

# TF Series

## Water-to-Air & Water Heat Pump



- Geothermal forced air heating and cooling
- Radiant in-floor heating with hot water temperatures up to 120°F
- Field selectable air or water priority
- Desuperheater for domestic hot water
- COPh up to 4.7
- Suitable for whole home applications
- R-454b: a low Global Warming Potential refrigerant
- ENERGY STAR® certified
- Suitable for open or closed loops
- Designed and built in Canada



## TF Series Water to Air & Water Heat Pump

### Features & Benefits

**Size** - Sizes from 45 (7.5kW) through 75 (14.7kW).

**Air and Water Heating** - Heating and cooling via central forced air, hydronic in-floor heating and domestic hot water heating.

**Built-in Refrigerant Detection System** - Optimized for safety of R454b, an **A2L** refrigerant.

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

**Part-Load Compressor** - Copeland high efficiency two-stage scroll, with double isolation for quiet operation.

**Oversized blower for quiet operation** - Motor is a constant airflow variable speed ECM, serviceable from one side.

**Domestic Hot Water Generation** - Double wall heat exchanger and stainless steel ECM circulator factory installed on all sizes.

**Start Capacitor Kit** - Standard on all units to maximize compressor longevity.

**Electronic Expansion Valve (EEV)** - For precise refrigerant control.

**Accumulator** - Protects compressor against liquid slugging.

**Coaxial Heat Exchanger** - Enhanced surface coaxial style (CuNi available).

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

**Coaxial Heat Exchangers** - Enhanced surface and heavy duty for efficiency and reliability (CuNi available).

**Heavy-Duty Cabinet** - Satin galvanized with powder coat finish. Acoustically insulated for quiet operation.

**Ease of Service** - Four removable side panels, electrical box swings out for unobstructed service.

**Loop or Well** - All sizes pre-wired for operation on a closed loop or a water well.



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### Performance Ratings

#### Standard Capacity Ratings for Closed Loop Air Heating (60Hz)

Rating Conditions	Model	Flow (GPM)	Mode	Heating Capacity (Btu/hr)	Input Energy (Watts)	COPh (Heating)	Cooling Capacity (Btu/hr)	Input Energy (Watts)	COPc (Cooling)	EER
Heating ELT 32°F (Stage 1 ELT 41°F) Cooling ELT 77°F (Stage 1 ELT 68°F)	45	10	Stage 1	20,800	1,438	4.24	25,800	1,088	6.95	23.7
			Stage 2	25,700	2,119	3.55	33,800	2,024	4.89	16.7
	55	12	Stage 1	27,500	1,947	4.14	34,400	1,404	7.18	24.5
			Stage 2	33,600	2,681	3.67	43,700	2,570	4.98	17.0
Heating ELT 32°F (Stage 1 ELT 41°F) Cooling ELT 77°F (Stage 1 ELT 68°F)	65	14	Stage 1	33,900	2,522	3.94	43,800	1,939	6.62	22.6
			Stage 2	41,500	3,342	3.64	55,400	3,317	4.89	16.7
	75	16	Stage 1	42,600	3,251	3.64	50,700	2,416	6.15	21.0
			Stage 2	50,200	4,143	3.55	63,900	4,233	4.43	15.1

#### Standard Capacity Ratings for Closed Loop Hydronic Heating (60Hz)

Closed Loop ELT 32°F (Stage 1 ELT 41°F)	45	10	Stage 1	17,900	1,720	3.05	
			Stage 2	24,000	2,303	3.05	
	55	12	Stage 1	26,000	2,498	3.05	
			Stage 2	32,700	3,140	3.05	
	65	14	Stage 1	32,200	3,094	3.05	
			Stage 2	40,200	3,867	3.05	
	75	16	Stage 1	38,800	3,610	3.15	
			Stage 2	46,300	4,450	3.05	