



**ROGER**<sup>®</sup>  
BRUSHLESS



## BH30 SERIES

Today's digital intelligence  
moves your gate

Primo Florian: Founding partner - Engineering and design,  
Dino Florian: Founding President - Development and design,  
Renato Florian: Founding partner - Assembly and quality

## PEOPLE AND IDEAS

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, always pushing the boundaries to develop extraordinary products.

## PRODUCT EXPERIENCE

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.



## 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.



as well as 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.

# Motor production

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.



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

### 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.



### 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.



### 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.



### 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.



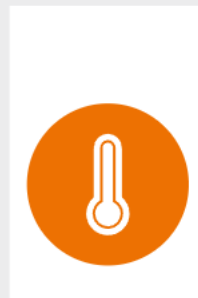
### EXTREMELY LOW ENERGY CONSUMPTION

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. We can move a 600 kg sliding gate and use less than 30W of power.



### 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.



### 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.

# COMPLETELY BRUSHLESS

The revolutionary digital motor with 12 unique features



## 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

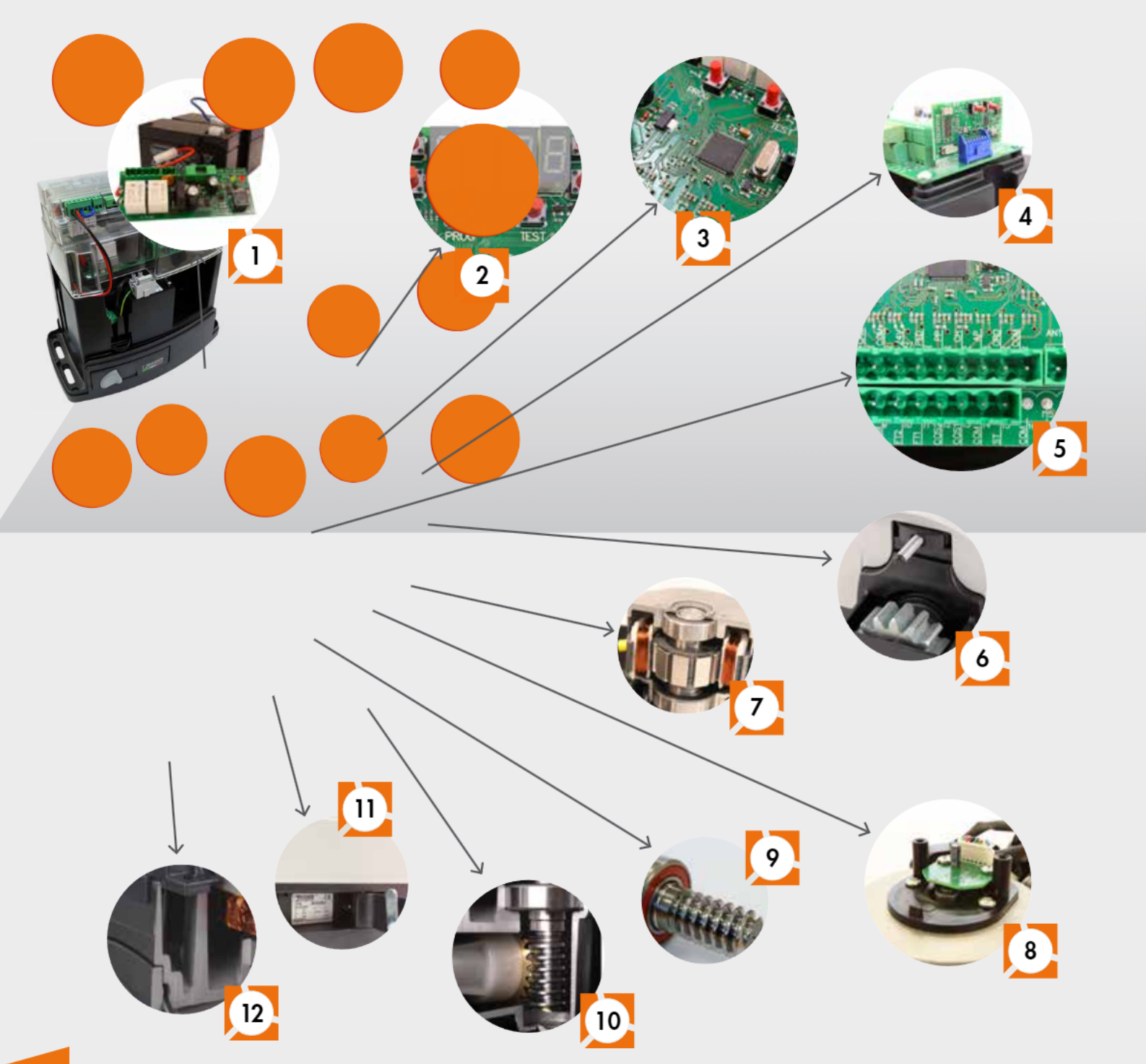
The BRUSHLESS motor can be installed by simply connecting it using three wires! What could be easier? This will provide full digital management of your automation system thanks to the senseless and sensed (absolute encoder) technology incorporated in the BRUSHLESS sliding gate motors.



## 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.

A technology that offers maximum performance but consumes less power than other motors



# WHY BRUSHLESS...?

Digital, smart, powerful,  
elegant, robust  
and all-Italian.



## 1 Standby batteries in the event of power failure

No problem in the event of power failure change to due to the onboard standby batteries with two 12V DC 1.2 a/h batteries and the associated charging card located in a protected position inside the gate operator cover.



## 2 Multifunction digital display

4-quadrant digital display with 6 function keys that allow you to go through the various parameters, change their values, check error messages and input statuses and perform all the self-learning phases.



## 3 Control on DSP microcontroller

Management of the BRUSHLESS motor by connection of a single 3-wire cable, with full digital management of your automation system thanks to the power control technology of the SENSORED motor.



## 4 Plug-in 2-channel radio receiver

Powerful 2-channel radio receiver with up to 500 storable radio controls, available in fixed code or rolling code versions.



## 5 Wide availability of inputs

The digital controller offers a wide range of inputs for management and connection of all accessories and safety devices.



## 6 Limit switch for any installation

The whole range of sliding gate motors in the BH30 series is available with a mechanical limit switch or magnetic limit switch managed by the powerful onboard native digital encoder.



## 7 BRUSHLESS digital 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 power system and available in 24V, 36V and 220V AC versions, the motor is extremely compact and operates at ambient temperature, guaranteeing super-intensive use with extremely low consumption.



## 8 Extremely powerful digital encoder

Thanks to the SENSORED technology and the native encoder in the motor, it is possible to exploit the technology provided by a motor encoder with a computing capacity of 4096 pulses per revolution. An effective power control that allows safe management of the automation system in all its movements, especially in the obstacle detection phases.



## 9 High quality worm gears and bearings

Special worm gears and motor shafts obtained by pressure rolling processes guarantee durability and silence. Use of high-quality ball bearings with double protection.



## 10 High precision engineering

Reducer gears made with only with high quality materials such as aluminium, steel, cast iron and bronze; gears assembled with high-quality double-shielded ball bearings in order to obtain absolute precision between their axes.



## 11 Eccentric aluminium lock release lever

The release lever is made entirely of aluminium with opening by key cylinder. The opening system is based on a very robust and powerful eccentric operating method, and on the principle of the double lever, which unlocks the automation system easily and reliably.



## 12 Reinforced aluminium body

The BH30 body is made completely of aluminium reinforced with titanium. The thicknesses are increased and reinforced in the areas of greatest stress or possible wear. Treatment with epoxy paints to protect the body from the weather.

# Technical SPECIFICATIONS

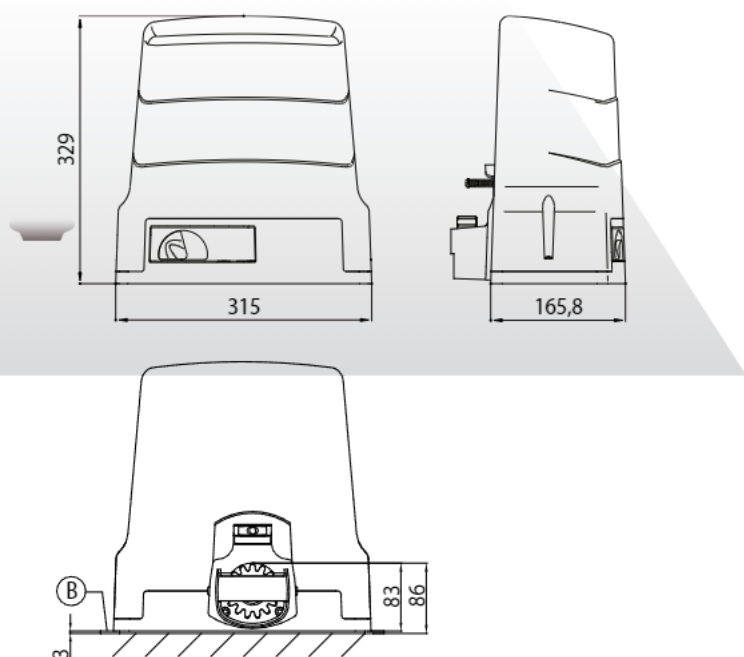
|                                                           | BH30/603                                                                                                                                                                                                                            | BH30/604                                                                                                                                                                                                                          | BH30/803                                                                                                                                                                                                                             | BH30/804                                                                                                                                                                                                                           | BH30/503HS                                                                                                                                                                                                                                 | BH30/504HS                                                                                                                                                                                                                                 |
|-----------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Code Description                                          | Electromechanical BRUSHLESS motor, low voltage, super intensive use, with native encoder onboard, irreversible ideal for sliding gates from 400 Kg to 600 Kg. with built-in digital controller B70 series, mechanical limit switch. | Electromechanical BRUSHLESS motor, low voltage, super intensive use, with native encoder onboard, irreversible ideal for sliding gates from 400 Kg to 600 Kg. with built-in digital controller B70 series, magnetic limit switch. | Electromechanical BRUSHLESS motor, low voltage, super intensive use, with native encoder onboard, irreversible ideal for sliding gates from 800 Kg to 1000 Kg. with built-in digital controller B70 series, mechanical limit switch. | Electromechanical BRUSHLESS motor, low voltage, super intensive use, with native encoder onboard, irreversible ideal for sliding gates from 800 Kg to 1000 Kg. with built-in digital controller B70 series, magnetic limit switch. | Electromechanical BRUSHLESS motor, low voltage, super intensive use, with native encoder onboard, irreversible ideal for sliding gates up to 500 Kg, and high speed, with built-in digital controller B70 series, mechanical limit switch. | Electromechanical BRUSHLESS motor, low voltage, super intensive use, with native encoder onboard, irreversible ideal for sliding gates up to 500 Kg, and high speed, with built-in digital controller B70 series, mechanical limit switch. |
| Max gate weight                                           | from 400 to 600 kg                                                                                                                                                                                                                  | from 400 to 600 kg                                                                                                                                                                                                                | from 800 to 1000 kg                                                                                                                                                                                                                  | from 800 to 1000 kg                                                                                                                                                                                                                | 500 Kg                                                                                                                                                                                                                                     | 500 kg                                                                                                                                                                                                                                     |
| Line power supply                                         | 230V AC - 115V AC 50/60Hz $\pm 10\%$                                                                                                                                                                                                | 230V AC - 115V AC 50/60Hz $\pm 10\%$                                                                                                                                                                                              | 230V AC - 115V AC 50/60Hz $\pm 10\%$                                                                                                                                                                                                 | 230V AC - 115V AC 50/60Hz $\pm 10\%$                                                                                                                                                                                               | 230V AC - 115V AC 50/60Hz $\pm 10\%$                                                                                                                                                                                                       | 230V AC - 115V AC 50/60Hz $\pm 10\%$                                                                                                                                                                                                       |
| Brushless motor power supply                              | 24V                                                                                                                                                                                                                                 | 24V                                                                                                                                                                                                                               | 24V                                                                                                                                                                                                                                  | 24V                                                                                                                                                                                                                                | 24V                                                                                                                                                                                                                                        | 24V                                                                                                                                                                                                                                        |
| Rated power                                               | 130W                                                                                                                                                                                                                                | 130W                                                                                                                                                                                                                              | 200W                                                                                                                                                                                                                                 | 200W                                                                                                                                                                                                                               | 200W                                                                                                                                                                                                                                       | 200W                                                                                                                                                                                                                                       |
| Frequency of use                                          | Super Intensive                                                                                                                                                                                                                     | Super Intensive                                                                                                                                                                                                                   | Super Intensive                                                                                                                                                                                                                      | Super Intensive                                                                                                                                                                                                                    | Super Intensive                                                                                                                                                                                                                            | Super Intensive                                                                                                                                                                                                                            |
| Operating temperature                                     | -20 +55°C                                                                                                                                                                                                                           | -20 +55°C                                                                                                                                                                                                                         | -20 +55°C                                                                                                                                                                                                                            | -20 +55°C                                                                                                                                                                                                                          | -20 +55°C                                                                                                                                                                                                                                  | -20 +55°C                                                                                                                                                                                                                                  |
| Degree of protection                                      | IP43                                                                                                                                                                                                                                | IP43                                                                                                                                                                                                                              | IP43                                                                                                                                                                                                                                 | IP43                                                                                                                                                                                                                               | IP43                                                                                                                                                                                                                                       | IP43                                                                                                                                                                                                                                       |
| Speed of operation                                        | 0,16 m/sec                                                                                                                                                                                                                          | 0,16 m/sec                                                                                                                                                                                                                        | 0,16 m/sec                                                                                                                                                                                                                           | 0,16 m/sec                                                                                                                                                                                                                         | 0,44 m/sec                                                                                                                                                                                                                                 | 0,44 m/sec                                                                                                                                                                                                                                 |
| Thrust                                                    | 50 - 600 N                                                                                                                                                                                                                          | 50 - 600 N                                                                                                                                                                                                                        | 50 - 1000 N                                                                                                                                                                                                                          | 50 - 1000 N                                                                                                                                                                                                                        | 50 - 500 N                                                                                                                                                                                                                                 | 50 - 500 N                                                                                                                                                                                                                                 |
| Encoder                                                   | Digital native encoder                                                                                                                                                                                                              | Digital native encoder                                                                                                                                                                                                            | Digital native encoder                                                                                                                                                                                                               | Digital native encoder                                                                                                                                                                                                             | Digital native encoder                                                                                                                                                                                                                     | Digital native encoder                                                                                                                                                                                                                     |
| Limit switch type                                         | Mechanical with microswitch                                                                                                                                                                                                         | Magnetic                                                                                                                                                                                                                          | Mechanical with microswitch                                                                                                                                                                                                          | Magnetic                                                                                                                                                                                                                           | Mechanical with microswitch                                                                                                                                                                                                                | Magnetic                                                                                                                                                                                                                                   |
| Onboard control unit                                      | B70/1DC                                                                                                                                                                                                                             | B70/1DC                                                                                                                                                                                                                           | B70/1DC                                                                                                                                                                                                                              | B70/1DC                                                                                                                                                                                                                            | B70/1DC                                                                                                                                                                                                                                    | B70/1DC                                                                                                                                                                                                                                    |
| Daily operation cycles (open / close - 24 hours non-stop) | 1300                                                                                                                                                                                                                                | 1300                                                                                                                                                                                                                              | 1300                                                                                                                                                                                                                                 | 1300                                                                                                                                                                                                                               | 800                                                                                                                                                                                                                                        | 800                                                                                                                                                                                                                                        |
| Packaged product weight                                   | 11,2 kg                                                                                                                                                                                                                             | 11,2 kg                                                                                                                                                                                                                           | 11,2 kg                                                                                                                                                                                                                              | 11,2 kg                                                                                                                                                                                                                            | 11,2 kg                                                                                                                                                                                                                                    | 11,2 kg                                                                                                                                                                                                                                    |
| Release                                                   | Eccentric lever with key cylinder                                                                                                                                                                                                   | Eccentric lever with key cylinder                                                                                                                                                                                                 | Eccentric lever with key cylinder                                                                                                                                                                                                    | Eccentric lever with key cylinder                                                                                                                                                                                                  | Eccentric lever with key cylinder                                                                                                                                                                                                          | Eccentric lever with key cylinder                                                                                                                                                                                                          |
| Rack module                                               | 4                                                                                                                                                                                                                                   | 4                                                                                                                                                                                                                                 | 4                                                                                                                                                                                                                                    | 4                                                                                                                                                                                                                                  | 4                                                                                                                                                                                                                                          | 4                                                                                                                                                                                                                                          |
| Number of packages per pallet                             | 44                                                                                                                                                                                                                                  | 44                                                                                                                                                                                                                                | 44                                                                                                                                                                                                                                   | 44                                                                                                                                                                                                                                 | 44                                                                                                                                                                                                                                         | 44                                                                                                                                                                                                                                         |



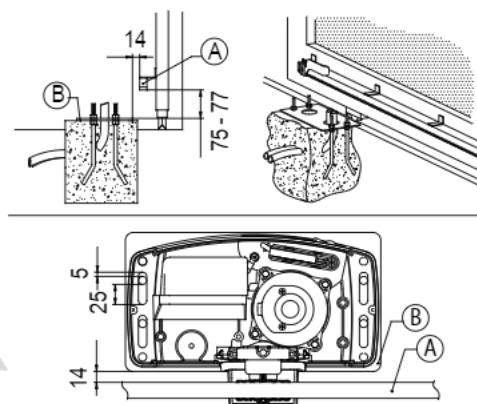
# FUNCTIONS of automated swing gate motor

| DESCRIPTION                                                              | BH30/603 - BH30/604                                                            | BH30/803 - BH30/804                                                            | BH30/503HS - BH30/504HS                                                        |
|--------------------------------------------------------------------------|--------------------------------------------------------------------------------|--------------------------------------------------------------------------------|--------------------------------------------------------------------------------|
| Max gate weight                                                          | from 400 kg to 600 Kg                                                          | from 800 kg to 1000 Kg                                                         | up to a 500 kg                                                                 |
| Onboard digital controller                                               | B70/1DC                                                                        | B70/1DC                                                                        | B70/1DC                                                                        |
| Radio receiver type                                                      | H93/RX22A/I with fixed code connectionH93/RX2RC/I with rolling code connection | H93/RX22A/I with fixed code connectionH93/RX2RC/I with rolling code connection | H93/RX22A/I with fixed code connectionH93/RX2RC/I with rolling code connection |
| Motor power supply                                                       | 24V DC                                                                         | 24V DC                                                                         | 24V DC                                                                         |
| Motor management technology (ETC)                                        | SENSORED technology                                                            | SENSORED technology                                                            | SENSORED technology                                                            |
| Encoder type                                                             | Magnetic Digital SENSORED, 4096 pulses per revolution                          | Magnetic Digital SENSORED, 4096 pulses per revolution                          | Magnetic Digital SENSORED, 4096 pulses per revolution                          |
| Mains power supply                                                       | 230V 50/60 Hz                                                                  | 230V 50/60 Hz                                                                  | 230V 50/60 Hz                                                                  |
| Battery operation                                                        | (optional) 2 internal batteries 12V DC, 1.2 a/h                                | (optional) 2 internal batteries 12V DC, 1.2 a/h                                | (optional) 2 internal batteries 12V DC, 1.2 a/h                                |
| Energy consumption                                                       | Very low consumption                                                           | Very low consumption                                                           | Very low consumption                                                           |
| Number of motors                                                         |                                                                                |                                                                                |                                                                                |
| Power supply for accessories                                             | 24V DC                                                                         | 24V DC                                                                         | 24V DC                                                                         |
| Flashing light type                                                      | 24V DC LED                                                                     | 24V DC LED                                                                     | 24V DC LED                                                                     |
| Output for gate opening indicator and automation system on warning light | ✓                                                                              | ✓                                                                              | ✓                                                                              |
| Output for courtesy light                                                | 40W                                                                            | 40W                                                                            | 40W                                                                            |
| Timed and guaranteed automatic closing                                   | ✓                                                                              | ✓                                                                              | ✓                                                                              |
| Gate edge safety management, 8.2KΩ or standard                           | ✓                                                                              | ✓                                                                              | ✓                                                                              |
| Limit switch type                                                        | Mechanical - Magnetic                                                          | Mechanical - Magnetic                                                          | Mechanical - Magnetic                                                          |
| Force adjustment in nominal movement                                     | ✓                                                                              | ✓                                                                              | ✓                                                                              |
| Force adjustment in start-up and deceleration                            | ✓                                                                              | ✓                                                                              | ✓                                                                              |
| Obstacle detection (also in position recovery mode) - Motor reversal     | ✓                                                                              | ✓                                                                              | ✓                                                                              |
| Speed adjustment                                                         | ✓                                                                              | ✓                                                                              | Regolabile separatamente in apertura e in chiusura                             |
| Deceleration                                                             | ✓                                                                              | ✓                                                                              | Regolabile separatamente in apertura e in chiusura                             |
| Gestione punto di partenza rallentamento                                 |                                                                                |                                                                                | ✓                                                                              |
| Starting acceleration (soft-start)                                       | ✓                                                                              | ✓                                                                              | Regolabile separatamente in apertura e in chiusura                             |
| Guaranteed closing                                                       | ✓                                                                              | ✓                                                                              | ✓                                                                              |
| Stopping space and motor braking                                         | ✓                                                                              | ✓                                                                              | ✓                                                                              |
| Partial opening control                                                  | Pedestrian entry                                                               | Pedestrian entry                                                               | Pedestrian entry                                                               |
| Human presence control                                                   | ✓                                                                              | ✓                                                                              | ✓                                                                              |
| Condominium function                                                     | ✓                                                                              | ✓                                                                              | ✓                                                                              |
| Safety device configuration                                              | ✓                                                                              | ✓                                                                              | ✓                                                                              |
| Installation test function                                               | (prog button)                                                                  | (prog button)                                                                  | (prog button)                                                                  |
| Operating temperature                                                    | -20°C/+55°C                                                                    | -20°C/+55°C                                                                    | -20°C/+55°C                                                                    |
| Inverter thermal protection                                              | ✓                                                                              | ✓                                                                              | ✓                                                                              |
| Restore factory default values                                           | ✓                                                                              | ✓                                                                              | ✓                                                                              |
| Information on use of motor                                              | ✓                                                                              | ✓                                                                              | ✓                                                                              |
| Security password management                                             | ✓                                                                              | ✓                                                                              | ✓                                                                              |

# Dimensions



# preparations for standard installation



A = Rack  
B = Fastening plate (thickness 3mm)

Note: All measurements in the drawings are in millimetres

## kit

### KIT BH30/605

Sliding gates from  
400 Kg to 600 Kg,  
mechanical limit switch

### KIT BH30/606

sliding gates from  
400 Kg to 600 Kg,  
magnetic limit switch

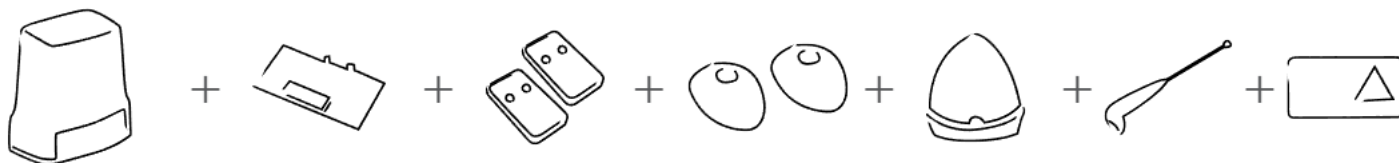
### KIT BH30/805

sliding gates from  
800 Kg to 1000 Kg,  
mechanical limit switch

### KIT BH30/806

sliding gates from  
800 Kg to 1000 Kg,  
magnetic limit switch

# Contents of standard BH30 swing gate motor kit



2 swing gate motors

1 radio receiver  
with 2 fixed code  
channels, H93  
series

2 fixed code  
remote control  
units with copy-  
ing function, E80  
series

1 pair of  
photocells,  
R90 series

1 flashing light  
LED 24V DC

1 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)

# ACCESSORIES

BH30 everything you need for a complete, professional installation.

## OPTIONAL ACCESSORIES



KT214/SC

Adapter plate complete with tie-rods and screws for H30 series



GA553

Nylon rack, module 4, 6 attachments, length 1000



KT221

Raised fastening plate for H30 series



GA554

Pack of 6 spacers with screws



GA550

Steel rack 22x22x1000, galvanised, module 4



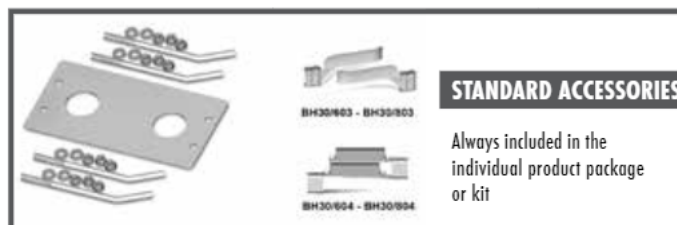
R99/C/001

"Automatic Opening" warning notice



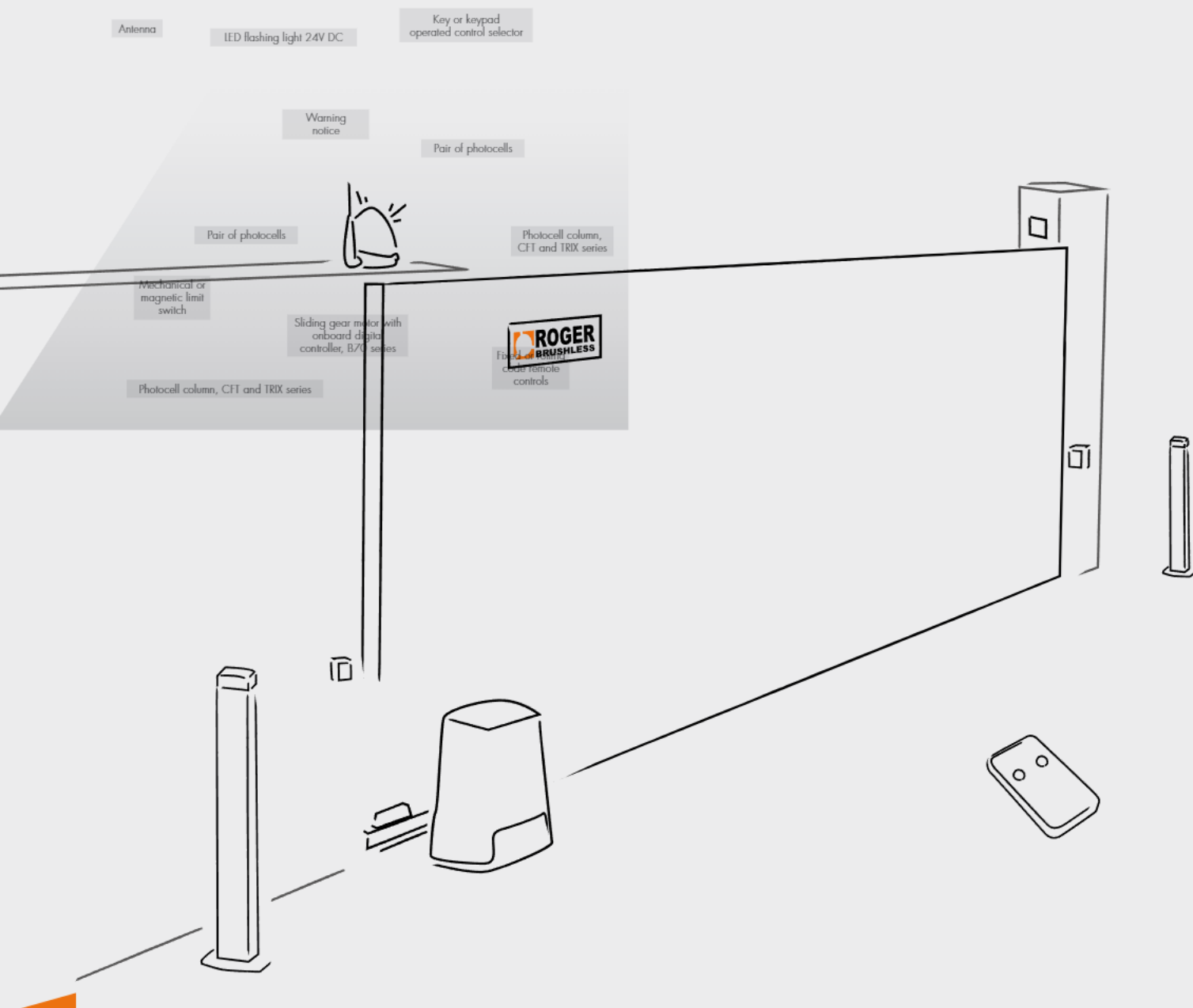
GA551

Steel rack 30x12x1000, galvanised, module 4, complete with spacers and screws



## STANDARD ACCESSORIES

Always included in the individual product package or kit



# STANDARD INSTALLATION

A practical example  
for your successful



# BH30 HG-SPEED

## nuovo è digitale!

**100%**  
PIÙ VELOCE

**GESTISCI TU**  
SEPARATAMENTE VELOCITÀ  
IN APERTURA E CHIUSURA

**GESTISCI TU**  
SEPARATAMENTE  
RALLENTAMENTO E ACCELERAZIONE  
IN APERTURA E CHIUSURA

**DECIDI TU**  
PUNTO DI PARTENZA  
DEL RALLENTAMENTO  
E DELLA VELOCITÀ

WWW.WEAREBRUSHLESS.COM



PREMIUM DEALER / RIVENDITORE

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