environ

ENVIRON LITE ACOUSTIC ENCLOSURE SYSTEM

OPERATING AND MAINTENANCE MANUAL

Version – September 2017

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SITE DETAILS

Client:	London Projects			
Site Location:	6 Cambridge Gate			

SITE SPECIFIC ACOUSTIC ENCLOSURE DETAILS

ELV1.1.25AC Acoustic Enclosures – Mitsubishi Electric Air Conditioning Units

ENVIRON ACOUSTIC ENCLOSURES

The patented Environ acoustic enclosure normally contains refrigeration plant, air conditioning plant or air cooled condensers/chillers. Designed to allow plant items to be operated in noise sensitive areas without the need for further noise attenuation measures, the additional benefits – unobtrusive appearance and the opportunity to locate in public areas - has led to wide acceptance of the product range as an effective method of controlling noise.

ENCLOSURE DESIGN

The acoustic enclosure is designed to DIN ISO 8015 standards

Air flow is paramount in the design of acoustic solutions for AC/Refrigeration plant items – without sufficient air the plant will not work efficiently or effectively. Equally important is that air recirculation within the enclosure has to be avoided at all costs so as to maintain operational integrity – Air On to the plant has to be at ambient temperature.

Environ Lite systems are designed with airflow in mind by providing internal plenums to separate the air flows on and off the plant.

Constricting air flow is also a negative as the plant fans cannot cope with additional static pressure, so Environ Lite designs are based on maximizing air flow.

ENCLOSURE MANUFACTURE

Acoustic enclosure panels are fabricated in Zintec Cold Rolled sheet steel to DIN ISO 9001 manufacturing standards. All exterior panels have a Polyester Powder Coat finish. All relevant internal faces have 25mm acoustic foam applied

ENCLOSURE POSITIONING, ACCESS AND VENTILATION

The acoustic enclosure should be installed on a flat and level surface capable of supporting the full operational weight, which includes the enclosed plant items.

For satisfactory operation it is important that access and ventilation requirements are met. There must be sufficient space to fully open the main access doors, which also ensures correct air inlet ventilation. On the air outlet side a minimum of 300 mm should be allowed to any obstruction.

All services entry points, mechanical, electrical and drainage, shall ensure that the acoustic integrity of the enclosure is maintained.

ACOUSTIC PERFORMANCE

TRANSMISSION LOSS DATA – Environ Lite Standard Configuration								
Octave Frequency in Hertz (dB ref 2 x 10 ⁻⁵ Pascals)								
63	125	250	500	1000	2000	4000	8000	
14	16	23	30	37	39	38	39	
Equates to an Overall Reduction of 22-26dBA								

IMPORTANT SAFETY INFORMATION

The acoustic enclosure system covered by this manual has been designed to be selected, installed, serviced and maintained by competent persons only.

This manual does not cover normal safety precautions to be taken during the installation, pressure testing, evacuation or commissioning procedures associated with the enclosed Air Conditioning or Refrigeration plant. It is assumed that persons responsible for working on a refrigeration system are qualified and fully conversant with all necessary safety precautions and best industry practice.

MECHANICAL PLANT INSTALLATION PROCEDURES

Refrigeration pipe work and Electrical cabling should enter the enclosure in the correct areas provided - knock out sections can be included in the enclosure outer walls if requested. Where services enter the enclosure it is the responsibility of the installing contractor to provide/fit Gland/Grommet fittings in line with best practice installation.

It is the responsibility of the installing contractor to provide for any Condensate produced by the mechanical plant. This must be routed outside of the enclosure via flexible or rigid drain pipe work.

MECHANICAL PLANT SERVICING PROCEDURES

IMPORTANT - With the front access doors open, condenser discharge air may well enter the air inlet ducts and recirculation will elevate the discharge pressure substantially. For any prolonged service period, remove all access doors fitted to the enclosure to allow free airflow through the inner core of the housing.

Upon completion of servicing of plant items by designated contractor, it is important that the operative ensures that all relevant panels, plenum seals and access doors are fitted correctly

ENCLOSURE SERVICING PROCEDURES

It is recommended that during the prescribed maintenance of the mechanical plant, that all internal airways of the enclosure are cleared of any dust and debris to ensure optimum performance

EQUIPMENT REFERENCE SECTION

Refer to selection sheets for further details of enclosures on the site referenced above.