IcoRoom™ Portable Anteroom System

Detailed Specifications

IcoRoom frame:
- Lightweight, collapsible frame
- Two-piece top frame assembly with foam strip
- Flat floor truss
- Sturdy, non-skid polyurethane wheels
- Collapsed Dimensions: 12.0” x 12.0” x 66”
- Extended Dimensions:
  - Footprint: 34.0” x 61.0”
  - Height: 7’0 to 10’6
  - Weight: 45 lbs.

IcoRoom envelope:
- Lightweight, durable frame-rated to U.S. NFPA 701 standard
- Four doors (two narrow, two wide cargo)
  - Wide: 48”
  - Narrow: 22”
- Four clear windows: 14.0” x 40.0”
- Two negative air ports in removable panel format:
  - 12.5” round port with drawstring and seal
  - 3.5” round smaller port
- Double reinforced floor
- Clear pouch for work/infection control permit
- Weight: 20 pounds
- Flange Accessory: 20.0 long, flares 44.0” to 58.0”
- Connector Cuff: 12.0”

engineered to protect healthcare environments from airborne contaminants

- SURGICAL SUITES
- PROCEDURE ROOMS
- TEMPORARY PATIENT ISOLATION

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Dear Customer,

Thank you for your purchase of the IcoRoom Portable Anteroom System by Mintie Technologies, Inc. The IcoRoom is the only portable, collapsible containment product that protects healthcare and other sensitive environments from harmful airborne particulates during construction and maintenance activities, or when creating short-term infectious isolation areas during a bioterrorist event or other public health emergency.

Your satisfaction as a customer is extremely important to us. If you have any questions that are not answered by this instruction manual or enclosed video, or if you would like to offer feedback on the IcoRoom, please contact us at (800) 9-MINTIE (800-964-6843), or by email at MTIproducts@mintie.com.

Kevin Mintie
Chief Executive Officer

PART A: INITIAL SET UP OF ICOROOM FRAME

1. Remove IcoRoom frame from box, and set base of the unit on the floor as shown. (Fig: A-1)

2. While standing on one of the two long sides of the frame, simultaneously grasp two of the white plastic sliders and open IcoRoom frame until the Outer Legs on the long sides of the IcoRoom frames are approximately 2’ feet apart. (Fig: A-2)

CAUTION: Do not grasp Outer Legs below chrome plastic sliders during opening of IcoRoom Frame to prevent accidental pinching of fingers.
3. Push down floor trusses with foot to square off unit. (Fig: A-3)

4. Finish by placing one hand above leg cap while pressing up on each upper truss bar with your other hand, until plastic sliders click and lock into place. (Fig: A-4)

PART B: ATTACHMENT OF ICOROOM ENVELOPE TO FRAME

1. Unfold the IcoRoom containment envelope and place inside opened IcoRoom Frame.

2. Attach the large Velcro Cuffs to Outer Leg, between each plastic Slider and Outer Leg Cap near the top of the IcoRoom. (Fig: B-1)

3. Attach all smaller white Velcro loops along edges of IcoRoom envelope to Outer Legs of the IcoRoom frame. (Fig: B-2)

4. Attach Velcro cuffs to each of the four floor trusses. (Fig: B-3)

PART C: PREPARATION OF UPPER FOLDING FRAME

1. Remove the two parts of the Upper Folding Frame from white box.

DO NOT DISCARD WHITE BOX. Place the Upper Folding Frame parts on a large flat surface. Remove two long foam strips and four short foam strips from the long, narrow brown box.

2. Peel back paper backing from the bottom of one end of a long foam strip and carefully align that end (adhesive side down) with outer edge of plastic end plug on one of the long beams. Carefully apply remaining portion of strip along top of long beam, peeling paper backing as you go. Repeat this step with second long foam strip on other long beam. (Fig: C-1)
3. Next, remove paper backing from bottom of one end of short foam strip and carefully align end (adhesive side down) approximately 3/16” beyond outer end of plastic end plug on one of the short beams. (Fig: C-2)

4. Carefully apply remaining portion of short foam strip along top of long beam. You may need to trim the end of the foam with a knife or razor. When finished, the foam strip will extend beyond the frame approximately 3/16” on both ends. Repeat this step for second short foam strip on other short beam.

9. Swing short piece of upper folding frame into place and secure with red-handled lock. Repeat for second piece. (Fig: D-2) Be careful to avoid placing fingers, etc. between Upper Folding Frame mounts and the IcoRoom frame to avoid pinching.

10. Beginning in one corner, attach Velcro at top edge of IcoRoom containment envelope to Velcro on inside of Upper Folding Frame. (Fig: D-3)

INITIAL DEPLOYMENT

1. Position IcoRoom directly in front of OR Room.

2. Pull Upper Folding Frame out of white box on side of cover slip.

3. Take off Cover Slip.

4. Remove Velcro Strap.

5. Deploy the Unit by placing your hands on short side of unit and pull outward.

6. Once unit is expanded, Finish by placing one hand above leg cap while pressing up on each upper truss bar with your other hand, until plastic sliders click and lock into place.

7. Push down Floor Trusses to square off unit.

8. Place one piece of Upper Folding Frame horizontally over corners of IcoRoom Outer Leg Caps. Gently push down upper folding frame onto IcoRoom frame. Repeat for other piece. NOTE: If upper folding frame does not fit onto outer leg caps. Make sure all plastic sliders are locked into place. (Fig: D-1)

11. Stand on one of the two short sides of the IcoRoom unit, and place foot on the foot pedal between the folding trusses. (Fig: D-4)

12. Press height adjustment clip located on each side of the IcoRoom and lift until left and right height adjustment engage first set of bottom holes.
13. Move to the opposite side of the IcoRoom unit and repeat step. The IcoRoom unit should be level and ready for engagement with ceiling. (D-5)

Note: To ensure level engagement with ceiling, be sure to raise IcoRoom so that same number of holes on Inner Legs are visible and that Upper Folding Frame is flush against ceiling tile frame.

There should be no visible gaps under foam. On each corner of the IcoRoom envelope there are two removable Velcro cuffs.

One is for usage, the second is a spare in case of loss. Position the Velcro cuff in the appropriate loop using the following guide:

- For ceiling heights above 9'6” use top loop.
- For ceiling heights approximately 9” use second loop from top.
- For ceiling heights approximately 8” use third loop from top.
- For ceiling heights below 7'8” use bottom loop.

If the doors to the IcoRoom envelope are hanging very low, you may need to move the Velcro Cuffs to a lower loop on the IcoRoom envelope. This will pull up the envelope and raise the doorway.

When adjusting height of envelope, ensure that bottom of wide doors on IcoRoom are flush against floor/truss to prevent hazard when entering or exiting IcoRoom.

OPERATING ROOMS.
Because ORs are already mandated by code to be at positive air pressure to the surrounding space, IcoRoom creates a protected negative air space to both the OR and surrounding corridor. This effectively contains any AIDN that may be released from the patient from escaping. The HEPA-filtered negative air machine both maintains proper negative air pressure and filters out the M. tuberculosis bacteria, returning the filtered air to the corridor.

PROCEDURE ROOMS.
The same capabilities that make the IcoRoom effective for OR’s can also apply to isolating various procedure rooms when known or suspected TB-positive patients require treatment. For example, positive pressure endoscopy rooms can be quickly converted to negative pressure rooms for performing bronchoscopies, as can patient rooms for bedside bronchoscopies.

TEMPORARY PATIENT ISOLATION.
IcoRoom can, with one additional step, be also used to convert any standard patient room or other contained space in your hospital into a temporary isolation room, so that contaminated air is not recirculated back into the general hospital ventilation system.

ATTACHING THE ICOROOM TO THE OR
Apply the Velcro provided to the corridor side inner face of OR doorframe. Move the assembled unit into place, centering the unit in the doorframe. Attach the matching Velcro of the IcoRoom flange to the Velcro on the doorframe.

ATTACHING THE NEGATIVE AIR MACHINE
1. The negative air machine can be attached to either side of the IcoRoom depending on which side has room for the NAM so it is not blocking scrub areas, other entrance doors or critical aspects of the OR environment.

TESTING THE NAM
Before using the NAM for this application, it must be tested to make sure there is no bypass of the HEPA filter. This is a simple test using a particle counter to compare the particulate count entering into the unit versus the particulate count leaving the unit (HEPA filtered air).

From inside IcoRoom, open the 11’ inch port by rolling down the Velcro Flap.

Attach HEPA-filtered negative air machine by inserting flex duct into the 11’ inch port of exterior of unit. (If using a HEPA vacuum to create Negative Pressure, use smaller 3 1/2 port.)

For increased flexibility in work projects, you may switch the negative air port panel to the other side of the unit.

Tighten the draw strings to seal port around negative air machine flex duct and/or vacuum hose. Ensure there are no gaps that may allow potentially infectious particulates an opportunity to escape.
USING THE ICOROOM
When the IcoRoom is installed and the negative air machine is turned on the sides of the unit should be drawn in which will indicate the unit is under a negative pressure. There is also a visual indicator on the side of the IcoRoom which can be used to check the negative pressure of the IcoRoom.

Open pressure relief vents, as needed, located inside envelope, beneath windows on both short doors, and the non-flange side door. Turn on HEPA-filtered negative air machines. **NOTE:** The door to the OR must remain in the open position for the solution to be effective.

ENTERING AND EXITING THE ICOROOM DURING SURGERY
Staff should use the second door leading from the OR, if at all possible. If staff must exit through the IcoRoom, use the side door and zip up the door after exiting.

MOVING CARTS AND MATERIAL INTO THE OR
The IcoRoom has a “cargo” door on the long side that can be used in an emergency or to resupply the room during a long procedure. Prior to opening up the “cargo” door turn the NAM up to maximum volume and then when leaving readjust the NAM to its previous setting.

ICOROOM STORED: IMPORTANT INFORMATION
1. See caution when handling IcoRoom frame assembly to avoid pinching hands or fingers.
2. Do not attempt to secure the top of the IcoRoom to the ceiling.
3. Extreme heat, soldering tools, open flame or hand torches are not to be used around IcoRoom.

ICOROOM MAINTENANCE PROCEDURES
1. Thoroughly inspect IcoRoom after every use.
2. Clean the IcoRoom with standard environmental cleaning procedures used in the Operating Room for terminal cleaning.
3. Allow the IcoRoom to dry prior to collapsing. If the IcoRoom is stored prior to being completely dry, the fabric may breakdown and crack over time.

COLLAPSING OF UNIT
1. Remove Velcro from corridor side of inner face of OR door frame.
2. Lower IcoRoom. Press height adjustment clip located on each side of the IcoRoom and lower unit. Move to opposite side and repeat the process. (Fig: E-1)
3. Un latch red-handled lock on upper folding frame. (Fig: E-2)
4. Detach Velcro from upper folding frame.
5. Remove upper folding frame. (Fig: E-3)
6. Detach large Velcro cuffs of outer leg. Detach smaller whit Velcro loops on outer legs of IcoRoom frame.
7. Start by disengaging each slider one at a time by pulling white Release Ring to release tension on unit. Slowly push down the Slider just past where the Release Ring catches. (Fig: E-4)
8. Disengage floor trusses by pulling on release pin. **CAU TION:** The weight of the IcoRoom envelope may cause the floor trusses to collapse/reengage. Continue to circle IcoRoom frame, lifting floor trusses until all four have been disengaged. (Fig:E-5)
9. Face long side of IcoRoom, grasp two the plastic sliders and slowly draw inward. Do not grasp outer legs below sliders as this may result in pinched fingers. **NOTE:** Be careful not to force the Outer Legs together quickly, as the Upper Trusses may encounter excessive force as they contact the collapsed IcoRoom envelope. If you encounter any resistance when closing the unit, check to make sure all four sliders have been disengaged and all four floor trusses are raised off of the floor. *(Fig: E-6)*

10. To ease closing of unit, avoid bunching of IcoRoom envelope by pulling envelope upward. Make sure envelope material is not caught in top of folding trusses at bottom of IcoRoom frame during closing. If material is caught, carefully pry material over top of folding trusses inboard away from trusses. Continue to lift and tuck envelope until it is neat and not bunched at the floor. *(Fig: E-7)*

11. When completely closed, wrap Velcro Strap around IcoRoom frame and draw tightly about midpoint. **NOTE:** Do not attach strap to outer leg as it may impede movement of sliders. *(Figure: E-8)*

12. Place Upper Folding Frame into white storage box and place in front pocket of Cover Slip.

**LIMITED PRODUCT WARRANTY**

Mintie Technologies, Inc., warrants to the original purchaser that each part of the IcoRoom to be free from defects in material or workmanship for a period of three years after the date of original purchase. This warranty applies only for normal and expected uses, as determined by the manufacturer and explained and demonstrated in the accompanying instruction manual.

**REMEDY LIMITATION**

Mintie Technologies, Incorporated obligation and liability under this warranty is limited to the repair or replacement (at its option) of the product or its parts, after its own review and examination. This will be purchaser’s exclusive remedy under this limited product warranty. Mintie Technologies, Inc. will not be liable for incidental or consequential damages even if its attempts to repair the defects fails, but in such case (or if Mintie Technologies, Inc. elects not to repair or replace) the purchaser will be entitled only to a refund of monies paid to Mintie Technologies, Inc. for the IcoRoom.

This warranty shall be void as to any product which has been altered or modified in any manner. This warranty does not apply to damages caused by any force of nature, to accidental or deliberated damage of the product, or to use of the product that does not conform with the product instructions.

**EXCLUSION OF ALL OTHER WARRANTIES**

THERE ARE NO WARRANTIES THAT EXTEND BEYOND THE LIMITED PRODUCT WARRANTY SET FORTH ABOVE. MINTIE TECHNOLOGIES, INC. DISCLAIMS ANY WARRANTY OF ANY OTHER KIND, INCLUDING WITHOUT LIMITATION, ANY WARRANTY THAT THE GOODS ARE MERCHANTABILITY OR FIT FOR ANY PARTICULAR PURPOSE.