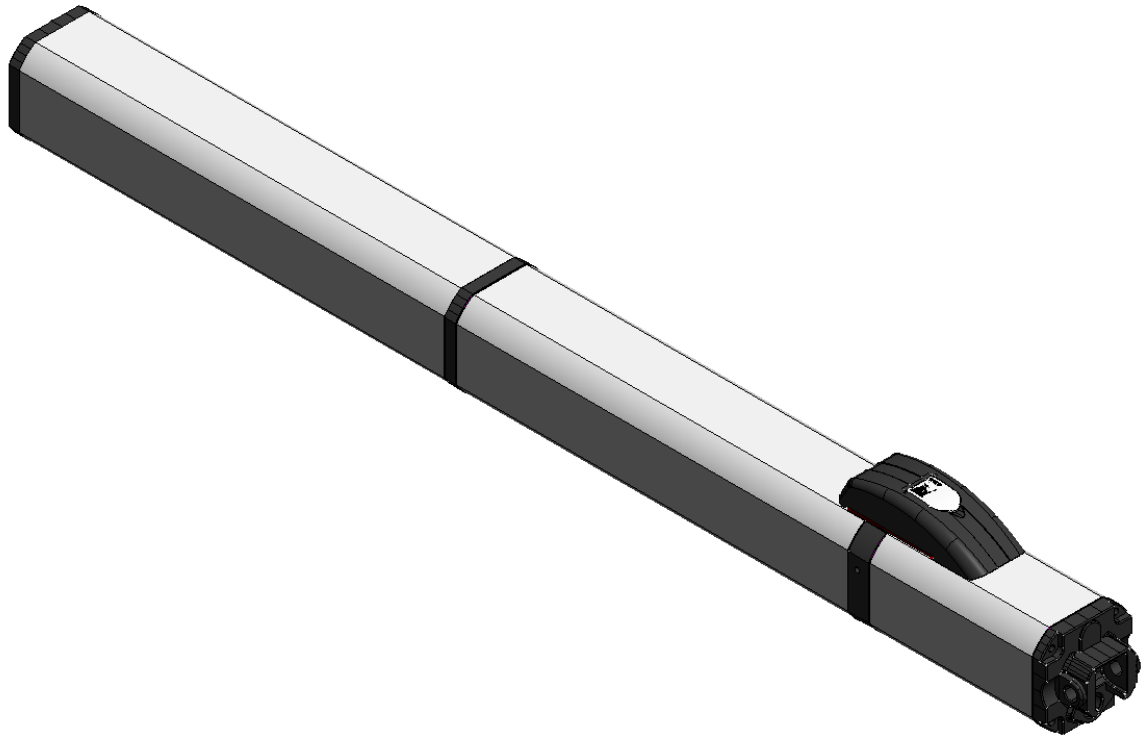


# S450H

24V Hydraulic Swing Gate Operator



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# FAAC

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Read this instruction manual before you begin installing the product.  
= Information regarding personal safety and proper maintenance of the product.

## IMPORTANT SAFETY INFORMATION

### Important Safety Instructions

#### **WARNING - TO REDUCE THE RISK OF SEVERE INJURY OR DEATH:**

- READ AND FOLLOW ALL INSTRUCTIONS.
- Never let children operate or play with the gate controls. Keep remote controls away from children.
- Always keep people and objects away from the gate. **NO ONE SHOULD CROSS THE PATH OF A MOVING GATE.**
- Test the gate operator monthly. The gate **MUST** reverse on contact with a rigid object or when an object activates a non-contact sensor. If necessary, adjust the force or the limit of travel and then retest the gate operator. Failure to properly adjust and retest the gate operator can increase the risk of injury or death.
- Use the manual release mechanism only when the gate is not moving.
- **KEEP GATE PROPERLY MAINTAINED.** Have a qualified service person make repairs to gate hardware.
- The entrance is for vehicles only. Pedestrians must use a separate entrance.
- **SAVE THESE INSTRUCTIONS.**

### Important Installation Instructions

1. Install the gate operator only when the following conditions have been met:
  - The operator is appropriate for the type and usage class of the gate.
  - All openings of a horizontal slide gate have been guarded or screened from the bottom of the gate to a minimum of 4 feet (1.25 m) above the ground to prevent a 2.25 inch (55 mm) diameter sphere from passing through openings anywhere in the gate or through that portion of the adjacent fence that the gate covers when in the open position.
  - All exposed pinch points are eliminated or guarded.
  - Guarding is supplied for exposed rollers.
2. The operator is intended for installation on gates used by vehicles only. Pedestrians must be provided with a separate access opening.
3. To reduce the risk of entrapment when opening and closing, the gate must be installed in a location that allows adequate clearance between the gate and adjacent structures. Swinging gates shall not open outward into public access areas.
4. Before installing the gate operator, ensure that the gate has been properly installed and that it swings freely in both directions. Do not over-tighten the operator clutch or pressure relief valve to compensate for a damaged gate.
5. User controls must be installed at least 6 feet (1.83 m) away from any moving part of the gate and located where the user is prevented from reaching over, under, around or through the gate to operate the controls. Controls located outdoors or those that are easily accessible shall have security features to prevent unauthorized use.
6. The Stop and/or Reset buttons must be located within line-of-sight of the gate. Activation of the reset control shall not cause the operator to start.
7. All warning signs and placards must be installed and easily seen within visible proximity of the gate. A minimum of one warning sign shall be installed on each side of the gate.
8. For gate operators that utilize a non-contact sensor (photo beam or the like):
  - See instructions on the placement of non-contact sensors for each type of application.
  - Exercise care to reduce the risk of nuisance tripping, such as when a vehicle trips the sensor while the gate is still moving.
  - Locate one or more non-contact sensors where the risk of entrapment or obstruction exists, such as at the reachable perimeter of a moving gate or barrier.
  - Use only FAAC "Photobeam" photoelectric eyes to comply with UL325.

*Important Installation Instructions (continued)*

9. For gate operators that utilize a contact sensor (edge sensor or similar):
  - Locate one or more contact sensors where the risk of entrapment or obstruction exists, such as at the leading edge, trailing edge, and post mounted both inside and outside of a vehicular horizontal slide gate
  - Locate one or more contact sensors at the bottom edge of a vehicular vertical lift gate.
  - Locate one or more contact sensors at the bottom edge of a vertical barrier (arm).
  - Locate one or more contact sensors at the pinch point of a vehicular vertical pivot gate.
  - Locate hard-wired contact sensors and wiring so that communication between sensor and gate operator is not subjected to mechanical damage.
  - Locate wireless contact sensors, such as those that transmit radio frequency (RF) signals, where the transmission of signals are not obstructed or impeded by building structures, natural landscaping or similar hindrances. Wireless contact sensors shall function under their intended end-use conditions.
  - Use only FAAC MSE MO, CN60 or M60 edge sensors.

**General Safety Precautions****Gate Construction**

**Vehicular gates should be constructed and installed in accordance with ASTM F2200: Standard Specification for Automated Vehicular Gate Construction.**

For more information, contact ASTM at: [www.astm.org](http://www.astm.org)

**Installation**

- If you have any questions or concerns regarding the safety of the gate operating system, do not install the operator and consult the manufacturer.
- The condition of the gate structure itself directly affects the reliability and safety of the gate operator.
- Only qualified personnel should install this equipment. Failure to meet this requirement could cause severe injury and/or death, for which the manufacturer cannot be held responsible.
- The installer must provide a main power switch that meets all applicable safety regulations.
- It is extremely unsafe to compensate for a damaged gate by increasing hydraulic pressure.
- Install devices such as reversing edges and photo beams to provide better protection for personal property and pedestrians. Install reversing devices that are appropriate to the gate design and application.
- Before applying electrical power, ensure that voltage requirements of the equipment correspond to the supply voltage. Refer to the label on your gate operator system.

**Usage**

- Use this equipment only in the capacity for which it was designed. Any use other than that stated should be considered improper and therefore dangerous.
- The manufacturer cannot be held responsible for damage caused by improper, erroneous or unreasonable use.
- If a gate system component malfunctions, disconnect the main power before attempting to repair it.
- Do not impede the movement of the gate, you may injure yourself or damage the gate system as a result.
- This equipment may reach high thermal temperatures during normal operation, therefore use caution when touching the external housing of the gate operator.
- Use the manual release mechanism according to the procedures presented in this manual.
- Before performing any cleaning or maintenance operations, disconnect power to the equipment.
- All cleaning, maintenance or repair work must be performed by qualified personnel.

## UL325 Gate Operator Classifications

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### RESIDENTIAL VEHICULAR GATE OPERATOR CLASS I

A vehicular gate operator system intended for use in a single family dwelling, garage or associated parking area.

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### COMMERCIAL / GENERAL ACCESS VEHICULAR GATE OPERATOR CLASS II

A vehicular gate operator system intended for use in commercial locations or buildings such as multi-family housing units (five or more single family units), hotels, parking garages, retail stores or other buildings that service the general public.

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### INDUSTRIAL / LIMITED ACCESS VEHICULAR GATE OPERATOR CLASS III

A vehicular gate operator system intended for use in industrial locations or buildings such as factories, loading docks or other locations not intended to service the general public.

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### RESTRICTED ACCESS VEHICULAR GATE OPERATOR CLASS IV

A vehicular gate operator system intended for use in guarded industrial locations or buildings such as airport security areas or other restricted access locations that do not service the general public, and in which unauthorized access is prevented via supervision by security personnel.

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## Installing the Warning Signs

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This FAAC swing gate operator is supplied with two warning signs to alert people that a possible hazard exists and that appropriate actions should be taken to avoid the hazard or to reduce exposure to it.

Permanently install one warning sign on each side of the gate so they are fully visible to traffic and pedestrians.

Use appropriate hardware such as metal screws (not supplied) to permanently install each warning sign.



## Model S450H 24V Hydraulic Swing Gate Operator

### 1. DESCRIPTION AND TECHNICAL SPECIFICATIONS

The FAAC S450H automated system for swing-leaf gates consists of an electrical pump and an hydraulic piston transmitting the leaf movement, assembled in a single block.

The model with hydraulic locking can automate leaves up to 6.5 feet long. It does not require the installation of electric locks and guarantees that the leaf is mechanically locked when the motor is not in operation. The model without hydraulic locking always needs one or more electric locks to guarantee the leaf mechanically locks. **S450H automated systems have been designed and built to automate swing-leaf gates. Avoid any other use, whatsoever.**

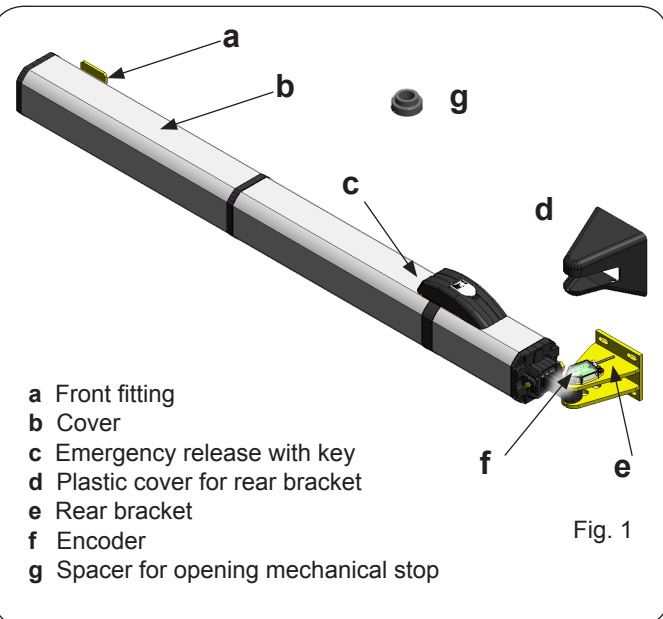


Fig. 1

### 1.1 DIMENSIONS

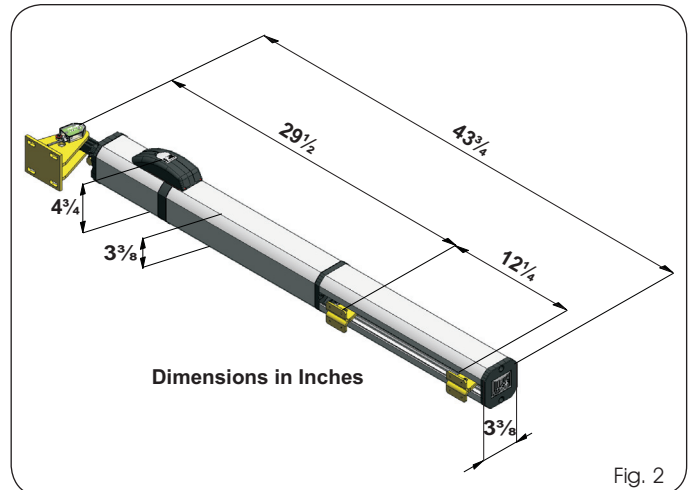


Fig. 2

### 2. PRESETS

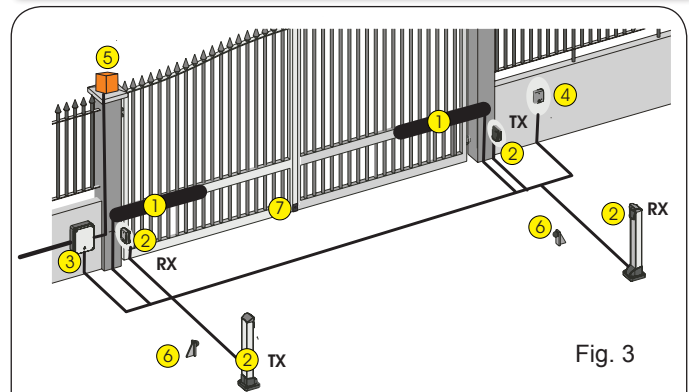


Fig. 3

- ❶ S450H operators (2x2.5 mm<sup>2</sup> each motor) (2x0.5 mm<sup>2</sup> each encoder bus)
- ❷ RX Photocells (receiver) (TRADITIONAL: 4 x 0.5 mm<sup>2</sup>; 2easy bus: 2 x 0.5 mm<sup>2</sup>)
- ❸ TX Photocells (transmitter) (2 x 0.5 mm<sup>2</sup>)
- ❹ Electronic control unit (power supply 3 x 1.5 mm<sup>2</sup>)
- ❺ Key-operated push-button (e.g. T11) (3 x 0.5 mm<sup>2</sup>)
- ❻ Flashing lamp 24 V dc (2 x 1 mm<sup>2</sup>)
- ❼ Opening mechanical stops\*
- ❼ Electric lock and closing mechanical stop (2 x 1.5 mm)

\* Not necessary when using opening mechanical stops inside the operator (Fig.1 Ref. 7).

### 3. INSTALLING THE AUTOMATED SYSTEM

Ensure that the following conditions have been met to ensure safety and the efficient operation of the automated system:

- The gate structure must be suitable for automation. Verify that it is sufficiently strong and that its dimensions and weight correspond to those stated in the technical specifications.
- Verify the smooth and uniform movement of leaves, without irregular friction during the entire travel.
- Verify the good condition of hinges.
- Verify the presence of mechanical limit switches.
- Remove any locks and bolts.
- Carry out any metalwork operations before installing the automated system.

#### Operator Specifications

TECHNICAL SPECIFICATIONS	CBAC OPERATOR	SB OPERATOR
Power Supply (VDC)	24 - 36	
Power Consumption (W)	70 (nominal) - 288 (maximum)	
Protection Class	IP 55	
Oil Type	FAAC HP OIL	
Operating Temperature	-4°F to +113°F	
Hydraulic Lock	Installed	Not installed
Max. Traction/Thrust Force (lbf)	1124	
Max. Opening Angle	See table 1	
Max. Leaf Length (feet)	14	16
Linear Rod Speed	adjustable up to 1"/sec	
Effective Rod Stroke (inches)	12 1/4	
Operator Weight (lbs)	15.6	15.2



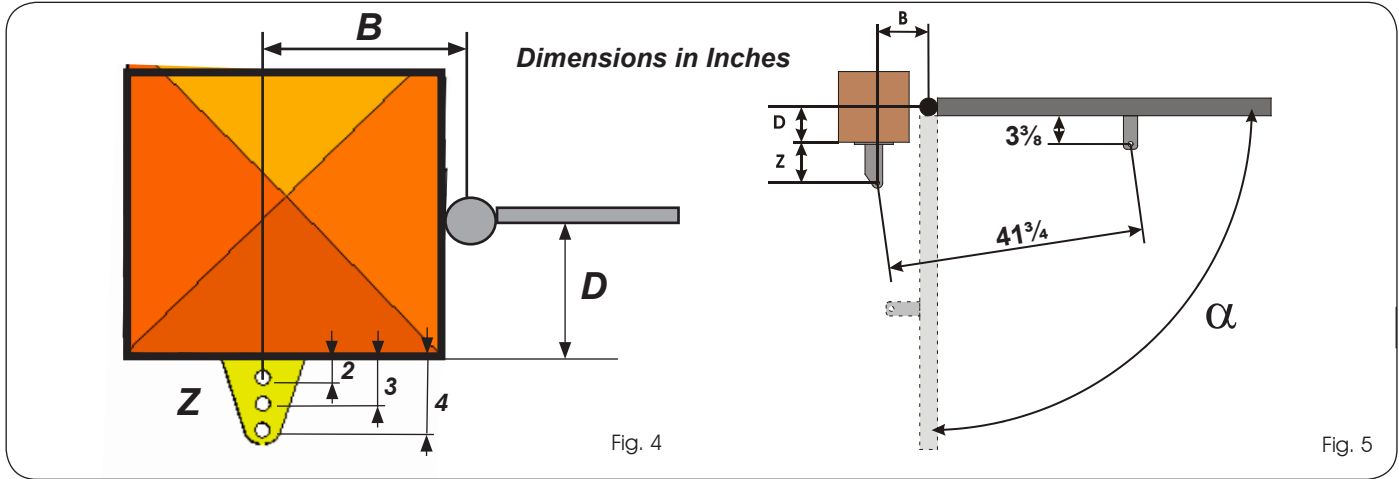
-- If the gate structure does not allow the stable fixing of the front fitting, create a firm bearing surface in the leaf structure.  
 - It is advisable to grease all fixing pins - Opening and closing stops must always be installed - Pay special attention not to damage the operator rod.

**3.1 INSTALLATION DIMENSIONS**

**3.1.1 APPLICATION WITH BRACKET FASTENED TO THE COLUMN**

**ATTENTION:** do not cut the rear bracket for any reason.

Refer to Figures 4 and 5 and Table 1 to determine the installation position of the operator.

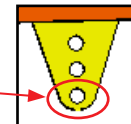


Dimensions in Inches

INSTALLATION DIMENSION "B"  
(SEE FIGURES 4 and 5)

TAB. 1		B	
		XXX	XXXX
INSTALLATION DIMENSION "D" (SEE FIGURE 5)	XXX	120° (3)	120° (3)
	XXX	110° (2)	110° (2)
	XXX	115° (1)	110° (1)

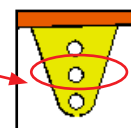
$\alpha^\circ$  (3)



(3)

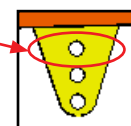
HOLE TO BE USED ON THE REAR BRACKET

$\alpha^\circ$  (2)



(2)

$\alpha^\circ$  (1)



(1)

- INTERSECT THE DIMENSIONS "D" AND "B" TO OBTAIN THE MAXIMUM VALUE OF OPENING ANGLES.
- ATTENTION: USE MECHANICAL LIMIT SWITCHES IN ORDER NOT TO EXCEED THE MAXIMUM OPENING ANGLES STATED IN TABLE 1 AND GUARANTEE THE CORRECT OPERATION OF THE AUTOMATED SYSTEM.

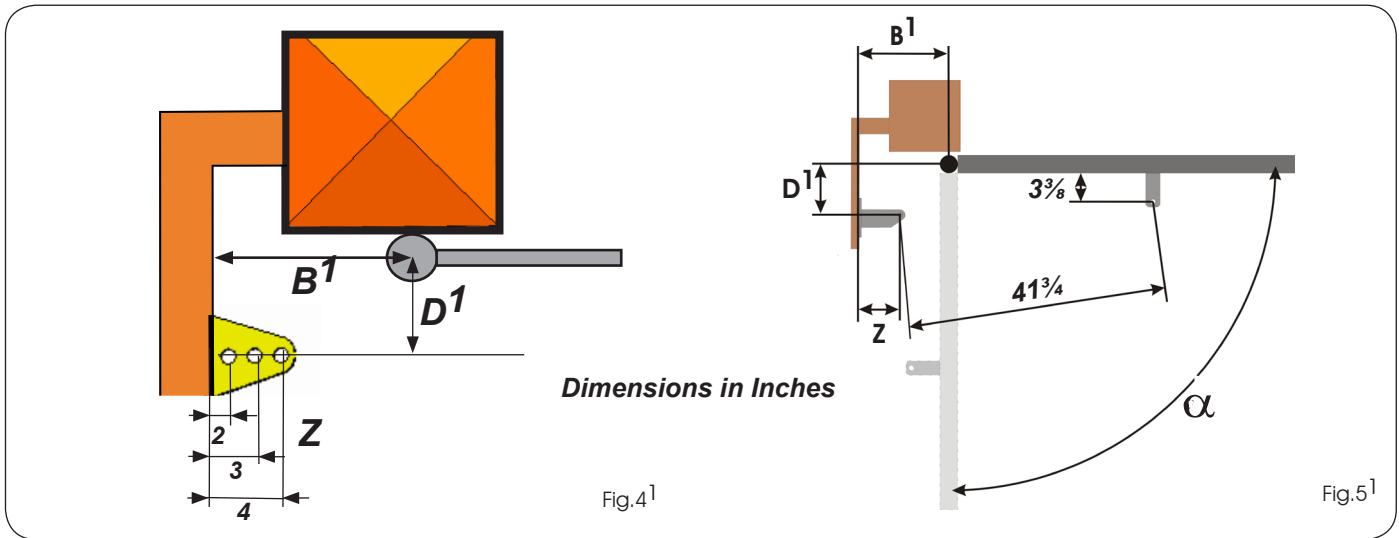
TAB. 1		B									
		2.95-3.3	3.35-3.7	3.75-4.0	4.1-4.45	4.5-4.85	4.9-5.25	5.3-5.65	5.7-6.0	6.1-6.45	6.5-6.85
D	0.75-0.95					110° (3)	110° (3)	115° (3)	108° (3)	100° (3)	100° (3)
	1.0-1.3					108° (3)	110° (3)	110° (3)	103° (3)	100° (3)	94° (3)
	1.35-1.7				100° (3)	107° (3)	108° (3)	104° (3)	111° (2)	104° (2)	100° (2)
	1.75-2.1				100° (3)	105° (3)	106° (3)	100° (3)	106° (2)	100° (2)	96° (2)
	2.15-2.5			97° (3)	100° (3)	105° (3)	99° (3)	107° (2)	100° (2)	96° (2)	92° (2)
	2.6-2.9		93° (3)	97° (3)	100° (3)	100° (3)	110° (2)	101° (2)	96° (2)	102° (1)	98° (1)
	2.95-3.3		90° (3)	95° (3)	100° (3)	105° (2)	102° (2)	111° (1)	105° (1)	98° (1)	94° (1)
	3.35-3.7	90° (3)	90° (3)	95° (3)	100° (2)	104° (2)	96° (2)	104° (1)	100° (1)	94° (1)	90° (1)
	3.75-4.0	90° (3)	90° (3)	95° (3)	100° (2)	96° (2)	106° (1)	98° (1)	96° (1)	90° (1)	
	4.1-4.45	90° (3)	90° (3)	95° (2)	97° (2)	103° (1)	99° (1)	94° (1)	92° (1)		
	4.5-4.85	90° (3)	90° (2)	95° (2)	98° (1)	100° (1)	94° (1)				
	4.9-5.25	90° (2)	90° (2)	95° (1)	98° (1)	94° (1)					
	5.3-5.65	90° (2)	90° (2)	95° (1)	94° (1)						
	5.7-6.0	90° (1)	90° (1)	94° (1)							
	6.1-6.45	90° (1)	90° (1)								
6.5-6.75	90° (1)										



HOLE TO BE USED ON THE REAR BRACKET

3.1.2 APPLICATION WITH BRACKET FASTENED TO SIDE WALL

ATTENTION: do not cut the rear bracket for any reason. Refer to Figures 4<sup>1</sup> and 5<sup>1</sup> and Table 2 to determine the installation position of the operator.

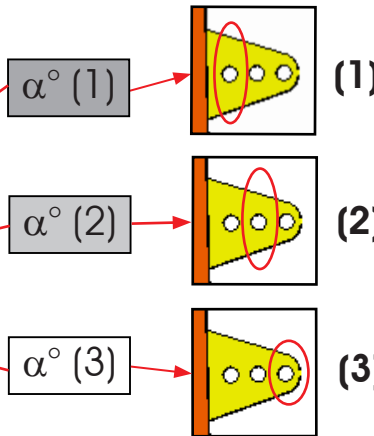


INSTALLATION DIMENSION " B¹ " (SEE FIGURE 4¹-5¹)

Dimensions in Inches

TAB. 2		B¹	
		XXX	XXXX
D¹	XXX	115° (1)	115° (1)
	XXX	110° (2)	110° (2)
	XXX	100° (3)	100° (3)

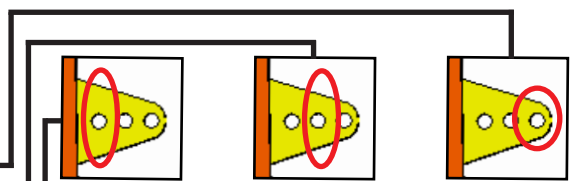
INSTALLATION DIMENSION " D¹ " (SEE FIGURE 4¹-5¹)



HOLE TO BE USED ON THE REAR BRACKET

- INTERSECT THE DIMENSIONS " D¹ " AND " B¹ " TO OBTAIN THE MAXIMUM VALUE OF OPENING ANGLES.
- ATTENTION: USE MECHANICAL LIMIT SWITCHES IN ORDER NOT TO EXCEED THE MAXIMUM OPENING ANGLES STATED IN TABLE 2 AND GUARANTEE THE CORRECT OPERATION OF THE AUTOMATED SYSTEM.

TAB. 2		B¹														
		5.0-5.25	5.5-5.65	5.7-6.0	6.1-6.45	6.5-6.85	6.85-7.25	7.3-7.65	7.7-8.0	8.1-8.45	8.5-8.8	8.85-9.2	9.25-9.6	9.65-10.05	10.1-10.4	10.45-10.75
D¹	4.75-4.85					110° (1)	110° (1)	115° (1)	108° (1)	100° (1)	100° (1)	108° (2)	100° (2)	100° (2)	100° (3)	100° (3)
	4.9-5.25					108° (1)	110° (1)	110° (1)	103° (1)	100° (1)	94° (1)	103° (2)	100° (2)	94° (2)	100° (3)	94° (3)
	5.25-5.65				100° (1)	107° (1)	108° (1)	104° (1)	100° (1)	96° (1)	92° (1)	100° (2)	96° (2)	92° (2)	96° (3)	92° (3)
	5.65-6.0				100° (1)	105° (1)	106° (1)	100° (1)	96° (1)	90° (1)	100° (2)	96° (2)	90° (2)	96° (3)	90° (3)	
	6.1-6.45			97° (1)	100° (1)	105° (1)	99° (1)	94° (1)	92° (1)	99° (2)	94° (2)	92° (2)	94° (3)	92° (3)		
	6.5-6.85		93° (1)	97° (1)	100° (1)	100° (1)	96° (1)	100° (2)	100° (2)	96° (2)	100° (3)	96° (3)				
	6.85-7.20		90° (1)	95° (1)	100° (1)	96° (1)	95° (2)	100° (2)	96° (2)	100° (3)	96° (3)					
	7.25-7.65	90° (1)	90° (1)	95° (1)	97° (1)	90° (2)	95° (2)	97° (2)	95° (3)	97° (3)						
	7.65-8.0	90° (1)	90° (1)	95° (1)	90° (2)	90° (2)	95° (2)	90° (3)	95° (3)							
	8.0-8.45	90° (1)	90° (1)	90° (2)	90° (2)	90° (2)	90° (3)	90° (3)								
8.5-8.8	90° (1)	89° (2)	90° (2)	90° (2)	90° (2)	90° (3)	90° (3)									

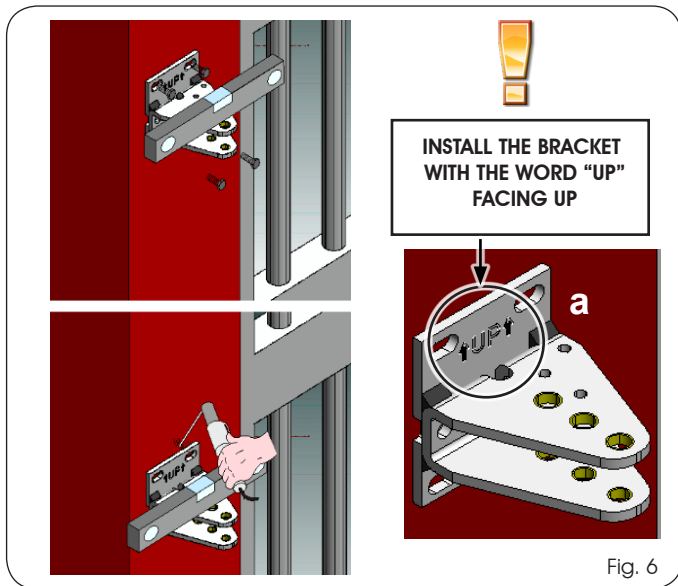


HOLE TO BE USED ON THE REAR BRACKET

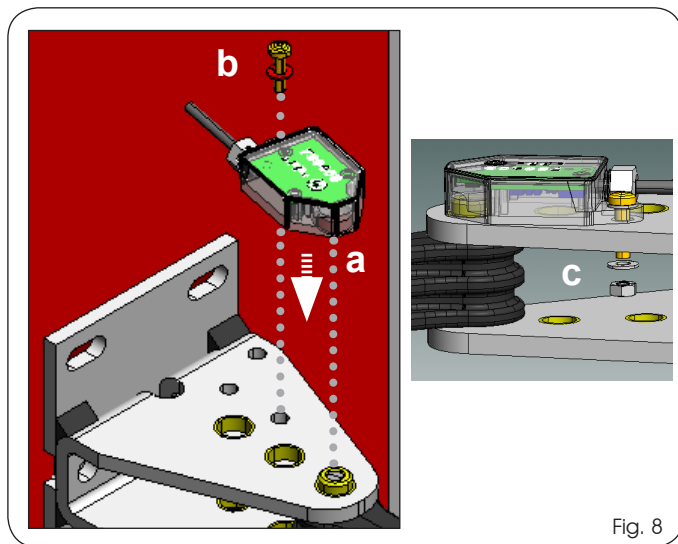
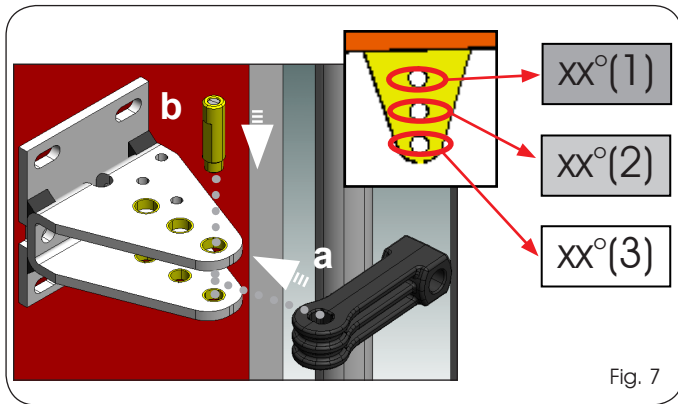


### 3.2 INSTALLING THE OPERATOR

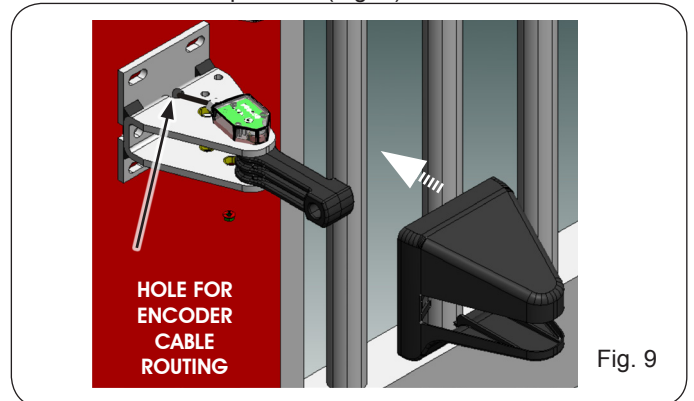
1. Check the perfect level then weld the rear fitting to the pillar or fix it by means of suitable screws, dowels / threaded inserts. Observe the dimensions stated in Tab.1 (never cut the rear fitting; moreover it must be installed with the word "UP" facing up as shown in Figure 6 Ref. a).



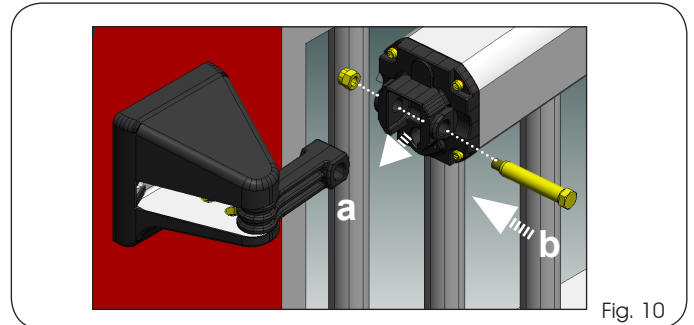
2. While referring to Table 1 (see white or grey boxes), choose the fixing hole on the rear bracket and install the fork (Fig. 7 Ref. a) by assembling it with the special pin supplied (Fig. 7 Ref. b).



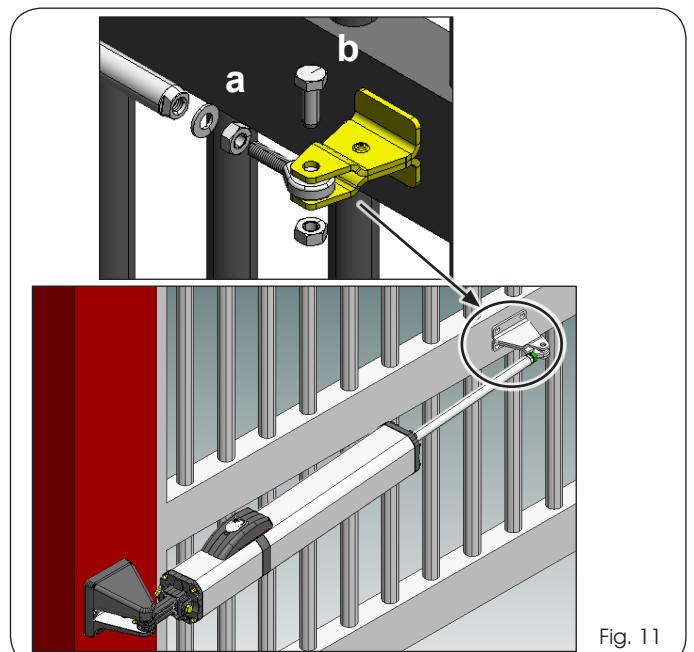
3. Install the encoder on the rear bracket by correctly engaging it on the pin, then fix it with the screw and nut supplied (Fig. 8 Ref. a, b and c).
4. Slightly press the protection cover on the rear bracket until it locks in position (Fig. 9).



5. Assemble the operator and the rear bracket by means of the pin and nut supplied (Fig. 10 Ref. a - b).



6. Screw one-half of the thread of the front articulated joint on the operator rod and tighten the nut (Fig. 11 Ref. a).
7. Unlock the operator according to Section 4.
8. If no external mechanical stop point at closure is present, you may use the stop point inside the operator (extend the rod completely up to its internal stop point).
9. If an external mechanical stop point at closure is present, extend the rod completely and then insert it 0.25 in.
10. Close the gate leaf and install the front fitting on the rod as shown in Fig. 11 Ref. b.



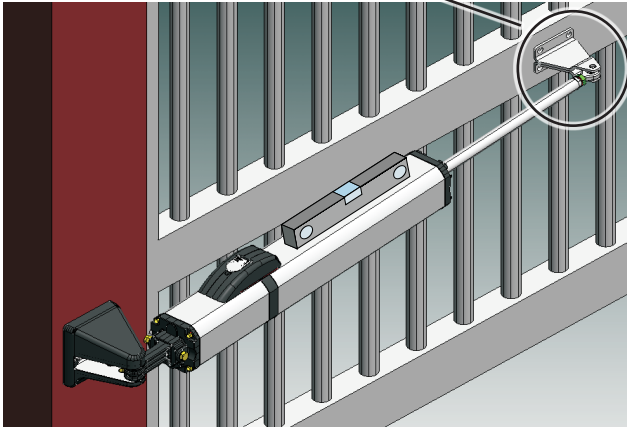
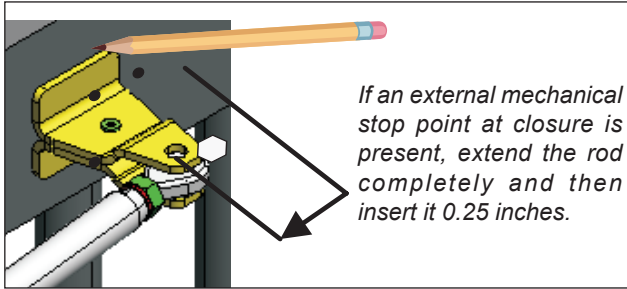


Fig. 12

11. Establish the fixing position of the front bracket on the leaf and mark the fixing points (Fig. 12) (the operator must be perfectly level).
12. Disassemble the operator from the front bracket to avoid damaging the rod when the front fixing is installed on the gate.
13. Weld the front bracket directly on the leaf or screw it by means of threaded inserts.
14. If an opening mechanical stop on ground is not installed, spacers can be used (Fig. 1 Ref. 7). Remove the front articulated joint and insert on the rod the number of spacers required to reach the desired opening angle (Fig. 14).

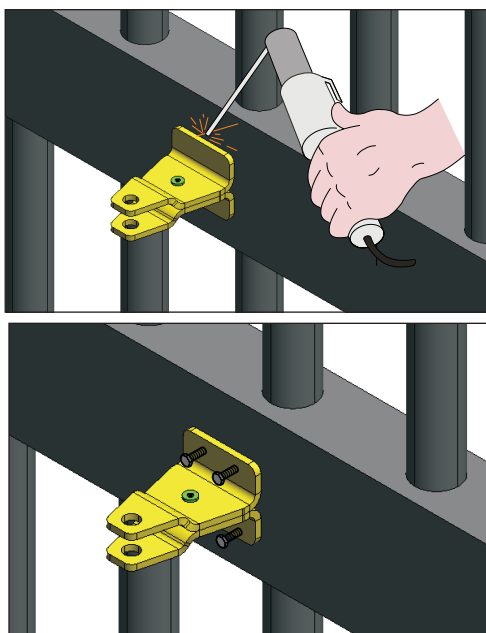


Fig. 13

15. Secure the operator to the front bracket (Fig. 15).
16. Remove the bleed screw (Fig.16 Ref. a) paying special attention to leave the sealing O-Ring in its seat.
17. Install the metallic protection cover as shown in Fig. 16, insert and tighten both tie-rods.
18. Connect the cable to the operator using the two screws supplied, as shown in Fig. 17.

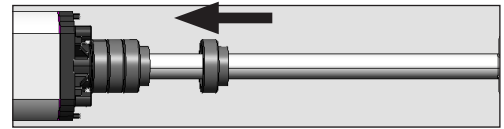


Fig. 14

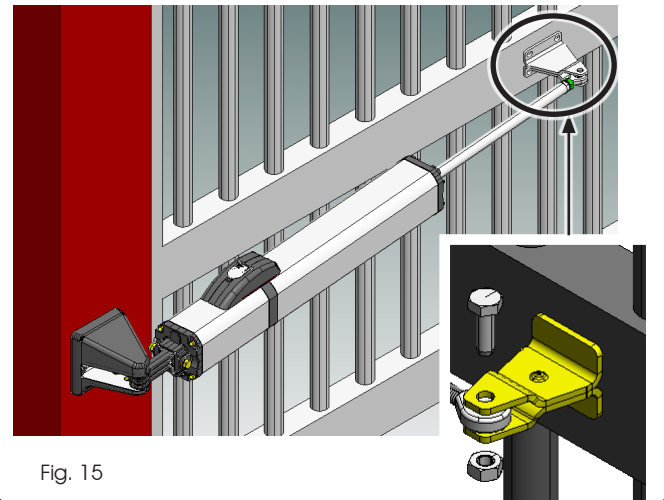


Fig. 15

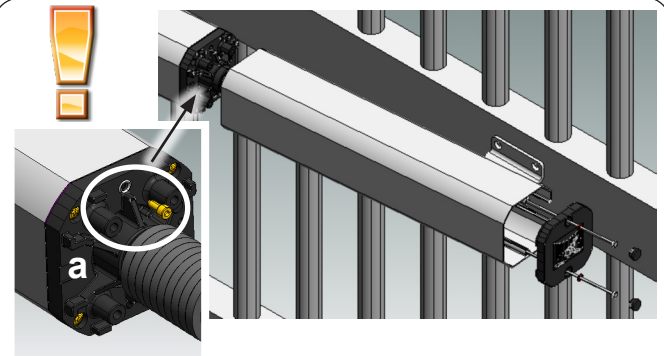


Fig. 16

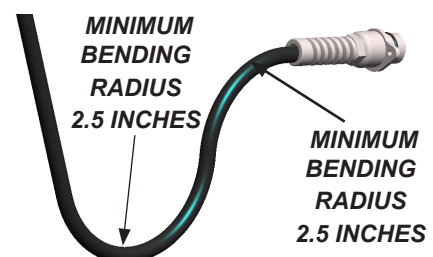
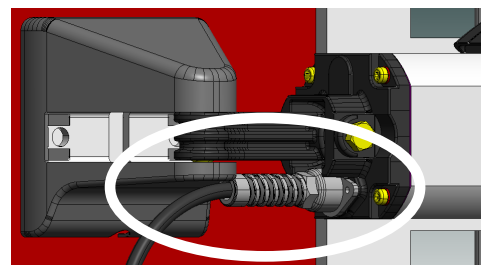



Fig. 17

## 4. MANUAL OPERATION

 **Models S450H and SB are not equipped with a release facility because, thanks to the particular configuration of the hydraulic distributing flange, you do not need to release the operator to manually move the leaf.**

If the gate is to be operated manually because of a power failure or an automated system fault, activate the release device.

1. Lift the protection lid (Fig. 18, Ref. a) and insert the key in the lock (Fig. 18, Ref. b).
2. Turn the key 90° clockwise to open the cover and lift it.
3. Turn the release knob (Fig. 18, Ref. c) counter-clockwise until it stops.
4. Open or close the leaf manually.

To restore the normal operation of the automated system, perform the above described operations in reverse order.

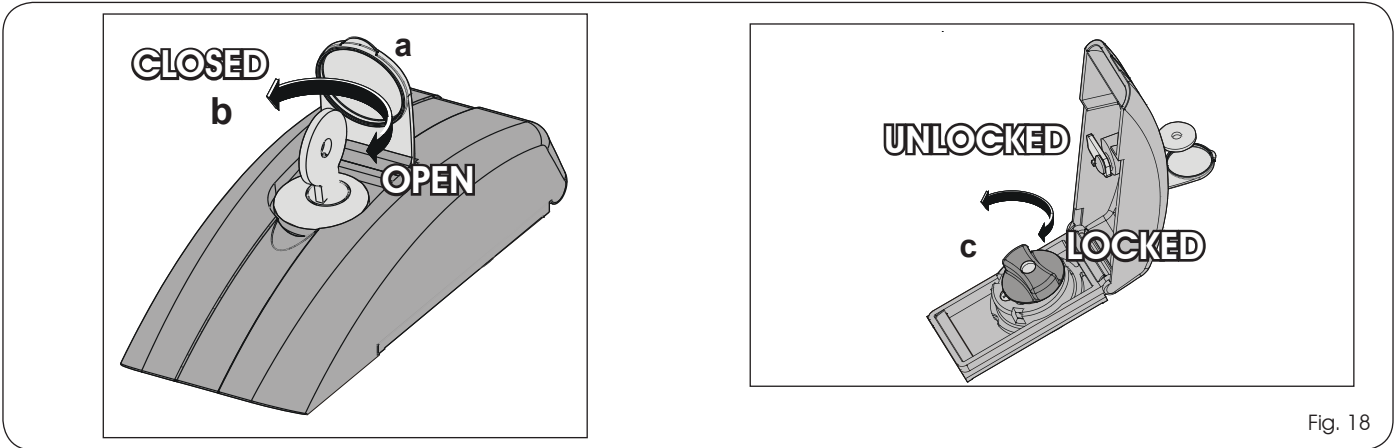


Fig. 18

## 5. ELECTRICAL CONNECTION OF THE ENCODER

The S450H operator is fitted with an encoder system. The proper assignment of the leaf to the corresponding encoder depends on the connection of the two encoder wires (leaf 1 - encoder 1; leaf 2 - encoder 2).

**THE ENCODER WIRES MUST BE CONNECTED TO THE BUS CONNECTOR OF THE ELECTRONIC EQUIPMENT.**

To verify the proper combination **LEAF 1 - ENCODER 1 - MOTOR 1** and **LEAF 2 - ENCODER 2 - MOTOR 2**, refer to the LEDs on the encoders, as shown in Table 2 and Figures 19, 20 and 21.

**To invert the leaf-encoder combination, change the encoder polarity by swapping its wires until the right LEDs are lit.**



 **The LEDs on the encoder also remain visible when the rear bracket protection cover is installed.**

**DL 1: must always be ON** to ensure the right connection between encoder and board.  
**DL 2: identifies the leaf to which the encoder is installed.**

If the encoder is installed on leaf 1, the DL 2 LED is ON.  
 If the encoder is installed on leaf 2, the DL 2 LED is OFF.

**DL 3: when blinking** at regular intervals, it signals the pulse reading **during the leaf movement. When the gate leaf is stationary, DL 3 is OFF.**

TABLE 3			
LED	ON	BLINKING	OFF
DL 1	Power supply ON and BUS - board communication	Power supply ON but no BUS communication (e.g.: cabling fault)	Power supply OFF and no BUS communication (e.g.: missing or broken connection)
DL 2	Encoder associated to leaf 1	/	Encoder associated to leaf 2
DL 3	/	Pulse reading during leaf movement	Leaf stationary

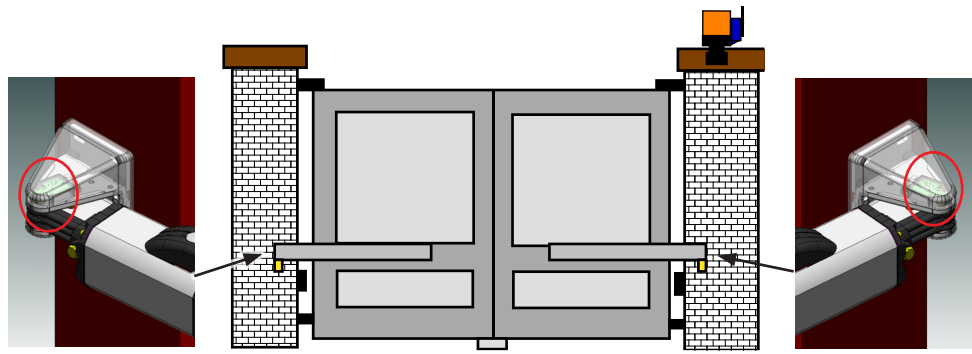


Fig. 19

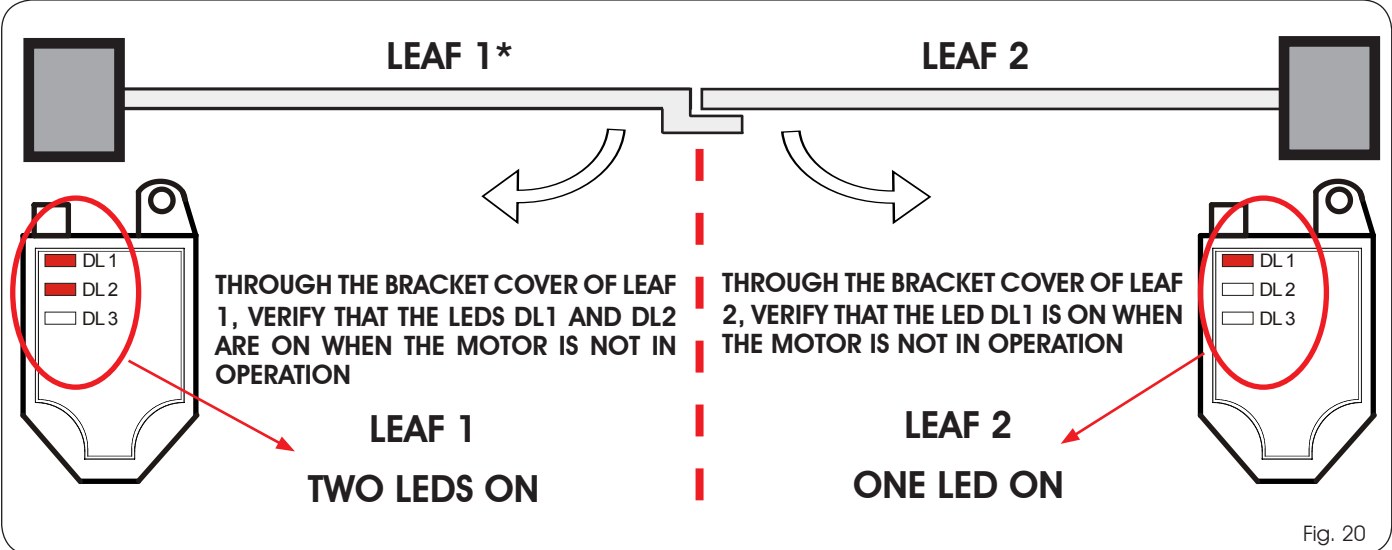


Fig. 20

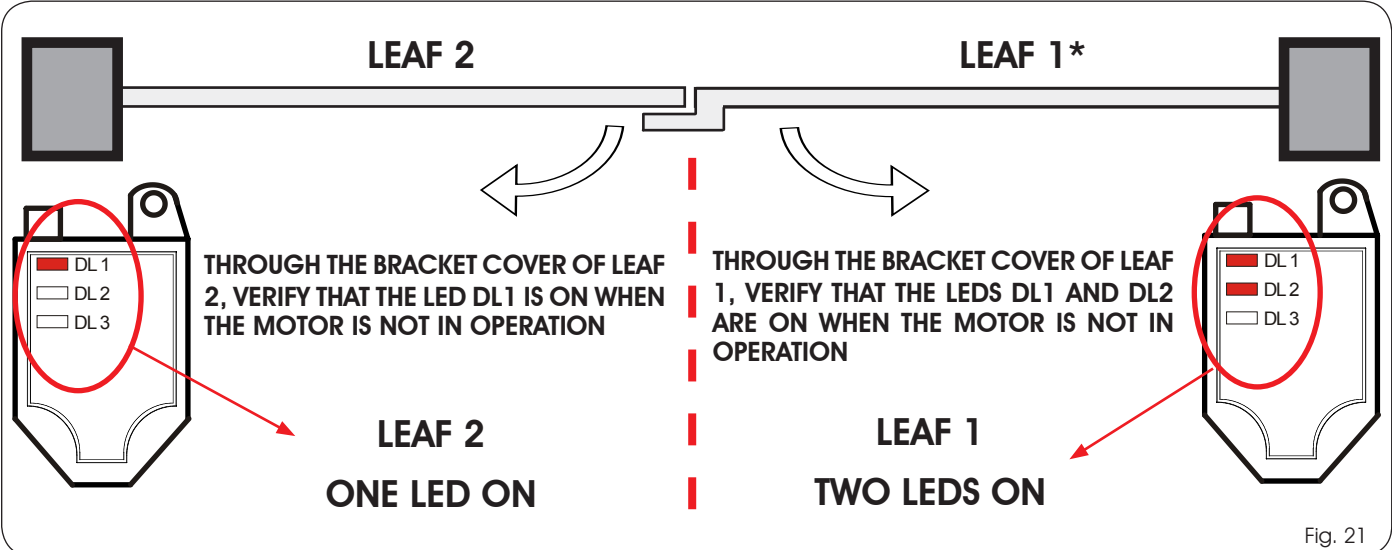


Fig. 21

**👉** \* LEAF 1 OPENS FIRST AND CLOSES AFTER LEAF 2. IF LEAF 1 AND LEAF 2 DO NOT OVERLAP, ON THE ELECTRONIC CONTROL BOARD, IF AVAILABLE, THE LEAF DELAY CAN BE SET TO ZERO.

**👉** BY SWAPPING THE ENCODER WIRES, THE ENCODER ASSOCIATED TO LEAF 1 CAN BE COUPLED TO LEAF 2 AND VICE VERSA (see example Fig. 22)

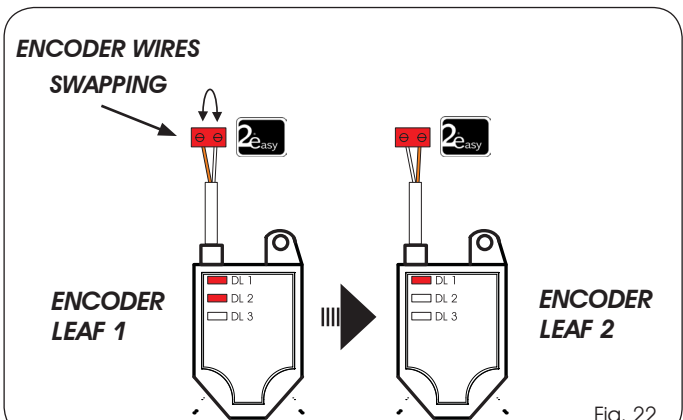
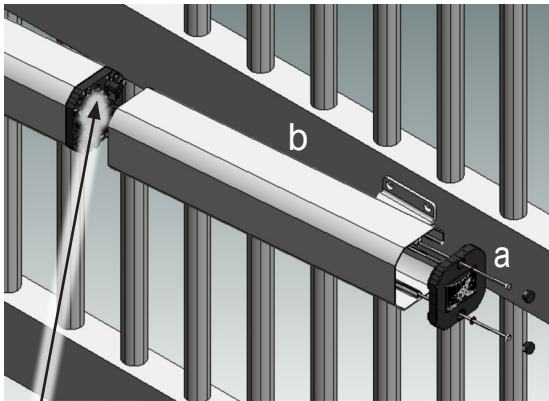


Fig. 22

**6. BLEEDING**

1. Loosen the tie-rods (Fig. 23 ref. a) and remove the metal protective housing (Fig. 23 ref. b).



Remove the upper tie-rod and be careful with the O-ring that must remain in its seat.

Fig.23

2. Remove the screw in Fig. 24 ref.d from the front fitting
3. Remove the joint (Fig.24 ref.f) from the operator stem. (Fig. 24 ref. g).

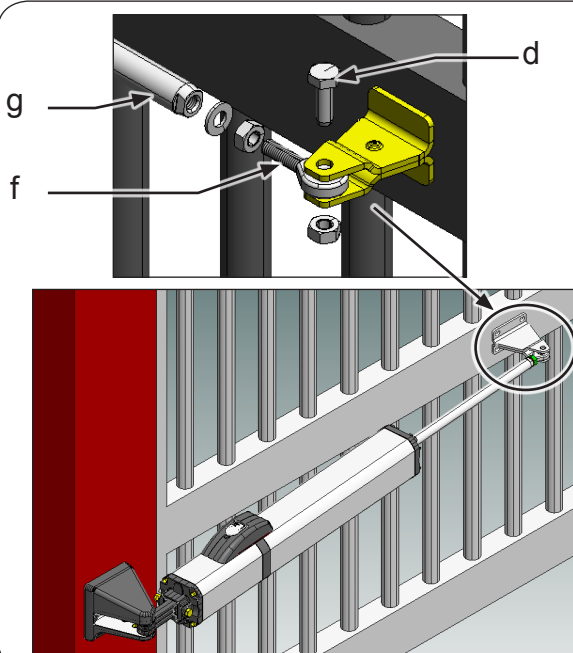


Fig.24

4. Remove all spacers, if present (Fig. 25).

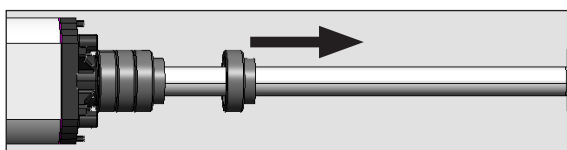


Fig.25

5. Tilt the operator upward as much as possible. Do not force the rear fitting too much.
6. Supply the operator with power and repeatedly move the stem in and out, over its complete stroke, until reaching a smooth movement (Fig. 27).



**TO PREVENT OIL LEAKAGE FROM THE BREATHER HOLE, DO NOT TILT THE OPERATOR DOWNWARD**

Fig.26

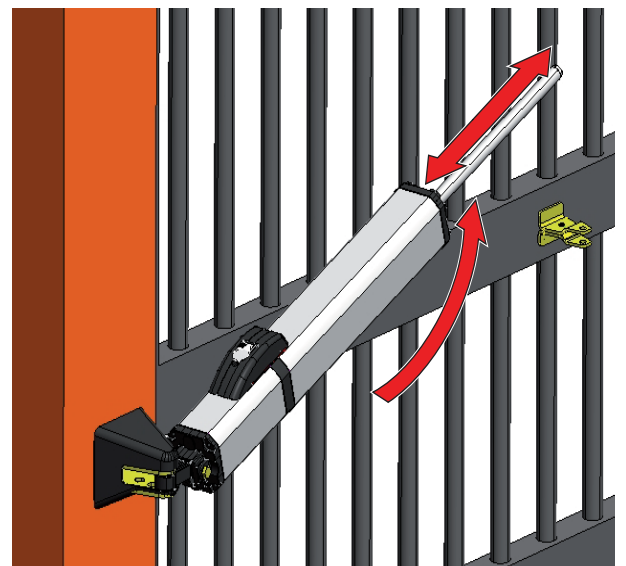
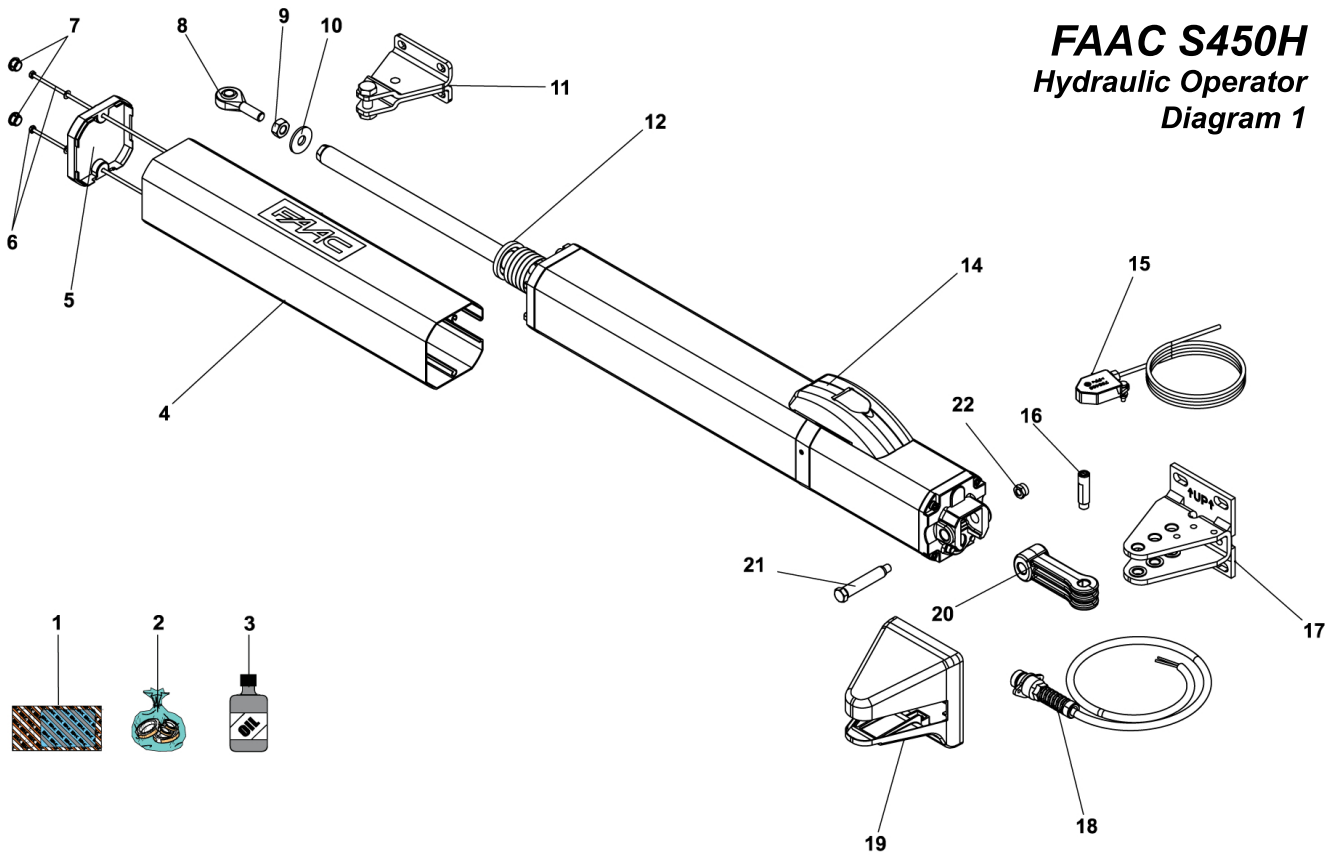


Fig.27

7. After bleeding, repeat the operations described above in reverse order.

7. S450H PARTS DIAGRAMS

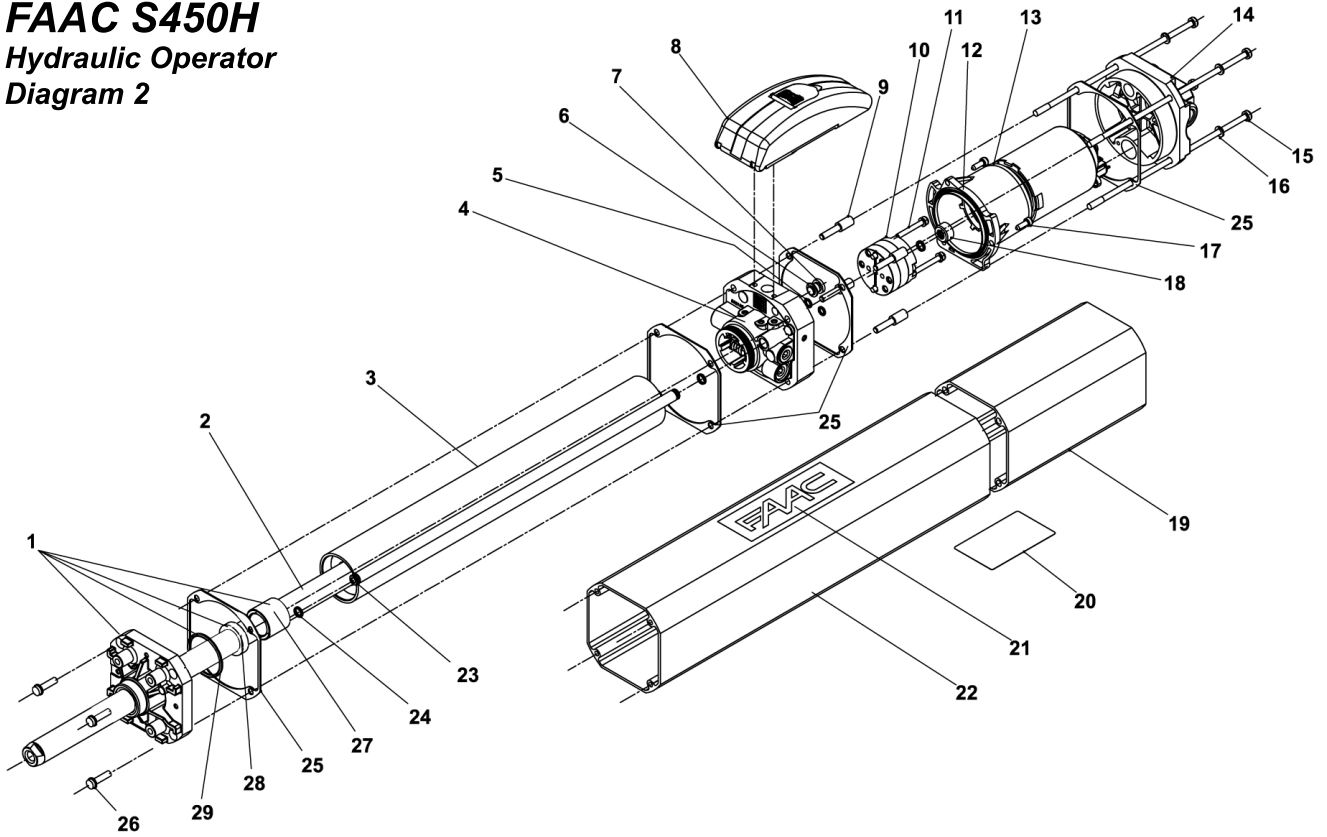


**FAAC S450H**  
Hydraulic Operator  
Diagram 1

Part	Part Number	Description
01	63001885	S450H SKINPACK
02	63000606	SEAL KIT S450H
03	714017	HYDRAULIC OIL FAAC HP OIL LT. 1
04	63001895	S450H CARTER WITH FAAC LABEL
05	4170015	CARTER 400/87
06	63001905	SCREW FOR CARTER S450H
07	7119405	CAP FOR HOLES COVER CARTER
08	7073035	M10 JOINT
09	702101	HEX. NUT 10 5588 5S Z
10	703027	WASHER 10 6593 CAT. C R40 Z
11	63001945	S450H FRONT FASTENING

Part	Part Number	Description
12	63001975	SPACERS KIT FOR S450H
14	63001985	RELEASE ASSY S450H
15	63001875	S450H ENCODER
16	63001965	S450H SHORT PIN
17	63001915	REAR BRACKET FOR S450H
18	96001935	S450H MOULDED CABLE FEMALE KIT
19	63001925	S450H BRACKET COVERING
20	63001955	REAR EYE TIE ROD FOR S450H
21	7182175	LONG PIN
22	702302	NUT AUT. 8 7474 5S Z

**FAAC S450H**  
**Hydraulic Operator**  
**Diagram 2**



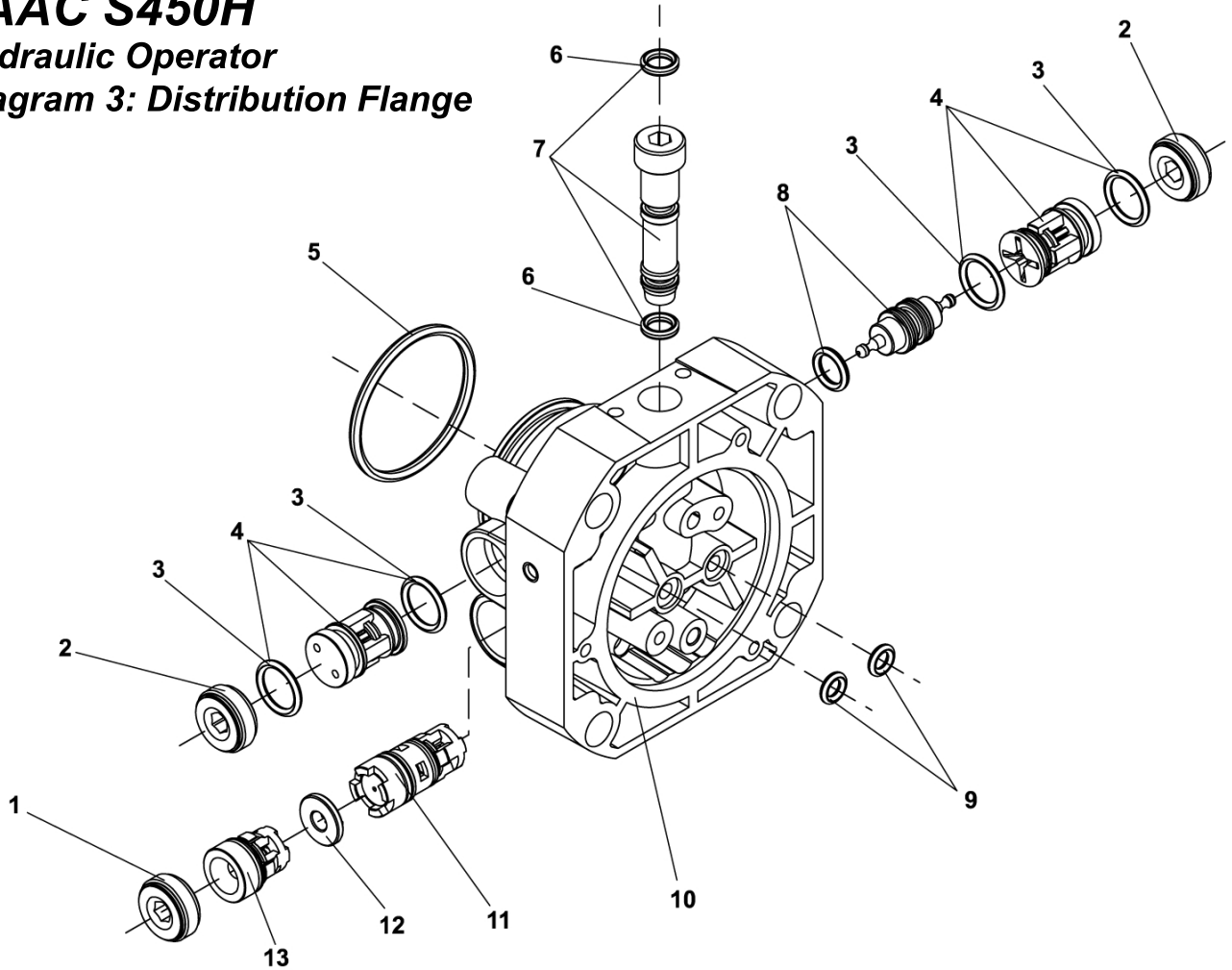
Part	Part Number	Description
01	63000716	S450H FRONT FLANGE
02	63000656	S450H RIVETED PISTON
03	63000646	CYLINDER PISTON S450H
04	63000676	S450H CB GEAR FLANGE
05	7090010015	SEAL OR 4.48X1.78 (2018)
06	63000756	S450H PLUG SEAL
07	63000766	DIN 908 M8X1 PLUG
08	63001985	REALEASE ASSY S450H
09	63000746	S450H TANK SCREW
10	63000696	10010 S09-169 1.5 L/MIN (S450H) PUMP
11	701996	TC M4X30 TORX T20 INOX DE 7
12	63000626	S450H MOTOR COVER KIT
13	63000636	S450H MOTOR ASSEMBLY
14	63000806	S450H REAR FLANGE
15	63000786	S450H TIE ROD
16	703121	WASHER GROWER M5 A2 UNI 1751 (INOX)

Part	Part Number	Description
17	701985	TC M4X12 TORX T20 INOX DE 7
18	63000706	S450H SPLINED JOINT
19	63000776	S450H MOTOR CARTER
20	903122	ETICH.PET+TRANSPARENT ARGENTO 45X75
21	63001865	FAAC STICKER FOR S450H
22	63000736	S450H TANK
23	63000726	RETRACT TUBE S450H
24	7090815	-
25	63000013	S450H GASKET D80 SPARE PART
26	701829	SCREW TC TORX M5X20 INOX WITH GROWER
27	708009	BUSHING 20X28X24.5 20E7
28	63000315	EU 2028/SP-Z20 SEAL
29	7090350025	GASKET OR 34.60X2.62 (3137)

# FAAC S450H

## Hydraulic Operator

### Diagram 3: Distribution Flange



Part	Part Number	Description
01	63000816	VALVE RING NUT
02	63000816	VALVE RING NUT
03	7090050015	GASKET OR 10.82X1.78 (2043)
04	4404085	STOP VALVE IN ZAMACK
05	7090350025	GASKET OR 34.60X2.62 (3137)
06	7090280015	GASKET OR 5.28X1.78 (2021)
07	63000826	RELEASE VALVE S450H

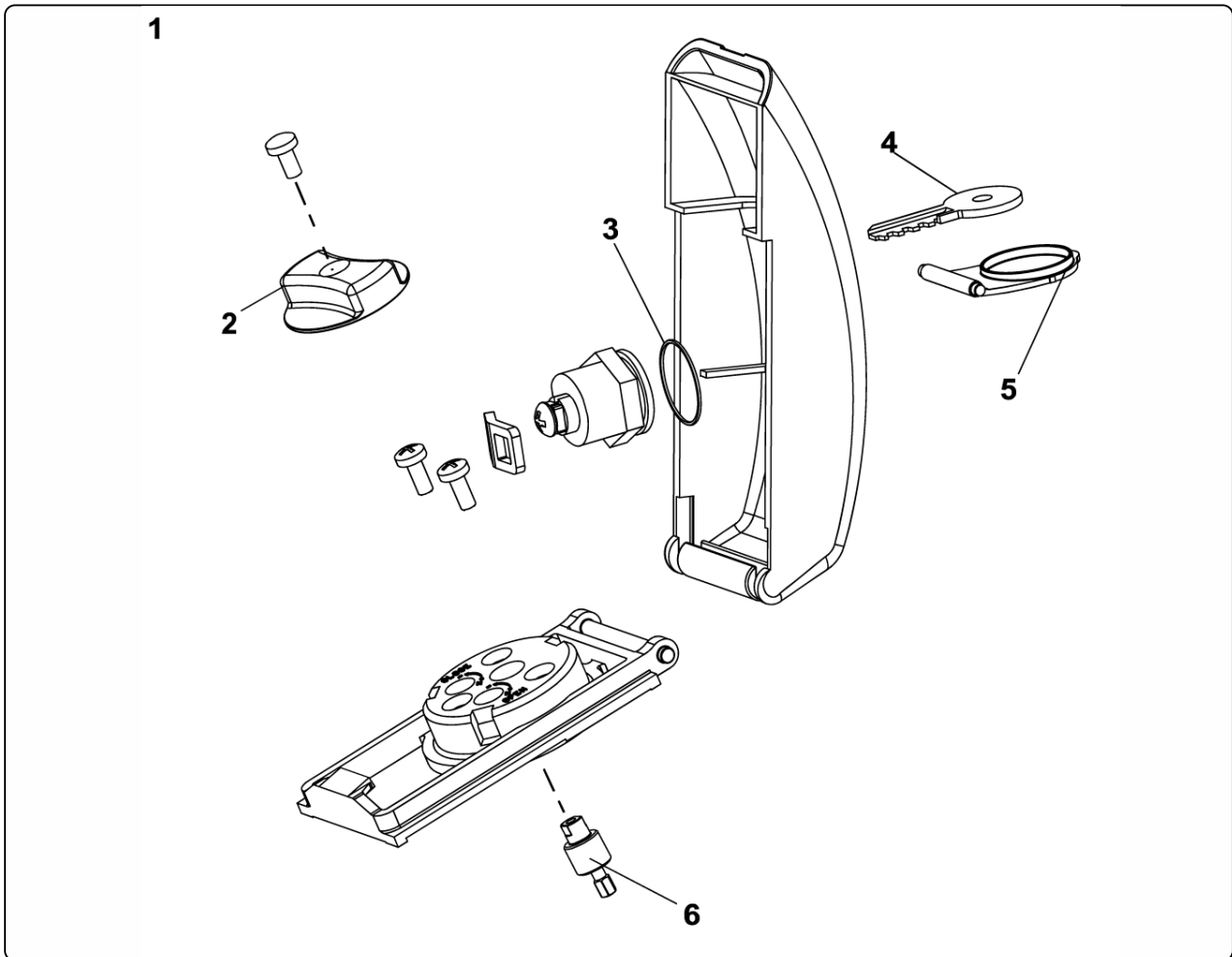
Part	Part Number	Description
08	4180315	593-595 COMMUTATING PISTON
09	7090010015	SEAL OR 4.48X1.78 (2018)
10	63000676	S450H CB GEAR FLANGE
11	4404095	2006 SUCTION VALVE
12	63000836	VALVE SPACER FOR S450H
13	4404065	SUCTION VALVE WITH SPRING



# FAAC S450H

## Hydraulic Operator

### Diagram 4: Emergency Lock Release



Part	Part Number	Description
01	63001985	RELEASE ASSY S450H
02	7290445	2005 RELEASE HAND GRIP
03	7090895	21X2 N70B200V SEAL
04	7131005	KEY MOD. 3889.0913
05	7275275	CAP FOR LOCK 400/422 RELEASE 2005
06	63000666	S450H RELEASE PIN