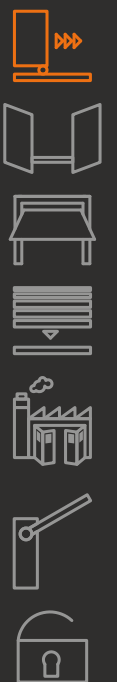


# TW90 SERIES



TODAY'S DIGITAL INTELLIGENCE  
MOVES YOUR GATE



# WHAT WE DO

INNOVATION, TOP NOTCH MECHANICS AND NEVER-ENDING TECHNOLOGICAL RESEARCH ARE THE ELEMENTS THAT MAKE ROGER TECHNOLOGY A UNIQUE AND DIFFERENT COMPANY

Starting from our first day of work we immediately gave priority to the development and production of excellent, completely Italian mechanics, based only on top quality ferrous and non ferrous raw materials and guaranteed by impeccable production and surface treatment processes. It was just a few years later, in the 1990s, that we created the first major step in our history, by implementing a mass production line for completely robotised motors, thus becoming a reference outsourcer for major brands of the gate automation market.

## PEOPLE, IDEAS AND PRODUCT EXPERIENCE

From the very beginning **Roger Technology** has evolved and grown because it's people believe that any bright idea can lead to great change in the future. Our people are passionate and innovative in their approach to every challenge, always pushing the boundaries to develop extraordinary products.

In our language we translate the word "**experience**" as passion. It is this passion that drives us in the development of revolutionary **new products** that serve the real needs of our customers. We understand that our customers want a product designed around the way that they work.

**Primo Florian**  
Founding partner  
Engineering  
and design

**Dino Florian**  
Founding President  
Development  
and design

**Renato Florian**  
Founding partner  
Assembly  
and quality



# OUR PLUSES

## EXCELLENT RAW MATERIALS

Steel, ductile cast iron, aluminium, bronze, copper and titanium have always been the main and exclusive raw materials used in the advanced engineering processes of our company.



## PRODUCTION TECHNOLOGY

At Roger Technology all internal manufacturing is carried out on optimised production lines making use of very advanced technology. We have invested heavily in robotics and automated all product manufacturing phases. This ensures that all components and semi-finished products are highly reliable and are fully compliant with our exceptionally high quality standards.



## INTERNAL ASSEMBLY

Our highly qualified and dedicated staff oversee the fitting and assembly stages. Every piece of equipment is checked by our all Italian personnel to ensure that we deliver reliable products to our customers.



## MADE IN ITALY

All solutions, products, design and the complete production process of Roger Technology is developed in Italy with the use of materials of primary quality always found in the market through partner suppliers that share the same passion and professionalism of our company in developing products technologically reliable, efficient and simple in the way that they have been made for being installed and used.



# BRUSHLESS MOTOR

**A DIGITAL BRUSHLESS MOTOR WITH PERMANENT MAGNETIC FIELD, DIGITAL ELECTRONICS FOR THE COMPLETE MANAGEMENT OF THE AUTOMATION SYSTEM CONTROL. DESIGNED FOR SUPER INTENSIVE USE WITH THE ADDED BENEFIT OF A SUPER LOW POWER CONSUMPTION: THIS IS ROGER BRUSHLESS**

We are the creators at the heart of the product!  
All of our digital brushless motors are designed and manufactured in our own factories. Using dedicated automated machines the motors are wound with ultimate precision.

## DIGITAL BRUSHLESS MOTOR

Revolutionary and innovative digital Brushless motor with permanent magnetic field, three-phase sinusoidal power supply with native encoder that allows super-intensive use of the automation system with extremely low power consumption, not only providing 100% compliance with all the automation system management and safety rules, but setting new standards in gate safety.

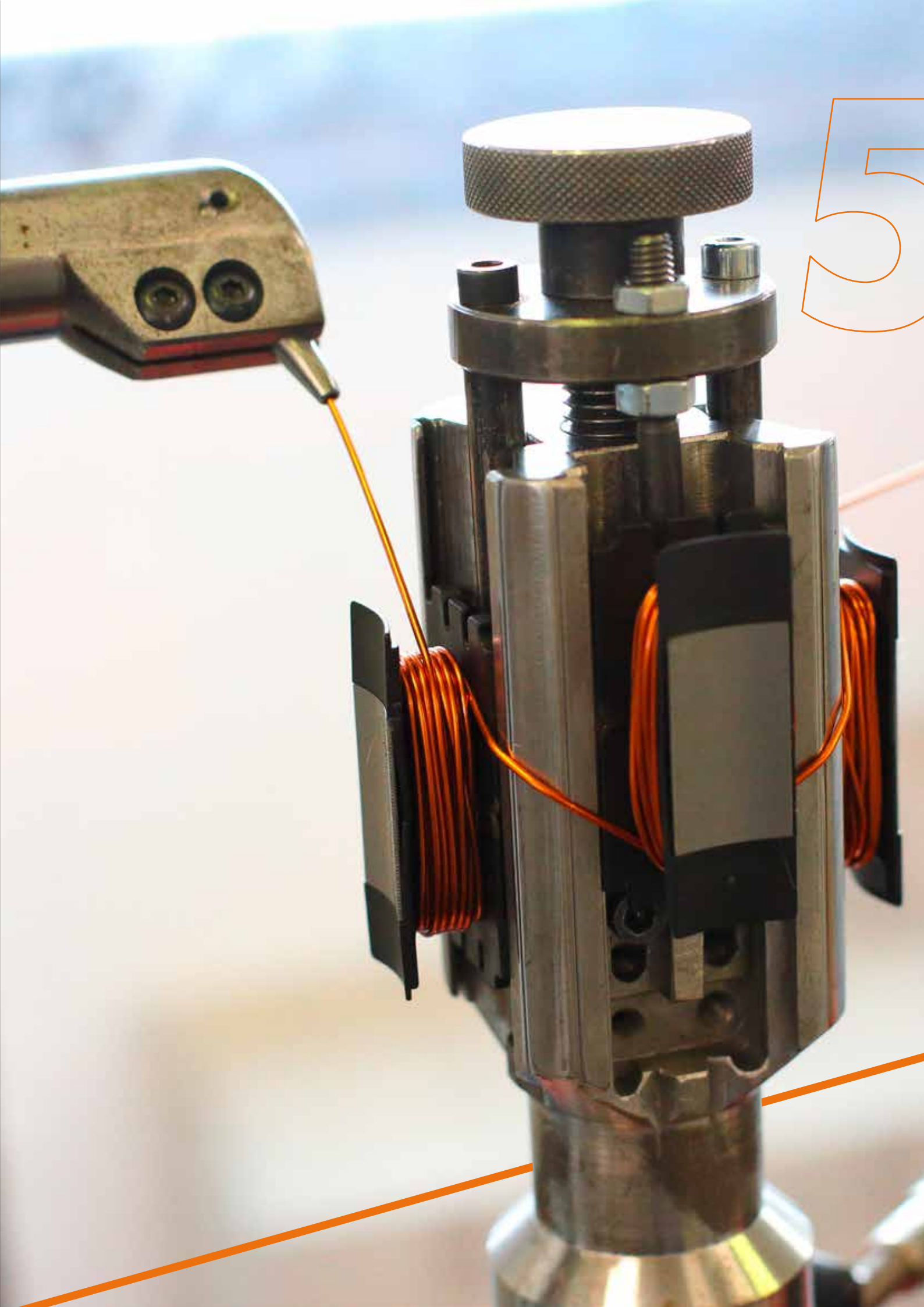
## NEW GENERATION OF ELECTRONICS

The new control unit with onboard digital Brushless controller. Without traditional relays and due to the revolutionary MOSFET quadrant system and its control technology entirely based on a DSP (Digital Signal Processor) microcontroller, it represents a new generation of electronic cards created to safely handle all movement phases of the automation system.

## ENGINEERING PASSION

All the mechanical components and gears are manufactured in steel, cast iron and bronze. The automation system casings are made from titanium-reinforced die-cast aluminium. All the gears are inspected and assembled on high-quality bearings and inserted on precise seats machined to provide absolute precision between the axes.

**A TECHNOLOGY THAT OFFERS MAXIMUM PERFORMANCE  
BUT CONSUMES LESS POWER THAN OTHER MOTORS**



# COMPLETELY BRUSHLESS

## THE REVOLUTIONARY DIGITAL MOTOR WITH 12 UNIQUE FEATURES



### 3-PHASE DIGITAL BRUSHLESS MOTOR

A very powerful motor with substantial torque. The motor is compact and neat due to the special concentrated coil windings, it is powered by a **three phase sinusoidal system**.



### NO PROBLEM IN THE EVENT OF POWER FAILURE

With the help of internal or external batteries and the associated battery charging card, your automation system continues to operate for a considerable time **even during prolonged power cuts**, ensuring many more operations than traditional technologies.



### SPEED, ACCELERATION AND DECELERATION WITH EXTREME ELEGANCE

The automation system with brushless digital technology creates perfect and elegant movements. With a constant **force and torque** at every point and with the option of varying the speed on deceleration and acceleration the system can be managed with maximum safety.



### EXTREMELY LOW ENERGY CONSUMPTION

A motor that can operate at low voltage in super-intensive use and which can operate in environments with extremely demanding weather conditions while maintaining **very low energy consumption and absorption levels**.



### DIGITAL AND VECTORIAL AUTOMATION CONTROLLER

The BRUSHLESS digital controller, which operates at low voltage **24V/36V DC**, allows 100% control of the automation system in digital mode. Due to its operation entirely based on a DSP microcontroller the travel and all the movements of your automation system can therefore be programmed and customised easily, precisely and elegantly.



### MOTOR AT AMBIENT TEMPERATURE

The BRUSHLESS motor was created with the main goal of being a motor for super intensive use and **with a 99% efficiency**. Regardless of how many operations the engine performs in a day, it always remains cold or at the most reaches the outside ambient temperature.



**TW90**  
WITH SEPARATE  
CONTROL UNIT



**TW90**  
WITH BUILT-IN  
CONTROL UNIT



## THE DIGITAL SILENCE OF THE MOTOR

One great impact is the **silence** or the near absence of noise, generated by the BRUSHLESS motor during all its movements.



## MOTOR FOR SUPER-INTENSIVE USE

We wanted to surprise our customers with a product that was fundamentally different to any other product on the market.  
Fact: our motor remains **permanently cold** even after many days of super intensive use.



## IMPACT, OBSTACLE DETECTION AND REVERSAL IN TOTAL SAFETY

Thanks to digital technology we are able to **detect an obstacle** and reverse the motor instantly, by simply specifying the torque of the motor, the sensitivity, the time and the travel of the reversal. All in full compliance with safety requirements.



## ONBOARD NATIVE DIGITAL ENCODER

The BRUSHLESS motor has a highly advanced **native digital encoder** that controls management of automation systems in a safe, precise and extremely elegant manner.



## SIMPLE INSTALLATION WITH A SINGLE 3-WIRE CABLE

The BRUSHLESS motor can be installed by simply connecting it using three wires! What could be easier? This will provide full digital management of your automation system thanks to the **SENSELESS** and **SENSED** (absolute encoder) technology incorporated in the BRUSHLESS sliding gate motors.



## ADVANCED PRECISION ENGINEERING TO OBTAIN OPTIMAL MOTOR PERFORMANCE

We have created a mechanism that gives you the opportunity to get **the maximum performance out of the motor**. A product which combines the quality of the internal production processes, the mechanical processing and the use of high quality ferrous and non-ferrous materials.

# WHY BRUSHLESS?

DIGITAL, SMART, POWERFUL, ELEGANT, ROBUST AND ALL-ITALIAN





## 1 DIGITAL BRUSHLESS MOTOR

Digital Brushless motor based on a permanent magnetic field, which uses neodymium iron-boron magnets inside the rotor. With special concentrated coil windings, powered by a three-phase sinusoidal 24V AC power system, the motor is extremely compact and operates at ambient temperature, guaranteeing super-intensive use with extremely low consumption.

## 2 4096 PPR SENSORED DIGITAL ENCODER

4096 PPR high resolution magnetic encoder, it ensures an extremely accurate automation control in all its acceleration/deceleration movements, especially in obstacle detection phases.

## 3 PRECISION ENGINEERING

The gear motor is made entirely of aluminium, steel and bronze. All gears are assembled with superior quality double shielded ball bearings to ensure absolute precision between axes, and provide long-lasting, noiseless performances.

## 4 COMPACT AND VERSATILE

Thanks to our experience in sliding gate automation, we designed a compact, high-performing gearbox compatible with 135mm x 140mm columns.

## 5 LOCK RELEASE SYSTEM

Lock release system with trilobe key, available on both column sides. With magnetic release sensor that communicates the automation release status to the control unit.

## 6 BUILT-IN CENTRAL BOX

In this version, the new 24V digital controller B70/1T for TW90 automations is built-in and directly connected to the gearbox, through a prewired, ready-to-use safety box, which ensures an automation height up to 470mm.

## 7 STANDBY BATTERIES IN THE EVENT OF POWER FAILURE

No problem in the event of power failure! The system is preset to house two 12VDC 1.2 Amp/H batteries and the related charging board B71/BC, located in a protected position inside the control box.

## 8 OPTIONAL MAGNETIC LIMIT SWITCH

The automation can be equipped with a magnetic limit switch, through an optional accessory. The limit switch is shaped and can be installed into the automation, taking up as low space as possible.

### KIT PACKAGING INTEGRATED CONTROL UNIT

L.: 50 cm  
P.: 21,3 cm  
H. 16,2 cm



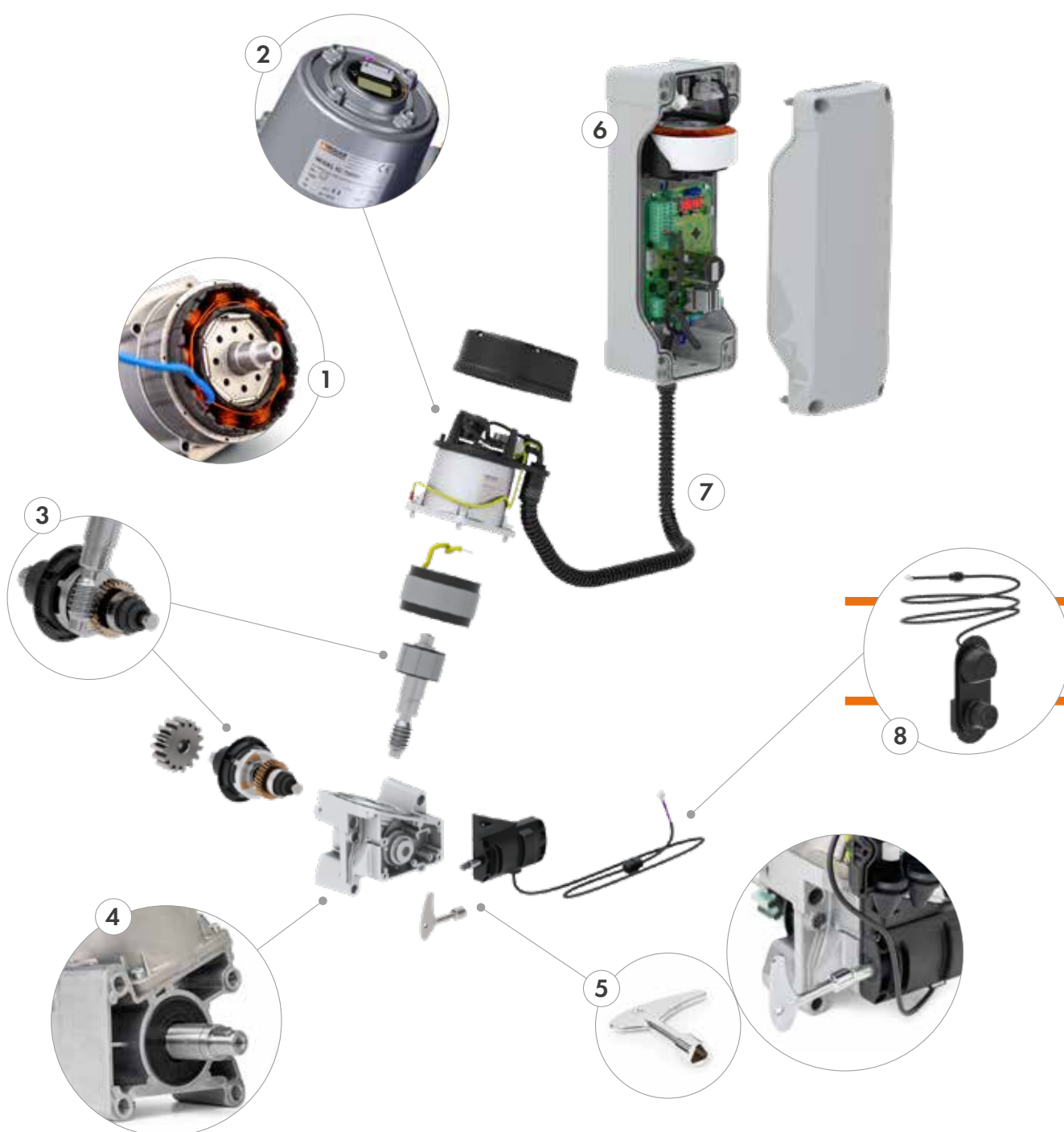
# TW90

# INTEGRATED CONTROL UNIT



# WHY BRUSHLESS?

DIGITAL, SMART, POWERFUL, ELEGANT, ROBUST AND ALL-ITALIAN



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**4 COMPACT AND VERSATILE**  
Thanks to our experience in sliding gate automation, we designed a compact, high-performing gearbox compatible with 135mm x 140mm columns.

**5 LOCK RELEASE SYSTEM**  
Lock release system with trilobe key, available on both column sides. With magnetic release sensor that communicates the automation release status to the control unit.

**6 BUILT-IN CENTRAL BOX**  
In this version, the new 24V digital controller B70/1T dedicated to TW90 automations is housed in a special plastic box, separated from the gear box. This way, it can be easily installed at a height of 1 meter.

**7 PREWIRED WIRINGS**  
The automation and digital controller box are supplied prewired for all motor, encoder, release sensor connections. Connections are achieved through high quality corrugated cable conduits for outdoor use.

**8 OPTIONAL MAGNETIC LIMIT SWITCH**  
The automation can be equipped with a magnetic limit switch, through an optional accessory. The limit switch is shaped and can be installed into the automation, taking up as low space as possible.

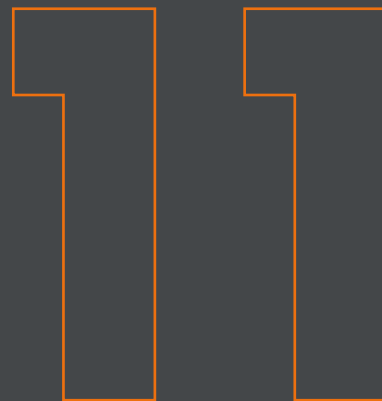
### KIT PACKAGING SEPARATE CONTROL UNIT

L.: 69,5 cm  
P.: 18,5 cm  
H. 18,2 cm

















# TW90

# SEPARATE CONTROL UNIT



# TECHNICAL SPECIFICATIONS

	TW90/600/HS	TW90/800	TW90/800/R	TW90/620/HS	TW90/820	TW90/820/R
<b>DESCRIPTION</b>	Electromechanical HIGH SPEED BRUSHLESS motor, low voltage, super intensive use, with SENSORED digital magnetic encoder at 4096 PPR, irreversible, ideal for sliding gates up to 600 kg with built-in digital controller B70 series.	Electromechanical BRUSHLESS motor, low voltage, super intensive use, with SENSORED digital magnetic encoder at 4096 PPR, irreversible, ideal for sliding gates up to 800 kg with built-in digital controller B70 series.	Electromechanical BRUSHLESS motor, low voltage, super intensive use, with SENSORED digital magnetic encoder at 4096 PPR, reversible, ideal for sliding gates up to 800 kg with built-in digital controller B70 series.	Electromechanical HIGH SPEED BRUSHLESS motor, low voltage, super intensive use, with SENSORED digital magnetic encoder at 4096 PPR, irreversible, ideal for sliding gates up to 600 kg with digital controller series B70 in prewired plastic box.	Electromechanical BRUSHLESS motor, low voltage, super intensive use, with SENSORED digital magnetic encoder at 4096 PPR, irreversible, ideal for sliding gates up to 800 kg with digital controller series B70 in prewired plastic box.	Electromechanical BRUSHLESS motor, low voltage, super intensive use, with SENSORED digital magnetic encoder at 4096 PPR, reversible, ideal for sliding gates up to 800 kg with digital controller series B70 in prewired plastic box.
						
<b>POWER LINE SUPPLY</b>	230V AC - 50Hz	230V AC - 50Hz	230V AC - 50Hz	230V AC - 50Hz	230V AC - 50Hz	230V AC - 50Hz
<b>MOTOR POWER SUPPLY</b>	24V DC	24V DC	24V DC	24V DC	24V DC	24V DC
<b>POWER RATING</b>	180W	180W	130W	180W	180W	180W
<b>FREQUENCY OF USE</b>	Intensive use 	Intensive use 	Intensive use 	Intensive use 	Intensive use 	Intensive use 
<b>THRUST</b>	250 N	385 N	270 N	250 N	385 N	270 N
<b>OPERATING TEMPERATURE</b>	-20 C° +55 C°	-20 C° +55 C°	-20 C° +55 C°	-20 C° +55 C°	-20 C° +55 C°	-20 C° +55 C°
<b>PROTECTION LEVEL</b>	IP44	IP44	IP44	IP44	IP44	IP44
<b>REDUCTOR TYPE</b>	Irreversible	Irreversible	Reversible 	Irreversible	Irreversible	Reversible 
<b>MANOEUVRE SPEED</b>	25 m/min (0.42 m/s)	12.3 m/min (0.2 m/s)	18 m/min (0.3 m/s)	25 m/min (0.42 m/s)	12.3 m/min (0.2 m/s)	18 m/min (0.30 m/s)
<b>LIMIT SWITCH</b>	Without limit switches - optional	Without limit switches - optional	Without limit switches - optional	Without limit switches - optional	Without limit switches - optional	Without limit switches - optional
<b>RECOMMENDED DIGITAL CONTROLLERS</b>	B70/1T	B70/1T	B70/1T	B70/1T	B70/1T	B70/1T
<b>ENCODER</b>	Digital magnetic encoder SENSORED 4096 PPR	Digital magnetic encoder SENSORED 4096 PPR	Digital magnetic encoder SENSORED 4096 PPR	Digital magnetic encoder SENSORED 4096 PPR	Digital magnetic encoder SENSORED 4096 PPR	Digital magnetic encoder SENSORED 4096 PPR
<b>OPERATING CYCLES PER DAY (OPENING/ CLOSING - 24 HOURS NO STOP)</b>	150000	150000	150000	150000	150000	150000
<b>BATTERIES RECOVERY</b>	Optional 2 internal battery 12V 1,2AH	Optional 2 internal battery 12V 1,2AH	Optional 2 internal battery 12V 1,2AH	-	-	-
<b>MAXIMUM DIMENSION PRODUCT IN MM (L X W X H)</b>	132 x 138,5 x 470	132 x 138,5 x 470	132 x 138,5 x 470	166 x 134,4 x 214,5	166 x 134,4 x 214,5	166 x 134,4 x 214,5
<b>TYPE EXIT GEAR</b>	Z15/mod 4	Z15/mod 4	Z15/mod 4	Z15/mod 4	Z15/mod 4	Z15/mod 4
<b>PRODUCT WEIGHT PACKED (KG)</b>	8,2	8,2	8,2	10,7	10,7	10,7
<b>NUMBER ITEMS PER PALLET</b>	50	50	50	30	30	30



Brushless Motor



Intensive Use



High Speed Motor



Reversible Motor



IPU Technology

# FUNCTIONS

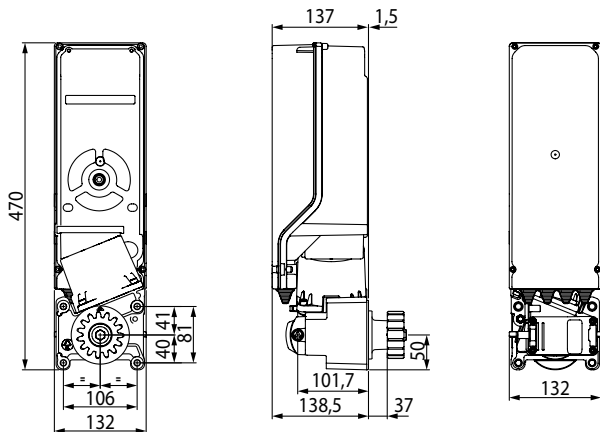
## OF AUTOMATED SLIDING GATE MOTOR

DESCRIPTION	TW90/600/HS	TW90/800	TW90/800/R	TW90/620/HS	TW90/820	TW90/820/R
<b>MAX GATE WEIGHT</b>	<b>600 KG</b>	<b>800 KG</b>	<b>800 KG</b>	<b>600 KG</b>	<b>800 KG</b>	<b>800 KG</b>
<b>ONBOARD DIGITAL CONTROLLER</b>	B70/1T	B70/1T	B70/1T	B70/1T	B70/1T	B70/1T
<b>RADIO RECEIVER TYPE</b>	H93/RX20/1 with fixed code connection H93/RX22A/1 with fixed code connection H93/RX2RC/1 with rolling code connection	H93/RX20/1 with fixed code connection H93/RX22A/1 with fixed code connection H93/RX2RC/1 with rolling code connection	H93/RX20/1 with fixed code connection H93/RX22A/1 with fixed code connection H93/RX2RC/1 with rolling code connection	H93/RX20/1 with fixed code connection H93/RX22A/1 with fixed code connection H93/RX2RC/1 with rolling code connection	H93/RX20/1 with fixed code connection H93/RX22A/1 with fixed code connection H93/RX2RC/1 with rolling code connection	H93/RX20/1 with fixed code connection H93/RX22A/1 with fixed code connection H93/RX2RC/1 with rolling code connection
<b>MOTOR POWER SUPPLY</b>	24V	24V	24V	24V	24V	24V
<b>ENCODER TYPE (ETC)</b>	Digital magnetic encoder SENSORED 4096 PPR	Digital magnetic encoder SENSORED 4096 PPR	Digital magnetic encoder SENSORED 4096 PPR	Digital magnetic encoder SENSORED 4096 PPR	Digital magnetic encoder SENSORED 4096 PPR	Digital magnetic encoder SENSORED 4096 PPR
<b>MAINS POWER SUPPLY</b>	230V AC - 50Hz	230V AC - 50Hz	230V AC - 50Hz	230V AC - 50Hz	230V AC - 50Hz	230V AC - 50Hz
<b>ENERGY CONSUMPTION</b>	Very low consumption	Very low consumption	Very low consumption	Very low consumption	Very low consumption	Very low consumption
<b>POWER SUPPLY FOR ACCESSORIES</b>	24V DC	24V DC	24V DC	24V DC	24V DC	24V DC
<b>FLASHING LIGHT TYPE</b>	24V DC LED	24V DC LED	24V DC LED	24V DC LED	24V DC LED	24V DC LED
<b>OUTPUT FOR GATE OPENING INDICATOR AND AUTOMATION SYSTEM ON WARNING LIGHT</b>	√	√	√	√	√	√
<b>OUTPUT FOR COURTESY LIGHT</b>	40W	40W	40W	40W	40W	40W
<b>TIMED AND GUARANTEED AUTOMATIC CLOSING</b>	√	√	√	√	√	√
<b>GATE EDGE SAFETY MANAGEMENT, 8.2KΩ OR STANDARD</b>	√	√	√	√	√	√
<b>FORCE ADJUSTMENT IN NOMINAL IN START-UP AND DECELERATION</b>	√	√	√	√	√	√
<b>OBSTACLE DETECTION (ALSO IN POSITION RECOVERY MODE) - MOTOR REVERSAL</b>	√	√	√	√	√	√
<b>SPEED ADJUSTMENT</b>	√	√	√	√	√	√
<b>DECELERATION</b>	√	√	√	√	√	√
<b>MANAGEMENT OF THE SLOWDOWN STARTING POINT</b>	√	√	√	√	√	√
<b>STARTING ACCELERATION (SOFT-START)</b>	√	√	√	√	√	√
<b>GUARANTEED CLOSING</b>	√	√	√	√	√	√
<b>PARTIAL OPENING CONTROL</b>	Pedestrian entry	Pedestrian entry	Pedestrian entry	Pedestrian entry	Pedestrian entry	Pedestrian entry
<b>HUMAN PRESENCE CONTROL</b>	√	√	√	√	√	√
<b>CONDOMINIUM FUNCTION</b>	√	√	√	√	√	√
<b>SAFETY DEVICE CONFIGURATION</b>	√	√	√	√	√	√
<b>INSTALLATION TEST FUNCTION</b>	(prog button)	(prog button)	(prog button)	(prog button)	(prog button)	(prog button)
<b>OPERATING TEMPERATURE</b>	-20°C/+55°C	-20°C/+55°C	-20°C/+55°C	-20°C/+55°C	-20°C/+55°C	-20°C/+55°C
<b>INVERTER THERMAL PROTECTION</b>	√	√	√	√	√	√
<b>RESTORE FACTORY DEFAULT VALUES</b>	√	√	√	√	√	√
<b>INFORMATION ON USE OF MOTOR</b>	√	√	√	√	√	√
<b>SECURITY PASSWORD MANAGEMENT</b>	√	√	√	√	√	√
<b>EXP B-CONNECT INPUT PREDISPOSITION</b>	√	√	√	√	√	√

# INSTALLATION

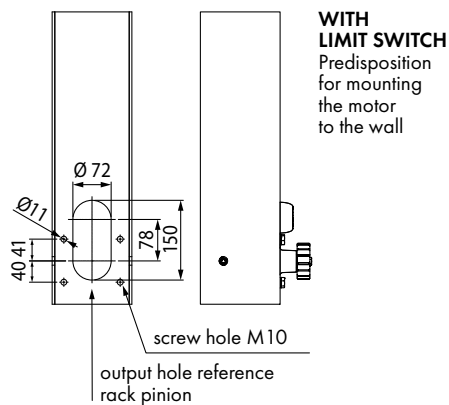
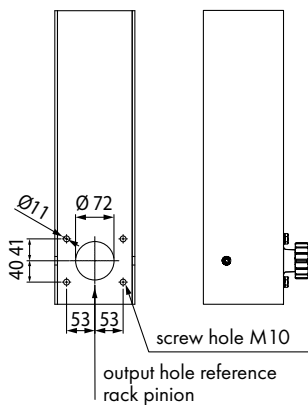
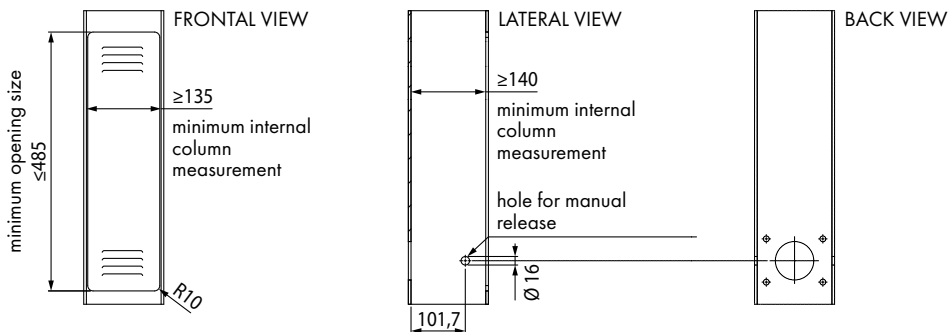
TW90 INTEGRATED CONTROL UNIT - TW90/600/HS - TW90/800 - TW90/800/R

## MOTOR DIMENSIONS



Note: all measurements in the drawings are in millimetres

## PREPARATION FOR INSTALLATION OF THE MOTOR IN THE COLUMN

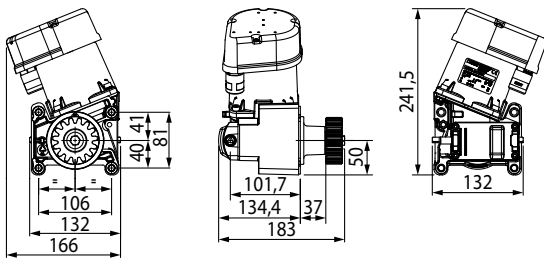


# INSTALLATION

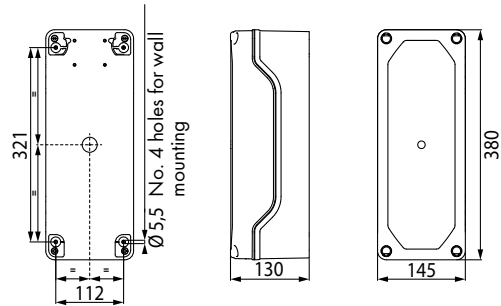
TW90 SEPARATE CONTROL UNIT - TW90/620/HS - TW90/820 - TW90/820/R



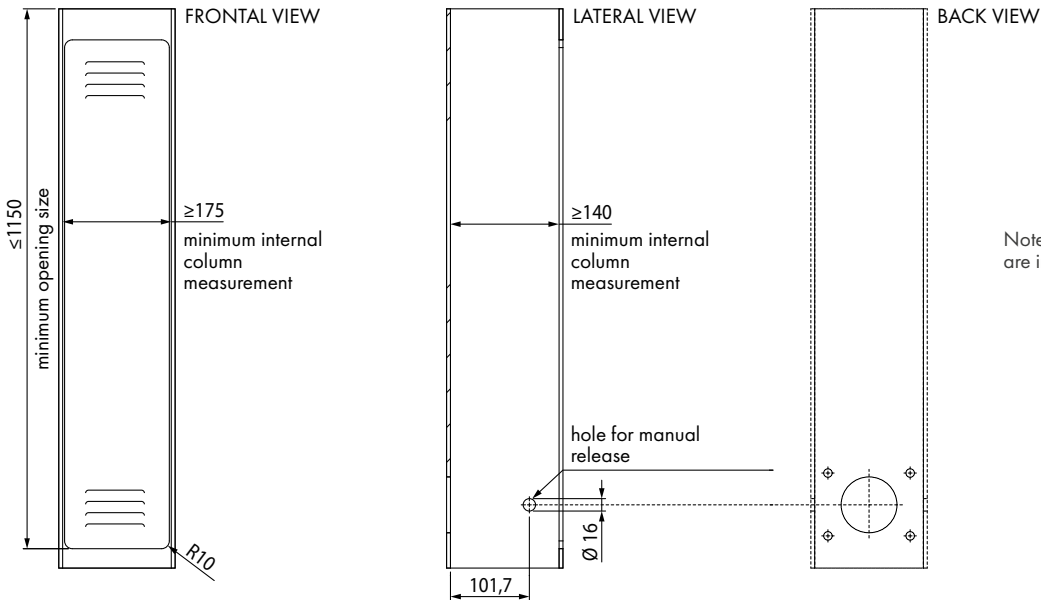
## MOTOR DIMENSIONS



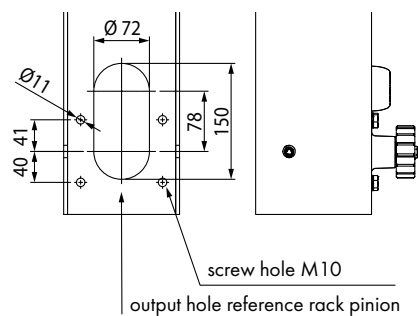
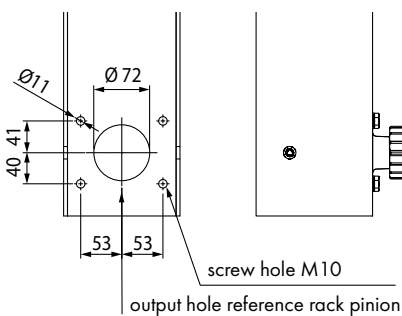
## CONTROL UNIT DIMENSIONS



## PREPARATION FOR INSTALLATION OF THE MOTOR IN THE COLUMN

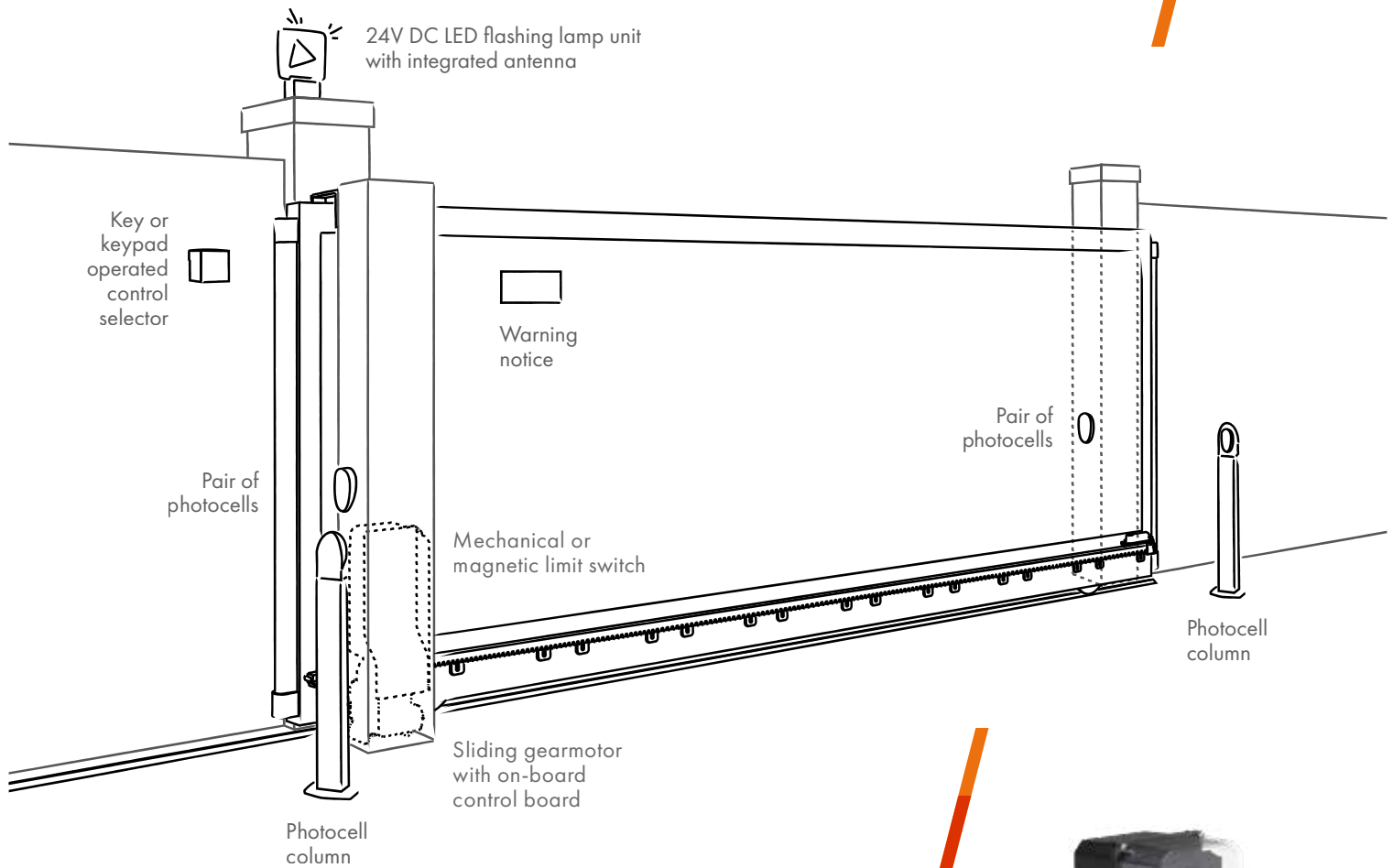


Note: all measurements in the drawings are in millimetres



# INSTALLATION TYPE

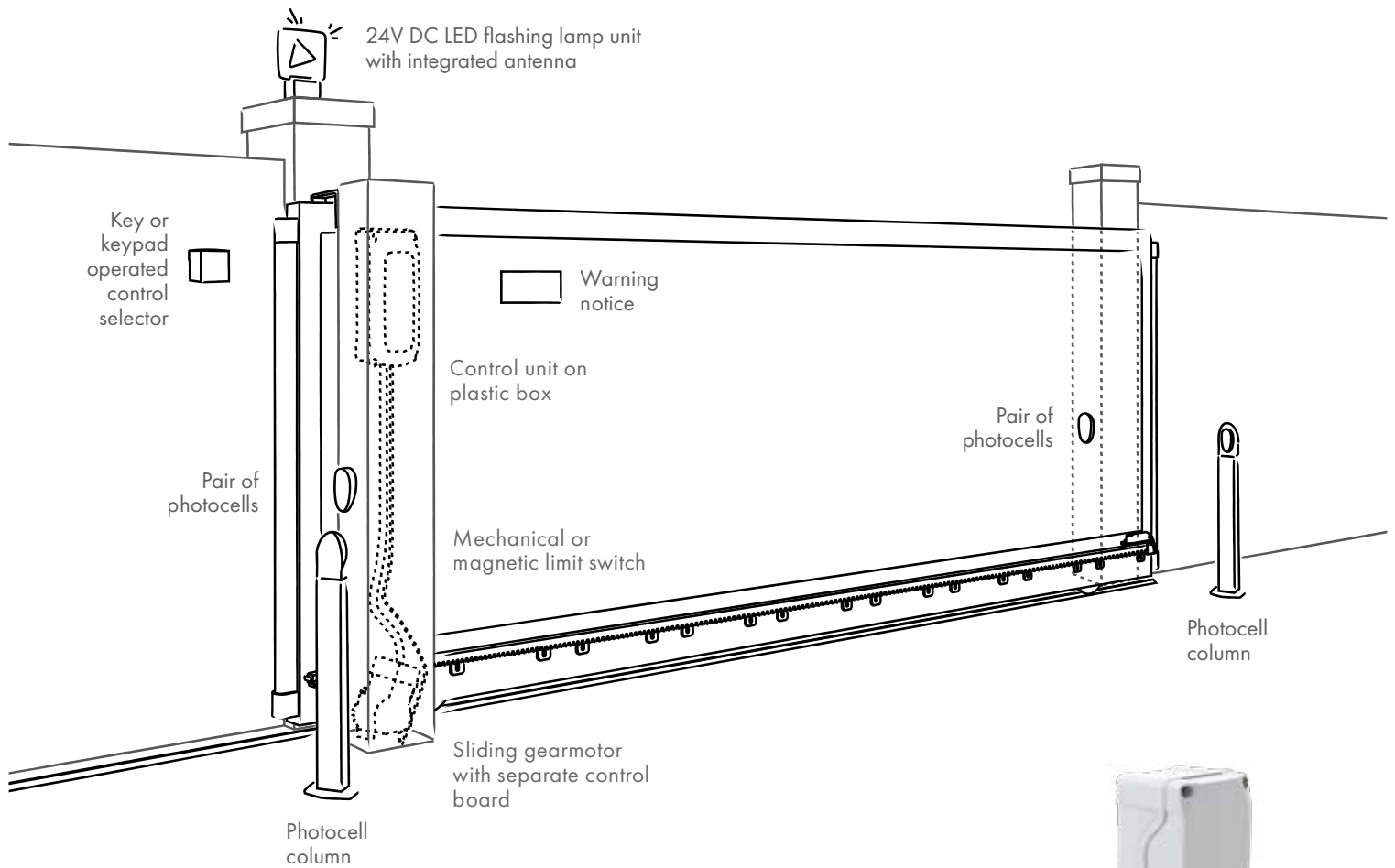
## TW90 COLUMN INSTALLATION WITH INTEGRATED CONTROL UNIT





## INSTALLATION TYPE

### TW90 COLUMN INSTALLATION WITH SEPARATE CONTROL UNIT



Fixed or rolling code remote controls



# OPTIONAL ACCESSORIES

TW90: EVERYTHING YOU NEED FOR A COMPLETE, PROFESSIONAL INSTALLATION



**B71/BC**

Batteries charger for Brushless digital controller B70/1DC - B70/1T



**GA554**

Pocket of 6 spacers (2,5 cm) and screws



**BT12V12**

Battery 12V 1.2 Ah (1 pc)



**GA557**

Roger Technology nylon rack module 4 with 6 connectors L.1000



**GA550**

Galvanised steel rack 22x22x1000 module 4



**MC784**

Magnetic limit switch for TW90 with integrated control unit



**GA551**

Galvanised steel rack 30x12x1000 module 4 with spacers and screws



**MC785**

Magnetic limit switch kit and brackets for TW90 with integrated control unit

# 19



**MC788**

Magnetic limit switch for TW90 with separate boxed control unit



**RL675**

Extension for release shaft TW90



**MC789**

Magnetic limit switch and bracket kit for TW90 with separate boxed control unit



**RL676**

Internal release key for installation without hole on TW90 column



**B74/  
BCONNECT  
VERS. HW2**

Module WI-FI B-CONNECT - Remote management and programming system in IP web browser mode via Wi-Fi hot spot P2P connection for Brushless control units (B70/2ML - EDGE1 - CTRL - B70/1DC - B70/1DCHP - B70/1T - B70/1THP - F70/IPU36)

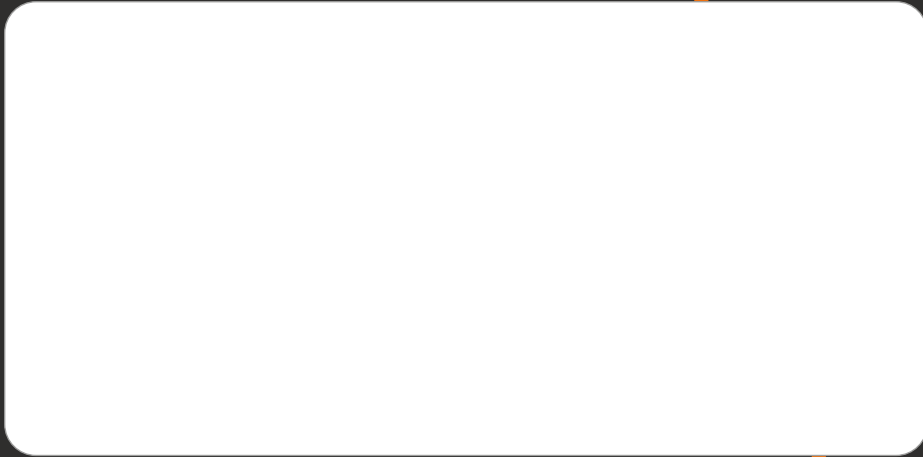


**R99/C/001**

"Automatic Opening" warning notice



**PREMIUM DEALER / PROFESSIONAL DEALER**



imaginative ASSOCIATI



F99/E/027EN - 07/2024



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