

Chain drives for direct opening of windows

GEZE E 580, E 600 - E 680



Health Cure House, Bad Pyrmont



GEZE E 580

Integrated chain drive for direct opening of windows

The profile-integrated chain drive GEZE E 580 with its small dimensions (31 x 31 x 311 mm) can be integrated in all common frame profiles. The chain drive E 580 is operated by a 24 V DC motor and it is equipped with automatic final position and overload cutout. A separate power pack 230 V AC / 24 V DC is available to connect the E 580 to 230 V mains voltage. Owing to its small dimensions (32 x 32 x 108 mm) the power pack can also be integrated into the frame profile.

Application range

- ▶ For vertical inserted rectangle windows ($\pm 5^\circ$ inclination) of metal, timber and plastic
- ▶ Mounted into the frame, for inward and outward opening bottom-hung and top-hung casements
- ▶ For dry rooms; Protection class IP 42

GEZE E 580

- ▶ Casement height min. 350 mm
- ▶ Casement width min. 600 mm (400 mm if the power pack is not integrated into the frame)
- ▶ Casement width max. 1500 mm
- ▶ Panel weight max. 30kg/m^2
- ▶ Casement area max. $1,5\text{ m}^2$
- ▶ Overlap:
0-13,5 mm for metal and plastic
0-20 mm for timber
- ▶ Opening time:
approx. 20 sec (depending on load)
- ▶ Duty cycle 50%
- ▶ Push/Pull force 200 N
- ▶ Current consumption 0,5 A
- ▶ Ambient temperature from -5° to $+70^\circ\text{ C}$

Installation drawings:

45139-9-0974
45139-9-9504
45139-9-9503



Profile-integrated chain drive GEZE E 580

Power pack E 580

- ▶ Input voltage 230 V AC, 50 Hz
- ▶ Output voltage 24 V DC
- ▶ Power consumption 30 W
- ▶ Output current 0,8 A
- ▶ Duty cycle 50%
- ▶ Schutzklasse II
- ▶ Ambient temperature from -25° to $+75^\circ\text{ C}$
- ▶ Connection cable 3 x 0,75 mm², length 2,5 m

Tandem version

- ▶ To use for smoke and heat extraction (RWA):
2 pcs E 580 (without power pack E 580)
and synchronised cut-off E 102, ID No. 101323
- ▶ To use for ventilation: 2 pcs E 580 (without power pack E 580), synchronised cut-off E 102 and a tandem power pack E 48, ID No. 087776
Installation of the synchronised cut-off and the tandem power pack external as surface-mounted.

Ordering information

Description	Finish	ID no.
GEZE E 580 / 24 V DC, stroke 200 mm		082606
Power pack E 580		082607
GEZE E 580 / 24 V DC, stroke 200 mm for casements of timber		104855
Accessories for E 580 bottom-hung casement, inward opening: leaf console, cover plate and fixing parts	EV1	082597
	white RAL 9016	082605
	RAL colour	082604
Accessories for E 580 top-hung casement, outward opening		104853

GEZE E 600 - E 680

Chain drives for direct opening of windows

The GEZE chain drives are slimline electric drives for direct opening of bottom-hung, top-hung, horizontally pivot-hung, side-hung and vertically pivoted windows. The drives are fitted parallel to the window and their corresponding colours harmoniously fit in the window architecture.

All GEZE chain drives have a special chain, which transmits both pulling and pushing force. This chain precisely and safely operates the window casements. In closed position the chain is invisibly rolled up within the drive housing.

Application range

The GEZE chain drives are intended for vertically installed rectangular window in dry rooms. The chain drives GEZE E 640 and E 660 are also suited for angled windows (skylights) and lightdomes.

- ▶ The maximum permissible panel weight as per particular installation drawing must be observed.
- ▶ Regarding angled windows, special panel weights will be applied accordingly!
- ▶ Using an additional bearing block (inward opening) or bracket set (outward opening) makes an overlap compensation possible.

Tandem version

For extremely wide and heavy casements it is possible to use two drives in tandem configuration, with corresponding synchronised cut-off e.g. GEZE E 102 / 24 V DC (ID No. 101323) or E 301 / 230 V AC (ID No. 090629).

For GEZE E 620 / 24 V Tandem: synchronised cut-off E 102 and tandem power pack E 48 (ID No. 087776)

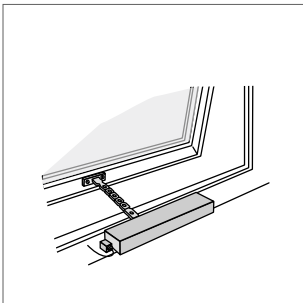


GEZE E 660 top-hung casement, inward opening

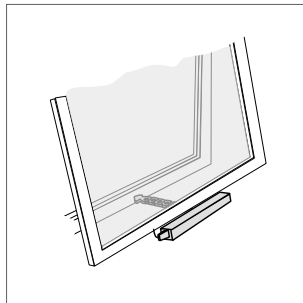


GEZE chain drive E 680

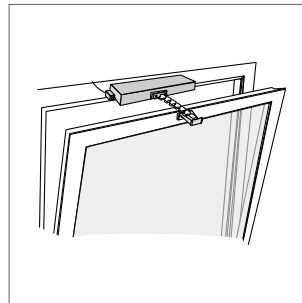
Examples of application



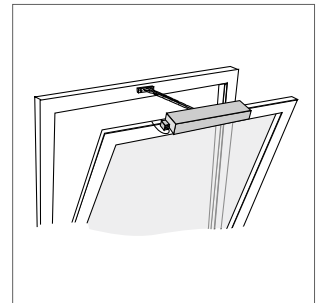
Top-hung casement, outward opening, electric drive mounted onto the frame



Top-hung casement, outward opening, electric drive mounted onto the casement



Bottom-hung casement, inward opening, electric drive mounted onto the frame



Bottom-hung casement, inward opening, electric drive mounted onto the casement

GEZE Chain drives – Technical data

	E 600	E 620	E 640 ¹⁾	E 660 ¹⁾	E 680 ¹⁾
Casement width (mm)	min. 430 max. 1500	min. 450 max. 1500	min. 540 (stroke 280) min. 660 (stroke 380)	min. 780 (stroke 420) min. 960 (stroke 600)	min. 1195
Casement height²⁾ (mm)	min. 500 (bot., stroke 250) min. 800 (bot., stroke 370) min. 500 (top., stroke 370)	min. 600	min. 900 (bottom-hung) min. 500 (top-hung)	min. 1100	min. 1100
Overlap (mm)	0 - 20	0 - 25	0 - 20 (bottom-hung) 0 - 18 (top-hung)	0 - 20	0 - 20
Casement area (m²)	max. 1,5	max. 1,5	max. 1,5	max. 1,65	max. 1,65
Space req. onto the frame (mm)	52 (27)	35 (25)	44 (35)	54 (35)	54 (35)
Installation drawing	45139-9-0950	45139-9-0951	45139-9-0952	45139-9-0953	45139-9-9508
Connection diagram	45139-9-0959	45139-9-0961	45139-9-0962	45139-9-0964	45139-9-9509

¹⁾ in also special piston stroke lengths available

²⁾ lower casement heights are practicable with GEZE swivel brackets

GEZE Chain drives 24 V DC

	E 600 stroke 250/370	E 620 stroke 200 (250)	E 640 stroke 280 (380)	E 660 stroke 420 (600)	E 680 stroke 835
Dimensions (mm) (WxHxL)	86x50x269	49x29x262 (49x29x286)	62x40x373 (62x40x423)	86x50x478 (86x50x573)	86x50x687
Pushing force (N)	150	200	350	400	200
Pulling force (N)	300	200	350	400	400
Piston stroke length (mm)	250/370	200 (250)	280 (380)	420 (600)	835
Travel time (mm/s)¹⁾	40	10	15	20	17
Power consumption (W)	50	20	25	50	50
Current consumption (A)	2,3	0,85	1,0	2,0	2,3
Ambient temperature (°C)	-20/+40	-5/+50	-5/+50	-10/+50	-10/+50
Protection class (IP)	20/III	20/III	22/III	22/III	22/III
Actuation	GEZE RWA - Emergency power control unit E 260 N				

GEZE Chain drives 230 V AC, 50 Hz

	E 600 stroke 250/370	E 620 stroke 200 (250)	E 640 stroke 280 (380)	E 660 stroke 420 (600)
Power consumption (W)	160	31	110	166
Current consumption (A)	0,7	0,3	0,45	0,7
Protection class (IP)	20/I	20/I	22/I	22/I
Activation	Single-digit operation: Change-over switch E 27 (ID No. 048941) / E 33 (ID No. 048942) Multi-digit operation: Vent switch E 50/1 (ID No. 006575) / E 50/3 (ID No. 006586) with self-locking module (ID No. 029393) only			

¹⁾ with maximum load

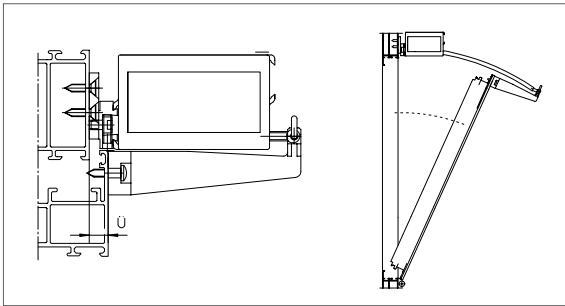
Note:

With bottom-hung windows, a suitable gripping scissor (e.g. GEZE Safety scissor No. 35) has to be used. The scissor restrict the travel of the casement (gripping position) when the scissor stay is disengaged so that the casement does not become a potential danger.

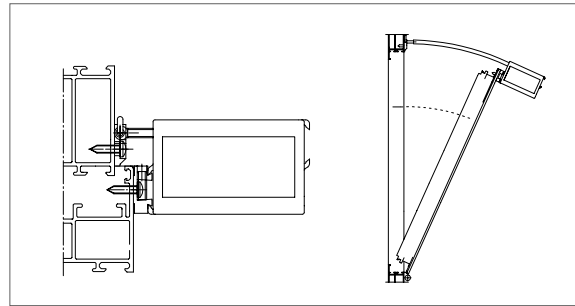
The relevant guide lines and regulations for powered windows, doors and gates BGR 232, Germany (till now ZH 1/494) must be observed

For additional information about mounting, commissioning and maintenance, see installation drawings and connection diagrams.

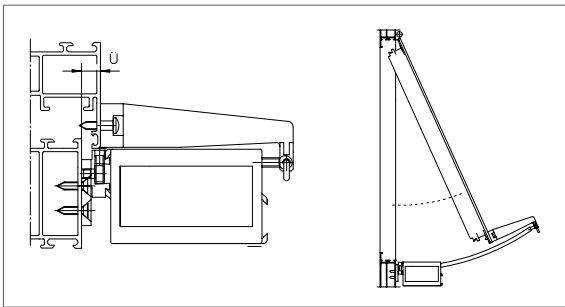
GEZE Chain drives – Mounting examples for bottom-hung and top-hung casements



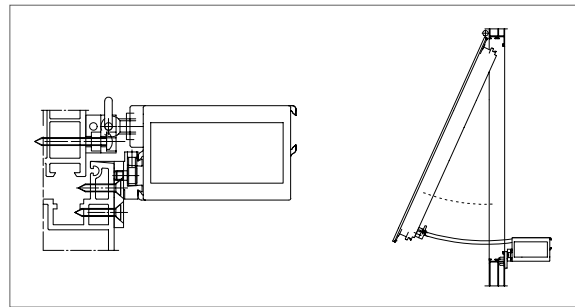
Standard application: bottom-hung casement, inward opening, the drive is mounted onto the frame



Variant: bottom-hung casement, inward opening the drive is mounted onto the casement



Variant: top-hung casement, inward opening, the drive is mounted onto the frame



Standard application: top-hung casement, outward opening, the drive is mounted onto the frame

Additional mounting examples on request.

Swivel brackets for GEZE chain drives

With swivel brackets (inward / outward) it is also possible to use the GEZE chain drives for windows with lower casement height. That means a considerable enlarged application range.

Depending on the overlap, mounting plates will be partly required.

Swivel bracket for E 620

- ▶ for vertically installed bottom-hung casements, inward opening with casement height < 600 mm; minimum casement height 350 mm
- ▶ for vertically installed top-hung casements outward opening with casement height < 600 mm; minimum casement height 250 mm

Swivel bracket	Stroke	Casement height	Casement width	Casement weight	Panel weight	
for E 600 inward	250 mm	300 - 500 mm		max. 20 kg	max. 30 kg/m ²	
	370 mm	500 - 800 mm		max. 20 kg	max. 30 kg/m ²	
for E 640 inward	280 mm	500 - 900 mm		max. 45 kg	max. 58 kg/m ²	
	380 mm	500 - 900 mm		max. 35 kg	max. 45 kg/m ²	
for E 660	inward	420 mm	500 - 700 mm		max. 25 kg	max. 30 kg/m ²
			700 - 1100 mm		max. 35 kg	max. 42 kg/m ²
	outward ^{*)}	600 mm	700 - 1100 mm		max. 25 kg	max. 30 kg/m ²
		420 mm	500 - 700 mm	600 mm	max. 25 kg	max. 30 kg/m ²
			700 - 1100 mm	600 mm	max. 35 kg	max. 42 kg/m ²
600 mm	700 - 1100 mm	800 mm	max. 25 kg	max. 30 kg/m ²		
for E 680	inward	835 mm	800 - 1100 mm		max. 35 kg	max. 30 kg/m ²
	outward ^{*)}	835 mm	800 - 1100 mm	740 mm	max. 25 kg	max. 30 kg/m ²

^{*)}with using the chain drives E 660 and E 680 for vertically installed top-hung casements, casement height lower than 1100 mm

GEZE Chain drives – Ordering information

Description	Finish	24 V DC ID No.	230 V AC ID No.
GEZE E 600, stroke 250/370 mm (reversible) without power supply cable	silver	071628	071633
	white RAL 9016	071632	071637
	RAL colour	071631	071636
GEZE E 620, stroke 200 mm with power supply cable	silver	071648	102705
	white RAL 9016	071652	102709
	RAL colour	071651	102708
GEZE E 620, stroke 250 mm with power supply cable	silver	072403	102712
	white RAL 9016	072408	102716
	RAL colour	072407	102715
GEZE E 640, stroke 280 mm with power supply cable	silver	072415	072421
	white RAL 9016	072419	072426
	RAL colour	072418	072425
GEZE E 640, stroke 380 mm with power supply cable	silver	071658	071653
	white RAL 9016	071703	071657
	RAL colour	071661	071656
GEZE E 660, stroke 420 mm with power supply cable	silver	071667	071662
	white RAL 9016	071671	071666
	RAL colour	071670	071665
GEZE E 660, stroke 600 mm with power supply cable	silver	071672	071677
	white RAL 9016	071676	071681
	RAL colour	071675	071680
GEZE E 680, stroke 835 mm with power supply cable	silver	107614	
	white RAL 9016	107615	
	RAL colour	107616	

Description		Inward ID No.	Outward ID No.
Casement console	for GEZE E 600	072033	072034
	for GEZE E 620	072035	072036
	for GEZE E 640	072037	072038
	for GEZE E 660 and E 680	072039	072040
Swivel bracket	for GEZE E 620	102765	102764
	for GEZE E 600, E 640, E 660 and E 680	084838	
	for GEZE E 660 and E 680		084966
Hing pin	for GEZE E 660 and E 680		088512
Fixing plate	for GEZE E 600		086335

Description	Special piston stroke length (mm)										ID No.
Chain drive GEZE E 640	265	255	240	230	215	205	190	180	165		106853
	365	355	340	330	315	305	290				106854
Chain drive GEZE E 660	400	380	365	345	325	305	285	270	250		106867
	580	560	545	525	505	485	465	450	430		106868
Chain drive GEZE E 680	815 to 435 mm in 20 mm steps										109855



Mechanical locking bracket for GEZE chain drives

For windows with large casements it is not sufficient to use only the drive for locking.

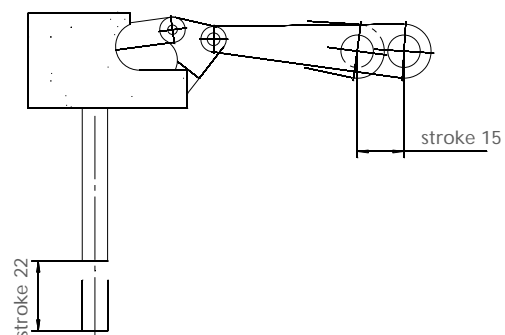
The solution: **GEZE mechanical locking bracket**

- ▶ for all GEZE chain drives (E 600 - E 680)
- ▶ no additional sequence control required
- ▶ no additional cables required
- ▶ for inward opening bottom-hung, top-hung and side-hung windows
- ▶ for all common profile systems
- ▶ simple installation by means of a template
- ▶ increased thickness
- ▶ increased burglar resistance
- ▶ no false locking due to wind load possible
- ▶ for overlap 0-20 mm
(higher overlaps with supporting plates possible)



Function

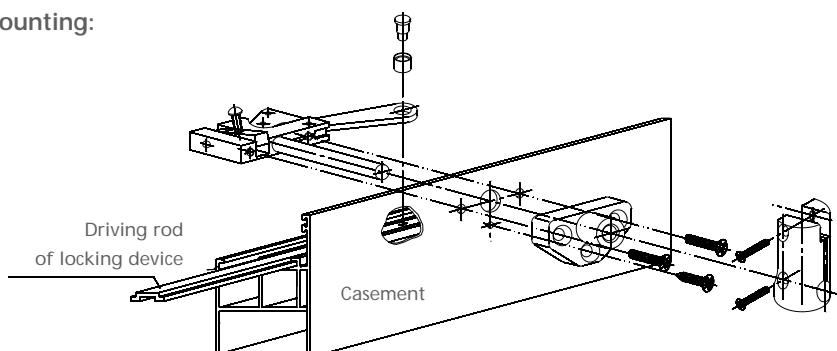
- ▶ When the chain drives are operated, the casement is electromechanically unlocked or locked via a concealed internal central locking device.
- ▶ The system provides concealed all-round locking and functions as follows: the locking bracket engages with the driving rod and thereby fixes the locking elements.



Ordering information

Locking bracket	Finish	ID No.
for GEZE E 600	EV1	107970
	white RAL 9016	113926
	RAL colour	113930
for GEZE E 620	EV1	107971
	white RAL 9016	113927
	RAL colour	113961
for GEZE E 640	EV1	107972
	white RAL 9016	113928
	RAL colour	113962
for GEZE E 660 / E 680	EV1	107973
	white RAL 9016	113929
	RAL colour	113963

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