

SAMSUNG
Climate Solutions

DVM S Mini with R32 refrigerant



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DVM S Mini R32

DVM S Mini with R32 refrigerant is a heating and cooling solution for residential and light commercial environments. This unit utilizes the R32 refrigerant with a low Global Warming Potential (GWP)¹ and it's already equipped with the safety devices requested in some installations by the standard (GWP). Equipped with Active AI technologies, compatible with our building management solutions (b.IoT), the DVM S Mini R32 ensures streamlined installations, optimised energy management, and efficient operations.

Meeting Safety Requirements

The safety devices integrated in DVM S Mini R32 guarantee maximum flexibility with the IEC 60335-2-40 standard. The outdoor unit is equipped with a shut-off valve and battery pack, while the indoor units connected have a built-in R32 refrigerant leak detect sensor. The remote controller³ has an audible and visible alarm system to alert users in the event of R32 leakage.



Durafin™ Ultra Technology

The Durafin™ Ultra⁴ technology shields the heat exchanger with a dual-layer defence: an epoxy acrylic anti-corrosive layer coupled with a hydrophilic acrylic resin layer. This repels water and prevents corrosion from forming on the heat exchanger, to maintain optimal performance and efficiency.

Silent Mode

Combined with specially shaped fans and compact, unimposing design it creates a more pleasant residential and working environment. The Silent Mode function⁵ creates a restful environment with a reduced noise level.

1 GWP R32: 675 GWP R410A: 2088 R32 refrigerant charge 2.2kg tCO₂e=1.49 R410A refrigerant charge 2.00 & 2.5 kg tCO₂e=4.18 & 5.22.

2 Based on internal testing of the cooling operation, with the temperature set at 22°C and using Auto mode for 4 hours, at a room temperature of 33°C and an external temperature of 35°C. The tested model was an AM060DXMDKG/EU connected to AM140DN4DKG/EU indoor unit with 25m of piping. The elapsed times were measured when the room temperature reached 25°C.

3 Only available for model codes: MWR-WG01JN and MWR-WG01KN.

4 Only available on certain models. Based on internal testing, verified by TUV Rheinland, in accordance with ISO 9227, ISO 14993 and ISO 21207 using specimens from the heat exchanger of a DVM outdoor unit. For more details, please contact Samsung's technical professionals. Based on testing by a third-party lab, applying the actual pressure of refrigerant for 1 minute, after a Salt Spray Test (SST) of over 10,000 hours.

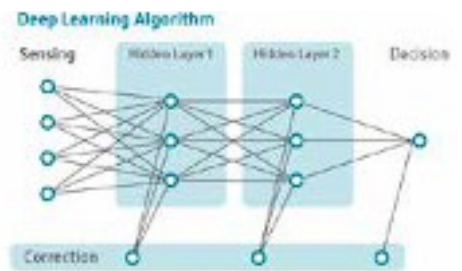
5 Silent mode can be activated by the installer depending on the model code during the installation/service stage. Reduction of sound levels could reduce heat pump capacity. Depending on ambient temperature.

6 Samsung SmartThings application account and internet connection are required. Requires iOS 10.0 or later & Android 5.0 or later.

Active AI

The DVM S Mini R32 is equipped with multiple Active AI features designed to enhance efficiency and user comfort:

- **AI Refrigerant Analysis** uses Deep Learning technology to collect and analyse various operational data in real time, proactively alerting users if the refrigerant level is too low, ensuring optimal performance.
- **Active AI High Pressure Control** adjusts high pressure based on piping length and elevation differences, using an AI learning algorithm to reduce unnecessary high pressure, thereby improving power consumption and efficiency.
- **Active AI Low Pressure Control²** learns cooling operation patterns to quickly reach the target low pressure, saving energy by preventing over-cooling and enhancing comfort by speeding up the cooling process.



Samsung b.IoT Lite ready

Samsung b.IoT (building Internet of Things) is a building management solution that can efficiently manage and help to save energy. It's an open platform with expandability and compatibility options that enable integrated control of the facility's major systems. The synergy between the DVM S Mini R32 and b.IoT Lite paves the way for streamlined installations, optimised energy management, and efficient operations, all while maintaining comprehensive oversight of integrated systems.





Smart Control

The DVM S Mini R32 enhances the user experience with Wi-Fi-enabled control, thanks to the factory-integrated Single Wi-Fi kit (MIM-H14EN). This allows for effortless management through the intuitive SmartThings App⁶ and empowers users to monitor energy usage and adjust settings on-the-go, ensuring a harmonious balance between comfort and energy usage*.











*Available in selected models only.

Line-up Controller Universal (compatible with R32 and R410A)




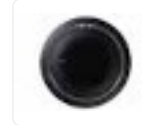






Model	Image	Language Packs
Wired Remote Controller		EN/FR/ES/PT/DE/NL
MWR-WG01JN*		EN/IT/EL/CS/SK/PL
MWR-WG01KN*		
SolarCell Wireless Remote Controller		EN
AR-CH01E		

*It is mandatory that every unit has a wired remote control.

Line-up Indoor Universal (compatible with R32 and R410A)

Type	Model	Image	Capacity (kW)															
			1.5	1.7	2.2	2.8	3.6	4.5	5.6	6.0	7.1	8.2	9.0	11.2	12.8	14.0	16.0	
Cassette	WindFree™ 1-Way Cassette AM***DN1DKG/EU			•	•	•	•			•								
	WindFree™ Mini 4-Way Cassette AM***DNNDKG/EU			•		•	•	•	•	•	•							
	WindFree™ 4-Way Cassette AM***DN4DKG/EU/ AM***DN4FKG/EU					•	•	•	•	•	•		•	•	•	•		
	360 Cassette AM***DN6DKG/EU												•	•	•	•		
Ducted	LSP Duct (drain pump included) AM***DNLDKG/EU			•		•	•	•	•	•			•					
	MSP Duct (drain pump included) AM***DNMDKG/EU/AM***DNMFKG/EU					•	•	•	•	•			•	•	•	•	•	•
	HSP Duct (drain pump included) AM***DNHDKG/EU													•	•	•	•	
Ceiling	Ceiling AM***DNCCKG/EU											•		•			•	
Wall-Mounted	WindFree™ Deluxe (EEV included) AM***DNVCKG/EU			•		•	•	•	•	•				•	•			
	Max Wall-Mounted AM093DNQDKG/EU																	•

Line-up Panels Universal (compatible with R32 and R410A) SmartThings

360 Cassette Front Panel		White Square PC6NUSMANW		Black Square PC6NBSMANW		White Circle Exposed Installation PC6EUSMANW Air Purification PC6EUCMANW Auto Elevation PC6EUXMANW		Black Circle Exposed Installation C6EBSMANW
WindFree™ 4Way Cassette Front Panel		600x600 Mini White PC4SUFMANW		900x900 White PC4NUFMANW Air Purification PC4NUCMANW Auto Elevation PC4NUXMANW		NEW COLOUR 900x900 Black PC4NBFMANW		
WindFree™ 1Way Cassette Front Panel		1.7-2.2kW PC1MWFMANW Air Purification PC1MWCMANW		2.8-3.6kW PC1NWFMANW Air Purification PC1NWCMANW		5.6-7.1kW PC1BWFMANW Air Purification PC1BWCMANW		

DVM S Mini R32 includes 2 of the safety measurements inside which IEC 60335-2-40 requires.

DVM S Mini R32 outdoor unit includes shut-off valve and battery pack, indoor unit has R32 refrigerant leak detect sensor inside, and remote controller has audible & visible alarm system.

Universal indoor units, universal controller and universal accessories can be installed both with DVM R410A and DVM R32 Outdoor units.

Universal Panels is equipped with a factory-integrated Wi-Fi kit (MIM-H14EN), enabling seamless management of indoor units directly through the intuitive SmartThings App.

Universal Panel SmartThings function is only compatible when installed together with DVM Universal Indoor units and CAC HEE Indoor units.

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- Horizontal discharge and rear suction one propeller BLDC Inverter fan (4~6 HP).
- Safety devices integrated (standard IEC 60335-2-40):
 - shut-off valve and battery pack (outdoor unit)
 - R32 refrigerant leak detector sensor (indoor unit)
 - audible & visible alarm system (wired control)
- Active AI Pressure Control.
- Active AI Refrigerant analysis.
- Durafin™ Ultra Heat Exchanger Fin.
- Night Silent Mode available.
- Eurovent certified and ErP (Ecodesign) compliant.
- Four-way direction piping connection.
- Indoor Cassettes with Wi-Fi embedded.
- b.IoT Lite ready.



Model			AM040DXMDKG/EU	AM050DXMDKG/EU	AM060DXMDKG/EU	AM040DXMDNG/EU	AM050DXMDNG/EU	AM060DXMDNG/EU		
Power Supply			Φ, #, V, Hz		1Φ, 2, 220~240 V, 50/60 Hz	1Φ, 2, 220~240 V, 50/60 Hz	1Φ, 2, 220~240 V, 50/60 Hz	3Φ, 4, 380~415 V, 50/60 Hz	3Φ, 4, 380~415 V, 50/60 Hz	3Φ, 4, 380~415 V, 50/60 Hz
Performance	HP	HP	4	5	6	4	5	6		
	Capacity	Cooling	kW	12.1	14	15.5	12.1	14	15.5	
		Heating	kW	12.1	14	15.5	12.1	14	15.5	
Maximum number of connectable indoor units	EA		8	9	10	8	9	10		
	Total capacity of the connected indoor units	Min.	kW	6	7	7.8	6	7	7.8	
Max.		kW	15.7	18.2	20.2	15.7	18.2	20.2		
Power	Power Input	Cooling	kW	3.73	4.83	5.62	3.73	4.83	5.62	
		Heating (Max)	kW	2.75 (3.55)	3.37 (4.10)	3.78 (5.00)	2.75 (3.55)	3.37 (4.10)	3.78 (5.00)	
	Current Input	Cooling	A	17.1	22.1	25.7	5.9	7.6	8.8	
		Heating (Max)	A	12.6(16.2)	15.4(18.8)	17.3(22.9)	4.3(5.6)	5.3(6.4)	5.9(7.8)	
	Current	MCA	A	22	24	32	16.1	16.1	16.1	
		MFA	A	25	32	40	20	20	20	
Energy Efficiency¹	EER (Nominal Cooling)	W/W	3.24	2.9	2.76	3.24	2.9	2.76		
	COP (Nominal Heating)	W/W	4.4	4.15	4.1	4.4	4.15	4.1		
	SEER (Cassette/ Ducted)	W/W	8.50/7.90	8.20/7.40	8.00/7.20	8.50/7.90	8.20/7.40	8.00/7.20		
	SCOP (Cassette/Ducted)	W/W	5.10/4.80	5.10/4.70	5.10/4.60	5.10/4.80	5.10/4.70	5.10/4.60		
	η _{s,c} % - η _{s,h} % Cassette	%	337%-201%	325%-201%	317%-201%	337%-201%	325%-201%	317%-201%		
	η _{s,c} % - η _{s,h} % Ducted	%	313%-189%	293%-185%	285%-181%	313%-189%	293%-185%	285%-181%		
Compressor	Type		Twin BLDC Rotary	Twin BLDC Rotary	Twin BLDC Rotary	Twin BLDC Rotary	Twin BLDC Rotary	Twin BLDC Rotary		
	Output					4.35				
		Type	-				POE			
Oil	Initial Charge	cc				1,500				
Fan	Type & Discharge direction	-				Propeller				
		-				Horizontal				
Fan Motor	Number of Fans	EA				1				
	Airflow Rate	m ³ /min	69	77	80	69	77	80		
Piping Connections	Model	-				BLDC Motor				
	Output x n	W				122 x 1				
Liquid Pipe	ø, mm					9.52				
		ø, inch				3/8				
	ø, mm		15.88	15.88	19.05	15.88	15.88	19.05		
		ø, inch		5/8	5/8	3/4	5/8	5/8	3/4	
	Piping length (ODU-IDU) ³	Max. (Equiv.)	m			80 (100)				
	Piping length (1st Branch - IDU) ³	Max.	m			40				
Total piping length (System)	Max.	m			150					
Level Difference	Level Difference (Outdoor in highest position)	Max.	m			30				
	Level Difference (Indoor in highest position)	Max.	m			25				
	Level Difference (IDU-IDU) ³	Max.	m			15				
Wiring Connections	Communication	Min.	mm ²			0.75				
		Remark	-			F1, F2				
Refrigerant	Type		R32(Fluorinated greenhouse gas, GWP=675)							
	Factory Charging	kg / tCO ₂ e	2.20/1.49	2.20/1.49	2.20/1.49	2.20/1.49	2.20/1.49	2.20/1.49		
Sound²	Sound Pressure	Cooling	dB(A)	55	57	58	55	57	58	
		Heating	dB(A)	57	59	60	57	59	60	
	Sound Power	Cooling	dB(A)	68	70	71	68	70	71	
		Heating	dB(A)	72	74	76	72	74	76	
External Dimensions	Net Weight	kg	90							
	Net Dimensions (W x H x D)	mm	940 x 840 x 460							
Operating Temperature Range	Cooling	°C	-5.0~48.0							
	Heating	°C	-25.0~26.0							

¹ Performances are based on the following test conditions:
 - Cooling: Indoor temperature: 27 °C DB, 19 °C WB, Outdoor temperature: 35 °C DB, 24 °C WB
 - Heating: Indoor temperature: 20 °C DB, 15 °C WB, Outdoor temperature: 7 °C DB, 6 °C WB
 - Equivalent refrigerant piping: 7.5 m, Level differences: 0 m

² Sound pressure level is obtained in an anechoic room. Sound pressure level is a relative value, depending on the distance and acoustic environment. Sound pressure level may differ according to operating conditions. Sound power level is an absolute value that a sound source generates.

³ ODU: Outdoor Unit, IDU: Indoor Unit

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Find your flow.

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