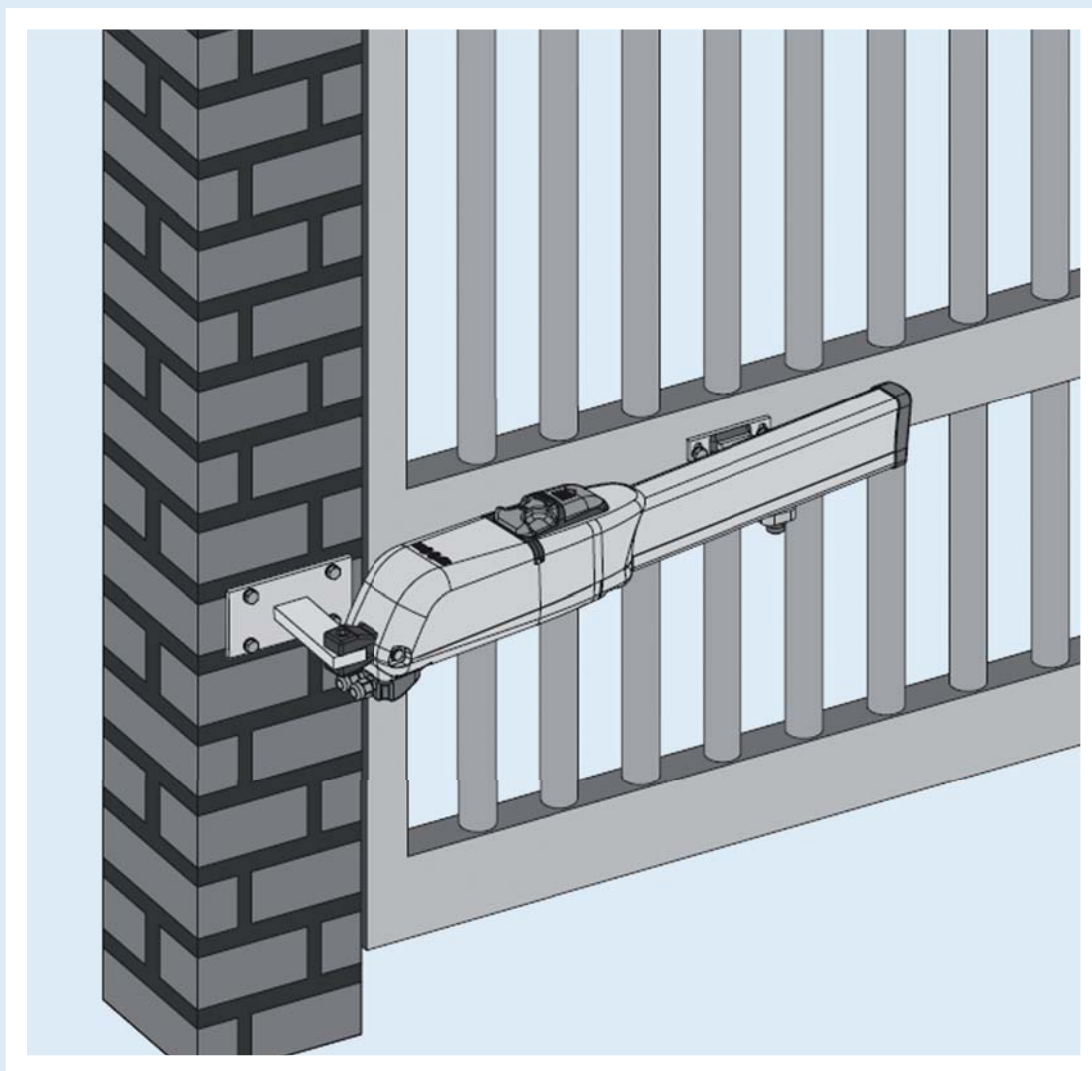


Installation Manual

413



Swing Gate System

FAAC

Leading the way ...



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1. CE DECLARATION OF CONFORMITY FOR MACHINES (DIRECTIVE 98/37/CE)

Manufacturer: FAAC S.p.a.

Address: Via Benini, 1 - 40069 - Zola Predosa - BOLOGNA - ITALY

Declares that: 413 mod. operator

- is built to be integrated into a machine or to be assembled with other machinery to create a machine under the provisions of Directive 98/37/CE;
- conforms to the essential safety requirements of the following EEC directives:
 - 73/23 EEC and subsequent amendment 93/68/EEC.
 - 89/336 EEC and subsequent amendment 92/31/EEC and 93/68/EEC

and also declares that the machinery must not be put into service until the machine in which it will be integrated or of which it will become a component has been identified and declared as conforming to the provisions of Directive 98/37/CE.

Bologna, 01.02.2005

The Managing Director
A. Bassi



2. DESCRIPTION

The **413** automated system for swing gates is an electro-mechanical non-reversing operator that transmits motion to the leaf via a worm screw system.

The operator is available in many versions covering therefore every installation requirement. The "LS" versions are equipped with opening and closing limit switches. Every version is supplied with opening and closing mechanical travel stops.

The non-reversing system ensures the leaf is mechanically locked when the motor is not operating. A convenient and safe release system with customised key makes it possible to manually move the leaf in the event of a malfunction or of a power failure.



ATTENTION:

- The correct operation and the declared specifications only apply if FAAC accessories and safety devices are used.
- As no mechanical clutch device is fitted, a control unit with adjustable electronic clutch is required to ensure the necessary anti-crushing safety.
- The 413 automated system was designed and built for controlling vehicle access. Avoid any other use whatever.

Pos.	Description
1	Operator
2	Release device
3	Limit switch cover
4	Closing limit switch
5	Opening limit switch
6	Front bracket
7	Rear fitting
8	Rear fitting pin
9	Rear bracket
10	Terminal board cover

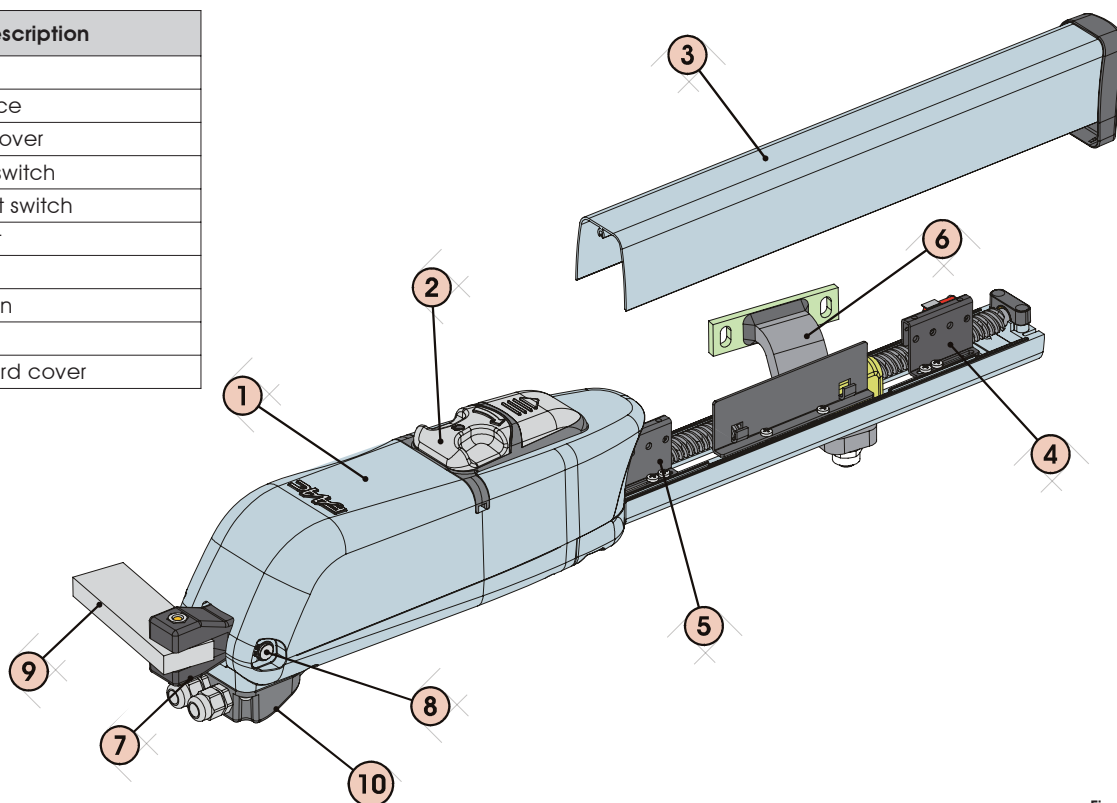


Fig. 1

2.1. Dimensions

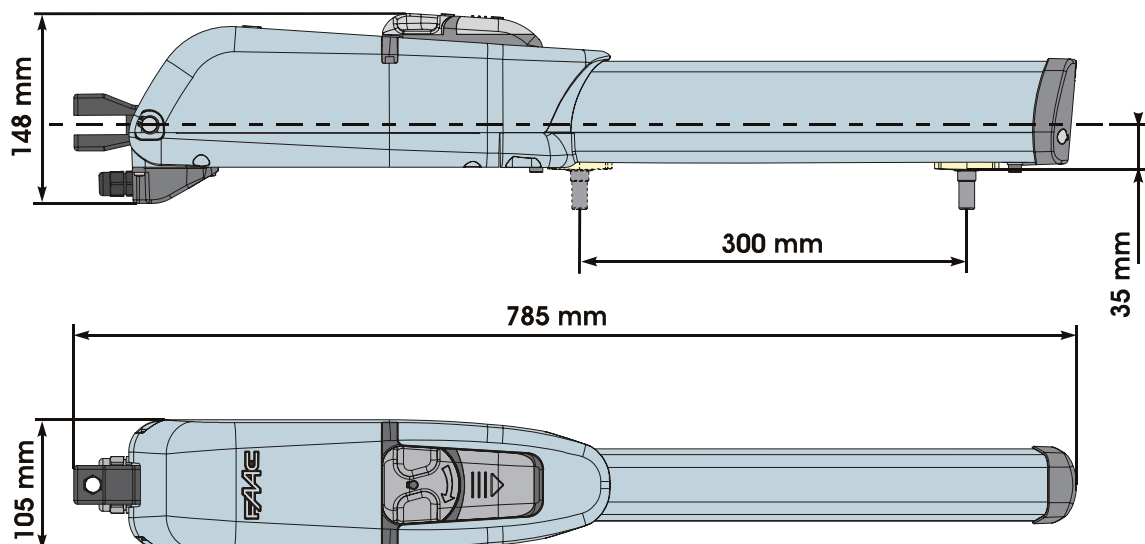


Fig. 2

3. TECHNICAL SPECIFICATIONS

TECHNICAL SPECIFICATIONS	413	413 LS	413 24V	413 LS 24V	413 115V	413 LS 115V
Power supply	230 V~		24 Vdc		115 V~	
Power (W)	250		70		260	
Current (A)	1,1		3		2.2	
Thermal protection (°C)	140		-		140	
Capacitor (µF)	6,3		-		20	
Thrust (daN)	200		250		200	
Travel (mm)	300 ⁽¹⁾					
Speed (cm/sec)	1,6				1,85	
Leaf max. (m)					2,5 ⁽²⁾	
Type and use frequency at 20° C	S3 - 30%	S3 - 35%	100%		S3 - 30%	S3 - 35%
Approximate min. cycle/hour at 20° C	~30		~100		~30	
Operating ambient temperature (°C)	-20 +55					
Operator weight (Kg)	6,5					
Operator length (mm)	see fig.2					
Operator dimensions (mm)	see fig.2					
Protection class	IP54					

⁽¹⁾ If no closing and opening mechanical travel stops are used, the operator travel is 350 mm

⁽²⁾ With leaves exceeding 1.8 m the fitting of an electric lock is required to ensure the leaf locking

3.1. Versions

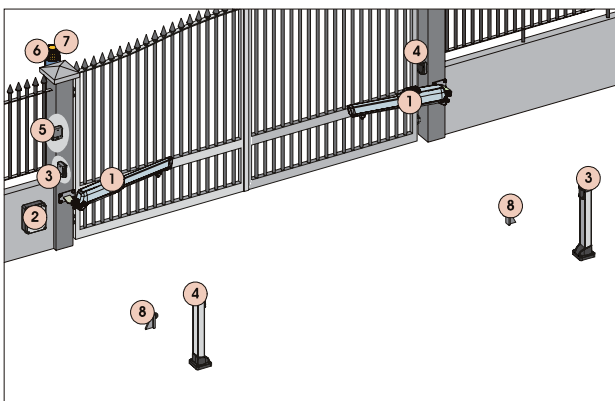
MODEL	VERSION
OPERATOR 413	230V~ operator with opening/closing mechanical travel stops
OPERATOR 413 LS	230V~ operator with opening/closing mechanical travel stops and opening/closing limit switches
OPERATOR 413 24V	24Vdc operator with opening/closing mechanical travel stops
OPERATOR 413 LS 24V	24Vdc operator with opening/closing mechanical travel stops and opening/closing limit switches
OPERATOR 413 115V	115V~ operator with opening/closing mechanical travel stops
OPERATOR 413 LS 115V	115V~ operator with opening/closing mechanical travel stops and opening/closing limit switches



For CSA-UL approved operators, control unit 455 MPS UL 115 must be used in order to maintain the approval.

4. INSTALLATION

4.1. Electrical set-up (standard system)



Pos.	Description	Cables
1	Operators	4x1.5 mm ² (2x1.5 mm ²)
2	Control unit	3x1.5 mm ² (power supply)
3	TX photocells	4x0.5 mm ²
4	RX photocells	2x0.5 mm ²
5	Key-operated selector switch	2x0.5 mm ² (3x0.5 mm ²)
6	Flashing lamp	2x1.5 mm ²
7	Receiver	3x0.5 mm ²
8	Mechanical stops	-

Fig. 3

Notes:

- Use suitable tubes and/or hoses to lay electric cables
- To avoid any kind of interference always separate low-voltage accessories and control cables from 230/115 V~ power supply cables using separate sheaths.

4.2. Preliminary checks

To ensure a correct operation of the automated system, make sure the following requirements are observed as for the gate structure (existing or to be realised):

- the mechanical parts must conform to the provisions of Standards EN 12604 and EN 12605.
- leaf length in compliance with the operator specifications (see paragraph 2.1)
- sturdy and stiff structure of the leaves, suitable for automation
- regular and uniform movement of the leaves, without any friction and dragging during their entire opening
- stiff hinges in good condition
- presence of both opening and closing mechanical limit stops (they are not necessary if opening and closing mechanical travel stops are used)
- presence of an efficient earthing for electrical connection of the operator

Perform any necessary metalwork job before installing the automated system.

The condition of the gate structure directly affects the reliability and safety of the automated system.

4.3. Installation dimensions

Determine the fitting position of the operator with reference to Fig.4. During this phase it is important to define if the mechanical travel stops are to be used: by eliminating the mechanical travel stops the operator travel increases thus changing the installation dimensions **A** and **B**.

Check with care if the distance between the open leaf and any obstacles (walls, fences etc.) is higher than the operator dimensions

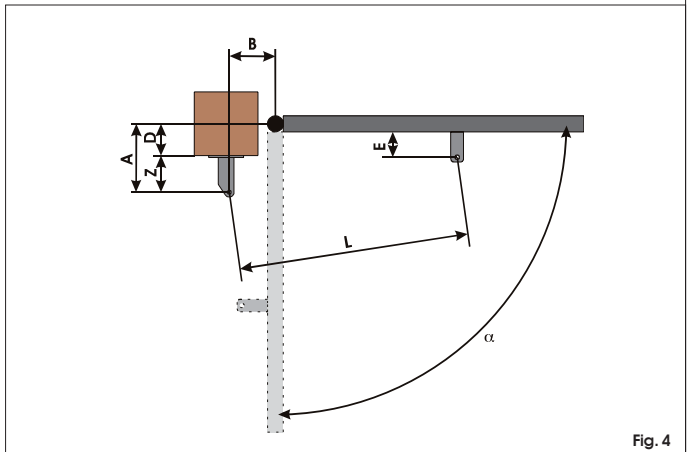


Fig. 4

Model	α	A	B	C ⁽¹⁾	D ⁽²⁾	Z ⁽³⁾	L	E ⁽³⁾
413 with opening and closing stop	90°	140	140	280	80	60	675	80
	110°	120	135	295	65	55	675	
413 with opening stop	90°	150	150	300	90	60	690	90
	110°	135	135	310	80	55	690	
413 without opening and closing stop	90°	160	160	320	100	60	690	95
	110°	145	145	330	85	60	690	

⁽¹⁾ operator useful travel

⁽²⁾ max. dimension

⁽³⁾ min. dimension

4.3.1. General rules to determine the installation dimensions

- to obtain 90° leaf openings : **A+B=C**
- to obtain leaf openings **exceeding 90°** : **A+B<C**
- **Smaller A and B dimensions determine higher peripheral speed of the leaf.**
- **Limit the difference between A and B dimension within 4 cm:** higher differences cause great speed variations during the gate opening and closing movement.
- Keep a **Z** dimension in such a way that the operator does not strike the pillar.
- in the LS versions the limit switches are triggered for the first and last 30mm. therefore use such A and B dimensions in order to use the whole operator travel. Shorter travels could limit or cancel the limit switch adjustment range.
- The mechanical travel stops operate for the first and last 30mm of the travel; shorter travels could limit or cancel the adjustment range.

If the pillar dimensions or the hinge position do not allow the installation of the operator, a niche on the pillar, as shown in Fig. 5, should be created in order to maintain the A dimension as determined. The niche should be dimensioned in such a way to enable easy installation, operator rotation and operation of the release device.

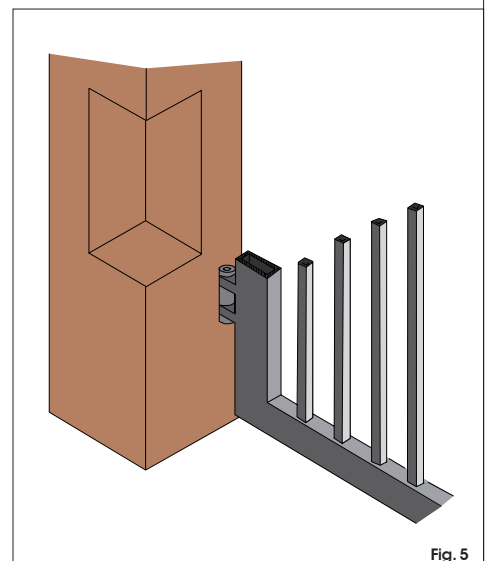


Fig. 5

4.4. Installing the operators

1) Fix the rear bracket in the position determined before. In the event of iron pillar carefully weld the bracket directly on the pillar (Fig.6). In the event of masonry pillar, use the suitable plate (optional) for the fixing to screw (Fig.7) by making use of suitable fastening systems. Then carefully weld the bracket to the plate.

During the fastening operations, check if the bracket is perfectly horizontal by means of a level.

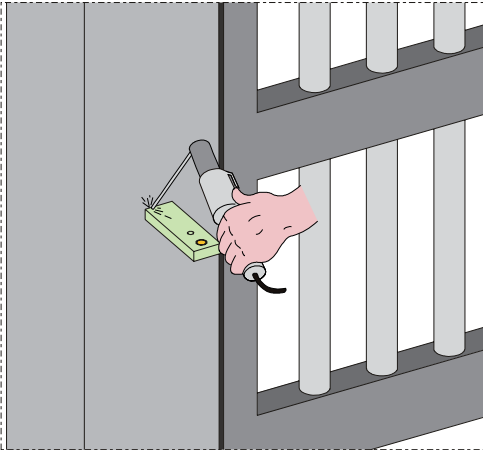


Fig. 6

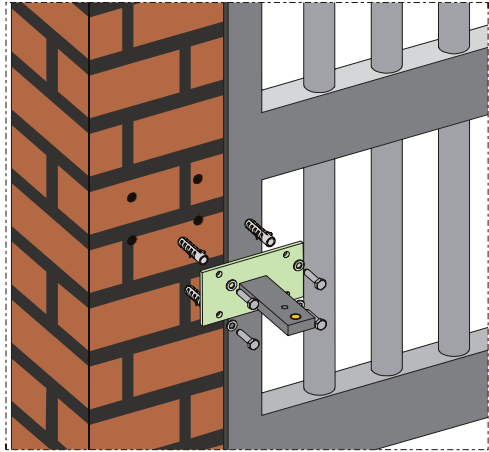


Fig. 7

2) Assemble the rear fitting to the operator as shown in Fig.8.

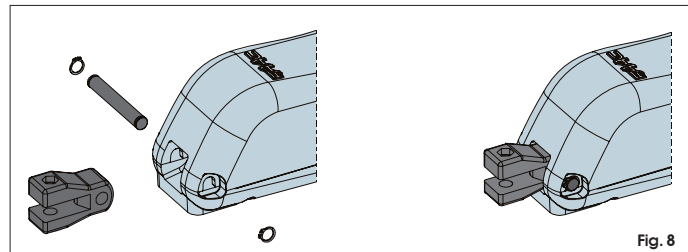


Fig. 8

3) Check if the front fitting is in the correct position as shown in Fig.9 (with closing mechanical travel stop) or in Fig.10 (without closing mechanical travel stop). If this is not the case, temporarily supply power to the operator to position the fitting.



ATTENTION: The operator can be moved by hand only if it is installed on the gate and in released position (see paragraph 6).

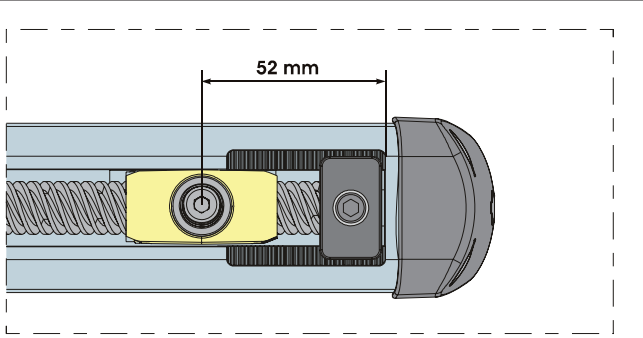


Fig. 9

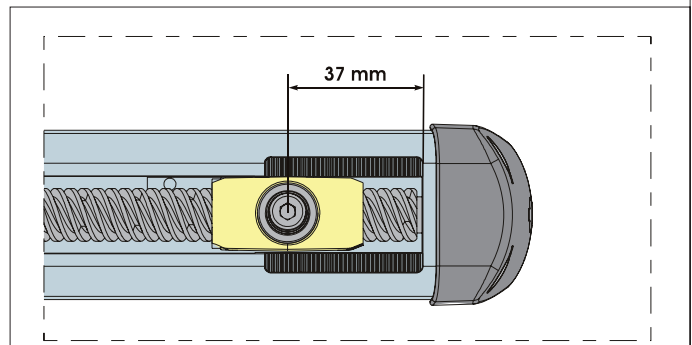


Fig. 10

4) Assemble the front bracket as shown in Fig.11. A hexagonal seat is located in the lower part of the fitting CH=5 (Fig.11 ref. A) to make the assembling operations easier.



Attention: before fastening the operator on the front bracket you have just welded, wait for the bracket to cool.

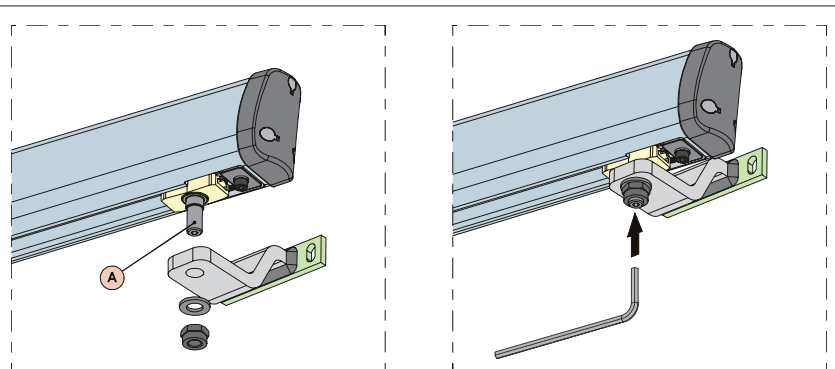


Fig. 11

5) Fix the operator to the rear bracket by means of the supplied pins as shown in Fig.12.

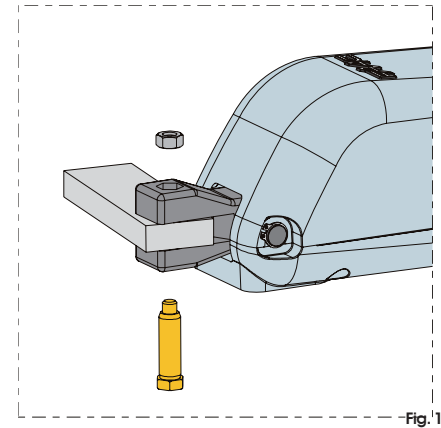


Fig.12

6) Close the leaf and, keeping the operator in a perfect horizontal position, determine the fastening point of the front bracket (Fig.13).
7) Temporarily fix the front bracket with two welding spots (Fig.13).

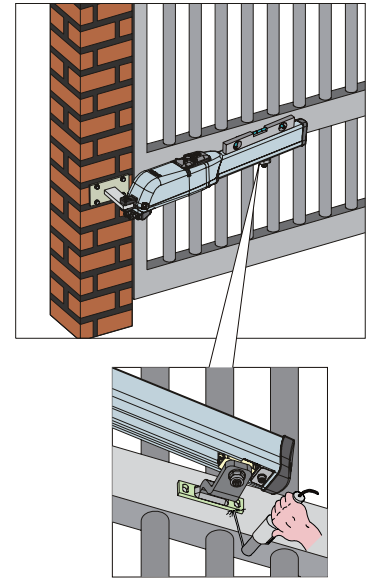


Fig. 13



Note: if the gate structure does not allow a fix bracket fastening it is necessary to create a sturdy supporting base in the gate structure.

8) Release the operator (see paragraph 6) and manually check if the gate can completely open without hindrances and stop at the mechanical travel stops as well as if the leaf moves regularly without any friction.
9) Carry out the necessary corrective measures and repeat from point 8.
10) Temporarily release the operator from the front bracket and weld the bracket definitively.



Note: we recommend to grease all the fastening pins of the fittings.

4.5. Wiring the operator

A terminal board is fitted in the lower part of the operator for the connection of the motor, of any limit switch and for the earthing of the operator.



IMPORTANT : To connect the motor, the supplied cable must be used for the mobile section, or a cable for mobile laying from the outside.

Motor wiring operations:

- 1) Open one of the two pre-drilled holes in the supplied cover, Fig.14; in case of operators with limit switches, open both holes.
- 2) Fit the supplied cable gland.
- 3) Connect the motor and the earthing with reference to Fig.15 and to the table.

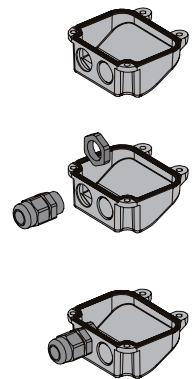
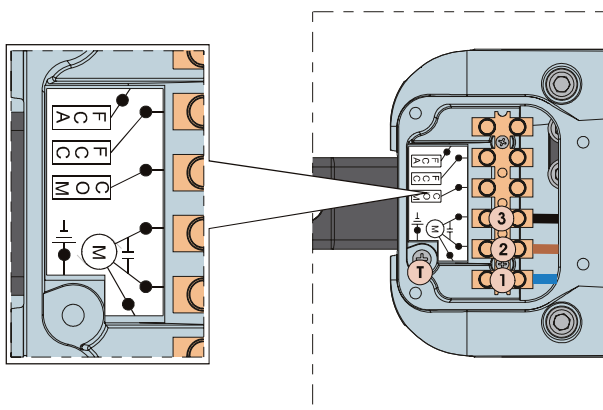


Fig. 14



To maintain approval for CSA-UL approved operators, position the capacitor (secured in a stable manner) inside a CSA-UL approved enclosure.



413 230 V~ (115V~)		
POS.	COLOUR	DESCRIPTION
1	Blue (White)	Common cable
2	Brown (Red)	Phase 1
3	Black (Black)	Phase 2
T	Yellow / Green (Green)	Earthing
413 24 Vdc		
POS.	COLOUR	DESCRIPTION
1	Blue	Phase 1
2	Not used	/
3	Brown	Phase 2
T	Not used	/

Fig. 15

4) Close the cover with the four supplied screws, Fig.16.

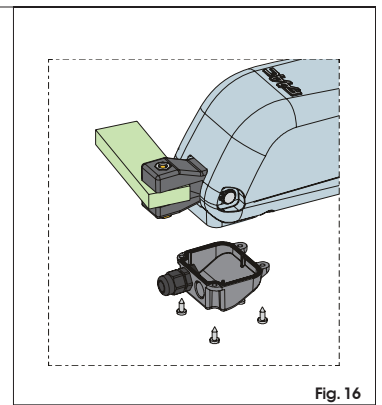


Fig. 16

4.6. Mechanical travel stops

The 413 operators are equipped with opening and closing mechanical travel stops. They can be used instead of the leaf mechanical limit stops. To adjust the mechanical travel stops operate as follows:

4.6.1. Adjusting the opening mechanical travel stop

- 1) Set the operator for manual operation, see paragraph 6
- 2) Manually move the leaf in opening position.
- 3) Loosen the fastening screw, Fig.17 ref.A. Do not remove the screw.
- 4) Move the stop near the fitting as shown in Fig.18.



IMPORTANT: The mechanical stop works coupled to a toothed sector, Fig. 17 ref. B. If there are any troubles during the movement, make sure that the coupling is free. DO NOT FORCE.

5) Re-tighten the securing screw, checking correct coupling to the toothed sector.

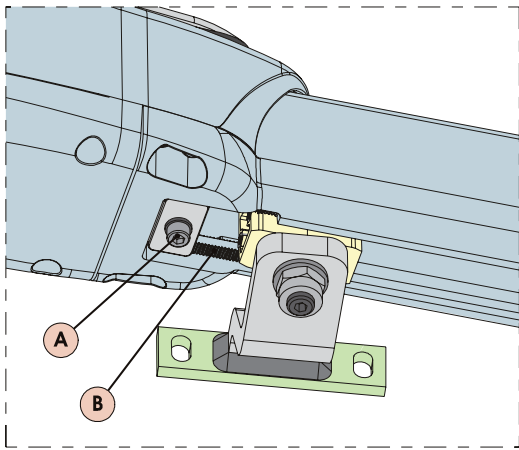


Fig. 17

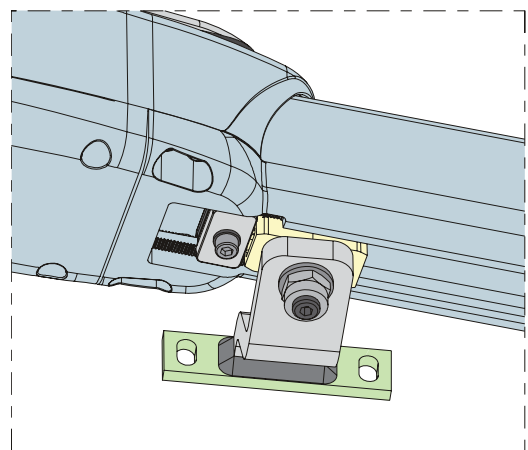


Fig. 18

4.6.2. Adjusting the closing mechanical travel stop

- 1) Set the operator for manual operation, see paragraph 6
- 2) Manually move the leaf in closing position.
- 3) Loosen the fastening screw, Fig.19 ref.A. Do not remove the screw.
- 4) Move the stop near the fitting as shown in Fig.20.



IMPORTANT: The mechanical stop works coupled to a toothed sector, Fig. 19 ref. B. If there are any troubles during the movement, make sure that the coupling is free. DO NOT FORCE.

5) Re-tighten the securing screw, checking correct coupling to the toothed sector.

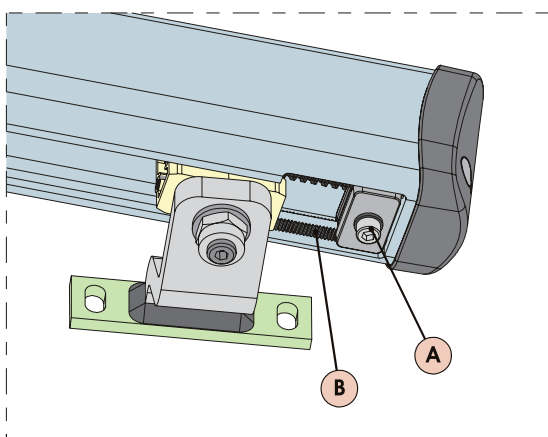


Fig. 19

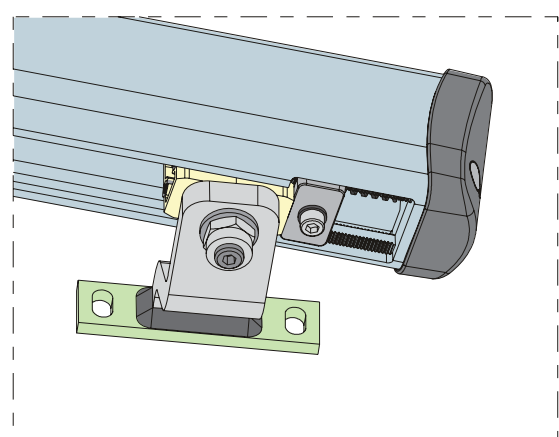


Fig. 20

4.7. Limit switches

The "LS" models are equipped with opening and closing limit switches. Therefore they require the use of a control board able to control these inputs.



Note: The limit switches are triggered for the first and the last 30 mm of the travel. Therefore the operator should use the whole available travel during the opening phase. Shorter travels can limit or completely cancel the limit switch adjustment range.

4.7.1. Wiring the limit switches

The limit switches are wired in the same terminal board where the motor wiring has been carried out. Wire the limit switches as follows:

- 1) Open the second pre-drilled hole in the cover, Fig.21.
- 2) Fit the supplied cable gland, Fig.21.
- 3) Insert the cable and connect it to the terminals observing the colours specified in the table of Fig.22.
- 4) Close the cover with the four supplied screws.



Notes:

- For the limit switch connection use the cable for the external movable laying with wires having a cross section of 0.5 mm².
- During the wiring operations, observe the wire colours as specified in the table of Fig.22.

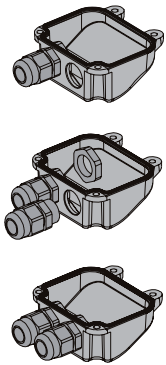
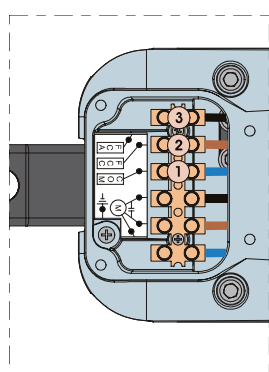


Fig. 21



POS.	COLOUR	DESCRIPTION
1	Blue	Common cable
2	Brown	Closing limit switch (FCC)
3	Black	Opening limit switch (FCA)

Fig. 22

4.7.2. Adjusting the limit switches

The limit switch adjustment is carried out as follows:

- 1) Remove the two plugs which cover the lower securing screws, Fig.23 ref.1. To facilitate this operation, a slot is provided for inserting a screwdriver.
- 2) Unscrew both lower screws of the front cap and remove the cover, Fig.23.

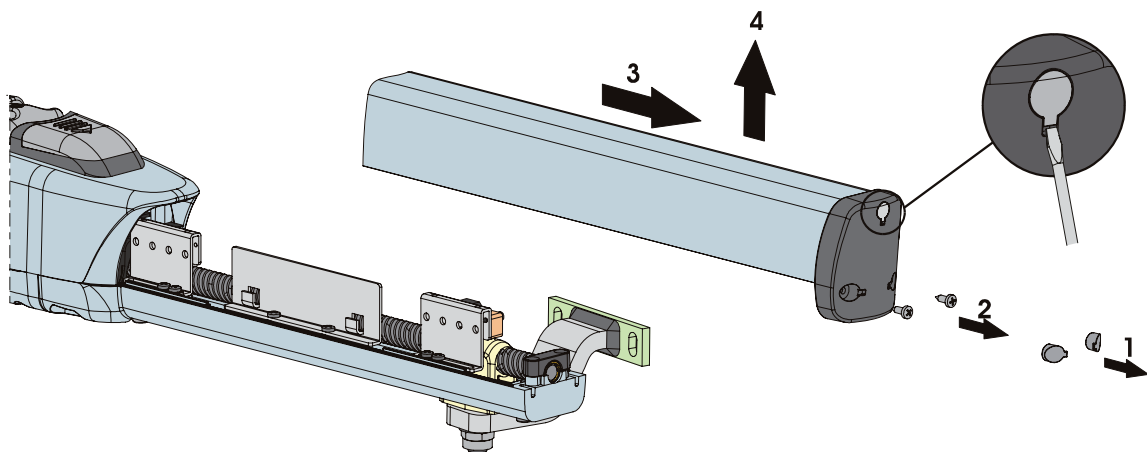


Fig. 23

- 3) Loosen the fastening screws of the limit switch to adjust, Fig.24 ref.A.
- 4) Move the limit switch to the desired position and lock the screws.
- 5) Perform a pair of test cycles to check the correct position of the limit switch. If the adjustment of the limit switch needs to be carried out again, repeat the operation starting from point 2.

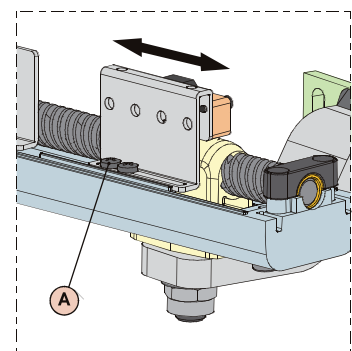


Fig. 24

- 6) Position again the cover by sliding it on the lower casting and make sure that it reaches the stop, Fig.25.
- 7) Screw both lower screws, Fig.25.
- 8) Re-position the two front plugs.

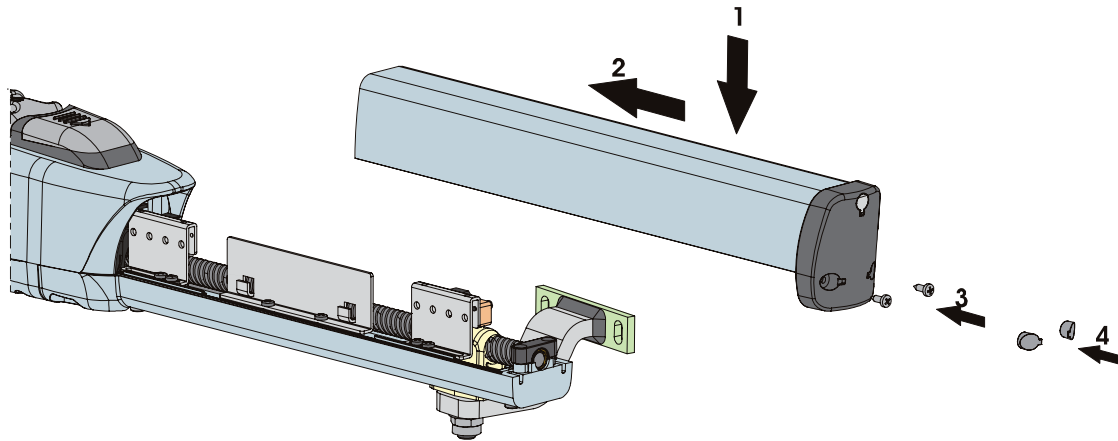


Fig. 25

4.8. Start-up



ATTENTION: Cut power before any job on the system or on the operator.

Carefully observe points 10, 11, 12, 13 and 14 of the SAFETY GENERAL RULES.

With reference to the indications in Fig.3, set the ducts and carry out the electrical connections of the control board and of the chosen accessories.

Always separate power cables from control and safety cables (push button, receiver, photocells, etc.). To avoid any electrical noise whatever in the unit, use separate sheaths.

- 1) Power up the system and check the LED condition as shown in the table of the control board instructions.
- 2) Program the control board according to the needs by following the given instructions.

5. TESTING THE AUTOMATED SYSTEM

- Carefully check operating efficiency of the automated system and of all accessories connected to it, paying special attention to the safety devices.
- Hand the "User's Guide" to the final user together with the Maintenance sheet.
- Explain correct operation and use of the automated system to the user.
- Indicate the potentially dangerous areas of the automated system to the user.

6. MANUAL OPERATION

If the automated system needs to be moved manually due to a power lack or to an operator malfunction, proceed as follows:

- 1) Cut power by means of the safety circuit breaker (even in the event of a power lack).
- 2) Slide the protective cap, Fig.26/1.
- 3) Insert the key and turn it 90°, Fig.26/2.
- 4) To release the operator turn 180° the control lever to the direction indicated by the arrow on the release system, Fig.26/3.
- 5) Open and close the leaf manually.



Note: To hold the operator in manual operation the release device should be left in its current positions and the system should be without power.

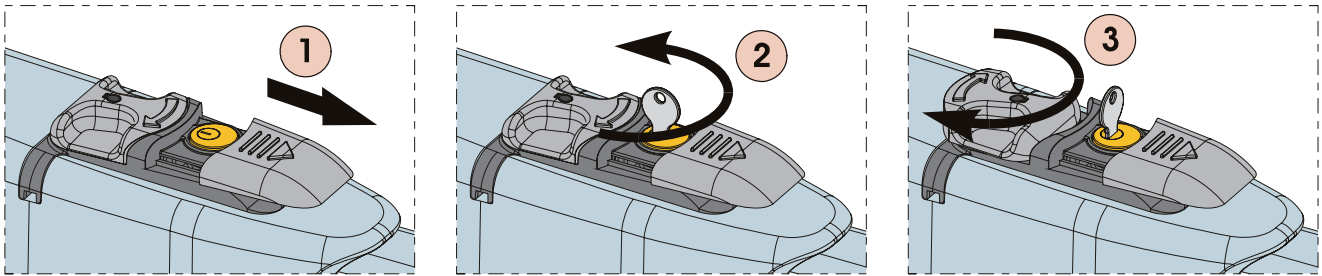


Fig. 26

6.1. Restoring normal operation

To restore normal operating conditions, proceed as follows:

- 1) Turn the release system 180° in the opposite direction of the arrow.
- 2) Turn 90° the release key and remove it.
- 3) Close the protection cover.
- 4) Power up the system and perform some movements in order to check the correct restoring of every function of the automated system.

7. MAINTENANCE

To ensure trouble-free operation and a constant safety level, an overall check of the system should be carried out every 6 months. A form for recording operations has been included in the "User's Guide" booklet.

8. REPAIRS

For any repairs, contact the authorised Repair Centres.

9. AVAILABLE ACCESSORIES

Refer to catalogue for available accessories.

10. SPECIAL APPLICATIONS

†There is no special application than the described use.

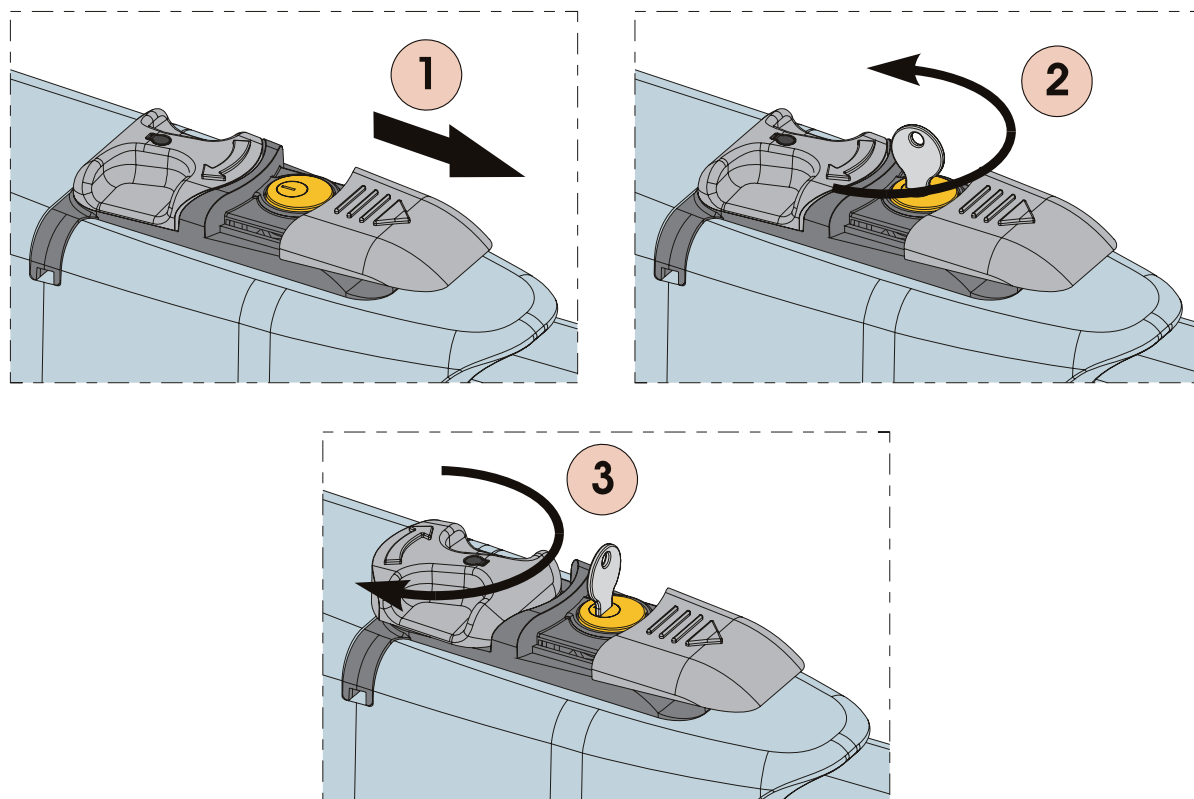


Fig. 1

ITALIANO

Leggere attentamente le istruzioni prima di utilizzare il prodotto e conservarle per eventuali necessità future

NORME GENERALI DI SICUREZZA

L'automazione **413**, se correttamente installata ed utilizzata, garantisce un elevato grado di sicurezza.

Alcune semplici norme di comportamento possono evitare inoltre inconvenienti accidentali:

- Non transitare tra le ante quando queste sono in movimento. Prima di transitare tra le ante, attendere l'apertura completa.
- Non sostare assolutamente tra le ante.
- Non sostare e non permettere a bambini, persone o cose di sostare nelle vicinanze dell'automazione.
- Tenere fuori dalla portata dei bambini, radiocomandi o qualsiasi altro datore d'impulso per evitare che l'automazione possa essere azionata involontariamente.
- Non permettere ai bambini di giocare con l'automazione.
- Non contrastare volontariamente il movimento delle ante.
- Evitare che rami o arbusti possano interferire col movimento delle ante
- Mantenere efficienti e ben visibili i sistemi di segnalazione luminosa.
- Non tentare di azionare manualmente le ante se non dopo averle sbloccate.
- In caso di malfunzionamento, sbloccare le ante per consentire l'accesso ed attendere l'intervento tecnico di personale qualificato.
- Non eseguire alcuna modifica sui componenti facenti parte il sistema d'automazione.
- Astenersi da qualsiasi tentativo di riparazione o d'intervento diretto e rivolgersi solo a personale qualificato.
- Far verificare almeno semestralmente l'efficienza dell'automazione, dei dispositivi di sicurezza e del collegamento di terra da personale qualificato.

DESCRIZIONE

L'automazione **413** per cancelli a battente è un operatore elettromeccanico irreversibile che trasmette il movimento all'anta tramite un sistema a vite senza fine.

L'operatore, disponibile in più versioni, copre tutte le esigenze di installazione. Le versioni "LS" dispongono di fincorsa in apertura e chiusura. Tutte le versioni sono fornite con arresti meccanici in apertura e chiusura.

Il sistema irreversibile garantisce il blocco meccanico dell'anta quando il motore non è in funzione. Un comodo e sicuro sistema di sblocco con chiave personalizzata permette la movimentazione manuale dell'anta in caso di disservizio o di mancanza di alimentazione.

Stabilire con il Tecnico installatore la logica di funzionamento che si desidera impostare per il proprio cancello.

Le ante normalmente si trovano in posizione di chiusura.

Quando la centralina elettronica riceve un comando di apertura tramite il radiocomando o qualsiasi altro datore di impulso, aziona l'apparato elettromeccanico ottenendo la rotazione delle ante, fino alla posizione di apertura che consente l'accesso.

Per il dettagliato comportamento dell'automazione nelle diverse logiche di funzionamento, fare riferimento al Tecnico installatore.

Nelle automazioni sono presenti dispositivi di sicurezza (fotocellule) che impediscono il movimento delle ante quando un ostacolo si trova nella zona da loro protetta.

Gli operatori **413** garantiscono il blocco meccanico quando il motore non è in funzione, e quindi non è necessario installare alcuna serratura.

L'apertura manuale è quindi possibile solo intervenendo sull'apposito sistema di sblocco.

La segnalazione luminosa indica il movimento in atto delle ante.

ATTENZIONE:

- Il corretto funzionamento e le caratteristiche dichiarate si ottengono solo con accessori e dispositivi di sicurezza FAAC.
- La mancanza di un dispositivo di frizione meccanica richiede, per garantire la necessaria sicurezza antisciacchiamento, l'impiego di una centrale di comando con frizione elettronica regolabile.
- L'automazione **413** è stata progettata e costruita per controllare l'accesso veicolare, evitare qualsiasi altro utilizzo.

FUNZIONAMENTO MANUALE

Nel caso si renda necessario movimentare manualmente l'automazione, per mancanza di alimentazione o disservizio dell'operatore, agire come di seguito:

- 1) Togliere l'alimentazione elettrica agendo sull'interruttore differenziale (anche in caso di mancanza di alimentazione).
- 2) Far scorrere il cappuccio protettivo, Fig.1/1.
- 3) Inserire la chiave e ruotarla di 90°, Fig.1/2.
- 4) Per sbloccare l'operatore ruotare di 180° la leva di manovra nella direzione della freccia presente sul sistema di sblocco, Fig.1/3.
- 5) Effettuare manualmente la manovra di apertura o di chiusura dell'anta.

Nota bene: Per mantenere l'operatore in funzionamento manuale è assolutamente necessario lasciare il dispositivo di sblocco nella posizione attuale e l'impianto disalimentato.

RIPRISTINO DEL FUNZIONAMENTO NORMALE

Per ripristinare le condizioni di funzionamento normale agire come di seguito:

- 1) Ruotare il sistema di sblocco di 180° nella direzione opposta a quella indicata dalla freccia.
- 2) Ruotare di 90° la chiave di sblocco ed estrarla.
- 3) Richiudere il coperchietto di protezione.

- 4) Alimentare l'impianto ed eseguire alcune manovre per verificare il corretto ripristino di tutte le funzioni dell'automazione.

MANUTENZIONE

Al fine d'assicurare nel tempo un corretto funzionamento ed un costante livello di sicurezza è opportuno eseguire, con cadenza semestrale, un controllo generale dell'impianto. Nel fascicolo "Guida per l'Utente" è stato predisposto un modulo per la registrazione degli interventi.

RIPARAZIONE

Per eventuali riparazioni rivolgersi ai Centri Riparazione autorizzati.

RESTORING NORMAL OPERATION

To restore normal operating conditions, proceed as follows:

- 1) Turn the release system 180° in the opposite direction of the arrow.
- 2) Turn 90° the release key and remove it.
- 3) Close the protection cover.
- 4) Power up the system and perform some movements in order to check the correct restoring of every function of the automated system.

MAINTENANCE

To ensure trouble-free operation and a constant safety level, an overall check of the system should be carried out every 6 months. A form for recording operations has been included in the "User's Guide" booklet.

REPAIRS

For any repairs, contact the authorised Repair Centres.

ENGLISH

Read the instructions carefully before using the product, and keep them for future consultation

GENERAL SAFETY REGULATIONS

If installed and used correctly, the 413 automated system will ensure a high degree of safety.

Some simple rules regarding behaviour will avoid any accidental trouble:

- Do not pass between the leaves when they are moving. Before passing between the leaves, wait for their complete opening.
- Do not stand between the leaves.
- Do not stand near the automated system and do not allow children and other people or things to stand there.
- Keep radiocontrols or any other pulse generator well away from children to prevent the automated system from being activated involuntarily.
- Do not allow children to play with the automated system.
- Do not willingly obstruct leaf movement.
- Prevent any branches or shrubs from interfering with leaf movement.
- Keep illuminated signalling systems efficient and clearly visible.
- Do not attempt to activate the leaves by hand unless you have released them.
- In the event of malfunctions, release the leaves to allow access and wait for qualified technical personnel to do the necessary work.
- Do not make any alterations to the components of the automated system.
- Do not attempt any kind of repair or direct action whatsoever and contact qualified personnel only.
- Call in qualified personnel at least every 6 months to check the efficiency of the automated system, safety devices and earth connection.

DESCRIPTION

The 413 automated system for swing gates is an electro-mechanical non-reversing operator that transmits motion to the leaf via a worm screw system. The operator is available in many versions covering therefore every installation requirement. The "LS" versions are equipped with opening and closing limit switches. Every version is supplied with opening and closing mechanical travel stops.

The non-reversing system ensures the leaf is mechanically locked when the motor is not operating. A convenient and safe release system with customised key makes it possible to manually move the leaf in the event of a malfunction or of a power failure.

Consult the Installation Technician for the desired operating logic.

The leaves are normally in closed position.

When the electronic control unit receives an opening command by radiocontrol or by any other pulse generator, it activates the electro-mechanical operator to rotate the leaves until they reach the opening position to provide access.

For detailed operation of the automated system under different operating logics, consult the Installation Technician.

The automated system includes safety devices (photocells) which prevent the leaves from moving when there is an obstacle in the area they protect.

The light indicates that leaves are moving.

ATTENTION:

- **The correct operation and the declared specifications only apply if FAAC accessories and safety devices are used.**
- **As no mechanical clutch device is fitted, a control unit with adjustable electronic clutch is required to ensure the necessary anti-crushing safety.**
- **The 413 automated system was designed and built for controlling vehicle access. Avoid any other use whatever.**

MANUAL OPERATION

If the automated system needs to be moved manually due to a power lack or to an operator malfunction, proceed as follows:

- 1) Cut power by means of the safety circuit breaker (even in the event of a power lack).
- 2) Slide the protective cap, Fig.1/1.
- 3) Insert the key and turn it 90°, Fig.1/2.
- 4) To release the operator turn 180° the control lever to the direction indicated by the arrow on the release system, Fig.1/3.
- 5) Open and close the leaf manually.

Note: To hold the operator in manual operation the release device should be left in its current positions and the system should be without power.

FRANÇAIS

Lire attentivement les instructions avant d'utiliser le produit et les conserver pour toute nécessité future éventuelle.

NORMES GENERALES DE SECURITE

S'il est correctement installé et utilisé, l'automatisme SKILL garantit un degré de sécurité important.

Quelques normes simples de comportement peuvent éviter des accidents:

- Ne pas transiter entre les vantaux lorsque ces derniers sont en mouvement. Avant de transiter entre les vantaux, attendre l'ouverture complète.
- Ne jamais stationner entre les vantaux.
- Ne pas stationner et éviter que des enfants, des tiers et des choses ne stationnent à proximité de l'automatisme.
- Eloigner de la portée des enfants les radiocommandes ou tout autre générateur d'impulsions, pour éviter que l'automatisme ne soit actionné involontairement.
- Eloigner de la portée des enfants les radiocommandes ou tout autre générateur d'impulsions.
- Interdire aux enfants de jouer avec l'automatisme.
- Ne pas empêcher volontairement le mouvement des vantaux.
- Éviter que des branches ou des arbustes n'interfèrent avec le mouvement des vantaux.
- Faire en sorte que les systèmes de signalisation lumineuse soient toujours efficaces et bien visibles.
- Ne jamais essayer d'actionner manuellement les vantaux: les déverrouiller préalablement.
- En cas de dysfonctionnement, déverrouiller les vantaux pour permettre l'accès et attendre l'intervention technique du personnel qualifié.
- N'effectuer aucune modification sur les composants qui font partie du système d'automatisme.
- S'abstenir de toute tentative de réparation ou d'intervention directe et s'adresser uniquement à un personnel qualifié.
- Faire vérifier, tous les six mois au minimum, la fiabilité de l'automatisme, des dispositifs de sécurité et de la mise à terre par un personnel qualifié.

DESCRIPTION.

L'automatisme 413 pour portails battants est un opérateur électromécanique irréversible qui transmet le mouvement au vantail par l'intermédiaire d'un système à vis sans fin.

L'opérateur, disponible en plusieurs versions, répond à toutes les exigences d'installation. Les versions "LS" disposent d'un fin de course en ouverture et fermeture. Toutes les versions sont fournies avec des arrêts mécaniques en ouverture et fermeture.

Le système irréversible garantit le verrouillage mécanique du vantail quand le moteur n'est pas en fonction. Un système pratique et sûr de déblocage à clé personnalisée permet l'actionnement manuel du vantail en cas de dysfonctionnement ou de coupure de courant.

Déterminer avec le Technicien préposé à l'installation la logique de fonctionnement qu'on souhaite donner au portail.

Les vantaux se trouvent normalement en position de fermeture.

Après la réception d'une commande d'ouverture par l'intermédiaire d'une radiocommande ou de n'importe quel autre générateur d'impulsions, la centrale électronique actionne l'appareil électro-mécanique, en obtenant la rotation des vantaux, jusqu'à la position d'ouverture pour permettre l'accès. Pour un comportement détaillé de l'automatisme dans les différentes logiques de fonctionnement, contacter le Technicien préposé à l'installation.

Les automatismes contiennent des dispositifs de sécurité (photocellules) qui empêchent le mouvement des vantaux lorsqu'un obstacle se trouve dans la zone qu'ils protègent.

La signalisation lumineuse indique que le mouvement des vantaux est en cours.

ATTENTION:

- **Le fonctionnement correct et les caractéristiques déclarées n'est possible qu'avec les accessoires et les dispositifs de sécurité FAAC.**
- **L'absence d'un dispositif d'embrayage mécanique exige, pour garantir la sécurité anti-écrasement, une centrale de commande à embrayage électronique réglable.**
- **L'automatisme 413 a été conçu et construit pour contrôler l'accès de véhicules; éviter toute autre utilisation.**

Six monthly checks	1	2	3	4	5	6	7	8	9	10
Connection and efficiency of safety circuit breaker										
setting and correct operation of electronic clutch										
Connections and operation of safety devices										
Connection and efficiency of earth socket										
Operation of manual release device										

Six monthly checks	1	2	3	4	5	6	7	8	9	10
Operation of limit switches (if any)										
Connection and operation of accessories										
Gear motor fixing condition										
Fastening pins conditions										
Wear of rear/front fixing										
Gate general conditions										

note - notes - note - notas - anmerkung - opmerkingen

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The descriptions and illustrations contained in this manual are not binding. FAAC reserve the right, whilst leaving the main features of the main equipment unaltered, to undertake any modifications it holds necessary for either technical or commercial reasons, at any time and without revising the present publication.

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V5 01/07

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