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

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Introduction and opening remarks

Max Halliwell
Communications Manager
Residential Heating & Ventilation Systems

- Gearing up for the Mass Market Uptake of heat pumps in the UK

- The sum of all the changes you see today marks another key step in Ecodan development

- Monobloc is the mass market product

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Your presenters today

Robert Taylor
Product Manager,
Residential Heating & Ventilation Systems

Laurent Widloecher
Product Manager,
Residential Heating & Ventilation Systems

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Product Update Meeting

Agenda

- Product innovation overview

- Product features & benefits

- Product safety guidance

- Sales support

- Q&A session

heating@meuk.mee.com

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Product innovation overview
Key product features

Efficiency
All new R32 monobloc models boast market leading system specifications

Capacity
Improved performance ensures that capacity is maintained to -7dC* ambient

Connectivity
Enhanced features include smart home / grid functionality & WiFi

* WM50 = -7dC, WM60 = -10dC, WM85 = -10dC, WM112 = -7dC & HWM140 = -15dC

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Core heat pump range

Monobloc outdoor units ranges from 4.9kW to 84kW*

4.0kW	5.0kW	6.0kW	8.5kW	11.2kW	14.0kW[1]
Compact	Compact	Ultra Quiet	Ultra Quiet	Ultra Quiet	Zubadan
R744 (CO2)	R32	R32	R32	R32	R32

* Achieved by cascading 6 outdoor units / [1] Both 1 & 3 phase variants are available

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4.0kW monobloc chassis

R744 (CO2) Compact QUHZ-W40VA model – available now

Key Technical Features

- **Dimensions:** (H) **715**mm **x** (W) **809**mm **x** (D) **300**mm

- **Sound Pressure Level @1m: 43** dBA

- **ErP / SCOP Efficiency: A+ / 2.90** (55dC)

- **Elec. Supply: 20**A (via Indoor Unit)

- **Pipe Connections: 15** mm

- **Nominal Flow Rate: 6** L/min

- **Heating Range: -15**dC – **35**dC

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5.0kW monobloc chassis
R32 Compact PUZ-WM50VHA model – Autumn 2020

Key Technical Features

- **Dimensions:** (H) **943mm x** (W) **950mm x** (D) **330mm**

- **Sound Pressure Level @1m: 47** dBA

- **ErP / SCOP Efficiency: A+++ / 4.58** (35dC)

- **Elec. Supply: 1Φ 230**V **/ 16**A

- **Pipe Connections: 22** mm

- **Nominal Flow Rate: 14** L/min

- **Heating Range: -20**dC – **35**dC

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6.0kW monobloc chassis
R32 Ultra Quiet PUZ-WM60VAA model – Autumn 2020

Key Technical Features

- **Dimensions:** (H) **1020**mm **x** (W) **1050**mm **x** (D) **480**mm

- **Sound Pressure Level @1m: 45** dBA

- **ErP / SCOP Efficiency: A+++ / 4.62** (35dC)

- **Elec. Supply: 1Φ 230**V **/ 16**A

- **Pipe Connections: 22** mm

- **Nominal Flow Rate: 17** L/min

- **Heating Range: -20**dC – **35**dC

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8.5kW monobloc chassis
R32 Ultra Quiet PUZ-WM85VAA model – Summer 2020

Key Technical Features

- **Dimensions:** (H) **1020**mm **x** (W) **1050**mm **x** (D) **480**mm

- **Sound Pressure Level @1m: 45** dBA

- **ErP / SCOP Efficiency: A+++ / 4.57** (35dC)

- **Elec. Supply: 1Φ 230**V **/ 25**A

- **Pipe Connections: 28** mm

- **Nominal Flow Rate: 24** L/min

- **Heating Range: -20**dC – **35**dC

11.2kW monobloc chassis

R32 Ultra Quiet PUZ-WM112VAA model – Summer 2020

Key Technical Features

- **Dimensions:** (H) **1020**mm **x** (W) **1050**mm **x** (D) **480**mm

- **Sound Pressure Level @1m: 47** dBA

- **ErP / SCOP Efficiency: A+++ / 4.58** (35dC)

- **Elec. Supply: 1Φ 230**V **/ 32**A

- **Pipe Connections: 28** mm

- **Nominal Flow Rate: 32** L/min

- **Heating Range: -20**dC – **35**dC

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14.0kW monobloc chassis
R32 Zubadan PUZ-WM140(V/Y)HA model – Winter 2020

Key Technical Features

- **Dimensions:** (H) **1350**mm **x** (W) **1020**mm **x** (D) **330**mm

- **Sound Pressure Level @1m: 53** dBA

- **ErP / SCOP Efficiency: A+++ / 4.45** (35dC)

- **Elec. Supply: 1Φ 230**V **/ -** A & **3Φ 415**V **/ -** A

- **Pipe Connections: 28** mm

- **Nominal Flow Rate: 40** L/min

- **Heating Range: -28**dC – **35**dC

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Compatible indoor cylinder range

Packaged & Pre-Plumbed models range from 150L to 300L

MELCloud™

Thermal Store	Packaged	Slimline	Standard	Solar
1 model	1 model	2 models	5 models	3 models
R744 (CO2)	R32	R32	R32	R32

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200L Thermal Store

R744 (CO2) Packaged EHPT20Q-VM2EA Indoor Unit – available now

Key Technical Features

- **Compatible with R744 (CO2) products only**

- **Dimensions:** (H) **1600**mm **x** (W) **595**mm **x** (D) **680**mm

- **Model(s): 200**L

- **Elec. Supply: 20**A

- **Pipe Connections: 22**mm

- **Wifi Adapter** supplied as standard

200L

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200L Packaged Cylinder

R32 Packaged EHPT20X-MHEDW Indoor Unit – Summer 2020

Key Technical Features

- **Compatible with R32 products only**

- **Dimensions:** (H) **1600**mm **x** (W) **595**mm **x** (D) **680**mm

- **Model(s): 200**L

- **Elec. Supply: 10**A & **16**A

- **Pipe Connections: 28**mm **& 22**mm

- **Wifi Adapter** supplied as standard

200L

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150L & 170L Slimline Cylinder
R32 Pre-Plumbed EHPT**X-UKHLDW Indoor Unit – Summer 2020

Key Technical Features

- **Compatible with R32 products only**

- **Dimensions:** (H) **1515**mm - **1689**mm **x** (W) **648**mm **x** (D) **645**mm

- **Model(s): 150**L & **170**L

- **Elec. Supply: 16**A & **16**A

- **Pipe Connections: 22**mm & **22**mm

- **Wifi Adapter** installed as standard

170L

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150L to 300L Standard Cylinder

R32 Pre-Plumbed EHPT**X-UKHDW Indoor Unit – Summer 2020

Key Technical Features

- **Compatible with R32 products only**

- **Dimensions:** (H) **1130**mm - **2074**mm **x** (W) **683**mm **x** (D) **730**mm

- **Model(s): 150**L, **170**L, **210**L, **250**L & **300**L

- **Elec. Supply: 16**A & **16**A

- **Pipe Connections: 22**mm & **22**mm

- **Wifi Adapter** installed as standard

170L

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210L to 300L Solar Cylinder
R32 Pre-Plumbed EHPT**X-UKHSDW Indoor Unit – Summer 2020

Key Technical Features

- **Compatible with R32 products only**

- **Dimensions:** (H) **1513**mm - **2081**mm **x** (W) **683**mm **x** (D) **730**mm

- **Model(s): 210**L, **250**L & **300**L

- **Elec. Supply: 16**A & **16**A

- **Pipe Connections: 22**mm & **22**mm

- **Wifi Adapter** installed as standard

250L

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Product combination overview

(FTC6) Heat pump outdoor & indoor cylinder range compatibility overview

Capacity (L)	Th.S	Pkg	Slimline		Standard					Solar		
	200	200	150	170	150	170	210	250	300	210	250	300
4.0kW	■											
5.0kW		■	■	■	■	■	■			■		
6.0kW		■	■	■	■	■	■			■		
8.5kW		■	■	■	■	■	■	■	■	■	■	■
11.2kW		■					■	■	■	■	■	■
14.0kW		■					■	■	■	■	■	■

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Follow these 3 easy steps to enjoy
Total peace of mind with smart control

1: Activate ✓

Register now to activate your Mitsubishi Electric **Homeowner Guarantee** and enjoy total peace of mind from the protection this **FREE** cover offers.

Activate today

2: Connect))

Easily pair your Ecodan to the internet via its wi-fi adaptor, **download the MELCloud app** and enjoy **remote control & monitoring** of your Ecodan at home or on the move from your smartphone, tablet or PC.

MELCloud

Room temperature
19°C

Available on the **App Store**
ANDROID APP ON **Google play**
Windows Store

3: Benefit 🎧 Ecodan Helpdesk

Once connected, you can also enjoy the benefits of **MELConsole** which provides **remote maintenance & technical support** reducing the need of a visit from an engineer.

MELConsole
Remote Maintenance & Technical Support

24/7 Technical Support

To activate, scan the QR Code or call: **0161 866 6064**
8am-5pm Mon-Fri (ex. Bank Holidays)

To find out how to connect, scan the QR Code or visit: **melcloud.com**

To find out more, scan the QR Code or call the Ecodan Helpdesk: **0161 866 6064**

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▲ **MITSUBISHI ELECTRIC**

Control & accessory solutions

Intelligent range of controls and accessories to suit all applications

Integrated	Wireless	MELCloud	Standalone	Fan Assisted Radiators
Main RC Flow Temp. Controller (standard)	Zone Temp. Controller (option)	Cloud System Controller (standard)	FTC6 or FTC2BR Controller (option)	iLife2 Slim 0.9kW & 2.1kW (option)

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Product refrigerant overview

Taking the next step to deliver upon F-Gas phase down legislation

F-Gases

Moving from R410a to R32 has been driven by emission reduction laws

CO2e

100%
93%
63%
45%
34%
24%
21%

2015 2016 2017 2018 2019 2020 2021 2022 2023 2024 2026 2027 2028 2029 2030

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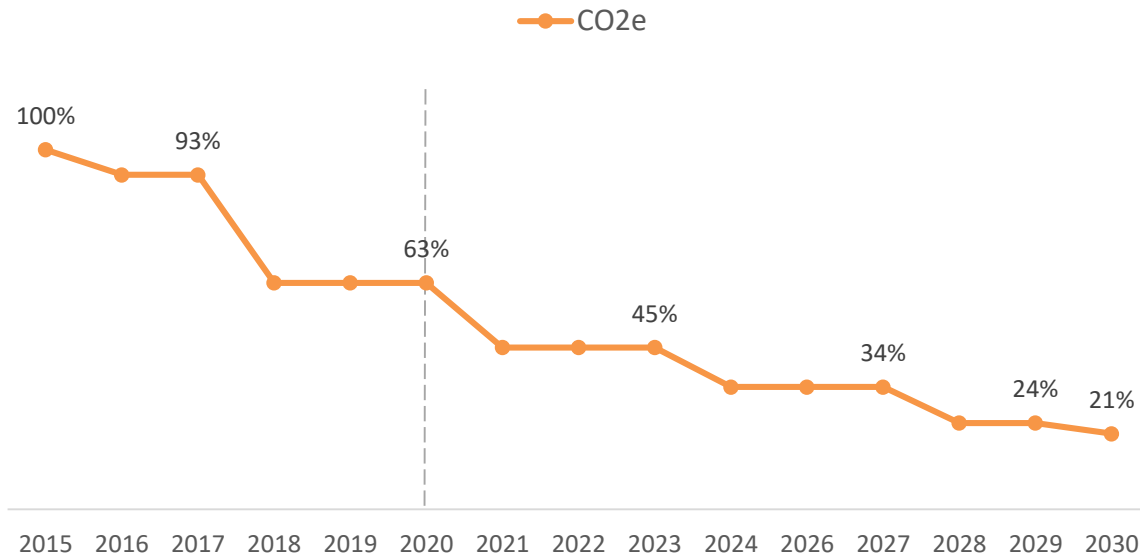
Product efficiency overview
Space Heating SCOP comparison at 35dC flow

A+++

Efficiency

All new R32 monobloc models boast market leading system specifications

Legend: ● R32   ● R410a

	5.0kW	6.0kW	8.5kW	11.2kW	14.0kW
R32	4.58	4.62	4.57	4.58	4.45
R410a	4.12	4.40	4.35	4.34	3.99

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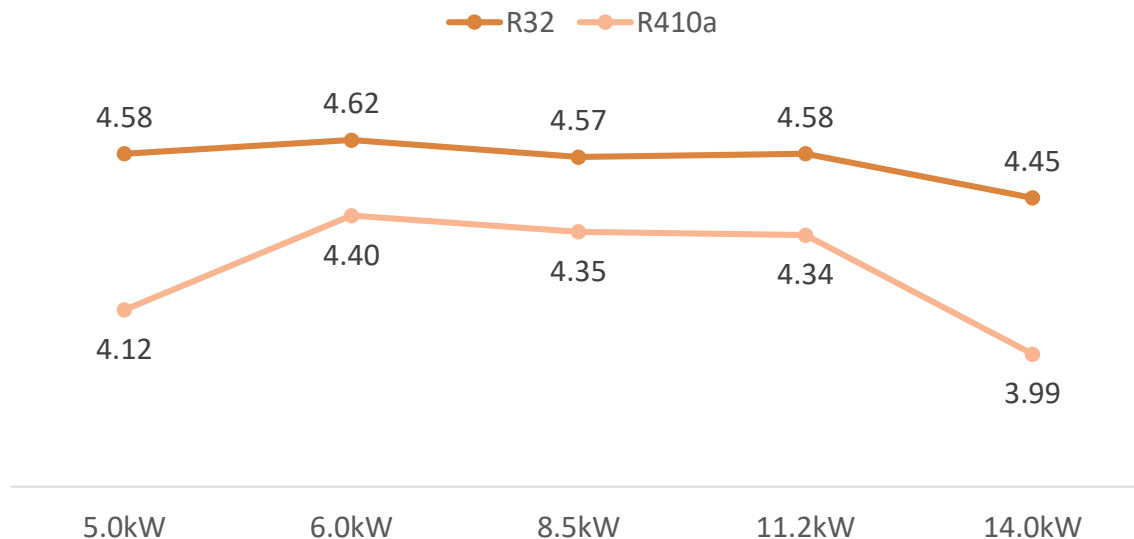
Product capacity overview

11.2kW model nominal low ambient performance at 45dC flow temperature

Capacity

Improved performance
ensures that capacity is
maintained to -7dC * ambient

R32 ● R410a

▲24%

	-25°C	-20°C	-15°C	-10°C	-7°C	2°C	7°C
R32	5.9	7.0	7.5	10.1	11.2	11.2	11.2
R410a	6.5	7.0	9.0	9.0	11.2	11.2	

* WM50 = -7dC, WM60 = -10dC, WM85 = -10dC, WM112 = -7dC & HWM140 = -15dC

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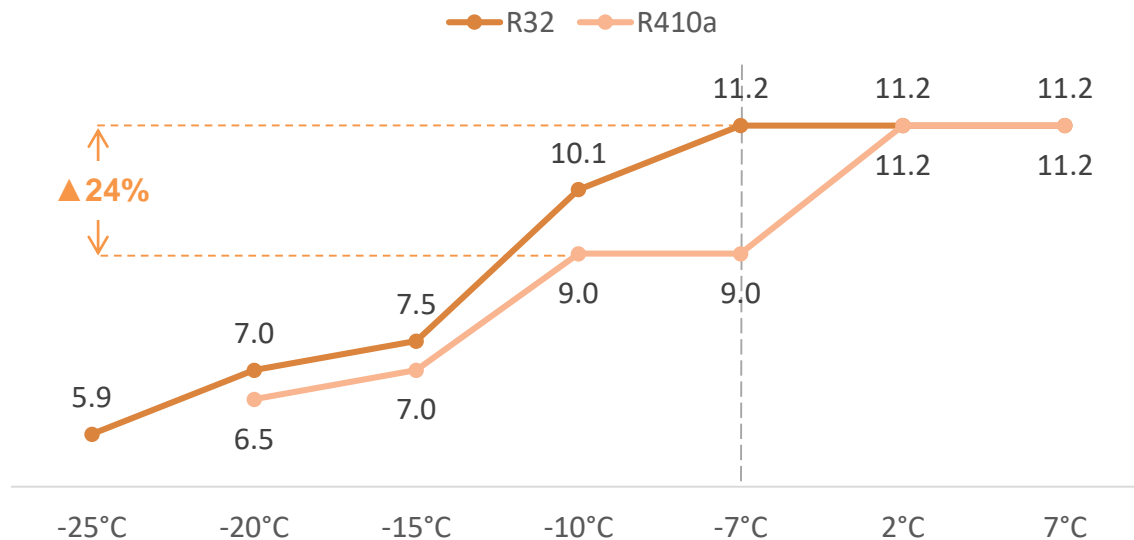
▲ MITSUBISHI ELECTRIC

Product flow temp overview

Seek to minimise the heat loss of a property to optimise performance

Flow Temp

Guidance is to use as low a temperature as possible to maximise efficiency

R32 8.5kW model

4.79

4.45

▲38%

4.11

3.79

3.47

35°C   40°C   45°C   50°C   55°C
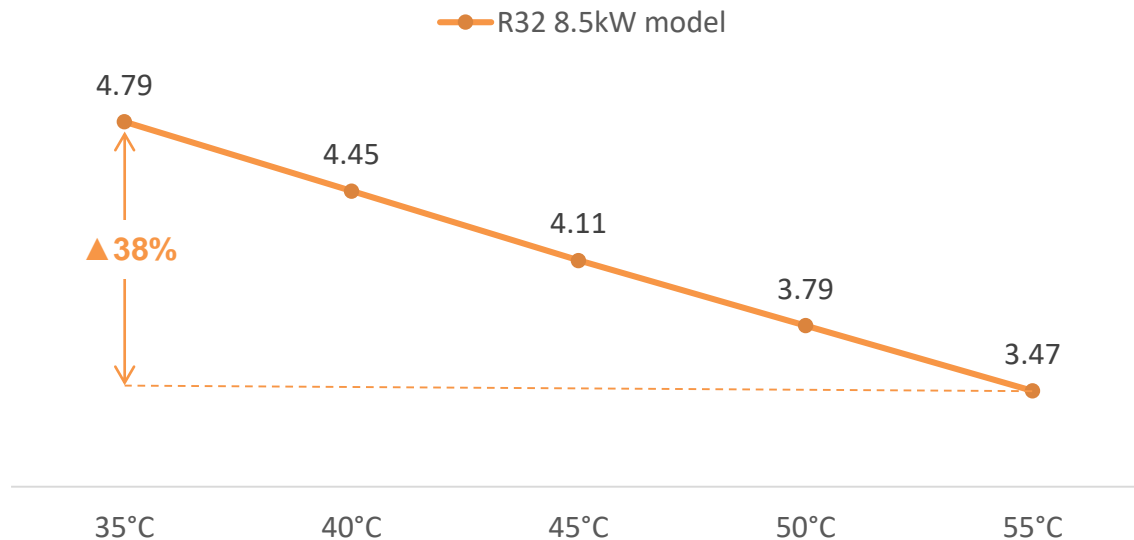
Source: mcscertified.com/product-directory/

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Product cloud services

Enhanced Mitsubishi Electric services included as standard

Connectivity

Enhanced features include smart home / grid functionality & WiFi

MELCloud	MELConsole
Cloud based solution for controlling your Ecodan remotely or via your smartphone, PC and/or tablet	Benefit from a MELCloud enabled system that enables remote maintenance and technical support
MELCloud	**MEL**Console Remote Maintenance & Technical Support

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Product connectivity features

Introducing the latest enhancements to our existing smart controls

Connectivity

Enhanced features include smart home / grid functionality & WiFi

Smart Home	Smart Grid
Ecodan is now able to connect to your smart home. You will be able to control and optimise your comfort & energy use	Advanced controls also allow homeowners to take advantage of flexible tariffs and external heating commands
Amazon Alexa compatible	

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Product commissioning features

Quick & simple system setup

Simple Setup

Seeking to improve the commissioning process for mass market uptake

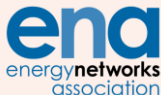| Setup Wizard	Quiet Mode
Upon system start-up, a setup Wizard will prompt the user and provides a step by step guide for setting the complete system	Commissioning engineers are now able to set the quiet mode from the main remote controller

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Product certification overview

Testing, marking & certification for the UK

Certification

All major UK schemes have been considered to maximise product use

Factory	Networks	Outdoor	Indoor	Design
Core products range is made in the UK and suit the UK market	Products are to be listed on the database for simplified grid connections	Products are listed and have a passport for the RHI grant	Products comply with key water & building regulations	Products are listed to enable the accurate calculation for [SAP] assessment
Manufactured in the UK	ena energy**networks** association	MCS CERTIFIED	kiwa	PCDB

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Product safety guidance

R32 Refrigerant Safety Classification

Details
R744 (CO_2) & R410a are classed as A1.
R32 is 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'.
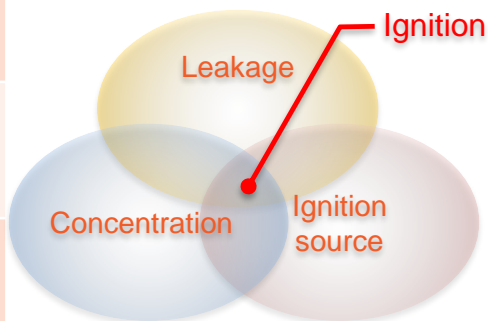
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Product safety guidance

R32 General Information

Details		General Information
Prevent R32 leakage		
Prevent R32 concentration		
Prevent R32 ignition source		R32 heat pump

Ignition

Leakage

Concentration

Ignition source

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Product safety guidance

R32 Refrigerant Leakage Prevention

Details
Anti-freeze protection is required
R32 unit primary water circuit should be unvented / sealed
All internal valves (e.g. AAV) should be sealed to atmosphere

Leakage Prevention
R32 heat pump

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Product safety guidance

R32 Refrigerant Concentration Prevention
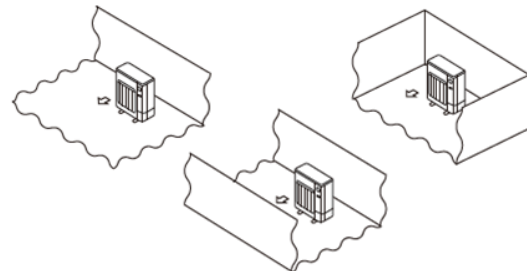
Details
Ensure adequate ventilation
Ensure the requirements of Standard EN 378-1 are met
Be aware that refrigerants may not contain an odour

Concentration Prevention
R32 heat pump

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Product safety guidance

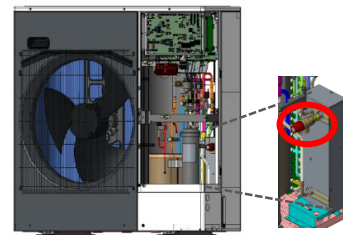R32 Refrigerant Concentration Prevention

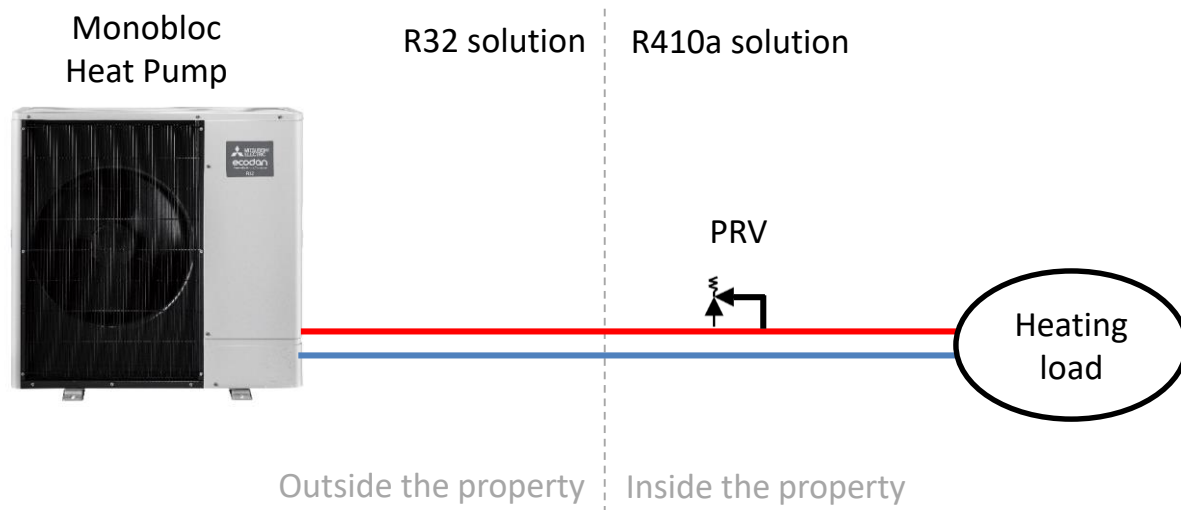| Details |
|---|
| R32 heat pumps have an in-built Pressure Relief Valve (PRV) |
| The Pressure Relief Valve (PRV) is contained within the heat pump to discharge any abnormally leaked refrigerant outside of the building |
| No Pressure Relief Valve (PRV) to be installed inside the building |

Concentration Prevention
R32 heat pump

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Product safety guidance

Important R32 system installation notification

Monobloc
Heat Pump

R32 solution | R410a solution

PRV

Heating
load

Outside the property | Inside the property

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Product safety guidance

R32 Refrigerant Ignition Source Prevention

Details
Minimise the potential for ignition
Ensure the requirements of Standard EN 60335 are met
The appliance shall be stored in a room without continuously operating ignition sources

Ignition Source Prevention
R32 heat pump

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Product safety guidance

Approved Product Combinations

Details	Combinations
R410a outdoor units with R410a (FTC5) indoor units only	R410A
R32 outdoor units with R32 (FTC6) indoor units only	R32
Do not mix R410a (FTC5) and R32 (FTC6) products	R32 heat pump

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Sales support

Ecodan Selection Tool

Benefits
"Whole house" and "Room by room" heat loss calculation software
Ensure suitable product selection for your project
Receive MCS compliant reports directly via email

EST
PMD Product Support

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Renewable Heating Technology

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Sales support
Cascade Technical Submission

Benefits
Ensures the best system by combining up to 6 heat pumps
Provides important mechanical system details
Provides important electrical system details

CTS
PMD Product Support

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Renewable Heating Technology

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Sales support

Sound Calculator

Benefits
MCS installer standard MCS020 compliant
Assess heat pump installation location for permitted development
Quick and simple to use with minimal input required

SC
PMD Product Support

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Sales support
MCS SCOP Table

Benefits
Quick look-up data table
Demonstrate Ecodan high space heating efficiency
Promote low flow temperature system design

SCOP
PMD Product Support

Final thoughts

Some key takeaways from our session today

- Product range has been developed to suit the needs of the UK mass market

- Full low GWP monobloc range will consist of 7 outdoor and 12 indoor models

- Product range delivers market leading connectivity, efficiency and sound levels

- Enhanced range of reliable award winning products are now easier to setup

- New models will be released in parallel with the existing range of products

Thank You

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Presented by	Robert Taylor, Laurent Widloecher, Max Halliwell