Heating

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MITSUBISHI ELECTRIC

Product Update Meeting (PUM)
Residential Heating FY22 Q4

Product Update Meeting

Presented by | Product Marketing Department

Audio

Attendees will be in listen only mode to ensure the best experience for all

Questions

We welcome these & ask that your questions be submitted for the Q&A session

Recording

We are recording this session to enable access at your convenience

Your presenters today

Robert Taylor
Senior Product Manager
Residential Heating & Ventilation Systems

Laurent Widloecher
Product Manager
Residential Heating & Ventilation Systems

Product Update Meeting

Agenda

- Introduction & Context
- Product Sales Support & Tools
- Product In The Marketplace
- Product Range Extension
- Product Collateral
- Q&A

heating@meuk.mee.com

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Introduction & Context

Presented by | Robert Taylor & Laurent Widloecher

Introduction & Context

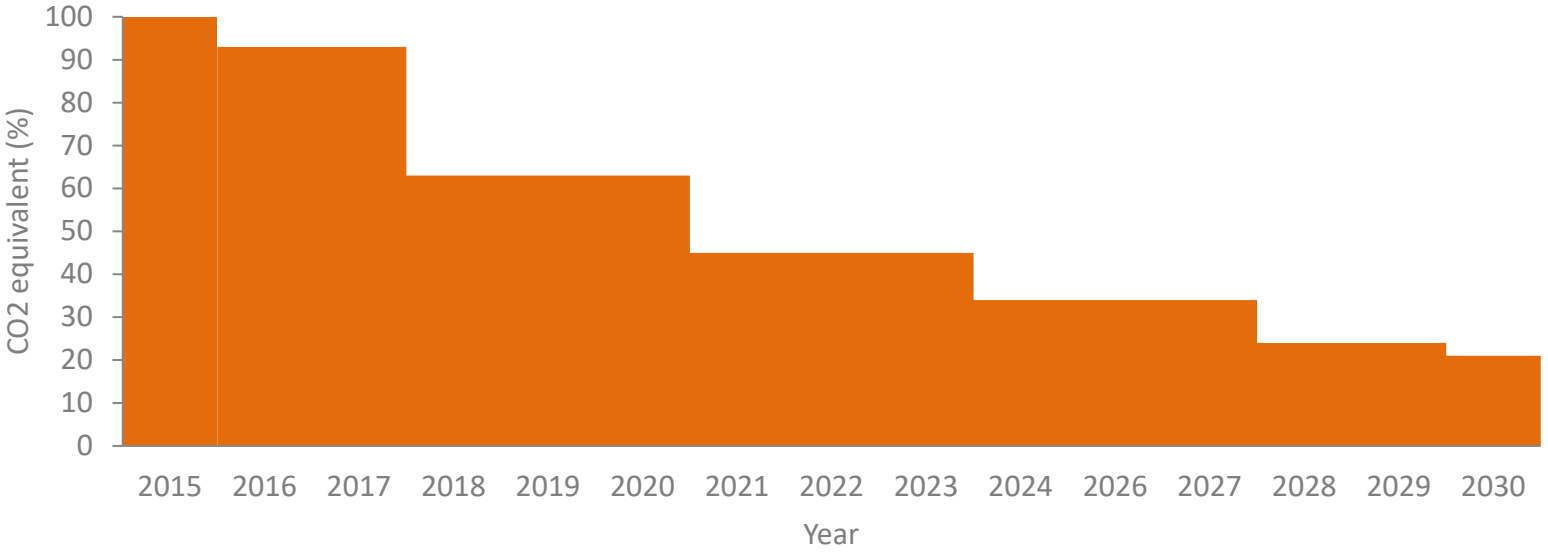
Decarbonisation Roadmap: Why heat pumps are the future of heating

- Electrification is key to decarbonisation & heat pumps to be the dominant low carbon heat technology
- Heat pump to be default low carbon heat technology within Building Regs 2025
- Target to install 600,000 heat pumps every year by 2028
- Target to install 1,000,000 heat pumps every year by 2030
- Scotland Net Zero Carbon 2045 and England & Wales Net Zero Carbon 2050

Refer to ‘Installation Manual’ and ‘Instruction Book’ for further ‘Technical Information’

Introduction & Context

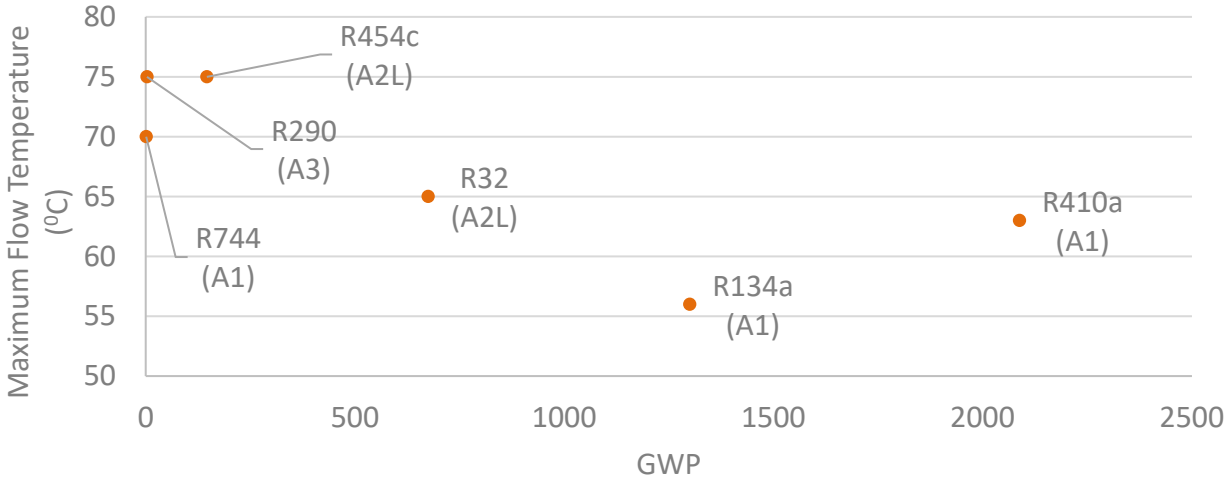
Refrigerant Type Overview



Refer to ‘Installation Manual’ and ‘Instruction Book’ for further ‘Technical Information’

Introduction & Context

Refrigerant Type Overview



Refer to 'Installation Manual' and 'Instruction Book' for further 'Technical Information'

Introduction & Context

Refrigerant Type Overview

Details
R744 (CO_2), R410a & R134a are classed as A1.
R32 & R454c are classed as A2L.
R290 (propane) is classed as A3.

Safety Classification		
A3	B3	Higher Flammability
A2	B2	Flammable
A2L	B2L	Lower Flammability*1
A1	B1	Non-Flammable
Lower Toxicity	Higher Toxicity	

R32 heat pump

*1 A2L refrigerants are commonly referred to as 'mildly flammable'
Refer to 'Installation Manual' and 'Instruction Book' for further 'Technical Information'

Introduction & Context

Embodied and Operational Carbon

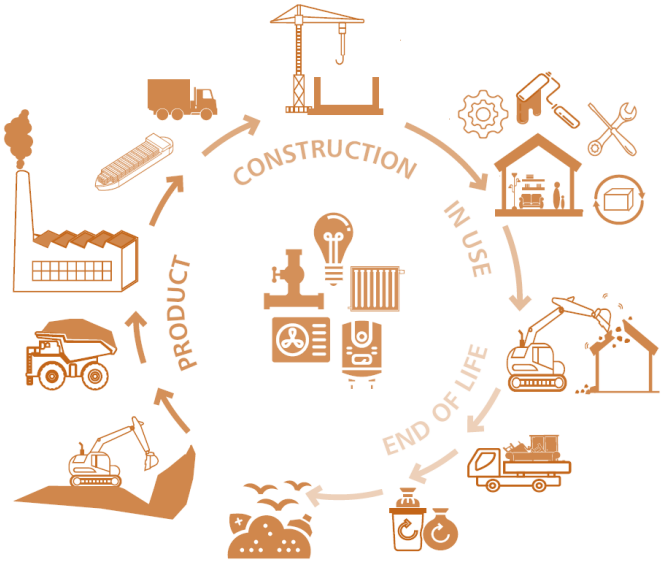
Embodied carbon

- Greenhouse gas emissions released to the atmosphere responsible for global warming, associated with the all life cycle except operational emissions at product level.

Operational carbon

- Greenhouse gases emitted as a result of a building's energy (B6) and water (B7) use during the building's operational lifetime.

Embodied, operational and whole life carbon are expressed as 'CO2 equivalent' (CO2e).



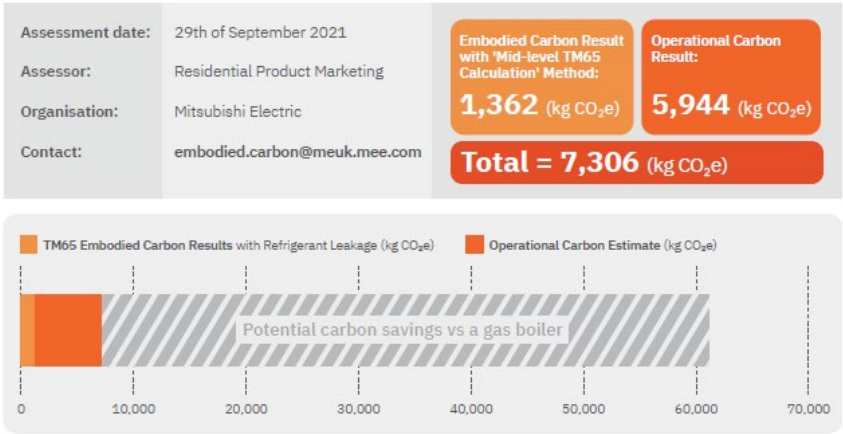
Refer to 'Installation Manual' and 'Instruction Book' for further 'Technical Information'

Introduction & Context

Embodied and Operational Carbon

A heat pump versus a gas boiler

- These calculations were conducted using some assumptions based on a typical air to water heat pump using ERP label energy data and efficiency as per the ERP fiche.
- The boiler calculation assumed a boiler efficiency of 97%, and used embodied carbon estimates based on the PEP Ecopassport and CIBSE's TM65 calculation methodology



Additional reading: https://les.mitsubishielectric.co.uk/the-hub/carbon-embodied-operational-and-whole-life-cycle

Refer to 'Installation Manual' and 'Instruction Book' for further 'Technical Information'

Introduction & Context

Poll Question

- When do you think heat pump product features should differ for new-build and retrofit markets?

- 2022
- 2023
- 2024
- 2025
- 2026

Please add further comments in the webinar chatbox
Refer to ‘Installation Manual’ and ‘Instruction Book’ for further ‘Technical Information’

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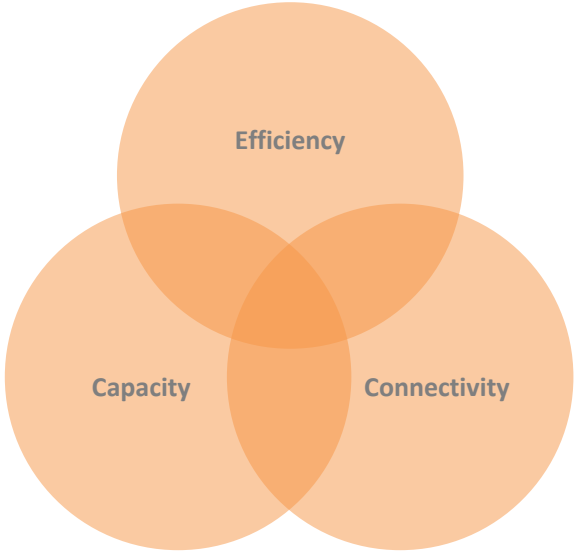
Product Sales Support & Tools

Presented by | Robert Taylor & Laurent Widloecher

Product Sales Support & Tools

Mass Market Requirements – Performance

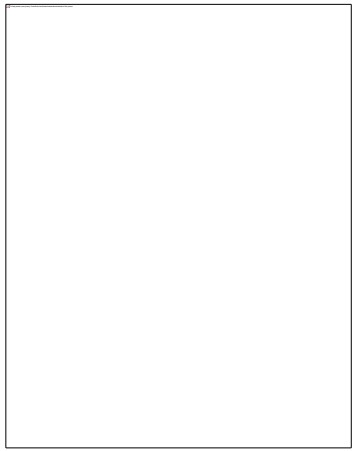


Refer to ‘Installation Manual’ and ‘Instruction Book’ for further ‘Technical Information’

Product Sales Support & Tools

Ecodan Training Centre - Hatfield

- Hands on training & practical activities (installation, commissioning, fault-finding)
- In addition to Ecodan online blended learning programmes
- Dedicated Ecodan zones inc. pre-plumbed DHW cylinder & cascade systems
- Refer e-shot communication & contact LESTechTraining@meuk.mee.com



Refer to ‘Installation Manual’ and ‘Instruction Book’ for further ‘Technical Information’

Product Sales Support & Tools

Ecodan Selection Tool

Updates:

MCS 031 v3.0

- Marcomms release 21/03
- Removal of financial information & dRHI data

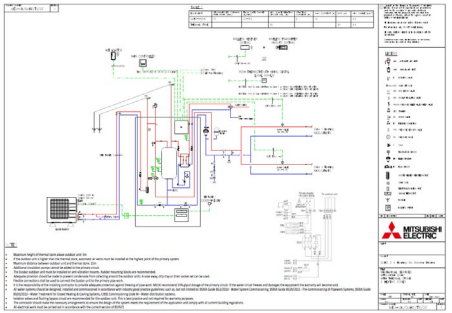
MIS 3005-D v1.0 & MIS3005-I v1.0

- Marcomms release 29/03
- Updated dry bulb temperatures at various locations
- Updated daily DHW demand calculation methodology
- Removal of Compliance Certificate

Refer to 'Installation Manual' and 'Instruction Book' for further 'Technical Information'

Product Sales Support & Tools

Pre-Sales Collateral

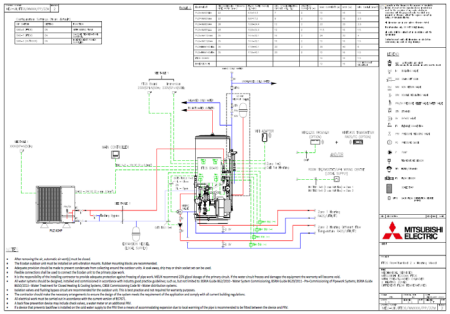


- Updated QUHZ-W40VA & EHPT20Q-VM2EA schematics [10/02]
- 4 no. schematics detailing: 1-zone; 2-zone; with & without booster heater
- Residential Pre-Sales will supply alongside relevant information & documents upon the return of quotation

Refer to ‘Installation Manual’ and ‘Instruction Book’ for further ‘Technical Information’

Product Sales Support & Tools

Pre-Sales Collateral



- Updated single outdoor unit (FTC6 control) schematics [03/03]
- Now include PUZ-WM85YAA & PUZ-WM112YAA
- 18 no. schematics detailing: 1-zone; 2-zone; 2-zone mixed flow temp; with & without DHW cylinder; hybrid
- Residential Pre-Sales will supply alongside relevant information & documents upon the return of quotation

Refer to ‘Installation Manual’ and ‘Instruction Book’ for further ‘Technical Information’

Product Sales Support & Tools

Pre-Sales Collateral

Technical Submission FTC6 Cascade

- Updated to include PUZ-WM85YAA & PUZ-WM112YAA
- Residential Pre-Sales will supply alongside relevant information & documents upon the return of quotation

Refer to ‘Installation Manual’ and ‘Instruction Book’ for further ‘Technical Information’

Product Sales Support & Tools

Poll Question

- Does the product sales support collateral and tools meet your needs?

- Yes, all my needs
- Yes, most of my needs
- No, I would like …

Please add further comments in the webinar chatbox

Refer to ‘Installation Manual’ and ‘Instruction Book’ for further ‘Technical Information’

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Product In The Marketplace

Presented by | Robert Taylor & Laurent Widloecher

Product in the Marketplace

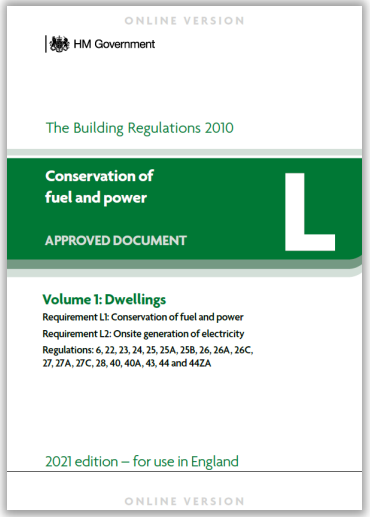
Brexit – UKCA Mark

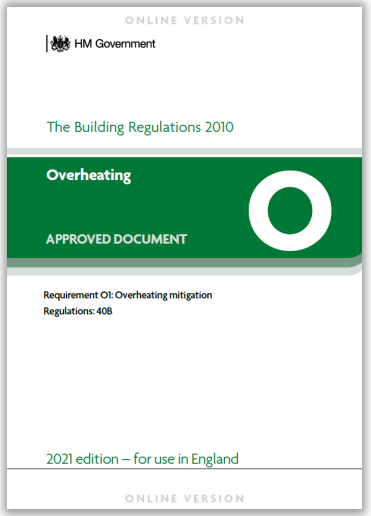
- ‘UK Conformity Assessed’ labels required for products from 1st Jan 2023
- Declares compliance with all relevant **UK** Regulations
- Operates in broadly the same manner as CE marking & divergence will be small in the short term

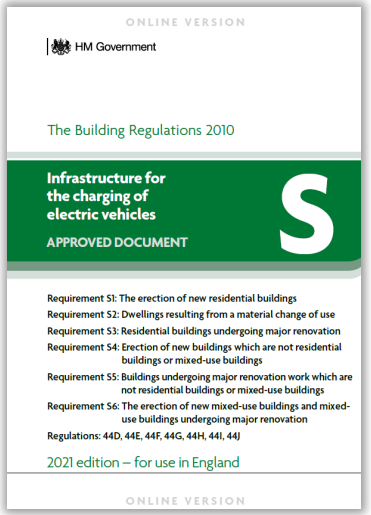
Refer to ‘Installation Manual’ and ‘Instruction Book’ for further ‘Technical Information’

Product in the Marketplace

Building Regulations Update: Overview







Refer to ‘Installation Manual’ and ‘Instruction Book’ for further ‘Technical Information’

Product in the Marketplace

dRHI & BUS

dRHI

- 31st March (midnight): Close to new applicants

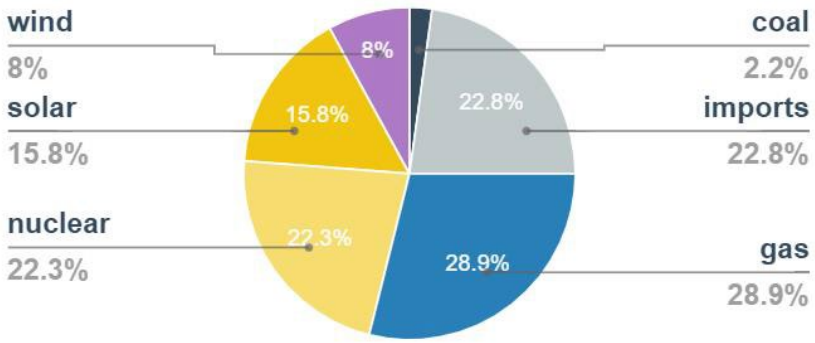
BUS

- 01st April: Commissioning date
- 11th April: Installer account creation opens
- 23rd May: Voucher applications open
  - Voucher application
  - Property owner consent
  - Voucher redemption

Refer to ‘Installation Manual’ and ‘Instruction Book’ for further ‘Technical Information’

Product in the Marketplace

Low Carbon Energy Sector: Energy Mix

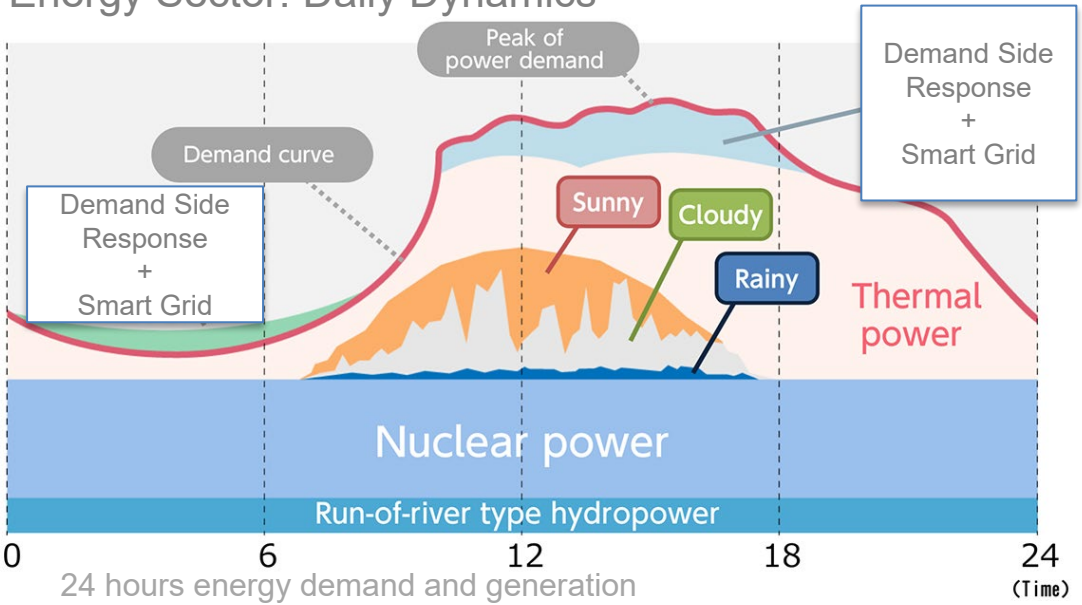


UK energy mix split continuously evolves

Sources: https://www.carbonintensity.org.uk/
Data (East England, 246gCO_2/kWh) as of Friday 25th March 16:23
Refer to 'Installation Manual' and 'Instruction Book' for further 'Technical Information'

Product in the Marketplace

Low Carbon Energy Sector: Daily Dynamics



Example: 24 hours energy demand and generation

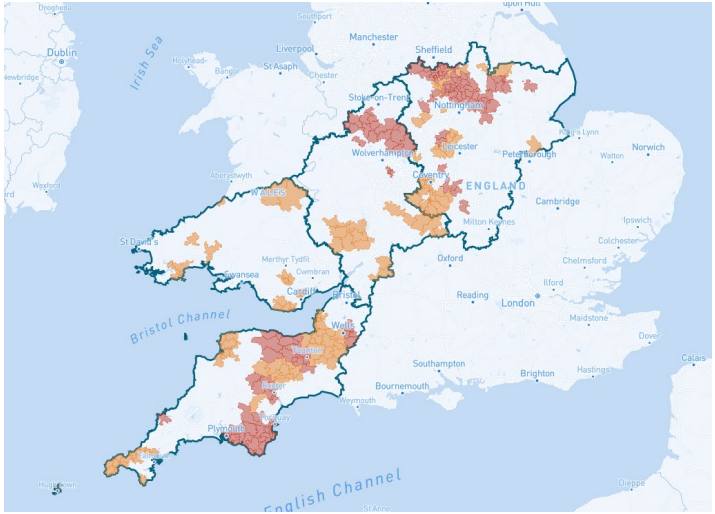
Opportunity: To deliver flexibility by shifting peak power demand to overnight

Refer to 'Installation Manual' and 'Instruction Book' for further 'Technical Information'

Product in the Marketplace

Low Carbon Energy Sector: Regional Peak Demand Mitigation

- DNOs identified areas where electricity demand is high
- Flexibility is seen as a tool to reduce grid reinforcement
- Ecodan offers grid flexibility services



Good to know:
Low voltage flexibility is developing at pace now. Historically flexibility was more required on the high voltage side of the network and delivered via industrial plants.

Sources: https://www.westernpower.co.uk/network-flexibility-map-application
Refer to 'Installation Manual' and 'Instruction Book' for further 'Technical Information'

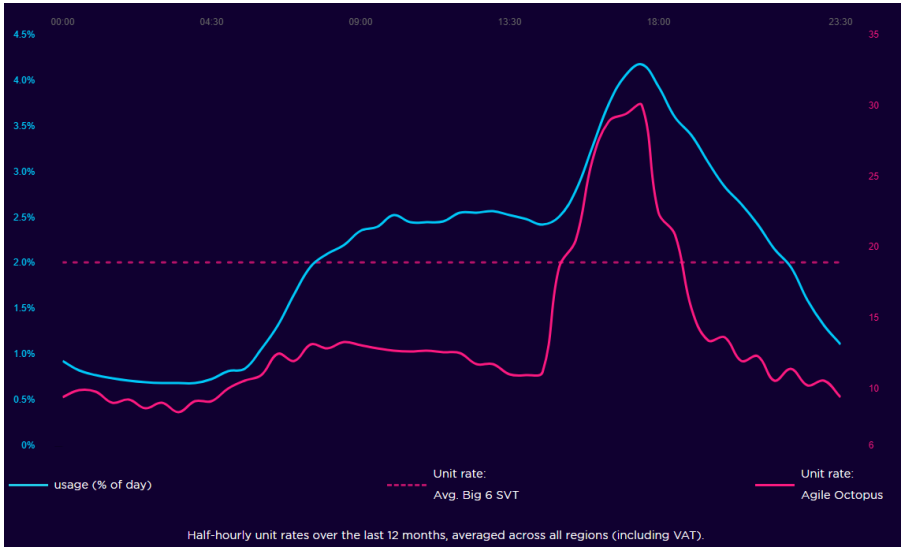
Product in the Marketplace

Low Carbon Energy Sector: Agile Tariff Example

Time Of Use (ToU) Tariff

- Offer cheaper electricity prices when demand and energy prices are at their lowest;
- Require a smart meter to monitors prices;
- Require a level of control commands to enable the optimisation.

Example with Octopus Agile →



Sources: https://octopus.energy/agile/

Refer to 'Installation Manual' and 'Instruction Book' for further 'Technical Information'

Product in the Marketplace

Poll Question

- Is your company supportive of mass market heat pump adoption?

- Yes; already providing heat pumps to the market as the default heat source
- Yes; already providing heat pumps to the market but only when specifically requested
- Yes; will provide heat pumps to the market by Apr'22
- Yes; will provide heat pumps to the market by Jul'22
- Yes; will provide heat pumps to the market by Oct'22

Please add further comments in the webinar chatbox

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Product Range Extension

Presented by | Robert Taylor & Laurent Widloecher

Product Range Extension

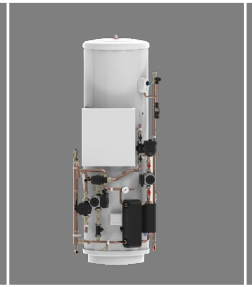
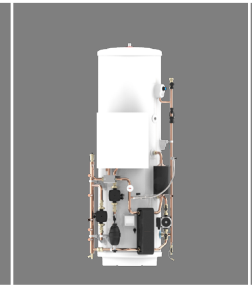
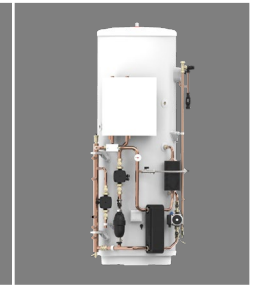
Product Range Overview - Monobloc Heat Pumps

	4.0kW	5.0kW	6.0kW	8.5kW	11.2kW	14.0kW
						
Dimensions (HxWxD) (mm)	715 x 809 x 300	943 x 950 x 330	1020 x 1050 x 480	1020 x 1050 x 480	1020 x 1050 x 480	1350 x 1020 x 330
Weight (kg)	57	71	98	98 / 111	119 / 132	132 / 143
Volume (m^3)	0.174	0.296	0.514	0.514	0.514	0.454
Max htg/dhw flow temp (^0C)	60 / 70	60 / 60	60 / 60	60 / 60	60 / 60	60 / 60
Sound Power Level (dB)	53	61	58	58	60	67

Refer to ‘Installation Manual’ and ‘Instruction Book’ for further ‘Technical Information’

Product Range Extension

Product Range Overview - Packaged & Pre-Plumbed DHW Cylinders

	Thermal Store	Packaged	Slimline	Standard	Solar	**New** Slimline	**New** Standard
							
Capacity (L)	200	200	150 - 170	150 – 300	210 - 300	150 - 170	150 – 300
Footprint (WxD) (mm)	595 x 680	595 x 680	649 x 646	683 x 730	683 x 730	676 x 654	730(748) x 756
Weight (Kg)	77	94	54 - 60	56 - 87	74 - 82	59-63	55-82
Plug & Play	Built-in electrical & mechanical components & flexible 2-zone space heating control						

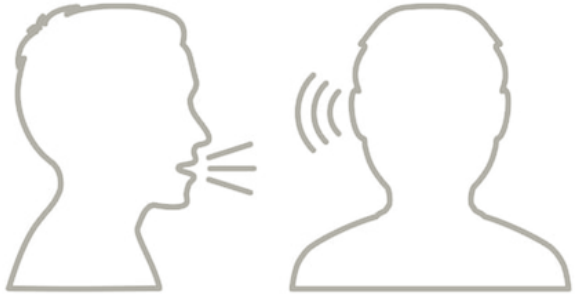
Refer to ‘Installation Manual’ and ‘Instruction Book’ for further ‘Technical Information’

Product Range Extension

New Pre-Plumbed Cylinders

Main Aims

- Achieve maximum primary flow rates
- Reduce primary circulation pump capacity
- Utilise commonly available UK componentry



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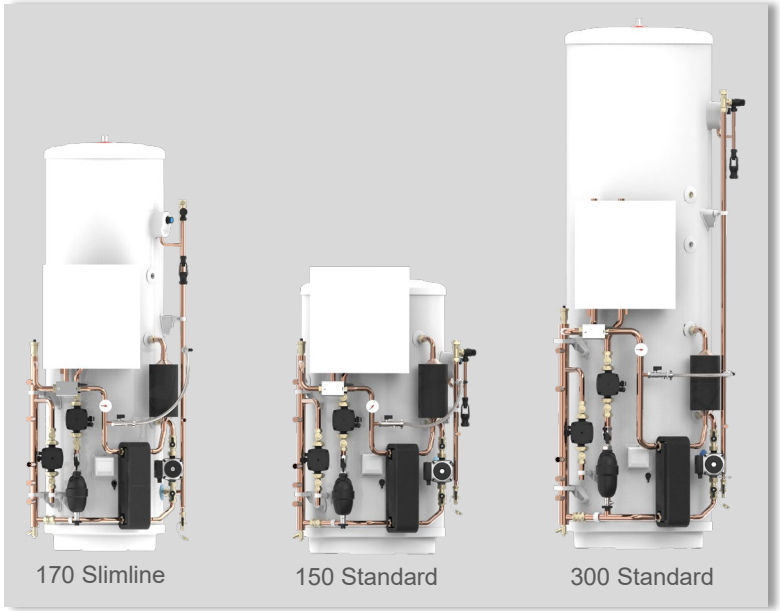
Product Range Extension

New Pre-Plumbed DHW Cylinders

Availability

- Due late 2022
- Currently being installed in Hatfield training centre



Refer to ‘Installation Manual’ and ‘Instruction Book’ for further ‘Technical Information’

Product Update

New Pre-Plumbed DHW Cylinders

	Slimline		Standard					
Capacity (L)	150	170	150	170	210	210	250	300
Primary Pipework Size (mm)	22					28		
Footprint (mm) [WxD]	676 x 654		730 x 756			748 x 756		

Refer to ‘Installation Manual’ and ‘Instruction Book’ for further ‘Technical Information’

Product Update

New Pre-Plumbed DHW Cylinders


PUZ-WM50VHA


PUZ-WM60VAA


PUZ-WM85VAA
PUZ-WM85YAA


PUZ-WM112VAA
PUZ-WM112YAA


PUZ-HWM140VHA
PUZ-HWM140YHA

System Type		Litres	5kW	6kW	8.5kW	11.2kW	14kW
Pre-Plumbed Slimline Cylinder	EHPT15X-UKHLDW1S	150	●	●	●		
	EHPT17X-UKHLDW1S	170	●	●	●		
Pre-Plumbed Standard Cylinder	EHPT15X-UKHDW1S	150	●	●	●		
	EHPT17X-UKHDW1S	170	●	●	●		
	EHPT21X-UKHDW1S	210	●	●	●		
	EHPT21X-UKHDW1L	210		●	●	●	●
	EHPT25X-UKHDW1L	250		●	●	●	●
	EHPT30X-UKHDW1L	300			●	●	●

WM60 compatible with both 210L cylinders; 22mm pipework variant recommended. WM85 compatible with both 210L cylinders; 28mm pipework variant recommended.

Refer to ‘Installation Manual’ and ‘Instruction Book’ for further ‘Technical Information’

Product Range Extension

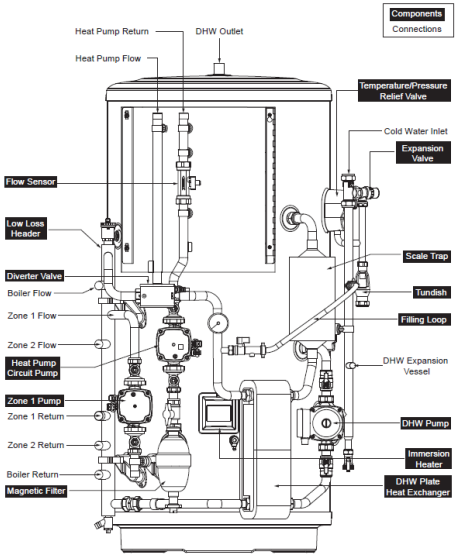
New Pre-Plumbed DHW Cylinders

Full Technical Details

- To follow later in the year

New Resources

- Major Components & Hydraulics Connections Identification
- Interconnecting Pipe Guidance
- System Schematics



Refer to ‘Installation Manual’ and ‘Instruction Book’ for further ‘Technical Information’

Product Range Extension

Product Range Overview - Controls

Programmer	Thermostat	MELCloud App	Smart Speaker Integration
			 
Engineer interface	User interfaces		
Commissioning & Servicing Tasks	Daily Operation (example functions: set room temperature, boost hot water, set holiday mode)		
Wired	Wireless		

Refer to ‘Installation Manual’ and ‘Instruction Book’ for further ‘Technical Information’

Product Range Extension

New WiFi Adaptor

Wi-Fi Adaptor Key Features:

- Enables ecodan to be connected to the internet
- Remote MELCloud Control
- Mitsubishi Electric after sales support

Update:

- MAC-567IF-E1H has been phased out
- Smaller form factor MAC-587IF-EH is its successor
- New MAC-587IF-EH will future proof ecodan in terms of connectivity

	MAC-567IF-E1H	**New** MAC-587IF-EH
		
Dimensions (mm) [HxDxW]	79 x 18.5 x 44	73.5 x 18.5 x 41.5

Refer to ‘Installation Manual’ and ‘Instruction Book’ for further ‘Technical Information’

Product Range Extension

Heating Accessories

- Ensure mechanical best practice installation
- System water maintenance
- Metering & Monitoring Service Packages

Refer to ‘Installation Manual’ and ‘Instruction Book’ for further ‘Technical Information’

Product Range Extension

Mechanical Ventilation Heat Recovery

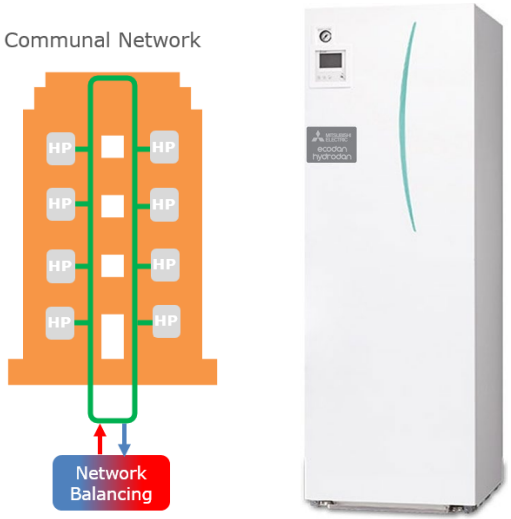
- Create an environment of constant clean and healthy air at home
- Capacities: 250, 350, 500 m^3/h
- Optional MELCloud app connection

Refer to ‘Installation Manual’ and ‘Instruction Book’ for further ‘Technical Information’

Product Range Extension

Ecodan Hydrodan – Water to Water Heat Pump

- Water-to-water residential apartment heat pump
- Connects to an ultra-low temperature network
- Provides space heating and DHW
- Capacity range: 1.1-7.5kW (L25W45)
- Optional MELCloud app connection



Refer to ‘Installation Manual’ and ‘Instruction Book’ for further ‘Technical Information’

Product Range Extension

Poll Question

- Which heat pump feature is most important for you?

- Capacity options <4kW
- Capacity options >14kW
- Additional capacity options 4-14kW
- High Flow Temperature
- Low Embodied Carbon

Please add further comments in the webinar chatbox

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Product Collateral

Presented by | Robert Taylor & Laurent Widloecher

Product Collateral

Pricelist

- Available to account holders
- Refer to upcoming marketing e-shot, due April 2022

Provided by your sales representative

Refer to ‘Installation Manual’ and ‘Instruction Book’ for further ‘Technical Information’

Product Collateral

Product Catalogue

Additions:

- Cylinders: EHPT15-30X-UKH(L)DW1(S-L)
- Wi-Fi Interface: MAC-587IF-EH
- Hydrodan: EHWT17D-MHEDW

Availability:

- Account holders
- Refer marketing e-shot, due April 2022

Refer to ‘Installation Manual’ and ‘Instruction Book’ for further ‘Technical Information’

Product Collateral

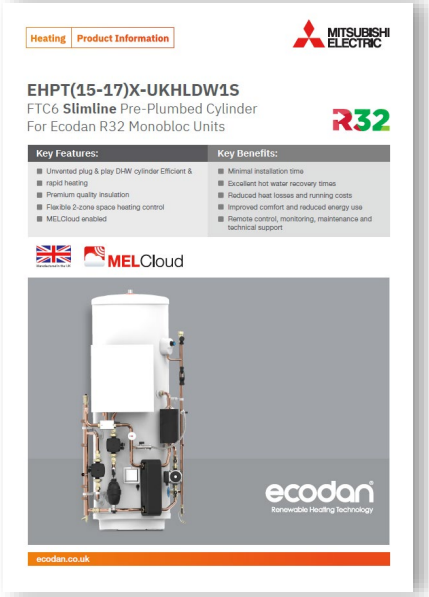
Document Library

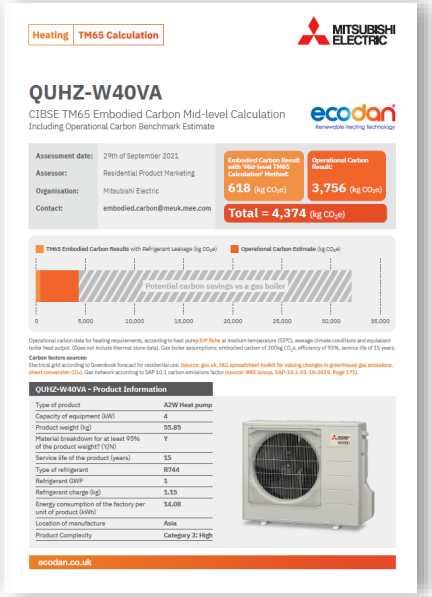
Embodied carbon calculations

- CIBSE TM65 Methodology
- Operational carbon benchmark
- Available for 4kW to 14kW ecodan

Product Information Sheets

- New Pre-Plumbed Cylinder Slimline (due soon)
- New Pre-Plumbed Cylinder Standard “S” (due soon)
- New Pre-Plumbed Cylinder Standard “L” (due soon)





http://library.mitsubishielectric.co.uk/pdf/directory/heating

Refer to ‘Installation Manual’ and ‘Instruction Book’ for further ‘Technical Information’

Product Collateral

Poll Question

- Which resource do you use most to obtain product information?

- Pricelist
- Catalogue
- Product Information Sheets
- M&E Schematics
- Product Bulletins

Please add further comments in the webinar chatbox

Refer to ‘Installation Manual’ and ‘Instruction Book’ for further ‘Technical Information’

Feedback

Webinar Rating

- How informative and valuable was this webinar for you?

- Slightly; I already knew a lot of the content
- As expected; I attend the bi-annual meetings for product updates
- Very; I learnt a lot of new information
- Extremely; I can refer to and use the information provided

Please add further comments in the webinar chatbox

Refer to ‘Installation Manual’ and ‘Instruction Book’ for further ‘Technical Information’

Future Webinar

Poll Question

- What would you like the next Product Update Meeting (PUM) to focus on?

Please add answers in the webinar chatbox

Refer to ‘Installation Manual’ and ‘Instruction Book’ for further ‘Technical Information’

Residential Heating

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Renewable Heating Technology

MITSUBISHI ELECTRIC

Q&A

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Thank You

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