



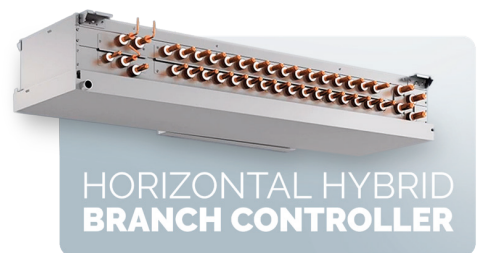
# Did you know?

## R32 Hybrid is the safest and most environmentally friendly VRV/VRF alternative on the market

Water-based HVAC solutions are seen as the best way to address the challenges around the changing refrigerant landscape. Mitsubishi Electric is leading the movement with R32 Hybrid – revolutionising the way we heat and cool commercial buildings.

### What is R32 Hybrid?

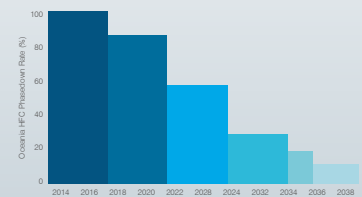
Simply put, R32 Hybrid replaces refrigerant with water between the Hybrid Branch Controller and the indoor units making it the lowest carbon footprint VRF / VRV alternative solution available today.



### Key Features

- The rapid and continuing price rises of R410A refrigerant is placing a strain on the viability of traditional VRF / VRV systems. R32 Hybrid ensures that both customers and installers have an alternative.
- Using R32 refrigerant, Hybrid provides air conditioning to a building with significantly lower Global Warming Potential (GWP) than existing solutions. Changing from R410A to R32 Refrigerant realises a massive 66% reduction in Global Warming Potential for the same charge. Additionally Hybrid has much less total refrigerant charge – so gives an overall carbon footprint reduction in the gas charge of around 85%.
- R32 Hybrid minimises the need for expensive safety measures such as leak detection that needs costly and on-going servicing and is specifically designed for occupied spaces where quiet, energy efficient, simultaneous heating and cooling is valued.
- Delivers better comfort, as air supply temperatures are milder and more stable.
- R32 Hybrid delivers easy buildability and controllability. External pumps, valves, actuators and controls are not required.
- Because it uses water, some R32 Hybrid components could be re-used at the end of life. So future upgrade and replacement costs could be substantially reduced and whole of life carbon footprints further reduced.

### Regulated Phase Down of CO<sub>2</sub> Emissions



GWP is a measure of the warming potential as compared to CO<sub>2</sub> which has a unitary GWP of 1.

R32 refrigerant is zero ozone depleting and has a GWP 66% less than R410A. For example R410A will hold 2,088 times more heat when released in the upper atmosphere than the equivalent amount of CO<sub>2</sub> would.

R32 refrigerant is being adopted by Mitsubishi Electric as an important step in the process towards the ultimate goal of a zero ODP, zero GWP, efficient, safe and non-toxic refrigerant.



# Did you know?

## The Benefits for Consultants

- R32 Hybrid is the lowest Global Warming Potential VRF type system on the market today, globally.
- R32 Hybrid has the same easy buildability that attracted the HVAC market to VRF type solutions in the first place.
- Being a hydronic based system, with water to the indoor units, compliance issues are significantly reduced compared to direct expansion systems like VRV/VRF.
- R32 Hybrid shares many performance benefits of a chiller / fan coil system such as milder air temperatures, more sensible cooling, easier system changes for fit outs and better end of life options.
- Provides peace of mind as a result of using a modern, future-proofed solution with good safety and proven performance.



Buildability

Compliance

Performance

Peace of mind

## The Benefits for Building Owners

- R32 Hybrid offers future-proofing and helps mitigate the risk of stranded assets.
- It protects your investment by preventing obsolescence and potential higher costs in the long run.
- In terms of safety, the absence of refrigerant in occupied spaces reduces liability for building owners.
- It is a cost-effective solution, providing modern and safe commercial-grade air conditioning at a lower cost compared to a full hydronic system.
- R32 Hybrid meets environmental standards, allowing you to showcase your commitment to sustainability to prospective clients, investors and tenants.
- Creating a better environment in a building increases the likelihood of attracting blue-chip tenants.



Stranded asset mitigation

Safety – Less refrigerant in occupied spaces

Cost efficient

Meets environmental standards

## The Benefits for Contractors

- R32 Hybrid combats the phasing down of high GWP R410A Refrigerant. The rapid and continuing price rises of R410A refrigerant is placing a strain on the viability of traditional VRF systems.
- Thanks to the low pressure system, the water side can be connected using simple crimp / push fittings, making for an overall quicker and easier installation.
- Hybrid controls are pre-packaged and onboard – so BMS is not necessary. Therefore controls integration issues can be avoided.
- R32 Hybrid ensures that both customers and installers not only have an alternative, but also get the added benefits of lower refrigerant costs, efficient performance, safety for occupants and advanced controls.



Cost of refrigerants

Significantly less refrigerant charge

Less risk

Easier to install than VRF

## Peace of Mind with a 3 Year Parts and Labour Warranty

Mitsubishi Electric R32 Hybrid products sold by Black Diamond Technologies Limited are provided with a 3-year parts and labour warranty as standard.

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