



100% Made in Italy

# SERIES

SWAY

TODAY'S DIGITAL INTELLIGENCE  
MOVES YOUR GATE

ROGER<sup>®</sup>  
BRUSHLESS



# WHAT WE DO

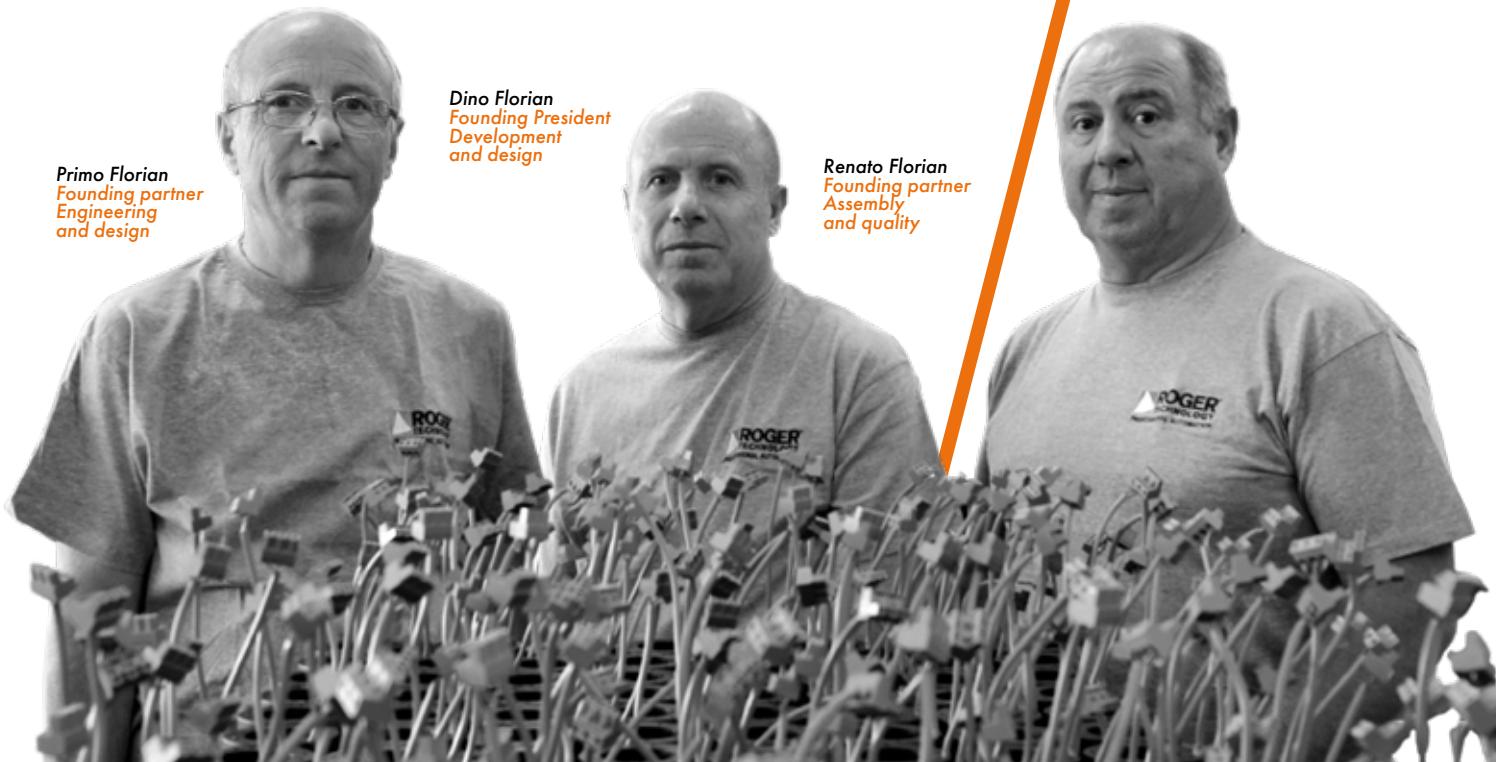
INNOVATION, TOP NOTCH MECHANICS AND NEVER-ENDING TECHNOLOGICAL RESEARCH ARE THE ELEMENTS THAT MAKE ROGER TECHNOLOGY A UNIQUE AND DIFFERENT COMPANY

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.



# 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.

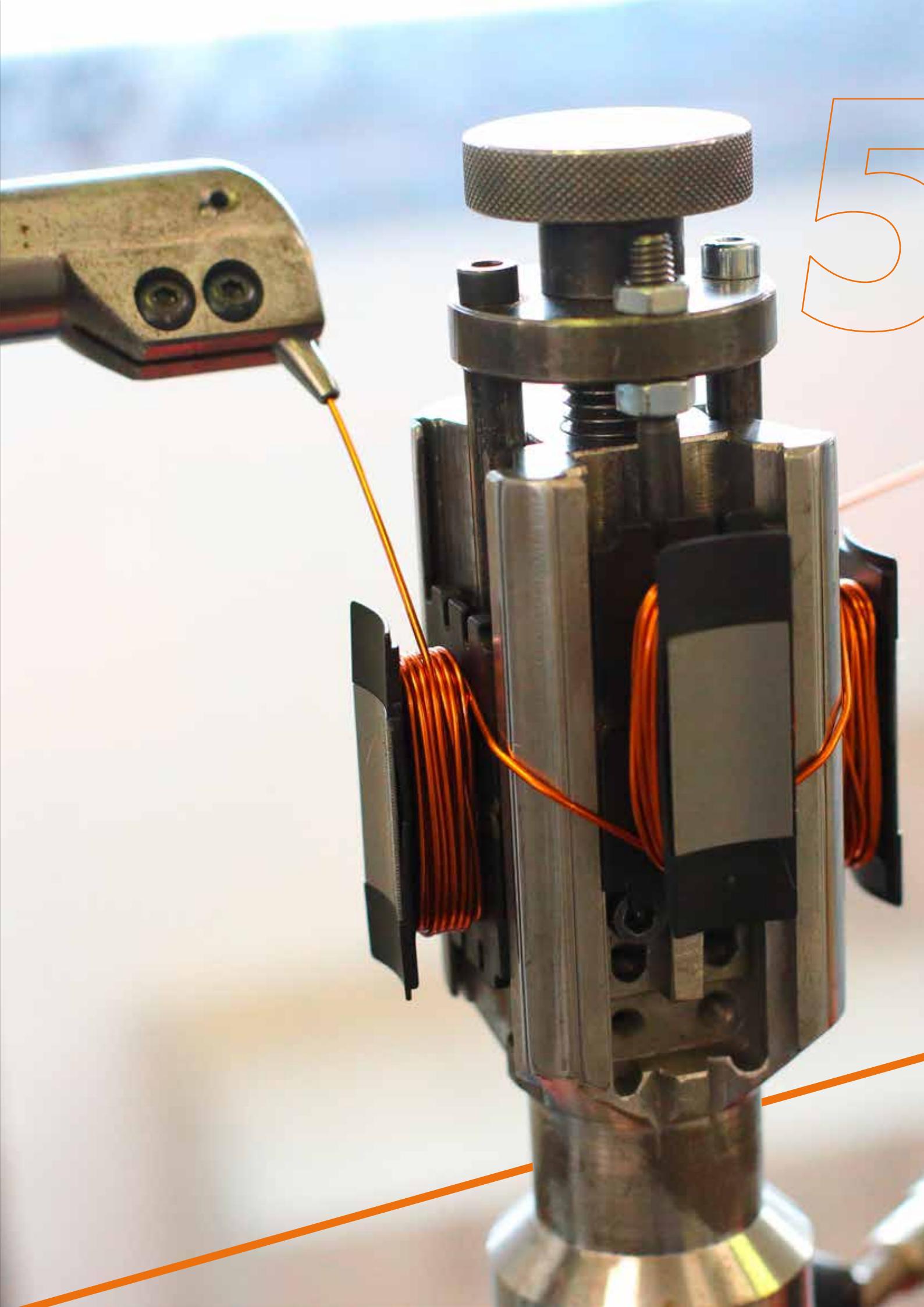
## NEW GENERATION OF ELECTRONICS

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



5

# 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 DECCELERATION 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**.



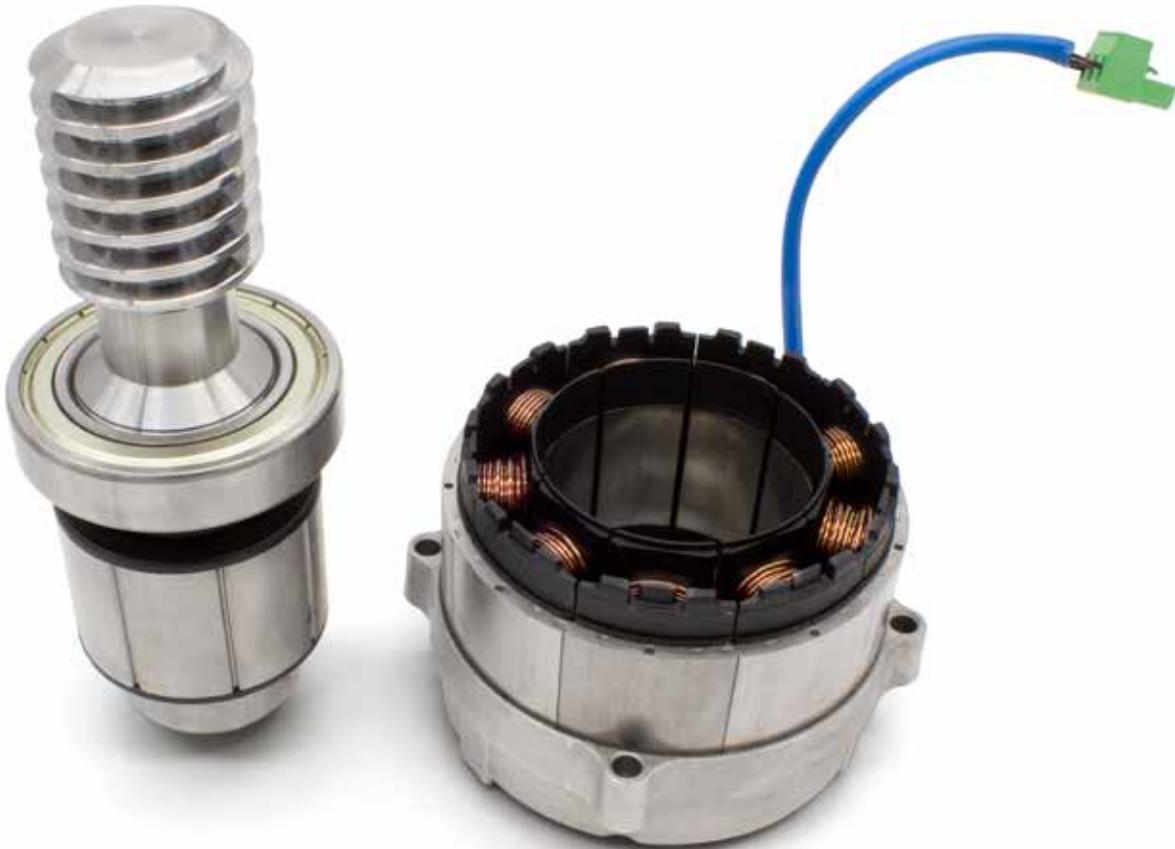
## DIGITAL AND VECTORIAL AUTOMATION CONTROLLER

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.



## 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 **SENSORELESS** and **SENSORED** (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 STURDY, DURABLE FORK AND BALL SCREW

The fork and ball screw rotating on the worm screw are manufactured from superior quality materials. In particular, the bronze nut screw features a completely threaded inner surface and is press-fit onto the steel fork to ensure a precise mechanical connection.

## 2 HIGH PRECISION ENGINEERING

Dual bevel gear reduction gear unit manufactured entirely from superior quality hardened steel, cast iron and bronze. All gears are assembled with superior quality double shielded (2ZZ) ball bearings to ensure absolute precision between axes.

## 3 REINFORCED LOCK RELEASE LEVER

The release lever is operated with a practical and sturdy customisable barrel lock and key. The operating principle is based on a extremely robust steel pin which actuates the release mechanism of the main gear, making it possible to unlock the automation system in all conditions, even when subjected to significant mechanical load by the gate leaf.

## 4 EXTERNAL LOCK RELEASE SYSTEM

The external lock release system is quick and very easy to use, with a steel cable making it possible mechanically release the reduction gear unit directly from the exterior of the unit itself. The extremely sturdy lock release system is operated by a lever connected to a universal joint linkage.

## 5 STURDY FASTENER BRACKETS

The new SMARTY Brushless digital motor is equipped with weld-on brackets designed and sized specifically for installation on particularly large and heavy condominium or industrial gates. The brackets are manufactured in galvanised carbon steel. The rear bracket is available as long or short versions.

## 6 BRUSHLESS DIGITAL MOTOR

Digital brushless motor based on a permanent magnetic field which uses neodymium iron-boron magnets inside the rotor. With innovative high density coil windings powered by a sinusoid three-phase power system, SMARTY series motors operate at low voltage (36V DC). The motor is extremely compact and operates at normal ambient temperature, making it suitable for extremely intense use and extraordinarily energy efficient.

## 7 ADJUSTABLE ALUMINIUM TRAVEL LIMITS

The SMARTY swing gate motor is factory-fitted with two titanium- reinforced aluminium travel limits in the gate open and gate closed positions. These travel limits are adjustable feature a completely threaded inner surface to form a solid mechanical connection with the fork in both directions of movement of the motor. The travel limits can be adjusted easily adjustable, even with the motor already installed, by simply removing the aluminium cover.

## 8 REMOVABLE PROTECTION BRUSHES

The extruded aluminium casing includes two specific guides for brushes preventing accidental contact and protecting and cleaning the worm gear and the relative fork. The brushes are removable and can even be replaced with the motor installed.

## 9 ELEGANT REINFORCED ALUMINIUM CASING

The casing enclosing the gear motor and the relative worm screw is made entirely from aluminium, while all parts of the casing subject to mechanical wear and friction are generously reinforced. The worm screw cover casing, made completely from anodised aluminium, is fastened to the motor casing with through screws passing through the entire width of the casing itself.

## 10 DSP TECHNOLOGY MICRO-CONTROLLER

The BRUSHLESS motor is controlled via a single 3-core cable between the motor itself and the 36 V DC digital controller. The new digital control unit is based on a 70 Mips micro-controller which calculates and estimates the position of the magnetic field completely digitally to permit SENSORLESS control of your automation system, or uses EMA technology to ensure absolute gate leaf position precision.

## 11 4 QUADRANT MOSFET DIGITAL INVERTER

Equipped with an extremely potent and revolutionary 12 Mosfet, 4 quadrant sinusoidal control digital inverter, the digital controller of the digital three-phase sinusoidal motor with field oriented control uses vector frequency modulation to control the two motors and, as a result, the two gate leaves independently.

## 12 MECHANICAL ABSOLUTE POSITIONER

The EMA (magnetic absolute encoder) is a digital mechanical encoder which measures and determines the positions of the gate leaves with absolute precision, during both opening and closing operation. This system communicates the absolute mechanical position of the gate leaves to the digital controller directly via a three-phase connection to the motor, making it unnecessary to repeat the self-acquisition procedures after prolonged power outages or manual release.



# TECHNICAL SPECIFICATIONS

|                                                                      | SMARTY5                                                                                                                              | SMARTY5RS                                                                                                                          | SMARTY7                                                                                                                              | SMARTY7R                                                                                                                           | SMARTY4/HS                                                                                                                                     |
|----------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>DESCRIPTION</b>                                                   | Low voltage BRUSHLESS electromechanical gear motor for extremely heavy duty. Irreversible. For swing gates with gate leaf up to 5 m. | Low voltage BRUSHLESS electromechanical gear motor for extremely heavy duty. Reversible. For swing gates with gate leaf up to 5 m. | Low voltage BRUSHLESS electromechanical gear motor for extremely heavy duty. Irreversible. For swing gates with gate leaf up to 7 m. | Low voltage BRUSHLESS electromechanical gear motor for extremely heavy duty. Reversible. For swing gates with gate leaf up to 7 m. | Low voltage HIGH SPEED Irreversible BRUSHLESS electromechanical gear motor for extremely heavy duty. For swing gates with gate leaf up to 4 m. |
|                                                                      |                                                                                                                                      |                                                                                                                                    |                                                                                                                                      |                                                                                                                                    |                                                                                                                                                |
| <b>POWER LINE SUPPLY</b>                                             | 230V AC - 50Hz                                                                                                                       | 230V AC - 50Hz                                                                                                                     | 230V AC - 50Hz                                                                                                                       | 230V AC - 50Hz                                                                                                                     | 230V AC - 50Hz                                                                                                                                 |
| <b>MOTOR POWER SUPPLY</b>                                            | 36V                                                                                                                                  | 36V                                                                                                                                | 36V                                                                                                                                  | 36V                                                                                                                                | 36V                                                                                                                                            |
| <b>POWER RATING</b>                                                  | 200W                                                                                                                                 | 200W                                                                                                                               | 200W                                                                                                                                 | 200W                                                                                                                               | 200W                                                                                                                                           |
| <b>FREQUENCY OF USE</b>                                              | Intensive use                                                                                                                        | Intensive use                                                                                                                      | Intensive use                                                                                                                        | Intensive use                                                                                                                      | Intensive use                                                                                                                                  |
| <b>THRUST</b>                                                        | 600 - 7000N                                                                                                                          | 600 - 6500N                                                                                                                        | 600 - 7000N                                                                                                                          | 600 - 6500N                                                                                                                        | 600 - 4500N                                                                                                                                    |
| <b>OPERATING TEMPERATURE</b>                                         | -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                                                                                                                                           |
| <b>REDUCTOR TYPE</b>                                                 | Irreversible                                                                                                                         | Reversible                                                                                                                         | Irreversible                                                                                                                         | Reversible                                                                                                                         | Irreversible                                                                                                                                   |
| <b>MANOEUVRE SPEED</b>                                               | 1,6 cm/s                                                                                                                             | 1,8 cm/s                                                                                                                           | 1,6 cm/s                                                                                                                             | 1,6 cm/s                                                                                                                           | 2 - 1 cm/s                                                                                                                                     |
| <b>OPENING TIME</b>                                                  | 25-40 s                                                                                                                              | 20-40 s                                                                                                                            | 35-50 s                                                                                                                              | 35-50 s                                                                                                                            | 15-25 s                                                                                                                                        |
| <b>STROKE</b>                                                        | 370 mm                                                                                                                               | 370 mm                                                                                                                             | 520 mm                                                                                                                               | 520 mm                                                                                                                             | 370 mm                                                                                                                                         |
| <b>LIMIT SWITCH</b>                                                  | Mechanical stopper in opening and closing                                                                                            | Mechanical stopper in opening and closing                                                                                          | Mechanical stopper in opening and closing                                                                                            | Mechanical stopper in opening and closing                                                                                          | Mechanical stopper in opening and closing                                                                                                      |
| <b>RECOMMENDED DIGITAL CONTROLLERS</b>                               | 230V: EDGE1/ BOX - 115V: EDGE1/ BOX/115                                                                                              | 230V: EDGE1/ BOX - 115V: EDGE1/ BOX/115                                                                                            | 230V: EDGE1/ BOX - 115V: EDGE1/ BOX/115                                                                                              | 230V: EDGE1/ BOX - 115V: EDGE1/ BOX/115                                                                                            | 230V: EDGE1/ BOX - 115V: EDGE1/ BOX/115                                                                                                        |
| <b>ENCODER</b>                                                       | Digital native encoder SENSORLESS 48 PPR                                                                                             | Digital native encoder SENSORLESS 48 PPR + EMA                                                                                     | Digital native encoder SENSORLESS 48 PPR                                                                                             | Digital native encoder SENSORLESS 48 PPR + EMA                                                                                     | Digital native encoder SENSORLESS 48 PPR                                                                                                       |
| <b>OPERATING CYCLES PER DAY (OPENING/CLOSING - 24 HOURS NO STOP)</b> | 1000                                                                                                                                 | 1000                                                                                                                               | 1000                                                                                                                                 | 1000                                                                                                                               | 1000                                                                                                                                           |
| <b>MAXIMUM DIMENSION PRODUCT IN MM (L X W X H)</b>                   | 1162 x 116 x 165                                                                                                                     | 1162 x 116 x 165                                                                                                                   | 1312 x 116 x 165                                                                                                                     | 1312 x 116 x 165                                                                                                                   | 1162 x 116 x 165                                                                                                                               |
| <b>PRODUCT WEIGHT PACKED (KG)</b>                                    | 16,1                                                                                                                                 | 17,4                                                                                                                               | 17,1                                                                                                                                 | 18,5                                                                                                                               | 16                                                                                                                                             |



Motor  
Brushless



Uso  
intensivo



Motor  
High Speed



Motor  
Reversible



## PACKAGING

### SMARTY 5 - SMARTY 4HS SMARTY 7

L.: 119 cm

P.: 12,5 cm

H. 16 cm

L.: 134,5 cm

P.: 12,5 cm

H. 16 cm

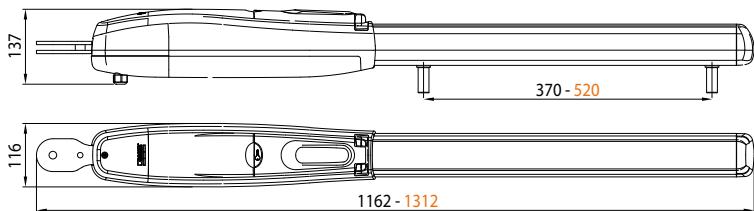
# FUNCTIONS

## OF AUTOMATED SWING GATE MOTOR

| DESCRIPTION                                                                     | SMARTY 5 - SMARTY 5R5                                                                             | SMARTY 7 - SMARTY 7R                                                                              | SMARTY 4 HS                                                                                       |
|---------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------|
| MAXIMUM LENGTH OF SINGLE GATE LEAF                                              | UP TO 5 METERS                                                                                    | UP TO 7 METERS                                                                                    | UP TO 4 METERS                                                                                    |
| <b>DIGITAL CONTROLLER</b>                                                       | EDGE1/BOX 36V DC (SMARTY 5R5 since version P3.20)                                                 | EDGE1/BOX 36V DC                                                                                  | EDGE1/BOX 36V DC (since version P3.05)                                                            |
| <b>RADIO RECEIVER TYPE</b>                                                      | H93/RX20/I and H93/RX22A/I with fixed code connection<br>H93/RX2RC/I with rolling code connection | H93/RX20/I and H93/RX22A/I with fixed code connection<br>H93/RX2RC/I with rolling code connection | H93/RX20/I and H93/RX22A/I with fixed code connection<br>H93/RX2RC/I with rolling code connection |
| <b>MOTOR POWER</b>                                                              | 36 V DC, with self-protected inverter                                                             | 36 V DC, with self-protected inverter                                                             | 36 V DC, with self-protected inverter                                                             |
| <b>MOTOR POWER CONTROL TECHNOLOGY (ETPC)</b>                                    | Field oriented control (FOC) with SENSORLESS technology                                           | Field oriented control (FOC) with SENSORLESS technology                                           | Field oriented control (FOC) with SENSORLESS technology                                           |
| <b>ENCODER TYPE</b>                                                             | Digital, with 16 bit maximum resolution                                                           | Digital, with 16 bit maximum resolution                                                           | Digital, with 16 bit maximum resolution                                                           |
| <b>EMA SYSTEM</b>                                                               | SMARTY 5 - optional / SMARTY 5R5 Standard                                                         | SMARTY 7 - optional / SMARTY 7R Standard                                                          | Optional                                                                                          |
| <b>MAINS POWER SUPPLY</b>                                                       | 230V 50/60 Hz                                                                                     | 230V 50/60 Hz                                                                                     | 230V 50/60 Hz                                                                                     |
| <b>BATTERY OPERATION</b>                                                        | (optional) 2 external batteries<br>12V DC, 4.5 Amp/h                                              | (optional) 2 external batteries<br>12V DC, 4.5 Amp/h                                              | (optional) 2 external batteries<br>12V DC, 4.5 Amp/h                                              |
| <b>ENERGY CONSUMPTION</b>                                                       | Very low consumption                                                                              | Very low consumption                                                                              | Very low consumption                                                                              |
| <b>NUMBER OF MOTORS</b>                                                         | 1 - 2 motors                                                                                      | 1 - 2 motors                                                                                      | 1 - 2 motors                                                                                      |
| <b>POWER SUPPLY FOR ACCESSORIES</b>                                             | 24V DC                                                                                            | 24V DC                                                                                            | 24V DC                                                                                            |
| <b>FLASHING LIGHT TYPE</b>                                                      | 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                                                                                               |
| <b>TIMED AND GUARANTEED AUTOMATIC CLOSING</b>                                   | ✓                                                                                                 | ✓                                                                                                 | ✓                                                                                                 |
| <b>GATE EDGE SAFETY MANAGEMENT, 8.2KΩ OR STANDARD</b>                           | ✓                                                                                                 | ✓                                                                                                 | ✓                                                                                                 |
| <b>PHOTOCELL TEST AND SAFETY DEVICE MANAGEMENT</b>                              | ✓                                                                                                 | ✓                                                                                                 | ✓                                                                                                 |
| <b>LIMIT SWITCH TYPE</b>                                                        | Adjustable open and closed position mechanical travel limits                                      | Adjustable open and closed position mechanical travel limits                                      | Adjustable open and closed position mechanical travel limits                                      |
| <b>SEPARATE MANAGEMENT FOR MOTOR 1 - 2</b>                                      | ✓                                                                                                 | ✓                                                                                                 | ✓                                                                                                 |
| <b>FORCE ADJUSTMENT IN NOMINAL MOVEMENT</b>                                     | ✓                                                                                                 | ✓                                                                                                 | ✓                                                                                                 |
| <b>FORCE ADJUSTMENT IN START-UP AND DECELERATION</b>                            | ✓                                                                                                 | ✓                                                                                                 | ✓                                                                                                 |
| <b>OBSTACLE DETECTION - MOTOR REVERSAL</b>                                      | ✓                                                                                                 | ✓                                                                                                 | ✓                                                                                                 |
| <b>ADJUSTEMENT IMPACT FORCE SEPARATE MOTOR 2</b>                                | ✓                                                                                                 | ✓                                                                                                 | ✓                                                                                                 |
| <b>OPENING AND CLOSING SPEED SETTING</b>                                        | ✓                                                                                                 | ✓                                                                                                 | ✓                                                                                                 |
| <b>DECCELERATION DURING OPENING AND CLOSING</b>                                 | ✓                                                                                                 | ✓                                                                                                 | ✓                                                                                                 |
| <b>STARTING ACCELERATION (SOFT-START) FOR OPENING AND CLOSING MANOEUVRES</b>    | ✓                                                                                                 | ✓                                                                                                 | ✓                                                                                                 |
| <b>SAFEGUARDED CLOSURE/OPENING FUNCTION</b>                                     | ✓                                                                                                 | ✓                                                                                                 | ✓                                                                                                 |
| <b>MOTOR STOPPING DISTANCE AND BRAKING DISTANCE</b>                             | ✓                                                                                                 | ✓                                                                                                 | ✓                                                                                                 |
| <b>PARTIAL OPENING CONTROL</b>                                                  | Pedestrian entry                                                                                  | Pedestrian entry                                                                                  | Pedestrian entry                                                                                  |
| <b>HUMAN PRESENCE CONTROL</b>                                                   | ✓                                                                                                 | ✓                                                                                                 | ✓                                                                                                 |
| <b>MECHANICAL LOCK AND MECHANICAL ELECTRO-LOCK MANAGEMENT</b>                   | ✓                                                                                                 | ✓                                                                                                 | ✓                                                                                                 |
| <b>CONDOMINIUM FUNCTION</b>                                                     | ✓                                                                                                 | ✓                                                                                                 | ✓                                                                                                 |
| <b>SAFETY DEVICE CONFIGURATION</b>                                              | ✓                                                                                                 | ✓                                                                                                 | ✓                                                                                                 |
| <b>INSTALLATION TEST FUNCTION</b>                                               | (prog button)                                                                                     | (prog button)                                                                                     | (prog button)                                                                                     |
| <b>OPERATING TEMPERATURE</b>                                                    | -20°C / +55°C                                                                                     | -20°C / +55°C                                                                                     | -20°C / +55°C                                                                                     |
| <b>INVERTER THERMAL PROTECTION</b>                                              | ✓                                                                                                 | ✓                                                                                                 | ✓                                                                                                 |
| <b>CURRENT ABSORPTION MAPPING SYSTEM</b>                                        | (MCA)                                                                                             | (MCA)                                                                                             | (MCA)                                                                                             |
| <b>RESTORE FACTORY DEFAULT VALUES</b>                                           | ✓                                                                                                 | ✓                                                                                                 | ✓                                                                                                 |
| <b>INFORMATION ON USE OF MOTOR</b>                                              | ✓                                                                                                 | ✓                                                                                                 | ✓                                                                                                 |
| <b>INSTALLER SECURITY PASSWORD MANAGEMENT</b>                                   | ✓                                                                                                 | ✓                                                                                                 | ✓                                                                                                 |
| <b>MAINTENANCE ALARM MANAGEMENT</b>                                             | ✓                                                                                                 | ✓                                                                                                 | ✓                                                                                                 |

# INSTALLATION

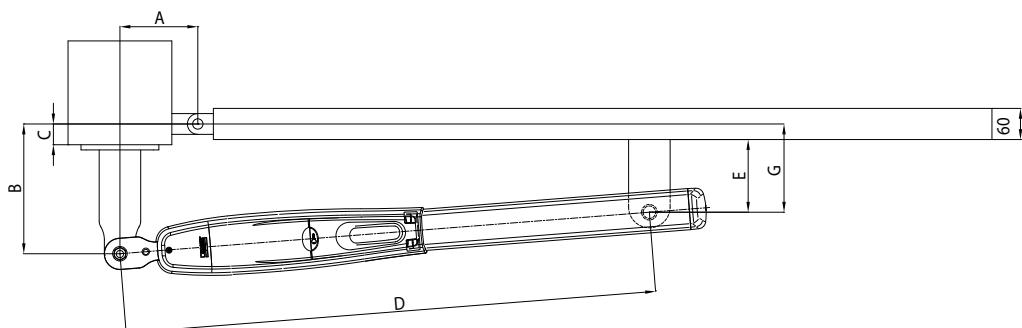
## DIMENSIONS



SMARTY4/HS - SMARTY5 - SMARTY5R5  
SMARTY7 - SMARTY7R

Note: all measurements in the drawings are in millimetres

## PREPARATIONS FOR STANDARD INSTALLATION



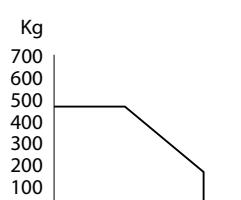
## OPERATING LIMITS

**SMARTY 5 / 5R5 / 4HS**  
(Max run = 370 mm)

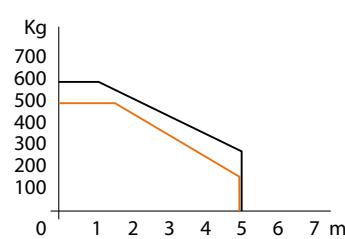
| A   | B   | C<br>(max) | D<br>(max) | E   | G   | $\alpha^\circ$ |
|-----|-----|------------|------------|-----|-----|----------------|
| 150 | 150 | 120        | 1030       | 100 | 130 | 97°            |
| 150 | 170 | 120        | 1030       | 100 | 130 | 96°            |
| 150 | 190 | 120        | 1030       | 100 | 130 | 95°            |
| 150 | 200 | 120        | 1030       | 100 | 130 | 95°            |
| 150 | 220 | 120        | 1030       | 100 | 130 | 90°            |
| 170 | 150 | 120        | 1030       | 100 | 130 | 103°           |
| 170 | 170 | 120        | 1030       | 100 | 130 | 102°           |
| 170 | 200 | 120        | 1030       | 100 | 130 | 90°            |
| 185 | 185 | 120        | 1030       | 100 | 130 | 90°            |
| 200 | 160 | 120        | 1030       | 100 | 130 | 92°            |

**SMARTY 7 / SMARTY 7R**  
(Max run = 520 mm)

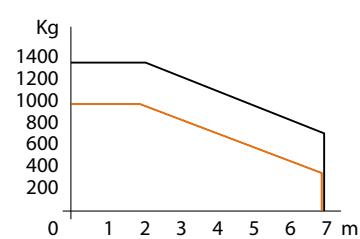
| A   | B   | C<br>(max) | D<br>(max) | E   | G   | $\alpha^\circ$ |
|-----|-----|------------|------------|-----|-----|----------------|
| 200 | 200 | 200        | 1180       | 140 | 170 | 98°            |
| 200 | 230 | 200        | 1180       | 140 | 170 | 97°            |
| 200 | 260 | 200        | 1180       | 140 | 170 | 96°            |
| 200 | 280 | 200        | 1180       | 140 | 170 | 95°            |
| 200 | 300 | 200        | 1180       | 140 | 170 | 93°            |
| 220 | 220 | 200        | 1180       | 140 | 170 | 102°           |
| 220 | 250 | 200        | 1180       | 140 | 170 | 100°           |
| 220 | 280 | 200        | 1180       | 140 | 170 | 93°            |
| 250 | 200 | 200        | 1180       | 140 | 170 | 106°           |
| 250 | 250 | 200        | 1180       | 140 | 170 | 94°            |



SMARTY4/HS



SMARTY5 - SMARTY5R5



SMARTY7 - SMARTY7R

# OPTIONAL ACCESSORIES

SMARTY: EVERYTHING YOU NEED FOR A COMPLETE,  
PROFESSIONAL INSTALLATION



**RL669**

Kit for release from outside  
without handle for series  
SMARTY



**RL670**

European cylinder key for  
release system series SMARTY



**RL671**

Metallic wire length 3mt for  
release from outside



**R99/C/001**

Signboard "Automatic  
Opening"



**SMARTY/EMA**

Module Encoder Magnetic  
Absolute for SMARTY Series

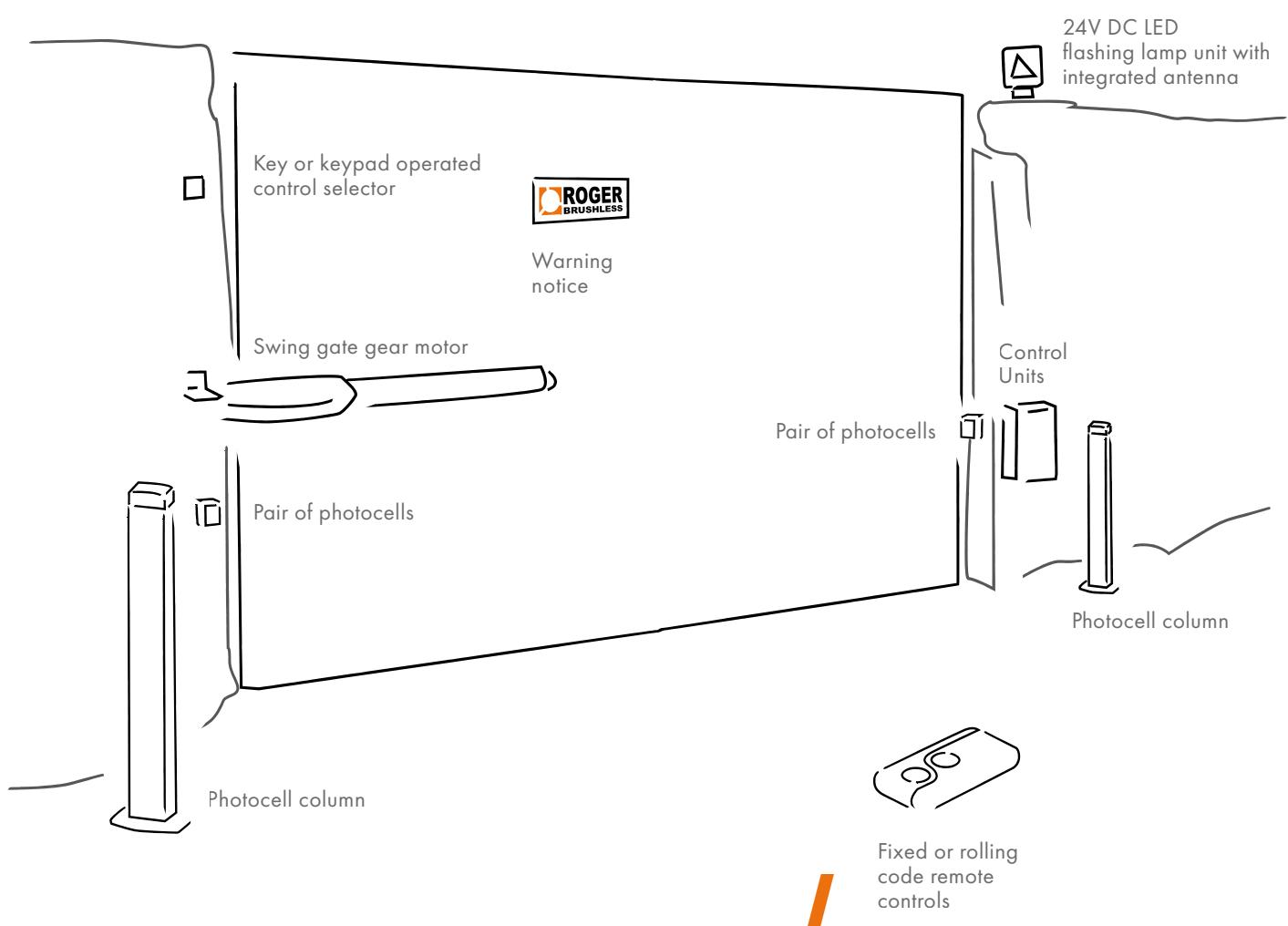
# STANDARD ACCESSORIES

Always included in the individual product package or kit

|                                                                                     | <b>SMARTY5</b>    | <b>SMARTY5R5</b>                        | <b>SMARTY7</b> | <b>SMARTY7R</b> | <b>SMARTY4/HS</b> |
|-------------------------------------------------------------------------------------|-------------------|-----------------------------------------|----------------|-----------------|-------------------|
|  | <b>MC782</b>      | Kit 2 mechanical stop                   | ✓              | ✓               | ✓                 |
|  | <b>SMARTY/EMA</b> | Module Encoder Magnetic Absolute        | ✓              | ✓               |                   |
|  | <b>KT237</b>      | Kit 3 hinge plates short, to weld       | ✓              | ✓               | ✓                 |
|  | <b>KT238</b>      | Kit 3 hinge plates long series, to weld | ✓              | ✓               |                   |

# STANDARD INSTALLATION

A PRACTICAL EXAMPLE FOR YOUR SUCCESSFUL INSTALLATION





# EMA

**ABSOLUTE ENCODER NEVER LOSES TRACK OF THE POSITION OF YOUR GATE FOR TOTAL SAFETY, ALWAYS!**

The EMA (magnetic absolute encoder) is a digital mechanical encoder which measures and determines the positions of the gate leaves with absolute precision, during both opening and closing operation. This system communicates the absolute mechanical position of the gate leaves to the digital controller directly via a three-phase connection to the motor, making it unnecessary to repeat the self-acquisition procedures after prolonged power outages or manual release.



**MEASURES**  
with millimetre precision



**CALCULATES**  
the absolute position



**COMMUNICATES**  
the exact position  
of your gate continuously

PREMIUM DEALER / PROFESSIONAL DEALER

immagine ASSOCIAZI



R99/B/016EN - 06/2023



100% Made in Italy

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