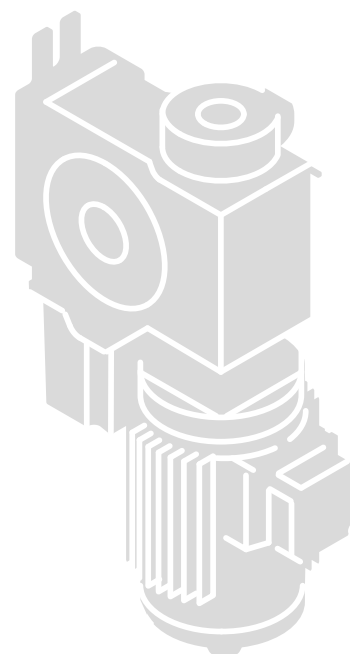
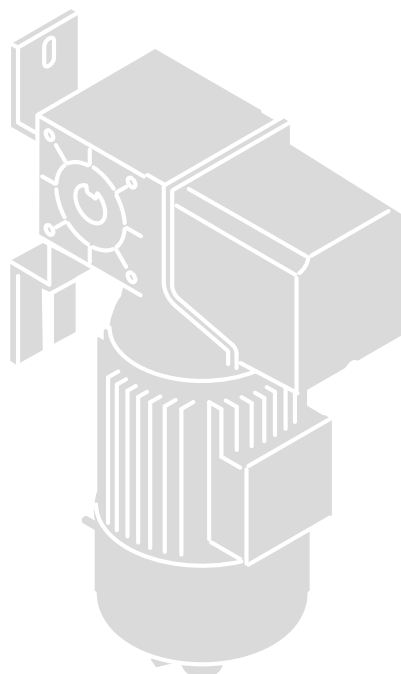
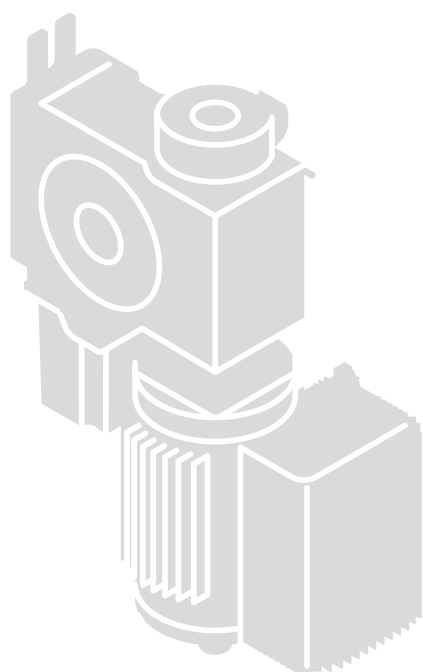


# Nice

CE

RDFN  
RDFNI



## Automation for industrial doors

**EN** - Instructions and warnings for installation and use

**Nice**



**CAUTION** Important safety instructions. Observe all the instructions as improper installation may cause serious damage

**CAUTION** Important safety instructions. It is important to comply with these instructions to ensure personal safety. Store these instructions

- Before commencing the installation, check the "Product technical specifications", in particular whether this product is suitable for automating your guided part. Should it be unsuitable, DO NOT proceed with the installation
- The product cannot be used before it has been commissioned as specified in the "Testing and commissioning" chapter

**CAUTION** According to the most recent European legislation, the implementation of an automation system must comply with the harmonised standards set forth in the Machinery Directive in force, which allow for declaring the presumed conformity of the automation. On account of this, all operations regarding connection to the mains electricity, as well as product testing, commissioning and maintenance, must be performed exclusively by a qualified and skilled technician!

- Before proceeding with the product's installation, check that all materials are in good working order and are suitable for the intended applications
- The product is not intended for use by persons (including children) with reduced physical, sensory or mental capacities, nor by anyone lacking sufficient experience or familiarity with the product
- Children must not play with the appliance
- Do not allow children to play with the control devices of the product. Keep the remote controls out of reach of children

**CAUTION** In order to avoid any danger from inadvertent resetting of the thermal cut-off device, this appliance must not be powered through an external switching device, such as a timer, or connected to a supply that is regularly powered or switched off by the circuit

- Provide a disconnection device (not supplied) in the plant's mains power supply, with a contact opening distance that ensures complete disconnection under the conditions envisaged by Overvoltage Category III
- Handle the product with care during installation, taking care to avoid crushing, knocks, falls or contact with liquids of any kind. Keep the product away from sources of heat and open flames. Failure to observe the above can damage the product and increase the risk of danger or malfunctions. If this should happen, stop installation immediately and contact the Customer Service
- The manufacturer assumes no liability for damage to property, items or persons resulting from non-compliance with the assembly instructions. In such cases the warranty does not cover material defects
- The weighted sound pressure level of the emission A is lower than 70 dB(A)
- Cleaning and maintenance to be carried out by the user must not be effected by unsupervised children
- Before intervening on the system (maintenance, cleaning), always disconnect the product from the mains power supply
- Check the system periodically, in particular all cables, springs and supports to detect possible imbalances, signs of wear or damage. Do not use if repairs or adjustments are necessary, because a failure with the installation or the incorrectly balanced automated system may lead to injury
- The packaging materials of the product must be disposed of in compliance with local regulations
- **The product must not be installed outdoors**
- Keep an eye on moving doors and do not let anyone go near them until they have opened or closed fully
- Be careful when activating the manual release device, as an open door may fall suddenly due to weak or broken springs, or if it is unbalanced
- Every month, check that the drive motor reverses when the door encounters a 50 mm-high object placed on the ground. If necessary, readjust the door and check it again, as incorrect adjustment is potentially dangerous (for drive motors incorporating a trapping safety system that intervenes when the door's lower edge encounters an obstacle)
- If the power cable is damaged, it must be replaced by the manufacturer or by the latter's technical assistance service, or by a similarly qualified person, in order to prevent any type of risk

## INSTALLATION PRECAUTIONS

- Prior to installing the motor, remove all unnecessary cables or chains and deactivate any equipment – such as locking devices – not required for motorised operation
  - Check that there are no points where trapping or crushing against fixed parts can occur when the moving section is in the fully open or closed position; adequately protect any such parts
  - Install the manoeuvring assembly for manual release at a height below 1.8 m
  - NOTE: if removable, the manoeuvring assembly must be kept close to the door
  - Make sure that the controls are kept at a safe distance from moving parts, while allowing a good view of these. Unless a selector is used, the controls should be installed at least 1.5 m from the ground and must not be accessible
  - Permanently attach the trapping hazard warning labels in a highly visible location or near the fixed control devices (if present)
  - Permanently attach the manual release label close to the manoeuvring assembly
  - After installation, make sure that the motor prevents or stops door opening when the latter is loaded with a 20 kg weight secured to the centre of its bottom edge (for drive motors that can be used with doors having opening widths exceeding 50 mm)
  - After installation, make sure that the mechanism is properly adjusted and that the motor reverses when the door collides with a 50 mm-tall object placed on the ground (for drive motors incorporating a trapping safety system that intervenes when the bottom edge of the door encounters an obstacle);
- Following installation, check and ensure that no door parts obstruct public roadways or pavements.

## CONTENTS

**GENERAL WARNINGS:**

SAFETY - INSTALLATION - USE

**1 - PRODUCT DESCRIPTION AND INTENDED USE****2 - OPERATING LIMITS****3 - INSTALLATION AND ELECTRICAL CONNECTIONS**

3.1 - Installation of the gearmotor

3.2 - Electrical connections

3.3 - Manual crank handle operated emergency device (KU)

3.4 - Adjusting the mechanical limit switch

3.5 - Connections and adjusting the mechanical limit switch

3.6 - Connections and adjusting the electronic limit switch

**4 - TESTING AND COMMISSIONING**

4.1 - Testing

4.2 - Commissioning

**5 - DETAILED INFORMATION**

5.1 - Integrated safety stop device

**6 - PRODUCT DISPOSAL****7 - TROUBLESHOOTING****8 - TECHNICAL SPECIFICATIONS****Product sheets RDFN****Product sheets RDFNI****Product sheets RDFN with chain return kit****Tables to obtain transmission ratio of 2:1 and 3:1 for motors with a chain transmission****Images of mod. RDFN****User manual (end user version)****EC DECLARATION OF CONFORMITY****1 PRODUCT DESCRIPTION AND INTENDED USE**

This product is a part of the RDFN - RDN gearmotor range, intended for automated industrial doors. Unbalanced rolling shutters.

Models RDFN 140-20, RDFN 250-15, RDFN 250-24, RDFNI 250-24, RDFN 350-24, RDFNI 350-24, RDFN 400-15, RDFN 550-15, RDFN 500-24, RDFNI 500-24, RDFN 750-9.5, RDFN 750-24, RDFN 850-12, RDFN 1000-24, RDFN 1100-12, RDFN 1400-9, RDFN 1400-24, are equipped with:

– an absolute encoder (the positions are set via the control unit)

or

– a mechanical limit switch (the positions are set manually by adjusting the cams).

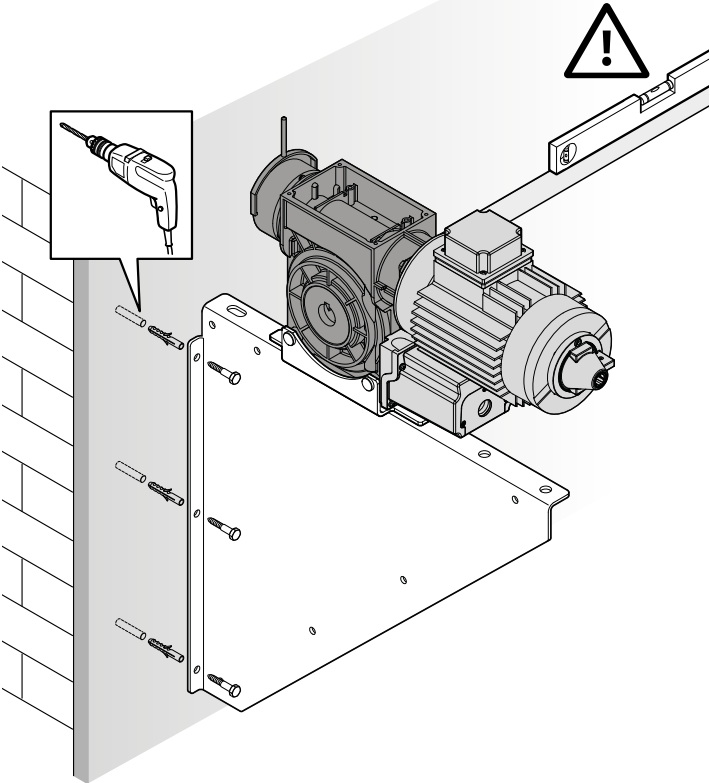
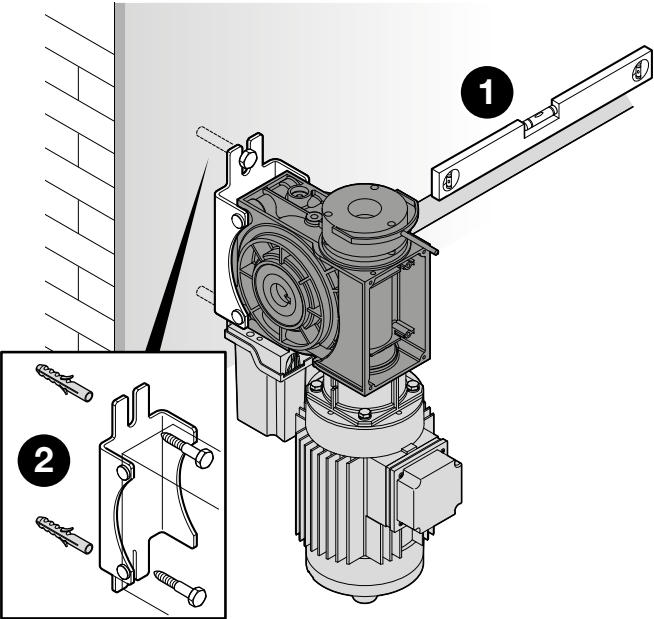
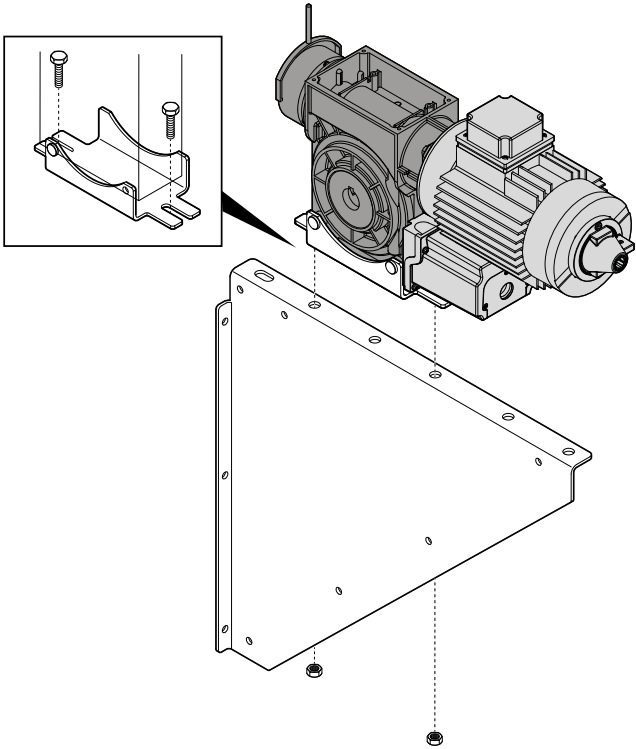
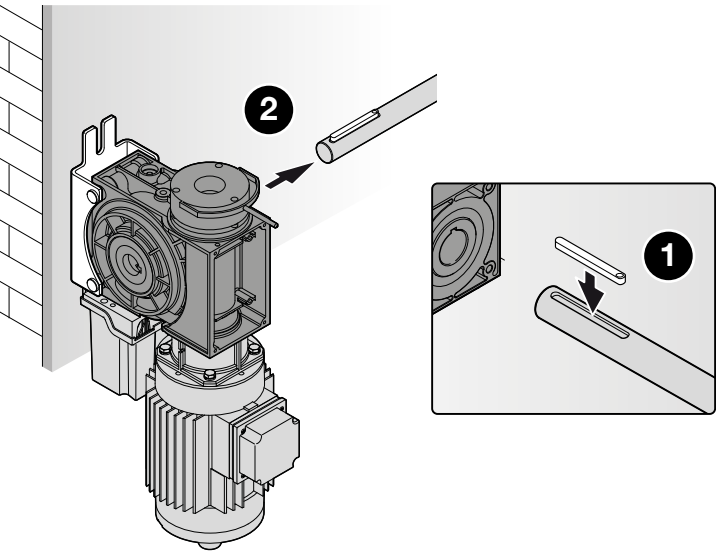
**⚠ CAUTION! – Any use other than that specified herein or in environmental conditions other than those stated in this manual is to be considered improper and is strictly forbidden!**

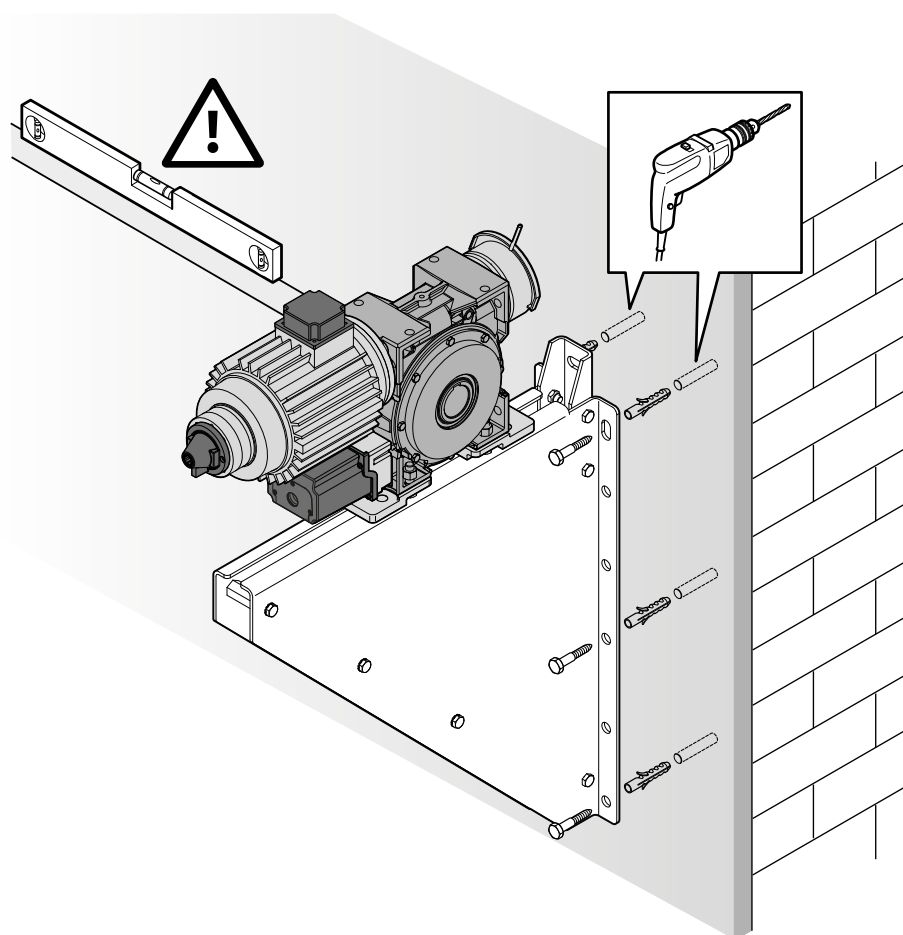
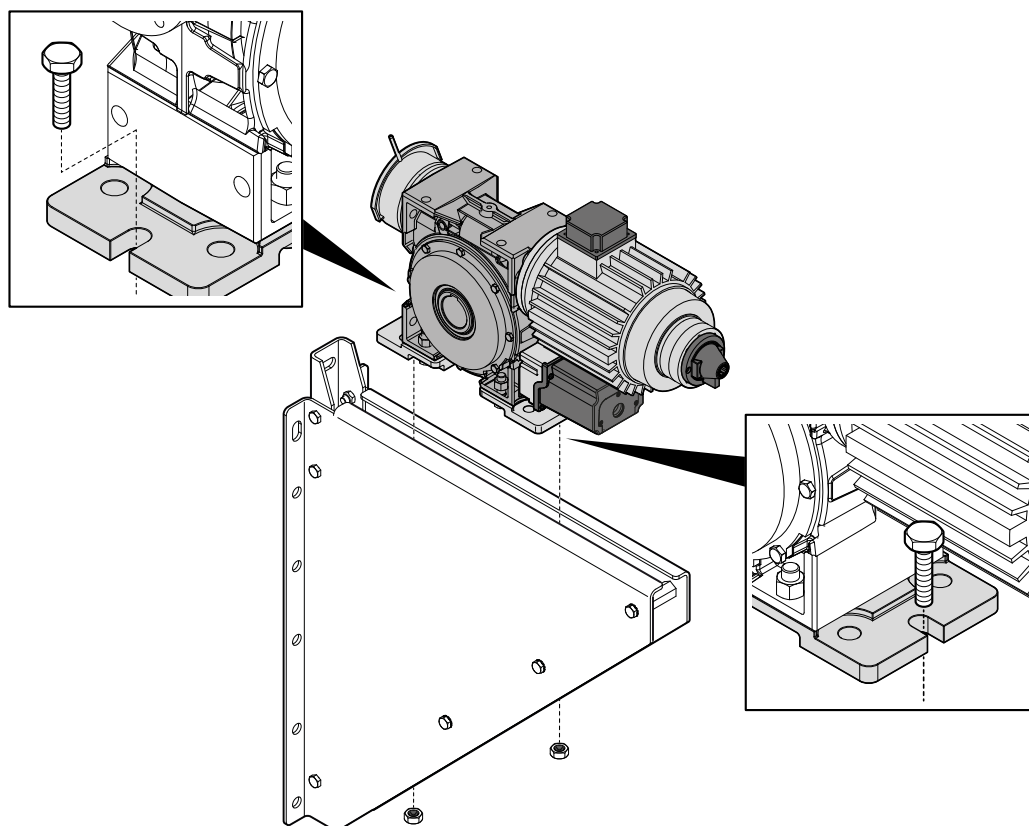
**2 APPLICATION LIMITS**

Before installation, check the product is suitable (section 8 - Technical specifications).

**⚠ WARNING! - The choice of gearmotor model is based on the overall weight the motor must lift, the roller shaft, the thickness of the wall/canvas and the friction of these on the structure of the door/shutter.**



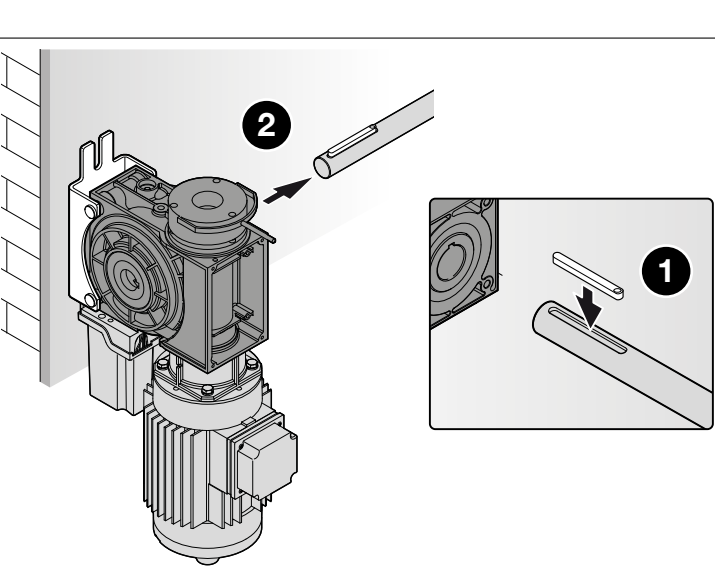
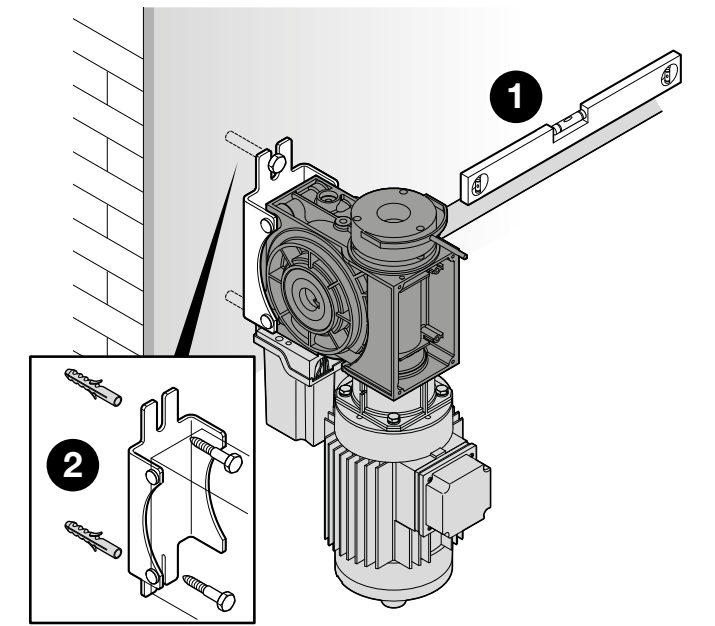




## 3.1 - Gearmotor installation

**⚠ Important! Before installing the gearmotor, check Section 2, the packaging contents to check the materials and the overall dimensions of the gearmotor (see product pages 14-36).**

**⚠ IMPORTANT! - The roller shaft must be concentric and aligned with the motorised axle, otherwise they create imbalances which could lead to damage or excessive wearing of the shaft components.**

01.	Grease the end of the roller shaft where it engages the motor.	
02.	Insert the gearmotor in the end of the roller shaft and insert the key in its seat.	
03.	<p>Fasten the fixing bracket: the gearmotor may be positioned either horizontally or vertically (see pages 3-4). It is important that the roller shaft is horizontal and parallel to the floor.</p> <p>Note: if the gearmotor needs to be positioned differently, contact Nice Technical Support.</p>	
04.	Ensure the roller shaft cannot shift on its axis: if necessary, use the adjustment systems to block it.	

**Note:** if the gearmotor must be painted, it is necessary to protect the O-rings which must not come into contact with the paint.

## 3.2 - Electrical connections

**⚠ CAUTION! – All electrical connections must be made with the system disconnected from the power supply. Incorrect connections can cause damage to the equipment and injury to people.**

When using Nice D-PRO control units (Action - Comfort - Automatic), refer to the instruction manuals of each individual product.

## 3.3 - Manual crank handle operated emergency device (KU)

The manually operated emergency device must only be used to open and close the door if there is no electrical power supply.

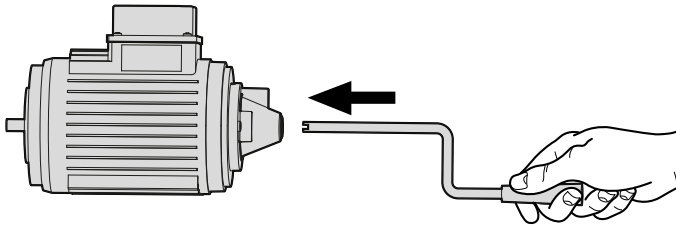
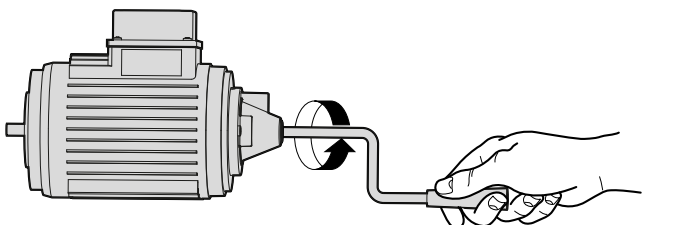
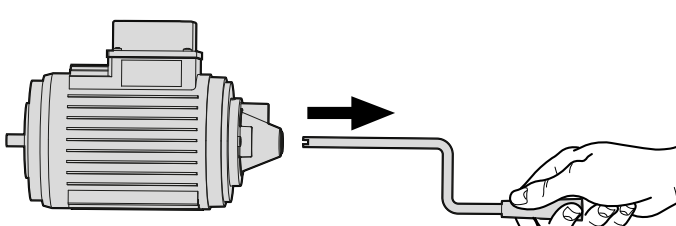
**⚠ CAUTION!**

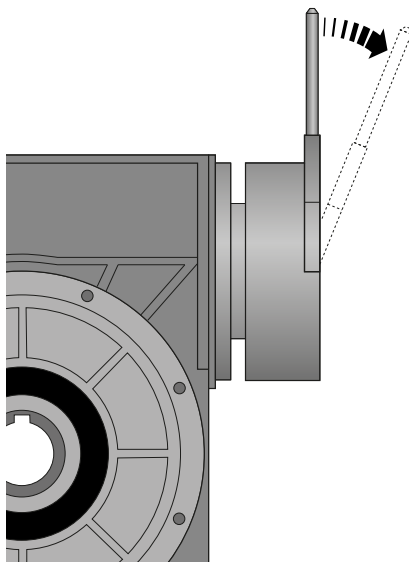
- Do NOT use for situations other than those described!
- The incorrect use of the device can lead to injury!

### WARNINGS:

- The manually operated emergency device is only to be used when the motor is stopped.

- The manual emergency movement is to be performed from a safe position.
- With a gearmotor equipped with a spring activated brake, opening and closing of the door must be performed with the brake engaged/closed.
- For reasons of safety, the brake on unbalanced doors is only released for the purpose of inspection with the door in the closed position.
- The manually operated safety device must not exceed the end positions of the automated system as it would activate the emergency limit switch. An automated operation cannot be activated in electric mode.

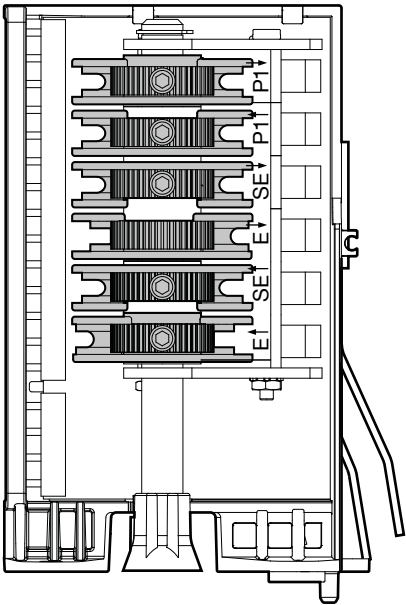
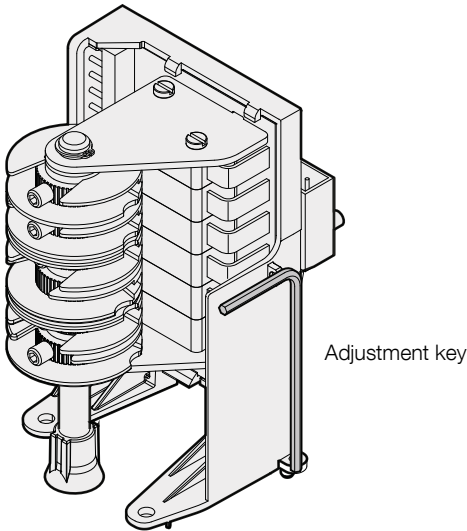
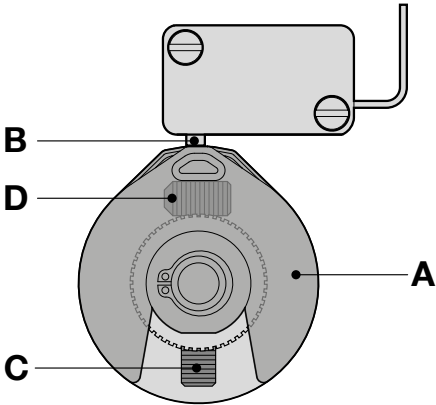
01.	Cut mains power supply to the automated system	
02.	Use light pressure to insert the crank handle in its hole.	
03.	Rotate the crank handle until it clicks into the position which allows manual movement. This interrupts the control voltage and the door can no longer be activated in electric mode.	
04.	Open and/or close the door by rotating the crank handle.	
05.	Extracting the crank handle restores the control voltage and the door may now be activated in electric mode.	



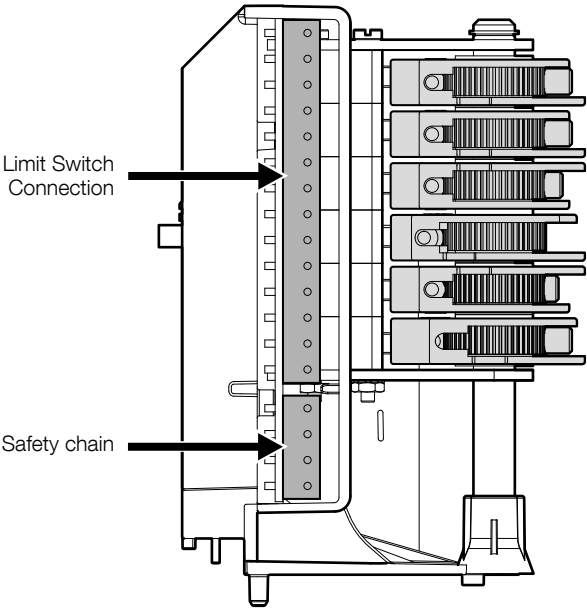
**⚠ CAUTION!** – The brake on the drives is safety related (in relation to the safe opening of the doors and gates) and needs to have a respective control circuit with performance level C.

3.4 - Adjusting the mechanical limit switch

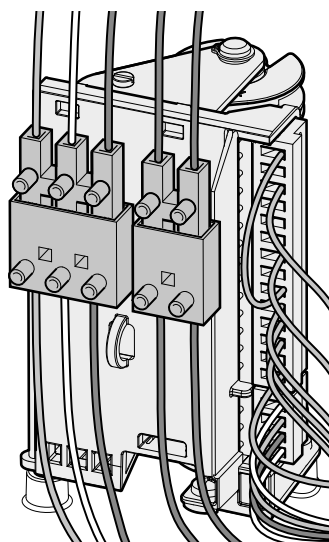
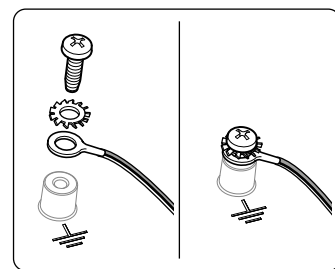
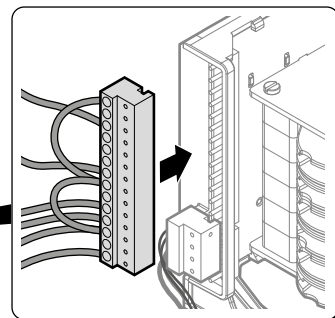
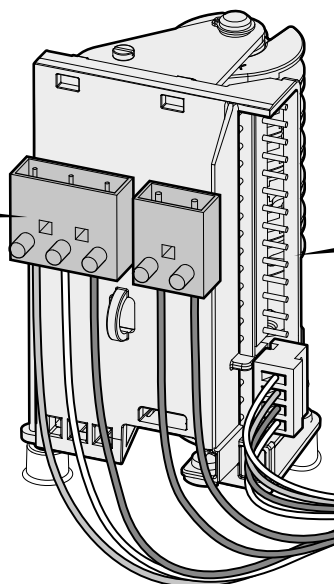
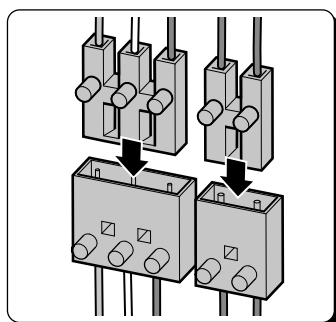
01. To adjust the limit switches, proceed as follows:
- Close the door
  - Rotate the control cam (A) on the CLOSING limit switch (3) up to the centre of the switch (B); tighten the grub screw (C) using the appropriate adjustment key.
- This operation allows a first adjustment
- Open the door up to the desired position
  - Follow the same procedure to adjust the OPENING limit switch and then the other cams (5) and (6), if used
  - Any small positional errors can be corrected, turning the grub screw (D) for fine adjustment.



6	WHITE ADDITIONAL CLOSING LIMIT SWITCH	P1 ↓
5	GREEN ADDITIONAL OPENING LIMIT SWITCH	P1 ↑
4	RED CLOSING SAFETY LIMIT SWITCH	SE ↓
3	WHITE CLOSING LIMIT SWITCH	E ↓
2	RED OPENING SAFETY LIMIT SWITCH	SE ↑
1	GREEN OPENING LIMIT SWITCH	E ↑

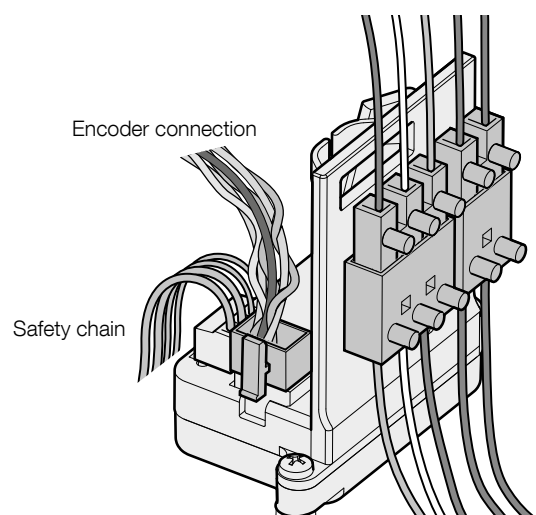
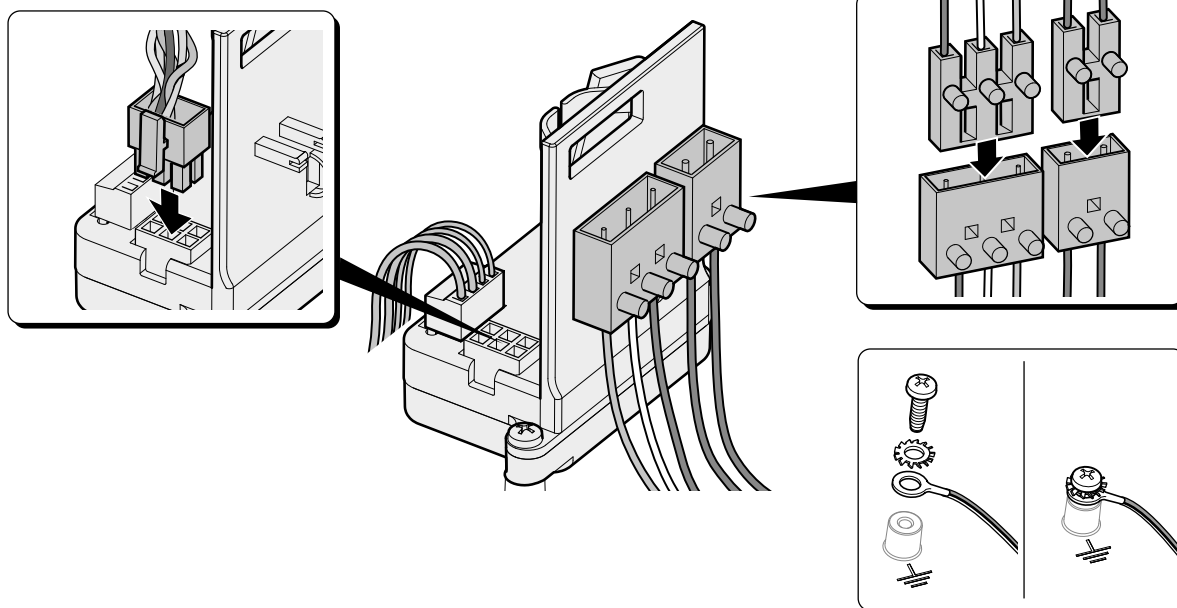


01.



### 3.6 - Connections and adjusting the electronic limit switch

- 01.** The ENAS002 electronic limit switch is an absolute limit switch.  
The positions are set via the control unit.



## 4 TESTING AND COMMISSIONING

These are the most important phases in the automation's arrangement to ensure maximum system safety.

This must be performed by qualified and experienced personnel who must take charge of establishing the tests necessary to verify the solutions adopted in respect of risks and verify the compliance of the system with applicable standards, legislation and regulations, in particular all requirements of standards EN 13241-1 and EN 12445 which establish the test methods for checking automation systems for doors and gates.

The additional devices must undergo a specific test, for both its operation and the correct interaction with RDFN - RDFNI - RDN: refer to the respective user manuals of each device.

### 4.1 - Testing

The testing procedure can also be performed as a periodic check of the automation devices.

Each component of the system (sensitive edges, photocells, emergency stop, etc.) requires a specific testing phase; for these devices, observe the procedures given in the respective instruction manuals.

Run the test as follows:

01.	Ensure that all specifications in the "WARNINGS" chapter have been observed in full.
02.	Close the door.
03.	Perform the test several times to verify that the gate moves smoothly, that there are no points of excessive friction and that there are no defects in the assembly or adjustment.
04.	Check the door for friction points during movement.
05.	Verify the correct operation of each safety device present in the system (photocells, sensitive edges, etc.).
06.	If dangerous situations caused by the movement of the door have been safeguarded by limiting the impact force, the user must measure the impact force in accordance with EN 13241-1 and EN 12445.
07.	Upon completion of the tests, power up the control unit and, after disengaging the manually operated safety device, switch ON the gearmotor.

### 4.2 - Commissioning

Commissioning can take place only after all testing phases have been terminated successfully (par. 4.1).

Partial or 'makeshift' commissioning is strictly prohibited.

01.	Prepare and store the technical documentation for the automation for at least 10 years. This must include at least: an assembly drawing of the automation, a wiring diagram, an analysis of hazards and solutions adopted, a manufacturer's declaration of conformity of all the devices installed (for HDFI use the annexed EC declaration of conformity); a copy of the automation system instruction manual and maintenance schedule.
02.	Place a permanent label or sign on the door, detailing the operations for the release and the manual manoeuvre (refer to the figures in the 'Instructions and warnings for users of the HDFI gearmotor').
03.	Post a label on the door providing at least the following data: type of automation, name and address of manufacturer (person responsible for commissioning), serial number, year of manufacture and 'CE' mark.
04.	Prepare the declaration of conformity of the automation system and deliver it to the owner.
05.	Give the owner the user manual (tear-out insert).
06.	Prepare and give the owner the maintenance schedule.
07.	Before commissioning the gate, inform the owner properly and in writing about the attendant residual risks.



## 5 FURTHER INFORMATION

### 5.1 - Integrated anti-drop system

The gearmotors are equipped with an anti-drop system which is not dependent from the number of rotations and position. The anti-drop system does not involve load or wear, and is only activated in the event of a mechanical failure.

**⚠ CAUTION! - Following the intervention of the anti-drop system, the gearmotor must be replaced!**

The anti-drop system has the following features:

- It safeguards against the breakage and wear of the sprocket
- It is not dependent on the number of rotations
- It is not dependent on the direction of rotation
- It is not dependent on the position
- It is not dependent on the vibrations
- It does not require maintenance
- In the event of an intervention, it blocks the descent of the door in accordance with the provisions of EN 12605.

The RDFN series of gearmotors can also be used with a chain transmission, using the accessory kit (see pages 38-39-40).

To check the weights lifted as a function of the transmission ratio and the overall dimensions of the assembled kit, see page 37.

**⚠** The power take-off output can be on either side.

**⚠ Where required, a separate and independent anti-drop system can be used.**

## 6 PRODUCT DISPOSAL

**This product constitutes an integral part of the automation and, therefore, must be disposed of together with it.**

Similarly to the installation phase, once the product reaches the end of its useful life, the disassembly and scrapping operations must be performed by qualified personnel.

This product is made of various types of materials, some of which can be recycled while others must be scrapped. Seek information on the recycling and disposal systems envisaged by local regulations in your area for this product category.

**⚠ CAUTION! - Some parts of the product may contain polluting or hazardous substances which, if released into the environment, constitute serious environmental and health risks.**



As indicated by the adjacent symbol, the product may not be disposed of together with domestic waste. Sort the materials for disposal, according to the methods envisaged by current legislation in your area, or return the product to the retailer when purchasing an equivalent product.

**⚠ CAUTION! - Local regulations may envisage the application of heavy fines in the event of improper disposal of this product.**

## 7 TROUBLESHOOTING

To check and resolve some problems, refer to the instruction manuals for D-PRO products (Action - Comfort - Automatic).

# 8 TECHNICAL SPECIFICATIONS

⚠ All technical specifications stated herein refer to an ambient temperature of 20°C (± 5°C). • Nice S.p.A. reserves the right to modify its products at any time when deemed necessary, while nonetheless maintaining their intended use and functionality.

	RDFN 140-20***		RDFN 250-15***		RDFN 400-15***		RDFN 550-15***		RDFN 750-9.5***	
Max torque [Nm] **	140		250		400		550		750	
Nominal torque [Nm] **	120		230		360		500		700	
No. of rotations in output [min-1] **	20		15		15		15		9.5	
Motor power [kW]	0.55		0.75		1.1		1.5		1.5	
Limit switch range (max shaft cable rotations)	15	40	15	40	15	40	15	40	15	40
Operating voltage [V]	3 x 400 V									
Frequency [Hz]	50 Hz									
Nominal current draw [A]	2.0	2.0	2.6	2.6	3.4	3.4	4.1	4.1	3.5	3.5
Cycles/Hour	4	1	17	5	14	7	14	4		2
Connection cable (n° x mm²)	4 x 1.5 mm² – 6 x 0.75 mm² – 2 x 0.75 mm²									
Operating temperature [°C]	-5°C ... +40°C		-20°C ... +40°C							
Sound pressure in dB(A)	<70									
Protection rating	IP 54									
Weight [kg] *	13		22		28		28		35	

	RDFN 850-12***		RDFN 1100-12***		RDFN 1400-9.5***	
Max torque [Nm] **	850		1100		1400	
Nominal torque [Nm] **	760		1000		1300	
No. of rotations in output [min <sup>-1</sup> ] **	12		12		9	
Motor power [kW]	2.2		3.0		2.2	
Limit switch range (max shaft cable rotations)	15	40	15	40	15	40
Operating voltage [V]	3 x 400 V					
Frequency [Hz]	50 Hz					
Nominal current draw [A]	4.6	4.6	8.0	8.0	5.1	5.1
Cycles/Hour	13	5	13	5		3
Connection cable (n° x mm <sup>2</sup> )	4 x 1.5 mm <sup>2</sup> – 6 x 0.75 mm <sup>2</sup> – 2 x 0.75 mm <sup>2</sup>					
Operating temperature [°C]	-20°C ... +40°C					
Sound pressure in dB(A)	<70					
Protection rating	IP 54					
Weight [kg] *	50		52		65	

	RDFN 250-24***	RDFN 350-24***	RDFN 500-24***
Max torque [Nm] **	250	350	500
Nominal torque [Nm] **	230	300	450
No. of rotations in output [min <sup>-1</sup> ] **	24	24	9
Motor power [kW]	1.1	1.5	2.2
Limit switch range (max shaft cable rotations)	40	40	40
Operating voltage [V]	3 x 400 V		
Frequency [Hz]	50 Hz		
Nominal current draw [A]	2.9	3.5	5.0
Cycles/Hour	7	7	7
Connection cable (n° x mm²)	4 x 1.5 mm² – 6 x 0.75 mm² – 2 x 0.75 mm²		
Operating temperature [°C]	-20°C ... +40°C		
Sound pressure in dB(A)	<70		
Protection rating	IP 54		
Weight [kg] *	22	29	28

	RDFNI 250-24	RDFNI 350-24	RDFNI 500-24
Max torque [Nm] **	250	350	500
Nominal torque [Nm] **	230	300	450
No. of rotations in output [min <sup>-1</sup> ] **	24	24	9
Motor power [kW]	1.1	1.5	2.2
Limit switch range (max shaft cable rotations)	40	40	40
Operating voltage [V]	3 x 400 V		
Frequency [Hz]	50 Hz		
Nominal current draw [A]	10.0	11.5	15.8
Cycles/Hour	7	8	7
Connection cable (n° x mm <sup>2</sup> )	4 x 1.5 mm <sup>2</sup> – 6 x 0.75 mm <sup>2</sup> – 2 x 0.75 mm <sup>2</sup>		
Operating temperature [°C]	-20°C ... +40°C		
Sound pressure in dB(A)	<70		
Protection rating	IP 54		
Weight [kg] *	24	31	31

\* refers to the heaviest configuration

\*\* In gearmotors powered at a frequency of 60Hz (and at the same voltage), multipliers are used for some performance figures:

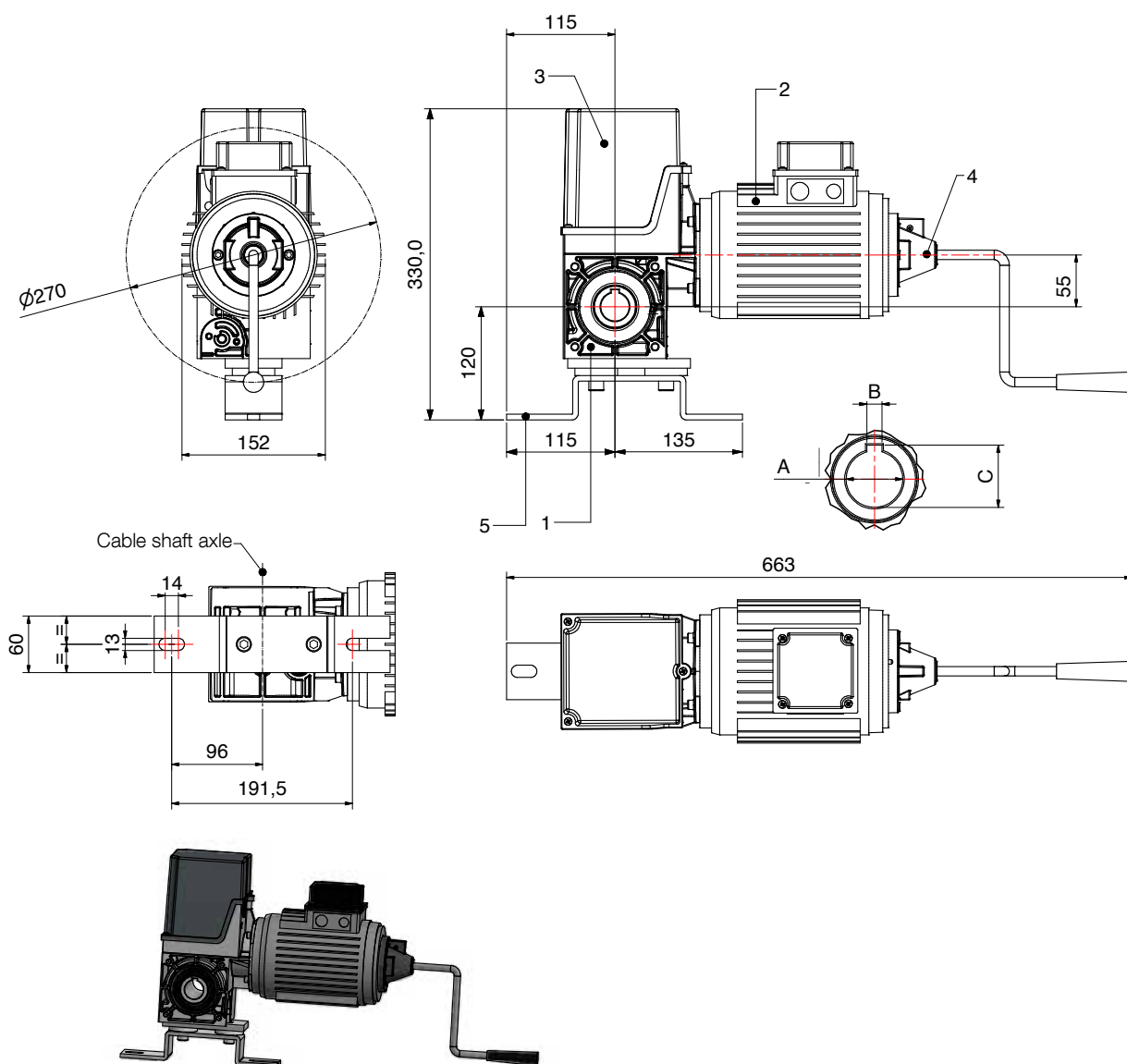
Nominal torque (and max torque): 0.83 and rotations in output: 1.2

\*\*\* Our drives are certified by TÜV Nord

# Product data sheet for RDFN 140-20 KU

Table 1			
Description	Ø A	B	C
RDFN 140-20 KU	30	8	33.3

Table 2	
No.	Description
1	Gear motor
2	Electric motor
3	Limit switch housing
4	Emergency manual device
5	Bracket unit



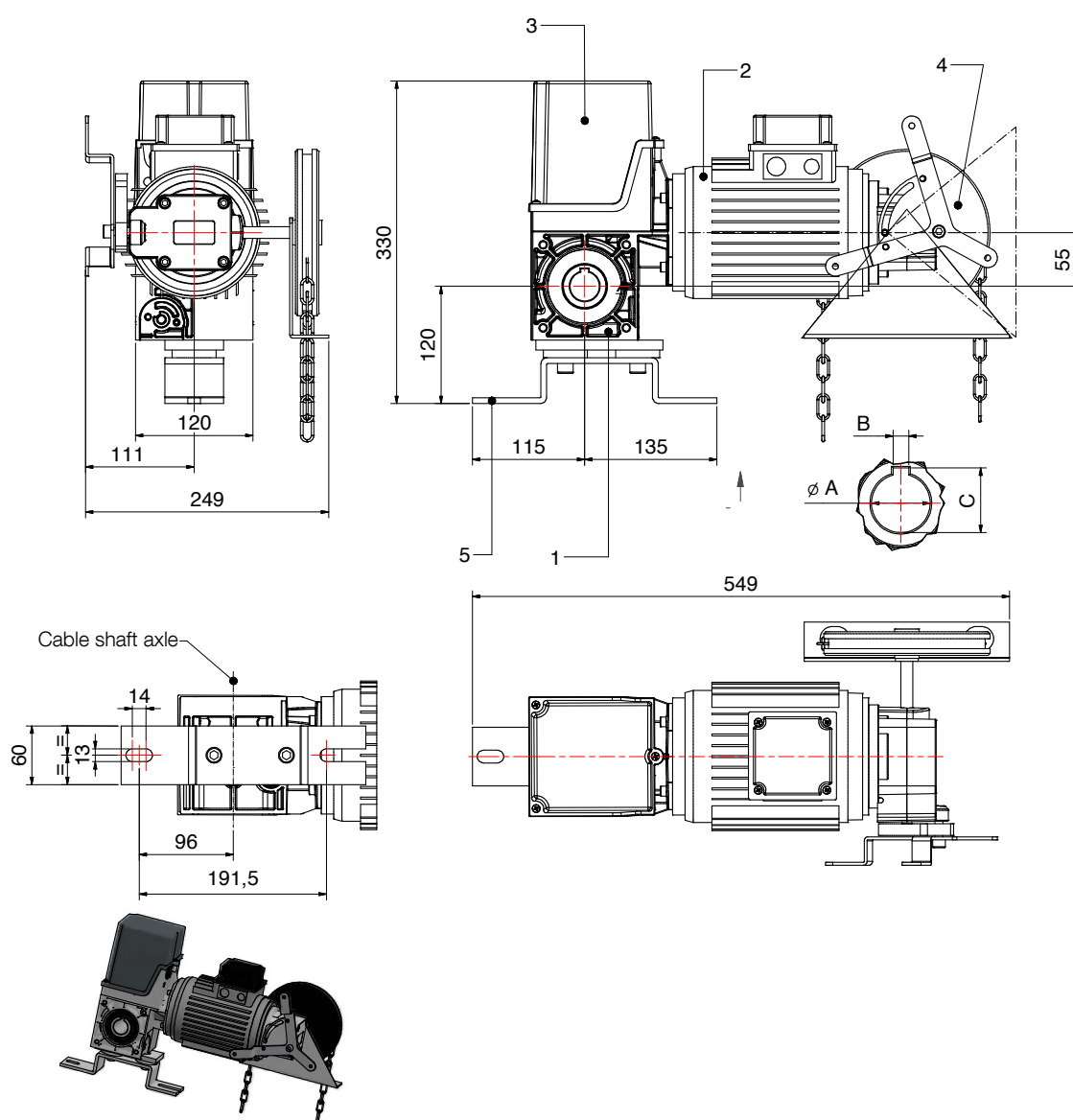
# Product data sheet for RDFN 140-20 KE

Table 1

Description	Ø A	B	C
RDFN 140-20 KE	30	8	33.3

Table 2

No.	Description
1	Gear motor
2	Electric motor
3	Limit switch housing
4	Emergency manual device
5	Bracket unit



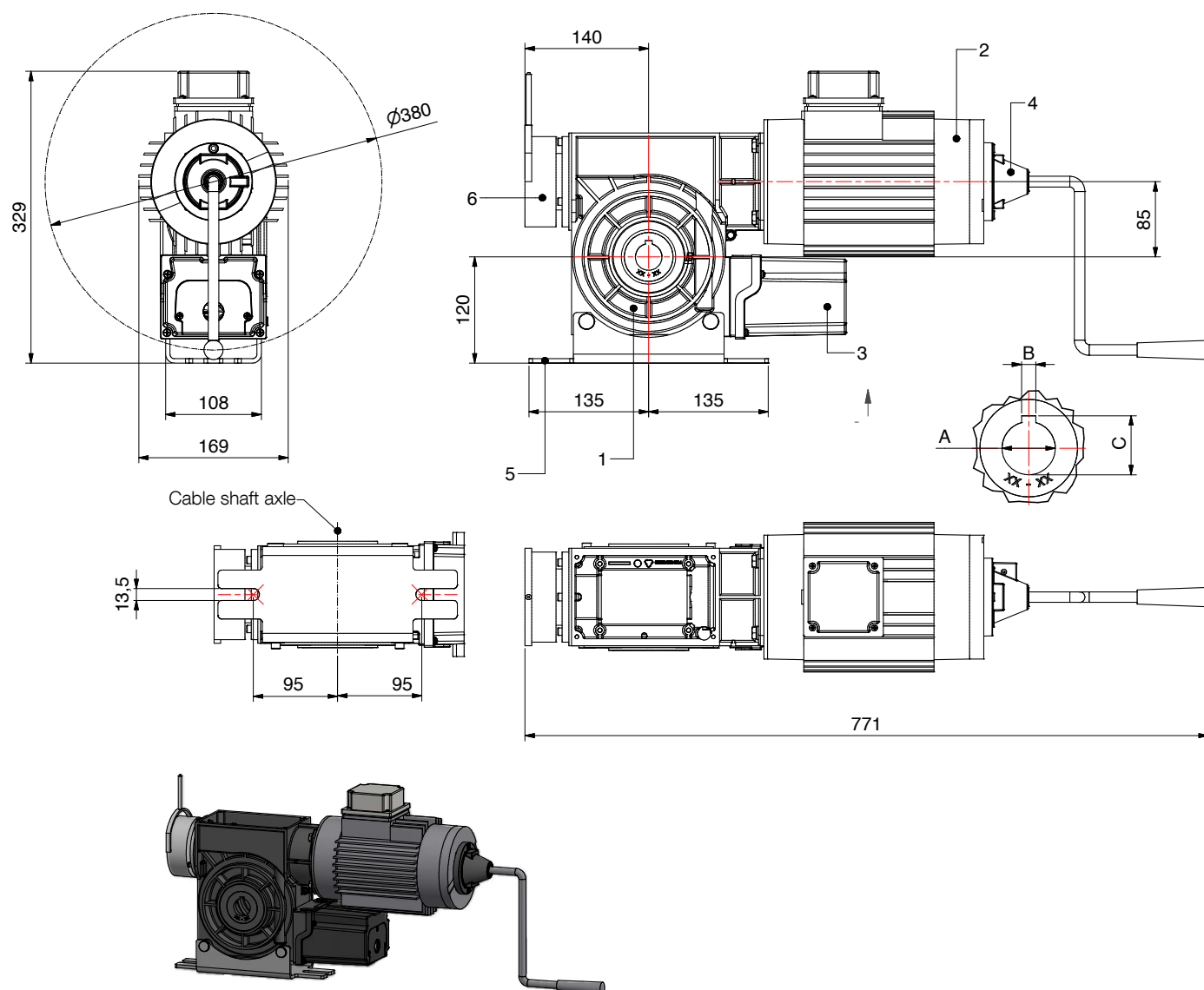
# **Products data sheet for** **RDFN 250-24 KU, RDFN 250-15 KU, RDFN 350-24 KU,** **RDFN 400-15 KU, RDFN 500-24 KU, RDFN 500-15 KU, RDFN 550-15 KU**

**Table 1**

Description	Ø A	B	C
RDFN 250-24 KU	30	8	33.3
RDFN 250-15 KU	30	8	33.3
RDFN 350-24 KU	40	12	43.3
RDFN 400-15 KU	40	12	43.3
RDFN 500-24 KU	40	12	43.3
RDFN 550-15 KU	40	12	43.3

**Table 2**

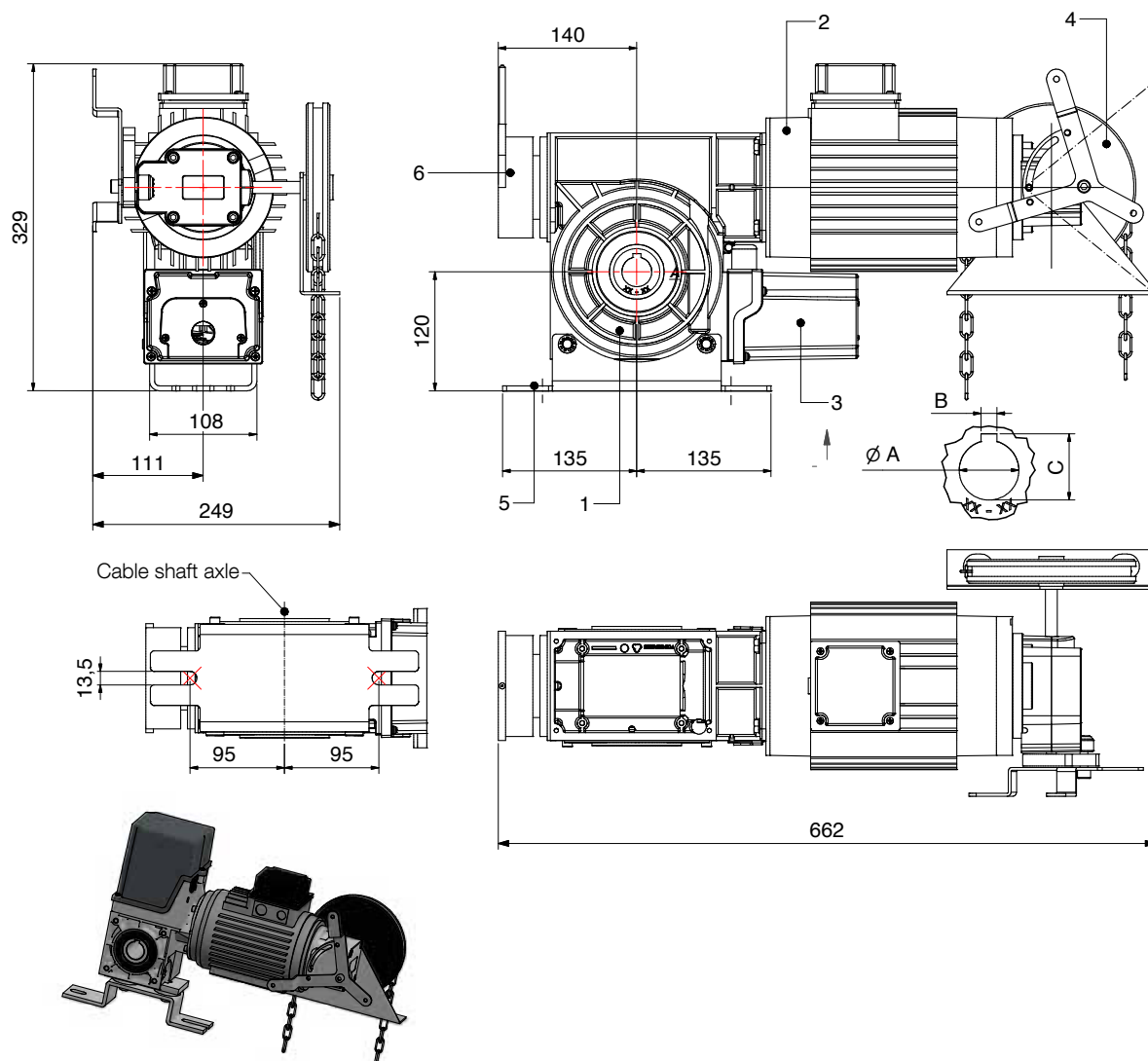
No.	Description
1	Gear motor
2	Electric motor
3	Limit switch housing
4	Emergency manual device
5	Bracket unit
6	Spring brake



## Table 2

Description	Ø A	B	C
RDFN 250-24 KE	30	8	33.3
RDFN 250-15 KE	30	8	33.3
RDFN 350-24 KE	40	12	43.3
RDFN 400-15 KE	40	12	43.3
RDFN 500-24 KE	40	12	43.3
RDFN 550-15 KE	40	12	43.3

No.	Description
1	Gear motor
2	Electric motor
3	Limit switch housing
4	Emergency manual device
5	Bracket unit
6	Spring brake



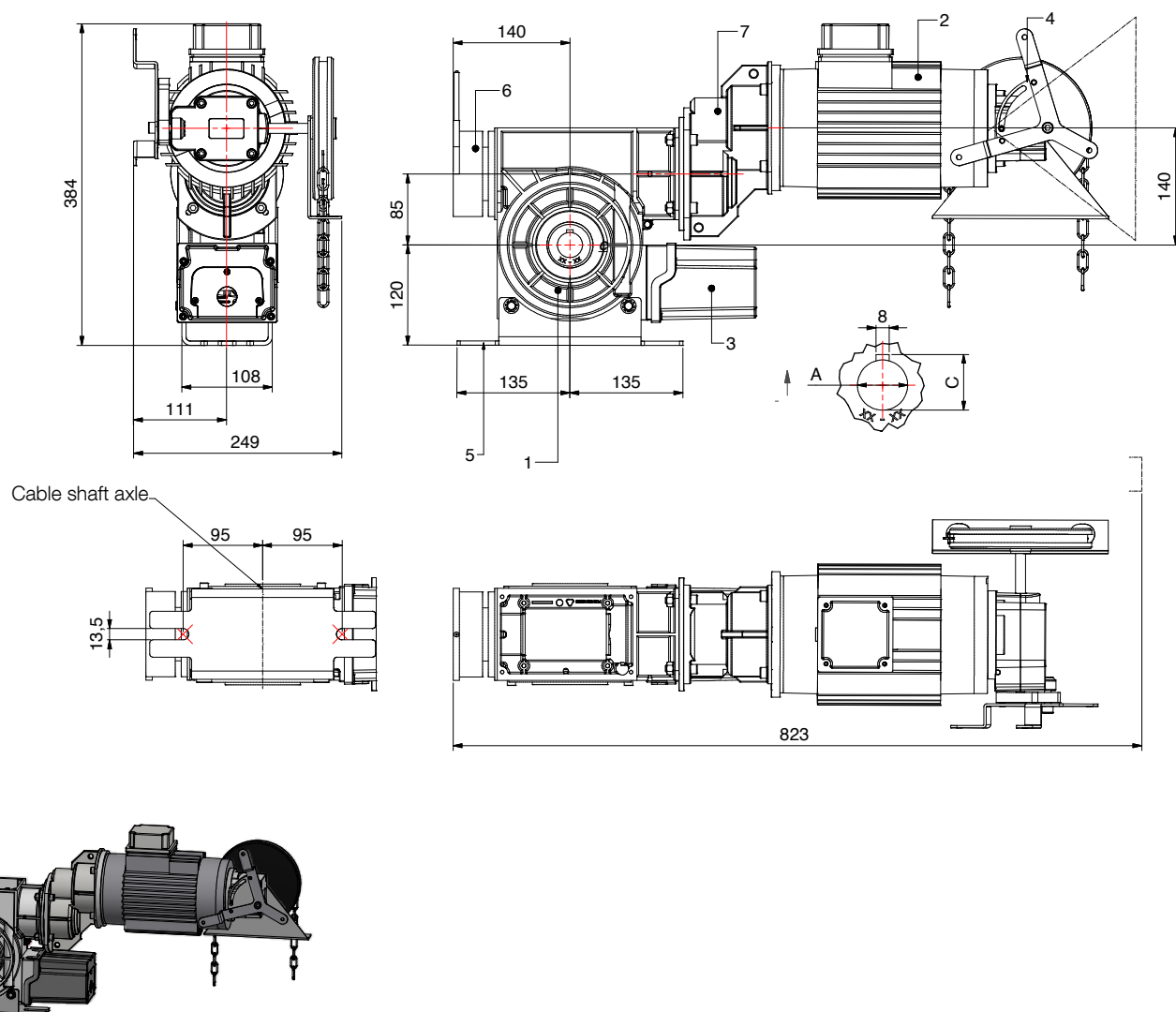
# Product data sheet for RDFN 750-9.5 KE

Table 1

Description	Ø A	B	C
RDFN 750-9.5 KE	40	12	43.3

Table 2

No.	Description
1	Gear motor
2	Electric motor
3	Limit switch housing
4	Emergency manual device
5	Bracket unit
6	Spring brake
7	Supplementary gearmotor





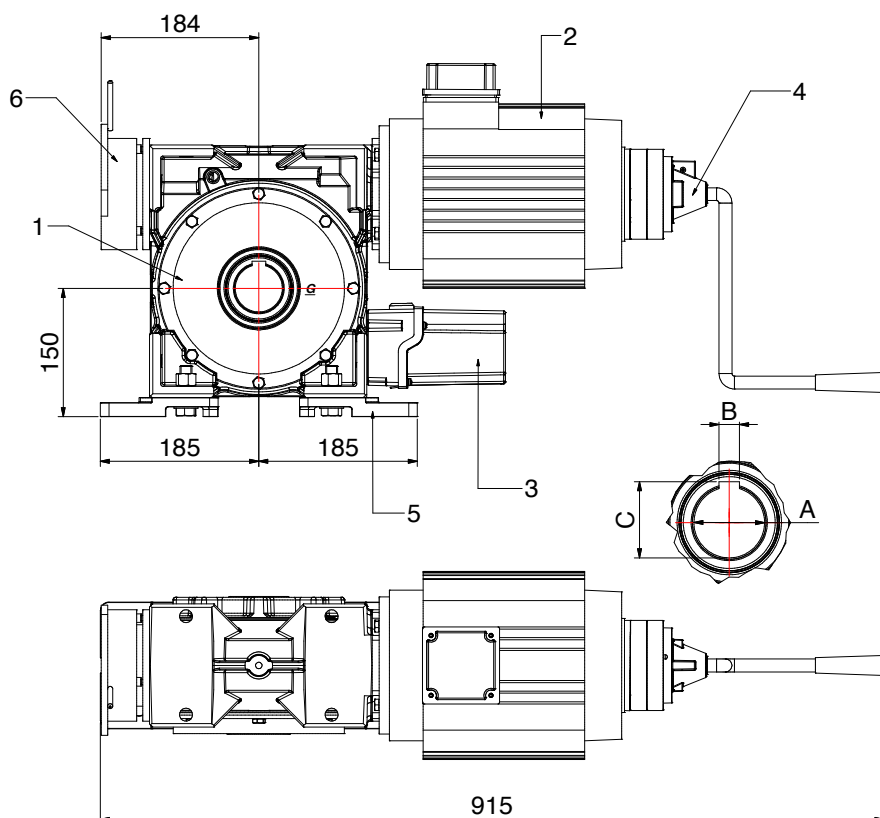
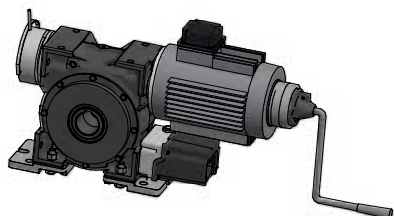
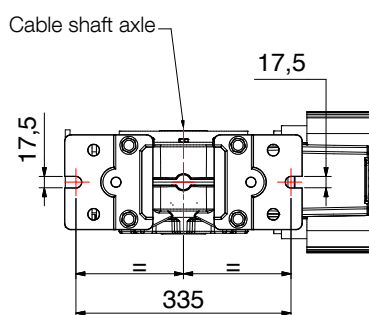
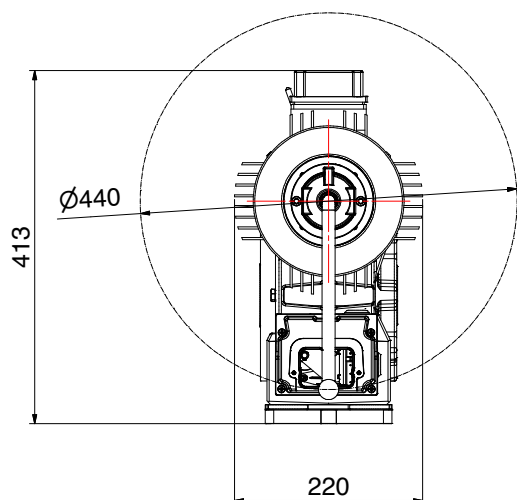
# Product data sheet for RDFN 750-24 KU

Table 1

Description	Ø A	B	C
RDFN 750-24 KU	55	16	59.3

Table 2

No.	Description
1	Gear motor
2	Electric motor
3	Limit switch housing
4	Emergency manual device
5	Bracket unit
6	Spring brake



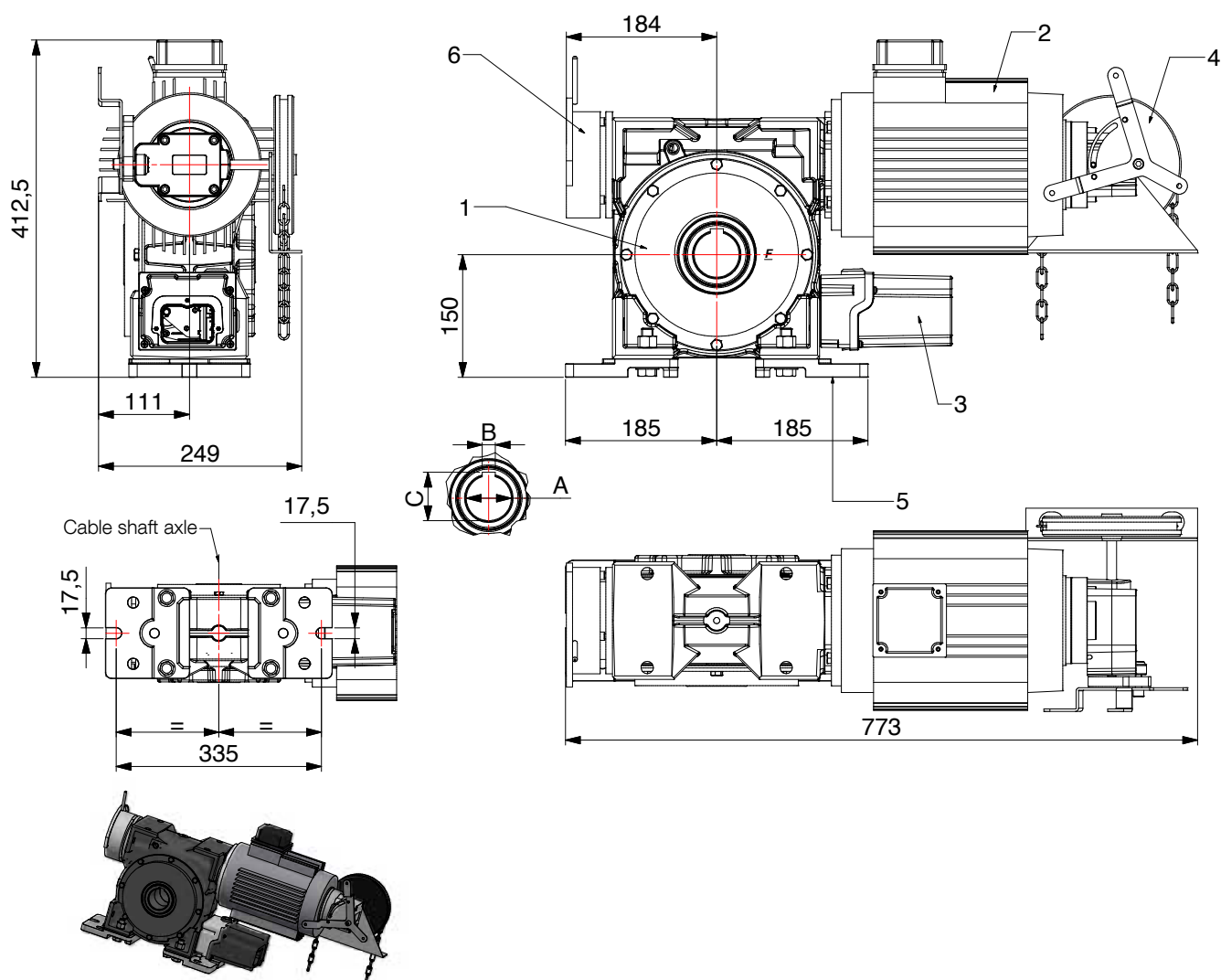
# Product data sheet for RDFN 750-24 KE

Table 1

Description	Ø A	B	C
RDFN 750-24 KE	55	16	59.3

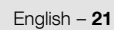
Table 2

No.	Description
1	Gear motor
2	Electric motor
3	Limit switch housing
4	Emergency manual device
5	Bracket unit
6	Spring brake



### Table 2

<b>No.</b>	<b>Description</b>
1	Gear motor
2	Electric motor
3	Limit switch housing
4	Bracket unit
5	Emergency manual device
6	Spring brake



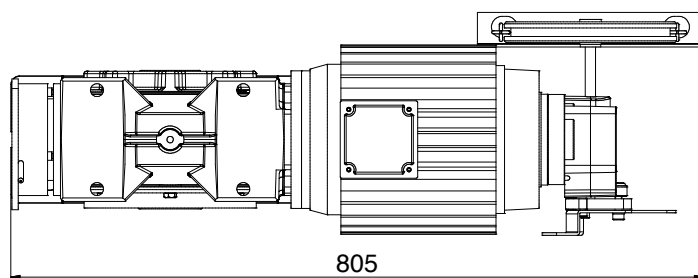
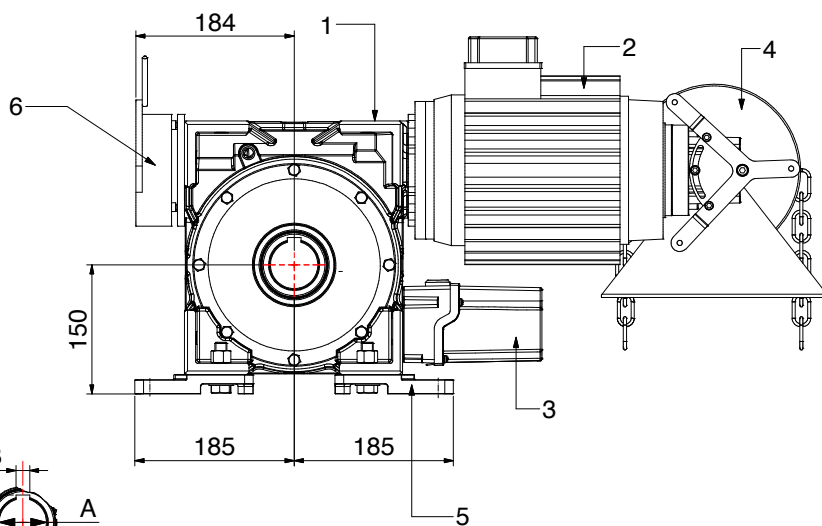
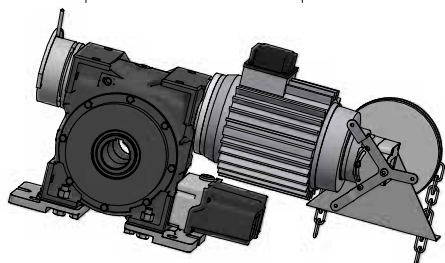
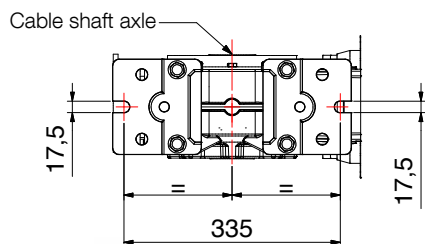
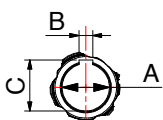
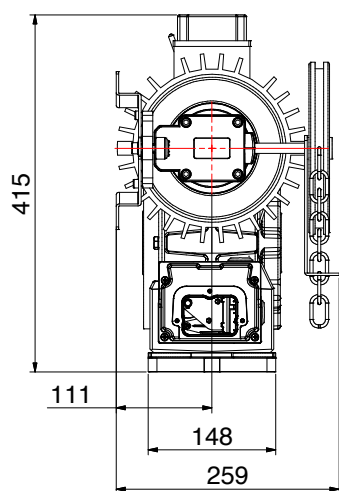
## Products data sheet for RDFN 800-12 KE, RDFN 1000-24 KE, RDFN 1100-12 KE

Table 1

Description	Ø A	B	C
RDFN 800-12 KE	55	16	59.3
RDFN 1000-24 KE	55	16	59.3
RDFN 1100-12 KE	55	16	59.3

Table 2

No.	Description
1	Gear motor
2	Electric motor
3	Limit switch housing
4	Bracket unit
5	Emergency manual device
6	Spring brake



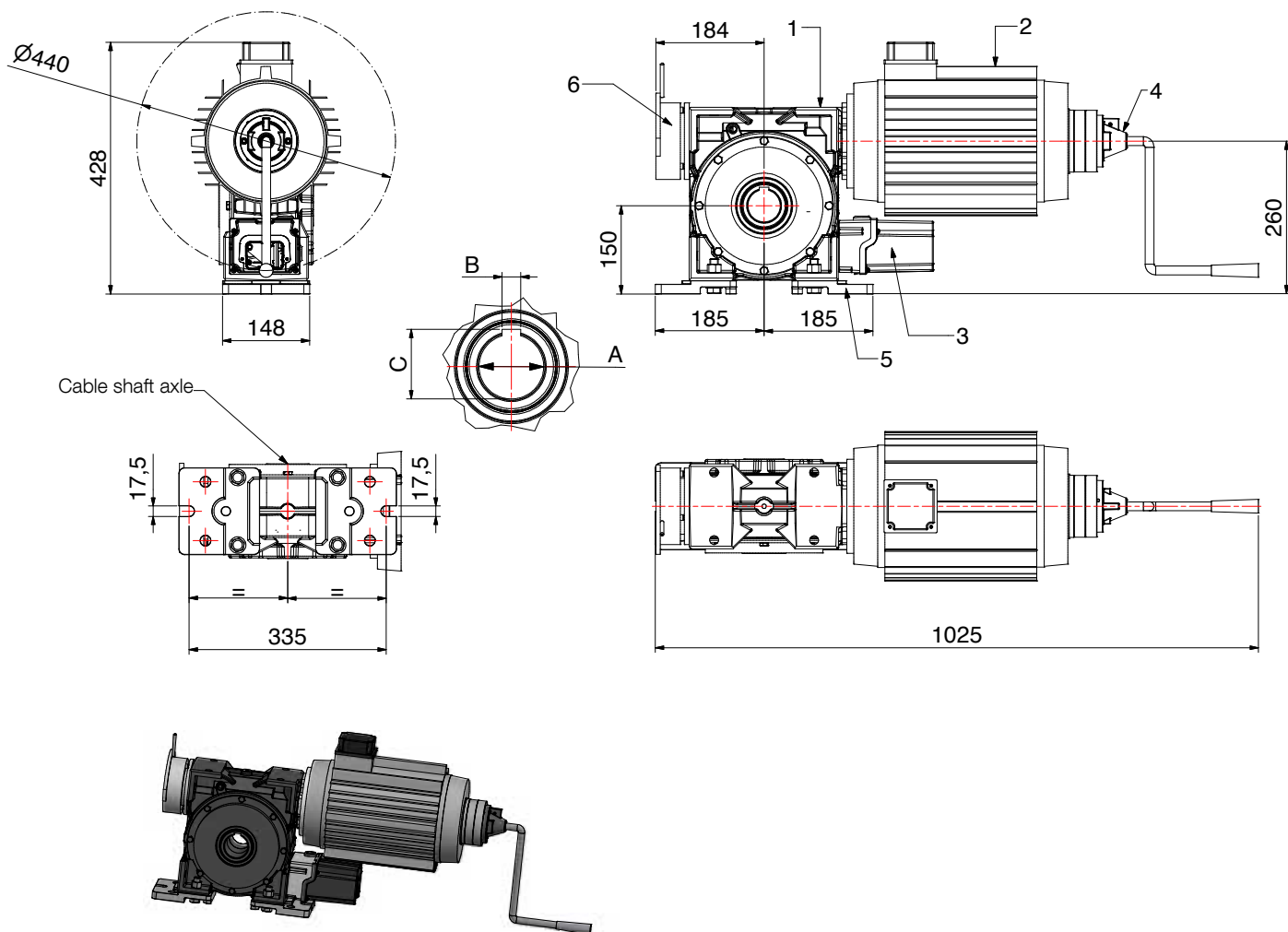
# Product data sheet for RDFN 1400-24 KU

Table 1

Description	Ø A	B	C
RDFN 1400-24 KU	55	8	59.3

Table 2

No.	Description
1	Gear motor
2	Electric motor
3	Limit switch housing
4	Emergency manual device
5	Bracket unit
6	Spring brake



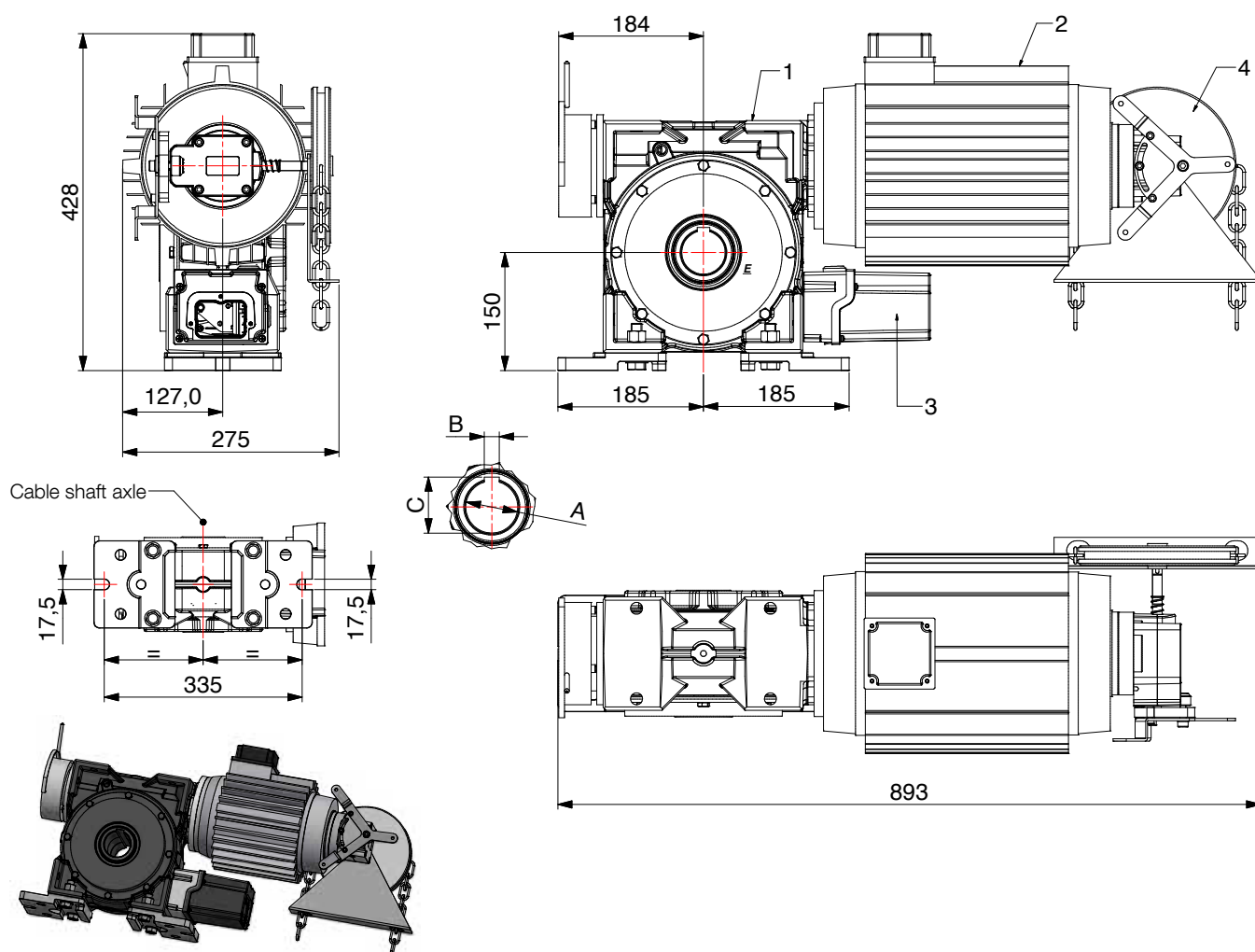
# Product data sheet RDFN 1400-24 KE

Table 1

Description	Ø A	B	C
RDFN 1400-24 KE	55	8	59.3

Table 2

No.	Description
1	Gear motor
2	Electric motor
3	Limit switch housing
4	Emergency manual device
5	Bracket unit
6	Spring brake



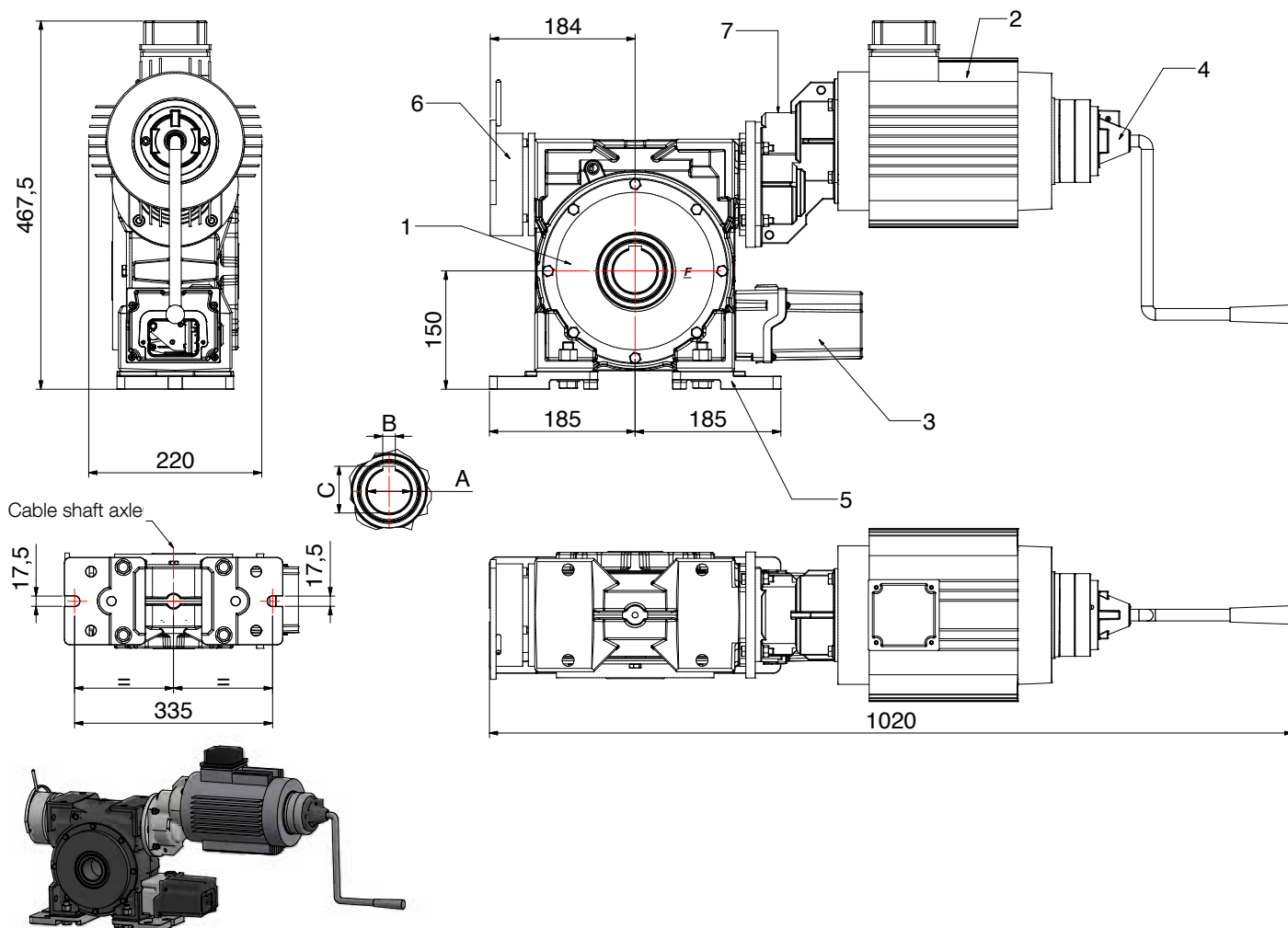
# Product data sheet RDFN 1400-9 KU

Table 1

Description	Ø A	B	C
RDFN 1400-9 KU	55	16	59.3

Table 2

No.	Description
1	Gear motor
2	Electric motor
3	Limit switch housing
4	Emergency manual device
5	Bracket unit
6	Spring brake
7	Supplementary gearmotor



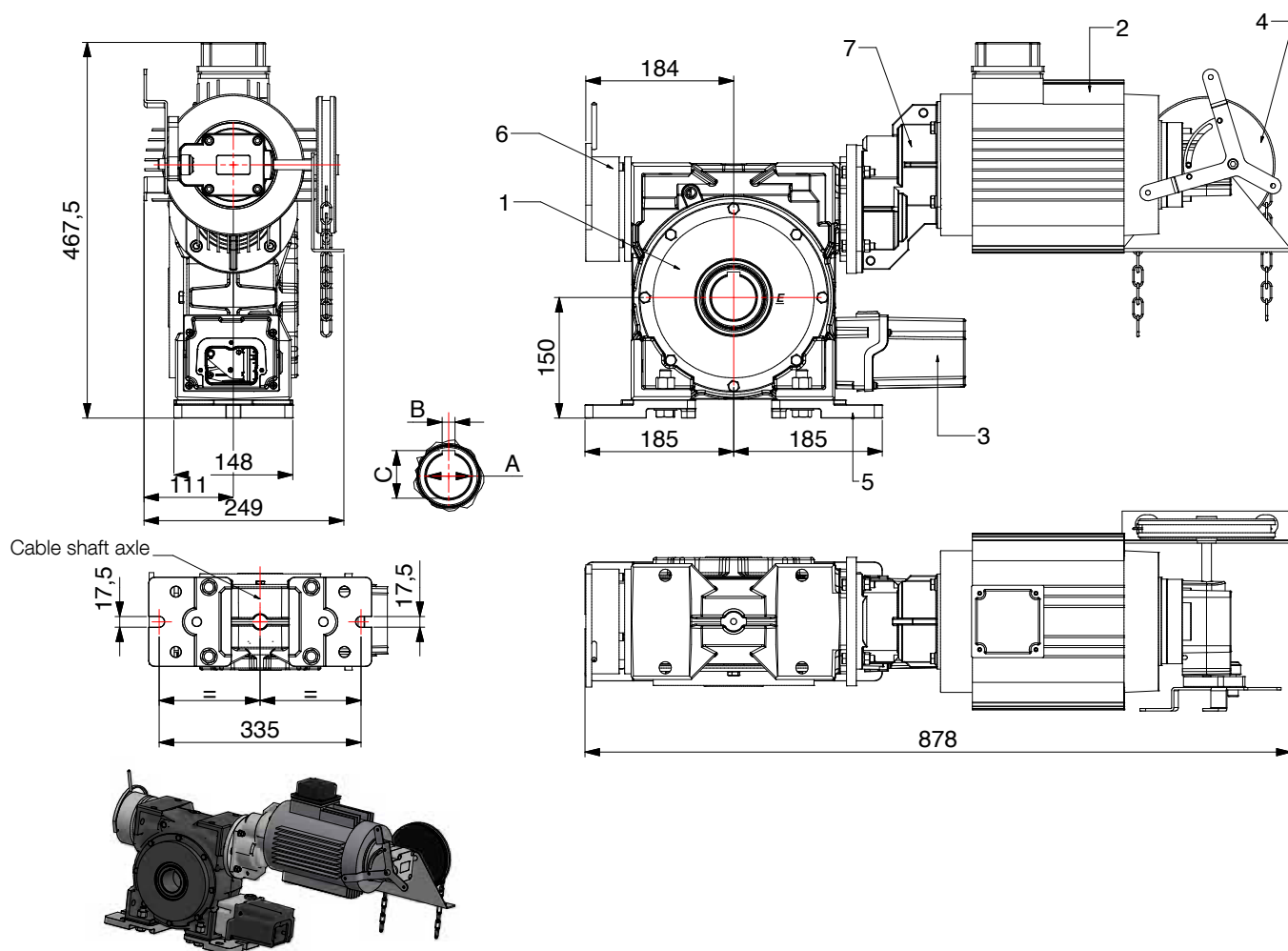
# Product data sheet RDFN 1400-9 KE

Table 1

Description	Ø A	B	C
RDFN 1400-9 KE	55	16	59.3

Table 2

No.	Description
1	Gear motor
2	Electric motor
3	Limit switch housing
4	Emergency manual device
5	Bracket unit
6	Spring brake
7	Supplementary gearmotor





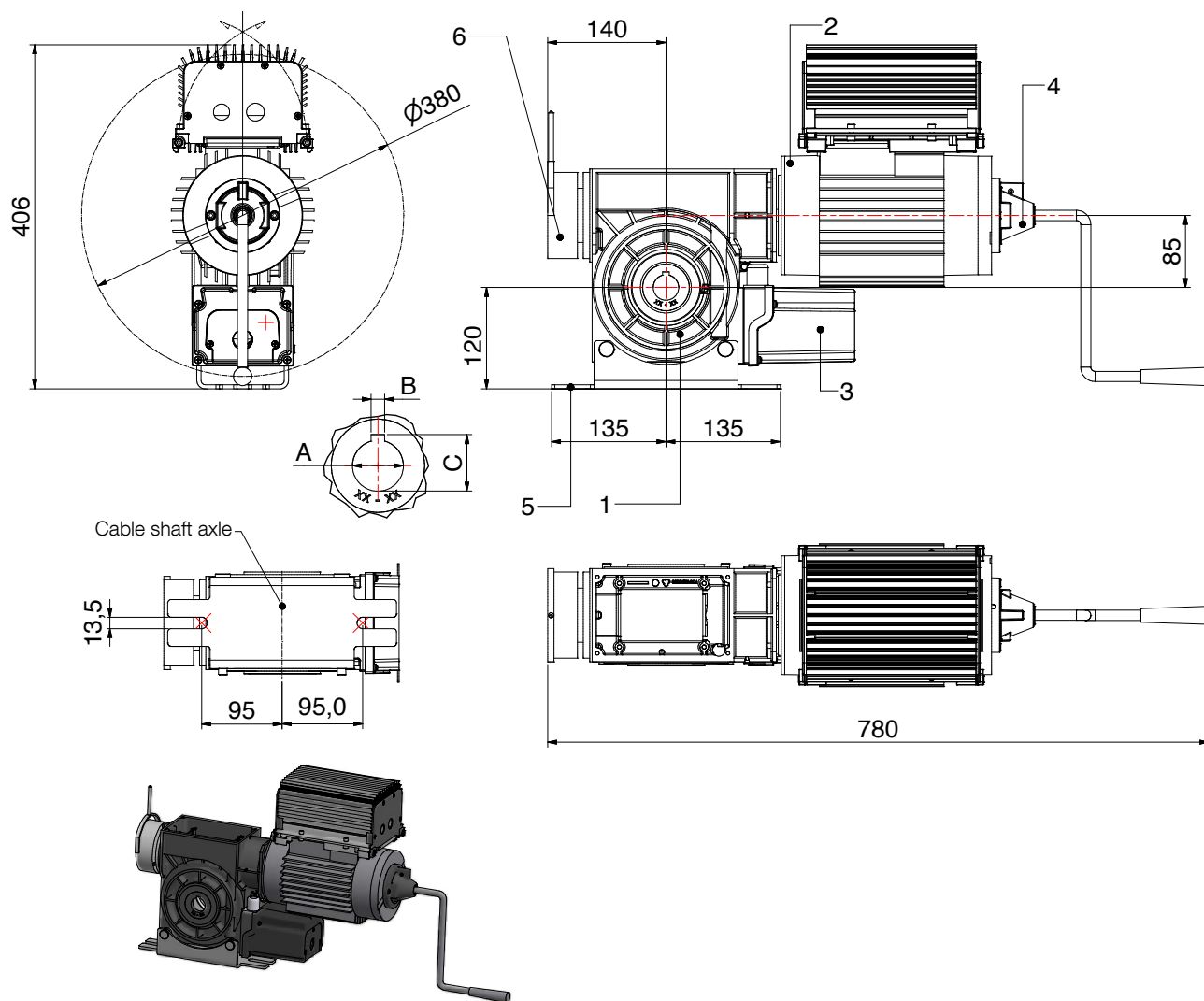
## Products data sheet for RDFNI 250-24 KU, RDFNI 350-24 KU, RDFNI 500-24 KU

Table 1

Description	Ø A	B	C
RDFNI 250-24 KU	30	8	33.3
RDFNI 350-24 KU	30	8	33.3
RDFNI 500-24 KU	30	8	33.3

Table 2

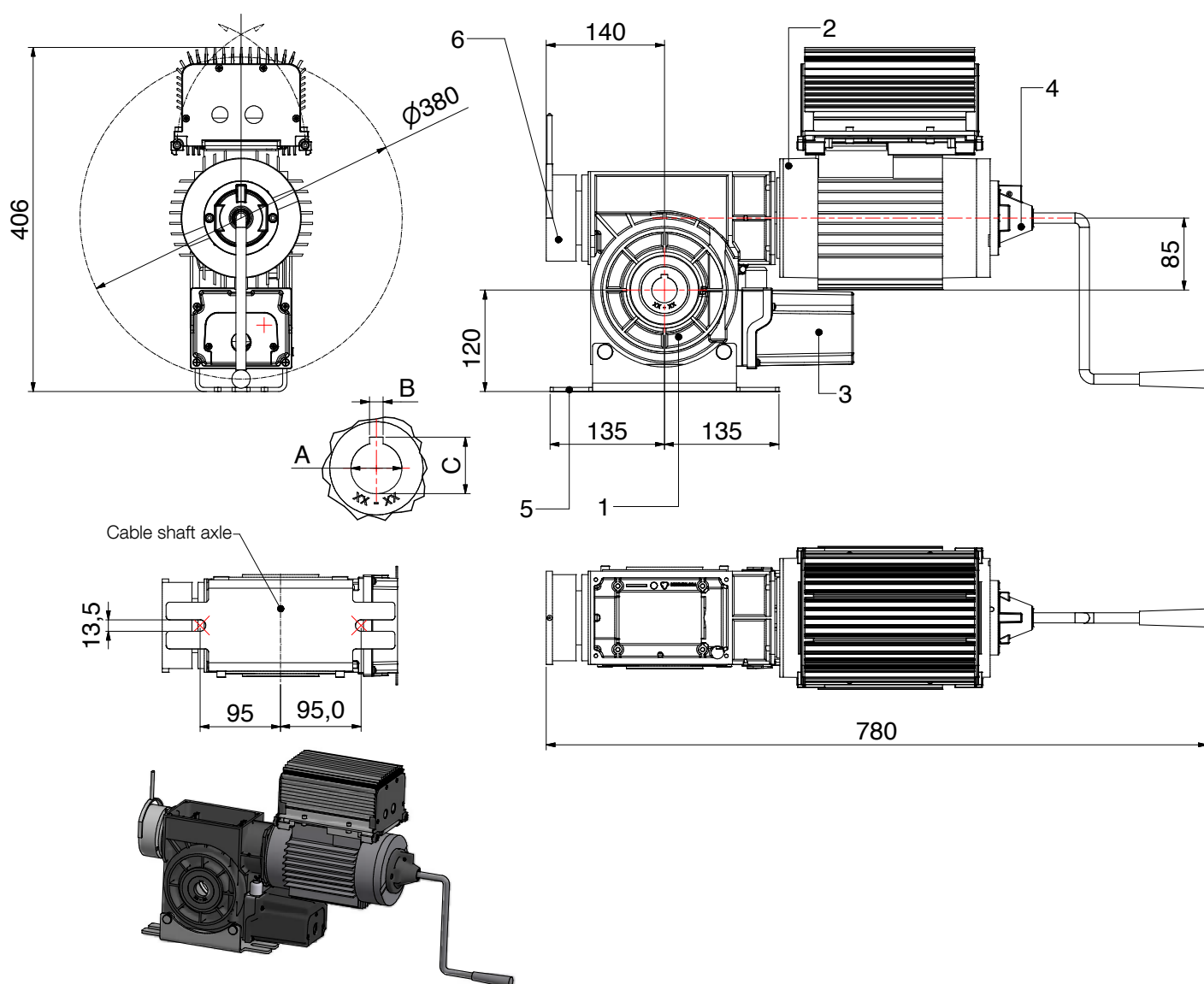
No.	Description
1	Gear motor
2	Electric motor
3	Limit switch housing
4	Emergency manual device
5	Bracket unit
6	Spring brake



# Products data sheet for RDFNI 250-24 KE, RDFNI 350-24 KE, RDFNI 500-24 KE

Table 1			
Description	Ø A	B	C
RDFNI 250-24 KE	30	8	33.3
RDFNI 350-24 KE	30	8	33.3
RDFNI 500-24 KE	30	8	33.3

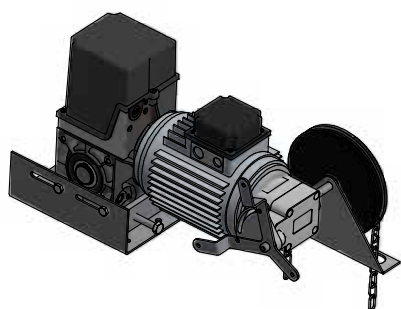
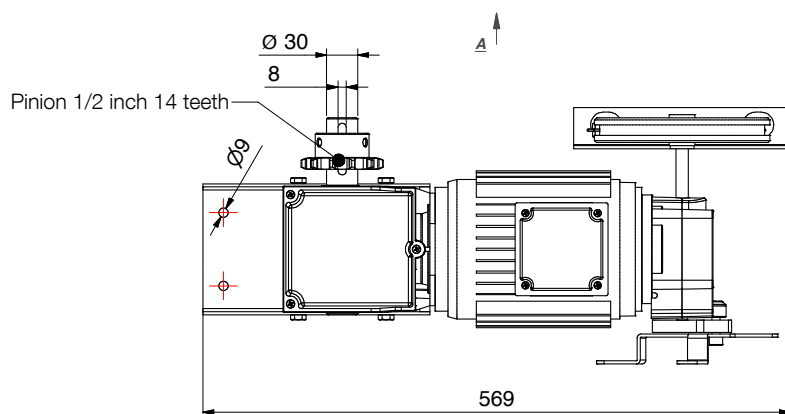
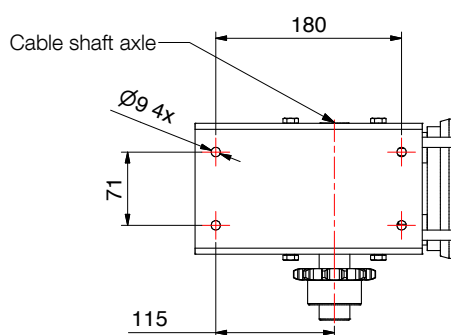
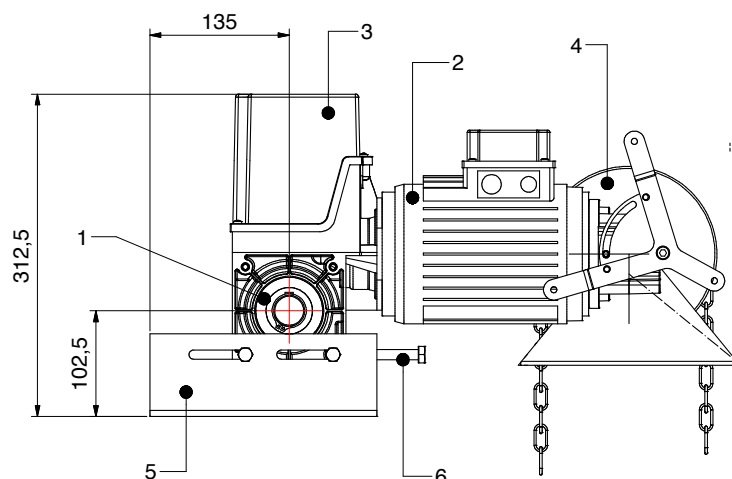
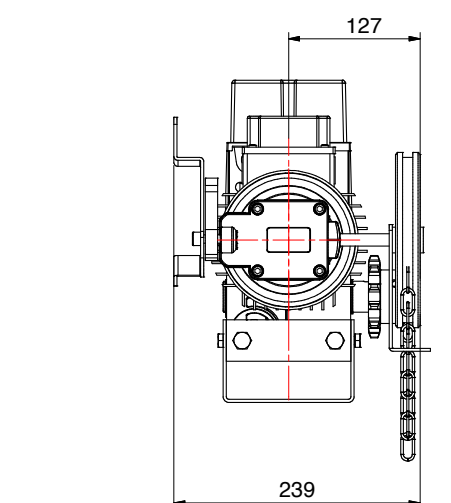
Table 2	
No.	Description
1	Gear motor
2	Electric motor
3	Limit switch housing
4	Emergency manual device
5	Bracket unit
6	Spring brake



## Product data sheet for RDFN 140-20 KE with chain return kit

Table

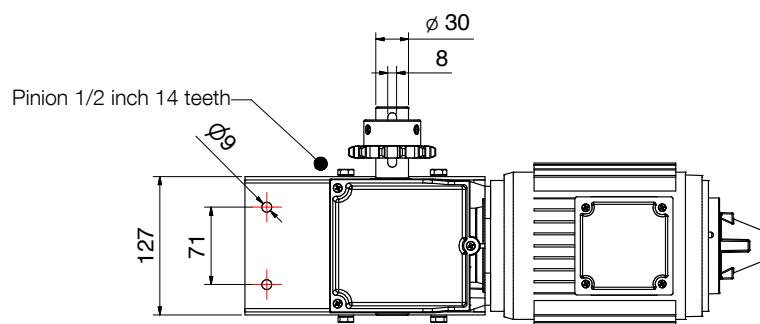
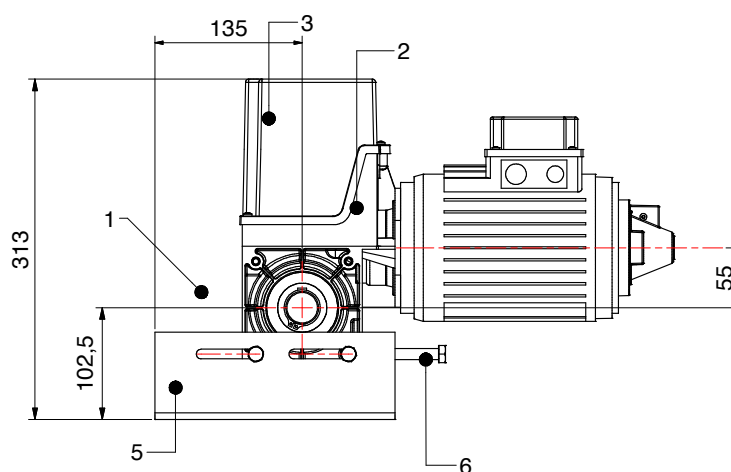
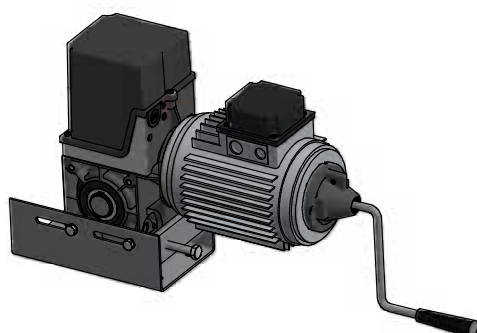
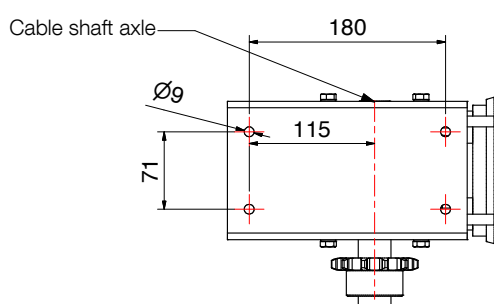
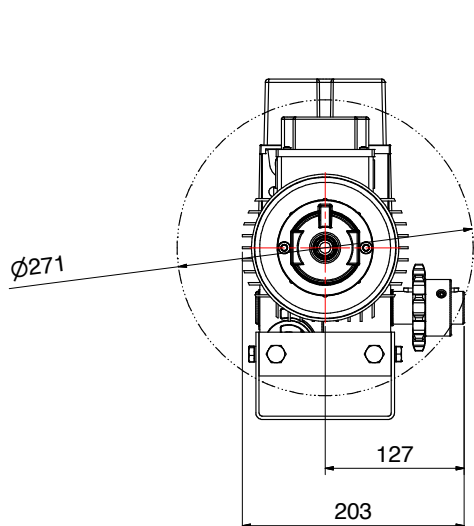
No.	Description		
1	Gear motor	4	Emergency manual device
2	Electric motor	5	Bracket unit
3	Limit switch housing	6	Chain tension adjustment screw



# Product data sheet for RDFN 140-20 KU with chain return kit

Table

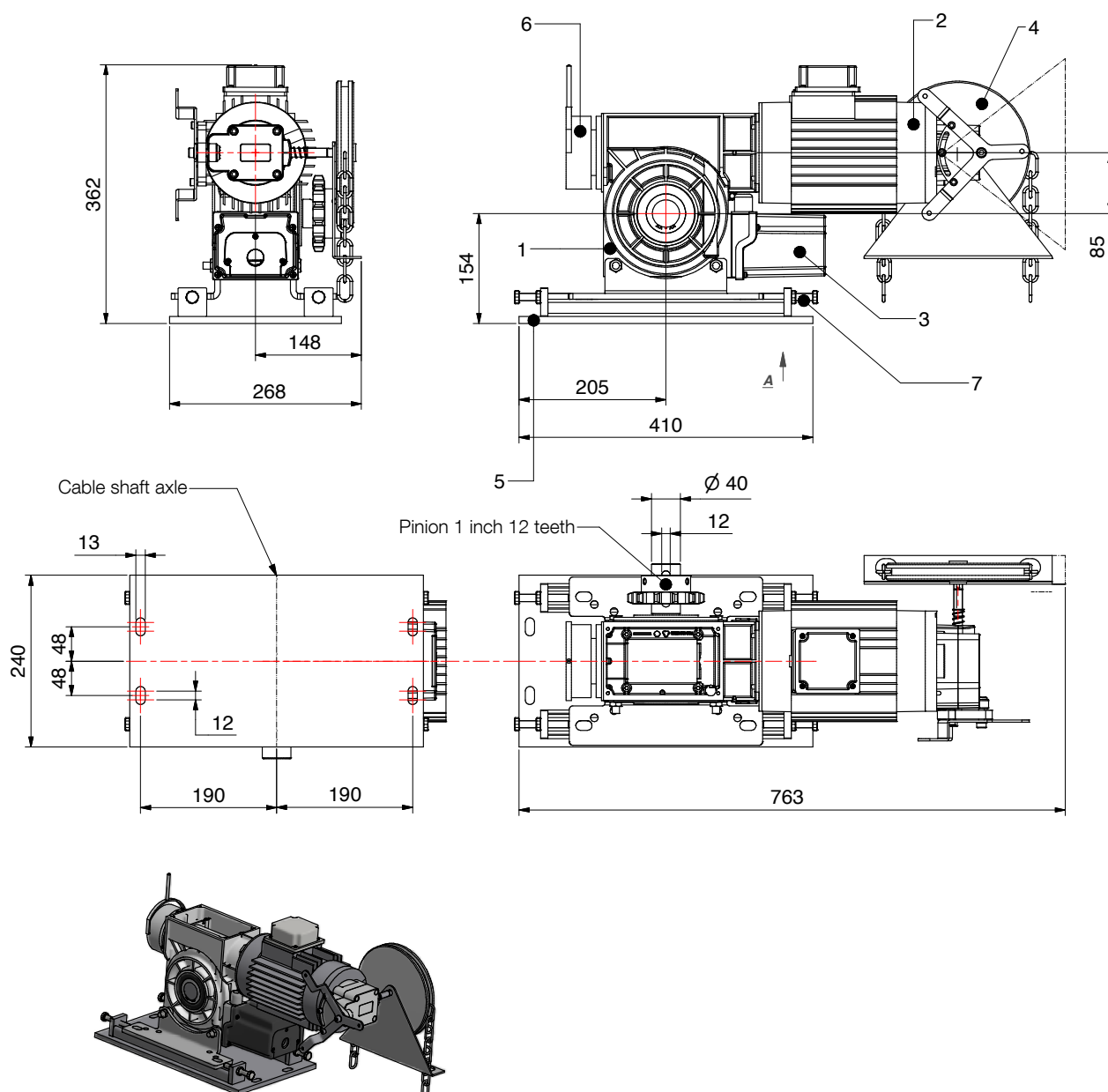
Table			
No.	Description		
1	Gear motor	4	Emergency manual device
2	Electric motor	5	Bracket unit
3	Limit switch housing	6	Chain tension adjustment screw



# Products data sheet for RDFN 250-24 KE, RDFN 350-24 KE, RDFN 500-24 KE with chain return kit

Table

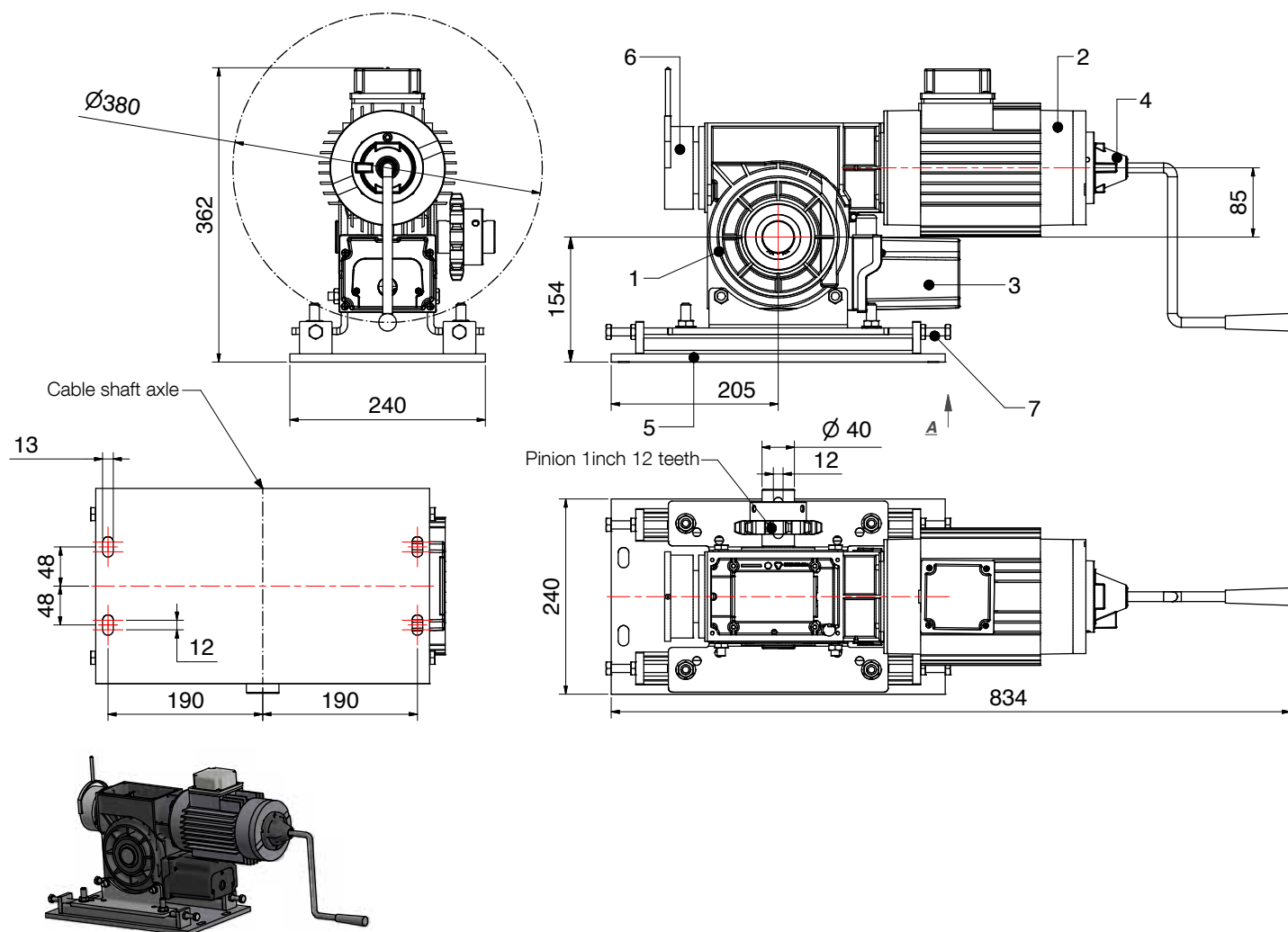
No.	Description		
1	Gear motor	5	Bracket unit
2	Electric motor	6	Brake
3	Limit switch housing	7	Chain tension adjustment screw
4	Emergency manual device		



# Products data sheet for RDFN 250-24 KU, RDFN 350-24 KU, RDFN 500-24 KU with chain return kit

Table

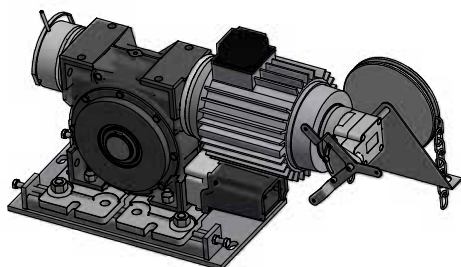
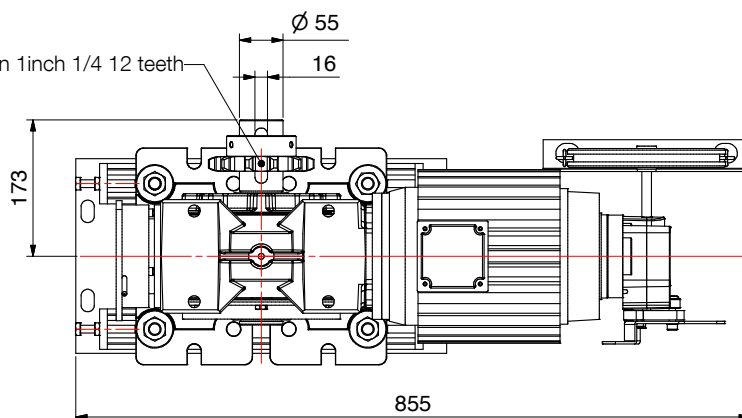
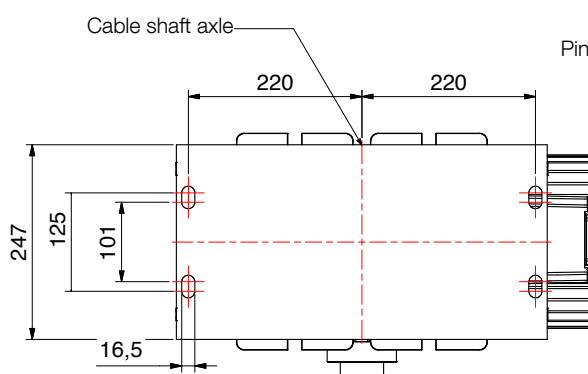
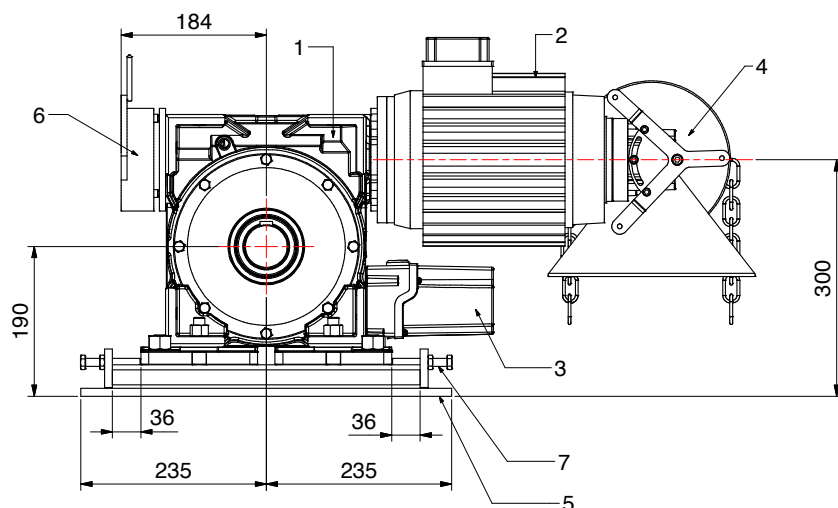
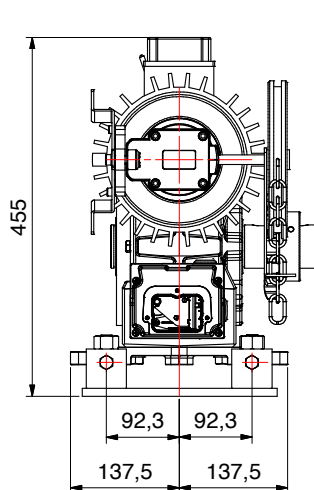
No.	Description		
1	Gear motor	5	Bracket unit
2	Electric motor	6	Brake
3	Limit switch housing	7	Chain tension adjustment screw
4	Emergency manual device		



## Product data sheet for RDFN 750-24 KE with chain return kit

## Table

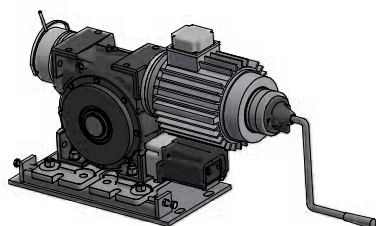
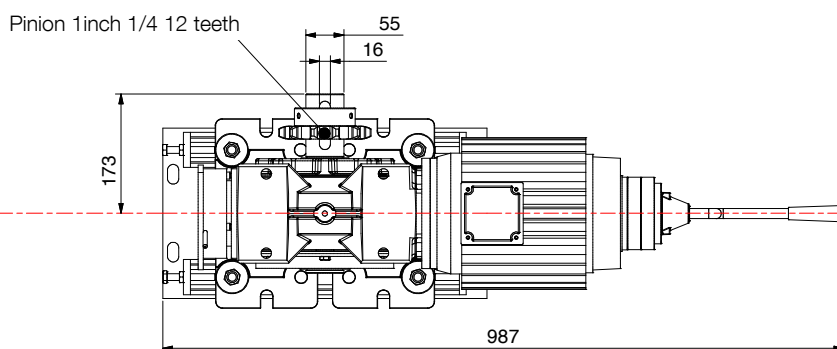
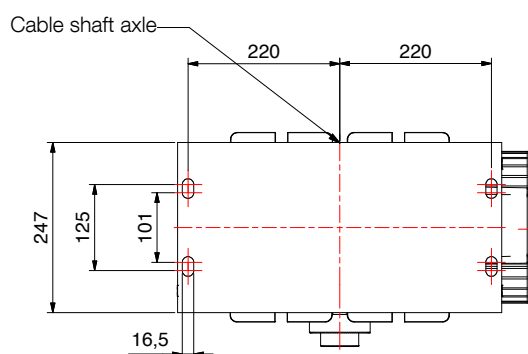
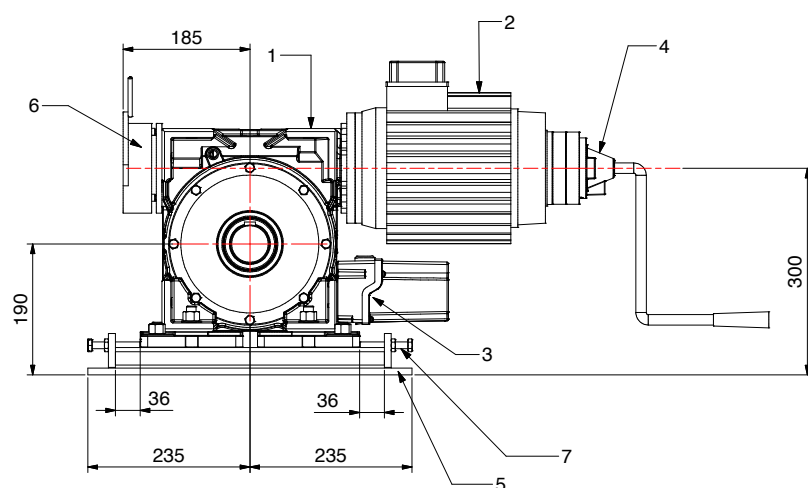
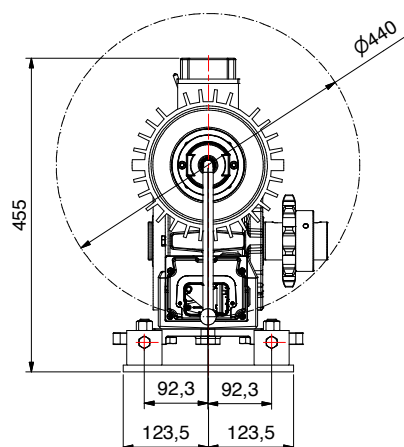
No.	Description		
1	Gear motor	5	Bracket unit
2	Electric motor	6	Brake
3	Limit switch housing	7	Chain tension adjustment screw
4	Emergency manual device		



# Product data sheet for RDFN 750-24 KU with chain return kit

Table

No.	Description		
1	Gear motor	5	Bracket unit
2	Electric motor	6	Brake
3	Limit switch housing	7	Chain tension adjustment screw
4	Emergency manual device		

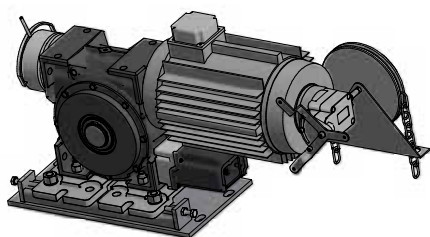
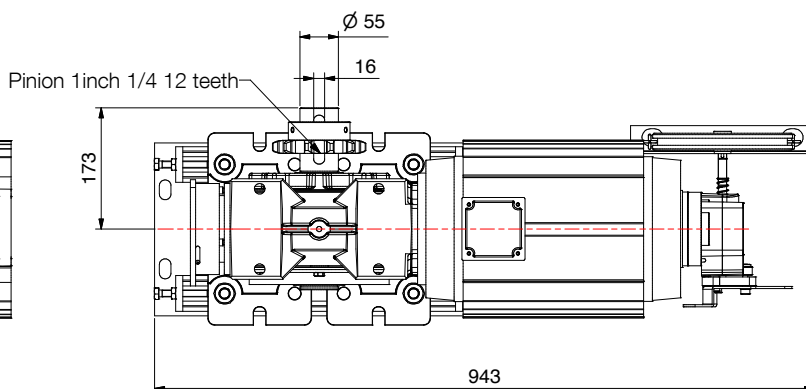
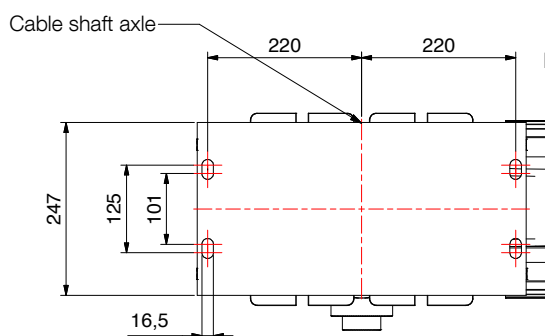
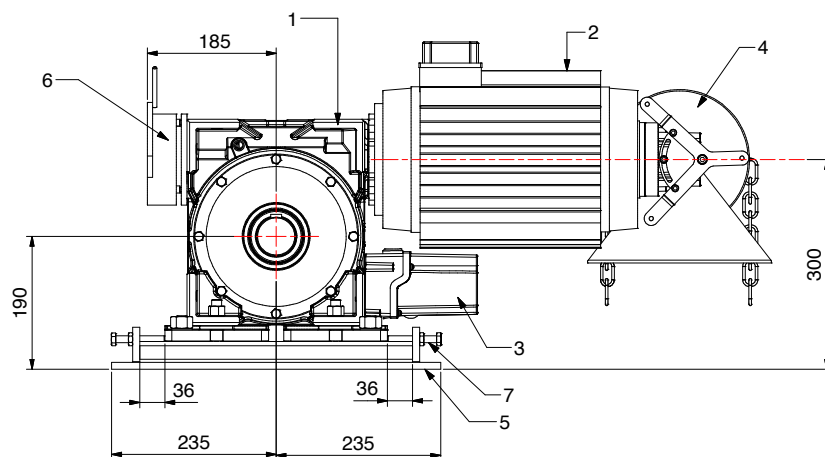
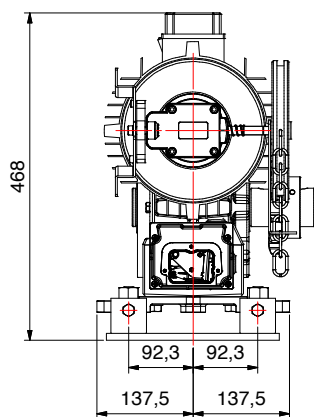




# Products data sheet for RDFN 1000-24 KE, RDFN 1400-24 KE with chain return kit

Table

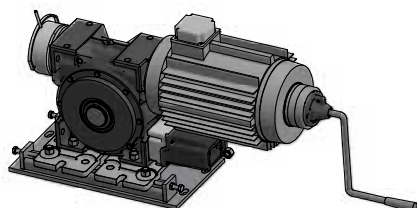
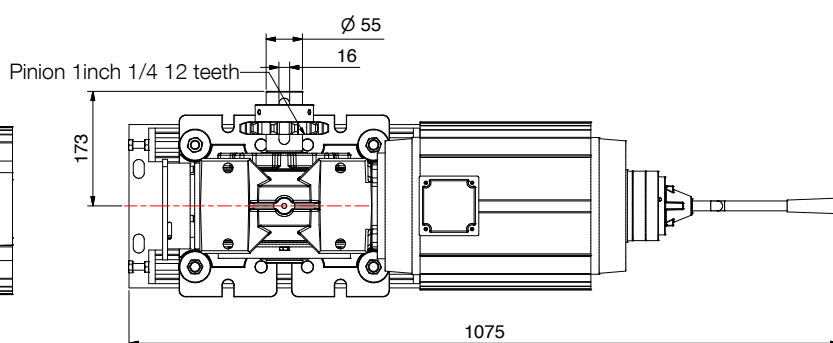
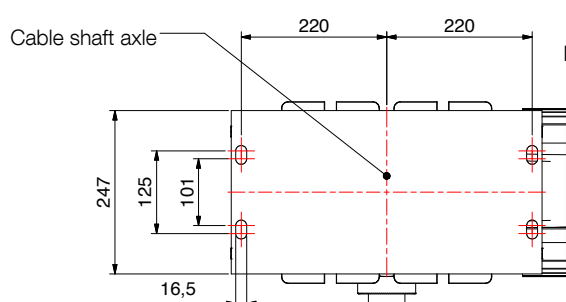
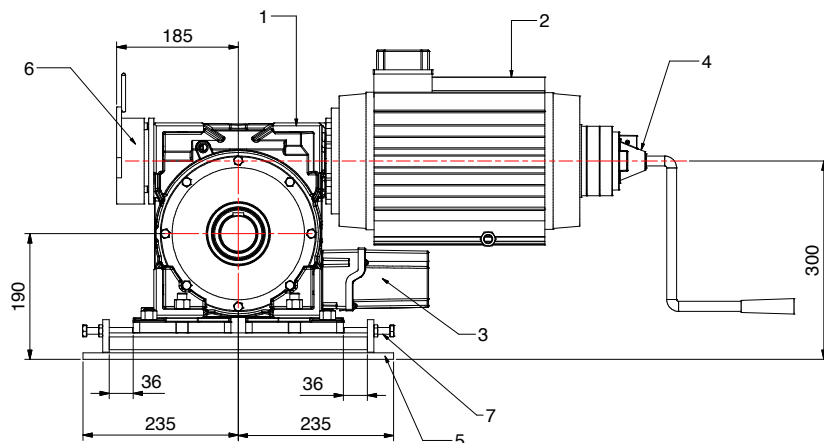
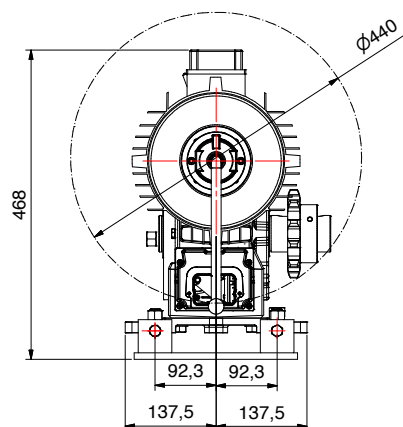
No.	Description		
1	Gear motor	5	Bracket unit
2	Electric motor	6	Brake
3	Limit switch housing	7	Chain tension adjustment screw
4	Emergency manual device		



# Products data sheet for RDFN 1000-24 KU, RDFN 1400-24 KU with chain return kit

Table

No.	Description		
1	Gear motor	5	Bracket unit
2	Electric motor	6	Brake
3	Limit switch housing	7	Chain tension adjustment screw
4	Emergency manual device		



## Composition to obtain transmission ratio of 2:1 for motors with a chain transmission

⚠ Applies to 20 mm thick shutters. The weights table is based on a loss value of 20% due to friction

Gearmotor	Bracket Unit	Pinion Unit	Ø STEEL TUBE EN 10220 (mm)					
			101.6x3.6	108x3.6	133x4	159x4.5	177.8x5	193.7x5.4
RDFN 140-20	NDA 560	NDA 520	376	357	299	255	231	214
RDFN 250-24	NDA 562	NDA 521	671	638	534	456	413	382
RDFN 350-24	NDA 562	NDA 521	940	893	747	638	578	535
RDFN 500-24	NDA 562	NDA 521	1343	1276	1067	912	825	764
RDFN 750-24	NDA 563	NDA 522	2014	1913	1601	1368	1238	1147
RDFN 1000-24	NDA 563	NDA 522	2685	2551	2134	1824	1651	1529
RDFN 1400-24	NDA 563	NDA 522	3759	3571	2988	2554	2311	2140

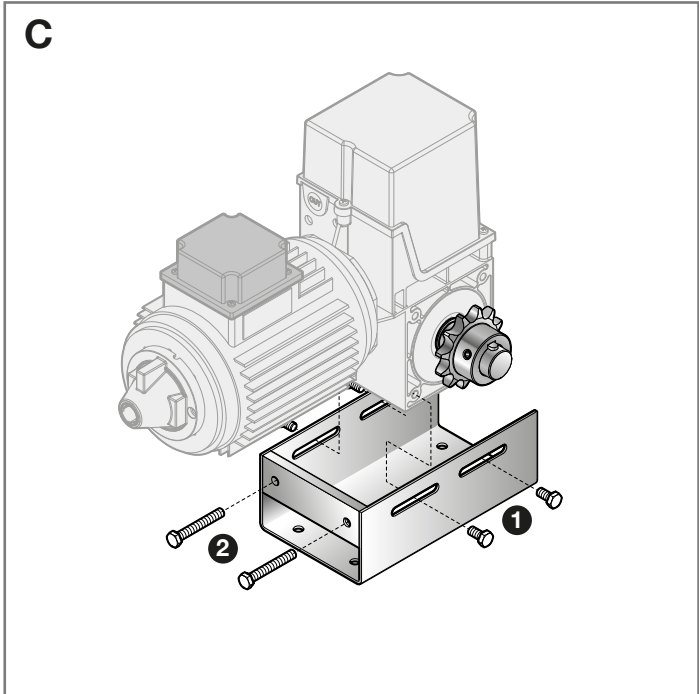
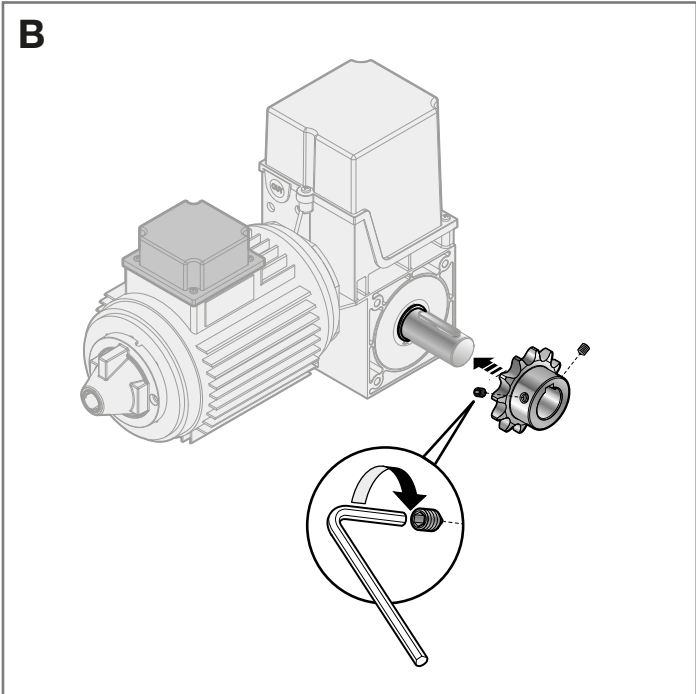
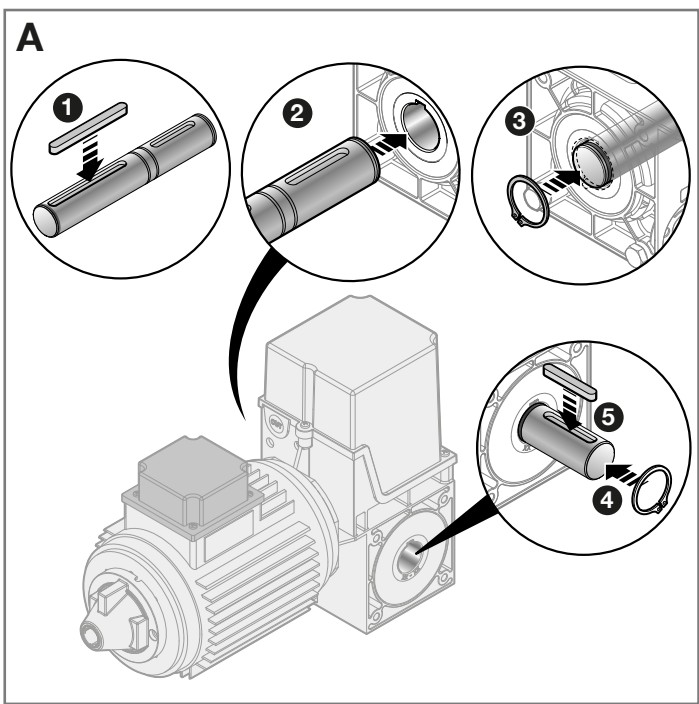
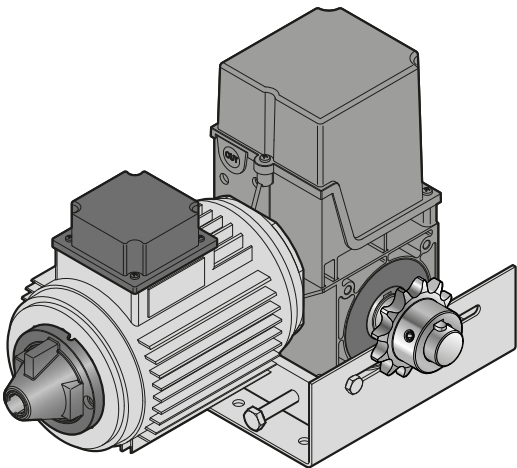
Gearmotor	Bracket Unit	Pinion Unit	219.1x5.9	244.5x6.3	273x6.3	298.5x7.1	323.9x7.1	
RDFN 140-20	NDA 560	NDA 520	191	173	156	144	133	
RDFN 250-24	NDA 562	NDA 521	342	309	279	256	237	
RDFN 350-24	NDA 562	NDA 521	478	432	390	359	332	
RDFN 500-24	NDA 562	NDA 521	683	617	557	513	475	
RDFN 750-24	NDA 563	NDA 522	1025	926	836	769	712	
RDFN 1000-24	NDA 563	NDA 522	1366	1235	1114	1026	950	
RDFN 1400-24	NDA 563	NDA 522	1913	1729	1560	1436	1330	

## Composition to obtain transmission ratio of 3:1 for motors with a chain transmission

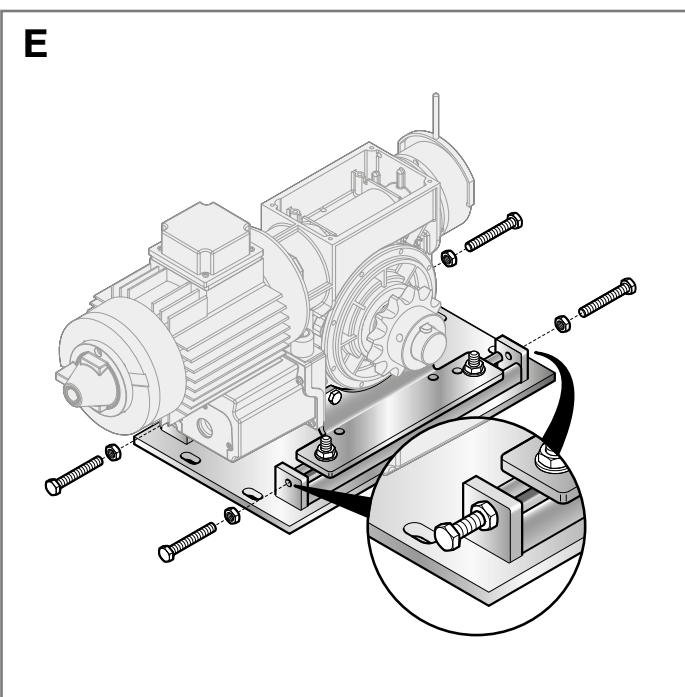
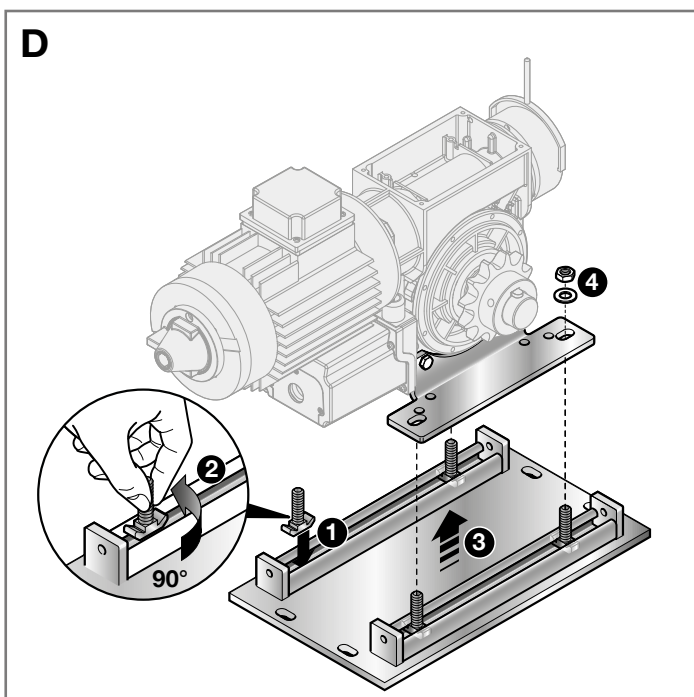
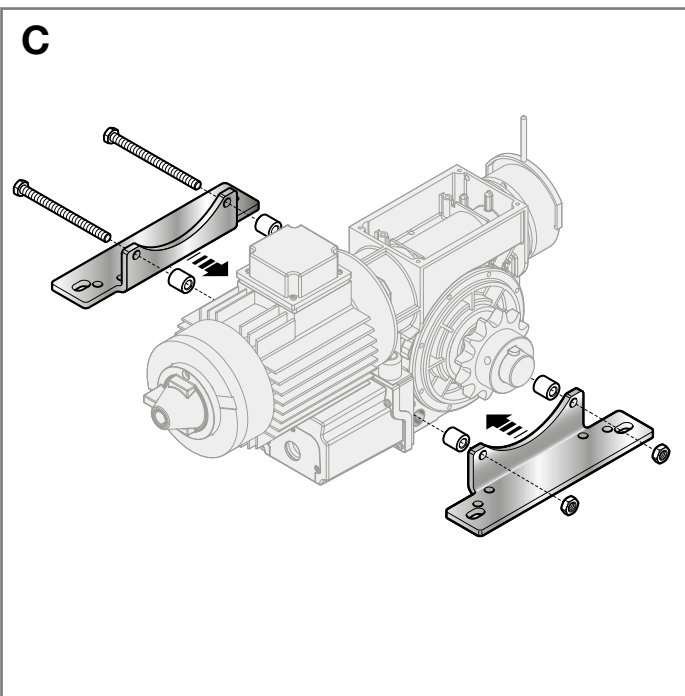
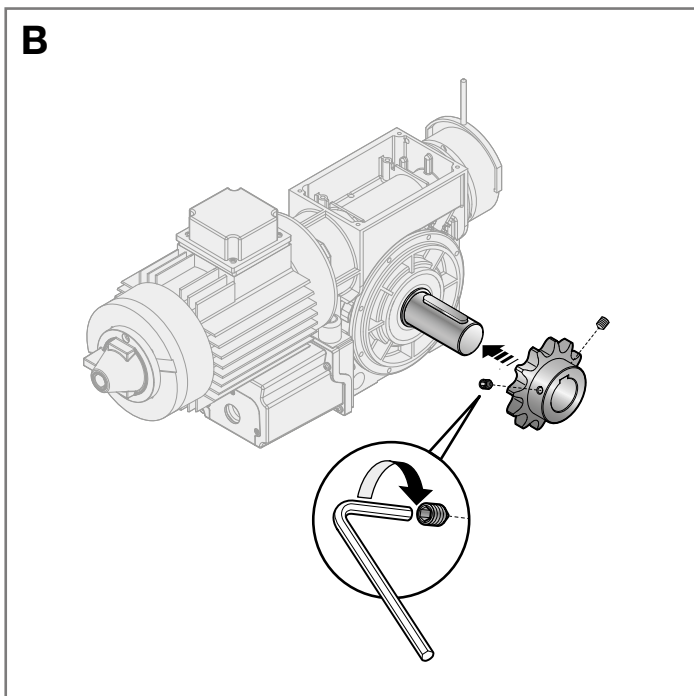
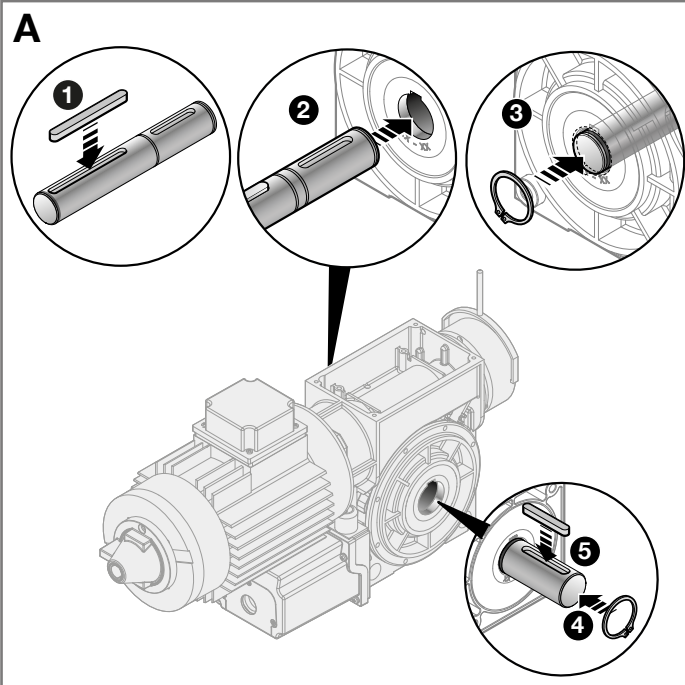
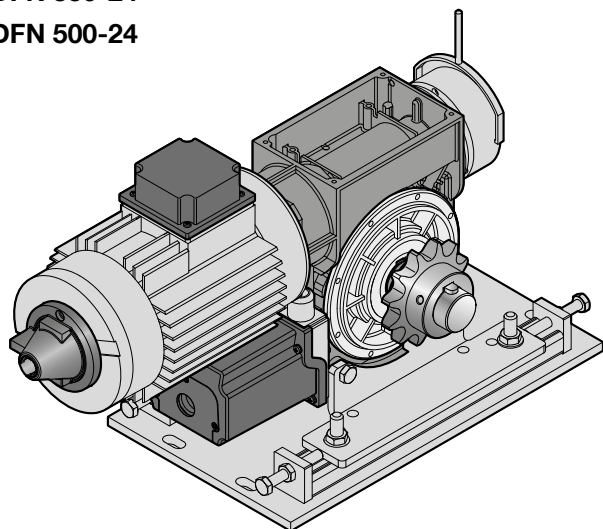
⚠ Applies to 20 mm thick shutters. The weights table is based on a loss value of 20% due to friction

Gearmotor	Bracket Unit	Pinion Unit	Ø STEEL TUBE EN 10220 (mm)					
			101.6x3.6	108x3.6	133x4	159x4.5	177.8x5	193.7x5.4
RDFN 140-20	NDA 560	NDA 523	564	536	448	383	347	321
RDFN 250-24	NDA 562	NDA 524	1007	957	800	684	619	573
RDFN 350-24	NDA 562	NDA 524	1410	1339	1120	958	867	803
RDFN 500-24	NDA 562	NDA 524	2014	1913	1601	1368	1238	1147
RDFN 750-24	NDA 563	NDA 525	3021	2870	2401	2052	1857	1720
RDFN 1000-24	NDA 563	NDA 525	4028	3827	3201	2736	2476	2293
RDFN 1400-24	NDA 563	NDA 525	5639	5357	4482	3831	3467	3210

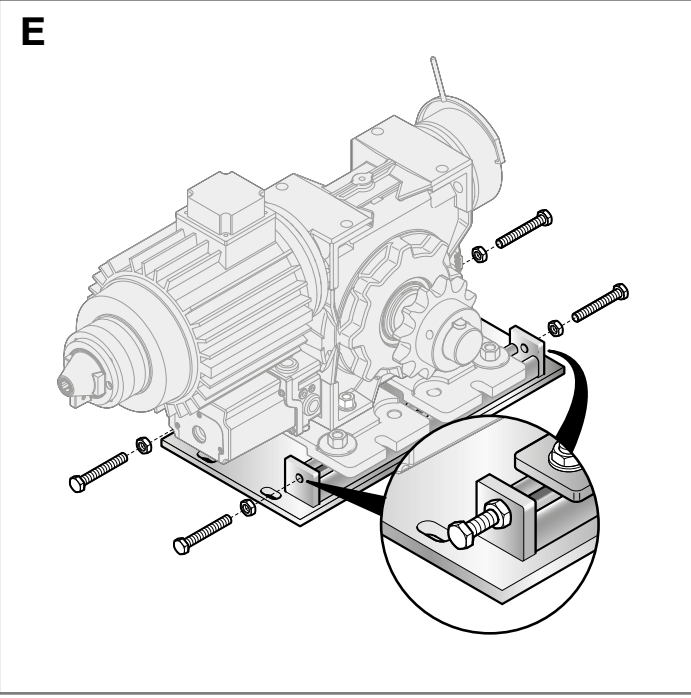
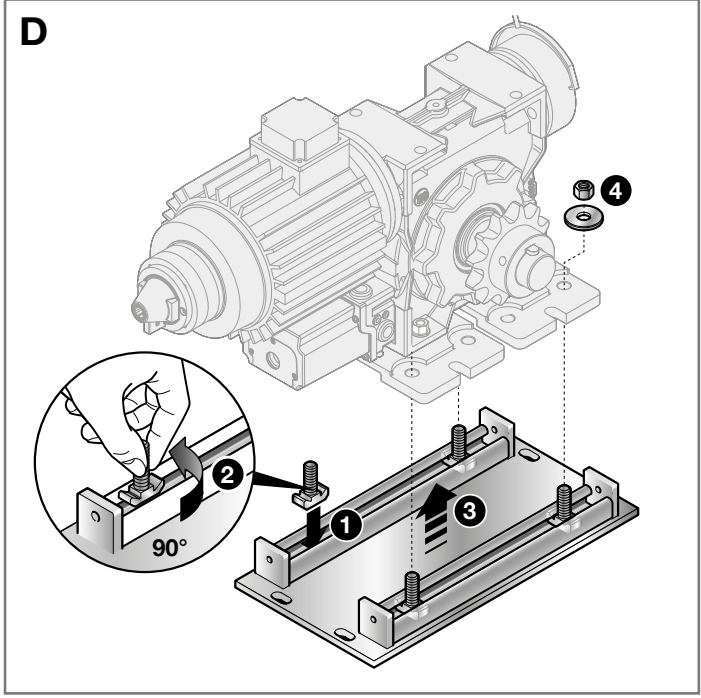
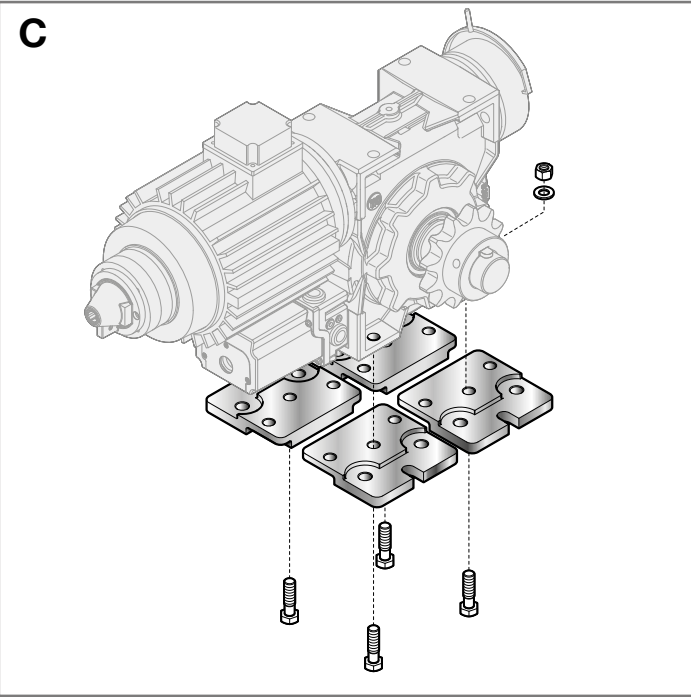
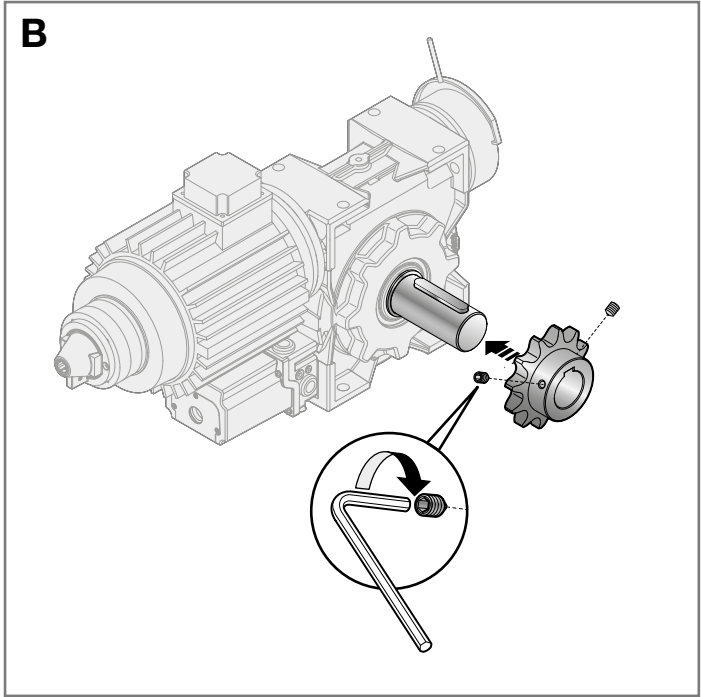
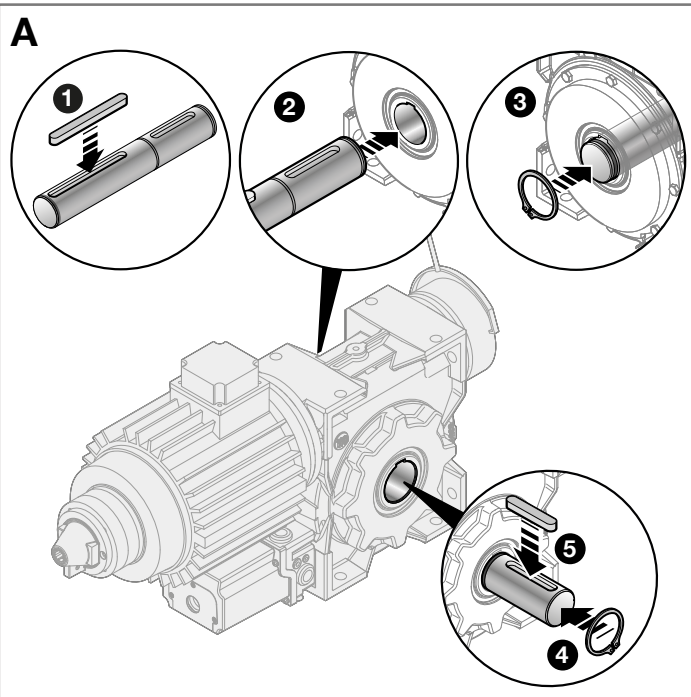
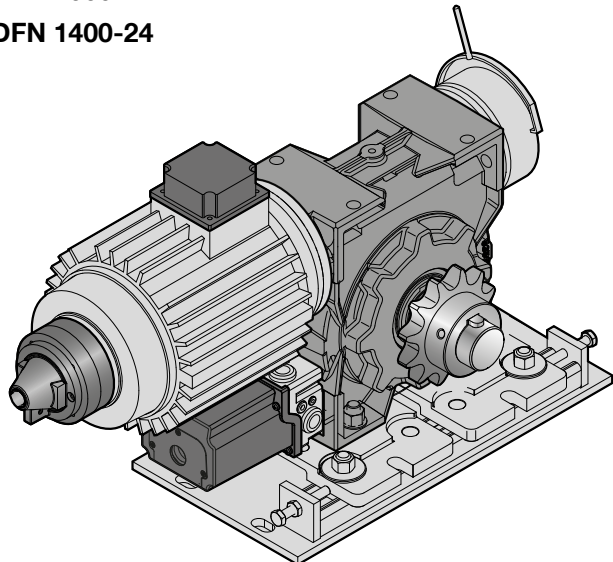
Gearmotor	Bracket Unit	Pinion Unit	219.1x5.9	244.5x6.3	273x6.3	298.5x7.1	323.9x7.1	
RDFN 140-20	NDA 560	NDA 523	287	259	234	215	199	
RDFN 250-24	NDA 562	NDA 524	512	463	418	385	356	
RDFN 350-24	NDA 562	NDA 524	717	648	585	538	499	
RDFN 500-24	NDA 562	NDA 524	1025	926	836	769	712	
RDFN 750-24	NDA 563	NDA 525	1537	1389	1254	1154	1068	
RDFN 1000-24	NDA 563	NDA 525	2049	1852	1672	1538	1425	
RDFN 1400-24	NDA 563	NDA 525	2869	2593	2340	2154	1995	



RDFN 250-24  
RDFN 350-24  
RDFN 500-24



RDFN 750-24  
 RDFN 1000-24  
 RDFN 1400-24





## User manual (to be handed to the end user)

- When you first use the automation, the installation technician must inform you about the origin of the residual risks and you must take time to read the user manual, with special attention to the general warnings (instruction manual).
  - Make sure to keep the manual (delivered by the installation technician) for future reference and for handover to any further owner of the automation.
  - Your automation system is a machine that will faithfully execute your commands; unreasonable or improper use may make it dangerous: do not operate the system if there are people, animals or objects within its range of operation.
  - **Children:** an automation system guarantees a high level of safety, using special detection devices to prevent movement in the presence of persons or objects, thereby guaranteeing constant foreseeable and safe activation. However, it is advisable to avoid letting children play in the vicinity of the automation, and remote controls should always be kept out of their reach – it is not a toy!
  - **Checking the system:** Check for any imbalances and signs of wear or damage.
  - Check the gearmotor on a monthly basis to ensure that it performs a reverse manoeuvre when the garage door touches a 50 mm tall object placed on the floor.
  - Do not use the automation system, if it requires a repair or adjustment.
  - **Malfunctions:** if the automation system is malfunctioning, shut off its power supply. Never attempt any repairs; contact your local installer for assistance.
  - The final test, periodic maintenance and any repairs must be documented by the person who performed them, and the relative documents must be stored by the owner of the system.
  - The only maintenance operations possible and which are recommended to perform periodically are the removal of leaves or debris that may impede the automation system.
  - **Disposal:** At the end of the automation's life, ensure that it is disposed by qualified personnel and that the materials are recycled or scrapped according to current local regulations for this product category.
  - **Control with safety devices out of order:** if the safety devices do not function correctly, it is still possible to control.
  - **Important:** have the system repaired as soon as possible if the safety devices are malfunctioning.
  - **Caution:** Transit is allowed only if the gate is open and stationary.
  - **Maintenance:** Annual maintenance is necessary to maintain the constant level of safety and to ensure the maximum lifespan of the entire automation system.
- ⚠ CAUTION! – The maintenance operations must be performed in strict compliance with the safety directions provided in this manual and according to applicable legislation and standards.**
- The mechanism is maintenance-free and is equipped with permanent lubrication.
  - **Fastening points:** Ensure the fixing screws are in the correct positions and in perfect condition. Maintenance interventions on mechanically operated doors and portals are to be carried out by qualified personnel only, who have the necessary skills and experience.
  - **Brake (if present):** During the annual inspection, ensure the brake operates perfectly. In the event of excessive wearing of the brake lining, the entire brake must be replaced. Before replacing the brake, disconnect the power supply to the system.





## EC declaration of conformity

### and declaration of incorporation of "partly-completed machinery"

**Declaration in accordance with the following Directives: 2014/30/UE (EMC); 2014/35/UE (LVD); 2006/42/CE (MD) Annex II, Part B**

*Note – The content of this declaration corresponds to that specified in the official document deposited at the Nice S.p.A. headquarters and, in particular, to the latest revised edition available prior to the publishing of this manual. The text herein has been readapted for editorial reasons. A copy of the original declaration can be requested from Nice S.p.A. (prov. of Treviso – Italy).*

**Number:** 606/RDFN

**Revision:** 0

**Language:** EN

**Manufacturer:**

Nice S.p.A.

**Address:**

Via Pezza Alta 13, Z.I. Rustignè, 31046 Oderzo (TV) Italy

**Person authorised to compile the technical documentation:**

Nice S.p.A.

**Type of product:**

Electromechanical gear motor for industrial quick doors

**Model / Type:**

RDFN 140-20, RDFN 250-15, RDFN 400-15, RDFN 550-15, RDFN 750-9.5, RDFN 850-12, RDFN 1100-12, RDFN 1400-9, RDFNI 250-24, RDFNI 350-24, RDFNI 500-24, RDFN 750-24, RDFN 1000-24, RDFN 1400-24

**Accessories:**

The undersigned, Roberto Griffa, as Chief Executive Officer, hereby declares under his own responsibility that the products identified above comply with the provisions of the following directives:

- DIRECTIVE 2014/30/EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 26 February 2014 on the harmonisation of the laws of the Member States relating to electromagnetic compatibility (recast), in accordance with the following harmonised standards: EN 61000-6-2:2005, EN 61000-6-4:2007 + A1:2011

- DIRECTIVE 2014/35/EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 26 February 2014 on the harmonisation of the laws of Member States relating to the making available on the market of electrical equipment designed for use within certain voltage limits (recast): EN 60335-1:2002 + A1:2004 + A11:2004 + A12:2006 + A2:2006 + A13:2008 + A14:2010 + A15:2011, EN 60335-2-103:2003 + A11:2009

In addition, the product conforms to the following directive in accordance with the provisions applicable to partly-completed machinery:

- Directive 2006/42/EC OF THE EUROPEAN PARLIAMENT AND COUNCIL of 17 May 2006 regarding machines and amending directive 95/16/EC (consolidated text)

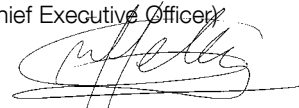
- It is hereby declared that the relevant technical documentation has been compiled in accordance with Annex VII Part B of Directive 2006/42/EC and that the following essential requirements have been applied and fulfilled: 1.1.1- 1.1.2- 1.1.3- 1.2.1-1.2.6- 1.5.1-1.5.2- 1.5.5- 1.5.6- 1.5.7- 1.5.8- 1.5.10- 1.5.11
- The manufacturer undertakes to transmit, in response to a reasoned request by the national authorities, relevant information on the partly completed machinery. This shall be without prejudice to the intellectual property rights of the manufacturer of the partly completed machinery.
- Should the partly completed machinery be put into service in a European country with an official language different to the one used in this declaration, a translation into that language must be provided by the person bringing the machinery into the language area in question.
- The partly completed machinery must not be operated until the final machine in which it is to be incorporated is declared to conform to the provisions of Directive 2006/42/EC, if applicable.

The parts of the product that are subject to the following standards comply with them:

EN 13241-1:2003+A1:2011, EN 12445:2000, EN 12453:2000, EN 12978:2003+A1:2009

Oderzo, 02.03.17

Ing. **Roberto Griffa**  
(Chief Executive Officer)



**Nice**

**Nice S.p.A.**  
Via Pezza Alta, 13  
31046 Oderzo TV Italy  
[info@niceforyou.com](mailto:info@niceforyou.com)

[www.niceforyou.com](http://www.niceforyou.com)