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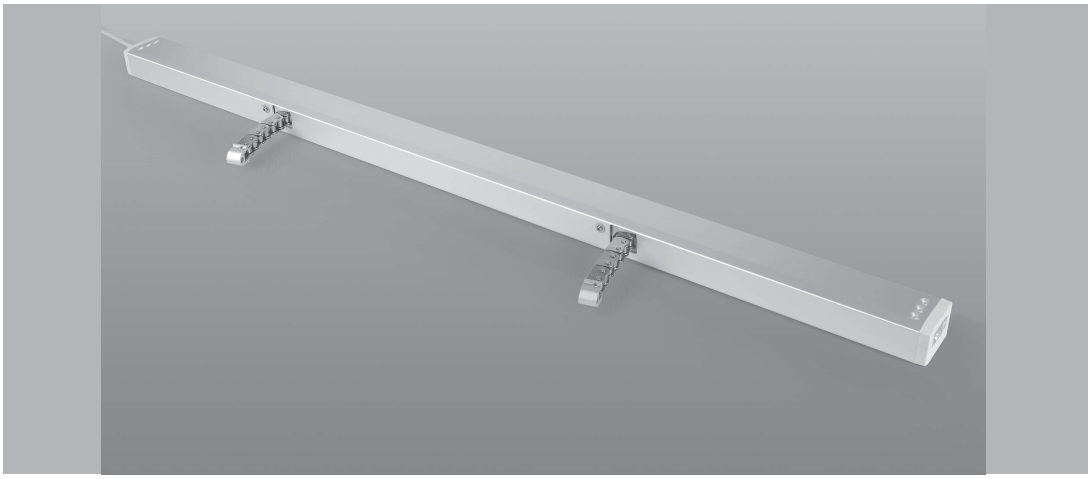
Assembly and Commissioning Instructions

according to Machinery Directive 2006/42/EC (annex VI)



KSA - Twin S12 24V DC Chain Drive CE

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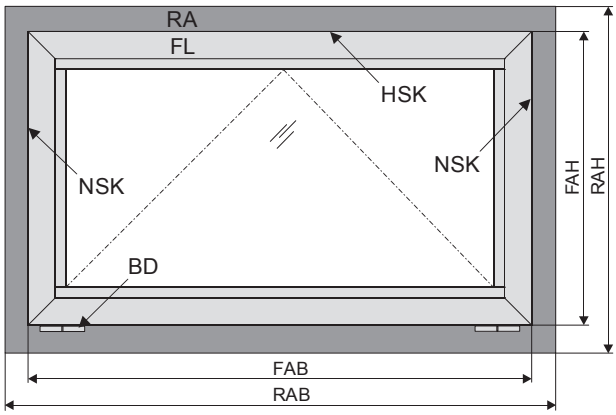
Abbreviations

Index of abbreviations	
These abbreviations are used consistently throughout these assembly & operating instructions. Unless stated differently, all dimensions indicated in this document are in mm. General tolerances in accordance with DIN ISO 2768-m.	
A	drive
AK	connection cable / drive cable
AP	cover cap
BD	hinge
Fxxx	casement bracket
FAB	overall width of casement
FAH	overall height of casement
FG	casement weight
FL	casement
FÜ	casement overlap
HSK	main closing edge
Kxxx	frame bracket
L	construction lenghth of drive
MB	central hinge
NSK	side closing edge
RA	frame
RAB	overall width of frame
RAH	overall height of frame
SL	snow load
→	opening direction



Risik analysis

for power-operated windows and doors (machines)
according to ISO 12100

General Procedure
Before starting work, a risk analysis must be carried out to systematically ensure compliance with the country-specific legal regulations on occupational safety and accident prevention regulations of the professional associations.
Once the risk assessment for power-operated windows and doors has been carried out by the planner and laid down in the constructional requirements, the installer of the power-operated windows and doors must again carry out another risk assessment to examine whether the planning requirements have been met. In case the protection class (see i. e. leaflet KB.01 of VFF [association windows + facade]) has not been met, further steps to reduce risk are necessary.

Extract from the Machinery Directive 2006/42/EC
„The manufacturer of machinery or his authorized representative must ensure that a risk assessment is carried out in order to determine the health and safety requirements which apply to the machinery. The machinery must then be designed and constructed taking into account the results of the risk assessment."
Separate documentation relating to risk assessment can be downloaded from the homepage of
Aumüller Aumatic GmbH (www.aumueller-gmbh.de).
In addition, the operator needs to be instructed about the residual risks.

It is essential to ensure compliance with the latest version of the guidelines, standards and national legislation applicable to the assembly and the electrical connection of drives / controls, especially:

EN 60335-1 / EN 60335-2-103
„Household and similar electrical appliances - Safety - Part 1: General requirements / - Part 2-103: Particular requirements for drives for gates, doors and windows"

Directive 2006/24/EC of the European Parliament and of the Council - „Machinery Directive"

Local accident prevention regulations.

Fire behaviour of building materials and building components.

Erection of power installations with rated voltages below 1000V

Warning and safety symbols in these Instructions:

The symbols used in the instructions shall be strictly observed and have the following meaning:

⚠ Danger	Failure to comply with the warning notes results in irreversible injuries or death.
⚠ Warning	Failure to comply with the warning notes can result in irreversible injuries or death.
⚠ Caution	Failure to comply with the warning notes can result in minor or moderate (reversible) injuries.
Note	Failure to comply with the warning notes can lead to damage to property.

Caution / Warning
Danger due to electric current.

Caution / Warning
Risk of crushing and entrapment during device operation (is provided as a sticker with the drive).

Attention / Warning
Risk of damage to / destruction of drives and / or windows.

01

SAFETY INSTRUCTIONS

⚠ WARNING Important safety instructions: To ensure safety of persons, these instructions must be strictly observed.
Always keep these instructions available.

Risk of crushing and entrapment!
Window closes automatically!

When closing or opening the drive is stopped by the drive-integrated or external electronic load disconnection.
There is always enough pressure force to crush fingers in case of carelessness.

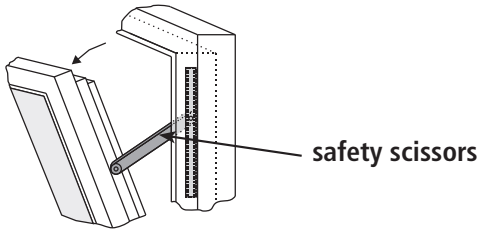
Do not put your hand into the window rabbet or into the moving chain during assembly work and operation !
Make sure that entrapment between the moving casement and the fix elements (i. e. wall), due to openings, is not possible.

Crush and shear points
Crush and shear points between casements and frames must be secured up to a height of 2.5 m (bottom edge of moving element) by devices that will stop the movement by touch or interruption initiated by a person and prevent any injury. A warning sign must be clearly attached to the opening element.
On power-operated doors and gates danger spots of crush and shear points must be secured against entrapment by appropriate measures to prevent injuries.

Casements must be hung or secured such way that, in case one of the mounting elements fails, it will not break away / slam down or move in an uncontrolled manner by providing double suspensions, safety scissors, casement stays.

Secure the window in front of inadvertent or unintentional opening and against falling.

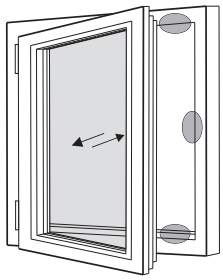
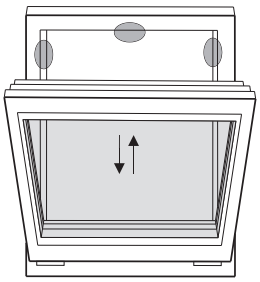
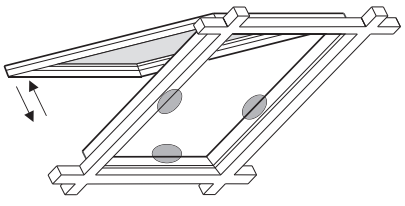
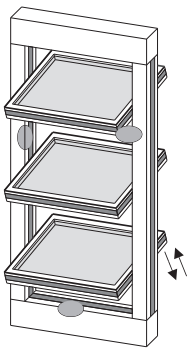
Bottom-hung windows must be provided with safety scissors or similar devices. Safety stays prevent damage and injuries to persons which might result from improper installation and handling.
The safety scissors must match the opening stroke of the drive (see technical data). This means: the opening width of the safety scissors must be greater than the drive stroke in order to avoid any blocking.



Mounting, Operation and Maintenance Instructions
These instructions shall allow professional assembly, commissioning and maintenance carried out by qualified and safety-minded electricians and/or skilled staff with in-depth knowledge of electrical and mechanical drive assembly.
To ensure safe operation and avoid damage and risks the system must be carefully assembled and adjusted according to these assembly instructions. All dimensions have to be verified at the place of installation and must be adjusted, if required.

Please note the connection assignment, the permissible drive voltage (see type plate), the minimum and maximum performance data (see technical data) and the assembly and installation notes and strictly adhere to them!
Never connect 24 V DC drives to 230 V supply!
Danger to life !

Danger spots by crush and shear points

Side-hung	Bottom-hung	Roof windows / light domes	Louvre windows

Danger spots: crush and shear points

Spare parts, fasteners, fittings and controllers
Only operate the drive with controllers built by the same manufacturer. There is no liability, warranty or customer service if third-party parts are used. If spare parts/fittings or extension parts are required, only original replacement parts from the manufacturer may be used.

Range of Application
Exclusively suited for the automatic opening and closing of the window types specified in these assembly instructions.
For any application not included in these instructions please consult the manufacturer or his authorized reseller for further information.

Do not misuse device for any other lifting operations.

Always check that your system complies with the applicable regulations. Special attention shall be given to opening width and opening area of the window, permissible fitting dimensions, opening time and opening speed, exerted forces, temperature resistance of drive/devices and cables as well as to the cross-section of the connection cable depending on the cable length and the power consumption.
Required fastening material shall be selected and, if necessary, completed to suit the drive and the exerted loads.

Make sure that all products installed are permanently protected from dirt and moisture unless the drive is expressly suited for use in damp or humid environments (see technical data).

Mounting and fastening material
Required or supplied fastening material shall be selected and, if necessary, supplemented to suit the building's structure and the corresponding strain.

Cable routing and electrical connection
Cable routing and electrical connections may only be carried out by approved contractors. Secure power supply lines 230 / 400V AC separately on site. Before working on the system the mains voltage supply and the emergency power supply (i. e. batteries) shall be disconnected in all poles and secured against unintended operation.
Never operate the drives, controllers, manual switches and sensors on operating voltages and connections contrary to the specifications in the operating instructions.
All relevant regulations must be observed for the installation:
Erection of power installations with rated voltages below 1000 V
Installation of cables and lines
Fire behaviour of building materials and building components

Specify suitable types of cable on consultation with the competent local authorities, energy supply companies and Employers' Liability Insurance Associations. Please pay especially regard to: All extra low-voltage lines (24 V DC) must be laid separately from power cables. Flexible lines must not be flush-mounted. Freely suspended lines must be provided with strain relief.

All lines must be laid such way that they can be neither sheared off, nor twisted or kinked during operation.

All junction boxes and external drive controllers must be positioned to allow access for maintenance work. The cable type, lengths and sizes must comply with the technical specifications. Check connection points for tight fit of the screwed connections and cable ends.

All 230 V components shall allow disconnection in all poles from the mains power supply prior to maintenance and repair work.

After mounting
and each modification to the structure, check all functions in a test run. Once the system is completely installed, the end-user must be instructed on all important operating steps. The end-user must also be notified of the remaining risks / hazards.

Ambient Conditions
The product must not be hit, dropped or exposed to vibrations, moisture, aggressive gases or other damaging environments unless it is approved for one or several of these ambient conditions by the manufacturer.

Accident prevention regulations and guidelines issued by the employers' liability insurance association
When working at, in or on a building or part of a building the specifications and notes of the respective accident prevention regulations (UVV) and the regulations and rules of the employers' liability insurance association (BGR) must be observed and adhered to.

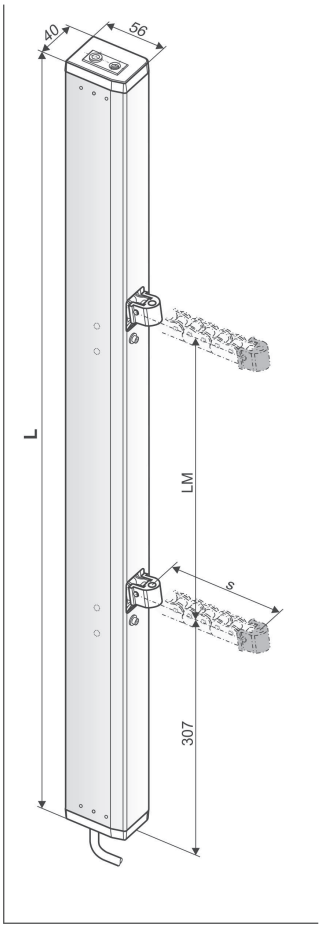
Declaration of Incorporation
The devices are manufactured and tested in accordance with the European Directives. The appropriate declaration of incorporation has been issued. You may only operate the drive if there is a declaration of conformity within the meaning of the Machinery Directive for the entire system.

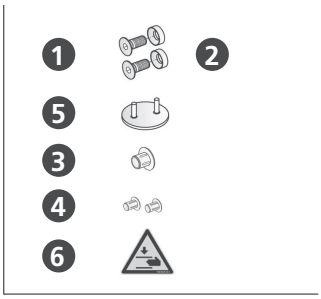
DATENBLATT KSA-TWIN S12 24V DC

- Application: natural ventilation, SHEV
- Internal intelligent cut-off switch S12
- Adjustable chain tension / Mechanical chain unlocking

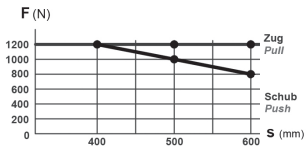
Options

- Programmable special functions
- M-COM for automatic synchronised run of multi drive systems and automatic sequence control with FV locking drives (S3/S12 SW V2)





TECHNICAL DATA

U_N	Rated voltage	24V DC (± 20%), max. 2 Vpp
I_N	Rated current	1,8 A
I_A	Cut-off current	2,4 A
P_N	Rated power	43 W
ED	Duty cycle	30 % (ON: 3 min./OFF: 7 min.)
	Protection rating	IP 32
	Ambient temperature range	-5 °C ... +75 °C
F_Z	Pulling force max.	1.200 N
F_A	Pushing force	
F_H	Pullout force	5.000 N (fastening depended)
	Chain	Stainless steel
	Connecting cable	non-halogen, grey– 5 x 0,5 mm², ~ 5 m
v	Speed	s = 400 8,0 mm/s 8,0 mm/s s 500 – 600 12,0 mm/s 8,0 mm/s
s	Stroke	400 – 600 mm (± 5 %)
L	Length	see order data
LM	Distance in between chains	see order data

Components packed with drive

❶ + ❷	4x Countersunk-head screw M8x16, 4x Spacer ring (brass)
❺	2x Chain unlocking key
❸	2x Dummy plug for unused cable entry
❹	4x Dummy plugs for chain unlocking points
❻	1x Warning label

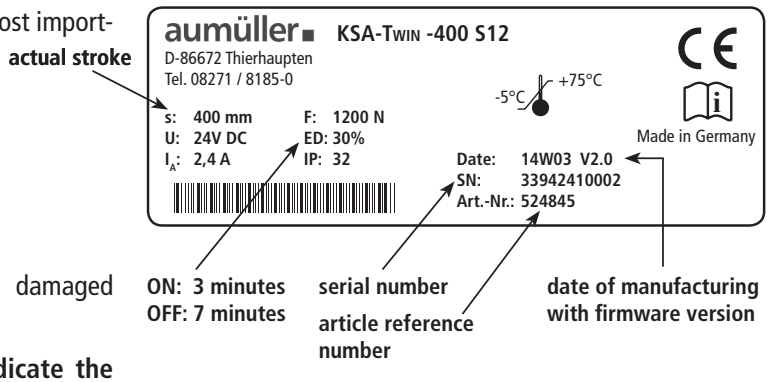
ORDER DATA									
s [mm]	L [mm]	LM [mm]	Version	Finish	PU/pcs.	**Part.-No.**			
400	1100	485	KSA TWIN 400 S12 24V	E6/C-0	1	**524845**			
500	1303	587	KSA TWIN 500 S12 24V	E6/C-0	1	**524855**			
600	1303	587	KSA TWIN 600 S12 24V	E6/C-0	1	**524865**			

OPTIONS					
Special model	PU/pcs.	**Part.-No.**			
Drive housing painted/powder coated in other RAL colours					
Specify at order stage:	1 – 4	**516004**			
	5 – 9	**516004**			
	10 – 49	**516004**			
	50 – 99	**516004**			
	up 100	**516004**			
Extra length connecting cable:					
10 m – non-halogen, grey – 5 x 0,5 mm²		**501056**			
Microprocessor programming S12					
Electronic stroke reduction		**524190**			
Special functions		**524180**			
Mechanical chain shortening					
In steps of 25 mm		**524194**			
Optional accessories	PU/pcs.	**Part.-No.**			
M-COM Comm. module for synchronised multi-drive systems	1	**524177**			

EXPLANATIONS ON THE PRODUCT LABEL

The product label provides information on the most important caracteristics, such as:

- manufacturer's address
- article reference number and name
- technical caracteristics
- date of manufacturing with firmware version
- serial number



NOTE Never install and operate damaged products.

In the event of any complaints, please indicate the product serial number (SN) (see product label).

INTENDE USE

Area of Application / Range of Application

These chain drives are used for electromotive opening and closing of windows in facades and roofs, with a mounting height (lower edge of moving element) of at least 2.5 meters from the floor. For natural smoke and heat exhaust (NSHEV/ SHEV) and for natural ventilation.

The main purpose of this product is to help save life in the event of a fire and to ensure the supply of fresh air in the building.

The safety features of this product are crucial for compliance with the Machinery Directive 2006/42/EC as well as standards EN 12101-2.

The most important requirement is that the window opens after:

- activation via a control unit (SHEV unit)
- from a fire alarm button
- from a smoke detector or
- from the fire alarm system (FAS).

Casement type:
roof window / light dome / bottom-hung, top-hung casement.
Made of base materials such as aluminum, plastic or wood.

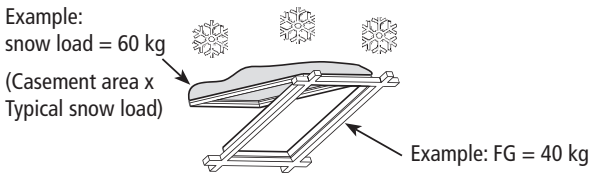
Opening direction:
inward and outward opening

All specified casement sizes shall be a guide only.
The actual application area depends on the ratio between: FAB/FAH, total casement weight and opening width. Strictly adhere to the **force-path-diagrams** of the drives.

For different drive mounting positions on the casement the following points must be considered:

- Total weight of casement (glass + frame)
- Casement size (FAB x FAH)
- Snow load (based on snow zone / area of use)
- Roof pitch angle (important for snow load calculation)
- Wind force (influence of side wind)
- Required cross-section of aperture (geometric or aerodynamic)
- Required force and stroke of drive/s

Snow load on roof windows for SHEV-systems



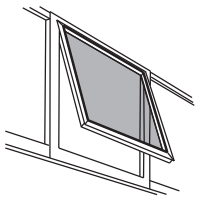
Example calculation
Establish snow loading based on national standards /directives
(in Germany according to DIN 1055-5)
total weight = FG + snow load
total weight = (40 kg + 60 kg) = 100 kg

Areas of application and casement sizes:

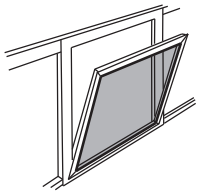
Mounting of drives up to a casement size of max. 4m² (depending on the system)

Top-hung casement and bottom-hung casement inward opening

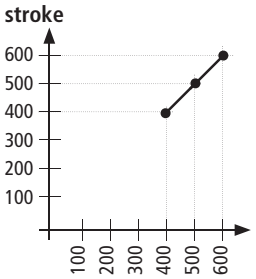
FAB min. = L + 100 mm
FAB max. = 2500 mm



top-hung casement



bottom-hung casement



FAH max. = 2500 mm

with frame bracket **K-B1**

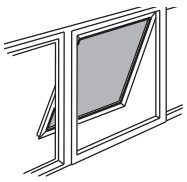
minimum space required on frame 52 mm

min. FAH

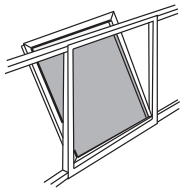
Top-hung casement and bottom-hung casement outward opening

FAB min. = L + 100 mm
FAB max. = 2500 mm

FAH min. = 500 mm
(for stroke 500)
FAH max. = 2500 mm



top-hung casement



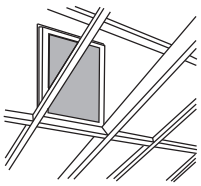
bottom-hung casement

Roof window

FAB min. = L + 100 mm
FAB max. = 2500 mm

FAH min. = 450 mm
FAH max. = 2500 mm

total weight casement including snow load
KSA - Twin 400 mm stroke ≤ max. 220 kg
KSA - Twin 500 mm stroke ≤ max. 185 kg
KSA - Twin 600 mm stroke ≤ max. 150 kg



INSTALLATION STEP 1: PRE-ASSEMBLY CHECKS

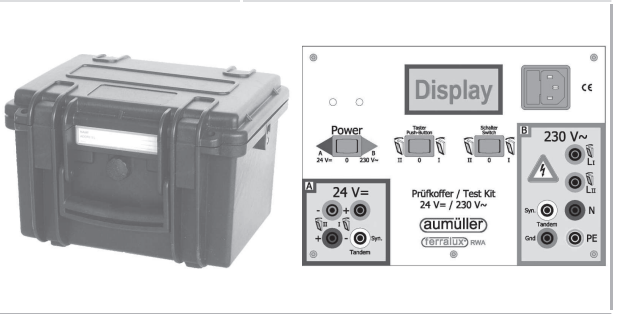
⚠ WARNING

Fully observe all instructions !
Incorrect assembly may lead to serious injuries!

Storage of the drives on site prior to the assembly.
Protective measures against damage, dust, moisture or contamination must be taken. Only store the drives in dry and well ventilated places before installation.

Testing the drives prior to installation
Check the drives prior to installation for their good mechanical condition and completeness. The drives must move smoothly in and out.
We recommend the use of our test kit for drives in 24V = / 230V~ (see table below).
Never install and operate damaged products. Drives must always be tested on a non-slip and stable surface or in a test fixture. Do not touch the test element during the operational test. The testing shall be performed under the supervision of specialist staff.
When mounting the chain drive, ensure the chain moves in and out in an approx. 90 degree angle.

Test kit for drives	
Order number:	**533981**
Application:	Test kit to check running direction and communication of drives 24V DC or 230V AC (including batteries)
Supply voltage:	230V AC
Drive types:	24V DC / 230V AC
Drive current:	max. 3 A
Display:	drive current, battery charge
Ambient temperature:	-5 °C ... + 75 °C
Plastic housing:	250 x 220 x 210 mm
Weight:	approx. 3,6 kg
Feature / equipment:	Control elements: 2 switches + 1 button



Instructions on intended use
Ensure that the use of the drives is in accordance with the specified range of application/ area of application. In particular, check that the temperature range marked on the drive is suitable for the local installation conditions.
Any other use of the products causes loss of warranty. The end-user must be informed about the intended use of the drives. In particular, it must be pointed out to the end-user that - apart from pressure and tensile forces in opening / closing direction - no additional forces should act on the spindle, chain or lever of the drives. Additional warning signs might be required.

Predictable Misuse
It is absolutely essential to avoid any foreseeable misuse of the drives! Some examples:
- do not connect 24V DC directly to 230V AC
- observe synchronization for tandem drive operation
- installation of drives in the indoor area only
- any other action of forces

Check installation requirements
- Are the supporting surfaces and the structural conditions adequate for the load transfer?
- Is an additional supporting structure required?
- Have sufficient measures been taken to avoid thermal bridges (thermal separation) at the contact points?
- Is there sufficient space for the drive swivel motion?

If not, the operator must be notified of these requirements!

Information on the Load Transfer
The supporting surfaces of the frame brackets and casement brackets must fully rest on the window or frame profile. Tilting movements of the mounting elements when locking and unlocking the casement are not allowed. Safe and firm mounting on the window profile must be ensured.

⚠ CAUTION

It is absolutely necessary to observe the necessary drive swivelling range. If this can not be ensured, another fastening or another drive type must be chosen.

Installation step 2: Prerequisites for Assembly / Preparing assembly

⚠ Warning

Important instructions for safe assembly: Fully observe all instructions, incorrect assembly may lead to serious injuries.

Prerequisites for Assembly

When installing a "Partly completed machine - drive", the following requirements must be met in order to allow correct assembly with other components to produce a complete machine without compromising health and safety of people:

1. Choose suitable drive type.
2. Select suitable fastening material (casement bracket, frame brackets) and adhere to the profile-specific hole layout.
3. There must be adequate space on the frame and on the casement to accommodate a drive.
4. Before installing check that the window is in a faultless mechanical condition.
   It should open and close easily.
5. The fasteners to be selected for fastening the drive to the window must be compatible with the window material (see table).

Wood windows	wood screws: i.e. DIN 96, DIN 7996, DIN 571 with head-type: round head with slot, round head with cross, hex head,special type	
steel, stainless steel, aluminum windows	self-tapping screws, thread screws, sheet-metal screws i.e. ISO 4762, ISO 4017, ISO 7049 , ISO 7085, DIN 7500 with head-type: cylinder head with hex socket, internal serration (Torx), Phillips head or external hex head blind rivet nut	
plastic windows	screws for plastic i.e. DIN 95606, DIN 95607, ISO 7049, ISO 7085, DIN 7500 with head-type: round head with cross, external hex head, Torx	Recommendation: if possible, screw through two cavity webs

Preparing assembly

Check window size on site.

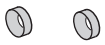
- Measure FAB and FAH.
- possibly establish the weight of casement or consult our specialized staff.

Tools required

- Marker
- Grains
- Hammer
- Knife
- Screwdriver (cross, Torx)
- Hexagonal wrench
- Torque wrench
- Power drill
- Threadlock adhesive
- possibly a tool for blind rivet nuts

Scope of delivery:

Prior to assembly, check that delivered products are complete.

Accessories for chain drive		
		Assembly and Commissioning Instructions (german and english)
	1	Countersunk screws M8 (4x)
	2	Brass washers (4x)
	3	Blind plug (2x)
	4	Cover caps (4x)
	5	Chain unlocking key (2x)
	6	Warning sign sticker „Risk of entrapment" (1x)

INSTALLATION STEP 3: ADJUSTING THE INITIAL CHAIN TENSION AND SMOOTH RUNNING

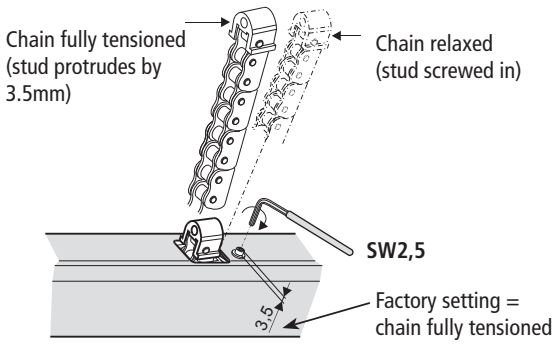
Adjust the initial chain tension on site (bottom-hung casements only)

The smooth running of the drive can be optimised under low load by screwing in the studs (clockwise).
At the factory setting the studs protrude with 3.5 mm out of the housing. In this position the chain is fully tensioned.

Bottom-hung casements only! Do not change the factory setting for other types of casements!

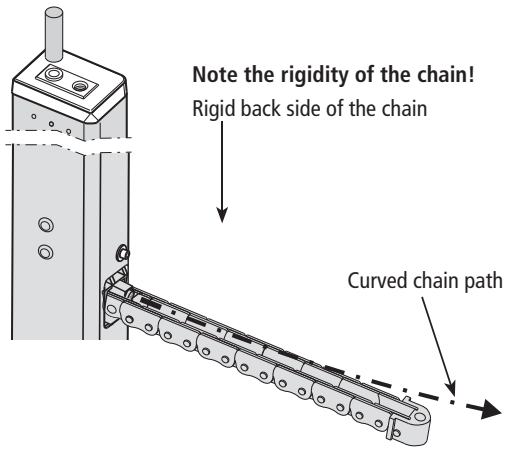
- The initial chain tension (pre-tension) is reduced by screwing in the stud (max. 5 mm = 7 complete screw rotations).

Optimise the smooth running carefully and check the chain tension. The two studs must have the same setting. Otherwise, the chain can buckle (backlash) during operation in the thrust (push) direction.



Always note the force-path diagram (see „KSA-TWIN S12 24V DC" DATA SHEET" chapter) and rigidity of the chain, depending on the installed position!

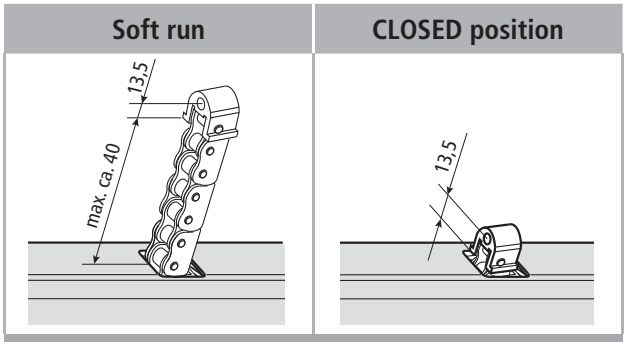
In inclined and vertical uses, ensure that the chain becomes rigid automatically. This is secured if the drive is installed with the motor side (cable outlet) at the top (e.g. for side-hung windows with drive installed at the main closing edge).



Soft run setting after manual unlocking of the chain

The drive has an electronic position detection. Just before the CLOSED position the chain retracts with reduced speed in the soft run mode, to protect the window and the drive.

- If the chain is unlocked manually and is completely pulled out by hand, on starting up ensure that the chain moves with reduced speed in soft run mode from approx. 40 mm before the CLOSED position.
- If necessary repeat this step several times.



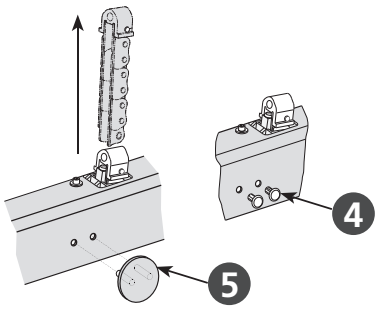
Manual unlocking of chain

If soft run mode is **not** achieved on retracting the chain:

- Use the Chain unlocking key ❺ to unlock both chains and completely pull them out manually.
- Re-close the drive completely electrically and note the soft run mode of app. 40 mm before the CLOSED position.
- Insert cover caps ❹.

If the soft run mode begins too early, it is adjusted automatically by the drive's electronics the next time the window is closed.

The manual chain unlocking function may only be used for **installation** purposes!

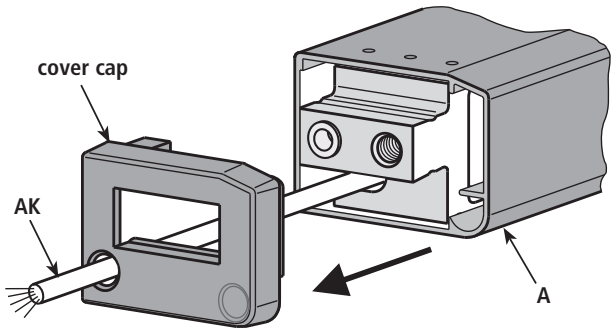


If the chain does not retract in soft run mode, the drive's transmission can be damaged, resulting in drive failure!

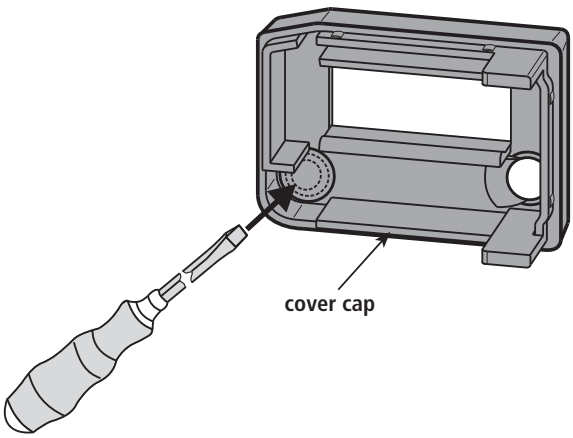
INSTALLATION STEP 4: CHANGING THE CABLE OUTLET POSITION

If there is a risk of the cable being sheared off by the bracket during opening, the position of the cable outlet must be changed.

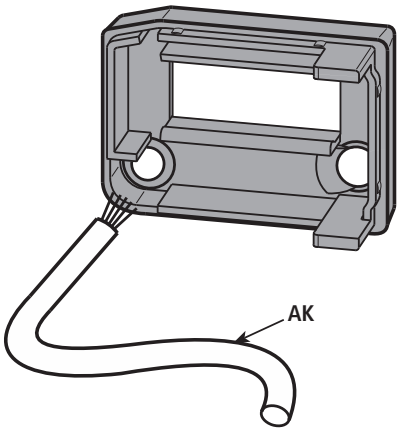
- Pull the cover cap of the drive profile by hand.
- Pull the connection cable completely out of the cover cap.



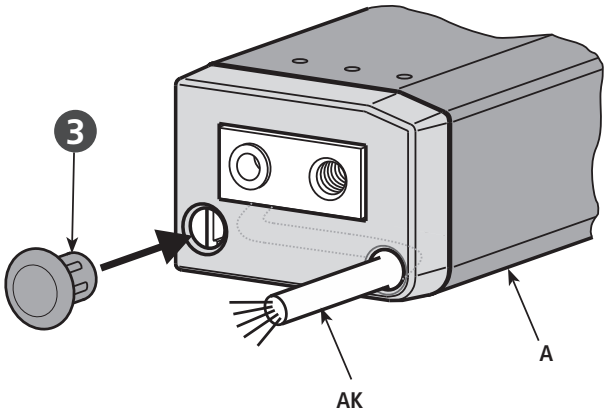
- Use a screwdriver to push through the pre punched hole and deburr.



- Feed the cable carefully through the new opening.



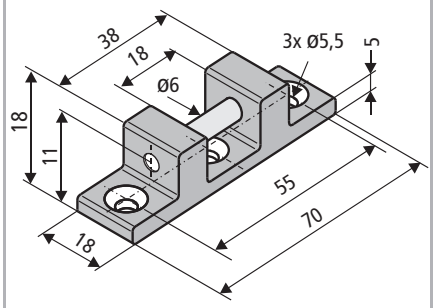
- Re-insert the cover cap in the profile.
- Push blind plug ❸ firmly into the old hole.



Installation step 5: Determine the casement brackets

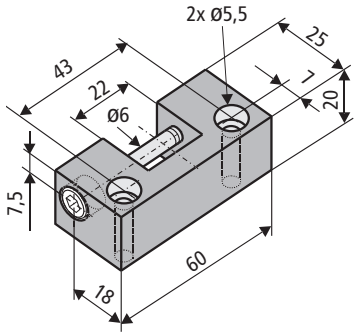
Casement brackets

Casement bracket F14



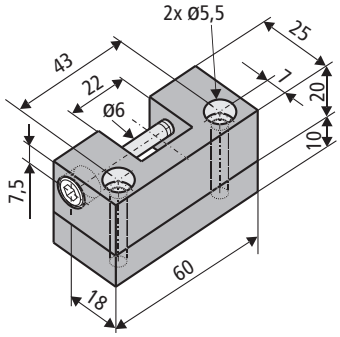
use with K-A1, K-B1, K-B2,
K-C1, K-E1, K-E2, K-F, K84-1, K125

Casement bracket F16



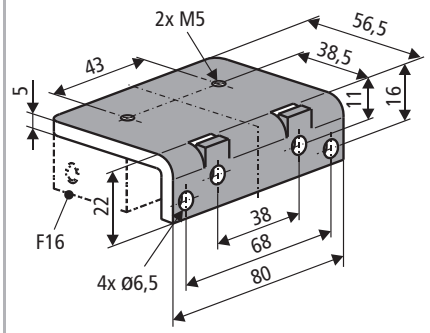
use with K-A1, K-B1, K-B2,
K-C1, K-E1, K-E2, K84-1, K87

Casement bracket F16-1



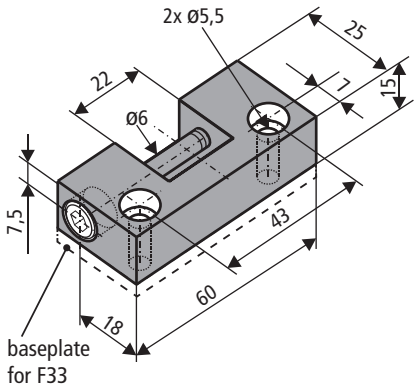
use on roof windows
Schüco AWS 57RO

Casement bracket F29-2



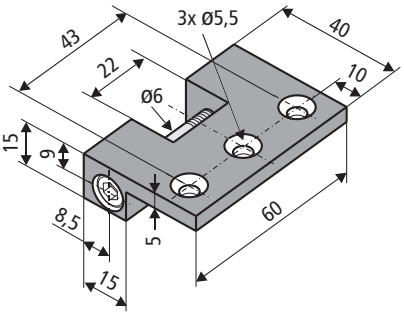
use on roof windows
Heroal 085 / 180 with F16

Casement bracket F33



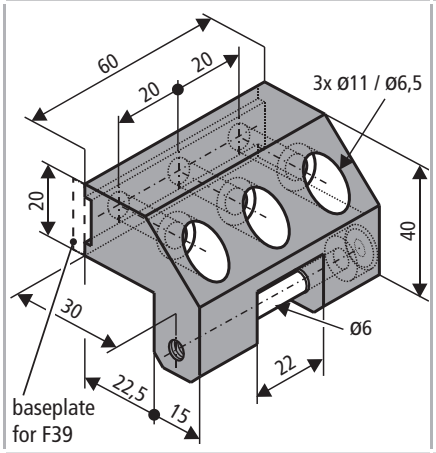
use with K-A1, K-B1, K-B2,
K-C1, K-E1, K84-1, K87

Casement bracket F38



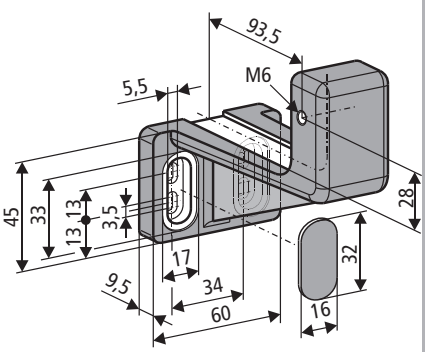
use with K-A1, K-B1, K-B87

Casement bracket F39



use with K-C1, K-E1, K-E1, K-E2, K84-1

Casement bracket F73

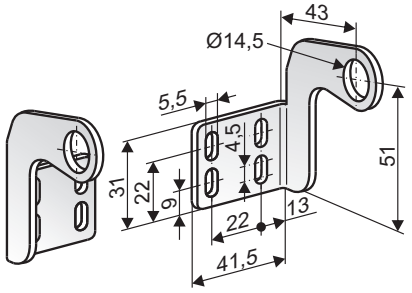


use with K-C1

INSTALLATION STEP 6: DETERMINE THE FRAME BRACKETS

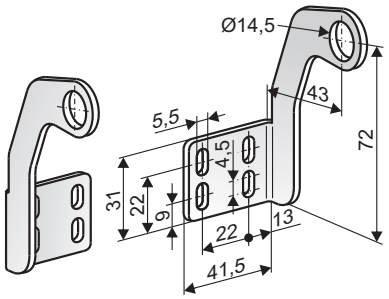
Frame brackets

Frame bracket K-A1



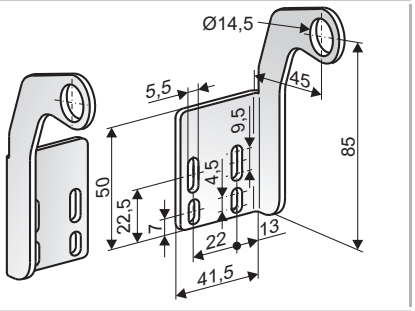
use with F14, F16, F33, F38
Space required on window frame 35 mm

Frame bracket K-B1



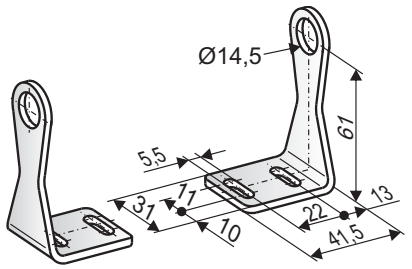
use with F14, F16, F33, F38
Space required on window frame 35 - 52 mm

Frame bracket K-B2



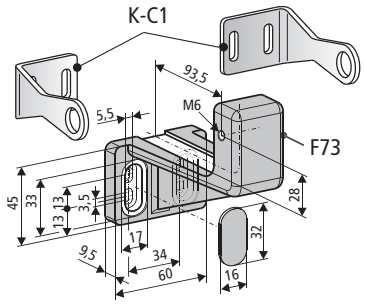
use with F14, F16, F33
Space required on window frame 35 - 52 mm

Frame bracket K-C1



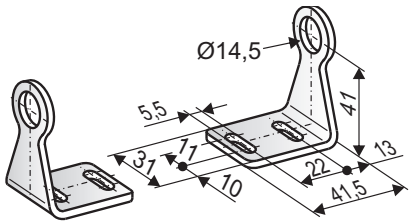
use with F14, F16, F33, F39, F73

Frame bracket K-D1



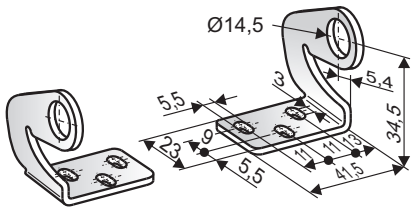
Space required on window frame 50 mm

Frame bracket K-E1



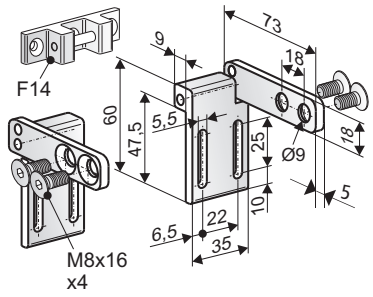
use with F14, F16, F33, F39

Frame bracket K-E2



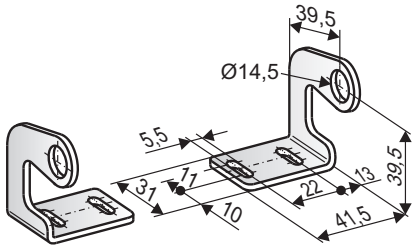
use with F14, F16, F16-1, F33, F39

Frame bracket K-F



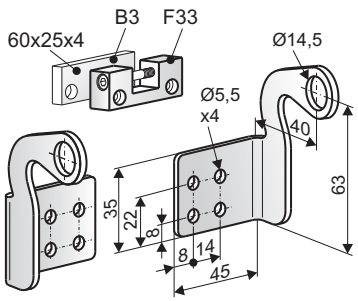
Space required on window frame 29 mm
FÜ 10 mm

Frame bracket K84-1



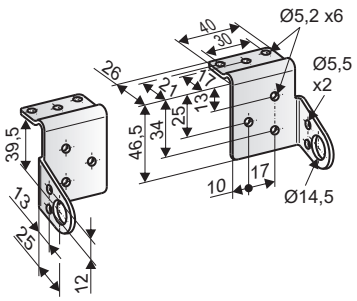
use with F14, F16, F33, F39

Frame bracket K87



use on Schüco AWS 102 (friction hinged windows)
Space required on window frame 35 mm

Frame bracket K125



use with F14 und B1(mounting angle)
on the kerb (upstand) of dome rooflights

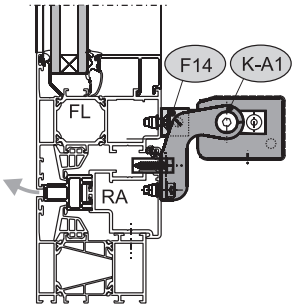
There is a wide range of window profile systems on the market. Depending on the profile design, different fitting brackets and fixings are often used. General fitting details for standard systems are illustrated on the following pages.
Separate project drawings can be supplied on request.

Application examples

Application examples for different types of windows

Top-hung outward opening Frame mounting

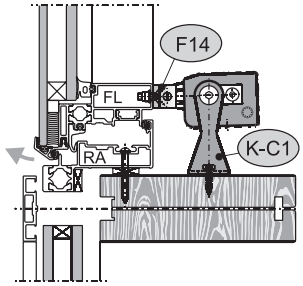
A



Detail of mounting on aluminium window

Top-hung outward opening Transom mounting

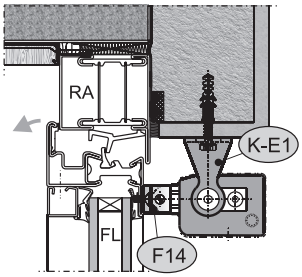
B



Detail of mounting on aluminium window

Bottom-hung outward opening Transom mounting

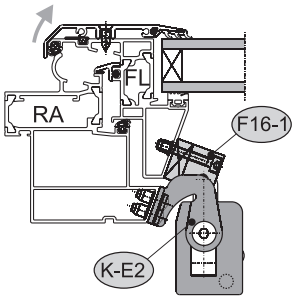
B



Detail of mounting on aluminium window

Roof Frame mounting

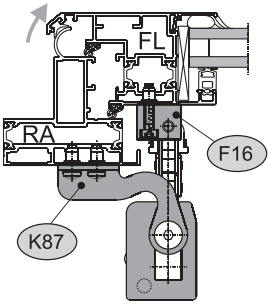
C



Detail of mounting on aluminium window

Roof Frame mounting

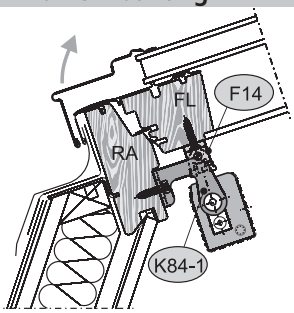
D



Detail of mounting on aluminium window

Roof Frame mounting

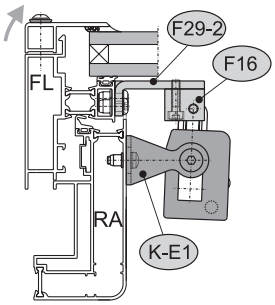
B



Detail of mounting on wooden window

Roof Frame mounting

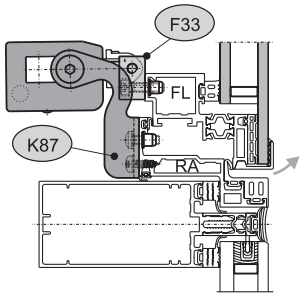
C



Detail of mounting on aluminium window

Friction hinged outward opening Frame mounting

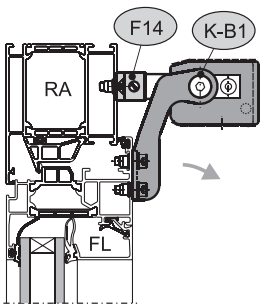
D



Detail of mounting on aluminium window

Bottom-hung inward opening Casement mounting

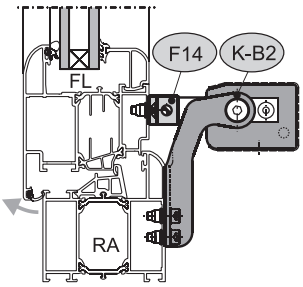
A



Detail of mounting on aluminium window

Top-hung outward opening Frame mounting

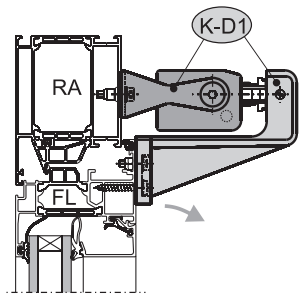
A



Detail of mounting on aluminium window

Bottom-hung inward opening Frame mounting

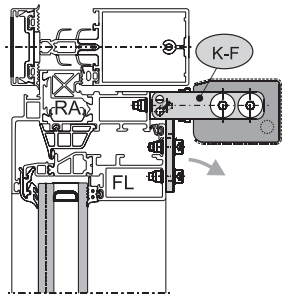
E



Detail of mounting on aluminium window

Bottom-hung inward opening Casement mounting

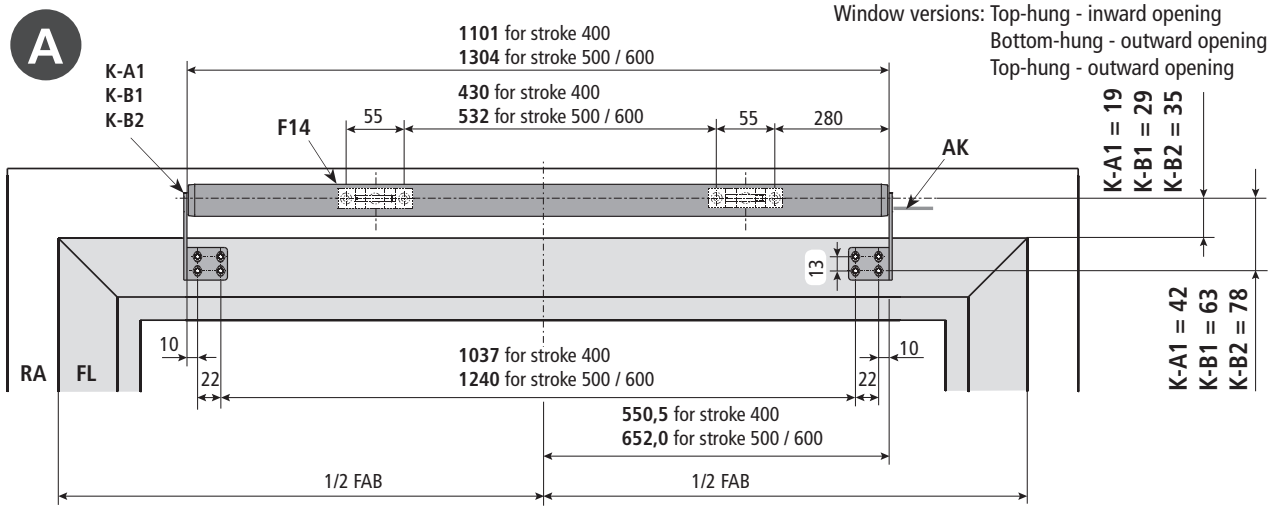
F



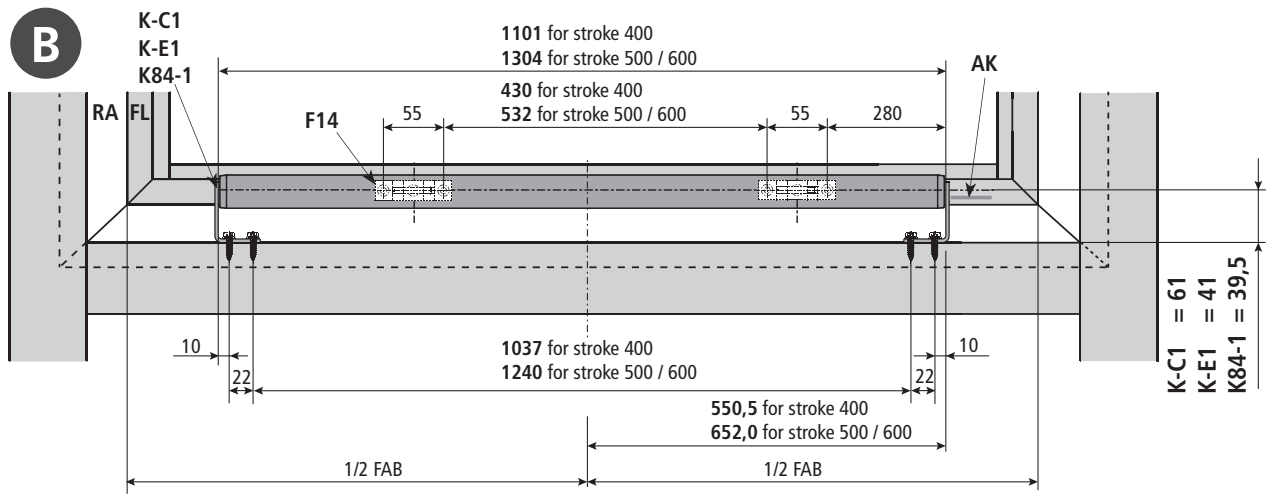
Detail of mounting on aluminium window

Installation step 7: Determine hole layout for frame bracket and casement bracket

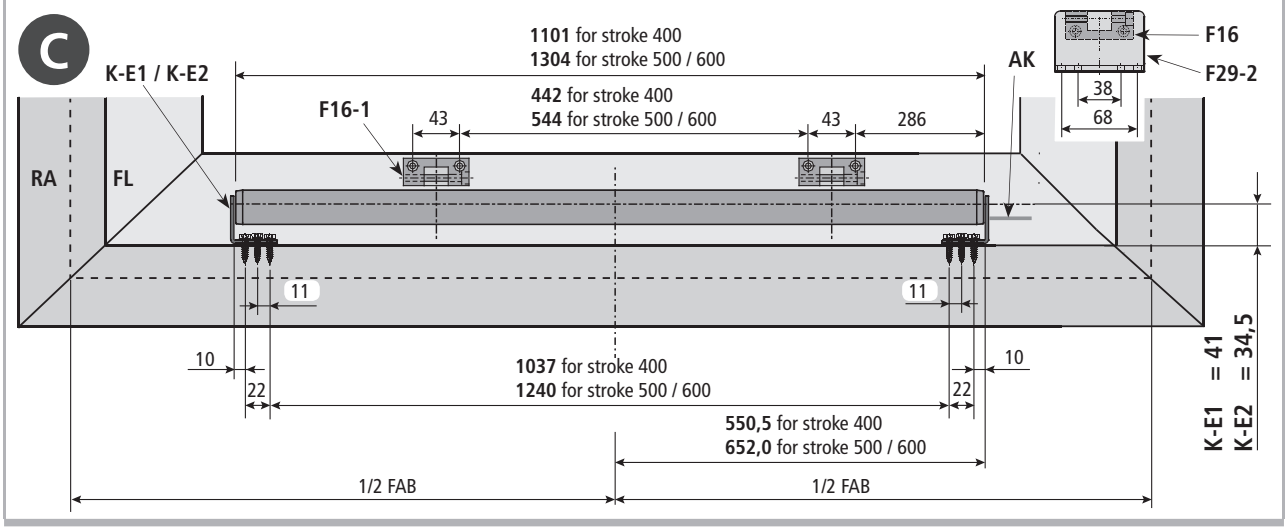
Hole layout for the frame brackets K-A1 / K-B1 / K-B2 with casement bracket F14 (Bottom-hung - inward opening)



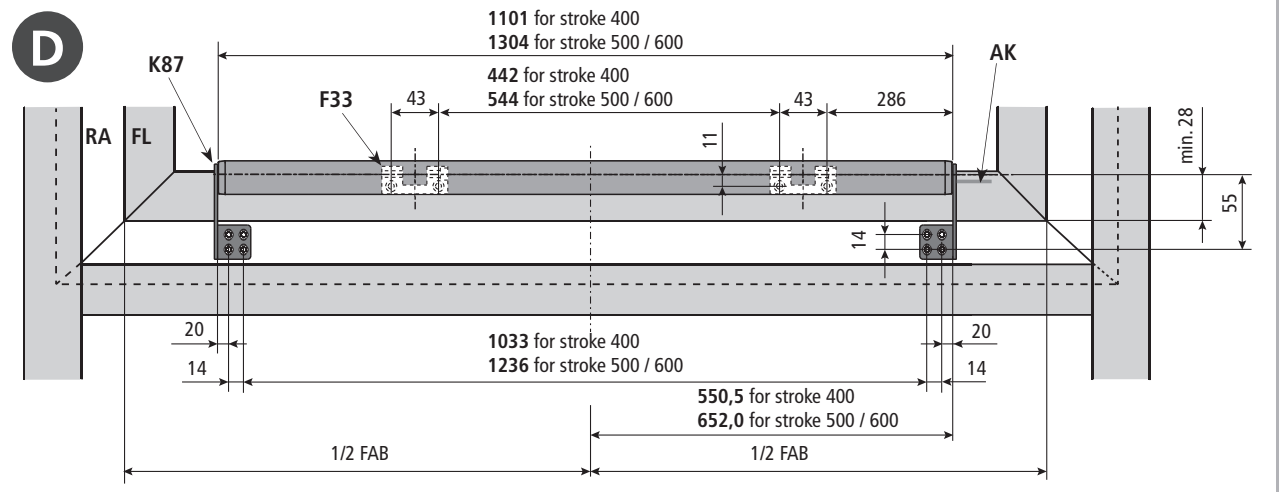
Hole layout for the frame brackets K-C1 / K-E1 / K84-1 with casement bracket F14 (Top-hung - outward opening)



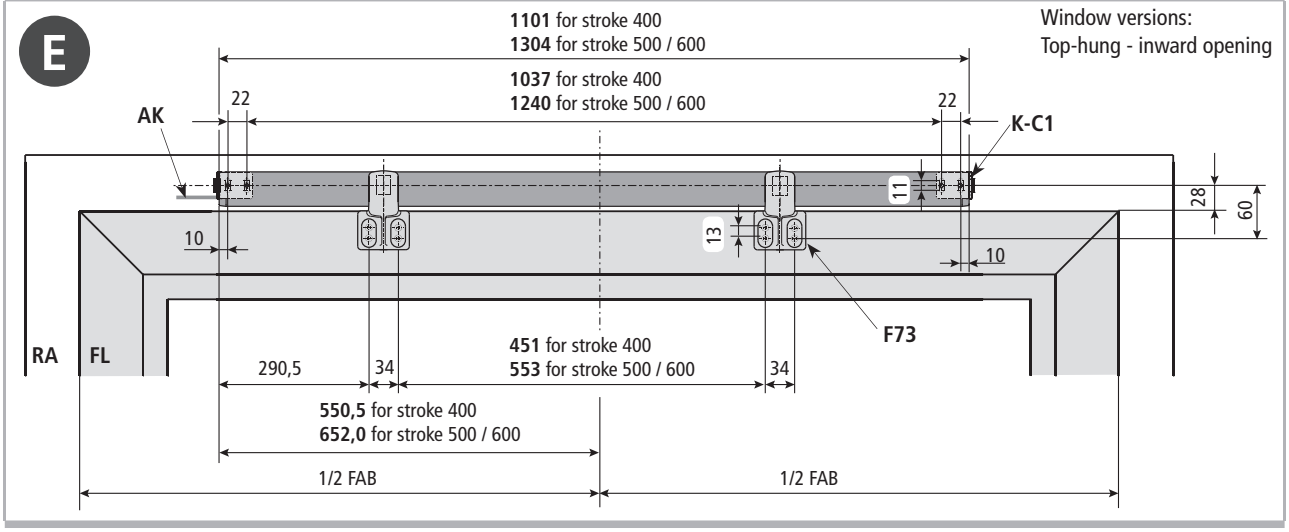
Hole layout for the frame brackets K-E1 / K-E2 with casement brackets F16-1 / F16 + F29-2 (Roof window)



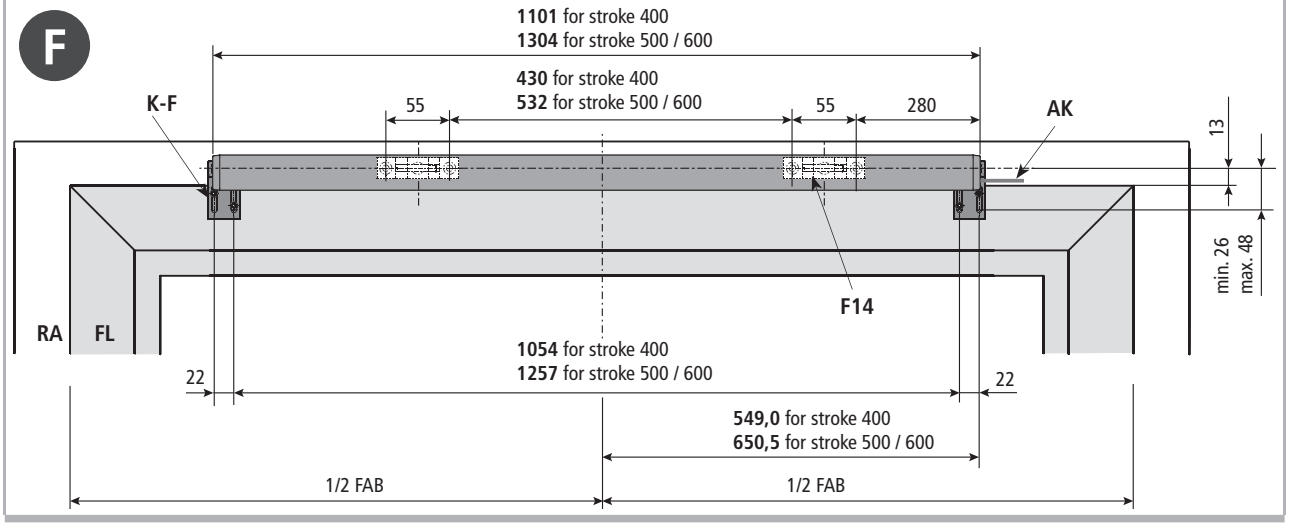
Hole layout for the frame bracket K-87 with casement brackets F16 / F33 (Friction hinged casement)



Hole layout for the frame bracket K-D1 (K-C1 with casement bracket F73) (Bottom-hung - inward opening)

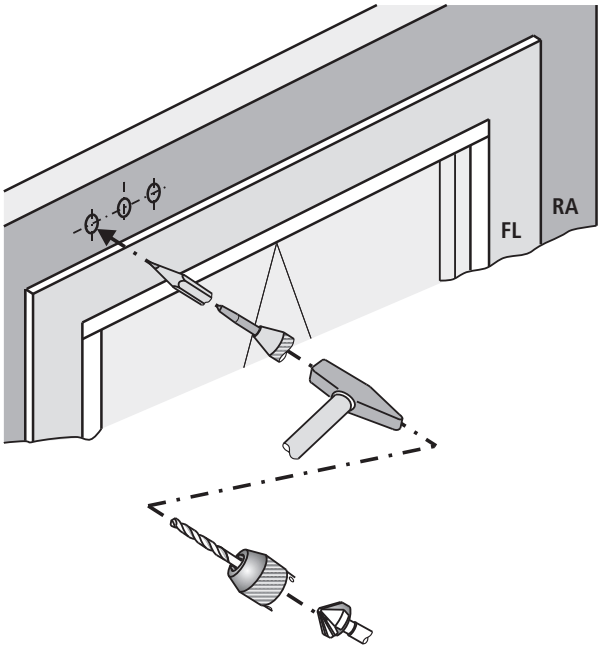


Hole layout for the frame bracket K-F (with casement bracket F14) (Bottom-hung - inward opening)

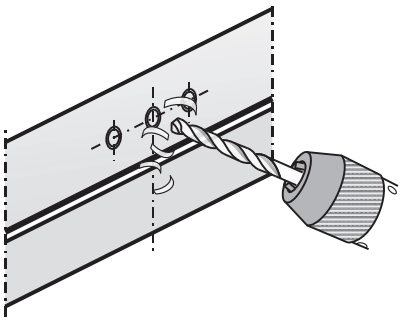


Installation step 8: Assembly casement bracket

- Determine fastenings.
- Produce drill holes with appropriate cross-section. For the mounting dimensions please refer to the above-mentioned hole layout drawings (see chapter „Installationstep 5 - 7“) or project-specific documents and drawings).

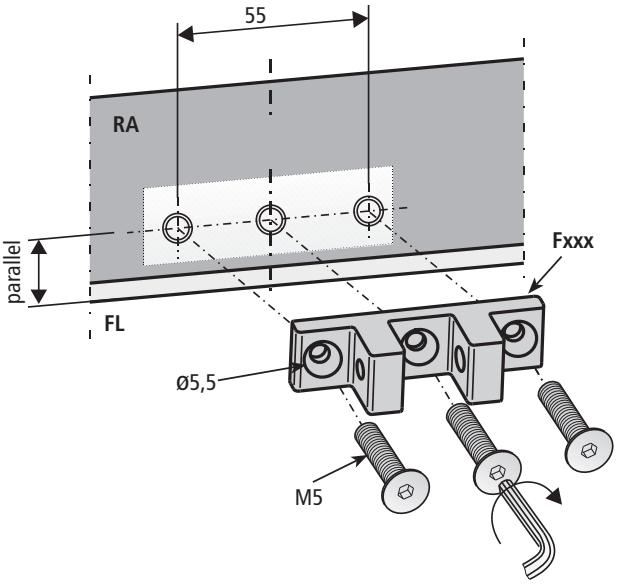


Carefully clear away drilling swarfs to prevent seals from being damaged.
Avoid surface scratches, for example by using masking tape.

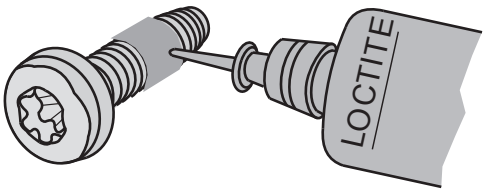


- Fit casement bracket Fxxx.

Make sure it is parallel to casement edge.
„Casement bracket“ center and „chain output“ must be in line.



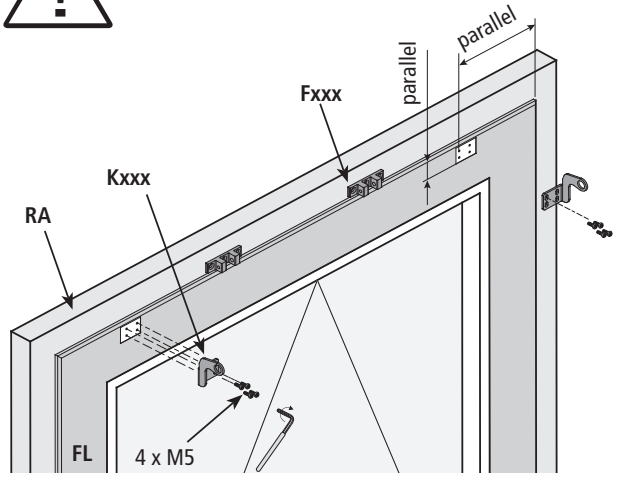
- Secure fasteners against loosening; i. e. by applying removable thread-locking compound such as “Loctite”.



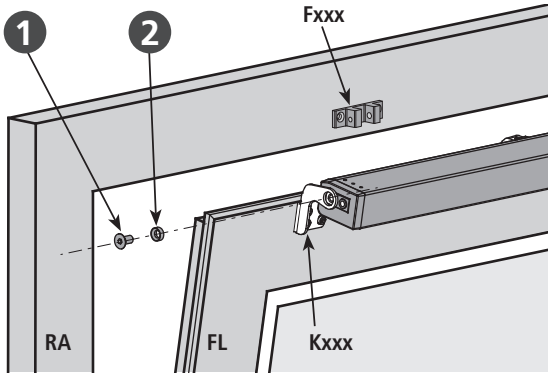
Installation step 9a:
Assembly frame bracket - Drive mounted on the window at the top

- Produce drill holes with appropriate cross-section. For the mounting dimensions please refer to the above-mentioned hole layout drawings (see chapter „Installationstep 5 - 7“) or project-specific documents and drawings).
- Fit frame brackets (Kxxx).

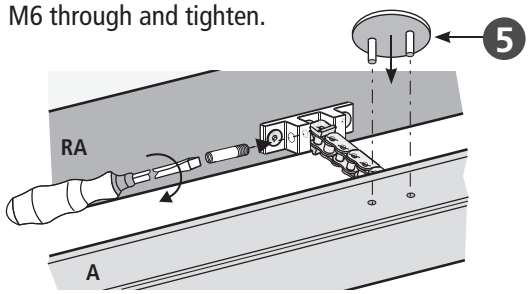
Make sure they are parallel to casement edge.



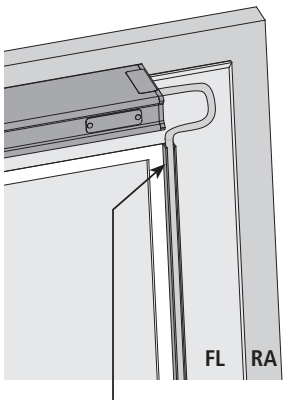
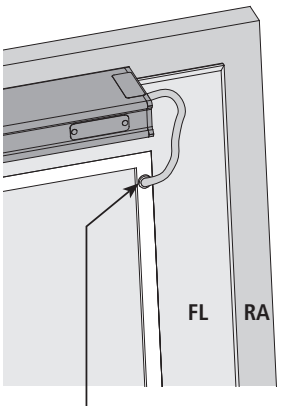
- Attach drive to the frame brackets.
- Insert brass washers ❷ and firmly tighten with countersunk screws M8 ❶. Drive should freely swivel.



- Insert the Chain unlocking key ❺ in the hole.
- Pull both chains out manually by the same distance (see chapter: „Adjusting the initial chain tension and smoot running“.
- Connect chain with casement bracket. Pass shaft screw M6 through and tighten.

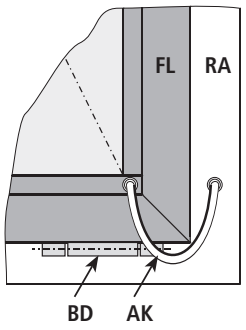
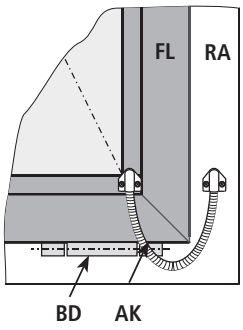


- Route cable on or in the casement.

Cable on casement	Cable in glazing bead
 Cable duct glued on (in addition secured with countersunk screws against breaking away).	 Drill hole in glazing bead (cable bushing protects against damage to cable).

Connection cable routing on the casement:
- The drive and its connection cable are swivelling. As a consequence, foresee cable routing with a loop.
- Cable must be protected against damage (shearing-off, kinking, splitting), i.e. by using bushings.

Upon removal of the glazing bead is the danger that the glass may fall.

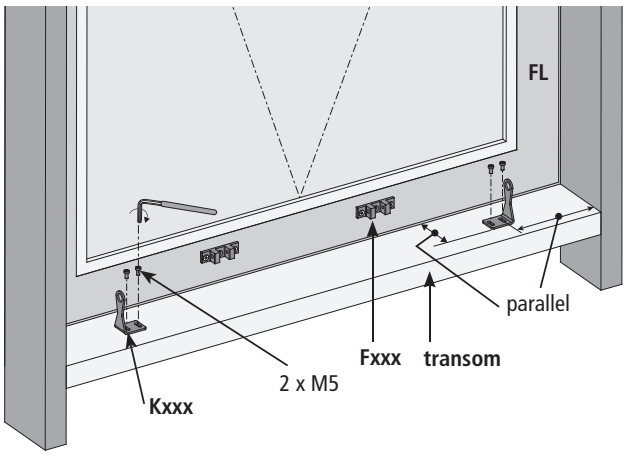
Cable crossover without protective cable hose	Cable crossover with protective cable hose
	

Connection cable routing on the hinge side:
- Make sure that during opening or closing procedure the cable will not be damaged by shearing-off, kinking, crushing.
- Protect cable feedthrough in profile e.g. by using cable bushings, cable transitions.

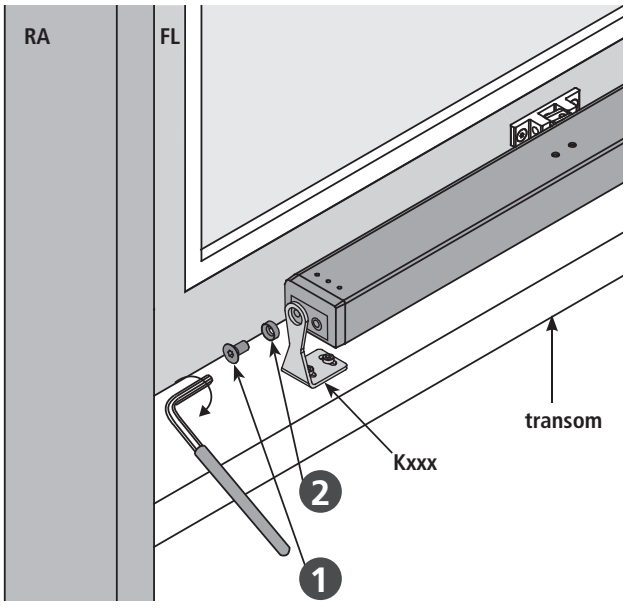
INSTALLATION STEP 9B:
ASSEMBLY FRAME BRACKET - DRIVE MOUNTED ON THE WINDOW AT THE BUTTON

- Produce drill holes with appropriate cross-section. For the mounting dimensions please refer to the above-mentioned hole layout drawings (see chapter „INSTALLATIONSTEP 5 - 7“) or project-specific documents and drawings).
- Fit frame brackets (Kxxx).

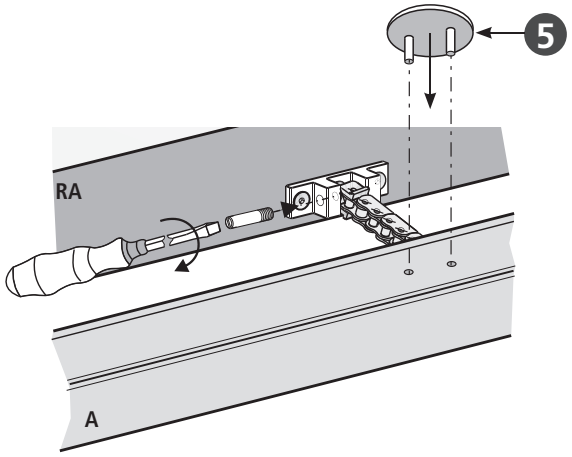
Make sure they are parallel to casement edge.



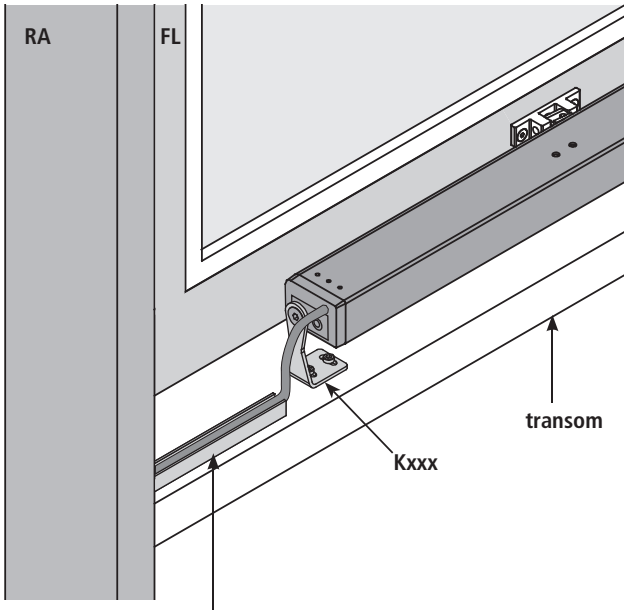
- Attach drive to the frame brackets.
- Insert brass washers ❷ and firmly tighten with countersunk screws M8 ❶. Drive should freely swivel.



- Insert the Chain unlocking key ❺ in the hole.
- Pull both chains out maually by the same distance (see chapter: „ADJUSTING THE INITIAL CHAIN TENSION AND SMOOTH RUNNING“.
- Connect chain with casement bracket. Pass shaft screw M6 through and tighten.



- Route cable on the frame or mullion/transom.
  The drive and its connection cable are swivelling. As a consequence, foresee cable routing with a loop. Cable must be protected against damage (shearing-off, kinking, splitting).



cable duct glued on
(in addition secured with countersunk screws against breaking away)

Check swiveling area (see chapter „SAFETY CHECK AND PERFORMING TEST RUN“).
Ensure that drive and connection cable can swivel freely.

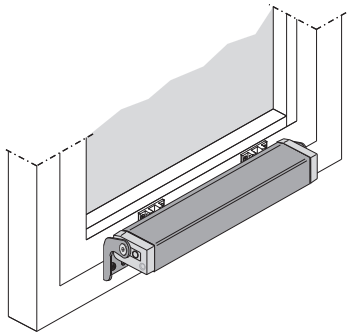
INSTALLATION STEP 10: CONCEALING THE DRIVE

The housing of the chain drive is covered using the cover profile kit (e.g. in case of change in colour).
In case of complete concealment (versions 2 and 3) the brackets are also partly covered and are hardly visible. Equally, it is possible to install the facing across the whole width of the window.

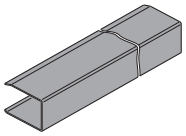
- Uniform appearance.
- Individual choice of colour (cover profile available in RAL colours).
- Adjustment to the frame dimensions, through the possibility of shortening the cover profile.
- Protection from dirt.

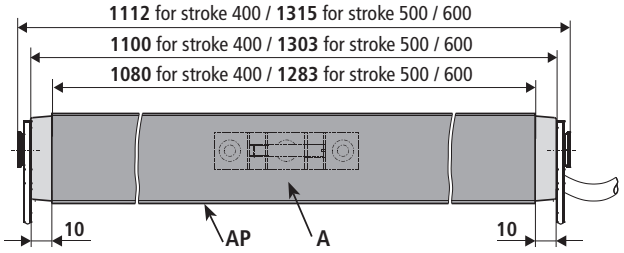
Concealment options for single use

Version 1 — Concealment of the drive (e.g. due to colour change) — Completely visible brackets



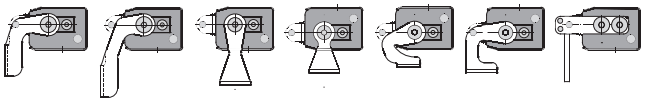
cover profile only



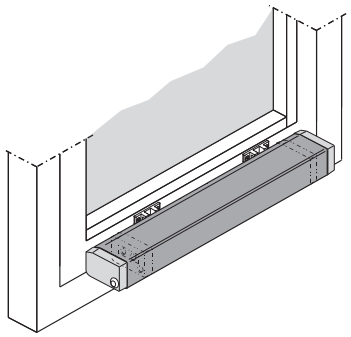


Can be used with:

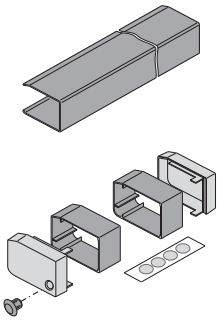
K-A1 K-B1/K-B2 K-C1 K-E1 K-E2 K84-1 K-F

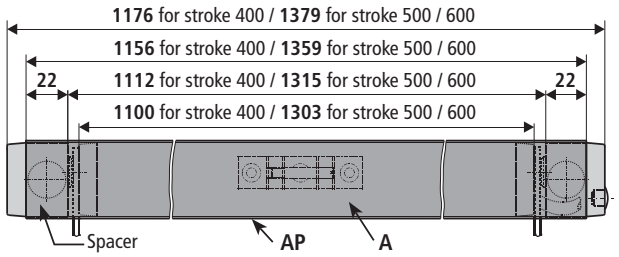


Version 2 — Complete concealment of the drive — Partially visible brackets



Cover profile and installation kit

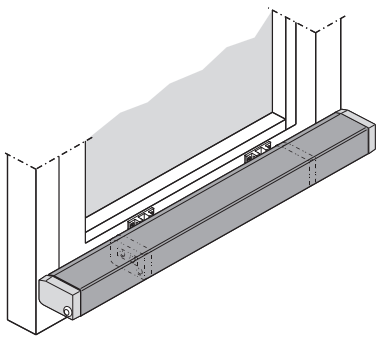




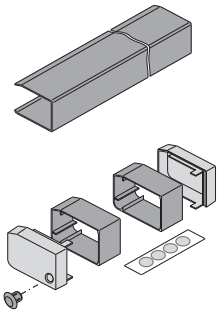
Can be used with:

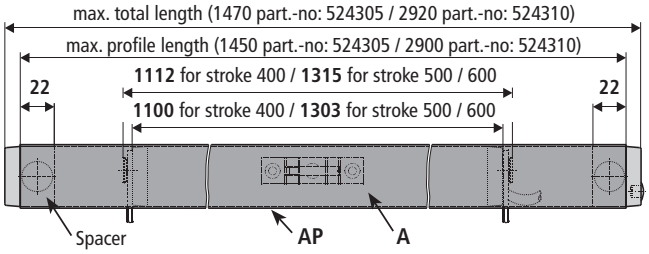
K-A1 K-B1/K-B2 K84-1 K-F

Version 3 — Variable concealment (e.g. over the whole width of the window) — Partially visible brackets



Cover profile and installation kit



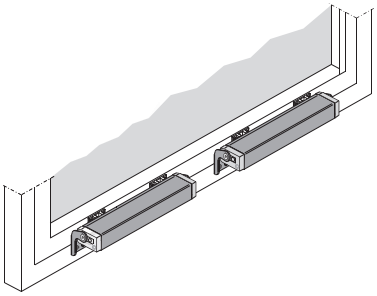


Can be used with:

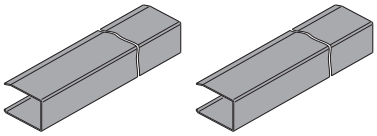
K-A1 K-B1/K-B2 K84-1 K-F

Concealment options for multiple use

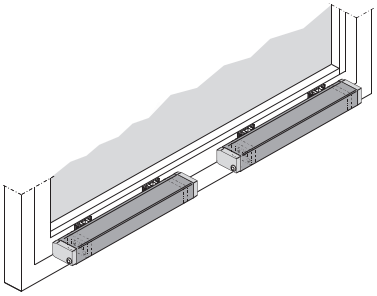
Version 1 — Concealment of the drive (e.g. due to colour change) — Completely visible brackets



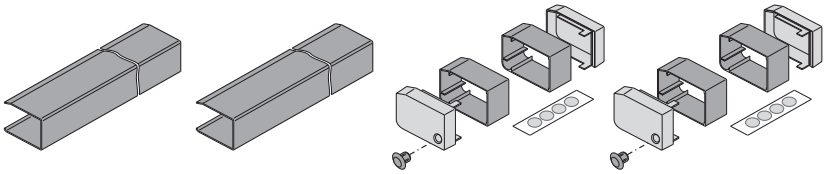
2x cover profile



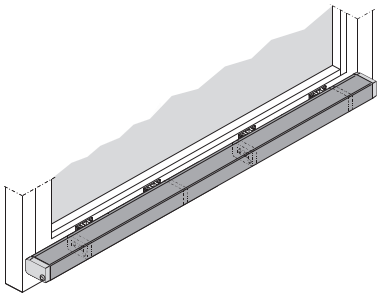
Version 2 — Complete concealment of the drive — Partially visible brackets



2x cover profile und 2x installation kit



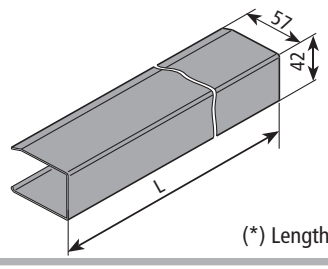
Version 3 — Variable concealment (e.g. over the whole width of the window) — Partially visible brackets



1x cover profile und 1x installation kit

Cover-profile Set

Part.-No.:	**524305 L = 1,45 m (*)** **524310 L = 2,90 m (*)** **524302 L = kundenspezifisch**
Application:	Cover profile for surface mounted drives KSA - Twin with frame bracket sets K-A1, K-B1, K-B2, K-E2, K84-1; Profile length adjustable to the lenght of the drives or of the casement.
Material / Finish:	aluminium (natural anodized) + plastic (grey)
Feature / Equipment:	incl. mounting aid for cover profile shortening on the job site + mounting set.

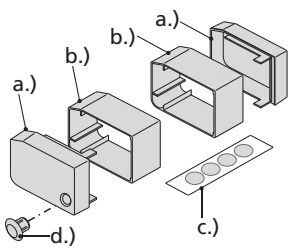


(*) Length without cover caps)

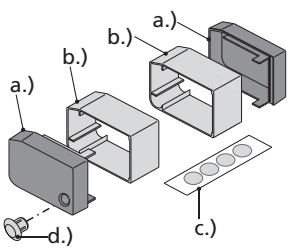
Installation Kit for cover profile (grey end caps)

Part.-No.:	**524300 Color grey** **524303 Color black**
Material / Finish:	aluminium, plastic (grey)
Feature / Equipment:	a.) 2x end cap b.) 2x spacer c.) 4x stickers d.) 1x dummy plug

Installation Kit Color: grey

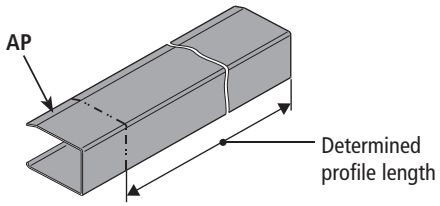


Installation Kit Color: black

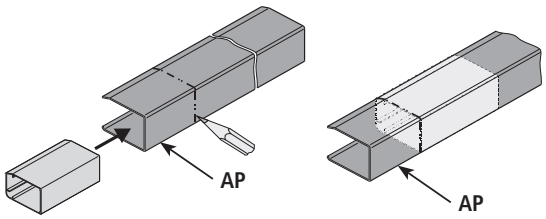


Installing the cover profile

- Select the drive facing variant required.
- Determine the profile length. (Please refer to the above tables in this chapter: „CONCEALING THE DRIVE" or the project-specific planning documents for length dimensions).

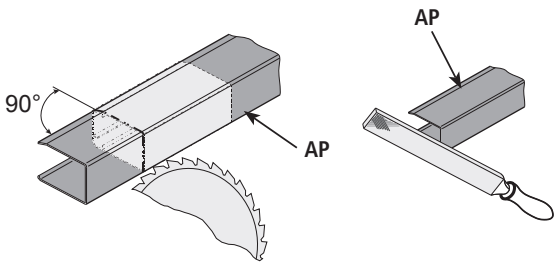


- Mark the required length.
- Push the mounting aid (piece of drive housing profile) into the cover profile.

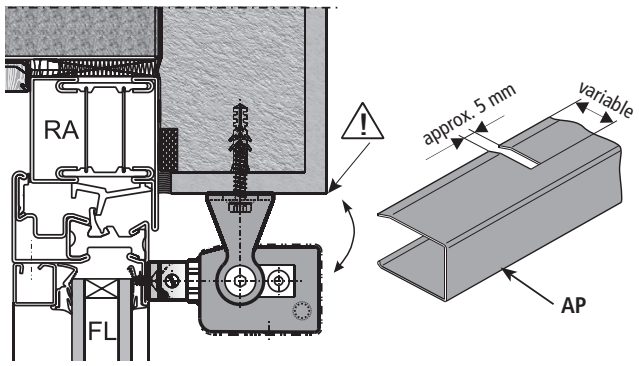


- Use a saw to shorten the cover profile to the required length.
- Deburr saw cut edge.

Ensure that you saw the profile perpendicular.

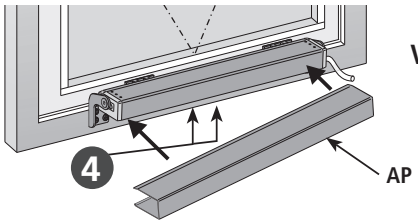


- Check the swivel area of the drive and if necessary cut out the cover profile in the area of the brackets.



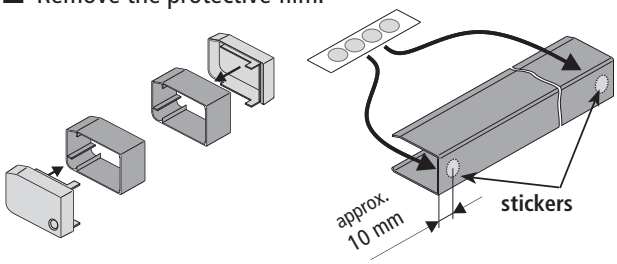
- If necessary, paint the cover profile with the required colour.

- Push on the cover profile so that it fits tightly. If necessary, remove the cover caps ❹ from the chain unlocking holes.

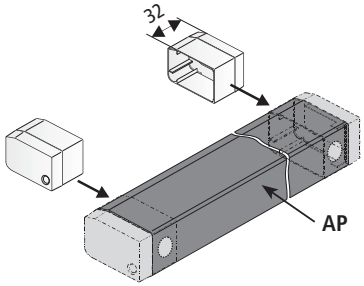


Version 1

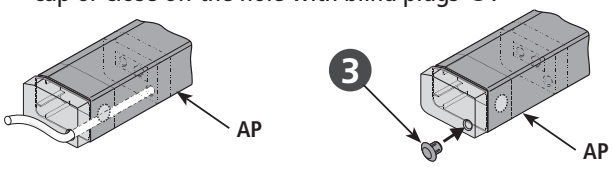
- Push both end caps onto the spacers so that they are flush.
- Glue adhesive dots on both sides in the cover profile.
- Remove the protective film.

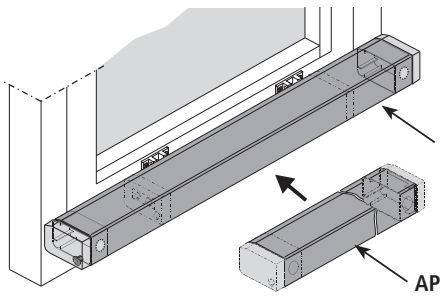


- Push the spacers together with the end caps into the profile from the front.
- Align so that they are flush.
- Press on all parts firmly in the area of the adhesive dots.



- If necessary, feed the cable through the hole in the end cap or close off the hole with blind plugs ❸.





Version 3

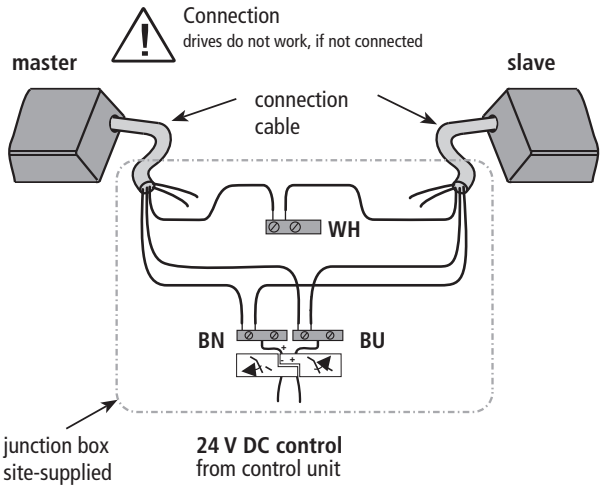
Version 2

INSTALLATION STEP 11: ELECTRIC CONNETCTION

Make sure when establishing the connection that there is no voltage at the terminals!
Unused wires must be safely insulated!

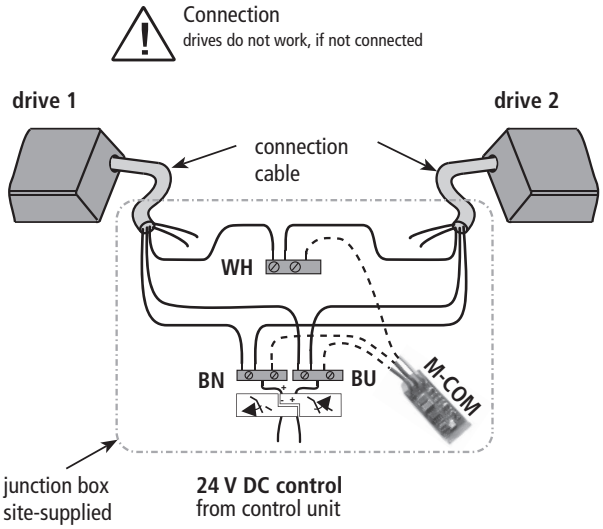
The running direction of the drive may be changed by interchanging (polarity reversal) the wires **„BN – (brown)"** - **„BU – (blue)"**.

Multi-drive operation with master and slave



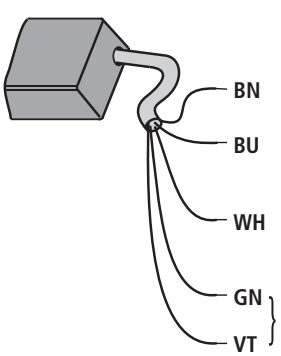
WH is used for communication, with synchronized multi-drive operation.

Multi-drive operation with M-COM



WH is used for communication, with synchronized multi-drive operation.

Connection assignment



	▲	▼
BN	+	-
BU	-	+

WH is used for communication, with synchronized multi-drive operation

Version Z:
contact max. 24 V, 500 mA (min. 10mA)

Wire colour coding

Colour	DIN IEC 757
black	BK
white	WH
brown	BN
blue	BU
green / yellow	GN / YE
green	GN
violet	VT
grey	GY

Direction of travel

OPEN ▲
CLOSE ▼

Polarity reversal

M-COM (Main control unit)

Order number:	**524177**
Application:	Main control unit for the automatic configuration and monitoring of max. 2 opening / 2 locking drives type S12 / S3 (software version SW-V2) in multi-drive systems.
Rated voltage:	24V DC +/- 20%, (max. 2 Vss)
Current consumption:	<12 mA
Drive type:	S12
Protection class:	IP30 rubber jacket
Ambient temperature:	0 °C ... + 70 °C
Dimensions:	45 x 17 x 6 mm
Connecting wires:	3 wires 0,5 mm² x 50 mm

Feature / Equipment:
printed circuit board with connecting wires for integration in site-supplied junction box.

UniPC with configuration interface

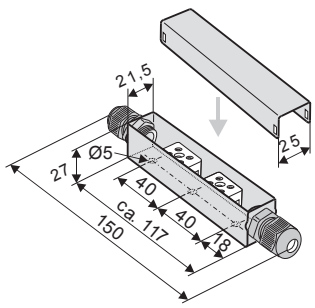
Order number:	**524178**
Application:	Hard- and software for configuration of drives supplied by Aumüller Aumatic GmbH
Rated voltage.	24V DC +/-20%
Parameterizable drives:	24V DC type MP, S3, S12, S12 V.2 230V AC type S12, S12 V.2
Scope of delivery:	software UniPC (Downloadlink*), Interface "ParInt", USB cable, connection cable * http://aumueller-intern.de/UniPC/UniPC_setup.exe
Features / Equipment: Power supply 24V DC is not included in the scope of delivery! Any extended settings require a software licence.	

Any reconfiguration of a drive is entirely at the user's own risk and responsibility.

Cable junction box (for renewal)

Order number:	**513344**
Application:	to extend a drive cable
Rated voltage:	only for low voltage to max. 50V DC/AC
Material:	stainless steel (V2A)
Protection class:	IP 40
Dimensions:	25 x 27 x 150 mm
Equipment:	with cable gland PG9 (grey) including strain relief, with loose ceramic terminals.

For multiple operation of the application is possible only with the master and slave.
(without M-COM)



Instructions on connection

Formula to calculate
the required wire cross-section of a infeed line

$$A_{mm^2} = \frac{I_{A\ (total)} \times L_{m\ (length\ infeed\ line)} \times 2}{2{,}0\,V_{\ (voltage\ drop)} \times 56\ m / (\Omega * mm^2)}$$

Calculation example

Available data:

- cut-off current per drive (i. e. 2 x 4.0A) from data sheet
- length to be bridged from the last window to the control unit (i. e. 10 meters)

$$A = \frac{(2 \times 4{,}0A) \times 10m \times 2}{2{,}0V \times 56m / (\Omega * mm^2)}$$

A = 1,42mm² -> **1,5mm²** chosen

Comply with the local regulations and directives for fire behaviour of building materials and building components (E30, E60, E90) and erection of power installations with rated voltages below 1000V!

Recommendation:
In choosing a cable, select the next higher wire cross section to anticipate possible later changes to the system (e.g. replacement of drives with greater current consumption or extension of the SHEV or ventilation line.

Connecting drive cable

- Avoid any installation area with large temperature differences, risk of water condensation
- Close to the window (shall be easily accessible later on for repair work)
- Ensure that a later removal of the connection cable is possible
- Observe maximum cable length of drives (standard length approx. 5 meters)

Safety check and Performing test run

Check safety of the assembled system and perform test run and commissioning.

Safety check:

- Connect operating voltage
- Re-check fastenings (casement bracket, frame bracket) and re-tighten if necessary

Performing test run:

- visual check of casement motion
- stop immediately in case of mulfunction
- make sure there is no collision with facade construction and, if necessary, correct assembly or re-configure

TROUBLSHOOTING, SERVICE AND REPAIR

Proper repair of a defective drive cannot be performed by the contractor or end-user and is therefore not permissible. Repairs can only be carried out by the manufacturer or by a specialist company authorized by the manufacturer.
Unauthorized opening or manipulation of the drive causes loss of warranty.

1. Exchange a faulty drive or have it repaired by the manufacturer.
2. If problems occur during installation or normal operation, use the following table for troubleshooting.

Problem	Possible causes	Possible solutions
Drive does not start	• Duration of mains power supply too short	• Adjust supply voltage as specified in the technical documentation
	• Drive run direction not correct	• Check drive cables
	• Connecting cable not connected	• Check all connection cables
	• Power supply / Control Unit voltage incorrect, too high or too low (see data sheet)	• Check power supply unit and replace if necessary
	• No mains supply to power supply unit / Control Unit (no voltage)	• Connect power supply
Drive doesn't start after having been in operation several times	• Operating time has been exceeded, drive has been overheated	• Wait until drive has cooled down and start again
	• See possible solutions above associated with „Drive doesn't start"	• See possible solutions associated with: "Drive doesn't start"
Drive doesn't close	• Closing edge safety mechanism has been triggered	• Release safety area for operation and reset closing edge safety mechanism
	• See possible solutions above associated with „Drive doesn't start"	• See possible solutions associated with: "Drive doesn't start"
Drive travels uncontrolled in open and close direction	• Residual ripple of power supply / control unit too hight	• Adjust drive voltage to the required value of drive. (values see data sheet of drive)
	• Fault in power supply unit / control unit	• Check output voltage of power supply unit or control unit

MAINTENANCE AND MODIFICATION

Prior to any maintenance work or modification of the system (e.g. exchange of the drive) the mains voltage and – where available – the batteries shall be disconnected in all poles and secured against unintended operation (lock in separated position).
Lasting functionality and safety of the drive require maintenance by specialized staff at regular intervals (in the case of SHEV systems the legal requirement is once a year). Check the system for operational availability on a regular basis. This is also recommended for a system with purely natural ventilation. At short intervals, check system for imbalance and signs of wear or damage of cables, springs and fasteners.
Remove any contamination from the drive when servicing the system. Check mountings and clamping screws for tight fit. Test the devices by opening and closing them in test runs.
The drive itself is maintenance-free.
Faulty devices may only be repaired in our plant. Only original parts from the manufacturer may be used. If the mains cable is damaged it must be replaced by the manufacturer or its service agent or a similarly qualified person in order to avoid hazards.
We recommend a scheduled Maintenance Agreement.
When cleaning the window, make sure that no water or cleaning agents reach the drives.
Protect the drives from dirt and dust during construction phase.

Take all safety-related measures required during servicing, in particular protective measures against falling, finger crushing and safe access to the work place.

1. Drive / open the power-operated casement to its full opening width (SHEV or ventilation angle).
2. Disconnect the system from the power supply, deactivate batteries, where appropriate, and secure against automatic or manual release.
3. Inspect window and fittings for any damage.
4. Check all mechanical fixings (observe torque specifications in the assembly instruction).
5. Check electric drives for any damage and dirt.
6. Check connections cables (drive cables) for
   - tightness of cable gland
   - operability of strain relief
   - damages
7. Check smooth movement of the hinges and fittings and re-adjust, if necessary, or apply lubricants such as silicone spray (adhere to the specifications of the window system manufacturer).
8. Inspect / check seals (all the way round) and, if necessary, remove contaminations or replace.
9. Maintain the system (e.g. wipe with a wet cloth the opening element of the drive „chain" or „spindle" using non-acidic / lye containing agents and dry with a dry cloth and - if necessary lubricate with cleaning oil (e.g. Ballistol)).
10. Re-connect to power supply.
11. Open and close power-operated window using the hand-held control (function test).
12. Check safeguards for finger protection and re-adjust, if necessary).
13. Check that CE-label is attached to the power-operated element, e.g. NSHEV.
14. Check that warning notes and label on the drive are available.
15. If required, carry out a risk assessment according to Machinery Directive 2006/42/EC
    (for example if the machine has been modified).

Removal and disposal

To remove the drive, reverse the sequence used for fitting. Adjustment work is not required.

1. Before removing a drive, disconnect it from the power supply.
2. When removing a drive, the window must be secured against unintended opening.

Dispose of the parts in accordance with the applicable local or national legal regulations.

Target Group

These instructions are intended for qualified operators of Natural Smoke and Heat Exhaust Ventilation systems (NSHEV /SHEV) and Natural Ventilation of windows and familiar with the operating modes as well as with the residual risks of the system.
This device is not intended to be used by persons (including children) with limited physical, sensory or mental aptitude or lack of experience and/or knowledge unless they are supervised by a person responsible for their safety or have received instruction from this person as to how the device is used. Children should be supervised to ensure that they do no play with the device.
Cleaning and user servicing must not be carried out by children without being supervised.

Operation of the power-operated window
Switchs with OFF-default setting (i. e. key switch) shall be located within eyeshot of the operated window but in a safe distance from moving parts. If it is not a key switch, the switch must be installed at a height of at least 1.5 m and out of reach for unauthorized operation.
Drives that are provided with a manual actuator must be provided with a sign indicating how to use it. The sign shall be fixed permanently and clearly visible next to the manual actuator.

⚠ **Caution**

During the opening operation all persons should be kept clear off the window - directly below or right next to it (within the opening radius of the casement) since operating the manual switch may lead to uncontrolled movements of the driven part, for example due to mechanical failure or imbalance.

Do not allow children playing with fixed control devices and keep remote controllers out of children's reach.

Keep all other persons clear off the window if a switch with OFF-default setting is operated when the window closes. Keep all other persons clear off the window that closes when being operated by a smoke exhaust system.

⚠ **Warning**

Do not operate the window during repair or adjustment work.

Warranty and after-sales service

Basically our:

„General Terms and Conditions of Goods and Services by the Electrical Industry" issued by the Central Association of the Electrical Engineering and Electronics Industry (ZVEI) are applicable.

This warranty complies with legal requirements and applies to the country in which the drive was purchased.
The warranty covers material and manufacturing faults that occur during normal use of the products.

The warranty period for materials supplied is 12 months.

Warranty and liability claims with damages to property and persons will be excluded if they are due to one or several of the following causes:

- Improper use of the drive.
- Improper assembly, commissioning, operation, maintenance or repair of the drive.
- Operating the drive with defective, improperly installed or malfunctioning safety and protection devices.
- Failure to comply with the notes and assembly pre-requisites as specified in these instructions.
- Unauthorized constructional modifications to the drive or to accessories.
- Cases of catastrophe caused by foreign objects and Acts of God.
- Wear.

For possible warranty claims or required spare parts or accessories please contact your nearest branch office or the competent contact person at
Aumüller Aumatic GmbH.
Details can be found on our website
(www.aumueller-gmbh.de).

Liability

We reserve the right to change or adjust products at any time without prior notice. Illustrations are subject to change. Although we take every care to ensure accuracy, we cannot accept liability for the content of this document.

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EINBAUERKLÄRUNG

für eine unvollständige Maschine
(nach Anhang II-1 B der EG-Richtlinie 2006/42/EG)

Declaration of incorporation

For a partly completed machinery
(in accordance with Annex II-part B of EG- Directive 2006142/EG)

Hersteller
Manufacturer
Aumüller Aumatic GmbH
Gemeindewald 11
86672 Thierhaupten, Germany

Produktbezeichnung
Product designation

Kettenantrieb / Chain Drive
KSA S12 24VDC, KSA S12 230VAC, KSA-Twin S12 24VDC, KSA-Twin S12 230VAC

Folgende grundlegende Sicherheits- und Gesundheitsschutzanforderungen nach Anhang 1 der o.a. EG- Richtlinie sind angewandt und eingehalten:
Follow basic compromise of safety and health protection requirements are applied and follow in accordance with Annex II-1 B of s.a. *EG- Directive:*
Nr.*/ no: 1.1.2; 1.1.3; 1.1.5/ 1.2. 1 / 1.3.2-7 / 1.5.1; 1.5.4; 1.5.11 / 1.6.1/ 1.7.1; 1.7.3; 1.7.4, -4.1, -4.2, -4.3*

Die speziellen technischen Unterlagen nach Anhang VII B wurden erstellt
The relevant technical documentation described in Annex VII, part B is prepared

Die Montageanleitung nach Anhang VI wurde erstellt
Assembly instructions described in Annex VI are prepared

Wir bestätigen die Konformität des oben bezeichneten Produktes mit folgend gelisteten EG- Richtlinien sowie Normen:
Richtlinie über elektromagnetische Verträglichkeit 2004/108/EG, Niederspannungsrichtlinie 2006/95/EG
We confirm herewith the conformity of the above mentioned product with EG Directive and the standards listed below:
Directive concerning Electromagnetic Compatibility 20041108/EC, low voltage Directive 2006195/EC

Hiermit erklären wir, dass das Teil in der von uns gelieferten Ausführung und gemäß den beigefügten Betriebs- und Installationshinweisen zum Einbau in eine Maschine bestimmt ist, und ihr Betrieb solange untersagt ist, bis festgestellt ist, dass die Maschine, in die genanntes Teil eingebaut werden soll, den Bestimmungen der EG Maschinenrichtlinie 2006/42/EG entspricht.
We herewith declare that the part in the version delivered by us *is intended to be installed in* a *machine in accordance with the enclosed operating and installation instructions, and that its operation is prohibited until the machine, into which the part is to be installed, is found to comply with the regulations of the EG Machine Directive 2006142/EG.*

Wir werden der zuständigen Behörde ggf. die vorgenannten speziellen technischen Unterlagen in Form von Papier oder elektronisch übermitteln.
We shall transmit the afore said relevant technical documentation in hardcopy- / or electronic form to appropriate authority.
Die vorgenannten speziellen technischen Unterlagen können angefordert werden bei:
The afore said relevant technical documentation can be required by follow person:

Rechtsverbindliche Unterschrift:
Legally binding signature:

Thierhaupten, den 06.05.2014
Gemeindewald 11
86672 Thierhaupten

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KONFORMITÄTSERKLÄRUNG

Declaration of conformity

Hersteller
Manufacturer
Aumüller Aumatic GmbH
Gemeindewald 11
86672 Thierhaupten, Germany

Produktbezeichnung
Product designation

Kettenantrieb / Chain Drive
KSA S12 24VDC, KSA S12 230VAC, KSA-Twin S12 24VDC, KSA-Twin S12 230VAC

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Directive concerning Electromagnetic Compatibility 20041108/EC, low voltage Directive 2006195/EC

Angewandte harmonisierte Normen insbesondere:
Harmonized Standards

DIN EN 61000-6-3

DIN EN 61000-6-4

Angewandte sonstige technische Normen und Spezifikationen: (wenn zutreffend)
Further technical Standards and Specifications:

DIN EN 60335-2-103:2010-05

Rechtsverbindliche Unterschrift:
Legally binding signature:

Thierhaupten, den 06.05.2014
Gemeindewald 11
86672 Thierhaupten

BUREAU VERITAS
Certification

Zertifikat

für

aumüller
Innovativ in die Zukunft

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Mit dem Produktionsstandort:
Am Gemeindewald 11-13
D-86672 Thierhaupten

Bureau Veritas Certification bestätigt, dass das Management-System der oben genannten Organisation beurteilt wurde und die in den folgenden Normen und Regelwerken festgelegten Anforderungen erfüllt.

Normen/Regelwerke

DIN EN ISO 9001:2008

Anwendungsbereich

Entwicklung, Herstellung und Vertrieb von Produkten und Systemen für Rauch- und Wärmeabzug, natürliche Gebäudelüftung, automatische Tür- und Toranlagen sowie damit verbundene Wartungs-, Dienst- und Serviceleistungen

Datum der Erstzertifizierung: 24.07.2002

Datum des Audits: 19.08.2011 Datum der nächsten Rezertifizierung: 18.08.2014

Während der Gültigkeitsdauer dieses Zertifikates müssen die Anforderungen der Normen/Regelwerke kontinuierlich erfüllt werden, was durch regelmäßige Überwachung durch Bureau Veritas Certification sichergestellt wird.

Zertifizierungsdatum: 24.11.2011 Gültigkeit des Zertifikates: 23.11.2014

Über die Gültigkeit dieses Zertifikates wird Bureau Veritas Certification auf Anfrage jederzeit Auskunft geben. Weitere Auskünfte über das Managementsystem und den Anwendungsbereich sind über die Organisation selbst zu bekommen.

Local Technical Manager

Datum: 12.12.2011
Zertifikatsnummer: **DE002432-1**

Deutscher Akkreditierungs Rat
DAR

Bureau Veritas Certification Germany GmbH
Veritaskai 1 · 21079 Hamburg

Translation of the original instructions (German)

Once the assembly and commissioning has been completed, the installer of a machine „power-operated window and door" shall hand these instructions over to the end-user. The end-user shall store these instructions in a safe place for further reference and use, if required.

Important note:
We are aware of our responsibility, which is why we present life-supporting and value-preserving products with greatest possible conscientiousness. Although we make every effort to ensure that the data and information are as correct and up-to-date as possible, we still cannot guarantee that they are free from mistakes and errors.
All information and data contained in this document are subject to alterations without prior notice. Distribution and reproduction of this document as well as the use and disclosure of its content is not authorized unless expressly approved. Offenders will be held liable for the payment of damages. All rights reserved in the case of a patent award or utility model registration.
Basically the General Terms and Conditions of Aumüller Automatic GmbH apply to all offers, supplies and services.

The publication of these assembly and commissioning instructions supersedes all previous editions.

Contact us during our business hours: Monday - Thursday 8 am to 4 pm and Friday 8 am to 12 am.

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