



## OVERVIEW OF GEZE WINDOW TECHNOLOGY NATURAL VENTILATION AND RWA



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# GEZE RWA AND VENTILATION TECHNOLOGY

## GEZE electrical RWA and ventilation systems

### Safety with air-moving power

GEZE has numerous solutions for automatic opening and closing of windows in all kinds of different applications. The wide range of products on offer extend from a large selection of drive systems for daily ventilation through to complete fresh and exhaust air solutions for safe and fast natural smoke extraction.

The GEZE product portfolio for electrically operated ventilation and the "RWA case" includes easy to install and use electrically operated chain drives as direct openers and powerful electric spindle drives which, as direct openers and flush-mounted on the frame profile, can also be used in an opening and locking system. Combined with electric linear drives, GEZE slimline fanlight scissors can also be operated electrically.

The smoke and heat extraction system (RWA) is actuated via the GEZE RWA emergency power control unit. GEZE also offers systems as fresh air solutions.

### GEZE window technology for electrically operated ventilation and RWA at a glance

Chain drives



Slimchain

Spindle drives



E 250 NT

Locking drives



Power lock

Opening and locking systems



RWA 100 NT

Fresh air systems



K 600

RWA control units



MBZ 300

# GEZE RWA AND VENTILATION TECHNOLOGY

## Overview table Electrically operated RWA and ventilation systems

	Chain drives				Spindle drives					Locking drives	Opening and locking systems					Electromagnetic	Scissor drives	Fresh air systems			
	ECchain	E 740	Slimchain	Powerchain	E 250 NT	E 350 N	E 1500 N	E 1500 S	E 3000	Power lock <sup>1)</sup> E 905/E 906	RWA 100 NT	OL 350 EN	RWA 105 NT	OL 370 EN	RWA 110 NT	OL 360 EN	RWA-EM	E 170, E 170/2	RWA TÖ	RWA K 600	RWA AUT
<b>Applications</b>																					
Natural ventilation	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•		•		•	
Smoke and heat extraction system (RWA)			•	•	•	• <sup>2)</sup>	•	•	•	•	•	•		•	•	•	•	• <sup>2)</sup>	•	•	•
Natural smoke and heat exhaust ventilator (SHEV)			•	•	•	• <sup>2)</sup>		•	•	•	•	•		•	•	•				•	
<b>Function</b>																					
Exhaust air (as smoke exhaust (SHEV) or smoke removal)			•	•	•		•	•	•	•	•	•		•		•	•	• <sup>2)</sup>			
Fresh air			•	•	•		•			•	•	•		•	•	•	•	• <sup>2)</sup>	•	•	•
<b>Location</b>																					
Façade	•	•	•	•	•		•			•	•	•	•	•	•	•	•	•		•	
Roof		•		•	•		•	•	•										• <sup>5)</sup>		
Door																		•	•	•	
<b>Casement types</b>																					
Bottom-hung casement	•	•	•	•	•		•			•	•	•	•	•	•	•	•	•	•	•	
Side-hung casement	•	•	•	•	•		•			•	•	•	•	•	•	•	•			•	
Top-hung casement	•	•	•	•	•		•			•	•	•	•	•	•	•	•			•	
Horizontally pivot-hung casement		•		•						•	•										
Vertically pivoted casement		•		•						•	•										
Roof casement		•		•	•		•	•	•										•		
Louvre window					•																
<b>Type of opening</b>																					
Inward opening	•	•	•	•	•		•			•	•	•	•			•	•	•	•	•	
Outward opening	•	•	•	•	•		•	•	•			•	•	•	•	•	•	•	•	•	
<b>Installation options</b>																					
Frame	•	•	•	•	•		•	•	•	•		•		•	•	•	•	•	•	•	
Leaf		•		•	•		•			•			•			•		•	•		
Integrated			• <sup>6)</sup>							•											
<b>Opening width [mm] / Opening angle [°]</b>	200	100	300	600	100	300	300	300	22 <sup>7)</sup>	18 <sup>7)</sup>	58°	75°	56°				170		90°		
	400	200	500	800	150	400	400	500													
		300	800	1200	200	500	500	750													
		400			230		600	1000													
					300		750														
					500		1000														
					750		1200														
					1000																
<b>Connection to RWA control units</b>																					
THZ			•	•	•		•			•	•	•		•	•	•	• <sup>4)</sup>	• <sup>2)</sup>	•	•	• <sup>3)</sup>
THZ Comfort			•	•	•		•			•	•	•		•	•	•	• <sup>4)</sup>	• <sup>2)</sup>	•	•	• <sup>3)</sup>
E 260 N			•	•	•		•	•	•	•	•	•		•	•	•		• <sup>2)</sup>	• <sup>5)</sup>	•	• <sup>3)</sup>
MBZ 300			•	•	•		•	•	•	•	•	•		•	•	•	• <sup>4)</sup>	• <sup>2)</sup>	•	•	• <sup>3)</sup>
<b>Use for ventilation 230 V</b>																					
with power supply and IQ gear			•	•	•				•	•	•		•								

<sup>1)</sup> As system solution for Slimchain, Powerchain and E 250 NT  
<sup>2)</sup> 24 V version only  
<sup>3)</sup> No supply - only potential-free alarm contact  
<sup>4)</sup> Operating mode: "holding magnet"

<sup>5)</sup> Depends on specific use  
<sup>6)</sup> Special variant, separate planning, depends on profile  
<sup>7)</sup> Locking stroke

## GEZE CHAIN DRIVES

### GEZE chain drives

#### Brief description of the variants

#### Direct openers for ventilation and for smoke and heat exhaust

The electrically operated chain drives are designed for vertically installed, rectangular bottom-hung, top-hung and side-hung and horizontally and vertically pivoted windows in dry rooms. They are suitable for daily room ventilation, for smoke and heat extraction systems (RWA) and as natural smoke and heat exhaust ventilator (SHEV). The drives are positioned parallel to the window and, depending on the colouring chosen, harmoniously match the window architecture. They have a special chain which can transfer both pulling and pushing forces. When closed the chain is concealed, it is rolled up in the drive housing.



#### ECchain: simple automation options for ventilation (230 V)

- Cost effective and efficient starter model
- Universal use, especially in private housing
- Integrated stroke adjustment to 200 mm or 400 mm enables adaptation to different ventilation requirements as and when needed
- Universal fixtures and brackets for standard profile systems
- Different colour options for optimum attachment on existing window profiles
- Fast and easy installation with the drilling template (optionally available)



#### E 740: automation option for ventilation operation (230 V)

- Straightforward automation for ventilation in the window and the façade area
- Bottom hung, side hung, top hung and skylight casement
- Inward-opening and outward-opening casements
- Synchronisation of up to 4 drives
- Can be used on timber, plastic and aluminium profile systems
- Leaf and frame installation



#### Slimchain: universal chain drive with attractive design

- Fulfils the highest design standards thanks to its slim and discrete look
- Use as RWA (24 V), in SHEVs in accordance with DIN 12101-2 and for natural ventilation (230 V in conjunction with a power supply)
- Intelligent electronics: continuously adjustable drive stroke and individual speeds for ventilation and RWA mode
- Integrated Syncro module for synchronising max. 3 drives without external control unit
- DIP switches for changing over the operating mode (Solo/Syncro, master/slave)
- Fast and easy installation with the GEZE Smart fix installation system



#### Powerchain: powerful chain drive for large and heavy window elements

- Fast opening speeds in the event of an RWA case, even for very heavy windows
- Use as RWA (24 V), in SHEVs in accordance with DIN 12101-2 and for natural ventilation (230 V in conjunction with a power supply)
- Intelligent electronics: continuously adjustable drive stroke and individual speeds for ventilation and RWA mode
- Integrated Syncro module for synchronising max. 3 drives without external control unit
- DIP switches for changing over the operating mode (Solo/Syncro, master/slave)
- Fast and easy installation with the GEZE Smart fix installation system

## Overview table of GEZE chain drives

## Technical data

	GEZE ECchain	GEZE E 740	GEZE Slimchain	GEZE Powerchain
Length	with bracket 409 mm, without bracket 390 mm	423 mm with bracket	Stroke 300: 560 mm, Stroke 500: 660 mm, Stroke 800: 810 mm (each with brackets)	Stroke 600: 756 mm, Stroke 800: 856 mm, Stroke 1200: 1056 mm (each with brackets)
Height	44 mm	42 mm	25 mm	36 mm
Depth	63 mm	54 mm	44 mm	51 mm
Space required on frame (min.)	Frame installation INWARD OPENING: 55 mm, frame installation OUTWARD OPENING: 35 mm	Frame installation EW/RM: 58 mm Frame installation AW RM/FM: 29 mm Frame installation AW RM/FM mini: 29 mm Frame installation EW RM (swivelling bracket): 58 mm Frame installation EW FM: 30 mm	Frame installation INWARD OPENING: 40 mm, casement installation INWARD OPENING: 16/21 mm, frame installation OUTWARD OPENING: 31 mm	Frame installation INWARD OPENING: 50/61 mm (for side-hung casement DIN L), casement installation INWARD OPENING: 30/41 mm (for side-hung casement DIN R), frame installation OUT- WARD OPENING: 50 mm
Space required on leaf (min.)	Frame installation INWARD OPENING: 37 mm, frame installation OUTWARD OPENING: 20 mm	Frame installation EW/RM: 32 mm Frame installation AW RM/FM: 35 mm Frame installation AW RM/FM mini: 25 mm Frame installation EW RM (swivelling bracket): 23 mm Frame installation EW FM: 22 mm	Frame installation INWARD OPENING: 40 mm, leaf installation INWARD OPENING: 34/29 mm, frame installation OUTWARD OPENING: 19 mm	Frame installation INWARD OPENING: 40 mm, leaf installation INWARD OPENING: 50 mm, frame installation OUTWARD OPENING: 30/41 mm (for side-hung casement DIN R)
Possible stroke lengths	200 mm, 400 mm	100 mm, 200 mm, 300 mm, 400 mm	300 mm, 500 mm, 800 mm	600 mm, 800 mm, 1200 mm
RWA opening speed	-		15 mm/s	
Ventilation opening speed	9 mm/s	7 mm/s	5 mm/s	
Closing speed	9 mm/s	7 mm/s	5 mm/s	
Tensile force (max.)	250 N	300 N	300 N	600 N
Compressive force (max.)	250 N	250 N	200 N (depending on stroke)	600 N (depending on stroke)
Holding force (max.)	2000 N	1800 N	2000 N	3000 N
Leaf weight (max.)*	130 kg	130 kg	150 kg	
Operating voltage	230 V ± 10 %		24 V ± 25 %	
Current consumption	0.13 A		Ventilation (24V): 0.9 A; RWA (18 V): 1.1 A	Ventilation (24 V): 1.2 A; RWA (18 V): 1.5 A
Power consumption (max.)	20 W		30 W	36 W
Duty rating	30 %			
Connection cable length	2 m			
Special length connection cable	-	-	5 m; 7.5 m	
Cable dimensions	4 x 0.75 mm <sup>2</sup>	3 x 0.75 mm <sup>2</sup> Syncro 5 x 0.75 mm <sup>2</sup>	4 x 0.75 mm <sup>2</sup>	4 x 0.75 mm <sup>2</sup>
Temperature range	-5 – 60 °C	-5 – 70 °C	-5 – 70 °C	
Enclosure rating / protection class	IP 30 / II	IP 42 / II	IP 40 / III	
Stroke length settable	-	via rotary switch	●	●
Syncro function	-	-	●	●
Adjustable opening speed (ventilation)	-	-	●	●
Additional locking available	-	●	●	●
Type of additional locking	-	-	Locking drive	
Type of stroke reduction	-	-	Synchronising unit, factory setting	
End position cut-off extended	Limit switch	electronically via internal position sensor		
End position cut-off retracted	electrically, electronically via power consumption			
Overload cut-off	●	●	●	●
Complete opening within 60 s	-	-	yes, including locking drive	yes, up to 800 mm stroke, including locking drive
SHEV tested	-	-	●	●
Synchronisation (max.)	-	4 drives	3 drives (4 on request)	

● = YES

\*) The total weight is limited by the hinges and depends on the details provided by the profile system manufacturer.

## GEZE SPINDLE DRIVES

### GEZE spindle drives

#### Brief description of the variants

#### Direct openers for ventilation and for smoke and heat exhaust

The RWA electric spindle drives are suitable for the electromotive opening and closing of bottom-hung, top-hung and side-hung casements, roof windows and light domes. They are suitable for daily room ventilation, for smoke and heat extraction systems (RWA) and as natural smoke and heat exhaust ventilation (SHEV).



#### E 250 NT: compact design spindle drive with large range of uses

- For direct opening of heavy and wide windows
- Use as RWA (24 V), in SHEVs in accordance with DIN 12101-2 and for natural ventilation (230 V in conjunction with a power supply)
- Intelligent electronics: continuously adjustable drive stroke and individual speeds for ventilation and RWA mode
- Integrated Syncro module for synchronising max. 3 drives without external control unit
- DIP switches for changing over the operating mode (Solo/Syncro, master/slave)
- Range of brackets for bottom-hung, top-hung and pivot-hung casements, roof windows and skylight domes
- The E 250 NT AB version for outdoor use and use in moisture-prone areas



#### E 350 N: compact design spindle drive in 230 V version

- Use for natural ventilation (230 V)
- For direct opening of heavy windows in façades, roofs and domelights
- Inward-opening and outward-opening casements
- Only for Solo mode. For Syncro mode use the E 250 NT with a power supply



#### E 1500 N: RWA spindle drive for heavy casements

- High-quality drive for heavy window elements in façades and roofs
- Narrow dimensions for the highest design standards
- Use as RWA (24 V) and for natural ventilation (230 V in conjunction with a power supply)
- Robust, corrosion-resistant design with built-in end-position damping
- Syncro set consisting of two E 1500 N with integrated synchronic control unit for particularly heavy and wide casements from 1200 mm primary closing edge
- Synchronisation of up to 3 drives



#### E 1500 S: fast spindle drive for heavy roof windows

- Convincingly large compressive force and high speed
- For outward-opening windows in the roof
- Use as RWA (24 V), in SHEVs in accordance with DIN 12101-2 and for natural ventilation (230 V in conjunction with a power supply)
- Robust, corrosion-resistant design with built-in end-position damping
- Full stroke (up to 1000 mm) in less than 60 seconds
- For leaf widths over 1200 mm the E 1500 S synchro drive sets are available, which are controlled via the integrated synchronic control unit



#### E 3000: spindle drive for particularly heavy roof windows

- High tensile and compressive forces (3000 N) open and close even very heavy roof windows up to 600 kg in synchronic mode
- Use as RWA (24 V), in SHEVs in accordance with DIN 12101-2 and for natural ventilation (230 V in conjunction with a power supply)
- Robust, corrosion-resistant design
- For leaf widths over 1200 mm synchro drive sets are available, which are controlled via the integrated synchronic control unit



## Overview table of GEZE spindle drives

## Technical data

	GEZE E 250 NT	GEZE E 350 N	GEZE E 1500 N	GEZE E 1500 S	GEZE E 3000
Dimensions (W x H x D)	Stroke + 284 x 40 x 47 mm		Stroke + 302, Ø 36 mm	Stroke + 465, Ø 50 mm	
Possible stroke lengths	100 mm 150 mm 200 mm 230 mm 300 mm 500 mm 750 mm 1000 mm	100 mm 150 mm 200 mm 230 mm 300 mm 500 mm 700 mm 750 mm 1000 mm	300 mm 400 mm 500 mm 750 mm 1000 mm	500 mm 750 mm 1000 mm	500 mm 750 mm 1000 mm
RWA opening speed	5.7 mm/s, Stroke 500: 9.5 mm/s		4 mm/s	16 mm/s	7.8 mm/s
Ventilation opening speed	5 mm/s	5 mm/s	4 mm/s	16 mm/s	7.8 mm/s
Tensile force (max.)	750 N	750 N	1500 N	1500 N	3000 N
Compressive force (max.)	750 N	750 N	1500 N		3000 N
Operating voltage	24 V DC	230 V	24 V DC		
Current consumption	Ventilation (24 V): 0.9 A; RWA (18 V): 1.0 A Stroke 500: Ventilation (24 V): 1.1 A; RWA (18 V): 1.3 A	0.15 A	0.8 A	4 A	5 A
Power consumption (max.)	20 W	35 W	20 W	75 W	
Duty rating	30 %	50 %	30 %		
Connection cable length	2 m	2.5 m	2.5 m	3 m	
Special length connection cable	5 m, 7.5 m	-	-		
Cable dimensions	4 x 0.75 mm <sup>2</sup>	3 x 0.75 mm <sup>2</sup>	3 x 1 mm <sup>2</sup>		
Temperature range	-5 – 70 °C	-20 – 75 °C	-5 – 75 °C		
Enclosure rating / protection class		IP 65 / III		IP 54 / III	
Stroke length settable	●	-	-	●	●
Syncro function	●	-	-	●	●
Adjustable opening speed (ventilation)	●	-	-	-	-
Additional locking available	●	-	-	-	-
Type of additional locking		Locking drive			
Type of stroke reduction	Factory setting, synchronising unit	-	Factory setting		
End position cut-off extended	electronically via path and load	mechanical load disconnection	electronic		
End position cut-off retracted	electronically via path and load	mechanical load disconnection	electronic		
Overload cut-off	●	●	●	●	●
Complete opening within 60 s	yes, up to 500 mm stroke	-	-	yes, up to 1000 mm stroke	yes, up to 300 mm stroke
SHEV tested	yes, up to 500 mm stroke	-	-	yes, up to 1000 mm stroke	yes, up to 300 mm stroke

● = YES

# GEZE LOCKING DRIVES

## GEZE locking drives

### Brief description of the variants

#### Additional safety and protection from the weather

The trend towards ever larger windows not only requires the retention force of the drive but also an additional locking unit at the locking point. In this way the performance classes defined in EN 14351-1, especially the wind load, sealing in the event of rain and airtightness, can be ensured. Therefore, additional locking should be provided for large windows. With the E 905 / E 906 and Power lock locking drives GEZE offers two locking drives that can be used for operation of additional locking points.



#### Power lock: drive in combination with Slimchain, Powerchain or E 250 NT

- The design of the drive matches the look of the new GEZE chain and spindle drives
- Can be used for frame and leaf installation
- Flexible retrofitting in an existing system with the new chain and spindle drives
- Locking and unlocking in 5 seconds: In combination with the Slimchain, Powerchain and E 250 NT drives, the system can also be used as a SHEV in accordance with EN 12101-2
- Can be used with standard central locks
- Electronic end position cut-off provides protection against incorrect operation and overload



#### E 905 / E 906: drive in combination with Slimchain, Powerchain or E 250 NT

- As a system solution for safe opening and locking of large window casements
- Locking and unlocking in less than 5 seconds
- Can be used with standard central locks
- Intelligent solution for the cable routing in the casement saves time required for wiring and ensures a tidy appearance
- The electronic end position cut-off provides protection against incorrect operation and overload
- Fast and easy installation: the profiles need virtually no preparation

## Overview table of GEZE locking drives

### Technical data

	GEZE Power lock	GEZE E 905 / E 906
Dimensions (W x H x D)	422 x 34 x 36 mm	345 x 22 x 35 mm
Possible stroke lengths	22 mm	18 mm
Ventilation opening speed	3.6 mm/s	
Locking and unlocking time	6 s	5 s
Locking points (max.)	6	4
Tensile force (max.)	600 N	400 N
Compressive force (max.)	600 N	400 N
Operating voltage	24 V ± 25 %	
Current consumption	1.5 A	1 A
Power consumption (max.)	36 W	22 W
Duty rating	30 %	
Connection cable length	2 m	60 mm
Special length connection cable	5 m, 7.5 m	-
Cable dimensions	4 x 0.75 mm <sup>2</sup>	4 x
Temperature range	-5 – 70 °C	-5 – 75 °C
Enclosure rating / protection class	IP 42 / III	IP 40 / III
Stroke length settable	•	-
Overload cut-off	-	•
Complete opening within 60 s	yes	
SHEV tested	•	•
Microprocessor control	integrated	

• = YES

## GEZE opening and locking systems

### Brief description of the variants

#### For natural smoke and heat exhaust ventilation and for ventilation

RWA 100 NT, RWA 105 NT and RWA 110 NT are opening and locking systems for RWA. They are suitable for daily room ventilation, for smoke and heat extraction systems (RWA) and as natural smoke and heat exhaust ventilator (SHEV). Due to the mechanical locking it is not necessary to use additional electrical locking drives. The systems consist of a mechanical bracket set combined with the high-quality RWA electric spindle drive E 250 NT.



#### **RWA 100 NT: RWA system for bottom-hung, top-hung and side-hung windows inward opening**

- Combination of an E 250 NT electric spindle drive flush-mounted on the frame profile in frame installation and a mechanical bracket set with locking
- Use as RWA (24 V), in SHEVs in accordance with DIN 12101-2 and for natural ventilation (230 V in conjunction with a power supply or OL 350 EN)
- Available in four stroke lengths for all standard vertically installed types of casement
- Mechanical locking on the primary closing edge, with the option of using a mechanical additional locking device on the secondary closing edge
- Large opening widths with small spindle stroke in less than 60 seconds
- Synchronic mode on wide casements by using two RWA 100 NTs



#### **RWA 105 NT: RWA system for post-rail-constructions**

- Combination of an E 250 NT electric spindle drive flush-mounted on the frame profile and a mechanical bracket set with double locking
- Use as RWA (24 V), in SHEVs in accordance with DIN 12101-2 and for natural ventilation (230 V in conjunction with a power supply or OL 370 EN)
- Available in three stroke lengths for vertically installed, inward-opening casements
- Double mechanical locking for burglar resistance and for high tightness
- Large opening widths with small spindle stroke in less than 60 seconds
- Synchronic mode on large casements by using the RWA 105 NT Syncro set



#### **RWA 110 NT: RWA system for bottom-hung, top-hung and side-hung windows, outward opening**

- Combination of an E 250 NT electric spindle drive flush-mounted on the frame profile in leaf installation and a mechanical bracket set with locking
- Use as RWA (24 V), in SHEVs in accordance with DIN 12101-2 and for natural ventilation (230 V in conjunction with a power supply or OL 360 EN)
- Available in three stroke lengths for all standard vertically installed types of casement
- Mechanical locking on the primary closing edge
- Large opening widths with small spindle stroke in less than 60 seconds
- Synchronic mode on wide casements by using two RWA 110 NT

# GEZE OPENING AND LOCKING SYSTEMS

## Overview table of GEZE opening and locking systems

### Technical data

	GEZE RWA 100 NT	GEZE RWA 105 NT	GEZE RWA 110 NT
Space requirement (min.)	Locking side: 32 mm, motor side: 48 mm	Perimeter frame: 18 mm, leaf: 38 mm, post-rail-construction height max. 125 mm	Leaf frame: min. 33 mm, window frame: min. 45 mm
Allowable dimensions for Solo primary closing edge for wooden and metal frames	360 - 1200 mm	depending on stroke	430 - 1200 mm
Allowable dimensions for Solo primary closing edge for plastic frames	360 - 800 mm	depending on stroke	430 - 800 mm
Allowable dimensions for Syncro primary closing edge for wooden and metal frames	800 - 2400 mm	depending on stroke	850 - 2400 mm
Allowable dimensions for Syncro primary closing edge for plastic frames	800 - 1600 mm	depending on stroke	850 - 1600 mm
Leaf heights for Solo and Syncro	520 - 1700 mm	depending on stroke	600 - 1600 mm
Possible stroke lengths	100 mm 150 mm 200 mm 300 mm	100 mm 150 mm 230 mm	150 mm 200 mm 300 mm
Tensile force (max.)	750 N		
Compressive force (max.)	750 N		
Panel weight (max.)	30 kg/m <sup>2</sup>		
Operating voltage	24 V DC (+30 % to -20 %)		
Current consumption	Ventilation (24 V): 0.9 A RWA (18 V): 1.0 A		
Power consumption (max.)	20 W		
Residual ripple (max.)	30 %		
Cable dimensions	4 x 0.75 mm <sup>2</sup>		
Temperature range	-5 - 75 °C		
Enclosure rating / protection class	IP 65 / III		
Syncro function	•	•	•
Locking and auxiliary bracket	•	•	•
End position cut-off extended	Internal path sensor		
End position cut-off retracted	Internal path sensor		
Overload cut-off	•	•	•

• = YES

# GEZE ELECTROMAGNETIC RWA SYSTEMS AND LINEAR DRIVES

## GEZE electromagnetic RWA systems

### Brief description of the variants



#### RWA EM "OPEN": simple solution for opening pure RWA windows

- Secure locking of the windows through electromagnetic locking
- The magnetic primary lock and mechanical secondary lock keep the window leaf securely closed against the pushing off force of the spring arms and the pressure of the wind.
- For leaf widths of 300 - 1000 mm (top-hung casements) and 1200 mm (bottom-hung casements) the locking occurs via the magnetic primary lock
- For leaf widths up to 2000 mm (top-hung casements) and up to 2400 mm (bottom-hung casements) the locking occurs via a magnetic primary lock, a connecting link arm and a secondary lock
- Retrofitting with minimum effort

## GEZE electric linear drives

### Brief description of the variants

#### For use in conjunction with slimline fanlight openers

The slimline fanlight openers (OL 320, OL 90 N and OL 95) can be actuated electrically in combination with the E 212 and E 205 electric linear drives and can be used for daily ventilation as well as for safe and reliable smoke extraction. Therefore, cost-effective and simple motorised solutions result for activating several scissors where several heavy windows exist.



#### E 212: for use in conjunction with slimline fanlight openers

- For automating the GEZE fanlight openers OL 320, OL 90 N and OL 95
- Cost-effective and simple motorised solutions for actuating several scissors
- Natural ventilation, smoke and heat extraction system (RWA) in the 24 V version
- The narrow design allows unobtrusive adaptation to the appearance of window frontages
- The assembly group is completely preassembled, the limit switch and drive protection are already installed and adjustable
- Stroke with variable adjustment so that the opening width can be flexibly controlled on site

### Technical data

	GEZE E 212
Dimensions (H x W x L)	30 x 80 x 210 mm
Adjustable stroke	42 - 66 mm
Tensile and compressive force	1500 N
Running time (under load)	approx. 35 s for 52 mm stroke
Temperature range	-20 - 70 °C
Power consumption	90 W
Current consumption	0.4 A
Enclosure rating	IP 42
Operating voltage	230 V AC / 24 V DC
Cable/length	Plug-in version

# GEZE SCISSOR DRIVES

## GEZE scissor drives

### Brief description of the variants

#### Design solutions for optimum ventilation

The scissor drive technology is flexible and can be used for daily ventilation as well as for safe and reliable smoke extraction. The scissor drive is suitable for vertically installed, inward-opening fanlights and moves wide and heavy leafs, conveniently and safely. The integration of the scissors in the cover profile not only provides design advantages, but also additional protection from dirt.



#### E 170 and E 170/2: design solutions for optimum ventilation

- Linear drive in conjunction with slimline fanlight openers for activating windows in the façade
- Natural ventilation, smoke and heat extraction system (RWA) in the 24 V version
- Design advantages and additional protection against dirt due to the integration of the scissors in the cover profile
- Stroke with variable adjustment so that the opening width can be flexibly controlled on site
- The two-scissor version E 170/2 also moves wide and heavy leafs conveniently and safely

#### Technical data

GEZE E 170, E 170/2	
Dimensions (W x H x D)	E 170: 547 x 35 x 85 mm, E 170/2 (length 900 mm): 900 x 35 x 85 mm, E 170/2 (length 1600 mm): 1600 x 35 x 85 mm
Height	85 mm
Depth	35 mm
Space required on frame (min.)	40 mm
i dimension	10 - 60 mm
Projection height	0 - 25 mm
Leaf width	E 170: 550 - 1200 mm, E 170/2 (length 900 mm): 900 - 1600 mm, E 170/2 (length 1600 mm): 1600 - 2400 mm
Opening width	170 mm
Leaf weight (max.)	80 kg
Operating voltage	at 230 V AC: 230 V (+60 %/-10 %), at 24 V DC: 24 V (20-30 V)
Current consumption	at 230 V AC: 0.4 A, at 24 V DC: 1.2 A
Current consumption	0.4 A
Power consumption	at 230 V AC: 90 W, at 24 V DC: 29 W
Power consumption (max.)	90 W
Residual ripple	at 24 V DC: 20 %
Frequency	at 230 V AC: 50 / 60 Hz
Duty rating	25 %
Temperature range	-5 – 60 °C
Enclosure rating / protection class	IP 42
Adjustable stroke length	•
End position cut-off extended	Limit switch
End position cut-off retracted	Limit switch

• = YES

## GEZE fresh air systems

### Brief description of the variants

#### Optimum interaction of fresh and exhaust air openings

Adequately dimensioned fresh air areas are always required for safe, reliable functioning of natural smoke and heat exhaust ventilation. Cold air flows in via the fresh air areas in the lower part of the building so that – due to the stack effect – any existing smoke rises and can be drawn out through the extraction areas in the upper part of the building. GEZE offers a range of several completely coordinated fresh air systems for the interaction between fresh and exhaust air openings.



#### RWA TÖ: RWA control unit in combination with inversely mounted door closer

- With the RWA TÖ doors can be used as an RWA fresh air supply or smoke extraction opening
- Simple system for creating large fresh air supply areas
- Released by the emergency power control unit, in the event of an RWA case the door is opened by the force of the inversely mounted door closer
- In conjunction with the RWA TÖ system the door can also be used as a smoke extraction opening
- Combination with the GEZE emergency exit system (RWS) enables its use on emergency exits



#### RWA K 600: retractable arm drive for opening doors and windows

- Universal use on windows and doors, on the hinge and on the opposite hinge side
- Enables opening angles of over 90 degrees at windows and doors
- Use as RWA (24 V), in SHEVs in accordance with DIN 12101-2 and for natural ventilation (230 V in conjunction with a power supply)
- The integrated control enables synchronised multiple operation and door closing selection without an additional module
- Integrated status contact for direct connection of a door opener

#### Technical data

	<b>RWA K 600</b>
Dimensions	RWA K 600 G: 40 x 120 x 472 mm, RWA K 600 T: 40 x 98.5 x 530 mm, RWA K 600 F: 40 x 86 x 421 mm
Current consumption (max.)	1.4 A
Torque	215 Nm
Tensile force (max.)	600 N
Compressive force (max.)	600 N



#### RWA AUT: automatic opening of the doors in RWA case

- Use for automatically passable doors which, depending on their location in the building, are used as fresh air or exhaust air openings in case of an emergency.
- Due to the large opening widths of the GEZE automatic doors, large fresh air supply areas can be created
- Safeguarding the automatic door in accordance with DIN 18650 ensures comfort, convenience and safety
- Combination with the GEZE emergency exit system (RWS) enables its use on emergency exits

## GEZE RWA CONTROL UNITS

### GEZE RWA control units

#### Brief description of the variants

#### Central control units for control of individual components

Emergency power control units enable the coordinated actuation and release of fresh air supply and exhaust air openings, which are equipped with electromotive drives. Release in case of fire occurs through automatic smoke detectors, manual RWA buttons or external alarm signalling devices. Vent switches enable drives on the windows and smoke extraction openings to be controlled for normal ventilation. GEZE offers different types and sizes of control units, so that the right solution can be found for every RWA.



#### THZ: the complete RWA solution for staircases

- Safe supply and control of RWAs for compliance with the fire safety regulations
- In combination with the FT4 K RWA button it is an inexpensive solution for smaller RWAs, e.g. in a staircase
- Compact control unit with plain design for installation within the visible area
- Parameterisation options for individual adjustment, e.g. to automatic ventilation systems
- Combination with the GEZE emergency exit system (RWS) enables its use on emergency exits



#### THZ Comfort: the additional safety and convenience in staircases

- Illumination of the integrated RWA button results in improved detectability and therefore more safety
- Completely robust metal housing - suitable for use in public areas
- Time savings during installation, as the integrated RWA buttons and vent switches no longer have to be wired separately
- Stylish and with minimum dimensions, it can be installed in a space-saving way within the visible area, even in narrow staircases.
- Fast and easy commissioning with the ST 220 service tool



#### E 260 N8/2: central control units for small to medium-sized RWA solutions

- Tried and tested supply and control of RWAs for compliance with the fire safety regulations
- Suitable control unit can be selected depending on the number of RWA openings
- 2 ventilator groups are available
- The emergency power supply reliably ensures 72 hours of functional safety for smoke extraction and smoke removal devices
- Easy commissioning: Important settings can be easily set using jumpers or service buttons



#### MBZ 300: bus control unit for flexible adaptation to specific building or project requirements

- Modular design and diverse setting options make it possible to provide an RWA control unit for specific buildings or projects
- The control unit can be extended flexibly and easily thanks to the individual modules
- Fast hardware configuration possible by clicking on the modules
- PC software for enhanced configuration and control of the control unit for updates and for saving important operating states and the service settings
- Direct user interface and state display on the modules enables simple functional tests



## Overview tables for GEZE THZ and THZ Comfort

**General information**

	THZ	THZ Comfort
Outer dimensions	193 x 285 x 89 mm	140 x 248 x 85 mm
Housing material	Plastic	Diecast aluminium
Colour	White	Lower part: grey, RAL 7035 Cover: orange, RAL 2011 or following implementation (VdS approval for colour orange only)
Type of installation	On the surface, installation within visible area possible	
Cable insertion	From above, surface or flush installation possible	
Enclosure rating	IP 30	
Ambient temperature	-5 to 40 °C	

**Electrical**

	THZ	THZ Comfort	
Operating voltage (primary)	Mains voltage	230 V AC $\pm 10\%$ , 50...60 Hz	
	Power	100 W	
	Back-up fuse necessary on site	16 A	
	Mains power cable connection cross-section	3 x 1.5 mm <sup>2</sup>	
Output voltage for drives	For mains supply	24 V DC $\pm 5\%$	
	For rechargeable battery supply	24 V DC $\pm 15\%$	
	Residual ripple	2 %	
	Minimum output voltage	-	Minimum output voltages in accordance with EN 12101-10 Tab. 5: drives 20 V / detection circuits 19.5 V
Output current for drives	Total	3.4 A	
	Duty rating	20 % duty rating	30 % duty rating
	Per ventilator group	3.4 A	
Connection cross-section	Drives	min. 1.5 mm <sup>2</sup> / max. 2.5 mm <sup>2</sup>	
Emergency power supply	Nominal capacity of the rechargeable battery	2.1 - 2.3 Ah (lead battery)	
	Rechargeable battery voltage (charge voltage temperature-compensated)	2 x 12 V	
	Rechargeable battery connection	Flat plug	
	Duration	72 h (max.) standby operation with subsequent motor operation for 180 s (2x open / 1x closed)	

**Composition / variants (schematic diagram for any control unit)**

	THZ	THZ Comfort
Structure	compact	
Alarm groups	1	
Ventilator groups	1	

## GEZE RWA CONTROL UNITS

### Overview tables for GEZE RWA emergency power units E 260 N8/2

#### General information

E 260 N8/2	
Outer dimensions	362 x 319 x 131 mm
Housing material	Plastic
Colour	grey
Type of installation	Surface-mounted
Cable insertion	from underneath, surface-mounted
Enclosure rating	IP54
Ambient temperature	-5 - 40 °C, environmental class III

#### Electrical

E 260 N8/2		
Operating voltage (primary)	Mains voltage	230 V AC ±10 %, 50 Hz
	Power	260 VA
	Back-up fuse necessary on site	16 A
	Mains power cable connection cross-section	3 x 1.5 mm <sup>2</sup> or 3 x 2.5 mm <sup>2</sup>
Output voltage for drives	For mains supply	24 V DC (20-30 V)
	For rechargeable battery supply	24 V DC (20-30 V)
	Residual ripple	20 %
Output current for drives	Total	7.5 A
	Duty rating	for mains operation: 25 %, max. on period: 5 min
	Per ventilator group	7.5 A (7.5 A in total)
Connection cross-section	Drives	maximum 4.0 mm <sup>2</sup>
Emergency power supply	Nominal capacity of the rechargeable battery	1,2 Ah
	Rechargeable battery voltage (charge voltage temperature-compensated)	2 x 12 V
	Rechargeable battery connection	Flat plug
	Duration	72 h (max.) standby operation with subsequent motor operation for 180 s (2x open / 1x closed)

#### Composition / variants (schematic diagram for any control unit)

E 260 N8/2	
Structure	compact
Alarm groups	1
Ventilator groups	2 ventilator groups

## Overview tables for GEZE RWA modular bus control unit MBZ 300

**General information**

	MBZ 300 N10	MBZ 300 N24	MBZ 300 N48 K / G	MBZ 300 N72	MBZ 300 configurable
Outer dimensions	400 x 500 x 200 mm	600 x 600 x 250 mm	600 x 600 / 800 x 250 mm	600 x 800 x 250 mm	depending on type
Housing material	Control cabinet made of painted sheet steel				
Colour	grey painted (RAL 7035)				
Type of installation	Surface-mounted				
Cable insertion	from above, surface-mounted				
Enclosure rating	IP 30, in accordance with EN 12101-10 environmental class 1				
Ambient temperature	-5 to 40 °C, in accordance with EN 12101-10 environmental class 1				

**Electrical**

	MBZ 300 N10	MBZ 300 N24	MBZ 300 N48 K / G	MBZ 300 N72	MBZ 300 configurable	
Operating voltage (primary)	Mains voltage	230 V AC ±10 %, 50...60 Hz				
	Power	240 W	480 W	960 W	1440 W	depending on type
	Back-up fuse necessary on site	16 A				
	Mains power cable connection cross-section	3 x 1.5 mm <sup>2</sup> or 3 x 2.5 mm <sup>2</sup>				
Output voltage for drives	For mains supply	24 V DC ±5 %				
	For rechargeable battery supply	24 V DC ±15 %				
	Residual ripple	2 %				
	Minimum output voltage	Minimum output voltages in accordance with EN 12101-10 Tab. 5: drives 19.3 V / detection circuits 18.2 V				
Output current for drives	Total	10 A	24 A	48 A (2x 24 A)	72 A (3x 24 A)	depending on type
	Duty rating	30 % duty rating				
	Per ventilator group	per DM 10 A per power supply 10 A	per DM 10 A per DME 20 A per power supply 24 A			depending on type
Connection cross-section	Drives	min. 1.5 mm <sup>2</sup> / max. 2.5 mm <sup>2</sup>				
Emergency power supply	Nominal capacity of the rechargeable battery	Standard rechargeable battery: 12 Ah	Standard rechargeable battery: 17 Ah alternatively: 24 Ah, 38 Ah	Standard rechargeable battery: 24 Ah alternatively: 38 Ah	Standard rechargeable battery: 38 Ah	depending on type
	Rechargeable battery voltage (charge voltage temperature-compensated)	2 x 12 V				
	Rechargeable battery connection	Flat plug 6.3 mm	Ring cable lug M55	Ring cable lug M55	Ring cable lug M55	depending on type
	Duration	72 h (max.) standby operation with subsequent motor operation for 180 s (2 x open / 1 x closed)				

**Structure**

Internal bus system for modular fitout

- The minimum fitout consists of 1 power supply adapter, 1 power module PM, 1 control module CM and 1 drive module DM
- The maximum fitout can contain up to 64 bus modules (depending on the control cabinet) with max. 72 A (3 switching-mode power supplies each with 24 A). If higher power is required, several linked control units can be configured as a single unit using the software.
- The following additional modules are possible: drive module DM or DME, sensor module SM, weather module WM, relay module ERM

Variants	MBZ 300 N10	MBZ 300 N24	MBZ 300 N48 K / G	MBZ 300 N72	MBZ 300 configurable
Installed power supplies	1 power supply adapter 10 A	1 power supply adapter 24 A	2 power supply adapters 24 A	3 power supply adapters 24 A	depending on type
<b>Installed modules:</b>					
PME	-	-	1	2	Based on the basic control units sizes N10-N72, the number and order of the modules can be adapted for a specific property or project.
PM	1	1	1	1	
CM	1	1	1	1	
DM	1	3	6	9	
Space for additional modules	8	18	N48 K: 5 N48 G: 13	8	
Standard configuration	1 alarm group 1 ventilator group	1 alarm group 3 ventilator groups	1 alarm group 6 ventilator groups	1 alarm group 9 ventilator groups	

# GEZE MANUAL VENTILATION SYSTEMS

## GEZE IQ box KNX

### Interface module for KNX building systems

The GEZE IQ box KNX is the interface between IQ windowdrives and the KNX building bus. The window drives Slimchain, Powerchain, E 250 NT as well as the locking systems Power lock and E 90X can be integrated directly in the KNX building bus using the IQ box KNX.



#### IQ box KNX UP

- Flush-mounting version for installation in a flush-mounting branch box
- KNX interface for the window drives Slimchain, Powerchain and E 250 NT
- Can be used for natural ventilation
- Activation and feedback contact of the window drives via the KNX building bus



#### IQ box KNX HS

- Top hat rail version for installation on a TS35 top hat rail.
- KNX interface for the window drives Slimchain, Powerchain and E 250 NT
- Can be used for natural ventilation
- Activation and feedback contact of the window drives via the KNX building bus

## TECHNICAL DATA

Product features	GEZE IQ box KNX
<b>General information</b>	
Dimensions	50 x 45 x 19 mm (IQ box KNX UP) 98 x 62 x 18 mm (IQ box KNX HS)
<b>Electrical data</b>	
Operating voltage	24 V ± 25 %
Current consumption	0.02 A
Cable dimensions	max. 1.5 mm <sup>2</sup>
Temperature range	-5 – 70 °C
IP rating / protection rating	IP 20 / III
<b>Specification</b>	
Type of installation	Surface or flush-mounted housing
Max. cable length for push buttons	30 m
Max. overall cable length for drives	15 m
<b>Functions</b>	
KNX movement commands	Open/close, step/stop, target position in %, speed in %, block
KNX status reports	Position in %, opened, closed, not closed, opening, closing, intermediate position
Ventilation	Timed ventilation, gap ventilation, wind alarm, rain alarm

## GEZE manual ventilation systems

### Daily ventilation made easy

The manual window opening systems are used for convenient daily ventilation. The fanlight opening systems offer large variant diversity and can be opened easily and reliably. The cranked turn and tilt hardware is the perfect solution for large, heavy windows. The range of applications includes rectangular vertically installed, inward-opening bottom-hung or top-hung casements and vertically installed outward-opening top-hung windows. Solutions are also available for special shapes, e.g. vertically installed, inward-opening angular, triangular, semicircular and segmental arch windows.

### Overview table GEZE manual ventilation systems

	Fanlight opener systems				Cranked turn and tilt hardware systems
	OL 90 N	OL 90 N Top-hung win- dows outward opening	OL 95	OL 320	F 1200
<b>Applications</b>					
For vertically installed window casements made of wood, plastic or metal	•	•	•	•	
Large heavy windows					•
<b>Window shape</b>					
Rectangular	•	•	•	•	•
Angular	•		•	•	
Triangular	•		•	•	
Semicircular and segmental arch	•				
<b>Type of opening</b>					
Inward-opening	•		•	•	•
Outward-opening		•			
<b>Technical data</b>					
OL scissor length	242 mm	274 mm	305 mm	436 mm	
OL scissor depth	49 mm	54 mm	49 mm	65 mm	
OL scissor height	16 mm	61 mm	16 mm	26 mm	
Max. opening width	170 mm	170 mm	220 mm	320 mm	180 mm
Max. panel weight	40 kg/m <sup>2</sup>	30 kg/m <sup>2</sup>	30 kg/m <sup>2</sup>	140 kg/m <sup>2</sup>	150 kg/m <sup>2</sup>
Max. leaf weight	80 kg	80 kg	60 kg	250 kg	200 kg
Min. leaf width	380 mm	600 mm	440 mm	680 mm	750 mm
Max. leaf width					2000 mm
Max. leaf width with one scissor	1200 mm	1200 mm	1200 mm	1200 mm	1400 mm
Max. leaf width with two scissors	2400 mm	2400 mm	2400 mm	2400 mm	
Max. leaf width with three scissors	3600 mm	–	3000 mm	3600 mm	
Min. leaf height	250 mm	370 mm	350 mm	400 mm	750 mm
Max. leaf height					2500 mm
Space requirement, min. to max.	19–27 mm	28–35 mm	21–27 mm	30–36 mm	
<b>Functions</b>					
Adjustable opening width (stroke reduction)	•	•	•	•	•
Casement lock integrated in the scissor	•	•	•	•	
Scissor unhooked by release button	•	•	•	•	
Burglary resisting lock (SKG)		•			
Lockable	•		•		•
Unhinging inhibitor	•		•	•	
Continuously adjustable ventilation					•

• = YES

## GEZE manual ventilation systems

### Brief description of the variants



#### **OL 90 N: surface-mounted slimline fanlight opener with an opening width of 170 mm**

- Large opening width of 170 mm
- The façade's appearance remains unchanged, because the flat scissor design and link arm require little space
- Problem-free installation: the scissors and the link arm can be installed from the front
- Safe casement locking thanks to locking in the scissor
- OL 90 N top-hung casement, outward opening: with burglar resistant locking (SKG certified)
- OL 90 N for special shapes: with the help of the extensive accessories, solutions can be implemented for different special window shapes



#### **OL 95: surface-mounted slimline fanlight opener with an opening width of 220 mm**

- Improved ventilation due to an opening width of 220 mm
- Inconspicuous installation in post-rail-construction due to small overall height
- Safe casement locking thanks to locking in the scissor
- Convenient window cleaning from the inside and outside by easily unhooking the scissor
- Small space requirement above and to the side of the casement



#### **OL 320: surface-mounted slimline fanlight opener with an opening width of 320 mm**

- Large opening width: approx. 320 mm (on request approx. 220 mm), for high leaf widths up to 250 kg
- Locking device in the scissor
- Problem-free installation even in deep reveals, as the scissors and link arm can be installed from the front
- Only one leaf bracket for all overlap heights and materials
- Small space requirement above and to the side of the casement



#### **F 1200: crank turn and tilt hardware system for large and heavy windows**

- Fulfils special robustness and stability requirements
- Continuously adjustable ventilation – from the gap ventilation to the tilted end position
- Functional safety due to weight-independent crank handle actuation with control display
- Additional protection against incorrect operation and overload friction coupling
- Secure locking due to the arrangement of virtually any number of bolt positions on all four sides
- Arrangement of all fitting parts on the inner casement shell

Reference photos of electrical RWA and ventilation systems



GEZE Slimchain and GEZE E 250 NT (Photo: Lazaros Filoglou)



GEZE ECchain with safety scissors  
(Photo: Lazaros Filoglou)



GEZE Powerchain with safety scissors  
(Photo: Lazaros Filoglou)



## GEZE RWA AND VENTILATION TECHNOLOGY

### Reference photos of GEZE manual ventilation systems



GEZE TS 5000 and OL 90 N with post-rail transmission, Nursing home Augustinum, Stuttgart, Germany (Photo: Dirk Wilhelmy)



GEZE OL 90 top-hung, outward opening, Stiftung Ecksberg, Mühlendorf, Germany (Photo: Robert Sprang)





GEZE OL 90 N, Hotel Amano, Berlin, Germany (Photo: Stefan Dauth)

# POTENTIAL APPLICATIONS OF GEZE PRODUCTS

You will find more product information in the relevant brochures, see ID numbers.

<b>Door technology</b>	
01	Overhead door closers ID 091593, ID 091594
02	Hold-open systems ID 091593, ID 091594
03	Integrated door closers ID 091609
04	Floor springs and all-glass fittings ID 091607
05	Sliding fitting systems and linear guides ID 123605, ID 000586
<b>Automatic door systems</b>	
06	Swing doors ID 144785
07	Sliding, telescopic and folding doors ID 143639
08	Curved sliding doors ID 135772
09	Revolving doors ID 132050
10	Activation devices and sensors ID 142655
<b>Smoke and heat extraction and window technology</b>	
11	Fanlight opening systems ID 127787
12	Electric opening and locking systems ID 127785, ID 127789
13	Electrical spindle and linear drives ID 127785, ID 127789
14	Electric chain drives ID 127785, ID 127789
15	Smoke and heat extraction systems ID 127785, ID 139075
<b>Safety technology</b>	
16	Emergency exit systems ID 132408
17	Access control systems ID 132158
18	Panic locks ID 132848
19	Electric strikes ID 148666
20	Building management system ID 132408
<b>Glass systems</b>	
21	Manual sliding wall systems (MSW) ID 104377
22	Integrated all-glass systems (IGG) ID 104366



# POTENTIAL APPLICATIONS OF GEZE PRODUCTS




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## Door technology

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The functionality, superior performance and reliability of GEZE door closers are impressive. A common design across the range, the ability to use them on all common door leaf widths and weights, and the fact that they can be individually adjusted makes their selection simple. They are continually being improved and enhanced with up-to-date features. For example, the requirements of fire protection and accessibility are fulfilled with a door closer system.

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## Automatic door systems

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GEZE automatic door systems open up a huge variety of options in door design. The latest, innovative high-performance drive technology, safety, ease of accessibility and first class universal drive design set them apart. GEZE offers complete solutions for individual requirements.

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## Smoke and heat extraction and window technology

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GEZE smoke and heat extraction systems and ventilation technology provide complete systems solutions combining the many requirements of different types of windows. We supply a full range from energy efficient drive systems to natural ventilation and complete solutions for supplying and extracting air, also as certified SHEVs.

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## Safety technology

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GEZE safety technology sets the standards where preventative fire protection, access control and anti-theft security in emergency exits are concerned. For each of these objectives GEZE offers tailored solutions, which combine the individual safety requirements in one intelligent system and close doors and windows in case of danger in a coordinated manner.

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## Building systems

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In GEZE's Building Management System GEZE door, window and safety products can be integrated in to the security and control systems of the building. A central control and visualisation system monitors various automation components in the building and offers security through many different networking capabilities.

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## Glass systems

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GEZE glass systems stand for open and transparent interior design. They can either blend discreetly into the architecture of the building or stand out as an accentuated feature. GEZE offers a wide variety of technologies for functional, reliable and aesthetic sliding wall or sliding door systems providing security with lots of design scope.



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