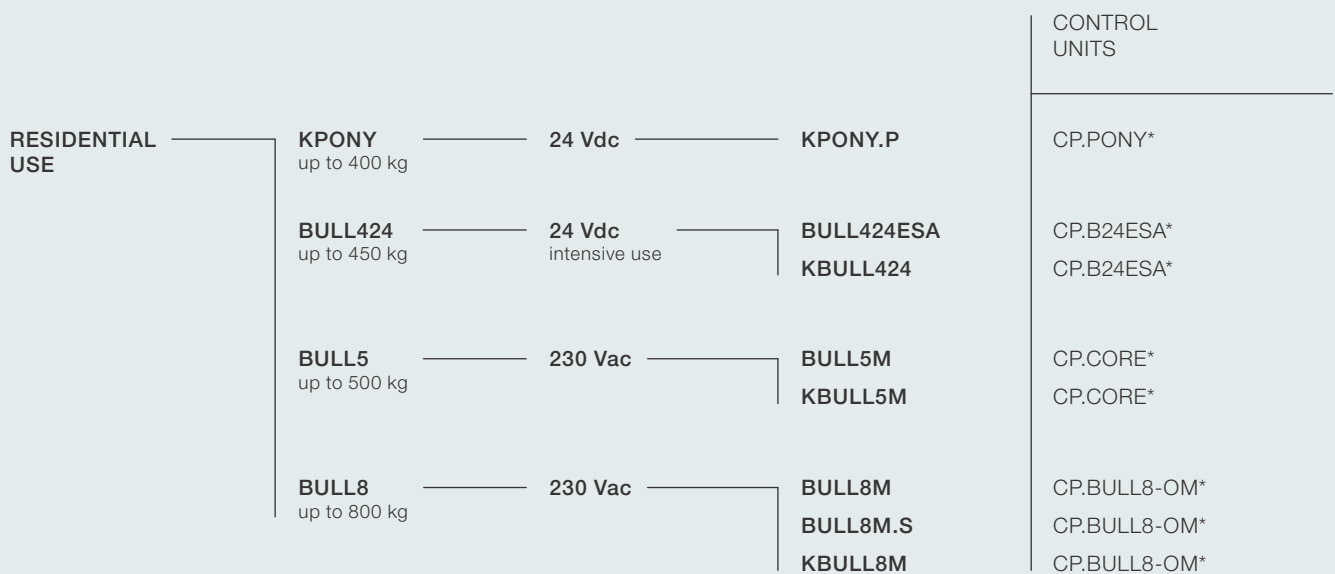




AUTOMATIONS FOR SLIDING GATES





				CONTROL UNITS
COMMERCIAL USE	BULL624 up to 600 kg	24 Vdc intensive use	BULL624ESA	CP.B24ESA*
			BULL624ESA.S	CP.B24ESA*
			BULL624TURBO	CP.B24 TURBO*
			BULL624TURBO.S	CP.B24 TURBO*
			KBULL624	CP.B24ESA*
			KBULL624TURBO	CP.B24 TURBO*
BULL8 up to 800 kg	230 Vac	BULL8 OM	CP.BULL8-OM*	
		BULL8 OM.S	CP.BULL8-OM*	
		KBULL8 OM	CP.BULL8-OM*	
BULL10 up to 1,000 kg	230 Vac	BULL10M	CP.BULL-RI*	
		BULL10M.S	CP.BULL-RI*	
BULL12 up to 1,200 kg	24 Vdc	BULL1224TURBO	CP.B24 TURBO*	
		BULL1224TURBO.S	CP.B24 TURBO*	
BULL15 up to 1,500 kg	230 Vac	BULL15M	CP.BULL-RI*	
		BULL15M.S	CP.BULL-RI*	
		KBULL15M.S-HM	CP.BULL-RI*	
BULL15 up to 1,500 kg	24 Vdc intensive use	BULL1524	CP.B1524	
		BULL1524.S	CP.B1524	
BULL17 up to 1,700 kg	230 Vac	BULL17 OMI	CP.BULL OMI*	

				CONTROL UNITS
INDUSTRIAL USE	BULL20 up to 2,000 kg	230 Vac	BULL20M	CP.BULL-RI*
			BULL20M.S	CP.BULL-RI*
			BULL20 HE	CP.BULL20-HE*
BULL20 up to 2,000 kg	400 Vac intensive use	BULL20T	THINKY START	
		BULL20T.S	THINKY START	
YAK25 up to 2,500 kg	230 Vac three-phase intensive use	YAK25 OTI	CP.YAK OTI*	
BISON25 up to 2,500 kg	230 Vac three-phase intensive use	BISON25 OTI	CP.BISON OTI*	
BISON35 up to 3,500 kg	230 Vac three-phase intensive use	BISON35 OTI	CP.BISON OTI*	
		BISON35 OTI L	CP.BISON OTI L*	
BISON45 up to 4,500 kg	400 Vac intensive use	BISON45 OTI	CP.BISON OTI*	

* Built-in control unit



24VDC

KPONY



CONTROL UNITS:

PONY ————— CP.PONY 161



RESIDENTIAL USE

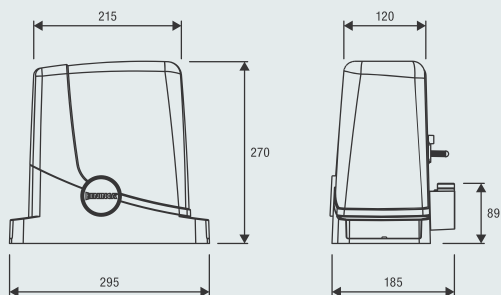
with integrated control unit and receiver

up to 400 kg



24 Vdc | intensive use

- 24 Vdc geared motor with built-in control unit and energy saving ESA SYSTEM
- Amperometric sensor obstacle detection system to prevent crushing
- Battery back up system ready
- The control unit is positioned in such a way as to make programming operations simple, easy and immediate



COMPLETE KITS

KPONY.P



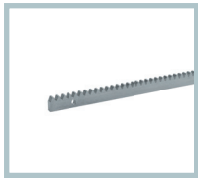
MOTOR
1x **PONY**



PHOTOCELLS
1x **PUPILLA.R**

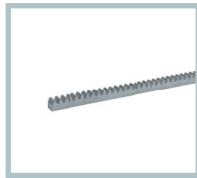


TRANSMITTER
1x **TO.GO2VA**



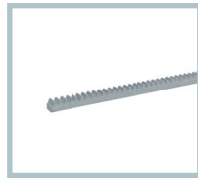
RI.M4F

M4 rack, to weld or attach with screws, 30x12x1000 mm slotted and galvanised. Supplied with M6 metric screws and threaded spacers.
Package of 4 pcs.



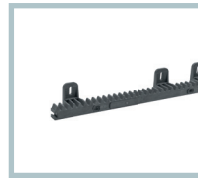
RI.M4Z

M4 galvanised rack to weld 22x22x2000 mm.
Package of 2 pcs.



RI.M4ZF

Galvanised slotted M4 rack 22x22x2010 mm for fastening to the side with the teeth. Supplied with M6 screws.
Package of 1 pc.



RI.M4P

Nylon rack with steel core, to attach with screws, M4, 28x40x1000 mm. Slotted, provided with self-drilling screws.
Package of 10 pcs.



MLS

Magnetic limit switches. Suitable for snowy places.



ID.TA

Warning board.



IRI.TX4VA

4-channel transmitter with Advanced Rolling Code and Rolling Code.



IRI.TX4AK

4-channel transmitter with Advanced Rolling Code and Fixed Code.



IRI.LAMP

White full range flashing light, 20-255 VAC with built-in aerial.



IRI.KPAD

Battery operated wireless vandal-proof digital keypad with alert buzzer and backlit buttons. Triple coding: Rolling Code, Programmable Code and Advanced Rolling Code. 254 memorisable codes.



IRI.CELL

Pair of vandal-proof metal covers for PUPILLA/PUPILLA.R photocells, comprising front and rear shells with concealed screw. They can maintain perfect orientation over 180°.



PUPILLA

Pair of photocells adjustable to 180°. Option to synchronise up to 4 pairs, 24 VAC/DC power supply. Easy adjustment through a LED that signals optimal alignment. Compact size: 36x110x35 mm



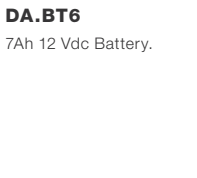
CBY.24V

Battery charger card. The CBY.24V card allows charging two different types of nickel metalhydrate and lead batteries.



DA.BT2

2.1Ah 12 Vdc Battery.



DA.BT6

7Ah 12 Vdc Battery.



LB

Standard box for control units. Protection level IP55. (290 x 220 x 118 mm)



DA.2S

Electronic board that allows synchronised movement of 2 automation devices (opposed sliding gates).

TECHNICAL DATA	PONY*
Power supply	230 Vac (50-60Hz)
Motor supply	24 Vdc
Max absorbed current	0.6 A
Power consumption in stand-by	8 mA
Max Thrust	321 N
Opening speed	10 m/min
Duty cycle	30%
Protection level	IP44
Operating temperature	-20°C /+50°C
Max gate weight	400 kg
Driving gear for rack	M4 Z14
Weight	8.1 kg
Version	KIT only
Kit weight	8.5 kg
Kits no. per pallet	40

* Available in 115 VAC version



BULL424ESA



CONTROL UNITS:

BULL424ESA — CP.B24ESA 162



RESIDENTIAL USE

control unit with built-in encoder and receiver personalised release key



up to 450 kg

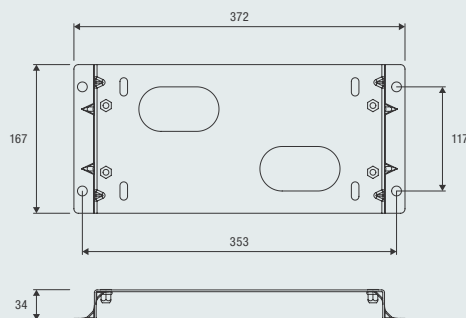
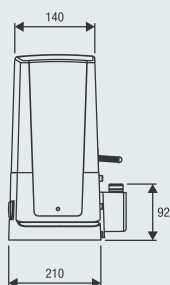
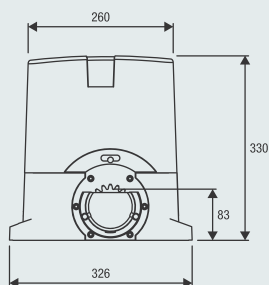


24 Vdc | intensive use

- 24 Vdc geared motor for intensive use, with built-in control unit, ESA SYSTEM and encoder
- The encoder device ensures maximum safety and precision in the gate moving phases
- Amperometric sensor obstacle detection system to prevent crushing
- Battery back up system ready
- Metal release lever
- Magnetic limit switches accessory available (MLS)



Raised foundation plate included. Height 34 mm. Floor fixing distance 353x117 mm, no. 4 Ø 11 mm, motor fixing distance 300x75 mm n.4 M8.



COMPLETE KITS



MOTOR
1x **BULL424ESA**



PHOTOCELLS
1x **PUPILLA.R**



FLASHING LIGHT
1x **LAMPI24.LED**

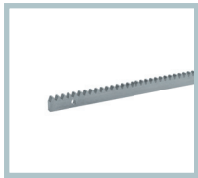


SELECTOR
1x **TOKEY**

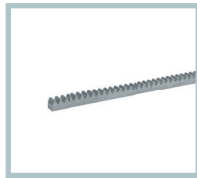


TRANSMITTER
1x **TO.GO2VA**

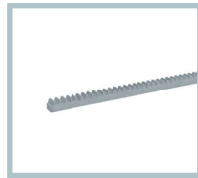
KBULL424

**RI.M4F**

M4 rack, to weld or attach with screws, 30x12x1000 mm slotted and galvanised. Supplied with M6 metric screws and threaded spacers.
Package of 4 pcs.

**RI.M4Z**

M4 galvanised rack to weld 22x22x2000 mm.
Package of 2 pcs.

**RI.M4ZF**

Galvanised slotted M4 rack 22x22x2010 mm for fastening to the side with the teeth. Supplied with M6 screws.
Package of 1 pc.

**RI.M4P**

Nylon rack with steel core, to attach with screws, M4, 28x40x1000 mm. Slotted, provided with self-drilling screws.
Package of 10 pcs.

**BULL.P3**

Raised foundation plate. Height 34 mm. Floor fixing distance 260x117 mm, no. 4 Ø 11 mm, motor fixing distance 300x75 mm n.4 M8.

**SB.BULL8.F**

Externally fitted anti-intrusion cable unlock device (L=4.5m).

**MLS**

Magnetic limit switches. Suitable for snowy places.

**ID.TA**

Warning board.

**IRI.TX4VA**

4-channel transmitter with Advanced Rolling Code and Rolling Code.

**IRI.TX4AK**

4-channel transmitter with Advanced Rolling Code and Fixed Code.

**IRI.LAMP**

White full range flashing light, 20-255 VAC with built-in aerial.

**IRI.KPAD**

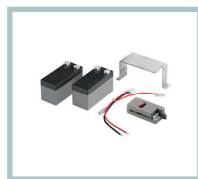
Battery operated wireless vandal-proof digital keypad with alert buzzer and backlit buttons. Triple coding: Rolling Code, Programmable Code and Advanced Rolling Code. 254 memorisable codes.

**IRI.CELL**

Pair of vandal-proof metal covers for PUPILLA/PUPILLA.R photocells, comprising front and rear shells with concealed screw. They can maintain perfect orientation over 180°.

**PUPILLA**

Pair of photocells adjustable to 180°. Option to synchronise up to 4 pairs, 24 VAC/DC power supply. Easy adjustment through a LED that signals optimal alignment. Compact size: 36x110x35 mm

**BULL24.CBY**

Accessory with CBY.24V battery charger, 1.2 Ah batteries and support bracket.

**DA.2S**

Electronic board that allows synchronised movement of 2 automation devices (opposed sliding gates).

TECHNICAL DATA	BULL424ESA*
Power supply	230 Vac (50-60Hz)
Motor supply	24 Vdc
Max absorbed current	0.4 A
Power consumption in stand-by	8 mA
Max Thrust	428 N
Opening speed	6.7÷11 m/min
Duty cycle	intensive use
Protection level	IP44
Operating temperature	-20°C /+50°C
Max gate weight	450 kg
Driving gear for rack	M4 Z14
Weight	10.4 kg
Items no. per pallet	40
Kit weight	11.1 kg
Kits no. per pallet	40

* Available in 115 VAC version



230_{VAC}

BULL5M



CONTROL UNITS:

BULL5M ————— CP.CORE 149



RESIDENTIAL USE

with integrated control unit and receiver
personalised release key



up to 500 kg

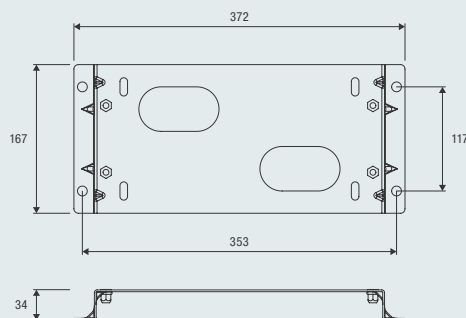
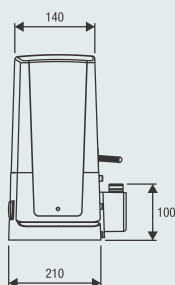
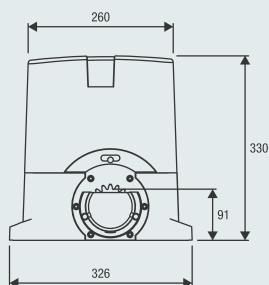


230 Vac

- Electromechanical 230 Vac geared motor with built-in control unit
- Optional encoder connection using MAG.E accessory
- The encoder device ensures crush prevention and precision in the gate moving phases
- Metal release lever
- Magnetic limit switches accessory available (MLS)



Raised foundation plate included. Height 34 mm. Floor fixing distance 353x117 mm, no. 4 Ø 11 mm, motor fixing distance 300x75 mm n.4 M8.



COMPLETE KITS



MOTOR



PHOTOCELLS



FLASHING LIGHT



SELECTOR



TRANSMITTER

KBULL5M

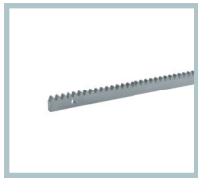
1x **BULL5M**

1x **PUPILLA.R**

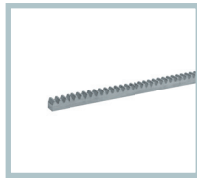
1x **LAMPI.LED**

1x **TOKEY**

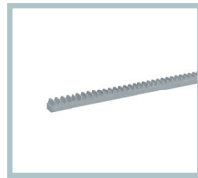
1x **TO.GO2VA**

**RI.M4F**

M4 rack, to weld or attach with screws, 30x12x1000 mm slotted and galvanised. Supplied with M6 metric screws and threaded spacers.
Package of 4 pcs.

**RI.M4Z**

M4 galvanised rack to weld 22x22x2000 mm.
Package of 2 pcs.

**RI.M4ZF**

Galvanised slotted M4 rack 22x22x2010 mm for fastening to the side with the teeth. Supplied with M6 screws.
Package of 1 pc.

**RI.M4P**

Nylon rack with steel core, to attach with screws, M4, 28x40x1000 mm. Slotted, provided with self-drilling screws.
Package of 10 pcs.

**BULL.P3**

Raised foundation plate. Height 34 mm. Floor fixing distance 260x117 mm, no. 4 Ø 11 mm, motor fixing distance 300x75 mm n.4 M8.

**SB.BULL8.F**

Externally fitted anti-intrusion cable unlock device (L=4.5m).

**MAG.E**

Magnetic sensor device to detect obstacles and manage deceleration.

**MLS**

Magnetic limit switches. Suitable for snowy places.

**ID.TA**

Warning board.

**IRI.TX4VA**

4-channel transmitter with Advanced Rolling Code and Rolling Code.

**IRI.TX4AK**

4-channel transmitter with Advanced Rolling Code and Fixed Code.

**IRI.LAMP**

White full range flashing light, 20-255 VAC with built-in aerial.

**IRI.KPAD**

Battery operated wireless vandal-proof digital keypad with alert buzzer and backlit buttons. Triple coding: Rolling Code, Programmable Code and Advanced Rolling Code. 254 memorisable codes.

**IRI.CELL**

Pair of vandal-proof metal covers for PUPILLA/PUPILLA.R photocells, comprising front and rear shells with concealed screw. They can maintain perfect orientation over 180°.

**PUPILLA**

Pair of photocells adjustable to 180°. Option to synchronise up to 4 pairs, 24 VAC/DC power supply. Easy adjustment through a LED that signals optimal alignment. Compact size: 36x110x35 mm

**DA.2S**

Electronic board that allows synchronised movement of 2 automation devices (opposed sliding gates).

TECHNICAL DATA	BULL5M*
Power supply	230 Vac (50-60Hz)
Motor supply	230 Vac
Max absorbed current	1.3 A
Max Thrust	650 N
Opening speed	10.5 m/min
Duty cycle	30%
Protection level	IP44
Operating temperature	-20°C /+50°C
Max gate weight	500 kg
Driving gear for rack	M4 Z18
Weight	11.3 kg
Items no. per pallet	40
Kit weight	12.1 kg
Kits no. per pallet	40

* Available in 115 VAC version



BULL624ESA



COMMERCIAL USE

control unit with built-in encoder and receiver
personalised release key



up to 600 kg



CONTROL UNITS:

BULL624ESA — CP.B24ESA 162

BULL624ESA.S — CP.B24ESA 162

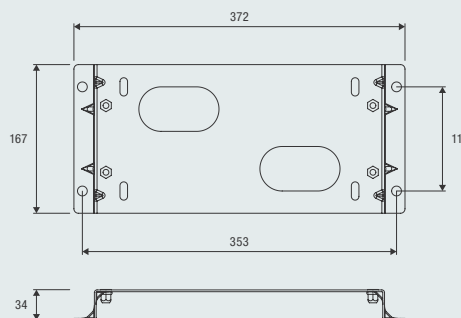
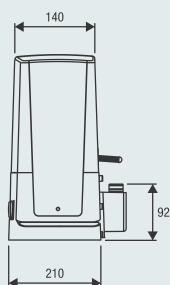
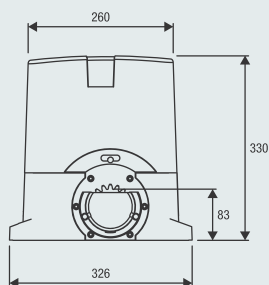


24 Vdc | intensive use

- 24 Vdc geared motor for intensive use, with built-in control unit, ESA SYSTEM and encoder
- The encoder device ensures maximum safety and precision in the gate moving phases
- Amperometric sensor obstacle detection system to prevent crushing
- Battery back up system ready
- Metal release lever
- Version with magnetic limit switches available (BULL624ESA.S)



Raised foundation plate included. Height 34 mm. Floor fixing distance 353x117 mm, no. 4 Ø 11 mm, motor fixing distance 300x75 mm n.4 M8.



COMPLETE KITS



MOTOR

1x **BULL624ESA**



PHOTOCELLS

1x **PUPILLA.R**



FLASHING LIGHT

1x **LAMP124.LED**



SELECTOR

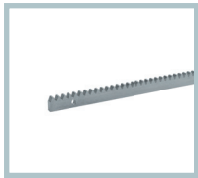
1x **TOKEY**



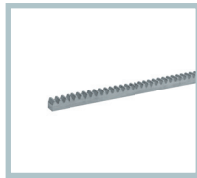
TRANSMITTER

1x **TO.GO2VA**

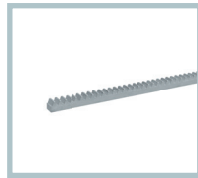
KBULL624



RI.M4F
M4 rack, to weld or attach with screws, 30x12x1000 mm slotted and galvanised. Supplied with M6 metric screws and threaded spacers.
Package of 4 pcs.



RI.M4Z
M4 galvanised rack to weld 22x22x2000 mm.
Package of 2 pcs.



RI.M4ZF
Galvanised slotted M4 rack 22x22x2010 mm for fastening to the side with the teeth. Supplied with M6 screws.
Package of 1 pc.



RI.M4P
Nylon rack with steel core, to attach with screws, M4, 28x40x1000 mm. Slotted, provided with self-drilling screws.
Package of 10 pcs.



BULL.P3
Raised foundation plate. Height 34 mm. Floor fixing distance 260x117 mm, no. 4 Ø 11 mm, motor fixing distance 300x75 mm n.4 M8.



SB.BULL8.F
Externally fitted anti-intrusion cable unlock device (L=4.5m).



ID.TA
Warning board.



IRI.TX4VA
4-channel transmitter with Advanced Rolling Code and Rolling Code.



IRI.TX4AK
4-channel transmitter with Advanced Rolling Code and Fixed Code.



IRI.LAMP
White full range flashing light, 20-255 VAC with built-in aerial.



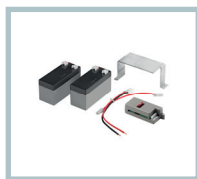
IRI.KPAD
Battery operated wireless vandal-proof digital keypad with alert buzzer and backlit buttons. Triple coding: Rolling Code, Programmable Code and Advanced Rolling Code. 254 memorisable codes.



IRI.CELL
Pair of vandal-proof metal covers for PUPILLA/PUPILLA.R photocells, comprising front and rear shells with concealed screw. They can maintain perfect orientation over 180°.



PUPILLA
Pair of photocells adjustable to 180°. Option to synchronise up to 4 pairs, 24 VAC/DC power supply. Easy adjustment through a LED that signals optimal alignment. Compact size: 36x110x35 mm



BULL24.CBY
Accessory with CBY.24V battery charger, 1.2 Ah batteries and support bracket.



DA.2S
Electronic board that allows synchronised movement of 2 automation devices (opposed sliding gates).

TECHNICAL DATA	BULL624ESA*	BULL624ESA.S*
Power supply	230 Vac (50-60Hz)	230 Vac (50-60Hz)
Motor supply	24 Vdc	24 Vdc
Max absorbed current	0.5 A	0.5 A
Power consumption in stand-by	8 mA	8 mA
Max Thrust	857 N	857 N
Opening speed	5.8÷9.75 m/min	5.8÷9.75 m/min
Duty cycle	intensive use	intensive use
Protection level	IP44	IP44
Magnetic limit switches	NO	YES
Operating temperature	-20°C /+50°C	-20°C /+50°C
Max gate weight	600 kg	600 kg
Driving gear for rack	M4 Z14	M4 Z14
Weight	11.7 kg	11.7 kg
Items no. per pallet	40	40
Kit weight	12.4 kg	---
Kits no. per pallet	40	---

* Available in 115 VAC version



24VDC



VIRTUAL ENCODER



turbo



STC SYSTEM



arc only



KNX



512

BULL624 TURBO

COMMERCIAL USE

control unit with incorporated receiver and virtual encoder
personalised release key
built-in battery charger

up to 600 kg

24 Vdc | intensive use

- Fast 24 VDC geared motor for intensive use with integrated control unit equipped with switching power supply (115/230 VAC) that permits a reduced power use and a long lifespan of the actuator
- The main control unit, on the top part of the motor, makes it possible to facilitate the wiring procedure and also to calculate the position of the motor starting from the measurement of instantaneous speed (virtual encoder)
- The virtual encoder allows proper management of the slowing-down phases, movement tracking (STC system), and torque management in relation to the position of the gate, which guarantees maximum safety
- Self-programming with the radio transmitter can be activated at the first installation. Practical cableguides
- **Maximum performance and speed (25.5 m/min with 600 kg)**
- Anti-crushing system with amperometric obstacle detection
- Safety sensor that stops the motor power supply during release operations
- Designed for connection to the X.BE module to integrate the device into KNX home automation systems
- Convenient compartment for 2 mod. DA.BT2 2.1 Ah batteries
- Metal release lever
- Option to operate opposed sliding gates using the SIS accessory
- Version available with magnetic limit switches (BULL624 TURBO.S)



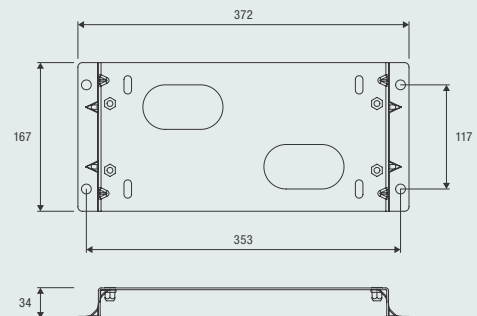
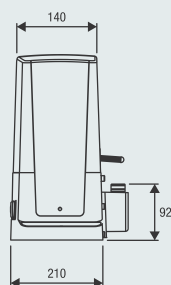
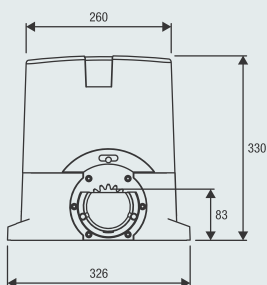
CONTROL UNITS:

BULL624 TURBO — CP.B24 TURBO 163

BULL624 TURBO.S — CP.B24 TURBO 163



Raised foundation plate included. Height 34 mm.
Floor fixing distance 353x117 mm, no. 4 Ø 11 mm,
motor fixing distance 300x75 mm n.4 M8.



COMPLETE KITS



MOTOR



PHOTOCELLS



FLASHING LIGHT



SELECTOR



TRANSMITTER

KBULL624TURBO

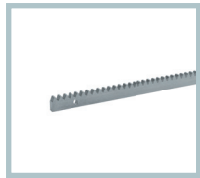
1x **BULL624TURBO**

1x **PUPILLA.R**

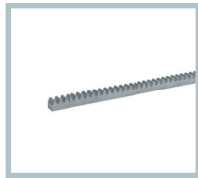
1x **LAMP124.LED**

1x **TOKEY**

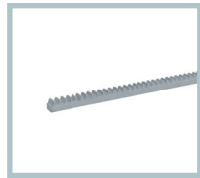
1x **TO.GO2VA**



RI.M4F
M4 rack, to weld or attach with screws, 30x12x1000 mm slotted and galvanised. Supplied with M6 metric screws and threaded spacers.
Package of 4 pcs.



RI.M4Z
M4 galvanised rack to weld 22x22x2000 mm.
Package of 2 pcs.



RI.M4ZF
Galvanised slotted M4 rack 22x22x2010 mm for fastening to the side with the teeth. Supplied with M6 screws.
Package of 1 pc.



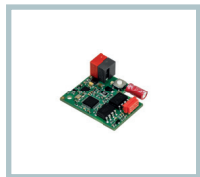
RI.M4P
Nylon rack with steel core, to attach with screws, M4, 28x40x1000 mm. Slotted, provided with self-drilling screws.
Package of 10 pcs.



BULL.P3
Raised foundation plate. Height 34 mm. Floor fixing distance 260x117 mm, no. 4 Ø 11 mm, motor fixing distance 300x75 mm n.4 M8.



SB.BULL8.F
Externally fitted anti-intrusion cable unlock device (L=4.5m).



X.BE
Electronic interface board between the KNX communication system and Beninca automation devices.



ID.TA
Warning board.



IRI.TX4VA
4-channel transmitter with Advanced Rolling Code and Rolling Code.



IRI.TX4AK
4-channel transmitter with Advanced Rolling Code and Fixed Code.



IRI.LAMP
White full range flashing light, 20-255 VAC with built-in aerial.



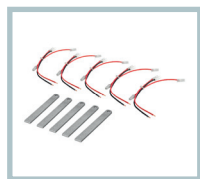
IRI.KPAD
Battery operated wireless vandal-proof digital keypad with alert buzzer and backlit buttons. Triple coding: Rolling Code, Programmable Code and Advanced Rolling Code. 254 memorisable codes.



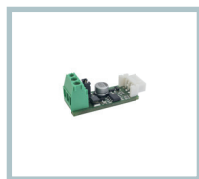
IRI.CELL
Pair of vandal-proof metal covers for PUPILLA/PUPILLA.R photocells, comprising front and rear shells with concealed screw. They can maintain perfect orientation over 180°.



PUPILLA
Pair of photocells adjustable to 180°. Option to synchronise up to 4 pairs, 24 VAC/DC power supply. Easy adjustment through a LED that signals optimal alignment. Compact size: 36x110x35 mm



BULL624T.CB
Kit comprising 5 cables and 5 brackets for battery installation and operation even in the event of a power failure.



SIS
Quick connection electronic board that allows synchronised movement of 2 automation devices (opposed sliding gates). One board for each motor is necessary.

TECHNICAL DATA	BULL624 TURBO	BULL624 TURBO.S
Power supply	115 Vac / 230 Vac (50-60Hz)	115 Vac / 230 Vac (50-60Hz)
Motor supply	24 Vdc	24 Vdc
Max absorbed current	3 A	3 A
Power consumption in stand-by	8 mA	8 mA
Max Thrust	330 N	330 N
Opening speed	12.5÷25.5 m/min	12.5÷25.5 m/min
Duty cycle	60%*	60%*
Protection level	IP44	IP44
Magnetic limit switches	NO	YES
Operating temperature	-20°C /+50°C	-20°C /+50°C
Max gate weight	600 kg	600 kg
Driving gear for rack	M4 Z18	M4 Z18
Weight	10 kg	10 kg
Items no. per pallet	40	40
Kit weight	10.6 kg	---
Kits no. per pallet	40	---

* In extreme operating conditions (environment T 50°C, speed 25.5 m/min, gate weight 600 kg) the cycle falls to 40%



230_{VAC}

BULL8M



RESIDENTIAL USE

control unit with built-in encoder and receiver personalised release key

64

up to 800 kg



CONTROL UNITS:

BULL8M ——— CP.BULL8-OM 150

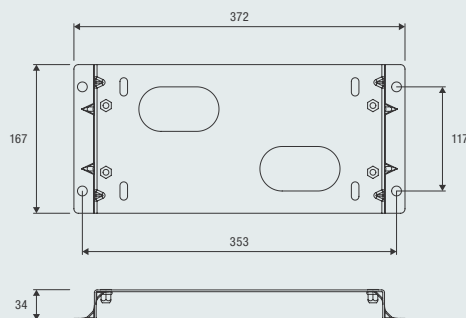
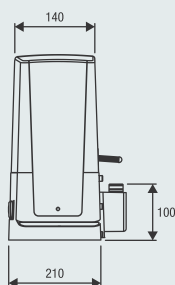
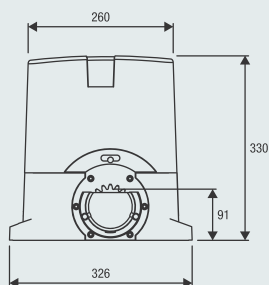
BULL8M.S ——— CP.BULL8-OM 150





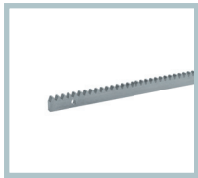
230 Vac

- Electromechanical 230 Vac geared motor with built-in control unit and encoder
- The encoder device ensures crush prevention and precision in the gate moving phases
- Metal release lever
- Version with magnetic limit switches available (BULL8M.S)

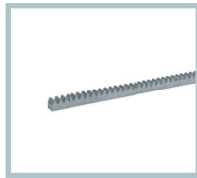
Raised foundation plate included. Height 34 mm. Floor fixing distance 353x117 mm, no. 4 Ø 11 mm, motor fixing distance 300x75 mm n.4 M8.



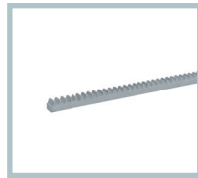
COMPLETE KITS					
KBULL8M	MOTOR 1x BULL8M	PHOTOCELLS 1x PUPILLA.R	FLASHING LIGHT 1x LAMPI.LED	SELECTOR 1x TOKEY	TRANSMITTER 1x TO.GO2VA



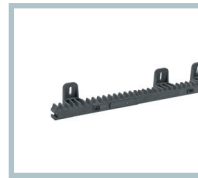
RI.M4F
M4 rack, to weld or attach with screws, 30x12x1000 mm slotted and galvanised. Supplied with M6 metric screws and threaded spacers.
Package of 4 pcs.



RI.M4Z
M4 galvanised rack to weld 22x22x2000 mm.
Package of 2 pcs.



RI.M4ZF
Galvanised slotted M4 rack 22x22x2010 mm for fastening to the side with the teeth. Supplied with M6 screws.
Package of 1 pc.



RI.M4P
Nylon rack with steel core, to attach with screws, M4, 28x40x1000 mm. Slotted, provided with self-drilling screws.
Package of 10 pcs.



BULL.P3
Raised foundation plate. Height 34 mm. Floor fixing distance 260x117 mm, no. 4 Ø 11 mm, motor fixing distance 300x75 mm n.4 M8.



SB.BULL8.F
Externally fitted anti-intrusion cable unlock device (L=4.5m).



ID.TA
Warning board.



IRI.TX4VA
4-channel transmitter with Advanced Rolling Code and Rolling Code.



IRI.TX4AK
4-channel transmitter with Advanced Rolling Code and Fixed Code.



IRI.LAMP
White full range flashing light, 20-255 VAC with built-in aerial.



IRI.KPAD
Battery operated wireless vandal-proof digital keypad with alert buzzer and backlit buttons. Triple coding: Rolling Code, Programmable Code and Advanced Rolling Code. 254 memorisable codes.



IRI.CELL
Pair of vandal-proof metal covers for PUPILLA/PUPILLA.R photocells, comprising front and rear shells with concealed screw. They can maintain perfect orientation over 180°.



PUPILLA
Pair of photocells adjustable to 180°. Option to synchronise up to 4 pairs, 24 VAC/DC power supply. Easy adjustment through a LED that signals optimal alignment. Compact size: 36x110x35 mm



DA.2S
Electronic board that allows synchronised movement of 2 automation devices (opposed sliding gates).

TECHNICAL DATA	BULL8M*	BULL8M.S*
Power supply	230 Vac (50-60Hz)	230 Vac (50-60Hz)
Motor supply	230 Vac	230 Vac
Max absorbed current	2.6 A	2.6 A
Max Thrust	940 N	940 N
Opening speed	10.5 m/min	10.5 m/min
Duty cycle	30%	30%
Protection level	IP44	IP44
Magnetic limit switches	NO	YES
Operating temperature	-20°C /+50°C	-20°C /+50°C
Max gate weight	800 kg	800 kg
Driving gear for rack	M4 Z18	M4 Z18
Weight	13.6 kg	13.7 kg
Items no. per pallet	40	40
Kit weight	14.5 kg	---
Kits no. per pallet	40	---

* Available in 115 VAC version



230_{VAC}

BULL8 OM



COMMERCIAL USE

control unit with built-in encoder and receiver
personalised release key
oil lubrication



up to 800 kg



CONTROL UNITS:

BULL8 OM — CP.BULL8-OM 150

BULL8 OM.S — CP.BULL8-OM 150

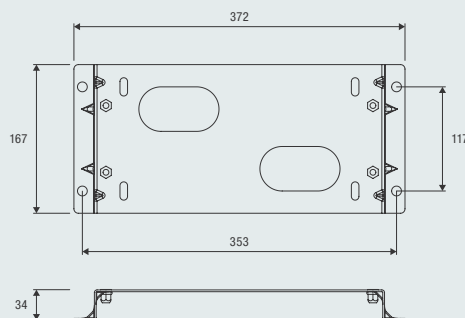
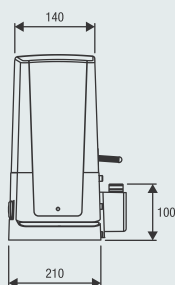
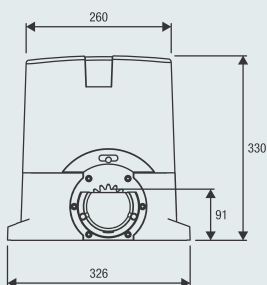


230 Vac

- Electromechanical 230 Vac geared motor with built-in control unit and encoder
- The encoder device ensures crush prevention and precision in the gate moving phases
- Full metal mechanics and oil lubrication ensure maximum gear durability. The type of oil used is also particularly effective, and ensures maximum efficiency even at low temperatures
- Reduced mechanical wear on components
- Metal release lever
- Version with magnetic limit switches available (BULL8OM.S)



Raised foundation plate included. Height 34 mm. Floor fixing distance 353x117 mm, no. 4 Ø 11 mm, motor fixing distance 300x75 mm n.4 M8.



COMPLETE KITS



MOTOR

KBULL8OM

1x **BULL8 OM**



PHOTOCELLS

1x **PUPILLA.R**



FLASHING LIGHT

1x **LAMPI.LED**



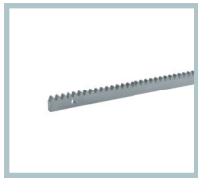
SELECTOR

1x **TOKEY**

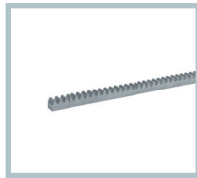


TRANSMITTER

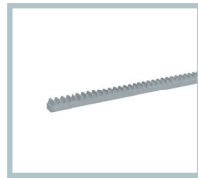
1x **TO.GO2VA**



RI.M4F
M4 rack, to weld or attach with screws, 30x12x1000 mm slotted and galvanised. Supplied with M6 metric screws and threaded spacers.
Package of 4 pcs.



RI.M4Z
M4 galvanised rack to weld 22x22x2000 mm.
Package of 2 pcs.



RI.M4ZF
Galvanised slotted M4 rack 22x22x2010 mm for fastening to the side with the teeth. Supplied with M6 screws.
Package of 1 pc.



RI.M4P
Nylon rack with steel core, to attach with screws, M4, 28x40x1000 mm. Slotted, provided with self-drilling screws.
Package of 10 pcs.



BULL.P3
Raised foundation plate. Height 34 mm. Floor fixing distance 260x117 mm, no. 4 Ø 11 mm, motor fixing distance 300x75 mm n.4 M8.



SB.BULL8.F
Externally fitted anti-intrusion cable unlock device (L=4.5m).



ID.TA
Warning board.



IRI.TX4VA
4-channel transmitter with Advanced Rolling Code and Rolling Code.



IRI.TX4AK
4-channel transmitter with Advanced Rolling Code and Fixed Code.



IRI.LAMP
White full range flashing light, 20-255 VAC with built-in aerial.



IRI.KPAD
Battery operated wireless vandal-proof digital keypad with alert buzzer and backlit buttons. Triple coding: Rolling Code, Programmable Code and Advanced Rolling Code. 254 memorisable codes.



IRI.CELL
Pair of vandal-proof metal covers for PUPILLA/PUPILLA.R photocells, comprising front and rear shells with concealed screw. They can maintain perfect orientation over 180°.



PUPILLA
Pair of photocells adjustable to 180°. Option to synchronise up to 4 pairs, 24 VAC/DC power supply. Easy adjustment through a LED that signals optimal alignment. Compact size: 36x110x35 mm



DA.2S
Electronic board that allows synchronised movement of 2 automation devices (opposed sliding gates).

TECHNICAL DATA	BULL8 OM*	BULL8 OM.S*
Power supply	230 Vac (50-60Hz)	230 Vac (50-60Hz)
Motor supply	230 Vac	230 Vac
Max absorbed current	2.6 A	2.6 A
Max Thrust	940 N	940 N
Opening speed	10.5 m/min	10.5 m/min
Duty cycle	40%	40%
Protection level	IP44	IP44
Magnetic limit switches	NO	YES
Operating temperature	-20°C /+50°C	-20°C /+50°C
Lubrication	OIL	OIL
Max gate weight	800 kg	800 kg
Driving gear for rack	M4 Z18	M4 Z18
Weight	14.6 kg	14.7 kg
Items no. per pallet	40	40
Kit weight	15.4 kg	---
Kits no. per pallet	40	---

* Available in 115 VAC version



BULL10M



COMMERCIAL USE

control unit with built-in encoder and receiver
personalised release key



up to 1000 kg



CONTROL UNITS:

BULL10M ——— CP.BULL-RI 151

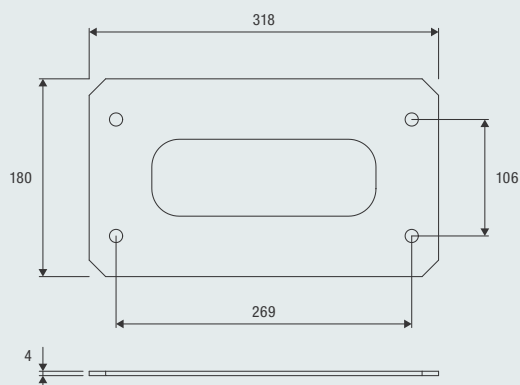
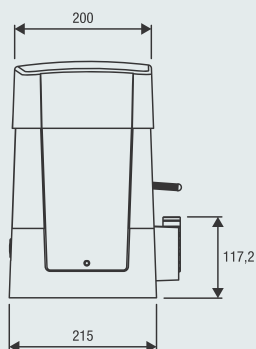
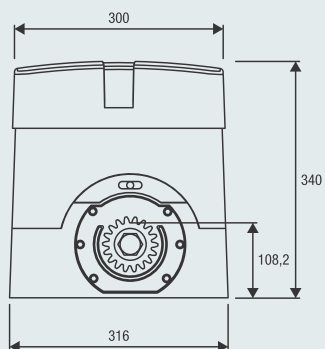
BULL10M.S ——— CP.BULL-RI 151

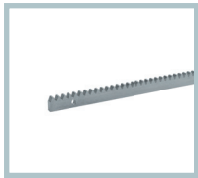


230 Vac

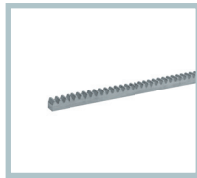
- 230 Vac geared motor with built-in control unit and encoder
- The encoder device ensures crush prevention and precision in the gate moving phases
- Metal release lever
- Version equipped with magnetic limit switches available (BULL10M.S)

Foundation plate with anchor bolts included.
Motor and floor fixing distance
269 mm x 106 mm, no. 4 Ø 12 mm.

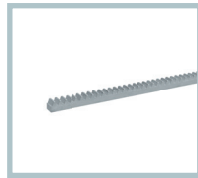




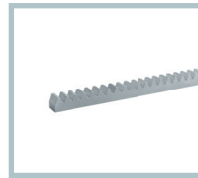
RI.M4F
M4 rack, to weld or attach with screws, 30x12x1000 mm slotted and galvanised. Supplied with M6 metric screws and threaded spacers.
Package of 4 pcs.



RI.M4Z
M4 galvanised rack to weld 22x22x2000 mm.
Package of 2 pcs.



RI.M4ZF
Galvanised slotted M4 rack 22x22x2010 mm for fastening to the side with the teeth. Supplied with M6 screws.
Package of 1 pc.



RI.M6Z
M6 galvanised rack to weld 30x30x2000 mm. Requires pinion RI.P6.



RI.P6
M6 gear, it needs the rack RI.M6Z.



BULL.PI
Raised foundation plate. Height 32 mm. Floor fixing distance 280x170 mm, no. 4 Ø 11 mm, motor fixing distance 269x106 mm n.4 M10.



SB.BULL20.F
Externally fitted anti-intrusion cable unlock device (L=4.5m).



ID.TA
Warning board.



IRI.TX4VA
4-channel transmitter with Advanced Rolling Code and Rolling Code.



IRI.TX4AK
4-channel transmitter with Advanced Rolling Code and Fixed Code.



IRI.LAMP
White full range flashing light, 20-255 VAC with built-in aerial.



IRI.KPAD
Battery operated wireless vandal-proof digital keypad with alert buzzer and backlit buttons. Triple coding: Rolling Code, Programmable Code and Advanced Rolling Code. 254 memorisable codes.



IRI.CELL
Pair of vandal-proof metal covers for PUPILLA/PUPILLA.R photocells, comprising front and rear shells with concealed screw. They can maintain perfect orientation over 180°.



PUPILLA
Pair of photocells adjustable to 180°. Option to synchronise up to 4 pairs, 24 VAC/DC power supply. Easy adjustment through a LED that signals optimal alignment. Compact size: 36x110x35 mm



DA.2S
Electronic board that allows synchronised movement of 2 automation devices (opposed sliding gates).

TECHNICAL DATA	BULL10M*	BULL10M.S*
Power supply	230 Vac (50-60Hz)	230 Vac (50-60Hz)
Motor supply	230 Vac	230 Vac
Max absorbed current	1.6 A	1.6 A
Max Thrust	1000 N	1000 N
Opening speed	10.5 m/min	10.5 m/min
Duty cycle	40%	40%
Protection level	IP44	IP44
Magnetic limit switches	NO	YES
Operating temperature	-20°C /+50°C	-20°C /+50°C
Max gate weight	1000 kg	1000 kg
Driving gear for rack	M4 Z18	M4 Z18
Weight	19 kg	19.1 kg
Items no. per pallet	20	20

* Available in 115 VAC version



BULL1224 TURBO

COMMERCIAL USE

control unit with incorporated receiver and virtual encoder
oil lubricated reductions
personalised release key
built-in battery charger

up to 1200 kg

24 Vdc | intensive use

- Fast 24 VDC geared motor for intensive use with oil lubricated reductions, control unit equipped with switching power supply (115/230 VAC) that permits reduced power use and long lifespan of the actuator
- The main control unit, on the top part of the motor, makes it possible to facilitate the wiring procedure and also to calculate the position of the motor starting from the measurement of instantaneous speed (virtual encoder)
- The virtual encoder allows proper management of the slowing-down phases, movement tracking (STC system), and torque management in relation to the position of the gate, which guarantees maximum safety
- Self-programming with transmitter can be activated at the first installation. Practical cableguides
- **Maximum performance and speed (24 m/min with 1200 kg)**
- Anti-crushing system with amperometric obstacle detection
- Safety sensor that stops the motor power supply during release operations
- Designed for connection to the X.BE module to integrate the device into KNX home automation systems
- Convenient compartment for 2 mod. DA.BT6 7 Ah batteries
- Metal release lever
- Option to operate opposed sliding gates using the SIS accessory
- Version available with magnetic limit switches (BULL1224 TURBO.S)



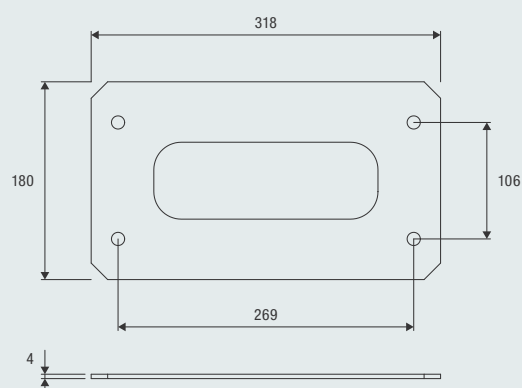
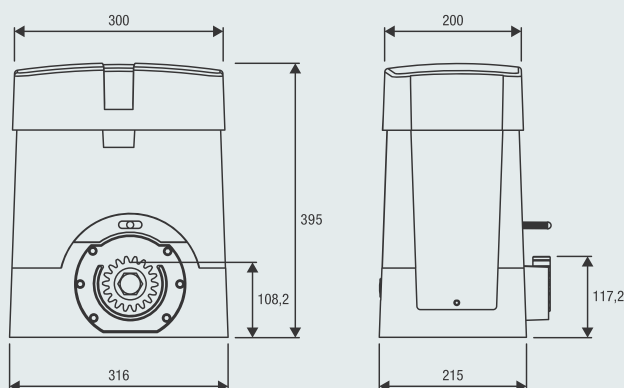
CONTROL UNITS:

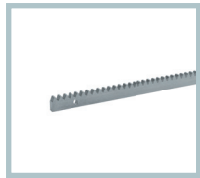
BULL1224 TURBO — CP.B24 TURBO 163

BULL1224 TURBO.S — CP.B24 TURBO 163

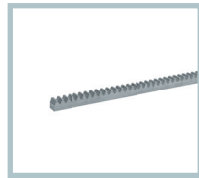


Foundation plate with anchor bolts included.
Motor and floor fixing distance
269 mm x 106 mm, no. 4 Ø 12 mm.

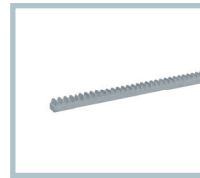




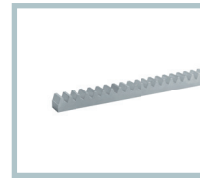
RI.M4F
M4 rack, to weld or attach with screws, 30x12x1000 mm slotted and galvanised. Supplied with M6 metric screws and threaded spacers.
Package of 4 pcs.



RI.M4Z
M4 galvanised rack to weld 22x22x2000 mm.
Package of 2 pcs.



RI.M4ZF
Galvanised slotted M4 rack 22x22x2010 mm for fastening to the side with the teeth. Supplied with M6 screws.
Package of 1 pc.



RI.M6Z
M6 galvanised rack to weld 30x30x2000 mm. Requires pinion RI.P6.



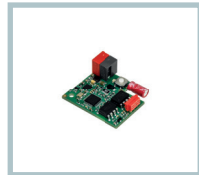
RI.P6
M6 gear, it needs the rack RI.M6Z.



BULL.PI
Raised foundation plate. Height 32 mm. Floor fixing distance 280x170 mm, no. 4 Ø 11 mm, motor fixing distance 269x106 mm n.4 M10.



SB.BULL20.F
Externally fitted anti-intrusion cable unlock device (L=4.5m).



X.BE
Electronic interface board between the KNX communication system and Benincà automation devices.



RF.SUN
Battery-operated device recharged by means of a photovoltaic panel applied on a mobile edge.



RF
Device with a non rechargeable battery, with guaranteed duration 2 years.



SC.RF
Device powered at 12/24 Vdc with self-test function and 2 outputs for connection to the electronic control units.



IRI.TX4VA
4-channel transmitter with Advanced Rolling Code and Rolling Code.

IRI.TX4AK
4-channel transmitter with Advanced Rolling Code and Fixed Code.



IRI.LAMP
White full range flashing light, 20-255 VAC with built-in aerial.



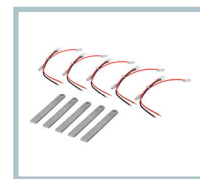
IRI.KPAD
Battery operated wireless vandal-proof digital keypad with alert buzzer and backlit buttons. Triple coding: Rolling Code, Programmable Code and Advanced Rolling Code. 254 memorisable codes.



IRI.CELL
Pair of vandal-proof metal covers for PUPILLA/PUPILLA.R photocells, comprising front and rear shells with concealed screw. They can maintain perfect orientation over 180°.



PUPILLA
Pair of photocells adjustable to 180°. Option to synchronise up to 4 pairs, 24 VAC/DC power supply. Easy adjustment through a LED that signals optimal alignment. Compact size: 36x110x35 mm



BULL1224T.CB
Kit comprising 5 cables and 5 brackets for battery installation and operation even in the event of a power failure.



SIS
Quick connection electronic board that allows synchronised movement of 2 automation devices (opposed sliding gates). One board for each motor is necessary.

TECHNICAL DATA	BULL1224 TURBO	BULL1224 TURBO.S
Power supply	115 Vac / 230 Vac (50-60Hz)	115 Vac / 230 Vac (50-60Hz)
Motor supply	24 Vdc	24 Vdc
Max absorbed current	3 A	3 A
Power consumption in stand-by	8 mA	8 mA
Max Thrust	390 N	390 N
Opening speed	12.5±24 m/min	12.5±24 m/min
Duty cycle	80%*	80%*
Protection level	IP44	IP44
Magnetic limit switches	NO	YES
Operating temperature	-20°C /+50°C	-20°C /+50°C
Max gate weight	1200 kg	1200 kg
Driving gear for rack	M4 Z18	M4 Z18
Weight	17.3 kg	17.4 kg
Items no. per pallet	20	20

* In extreme operating conditions (environment T 50°C, speed 24 m/min, gate weight 1200 kg) the cycle falls to 40%



BULL15M



COMMERCIAL USE

control unit with built-in encoder and receiver
personalised release key



up to 1500 kg



CONTROL UNITS:

BULL15M ——— CP.BULL-RI 151

BULL15M.S ——— CP.BULL-RI 151

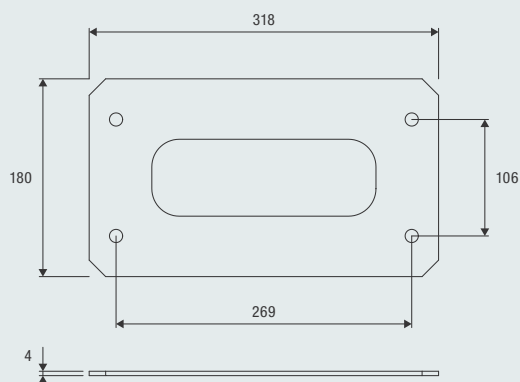
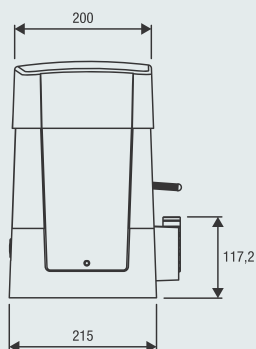
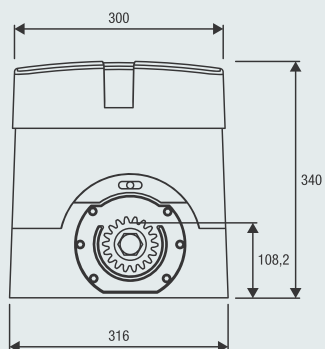


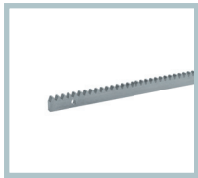
230 Vac

- 230 Vac geared motor with built-in control unit and encoder
- The encoder device ensures crush prevention and precision in the gate moving phases
- Metal release lever
- Version equipped with magnetic limit switches available (BULL15M.S)



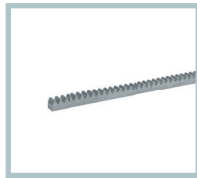
Foundation plate with anchor bolts included.
Motor and floor fixing distance
269 mm x 106 mm, no. 4 Ø 12 mm.





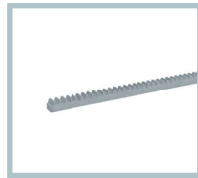
RI.M4F

M4 rack, to weld or attach with screws, 30x12x1000 mm slotted and galvanised. Supplied with M6 metric screws and threaded spacers.
Package of 4 pcs.



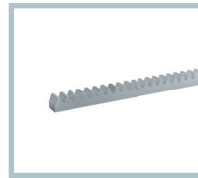
RI.M4Z

M4 galvanised rack to weld 22x22x2000 mm.
Package of 2 pcs.



RI.M4ZF

Galvanised slotted M4 rack 22x22x2010 mm for fastening to the side with the teeth. Supplied with M6 screws.
Package of 1 pc.



RI.M6Z

M6 galvanised rack to weld 30x30x2000 mm. Requires pinion RI.P6.



RI.P6

M6 gear, it needs the rack RI.M6Z.



BULL.PI

Raised foundation plate. Height 32 mm. Floor fixing distance 280x170 mm, no. 4 Ø 11 mm, motor fixing distance 269x106 mm n.4 M10.



SB.BULL20.F

Externally fitted anti-intrusion cable unlock device (L=4.5m).



ID.TA

Warning board.



IRI.TX4VA

4-channel transmitter with Advanced Rolling Code and Rolling Code.



IRI.TX4AK

4-channel transmitter with Advanced Rolling Code and Fixed Code.



IRI.LAMP

White full range flashing light, 20-255 VAC with built-in aerial.



IRI.KPAD

Battery operated wireless vandal-proof digital keypad with alert buzzer and backlit buttons. Triple coding: Rolling Code, Programmable Code and Advanced Rolling Code. 254 memorisable codes.



IRI.CELL

Pair of vandal-proof metal covers for PUPILLA/PUPILLA.R photocells, comprising front and rear shells with concealed screw. They can maintain perfect orientation over 180°.



PUPILLA

Pair of photocells adjustable to 180°. Option to synchronise up to 4 pairs, 24 VAC/DC power supply. Easy adjustment through a LED that signals optimal alignment. Compact size: 36x110x35 mm



DA.2S

Electronic board that allows synchronised movement of 2 automation devices (opposed sliding gates).

TECHNICAL DATA	BULL15M*	BULL15M.S*
Power supply	230 Vac (50-60Hz)	230 Vac (50-60Hz)
Motor supply	230 Vac	230 Vac
Max absorbed current	2.5 A	2.5 A
Max Thrust	1250 N	1250 N
Opening speed	10.5 m/min	10.5 m/min
Duty cycle	60%	60%
Protection level	IP44	IP44
Magnetic limit switches	NO	YES
Operating temperature	-20°C /+50°C	-20°C /+50°C
Max gate weight	1500 kg	1500 kg
Driving gear for rack	M4 Z18	M4 Z18
Weight	19.6 kg	20.1 kg
Items no. per pallet	20	20

* Available in 115 VAC version



230 VAC

KBULL15M.S-HM



CONTROL UNITS:

BULL15M.S-HM — CP.BULL-RI 151



COMMERCIAL USE

control unit with built-in encoder and receiver
personalised release key

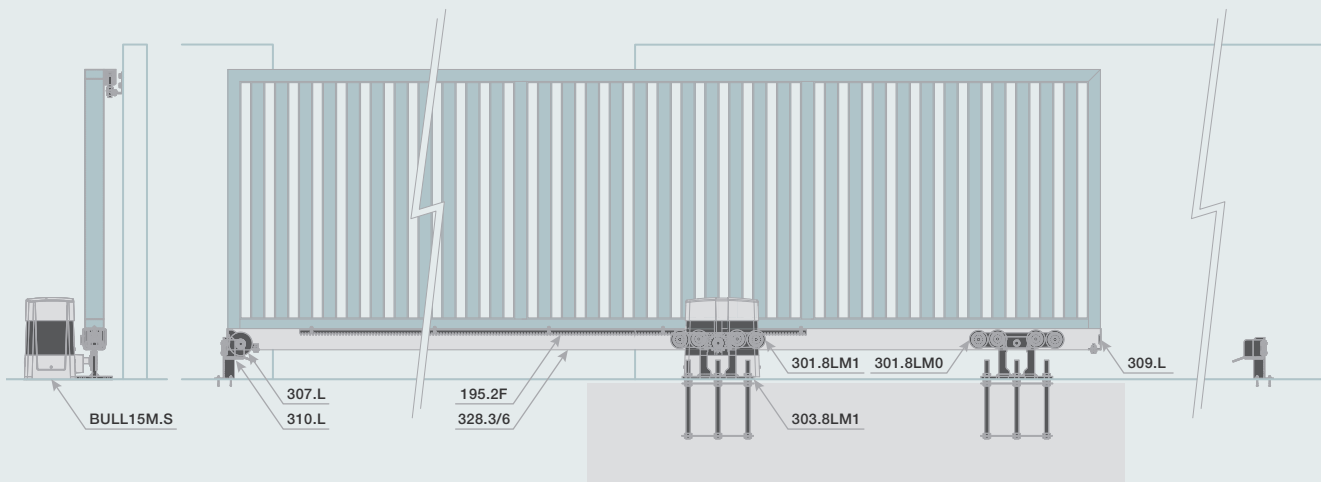


up to 1500 kg



230 Vac

- 230 VAC geared motor with incorporated control unit and encoder
- The encoder guarantees maximum safety against crushing and precision while the gate is moving
- Metal release lever
- Available in the kit KBULL15M.S-HM for automating cantilever sliding gates, equipped with 9 mt long track
- The system has an internal rack, and guarantees maximum safety against draw-in and/or crushing in the transmission mechanism
- The system is fastened on one of two carriages present inside the rail. This ensures compliance with safety regulations, since it is within the impact curve parameters



□ KIT INCLUDES THE FOLLOWING ITEMS:

BULL15M.S	PUPILLA	LAMP.I.LED	TOKEY	TO.GO2VA	301.8LM0	301.8LM1	303.8LM1	328.3/6	195.2F	307.L	309.L	310.L

**ID.TA**

Warning board.

**IRI.TX4VA**

4-channel transmitter with Advanced Rolling Code and Rolling Code.

**IRI.TX4AK**

4-channel transmitter with Advanced Rolling Code and Fixed Code.

**IRI.LAMP**

White full range flashing light, 20-255 VAC with built-in aerial.

**IRI.KPAD**

Battery operated wireless vandal-proof digital keypad with alert buzzer and backlit buttons. Triple coding: Rolling Code, Programmable Code and Advanced Rolling Code. 254 memorisable codes.

**IRI.CELL**

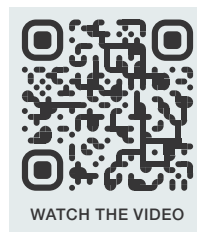
Pair of vandal-proof metal covers for PUPILLA/PUPILLA.R photocells, comprising front and rear shells with concealed screw. They can maintain perfect orientation over 180°.

**PUPILLA**

Pair of photocells adjustable to 180°. Option to synchronise up to 4 pairs, 24 VAC/DC power supply. Easy adjustment through a LED that signals optimal alignment. Compact size: 36x110x35 mm

**DA.2S**

Electronic board that allows synchronised movement of 2 automation devices (opposed sliding gates).



TECHNICAL DATA	BULL15M.S-HM
Power supply	230 Vac (50-60Hz)
Motor supply	230 Vac
Max absorbed current	2.5 A
Max Thrust	1250 N
Opening speed	10.5 m/min
Duty cycle	60%
Protection level	IP44
Magnetic limit switches	SI
Operating temperature	-20°C /+50°C
Max gate weight	1500 kg
Driving gear for rack	M4 Z18
Weight	18.9 kg
Items no. per pallet	20



24VDC

BULL1524

VIRTUAL
ENCODER

COMMERCIAL USE

control unit with incorporated receiver and virtual encoder
personalised release key
built-in battery charger

STC
SYSTEMarc
only

2048

up to 1500 kg

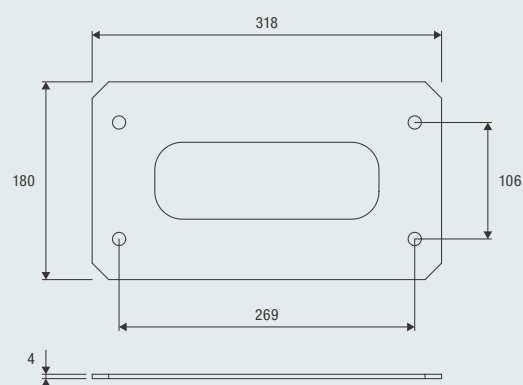
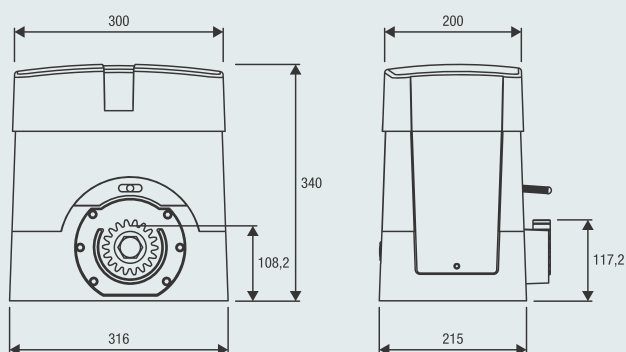
CONTROL UNITS:

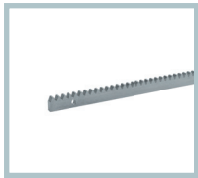
BULL1524 ——— CP.B1524 164

Foundation plate with anchor bolts included.
Motor and floor fixing distance
269 mm x 106 mm, no. 4 Ø 12 mm.

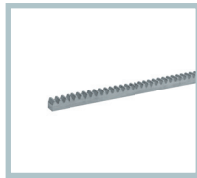
24 Vdc | intensive use

- 24 VDC geared motor with integrated control unit equipped with switching power supply (85÷265 VAC) which reduces energy consumption and ensures a long lifespan of the actuator
- Very intensive use, ideal for condominium applications
- Anti-crushing system with amperometric obstacle detection
- The control unit makes it possible to calculate the position of the motor starting from the measurement of instantaneous speed (virtual encoder)
- The virtual encoder allows proper management of the slowing-down phases, movement tracking (STC system), and torque management in relation to the position of the gate, which guarantees maximum safety
- Fast and easy to install, with the self-programming function through the radio transmitter, activation is possible immediately after installation
- Option to operate opposed sliding gates using the SIS accessory and in case of power failure with the built-in battery charger accessory
- Metal release lever
- Version available with magnetic limit switches (BULL1524.S)

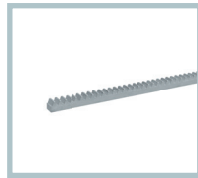




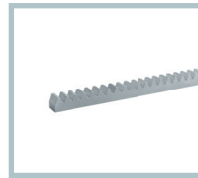
RI.M4F
M4 rack, to weld or attach with screws, 30x12x1000 mm slotted and galvanised. Supplied with M6 metric screws and threaded spacers.
Package of 4 pcs.



RI.M4Z
M4 galvanised rack to weld 22x22x2000 mm.
Package of 2 pcs.



RI.M4ZF
Galvanised slotted M4 rack 22x22x2010 mm for fastening to the side with the teeth. Supplied with M6 screws.
Package of 1 pc.



RI.M6Z
M6 galvanised rack to weld 30x30x2000 mm. Requires pinion RI.P6.



RI.P6
M6 gear, it needs the rack RI.M6Z.



BULL.PI
Raised foundation plate. Height 32 mm. Floor fixing distance 280x170 mm, no. 4 Ø 11 mm, motor fixing distance 269x106 mm n.4 M10.



SB.BULL20.F
Externally fitted anti-intrusion cable unlock device (L=4.5m).



ID.TA
Warning board.



IRI.TX4VA
4-channel transmitter with Advanced Rolling Code and Rolling Code.



IRI.TX4AK
4-channel transmitter with Advanced Rolling Code and Fixed Code.



IRI.LAMP
White full range flashing light, 20-255 VAC with built-in aerial.



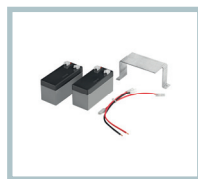
IRI.KPAD
Battery operated wireless vandal-proof digital keypad with alert buzzer and backlit buttons. Triple coding: Rolling Code, Programmable Code and Advanced Rolling Code. 254 memorisable codes.



IRI.CELL
Pair of vandal-proof metal covers for PUPILLA/PUPILLA.R photocells, comprising front and rear shells with concealed screw. They can maintain perfect orientation over 180°.



PUPILLA
Pair of photocells adjustable to 180°. Option to synchronise up to 4 pairs, 24 VAC/DC power supply. Easy adjustment through a LED that signals optimal alignment. Compact size: 36x110x35 mm



BULL1524.CB
Accessory equipped with 1.2 Ah batteries and support bracket.



SIS
Quick connection electronic board that allows synchronised movement of 2 automation devices (opposed sliding gates). One board for each motor is necessary.

TECHNICAL DATA	BULL1524	BULL1524.S
Power supply	85 ÷ 265 Vac (50-60Hz)	85 ÷ 265 Vac (50-60Hz)
Motor supply	24 Vdc	24 Vdc
Max absorbed current	1.7 A	1.7 A
Max Thrust	944 N	944 N
Opening speed	11.7 m/min	11.7 m/min
Duty cycle	intensive use	intensive use
Protection level	IP44	IP44
Magnetic limit switches	NO	YES
Operating temperature	-20°C /+50°C	-20°C /+50°C
Max gate weight	1500 kg	1500 kg
Driving gear for rack	M4 Z18	M4 Z18
Weight	15.9 kg	16 kg
Items no. per pallet	20	20

230_{VAC}

BULL17 OMI



INDUSTRIAL USE

control unit with built-in inverter and virtual encoder
oil lubricated reductions
personalised release key

**up to 1700 kg**

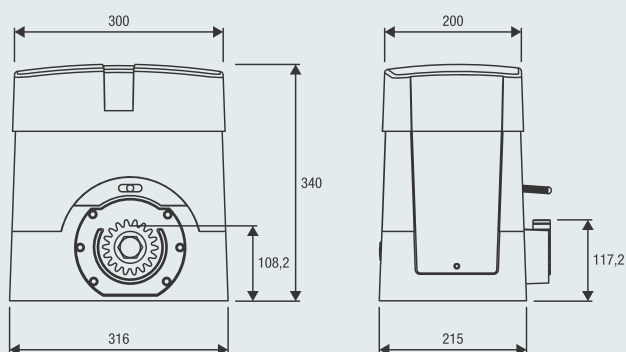
CONTROL UNITS:

BULL17 OMI ——— CP.BULL OMI 153

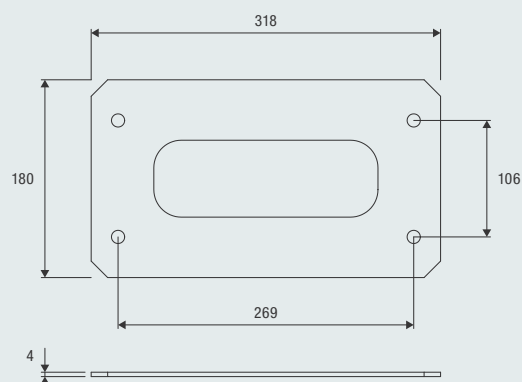
Foundation plate with anchor bolts included.
Motor and floor fixing distance
269 mm x 106 mm, no. 4 Ø 12 mm.

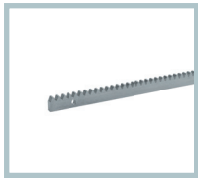
230 Vac

- Single phase 230 VAC geared motor for intensive use with oil lubricated reductions
- The main control unit, located in the top part of the motor and with integrated inverter, makes it possible to calculate the position of the motor starting from the measurement of current intensity on the electric motor (virtual encoder)
- Oil lubrication guarantees maximum duration of the reducer. The type of oil is very effective and guarantees excellent performance even at low temperatures
- Reduced mechanical wear of components
- The virtual encoder allows proper management of the slowing-down phases, movement tracking (STC system), and torque management in relation to the position of the gate, which guarantees maximum safety
- Adjustable speed from 10 to 24 m/min according to gate weight
- Safety sensor that stops the motor power supply during release operations
- Receiver ONE2.WI is supplied
- Metal release lever



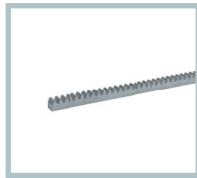
Weight (kg)	Speed (m/min)
1,700	17
1,000	20
500	24





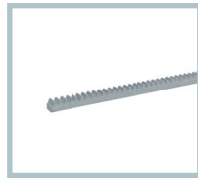
RI.M4F

M4 rack, to weld or attach with screws, 30x12x1000 mm slotted and galvanised. Supplied with M6 metric screws and threaded spacers.
Package of 4 pcs.



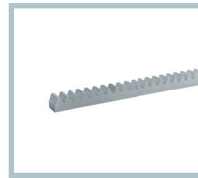
RI.M4Z

M4 galvanised rack to weld 22x22x2000 mm.
Package of 2 pcs.



RI.M4ZF

Galvanised slotted M4 rack 22x22x2010 mm for fastening to the side with the teeth. Supplied with M6 screws.
Package of 1 pc.



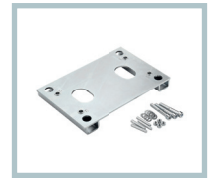
RI.M6Z

M6 galvanised rack to weld 30x30x2000 mm. Requires pinion RI.P6.



RI.P6

M6 gear, it needs the rack RI.M6Z.



BULL.PI

Raised foundation plate. Height 32 mm. Floor fixing distance 280x170 mm, no. 4 Ø 11 mm, motor fixing distance 269x106 mm n.4 M10.



SB.BULL20.F

Externally fitted anti-intrusion cable unlock device (L=4.5m).



RF.SUN

Battery-operated device recharged by means of a photovoltaic panel applied on a mobile edge.



RF

Device with a non-rechargeable battery, with guaranteed duration 2 years.



SC.RF

Device powered at 12/24 Vdc with self-test function and 2 outputs for connection to the electronic control units.



ID.TA

Warning board.



IRI.TX4VA

4-channel transmitter with Advanced Rolling Code and Rolling Code.



IRI.TX4AK

4-channel transmitter with Advanced Rolling Code and Fixed Code.



IRI.LAMP

White full range flashing light, 20-255 VAC with built-in aerial.



IRI.KPAD

Battery operated wireless vandal-proof digital keypad with alert buzzer and backlit buttons. Triple coding: Rolling Code, Programmable Code and Advanced Rolling Code. 254 memorisable codes.



IRI.CELL

Pair of vandal-proof metal covers for PUPILLA/PUPILLA.R photocells, comprising front and rear shells with concealed screw. They can maintain perfect orientation over 180°.



PUPILLA

Pair of photocells adjustable to 180°. Option to synchronise up to 4 pairs, 24 VAC/DC power supply. Easy adjustment through a LED that signals optimal alignment. Compact size: 36x110x35 mm



DA.2S

Electronic board that allows synchronised movement of 2 automation devices (opposed sliding gates).

TECHNICAL DATA	BULL17 OMI*
Power supply	230 Vac (50-60Hz)
Motor supply	230 Vac
Max absorbed current	7 A
Max Thrust	1880 N
Max opening speed	24 m/min
Duty cycle	80%**
Protection level	IP44
Magnetic limit switches	NO
Operating temperature	-20°C /+50°C
Lubrication	OIL
Max gate weight	1700 kg
Driving gear for rack	M4 Z18
Weight	21.6 kg
Items no. per pallet	20

* Available in 115 VAC version | ** In extreme operating conditions (environment T 50°C, speed 24 m/min, gate weight 500 kg) the cycle falls to 40%



BULL20M

BULL20T

INDUSTRIAL USE

BULL20M: control unit with built-in encoder and receiver

BULL20T: no control unit
personalised release key

up to 2000 kg

Irreversible electromechanical geared motor available in versions single-phase 230 VAC or three-phase 400 VAC. Metal release lever.

230 Vac

- 230 Vac single phase geared motor with built-in control unit and encoder
- The encoder device ensures crush prevention and precision in the gate moving phases
- Control unit equipped with electronic braking
- Version equipped with magnetic limit switches available (BULL20M.S)

400 Vac

- 400 Vac three phase geared motor with external control unit and electronic braking
- Self-ventilated motor for more intense use
- Version equipped with magnetic limit switches available (BULL20T.S)

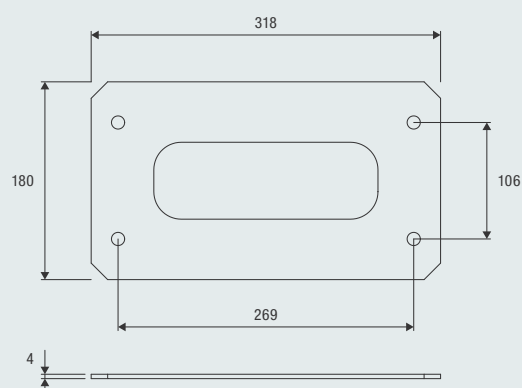
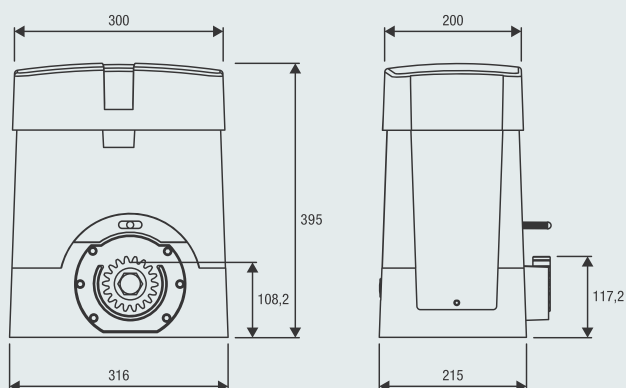


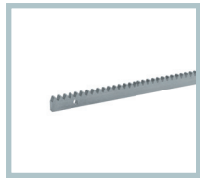
CONTROL UNITS:

BULL20M	CP.BULL-RI	151
BULL20M.S	CP.BULL-RI	151
BULL20T	THINKY START	141 142
BULL20T.S	THINKY START	141 142

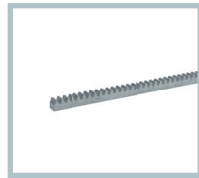


Foundation plate with anchor bolts included.
Motor and floor fixing distance
269 mm x 106 mm, no. 4 Ø 12 mm.

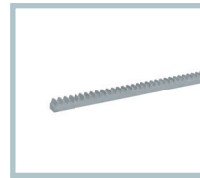




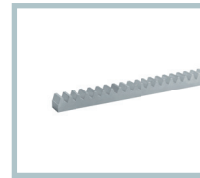
RI.M4F
M4 rack, to weld or attach with screws, 30x12x1000 mm slotted and galvanised. Supplied with M6 metric screws and threaded spacers.
Package of 4 pcs.



RI.M4Z
M4 galvanised rack to weld 22x22x2000 mm.
Package of 2 pcs.



RI.M4ZF
Galvanised slotted M4 rack 22x22x2010 mm for fastening to the side with the teeth. Supplied with M6 screws.
Package of 1 pc.



RI.M6Z
M6 galvanised rack to weld 30x30x2000 mm. Requires pinion RI.P6.



RI.P6
M6 gear, it needs the rack RI.M6Z.



BULL.PI
Raised foundation plate. Height 32 mm. Floor fixing distance 280x170 mm, no. 4 Ø 11 mm, motor fixing distance 269x106 mm n.4 M10.



SB.BULL20.F
Externally fitted anti-intrusion cable unlock device (L=4.5m).



RF.SUN
Battery-operated device recharged by means of a photovoltaic panel applied on a mobile edge.



RF
Device with a non-rechargeable battery, with guaranteed duration 2 years.



SC.RF
Device powered at 12/24 Vdc with self-test function and 2 outputs for connection to the electronic control units.



ID.TA
Warning board.



IRI.TX4VA
4-channel transmitter with Advanced Rolling Code and Rolling Code.



IRI.TX4AK
4-channel transmitter with Advanced Rolling Code and Fixed Code.



IRI.LAMP
White full range flashing light, 20-255 VAC with built-in aerial.



IRI.KPAD
Battery operated wireless vandal-proof digital keypad with alert buzzer and backlit buttons. Triple coding: Rolling Code, Programmable Code and Advanced Rolling Code. 254 memorisable codes.



IRI.CELL
Pair of vandal-proof metal covers for PUPILLA/PUPILLA.R photocells, comprising front and rear shells with concealed screw. They can maintain perfect orientation over 180°.



PUPILLA
Pair of photocells adjustable to 180°. Option to synchronise up to 4 pairs, 24 VAC/DC power supply. Easy adjustment through a LED that signals optimal alignment. Compact size: 36x110x35 mm



DA.2S
Electronic board that allows synchronised movement of 2 automation devices (opposed sliding gates).

TECHNICAL DATA	BULL20M*	BULL20M.S*	BULL20T	BULL20T.S
Power supply	230 Vac (50-60Hz)	230 Vac (50-60Hz)	≈ 400 Vac (50-60Hz)	≈ 400 Vac (50-60Hz)
Motor supply	230 Vac	230 Vac	≈ 400 Vac	≈ 400 Vac
Max absorbed current	2.9 A	2.9 A	1.7 A	1.7 A
Max Thrust	1667 N	1667 N	2000 N	2000 N
Opening speed	10.5 m/min	10.5 m/min	10.5 m/min	10.5 m/min
Duty cycle	40%	40%	intensive use	intensive use
Protection level	IP44	IP44	IP44	IP44
Built-in control unit	YES	YES	NO	NO
Magnetic limit switches	NO	YES	NO	YES
Operating temperature	-20°C /+50°C	-20°C /+50°C	-20°C /+50°C	-20°C /+50°C
Max gate weight	2000 kg	2000 kg	2000 kg	2000 kg
Driving gear for rack	M4 Z18	M4 Z18	M4 Z18	M4 Z18
Weight	21.1 kg	21.3 kg	21.3 kg	21.4 kg
Items no. per pallet	20	20	20	20

* Available in 115 VAC version



230_{VAC}

BULL20 HE



CONTROL UNITS:

BULL20 HE — CP.BULL20-HE 152



COMMERCIAL | INDUSTRIAL USE

control unit with built-in encoder and receiver
oil lubricated reductions
personalised release key
self-ventilated for very intense use



up to 2000 kg

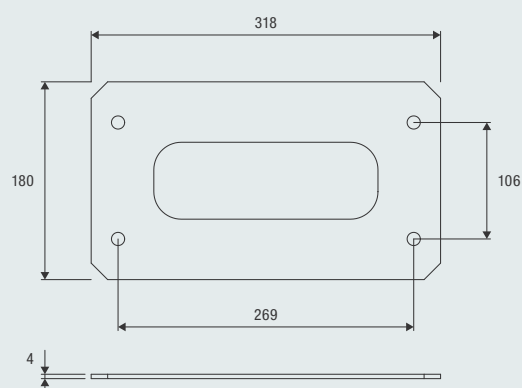
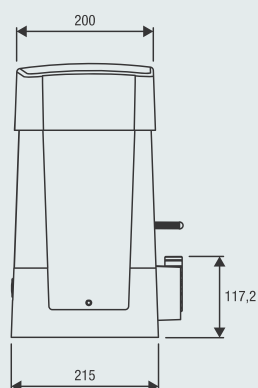
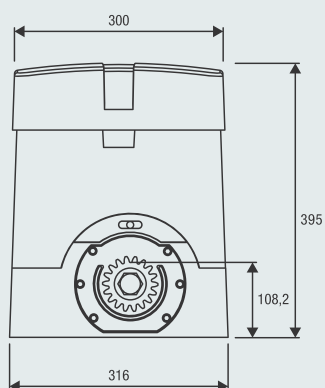


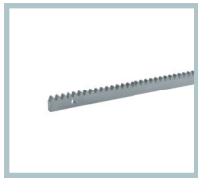
230 Vac

- Self-ventilated 230 VAC geared motor for intensive use with oil lubricated reductions
- Thanks to the characteristics of the new electric motor, this product is particularly indicated for very intense use
- The encoder guarantees maximum safety and precision while the gate is moving
- Metal release lever



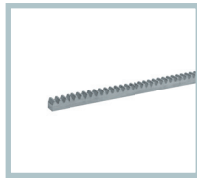
Foundation plate with anchor bolts included.
Motor and floor fixing distance
269 mm x 106 mm, no. 4 Ø 12 mm.





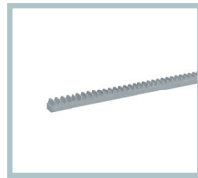
RI.M4F

M4 rack, to weld or attach with screws, 30x12x1000 mm slotted and galvanised. Supplied with M6 metric screws and threaded spacers.
Package of 4 pcs.



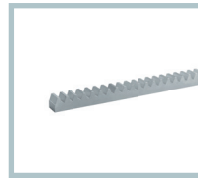
RI.M4Z

M4 galvanised rack to weld 22x22x2000 mm.
Package of 2 pcs.



RI.M4ZF

Galvanised slotted M4 rack 22x22x2010 mm for fastening to the side with the teeth. Supplied with M6 screws.
Package of 1 pc.



RI.M6Z

M6 galvanised rack to weld 30x30x2000 mm. Requires pinion RI.P6.



RI.P6

M6 gear, it needs the rack RI.M6Z.



BULL.PI

Raised foundation plate. Height 32 mm. Floor fixing distance 280x170 mm, no. 4 Ø 11 mm, motor fixing distance 269x106 mm n.4 M10.



SB.BULL20.F

Externally fitted anti-intrusion cable unlock device (L=4.5m).



RF.SUN

Battery-operated device recharged by means of a photovoltaic panel applied on a mobile edge.



RF

Device with a non rechargeable battery, with guaranteed duration 2 years.



SC.RF

Device powered at 12/24 Vdc with self-test function and 2 outputs for connection to the electronic control units.



ID.TA

Warning board.



IRI.TX4VA

4-channel transmitter with Advanced Rolling Code and Rolling Code.



IRI.TX4AK

4-channel transmitter with Advanced Rolling Code and Fixed Code.



IRI.LAMP

White full range flashing light, 20-255 VAC with built-in aerial.



IRI.KPAD

Battery operated wireless vandal-proof digital keypad with alert buzzer and backlit buttons. Triple coding: Rolling Code, Programmable Code and Advanced Rolling Code. 254 memorisable codes.



IRI.CELL

Pair of vandal-proof metal covers for PUPILLA/PUPILLA.R photocells, comprising front and rear shells with concealed screw. They can maintain perfect orientation over 180°.



PUPILLA

Pair of photocells adjustable to 180°. Option to synchronise up to 4 pairs, 24 VAC/DC power supply. Easy adjustment through a LED that signals optimal alignment. Compact size: 36x110x35 mm



DA.2S

Electronic board that allows synchronised movement of 2 automation devices (opposed sliding gates).

TECHNICAL DATA	BULL20 HE*
Power supply	230 Vac (50Hz)
Motor supply	230 Vac
Max absorbed current	3 A
Max Thrust	1100 N
Max opening speed	10.5 m/min
Duty cycle	80%**
Protection level	IP44
Magnetic limit switches	YES
Operating temperature	-20°C /+50°C
Lubrication	OIL
Max gate weight	2000 kg
Driving gear for rack	M4 Z18
Weight	21.4 kg
Items no. per pallet	20

* Available in 115 VAC version | ** In extreme operating conditions (environment T 50°C, gate weight 2000 kg) the cycle falls to 60%

230_{VAC}

YAK25 OTI

VIRTUAL
ENCODER

INDUSTRIAL USE

control unit with built-in inverter and virtual encoder
oil lubricated reductions
personalised release key

STC
SYSTEM**up to 2500 kg**

512



CONTROL UNITS:

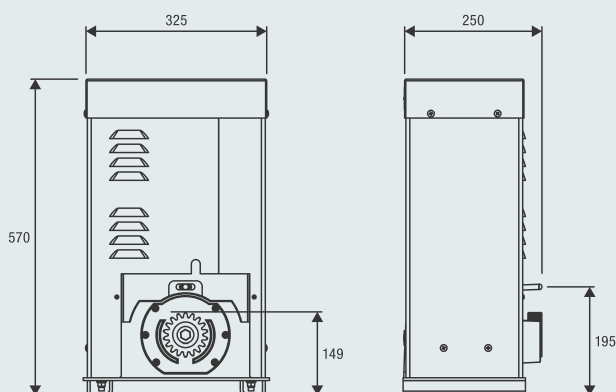
YAK25 OTI ——— CP:YAK OTI 156



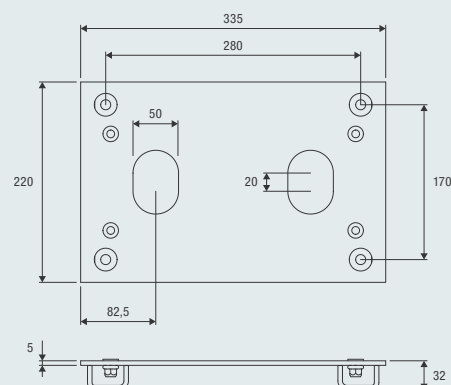
Raised foundation plate included. Height 32 mm.
Floor fixing distance 280x170 mm, no. 4 Ø 11 mm,
motor fixing distance 269x106 mm n.4 M10.

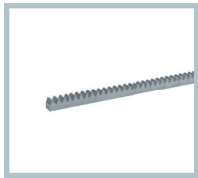
230 Vac

- Three-phase 230 VAC geared motor for intensive use with incorporated control unit, self-ventilation system and metal oil lubricated reductions to guarantee maximum performance also at low temperatures
- The main control unit, located in the top part of the motor and with integrated inverter, makes it possible to calculate the position of the motor starting from the measurement of current intensity on the electric motor (virtual encoder)
- The virtual encoder allows proper management of the slowing-down phases, movement tracking (STC system), and torque management in relation to the position of the gate, which guarantees maximum safety
- Adjustable speed from 10 to 24 m/min according to gate weight
- Safety sensor that stops the motor power supply during release operations
- External metal casing with the possibility to install PUPILLA/PUPILLA.R photocells (as accessory)
- Receiver ONE2.WB is supplied
- Metal release lever

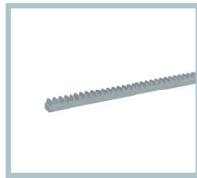


Weight (kg)	Speed (m/min)
2,500	10
2,000	11
1,500	14
1,000	16
500	24

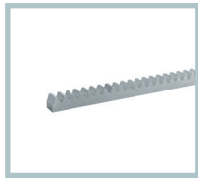


**RI.M4Z**

M4 galvanised rack to weld 22x22x2000 mm.
Package of 2 pcs.

**RI.M4ZF**

Galvanised slotted M4 rack 22x22x2010 mm for fastening to the side with the teeth.
 Supplied with M6 screws.
Package of 1 pc.

**RI.M6Z**

M6 galvanised rack to weld 30x30x2000 mm.
 Requires pinion RI.P6.

**RI.P6**

M6 gear, it needs the rack RI.M6Z.

**RF.SUN**

Battery-operated device recharged by means of a photovoltaic panel applied on a mobile edge.

**RF**

Device with a non rechargeable battery, with guaranteed duration 2 years.

**SC.RF**

Device powered at 12/24 Vdc with self-test function and 2 outputs for connection to the electronic control units.

**ID.TA**

Warning board.

**IRI.TX4VA**

4-channel transmitter with Advanced Rolling Code and Rolling Code.

**IRI.TX4AK**

4-channel transmitter with Advanced Rolling Code and Fixed Code.

**IRI.LAMP**

White full range flashing light, 20-255 VAC with built-in aerial.

**IRI.KPAD**

Battery operated wireless vandal-proof digital keypad with alert buzzer and backlit buttons. Triple coding: Rolling Code, Programmable Code and Advanced Rolling Code. 254 memorisable codes.

**IRI.CELL**

Pair of vandal-proof metal covers for PUPILLA/PUPILLA.R photocells, comprising front and rear shells with concealed screw. They can maintain perfect orientation over 180°.

**PUPILLA**

Pair of photocells adjustable to 180°. Option to synchronise up to 4 pairs, 24 VAC/DC power supply. Easy adjustment through a LED that signals optimal alignment. Compact size: 36x110x35 mm

**PUPILLA.R**

Pair of fixed photocells characterised by an N.C. relay (voltage free contact). Possibility to install 2 pairs close to each other without synchronisation. Compact size: 36x110x35 mm.

**DA.2S**

Electronic board that allows synchronised movement of 2 automation devices (opposed sliding gates).

TECHNICAL DATA	YAK25 OTI
Power supply	230 Vac (50-60Hz)
Motor supply	≈ 230 Vac
Max absorbed current	4.0 A
Max Thrust	2500 N
Max opening speed	24 m/min
Duty cycle	intensive use
Protection level	IP44
Operating temperature	-20°C /+50°C
Lubrication	OIL
Max gate weight	2500 kg
Driving gear for rack	M4 Z18
Weight	36.3 kg
Items no. per pallet	8

230_{VAC}

BISON25 OTI



ENCODER

INDUSTRIAL USE

control unit with built-in receiver, magnetic encoder and inverter
oil lubricated reductions
IP68 limit switch
personalised release key

**up to 2500 kg**

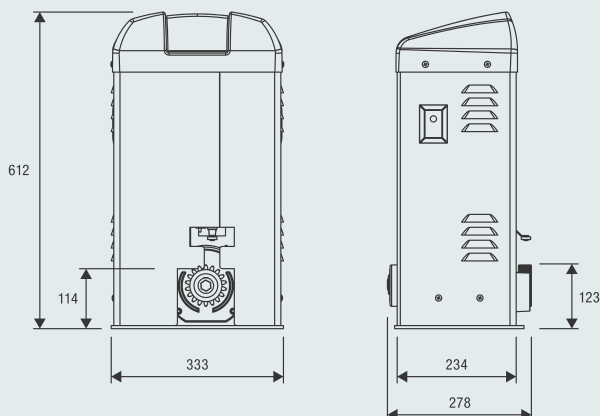
CONTROL UNITS:

BISON25 OTI — CP.BISON OTI 154

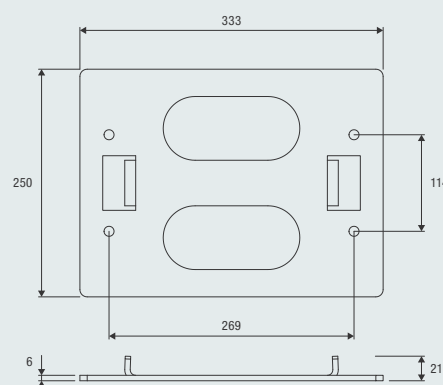
Foundation plate with anchor bolts included.
Motor and floor fixing distance
269 mm x 114 mm, no. 4 Ø 12 mm.

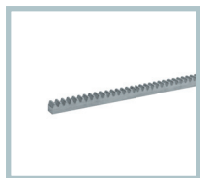
230 Vac

- Three phase 230 Vac geared motor, ventilated for intensive use
- Full metal mechanics and oil lubrication. The type of oil used ensures maximum efficiency even at low temperatures
- The encoder device ensures precision in the gate moving phases
- Casing protective treatment and paint
- The inverter technology allows for more precise adjustment of the gate moving phases, and increased crush prevention security
- Optional built-in FTC.S photocells, available as accessory

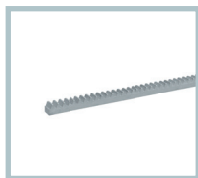


Weight (kg)	Speed (m/min)
2,500	10
2,000	11
1,450	13
1,100	15
650	19

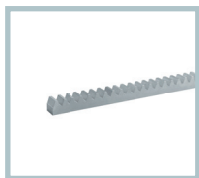




RI.M4Z
M4 galvanised rack to weld 22x22x2000 mm.
Package of 2 pcs.



RI.M4ZF
Galvanised slotted M4 rack 22x22x2010 mm for fastening to the side with the teeth. Supplied with M6 screws.
Package of 1 pc.



RI.M6Z
M6 galvanised rack to weld 30x30x2000 mm. Requires pinion RI.P6.



RI.P6
M6 gear, it needs the rack RI.M6Z.



RF.SUN
Battery-operated device recharged by means of a photovoltaic panel applied on a mobile edge.



RF
Device with a non rechargeable battery, with guaranteed duration 2 years.



SC.RF
Device powered at 12/24 Vdc with self-test function and 2 outputs for connection to the electronic control units.



ID.TA
Warning board.



IRI.TX4VA
4-channel transmitter with Advanced Rolling Code and Rolling Code.



IRI.TX4AK
4-channel transmitter with Advanced Rolling Code and Fixed Code.



IRI.LAMP
White full range flashing light, 20-255 VAC with built-in aerial.



IRI.KPAD
Battery operated wireless vandal-proof digital keypad with alert buzzer and backlit buttons. Triple coding: Rolling Code, Programmable Code and Advanced Rolling Code. 254 memorisable codes.



FTC.S
24 Vac/dc surface mounting photocell. It is possible to synchronise up to 4 pairs of photocells.



DA.2S
Electronic board that allows synchronised movement of 2 automation devices (opposed sliding gates).

TECHNICAL DATA	BISON25 OTI
Power supply	230 Vac (50-60Hz)
Motor supply	≈ 230 Vac
Max absorbed current	8 A
Max Thrust	2500 N
Max opening speed	19 m/min
Duty cycle	intensive use
Protection level	IP44
Operating temperature	-20°C /+50°C
Lubrication	OIL
Max gate weight	2500 kg
Driving gear for rack	M4 Z18
Weight	41.2 kg
Items no. per pallet	8



BISON35 OTI

BISON35 OTIL



INDUSTRIAL USE

control unit with built-in receiver, magnetic encoder and inverter
oil lubricated reductions
IP68 limit switch
personalised release key



up to 3500 kg



CONTROL UNITS:

BISON35 OTI — CP.BISON OTI 154

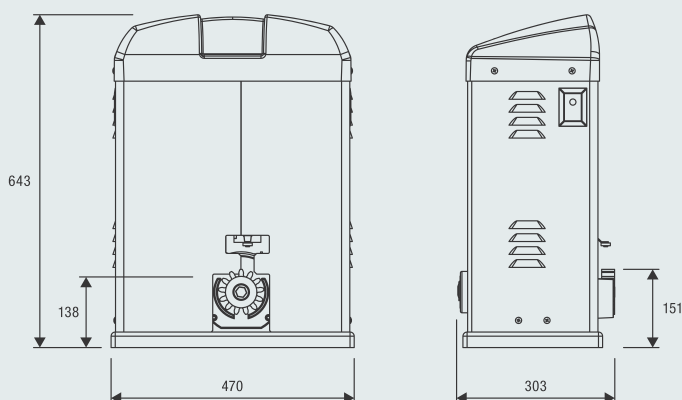
BISON35 OTIL — CP.BISON OTI L 155

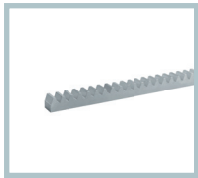


230 Vac | 400 Vac

- Three phase electromechanical geared motor available in 230 Vac (can be connected to 230 Vac single phase network) or 400 Vac (can be connected to 400 Vac three phase network)
- Ventilated for intensive use
- The encoder device ensures precision in the gate moving phases
- Full metal mechanics and oil lubrication with maximum efficiency even at low temperatures
- Casing protective treatment and paint
- The inverter technology allows for more precise adjustment of the gate moving phases, and increased crush prevention security
- Optional built-in FTC.S photocells, available as accessory

Foundation plate not included





RI.M6Z
M6 galvanised rack to weld 30x30x2000 mm.



BISON.P35
Foundation plate with coach screws and support base for height adjustment. Motor fixing distance 410x210 mm n.4 Ø 13 mm.



RF.SUN
Battery-operated device recharged by means of a photovoltaic panel applied on a mobile edge.



RF
Device with a non rechargeable battery, with guaranteed duration 2 years.



SC.RF
Device powered at 12/24 Vdc with self-test function and 2 outputs for connection to the electronic control units.



ID.TA
Warning board.



IRI.TX4VA
4-channel transmitter with Advanced Rolling Code and Rolling Code.



IRI.TX4AK
4-channel transmitter with Advanced Rolling Code and Fixed Code.



IRI.LAMP
White full range flashing light, 20-255 VAC with built-in aerial.



IRI.KPAD
Battery operated wireless vandal-proof digital keypad with alert buzzer and backlit buttons. Triple coding: Rolling Code, Programmable Code and Advanced Rolling Code. 254 memorisable codes.



FTC.S
24 Vac/dc surface mounting photocell. It is possible to synchronise up to 4 pairs of photocells.



DA.2S
Electronic board that allows synchronised movement of 2 automation devices (opposed sliding gates).

TECHNICAL DATA	BISON35 OTI	BISON35 OTI L
Power supply	≈ 400 Vac (50-60Hz)	230 Vac (50-60Hz)
Motor supply	≈ 400 Vac	≈ 230 Vac
Max absorbed current	3 A	8 A
Max Thrust	3000 N	2500 N
Max opening speed	19 m/min	10.5 m/min
Duty cycle	intensive use	intensive use
Protection level	IP44	IP44
Operating temperature	-20°C /+50°C	-20°C /+50°C
Lubrication	OIL	OIL
Max gate weight	3500 kg	3500 kg
Driving gear for rack	M6 Z13	M6 Z13
Weight	50.8 kg	51 kg
Items no. per pallet	4	4



BISON45 OTI



CONTROL UNITS:

BISON45 OTI — CP.BISON OTI 154



INDUSTRIAL USE

control unit with built-in receiver, magnetic encoder and inverter
oil lubricated reductions
IP68 limit switch
personalised release key

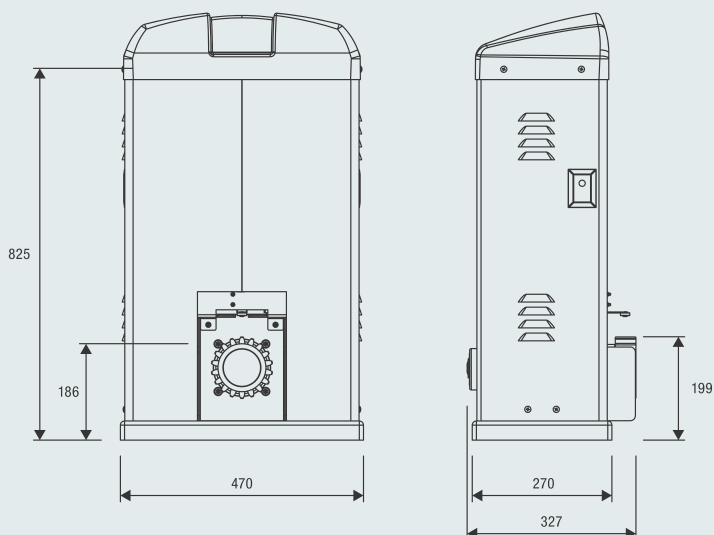


up to 4500 kg

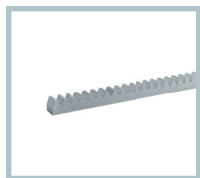
400 Vac

- Three phase 400 Vac geared motor, ventilated for intensive use
- Security sensor which interrupts the motor power supply during release operations
- The encoder device ensures precision in the gate moving phases
- Full metal mechanics and oil lubrication. The type of oil used ensures maximum efficiency even at low temperatures
- Casing protective treatment and paint
- The inverter technology allows for more precise adjustment of the gate moving phases, and increased crush prevention security
- Optional built-in FTC.S photocells, available as accessory

Foundation plate not included



Weight (kg)	Speed (m/min)
4,500	10
3,500	11
2,600	13
2,000	15
1,150	19



RI.M6Z

M6 galvanised rack to weld 30x30x2000 mm.



BISON.P45

Foundation plate with coach screws and support base for height adjustment. Motor fixing distance 400x210 mm n.4 Ø 14,5 mm.



RF.SUN

Battery-operated device recharged by means of a photovoltaic panel applied on a mobile edge.



RF

Device with a non rechargeable battery, with guaranteed duration 2 years.



SC.RF

Device powered at 12/24 Vdc with self-test function and 2 outputs for connection to the electronic control units.



ID.TA

Warning board.



IRI.TX4VA

4-channel transmitter with Advanced Rolling Code and Rolling Code.



IRI.TX4AK

4-channel transmitter with Advanced Rolling Code and Fixed Code.



IRI.LAMP

White full range flashing light, 20-255 VAC with built-in aerial.



IRI.KPAD

Battery operated wireless vandal-proof digital keypad with alert buzzer and backlit buttons. Triple coding: Rolling Code, Programmable Code and Advanced Rolling Code. 254 memorisable codes.



FTC.S

24 Vac/dc surface mounting photocell. It is possible to synchronise up to 4 pairs of photocells.



DA.2S

Electronic board that allows synchronised movement of 2 automation devices (opposed sliding gates).

TECHNICAL DATA	BISON45 OTI
Power supply	≈ 400 Vac (50-60Hz)
Motor supply	≈ 400 Vac
Max absorbed current	2.85 A
Max Thrust	5000 N
Max opening speed	19 m/min
Duty cycle	intensive use
Protection level	IP44
Operating temperature	-20°C /+50°C
Lubrication	OIL
Max gate weight	4500 kg
Driving gear for rack	M6 Z18
Weight	66 kg
Items no. per pallet	4