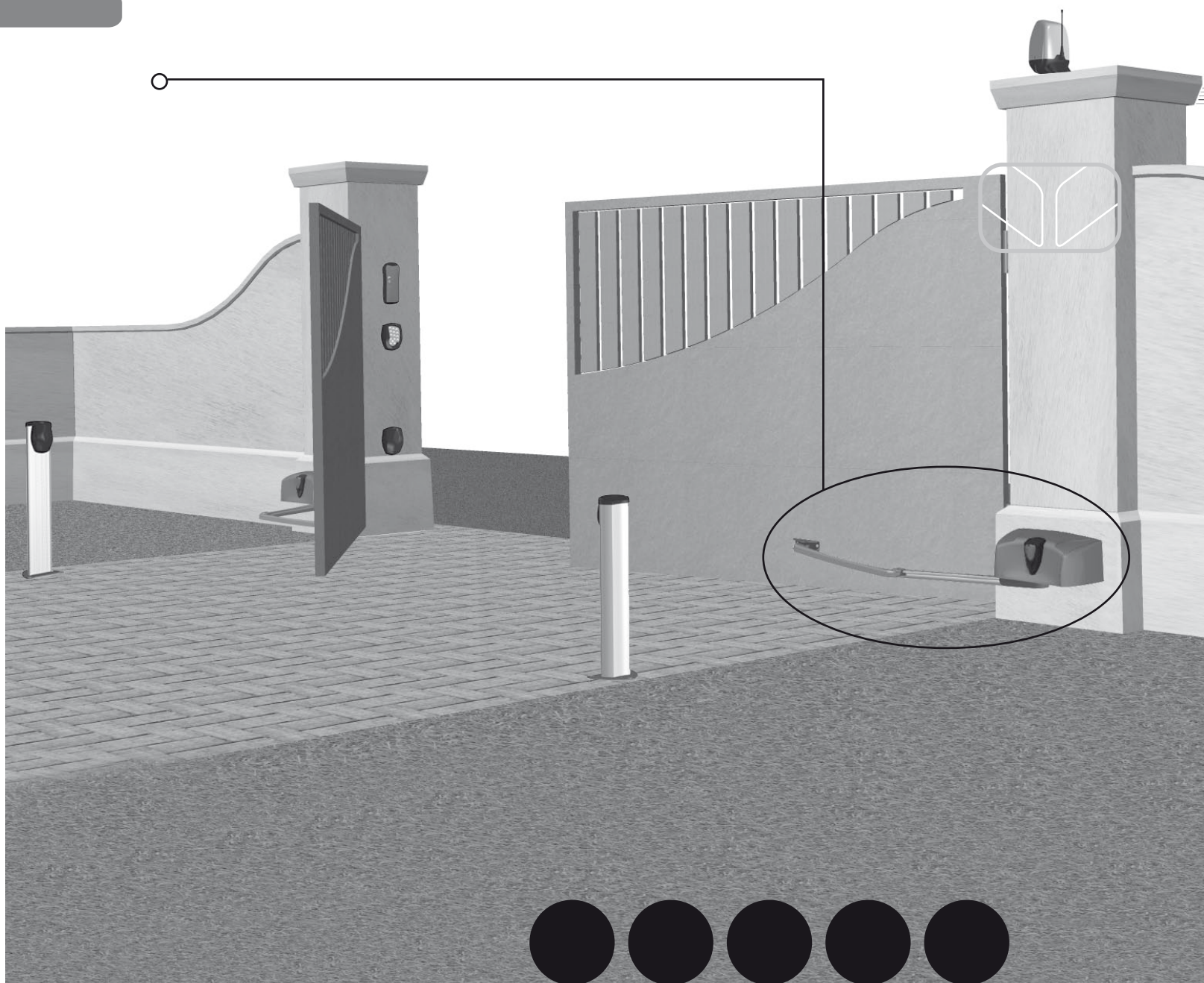


Electro-mechanical operator for swing gates
Operating instructions and warnings



16230XX Rev 08.1 (03-09-14)

LIVI 502

IT UTILIZZO DEL LIBRETTO

Per facilitare la comunicazione e la rintracciabilità di particolari importanti informazioni all'interno del testo DEA System adotta la simbologia riportata.

EN USE OF THIS BOOKLET

In order to facilitate communication and the traceability of particularly important parts of the text, DEA System adopts the symbols provided.

FR UTILISATION DE CE LIVRET







Pour faciliter la communication et le repérage de renseignements spéciaux et importants à l'intérieur du texte, DEA System a adopté la symbologie indiquée.

ES UTILIZACIÓN DEL MANUAL

Para facilitar la comunicación y la trazabilidad de informaciones de particular importancia, DEA System adopta, en el interior del texto, la simbología reproducida.

PT UTILIZAÇÃO DO FOLHETO

Para facilitar a comunicação e localizar pormenores importantes de informações no interior do texto, a DEA System adoptou os símbolos apresentados.

	Avvertimento Warning Avertissement Advertencia Advertência
	Pericolo Danger Danger Peligro Perigo
	Consultaione Consultation Consultation Consultaion Consulta
	Osservazione Observation Observation Observación Observação
	Ispezione Inspection Inspection Inspección Inspeção
	Certificazione Certification Certification Certificación Certificado

LIVI 500

Electro-mechanical operator for swing gates

Operating instructions and warnings

ENGLISH

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ANNEXES

- Instructions for the final user
- Terms of warranty

OVERVIEW

SCOPE OF THE INSTRUCTIONS

These instructions were prepared by the manufacturer and are an integral part of the product. The operations described are intended for adequately trained and qualified personnel and must be carefully read and conserved for future reference.

Chapters "2 RESIDUAL RISK WARNINGS" and "4 OPERATING INSTRUCTIONS" contain all the information that **DEA** System provides so that the product can constantly satisfy the Essential Safety Requirements prescribed by the Machinery Directive (European Directive 2006/42/CE).

Read these chapters carefully because they contain important instructions for safe installation, use and maintenance and important warnings regarding the residual risks remaining even after all the safety devices and measures described have been applied.

The product is designed for installation in complete closing systems subject to specific legislation. Chapter 6 "COMPLETE CLOSING ASSEMBLY" provides useful information for the respect of the Essential Safety Requisites for special types of closing.



1 PRODUCT CONFORMITY

DEA System guarantees the conformity of the product to European Directives 2006/42/CE regarding machinery safety, 2004/108/CE and amendments regarding electromagnetic compatibility and 2006/95/CE and amendments regarding low voltage electrical equipment.



2 RESIDUAL RISK WARNINGS

Read these warnings carefully; the failure to respect the following warnings can create risk situations.

WARNING Using the product under unusual conditions not foreseen by the manufacturer can create situations of danger, this is the reason why all the conditions prescribed in these instructions must be respected.

WARNING Under no circumstances must the product be used in an explosive environment or surroundings that may prove corrosive and damage parts of the product.

WARNING All installation, maintenance, cleaning or repair operations on any part of the system must be performed exclusively by qualified personnel with the power supply disconnected working in strict compliance with the electrical standards and regulations in force in the nation of installation.

WARNING All the other adjustment/setting operations beyond the adjustment of the oil flow are made by the manufacturer. Tampering with these settings may cause malfunction and/or situations of risk to people, animals and property. Refrain from performing any operations not authorised by **DEA** System.

WARNING The use of spare parts not indicated by **DEA** System and/or incorrect re-assembly can create risk to people, animals and property and also damage the product. For this reason, always use only the parts indicated by **DEA** System and scrupulously follow all assembly instructions.

WARNING Awareness of the operation of the key-release mechanism (see F9 Page 33) is essential for all users of the automatism because the failure to use the device quickly during emergencies can jeopardise people, animals and property. Enclosure I to these instructions, which the installer is required to deliver to the final user, illustrates operation and can be detached.

WARNING **DEA** System reminds all users that the selection, positioning and installation of all materials and devices which make up the complete automation system, must comply with the European Directives 2006/42/CE (Machinery Directive), 2004/108/CE and subsequent amendments (electromagnetic compatibility), 2006/95/CE and subsequent amendments (low voltage electrical equipment). In order to ensure a suitable level of safety, besides complying with local regulations, it is advisable to comply also with the above mentioned Directives in all extra European countries.

WARNING To ensure an appropriate level of electrical safety always keep the 230V power supply cables apart (minimum 4mm in the open or 1 mm through insulation) from low voltage cables (motors power supply, controls, electric locks, aerial and auxiliary circuits power supply), and fasten the latter with appropriate clamps near the terminal boards.

WARNING Wrong assessment of impact forces may cause serious damage to people, animal and things. **DEA** System reminds all personnel that the installer must ascertain that these impact forces, measured according to EN 12445 prescriptions, are actually below the limits indicated by EN14453 regulation.



WARNING In line with EU Directive 2002/96/EC for waste electrical and electronic equipment (WEEE), this electrical product must not be disposed of as unsorted municipal waste. Please dispose of this product by returning it to your local municipal collection point for recycling.

3 MODELS AND CONTENTS OF THE PACKAGE

The name LIVI 500 identifies a series of electromechanical operators with different features depending on reversibility, motor phase power supply, the availability of built-in limit-switches, the type of support and the design.

DEA System articles in the series are listed in the "AVAILABLE MODELS" table.

LIVI 500 is completed by a set of accessories listed in the "PRODUCT ACCESSORIES" table.

Inspect the "Contents of the Package" on Page 29 and compare it with your product for useful consultation during assembly.



4 OPERATING INSTRUCTIONS

In compliance with Directive 2006/42/CE Enclosure I, Point 1.7.4.

4.1 Product description

LIVI 500 is basically a mechanical operator (see F1, page 31) rotating either an articulated arm or a rail arm which is fitted onto the gate leaf to automate. The special system connecting all parts of the articulated arm guarantees no scissor movement.

4.2 Technical data

See the "TECHNICAL DATA" table.

4.3 Labelling information

Part of the summarised data for the CE label are listed in the label applied to the product (see Position F4, Page 32); the data regarding the seller are found in the enclosed Warranty, while "Indispensable Operating Safety Elements" are found under Point "4.2 Technical data".

4.4 Appropriate conditions of use

The LIVI 500 is designed for installation in civil and industrial swing gates as an actuator for the operational automatism as shown in F5 on Page 32. Brackets for both "horizontal" (standard) and "vertical" (see "PRODUCT ACCESSORIES" table) installation have been arranged for.

The LIVI 500 has been designed and tested for operation under "normal" civil and industrial gate opening conditions; temperature limits, degrees of protection against dust and water,

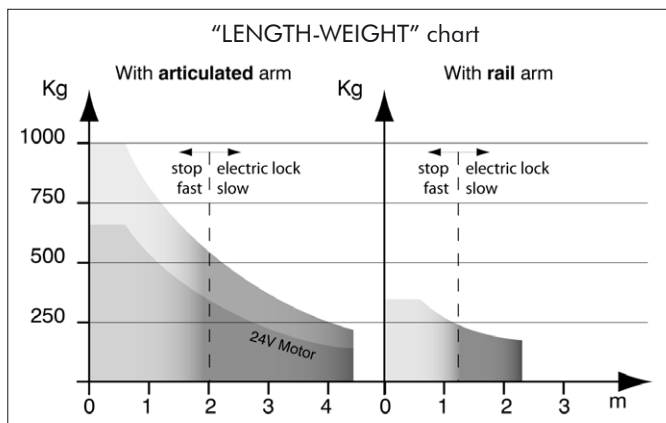
"AVAILABLE MODELS" table

	Article	Reversible	Motor power supply voltage	Limit-switches	Slow
	500	NO	230 V ~	NO	NO
	500L	NO	230 V ~	NO	YES
	501	NO	230 V ~	YES	NO
	501L	NO	230 V ~	YES	YES
	500/24	NO	24 V ===	NO	NO
	501/24	NO	24 V ===	YES	NO
	500R	YES	230 V ~	NO	NO
	501R	YES	230 V ~	YES	NO
	502	NO	230 V ~	NO	NO
	502L	NO	230 V ~	NO	NO
	503	NO	230 V ~	YES	NO
	503L	NO	230 V ~	YES	NO
	502/24	NO	24 V ===	NO	NO
	503/24	NO	24 V ===	YES	NO
	502R	YES	230 V ~	NO	NO
	503R	YES	230 V ~	YES	NO
	502EN	NO	230 V ~	NO	NO

"PRODUCT ACCESSORIES" table

Article	Description
560A	Articulated arm
560B	Rail arm
560S	Vertical bracket for LIVI 500/501
560P	Vertical bracket for LIVI 502/503
560M	Release device with cable

	500 - 501 - 502 - 503 - 502EN	500R - 501R - 502R - 503R	500L - 501L - 502L - 503L	500R/EN (500P)	500/24 - 501/24 - 502/24 - 503/24
Motor power supply voltage (V)	230 V ~ ±10% (50/60 Hz)				24 V ===
Absorbed power (W)	300			180	80
Max torque (Nm)	295	162	260	150	180
Duty cycle (cycles/hour)	22 - 25 (502EN)		22	20	35
Maximum n° of operations in 24 hour	110			160	140
Built-in capacitor (µF)	8				/
Operating temperature range (°C)	-20÷50 °C				
Motor thermal protection (°C)	150				/
Opening time 90° (s)	12	9	18	9	10
Weight of product with package (Kg)	13,5				13,2
Protection degree	IP44				



and other data are provided in Point 4.2 "Technical Data".

Satisfactory operation requires the correct positioning of the LIVI 500 operator with respect to the gate; DEA System recommended measurements are shown in F5 page 32.

The automatism required must be selected according to the gate to be moved; the attrition on the attachments, the weight, the length/height of the gate wing, and the degree of closing of the surfaces are the elements to be considered. The chart "LENGTH-WEIGHT" correlating the length of the gate leaf and its weight in typical situations can be used in selecting the automation according to the gate to be automated.

We suggest to use the rail arm (art. 560B) with models 501L and 503L.

WARNING The use of the product under unusual conditions not foreseen by the manufacturer can create situations of danger, and for this reason all the conditions prescribed in these instructions must be respected.

WARNING Under no circumstances must the product be used in explosive atmospheres or surroundings that may prove corrosive and damage parts of the product.

4.5 Instructions for risk-free operation

4.5.1 Transport

The LIVI 500 gate operator is always delivered packed in boxes that guarantee the product adequate protection. Carefully read any warnings or instructions for storage and handling provided on the box.

4.5.2 Installation, assembly and disassembly

The following operations are essential to the correct laying of the product:

- the careful definition of the entire automatic opening layout

(see also "6 Complete Closing Assembly"); in particular, after carefully assessing the characteristics of the supports and the gate, the attachments must also be designed and positioned according to the angle of opening desired (see F2, F5 Page 31 e 32);

- fasten the bracket and the operator (see F6 page 33);
- assemble carter and arm (see F7 and F8, page 33);
- fasten the arm or the rail to the gate leaf by welding the attachment or with 4 fixing screws (not included).

WARNING All installation, maintenance, cleaning or repair operations on any part of the system must be performed exclusively by qualified personnel with the power supply disconnected working in strict compliance with the electrical standards and regulations in force in the nation of installation.

WARNING To ensure compliance with regulations and safe operation of the motor, we recommend to use **DEA** System control panels only.

The fastening of the attachments must be performed with extra attention on both iron pillars and masonry works and gates of any type.

The necessity of installing reinforcement plates for iron pillars and gates must be carefully assessed whenever the remaining part of the structure does not appear sufficiently strong, whenever the metal plate used does not appear thick enough or whenever the morphology of the gate appears to lack solidity.

To install the bracket on masonry posts use appropriate screw anchors (mechanical or chemical fixing) not included.

Keep all welding seams well protected from corrosion.

Give extra attention to the alignment of the attachments and their correct vertical positioning.

4.5.3 Starting

The installation of the product requires masonry and/or welding and electrical connection operations using adequate equipment for the job in complete respect of the accident-prevention standards and regulations in force in the nation of installation.

The product must be electrically connected to a special control unit for gate operators; see the instructions provided for such device for further information. When using art. 502EN together with control panel art. 202RR, use the supplied adaptor cable by installing it on the control panel and connect to the encoder reader paying attention to indicated polarity as shown in picture F12 at page 34.

4.5.4 Use

The product is destined for incorporation in the assembly of devices that comprise the gate's automatism. **DEA** System assumes that it will always be used in compliance with the standards and regulations in force.

"TROUBLE-SHOOTING" table

MALFUNCTION	CAUSES / SOLUTIONS
When the opening command is given, the gate wing fails to move and the operator's electric motor fails to start	The operator is not receiving correct power supply. Check all connections, fuses, and the power supply cable conditions and replace or repair if necessary
When the opening command is given, the motor starts but the gate wing fails to move	Check that the unlocking system is closed (see F9, page 33)
	Make sure that the electronic device for electric power adjustment is in good condition
The operator jerks during movement	If the wing of the gate does not move freely, release the piston and readjust the rotation points
	The power of the gearmotor may be insufficient for the characteristics of the gate's wing; check the choice of model whenever required
	If the operator attachment to the gate bends or is badly fastened, repair and/or buttress it.



All LIVI 500 models have an unlocking system; the working of this system in the 502 and 503 series is the following: after unlocking the lock on the handle (protected by a plastic cover) turn the lever in the direction shown in F9, page 33; the operator is now unlocked and, if no obstructions hinder its movement, the gate can now move freely. The opposite procedure, that is the rotation of the lever up to the limit switch and the locking of the lock (remember to protect the lock with the appropriate cover) returns LIVI 500 to its normal working conditions.

In LIVI 500 and 501 the unlocking system can be operated as follows: after unlocking the lock on the case (protected by a plastic cover) remove the case and turn the lever on position 2 (see F9, page 33); the operator is now unlocked and, if no obstructions hinder its movement, the gate can now move freely. The opposite procedure, that is the rotation of the lever to position 1 and the assembling of the case and locking system (remember to protect the lock with the appropriate cover) returns LIVI 500 to its normal working conditions.

If, for whatever reason, the release unit is inaccessible, you can install on all models the accessory 560M "Release device with cable" (see "PRODUCT ACCESSORIES") by following the instructions enclosed therein.

4.5.5 Adjustment

The installation of series 500 and 502 products does not require adjustments; the only adjustment required for the installation of series 501 and 503 products is the positioning of the stroke-end.

You can make such adjustments by unscrewing the fixing screws of the limit switch check cams and the limit switch cams (see F3, page 31), by rotating the latter along the cam holder up to the chosen position and by screwing on the screws again.

WARNING All the other adjustment/setting operations beyond the adjustment of the oil flow are made by the manufacturer. Tampering with these settings may cause malfunction and/or situations of risk to people, animals and property. Refrain from performing any operations not authorised by **DEA** System.

4.5.6 Maintenance and repair

Good preventive maintenance and regular inspection ensure long working life (see also "Warranty"). Consult the "TROUBLE-SHOOTING" table (see page 9) whenever anomalies are observed in order to find the solution to the problem and contact **DEA** System directly whenever the solution required is not provided.

The inspection/maintenance operations to be routinely scheduled in the "complete automatism maintenance register" are:

INTERVENTION TYPE	PERIODICITY
cleaning of external surfaces	6 months
checking of screw tightening	6 months
checking of release mechanism operation	6 months
greasing of articulated joint	1 year

10

WARNING All installation, maintenance, cleaning or repair operations on any part of the system must be performed exclusively by qualified personnel with the power supply disconnected working in strict compliance with the electrical standards and regulations in force in the nation of installation.

WARNING The use of spare parts not indicated by **DEA** System and/or incorrect re-assembly can cause risk to people, animals and property and also damage the product. For this reason, always use only the parts indicated by **DEA** System and scrupulously follow all assembly instructions.

4.6 Training

After installation and setting, the correct operation of the complete automatism must be carefully illustrated to the final user.

The LIVI 500 gate operator requires careful instruction on

the release mechanism (see "Enclosures") in particular and the respective maintenance schedule (see Point 4.5.6.).

WARNING Awareness of the operation of the LIVI 500 key-release mechanism (see F9 Page 33) is essential for all users of the automatism because the failure to use the device quickly during emergencies can jeopardise people, animals and property. Enclosure I to these instructions, which the installer is required to deliver to the final user, illustrates operation and can be detached.

4.7 Inappropriate use

Chapter "4.4 Appropriate conditions of use" describes the conditions for which the product has been designed and tested. The product must never be used for other purposes.

WARNING The use of the product under unusual conditions not foreseen by the manufacturer can create situations of danger, and for this reason all the conditions prescribed in these instructions must be respected.

WARNING Under no circumstances must the product be used in explosive atmospheres or surroundings that may prove corrosive and damage parts of the product.



5 SPARE PARTS LIST

The list of spare parts that can be ordered (Pages 28, 29) is a detailed list that accompanies the exploded view of the product and must be used to order spare parts.

The following data must always be provided when ordering spare parts:

- the code of the product (seen on the product label; see F4, Page 32),
- the part's position number in the exploded view,
- if available, the product's purchase date may be useful in some cases.



6 COMPLETE CLOSING ASSEMBLY

This chapter illustrates the typical installation of a complete automatism for the purpose of informing and assisting the installer in the selection of the various parts to be used in compliance with Machinery Directive (2006/42/CE) and European Safety Standards (EN 14453 - EN 12445) for gate installation.

The data provided in this chapter are neither complete nor exhaustive, and **DEA** System declines all liability for any errors, omissions or inaccuracies that may occur.

6.1 Minimum level of protection provided by the safety edge

Among the most serious risks to be considered for the automation of a swing gate is the risk of crushing between two wings or between one wing and its stop during closing. Regulations prescribe the adoption of one of the following types of controls against such risks depending on the use foreseen for the gate.

An appropriate type of operating control board must be used according to the gate type and use against such risk, as provided for by the quoted regulations (see "OPERATING CONTROL" table).

6.2 Crushing in the opening area

The risk of crushing can also arise in the area between the gate being opened and the wall or other construction behind it. F10 on Page 33 provides the measurements that must be respected whenever measures are not taken to limit the impact force or whenever presence detection systems are not used.

6.3 Impact in the opening/closing area

In order to avoid crushing by the gate wing in the closing area, install a pair of photocells (A) (recommended height: 500

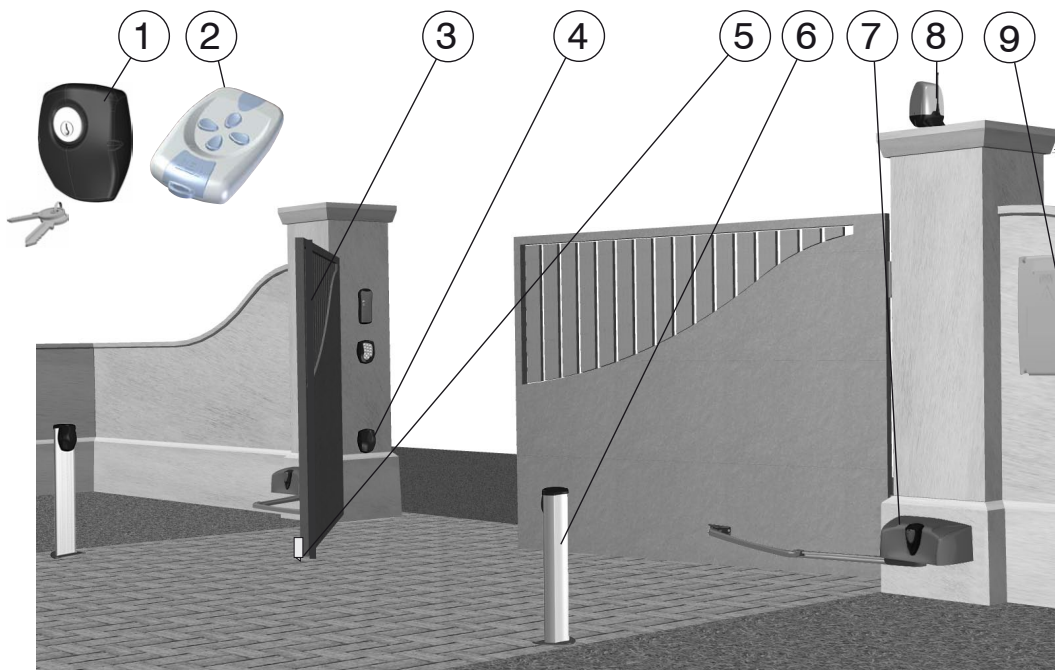


mm) in order to detect the presence of the test parallelepiped (B) (height: 700 mm) positioned as shown in F11 on Page 33.

Note. The presence detection test sample is a parallelepiped with 3 sides with light-coloured reflecting surfaces and 3 sides with dark-coloured, opaque surfaces.

In order to further reduce the risk of impact with the gate wing in the opening area, an extra pair of photocells (C) (recommended height: 500 mm) can be installed for the detection of the presence of the test parallelepiped (D) (height: 700 mm) positioned as shown in F11 on Page 33.

“EXAMPLE OF TYPICAL INSTALLATION” picture



Pos.	Description
1	102 Lux key selector
2	Remote-control
3	Safety edge
4	104 Lux series photocells
5	Electric lock
6	1Pilly 60 column
7	LIVI 503R
8	Lumy flashing light
9	Control box

“OPERATING CONTROL” table

Type of control	Type of use		
	Informed users (private areas)	Informed users (public areas)	Uninformed users
Person-present control	Pushbutton control	Pushbutton control with key	The person-present control is not possible
Pulse control with the gate in sight	Force limitation or presence detectors	Force limitation or presence detectors	Force limitation and photocells or presence detectors
Pulse control with the gate not in sight	Force limitation or presence detectors	Force limitation and photocells or presence detectors	Force limitation and photocells or presence detectors
Automatic control (i.e. control with timed closing)	Force limitation and photocells or presence detectors	Force limitation and photocells or presence detectors	Force limitation and photocells or presence detectors

RESPONSIBILITIES OF THE INSTALLER

Remember that anyone who sells and/or motorises doors/gates becomes the manufacturer of the automatic door/gate machine and must therefore prepare and conserve a **technical folder** that contains the following documents (see Machinery Directive Enclosure V):

- Assembly drawing of the automatic door/gate;
- Electrical connection and control circuit wiring diagram;
- Risk analysis including: a list of the essential safety requirements provided in Machinery Directive Enclosure I; a list of the risks posed by the door/gate and the description of the solutions adopted.
- Keep these operating instructions in a safe place together with the instructions for all the other components;
- Prepare these operating instructions and general safety warnings (for the completion of these operating instructions) and deliver a copy to the final user;
- Fill out the maintenance register and deliver a copy to the final user;
- Fill out the or plate and apply it to the door/gate.

Note: The technical folder must be conserved for inspection by the competent national authorities for at least ten years from the date construction of the automatic door/gate.



LIVI 500

GARANZIA / WARRANTY / GARANTIE / GARANTÍA / GARANTIA

Compilare e spedire alla ditta costruttrice il presente tagliando affinché la garanzia sia valida.

Fill out and send this coupon to the manufacturer in order to qualify for warranty coverage.

Remplissez le présent coupon puis envoyez-le au constructeur pour valider la garantie.

Compile y envíe al fabricante este cupón para que la garantía sea válida.

Preencha e envie à empresa fabricante o presente cupom para a vossa garantia ser válida.

Apparecchio - Equipment - Appareil - Aparato - Aparelho	
Apparecchio tipo Equipment type Type d'appareil Tipo de aparato Tipo de aparelho	
Data di installazione Installation date Date d'installation Fecha de instalación Data de instalação	N° di matricola Serial number N° de série N° di matrícula N.° de série

Rivenditore - Dealer - Revendeur Distribuidor - Revendedor	Installatore - Installer - Installateur Instalador - Técnico Instalador

Utilizzatore - User - Utilisateur - Usuario - Utilizador	
Nome First name Prénom Nombre Nome	Cognome Surname Nom Apellidos Apelido
Via Address Adresse Calle Morada	Città City Ville Localidad Cidade
Provincia Province Province Provincia Província	Stato Nation État País País



LIVI 500



ISTRUZIONI PER L'UTENTE FINALE

Questa guida è espressamente realizzata per gli utenti dell'automatismo; l'installatore ha il compito di consegnarla ed illustrarla ad un responsabile dell'impianto il quale si preoccuperà dell'informazione a tutti gli altri utenti. È importante che queste istruzioni siano conservate e rese facilmente disponibili.

Una buona manutenzione preventiva ed una regolare ispezione al prodotto ne assicurano una lunga durata. Contattare regolarmente l'installatore per la manutenzione programmata ed in caso di guasto.

REGOLE DI SICUREZZA

1. Durante il funzionamento dell'automatismo rimanere sempre ad una adeguata distanza di sicurezza e non toccare alcun elemento.
2. Impedire ai bambini di giocare nelle immediate vicinanze dell'automatismo.
3. Eseguire i controlli e le ispezioni previste nel programma di manutenzione; nel caso di funzionamento anormale non utilizzare l'automatismo.
4. Non smontare parti! Le operazioni di manutenzione e riparazione devono essere eseguite da personale qualificato.
5. Può accadere che l'operazione di sblocco si debba realizzare in situazioni di emergenza! Istruire bene tutti gli utenti sul funzionamento dello sblocco e sull'ubicazione delle chiavi di sblocco.

SBLOCCO DI LIVI 500

Tutti i modelli di LIVI 500 sono dotati di un dispositivo di sblocco; il funzionamento di tale dispositivo nei modelli della serie 502 e 503 è il seguente. Una volta aperta la serratura posta sulla maniglia (protetta dal coperchietto in plastica) la leva va girata nel senso indicato in figura; a questo punto il riduttore è sbloccato e il cancello, in assenza di altri impedimenti è libero nei suoi movimenti. Il procedimento inverso, ruotare la leva fino a fine corsa e chiusura della serratura (ricordarsi di proteggere la serratura con l'apposito coperchietto), riporta LIVI 500 in condizioni di lavoro.

Nei modelli 500 e 501 il dispositivo di sblocco si attiva nel seguente modo. Una volta aperta la serratura posta sul carter (protetta dal coperchietto in plastica) togliere il carter e portare la leva di sblocco in posizione 2 (vedi figura); a questo punto il riduttore è sbloccato e il cancello, in assenza di altri impedimenti è libero nei suoi movimenti. Il procedimento inverso, portare la leva in posizione 1, assemblare il carter e chiusura della serratura (ricordarsi di proteggere la serratura con l'apposito coperchietto), riporta LIVI 500 in condizioni di lavoro.

Nel caso in cui sia stato installato l'accessorio 560M "Dispositivo di sblocco a filo", agire come indicato nelle istruzioni contenute nello stesso.

PULIZIA ED ISPEZIONI

L'unica operazione che l'utente può e che deve fare è quella di rimuovere da LIVI 500 foglie, rami e ogni altro detrito che ne ingombri il movimento. Attenzione! Operare sempre in mancanza di tensione!

CONDIZIONI DI GARANZIA

La garanzia sui nostri prodotti è di 24 mesi dalla data di installazione. La garanzia è limitata esclusivamente alla riparazione o sostituzione gratuita dei pezzi riconosciuti difettosi. La garanzia non è valida se i prodotti sono stati manomessi, modificati, installati in modo non corretto o privi di etichetta di identificazione con codice e data di produzione.



INSTRUCTIONS FOR THE FINAL USER

This guide has been prepared for the final users of the automatism; the installer is required to deliver this guide and illustrate its contents to the person in charge of the system. The latter must then provide similar instruction to all the other users. These instructions must be carefully conserved and easily available for consultation when required.

Good preventive maintenance and frequent inspection ensures the long working life of the product. Contact the installer regularly for routine maintenance and in event of anomaly.

SAFETY RULES

1. Always keep a safe distance from the automatism during operation and never touch any moving part.
2. Prevent children from playing near the automatism.
3. Perform the control and inspection operations prescribed in the maintenance schedule and immediately stop using the automatism whenever signs of malfunction are noted.
4. Never disassemble parts of the product! All maintenance and repair operations must be performed only by qualified personnel.
5. The release operation must sometimes be performed in emergencies! All users must be instructed on the use of the release mechanism and the location of the release keys.

LIVI 500 RELEASE MECHANISM

All LIVI 500 models have an unlocking system; the working of this system in the 502 and 503 series is the following: after unlocking the lock on the handle (protected by a plastic cover) turn the lever in the direction shown in figure; the operator is now unlocked and, if no obstructions hinder its movement, the gate can now move freely. The opposite procedure, that is the rotation of the lever up to the limit switch and the locking of the lock (remember to protect the lock with the appropriate cover) returns LIVI 500 to its normal working conditions.

In LIVI 500 and 501 the unlocking system can be operated as follows: after unlocking the lock on the case (protected by a plastic cover) remove the case and turn the lever on position 2 (see figure); the operator is now unlocked and, if no obstructions hinder its movement, the gate can now move freely. The opposite procedure, that is the rotation of the lever to position 1 and the assembling of the case and locking system (remember to protect the lock with the appropriate cover) returns LIVI 500 to its normal working conditions.

In case the accessory 560M « Release device with cable » is installed, follow the instructions enclosed therein.

CLEANING AND INSPECTIONS

The only operation that the user can and must do is to remove branches, leaves, and any other object that might obstruct the gate's free movement. Warning! Always disconnect the power supply whenever performing operations on the gate!

TERMS OF WARRANTY

Our products are covered by warranty for 24 months from the date of installation. Coverage is limited exclusively to the free repair or replacement of parts recognised as defective. Warranty coverage will not be provided whenever the products have been tampered with, modified or installed incorrectly or whenever the identification labels with the respective codes and production dates are missing.



INSTRUCTIONS POUR L'UTILISATEUR FINAL

Ce guide a été réalisé exprès pour les utilisateurs de l'automatisation. L'installateur doit le remettre et le commenter à un responsable de l'installation, qui répercutera l'information à tous les autres utilisateurs. Il est important de garder ces instructions, et elles doivent être facilement accessibles.

Une bonne maintenance préventive et une inspection régulière du produit assurent sa longue durée. Contactez l'installateur régulièrement pour la maintenance programmée, et en cas de panne.

RÈGLES DE SÉCURITÉ

1. Pendant le fonctionnement de l'automatisation restez toujours à une certaine distance de sécurité, et ne touchez aucun élément.
2. Empêchez les enfants de jouer dans les alentours immédiats de l'automatisation.
3. Effectuez les vérifications et les inspections prévues dans le programme de maintenance. En cas de fonctionnement anormal, n'utilisez pas l'automatisation.
4. Ne démontez pas les pièces! Les opérations de maintenance et de réparation doivent être exécutées par du personnel qualifié.
5. Il peut arriver que l'opération de déverrouillage doive se dérouler dans des situations d'urgence! Instruisez bien tous les utilisateurs sur le fonctionnement du déverrouillage et sur la position des clés de déverrouillage.

DÉVERROUILLAGE DE LIVI 500

Tous modèles du LIVI 500 sont équipés d'un dispositif de déverrouillage; le fonctionnement de ce dispositif pour les modèles de la série 502 et 503 est le suivant: une fois que la serrure (protégée par le capot en plastique) qui est positionnée sur la poignée est ouverte, il faut tourner le levier dans le sens indiqué sur figure; le motoréducteur est alors déverrouillé et le portail, sans autres entraves, est libre de manœuvrer. Le procédé inverse, soit la rotation du levier jusqu'à la fin de sa course et la fermeture de la serrure (rappelez-vous de protéger la serrure avec le capot prévu à cet effet) ramène LIVI 500 dans ses conditions de travail.

Dans les modèles 500 et 501 le dispositif de déverrouillage est activé de la façon suivante: une fois que la serrure (protégée par le capot en plastique) qui est positionnée sur le carter est ouverte, il faut retirer le carter et positionner le levier de déverrouillage sur 2 (voir figure); le motoréducteur est alors déverrouillé et le portail, sans autres entraves, est libre de manœuvrer. Le procédé inverse, soit la rotation du levier jusqu'à la position 1, l'assemblage du carter et la fermeture de la serrure (rappelez-vous de protéger la serrure avec le capot prévu à cet effet) ramène LIVI 500 dans ses conditions de travail.

Au cas où l'accessoire 560M « Dispositif de déverrouillage avec creux » aurait été installé, suivez les instructions qui accompagnent le produit.

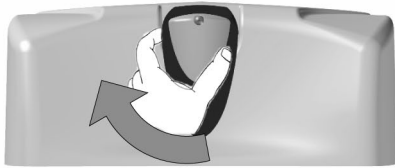
NETTOYAGE ET INSPECTIONS

La seule opération que l'utilisateur peut et doit faire est de débarrasser LIVI 500 des feuilles, des brindilles et de tout autre débris qui pourrait entraver sa manœuvre. Attention! Opérez toujours quand la tension est coupée!

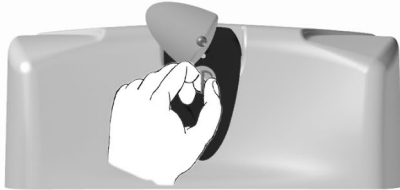
CONDITIONS DE GARANTIE

La garantie sur nos produits est de 24 mois à compter de la date d'installation. La garantie concerne exclusivement la réparation ou le remplacement gratuit des pièces qui ont été reconnues défectueuses. La garantie n'est pas valable si les produits ont été manipulés, modifiés, installés d'une manière incorrecte ou débarrassés de leur étiquette d'identification portant leur code et la date de production.

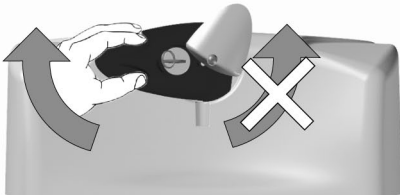




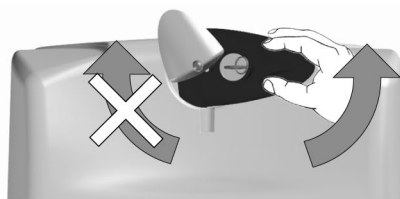
1.



2.



3. (SX)



3. (DX)

INSTRUCCIONES PARA EL USUARIO FINAL

Esta Guía se ha realizado expresamente para los usuarios del automatismo; el instalador tiene el deber de entregarla y explicarla a un responsable de la instalación quien se preocupará de informar a todos los demás usuarios. Es importante guardar estas instrucciones y que estén siempre disponibles.

Un buen mantenimiento preventivo y una regular inspección del producto aseguran su larga duración. Contactar regularmente al instalador para el mantenimiento programado y en caso de avería.

REGLAS DE SEGURIDAD

1. Durante el funcionamiento del automatismo, situarse siempre a una adecuada distancia de seguridad y no tocar ningún elemento.
2. Impedir que los niños jueguen en las inmediatas cercanías del automatismo.
3. Realizar los controles y las inspecciones previstas en el programa de mantenimiento; si el funcionamiento fuera anormal, no utilizar el automatismo.
4. No desmontar ninguna parte. Las operaciones de mantenimiento y reparación deben efectuarse personal autorizado.
5. Es posible que la operación de desbloqueo deba realizarse en situaciones de emergencia. Todos los usuarios tienen que estar debidamente instruidos sobre el funcionamiento del desbloqueo y sobre la ubicación de las llaves de desbloqueo.

DESBLOQUEO DE LIVI 500

Tous modèles du LIVI 500 sont équipés d'un dispositif de déverrouillage ; le fonctionnement de ce dispositif pour les modèles de la série 502 et 503 est le suivant: une fois que la serrure (protégée par le capot en plastique) qui est positionnée sur la poignée est ouverte, il faut tourner le levier dans le sens indiqué sur figure; le motoréducteur est alors déverrouillé et le portail, sans autres entraves, est libre de manoeuvrer. Le procédé inverse, soit la rotation du levier jusqu'à la fin de sa course et la fermeture de la serrure (rappelez-vous de protéger la serrure avec le capot prévu à cet effet) ramène LIVI 500 dans ses conditions de travail.

Dans les modèles 500 et 501 le dispositif de déverrouillage est activé de la façon suivante : une fois que la serrure (protégée par le capot en plastique) qui est positionnée sur le carter est ouverte, il faut retirer le carter et positionner le levier de déverrouillage sur 2 (voir figure); le motoréducteur est alors déverrouillé et le portail, sans autres entraves, est libre de manoeuvrer. Le procédé inverse, soit la rotation du levier jusqu'à la position 1, l'assemblage du carter et la fermeture de la serrure (rappelez-vous de protéger la serrure avec le capot prévu à cet effet) ramène LIVI 500 dans ses conditions de travail.

Si se ha instalado el accesorio 560M "Dispositivo de desbloqueo con cable", actuar en el modo indicado en las instrucciones que contiene.

LIMPIEZA E INSPECCIONES

La única operación que el usuario puede y debe hacer es la de retirar de LIVI 500 las hojas, ramas y otros residuos que impidan sus movimientos. ¡Atención! Estas operaciones deben efectuarse tras haber desconectado el suministro eléctrico.

CONDICIONES DE GARANTÍA

La garantía de nuestros productos dura 24 meses desde la fecha de instalación. La garantía se limita exclusivamente a la reparación o sustitución gratuita de las piezas reconocidas defectuosas. La garantía no es válida si los productos han sido forzados, modificados, instalados incorrectamente o carentes de etiqueta de identificación con código y fecha de producción.

INSTRUÇÕES PARA O UTILIZADOR FINAL

Este guia foi expressamente realizado para os utilizadores do automatismo; o técnico de instalação tem a tarefa de entregá-lo e explicá-lo a um responsável pelo equipamento, que se encarregará pela informação a todos os demais utilizadores. É importante guardar e manter estas instruções de maneira que estejam facilmente disponíveis. Uma boa manutenção preventiva e uma regular inspeção do produto asseguram ao mesmo uma longa durabilidade. Contacte periodicamente o técnico de instalação acerca da manutenção programada e caso haja avarias.

REGRAS DE SEGURANÇA

1. Durante o funcionamento do automatismo permaneça sempre a uma adequada distância de segurança e não toque nenhum dos componentes.
2. Impeça que crianças brinquem nas proximidades do automatismo.
3. Efectue as verificações e as inspeções previstas pelo programa de manutenção; no caso de funcionamento anormal não utilize o automatismo.
4. Não desmonte nenhuma peça! As operações de manutenção e reparação devem ser efectuadas por pessoal qualificado.
5. Pode ser necessário efectuar uma operação de desbloqueo em situações de emergência! Instrua bem todos os utilizadores acerca do funcionamento do desbloqueo e da localização das chaves de desbloqueo.

DESBLOQUEIO DO LIVI 500

Todos os modelos de LIVI 500 são equipados com dispositivo de desbloqueo; o funcionamento deste, nos modelos da série 502 e 503 é o seguinte. Depois de ter aberto a fechadura da maçaneta (protegida por uma capinha de plástico) a alavanca deve ser girada na direcção indicada por figura; neste ponto o redutor estará solto e o portão, se não estiver preso de outra maneira, poderá ser movimentado a vontade. O processo contrário, ao girar a alavanca até o final do percurso e trancando a fechadura (lembre-se de proteger a fechadura com a sua capinha), o LIVI 500 voltará às condições de trabalho.

Nos modelos 500 e 501 o dispositivo de desbloqueo activa-se da seguinte maneira. Depois de abrir a fechadura (protegida pela capinha de plástico) situada na capa, retire a capa e desloque a alavanca de desbloqueo na posição 2 (veja figura); neste ponto o redutor estará desbloqueado e o portão, se não estiver preso de outra maneira, poderá ser movimentado a vontade. O processo contrário, se levar a alavanca até a posição 1, remonte a capa e trancando a fechadura (lembre-se de proteger a fechadura com a sua capinha), o LIVI 500 voltará às condições de trabalho.

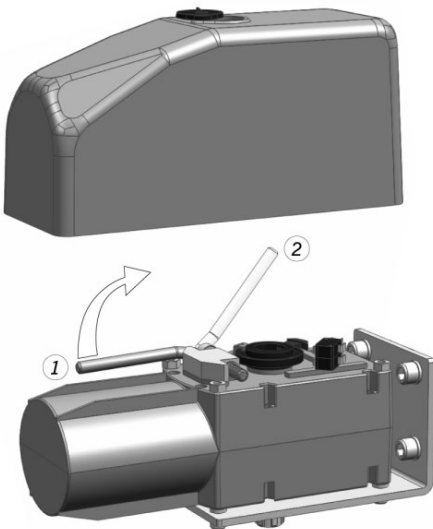
Se tiver sido instalado o acessório 560M "Dispositivo de desbloqueo de fio", realize as operações indicadas nas instruções contidas no mesmo.

LIMPEZA E INSPECCÕES

A única operação que o utilizador pode e deve efectuar é retirar do LIVI 500: folhas, ramos e todos os demais detritos que atrapalhem o seu movimento. Atenção! Realize estas operações com a alimentação eléctrica na máquina desligada!

CONDIÇÕES DE GARANTIA

A garantia dos produtos da DEA System é de 24 meses a partir da data de instalação. Esta garantia é limitada exclusivamente à reparação ou substituição gratuita das peças reconhecidas como defeituosas. Esta garantia não é válida se os produtos tiverem sido alterados, modificados, instalados de maneira não correcta ou estejam sem a etiqueta de identificação que contém o código e a data de produção.



DEA®



Esempio di installazione tipica - Example of typical installation - Exemple d'installation typique
Ejemplo de instalación típica - Exemplo de instalação típica

DEA System fornisce queste indicazioni che si possono ritenere valide per un impianto tipo ma che non possono essere complete. Per ogni automatismo, infatti, l'installatore deve valutare attentamente le reali condizioni del posto ed i requisiti dell'installazione in termini di prestazioni e di sicurezza; sarà in base a queste considerazioni che redigerà l'analisi dei rischi e progetterà nel dettaglio l'automatismo.

DEA System provides the following instructions which are valid for a typical system but obviously not complete for every system. For each automatism the installer must carefully evaluate the real conditions existing at the site. The installation requisites in terms of both performance and safety must be based upon such considerations, which will also form the basis for the risk analysis and the detailed design of the automatism.

DEA System fournit ces indications que vous pouvez considérer comme valables pour une installation-type, même si elles ne peuvent pas être complètes. En effet, pour chaque automatisme, l'installateur doit évaluer attentivement les conditions réelles du site et les pré-requis de l'installation au point de vue

performances et sécurité ; c'est sur la base de ces considérations qu'il rédigera l'analyse des risques et qu'il concevra l'automatisation d'une manière détaillée.

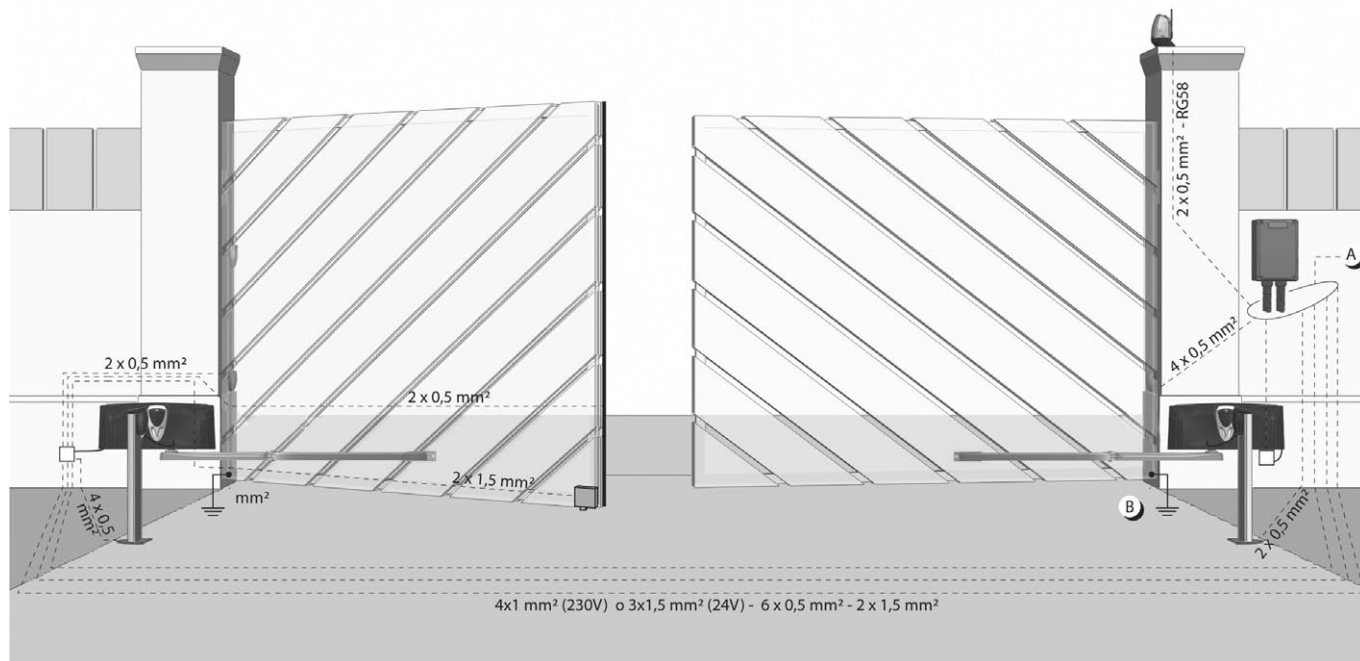
DEA System facilita estas indicaciones que pueden considerarse válidas para una instalación tipo pero que no pueden considerarse completas. El instalador, en efecto, tiene que evaluar atentamente para cada automatismo las reales condiciones del sitio y los requisitos de la instalación por lo que se refiere a prestaciones y seguridad; en función de estas consideraciones redactará el análisis de riesgos y efectuará el proyecto detallado del automatismo.

DEA System fornece estas indicações que podem ser consideradas válidas para o equipamento padrão, mas que podem não ser completas. Para cada automatismo praticamente o técnico de instalação deverá avaliar com atenção as condições reais do sítio e os requisitos da instalação em termos de performance e de segurança; será em função destas considerações que realizará uma análise dos riscos e projectará o

Per un corretto uso ai fini della sicurezza il motore deve essere collegato unicamente ad una centrale di comando Dea System.
To ensure proper and safe use of operators, connect them only to Dea System control panels.

Afin d'assurer un emploi correct au point de vue de la sécurité, le moteur doit être branché à une armoire de commande Dea System.
Para un empleo correcto en cuanto a seguridad, el motor tiene que conectarse exclusivamente a una central de control Dea System.
Para um uso certo em relação à segurança, o motor deve ser ligado unicamente a uma central de comando Dea System.

DEA System consiglia di inserire il quadro di comando (scheda elettrica + box) in scatole di derivazione commerciali - DEA System suggests to shelter the control board (control board card + box) inside a connector block box (not supplied) - DEA System vous conseille d'insérer l'armoire de commande dans (carte électronique + boîte) une boîte étanche de dérivation (pas fournie) - DEA System aconseja de insertar el cuadro de maniobra (tarjeta electrónica del cuadro de mando + caja) en una caja de derivación (no provista) - Dea System aconselha instalar o quadro de comando (quadro eléctrico + caixa) numa caixa de derivação (não fornecida)



- A) Collegarsi alla rete 230 V ± 10% 50-60 Hz tramite un interruttore onnipolare o altro dispositivo che assicuri la onnipolare disinserzione della rete, con una distanza di apertura dei contatti ≥ 3 mm - Make the 230V ± 10% 50-60 Hz mains connection using an omnipolar switch or any other device that guarantees the omnipolar disconnection of the mains network with a contact opening distance of 3 mm - Connectez-vous au réseau 230 V ± 10% 50-60 Hz au moyen d'un interrupteur omnipolaire ou d'un autre dispositif qui assure le débranchement omnipolaire du réseau, avec un écartement des contacts égal à 3 mm. - Efectuar la conexión a una línea eléctrica 230 V ± 10% 50-60 Hz a través de un interruptor omnipolar u otro dispositivo que asegure la omnipolar desconexión de la línea, con 3 mm de distancia de apertura de los contactos. - Ligue na rede de 230 V. ± 10% 50-60 Hz mediante um interruptor omnipolar ou outro dispositivo que assegure que se desliga de maneira omnipolar da rede, com abertura dos contactos de pelo menos 3 mm. de distância
- B) Collegare a terra tutte le masse metalliche - All metal parts must be grounded - Connectez toutes les masses métalliques à la terre - Conectar con la tierra todas las masas metálicas - Realize ligação à terra de todas as massas metálicas



Lista parti ordinabili, Spare parts list, Liste pièces ordonnables, Lista partes que pueden encargarse,
Lista para pedido de peças de reposição

cod. 923040E sblocco interno - art. 500
internal unlocking device - art. 500
déverrouillage intérieur - art. 500
desbloqueo interno - art. 500
desbloqueio interno - art. 500

cod. 923041E sblocco interno - art. 500R
internal unlocking device - art. 500R
déverrouillage intérieur - art. 500R
desbloqueo interno - art. 500R
desbloqueio interno - art. 500R

cod. 360380 ingranaggio - art. non rev.
gear - art. not rev.
engrenage - art. non rev.
engranaje - art. no rev.
engrenagem - art. não rev.

cod. 360390 ingranaggio - art. rev.
gear - art. rev.
engrenage - art. rev.
engranaje - art. rev.
engrenagem - art. rev.

cod. 156028 o-ring
o-ring
o-ring
o-ring
o-ring

cod. 121013 cuscinetto
bearing
coussinet
cojinete
rolamento

cod. 330570 albero scanalato
splined shaft
arbre cannelé
eje acanalado
veio canelado

cod. 923100M albero scanalato
splined shaft
arbre cannelé
eje acanalado
veio canelado

cod. 923160S cuscinetto+anello di compensazione
bearing+adjustment ring
coussinet+anneau compensateur
cojinete+anillo de compensación
rolamento+anel de compensação

cod. 923170T cuscinetto+anello di compensazione
bearing+adjustment ring
coussinet+anneau compensateur
cojinete+anillo de compensación
rolamento+anel de compensação

cod. 330590 albero dentato
toothed shaft
arbre denté
eje dentellado
veio dentado

cod. 923080I albero motore - art. 500
motor shaft - art. 500
arbre moteur - art. 500
eje motor - art. 500
veio de motor - art. 500

cod. 923081I albero motore - art. 500R
motor shaft - art. 500R
arbre moteur - art. 500R
eje motor - art. 500R
veio de motor - art. 500R

cod. 923082I albero motore - art. 502EN
motor shaft - art. 502EN
arbre moteur - art. 502EN
eje motor - art. 502EN
veio de motor - art. 502EN

cod. 923190V encoder
encoder
encodeur
encoder
encoder

cod. 164008 microinterruttore
microswitch
micro-interrupteur
microinterruptor
micro interruptor

cod. 923180U vite senza fine+cuscinetto
worm screw+bearing
vis sans fin+coussinet
tornillo sinfin+cojinete
parafuso sem fim+rolamento

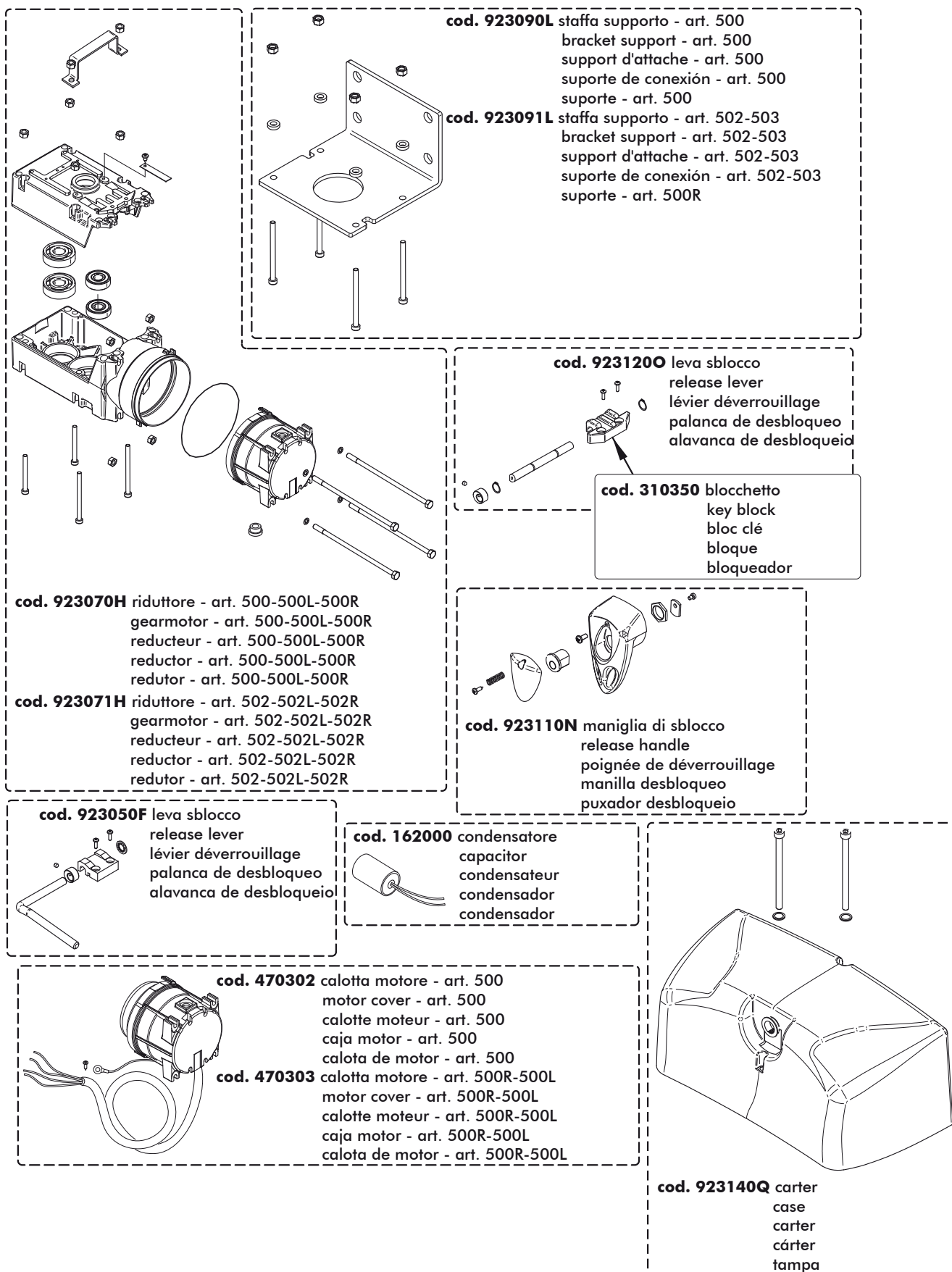
cod. 923150R motore 24V
24V motor
moteur 24V
motor 24V
motor de 24V

cod. 639111 finecorsa
limit switch
fin de course
final de carrera
fin de curso



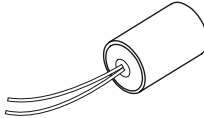

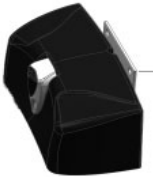
cod. 440020 carter
case
carter
carter
tampa

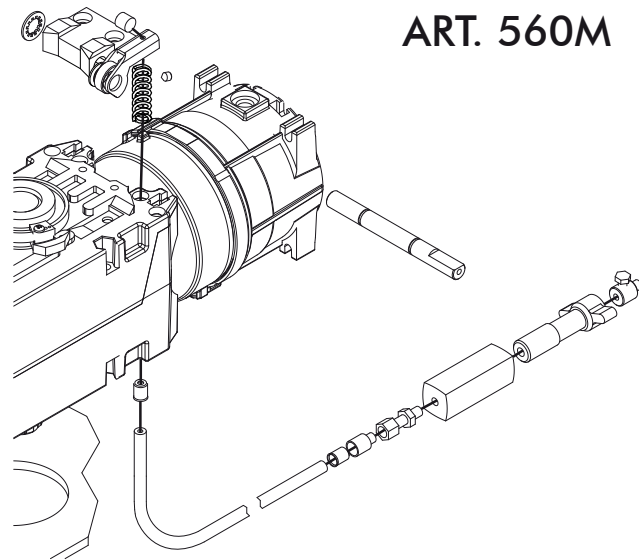


Lista parti ordinabili, Spare parts list, Liste pièces ordonnables, Lista partes que pueden encargarse,
Lista para pedido de peças de reposição

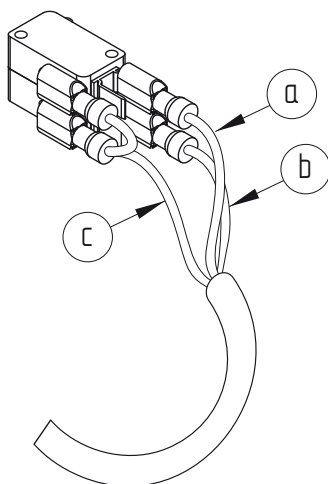




	<p>Contenuto dell'imballo Contents of the package Contenu de l'emballage Contenido del embalaje Conteúdo da embalagem</p>
	x1
	x1
Art. 500, 500L, 501, 501L, 500/24, 500R, 501R	
	x1
Art. 502, 502L, 503, 502L, 502/24, 502R, 503R	
	x1



ART. 560M



- a- marrone = finecorsa apertura
- a- brown = limit switches in opening
- a- marron = fin de course en ouverture
- a- marrón = tope abertura
- a- castanho = final de percurso de abertura

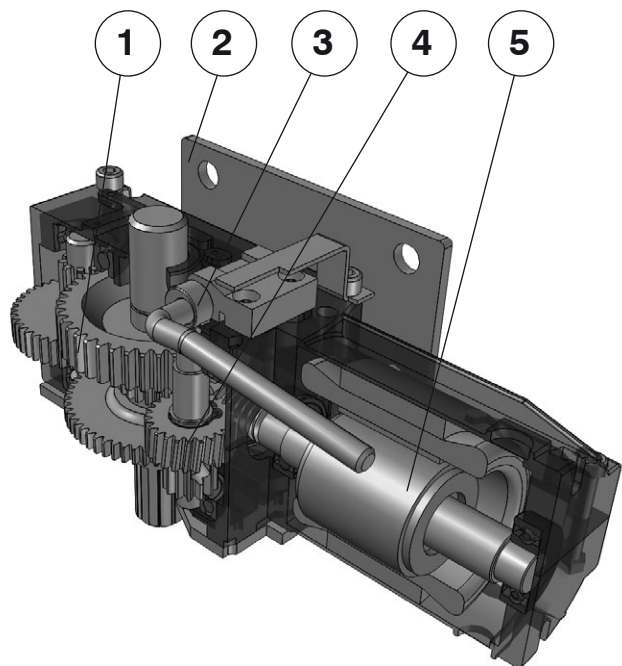
- b- nero = finecorsa chiusura
- b- black = limit switches in closing
- b- noir = fin de course en fermeture
- b- negro = tope cierre
- b- preto = final de percurso de fechamento

- c- blu = comune comandi
- c- bleu = common for the controls
- c- bleu = commune des commandes
- c- azul = común mandos
- c- azul = comum dos comandos

Nel caso sia necessaria una totale irreversibilità del motoriduttore utilizzare versione con microinteruttori di finecorsa.- **Should** you need the gate operator to be completely irreversible, use the model equipped with limit micro switches. - **S'il** est nécessaire de garantir une totale irréversibilité de l'automation, utilisez la version avec les micro interrupteurs de fin de course. - **Si** fuera necesaria la total irreversibilidad del motor-reductor, utilídense versiones con microinterruptores de tope. - **Se** for necessário o redutor de movimento ser totalmente irreversível, utilize a versão com micro interruptores de final de percurso.

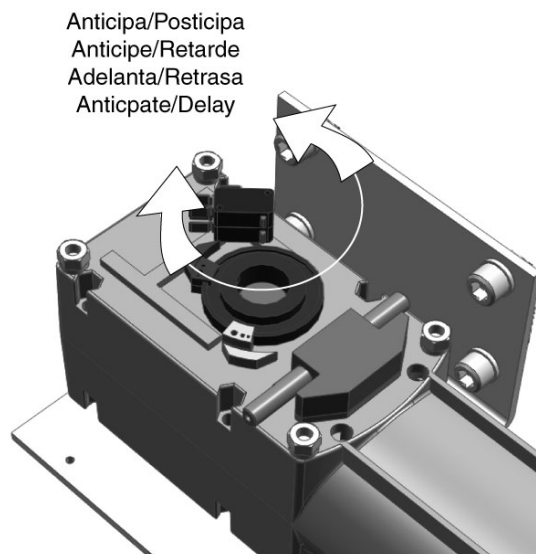


F1 Elementi del prodotto, Product elements, Eléments du produit, Elementos del producto, Elementos do produto

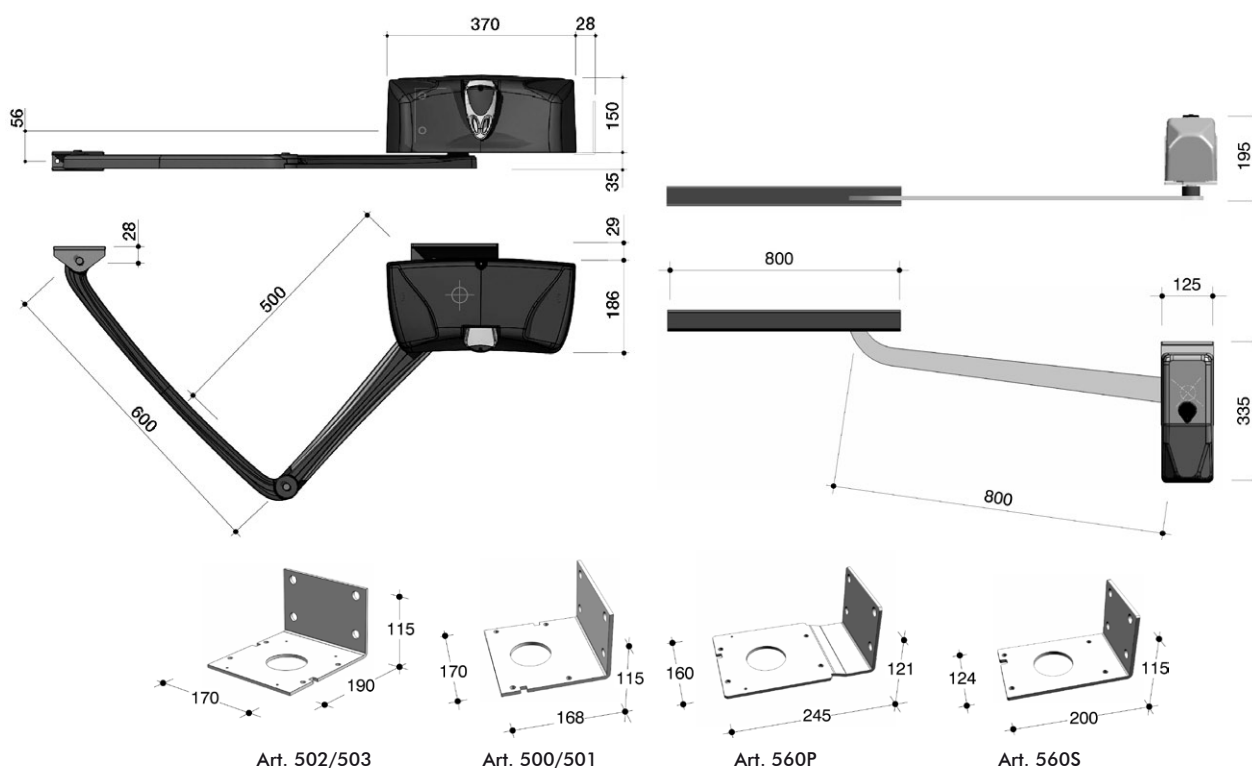


1	2	3	4	5
Riduttore Operator Réducteur Reductor Redutor	Staffa Bracket Attache Soporte Estribo	Gruppo sblocco Unlocking unit Bloc de déverrouillage Grupo desbloqueo Grupo de desbloqueo	Albero sblocco Unlocking shaft Arbre déverrouillage Eje desbloqueo Veio de desbloqueo	Gruppo motore Motor unit Groupe moteur Grupo motor Grupo do motor

F3 Regolazione finecorsa, Limit switch adjustment, Réglage fin de course, Regulación tope, Regulação do final de percurso.

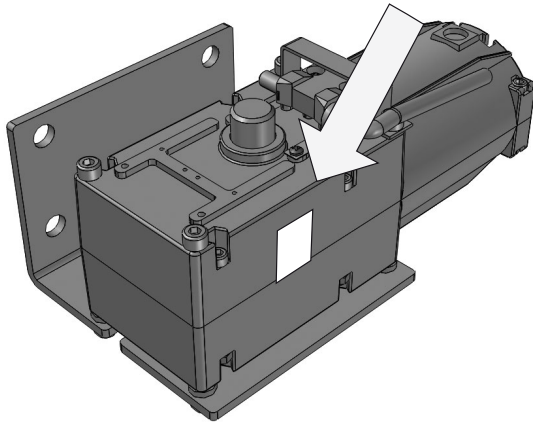


F2 Ingomri prodotto, Product dimensions, Cotes d'encombrement du produit, Espacio ocupado por el producto, Medidas máximas do produto



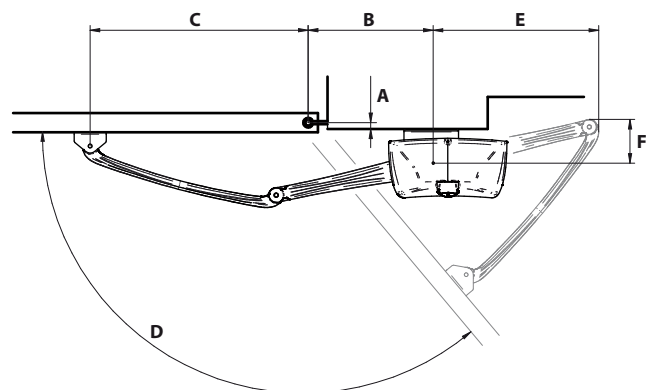
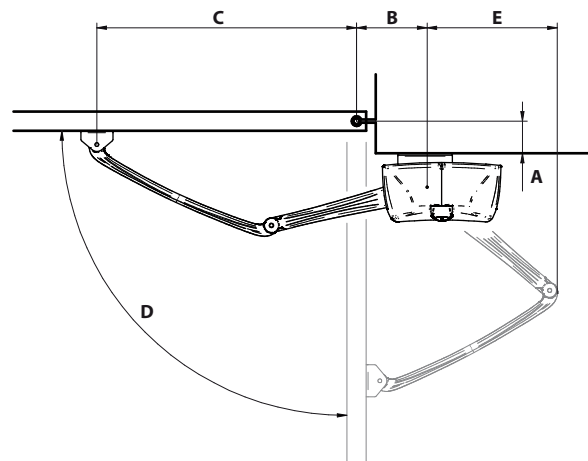


F4 Posizione etichetta, Label position, Position étiquette, Posición etiqueta, Posição da etiqueta



F5 Misure installazione, Installation measurements, Mesures pour l'installation, Medidas instalación, Medidas para instalação

A	B	C	D	E	F
20	200	860	90°	372	-
50	200	840	90°	392	-
100	200	820	90°	418	-
120	200	820	90°	424	-
150	200	800	90°	438	-
200	200	800	90°	452	-
250	200	800	90°	464	-
300	200	800	90°	472	-
350	200	780	90°	482	-
0	390	680	135°	498	208
20	390	680	130°	522	140
20	300	760	120°	532	75
20 ÷ 50	250	800	110°	520	-
50 ÷ 100	220	810	100°	482	-

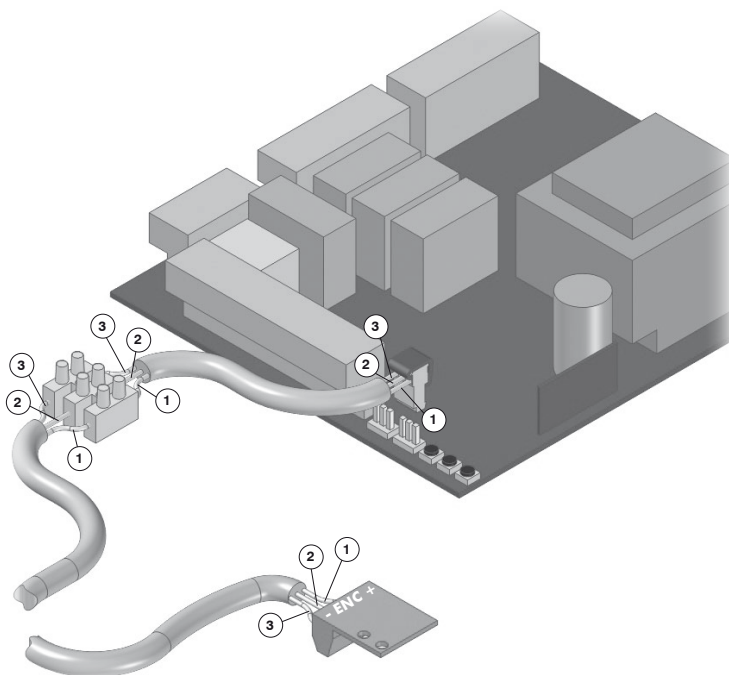




<p>F6 Assemblaggio riduttore, Operator assembly, Assemblage réducteur, Montaje del reductor, Conjunto do reductor</p>	<p>F7 Assemblaggio carter, Case assembly, Assemblage carter, Montaje de la caja, Conjunto da capa de protecção</p>	
<p>F8 Attacco braccio articolato e a binario, Articulated and rail arm fastening, Fixation bras articulé et coulisse, Conexión del brazo articulado y con carril, Engate do braço arti- culado ou com trilho</p>	<p>F9 Sblocco manuale, Manual release, Déverrouillage manuel, Desbloqueo manual, Desbloqueio manual</p>	<p>F10 Distanze antischiacciamento, Crushing prevention safety distances, Distances anti-écrasement, Distancias anti aplastamiento, Distância para evitar esmagamento</p>

F12 Connessione encoder con mod. 502EN, Encoder connection to art. 502EN, Connexion de l'encodeur avec l'art. 502EN, Conexión encoder con art. 502 EN, Ligaçáo do encoder ao art. 502EN.

Numerazione cavo Cable numbering Numération câble Numero cable Numeração cabo	Colore del cavo Cable colour Couleur câble Color del cable Cor do cabo
1	Bianco, White, Blanche, Blanco, Branco
2	Verde, Green, Vert, Verde, Verde
3	Marrone, Brown, Marron, Marrón, Castanho



Collegare il cavetto adattatore encoder fornito come indicato in figura **Connect** the supplied adaptor cable as shown in the picture **Connecter** le câble adaptateur fourni comme montré en figure **Conectar** el cable adaptador suministrado como es indicado en la imagen **Ligar** o adaptador do cabo fornecido como mostra na figura.

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