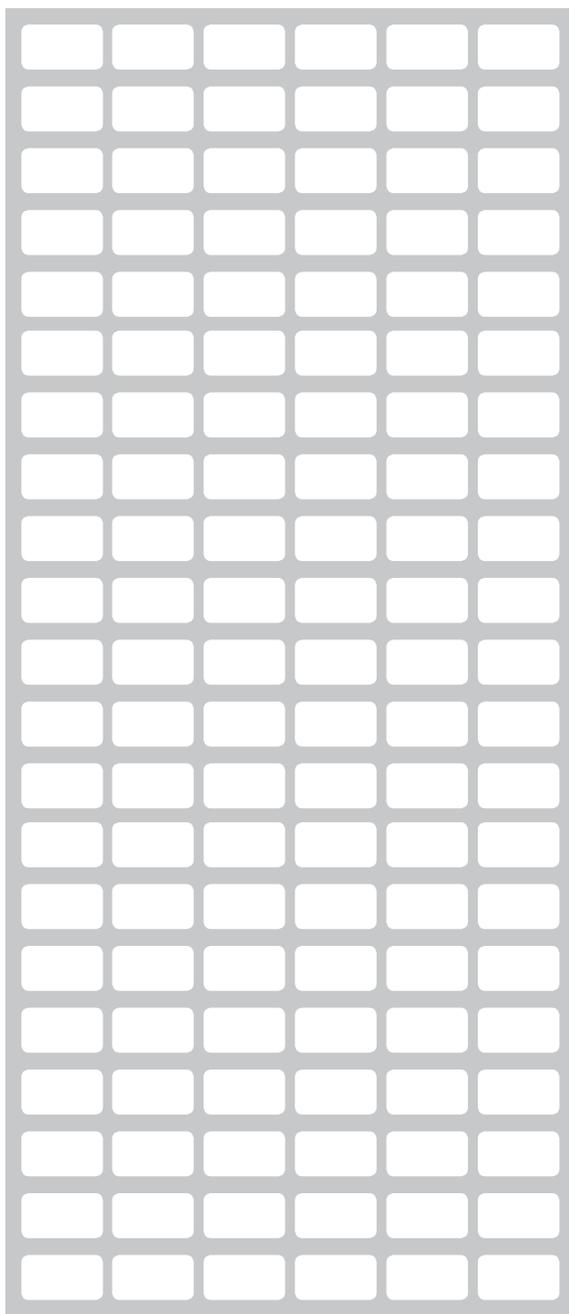
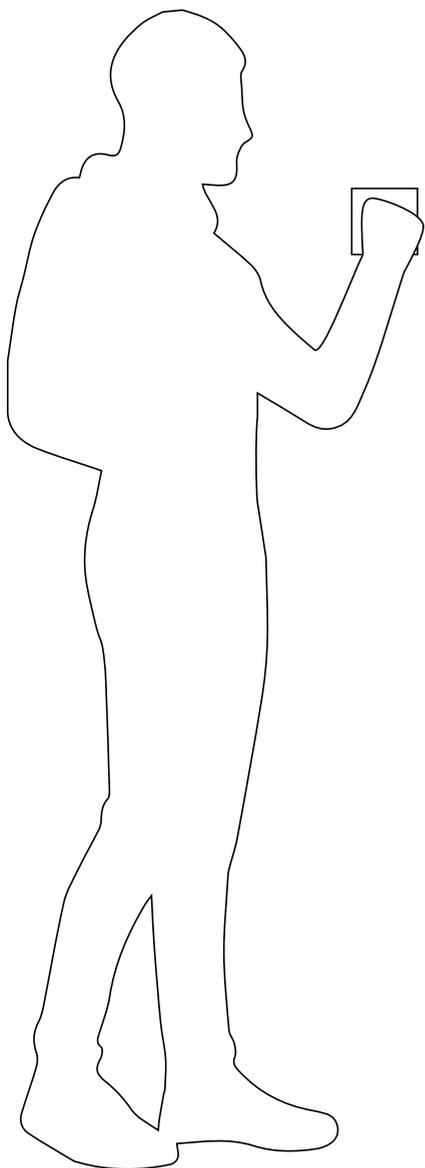


ENGLISH

USER GUIDE

ROLLER GRILLES/ROLLER SHUTTERS



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GENERAL INFORMATION

Type:	Aluminium roller grilles Aluminium roller shutters Steel roller grilles Steel roller shutters
Usage:	Tamper protection, space separation, closing down.
Areas of usagfe:	Factories, shops, offices, etc.
CE marking:	ALUX A/S hereby declares that this product/machine is manufactured in accordance with European Parliament and Council Directive No. 89/106/EEC of 21 December 1988 on the approximation of laws, regulations and administrative provisions of the Member States relating to construction products, amended by Directive No. 93/68/EEC and Council Directive No. 98/37/EC of 22 June 1998 on the approximation of Member States' laws relating to machinery, amended by Directive No. 98/79/EC.

The following Directives are associated with the product:

The Machine Directive: 98/37/EF – amended by Directive No. 98/79/EF

The EMC Directive: 89/336/EØF and amended by 92/31/EØF

The Low Voltage Directive: 73/23/EØF and amended by 93/68/EØF
The specified machine is manufactured in accordance with the following harmonised standards.

Machinery Directive, Article 5,

paragraph 2: DS/EN ISO 12100-1292-1

Machine Safety: DS/EN ISO 12100-2292-2

EU standard: EN 13659

PRODUCT DESCRIPTIONS:

Safe 5000

Safe 5000 roller grilles/roller shutters consist of horizontally positioned interlocking profiles made of extruded aluminium. Between the interlocking profiles there is a 4 mm polycarbonate plate that was inserted using extruded aluminium hinge profiles.

Safe 4000

Safe 4000 roller grilles consist of horizontally positioned interlocking profiles made of extruded aluminium. Between the interlocking profiles, there are punched slats or 20 mm wide slats also made of extruded aluminium. The distance between the 20 mm wide slats is the result of the installation of spacers in the interlocking profiles.

Safe 4000 roller shutters consist of horizontally positioned interlocking profiles made of extruded aluminium. Between the interlocking profiles, there are slats also made of extruded aluminium.

Safe 3000

Safe 3000 type 120 and screen type roller grilles consist of punched slats made of extruded aluminium. The slats are hinged together. Safe 3000 roller shutters consist of slats made of extruded aluminium.

Safe 2000

Safe 2000 roller grilles/roller shutters consist of steel, aluminium, or extruded aluminium roll-shaped slats that can be equipped with punched holes/perforations.

Safe 1000

The Safe 1000 shutter type and type 90 roller grilles/roller shutters are made with the same principle as Safe 3000. It is a lighter system in which the profiles are made from thinner material and the surface is more uniform and smooth, as the profile connections are at the back side of the profiles.

Safe 1000 type 30 is a small, simple system for smaller openings. The profile is only 30 mm high, which means that it requires very little space when rolled up.

The system is supplied with closed shutters or with perforations.

GENERAL DESCRIPTION:

At the top of the aluminium roller grilles/roller shutters, there are two slats along the roller grilles' full length.

The grille/shutter mat has a bottom end with a specially extruded aluminium profile, or optionally, with a rubber end profile.

Extruded aluminium guide rails with PVC sound absorbing inserts and Teflon in the insert. The guard rails control the roller grilles/roller shutters at the sides.

In the three lower-most slats/interlocking profiles, specially made extruders are screwed on at the side of the grille/shutter mat. Then, every half meter, additional extruders are on at the grille/shutter mat at a height of up to 2,500 mm in order to prevent the mat from pulling out of the guide rails when it is closed.

In the upper slats/interlocking profiles, there is a specially made bracket for mounting on the roller.

The grille/shutter mat is rolled up on the roller which is made with lacquered or galvanized welded steel pipes of various thicknesses and diameters, depending on weight and span.

The roller is pulled around a tube motor or box motor – an Elero brand motor in a variety of types and sizes.

The motor is operated via a key switch or code switch.

WEIGHT

Alux roller grilles/shutters	Type:	Approximate weight per m ²	
	Safe 4000 type 160 roller grilles	kg	11,0
	Safe 4000 type 60 roller grilles	kg	9,5
	Safe 4000 type 120 roller grilles	kg	9,0
	Safe 4000 type 180 roller grilles	kg	8,0-9,0
	Safe 3000 type 120 roller grilles	kg	7,0
	Safe 3000 type screen roller grilles	kg	8,0-9,0
	Safe 2000 type perfo roller grilles	kg	14,0
	Safe 1000 type 90 roller grilles	kg	6,0
	Safe 1000 type 30 roller grilles	kg	6,45
	Safe 5000 roller shutter	kg	15,0
	Safe 4000 roller shutter	kg	15,0
	Safe 4000 type pd 40 roller shutter	kg	12,5
	Safe 4000 type pd 75 roller shutter	kg	14,0
	Safe 3000 roller shutter	kg	11,0
	Safe 2000 type alu roller shutter	kg	7,5
	Safe 2000 type steell roller shutter	kg	max. 15,0
Cylinder tubes			
	102 x 2,0 mm	kg/m	5,0
	108 x 3,6 mm	kg/m	9,3
	133 x 4,0 mm	kg/m	12,7
	159 x 4,5 mm	kg/m	17,1
Motor			
	Elero type 11 tube motor	kg	6,0
	Elero type 15 tube motor	kg	8-12
	Elero box motor	kg	12,0-16,0

ASSEMBLY:

The machine is assembled by Alux's own well-trained SKAFOR-approved fitters or a company/fitters approved by Alux.

Electrical installation must be performed by an authorized electrician. Only electrical components supplied or approved by Alux can be used.

Electricity must always be installed according to Alux's instructions/ diagrams. If the system contains two motors, one single-pole connector and one relay box for two motors must be used. Alternatively, one two pole switch may be used. If the system contains three or more motors, relay boxes for four motors must be used.

Motors may never be connected in parallel.

Electrical work must be carried out in accordance with high voltage regulations.

STOPPAGES – REPAIRS

1. During stoppages that are not clearly due to physical defect, an electrician is called to check the electrical installation and power supply. Electrical installation must be performed by an authorized electrician.

A short stop may occur if the motor has been exposed to continuous operation. In such case, the motor gets interrupted by a built-in thermofuse. It is automatically reconnected again after approximately 15-25 minutes when the motor has been cooled sufficiently.

2. During stoppages that are not due to electrical failure, Alux's service technicians are called in.

3. The assembly/adjustments performed by Alux may not be modified. This also applies to setting the motor's end stop.

4. For roller grilles which are not fitted with mechanical locks but are designed as self-locking grilles, it is necessary to check that the grilles are driven completely down each time they are closed. If they are not driven completely down, the grilles are not self-locking. If there is a break- in such a situation, this may result in loss of insurance coverage.

OPERATING ERRORS:

If one is not sufficiently paying attention while operating the grilles/shutters, and unfortunately drive it down to an object placed on the floor, follow these instructions:

Run the grille/shutter up so that it frees the object. Remove the object and run the grille/shutter completely down. The problem will thus be solved.

Note:

Never run the grille/shutter completely up when removing an object. The grille/shutter mat will most likely fall backwards or get stuck. The grille/shutter must therefore first have been driven completely down to the floor before it may be run up.

Error corrections for grilles/shutters after impact that occurs while running them down:

When the grille/shutter mat fails to roll up completely by approximately one meter after being driven out of the guard rails, it is because the mat has been put in place in the rails but is missing one rotation on the roll. (The motor is encoded to only know the number of turns between the upper and lower stops)

Solution:

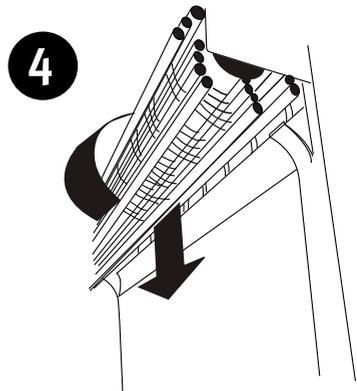
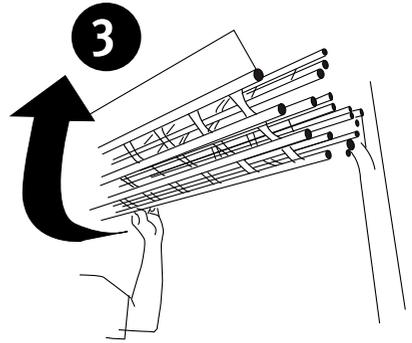
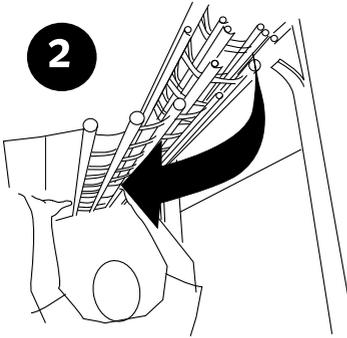
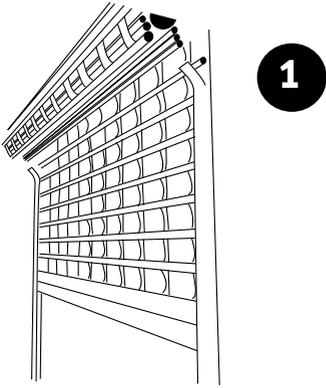
1. Run the mat all the way up until the motor itself stops, figure 1.
2. Lift the mat until it can be tilted out of the groove in the guide rails, figure 2.
3. Slide the mat backwards and upwards over the roll itself, figure 3.
4. Put the mat back in the groove above, figure 4.

Note:

For safety reasons, do not stay under the grilles while operating – stay only behind or next to them.

SERVICE:

1. The grilles should be inspected regularly (at least once a year) to check that screws, nuts and the like have not been loosened and cannot cause a stoppage. This may – in addition to stoppages – mean that the grilles are not sufficiently burglar-proof. If faults or the like are found, Alux's service technicians should be called in.
2. Alux therefore recommends that a service agreement be entered into. Annual servicing prolongs the product's lifetime.
3. In case of failure to comply with the above, the product warranty will be void.



MAINTENANCE:

Alux's roller grilles/shutters are composed of moving parts, and therefore, as a general guideline, they must be inspected and maintained annually.

Suspension hinges in grille mats/shutters can be noisy if the metal becomes too dry. This can be remedied via lubrication with Teflon spray.

Roller grilles/roller shutters can be cleaned of natural dirt buildup using standard cleaning agents.

Lukewarm soapy water or highly diluted solutions containing mild synthetic cleaning agents are recommended for cleaning polycarbonate plates or objects made of polycarbonate.

Use a soft sponge or a microfiber cloth for cleaning. To remove soap residues, wash afterwards with clean water and dry water drops with a damp soft sponge or cloth. Never clean the plate while dry.

Avoid benzine, alcohol, ester or organic solvents in connection with the polycarbonate plates. However, isopropyl alcohol on a soft cloth can be used.

Note:

Never use abrasives, razor blades, or other sharp objects to clean polycarbonate.

INSPECTION:

For safety reasons, an inspection shall be performed on an annual basis to check that the grilles/shutters, guide rails, bolts, and various other parts of the machine have not loosened, and that they are still fastened to the building structure correctly.

Worn parts may be replaced.

Alux therefore recommends that a service agreement be entered into.

DISPOSAL:

Metal and plastic from the machine should be disposed of in accordance with applicable legislation.

SAFETY MEASURES:

When used in accordance with the user manual, the construction is designed so that while in use, moving parts can not pinch the operator in any position.

The control switch for up and down roller of the grilles/shutters should be placed so that one can monitor the system while it is in operation. This is to avoid damage to property and persons that may be located under the roller grille or roller shutter.

If the system is equipped with automatic operation (impulse) or remote control, the system must also be equipped with safety equipment in the form of an emergency stop and safety strips on the bottom profile. If the roller grilles/roller shutters are mounted so that one can freely move underneath while in operation, the product must be made with auto matic/safety gate equipment. For open grilles, safety photocells must be set on both sides. (climbing protection)

SAFETY EQUIPMENT:

The control switch for up and down roller Alux running grilles/roller shutters (Orion/Elero/Geba/key switch) is at forced centre position (kill switch).

Safety strips (emergency stop on the bottom profile), roll-out protection (fall protection), emergency stop switch and photocell.

**SAFE DISTANCE
TO THE MACHINE:**

None for the operator.
Two meters for other parties.

**EMERGENCY STOPPING
DEVICES:**

Kill switch operation of control functions.

According to the EU's Machinery Directive, this machine does not require any emergency stop equipment as risk is not reduced with the installation of such an emergency stop.

Safety strips, emergency stop switch, safety photocells and fall protection.

NOISE:

The machine has a noise level of less than 70 dB.

PICTOGRAMS:

Danger of pinching fingers.

The attached pictograms from the manufacturer must not be removed!
Removing these waives the manufacturer's liability.

**STANDARDS FOR
BUILT-IN PARTS:**

- Elementer for attachment
- Machine elements
- Electrical accessories

These are made in accordance with applicable ISO and DS/EN standards.

**BUILT-IN PARTS FOR
WHICH A COMPONENT
DECLARATION IS
REQUIRED:**

Elero 230 volt tube motor/Elero tube motor with or without emergency manoeuvring for 230 volts.

Elero 230/400 volt box motor/Elero box motor with or without emergency manoeuvring for 230/400 volts.

Orion or Geba switches.

The component declaration may be obtained from the manufacturer.

Elero safety strips, fall protection, photocells, and emergency stop switch.

**ELECTRICAL MOTOR
CONNECTION:**

Always refer to the enclosures included with the product.

**THE MACHINE'S
EXPECTED LIFETIME:**

The run time/lifetime of the tube motor and box motor is approximately 100,000 revolutions with a normal up and down roller of approximately 10-14 revolutions.

Aluminium roller grilles/roller shutters were tested to find the product's breaking point/lifetime. Once the roller grilles/shutters have run up and down approximately 15,000 times, there may be an increased risk of breakage.

See also service, page 8.

INSTRUCTION MANUAL: Operators must observe roller grilles/roller shutters the entire time keep they are rolled up/down. In case of problems, release the key. The roller grilles/roller shutters will stop immediately.

!! Warning: Do not touch the roller grilles/roller shutters while running them up and down.

The person servicing the roller grilles/roller shutters must monitor them while running them up and down, and is responsible for ensuring that no persons or objects are caught during operation.

! For safety reasons, the operation key must be removed after running up and down.

When rolling down:

1. Make sure that the roller grilles/roller shutters can freely move down. That is, make sure that there is no person, shopping cart, or other obstacles that block the roller grilles/roller shutters from running freely.
2. Insert the key in the key switch and turn to the left. The roller grilles/roller shutters will begin to run down as shown on the arrow on the key switch.
3. The roller grilles/roller shutters will automatically stop when they reach the predetermined position.
4. Release the key.

Note: Check that the grille/shutter has run completely down to the floor. It **MUST** be run completely down to be self-locking.

When rolling up:

1. Check that there is nothing that prevents the roller grilles/roller shutters from running completely up.
2. Insert the key in the key switch and turn to the right. The roller grilles/roller shutters will begin to run up, as shown on the arrow on the key switch.
3. The roller grilles/roller shutters will automatically stop when they reach the predetermined position.
4. Release the key.

MANUFACTURER

Alux A/S
Sun & Safe Systems
Holbladsvej 4-6
DK-8600 Silkeborg Denmark

THIS MACHINE BELONGS TO

Stamp:

YEAR OF MANUFACTURE

A CE mark is affixed to the product



ALUX[®]
Sun & Safe Systems

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