

SAMSUNG

Hydro

Searching for efficiency? You're getting warmer.



Product Registration Required
Conditions Apply



WORKS WITH
SmartThings

Innovation is heating up.

The only waste here is not choosing Hydro.

Up your building's efficiency with Samsung HVAC Hydro units. With refrigerant-to-water heat exchangers to recover waste heat from condensing units and two types to choose from, there's a unit sure to fit your needs. Select the HE model for outlet water up to 122°F (50°C) and the HT model for its advanced Cascade Cycle technology, capable of supplying water reaching 176°F (80°C).



Hydro features the best.

- One or more Hydro units can be connected to systems with standard indoor units (cassette, duct, etc.) or systems without standard units that only consist of Hydro units.
- A single Hydro unit can be applied to both domestic hot water (DHW) with an indirect water heater tank and provide comfort heating (ex: radiant heating) with the ability to assign priority to either DHW or comfort heating.
- Hydro units can be controlled via third-party 24VAC thermostat inputs or 208/230V thermostat inputs when applied to comfort heating applications.
- The Hydro unit features an Auto mode setting (outdoor reset) capable of automatically adjusting water set temperature based on outside ambient temperature when applied to comfort heating applications.

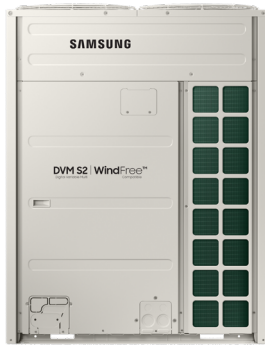


Hydro HE



Hydro HT

Compatible with these condensing units



DVM S2
Heat Pump and Heat Recovery



DVM S Eco
Heat Pump and Heat Recovery

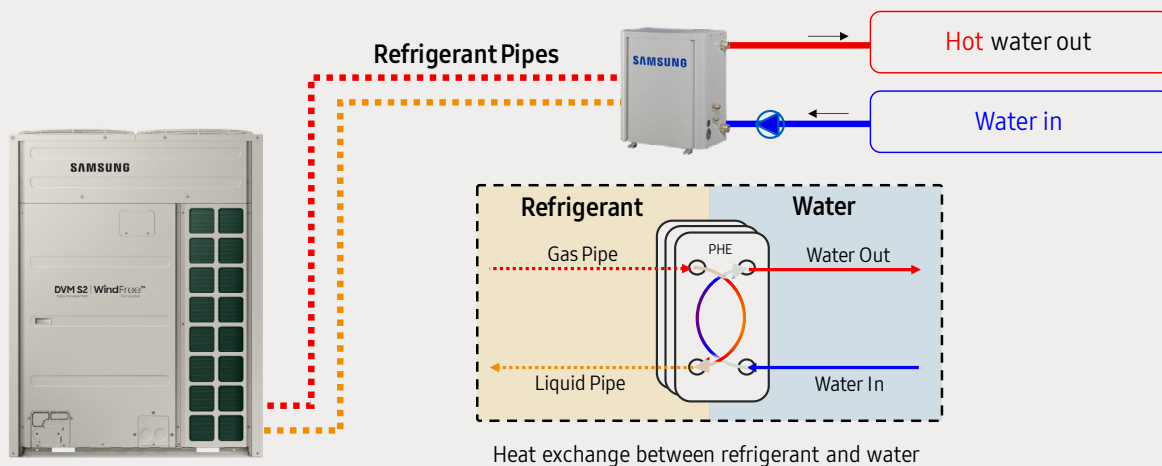


DVM S Water
1Ø and 3Ø
Heat Pump and Heat Recovery

NOTE: AM144CNBDCH/AA is not compatible with Heat Recovery systems due to HR MCU port capacity limitations. AM096CNBDCH/AA and AM144CNBDCH/AA are not compatible with DVM S Eco systems due to connection ratio limitations. Compatible with Samsung central controls including all DMS 2.5 models, Wi-Fi adapters, and touch central controller. System selection and design must be done with [DVM Pro 2 Design Software](#) to ensure connection ratio, indoor/outdoor selection, and water design parameters are within specifications.

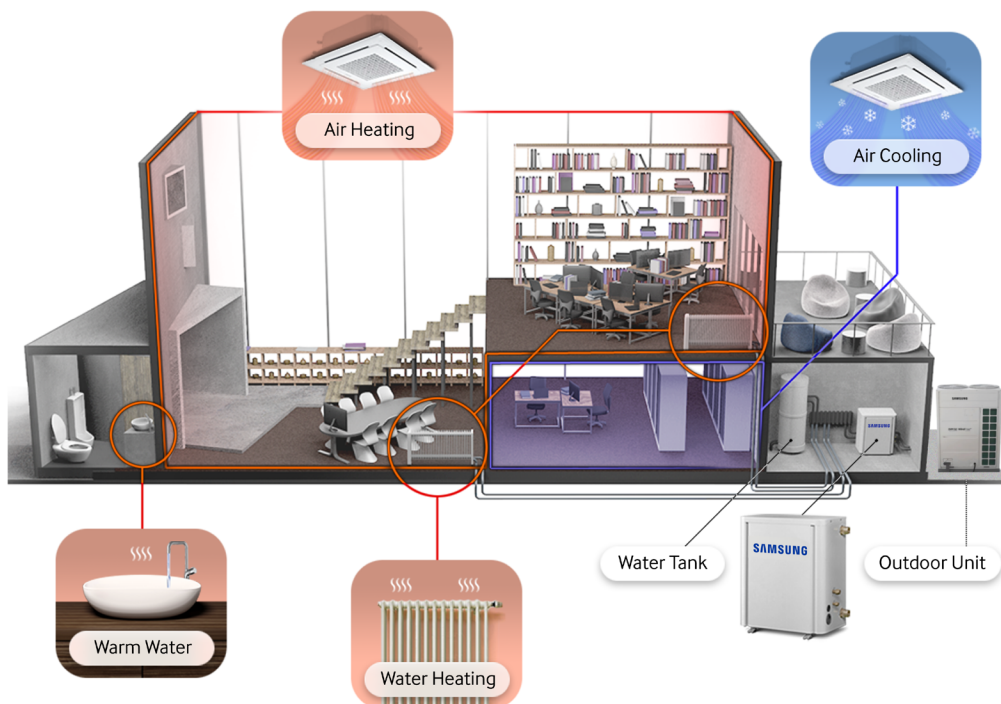
How it works

Using refrigerant discharged from the compressor, water is heated efficiently by directing hot gas discharged from a heat pump or heat recovery outdoor unit into a refrigerant to water plate heat exchanger (PHE). Not only does this capture potentially wasted heat, but it can also improve the efficiency of the heat pump unit (conditions apply) and reduce or eliminate the need to use fossil fuels for water heating purposes.



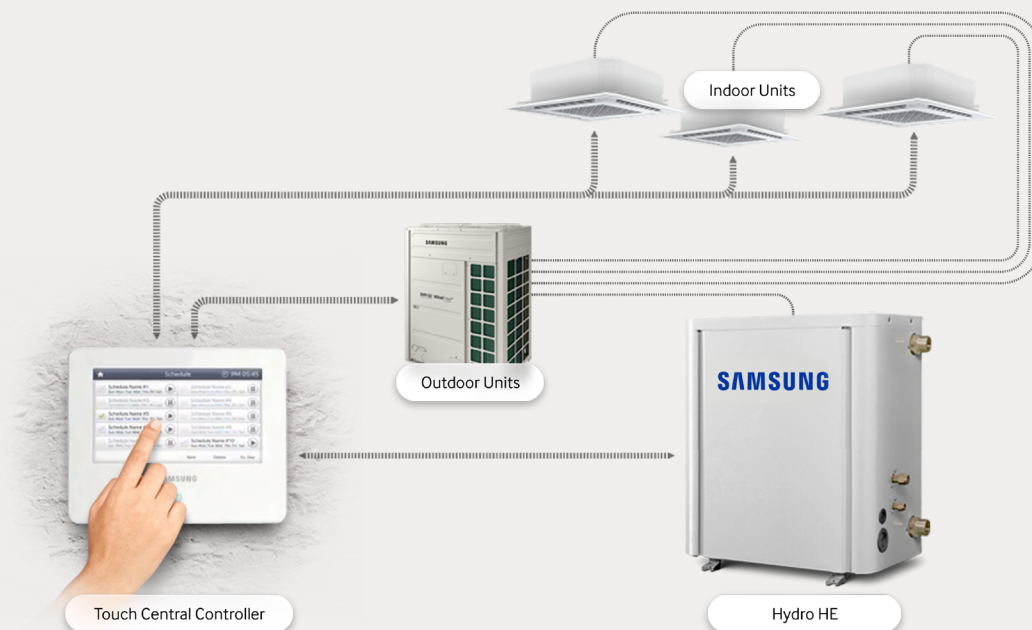
Recycle heat for real efficiency.

Samsung Hydro units can be added to create a single, integrated solution for cooling, heating and hot water that's simple to manage. It ensures much greater efficiency to suit a variety of demands by recycling redundant heat and transferring it to other areas where it is needed – generating substantial energy and cost savings all year round.



Easy control. Seamless integration.

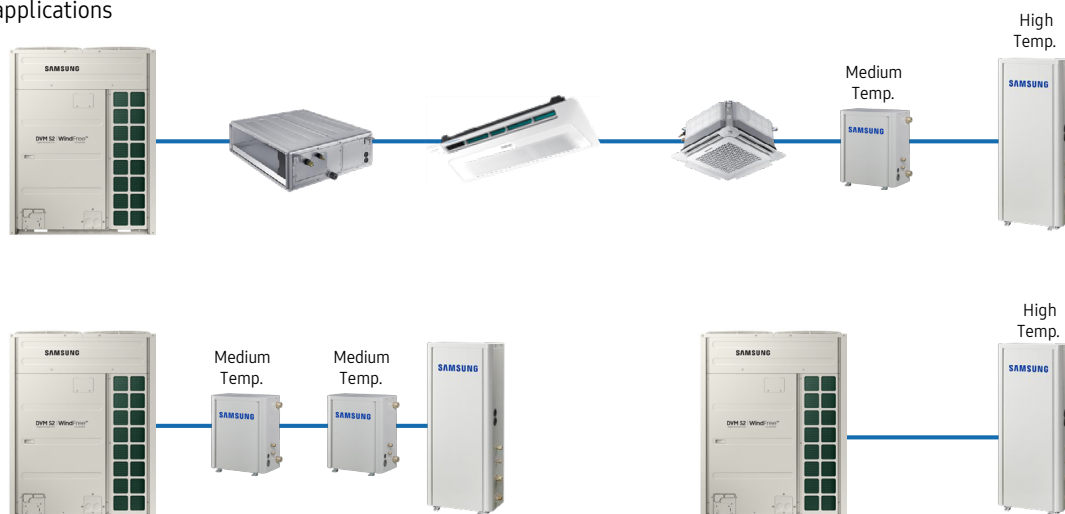
Hydro units can be independently or centrally operated along with a variety of Samsung condensing units. For standalone use on individual sites it has its own control system or it can be integrated with various Samsung systems (example: water and air), and controlled with a central controller.



How Hydro can work for you

Whether the application is a large hotel using 3Ø DVM S2 systems or residential using 1Ø DVM S Eco Heat Recovery systems, Samsung HVAC has the perfect solution for your project needs. Hydro unit applications include, but are not limited to:

- Air-to-water heat exchanger
- Radiant heating
- Boiler preheating
- Pool heating
- Indirect potable water heating
- Many other applications



Note: Examples noted above will require additional field provided components.

Wide-ranging, widely useful applications.

Hydro units can be applied to a wide range of project applications. The units include several control output options for various external input and output devices, such as tank sensors, booster heaters, 2-way and 3-way valves, and room thermostats.



Hydro HE

Model Number			AM036CNBDCH/AA	AM048CNBDCH/AA	AM096CNBDCH/AA	AM144CNBDCH/AA
Performance	Nominal Capacity	Heating (Btu/h) ¹	40,000	54,500	108,000	172,000
Power	Voltage (ø/V/Hz)		1 / 208-230 / 60	1 / 208-230 / 60	1 / 208-230 / 60	1 / 208-230 / 60
	Minimum Circuit Ampacity (MCA)		2.2 A	2.2 A	2.2 A	2.2 A
	Maximum Overcurrent Protection (MOP)		15 A	15 A	15 A	15 A
Heat Exchanger ²	Type		Brazed Plate	Brazed Plate	Brazed Plate	Brazed Plate
	Quantity		1	1	1	1
	Water Flow Rate (GPM)	Standard	9.5	12.7	24.3	39.6
		Range	4.8 - 9.5	6.3 - 12.7	12.2 - 24.3	19.8 - 39.6
	Maximum Pressure (Water)		145 PSI	145 PSI	145 PSI	145 PSI
Refrigerant	Type		R410A	R410A	R410A	R410A
Refrigerant Pipe Connections (Brazed)			3/8" X 5/8"	3/8" X 5/8"	3/8" X 7/8"	1/2" X 1-1/8"
Water Pipe Connections			NPT 1"	NPT 1"	NPT 1"	NPT 1-1/4"
Dimensions	W X H X D		20-3/8" X 24-11/16" X 13"	20-3/8" X 24-11/16" X 13"	20-3/8" X 24-11/16" X 13"	20-3/8" X 24-11/16" X 13"
Temperature	Maximum Outside Ambient ³		95°F (35°C)	95°F (35°C)	95°F (35°C)	95°F (35°C)
	Water Outlet Range		68°F ~ 122°F (20°C ~ 50°C)	68°F ~ 122°F (20°C ~ 50°C)	68°F ~ 122°F (20°C ~ 50°C)	68°F ~ 122°F (20°C ~ 50°C)

¹ Nominal heating capacities are based on:

- Water temperature: 86°F (30°C) inlet, 95°F (35°C) outlet
- Indoor temperature: 68°F (20°C) DB
- Outdoor temperature: 44.6°F (7°C) DB, 42.8°F (6°C) WB

² Refer to supporting technical documents for full water system details.

³ When outside ambient temperature is above the specified maximum temperature, the hydro unit will not produce hot water using the condensing unit. If a field provided booster heater is installed, the Hydro unit will use the booster exclusively to heat the water until ambient temperatures are within the specified range.

Hydro HT

Model Number			AM048CNBFCB/AA	AM072CNBFCB/AA
Performance	Nominal Capacity	Heating (Btu/h) ¹	54,500	86,000
Power	Voltage (ø/V/Hz)		1 / 208-230 / 60	1 / 208-230 / 60
	Minimum Circuit Ampacity (MCA)		18 A	30 A
	Maximum Overcurrent Protection (MOP)		25 A	40 A
Heat Exchanger ²	Type		Brazed Plate	Brazed Plate
	Quantity		2	2
	Water Flow Rate (GPM)	Standard	6.1	9.5
		Range	3.7 - 12.2	3.7 - 19
	Maximum Pressure (Water)		145 PSI	145 PSI
Refrigerant	Primary (VRF)	Type	R410A	R410A
	Secondary (Internal)	Type	R134A	R134A
Compressor	Type		Inverter Driven Rotary	Inverter Driven Rotary
	Quantity		1	1
Refrigerant Pipe Connections (Flare)			3/8" X 5/8"	3/8" X 5/8"
Water Pipe Connections			NPT 1"	NPT 1"
Dimensions	W X H X D		20-3/8" X 47-5/8" X 13"	20-3/8" X 47-5/8" X 13"
	Weight	lbs.	233.7	233.7
Sound	Sound Pressure	dB	42	42
Temperature	Maximum Outside Ambient ³		109.4°F (43°C)	109.4°F (43°C)
	Water Outlet Range		77°F ~ 176°F (25°C ~ 80°C)	77°F ~ 176°F (25°C ~ 80°C)

¹ Nominal heating capacities are based on:

- Water temperature: 131°F (55°C) inlet, 149°F (65°C) outlet.
- Indoor temperature: 68°F (20°C) DB
- Outdoor temperature: 44.6°F (7°C) DB, 42.8°F (6°C) WB

² Refer to supporting technical documents for full water system details.

³ When outside ambient temperature is above the specified maximum temperature, the hydro unit will not produce hot water using the condensing unit. If a field provided booster heater is installed, the Hydro unit will use the booster exclusively to heat the water until ambient temperatures are within the specified range.



Product Registration Required.
Conditions Apply.

Samsung HVAC maintains a policy of ongoing development, specifications are subject to change without notice.

Notes

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SamsungHVAC.com
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