



Domestic Hot Water Air-to-Water Heat Pump System

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



Innovating Home Comfort

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

The Carrier DHW-A2W heat pump system is a true all-in-one kit with indoor unit, outdoor unit, buffer tank, and domestic hot water tank. The easiest way to add heat pump hot water.



The Carrier domestic hot water air-to-water heat pump system offers a complete solution for residential applications. The optional domestic indirect tanks come in three sizes: 53, 66 or 79 gallons.

Highly efficient and easy to install

The Carrier DHW-A2W heat pump system features 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 of a fast and simple installation. The kit is available in three 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. These tanks save space and installation costs over other types of domestic hot water heating. The optional domestic indirect tanks come in two sizes. They are designed to pair with this system, 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, 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 Carrier calls a European Style system; or set it up in a more traditional style with a 3rd party thermostat or with 3rd party zone controller directly wired to the dry contacts on the unit.

Flexible application types

The Carrier DHW-A2W heat pump system proves adaptable and works in a variety of application types. Whether installing forced-air heating and cooling, retrofitting a legacy radiant heating system, driveway heating system, or a combination, these versatile systems effortlessly accommodate various heating and cooling strategies.

MODEL 33NM3

- 1 Outdoor unit
- 2 Indoor unit
- 3 Buffer tank
- 4 Domestic hot water heater tank



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
- Utilizes R-32 low GWP refrigerant
- Auxiliary Electric Heat is integrated into the Indoor unit, additionally Model 33NM3 can be paired with a furnace or a boiler utilizing the “dual fuel switch”
- Installation ready. Comes with a fitting accessory kit. Ready to install without additional hydronic specialties

Outdoor Unit*

- 1 Dynamically balanced fan blade
- 2 Heavy gauge steel casing with baked enamel finish
- 3 Pre-charged with R-32 refrigerant
- 4 Brazed plate heat exchanger for 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

*Not intended for sale in a location that may exceed 109 °F ambient temperature.



Quality Guaranteed

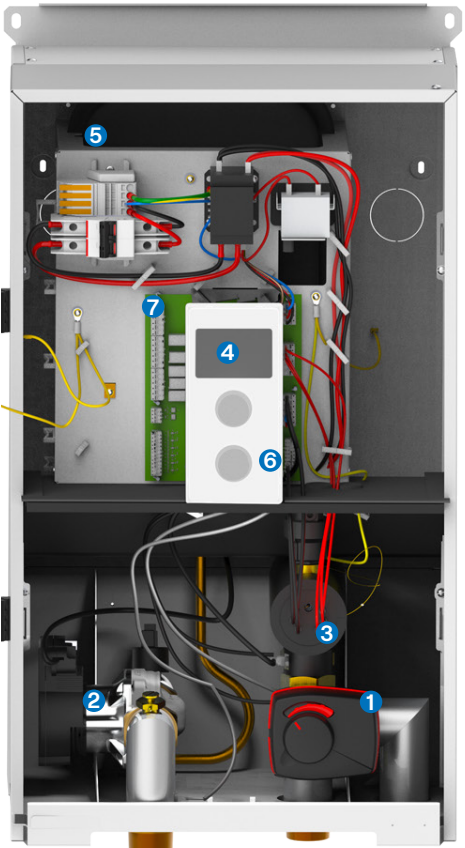
Warranty information is available at www.carrier.com

Benefits at a Glance

- Lower utility bills - With efficiencies up to 4.9 COP and 16.8 EER
- AIM Act ready - Utilizing R-32 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

Indoor Unit

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



Technical Information Model 33NM3

Indoor Unit	Specifications	AW020028	AW034043	AW051078
Electrical Data: Power Supply	Voltage	230 VAC	230 VAC	230 VAC
	Phase/Hertz	1/60	1/60	1/60
	Amperage (FLA)	31	31	43
	Maximum Fuse (Amps)	40	40	50
Electric Heater Output	kW (BTU)	6 (20500)	6 (20500)	9 (30700)
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	Specifications	AW020028	AW034043	AW051078
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 Maximum Fuse Refrigerant	Voltage	208/230 VAC	208/230 VAC	208/230 VAC
	Phase/Hertz	1/60	1/60	1/60
	Amps	25	45	70
		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)	31-¾ (795)	36-½ (928)	52-¾ (1329)
	Width in. (mm)	46 (1165)	50-¾ (1285)	49-¼ (1250)
	Depth in. (mm)	15-¾ (400)	18-⅞ (460)	19-½ (495)
	Weight lbs (kg)	198 (90)	291 (132)	353 (160)
Buffer Tank	Specifications	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)		
Weight	lbs. (kg)	110 (50)		
Domestic Hot Water Tank	Specifications	CVWC 53	CVWC 66	CVWC 79
Storage tank draw volume at 113°F (45°C) without reheating with a tank temperature of:	113°F (45°C) USG (L)	37 (140)	46 (175)	55 (210)
	122°F (50°C) USG (L)	53 (203)	67 (254)	80 (305)
	131°F (55°C) USG (L)	70 (266)	88 (333)	106 (400)
	140°F (60°C) USG (L)	87 (330)	109 (412)	131 (495)
Maximum Operating Temperature:	Heating System Supply	248°F (120°C)	248°F (120°C)	248°F (120°C)
	Domestic Hot Water	180°F (82°C)	180°F (82°C)	180°F (82°C)
Dimensional Data	Length in. (mm)	26-1/4 (668)	26-1/4 (668)	26-1/4 (668)
	Width in. (mm)	28-1/4 (714)	28-1/4 (714)	28-1/4 (714)
	Height in. (mm)	48-1/2 (1229)	56-1/2 (1430)	67 (1697)
	Weight lbs (kg)	214 (97)	245 (111)	278 (126)



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Technical information subject to change without notice. 6221 816 03/2025 Printed in Canada

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