



# ZT42 - 44

ELECTRO-HYDRAULIC RAMS SYSTEM FOR SWING GATES

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## 1.1 TECHNICAL DATA

CHARACTERISTICS	ZT42 (B-SR)	ZT44 ABC	ZT44 SF DS
Single-phase system voltage	230 V±10% 50 Hz	230 V±10% 50 Hz	230 V±10% 50 Hz
Power absorption	250W	250W	250W
Mean pressure	30 bar	30 bar	30 bar
Thrust force at 10 bar	962 N	962 N	962 N
Traction force at 15 bar	1140 N	1140 N	1140 N
Leaf opening time		17,5 sec	17,5 sec
Leaf closing time		21,5 sec	21,5 sec
Max leaf length	1,2 m	1,8 m	4 m
Min leaf length	0,8 m	1,2 m	1,2 m
Operating temperature range	-20° / + 70°C	-20° / + 70°C	-20° / + 70°C
Max distance between centres for mounting holes with fully extended rod	1002 mm ± 5	1002 mm ± 5	1002 mm ± 5
Max stroke - standard arm	185 mm	270 mm	270 mm
Weight with oil	8 Kg	8 Kg	8 Kg
Oil quantity	0,6 lt.	0,6 lt.	0,6 lt.
Oil type	Aprimatic Oil HC13	Aprimatic Oil HC13	Aprimatic Oil HC13
Protection degree	IP 55	IP 55	IP 55



The noise level of the above models, with reference to the working of the operator independently of the gate leaf and the gate post, falls within the maximum limits set by EEC standards.

### 1.2 CHOOSING THE TYPE OF AUTOMATION

Before mounting, the type of automation must be decided on, on the basis of the characteristics and dimensions of the element to be operated. The ZT 44 hydraulic operator, with its range of different versions, is compatible with the elements listed below.



#### Caution

- **The right choice of the type of automation assures an efficient operation of the unit and minimises the possibility of failures.**
- **The ZT 44 operator, if installed correctly, conforms to all the safety standards listed in the UNI 8612 publication.**

List of versions:

- A:** Hydraulic lock for opening only
- B:** Double hydraulic lock for opening and closing
- C:** Hydraulic lock for closing only (with lock inaccessible when the gate is open)
- SF:** No hydraulic lock -braking action (the gate leaf can be moved by hand with a minimum of resistance, if moved slowly; there is also a release device to facilitate opening -needs an electric lock -for use in windy zones)
- SR:** No hydraulic lock -braking action (the gate leaf can be moved by hand with a minimum of resistance, if moved slowly; there is also a release device to facilitate opening -needs an electric lock -for use in windy zones)



#### Warning

- **The versions listed above are recommended for use with solid gate leaves (with the operator inaccessible when the gate is open).**
- **The C version model must not be fitted on gate leaves of length exceeding 1.8 m**

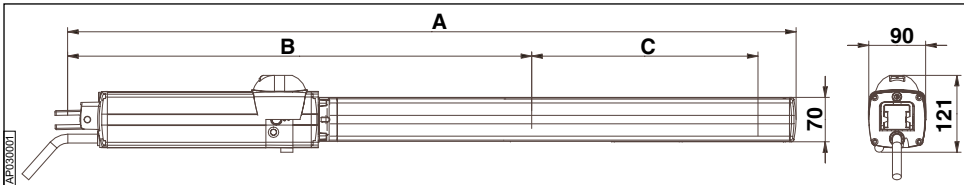


#### Warning

**The peripheral speed of the gate leaf must always be less than 12 m/min. in order to conform to the UNI 8612 regulations. Also, it is important to avoid the use of high-speed operators on wide gate-leaves as this could cause the gate leaves to bang violently against the gate stop (see table below).**

### 1.3 GENERAL CHARACTERISTICS

- Specially designed for residential use, the ZT 44 is a hydraulic operator for swing gates. It is produced in two different pump flow-rate versions for use with small or large size gate leaves.
- The version with the hydraulic closing lock avoids the use of electrical locking, and guarantees the closing position for gate leaves of length less than 1.8 meters.
- Emergency release: allows the manual control of the gate (for use in the absence of electricity supply) with a personalized key, easily accessible via an opening compartment on the upper cover of the operator, safe to use and easily maneuverable.
- "Non-crush" safety feature with sensitive valves, settable during installation.



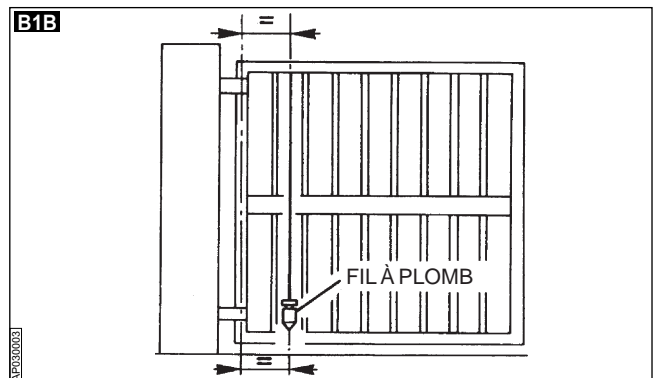
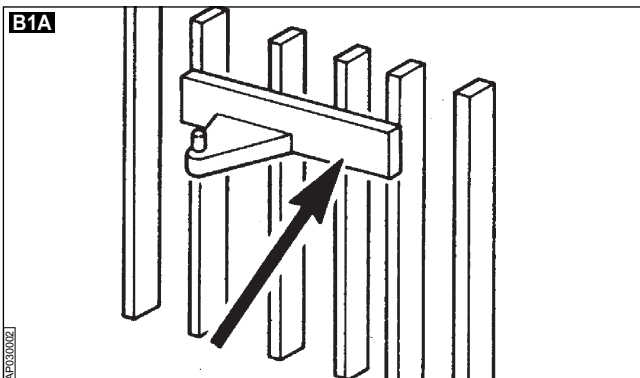
MOD.	ZT 42	ZT 44
A (mm)	872	1052
B (mm)	642	732
C (mm)	180	270

### 2.1 PRELIMINARY CHECKS

Before choosing the final position of the mountings, it is necessary to:

- Choose the most suitable height on the gate leaf for the operator front mounting. If possible, it should be positioned halfway up the gate leaf. As a rule, the ideal point is always in the strongest area, where the flexing of the gate leaf has the least effect. If there is not a broad strip of steel in the gate framework, then a suitable support needs to be welded on in the area where the front mounting is to be positioned, in order to spread the load over a wide zone (**B1A**).
- Check whether the chosen area needs reinforcing or strengthening in any way. Make the same check on the gate leaf support posts.
- Before proceeding with the actual mounting, make a complete check on the gate leaves, making sure that they are in good condition, and not broken or damaged in any way.
- Check that the movement of the gate leaves is uniform, and that the hinges have no play and do not rub.
- Check that the gate leaves are plumb (when perfectly still at any point in the swing) (**B1B**); when the gates are completely closed, check that the closure is even throughout the whole height of the gate leaves.
- Using a dynamometer to measure from the end of the gate leaf, check that the opening and closing effort of the gate leaves does not exceed 15 kg (147 N).

If the effort is excessive, then the hinges must be repaired so that the gate leaves can be moved easily by hand or, if repairs are impossible, the hinges must be replaced.



## 2.2 CHECKING THE OPERATOR COMPONENTS

Also check that the model code displayed on the operator packaging corresponds to the code on the identification plate of the operator itself (B3).

Also, before starting with the mounting procedure, check that the packaging contains all the components listed in fig. B4 on the next page, and that none of the components are damaged.

### 2.2.1 List of components (B4)

- 1 - Operator
- 2 - Upper cover
- 3 - Release lock
- 4 - Nut
- 5 - Ball joint
- 6 - Snap ring
- 7 - Rod protection casing
- 8 - Rod protection casing cover
- 9 - Rear mounting
- 10 - Bushing
- 11 - Rear pin
- 12 - Snap ring
- 13 - Fork pin
- 14 - Fork
- 15 - Locknut
- 16 - Capacitor
- 17 - Front mounting
- 18 - Self-tapping screw
- 19 - Template
- 20 - Release key
- 21 - Seal
- A - Complete front mounting assembly
- B - Complete rear mounting assembly

## 2.3 PREPARING THE MOUNTING

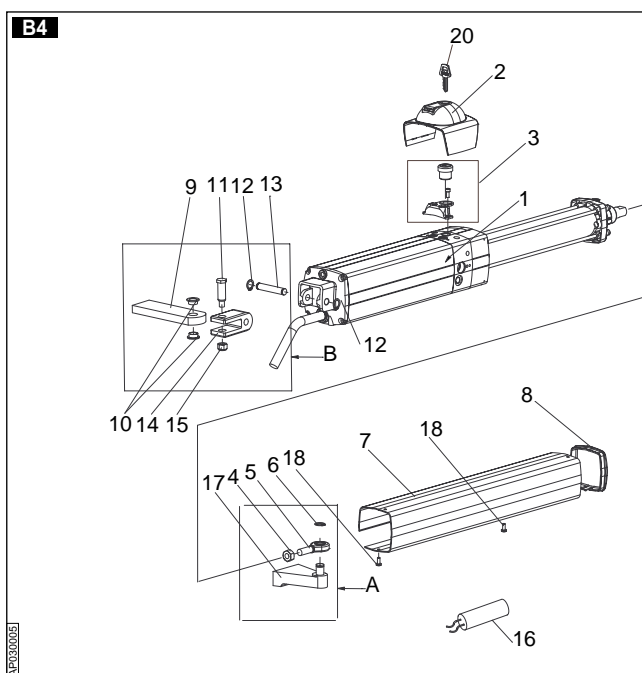
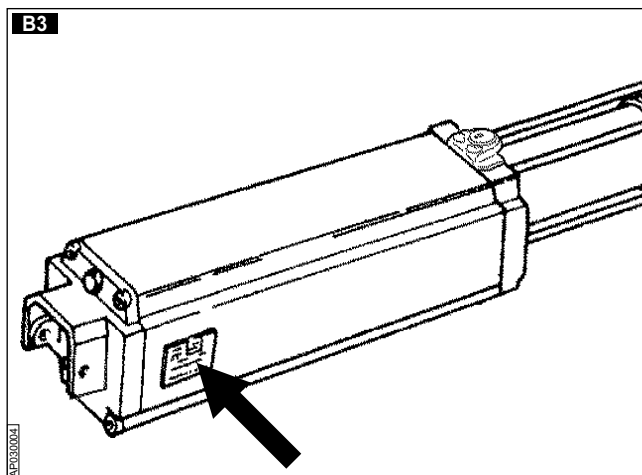
To mount the operator, a number of preparatory on-site jobs need to be done on the structure that is to be moved; for this, it is better to be equipped with the correct tools, so that the installer is able to work independently.



### Caution

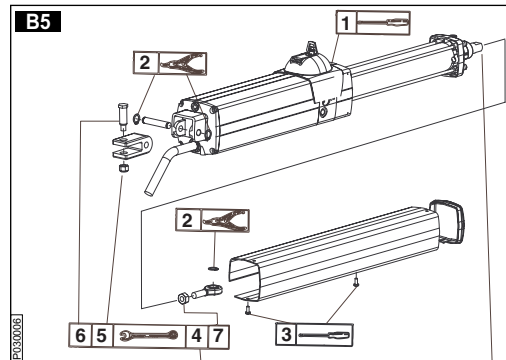
The list of required tools is shown in the illustration and table (B5).

- Electric disk grinder - 230 V
- Protective goggles
- Electric welder - min. power: 230 V/100 amp
- Protective mask
- Electrodes - min. Ø 2
- Soldering iron
- Suitably powered electric drill - 230 V
- Drill bits
- Hollow cutter Ø 67 for photocell and control panel mounting holes
- Extension lead for welder
- Electric cable, cross-section 1.5 mm<sup>2</sup>, various colours + various types of cable terminals
- Electrical scissors
- Pliers for cable terminals
- Tester
- 1/20 gauge
- Rule
- Detergent wipes
- Paper hand-towels



- First aid kit
- Goniometer
- Dynamometer
- Plumb line
- Spirit level (3-D)
- Graphitized grease
- Oil -AprimOil HC 13 (specially formulated for Aprimatic)
- Zincospray cylinder
- Anti-rust paint
- Paintbrushes
- Thinner for cleaning paintbrushes
- Wire brush
- Various files
- Hacksaws
- Scribers
- Hammer
- Chisel for steel and masonry

### B5



POS.	TOOL	
1	Screwdriver	USAG 326/5x150
2	Gripper for snap ring on shaft	USAG 128 P/10÷25
3	Screwdriver TC	USAG 326 TC/2
4	Combined wrench 12	USAG 285/12
5	Combined wrench 13	USAG 285/13
6	Combined wrench 14	USAG 285/14
7	Combined wrench 17	USAG 285/17

## 2.4 COMPONENTS LAYOUT (B2)

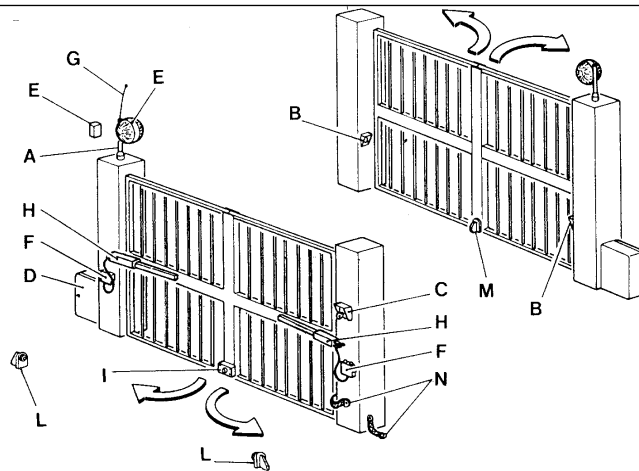
- A - Aprimatic flashing warning/courtesy lamp (to be positioned at a point that is clearly visible from both approaches)
- B - Aprimatic safety photocell
- C - Manual key-operated control unit (magnetic, digital, keyboard combination lock, mechanical, etc.)
- D - Aprimatic microprocessor control unit in watertight container (if possible, to be fitted in a position that is sheltered from atmospheric agents)
- E - Aprimatic remote control radio receiver (can be fitted inside the flashing lamp)
- F - Watertight operator electricity supply junction box (recommended) - to be positioned so that the cables are not subject to dangerous stretching during the movement of the gate leaves
- G - Antenna (optional)
- H - Aprimatic ZT series operators
- I - Electric lock
- L - Open position gate stop
- M - Closed position gate stop
- N - Ground connection for metal framework



### Information

Consult the price-list for additional (optional) safety devices.

**E2**



## 2.5 ELECTRICAL CONNECTIONS

- When making the electrical connections, carefully follow the instructions for each of the components, referring to the wiring diagram (D1).
- After making the connections, check the thrust force at the end of the gate leaf and set to the correct pressure, following the procedure described in the next paragraph.
- Before making the pressure settings, open and close the gates electrically a few times to help with the bedding-in, and check that the motion is uniform throughout the whole movement range.



### Warning

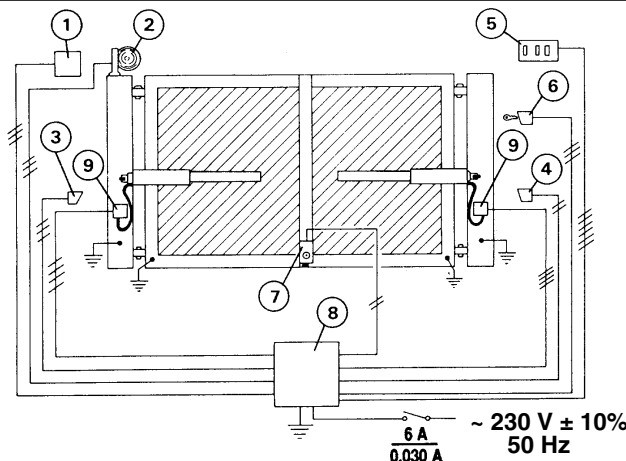
- The entire circuit must be installed in conformity with the CEI 61-1 and CEI 64-8 regulations.
- Use cable of cross-section 1.5 mm<sup>2</sup> for the wiring.
- If necessary, protect the operator power cable with a sheath; do this before connecting the cable to the junction box.



### Warning

- Operators come with pickup capacitors. During installation, connect the capacitor/s to the electrical equipment according to the wiring diagram supplied.

**D1**



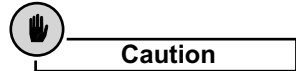
- 1 Radio
- 2 Flasher unit
- 3 Receiving photocell
- 4 Emitting photocell
- 5 Internal control panel
- 6 Key control
- 7 Electrical lock
- 8 Electronic control unit
- 9 Junction box

### 3.1 POSITIONING OF MOUNTINGS

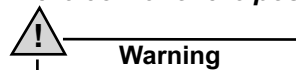
The following table (C1) gives the recommended data for fixing the position of the operator mountings in relation to the center of rotation of the gate leaf.

The distances **A** and **B** will give:

- The useful stroke length (**C**) of the piston
- The peripheral speed of the gate leaf
- The angle of maximum opening of the gate leaf
- The holding capacity of the lock in relation to distance **E** (which must always be less than **B** when the operator is fitted with a hydraulic lock); the distance **E** is obtained, in practice, by measuring the distance between the front attachment fulcrum to the gate hinge axis (see fig. C1)



- *The sum A+B corresponds to the useful stroke length of the piston (C) for a 90° opening of the gate leaf.*
- *The minimum value of distances A and B is 70 mm, and the maximum is 130 mm.*
- *If possible, distances A and B must be equal in order to have a uniform peripheral speed.*
- *If the gate leaf is to open by more than 90°, first of all find the best A and B measurements for mounting, and then reduce distance B to the desired opening angle, making sure, by checking the distance Y, that the corner of the post doesn't interfere with the operator action.*



- *The greater the distance B in relation to E, the more efficient the holding capacity of the hydraulic lock (for all types of operator).*
- *If the gate leaf is closed with an electric lock, then E must always be less than or equal to distance B (never greater).*

1) wing rotation axis  
2) operator centre of rotation

DISTANCES IN MILLIMETERS					
	L	A	B	C	Y Max.
ZT 44	1200 ÷ 4000	130	140	275	90
ZT 42	1200	90	100	190	40

### 3.2 PREPARING THE REAR MOUNTING

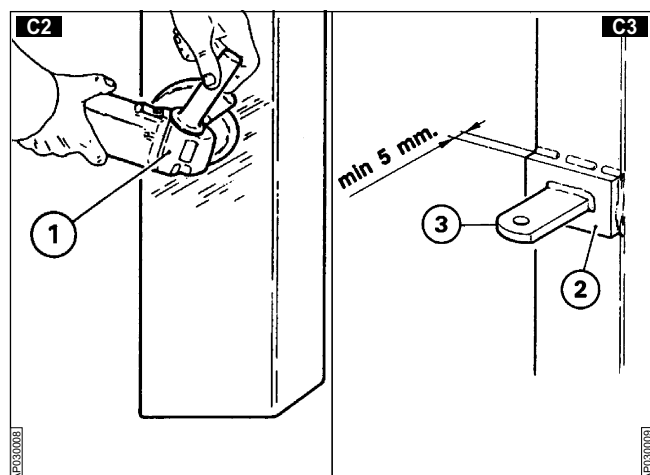
#### 3.2.1 Preparations for rear operator mounting on iron posts

Clean the welding zone for the rear mounting perfectly with the correct tool (C2 pos. 1); be especially sure to remove any traces of paint or zinc coating.

Place a strengthening plate of minimum thickness 5 mm (C3 pos. 2) on the column, covering it from edge to edge, in the rear mounting welding zone.

The size of the strengthening plate must be in proportion to the size of the column.

For the final fitting of the mounting (C3 pos. 3), see the section: "fitting the rear operator mounting", chapter 3.4 in this manual.



### 3.2.2 Preparations for rear operator mounting on masonry posts

If the supporting posts for the gate leaves are made from masonry, then metal mounting of the operator. Three ways of doing this are shown in fig. C4:

- A - Plate with hooked fitting
- B - Plate with stud bolts, either glued or pressure-fitted
- C - L-plate with stud bolts, either glued or pressure-fitted



#### Caution

- The size of the plates, apart from standard APRIMATIC plates, must be proportional to the size of the columns.
- If the A-type plate is used and has to be positioned in line with the operator axis, the hook fittings must be modified as shown in fig. C 5.

### 3.2.3 Preparations for rear operator mounting on masonry posts with inset

If mounting insets have to be made in the posts for the rear operator mounting with metal plates, the measurements shown in fig. C7 must be adhered to.

Remember that the inset is necessary when the distance between the edge of the post and the center of rotation of the gate leaf is greater than the distance Y (C1), or when the gate leaf is anchored to a continuous wall.

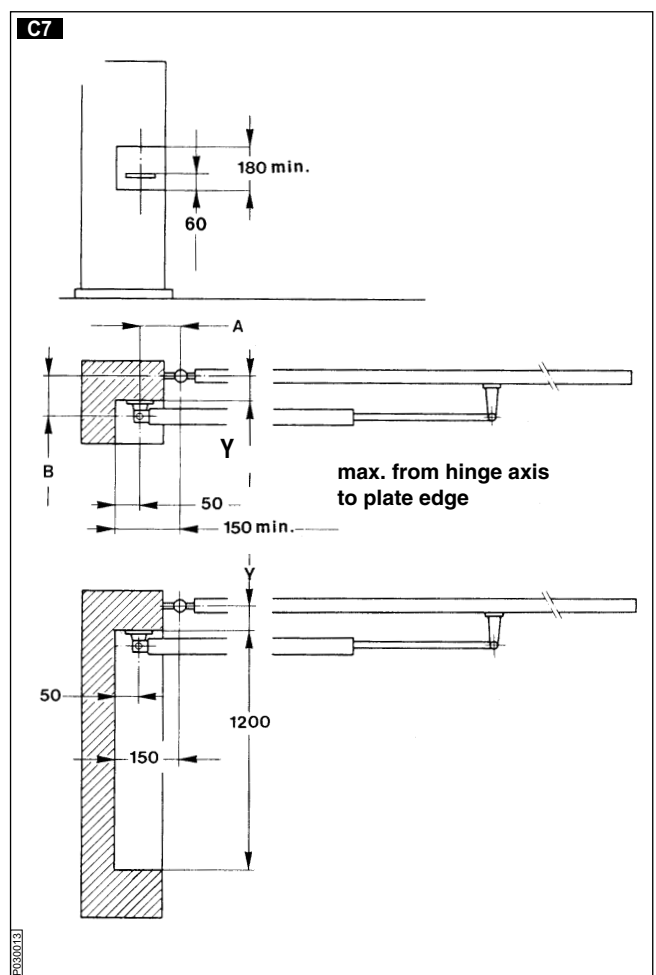
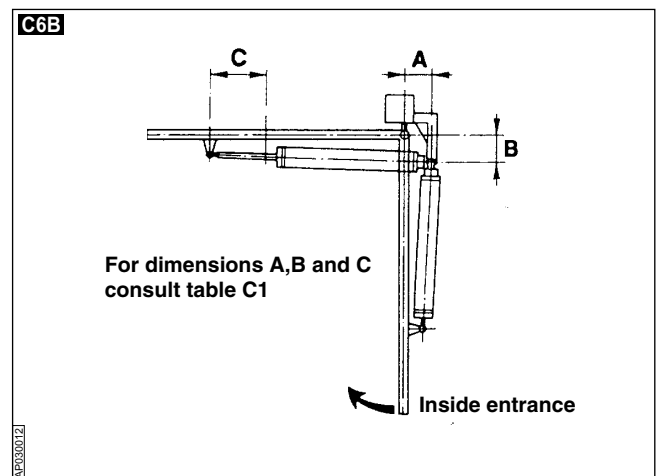
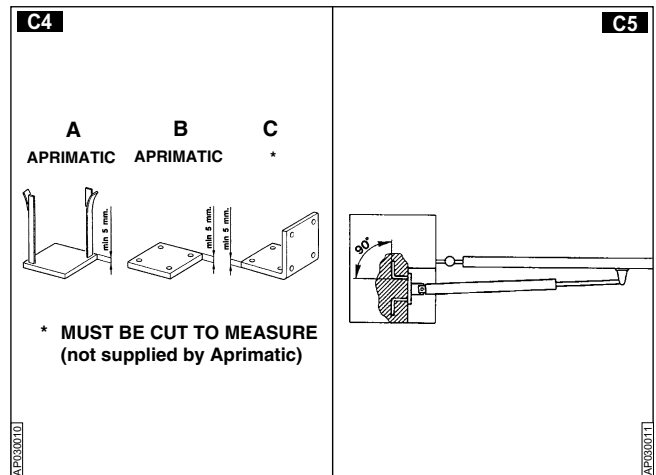
#### REAR OPERATOR MOUNTING - SPECIAL CASES

For outward-opening gate leaves, the rear mounting has to be modified using an L-plate, as shown in C6. In this particular case, as the operators have a hydraulic lock, the A-type hydraulic lock must be used.

#### REAR OPERATOR MOUNTING

If the post is made out of iron, the operator rear mounting plate can be welded directly on to the post, welding as shown in C2 and C3. If the post is made from masonry, proceed as follows:

- For each post, prepare an iron anchorage plate (see C4 for size of plate).
- Cut the insets into the posts (see C7 for size of inset).



### 3.3 FITTING THE REAR ANCHORAGE PLATES

Clean out any traces of cement or sand in the inset. Drill 4 holes in the inset (C8 pos. 1), after marking the position of the holes, using the anchorage plate itself as a drilling template.

Attach the plate with "FISCHER" expansion plugs of minimum Ø 15 with M 8 steel or cast iron screws (C8 pos. 2), if the material that the column is made of is able to hold the screws, or, if not, attach with glue in the following way:

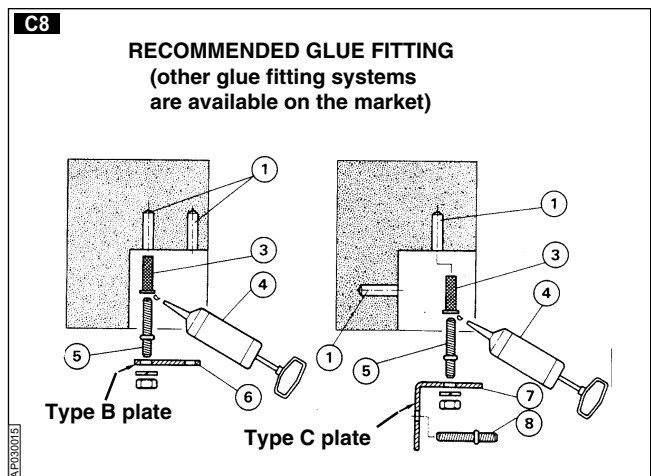
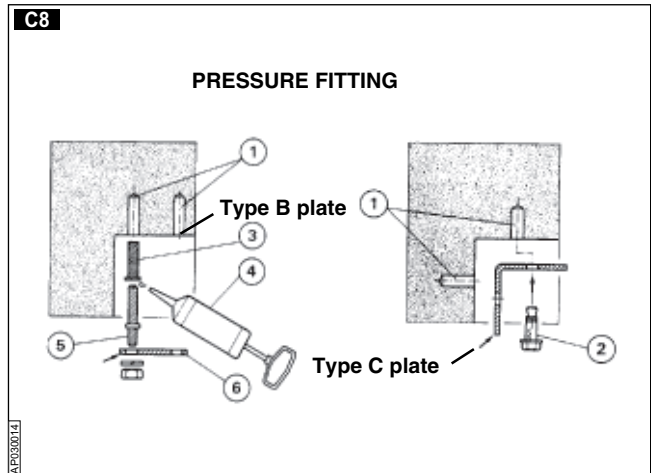
- Insert the mesh sheaths (C8 pos. 3) into the holes and inject the quick-dry glue (C8 pos. 4); see attached instructions for the method of glue application and quantity.
- Insert the stud bolts (C8 pos. 5) into the sheaths (if plate type B is used)
- Fit the anchorage plate (C8 pos. 7) to the stud bolts.

If the C-type plate is used, proceed as follows:

- Insert the stud bolts (C8 pos. 5) into one of the two sides of the inset.
- Fit the anchorage plate (C8 pos. 7) to the stud bolts.
- Insert the two remaining stud bolts (C8 pos. 8).

At this point, if plate-types B or C are being used, screw in all the fittings, nuts and washers by hand, without tightening; after about half an hour the stud bolts can be tightened up, using a hexagonal wrench.

When finished, cut off the protruding parts of the stud bolts using the correct tool.



### 3.4 FITTING THE REAR OPERATOR MOUNTING

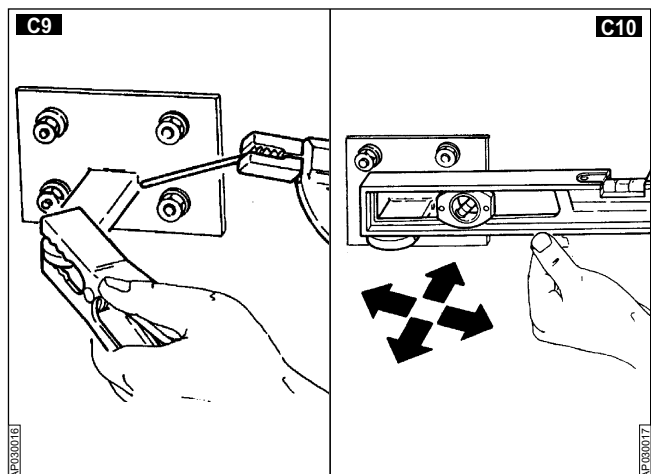
Position the rear fitting (B4 pos. 9) to the measurements taken previously and weld it to the anchorage plate with two weld points (C9).

Check the lengthwise and crosswise alignment (C10) of the mounting with a spirit level.

Complete the welding and clean away the residue with a wire brush.

**Warning**

- Before welding, ensure that there are no bushings (B4 pos. 10) in the mounting, and that the fitting hole is properly protected from welding residue.
- When the welded zone has cooled down, apply a coat of anti-rust paint.



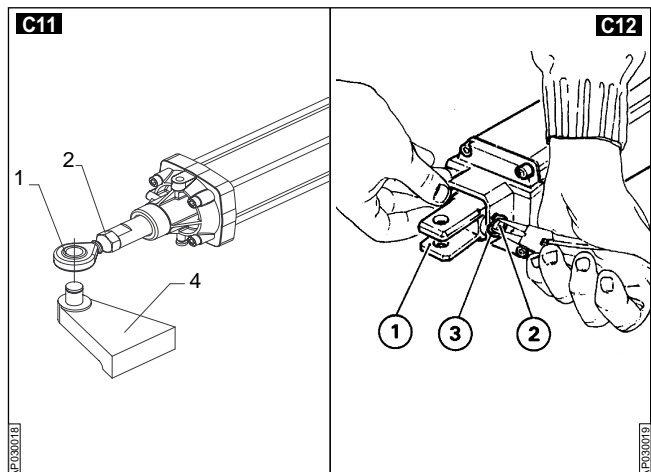
### 3.5 POSITIONING THE FRONT MOUNTING

Spread grease on the threaded stem of the ball joint (C11 pos. 1), fit the ball joint, along with its nut (C11 pos. 2) and to the operator arm, screwing on to about halfway along the thread. Insert the pin (C11 pos. 4) into the ball joint, without fitting the snap ring.

Fit the fork (C12 pos. 1) to the base of the operator with its pin (C12 pos. 2) and fix in place with the two snap rings (C12 pos. 3).

**Warning**

Grease both the pin and the housings abundantly.



English

### 3.6 TEMPORARY REAR FITTING OF THE OPERATOR

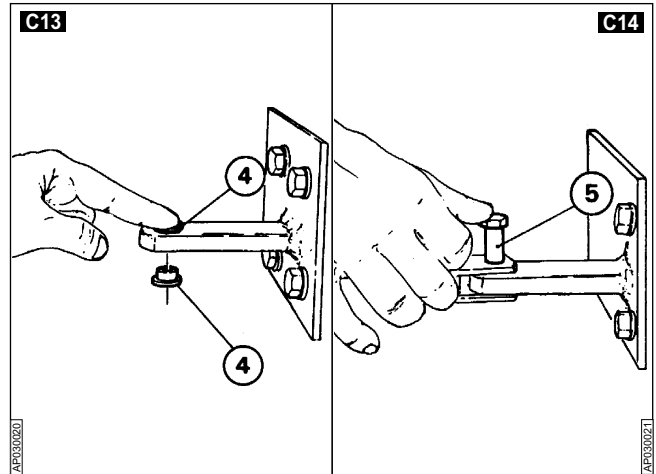
Fit the two vibration damper bushings (C13 pos. 4) to above and below the mounting.

Fit the operator to the mounting with the vertical pin (C14 pos. 5), after greasing abundantly.



#### Warning

Handle the operator with care during assembly.



### 3.7 FRONTAL POSITIONING OF THE OPERATOR

If it has been decided to use the maximum useful length of the rod (distance A+B = useful piston stroke length) then the supplied template needs to be used, in the following way:

- Fit the key (C15 pos. 1) to the release screw and turn in an anti-clockwise direction to release the operator manually.
- Fully extend the rod slowly.  
Ensure the length of the extended rod is 285 mm (C18).
- Withdraw the rod of 5 cm.
- Protect the rod (C16 pos. 2).
- Withdraw the rod up to the edge of the template, and check that there is about 5 mm clearance between the rod washer and the operator plug.
- Clean the welding zone for the front mounting perfectly with a suitable tool (C17 pos. 4); be especially sure to remove any traces of paint or zinc coating.



#### Warning

To use the close delay function, it is necessary to fix the operator with fully extended rod.

After having extended the rod fully, withdraw it up to the safety distance (5 mm). Otherwise, a malfunction of the operator itself could occur.

- Check the strength of the mounting zone; if necessary, fit a strengthening plate of the correct size; the strengthening plate is especially important with gate leaves made from thin sheet steel.
- When cleaning the mounting zone for the operator front mounting, remove the operator from the vicinity and protect it from flying sparks.

Rest a spirit level (C18 pos. 1) on the operator body (C18 pos. 2) and level the operator.

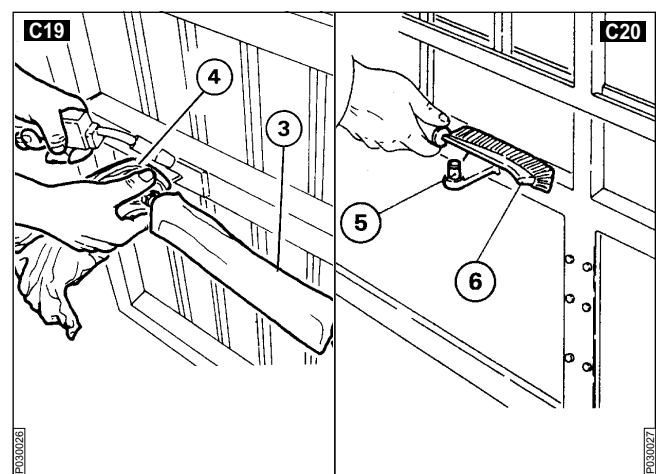
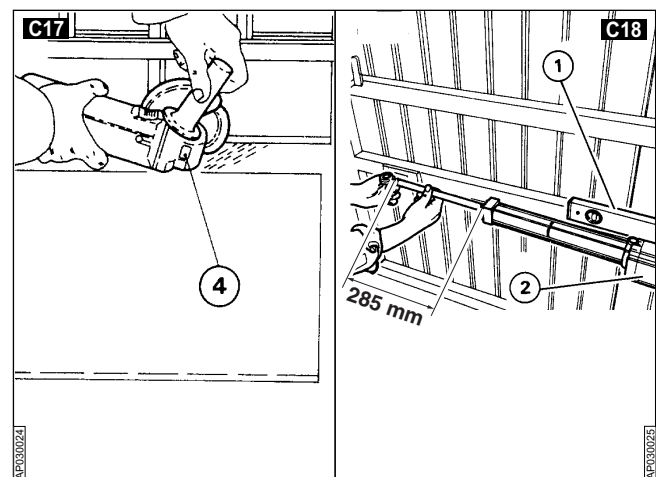
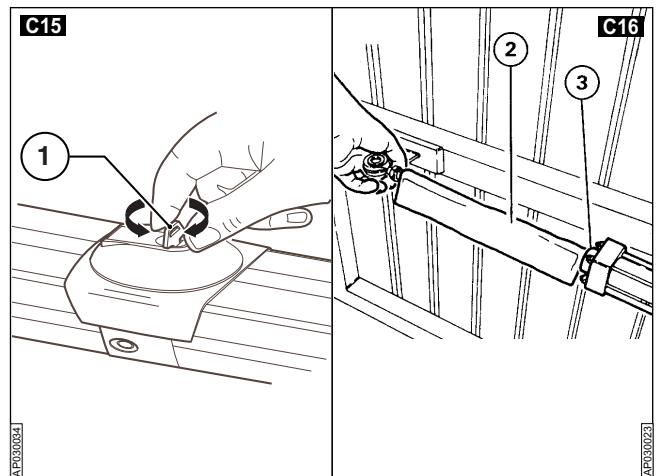
Weld the front mounting of the rod to the gate leaf with two weld-points, protecting the rod from the weld residue with the template used for the positioning (C19 pos. 3) and protecting the ball joint with a clean cloth (C19 pos. 4).

Withdraw the jointed head of the operator from the front mounting; completely remove the operator itself from its temporary mountings, close off the flange with the correct plug; complete the welding, covering the pin (C20 pos. 5) (using a clean cloth or adhesive tape) to protect it from weld residue, and then clean off the residue with a wire brush (C20 pos. 6).



#### Warning

- Whilst welding the points on the front mounting with the electrode, always cover the rod with a clean cloth; a splinter of molten metal can cause irreparable damage to the machined surface and render the operator unusable.
- During welding, the operator must be disconnected from the electricity supply.



After cooling, apply a coat of rustproof paint to the welded zone (C21).

### 3.8 FINAL FITTING OF THE OPERATOR

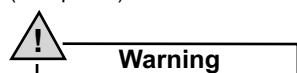
Spread graphitized-type grease on to the frontal anchorage pin of the ball joint (C22 pos. 1).

Spread graphitized-type grease on to the ball joint (C23 pos. 2).

Fit the jointed head to the pin (C24 pos. 1) and fix in place with the snap ring (C24 pos. 2).

Fit the operator to the rear mounting with the fork pin (C25 pos. 3) and its locknut (C25 pos. 4).

Using the template, check once more that the rod advances from the operator to the set distance when the gate leaf is completely closed; then tighten up the ball joint fitting to the rod using a CH 12 hexagonal wrench (C26 pos. 5) and a CH 17 hexagonal wrench (C26 pos. 6).



#### Warning

- When the mounting is completed, neutralize the hydraulic lock (if present in the operators) by turning the correct key through 180° anti-clockwise, and move the gate-leaves manually to check on the smoothness of the movement; this should be done very slowly, otherwise the operators will take in air and, consequently, will have to be bled.
- Open and close the gate leaf to check that the operator can move freely without rubbing and without going against either the gate leaf or the gate post.
- After making the checks, reset the hydraulic lock by turning the release key fully in a clockwise direction.

### 3.9 FINAL ASSEMBLY

#### 3.9.1 Bleeding



#### Warning

Before proceeding in setting the operator, bleed it.

Start the operator after having checked the setting of the pressure relief valves, move it to stroke end either in open or close position and, acting on the screw (see fig. C27), lock and release the operator a dozens of times.

#### 3.9.2 Adjusting the brake in close position



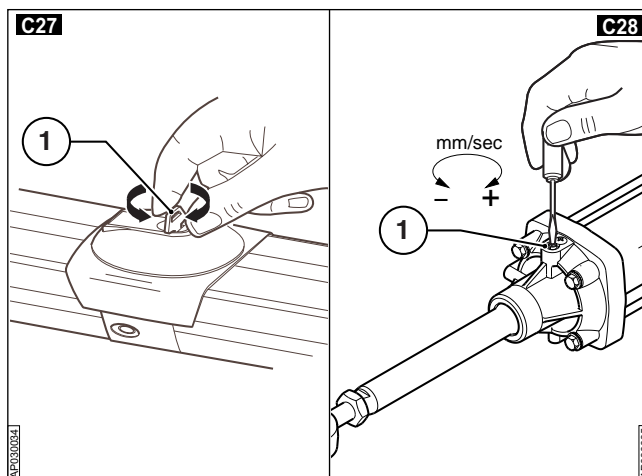
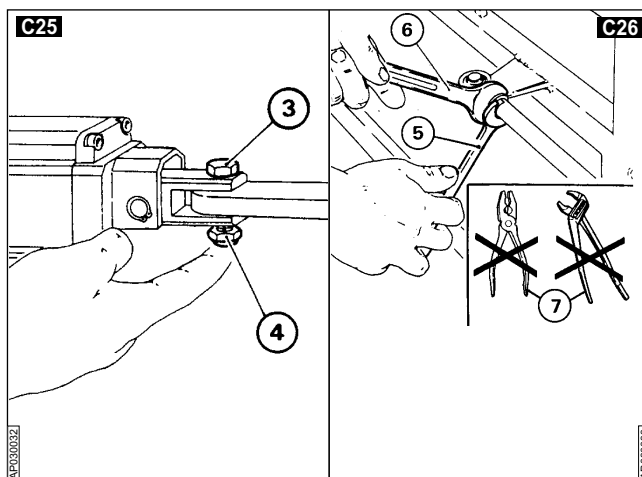
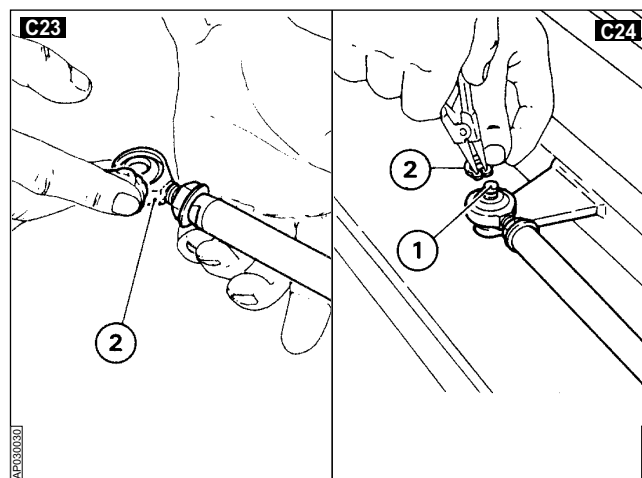
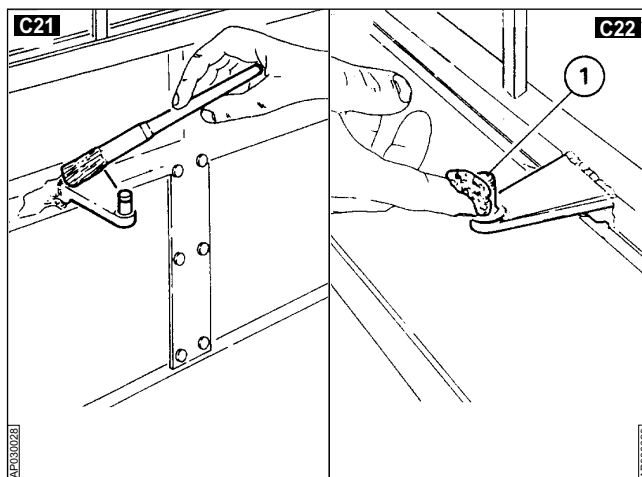
#### Warning

The operator is standard supplied with cut-out brake.

Do not unscrew the hydraulic brake setting screw completely to prevent oil leakage.

For an easy adjustment, proceed as follows:

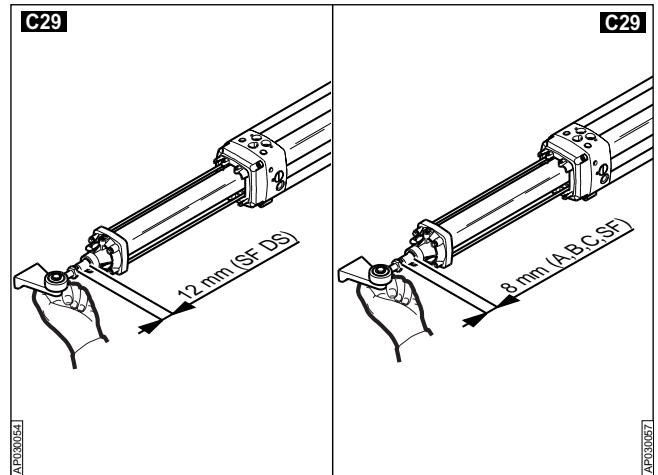
- Retract the rod inside the operator by means of the manual release device or by powering the operator opening.
- Tighten the slow-down setting screw (C28 pos. 1) by rotating clockwise.
- Power the operator closing (rod extension) for a longer time than the one necessary to complete the maneuver. The rod movement stops.
- Rotate the slow-down setting screw (C28 pos. 1) counter-clockwise. Rotate slowly for max 4 complete turns until the rod starts moving again.
- Adjust the slowing-down as required by rotating the screw of half-turn.



### 3.9.3 Slowing down the operator opening (C29)

To use the opening slowing-down (only for ZT44 SF DS version), it is indispensable to use the entire stroke length of the rod.

In the ZT44 SF DS version, with the rod fully withdrawn, 12 mm will protrude.



### 3.9.4 Final assembly

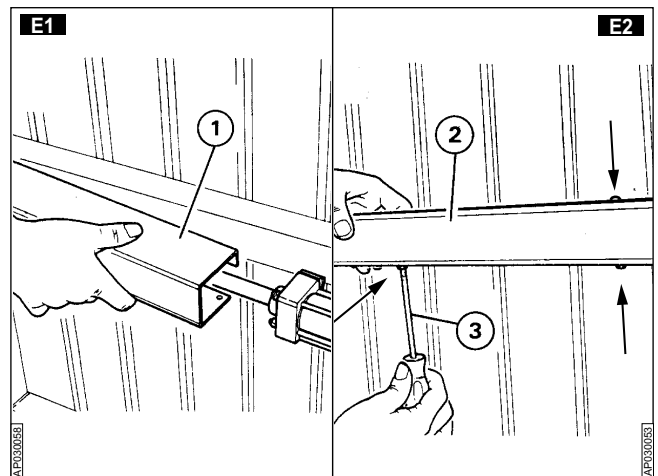
Fit the protective casing (E1 pos. 1) to the arm, positioning it against the operator.

Fix the casing (E2 pos. 2) into position on its underside, using a cross-head screwdriver (E2 pos. 3).

Fit the push-on cover (E3 pos. 2) on to the protective casing (E3 pos. 1).

Tighten the fixing screw (E4 pos. 1) of the protective casing.

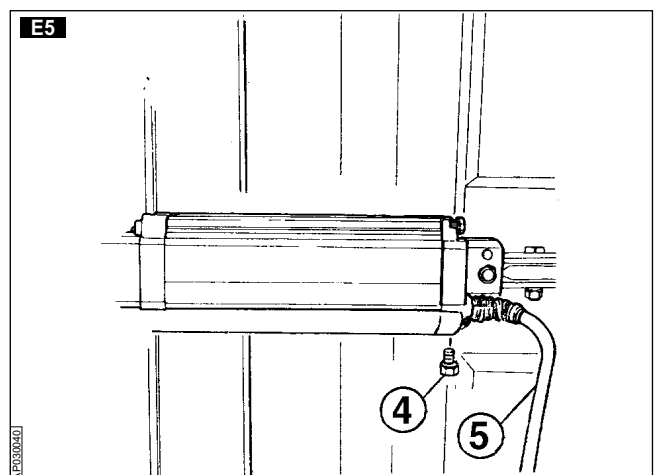
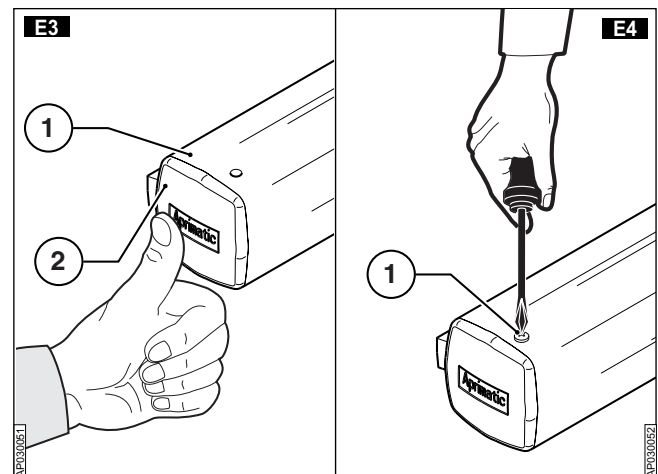
On completion of the assembly, remove the bleed screw (E5 pos. 4) using CH7 hexagonal wrench.



#### Caution

**One drop of hydraulic oil coming out of the duct created by the screw elimination (E5 pos. 4) is normal.**

If necessary, fit the protective sheath to the power supply cable (E5 pos. 5).

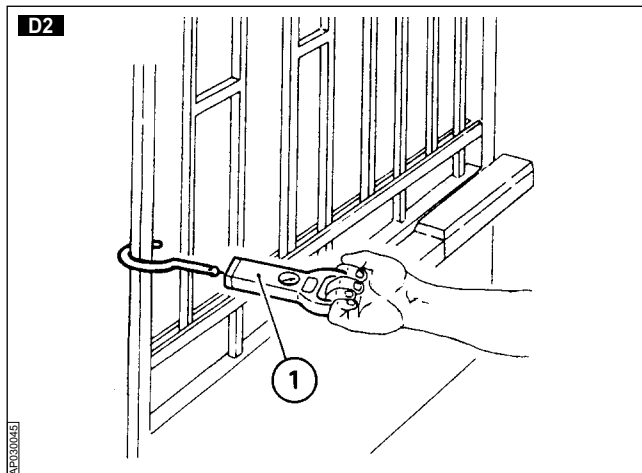


### 4.1 CHECKS AND SETTINGS

With the gate leaf moving, measure the thrust force at the end of the gate leaf, using a dynamometer (D2 pos. 1). The thrust force must never exceed 15 kg (147 N). If necessary, adjust the working pressure of the operator.

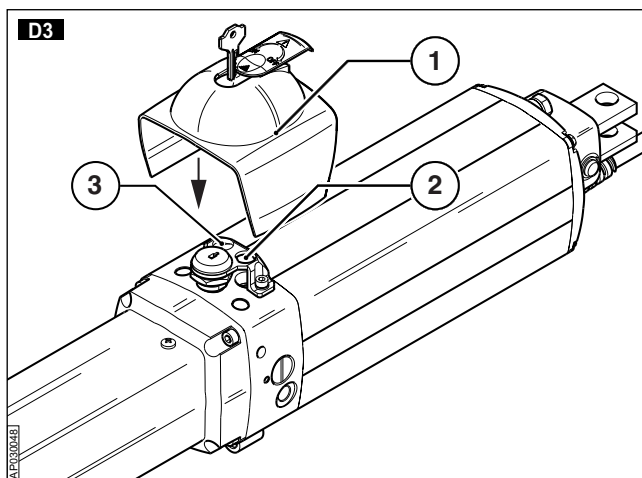
Using a broad, flat-headed screwdriver, turn the control valve clockwise to increase the pressure and anti-clockwise to reduce it.

The settings are made both on the opening control valve (silver - D3 pos. 2) and the closing control valve (gold - D3 pos. 3).



**Caution**

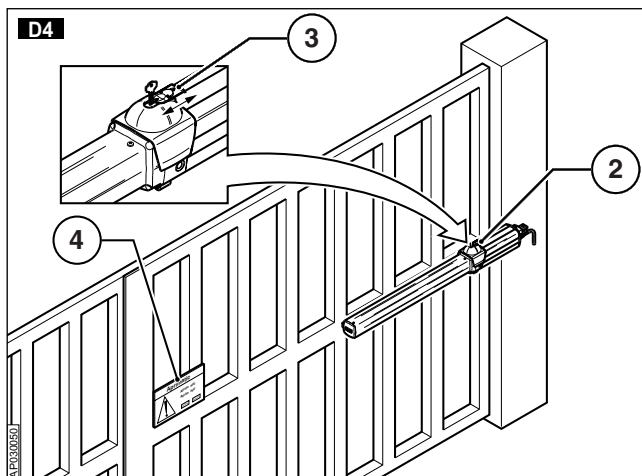
- The opening thrust of the gate leaf should be set slightly higher than the closing thrust.
  - After making the settings, make another check with the dynamometer to see if the thrust force corresponds to the setting; if it doesn't, then the setting needs to be adjusted again.
  - If the gate leaf requires an excessively high pressure to move it, then make another thorough check of the mechanical parts, the plumb and the free movement of the gate leaf itself.
- Clip on the upper casing (D3 pos.1).  
When completely assembled, the operator should appear as in the illustration (D4 pos. 2).



**Caution**

To gain access to the release key, it is enough to slide back the hatch (D4 pos. 3); after locking or releasing operations, remember to close the hatch again.

After installation, an appropriate warning sign must be attached to the gate (D4 pos. 4).



English

To gain access to the release key, it is enough to slide back the hatch (F01 pos. 1); after locking and releasing operations, remember to close the hatch again.



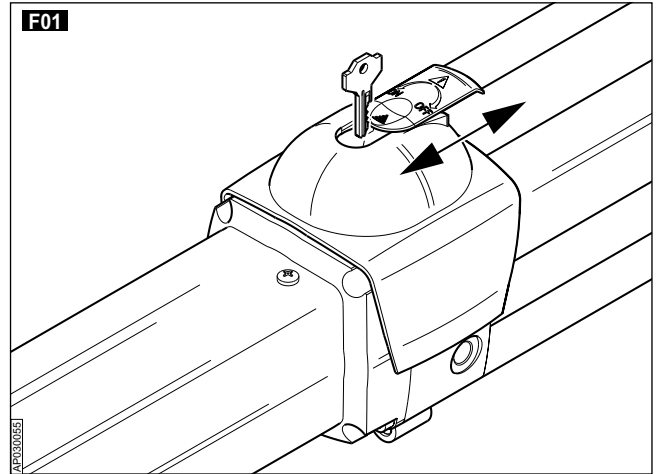
**Information**

**Periodically check the proper functioning of the operator. Do this check at least every 12 months.**



**Warning**

**Maintenance must be performed only by skilled technicians.**



## 5.2 NOTES FOR THE INSTALLER

### 5.2.1 Maintenance



**Warning**

**Before doing any maintenance job, turn the operator off by means of the differential switch of the electric system.**

- Grease the joints with graphitized grease every year.
- Check the general condition of the gate structure.
- Check the mechanical resistance of hinges, operator mountings and stops.
- Ensure the installed safety devices are in working order (photocells, rubber barriers,...) and adjust the thrust force at the end of the gate leaf (max. 147 N).
- Ensure the electrical system and the differential switch are efficient.
- Check the setting of the pressure relief valve.
- Check the tightening of the safety lock.
- Depending on the use of the operator, check the oil level of the system.

### 5.2.2 Trouble-shooting guide

Fault type	Probable cause	Solution
By operating the opening control, the leaf does not move and the electric motor of the operator does not run.	No power supply.	Turn the power on.
	Defective fuse.	Replace the defective fuses with new ones having the same amperage.
	The power cable of the operator is damaged.	Replace the power cable and find and rectify the fault.
By operating the opening control, the electric motor of the operator runs but the leaf does not move.	If the operator has a hydraulic release, check that the release valve setting is closed.	Turn the valve fully in a clockwise direction.
	If the operator doesn't have a hydraulic release, adjust the opening pressure setting.	Turn the valve fully in a clockwise direction.
	If the operator has been exposed to the sun for a long period, with the gate closed, check that the operator piston is not in the fully advanced position, i.e. with the rod completely out.	Check the operator mounting, as described in point C of this manual. Check the measure of the piston stroke.
During the motion, the operator jerks.	Probably air in the cylinder.	Detach the operator from its front mounting and make a few opening and closing movements; then re-fit to the front mounting.
	Oil in the cylinder not enough	Add oil and evacuate air as above.
	The front and rear operator mountings move or have been fitted incorrectly	Repair or strengthen the mountings.

SPACE RESERVED TO THE INSTALLER  
PLEASE, SUPPLY THIS PAGE TO THE USER