METHOD STATEMENT

FOR

INSTALLATION

OF

FRESH AIR HANDLING UNIT

1.0 Scope

1.1 This method statement applies to the installation of floor mounted air handling units as per the Specification Section 15700.

2.0 Purpose

2.1 Purpose of this method statement is to outline the method of storage and installation of Floor mounted Air Handling Units.

3.0 Material

3.1 Fresh air handling units.

3.2 Pipes and fittings as per approved submittals/drawings.

3.3 Ducting and accessories as per approved submittals/drawings.

3.4 Electrical cables, control panel, other accessories if any, as per approved drawings and submittal.

4.0 Method

4.1 Receiving

4.1.1 On arrival at site all Air Handling Units (AHUs) shall be checked for quantities, type and model number, physical damages, orientation of coil connections, access doors, etc.

4.1.2 Upon delivery material on site inspection shall be carried by R&P/NMX/MACE.

4.1.3 Upon satisfactory inspection the AHUs shall be stored properly with protective covering.

4.2 Preparation

4.2.1 Check the AHUs foundation and ensure it is as per approved drawings.

4.2.2 Check the area around the foundation and ensure access to the AHUs from all sides as applicable.

4.2.3 Ensure availability of sufficient slope to the drainpipe, for easy draining of condensate drain.

4.2.4 Check the foundation surface and it shall be smooth finish to avoid any dust accumulation.

4.2.5 The foundation surface shall be even in all directions.

4.2.6 The foundation surface shall be cleaned before installation of AHUs.

4.2.7 Mark the AHUs position on the foundation for centralisation.

4.2.8 Place the anti vibration ribbed rubber pads of correct thickness as per approved drawings/submittals.

4.2.9 In case of multiple rubber pads the pads shall be placed one above the other, with the ribs at right angle to each other.

4.2.10 AHU sections are assembled at site/location by factory trained personal.

4.3 Installation

4.3.1 Shift the AHUs to the place of installation in safe manner using fork lift/crane as applicable. Sufficient manpower will be engaged as required for safe shifting and installation.

4.3.2 Ensure that the correct AHU is shifted to the place of installation.

4.3.3 Air inlet, outlet, fresh air connection and chilled water connection orientation are as per approved drawings.

4.3.4 If the AHUs are shipped in multiple sections, the AHUs will be assembled strictly as per the manufacturer's instructions.

4.3.5 Remove the movement arrestors provided inside AHUs at Fan and impeller which are fixed during transportation.

4.3.6 The AHUs are placed correctly on foundation with vibration isolator rubber pads at right location.

4.3.7 The AHUs will be properly levelled and parallel to room walls/other installations.

4.3.8 AHUs shall be inspected again for any damage during hoisting/shifting and installation by R&P/ETA.

4.3.9 Upon satisfactory positioning of AHUs any open air/water outlets of AHUs shall be closed properly and area shall be cleaned, complete protection in areas where other trades are working.

4.4 Air, Chilled water, Electrical and Condensate Drain connections

4.4.1 Air side connections

4.4.1.1 Ducting connection shall be done as per approved shop drawings.

4.4.1.2 Provide flexible duct connections as applicable/as approved submittal.

4.4.1.3 Provide proper supports as per approved drawings.

4.4.1.4 The weight of ducting shall not act on AHUs panel.

4.4.1.5 Before making final connections to AHUs ensure inner area of AHUs is clean, especially the impeller of the fan.

4.4.2 Chilled Water connections

4.4.2.1 Chilled water connections shall be made as per approved drawings.

4.4.2.2 Ensure supply and return connection is made properly.

4.4.2.3 Provide pipe flexible connection and other piping accessories as per approved drawings and submittals.

4.4.2.4 The piping shall be free of any strain and shall not exert any load on, AHUs panel/AHUs.

4.4.2.5 Provide vibration isolators to piping supports as per approved submittals/drawings.

4.4.2.6 Install the control valves, strainer, commissioning set correctly as per direction of flow as per approved drawings.

4.4.2.7 Ensure proper operation of valve handles and sufficient space for valve installation.

4.4.2.8 The location and orientation of the gauges and commissioning sets shall allow for easy accessibility and readability of readings.

4.4.3 Electrical connections

4.4.3.1 Electrical power connections shall be done as per approved drawings.

4.4.3.2 Cables shall be installed and terminated as per approved method statement Ref;ETA/MS/E/015.

4.4.4 Condensate drain piping connections

4.4.4.1 Condensate drain piping shall be terminated at the nearest floor drain.

4.4.4.2 Provide the `U' trap in the condensate drain piping.

4.4.4.3 Ensure provision for cleaning of `U' traps.

4.4.4.4 Ensure proper slope to enable easy draining.

4.4.4.5 Ensure trap is deeper than ESP of fan – eg., 70mm > 650pa

4.5 Cleaning

4.5.1 Clean the interiors of AHUs including the impeller, drain tray.

4.5.2 After completion of installation, it shall be checked and certified by the supplier/manufacturer and inspected by R&P/ETA.

4.6 Testing

4.6.1 The piping connections to AHUs shall be pressure tested to 1.5 times the working pressures. Coils not included in test.

4.6.2 Strainer shall be cleaned after pressure testing and initial flushing of chilled water piping system.

4.6.3 Flow test of the AHUs drain tray, condensate drain pipe and ensure water is drained out completely.

5.0 Inspection

5.1 Work Inspection Request (WIR) shall be raised for consultant's inspection.

5.2 QC inspection shall be carried out as per the installation checklist and manufacturer's instructions.

5.3 Inspection shall be recorded in the approved format and signed off by R&P.

6.0 Safety

6.1 All safety precautions shall be followed as per established project safety plan and procedure.

6.2 Only experienced and skilled technicians shall be engaged for carrying out AHUs installation work.

6.3 The people involved in the installation shall use PPE such as safety helmets, safety shoes, harnesses, gloves, etc as required.

6.4 Safety officer shall check and ensure that all safety precautions are followed.

6.5 Safety officer shall check and ensure that all scaffolding and ladders used at site are having duly signed tags.

7.0 Reference

7.1 Manufacturer's catalogue.

7.2 Approved submittal.

7.3 Shop drawings.

7.4 Specification section 15700.

8.0 Records

8.1 `Work Inspection Request' (WIR) duly signed by the Consultants.

8.2 Air Handling Unit installation checklist signed off by R&P.