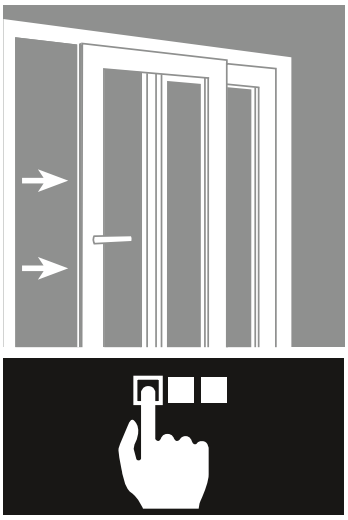


Doc. No. 10000483753_03 / 03.2021

Aluminium systems

Schüco ASE 60/80 TipTronic lift-and-slide system

en Operating instructions for qualified personnel and consumers

Contents

1. Notes on this document

1.1 Target groups and qualifications

This document is intended both for qualified personnel, such as trained fitters and electricians, and for consumers (operators, end users).Before commissioning and use, read through this document thoroughly and adhere to the specified sequence of the instructions.Schüco International KG shall not be liable for any damage which arises from a failure to adhere to these instructions.

1.2 Handover of the document

After commissioning, hand over all the documentation pertaining to this product to the consumer.Make them aware of the safety instructions, to which they must pay particular attention.
Our instructions are continuously optimised and updated. Before use, check whether an updated version of the product documentation exists. You can find the latest version in Docu Center at: http://docucenter.schueco.com.

1.3 Retention of the document

This document is a component of the product. Keep this document in an accessible place even after installation and commissioning, so that the information is always available.

1.4 Abbreviations used

ASE	Aluminium Sliding Element	VCU	Vent control unit
BSC	Building Skin Control	MCU	Main control unit
DC	Direct current	MVS	Multi-vent system
AET	Automation Engineering Tool	PP	Power pack
		SELV	Safety Extra Low Voltage

1.5 Symbols used

○	LED is off
●	LED lights up continuously
✸	LED flashes

Our instructions are continuously optimised and updated. Before use, check whether an updated version of the product documentation exists. You can find the latest version in Docu Center at: http://docucenter.schueco.com.

Schüco Docu Center

2. Safety

2.1 About the safety instructions

 **KEY WORD**

Type / source / consequence of the danger

Pictograms and key words advise of the type of danger and the level of danger:

 General personal injury  Personal injury from electrocution  Damage to property

DANGER		Imminent danger resulting in death or severe injuries.
WARNING		Potential imminent danger which may lead to death or severe injuries.
CAUTION		Potentially dangerous situation which may lead to minor injuries.
NOTE		Imminent danger of damage to property which may lead to damage to or destruction of the product or environment.
INFORMATION		Information Information, tips and advice

2.2 General safety instructions

Follow the safety instructions in this document so as not to endanger your own life or that of others and to ensure error-free operation.

 **WARNING**

- ► When operating, ensure that Schüco sliding units are not opened or closed automatically when unattended.
- ► All work on the product must be carried out by qualified personnel.
- ► Before any work is carried out on the product, all power packs must be disconnected and protected against anyone inadvertently switching them back on.
- ► Following each installation or alteration to the electrical system, carry out a test run to test all functions.

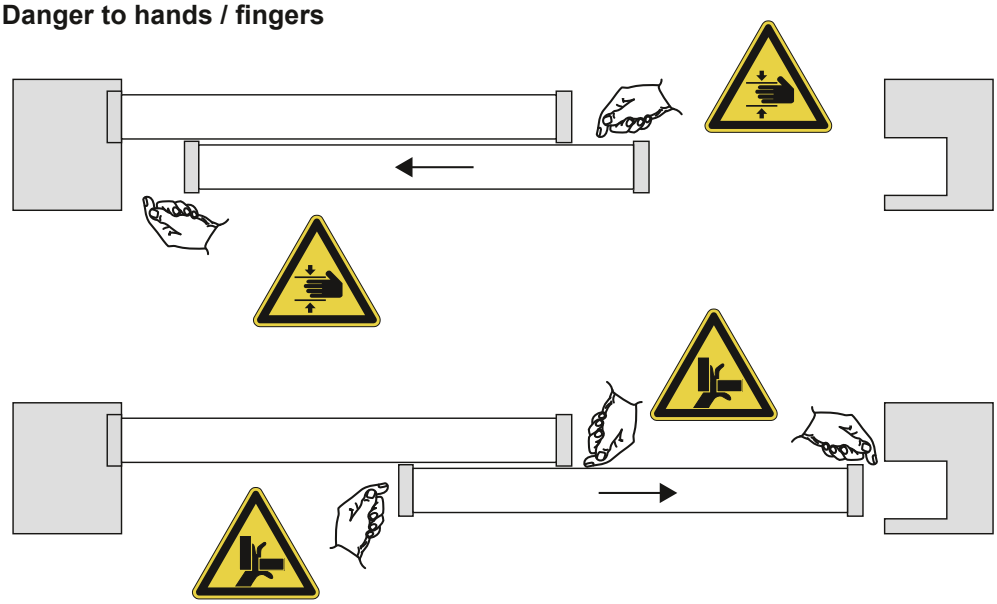
For reasons of simplicity, this manual does not contain every detail of all product types and it cannot cover every possible installation, operation or maintenance scenario.

2.3 Safety instructions for sliding units

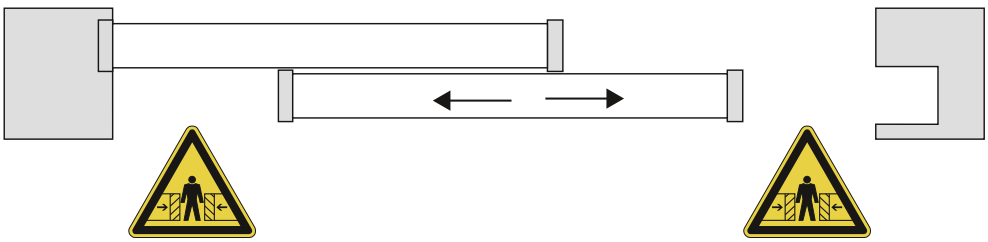
KEY WORD

When using aluminium units, take note of the hazards listed below.A range of measures are used to safeguard against these. For more information, see the section on Safety devices.

Danger to hands / fingers

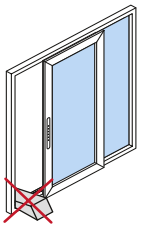


Danger for the body / head area



NOTE

Note the following advice to prevent damage to the units.



- ► Do not wedge anything between the vent and the frame. The additional load can cause deformation of the frame.

2.4 Sicherheitseinrichtungen

You can find out which safety measures have been used on your installation from your metal fabricator.

The Schüco ASE 60/80 TipTronic sliding system has a range of safety devices in accordance with DIN EN 16005:
- Crush protection: triggers if the vent encounters an obstacle
- Overload protection: triggers if the vent jams (e.g. due to snow, dirt, foliage, etc.)
- Sensor strip (optional): triggers if the sensor strip is pressed in or activated when moving the vent
- Safety sensors (optional): trigger if a person or an obstacle enters the detection range of the light grid / safety sensors

INFORMATION

If the floor structure is changed (e.g. cork flooring instead of carpet), the safety sensors may need to be reset by a specialist.

2.5 Proper use

- Schüco ASE 60/80 TipTronic sliding systems are electrically driven closing systems that are intended for private and commercial environments. They are designed for fixed and horizontal installation
- Schüco ASE 60/80 TipTronic sliding systems are only suitable for use in dry rooms. Relative humidity 5 – 93 %, condensing
- Operating temperature range: -20°C to +50°C

Proper use also includes adhering to the operating and care instructions. Any alternative use or a use beyond this remit is not in accordance with its purpose.
Incorrect use or unauthorised modification of the product may result in death or serious injury, or damage to the product and other material assets. Only original replacement parts may be used. The manufacturer / supplier shall not be liable for any damage resulting from infringement. The user alone bears the risk.

This device may be used by children aged 8 and over as well as by persons with reduced physical, sensory or mental capabilities or a lack of experience and knowledge provided that they are supervised or have been instructed in the safe use of the device and understand the resulting dangers. Children must not play with the device.

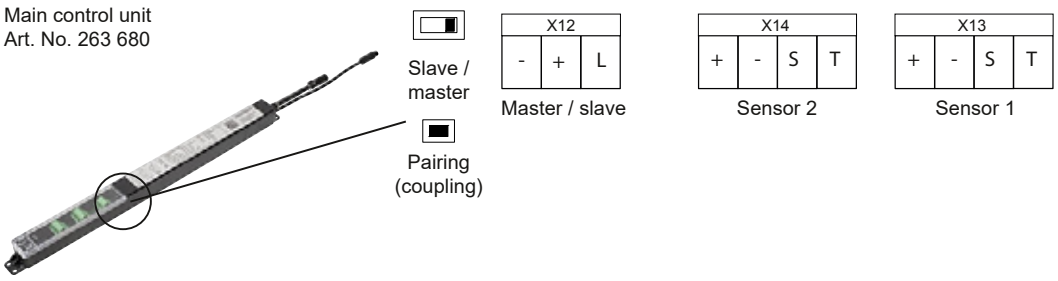
3. Product description

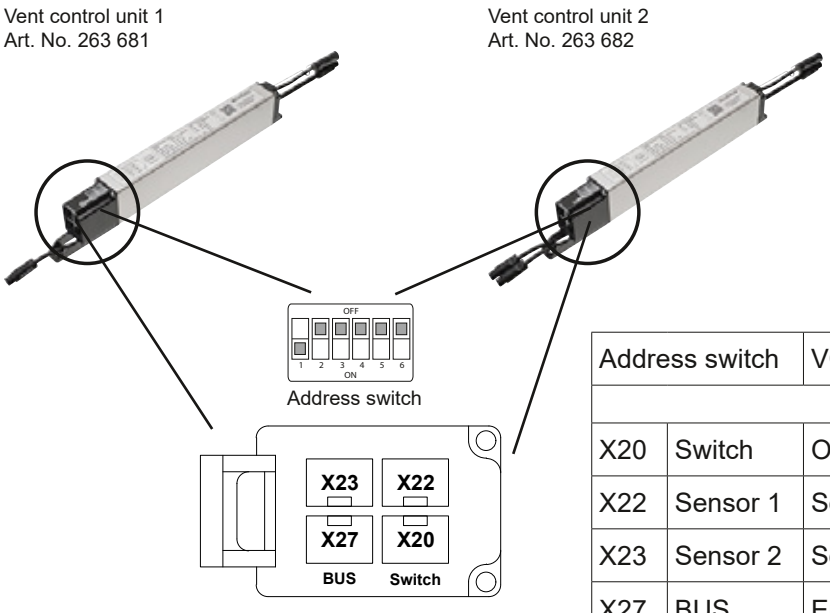
The Schüco ASE 60/80 TipTronic sliding/lifting & sliding system comprises a peripheral outer frame integrated in the building in which a maximum of 6 movable vents are located. These moving vents are mounted on roller carriages and can be moved horizontally on up to 3 parallel tracks.

Each vent frame of a moving vent contains a sliding drive (for moving the vent), one or two lifting drives (for raising/lowering and locking the vent), an operating unit and components for protection (optional).

The ASE 60/80 TipTronic control system comprises a superordinated main control unit (MCU) in the outer frame, a vent control unit (VCU) for each moving vent and a sequence control unit.
No MCU is required in the basic version having only one moving vent. Please note that no external components (BSC, safety sensor, wall button) can be connected when using this version.
No MCU is required in the basic version having only one moving vent.Please note that no external components (BSC, safety sensor, wall button) can be connected when using this version.

3.1 Basic settings of the control devices





Address switch		VCU DIP switch
X20	Switch	Operating unit
X22	Sensor 1	Sensor strip 1
X23	Sensor 2	Sensor strip 2
X27	BUS	Encryption module adapter

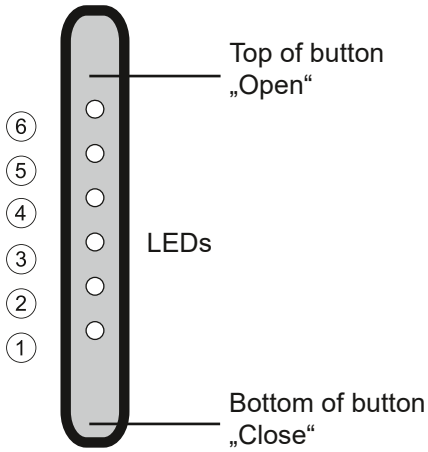
	LED	Meaning
Main control unit	Green LED lights up	Voltage is applied
	Green LED flashes, 2 Hz	Communication via the vent bus
	Red LED lights up	Main control unit event is pending
	Red LED flashes, 2 Hz	Enter VCU address twice
Vent control unit	Green LED lights up	Voltage is applied
	Green LED flashes, 2 Hz	Communication via the vent bus
	Red LED lights up	Vent control unit event is pending
	Red LED flashes, 2 Hz	Enter VCU address twice

3.2 Technical data

System	ASE 60/80 TipTronic	
Control unit	VCU 1 / VCU 2	MCU
Rated voltage	DC 24 V (-10 % / +30 %) SELV	
Rated current	Max. 4 A / 8 A	Max. 10 A
Protection class	III (Protective Extra Low Voltage)	
Duty cycle	S3 ED 40 % 14 min	
Power supply	Schüco universal power pack or Schüco AW2 or AW4 power pack	
Operating temperature	-20°C to +50°C	
Transport / storage temperature	-40°C to +80°C	
Relative humidity	5% to 93% (non-condensing)	
Protection rating	IP 22 (for vertical installation)	
Resistance class	In accordance with DIN EN ISO 13849-1 Category 2, Performance Level C	
Connection to the building management system	-	BSC

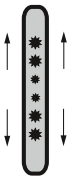
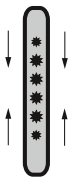
4. Operation

4.1 Operating unit



The moving vent can be opened or closed on the operating unit. If one of the two buttons is pressed during operation in automatic mode, the vent stops.Operating unitVarious status signals and events are shown on the integrated light-emitting diodes (LEDs).

4.2 Overview of operating unit statuses

LEDs	Meaning		
	The LEDs do not light up, the system is locked.		The top LED lights up continuously – the system is open.
	The bottom LED lights up continuously – the system is locked. The LED turns off after approx. 3 seconds.		The LEDs flash from inside to outside, the system is opening.
	The LEDs flash from outside to inside, the system is closing.		LEDs 1-3-5 flash alternately to LEDs 2-4-6, a reference cycle is required.
	The LEDs flash: two top, two bottom, the system has not been commissioned.		All LEDs flash, the system is being commissioned.

4.3 Individual movement commands and unit settings

The Schüco ASE 60/80 TipTronic multi-vent system is moved via individual movement commands and so-called unit settings, which are controlled using the operating units. Individual movement commands are controlled via a brief button press. Here, the possible movement path may be limited by other moving vents.

Unit settings which are triggered via a long button press generally affect multiple moving vents simultaneously and are most useful in systems with multiple moving vents.

In the operating mode with self latching (automatic), the button on the operating unit only needs to be pressed to begin the movement.

Movement command		Description
Briefly press top of button	Briefly press wall operating switch input 1	The vent unlocks and opens
Briefly press bottom of button	Briefly press wall operating switch input 2	The vent closes and locks
Continuously (>2s) press top of operating unit	Continuously (>2s) press wall operating switch input 1	The vent moves to the stored unit positionBriefly press top / bottom of button during movement
Sustained (>2) button press, bottom of operating unit	Continuously (>2s) press wall operating switch input 2	
Briefly press button at top / bottom during movement	Simultaneously press wall operating switch input 1 & 2 during movement	The vent stops
Hold down button at top / bottom during movement		Stop all vents

4.3.1 Applying unit positions

At the factory, the following preset unit positions are stored for the catalogue types:

Factory setting 1	System closed and locked
Factory setting 2	Maximum opening width of the system
Factory setting 3	Passage on the right and left sides
Factory setting 4	Passage on the left side
Factory setting 5	Passage on the right side

Unit positions can be called up via a long press on an operating unit on the moving vent. As standard, factory setting 1 is called up via a long bottom button press. The system closes, irrespective of the vent on which the operating unit was activated.

As standard, an open factory setting (2 to 5) is called up via a long press on the top of an operating unit, even if other vents have to move for this purpose.

In the case of a double vent sliding system, a long button press on the top of the operating unit of the access leaf calls up factory setting 2 (maximum opening width of the system), both vents open.

In the case of an E3/1 system, a long button press at the top of the operating unit of the outer leaf calls up factory setting 2 (maximum opening width of the system), both vents open.

In the case of an 3F system, a long button press at the top of the operating unit of the fourth leaf calls up factory setting 5 (passage on the right side), both right-hand vents open, the other vents close.

Unit positions can also be individually set and configured in accordance with customer requirements.

4.3.2 Wall operating switch

Unit positions are called up via the wall operating switch that is connected to the main control unit. Here, commands can also be given by long and short button presses on the wall operating switch.

4.3.3 BSC (bus operation)

The units can also be controlled via the BSC bus. Refer here to the operating instructions for the Schüco Automation Engineering Tool (doc. no. 10000425841).

4.3.4 Operation without self latching (dead man)

If operation without self latching (dead man) has been activated, the system can then only be moved via the operating unit and the wall operating switch. Operation by means of bus-compatible end devices is not permissible when dead man operation is active.

<table>
<tr><th colspan="2">Movement command</th><th>Description</th></tr>
<tr><td>Press and hold top of operating unit button</td><td>Press and hold wall operating switch input 1</td><td rowspan="2">The vent unlocks and opens or is moved to the stored unit position.</td></tr>
<tr><td>Press and hold bottom of operating unit button</td><td>Press and hold wall operating switch input 2</td></tr>
<tr><td colspan="2">Briefly press top / bottom of button (input 1 / input 2)</td><td>The vent locks / unlocks when it is in the closed position</td></tr>
</table>

5. Faults and troubleshooting

5.1 Troubleshooting

In the case that the moving vent can no longer be operated, the entire power supply completely shuts down for approx. 1 minute. Then run through the points „Response after power failure“ (Chapter 5.2).

5.2 Functioning after power failure (reference cycle)

If the system is closed and locked at the moment of reconnection to the main power supply, it takes approx. 10 seconds for the system to be ready for use.
If the system is not closed and locked, the vents must be referenced by the user. To do this, press the lower button „Close“ on the operating unit.

» LEDs 1-3-5 flash alternately to LEDs 2-4-6 on the vents which require a reference cycle (zero position).

1. Press the bottom of the operating unit.
» The vent closes at safety speed and locks.
2. Perform step 1 for every vent that displays „Reference cycle required“.

The reference cycle can be performed with the operating unit, via which the vents can also be closed in normal operation.
» You can now operate the system normally again.

In the event that the reference cycle cannot be successfully completed (LEDs continue to flash alternately after locking), proceed as follows:

1. If no movement takes place after the attempted reference cycle (movement or lifting/locking), hold down the bottom button on the operating unit within 10 seconds.
» Another reference cycle begins.
2. Hold down the button until there is no more movement (movement or lifting/locking). If the button is released during the manual reference cycle, it will not finish.

6. Cleaning and care

6.1 General information on cleaning

WARNING

► Risk of injury due to maintenance work carried out incorrectly. Incorrect maintenance could lead to severe injury or damage to property.

The consumer can carry out regular cleaning and maintenance of the aluminium units themselves, as described in the following sections.
Have power-operated units (e.g. with Schüco TipTronic mechatronic fittings) safety-checked at least once a year by a specialist company. Existing safety devices must also be checked.The test must be documented.

6.1.1 Cleaning the frame and panes

For the best window care, clean the window frames and gaskets at the same time as the window panes. Use a mild, non-scouring cleaning agent.

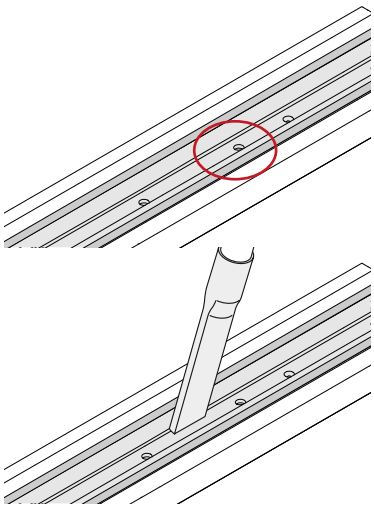
Solid substances
Plaster, mortar or similar is best removed using a wooden or plastic spatula.

Marks
Can be removed safely and without residue using a cleaning agent from our range of cleaning products for aluminium units.

NOTE

To prevent damage, observe the instructions for use given on the cleaning agent.

6.1.2 Cleaning the tracks and drainage slots



- ► Check the drainage slots in the entrance area for dirt
- ► Blocked drainage slots can be cleaned using a cocktail stick or cotton bud
- ► Remove any dirt using a vacuum cleaner or a suitable cleaning agent.
- ► In addition to the drainage slots, the stainless steel track also needs to be cleaned

6.1.3 Maintenance of gaskets

► Check the gaskets for damage.

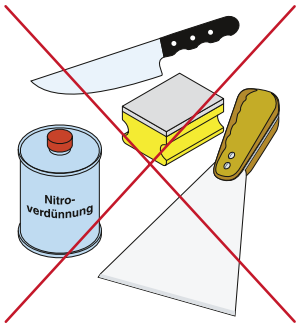
NOTE

Ask a Schüco specialist to replace any defective gaskets.

6.2 Cleaning and maintenance products

NOTE

When cleaning colour-coated units, observe the instructions for use of the cleaning agent.



The following items must NOT be used for cleaning:

- ► Tools with sharp edges, e.g. knives, metal scrapers, steel wool, the scouring side of household sponges etc., will damage surfaces
- ► Aggressive cleaning fluids or solvents, e.g. cellulose thinner, nail polish remover etc., will also cause irreversible damage to unit surfaces

Cleaning agents suitable for aluminium units are available from Schüco specialists.

Aluminium maintenance kit 298 672:

- Cleaner and preservative
- Stainless steel cleaner
- Grease stick to maintain gaskets
- Lubricating spray to maintain fittings

Maintenance products for anodised aluminium units:

Basic cleaner 298 181
For initial and basic cleaning.
Cleans and preserves the aluminium surface.

Metal polish 298 010
This cleaner for anodised surfaces restores the matt finish to the aluminium and preserves the surface (can also be used on stainless steel).

Universal aluminium cleaner 298 001
Removes stubborn grime, minor scuff marks and scratches.

Klüberalfa YM 3-30 spray
Special lubricating oil for electrical contacts.
This spray is applied to the power supply buses and sliding contacts and helps to reduce wear between the power supply buses and prevent squeaking noises.

7. Inspections and maintenance by qualified personnel

In addition to normal cleaning and maintenance, you should carry out an inspection of your aluminium units annually.This will extend the working life of the units and maintain ease-of-use.

NOTE

The fittings, window, door and facade units require specialist, systematic maintenance / care and inspection to ensure they maintain their value and remain fit for use and safe. Therefore, it is recommended to conclude a corresponding maintenance contract with a specialist window, door and façade company.

7.1 8.1 Maintenance contract

If these operating instructions do not answer all of your questions, please contact your specialist for further help.In addition to providing expert advice, a specialist company can advise you on particular modifications and repairs.

Specialists can offer you the additional benefit of a maintenance contract. Under the terms of the maintenance agreement, the specialist will undertake all maintenance and repair work. Your aluminium units will be maintained at their optimum functional performance and value without the need for additional resources.

NOTE

All repairs and modifications should be undertaken by a specialist. Only repairs by a specialist using “original parts” ensure the continued correct operation of your Schüco units.

7.2 Prerequisites/preparation

CAUTION

Risk of crushing

► When operating the electric sliding units, beware of the risk of crushing between the individual vents as well as between the vent and outer frame. For more information, refer to the chapter on Safety instructions for sliding units.

- With power-operated windows, regular maintenance in accordance with the Technical Rules for Workplaces ASR A1.6 is mandatory. For maintenance instructions for Schüco aluminium windows and doors, please see “Operating and maintenance instructions”
- Before releasing load-bearing components or safety devices such, secure the vent against falling out. Ensure that the entire weight of the vent is supported/secured
- The inspection has to be documented

7.3 Inspection intervals

IFT Rosenheim gives recommendations for the required maintenance intervals depending on the building use.

	Safety inspection	General inspection
School or hotel building	Every six months	Every six months
Office or public building	Every six months	Once per year
Residential buildings	Once per year	Every two years / measures in accordance with the requirements of the client

7.4 Checking and maintaining the sliding units

CAUTION

Risk of crushing

► In the case of defective safety devices, put the sliding unit out of operation and repair safety devices without delay.

- Check of function
- Check of safety devices
- Read-out of error memory with the ETA
- Visual inspection for damage
- Visual inspection of the gear on the sliding drive
- Visual inspection of the current collector (uniform wear, no dirt)
- Visual inspection of the vents during movement (uniform movement)
- Visual inspection of the lifting drive when opening (uniform opening and closing)
- Check system for acoustic changes (volume, scraping, etc.)
- Check that the vent operates smoothly.
- If necessary, remove any obstacles/adjust the vent in the fitting/re-block the vent
- Visual inspection for damage and wear; rectify or replace if necessary
- Check tolerance and overlap dimension; adjust vent/move keeps if necessary.
- Check that gaskets for damage and correct position; correct or replace if necessary
- Lubricate the gaskets using a grease stick or VaselineSpray the power supply buses and sliding contacts with Klüberalfa YM 3-30 spray all over
- Check that all mechanical fittings are correctly and securely positioned and do not show signs of wear; secure or replace if necessary
- Check that all visible parts are correctly and securely positioned and do not show signs of damage or corrosion; secure or replace if necessary

8. Decommissioning and disposal

CAUTION

Commission a specialist to dispose of the units professionally.

The materials used can be recycled. Observe the environmental requirements with regard to recycling, re-use and disposal of operating materials and components in accordance with the local, country-specific and international current technical regulations and official regulations. Make a contribution towards protecting our environment and dispose of the device at a collection point.

9. Service and support

At Schüco, a high level of customer satisfaction is our priority. If you require further information or encounter problems not dealt with in detail in this document, you can request the requisite information from the Smart Building Technical Support team.
You can reach your contact partners on the service phone numbers below:

Hotline – Metal systems

Please contact your local branch.

Technical Support – Smart Building

Monday – Thursday:	8.00 a.m. – 4.30 p.m.
Friday:	8.00 a.m. – 3.00 p.m.
Tel.:	+49 (0) 521 - 783 665
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