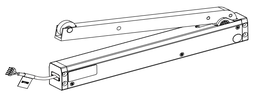
RWA K 600
Fresh air system

EN Installation instructions

132618-04



GEZE

1 Symbols and means of representation

Warnings
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 word	Meaning
⚠	**CAUTION**	Danger for individuals. Non-compliance can result in minor injuries.

Other symbols and means of representation
Important information and technical notes are highlighted to explain correct operation.

Symbol	Meaning
❗	means "important note"
ℹ	means "additional information"
►	**Symbol for an action: Here you have to do something.** ► If there are several actions to be taken, keep to the given order.

2 Safety instructions

To ensure personal safety, it is important to follow these safety instructions. These instructions must be kept.

2.1 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 and in the corresponding mounting instructions and wiring diagrams of the product (product information and proper use, misuse, product performance, product maintenance, obligations to provide information and instructions) is to be observed. Failure to comply releases the manufacturer from his statutory liability.
- Only qualified personnel who are authorised by GEZE may carry out mounting, function check and maintenance. GEZE shall not be liable for injuries or damage resulting from unauthorised modification of the equipment.
- GEZE shall not be liable if devices from other manufacturers are used with GEZE equipment. Use only original GEZE parts for repair and maintenance work as well.

2.2 General safety precautions

- In accordance with Machine Directive 2006/42/EC, a danger analysis must be performed and the system identified with the CE marking in accordance with Appendix III of the EC Machine Directive before commissioning the system.
- ► Observe the latest versions of guidelines, standards and country-specific regulations, in particular:
  - BGV A1 "Accident-prevention regulations, General regulations"
  - BGV A3 "Electrical systems and equipment"
  - ASR A1.6 "Windows, fanlights, translucent walls"
  - VDE 0100, Part 600 "Erection of low-voltage systems Part 6. Tests".
  - DIN EN 60335-1 "Safety of electrical devices for home use and similar purposes - Part 1: General requirements"
  - DIN EN 60335-2-103 "Safety of electrical devices for home use and similar purposes - Part 2-103: Special requirements for drives for gates, doors and windows"
- ► Do not allow children to play with fixed mounted control systems of all types and keep remote controls out of reach of children.
- ► Ensure that enclosing between the driven part and the surrounding parts due to the opening movement of the driven part is prevented.

⚠ **During installation, heed the following:**
- **On bottom-hung windows, use of a suitable catch guard is prescribed (e.g. GEZE safety scissor no. 35).**
- **Only genuine consoles may be used for attachment.**
- **Use suitable fixing elements for installation. Recommendations can be found in the installation instructions. Make sure that the fixing elements in the profile guarantee safe fixing of the installed parts.**

According to the above-mentioned standards/regulations, the closing speed must be less than 5mm/sec if no further safety measures are taken on the window itself or if the window is installed at a height of less than 2.5 m (see p.6 ASR A1.6). Our drives have been adjusted to this speed in the factory.

2.3 Installation notes

- ► Read and observe the specifications in the mounting instructions and keep these for later use. All the dimensions specified have to be checked on site on own initiative and responsibility.
- The drive is designed solely for use in dry rooms and may not be subjected to highly corrosive environments (e.g. sea air or marine air).
- ► In order to avoid injuries, protective caps are to be placed onto projecting threads of the fastening screws.
- ► Check whether the conditions specified on the information plate of the drive such as the ambient temperature and electrical data are observed at the planned installation site.
- ► Before installing the driven part check whether it is in a good mechanical state, has a balanced weight and can be closed easily.

2.4 Cable layout and electrical connection (at electrical drives)

- The connection to the power supply (230 V AC or 24 V DC) has to be carried out by a qualified electrician, in accordance with the respective wiring diagram. Carry out the power connection and equipment earth conductor test in accordance with DIN VDE 0100.
- Use a customer-accessible 2-pin overload cut-out as the line-side disconnecting device in accordance with the permissible current carrying capacity of the cable.
- ► Use only cables prescribed in the wiring diagram. Implement the cable type, line length and cross-section in accordance with the technical specifications.
- ► Always use wire-end ferrules for wire cores.
- All the 230-V components have to be disconnected at all poles from the supply voltage for maintenance and repair work.
- ► Insulate the cores that are not used.

❗ In the case of 24 V DC and a longer power supply cable, the cable must have a sufficiently large cross-section in order to prevent a voltage drop. Calculate the cross-section (see cable plan for RWA central control units)!

2.5 Safety-conscious working and usage

- ► Secure 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. When using an uninterrupted power supply (UPS), the system will still be under power even when disconnected from the mains.
- ► During the set-up actuate the drives only in inching mode.
- Risk of injury when a drive is opened through moving parts (drawing in of hair, clothing, etc.)
- Risk of injury by trapping, knocking, shearing and hair etc. being pulled in at unsecured points.
- Risk of injury due to glass breakage.
- Touching the window unit can result in injuries during operation.

2.6 Inspection of installed system

- The measures for security and prevention of crushing, impact, shearing or drawing-in spots, in particular at a leaf or drive height of less than 2.5 m are to be carried out and checked.
  One measure, for example, is the use of switch with OFF default setting (e.g. GEZE vent switch LTA-LSA mat. no. 118476). In the case of children or persons with a limited ability to judge, a key-operated switch with an OFF default setting must be used (e.g. GEZE mat. no. 117996 for SCT, 090176 for cylinder). The switch has to be mounted so that the points of danger can be seen.
- ► After the installation has been completed, check that the system is set correctly and functions correctly and safely.
- ► Check all the functions by means of a trial run.
- ► The end user has to be instructed in all the important operating and handling steps after completion.

3 Disposal of the window unit

The window unit consists of materials that have to be recycled. The individual components have to be sorted in accordance with their material type.
- Aluminium (profiles)
- Iron (screws, chain, ...)
- Plastic
- Electronic components (motor, controller, transformer, relay, ...)
- Cables
- ► Dispose of the parts in accordance with the statutory regulations.

4 After-sales service

GEZE prescribes regular maintenance (at least once a year). This is to be carried out by a suitably qualified person. In the process the function as well as the state of the mechanical equipment (imbalance or signs of wear, damage to fastening parts) and the electrical connections are to be checked.
The system may not be used during repair and setting work.
- ► Inspect the fixations and clamping screws for firm seating.
- ► Clean soiling from the drive during maintenance.

⚠ **Note: Danger of pinching and clamping!**
The window closes automatically!
Before installation, read the enclosed safety notes and consider them during installation and operation of the drive!
Warranty claims require proper mounting, installation and maintenance in accordance with the manufacturer's specifications.

- Inform the electrician by handing out this wiring diagram.
- The drive must be protected from construction dirt and splashwater.

5 Application range

	Window Hinge side	Window Opposite hinge side	Door Hinge side	Door Opposite hinge side
RWA K 600 F	x	(on request)	x	
RWA K 600 G	x	x	x	x
RWA K 600 T			x	x

❗ With the combination of K 600 T with a door closer, the minimum closing time of the door closer must be limited to 5 seconds.

6 Technical data per drive

Mechanical data	
Parameter	Value
Max. opening force [N]	600 *1)
Max. closing force [N]	T: 200 *1) / F, G: 600
Running time [s]	40
End position cut-off extended	integrated path sensor
End position cut-off retracted	integrated path sensor
Overload cut-off	through power consumption
Max. torque [Nm]	215 *1)
Min. torque [Nm]	T: 70 *1) / F, G: 215
Supply cable [m]	5
Weight [kg]	approx. 3

Electrical data - SELV	
Parameter	Value
Voltage [V DC]	24 ±25%
Max. residual ripple [%]	20
Load factor [%]	30
Power consumption [W]	max. 30
Current consumption [A] (at full load)	max. 1.4
Ambient temperature [°C]	-5° / +75°
Enclosure rating/protection class [IP]	IP32 / III
Application range	dry rooms

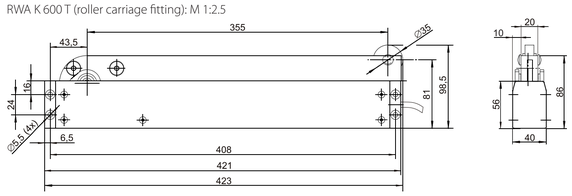
*1) Opening and closing force can be changed (on request). Force depends on the drive variant (lever length).
Subject to technical modifications.

7 Packing units

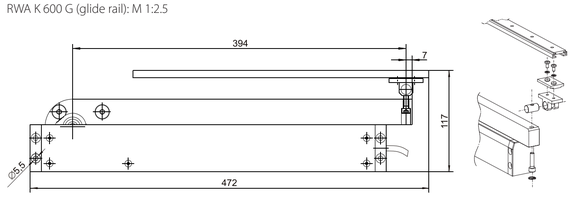
	Description	Colour EV1 (silver)	Colour acc. to RAL
K 600 F			
Packaging contents	Retractable arm drive	130151	130152
	Retractable arm drive Syncro-Set	133221	
	2-leaf retractable arm drive with door closing sequence selector	137451	137452
Accessories	Console R (required for all types of installation for RWA K 600 F)	130154	140506
K 600 G			
Packaging contents	Retractable arm drive	130057	130058
	Retractable arm drive Syncro-Set	133119	
	2-leaf retractable arm drive with door closing sequence selector	137447	137448
Accessories	Console G (required for all types of installation for RWA K 600 G)	130155	140507
K 600 T	Description	Colour EV1 (silver)	Colour acc. to RAL
Packaging contents	Retractable arm drive	130059	130060
	Retractable arm drive Syncro-Set	133120	
	2-leaf retractable arm drive with door closing sequence selector	137449	137450
Accessories	Console T (required for K 600 T on hinge side)	130153	140505
	Console R (required for K 600 T on hinge side)	130154	140506

8 Main dimensions

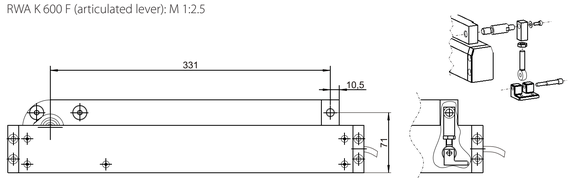
8.1 RWA K 600 T (roller carriage fitting): M 1:2.5



8.2 RWA K 600 G (glide rail): M 1:2.5



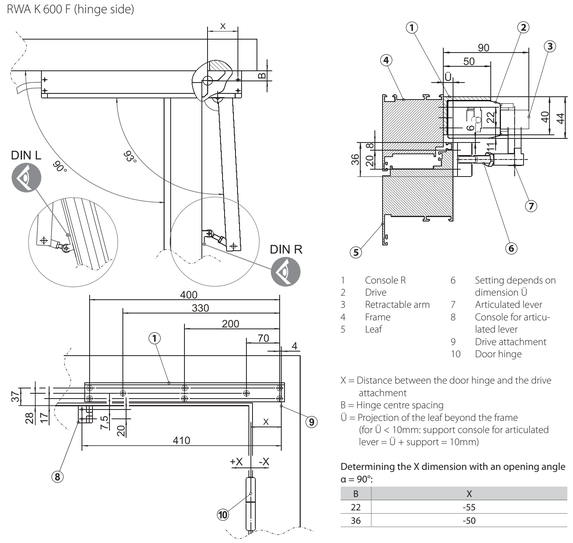
8.3 RWA K 600 F (articulated lever): M 1:2.5



ℹ **Refer to the installation instruction for the drive brackets for further information.**

9 Installation: Door

9.1 RWA K 600 F (hinge side)



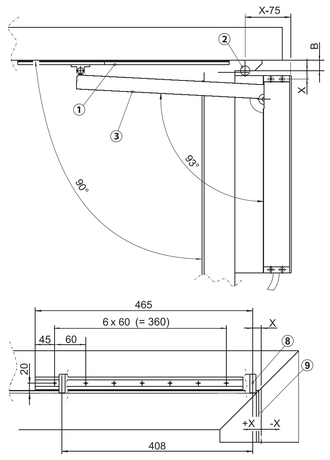
1 Console R
2 Drive
3 Retractable arm
4 Frame
5 Leaf
6 Setting depends on dimension Ü
7 Articulated lever
8 Console for articulated lever
9 Drive attachment
10 Door hinge

X = Distance between the door hinge and the drive attachment
B = Hinge centre spacing
Ü = Projection of the leaf beyond the frame (for Ü < 10mm: support console for articulated lever = Ü + support = 10mm)

Determining the X dimension with an opening angle α = 90°:

B	X
22	-55
36	-50

9.2 RWA K 600 G (hinge side)



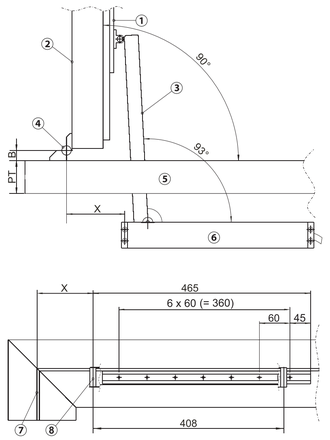
1 Glide rail
2 Door hinge
3 Retractable arm
4 Door frame
5 Drive
6 Door leaf
7 Console G or mounting bracket on site
8 Drive attachment
9 Hinge axis

X = Distance between the door hinge and the drive attachment
A = Dimension depends on Ü
B = Hinge centre spacing
Ü = Projection of the leaf beyond the frame (for Ü ≤ 20mm)

Determining the X dimension with an opening angle α = 90°:

B	X
13	30
22	20
36	5

9.3 RWA K 600 G (opposite hinge side)



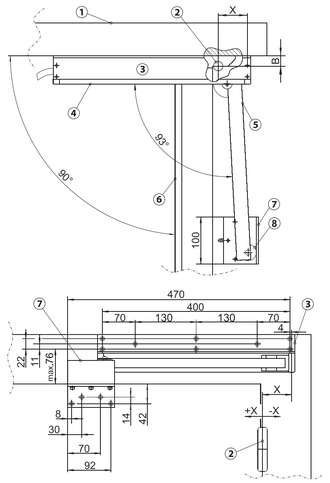
1 Glide rail
2 Door leaf
3 Retractable arm
4 Door hinge
5 Door frame
6 Drive
7 Hinge axis
8 Drive attachment
9 Drive is fixed in lintel already available on site or with on-site console or console G

X = Distance between the door hinge and the drive attachment
B = Hinge centre spacing
PT = Profile overall depth cover frame

Determining the X dimension with an opening angle α = 90°:

B	PT	X
22	40	100
22	50	110
22	60	120
22	65	125
22	70	130
22	75	135
22	80	140
36	40	115
36	50	125
36	60	135
36	65	140
36	70	145
36	75	150
36	80	155

9.4 RWA K 600 T (hinge side)



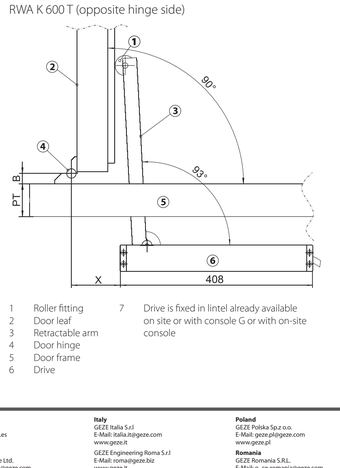
1 Door frame
2 Door hinge
3 Console R
4 Drive
5 Retractable arm
6 Door leaf
7 Console T
8 Roller fitting

X = Distance between the door hinge and the drive attachment
B = Hinge centre spacing
Ü = Projection of the leaf beyond the frame

Determining the X dimension with an opening angle α = 90°:

B	Ü=0	Ü=10
13	-60	-70
22	-55	-60
36	-45	-45

9.5 RWA K 600 T (opposite hinge side)



1 Roller fitting
2 Door leaf
3 Retractable arm
4 Door hinge
5 Door frame
6 Drive
7 Drive is fixed in lintel already available on site or with console G or with on-site console

X = Distance between the door hinge and the drive attachment
B = Hinge centre spacing
PT = Profile overall depth cover frame

Determining the X dimension with an opening angle α = 90°:

B	PT	X
22	40	80
22	50	90
22	60	100
22	65	105
22	70	110
22	75	115
22	80	120
36	40	95
36	50	105
36	60	115
36	65	120
36	70	125
36	75	130
36	80	135

10 Installation: Window

Installation possibilities (secondary closing edge)

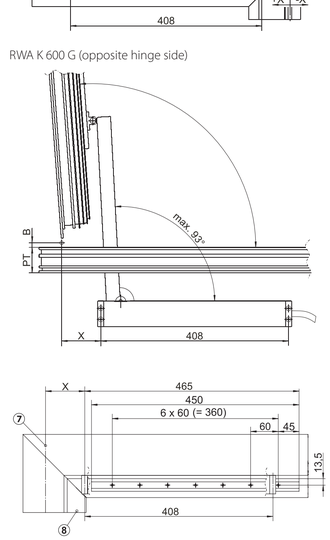
a). Bottom-hung window | b). Top-hung window | c). Side-hung window | *d). Vertically pivoted window | *e). Swing sash | *f). Skylight

	RWA K 600 F	RWA K 600 G
Type of window	All	a)., b)., c)., f).
Casement width b	max. 800 mm (1 drive), max. 1200 mm (2 drives), larger casement widths: add. locking drive necessary	
free length*2)	max. 1600 mm (without locking)	
min. casement height*1)	X+420	X+465
max. casement height*1)	2*X+750	2*X+880
max. casement weight	on request (depends on type of window and opening angle)	

* on request; *1)Dimension X: Distance drive / hinge centre (for values see 10.1, 10.2 and 10.3)

*2) free length: a + b + c

10.1 RWA K 600 F (hinge side)



1 Console R
2 Frame
3 Drive
4 Retractable arm
5 Articulated lever
6 Leaf
7 Console for articulated lever
8 Setting depends on dimension Ü
9 Drive attachment
10 Window hinge

X = Distance between the window hinge and the drive attachment
B = Hinge centre spacing
Ü = Projection of the leaf beyond the frame
Z = Depending on dimension X

Window opening angle (depending on B and X).

B	X	Opening angle α*1	DIN R Z	DIN L Z
Hinge centre spacing B=10±2	-35	84	410	380
	-30	83	410	380
	-20	82	410	380
	-15	81	390	360
	-10	80	390	360
	0	79	390	360
	10	77	370	340
	20	76	370	340
	30	74	370	340

10.2 RWA K 600 G (hinge side)

1 Frame
2 Retractable arm
3 Drive
4 Leaf
5 Glide rail
6 Console G or mounting bracket on site
7 Drive attachment
8 Hinge axis

X = Distance between the window hinge and the drive attachment
B = Hinge centre spacing

Window opening angle (depending on B and X).

X	B	Opening angle α*1	Z
30	10	90	410
60	10	85	410
90	10	80	410
120	10	75	390
150	10	71	390
190	10	65	390
230	10	60	370

10.3 RWA K 600 G (opposite hinge side)

1 Console G or mounting bracket on site
2 Frame
3 Drive
4 Retractable arm
5 Leaf
6 Glide rail
7 Drive attachment
8 Hinge axis

X = Distance between the window hinge and the drive attachment
B = Hinge centre spacing
PT = Profile overall depth cover frame

Window opening angle α (depending on B, X and PT).

B≤10				10≤B≤22		
X	PT	Opening angle α*1		X	PT	Opening angle α*1
95	65	94		115	65	90
105	65	92		125	65	88
115	65	90		135	65	85
125	65	88		145	65	83
135	65	85		125	75	90
145	65	83		135	75	88
105	75	94		145	75	85
115	75	92				
125	75	90				
135	75	88				
145	75	85				

*1 free length: a+b+c

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