

C-54BL Round Barn Door Lock

Barrier-Free (ADA Compliant)

Installation Instructions

Installation is based on barn door application where doors are hung on the outside of the room.

- Install lock inside the jamb wall behind the barn door
- Install trim plate on the jamb wall facing the opening
- Install strike with an emergency release on the barn door
- Adjustable strike for door thickness from 1 3/8 in [34.9 mm] to 1 3/4 in [44.5 mm]

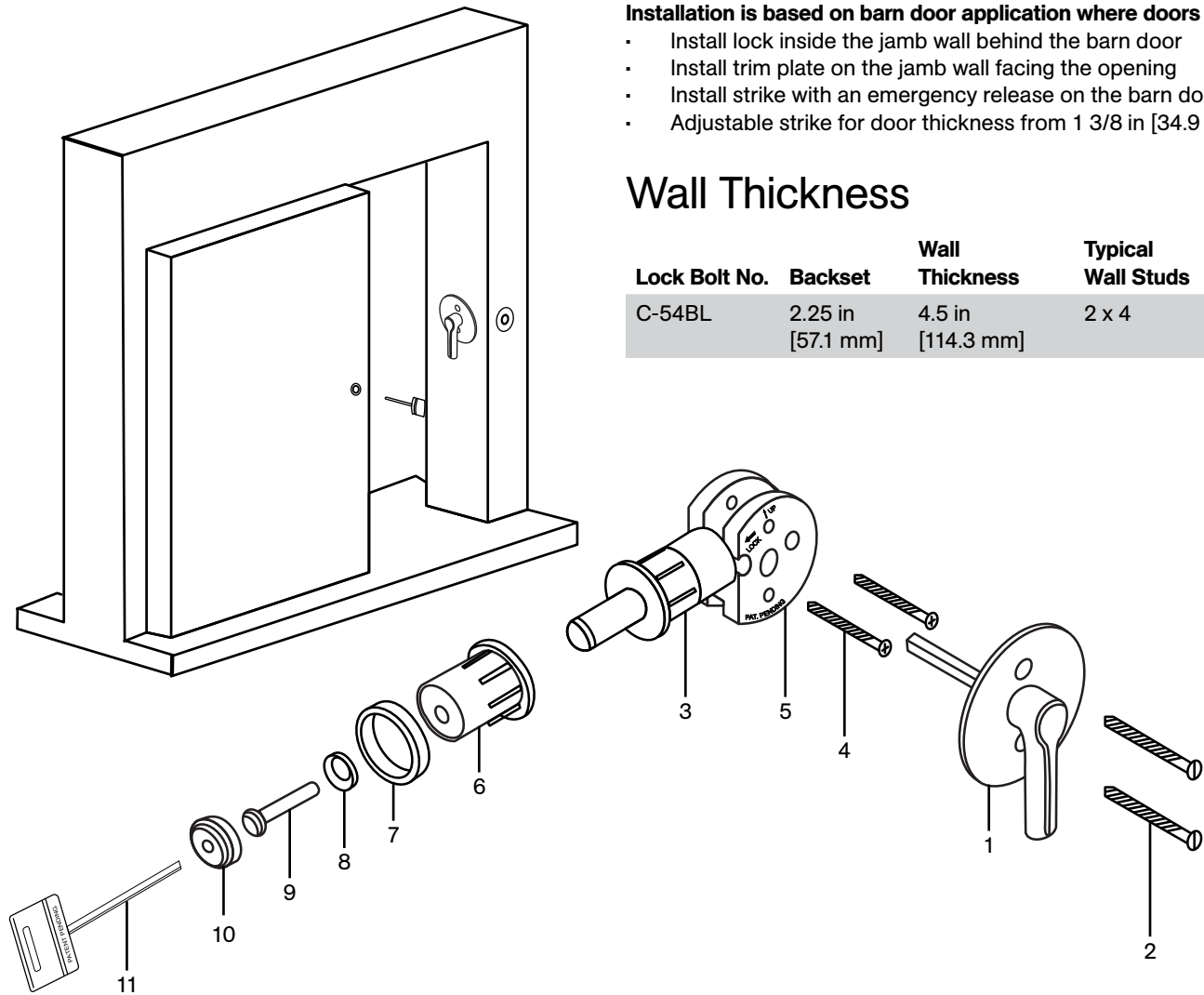
Wall Thickness

| Lock Bolt No. | Backset | Wall Thickness | Typical Wall Studs |
|---------------|----------------------|----------------------|--------------------|
| C-54BL | 2.25 in [57.1 mm] | 4.5 in [114.3 mm] | 2 x 4 |

Parts' List

with Face Fixing Trim Plate

| Items | No. | Parts Description | |
|------------|-----|-------------------------------|--------|
| Trim Parts | 1 | Face Fixing Trim with Spindle | 1 each |
| | 2 | M4 x 50 Slotted Head Screws | 2 each |
| Lock | 3 | Barn Door Lock | 1 each |
| | 4 | M4 x 40 Wood Screws | 2 each |
| | 5 | Lock Bracket | 1 each |
| Strike | 6 | Dust Proof Strike | 1 each |
| | 7 | Washer | 2 each |
| | 8 | Sleeve | 1 each |
| | 9 | Hollow Screw | 1 each |
| Others | 10 | Decorative Cap | 1 each |
| | 11 | Emergency Key | 1 each |
| | - | Door Prep Template | 1 each |
| | - | Installation Instruction | 1 each |



Wall Conditions and Tools Suggestion

Most of the drywall will have corner bead in steel or vinyl; it's strongly recommended to use a Hole Saw to cut the holes for installing locks and trim plates. Hole Saw for steel will also help cut through any screws inside drywall or wood stud to make the installation job run faster.

Tools required (not supplied)

| | |
|-------------------|-------------------|
| Stud Finder | 1 1/4 in Hole Saw |
| Level | 1 in Hole Saw |
| T-Square | 1/8 in Drill Bit |
| 2 1/8 in Hole Saw | 1/4 in Drill Bit |

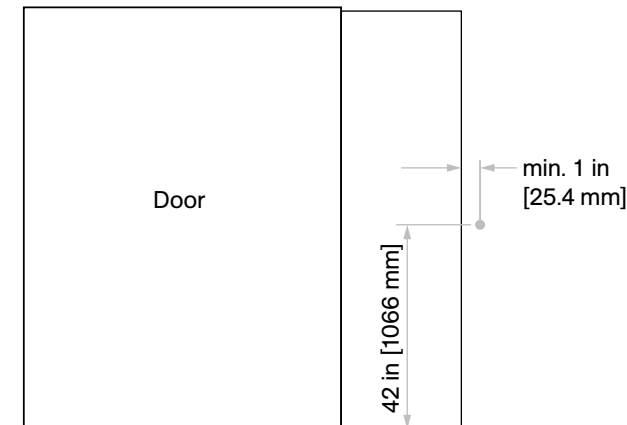
Installation Steps

Step #1:

Drywall Opening

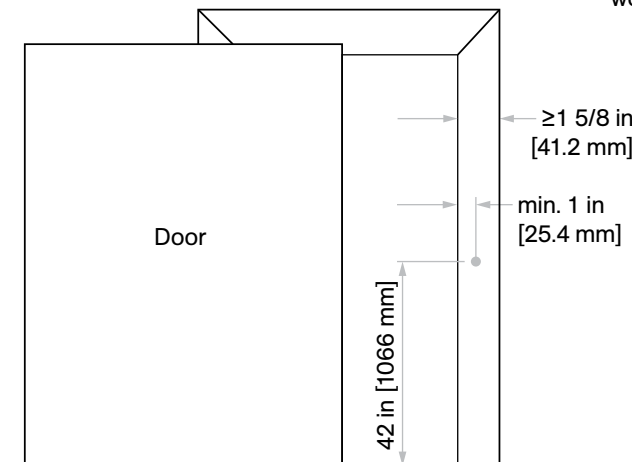
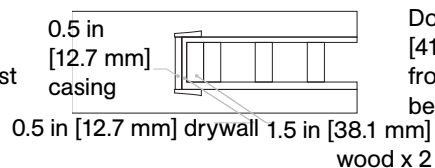
For drywall opening with 0.5 in [12.7 mm] drywall (gypsum board), minimum 2 in [50.8 mm] door overlap is needed to install C-54BL. The lock bore center must be at least 1 in [25.4 mm] from wall edge; align strike with lock.

Choose center hole location based on aesthetic preference; must be at least 1 in [25.4 mm] from the edge.



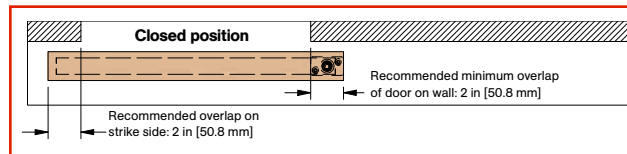
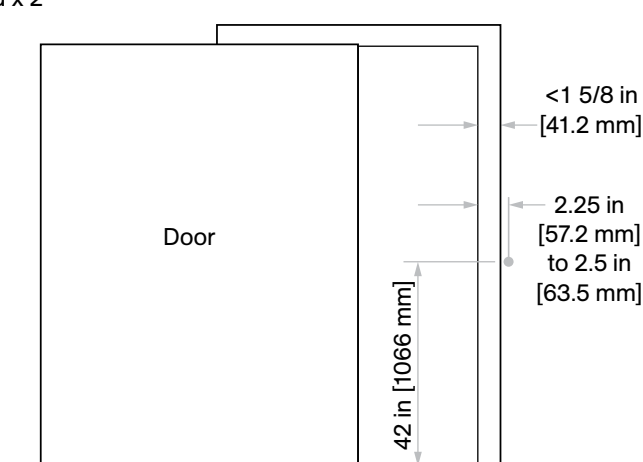
Opening with casing greater than 1 5/8 in [41.2 mm]

Choose center hole location based on your aesthetic preference, must be at least 1 in [25.4 mm] from the edge.



Opening with casing less than 1 5/8 in [41.2 mm]

Do not install lock on casing that is less than 1 5/8 in [41.2 mm] wide. Drill lock bore at least 2.25 in [57.2 mm] from edge. For this type of installation, door overlap must be at least 3 in [76.2 mm]. Align strike with lock.

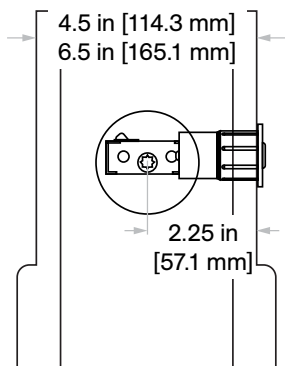


Note: While door is fully closed, measure overlap on side where lock is to be installed. For casing less than 1 5/8 in [41.2 mm], door overlap must be at least 3 in [76.2 mm]. Align strike with lock.

Note: If lock bore center location is 2.125 in [53.9 mm] or more from edge of opening, use stud finder to ensure there are at least two studs stacked behind lock bore center. Extended spindle and fixing screws may be required. Contact KN Crowder to order an extension kit.

Step #2:

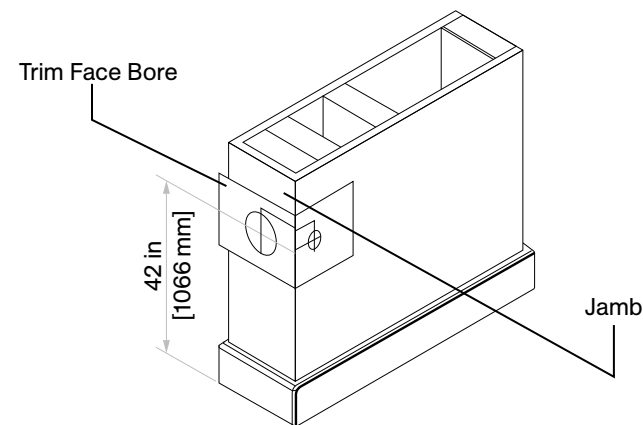
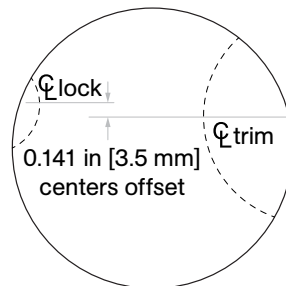
Verify wall thickness is minimum 4.5 in [114.3 mm] thick for KNC's C-54BL ADA barn door lock. There is no maximum thickness minimum stud size: 2x4, backset: 2.25 in [57.1 mm]



Step #3:

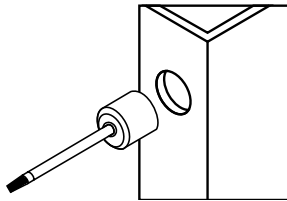
Remove barn door. Use the template to mark pilot hole.

Note: The bore hole on the jamb side is offset 3.5 mm (approximately 0.125 in) lower than wall-side bore.

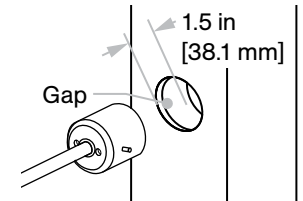


Step #4:

Before drilling, cover area around the bore hole with masking tape to prevent the drywall from chipping or cracking. With a Ø2 1/8 in hole saw, drill on jamb side in accordance with following steps.

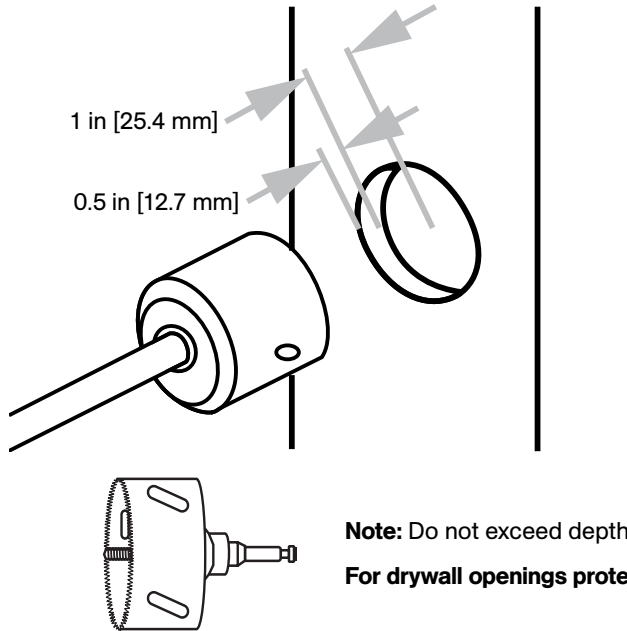


Note: If there is a gap between the drywall and the stud, measure the distance and add to the bore hole depth. Hole depth must accommodate lock barrel preparation in step 6. You can deepen trim bore as needed after that step.



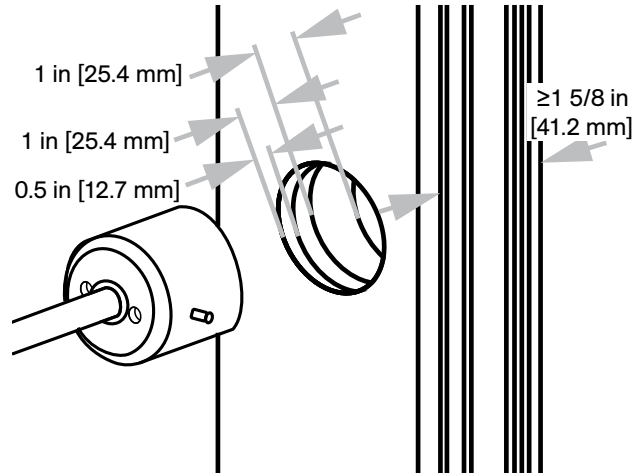
Without casing:

- Drill through drywall approximately 0.5 in [12.7 mm] to locate first wood stud.
- Continue drilling 1 in [25.4 mm] into the stud.



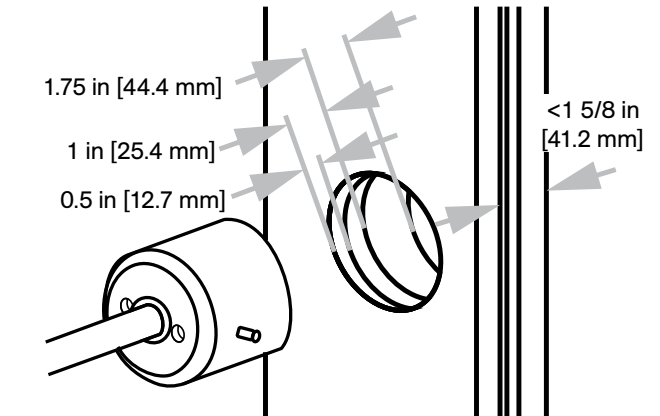
With casing 1 5/8 in [41.2 mm] or wider:

- Drill through casing and drywall approximately 1 in [25.4 mm] to locate the first wood stud.
- Continue drilling 1 in [25.4 mm] deep into stud.



With casing less than 1 5/8 in [41.2 mm]:

- Drill through casing and drywall approximately 1 in [25.4 mm] deep to locate the first wood stud.
- Continue drilling 1.75 in [44.5 mm] deep into the stud. This will give you a 2.25 in [57.1 mm] deep bore to accommodate the lock installed next to casing.



Note: Do not exceed depth of wood stud when drilling. Minimum 0.25 in [6.3 mm] or thicker wood backing is required to support the lock.

For drywall openings protected with steel corner beads, use metal hole saw for cleaner and faster installation.

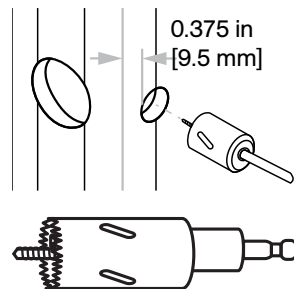
Step #5:

Double check lock bore distance from Step 1. Refer to template markings to ensure both lock and strike pilot holes are within door overlap requirements. Keep 0.375 in [9.5 mm] safety margin to edges.

Drywall or flat casing openings:

Use a 1 in [25.4 mm] hole saw to cut lock bore hole to depth as shown in chart.

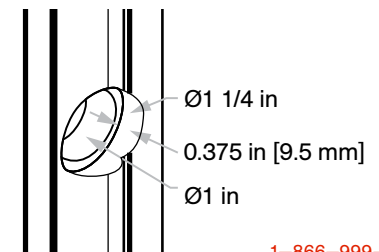
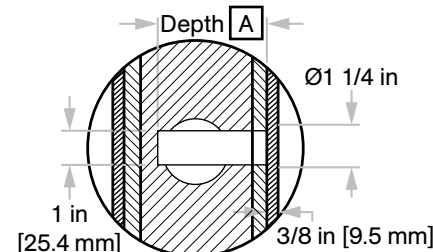
Note: Hole saw for metal should be used for drywall with steel corner bead.



Moulded casing with uneven surface:

At pilot center mark, use Ø1 1/4 in hole saw to drill to a depth of 0.375 in [9.5 mm]. Use Ø1 in hole saw at same center mark to drill hole to correct bore hole depth.

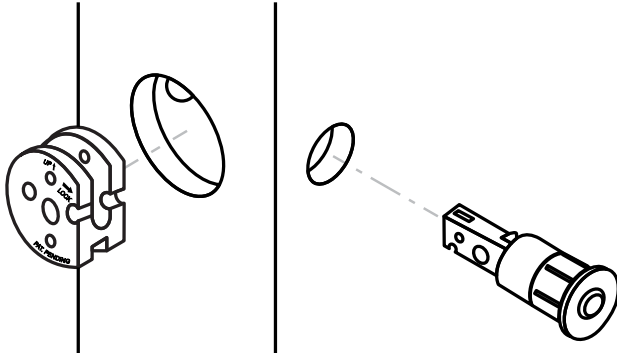
Note: Do not drill too deep, you may damage the wall on the other side.



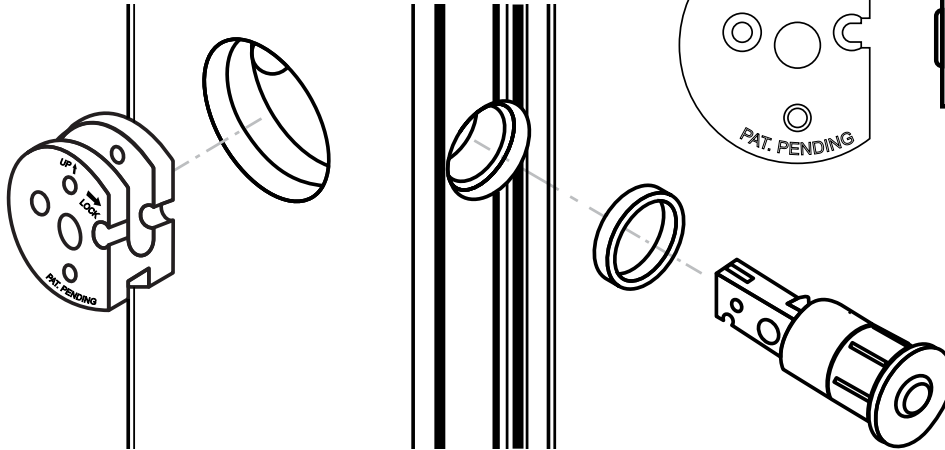
| Lock Part No. | Backset | Bore Hole Depth |
|---------------|-------------------|-------------------|
| C-54RBL | 2.25 in [57.1 mm] | 3.25 in [82.5 mm] |

Step #6:**For drywall and casing less than 1 5/8 in [41.2 mm]:**

- A. Insert bracket into trim bore
- B. Insert lock bolt into lock bore and fit into bracket slot.

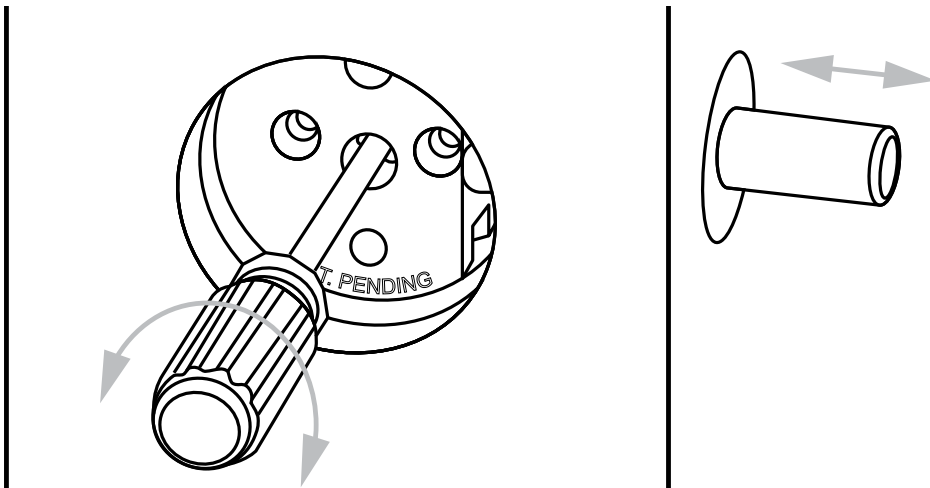
**For moulded casing with uneven surface:**

- A. Insert 0.25 in [6.3 mm] spacer provided with lock into the 1.25 in [31.7 mm] recess first.
- B. Insert bracket into trim bore.
- C. Insert lock bolt and spacer into lock bore and fit into bracket slot.

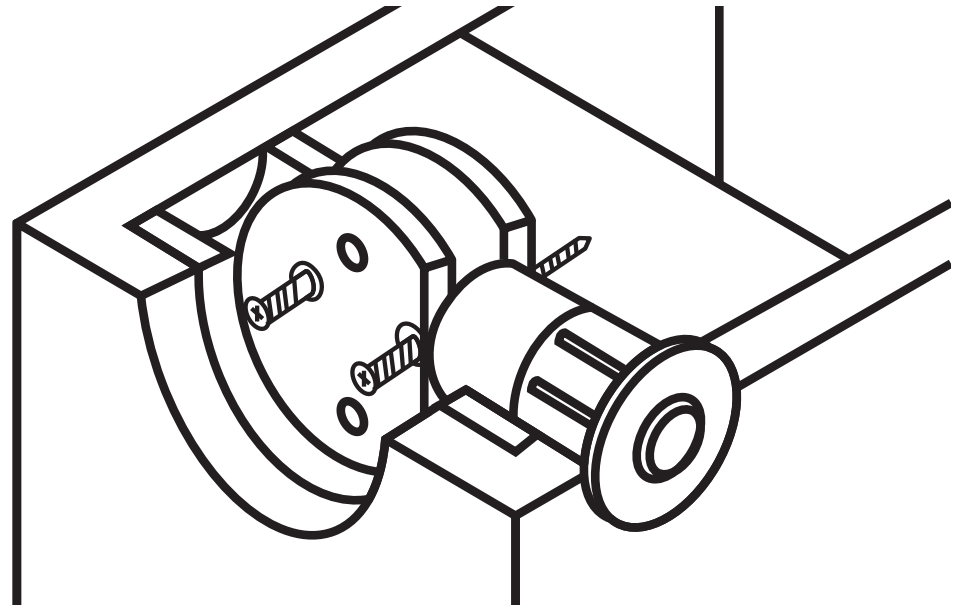
**Step #7:**

Ensure spindle hub is at center of trim bore. Use spindle or screwdriver to test bolt retraction; if not smooth, troubleshoot as follows:

1. Check 2 1/8 in [53.9 mm] trim bore dimensions.
2. Ensure hole is free of debris.
3. Make sure 1 in [25.4 mm] lock bore is perpendicular to trim bore.
4. Check lock by removing it from bore and throwing the bolt. Adjust wall prep as needed.

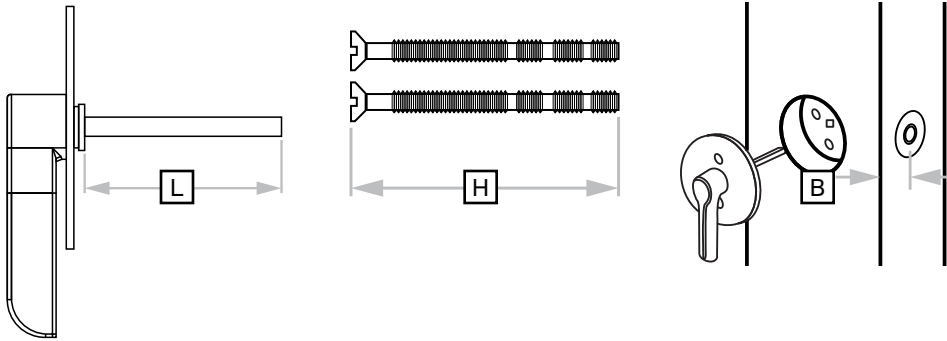
**Step #8:**

Fasten the two wood screws inside the trim bore hole through lock body and into wood stud.



Step #9:

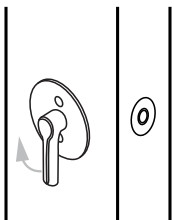
Cut spindle and screw to accommodate wall side backset.



| Edge to Lock Center [B] | Spindle Length [L] | Screw Length [H] |
|-------------------------|--------------------|--------------------|
| 1 in [25.4 mm] | 1.25 in [31.7 mm] | 0.813 in [20.6 mm] |
| 1.25 in [31.7 mm] | 1.5 in [38.1 mm] | 1.063 in [26.9 mm] |
| 1.5 in [38.1 mm] | 1.75 in [44.4 mm] | 1.313 in [33.3 mm] |
| 1.75 in [44.4 mm] | 2 in [50.8 mm] | 1.563 in [39.6 mm] |
| 2 in [50.8 mm] | 2.25 in [57.1 mm] | 1.813 in [46 mm] |
| 2.25 in [57.1 mm] | 2.5 in [63.5 mm] | 2.063 in [52.3 mm] |
| 2.5 in [63.5 mm] | 2.75 in [69.8 mm] | 2.313 in [58.7 mm] |

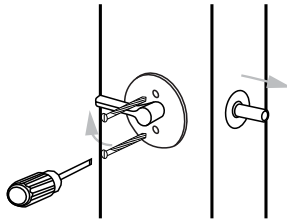
Step #10:

Insert trim into spindle hole. Use thumb turn to test lock bolt movement.

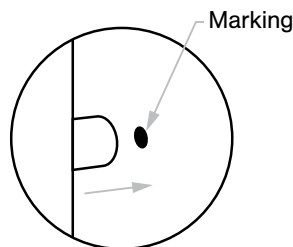
**Step #11:**

Fasten trim screws until trim is tight to jamb surface.

Note: do not over tighten.

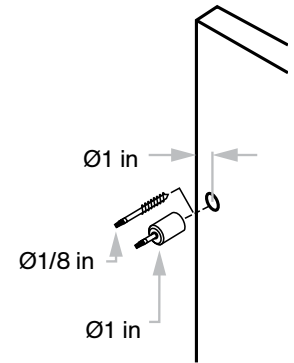
**Step #12:**

Move door to closed position and throw the lock bolt to mark the exact strike center position. This location must be a minimum of 1 in [25.4 mm] to the edge of the door.

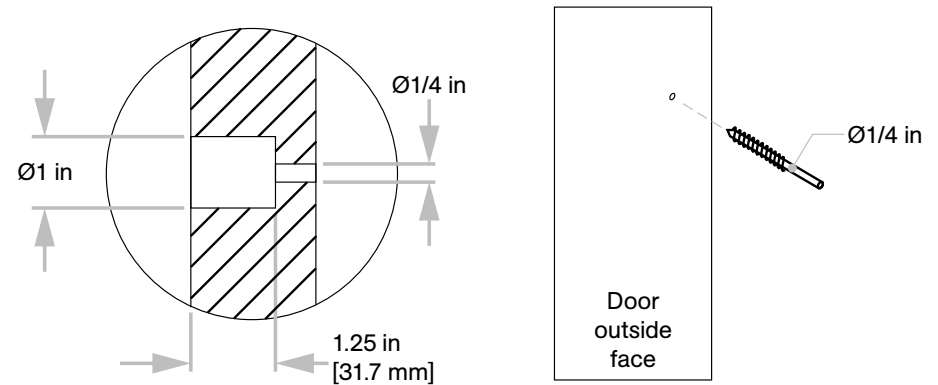
**Step #13:**

Using the strike center position as a guide, drill a pilot hole through the door with a Ø1/8 in drill bit from strike side. With the pilot hole as guide, use a Ø1 in hole saw to drill a 1.25 in [31.7 mm] deep hole.

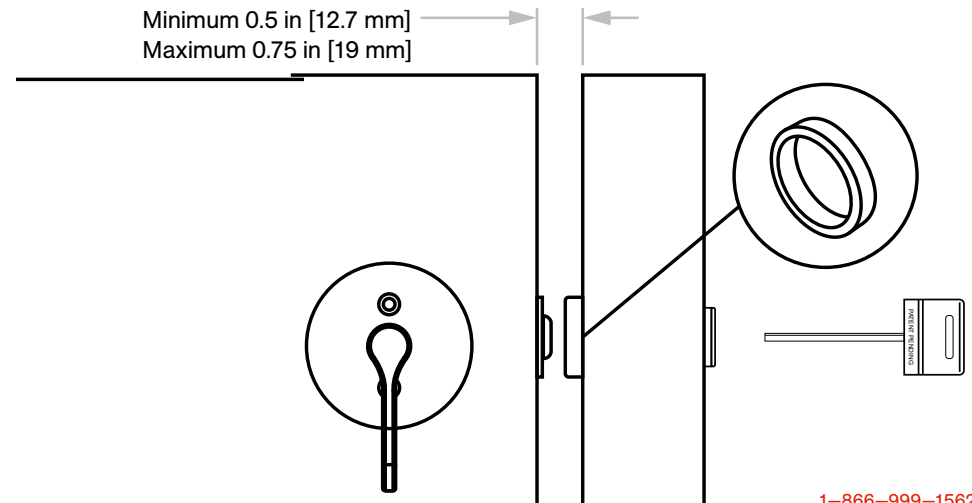
Note: do not drill through the door!

**Step #14:**

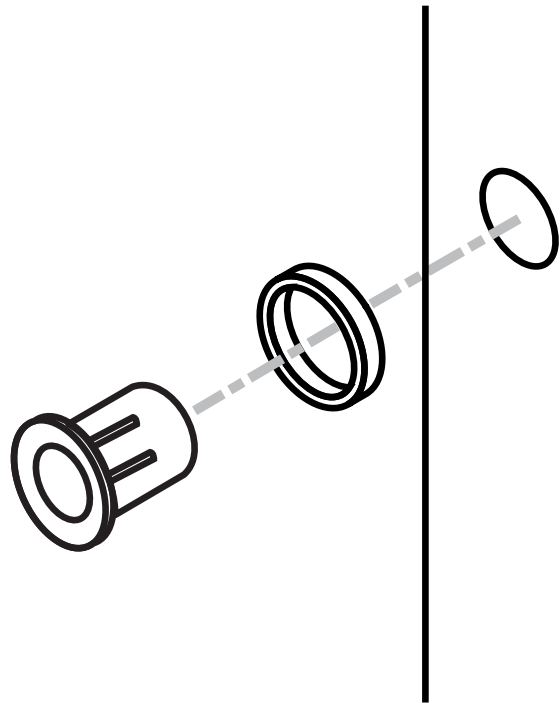
With the pilot hole as a guide, use a Ø1/4 in bit to drill a hole from the outside to connect with the strike bore hole.



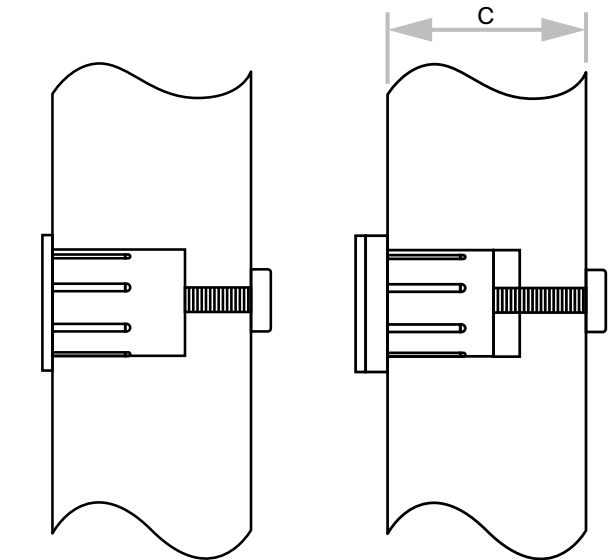
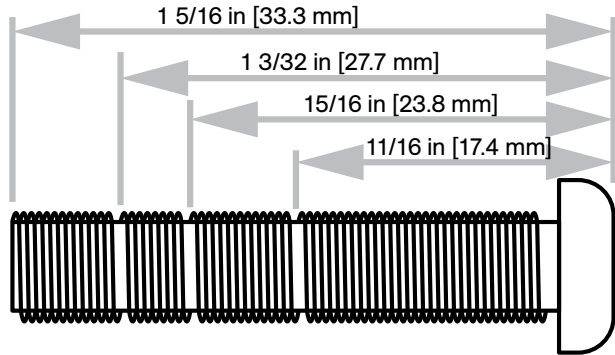
Note: Standard barn door to wall clearance is approximately 0.375 in [9.5 mm] to 0.5 in [12.7 mm]. Install additional spacer as needed behind the strike faceplate if the door to wall clearance is over 0.5 in [12.7 mm]. Additional spacers can support maximum clearance of 0.75 in [19 mm] between door and wall.



Step #15:
Install the 1 in [25.4 mm] dust-proof strike with the 0.25 in [6.3 mm] release screws on the outside.

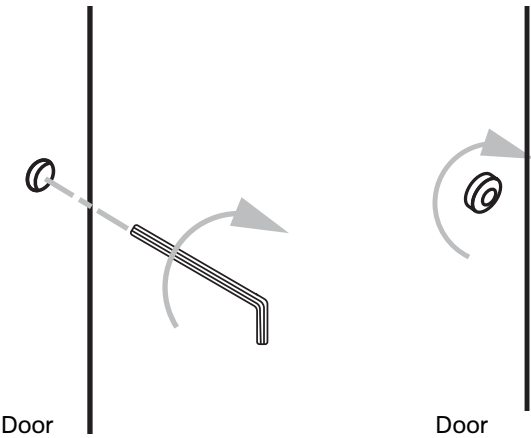


Step #16:
Cut break-away screw to appropriate door thickness.
Note: do not over tighten.



| Door thickness | Length without spacer | Length with spacer |
|--------------------|-----------------------|---------------------|
| 1 3/8 in [34.9 mm] | 11/16 in [17.4 mm] | 15/16 in [23.8 mm] |
| 1 3/4 in [44.4 mm] | 1 3/32 in [27.7 mm] | 1 5/16 in [33.3 mm] |

Step #17:
Install break-away screw and tighten with Allen wrench.
Screw on decorative cap by hand.
Note: do not over tighten.



Step #18:
Use release key, provided with lockset, to push through center hole on release to push lock bolt back and unlock door.

