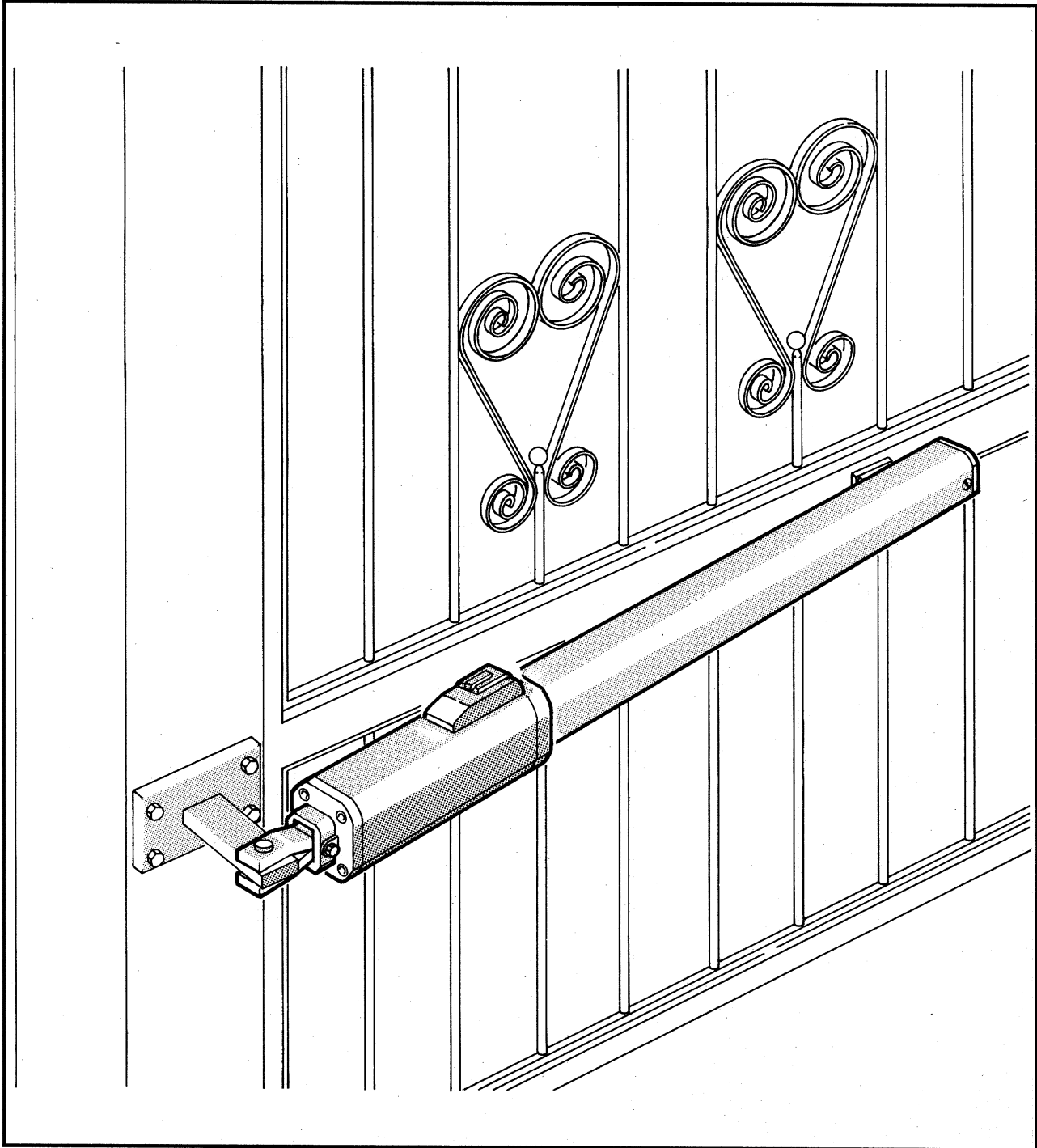


# 422



# FAAC®

# QUOTE D'INSTALLAZIONE

## INSTALLATION DIMENSIONS

## INSTALLATIONSMASSE

# COTES D'INSTALLATION

## COTAS DE INSTALACION

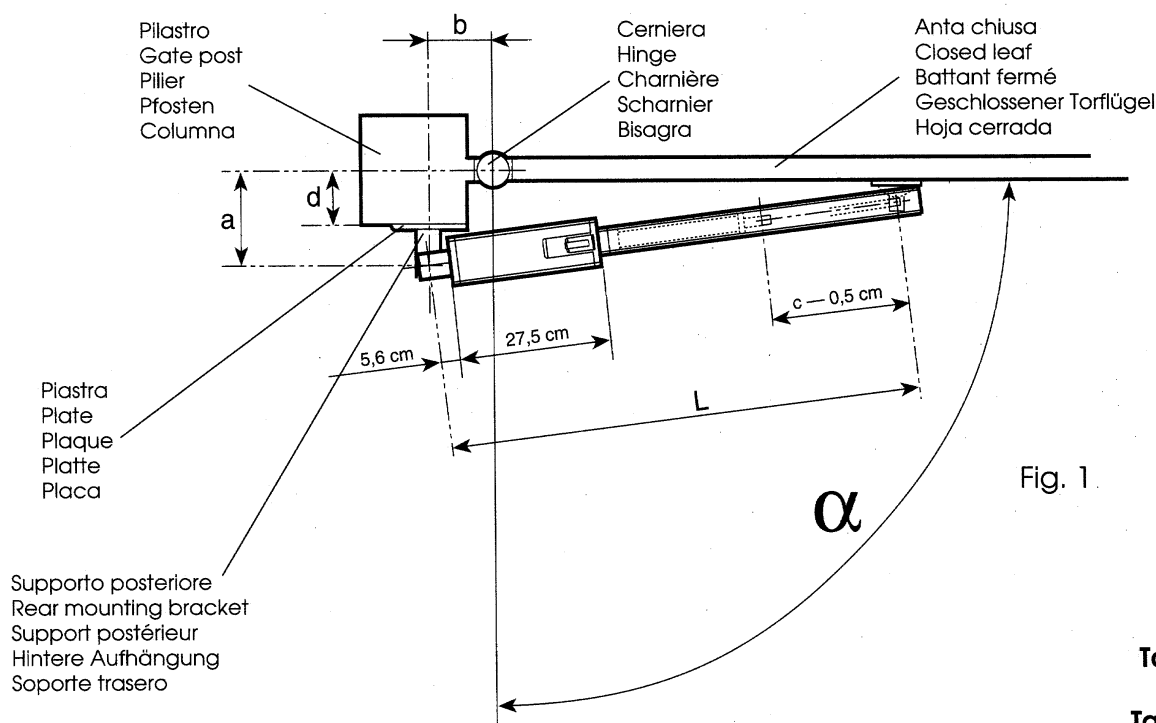


Fig. 1.

**Tabella A**  
**Table A**  
**Tableau A**  
**Tabelle A**  
**Tabla A**

TABELLA QUOTE DI INSTALLAZIONE TABLE OF INSTALLATION DIMENSIONS TABLEAU DES COTES D'INSTALLATION TABELLE DER INSTALLATIONSMASSE TABLA COTAS DE INSTALACION	ANGOLO DI APERTURA "α" OPENING ANGLE "α" ANGLE D'OUVERTURE "α" ÖFFNUNGSWINKEL "α" ANGULO DE APERTURA "α"	a (cm)	b (cm)	c (*) (cm)	d (***) (cm)	L (cm)
422 STANDARD	90 °	12	12	25	6	93
	110 ° (**)	10	10		4	
422 PEDONALE PEDESTRIAN 422 422 PIETON 422 FUSSGÄNGERDURCHGANG 422 PASO DE PEATONES	90 ° (**)	8	8	17	2	75,5

(\*) c = corsa massima dello stelo  
(\*) c = maximum length of piston rod  
(\*) c = course maximum de la tige  
(\*) c = Maximalhub der Kolbenstange  
(\*) c = carrera máxima del vástago.

(\*\*) massimo angolo di apertura  
(\*\*) maximum opening angle  
(\*\*) angle maximum d'ouverture  
(\*\*) maximaler Öffnungswinkel  
(\*\*) ángulo máximo de apertura

(\*\*\*) quota massima ammessa  
(\*\*\*) maximum permissible dimension  
(\*\*\*) cote maximale admissible  
(\*\*\*) Maximal zulässiges Maß  
(\*\*\*) cota máxima permitida

**IMPORTANTE:** qualora sia necessario modificare le quote di tabella rispettare le seguenti avvertenze:

- 1) Per aperture di 90° la somma delle quote a e b deve essere inferiore o uguale al valore c - 1 cm ( $a + b \leq c - 1 \text{ cm}$ ). Quote superiori determinano angoli di apertura inferiori a 90°.
- 2) Le quote a e b non devono essere inferiori a 10 cm per la versione standard ed a 8 cm per la versione pedonale.
- 3) Per quote "d" superiori è necessario realizzare una nicchia sul pilastrò.

**IMPORTANT NOTE:** should it be necessary to modify the dimensions listed in the table, proceed according to the following notes:

- 1) For opening angles of 90° the sum of dimensions a and b must be less than or equal to c - 1 cm ( $a + b \leq c - 1 \text{ cm}$ ). Larger dimensions result in opening angles of less than 90°.
- 2) Dimensions a and b must not be less than 10 cm for the standard version and 8 cm for the pedestrian version.
- 3) For larger "d" dimensions it is necessary to make a niche on the gate post.

**IMPORTANT:** s'il y a nécessité de modifier les cotes des tableaux respecter les indications suivantes:

- 1) Pour les ouvertures de 90° la somme des cotes a et b doit être inférieure ou égale à la valeur c - 1 cm ( $a + b \leq c - 1 \text{ cm}$ ). Des cotes supérieures déterminent des angles d'ouverture inférieurs à 90°.
- 2) Les cotes a et b ne doivent pas être inférieures à 10 cm pour la version standard et à 8 cm pour la version piétonne.
- 3) Pour toutes cotes "d" supérieures, réaliser une niche dans le pilier.

**WICHTIG:** Sollte eine Änderung der Tabellenwerte erforderlich sein, so beachten Sie bitte die folgenden Hinweise:

- 1) Für Öffnungswinkel von 90° muß die Summe der Maße a und b niedriger oder gleich dem Wert c - 1 cm sein ( $a + b \leq c - 1 \text{ cm}$ ). Höhere Maße bedingen Öffnungswinkel von weniger als 90°.
- 2) Die Maße a und b dürfen bei der Standardversion nicht geringer sein als 10 cm und bei der Fußgänger Ausführung nicht geringer als 8 cm.
- 3) Für größere "d"-Maße muß der Pfosten über eine Nische verfügen.

**IMPORTANTE:** si fuese necesario modificar las cotas de la tabla, respetar las siguientes advertencias:

- 1) Para las aperturas de 90°, la suma de las cotas a y b debe ser inferior o igual al valor c - 1 cm ( $a + b \leq c - 1 \text{ cm}$ ). Cotas superiores, determinan ángulos de apertura inferiores a 90°.
- 2) Las cotas a y b no deben ser inferiores a 10 cm en la versión estándar, ni de 8 cm en la versión peatonal.
- 3) Para cotas "d" superiores es necesario abrir un nicho en la columna.

Fig. 2

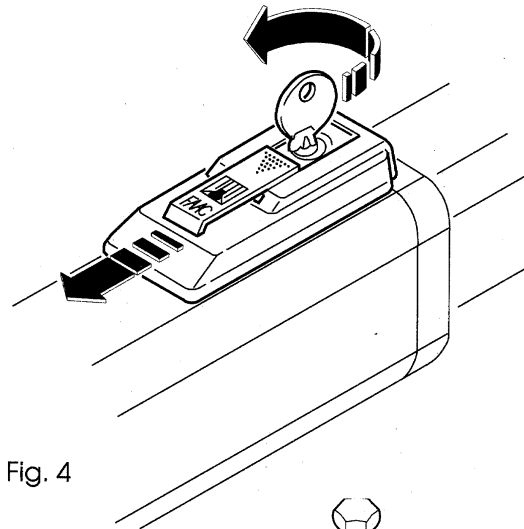
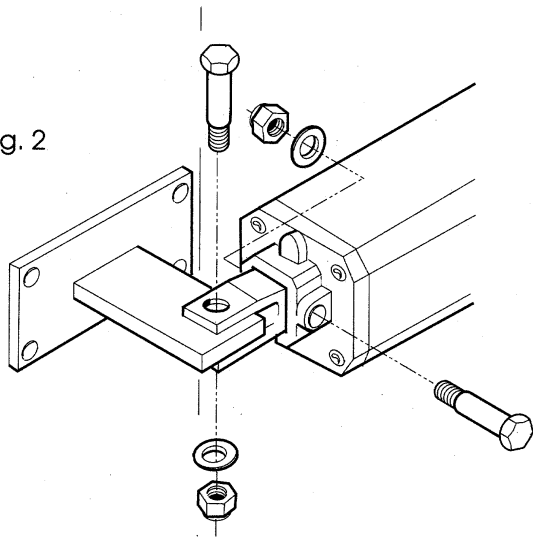


Fig. 4

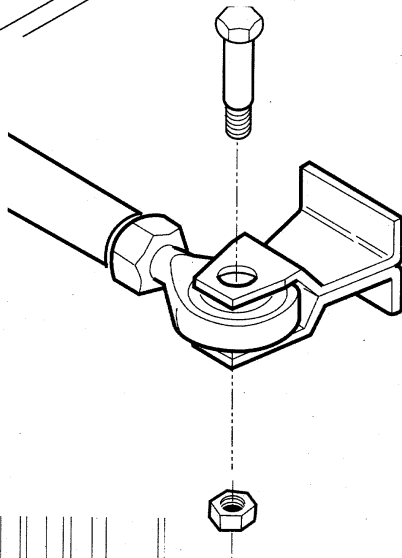


Fig. 6

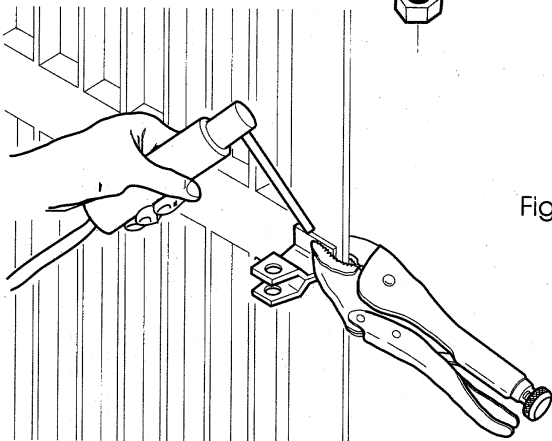


Fig. 8

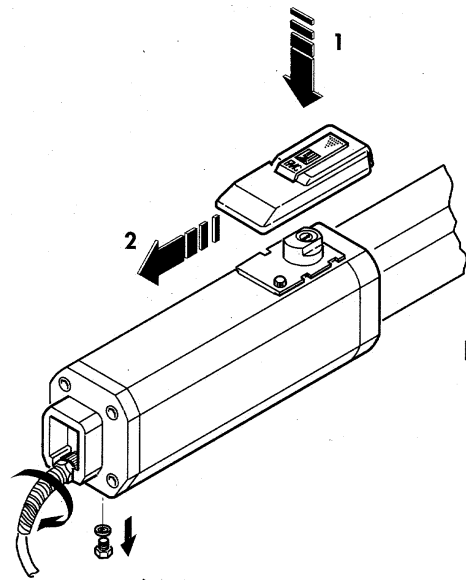


Fig. 3

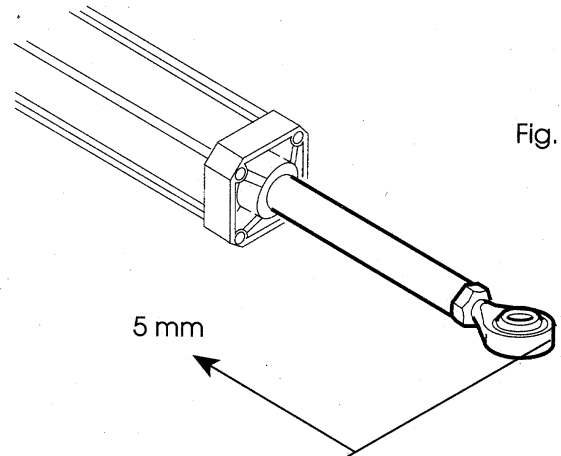


Fig. 5

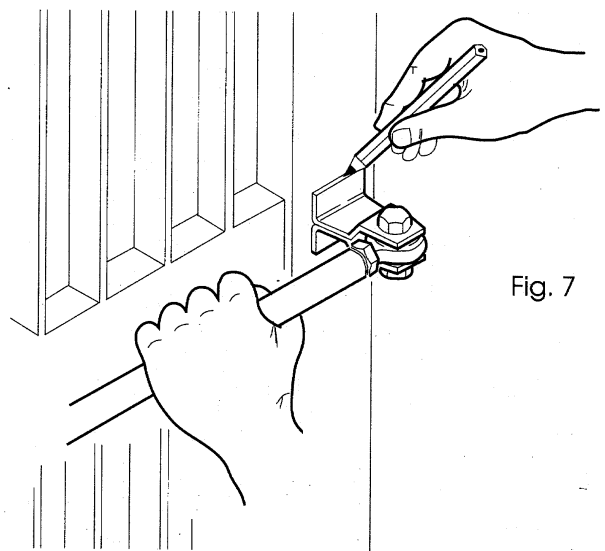


Fig. 7

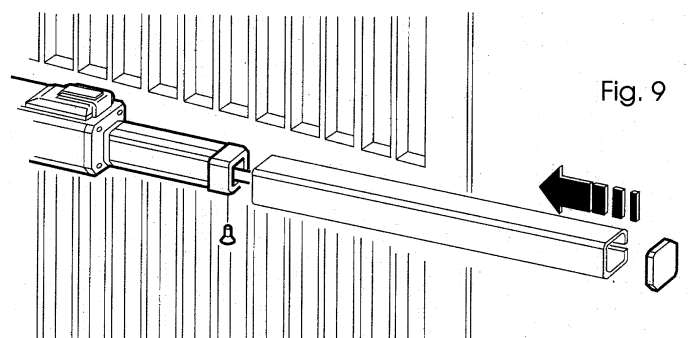


Fig. 9

## CURVA DI MASSIMO UTILIZZO

La curva consente di individuare il tempo massimo di lavoro (T) in funzione della frequenza d'utilizzo (F).

Es.: L'operatore può funzionare ininterrottamente alla frequenza d'utilizzo del 40%.

Per garantire il buon funzionamento è necessario operare nel campo di lavoro sotto la curva.

**IMPORTANTE:** la curva è ottenuta alla temperatura di 24 °C. L'esposizione all'irraggiamento solare diretto può determinare diminuzioni della frequenza d'utilizzo fino al 20%.

### CALCOLO DELLA FREQUENZA D'UTILIZZO

E' la percentuale del tempo di lavoro effettivo (apertura + chiusura) rispetto al tempo totale del ciclo (apertura + chiusura + tempi sosta).

Formula pratica

TA : tempo apertura

TC : tempo chiusura

TP : tempo pausa

TI : tempo di intervallo tra un ciclo completo e l'altro

$$\% F = \frac{TA + TC}{TA + TC + TP + TI} \times 100$$

## MAXIMUM DUTY CYCLE CURVE

The curve makes it possible to determine the maximum operating time (T) based on the duty cycle (F).

e.g. The operator can work continuously at a duty cycle of 40%.

To ensure smooth running, operation should be kept within the duty area below the curve.

**IMPORTANT NOTE:** the curve was plotted on the basis of operation at 24°C.

Allow for up to 20% reduction of the duty cycle in the case of exposure to direct sunlight.

### CALCULATING THE DUTY CYCLE

The duty cycle is the actual operating time (opening and closing) compared with the total time of the cycle (opening + closing + stationary time).

Practical formula

TA : opening time

TC : closing time

TP : stationary time

TI : length of interval between one complete cycle and the next

$$\% F = \frac{TA + TC}{TA + TC + TP + TI} \times 100$$

## COURBE D'UTILISATION MAXIMUM

La courbe (Fig. 10) permet de repérer le temps maximum de travail (T) en fonction de la fréquence d'utilisation (F).

Ex: L'opérateur peut fonctionner de manière ininterrompue à la fréquence d'utilisation de 40%.

Pour garantir un bon fonctionnement il est nécessaire d'opérer dans la plage de travail située en-dessous de la courbe.

**IMPORTANT:** la courbe est tracée pour une température de 24°C.

L'exposition aux rayons solaires peut provoquer une diminution de la fréquence d'utilisation jusqu'à 20%.

### CALCUL DE LA FREQUENCE D'UTILISATION

Il s'agit du pourcentage de temps effectif (ouverture + fermeture) par rapport au temps global du cycle (ouverture + fermeture + temps d'arrêt).

Formule pratique.

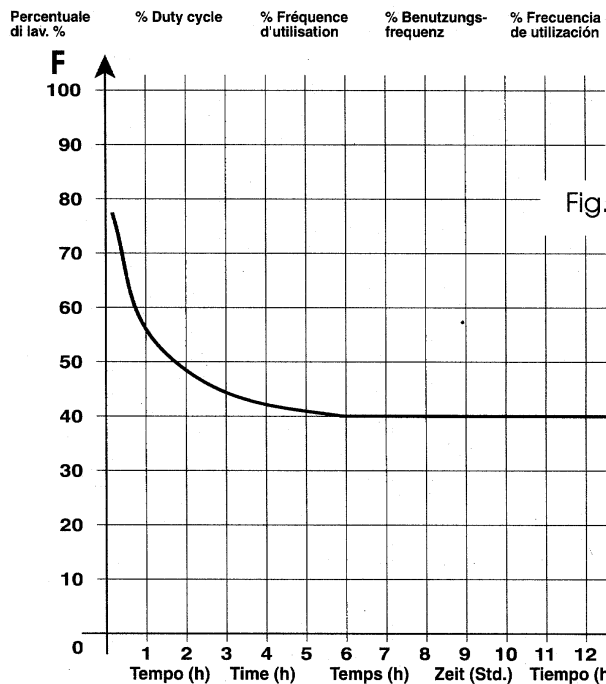
TA : temps d'ouverture

TC : temps de fermeture

TP : temps de pause

TI : intervalle entre un cycle complet et l'autre

$$\% F = \frac{TA + TC}{TA + TC + TP + TI} \times 100$$



## MAXIMALE BENUTZUNGSLINIE

Die Linie ermöglicht die Bestimmung der maximalen Betriebszeit (T) je nach der Benutzungsfrequenz (F).

Bsp.: der Antrieb kann bei einer Benutzungsfrequenz von 40% ununterbrochen funktionieren.

Zur Gewährleistung eines reibungslosen Betriebs ist es erforderlich, im Arbeitsbereich unter der Linie zu arbeiten.

**WICHTIG:** Die Linie wurde bei einer Temperatur von 24°C erzielt. Die direkte Sonneneinstrahlung kann zu einer Verringerung der Benutzungsfrequenz von bis zu 20% führen.

### BERECHNUNG DER BENUTZUNGSFREQUENZ

Prozentsatz der effektiven Arbeitszeit (Öffnung + Schließung) bezüglich der Gesamt-Taktdauer (Öffnung + Schließung + Stillstandzeiten).

Anwendungsformel

TA : Öffnungszeit

TC : Schließzeit

TP : Pausenzeit

TI : Intervalldauer zwischen zwei kompletten Takten

$$\% F = \frac{TA + TC}{TA + TC + TP + TI} \times 100$$

## CURVA DE MAXIMA UTILIZACION

La curva permite calcular el tiempo máximo de trabajo (T), en función de la frecuencia de utilización (F).

Ej.: El operador puede funcionar ininterrompidamente a la frecuencia de utilización del 40%.

Para garantizar el buen funcionamiento, es necesario operar en el campo de trabajo bajo la curva.

**IMPORTANTE:** la curva ha sido obtenida a la temperatura de 24°C.

La exposición a las radiaciones solares directas, puede determinar disminuciones en la frecuencia de utilización de hasta un 20%.

### CALCULO DE LA FRECUENCIA DE UTILIZACION

Es el porcentaje del tiempo efectivo de trabajo (apertura + cierre) con respecto al tiempo total del ciclo (apertura + cierre + tiempos de pausa).

Fórmula Práctica

TA : tiempo de apertura

TC : tiempo de cierre

TP : tiempo de pausa

TI : tiempo de pausa entre dos ciclos completos

$$\% F = \frac{TA + TC}{TA + TC + TP + TI} \times 100$$

**PRELIMINARY NOTES**

Ensure that the structure of the gate is in compliance with current regulations and that the movement of the leaves is even and without friction.

Make all necessary adjustments including the fitting of gate stops before installing the automation equipment.

Installation must be carried out in compliance with current regulations.

**INSTALLATION INSTRUCTIONS**

1) Fit the rear mounting bracket to the gate post as shown in Fig. 1 and Table A.

**N.B.:** The installation dimensions should be strictly adhered to. Failure to do so may result in the incorrect operation of the operator.

- 2) Attach the operator to the rear mounting bracket (Fig. 2).
- 3) Fit the cable cover provided as illustrated in Fig. 3.
- 4) Connect the electrical cables to the electronic control box (see relevant instructions).
- 5) Remove the breather screw as illustrated in Fig. 3.
- 6) Mount the safety guard onto the unlocking device as illustrated in Fig. 3.
- 7) Keeping the operator in a horizontal position, cycle five or six times in order to check the smooth operation of the piston rod.

**N.B.:** Should the piston rod tend to judder it will be necessary to perform further cycles, bleeding off the air until a smooth operation is obtained.

- 8) After bleeding, unlock the operator (Fig. 4) by:
  - gently pressing the safety cover down and sliding it in the direction of the arrow.
  - insert the unlocking key provided into the lock and turn it at least once in an anti-clockwise direction.

**IMPORTANT: IT IS ONLY POSSIBLE TO REMOVE THE KEY WHEN IT IS IN ITS ORIGINAL POSITION (LOCKED LEAF) OR AFTER HAVING TURNED THE KEY 360° (UNLOCKED LEAF)**

- 9) With the operator unlocked withdraw the piston rod by hand to the end of its stroke and then reduce the length by 5 mm (Fig. 5).
- 10) Assemble the front bracket on the piston rod (Fig. 6).
- 11) Close the gate and, keeping the operator in a horizontal position, locate and mark the position of the front bracket on the leaf (Fig. 7).
- 12) Attach the front bracket to the leaf (Fig. 8).

**N.B.:** To prevent any weld spatter from damaging the rod during installation, disconnect the piston rod from the bracket while welding.

13) Reconnect the piston rod to the front bracket.

**TECHNICAL SPECIFICATIONS**

MODEL	422				422 PED.	
	CBC	CBAC	SB	SBS	CBC	SB
POWER SUPPLY (V)	220 ± 10 %				50 - 60 Hz	
ABSORBED POWER (W)	220					
CURRENT DRAWN (A)	1					
MOTOR RPM	1400					
THERMAL CUT-OUT (°C)	100					
PUMP DELIVERY (l/min)	1		0.75		1.5	
PISTON ROD SPEED (cm/sec)	1.3		1		2	
MAX. USABLE PISTON ROD LENGTH (mm)	240				160	
DUTY CYCLE	see Fig. 10					
MAX. THRUST (Kg)	570			380		
MAX. LEAF LENGTH (m)	1.8	2.5	3	1.2		
HYDRAULIC LOCK	YES	NO		YES	NO	
TYPE OF OIL	FAAC OIL XD 220					
OIL CAPACITY (l)	0.9			0.8		
WEIGHT (Kgs)	7			6.5		
ELECTRONIC CONTROL BOX	401 MPS (included)					

14) Open the leaf by hand in order to check that the system is operating correctly.

**N.B.:** An important adjustment for the operator to function correctly consists in ensuring that the rod is never at the end of its travel when the gate leaf is fully open or closed, but a minimum of 5 mm away from this limit.

15) Mount the piston rod cover (Fig. 9).

16) Relock the operator by turning the key clockwise as far as it will go and returning it to its original position in order to remove it.

**N.B.:** It is necessary to grease all the pins.

**ADJUSTMENT OF THE ANTI-CRUSHING SAFETY DEVICE**

The operator is equipped with an anti-crushing safety device which ensures that movement will stop if met by an opposing force or in the event of persons or objects being caught in the path of the gate.

The sensitivity with which this device operates can be adjusted by turning the bypass screws. These can be reached by unscrewing the fixing screws on the unlocking device as illustrated in Fig. 11.

Closing thrust is governed by the red screw.

Opening thrust is governed by the green screw.

Turn the screws clockwise to increase torque.

Turn the screws anti-clockwise to reduce torque.

**IMPORTANT: ADJUSTMENTS MUST REMAIN WITHIN THE LIMITS IMPOSED BY CURRENT REGULATIONS.**

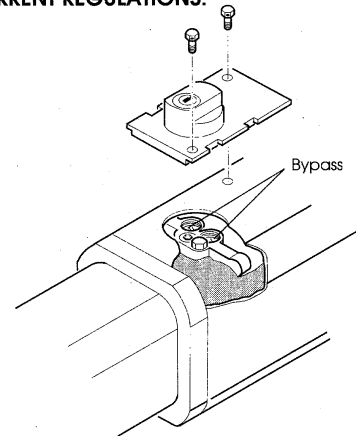


Fig. 11

**IMPORTANT: WHEN REPOSITIONING THE RELEASE MECHANISM, KEEP THE LOCK IN ITS ORIGINAL POSITION. FAILURE TO FOLLOW THIS PROCEDURE WILL RESULT IN THE INCORRECT OPERATION OF THE UNIT.**

**N.B.:** It is possible to fit security seals to the fixing screws. This will prevent unauthorized tampering (Fig. 11).

**MAINTENANCE**

Check the oil level regularly by making sure that it is approximately 5 mm below the surface of the bypass flange (Fig. 12).

For low to medium duty cycles an annual inspection is sufficient; For higher duty cycles inspection every 6-8 months is advisable.

Only FAAC XD 220 oil should be used for topping up.

**N.B.:** During maintenance always check that the bypass screws are correctly set.

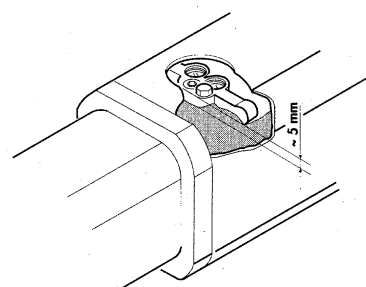


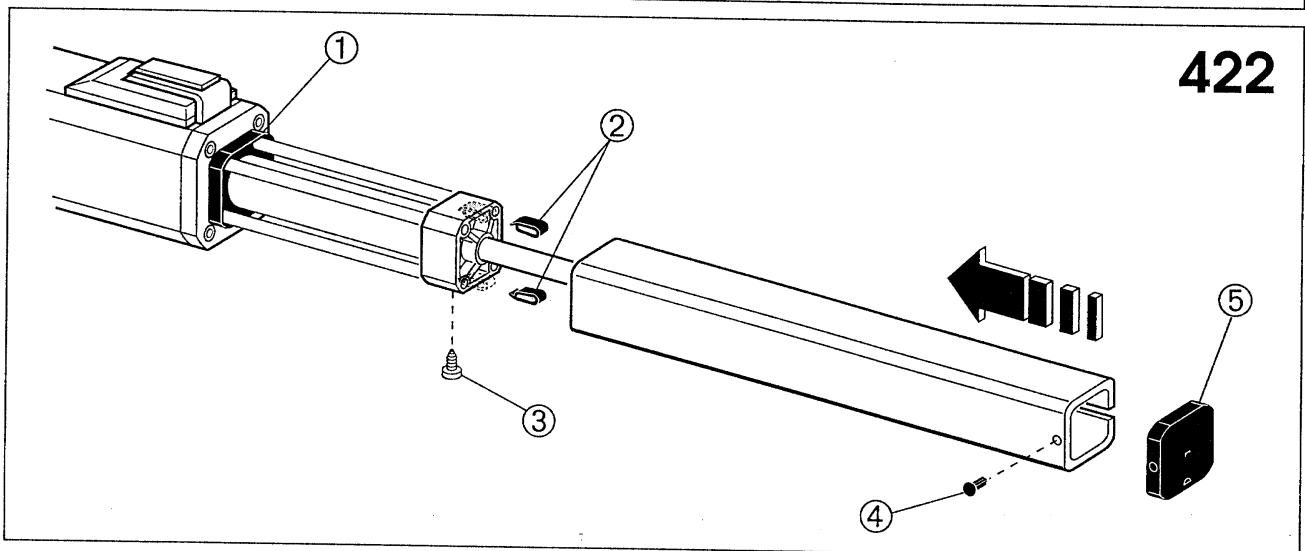
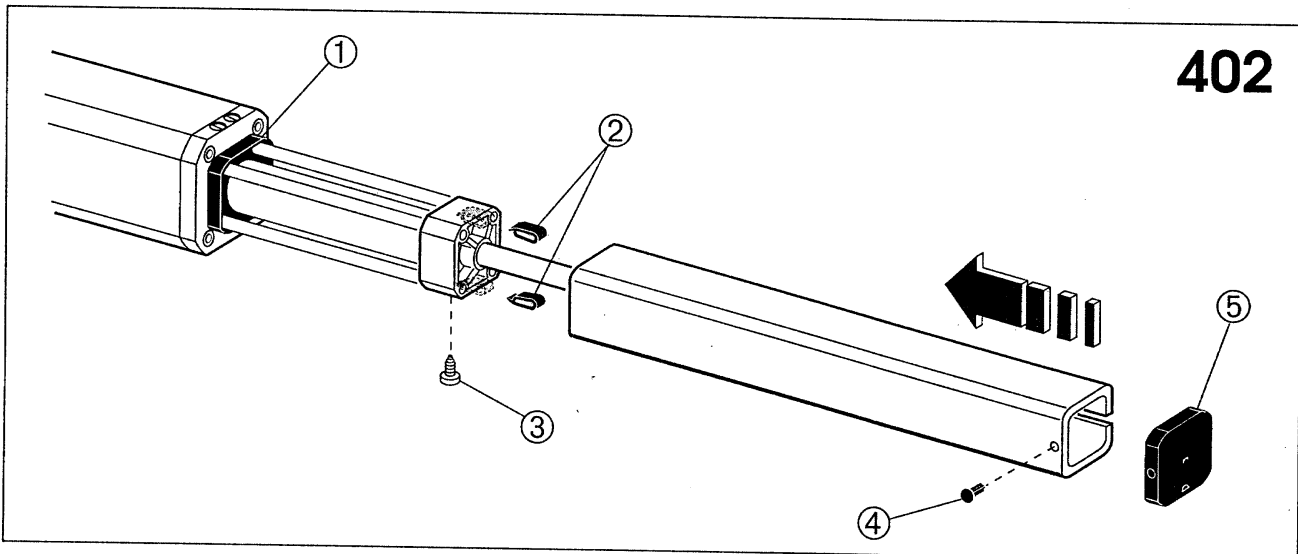
Fig. 12



# FAAC®

NUOVO CARTER  
NEW GUARD  
NOUVEAU CARTER  
NEUE ABDECKUNG  
NUEVO CÁRTER

# 402-422



- I**
- 1) Inserire i due distanziali antivibranti (2) nella flangia anteriore.
  - 2) Introdurre il carter premendolo con forza nel coperchio posteriore (1).
  - 3) Fissare il carter con la vite aut. (3).
  - 4) Inserire il coperchio anteriore (5) sul carter e bloccare con il tappo FIX (4).

- E**
- 1) Insert the two vibration-proof spacers (2) into the front flange.
  - 2) Insert the guard by pressing it firmly into the rear cover (1).
  - 3) Fasten the carter using the self-threading screw (3).
  - 4) Insert the front cover (5) on the carter and lock using the FIX cap (4).

- F**
- 1) Introduire les deux silentblocs (2) dans la flasque avant.
  - 2) Introduire le carter et le presser avec force dans le couvercle arrière (1).
  - 3) Fixer le carter avec la vis autotaraudeuse (3).
  - 4) Introduire le couvercle avant (5) sur le carter et bloquer avec le bouchon FIX (4).

- D**
- 1) Die beiden Gummi-Distanzstücke (2) in den Vorderflansch einsetzen.
  - 2) Die Abdeckung einsetzen und fest gegen den hinteren Deckel (1) drücken.
  - 3) Die Abdeckung mit der selbstschneidenden Gewindeschraube (3) befestigen.
  - 4) Den vorderen Deckel (5) auf die Abdeckung setzen und mit dem FIX-Verschluss (4) blockieren.

- S**
- 1) Introducir los dos distanciadores antivibradores (2) en la gualdera anterior.
  - 2) Colocar el cárter, empujándolo con presión, sobre la tapa posterior (1).
  - 3) Fijar el cárter con el tornillo autoroscador (3).
  - 4) Colocar la tapa anterior (5) sobre el cárter y fijar todo con el tapón FIX (4).