

30 years
of experience

smoke exhaust windows
mcr
OSO THERM 75
CE



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 30-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®
30 years
of experience

Mercor Group's aim is to provide safety and security to the building users with comprehensive fire prevention measures. As an expert in our field, we offer our business partners products and services they can rely on at every stage of the investment.

Since 1988, we have been following a simple rule - we exist and continue to develop for our customers.

We have been delivering safety for 30 years.

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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 colour 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.

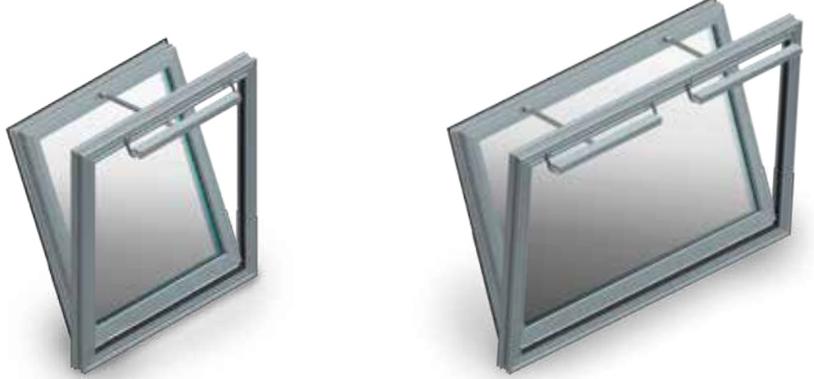


**mcr OSO THERM 75 SMOKE
EXHAUST WINDOW TYPES**

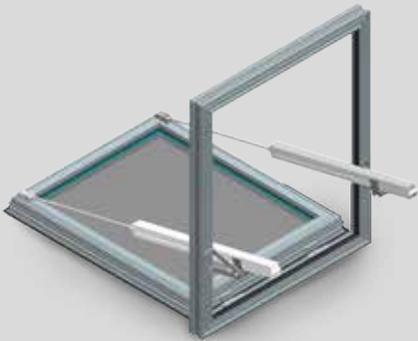
TOP HUNG OPENING OUTWARD



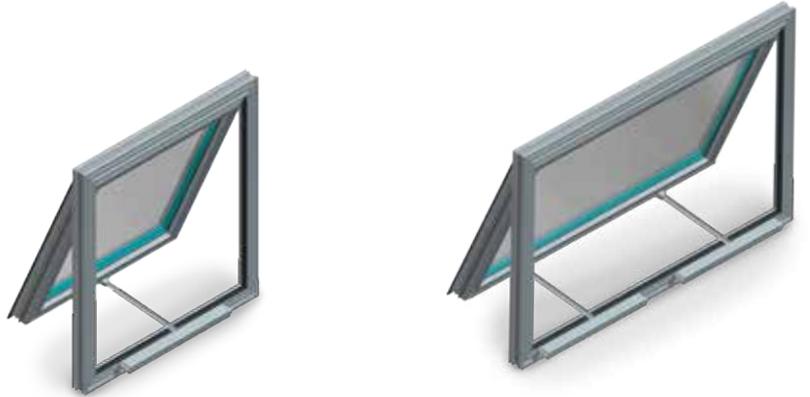
BOTTOM HUNG OPENING OUTWARD



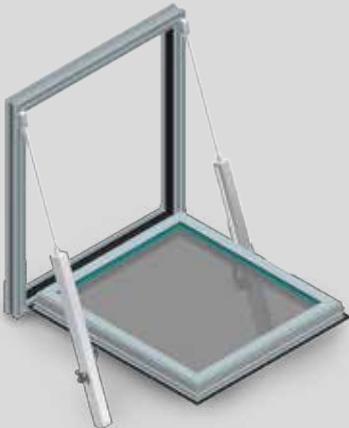
BOTTOM HUNG OPENING OUTWARD



TOP HUNG OPENING OUTWARD



BOTTOM HUNG OPENING INWARD

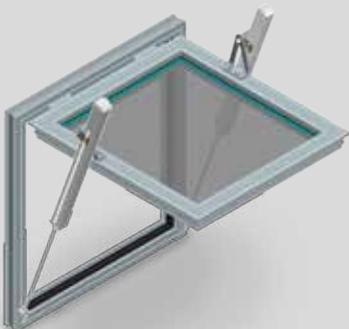


BOTTOM HUNG OPENING INWARD



TOP HUNG OPENING INWARD

TOP HUNG OPENING INWARD

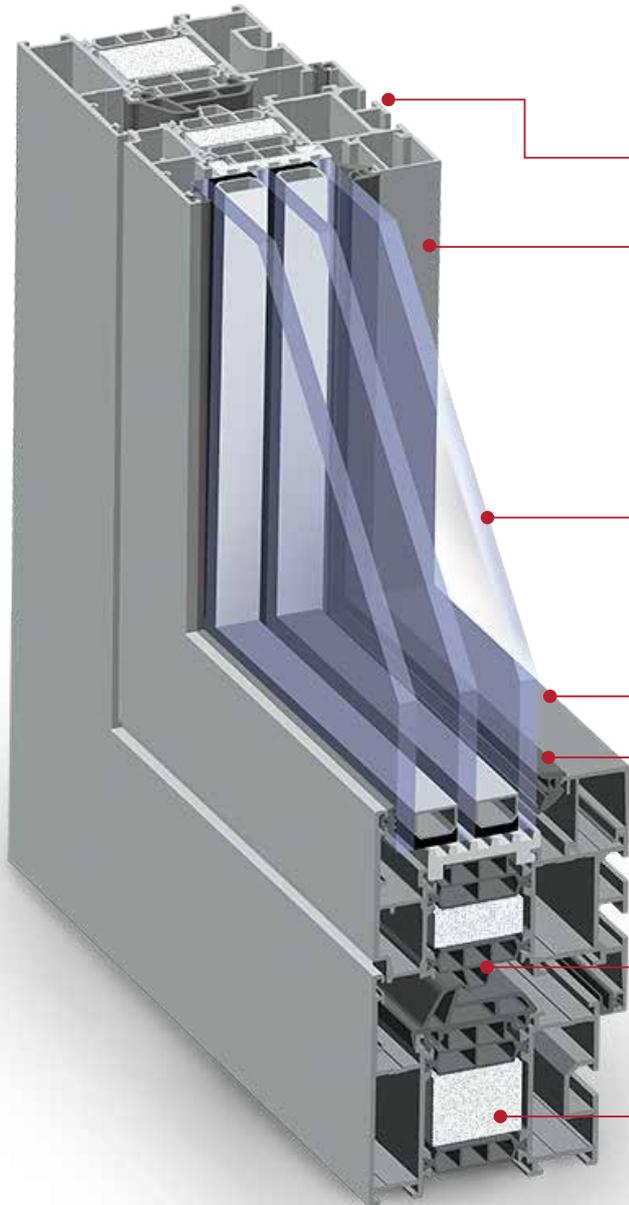


spindle actuators

single chain actuators

double chain actuators

smoke exhaust windows mcr OSO THERM 75



ASSEMBLY GROOVES

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

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.

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.

COLOURS

Rich colour range according to RAL palette, availability of structural and wood-resembling colours, bicolour.

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

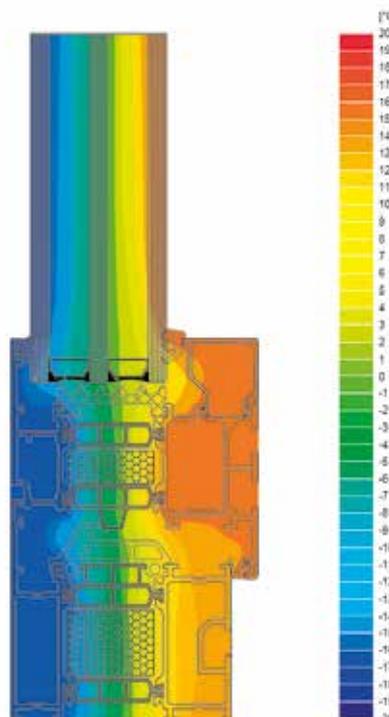
Profiles with additional inserts eliminate thermal bridges and increase the total thermal insulation value of the window.

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.



$U_{rc} = 0,8$
 W/m^2K

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80 [cm] x 80 [cm]	Min. nominal size
270 [cm] x 130 [cm]	Max. nominal size - horizontal arrangement W x H
160 [cm] x 220 [cm]	Max. nominal size - vertical arrangement W x H
SL 0	Snowload class
WL 1000 ÷ WL 1500	Wind load class
B 300	High temperature resistance class
Re 1000	Reliability - smoke extraction
Re_v 10000	Reliability - ventilation
T(00)	Low ambient temperature class
60 [s]	Maximum vent opening time to fire position
10° ÷ 90°	Vent opening angle

EXAMPLE mcr OSO THERM 75 SMOKE EXHAUST WINDOW PARAMETERS

B x H [cm x cm]	Outward opening window									Inward opening window					
	30°			60°			90°			30°		60°		90°	
	Aa [m ²]	spindle actuators	chain actuators	Aa [m ²]	spindle actuators	chain actuators	Aa [m ²]	spindle actuators	chain actuators	Aa [m ²]	spindle actuators	Aa [m ²]	spindle actuators	Aa [m ²]	spindle actuators
80x80	0,17	2x0,8A	1x1,4A	0,26	2x0,8A		0,29	2x1,0A		0,20	2x0,8A	0,29	2x0,8A	0,32	2x1,0A
100x100	0,30	2x0,8A	1x1,0A	0,44	2x1,0A		0,50	2x2,6A		0,34	2x0,8A	0,48	2x1,0A	0,54	2x1,0A
100x120	0,40	2x0,8A	1x1,4A	0,55	2x1,0A		0,61	2x2,6A		0,43	2x0,8A	0,60	2x1,0A	0,66	2x2,6A
120x150	0,66	2x0,8A	1x1,4A	0,88	2x1,0A		0,96	2x2,6A		0,70	2x0,8A	0,96	2x1,0A	1,05	2x2,6A
130x80	0,29	2x0,8A	1x1,4A	0,44	2x0,8A	1x1,4A	0,51	2x1,0A	1x1,4A	0,33	2x0,8A	0,48	2x0,8A	0,54	2x1,0A
150x150	0,83	2x0,8A	1x1,4A	1,12	2x1,0A		1,23	2x2,6A		0,87	2x0,8A	1,22	2x1,0A	1,32	2x2,6A
160x170	1,06	2x1,0A	1x1,4A	1,39	2x2,6A		1,51	2x2,6A*		1,12	2x1,0A	1,52	2x2,6A	1,64	2x4,0A*
160x180	1,15	2x1,0A	1x1,4A	1,50	2x2,6A*		1,61	2x2,6A*		1,21	2x1,0A	1,61	2x2,6A*	1,76	2x4,0A*
190x110	0,67	2x0,8A	2x1,4A	0,98	2x1,0A	1x1,4A	1,12	2x2,6A		0,73	2x0,8A	1,07	2x1,0A*	1,17	2x2,6A
200x170	1,30	2x1,0A		1,75	2x2,6A*		1,92	2x2,6A*		1,38	2x1,0A*	1,90	2x2,6A*	2,08	2x4,0A*
230x80	0,52	2x0,8A	2x1,4A	0,83	2x0,8A*	2x1,4A	0,95	2x2,6A*	2x1,4A	0,59	2x0,8A*	0,88	2x0,8A*	0,99	2x1,0A*
230x150	1,24	2x0,8A		1,74	2x2,6A*		1,95	2x2,6A*		1,31	2x0,8A*	1,86	2x2,6A*	2,04	2x2,6A*
270x130	1,18	2x1,0A		1,73	2x2,6A*		1,97	2x2,6A*		1,27	2x0,8A*	1,85	2x2,6A*	2,04	2x2,6A*

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



Thermal transmittance coefficient U_{TC}^{**}
OF mcr OSO THERM 75 SMOKE VENTS

B x H [cm x cm]	U_{TC} [W/m ² K]	
	Outward opening window	Inward opening window
80 x 80	1,1	1,1
100 x 100	0,9	0,9
100 x 120	0,9	0,9
120 x 150	0,9	0,8
130 x 80	0,9	0,8
150 x 150	0,8	0,8
160 x 170	0,8	0,8
160 x 180	0,8	0,8
190 x 110	0,8	0,8
200 x 170	0,8	0,8
230 x 80	0,8	0,8
230 x 150	0,8	0,8
270 x 130	0,8	0,8

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

**OUR PRODUCTS
ARE PRESENT
IN THE FOLLOWING
COUNTRIES:**



**SMOKE
VENTS IN
CONTINUOUS
ROOFLIGHTS**



**SMOKE
CURTAINS**



**FIRE
DAMPERS**



**SMOKE AND
VENTILATION
VENTS,
ROOF ACCESS
HATCHES**



**SMOKE
AND HEAT
EXHAUST
WINDOW
SYSTEM**



**SMOKE
VENTILATORS**



**LOUVERED
SMOKE
VENTS**



**PVC SMOKE
VENTS AND
SKYLIGHTS**



**BUILDING
STRUCTURE
PROTECTIONS**



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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.