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Enclosure Installation Manual

ASSEMBLY AND INSTALLATION INSTRUCTIONS FOR IBIS ENCLOSURES

Before proceeding, please refer to supplied Ibis Enclosure Panel Layout.

1. Inventory the entire shipment and inspect for missing parts or damage. Report any damaged or missing parts immediately.

2. Before beginning assembly, read the entire instructions as well as the instructions for the Ibis Filter Instructions and study the Enclosure Panel Layout drawing.

3. Before installing the enclosures, the proposed location should be selected and confirmed through the technical and production departments as well as Ibis Engineering.

4. Clean installation and assembly area thoroughly.

5. Use a marker or a chalk line to mark the perimeter of the enclosure and plenum wall. NOTE: REFER TO SUPPLIED ASSEMBLY DRAWING FOR INSIDE SKIN OF END WALL TO DRUM SIDE PLENUM WALL DISTANCE. This distance MUST be maintained and be accurate.

6. Most drum filter components should be installed prior to enclosure assembly.

    NOTE: Confirm that there is sufficient space around the unit for easy access for maintenance and service, and the layout allows space for obstructions such as beams, plumbing, electrical conduits, emergency exit walkways, doors, etc.

    NOTE: The surface that the enclosure is to be installed on should be relatively smooth and level. If the surface is not smooth and level, the panels will need shims under them to compensate for the unevenness of the installation surface.

7. Enclosure Instructions.

    NOTE: The Enclosure Installation instructions will cover a wide range of installation applications. However, every application is different. Some may require minor field modifications and/or additional bracing etc. If any problems occur with the installation, contact Ibis for Technical support.

    NOTE: If this Ibis Filter has the optional Structural Steel Base or floor mounting kits, begin the installation by bolting the flanged sections together. Floor panels have special 'tags' and are made of heavier metal. The Steel Bases should be level and in place before proceeding with the Panel Enclosure assembly.

    7.1. Refer to the Enclosure Panel Layout drawing and mark the outline of the enclosure and fans using a marker or a chalk line. Check length, width and diagonally measurements (within ¼ inch/6 mm.) to ensure that the enclosure is proper size and square. Mark location of plenum wall in this process.

NOTE: Ibis suggests that each Wall Panel be outlined on the floor and numbered according to the Enclosure Panel Layout drawing. All panels will be numbered to match the numbers on the drawing. Be sure to check that items such as the Plenum Wall and the Door Panels are in their desired or proper location.

NOTE: Most Wall Panels, Door Panels, etc. are interchangeable. This will allow locating doors and inlets in positions other than indicated on the Panel Layout Drawing. Corner Panels and Plenum Wall Panels may not be interchangeable – Refer to the Panel Layout Drawing. Contact Ibis for questions or technical support as needed.

7.2. At this point the plenum wall and plenum flashing panels should be complete. Make certain that the plenum wall is plumb and square to the layout of the enclosure.

7.3. Assemble the drum filter to the plenum wall by following the directions outlined in the drum filter manual. IMPORTANT TO REAR DRIVE FILTERS: WHEN SETTING THE DRUM FILTER TO THE REAR STAND, MAKE SURE THE END WALL PANEL AND SHAFT SEAL IS FIRST FITTED TO THE DRUM SHAFT. For reference, the rear drive stand must be positioned so the bearing rests against the shaft shoulder.

7.4. When the drum filter is installed, loosely assemble the walls of the enclosure, working towards the end wall from the plenum wall. Make sure the panels are set on the layout lines and only loosely bolted. **DO NOT CAULK BETWEEN PANELS**. If the "dirty air chamber" has floor coves to be installed, install them at this time to dictate the distance to the end wall.

Note: All items that bolt to the inside of the enclosure will use M10 dome head cap screws, with the head on the inside and nut on the outside.

7.5. Begin standing/installing the panels in place by starting with the panel at the Plenum Wall and working towards the nearest corner. Always complete the corner to stabilize the wall. Refer to the panel layout drawing frequently. Do not tighten bolts until assembly is complete.

NOTE: If you have critical space restrictions, you may require a modified installation. Contact Ibis for details.

NOTE: The installation of the Front Wall Panels can be delayed in order to give easy access for final internal filter assembly.

NOTE: Again, verify with the Enclosure Panel Layout drawing that all the panels are in their proper location and that they are aligned and square with the marks on the floor.

7.6. Finger tighten the bolts to the Corner Panels to stabilize the walls. Leave the other panels loosely bolted to allow movement of the Wall panels and align to the Roof Panels. DO NOT anchor panels to the floor at this time.

7.7. If your drum filter is configured with a high velocity inlet start by installing the deflector brace. The 90 degree leg should point to the drum filter.

7.8. Place the high velocity inlet panel next. There should be a 1 inch leg sticking passed the end of the inlet panel. This allows you to rest the roof panel on the leg while you bolt the panels in place.

7.9. Place the Roof Panels in place one at a time. Loose bolt the Roof Panels to each other and the Wall Panels. Verify that the ends of the Roof Panels are flush to each other and the outside of the Wall Panels.

NOTE: Be sure to protect the Drum Filter, especially the Filter Media, before installing the Roof Panels.

NOTE: After the Roof Panels are installed, check the Enclosure to verify that it has remained square.

NOTE: The Plenum Wall and Plenum Wall Flashing Panel (if required) may require field drilling to secure to each other and to the Enclosure.

7.10. Complete the remaining end wall and tighten all bolts in all Wall Panels, Roof Panels, Plenum Wall and Flashing Panels. If you are using an Ibis High Velocity Inlet Plenum you should install it at this point.

> **NOTE**: Verify that all bolt holes have bolts in them and are tight. Apply sealer/chalk, to all enclosure seams inside and outside.

> **NOTE**: Anchor the Wall Panels to the floor. Drill through the pre-punched holes in the Wall Panels into the floor and anchor and bolt to the floor. Use 3/8(10mm) anchors or appropriate floor anchors for your installation needs. Anchors and bolts are not provided.

7.11. Mount the Fan Panel into the Enclosure. The Fan Panel is shipped blank and must be field cut and drilled. The fan end wall has two angle braces that must be installed; this will prevent deformation of the end wall.

7.12. Seal each joint between the panels ON THE EXTERIOR SEAM ONLY with the Sealer/Caulking provided including between the Plenum Wall and Flashing Panel. Seal/Caulk both inside and outside seams. Most enclosures operate under a negative/vacuum so the outside seal is the most important.

8. Manifold Installation.

Locate the external Pneumatic Manifold or SRV on the roof of the Enclosure above the Vacuum Nozzles.

Note: All items that bolt to the inside of the enclosure will use M10 dome head cap screws, with the head on the inside and nut on the outside.

8.1.   Field cut the appropriate holes and match drill holes to accept the companion flanges to the manifold inlet ducts.

8.2.   Bolt the manifold or SRV in place on the roof of the enclosure.

8.3.   Install the flexible hose in between the Vacuum Nozzles and the Pneumatic Manifold connections.

> **NOTE**: If desired or space required, the Pneumatic Manifold can be located on the Wall Panels above the doors.

9.   Vacuum Nozzle Fan Installation.

The Vacuum Nozzle Fan can be located in the most convenient place. The fan can be mounted on the floor, ceiling or and the top of the Enclosure. If the fan is mounted on the enclosure, it should be mounted on steel rails or a plate and mounted near a corner to give the fan maximum support.

Note: All items that bolt to the inside of the enclosure will use M10 dome head cap screws, with the head on the inside and nut on the outside.

9.   Main Fan Installation.

10.1. Mount the Main System Fan.

> **NOTE**: BE SURE the fan is in the exact position it will be in when in operation, whether mounted on the floor or on a stand. Shim and align the fan in the proper location. The fan can be either mounted directly to the Fan Panel or to the Fan Panel via a flexible connector, spool piece or transition. If vibration isolators are supplied, be sure to install them on the fan before installation

10.2. Press the fan or the transition/damper against the Fan Panel.

10.3. Mark location of hole for fan inlet and bolt holes on the Fan Panel.

10.4. Remove the Fan panel and Cut holes.

10.5. Re-install the Fan Panel and mount Main Fan to Fan Panel or transition/damper to the Main Fan and to the Fan Panel.
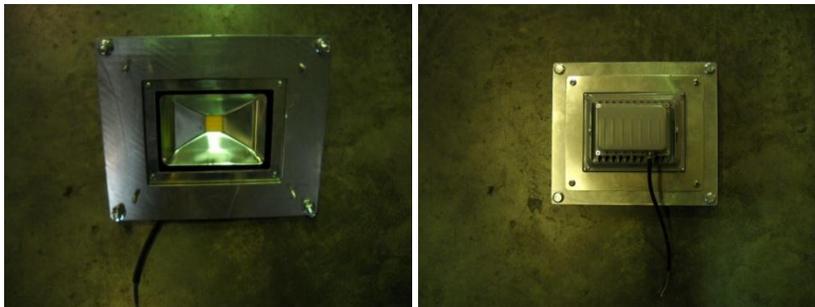
10.6. Secure or anchor Main Fan.

11. Other Equipment Installation.

11.1. Lighting Package.

Note: The lights are per-installed in each door panel. We also ship one additional light for field location in the customer's desired location.

11.2. Lights are mounted above the door.

11.2.1.　The light should be wired to an outside switch and power supply.

11.3. Fire Protection.

11.3.1.　Refer to drawings and instructions concerning the wet sprinkler System located in this manual. (field cut holes)

NOTE: Always refer to any/all local, corporate and insurance codes.

12.　Final Run-In Procedures.

12.1. Check all bolts, anchors and other connectors that they are located and tightened.

12.2. Check all exterior seams to ensure that they have all been sealed/caulked.

12.3. Check alignment of drum and Seal and check Seal lubrication.

12.4. Check fan rotation and Drum rotation and verify that they are turning in the proper directions.

12.5. Check all Pneumatic Manifolds, Pneumatic Diverter Valves, cylinders, valves and etc.

12.6. If possible, the Ibis system should be started and ran for 24 hours prior to putting it in service with the production equipment. Many operating or maintenance problems can be eliminated during this 24-hour run-in period.

NOTE: Report any problems that are detected and contact Ibis for assistance or questions.

Useful Tools:

- Drift Pins-Alignment Rod
- Air or Electric Impact Wrench
- Heavy Blow Hammer
- Hammer Drill
- Electric Punch
- Electrical Extension Cord
- Portable Light

- Ladder – 10 feet/3 meter
- Level
- Framing Square (90 degrees)
- Tape Measure/Ruler
- Wrenches and Screw Drivers
- Dust Pan & Broom
- Chalk Line

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