



AIR-TO-WATER HEAT PUMP SYSTEM

The total hydronic heat pump solution for heating, cooling, and domestic hot water

VITOCAL 100-AW



A future ready solution

The brand new residential air-to-water heat pump system. An energy efficient and sustainable complete heating, cooling and DHW solution.

▶ The Vitocal 100-AW is a true all-in-one kit with indoor unit, outdoor unit, and buffer tank. The easiest way to add heat pump hot water. ▶



The Vitocal 100-AW offers a complete solution for residential applications. The optional domestic indirect tanks are available in three sizes, 53, 66 or 79 gallons.

Highly efficient and easy to install

The Vitocal 100-AW is a residential air-to-water heat pump system featuring an outdoor unit, an indoor unit and a steel buffer tank (20 gal). The kit can be delivered on a single pallet for easy inventory, delivery, and on-site convenience - providing the advantage for a fast and simple installation. The Vitocal 100-AW offers 3 different sizes: 1.5, 3.0 and 4.3 Tons for cooling / 20.5, 34.0 and 58.0 MBH for heating (nominal capacities) which allows for flexible application types.

The easiest way to add domestic hot water

There is no reason to purchase a separate heat pump water heater with the available optional indirect domestic storage tanks, saving space and installation cost over other types of domestic hot water heating.

The optional domestic indirect tanks come in two sizes. Designed to pair with the Vitocal 100-AW, the buffer tank can be physically mounted on top of the domestic tank to save space. A contractor only needs to decide if they prefer 53, 66, or 79 gallons of domestic hot water storage.

Simple set up and easy control

The Indoor unit has an integrated controller that can be run with continuous pumping and outdoor reset, utilizing the included sensors (outdoor, indoor, and tank sensors) with no thermostat needed in what Viessmann calls a European Style system; or set it up North American style with a 3rd party thermostat or 3rd party zone controller directly wired to the dry contacts on the unit.

Flexible application types

Vitocal 100-AW proves adaptable and works in a variety of application types. Whether installing forced-air heating and cooling, retrofitting a legacy radiant heating system, or a combination of both, these versatile systems effortlessly accommodate various heating and cooling strategies.



VITOCAL 100-AW

1.5 - 4.3 TONS / COOLING

20.5 - 58.0 MBH / HEATING

PRODUCT FEATURES

- + Offers 3 different sizes: 1.5, 3.0 and 4.3 Tons for cooling / 20.5, 34.0 and 58.0 MBH for heating (nominal capacities)
- + All-in-one kit for easy inventory and installation
- + Future ready with R32 low GWP refrigerant
- + Pairs with Vitocell 100-V 53, 66, and 79 gallon indirect tanks
- + Auxiliary Electric Heat is integrated into the Indoor unit, additionally the Vitocal 100-AW can be paired with a furnace or a boiler utilising the "dual fuel switch"
- + Installation ready. Comes with a fitting accessory kit. The Vitocal 100-AW is ready to install without additional hydronic specialties

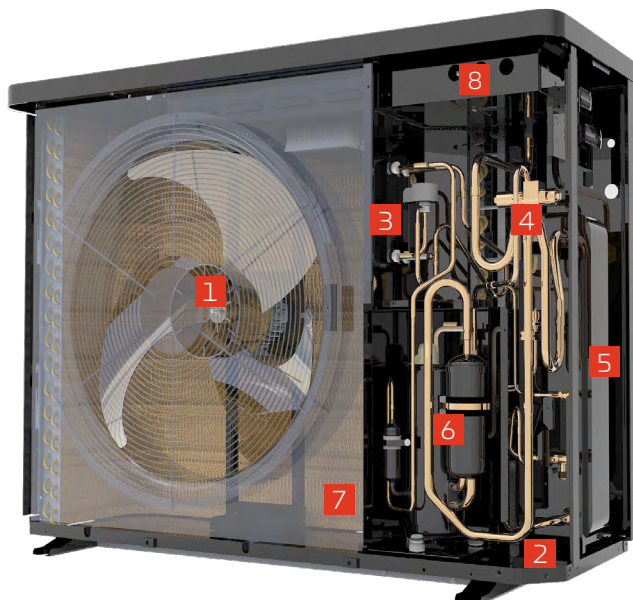
BENEFITS AT A GLANCE

- + Lower utility bills - With efficiencies up to 4.9 COP and 16.8 EER
- + AIM Act ready - Utilizing R32 refrigerant with a global warming potential (GWP) of 675 kg / CO₂ equivalent
- + Low cost of ownership - With minimal maintenance and low operating costs
- + Flexible applications - Use for radiant, forced air, chilled panel and domestic hot water applications

VITOCAL 100-AW

OUTDOOR UNIT

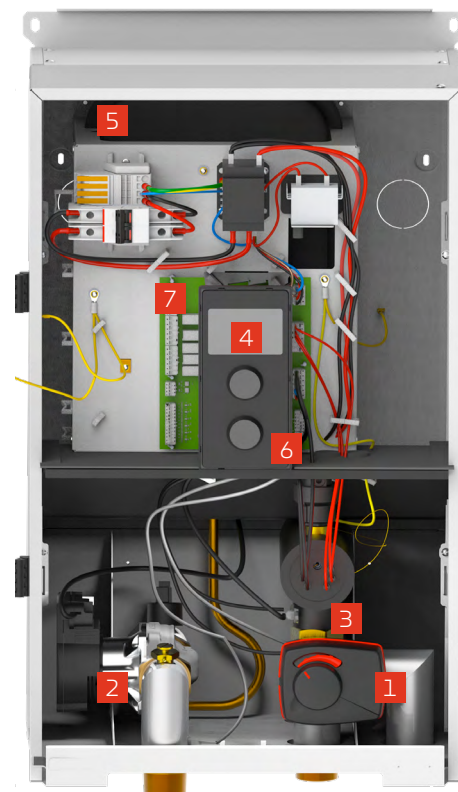
- 1 Dynamically balanced fan blade
- 2 Heavy gauge steel casing with baked enamel finish
- 3 Pre charged with R32 refrigerant
- 4 Enhanced Vapor Injection (EVI) system
- 5 Refrigerant to water brazed plate heat exchanger
- 6 Robust inverter driven variable speed rotary compressor
- 7 Large evaporator coil with corrosion resistant coating
- 8 Integrated control with modbus communication protocol for communication with Indoor Unit



VITOCAL 100-AW

INDOOR UNIT

- 1 Diverting valve
- 2 Pump
- 3 Submersible Electric Heater
- 4 Controller
- 5 Expansion tank
- 6 Dual fuel switch
- 7 Pump outputs



Quality Guaranteed

Warranty information is available at
www.viessmann-us.com/en/services/warranties.html

Technical Information

VITOCAL 100-AW

Viessmann Manufacturing
Company (US) Inc.
Warwick, RI
(800) 288-0667
viessmann-us.com
A Carrier Company

**Three sizes available for easy
and flexible installation:**

AW-AM2V 020028

1.5 Tons cooling / 20.5 MBH heating

AW-AM2V 034043

3.0 Ton cooling / 34.0 MBH heating

AW-AM2V 051078

4.3 Ton cooling / 58.0 MBH heating

Indoor Unit	Model	AM2V 020028	AM2V 034043	AM2V 051078
Electrical Data				
Power Supply	Voltage	230 VAC	230 VAC	230 VAC
	Phase	1	1	1
	Hertz	60	60	60
	Amperage (FLA)	31	31	43
	Maximum Fuse (Amps)	40	40	50
Electric Heater Output	kW (BTU)	6 (20500)	6 (20500)	9 (30700)
Heating Elements		2	2	3
Hydronic Data		1-1/4 NPT (Male Threads)	1-1/4 NPT (Male Threads)	1 1/4 NPT (Male Threads)
Dimensional Data				
Height	in. (mm)	28-1/2 (723)	28-1/2 (723)	28-1/2 (723)
Width	in. (mm)	16-1/4 (416)	16-1/4 (416)	16-1/4 (416)
Depth	in. (mm)	12-3/4 (323)	12-3/4 (323)	12-3/4 (323)
Weight	lbs (kg)	64 (29)	64 (29)	64 (29)
Maximum Supply Temperature	°F (°C)	167 (75) DHW	167 (75) DHW	167 (75) DHW
Outdoor Unit	Model	AM2V 020028	AM2V 034043	AM2V 051078
Heating Capacity	MBH (kW)	20.5 (6.0)	34.0 (10)	58.0 (17)
Cooling Capacity/Range*				
Low	Tons (kW)	1.4 (4.9)	2.8 (9.8)	4.2 (14.7)
High	Tons (kW)	1.5 (5.2)	2.9 (10.2)	4.3 (15.1)
Energy Efficiency Ratio (EER)		16.81	16.75	14.46
COP		4.927	4.909	4.238
Electrical Data				
Power Supply	Voltage	208/230 VAC	208/230 VAC	208/230 VAC
	Phase	1	1	1
	Hertz	60	60	60
Total Electrical Load	Amps	13.0	21.8	29.4
Compressor Load Rating	Amps	12.2	21.0	27.8
Fan Motor Load Rating	Amps	0.8	0.8	2 X 0.8
Minimum Circuit Ampacity	Amps	17	28	37
Maximum Fuse	Amps	25	45	60
Refrigerant		R32	R32	R32
Hydronic connection		1 NPT (Male Threads)	1 NPT (Male Threads)	1 NPT (MaleThreads)
Water Flow Rate	GPM (m ³ /h)	3.7-8.8 (0.85-2.0)	6.2-15.0 (1.4-3.4)	11.4-25.5 (2.6-5.8)
Maximum Temperature of Heating Medium	°F (°C)	149 (65)	149 (65)	149 (65)
Dimensional Data				
Height	in. (mm)	31-1/4 (795)	36-1/2 (928)	52-3/8 (1329)
Width	in. (mm)	46 (1165)	50-3/4 (1285)	49-1/4 (1250)
Depth	in. (mm)	15-3/4 (400)	18-1/8 (460)	19-1/2 (495)
Weight	lbs (kg)	206 (93.5)	275 (124.5)	411 (186.5)
Vitocell 100-E MSCA-20		Dimensional Data		
Volume	USG (Litre)	20 (75)		
Diameter	in. (mm)	Width 26-3/4 (675); Length 26-1/2 (668)		
Height	in. (mm)	21 (533)		
Water Temp Range	°F (°C)	45-230 (7 to 110)		



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* Certified to AHRI Standards 550/590 and 551/591 Air Cooled Water Chilling Packages, additional technical information can be found in the AHRI product listing Primary Catalog V3.1 (20240218).