

## Enclosure Guide Spec

### Sound Attenuation

- Custom fabricated, walk-in enclosure to be sound attenuated to **65dBA @ 7m** in free field conditions.

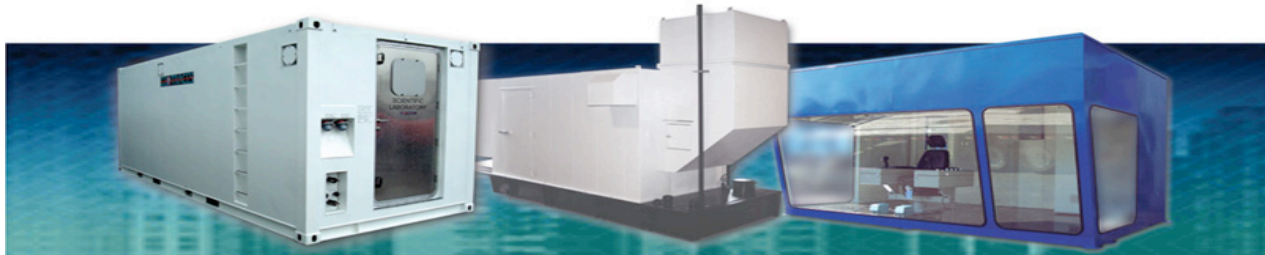
### Building

- Walls shall be **4" thick**, made of formed **12 gauge** satin coat panels to ASTM A653
- Walls shall be insulated with mineral wool insulation to **R16 insulation** value and lined with 22 gauge galvanized steel perforated sheets (liner to be riveted, teck screws are not permitted)
- Walls shall be stitch welded and caulked before paint
- Roof shall be fully seam welded, **4" thick, 12 gauge** satin coat to ASTM A653
- Roof shall be insulated with mineral wool insulation to **R16 insulation** value and lined with 22 gauge galvanized steel perforated sheets
- **Roof shall have a 2" slope to reduce ponding of water --OR-- Roof shall have 2" peak to reduce ponding of water**
- **Enclosure to be designed as walk-in with 1 metre clearance at rear and on both sides**
  - o **Side clearance to be from edge of skid, not including radiator**
- OR---
- **Enclosure to be designed as skin-tight, with control panel and generator circuit breaker access through a side door**
- Enclosure to be designed to meet **British Columbia** Building Code
- **Walk-In Enclosure shall come with two (2) only man doors c/w freezer-style panic door hardware, bulb seal and drip-edge rain gutter**
- OR---
- **Skin-Tight Enclosure shall come with four (4) only Access Doors, c/w recessed automotive style door hardware, bulb seal, and drip edge rain gutter**
- **Two (2) OSHA Compliant Stair Sets c/w Landing, Platform and Hand Railing**
- All fabrication shall be performed in a CWB Certified facility by CWB Certified welders

### Ventilation

- Intake hood shall be lined, complete with motorized (power close, spring open), **insulated** dampers and bird screen at opening
- Discharge hood shall be lined, **complete with thermostatically controlled recirculation air system**, integral baffles and discharge hush duct w/ bird screen at opening
- **Gooseneck Snow Hood / Discharge Hush Duct included, removable for shipping**

### Base / Floor



- Base shall be fabricated using **C12** structural channel steel c/w integral lifting lugs and **C6** channel cross members
- Floor shall be insulated to **R21 insulation** value with polyurethane spray foam insulation
- Floor shall be 3/16" checker plate c/w generator mounting rails and **2"** containment sill
- Lift lugs to be weld tested
- **Natural gas fuel line shall be plumbed to exterior skid-edge, regulators etc. shall be installed by on-site natural gas system installer**

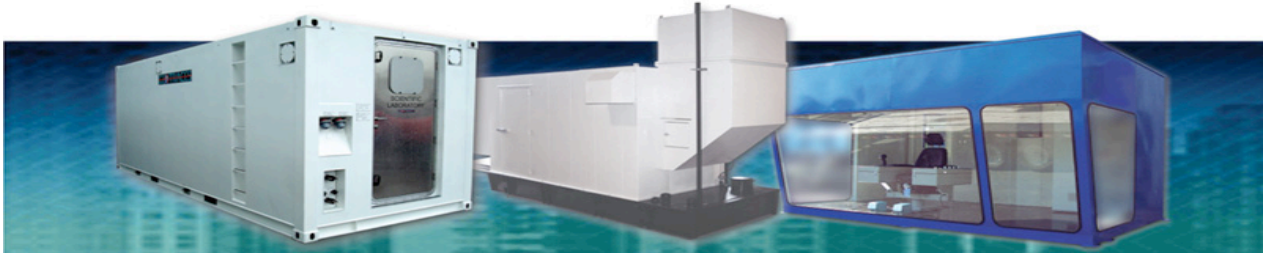
--- OR ---

#### Fuel Tank Base

- Fuel tank, sized for **24hrs** of run-time at **100%** load, shall be double-walled and **CAN/ULC S601** certified complete with the following:
  - Emergency relief fittings
  - Normal vents, extended 12' above grade for code compliance
  - Fuel supply (with check valve) and return lines
  - Mechanical fuel gauge
  - Float switches for high/low fuel level and leak detection
  - 2" Camlock fill with 5 gallon spill containment bucket
  - Electrical stub-up area(s)
  - Lifting eyes
  - 75mm containment sill around the perimeter
  - Genset Support Rails shall be provided, running longitudinally with engine skid
- Fuel tank base shall serve as the floor of walk-in enclosure, therefore there shall be no generator mounting cross-members allowed across enclosure floor – this is to prevent tripping hazards
- Fuel tank base shall be manufactured in Canada by the same manufacturer as the enclosure package to ensure optimal QA/QC and integration between fuel tank base and generator

#### Electrical

- House electrical loads shall be powered via one (1) only **18CCT, 120/208V, three phase, 100 Amp** distribution panel board connected to the following items
  - **Four (4)** only 120V vapor proof fluorescent lights c/w two (2) only 3-way light switches
  - **Two (2)** only 120V, 20A GFCI convenience receptacles installed inside enclosure
  - **Two (2)** only **4kW** fan-forced space heaters
  - Circuits for block heater(s), anti-condensation heater & battery charger
- **Two (2)** only emergency lights c/w **2hr** battery back-up, installed inside enclosure



- All electrical enclosure wiring is in surface mount EMT, up to 6' away from the genset, where liquid tight flex will be used to provide a non-rigid connection between the engine and the enclosure
- All components are CSA or ULC listed and bear the CSA or ULC Label
- All electrical work to be performed by ticketed (journeyman) electricians
- CSA Special Inspection to SPE-1000 is required for all enclosure electrical work with certification by approved inspection body

#### Paint System

- Enclosure (Satin Coat Galvanized) Surface Preparation shall be to SSPC-SP1
- Fuel Tank Base Surface Preparation shall be to SSPC-SP1
- Skid Base Structural Materials Surface Preparation to SSPC-SP6
- Primer shall be International Paints Epoxy
- Top Coat shall be International Paints Polyurethane, enclosure exterior colour to be determined by **customer**, colour matching to be available if required

#### Exhaust System

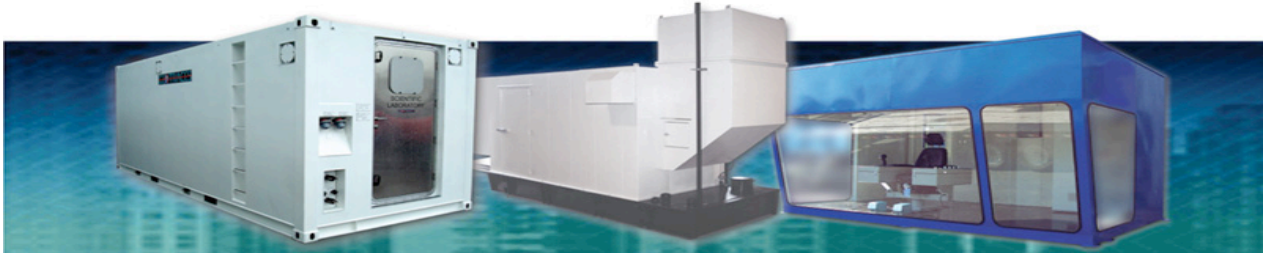
- **Super-critical grade silencer** shall be **installed inside enclosure** c/w flex, exhaust piping, roof penetration and rain cap
- Insulation blankets shall be installed on **interior-mounted silencer** and interior exhaust piping

#### Manufacturing

- All major components in the enclosure manufacturing process (enclosure, hoods and fuel tank/base) must be designed and manufactured by a single company

#### Packaging

- Generator set to be installed in enclosure on generator manufacturer supplied vibration isolators
- Radiator flexible coupling shall be installed between radiator and air discharge duct
- Battery charger shall be wall-mounted inside enclosure and wired to distribution panel
- Generator heaters (block heater, anti-condensation heater etc.) shall be wired to distribution panel
- **Fuel tank alarms (level and leak float switches) shall be wired to the generator control panel**
- **Automatic Transfer Switch(es) installed inside enclosure and wired back to generator circuit breaker(s)**
- **Radiator Duct-Mounted Load Bank installed inside enclosure and wired back to generator-mounted circuit breaker**



Quality Control, Testing, & Project Management

- Structural Design by Structural P.Eng Licensed in **British Columbia**
- All fabrication and packaging to be performed by an ISO 9001:2008 certified company
- Fabrication to be performed by CWB Certified Welders IAW CWB Standards
- Mechanical Installations to be inspected by In-House Project Manager
- All Electrical Installations shall be by Licensed Electricians, supervised by in House Electrical Engineer.
- QA Inspection reports to be provided if required
- Progress reporting shall be provided as required, complete with digital pictures and MS project schedule.

Best Regards,



Dave de Ste Croix, Vice President  
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