

# Benefits & Specification of Packaged Plant Rooms

## EllisonAC

### Benefits of Using & Specifying EllisonAC

- Design & fabrication is carried out totally in house
- Consultancy & management time together with the associated costs are significantly reduced
- Patented acoustic vented ridge for optimum temperature control
- Patented method of fixing cladding panels giving a homogeneous finish
- Concealed gutters & downspouts
- Insulated floor preventing underfloor condensation & corrosion
- Integrated electrical containment system
- Removable cladding panels
- Modular units extendable by 1172mm panels
- Integral floor drainage
- Acoustic & non-acoustic units
- Delivery & installation normally carried out within 1 working day
- The delivery will not have an effect on the critical path of the programme, as in-built plant does
- The units can be fully tested, pre-commissioned & witnessed off site
- Delivery time is normally 8-10 weeks from approval of drawings

## Specification for EllisonAC

### General

The container shall be manufactured by EllisonAC, provided with adequate means for lifting and positioning into final position utilising suitable craneage.

### Construction

The container shall be a double skinned insulated one-piece unit constructed to be capable of accommodating the full operating load of the installed equipment/installations (both point loads and uniformly distributed loads).

### Walls

External walls are to be constructed of steel panels, complete with adequate steel vertical supporting members at suitable centres. Heavy duty galvanised channel 41mm x 41mm x 2mm gap and 6mm return to be provided within each supporting member for pipework support and electrical containment systems as required.

### External Finish

The steelwork frame to be generally painted with two coats air drying enamel to Colour Code BS.10A05 Goosewing Grey or equal.

### Internal Finish

The steelwork frame to be as above. Silicone type sealant to be applied to panel joints where a weatherproof/air seal is required.

### External / Internal Panels

#### Option A – Bonded Panels (also available as fire rated)

The walls shall be preformed removable panels manufactured from Plastisol coated steel sheeting, and shall be 40mm thick zero ODP slab insulation.

Internally the panels will have bright white liner enamel affixed, encasing the whole panel.

#### Option B – Acoustic Panels (also available as fire rated)

The walls shall be preformed removable panels manufactured from Plastisol coated steel sheeting, and shall be 80mm thick rockwool insulation.

Internally the panels will have a galvanised perforated sheet fixed with a glass fibre tissue membrane to prevent migration of the insulation.

#### Option C – Bonded/Acoustic Panels (also available as fire rated)

The walls shall be preformed removable panels manufactured from Plastisol coated steel sheeting, and shall be an 80mm thick combination

panel of 40mm thick zero ODP slab insulation and 40mm thick rockwool insulation.

Internally the panels will have a galvanised perforated sheet fixed with a glass fibre tissue membrane to prevent migration of the insulation.

All of the above cladding panels shall be affixed to the container from the outside thus allowing them to be removable should they be damaged or for plant replacement. **Patent No. 2280206.** All joints should have cover strips fitted, manufactured from the same materials as the external finish thus ensuring the unit has a homogeneous finish.

### Roof

The roof shall be pitched from the central ridge, and shall be double skin, of steel construction, insulated to maintain minimum thermal transmittance. Roof finish to be same as walls (option A, B or C). Eaves to overhang walls. Guttering and downpipes shall be concealed type, manufactured from plastisol in the same colour as the unit.

### Sub-Floor

Generally for container up to a gross weight of 20 tonnes the sub-floor and floor shall be as follows. All steel shall receive a coat of weldable primer. Shall be channel with the U-section of the channel facing all internal elevations. At 1M centres through the length of the container channel shall be fitted and run from side to side. All channels shall be fully weld prepped and receive 2 welds to all joints and butt joints. Running from end to end of the container shall be 2 sections of 100 x 100 angle which shall be weld prepped and fully welded.

### Floor

On the floor shall be laid 4.5mm thick durbar plate and shall have no more than 4 joints throughout the total floor area. The durbar plate shall be welded to the sub-floor by stitch welding and there shall be a minimum of 20% of the steel contact area of the floor to the sub-base welded. All joints within the floor area shall be fully welded and prior to welding have been levelled from beneath to prevent ponding of water. A 200 x 4.5mm durbar kicker plate shall be welded to the completed floor to prevent damage to the container side panels. After the welding of the kicker plate the container shall be tested for leakage.

The completed floor shall receive 2-No. coats of epoxy non-slip semi matt floor paint to an approved colour. 1-No. coat shall be applied after completing all site works or commissioning. The sub-floor shall receive 2-No. coats of black bituminous paint applied by airless spray to ensure even coat to all steelwork.

### Underfloor Insulation

To all the sub-floor area foil faced insulation board shall be affixed thus ensuring no underfloor condensation will form resulting in corrosion to the underfloor steelwork taking place.

Where entry point is requested through the floor, a 200mm high upstand detail can be provided, matching the general 200mm high skirting throughout the container.

### Internal Drainage

Drainage will take place through the door thresholds out onto the roof area, or through an alternatively specified drain gully.

### Doors

Outwards opening steel doors are to be provided as requested and hung on stainless steel security pattern hinges. Suitably designed internal door stays are also to be fitted and door clips to hold the doors back fully, if required. The minimum door opening is to be 1M wide x 2M high and is to be sized to facilitate removal of major plant/equipment items.

All doors to be constructed and insulated to the same thermal transmittance value as the container walls. A security lock is to be fitted.

### Internal Plinths / Bases

Suitably designed pump plinths/bases can be provided where required, to comply with the requirements of equipment manufacturers.

Where bases are provided, they shall make all necessary provision to isolate vibration/noise transmission as required.

