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 <u>true all-in-one kit</u> 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 come in two sizes: 53 or 66 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 that save space and installation cost over other types of domestic hot water heating. The optional domestic indirect tanks come in two sizes. They are designed to pair with the Vitocal 100-AW, and 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 or 66 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 utilising 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 with 3rd party zone controller directly wired to the dry contacts on the unit.

BENEFITS AT A GLANCE

+ Lower utility bills - With efficiencies up to 4.9 COP and 16.8 EER
+ ODSHAR ready - Utilizing R32 refrigerant with a global warming potential (GWP) of 675 kg / CO_2 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

The Vitocal 100-AW offers a complete solution for residential applications featuring an outdoor unit, an indoor unit and a steel buffer tank. Pictured is the optional indirect domestic storage tank (not included).

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.

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
+ Pairs with Vitocell 100-V 53 or 66 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
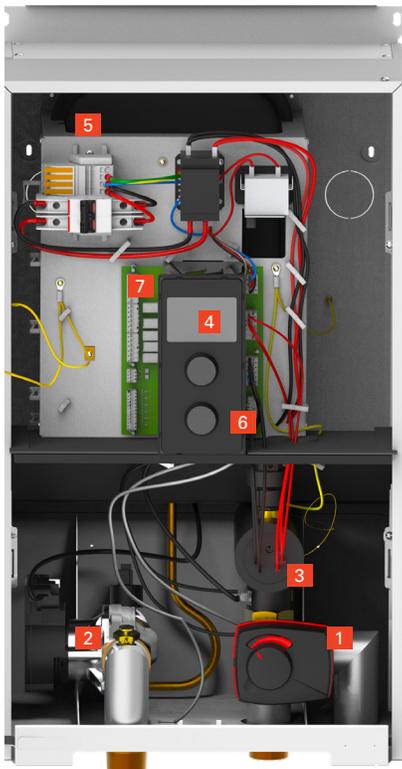
VITOCAL 100-AW
1.5 - 4.3 TONS / COOLING
20.5 - 58.0 MBH / HEATING

1 Diverting valve

2 Pump

3 Submersible Electric Heater

4 Controller

5 Expansion tank

6 Duel fuel switch

7 Pump outputs

VITOCAL 100-AW

1 Outdoor unit
2 Indoor unit
3 Buffer tank

1   2   3

Quality Guaranteed

Warranty information is available at
www.viessmann.ca/en/services/warranties.html

Technical Information
VITOCAL 100-AW

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		1-¼ NPT (Male Threads)	1-¼ NPT (Male Threads)	1 ¼ NPT (Male Threads)
Dimensional Data				
Height	in. (mm)	28-½ (723)	28-½ (723)	28-½ (723)
Width	in. (mm)	16-¼ (416)	16-¼ (416)	16-¼ (416)
Depth	in. (mm)	12-¾ (323)	12-¾ (323)	12-¾ (323)
Weight	lbs (kg)	64 (29)	64 (29)	64 (29)
Maximum Supply Temperature	°F (°C)	165 (75) DHW	165 (75) DHW	165 (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 (5.0)	2.8 (9.8)	4.2 (14.7)
High	Tons (kW)	1.5 (5.2)	3.0 (10.5)	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	35.1
Compressor Load Rating	Amps	12.2	21.0	33.5
Fan Motor Load Rating	Amps	0.8	0.8	2 X 0.8
Minimum Circuit Ampacity	Amps	17	28	44
Maximum Fuse	Amps	25	45	70
Refrigerant		R32	R32	R32
Hydronic connection		1 NPT (Male Threads)	1 NPT (Male Threads)	1 NPT (Male Threads)
Water Flow Rate	GPM (m³/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)	31-¼ (795)	36-½ (928)	52-⅜ (1329)
Width	in. (mm)	46 (1165)	50-¾ (1285)	49-¼ (1250)
Depth	in. (mm)	15-¾ (400)	18-⅛ (460)	19-½ (495)
Weight	lbs (kg)	198 (90)	291 (132)	353 (160)

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)

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

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Air-Cooled Water Chilling Packages
AHRI Standards 550/590 and 551/591