INSTALLATION GUIDE

for automatic closing systems

CARDIN®
ELETTRONICA

INDEX

ATTACHED FORMS

INTRODUCTION

The declaration of conformity that the **installer** (that is to say the person who installs the automatic closing system) has to compile and leave with the **end user** vouches that the entire automatic closing system conforms to the Machine Directives and to the previously stated new European harmonised standards which at the moment are considered to be a support for the MD (they are referenced by the product standards EN13241-1 belonging to the product constuction directive - 89/106/CEE).
The aim of the new standards is to define the technical, constructive and operative characteristics and the testing methods for the devices which make up the automatic system and that act as a safeguard against risks which could occur during the operative life of the system.

They therefore deal with safety aspects.

Before confronting the purely technical standards we would remind the installer what has to be done to be in line, remembering that the rules and standards are taken from the Machine directive DPR nr. 459 of the 24/07/96.

AIM OF THIS GUIDE

1. To supply fundamental information regarding the regulations, **legal obligations and responsibility** for a safe AUTOMATIC CLOSING INSTALLATION for domestic and industrial use;
2. To supply concrete technical support to simplify and directly satisfy all the requirements foreseen by the laws and reference standards.

RESPONSIBILITY

The law states that the **person responsible for the safety of an automatic closing installation is the same person who carried out the initial installation.** THE INSTALLER has the complete responsibility regarding the following:

- the correct installation of the system (according to the standards in force), following the user installation and maintenance instructions supplied by the constructor of the component parts of the automatic closing installation;
- the use of approved materials which conform to the laws and reference standards covered by the CE mark. To this end the installer must attach the certificates and/or the CE declaration of conformity to the instruction manual of the component parts of the automatic closing installation;
- **handing over documents to the client** which contain the following:
  - the operating instructions for the safe use of the system,
  - normal maintenance instructions,
  - the declaration of approval,
  - the maintenance register.

LEGAL OBLIGATIONS

The European community commission has declared that all AUTOMATIC CLOSING SYSTEMS (motorised gates and doors etc.) are governed by the **Machine directives** (89/392/CEE)[1]. This directive states that the **installer** who "motorises" a gate or a door (therefore creating an installation) has the same obligations as the constructor of an automatic machine and therefore **MUST**:

1. prepare the **TECHNICAL FILE**;
2. fill out the CE **DECLARATION OF CONFORMITY** [2];
3. apply the CE symbol to the automatic closing system.

Note [1]:

- adding automation to a new manual closing system makes it a **machine**, and therefore the person who carries out the transformation must respect the **machine directives**; (for machines we

mean a set or parts or organs, of which at least one is mobile, along with the relative actuators, command and power circuits, etc. that are interconnected to carry out a specific task, in particular for transformation, holding, movement or treatment of materials);

- machinery which was installed before the directive became law is excluded, but significant modifications or alterations for maintenance are covered by the **machine directives**.
- we would also point out that two other EU directives, 89/655/CEE and 95/63/CEE, indicate the guidelines for the minimum safety requirements of machinery that is already being used.

Note [2]:

The conformity of a product is declared according to a directive, which defines the essential requirements that are to be respected. The technical standards are complementary instruments for verifying the conformity of the product (according to the essential requirements of the directive).

What has to be done: the TECHNICAL FILE

The automatic closing system technical file that the installer has to fill out and save must contain the following indications:

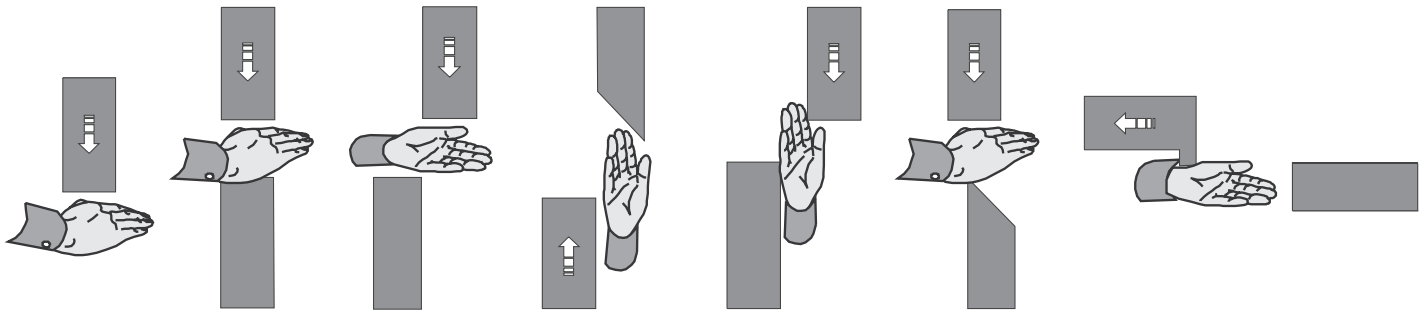
- complete mechanical and electrical drawings;
- **risk analysis of the closing system and the solutions used**;
- the technical manuals for each single component (with installation and maintenance details);
- **the list of components used** (with their declaration of conformity);
- the end user instructions and general warnings for a safe installation (also to be given to the end user);
- **the maintenance register for the system** (also to be given to the end user);
- **The CE declaration of conformity for the system** (also to be given to the end user).

- RISK ANALYSIS

Possible risks which can appear in an automatic closing system and the solutions used to reduce or eliminate them are listed in the attached sheets.

To carry out correct risk analysis the following points should be considered:

- **check the constructive and mechanical condition of the closing system that is to be automated** (door, gate, etc.) and coordinate any eventual interventions required to obtain the correct and regular operation of the manual closing device;
- evaluate the risk level presented by the closing device remembering that different levels of risk can be assigned to the same danger point); risk is in fact the combination of the probability which occurs in dangerous situations (which increases with the number of users) with the graveness of the consequences;
- typical risks associated with automatic closing are:



- COMPONENT LIST

Made up of a list of components and accessories used to carry out the automatic closing installation.
The technical characteristics and the installation indications for the components can be found in their relative installation and user instruction manuals.

- MAINTENANCE REGISTER

The maintenance register contains (as well as a list of components used and indications regarding residual risk) the technical references and a list of installation activity, maintenance interventions repairs and modifications carried out throughout its lifetime; **it must be available for inspection by authorised bodies where required**. The new standards highlight the fact that **maintenance is of fundamental importance** in ensuring that the automatic closing system remains safe and efficient. During maintenance interventions[3] all necessary actions must be taken to check that the closing system corresponds to the conformity characteristics that were verified at the time of the initial installation; the following must be checked for example::

- limits of force must be respected if the safety of the automatic closing system is guaranteed by a torque system (see standards **EN12453** and **EN12445**);
- detection devices (with direct safety functions (type E) or only courtesy functions (type D) must function correctly (see standard **EN12445**).

Note [3]:

- Remember that maintenance must be carried out not only respecting the indications of the various constructors of the installed components (regarding both the time of the intervention as well as the type of intervention to be carried out) but also respecting the indications pointed out by the installer himself (in fact the installer knows the ambient conditions and the state of wear of the closing system).

A **maintenance contract** must be stipulated (to be attached to the maintenance register) and this must clearly indicate: the frequency of the maintenance intervention and the types of operation and checks carried out during the intervention. Bear in mind that:

- maintenance activity, repair and modifications must be carried out by qualified personnel;
- original spare parts must be used when part replacement is necessary.
- maintenance interventions regard all the closing devices (old, new, automatic and manual).

Note:

- as a follow up to the Directive 99/44/CE regulating the relationship between the seller and the customer regarding the "guarantee of consumer goods" coming into force (commercial relationships between other members of the professional chain i.e. constructor, dealers and installers are excluded), the installation is now considered a product in the category of consumer goods and is therefore subject to the new laws.
- The installer is responsible and therefore must answer to the client (for two years from the supply of the closing system) not only for the conformity of the installation (i.e. for having carried out the a competent installation and for having respected the installation instructions) but also for the conformity of the products used in the construction of the automatic closing system. He could claim from the constructors of the products for the used parts remembering however that:
  - the duration of the guarantee can also be limited by the maximum number of manoeuvres that can be carried out without maintenance interventions (as stipulated by the constructor and laid out in the instruction manual);
  - generally speaking the guarantee is not valid in cases of product non-conformity owning to situations where constructive defects cannot be held responsible.

What has to be done: THE CE CONFORMITY DECLARATION

The CE conformity declaration, meaning the conformity of the complete installation, and the procedures used by the "constructor" (in this case the installer who assembles the automatic closing system) declares that the "machine" respects all the essential safety requirements which effect it.
Signing the **CE conformity declaration** authorises the "constructor" to attach the CE mark to the machine.

The directives which must be indicated in the declaration are as follows:

- Machine directive **98/37/CE**;
- Directive EMC **89/336/CEE** and successive modifications;
- Directive BT **73/23/CEE** and successive modifications.

Conforming with the above mentioned directives does not exclude the obligation to conform with other technical standards and local laws (e.g. the Directive 99/05/CE – regarding radio devices and telecommunications terminals – and the law 46/90).

By signing the conformity declaration the installer (constructor) of the automatic closing system assumes the following responsibilities:

- the responsibility for the installation and how it was carried out by the declarer;
- the responsibility for the system being maintained following the indications supplied by him (as the constructor of the closing system) and the components used.
- the responsibility for modifications, repair work and maintenance being carried out by qualified personnel;

The responsibility for eventual modifications covered by the conformity declaration only when authorised and countersigned by the declarer.

What has to be done: THE CE MARK

The CE mark of the automatic closing system must contain (indelible and easily readable) at least the following indications:

- the personal data of the person who carried out the installation (the installer "constructor) and how he can be contacted (name, address, etc.);
- the type of closing system (hinged/sliding gates, etc.) the automation's model and serial number;
- the year of installation (when the system was started up);
- the technical characteristics of the closing system such as the weight and dimensions of the gate leaf;
- the CE mark.

Person responsible for the installation: _____

Address: _____

Model: _____

Serial number: _____

Installation year: _____

Dimensions (L x H): _____

Weight of the moving parts: _____

CE

THE NEW SAFETY STANDARDS

Note:

- the following shouldn't be considered a replacement for the standards already mentioned; the user must in any case refer to and consult the official standards and keep up to date with eventual variations.
- after the withdrawal of UNI 8612, on 1st may 2001, the new European standards (which derive from the construction materials directive - CPD) are the only standards governing the sector of automatic closing systems.

The new standards are particularly significant because they are based on the analysis of danger situations; they are in fact safety aspects and are expressed as safety objectives, meaning that the methods and solutions proposed should not be considered to be the only method of satisfying the standards requirements but they should be considered to be possible solutions that supply an **equivalent safety level**.

Note

- reaching the safety objectives using means and solutions different from those indicated by the new standards (in particular by the EN12453, which is considered the main stay for the safety aspects regarding automatic closing systems for traffic passage) still allows you to compile the Machine Directive conformity declaration. In this case there is greater need to indicate the solutions used to eliminate and/or reduce the residual risk situations in the technical file.

THE EN12453 STANDARD – REQUIREMENTS

If we start from the principal that when a closing system is automated it automatically becomes a machine, the EN12453 deals with the closing system safety problems as if it were dealing with a typical machine, that is to say it begins with risk analysis; the next step is to put these measures into force in order to eliminate or reduce the danger situations as much as possible. This can be obtained through the following concepts:

- MINIMUM PROTECTION LEVEL;
- FORCE LIMITATION;
- PRESENCE DETECTION AND SAFETY DEVICES.

It is important to remember that different risk levels can be associated with one single danger situation (risk in fact is the combination of the probability that the danger situation will arise and the graveness of the consequences). It is evident for example that the risk level rises:

- when the closing system is used by a great number of people;
- when those people cannot be trained;
- when it is not possible to limit use of the closing system to an authorised group of people.

The standard EN12453 takes all this into account when defining the safety measures that should be adopted depending on the risk analysis carried out.

- MINIMUM PROTECTION LEVEL

The minimum protection level required by the standard for the main edge of the closing system depending on the command type and the use of the closing system is laid out in the following table taking into account that:

1. the types of use of the closing system are divided into **three groups**:

Group 1: A limited number of people are authorised to use the closing system and it is not

in a public area. Typical examples are a company's doors or automatic gates (excluding doors that open on to public streets), the use of which has been taught to the users.

Group 2: A limited number of people are authorised to use the closing system and it is in a public area.

Group 3: Any person can use the closing system and it is situated in a public area.

2. the letters A, B, C, D, E indicate the type of protection that is to be used:

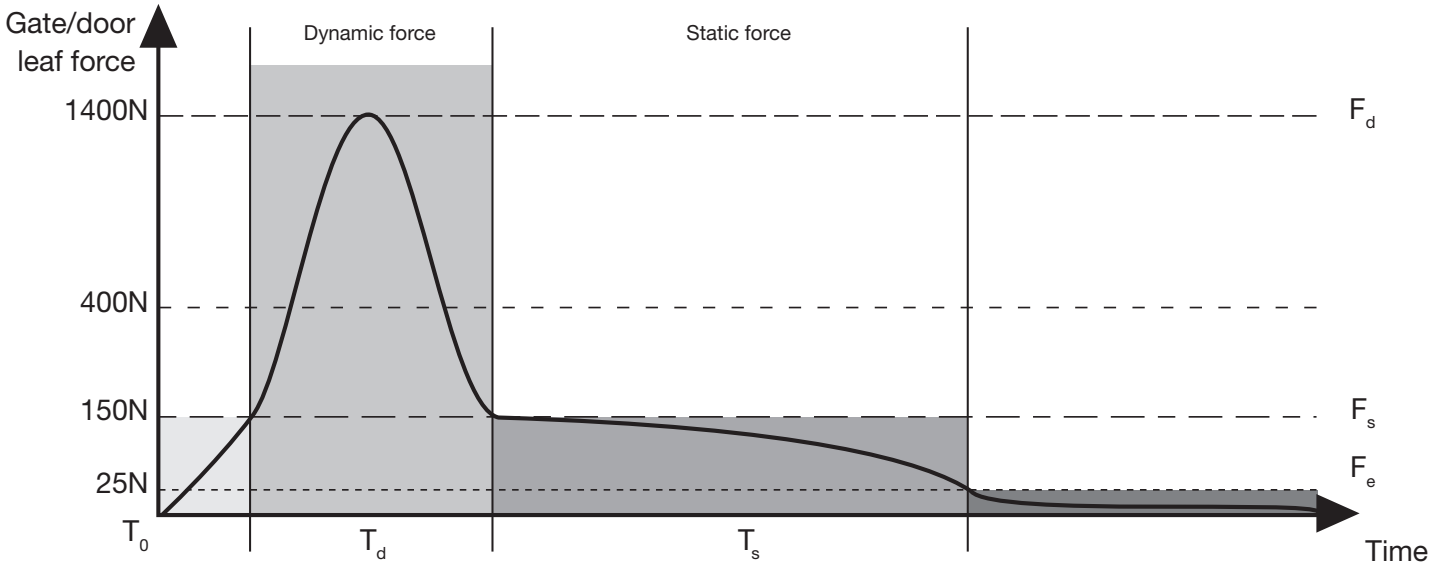
A : Manual command button (i.e. manually held down);
B : Manual command using a selector switch to impede use by non-authorised persons;
C : Force limitation;
D : Obstacle or person detection device; they can be applied to either side or to both sides of the door (for example photoelectric cells);
E : Presence detection devices that are designed and installed in such a way that under no circumstances can a person be touched by the gate or door in movement (no-contact detection devices). Typical examples are pressure mats or photoelectric beams. These detection devices must cover the entire danger area.

Note
- The danger area is defined as the volume containing the gate or door in any position it can reach during movement increased by the safety distance "d" in all directions and up to a height of 2,5 metres. The safety distance "d" depends on the speed of the gate/door; it must not however be inferior to 200 mm but, if the closing speed of the gate/door is greater or equal to 0,5 m/s, "d" must be at least 900 mm.

TYPE OF ACTIVATION OF THE CLOSING SYSTEM	**USE OF THE CLOSING SYSTEM**		
Command	**Expert person (outside a public area) Group 1**	**Expert person (public area) Group 2**	**Unlimited use (public area) Group 3**
Manual	Using a hold down button	Using a key and holding it in position	
Impulse commands with the closing system in sight (Infrared command)	Force limitation / Safety devices	Force limitation / Safety devices	Force limitation and detection / Safety devices
Impulse commands with the closing system not in sight (radiocontrol)	Force limitation / Safety devices	Force limitation and Photocells / Safety devices	Force limitation and Photocells / Safety devices
Automatic	Force limitation and Photocells / Safety devices	Force limitation and Photocells / Safety devices	Force limitation and Photocells / Safety devices

FORCE LIMITATION

The force limitation of gate/door opening or closing is a typical aspect of the standards; the drawing below shows the profile of the impact force detected on the main edge of the closing system using the instrument indicated by the standard EN12445, which also gives the instructions on how to carry out the measurements.



The significant parametres are:

- Dynamic force F_d, i.e. the surge of the profile of the detected force must be less than the value shown in the underlying table (depending on the type of closing system and the passage opening);
- Dynamic time T_d must be inferior to 750 ms; T_d represents the time during which the measured force exceeds 150 N (the normal translation force value);
- Static force F_s, i.e. the force that remains after the dynamic time T_d, it must not however be greater than 150 N;
- Final force F_e, i.e. the force that remains 5 seconds after the start of the measurement (T_d+T_s), it must not be greater than 25 N.

ALLOWED SURGE FORCE	BETWEEN CLOSING BORDERS OPPOSITE BORDERS		BETWEEN FLAT AREAS with a surface> 0,1mq and sides ≥ 100mm
	spaces of 50 to 500mm	spaces >500mm	
Closing systems with movement (e.g. Sliding gates)	**400N**	**1400N**	**1400N**
Closing systems rotating on an axis perpendicular to the pavement (e.g. hinged doors)	**400N**	**1400N**	**1400N**
Closing systems with vertical movement (e.g. Fold-up doors)	**400N**	**1400N**	**1400N**
Closing systems rotating on an axis parallel to the pavement (e.g. garage doors) Road barriers	**400N**	**400N**	**1400N**

- PRESENCE DETECTION AND SAFETY DEVICES

Presence detection and "safety devices" regard closing systems where the safety is delegated to force limitation; the classic photocells with one or two modulated beams are relegated to a secondary or courtesy form (type D devices) according to the standard EN 12453, as they avoid people from being hit by the gate/door but are not considered safety devices (guaranteed by force limitation).
When the detection devices have a true safety function in the sense that the safety of the system depends entirely on their correct operation, they are considered to be type "E" safety devices and it is evident that their characteristics and the severity of the test they will undergo to check the conformity is definitely going to be greater than the tests for type "D" devices. As well as this the devices that carry out safety functions must satisfy the "resistance to failure" requirements and the presence detection area must encompass the entire danger zone.

The standard EN12453 in fact obliges you to avoid danger situations caused by single failures both when the safety is guaranteed by force limitation (case C) as well as when you are using presence detection (case E).
You obviously need to take into account that the failure could occur both in the sensitive element itself (e.g. a pressure contact safety edge or a photoelectric beam) as well as in the signal's control circuit (from the sensitive device to the ECU that controls the movement of the gate/door). It is possible to make sure that a single failure does not reduce the safety level of the system in two ways:

- By duplication of the parts that are open to failure (category 3 or 4 of the EN954-1) so making sure that the security function remains active even in case of failure;
- By periodically monitoring the correct operation of the safety device (category 2 of the EN954-1). The standard requires that safety function test be carried out as late as possible during the final movement of the device and if a failure is detected any further dangerous movement of the gate/door must be inhibited.

note:

- **The safety devices** are covered by the **standard EN12978**, regarding the functions of **pressure sensitive devices** (e.g. sensitive edges or sensitive mats) or **electro-sensitive devices** (e.g. infrared devices such as the traditional photoelectric cells) and the way in which they interface with the control device of the closing system.

THE STANDARD EN12445 – TEST METHODS

The standard EN12445, associated with the EN12453, gives the following:

- The indications regarding how to measure force: where they should be carried out and the characteristics of the measurement instruments (three measurements must be made at each point; the average value must satisfy the requirements);
- The procedure and the methods for checking the correct position of type "D" and "E" presence detectors and verifying their correct functioning is established by the use of witness objects (two types) that represent the human body:
  - Calibre A: a rigid parallelepiped 70 cm x 30 cm x 20 cm;
  - Calibre B: a rigid cylinder length 30 cm and diameter 5 cm.

For closing systems fitted with one or more type "D" detectors the standards only require checks made with calibre "A". To check the efficiency of a type "E" detection device both of the calibres ("D" and "E") must be used. The test details depend on the type of closing system but it is possible to affirm that the gate/door must stop moving or invert its sense of travel direction (avoiding danger situations) without the gate/door and the calibration object coming into contact. The detection area of the device must cover the entire danger zone of the closing device.

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RISK ANALYSIS

Types of risk (Mark the risks considered)	Evaluation criteria and solutions used (tick the box corresponding to the solution used)
Mechanical and structural risks and wear and tear	
☐ loss of stability	☐ The robustness of the structure has been checked, suitable materials and fastenings have been used .
☐ falling parts	☐ Required interventions and adjustments have been carried out to make sure the gate leaves cannot fall.
☐ protrusions	☐ Checked that protrusions greater than 4mm (e.g.. the gate runner guide) have been rounded and highlighted.
☐ slippery surfaces	☐ Checked that protrusions do not have slippery surfaces or could become slippery when it rains
	☐ Checked the presence and efficiency of an anti-falling system for the moving parts.
	☐ Suitable travel limits have been installed and checked.
	☐ The necessary maintenance instructions have been supplied.
Further checks	
☐ The moving parts have been fitted with enough protection according to the standards in force and have been installed following the manufacturer's instructions.	☐ If required and according to the manufacturer's instructions, the speed adjustment of the gate leaf can only be carried out by specialised personnel.
☐ The gate has been fitted with a release device to allow manual operation.	☐ The opening has been checked to verify that there are no assembly errors.
☐ Suitable instructions have been supplied to carry out the release.	☐ Suitable instructions explaining how to avoid unforseen or non wanted start ups (e.g. during maintenance interventions) have been supplied.

Risks caused by movement of the closing system

Risk type		Solutions adopted
A) bangs / crushing	D) dragging/ wedging	
B) cuts	E) shearing	
C) lifting	F) hooking	

Protection to be applied	
1) manual commands	8) multiplex barriers (protective devices)
2) safety edges (protective devices)	9) acoustic signals
3) photocells (detection devices)	10) warning lights etc.
4) safety devices	11) warning signs
5) torque adjustment (protective devices)	12) separation (using covers or rubber buffers)
6) modelling the surfaces	13) wire mesh protection (20x20mm)
7) safety mats	14) other

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Safety and reliability of the operator and the command devices	
☐ safety conditions (even during failure and blackouts).	☐ Suitable command, movement and safety devices have been used which conform to the standard EN12453 (chapter 5 and appendix A).
	☐ Command devices fitted with buffer batteries which conform to the standards and regulations in force have been installed.
	☐ The installation has been carried out following the indications in the installation manual.
☐ assembly errors and command coherence	☐ The commands are coherent with the movement of the closing automation and with the instructions supplied by the constructor.
☐ command devices	☐ An emergency stop device has been installed (and doesn't introduce added risk).
	☐ The command devices have been installed in a visible and easily accessible position.
☐ measuring the force of the closing device	☐ Measurements have been carried out using instruments according to the standard EN 12445 and at the correct points (chapter 5).
☐ protection devices (contact between the closing system and people must never be allowed)	☐ A detection device which confirms to the standard prEN 12978 has been installed.
☐ detection devices	☐ Checks have been carried out to the detection device according to the standard EN 12445.
Principles for integrating safety devices and information	
☐ residual non protected risks	☐ The user has been informed that residual non protected risks remain and that foreseeable incorrect use of the installation has been communicated.
☐ warning devices	☐ Warning lights, traffic lights and sirens etc. have been installed in correct and easily visible positions.
☐ warning signs	☐ Warning signs indicating residual risk have been positioned.
☐ marking	☐ An adhesive or plaque with the CE marking and containing the constructor's data, the address, series, type of closing device and the installation year has been fitted.
☐ user instructions	☐ User manual and safety instructions have been given to the end user.
	☐ Keys and tools for manual release etc. have been supplied.
	☐ The commands have been situated in easily accessible positions.
Electrical risks	
☐ direct and indirect contact	☐ Components marked with the CE symbol according to the Low Voltage Directive (73/23/CEE).
☐ electrical energy dispersion	☐ The electrical connection and connection to the mains conforms to the standards in force and is in agreement with the instructions supplied by the constructor.
Electromagnetic compatibility risks	
☐ Electrical, magnetic and electromagnetic field emission	☐ Approved radio control devices or those conforming to the directive R&TTE (99/5/CE) with allowed frequencies, according to the relative standards, have been used.
	☐ Components marked with the CE symbol according to the EMC (89/336/CEE) directive have been used.
	☐ The installation follows the instruction manual for the operating device and for other eventual electrical and electronic components.
Ergonomic risks	
☐ force required for manual movement	☐ Check that the manual movement commands do not require excessive force and conform to the standard EN12604 (manual gate opening/closing using force not greater than 150N if in a residential area or 260N if in a commercial/industrial area) and to the standard EN12453 chapter 5.3.5.
Maintenance	
☐ how to proceed	☐ A maintenance plan has been drawn up and put into act for the required time period (at least once every 6 months).
☐ power supply cut off devices	☐ A cut off device has been installed to interrupt the electrical power supply.
☐ documentation	☐ Maintenance interventions have been registered and the CE declaration of conformity has been given to the end user.

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MAINTENANCE REGISTER

The following maintenance register contains the technical references, installation, maintenance, repair and modifications carried out, and must be made available for inspection by authorised bodies where required.

Client:
(Name, address and reference person)

Description of the gate/door closing device:
(Model, type)

Identification number: (univocal reference to the gate/door)

Location: (address)

Leaves:
(Number, material, dimensions, weight)

Power supply: (Voltage and electrical input)

Operating type: (Manual, semi-automatic, automatic)

Installer: (Name, address, telephone)

Installation date:

List of installed components (drive unit, command and safety devices)

The technical characteristics and performance of the below mentioned components has been laid out in their relative installation manuals and/or on the technical data plate.

	(Type)	(Serial number)
Drive unit:		
Motor:		
ECU:		
Photocells:		
Safety devices:		
Warning lights:		
Radio controls:		
Command devices:		
☐ Other:		

Indications regarding residual risk factors and foreseen improper use

Warning signs placed at the points of risk of the system and/or written indications explaining the risk factors and improper use should be given to the user of the gate.

End user's signature

Installer's signature

MAINTENANCE REGISTER

Date:	Technician's signature:	End user's signature:
Intervention description:		

Date:	Technician's signature:	End user's signature:
Intervention description:		

Date:	Technician's signature:	End user's signature:
Intervention description:		

Date:	Technician's signature	End user's signature:
Intervention description:		

Date:	Technician's signature	End user's signature:
Intervention description:		

Date:	Technician's signature	End user's signature:
Intervention description:		

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CE CONFORMITY DECLARATION

The undersigned:

Name

Address

as the person responsible for the start up of the system declares that the product:

Door model

Type

Identification number:

Location

conforms to the requirements of the following EC directives:

Machine directive 98/37/CE

Low voltage directive 73/23/CEE and subsequent modifications

Electromagnetic compatibility directive 89/336/CEE and subsequent modifications

I also declare that the harmonised standards and/or specific technical standards:

☐ EN 12604: Industrial gates and doors, commercial and domestic - Mechanical aspects- Requirements and class

☐ EN 12605: Industrial gates and doors, commercial and domestic - Mechanical aspects - Testing methods

☐ EN 12453: Industrial gates and doors, commercial and domestic - Safety when using motorised doors - Requirements

☐ EN 12445: Industrial gates and doors, commercial and domestic - Safety when using motorised doors - Testing methods

☐

☐

Attached: the technical file

Place	Date
The client (on receival)	The declarant

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(Name, address, telephone)

GUARANTEE CONDITIONS

Foreword: in the following text CARDIN ELETTRONICA S.p.A. is indicated as "CARDIN" and the purchaser is indicated with the word "CUSTOMER".
The CUSTOMER of CARDIN is a retailer who buys materials for his professional activity. The guarantee conditions, between Cardin and the customer, are therefore not governed by the D.Lgs. n.24 of the 2/2/2002 (brought into force in Italy by the European directive 99/44/CE, regarding the conformity of consumer goods) that defines the guarantee conditions between the last salesperson and the private customer.

Guarantee: all the appliances in the CARDIN price list are carefully controlled and tested and are guaranteed against manufacturing defects (construction and performance) for a period of 24 months from the date of sale; this limit is bound by the correct and periodic maintenance of the system. For certain products the guarantee is limited by the maximum number of manoeuvres that can be carried out without maintenance interventions as foreseen by the manufacturer and indicated in the instruction manual supplied with the product.
The CUSTOMER must examine the goods, or have them examined, when they are received. Any eventual claim regarding errors in delivery must be brought to the attention of CARDIN within eight days of receiving the goods. In the event of complaints about the quality of the goods, the CUSTOMER has to communicate them to CARDIN in writing and by registered post within eight days of the discovery of the defect. The repair or the substitution free of charge of the products under guarantee will be carried out ex-works and all the costs of transport and assembly of the product will be the responsibility of the CUSTOMER. Along with the product that is to be repaired or replaced under guarantee the CUSTOMER must supply CARDIN with a copy of the declaration of conformity, the maintenance register for the system (filled out correctly in all parts) and the product installation method used.
NOTE: take note that the person that installs the system by assembling the different components has the same responsibility as the manufacturer of the machine as laid out in the "installation guide" to which the installation form is attached.
The guarantee becomes null and void whenever products, that are deemed to be defective by the CUSTOMER but have not yet been examined by Cardin's technicians, have been tampered with.
The guarantee is also not applied in cases of product misuse; non conformity owing to negligence, oversight during transport and use; an installation not carried out by professional personnel or not following the proper procedure also renders the guarantee null and void.
All in all the guarantee is null and void in cases where product non conformity has arisen under circumstances that cannot by attributed to manufacturing defects and in no case can CARDIN be considered responsible for damage or profit loss arising during the product guarantee period or successively.

NOTE:

TO GUARANTEE AN EFFICIENT AND SAFE INSTALLATION CARDIN ELETTRONICA RECOMMEND, THE USE OF CARDIN APPLIANCES THAT HAVE BEEN TRIED AND TESTED TO WORK TOGETHER IN SYNERGY UNDER ALL CONDITIONS.

THE DECLARATION OF CONFORMITY FOR ALL CARDIN APPLIANCES CAN BE DOWNLOADED FROM THE STANDARDS AND CERTIFICATION AREA OF THE WEBSITE www.cardin.it.

IN SPECIFIC CASES THE CERTIFICATES CAN BE REQUESTED FROM OUR AUTHORISED DEALERS OR DIRECTLY FROM THE CARDIN STANDARDS AND CERTIFICATION OFFICE.

SN0002 - 01-2004

CARDIN ELETTRONICA spa
Via Raffaello, 36- 31020 San Vendemiano (TV) Italy
Tel: +39/0438.404011-401818
Fax: +39/0438.401831
E-Mail (Italy): Sales.office.it@cardin.it
E-Mail (Europe): Sales.office@cardin.it
Http: www.cardin.it