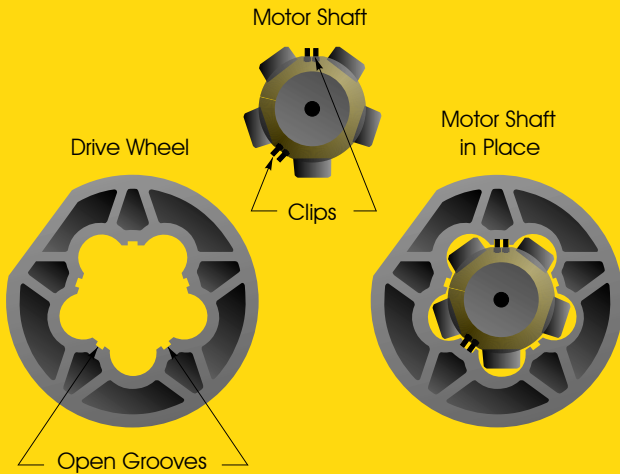
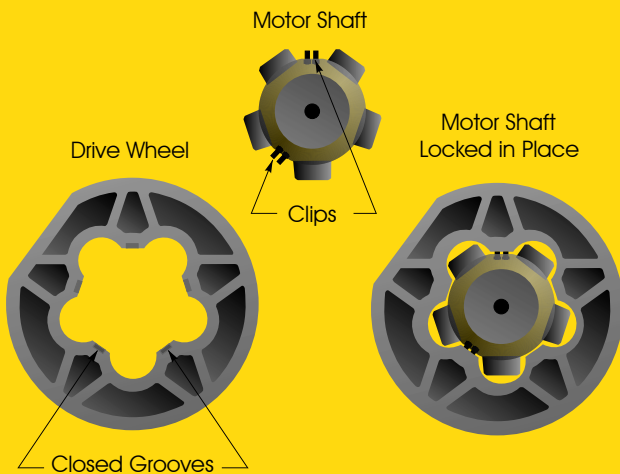


SOFT CLIP (Removable)



HARD CLIP (Fixed)



Installation of the drive wheel to the motor shaft:
Push the drive into the motor shaft until you hear a "click". Two clips lock the drive wheel into the motor shaft.

There are two types of LT drive wheels: Removable or "**Soft Clip**" type, and fixed or "**Hard Clip**" type.

The "Soft Clip" drives are available only for round tubes in 2", 2.5" and 2.75" diameters. The drive wheel can be removed by physically pulling it off the motor shaft. For the ease of identification all "Soft Clip" drives are brown.

The "Hard Clip" drives can only be removed from the shaft by pressing the two clips inward at the same time. The motor must be out of the tube in order to have access to the clips. These drives are black.

Installation in round tubes:

The drive must be riveted to the tube after the motor is inserted. See page 62 for required fastener size and quantity.

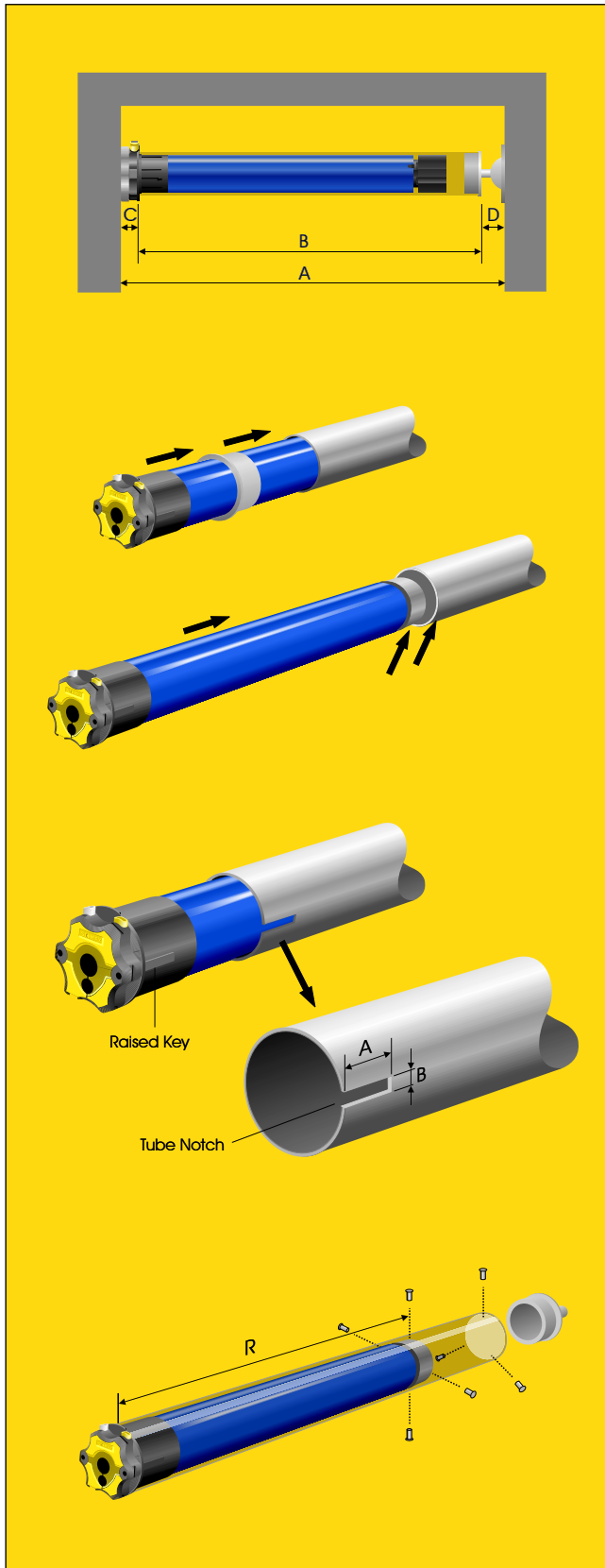
Installation in profiled tubes:

The drive doesn't need to be riveted to the tube because it is already in a positive lock position within the profiled tube.



Installation Instructions

LS40, LT50/60, LT50 RH



Determining the Tube Length (B):

Clear dimension (A)

- Space requirement for motor bracket (C)
- Space requirement for idler bracket (D)

= Tube length (B)

The dimensions for the lateral space requirement for the motor brackets and idler brackets depends on the bracket design in each instance. They also include the space requirements for the motor head which are listed on pages 10-12.

Installation

- Attach motor brackets
- Provide opening for the motor cables
- Install the motor in the tube. Only push the motor into place. **Never hit into place with a hammer!**

Profiled Tubes

Push on the motor crown and drive wheel (which fit the pre-finished tube) and slide motor inside the tube.

Round Tubes

Notch the tube on the motor side for the basic motor crown and push on the drive wheel. Now slide the motor into the tube in such a way that the raised key of the crown comes to rest in the cut notch.

| | | |
|--------------------|-----------------|--------------|
| | <u>A</u> | <u>B</u> |
| Notch: LS40 | Length = 8.5 mm | Width = 6 mm |
| LT50 | 25 mm | 4 mm |
| LT60 | 35 mm | 8 mm |

Rivet or screw the drive wheel in place at four points at a distance **R** from the motor side.

- | | |
|----------------------|-----------------------------|
| Self Tapping screws: | 4 pcs., 5 x 10mm |
| Blind rivets: | 4 pcs., diameter 5mm, steel |

NOTE: To ensure a safe installation, we recommend that the idler end cap be secured to the tube with 3 blind rivets.

When using fasteners other than supplied by SOMFY, it is imperative that they are of steel SAE Grade 5 or higher. (8.8 for metric fasteners), accompanied with locking type washers.

NOTE: When selecting mechanical accessories the following specifications must be followed:

- Maximum motor torque rating of the components
- Static (dead) load of all system components supported by the motor head and mounting brackets must be within their capacity
- Effective motor torque is equal to the maximum motor torque less torque losses in the system due to friction, misalignment etc... For design purposes SOMFY recommends this value to be 70% of the maximum motor torque.



Motor Cable Positioning

Depending on the application, the motor cable can pass through the center or side of the motor head. In the LT50/60 versions simply raise the yellow cover plate slightly, reposition the cable and then press the cover plate into place.

Mounting the Motorized Tube

LS40 and LT50 RH

The motor brackets for the LS40 and LT50 RH are screwed directly into the head of the motor as illustrated at left.

LT50/60

The motor brackets for the LT50/60 are equipped with a spring ring. This spring ring must be used and does not have to be removed for installation. You can press the motor axially into the motor bracket in any of 6 positions, so that the limit switch adjustment buttons are always easily accessible. When the motor engages the motor bracket, the spring ring makes a click sound. The spring ring keeps the motor head securely seated in the bracket for even torque distribution. For higher torque applications a locking spring ring with screw must be used in place of the standard spring ring.

Testing the Motor - Test Run 1

- Connect the motor tester cable (Cat. No. 6020086) to the motor cable, match the wire colors and connect to power
 - Remove yellow protective cap from limit switch adjustment buttons.
 - Press both limit switch adjustment buttons in (they will automatically remain locked).
- When the limit switch adjustment buttons are pushed in, the motor has no stop position shut-off points. The number of revolutions is unlimited.

Attaching Rolling Shutter , Awning, Screen...

Now you can attach the interior, or exterior window treatment to the tube.

Caution! Never drill in the vicinity of the motor , or use screws that could penetrate the motor.

Adjustment of Upper and Lower Positions for LT50/60 motors

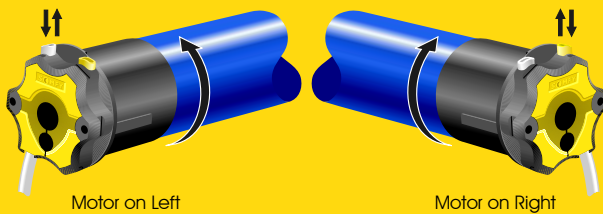
- Both limit switch adjustment buttons have been depressed since Test Run 1 .

Stop Position 1

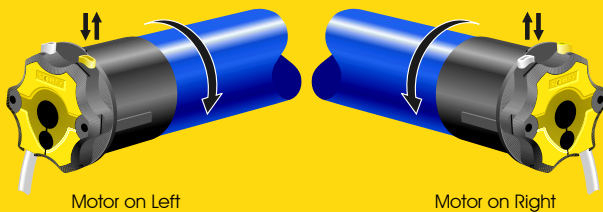
- Bring end product into the desired stop position 1 (direction of rotation 1)
- Release the limit switch adjustment button that lies in the direction of rotation 1 by pressing it down again. Stop position 1 is now set.

LT50/60 and LT50RH

Stop Position 1
Depending upon type of installation

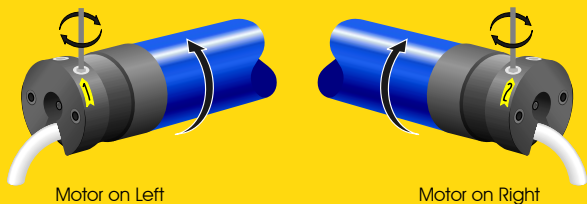


Position 2

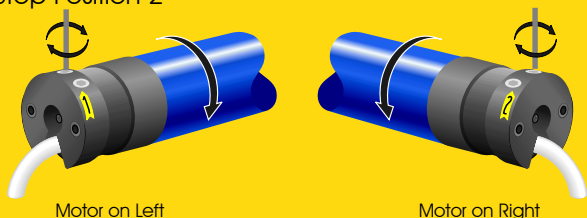


LS40

Stop Position 1
Depending upon type of installation



Stop Position 2



Stop position 2

- Bring end product into stop position 2 (direction of rotation 2)
- Release the limit switch adjustment button that lies in the direction of rotation 2 by pressing it down again. Stop position is now set.

Always attach protective cap over limit switch adjustment buttons.

NOTE: It is important to note that SOMFY motors are weatherproof, but **NOT WATERPROOF** and therefore the motor head should not be exposed to direct rainfall.

Test Run 2

Allow the motor to run in both directions, until it shuts off in the stop positions. Because of the built-in thermal protection feature, the motor may shut off automatically after running without interruption for an extended period of time. Please wait until the motor has cooled off and is ready for operation again (approximately 10-15 minutes).

Changing a Set Stop Position...

- Press the limit switch adjustment button that lies in the direction of rotation.
- Bring the end product into the desired stop position.
- Release the limit switch adjustment button by pressing it down again.

Adjustment of Upper and Lower Positions for the LS40 Motor

- Connect the motor tester cable (Cat. No. 6020086) to the motor cable, match the wire colors and connect to power
- Identify the UP recessed limit screw by finding the arrow on the motor head which points in the direction that retracts (rolls up) the system.
- Turn the power on to ensure that the switch is operating properly (UP-raises, DOWN-lowers). If not, turn the power off and simply reverse the black and red motor leads.
- Flip the tester cable switch in the UP direction. If the system stops before its UP limit, turn the UP screw to "+" until necessary. If the system does not stop at its UP limit, flip the tester cable switch off and turn the UP screw to "-". Repeat this until correct setting is achieved.

NOTE: 7 Turns of Hex Screws equals 1 turn of roller tube.

- Flip the tester cable switch in DOWN direction. If the system stops before its DOWN limit, turn the DOWN limit screw to "+". If not, flip the tester cable switch off and turn the DOWN limit screw to "-". Repeat this until correct setting is achieved.

NOTE: Recessed thumbscrews can accommodate a flat head screwdriver, SOMFY's Allen wrench or Flexible limit switch adjuster.