



**INSTALLATION MANUAL**  
**SHAFT-30**

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## 1. Main technical parameters

Power supply	230V/50Hz
Max. output torque	30 N·m
Motor rotate speed	1400 r/min
Max. travel distance	5 m
Output shaft aperture	25.4 mm
Length of hand chain	8 m
Roller rotate	32 r/min
Reduction ratio	43:1
Weight	12 Kg
Dimension	370mm/270mm/150mm
Thermal protection temperature	120 °C
Intensity*	50%
Oil quantity	0.22L
Oil type	Shell Omala HD220
Working time	4 min

\* - the ratio of the automatic movement to the time of one cycle (opening and closing). For example: intensity = 50%; opening time = 30s. (The same is required for closing). It turns out that automation is designed for 1 cycle of 30 x 2: 0,5 = 120 seconds

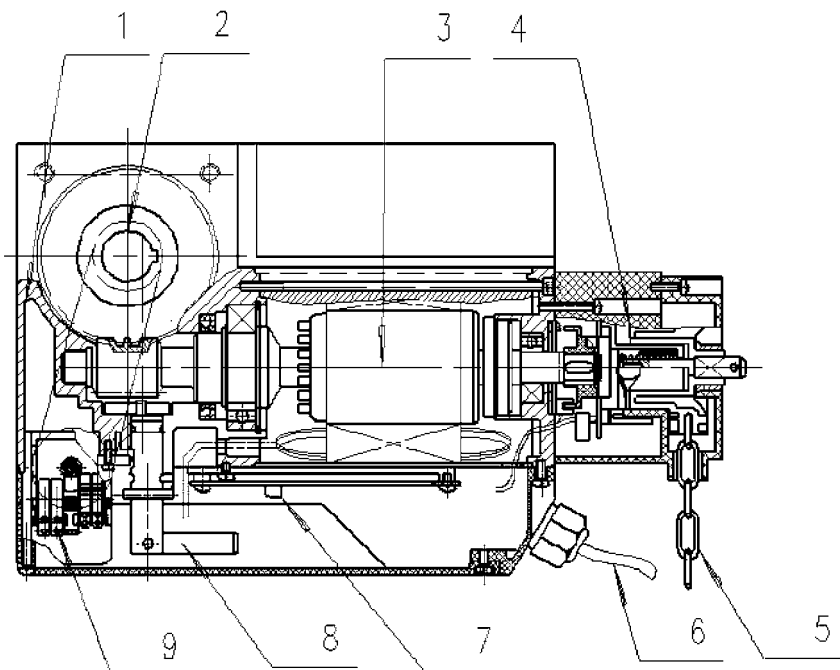
## 2. General description

Shaft-30 door operator is applied widely to garages, industrial or commercial buildings. It is featured with compact structure, safe and reliable performance.

### Main function

- Auto brake system: it makes the motor stop fast and accurately.
- Rotate the release handle 180° anticlockwise, release the door from the door operator immediately. The operator motor may only be disengaged with the door closed.
- In the event of power failure, a release hand chain allows you to operate the door manually.
- It has double limit switches to ensure the operator safety and reliability.
- The device is not supplied by a power supply cable

## 3. Main structure



1. Reducer casing
2. Output shaft
3. Motor
4. Hand chain components
5. Hand chain
6. Cable 3x1,5 mm
7. Wiring terminal block
8. Release handle
9. Limit switch

#### 4. Safety instructions

- It is important that you read all the following instruction:
- The door operator should be installed and put into operation by qualified personnel. Otherwise, serious personal injury or property damage may occur.
- Open and close the door manually, make sure the door can be moved smoothly.
- The door must be equipped with balance springs, otherwise the operator will be damaged. Before installation of the door operator, the door should be carefully checked for being kept well balance. The door must be in good working order.
- It is recommended to install limit devices on door tracks to prevent the door from sliding out of the tracks.
- The operator motor may only be disengaged with the door closed. This must be carried out by specialist personnel for maintenance purpose only.
- Keep button switch away from children, to prevent the door operator from being activated involuntarily.
- The operator should be switched off before repairing it or opening its cover.
- When opening or closing the door, do not attempt to walk or drive through the door.
- The door should only be operated when it can be observed to avoid accidents.
- Do not pull the hand chain during opening or closing the door.



**WARNING:** Important safety instructions. It is important for the safety of persons to follow all instructions. Save these instructions. Frequently examine the installation, in particular check cables, springs and mountings for signs of wear, damage or imbalance. Do not use if repair or adjustment is needed since a fault in the installation or an incorrectly balanced door may cause injury.



**WARNING:** Important safety instructions. Follow all instructions since incorrect installation can lead to severe injury.

**WARNING:** permanently fix the labels warning against entrapment in a prominent place or near any fixed controls.

- Frequently examine the installation, in particular check cables, springs and mountings for signs of wear, damage or imbalance. Do not use if repair or adjustment is needed since a fault in the installation or an incorrectly balanced door may cause injury;
- before installing the drive, remove all unnecessary ropes or chains and disable any equipment, such as locks, not needed for powered operation;
- install the actuating member for the manual release at a height less than 1,8 m;
- If removable, the actuating member should be stored in direct vicinity of the door.
- install any fixed control at a height of at least 1,5 m and within sight of the door but away from moving parts
- It is not required to specify a minimum height for key-operated switches.
- the fixed electric wiring shall have built-in disconnectors according to the wiring rules
- good condition of system units and safety devices order shall be checked each half year
- the motor is used for mounting at the height not more 2.5 meters. To mount the motor at the height more than 2.5 meters it is necessary to observe the rules of working at the height.
- If the drive is not to be used with doors having openings exceeding 10 mm in diameter or having edges or protruding parts a person could grip or stand on.

#### 5. Installation

Before installing, make sure the door is in good working order. We advise to install the operator as follow see 'direct installation' section or 'indirect installation' section:

(1) Direct installation (standard accessories see page8 packing list)

Screw the wall bracket (Lshaped iron fitting) onto the wall. You may install the wall bracket to left side or right side of operator.

Remove the plastic housing, rotate release handle 180°anticlockwise.

Slot the 1st spacer ring onto the door shaft.

Slot the door operator onto the door shaft (ensure correct position of the key) and screw onto the wall bracket.

Slot the 2nd spacer ring onto the door shaft and push against the door operator. Push the 1st spacer ring against the door operator and fix both rings.

You also can install the door operator as shown in Fig.3.

Drill four holes on the shaft bearing bracket.

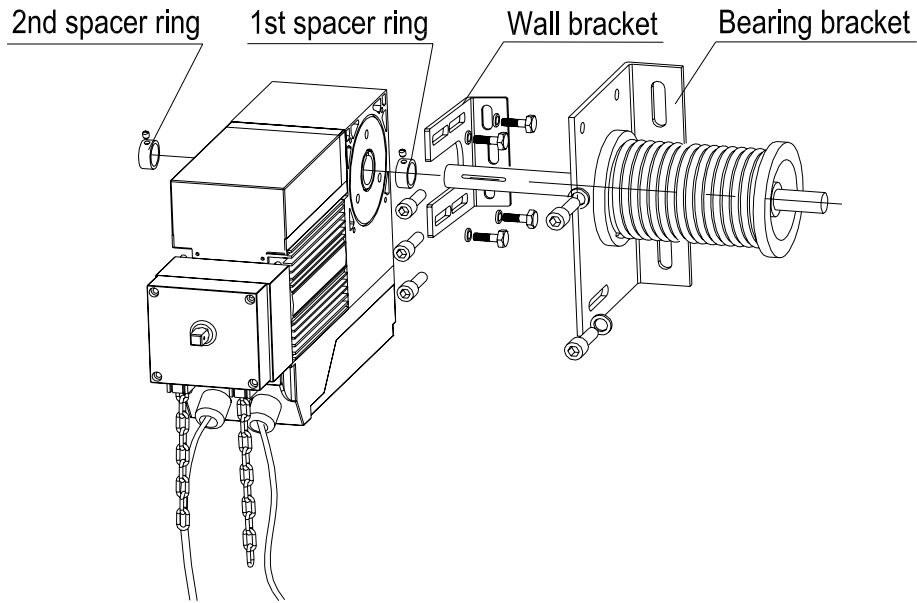
Remove the plastic housing, rotate release handle 180°anticlockwise.

Direct attach the door operator onto the door shaft end and screw onto the shaft bearing bracket, ensure the correct position of the key.

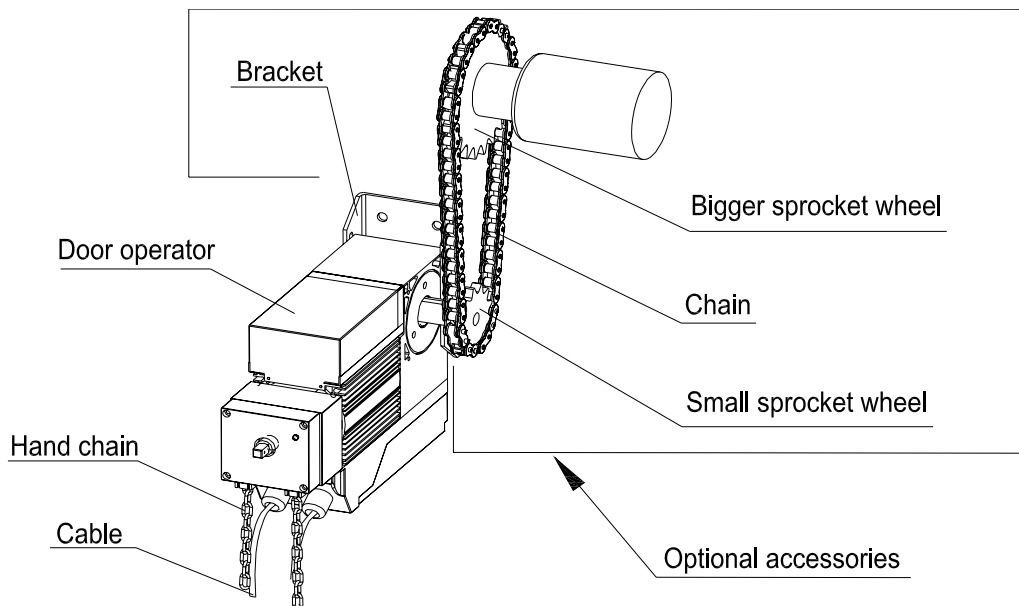
Adjust the position of the operator and ensure the hand chain hangs vertically.

Slot the spacer ring onto the shaft and fix ring with screw.

(2) Indirect installation (You can purchase the optional accessories from our company.)



Install the bigger sprocket wheel onto the door shaft end.  
 Fix the bracket on the wall with expansion bolts according to the length of the chain.  
 Attach the door operator on the bracket with four M10 bolts. Thread up the chain by adjusting the position of the operator.

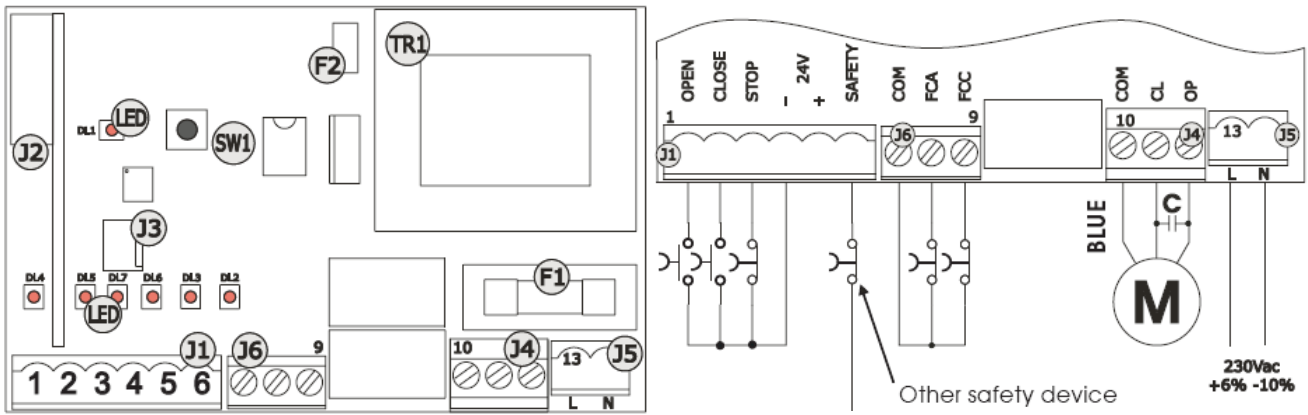


**6. Electrical**

Wiring chart see Fig.5.

Wires within the cable shall be protected so that no damage can result from contact with any rough, sharp part. In order to protect electrical elements from water, waterproof adapter must be tightened by turning the plastic nut.

Motor			Capacitor		Limit switch			Opened position signal output	
U(Blue)	V(Brown)	W(Black)	C	C	OP(Green)	CO(White)	CL(Red)	LS(Yellow)	LS(Yellow)
1	2	3	4	5	6	7	8	9	0



- J1 inputs terminal board and power supply to accessories
- J2 connector for radio receiver (see Note)
- J3 (not used)
- J4 motor terminal board
- J5 230 V ac power supply terminal board
- J6 limit-switch terminal board
- LED signalling key
- TR1 transformer
- F1 5A - 250 V(motor protection)
- F2 self-resetting (accessories protection )

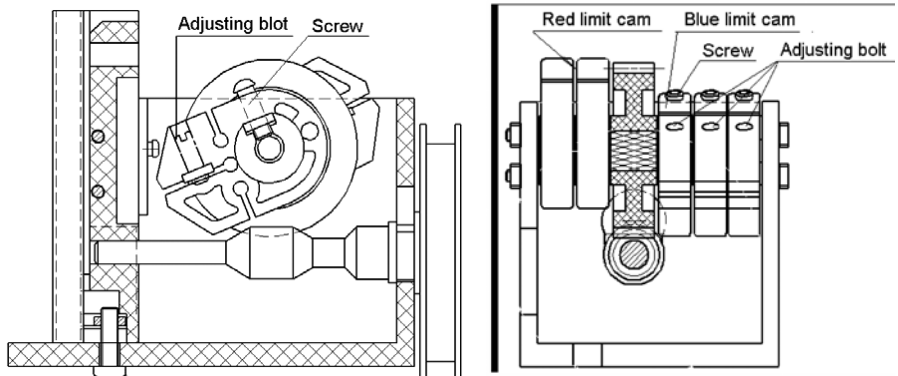
- To select the function logic, press the SW1 pushbutton the number of times equal to the number of the required logic, irrespective of the current logic and the door status. The interval between the pulses must be less than 1 second.
- The selected logic is then continuously displayed by the DL1 LED, which flashes once a second at 3 sec intervals, equal to the number of the required logic. To select the logics, press SW1 the number of times indicated in the table below:

No.	Logic	Description	SW1 PRESSINGS	LED	Description	ON (closed contact)	OFF (Open contact)
1	B/C (default)	Mixed B / C	once	DL1	/	Flashing to indicate selected logic	
2	B	Semiautomatic B	twice	DL2	FCA	<b>Opening limit switch free</b>	Opening limit switch engaged
3	C	Manned	3 times	DL3	FCC	Closure limit switch free	<b>Closing limit switch engaged</b>
4	EP	Stepped semiautomatic	4 times	DL4	OPEN	Command enabled	<b>Command disabled</b>
5	AP	Stepped automatic	5 times	DL5	CLOSE	Command enabled	<b>Command disabled</b>
6	P	Stepped automatic	6 times	DL6	SAFETY	<b>Safety devices disabled</b>	Safety devices engaged
7	A	Automatic	7 times	DL7	STOP	<b>Command disabled</b>	Command enabled

**7. Adjustment Limit switch**

Rough adjusting (Setting of the close limit)

- Check that the operator has firmly installed, close the door to fully closed position and observe the rotating direction of red limit cams during closing. Loose the screws of red limit cams, then turn two cams in the same direction until the limit switches click, finally tighten the screws.
- If the gap between the door and its bottom position is larger than 20mm, repeat this step until the door is less than 20mm from the closed position.



**Fine adjusting (Setting of the close limit)**

- The adjusting bolts are used for fine adjustment.
- After rough adjustment, you can close the door and observe whether the door has successfully reached the closed position. If need, fine adjust the adjusting bolts in the red limit cams carefully to make the door reach the closed position, anticlockwise to close more, clockwise to close less.

**Rough adjusting (Setting of the open limit)**

- Open the door to arrive at its opened position, observe the rotating direction of blue limit cams during opening. Loose the screws of blue limit cams, then turn three cams in the same direction (i.e. on the opposite direction of the red cam) until the limit switches click, finally tighten the screws.

**Fine adjusting (Setting of the open limit)**

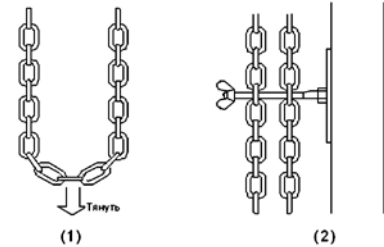
- After rough adjustment, you can open the door and observe whether the door has successfully reached the opened position. If the door does not reach the fully opened position (less than 20mm), fine adjust the adjusting bolts in the blue limit cams to make the door reach the opened position, anticlockwise to open more, clockwise to open less.
- If the distance between the door and its top position exceeds 20mm, then the blue limit cam (rough adjustment) should be readjusted.

**Important note:**

- **Please use the control box button to adjust the limit switches, do not use remote control.**
- **When the door reaches fully closed or opened position, please ensure that the limit switches are active and the indicator light on the control box turns off. If the light does not turn off, please readjust the limit switch.**

**8. Hand chain**

- You can open or close the door manually by operating the hand chain, disconnects the door operator from the electricity supply. This time, the close indicator light on the control box will flash, and after actuation of the hand chain, the operator may not work when you press the button, please pull the hand chain see Fig.7 (1), a reset is carried out and the operator is switched on electrically. The close indicator light turns off.
- It is important to ensure that the chain is not fitted twisted. If the chain is twisted, malfunctions may occur when the hand chain is used.
- It is essential to screw the hand chain firmly in place as shown in Fig.7 (2).
- Pull the chain only when the power failure. Please do not pull the chain during closing or opening the door, otherwise, serious personal injury or property damage may occur.
- Do not pull the chain too hard, otherwise the chain components will be damaged.

**9. Maintenance**

- Make sure the door is in good working order and that is correctly balanced.
- The door operator should be checked and maintained by a qualified technician.
- Keep operator clean at all times.
- Our company reserves the right to change the design and specification without prior notification.

**10. Troubleshooting**

Error	Cause for error	Remedies
The operator will not work.	Power is OFF.	Make sure that power is ON.
	The door is obstructed.	Remove obstructions.
	The wires become loose.	Fasten the wires.
	The release handle is disengaged.	Engage the release handle.
After using the hand chain, the operator does not work after you press control box button or transmitter.	An automatic reset is not carried out.	Pull the hand chain see Fig.7 (1) to carry out an automatic reset. (See Hand chain section)
The operator stops working suddenly.	Thermal overload protection in motor is active.	Allow the motor to cool down.
The door cannot be opened or closed fully.	Wrong adjusting of limit switch.	Readjust the limit switch.



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