

The background of the page is a photograph of a white security door. On the left side, there are three chrome door handles stacked vertically. In the center, there is a vertical strip showing the internal mechanism of the door, including several black cylindrical components. The right side of the page is a solid light gray.

TORTEROLO & RE

SAFETY WITH YOUR STYLE

INSTALLATION, OPERATION AND MAINTENANCE INSTRUCTIONS

Security doors

I014ING-02

TABLE OF CONTENTS



- I FALSE FRAME INSTALLATION**
- PRELIMINARY CHECKS
 - ALIGNING AND SECURING THE FALSE FRAME
 - CHECKS FOLLOWING FALSE FRAME INSTALLATION
 - ASSEMBLING THE FALSE FRAME FROM ITS COMPONENTS
- II FRAME INSTALLATION**
- PRELIMINARY CHECKS
 - INSTALLING THE FRAME
- III LEAF INSTALLATION AND ADJUSTMENT**
- PRELIMINARY CHECKS
 - SINGLE LEAF DOOR INSTALLATION AND ADJUSTMENT
 - INSTALLATION AND ADJUSTMENT OF DOUBLE DOORS
 - ADJUSTMENTS COMMON TO SINGLE AND DOUBLE-LEAF DOORS



- IV MODELS WITH CERTIFIED INSULATION –
COMPULSORY OPERATIONS**
- PROTECTION (FIREPROOF MODELS)
 - CONFORT (MODELS WITH CERTIFIED THERMAL TRANSMITTANCE)
 - DOORS WITH ACOUSTIC INSULATION
 - AIR – WATER – WIND-TIGHT DOOR



- V LOCKS**
- CYLINDER LOCKS
 - DOUBLE BITTED LOCKS
 - OPENING LIMITER BOLT ADJUSTMENT



- VI FINISHES**
- STANDARD ACCESSORIES APPLICATION
 - OPTIONAL ACCESSORIES APPLICATION



- VII HANDLES**
- TYPES OF HANDLES
 - INSTALLATION OF HANDLES



- VIII MAINTENANCE**

INSTALLATION CERTIFICATION

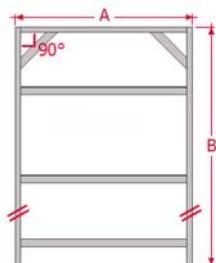
WARRANTY TERMS AND CONDITIONS

I- FALSE FRAME INSTALLATION

The False Frame can be supplied with the security door or it may have been purchased separately.

PRELIMINARY CHECKS

False frame inspection



Check that during transport and/or handling the following features of the false frame have not been damaged:

- the uprights must be parallel and perpendicular with the lintel
- the spacers must be fastened properly

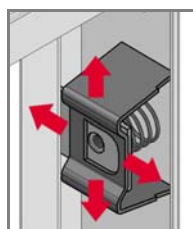
Check that the false frame corresponds to the type you ordered.

CONTROL MEASUREMENTS

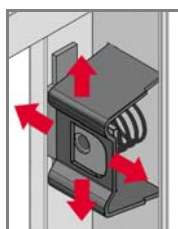
$A = W_{(NET\ PASSAGE)}^* + 128\text{ mm}$ $B = H_{(NET\ PASSAGE)}^* + 63\text{ mm}$	$A = W_{(NET\ PASSAGE)}^* + 128\text{ mm}$ $B = H_{(NET\ PASSAGE)}^* + 63\text{ mm}$	$A = W_{(NET\ PASSAGE)}^* + 81\text{ mm}$ $B = H_{(NET\ PASSAGE)}^* + 46\text{ mm}$
<p>NORMAL FALSE FRAME</p> <p>40 63 6.5 cm min 4 cm H W 6.5 cm 6.5 cm min 4 cm ★★ Finished surface of the internal wall</p>	<p>REDUCED FALSE FRAME</p> <p>40 6.5 cm min 5.5 cm H W 6.5 cm 6.5 cm min 5.5 cm ★★ Finished surface of the internal wall</p>	<p>MICRO FALSE FRAME</p> <p>18 40 4.5 cm min 5.5 cm H W 4.5 cm 4.5 cm min 5.5 cm ★★ Finished surface of the internal wall</p>

NOTE: The reduced false frame features more space on the lintel compared to the frame's lintel.

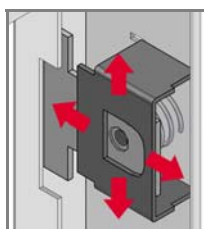
* Sizes as per the identification label on the package side



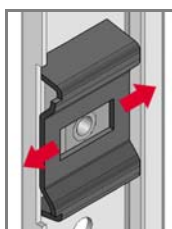
NORMAL FALSE FRAME BOX



REDUCED FALSE FRAME BOX



2 LEAF DOORS FALSE FRAME BOX



MICRO FALSE FRAME BOX

Check integrity of adjustment devices ("boxes").

The pictures represent all available adjustments for all types of boxes.

Checking and preparing the wall

RESISTANCE: The wall thickness, solidity and material must be suitable to hold both the fastening braces and the entire door weight. Make sure that the false frame is fastened to the wall in a very sturdy and secure way.

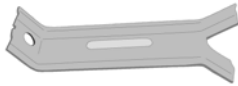
ATTENTION: Torterolo&Re recommends NOT to use installation methods different from those described in this chapter as they may prejudice the door's breaking resistance, energy and acoustic insulation performances.



ELECTRICAL STRIKE PLATE: if the door is equipped with electrical strike plate the strike plate power supply cable must exit from the adjacent wall (see par. 'ELECTRICAL STRIKE PLATE').

ALIGNING AND SECURING THE FALSE FRAME

Important considerations



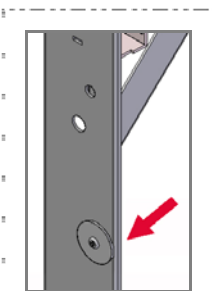
If possible, the installation method recommended by Torterolo & Re for aligning and securing the false frame requires the braces to be set into the walls. This system is the only one that makes it possible to keep the door's breaking resistance performance compliant to the values tested in the laboratory.

Bracing using expansion anchors is not recommended.

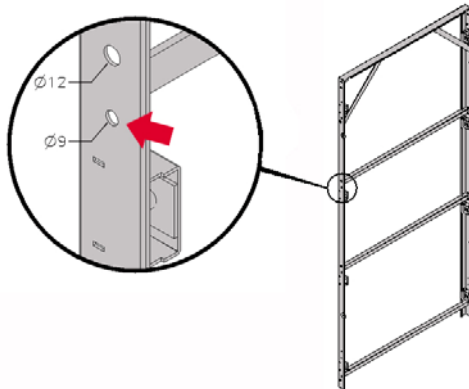
Should installation with braces be impossible, bracing with anchors may be undertaken with the following precautions:

- choose anchors according to the type of wall, taking care that the resistant section has a diameter higher than 6 mm and preferring chemical anchors to traditional expansion anchors. Nylon expansion anchors should not be used to install these doors.
- connect the anchors in the 12 mm diameter holes on the uprights in the false frame
- should there be empty spaces between the false frame and the wall, fill them with cement. Do not use polyurethane foams.

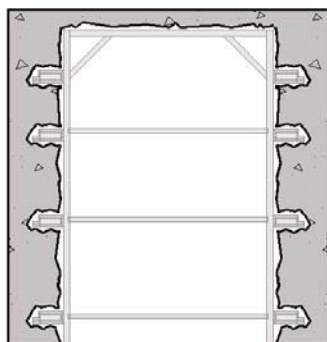
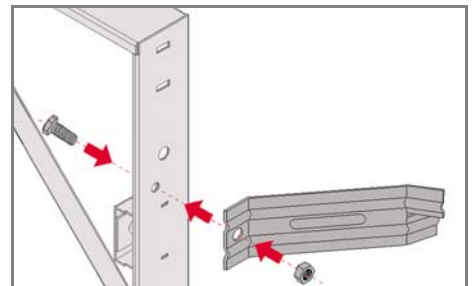
Laying operations



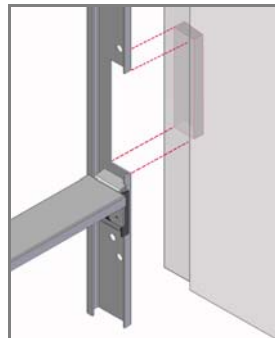
Remove packing washers from the false frame.



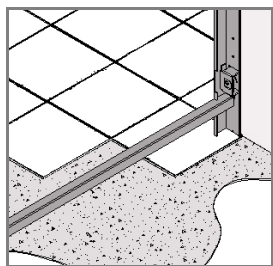
Fasten the 8 braces to the uprights of the false frame by using the screws included in the package through the 9 mm diameter holes.



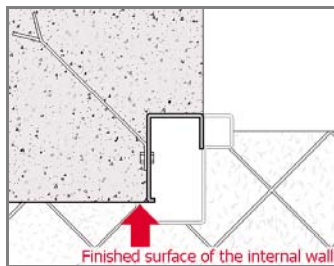
Prepare slots in the wall, corresponding to the braces' position



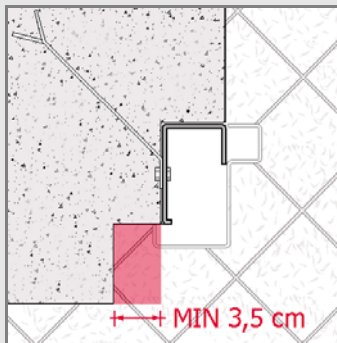
If a micro-false frame is installed, prepare slots about 20 mm deep, at the height corresponding to the position of: hinges and latch output. Use the profiles and shapes of the uprights as a template (see the picture).



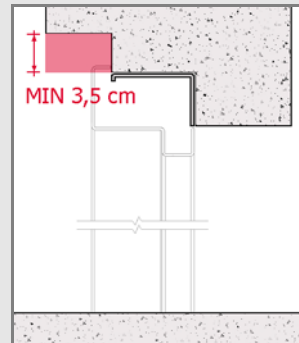
! If the floor has not been laid, remember that the bottom of the false frame must be installed in line with the finished floor level.



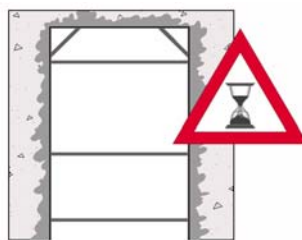
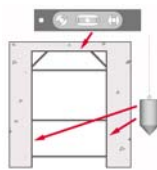
Place the false frame in the space prepared in the wall, make sure it is flush with the inside wall that must be "finished" (smooth and plastered)



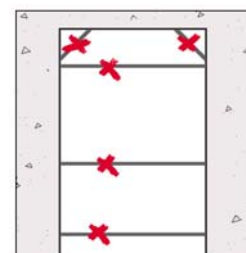
If the door is housed inside a niche, since the frame's width and height exceeds the false frame's, leave about 3.5 centimetres of free space around the false frame.



Insert the braces in the aperture, ensuring that the frame remains flush and vertical during installation.



Wait until cement sets

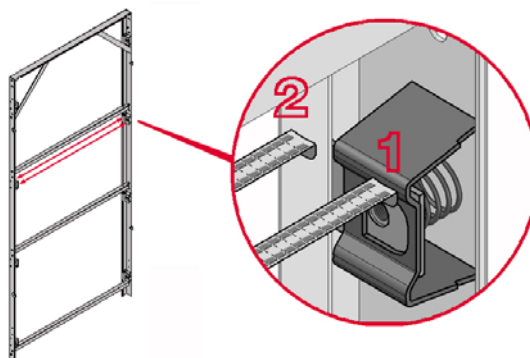


Remove the spacers

Fill the empty spaces between the false frame and the wall (if any) with cement. Do not use polyurethane foams.

CHECKS FOLLOWING FALSE FRAME INSTALLATION

- Check that the uprights of the false frame are both perpendicular.
- Check that angles between the false frame components are as required, using diagonals.
- Check that the uprights are parallel by making sure that the distance between two boxes placed at the same height remains the same even at different heights (1).
- Repeat these measurements on pairs of points at the same height on the verticals (2).



ASSEMBLING THE FALSE FRAME FROM ITS COMPONENTS

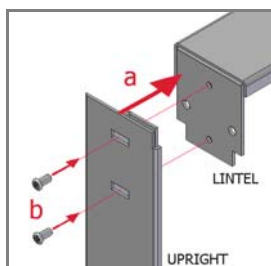
(AVAILABLE ONLY FOR SINGLE LEAF DOORS)

Package content

For a false frame delivered unassembled, the package will contain:

- uprights; spacers; 1 lintel with 2 pairs of 4.8x13 screws
- 1 pack with 8 braces with the relevant fastening screws
- 1 pack of 6 plastic spacer plates

Assembly



Unscrew and store away the 4.8x13 screws fastened on each end of the lintel.

Place the upright near the lintel (a) so that the lintel remains enclosed between the uprights.

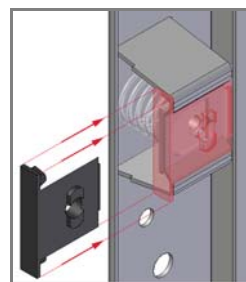
Fasten both uprights to the lintel using the screws removed before (b).



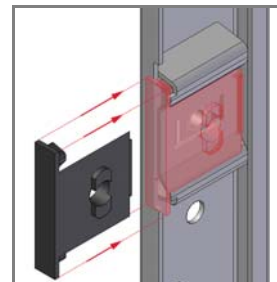
Unscrew the M8 x 14 hex head screw on the box.

Insert the black plastic plate in the box in positions as illustrated.

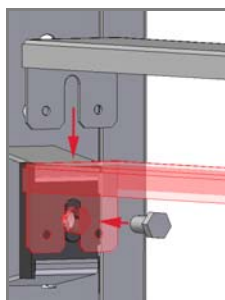
Repeat the operation for each box.



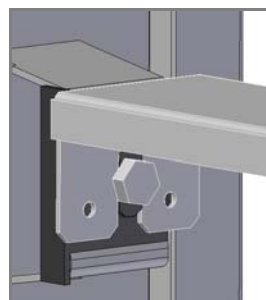
NORMAL OR REDUCED FALSE FRAME



MICRO FALSE FRAME



Position the spacer in the seat on the plastic plate available on both pairs of corresponding boxes.



Fasten the spacer to corresponding boxes using the M8 x 14 hex head screws.



Repeat the operation inserting a spacer for each pair of boxes: start from below and ignore the top pair.

Complete installation of the false frame following the instructions in the previous paragraphs: see 'Aligning and securing the false frame' and 'Checks following false frame installation'.

Important: after finishing laying and removing the spacers remove the black plastic plates.

ATTENTION: Torterolo&Re does not guarantee that the door will perform as indicated on the label in case installation is not carried out in compliance with the instructions here and/or in case of modifications to the product.

II -FRAME INSTALLATION

The Frame may be delivered with the security door or packed separately, depending on the type (e.g., in case of doors with fanlight or two-leaf doors) or colour (e.g., non-standard colours).

PRELIMINARY CHECKS

Check that the frame type corresponds to the type you ordered.

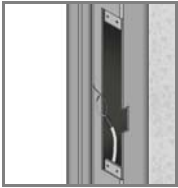
CONTROL MEASUREMENTS		
$W_{\text{net passage frame}} = W_{\text{(NET PASSAGE)}}^*$ $H_{\text{net passage frame}} = H_{\text{(NET PASSAGE)}}^*$	$W_{\text{net passage frame}} = W_{\text{(NET PASSAGE)}}^*$ $H_{\text{net passage frame}} = H_{\text{(NET PASSAGE)}}^*$ $H_{\text{maximum net passage}} = H_{\text{net passage frame}} + H_{\text{fanlight}}$	$W_{\text{net passage frame}} = W_{\text{(NET PASSAGE)}}^*$ $H_{\text{net passage frame}} = H_{\text{(NET PASSAGE)}}^*$
<p>NORMAL FRAME / REDUCED FRAME</p>	<p>NORMAL FRAME / REDUCED FRAME WITH FANLIGHT</p>	<p>FRAME FOR PROTECTION / CONFORT DOORS</p>

*Sizes as per the identification label on the package side

Make sure that the false frame is perfectly vertical before installing the frame

Remove the spacers, taking care not to deform and/or remove the false frame uprights from the wall.

Preliminary checks for doors with electric strike



If the door has an electric strike make sure the power supply cable is in the correct position for subsequent connection.

Please refer to the "ELECTRIC STRIKE" paragraph.

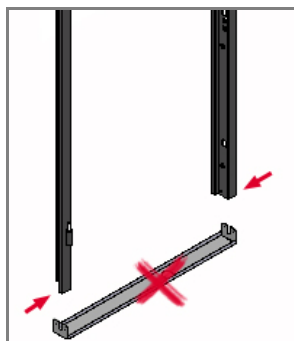
ATTENTION: ANY UNAUTHORISED PRODUCT MODIFICATION and ANY INSTALLATION PROCEDURE OTHER than the one described here may compromise the door performance levels irremediably.



INSTALLING THE FRAME

Installing a standard frame

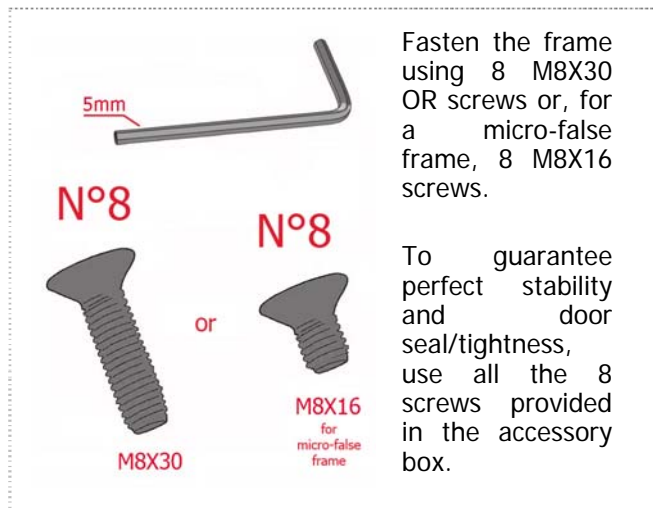
Separate the frame from the leaf; make sure the spring latch is retracted from its adjustment plate, then remove the frame from the hinges by lifting it away from the leaf.



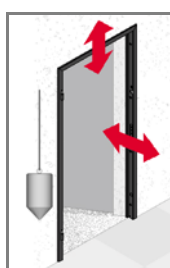
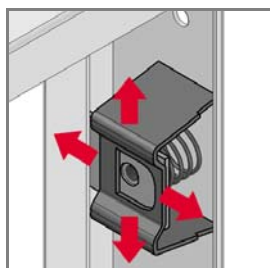
Remove the lower spacer by unscrewing the fastening screws on the side of each upright.



Match the frame to the false frame in the aperture.



- Start bracing from the upright, on the hinge side, adjust the frame until it is perfectly perpendicular then tighten the screws completely.
- Now move to the upright on the lock side, at first fasten the screws temporarily to adjust them later on.



The unique structure of the fastening boxes, which are integral to the false frame, make it possible to adjust both height and depth. If a micro-false frame is used only depth can be adjusted.

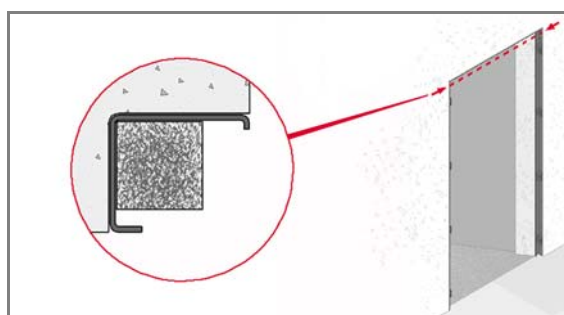
Check the "LEAF INSTALLATION AND ADJUSTMENT" chapter.

Check that the hinges are perpendicular.

Lubricate the hinge pins with mineral grease before installing the leaf

Laying frames for "Protection 60" doors

Only for
"Protection 60"
doors

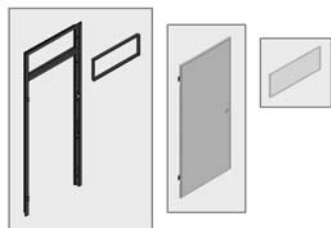


Before laying the framework, insert inside the lintel of the false frame the pre-adhered plasterboard bar supplied.

Modify, if needed, the bar's size to fit the door's width.

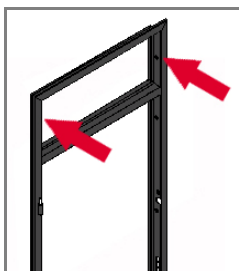
ATTENTION: improper laying/installation of the frame may seriously jeopardise the door's anti-breaking, acoustic insulation and heat transmission performances as well as the fire resistance properties of fire doors.

Installing a frame with fanlight



If the door features a fanlight the package delivered will contain (in separate packages):

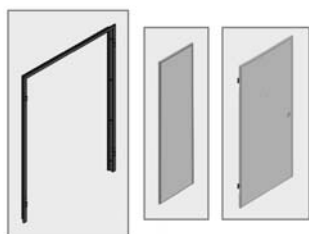
- The frame, together with the glass retention frame
- The wood panel or glass, if provided by Torterolo&Re
- the doorleaf



- Separate the glass retention frame from the frame.
- Install the frame as described in previous paragraphs, remember that the fanlight might be provided with two additional bracing points to guarantee a firmer fixing.

Do not install the glass (or solid panel) until the door has been hung and adjusted. To install the glass (or solid panel) refer to the "FINISHES" section.

Securing the frame for double doors

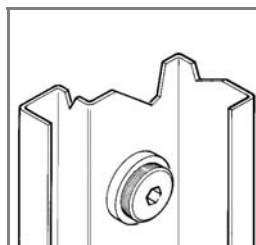
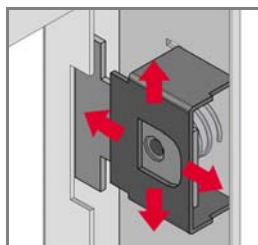


If the door has 2 leaves the delivered package will contain (in separated packages):

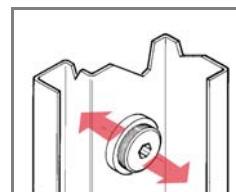
- the frame
- the opening leaf
- the semi-fixed leaf



Install the frame as described in the previous paragraphs



In addition to the boxes, the two-leaf door frame also features special rings to check the frame verticals are in parallel and also the central positioning of the door leaves.



Use of the rings is described in the "LEAF INSTALLATION AND ADJUSTMENT" chapter.

Before fastening the screws adjust the rings so that the distance between the two uprights remains constant (and corresponding to the length of the lintel) all along their length.

Lubricate the hinges with mineral grease before hanging the leaves.

ATTENTION: improper laying/installation of the frame seriously jeopardises the door's anti-breaking, acoustic insulation, heat transmission performances as well as the fire resistance properties of fire-stopping doors.



III - LEAF INSTALLATION AND ADJUSTMENT



*The doorleaves are heavy.
Handle them with care, using suitable individual safety devices.*



PRELIMINARY CHECKS

- Check that the pack containing the keys is available and unpack it in presence of the end user
- Check that the frame has been properly fastened to the false frame using all available screws
- ATTENTION: check that the key has not been turned, i.e. that the latches do not protrude for more than 5 / 6 mm. Note that whilst installing the leaf, the latches could be damaged if they are permitted to protrude outside the edge of the door leaf itself.
- Check that the leaf and frame hinges have been lubricated with mineral grease



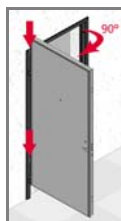
STANDARD DOORS CONTROL MEASUREMENTS		"PROTECTION" DOORS CONTROL MEASUREMENTS
$H_{\text{leaf}} = \text{NET PASSAGE}^* + 11 \text{ mm}$		$H_{\text{leaf}} = \text{NET PASSAGE}^* + 8 \text{ mm}$
$W_{\text{leaf}} = \text{NET PASSAGE}^* + 27 \text{ mm}$		$W_{\text{leaf}} = \text{NET PASSAGE}^* + 27 \text{ mm}$
<p>NORMAL FRAME AND FALSE FRAME</p>		<p>REDUCED FRAME AND FALSE FRAME</p>

NOTE: The reduced false frame features more space on the lintel compared to the frame's lintel.

* Sizes as per the identification label on the package side

SINGLE LEAF DOORS INSTALLATION AND ADJUSTMENT

Hanging the leaf



After checking that the hinge side frame upright is vertical and having made sure the lintel is level and horizontal using a spirit level, proceed as follows:

- ensure that the bearings are on the hinges.
- hang the door on the hinges while the leaf is open at a 90° angle to the frame.
- if the door uses a cylinder lock and the latter is not factory assembled, assemble it now. Install the cylinder as shown in the "LOCKS" CHAPTER.

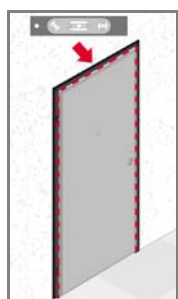
Leaf checks

After hanging the leaf carry out the following checks:

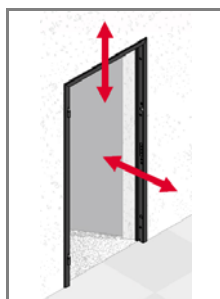
1 - WITH LEAF OPEN	2 - WITH LEAF AJAR
try opening and closing the lock to make sure it works as intended	a correctly laid leaf shall: <ul style="list-style-type: none"> ▪ open and close smoothly ▪ exercise equal pressure on the three sides of the internal rabbet seal ▪ connect properly to the frame via the spring latch
3 - WITH LEAF CLOSED	
test lock closing and opening to make sure that the bolts enter the holes in the frame smoothly and without interference	

If necessary, carry out adjustments as described below.

Frame adjustment

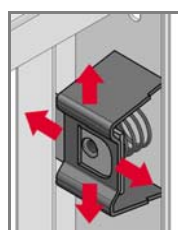


Make sure the frame is level/horizontal, then check that the leaf presses uniformly on the three sides of the internal rabbet seal.

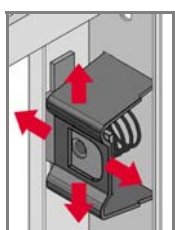


Using the special adjustment devices on the false frame it is possible to adjust the frame position in all directions operating the frame/false frame fastening screws.

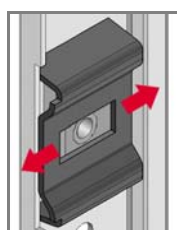
The next picture shows all available adjustments for all types of frames



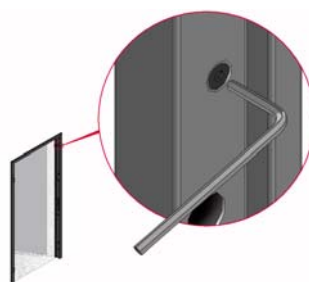
NORMAL FALSE FRAME BOX



REDUCED FALSE FRAME BOX



MICRO FALSE FRAME BOX



Using an Allen key unscrew the M8 fastening screws on the upright on the lock side and move the frame to regulate both its height and depth.

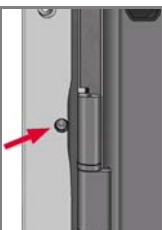
Lateral adjustment of hinges (optional)



The "adjustable hinges" option makes it possible to adjust the leaf's lateral position relative to the frame as follows. During this adjustment it may be necessary to adjust or offset the normal working clearances.



With the leaf fully open remove the plastic plug on the side of the door at the height of the hinge wing that must be adjusted. The plug will reveal the hex socket of an Allen screw.



Screw/unscrew the screw to bring the leaf closer/farther away from the frame using a 6 mm Allen key.



After completing adjustment as required test that the door closes properly and then replace the plastic plug on the side of the door, then make sure that the distance between leaf and frame is the same along all of the frame's height and width.

INSTALLATION AND ADJUSTMENT OF DOUBLE DOORS

Hanging the leaves



Hang both the leaves on the hinges while the leaves are open with a 90° angle with the frame.

If the door uses a cylinder lock and the latter is not factory assembled, assemble it now.

Install the cylinder as shown in the "Locks" chapter.

Checks

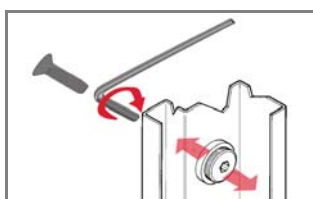
After hanging the leaves carry out the following checks:

1 - WITH OPEN LEAVES	2 - WITH LEAVES POSITIONED NEXT TO THE FRAME
try opening and closing the lock to make sure it works as intended	<p>If the two leaves have been correctly installed they should:</p> <ul style="list-style-type: none"> be parallel and coplanar with each other have enough space in the centre to allow the bolts in the opening leaf to fit perfectly into the holes in the semi-fixed leaf open and close smoothly exercise equal pressure on all the sides of the internal rabbit seal connect properly to the frame with the spring latch to the fixed leaf
3 - WITH CLOSED LEAVES	
test lock closing and opening to make sure that the bolts enter into the holes in the fixed leaf frame rabbit smoothly and without interference	

If necessary, carry out adjustments as indicated below.

Confirmation of alignment of door leaves

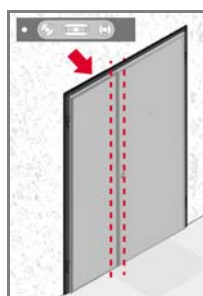
To confirm that the doors are in parallel and that the leaves are coplanar, adjustments may be required as follows:



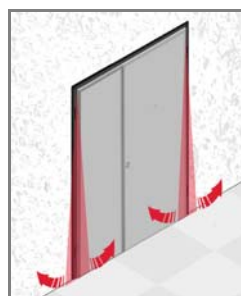
After having regulated the rings that need adjustment remove the corresponding frame/false frame connecting screws.

Insert a 8 mm Allen screw in the screw hole and adjust the rings.

PARALLELISM

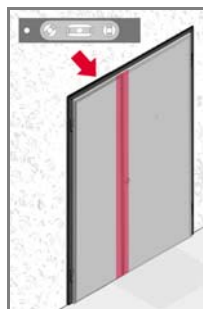


- Check that the frame is horizontal.
- Then check that the leaves are parallel with each other in the centre.

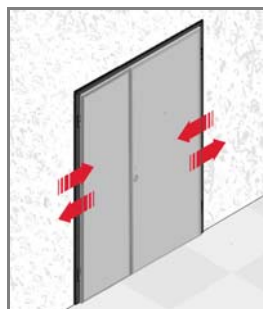


- Adjust the shimming rings to move the frame as highlighted in the picture.
- After completing adjustment screw the connecting screws back into place.

CENTRAL PASSAGE

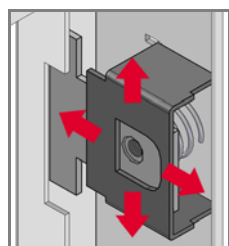


Check that the frame is horizontal and that there is enough space in the centre to allow the bolts in the opening leaf to fit perfectly into the holes in the semi-fixed leaf.



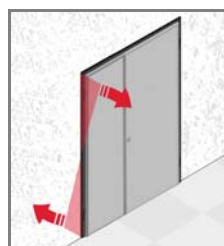
Use the frame shimming rings to bring the leaves close. After completing adjustment screw the connecting adjustment screw the connecting screws back into place.

COPLANARITY

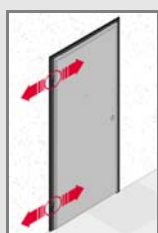


To perform the movements described in the picture, unscrew the connecting screws with an 8 mm Allen key and use the boxes to move the frame.

After completing the adjustment screw the connecting screws back into place.



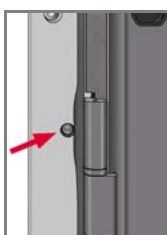
Lateral adjustment of hinges (optional)



The "adjustable hinges" option makes it possible to adjust the leaf's lateral position relative to the frame, as follows. During this adjustment it may be necessary to adjust or offset the normal working clearances.



With the leaf fully open remove the plastic plug on the side of the door at the height of the hinge wing that must be adjusted. The plug will reveal the hex socket of an Allen screw.



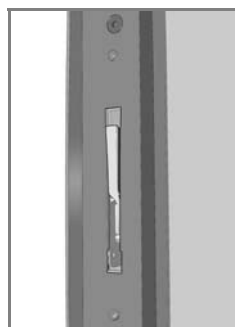
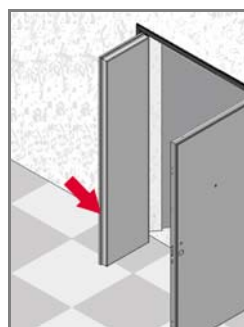
Screw/unscrew to bring the leaf closer/farther away from the frame using a 6 mm Allen key.

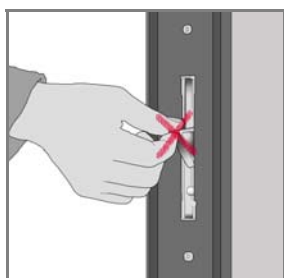


After completing adjustment as required test that the door closes properly and then replace the plastic plug on the side of the door.

Semi-fixed leaf locking mechanism

With the semi-fixed leaf opened, check that the locking mechanism (on the door edge) is in its open position, i.e. turned upwards as in the picture.

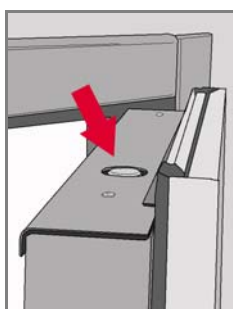




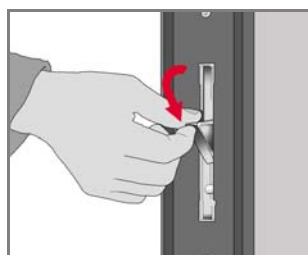
Do not operate the semi-fixed leaf closing mechanism before preparing the hole in the floor needed to house the lower vertical locking rod.

Keep the sticks in retracted position inside the leaf

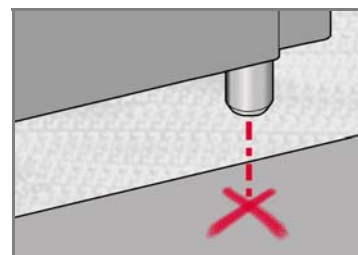
PREPARING THE HOLE IN THE FLOOR



With the semi-fixed leaf opened, both the upper and lower sticks are fully retracted inside the door structure.



With the leaf ajar operate the closing mechanism and watch the lower stick movements.



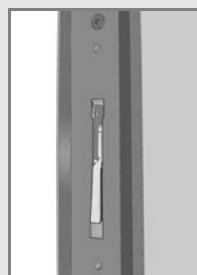
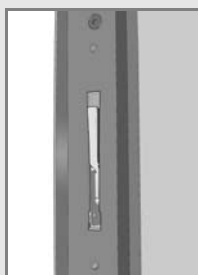
Carefully mark the point on the floor where the vertical locking rod will be positioned.



Use a drill and a cup wheel cutter (dia. 27 mm) to drill a hole on the floor on the marked point.

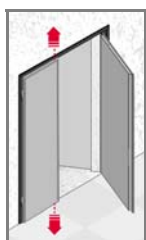
Insert the small female cupped fixing from the accessory box into the hole.

Test the semi-fixed leaf's operation, making sure that the mechanism moves smoothly and that no effort is needed to carry out this movement.



Grasp the mechanism and rotate it downwards, moving it into the locked position.

LEAF CLEARANCES ADJUSTMENT



When the semi-fixed leaf is closed the upper and lower bolts protrude into the locking holes in the frame lintel and floor.



The upper locking rod has some clearance in its seat; this clearance can be adjusted by moving the mobile plate to reduce the size of the hole in the frame lintel.

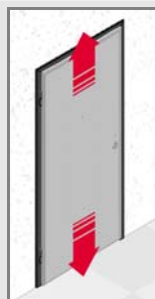


Loosen the fastening screws by using a 5 mm Allen key. Move the plate away. Fasten the screws back in.

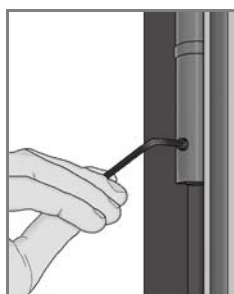
After completing adjustment make sure that: clearance between leaf and frame is the same all along the frame's height and width.

ADJUSTMENTS COMMON TO SINGLE AND DOUBLE LEAF DOORS

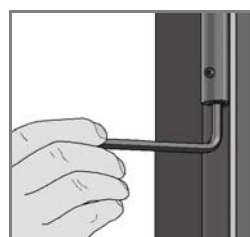
Height adjustment of hinges



The height of the hinges can be adjusted on all Torterolo & Re security doors.

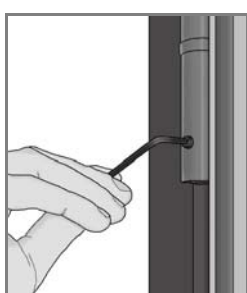


Unscrew the M6 pressure grub screw on the barrel of the male hinge using a 3 mm Allen key.



Regulate the pin height using the screw on the lower part of the male hinge.

Use a 6 mm Allen key.

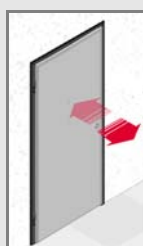


Tighten the M6 pressure grub screw on the barrel of the male hinge to lock the pin of the adjusted hinge in position.



It is important for the leaf's weight to be distributed uniformly over the frame; therefore the adjustment described must be carried out on both hinges to ensure that the female part of the hinges rest on their thrust bearings.

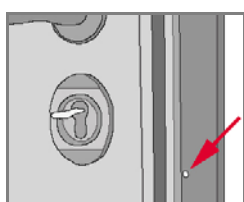
Door clearance adjustment



The door clearance can be adjusted on the spring latch adjustment plate in the keep.

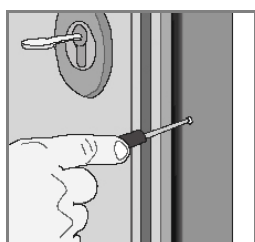
Check clearance by closing the leaf using the spring latch only, i.e. without turning the key.

ADJUSTING THE SPRING LATCH ADJUSTMENT PLATE

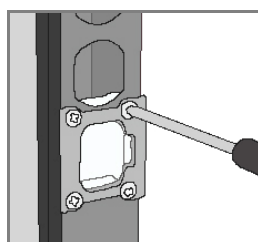


Using a Phillips screwdriver (PH 1X80) on the screw facing the frame's rabbet (for 1 leaf doors) or the fixed leaf upright rabbet (for 2 leaf doors) it is possible to adjust the keep.

ATTENTION: Use ONLY a MANUAL screwdriver.
Do not use electric screwdrivers that might damage the mechanism.



Adjust the guiding screw to increase/decrease the leaf clearance.



If the screw is hard to turn, unscrew the screws fastening the strike plate by half a turn then repeat point 1 and screw back the strike plate fastening screws.

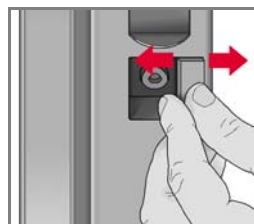
ATTENTION: Torterolo&Re does not guarantee that the door will function as specified if the installation is not carried out in compliance with these instructions or if modifications to the product have been made.



ADJUSTMENT OF Z TYPE SPRING LATCH ADJUSTMENT PLATE (ONLY FOR PROTECTION 60 / ACTIVA MODELS)



- Unscrew the hex head screw inside the hole of the spring latch on the frame, using an Allen key.



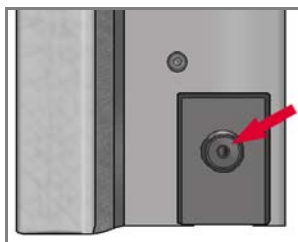
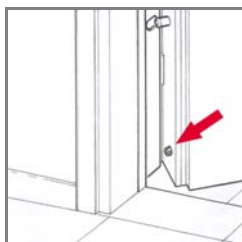
- Move the adjustment keep until you reach the required position.



- Tighten the Allen screw inside the spring latch hole and test door closing.

Repeat from the start if necessary.

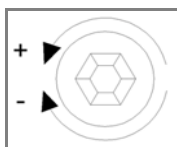
Draught excluder adjustment



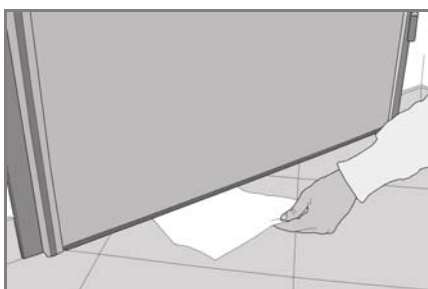
To ensure the air - and light - sealing of the draught excluder:

- Open the door

In the lower part of the upright on the hingeside there is a hex head screw in the edge of the door leaf.



- Use a 3 mm Allen key: rotate it clockwise to decrease the height of the draught excluder or counter-clockwise to increase it.
- Proceed gradually and check the seal after every adjustment.



- To check that the draught excluder's performance is adequate, close the leaf so that the draught excluder is lowered down, then slide a sheet of paper on the floor under the door.

The sheet should encounter equal resistance through the leaf's width.



IF THE FLOOR IS NOT TRUE OR IF ITS FINISHING HAS AN IRREGULAR SURFACE THEN THE DRAUGHT EXCLUDER MAY NOT OPERATE PROPERLY.

In this case Torterolo&Re recommends installation of an appropriate metal threshold on the floor. Conditions should be checked carefully before door installation so that adjustments, if needed, can be made.

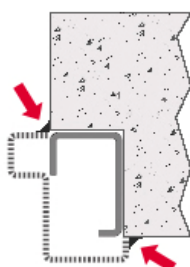
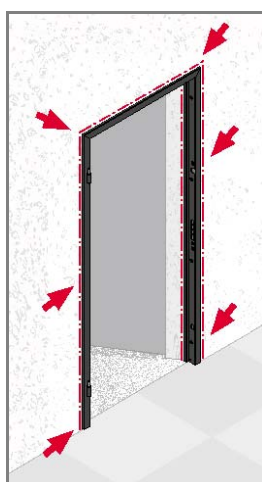
IV – MODELS WITH CERTIFIED INSULATION COMPULSORY OPERATIONS

Installation methods, described in previous chapter, as well as the general instructions found elsewhere in this manual mirror the methods used in our laboratories to achieve the guaranteed performance values declared by Torterolo&Re. Following these instructions is, therefore, necessary to achieve the stated performance values.

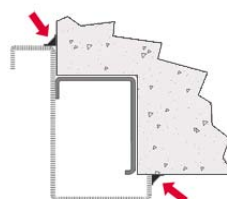
TORTEROLO & RE SECURITY DOORS SET ACCREDITATIONS	
Torterolo & Re doors' performances have been tested in the best Italian and European testing institutes in compliance with the most recent European rules and standards.	
ANTI BREAKE-IN	The antibreake in certification classes of Torterolo&Re doors, though different according to product specification, all require and are based on the installation methods described in the previous chapters
ACOUSTIC INSULATION/FIRE RESISTANCE/THERMAL TRANSMITTANCE /AIR-WATER-WIND	To obtain the performance levels for a given product family and model, please refer to the procedures described in the previous chapter. As appropriate, protection against water (including rain water) must be considered very carefully.

REGARDLESS OF THE DOOR MODEL AND THE PERFORMANCES YOU WISH TO ACHIEVE, IT IS NECESSARY TO SEAL THE FRAME PROPERLY

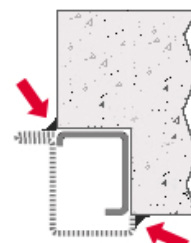
- Before sealing ensure that all checks and adjustments described in the previous chapters have been carried out.
- Seal the space between the wall and the frame, both inside and outside the door, using continuous sealing with silicone putty.



NORMAL
FRAME



PROTECTION /
CONFORT FRAME

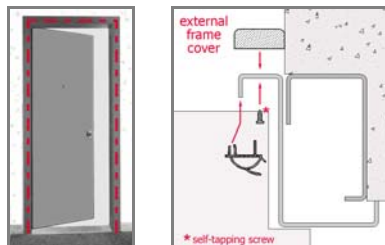


REDUCED
FRAME



PROTECTION (FIREPROOF MODELS)

Protection 30



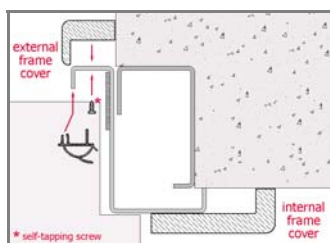
- Assemble the 3x1 cm wooden borders supplied on the outer side of the frame.
- After shaping the frame covers as required, fasten to the frame with silicon putty.

To increase tightness of the frame covers externally, remove the rabbet seal and insert self-tapping screws as indicated.

For doors certified to 'LPS1175: issue 7' the external wall dimensions shown in page I-1 should be noted.

Protection 60

Install the wooden frame covers on both the external and internal sides of the frame:



The internal vertical frame cover on the hinged side must be shaped carefully to accommodate the shape of the hinges.

After shaping the frame covers as required, fasten to the frame with silicon putty.

To increase tightness of the frame covers externally, remove rabbet seal and insert self-tapping screws as indicated.

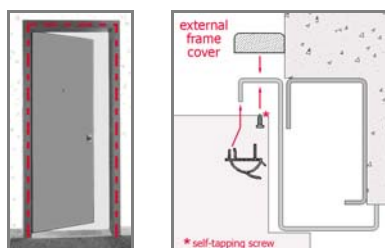


- Install the hydraulic door closer following the instructions included in it.

The security door Protection 60 is fireproof EI₂60 according to standards regulation EN 1634-1. Its certification is valid only if the door is equipped with the hydraulic door closer. Otherwise, even though the door maintains its fire-prevention properties, it cannot be given ministry certification.

CONFORT (MODELS WITH CERTIFIED THERMAL TRANSMITTANCE)

Confort TR15C / TR15S

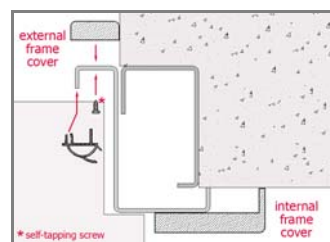


- Assemble the 3x1 cm wooden borders supplied on the outer side of the frame.
- After shaping the frame covers as required, fasten to the frame with silicon putty.

To increase tightness of the frame covers externally, remove the rabbet seal as indicated and insert self-tapping screws as indicated.

Confort TR09C / TR09S

Assemble the 3x1 cm wooden borders supplied on the outer side of the frame and the 7x3 cm wooden bars on the inside of the frame.



The internal vertical frame cover on the hinged side must be shaped carefully to accommodate the shape of the hinges.

After shaping the frame covers as required, fasten to the frame with silicon putty.

To increase tightness of the frame covers externally, remove the rabbet seal as indicated and insert self-tapping screws as indicated.



Tortorolo&Re guarantees that all doors have been manufactured to meet certified standards; installation, including final adjustments and sealing, must be undertaken by qualified personnel to ensure that these certified standards are met.

DOORS WITH ACOUSTIC INSULATION

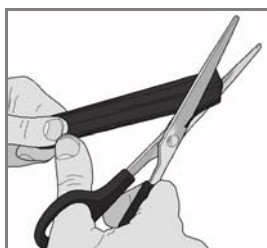
Doors specified with any of the following options require assembly, within the frame rabbet, of 3 "acoustic insulation bars" which are stocked inside the door packaging:



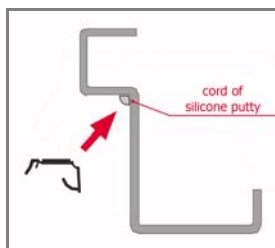
- "KIT SILVER 37 – 37 dB Acoustic Insulation"
- "KIT GOLD 40 – 40 dB Acoustic Insulation"
- "KIT GOLD PLUS 40 – 40 dB Acoustic Insulation"

The bars are located inside the frame rabbet or laid in a diagonal on the leaf.

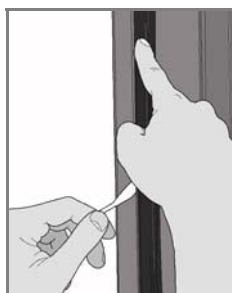
- ATTENTION:** Fastening the seal with double-sided adhesive might seem the quickest way, but in many environmental conditions double-sided adhesive does not have an adequate sealing strength. Therefore, we recommend using double-sided adhesive only as a positioner, with silicone putty used to glue the seals in place. If double-sided adhesive has to be used to maximise its performances it is important to:
- thoroughly clean the application surface, using solvents or other detergents that do not leave greasy residues or films after drying
 - take care **not** to remove the protection layer from the double-sided adhesive long time before its application
 - take care **not** to handle the unprotected double-sided adhesive before applying the seal
- Double-sided adhesive takes about 24 hours to complete crosslinking, do not remove the seal before this time has passed.



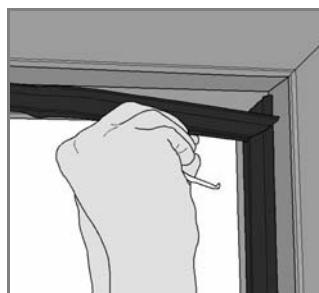
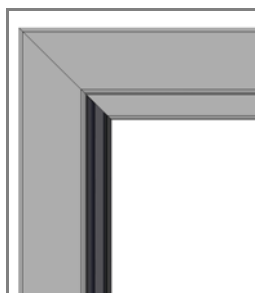
- Cut two of the bars making sure their lengths match the height of the upright's rabbet area.
- The upper ends of the two bars must then be finished with a 45° degree cut so that they match the bar applied on the lintel.



After applying a cord of silicone putty in the position shown in the diagram, remove the protection from the double-sided adhesive and fasten the bars making sure that the adhesive side faces the frame's rabbet.



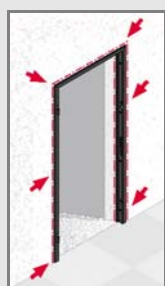
Do not force the seal on the larger part of the frame, but rather push it firmly on the rabbet.



Cut the last bar matching its width with the width of the lintel's rabbet. Make a 45° cut on both the bar's edges.

ATTENTION: if the seal's adhesion to the frame does not seem strong enough, it can be increased with the following procedure:

- after sticking the seal in position with double-sided adhesive, fix it with TSPIC 2.9 x 9 self-tapping screws (3 for the upright, one for 2 for the lintel) passing through the side that sticks to the frame rabbet.



TO IMPROVE INSULATION SEAL FURTHER, USING SILICONE PUTTY, ALL THE AREAS BETWEEN THE WALL AND THE FRAME IN WHICH NOISE MAY FILTER.

TorteroLo&Re guarantees that all doors have been manufactured to meet certified standards; installation, including final adjustments and sealing, must be undertaken by qualified personnel to ensure that these certified standards are met.

AIR – WATER – WIND-TIGHT DOOR



The kit for the "air – water - wind-tight door" requires careful installation of:

- 3 "frame leaf sealing" bars
- 1 aluminium threshold fastened on the floor

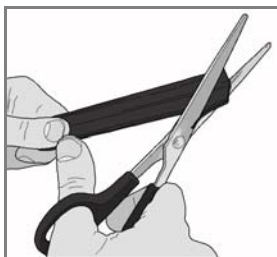
Sealing bars

The bars are located inside the frame rabbet or laid in a diagonal on the leaf.

ATTENTION: Fastening the seal with double-sided adhesive might seem the quickest way, but in many environmental conditions double-sided adhesive does not have adequate sealing properties. Therefore, we recommend the use of double-sided tape only as a positioner, with silicone putty used to glue the seals in place. If double-sided adhesive has to be used, to maximise its performances it is important to:

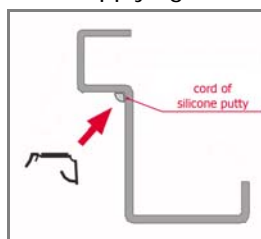
- thoroughly clean the application surface, using solvents or other detergents that do not leave greasy residues or films after drying
- take care not to remove the protection layer from the double-sided adhesive long time before its application
- take care not to handle the unprotected double-sided adhesive before applying the seal

Double-sided adhesive takes about 24 hours to complete crosslinking, do not remove the seal before that time has passed.

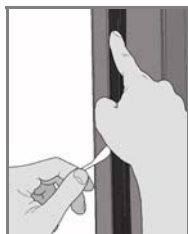


Cut two of the bars making sure their length matches the height of the upright's rabbet area. The upper ends of the two bars must then be finished with a 45° degree cut so that they match the bar applied on the lintel.

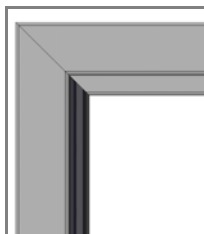
After applying a thick cord of silicone putty in



the position shown in the diagram, remove the protection from the double-sided adhesive and fasten the bars making sure that the adhesive side faces the frame's rabbet.



Do not force the seal on the larger part of the frame, but rather push it firmly on the rabbet.

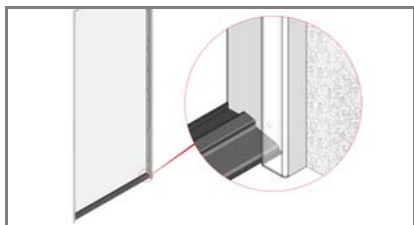


Cut the last bar matching its width with the width of the lintel's rabbet. Make a 45° cut on both the bar's edges.

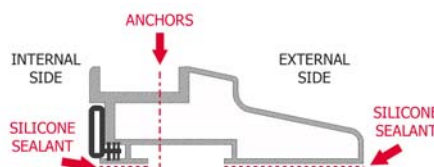
ATTENTION: if the seal's adhesion to the frame does not seem strong enough, it can be increased with the following procedure:

- after sticking the seal in its destination with double-sided adhesive, fix it with TSPIC 2.9 x 9 self-tapping screws (3 for the upright, one for 2 for the lintel) passing through the side that sticks to the frame rabbet.

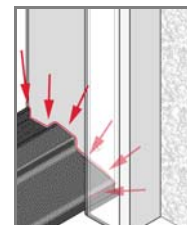
Waterproof sill (available only for single-leaf doors)



Put the aluminium section on the doorstep between the two frame uprights.



Fasten the sill on the door using anchors and seal it with a silicone sealant specific for the material used.

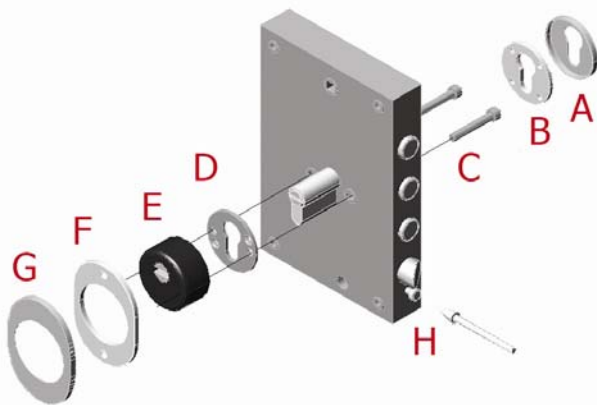


V - LOCKS

■ CYLINDER LOCKS

ATTENTION: if the lock has a cylinder locking cross-slotted screw ALL the cylinder installation and testing must be carried out with FULLY RETRACTED BOLTS. Otherwise the lock will IRREVERSIBLY block.

Installing a cylinder with security screw



- Remove the escutcheon "A".
- From the internal covering panel remove the part "B" with a screwdriver.

ATTENTION: The defender "E" and the shims "D" are fastened to the lock by means of the screws "C", which are not involved in this operation.

- Insert the key in the cylinder and rotate it by 30° to align the cam to the cylinder body.

- Unscrew the head screw "H" by 5 mm.

IN CASE A CROSS-SLOTTED SCREW IS USED:

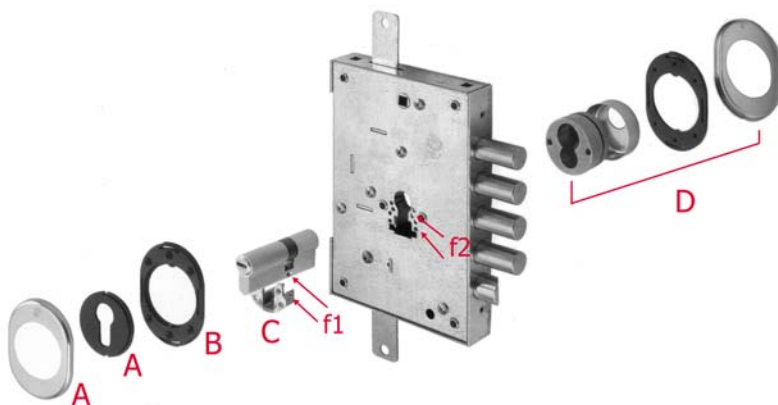
push the head screw into the lock, insert the cylinder sliding it in the relevant hole. When the cylinder has been inserted enough to 'catch' the anchoring mechanism release the head screw, slide the cylinder towards the outside of the door until you hear the anchoring mechanism locking. Screw the head screw on.

IF A HEX HEAD SCREW IS USED:

push the head, insert the cylinder sliding it in the relevant hole. When the cylinder has been inserted enough to 'catch' the anchoring mechanism pull the head screw, slide the cylinder towards the outside of the door until you hear the anchoring mechanism locking. Screw on the screw with a suitable Allen key

- Backer-assemble the parts removed.

Installing a cylinder with front security mechanism - Silver models only



- Remove the escutcheons "A" from the internal covering panel. Do not remove the part "B".

ATTENTION: the group of components "D" remains fastened to the body of the lock and is not involved in this operation.

- Remove the element "C" from the lock body.

- Join the part "C" to the cylinder via the provided screw through the threaded hole "f1".
- Insert the key in the cylinder and rotate it by 30° to align the cam to the cylinder body.
- Insert the cylinder joined to the lock body and fasten the two components using the screws provided through the holes "f2".

ATTENTION: if the lock has a cylinder locking cross-slotted screw ALL the cylinder installation and testing must be carried out with FULLY RETRACTED BOLTS. Otherwise the lock may block IRREVERSIBLY.



Security doors

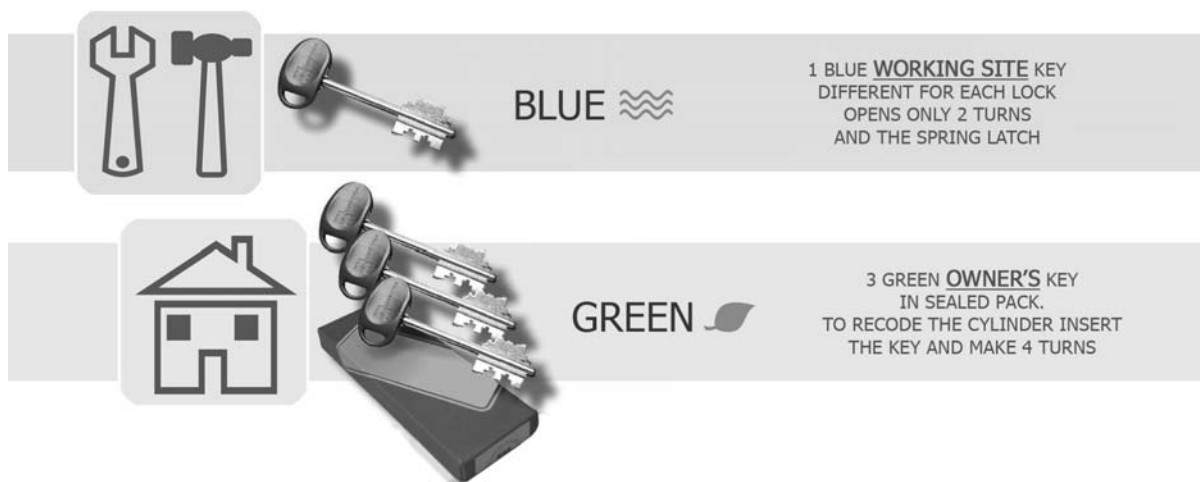
DOUBLE BITTED LOCKS

Lock with working-site keys and automatic recoding

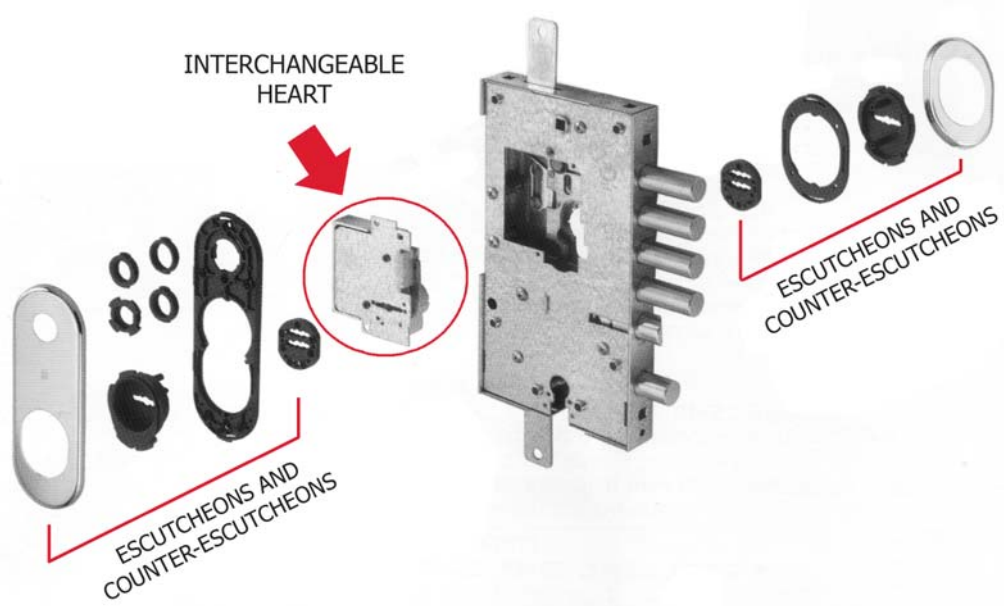
The automatic recoding key system uses 2 types of keys (1 blue working site/temporary key, 3 green owner/final keys).

The working site key (blue) is different for each lock (opens only 2 turns and the spring latch) to guarantee safety until installation is complete (decoration works, fixtures, moving in, etc.).

The owner's key (green) can recode the lock without the need to dismount panels, bezels or other parts, thereby nullifying access to working site keys. To recode the cylinder insert the key and make four turns.



Lock with interchangeable "Heart"



To remove the "Heart" remove the pressure escutcheon from the internal panel; remove the counter-escutcheon with a screwdriver; remove the heart also with a screwdriver.

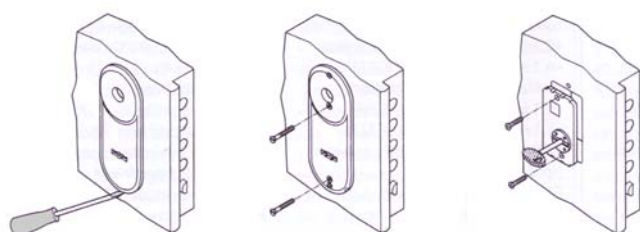
Lock with "Compact" interchangeable core

The doors equipped with the Compact interchangeable core usually feature a temporary "working" plastic core with a key (the same for all locks) used for operating both the spring latch and the bolts (two turns).



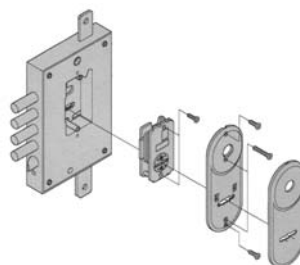
After installation replace the plastic core with the final metal core.

The metal core is supplied complete with 3 final keys, packed separately.

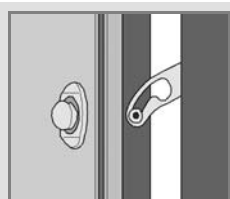


To remove the plastic core remove the pressure rose from the internal panel; remove the counter-escutcheon with a screwdriver; remove the plastic core, also with a screwdriver.

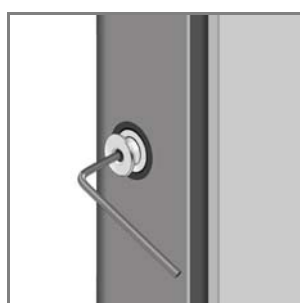
- Apply the final core.
- Fasten it with the screws previously removed.
- Remount the parts removed previously



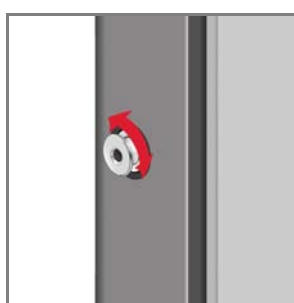
OPENING LIMITER BOLT ADJUSTMENT



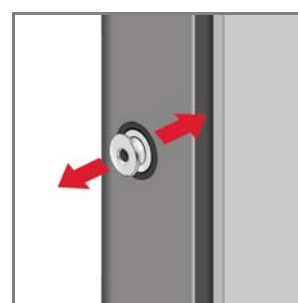
Some models offer the option to adjust the opening limiter bolt overhang from the leaf edge to guarantee perfect connection with the butt hinge on the frame.



Insert an Allen key in the slot on the pin head, unscrew the grub screw.



Rotate the pin anti-clockwise to increase the pin overhang or clockwise to decrease it.



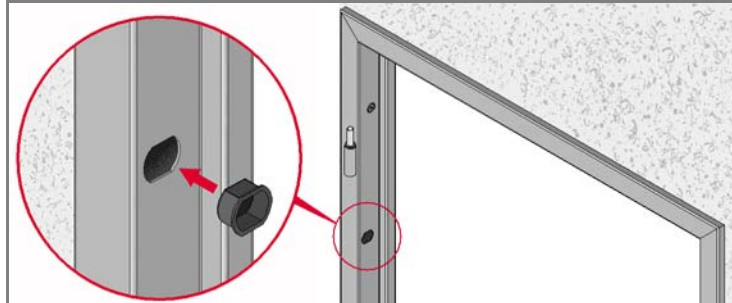
Lock the pin in the desired position by screwing the grub head screw with the Allen key.



VI - FINISHES

STANDARD ACCESSORIES APPLICATION

Frame hole caps



On completion of the frame installation insert the black plastic caps in the pins area, on the hinge side only.

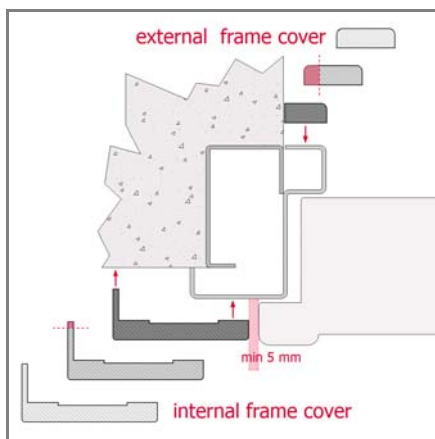
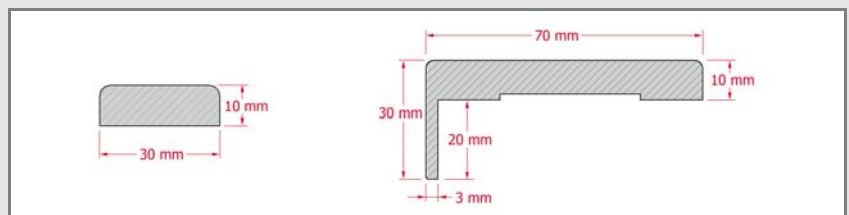


ATTENTION: do not insert the caps in the holes for the locking bolts (vertical and horizontal) as this will prevent the lock from working properly.

OPTIONAL ACCESSORIES APPLICATION

Wooden frame covers

The Torterolo&Re portfolio includes a range of different wooden cover pieces – the choice will depend of the final finish and style that is required.



Before fastening the internal frame covers please remember that the internal frame cover applied on the hinge side must be carefully shaped to follow the hinge profile.

Frame covers are provided in just one size; therefore they must be shaped on site to meet the requirements of each door installation.

After cutting the frame cover pieces to the sizes required, fasten them with silicone putty.
If stronger fastenings are required, small self-tapping screws can be used.

Connecting the electric strike (optional)



ATTENTION: The electric strike is a live device. Use all appropriate safety devices and tools with electrically insulated handles.



VOLTAGE REQUIRED: The electric strike must be powered with alternating current **~12V (25VA)**.



PRELIMINARY OPERATIONS

Before connecting the electric strike to the mains supply, complete the following works as required:

- masonry works
- false frame laying.

Please refer to chapter II, "FALSE FRAME INSTALLATION" in these instructions.

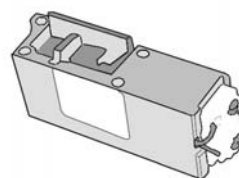
The electric strike consists of 3 components which are provided already assembled in the frame



FASTENING PLATE



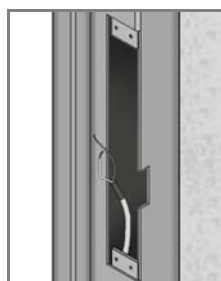
STEEL SHIM



ELECTRIC STRIKE

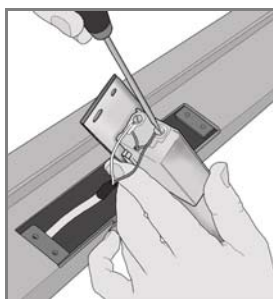


The fastening plate, screwed on two brackets welded on the frame, must be removed to connect the electric strike.



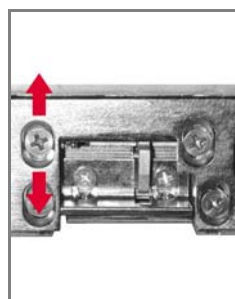
After removal the frame will feature a slot on one side, which will be used to rotate the electric strike flap.

Find the mains supply connection prepared beforehand (see the "FRAME INSTALLATION" chapter)



- Connect the two cables to the terminals on the electric strike.
- Re-assemble the plate with the electric strike on the frame.

Do not tighten the screws completely as the strike and spring latch may need subsequent adjustment.



Use the slots on the plate and on the electric strike to adjust the strike's action with respect to the latch bolt.

After adjustment is complete, lock the screws for final fastening

Attention: the solenoid switch inside the electric strike can only be used to unlock the mobile flap.

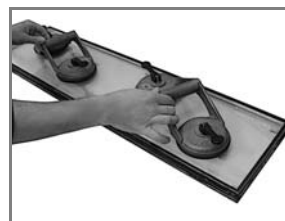
ATTENTION: following connection, check that the door opens and closes as expected; in the event that is unreliable, contact the Torterolo & Re authorised dealer.



Fixing the glass or panel on the fanlight



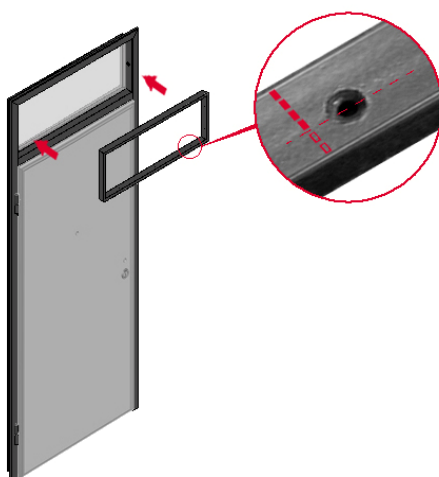
Apply the seal on the inner side of the frame on the rabbet of the space that will hold the panel or glass.



Handle the panel with great care, using required tools and suitable safety devices. Insert the glass/panel within the fanlight



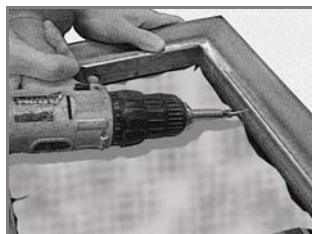
If need be, use shims to stabilise the position of the glass/panel within the fanlight.



To install the secondary fanlight frame correctly, note that the fixing holes are not symmetrical.

The side of the frame that abuts the glass is that which is further from these fixing holes.

Once identified, adhere the seal supplied to the side of the frame that abuts the glass.



Fasten the glass holding frame to the fanlight, drilling holes where needed and using the 10 self-tapping screws in the accessories box to fasten.

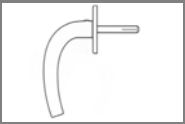
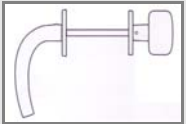
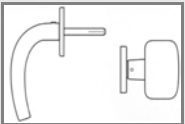
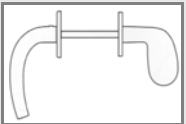
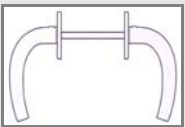
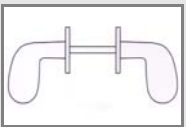
Always protect the glass or panel during fastening operations

If the door is located outside seal the glass (or panel) using silicone putty from the external side of the frame.

VII – HANDLES

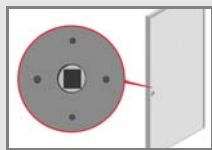
Handles are not supplied installed on the door, they must be installed separately. Installation kits for the handles are in the accessories box.

TYPES OF HANDLES

	INTERNAL HANDLE		HANDLE WITH FIXED KNOB
	INTERNAL HANDLE WITH FIXED CENTRE-OF-DOOR KNOB		HANDLE WITH PINECONE KNOB
	TWO-SIDED HANDLE		TWO-SIDED PINECONE KNOB

INSTALLATION OF HANDLES

Important preliminary information



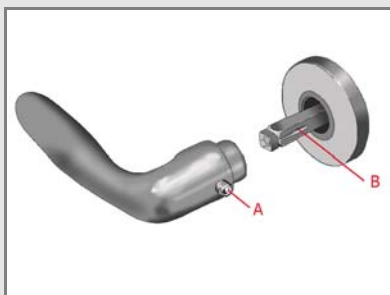
Both the internal and the external panel (if supplied) are already prepared for housing the knobs or handles ordered. This applies to all the above combinations except "FIXED CENTRE-OF-DOOR KNOB" which does not require any preparatory work.



Regardless of the type fix the plastic counter-rose remembering to position the spline downwards.



The metal rose must be applied with slight pressure to fasten them on the counter-rose. During the application pay special attention to insert the counter-rose spline accurately within the rose's slot.



The spindles feature a slot (B) to house the pressure grub screw (A) of the handles and guarantee proper fastening.

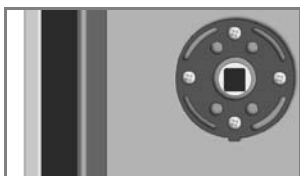
Before inserting the spindle in the lock:

- locate the spindle's slot (B)
- note the position that the grub screw (A) of the handle will have once the handle has been installed
- insert the spindle with the slot in the correct position

ATTENTION: improper installation of door furniture may result in inadequate functioning of the lock and damage to the door panels; complaints cannot be accepted if the proper methods of installation are not adhered to.



Internal handle



Using the screws supplied, fasten the plastic counter-rose to the internal panel of the door.

Push the metal pressure rose on the counter-rose



Insert the spindle positioning the slot to achieve a proper grip of the grub screw on the spindle.



Rotate the nut so that the opposite end of the spindle will expand inside the lock and provide the necessary grip.

- Screw the nut firmly; ensure that the spindle cannot be removed from its housing.
- Insert the handle on the spindle



Screw on the grub screw using the supplied Allen screw

Handle with fixed knob

INTERNAL SIDE



Using the screws supplied fasten the plastic counter-rose to the internal panel of the door.

Press the metal rose on the counter-rose

EXTERNAL SIDE



Insert the spindle positioning the slot to achieve a proper grip of the grub screw on the spindle.



Apply the plastic counter-rose – with the spline pointing downwards - ensuring that the hexagonal shaped slot corresponds to the hexagon in the spindle.

- Using the screws supplied fasten the counter-rose on the external panel
- Fasten the counter-rose pushing it on the rose, make sure that the plastic spline correctly matches with the rose slot
- Screw the knob on the spindle
- Screw on the grub screw using the Allen screw supplied



INTERNAL SIDE



Insert the knob on the spindle making sure that the grub screw is completely unscrewed.



Screw on the grub screw using the Allen screw supplied.

ATTENTION: improper installation of door furniture may result in inadequate functioning of the lock and damage to the door panels; complaints cannot be accepted if the proper methods of installation are not adhered to.

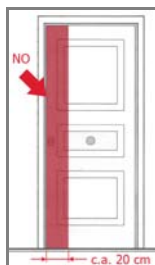
Internal handle with fixed centre-of-door knob

INTERNAL SIDE

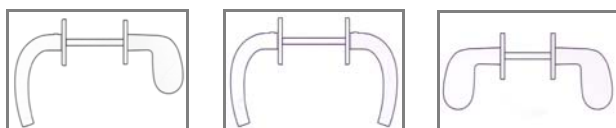
Install the handle as described in the previous paragraph 'INTERNAL HANDLE'

EXTERNAL SIDE.

- Pick the position where you want to place the knob (ensuring that the lock area is avoided)
- Use the plastic counter-rose as a template to mark the seat of the holes on the external panel.
- Pierce the holes with a drill
- Insert the bolt in the counter-rose ensuring that the bolt's hexagon combines with the counter-rose's hexagon.
- Fasten the counter-rose and the bolt to the external panel with the screws supplied. Attention: the plastic tooth must face downwards.
- Push the pressure rose
- Screw the knob on the spindle
- Screw on the grub screw using the supplied Allen screw



Handle with pinecone knob / two-sided handle / Two-sided pinecone knob



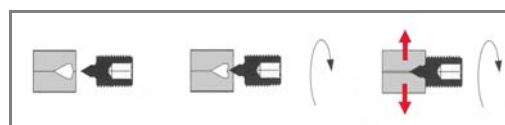
The three types of handle kits described in this paragraph all follow the same assembly procedure



Using the screws supplied fasten the plastic counter-roses to the internal and external panel of the door.

Push the metal pressure roses onto counter-roses

Align the two parts of the spindle as illustrated.



The assembled spindle enables the pressure grub screw to 'slide' between the two sections, causing it to expand.

Insert the spindle inside the lock then fix the supplied pair of handles (internal and external).



Screw on the grub screws using the Allen screw supplied.



ATTENTION: improper installation of door furniture may result in inadequate functioning of the lock and damage to the door panels; complaints cannot be accepted if the proper methods of installation are not adhered to.

VIII- MAINTENANCE

We recommend that periodic checks of all main door components are carried out with the following care and maintenance being undertaken as required.

INTRODUCTION

Your security door is a technology product and it must be treated as such. It is important, therefore, that the installation is carried out by expert and qualified staff following the detailed procedures outlined in this manual. Bear in mind that, as with other technology products, regular use may result in the need for periodic maintenance to ensure that the door is maintained in sound operational condition. These works may be merely aesthetic in nature, i.e. involving cleaning or restoring the lost coating or they may be more technical, requiring contacting your Installer of choice or an experienced maintenance technician.

24 months following installation we recommend a complete overhaul of the security door, to be carried out by qualified staff (contact the dealer who supplied the door).

COATINGS

ATTENTION! Wood and paint need to breathe. It is essential to remove the protective film after installing the security door to avoid damaging the product.

SOLID WOOD COATINGS

Please keep in mind that there is a continuous exchange of humidity between wood and the surrounding environment that manifests itself through enlargements and shrinkage perpendicular to the wood grain direction. These events happen more frequently in very humid environments with strong seasonal temperature variations.

WOODEN WIRE CASINGS

Be especially careful not to damage the seals as this may prejudice the door's performances beyond repair. Follow the same cleaning and care procedures applied to the coverings, described in the following pages.

PAINTING

Occurrence of the following events over time should be regarded as normal and not a consequence of defects in the paint coating: slight reduction in the painted film; slight loss of brightness; slight change of colour; leak of resin-like and/or tannic substances from wood after the door has been installed.

- To preserve the paint for longer, and consequently keeping the coating in good conditions, follow some basic precautions like the following:

Care and cleaning of wood coatings

Cleaning is extremely important, and is required to remove atmospheric chemicals and dust that may affect the paint film.

Cleaning frequency depends on the type of coating exposure but it is recommended at least once every three to four months. Use a soft cloth and a neutral solution (e.g. water and washing detergent). Avoid stronger products containing alcohol, acid or bases.

IMPORTANT: The water-based paints that are used may leave a thin coloured residue on the cleaning cloth: this is not a defect in the panel but an inherent feature of the environmentally friendly paint (that does not damage the balance of the local microclimate).

Exposure of the coating to weather

It is important to remember that wood, exposed to weather, does not always behave in a predictable way. In order to reduce the risk of unwanted effects it is important to check that the external coating panel's use is compliant with Torterolo & Re recommendations which also contains the list of exposure conditions that should be avoided.

Condensation

TorteroLo&Re doors have been designed to provide security and anti-break in resistance, and in order to do so they feature seamless, wholly galvanised steel structures internally and externally. If the door has been installed in an environment with variable temperatures condensation may form on exposed surface in warmer rooms.

To reduce this natural phenomenon we recommend reducing as much as possible the metal surface exposed to colder temperatures by fully covering the frame with the wooden covering kits available on our price list.

GLASS

- Use a soft cloth moistened with water and soap or denatured alcohol.
- Be especially careful, during cleaning, not to damage the glass seals as this may prejudice product performance beyond repair
- If veins or other flaws in the glass are noticed (which might reduce the security level), contact the retailer who supplied the product.

FRAME

Schedule cleaning of the frame at least twice per year. In particularly aggressive environments atmospheric dust, if not removed, may cause oxidation.

- Clean using a sponge or a soft cloth moistened with a neutral, non-aggressive detergent, containing neither ammonia nor chloride. Be careful not to damage or cause detachment of the rabbit seal or of the seals between wall and frame.
- Periodically check along the frame's perimeter that the following elements are free from dust or other substances:
 - the tear-resistant pins entrance holes
 - the entrance holes for the lock bolts, spring latch and other locking bolts
 - the entrance hole of the upper (ceiling) bolt and the bucket of the floor bolt

Any object, however small, in these holes might impede the operation of the lock.

- Periodically check that the paint on the frame has not been scratched / damaged as oxidation may result from even minor damage, especially if exposed to the elements. In this case contact TorteroLo&Re authorised centres.

HINGES

- Lubricate at least once every six months by inserting fluid mineral oil or silicone lubricant in the relevant hole on the upper surface of the hinge body.
- To ensure that the weight of the door leaf is distributed uniformly over the frame, it is essential that the female parts of the hinges rest fully on the thrust bearing; if this is not the case, please refer to the "LEAF INSTALLATION AND ADJUSTMENT" chapter of these Installation Instructions.

LOCK

Efficient operation of the lock is ensured by regular and proper maintenance of the lock's external components.

NEVER lubricate the key and the lock's and/or cylinder's internal components.

- With the door open, open the lock, fully extracting the bolts, then remove all dust or any other substance on them and slightly lubricate with Vaseline oil before closing back the bolts.

ATTENTION: Any unauthorised modification or maintenance work not carried out by qualified technicians immediately voids product warranty and certifications.



- The following checks should be carried out:
bring the leaf ajar and make sure that it properly connects to the frame with the spring latch; close the leaf and test lock closing and opening to ensure that the bolts enter the holes in the frame smoothly and without any interference. If either check yields a negative result, please refer to the "LEAF INSTALLATION AND ADJUSTMENT" chapter of these Installation instructions.

Door clearance adjustment

The door clearance can be adjusted using the spring latch adjustment plate by which it is possible to move a slider inside the hole of the spring latch. Check clearance by closing the leaf using the spring latch only, i.e. without turning the key. Please refer to the "LEAF INSTALLATION AND ADJUSTMENT" chapter of these Installation instructions for further directions on adjustment.

Electrical strike plate

ATTENTION: The electrical strike plate is a live device. Any repair or work on it should be carried out by specialised technicians. Please contact the dealer who supplied the door.

Cylinder replacement

For replacement of cylinders please refer to the LOCKS chapter of these INSTALLATION INSTRUCTIONS.

ATTENTION: if the lock has a cylinder locking cross-slotted screw ALL the cylinder installation and testing must be carried out with the FULLY RETRACTED BOLTS.
Otherwise the lock will IRREVERSIBLY block.

Keys

- **NEVER lubricate the key and the lock's and/or cylinder's internal components.**
- All keys, regardless of the model, must be used only to open/close the lock. Any other use may alter their shape thus making them unusable.
- For security reasons duplication of the final (owner) keys is available only from Torterolo&Re. Therefore, please contact the Dealer who supplied the product.

Fixed leaf closing pin

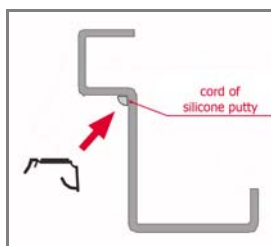
If a replacement fixed leaf closing pin is required, pull the head of the pin out with a flat head screwdriver (or a coin) and pull out the mechanism until it reaches the end of its stroke. Unscrew the pin until it can be removed, replace it and screw the replaced pin back. Close the fixed leaf as described in the "LEAF INSTALLATION AND ADJUSTMENT" chapter of the INSTALLATION INSTRUCTIONS.

SEALS

"Acoustic insulation" and "Air-, water-, wind-tightness" seal

If the seal's adhesion to the frame does not seem strong enough, it can be increased with either of the following procedures:

- fix it with silicone putty: after applying a cord of silicone putty in the position shown in the picture, remove the protection from the double-sided adhesive and fasten the bars making sure that the adhesive side faces the frame's rabbet.



- after putting the seal in its intended place with the double-sided adhesive, fix it with self-drilling screws passing through the side that sticks to the frame rabbet using self-drilling TSPIC 2.9 x 9 screws (3 for the upright, one for 2 for the lintel).

ATTENTION: inadequate maintenance (or lack of maintenance) may seriously prejudice the product's operation.

HANDLES

- Use a soft cloth moistened with water and soap. Wipe the handles with a damp cloth to remove all soap, dry thoroughly. Avoid using abrasive powders or detergents that may damage the metal surface.
- The handle or knob movements should be smooth at all times.

HYDRAULIC DOOR CLOSER (PROTECTION 60 DOORS)

Periodically check that the hydraulic door closer functions properly. The door's tested and certified performances are guaranteed only if the door closer is fully operational.

DRAUGHT EXCLUDER

The floor area covered by the leaf in its movements must be kept clean from dust or other residues that might form deposits on the bottom of the door to hinder the proper operation of the draught excluder.

Draught excluder adjustment

Please refer to the "LEAF INSTALLATION AND ADJUSTMENT" chapter of these INSTALLATION INSTRUCTIONS.

Draught excluder replacement

Check that the new draught excluder is correctly sized (net passage width + 15 mm). Open the door completely. Remove the black plastic cover in the draught excluder area, lock side. Extract the draught excluder grabbing it by the adjustment screw and pull outwards. Insert the new draught excluder in the slot and push in fully. Restore the protection cover.

WIDE-ANGLE DOOR VIEW

During cleaning of the external coating pay special attention not to scratch or tarnish the wide-angle door view (peephole).

USE PRECAUTIONS

- Avoid uses that are unsuitable for the product. Please follow the recommendations in Torterolo&Re's technical documents and in these instructions to ensure suitable installation locations and uses.
- The door leaves are very heavy and their movement, although simple, must be carried out by competent staff that complies with the local legislative, health and safety regulations.
- During any operation carried out with an open leaf, always make sure that the lock bolts are fully retracted inside the leaf to avoid damaging them and to prevent them from hitting the frame.
- If it is planned not to use a door for more than 30 days thoroughly lubricate the hinge pins with fluid mineral oil and lubricate the lock bolts and tear-resistant pins with graphite oil.

ATTENTION! Security door anti-break in resistance performances are compliant to the performances tested in laboratory only if the lock is fully closed (with all the required key turns), whether operated from the outside or the inside.

DISPOSAL

Do not dispose of this product, its components and all the accessories in the environment. Use the waste disposal procedures and systems in compliance to the laws in force.

ATTENTION: Any unauthorised modification or maintenance work not carried out by qualified technicians immediately voids product warranty and certifications.



INSTALLATION CERTIFICATION

The "Installer", a professional with specific qualifications in the installation of anti break-in doors and windows, is fully responsible of the delivery of this Product to the user and required to train the latter in its proper use and risks related to improper use of the product.

It is therefore extremely important that the installer devotes all possible efforts to manage his / her relationship with the user and commits to carry out all installations according to the manufacturer's specifications and, more generally speaking, the rules and procedures of the trade.

The following is a list of all minimum required operations that we, the Manufacturers, require to be carried out in presence of the end customer or of the person that has the needed authority to approve of the job before leaving the site. These operations may represent, for the user, key elements of a high quality service offered by the installer and, consequently, grounds for proactive advertisement of the finished product.

CONNECTION FRAME-MASONRY	check the absence of cracks, flaking, cavities and continuity of seals
LEAF MOVEMENT	check that the doorleaf's working clearances maintain their regular values all along its perimeter; scratches on the frame or on the leaf's rabbet might be proof of incorrect clearances
HINGES	check that the hinges are aligned and in axis with the door, that the hinge height adjustment pressure screws are fastened, lubricate them through the hole using graphite oil
SEALS	check that they are clean and uninterrupted
DRAUGHT EXCLUDER	check that the draught excluder downwards movement has been properly adjusted
HOLES	check that the holes are clean, not obstructed and aligned with the corresponding locking elements (bolts and so on).
ACCESSORIES	check that all accessories function correctly (handles, opening limiting device and so on.)
KEYS	open the key bag in presence of the customer (if you are delivering the installed door to them), check that all the keys work properly and are clean before handing them to the customer
LOCKS	check that the keys turn smoothly and that they lock and close with minimum clearance between leaf and frame, lubricate using mineral oil all the moving elements (bolts, upper stick if installed, spring latch)
TRAINING	instruct the end customer, or the person having full authority to accept the door delivery on how to operate the door: lock, opening limiting device, draught excluder, correct opening and closing methods. Provide the necessary usage warnings to avoid any residual risk related to product operation: improper use that may cause physical harm, restrict the user's freedom and prejudice the door's intended security performances. Describe the ordinary maintenance operations the user shall carry out and that can keep the product in good status

Stamp, date and sign this manual to testify that the instructions contained in it have been complied with and hand it to the end customer, or the person having authority to accept the door delivery.

CORRECT INSTALLATION CERTIFICATION

I hereby declare that this door has been installed in compliance with all the indications provided by Torterolo&Re in the Installation Instructions.

In particular, I hereby declare to have followed thoroughly all the instructions in the chapter "certified performances of the door—mandatory operations" which are mandatory and necessary to achieve and maintain the door performances' certification requirements.

Installer's First and last name

Company

Door installation date

Installer's signature

WARRANTY TERMS AND CONDITIONS

Dear Customer,

Thank you for purchasing this product from Torterolo & Re; all manufacturing is undertaken at the Torterolo & Re S.P.A plant in Cosseria (SV) Italy and has been produced and accredited in line with the Company's ISO 9001 Quality System.

As a manufacturing company, Torterolo & Re is committed to supporting its global network of distributors, agents and installers in meeting the warranties that are outlined in its Price Book. However, Torterolo & Re does not deal directly with end customers; if quality issues do arise, therefore, we ask that you refer these directly to the agent / distributor / installer from whom the purchase was made.

Please note:

- If a product, or a part thereof, requires replacement, the original period of guarantee shall remain
- If, as a result of a product problem, Torterolo & Re is required to provide direct technical support at an installation, then the Company shall have the option of charging for at least the out-of-pocket expenses for its technician(s)
- Freight charges shall be borne by the customer if a product is forwarded to Torterolo & Re for repairs; in the event that a Torterolo & Re technician recovers a product for repair, then these expenses shall be borne by the Company

The Company shall not be held responsible for any damage as a result of improper installation (that does not adhere to these instructions), inadequate maintenance or other forms of negligence, nor shall it be held responsible in any way for damage caused to people or property as a result to failure to comply with the procedures and protocols outlined in this manual.

As a general point, we recommend that in the event of any concern about the operating performance of the product, you confirm in the first place that the product has been properly installed – we are confident that so long as the installation has been carried out carefully, you should be very satisfied with the quality and performance of the product.

