

Mier Products' "FC Series"

Outdoor, NEMA 3R, Fan-Ventilated, Electrical Enclosures

FC Series units include

- *UL Listed fans*
- *Filter kits*
- *Thermostats*
- *Protective Shrouds for NEMA 3R rating*
- *Exterior mounting ears*
- *Air-intake and air-exhaust ports*
- *Locking and screw-down doors*

Options include windows, pole-mount kits and 12V, 24V, 48V, or 230V Fans!

16 & 14 Gauge Metal Models with Outdoor ASA70 Gray Powder-Coat

BW-124-8-FC

24"W x 24"H x 8"D with a 115V, 131 cubic-foot/min. fan, thermostat, a removable back-panel, shrouds, gaskets, quarter-turn latches and a tubular lock

BW-124FC

24"W x 24"H x 12"D with a 115V, 300 cubic-foot/min. fan, thermostat, a removable back-panel, shrouds, gaskets, quarter-turn latches and a tubular lock

BW-136FC

24"W x 36"H x 12"D with a 115V, 300 cubic-foot/min. fan, thermostat, a removable back-panel, shrouds, gaskets, quarter-turn latches and a tubular lock

BW-RACKFC

22"W x 12RU H x 24"D with a 120V, 300 cubic-foot/min. fan, thermostat, an internal 19" rack, shrouds, gaskets, quarter-turn latches and a tubular lock

Polycarbonate, Non-Metallic Models

BW-FC16147

16"W x 14"H x 7"D non-metallic, with a 115V, 81 cubic-foot/min. fan, thermostat, internal standoffs for back-panels, panel adjustment rails, and pad-lockable latches

BW-FC181610

18"W x 16"H x 10"D non-metallic, with a 115V, 81 cubic-foot/min. fan, thermostat, internal standoffs for back-panels, panel adjustment rails, and pad-lockable latches

NEW BW-FC20168

20"W x 16"H x 8"D non-metallic, with two 115V, 81 cubic-foot/min. fans, thermostat, internal standoffs for back-panels, panel adjustment rails, and pad-lockable latches

BW-FC242410

24"W x 24"H x 10"D non-metallic, with two 115V, 81 cubic-foot/min. fans, thermostat, internal standoffs for back-panels, panel adjustment rails, and pad-lockable latches



Installation Instructions

Mier Products' Metal, Fan-Ventilated, NEMA 3R, Enclosures

URGENT!
Handle with care during shipping, storage, and installation.

The Fans and Shrouds must be mounted to the enclosure using the pre-cut holes and supplied gaskets. The Fans must be installed in the proper position.

Follow all OEM instructions to maintain NEMA rating and proper performance.

ATTENTION:
WATERTIGHT FITTINGS
MUST BE USED ON ALL
OPENINGS!

When installed properly per OEM's specs:

- * Enclosure is NEMA 3R standards
- * Powder-coat meets NEMA 4, UL-1332
- * Gaskets meet NEMA 4, UL-50 and UL-94-HB Flammability Rating

Shroud and Fan Installation for BW-1248FC, BW-124FC, BW-136FC and BW-RACKFC:

Your fans have been placed inside the shrouds, which have been bolted inside the enclosure to protect these products during shipping. The fans are continuous-duty **unless** you install the thermostat with them (see next page). The thermostat has been shipped in a small box also packed inside the enclosure.

1. Remove the bolts which secure the Shrouds, Fans, Filter Kit and Hardware being careful **NOT TO GOUGE** the paint
2. Remove the Shrouds, Fans, Filter Kit, Hardware and Thermostat and place them aside
3. Feed the Fan Cord through the Double-D Hole in the enclosure (Note: Do not connect the cord to the fan terminals yet)
4. Install the Fan on the **LOWER RIGHT-HAND SIDE** opening of the enclosure (note: Tamper Switch Bracket is on the upper-right hand side), putting the **FAN on the OUTSIDE** of the enclosure with the Fan-Power-Terminals near the Double-D Hole, using the four (4) long #8x32x2.5 bolts, screws and nuts.

NOTE the airflow arrows on the fan. IT IS RECOMMENDED FAN AIRFLOW FLOW INTO THE ENCLOSURE.

5. With a minimum of 2.25" of fan-cord slack on the **outside** of the enclosure, install the Plastic Strain Relief over the fan-cord, snap it closed, and fit it into the Double-D Hole (**Figure 1** below shows completion of steps 3-5)
6. Snap apart the Filter Kits which include a Filter Guide with screw holes, a Filter, and a Snap Cover (**Figure 2** - Step 6)
7. Install the Filter Guides **ON THE BOTTOM OF THE SHROUDS** using four (4) 8x32x3/4" flat-head screws per shroud, making sure the Filter Guide rails face away from the shroud (**Figure 2** - Step 7)
8. Re-install the Filters in the Filter Guides and replace the covers (**Figures 2 & 3**)
9. Install the Rain Shrouds at the top and bottom openings with the **AIR HOLES FACING DOWN**. Use a 3/8" socket and the eight (8) #1/4x20x1/2 inch bolts for each Rain Shroud (**Figure 4** shows enclosure with rain shrouds attached)
10. The Fan may now be plugged into 115VAC for **continuous duty** (see next page to **thermostatically control the fans**). Installers will need to cut a conduit opening in the enclosure their specific installation; the bottom of the enclosure is recommended.
11. Openings in the bottom of the Rain Shrouds should be checked periodically for debris blocking air flow
12. REMEMBER to clean or replace Filters a minimum of every six months. Do so more often in dust/pollen/debris/ ridden areas.

Figure 1

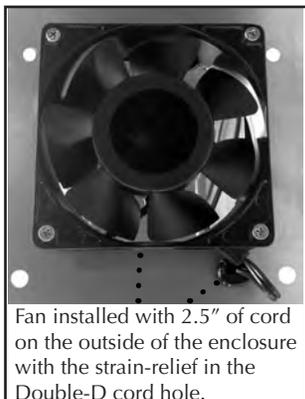


Figure 2

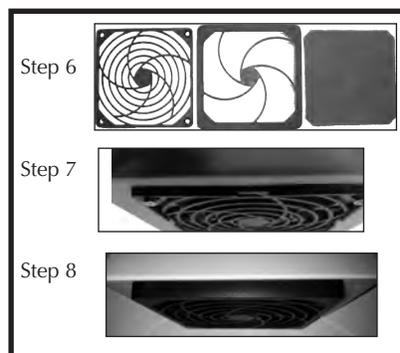


Figure 3



Figure 4



Installation Instructions

Mier Products' Metal, Fan-Ventilated, NEMA 3R, Enclosures

Thermostat Installation with Fans for variable duty instead of continuous-duty:

- * **BW-F131 FAN** - 120mm, 115-Volt AC, 4.75 x 4.75 x 1.5, 50/60HZ, .18 Amp, 22-Watt, 110 cubic-foot-per-minute continuous-duty fan used on Mier's NEMA 3R outdoor **BW-1248FC**.
- * **BW-F300 FAN** - 172mm, 115-Volt AC, 6.75 x 6.00 x 2.0, 50/60HZ, .40 Amp, 50-Watt, 300 cubic-foot-per-minute continuous-duty fan used on Mier's NEMA 3R Outdoor enclosures including the **BW-124FC**, **BW-136FC**, and **BW-RACKFC**, and also on the indoor NEMA 1 models including the BW-RACKBOX and BW-RACKCART.



NOTE: Mier also offers 12V, 24V, 48V, and 230V DC versions of the fans above.

FAN THERMOSTAT CONTROL INSTALLATION

1. Set the Thermostat Control 70 to 75 degrees F for most installations. However, before determining the Thermostat setting for your specific application: you must consider the operating parameters of the equipment you are installing, specifically the operating temperatures, and take into consideration the temperature of the installation environment, seasonal changes, and the heat load of the electronics within. If the electronics are less than 100 Watts, and the installation is in a normal indoor temperature controlled setting, it is recommended to set the Thermostat to 80 degrees Fahrenheit.
2. Pull the **Smooth/Neutral Wire** and **Ribbed/Continuous Wire** apart from each other on the Fan Cord. **Cut the Smooth/Neutral Wire in half.** The **Ribbed/Continuous Wire** remains attached to the plug.
3. Wire **Smooth/Neutral Wire from the Fan** into **Terminal 2 of the Thermostat**, and the **Smooth/Neutral Wire from the Plug** into **Terminal 1 of the Thermostat** (see Diagram 1 and Figure 5 below). This wires the Thermostat in series with the Fan.
4. Mount the Thermostat **INSIDE** the enclosure using the two-sided-tape supplied by placing it on one side of the Thermostat. Another method is to mount an optional DIN Rail in the enclosure, and use the DIN Rail tabs on the back of the Thermostat.

Diagram 1

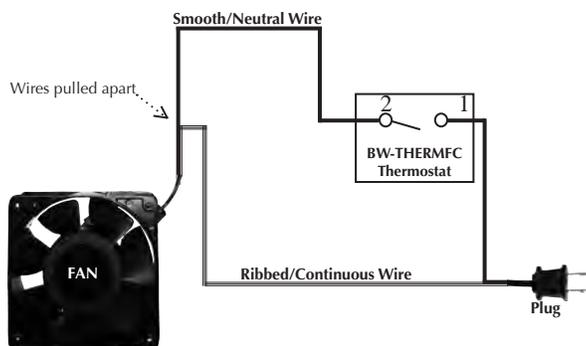
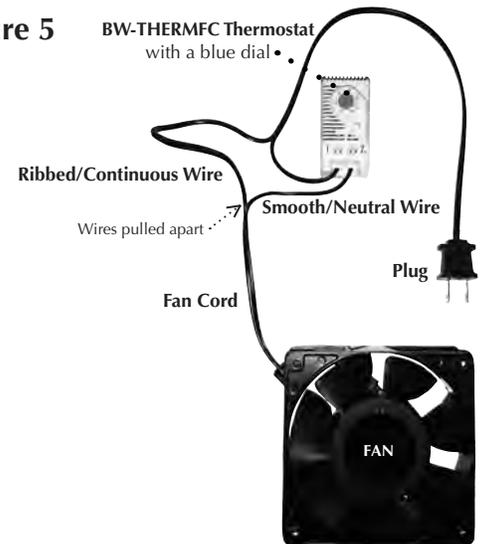


Figure 5



When using one fan, the fan should blow into the enclosure.

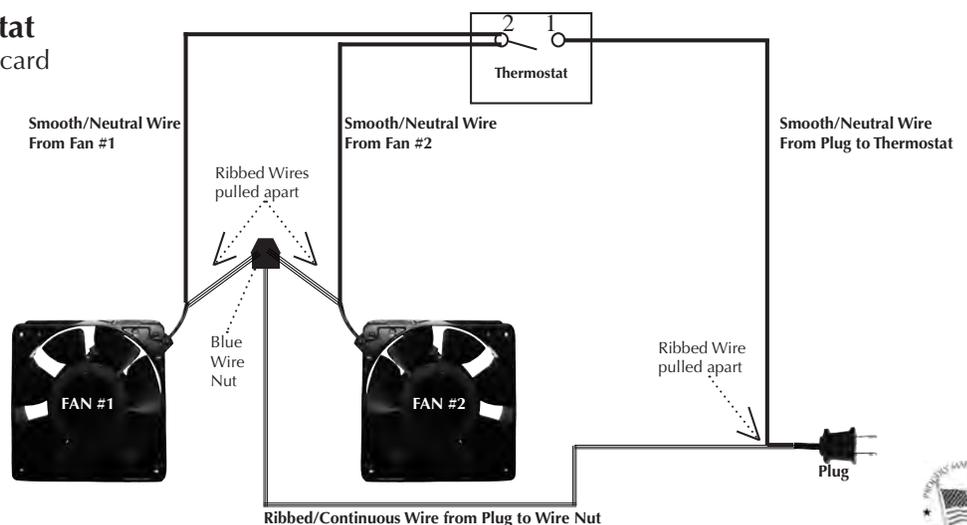
Figure 6: Wiring two fans to a thermostat

* Cut the plug off of Fan #1 at the plug, and discard

* Wire the two fans as shown:

- ALL Ribbed/Continuous Wires, from both fans AND the Plug, join at a blue wire nut
- The Smooth/Neutral Wires from both fans join at Terminal 2 of the Thermostat
- The Smooth/Neutral Wire from the Plug joins at Terminal 1 of the Thermostat

Note: Mount the lower fan to blow into the enclosure and the upper fan to blow out.



Installation Instructions

Mier Products' Non-Metallic, Fan-Ventilated, NEMA 3R, Enclosures



NOTE: These "FC" fan-cooled units simply exchange internal air for the external air. Therefore, **Fan-Cooled models are not recommended for high-temperature or low temperature environments.** Because these units pull external air into the enclosure through a filtering system, they do not meet the NEMA 4 standards of Mier's air-conditioned and heated models (ACE or ACHT). However, they are designed to NEMA 3R specifications. Therefore, **Fan-Cooled models are not recommended for applications where internal components need to be protected from wash down conditions. When using these models you must keep the filters clean and must not block the fan, air intake, or air-flow with items mounted inside the enclosure.** If your installation is using non-hardened electronics in warmer or cooler or humid temperatures, if your equipment creates high internal heat loads, or if you are installing in a coastal or highly corrosive area call Mier Products for advice on our other models. **Mier recommends only installing units with windows or clear doors in shaded areas;** as interior temperatures of these units reach 20° higher than units without windows or clear doors.

See the Warranty & Return Policy shipped with this enclosure. Warranty protection and information for each component such as fans, filters, and thermostats are provided by their respective OEMs.

- This enclosure is properly installed when the top and bottom mounting ears are flush against the wall or pole-mount kit, and held securely with appropriate bolts, and the hinges face to the left side after the enclosure has been mounted
- Watertight fittings must be used on all openings.
- The door-gasket around the opening of the enclosure must remain in place and never be removed or altered.
- The fans and shrouds must be mounted using the appropriate pre-cut holes on the enclosure, and strictly following OEM installation guidelines.
- **If you have ANY questions regarding the installation of these products, call Mier Products at 1-800-473-0213**

Your Fans have been placed in a carton and stored inside the enclosure for shipment to protect them. Please CAREFULLY remove them along with the Shrouds, Filters and Hardware and place them aside for installation.

If you have any questions please call Mier Products at 1-800-473-0213 between 8am and 5pm EST.



1-800-473-0213 | www.mierproducts.com



Wireless Vehicle Detection | Driveway Alarms | Drive-Up Window Detection | Buried Sensor Systems | Instrument Boxes | DVR/CPU Lockboxes
NEMA Enclosures | Outdoor Enclosures | Temperature Controlled Enclosures | UL/NEMA Non-Metal Enclosures | Rack Enclosures, Shelves,
and Drawers | Siren/Speaker Cabinets | Bell Boxes | Structured-Wiring Flush-Mount Cabinets | Power Supply Boxes | Battery Cabinets
Transformer Covers | Custom Fabrication, Powder Coat, and Screening



Mounting Examples for Mier Products' TEMPERATURE CONTROLLED ENCLOSURES

Mounted inside the gate-house at a gated community



Along a gate using metal tubing to run wiring from one enclosure to another



Wall-mount



Rack Enclosure mounted on a wall



Using metal tubing or angle-iron and a concrete slab



Installer made mounting surface



Using metal tubing and angle-iron



Pole-Mount Kits available for our enclosures to be mounted on 4" to 14" poles. Call us and specify the enclosure you want to use, and the pole size, for help choosing the correct pole-mount kit.

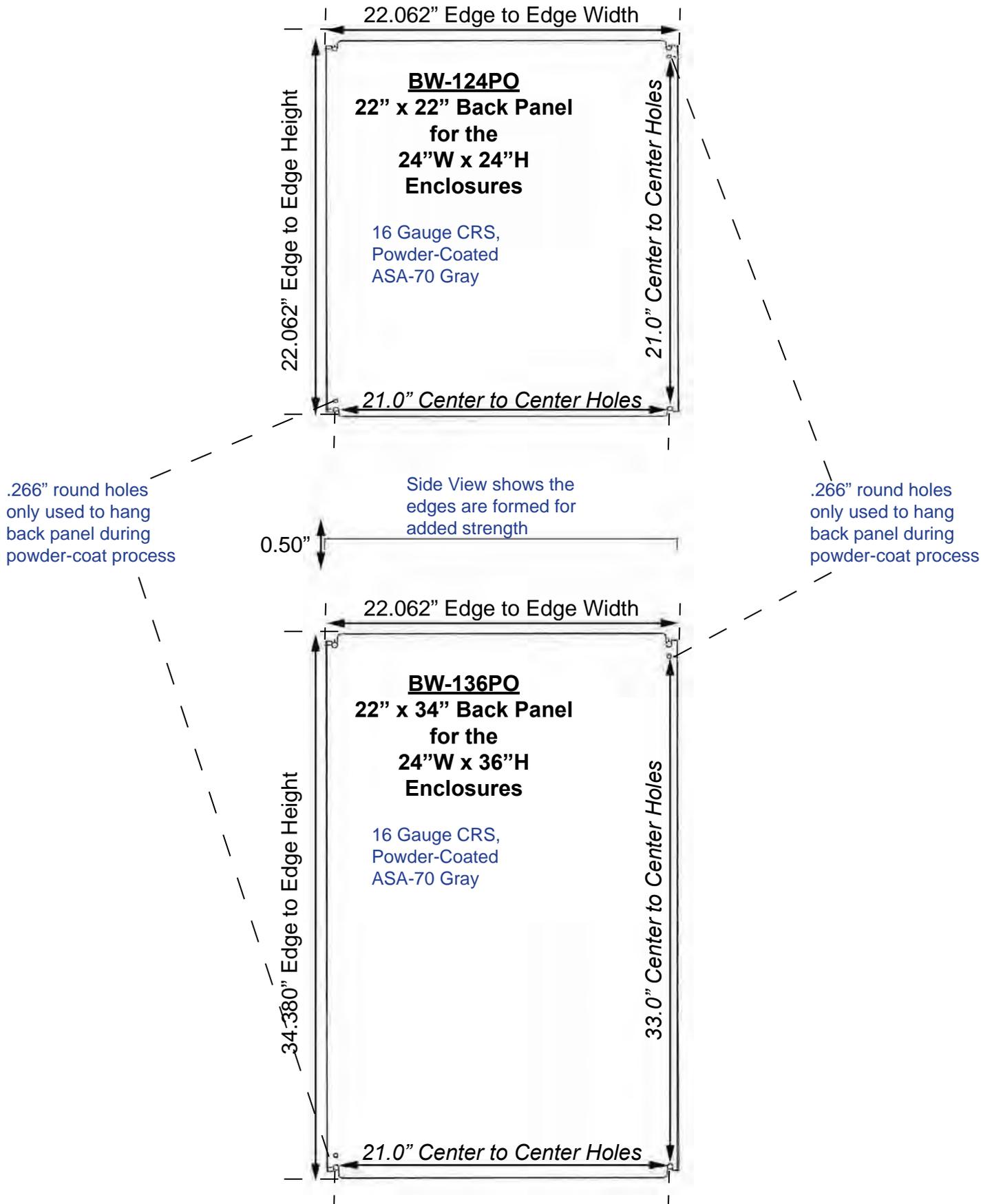


NOTE: Do Not Mount On Apartment/Condo/Office Walls
Home and office AC units are mounted a few feet away from a home or on the roof of an office building in order to avoid vibration noise from becoming a nuisance to those who live/work within. For that same reason, Mier recommends installers mount our temperature-controlled enclosures on concrete slabs with angle-iron or poles as pictured, or on walls that are not common to living or office space.

- Our engineers recommend the following options around **RGS fittings** in holes installers might cut into the enclosures, in order to keep NEMA ratings:
- If not using conduit or flex-cable, and running your cords directly into the enclosure, we recommend drilling your holes in the bottom of the enclosure and using a Heyco fitting appropriate for your specific cord size, and able to fit in our 3/16" enclosure wall thickness. These fittings can be found at: http://www.heyco.com/Liquid_Tight_Cordgrips/index.cfm
 - If you are using conduit or flex-cable, we recommend drilling your holes in the bottom of the enclosure and using an appropriate fitting such as:
 - SealCon DS21AA-BK = 3/4" Liquid-Tight Conduit Fitting with DOUBLE Lock - <http://www.sealconusa.com/conduit/product/double-seal.html>
 - SealCon ST21NA-BK = 3/4" Liquid-Tight Conduit Fitting with SINGLE Lock - <http://www.sealconusa.com/conduit/product/condsttwist-npt.html>
 - McMaster Carr 7119K13 = 3/4" Liquid-Tight Conduit Fitting/Heavy-Duty - <http://www.mcmaster.com/#7119k13/=vg864m>



Back Panels for 24" x 24" and 24" x 36" Enclosures



Dimensions and Weight

- Outside dimensions *without* Shrouds attached: 24.8"W x 26.5"H x 8.8"D
- Outside dimensions *with* Shrouds attached are: 35.3"W x 26.5"H x 8.8"D
- Inside dimensions are: 23.9"W x 23.9"H x 7.9"D
- Internal back panel dimensions: 22"x22"
- Enclosure with back panel weighs 54 lbs
- Shrouds (2) weigh and additional 5.2 lbs
- Shipping skid weighs 50 lbs

External 0.580" mounting hole dimensions are: 20" center-to-center from left to right and 25 3/8" center-to-center from top to bottom

Holes for mounting the Shrouds are pre-cut on both sides. Shrouds are 6.75" x 7" x 5.25" each

Removable Door

Two 1/4-Turn Latches, and one Tubular Lock with a set of two keys

Ground Lug

Right Side

Removable Back Panel
22" x 22" sits on 6 standoffs

Literature Tray with key tabs for 3 sets of keys located on the inside of the door

Rain-Channel and bulb-seal gasket for a tight fit with the door when the two 1/4-turn latches are closed

BW-1248FC with shrouds attached

Left Side

Easily mount the removable back panel on the 1" standoffs welded into the back of the enclosure

Mounting options

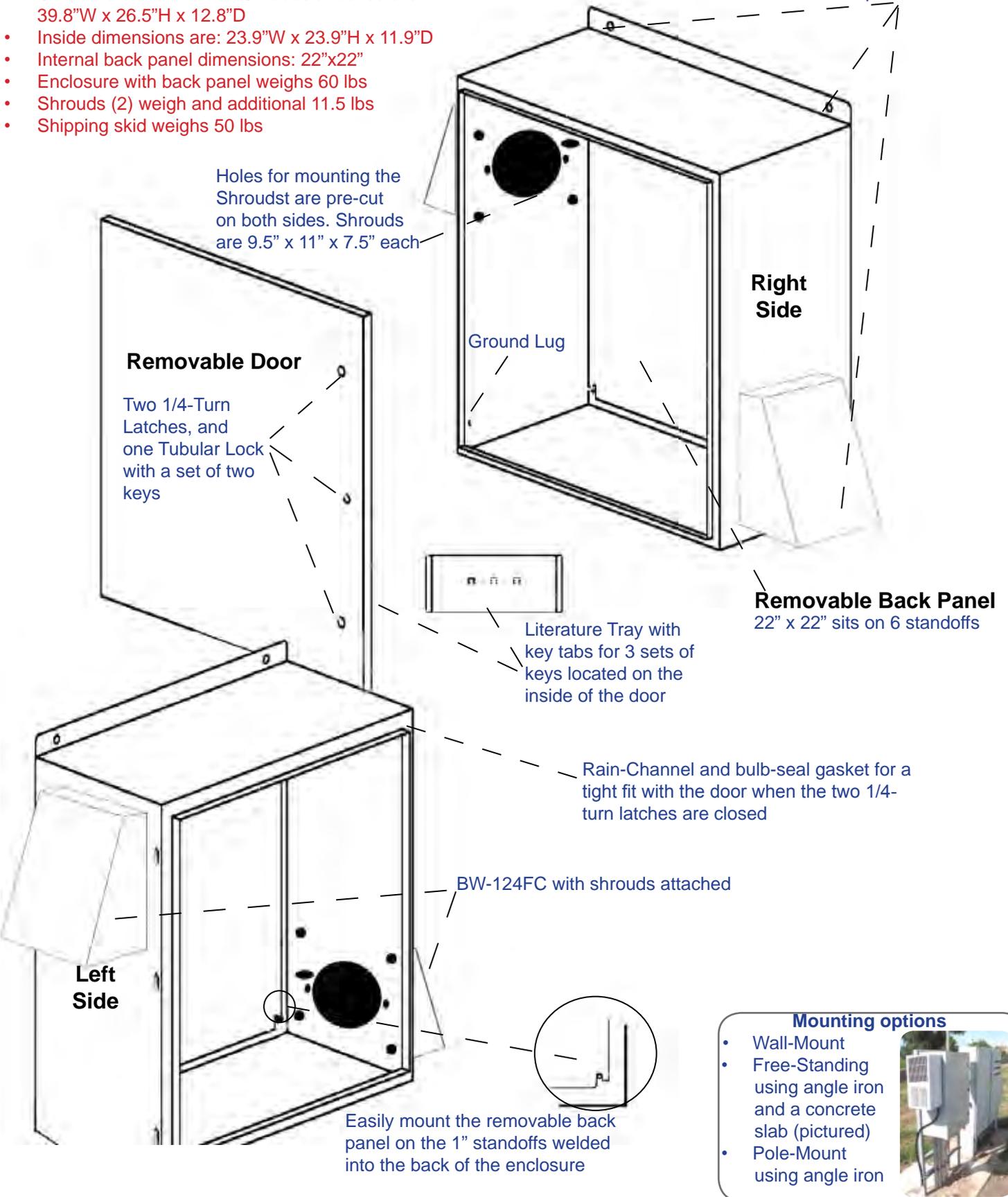
- Wall-Mount
- Free-Standing using angle iron and a concrete slab (pictured)
- Pole-Mount using angle iron



Dimensions and Weight

- Outside dimensions *without* Shrouds attached: 24.8"W x 26.5"H x 12.8"D
- Outside dimensions *with* Shrouds attached are: 39.8"W x 26.5"H x 12.8"D
- Inside dimensions are: 23.9"W x 23.9"H x 11.9"D
- Internal back panel dimensions: 22"x22"
- Enclosure with back panel weighs 60 lbs
- Shrouds (2) weigh and additional 11.5 lbs
- Shipping skid weighs 50 lbs

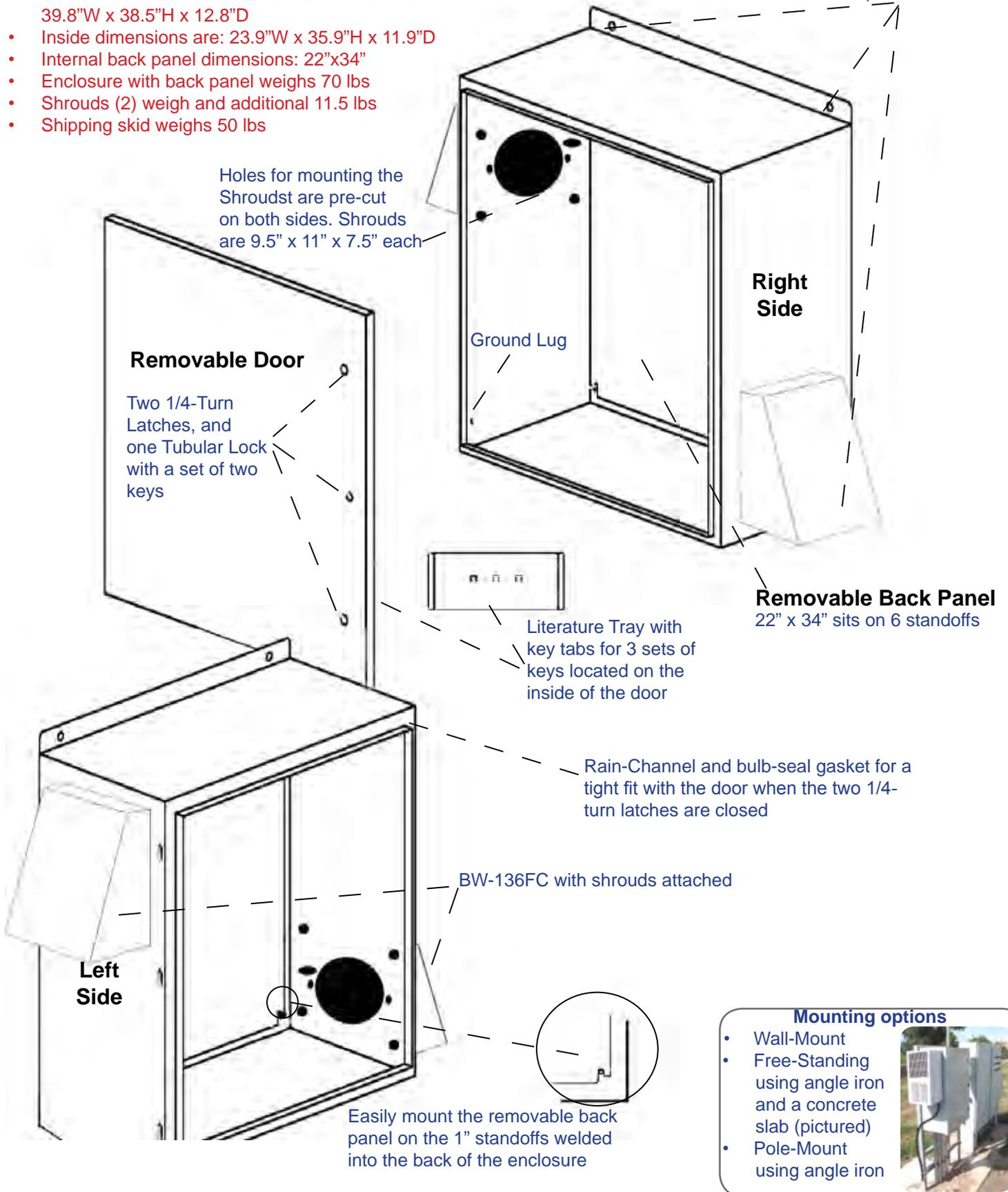
External 0.580" mounting hole dimensions are: 20" center-to-center from left to right and 25 3/8" center-to-center from top to bottom



Dimensions and Weight

- Outside dimensions *without* Shrouds attached: 24.8"W x 38.5"H x 12.8"D
- Outside dimensions *with* Shrouds attached are: 39.8"W x 38.5"H x 12.8"D
- Inside dimensions are: 23.9"W x 35.9"H x 11.9"D
- Internal back panel dimensions: 22"x34"
- Enclosure with back panel weighs 70 lbs
- Shrouds (2) weigh and additional 11.5 lbs
- Shipping skid weighs 50 lbs

External 0.580" mounting hole dimensions are: 20" center-to-center from left to right and 37 3/8" center-to-center from top to bottom

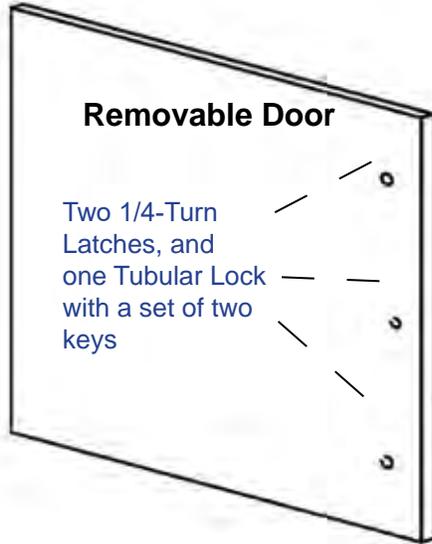
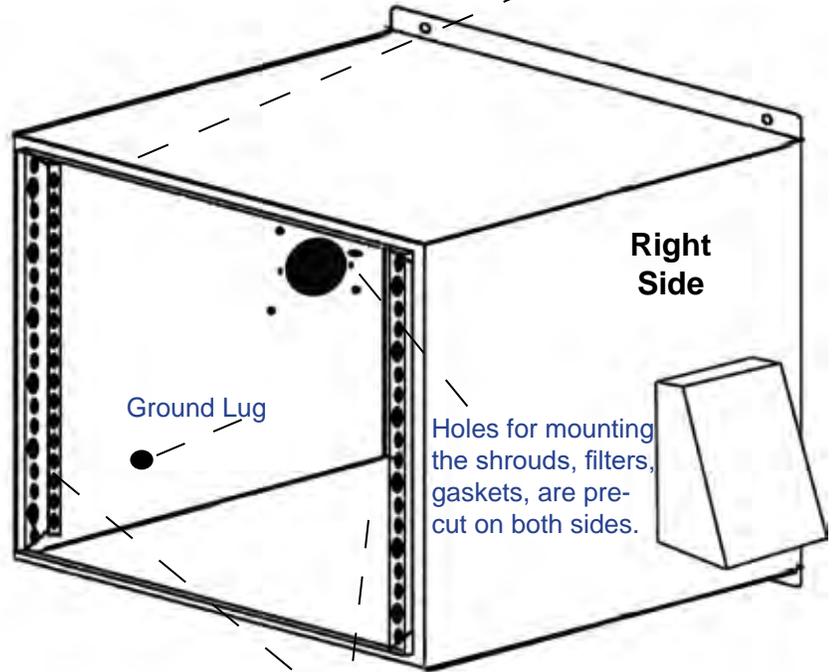


BW-RACKFC

Dimensions and Weight

- Outside dimensions *without* Shrouds: 22"W x 24"H x 24"D
- Outside dimensions *with* Shrouds: 37"W x 24"H x 24"D
- Inside dimensions are: 21.5"W x 23.7"H x 23.8"D
However, the standard 19" 12RU Rack makes the workable rack space 19"W x 21"H x 22"D plus another 1.5" in front of the rack
- Enclosure weighs 105 lbs
- Shrouds weigh 6 lbs each (12 lbs total)
- Shipping skid weighs 50 lbs

Rain-Channel and bulb-seal gasket for a tight fit with the door when the two 1/4-turn latches are closed

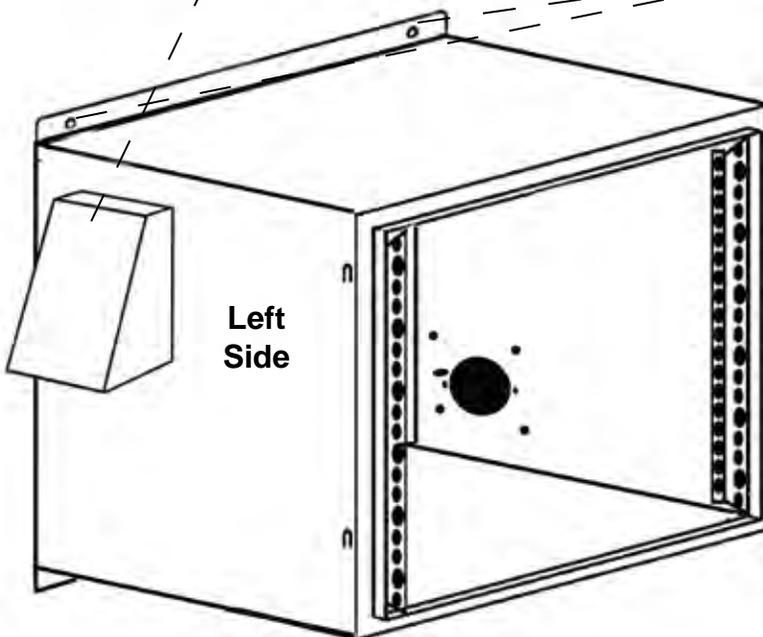


12 RU Rack-Rails

NOTE: The distance from rails to the back of the enclosure is 23 inches deep. However, there are tabs that protrude in on both the rear-left and rear-right which the rack mounts to, so it is 22" on the extreme left and extreme right.

BW-RACKFC with Shrouds attached.

External 0.580" mounting hole dimensions are: 20" center-to-center from left to right and 25 3/8" center-to-center from top to bottom



Mounting options

- Wall-Mount
- Free-Standing using angle-iron or pole-iron and a concrete slab (pictured)
- Pole-Mount using angle iron

