Quba Architectural Products Private Limited

SERVICE
TRAINING MANUAL

FY 2020-21

CONTENTS

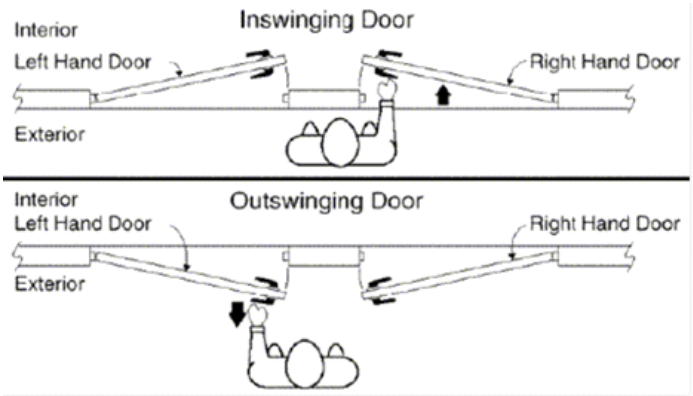
1. INTRODUCTION

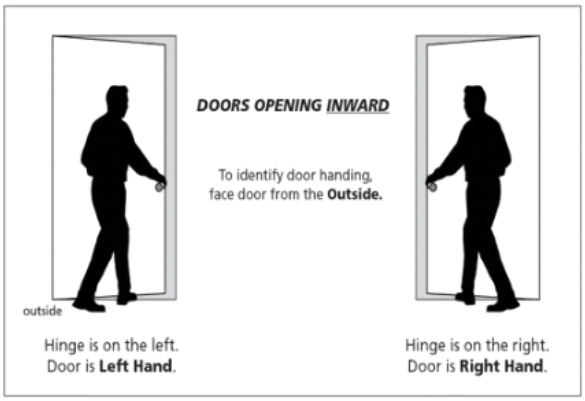
This manual is designed to facilitate impactful training to field force to reduce chances of mistake and improve quality of work. This includes basics of wood working related to door hardware and accessories installation to advanced content to impart training on existing and upcoming QUBA products. It contains

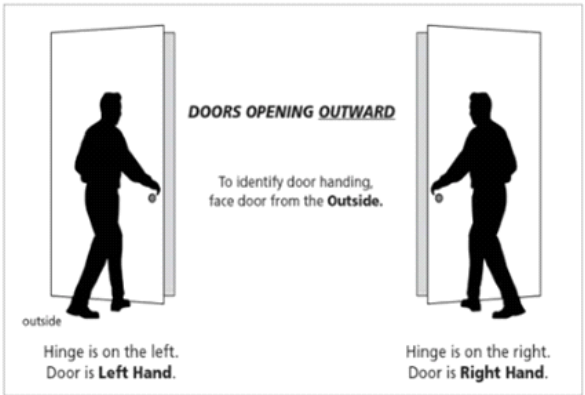
- Wood working basics
- Door identification
- Criteria for selecting Main door locks
- Installation process
- Precautions
- Trouble shooting
- AMC (Annual Maintenance Contract)
- Spare ordering process

2. TYPE OF DOORS

Door handing refers to the direction the door swings open. When determining handing, stand in front of the public side of the door. If the hinges are on the left, and the door opens inward, then the door is left hand (LH I/O). If the hinges are on the right, and the door opens inward, then the door is right hand (RH I/O). If the hinges are on the left, and the door opens outward, then the door is left hand reverse (LH O/O). If the hinges are on the right, and the door opens outward, then the door is right hand reverse (RH O/O). Handing is crucial when purchasing a lever-style doorset and mortise locks. Below are some images to further clarify:



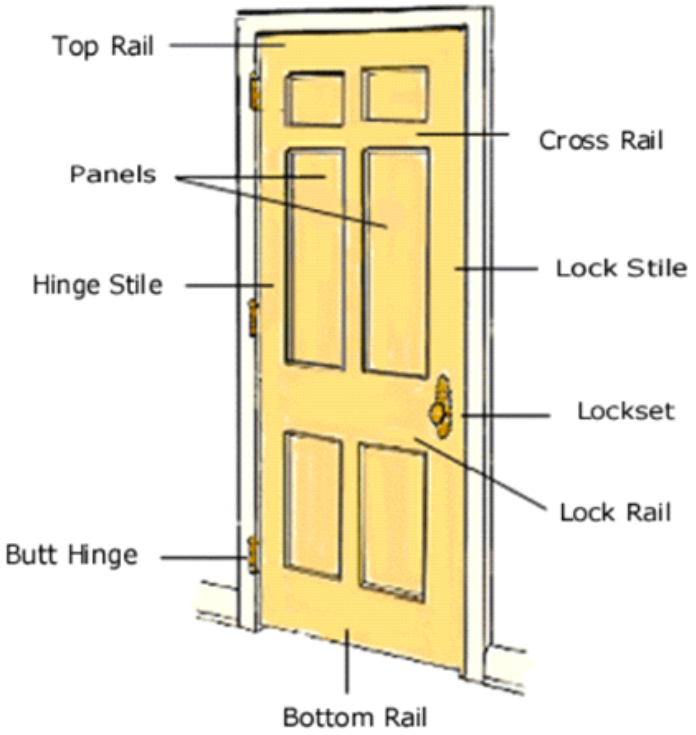




Finally, there are four types of doors:

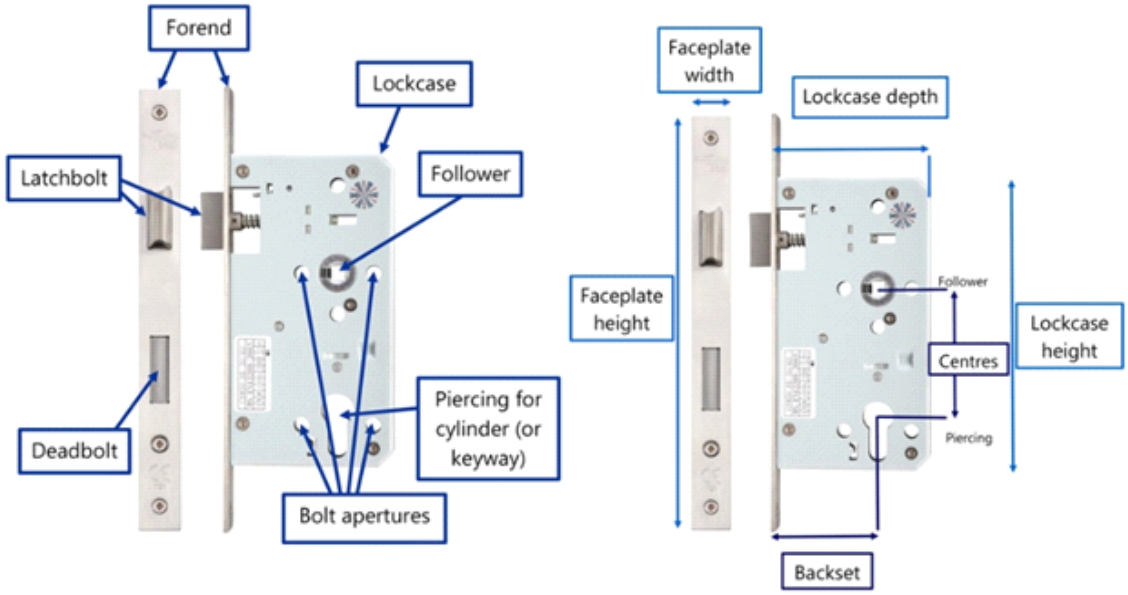
- Left Hand Inside Opening Door (LH I/O)
- Right Hand Inside Opening Door (RH I/O)
- Left Hand Outside Opening Door (LH O/O)
- Right Hand Outside Opening Door (RH O/O)

3. NOMENCLATURE OF DOOR AND FRAME



4. SPECIFICATION ADVICE – LOCKS AND LATCHES

What are the correct names for the parts of locks and latches? What do the dimensions, such as backset and centers, mean? And how do they impact on specifications? These diagrams depict the parts and dimensions of locks and latches



4.1 LOCK / LATCH PARTS

Lockcase: The outer casing which conceals and protects the inner workings.

Forend: The forend is the visible part of the lock once fitted. It is important the finish matches the rest of the door furniture. Our forends are either single fixed forends or double forends; the former has the forend fixed and the latter has a dress plate so the right finish can be used. Forends are either square or radius.

Follower: This is the square hole in a circular section of metal/nylon that the spindle from the handle of the door furniture passes through. The follower receives the rotary actions from the handle/knob and transmits the instruction onto the latchbolt. Followers are 8mm² for latches; bathroom locks have a second follower which is 5mm² for a bathroom deadbolt, which receives operational instruction from the turn & release.

Deadbolt/Latchbolt/Lock: this is the locking bar of metal that when instructed protrudes from the lockcase into the door frame and thus the lock engages. The Latch has a spring behind it which pushes the latch out until depressed in; thus when the door is shut it depresses slightly over the strike plate and then engages in the strike plate in the frame when the door is fully shut. Latchbolts come in a number of styles, however all have a diagonal slant cut across the bolt to allow the bolt to slide across the strike plate. The Deadbolt is an unsprung rectangular bar of metal that moves only when mechanically thrown and withdrawn by a key/cylinder/Bathroom turn and release.

Piercing for cylinder/Keyway: This is the section for the cylinder (euro or oval). The cylinder instructs the deadbolt to throw the deadbolt or to withdraw the deadbolt. In traditional locks this is a keyway.

Bolt apertures: These are holes in the lockcase that allow back to back bolts to run right through the door and secure the handles either side of the door.

4.2 LOCK / LATCH DIMENSIONS

Centres: This is the measurement between the centre of the handle follower and the centre of the keyhole (or euro/oval centre). Centres are typically 57mm for bathroom locks, 72mm for DIN standard locks and 47.5mm for euro profile sashlocks. This measurement is particularly important with handles on backplates. The centres are normally dictated by the size of the lockcase.

Backset: This is the measurement between the forend and the centre of the follower and/or keyhole. Common backsets are 44mm (64mm Lockcase) and 55mm (76mm lockcase). Ensure that the backset is sufficient for hands to pass between the handle/knob and the door stop, be particularly cautious when fire door stop is used.

5. WOOD WORKING PROCESSES

5.1 Tools

5.1.1 Pencil

A pencil is the most important tool for a carpenter. You will be marking almost every cut that you want to make. There is a rule that says, “Measure twice, cut once.” You want a pencil to make your markings in case you need to erase the first one and make an adjustment.

5.1.2 Tape Measure

No carpenter can go without a tape measure. It is used to measure everything. Since precise measurements are important, make sure that the tab at the end is firmly attached to the tape before hooking it over the edge of your wood. 25 feet is a good size for a tape measure. This is long enough to measure most things and short enough to recoil easily.

5.1.3 Utility Knife

Utility knives are always handy for cutting and cleaning joints. The most common utility knives have disposable blades that slide inside the tool for storage.

5.1.4 Screwdriver

Screwdrivers and wood go hand in hand. Many different sizes and styles of screws can be used in any project. A good carpenter should have a good assortment of sizes for both flathead and Phillips head screwdrivers

5.1.5 Carpenter Square

A carpenter square is used to help lay your project out properly before you begin to cut or assemble it. It allows you to measure, draw straight lines, and get perfect 90° angles.

5.1.6 Chisel

Chisels are used to chip wood out of areas that need to be open. They are also used to clean out joints and saw cuts.

5.1.7 Block Plane

Block planes are used to smooth out projects that have been dovetailed together. They can also flatten, square, or add curve to your project.

5.1.8 Power Drill

Power drills are more powerful and less expensive than cordless drills. You may need this extra power for drilling into large projects.

5.1.9 Calipers

Calipers are used to make precise measurements to fine-tune your woodworking projects. They look like a double “F.” One side has a big “F” to measure the outsides of items. The other has a small “f” to measure the insides of items. The measurement markings on the central mast let you measure the right-sized openings for your project.

5.1.10 Level

The level is used to make sure that your projects are level. You use it by placing the level on top of your project and making adjustments until the bubble is in the center of the leveling vial.

5.1.11 The Claw Hammer

The claw on one side of the head should be well counterbalanced by the finished head, which should be somewhat rounded. It's heavy enough to easily drive nails but easily manipulated when pulling nails. It is also used to chisel out the slot in door using chisel.

5.1.12 G type Cutter

It is a cutter which can be used to cut cylinder connecter strip and fitting screws. It can also be used to remove nails.

5.1.13 Hacksaw frame and Blade

It is used to cut connector strips and screws etc.

5.1.14 Circlip Plier

It is used to remove and fix circlip on mortise handle to fix handle lever. Also it is used to remove cylinder connector strip with new one.

5.1.15 Centre Punch / Tochya

It is used to mark centres while using marker.

5.1.16 Mortiser Jig

It is jig which helps in creating mortise slot on door with ease. It saves time and improves productivity and quality of the work.

5.1.17 Drilling Cutters

These cutters are used to make through hole for fitting main door locks such night latches, cylindrical locks, vault, Stronghold etc. by carpenter.

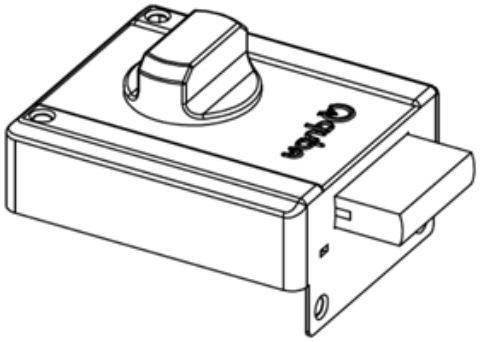
5.1.18 Wood Chisel Drill Bits

Thse bits are used by carpenter to make through holes of small diameter and to create slot in door for mortise fitting of various thickness.

6. MAIN DOOR LOCKS INSTALLATION PROCESS

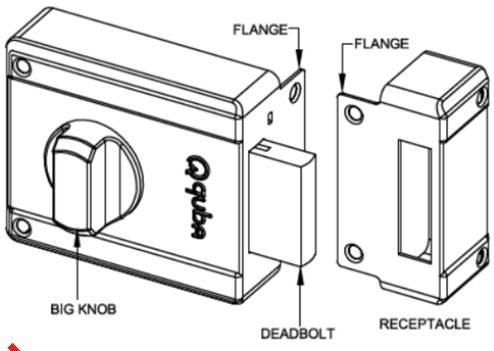
6.1 Shield Dead Lock (Suitable for 30mm to 85mm door thickness)

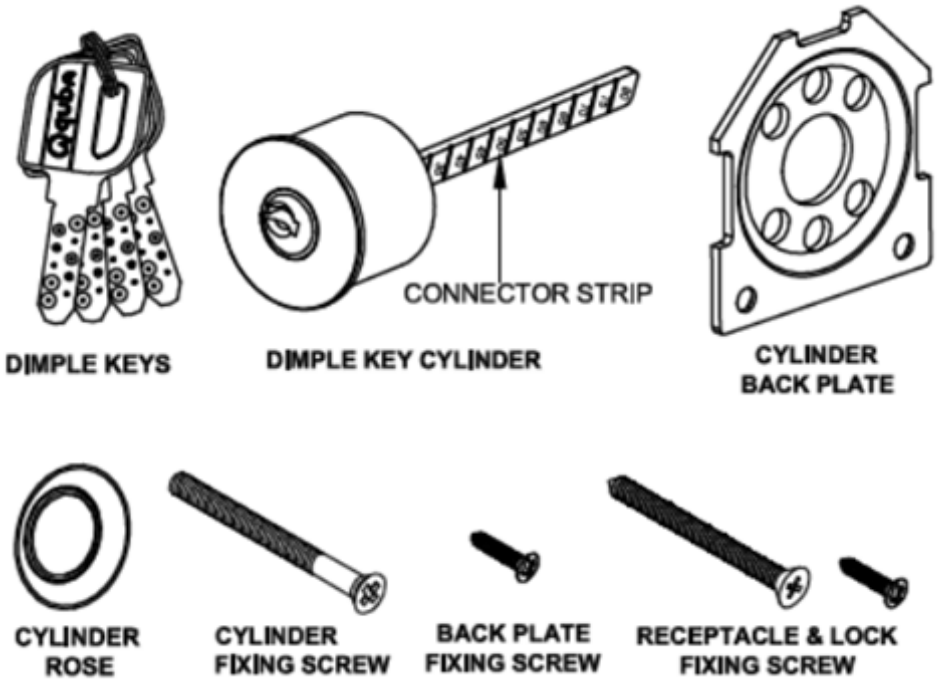
Let us see the process of installation of Quba Shield Dead lock



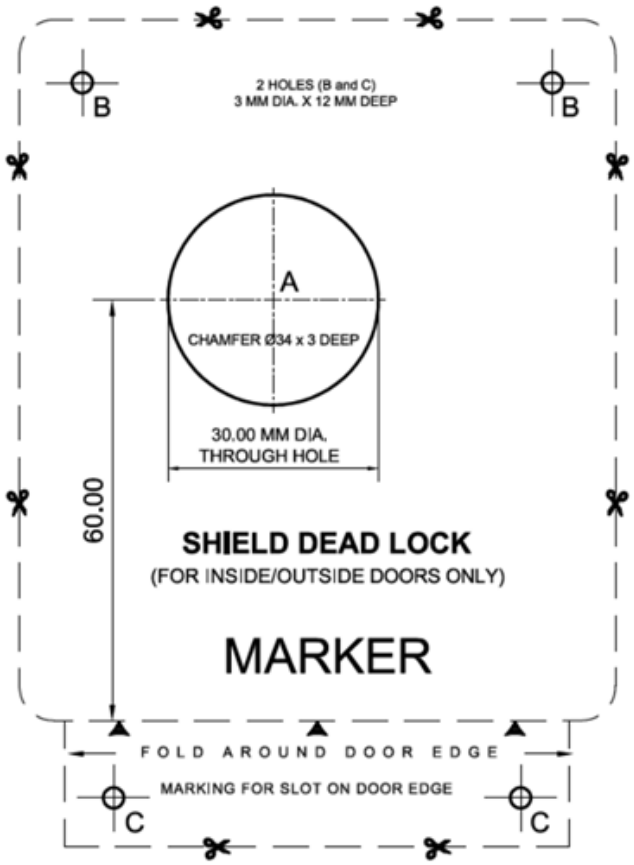
Steps:

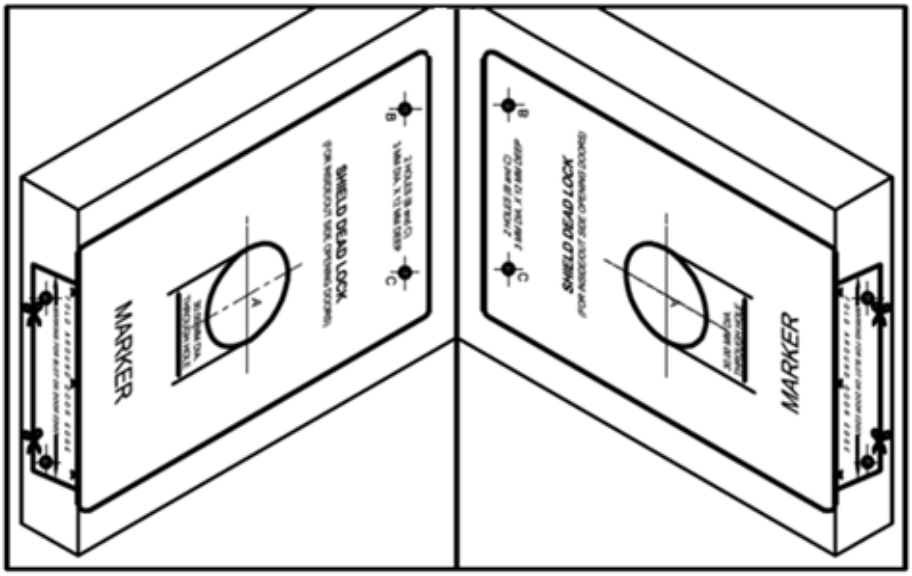
1) Open the lock and check the contents such as lock body, receptacle cylinder with keys, retainer plate, rose ring, wooden screws etc. Check the functionality of the lock. If you find anything missing or functional problem, then correct it. If correction is not possible then ask the customer to arrange new product from the nearest authorized Quba dealer/ retailer.



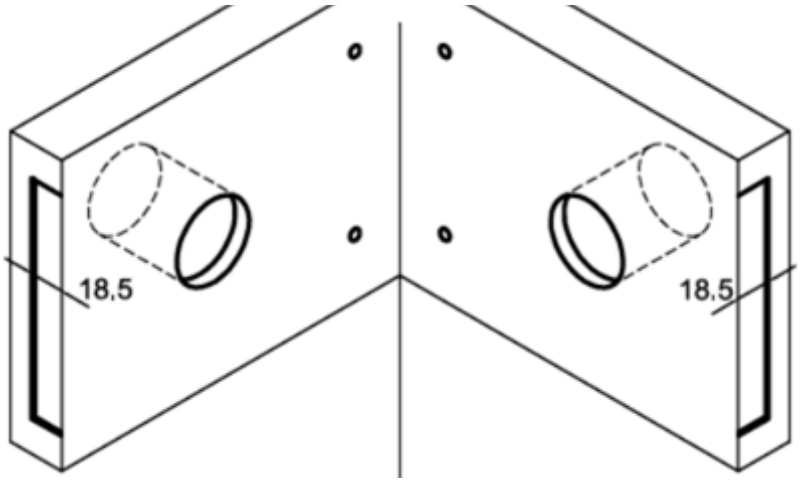


2) Cut the marker from the instruction manual given with the product, and fold along the dotted line and place on the door from inside as per the direction of the door opening as shown and punch the centres A, B and C.

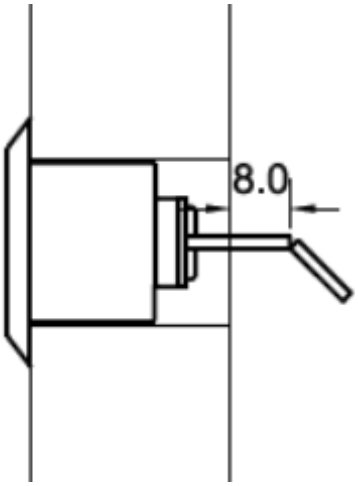




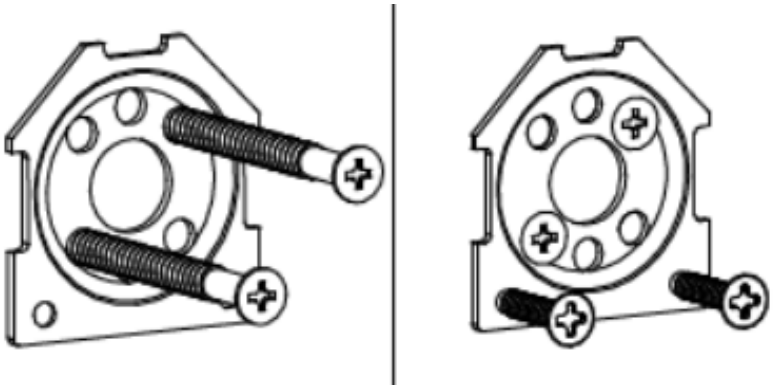
3) Make ø30MM through hole at point A using drill and cutter. From inside enlarge the hole to ø34mm X 3mm deep. Using chisel make 18.5 mm recess along marking on door edge as shown such that the lock flange lies flush with the door edge.



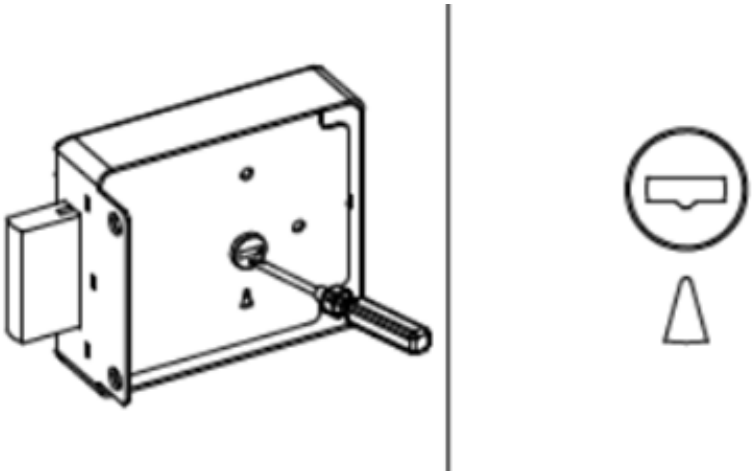
4) Place the cylinder with rose as shown and cut the strip as per the door thickness so that strip remains 8mm above the door surface.



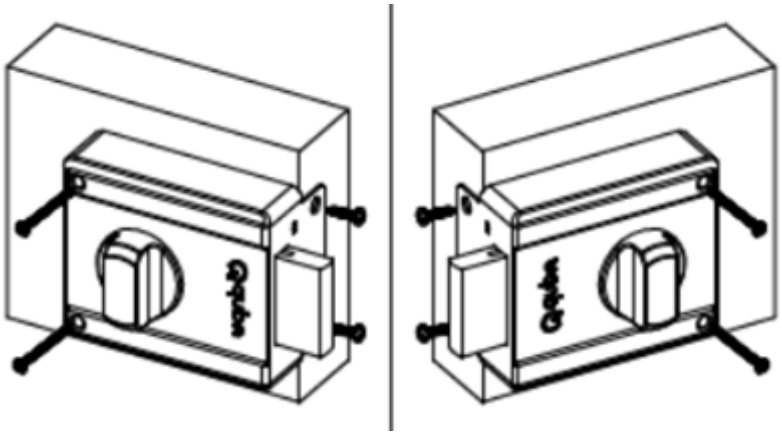
5) Now fix the cylinder using retainer plate on door as shown, so that QUBA logo on the cylinder is upright.



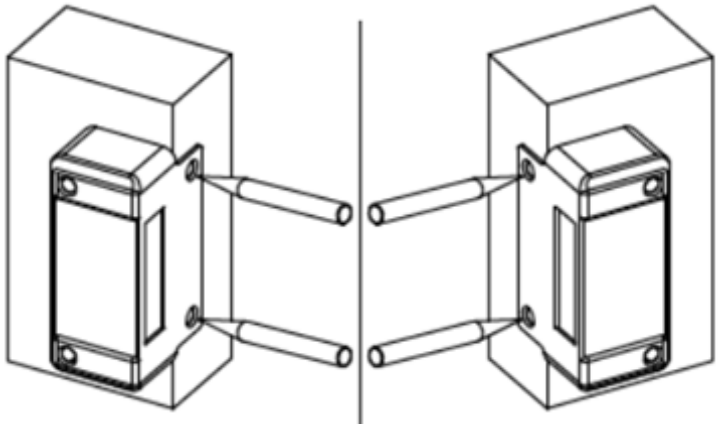
6) Place screw driver in the slot at the back side of the lock assembly and rotate it to align the mark on the spindle with the mark on the plate as shown.



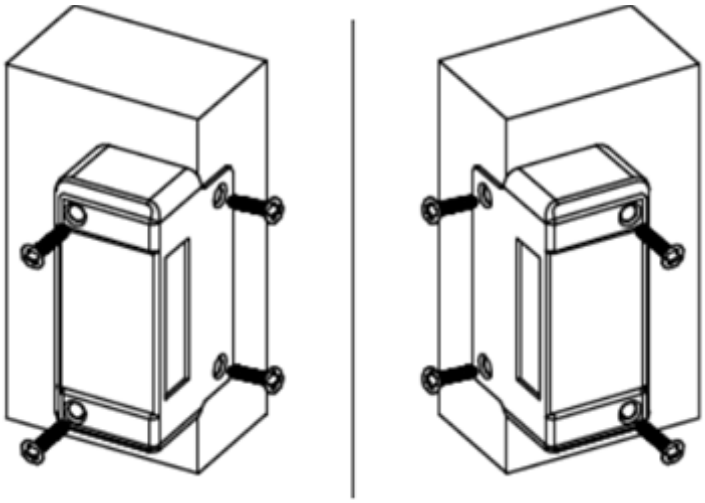
7) Now place the lock assembly from inside ensuring that connector strip enters into the slot at the back of the lock assembly. Fix it using the screws and check the functionality using keys.



8) Now place the receptacle on the door frame from inside, slightly lower than the lock assembly to accommodate sag of the door. Mark its outline on the door edge.

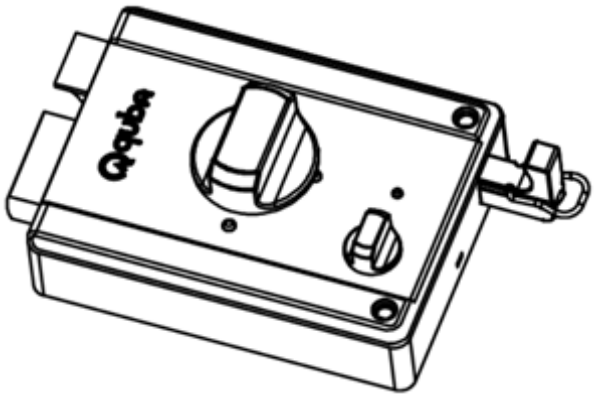


9) Make recess along this marking so that the flange of receptacle lies flush with the face of the door frame. Fix it using the receptacle screws as shown.



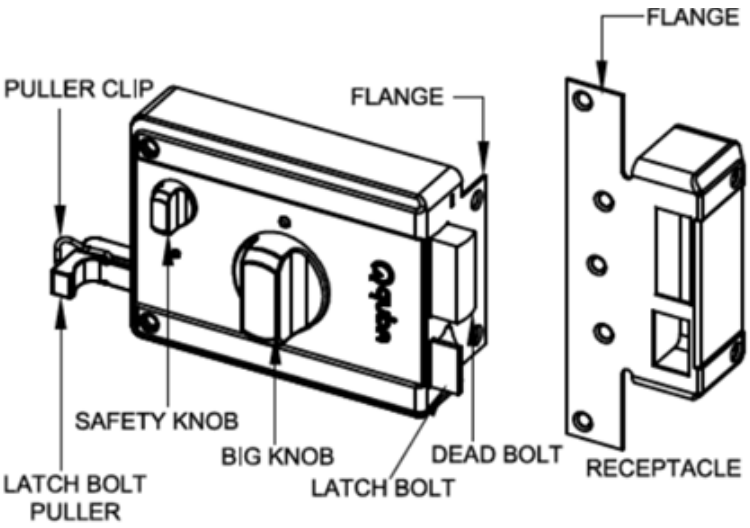
10) Now lock is installed and check the functionality using key and knobs. Once functionality is check then handover the keys to the customer to check and make feel of the operation of the lock.

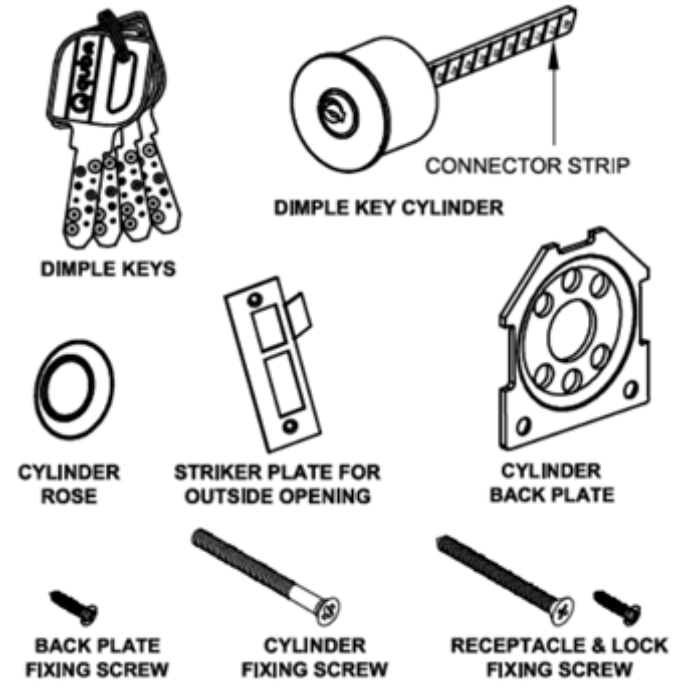
6.2 Shield Night Latch – Dimple Keys (Suitable for 30mm to 85mm door thickness)



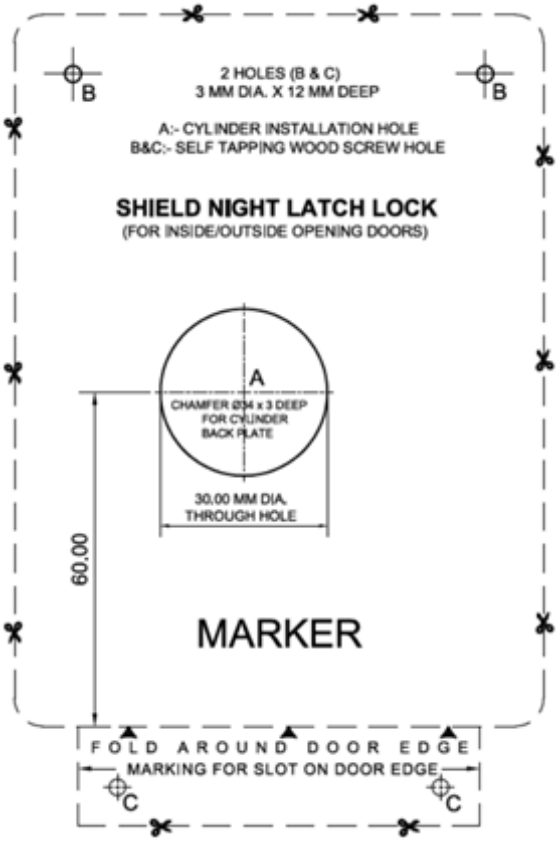
Steps:

1) Open the lock and check the contents such as lock body, receptacle cylinder with keys, retainer plate, rose ring, wooden screws etc. Check the functionality of the lock. If you find anything missing or functional problem, then correct it. If correction is not possible then ask the customer to arrange new product from the nearest authorized Quba dealer/ retailer.



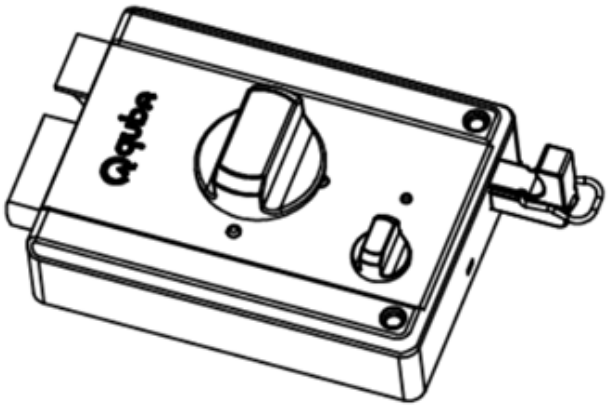


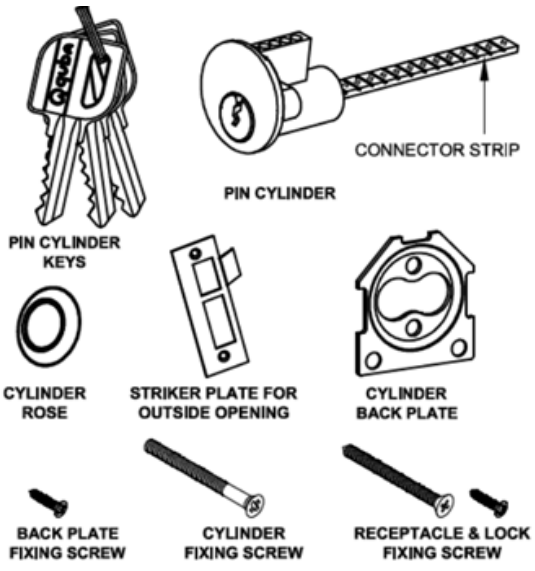
2) Cut the marker from the instruction manual given with the product, and fold along the dotted line and place on the door from inside as per the direction of the door opening as shown and punch the centres A, B and C.



3) Now, follow steps 3 to 10 of section 6.1 for installing this night latch.

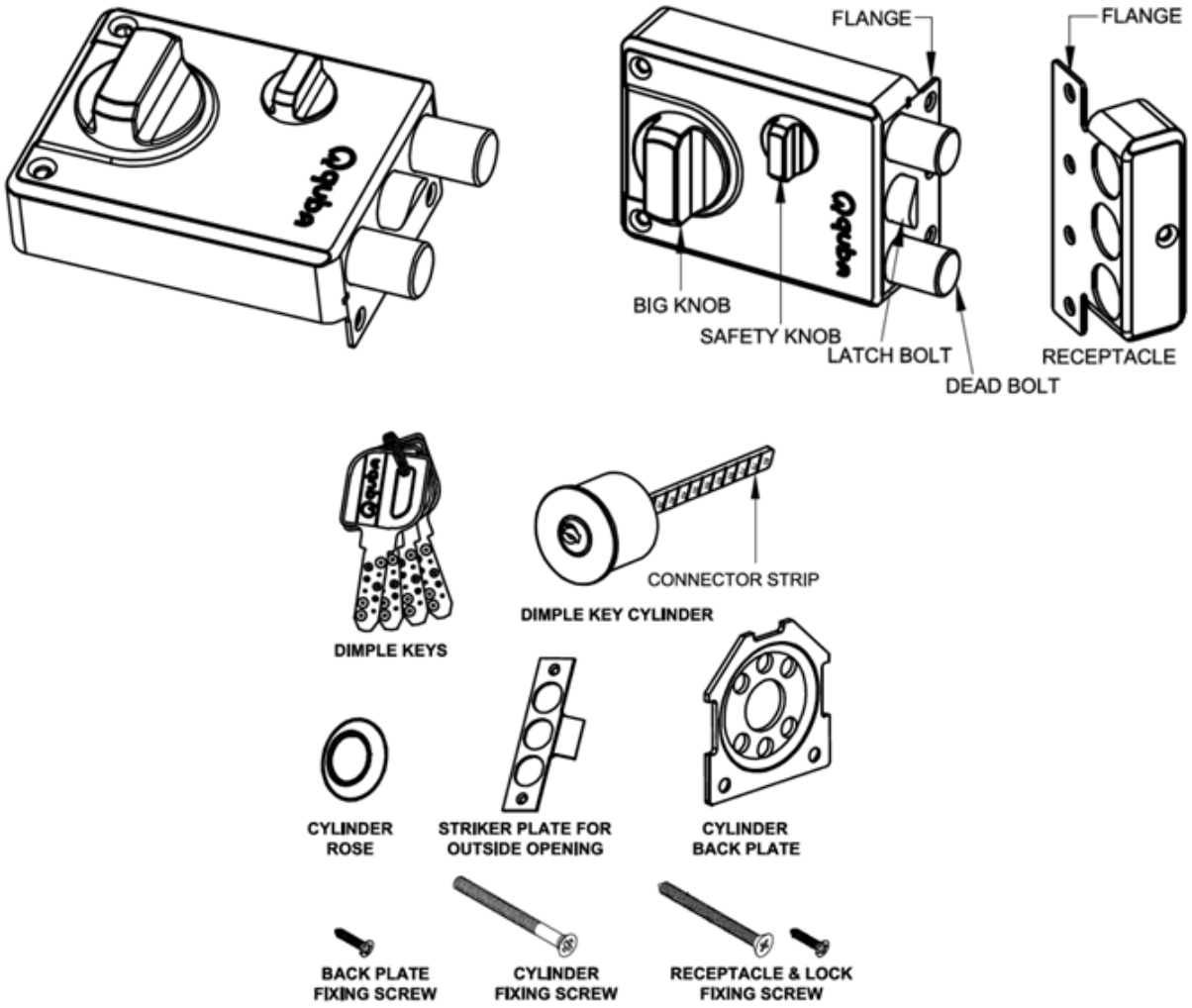
6.3 Shield Night Latch – Pin Cylinder Keys (Suitable for 30mm to 85mm door thickness)





Follow steps of section 6.2 for installing this lock.

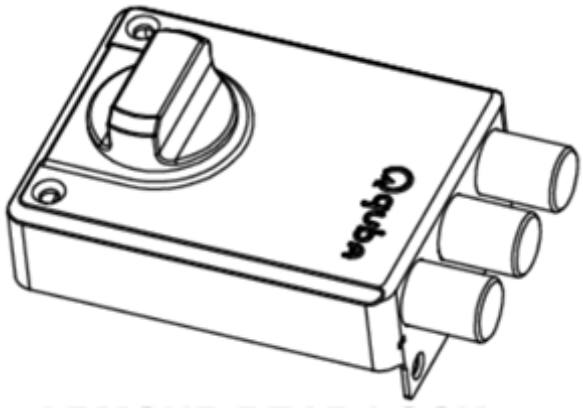
6.4 Armour Night Latch – Dimple Keys (Suitable for 30mm to 85mm door thickness)



Follow steps of section 6.2 for installing this lock.

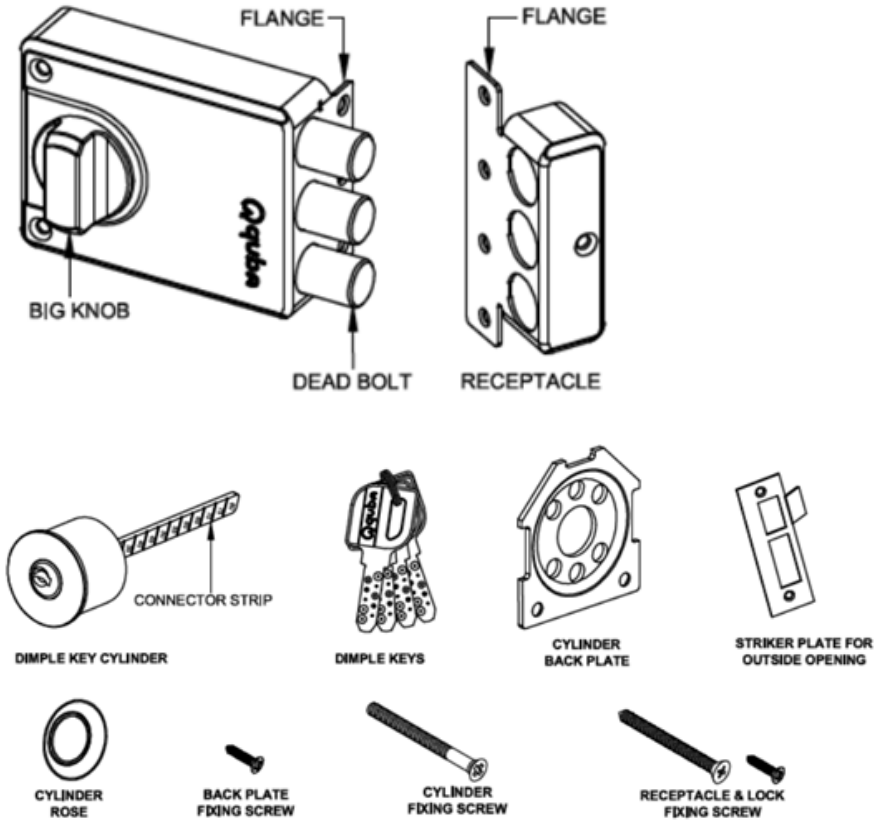
6.5 Armour Dead Lock -Dimple Keys (Suitable for 30mm to 85mm door thickness)

Let us see installation process

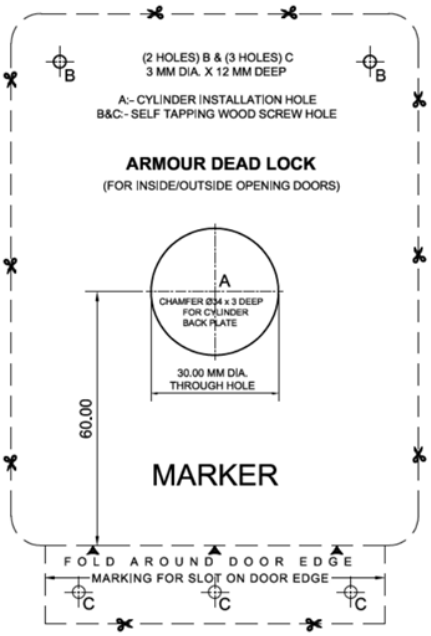


Steps:

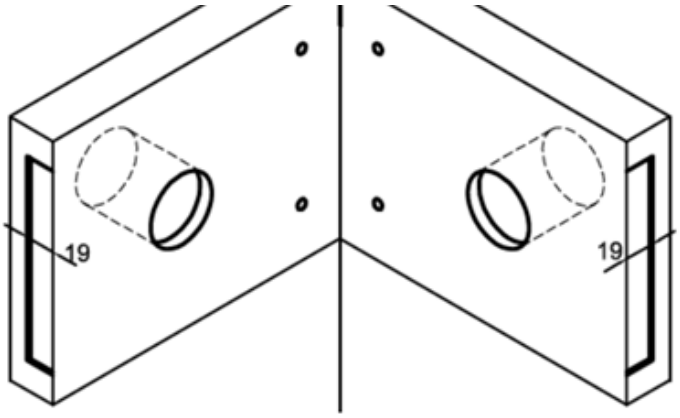
1) Open the lock and check the contents such as lock body, receptacle cylinder with keys, retainer plate, rose ring, wooden screws etc. Check the functionality of the lock. If you find anything missing or functional problem, then correct it. If correction is not possible then ask the customer to arrange new product from the nearest authorized Quba dealer/ retailer.



2) Cut the marker from the instruction manual given with the product, and fold along the dotted line and place on the door from inside as per the direction of the door opening as shown and punch the centres A, B and C.



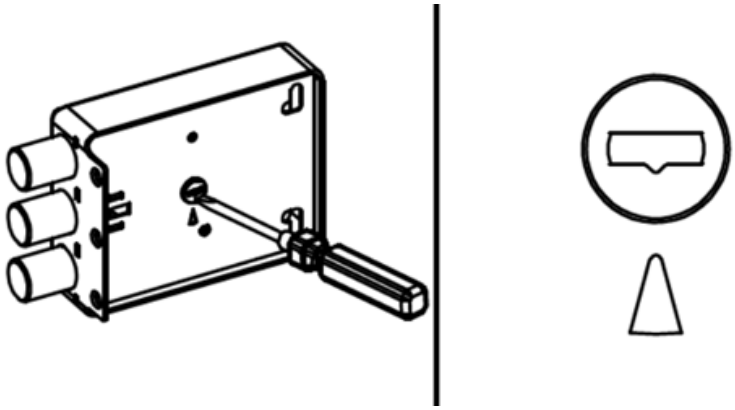
3) Make ø30MM through hole at point A using drill and cutter. From inside enlarge the hole to ø34mm X 3mm deep. Using chisel make 19 mm recess along marking on door edge as shown such that the lock flange lies flush with the door edge.



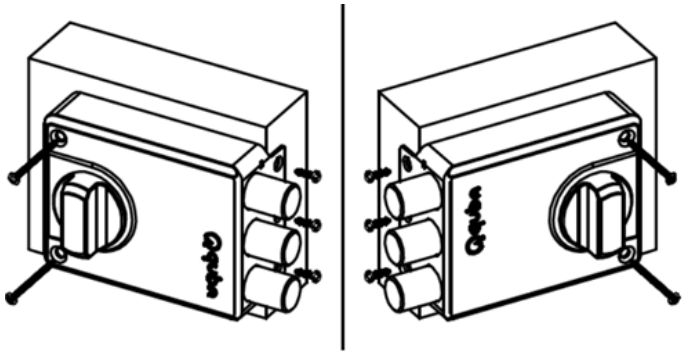
4) Place the cylinder with rose as shown and cut the strip as per the door thickness so that strip remains 8mm above the door surface.

5) Now fix the cylinder using retainer plate on door as shown, so that QUBA logo on the cylinder is upright.

6) Place screw driver in the slot at the back side of the lock assembly and rotate it to align the mark on the spindle with the mark on the plate as shown.

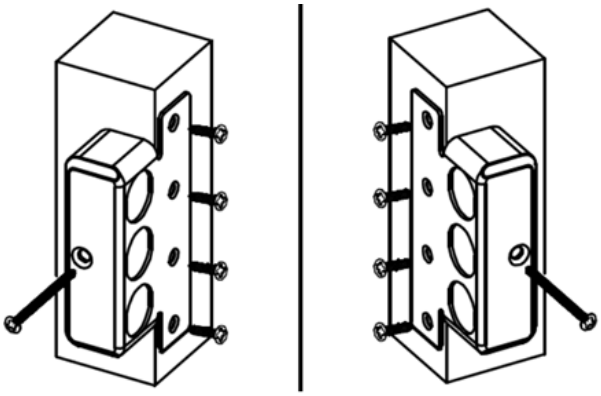


7) Now place the lock assembly from inside ensuring that connector strip enters into the slot at the back of the lock assembly. Fix it using the screws and check the functionality using keys.



8) Now place the receptacle on the door frame from inside, slightly lower than the lock assembly to accommodate sag of the door. Mark its outline on the door edge.

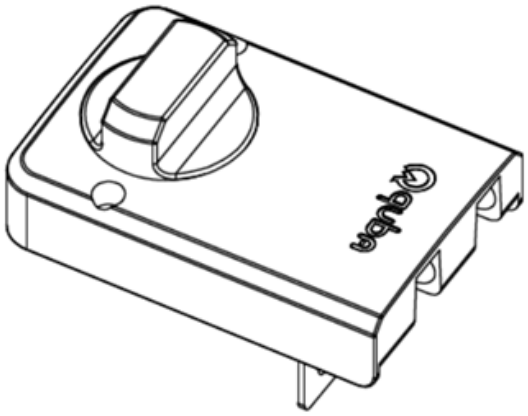
9) Make recess along this marking so that the flange of receptacle lies flush with the face of the door frame. Fix it using the receptacle screws as shown.



10) Now lock is installed and check the functionality using key and knobs. Once functionality is check then handover the keys to the customer to check and make feel of the operation of the lock.

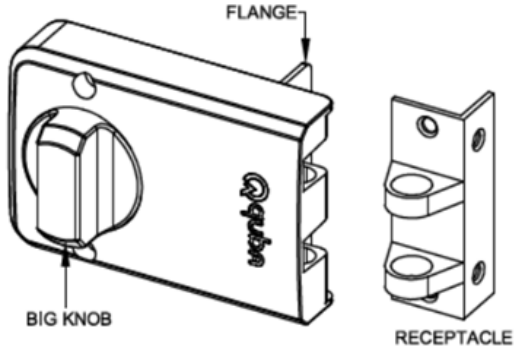
6.6 Endura Vertibolt- Dimple Keys (Suitable for 30mm to 85mm door thickness)

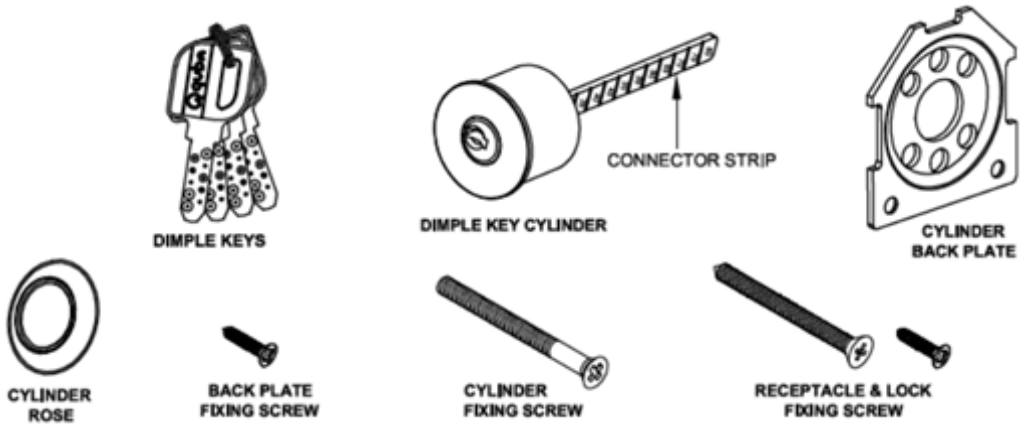
Let us see installation process



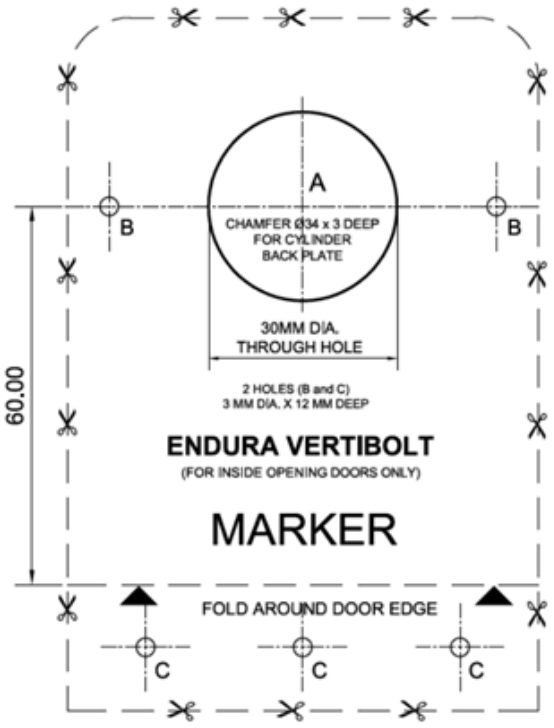
Steps:

1) Open the lock and check the contents such as lock body, receptacle cylinder with keys, retainer plate, rose ring, wooden screws etc. Check the functionality of the lock. If you find anything missing or functional problem, then correct it. If correction is not possible then ask the customer to arrange new product from the nearest authorized Quba dealer/ retailer.





2) Cut the marker from the instruction manual given with the product, and fold along the dotted line and place on the door from inside as per the direction of the door opening as shown and punch the centres A, B and C.



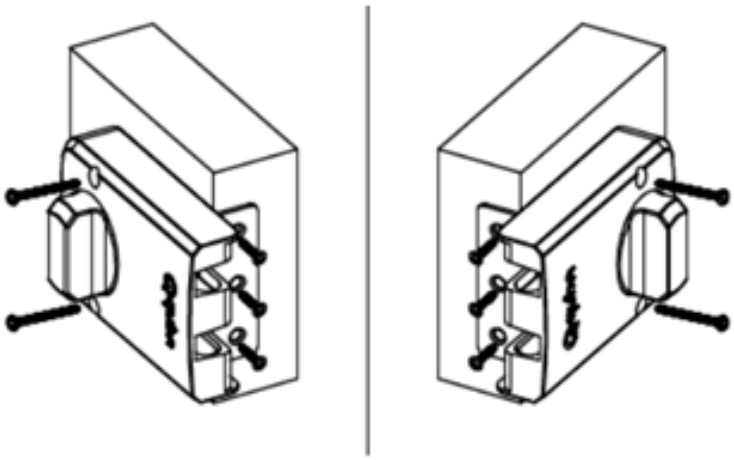
3) Make ø30MM through hole at point A using drill and cutter. From inside enlarge the hole to ø34mm X 3mm deep. Using chisel make 20.5 mm recess along marking on door edge as shown such that the lock flange lies flush with the door edge.

4) Place the cylinder with rose as shown and cut the strip as per the door thickness so that strip remains 8mm above the door surface.

5) Now fix the cylinder using retainer plate on door as shown, so that QUBA logo on the cylinder is upright.

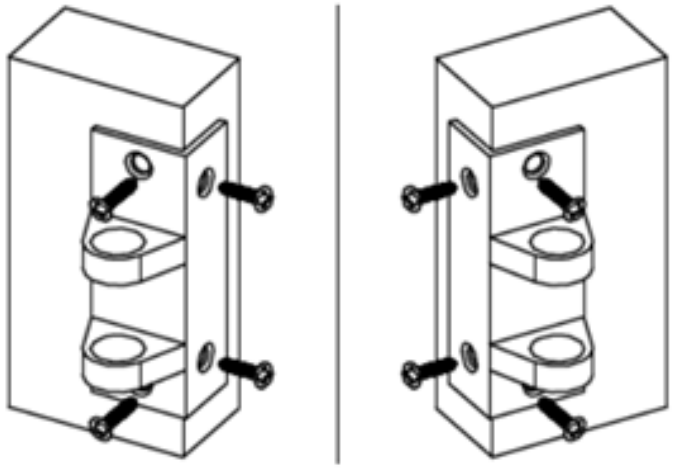
6) Place screw driver in the slot at the back side of the lock assembly and rotate it to align the mark on the spindle with the mark on the plate as shown.

7) Now place the lock assembly from inside ensuring that connector strip enters into the slot at the back of the lock assembly. Fix it using the screws and check the functionality using keys



8) Now place the receptacle on the door frame from inside, slightly lower than the lock assembly to accommodate sag of the door. Mark its outline on the door edge.

9) Make recess along this marking so that the flange of receptacle lies flush with the face of the door frame. Fix it using the receptacle screws as shown.



10) Now lock is installed and check the functionality using key and knobs. Once functionality is check then handover the keys to the customer to check and make feel of the operation of the lock.

Similarly, we can install Endura Vertibolt -Pin cylinder lock also.

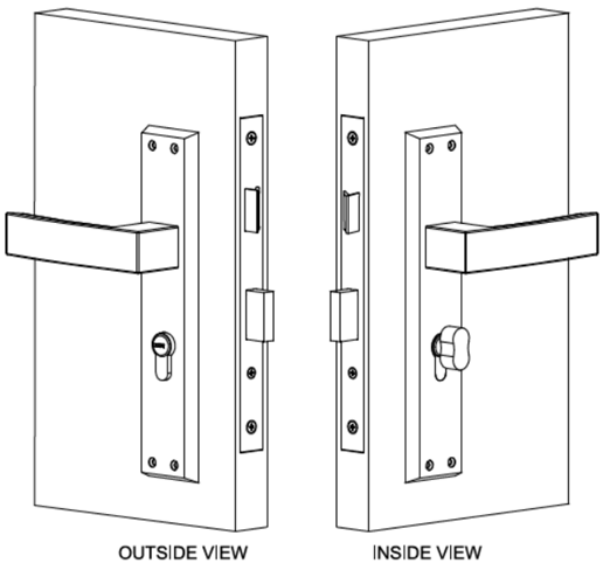
7. TROUBLE SHOOTING OF MAIN DOOR LOCKS

Sr. No.	Issue	Solution
1	Latch bolt is not operating	*Check latch operation is free from inside *Check safety knob released *Check Puller Clip
2	Door is not locking on latch bolt	*Check door alignment and position of receptacle on frame
3	Dead bolt is not locking	*Check door alignment and position of receptacle on frame
4	Cylinder key operation or knob operation is tight while locking and opening the door	*Check door alignment and position of receptacle on frame *Check slot is properly made in receptacle *Check cylinder strip might be longer than the permissible length of 8mm above the surface of the door
5	Cylinder key is rotating but lock is not operating	*Check cylinder strip is inserted properly in hole of the lock body plate *Check length of strip, might be under sized cut (less than 5mm)
6	Cylinder is loosely fitted and QUBA logo is not upright	*Check retainer plate wrongly fixed *Check all the 4 screws of retainer plate fixed

8. INSTALLATION OF MORTISE LOCKS

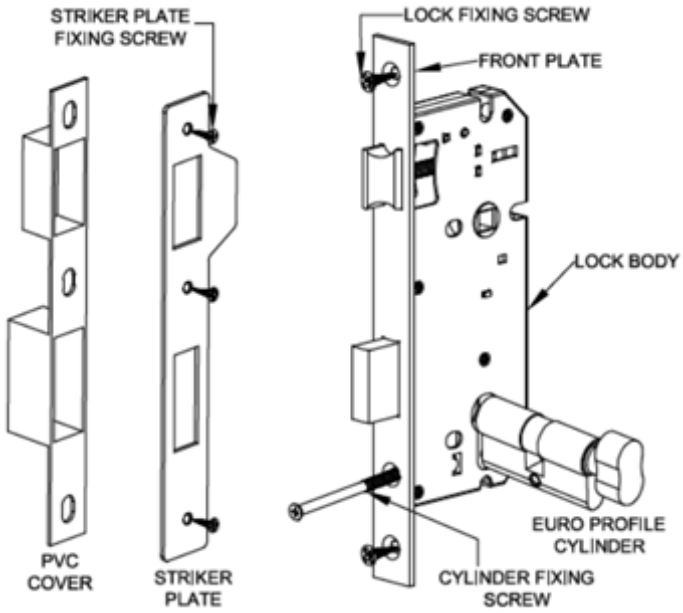
8.1 240MM Mortise Lock (Minimum door thickness 28mm)

Let us see the process of installation

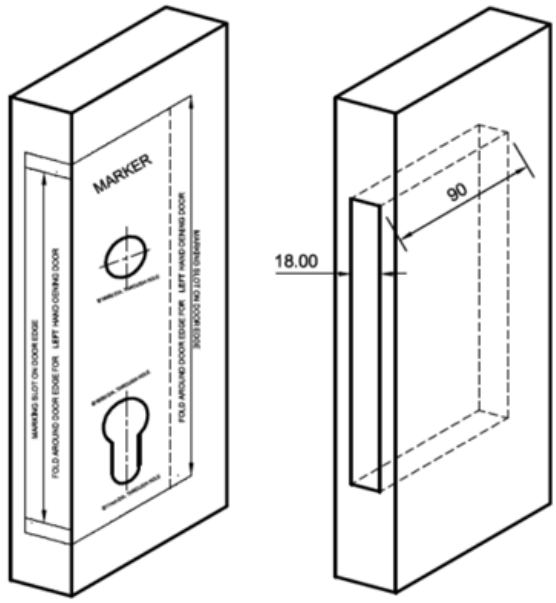


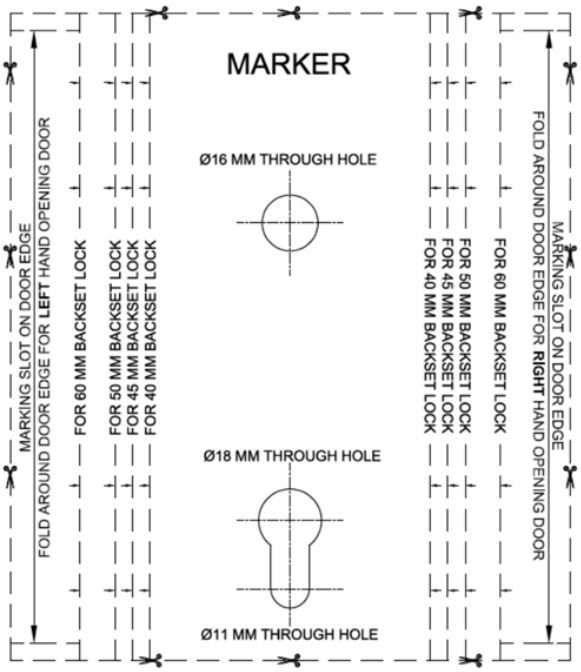
Steps:

1) Open the lock and check the contents such as lock body, striker plate, Euro profile cylinder with keys, cylinder fixing screws, PVC cover, handle sets and fixing wooden screws etc. Check the functionality of the lock. If you find anything missing or functional problem, then correct it. If correction is not possible then ask the customer to arrange new product from the nearest authorized Quba dealer/ retailer.

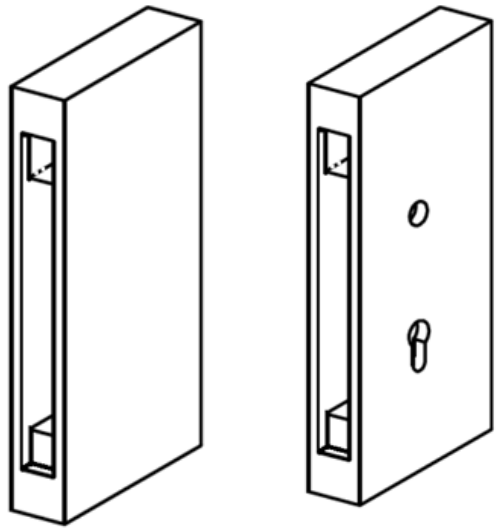


2) Cut the marker from the instruction manual given with the product, and fold along the dotted line as per the backset such as 40mm, 45mm & 50mm, and place on the door from inside as per the direction of the door opening as shown and punch the centers and mark the dotted lines along the thickness of the door. Mark horizontal lines on door thickness and mark two vertical lines 18mm apart from the middle of the door.

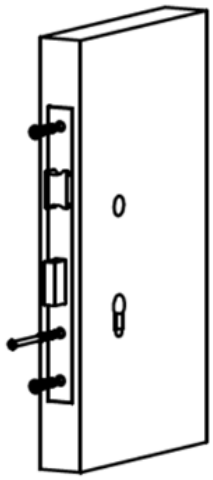




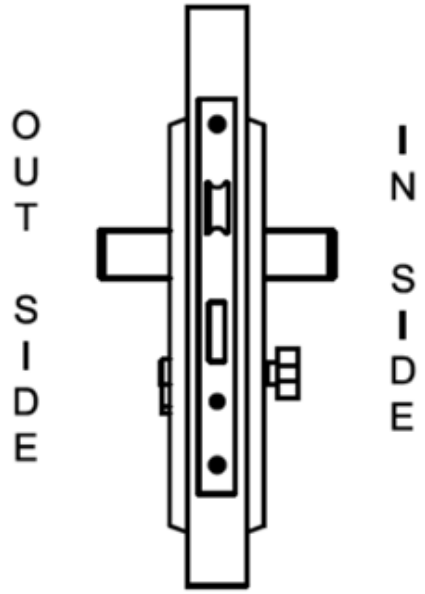
3) Make mortise slot of 18mm X 90 as shown using chisel and drill bits. Also make Ø16mm, Ø18mm and Ø11mm through hole from side of door for fixing handle shank and cylinder as shown.



4) Now fix the lock body using wooden screws as shown.

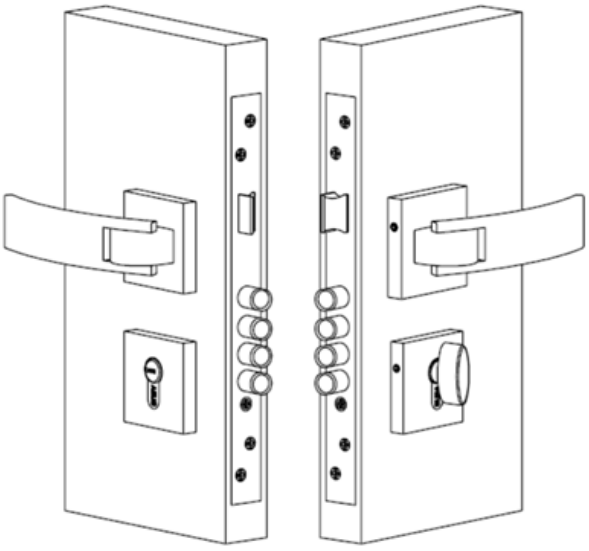


5) Now fix handles using handle screws and Euro cylinder using cylinder fixing screw.



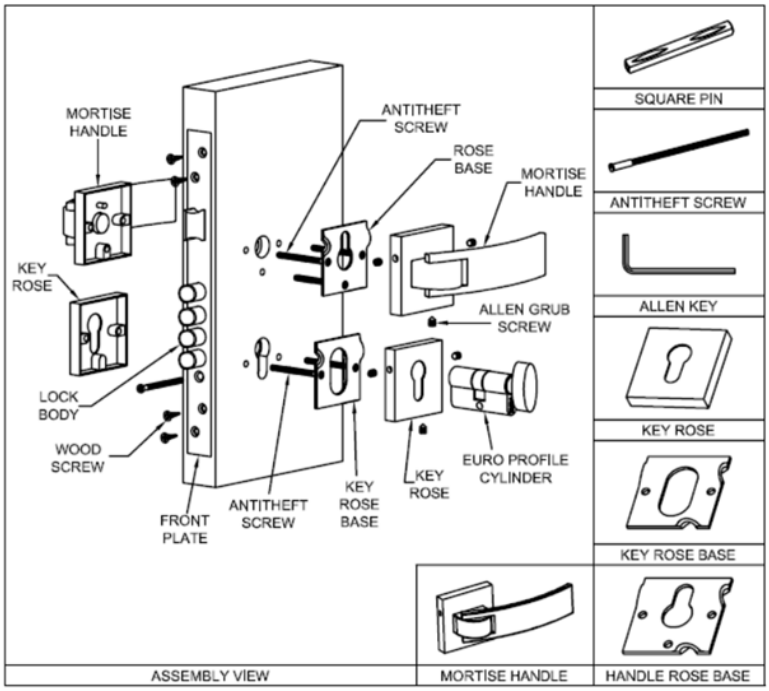
8.2 Square Rose Set Mortise Lock – QX Series (Minimum door thickness 28mm)

Let us see the process of installation

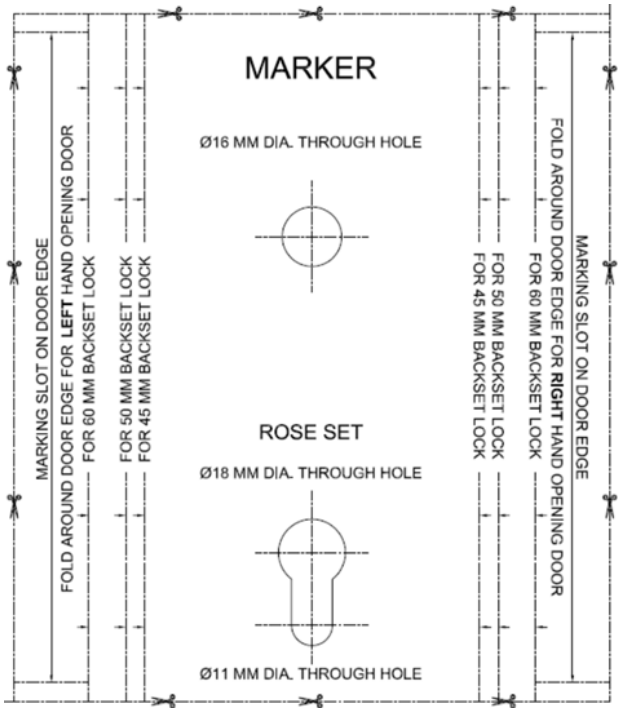


Steps:

1) Open the lock and check the contents such as lock body, striker plate, Euro profile cylinder with keys, cylinder fixing screws, PVC cover, handle sets and fixing wooden screws etc. Check the functionality of the lock. If you find anything missing or functional problem, then correct it. If correction is not possible then ask the customer to arrange new product from the nearest authorized Quba dealer/ retailer.



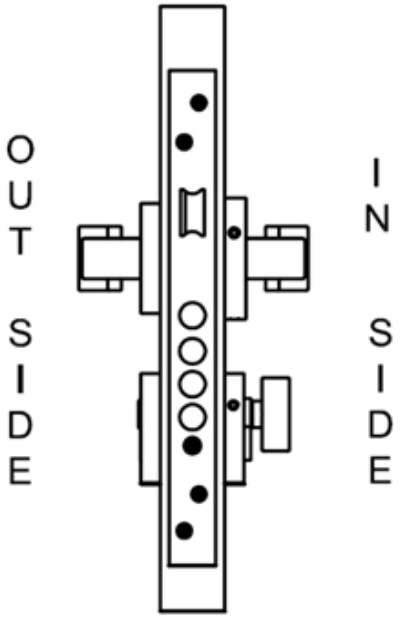
2) Cut the marker from the instruction manual given with the product, and fold along the dotted line as per the backset such as 45mm, 50mm & 60mm, and place on the door from inside as per the direction of the door opening as shown and punch the centres and mark the dotted lines along the thickness of the door. Mark horizontal lines on door thickness and mark two vertical lines 18mm apart from the middle of the door.



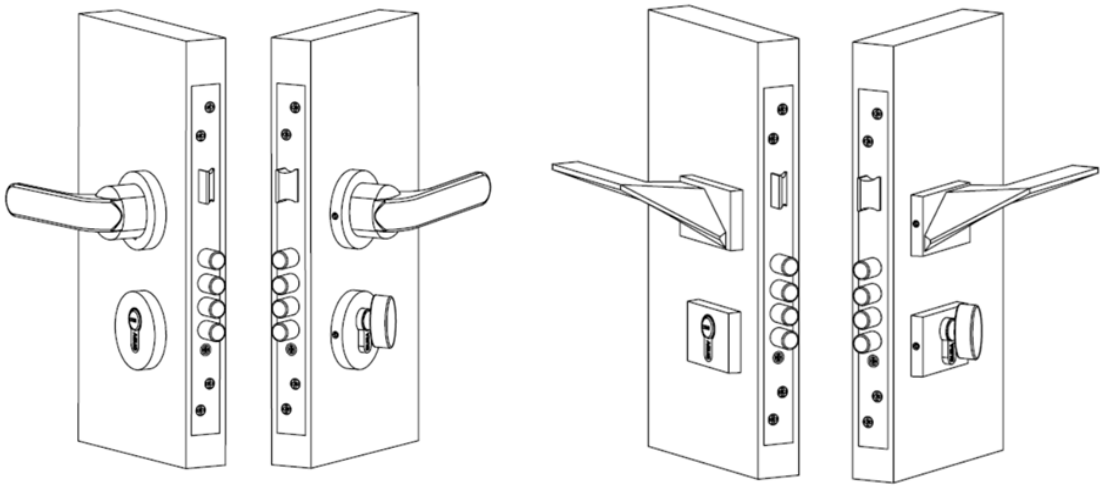
3) Make mortise slot of 18mm X 90 as shown using chisel and drill bits. Also make Ø16mm, Ø18mm and Ø11mm through hole from side of door for fixing handle shank and cylinder as shown.

4) Now fix the lock body using wooden screws as shown.

5) Now fix Rose Set handles using handle screws and Euro cylinder using cylinder fixing screw.

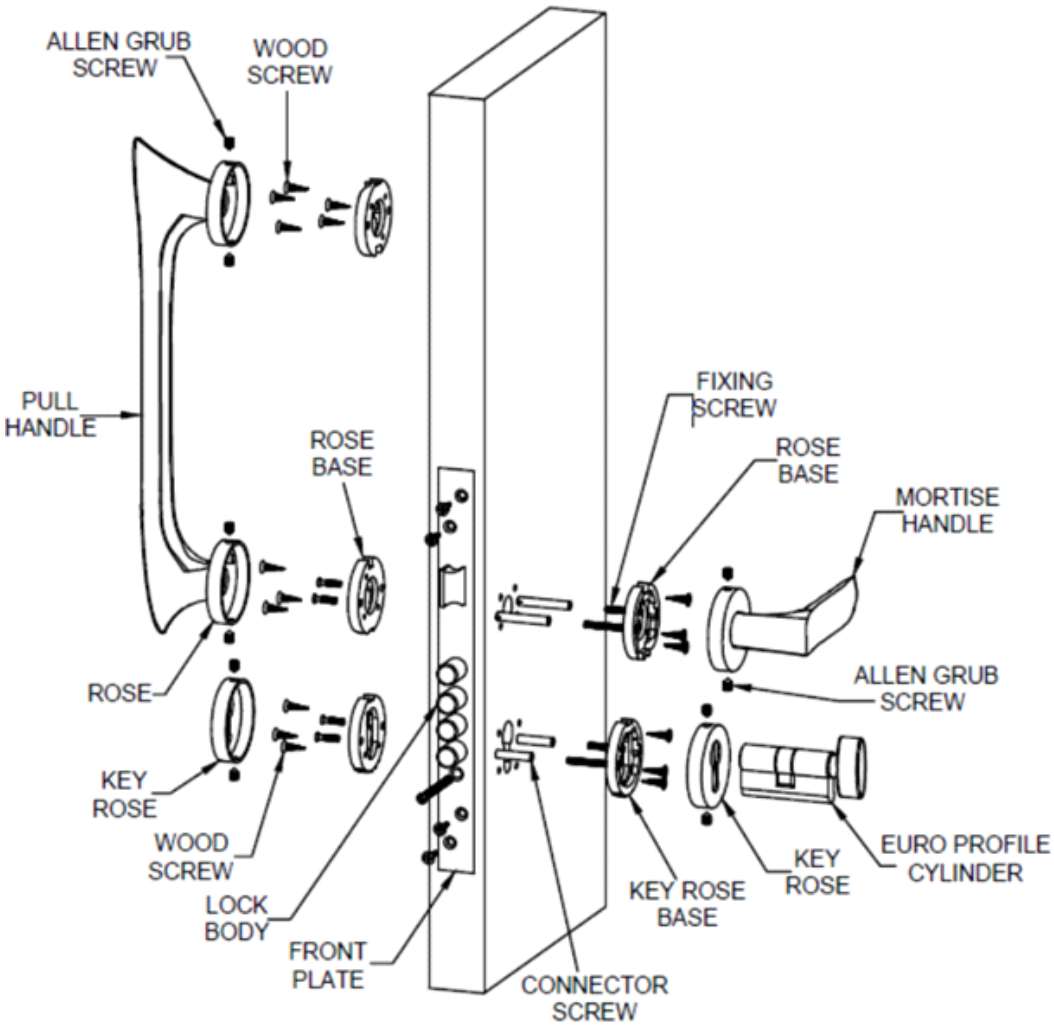


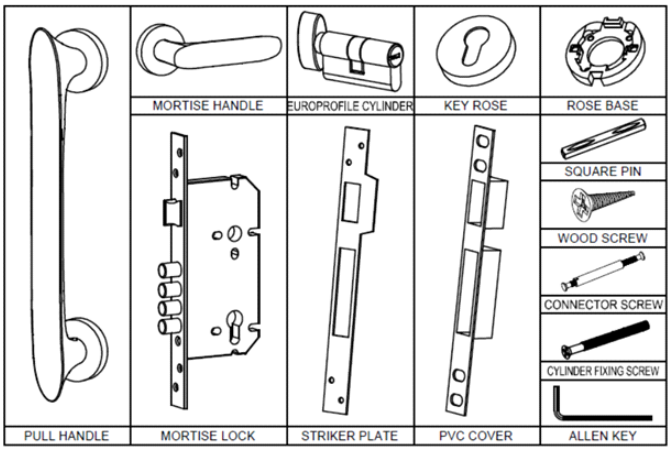
Similarly, we can also install Round Rose Set Mortise lock and Rectangle Rose Set Mortise lock.

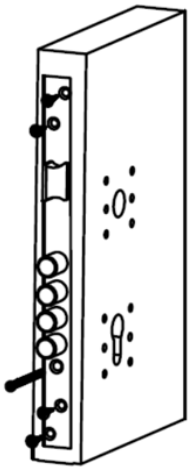


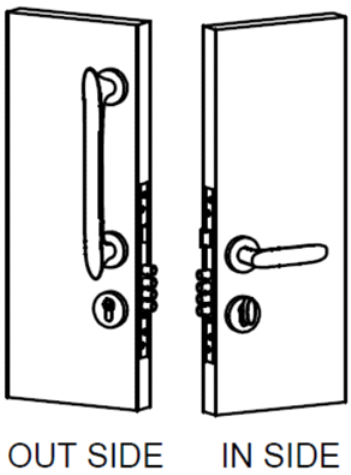
8.3 QMDS Mortise Lock (Minimum door thickness 28mm)

Following the steps of 8.1 we can install this lock also.







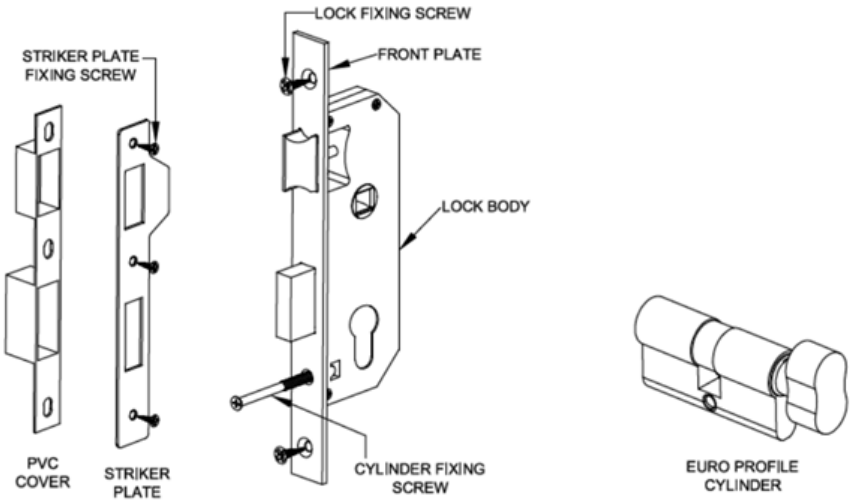


8.4 Narrow Style Mortise Lock (Minimum door thickness 28mm)

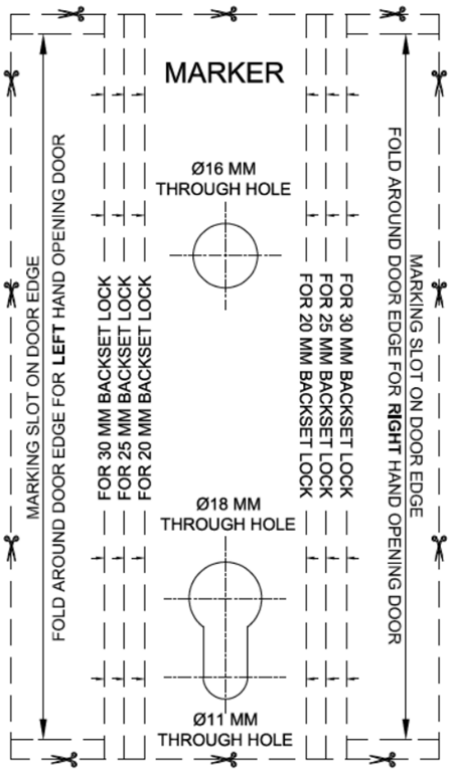
Let us see the process of installation

Steps:

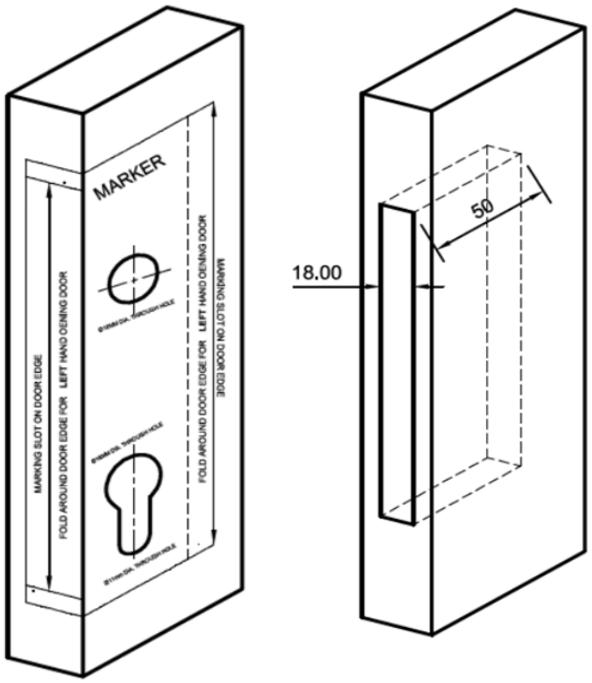
1) Open the lock and check the contents such as lock body, striker plate, Euro profile cylinder with keys, cylinder fixing screws, PVC cover, handle sets and fixing wooden screws etc. Check the functionality of the lock. If you find anything missing or functional problem, then correct it. If correction is not possible then ask the customer to arrange new product from the nearest authorized Quba dealer/ retailer.



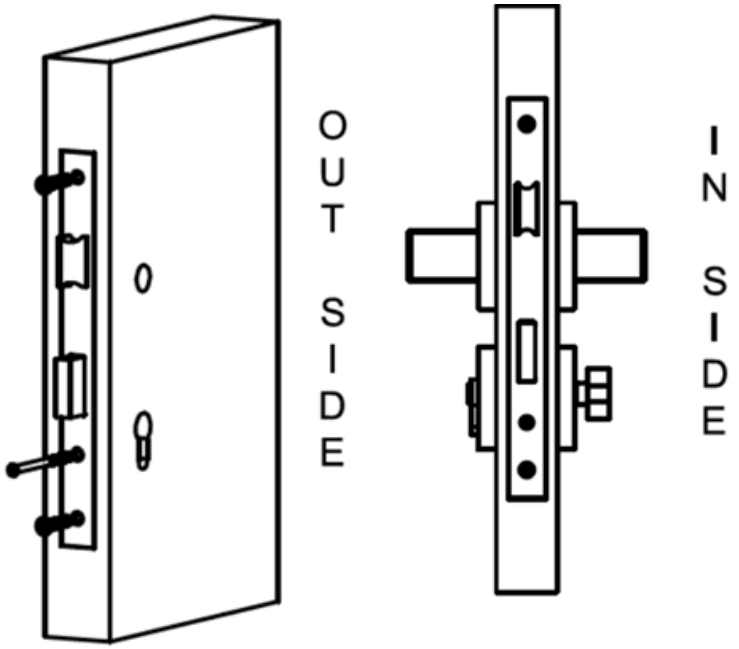
2) Cut the marker from the instruction manual given with the product, and fold along the dotted line as per the backset such as 20mm, 25mm & 30mm, and place on the door from inside as per the direction of the door opening as shown and punch the centers and mark the dotted lines along the thickness of the door. Mark horizontal lines on door thickness and mark two vertical lines 18mm apart from the middle of the door.



3) Make mortise slot of 18mm X 50 as shown using chisel and drill bits. Also make Ø16mm, Ø18mm and Ø11mm through hole from side of door for fixing handle shank and cylinder as shown.

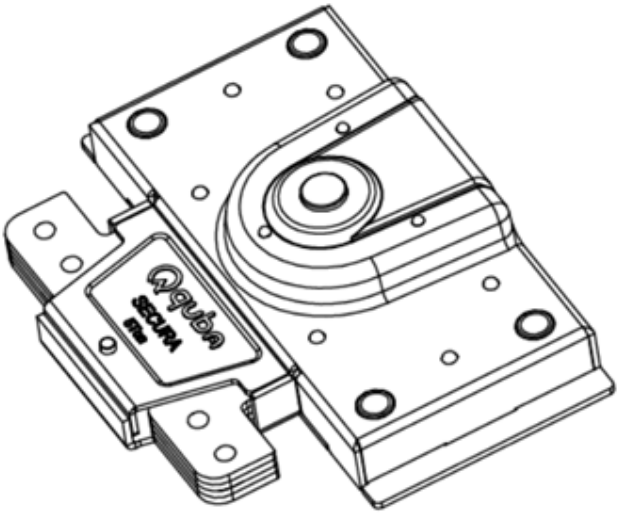


4) Now fix the lock body and handles using wooden screws, and Euro cylinder using cylinder fixing screw as shown.



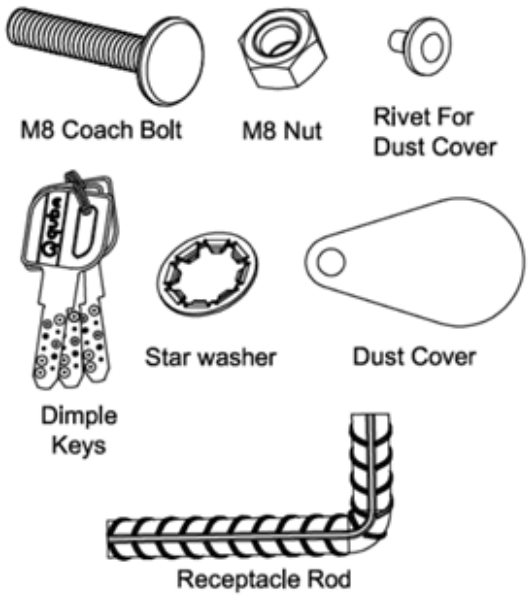
9. QUBA CENTRAL SHUTTER LOCK

Let us see the installation process

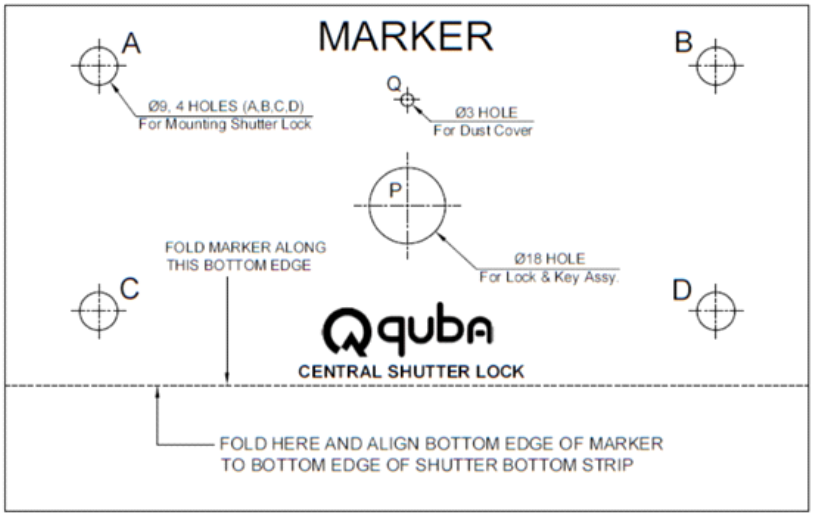


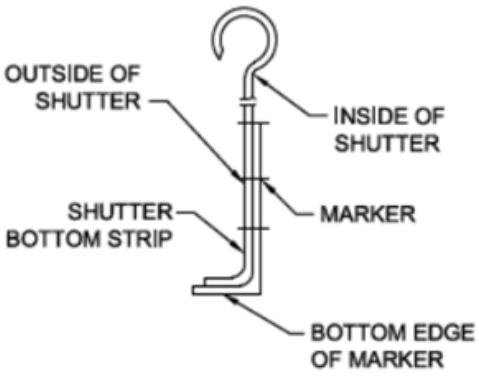
Steps:

1) Open the lock and check the contents such as lock body, receptacle, keys, dust cover, rivet, nut and washer, receptacle rod etc. Check the functionality of the lock. If you find anything missing or functional problem, then correct it. If correction is not possible then ask the customer to arrange new product from the nearest authorized Quba dealer/ retailer.



2) Cut the marker from the instruction manual given with the product, and fold along the dotted line, from inside of shutter place marker on shutter bottom edge as shown and mark centres A,B,C,D,P and Q with center punch.

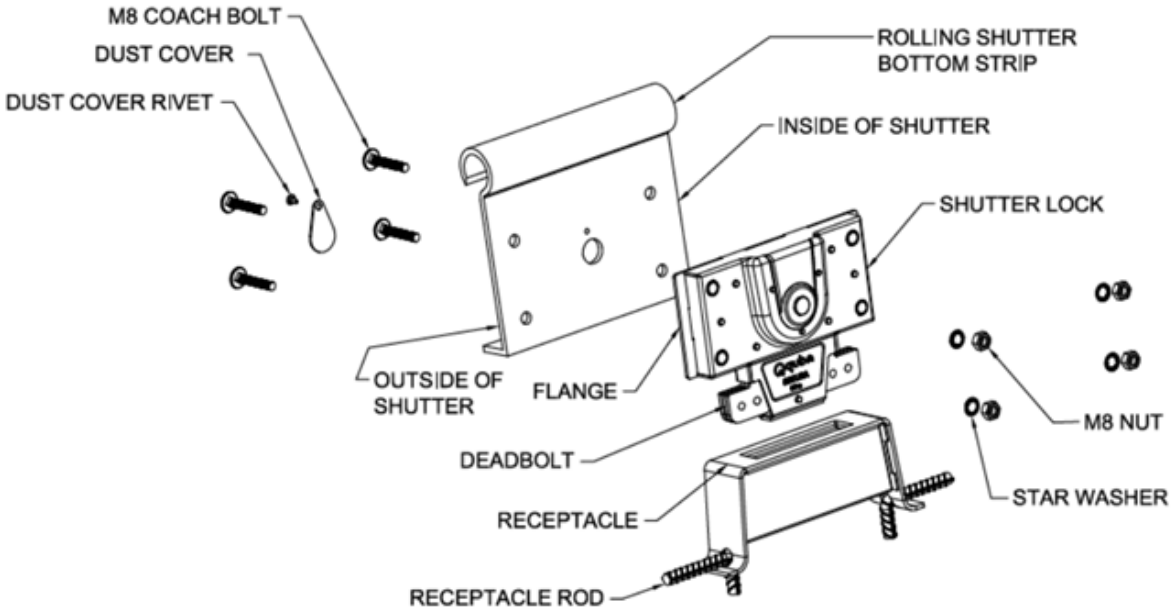




3) Drill 9mm through hole at centers A, B, C and D . Drill 18mm through hole at center P and drill 3mm through hole at Center Q.

4) To prevent dust entering the key hole, rivet the dust cover on the shutter from outside at center Q with rivet supplied.

5) Now fix the lock on the shutter using M8 Coach Bolts.

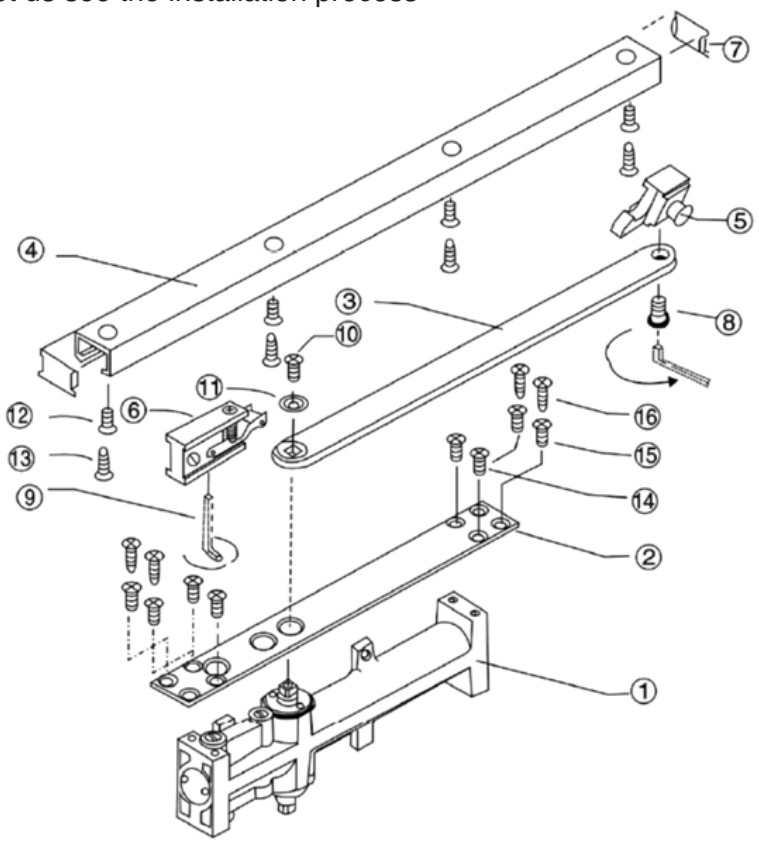


6) Fix the receptacle with concrete mixture using the lock in engaged condition provided lock is in the center position of the receptacle.

10. DOOR CLOSERS INSTALLATION

10.1 QCDC-80 Concealed Door Closer

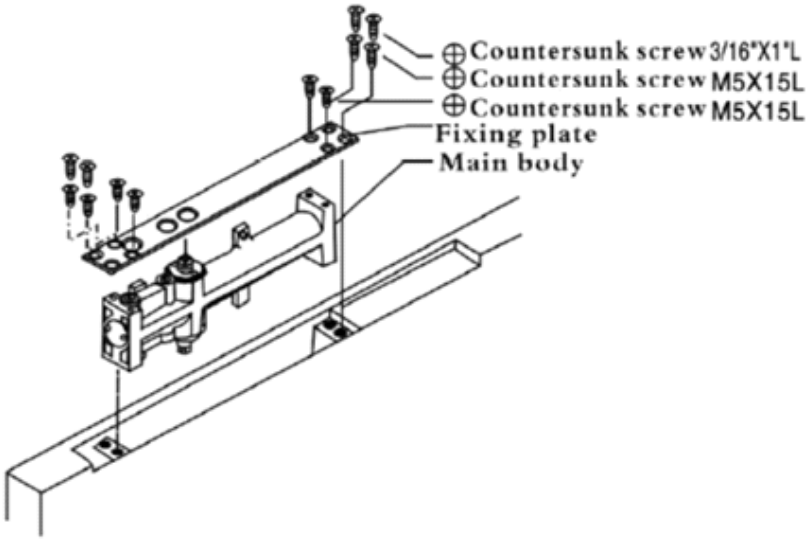
Let us see the installation process



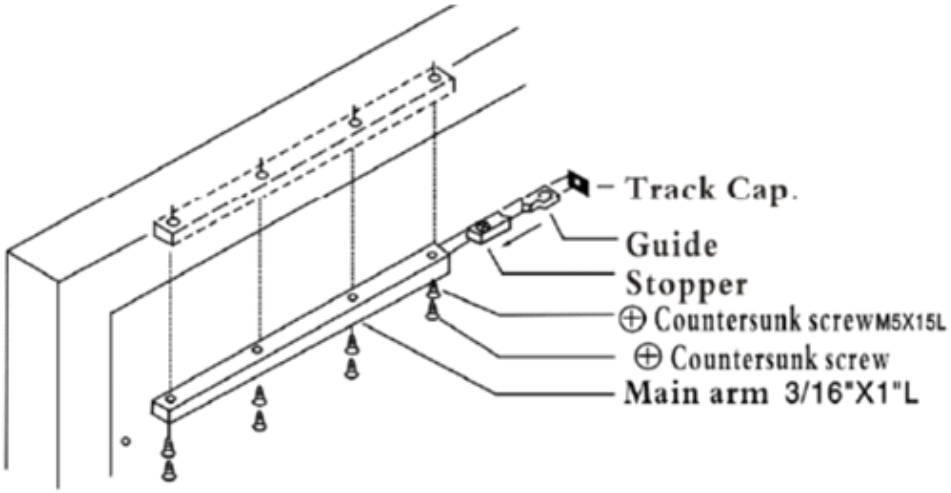
NO	Fitting Description	Quantity
1	Main body	1
2	Fixing plate	1
3	Arm	1
4	Track	1
5	Guide	1
6	Stopper	1
7	Track Cap	2
8	◎ Guide Screw	1
9	5 mm Allen Key	1
10	⊕ Countersunk Screw M5X15L	1
11	Washer	1
12	⊕ Countersunk Screw M5X15L	4
13	⊕ Countersunk Screw 3/16”X1”L	4
14	⊕ Countersunk Screw M5X12L	4
15	⊕ Countersunk Screw M5X15L	4
16	⊕ Countersunk Screw 3/16”X1”L	4

Steps:

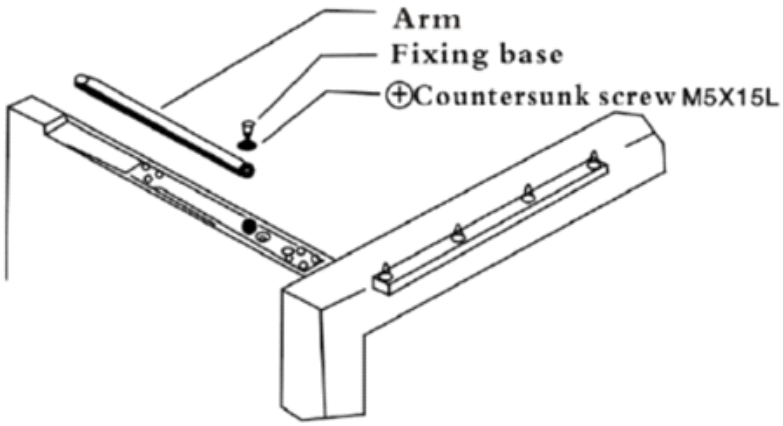
1) To install the door closer on RH I/O door we have to install the body such that door closer surface with “R“ should be on the top and ensure bottom two valves are fully closed.



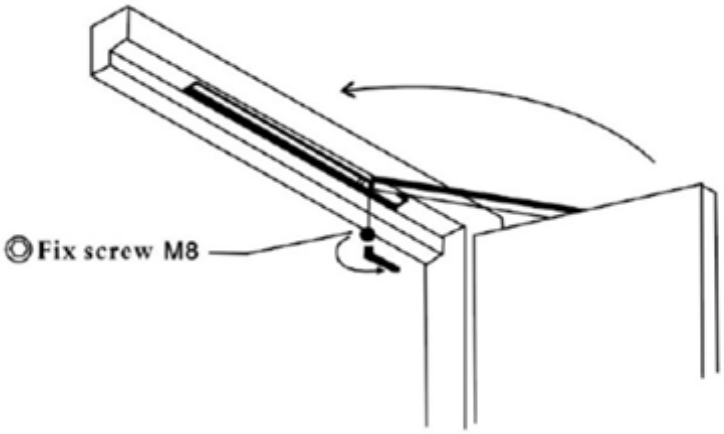
2) Fix the arm in the door frame to guide with the guide screw.



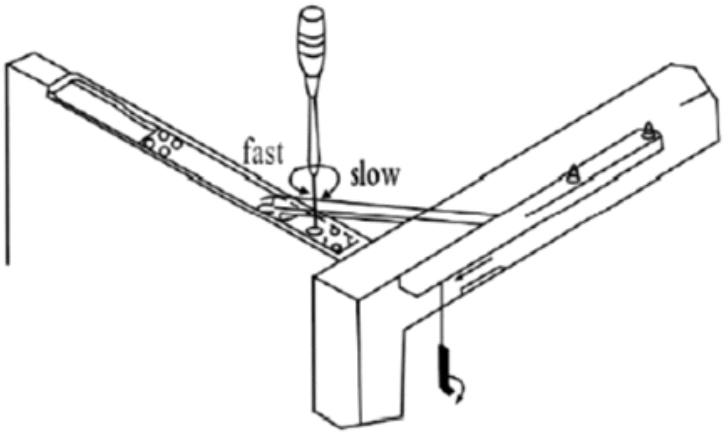
3) Now combine the arm with the main body part.



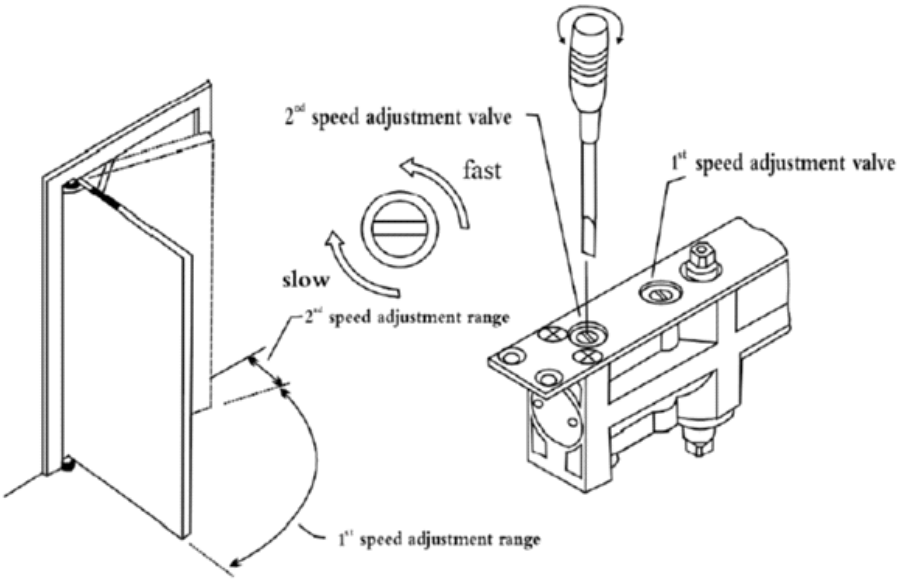
4) Now combine the main arm with the track



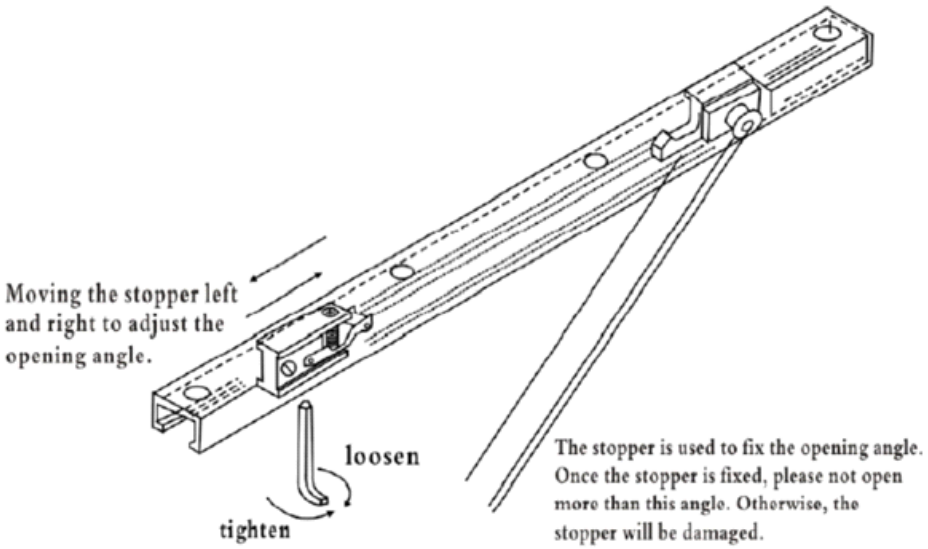
5) Now adjust the closing and latching speed



*** Speed adjustment method**



*** Open-Close angle (Stop angle is adjustable) adjustment method**

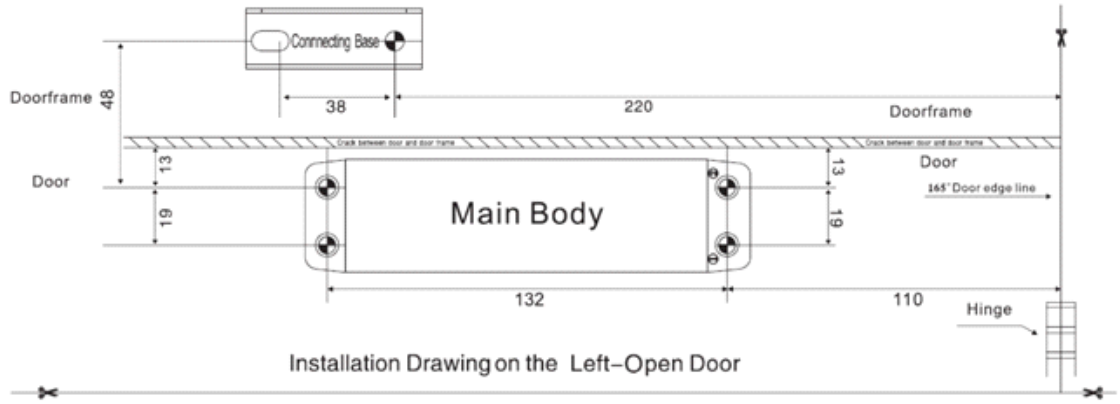


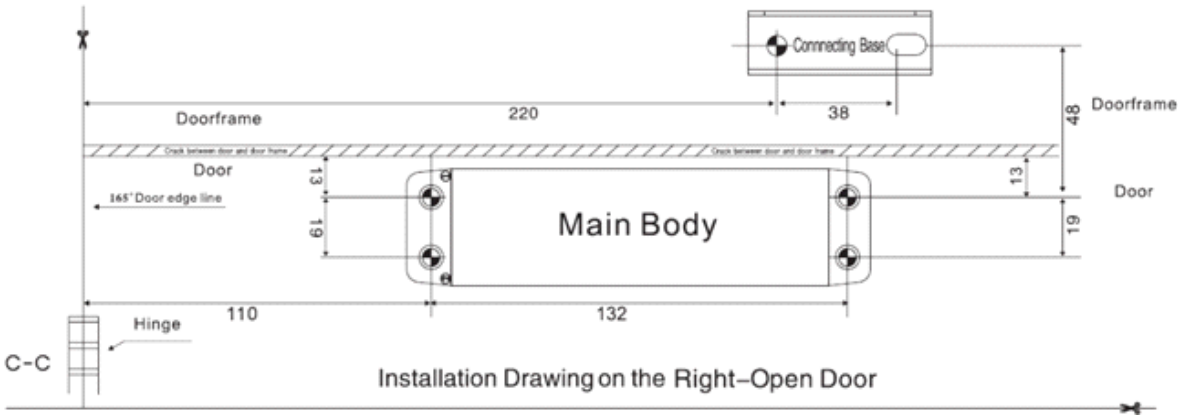
10.2 QDC 40 Overhead Door Closer

Let us see the installation process

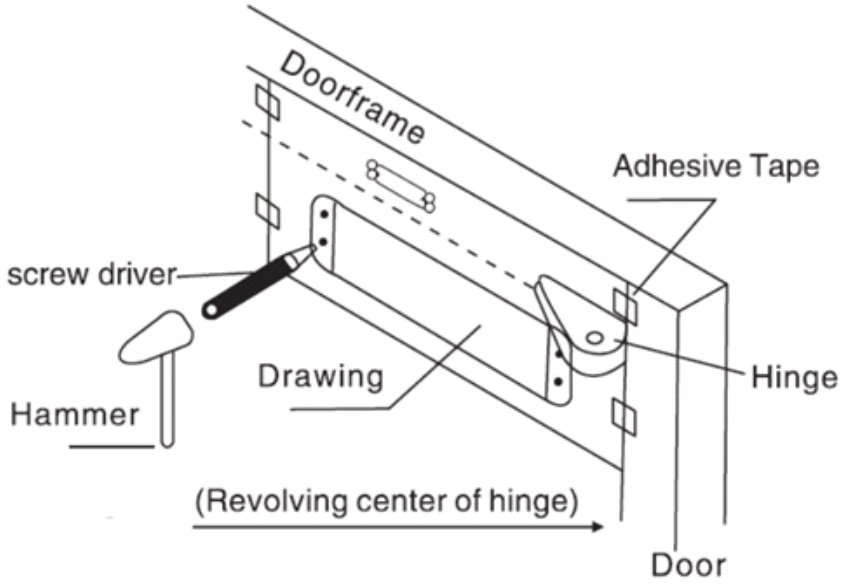
Steps:

1) As per the door type cut the marker from the instruction manual and stick on the door and frame as shown.

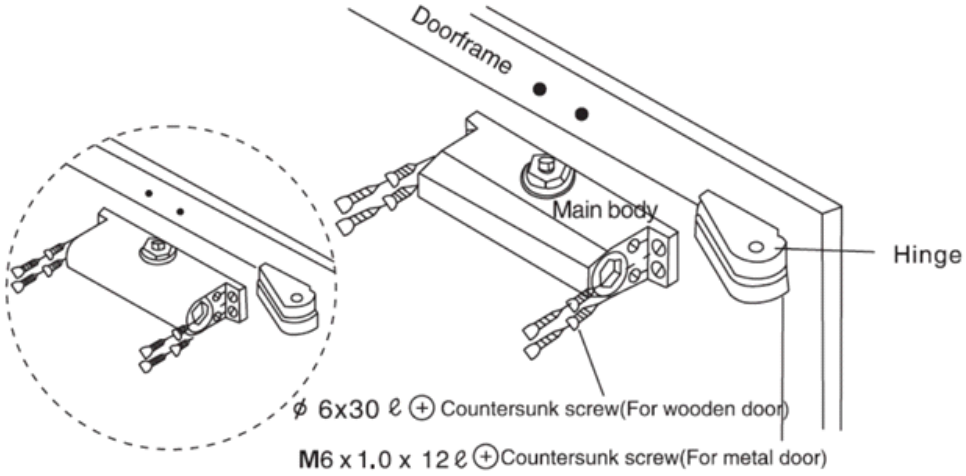




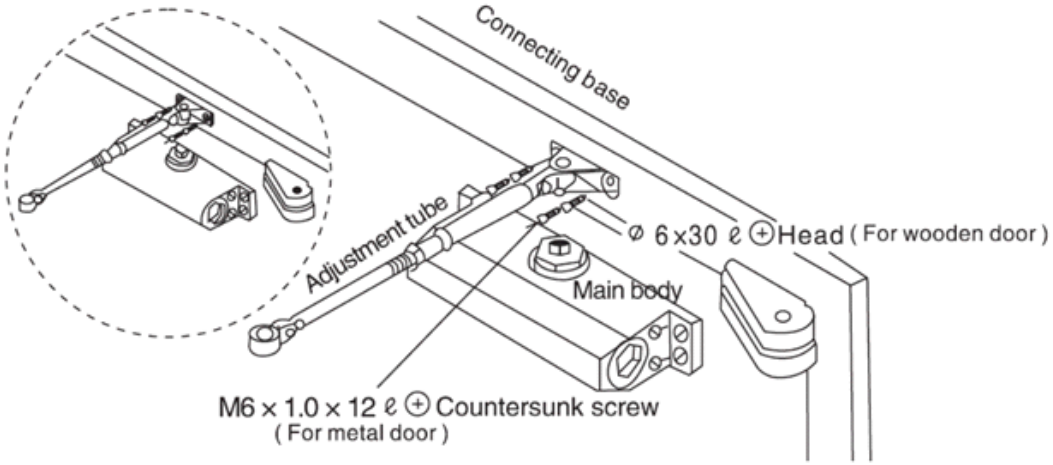
We will do installation on LH I/O door. Stick the marker from inside on right corner door and frame using adhesive tape as shown and punch the centers using punch center. Punch 4 holes on door and 2 holes on frame, and then drill holes of ø 5 mm.



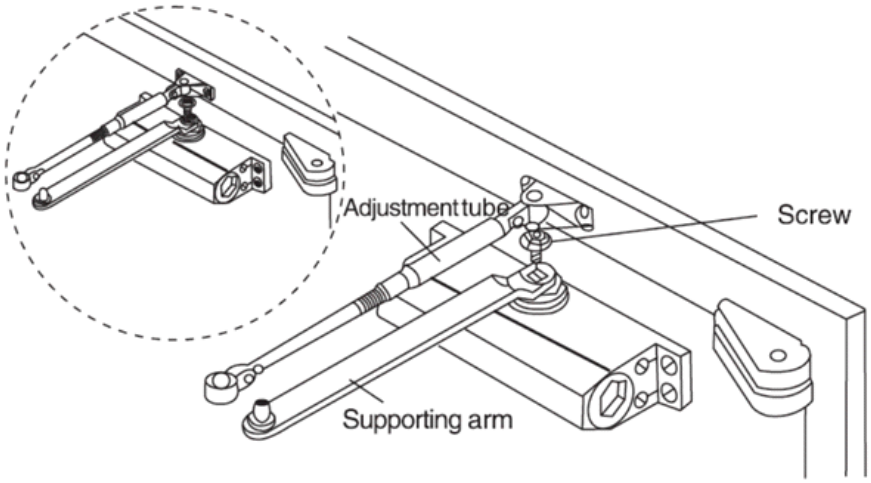
2) Install main body on door



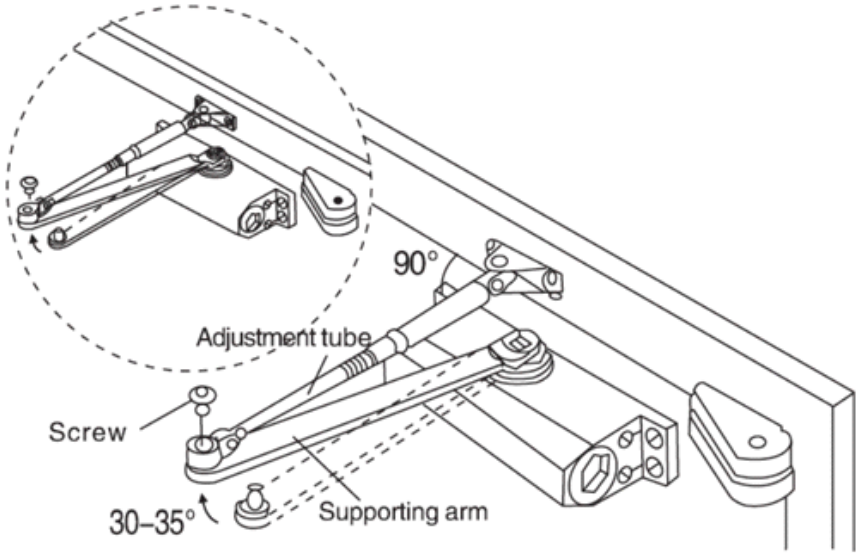
3) Fix connecting base on door frame



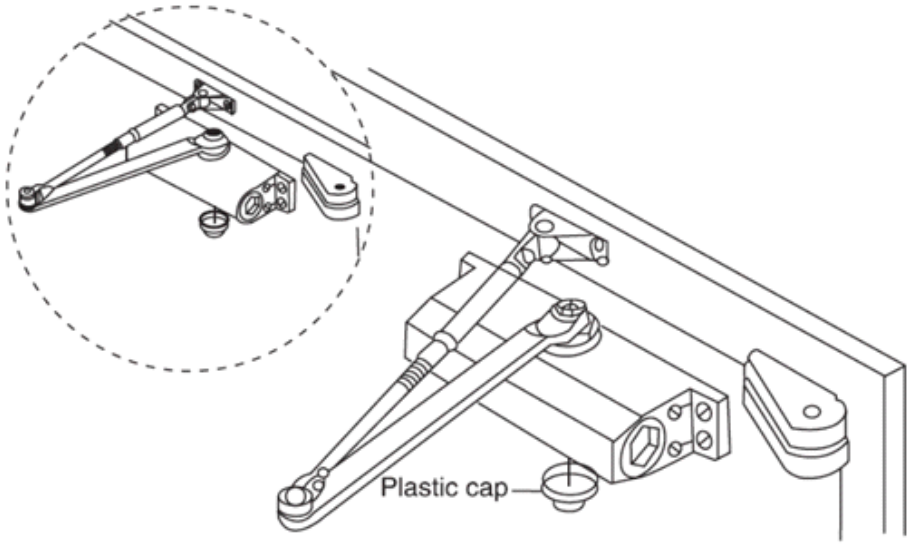
4) Install supporting arm on main body with screw



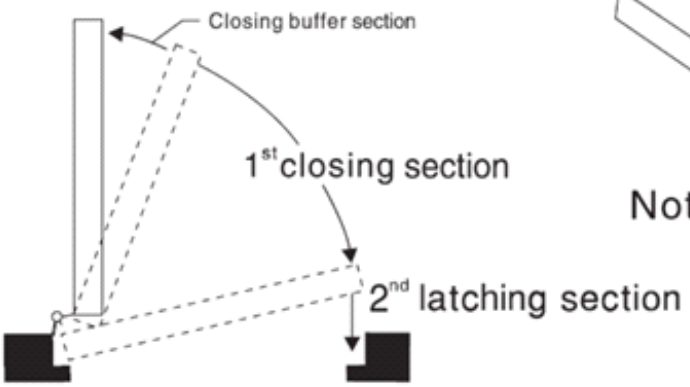
5) Regulate the adjustment arm to make it perpendicular to the door and fix the adjustment tube and supporting arm with screws

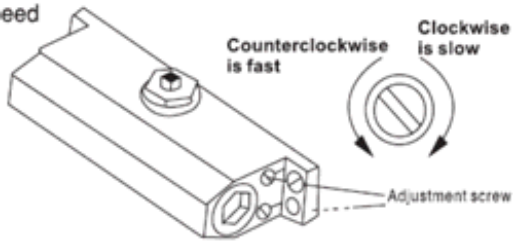


6) Now put the plastic cap and adjust the speed screws as per the requirement.



The 1st adjustments screw controls the 1st segment closing speed
The 2nd adjustments screw controls the 2nd segment closing speed
clockwise for slow, and count erclockwise for fast.





Notice:

Not to turn out the adjustment screw from body surface, Otherwise,it will be oill eakage and can not work anymore.

*Adjustable section of closing speed – 120° to 15°

*Adjustable section of latching speed – 15° to 0°

*QDC 40 is suitable for door weight from 25 to 45 kgs

Similarly, we can install QDC 60 and QDC 80 .

*QDC 60 is suitable for door weight from 45 to 65 kgs

*QDC 80 is suitable for door weight from 65 to 85 kgs

We are here to help!

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