

# Home Energy Grants: Technical Bulletin

## Heat Pump System Installation Guidance



Series 2021-08-001 HP




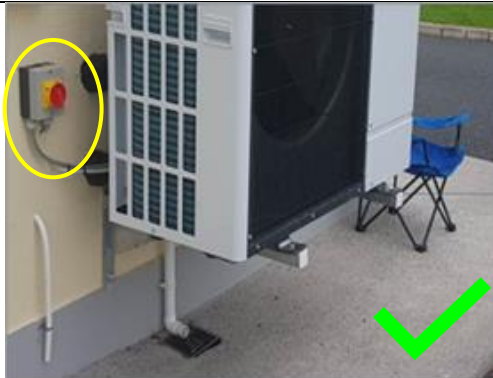
# Correct installation guidance for heat pump

The following are some common installation failures noted by SEAI inspection unit with the corresponding correct installation best practices. The illustrated correct installation is for guidance purposes. Installation should be carried out in accordance with the relevant SEAI Domestic Technical Specifications and Standards (DTSS), and the BEH Contractor’s Code of Practice (COP). At the end of the Quality Assurance and Disciplinary Procedures (QADP) document there is a full list of checks, used by SEAI inspectors. You should use these to check your work before signing the DOWs (or similar).


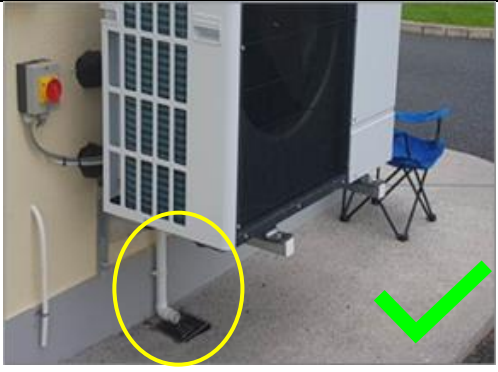
## 1. Equipotential bonding (Earthing)

 <p>Figure 1: Incorrect Installation</p>	 <p>Figure 2: Correct Installation</p>
<p>Incorrect Method:</p> <ul style="list-style-type: none"> <li>- No ground wire connection in each metal pipeline.</li> </ul>	<p>Correct Method:</p> <ul style="list-style-type: none"> <li>- All metal pipes are bonded together via 10mm<sup>2</sup> ground wire with ground coupling.</li> </ul>



## 2. Isolator/Disconnect switch

 <p>Figure 3: Incorrect Installation</p>	 <p>Figure 4: Correct Installation</p>
<p>Incorrect Method:</p> <ul style="list-style-type: none"> <li>- No isolation switch installed.</li> </ul>	<p>Correct Method:</p> <ul style="list-style-type: none"> <li>- Heat pump must be fitted with isolation switch near the unit and properly rated.</li> </ul>



### 3. Condensate discharge

 <p>Figure 5: Incorrect Installation</p>	 <p>Figure 6: Correct Installation</p>
<p>Incorrect Method:</p> <ul style="list-style-type: none"> <li>- Condensate water from external heat pump unit discharging directly onto the surface underneath the unit. No drain access provided.</li> </ul>	<p>Correct Method:</p> <ul style="list-style-type: none"> <li>- The external heat pump unit has been fitted with a PVC pipe to allow condensate water discharge directly to drainage system.</li> </ul>

### 4. Pressure relief valve from water cylinder

 <p>Figure 7: Incomplete Installation</p>	 <p>Figure 8: Correct Installation</p>
<p>Incorrect Method:</p> <ul style="list-style-type: none"> <li>- Pressure relief valve has no pipe connection for discharge to building exterior.</li> </ul>	<p>Correct Method:</p> <ul style="list-style-type: none"> <li>- Has pipe connection to building exterior using proper fitting and good plumbing practice.</li> </ul>

### 5. Pressure relief valve outlet

 <p>Figure 9: Incorrect Installation</p>	 <p>Figure 10: Correct Installation</p>
<p>Incorrect Method:</p> <ul style="list-style-type: none"> <li>- <b>Plastic</b> discharge pipe through building exterior.</li> </ul>	<p>Correct Method:</p> <ul style="list-style-type: none"> <li>- <b>Metal</b> discharge pipe through building exterior.</li> </ul>

### 6. RECI certificate and Commissioning report

These two (2) documents must be provided to the homeowner and be available for inspection. It must be filled-out completely with signature of qualified person.

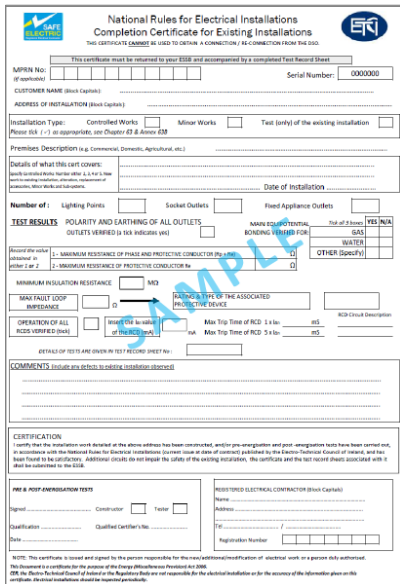


Figure 9: RECI Certificate

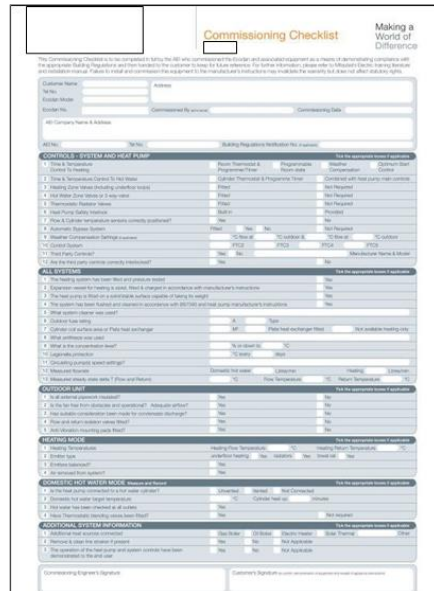


Figure 10: Commission Certificate

### 7. Refrigerant top-up

In the event that the heat pump does not provide enough heat as per design, the contractor needs to check the pipes in the refrigerant circuit for possible leaks and check the level of refrigerant and provide top-up if needed.

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