

**Symbols and means of representation**

In these instructions, warnings are used to warn against material damage and injuries.

- Always read and observe these warnings.
- Observe all the measures that are marked with the warning symbol and warning word.

**Warning symbol**

Warning symbol	Warning word	Meaning
	<b>DANGER</b>	Danger for persons. Non-compliance will result in death or serious injuries.
	<b>WARNING</b>	Danger for persons. Non-compliance can result in death or serious injuries.
	<b>CAUTION</b>	Danger for persons. Non-compliance can result in minor injuries.
	<b>CAUTION</b>	Information on avoiding material damage, understanding a concept or optimising the process.

**Important information and technical notes are emphasised in order to illustrate the correct operation.**

**Symbol**

- Means "important note"
- Means "additional information"

**► Symbol for an action. Here you have to do something.**

**► Observe the sequence if there are several action steps.**

**Product liability**

In accordance with the liability of the manufacturer for his products as defined in the German "Produkthaftungsgesetz" (Product Liability Act), the information contained in this brochure (product information and proper use, misuse, product performance, product maintenance, obligations to provide information and instructions) is to be observed. Non-compliance releases the manufacturer from his statutory liability.

**1 General information**

**1.1 Product description**

The window unit is a drive system for opening and closing vertically installed bottom-hung, top-hung and side-hung windows that are opened inwards.

Depending on the application, 1 system (Solo) or 2 systems (Syncro) are mounted next to the window.

**1.2 Intended use**

The drive is designed solely for use in dry rooms.

Use only cables specified in the cable plan. Insulated wire end-femles must always be used for wire-end-femles.

Any other use than the proper use as well as all changes to the product are impermissible.

**1.3 Limitation of liability**

GEZE GmbH does not accept any liability for direct or indirect damage resulting from the non-observance of the specifications in these instructions of this window unit.

Technical modifications that serve the improvement or further development of the product can be introduced at any time without any particular announcement.

GEZE shall not be liable for injuries or damage resulting from unauthorised modification of the system.

GEZE shall not be liable if products from other manufacturers are used with GEZE equipment. Only original GEZE parts may be used for repair and maintenance work as well.

For further information please contact our customer service.

**2 Safety instructions**

The prescribed mounting, maintenance and repair work must be performed by properly trained personnel authorised by GEZE.

Connection to the mains voltage (24 V DC) and any work on electrical items must be carried out by a qualified electrician in accordance with the respective wiring diagram.

The mains connection and safety earth conductor test must be carried out in accordance VDE 0100.

Use a customer-accessible overlaid cut-out of the line-side disconnecting device in accordance with the permissible current-carrying capacity of the cable.

The country-specific laws and regulations are to be observed during safety-related tests.

In accordance with Machine Directive 2006/42/EC, a danger analysis must be performed and the window system identified in accordance with CE certification Directive 93/68/EEC before commissioning the window system.

Observe the latest versions of guidelines, standards and country-specific regulations, in particular:

- BGR 232 "Guidelines for power-operated windows, doors and gates"
- DIN 18650 "Building hardware - Powered pedestrian doors"
- VDE 0100: Part 610 "Protection of low-voltage installations"
- VDE 0700, Part 238 "Safety of electrical devices for home use and similar purposes, drives for windows, doors, gates and similar systems"
- Accident-prevention regulations, especially BGV A1 "General regulations" and BGV A2 "Electrical systems and equipment"

**2.1 Safety-conscious working**

Observe the safety instructions for electrical systems and in the wiring diagram.

Secure the workplace against unauthorised entry.

Take care to allow sufficient space for the movement of long components in the system.

Before working on the electrical system interrupt the power supply and verify the safe isolation from supply. Note that the system will still be supplied with power, despite the fact that the power supply is disconnected, if an uninterruptible power supply (UPS) is used.

Risk of injury by sharp edges and moving parts (drawing in of hair, clothing, ...) when a drive is opened.

Risk of injury by trapping, knocking, shearing and hair etc. being pulled in at unsecured points.

Risk of injury through breakage of glass.

During the setup control the drive only in inching mode. Touching the window unit can result in injuries during operation.

In order to avoid injuries the enclosed protective caps are to be screwed onto projecting threads of the fastening screws.

**3 Tools and fastening means**

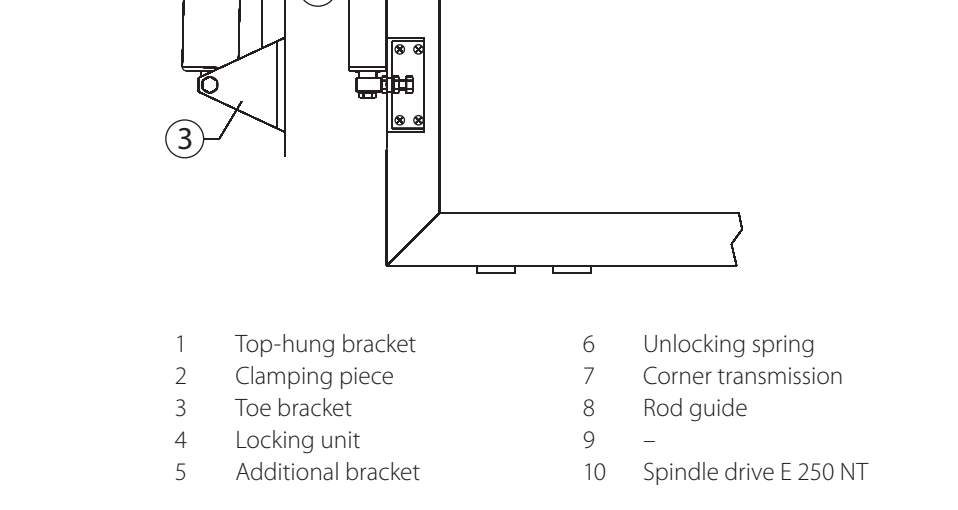
Tool	Size
Tap	-
Marking tools	-
Drilling pattern	-
Drilling tool	-
Drill bits	Diameter 4 mm (3 mm)
Allen key	Size 2, size 4
2 open-ended spanners	Size 17
Screw driver	-
Saw	-
File	-

Window type	Fastening screws	Ø hole
Wooden	Countersunk wood screw 5x35 DIN 97 or 7997	3 mm
Light alloy	Countersunk head tapping screw 4.8x22 DIN 9792 or 7982 4 mm	4 mm
Plastic	Countersunk head tapping screw 4.8x22 DIN 9792 or 7982 4 mm	4 mm

Fastening screws are not included in the scope of delivery. Rivet nuts are recommended for light alloy and plastic windows.

**4 Location and overview of parts at the window**

**4.1 RWA 100 NT Solo**



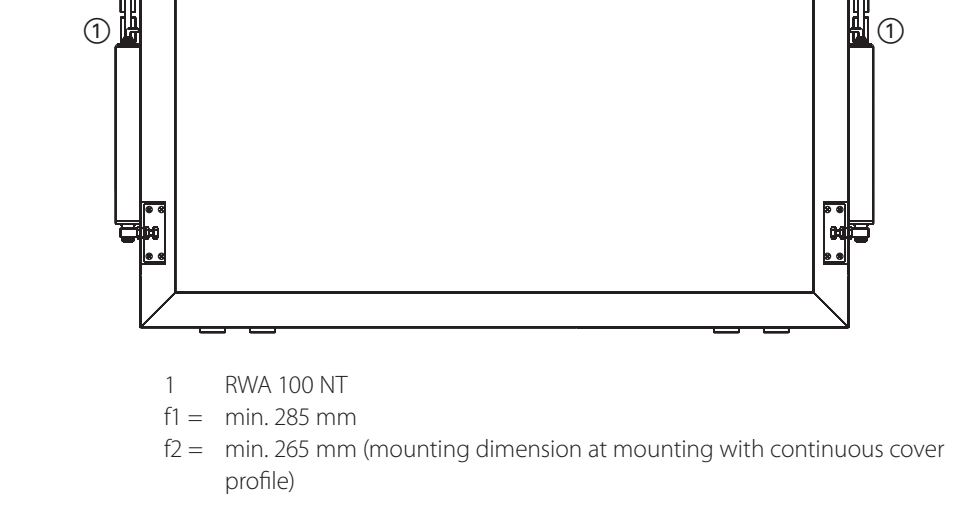
- 1 Top-hung bracket
- 2 Clamping piece
- 3 Toe bracket
- 4 Locking unit
- 5 Additional bracket
- 6 Unlocking spring
- 7 Corner transmission
- 8 Rod guide
- 9 Root guide
- 10 Spindle drive E 250 NT

With 2 locking units:



- 1 RWA 100 NT
- f1 = min. 285 mm
- f2 = min. 265 mm (mounting dimension at mounting with continuous cover profile)

**4.2 RWA 100 NT Syncro**

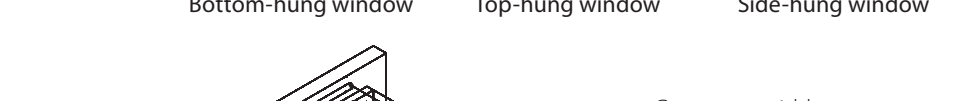


- 1 RWA 100 NT
- f1 = min. 285 mm
- f2 = min. 265 mm (mounting dimension at mounting with continuous cover profile)

**5 Mounting**

**5.1 Mounting possibilities**

**5.1.1 Installation conditions**



- a Casement width
- b Casement height
- c Overlap
- d Distance between casement top edge and rod centre

**Further installation conditions**

- 2 hinges (B1 and B2) have to be installed on the motor side.
- The window bearings and their fixings have to withstand a static load of 1000 N.
- A limiter has to be applied installed additionally at plastic windows.



Bottom-hung window Top-hung window Side-hung window

Further installation conditions

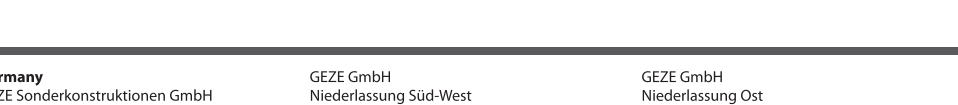
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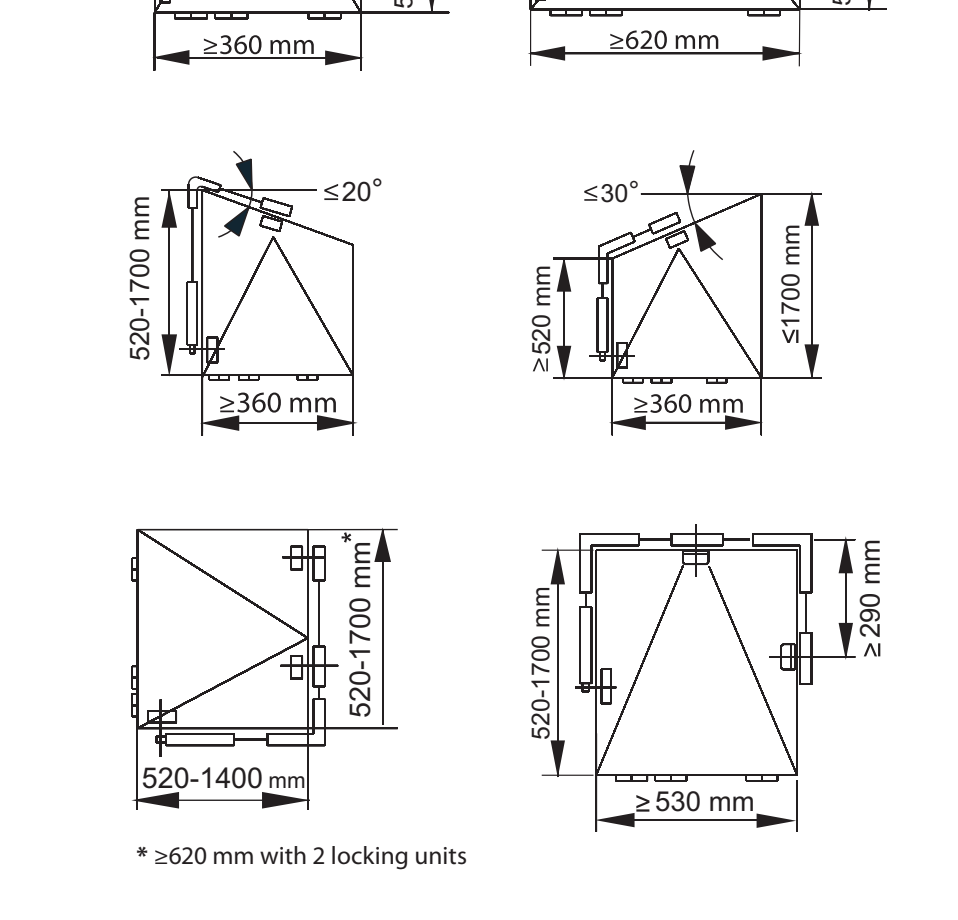


Bottom-hung window Top-hung window Side-hung window

**5.1.2 RWA 100 NT Solo**

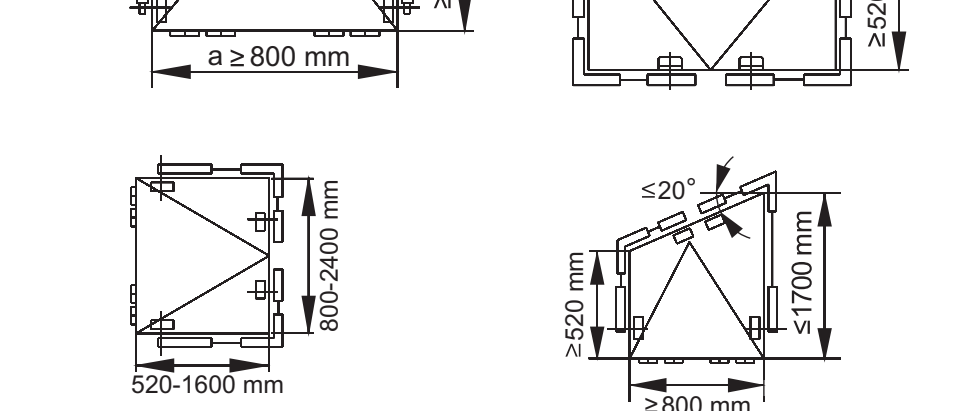
The motor can be mounted on the left or right.

Above 1.2 m window surface 2 locking units have to be mounted. The second locking unit is placed depending on the height and width.



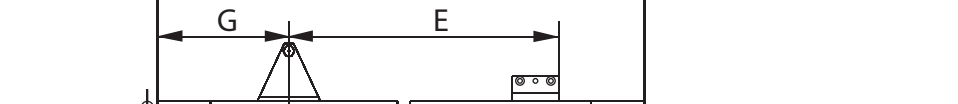
• >620 mm with 2 locking units

**5.1.3 RWA 100 NT Syncro**



**5.2 Mounting dimensions depending on drive stroke**

**5.2.1 RWA 100 NT**



b Casement height

RWA 100 NT Solo

mV with displacement of 50 mm or flush (see following table)

Case height [mm]	Dimension G [mm]	Dimension b [mm]	Opening angle [°]	Opening width [mm]	With displ. [mm]
<b>Stroke 100</b>					
520-600	65	365	aprox. 34°	aprox. 350	45
600-700	85	365	aprox. 22°	aprox. 380	45
700-800	125	365	aprox. 26°	aprox. 380	45
800-850	145	365	aprox. 20°	aprox. 400	45
<b>Stroke 150</b>					
610-630	100	415	aprox. 49°	aprox. 520	45
630-700	115	415	aprox. 47°	aprox. 520	45
700-800	150	415	aprox. 42°	aprox. 560	35
800-900	200	460	aprox. 30°	aprox. 550	50
900-1000	275	460	aprox. 31°	aprox. 520	50
<b>Stroke 200</b>					
700-720	145	465	aprox. 58°	aprox. 690	45
720-800	160	465	aprox. 55°	aprox. 720	45
800-900	215	485	aprox. 47°	aprox. 710	25
900-1000	275	510	aprox. 41°	aprox. 690	50
1000-1100	325	510	aprox. 37°	aprox. 690	50
1100-1200	425	510	aprox. 31°	aprox. 650	50
1200-1300	525	510	aprox. 27°	aprox. 610	50
<b>Stroke 300</b>					
1000-1000	290	560	aprox. 58°	aprox. 970	50
1000-1050	335	570	aprox. 51°	aprox. 930	40
1050-1100	350	570	aprox. 51°	aprox. 950	40
1100-1150	415	580	aprox. 46°	aprox. 900	30
1150-1250	465	580	aprox. 41°	aprox. 900	30
1250-1300	495	610	aprox. 41°	aprox. 920	30
1300-1400	565	610	aprox. 38°	aprox. 890	30
1400-1500	645	610	aprox. 34°	aprox. 870	30
1500-1600	715	610	aprox. 32°	aprox. 860	30
1600-1700	815	610	aprox. 29°	aprox. 830	30

Special G dimensions for larger opening widths available on request or online via the GEZE Customer Portal.

**5.3 Preparation of installation**

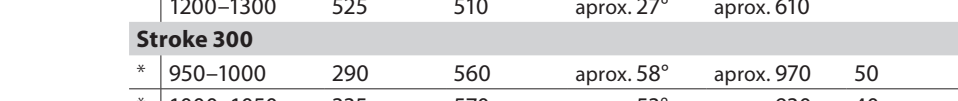
Mount an additional hinge on the drive side to improve stability at all the window types.

Ensure that a limiter (not included) is used at the drive side for plastic windows with steel reinforcement.

The mounting dimensions specified in the following chapters apply for mounting on the left-hand side.

Use the mounting dimensions for the right-hand side laterally reversed.

**5.4 Component layout and dimensions**



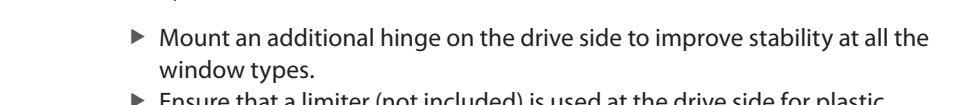
f1 = > 495 mm with 2 locking units

f2 = min. 285 mm

Item numbers with a grey background refer to drilling templates

- 11 Mounting dimension
- 12 Limiter
- 13 Drilling template for corner transmission
- 14 Drilling template for locking unit between fittings (2nd locking unit)
- 15 Additional bracket required for O up to 12 mm
- 16 Drilling template for locking unit with end cap
- 17 Drilling template for rod guide
- 18 Drilling template for unlocking spring
- 19 Drilling template for toe bracket
- 20 2 hinges on electrically operated drive-side

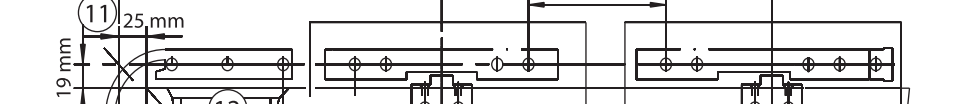
**5.5 Holes (with drilling pattern)**



Holes (without drilling pattern) see Drilling templates on the right

**5.6 Mounting sequence**

**5.6.1 Fastening of the components**



- 3 Toe bracket
- 4 Locking unit
- 5 Additional bracket
- 7 Corner transmission
- 8 Rod guide (can be left out in case of insufficient space)
- 8b Rod guide (required for rod length >600 mm)
- 26 Driving side
- 26b Driving side

Define the mounting dimensions:

- Dimension G and E (see Section 5.2.1)
- Dimension f1 or f2 (see Section 5.4)
- Drill the fitting holes (see Section 5.5)

Mount the corner transmission (7), rod guide (8), toe bracket (3) and locking units (4) without end cap.

Shorten the corner transmission (7) by 50 mm, if appropriate (see Sec. 5.2).

If necessary, screw the protective caps onto the ends of the fastening screws.

Mount the additional bracket (5) at overlap heights up to 12 mm (15).

**Sectional views of the locking unit**



39 Locking element retracted into locking position.

**5.6.2 Mounting the covers**

Shorten the cover profile:

- 1 locking unit: L1 = f1 - 83 mm
- L2 = b - G - E + 22 mm

2 locking units: L1 = f2 - 85 mm

L2 = b - G - E + 22 mm

L3 = a - 2 x f2 - 146 mm

1 locking unit per side with continuous cover profile: L1 = f2 - 85 mm

L2 = b - G - E + 22 mm

L3 = a - 2 x f2 - 146 mm

If necessary, mount the end caps. Clip in the locking unit covers and cover profiles.

**6 Commissioning and electrical installation**

see wiring diagram ID 148327

**7 Final check**

Check measures for securing parts and avoiding injuries due to trapping, knocking, shearing and hair, etc. being drawn in.

It is imperative that the fixing screws of the electrically operated drive and the frame bracket be tightened.

**8 Periodic monitoring, maintenance**

Maintain the system at least once a year.

Check the function.

Check the state of the mechanical equipment and power cable.

**9 Disposal**

The window unit consists of materials that have to be recycled.

Sort the individual components in accordance with the type of material:

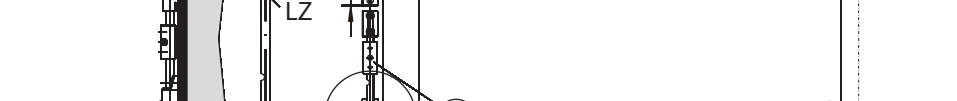
- Aluminium (profiles)
- Iron (screws, etc.)
- Plastics
- Electronic components (motor, control, transformers, relay, etc.)
- Cables

The parts can be disposed of at the local recycling station or a scrap processing company.



- 4 Locking unit
- 5 Additional bracket
- 15 Additional bracket required for overlap height O up to 12 mm
- 27 End cap and cover (for mounting see Section 5.6.2)

**5.6.2 Mounting of the connecting rod**



LZ Connecting rod length

Shorten the connecting rod:

- LZ = Connecting rod length [mm] = b - G - E + 335
- Lightly lubricate the connecting rod.

If the space is insufficient (e.g. in soffits), introduce the connecting rod before mounting the unlocking spring. If necessary, cut a recess in the connecting rod so that the fastening screws can be reached with the screw driver.

Mount the unlocking spring (6).

Insert the connecting rod from below through the unlocking spring (6).

Place the clamping piece (2) above the unlocking spring (6).

Insert the connecting rod into the corner transmission (7) and clamp it tight.

Clamp the connecting rod into unlocking spring (6).

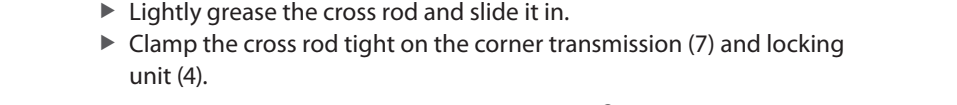
**5.6.3 Mounting the cross rod**

Shorten the cross rod:

- LQ = Cross rod length [mm] = f1 - 77
- Lightly grease the cross rod and slide it in.
- Clamp the cross rod tight on the corner transmission (7) and locking unit (4).

28 Locking component unlocked (distance approx. 2 mm)

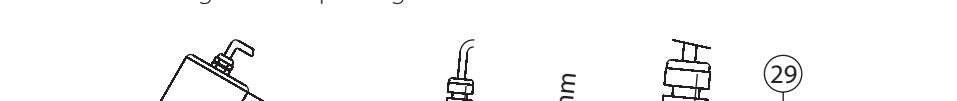
**5.6.4 Mounting of the top-hung bracket**



Screw the lower bracket section (14) with 4 screws, (20) (MS/Al) to the electrically operated drive (flush or displaced by 50 mm).

Mount the upper bracket section (14) on the clamping piece (2) using M6x12 (34) screws.

**5.6.5 Mounting the angle transmission**



Mount the angle transmission (30) on the toe bracket (14).

Screw the adjustment screw (31) (MS/Al) to the electrically operated drive (flush or into the angle transmission).

Shorten the corner transmission by 50 mm.

32 Corner transmission clamping piece (flush with unlocked state)

33 Hexagon nut SW17

34 Screws MS/Al

35 Screws MS/Al