General:

1.The humidifiers will comply fully with 'New

Approach' CE Directives and UL requirements.

2. The humidifier evaporative material shall, be A2-

S2,-D0 (UL Class 1) fire rating and by non-particle releasing.

3. The humidifier should have the option of utilising polyester evaporate material with a fire rating DIN EN 53438 Class F1.

4. The humidifier shall be powered by a 110V- 250V single phase 50/60Hz power supply with a low power consumption of less than 278W.

5. The humidifier shall be designed to optimise the

airflow across its surface area and allow evaporation of the desired quantity of water, with no carry-over of water droplets into the airstream.

6. The rate of evaporation shall be dictated by the air volume and temperature, humidifier physical

dimensions and the matrix depth. The depth of matrix used shall govern the efficiency of the system up to 95%.

7. The construction of this humidifier will allow for an optional droplet eliminator to be fitted should the air velocity be greater than 3.5 m/s to ensure no droplet carryover.

8. The humidifier shall be evaporative adiabatic type

and consequently incorporate a free cooling effect

following the enthalpy line on the psychometric chart.

9. All evaporative module metalwork shall be 304

stainless steel that includes a water distribution

system to ensure uniform delivery of the water across the evaporative surface.

10. The evaporative humidifier shall include a patented compact self contained hydraulic unit that incorporates a water tank and up to 5 pumps that can be mounted inside or outside the AHU. The hydraulic unit shall include Biomaster antimicrobial additive.

11. The hydraulic unit shall be installed either inside, or outside the air handling unit to allow for maintenance of the hydraulic unit to be carried out without interrupting the supply air.

14. The humidifier will have a pump assisted drain minimise hygiene cycle duration. All tank sizes should drain in <15 minutes.

15. The humidifier overflow shall be integrated into a single drain connection for simple installation.

20. A maximum of 5 stage control shall be available as standard and controlled by up to 5 24Vdc electronically commutated pumps which require no mechanical alteration to control flow rates.

21. Each humidifier must include a separate

programmable Control Panel. The

Control Panel must provide for fully

automatic control of the humidification system.

20. The Control Panel will include a touch screen control panel that allows software based commissioning and shows detailed operational, service and fault conditions.

22. Where necessary the Control Panel may be located up to 10 meters away from the Evaporative Module. It shall be pre-wired with 5m of cable.

23. The Control Panel shall be capable of accepting the following methods of humidity control:

• Humidistat/thermostat or BMS interlock.

• 0-10Vdc, 2-10Vdc or 4-20 mA control signal.

• Integral programmable on/off timer.

• Al1 Range 0-5V, 1-5V, 0-10V, 2-10V, 0-16V, 3.2-16V, 0-20V, 0-20mA, 4-20mA

24. The Control Panel will have both a service time counter and real time hours run counter, in addition to a PureFlo Ag+ counter.

25. The Control Panel will initiate and control water quality dependent cleaning cycles to control the build up of concentrates in the Module Tank.

26. The water supply and distribution system must be designed, assembled and operated in accordance with Health & Safety at Work Act 1974, Control of Substances Hazardous to Health Regulations 1994 and The Control of

Legionella Bacteria in Water Systems (L8), with regard to the risk of legionellosis.

27. The Control Panel must initiate timed drain down of the module tank at least once every 24hrs of inactivity to prevent stagnation. In the event of no demand for humidity, the tank will drain and remain empty.

28. Systems 900mm or wider can be supplied with a submerged UV water treatment system that kills micro-organisms in the reservoir. Fault detection included.

29. The humidifier shall be designed to be fully evaporative so that there is no aerosol carry over, which might carry microbes.

30. The humidifier shall be commissioned by a

Customer Services Engineer or Approved Supplier.

31. Conductivity option shall be available

32. USB fault log download / software upgrade capability.

33. Modbus connectivity included as standard.

34. BMS options ( Bacnet/ LonWorks) shall be available.

Equipment Supplier:

The system is to be manufactured by:

Condair plc – the new name for JS Humidifiers

Artex Avenue, Rustington, Littlehampton, West Sussex, BN16 3LN, UK

Tel: +44 (0)1903 850 200 - Fax: +44 (0)1903 850 345 - [uk.sales@condair.com](mailto:uk.sales@condair.com) - [www.condair.co.uk](http://www.condair.co.uk)