

National Building Control Office event, Naas, 2026



Installation of Heat Pumps in existing properties & Building
Regulations Requirements

Our members



Formed in 2011, the Heat Pump Association of Ireland is the representative body of manufacturers and distributors of heat pumps in the Republic of Ireland.

Our members are committed to quality and to promoting a high standard of professionalism in the Irish heat pump industry.

National Building Control Office event

Today's presentation topic is on the Installation of heat pumps in existing properties and the relevant Building Regulations



Retrofitting heat pumps

Retrofit checklist for heating and DHW	✓
Technical assessment by a BER	
Assessment by a heating contractor	
SEAI grant approval prior to any works	
Building fabric & heating system installation	
All systems commissioned, handover and sign off	



What makes a heat pump efficient in a retrofit mainly depends on the property's ability to retain the heat it generates.

Requirements for retrofitting a heat pump

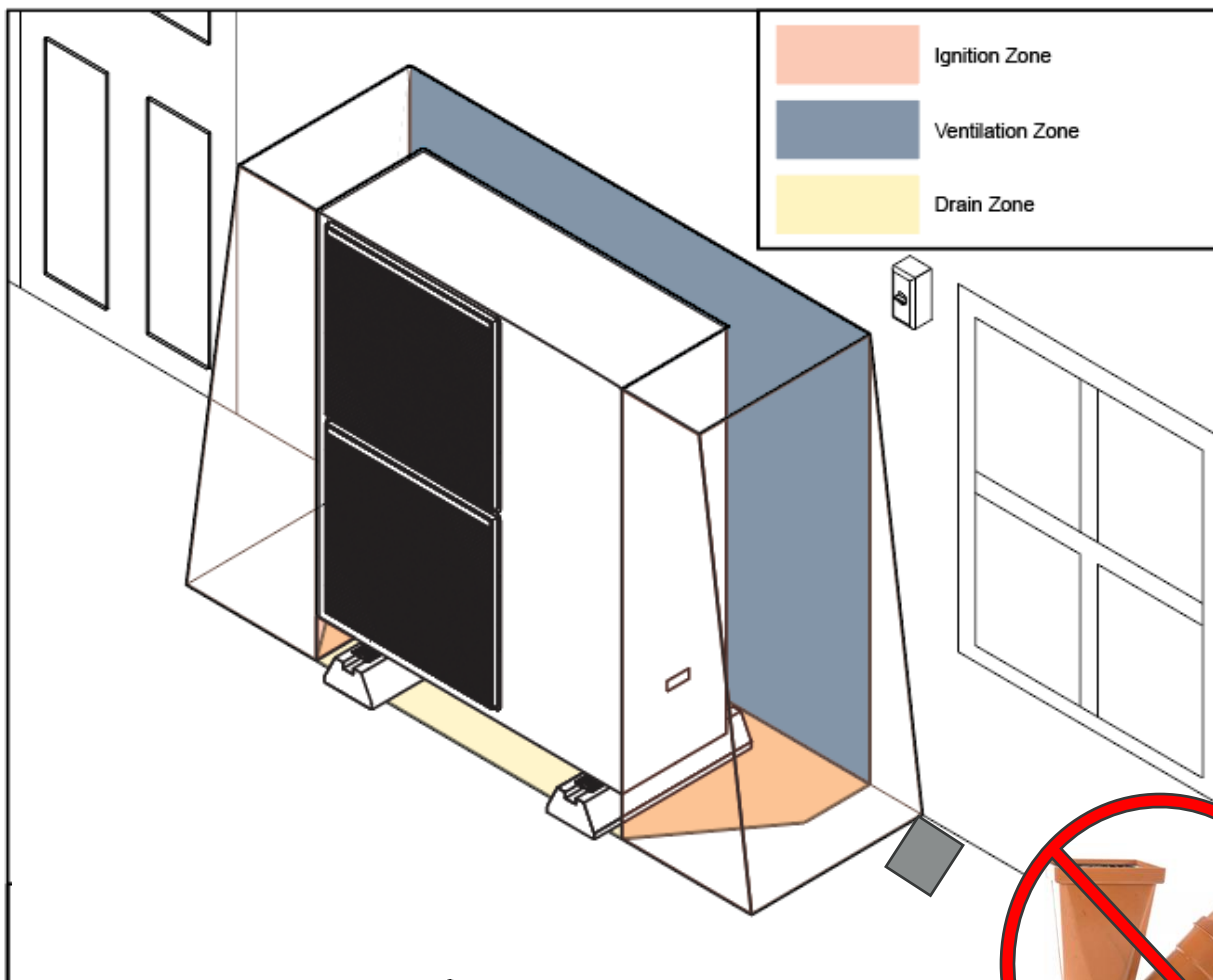


Inspection by a registered SEAI installer, checking;

- Heating system pipework
- Existing radiators/underfloor heating
- Potential heat pump location
- Hot water cylinder space
- Heating control strategy
- Homeowner made aware of works required
- Financial requirements for the homeowner
- SEAI retrofit scheme requirements

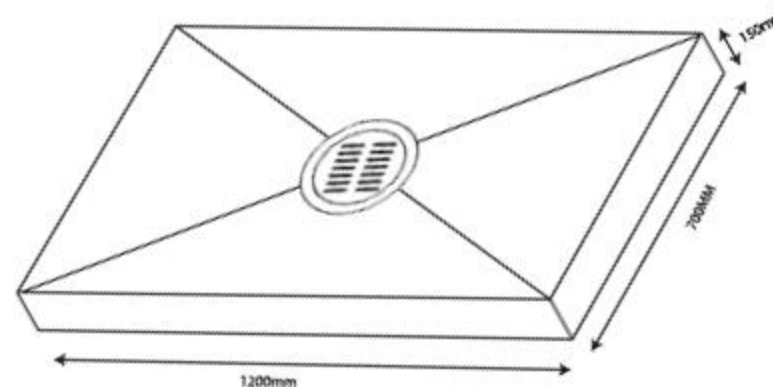
- How to operate your heat pump system
- Service and maintenance requirements
- The benefits of integration with PV systems

Requirements for retrofitting a heat pump



Updated R290 clearances

- Check ignition zone – 500mm clearance on either side, isolator level with the top
- Check ventilation zone – 300mm either side
- Check drain zone – no trapped drains; a 500mm minimum clearance away



Building Regulations: EPC, CPC, RER

EPC – Energy Performance Coefficient

- Measures a dwelling's overall energy efficiency.
- Compares the building's calculated energy use against a reference dwelling of the same size and shape.
- Expressed as a number:
 - 1.0 = same as the reference house.
 - Less than 1.0 = better than the reference house.
 - The lower the EPC, the more energy-efficient the building.

Simple example:

An EPC of 0.20 means the house uses only 20% of the energy of the reference dwelling

Zero Emissions Building (ZEB)

Check of whether primary energy use is covered by carbon free sources

% of grid electricity generated by carbon free sources	80
PE associated with regulated energy uses [kWh/yr]	7,799.415
Of which electricity [kWh/yr]	5,768.507
Amount covered by on-site renewables and consumed on-site [kWh/yr]	0
Amount of electricity supplied by the grid [kWh/yr]	5,768.507
Amount of electricity supplied by the grid using fossil fuels [kWh/yr]	1,153.701
Difference between PE and ZEB threshold [kWh/yr]	2,683.993
Exported renewables energy [kWh/yr]	0
Amount covered by energy from carbon free grid sources [kWh/yr]	4,614.806
Amount covered by efficient district heating and cooling systems [kWh/yr]	0
Net primary energy use [kWh/yr]	1,153.701

ZEB Compliance Check

	Value	Threshold / Requirement	Compliance Status
Total Primary Energy Use [kWh/(m ² .y)]	41.94	<=42.00	Compliant
Primary energy use covered by carbon free sources?	Yes	Yes	Compliant
Operational GHG Emissions [kgCO ₂ e/(m ² .y)]	6.87	<=5.00	Non Compliant
Fossil fuel used on site?	Yes	No	Non Compliant
Ability to accept external signals?	No	Yes	Non Compliant
Achieves NZEB?	No	Yes	Non Compliant
Overall ZEB Compliant?	-	-	Non Compliant

NZEB Compliance Check

	Value	Threshold / Requirement	Compliance Status
EPC	0.35	<=0.30	Non Compliant
CPC	0.31	<=0.35	Compliant
RER	0.54	>=0.20	Compliant
Overall NZEB Compliant?	-	-	Non Compliant

Building Regulations: EPC, CPC, RER

CPC – Carbon Performance Coefficient

- Measures the carbon dioxide (CO₂) emissions from the dwelling.
- Compares the building's carbon emissions against a reference dwelling.
- Expressed as a number:
 - 1.0 = same emissions as the reference house.
 - Less than 1.0 = lower emissions.
 - Encourages low-carbon heating systems such as heat pumps and renewable technologies.

Simple example:

A CPC of 0.15 means the dwelling produces only 15% of the reference dwelling's CO₂ emissions.

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RER – Renewable Energy Ratio

- Measures the proportion of a building's energy demand supplied by renewable energy sources.
- Expressed as a percentage, renewable sources include:
 - Heat pumps
 - Solar PV
 - Solar thermal
 - Biomass (where permitted)

Simple example:

If a house requires 10,000 kWh of energy per year and 7,000 kWh comes from renewable sources, the RER is:

$$\frac{7000}{10000} \times 100 = 70\%$$

So the RER = 70%.

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Thank you for your attention,
any questions?

Website www.hpa.ie

Promoting best practice in heat pump
design, installation, and aftercare

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