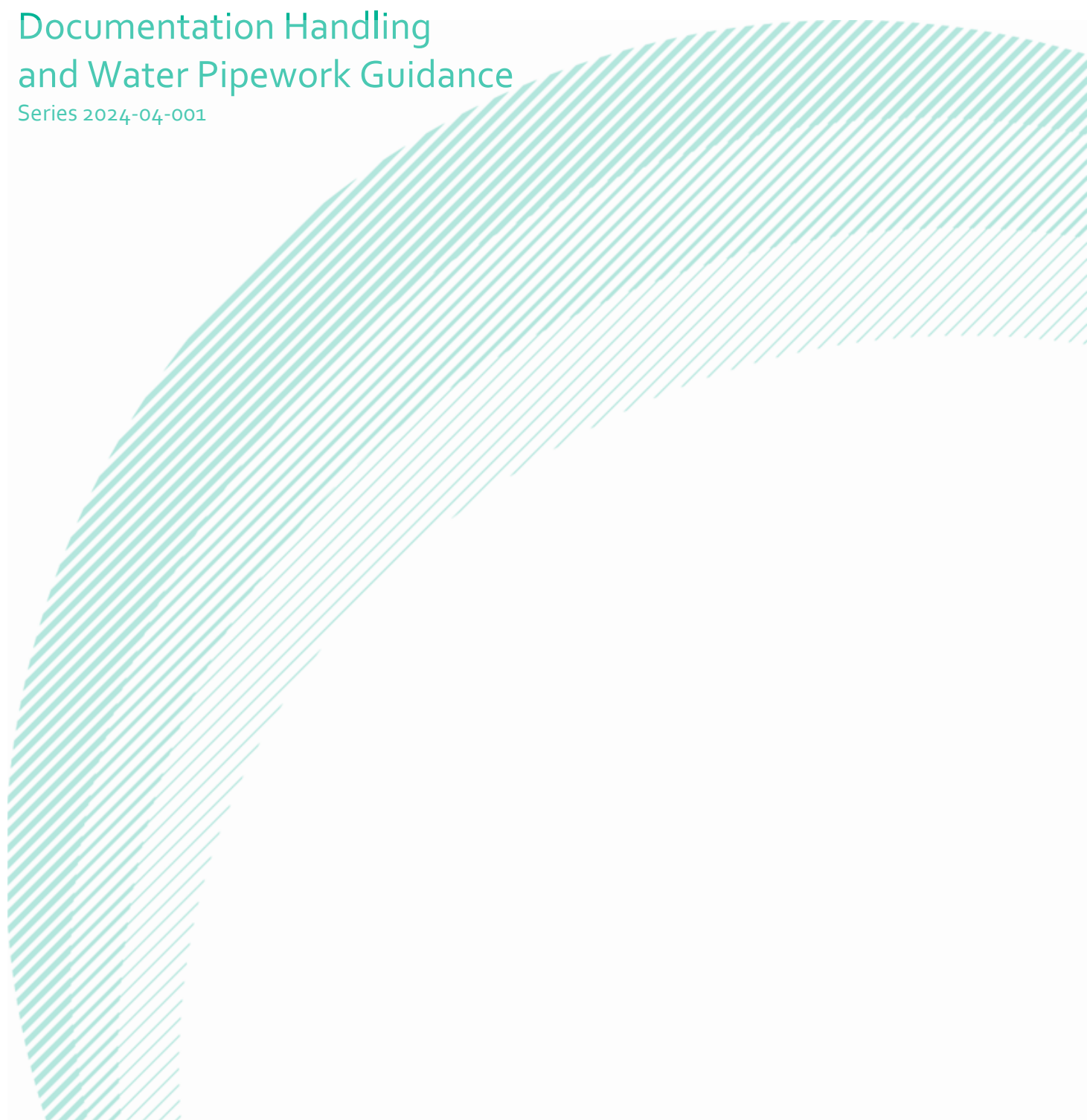


Home Energy Grants: Technical Bulletin – Heat Pump Systems

Documentation Handling
and Water Pipework Guidance

Series 2024-04-001



Content Overview for Heat Pump Bulletin

This technical bulletin outlines the most frequent non-compliant items noted by SEAI inspectors on heat pump system installations. Guidance on correct handling/installation of these items in this document are designed for Contractors with the aim of reducing the number of reworks and subsequently lead to a more efficient Programme with faster turnaround time for payments.

It is important to note that all aspects of the installation of heat pump systems must be as per the Domestic Technical Standards and Specifications (DTSS) document and in accordance with the Contractors Code of Practice.

Please see the Contractors Support page for further information which may aid Contractors in achieving high compliance on the Better Energy Homes Programme: <https://www.seai.ie/grants/supports-for-contractors/>.

Non-Compliances and Guidance covered in Technical Bulletin:

1. Commissioning documents not available/correct & RECI cert not present/correct upon Inspection.
2. Guidance on correct installation of Pressure Relief Valve Pipework
3. Guidance on correct installation of Condensate Discharge

Commissioning and Handover

Details of Non-Compliance

The absence of heat pump documentation is responsible for the highest number of inspection reworks. This is a frequently reoccurring item which results in unnecessary long delays to grant payments and contractor works.

The Homeowner must be provided with the following documentation upon installation of the heat pump system for the purposes of a possible pre-pay or post-pay inspection, where required:

- Register of Electrical Contractors (RECI) Certificate
- Heat Pump Commissioning Certificate
- User Manual
- F-Gas Certificate (if applicable)
- Ground and water collector design (if applicable)

The most frequent documents which are absent upon an inspection, and subsequently cause reworks, are the **Commissioning Documents and Register of Electrical Contractors Ireland (RECI) Cert.** As an appointed contractor for a grant aided heat pump system installation, it is your responsibility that all necessary pieces of documentation are handed over to the Homeowner prior to signing the Declaration of Works (DOW) forms.

The Commissioning Checklist is to be completed by the RECI who commission the boiler and associated equipment as a means of demonstrating compliance with the requirements of the Regulations and then handed to the customer to keep for future reference. For further information please refer to the Electrical Safety Agency website at www.electricalsafety.gov.ie. Please to read and understand the manufacturer's instructions. The manufacturer's instructions may indicate the warranty but also not affect statutory rights.

Customer Name: _____ **Address:** _____
Customer Mobile: _____ **Committed By:** _____ **Commissioning Date:** _____
Boiler No.: _____ **Commissioned By:** _____ **Commissioning Date:** _____
All Company Name & Address: _____

CONTROL - SYSTEM AND HEAT PUMP

1. Thermostat	Room Thermostat	Programmable	Weather Compensation	Outdoor Sensor
2. Thermostat Control To Heat Water	Capacitor Thermostat / Programmable Thermostat	Controlled with heat pump main controls		
3. Heating Zone valves (including underfloor heating)	Filter	Not Required		
4. Hot Water Zone Valves (if 2-way valve)	Filter	Not Required		
5. Thermostatic Radiator valves	Filter	Not Required		
6. Heat Pump Safety Isolator	Not in	Present		
7. Hot & Cold water temperature sensors correctly installed?	Yes	No		
8. Automatic Radiator System	Filter	Not Required		
9. Radiator Commissioning (if High pressure)	PSD	PSD	PSD	PSD
10. Control System	PSD	PSD	PSD	PSD
11. Heat Pump Control?	Yes	No	Manufacturer Name & Model	
12. Are the heat pump controls correctly installed?	Yes	No		

ALL SYSTEMS

1. The heating system has been flushed and pressure tested	Yes	No
2. Expansion vessel for heating is correct, filled & charged in accordance with manufacturer's instructions	Yes	No
3. The heat pump is installed on a suitable surface capable of taking its weight	Yes	No
4. The system has been flushed and commissioning in accordance with electrical and heat pump manufacturer's instructions	Yes	No
5. All pipework is clean and sealed	Yes	No
6. Outdoor Unit	OK	Type
7. Outdoor unit is on the same area of the heat exchanger	Yes	No
8. All pipework is clean and sealed	Yes	No
9. All pipework is supported	Yes	No
10. All pipework is supported	Yes	No
11. All pipework is supported	Yes	No
12. All pipework is supported	Yes	No

OUTDOOR UNIT

1. Is it outdoor pipework installed?	Yes	No
2. Is the heat pump outdoor unit supported? Adequate airflow?	Yes	No
3. Has suitable condensation cover been made for condensation discharge?	Yes	No
4. Flow and return pipework correct (flow)?	Yes	No
5. All pipework is supported	Yes	No

HEATING MODE

1. Heating Mode selected	Heating (Flow Temperature: _____ °C)	Heating (Return Temperature: _____ °C)			
2. Outdoor Temp	Indoor/Outdoor Heating	Yes	No	Outdoor Temp	_____ °C
3. Outdoor Temp	Indoor/Outdoor Heating	Yes	No	Outdoor Temp	_____ °C
4. All pipework is supported	Yes	No			

GENERAL CHECKS

1. Is the heat pump installed in the correct position?	Unobstructed	Not Obstructed	
2. Domestic hot water temperature	_____ °C	Outdoor Temp	_____ °C
3. Hot water has been checked at all outlets	Yes	No	
4. Hot Water Temperature (Domestic) correct (flow)?	Yes	No	

ADDITIONAL SYSTEM INFORMATION

1. Additional hot water information	Yes	No	Other	_____
2. Radiator & other heat emitter p.p.	Yes	No	Other	_____
3. The operation of the heat pump and system controls have been demonstrated to the client	Yes	No	Other	_____

Commissioning Engineer's Signature: _____ Customer's Signature: _____

Figure 1: Commission Cert

SAFE ELECTRIC **RECI**

National Rules for Electrical Installations
Completion Certificate for Existing Installations
THIS CERTIFICATE CANNOT BE USED TO OBTAIN A CONNECTION / RE-CONNECTION FROM THE ESB.

This certificate must be returned to your ESB and accompanied by a completed Test Record Sheet

MPRN No: (if applicable) _____ Serial Number: 0000000

CUSTOMER NAME (Block Capitals): _____

ADDRESS OF INSTALLATION (Block Capitals): _____

Installation Type: Controlled Works Minor Works Test (only of the existing installation)

Please tick (-) as appropriate, see Chapter 63 & Annex 63B

Premises Description (e.g. Commercial, Domestic, Agricultural, etc.): _____

Details of what this cert covers: _____

Date of Installation: _____

Number of: Lighting Points Socket Outlets Fixed Appliance Outlets

TEST RESULTS: POLARITY AND EARTHING OF ALL OUTLETS MAIN EQUIPMENT BONDING VERIFIED FOR: WATER GAS OTHER (Specify) _____

MINIMUM INSULATION RESISTANCE: _____ MΩ

MAXIMUM INSULATION RESISTANCE: _____ MΩ

OPERATION OF ALL RCDs VERIFIED (If any): _____

DETAILS OF TESTS ARE GIVEN IN TEST RECORD SHEET No: _____

COMMENTS (Include any defects in existing installation observed): _____

CERTIFICATION

I certify that the installation work detailed at the above address has been constructed, and/or pre-emptively and post-emptively tests have been carried out, in accordance with the National Rules for Electrical Installations (current issue or draft of contract) published by the Electro-Technical Council of Ireland, and has been found to be satisfactory. ADDITIONAL CIRCUITS do not impact the safety of the existing installation, the certificate and the test record sheets associated with it shall be submitted to the ESB.

PRE & POST-EMERGENT TESTS

REGISTERED ELECTRICAL CONTRACTOR (Block Capitals)

Name: _____

Address: _____

Tel: _____

Registration Number: _____

Signature: _____

Qualified Certifier's Name: _____

Date: _____

NOTE: This certificate is issued and signed by the person responsible for the new/additional/modification of electrical work on a person duty authorised. This document is a certificate for the purpose of the Energy (Miscellaneous Provisions) Act 2006. The Electro-Technical Council of Ireland or the Regulatory Body are not responsible for the electrical installation or for the accuracy of the information given on this certificate. Electrical installations should be inspected periodically.

Figure 2: RECI Cert

Tips to Reduce Occurrence of Documentation Non-Compliance

In order to reduce the occurrence of these non-compliances in relation to documentation on heat pump installations, the following mitigation measures are suggested to ensure documentation is handled correctly and the Homeowner is well informed of the same.

Documentation Handover to Homeowner for Inspection Purposes

It is recommended that all three steps below are taken with Homeowners following the installation of a heat pump system.

1. **Leave Physical Copy of Necessary Documentation:** Firstly, the Contractor should leave a physical copy of all necessary documents (as mentioned above) with the Homeowner and inform the Homeowner that they may be subject to a pre-pay or post-pay inspection from SEAI. Should that particular Homeowner be randomly selected for inspection, they will have to produce this documentation upon request from the Inspector. Please note, failure to produce this documentation may result in delay in payment of the grant or loss of the grant money entirely should the Contractor fail to complete necessary reworks.
2. **Email a copy of Documentation to Homeowner with the subject line **"HEAT PUMP DOCUMENTS FOR SEAI INSPECTION"**:** An email with the necessary documentation attached with the above subject line ensures that even if the Homeowner misplaces the physical copy of the documents, there is a backup copy of the documents on an email which is easily searchable with the above subject line.
3. **Take a Picture of the necessary documents and send to Homeowner via WhatsApp:** The SEAI Inspector just needs to see proof that these documents were transferred from the Contractor to the Homeowner and the Homeowner has access to them. A fast and easy way to prove this to an SEAI Inspector is for the Contractor to take a picture of these documents and send them to the Homeowner **via WhatsApp**. The Contractor must, again, inform the Homeowner that upon inspection they can show the picture of the documents received from the Contractor via WhatsApp.

Pressure Relief Valve Pipework

Details of Non-Compliance

Following non-compliances associated with documentation, the next most prevalent non-compliance found on inspections surrounds the incorrect installation of Pressure Relief Valve Pipework.

List of Non-Compliance items which are being picked up at inspections:

- **Water Pipework (Pressure relief valve pipework not installed to good plumbing practice)**
- **Water Pipework (Pressure relief valve not piped to safe and visible areas)**
- **Condensate Pipework (Condensate not discharging to a drain or soakaway)**

Water Pipework – Pressure Relief Valve Pipework not installed to Good Plumbing Practice

Non-Compliant Practice for Pressure Relief Valve Pipework

No tundish installed on the safety pipework leading from the Pressure Relief Valve therefore there is no apparent outlet for Homeowners to observe any discharge from the safety valve.

Correct Practice for Pressure Relief Valve Pipework

Install a tundish to the internal pipework leading from the Pressure Relief Valve so there is a visibility point for the Homeowners to observe any discharge

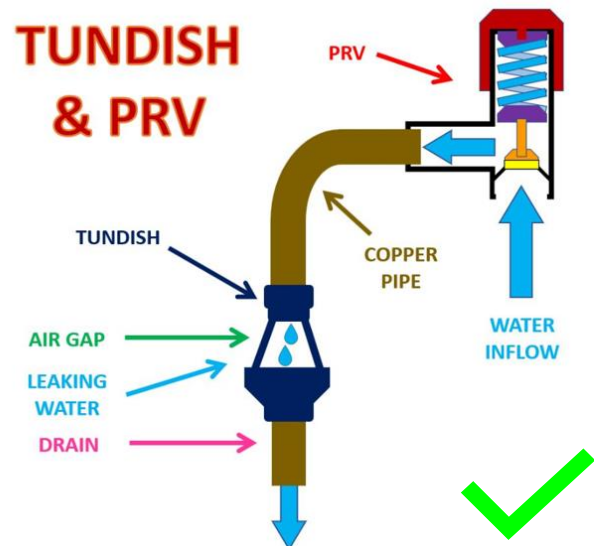
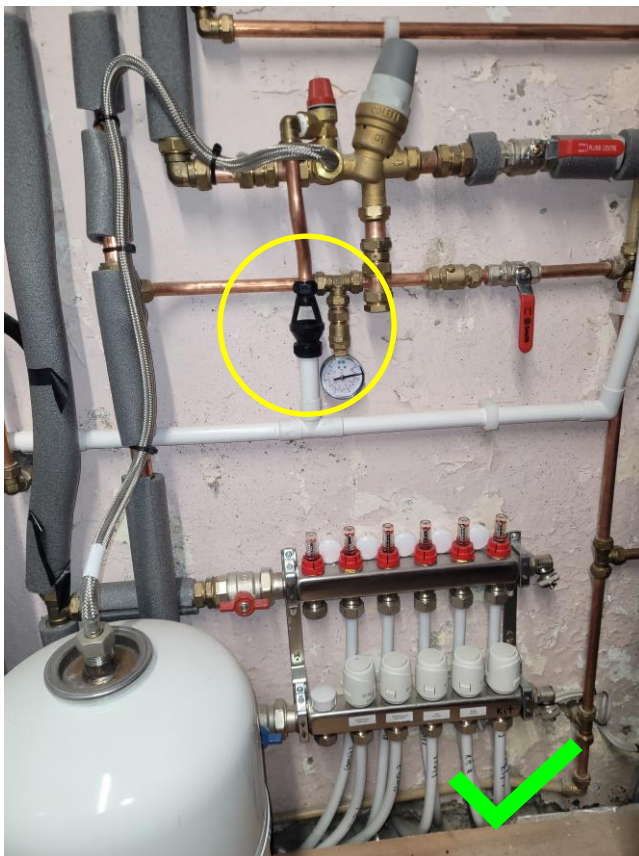


Figure 3: Example of correct installation of tundish on PRV

Water Pipework – Pressure Relief Valve Not Pipped to Safe and Visible Areas

Non-Compliant Practice for Pressure Relief Valve Pipework

Pressure Relief Valve Pipework not terminating safely at point of termination outside (plastic discharge pipe)



Figure 4: Incorrect Installation

Correct Practice for Pressure Relief Valve Pipework

Ensure Pressure Relief Pipework terminates through exterior of building through metal discharge pipework and to a safe and visible area



Figure 5: Correct Installation

Condensate Pipework – Condensate Not Discharging to Drain or Soakaway

Non-Compliant Practice for Condensate Pipework

Condensate water from external heat pump unit discharging onto the surface underneath the unit. No drain access provided.



Figure 6: Incorrect Installation

Correct Practice for Condensate Pipework

A correctly plumbed drain is required from the heat pump system for disposal of condensate and potential discharge from the safety valves' tundish

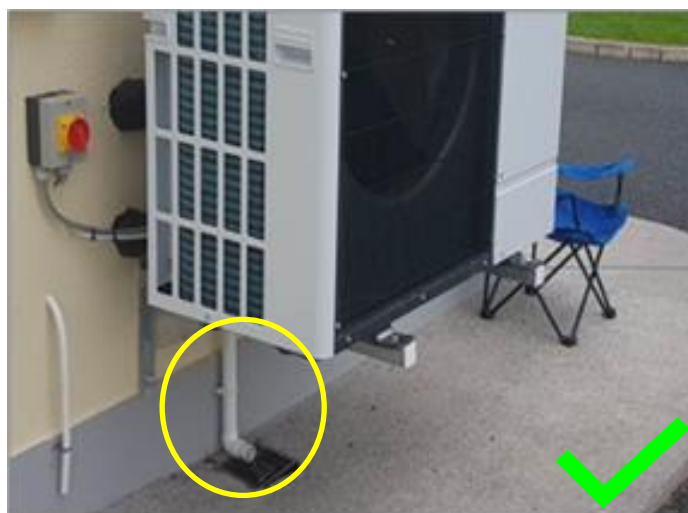


Figure 7: Correct Installation

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