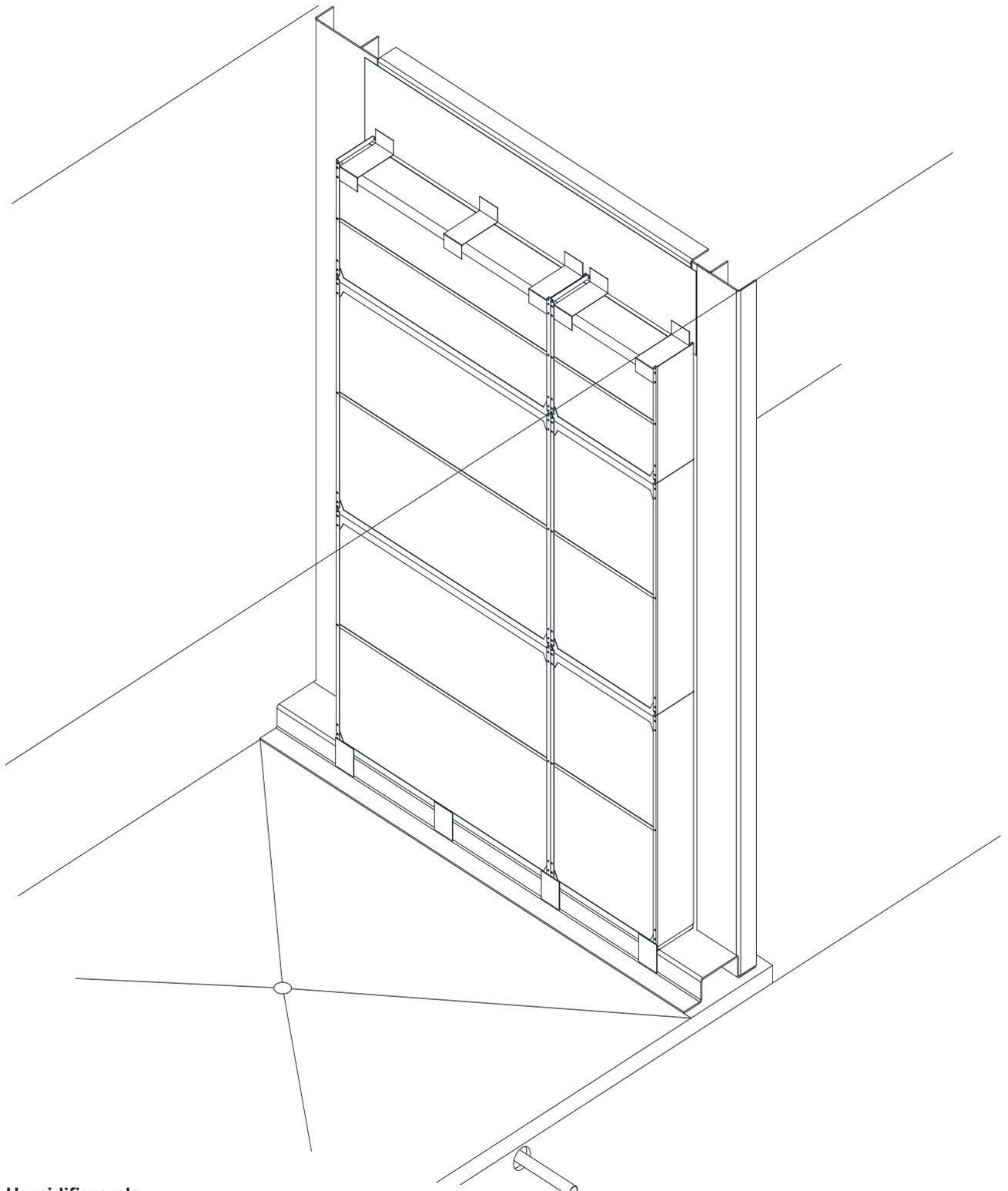

AHU Droplet Separator

Installation Guide

Version 1.00 (UK) 25.04.2012



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Introduction: Safety

Foreword

This manual has been written to ensure the safe use, performance and longevity of the equipment and is intended for use by engineers and properly trained technical personnel.

Please read this guide thoroughly before designing or installing a JS Droplet Separator system. Retain for reference.

JS Humidifiers plc policy is one of continuous research and development. JS Humidifiers plc reserves the right to amend, without notice, the specifications provided in this document. JS Humidifiers plc does not guarantee, or accept liability for, the accuracy of information in this document.

Health and Safety:

Installation, maintenance, repair work or de-commissioning should only be carried out by appropriately qualified and properly trained technical personnel. It is the customer's responsibility to ensure their suitability. The customer is responsible for ensuring that the installation of the equipment complies with all local regulations. Any risks or hazards relating to the system, including during installation and maintenance, should be identified by a competent Health & Safety representative who shall be responsible for introducing effective control measures as necessary.

COSHH and Personal Protective Equipment:

Refer to HSE for information on the Control Of Substances Hazardous to Health and recommendations with regard to Personal Protective Equipment including Respiratory Protective Equipment.

Hygiene:

Your attention is drawn to the local Health & Safety Executive's technical guidance on the control of Legionellosis in water systems. If inadequately maintained, water systems, of which any humidifier is a part, can support the growth of micro-organisms, including the bacterium that causes Legionnaires' disease. JS Humidifiers plc has considered all aspects of this equipment to reduce as far as possible the risk of Legionnaires' disease and other similar conditions, but it is important that users are aware of their responsibilities under the ACoP in reducing the risk of Legionellosis.

To prevent the growth of Legionella, users are required to:

1. Carry out a risk assessment of the water system using a competent person, and implement an appropriate monitoring and control regime.
2. Avoid water temperatures which favour the growth of Legionella.
3. Avoid water stagnation.
4. Clean and disinfect the system in accordance with the Health & Safety Executives technical guidance and instructions in this manual.
5. The JetSpray humidification system MUST be connected to a clean, potable mains water supply. It is the responsibility of the user to ensure that the water system complies with local regulations and bylaws, particularly those for the control of Legionella bacteria (such as the HSE ACoP L8, The control of Legionella bacteria in water systems). The use of mains water fed tanks and reservoirs is only permitted as part of a managed water treatment system.

WARNING: This equipment must be installed, operated and maintained in accordance with this manual. Failure to do so could result in contamination that might cause Legionnaires' disease, which can be fatal.



Correct Use: The droplet separator system is intended for use with adiabatic humidification and cooling systems. Any other, or further, application is not considered use for the intended purpose. JS Humidifiers plc cannot be made liable for any damage or injury attributable to inattentive, inappropriate, negligent or incorrect operation of the equipment whether or not caused deliberately.

Warranty:

Droplet separator parts are warranted for 2 year from invoice date with the exception of the Matrix material. Failure to observe the manufacturer's installation and maintenance recommendations and instructions will invalidate the warranty. JS Humidifiers plc cannot be made liable for damage or injury attributable to failure to observe the manufacturer's installation and maintenance recommendations and instructions.



Delivery and Storage

To ensure consistent quality, each evaporative module is inspected before leaving the factory. If the module is to be put into storage prior to installation, it must be stored under cover and protected from physical damage, dust, frost and rain.

It is recommended that the evaporative module be kept in its transit packaging for as long as possible prior to installation.

All evaporative modules are supplied flat-packed for assembly 'in situ'. The evaporative module must be assembled before water and electrical connections are made.

Please refer to HumEvap Evaporative Module Assembly Instructions supplied with the system.

Inspection

Upon receipt, remove the transit packaging and inspect the unit to ensure that no damage has occurred during transit. Any visible damage must be reported to JS Humidifiers immediately. If the unit is to be put into storage, the packaging should be replaced.

Handling Evaporative Material



The HumEvap evaporative material should not be cut or crushed as doing so may generate dust.

HumEvap evaporative material is manufactured from glass fibre and is not classified as hazardous. It is recommended that Personal Protection Equipment such as gloves, protective clothing and eye protection are used during handling to protect the user from fibres or dust. If dust is generated during handling it is recommended that respiratory protection is worn. Damage to the evaporative material will affect the performance of the humidifier and may result in water carry over.

In the event of contact, the following procedures should be observed:

Eye contact – wash well with water for a minimum of 15 minutes.

Skin contact – wash well with soap and water.

Contact JS Humidifiers for COSHH data sheet if required.

Correct Method of Lifting

Lifting or handling must only be carried out by trained and qualified personnel. Ensure that the lifting operation has been properly planned and risk assessed, and that all equipment has been checked by a skilled and competent Health & Safety representative.

It is the customer's responsibility to ensure that operators are trained in handling heavy goods and to enforce the relevant lifting regulations.

Any personnel handling or lifting the HumEvap system must follow the Lifting Operations and Lifting Equipment Regulations 1998 and Approved Code of Practice L113. The regulation imposes duties on employers and self employed persons and persons who have control, to any extent of lifting equipment.

The packaged HumEvap unit may be carried by fork lift from the underside, but caution should be exercised to ensure that the load is balanced before lifting. Refer to weights and measures section for system weight.

Disposal

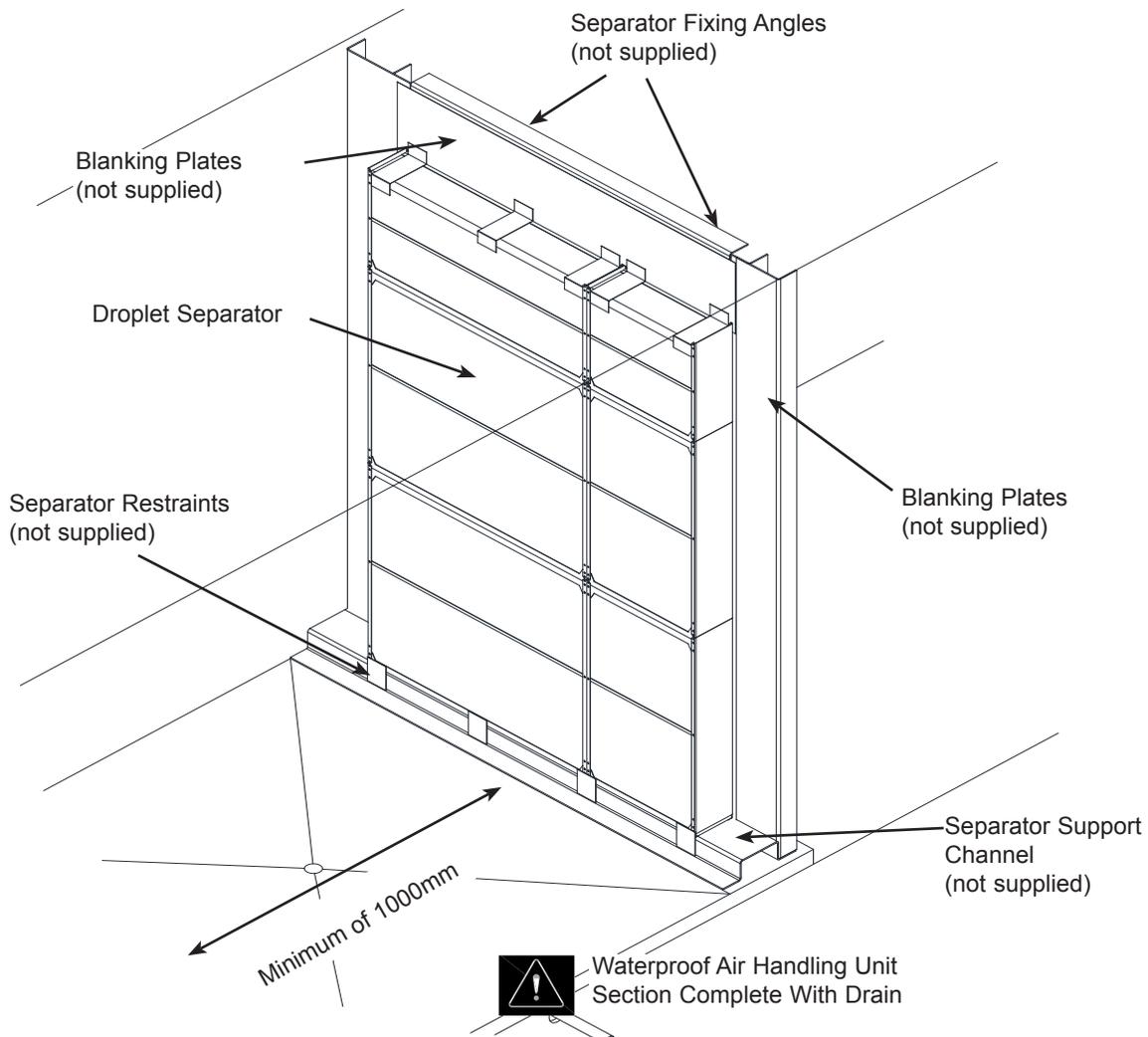
You must observe local laws and regulations when disposing of your JS HumEvap at the end of its working life. Use personal protective equipment as recommended in the handling section above when handling the evaporative material. In addition, respiratory protection should be worn to avoid inhalation of dust or debris from the air flow which may have accumulated on the material.



The evaporative module is constructed from stainless steel which may be fully recycled.



Typical AHU Installation

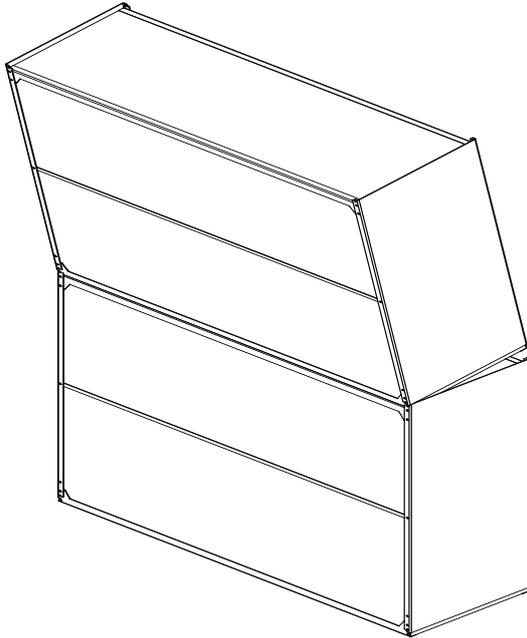


1. Ensure that the humidifier is located in the correct position within the air handling unit/duct. Consult project drawings to determine exact position and orientation. **IF IN ANY DOUBT CONSULT JS.**
2. Where the humidifier is installed after a heating coil or filter bank, allow sufficient space (min 500mm) for access to the system for commissioning/service.
3. The system must be installed in a waterproof AHU section, complete with a drain.
4. Adequate separator restraints must be used to support the droplet separator.
5. A waterproof blanking plate must be constructed around the droplet separator, to prevent any air bypassing the Droplet Separator.
6. The droplet separator must be installed a minimum of 1000mm from the humidifier.
7. The support metalwork must be suitable for the weight of the droplet separator. Refer to spares section for individual cassette weights.
8. If possible, access to both sides of the separator should be possible.



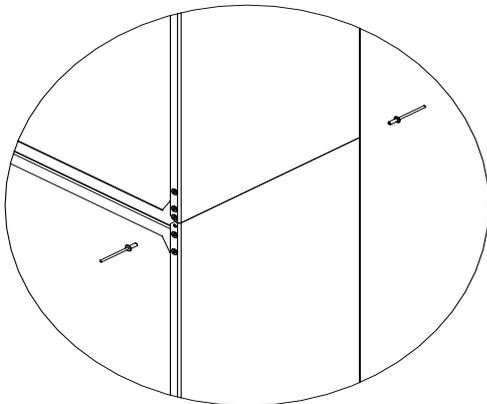
Droplet Separator Assembly

1. Remove all of the droplet separator cassettes from the packaging.
2. Starting with the tallest at the bottom, start to assemble the cassettes in height order.



The evaporative material should not be cut or crushed as doing so may generate dust.

3. Rivet the inter-connecting cassettes together as shown in the detail below.



4. Mount the droplet separator cassettes, ensuring the blanking plates are securely fitted and they form a seal against the cassette metalwork.

Droplet Separator Spares

Stock Code:	Description:	Width (mm)	Height (mm)	Depth (mm)	Weights (dry) (kgs)
HU02-200-25-01	Evaporative Matrix Cassette	300	250	100	1.00
HU02-200-25-02	Evaporative Matrix Cassette	300	500	100	1.79
HU02-200-25-03	Evaporative Matrix Cassette	600	250	100	1.55
HU02-200-25-04	Evaporative Matrix Cassette	600	500	100	2.71
HU02-200-25-17	Evaporative Matrix Cassette	300	1000	100	3.48
HU02-200-25-20	Evaporative Matrix Cassette	600	1000	100	5.30

