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)

![Incorrect Installation](image1)

![Correct Installation](image2)

**Incorrect Method:**
- No ground wire connection in each metal pipeline.

**Correct Method:**
- All metal pipes are bonded together via 10mm² ground wire with ground coupling.

2. Isolator/Disconnect switch

![Incorrect Installation](image3)

![Correct Installation](image4)

**Incorrect Method:**
- No isolation switch installed.

**Correct Method:**
- Heat pump must be fitted with isolation switch near the unit and properly rated.
3. **Condensate discharge**

<table>
<thead>
<tr>
<th>Incorrect Method:</th>
<th>Correct Method:</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Condensate water from external heat pump unit discharging directly onto the surface underneath the unit. No drain access provided.</td>
<td>- The external heat pump unit has been fitted with a PVC pipe to allow condensate water discharge directly to drainage system.</td>
</tr>
</tbody>
</table>

![Figure 5: Incorrect Installation](image)

![Figure 6: Correct Installation](image)

4. **Pressure relief valve from water cylinder**

<table>
<thead>
<tr>
<th>Incorrect Method:</th>
<th>Correct Method:</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Pressure relief valve has no pipe connection for discharge to building exterior.</td>
<td>- Has pipe connection to building exterior using proper fitting and good plumbing practice.</td>
</tr>
</tbody>
</table>

![Figure 7: Incomplete Installation](image)

![Figure 8: Correct Installation](image)
5. **Pressure relief valve outlet**

![Incorrect Installation](image1)

![Correct Installation](image2)

**Incorrect Method:**
- Plastic discharge pipe through building exterior.

**Correct Method:**
- Metal discharge pipe through building exterior.

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-up completely with signature of qualified person.

![RECI Certificate](image3)

![Commission Certificate](image4)

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.