

# Why Using a 2-pipe VRF Heat Recovery System Is Superior To 3-pipes

Selecting the right HVAC system for your building is a key decision that affects the overall comfort of occupants. Here's why our 2-pipe VRF Heat Recovery system is the smart investment:

## 2-Pipe VS. 3-Pipe VRF Heat Recovery System

Lower labour and material costs

Faster installation times

Lower maintenance costs

Immediate switchover from heating to cooling, and vice versa

**2-Pipe  
HVAC System**

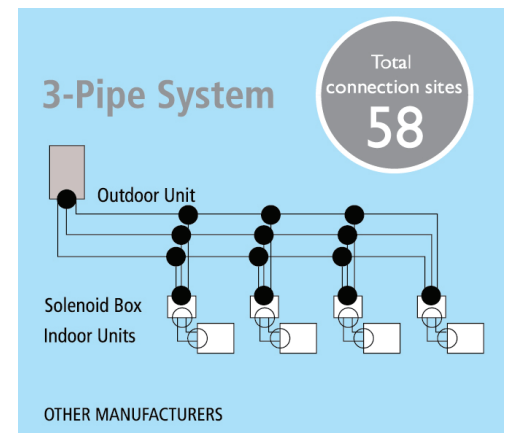
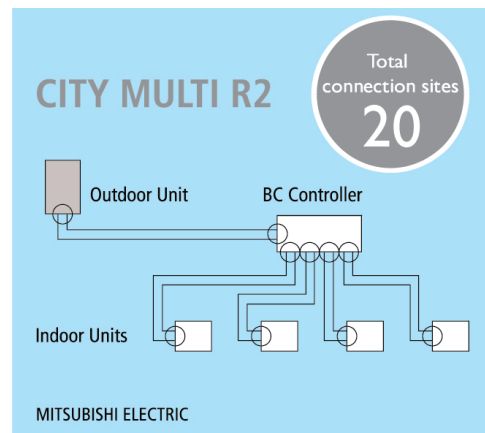


**3-Pipe  
HVAC System**



## How It Works

The secret of the 2-pipe VRF Heat Recovery system lies in the BC Controller, which houses a liquid/gas separator along with several linear expansion valves. This allows the outdoor unit to deliver 2-phase refrigerant for simultaneous heating and cooling, all through the respective pipes.



## Why Mitsubishi Electric

- ✓ +100 years of experience
- ✓ Canadian VRF experience of +20 years
- ✓ Made for the Canadian climate

- ✓ Superior thermal comfort
- ✓ Exceptional application and engineering support
- ✓ Expert training and technical support

# Benefits of a 2-Pipe VRF Heat-Recovery System



## For Builders and Developers

Two pipes mean fewer connection sites for joints and electrical parts. In turn, this reduces the installation time and overall labour and materials required, therefore creating significant cost-savings. Plus, lower maintenance costs add to the bottom line. Superior thermal comfort is also provided while the streamlined system makes it easier to implement changes in the future.



## For Homeowners and Occupants

The Canadian climate has very distinct seasons. Frequent weather swings and temperature fluctuations can be uncomfortable for building occupants and require sudden changes to the thermal mode. Only the 2-pipe VRF Heat Recovery system switches from heating to cooling and vice versa immediately, while the 3-pipe system takes four to six minutes.



## For Architects and Engineers

The straightforward layout makes it easy to design and comprehend the VRF drawings, meaning it's easier for architects and engineers to understand the system and lay out a job. Less piping also means a cleaner design and increase in space available.



## For Contractors

Fewer piping connections mean less copper and materials are required, which saves installation time and improves the bottom line. Alterations and additions to existing systems are also made easier with the 2-pipe VRF Heat Recovery system. Individual systems can be worked on while the rest of the system is still in service.

## Condo Case Study

In a high-rise multi-unit project in downtown Toronto featuring Mitsubishi Electric's 2-pipe VRF Heat Recovery system, the developer was able to save on materials, time and labour. **Had they utilized a 3-pipe VRF Heat Recovery system, then they would have used:**

**~7x more**  
branch boxes

**2.3x more**  
brazed joints

**1.2x more**  
isolation valves

**1.5x more**  
condensing units

To learn more about the benefits of our system for your next project, contact us at [twopipevrf@mitsubishielectric.ca](mailto:twopipevrf@mitsubishielectric.ca) or go to [www.2pipeheatrecovery.ca](http://www.2pipeheatrecovery.ca)