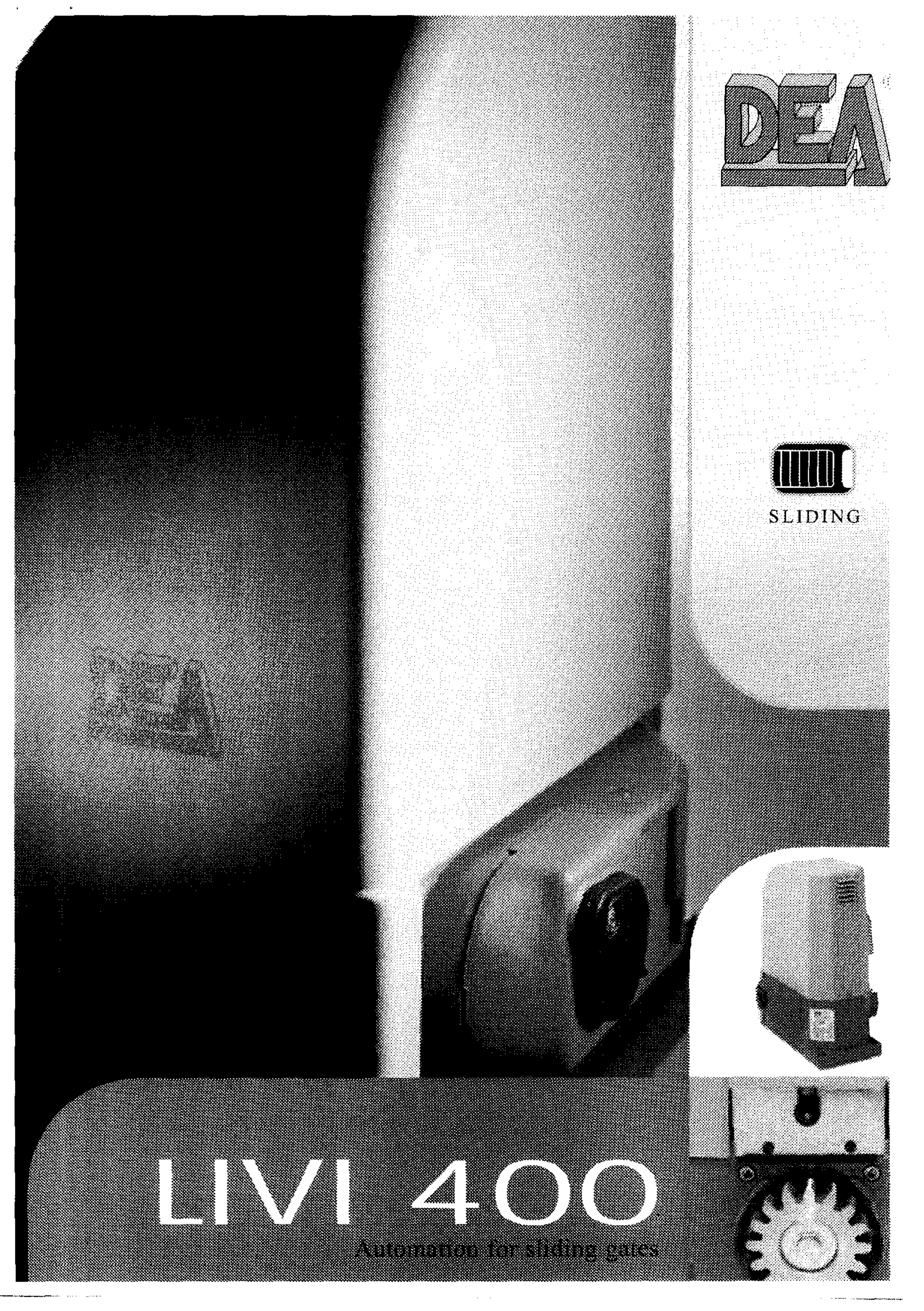




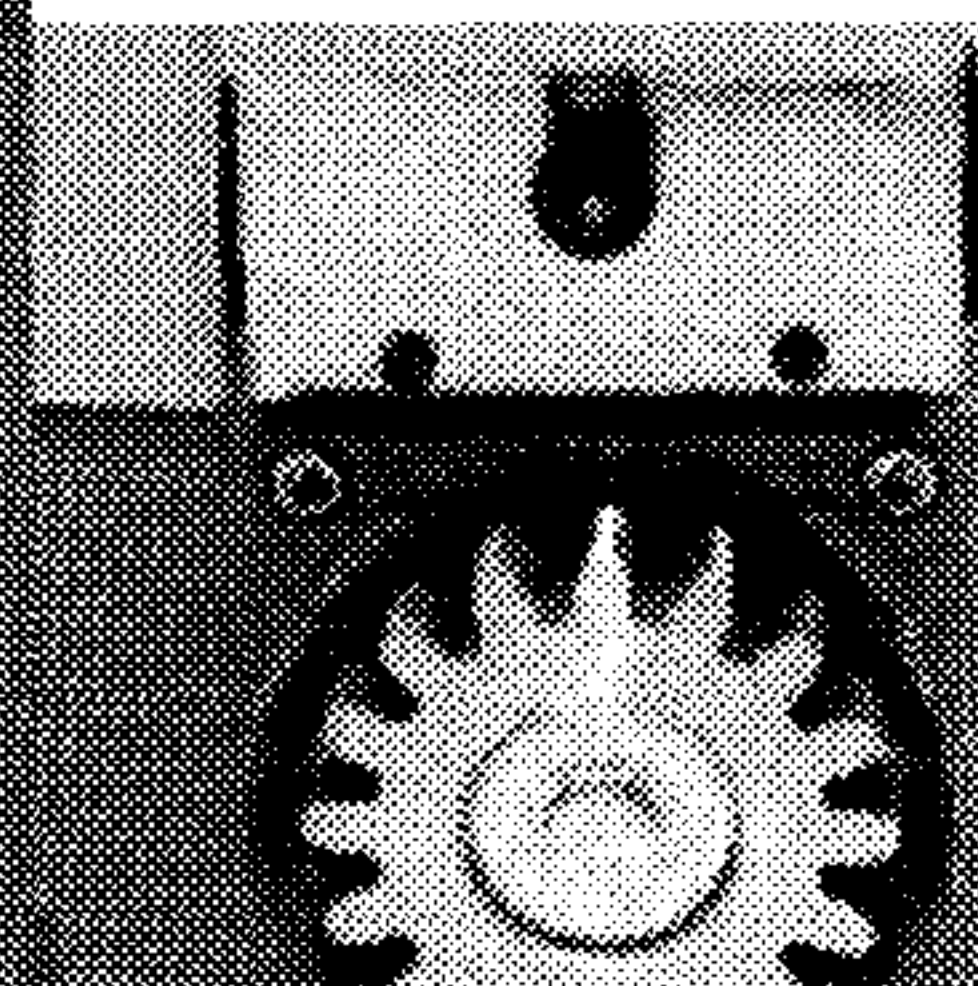
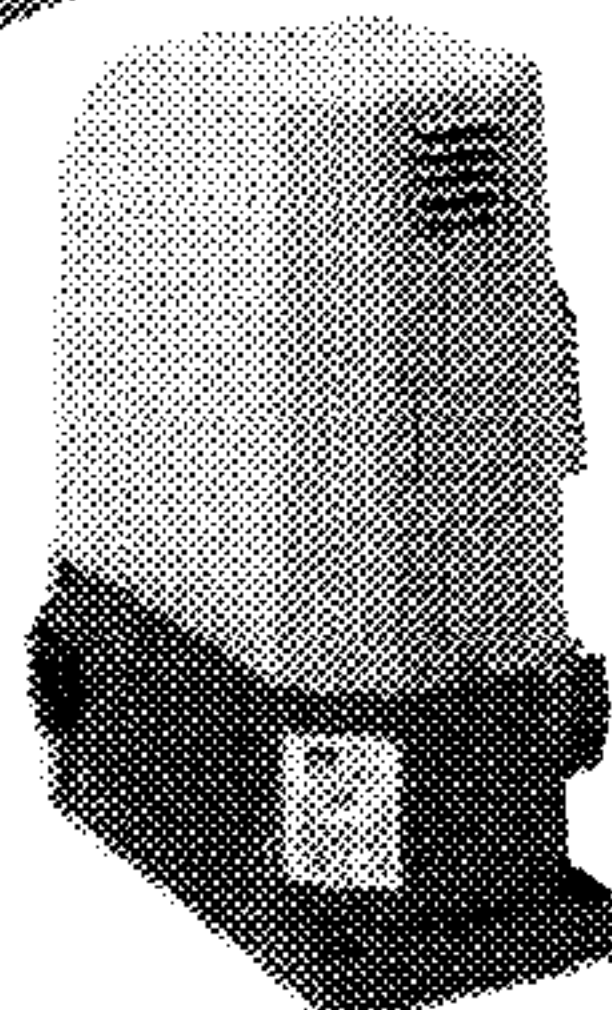
DEA



SLIDING

LIVI 400

Automation for sliding gates





Electromechanical operator for sliding gates

LIVI 400

THE STURDINESS, BORN OF THE LONG EXPERIENCE

LIVI 400 is the automation for sliding gates from 400 kg to 800 kg, which combines a great **sturdiness** and **reliability**

with an agreeable and original design,

which has been marking out this product for several years.

Thanks to the mechanical or electronic clutch, the **safety** is assured.

The control board is integrated in the case, making so still easier the already quick installation of Livi 400.

RANGE

LIVI 400

For gates up to 400 kg

LIVI 400: operator 230V ac.

LIVI 402: operator 230V ac, built-in control board 203/B with pedestrian opening.

LIVI 403: operator 230V ac, built-in control board 203 with pedestrian opening and reverse on obstacle.

For gates up to 800 kg

LIVI 800: operator 230V ac.

LIVI 802: operator 230V ac, built-in control board 203/B with pedestrian opening.

LIVI 803: operator 230V ac, built-in control board 203 with pedestrian opening and reverse on obstacle, electronic clutch.

LIVI 804: operator 230V ac, not self-locking.

LIVI 805: operator 230V ac, built-in control board 203 with pedestrian opening and reverse on obstacle, electronic clutch, not self-locking.

For solutions in low voltage*

LIVI 402/24: operator 24V dc for gates up to 400 kg, built-in control board 24/400/1.

LIVI 402/24B: operator 24V dc for gates up to 400 kg, built-in control board 24/400/1 with 2 integrated batteries 12V 1,2 Ah.

**the automation in 24V dc enables programmable limit switches and the final slow-down in opening and closing; moreover a battery backup system enables the operation in case of power failure.*

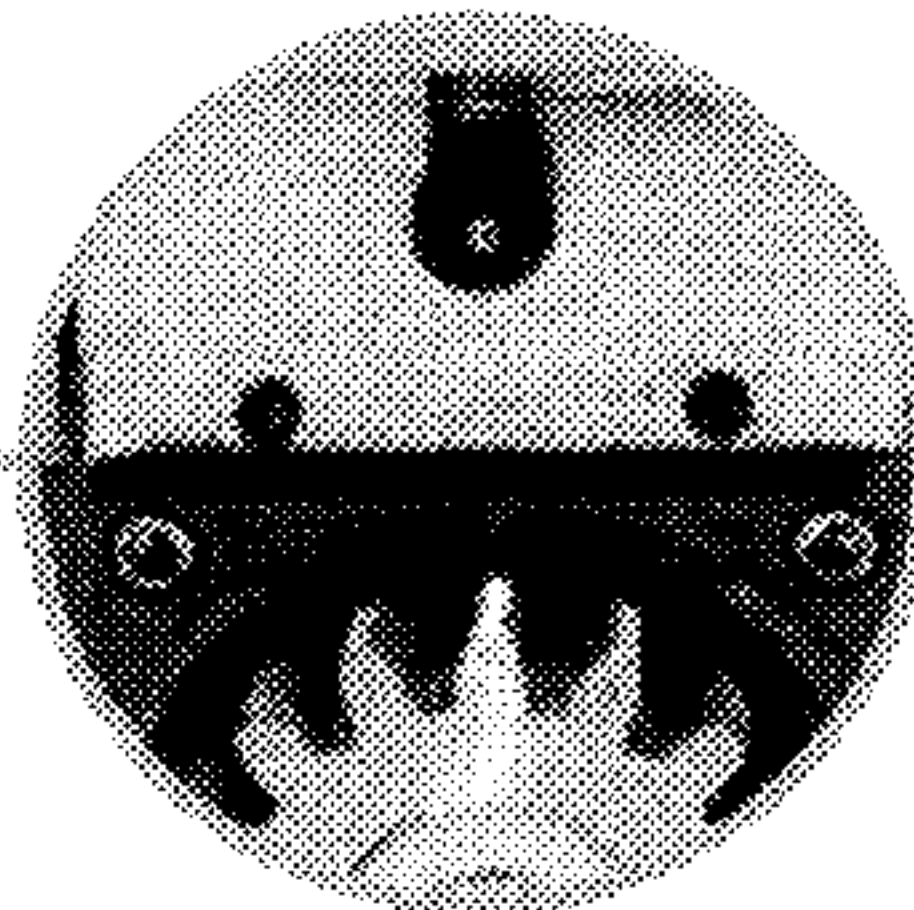
The DEA System control boards are planned to optimize the performances of Livi 400 range.

It is suggested to use articles with control boards integrated.

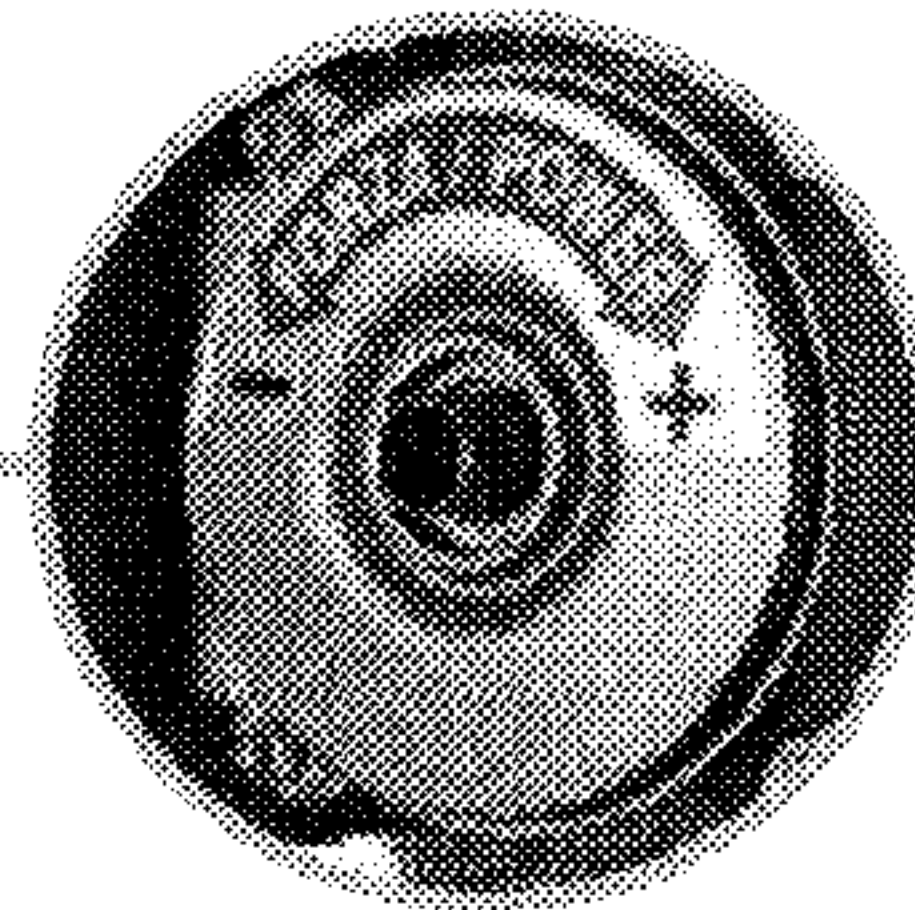
The models

- Electromechanical automation, 230V ac and 24V dc.
- Suitable for gates from 400 kg to 800 kg.
- Easy to install, thanks to the adjustable fixing plate.
- Integrated limit-switch.
- Simple unlocking system by key.
- Mechanical clutch.
- Grease soaked gear motor.
- Silent.

Simple unlocking system by key

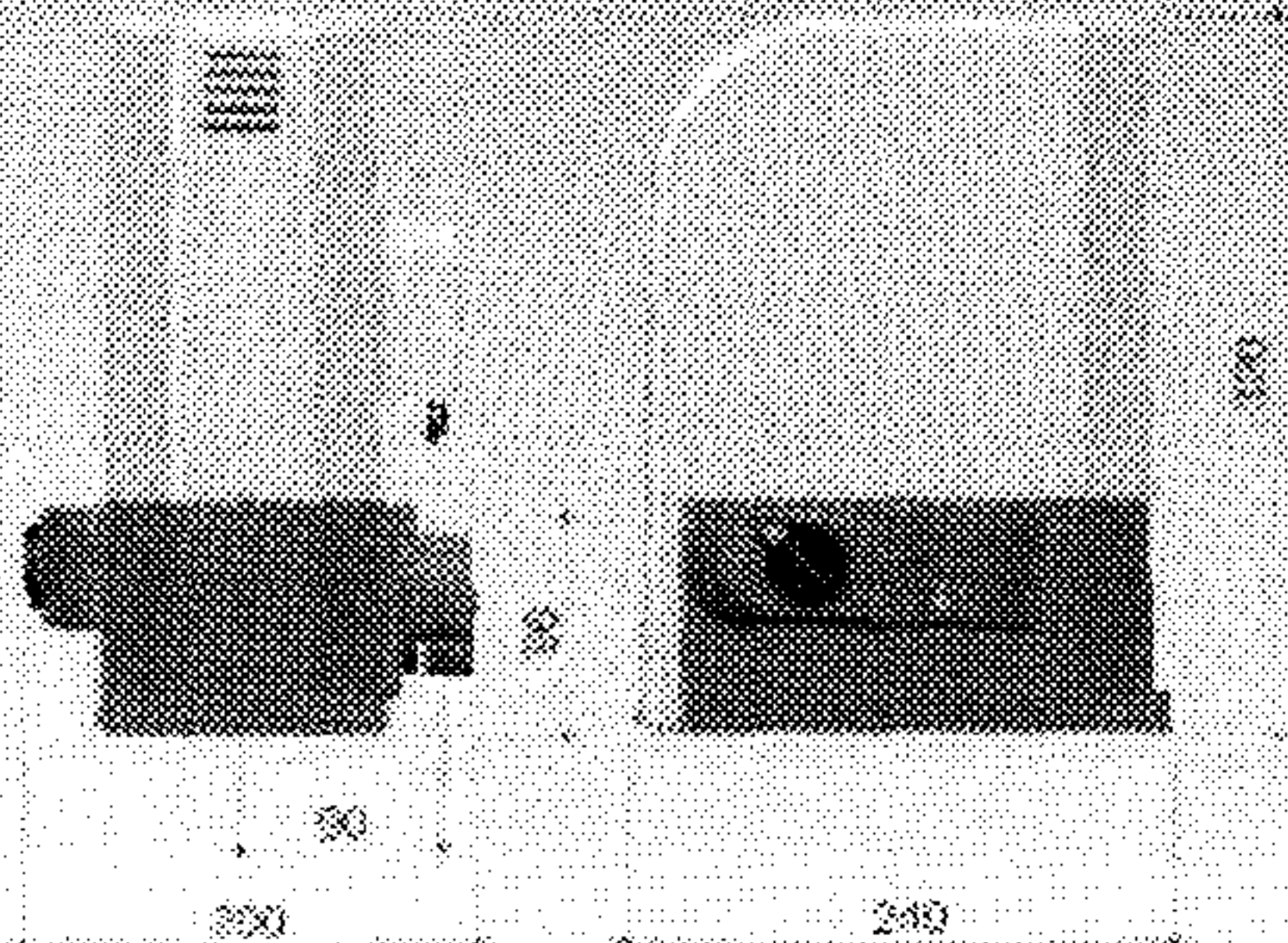


Integrated limit-switch in opening and closing.



Anti-crushing safety thanks to the mechanical clutch.

accessories



Art. 111
NYLON rack.



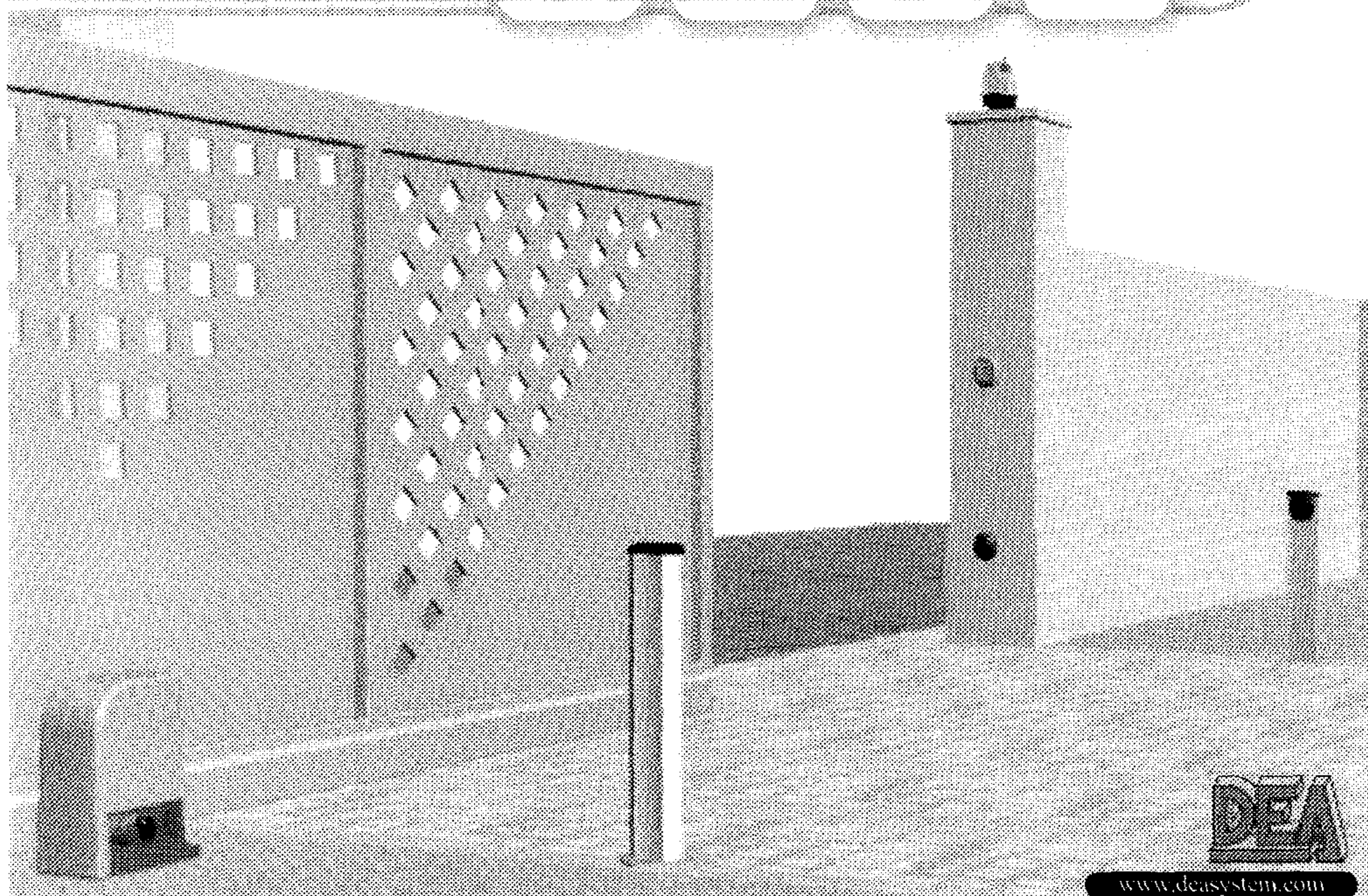
Art. 112 - 113
GALVANIZED racks.

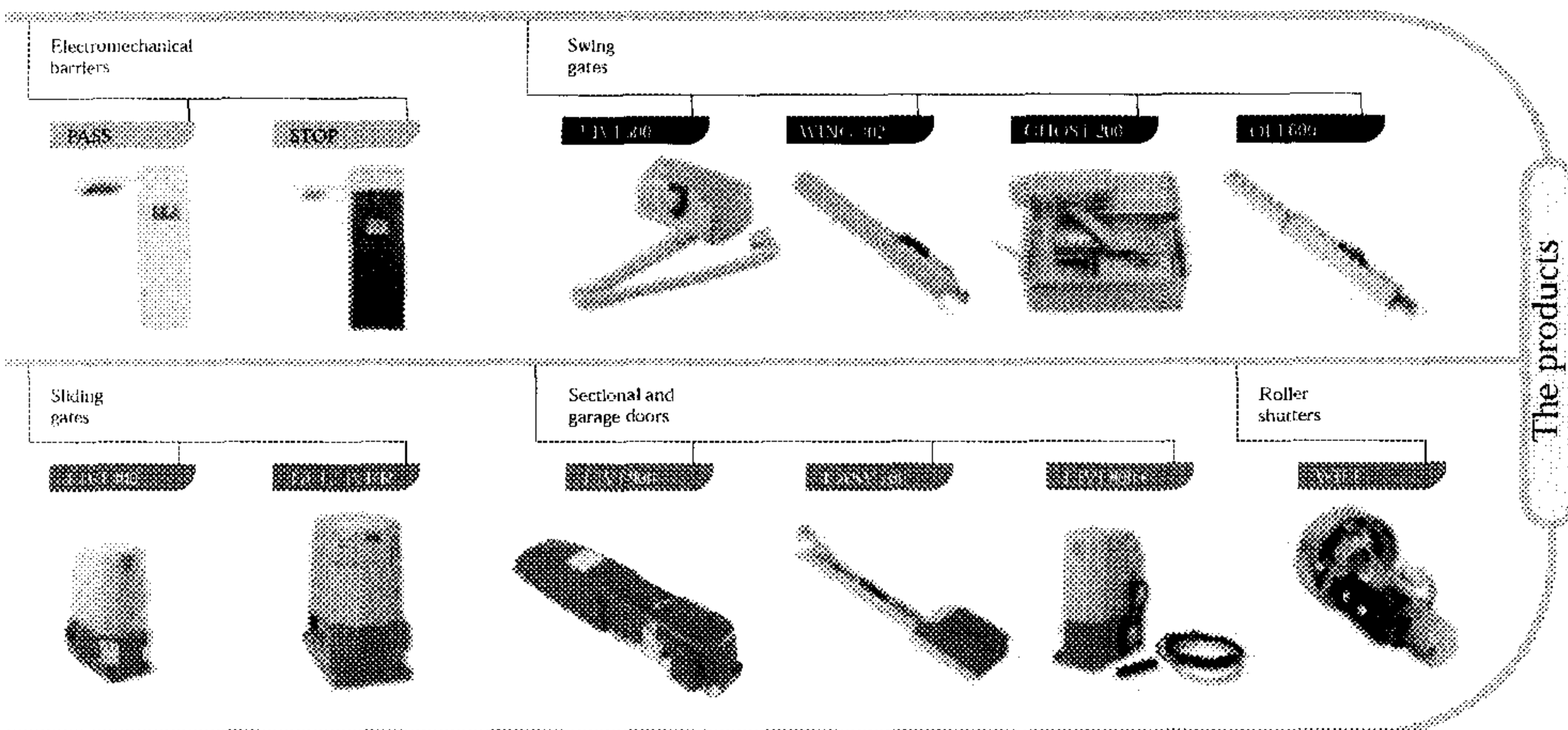


Art. 460
Foundation plate to be placed in the concrete.

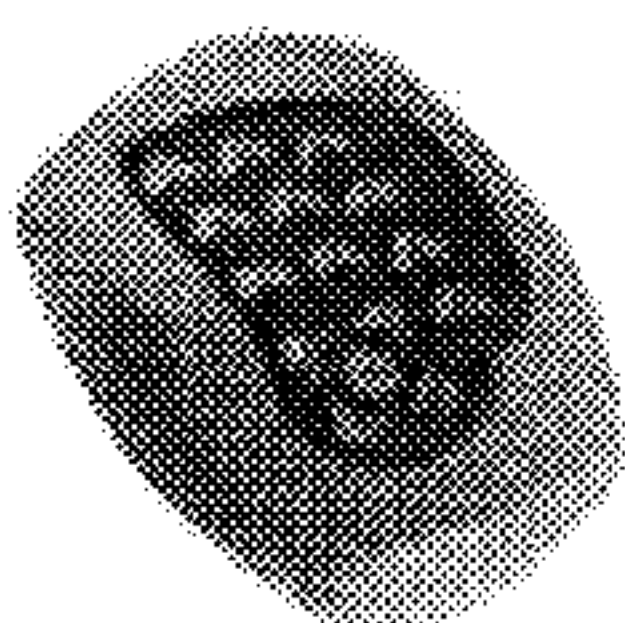
Technical information

Model	400-402-403	800-802-803	804-805	402/24
Power supply (V) (50/60 Hz)	230 AC	230 AC	230 AC	230 AC
Motor power supply (V)	230 AC	230 AC	230 AC	24 DC
Capacity (W)	320	460	460	120
Incorporated condenser (uF)	8	12,5	12,5	-
Protection level (IP)	14	14	14	24
Max torque (Nm)	11	16	13	9
Max starting torque (Nm)	4,6	11	-	-
Speed (m/s)	10,5	10,5	13	10,5
Max thrust (N)	340	500	400	280
Operating temperature (°C)	- 20 ÷ + 60	- 20 ÷ + 60	- 20 ÷ + 60	- 20 ÷ + 60
Motor thermal protection (°C)	140	150	150	-
Max gate weight (kg)	400	800	600	400
Duty cycle (%)	30	50	50	80
Weight with packing (kg)	11	12	12	10

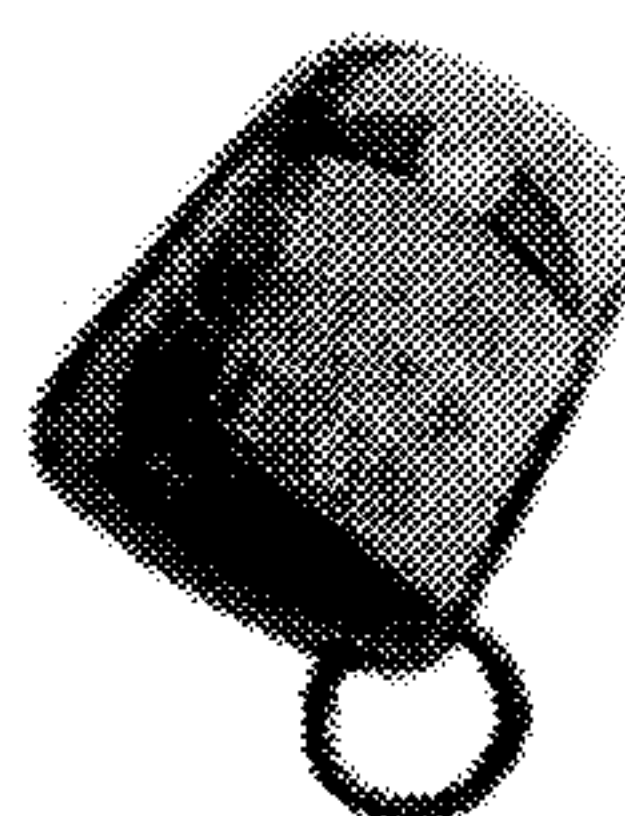




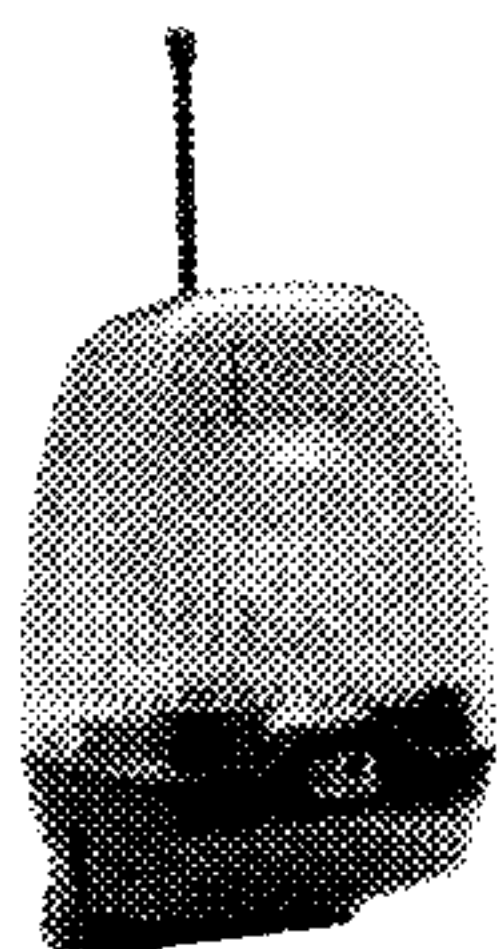
The accessories



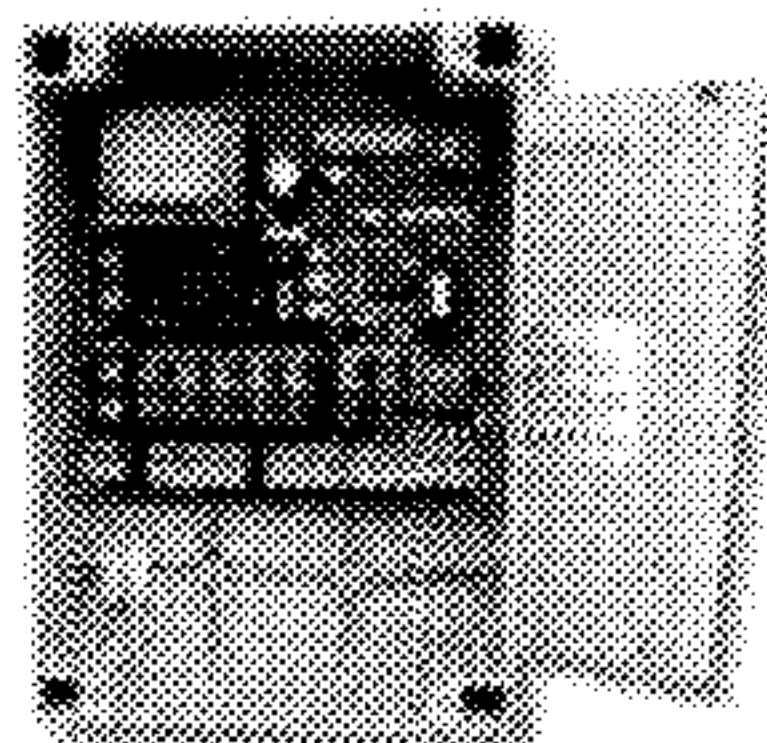
Digikay:
Safe and reliable,
available wireless
and hard-wired.



Radio devices:
frequency 433,92 Mhz,
available Dip-Switch
or Self-Learning type.



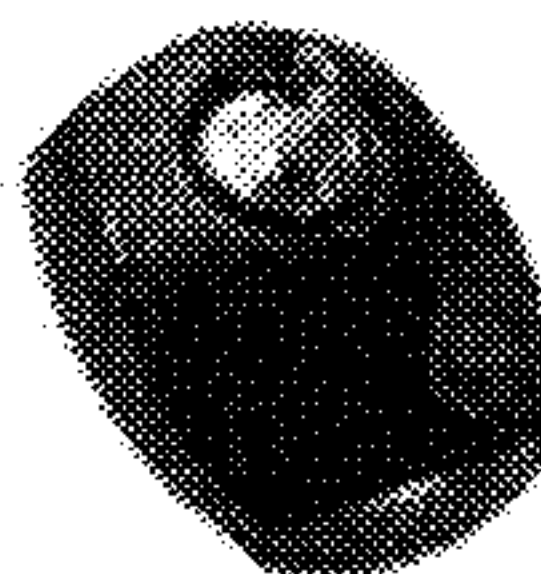
Flashing light
with built-in
433,92 Mhz
aerial.



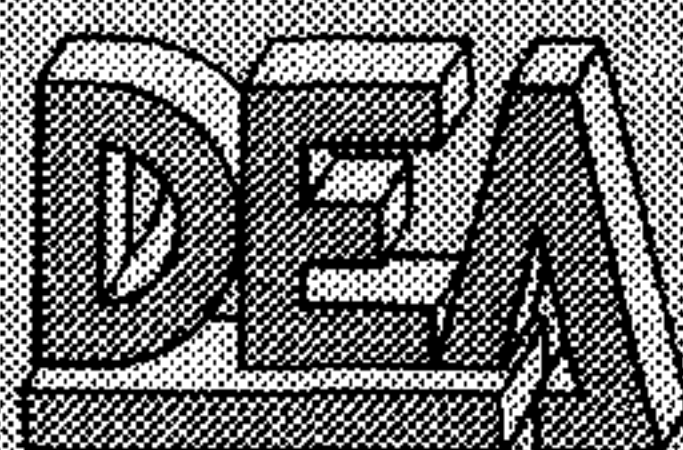
Control boards:
230V ac and 24V dc,
safe and simple
to program.



Safety beams:
reliable and easy
to install.



Keyswitch:
available flush mounted or
surface mounted.



DEA SYSTEM S.p.A.

Via dell'Industria, 1 - 20090 Sesto San Giovanni (MI)

DEA SYSTEM S.p.A. è una società a partecipazione paritetica tra l'Ente Cassa di Risparmio di Milano e l'Ente Cassa di Risparmio di Roma. L'Ente Cassa di Risparmio di Milano è rappresentata dal Presidente della Cassa di Risparmio di Milano, l'Ente Cassa di Risparmio di Roma è rappresentata dal Presidente della Cassa di Risparmio di Roma.

DEALER STAMP

1. GENERAL DESCRIPTION

The photocell FOTO30SDE has been designed and created for use on power operated doors (gates, doors,...). It has autotest function, usable with control units able to manage it (e.g. EURO1MF or EURO2MF). The autotest function is carried out as follows: before any manoeuvre the station inhibits the transmitter by sending a voltage between +5 and +24 V dc on terminal N° 3. The absence of the infrared beam thus brought about generates, with a 20 ms. delay, opening of the receiver's N.C. contact. The station checks that the described procedure is properly carried out before each manoeuvre. It complies with european directive 98/336/EEC (EMC).

2. APPLICATIONS

With stations equipped with autotest device for safety applications.

3. MAIN TECHNICAL FEATURES

POS.	FEATURE	VALUES
1)	Power supply (TX - RX)	12 + 24 V ac/dc
2)	Rest/Work Consumption	50 mA (TX+RX)
3)	Container	ABS
4)	Size / Weight	110 x 50 x 25 mm 200g
5)	Working frequency	850 Hz +/- 10%
6)	modulation frequency	1000 Hz
8)	Degree of insulation	IP 45
7)	Infrared wavelength	850 nm
8)	Relay contact capacity	0,5 A @ 24 V ac/dc
9)	Infrared beam range	30m nominal (8m in external use)
10)	Working temperature	-20 +70° C
11)	Intervention time	< 20ms

4. RECEIVER TERMINAL BOARD

Pos.	Function	Description
1)	+12 + +24 V ac/dc	Power supply 12 - 24 V ac/dc
2)	0 V	Common supply
3)	N.C.	Relay contact normally closed
4)	C	Common relay contact
5)	N.A.	Relay contact normally open

5. TRANSMITTER TERMINAL BOARD

Pos.	Function	Description
1)	+12 + +24 V ac/dc	Power supply 12 - 24 V ac/dc
2)	0 V	Common supply
3)	Autotest input	From +5 to +24 Vdc to block infrared beam emission

6. FUNCTIONING

Align the beam with the receiver using the relevant adjustment screws "A" (fig. 2) on the receiver and transmitter. Interruption of the infrared beam generates opening of the normally closed contact of the relay on the receiver and lighting up of the red LED.

7. NOTES

Alignment is checked by voltmeter measuring of tension at the receiver test-point (fig.3). This value varies in accordance with various parameters, among which the distance between the photocells. The higher the voltage value at the test-point, the better the alignment. This value can range between 0 and 5 Vdc. Optimum voltage should be between 0,5 and 0,6 Vdc.

1. GENERAL INFORMATION

These receivers integrate the functions of standard Multipass and Multipass Roll code receivers and decoders. They feature a storage capacity of up to 200 different codes generated by transmitters of the Multipass and Multipass Roll family at 40,685 MHz (**MRA1- MRA2**) and at 433 MHz (**MRA1E - MRA2E**).

2. ROLLING CODING

This type of coding affords extra security as it prevents the risk of code violation by interception or re-transmission. It is based on the transmission of a batch of bits consisting of a fixed part (which is different for each transmitter), of channel bits associated with the switch of the activated transmitter, and of a part which changes in a pseudo-random manner (rolling code) in accordance with a proprietary Prastel algorithm. The configuration of these latter bits changes unpredictably from one transmission to the following. The receiver memorises by self-learning the fixed part of the code associated with each transmitter plus the relevant rolling code, updating the latter upon each transmission. Transmitter recognition occurs only if the transmitted rolling code corresponds to the 255 configurations subsequent to the last recognised transmission. Realignment and recognition of a previously memorised transmitter which has overrun the permissible interval (an event which may occur for example following on an excess of unrecognised transmissions or upon battery replacement) can however be made by pressing and releasing the transmitter learning button. This procedure permits the system to check for code correctness, while safeguarding the advantages afforded by the rolling code.

3. TECHNICAL FEATURES

Power supply	12 - 24 Vac/dc
Average consumption	stand-by: 20 mA with relay energized: 45 mA
Reception frequency (mod. MRA1E - MRA2E)	433 MHz
Reception frequency (mos. MRA1- MRA2)	40,685 MHz
Digital Code	with a number of bits varying from 40 to 54
Number of storable codes	200
Number of channels	1 (MRA1- MRA1E); 2 (MRA2 - MRA2E)
Type of output	monostable, bistable
Output	Relay
Contact rating	0,5 A @ 24 Vac/dc
Signals	red LED
Working temperature range	-20/+55 °C
Storage temperature	-40/+85 °C
Receiver weight	250 g.
Receiver dimensions	77 x 80 x 38 mm

4. VOLTAGE SELECTION

Both the **MRA1-MRA2** and the **MRA2E-MRA1E** receivers can operate at 12/24 Vac/dc.

5. CODE PROGRAMMING AND DELETION

Entry and storage of a new code and deletion of the full code list can be made by acting on key P1, while deletion of single user codes can be made using the **GTBASER** portable terminal.

How to Program

- Power the receiver as specified.
- Press **P1**. The red LED lights up indicating that programming is in progress.
- Press any of the transmitter's keys to make a transmission.
- The code will now be entered in the memory. While loading is in progress, LED will flash. Upon code being stored, the LED stops flashing and becomes fixed. A new code can now be entered.
- Load the codes of all the transmitters by making a transmission with each of them.
- Upon this operation being completed, press **P1** again to exit from programming mode. The LED will go off. In any case, the system will automatically exit from programming mode upon 10 seconds having elapsed since last loading.

Note: Codes remain stored even if receiver is powered off.

Attention: Make a transmission within 10 seconds after pressing **P1** as system will automatically exit from programming mode after this time has elapsed if no transmission has been made.
To re-access programming mode, press **P1** again.

Deletion of all codes

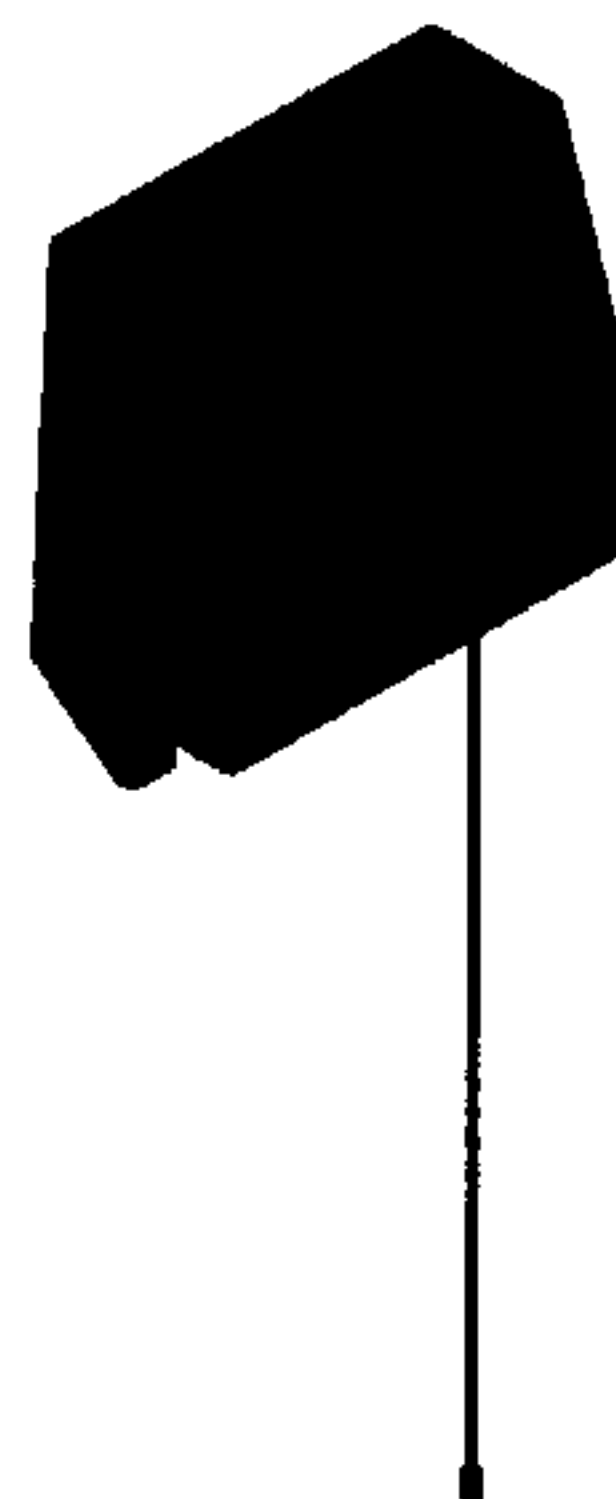
- Press and hold down key **P1** until the red LED starts flashing.
- Press **P1** again within 6 seconds to confirm deletion. Confirmation is signalled by the LED flashing more rapidly.

6. CHANNEL SELECTION AND RELAY OPERATING MODE

Set output as desired by means of jumper A (jumper A closed for monostable relay operation and jumper A open for bistable relay operation).
Note: Relay operating mode selection is not contemplated on the **MRA2 - MRA2E** receivers.

7. ANTENNA CONNECTION

The receivers may be connected to external antennas of corresponding frequencies by means of the appropriate F-type female connectors. In particular, the **MRA1** and **MRA2** receivers can be connected to **ANTFK4** and **ANT40,6** type antennas or the like.
The **MRA1E** and **MRA2E** receivers can instead be connected to **ANT433SD** type antennas, to the wire antenna provided or the like.



DECLARATION OF CONFORMITY

Prastel S.p.A. declares that the following equipments: **RECEIVERS MRA1, MRA2, MRA1E, MRA2E** ARE IN ACCORDANCE with the 99/05/EC (R&TTE) directive

Sliding gate safety aspects.

The sliding gate operator has an electronic clutch mechanism, which is adjustable to suit the weight of the gate. The adjustment required depends on the resistant force required for the movement of the gate.

When the clutch detects an obstacle in the line of movement strong enough to combat the force set it the clutch will slip to prevent further movement, this feature relies upon the obstacle being heavy enough to stop the gate from moving and is not ideal for protection of persons

If there is concern for safety when the gate is opening a safety beam can be installed protecting the rear area that the gate slides into, when this is obstructed the gate is stopped from moving in either direction, thus preventing someone from standing behind the gate and being involved in a collision.

The design of the gate has a bearing on the safety aspect, gates which have a backing sheet prevents children from putting the arm through the gate during operation reducing the risk of injury.

Consideration should also be given to signage and erecting an enclosure over the area to which the gate opens into which again would prevent obstructions in the line of movement.

Please note that automated gates consist of moving mechanical parts, safety systems can be installed to minimise risks, but at all times persons/children should be restricted from working/playing in the vicinity of the gate and its moving area.