

Innovations



Innovations 2017



WE SEE THE BIG PICTURE.

Kingspan + ESSMANN + STG-BEIKIRCH: Strong partners. Strong brands. Strong portfolio.

The ESSMANN Group - with the companies ESSMANN Gebäudetechnik GmbH, ECODIS SAS and STG-BEIKIRCH GmbH & Co. KG - is one of the leading manufacturers in Europe of products and system solutions for natural lighting and ventilation, as well as for natural and mechanical smoke and heat extraction in industrial, commercial and administration buildings. Kingspan is a world leader in the field of sustainable construction products for high performance insulation and systems for the building envelope. The products of Kingspan and the ESSMANN GROUP complement one another ideally so they can be perfectly integrated together in a building project. The core competences and know-how for this were bundled in the newly founded company division "Kingspan Light + Air" with the goal of pursuing even more intensively, the integrated approach of system solutions for complex requirements associated with the issues of light, air, safety and energy efficiency for the intelligent building envelope.

System solutions for natural ventilation, lighting as well as smoke and heat extraction – intelligent and energy efficient

The intelligent automation and networking of building functions is a must for the cost-efficient and user-oriented operation of buildings nowadays. In addition to the basic functions of

lighting, ventilation, as well as smoke protection, energy aspects are gaining more and more importance. Together, Kingspan Light and Air and the ESSMANN Group, offer you a unique modular system for the complete building envelope. In addition, we offer a pioneering integrated value and service chain, consisting of engineering, production, assembly and service. In this context, energy efficiency is always at the centre of our actions. Our philosophy is: "We see the big picture", providing sustainable and safe construction and maximum added value for our customers.



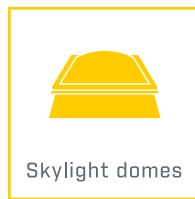
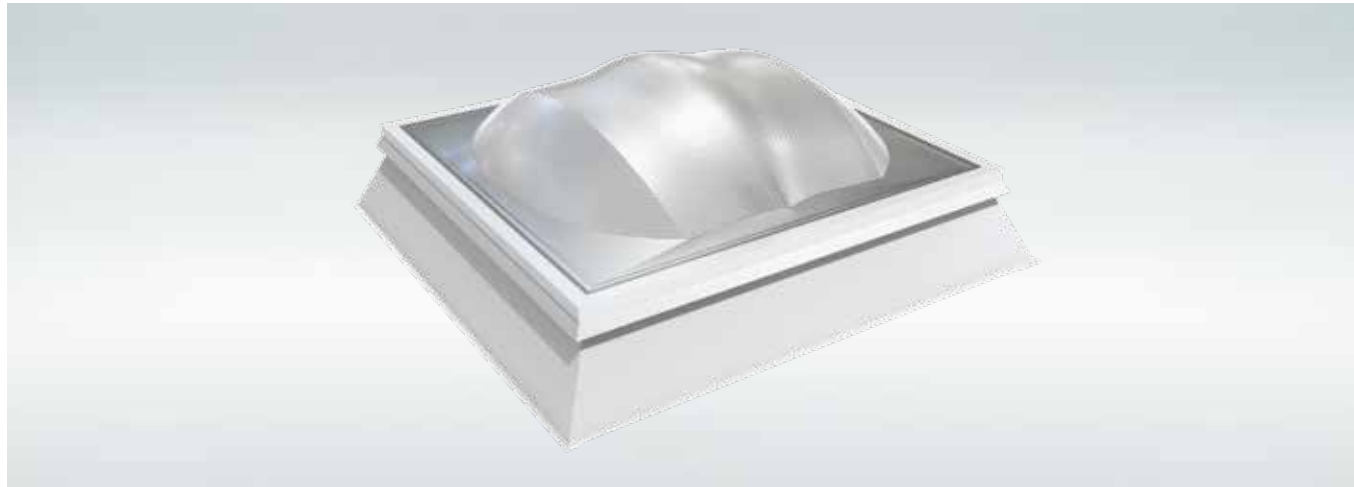
Our vision:

Become the **GLOBAL LEADER** in **ENERGY EFFICIENT**, sustainable **LIGHTING**, natural **VENTILATION** and smoke management solutions for the roof and façade non-residential sector.

System solutions for light, air, safety and automation.

Intelligent and energy efficient.





ESSMANN skylight dome Day-Lite Kapture

Optimum light yield, light transmission and light scatter as a result of its specific shape and prism structure



Natural light promotes concentration and performance at the workplace. It also reduces the occurrence of fatigue, this reducing the danger of injuries and accidents. With the innovative skylight dome Day-Lite Kapture, ESSMANN sets a new milestone for daylight systems in commercial, industrial, office and administration buildings – energy efficient and user-friendly. Its 3-skin structure with an inner prism skin provides greater daylight yield in combination with the specifically defined, organic shape. This results in much better light transmission and scattering of the incident light inside the building – and does so without forming hard shadows. This ensures optimum daylight yield, even at the start and end of the day when the sun is in a low position. This raises user comfort and saves the energy costs of artificial lighting.

Maximum daylight illumination – free of hard shadows and glare

The integrated prisms ensure optimum light control (refraction) as well as excellent light scatter (reflection) in the building. The special shape of the dome also ensures a larger incident light area – even when the sun is in a low position. This means that more light is captured than with conventional domes. Greater light transmission could also be achieved by the use of transparent glass, but would entail significant disadvantages in the form of glare and the formation of hard shadows in direct sunlight.

A wide range of versions for different requirements

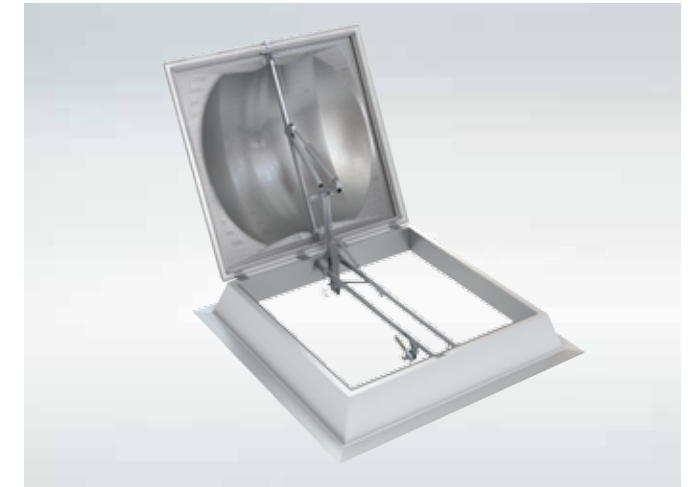
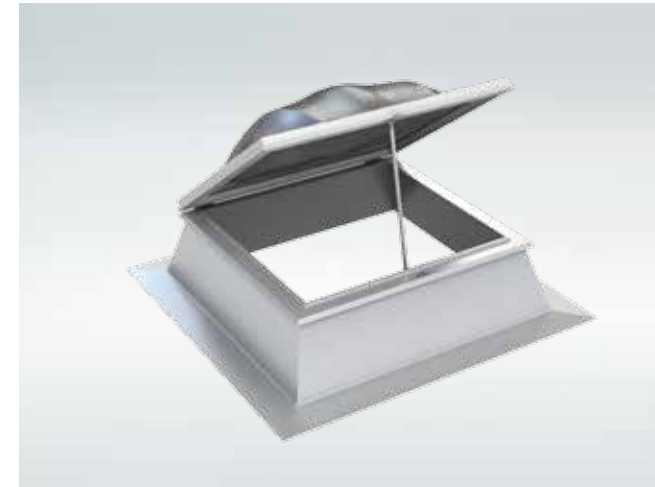
The ESSMANN skylight dome Day-Lite Kapture is optionally available for smoke and heat extraction (SHE) or for ventilation with an automated drive. In addition to the version with a standard prism skin, ESSMANN provides a variant with nanoprismatic glazing for even higher light yield and scatter. Various sizes are available for customised project solutions.

High energy and cost efficiency

The maximised daylight yield leads to lower power consumption because the electrical lighting can be switched on later and switched off earlier. When correctly designed, the use of prism glazing results in considerable savings in energy costs for lighting the building.

Comprehensive range of accessories

The competences of the skylight dome ESSMANN Day-Lite Kapture can be extended as required with proven accessories from the ESSMANN portfolio, such as safety systems for fall and fall-through protection.



Versions and scope of delivery

Day-Lite Kapture for ventilation:

Skylight dome optionally with prismatic or nanoprismatic glazing, skylight base, automated drive

Versions and scope of delivery

Day-Lite Kapture for smoke and heat extraction:

Skylight dome optionally with prismatic or nanoprismatic glazing, skylight base, pneumatic NSHE F6

Delivery size [L x W] in cm	Skylight base with transparent top edge, interior dimension [L x W] in cm	Drive lifting height in mm	Geometric area and ventilation cross-section in m ²
930 x 930	730 x 730	300	0.44
		500	0.73
1720 x 930	1520 x 730	300	0.68
		500	1.13
1720 x 1790	1520 x 1590	300	0.93
		500	1.56
1720 x 2996	1520 x 2796	300	1.29
		500	2.16

Applications

- Industrial and commercial enterprises with a high requirement for true-colour daylight
- Sport and event halls
- Northern latitudes often with sun in a low position

Material

- 3-skin skylight dome structure: Polycarbonate glazing transparent/transparent with prism structure/clear
- Skylight base: PVC

Accessories

- Safety accessories, e.g. fall and fall-through protections
- Ventilation drives
- Pneumatic NSHE F6
- Darkening and shading system



Differences in the light transmission and scatter with transparent, opal and prism glazing

SYSTEM ADVANTAGES:

- 3-skin glazing with inner prism glass: Excellent light transmission and light scatter
- Maximum daylight illumination, even at the start and end of the day when the sun is in a low position
- Uniform illumination of the building without the formation of hard shadows
- High energy efficiency: Lower energy costs for lighting the building
- Greater user comfort and safety due to true-colour, fatigue-free daylight



ESSMANN flat roof window with genuine glass

Aesthetic design and energy efficient construction perfectly combined



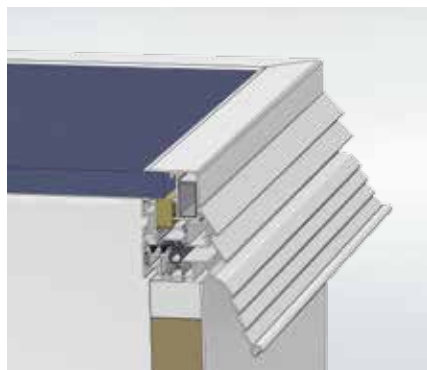
Energy efficiency, sealing, safety and appealing looks due to thermally separated aluminium/PVC border frame profile and heat insulation glazing with compound safety glass (VSG) – this makes the new, elegant ESSMANN flat roof window an ideal solution for greater requirements in industrial and administration buildings, as well as public buildings. The innovative daylight system is available in a fixed or ventable version with an integrated chain drive – optimum for daily ventilation or as geometric smoke and heat extraction. Optionally, the windows can also be conveniently opened and closed remotely. Compatibility with the comprehensive range of accessories from the ESSMANN product range provides architects and property developers with a rich variety of solutions for construction, as well as for energy-optimised renovations.

Brilliant appearance for sophisticated building architectures

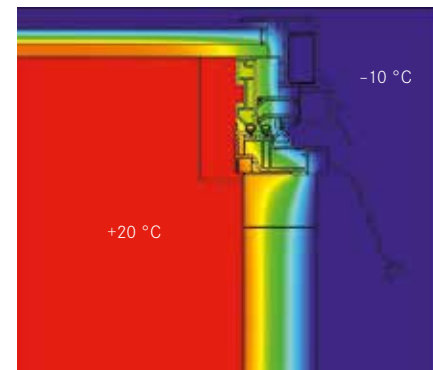
The new flat roof window is distinct with its aesthetic design. A peripheral blind frame, highly transparent genuine glazing and a covered cable guide (used in ventilation units) ensure an especially appealing interior view.

High energy efficiency and safety

The excellent heat insulation and safety features of the new flat roof window are based on efficient 2-layer or 3-layer heat insulation glazing and the ESSMANN system frame with triple seal. In addition, the genuine glazing minimises the noise level when it rains – for increased user comfort.



ESSMANN flat roof window cross-section



Isothermal diagram of ESSMANN flat roof window



Version and scope of delivery

- Fixed: Flat roof window with 2-layer or 3-layer glazing, system frame, optional 6° inclined skylight base or 6° inclined adapter frame
- Ventable: Flat roof window with 2-layer or 3-layer glazing, system frame, chain drive (can be supplemented by remote control), optional 6° inclined skylight base or 6° inclined adapter frame

Applications

- Office and administration buildings
- Schools and kindergartens
- Construction, energy-optimised refurbishment and repair

Material

- Border frame: PVC and aluminium profile
- Windows: Heat insulation glazing with compound safety glass (VSG)

Accessories

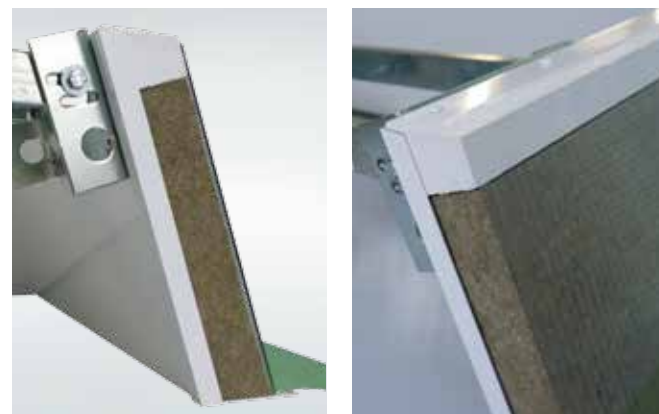
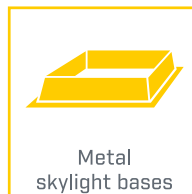
- Chain drives (optional remote control), 300 or 500 mm stroke
- Outside shading and/or inner darkening system
- Exit hatch

Dimensions [W x L]

- 80 x 80 cm
- 120 x 120 cm
- 90 x 90 cm
- 100 x 150 cm
- 100 x 100 cm

SYSTEM ADVANTAGES:

- Aesthetic system design – peripheral blind frame, highly transparent genuine glazing and covered cable (used in ventilation units)
- Mounting the drive in the frame of the window avoids weakening the heat insulation in the wall of the skylight base
- Pioneering energy efficiency: With the overall design optimising the thermal bridge, through thermally separated aluminium/PVC border frame combined with high-grade 2 or 3-layer heat insulation glazing with a Ug value of up to 0.7 W/(m²K)
- High sealing integrity through the use of the ESSMANN system frame with triple seal
- Optimised daylight illumination due to genuine glass, saving electricity costs
- Can be combined with the proven modular ESSMANN skylight dome system
- Can also be used in conjunction with third-party brand skylight bases or substructures through the use of the ESSMANN system frame
- Minimised noise level of rain
- Available in a fixed or ventable version with integrated chain drive for daily ventilation, as well as geometric smoke and heat extraction
- Motor-activated opening and closing – optionally with remote control
- Simple replacement of existing skylight domes (minimum roof inclination of 6° for rain water removal) due to the system frame



Thermally separated steel skylight base with high energy efficiency

Thermally separated and with improved heat insulation (remove the word package) the new ESSMANN steel skylight base provides a skylight base solution with high energy efficiency. The single-skin steel profile structure with thermal separation, also in the head area, has no direct contact with the external environment, thus minimising heat loss. In addition, a heat insulation thickness increased by 60 mm ensures greater insulation in the wall area. This results in greatly improved isothermal diagrams. The special insulation material in the head area enables direct screw fastenings, e.g. for storage.

The new steel skylight bases, with an interior colour-coating (RAL 9002), can be supplied in different construction heights with a flat flange, as well as with an optional vapour barrier connection, prefabricated at the factory. The skylight base versions are non-flammable and correspond with fire class A1.

Simple handling – full ESSMANN system compatibility

Completely integrated with the skylight dome system from ESSMANN, the thermally separated steel skylight bases are authentic due to simple handling (in accordance with the proven ESSMANN standards). For roofers and fitters, this

means the same fitting technology, connection options fixtures, as well as additional products that can be combined with ESSMANN repair and refurbishment sets.

Applications

- All ESSMANN skylight dome systems
- Industrial flat roof
- Construction and refurbishment

Version and scope of delivery

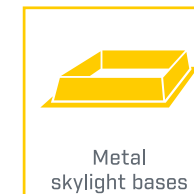
- Steel skylight base incl. thermal separation and system frame installed
- Standard heights: 30, 40 and 50 cm, intermediate heights available on request
- With a flat flange
- Available with smoke and heat extraction system (SHE) prefabricated at the factory
- Available with ESSMANN fall and fall-through protections
- Available with vapour barrier connection prefabricated at the factory

Material

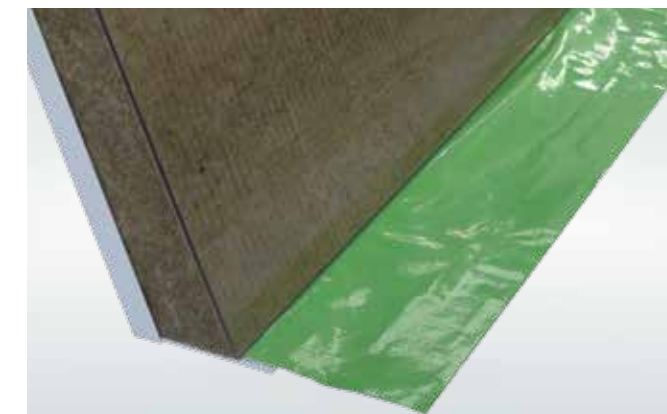
- Prepainted steel sheet, RAL 9002

SYSTEM ADVANTAGES:

- Single-skin steel skylight base with complete thermal separation, also in the head profile, resulting in no transmission of the cold from the outside to the inside
- Improved heat remove the word package the wall area with an insulation thickness of 60 mm and a U_{up} value of $0.68 \text{ W}/(\text{m}^2\text{K})$, (standard insulation package: 40 mm)
- High energy efficiency and optimised isothermal diagrams
- Special insulation material in the head area, making direct screw fastenings possible, e.g. for storage
- Various construction heights can be delivered with a flat flange
- Available with vapour barrier connection prefabricated at the factory
- Inner colour coating (RAL 9002)
- Non-flammable (fire protection class A1)
- Fulfils DIN 18234 (prevention of fire spreading from the inside to the outside)
- Fully compatible with existing ESSMANN skylight dome systems including the ESSMANN range of accessories
- Simple handling due to proven ESSMANN standards



Vapour barrier connection for steel skylight bases Optimised skylight base assembly



ESSMANN optimises the safety and economy of the skylight base assembly with the new vapour barrier connection, prefabricated at the factory, for steel skylight bases. The handling when installing is simpler, quicker and safer as the vapour barrier connection is directly connected with the laid vapour barrier without expensive detail connections on the skylight base. This saves the time-consuming forming of connections at the corners that was previously required. Self-adhesive on the underside, the innovative vapour barrier connection only needs to be folded down, the protective film pulled off and the bond created with the on-site vapour barrier when mounting the skylight base.

The result: Rational assembly with minimised error sources assures the optimum version of the vapour barrier for insulating the roof.

Compatible with all customary vapour barriers

Another significant advantage of the ESSMANN system innovation, is that the single skin steel skylight bases with integrated vapour barrier connection are compatible with all customary vapour barriers. The new vapour barrier connection is optional and only available in combination with

an ESSMANN steel skylight base – suitable for all skylight base sizes. The overlapping width of the connection is always the same.

Applications

- ESSMANN steel skylight base with a flat flange
- Industrial flat roof

Versions

- For all steel skylight bases in standard and intermediate sizes

Material

- Reinforced, flexible special foil made from PE

SYSTEM ADVANTAGES:

- Vapour barrier connection prefabricated at the factory
- No expensive detail connections required on the skylight base
- Rational assembly: Simple, quick and safe with minimised sources of error
- For all steel skylight bases in standard and intermediate sizes
- Self-adhesive underside
- Compatible with all customary vapour barriers



PC web plate IR Control white PC 16/7

For reducing the energy transmission and for reflecting the sunlight in ESSMANN arcade rooflights

The web plate IR Control white PC 16/7, made from polycarbonate (PC), is a new glazing option for the ESSMANN *classic* and *classic plus* arcade rooflights, as well as saddle rooflights. It achieves improved light transmission despite the reflection of sunlight. At the same time it reduces heat ingress into the building.

The reason for the improved product properties is the innovative production process of the PC web plate. The reflecting particles are extruded directly into the upper side of the polycarbonate plate in a coextrusion process. The result is a homogeneous combination of materials with improved light transmission.

The new glazing type IR Control white PC 16/7 as an equipment variant, is available as an alternative to the standard opal or transparent PC plates when ordering the ESSMANN *classic* and *classic plus* arcade rooflights or ESSMANN saddle rooflights. The seven-shelled web plate in a thickness of

16 mm is also suitable for the retrofitting of existing ESSMANN rooflights as a replacement for the old glazing.

Applications

- Construction and refurbishment flat roofs

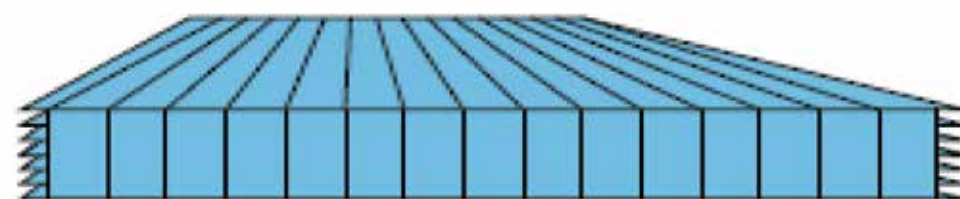
Versions

- Seven-shelled web plate made from polycarbonate in a thickness of 16 mm
- Can be selected as a glazing option when ordering the ESSMANN *classic* and *classic plus* arcade rooflights or ESSMANN saddle rooflights

Technical data

- Heat transfer coefficient (horizontal) $U_g = 1.9 \text{ W/m}^2\text{K}$
- Heat transfer coefficient (vertical) $U_g = 1.8 \text{ W/m}^2\text{K}$
- Light transmission $T_{vis} = 22 \%$
- Total energy transmission $g = 31 \%$
- Sound-proofing quality $R_{wp} = 22 \text{ dB}$

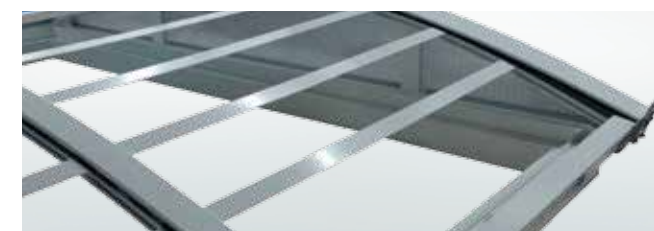
* Values tested by the Fraunhofer Institute



Polycarbonate multiple web plates PC 16/7

SYSTEM ADVANTAGES:

- Additional glazing option made from a new type of coextruded polycarbonate material
- Improved light transmission despite the reflection of sunlight
- Reduced ingress of heat into the building
- Homogeneous combination of materials instead of outside surface coating
- Equipment alternative to standard opal or transparent web plates
- Increased user comfort due to better and longer daylight illumination
- Can be retrofitted when exchanging or replacing the old glazing



ID 1200 *plus* and ID 600

Permanent fall-through protection for fixed ESSMANN *classic* and *classic plus* arcade rooflights as well as saddle rooflights

The name says it all - with the two integrated fall-through protections ID 1200 *plus* and ID 600, ESSMANN has consistently further developed its fall-through protection system. The new fall-through protection ID 1200 *plus*, integrated in the arcade rooflight, also provides permanent fall-through protection with the glazing removed - tested with a test load of 1,200 N. The safety system has four prepainted steel belts below the polycarbonate glazing in addition to the aluminium bottom sheet. This also maintains the permanent safeguarding function of the system when the glazing is removed, e.g. during a repair, so the additional, time and cost-intensive safeguarding measures that were previously required can be omitted.

The new ID 600 fall-through protection is the variant to assure permanent fall-through protection for all existing ESSMANN rooflights - tested with a test load of 600 N. Here, four powder-coated aluminium profiles are screwed together directly with the rooflight construction from outside. The great advantage: During the retrofitting, existing rooflights must not be open for mounting. If the required on-site prerequisites are met (object-specific test required), the new fall-through protection ID 600 can also be used on the rooflights of third party manufacturers.

Tested system solution for construction, repair and refurbishment

When integrated, permanent fall-through protections - the newly developed ID 1200 *plus* and ID 600 - fulfill the primary requirement of ASR A2.1 (Technical Regulations for Workplaces). They are tested and certified in accordance with GS.BAU 18 and DGUV. Both systems are easily retrofitted for the repair or refurbishment of the ESSMANN *classic* and *classic plus* arcade rooflights, as well as saddle rooflights. This means that the ESSMANN system portfolio provides architects, planners and property developers with two additional, future-oriented solutions for the realisation of safe flat roofs.

Applications

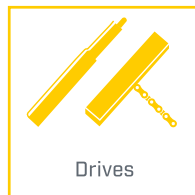
- Fixed ESSMANN arcade rooflight and saddle rooflight parts of the *classic* and *classic plus* systems
- Flat roof construction (ID 1200 *plus*) and retrofitting only by ESSMANN fitters (ID 1200 *plus* and ID 600)
- Depending on the object, ID 600 can also be used for third-party products if the prerequisites are fulfilled

Material

- Steel: Prepainted (ID 1200 *plus*)
- Aluminium: Powder-coated (ID 600)

SYSTEM ADVANTAGES:

- Meet the primary requirements of ASR A2.1 (Technical Regulations for Workplaces)
- Permanent fall-through protection, also with the ID 1200 *plus* glazing removed
- Highly resilient: Tested with 1,200 N test load (ID 1200 *plus*) and 600 N test load (ID 600)
- ID 1200 *plus*: Four prepainted steel belts
- ID 600: Four powder-coated aluminium belts
- Easy to retrofit for ESSMANN arcade rooflight renovation or repair
- Certified in accordance with GS.BAU 18 and DGUV test certificate



Intelligent EasyDrive/2 technology for drives

easyDRIVE/2
SAFE EFFICIENT INTELLIGENT



Automated natural ventilation and smoke and heat extraction in the event of fire: Equipped with the intelligent EasyDrive/2 technology, the electrical drives for windows, facades and SHE provide customised, energy efficient solutions for different project requirements. Equipped with EasyDrive/2 technology, all drive series (chain, locking-bolt and linear drives) can be configured in their basic functions without the use of software: Opening, closing, initialisation runs along with the synchronisation of several drives in one window. For customer-specific applications, the configuration of additional system parameters, e.g. opening distance, force, speed, seal closure relief or pinch protection, are individually possible by EasyDrive/2 software – even retrofitted, without mechanical interventions in the drive.

Besides their use as a single drive, several EasyDrive/2 drives can also be coupled directly with one another and synchronised in building automation. Here, depending on the application and control concept, facade and roof elements

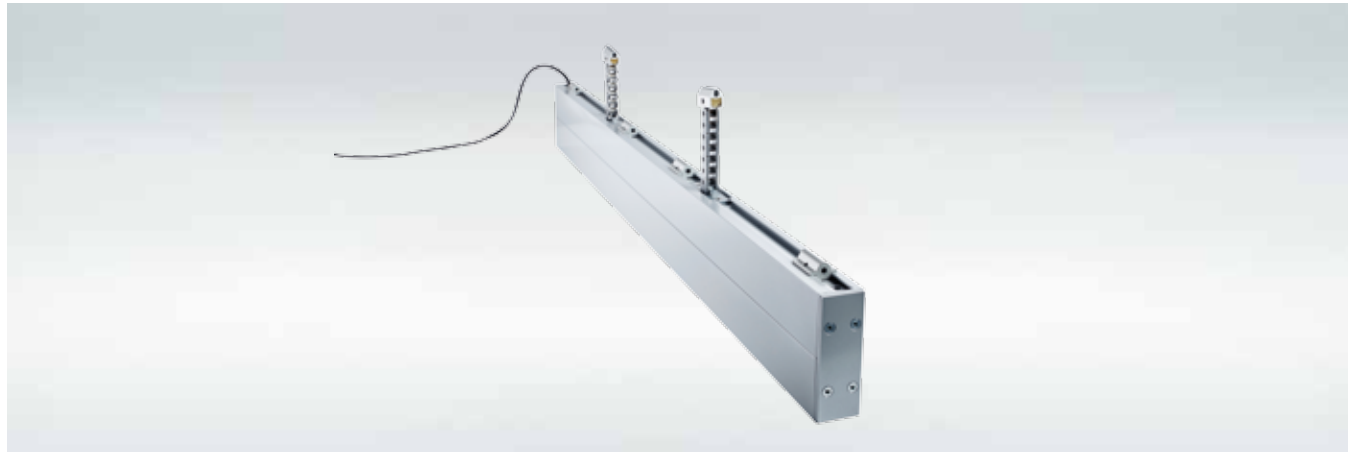
with EasyDrive/2 technology fulfil many functions, such as natural ventilation, light control, shading as well as safety tasks including SHE.

More comfort, safety and energy efficiency due to EasyDrive/2 solutions

Due to their versatile configuration options, EasyDrive/2 drives are ideally suitable for use with control systems for automated natural ventilation, where sensors record a number of parameters inside and outside a building and ensure a constantly pleasant indoor climate through targeted, low-noise opening and closing of elements in the roof or the facade. In combination with SHE systems, in the event of fire, smoke and heat can be quickly and efficiently extracted to the outside via windows, facades and roof-integrated daylight systems.

SYSTEM ADVANTAGES:

- Electronically controlled and configurable compact drives: Suitable for use in automated natural ventilation and in SHE solutions
- Basic functions can be configured without the use of software
- The opening distance, force, speed, seal closure relief can be individually configured via EasyDrive/2 software. These settings can be configured differently for several sections
- Single or synchronous operation with up to 4 drives without additional modules
- When connecting EasyDrive locking motors, the integrated sequence control is activated automatically
- Opening speed is constant and independent of the load
- The SoftClose function and the adjustable seal closure load reduce the mechanical load on fittings, opening and sealing elements
- Protection class up to SK3 – without additional components – by reducing the closing speed to less than 5mm/s
- Fastening sets available for different window systems
- Freely adjustable, integrated signalling contact: OPEN, CLOSED or POSITION
- Uniform wiring concept for all EasyDrive/2 drive series, separate terminal positions for input and output wiring
- Use in noise-sensitive building areas



CM EasyDrive/2 Twin compact drive

Designed for narrow and heavy casement types

The newest member of the EasyDrive/2 family is the CM EasyDrive/2 Twin compact with 1200 N compressive and tensile force – a real power pack. With its compact construction and inverse running stainless steel chains, optimum mechanical stability is achieved. The new chain drive is specifically designed for the opening and closing of narrow opening elements with high casement loads. A significant advantage: Equipped with the CM EasyDrive/2 Twin compact, even narrow, heavy roof flaps and top hung sashes can undertake intelligent ventilation and SHE functions. This makes it an ideal solution for transparent architectures with heavy multiple glazing, such as glass atriums and conservatories. This provides architects and converters with new solutions for the planning and realisation of automated building envelopes.

Applications

- Automated natural ventilation as well as smoke and heat extraction in SHE systems
- Atriums, conservatories and vertical facades with narrow opening elements with high loads
- Surface assembly

Material

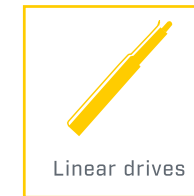
- Aluminium housing, stainless steel chain

Technical data

- Rated voltage: 24 V DC
- Rated current: 2.6 A for rated load 1200 N
- Stroke length: 600 mm
- Compressive and tensile force: 1200 N
- Dimensions: L 1095.5 x H 40.25 x D 114.6 (mm)
- Protection category: IP 20

SYSTEM ADVANTAGES:

- Drive with 1200 N compressive and tensile force: Specifically designed for narrow and heavy top-hung and roof windows
- Stainless steel chains running in opposing directions ensure safe, precise opening and closing
- Optimum mechanical stability, even for open casements
- New planning options for the integration of narrow windows and top hung sashes with large casement loads in intelligent, automated ventilation and SHE concepts
- Compact design, with a width of only 1100 mm
- Maximum opening distance: 600 mm
- All configuration options of the EasyDrive/2 series can be used



24 V linear drive M2

Now also with multifunctional EasyDrive/2 technology

The intelligent, pioneering EasyDrive/2 technology with configurable control systems, is now also available for linear drives.

This creates new possible applications in SHE and automated natural ventilation solutions for these powerful drives. Due to the stable push rod, the maximum piston force up to the largest possible opening distance is always available, even for large casement weights.

The linear drives are ideally suitable for use in noise-sensitive building sectors, e.g. in hospitals, rehabilitation or training facilities.

Applications

- Automated natural ventilation, as well as smoke and heat extraction in SHE systems
- Windows, daylight systems, facades
- Surface assembly

Material

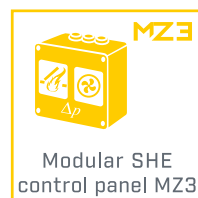
- Aluminium housing

Technical data

- Rated voltage: 24 V DC
- Rated current: 1 A for rated load 500 N
- Stroke length: 500 mm
- Compressive and tensile force: 500 N
- Dimensions: L 728 x H 60 x D 41 (mm)
- Protection category: IP 54

SYSTEM ADVANTAGES:

- Linear drives with intelligent EasyDrive/2 technology that can be individually configured
- Maximum piston force up to the greatest opening distance due to stable push rod
- New planning options for the integration of heavy window sashes and top hung sashes in intelligent, automated ventilation and SHE concepts
- With comfort mode for quiet operation



Modular control panel MZ3

Control system for ventilation and smoke discharge, as well as for integration in the building automation



The modular control panel MZ3 is a modular and individually configurable monitoring and control system for SHE and ventilation technology. This enables natural aeration and ventilation as well as smoke and heat extraction for windows and facades to be safely and efficiently realised.

Automated SHE and ventilation technology via Drag & Drop

The new modular control panel MZ3 provides future-oriented control technology for SHE and ventilation technology. "ESSplan^{MZ}" provides it with innovative configuration software. This enables the required drives, operating elements, sensors or signals of individual fields or fire sections to be allocated via Drag & Drop. Thus, complete system planning is very easy to realise. Here, the software automatically calculates which components are required in the control system and defines (derived from this) the most compact switch cabinet size. The fully modular structure of the MZ3 system means that retrofitted expansions and adjustments are very easy to implement. This guarantees maximum

safety, efficiency and functionality of the smoke and heat extraction system (SHE) and ventilation technology at any time.

Intelligent facility management

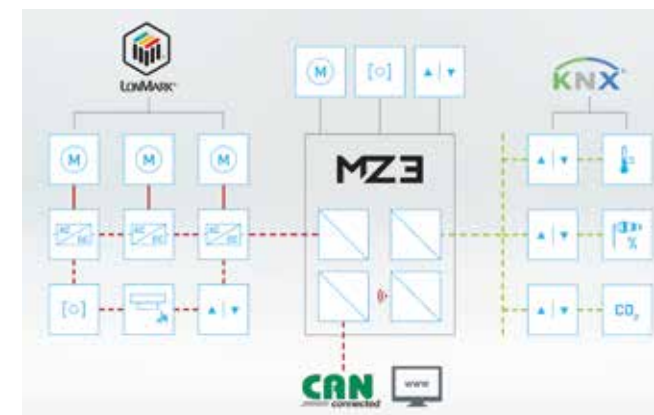
Interfaces for the KNX and LON BUS are available for seamless, efficient integration in the building management system. This enables SHE and ventilation systems to be networked, not just with one another but also with the building automation. The MZ3-KNX module enables the intelligent integration of SHE systems into a central ventilation control, for instance, while taking account of the safety-relevant requirements of a SHE. The widespread KNX standard serves as the basis for the optional integration of a number of KNX sensors, operating elements and other components. Their use in conjunction with the MZ3-KNX control systems, enable the system integrator to use virtually all options regarding a flexible, networked control system for ventilation.



Each system – whether for SHE or natural ventilation – adapted to the most varied applications, can be planned simply via Drag & Drop.



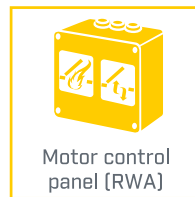
If the MZ3-LON module is used, the control centre becomes a real LON node. Further modules can also be integrated for future applications through the open BUS system.



Whether KNX, LON BUS, CAN BUS or Web – the MZ3 supports the leading protocols for communication with the building management system, thus providing an ideal solution for the convenient monitoring and control of light, air, safety and energy efficiency.

SYSTEM ADVANTAGES:

- **Efficiency**
 - Compact design, modular expansion and lower amount of cabling work
 - Simple configuration via Drag & Drop
 - Decentralised ventilation concepts via KNX module and KNX BUS system
- **Safety**
 - Monitoring function for early fault detection
 - Central closing function
- High functional safety due to intelligent communication of the modules via the BUS system
- **Function**
 - Individual setting of the controlled drives
 - Integrated wind direction dependent control system for SHE and ventilation
 - Integration in the building management system and decentralised system concepts due to integrated LON and KNX interfaces



Motor control panel MBE 24 V/10 A

Basic unit for intelligent
networked control systems

The new basic unit MBE 24V/10A is a modular, highly flexible motor control panel for the checking and controlling of SHE and ventilation systems. As a single control panel, it provides full SHE and ventilation functionality for small and medium hall areas. The MBE 24V/10A is BUS compatible and thus provides the option of switching several systems together into a decentralised SHE and ventilation system. This provides the option of supplying larger hall areas and the simple adaptation/expandability (e.g. building expansion or change of use).

The MBE 24V/10A impresses with a compact design in an industry-compatible housing, which minimises the assembly effort and ensures user-friendly handling. The robust construction is also suitable for use in rough environments with high loads of dust and moisture – up to IP 54 with proper assembly. Placement of the housing is variable, modular and expandable thanks to an extensive accessory program, e.g. due to flange plates, PG screw fastenings and cable entries from above/below.

This new motor control panel forms the basis for the coming generation of compatible, intelligently networked control systems.

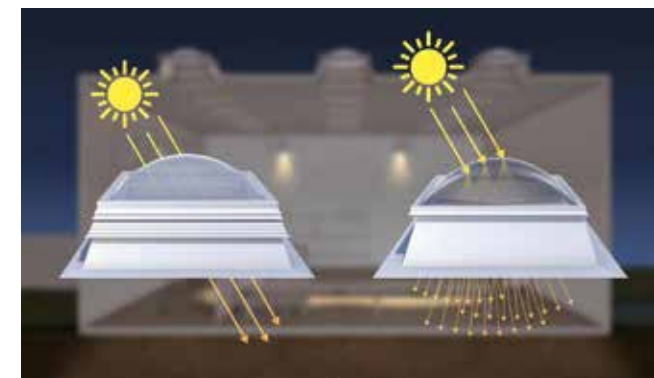


Applications

- Individually configurable and expandable, automated natural ventilation, as well as smoke and heat extraction in SHE systems in small and medium halls
- Can also be used in harsh environments with high loads of dust and humidity – up to IP 54 with proper assembly

SYSTEM ADVANTAGES:

- ESS BUS-compatible basic motor control panel 24 V/10 A, with 72 h emergency power operation
- Simple system expansion
 - Cascading of several basic units
 - Option for the set-up of decentralised SHE and ventilation systems
- Can be used as a self-sufficient, compact control panel
- Compact design in an industry-compatible housing: Minimal assembly effort, user-friendly handling
- Intelligent control of EasyDrive drives



Concept study: EasyConnect

Intelligent networking of automated ventilation, smoke and heat extraction and lighting systems in buildings



The requirements of modern building envelopes are becoming ever more complex. In this context, the intelligent automation and networking of building functions is already a must for the cost-efficient and user-oriented operation of buildings nowadays. Safety, comfort and energy efficiency factors are of particular focus in the construction industry.



EasyConnect is an approach for the future intelligent networking of different automated assemblies and components in connection with the sectors of smoke and heat extraction, natural ventilation and lighting in buildings.

In this way, ESSMANN, STG-BEIKIRCH and Kingspan are systematically pursuing the path of a decentralised structure of systems, which intelligently controls daily ventilation, as well as smoke and heat extraction. EasyConnect enables the individual configuration of different building sectors and, in addition to the automatic control of the above-mentioned functions, also provides the optional connection to central building automation. EasyConnect can integrate different

sections and enables customised, user-oriented solutions for different comfort and safety scenarios in industrial, administration and commercial buildings. Another advantage is that if requirements (e.g. building expansion or change of use), the system can be flexibly adapted or expanded at any time.

In the newly founded division of Kingspan Light + Air, Essmann, STG-BEIKIRCH and Kingspan unite their core competences from the fields of roof, facade and intelligent daylight and artificial light systems. EasyConnect is a further consistent step towards intelligent, automatic networking in the fields of light, air and safety in buildings – for increased user comfort and energy efficiency.

Applications

- Automated natural ventilation
- Smoke and heat extraction
- Room lighting
- Central and decentralised building automation

SYSTEM ADVANTAGES:

- Intelligent networking of different automated assemblies and components from the fields of smoke and heat extraction, natural ventilation and lighting
- Modular structure
- Interfaces to different sections
- Decentralised distribution of the system components
- Simple cabling structure due to BUS system
- Flexible, adjustable and expandable



ESSMANN Gebäudetechnik GmbH | Im Weingarten 2 | 32107 Bad Salzuflen | Germany
T + 49 (0) 5222 791-0 | F + 49 (0) 5222 791-236 | info@essmann.de | www.essmann.de

STG-BEIKIRCH Industrieelektronik + Sicherheitstechnik GmbH & Co. KG | Trifte 89 | 32657 Lemgo | Germany
T + 49 5261 9658-0 | F + 49 5261 9658-66 | info@stg-beikirch.de | www.stg-beikirch.de



WE SEE THE BIG PICTURE.