



# ENVISION™

Commercial 0.75 to 6 Ton  
Geothermal/Water Source Heat Pump



## ENVISION

For nearly 25 years, WaterFurnace has led the way in the design and manufacture of water-source heat pumps for use in geothermal closed loop applications. In 2003 WaterFurnace developed the first R410A water-source heat pump product line. Now the Envision Series has broken ground again by providing the first 30 EER and 5 COP (ISO 13256-1 GLHP) water-source heat pump on the market.

The Envision Series provides cutting edge technology in heating and cooling for commercial applications using the latest in component and design technology. Dual isolation mounted **Copeland K-5 Scroll™** or **LG rotary** compressors in single speed and **Copeland Scroll UltraTech™** in dual capacity versions are the heart of the system. Also included are oversized coaxial water-to-refrigerant heat exchangers and large faced, rifled tube air coils with high efficiencies at low face velocities. Envision units are capable of operating at extreme loop temperatures and have the options and flexibility for any application.

As a leader in the industry, WaterFurnace International is dedicated to innovation, quality and customer satisfaction. Our team of engineers, customer support and skilled assembly technicians are dedicated to providing the highest quality products with the most extensive support network in the industry. By specifying WaterFurnace 0.75-6 ton Envision Series products, you can rest assured your customers are investing in a product with superior quality and performance.



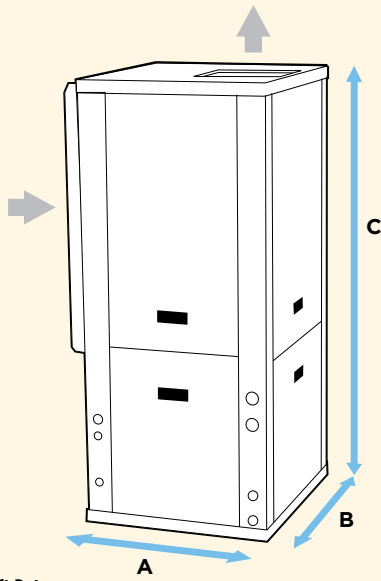
# WaterFurnace has raised the bar again. The Envision Series is the first water-source heat pump to reach 30 EER

(ISO/ARI 13256-1 GLHP)

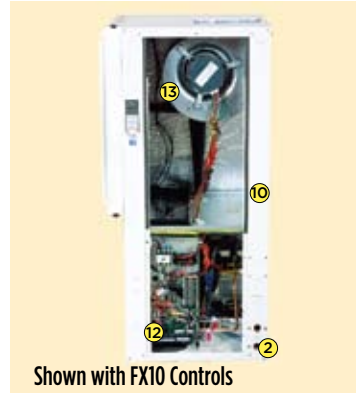
## KEY FEATURES

- ① **COMPRESSOR:** Copeland K-5 Scroll™ or LG rotary (single speed) and Copeland Scroll UltraTech™ (dual capacity) in commercial voltages mounted on a double isolation system.
  - ② **WATER LINES:** Copper FPT waterline connections, securely mounted flush to cabinet corner post.
  - ③ **COAXIAL HEAT EXCHANGER:** Oversized and convoluted with copper inner tube (optional cupronickel) and steel outer tube, designed for maximum heat transfer at normal and low water flow rates to minimize pressure drop.
  - ④ **AIR COIL:** Large face, rifled copper tubes and enhanced corrugated lanced aluminum fins to provide high efficiencies at low face velocities. Optional FormiShield™ coating for added protection against formicary corrosion.
  - ⑤ **FLOW REGULATOR:** Optional factory installed internal water flow regulator.
  - ⑥ **WATER VALVE:** Optional factory installed internal water solenoid valve.
  - ⑦ **SECONDARY LOOP CIRCULATING PUMP:** Optional factory installed fractional horse power pump for primary/secondary water loop applications.
  - ⑧ **FILTER RACK:** Redesigned filter rack includes 1" Pleated MERV 8 standard or an optional 2" MERV 11.
  - ⑨ **DESUPERHEATER:** Optional factory installed heat exchanger without internal water circulating pump.
  - ⑩ **CABINET:** Constructed of heavy gauge environmentally-responsible galvanized steel for maximum corrosion resistance. Vertical units are painted with a white powder coat finish. All interior surfaces are lined with ½" thick, foil lined acoustic type fiber insulation, applied in manner that prevents introduction of glass fibers into the air stream. Multiple knockouts in various sizes facilitate power and low voltage wiring. Multiple access panels for ease of service.
  - ⑪ **REFRIGERANT CIRCUIT:** Units utilize R-410A refrigerant in sealed circuits. Metering accomplished with a bi-flow thermostatic expansion valve to deliver optimum flow over a wide range of conditions without troublesome check valves. Four-way solenoid activated reversing valve faults to heating, and is "cool brazed" at the factory.
  - ⑫ **CONTROLS:** Premier2 microprocessor control is standard. Optional FX-10 microprocessor control, featuring N2, LonWorks, and BACnet compatibility.
  - ⑬ **FAN MOTOR:** Variable speed ECM fan motors provide high efficiency while allowing quiet operation and wide range of airflow selections. Optional high efficiency 3 & 4 speed PSC fan motor is also available (single speed units only).
- OTHER OPTIONS:**
- Extended range coaxial heat exchanger and piping insulation
  - FormiShield™ coated air coil (Minimum 1,000 hours salt spray protection — 2,000 hours on aluminum fins).
  - High static blower
  - 2" MERV11 air filter
  - Hot Gas Bypass (015-072)
  - Hot Gas Reheat (022-072)

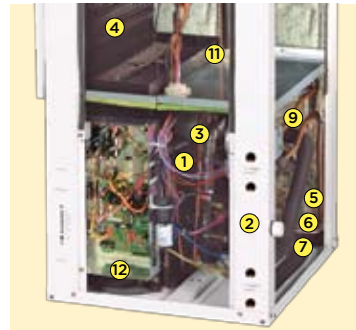
## ENVISION VERTICAL 0.75 to 6 Ton



Left Return



Shown with FX10 Controls

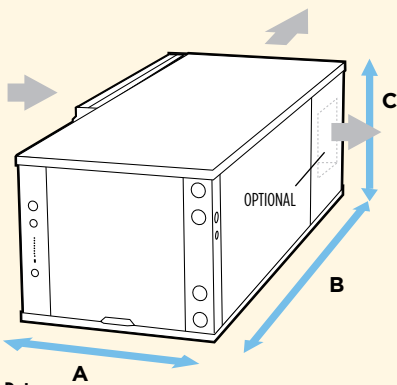


Shown with Premier2 Controls

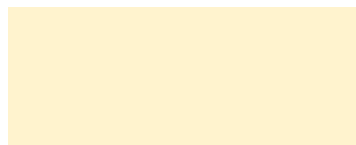


Model	A	B	C
009 - 012	22.2"	22.5"	34.5"
015 - 018	22.5"	26.5"	39.5"
022 - 030	22.5"	26.2"	52"
All others	25.5"	31.2"	58.4"

## ENVISION HORIZONTAL 0.75 to 6 Ton



Left Return



Model	A	B	C
009-012	22.5"	44"	17.3"
015-018	22.5"	53"	19.3"
022, 026, 030	22.5"	63"	21.3"
036, 038	25.5"	72"	21.3"
042, 048, 049	25.5"	77"	21.3"
060, 064, 070, 072	25.5"	82"	21.3"



# Envision Commercial Series ARI Data

ARI/ASHRAE/ISO 13256-1 English (IP) Units

Model	Capacity Modulation	Flow Rate		Water Loop Heat Pump				Ground Water Heat Pump				Ground Loop Heat Pump				
				Cooling EWT 86°F		Heating EWT 68°F		Cooling EWT 59°F		Heating EWT 50°F		Cooling Brine Full Load 77°F Part Load 68°F		Heating Brine Full Load 32°F Part Load 41°F		
		gpm	cfm	Capacity Btuh	EER Btuh/W	Capacity Btuh	COP	Capacity Btuh	EER Btuh/W	Capacity Btuh	COP	Capacity Btuh	EER Btuh/W	Capacity Btuh	COP	
PSC Motor	009	Single	3.0	350	9,600	14.5	13,200	5.2	10,800	22.2	10,600	4.4	9,800	16.7	7,800	3.4
	012	Single	3.5	400	12,300	15.7	14,800	5.1	14,500	25.5	12,300	4.5	13,000	18.0	9,600	3.7
	015	Single	4.0	500	14,400	15.9	18,500	5.3	16,700	26.0	15,500	4.5	15,000	18.0	12,000	3.8
	018	Single	5.0	600	18,000	15.6	23,000	5.1	21,000	25.5	19,000	4.4	18,500	18.0	14,700	3.8
	022	Single	8.0	850	20,600	17.2	25,000	6.0	23,000	28.0	19,800	5.0	21,200	20.3	15,000	3.8
	030	Single	8.0	900	28,100	18.2	32,700	5.5	30,900	27.1	25,800	4.8	29,200	21.1	19,800	3.8
	036	Single	9.0	1200	34,100	17.6	37,900	5.6	36,300	25.7	30,300	4.7	34,600	19.6	24,100	4.0
	042	Single	11.0	1300	40,100	16.6	44,100	5.3	44,600	24.5	34,900	4.6	41,600	18.6	27,500	3.7
	048	Single	12.0	1500	46,400	15.5	55,400	5.0	51,600	22.5	45,100	4.3	48,900	17.3	35,300	3.6
	060	Single	15.0	1800	64,000	16.0	69,800	5.1	71,700	24.6	55,100	4.4	66,800	18.5	43,200	3.7
070	Single	18.0	2000	70,600	15.1	84,300	4.7	77,500	21.6	66,100	4.0	73,200	17.2	52,000	3.4	
ECM	026	Full	8.0	950	26,000	16.0	31,000	5.5	29,000	24.0	25,300	5.0	27,200	18.6	19,500	4.2
		Part	7.0	750	19,500	18.6	22,600	6.3	22,000	31.2	18,100	5.4	21,500	26.8	16,200	4.7
	038	Full	9.0	1200	39,000	17.2	42,200	5.5	39,400	24.1	34,800	5.0	40,200	20.1	27,000	4.2
		Part	8.0	1000	28,000	20.1	30,300	6.5	30,500	32.1	24,800	5.4	30,100	30.0	22,300	5.1
	049	Full	12.0	1500	48,300	15.8	57,400	5.1	53,200	22.7	47,200	4.7	50,000	18.0	37,400	4.1
		Part	11.0	1300	35,900	18.1	41,900	6.1	37,800	28.3	34,000	5.2	38,700	25.1	31,000	4.7
	064	Full	16.0	1800	64,500	16.2	72,500	5.1	70,700	22.7	56,800	4.6	67,600	18.0	45,800	3.9
		Part	14.0	1500	47,000	18.2	51,500	5.8	51,500	29.3	39,600	4.8	51,100	25.6	36,000	4.2
	072	Full	18.0	2000	71,000	15.0	86,700	5.0	79,900	20.4	67,900	4.4	73,600	16.8	54,100	3.8
		Part	16.0	1500	54,000	16.6	63,400	5.4	62,200	26.0	51,000	4.6	58,800	23.1	45,000	4.3
	015	Single	4.0	500	14,400	16.5	18,500	5.3	16,700	27.0	15,500	4.7	15,000	18.8	12,000	4.0
	018	Single	5.0	600	18,000	16.5	23,000	5.3	21,000	26.8	19,000	4.7	18,500	19.0	14,700	4.1
	022	Single	8.0	850	20,700	17.5	25,300	6.2	23,500	30.0	19,800	5.3	21,700	21.0	15,000	4.0
	030	Single	8.0	900	28,300	19.2	32,700	5.8	31,300	28.8	25,800	5.0	29,400	21.9	20,000	4.0
	036	Single	9.0	1200	34,500	19.6	38,000	6.1	37,200	30.1	30,300	5.2	35,000	22.0	24,100	4.4
	042	Single	11.0	1300	40,600	19.2	44,100	5.9	45,200	29.5	34,900	5.2	42,000	21.4	27,500	4.2
	048	Single	12.0	1500	47,000	17.5	55,400	5.5	52,000	26.1	45,100	4.8	49,300	19.7	35,300	4.0
060	Single	15.0	1800	64,300	17.2	69,800	5.4	72,000	26.1	55,100	4.7	66,800	19.5	43,200	3.9	
070	Single	18.0	2000	70,600	16.0	84,300	5.1	79,100	23.8	66,100	4.4	73,200	18.2	52,000	3.7	

Cooling capacities based upon 80.6°F DB, 66.2°F WB entering air temperature

Heating capacities based upon 68°F DB, 59°F WB entering air temperature

All ratings based upon 208V operation

1/15/08



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