



# USER INSTRUCTIONS

## DAAB DRIVE UNIT MT/MK2/MA2/M10

*Issue 1*



FAAC Nordic AB

BOX 125, SE-284 22 PERSTORP SWEDEN TEL. +46 435 77 95 00 FAX. +46 435 77 95 29

[www.faac.se](http://www.faac.se)

|   |           |
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## EU Declaration of incorporation

We hereby declare that the following partly completed machine types conform to the relevant requirements in the Machinery Directive 2006/42/EC, the EMC Directive 2004/108/EC and Low Voltage Directive 2006/95/EC.

These machine types are intended for incorporation into machinery, or to be assembled with other machinery which will not be taken into operation before the whole conforms to the applicable requirements in accordance with the above directive.

Machine type: **Drive unit type MT, MT1H, MK2/MA2, MK1H and M10 for swing gates and folding doors.**

The relevant requirements in the Machinery Directive 2006/42/EC Annex I, point 1, "Essential health and safety requirements" have been implemented for these machine types.

Where applicable these machine types conform to the following harmonised standards:

**EN 13241-1** Industrial, commercial and garage doors and gates - Product standard - Part 1: Products without fire resistance or smoke control characteristics.

**EN 60204-1** Safety of machinery - Electrical equipment of machines, General requirements.

Technical documentation according to the Machinery Directive 2006/42/EC, Annex VII Section B, for the above machine types, are available from the manufacturer and will, on the receipt of a reasonable request from a national public authority, be submitted by the undersigned to this public authority as printed documents, without affecting the manufacturer's potential intellectual property rights.

Manufacturer FAAC Nordic AB  
Box 125  
284 22 Perstorp  
Telephone: +46 435 77 95 00  
Fax: +46 435 77 95 29  
E-mail: info@faac.se

Perstorp 29.12.2009

Ola Hansson, Managing Director


## Safety


### • General

Read through the entire instruction manual carefully before unpacking, installing and using the equipment. Pay particular attention to the safety paragraphs in the text.

There is a risk of serious injury or material damage if the prescribed precautionary measures are not taken.

Sections of text warning of hazards are sorted by severity and have the headings DANGER, WARNING and NOTE! which have the following significance:

|   |   |
|---|---|
|  | <b>DANGER</b><br>This means that there is a danger to the life or health of the user if the relevant precaution is not taken. |
|---|---|

|   |  |
|---|--|
|  | <b>WARNING</b><br>This means that there is a risk of bodily injury or damage to the machine if the relevant precaution is not taken. |
|---|--|


|   |  |
|---|--|
| • | <b>NOTE!</b><br>This means that important information requires the full attention of the reader. |
|---|--|

## Packing, transport and unpacking

### • General

|  |
|--|
| <b>NOTE!</b><br>It is important to secure the drive unit properly in its packaging and to ensure that moving parts are not under tension during transport. |
|--|

**Immediately** on arrival check that the consignment is as agreed.

|   |   |
|---|---|
|  | <b>WARNING</b><br>Treat the drive unit carefully during handling and transport. |
|---|---|

### Lifting the drive unit


|   |   |
|---|---|
|  | <b>WARNING</b><br>Do not lift the drive unit by its moving parts or protective cover. |
|---|---|

Table of weights excluding the drive arm and link arm:

| Drive unit | MT | MA2 | MK2 | M10 |
|------------|----|-----|-----|-----|
| Weight, kg | 16 | 23  | 25  | 60  |

## Introduction


- Intended use

To open and close swing gates, leaf doors and folding doors.

Drive units are intended for use in normal indoor and outdoor environments.

All other use is prohibited.

- Machine marking

|   |    |   |
|---|----|---|
| TYPE  |    |  |
| S/N   |    |   |
| YEAR  |    |   |
| FAAC Nordic AB<br>www.faac.se<br>Phone: +46 (0)435-77 95 00 | IP |   |

The plate must not be removed or made illegible!

### The identification plate must contain the following information:

- Type: MT, MK2, MA2 or M10.
- Serial no: The serial number of the drive unit (used in all communication with FAAC Nordic AB regarding spare parts).
- Year: The year in which the drive unit was manufactured.
- IP: The IP rating of the drive unit.

- Manufacturer

FAAC Nordic AB

Box 125

SE-284 22 Perstorp, Sverige

Telephone: +46 435 77 95 00

Fax: +46 435 77 95 29

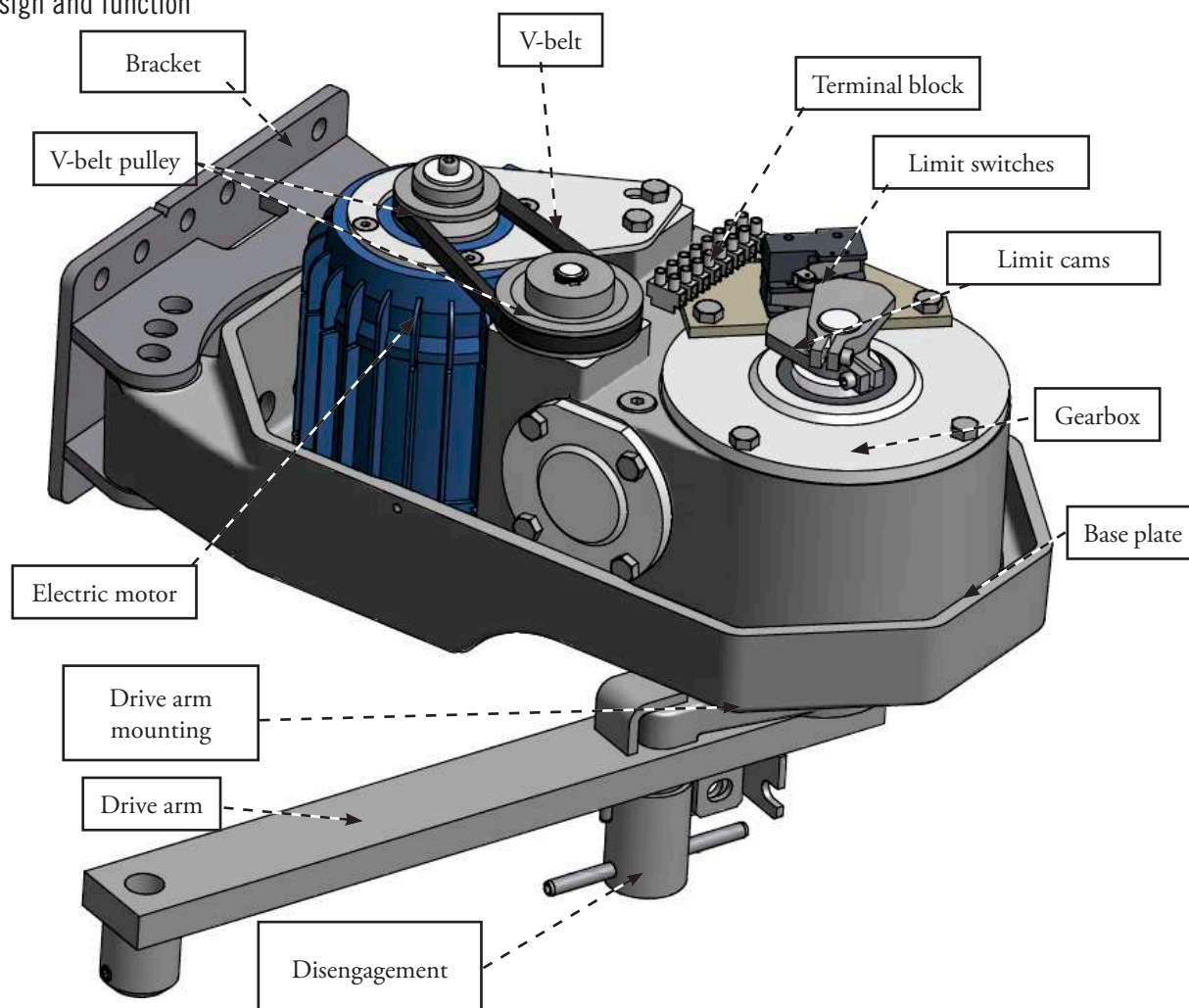
E-mail: info@faac.se

Website: www.faac.se

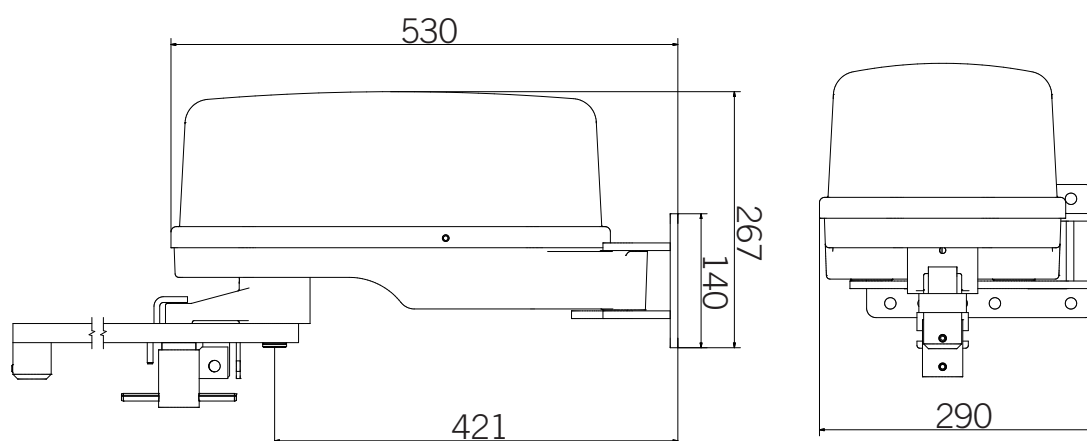
## Drive unit MA2/MK2

- Function description

### Design and function



### Dimensions



- Technical specification

## Electric motors

The design, rated output and connection dimensions of the motors meet the requirements contained in Swedish and European Standards according to IEC 31-1 and 72 together with SS4260101 and SS4360102.

## Ratings for motor types used in the MK2, MA2 and M10

| Motor type<br>~                              | Hz | Output<br>kW | Voltage<br>V           | Current<br>A        | Motor<br>speed<br>rpm | Type of<br>operation* | Ingress<br>protection<br>rating | Thermal<br>switch                           |
|--|----|--------------|------------------------|---------------------|-----------------------|-----------------------|---------------------------------|---|
| <b>SKh 714B2<br/>3-phase</b>                 | 50 | 0.37         | 220-240 D<br>380-440 Y | 2.2-2.4<br>1.25-1.4 | 1370<br>1370          | S3<br>25%             | IP54                            | With or<br>without<br>a thermal<br>switch** |
| <b>SKh 714B2<br/>3-phase</b>                 | 50 | 0.37         | 525                    | 0.8                 | 1360                  | S1                    | IP55                            | No thermal<br>switch                        |
| <b>SEMKh 714B2<br/>1-phase<br/>10uF/450V</b> | 50 | 0.25         | 240                    | 2.6                 | 1350                  | S1                    | IP54                            | With or<br>without<br>a thermal<br>switch** |

\*S1 = Continuous operation. The motor can be subject to full load in continuous operation.

\*S3 = Intermittent operation. The motor must not be subject to full load for more than 25% of the 10 minute duty cycle. In practice the motor is not subject to full load for more than one second just as it starts.

\*\*The motor is available both with and without an integrated thermal switch. If the motor has a thermal switch there is a red label on the motor indicating this.

## Gears

Select the opening speed taking account of the size and weight of the gate. The basic rule is to select a lower speed for large gates.

**WARNING**

Too high an opening speed can result in trapping forces being too large despite the use of a sensing strip.

| MK2/MA2                     |              |                             |              |                         |
|-----------------------------|--------------|-----------------------------|--------------|-------------------------|
| Electric motor pulley<br>mm | GEARING<br>i | MOTOR SHAFT<br>SPEED<br>rpm | TORQUE<br>Nm | OPENING TIME<br>seconds |
| 40                          | 1400         | 1,00                        | 1600         | 30                      |
| 50                          | 1150         | 1,25                        | 1275         | 24                      |
| 71                          | 800          | 1,77                        | 900          | 17                      |
| 100                         | 570          | 2,49                        | 650          | 12                      |
| 125                         | 450          | 3,12                        | 510          | 9                       |
| 140                         | 400          | 3,49                        | 450          | 8                       |

- Installation and commissioning

## General installation

**WARNING**

Always start installation with a run through of the points in the: "Pre-installation checklist".

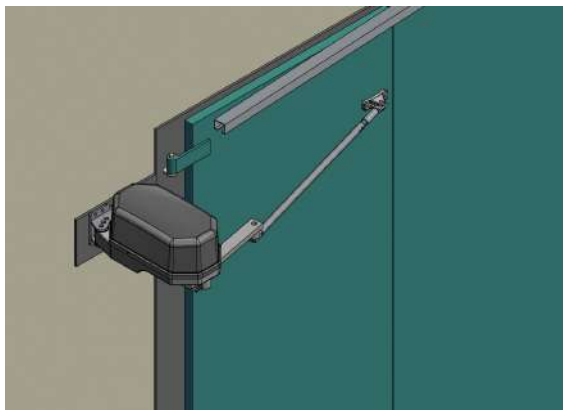
**WARNING**

The drive unit must be installed so that no unprotected moving parts are lower than 2,500 mm.

**WARNING**

Always use the fasteners prescribed in the assembly drawing with regard to: property class, dimensions, length and quantity.

- Side installation



### Mounting plate

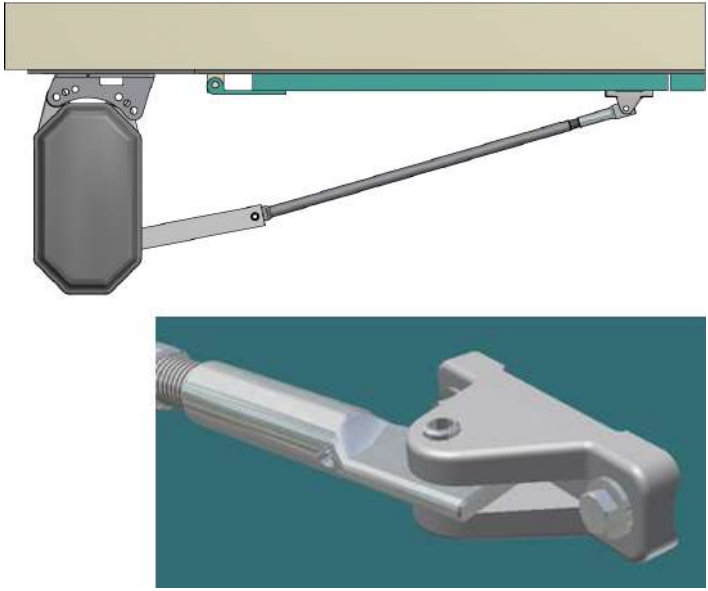
|   |   |   |
|---|---|---|
| 1 | A 3D perspective diagram showing a grey mounting plate being attached to a light brown wall. A metal arm is already mounted to the wall, and the plate is being positioned to be secured to it. | <p>The mounting plate is not manufactured by FAAC.</p> <p>The measurement from the floor or other permanent entry level to the lower edge of the mounting plate should be at least 2,550 mm.</p> <p>The dimensions of the mounting plate should be 200 mm x 400 mm and it should be at least 8 mm thick. It must be positioned according to the enclosed assembly drawing. The mounting plate is to be anchored so that it can withstand a torque of 2,000 Nm.</p> <p>Lightweight concrete wall for example – through-going M10 bolts are used.</p> <p>Concrete – 10 mm resin anchor.</p> <p>Steel building – square tube onto a fixed building structure.</p> <p>The mounting plate is also welded onto the gate surround.</p> |
|---|---|---|

### Drive arm

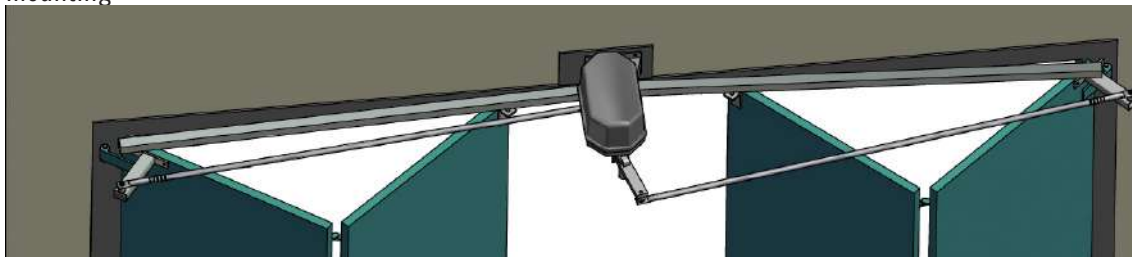
|   |  |   |
|---|--|---|
| 2 | A 3D perspective diagram showing the black FAAC drive unit with its mounting plate. A long metal drive arm is being positioned to be attached to the bottom of the unit. | <p>Install the drive arm by removing the bolt and washer / retaining ring on the output shaft from the drive unit and pressing the arm into place.</p> <p>Then reinstall the bolt and washer.</p> |
|---|--|---|



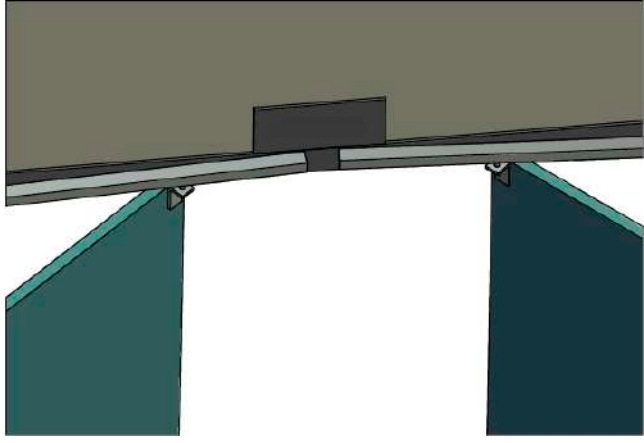
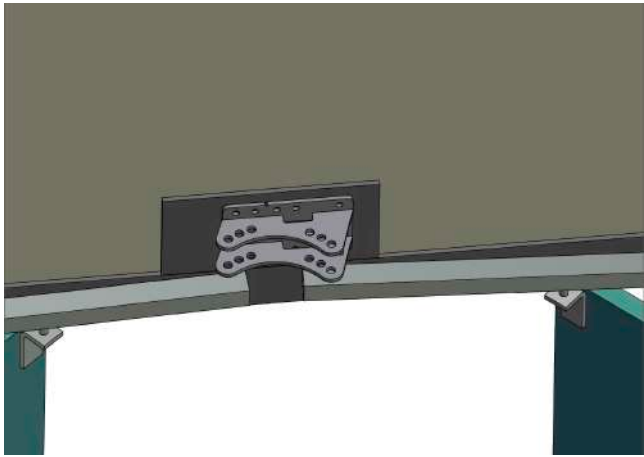
## Gate mounting and link arm

|   |  |   |
|---|--|---|
| 3 |  | <p>Screw together the link arm with the gate mounting and drive arm. The lateral position of the gate mounting can be determined when the gate is fully closed and the drive arm and link arm are in line.</p> <p>The gate mounting should be as close to the pivot point as possible as this provides the best geometry.</p> <p>Screw the gate mounting into place using two M8 bolts and washers.</p> |
|---|--|---|

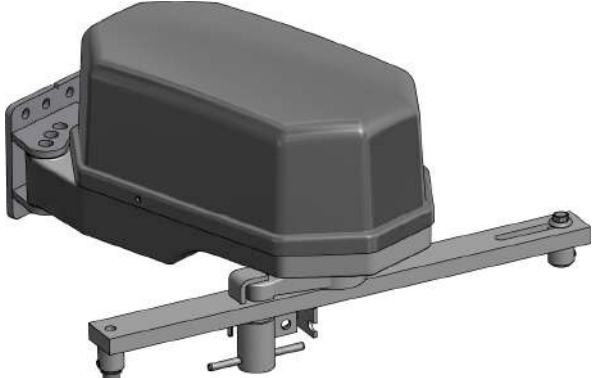
- Top mounting



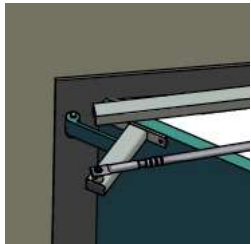
## Bracket &amp; mounting plate

|   |   |   |
|---|---|---|
| 1 |  | <p>Positioned centrally above the gate opening.</p> <p>Dimensions and mounting according to the point entitled "Mounting plate" in the chapter "Installation and commissioning; General installation"</p> |
| 2 |  | <p>Centre the plate horizontally above the gate opening. Height dimensions in accordance with a separate assembly drawing. Then weld the motor plate onto the mounting plate.</p>                         |

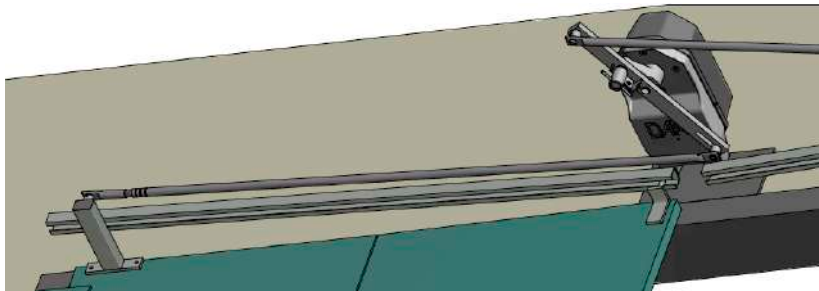
## Drive arm

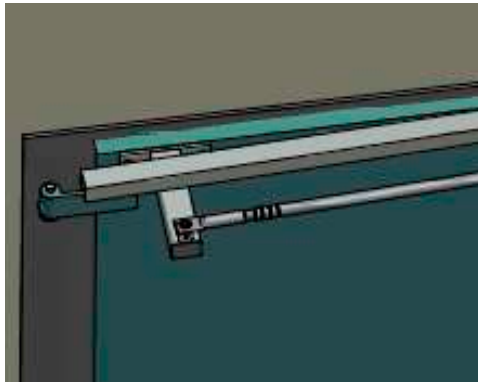
|   |   |  |
|---|---|--|
| 3 |  | Install the drive arm by removing the bolt and washer / retaining ring on the output shaft from the drive unit and pressing the arm into place. Then reinstall the bolt and washer / retaining ring. |
|---|---|--|

## Gate mounting

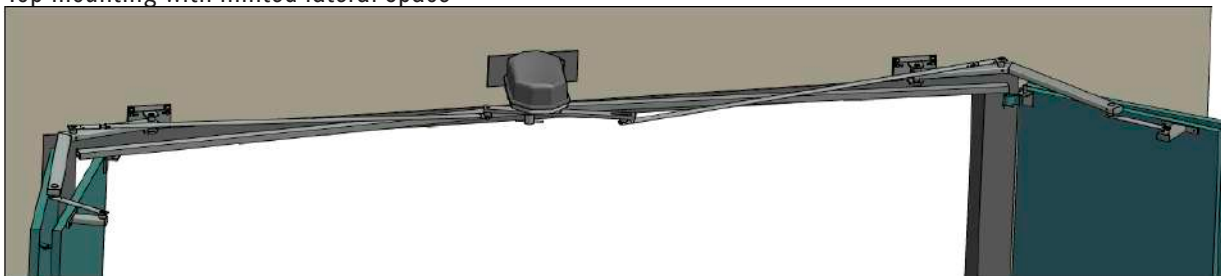
|   |   |  |
|---|---|--|
| 4 |  | Screw the gate mounting into place using two M8 bolts according to the assembly drawing. |
|---|---|--|

## Link arm

|   |  |   |
|---|--|---|
| 5 |  | Position the link arm between the drive arm and gate mounting. Screw it into place using M12 bolts and washers. |
|---|--|---|

|   |   |   |
|---|---|---|
| 6 |  | Adjust it by undoing one bolt and then screwing the arm out or in at the gate mounting. |
|---|---|---|

- Top mounting with limited lateral space



### Bracket & mounting plate

|   |  |   |
|---|--|---|
| 1 |  | <p>Centre the plate horizontally above the gate opening. Height dimensions in accordance with a separate assembly drawing. Then weld the motor plate onto the mounting plate.</p> |
|---|--|---|

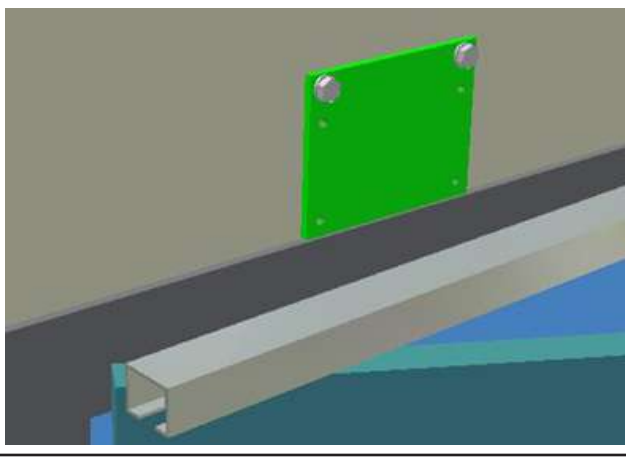
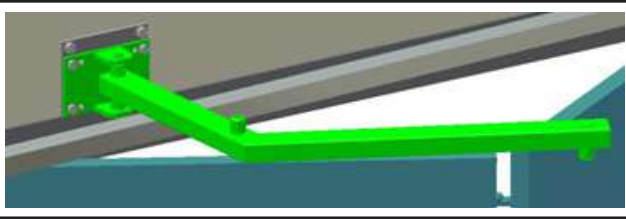
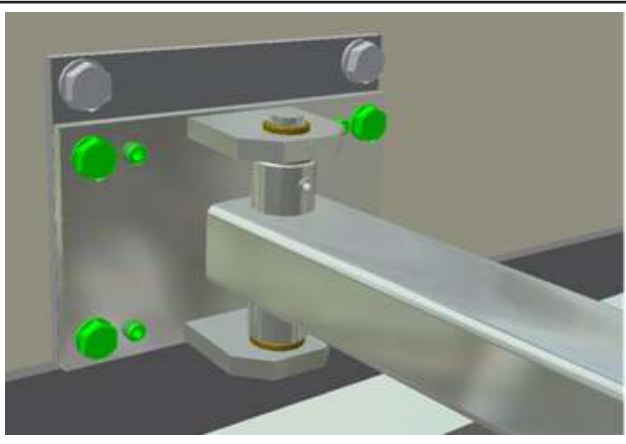
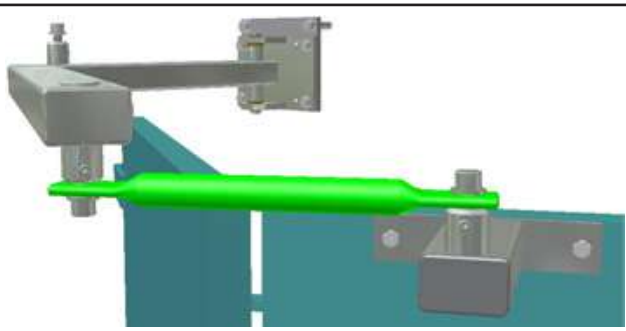
### Drive arm

|   |  |   |
|---|--|---|
| 2 |  | <p>Install the drive arm by removing the bolt and washer / retaining ring on the output shaft from the drive unit and pressing the arm into place. Then reinstall the bolt and washer / retaining ring.</p> |
|---|--|---|

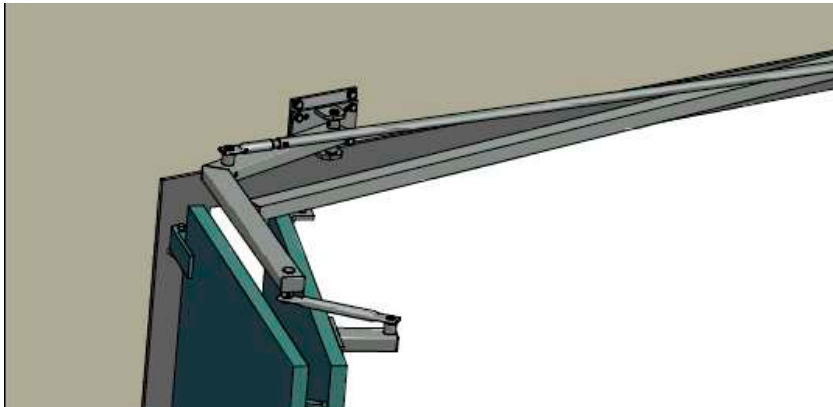
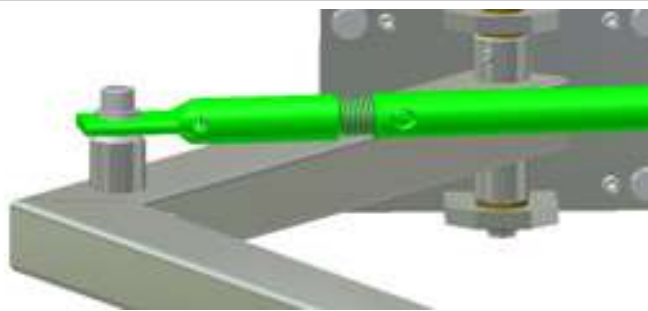
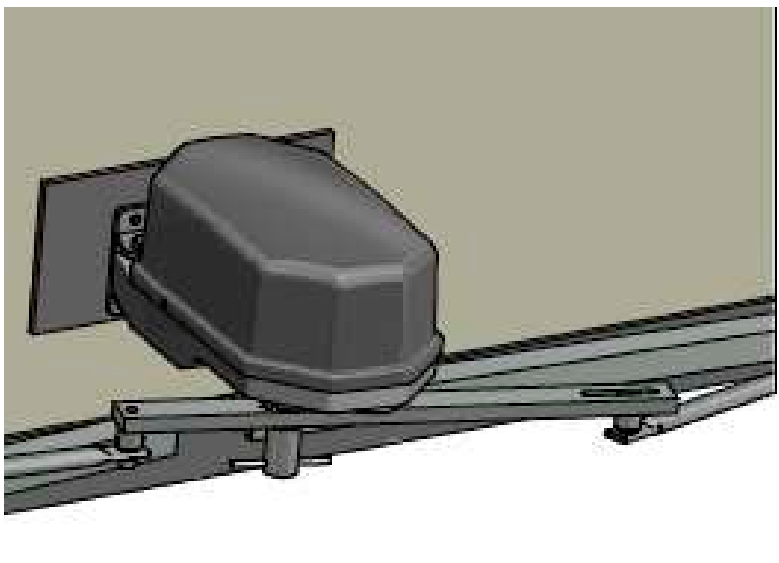
### Gate mounting

|   |  |   |
|---|--|---|
| 3 |  | <p>Screw the gate mounting into place using two M8 bolts according to the assembly drawing.</p> |
|---|--|---|

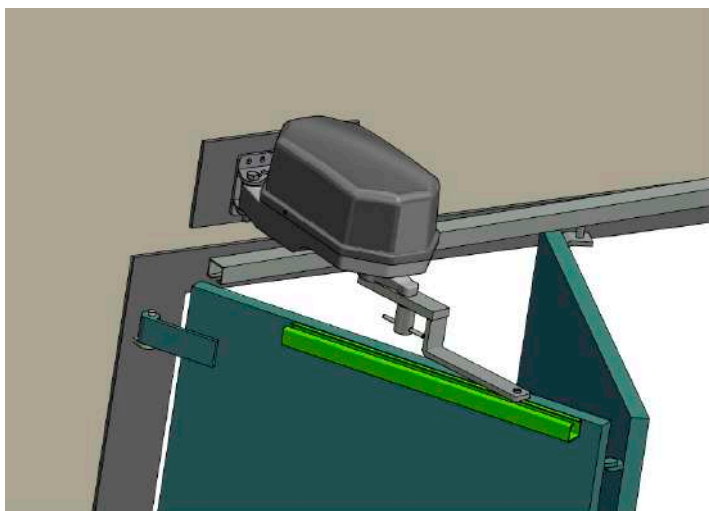
## Mounting plate for the swing arm bracket

|   |   |  |
|---|---|--|
| 4 |    | Position the mounting plate for the swing arm bracket according to the point entitled "Mounting plate" in the chapter "Installation and commissioning; Side installation". |
| 5 |    | Screw the bracket into place on the mounting plate using four M10 bolts. Adjust the swing arm so that it is always horizontal.   |
| 6 |   | Adjust the mounting using the four set screws.   |
| 7 |  | Screw in the short link arm between the outer swing arm mounting and the gate mounting using M12 bolts and washers.  |

## Link arm

|    |   |  |
|----|---|--|
| 8  |   | <p>Screw in the link arm between the drive arm and swing arm using M12 bolts and washers.</p>  |
| 9  |    | <p>Adjust it by undoing one bolt and then screwing the arm out or in at the swing arm mounting.</p>                                    |
| 10 |  | <p>Adjust the outer link arm by unscrewing the bolt on the mounting and then inserting it into the oblong groove in the drive arm.</p> |

- Wing mounting



### Bracket & mounting plate

|   |   |  |
|---|---|--|
| 1 | A 3D perspective drawing showing the motor plate being positioned horizontally on the mounting plate. The motor plate is black and the mounting plate is grey. The door wing is shown in a partially open position. | <p>Position the motor plate horizontally according to the assembly drawing.<br/>Then weld the motor plate onto the mounting plate.</p> |
|---|---|--|

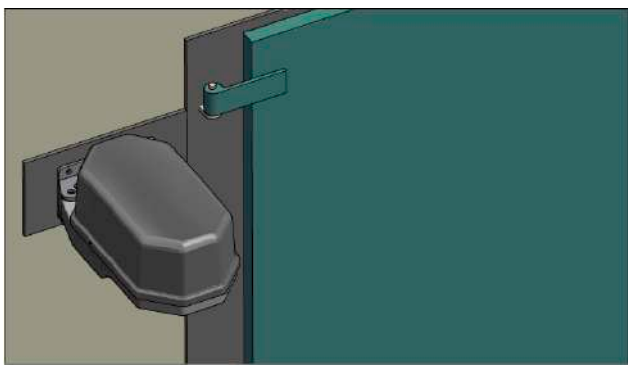
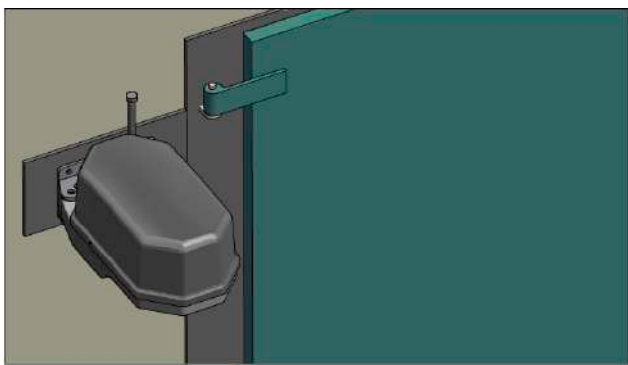
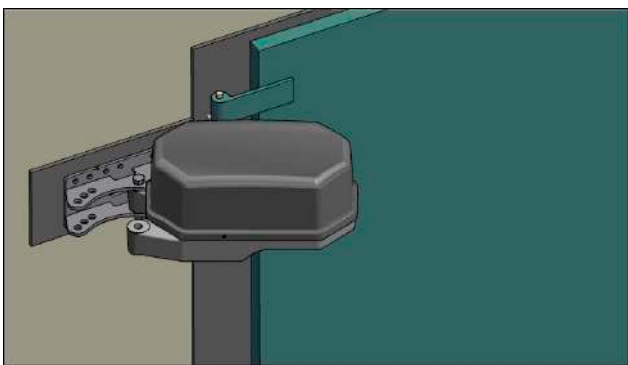
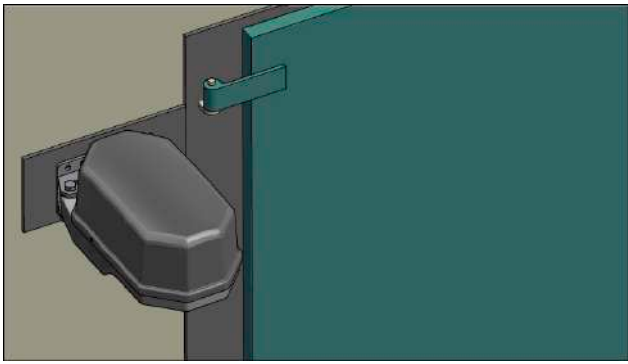
### Drive arm

|   |   |   |
|---|---|---|
| 2 | A 3D perspective drawing showing the drive arm being installed. The drive arm is grey and the motor unit is black. The drive arm is being pressed into place on the output shaft of the motor unit. | <p>Install the drive arm by removing the bolt and washer / retaining ring on the output shaft from the drive unit and pressing the arm into place.<br/>Then reinstall the bolt and washer / retaining ring.</p> |
|---|---|---|

- Installing the drive unit

Installation of the drive unit is common to all types of mounting.

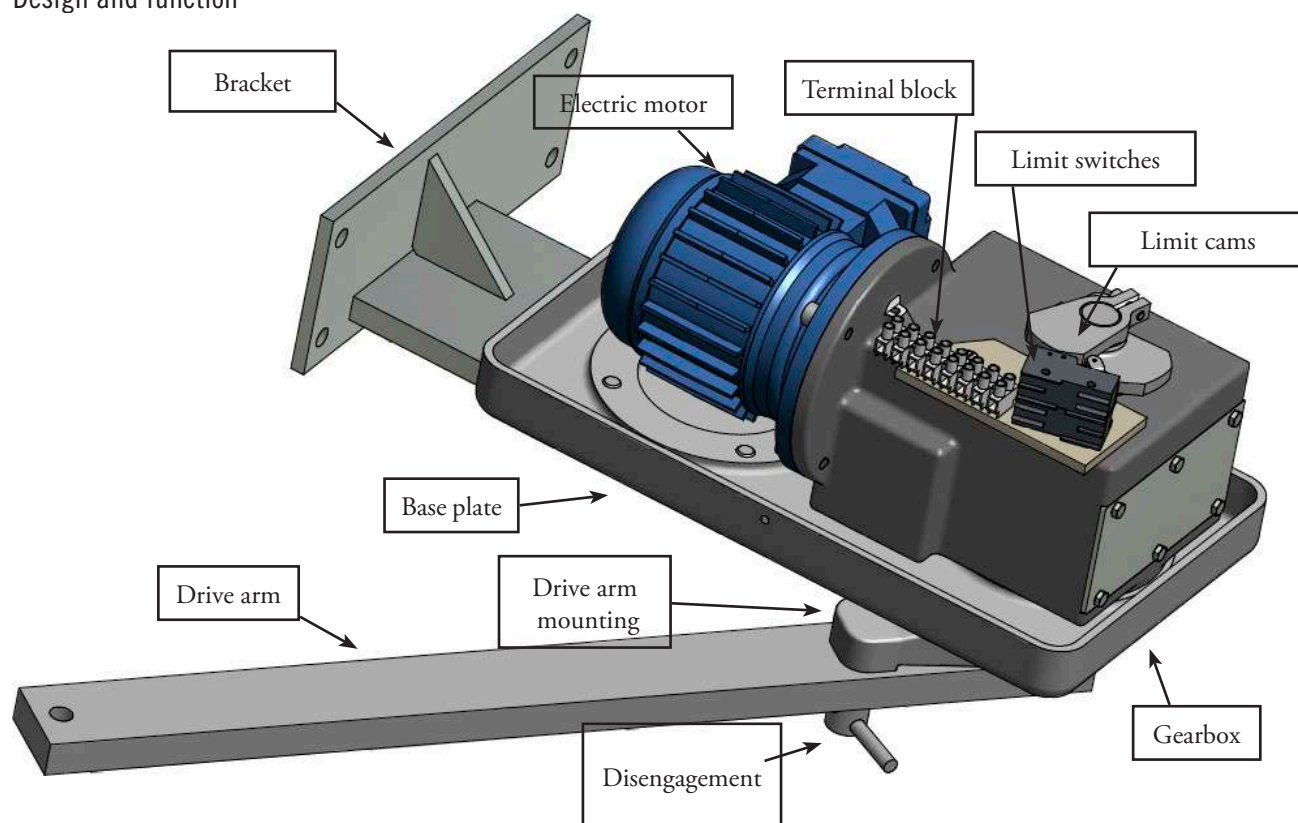
The motor is located in different holes depending on the angle at which it is positioned. Viewed from the left this is 90, 100 and 110 degrees. The angle to be used is indicated in the assembly drawing supplied with the unit.

|   |   |   |
|---|---|---|
| 1 |    | Insert the drive unit in the bracket.   |
| 2 |   | Tighten one bolt.   |
| 3 |  | Turn the drive unit to make the installation of power and limit position cables easier. |
| 4 |  | Turn back the drive unit and tighten the other bolt.                                    |

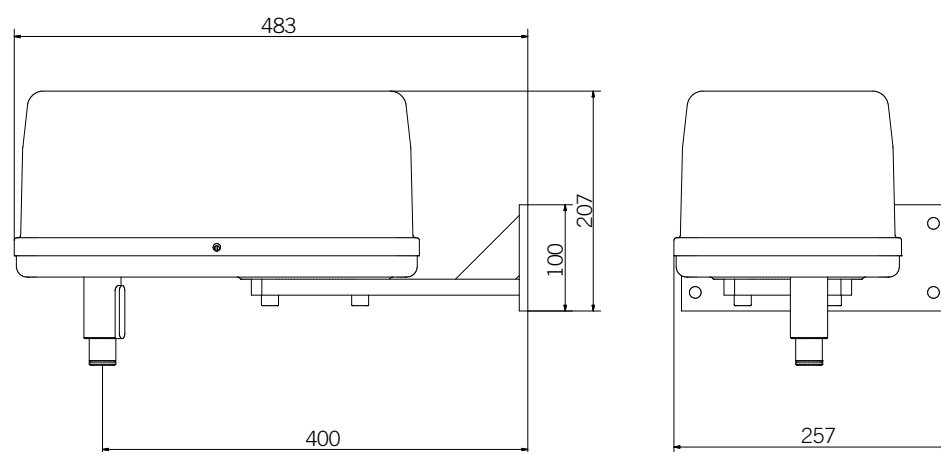


## Drive unit MT

- Function description
- Design and function



## Dimensions





- Technical specification

## Electric motors

The design, rated output and connection dimensions of the motors meet the requirements contained in Swedish and European Standards according to IEC 31-1 and 72 together with SS4260101 and SS4360102.

| Ratings for motor types used in the MT:   |    |              |                        |                      |                       |                       |                                 |                                       |
|---|----|--------------|------------------------|----------------------|-----------------------|-----------------------|---------------------------------|---------------------------------------|
| Motor type<br>~                           | Hz | Output<br>kW | Voltage<br>V           | Current<br>A         | Motor<br>speed<br>rpm | Type of<br>operation* | Ingress<br>protection<br>rating | Thermal switch                        |
| <b>SKg 63-2B</b><br>3-phase               | 50 | 0.25         | 220-240 D<br>380-420 Y | 1.1-1.2<br>0.65-0.72 | 2760                  | S1                    | IP55                            | With or without a<br>thermal switch** |
|   | 60 |              | 440-480 Y              | 0.65-0.72            | 3310                  |                       |                                 |                                       |
| <b>STKg 63X-4C</b><br>3-phase             | 50 | 0.25         | 220-240 D<br>380-420 Y | 1.65-1.8<br>0.95-1.0 | 1400                  | S1                    | IP55                            | With or without a<br>thermal switch** |
|   | 60 | 0.30         | 440-480 Y              | 0.95-1.0             | 1680                  |                       |                                 |                                       |
| <b>SEMKg 63-2B</b><br>1-phase<br>8uF/450V | 50 | 0.18         | 240                    | 1.45                 | 1360                  | S1                    | IP55                            | With or without a<br>thermal switch** |
| <b>SEMKg 63-4C</b><br>1-phase<br>8uF/450V | 50 | 0.18         | 240                    | 1.70                 | 2760                  | S1                    | IP55                            | With or without a<br>thermal switch** |


\*S1 = Continuous operation. The motor can be subject to full load in continuous operation.

\*S3 = Intermittent operation. The motor must not be subject to full load for more than 25% of the 10 minute duty cycle. In practice the motor is not subject to full load for more than one second just as it starts.

\*\*The motor is available both with and without an integrated thermal switch. If the motor has a thermal switch there is a red label on the motor indicating this.

## Gears


Select the opening speed taking account of the size and weight of the gate. The basic rule is to select a lower speed for large gates.


|   |   |
|---|---|
|  | <b>WARNING</b><br>Too high an opening speed can result in trapping forces being too large despite the use of a sensing strip. |
|---|---|


| ELECTRIC MOTOR<br>OUTPUT SPEED<br>rpm | GEARING<br>i | MOTOR SHAFT<br>SPEED<br>rpm | TORQUE<br>Nm | OPENING TIME<br>seconds |
|---------------------------------------|--------------|-----------------------------|--------------|-------------------------|
| 1400                                  | 750          | 1,90                        | 550          | 16                      |
| 2800                                  | 750          | 3,80                        | 275          | 8                       |

- Installation and commissioning

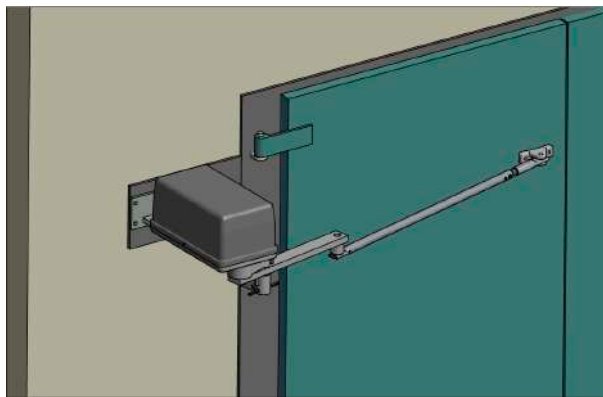
## General installation

|   |  |
|---|--|
|  | <b>WARNING</b><br>Always start installation with a run through of the points in the: "Pre-installation checklist". |
|---|--|

|   |   |
|---|---|
|  | <b>WARNING</b><br>The drive unit must be installed so that no unprotected moving parts are lower than 2,500 mm. |
|---|---|

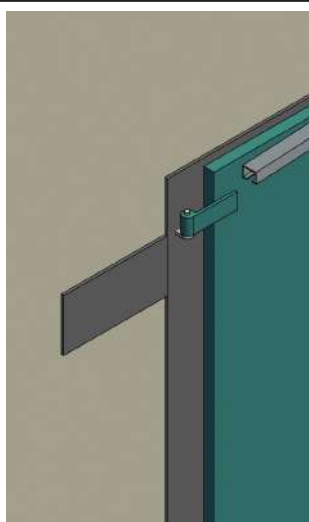
|   |  |
|---|--|
|  | <b>WARNING</b><br>Always use the fasteners prescribed in the assembly drawing with regard to: property class, dimensions, length and quantity. |
|---|--|

- Side installation



## Mounting plate

1



The mounting plate is not manufactured by FAAC.

The measurement from the floor or other permanent entry level to the lower edge of the mounting plate should be at least 2,550 mm.

The dimensions of the mounting plate should be 200 mm x 400 mm and it should be at least 8 mm thick. It must be positioned according to the enclosed assembly drawing. The mounting plate is to be anchored so that it can withstand a torque of 2,000 Nm.

Example: Siporex wall - through-going M10 bolts are used.

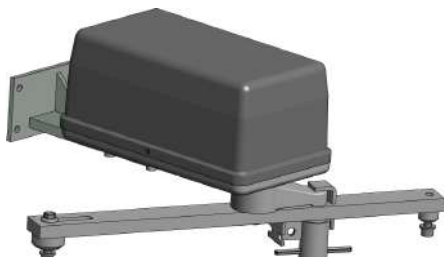
Concrete – 10 mm resin anchor.

Steel building – square tube onto a fixed building structure.

The mounting plate is also welded onto the gate surround.

## Drive arm

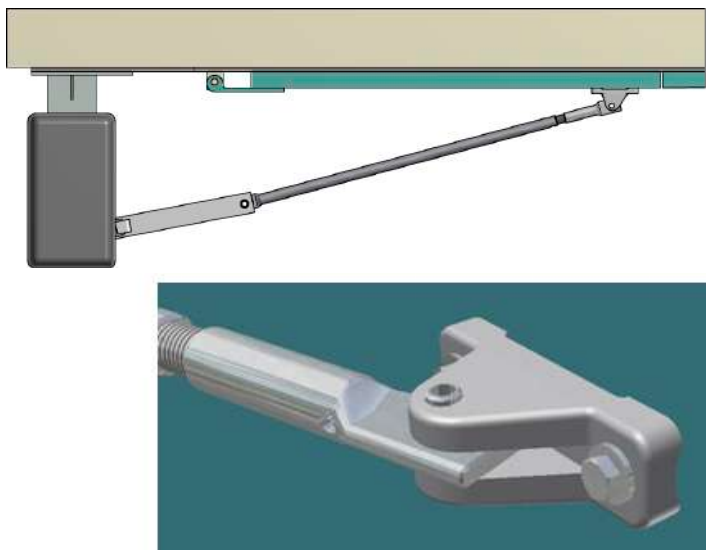
2



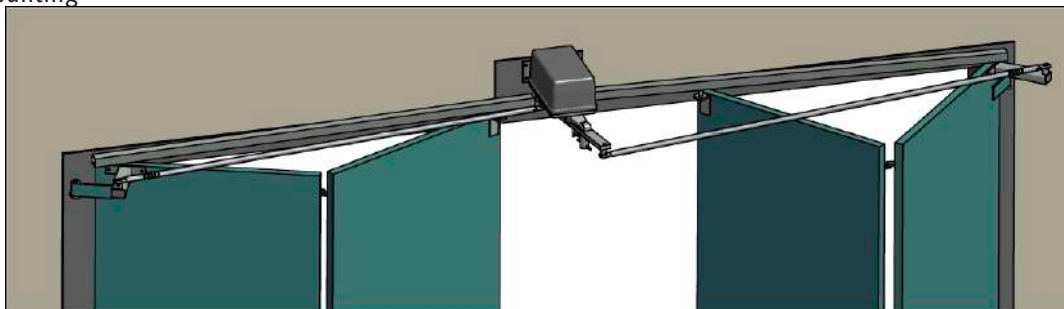
Install the drive arm by removing the bolt and washer / retaining ring on the output shaft from the drive unit and pressing the arm into place.

Then reinstall the bolt and washer.

## Gate mounting and link arm

|   |   |   |
|---|---|---|
| 3 |  The diagram shows a side view of a gate mounting bracket attached to a horizontal beam. A drive arm is connected to the bracket, and a link arm is connected to the drive arm. A close-up inset shows the link arm and drive arm connected by a pin. | <p>Screw together the link arm with the gate mounting and drive arm. The lateral position of the gate mounting can be determined when the gate is fully closed and the drive arm and link arm are in line.</p> <p>The gate mounting should be as close to the pivot point as possible as this provides the best geometry.</p> <p>Screw the gate mounting into place using two M8 bolts and washers.</p> |
|---|---|---|

- Top mounting



## Bracket &amp; mounting plate

|   |  |   |
|---|--|---|
| 1 |  | <p>Positioned centrally above the gate opening.</p> <p>Dimensions and mounting according to the point entitled "Mounting plate" in the chapter "Installation and commissioning; General installation"</p> |
| 2 |  | <p>Centre the plate horizontally above the gate opening. Height dimensions in accordance with a separate assembly drawing. Then weld the motor plate onto the mounting plate.</p>                         |

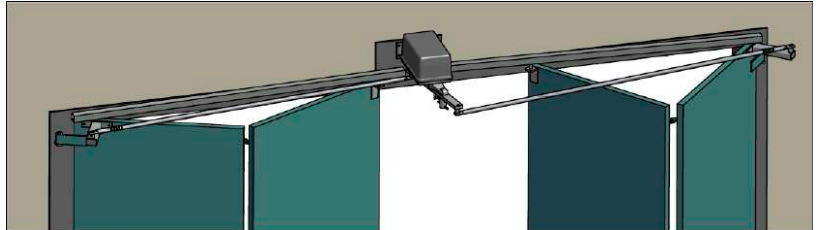
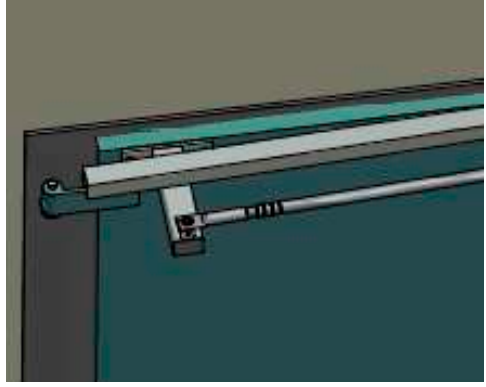
## Drive arm

|   |  |   |
|---|--|---|
| 3 |  | <p>Install the drive arm by removing the bolt and washer / retaining ring on the output shaft from the drive unit and pressing the arm into place. Then reinstall the bolt and washer / retaining ring.</p> |
|---|--|---|

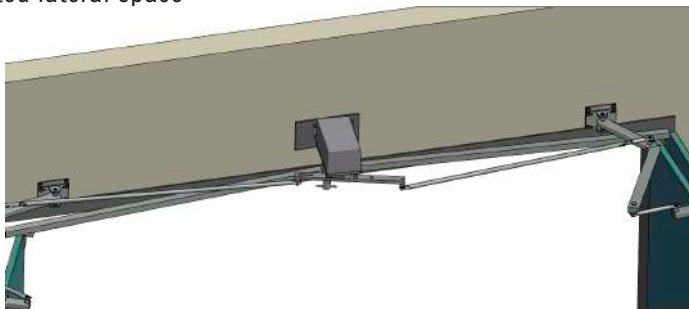
## Gate mounting

|   |  |   |
|---|--|---|
| 4 |  | <p>Screw the gate mounting into place using two M8 bolts according to the assembly drawing.</p> |
|---|--|---|

## Link arm

|   |  |  |
|---|--|--|
| 5 |  | <p>Position the link arm between the drive arm and gate mounting. Screw it into place using M12 bolts and washers.</p> |
| 6 |   | <p>Adjust it by undoing one bolt and then screwing the arm out or in at the gate mounting.</p>                         |

- Top mounting with limited lateral space



#### Bracket & mounting plate

|   |  |   |
|---|--|---|
| 1 |  | <p>Centre the plate horizontally above the gate opening. Height dimensions in accordance with a separate assembly drawing. Then weld the motor plate onto the mounting plate.</p> |
|---|--|---|

#### Drive arm

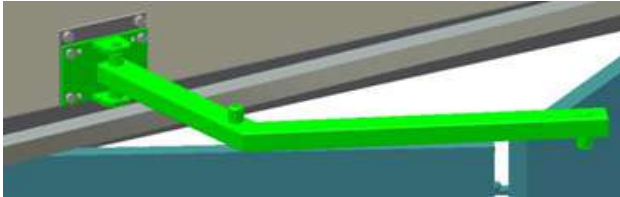
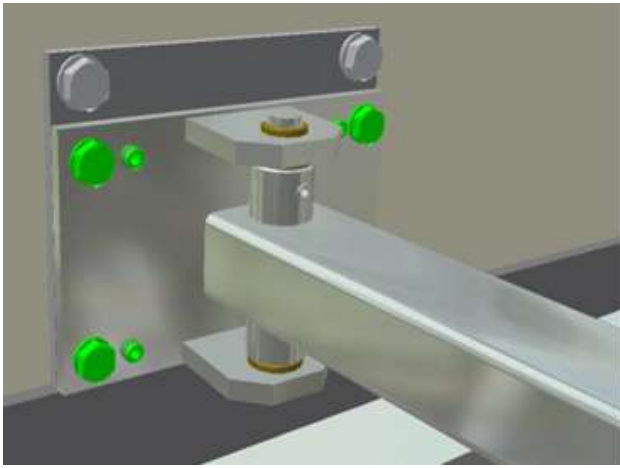
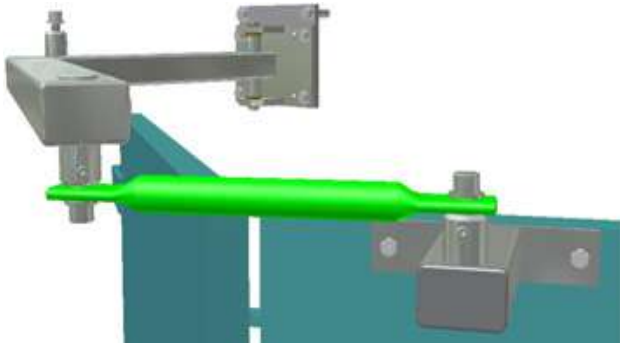
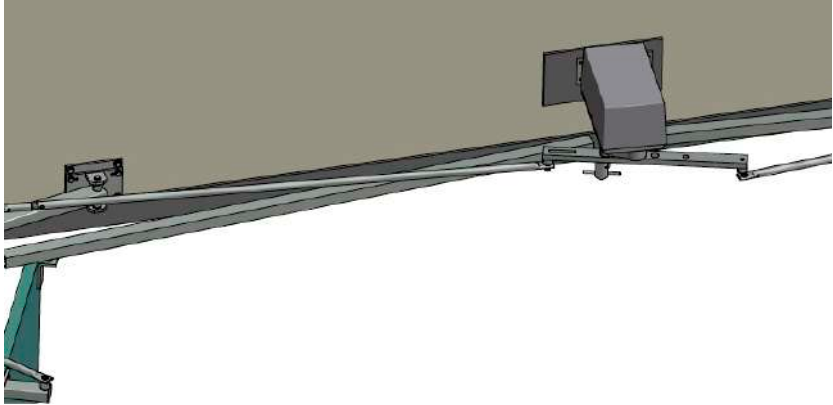
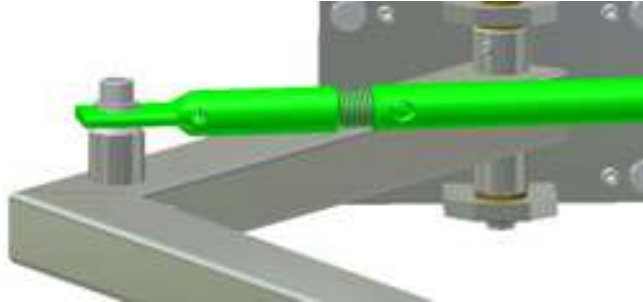
|   |  |   |
|---|--|---|
| 2 |  | <p>Install the drive arm by removing the bolt and washer / retaining ring on the output shaft from the drive unit and pressing the arm into place. Then reinstall the bolt and washer / retaining ring.</p> |
|---|--|---|

#### Gate mounting

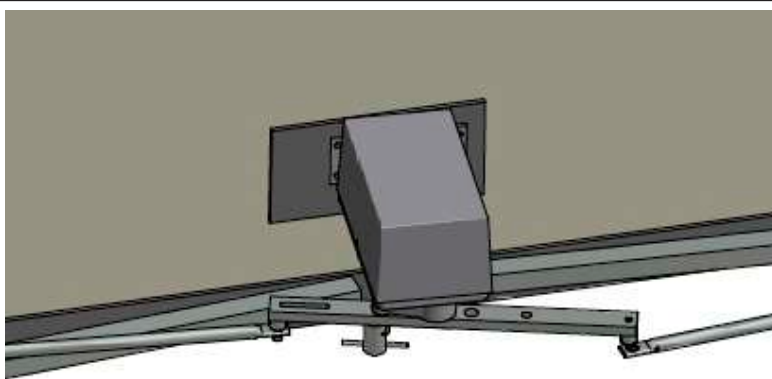
|   |  |   |
|---|--|---|
| 3 |  | <p>Screw the gate mounting into place using two M8 bolts according to the assembly drawing.</p> |
|---|--|---|

#### Mounting plate for the swing arm bracket

|   |  |   |
|---|--|---|
| 4 |  | <p>Position the mounting plate for the swing arm bracket according to the point entitled "Mounting plate" in the chapter "Installation and commissioning; Side installation".</p> |
|---|--|---|

|          |  |  |
|----------|--|--|
| 5        |     | Screw the bracket into place on the mounting plate using four M10 bolts. Adjust the swing arm so that it is always horizontal. |
| 6        |     | Adjust the mounting using the four set screws.   |
| 7        |    | Screw in the short link arm between the outer swing arm mounting and the gate mounting using M12 bolts and washers.            |
| Link arm |  |  |
| 8        |  | Screw in the link arm between the drive arm and swing arm using M12 bolts and washers.   |
| 9        |   | Adjust it by undoing one bolt and then screwing the arm out or in at the swing arm mounting.                                   |

10



Adjust the outer link arm by unscrewing the bolt on the mounting and then inserting it into the oblong groove in the drive arm.



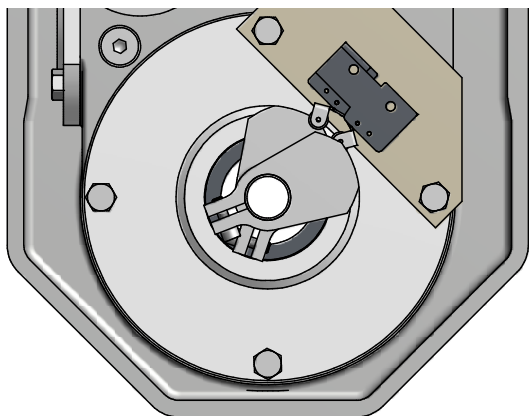
- Adjusting the drive unit

**WARNING**

Disengage the door/gate at the drive arm and ensure that it can be easily operated manually.

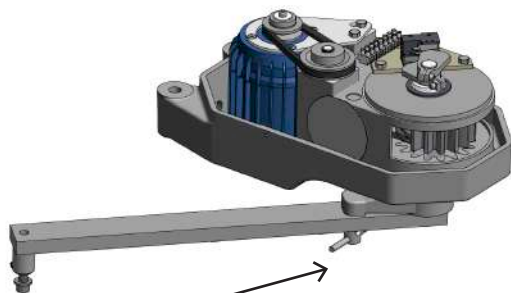
**DANGER**

Before all safety devices are in operation and are correctly calibrated only hold to run operation is permitted.



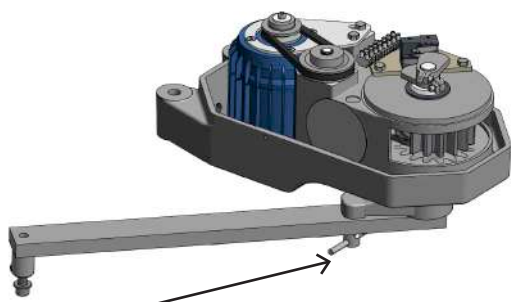
Ensure that the door/gate opens and closes to the correct position, i.e. that it does not press too hard on the surround or does not open completely. The leaves of the gate must line up with each other in the closed position which is important if there is a solenoid lock or striker. Adjust the limit positions by turning the limit cams on top of the drive unit output shaft. The upper cam is for adjusting the closed position and the lower for the open position.

- Disengagement  
Quick release



Turn the release handle a half turn to disengage the door.

Release handle



Unscrew the release handle from the drive arm mounting to disengage the door.

## Electrical connection

- General

**WARNING**

Turn off the main circuit breaker before carrying out electrical work.

**WARNING**

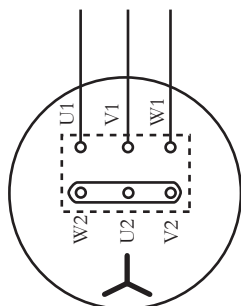
All electrical work must be carried out by a qualified electrician.

**NOTE!**

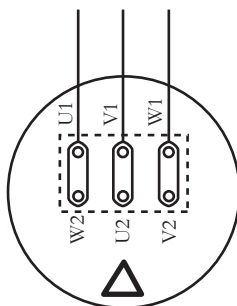
Check that the supply voltage and motor voltage are the same.

- Engaging the electric motor

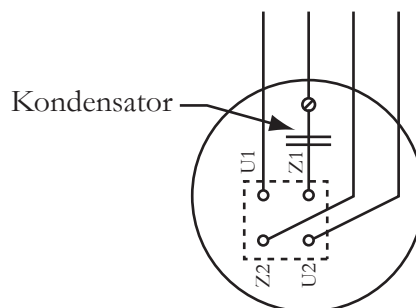
### Inkoppling av elmotor



3-fas motor  
Y-kopplad



3-fas motor  
D-kopplad



1-fas motor  
Osymetrisk

- Limit positions

| Terminal block on the limit position plate |   |
|--|---|
| No. 1                                      | Limit position Open (lower cam) C                         |
| No. 2                                      | Limit position Open (lower cam) NC                        |
| No. 3                                      | Limit position Close (upper cam) C                        |
| No. 4                                      | Limit position Close (upper cam) NC                       |
| No. 5                                      | Thermal switch (if used)                                  |
| No. 6                                      | Thermal switch (if used)                                  |
| No. 7                                      | Connection block for the anti-trap guard or solenoid etc. |
| No. 8                                      | Connection block for the anti-trap guard or solenoid etc. |

## Maintenance and service

- General



### WARNING

Turn off the main circuit breaker before carrying out service and maintenance.

### NOTE!

Service must be carried out at least twice a year! This must be confirmed in a log book.

Check that the safety equipment on the door is operational, including the anti-trap guard, load guard, stop buttons, photocells and safety loops (see the automatic control system manual).

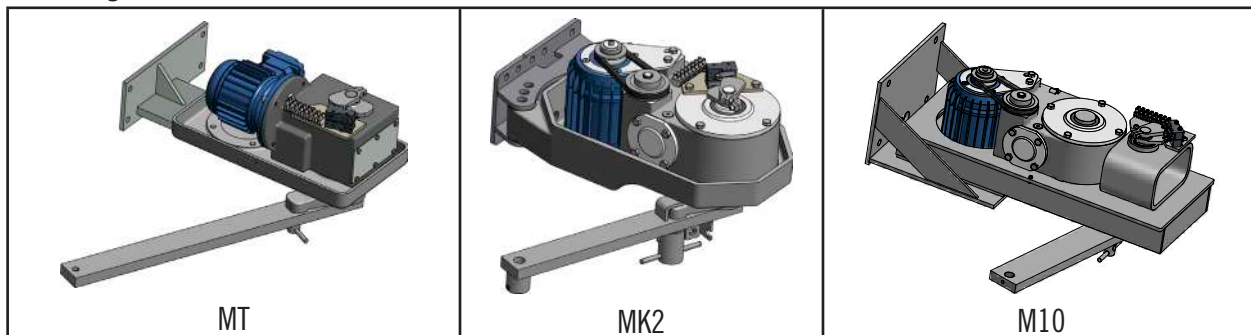
Check that all bolts are tightened. Check the tension and condition of the V-belts.

Check that the release mechanism in the drive arm has been greased so that if necessary manual operation can be easily disengaged.

Lubricate the spherical link arm bearings with grease.

- Lubrication

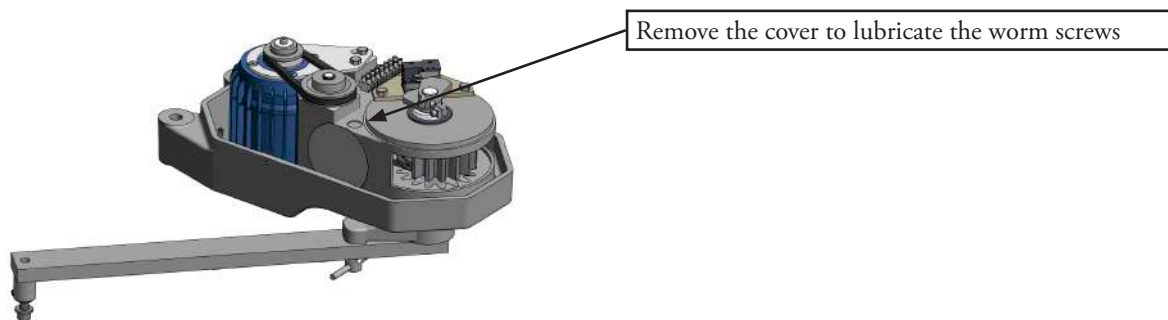
### Oil filled gearbox



A drive unit with an oil-filled gearbox is lubricated using synthetic oil: MOBIL SHC 629 or the equivalent. This does not normally need to be changed.

The M10 drive unit has two gear wheels under the gearbox, these must be lubricated using Molykote 165 LT twice a year or every 4,000 opening cycles, whichever comes first. See the instruction manual for the automatic control system for reading off the number of opening cycles.

## Open gearbox



A drive unit with an open gearbox must be lubricated twice a year or every 4,000 opening cycles, whichever comes first. See the instruction manual for the automatic control system for reading off the number of opening cycles.

Brush Molykote 165 LT onto the worm gears and worm screws.

## Spare parts

Contact FAAC Nordic AB with any queries or to order spare parts and accessories.

Always give the serial number which is located on the inside of the control cabinet.

## Fault search

- In the event of a blockage

If the door/gate cannot be operated manually using one of the normal control devices, use the manual release (see the chapter on disengagement). Disengagement means that the door/gate can be opened and closed manually without damaging the drive mechanism.

- In the event of a collision

A collision can seriously damage the installation, always check the anti-trap function, load guard and that parts are intact before continuing to use the system. If spare parts are needed see the chapter on spare parts.

- The motor is running but the gate is not moving

Check that the door/gate is not disengaged. If the installation is disengaged, try to contact the person who disengaged it to find out the reason for this. If the installation is not disengaged, check that the drive arm mounting and other mechanical components are intact.





**FAAC**