Electric Motor Drive Type: GGM 24 / 400 N, 650 N and 1000 N with Electronic Limit Stop and Bracket

Description:

These electric motor drives 24V DC are used for smoke extraction and ventilation systems for the actuation of skylights, roof vents and windows. Ready for connection.
Connecting cable 2 x 0.75 mm², temperature resistant SIHF.

Actuation:
Actuated by SHEV control systems of various sizes (determined by the number of drives).

Standard sizes:

Type:	Stroke:	Dim.: X
GGM 24/ 100	100 mm	376 mm
GGM 24/ 200	200 mm	476 mm
GGM 24/ 300	300 mm	576 mm
GGM 24/ 400	400 mm	676 mm
GGM 24/ 500	500 mm	776 mm
GGM 24/ 600	600 mm	876 mm
GGM 24/ 700	700 mm	976 mm
GGM 24/ 1000	1000 mm	1276 mm

Bracket Article No. 260.011 for upper suspension is included.

Specifications:
Type of protection: IP 54
Voltage: 24 Volt DC
Current: at rated load approx. 0.5 A, cutoff current approx. 1 A
Weight: approx. 1.5 kg (Basis 500 mm Hub)
Power: approx. 400 N, 650 N or 1000 N
Running time: approx. 25 sec. at 100 mm Hub and 400 N, rated load
Running time: approx. 32 sec. at 100 mm Hub and 650 N, rated load
Running time: approx. 56 sec. at 100 mm Hub and 1000 N, rated load

Article No.

with external limit stop		
400 N	650 N	1000 N
200.099	-	-
200.200	300.200	300.309
200.300	300.300	300.310
200.400	300.400	300.311
200.500	300.500	300.312
200.600	300.600	300.313
200.700	300.700	300.314
200.999	300.999	-

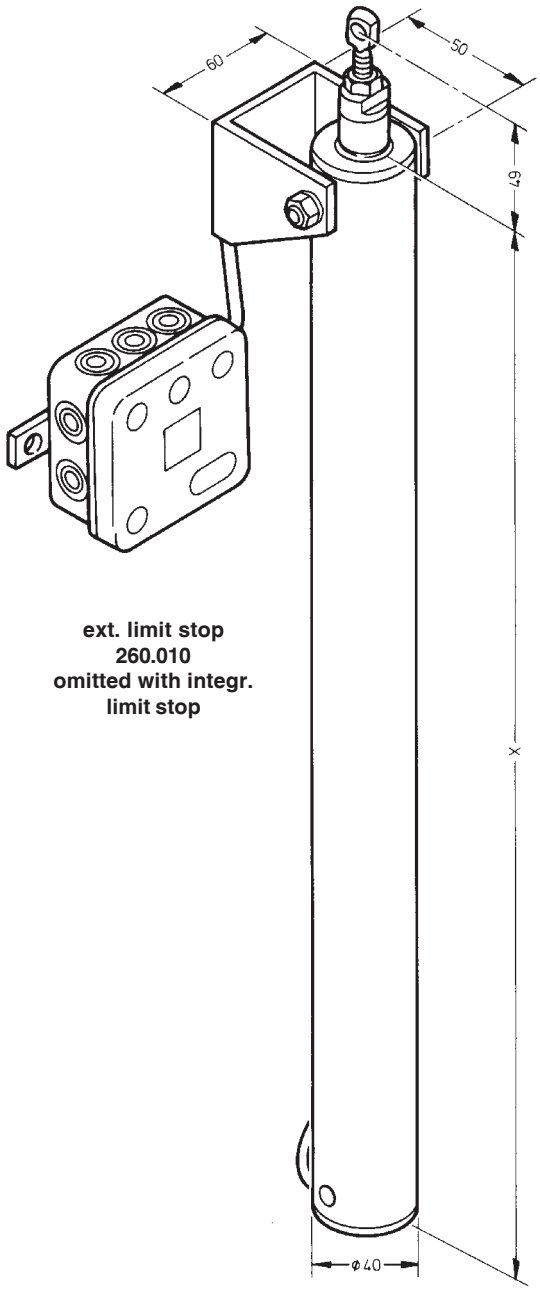
with integrated limit stop		
400 N	650 N	1000 N
202.099	-	-
202.200	302.200	302.309
202.300	302.300	302.310
202.400	302.400	302.311
202.500	302.500	302.312
202.600	302.600	302.313
202.700	302.700	302.314
202.999	302.999	-

Design of drive:
Stable aluminum housing, anodized, push rod guided by VA bearings.
Optimal opening and closing of skylights, vents, and windows.
Electronic limit stop prevents damage to connected mechanism in case of jamming.
Hermetically sealed gearing with permanent lubrication.
Lifting spindle with ball bearings.

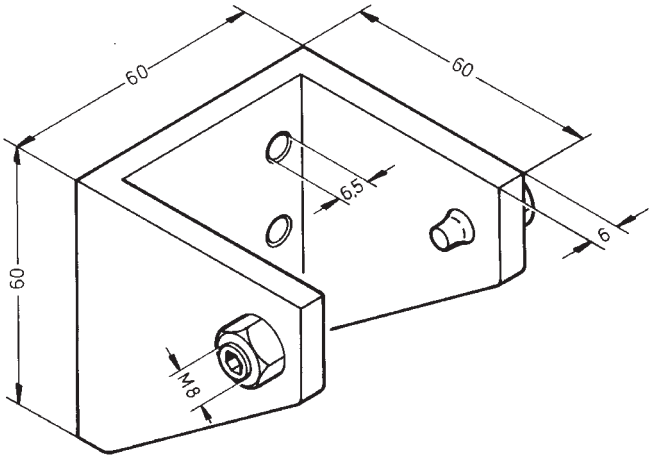
Extended motor connection cable 280.103
The standard factory installed, temperature resistant connecting cable with a length of about 1.5 m can be supplied longer, if required. Please, specify the required total length.

Painting of motor housing 280.010
The extra cost for painting of motor housings type GGM 24 or PGM 24 in RAL 9010 (weiß) depends on the stroke of the motor.
Other RAL colors available after consultation of the manufacturer.

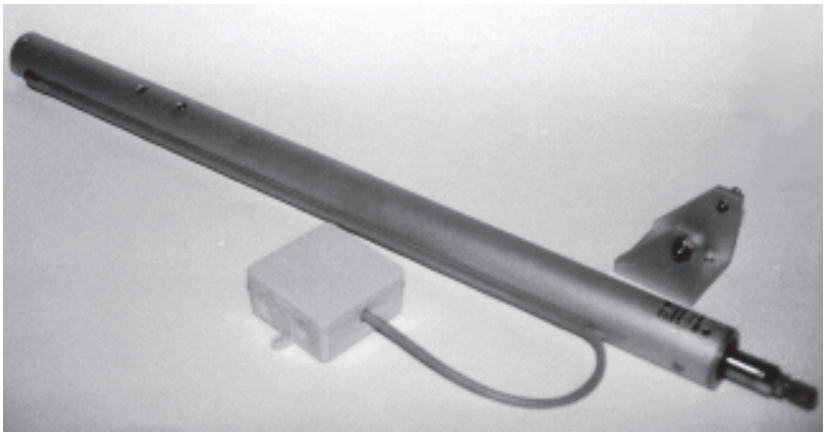
Electric Motor Drive Type: GGM 24 / 400 N, 650 N and 1000 N with Electronic Limit Stop and Bracket



ext. limit stop
260.010
omitted with integr.
limit stop



upper bracket
260.011



Electric Motor Drive 24 Volt DC, Type: GGM 24 / 400 N, 650 N and 1000 N with Electronic Limit Stop and Bracket for Bottom Suspension

Description:

These electric motor drives 24V DC are used for smoke extraction and ventilation systems for the actuation of skylights, roof vents and windows. Ready for connection.
Connecting cable 2 x 0.75 mm², temperature resistant SIHF.

Actuation:
Actuated by SHEV control systems of various sizes (determined by the number of drives).

Standard sizes:

Type:	Stroke:	Dim: X
GGM 24/ 100	100 mm	376 mm
GGM 24/ 200	200 mm	476 mm
GGM 24/ 300	300 mm	576 mm
GGM 24/ 400	400 mm	676 mm
GGM 24/ 500	500 mm	776 mm
GGM 24/ 600	600 mm	876 mm
GGM 24/ 700	700 mm	976 mm
GGM 24/ 1000	1000 mm	1276 mm

Specifications:
Type of protection: IP 54
Voltage: 24 Volt DC
Current: at rated load approx. 0.5 A, cutoff current approx. 1 A
Weight: approx. 1.5 kg (Basis 500 mm Hub)
Power: approx. 400 N, 650 N or 1000 N
Running time: approx. 25 sec. at 100 mm Hub and 400 N, rated load
Running time: approx. 32 sec. at 100 mm Hub and 650 N, rated load
Running time: approx. 56 sec. at 100 mm Hub and 1000 N, rated load

Design of drive:
Stable aluminum housing, anodized, push rod guided by VA bearings.
Optimal opening and closing of skylights, vents, and windows.
Electronic limit stop prevents damage to connected mechanism in case of jamming.
Hermetically sealed gearing with permanent lubrication.
Lifting spindle with ball bearings.

Article No.

with external limit stop

400 N	650 N	1000 N
200.098	-	-
200.201	300.201	300.319
200.301	300.301	300.320
200.401	300.401	300.321
200.501	300.501	300.322
200.601	300.601	300.323
200.701	300.701	300.324
200.998	300.998	-

with integrated limit stop

400 N	650 N	1000 N
201.098	-	-
201.201	301.201	301.309
201.301	301.301	301.310
201.401	301.401	301.311
201.501	301.501	301.312
201.601	301.601	301.313
201.701	301.701	301.314
201.998	301.998	-

U brackets for bottom suspension

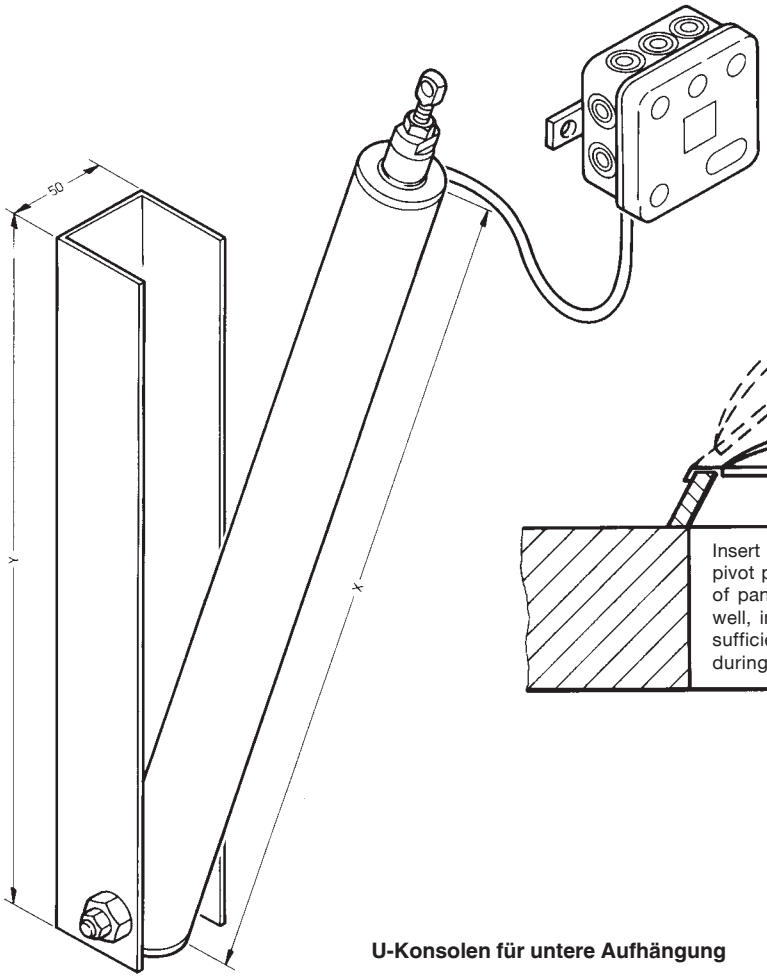
U-bracket for electric motor drive, dim. Y = 350 mm	200.350
U-bracket for electric motor drive, dim. Y = 450 mm	200.450
U-bracket for electric motor drive, dim. Y = 550 mm	200.550
U-bracket for electric motor drive, dim. Y = 650 mm	200.650
U-bracket for electric motor drive, dim. Y = 750 mm	200.750

Do not use longer U-brackets!

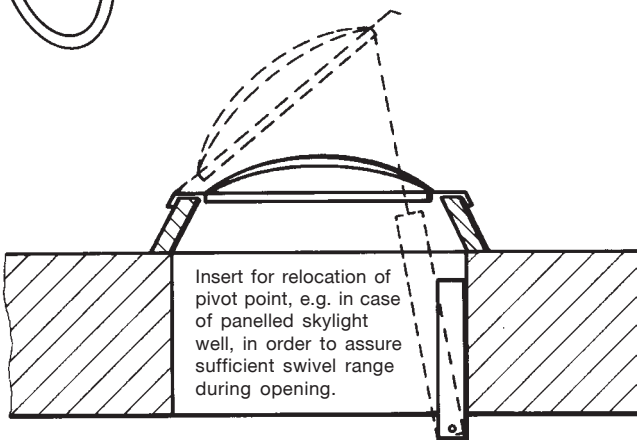
Extended motor connecting cable 280.103
The standard factory installed, temperature resistant conenecting cable with a length of about 1.5 m can be supplied longer, if required. Please, specify the required total length.

Painting of motor housing 280.010
The extra cost for painting of motor housings type GGM 24 or PGM 24 in RAL 9010 (weiß) depends on the stroke of the motor.
Other RAL colors available after consultation of the manufacturer..

Electric Motor Drive 24 Volt DC, Type: GGM 24 / 400 N, 650 N and 1000 N with Electronic Limit Stop and Bracket for Bottom Suspension

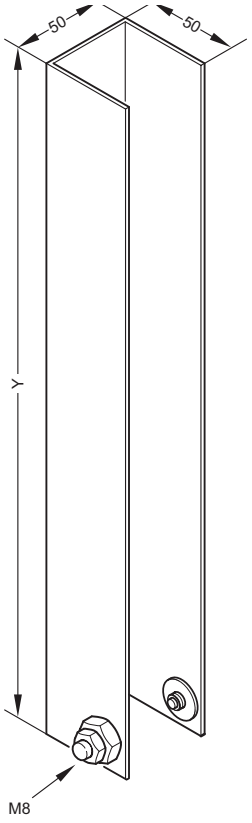


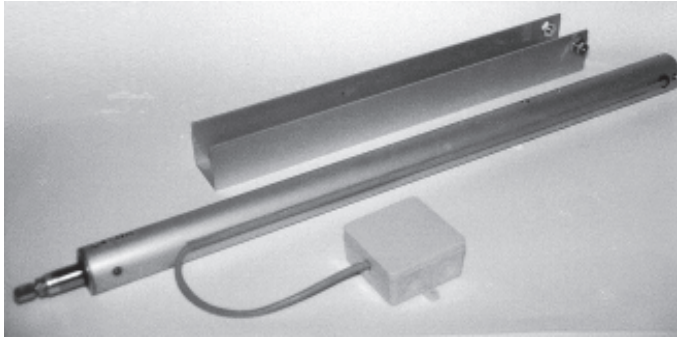
ext. limit stop 260.010 omitted with integrated limit stop



U-Konsolen für untere Aufhängung

U brackets for bottom suspension





Hopper Window, Opening Inward with Motor Type GGM and Bracket for Sash Installation

Description:

The illustration shows a hopper window with a motor, type GGM 24 mounted directly on the sash.

The motor protrudes into the room (observe restriction of escape route!).

The brackets can be relocated to accommodate various sashes with various thicknesses.

In this type of installation, the motor power supply cable is routed along the moveable sash. In order to avoid an additional cable connection, we recommend ordering the motor with an extended connection cable.

Bracket:

	Article No.
Bracket for hopper window, with gusset plate for attachment to sash	260.016
Bracket for hopper window, extended for transom-mullion construction	260.023
Bracket for hopper window, painted white (RAL 9010)	290.010
For other RAL colors, please consult the manufacturer	
Pivot support	500.901
Pivot support painted white (RAL 9010)	290.013
For other RAL colors, please consult the manufacturer	

Extended motor connecting cable — 280.103

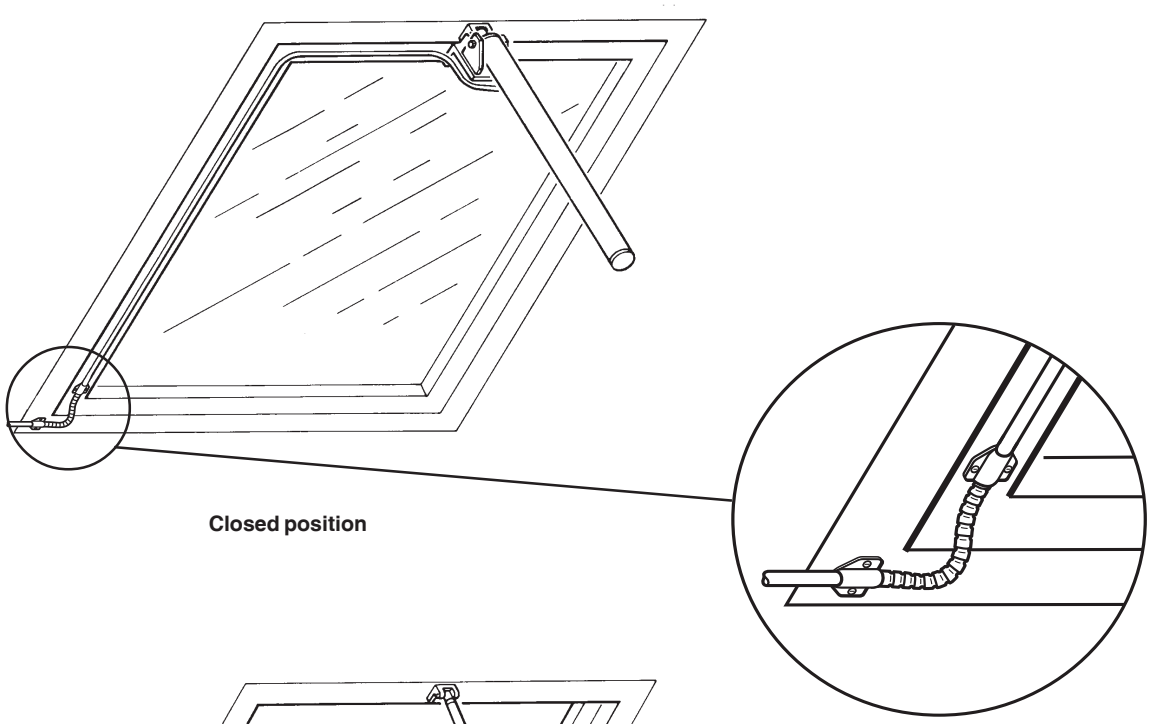
The standard factory installed, temperature resistant conenecting cable with a length of about 1.5 m can be supplied longer, if required. Please, specify the required total length.

Flexible cable transition, white PVC sheathed — 280.111

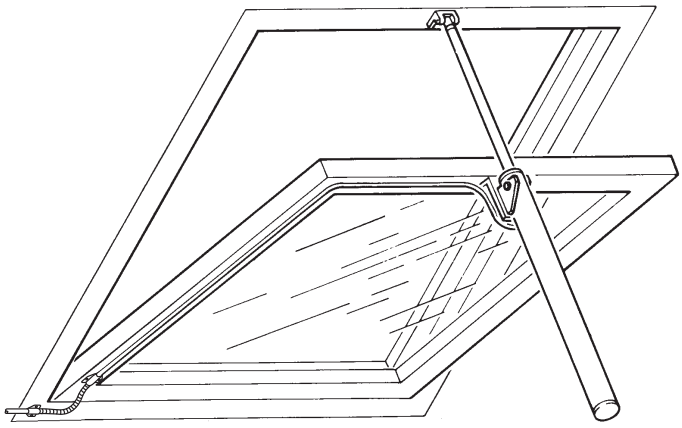
Flexible protective sheath to protect the cable at transition points of moving parts. Consisting of 2 end pieces, 4 screws, 2 end sockets as well as approx. 50 cm protective sheath, outside Ø 10 mm, inside Ø 7 mm . The sheath can be cut to the required length.

Other types available upon request.

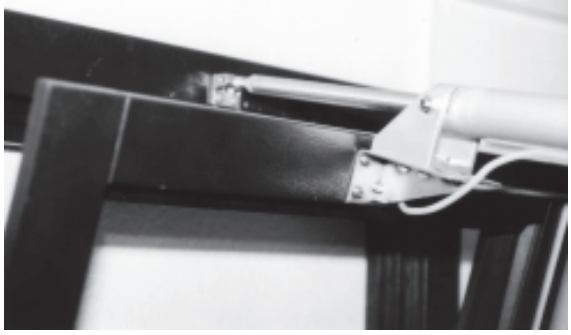
Hopper Window, Opening Inward with Motor Type GGM and Bracket for Sash Installation

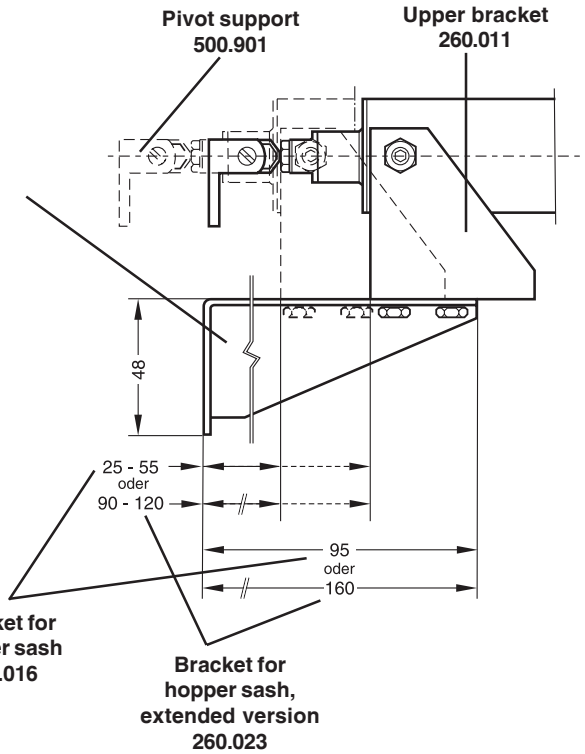


Closed position



Open position

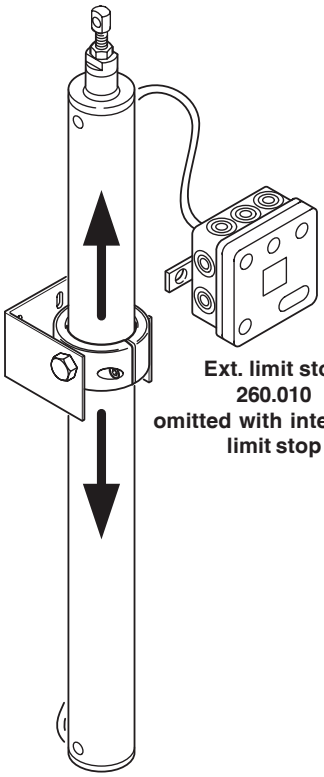




Electric Motor Drive Type: GGM 24 / 400 N, 650 N and 1000 N with FUMILUX Bracket / All-Purpose Bracket

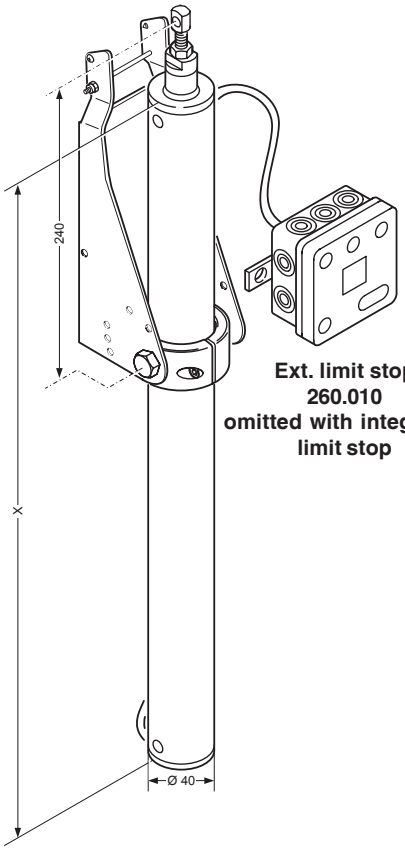
Electric motor drive:	**Article No.**
These electric motor drives 24V DC are used for smoke extraction and ventilation systems for the actuation of skylights, roof vents and windows.	
Fig. 1 **U-bracket, all-purpose**	200.366
Galvanized steel bracket 2.5 mm for mounting of clamping block with electric motor drive for random installation position.	
Fig. 2 **FUMILUX bracket for lifting cylinder and electric motor drives 24 Volt DC 400 N, 650 N or 1000N**	260.014
Bracket and support brace made of steel. The bracket, in combination with the aluminum clamping block, is used for mounting of lifting cylinders or electric motor drives for attachment to a crown. This bracket is specially designed for use with ETERNIT skylights. Single version for skylights with a width of up to 150 cm. Tandem version for skylights with a width more than 150 cm.	
Aluminum clamping block for electric motor drives 24 Volt DC	200.303
The clamping block consists of anodized aluminum. In combination with the FUMILUX bracket or the all-purpose bracket, it is used for mounting electric motor drives with 400 N, 650 N or 1000 N.	
Painting of brackets	
The extra cost for painting of brackets in white (RAL 9010) depends on the type of bracket. For other RAL colors, please consult the manufacturer.	
Aluminum clamping block	290.011
U-bracket, all-purpose	290.012

Fig. 1

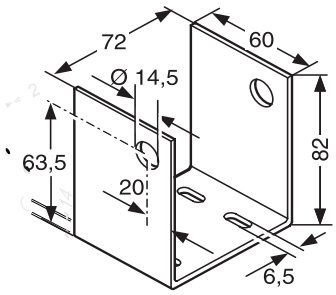


Ext. limit stop
260.010
omitted with integrated
limit stop

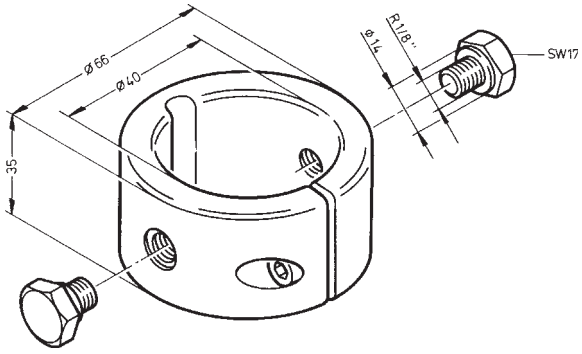
Fig. 2



Ext. limit stop
260.010
omitted with integrated
limit stop

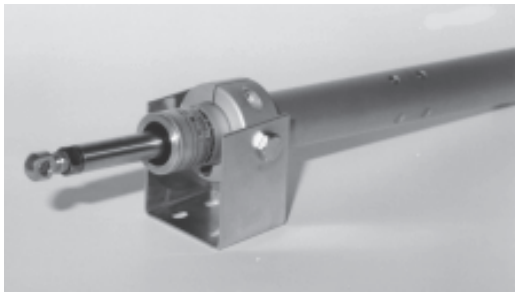


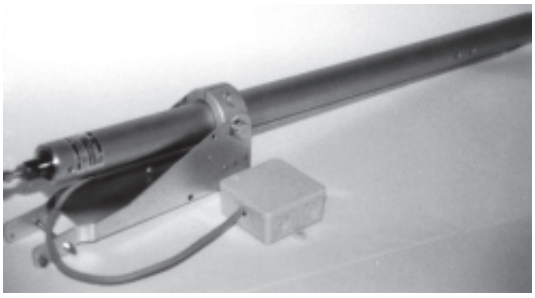
U-bracket, all-purpose
200.366



Aluminum clamping block
200.303

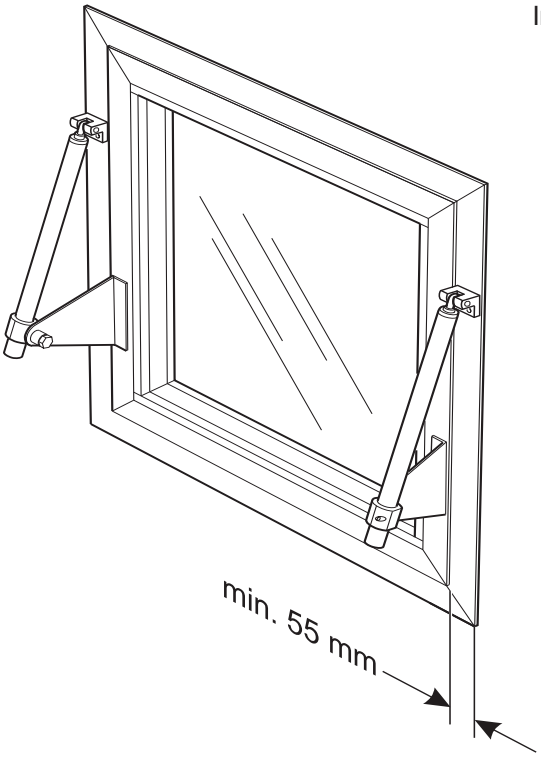
Fumilux
bracket
260.014



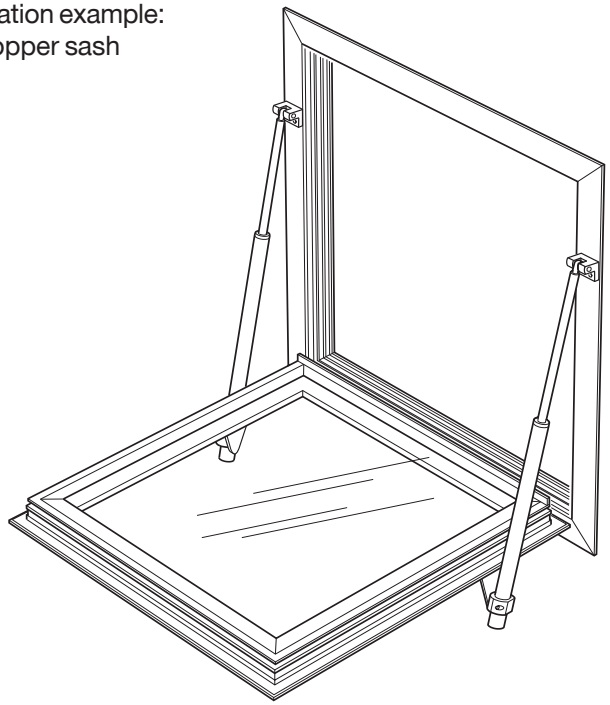


Electric Motor Drive Type: GGM 24 / 400 N, 650 N and 1000 N with Motor Bracket and Rotating Clamping Ring

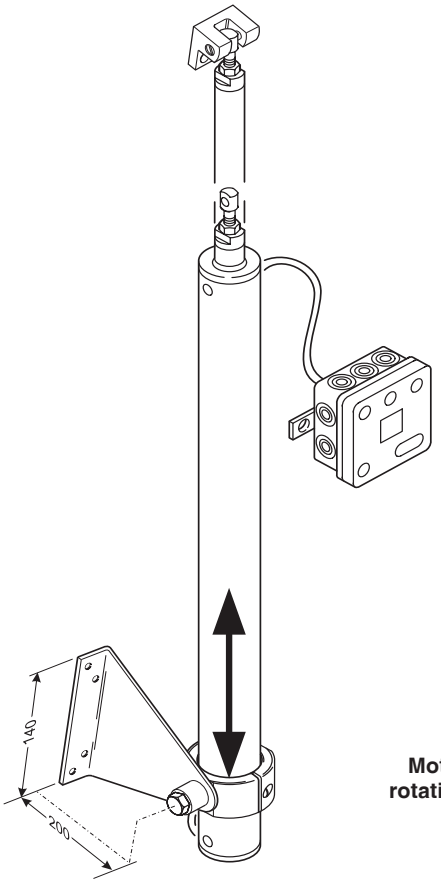
Description:	Article No.
Motor bracket with rotating clamping ring	260.017
The motor bracket with rotating clamping ring is used for dependable attachment of drives typ GGM 24 to hopper, top hung and Pivoting sash windows. The drives can be attached along the entire length of the motor housing.	
Note: The installation of the motor bracket with rotating clamping ring requires a minimum space of 55 mm (with closed sash) on the window frame.	
Motor bracket with rotating clamping ring, painted white (RAL 9010) For other RAL colors, please consult the manufacturer	290.021
Pivot support	500.901
Pivot support, painted white (RAL 9010) For other RAL colors, please consult the manufacturer	290.013



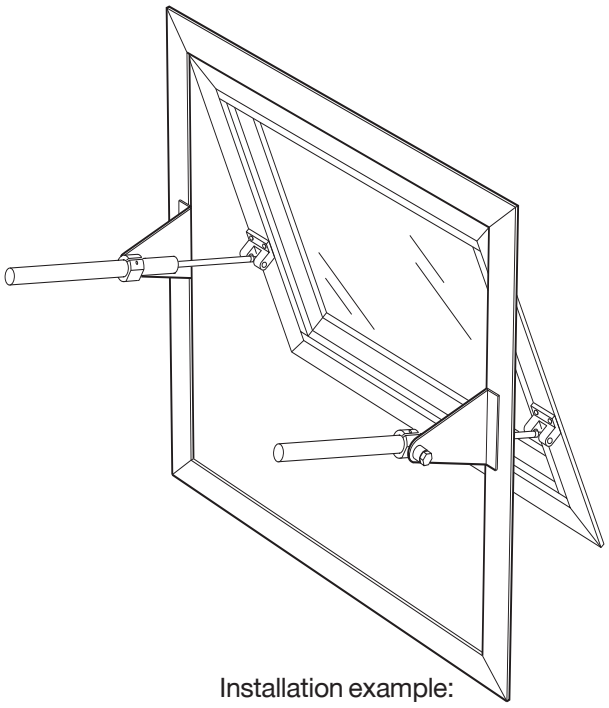
Installation example:
hopper sash



Observe instructions for
tandem operation!



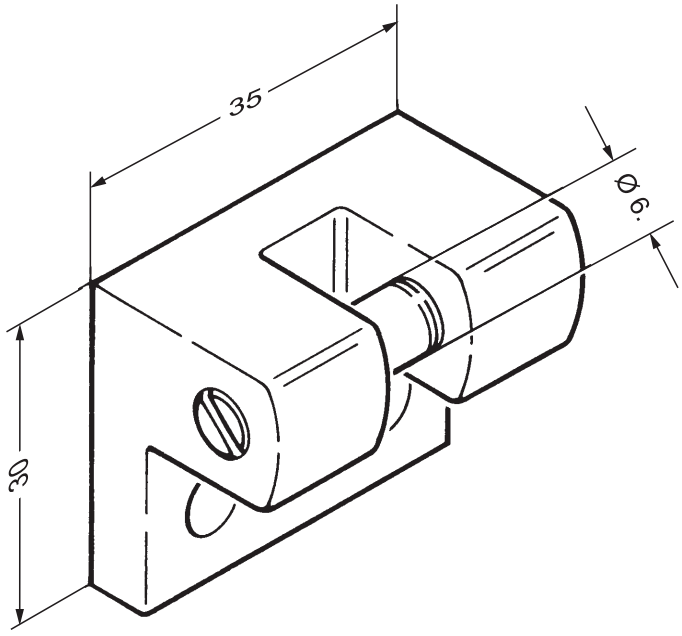
**Motor bracket with
rotating clamping ring
260.017**

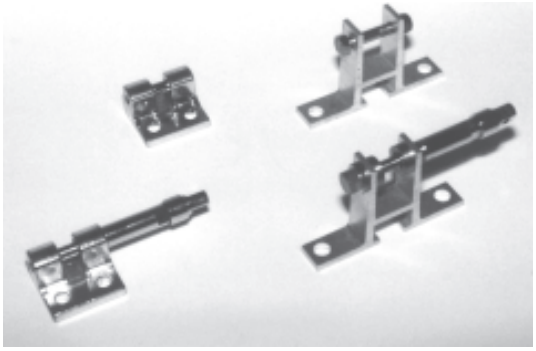


Installation example:
Top hung sash

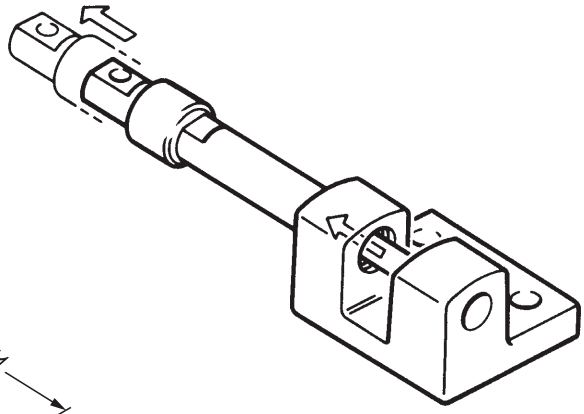
Pivot supports

Description:	Article No.
Pivot supports are mounted on the frame of a domelight or on the window sash.	
They are used for mounting piston rods of lifting cylinders and electric motor drives	
Pivot support	500.901
Pivot support, detachable	500.903
Pivot support, system Eternit	500.902
Pivot support, system Eternit, detachable	500.904
Pivot support painted white (RAL 9010)	290.013
For other RAL colors, please consult the manufacturer.	

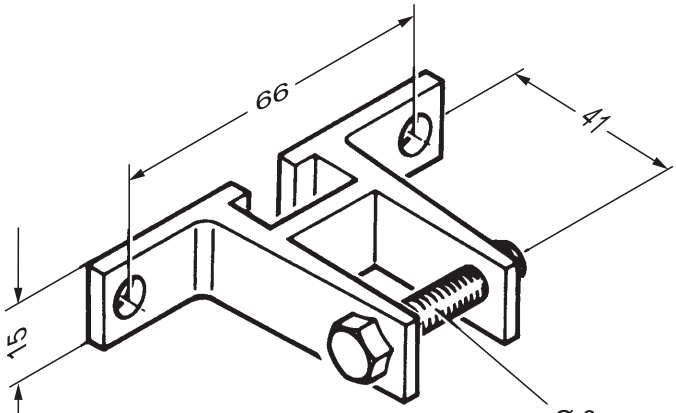




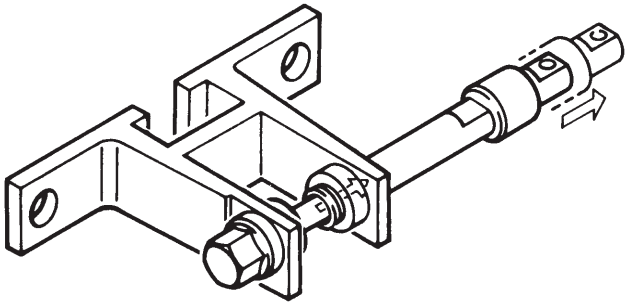
Article No.: 500.901



Article No.: 500.903



Article No.: 500.902



Article No.: 500.904

Top-hung sash / Pivoting sash (bottom outward)

With the motor piston rod (A) retracted, align and mark the attaching points of the motor bracket (B) and the pivot support (C). The srews used for the installation of the motor bracket and pivot support must be dimensioned sufficently in accordance with installation conditions.

The pivot support and the motor bracket must be mounted assuring full contact of the contact surfaces. Care must be taken to assure that the motor is positioned at an angle of 90° to the closed sash.

Insert the motor into the motor bracket and align in the center it using the two Allen screws. Tighten the Allen screws (D) evenly, leaving a small amount of play of approx .1 mm about the center.

Lock the two Allen screws in position using the two lock nuts (E).

Insert the eye bolt (G) into the pivot support and secure in position using the gudgeon (F).

Small distances between the motor bracket and the pivot support can be compensated by turning the eye bolt in or out (adjust contact pressure of the sash!). Lock the eye bolt in place by tightening the lock nut (H) while holding the piston rod with an open-end wrench (ca. 18 Nm).

Make the electrical connections in accordance with the circuit diagram.

Domelight / skylight

With the motor piston rod (A) retracted, align and mark the attaching points of the motor bracket (B) and the pivot support (C). The srews used for the installation of the motor bracket and pivot support must be dimensioned sufficently in accordance with installation conditions.

The pivot support and the motor bracket must be mounted assuring full contact of the contact surfaces.

Insert the motor into the motor bracket and align in the center it using the two Allen screws. Tighten the Allen screws (D) evenly, leaving a small amount of play of approx .1 mm about the center.

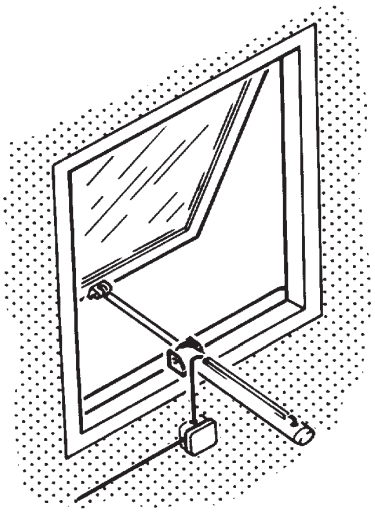
Lock the two Allen screws in position using the two lock nuts (E).

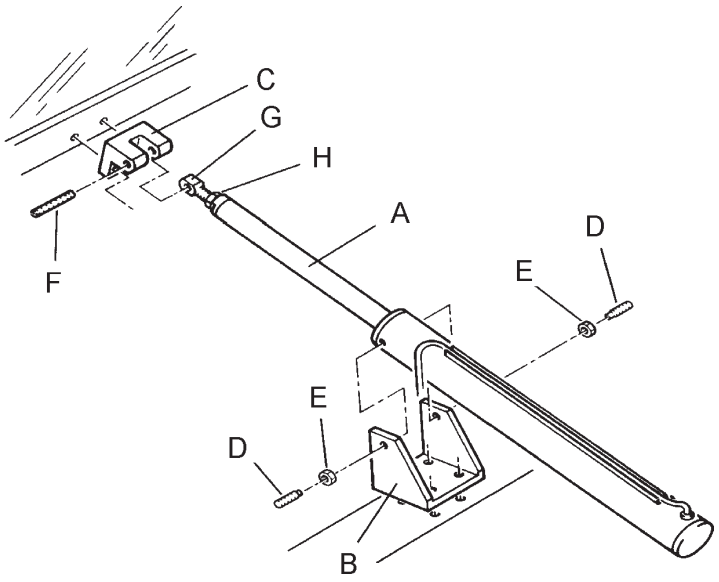
Insert the eye bolt (G) into the pivot support and secure in position using the gudgeon (F).

Small distances between the motor bracket and the pivot support can be compensated by turning the eye bolt in or out (adjust contact pressure!). Lock the eye bolt in place by tightening the lock nut (H) while holding the piston rod with an open-end wrench (ca. 18 Nm).

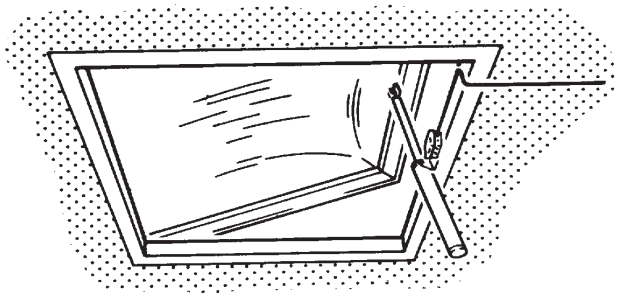
Make the electrical connections in accordance with the circuit diagram.

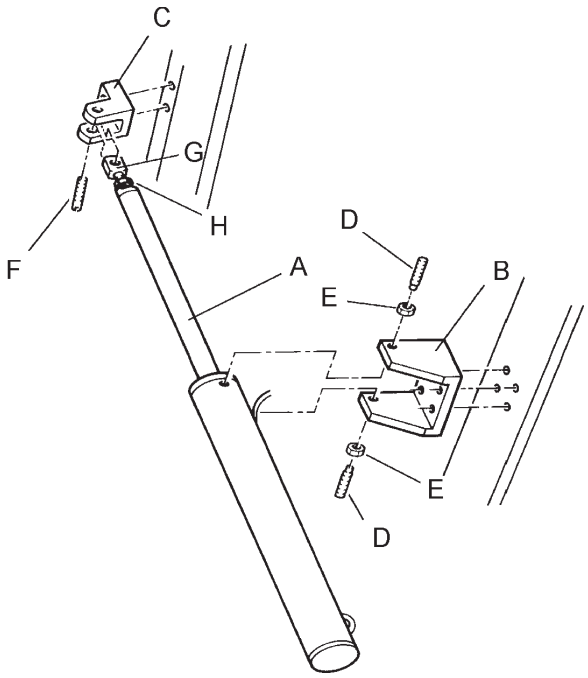
Top-hung sash / Pivoting sash (bottom outward)





Domelight / skylight





Hopper sash / Pivoting sash (inward)

With the motor piston rod (A) retracted, align and mark the attaching points of the sash bracket (K) and the pivot support (C). The srews used for the installation of the motor bracket and pivot support must be dimensioned sufficently in accordance with installation conditions.

The pivot support and the sash bracket must be mounted assuring full contact of the contact surfaces. Care must be taken to assure that the motor is positioned at an angle of 90° to the closed sash.

During the installation, make sure that the piston rod does not contact the sash while wide open, since otherwise the motor will be bent. Select the mounting points of the motor bracket and pivot support to prevent any contact between the piston and the sash.

Attach the motor bracket (B) to the sash bracket (K), using the four attaching screws (M6 with two washers and 1 nut each).

Insert the motor into the motor bracket and align in the center it using the two Allen screws. Tighten the Allen screws (D) evenly, leaving a small amount of play of approx .1 mm about the center.

Lock the two Allen screws in position using the two lock nuts (E).

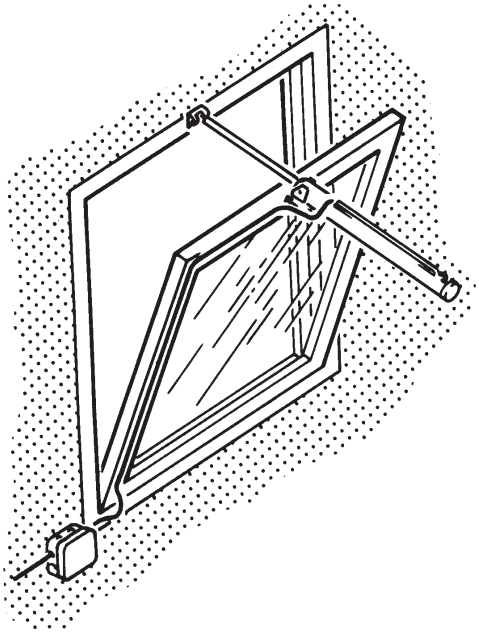
Insert the eye bolt (G) into the pivot support and secure in position using the gudgeon (F).

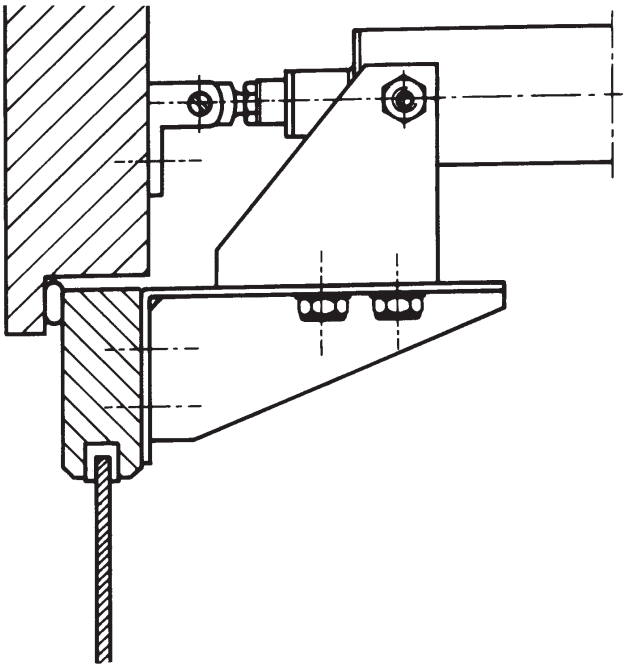
Small distances between the motor bracket and the pivot support can be compensated by turning the eye bolt in or out (adjust contact pressure of the sash!). Lock the eye bolt in place by tightening the lock nut (H) while holding the piston rod with an open-end wrench (ca. 18 Nm).

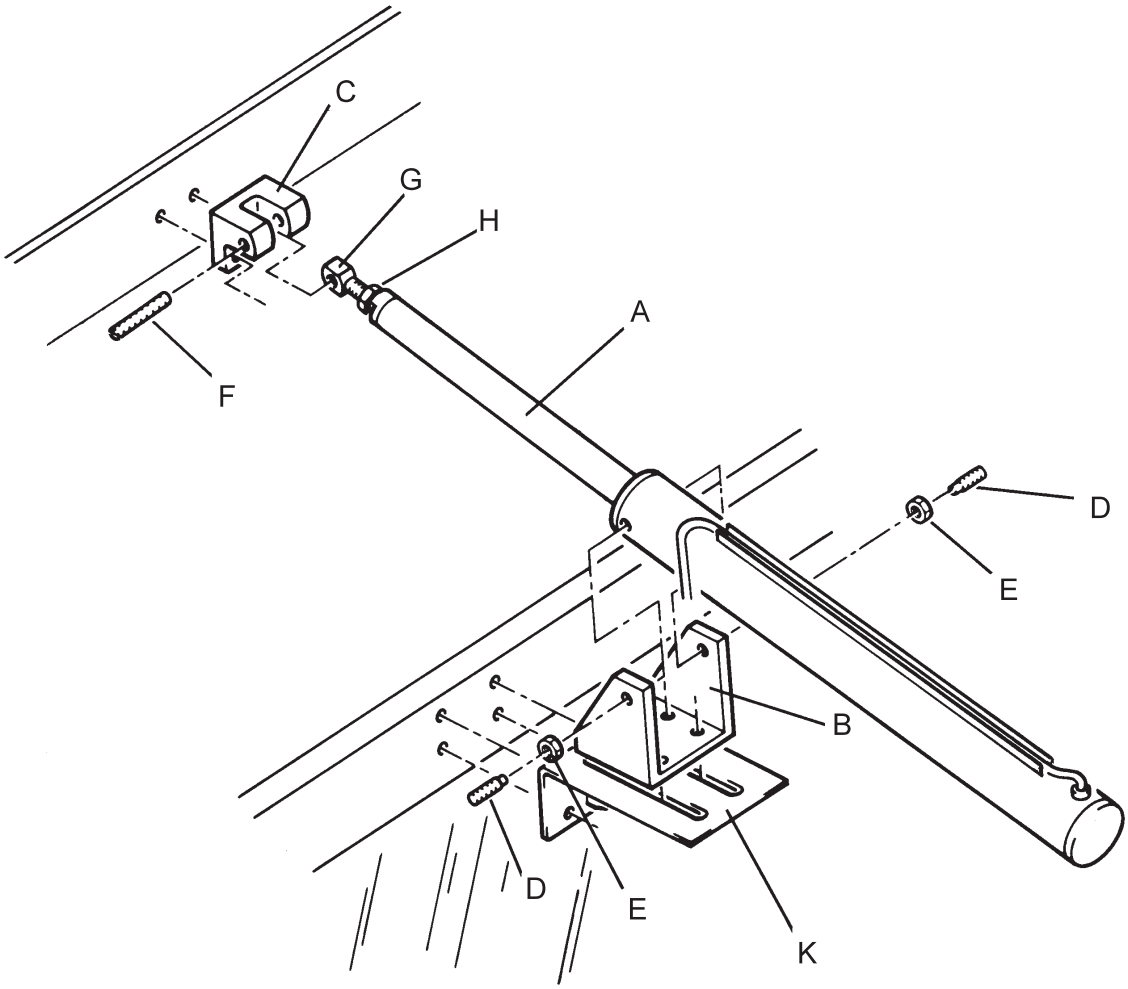
Install the connecting cables so that they cannot be pinched when the sash is closed. It is a good idea to install the cable inside a cable conduit on the sash to the hinge.

Make the electrical connections in accordance with the circuit diagram.

Hopper sash / Pivoting sash (inward)







Roof window

With the motor piston rod (A) retracted, align and mark the attaching points of the motor bracket (B) and the pivot support (C). The srews used for the installation of the motor bracket and pivot support must be dimensioned sufficently in accordance with installation conditions.

The pivot support and the motor bracket must be mounted assuring full contact of the contact surfaces. Care must be taken to assure that the motor is positioned at an angle of 90° to the closed sash.

Insert the two bearing bushes (L) into the motor bracket and secure them in place with the lock nuts (K).

Insert the motor into the motor bracket and align in the center it using the two Allen screws. Tighten the Allen screws (D) evenly, leaving a small amount of play of approx .1 mm about the center.

Lock the two Allen screws in position using the two lock nuts (E).

Insert the eye bolt (G) into the pivot support and secure in position using the gudgeon (F).

Small distances between the motor bracket and the pivot support can be compensated by turning the eye bolt in or out (adjust contact pressure of the sash!). Lock the eye bolt in place by tightening the lock nut (H) while holding the piston rod with an open-end wrench (ca. 18 Nm).

Make the electrical connections in accordance with the circuit diagram.

Domelight „Eternit“

Insert the Eternit pivot support (A) into the vent frame and attach using the two supplied screws. Attach the Fumilux bracket (B) with the supplied screws to the catch on the frame. Slide the M4 x 65 screw through the borehole of the Fumilux bracket and the catch and secure in place with a lock nut. Insert the two support braces (C) into one of the provided boreholes of the Fumilux bracket and attach to the frame using the supplied blind rivets. Slide the clamping ring (D) onto the motor from below. Avoid damaging the conncting cable.

Fix the motor with attached clamping ring in place in the Fumilux bracket, using the two fixing screws (E).

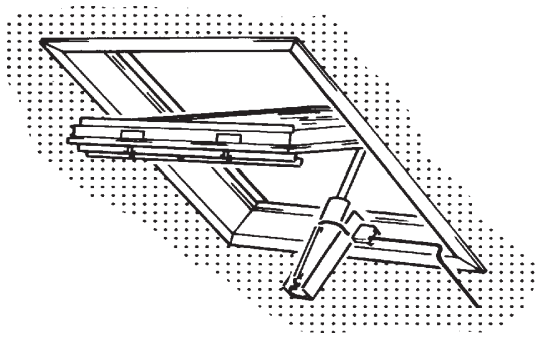
The motor must swivel freely in the bearing bushes.

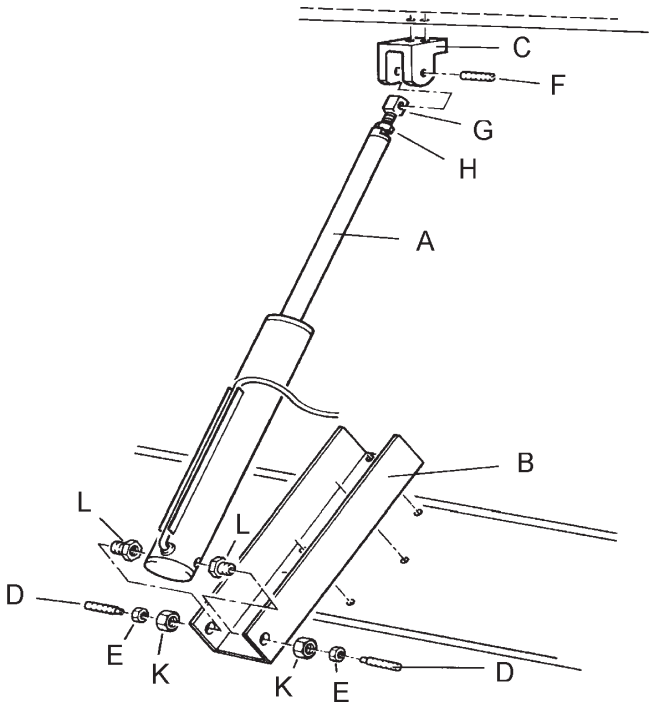
Insert the eye bolt (F) into the pivot support (A) and secure in place using the screw (G) and the nut (H)..

Tighten the Allen screw (K) after firmly closing the domelight. Small distances between the motor bracket and the pivot support can be compensated by turning the eye bolt (F) in or out (adjust contact pressure!). Lock the eye bolt in place by tightening the lock nut (L) while holding the piston rod with an open-end wrench (ca. 18 Nm).

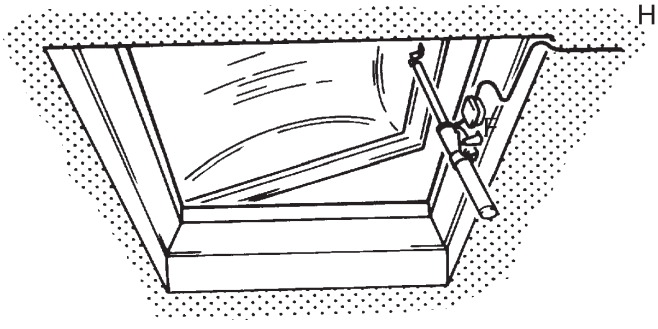
Make the electrical connections in accordance with the circuit diagram.

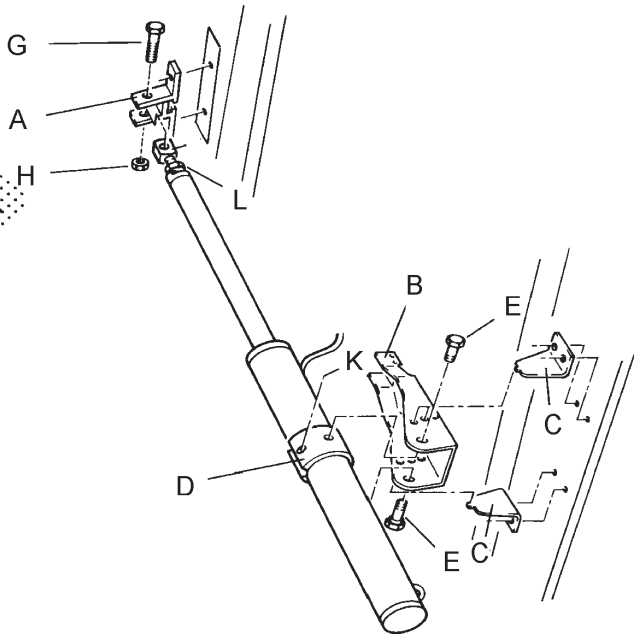
Roof window





Domelight „Eternit“





Domelights with paneled well

With the motor piston rod (A) retracted, align and mark the attaching points of the motor bracket (B) and the pivot support (C). The srews used for the installation of the motor bracket and pivot support must be dimensioned sufficently in accordance with installation conditions.

The pivot support and the motor bracket must be mounted assuring full contact of the contact surfaces.

Insert the two bearing bushes (L) into the motor bracket and secure them in place with the lock nuts (K).

Insert the motor into the motor bracket and align in the center it using the two Allen screws. Tighten the Allen screws (D) evenly, leaving a small amount of play of approx .1 mm about the center.

Lock the two Allen screws in position using the two lock nuts (E).

Insert the eye bolt (G) into the pivot support and secure in position using the gudgeon (F).

Small distances between the motor bracket and the pivot support can be compensated by turning the eye bolt in or out (adjust contact pressure!). Lock the eye bolt in place by tightening the lock nut (H) while holding the piston rod with an open-end wrench (ca. 18 Nm).

Make the electrical connections in accordance with the circuit diagram.

Domelights with paneled well