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2. Information in this document

Original operating instructions

- Copyright.
- No part of these instructions may be reproduced without our prior approval.
- Subject to alterations in the interest of technical progress.
- All dimensions given in mm.
- The diagrams in this manual are not to scale.

Key to symbols

DANGER!

Indicates a hazard with a high level of risk which, if not avoided, will result in death or serious injury.

WARNING!

Indicates a hazard with a medium level of risk which, if not avoided, could result in death or serious injury.

CAUTION!

Indicates a hazard with a low level of risk which, if not avoided, could result in minor or moderate injury.

ATTENTION!

Indicates an imminent danger of damage or destruction.

CHECK

Indicates a check to be performed.

REFERENCE

Reference to separate documents which must be complied with.

 Action request

– List, itemisation

→ Reference to other sections of this document

DANGER!

Failure to observe the instructions in this document can result in mortal danger!

- ☞ Observe all safety information contained in this document.

Warranty

The function and safety of the equipment is only guaranteed if the warning and safety instructions included in these operating instructions are adhered to.

Marantec GmbH + Co.KG is not liable for personal injury or damage to property if these occur as a result of the warnings and safety advice being disregarded.

The manufacturer does not accept any liability or warranty for damage due to the use of non-approved spare parts and accessories.

Intended use

Operators of the MDF/MDFC range are designed exclusively for opening and closing roll-up doors, roller shutter grilles and springless or weight-counterbalanced sectional doors.

Target group

Only qualified and trained specialists are permitted to install and service the operator. Qualified and trained professionals fulfil the following requirements:

- knowledge of the general and specific safety and accident prevention regulations,
- knowledge of the relevant regulations,
- trained in the use and care of appropriate safety equipment,
- Capable of recognising the dangers associated with installation.

Only qualified and trained electricians may connect the operator and carry out electrical maintenance.

Qualified and trained electricians fulfil the following requirements:

- knowledge of the general and specific safety and accident prevention regulations,
- knowledge of the relevant electrical regulations,
- trained in the use and care of appropriate safety equipment,
- capable of recognising the dangers associated with electricity.

Instructions for installation and connection

- The controls must be disconnected from the electricity supply before carrying out electrical works. It must be ensured that the electricity supply remains disconnected during the works.
- Local protective regulations must be complied with.
- Mains cables and control cables must be laid separately.

Regulations and bases for testing

For connecting, programming and servicing, the following regulations must be observed (the list is not exhaustive).

Construction product standards

- EN 13241-1 (Products without fire resistance or smoke control characteristics)
- EN 12445 (Safety in use of power operated doors - Test methods)
- EN 12453 (Safety in use of power operated doors - Requirements)
- DIN EN 12604 (Doors and gates - Mechanical aspects - Requirements)
- EN 12635 (Industrial, commercial and garage doors and gates - Installation and use.)
- EN 12978 (Safety devices for power operated doors and gates - Requirements and test methods)

Electromagnetic compatibility

- EN 55014-1 (Radio disturbance, household appliances)
- EN 61000-3-2 (Disturbances in supply systems - harmonic currents)
- EN 61000-3-3 (Disturbances in supply systems - voltage fluctuations)
- DIN EN 61000-6-2 (Electromagnetic compatibility (EMC) - Part 6-2: Generic standards – Immunity for industrial environments)
- DIN EN 61000-6-3 (Electromagnetic compatibility (EMC) - Part 6-3: Generic standards – Emission standard for residential, commercial and light-industrial environments)

Machinery Directive

- EN 60204-1 (Safety of machinery, electrical equipment of machines) Part 1: General requirements
- EN ISO 12100 (Safety of machinery – general principles for design - risk assessment and risk reduction)

General safety instructions

Low voltage

- DIN EN 60335-1 (Household and similar electrical appliances - Safety - Part 1: general requirements)
- DIN EN 60335-2-103 (Household and similar electrical appliances - Safety - Part 2-103: Particular requirements for drives for gates, doors and windows)

Committee for Workplaces (ASTA)

- Workplace regulation ASR A1.7 ("Doors and gates")

4. Overview of products

4.1 Safety catch device as a safety feature

The MDF roll-up door operator is a slip-on drive with an incorporated safety catch device. The safety catch device is entrained load-free and wear-free.

If the drive unit fails, the safety catch device is automatically triggered. The load moved by the operator is then smoothly brought to a standstill in the position concerned. The power transmission between the motor and the door shaft is interrupted after the drive unit fails.

The operator is no longer usable after the safety catch device has been triggered and must be replaced.

The safety catch device is distinguished by the following features:

- Protection against worm shaft and worm gear failure
- Independent of the rotational speed
- Independent of the direction of rotation
- Can be mounted in any position
- Unsusceptible to vibrations
- Maintenance-free
- Self-controlling
- Excellent damping properties when safety catch device is triggered

4.2 Various options

The following package options are available for the MDF operator:

- MDF 05-14-12 KU
- MDF 05-10-12 KU HD*

- MDF 05-14-12 KE
- MDF 05-10-12 KE HD*

- MDF 20-22-12 KU
- MDF 20-15-12 KU HD*

- MDF 20-22-12 KE
- MDF 20-15-12 KE HD*

- MDF 30-30-12 KU
- MDF 30-42-12 KU
- MDF 30-50-12 KU
- MDF 30-27-12 KU HD*

- MDF 30-30-12 KE
- MDF 30-42-12 KE
- MDF 30-50-12 KE
- MDF 30-27-12 KE HD*

- MDF 50-75-10 KU
- MDF 50-65-10 KU HD*

- MDF 50-75-10 KE
- MDF 50-65-10 KE HD*

- MDF 60-100-9 KU
- MDF 60-140-9 KU HD*

- MDF 60-100-9 KE
- MDF 60-140-9 KE HD*

- MDF 70-165-8 KU HD*
- MDF 70-200-8 KU HD*

- MDF 70-165-8 KE HD*
- MDF 70-200-8 KE HD*

* HD = Operators with this suffix have a higher duty cycle.

The precise values for all operators can be found in
 → „9. Technical data“

Additional product combinations are possible.
 Information about these combinations can be obtained from
 the manufacturer.

5. Installation

5.1 Preparation

WARNING!

Incorrect installation of the drive can result in serious injury!

- The drive must be installed free of any tension.
- The drive must not move on the shaft.
- The design and subsurface of all components must be suitable for the forces encountered.
- Installation must only be carried out from a safe standing position (e. g. scaffolding).

ATTENTION!

Incorrect installation of the drive can result in damage to property!

To avoid damage to the drive and the door, the drive must only be fitted if

- the drive is undamaged,
- the ambient temperature is -20 °C to +60 °C.,
- the altitude of the location does not exceed 1,000 m,
- a suitable protection type has been selected.

 Before installation, ensure that

- the drive is not blocked,
- the drive has been newly prepared after a lengthy storage period,
- all connections have been carried out correctly
- the direction of rotation of the drive motor is correct,
- all motor protective devices are active
- no other sources of danger exist,
- the installation site has been cordoned off over a wide area.

Installation

5.2 Slip-on assembly

⚠ ATTENTION!

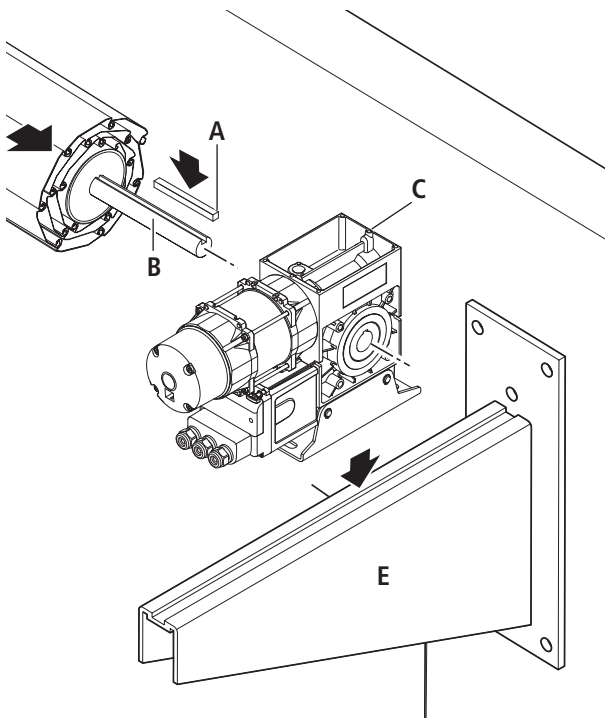
Damage due to improper installation of the drive!

To avoid damage to the drive and to the door, the drive must be mounted on a console or a torque support bracket so that it is vibration damped.

***i* REFERENCE**

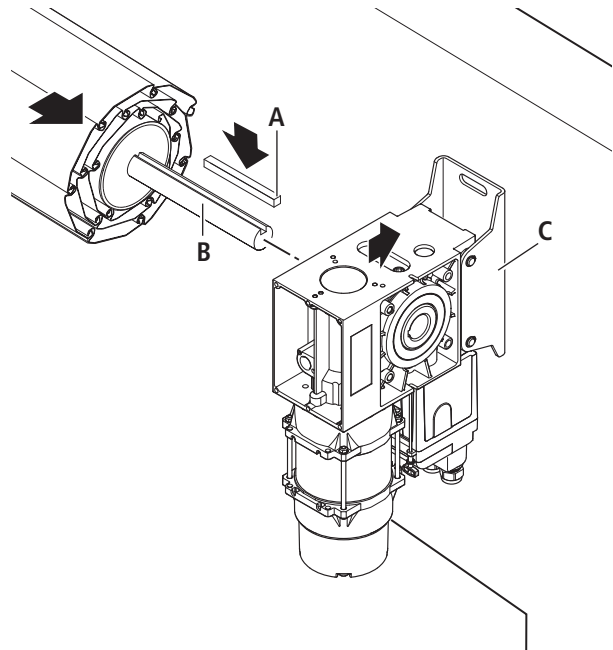
The relevant instructions for the door must be observed when fitting the drive to the door.

Horizontal installation position



- ➡ Insert the feather key (A) into the shaft (B).
- ➡ Slide the operator (C) onto the shaft (B).

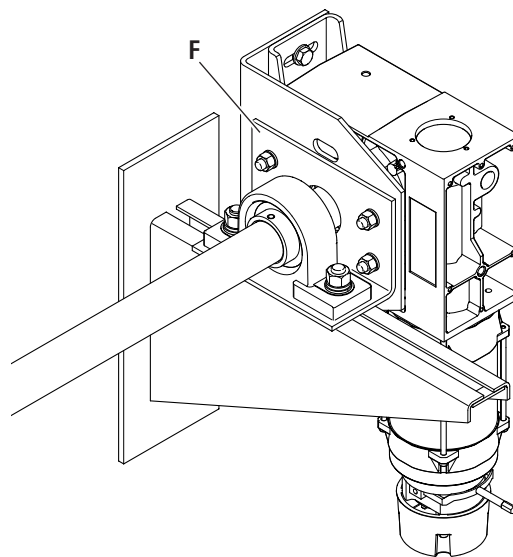
Vertical installation position

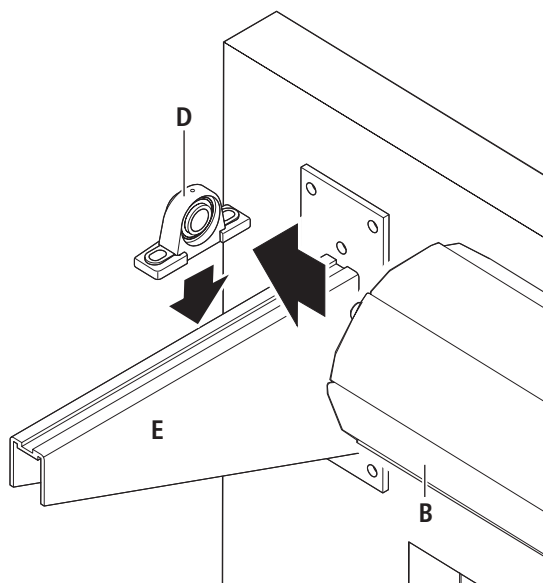


⚠ ATTENTION!

Damage due to improper installation of the drive!

From a torque of 650 Nm upwards, the operator must be fitted with an additional torque support (F) when installed in a vertical position.

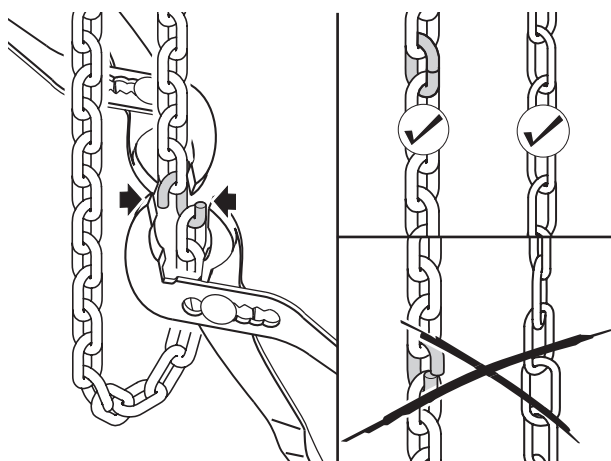




- Slide the counter bearing (D) onto the shaft (B).
- Fix the shaft (B) with the operator (C) and counter bearing (D) to the brackets (E).

5.3 Installation of the emergency hand chain (only for operators with emergency hand chain)

To ensure that they work correctly, the chain links must not be twisted.



- Join the ends of the emergency hand chain together with the chain connecting link.

⚠ ATTENTION!

Incorrect operation of the drive can result in damage to property!

To avoid damage to the drive and the door, the emergency hand chain must be secured while the door is operated electrically.

6. Initial Operation

6.1 Preparation

ATTENTION!

Damage due to improper installation of the drive!

To avoid damage to the drive, the following points must be observed:

- The types of cable and their diameters must be selected according to current regulations.
- The nominal currents and the type of connection must correspond to those on the motor type plate.
- The drive details must agree with the connected loads.

REFERENCE

When operated with electronic control units, the corresponding start-up instructions and circuit diagrams must be complied with.

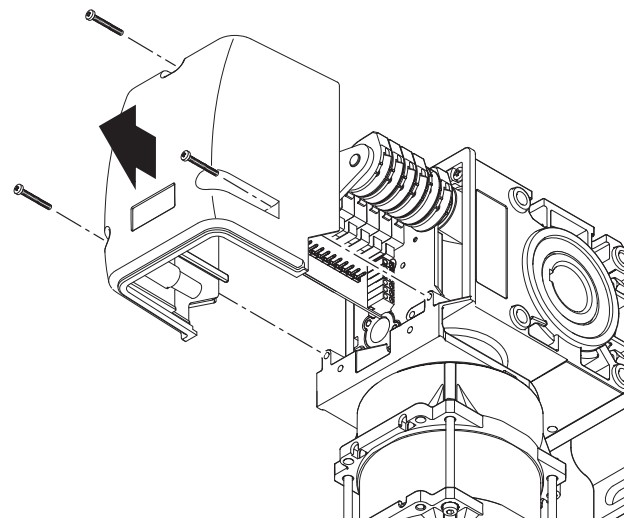
6.2 Open the operator

DANGER!

Danger of fatal electric shock!

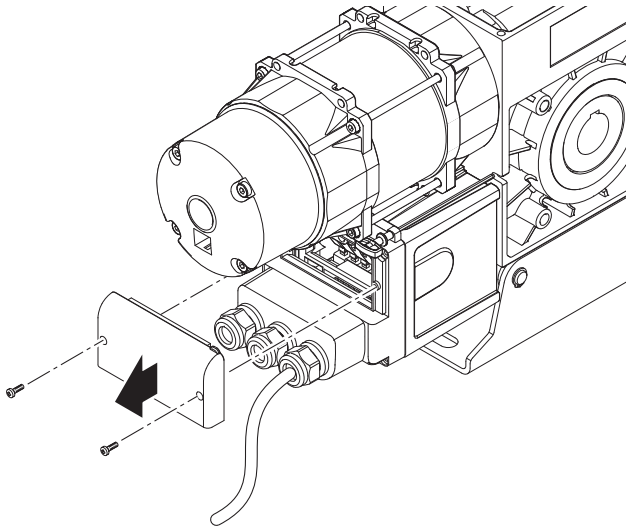
- ✎ Before commencing cabling works, you **MUST** disconnect the drive system from the mains supply. Ensure that the electricity supply remains disconnected throughout the cabling works.

Model MDF 05

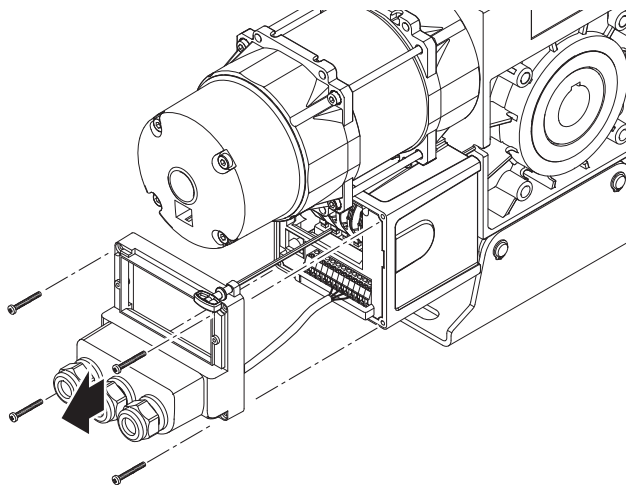


- ✎ Remove the screws from the hood.
- ✎ Remove the cover from the operator.

From model MDF 20 onwards



- Remove the screws from the adjustment cover.
- Take the adjustment cover off the limit switch cover.



- Remove the screws from the limit switch cover.
- Take the limit switch cover off the limit switch box.

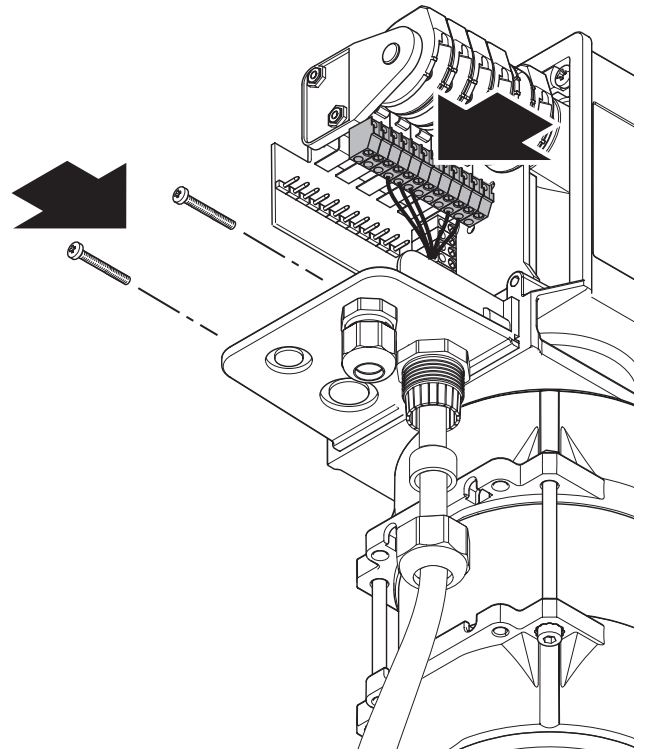
6.3 Inserting and attaching the cable

⚠ DANGER!

Danger of fatal electric shock!

- Before commencing cabling works, you **MUST** disconnect the drive system from the mains supply. Ensure that the electricity supply remains disconnected throughout the cabling works.

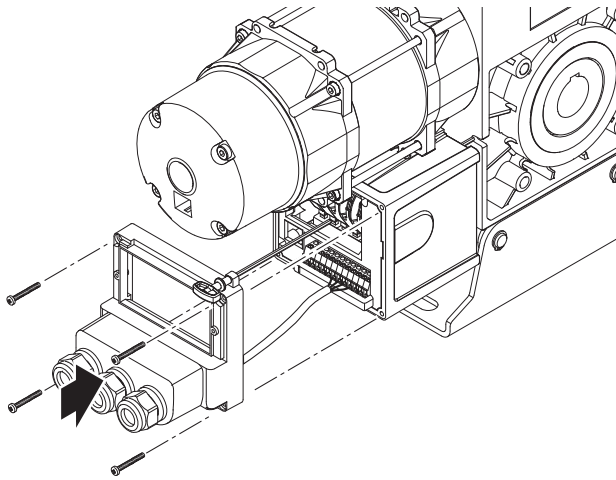
Model MDF 05



- Screw the cable set retaining plate on.
- Plug the connector into the PCB.
- Connect up the control unit, if required, according to the following circuit diagrams.
→ „6.4 Connection options”

Initial Operation

From model MDF 20

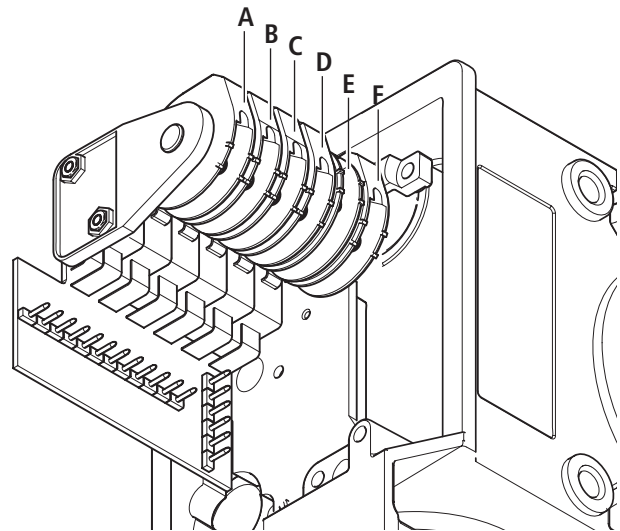


- Plug the cable set connector into the limit switch PCB.
- Connect up the control unit, if required, according to the following circuit diagrams.
- ➔ „6.4 Connection options“
- Screw the limit switch cover on tightly.

6.4 Connection options

3 x 400 V star connection (standard, pluggable)

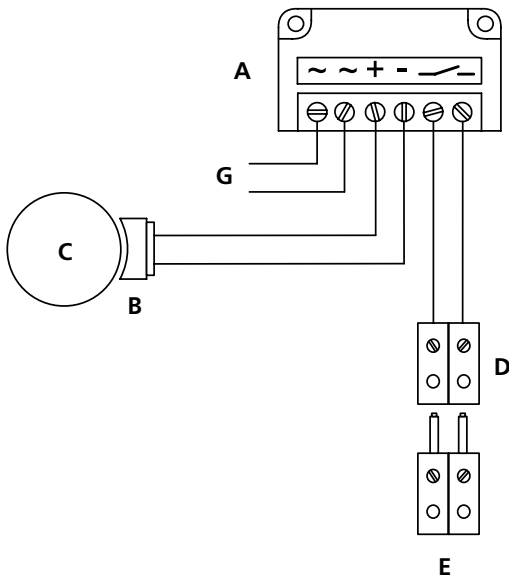
The motor is factory-wired for connection to a 3 x 400 V mains supply in star connection.



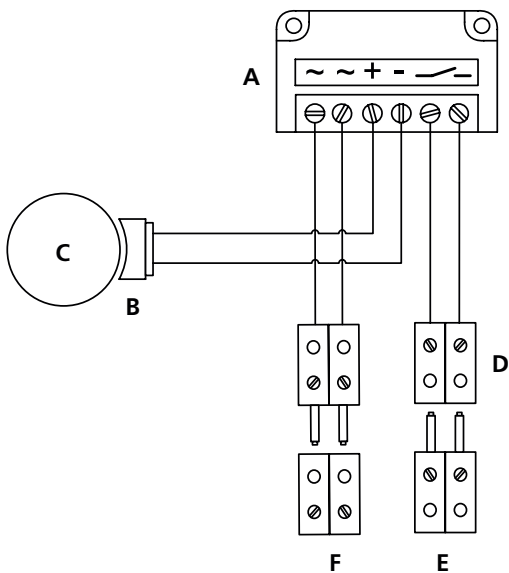
Initial Operation

Connection of brake rectifier from size MDF 30-50 onwards with the brake connected

Connection of MDF with contactor operation:

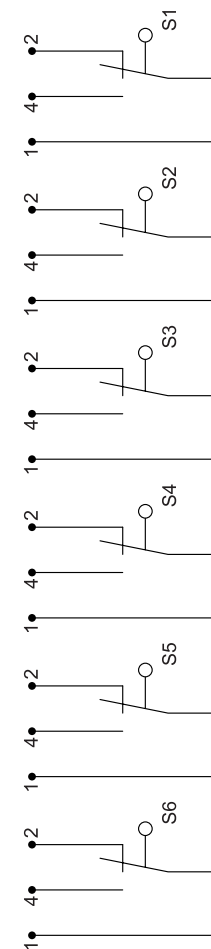
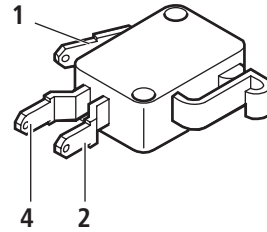


Connection of MDF with frequency converter operation:



- A Brake rectifier
- B Motor brake
- C Motor
- D Brake contact coupling
- E Brake contact connector
- F Brake voltage
- G Brake voltage (ready-wired)

3 x 400 V star connection

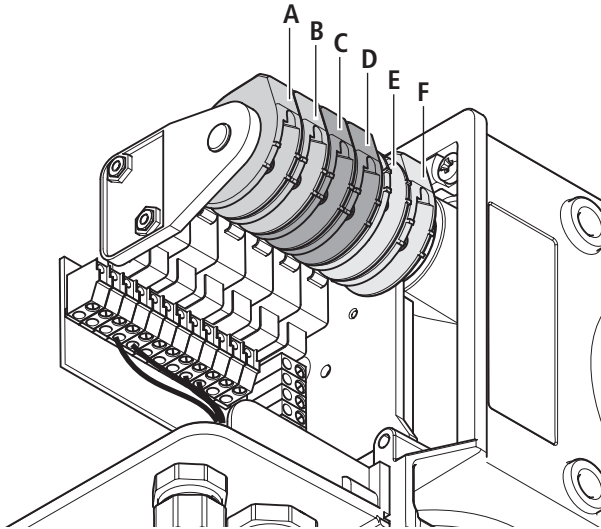


- S1 OPEN additional limit switch (standard only in the case of operators without integrated control unit)
- S2 Limit switch, OPEN
- S3 Safety limit switch, OPEN
- S4 Safety limit switch, CLOSE
- S5 Limit switch CLOSED
- S6 CLOSED additional limit switch (standard only in the case of operators without integrated control unit)

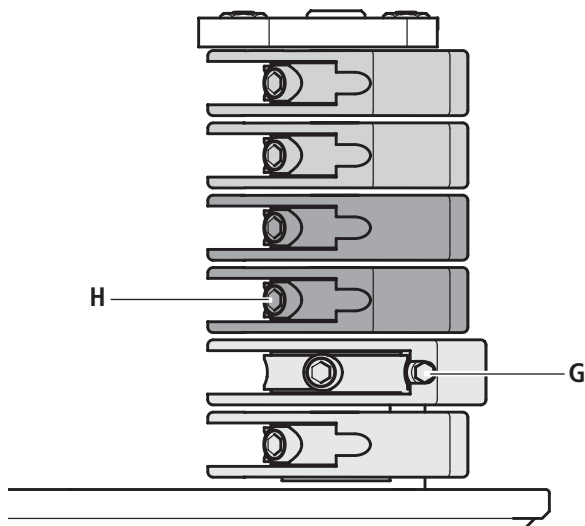
3 x 230 V delta connection

To connect the operator to a 3 x 230 V mains supply, please consult the manufacturer.

6.5 Manual settings for model MDF 05



- A Control cam for additional limit switch, OPEN (green)
- B Control cam for limit switch, OPEN (green)
- C Control cam for safety limit switch, OPEN (red)
- D Control cam for safety limit switch, CLOSED (red)
- E Control cam for limit switch, CLOSED (white)
- F Control cam for additional limit switch, CLOSED (white)



- G Fine adjustment screw
- H Locking screw

Each control cam has a locking screw (H) and a fine adjustment screw (G).

The locking screw (H) is used to lock the corresponding control cam in the desired position. Finer adjustment can be made with the fine adjustment screw (G).

Set the CLOSED end position

- Drive the door to the CLOSED end position.
- Set the control cam so that the CLOSED limit switch (E) is actuated.
- Tighten the locking screw (H).

The CLOSED safety limit switch (D) must be set in such a way that it switches immediately when the CLOSED limit switch (E) is passed over.

- Adjust the CLOSED safety limit switch (D).

Set the OPEN end position

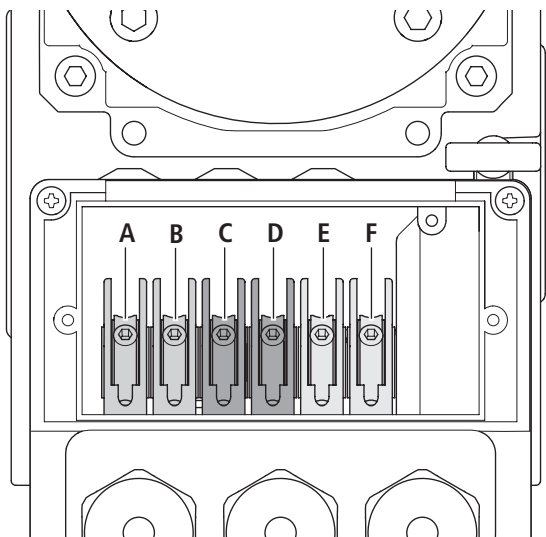
- Drive the door to the OPEN end position.
- Set the control cam so that the OPEN limit switch (B) is actuated.
- Tighten the locking screw (H).

The OPEN safety limit switch (C) must be set in such a way that it switches immediately when the OPEN limit switch (B) is passed over.

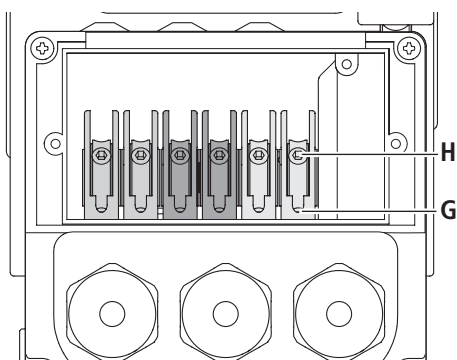
- Adjust the OPEN safety limit switch (C).

Initial Operation

6.6 Manual settings for model MDF 20 and subsequent models



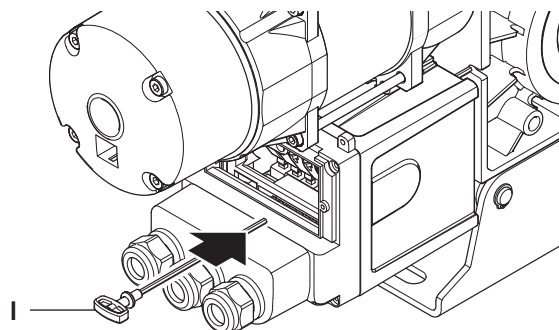
- A Control cam for additional limit switch, OPEN (green)
- B Control cam for limit switch, OPEN (green)
- C Control cam for safety limit switch, OPEN (red)
- D Control cam for safety limit switch, CLOSED (red)
- E Control cam for limit switch, CLOSED (white)
- F Control cam for additional limit switch, CLOSED (white)



- G Fine adjustment screw
- H Locking screw

Each control cam has a locking screw (H) and a fine adjustment screw (G).

The locking screw (H) is used to lock the corresponding control cam in the desired position. Finer adjustment can be made with the fine adjustment screw (G).



Use the adjusting tool (I) to tune the fine adjustment screw and the locking screw.

Set the CLOSED end position

- Drive the door to the CLOSED end position.
- Set the control cam so that the CLOSED limit switch (E) is actuated.
- Tighten the locking screw (H).

The CLOSED safety limit switch (D) must be set in such a way that it switches immediately when the CLOSED limit switch (E) is passed over.

- Adjust the CLOSED safety limit switch (D).

Set the OPEN end position

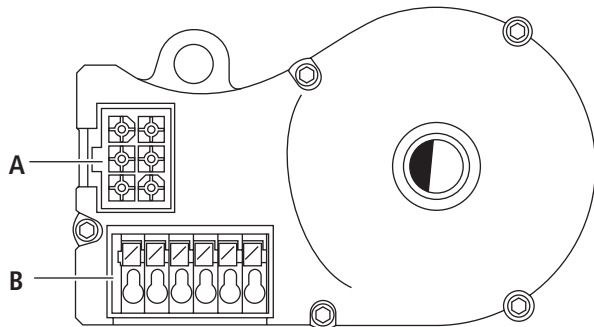
- Drive the door to the OPEN end position.
- Set the control cam so that the OPEN limit switch (B) is actuated.
- Tighten the locking screw (H).

The OPEN safety limit switch (C) must be set in such a way that it switches immediately when the OPEN limit switch (B) is passed over.

- Adjust the OPEN safety limit switch (C).

6.7 Digital settings – Limit switch and safety circuit for drive

Electronic interface



- A: AVE plug (absolute value encoder plug)
- B: AVE plug terminal (absolute value encoder plug terminal)

i REFERENCE

Please refer to the control unit operating manual for instructions on setting the end positions.

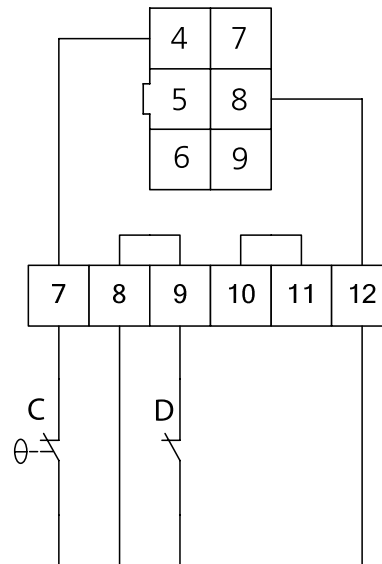
Wiring allocation, AVE (absolute value encoder) plug

4 grey	7 yellow
5 green	8 pink
6 white	9 brown

Depending on the operator, cables with either numbered or coloured wires are used for the AWG:

- 4 (grey): Safety circuit input
- 5 (green): RS 485 B
- 6 (white): GROUND
- 7 (yellow): RS485 A
- 8 (pink): Safety circuit output
- 9 (brown): 7...18V_{DC}

AVE (absolute value encoder) plug terminal (7-12)

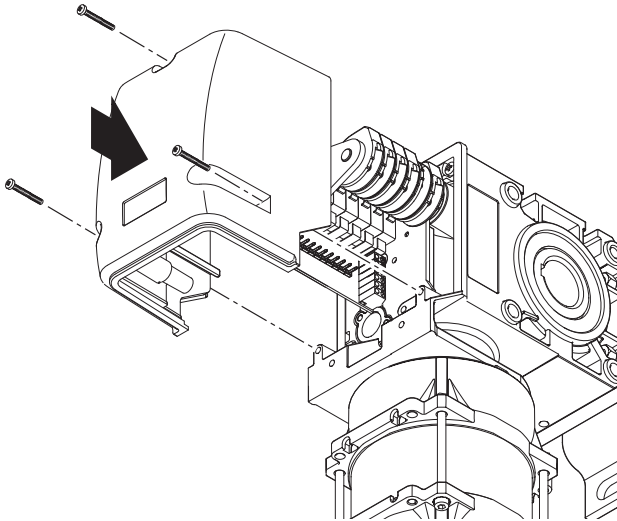


- C: Thermal element in the drive
- D: Manual emergency control
(emergency crank or emergency chain)

Initial Operation

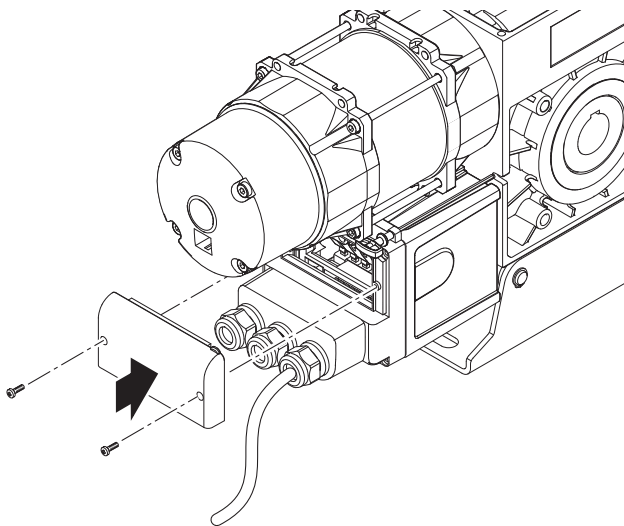
6.8 Close the operator

Model MDF 05



- Place the cap on the operator.
- Screw the cap on tightly.

From model MDF 20 onwards



- Place the cover over the cap.
- Screw the cover on tightly.

6.9 Check the system

Check the direction of travel

➤ Drive the door in the CLOSED direction.
The operator must close the door.

➤ Drive the door in the OPEN direction.
The drive must open the door.

If the direction of movement of the door does not match the button commands, change the direction of rotation.
The direction of movement must then be checked again.

i REFERENCE

Please refer to the control unit operating manual for instructions on changing the direction of rotation.

Check the limit switch settings

➤ Drive the door to the CLOSED end position.
The drive must stop in the desired position.

➤ Drive the door to the OPEN end position.
The operator must stop in the desired position.

➤ Check the seat of the fixing screws.

Check the mechanical functions

After assembling and installing all components the functions of the system must be checked.

- Check all the functions of the system.
- Check that the operator runs smoothly.
- Check whether the operator is leaking oil.

If the operator makes unusual noises or leaks oil:

- The operator must be taken out of service immediately,
- The customer service must be informed.

WARNING!

Improper use may result in serious injury!

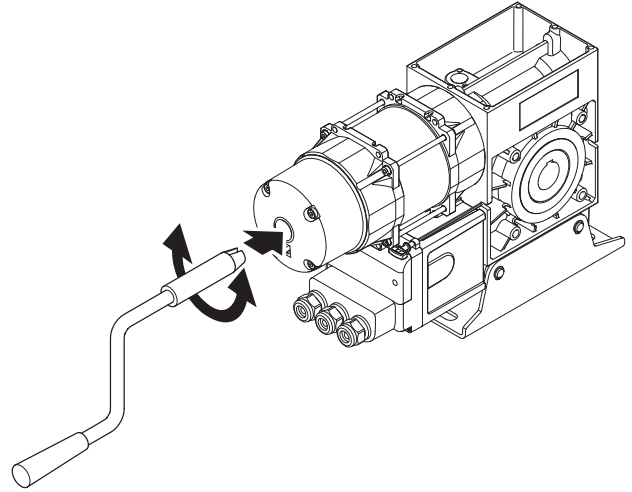
To avoid injury, the following points must be observed:




- Emergency operation may only be carried out from a safe standing position.
- Emergency operation may only be carried out when the motor is stationary.
- The system must be disconnected from the power supply during emergency operation.
- Operators with a spring brake must be actuated against the closed brake when opening or closing the door.
- For safety reasons, brakes in doors without a weight counterbalance must only be vented in the closed door position for testing purposes.
- Accidental venting of the brake must be rendered impossible by preventive measures at the installation site.

During maintenance works or in the case of an electrical fault, the door can be moved towards the OPEN or CLOSED positions with the help of the emergency operation equipment.

If the door is moved beyond the CLOSED or OPEN end positions, the drive can no longer be activated electrically.

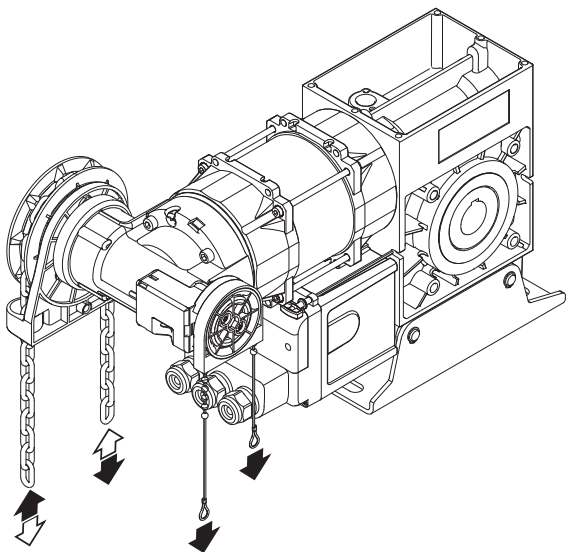
Operation with emergency hand crank



-  Push the emergency hand crank into the operator as far as it will go. The control voltage will be interrupted and the door can no longer be operated electrically.
-  Move the door in the OPEN or CLOSE direction by turning the emergency hand crank.
-  Remove the emergency hand crank from the operator after completing emergency manual operation. The control voltage will be switched on again and the door can be operated electrically.

Emergency operation

Operation with emergency hand chain



Releasing

- ☞ Gently pull the chain with the red handle downwards as far as possible. The control voltage will be interrupted and the door can no longer be operated electrically.
- ☞ Release the emergency hand chain from its fixing.
- ☞ Move the door in the OPEN or CLOSE direction by pulling on the emergency hand chain on the side concerned.

Locking

- ☞ Gently pull the chain with the green handle downwards as far as possible. The control voltage will be switched on again and the door can be operated electrically.
- ☞ Attach the emergency hand chain to its fixing. The door can now be moved with the operator.

8. Maintenance

⚠ DANGER!

Danger of fatal electric shock!

- ☞ Before commencing cabling works, you **MUST** disconnect the drive system from the mains supply. Ensure that the electricity supply remains disconnected throughout the cabling works.

⚠ ATTENTION!

Improper maintenance of the drive can result in property damage!

To avoid damage to the drive and door, the following points must be observed:

- Maintenance must only be carried out by authorized persons.
- Directive ASR A1.7 must be complied with.
- Worn or faulty parts must be replaced.
- Only approved parts must be installed.
- All maintenance work must be documented.

The drive unit has lifetime lubrication and is maintenance-free.

The hollow shaft must be kept rust-free.

- ☞ Check that all mountings have been securely tightened.
- ☞ Check the brake (if available).
The brake is subject to wear and must be checked regularly to ensure that it is in good working order.
- ☞ Check the limit switches and safety switches.
- ☞ Check for noises and oil leaks.
- ☞ Check the mounting of the drive for corrosion.
- ☞ Check the housing for damage.

Faulty parts that have been replaced must be disposed of properly in accordance with the regulations.

Please contact the manufacturer in the event of a fault or failure.

9. Technical data

EN

Type (KU / KE):	MDF 05-14-12 KU MDF 05-14-12 KE	MDF 05-10-12 KU HD MDF 05-10-12 KE HD	MDF 20-22-12 KU MDF 20-22-12 KE	MDF 20-15-12 KU HD MDF 20-15-12 KE HD
Driving torque (Nm):	140	100	220	150
Maximum safety catch torque (Nm):	309	309	784	784
Driving motor speed (min ⁻¹):	12	12	12	12
Motor output (kw):	0,45	0,37	0,75	0,55
Operating voltage (V):	400 / 3~	400 / 3~	400 / 3~	400 / 3~
Mains frequency Hz:	50	50	50	50
Control voltage (V):	24	24	24	24
Nominal motor current (A):	1,9	1,5	2,8	1,8
Max. no. cycles per hour*	20	30	20	30
Cable on site (mm ²):	5 x 1,5	5 x 1,5	5 x 1,5	5 x 1,5
Fuse protection on site (A):	10,0	10,0	10,0	10,0
Protection type (IP)	54	54	54	54
Temperature range (°C):	-20 / +60	-20 / +60	-20 / +60	-20 / +60
Continuous sound pressure level (dB (A)):	< 70	< 70	< 70	< 70
Weight per piece (kg):	16	18	19	21
Maximum number of revolutions of driven shaft:	13	13	18	18
Hollow shaft (mm):	30	30	30	30

* One cycle is equal to two door movements (opening and closing the door).

The values indicated apply for 10 revolutions of the output shaft per door movement and assume they are evenly distributed.

Technical data

Type (KU / KE):	MDF 30-30-12 KU MDF 30-30-12 KE	MDF 30-42-12 KU MDF 30-42-12 KE	MDF 30-50-12 KU MDF 30-50-12 KE	MDF 30-27-12 KU HD MDF 30-27-12 KE HD
Driving torque (Nm):	300	420	500	270
Maximum safety catch torque (Nm):	2680	2680	2680	2680
Driving motor speed (min -1):	12	12	12	12
Motor output (kw):	0,85	1,1	1,1	0,75
Operating voltage (V):	400 / 3~	400 / 3~	400 / 3~	400 / 3~
Mains frequency Hz:	50	50	50	50
Control voltage: (V):	24	24	24	24
Nominal motor current (A):	3,6	5,1	5,7	2,1
Max. no. cycles per hour*	20	20	20	30
Cable on site (mm ²):	5 x 1,5	5 x 1,5	5 x 1,5	5 x 1,5
Fuse protection on site (A):	10,0	10,0	10,0	10,0
Protection type (IP)	54	54	54	54
Temperature range (°C):	-20 / +60	-20 / +60	-20 / +60	-20 / +60
Continuous sound pressure level (dB (A)):	< 70	< 70	< 70	< 70
Weight per piece (kg):	23	27	29	30
Maximum number of revolutions of driven shaft:	18	18	18	18
Hollow shaft (mm):	30	40	40	40

* One cycle is equal to two door movements (opening and closing the door).

The values indicated apply for 10 revolutions of the output shaft per door movement and assume they are evenly distributed.

Type (KU / KE):	MDF 50-75-10 KU MDF 50-75-10 KE	MDF 50-65-10 KU HD MDF 50-65-10 KE HD
Driving torque (Nm):	750	650
Maximum safety catch torque (Nm):	5136	5136
Driving motor speed (min -1):	10	10
Motor output (kw):	1,2	1,1
Operating voltage (V):	400 / 3~	400 / 3~
Mains frequency Hz:	50	50
Control voltage: (V):	24	24
Nominal motor current (A):	4,2	3,1
Max. no. cycles per hour*	20	30
Cable on site (mm ²):	5 x 1,5	5 x 1,5
Fuse protection on site (A):	10,0	10,0
Protection type (IP)	54	54
Temperature range (°C):	-20 / +60	-20 / +60
Continuous sound pressure level (dB (A)):	< 70	< 70
Weight per piece (kg):	41	42
Maximum number of revolutions of driven shaft:	36	36
Hollow shaft (mm):	50	50

* One cycle is equal to two door movements (opening and closing the door).
The values indicated apply for 10 revolutions of the output shaft per door movement and assume they are evenly distributed.

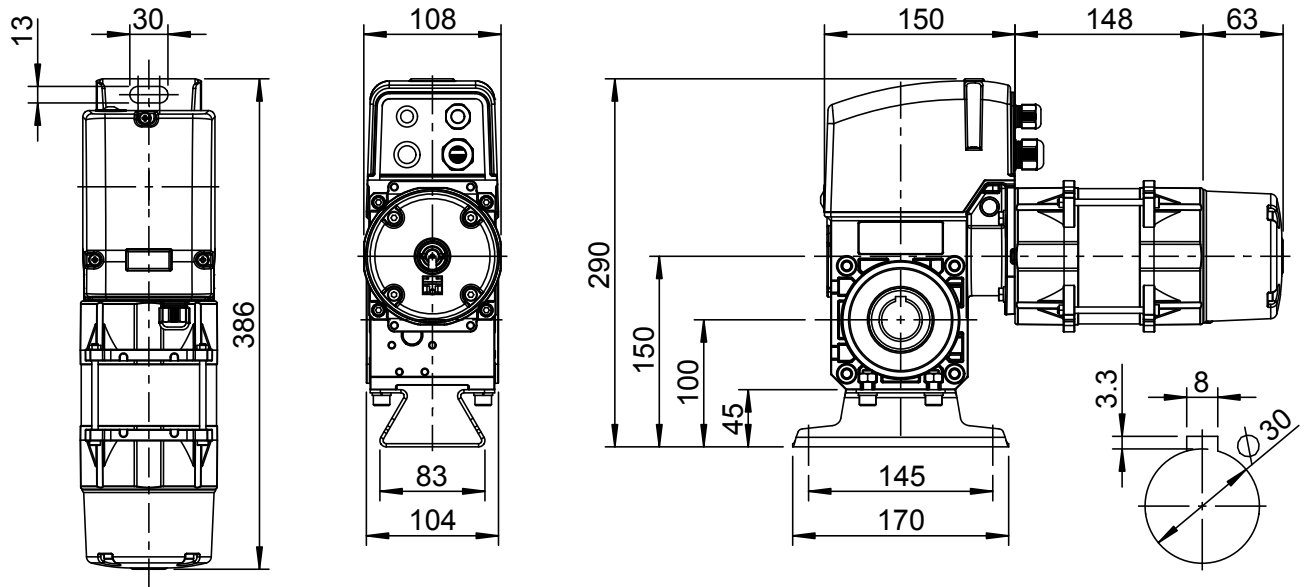
Technical data

Type (KU / KE):	MDF 60-100-9 KU MDF 60-100-9 KE	MDF 60-140-9 KU HD MDF 60-140-9 KE HD	MDF 70-165-8 KU HD MDF 70-165-8 KE HD	MDF 70-200-8 KU HD MDF 70-200-8 KE HD
Driving torque (Nm):	1000	1400	1650	2000
Maximum safety catch torque (Nm):	3974	3974	7738	7738
Driving motor speed (min -1):	9	9	8	8
Motor output (kw):	1,5	2,0	2,2	2,5
Operating voltage (V):	400 / 3~	400 / 3~	400 / 3~	400 / 3~
Mains frequency Hz:	50	50	50	50
Control voltage: (V):	24	24	24	24
Nominal motor current (A):	6,1	6,7	8,5	8,1
Max. no. cycles per hour*	30	30	30	30
Cable on site (mm ²):	5 x 1,5	5 x 1,5	5 x 1,5	5 x 1,5
Fuse protection on site (A):	10,0	10,0	10,0	10,0
Protection type (IP)	54	54	54	54
Temperature range (°C):	-20 / +60	-20 / +60	-20 / +60	-20 / +60
Continuous sound pressure level (dB (A)):	< 70	< 70	< 70	< 70
Weight per piece (kg):	72	75	72	81
Maximum number of revolutions of driven shaft:	36	36	36	36
Hollow shaft (mm):	50	50	55	55

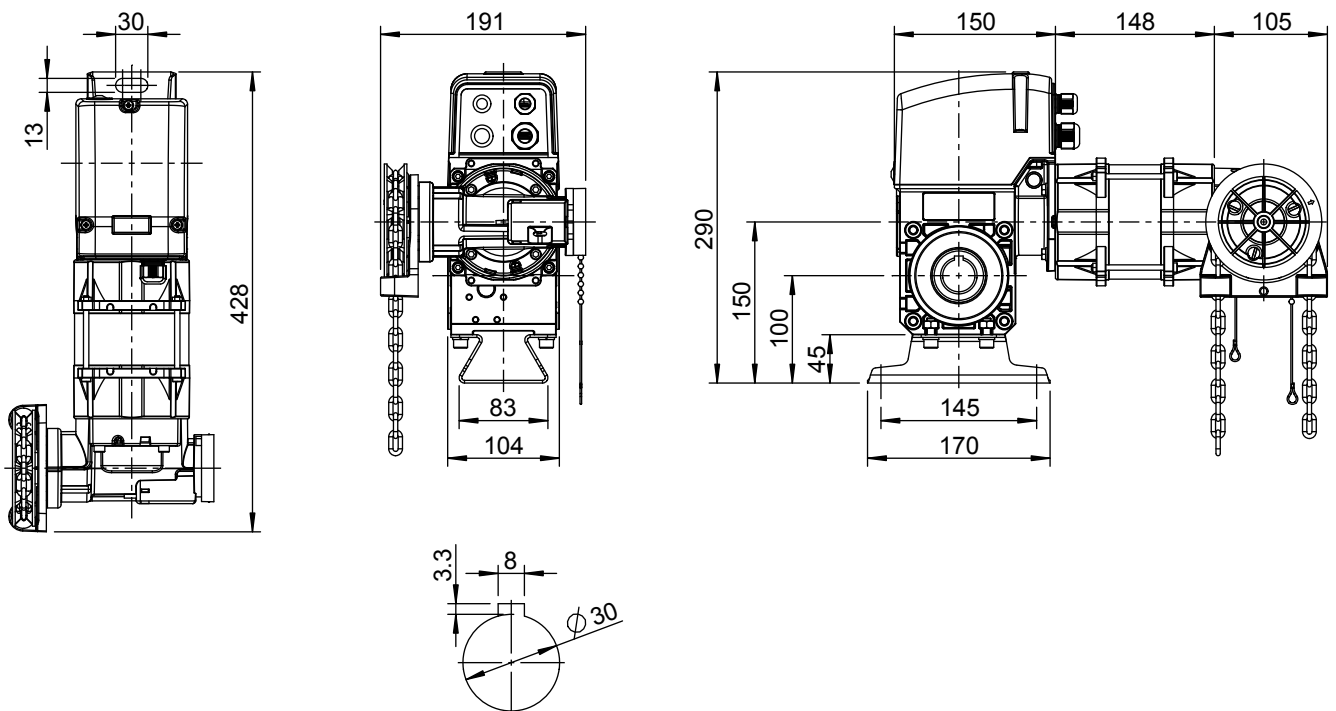
* One cycle is equal to two door movements (opening and closing the door).

The values indicated apply for 10 revolutions of the output shaft per door movement and assume they are evenly distributed.

MDF 05-14-12 KU (Crank)

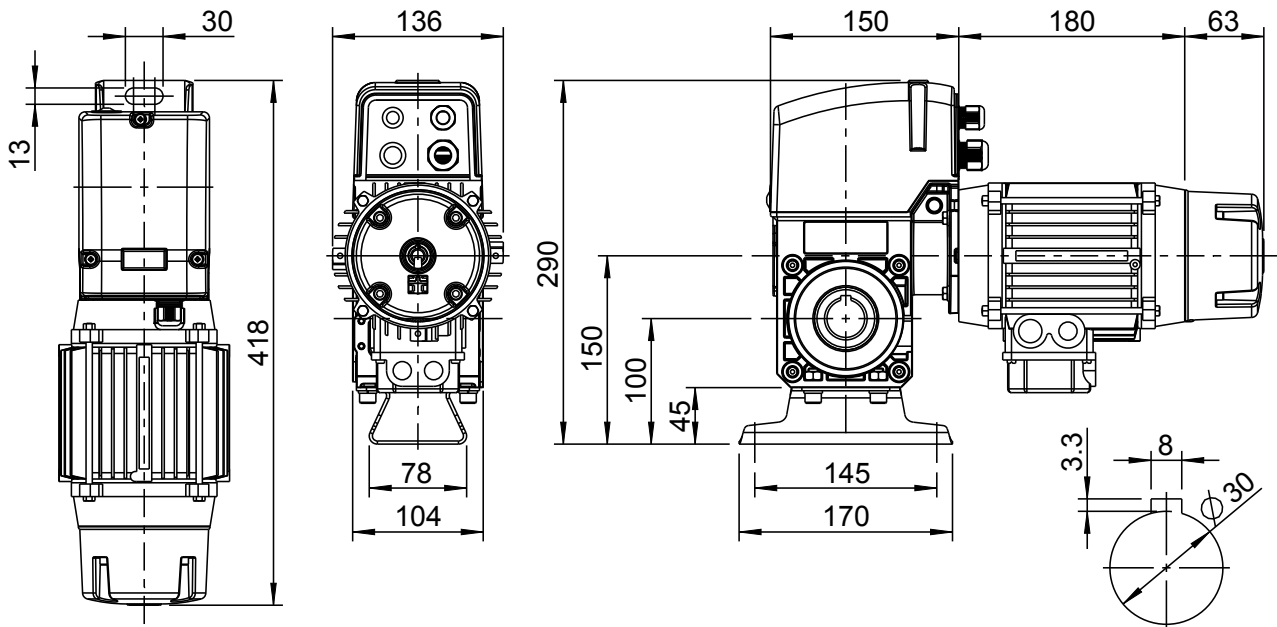


MDF 05-14-12 KE (Chain)

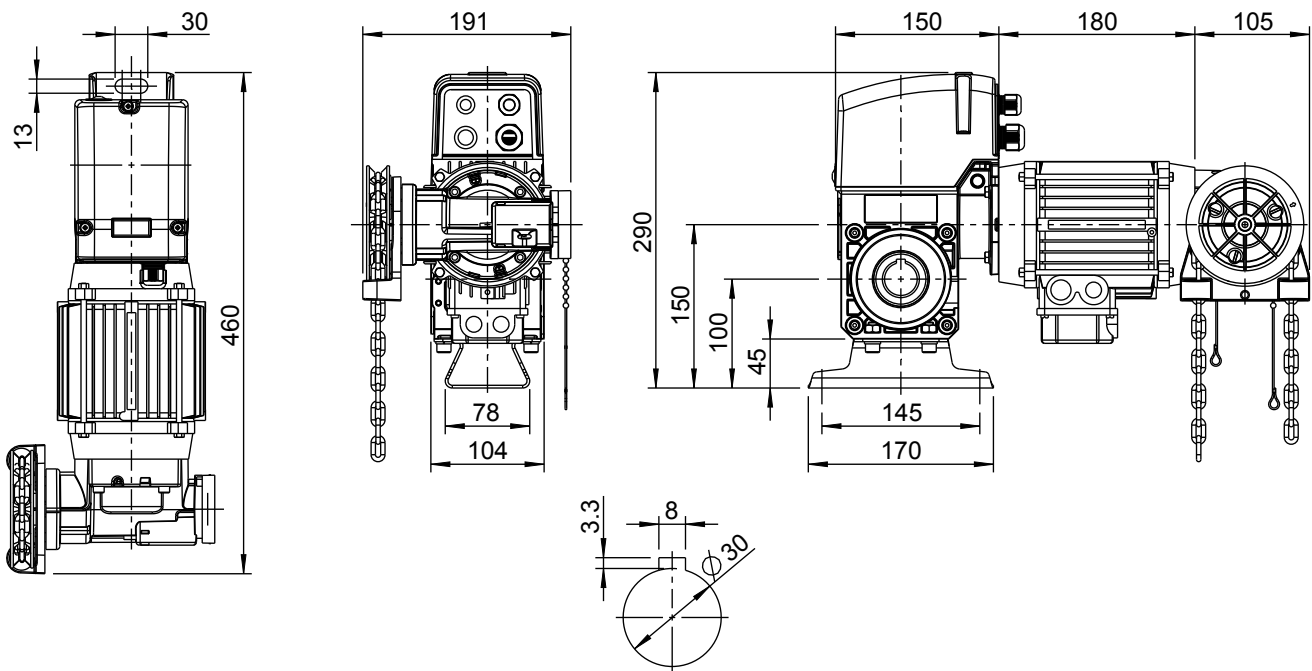


Technical data

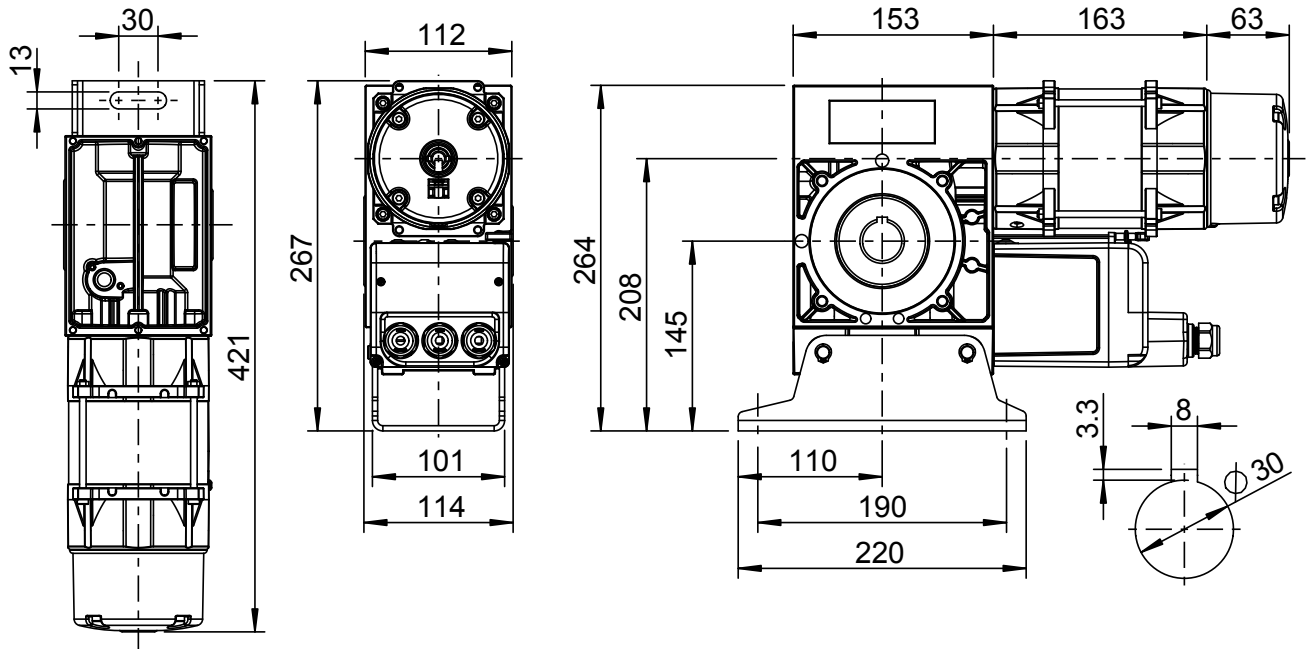
MDF 05-10-12 KU HD (Crank)



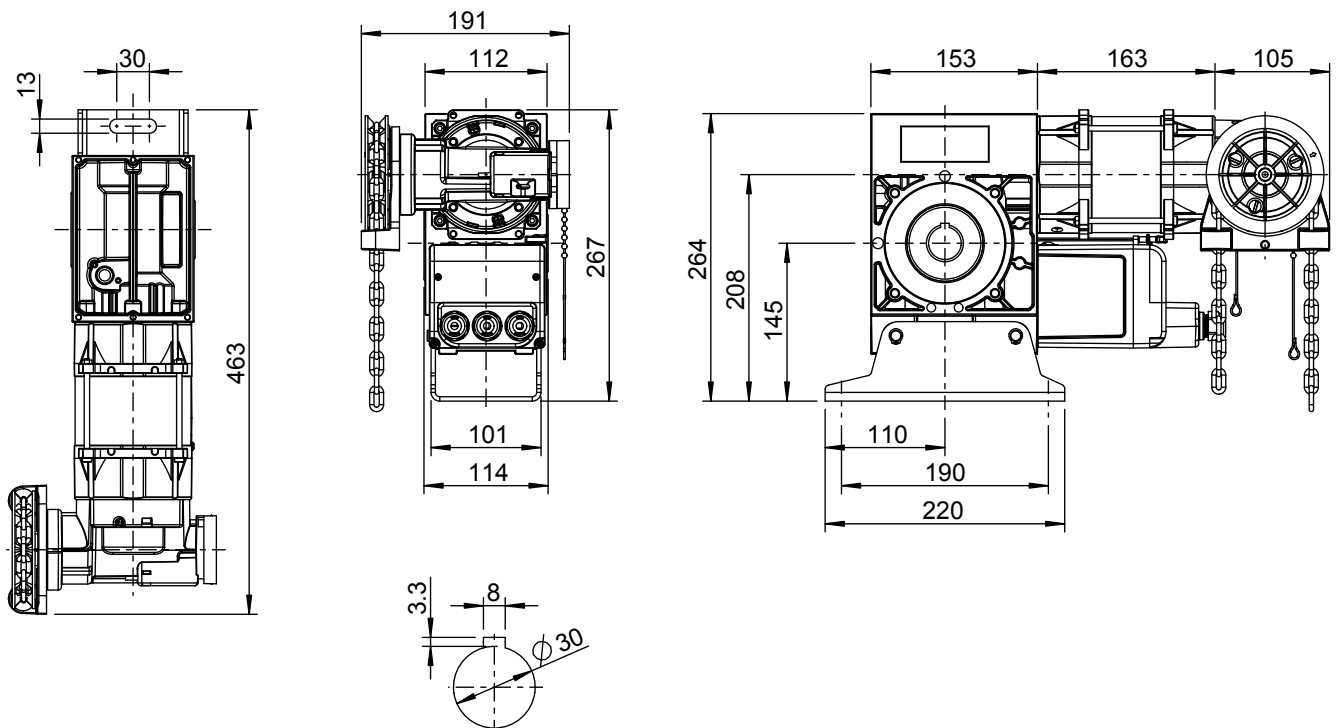
MDF 05-10-12 KE HD (Chain)



MDF 20-22-12 KU (Crank)

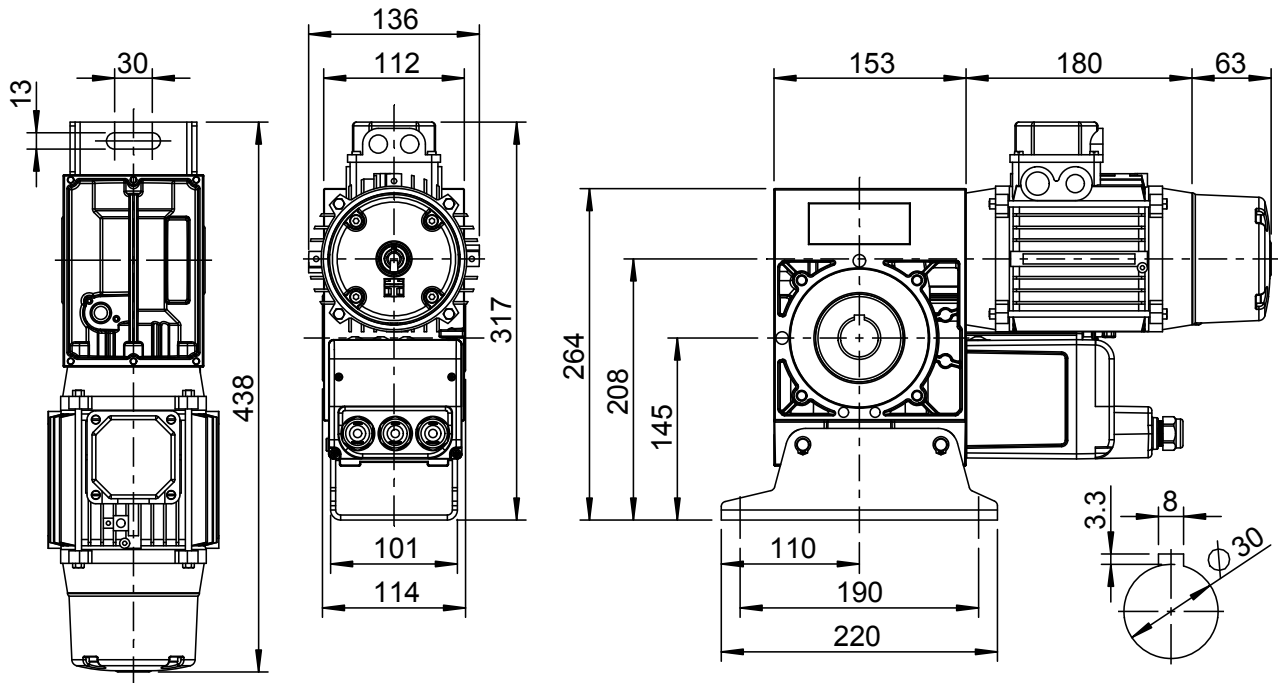


MDF 20-22-12 KE (Chain)

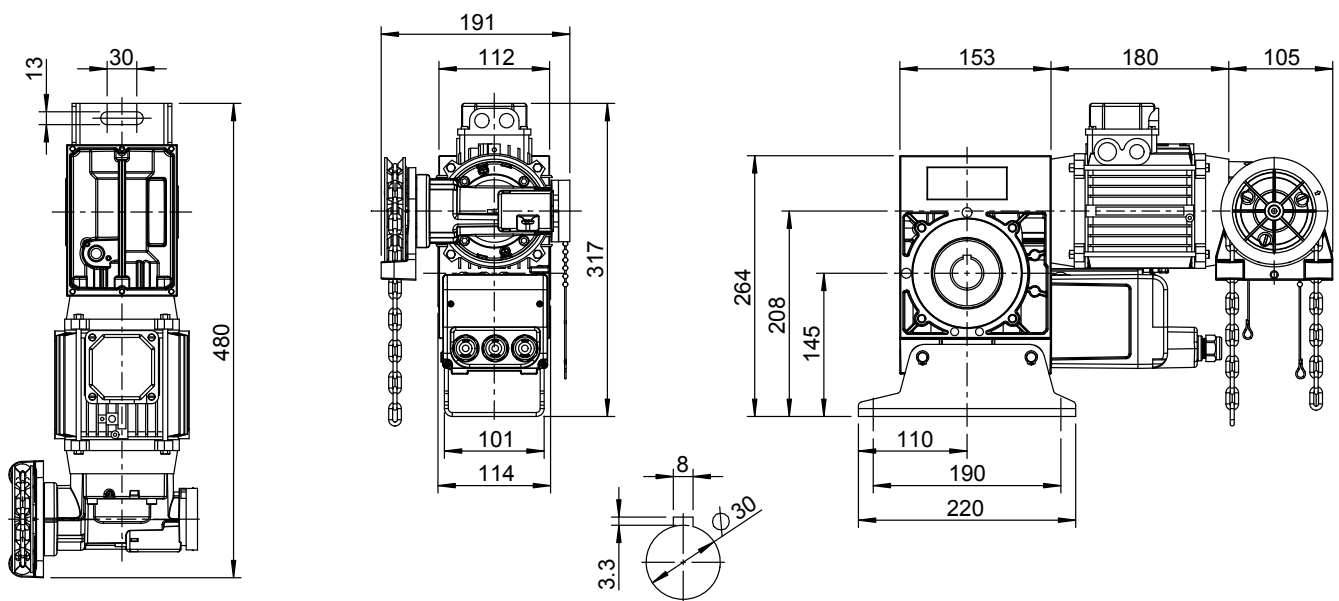


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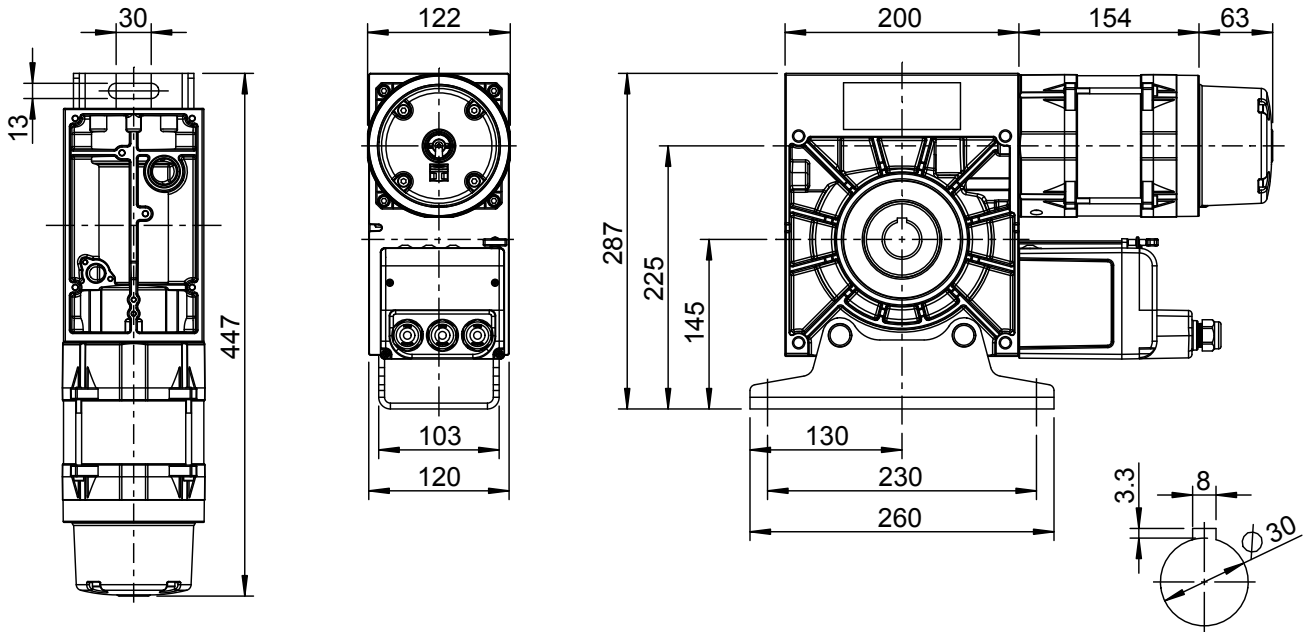
MDF 20-15-12 KU HD (Crank)



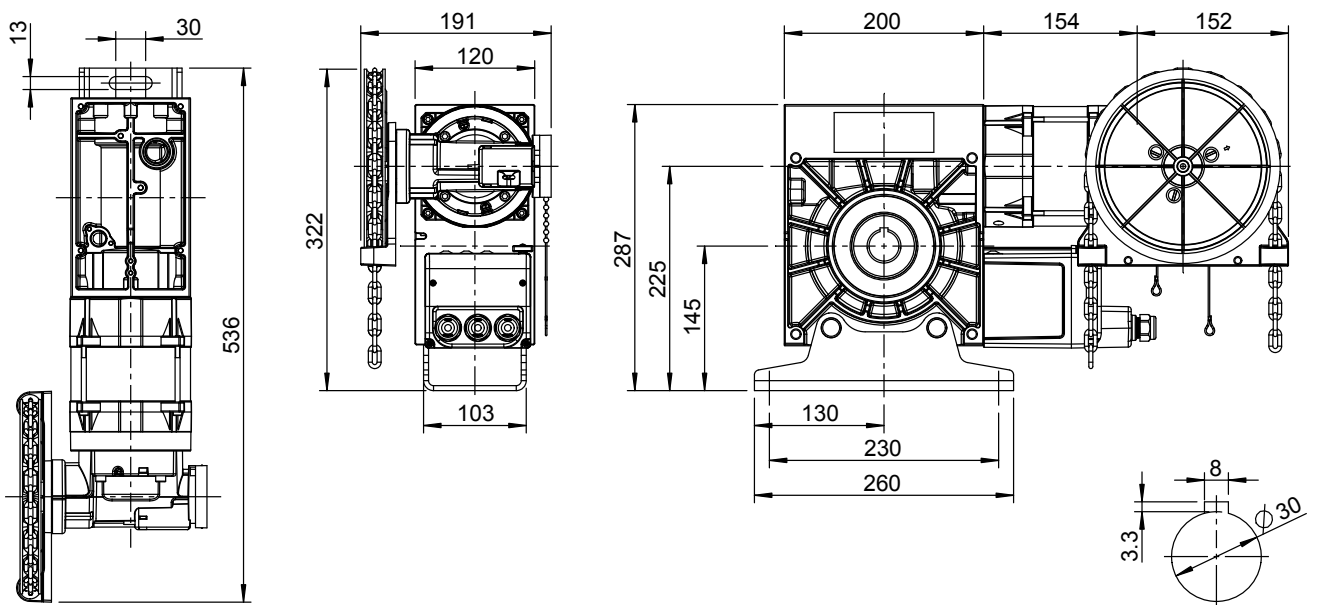
MDF 20-15-12 KE HD (Chain)



MDF 30-30-12 KU (Crank)

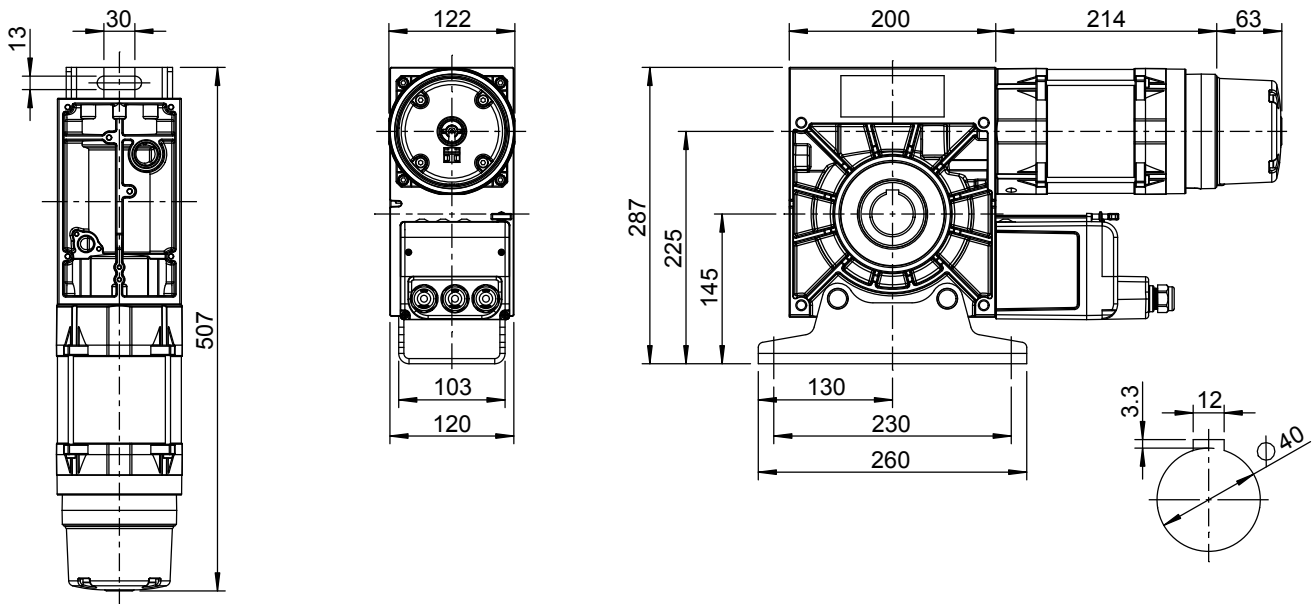


MDF 30-30-12 KE (Chain)

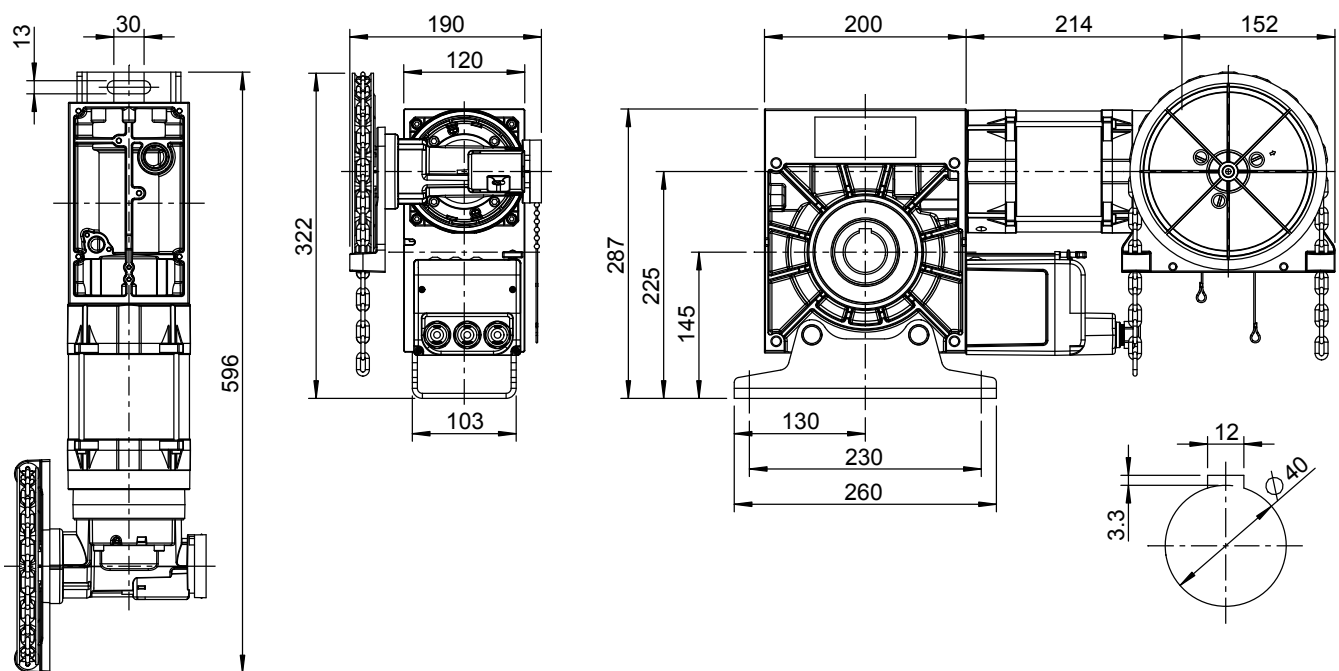


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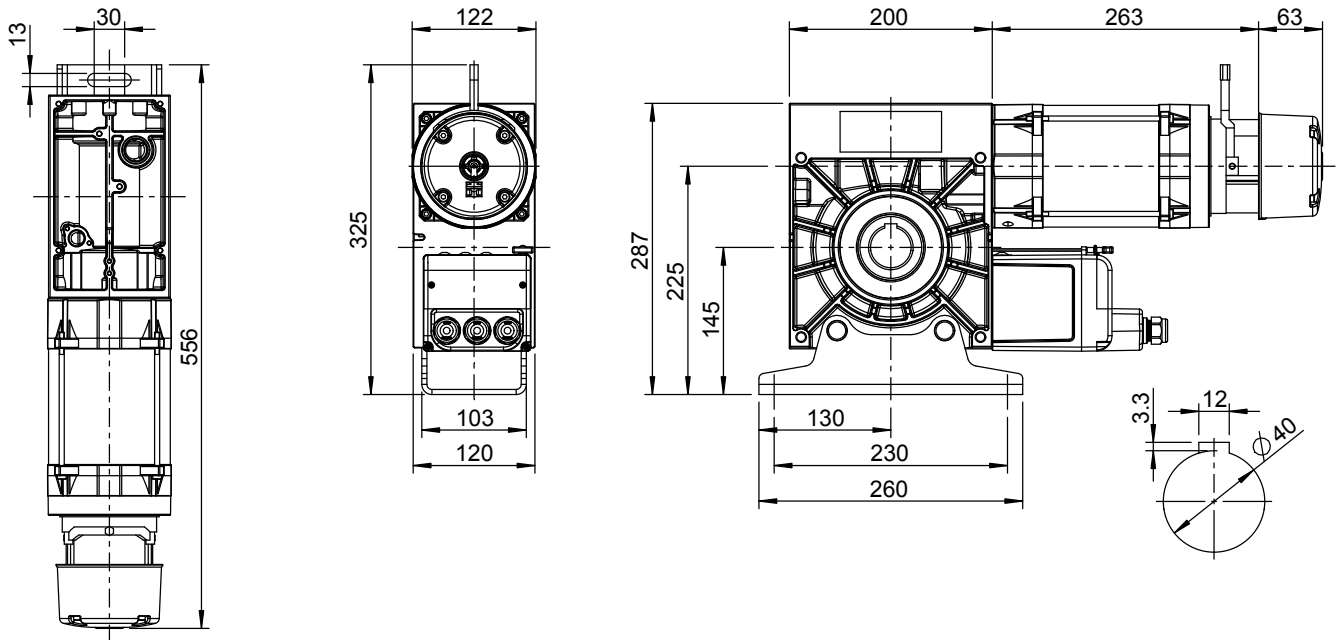
MDF 30-42-12 KU (Crank)



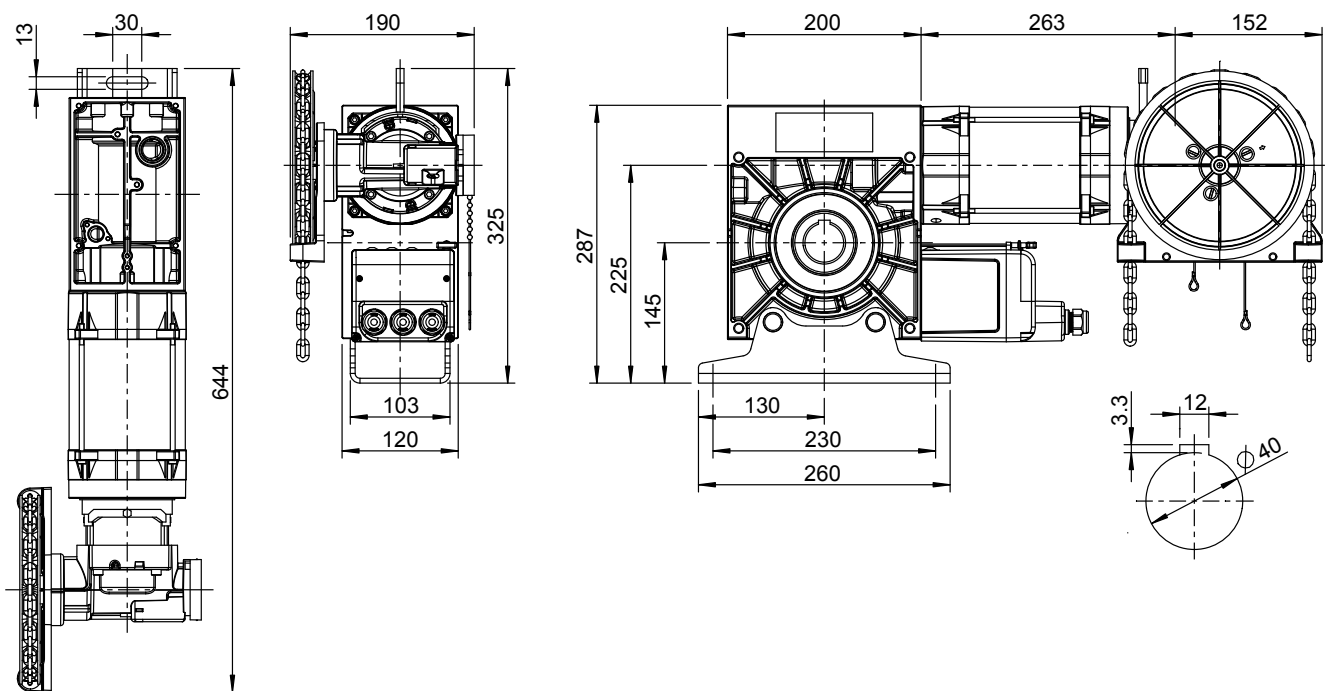
MDF 30-42-12 KE (Chain)



MDF 30-50-12 KU (Crank)

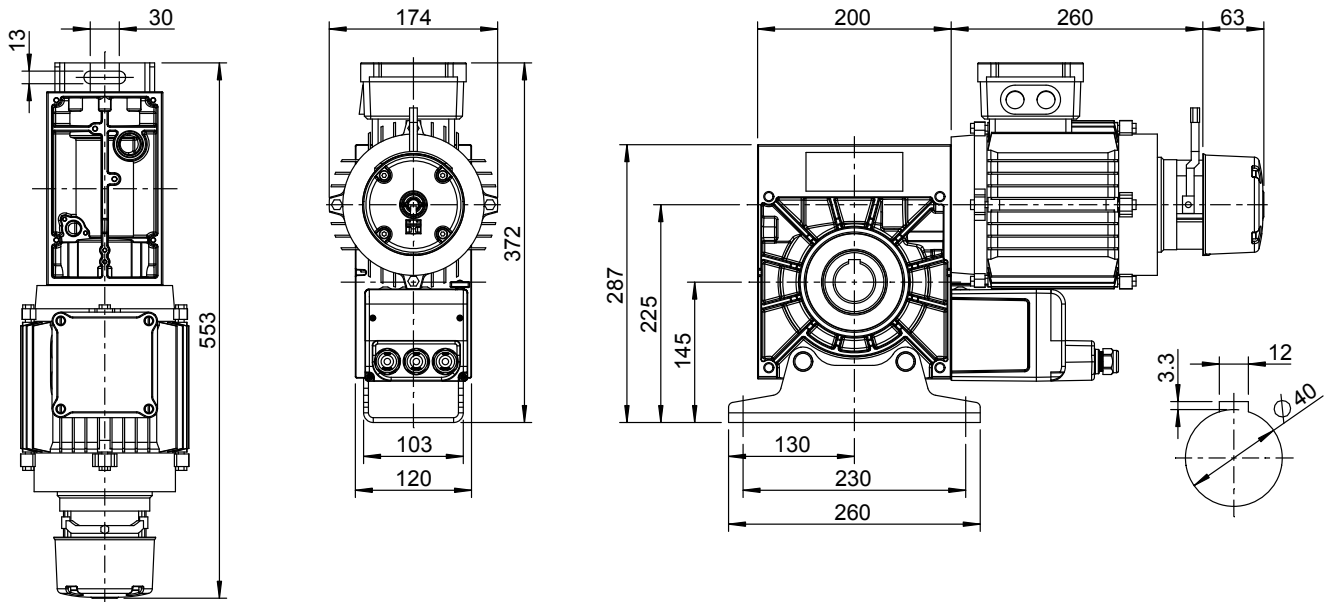


MDF 30-50-12 KE (Chain)

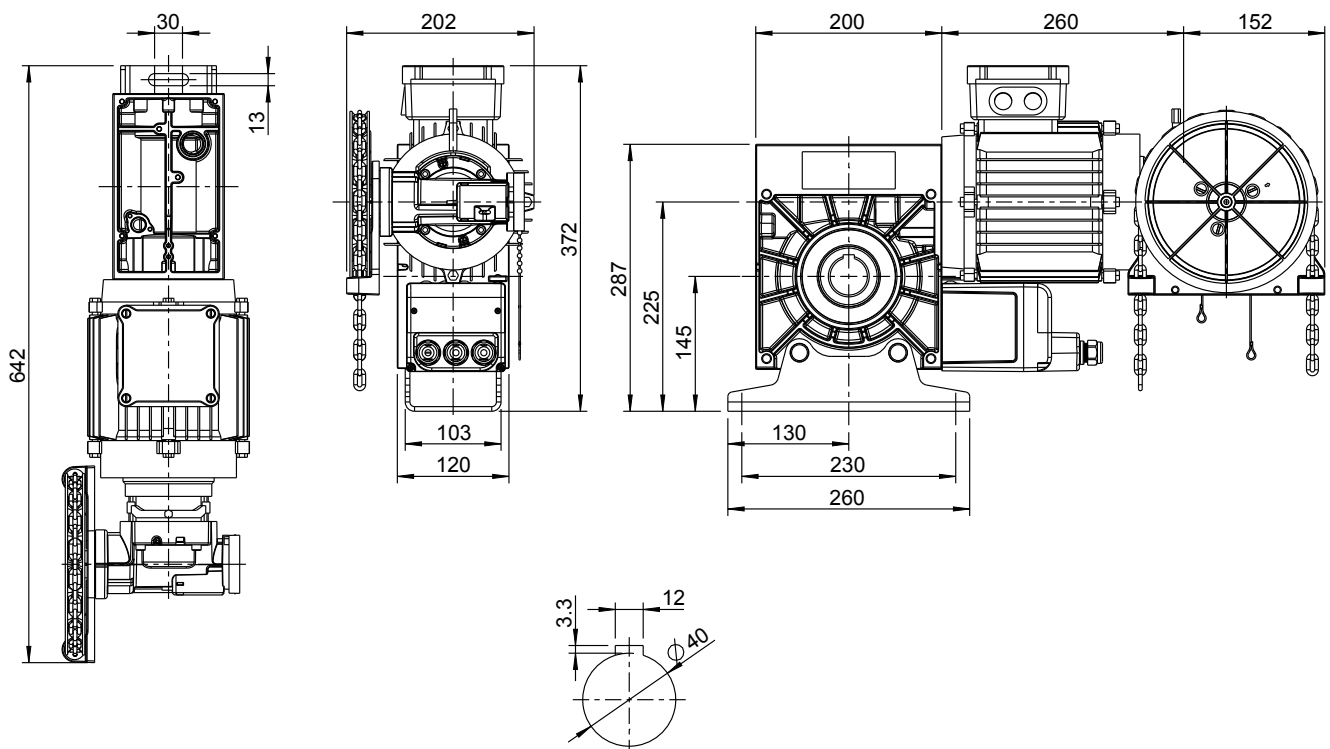


Technical data

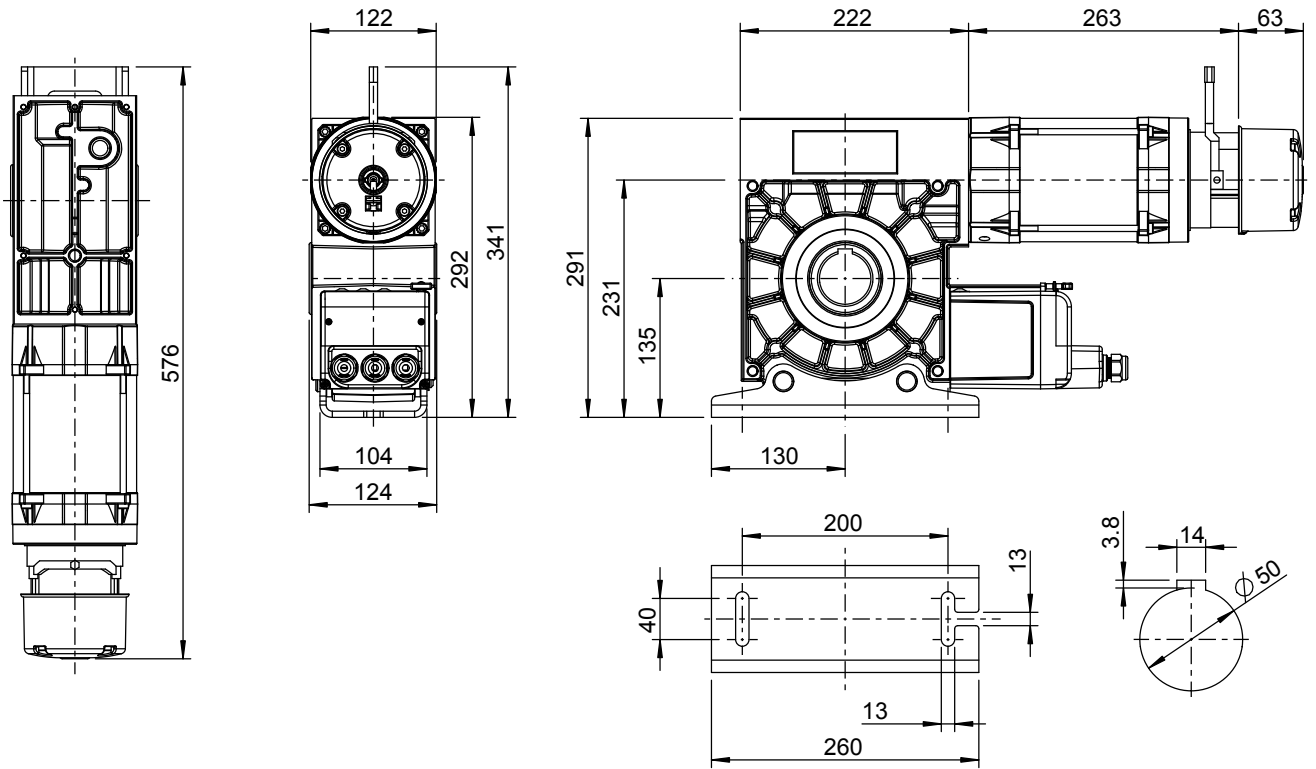
MDF 30-27-12 KU HD (Crank)



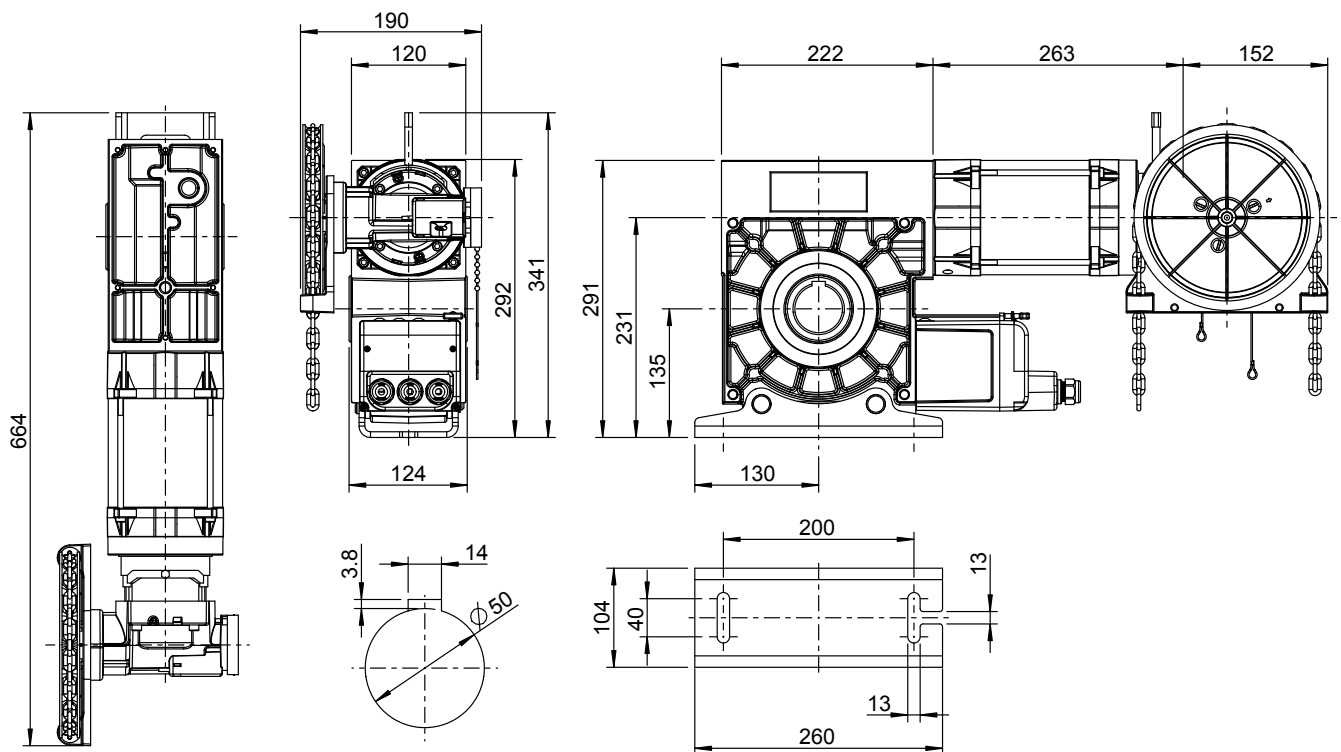
MDF 30-27-12 KE HD (Chain)



MDF 50-75-10 KU (Crank)

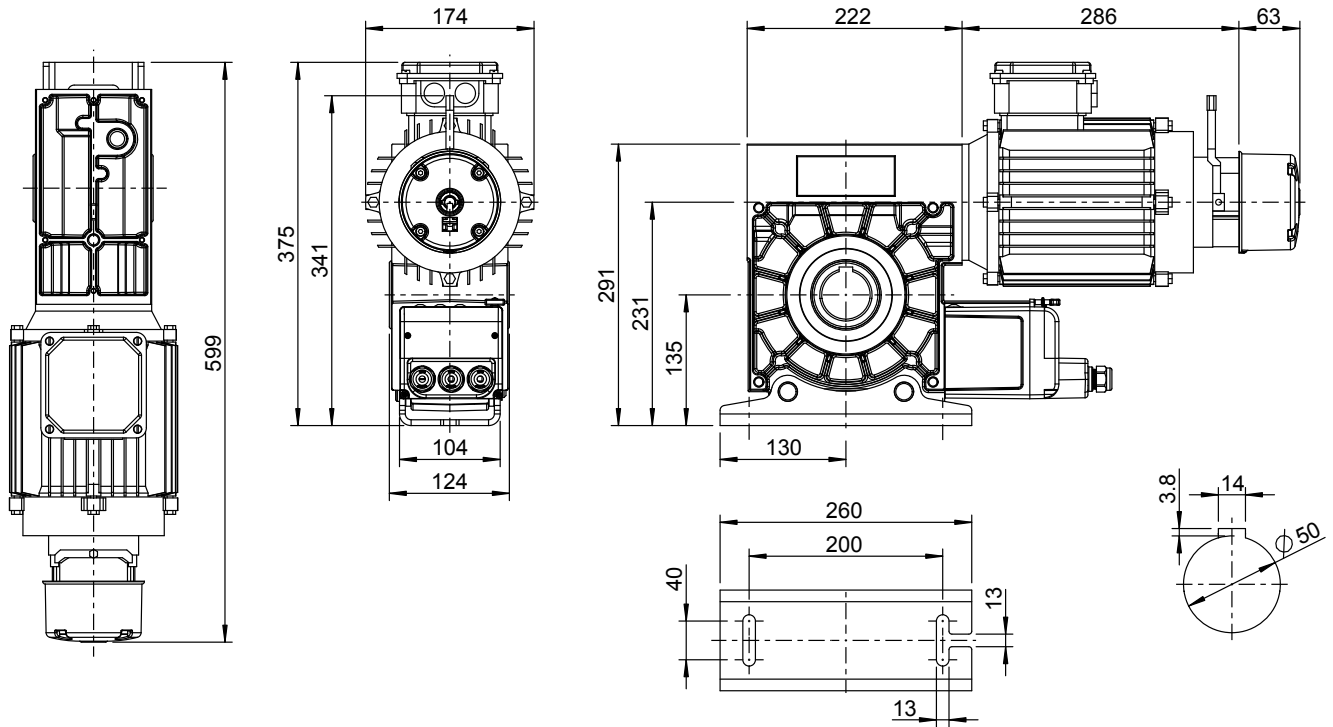


MDF 50-75-10 KE (Chain)

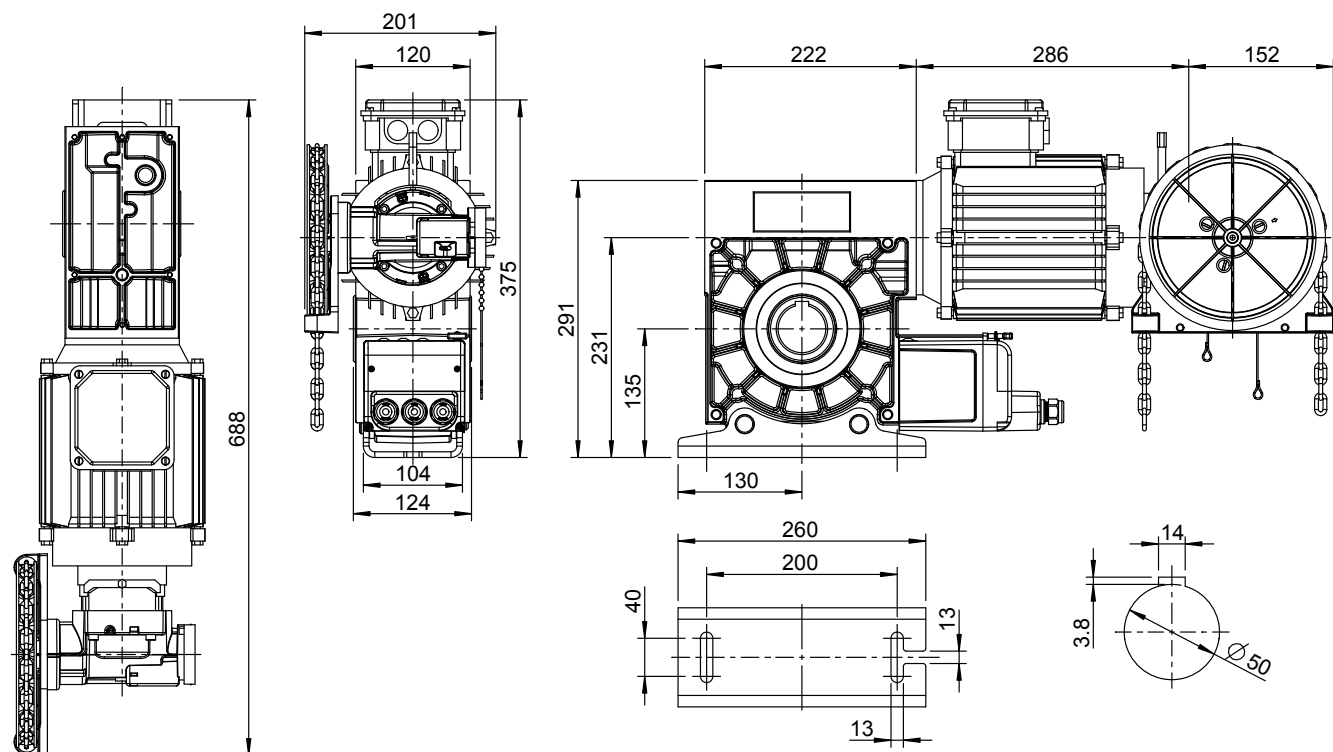


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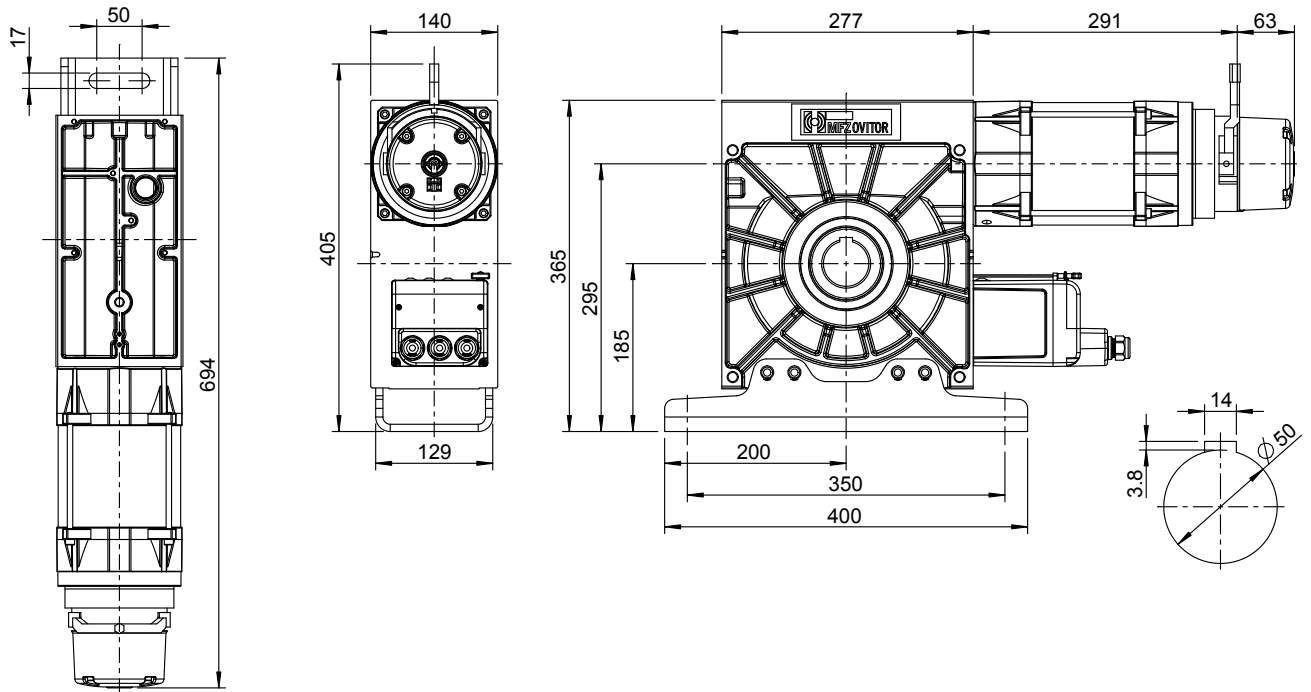
MDF 50-65-10 KU HD (Crank)



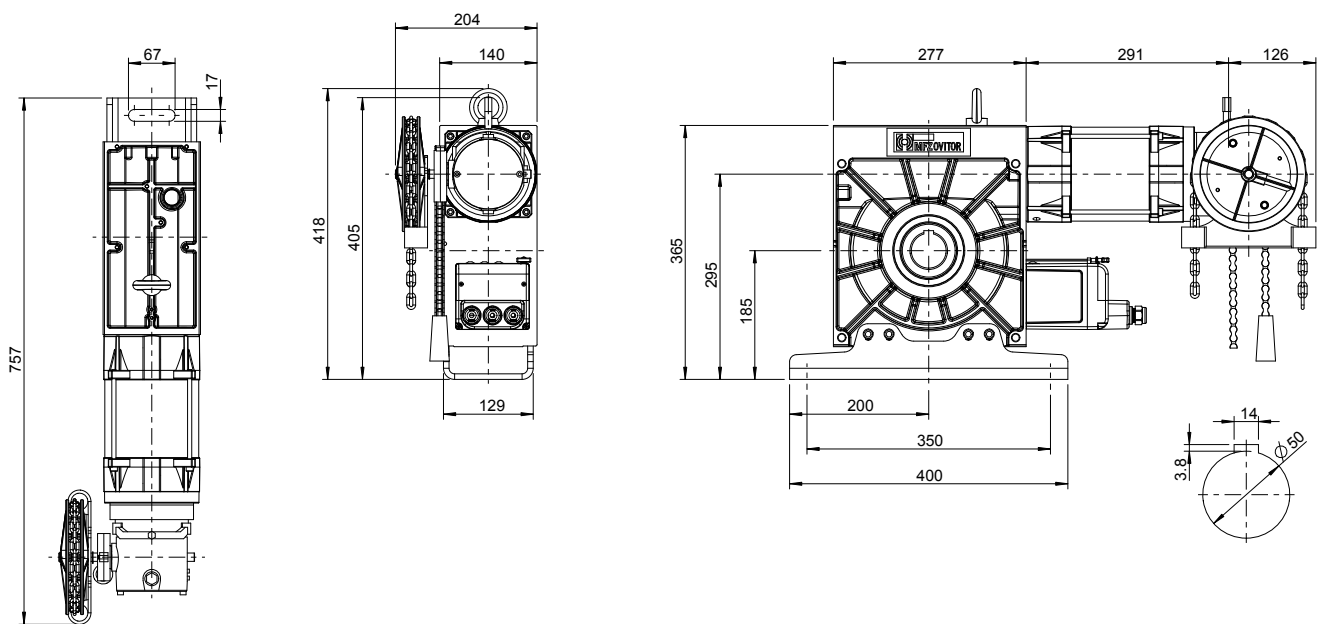
MDF 50-65-10 KE HD (Chain)



MDF 60-100-9 KU (Crank)

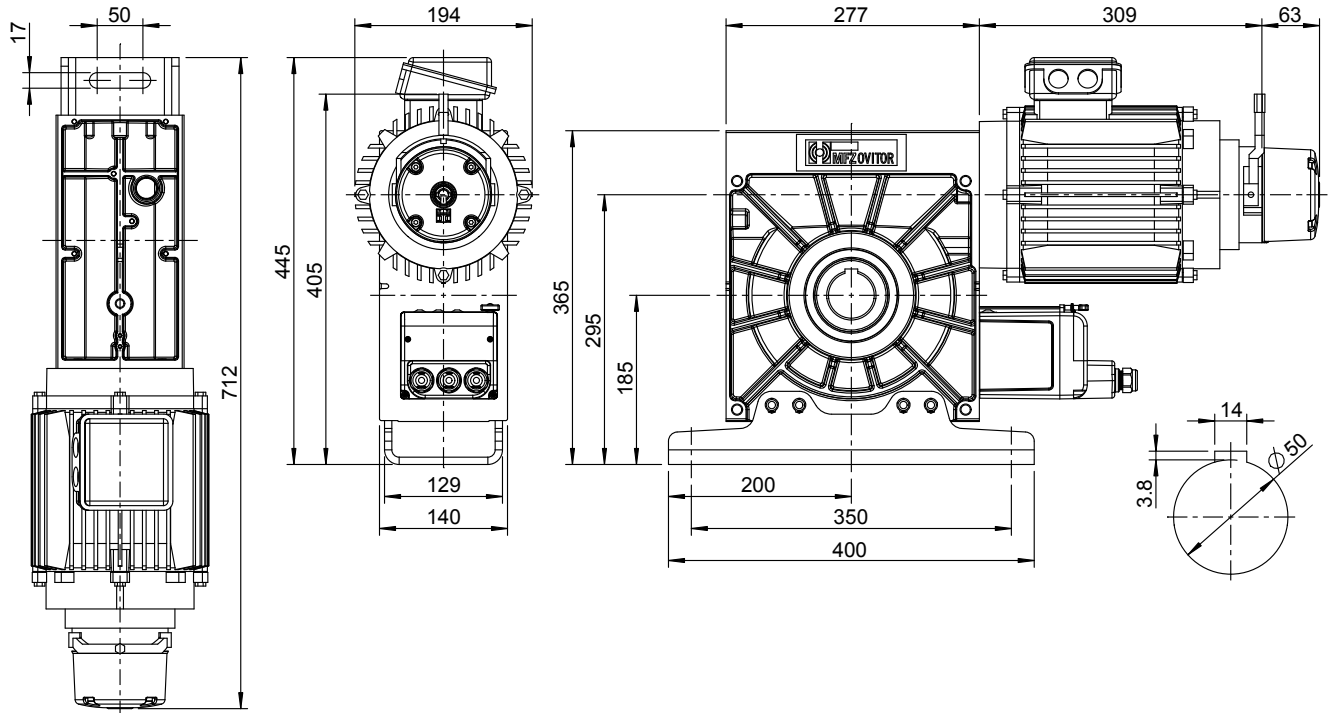


MDF 60-100-9 KE (Chain)

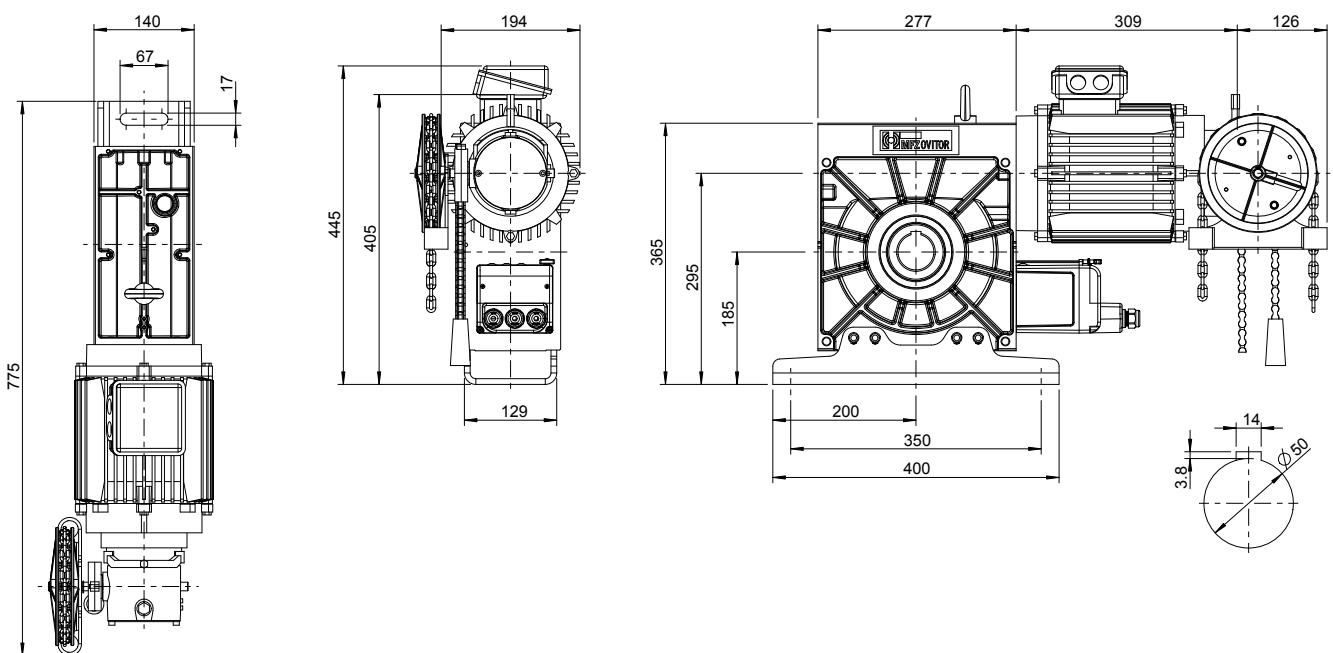


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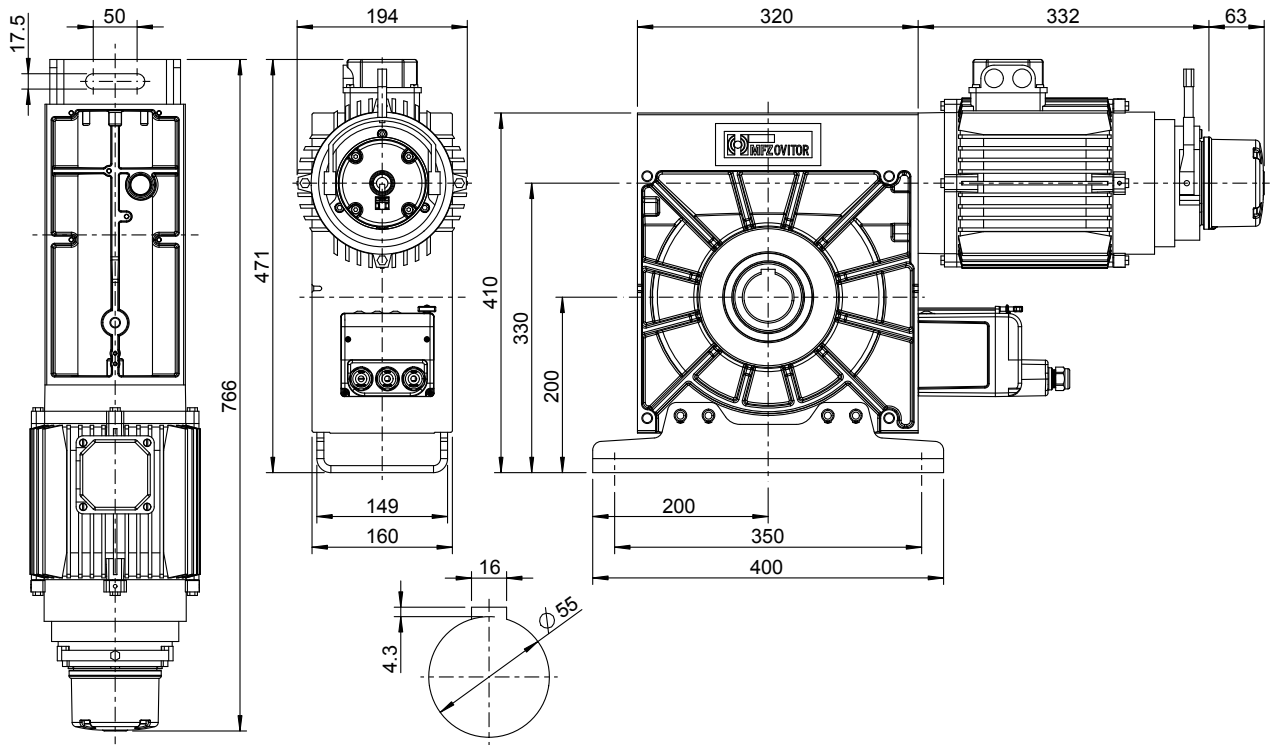
MDF 60-140-9 KU HD (Crank)



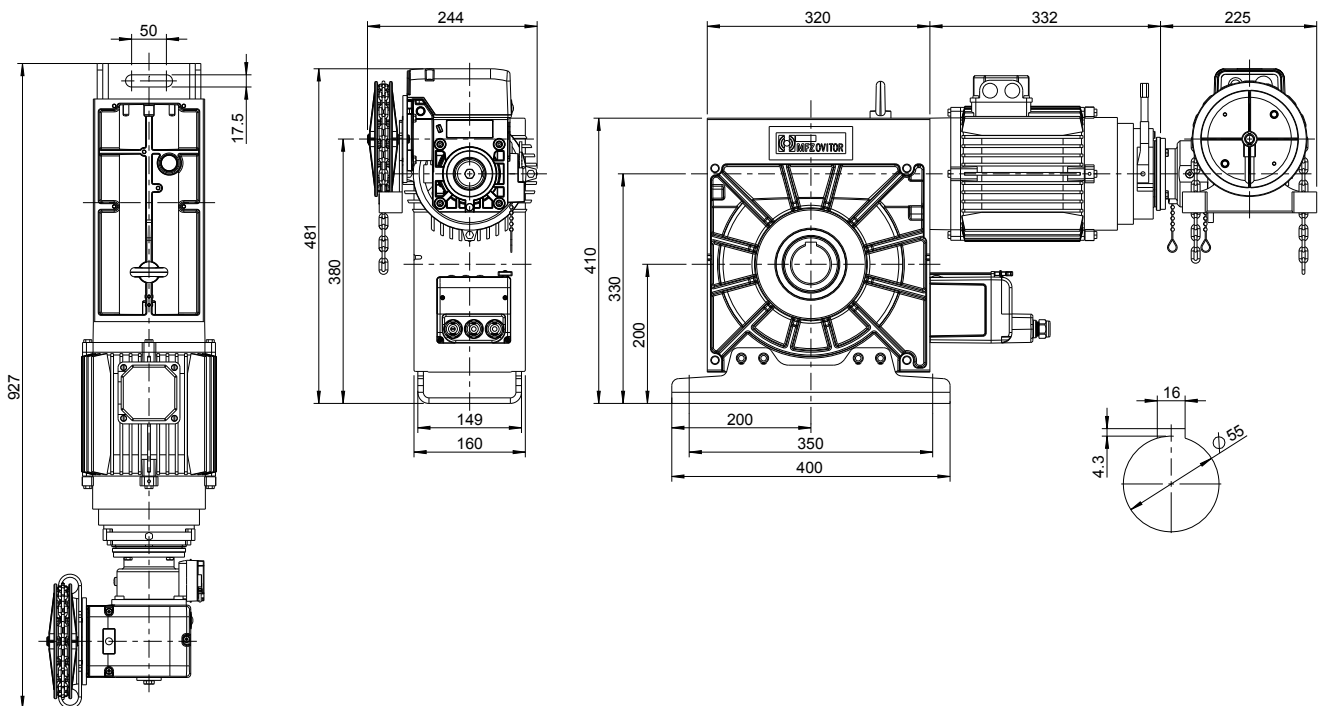
MDF 60-140-9 KE HD (Chain)



MDF 70-165-8 KU HD (Crank)

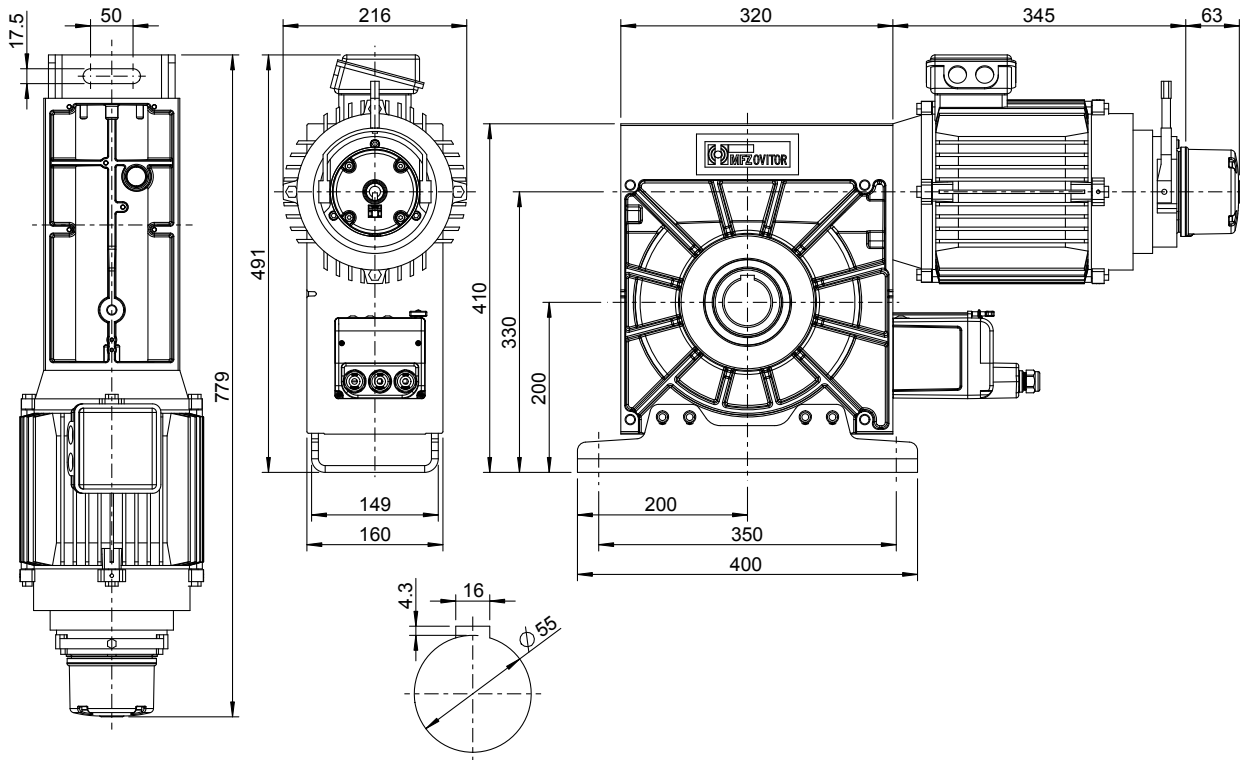


MDF 70-165-8 KE HD (Chain)

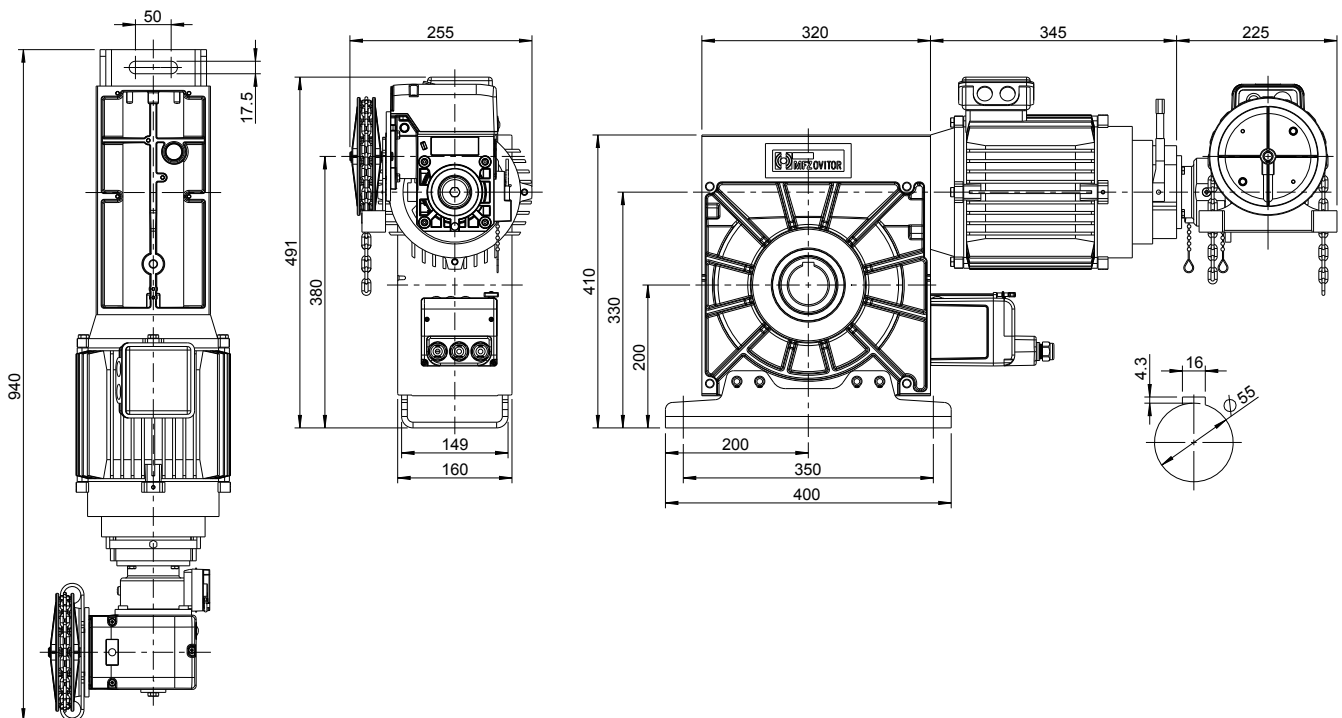


Technical data

MDF 70-200-8 KU HD (Crank)



MDF 70-200-8 KE HD (Chain)



10. EC Declaration of Incorporation

EN

We hereby declare that the product described below:

Roll-Up Door Operator / MDF

is in conformity with all essential requirements of the Machinery Directive (2006/42/EC).

The partly completed machinery is in conformity with all regulations of the

- EC Construction Products Regulation (305/2011/EU)
- Electromagnetic Compatibility Directive (2014/30/EU)
- Low Voltage Directive (2014/35/EU)

The following standards were applied:

EN 60204-1

Safety of machinery, electrical equipment of machines;
Part 1: General requirements

EN ISO 12100

Safety of machinery – general principles for design -
risk assessment and risk reduction

DIN EN 12453

Safety in use of power operated doors - Requirements

prEN 12453: 2014

Safety in use of power operated doors
(exclusively for items 1.3.7 and 1.4.3 of Annex I of the
Machinery Directive)

DIN EN 12604

Industrial, commercial and garage doors and gates.
Mechanical aspects. Requirements.

DIN EN 61000-6-2

Electromagnetic compatibility (EMC) -
Part 6-2: Generic standards - Immunity for industrial
environments

DIN EN 61000-6-3

Electromagnetic compatibility (EMC) -
Part 6-3: Generic standards - Emission - standard for
residential, commercial and light-industrial environments

DIN EN 60335-1

Household and similar electrical appliances - Safety -
Part 1: General requirements

DIN EN 60335-2-103

Household and similar electrical appliances - Safety -
Part 2-103: Particular requirements for drives for gates, doors
and windows

The relevant technical documentation is compiled in
accordance with Annex VII (B) of the EC Machinery Directive
2006/42/EC. We undertake to transmit, in response to a
reasoned request by the market surveillance authorities, this
information in electronic form within a reasonable term.

Person authorised to compile the relevant technical
documentation:

Marantec GmbH & Co. KG, Remser Brook 11,
D-33428 Marienfeld

The machinery is incomplete and must not be put into service
until the machinery into which it is to be incorporated has
been declared in conformity with the provisions of Machinery
Directive 2006/42/EC.

Place / Date

Marienfeld, 20/04/2016

Manufacturer's signature



Michael Hörmann

Position of signatory

Management

#1700012288
#101055