



Cleaning A Drain Tray

How To Guides



Cleaning Drain Tray



Figure 1. Site personnel in PPE reviewing the certified drawings. Drain-tray hygiene cleaning must be carried out by competent personnel using the PPE, COSHH controls and infection-control requirements applicable to the installation.

Video Duration: 6 minutes 10 seconds

Applies to: Cooling Coil, Plate Recuperator, and Humidifier Drain Trays

Document Status: Controlled technical instruction

1. Purpose

This procedure describes the detailed hygienic cleaning and inspection of AHU drain trays.

Drain trays must be maintained to prevent:

- Microbial growth
- Biofilm formation
- Standing water accumulation
- Blocked drainage
- Aerosolised contamination

2. Important AHU Information

- ECE AHUs are bespoke. Do not assume that information, access arrangements, terminal numbers, wiring colours, component selections or controls logic from another AHU applies to the AHU being reviewed or worked on.
- The certified drawing and current project-specific documentation are the primary sources for the AHU arrangement and component technical information.
- Where component technical information is checked, it must be checked against the certified drawing and related manufacturer data for the exact AHU.

IMPORTANT: Always use the project-specific asset information, certified drawing, relevant ECE product-range IOM, quotation scope and component information for the exact AHU being reviewed or worked on.

3. Safety and Competency Requirements

- Only competent and authorised personnel should carry out this procedure. The required competency depends on the task being undertaken.
- Before starting, confirm the correct AHU, asset tag, certified drawing, relevant ECE product-range IOM and any applicable wiring diagram, controls description, component technical information or manufacturer data sheet.
- Follow all site-specific RAMS, permits, PPE, isolation and access requirements.
- Where the task requires physical access to the AHU, do not open access doors, remove panels or work inside the AHU unless fans and relevant equipment are isolated, stationary and safe to access.
- Do not bypass safety devices, interlocks, alarms or controls.
- Stop and escalate if the AHU identity, current technical information, safe isolation, access condition or required competency cannot be confirmed.

Task-specific requirements:

- Drain tray cleaning and hygiene work must be carried out by competent personnel using the PPE, COSHH controls, infection-control requirements and site hygiene procedures applicable to the installation.
- Use approved cleaning and disinfectant materials in accordance with the manufacturer instructions and required contact times.
- Manage standing water, biological contamination, sharp edges, drain outlets, traps and condensate connections using suitable hygiene controls.
- Re-prime, reinstate or confirm drain traps and drainage paths where required before returning the AHU to normal operation.
- Stop and escalate if contamination, damage, blocked drainage, failed trap condition or unsafe access prevents the tray being cleaned and reinstated safely.

4. Before You Begin

- Access the AHU asset information via the ECE Client Portal using the asset tag or 18-digit reference number where available.
- Confirm the AHU reference, project name, location and latest document revision.
- Review the certified drawing, relevant ECE product-range IOM, quotation scope, component schedule and manufacturer data sheets where applicable.
- Review the wiring diagram, controls description and commissioning information where the task involves electrical, controls or BMS interfaces.
- Confirm the required personnel, tools, PPE, access equipment, permits and isolation method before starting work.

5. Required Tools, Equipment, PPE and Information

- PPE for hygiene cleaning
- Approved disinfectant/cleaning chemical
- Brushes, wipes and waste bags
- Wet vacuum or water removal method where permitted
- Drain trap priming water where required
- Hygiene or maintenance record

Additional Required Items

Personal Protective Equipment

- Disposable gloves
- Eye protection
- Mask (if heavy contamination present)
- Protective clothing as required

6. Procedure

Before commencing cleaning:

- Select Maintenance Mode via the control panel (if applicable).
- Allow fans to ramp down fully.
- Confirm airflow has completely stopped.
- Isolate fans electrically using local isolators.
- Apply lock-off/tag-out if required by site procedure.

WARNING: Do not open access doors while fans are rotating.

Cleaning Materials

- Approved grade disinfectant
- Warm water
- Non-abrasive cloths
- Soft nylon brush
- Bottle brush (for drain outlet)
- Absorbent wipes
- Waste disposal bags

Do not use abrasive pads or corrosive chemicals.

7. Accessing the Drain Tray

- Release external access door latches.
- Open the access door fully.
- Remove internal retaining panel (Allen key or finger-tight fasteners if fitted).
- Disconnect drain hose if required.
- Carefully slide out the drain tray.

Keep tray level to prevent spillage.



Figure 2. Identifying the retaining-panel fixings — Allen key or finger-tight fasteners may be used.

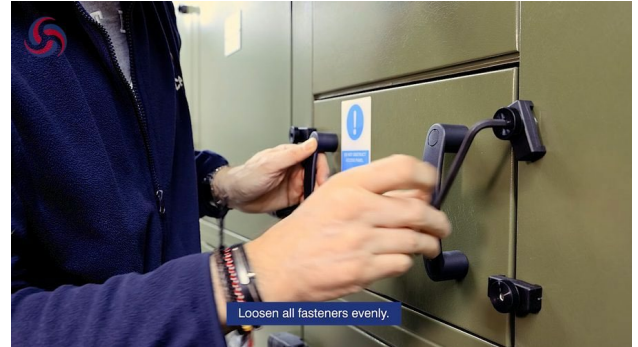


Figure 3. Loosening all retaining-panel fasteners evenly to release the internal panel.

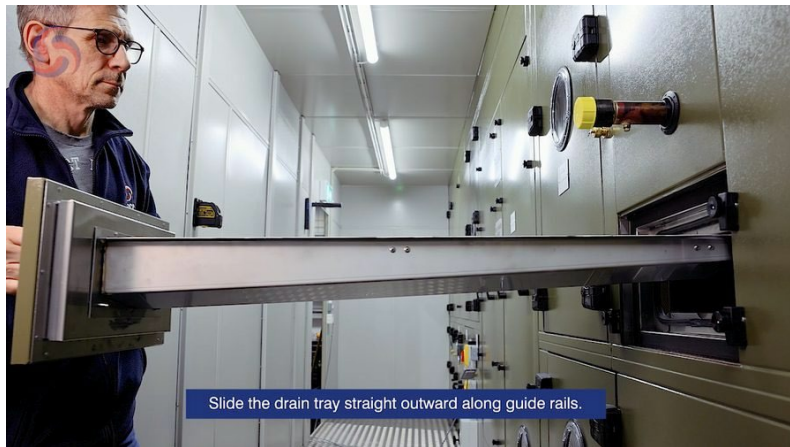


Figure 4. Sliding the drain tray out along its guide rails — keep the tray level to prevent spillage.

7.1 Initial Inspection (Pre-Cleaning)

Inspect for:

- Standing water
- Sludge accumulation
- Biofilm (slimy residue)
- Corrosion or pitting
- Damaged welds
- Blocked drain outlet
- Incorrect fall (no slope to drain)

If significant corrosion or structural damage is present, report for replacement.

7.2 Cleaning Procedure

Step 1 – Remove Debris

- Remove loose debris manually.
- Wipe down surface with disposable cloth.

Step 2 – Wash

- Apply warm water and approved disinfectant.
- Use soft brush to clean:
 - Corners
 - Welded seams
 - Drain outlet
 - Underside edges

Step 3 – Disinfect

- Apply disinfectant evenly across entire tray surface.
- Allow correct contact time per manufacturer instructions.

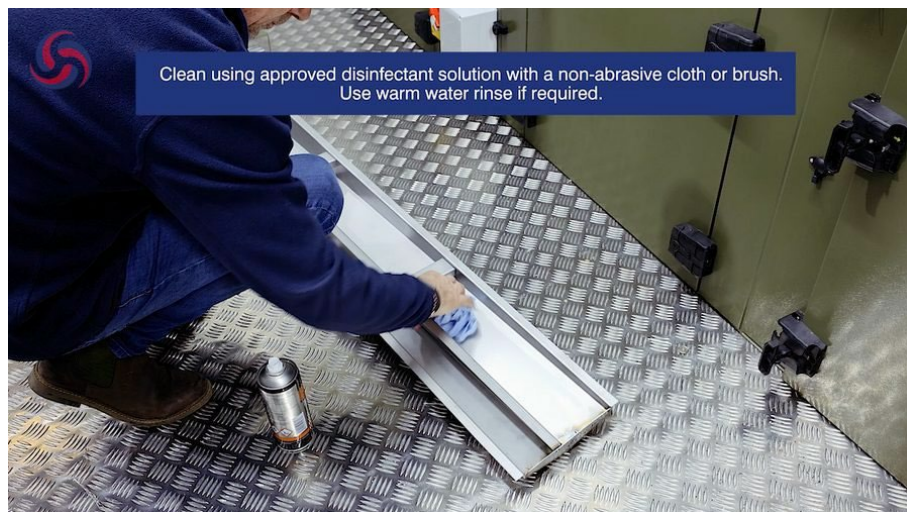


Figure 5. Cleaning the drain tray with an approved disinfectant solution and a non-abrasive cloth or brush — apply evenly across the entire tray surface and allow the manufacturer's contact time.

Step 4 – Rinse (If required)

- Rinse with clean water if disinfectant requires removal.
- Avoid leaving chemical residue.

Step 5 – Dry

- Dry tray thoroughly with lint-free cloth.
- Ensure no pooling remains.

Drain tray must be completely dry before refitting.

7.3 Cleaning the Drain Outlet and Pipework

- Inspect outlet spigot.
- Use bottle brush to clear internal bore.
- Confirm drain pipe is free-flowing.
- Flush with clean water if necessary.

Where glass condensate trap is fitted:

- Remove and clean separately.
- Re-prime before restart.

7.4 Inspection of Surrounding Surfaces

Before refitting tray:

- Inspect underside of coil or plate exchanger.
- Check for dripping points or contamination.
- Wipe down adjacent internal surfaces.
- Confirm no standing water inside housing.

Good housekeeping requires no water stagnation within the AHU.

7.5 Refitting the Drain Tray

- Confirm correct orientation (drain outlet aligned).
- Ensure tray slope is toward outlet.
- Slide tray fully into guide rails.
- Reconnect drain hose securely.
- Reinstall retaining panel.
- Tighten fixings evenly (Allen key or finger-tight).

Do not overtighten or distort panel.



Figure 6. Sliding the cleaned drain tray fully back into the guide rails.



Figure 7. Reinstalling the internal retaining panel — insert all fasteners loosely first.



Figure 8. Tightening fasteners evenly with an Allen key or finger-tight fasteners. Do not overtighten.

7.6 Closing and Restarting the Unit

- Close access door fully.
- Secure all latches.
- Remove lock-off devices.
- Restore electrical supply.
- Exit Maintenance Mode.
- Allow fans to ramp up gradually.

After restart:

- Confirm condensate drains freely.
- Inspect for leaks at drain connection.
- Check no water carryover.
- Confirm no abnormal odours.
- Observe drain tray via viewing window if fitted.

7.7 Hygiene Compliance Requirements

Drain trays must:

- Be removable and accessible.
- Be constructed of corrosion-resistant material.
- Be free from standing water.
- Have continuous fall toward drain outlet.
- Be cleaned at scheduled intervals.
- Be recorded in maintenance log.

Frequency of inspection should reflect risk assessment.

8. Verification / Functional Test

- Standing water, debris and visible contamination are removed.
- Drain outlet and removable tray are clear.
- Tray falls towards the drain and is refitted securely.
- Drain trap is correctly re-primed where required.
- No leakage is present after refitting.
- Drain tray and outlet are clean, dry/free-draining and free from visible debris or biofilm.

Additional Verification Notes

9. Stop-and-Escalate Conditions

STOP: Stop work or stop the review and escalate to the responsible ECE/project technical contact if any of the following apply:

- The AHU reference, asset tag, certified drawing or document revision cannot be confirmed.
- The information found does not match the physical AHU, installed component or project scope.
- Safe access, safe isolation or required site permits cannot be confirmed.
- A required component technical detail, wiring detail, control signal or manufacturer data sheet is missing.
- The task would block or compromise AHU maintenance access, withdrawal routes, isolators, terminal boxes or emergency access.
- Contamination is beyond the scope of routine cleaning.
- Drain blockage cannot be cleared.
- Tray, drain connection or seal damage prevents hygienic refitting.
- Required disinfectant, PPE or waste disposal route is not available.
- Biological contamination, standing water or odour indicates a wider hygiene issue requiring specialist review.

10. Final Checks

- Confirm the AHU, component, wiring, control function or approval item has been left in the intended safe and complete condition.
- Confirm access doors, panels, terminal boxes, covers, guards, isolators and labels are secure where applicable.
- Confirm no tools, temporary materials, loose items, debris or packaging remain in or around the AHU.
- Confirm any alarms, faults, abnormal indications or unresolved comments have been recorded and escalated.

11. Records to Complete

Record enough evidence to prove that the task, review or test has been completed using the correct AHU information and by competent personnel.

- Drain tray cleaned
- Drain outlet checked
- Trap re-primed where required
- Contamination or defects recorded
- Hygiene/maintenance log updated

Evidence item	Required entry
AHU reference / asset tag	To be completed
Certified drawing revision / document revision	To be completed
Person completing task / review	To be completed
Date completed	To be completed
Result / status	Pass / fail / comment / not applicable
Outstanding actions	To be completed or marked none

Additional Record Notes

Record:

- Date of cleaning
- Condition of tray
- Condition of drain outlet
- Any corrosion identified
- Disinfectant used
- Engineer name

Maintain record in AHU hygiene log.

12. Completion Checklist

- Correct AHU and guide number confirmed.
- Latest asset information and certified drawing checked.
- Relevant IOM, wiring diagram, controls description or manufacturer data checked where applicable.
- Safety and competency requirements confirmed.
- Procedure completed or approval review completed.
- Verification / functional test completed.
- Stop-and-escalate conditions checked and no unresolved stop condition remains.
- Records to Complete section completed.
- AHU returned to safe condition or review status recorded.

13. Task-Specific Completion Checks

- Maintenance mode selected
- Fans isolated
- Tray removed
- Debris removed
- Tray disinfected
- Drain outlet cleared
- Surrounding surfaces cleaned
- Tray refitted
- Drain reconnected
- Door secured
- Unit restarted
- Drainage verified
- Maintenance recorded

14. Learning Outcome

After completing this guide, the user should be able to complete or review Cleaning Drain Tray Hygiene Procedure using the correct AHU information, with clear safety controls, defined verification, completion records and escalation criteria.