

Variable refrigerant flow (VRF) is an air-condition system configuration where there is one outdoor unit and multiple indoor units. The term variable refrigerant flow refers to the ability of the system to control the amount of refrigerant flowing to the multiple evaporators (indoor units), enabling the use of many evaporators of differing capacities and configurations connected to a single condensing (outdoor unit).

Samsung offers different VRF Systems to suit all of its customers needs. All ranges differentiate by the pipe layout and cooling capacity:

- Samsung Free Joint Multi Split
- Samsung DVM Eco
- Samsung DVM S

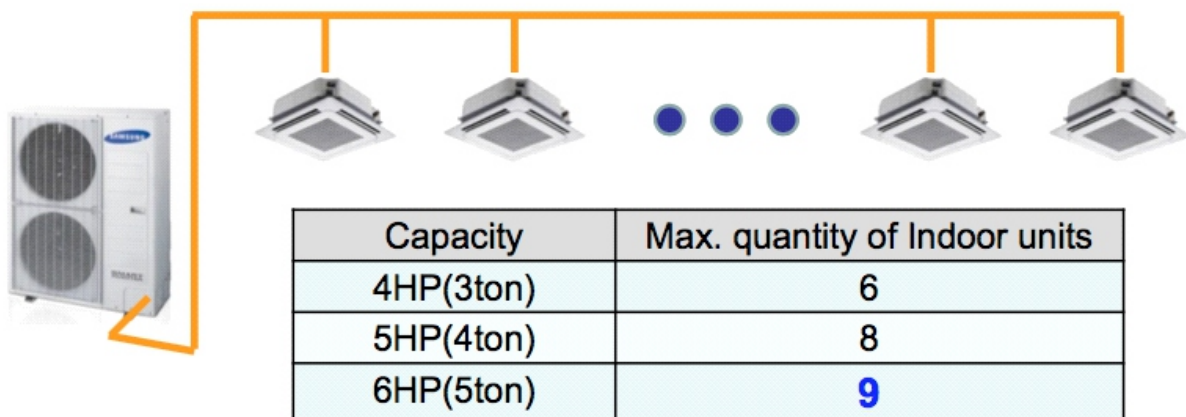
Benefits:

- **Comfort** - The arrangement provides an individualized comfort control, and simultaneous cooling in different zones. The user can set the ambient temperature of each room as per his/her requirements.
- **Design Flexibility** - A single condensing unit can be connected to wide range of indoor units of varying capacity. The modular concept makes it easy to adapt the HVAC system to expansion or reconfiguration of the space.
- **Flexible Installation** - VRF systems are lightweight; require less outdoor plant space and offer space saving features. When compared to the single split system, a VRF system reduces installation cost by about 30%.
- **Energy Efficiency** – Field-testing has indicated that this technology can reduce the energy consumption by as much as 30 to 40% a year compared to traditional rotary or reciprocating type compressors. A VRF system minimizes or eliminates ductwork completely. This reduces the duct losses often estimated to be 10% to 20% of the total airflow in a ducted system.
- **Reduced Noise Levels** - Quietest operation mode in the market, Indoor and outdoor units are so quiet that they can be placed just about anywhere.
- **Reliability** - Continuous operation is possible even if trouble occurs in one of the indoor units.
- **Maintenance and Commissioning** - Normal maintenance for a VRF system consists mainly of changing filters and cleaning coils. Because there are no water pumps to maintain or air ducts to be cleaned, less maintenance is required compared to other technologies.
- **Aesthetics** - Indoor units are available in different capacities and multiple configurations such as wall-mounted, ceiling-mounted cassette suspended, and concealed ducted types. It is possible to provide an assorted arrangement that combine multiple types of indoor sections with a single outdoor section. These provide extreme versatility to the aesthetic requirements of different building types. Outdoor units can be located on roof or hidden space.
- **Applications** - VRF systems may be a particularly good option for buildings with multiple zones or wide variance heating/cooling loads across many different internal zones. These systems provide individual control and are the most versatile of the multi-split systems. Hotels, schools, hospitals and office buildings are good examples.

Available Capacities (Btu/h) - 36,000/48,000/53,000/60,000

DVM S Eco outdoor unit can support up to 9 indoor units, and is an ideal air solution for residential and semi-commercial spaces.

The DVM S Eco is the unparalleled choice for high efficiency heating and cooling for your home and small business needs. The variable speed Eco system can reduce system capacity down to 14%, giving you air conditioning capacity you need when you need it.



Benefits:

- Great for light commercial or residential use
- Sleek and flexible refrigerant pipe layout (only two pipes required to connect outdoor unit to all of the indoor units)
- DVM S ECO allows an extended piping length up to 492ft, and maximum level difference of 164ft. With such a great allowance, you can facilitate a variety of system designs.
- Highest energy efficiency compared to all VRF systems on the market
- The DVM S ECO outdoor unit has a smaller footprint up to 11% and the volume has been reduced by 5%
- Wi-Fi capability with access via smart phone home app
- Choose from Duct or Ductless indoor units
- Compact and visually appealing outdoor unit
- Single and Multi Zone capability allowing one to nine indoor units

Samsung FREE JOINT MULTI System

Outdoor unit capacities (Btu/h) - 17,000 / 22,000 / 36,000

Samsung's Free Joint Multi is the best solution for residential buildings requiring a flexible, efficient and reliable air conditioning system. A single Free Joint Multi outdoor unit can support a variety of up to 5 indoor units with minimal installation space, providing efficient cooling operation in multiple areas.



Benefits:

- Great for small residential spaces up to 3 tones capacity
- 1 outdoor unit serves up to 5 indoor units
- Compact and visually appealing outdoor unit
- Easy installation & access
- Choose from Duct or Ductless indoor units
- Most cost efficient of the three listed Samsung VRF Systems
- Control options include wireless remote control or wired thermostats
- Wi-Fi capability with access via smart phone home app

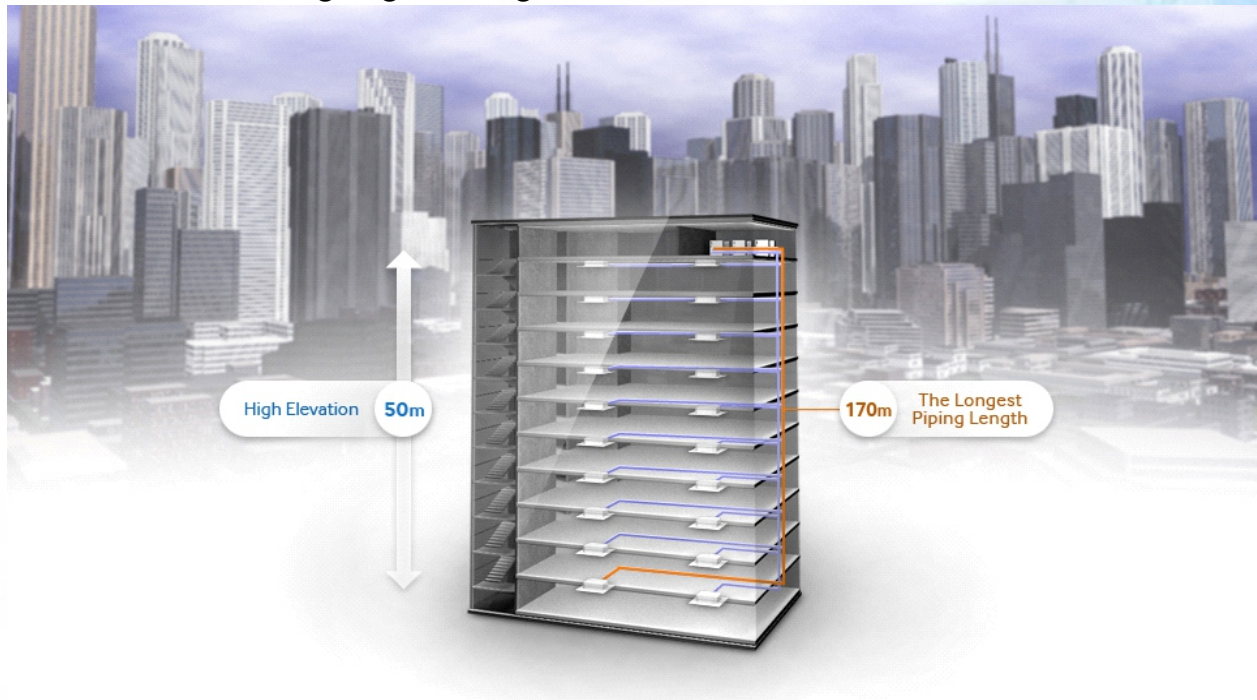
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Samsung DVM S

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Available Capacities (Btu/h) - 69 000 UP TO 500 000

DVM S is a highly innovative system that adopts the new 3rd generation SSC (Samsung Scroll Compressor) technology. With its Dual Smart Inverter, DVM S provides the world, top class energy efficiency and the most powerful cooling and heating performance. This is the perfect air conditioning system that satisfies all types of environments, including large building.



Benefits:

- Great for light commercial or heavy commercial
- Highest energy efficiency compared to all VRF systems on the market
- Self-diagnosis mode monitors the operation status and displays an error code in response to any sign of abnormal operation, making it easier to solve any problems with the system.
- Auto Commissioning & Management. DVM S has a smart management system that facilitates self-diagnosis, auto commissioning, auto management and mobile data transmission. Management is easy and convenient with the ability to control the system with your smart phone or tablet PC.
- Sleek and flexible refrigerant pipe layout (only two pipes required to connect outdoor unit to all of the indoor units)
- DVM S allows an extended piping length up to 558ft, and maximum level difference of 164ft. With such a great allowance, you can facilitate a variety of system designs.
- Wi-Fi capability with access via smart phone home app
- Choose from Duct or Ductless indoor units