



GENIUS®

**Rolling Door Installation
and Operating Instructions**

GENIUS[®] Rolling Door

Installation Instructions / Operating Instructions

Rolling Door Lift Car Closure for Passenger, Freight and Goods Lifts

1 Usage Note

The Meiller rolling door is a vertical-motion, car closure door (with no locking device) that opens on one side, with a roller shutter box and mechanical operation.

The car closure door is intended for installation inside cars and serves to securely shut off the lift cab from the shaft wall.

The Meiller rolling door is used in conjunction with revolving landing doors, which are unlocked either by a lock release curve operated when the rolling door is opened or by a lock release curve on the car.

The Meiller rolling door is manufactured in the following dimensions

Door width	700 mm to 2500 mm
Door height	2000 mm to 2500 mm

2 Project Planning Note

The Meiller rolling door car closure is normally used in conjunction with revolving landing doors. The landing doors may optionally be unlocked by means of a mechanical lock release curve, which is fitted on the Meiller rolling door and operated by the rolling door. This lock release curve unlocks the revolving landing door after the Meiller rolling door has opened. The free vertical distance between the rolling door and the shaft roof must be designed in accordance with EN 81 parts 1 and 2, as per point 5.7.1.1 c) 1.

2.1 Door Drive

The Meiller rolling door is driven by a DC drive, which is controlled by the Siemens AT 25 comfort control. With the AT 25 door control, a potentiometer or optional hand terminal may be used to set various speed profiles for the lift door.

CAUTION: For use in lift systems in accordance with EN 81-1/2, the closing speed may be set up to a maximum of 0.3 m/s (EN 81-1/2; 8.7.2.2).

The low-maintenance drive unit comprises a speed regulated DC motor with gearing that is not self-locking.

2.1.3 Superior Lift Control Default Command

The “door OPEN” signal must be constantly on whilst the door is opening and during the open holding time. Whilst the door is closing, during lift transit and when stopping with the door closed, the “door CLOSE” signal must be constantly on. Should both signals be on at the same time, then the door OPEN signal shall take precedence. If neither of the two signals is on, then the drive is motion free.

When the lift is in the idle position, the rolling door should be in the “open” position. This reduces the strain on the tension springs and extends their life.

Pushing function: the “push” and “close” inputs must be entered simultaneously.

When the line voltage is restored, the door automatically closes at crawling speed. Here, a CLOSE command must be constantly on, in order to set the lower door position during the initialisation process.

The next opening is also carried out a crawling speed, using the OPEN command. After this, the normal movement sequence is available.

The rolling door can only close once the shaft door is closed. After the unlocked shaft door is opened, the rolling door must come to a standstill within 100 mm.

2.1.4 Emergency Evacuation

Point 8.11 of EN 81-1/2 demands: If the car comes to a stop near to a landing opening for any reason, people should be able to leave the car when it is at a standstill and the door drive switched off.

CAUTION: The Meiller rolling door may be pushed up only when the “door open / close” command is switched off.

For other instructions concerning the comfort lift door drive and the AT 25 control, please refer to the Siemens operating instructions.

2.2 Safety Instructions, Residual Risks

- Please note that additional car aeration and ventilation may be required in the case of subsequent fitting of a Meiller rolling door (TRA 246.2, EN 81-1/2 (8.16)).
- According to (EN 81-1/2, 8.7.2.2), the closing speed of the rolling door must not exceed 0.3 m/s. This is achieved with the following opening times:

Door Height	Opening Time
<u>2000</u>	<u>7 s</u>
<u>2100</u>	<u>7.4 s</u>
<u>2200</u>	<u>7.8 s</u>
<u>2300</u>	<u>8.2 s</u>
<u>2400</u>	<u>8.5 s</u>
<u>2500</u>	<u>9 s</u>



- Do not walk under the door whilst it is in motion (residual closing force 150 N)
- Keep the path of the rolling door clear.
- Leave the car only after the door has come to a standstill.
- Take care when working on the roof of the car. Do not reach into moving parts.
- Access to the roller cover is prohibited.
- **Caution: Take care with taut tension springs.**
- The following events may occur: The tension spring breaks, the steel cable rips, or cable and spring fixing points come loose.
- **Therefore, do not work in the immediate risk area of the taut tension springs. The installation of a protective cover is recommended.**

3. Operating Instructions

3.1 General Instructions

- Only operate the rolling door in accordance with these operating instructions.
- Do not undertake interventions or modifications to the rolling door.
- Unless safety-related faults can be rectified immediately, ensure that the system is properly placed out of operation.
- Inform the maintenance company immediately of any unusual operating conditions, faults or noises and of any hazardous damage that occurs.
- Stop the system if necessary.
- After a power cut or 5 reversing procedures, the Meiller rolling door carries out a crawl transit. The Meiller rolling door returns to normal movement only after the closing procedure has been completed once. Should the rolling door fail to return to normal travel speed after this, then the maintenance company must be informed.

4 Installation Instructions

4.1 Preliminary Remark

Installation work is to be carried out only by experts.

4.2 Safety Instructions

4.2.1 General Instructions, Protective Clothing and Protective Equipment

Observe the general safety-technical regulations. The risk of a crash in the shaft must be avoided by the use of appropriate barriers.

For protection against hand injuries, wear gloves when installing rough and sharp-edged parts. Use lifting gear to lift particularly heavy and bulky parts or assemblies.

4.2.2 Welding and Grinding Work

Caution: Fire hazard!

If necessary, obtain written welding authorisation from the client. Take fire precautions and if necessary, post a fire watch.

When carrying out welding work, observe the “welding, cutting and related processes” (VBG 15) accident prevention directive.

Welding work is to be carried out only by trained and certified welders (e.g. EN 287).

4.3 Installation

Preliminary Remark:

The gap between the roof of the car and the car door must not exceed max. 6mm. There is a risk of intake in the area of the car roof closure. There are to be no sharp edges here.

1. Screw the guide profile onto the floor frame as in figure 1.
2. Fix the spring holder to the floor frame according to figure 1.

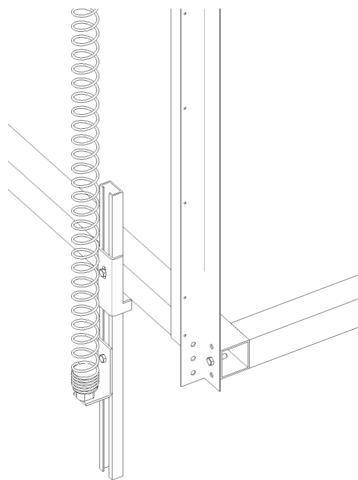


Figure 1

3. Position the body of the rolling door on the roof of the car such that it is flush with the front edge of the roof (front edge of car -80 mm) and insert the chain for the first two slats into the guides. Under no circumstances are the roller shutters, which are secured against unrolling, to be released.
4. Now install the springs on the cable and on the spring holders on the floor frame, in accordance with the manufacturer's instructions for pre-tensioning of the springs. Here, ensure that the cable is lying in the correct groove of the cable roll. (When the door is unrolled, the cable is laid out to approx. 0.9 – 1.25 turns, depending on the door height). Check the safety valve on the cable drum. **Observe safety instruction 2.2.**

5. The unrolling protection may now be removed and the cross-tube (link between the guide profiles) installed. At the same time (if included in the scope of delivery), install the shaft door opener (ensure plumb positioning).

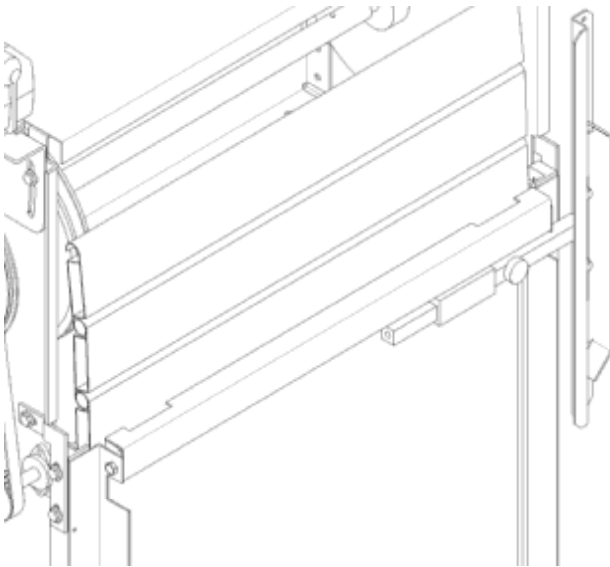


Figure 2

6. The roller shutter can now be unrolled. It is easy to move and adjust such that it is immobile.
7. Now push the body of the rolling door in the direction of the front edge of the car until it touches the guide profile and screw it to the same (figure 3). Then screw the body of the rolling door to the roof of the car.

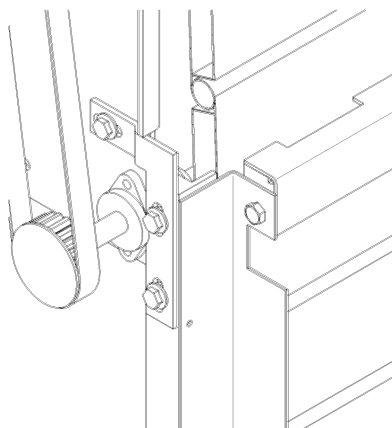


Figure 3

8. Install the door contact and ensure that the contact bridge accurately enters the switch when the door is closed. Then close the contact. When the door contact is closed, the gap on the closing edge must not exceed max. 6 mm. Fix the position of the door switch with the cover plate.

9. When laying the motor feed lines, ensure that these do not come into contact with moving parts. Note that the timing belt is tensioned so as to be taut (± 2 mm play unladen). This must not cause the drive shaft to sag.
10. Set the spring pre-tension (by pushing the spring holder, see point 2).
When doing this, observe the following points:
-If the door is opened by hand (with no motor power), it should be almost balanced at all opening points.
In normal operation, the closing force in the area 120 mm ahead of the closing edge must not exceed 150 N.
-When closed, do not exceed the greatest extension length of the respective spring. The following table applies here:

Springtype		
Cable Diameter	External Diameter.	Maximum Extended Length
4,0	44	2130
4,0	40	2130
4,5	50	2275
5,0	50	2130
5,5	50	2130
5,5	60	2275
6,3	60	2275

11. Select the closing speed such that the kinetic energy does not exceed 10 Joules. The max. closing speed must not exceed 0.3 m/s, in accordance with EN 81-1/2.
12. Install the control unit on the car and proceed as described in the installation instructions from Siemens.
Caution: During the setup trip, manually hold the rolling door in its lowest position for approx. 5 sec., in order that the fully closed position can be saved exactly. (As the motor has no momentum during the save procedure, the spring pre-tension of the spring would otherwise open the rolling door again a little.)
13. Install the cover hood.

4.4 Adjustment Work

4.4.1 Adjust Weight Balance

The rolling door box of the Meiller rolling door must be balanced precisely. This is necessary in order that the load conditions on the door drive are equal. The Siemens door drive monitors the closing force. Changes to the closing force during the closing procedure will cause the door to reverse.



For adjustment, start by switching off the drive, then remove the timing belt from the drive. It should now be possible to push the rolling door upward or downward with limited force, in any position. The rolling door then remains stationary in each position, with no effect from force.

Should the rolling door close on its own or should the force required to open it be significantly greater than that required to close it, then the spring pre-tension of the differential springs must be increased.

Should the rolling door open on its own or should the force required to close it be significantly greater than that required to open it, then the spring pre-tension of the differential springs must be decreased.

In case of equilibration, ensure that both springs are tensioned as evenly as possible.

4.4.2 Closing Force

See SIEMENS AT 25 operating instructions.

4.4.3 Closing Speed

See SIEMENS AT 25 operating instructions. On installation, max. 0.3m/s in accordance with EN 81-1/2.

5 Function and Safety Check After Installation

1. Electrical Precautions

2. Door Contact

3. Closing Force

The drive must be adjusted such that the maximum static force by which a person can be jammed under the closing edge is 150 N. Reference is made to observance of the conditions of TRA 200, number 243.1 (2).

6 Maintenance

- Clean the slats
- Lubricate the lock release curve
- Check the path of the door contact
- Check the tension of the timing belt
- Check reversing in upward travel (150 N)
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Maintenance Work to be Carried Out Regularly:

- After the first 100 operating hours, check the pre-tension of the springs. If necessary, carry out subsequent adjustment.
After max. 20000 cycles, check both steel cables for the tension springs for wear and damage.
- Check the closing force at regular intervals of max. 6.
- Damage to the slats may produce risk sources. Check the slats and their guides for wear and damage. The max. wear play between the slats must be no greater than 4mm. The max. horizontal wear play of the guides is 10mm. • In the case of wear on the car roof closure to the rolling door, the inflow gap must not exceed 10mm.
- Due to wear, the max. closing edge gap may be 10 mm.

7 Dismantling, Disposal

Dismantling must be carried out by a specialist company and is undertaken in the reverse order of the installation. Different materials are to be disposed of or recycled separately, in accordance with the respective regulations.

MANUFACTURER'S DECLARATION

In the Context of EC Machinery Directive 98/37/EG, Appendix II B

We, Meiller Aufzugtüren GmbH, hereby declare that the aforementioned rolling door, of type GENIUS, is intended for installation in a lift in accordance with EN 81-1/2 or TRA 200.

The use of the same remains prohibited until it has been established that it is compliant with the regulations of EC machinery directive 98/37/EG, EC construction products directive (89/106/EWG) and EC low voltage directive 73/23/EWG.

List of Norms and Specifications Observed

Harmonised Norms:

EN 81-1	Safety regulations for the construction and installation of lifts. Part 1: electrically operated passenger and freight lifts
EN 81-2	Safety regulations for the construction and installation of lifts. Part 2: hydraulically operated passenger and freight lifts
DIN EN 292 Part 1	Safety of machines; basic terms; general guiding principles of design; part 1: basic terminology; methodology
DIN EN 292 Part 2	Safety of machines; basic terms; general guiding principles of design; part 2: technical guiding principles and specifications
DIN EN 294	Safety of machines; safety distances to prevent the upper extremities from reaching danger points
DIN EN 349	Safety of machines; minimum distances to prevent crushing of body parts
DIN-EN 811	Safety of machines; safety to prevent the lower extremities from reaching danger points
DIN-EN 953	Safety of machines; general requirements for the design and construction of isolating safety equipment (static and mobile)
DIN-EN 954-1	Safety of machines; safety related parts of controls part 1: general guiding principles of design
DIN-EN 1050	Safety of machines; guiding principles for risk assessment
DIN-EN 50099	Safety of machines; Basics for indicators, operating parts (operating controls) and labelling; part 1: visible, audible and tangible signals
DIN EN 60204 Part 1	Safety of machines; electrical machine equipment; part 1: general requirements



Technical Information

TE 8200 3006 160

25.10.07 / VOS

Änderungs-Nr.: e
10.03.08 RIN

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National Regulations:

TRA 200 Technical regulations for lifts, passenger lifts, freight lifts, goods lifts

Operating Safety Ordinance

BGV A3 Version dated 1st January 1997 of the accident prevention directive for electrical systems and operating resources dated 1st April 1979

Expert Assessment: G 271/2 TÜV southern group

**Dimensions and Connection Sizes in Accordance with Drawing
8200 3002 149**

