



VIRTUAL POLYMER
COMPOUNDS, LLC

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**HYTECH ENCLOSURES
SECTION 13130-1D
PREFABRICATED MODULAR SHELTER**

PART I GENERAL:

1.01 Description of Work:

- A. The work herein includes the provision and installation of a prefabricated shelter as shown on the Drawings and includes all appurtenances necessary for a complete installation. Options shall be provided as specified herein.
- B. Related Work Specified Elsewhere:
 - Concrete foundation pad: (Recommended: minimum 4" height, 6" surround, 3,000 PSI material)
 - Electric rough-ins
 - Plumbing where required

1.02 Quality Assurance:

Manufacturer:

- A. A firm with no less than seven years of successful experience in the production of units similar to the one required for this project.
- B. Unit shall be completely assembled and pre-wired.

Performance Requirements:

- A. Units to be manufactured with Class I Fire-Retardant Resin.

Fire Resistance: Unit shall provide a Class I Fire resistant rating with flame spread of not over 30 for structural panels per ASTM E-84.

- B. Material Properties: Panelized units shall be constructed of Fiberglass Reinforced Polyester (FRP) having the following physical properties.
 - a. Wind pressure equal to 110 mph: 63.6 PSF
 - b. Live load on flooring: 50 PSF
 - c. Snow load: 40 PSF
 - d. Dead Load: 40 PSF
 - e. Wind Uplift Load 46 PSF

The manufacturer must be able to substantiate these claims through performance calculations and supporting test data, when requested. Said calculations shall be certified by a licensed P.E. in the state of manufacture.

PART II – PRODUCTS

2.01 Shelter Unit:

Shall be equivalent to Modular Shelter System, Model SNH _____ HyTech Series, as manufactured by Virtual Polymer Compounds, LLC. 10478 Ridge Rd. Medina, NY 14103. 888-290-9522

Unit shall be _____ wide, by _____ long and shall be provided as follows.

2.03 Structural Panels:

- A. Panels comprising the structure shall be of fiberglass reinforced polyester having the properties required above. All wall panels shall be glazed to provide 360-degree visibility. Steel 1-1/4" x 1-1/4" .040" tubes shall be encapsulated into each panel for structural reinforcement, including all necessary hardware. Hardware shall be of stainless steel or aluminum.
- B. Exterior panel finish shall be smooth gel coat. Finish color shall be as selected by the Owner. Interior finish shall be manufacturer's standard neutral carpet on interior walls and rippled gel coat on interior ceiling.
- C. Interior wall panel shall be carpeted with a tan or gray wall carpet to provide an acoustically acceptable environment. The unit shall provide a Db reduction of 15. Wall covering shall have no less than a Class B rating per ASTM E84.
- D. Panels shall be insulated with 3/8-inch thick end balsa wood core, to provide a "K" factor of 0.11 BTU-H per square foot per degree F per inch, for a 5/8 inch total composite wall.
- E. Roofpanel shall be equipped with drain scuppers at each end of the unit and shall be a total of 1-1/4 inch total composite.
- F. Unit shall be manufacturer's standard height, 8'-0" plus 1" without optional roof-mounted air conditioner.

2.04 Glazing:

All wall and door panels shall be glazed with a 1/4-inch thick abrasion resistant polycarbonate sheet set into molded heavy-duty neoprene gaskets with integral locking strips.

Glazing shall be clear or bronze tint (**specify**).

2.05 Doors:

Doors shall be hinged or sliding (**specify**) and shall be equipped with locks for security. Doorframes shall be of extruded aluminum with clear anodized finish. Door panel shall match the remaining exterior color of the prefabricated enclosure.

2.06 Flooring:

Flooring shall be 3/4 thick APA A-C Exterior Grade plywood with edges and bottom weather protected. Interior floor to be tan or gray colored resilient rubber tile (**specify**).

2.07 Electrical/ Mechanical Systems:

Wiring and Lighting:

Unit shall be pre-wired with interior grade plastic coated wiring run through concealed conduit, except at ceiling where conduit may be exposed. Unit shall be supplied with a 100 amp, multi-circuit distribution box for connection to electrical rough-in. Manufacturer to supply kiosk breakers; electrical rough-in to be done in field by others.

- A. Unit shall be equipped with a wall switch for lights and with one duplex outlet. Outlet shall be located where shown on the drawings.
- B. Unit shall be equipped with at least two 110V fluorescent lights of length and width appropriate for unit size, complete with rapid start ballasts.
- C. Unit shall be wired in accordance with National Electrical Code (NEC).

2.08 Counter:

Counters: of type and location shown on the drawings, counters shall be constructed of hardwoods and plywood understructure, with work surfaces covered with off-white plastic laminate. One counter with lockable drawer shall be included as standard equipment with each unit.

Units with drawers shall be fitted with the manufacturer's standard operating hardware. Counters shall be bolted to reinforced rib sections of wall panels.

2.09 OPTIONAL Heating/Cooling equipment (SPECIFY)

Electric Wall Heater (specify A. or B.)

- A. Heater shall be forced air/electric wall-mounted down flow type. Heater shall have a 13,650 BTU/H delivery capacity and shall be rated 3000 watts at 208 volts. Heater shall be automatic control type with louvered front plate to channel air flow. Heater shall include thermal limit switch, matched fan and motor, fan delay switch and automatic thermal switch.
- B. Heater shall be forced air/electric wall-mounted down flow type. Heater shall have a 5120 BTU-H delivery capacity and shall be rated 1500 watts at 120 volts. Heater shall be automatic control type with louvered front plate to channel air flow. Heater shall include thermal limit switch, match fan and motor, fan delay switch and automatic thermal switch.

Roof-Mounted Air conditioner / Heater Combination

- C. Unit to provide 13,500 BTU of cooling and 5120 BTU heating, 115V single phase. Unit shrouds shall be of fade-resistant plastic and weather exposed metal parts shall be corrosion-resistant material. Units shall provide individually controlled louvers and washable air filters. Units shall be thermo-statically controlled, three speed fan, seven function type to provide either heating or cooling as required, or fresh, untreated air. Unit fan shall be totally enclosed and compressor shall be hermetically sealed. Thermostat shall be variable type. Unit shall be pre-wired and UL approved. Installation by others.

2.10 OPTIONAL Accessories: (ONLY INCLUDED IF SPECIFIED)

Required items:

In addition to the optional/accessory items specified herein before, the following items may also be supplied.

1. Telephone Mounting Panel: Locate per drawing.
2. Vertical-raise, single hung window with operable and removable screen.
3. Horizontal slide window.
4. Speaker tube
5. Pass-through closure (lockable)
6. Lavatory package (includes partition with door, exhaust fan, smooth gel coat interior, light with switch, and GFI duplex outlet.) **Plumbing fixtures to be supplied and installed by others.**

PART III-EXECUTION:

3.01 Submittals:

- A. Shop drawings: Manufacturer shall submit complete shop drawings indicating all component sizes, installation procedures, wiring diagrams (if required), sizes and types of all fastening devices, and all accessories requiring field installation.
- B. Samples: Submit color samples of all materials having a choice of color for selection by the Owner.
- C. Maintenance and Installation Instructions: Submit suggested procedures for installations, care and maintenance of the materials comprising the unit, and of the optional heating and cooling units, as required.

3.02 Measurements:

- A. Verify all dimensions by taking field measurements and from final accepted shop drawings; proper fit and attachment of all items is required.
- B. Coordinate concrete flat work and electrical rough-in installations to properly conform to prefabricated unit.

3.03 Inspection:

Installer must examine sub-structure and conditions under which pre-fabricated unit work is to be installed and erected and shall not proceed with erection until unsatisfactory conditions have been corrected.

3.04 Installation:

Install system complete per final accepted shop and erection drawings and in full accordance with the manufacturer's written specifications and instructions. Some minor adjustments to the booth may be needed at time of installation and are installer's responsibility. This is necessary due to variances and irregularities in the prepared slab.