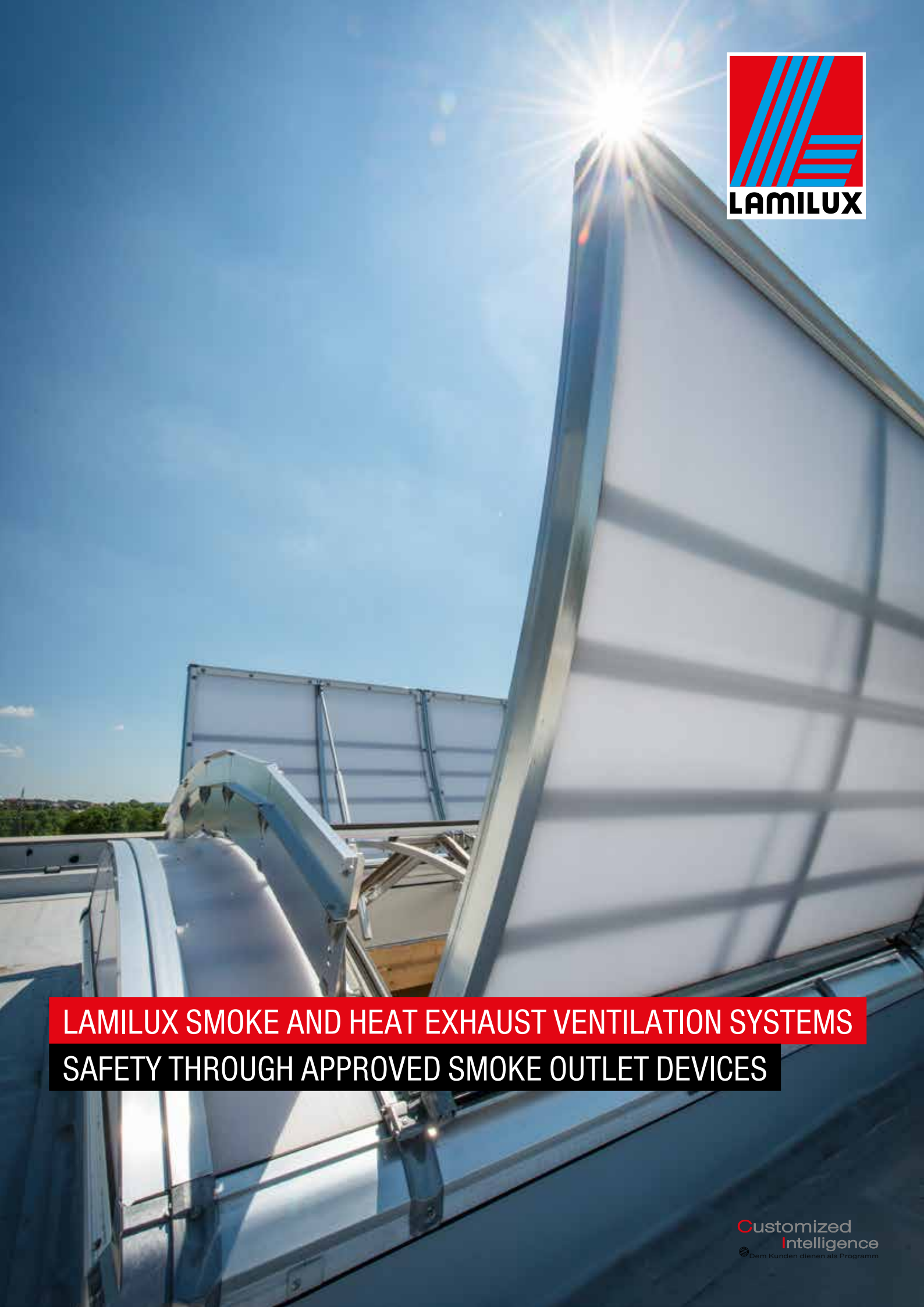


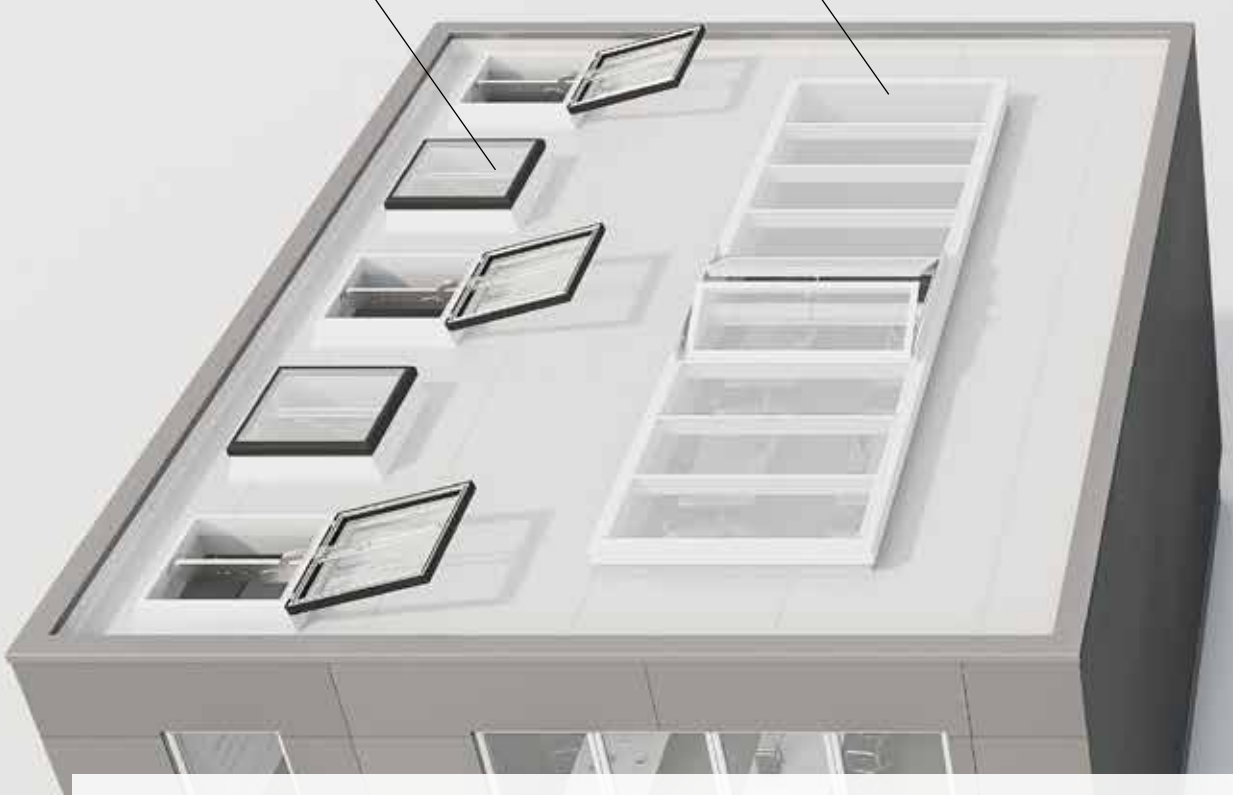
LAMILUX SMOKE AND HEAT EXHAUST VENTILATION SYSTEMS

SAFETY THROUGH APPROVED SMOKE OUTLET DEVICES

Customized Intelligence
Dem Kunden dienen als Programm

LAMILUX GLASS ROOF PR60
PAGE 16

LAMILUX GLASS SKYLIGHT F100 / FE
PAGE 12



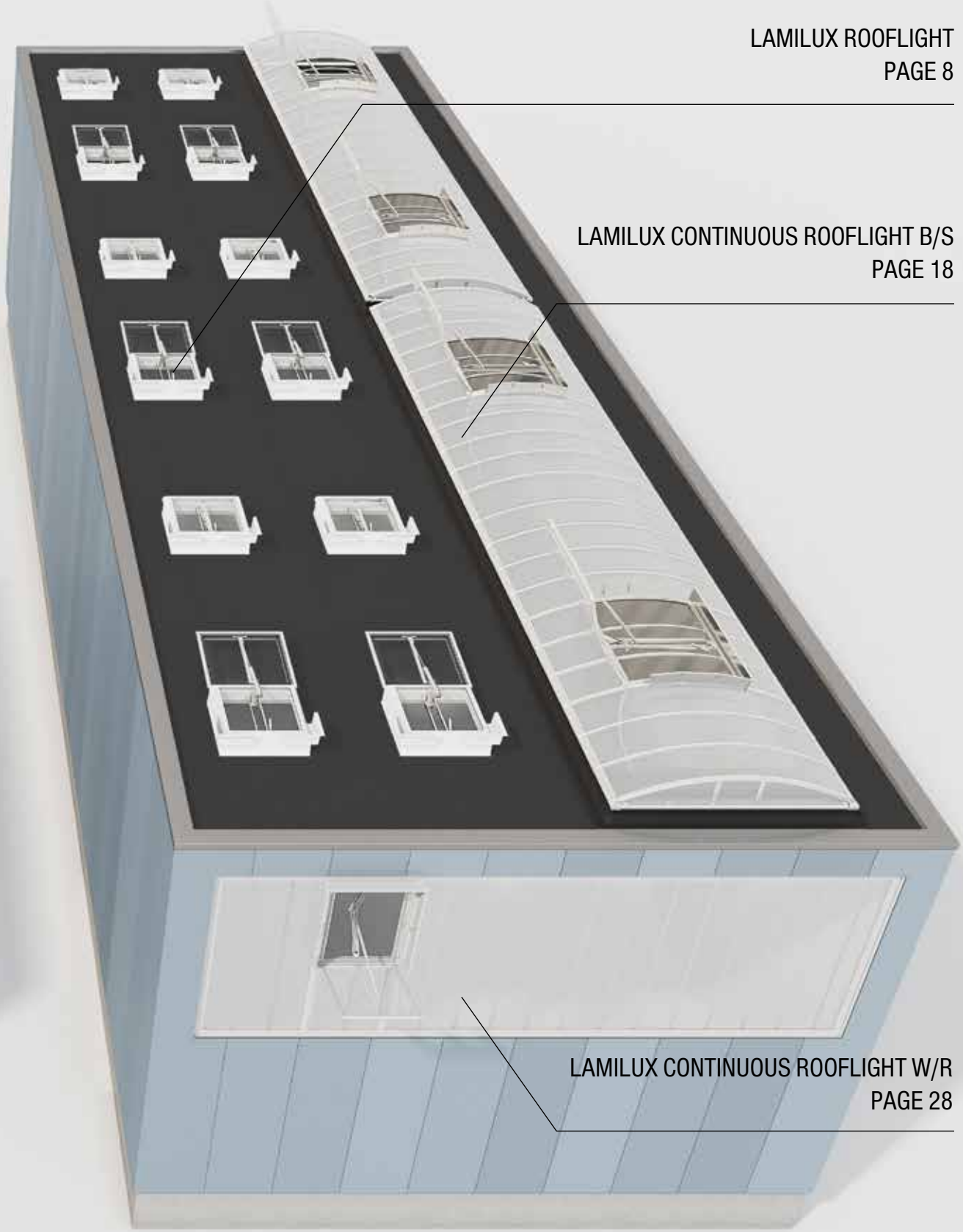
The LAMILUX CI Philosophy

Customer value is the reason we exist – and the focus of our activities. This requires harmony, identity and a balance between customer value and company strategy.

The principles that guide our company's actions and customer relations are set out in LAMILUX's company philosophy:

Customised Intelligence – serving customers is our first priority:
This requires outstanding performance and leadership in all areas relevant to customers, particularly in the role of:

- A leader in quality – optimum benefit for customers
- A leader in innovation – at the cutting edge of technology
- A leader in service – fast, uncomplicated and friendly
- A leader in expertise – optimum salesand technical advisory services
- A leader in problem solving – individual, tailored solutions



LAMILUX ROOFLIGHT
PAGE 8

LAMILUX CONTINUOUS ROOFLIGHT B/S
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LAMILUX CONTINUOUS ROOFLIGHT W/R
PAGE 28

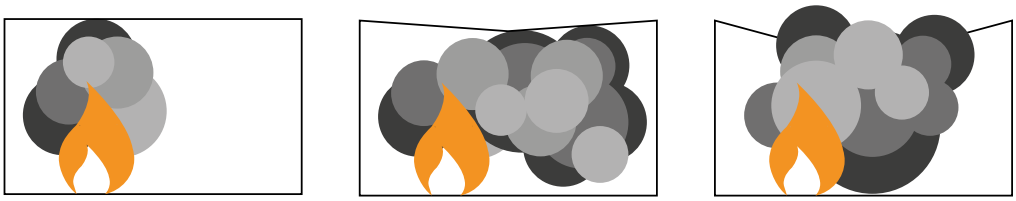
NATURAL
SMOKE AND HEAT EXHAUST VENTILATION SYSTEMS

The main task of natural smoke and heat exhaust ventilation (NSHEV) systems: In the event of fire, extract smoke and heat from rooms and buildings as quickly as possible and ensure a low-smoke layer in the lower area of the room. This creates the optimum conditions for the (self-)rescue of building users and for efficient fire fighting. Natural smoke and heat exhaust ventilation systems therefore play a key role in the planning of fire protection concepts. The widespread abbreviation SHEV stands for smoke and heat exhaust ventilation system. These can be different types of systems (NSE,MSE,SDPS,GE,HEV). LAMILUX Daylight Elements are used as NSE (natural smoke exhaust) and HE (heat exhaust) systems. The LAMILUX Group offers you a comprehensive portfolio of SHEV systems.

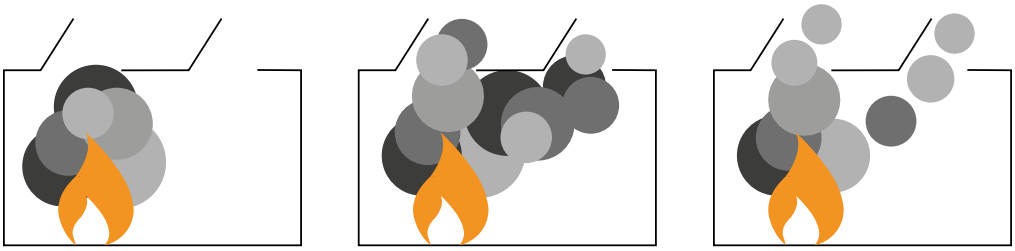
SHEV – its importance

- They keep escape routes free from toxic smoke gases.
- They create a layer of air with little smoke which provides the fire brigade with a clearer view for rapid and targeted intervention for fire-fighting and evacuation.
- They delay or prevent the explosive ignition of the smoke gases (flashover).
- They can delay or prevent a full fire outbreak.
- They prolong the structural integrity of the building through thermal relief.
- They reduce consequential fire damage to buildings and to all goods inside.

Fire progression without smoke and heat exhaust ventilation system in an industrial hall



Fire progression with natural smoke and heat exhaust ventilation (NSHEV) system in an industrial hall



STANDARDISATION

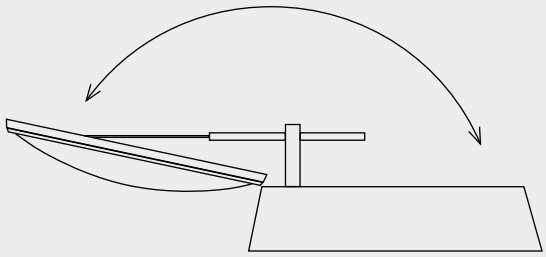
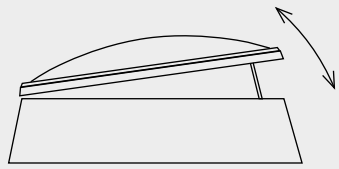
Regulations pertaining to the subject of smoke removal can be found in the various German building regulations, in standards, in the administrative regulation (technical construction specifications) and in special building regulations. The basic principles of fire protection are described in § 14 of the Master Building Code (MBO).
In principle, construction systems are to be arranged, erected, modified and maintained in such a way that the development of fire and the spread of fire and smoke is prevented. In the event of a fire, it must also be possible to rescue people and animals and to extinguish the fire effectively.

If this does not happen, Section 319 of the German Criminal Code (StGB) applies: Anyone who endangers the life and limb of people during the planning, construction or operation of buildings can be prosecuted and face a financial penalty and imprisonment.
The safety objectives considered in the German Building Code are: personal protection, neighbourhood protection and environmental protection. The type of building, its use and the construction method determine which standards must be implemented in this regard.

Overview of common standards

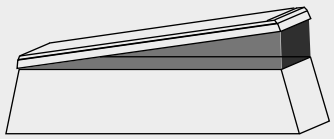
Standards	Objective
Building material class DIN 4102-1, EN 13501-1	**How easily does a building material ignite and what is its propensity to spread fire?** According to the MBO, the fire behaviour of building materials must be at least Class E (normally flammability).
Fire resistance period DIN 4102-2, EN 13501-2	**Can a structural element (wall, door ...) resist a fire without becoming inoperable?** To prevent fire spreading in a building (buildings are divided into fire compartments by firewalls with fire doors and similar. Fires are contained within these compartments for a certain period of time).
Hard roofing DIN 4102-7, EN 13501-5	**Can fire penetrate the roof and into the building from the outside?** Prevent fire spread from a building/part of a building to another via the roof.
Heat exhaust DIN 18230-1	**Can the statics of the building be protected in the event of fire by thermal relief?** Heat extraction in the event of fire, e.g. due to opening of NSHEVs or melting out of plastic surfaces (at T<300 °C), in order to protect load-bearing structural components.
Structural fire protection on (large) roofs DIN 18234	**Limits the spread of fire on large roofs when exposed to fire from below** Avoid fire spread at roof penetrations, to ensure a safer roof in the event of fire.
Smoke outlet DIN 18232, EN 12101	**Early detection and targeted containment and removal of smoke** Creation of a low-smoke layer, prevention of smoke ignition are requirements for certified smoke and heat exhaust ventilation systems.

LEGAL FOUNDATIONS

Smoke exhaust ventilation system (tested as per DIN EN 12101-2)	**Smoke vent** (no testing necessary)
	
• Device tested as per DIN EN 12101-2 • Most important parameter: Aerodynamically effective opening surface A_a (EN) or A_w (DIN) • Specification of the A_a value can be found in the manufacturer's declaration of performance **Common areas of use:** Industrial buildings, places of assembly, sales buildings	• No testing required according to MVVTB Part D 2.2.3.9 • Most important parameter: Geometrically unobstructed opening surface A_{geo} • Calculation: A_{geo} [m²] = A_{Front} + A_{Side} + A_{Side} **Common areas of use:** Staircases

All LAMILUX devices shown in this brochure are available both as a certified smoke exhaust ventilation system and as a smoke vent.

Concept drawing of the geometrically unobstructed opening surface



A_{Front}: Clearance x stroke

A_{Side}: Clearance x stroke x 0.5

$A_{Front}+A_{Side}+A_{Side}=A_{geo}$

Note: A_{geo} can never be greater than the clearance of the element

SMOKE AND HEAT EXHAUST VENTILATION:

CO_2 24V 48V 230V

VENTILATION:

bar 24V 48V 230V

LAMILUX SMOKE LIFT ROOFLIGHT F100

LAMILUX Smoke Lifts meet legal requirements and official standards for certified smoke and heat exhaust ventilation (SHEV) systems. But we also meet the demands of building owners, because they can rely on our pneumatic or electric solutions which are economical and precisely tailored to their needs.

LAMILUX Smoke Lift Rooflight F100 consists of an upstand for a roof mount and a rooflight upper section. The natural smoke and heat exhaust ventilation system (NSHEV) is much more than an 'off-the-rack product' and offers great diversity and flexibility: Our extensive selection of accessories helps us to match LAMILUX Smoke Lift Rooflight F100 to individual requirements, customer wishes and structural conditions. And we also keep one thing in mind above all else: the utmost safety and reliability of our NSHEVs in the event of fire.

Temperature parameters according to DIN EN 12101-2 and test results

Our NSHEVs reliably open into the SHEV position in less than 60 seconds...

... and ensure high smoke discharge volumes	Flow rate coefficient C_v between 0.60 and 0.75 Aerodynamically effective opening area A_a between 0.6 m² and 3.94 m²
... after endurance test (1,000 times in SHEV position and 10,000 times in ventilation position)	RE 50/1000 | Ventilation 10,000
...under snow load	SL 500 to SL 2400
...down to indoor temperature of -15 °C	T(-15)
... after exposure to wind suction (up to 1,500 N/m²)	WL 1500
...when exposed to fire	B 300

How you benefit

- Tested to DIN EN 12101-2
- The LAMILUX Smoke Lift Rooflight F100 does not hit against the roof and does not need to be replaced even when triggered during testing or due to false alarms
- Combination with natural ventilation function (300/500 mm stroke)
- CO_2 cartridges in the NSHEV are not damaged during manual triggering and maintenance
- Complies with DIN 18234 at no extra cost or effort (see page 35)
- Possibility for pneumatic and/or electric remote release

Available sizes

Top roof edge size in cm	A_a values m² Sloped upstand				A_a values m² Steep upstand with spoiler		
	CO_2	24V	48V	230V	CO_2	24V	48V	230V
100/100	0.60	0.60		—	0.75	0.71		0.75
100/150	0.90	0.90		—	1.13	1.08		1.13
100/200	1.30	1.24		—	1.50	1.44		1.50
100/240	1.56	1.51		—	1.80	1.73		1.80
100/250	1.63	1.58		—	1.88	1.80		1.88
100/300	1.95	1.83*		—	2.25	2.07*		2.25
120/120	0.94	0.88		0.94	1.08	1.02		1.08
120/150	1.17	1.12		1.17	1.35	1.30		1.35
120/180	1.40	1.36		1.40	1.62	1.56		1.62
120/240	1.87	1.87		1.87	2.16	2.10		2.16
120/250	1.95	1.95		—	2.25	2.19		—
120/270	2.11	2.00*		—	2.43	2.27*		—
120/300	2.34	2.23*		2.34	2.70	2.56*		2.70
125/125	1.02	0.97		1.02	1.17	1.11		1.17
125/250	2.03	2.03		2.03	2.34	2.28		2.34
140/140	1.25	1.22		—	1.43	1.41		—
150/150	1.46	1.42		1.46	1.69	1.62		1.69
150/180	1.76	1.73		1.76	2.03	1.97		2.03
150/200	1.95	1.95		1.95	2.25	2.19		2.25
150/210	2.05	2.05		2.05	2.36	2.30		2.36
150/240	2.34	2.34		2.34	2.70	2.63		2.70
150/250	2.44	2.44		2.44	2.81	2.74		2.81
150/270	2.63	2.55*		—	3.04	2.88*		—
150/300	2.93	2.84*		2.93	3.38	3.20*		3.38
180/180	2.11	2.11		—	2.43	2.37		—
180/210	2.46	2.46		—	2.84	2.76		—
180/240	2.81	2.81		—	3.24	3.15		—
180/250	2.93	2.93		—	3.38	3.33		—
180/270	3.26	3.06*		—	3.55	3.50*		—
180/300	3.62	3.40*		—	3.94	3.89*		—
200/200	2.60	2.60		—	3.00	2.92		—

*Tandem fitting

LAMILUX
SMOKE LIFT GLASS SKYLIGHT F100

SMOKE AND HEAT EXHAUST VENTILATION:
CO_2 24V 48V 230V
VENTILATION:
bar 24V 48V 230V

The LAMILUX Smoke Lift Glass Skylight F100 is ideally suited for industrial and administrative buildings. It combines the advantages of glass skylights with those of an electrical smoke and heat exhaust ventilation system according to DIN EN 12101-2.

The Smoke Lift achieves excellent heat and sound insulation values. Adapted to the individual requirements and wishes of the customer as well as the structural conditions, the natural smoke and heat exhaust ventilation system offers you safety and comfort for your workspaces.

Temperature parameters according to DIN EN 12101-2 and test results
Our NSHEVs reliably open into the SHEV position in less than 60 seconds...

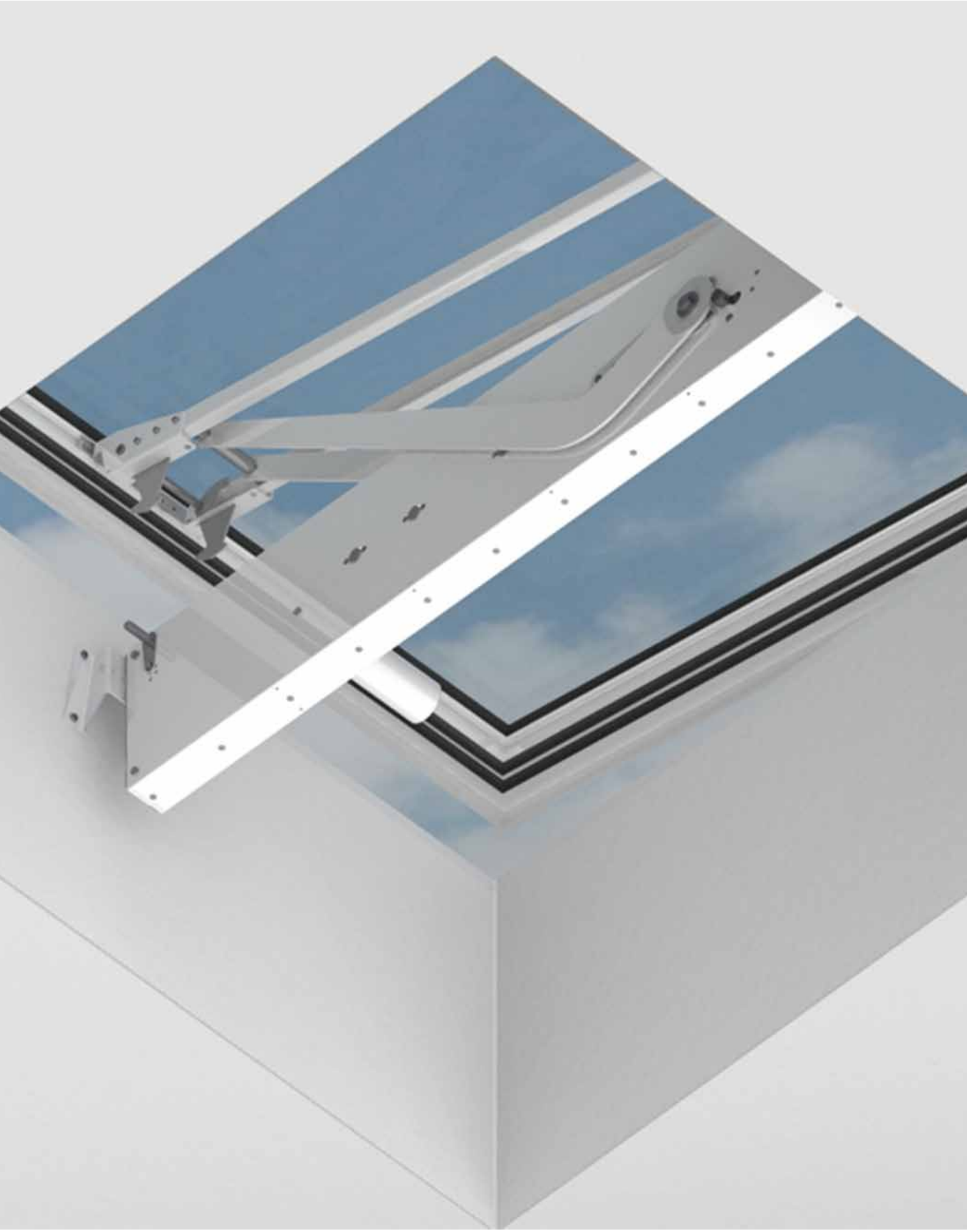
... and ensure high smoke discharge volumes	Flow rate coefficient C_v between 0.60 and 0.70 Aerodynamically effective opening surface A_a between 0.6 m² and 1.62 m²*
... after endurance test (1,000 times in SHEV position and 10,000 times in ventilation position)	RE 1000 | Ventilation 10,000
...under snow load	SL 1000 to SL 2000
...down to indoor temperature of -15 °C	T(-15)
... after exposure to wind suction (up to 1,500 N/m²)	WL 1500
...when exposed to fire	B 300

How you benefit

- Available with double or triple insulating glazing with U_g values between 1.1 and 0.7 W/(m²K)
- Tested to DIN EN 12101-2
- Complies with DIN 18234 requirements: Prevents fire spreading on the roof without additional measures
- Complies with EN 13501-5: Resistant to flying sparks
- Permanently fall-through proof
- Multi-stage ventilation fitted as standard
- Easy to close after false signal release
- Available as a roof exit hatch as an option

Upper edge of roof in cm	A_a values (m²) Sloped upstand 24V 48V	A_a values (m²) Steep upstand 24V 48V
100/100	0.60	—
100/150	0.90	1.08
120/120	0.88	1.02
120/150	1.12	—
125/125	0.97	—
140/140	1.22	—
150/150*	1.42	1.62
150/150**	1.35	1.58

*Only with double insulating glazing **Triple glazing as tandem fitting



LAMILUX
SMOKE LIFT GLASS SKYLIGHT FE

SMOKE AND HEAT EXHAUST VENTILATION:
CO_2 24V 48V 230V
VENTILATION:
bar 24V 48V 230V

The LAMILUX Smoke Lift Glass Skylight FE opens up new architectural possibilities for high-quality administrative buildings. With an aluminium frame and for high energy standards, it combines the advantages of glass skylights with those of an electrical smoke and heat exhaust ventilation system according to DIN EN 12101-2.

In addition to excellent heat and sound insulation values, you can also benefit from the durability of our aluminium frames or the free colour scheme of the frames, in all RAL colours. The natural smoke and heat exhaust ventilator offers you safety and comfort for your workspaces.

Temperature parameters according to DIN EN 12101-2 and test results

Our NSHEVs reliably open into the SHEV position in less than 60 seconds...

... and ensure high smoke discharge volumes	Flow rate coefficient C_V between 0.60 and 0.71 Aerodynamically effective opening surface A_a between 0.6 m² and 2.84 m²*
... after endurance test (1,000 times in SHEV position and 10,000 times in ventilation position)	RE 1000 | Ventilation 10,000
...under snow load	SL 1000 to SL 2000
...down to indoor temperature of -15 °C	T(-15)
... after exposure to wind suction (up to 1,500 N/m²)	WL 1500
...when exposed to fire	B 300

How you benefit

- Available with double or triple insulating glazing with U_g values between 1.1 and 0.6 W/(m²K)
- Tested to DIN EN 12101-2
- Complies with DIN 18234 requirements: Prevents fire spreading on the roof without additional measures
- Complies with EN 13501-5: Resistant to flying sparks
- Permanently fall-through proof
- Multi-stage ventilation fitted as standard
- Easy to close after false signal release
- Also available in the 3° inclined version

Upper edge of roof in cm 0°/3°	A_a values (m²) Sloping/Steep 24V	48V	Upper edge of roof in cm 0°/3°	A_a values (m²) Sloping/Steep 24V	48V
100/100	0.60		120/250	1.86	
100/150	0.90	1.08	120/300	2.23	
100/200*	1.24		125/125	0.97	1.08
100/200**	1.20		125/250	1.94	
100/240	1.44		150/150*	1.42	
100/250	1.53		150/150**	1.35	1.62
100/300	1.83		150/180	1.58	1.65
120/120	0.88	1.02	150/200	1.86	
120/150	1.12		150/210	1.98	
120/180*	1.36		150/240	2.27	
120/180**	1.30		150/250	2.36	
120/240	1.79		150/300	2.84	

*Only with double insulating glazing **Triple glazing as tandem fitting

SMOKE AND HEAT EXHAUST VENTILATION:
CO_2 24V 48V 230V
VENTILATION:
bar 24V 48V 230V

LAMILUX
SMOKE LIFT GLASS ROOF PR60

Our fitting SHEV unit, the LAMILUX Smoke Lift Glass Roof PR60, can be optimally integrated in the glass roof construction. It also opens safely and reliably in the event of a fire. The SHEV unit can be installed in the LAMILUX Glass Roof PR60 in inclinations between zero and 90 degrees.

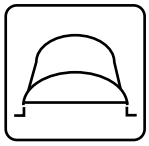
Temperature parameters according to DIN EN 12101-2 and test results
Our NSHEVs reliably open into the SHEV position in less than 60 seconds...

...and ensure high smoke discharge volumes	Flow rate coefficient C_v between 0.56 and 0.70 Aerodynamically effective opening area A_a between 0.14 m² and 4.20 m²
...after endurance test (1,000 times in SHEV position and 10,000 times in ventilation position)	RE 50/1000 | Ventilation 10,000
...under snow load	SL 500 to SL 1000
...down to indoor temperature of -15 °C	T(00) T(-05) T(-15)
...after exposure to wind suction (up to 1,500 N/m²)	WL 1500
...when exposed to fire	B 300

How you benefit

- Opening vent width and height can be any size (up to 2.50 m, covering a maximum opening vent size of 3.00 m² with genuine glazing)
- Complies with European standard DIN EN 12101-2 for smoke and heat exhaust ventilation systems
- Variable selection of drive systems – pneumatic or 24 Volt electric version
- Perfectly suited for renovations of older glass roof constructions as it can be integrated in systems of other manufacturers

SMOKE AND HEAT EXHAUST VENTILATION:
CO_2 24V 48V 230V
VENTILATION:
bar 24V 48V 230V



LAMILUX
SMOKE LIFT CONTINUOUS ROOFLIGHT B

In the event of a fire, smoke levels in escape routes must be kept low for as long as possible. LAMILUX Smoke Lift Continuous Rooflight B and S with standard-compliant triggering achieve this thanks to their effective smoke vent effect. This allows people to escape from inside the building and allows the fire brigade to enter it to extinguish the fire. In their function as natural smoke and heat exhaust ventilation systems, Smoke Lift Continuous Rooflight B and S meet all requirements of DIN EN 12101-2.

Our continuous rooflight systems enable large, aerodynamic smoke extraction areas and extensive full ventilation. With large dimensions, the opening vents of the smoke lift also prove to be an extremely stable overall system when subjected to strong wind loads – even when they are open. In the event of a fire, vents are quickly opened thanks to thermal release or CO_2 remote release or electric remote release. If additional opening drives are used, our NSHEVs can also be used for daily ventilation.

Temperature parameters according to DIN EN 12101-2 and test results
Our NSHEVs reliably open into the SHEV position in less than 60 seconds...

... and ensure high smoke discharge volumes	Flow rate coefficient C_V between 0.60 and 0.67 Aerodynamically effective opening area A_a between 0.59 m² and 7.52 m²
... after endurance test (1,000 times in SHEV position and 10,000 times in ventilation position)	RE 1000 | Ventilation 10,000
...under snow load	SL 200 to SL 1100
... in indoor temperatures as low as -5 °C	Up to T (-25)
... after exposure to wind suction (up to 3,000 N/m²)	WL 1500 to WL 3000
...when exposed to fire	B 300

How you benefit

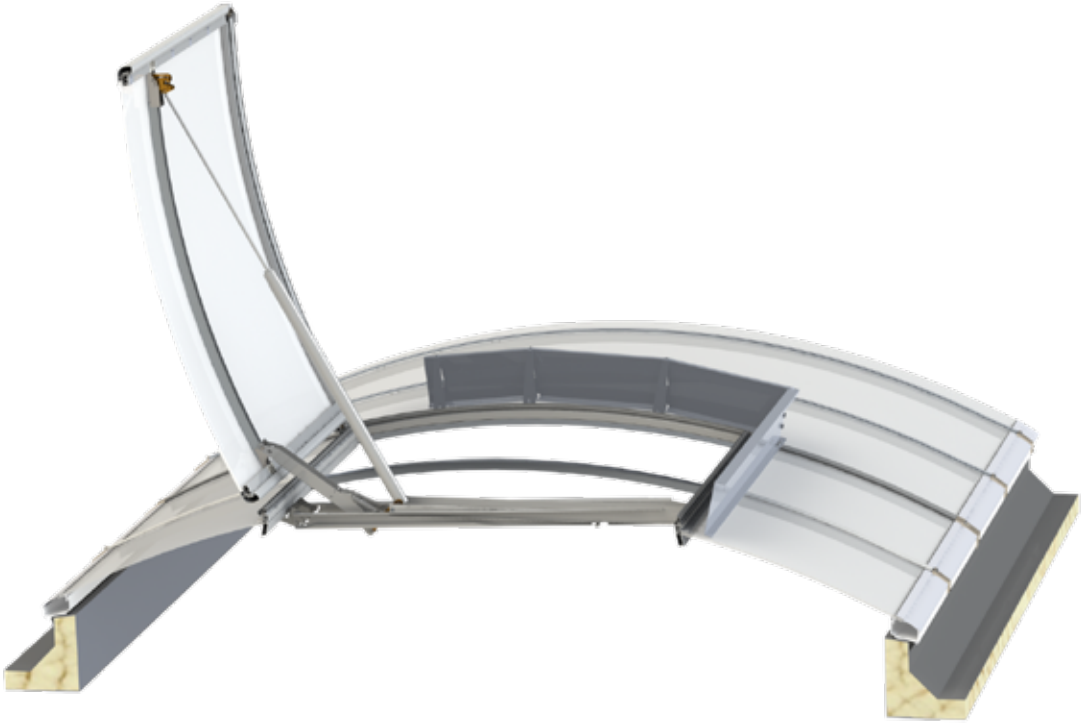
- No spreading of flames as the patented Linear Burn-through Protection ensures compliance with DIN 18234 even with no gravel fill
- Excellent heat insulation values with thermally broken framework
- Suitable as a “meltable” roof surface pursuant to DIN 18230 for heat extraction
- Optionally available as ‘hard roofing’ as per EN 13501-5: resistant to flying sparks
- CO_2 cartridges in the NSHEV are not damaged during manual triggering and maintenance
- Many opening vent combinations – the perfect solution for every need

Opening vent combinations

We offer all Smoke Lift systems as single or double opening vents. To achieve even greater A_a values, two opening vents can be placed directly next to each other (tandem series). This combination is a certified natural smoke and heat exhaust ventilation system and achieves an A_a value of 7.4 m^2.

LAMILUX Smoke Lift Continuous Rooflight B

As single opening vent



As asymmetric double opening vent

As symmetric double opening vent

Available opening vent sizes

LAMILUX Smoke Lift Continuous Rooflight B

Single opening vent

Can be used from continuous rooflight width in cm	Width in cm	Length in cm	Geometrically unobstructed opening area A_{geo} in m²	Aerodynamically effective opening area A_a in m²
100	98	96	0.93	0.59
100	98	201	1.96	1.27
100 TS	98	201	1.96	1.23
100 TS	98	411	4.01	2.53
125	123	96	1.17	0.74
125	123	201	2.46	1.60
125 TS	123	201	2.46	1.53
125 TS	123	411	5.04	3.18
150	150	96	1.43	0.90
150	150	201	3.01	1.96
150 TS	150	201	3.02	1.87
150 TS	150	411	6.17	3.83

Asymmetric double opening vent

Can be used from continuous rooflight width in cm	Width in cm	Length in cm	Geometrically unobstructed opening area A_{geo} in m²	Aerodynamically effective opening area A_a in m²
175	175	96	1.67	1.04
175	175	201	3.51	2.28
175 TS	175	201	3.52	2.18
175 TS	175	411	7.20	4.68
200	200	96	1.91	1.18
200	200	201	4.01	2.61
200 TS	200	201	4.02	2.53
200 TS	200	411	8.22	5.34

Symmetric double opening vent

Can be used from continuous rooflight width in cm	Width in cm	Length in cm	Geometrically unobstructed opening area A_{geo} in m²	Aerodynamically effective opening area A_a in m²
250	250	96	2.39	1.48
250	250	201	5.02	3.26
250 TS	250	201	5.03	3.12
250 TS	250	411	10.28	6.37
300	300	96	2.87	1.78
300	300	201	6.02	3.91
300 TS	300	201	6.04	3.74
300 TS	300	411	12.34	7.40

SMOKE AND HEAT EXHAUST VENTILATION:
CO_2 24V 48V 230V
VENTILATION:
bar 24V 48V 230V

LAMILUX
SMOKE LIFT CONTINUOUS ROOFLIGHT S

In the event of a fire, smoke levels in escape routes must be kept low for as long as possible. LAMILUX Smoke Lift Continuous Rooflight B and S with standard-compliant triggering achieve this thanks to their effective smoke vent effect. This allows people to escape from inside the building and allows the fire brigade to enter it to extinguish the fire. In their function as natural smoke and heat exhaust ventilation systems, Smoke Lift Continuous Rooflight B and S meet all requirements of DIN EN 12101-2.

Our continuous rooflight systems enable large, aerodynamic smoke extraction areas and extensive full ventilation. With large dimensions, the opening vents of the smoke lift also prove to be an extremely stable overall system when exposed to strong wind loads – even when they are open. In the event of a fire, vents are quickly opened thanks to thermal release or CO_2 remote release or electric remote release. If additional opening drives are used, our NSHEVs can be used for daily ventilation.

Temperature parameters according to DIN EN 12101-2 and test results
Our NSHEVs reliably open into the SHEV position in less than 60 seconds...

... and ensure high smoke discharge volumes	Flow rate coefficient C_V between 0.51 and 0.77 Aerodynamically effective opening area A_a between 0.32 m² and 6.50 m²
... after endurance test (1,000 times in SHEV position and 10,000 times in ventilation position)	RE 1000 | Ventilation 10,000
...under snow load	SL 550 to SL 1100
... in indoor temperatures as low as -5 °C	T(-5)
... after exposure to wind suction (up to 3,000 N/m²)	WL 1500 to WL 3000
...when exposed to fire	B 300

How you benefit

- No spreading of flames as the patented Linear Burn-through Protection ensures compliance with DIN 18234 even with no gravel fill
- Excellent heat insulation values with thermally broken framework
- Suitable as a “meltable” roof surface pursuant to DIN 18230 for heat extraction
- Optionally available as ‘hard roofing’ as per EN 13501-5: resistant to flying sparks
- CO_2 cartridges in the NSHEV are not damaged during manual triggering and maintenance
- Many opening vent combinations – the perfect solution for every need

Opening vent combinations

All smoke lift systems can be integrated as single or double opening vents. Similarly, two opening vents can be placed directly next to each other (tandem series). This flap combination acts as a certified natural smoke and heat exhaust ventilation system and achieves a high aerodynamic smoke ventilation area.

LAMILUX Smoke Lift Continuous Rooflight S

As single opening vent

As double opening vent

Available opening vent sizes

LAMILUX Smoke Lift Continuous Rooflight S

30° single opening vent

Can be used from continuous rooflight width in cm	Width in cm	Length in cm	Geometrically unobstructed opening area A_{geo} in m²	Aerodynamically effective opening area A_a in m²
100	53	100	0.53	0.32
100	53	205	1.09	0.64
100 TS	53	206	1.09	0.63
100 TS	53	416	2.20	1.19
150	82	100	0.82	0.49
150	82	205	1.68	0.99
150 TS	82	206	1.69	0.98
150 TS	82	416	3.41	1.81
200	111	100	1.11	0.64
200	111	205	2.28	1.30
200 TS	111	206	2.28	1.30
200 TS	111	416	4.62	2.45
250	140	100	1.40	0.80
250	140	205	2.87	1.61
250 TS	140	206	2.88	1.55
250 TS	140	416	5.82	2.97
300	169	100	1.69	0.95
300 TS	169	206	3.47	1.84

30° double opening vent

Can be used from continuous rooflight width in cm	Width in cm	Length in cm	Geometrically unobstructed opening area A_{geo} in m²	Aerodynamically effective opening area A_a in m²
100	102	100	1.02	0.64
100	102	205	2.09	1.28
100 TS	102	206	2.10	1.24
100 TS	102	416	4.24	2.42
150	152	100	1.52	0.96
150	152	205	3.12	1.90
150 TS	152	206	3.13	1.84
150 TS	152	416	6.32	3.48
200	202	100	2.02	1.25
200	202	205	4.14	2.57
200 TS	202	206	4.15	2.53
200 TS	202	416	8.40	4.96
250	252	100	2.52	1.54
250	252	205	5.17	3.20
250 TS	252	206	5.18	3.21
250 TS	252	416	10.48	6.50
300	302	100	3.02	1.84
300 TS	302	206	6.21	3.85

Available opening vent sizes

LAMILUX Smoke Lift Continuous Rooflight S

45° single opening vent

Can be used from continuous rooflight width in cm	Width in cm	Length in cm	Geometrically unobstructed opening area A_{geo} in m²	Aerodynamically effective opening area A_a in m²
80	53	100	0.53	0.33
80	53	205	1.09	0.65
80 TS	53	206	1.09	0.65
80 TS	53	416	2.20	1.23
120	82	100	0.82	0.51
120	82	205	1.68	0.99
120 TS	82	206	1.69	1.01
120 TS	82	416	3.41	1.91
160	111	100	1.11	0.67
160	111	205	2.28	1.32
160 TS	111	206	2.28	1.30
160 TS	111	416	4.62	2.45
200	140	100	1.40	0.80
200	140	205	2.87	1.64
200 TS	140	206	2.88	1.55
200 TS	140	416	5.82	2.97
240	169	100	1.69	0.96
240 TS	169	206	3.47	1.84

45° double opening vent

Can be used from continuous rooflight width in cm	Width in cm	Length in cm	Geometrically unobstructed opening area A_{geo} in m²	Aerodynamically effective opening area A_a in m²
120	122	100	1.22	0.94
120	122	205	2.49	1.84
120 TS	122	206	2.50	1.82
120 TS	122	416	5.05	3.54
160	163	100	1.63	1.25
160	163	205	3.33	2.47
160 TS	163	206	3.34	2.44
160 TS	163	416	6.76	4.39
200	204	100	2.04	1.51
200	204	205	4.17	2.71
200 TS	204	206	4.18	2.59
200 TS	204	416	8.47	5.08
240	245	100	2.45	1.71
240 TS	245	206	5.03	3.02

TS = Tandem-serial smoke and heat exhaust ventilation unit

LAMILUX Smoke Lift Continuous Rooflight S

Shed single opening vent

Can be used from continuous rooflight width in cm	Width in cm	Length in cm	Geometrically unobstructed opening area A_{geo} in m²	Aerodynamically effective opening area A_a in m²
110	53	100	0.53	0.32
110	53	205	1.09	0.64
110 TS	53	206	1.09	0.62
110 TS	53	416	2.20	1.21
170	82	100	0.82	0.49
170	82	205	1.68	0.99
170 TS	82	206	1.69	0.96
170 TS	82	416	3.41	1.88
230	111	100	1.11	0.65
230	111	205	2.28	1.32
230 TS	111	206	2.28	1.26
230 TS	111	416	4.62	2.49
290	140	100	1.40	0.81
290	140	205	2.87	1.64
290 TS	140	206	2.88	1.55
290 TS	140	416	5.82	3.03
350	169	100	1.69	0.96
350 TS	169	206	3.47	1.84

LAMILUX SMOKE LIFT M
FOR CONTINUOUS ROOFLIGHT W | R

LAMILUX Smoke Lift systems meet legal requirements and official standards for fast and efficient smoke and heat exhaust ventilation (SHEV). But we also meet the demands of building owners, because they can rely on our pneumatic or electric solutions which are economical and precisely tailored to their needs.

As a natural smoke and heat exhaust ventilation (NSHEV) system, the LAMILUX Smoke Lift M for Continuous Rooflight W|R is far more than an 'off-the-rack' product and offers great variety and flexibility: We match LAMILUX Smoke Lift M to individual requirements, customer wishes and structural conditions. And we also keep one thing in mind above all else: the utmost safety and reliability of our NSHEVs in the event of fire.

Temperature parameters according to DIN EN 12101-2 and test results
Our NSHEVs reliably open into the SHEV position in less than 60 seconds...

... and ensure high smoke discharge volumes	Flow rate coefficient C_v of 0.55 Aerodynamically effective opening area A_a between 0.37 m² and 1.7 m²
... after endurance test (1,000 times in SHEV position and 10,000 times in ventilation position)	RE 50/1000 | Ventilation 10,000
...under snow load	SL 500 to SL 1000
...down to indoor temperature of -15 °C	T(-5) T(-15)
... after exposure to wind suction (up to 1,500 N/m²)	WL 1500
...when exposed to fire	B 300

Your benefits:

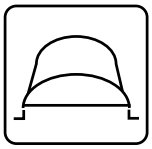
- Tested to DIN EN 12101-2
- The LAMILUX Smoke Lift M does not hit against the roof or wall and does not need to be replaced even when triggered during testing or due to false alarms
- Combination with natural ventilation function (300/500 mm stroke)
- CO_2 cartridges in the NSHEV are not damaged during manual triggering and maintenance
- Possibility for pneumatic and/or electric remote release

SMOKE AND HEAT EXHAUST VENTILATION:

CO_2 24V 48V 230V

VENTILATION:

bar 24V 48V 230V



LAMILUX AND RODA

roda Licht- und Lufttechnik GmbH has been part of the LAMILUX Group since January 2018. The subsidiary's product portfolio covers four core competences: smoke and heat exhaust ventilation, industrial ventilation, daylight technology and translucent facade technology. roda takes care of all project planning up to on-site acceptance. In addition, roda offers maintenance for SHEV systems of all manufacturers as well as renovations within the scope of the four stated core competences.

LAMILUX and roda work together very closely in both development and sales. The benefit for you as a customer: One central contact, no interfaces, larger product portfolio and volume of services.

The first collaborative product is a thermally separated continuous rooflight with rainproof ventilation: the connection between the LAMILUX Continuous Rooflight B and the MEGAPHOENIX double flap from roda. The element guarantees all-weather ventilation through its weather-resistant side opening vents. These open automatically as soon as the top-mounted vents close when it begins to rain.

The MEGAPHOENIX can be mounted directly on the continuous rooflight frame with a continuous rooflight width of up to three metres. From a continuous rooflight width of more than three metres, the MEGAPHOENIX is mounted directly on the glazing bars of the continuous rooflight without interruptions.

A further collaborative solution is the integration of roda's louvered ventilators into the LAMILUX Continuous Rooflight S.

Temperature parameters according to DIN EN 12101-2 and test results

Our NSHEVs reliably open into the SHEV position in less than 60 seconds...

	...and ensure high smoke discharge volumes	Flow rate coefficient C_V between 0.4 and 0.65 Aerodynamically effective opening area A_a between 0.325 m² and 6.7 m²
	...after endurance test (1,000 times in SHEV position and 10,000 times in ventilation position)	RE 1000 Ventilation 10,000
	...under snow load	SL 300 to SL 9040
	...down to indoor temperature of -15 °C	T (-5) T (-10) T (-15)
	...after suction loads caused by wind	WL 750 to WL 4500
	...when exposed to fire	B 300

Your benefits:

- Tested to DIN EN 12101-2
- For roda double opening vent systems, the full ventilation area is available when in ventilation mode with an opening angle of 90°
- Suitable for daily ventilation, as multi-purpose ventilator for adverse weather ventilation optional
- CO_2 cartridges in the NSHEV are not damaged during manual triggering and maintenance
- Complies with DIN 18234 without extra costs or work

Phoenix

Megaphoenix

Firefighter

Smokejet

STEINEL, LEIPZIG-MÖLKAU

Project:

The ventilation system in the production hall for hot-air devices has to process an enormous amount of waste heat from the injection moulding machines. Even when it rains, continuous ventilation must be guaranteed.

Systems:

- DELTALIGHT gabled roof skylight with MEGAPHOENIX multi-purpose ventilators spanning a length of almost 50 m
- Tenfold increase in the opening area to approximately 39 m²
- Rainproof ventilation thanks to the weatherproof side flaps of the MEGAPHOENIX

WANZL, LEIPHEIM

Project:

In this electroplating hall, only elements that can tolerate the corrosive vapours could be installed. We placed particular emphasis on this when renovating the roof.

Systems:

- 7 EUROLIGHT barrel skylights with opal PC multi-wall sheets
- 12 MEGAPHOENIX multi-purpose ventilators with fall-through protection grids
- 5 FIREFIGHTER DUO single flaps with PC multi-wall sheets with Lumira filling
- Special cylinders with hard-chrome plated piston rod, bellows and a protective sleeve over the locking mechanism
- KTL coating on all system parts

COLLEGE, FURTWANGEN

Project:

Several glass roof structures on a green and partially gravelled roof over corridors and staircases were equipped with ventilation and SHEV elements.

Systems:

- 13 FIREFIGHTER double flap systems insulated with SHEV boxes, network box and control panel
- 4 FIREFIGHTER single flap systems in the staircase as lighting units for ventilation, daylight and SHEV functions

BERLIN STATE OPERA UNTER DEN LINDEN

Project:

For the auditorium and the stage tower, the Berlin Senate Administration demanded the highest possible sound insulation value to prevent acoustic influences from outside. The Firefighters were clad with copper sheets to match the roof design to avoid standing out in accordance with the requirements for protect the monument.

Systems:

- 10 FIREFIGHTER with an overall sound insulation value of 54 dB

LAMILUX
SMOKE EXTRACTION FOR BUILDINGS

We provide safe and integral smoke extraction for buildings of all sizes. We develop our control solutions on an electrical or electric-pneumatic basis – depending on individual, safety related requirements and the building type. From small control solutions for smoke extraction and energy efficiency to complex large-scale automation, we offer all services across all trades as a single source to ensure reliable completion: from planning and conceptual design to installation, commissioning and maintenance.

- Integral approach to building-related smoke extraction
- Planning, conceptual design and supply of integral control technologies
- Preparation and support for architects and planners for smoke extraction solutions
- In-house manufacturing, installation and maintenance of control and switchgear installations
- Installation of all cables (electrical systems) and pipes (pneumatic systems)

SHEV: Smoke and heat exhaust ventilation system
(In-house product references)

NSHEV	MSE	SDS	HE
Natural smoke and heat exhaust ventilators	Mechanical smoke exhaust	Smoke differential pressure system	Heat exhaust

AIRPORT, MUNICH

- Control of all natural smoke exhaust ventilation devices in combination with solar protection and climate optimisation in Terminal 2
- Connection to BMS "fire coordinator" and "building management system climate optimisation"
- Venetian blind system activated via 230 LON bus modules
- Glass louvers for supply air and air vents
- Glass Roof PR60 ridged roof glazing, 15° pitch
- Solar control insulation glass with Stopray Carat PVB film, 47% light transmission, G value = c. 25%, Ug value = 1.1 W/(m²K)

INTERCITY HOTEL, HANOVER

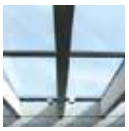
- Planning, design and installation of the smoke pressurisation system (SPS) in the staircase and fire brigade access lift of the 17-storey building
- Installation of all control components, fire protection and louvre opening vents and other elements
- Commissioning and adjustment of the smoke pressurisation systems
- Planning, coordination and implementation of the expert acceptance procedure

Scan this to learn more about LAMILUX skylights!

ROOFLIGHT F100

GLASS SKYLIGHT F100

GLASS SKYLIGHT FE



GLASS ARCHITECTURE

RENOVATION

MIROTEC STEEL CONSTRUCTIONS

CONTINUOUS ROOFLIGHT B

CONTINUOUS ROOFLIGHT S

CONTINUOUS ROOFLIGHT W|R

SMOKE AND HEAT EXHAUST VENTILATION SYSTEMS

BUILDING SMOKE EXTRACTION

RODA LIGHT AND AIR TECHNOLOGY

The technical data listed in this brochure correspond to the current status at the time of printing and are subject to change. Our technical specifications are based on calculations and supplier specifications, or have been determined by independent testing authorities within the scope of applicable standards.
Thermal transmission coefficients for our plastic glazing were calculated using the finite element method with reference values in accordance with DIN EN 673 for insulated glass. Taking into account practical experience and the specific characteristics of plastic, the temperature difference between the outer surfaces of the material was defined as 15 K. Functional values refer to test specimens and the dimensions used in testing only. We cannot provide any further guarantees of technical values. This particularly applies to changed installation conditions or if dimensions are re-measured on site.

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