

BLDC Industrial Door Operator User Instruction

INDUS50DC/INDUS70DC/INDUS100DC/INDUS150DC



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WARRANTY

1. To repair against this warranty card and invoice during the warranty period.
2. Warranty period: 1 year after the date of invoice.
3. Without unauthorized dismantling, any product broken or damage due to quality problem, we' ll offer the repair service for free or replace for free.
4. The malfunction and damages caused by incorrect use or man fault is not covered by this warranty.

CONTACT US

E-mail: sales@gatexpert.com

- Please fill in the order information in the form below.
- All personal information you provided will be only used for warranty service and kept strictly confidential.
- Refer to this list when contacting GATEXPERT for technical service or assistance with your automatic gate opener.

Order Number	Product Model	Purchase Date	Country / Region
Email Address			
Issue Details			



Safety Instruction

1. The industrial door operator should be installed and put into operation by qualified personnel. Otherwise, serious personal injury or property damage may occur.
2. Installation and wiring must be in accordance with the construction standards and electrical standards, diameter $\geq 1.5\text{mm}^2$; power must have a reliable grounding, ground wire must be reliably connected to the place labeled ground tab, ground lead on the power line is prohibited to be removed; front end of incoming power line should be installed with electrical leakage protector which is in line with national standards.
3. This industrial door operator is only allowed to be installed on well-balanced door which has balance spring, otherwise machine may be damaged due to overload.
4. Door should be flexible and run without stagnation; lead rail end of door must be installed with mechanical stop block and buffering booster to prevent the door from rolling out.
5. Control box should be installed in the wall or column of 1.4 meters where the operation of door can be observed to prevent children from inadvertently touching. While keeping the remote control, prohibit children to touch or play just in case of danger. Do not use the remote control when you cannot see the operation of door.
6. Before repairing and moving the door machine and control box, please cut off the power supply, and make sure that the door has been locked and the risk of falling due to self-weight is null.
7. Pedestrian and vehicle are prohibited to go through or stay below the running door.
8. To ensure the safety of pedestrian and vehicle, please install the infrared protection device and airbag protection device
9. Relevant safety protection devices and the operation of the door should be checked frequently to ensure the security and stability of door.

Thank you for choosing this product!

Appreciate for your trust and support!

Please read this instruction carefully before installation!3

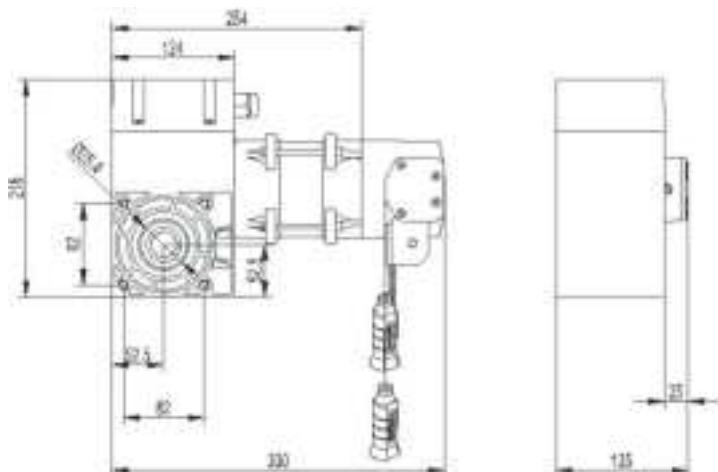
Please keep this instruction properly after installation!

Industrial Door Operator Technical Parameter

Model	INDUS50DC	INDUS70DC	INDUS100DC	INDUS150DC
Power Supply	AC220V±10%	AC220V±10%	AC220V±10%	AC220V±10%
Motor Power	450W	600W	800W	1000W
Max.Output Torque	50N.m	70N.m	100N.m	150N.m
Output Speed Range	10~50RPM	10~50RPM	10~40RPM	10~25RPM
Max.Loading (Door Area)	20m²	30m²	40m²	50m²
Main engine Dimension (mm)	295x128x199	330x135x218	345x135x218	360x135x218
Main engine Weight (kg)	10	12	13.2	14.2
Reducer Lubricating System	Liquid Oil Lubrication			
Encoder Type	Single Circle Absolute Encoder			
Manual/Auto switch	Pull Cord Switch			
Manual Release	Hand-Pulled Chain			
Maximum Limit Travel	Output shaft rotates 20 rounds			
Working Temperature	-20℃ ~+50℃			

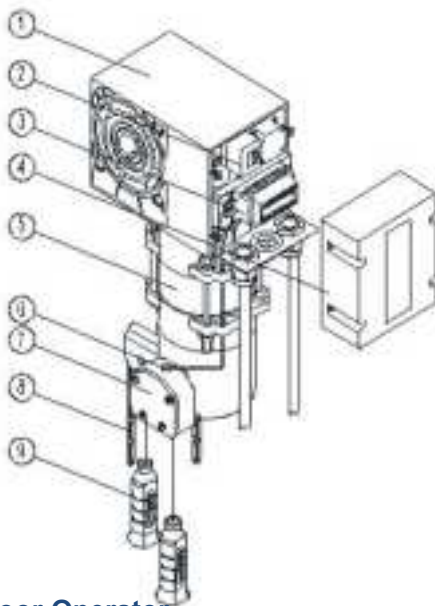
☆Dimension and Component of Industrial Door Operator

Outline Dimension Drawing(INDUS70DC)



Composition Diagram

- ① Gear box
- ② Encoder
- ③ Terminals
- ④ Plastic cove
- ⑤ Motor
- ⑥ Safety switch line
- ⑦ Chain part
- ⑧ Hand-pulled chain
- ⑨ The rope handle

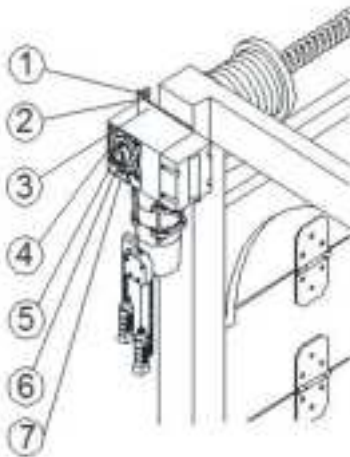


☆Installation Guide of Industrial Door Operator

The industrial door operator is mainly used in the industrial sectional door equipped with balance spring, but also can be applied in lifting industrial

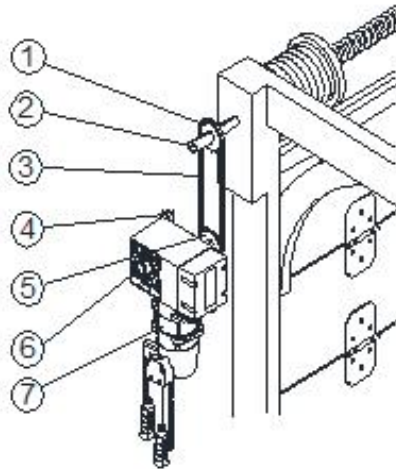
door. There are two ways for installation of this product: shaft drive and chain drive. The factory standard configuration is shaft drive. If chain drive installation is required, users may choose the appropriate combination of sprocket chain according to the installation needs.

Shaft Drive Installation



- ①Expansion Screw
- ②Mounting Bracket
- ③ Mounting Screw
- ④Main Engine
- ⑤Special Flat Key
- ⑥Door Shaft
- ⑦Fixing Sleeve

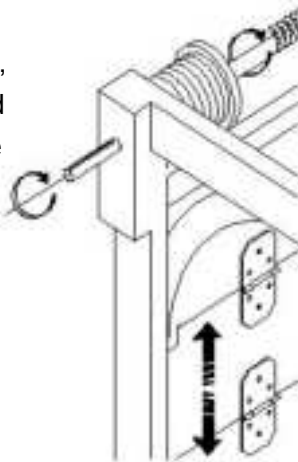
Chain Drive Installation



- ①Driven wheel
- ②Door Shaft
- ③Chain
- ④Mounting Bracket
- ⑤Driving Sprocket
- ⑥Driving Sprocket Shaft
- ⑦Main Engine

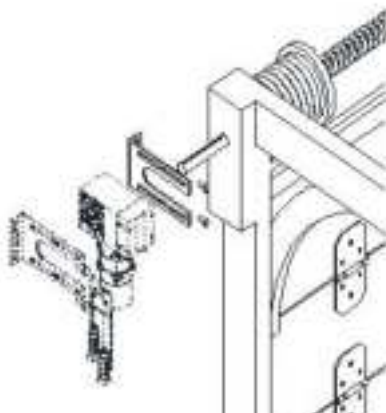
1) Check the door

After the door is installed, adjust the torsion spring, manually opening or closing the door which should be flexible and run without stagnation, observe the direction of rotation of the rope sheave which should be consistent with the direction of opening and closing of industrial door operator.



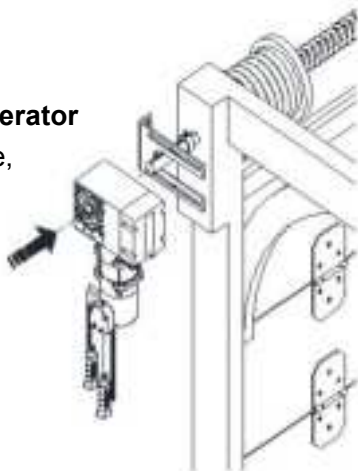
2) Determine the installation position

Consider the boundary dimension and installation direction of the door machine, determine the position of the mounting bracket, mark the insert cavity position, drill the screw hole and fix the mounting bracket. (The mounting bracket can be fixed inside and outside the door machine, recommended to be installed inside, for the convenience of disassembly of door machine)



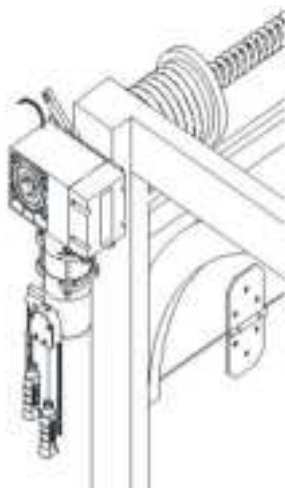
3) Trial assemble for the industrial door operator

Install a fixing sleeve on door shaft in advance, and insert the industrial door operator into the door shaft.



4) Pre-fixing industrial door operator

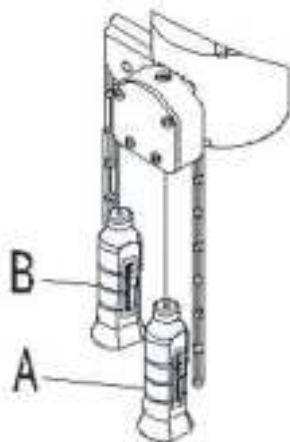
Fix the industrial door operator on mounting bracket by 4 pieces of hexagon head flange bolts M10×20, do not tighten.



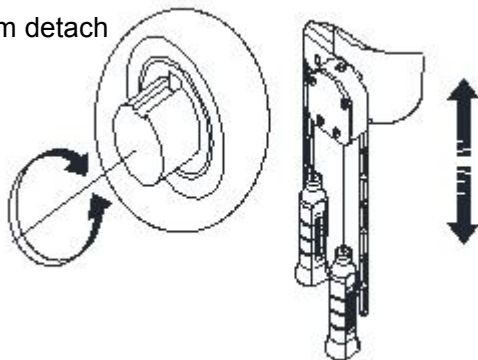
5) Find the direction of key slot

First pull the red handle A to the bottom to make the hand-pulled chain mechanism engage with the main engine.

And then by pulling the chain up and down to rotate the output shaft of industrial door operator till it fully aligned with the keyway of the door shaft.

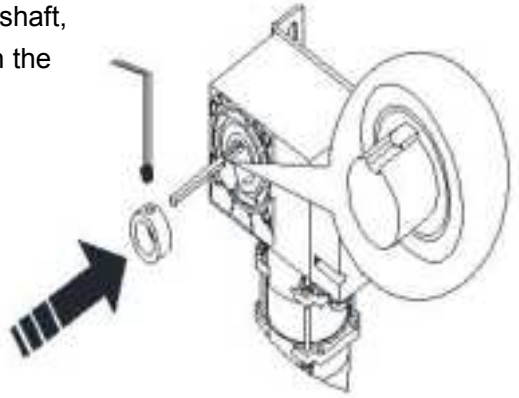


Finally pull green handle B to the bottom to make the hand-pulled chain mechanism detach from the main machine.



6) Mount flat key and fixing sleeve

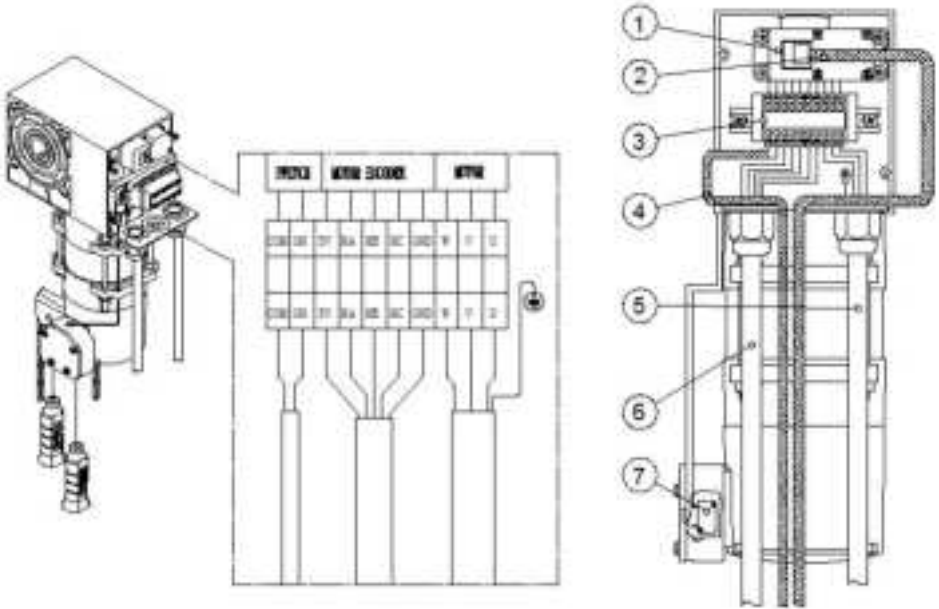
Mount the flat key, keep two fixing sleeves clinging to the two ends of the output shaft, and fasten the two M6 head screws in the key slot of door shaft to prevent the flat key from loosening and falling off.



7) Tighten the screws for debugging.
Tighten all screws.

☆Industrial Door Operator Wiring

Wiring diagram for all parts of industrial door operator (All parts has been wired before delivery, only need to plug the terminal of the cable into the control unit.)



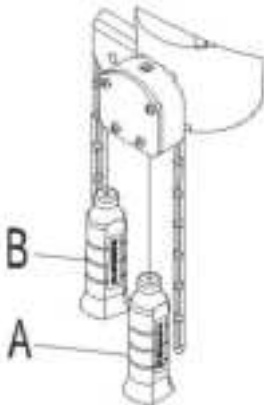
- ① Encoder
- ② Encoder line
- ③ Terminals
- ④ Safety switch line
- ⑤ Motor lines: Blue U, Brown V, Black W, Yellow-green (ground)
- ⑥ Motor encoder line: Black GND, Orange HC, Purple HB, Blue HA, Red +5V
- ⑦ Safety switch

Usage of hand-pulled chain

When you need to manually open or close the industrial door, then hand-pulled chain would be required.

Before pulling the chain, please fully pull the red handle A in the hand-pulled chain mechanism to make it engage with the main machine. The protection switch inside the hand-pulled chain mechanism will automatically cut off the power supply. At this time, the chain can be pulled. The chain should be pulled continuously and evenly to avoid damage to the hand-pulled chain mechanism.

When you need to electrically open or close the industrial door, please fully pull the green handle B in the hand-pulled mechanism first to make it disengage from the main machine, and the protection switch in the hand-pulled mechanism will be reset to make the industrial door operator return to its normal electric operation. Please fix the hand-pulled chain on the wall properly when it's not in use



Note: 1. After using the chain. If the display screen on the control unit shows it is hand-pulled chain operation, then under which the door cannot be opened or closed electrically, because the protection switch inside the hand-pulled chain mechanism has not been reset. To fully pull the green handle in the hand-pulled chain mechanism to separate it from the main machine, the control unit will work normally until the hand-pulled chain operation is not shown any more on the display screen

2. The hand-pulled chain can only be used in special circumstances such as power failure. It cannot be used long term as normal state.

Note: Check once a month whether the travel of opening or closing is changed, whether the limit position is accurate and reliable, whether the door is well balanced, if not, please make adjustment timely. If necessary, please ask professional personnel for maintenance and debugging.

Failure and Troubleshooting

No.	Trouble	Possible Reason	Troubleshooting
1	The machine suddenly stops during operation, but the indicator light of UP/DOWN button is still on which indicates that the machine is in working process.	A balance failure of the door balance spring or there is obstacle during the door operation, the machine cannot drive the door and causing the motor stalling.	1. Adjust the balance spring; 2. Track deformation, find the resistance point of the door and eliminate it
2	The machine doesn't work	The machine is in manual mode	Pull the green handle in place
3	There is a big change on the limit position of the door.	The balance state of the door changed	Adjust the door balance

PACKING LIST

Packing Box INDUS70DC、INDUS100DC、INDUS150DC			
No.	Name	Quantity	Note
1	Main machine	1	
2	Mounting bracket	1	
3	Fixing sleeve	2	Contain M6×10 fastening screw
4	Encoder (network) cable	1	5m
5	Motor (four-core) wire	1	5m
6	Motor encoder (five-core) wire	1	5m
7	Safety switch (two core) wire	1	5m
8	Dedicated flat key	1	6x70
9	Bolt M10x20	4	
10	User manual	1	