The VRE Series of Ventilated Robotic Enclosures are designed to specifically house bench top laboratory robots or automated equipment to protect lab personnel.

Used where exposure to fumes or vapors is low, these units provide a negative pressure zone inside the unit when the automated equipment is in use. When it is necessary for operators to enter the enclosure to make adjustments, etc., air will enter through the front opening and out the exhaust port.

When outfitted with black acrylic panels, the VRE Series enclosures are also used in light sensitive experiments.

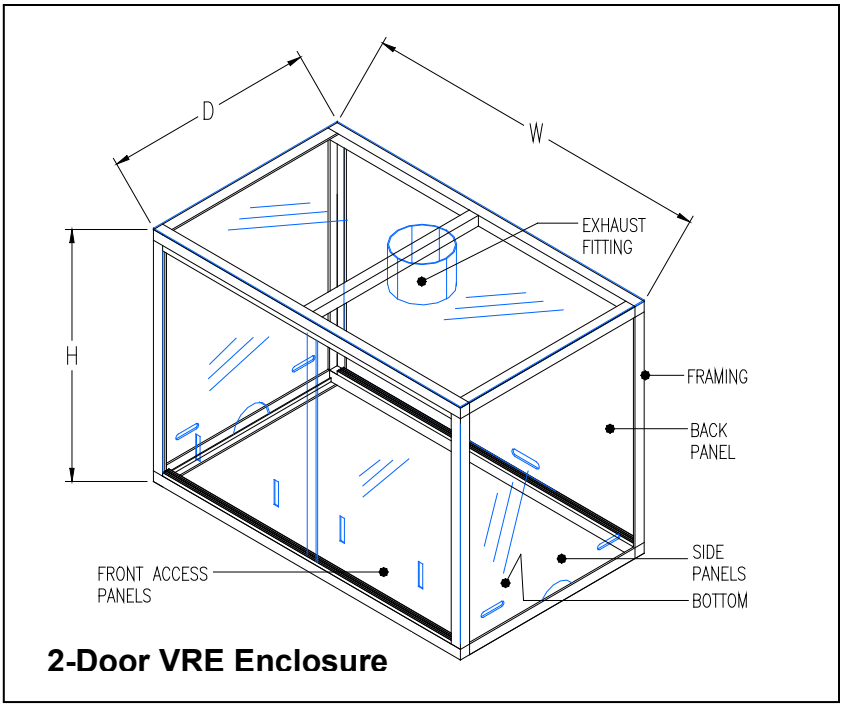
VRE for light sensitive assays (doors open)

Engineering details in our Standard Designs and Custom Applications are focused around the Scientists, blending our experience in Industrial Engineering, Ergonomics and Automation.

Dozens of standard configurations combined with a full assortment of options enable specifiers, architects and engineers versatility required in todays challenging lab environment.

VRE enclosures can be provided fully assembled and installed by our technicians or shipped in kit form.

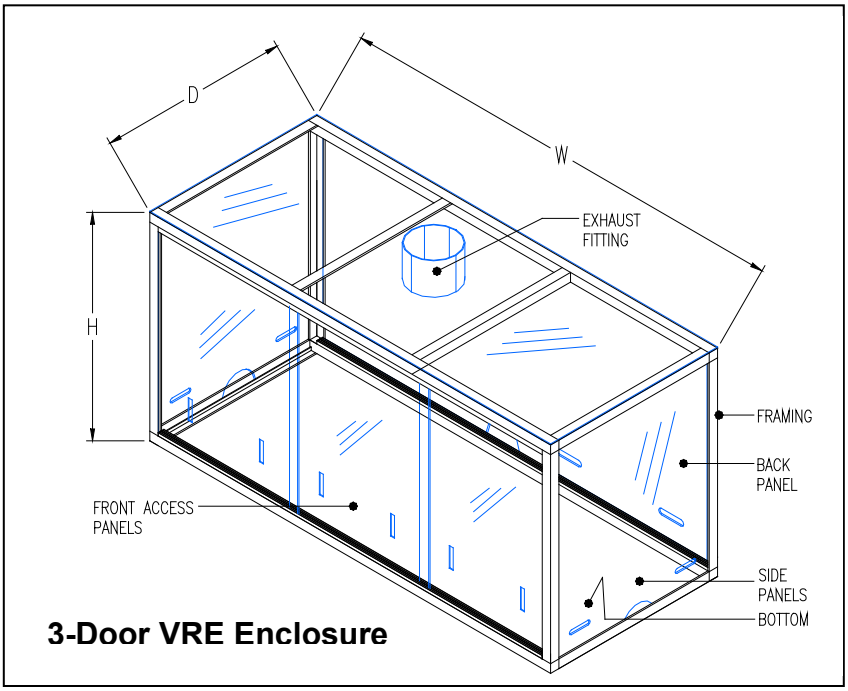
Sizing VRE Enclosures for Specific Applications



2-Door VRE Enclosure

Height (H)
Add 6” to the height of your instrument to get the minimum VRE height. Make allowances for cables or hoses that are at the top of the instrument.

Width (W)
Add 2’ total to the width of your instrument. This will allow 1’ on each side. Make allowances for supply and/or waste bottles that may be required.



3-Door VRE Enclosure

Depth (D)
Add 1’ total to the depth of your instrument. This will allow 6” front and back. Make allowances for cables or hoses that exit the back of the instrument.

VRE Series Ventilated Robotic Enclosures
36" High, Base Models

Base Model Number H x W x D		Front Sliding Panels	Intake Area with (1) panel opened	Req'd CFM with (1) panel opened*	Intake Area with (2) panels opened	Req'd CFM with (2) panels opened*
VRE	36-36-36	2	4.0	400	na	na
VRE	36-42-36	2	4.7	470	na	na
VRE	36-42-42	2	4.7	470	na	na
VRE	36-48-36	2	5.3	530	na	na
VRE	36-48-42	2	5.3	530	na	na
VRE	36-48-48	2	5.3	530	na	na
VRE	36-54-36	3	4.0	400	8.0	800
VRE	36-54-42	3	4.0	400	8.0	800
VRE	36-54-48	3	4.0	400	8.0	800
VRE	36-54-54	3	4.0	400	8.0	800
VRE	36-60-36	3	4.4	440	8.8	880
VRE	36-60-42	3	4.4	440	8.8	880
VRE	36-60-48	3	4.4	440	8.8	880
VRE	36-60-54	3	4.4	440	8.8	880
VRE	36-60-60	3	4.4	440	8.8	880
VRE	36-66-36	3	4.9	490	9.8	980
VRE	36-66-42	3	4.9	490	9.8	980
VRE	36-66-48	3	4.9	490	9.8	980
VRE	36-66-54	3	4.9	490	9.8	980
VRE	36-66-60	3	4.9	490	9.8	980
VRE	36-66-66	3	4.9	490	9.8	980
VRE	36-72-36	3	5.3	530	10.6	1060
VRE	36-72-42	3	5.3	530	10.6	1060
VRE	36-72-48	3	5.3	530	10.6	1060
VRE	36-72-54	3	5.3	530	10.6	1060
VRE	36-72-60	3	5.3	530	10.6	1060
VRE	36-72-66	3	5.3	530	10.6	1060
VRE	36-72-72	3	5.3	530	10.6	1060

* Based on 100 FPM face velocity

VRE Series Ventilated Robotic Enclosures
42" High, Base Models

Base Model Number H x W x D		Front Sliding Panels	Intake Area with (1) panel opened	Req'd CFM with (1) panel opened*	Intake Area with (2) panels opened	Req'd CFM with (2) panels opened*
VRE	42-36-36	2	4.8	475	na	na
VRE	42-42-36	2	5.5	550	na	na
VRE	42-42-42	2	5.5	550	na	na
VRE	42-48-36	2	6.3	630	na	na
VRE	42-48-42	2	6.3	630	na	na
VRE	42-48-48	2	6.3	630	na	na
VRE	42-54-36	3	4.8	475	9.5	950
VRE	42-54-42	3	4.8	475	9.5	950
VRE	42-54-48	3	4.8	475	9.5	950
VRE	42-54-54	3	4.8	475	9.5	950
VRE	42-60-36	3	5.3	530	10.6	1060
VRE	42-60-42	3	5.3	530	10.6	1060
VRE	42-60-48	3	5.3	530	10.6	1060
VRE	42-60-54	3	5.3	530	10.6	1060
VRE	42-60-60	3	5.3	530	10.6	1060
VRE	42-66-36	3	5.8	580	11.6	1160
VRE	42-66-42	3	5.8	580	11.6	1160
VRE	42-66-48	3	5.8	580	11.6	1160
VRE	42-66-54	3	5.8	580	11.6	1160
VRE	42-66-60	3	5.8	580	11.6	1160
VRE	42-66-66	3	5.8	580	11.6	1160
VRE	42-72-36	3	6.3	630	12.6	1260
VRE	42-72-42	3	6.3	630	12.6	1260
VRE	42-72-48	3	6.3	630	12.6	1260
VRE	42-72-54	3	6.3	630	12.6	1260
VRE	42-72-60	3	6.3	630	12.6	1260
VRE	42-72-66	3	6.3	630	12.6	1260
VRE	42-72-72	3	6.3	630	12.6	1260

* Based on 100 FPM face velocity

Framing Options

SS - 304 stainless steel

- 1 ½" square tube and angle members, welded assembly
- Chemical resistant

AL - 6061 aluminum extrusion.

- 1 ½" or 2" extruded aluminum, bolted assembly
- Chemical resistant clear anodized finish standard

Panel Glazing Options

Glazing provides the multiple functions of visibility, protection from fumes and moving equipment and aesthetic appearance in lab environments. Standard panel thickness is ¼", with optional 3/8" and ½".

CA - Clear Acrylic

Our standard, Clear Acrylic is a high translucent product that is ideal for enclosing machinery while maintaining clean lines of sight. Available with abrasion resistant (AR) coatings for scratch resistance. Highly resistant to chemicals.

SA - Smoked Acrylic

While maintaining the same chemical resistant properties as clear acrylic, the black "smoked" appearance provides protection for light sensitive procedures and makes an aesthetically pleasing choice for Lab applications.

BA - Black Acrylic

For extremely light sensitive procedures, black acrylic provides the best protection.

CPC - Clear Polycarbonate

While not as translucent as Acrylic, Polycarbonate provides high impact strength making it ideal for machine guards and more industrial applications. Available with abrasion resistant coatings for scratch resistance. Highly resistant to chemicals.

AR - Abrasion Resistant Coatings

Frequent handling and cleaning can create scuffs and scratches, impeding view into enclosed equipment. All of our glazing options can be applied with an abrasion resistant coating providing remarkable resistance.

Exhaust Port Options

Exhaust ports are located at the top of the VRE Enclosures for slip fitting flex hoses. Location, size and materials of exhaust port selected based on project requirements.

Location

Standard Location at dead center of top panel. Any location optional.

Size

Standard sizes are 4”, 6” and 8” OD.

Materials

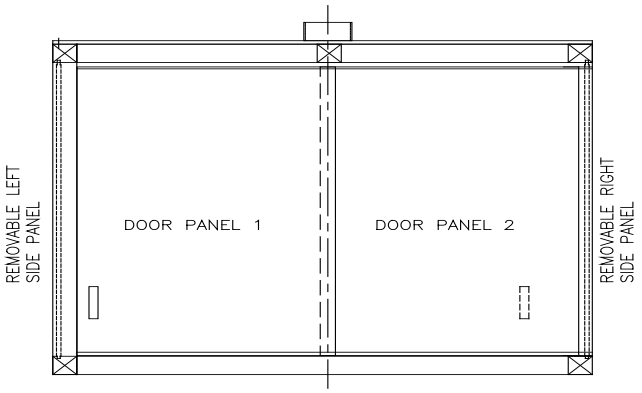
Standard material is same as panels, solvent welded to top. Optional 304 SS flanged fitting with (2) ¼” FNPT plugged couplings for air flow test ports.

Operator Front Access Doors

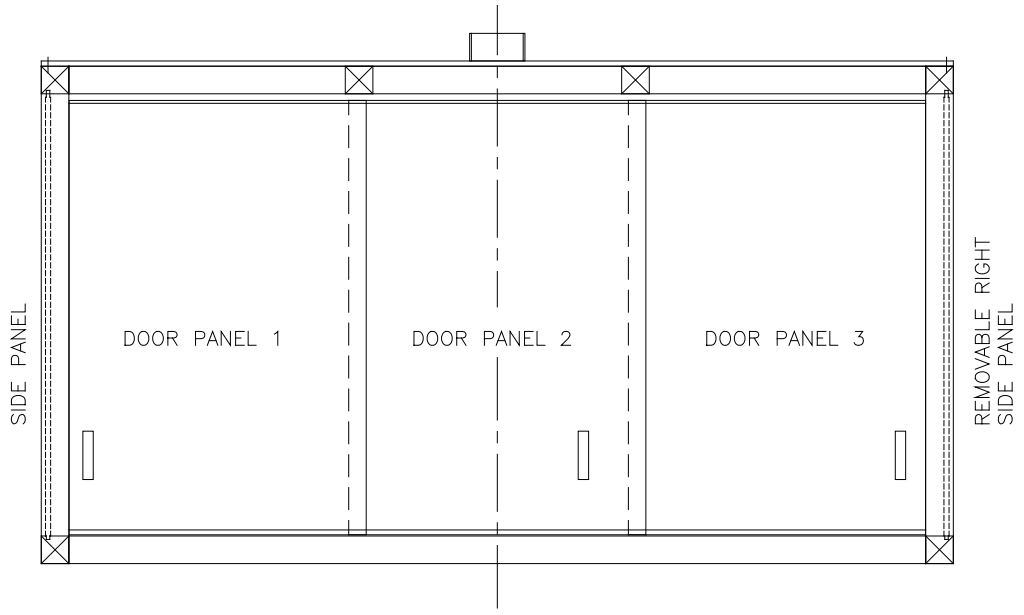
On the side of the enclosure most frequently accessed by the Scientists, we offer a wide variety of Access Door Options to meet the specific requirements of the application including Panel Sliding Doors, Horizontal Hinged and Vertical Hinged.

By far the most popular is our standard sliding panel designs:

2 Panel Sliding Doors (for Enclosures up to 48” wide)



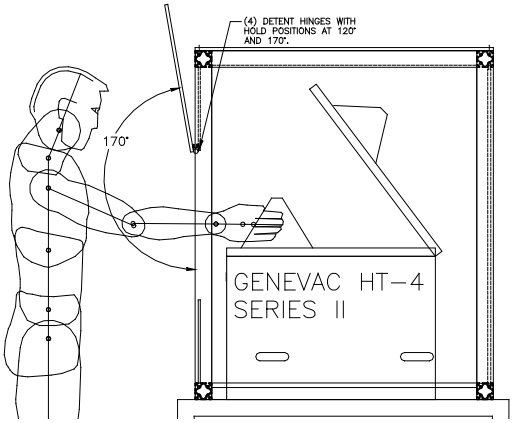
3 Panel Sliding Doors (for Enclosures over 48” wide)



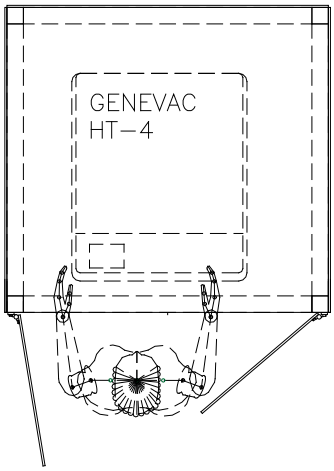
Sliding panels have as standard machined recesses for fingertips. D-ring handles are optional.

Depending on the application, horizontal or vertically hinged units can be provided as an option.

Horizontal Hinged



Vertical Hinged



Side Panel Configurations

Lift, Tilt and Remove the Side Panels for Quick Access

The Lift and Tilt Panel removal system was engineered to enable quick and easy access to all sides of enclosed equipment and robots. While the “operator side” of the enclosure is most times suitable for hinged or sliding doors, the back and sides many times don’t have sufficient clearance.