



BIONIK

The BRUSHLESS
automated barrier
with digital thinking

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.



Internal assembly

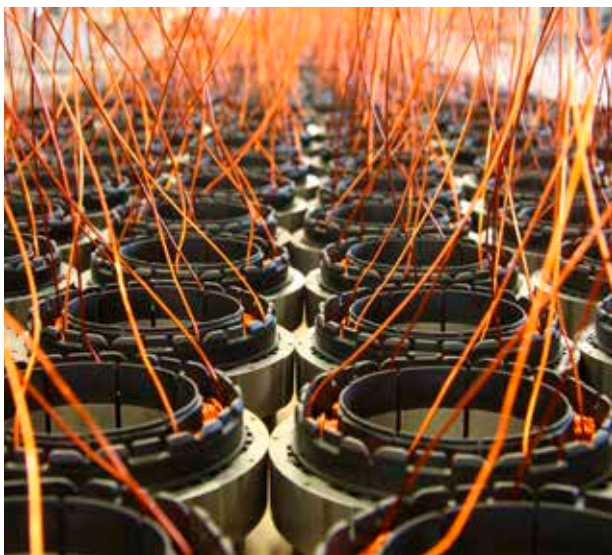
Our highly qualified and dedicated staff oversee the fitting and assembly stages. Every piece of equipment is checked by our all Italian personnel to ensure that we deliver reliable products to our customers.



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

Innovative, revolutionary Brushless digital motor with permanent magnetic field, 36V three-phase sinusoidal with native encoder that permits highly intensive use of the automation with extremely reduced consumption, whilst at the same time fully guaranteeing all its safety and management functions.

New Generation of Electronics

The new control unit with onboard Brushless digital controller (36V DC). Without traditional relays and thanks to its revolutionary MOSFET quadrant system and its control technology entirely based on a DSP microcontroller, it represents a new generation of electronic cards created to safely handle every type of automation movement.

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 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.



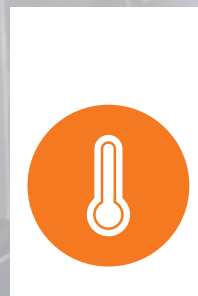
EXTREMELY LOW ENERGY CONSUMPTION

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.

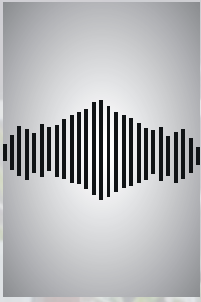


MOTOR AT AMBIENT TEMPERATURE

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

And the BRUSHLESS motor can be installed by simply connecting it using a single 3-wire cable! What could be easier? This will provide fully digital management of your automation system thanks to sensorless or sensed technology depending on the type of automation system.



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

BIONIK, EQUAL ONLY TO ITSELF

1

Digital 36V BRUSHLESS motor

Innovative, revolutionary 36V Brushless digital motor with permanent magnetic field and a SENSORED digital technology encoder that permits unlimited use of the barrier with extremely reduced consumption and a mechanical absolute positioning system.

2

Advanced digital controller

Easy to access, thanks to its position in the upper part of the barrier, well protected in the basket containing all the electronics, transformer compartment and support batteries. The digital controller ensures total, accurate management.

3

Gear motor with perfect gears

The gear motor is a mechanical jewel made entirely of aluminium, steel and bronze. All the gears are helicoidal with a 15° tilt, assembled on top quality bearings and inserted in perfectly machined seats to guarantee the absolute precision of the gear axes.

4

Small but highly resistant structure

The materials employed - steel and bronze - are top quality to ensure optimum robustness for the automation, making it highly stable during use. A vital role is also played by the surface treatment and the types of varnish, designed to make the barrier structure particularly resistant to a wide range of atmospheric agents.

8

BRUSHLESS BECAUSE

Robust and elegant, for the access to condominiums, commercial premises, industrial sites and residential areas.

5

Linkage lever and springs

Different types of spring are available, according to the length of the boom and certified for millions of manoeuvres. Mechanical linkage lever with adjustable mechanical stops.

6

LED lighting

Elegant LED lighting circuit all over the aluminium head of the barrier column. Can be configured via the control unit.

7

Absolute mechanical positioner

Powerful, innovative and accurate encoder with absolute positioning, mounted on the slow reducer shaft. Allows movements to be managed in tenths of a degree, and ensures perfect automation restart without relearning after the blackout or manual release phases.

8

Robust, elliptic boom

Aluminium boom with an elliptical section providing greater wind resistance, and central ribbing for even greater stability and robustness. Integrated error alert LED on the upper side. Can be configured via the control unit.

9

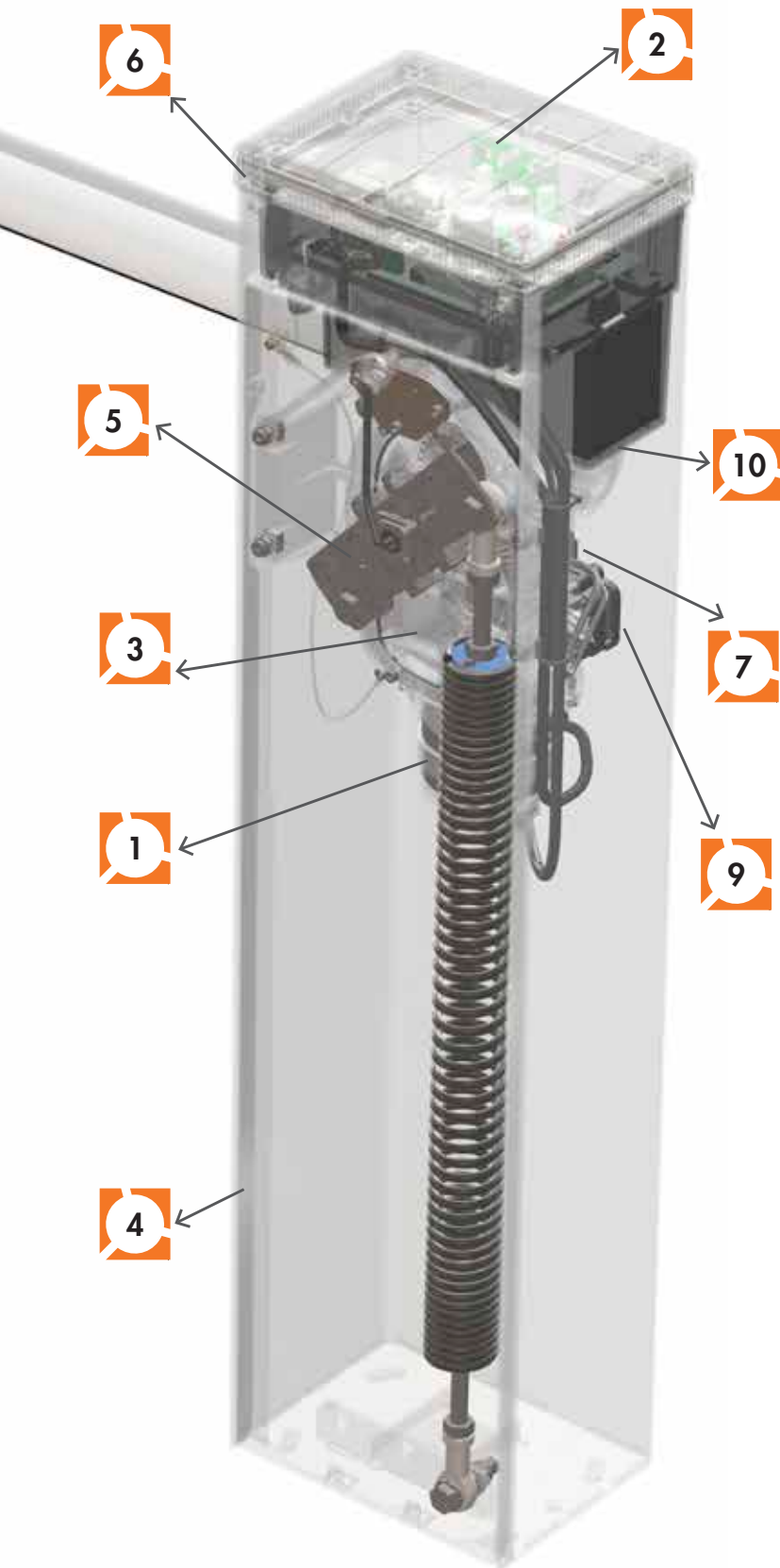
Robust, innovative release

Mechanical manual release with cylinder lock, able to unlock the barrier in any situation thanks to its excellent mechanics based on a twin-acting elliptical lever.

10

Bionic boom support arm

Bionic support and protection arm in die-cast aluminium, directly connected to the reducer via a special system for pre-reducing the mechanical stress of the mechanical boom movement.



ACCESSORIES

BIONIK BARRIER

OPTIONAL ACCESSORIES

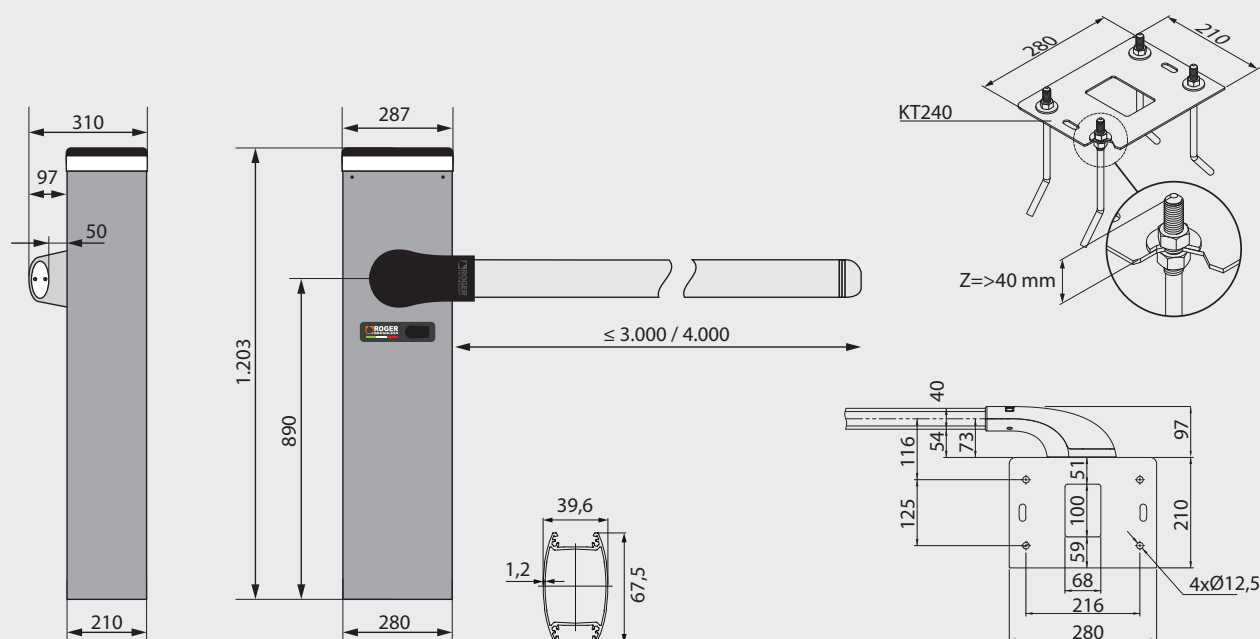
	BI/BA3/01	Elliptical boom up to 3 m, in white painted aluminium with slot cover profiles and shock-resistant rubber and terminal cap		AG/BAFS/03
	BI/BA4/01	Elliptical boom up to 4 m, in white painted aluminium with slot cover profiles and shock-resistant rubber and terminal cap		AG/BAFS/02
	AG/SP48/01	Spring Ø48 for barrier (green colour)		AG/BAFS/04
	AG/SP61/01	Spring Ø61 for barrier (blue colour)		AG/BAFS/05
	AG/SP72/01	Spring Ø72 for barrier (red colour)		AG/BAMS/01
	BI/ALED4C	Luminous led cord of 4 meters for bar up to 4 meters with connection cable		BI/BAJ/02
	AG/BAFS/01	Fixed end rest, non-adjustable, with rubber buffer		BI/BAJ/03

Fixed end rest with rubber, non-adjustable, with holes for a latch chain and rubber bufer		AG/BARK/02	Painted aluminium rack for bar L=2 m lenght
Fixed end rest with rubber, adjustable, telescopic with rubber bufer		DLD1/24	Loop detector for 1 loop, 2 output, 24V AC/DC
Fixed end rest with rubber, adjustable, telescopic with holes for a latch chain and rubber bufer		DLD2/24	Loop detector for 2 loop, 2 output + output alarm, 24V AC/DC
Fixed end rest with rubber, adjustable, telescopic with rubber bufer and integrated magnet 250 kg		BI/BAT/KIT	Emergency battery kit complete with battery charger, wiring and 2 recovery batteries 4,5 Ah
Hinged end rest for booms		AG/EXP	Signal status board, 2 output
Joint with 90° pivot point with lower tie-od		KT239	DIN bar kit with magnetic supports
Joint with 90° pivot point with upper tie-od		AG/BASB40	Package of 40 refractie adhesive strips for the boom

Technical SPECIFICATIONS

	BI/004
Code Description	BRUSHLESS 36V DC Barrier
Asta	up to 4 m
Line power supply	230V AC - 115V AC 50/60Hz +10%
Brushless motor power supply	36V
Max power	220W
Frequency of use	Continuous
Operating temperature	-20 +55°C
Degree of protection	IP54
Open time 90° (with boom up to 3 m)	From 2 to 6 s
Open time 90° (with boom up to 4 m)	From 3 to 6 s
Encoder	Absolute digital encoder
Typology encoder	Digital SENSORED
Onboard control unit	AG/CTRL (since firmware version r3.25)
Daily operation cycles (open / close - 24 hours non-stop)	5000
Packaged product weight	47 kg
Dimensions	287 x 310 x 1.203 (L x P x H)
Release	Handle with a twin-acting elliptical lever and key with a STANDARD cylinder
Number of packages per pallet	8

DIMENSIONS



FUNCTIONS

of the BIONIK barrier

DESCRIPTION	BI/004
Onboard digital controller	AG/CTRL (since firmware version r3.25)
Radio receiver type	H93/RX22A/I with fixed code connection H93/RX2RC/I with rolling code connection
Motor power supply	36V DC
Motor management technology (ETC)	SENSORED technology
Encoder type	Magnetic Digital SENSORED, 4096 pulses per revolution
Mains power supply	230V 50/60 Hz
Battery operation	(optional) 2 internal batteries 12V DC 4,5 A/h
Energy consumption	Very low consumption
Number of motors	1
Power supply for accessories	24V DC
Flashing light barrier type (included)	24V DC LED
Flashing light boom type	24V DC LED - Strip led, lenght 4 m
Output for barrier opening indicator and automation System on warning light	✓
Output for courtesy light	40W
Timed and guaranteed automatic closing	✓
Gate edge safety management, 8.2KΩ or standard	✓
Limit switch type	Adjustable open and closed position Mechanical travel limits
Force adjustment in nominal movement	✓
Force adjustment in start-up and deceleration	✓
Obstacle detection (also in position recovery mode) - Motor reversal	✓
Opening and closing speed setting	✓
Deceleration during opening and closing	✓
Opening and closing approach distance setting	✓
Starting acceleration (soft-start) for opening And closing manoeuvres	✓
Safeguarded closure/opening function	✓
Stopping space and motor braking	✓
Partial opening control MASTER / SLAVE mode	✓
Human presence control	✓
Condominium function	✓
Safety device configuration	✓
Installation test function	(prog button)
Operating temperature	-20°C/+55°C
Inverter thermal protection	✓
Magnetic electro-lock management	(optional) ✓
Detector loop management	(optional) ✓
Clock function (included)	✓
Parking access mode function (included)	✓
External status type output setting	(optional) ✓
Restore factory default values	✓
Information on use of motor	✓
Security password management	✓

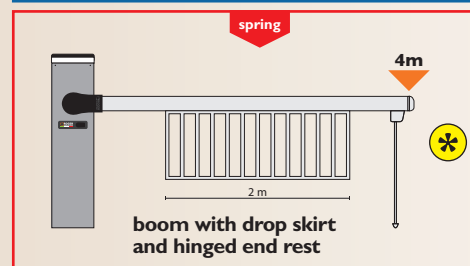
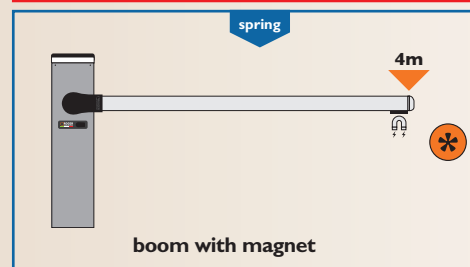
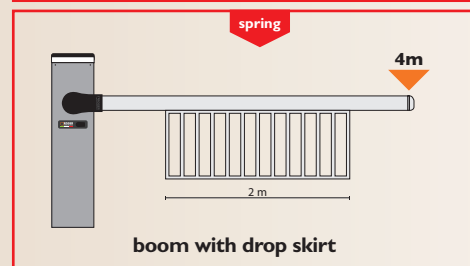
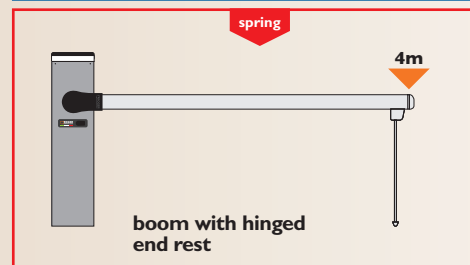
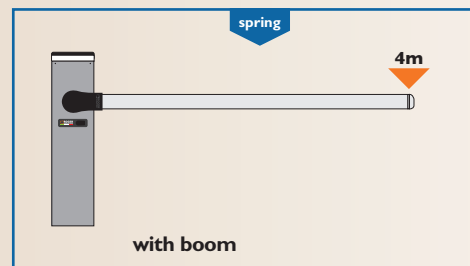
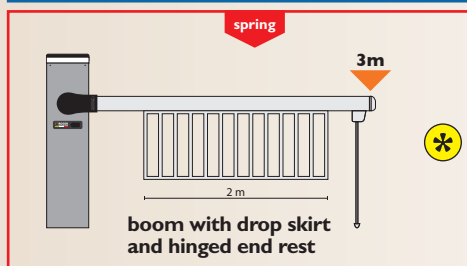
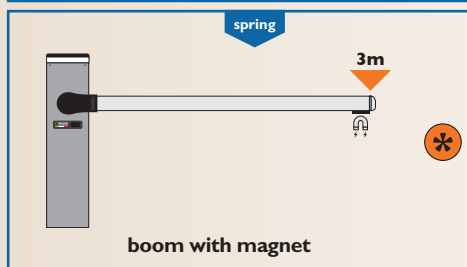
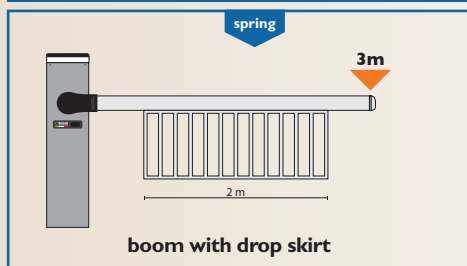
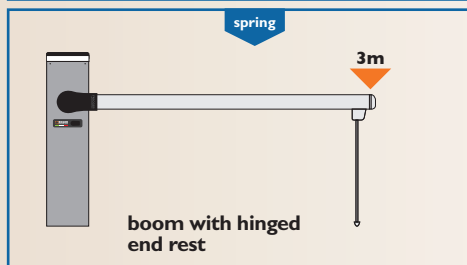
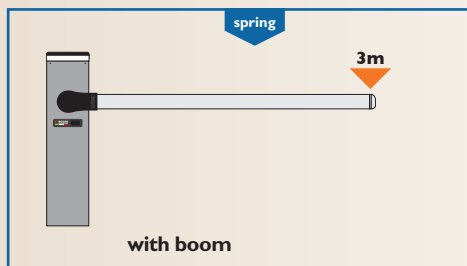
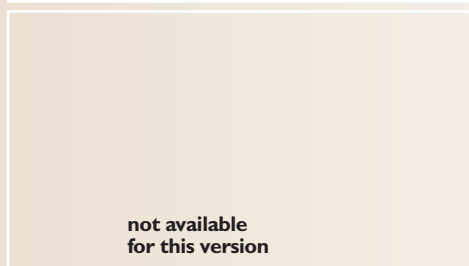
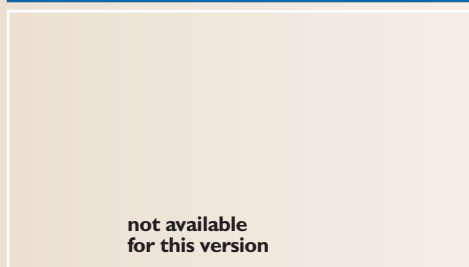
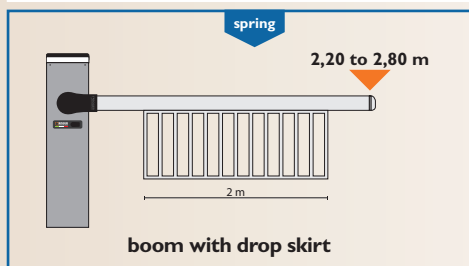
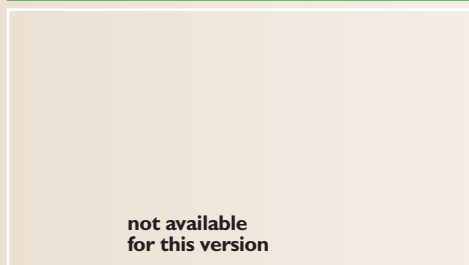
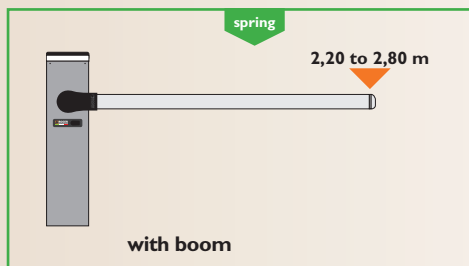


Bionik CONFIGURATIONS

Parking version boom
from 2,20 to 2,80 m

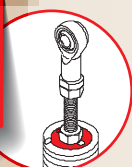
boom up to 3m

boom up to 4m

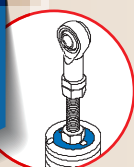


choice of spring

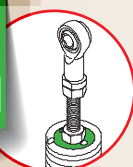
AG/SP72/01



AG/SP61/01



AG/SP48/01



Parking version boom
from 2,20 to 2,80 m

boom up to 3m

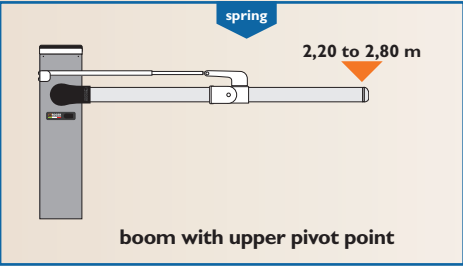
boom up to 4m

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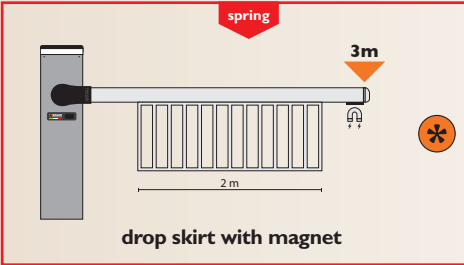
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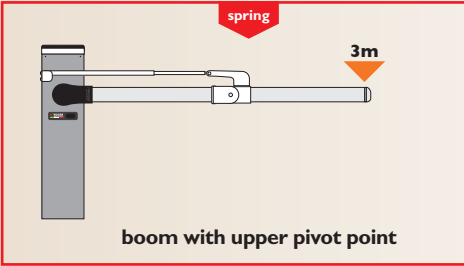
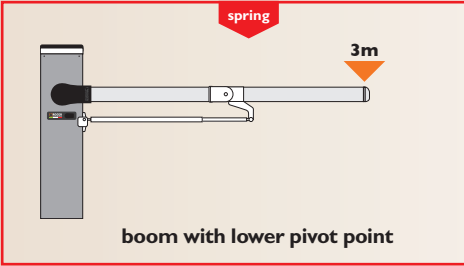


i all the booms are complete with protective rubber and strip LED already put in

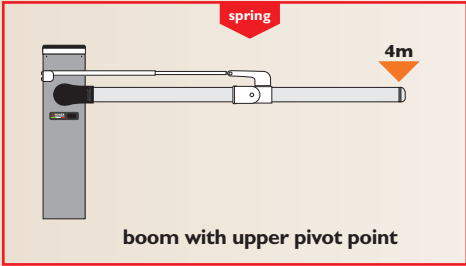
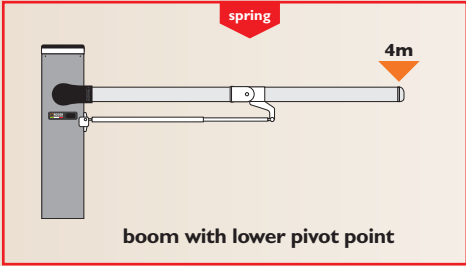
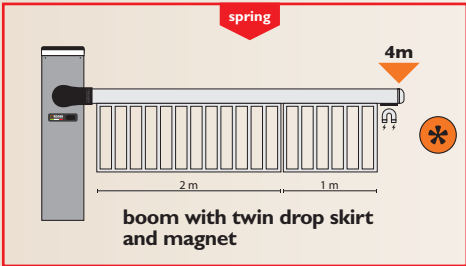
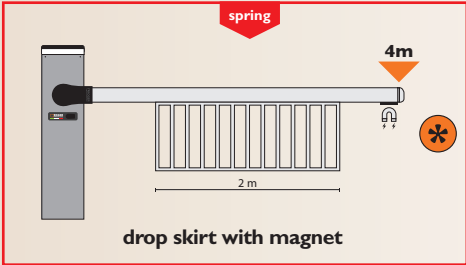
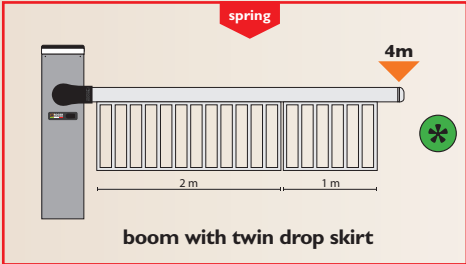
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- * The adjustable fixed end rest with integrated magnet AG/BAFS/05 must be used
- * With compulsory fixed end rest



- * Configuration only possible if the drop skirt is installed as close as possible to the cabinet

WWW.WEAREBRUSHLESS.COM



PREMIUM DEALER / AUTHORISED DEALER



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