

SAMSUNG VRF SYSTEM DVM S

HIGH EFFICIENCY SYSTEM AIR CONDITIONER

SAMSUNG



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Version 5-2.14

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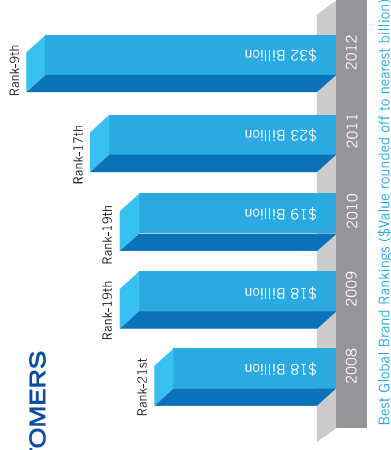
PRODUCT CATALOG

SAMSUNG

MOVING FORWARD WITH OUR CUSTOMERS

"Put simply, our differentiation is centered on producing innovative technology that brings genuine change to people's lives. We do this by bringing a relentless focus on consumer experience and product innovation in everything we do."

- Chief Marketing Officer, SAMSUNG



ECO-FRIENDLY SAMSUNG *Preserving for future generations*

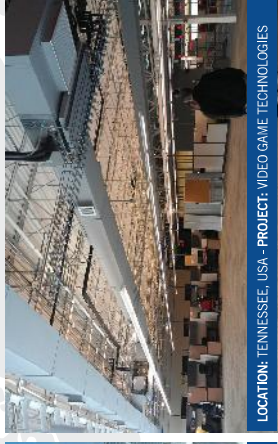
Thinking of people and the environment, Samsung has been developing products/solutions that are eco-friendly without sacrificing performance. Realizing the hopes for a greener, healthier life for people and the generations that follow, Samsung's environment-friendly technologies work to make the world a safer and more liveable place.



Eco-Friendly Air Conditioners by Samsung

Making continuous efforts to stay eco-friendly, Samsung air conditioners use R-410A, an environment-friendly refrigerant to help rid the air of pollutants and restrain the use of materials with high global warming potential (GWP). These energy-efficient air conditioners not only save you money, but help conserve the environment.

SAMSUNG'S DVM SYSTEMS ARE A GLOBAL OPERATION
Various groups from all over the world choose Samsung's DVM systems for their proven performance.



LOCATION: TENNESSEE, USA - PROJECT: VIDEO GAME TECHNOLOGIES



LOCATION: TENNESSEE, USA - PROJECT: VIDEO GAME TECHNOLOGIES



LOCATION: TENNESSEE, USA - PROJECT: LIPSCOMB COLLEGE



LOCATION: HUNGARY - PROJECT: SHOPPING CENTER



LOCATION: QATAR
PROJECT: OFFICE BUILDING



LOCATION: TEXAS, USA
PROJECT: HHS



LOCATION: B.C., CANADA
PROJECT: DOUGLAS COLLEGE



LOCATION: KOREA
PROJECT: SOCCER STADIUM



LOCATION: TURKEY
PROJECT: PRINCESS RESORT



LOCATION: VIETNAM
PROJECT: HOTEL




LOCATION: UAE
PROJECT: RESIDENTIAL BUILDING



LOCATION: CHINA - PROJECT: INTERNATIONAL AIRPORT

CAPACITY TABLES

OUTDOOR UNITS



	3 Ton	4 Ton	5 Ton	6 Ton	8 Ton	10 Ton	12 Ton
HP (208/230V-1Ph)	AM036FXMDC/AA	AM048FXMDC/AA	AM053FXMDC/AA				
HP (208/230V-3Ph)				AM072FXVA/AA	AM096FXVA/AA	AM120FXVA/AA	AM144FXVA/AA
HR (480V-3Ph)				AM072FXVA/AA	AM096FXVA/AA	AM120FXVA/AA	AM144FXVA/AA
HR (480V-3Ph)				AM072FXVA/J/AA	AM096FXVA/J/AA	AM120FXVA/J/AA	AM144FXVA/J/AA
HP - Heat Pump / HR - Heat Recovery				AM072FXVA/R/AA	AM096FXVA/R/AA	AM120FXVA/R/AA	AM144FXVA/R/AA

	6 Ton	8 Ton	10 Ton	12 Ton
Single C/U	1	1	1	1
Double C/U	1	1	2	2
Triple C/U	1	1	1	1

INDOOR UNITS

	7,500 BTU	9,500 BTU	12,000 BTU	18,000 BTU	20,000 BTU	24,000 BTU	30,000 BTU	36,000 BTU	48,000 BTU	76,000 BTU	96,000 BTU
4 Way Cassette	✓			✓		✓	✓	✓	✓		
Mini 4 Way Cassette	✓	✓	✓								
1 Way Cassette	✓	✓	✓								
H.S.P. Duct				✓		✓	✓	✓	✓	✓	✓
M.S.P. Duct				✓		✓	✓	✓	✓	✓	✓
Slim Duct	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Wall Mount	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Ceiling/Floor Mount				✓		✓					



TABLE OF CONTENTS



DVM S

DIGITAL VARIABLE MULTI

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's 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 and small buildings.

- Innovative Technology
- High Efficiency
- Smart Management
- Flexible Installation
- Comfortable & Reliable Operation
- Heat Recovery



As High as IEER 27 / SCHE 30



INNOVATIVE TECHNOLOGY

• 3rd Generation Technology

Samsung's new 3rd generation technology adopts dual inverter compressors and an upgraded vapor injection system which surpasses the performance of previous versions of the system. This optimizes energy efficiency, providing energy savings.



• Dual Smart Inverter

The innovative Dual Smart Inverter feature has both compressors operate simultaneously, providing balanced oil distribution, quick cooling & heating and better energy efficiency.



• 3rd Generation Vapor Injection System

Upgraded vapor injection system within the compressor increases the refrigerant flow rate by up to 20% compared to conventional products.



Dual Smart Inverter System

This 3rd generation feature adopts a dual inverter compressor that upgrades refrigerant flow and the motor's operating performance. The Dual Smart Inverter System achieves unsurpassed energy efficiency.

DSI (Dual Smart Inverter) System

- Dual Smart Inverter : SSC + SSC
- 3rd Generation Vapor Injection
- Wider operation range of BLDC motor (20-140Hz)

3rd Generation Vapor Injection

Enhanced Compressor Durability

In a conventional system composed of inverter and fixed compressors, one compressor operates longer than the other which results in one compressor wearing down faster. This in fact decreases compressor durability and life span. However, with the DVM S Dual Smart Inverter System, each compressor operates in unison with the other so the overall durability and life span of the compressors increases.

DVM S

start after extended operation

Conventional

start after extended operation

DVM S (Inverter + Inverter)

Conventional (Inverter + Fixed)

Case 1

Case 2

Case 3

Thanks to capacity control, the DSI (Dual Smart Inverter) system responds to subtle indoor load changes, saving energy.

Compressors Alternate operation to share equal run times to ensure equipment longevity

Quick Cooling & Heating

With compressor speed acceleration and simultaneous starting, DVM S provides quick cooling and heating performance.

Quick Start (Simultaneous Operation)

Fast Frequency Acceleration

Fast Heating Performance

5 sec 90 sec 7 min 9 min 33% higher heating

Refrigerant PCB Cooling System

The PCB is cooled by the refrigerant, ensuring better stability.

Refrigerant Cooling Method

Air Cooling Method

DVM S

Conventional

Auto Oil Balancing

DVM S ensures stable and equal oil balancing without requiring an extra oil balancing pipe.

DVM S

- Inverter + Inverter Compressor
- No oil balance pipe

Conventional

- Fixed + Inverter Compressor
- Oil unbalanced (Balance Pipe is necessary)

Large Oil Storage Capacity

With large oil storage and low OCR, DVM S can ensure reliability even in high altitude applications that require long piping.

Oil storage amount

OCR (Oil Circulation Ratio) amount

SMART MANAGEMENT

• 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.



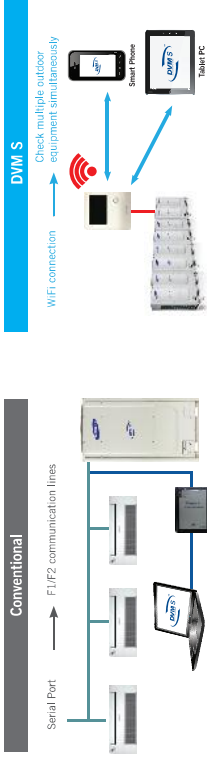
• Reduced Commissioning Time

With S-Checker, the commissioning time for DVM S has shortened considerably from days to a mere 50 minutes, and the test results are automatically stored and reported wirelessly.



• WiFi Monitoring System

With S-Checker, DVM S can be monitored by computers and handheld devices. Also collects the serial numbers of all indoor units automatically.



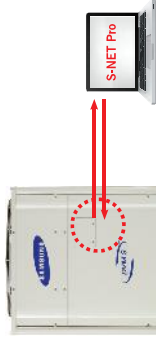
• Self-Diagnosis Mode

DVM S 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.



• Automatic Data Backup

If a malfunction occurs with the DVM S outdoor unit, the last 30 minutes of operation data are stored for stored with automatic data backup.



• Easy Access

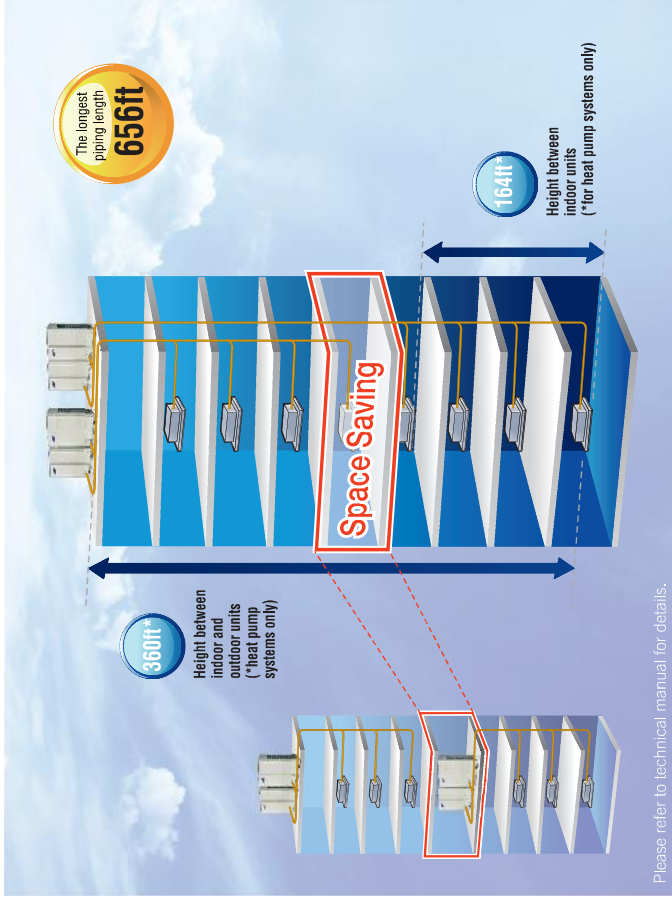
With the small opening on the front side of the outdoor unit, checking the status of it and setting options is simple.



FLEXIBLE INSTALLATION

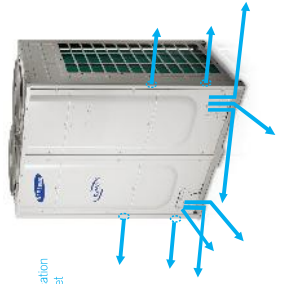
• Longest Piping Length & Highest Elevation

DVM S allows an extended piping length of up to 721ft and units will still perform great over wide areas. With this technology, installation is available with a maximum height level of 360ft, which is equivalent to 20 stories (where each story is considered to be 16.4ft in height).



• Versatile Piping Connection with Various Knock-Out Holes

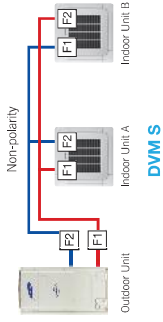
The knock-out holes for piping, power and communication cables are located in a variety of different areas of the condensing unit, allowing for simpler installation of DVM S where the piping and cable direction can be selected from the front, left and right side.



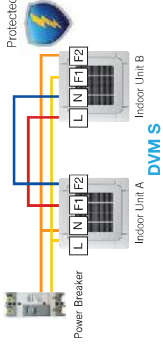
• Easy and Safe Wiring

Non-polar communication between indoor and outdoor units makes wiring work much easier. This is also safer since the outdoor unit will protect itself if the communication cable is connected to a power terminal by mistake.

Normal operation is possible even when communication cables are not connected properly

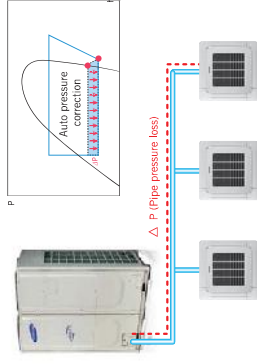


Air conditioner is protected even when power/communication cables are not connected properly



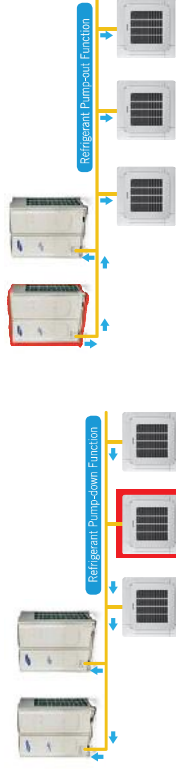
• Optimized Refrigerant Distribution Control

Since the piping distance is far between the outdoor units and indoor units, the individual indoor units perform capacity connection control and automatic refrigerant balancing to secure balanced performance between the units.



• Refrigerant Pump-Down & Pump-Out

DVM S provides the refrigerant pump-down/out functions to facilitate easy and convenient replacement of the product, as well as additional installations and maintenance. When the outdoor unit needs maintenance, it is possible for the refrigerant to recover into indoor units and pipes. It is also possible to recover refrigerant into outdoor units when moving indoor units or performing maintenance of pipes.



• High External Static Pressure

To properly deal with unexpected and varying installation conditions, DVM S is designed to manage high external static pressures up to .32".

