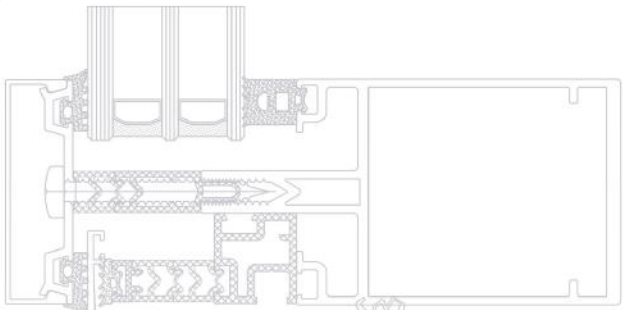
03/2026



smoke exhaust windows

mcr OSO THERM 75

We provide safety

NATURAL SMOKE EXHAUST SYSTEM

mcr OSO THERM 75 smoke exhaust windows are a family of innovative products that we developed combining our almost 40-years' experience in the natural smoke ventilation market with the expertise of the leading European experts in window profile sector. We designed this solution taking into account the requirements of the changing construction market and the expectations of our customers.

mcr OSO THERM 75 windows are made of specially designed profiles and accessories. The system is based on sections of 75 mm structure depth, which allows for obtaining a very good thermal insulation parameter.

We have additionally designed special grooves in the window profiles facilitating quick, non-invasive assembly and adjustment of drive brackets and cable laying in order to maintain the best aesthetic effect.

Our range of **mcr OSO THERM 75** smoke exhaust windows is characterised with diversity of solutions, thanks to which they can be used in individual assembly as well as in transom-post façade systems available on the market. Universal profile and bracket standardisation make the customer aware from the very beginning what the final solution is going to look like, guarantee easy assembly, ensure favourable delivery times and aesthetic values.

mercor

Mercor Light&Vent's mission is to deliver safety to building users by providing them with comprehensive fire protection. For almost 40 years, we have been offering our business partners, at every stage of the investment process, products and services they can always trust. As a leader of modern technologies in the fire protection industry, we introduce new solutions that are ahead of the norm, and are additionally characterized by high quality and aesthetic workmanship.

smoke exhaust windows

mcr OSO THERM 75

SMOKE EXHAUST WINDOW FEATURES

FUNCTION

Smoke exhaust façade windows, air inlet windows, natural ventilation windows, day lighting.

QUALITY

Complex cross-section of the aluminium profiles, sliding assembly brackets, fittings and actuators from renowned companies guarantee the final effect of the delivered product.

AESTHETICS

Wide color range of RAL palette and possibility of finishing using wood imitating varnishes. The application of small size drives assembled parallel to the window surface.

DESIGN

Various types of leaf-fillings with glazing units to meet specific user requirements. Actuator type and opening angle and direction appropriately selected to meet performance requirements.

HEAT

Aluminium profiles with separators providing excellent thermal insulation – without thermal bridges. High class glazing units with thermally insulated frame providing maximum thermal comfort.

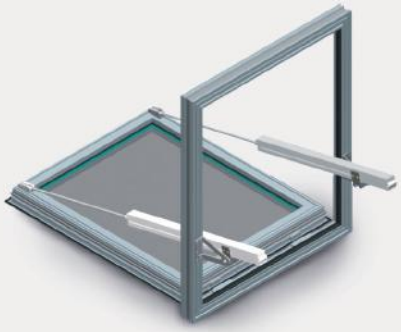
UNIVERSAL DESIGN

Possibility of combining the windows in groups, assembly in any façade system and wall type. Sliding drive assembly system facilitates adjustment to the existing assembly conditions.

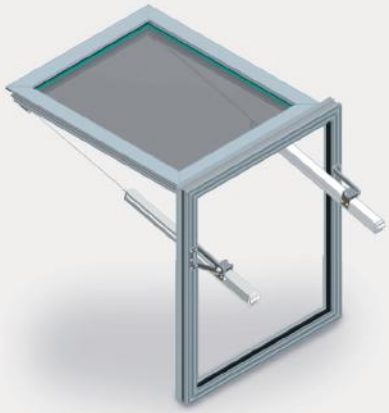
mcr OSO THERM 75 SMOKE EXHAUST WINDOW TYPES

SPINDLE ACTUATORS

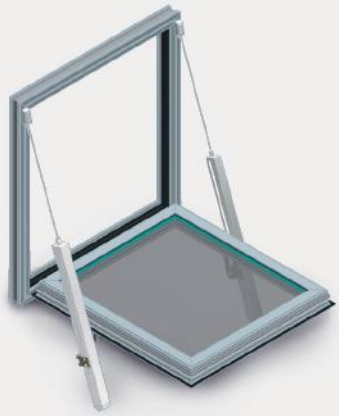
TOP HUNG OPENING OUTWARD



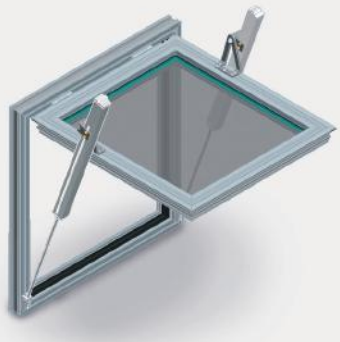
BOTTOM HUNG OPENING OUTWARD



BOTTOM HUNG OPENING INWARD

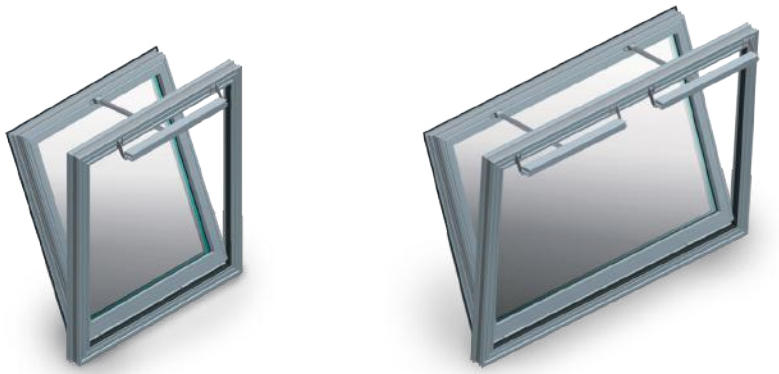


TOP HUNG OPENING INWARD



CHAIN ACTUATORS

BOTTOM HUNG OPENING OUTWARD



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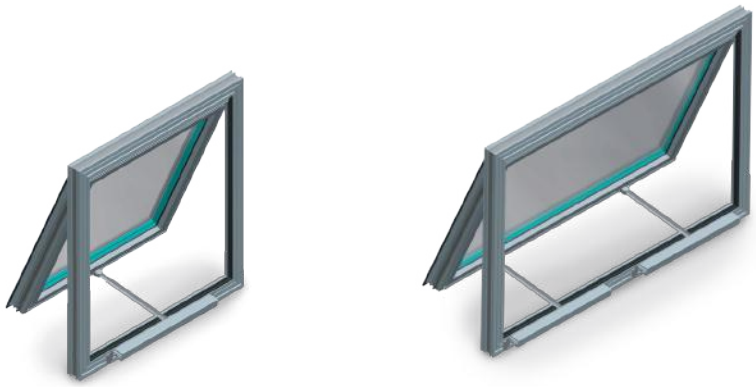

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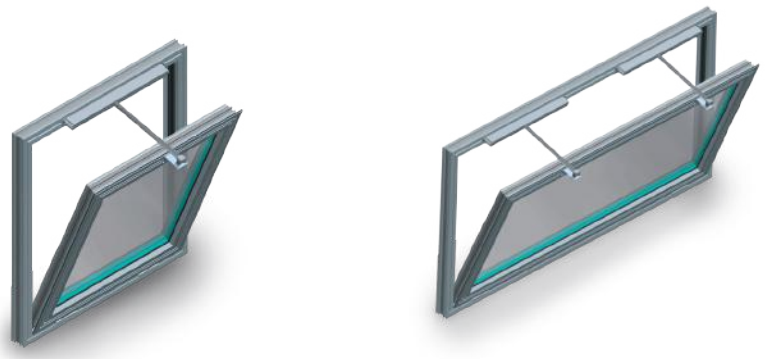
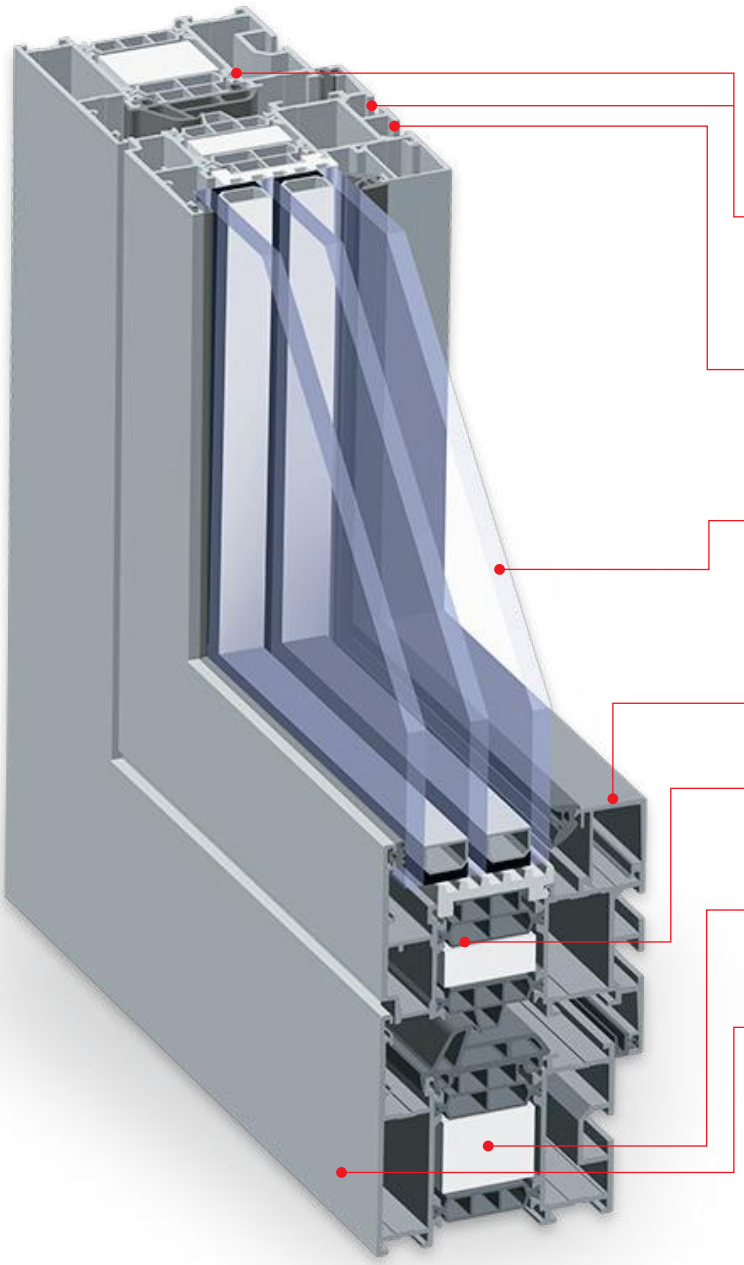


TOP HUNG OPENING INWARD

smoke exhaust windows

mcr OSO THERM 75



ALUMINIUM PROFILES

Multi-chamber profiles with polyamide thermal separators, Anti-corrosive protection of aluminium through anodising. Frame profile width 75 mm, leaf profile 84 mm.

ASSEMBLY GROOVES

Groove system allows for cable laying and simple drive bracket assembly and smooth adjustment. Grooves covered by covering profile in colors matching the frame.

GLAZING UNIT

High class up to 50 mm thick triple-glazing unit with thermally insulated frame. Deep window pane fixing guarantees optimal temperature on the internal surface of the glazing, which prevents water condensation.

EXTERNAL AND INTERNAL FINISHING

Glazing strips available in rectangular and round version.

TIGHTNESS

Increased tightness parameters thanks to using system of three advanced seals with a middle seal.

THERMAL INSERTS

Profiles with additional inserts eliminate thermal bridges and increase the total thermal insulation value of the window.

COLORS

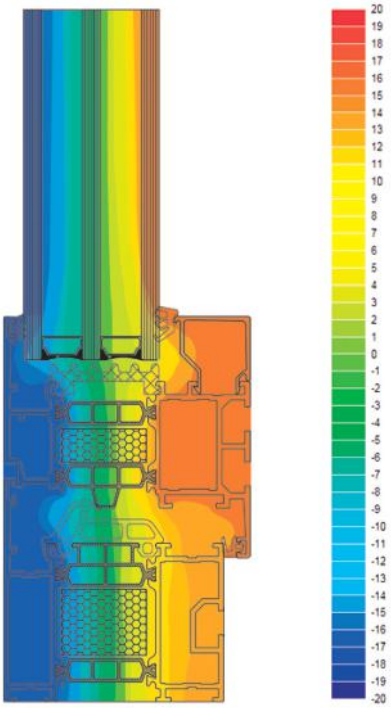
Rich color range according to RAL palette, availability of structural and wood-resembling colors, bi-color.

ENERGY EFFICIENCY

ISOTHERM PATTERN IN mcr OSO THERM 75 SMOKE EXHAUST WINDOW

Optimal isotherm pattern in **mcr OSO THERM 75** window system has been achieved thanks to appropriate arrangement of aluminium profile chambers equipped with polyamide separators, multi-surface seal system and application of additional thermal inserts.

Thanks to deep window pane fixing in the leaf profile and application of additional thermal inserts in the leaf and frame we have eliminated the water condensation on the internal side of the window.



U_{rc}=0.9 W/m²K

mcr OSO THERM 75 SMOKE EXHAUST WINDOW CLASSIFICATION ACCORDING TO EN 12101-2

80 [cm] x 80 [cm]	Min. nominal size
270 [cm] x 130 [cm]	Max. nominal size – horizontal arrangement W x H
170 [cm] x 200 [cm]	Max. nominal size – vertical arrangement W x H
SL0	Snowload class
WL 1000 + WL 1500	Wind load class
B300	High temperature resistance class
Re1000	Reliability – smoke extraction
Re_w 10000	Reliability – ventilation
60[s]	Low ambient temperature class
10° ÷ 90°	Vent opening angle

EXAMPLE mcr OSO THERM 75 SMOKE EXHAUST WINDOW PARAMETERS | spindle actuator

BxH [cm x cm]	Outward opening window						Inward opening window					
	30°		**60°**		**90°**		**30°**		**60°**		**90°**	
	Aa [m²]	spindle actuator mcr S **/ G**	Aa [m²]	spindle actuator mcr S **/ G**	Aa [m²]	spindle actuator mcr S **/ G**	Aa [m²]	spindle actuator mcr S **/ G**	Aa [m²]	spindle actuator mcr S **/ G**	Aa [m²]	spindle actuator mcr S **/ G**
80 x 80	0.17	2 x 0.8 A	0.26	2 x 0.8 A	0.29	2 x 1.0 A	0.20	2 x 0.8 A	0.29	2 x 0.8 A	0.32	2 x 1.0 A
100 x 100	0.30	2 x 0.8 A	0.44	2 x 1.0 A	**0.50**	**2 x 2.6 A**	0.34	2 x 0.8 A	0.48	2 x 1.0 A	0.54	2 x 1.0 A
100 x 120	0.40	2 x 0.8 A	0.55	2 x 1.0 A	**0.61**	**2 x 2.6 A**	0.43	2 x 0.8 A	0.60	2 x 1.0 A	**0.66**	**2 x 2.6 A**
120 x 150	0.66	2 x 0.8 A	0.88	2 x 1.0 A	**0.96**	**2 x 2.6 A**	0.70	2 x 0.8 A	0.96	2 x 1.0 A	**1.05**	**2 x 2.6 A**
130 x 80	0.29	2 x 0.8 A	0.44	2 x 0.8 A	0.51	2 x 1.0 A	0.33	2 x 0.8 A	0.48	2 x 0.8 A	0.54	2 x 1.0 A
150 x 150	0.83	2 x 0.8 A	1.12	2 x 1.0 A	**1.23**	**2 x 2.6 A**	0.87	2 x 0.8 A	1.22	2 x 1.0 A	**1.32**	**2 x 2.6 A**
160 x 170	1.06	2 x 1.0 A	**1.39**	**2 x 2.6 A**	**1.51**	**2 x 2.6 A***	1.12	2 x 1.0 A	**1.52**	**2 x 2.6 A**	**1.64**	**2 x 2.6 A***
160 x 180	1.15	2 x 1.0 A	**1.50**	**2 x 2.6 A***	**1.61**	**2 x 2.6 A***	1.21	2 x 1.0 A	**1.61**	**2 x 2.6 A***	**1.76**	**2 x 4.0 A***
190 x 110	0.67	2 x 0.8 A	0.98	2 x 1.0 A	**1.12**	**2 x 2.6 A**	0.73	2 x 0.8 A	1.07	2 x 0.8 A	**1.17**	**2 x 2.6 A**
200 x 170	1.30	2 x 1.0 A	**1.75**	**2 x 2.6 A***	**1.92**	**2 x 2.6 A***	1.38	2 x 1.0 A*	**1.90**	**2 x 2.6 A***	**2.08**	**2 x 2.6 A***
230 x 80	0.52	2 x 0.8 A	0.82	2 x 0.8 A*	**0.95**	**2 x 2.6 A***	0.59	2 x 0.8 A*	0.88	2 x 0.8 A*	0.99	2 x 1.0 A*
230 x 150	1.24	2 x 0.8 A	**1.74**	**2 x 2.6 A***	**1.95**	**2 x 2.6 A***	1.31	2 x 0.8 A*	**1.86**	**2 x 2.6 A***	**2.04**	**2 x 2.6 A***
270 x 130	1.18	2 x 1.0 A	**1.73**	**2 x 2.6 A***	**1.97**	**2 x 2.6 A***	1.27	2 x 0.8 A*	**1.85**	**2 x 2.6 A***	**2.04**	**2 x 2.6 A***

mcr S **/ G** **– bolded values indicate parameters of actuator mcr G**

* due to the size of the window and the opening angle it is necessary to use an electromagnetic lock

EXAMPLE mcr OSO THERM 75 SMOKE EXHAUST WINDOW PARAMETERS | chain actuator

BxH [cm x cm]	Outward opening window				Inward opening window			
	Aa [m²]	chain actuator* HCV	opening angle [°]	power consumption for 24 V- / 48 V-	Aa [m²]	chain actuator* HCV	opening angle [°]	power consumption for 24 V- / 48 V-
80 x 80	0,17	HCV500/350	29	1,4 / 0,7	0,18	HCV500/350	27	1.4 / 0.7
100 x 100	0.36 / **0.25**	HCV500/600 / **HCV500/350**	39 / **22**		0.25	HCV500/350	21	
100 x 120	0.45 / **0.31**	HCV500/600 / **HCV500/350**	13 / **28**		0.43 / **0.28**	HCV500/600 / **HCV500/350**	30 / **17**	
120 x 150	0.59 / **0.38**	HCV500/600 / **HCV500/350**	25 / **14**		0.60 / **0.39**	HCV500/600 / **HCV500/350**	24 / 14	
130 x 80	0.41 / **0.27**	HCV500/600 / **HCV500/350**	51 / **29**		0.30	HCV500/350	27	
150 x 150	0.73 / **0.47**	HCV500/600 / **HCV500/350**	25 / **14**		0.73 / **0.47**	HCV500/600 / **HCV500/350**	24 / **14**	
160 x 170	0.87 / **0.55**	HCV500/600 / **HCV500/350**	22 / **12**		0.86 / **0.55**	HCV500/600 / **HCV500/350**	21 / **12**	
160 x 180	0.92 / **0.58**	HCV500/600 / **HCV500/350**	20 / **12**		0.90 / **0.58**	HCV500/600 / **HCV500/350**	20 / **11**	
190 x 110	0.74 / **0.50**	HCV500/600 / **HCV500/350**	35 / **20**	2x 1.4 / 2x 0.7	0.78 / 0.48	HCV500/600 / **HCV500/350**	33 / **19**	2x 1.4 / 2x 0.7
200 x 170	1.07 / **0.66**	HCV500/600 / **HCV500/350**	22 / **12**		1.06 / **0.67**	HCV500/600 / **HCV500/350**	21 / **12**	
230 x 80	0.74 / **0.50**	HCV500/600 / **HCV500/350**	51 / **29**		0.54	HCV500/350	27	
230 x 150	1.08 / **0.67**	HCV500/600 / **HCV500/350**	25 / **14**		1.11 / **0.69**	HCV500/600 / **HCV500/350**	24 / **14**	
270 x 130	1.58 / **1.40**	HCV500/1000 / **HCV500/800**	49 / **39**		1.19 / **0.74**	HCV500/350	28 / 16	

Bolded values indicate parameters of actuator HCV500/350

* HCV 500/xxx actuators can be powered with 24 V- or 48 V-. Possibility of using the HCVA 500/xxx actuator with a voltage of 230 V~ and a current consumption of 0.13 A as an equivalent to any given HCV 500/xxx actuator.

THERMAL TRANSMITTANCE COEFFICIENT U_{rc} ** OF mcr OSO THERM 75 SMOKE VENTS

B x H [cm x cm]	U_{rc} [W/m²K]	
	Outward opening windows	Inward opening windows
150 x 150	0.9	0.9
160 x 170	0.9	0.9
160 x 180	0.9	0.9
200 x 170	0.9	0.9
230 x 150	0.9	0.9
270 x 130	0.9	0.9

** U_{rc} thermal transmittance coefficient for the entire window, determined for two-chamber glass units 4/18/4/18/33.1.

CONTINUOUS ROOFLIGHT WITH SMOKE VENTS

SMOKE AND VENTILATION VENTS

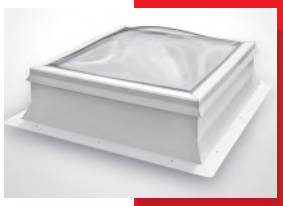
LOUVERED VENTS

SMOKE CURTAINS

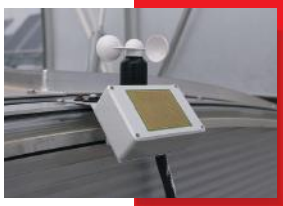
SMOKE EXHAUST WINDOWS

ROOF HATCHES

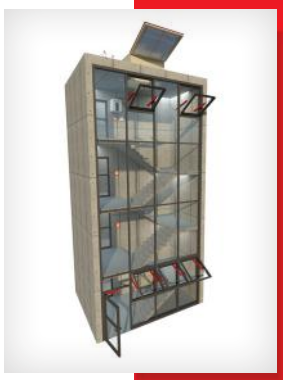
FIXED SKYLIGHTS



CONTROL SYSTEMS



STAIRCASE SMOKE EXHAUST SYSTEMS



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European Funds Smart Growth

European Union
European Regional Development Fund

The product was developed within the framework of an innovative project entitled:
"Comprehensive solutions in the scope of passive fire protection of buildings including the development of display line"
subsidized with European funds.

Read more about our smoke ventilation windows mcr OSO THERM 75

www.**mercor**.com.pl/en