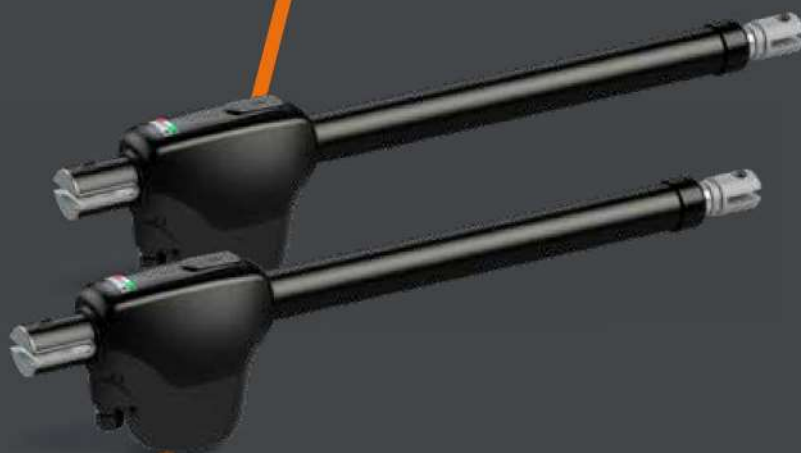


# MONOS SERIES

THE INTELLIGENT  
TELESCOPIC SOLUTION



# 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, starting in the 1990s, that we created the first major step in our history, by implementing a real 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 our approach to every challenge, allways 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 trough 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

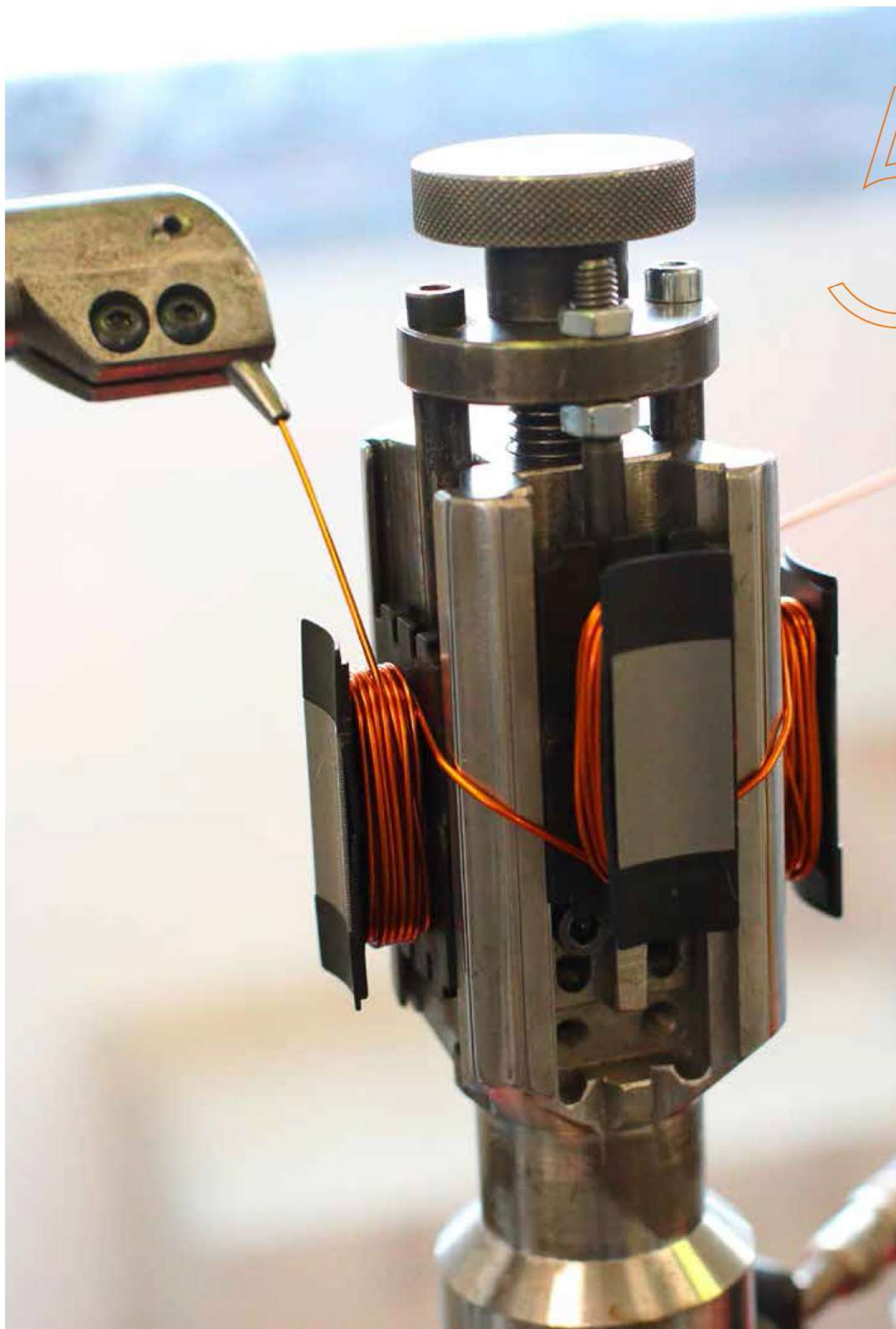
The new control unit with onboard digital Brushless controller. Without traditional relays and due to the revolutionary MOSFET quadrant system and its control technology entirely based on a DSP (Digital Signal Processor) microcontroller, it represents a new generation of electronic cards created to safely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





### 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



## MONOS

The Monos line is a simple solution, thanks to its telescopic electromechanical gear motor. It is designed for residential and condominium gates with leaf lengths up to 4 meters.

The Monos engine is a simple and easy solution to install, both on the right and left wings of the gate, using the same version of the swing gate operator.





### 1 ECCENTRIC RELEASE LEVER WITH BARREL LOCK AND KEY

The eccentric release lever is operated with a practical and durable barrel lock and key. The release system uses an extremely robust and resilient eccentric lever and a double lever lock mechanism, for manually releasing the automated system when needed simply and easily.

### 2 TUBULAR DESIGN

Telescopic arm protective casing completely made of powder coated steel, with AISI 304 stainless steel stem and a diameter of 32 mm.



### 3 EXTREMELY RESISTANT FORKS AND BRACKETS

The rear and front forks are made from high-resistance die-cast aluminium alloy, fixed to the gate by means of screw-on and adjustable steel brackets.

### 4 ROBUST PRECISION MECHANICS

The Monos mechanical transmission system is completely based on a steel worm with a diameter of 18 mm and an aluminium bronze transmission gear.

# TECHNICAL SPECIFICATIONS

	MONOS4	MONOS4/220
<b>DESCRIPTION</b>	Electromechanical actuator with telescopic arm, BRUSHLESS, low voltage, super intensive use, with native encoder onboard, irreversible, ideal for swing gates with leaf up to 4 mt lenght.	Electromechanical actuator with telescopic arm, 230V AC, irreversible, ideal for swing gates with leaf up to 4 mt lenght.
		
POWER LINE SUPPLY	230V AC - 50Hz	230V AC - 50Hz
MOTOR POWER SUPPLY	24V	230V AC
POWER RATING	200W	200W
FREQUENCY OF USE	Intensive use	 30%
THRUST	2200N	2400N
OPERATING TEMPERATURE	-20 C° +55 C°	-20 C° +55 C°
PROTECTION LEVEL	IP43	IP43
REDUCTOR TYPE	Irreversible	Irreversible
MANOEUVRE SPEED	2,10 cm/s	1,66 cm/s
OPENING TIME AT 90°	19-35 s	24 s
STROKE	400 mm	400 mm
LIMIT SWITCH	-	-
RECOMMENDED DIGITAL CONTROLLERS	230V: B70/2DC/BOX 115V: B70/2DC/BOX/115	H70/200AC
ENCODER	Digital native encoder SENSORLESS 48 PPR	-
OPERATING CYCLES PER DAY (OPENING/CLOSING - 24 HOURS NO STOP)	700	50% frequency use
MAXIMUM DIMENSION PRODUCT IN MM (L X W X H)	1223 x 178 x 111	1223 x 178 x 111
PRODUCT WEIGHT PACKED (KG)	7	8,5



Brushless  
Motor



Intensive  
Use



High Speed  
Motor



Reversible  
Motor

## PACKAGING

MONOS4

L.: 89 cm

W.: 13 cm

H. 18 cm



# FUNCTIONS

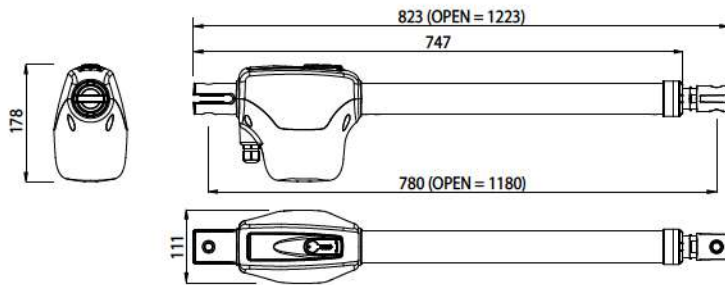
## OF AUTOMATED SWING GATE MOTOR

DESCRIPTION	MONOS4	MONOS4/220
MAXIMUM LENGTH OF SINGLE GATE LEAF	4 METERS	4 METERS
DIGITAL CONTROLLER	B70/2DC/BOX B70/2ML/BOX EDGE1/BOX	H70/200AC
RADIO RECEIVER TYPE	H93/RX20/I with fixed code connection H93/RX22A/I with fixed code connection H93/RX2RC/I with rolling code connection	H93/RX20/I with fixed code connection H93/RX22A/I with fixed code connection H93/RX2RC/I with rolling code connection
MOTOR POWER SUPPLY	24V DC / 36V DC	230V AC
MOTOR POWER CONTROL TECHNOLOGY (ETPC)	Field oriented control (FOC) with SENSORLESS technology	-
ENCODER TYPE	Digital SENSORLESS, 48 PPR	-
MAINS POWER SUPPLY	230V 50/60 Hz	230V 50/60 Hz
BATTERY OPERATION	(optional) 2 internal batteries (in digital controller box) 12V DC, 1.2 Amp/h (optional) 2 external batteries 12V DC, 4.5 Amp/h	-
NUMBER OF MOTORS	1 - 2 motors	1 - 2 motors
POWER SUPPLY FOR ACCESSORIES	24V DC	230V AC
FLASHING LIGHT TYPE	24V DC LED	230V AC
OUTPUT FOR GATE OPENING INDICATOR AND AUTOMATION SYSTEM ON WARNING LIGHT	✓	✓
OUTPUT FOR COURTESY LIGHT	40W	40W
TIMED AND GUARANTEED AUTOMATIC CLOSING	✓	✓
GATE EDGE SAFETY MANAGEMENT, 8.2KΩ OR STANDARD	✓	✓
LIMIT SWITCH TYPE	-	-
SEPARATE MANAGEMENT FOR MOTOR 1 - 2	✓	-
FORCE ADJUSTMENT IN NOMINAL MOVEMENT	✓	-
FORCE ADJUSTMENT IN START-UP AND DECELERATION	✓	-
OBSTACLE DETECTION - MOTOR REVERSAL	✓	-
ADJUSTMENT IMPACT FORCE SEPARATE MOTOR 2	✓	-
SPEED ADJUSTMENT	✓	-
DECELERATION	✓	✓
STARTING ACCELERATION (SOFT-START)	✓	✓
GUARANTEED CLOSING	✓	✓
WIND PROTECTION FUNCTION WITH GATE CLOSED	✓	-
MOTOR STOPPING DISTANCE AND BRAKING DISTANCE	✓	✓
PARTIAL OPENING CONTROL	Pedestrian entry	Pedestrian entry
HUMAN PRESENCE CONTROL	✓	✓
LOCK MANAGEMENT	✓	✓
CONDOMINIUM FUNCTION	✓	✓
SAFETY DEVICE CONFIGURATION	✓	✓
INSTALLATION TEST FUNCTION	(prog button)	(prog button)
OPERATING TEMPERATURE	-20°C/+55°C	-20°C/+55°C
INVERTER THERMAL PROTECTION	✓	-
CURRENT ABSORPTION MAPPING SYSTEM	(MCA)	-
RESTORE FACTORY DEFAULT VALUES	✓	✓
INFORMATION ON USE OF MOTOR	✓	✓
EXP B-CONNECT INPUT PREDISPOSITION	✓	-
SECURITY PASSWORD MANAGEMENT	✓	✓



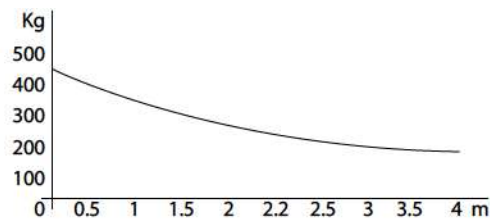
# INSTALLATION

## DIMENSIONS



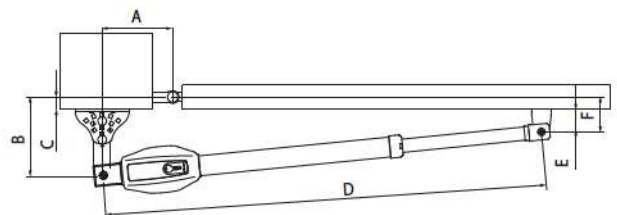
Note: all measurements in the drawings are in millimetres

## OPERATING LIMITS



## KIT

## PREPARATIONS FOR STANDARD INSTALLATION



### MONOS4/220 - MONOS4 (Max run = 400 MM)

A	B	C	D (min)	D (max)	E	F	α° (max)
110	180	57	870	1175	50	80	95°
110	210	87	840	1175	50	80	95°
120	150	27	893	1175	50	80	95°
120	200	77	839	1175	50	80	95°
130	130	7	893	1175	50	80	100°
150	130	7	860	1175	50	80	105°
150	150	27	840	1175	50	80	105°
150	200	77	796	1175	50	80	100°
160	150	27	817	1175	50	80	110°
160	160	37	817	1175	50	80	105°

### KIT MONOS4

For swing gates with leaf up to 4 mt lenght

### KIT MONOS4/115

For swing gates with leaf up to 4 mt lenght

### KIT MONOS4/220

For swing gates with leaf up to 4 mt lenght

## CONTENTS OF STANDARD MONOS SWING GATE MOTOR KIT



2 swing gates motors



1 controller unit



1 radio receiver with 2 fixed code channels, H93 series



2 fixed code remote control units with copying function, Synus series



1 pair of photocells, R90 series



24V DC / 230V AC LED flashing lamp unit with integrated antenna



1 "Automatic Opening" warning notice

The composition of the kit is subject to change in the nature or quantity of the items. For the correct content of the kits always refer to the catalogue, the current sales price lists or the online product catalogue at

[WWW.ROGERTECHNOLOGY.COM](http://WWW.ROGERTECHNOLOGY.COM)


# OPTIONAL ACCESSORIES

MONOS: EVERYTHING YOU NEED FOR A COMPLETE, PROFESSIONAL INSTALLATION

	<b>HT420</b> MONOS4 Series stem cover		<b>R99/C/001</b> Signboard "Automatic Opening".
	<b>KT204</b> Short rear hinge plate, to weld.		

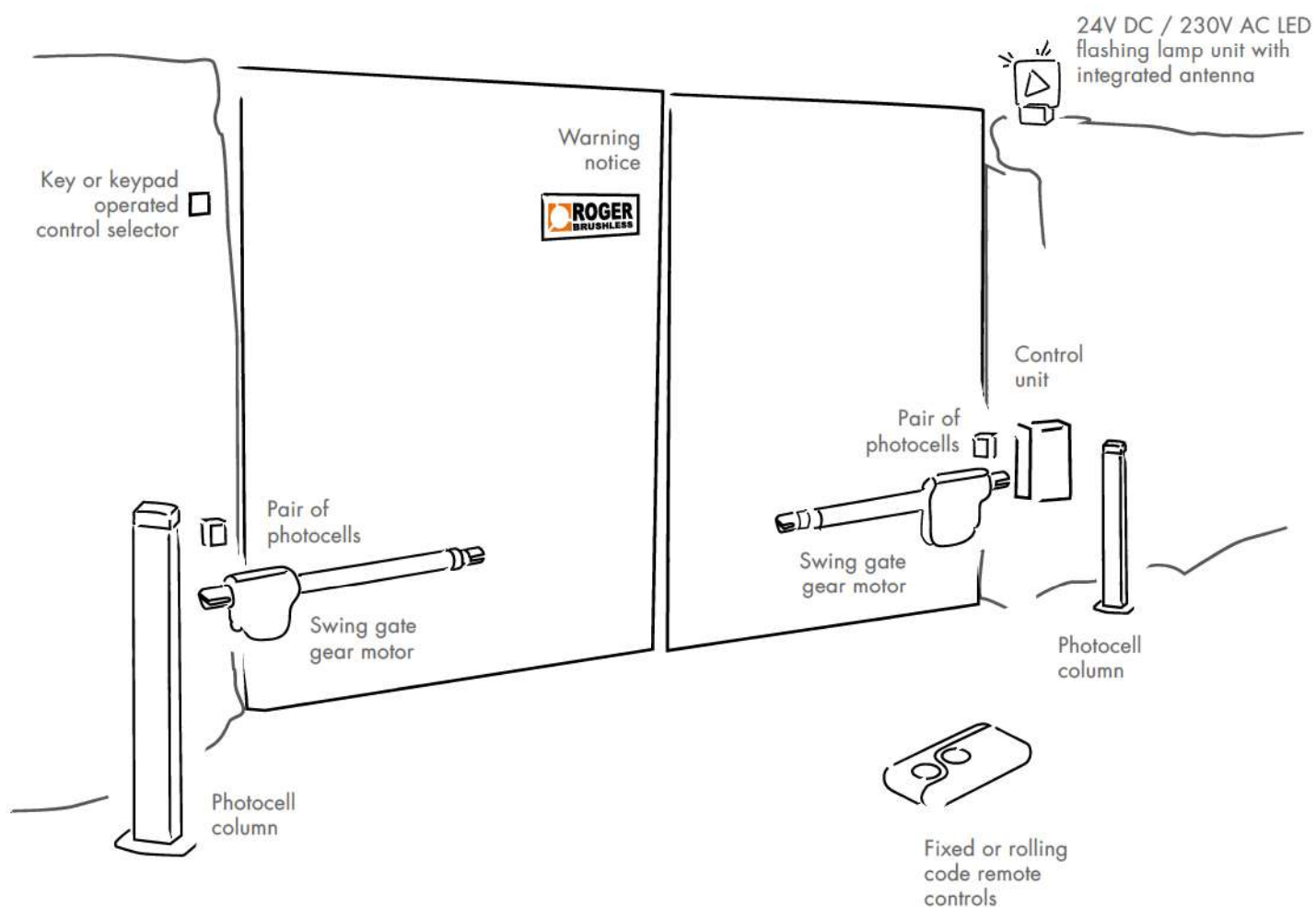
# STANDARD ACCESSORIES

Always included in the individual product package or kit

			<b>MONOS4</b>  <b>MONOS4/200</b>
	<b>KT246</b> Kit of screw-adjustable short rear bracket and front bracket to screw (MONOS4).	✓	✓

# STANDARD INSTALLATION

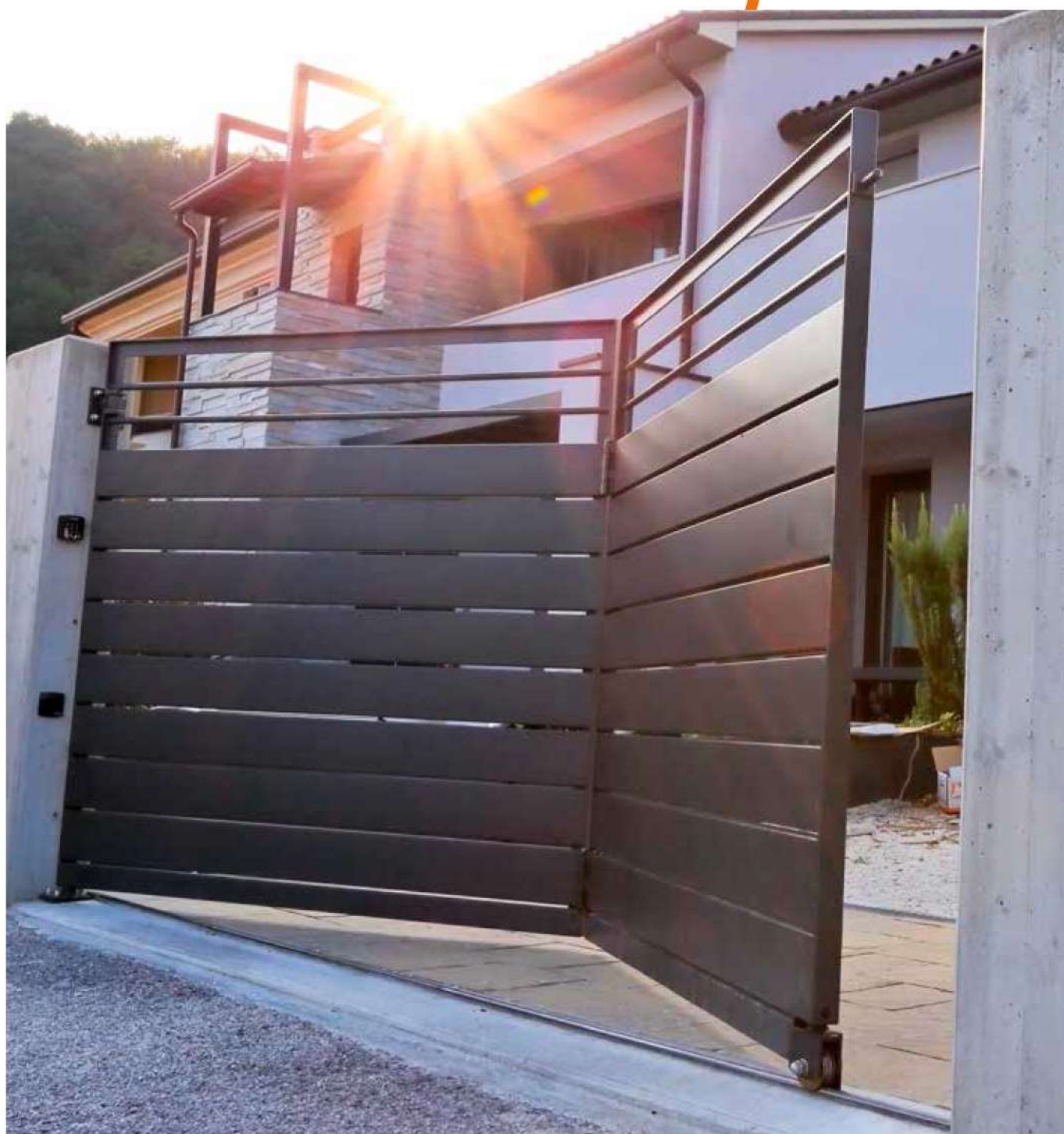
A PRACTICAL EXAMPLE FOR YOUR SUCCESSFUL INSTALLATION







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