

MANUAL - INSTALLATION

Floor Mounted Active Beam ACBC Series



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Having difficulty installing this product? Price is here to help.

APPLICATION SUPPORT ▼

204.669.4220 beamteam@priceindustries.com priceindustries.com

INSTALLATION & MOUNTING INSTRUCTIONS

Before You Start

Inspect all cartons and boxes for flaws and shipping damage.

If shipping damage has occurred, take photos and contact the shipping company to file a freight claim immediately.

Ensure all tools (as listed on the following page) are on site and ready for use.

A minimum of two (2) people are required for safe installation.

ACBC:

- 1 or 2 way discharge units
- Vertical Coil
- 13.5 inch depth
- 60 to 87.438 inch length

Handling

- Avoid introducing contaminants into the unit; such as dust or dirt. Keep the induction grille face, the duct inlet, and the water connection piping covered at all times during the installation process.
- To avoid smudging the unit while handling, the use of clean white cotton gloves is recommended.
- Storage of the units should be in a covered, dry location while waiting for installation. Location should be cleaned of excess dust before installation.

Typical installation on the floor

Determine where beams should be located using building drawings and identification tags on schedule and units. Ensure the beam's length, nozzle size, number of pipe connections, pipe circuiting, duct size, duct inlet location and air discharge configuration (1 way or 2 way) match the requirements specified for that particular beam by cross referencing the Price provided schedule, the order linestring and line instructions with the units that are on site.

ACBC T



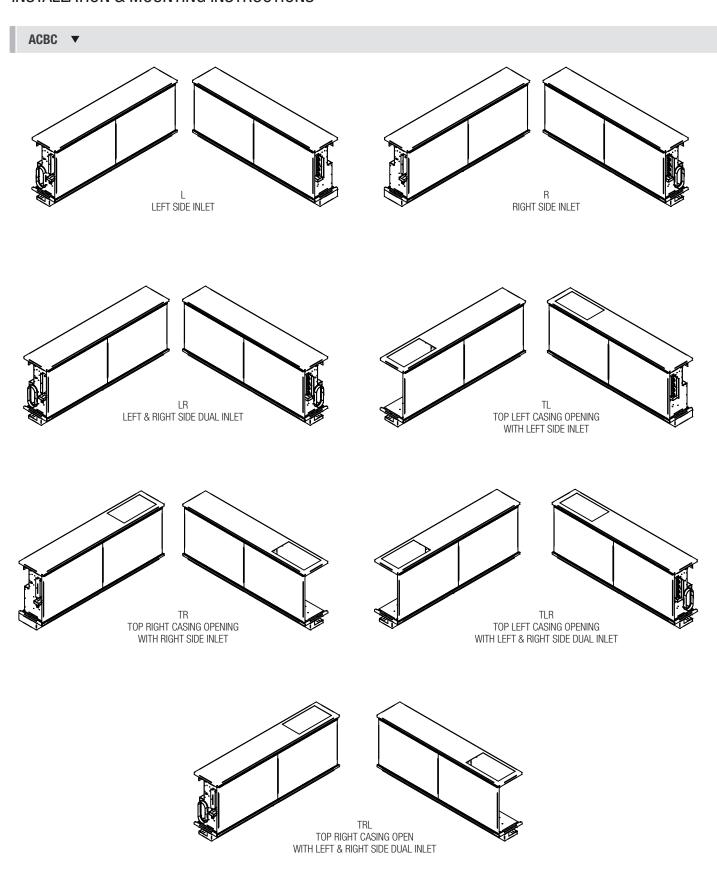
Maintenance

Maintenance required is accessing the coil from the room side through the removable face and vacuuming the water coil with a soft bristle brush based on space and owner requirements.

Maintain water conditions which prevent corrosion of copper tubing and ensure that safeguards against air accumulation through leaks or oxygen diffusion in system piping are functioning.

If included in the system design, check the condensate sensor(s) or humidity sensor(s) according to sensor manufacturer's methods and schedule.

INSTALLATION & MOUNTING INSTRUCTIONS



INSTALLATION & MOUNTING INSTRUCTIONS

Required Tools/Parts

To be supplied by contractor

- Laser Level
- Cordless Drill/Impact
- Damp cloth(s) (for cleaning)
- Tape Measure
- Clamps/Locking Plier
- Wood Blocks

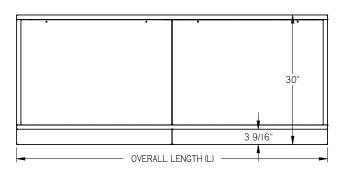
Mounting Screws

Dimensional Data

DIMENSIONAL DATA ▼

OVERALL LENGTH / ACTIVE COIL LENGTH / INLET OPTION CONFIGURATIONS:

| OVERALL LENGTH (L) | ACTIVE COIL LENGTH (CL) | INLET LOCATION |
|--------------------|----------------------------|----------------------------|
| 60.000 | 36.000 | L, R, LR, TL, TR, TLR, TRL |
| | 60.000 | L, R, LR |
| 67.750 (1500) | 36.000 | L, R, LR, TL, TR, TLR, TRL |
| | 60.000 | L, R, LR |
| 72.000 | 48.000 | L, R, LR, TL, TR, TLR, TRL |
| | 72.000 | L, R, LR |
| 87.438 (2000) | 60.000 | L, R, LR, TL, TR, TLR, TRL |
| | 84.000 | L, R, LR |



8 9/16" TYP.

WATER COIL

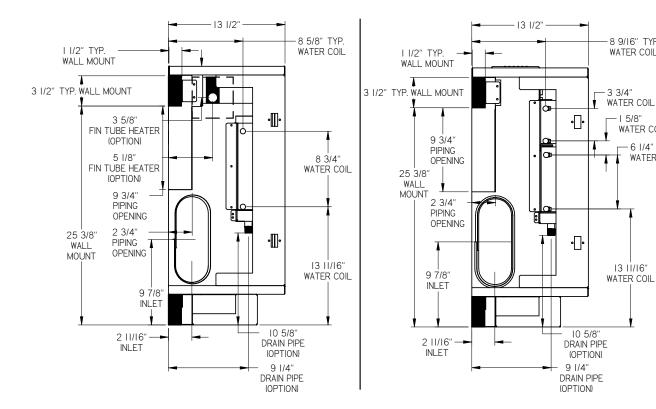
1 5/8"

13 11/16"

WATER COIL

6 1/4"

WATER COIL



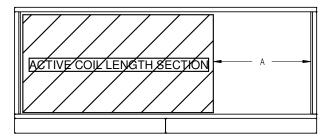
ACBC I-WAY

ACBC 2-WAY

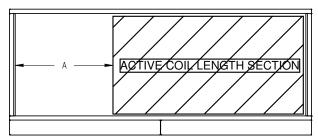
INSTALLATION & MOUNTING INSTRUCTIONS

DIMENSIONAL DATA ▼

• SL - SHIFT LEFT



• SR - SHIFT RIGHT



CORE SHIFT (ONLY SELECTABLE FOR FOLLOWING OVERALL LENGTH / ACTIVE COIL LENGTH COMBINATION LISTED BELOW):

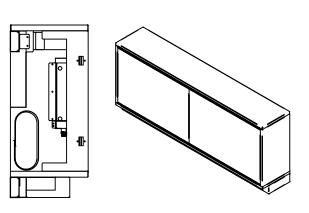
☐ SL - SHIFT LEFT ☐ SR - SHIFT RIGHT

| OVERALL LENGTH | ACTIVE COIL LENGTH | Α |
|----------------|--------------------|--------|
| 60.000 | 36.000 | 23.500 |
| 67.750 (1500) | 36.000 | 27.500 |
| 72.000 | 48.000 | 23.500 |
| 87.438 (2000) | 60.000 | 25.500 |

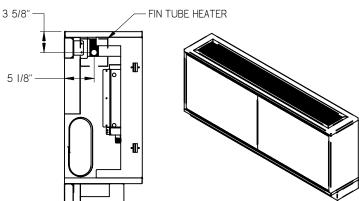
FIN TUBE HEATER (ONLY SELECTABLE FOR 1-W DISCHARGE):

☐ FTH - FIN TUBE HEATER (1" NOM. COPPER TUBE, FLARED ONE END TO ACCEPT 1" NOM. COPPER TUBE)

• STANDARD



• FIN TUBE HEATER



INSTALLATION & MOUNTING INSTRUCTIONS

Installation

Handling Prior to Installation

- Avoid introducing contaminants into the unit.
- When handling the unit, we recommend wearing clean, white cotton gloves to avoid smudging.
- Store the units in a covered, dry location while waiting for installation. Location should be cleaned of excess dust before installation.

Pre-Installation Review

Read manual in its entirety before installation. Determine where the beams should be located. The beam construction determines the beam performance. Ensure the following match the beam schedule:

- Length
- Nozzle size
- Number of pipe connections
- Coil handing
- Coil circuiting
- Inlet size and location

Unit Installation

STEP 1 - INSTALL BLOCKING

ACBC active beams come standard with mounting brackets that utilize blocking to secure the beam to the wall. The location of the mounting brackets is shown on page 3.

Secure blocking that runs across the wall at the height of the beam mounting brackets. The blocking should be securely fastened to the stud wall or similar structure. Blocking and fasteners are by others. Please see Figure 2.

It is recommended to perform a dry fit installation at this stage to ensure blocking and mounting bracket alignment. Remove the face of the beam using a 4mm hex key for the ½ turn latches and set aside on a clean, flat surface to avoid damage. Place beam in desired location against the wall and blocking and verify proper alignment. The ACBC can then be removed for installation of the water headers in between the blocking.

NOTE: Multiple ACBC can be installed continuously along a wall. All units should be dry fit together to ensure proper alignment and location of inlet and water. If piping and air connections require additional space between wall and chilled beam, consider using flashing pieces to cover gap. Flashing pieces by others.

ACBC 1-WAY ACBC 2-WAY WALL MOUNTING WALL MOUNTING

BRACKETS

BRACKETS



INSTALLATION & MOUNTING INSTRUCTIONS

STEP 2 - INSTALL WATER HEADERS

The ACBC is designed with a recessed cavity on the rear of the beam to accommodate water supply and return headers. Install headers securely to the wall, as shown in Figure 2. Ensure piping fits within recessed cavity. See previous pages for dimensions.

The ACBC can be supplied with a right hand or left hand water coil connection. These can be plumbed using sweat, NPT or push on connections. The beams are to be piped in parallel to maintain the scheduled inlet water temperature. The final water connections are completed in Step 4.

STEP 3 - SECURE THE ACBC TO THE BLOCKING

With the face removed, the mounting brackets will be visible on either side of the beam, as shown on right. Position the ACBC in the desired location according to the approved plans. Ensure the casing is flush against the wall. The mounting brackets should then be securely fastened to the blocking.

STEP 4 - CONNECT THE WATER **SUPPLY AND RETURN LINES**

Connect the supply and return piping to the beam water coil. Hard pipe connections or flexible hose can be used. As water lines are being connected, ensure geometry allows for installation of any accessories on following pages.

STEP 5 - CONNECT THE CONDENSATE LINE (IF APPLICABLE)

Connect the drain line to the buildings drain return; connections can be made with either hard pipe or flexible hose. Ensure a water tight connection is made.

STEP 6 - CONNECT THE AIR INLET COLLAR

Connect the supply air to the ACBC inlet collar. The air connection can be made with either hard duct or flex duct. Ensure an airtight connection to achieve desired performance. As air inlets are being connected, ensure geometry allows for installation of any accessories on following pages.

STEP 7 - CONNECTING ADDITIONAL **BEAMS (IF APPLICABLE)**

It is acceptable to duct multiple beams in series. Use field supplied duct interconnects to attach adjacent beams together.

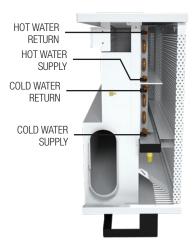
UNIT ALIGNMENT ▼



ACBC 1 WAY



ACBC 2 WAY ▼



INSTALLATION & MOUNTING INSTRUCTIONS

Water System Preparation

- Water connection options:
 - Sweat, Threaded, Push Connect.
- Before connecting beams to the water system, flush and drain the water main piping to remove contaminants from the construction process.
- Pressure test the water system for leaks. Isolate and fix leaks.

Water Balancing - Manual

 Adjust balancing valves based on fluid flow rates scheduled on Price performance data.

Water Balancing - Auto/Pressure Independent

 Ensure correct pressure independent valves are installed based on design drawings. Confirm the correct flow rate is on the correct branch. (i.e. hot waterflow rate going through hot water coil.)

Air System Preparation

- Ensure an air tight connection between the supply duct and the active beam. Duct connections are recommended to meet SMACNA class B standard up to 2 in. w.g.
- Air connections will ideally have straight duct sections upstream of the air inlet. Although bends in the duct are permitted close to the air inlet, there should be 3 duct diameters straight leading into inlet to ensure laminar flow only straight ductwork connections will yield a reliable pressure port measurement.

Air Balancing

- Measure static pressure in the plenum of the active beam by connecting a static pressure measurement device to the port included on the beam. The pressure port is located inside the discharge slot, near the end of the beam.
- Adjust balancing damper to match the Price project schedule static pressure to the measured result.
- Damper should be used for trimming only.
- Contact the Price Application Engineering department for high altitude locations.
- See Air flow calibration charts on pg 9. Chilled beams should be balanced based on active length of water coil, not casing size.

NOTE: Traversing the duct work before a beam will not guarantee that the beam is properly balanced because performance is based on internal plenum pressure.

INSTALLATION & MOUNTING INSTRUCTIONS

Damper Installation

Select the appropriate MQ/VAV Damper required for the location based on the diameter of the unit or zone duct.

The MQ/VAV damper should always be installed in locations that are accessible for inspection and removal if necessary.

In order to avoid additional noise in the occupied space:

- 1. The MQ/VAV damper should be installed at least 5 duct diameters upstream of the active beam.
- 2. The MQ/VAV damper should be used as a trimming damper and not a balancing damper.

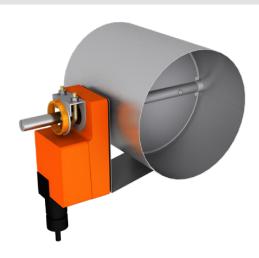
MQ DAMPER ▼



DAMPER INSTALLATION ▼



VAV DAMPER ▼



INSTALLATION & MOUNTING INSTRUCTIONS

Interpretation of Beam Tag

All beams come shipped with a tag on the unit and on the outer packaging. This tag should be checked to ensure that the beam is placed in the proper location, and contains the correct options.

ACBC Linestring



- Model
- 2 Discharge (2W: 2-Way, 1W: 1-Way)
- 3 Casing Length (in.)
- 4 Coil Length (in.)
- 5 Nozzle (1W only)
- 6 Coil Type
- Coil Connection

- 8 Coil Orientation
- 9 Fin Tube Heater (Option, 1W only)
- 10 Inlet Size
- 1 Inlet Location
- 12 Damper Type
- 13 Core Shift
- 14 Side Panel

- 15 Face Style (P: Perforated, G: Grille)
- 16 Drain Pan
- 17 Insulation
- 18 Protection Film
- 19 Finish

Bookshelf Linestring

ACBCBK-1-1/S/I/AB/24.000/LR/B12











- Active / Inactive Bookshelf
- 3 Lenath (in.)
- 4 Inlet Locations
- 5 Flnish

Filler Panels Linestring

ACBCUC-1-1/I/24.000/LR/B12







- 1 Model
- 2 Length (in.)
- 3 Inlet Locations
- 4 Flnish

Utility Cabinet Linestring

ACBCFL-1-1/I/24.000/B12

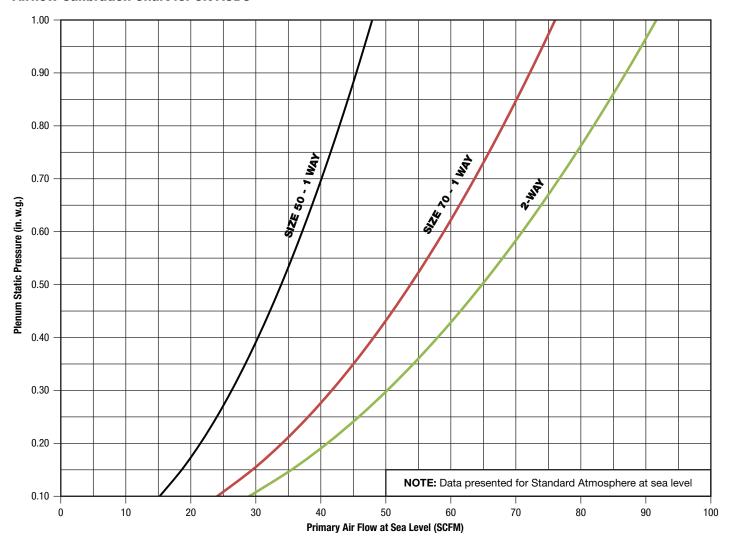




- 1 Model
- 2 Length (in.)
- 3 Flnish

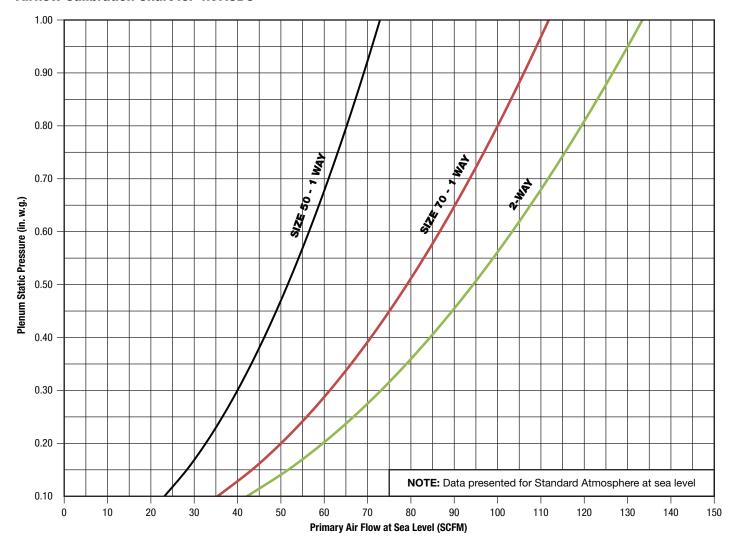
INSTALLATION & MOUNTING INSTRUCTIONS

Airflow Calibration Chart for 3ft ACBC



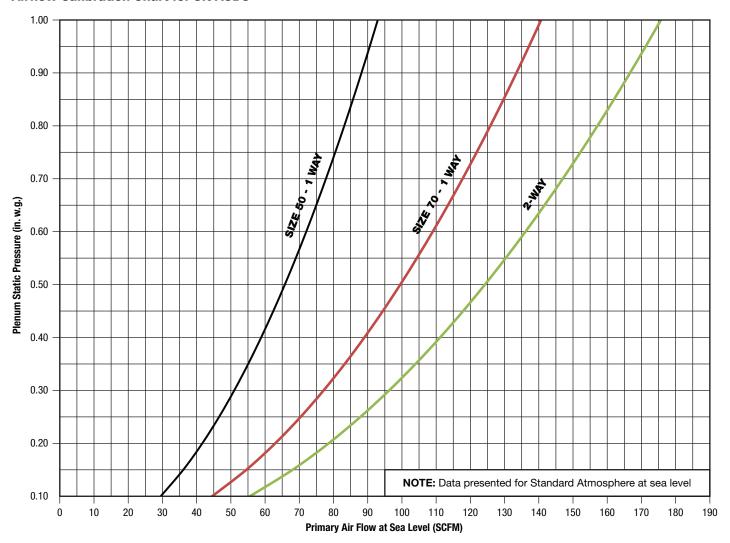
INSTALLATION & MOUNTING INSTRUCTIONS

Airflow Calibration Chart for 4ft ACBC



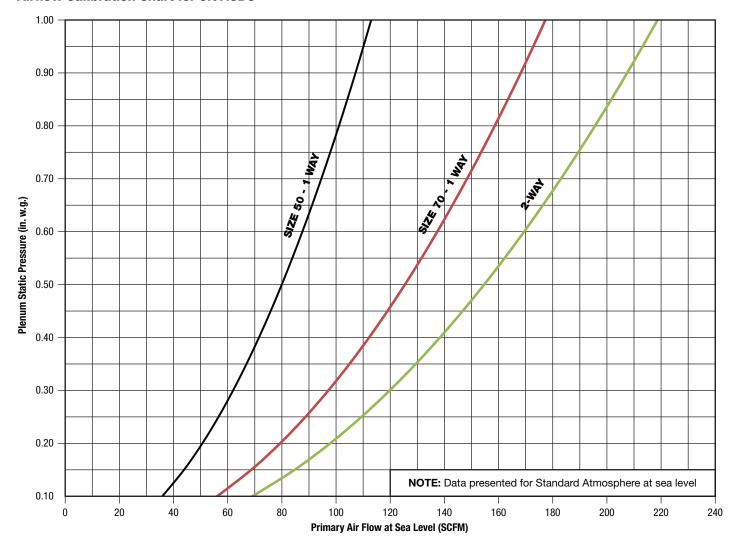
INSTALLATION & MOUNTING INSTRUCTIONS

Airflow Calibration Chart for 5ft ACBC



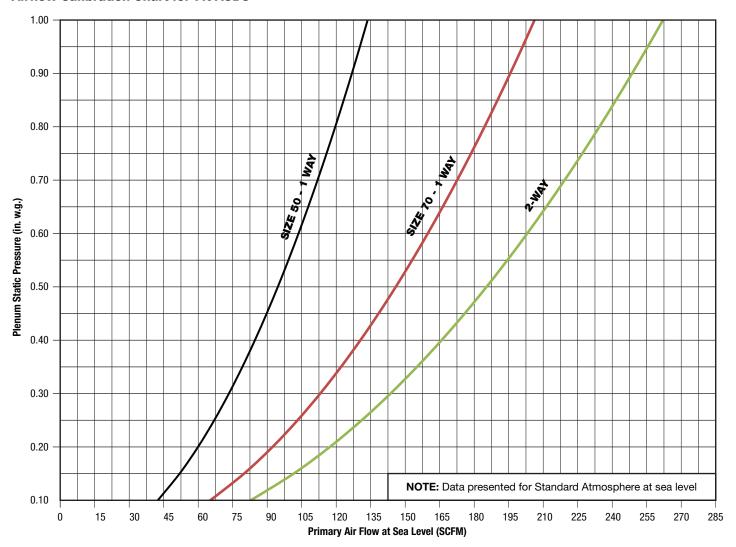
INSTALLATION & MOUNTING INSTRUCTIONS

Airflow Calibration Chart for 6ft ACBC



INSTALLATION & MOUNTING INSTRUCTIONS

Airflow Calibration Chart for 7ft ACBC



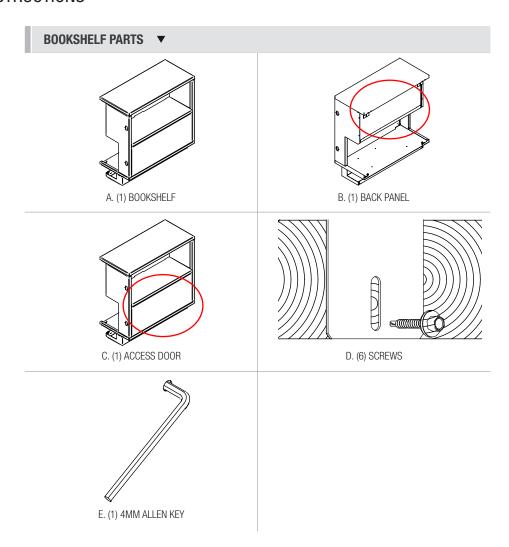
INSTALLATION & MOUNTING INSTRUCTIONS

Installing an Active Bookshelf

Bookshelf (Active) Parts

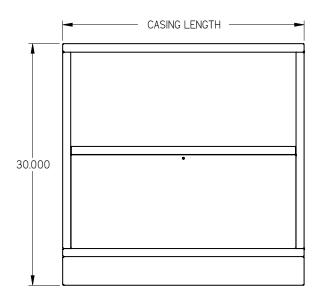
List Quantity of parts per beam:

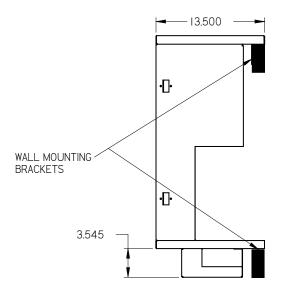
- A. (1) Bookshelf
- B. (1) Back Panel
- C. (1) Access Door
- D. (6) Screws
- E. (1) 4mm Allen Key



INSTALLATION & MOUNTING INSTRUCTIONS

ACTIVE BOOKSHELF ▼





| Casing Length | |
|---------------|--|
| 24.000 | |
| 30.000 | |
| 36.000 | |

INSTALLATION & MOUNTING INSTRUCTIONS

Bookshelf (Active) Installation for ACBC

Step 1: Determine bookshelf locations and orientation according to approved plans.

Step 2: Secure blocking that runs across the wall at the height of the bookshelf mounting brackets. The blocking should be securely fastened to the stud wall or similar structure. Blocking and fasteners provided by others.

Step 3: Place the bookshelf flush against the wall and connecting unit(s) pictured in Figure 3.

Step 4: Open access door by using 4mm allen key and turn both spring latches to the left until access door is opened pictured in Figure 4.

FIGURE 3 ▼

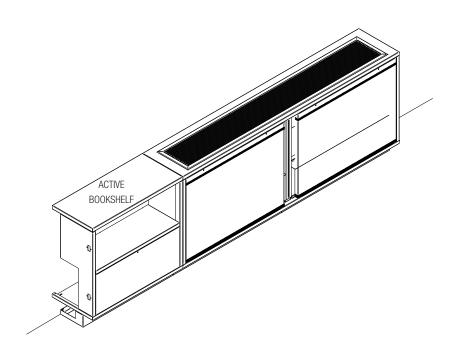
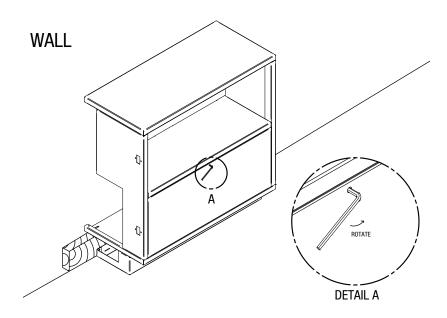


FIGURE 4 ▼

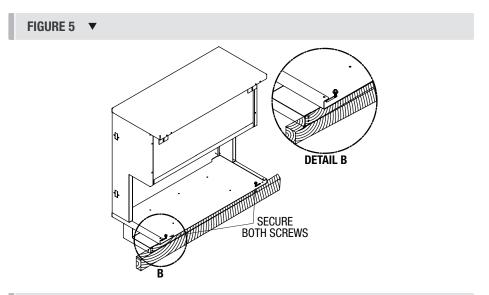


INSTALLATION & MOUNTING INSTRUCTIONS

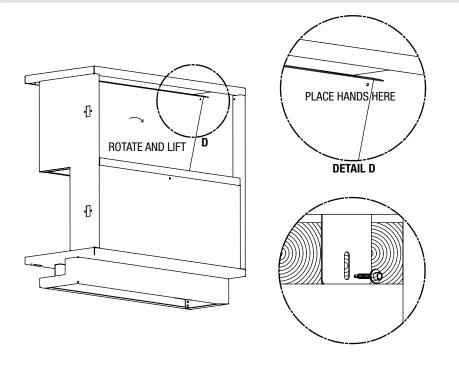
Step 5: Locate the bottom mounting brackets and secure bookshelf with two screws, reference Figure 5.

Step 6: Remove the two screws from the back panel, pictured in Figure 6. Do not discard screws.

Step 7: Place hands in both slots in the back panel and lean the top part of the panel towards you and remove the back panel, as pictured in Figure 6. Do not discard back panel, place it on a clean and flat surface.







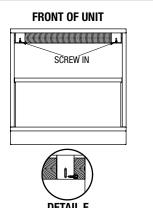
INSTALLATION & MOUNTING INSTRUCTIONS

Step 8: Locate top mounting bracket holes on bookshelf and secure to wood blocking with screws by others, pictured in Figure 7.

Step 9: With the top of the back panel rotated towards you, place the back panel flanges into the the slots and slowly rotate the top towards the wall until the panel is in its desired location. Reference Figure 8.

Step 10: Align the holes of the back panel with the holes on the bookshelf and secure in place with the two screws as pictured in Figure 9.

FIGURE 7 ▼



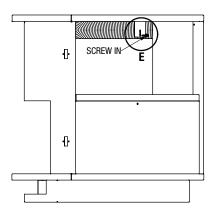


FIGURE 8 ▼

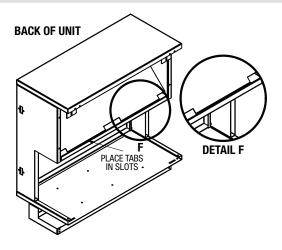
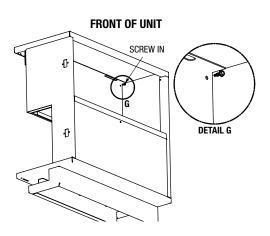


FIGURE 9 ▼

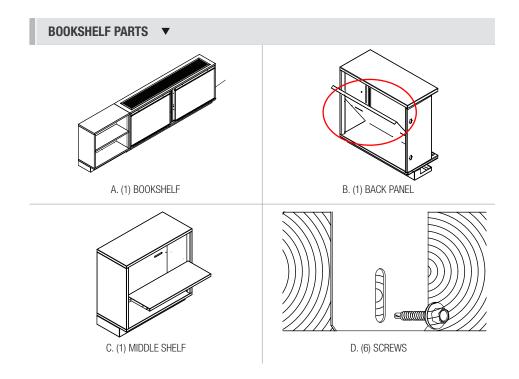


INSTALLATION & MOUNTING INSTRUCTIONS

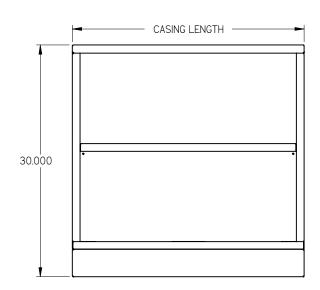
Installing an Inactive Bookshelf

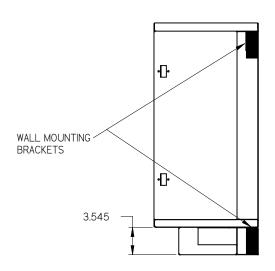
List Quantity of parts per beam:

- A. (1) Bookshelf
- B. (1) Back Panel
- C. (1) Middle Shelf
- D. (6) Screws



INACTIVE BOOKSHELF ▼





| Casing Length | |
|---------------|--|
| 24.000 | |
| 30.000 | |
| 36.000 | |

INSTALLATION & MOUNTING INSTRUCTIONS

Bookshelf (Inactive) Installation for ACBC

Step 1: Determine bookshelf locations and orientation according to approved plans.

Step 2: Secure blocking that runs across the wall at the height of the bookshelf mounting brackets. The blocking should be securely fastened to the stud wall or similar structure. Blocking and fasteners provided by others.

Step 3: Place the bookshelf flush against the wall and connecting unit(s) pictured in Figure 10.

Step 4: Remove both sets of side screws from the middle shelf that secure it to the side panel and remove the shelf. Do not discard screws or shelf and place shelf on a clean, flat surface for later use. Reference Figure 11.

FIGURE 10 ▼

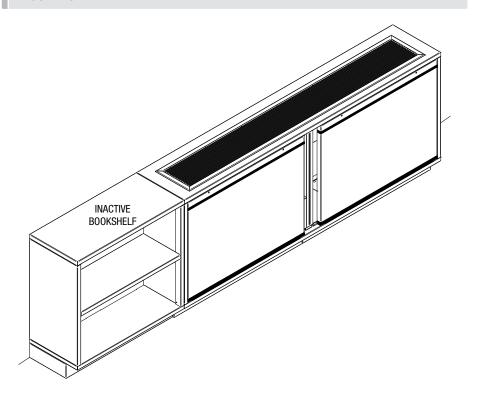
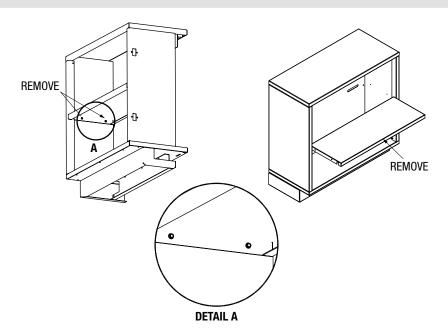


FIGURE 11 ▼



INSTALLATION & MOUNTING INSTRUCTIONS

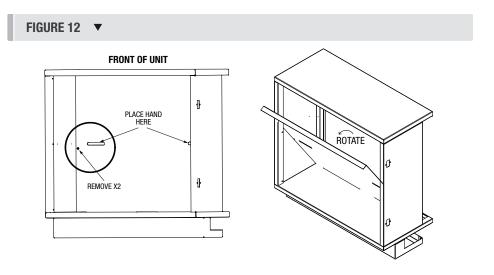
Step 5: Remove the two screws from the back panel then secure it to the bookshelf, pictured in Figure 12. Do not discard screws.

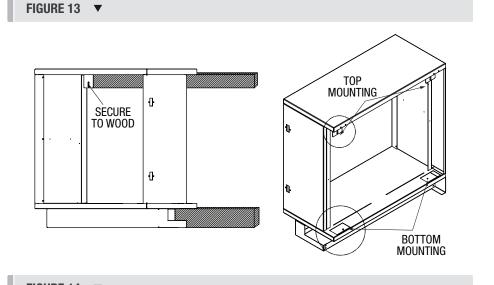
Step 6: Place hands in both slots in the back panel and lift straight up 1.5 in, and rotate the bottom part of the panel towards you and remove the back panel, reference Figure 12. Do not discard back panel and place on a clean and flat surface.

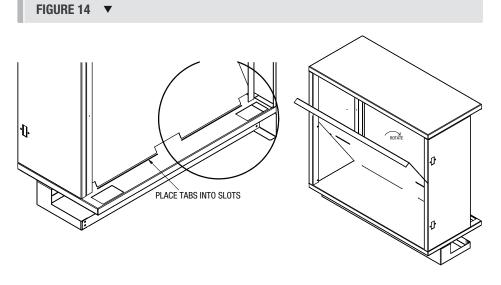
Step 7: Locate top mounting bracket holes on bookshelf and secure to the wood blocking with screws by others, pictured in Figure 13.

Step 8: Repeat step 7 for bottom mounting brackets pictured in Figure 13.

Step 9: Place back panel flanges into slots while the top of the back panel is rotated towards you and as you insert the flanges slowly rotate the top towards the wall until the panel is in its original position, reference Figure 14.



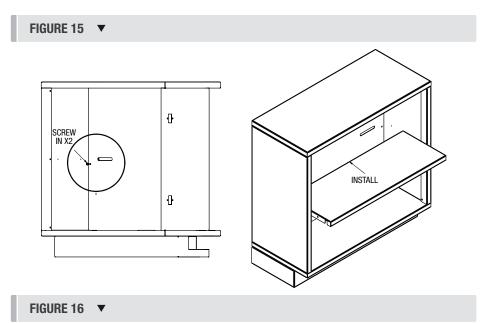


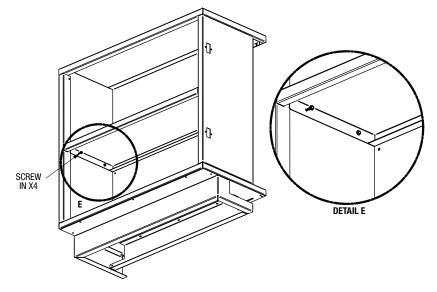


INSTALLATION & MOUNTING INSTRUCTIONS

Step 10: Align the holes of the back panel with the holes on the bookshelf and secure in place with the two screws from step 5. Reference Figure 15.

Step 11: Install the middle shelf. Align the holes of the middle shelf with the holes of the side panel and secure in place with four screws from step 4. Reference Figure 16.



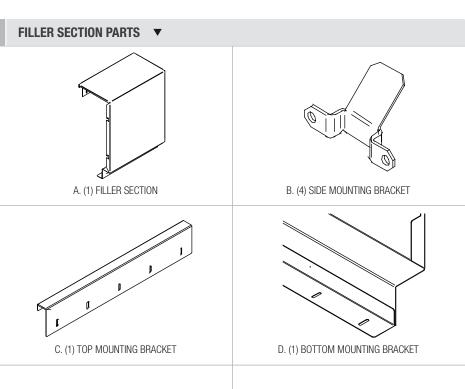


INSTALLATION & MOUNTING INSTRUCTIONS

Installing a Filler Section

List Quantity of parts per beam:

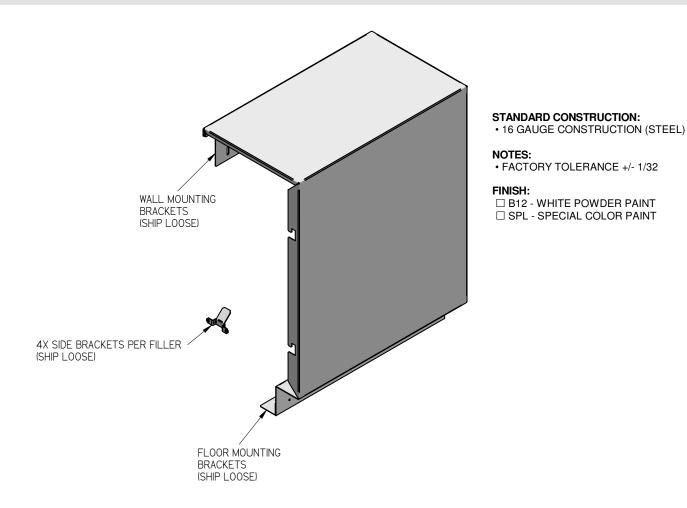
- A. (1) Filler Section
- B. (4) Side Mounting Bracket
- C. (1) Top Mounting Bracket
- D. (1) Bottom Mounting Bracket
- E. (L/6") Self-Tapping Screws
- F. (8) Pop Rivets

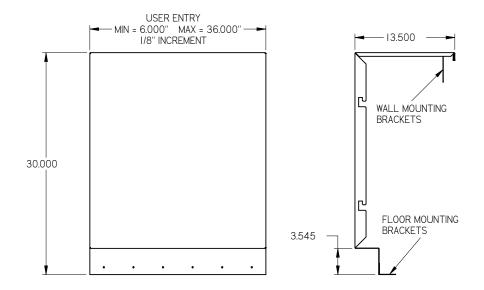




INSTALLATION & MOUNTING INSTRUCTIONS

FILLER SECTION PARTS ▼





INSTALLATION & MOUNTING INSTRUCTIONS

Filler Section Installation for ACBC

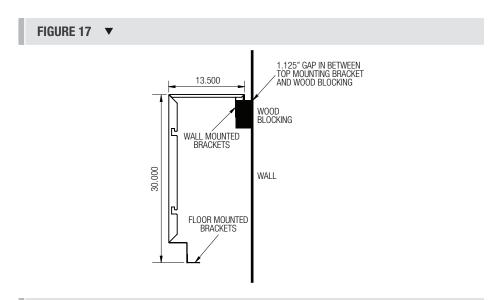
Step 1: Determine Filler section locations and orientation according to approved plans.

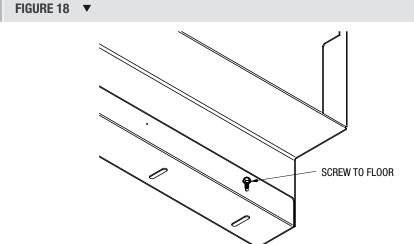
Step 2: Secure blocking that runs across the wall at the height of the filler mounting brackets. The blocking should be securely fastened to the stud wall or similar structure. Blocking and fasteners provided by others.

Step 3: Locate the top mounting bracket 30 in. from the floor and secure using a screw(s), by others, in the top wood block. Pictured in Figure 17.

Step 4: Locate the bottom mounting bracket 8 in. from the wall and secure using a screw(s), by others, into the floor. Pictured in Figure 18. Bottom mounting bracket should align with adjacent ACBC kick plates.

Step 5: Set the side-mounting bracket in the cut out, pictured in Figure 19, on the unit being connected to and install using rivets provided. Repeat 3 times.





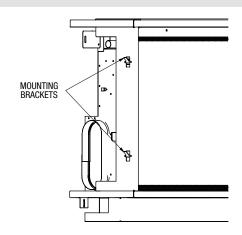


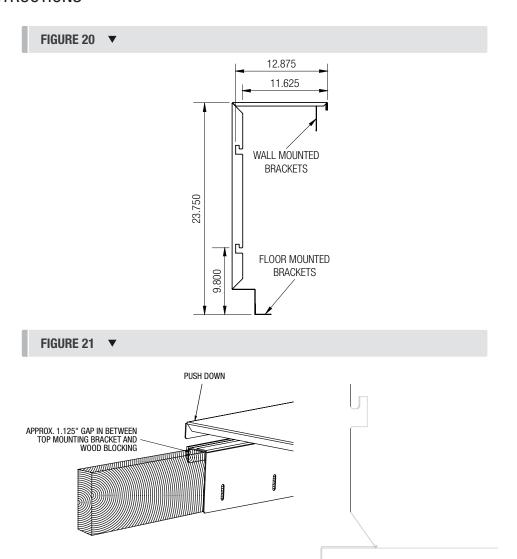
FIGURE 19 ▼

INSTALLATION & MOUNTING INSTRUCTIONS

Step 6 (If Applicable): If installing the filler section next to a connecting unit and wall, follow Step 5 for installing to connecting unit. Repeat once. When installing to the wall, locate the side mounting brackets as shown in Figure 20 and secure in place with screws, by installing mounting brackets to wall at approximate heights shown in Figure 20.

Step 7: Slide the filler section tabs into the side mounting brackets and at the same time insert the top flange of the filler section into the top mounting bracket as pictured in Figure 21. Push down to secure in place.

Step 8: Use the self-tapping screws in pilot holes across the length of the filler section bottom to secure to the bottom mounting bracket. Pictured in Figure 21.



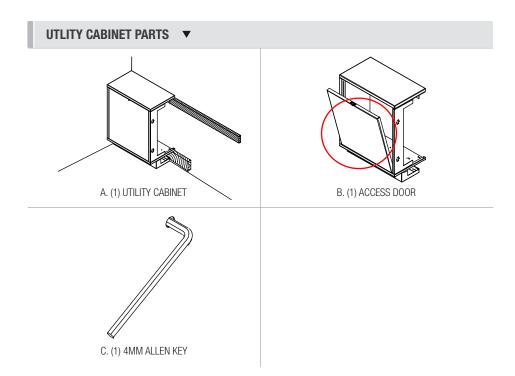
(Nume)

INSTALLATION & MOUNTING INSTRUCTIONS

Installing a Utility Cabinet

List Quantity of parts per beam:

- A. (1) Utility Cabinet
- B. (1) Access Door
- C. (1) 4mm Allen Key

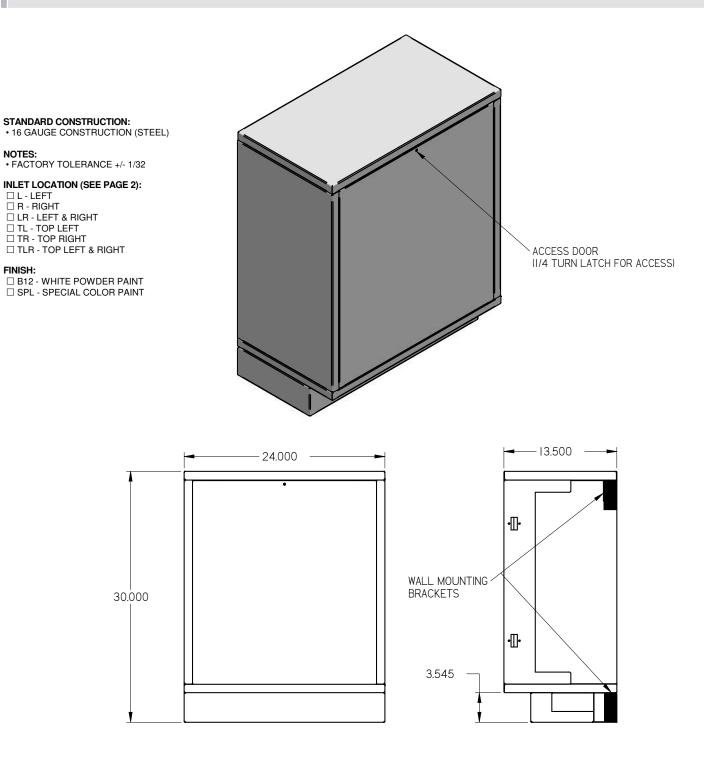


INSTALLATION & MOUNTING INSTRUCTIONS

UTLITY CABINET ▼

☐ L - LEFT ☐ R - RIGHT

FINISH:



INSTALLATION & MOUNTING INSTRUCTIONS

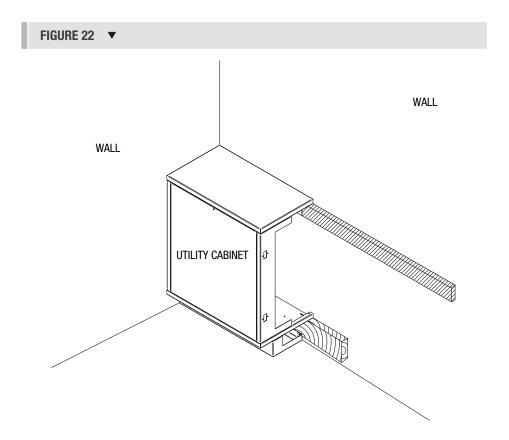
Utility Cabinet Installation for ACBC

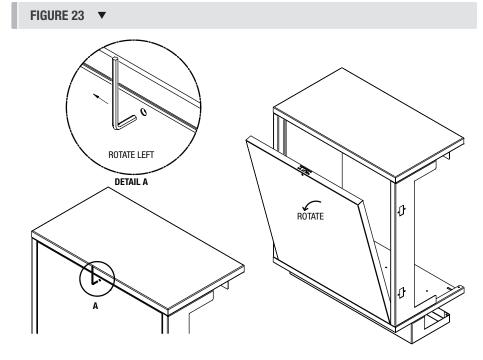
Step 1: Determine utility cabinet locations and orientation according to approved plans.

Step 2: Secure blocking that runs across the wall at the height of the utility cabinet mounting brackets. The blocking should be securely fastened to the stud wall or similar structure. Blocking and fasteners by others.

Step 3: Place the utility cabinet flush against the wall and/or connecting unit(s), pictured in Figure 22.

Step 4: Using the 4mm allen key open the access door and turn both spring latches to the left until access door is opened, pictured in Figure 23. Remove access door and place on a clean, flat surface.



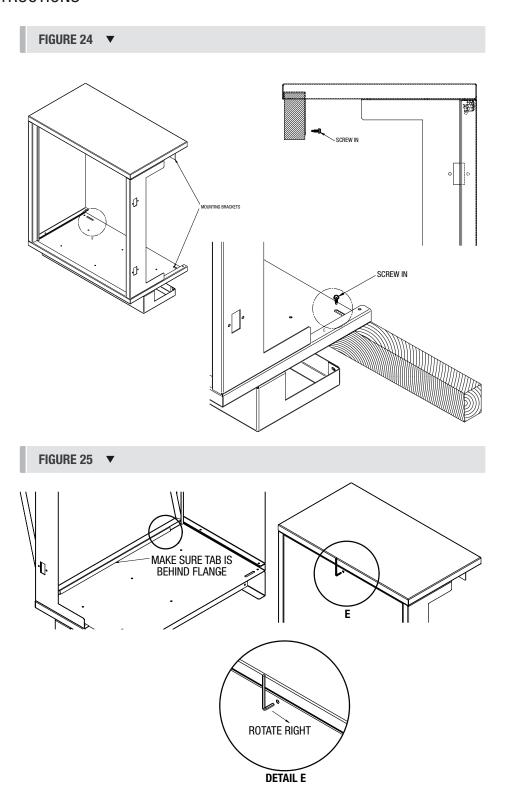


INSTALLATION & MOUNTING INSTRUCTIONS

Step 5: Locate the top and bottom mounting brackets. Pictured in Figure 24.

Step 6: Secure the utility cabinet against the wall blocks with the screws provided by others. Pictured in Figure 24.

Step 7: Install access door and retighten the spring latches by turning them both to the right until secure. Pictured in Figure 25.



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