

## KINDI 30NM

### GENERAL SAFETY PRECAUTIONS

- The following precautions are an integral and essential part of the product and must be supplied to the user.
- Read them carefully as they contain important indications for the safe installation, use and maintenance.
- These instructions must be kept and forwarded to all possible future users of the system.
- Do not allow children playing with fixed devices.
- Keep all remote controls away from children.
- Check this system periodically for signs of unbalance, wear and/or damage to wires or springs.
- Do not operate when the system shows need for adjustment or repair.

### Tubular Motor Instructions

#### 1. PRODUCT FEATURES AND USES

tubular motors are the driving force behind many roller shutters, awnings and garage doors.

The products emit minimal noise when in operation, are easy to conceal, compact in size and a whisk to install.

In European countries, the motor-moved roller shutters, awnings, sunshade and garage doors are widely used in offices, houses, hotels, restaurants, exhibition halls, and other public places.

To prolong its using life, the motor bears an over-heating protection device inside; it will stop automatically during long-time working with temperature rising too high and will resume operation when temperature comes down.

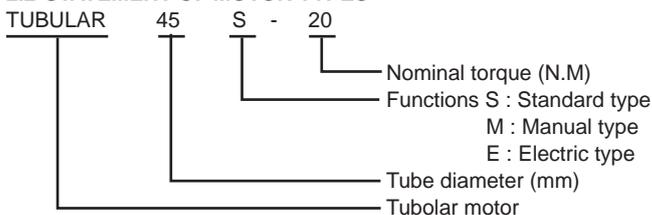
#### 2. CONSTRUCTION AND FUNCTIONS

##### 2.1 Construction

tubular motor consists of four main parts Limit switchbrake motor gearbox (Fig.1).

The outer fitting of tubular motors (Fig.2).

##### 2.2 STATEMENT OF MOTOR TYPES



##### 2.3 Parameters (taking TUBULAR 45S - 20 as an example)

- 20N.m. : Nominal torque
- 15rpm : Nominal speed
- ∅ 45 : Tube diameter
- 230 : Rated voltage
- 50HZ : Rated frequency
- 205W : Input power
- 0.92A : Rated current
- 2.8Kg : Net weight
- IP44 : Protection class (It means that it can prevent solid blocks with diameter over 1mm from invading the motor tube and prevent liquids splashed in all directions).

##### 2.4 Endurance

Operation times >8500times (one single trip as one time).

##### 2.5 Noise emitted during working process

TUBULAR 35 series, TUBULAR 45 series < 45db

TUBULAR 59 series < 55db

### 3. INSTALLING INSTRUCTION

#### 3.1 Notices before installation

- Invite professional to install the motors
  - Choose the right crown and drive adapter before installation, do not hammer the motor into the tube (Fig.3).
  - Do not hose the motor with water (Fig.4).
  - The fit clearance between the drive adapter outer edge and the internal dia. of the tube should not exceed 1mm (Fig.5-6).
  - The tube, adapter and idler should be evenly fixed with 4 pieces of 5\*20 sunk-head self-threading screws (for TUBULAR 59 series) respectively in the radial direction; and the screws should be fixed in the middle of the adapter and the middle of the idler in axial direction (Fig.5-6).
  - The tube and the driving adapter should be evenly fixed with 4 pieces of 4\*10 sunk head self-threading screws and the screw tip should not penetrate through the internal surface of the crown might damage the internal geared ring (Fig.5-7).
  - The connecting bar between the tube and the door sheet should not be too long or might affect the prizing-proof results (Fig.8).
  - During installation, the motor and the tube should be kept in parallel level, and the door and window should be perpendicular to the axial line of the tube (Fig.9).
  - For security, there is a yellow & green colored earth line among the in-lines; customer should put it to earth before using the motor (Fig.10).
  - When the door sheet and the tube were already fixed, in case the customer needs to drill within the motor space, the drill bit should not touch the motor shell. (the suggested drill length out of the drill chuck be less than 15mm); the stretching rivet is recommended for fixing. In case the screw might be used, the clearance between the screw tip and the motor shell should be more than 5mm, or the motor might be damaged (Fig.10).
  - Before installation, make sure that all accessories were fixed and the rails were smooth enough and will not bring extra obstructions for mechanical problems.
  - Check the motor lifting power, make sure it fits the actual weight, choose the motor that is the same as lifting power or that has slightly high power.
  - When choosing installation place, the motor can be installed in either left or right side of the doors and windows according to actual needs.
- #### 3.2 Installation steps (Fig.11)
- Step 1** - Mounting the drive adapter (4) to the motor (3) and measure the distance between the adapter and the crown (2) and then insert them into the roller tube (5) the crown (2) opposite an opening of roller tube.
- Step 2** - Measure the drilling length, mounting the screw (7) ,to fix the drive adapter and the tube. Then remove the motor.
- Step 3** - Insert the idler (8) into the tube (5), then measure the drilling length (about 1cm) to mount the screws (7) for fixing the idler and roller tube.
- Step 4** - Stick the screen (6) on the rolling tube (5) and roll it up.
- Step 5** - Fix the motor bracket (1) and idler bracket (9) on the wall.
- Step 6** - Insert the motor into the tube, with the crown (2) opposite an opening of roller tube.
- Step 7** - For the complete assembly, insert one side of tube into the idler bracket (9), and insert the other side into the motor bracket (1).

### 3.3 Line connection (Fig.12-13)

When the blue line and the brown line are switched on, the driving adapter rotates clockwise.

While the blue line and the black line are switched on, the driving adapter rotates counter-clockwise.

The Green- yellow line is the earth line.

**NOTE:** to discriminate the rotating direction of the driving adapter, please refer to the Chap. 4: debugging method"

## 4. DEBUGGING METHOD

### 4.1 Adjusting instruction

a. we tubular motor in hand, buyers might as well switch on the power for a prior checking. When the power is switched on through blue line and black line (or brown), which can also be manipulated by the remote-control or touching switch, the driving adapter begins rotating counterclockwise (or clockwise).

b. meantime, turn the crown along with the rolling direction of the adapter until the later stops, then roll the crown back so as to let the adapter move again towards the original direction.

c. Repeat the above performance until the adapter stops and the rotating direction being set definitely.

d. Exchange the line connections, so as to change the rolling direction.

e. If a sign was already made on the outside of the crown, the number of the rolling of the signs can be regarded as the revolutions of the adapter between the two spaces. (The original revolution is set to 5 turns or so before leaving the factory)

f. When the rotation of the adapter is stopped by spacing control, the crown is not allowed to move continuously along the ongoing direction, or might damage the relevant machine parts.

g. If the adapter revolution number needs to be manipulated, signs and colors regulation may be introduced: "+" symbolizing the increase of revolutions and "-" means decrease; black symbolizing counterclockwise and red means clockwise. The regulation should be conducted under motor-working conditions.

h. Before installation, users may set a number of revolution, which might be fewer than the practical operation needs.

i. Close the spacing of one direction and keep the other direction spacing open. The opening direction should be the same as the initial operating direction after installation. For example, if the initial operation direction is counterclockwise after installation, close the spacing of the clockwise rolling direction before installation and gradually adjust it to the needed spacing position.

### 4.2 TUBULAR S series (standard type) adjusting method (Fig.14)

a. Stands for the direction needed for the operation of the motor: when clockwise regulation is needs, use the button along with the red sign, whereas counter-clockwise needs, use the one in white side.

b. Indicating the increase or decrease the path length: "+" stands for increase, "-" for decrease.

c. **NOTE:** Regulation direction for the path length may be different when the motor is installed inversely or on the other side. Please check the indicating signs during regulations.

### 4.3 TUBULAR M series (Manual type ) adjusting method (Fig.15)

a. Stands for the direction needed for the operation of the motor: when clockwise regulation is needs, use the red knob, whereas counter-clockwise needs, use the black one.

b. Indicating the increase or decrease the path length: "+" stands for increase, "-" for decrease.

c. **NOTE:** Regulation direction for the path length may be different when the motor is installed inversely or on the other side. Please check the indicating signs during regulations.

## 5. OTHER ATTENTIONS AND NOTES

a. Do not store the motor with strong acid and alkali or dirty & eroding materials.

b. Do not use the motor in humid or damp environments.

c. Do not start the motor frequently or overload it as it might reduce its operation life.

d. Do not turn the regulating knob or the driving sleeve at non-operation state.

e. If you wish to open the shutters under power-off circumstance, you may choose the M series products which carries manual functions, and do not forget to invite professionals to install the handling bar and locks. And please note that the manual function doesn't work in the power-on condition.

f. Keep the product number and data plate in safety place.

## 6. TROUBLE AND SOLUTIONS

1. **TROUBLE:** Press the controller down button, the shutter moves upward instead of downward.  
**POSSIBLE REASONS:** Line connection opposite.  
**SOLUTIONS & SUGGESTIONS:** Exchange the connection head between the brown and black line.

2. **TROUBLE:** The driving adapter can only rotate in one direction when the power is on.  
**POSSIBLE REASONS:** The switch of the other direction is off.  
**SOLUTIONS & SUGGESTIONS:** Rotate the crown toward the rotating direction of the driving adapter.

3. **TROUBLE:** When power is switched on, the motor refuses to work or starts slowly.  
**POSSIBLE REASONS:** a. Voltage too low  
b. Errors in line connection  
c. Overload  
d. Installation errors  
**SOLUTIONS:** a. Regulate the voltage to the rated  
b. Check the lines and correct it  
c. Install the load relevant to the rated torque  
d. Reinstall the motor

4. **TROUBLE:** Sudden stop of the operating motor.  
**POSSIBLE REASONS:** Rated operating time (4min) exceeded.  
**SOLUTIONS & SUGGESTIONS:** After approximately 20 minutes, it will resume automatically when the motor cools down.

5. **TROUBLE:** After approximately 20 minutes, it will resume automatically when the motor cools down.  
**POSSIBLE REASONS:** The spacing has been adjusted to the maximum.  
**SOLUTIONS & SUGGESTIONS:** Remove the motor and rotate the crown towards the inverse direction several rounds (according to the practical need). Then put it into the tube and adjust to the necessary spacing position.

6. **TROUBLE:** Unexpected noise emitted during shutter rolling.  
**POSSIBLE REASONS:** The tube too long, which causes the tightness between the rolling shutter and the bracket in both.  
**SOLUTIONS & SUGGESTIONS:** If the idler is flexible, users may cut a little of the tube with a saw, to loosen the tightness between the bracket and roller shutters.



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**Fig.1**

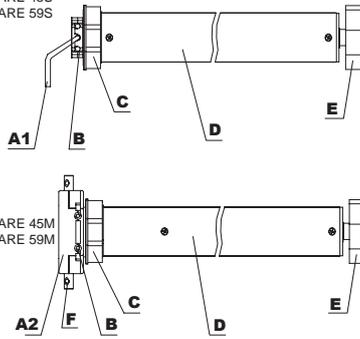


- Limit switch - Brake - Motor - Gearbox

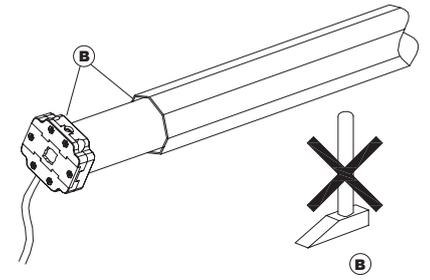
**Fig.2**

TUBOLARE 35S  
TUBOLARE 45S  
TUBOLARE 59S

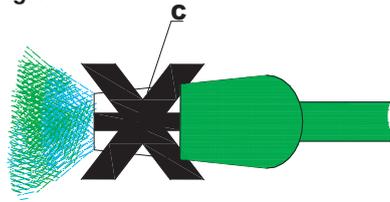
A1 - Support  
A2 - Base  
B - Debugging switch  
C - Crown  
D - Enclosure  
E - Driving adapter  
F - Manual rocker connector



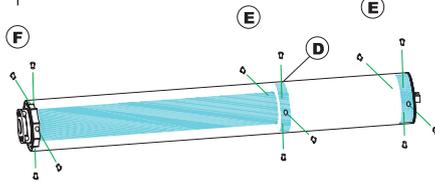
**Fig.3**



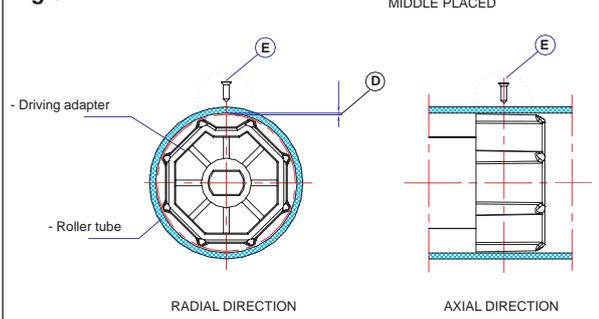
**Fig.4**



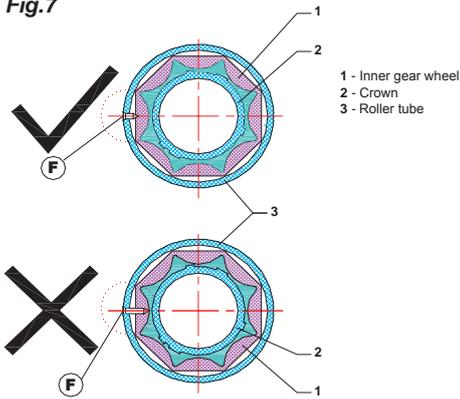
**Fig.5**



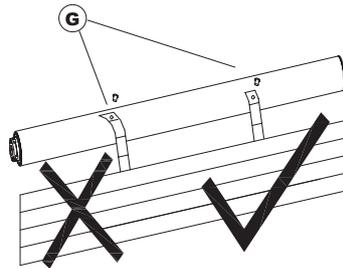
**Fig.6**



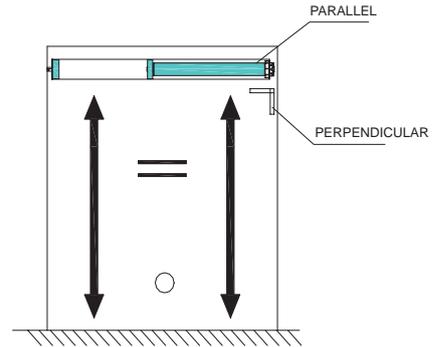
**Fig.7**



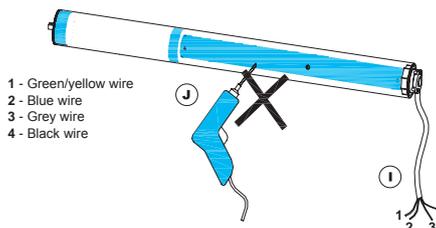
**Fig.8**



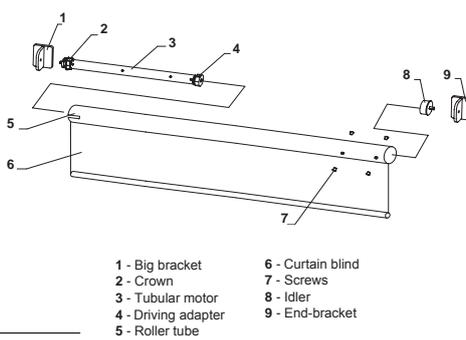
**Fig.9**



**Fig.10**

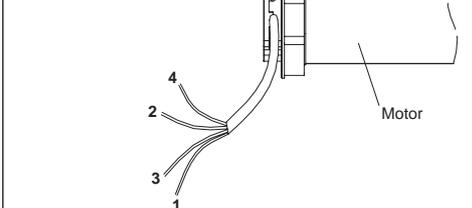


**Fig.11**



**Fig.12**

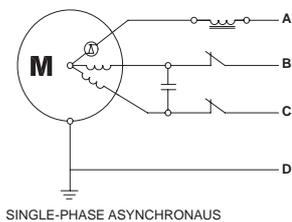
WIRING DIAGRAM



1 - Green/yellow wire  
2 - Blue wire  
3 - Grey wire  
4 - Black wire

**Fig.13**

CLUTCH COIL



A - Neutral wire (blue)  
B - Clock wise (grey wire)  
C - Counter-clock wise (black wire)  
D - Earth wire (green/yellow)

**Fig.14**

