Mitsubishi Electric Guide to

Future-proofing HVAC: VRF systems and lower GWP refrigerants

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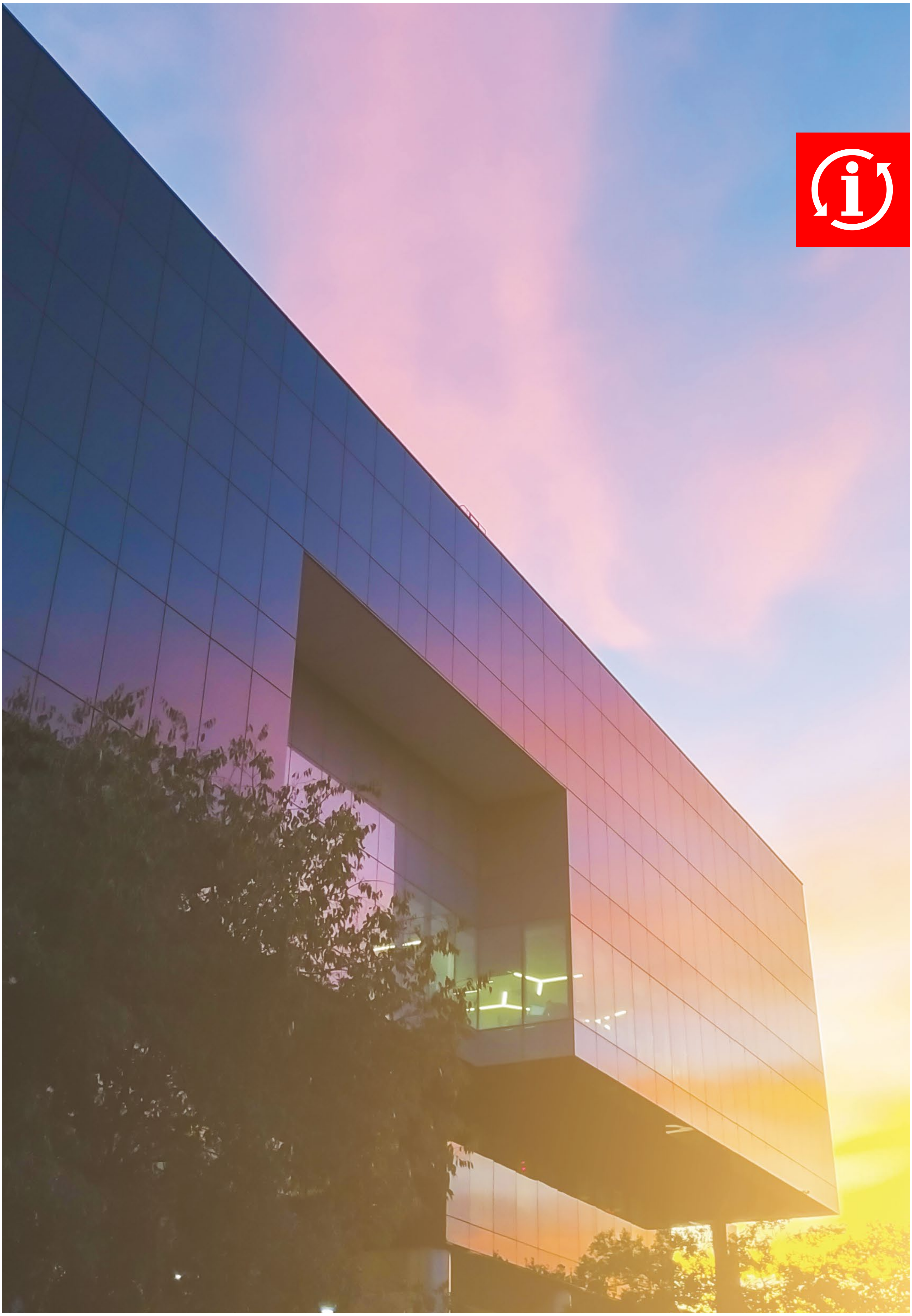


Mitsubishi Electric Guide to

Future-proofing HVAC: VRF systems and lower GWP refrigerants

This is an independent guide produced by Mitsubishi Electric to enhance the knowledge of its customers and provide a view of the key issues facing our industry today.

This guide accompanies a series of seminars, all of which are CPD certified.

Contents

Introduction

Today, specification of HVAC systems takes place against a backdrop of complex regulation and tighter targets on carbon reduction in the built environment. Energy performance legislation, refrigerant phase-down programmes and whole-life carbon reporting frameworks are reshaping how buildings services are designed, installed and maintained.

Variable refrigerant flow (VRF) systems are well-established as a flexible and efficient solution across a range of commercial building types, including offices, hospitality, education and mixed-use developments. However, the regulatory environment in which they operate is evolving.

The transition from high-GWP refrigerants such as R410A towards lower-GWP alternatives including R32 is a significant stage in that evolution.

This Guide examines how VRF technology is adapting to these changes. It considers the implications of refrigerant regulation, energy performance requirements and safety standards. It also explores how consultants can specify systems with confidence in the phase-down environment while providing context around hybrid and hydronic approaches to support informed decision making.

Understanding VRF:
Technology with history

Variable refrigerant flow systems have been in use in the UK for decades. They are widely applied across diverse sectors including offices, education, retail and leisure.

The continuous development of VRF technologies has kept it at the forefront of choices for specifiers and installers. Research from organisations such as BSRIA[1] shows that the UK market for VRF remains steady, with high sales volumes driven by both the new-build and refurbishment markets.

As a direct expansion (DX) system, VRF installations have a single outdoor unit connecting to multiple indoor units (mounted on or in walls, ceilings or floors), giving them flexibility in design.

The intelligent modulation of refrigerant flow around different building zones means that a VRF system can deliver a comfortable environment that matches the requirements of each zone. Two of the main VRF formats are heat pump VRF and heat recovery VRF.

Diagram 1 shows a typical layout for a Mitsubishi Electric heat pump VRF system, where multiple indoor units are supplied by a highly efficient air-source heat pump outdoor unit.

Heat pump VRF systems can provide heating or cooling within a space, and are ideal for open plan offices, call centres or larger retail units.

Diagram 1: Mitsubishi Electric Heat Pump VRF System

One outdoor unit provides all indoor units heating or cooling at a given time.

This system is ideal for:
open plan offices, call centres or retail

Understanding VRF:
Technology with history

Diagram 2 shows a typical layout for Mitsubishi Electric's City Multi VRF with heat recovery.

This approach provides several benefits for designers and end-users. Heat recovery transfers energy around the building to wherever it's needed, allowing for simultaneous heating and cooling in a space. This is also a highly energy efficient system, reducing power input by 30% (against non-heat recovery systems).

This makes it an excellent solution for hotels and offices with a mix of open plan and closed spaces, where occupants may want heat in some parts of the building, but cooling in others. It's also useful in the changeable UK climate where cooler mornings are replaced by hotter afternoons, as the system can manage the transfer from heating to cooling exactly as required by occupants.

Diagram 2: Mitsubishi Electric's City Multi Heat Recovery VRF System

Provides simultaneous heating and cooling with the benefit of **heat recovery**. By moving energy where it's needed, power input is **reduced by up to 30%**, offering flexibility, operability, comfort and control.

This system is ideal for: **Hotels, offices and leisure**

The continuous developments in VRF technologies means that they provide designers with a well-known and robust HVAC solution which, teamed with modern control systems, can provide excellent outcomes in terms of energy efficiency and reduced operational carbon.

However, VRF is not standing still. The regulatory and environmental landscape that they operate in is changing rapidly, leading to further evolution in this technology.

VRF evolution: responding to a changing HVAC landscape

VRF technology has evolved steadily over the past few decades, driven by improvements in compressor performance and features such as inverters, smart controls and heat recovery capabilities. However, the most significant change affecting system design in recent years has not been mechanical but regulatory: the global phase-down of high GWP (Global Warming Potential) refrigerants.

Refrigerants used in VRF systems fall within the scope of the EU Regulation on fluorinated greenhouse gases (F-gas Regulation)[2]. This legislation, introduced in 2006 and updated in 2015 and 2024, is a quota-based phase-down mechanism that limits the total amount of HFCs (hydrofluorocarbons) on the market, expressed as CO_2 equivalent tonnes (CO_2e).

The EU F-gas Regulation has expanded since its introduction to include an increasing range of products in the phase-down process. It also introduced stricter rules on leak prevention during transport, installation, service and disposal; and now focuses on developing closer monitoring to track F-gas use.

In addition, from 2024 the EU F-gas Regulation introduced a schedule for bans on placing several categories of products containing HFCs on the EU market. These include HVAC equipment such as chillers and heat pumps in certain size ranges.

For system owners and operators, one of the most important impacts of the EU F-gas Regulation is that it reduces the availability of higher-GWP refrigerants over time and has already led to the withdrawal of several legacy options.

Use of higher GWP refrigerants is also restricted during maintenance, with reclaimed and recycled F gases above the GWP threshold only able to be used until 2030. And then they may only be used by the organisation which carried out the recovery as part of maintenance or servicing.

VRF evolution: responding to a changing HVAC landscape

Although the UK is no longer part of the EU, domestic refrigerant policy has continued to evolve. DEFRA (Department for Environment Food and Rural Affairs) oversees UK fluorinated gas rules. At the end of 2025, DEFRA proposed a UK phase-down trajectory[3] that would reduce HFC use by 98.6% by 2048, with steep quota reductions from 2027 onwards.

However, in May 2026, DEFRA announced[3] that it would delay the introduction of a phasedown in Great Britain,following feedback from the industry to its proposal.

DEFRA noted: **"To give industry clarity ahead of 2027, we confirm that we will not legislate in 2026 to change the phasedown steps from 1 January 2027."**

It is important to note that DEFRA confirmed that for 2027, the relevant HFC phasedown step in Annex 5 of the F-gas Regulation will continue to apply. This Annex sets out the UK's existing HFC phasedown schedule (adopted when the UK left the European Union).

The most recent phasedown step started on 1 January 2024, which reduced the quantity of HFCs placed on the market in Great Britain to 31% of the 2015 -2019 baseline, or an equivalent 69% reduction in HFCs.

The table below shows the phasedown percentages from 2027 onwards under the current F-gas Regulation.

Years	Existing UK HFC Phase-down F-gas Regulation (Annex 5)	PROPOSED BUT DELAYED DEFRA Proposed High-ambition phase down option
2024 - 2026	**31%**	**-**
2027 - 2029	**24%**	**16.2%**
2030 - 2032	**21%**	**10.3%**
2033 – 2035	**21%**	**6.75%**
2036 – 2038	**21%**	**4.8%**
2039 – 2041	**21%**	**3.2%**
2042 - 2044	**21%**	**2.1%**
2045 - 2047	**21%**	**1.6%**
2048 - 2050	**21%**	**1.4%**

(From DEFRA: F-gas Regulation in Great Britain: Reform of the HFC phasedown – Consultation)

DEFRA has stated that it will clarify the next steps for F-gas reduction plans in a report due towards the end of 2026. However, the change of course does not diminish the impact of refrigerant choice in HVAC systems.

For specifiers there are two immediate implications:

HVAC system selection, including the refrigerant, must consider long-term viability (including for maintenance and servicing), not just current compliance.

System specification should reflect the likely trajectory of the phase-down steps over the building's operational life.

The transition from R410A to R32

In the VRF sector, the most visible impact of phase-down policy has been the transition from R410A (GWP 2088 under IPCC assessment values[4]) to lower-GWP alternatives such as R32 (GWP 675).

The transition is not a reflection of performance limitations in R410A systems. Instead, it is a response to regulatory and carbon-accounting pressures. **R32 offers some key benefits:**

- **Significantly lower GWP than R410A**
- **High volumetric cooling capacity**
- **Strong energy performance profile**
- **Single-component refrigerant characteristics (simplifying recovery and reuse)**

However, the reduction in GWP is accompanied by a change in safety classification. Under BS ISO 187[5], refrigerants are classified by toxicity (A or B) and flammability (1, 2L, 2, 3). R32 is classified as A2L: 'lower toxicity, mildly flammable'. This impacts design and installation of HVAC systems.

Specification in a phase-down environment

The regulatory landscape introduces a broader whole life consideration for consultants. Specifying a system nearing the limits of phase-down may expose a building owner to:

- **Increased maintenance costs due to rising refrigerant prices**
- **Supply chain volatility for service top-ups**
- **Risk of premature system replacement** (financial cost and disruption to the building users)
- **Increased embodied carbon if the plant is replaced before its end of life.**

In projects targeting Net Zero pathways, or whole life carbon (WLC) assessment, refrigerant choice now influences both embodied and operational carbon (calculated as charge size x GWP) and operational carbon (system efficiency and leakage potential).

In response to these challenges, leading manufacturers have adopted system architecture, controls and safety measures to accommodate A2L characteristics, while maintaining the design flexibility and efficiency that made VRF so widely specified from its first introduction.

The focus for consultants is therefore how to specify next-generation systems within our changing regulatory framework.

VRF evolution: responding to a changing HVAC landscape

Energy performance and whole-life carbon drivers

Alongside refrigerant phase-down programmes, building energy performance legislation and carbon reporting frameworks are exerting increased influence on HVAC specification decisions.

The most recent update of Part L of the Building Regulations for non-dwellings introduced more stringent performance requirements for fixed building services. HVAC systems now play a critical role in achieving compliance at both design and as-built stages.

At the same time, Minimum Energy Efficiency Standards (MEES) continue to raise the baseline performance for non-domestic buildings. Proposals to move the minimum EPC rating to C by 2027 and B by 2030 have already impacted the commercial property sector – for building owners system efficiency is directly linked to asset and rental value.

Beyond operational performance, there is a growing focus on the whole life carbon of buildings. Although not currently legislated, frameworks such as the UK Net Zero Carbon Buildings Standard[6] are backed by influential bodies such as CIBSE and RICS. The UK NZCBS encourages designers to consider:

- **Operational carbon** (energy use in operation), and
- **Embodied carbon** (associated with manufacturing, installation, maintenance and end-of-life of equipment used in buildings)

Refrigerant selection contributes to operational and embodied carbon. From an operational perspective, system efficiency influences annual energy consumption and associated emissions. From an embodied and lifecycle perspective, a refrigerant's global warming potential, system charge volume and leakage risk all contribute to total carbon impact over a system's lifetime.

As a result, consultants are increasingly required to balance:

- **Energy performance**
- **Refrigerant strategy**
- **Whole-life carbon reporting**
- **Long-term regulatory resilience**

This combined regulatory and carbon landscape reinforces the importance of selecting HVAC technologies that are both energy efficient and aligned with lower-GWP refrigerant pathways.

R32 VRF and the City Multi YXM Range

The transition to lower-GWP refrigerants has led manufacturers to examine system architecture, efficiency optimisation and refrigerant management strategies. Mitsubishi Electric's **City Multi YXM R32 VRF** system provides an example of how modern VRF platforms are adapting to this environment.

Designed around R32 (GWP 675), the YXM range supports compliance with current and anticipated F-Gas phase-down trajectories, while reducing system carbon impact compared to legacy R410A systems. Beyond refrigerant selection, City Multi YXM incorporates features that reduce overall refrigerant charge and improve seasonal efficiencies.

High-efficiency models use a redesigned Vertical Flat Tube (VFT) heat exchanger to optimise refrigerant distribution and improve heat transfer performance. This contributes to higher SEER and SCOP values, supporting compliance with Part L energy performance requirements and reducing operational carbon over the system lifecycle.

From a safety perspective, the City Multi YXM is designed to align with BS EN 378 Part 3, including optional low-level leak detection solutions where required by room volume calculations. Additionally, the platform supports both heat pump and heat recovery configurations, allowing simultaneous heating and cooling to improve overall building efficiency.

By combining lower-GWP refrigerant, reduced system charge and improved seasonal performance, systems such as the City Multi YXM range illustrate how VRF technology is evolving to address both regulatory and carbon pressures.

Using new refrigerants - considerations for HVAC systems

The adoption of lower-GWP refrigerants such as R32 requires a clear understanding of how safety standards, product standards and installation practices interact. The aim should be to manage risk, without introducing complexity into designs.

Refrigerant classification and implications

A2L refrigerants have certain characteristics:

- Increased lower flammability limits (LFLs) than A3 refrigerants such as R290
- Low burn velocity
- Reduced flammability risk compared to higher classes

Their classification requires designers and installers consider issues such as charge limits, ventilation, leak detection and system layout.

In the UK, refrigerants also fall within the scope of DSEAR (Dangerous Substances and Explosive Atmospheres Regulations)[7]. This requires that refrigeration, air conditioning and heat pump installations undergo a risk assessment. Risks should be eliminated so far as reasonably practicable.

Understanding the standards framework

Two main standards govern refrigerant-based HVAC systems:

1. BS EN 378 System Safety (horizontal standard)[8]

BS EN 378 provides overarching safety and environmental requirements for refrigerating systems and heat pumps. It has four parts:

Part 1: Definitions, classification and charge calculations

Part 2: Design, construction, testing and documentation

Part 3: Installation site and personal protection

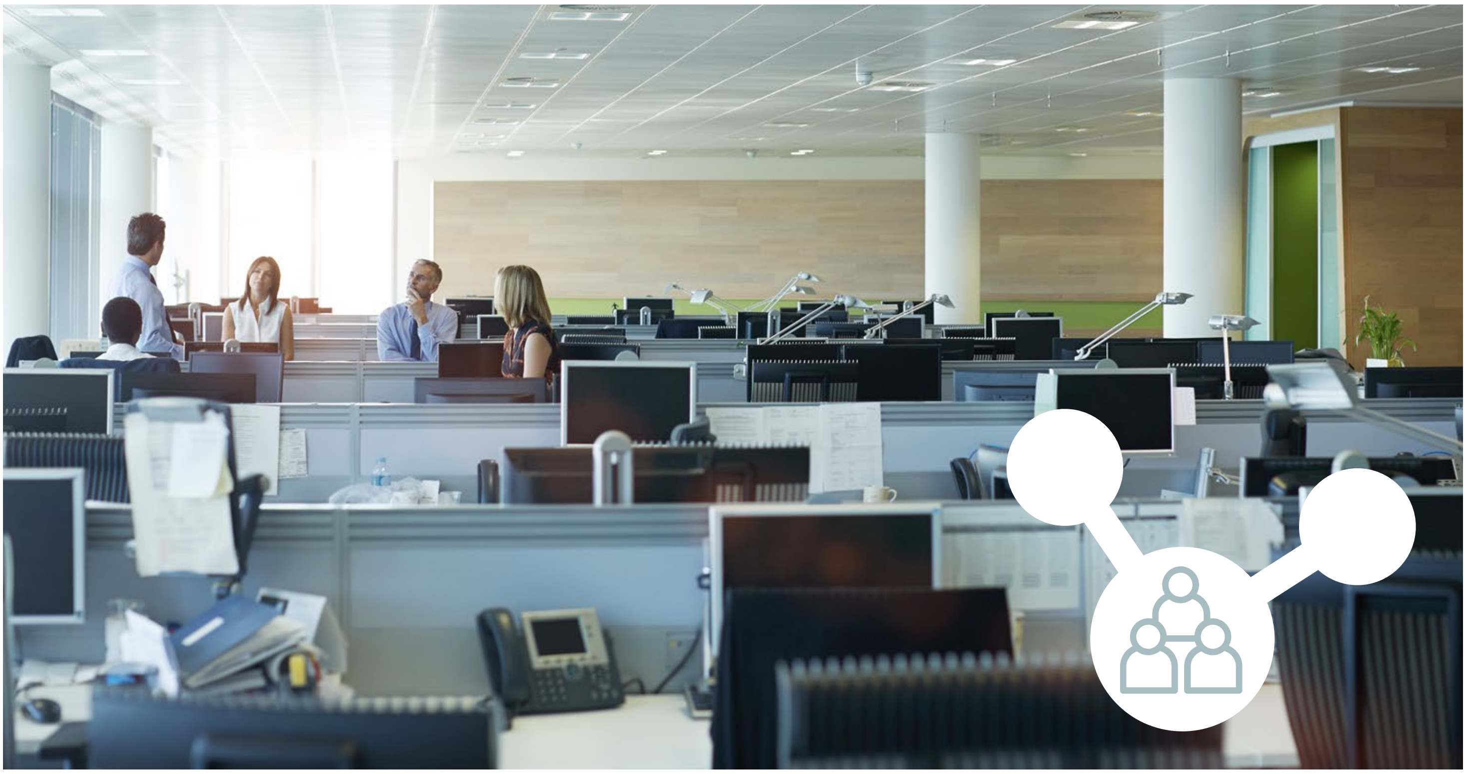
Part 4: Operation, maintenance and recovery

Part 1 includes formulas for determining maximum allowable refrigerant charge in occupied spaces, based on toxicity and flammability limits. Where charge thresholds are exceeded, additional mitigation measures such as leak detection, alarms or mechanical ventilation may be required.

Parts 2 and 3 address system construction, installation practice and site-specific safety measures. **Part 4** covers ongoing maintenance and recovery procedures.

Optimising Safety: Focus on Standards

BS EN 378-1	BS EN 378-2	BS EN 378-3	BS EN 378-4
Part 1: Basic requirements, definitions, classification and selection criteria.	**Part 2:** Design, construction, testing, marking and documentation.	**Part 3:** Installation site and personal protection.	**Part 4:** Operation, maintenance, repair and recovery.
Product standard EN 60335-2-40, 60335-2-24, 60335-2-89 is mentioned in Part 1	Product standard EN 60335-2-40, 60335-2-24, 60335-2-89 is also mentioned in Part 2		



Using new refrigerants - considerations for HVAC systems

2. BS EN IEC 60335-2-40 Product safety (vertical standard)[9]

The EN 60335 series is a product standard governing the construction and safety of electrical appliances. Part 2-40 applies specifically to heat pumps and air conditioning systems.

Manufacturers must comply with this product standard to be permitted to place equipment on the global market. The standard includes provisions for:

- **Charge limits under defined conditions**
- **Built-in mitigation measures**
- **Automatic response functions in the event of a leak**

In certain circumstances, the product standard permits alternative charge calculations where engineered safety features, such as integrated leak detection and fan-assisted dilution, are incorporated into the unit design.

For consultants, the key principle is that product standards and system standards interact. Product standards may define inherent safety features within equipment, while BS EN 378 governs how systems are designed and installed in the context of the building.

Leak detection and mitigation

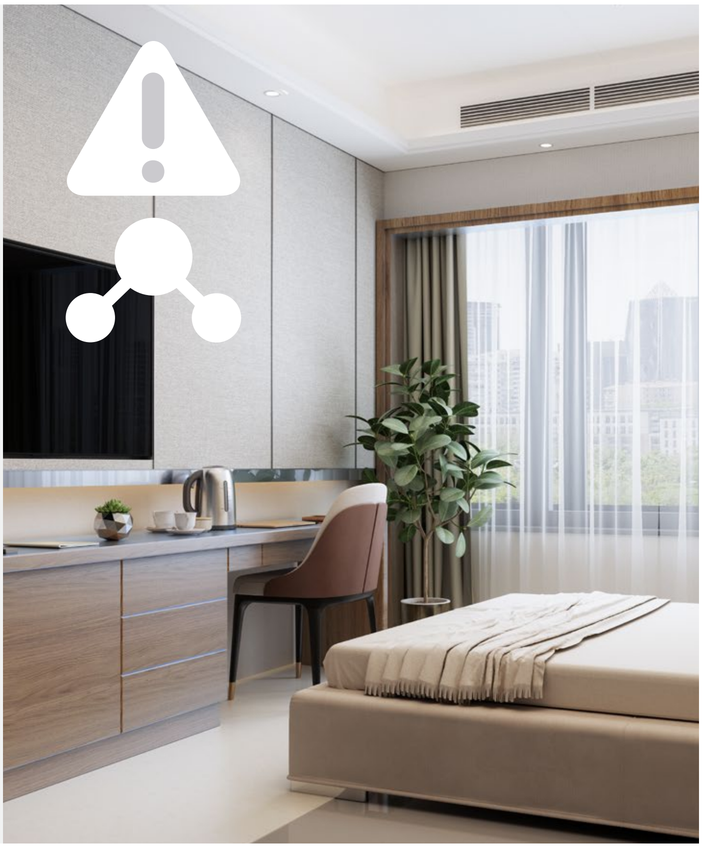
Leak detection is one of the most commonly discussed aspects of A2L system design.

BS EN 378 recommends that detectors are located where refrigerant is likely to accumulate. In addition, alarm systems must operate independently of the equipment being protected. The standard also highlights the importance of airflow patterns and stagnation patterns within the occupied space.

In practice, responsible R32 system design must take into account:

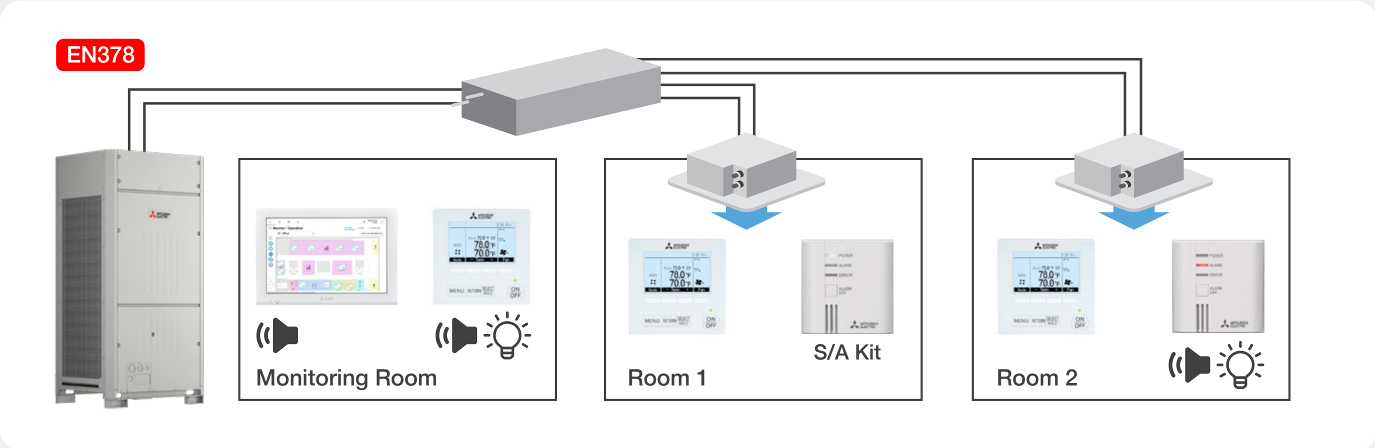
- **Refrigerant density relative to air**
- **Pipework routing and joint locations**
- **Room geometry and ventilation strategy**
- **Alarm, shut-off and control integration**

The key point is that system designers must take an integrated approach to risk reduction.



Supporting EN 378 compliance in R32 VRF systems

Managing Risk - Safety operation in the event of a leak



The adoption of A2L refrigerants such as R32 means that system designers must consider room volume, charge limits and mitigation measures to meet the requirements of BS EN 378 Part 1 and Part 3.

Modern VRF platforms incorporate engineered safety features to support compliance. For example, Mitsubishi Electric's City Multi YXM R32 VRF system integrates measures aligned with BS EN 378 Part 3 guidance. Features include:

- **Integrated refrigerant leak detection**
- **Audible and visual alarm indication**
- **Independent power shut-off valve activation at the BC Controller in the event of detection**
- **System-level fault reporting via local and centralised controllers**

In the event of a detected leak, the affected indoor unit is isolated while the rest of the system continues to operate. This supports operational resilience while managing safety risk.

Detector longevity is also a consideration in lifecycle planning. For example, Mitsubishi Electric's detector service life is 30 years, which reduces maintenance frequency and contributes to lower whole-life operational costs.

By combining product-level mitigation features with system-level design in accordance with BS EN 378, Mitsubishi Electric's YXM range demonstrates how safety compliance can be embedded within equipment rather than retrofitted at installation stage.

Using new refrigerants - considerations for HVAC systems

Responsibilities across the supply chain

The introduction of A2L refrigerants reinforces the importance of clearly-defined responsibilities. Industry bodies such as CIBSE, REFCOM and the Institute of Refrigeration (IoR) reference BS EN 378 as a benchmark for good practice in system refrigerant safety.

Consultants must design in accordance with applicable standards, including BS EN 378 Parts 1 to 3. Installers must meet the requirements of Parts 2 and 4. And building owners and operators must ensure that they undertake ongoing inspection, maintenance and documentation as required by regulations.

Integrating safety considerations and carbon objectives

Refrigerant selection sits at the intersection of safety compliance and carbon performance. Lower-GWP refrigerants reduce a system's embodied carbon footprint, while system efficiency influences operational carbon. Charge size, distribution strategy and system architecture therefore affect both regulatory compliance and whole-life carbon (WLC) calculations.

R32 VRF systems are engineered to balance these considerations, incorporating product-level safety features while enabling system-level compliance with BS EN 378.

The result is that R32 VRF systems can be specified with confidence, provided that design and installation are approached systematically and in line with recognised standards.

The future for HVAC: VRF, Hybrid and Hydronic approaches

The HVAC landscape is changing in response to three primary drivers: decarbonisation policy, refrigerant legislation and rising expectations around whole-life carbon performance. As noted earlier, refrigerant phase-down programmes are reshaping system choice and design, while energy efficiency standards and net zero frameworks are influencing specification decisions across all property sectors.

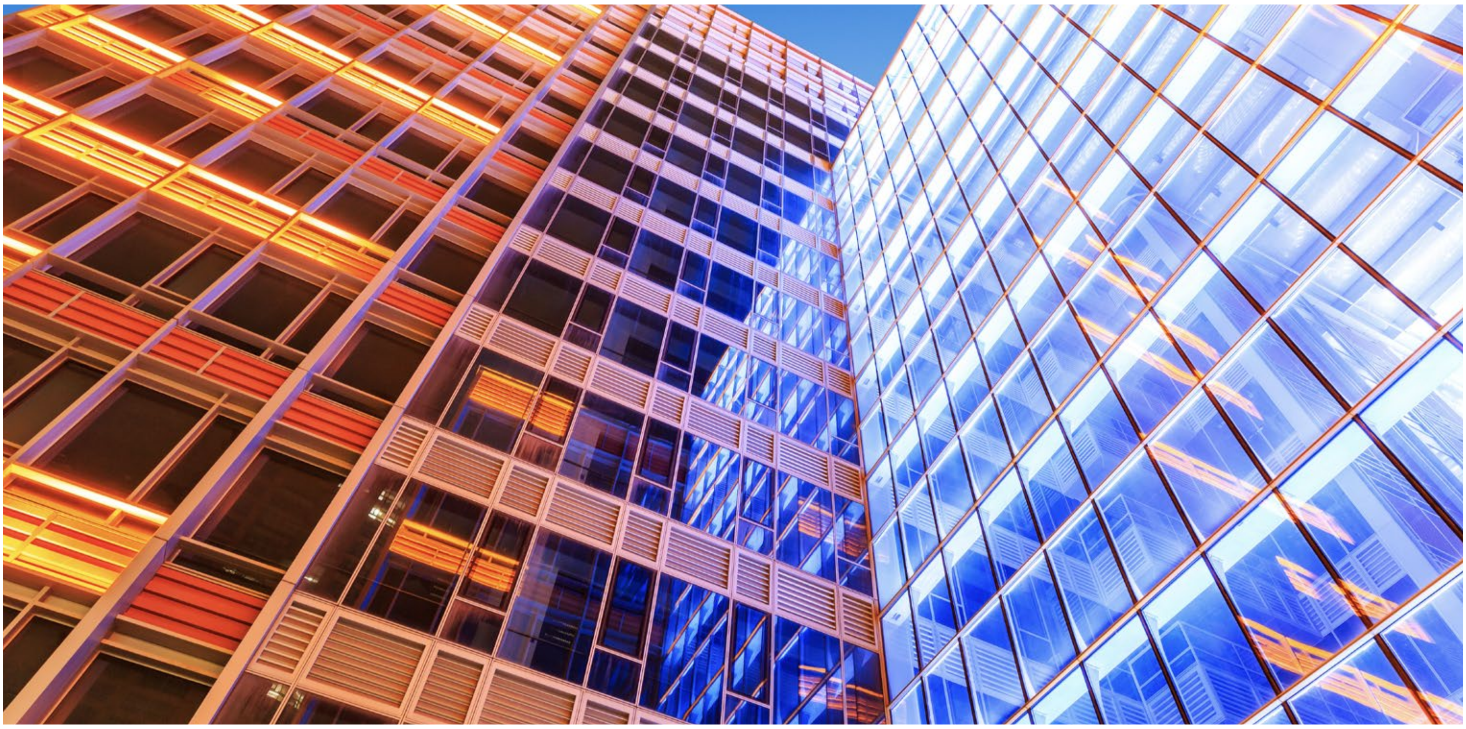
Against this backdrop, it is important to recognise that VRF remains a widely-specified and technically mature solution. VRF has continually evolved in terms of seasonal efficiency, controls integration and refrigerant use. The transition to R32 is the latest step in that development.

Modern R32 VRF systems are designed to address performance and compliance requirements. Improved heat exchanger design, enhanced compressor control and optimised refrigerant distribution have enabled higher seasonal efficiency and reduced operational carbon. At the same time, system architectures and built-in safety features have developed to support compliance with BS EN 378 and IEC 60335-2-40.

For many commercial applications such as offices, education, hospitality and mixed-use developments, R32 VRF continues to offer:

- Simultaneous heating and cooling through heat recovery
- Flexible zoning and modular expansion
- High seasonal efficiencies
- Integrated controls and monitoring
- Established design methodologies familiar to consultants and contractors

In this sense, VRF continues to be a robust system choice for many projects.



The future for HVAC: VRF, Hybrid and Hydronic approaches

Hybrid VRF (HVRF): Bridging refrigerant and water-based systems

In certain applications designers may wish to reduce or eliminate refrigerant in occupied spaces. This may be driven by room size constraints under EN 378 charge calculations, building use considerations (such as hotels or healthcare environments), or client preference around ongoing refrigerant risk management.

Hybrid VRF (HVRF) systems offer an alternative approach. For example, Mitsubishi Electric's HVRF range combines the heat recovery capability of VRF with hydronic distribution. Refrigerant is contained between the outdoor unit and the Hybrid Branch Controller (HBC), and water is circulated to indoor fan coil units in occupied spaces to deliver cooling or heating.

By integrating plate heat exchangers with the HBC, Mitsubishi Electric HVRF allows for heat exchange between refrigerant and water, creating a decentralised hydronic distribution network while retaining heat recovery efficiency.

The HVRF approach offers several technical benefits:

- **Simultaneous heating and cooling via two-pipe design**
- **Removal of refrigerant from occupied spaces**
- **Reduced requirement for leak detection in certain applications**
- **Lower total refrigerant charge compared to equivalent VRF systems**
- **Compatibility with established VRF controls**

For consultants, HVRF is a response to regulatory pressure, particularly in projects where EN 378 calculations constrain conventional VRF layouts. It can also support whole life carbon reduction strategies through lower refrigerant volume and reduced embodied carbon associated with high-GWP refrigerant gases.

The growing role of hydronic systems

Alongside VRF and hybrid VRF approaches, there is increasing interest in fully-hydronic systems. The electrification of heat, heat pump deployment and policy frameworks aimed at reducing fossil fuel dependency are accelerating the adoption of air-to-water and water-based distribution HVAC technologies. Mitsubishi Electric has several hydronic system solutions to meet the needs of a range of projects.

For example, hydronic systems may offer advantages in

- **Large floorplate developments**
- **District heating integration**
- **Projects targeting low-temperature heating strategies**
- **Applications prioritising minimal refrigerant within buildings**

However, hydronic applications also introduce their own design considerations including plant space requirements, pipework routing and water treatment.

A range of solutions

For consultants, the future of HVAC specification lies in selecting the most appropriate technology for each application, based on building use, carbon targets, refrigerant strategy and user requirements.

R32 VRF remains a proven, and evolving, solution suited to a wide range of commercial building types. Hybrid VRF offers an alternative where refrigerant management in occupant spaces is a primary consideration. Fully hydronic systems provide additional flexibility for projects aligned with wider electrification, low-carbon heating and district energy networks.

Rather than positioning these technologies in competition with each other, it is more accurate to view them as complementary approaches within a broader HVAC design strategy.

The regulatory and carbon landscape is likely to become more complex in the coming years. Consultants need solutions that combine regulatory resilience with long-term performance.

Manufacturers such as Mitsubishi Electric that can support VRF, Hybrid and Hydronic systems, are therefore well-placed to provide that support.

Further reading

Mitsubishi Electric Guide to BS EN 378: Managing risk in HVAC systems with modern refrigerants

https://library.mitsubishielectric.co.uk/pdf/book/BS_EN_378_Managing_Risk_in_HVAC_Systems_with_Modern_Refrigerants#page-1

References

1. BSRIA Market Intelligence

Reports available from BSRIA:
https://glenbrookproperty.co.uk/glenbrook-complete-whitehall-riverside-leeds/

2. EU Regulation on fluorinated greenhouse gases (F-gas Regulation)

https://eur-lex.europa.eu/eli/reg/2024/573/oj

3. Department for Environment Food & Rural Affairs (DEFRA)

F gas Regulation in Great Britain: Reform of HFC phasedown Consultation

https://consult.defra.gov.uk/fluorinated-gases-and-ozone-depleting-substances-policy-team/f-gas-regulation-in-great-britain/supporting_documents/hfc-phasedown-reform-consultation-documentpdf

4. IPCC Global Warming Potential Values

https://ghgprotocol.org/sites/default/files/2024-08/Global-Warming-Potential-Values%20%28August%202024%29.pdf

5. BS ISO 817 (Refrigerants - Designation and safety classification)

https://knowledge.bsigroup.com/products/refrigerants-designation-and-safety-classification?version=standard

6. UK Net Zero Carbon Building Standard

https://www.nzcbuildings.co.uk/

7. The Dangerous Substances and Explosive Atmospheres Regulations

https://www.hse.gov.uk/fireandexplosion/dsear.htm

8. BS EN 378-1 (with links to sections 2, 3, and 4)

https://knowledge.bsigroup.com/products/refrigerating-systems-and-heat-pumps-safety-and-environmental-requirements-basic-requirements-definitions-classification-and-selection-criteria-1?version=standard

9. BS EN IEC 60335-2

https://knowledge.bsigroup.com/products/household-and-similar-electrical-appliances-safety-particular-requirements-for-room-heaters-5?version=standard&tab=preview

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If you would like to receive invitations to future CPD events, please email **livingenvironmentalsystems@meuk.mee.com**

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Note: The fuse rating is for guidance only and please refer to the relevant databook for detailed specification. It is the responsibility of a qualified electrician/electrical engineer to select the correct cable size and fuse rating based on current regulation and site specific conditions. Mitsubishi Electric's air conditioning equipment and heat pump systems contain a fluorinated greenhouse gas, R410A (GWP:2088), R32 (GWP:675), R407C (GWP:1774), R134a (GWP:1430), R513A (GWP:631), R454B (GWP:466), R515B (GWP:292), R454C (GWP:148), R1234ze (GWP:7) or R1234yf (GWP:4). *These GWP values are based on Regulation (EU) No 517/2014 from IPCC 4th edition. Mitsubishi Electric's air conditioning equipment and heat pump systems contain a hydrocarbon, R290 (GWP:0.02). *These GWP values are based on IPCC 6th edition.

Effective as of July 2026

Green Gateway greengateway.mitsubishielectric.co.uk