



EMW Series Water-to-Water Heat Pump



- Geothermal radiant in-floor heating with everything needed inside the unit
- Desuperheater for domestic hot water
- COPh up to 3.9
- Hot water temperatures up to 120°F
- Sizes up to 6 nominal tons for whole home applications

EMW Series

This unit is a full package water-to-water heat pump with everything you need for an in-floor heating system. It includes a buffer tank, electric backup heat, indoor circulators, and control electronics.

By including these components inside the cabinet, less installation time is spent on plumbing and wiring. This heat pump also saves mechanical room space and standardizes your hydronic system installations for easier service and simplified job site documentation.



Features & Benefits

Size - A 28.5 x 61 footprint.

Start Capacitor Kit - Standard on all single phase models.

Electronic Expansion Valve (EEV) - Maintains an accurate and efficient flow of refrigerant.

Heat Exchangers - Enhanced surface coaxial style (CuNi available).

Filter Dryer - Standard on all units.

Sight Glass - Standard on all units.

Accumulator - Protects compressor against liquid slugging.

50 Gallon Buffer Tank - Foam insulated and installed with 12kW electric heating elements for auxiliary/backup heat.

Desuperheater - For domestic hot water. Bronze head circulator factory installed.

Compressor - Copeland high-efficiency two-stage scroll.

Expansion Tank - Pre-charged with air.

Service Ports - High and low service ports for quick connection to a manifold gauge set.

Gen2 Board - Includes built-in aquastat functionality, BACnet, data logging, electronic readout of refrigerant pressures and water in/out temperatures.

In-Floor Circulator Pump - Standard equipment.

Cabinet - Satin galvanized with powder coat finish.

Doors - 6 side panels can be removed for maximum service access

Open or Closed Loop - Unit pre-wired for operation on either style.

Performance Ratings

Standard Capacity Ratings for Open Loop (60Hz)

Rating Conditions	Model	Tons	Flow (GPM)	Outdoor dP (psi)	Mode	HEATING MODE			COOLING MODE		
						Heating Capacity (Btu/hr)	Input Energy (Watts)	COPh (Heating)	Cooling Capacity (Btu/hr)	Input Energy (Watts)	EER (Cooling)
Open Loop Heating: EWT 104°F ELT 50°F Cooling: EWT 53.6°F ELT 59°F	45	3	10.0	4.0	Stage 1	22,800	1,855	3.6	24,500	985	24.8
					Stage 2	32,700	2,455	3.9	34,000	1,665	20.4
	55	4	12.0	3.7	Stage 1	32,100	2,475	3.8	33,900	1,370	24.7
					Stage 2	45,000	3,565	3.7	44,700	2,180	20.5
	65	5	14.0	5.0	Stage 1	39,300	3,200	3.6	41,300	1,755	23.5
					Stage 2	54,900	4,345	3.7	54,800	2,710	20.2
	75	6	16.0	4.0	Stage 1	47,800	3,785	3.7	49,800	2,120	23.5
					Stage 2	64,500	4,845	3.9	62,400	3,105	20.1
	80	6.5	17.0	4.1	Stage 1	77,000	6,095	3.7	73,000	3,725	19.6

Standard Capacity Ratings for Closed Loop (60Hz)

Closed Loop Heating: EWT 104°F Stage 1 ELT 41°F Stage 2 ELT 32°F Cooling: EWT 53.6°F Stage 1 ELT 68°F Stage 2 ELT 77°F	45	3	10.0	4.7	Stage 1	19,200	1,760	3.2	23,000	1,205	19.1
					Stage 2	26,000	2,455	3.1	31,000	2,125	14.6
	55	4	12.0	4.4	Stage 1	29,000	2,740	3.1	31,500	1,615	19.5
					Stage 2	34,600	3,270	3.1	40,300	2,685	15.0
	65	5	14.0	5.8	Stage 1	34,100	3,120	3.2	39,100	1,975	19.8
					Stage 2	42,600	4,025	3.1	49,600	3,305	15.0
	75	6	16.0	4.7	Stage 1	41,100	3,765	3.2	45,600	2,535	18.0
					Stage 2	49,000	4,630	3.1	55,900	3,750	14.9
	80	6.5	17.0	4.6	Stage 1	58,000	5,860	2.9	66,000	4,460	14.8