

# SARTO

*European quality in technologies*

## INSTALLATION MANUAL

### Interior Swing Door on Hinges

Standard Hardware — American Lever Handle & Mortise Lock, Butt (“butterfly”) Hinges

**Optional add-ons covered in this manual:**

- Concealed (hidden) hinges
- Euro-profile lever handle with magnetic mortise lock

[www.sartodoors.com](http://www.sartodoors.com)

## Tools Required

- Tape measure
- Utility knife
- Cordless drill / driver + bit set
- Screwdriver (Phillips and flat)
- Compound miter saw or hand saw
- Adhesive (“liquid nails” or PVA in a bottle with a narrow nozzle)
- Hinge boring bit / Forstner bit (only if installing concealed hinges)
- Chisel (for mortising hinge leaves and lock body)
- Doweling jig (only if using the dowel frame-joint method)

## Package Contents & Hardware Configuration

Before installation, verify the completeness of the product against the list below. This door ships in one of three hardware configurations — confirm which one applies to your order on the packing slip or sales confirmation.

- Door leaf — 1 pc
- Doorframe set: jamb — 2 pcs, head — 1 pc
- Casing set for two door sides: side casing — 4 pcs, head casing — 2 pcs
- Weather strip (seal)
- Door hinges — standard butt (“butterfly”) hinges, 2–3 pcs depending on door height (see hardware configuration below)
- Door hardware set — see configuration A, B, or C below

| Configuration       | Hinges                                           | Handle & Lock                                                   |
|---------------------|--------------------------------------------------|-----------------------------------------------------------------|
| A — Standard (base) | Standard butt (“butterfly”) hinges               | American lever handle + mortise lock with cylinder and deadbolt |
| B — Add-on          | Concealed (hidden) hinges                        | Same as Configuration A                                         |
| C — Add-on          | Standard or concealed hinges (customer’s choice) | Euro-profile lever handle + magnetic mortise lock               |

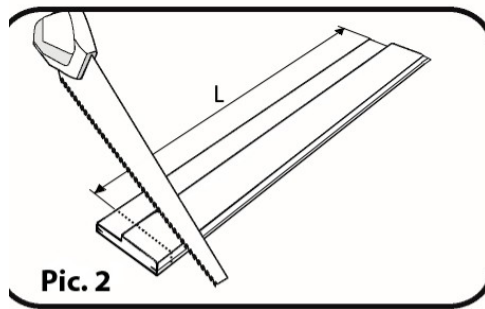
Table 1. Hardware configurations covered in this manual

## Rough Opening & Jamb Length Reference

Cut the jambs to length “L” before assembling the frame:

$$L = H + 7/8" + Y$$

*H* — door leaf height    *Y* — gap between the door leaf and the floor



*Pic. 2 — Cutting the jamb to length L*

| Parameter                  | Typical value                                 |
|----------------------------|-----------------------------------------------|
| Rough opening width        | Door width + 2" to 2½"                        |
| Rough opening height       | Door height + 1½" to 2"                       |
| Gap Y (door leaf to floor) | ⅓" – ½" (finished flooring already installed) |
| Wall thickness supported   | 4" – 5" (standard jamb depth)                 |

#### **Wall thicker than 5-1/4"?**

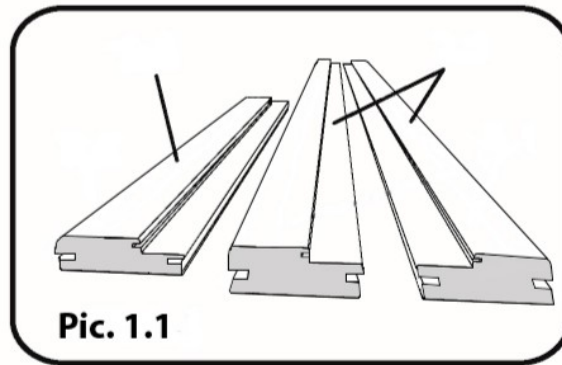
If your wall (finished surface to finished surface) is thicker than 5-1/4" — the standard jamb depth — order the Frame (Jamb) Extension add-on instead of a custom jamb. See "Add-on: Frame (Jamb) Extensions" later in this manual for sizing and fitting instructions.

#### **Worked example**

For a 30" × 80" door leaf, the recommended rough opening is 32" wide × 81.5" high. A width of up to 32.5" is acceptable if needed for an out-of-plumb wall, but do not go narrower than 32" — the frame and shim space will not fit and the jambs cannot be squared.

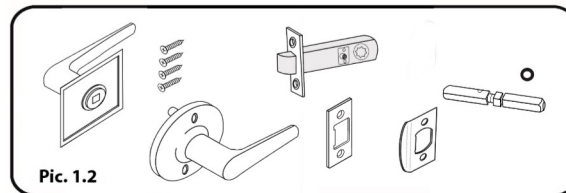
## STEP 1 Check Completeness of the Product

Before installation, lay out all parts and confirm the box contents against the Package Contents table above. Confirm your hardware configuration (A, B, or C) before proceeding, since Steps 4, 5 and 9 differ for concealed hinges, and the lock/handle installation differs by configuration (see Hardware Installation, later in this manual).



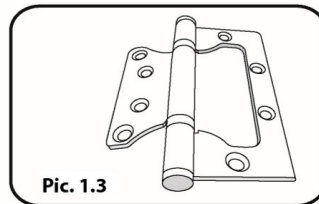
**Pic. 1.1**

*Pic. 1.1 — Doorframe set (jamb + head)*



**Pic. 1.2**

*Pic. 1.2 — Door latch, handle set and strike plate (Configuration A/B)*

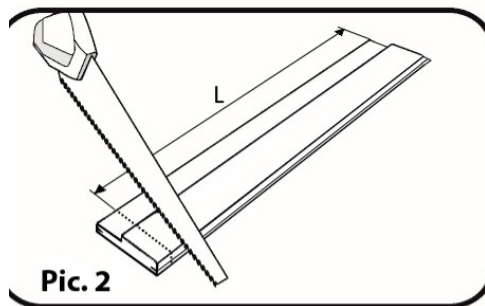


**Pic. 1.3**

*Pic. 1.3 — Standard butt hinge (Configuration A/C default)*

## STEP 2 Cut the Jambs to Length

Cut both jambs to length L, using the formula in the Rough Opening reference above.



**Pic. 2**

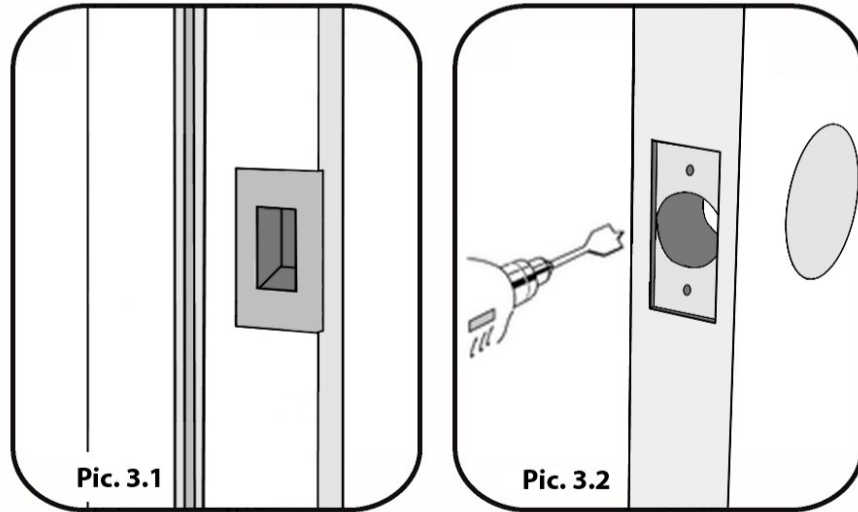
*Pic. 2*

## STEP 3 Drill and Mill Seats for the Latch and Strike Plate

For Configuration A or B (American mortise lock), drill and mill the lock mortise and strike-plate seat now, using the door manufacturer's template — see Hardware Installation — Option A later in this manual for exact dimensions and the 0.8–1.0 m (31–39") handle-height guideline.

### Configuration C (Euro handle + magnetic lock)

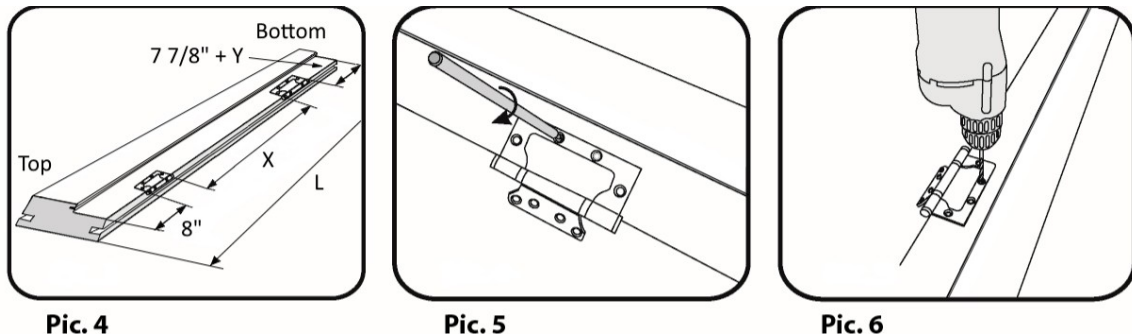
Skip ahead to Hardware Installation — Option C. The magnetic lock body uses the same style mortise pocket as a standard Euro mortise lock, but the strike plate location must line up with the magnetic striker, not a spring latch — see the alignment note in that section before milling the jamb.



Pic. 3.1, 3.2 — Reference: milling the latch and strike-plate seats

## STEP 4 Mark and Drill the Hinge Holes on the Jamb

Standard hinges (Configuration A default): the top hinge should be located 8" from the jamb chamfer (measured to the top of the hinge barrel). The bottom hinge should be located  $7\frac{7}{8}" + Y$  from the bottom edge of the jamb. Drill the holes in accordance with the marking.



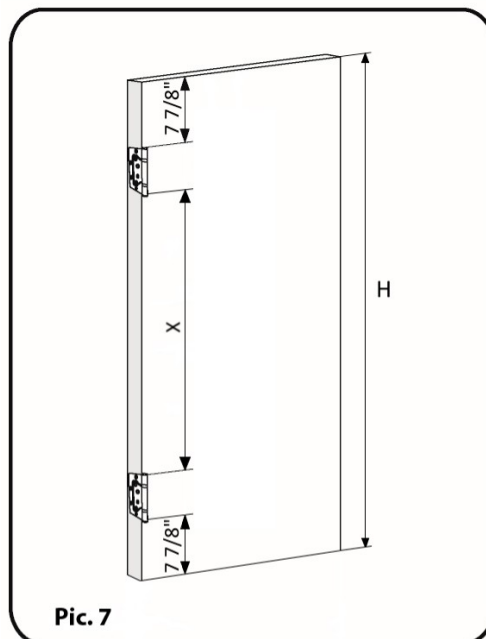
Pic. 4, 5, 6 — Marking and drilling hinge positions on the jamb

### Add-on B/C — Concealed hinges

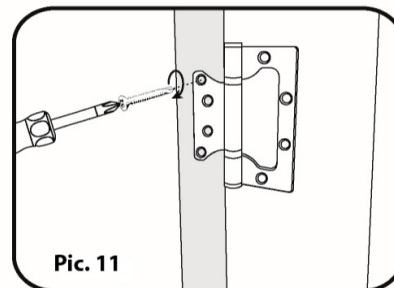
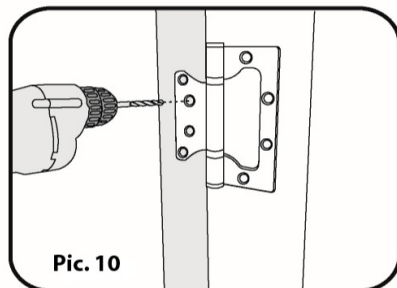
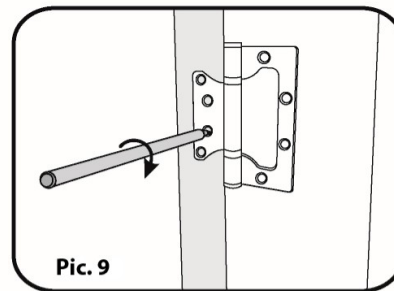
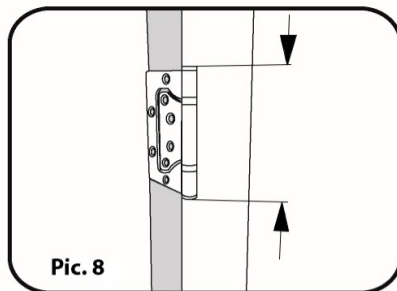
Do not drill screw holes at this stage. Concealed hinges use round mortised cups instead of screw-only leaves — see “Add-on: Concealed Hinges” later in this manual for boring diameter, depth and positioning before you touch a drill to the jamb.

## STEP 5 Mark and Drill the Hinge Holes on the Door Leaf

The top hinge should be located 7-7/8" from the top of the door leaf (measured to the top of the hinge barrel). The bottom hinge should be located 7-7/8" from the bottom of the door leaf. Make sure distance "X" between the hinges is identical on the jamb and on the door leaf. Drill the holes and screw the hinges to the door leaf.



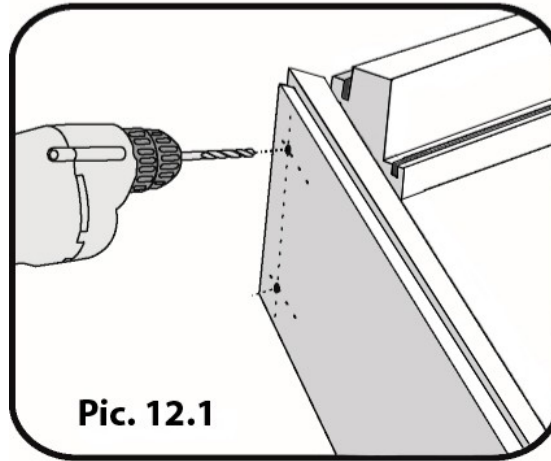
*Pic. 7 — Hinge spacing on the door leaf*



*Pic. 8-11 — Marking, drilling and fastening the hinge to the door leaf*

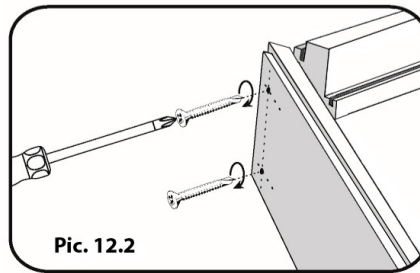
## STEP 6 Assemble the Frame — Head to Jamb Corner Joint

Pre-drill before screwing. Screw (or dowel — see below) the head to each jamb. This joint carries the full weight of the door leaf through the hinge-side jamb, so it must be tight and square before the frame goes into the opening.



**Pic. 12.1**

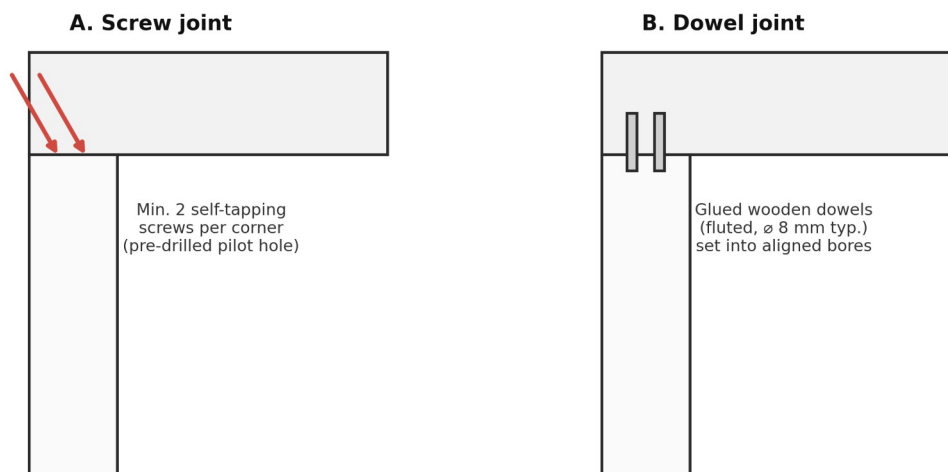
*Pic. 12.1 — Pre-drilling the head-to-jamb joint*



**Pic. 12.2**

*Pic. 12.2 — Fastening the head-to-jamb joint*

### Frame head-to-jamb corner joint — two accepted methods



*Two accepted corner-joint methods: self-tapping screws (left) or glued dowels (right)*

## Method A — Self-tapping screws (recommended for field installs and any future adjustment)

- Use a minimum of two self-tapping screws per corner, driven through the face of the head into the end grain of the jamb.
- Screw size: 5 mm (approx. #9–#10) diameter, 50–70 mm (2"–2¾") long — the same coarse-thread, self-tapping “confirmat-style” screw commonly used for flat-pack furniture and RTA door-frame kit corners. On thin («13/16") jamb stock use the 50 mm (2") length; on thicker stock or where extra pull-out resistance is wanted, use 65–70 mm (2½"–2¾").
- Always pre-drill a pilot hole slightly smaller than the screw shank diameter to prevent the jamb end grain from splitting.
- Countersink the screw head flush; it will be hidden by the head/side casing once trim is installed.

## Method B — Glued dowels

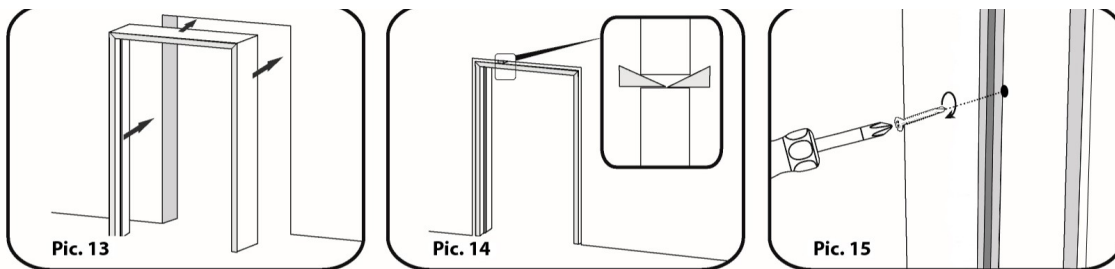
- Use 2 fluted wooden dowels per corner,  $\varnothing$  8 mm (5/16"), set into pre-bored, aligned holes using a doweling jig.
- Apply PVA or wood glue in each bore before inserting the dowel; clamp the joint until the glue sets.
- This method leaves no visible fastener and is preferred for factory/shop pre-assembly of frames, or where the customer wants a completely screw-free corner.

### Which method to choose

Both methods meet SartoDoors’ structural requirement for the head-to-jamb joint. Screws are faster on site and allow the joint to be taken apart if a jamb needs replacing; dowels give a cleaner, glue-only joint but require the frame to be assembled before delivery to the job site.

## STEP 7 Insert the Assembled Doorframe Into the Opening

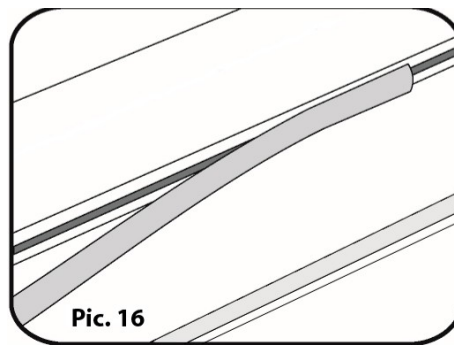
Insert the assembled doorframe into the rough opening and fasten it to the wall with at least three screws per side (top, middle, bottom). To prevent frame deflection, install gasket wedges between the doorframe and the wall. Fix the doorframe to the wall opening with self-tapping screws in the locations that will later be covered by the weather strip (seal).



Pic. 13–15 — Inserting, shimming and fastening the frame into the rough opening

## STEP 8 Install the Weather Strip

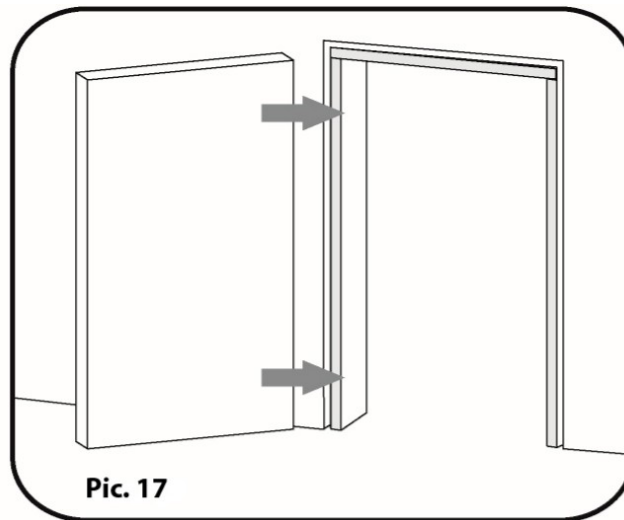
Insert the weather strip (seal) into the doorframe groove.



Pic. 16

### STEP 9 Hang the Door Leaf

Insert the door leaf into the doorframe and fix the hinges with the screws in the pre-marked places (see Step 3).



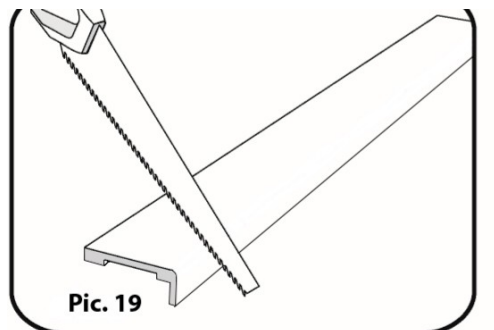
Pic. 17 — Hanging the door leaf on standard hinges

#### Add-on B/C — Concealed hinges

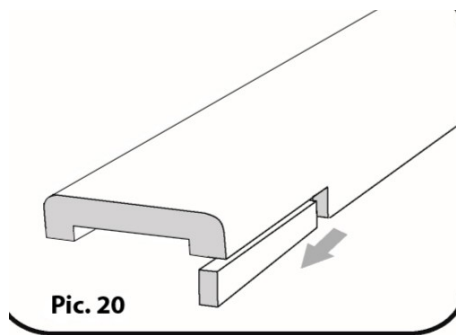
See “Add-on: Concealed Hinges” below for the hanging and 3D-adjustment procedure, which replaces this step.

### STEP 10 Install the Side and Head Casing (Trim)

Cut the side casings so they sit about 9/16" higher than the doorframe. Remove the lateral leg to fit the side casing into the doorframe groove.

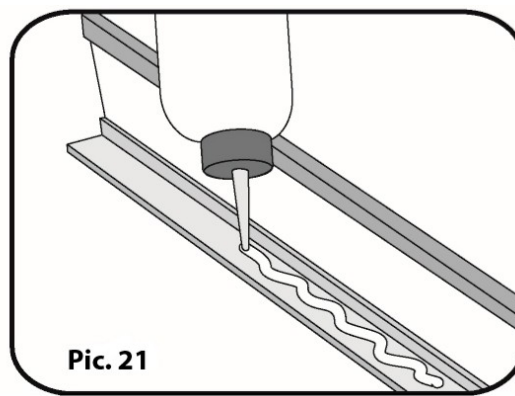


Pic. 19 — Cutting the side casing to length

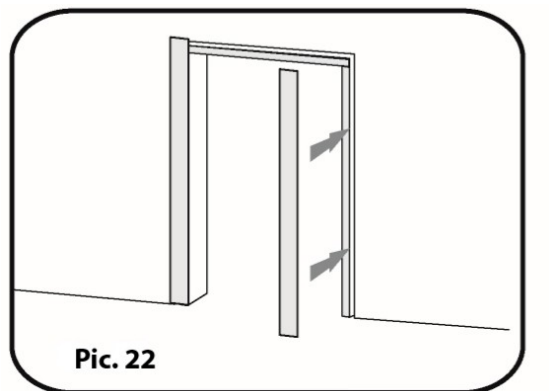


*Pic. 20 — Removing the lateral leg to fit the casing*

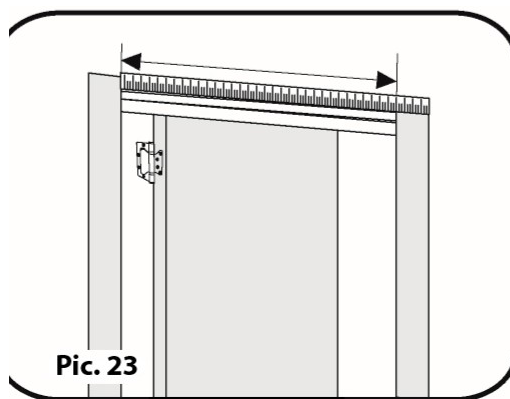
Apply adhesive to the inner side of the casing leg and insert the side casing into the groove of the doorframe. Measure the distance between the side casings, then cut the head casing to the required length and fit it the same way.



*Pic. 21 — Applying adhesive to the casing leg groove*



*Pic. 22 — Side casings fitted into the doorframe groove*



*Pic. 23 — Measuring for the head casing before final cut*

### Which adhesive to use

Run a continuous bead of a polymer construction adhesive (“liquid nails”-type MS-polymer or polyurethane adhesive) or PVA wood glue — applied from a bottle with a narrow nozzle — along the full length of the casing leg groove, not just a few dabs. Press the casing firmly into the frame groove immediately after applying, and hold or tape it in place for the adhesive’s initial tack time (check the product label; typically a few minutes to a few hours).

A continuous, narrow bead gives a tight, rattle-free casing with no visible fasteners and no risk of nail heads telegraphing through the finish. Avoid gap-filling amounts of adhesive — excess squeeze-out is harder to clean from the reveal line than a light, even bead.

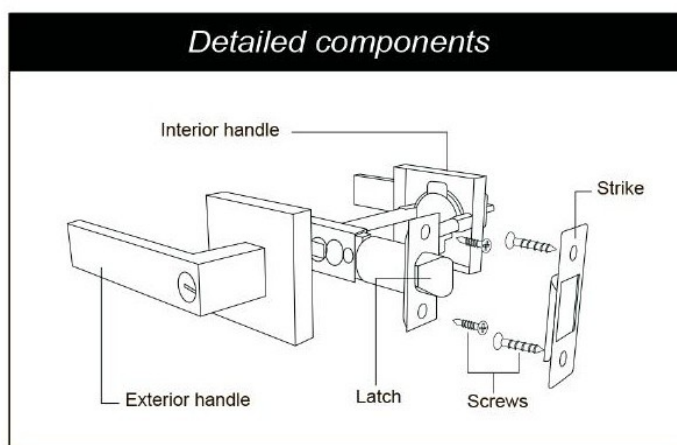
On uneven walls, a few finish nails through the casing into the jamb (in addition to the adhesive) can help hold a stubborn section flat while the adhesive cures, but the adhesive bead — not the nails — is what keeps the casing tight over time.

## Hardware Installation — Standard: American Lever Handle & Mortise Lock (Configuration A/B)

This is the standard hardware set for Configuration A/B. It uses a mortise lock body with a lever handle on both faces, a fixed cylinder, and a deadbolt operated by key or thumb-turn.

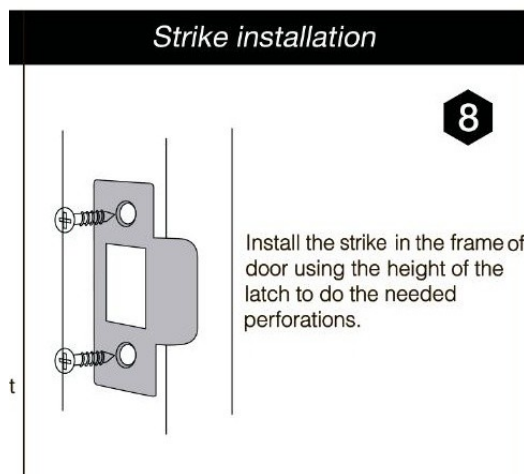
### Hardware layout — handle, latch & strike in the frame

This is the base hardware set included with every Configuration A/B door — it is not a separate add-on, so the exploded view below is provided here for reference before you start the door and jamb prep in Steps 3–5 above. It shows how the exterior handle, interior handle, latch and strike plate fit together across the door edge and the jamb.



*Exploded view — exterior handle, interior handle, latch, strike plate and mounting screws*

The strike plate is mortised into the jamb opposite the latch, at the same height, so the latch nose enters the strike pocket and holds the door closed. Confirm the strike location against the latch height marked in Step 3 before mortising the jamb.

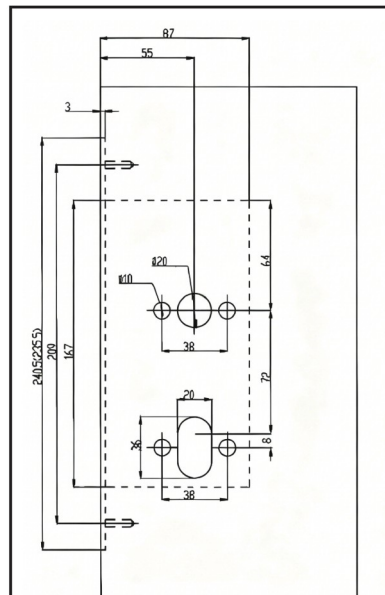


*Strike plate installed in the jamb — engages the latch when the door closes*

## Door preparation

The best height for the mortise lock is between 36 and 40" from the bottom of the door to the lever handle center. It is recommended to print the 1:1 paper drawing supplied with the hardware and stick it to the door edge when marking out the mortise.

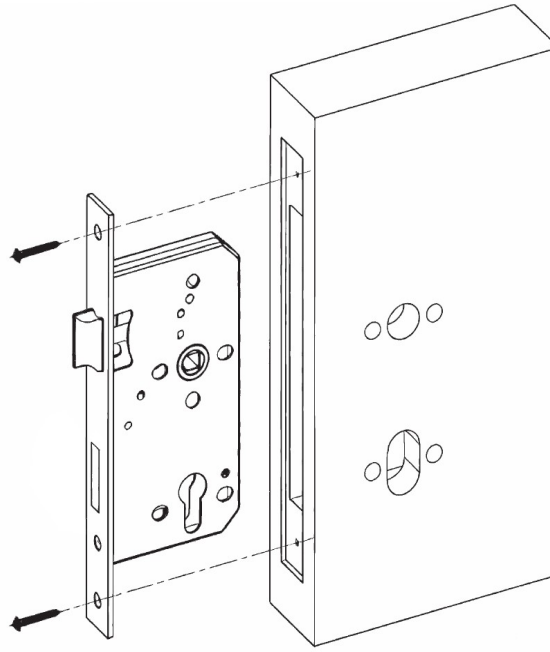
Provide the lower pre-cut only when the lockset requires a privacy or keyed-entry function. When selected at the time of order, this pre-cut is completed at the factory as an add-on. Omit the cylinder pre-cut for passage-function hardware.



*Dimensions for preparing the door for the mortise lock*

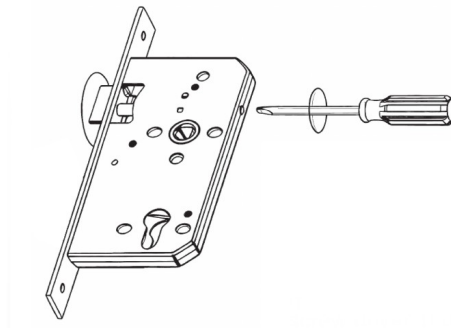
### 1. Insert the lock body

Insert the lock body into the mortised cavity and fasten the mounting screws.



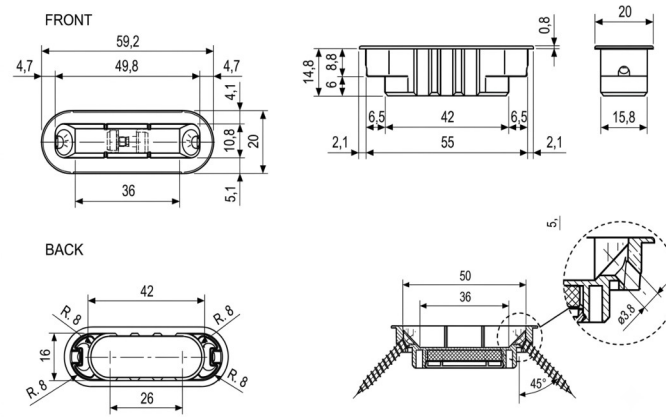
## 2. Set the latch-bolt direction

- The bevel of the latch bolt must face the same direction the door closes (bevel toward the strike side / outside).
- To reverse the latch bolt direction: push the latch bolt in with a screwdriver, rotate the latch (or the screwdriver) 180°, then release.



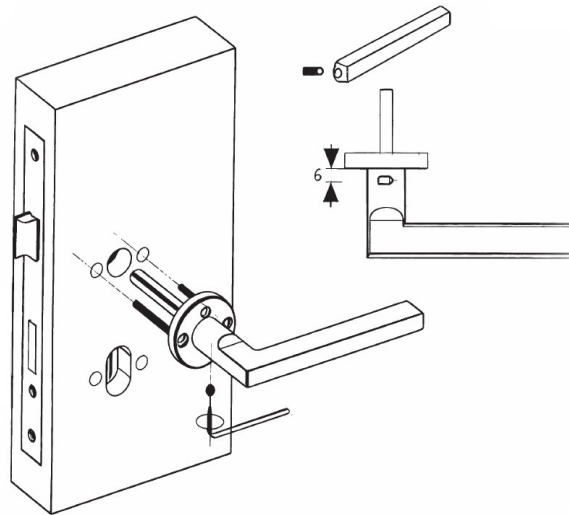
## 3. Install the striking plate

Install the striking plate and pocket in the jamb, and fasten the screws.

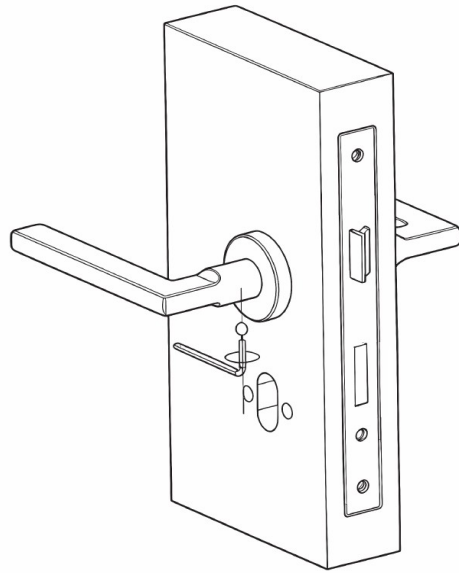


#### 4. Install the lever handle and spindle

Insert the spindle keeping the distance to both faces equal. The set screw must be fixed on the thinner side of the spindle. Note: the screw bolt should sit on the outside of the door when installed.

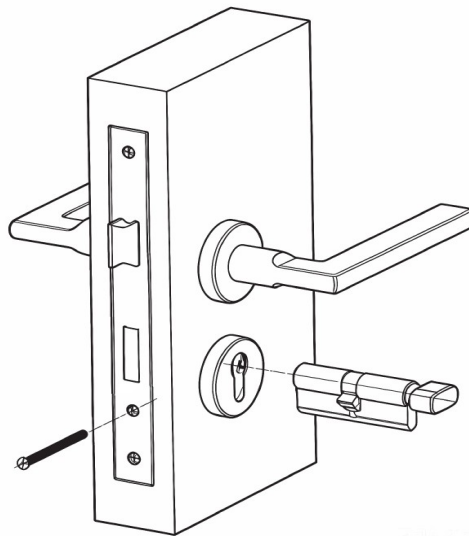


## 5. Fasten the rosette



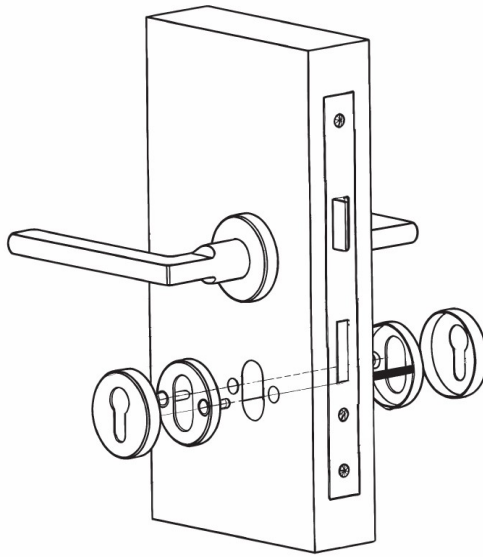
## 6. Install the cylinder

Insert the cylinder and fasten the cylinder fixing screw, M5 × 2 1/2"



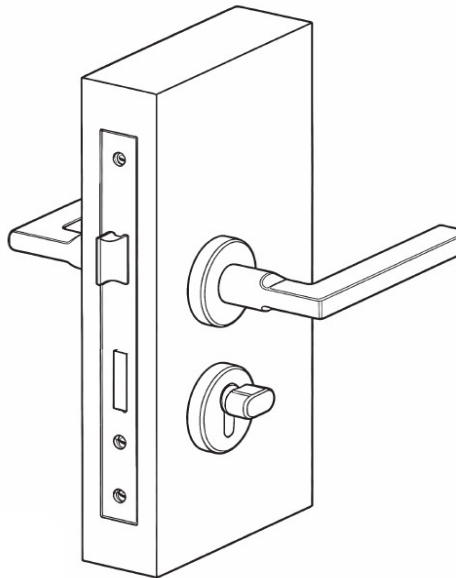
## 7. Install the escutcheons

Install the escutcheon base and fasten the screws (the screw bolt should sit on the outside), then fasten the escutcheons.



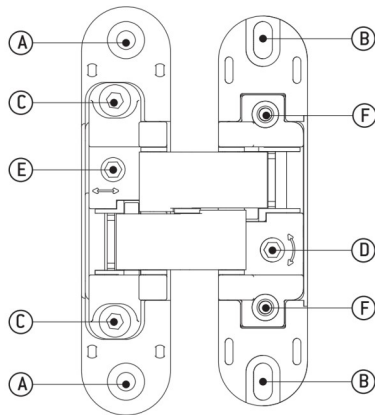
## 8. Test the lock

Operate the lever handle to confirm the latch bolt retracts smoothly. Turn the cylinder knob to check the deadbolt. Operate the key to check the deadbolt again. Repeat the previous steps until the latch bolt and deadbolt both work smoothly, then fasten all remaining screws.



## Add-on: Concealed (Hidden) Hinges

This add-on replaces the standard butt hinges from Steps 4, 5 and 9 with fully concealed hinges: when the door is closed, no hinge barrel or leaf is visible from either face. Concealed hinges of this type are supplied as a matched 2-piece (or 3-piece, on taller/heavier doors) hinge set with independent 3-way adjustment.



**A**  
Fixing hole for the hinge to the frame.

**B**  
Oval holes for vertical adjustment and fixing to the door.

**C**  
Fixing screw of depth adjustment.

**D**  
Self-locking screw for lateral adjustment.

**E**  
Excentric system for depth adjustment.

**F**  
Optional D.3,5 mm screw for vertical fixing of the door.

*Concealed hinge — mortised cup principle and 3D adjustment axes*

### Installation sequence

- Using the hinge routing template, mark the mortise locations on the door edge and the corresponding frame jamb at the hinge heights specified in Steps 4-5.
- Machine the hinge mortises to the dimensions specified by the hinge template. Use the specified router bit and guide-bushing dimensions. Maintain the required mortise depth and alignment on both the door and frame sides.
- Position the hinge sections in the prepared mortises and secure them with the specified mounting screws. Do not overtighten the screws.
- Support the door leaf and connect the door-side and frame-side hinge sections. Confirm that the hinge arms engage fully and move freely within the door-to-frame clearance.
- Close the door and inspect the reveal around the perimeter. Adjust the hinges as required:
  - Height adjustment - raises or lowers the door leaf;
  - Lateral adjustment - moves the door left or right;
  - Depth/compression adjustment - moves the door inward or outward relative to the frame face.
- Make small, equal adjustments at all hinges. Recheck the reveal and door operation after each adjustment. After final alignment, tighten all fixing screws and confirm that the door opens and closes freely without binding.

#### Note on hardware compatibility

Concealed hinges can be combined with either American mortise lock) or Euro handle + magnetic lock below — the hinge choice and the lock/handle choice are independent options.

## Add-on: Magnetic Bottom Stopper

This optional add-on provides a concealed magnetic hold-open function at the bottom of the door. A magnet and mounting plate are mortised into the bottom edge of the door, and a matching pin is installed in the floor at the desired open position. When the door reaches this position, the magnet engages the floor pin and holds the door open. Pulling the door releases the magnetic connection.

### Tools & equipment

- Cordless drill/driver
- Hammer drill, if installing the floor pin into concrete or masonry
- 3/32"–1/8" drill bits for pilot holes and 9/16" drill bit for the floor pin opening
- 215/16" Forstner bit for the magnet housing and 3/4"–1-3/16" Forstner or spade bit
- Caulking gun and compatible construction sealant
- #2 Phillips screwdriver or driver bit

#### Before you drill

This stopper is strongly magnetic. Keep it away from metal objects, credit cards and electronic/magnetic media before installation. On tile or stone floors, use a diamond bit to score the surface first to prevent chipping; on carpet, keep the bit in contact with the carpet/pile rather than lifting it clear while starting the hole.

### Installation sequence

- Unpack and identify all components.  
Remove the packaging and verify that the kit includes the magnet assembly, mounting plate, floor pin, floor sleeve, and mounting screws.
- Mark the floor-pin location.  
Open the door to the desired hold-open position. Mark the floor directly below the magnet centerline, keeping the floor pin aligned with the door's travel path.
- Prepare the magnet recess in the door.  
Remove the door and place it on a stable work surface with the bottom edge accessible. Mark the centerline and drill the magnet recess to the diameter and depth specified for the supplied hardware.
- Drill the mounting-screw pilot holes.  
Use the magnet housing or mounting plate as a template. Drill two 1/8" pilot holes approximately 3/4" deep, centered on the marked screw locations.
- Install the magnet assembly.  
Remove the magnet and mounting plate from the packaging. Keep magnetic-sensitive items and loose metal objects away from the work area. Insert the assembly into the prepared recess, confirm the correct orientation, and secure it with the supplied screws. Do not overtighten.
- Install the floor sleeve.  
At the marked floor location, drill a 9/16" diameter hole approximately 2" deep. Remove all drilling debris. Apply a compatible sealant to the outside of the sleeve, press it fully into the hole, and allow the sealant to cure according to the manufacturer's instructions.
- Insert the floor pin.  
After the sealant has cured, insert the floor pin into the sleeve with the correct end facing upward.
- 8. Reinstall and test the door.  
Rehang the door and open it to the hold-open position. Confirm that the magnet engages the floor pin securely and releases when the door is pulled closed. Adjust the floor-pin location if the magnet does not align or hold properly.

## Add-on: Concealed Automatic Bottom Seal (Drop Seal)

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This add-on fits a concealed automatic drop seal into a routed groove in the bottom rail of the door. The seal bar sits retracted while the door is open and drops down automatically to seal against the floor/threshold when the door closes, improving sound, smoke, insect, weather and light performance without a visible threshold sweep. It is fastened by wing-shaped mounting flanges along the housing ("fastening by wings").

### Fitting sequence

- **1. Cut to length** — Trim the seal housing to length Y as described above, cutting from one end only so the factory-finished end cap stays in place.
- **2. Fasten by wings** — Slide the housing into the routed groove in the door bottom rail and fasten it through the wing flanges, 5 mm in from each face, with the screws provided.
- **3. Secure the end bracket** — Drive the retaining screw(s) through the door face into the housing end bracket, as shown, to lock the housing in the groove.
- **4. Calibrate the drop height** — Use the calibration screw (+/-) to set the drop distance — up to 13 mm maximum drop — so the seal bar contacts the floor/threshold evenly across the full width without dragging.

## Add-on: Frame (Jamb) Extensions

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Standard jambs are milled for wall thickness up to 5-1/4" (see Rough Opening & Jamb Length Reference, earlier in this manual). If your wall — measured from finished surface to finished surface — is thicker than 5-1/4", order the frame (jamb) extension add-on rather than a custom-depth jamb. Extensions are supplied in two standard widths, 4" and 8", and ship with a factory-milled tongue on one edge and a casing groove on the other, matching the profile of the main jamb.

### Choosing a width

- 4" extension — covers wall thickness up to approximately 8-1/4" total jamb depth.
- 8" extension — covers wall thickness up to approximately 12-1/4" total jamb depth.

### Cutting the extension to width

- **Measure the wall thickness**  
Measure the finished wall thickness at the head and both sides of the opening. Subtract the jamb depth of approximately 4-9/16" (116 mm) to determine the required exposed extension width.
- **Account for the insert depth**  
Add the depth of the factory-machined insert edge to the exposed extension width when determining the overall cut width. Verify the actual engagement depth before cutting.
- **Rip the extension to width**  
Rip the jamb extension lengthwise using a table saw or a circular saw with a straightedge guide. Cut only from the plain outer edge. Do not trim or modify the factory-machined insert edge or the outer casing groove.
- **Dry-fit the extension**  
Insert the factory-machined edge into the jamb groove and confirm that it seats fully. The outer face of the extension should align with the finished wall surface, and the extension should remain square to the jamb.

## Fitting the extension to the jamb

- **Apply adhesive**  
Apply a continuous bead of compatible construction adhesive inside the jamb groove or along the factory-machined insert edge. Use PVA wood glue only on clean, unfinished wood surfaces.
- **Insert the extension**  
Slide the factory-machined insert edge into the jamb groove until fully seated. Align the extension with the jamb and the finished wall surface.
- **Secure and align**  
Temporarily clamp, tape, or brace the extension while the adhesive cures. Confirm that both side extensions and the head extension remain straight, square, and aligned.
- **Install the trims**  
After the adhesive has fully cured, insert the trims into the outer groove of the jamb extension. On the opposite side of the wall, install the trims directly into the original jamb groove.

### Order matters

Glue and seat the jamb extensions first, and let the adhesive cure before installing the casing on the extension's outer groove. Installing the casing before the extension is fully seated can force the reveal line out of alignment.

## Troubleshooting

| Symptom                                                | Likely cause                                                               | Fix                                                                                                                  |
|--------------------------------------------------------|----------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------|
| Door binds on the jamb at top or bottom corner         | Frame not square, or hinge-side jamb screwed/doweled slightly out of plane | Re-check frame diagonal measurements before final wall fastening; on concealed hinges, use the depth/side adjustment |
| Gap between head and jamb visible after trim           | Only one screw or dowel used per corner                                    | Always use minimum 2 fasteners per corner as specified in Step 6                                                     |
| Door leaf sags over time on hinge side                 | Short hinge screws only reached the jamb, not the wall stud                | On heavier doors, replace one screw per hinge with a longer 2"–3" wood screw into the stud                           |
| Concealed hinge leaves visible reveal gap on lock side | Hinge not adjusted after hanging                                           | Use the 3-way adjustment (height / depth / side) described in the Concealed Hinges add-on section                    |
| Magnetic latch does not pull door fully shut           | Striker plate misaligned with latch nose                                   | Shim/re-mortise striker in ~1 mm steps toward the latch until door self-closes from a few cm ajar                    |
| Magnetic latch feels stiff or drags on closing         | Striker set too close / over-magnetized alignment                          | Move striker slightly away from the latch face and retest                                                            |
| Deadbolt/cylinder hard to turn                         | Frame or door leaf slightly out of square, binding the bolt in the strike  | Loosen frame fasteners, re-square, and re-fasten before re-testing the lock                                          |