



ENVISION™
7, 8 & 10 Ton, R-410A



ENVISION

WaterFurnace Envision 7-10 ton units are an exceptional choice for large zones in commercial and institutional applications. These units are available in both an EL group for water source heat pump applications, and an EX group for extended range geothermal applications. Available in 3 sizes in both horizontal and vertical, Envision units provide the user with high efficiency, excellent performance, flexibility and reliability.

Envision 7-10 ton units utilize R-410A refrigerant. A standard FX10 control is included for flexible integration into facilities with building automation systems. Vertical units can be ordered in left or right-hand return air, top or side discharge. Horizontal units are available with left or right-hand return, side or end discharge. Heavy gauge metal cabinets add durability to the system. Vertical units are painted with a long lasting poly paint. Horizontal units are unpainted. Envision units are performance-certified to ARI ISO 13256-1 and are ETL listed.

High efficiency, coupled with additional upgrades make the Envision product line different from the company's Versatec products. These upgrades include: adjustable motor mount design, new access panel design, handles in access doors, filter rack doors, MERV 11 filter options, plastic drain pans (ASHRAE 62 compliant), flush mounted water lines, and field convertibility of vertical units for either top or side discharge.

By choosing or specifying WaterFurnace Envision products, you can be assured that the investment will provide an exceptional combination of performance, versatility, reliability and control.

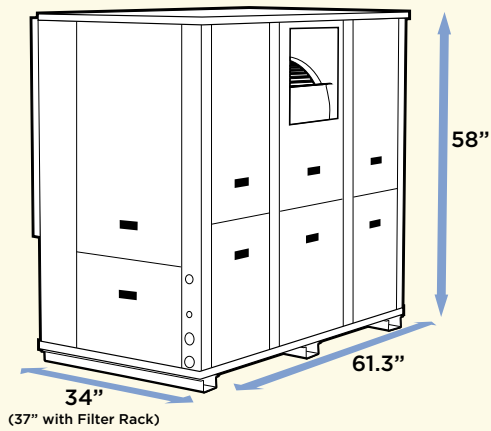
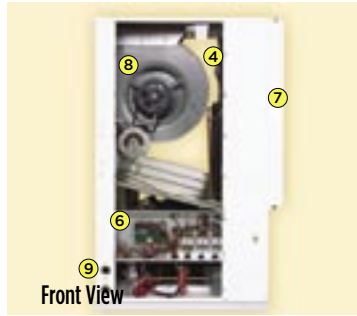
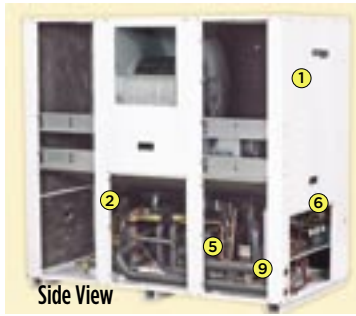


Continuing our long history of innovation, efficiency, quality and reliability for commercial products

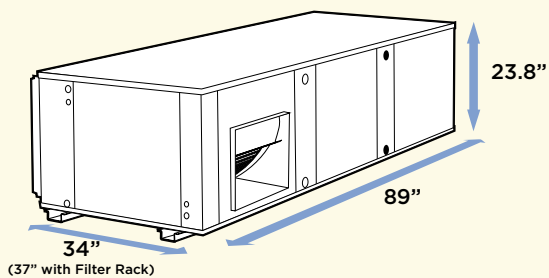
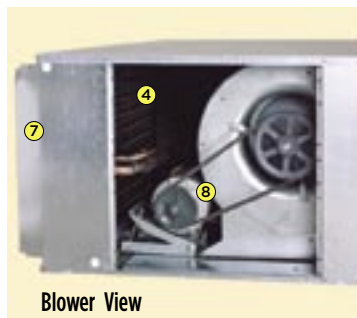
KEY FEATURES

- 1 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 1/2" thick, dual density acoustic type fiber insulation, applied in a manner that prevents the 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.
 - 2 Scroll Compressors**— Includes two high efficiency Copeland Scroll compressors designed for heat pump operation. Dual level vibration system and internal overload protection.
 - 3 Coaxial Heat Exchangers**— Dual oversized convoluted heat exchangers 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 and enhance freeze protection.
 - 4 Air Coil**— Large face, rifled copper tubes and enhanced corrugated lanced aluminum fins to provide high efficiencies at low face velocities. FormiShield™ with low cure cathodic epoxy material, providing a minimum of 1,000 hours salt spray protection (2,000 hours on aluminum fins). Three rows deep (four rows deep on vertical 10 ton).
 - 5 Refrigerant Circuit**— Envision units utilize R-410A refrigerant in two sealed circuits. Metering accomplished with thermostatic expansion valve to deliver optimum refrigerant 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.
 - 6 Controls**— Johnson Controls FX10 board provides operational control and monitoring of all functions. Includes input ports for communication protocols including Open N2, LonWorks and BacNet. Optional user interface, if selected, is factory-mounted on front of unit. Monitors high pressure, low pressure, condensate overflow, freeze protection and more. Anti-short cycle, random start, low voltage protection, automatic intelligent reset, remote fault indication, emergency shutdown, compressor lead/lag, accessible alarm history and accessory relay.
 - 7 Filter Rack**— Units include a factory-installed 2" wide filter bracket. Filter removal can be done from either side. Optional MERV-11 filters available.
 - 8 Blower Motor**— Fan is belt driven, double width, double inlet forward curved with dynamically balanced wheel. Motors are permanently lubricated with thermal overload protection. Drive includes fixed pitch blower sheave and variable pitch motor sheave sized for 115% of fan brake horsepower.
 - 9 Piping**— Supply and return water connections are copper 1 1/4" NPT fittings, securely mounted flush to the cabinet corner post. All internal piping including coaxial heat exchanger is insulated to prevent condensation during operation with low entering water temperatures. Low temperature soldered to prevent misshaping or weakening.
- Additional Features**— All units are computer-run tested with water upon final assembly. Horizontal units include base rails and hanger brackets with rubber isolation grommets. Drain pan constructed of corrosion and mold resistant plastic, sloped in four directions to facilitate condensate removal.

ENVISION VERTICAL 7 to 10 Ton



ENVISION HORIZONTAL 7 to 10 Ton



Model	Liquid Flow (gpm)	Air Flow (cfm)	Water Loop Heat Pump				Ground Water Heat Pump				Ground Loop Heat Pump			
			Cooling 86°F		Heating 68°F		Cooling 59°F		Heating 50°F		Cooling 77°F		Heating 32°F	
			Capacity Btuh	EER Btuh/W	Capacity Btuh	COP	Capacity Btuh	EER Btuh/W	Capacity Btuh	COP	Capacity Btuh	EER Btuh/W	Capacity Btuh	COP
NLV080	22.0	2600	83,000	18.1	91,000	5.5	91,000	26.4	76,000	4.8	85,000	20.7	57,700	3.9
NLV095	24.0	2800	99,000	18.8	108,000	5.6	110,000	27.8	88,500	4.9	100,000	20.8	68,500	4.0
NLV120	28.0	3600	120,000	16.9	145,500	5.5	143,000	26.0	116,000	4.8	126,000	19.0	87,500	3.8
NLH080	22.0	2600	78,000	17.1	83,000	5.1	87,000	24.7	70,500	4.5	80,500	18.8	54,000	3.7
NLH095	24.0	3200	94,600	17.2	98,000	5.1	103,900	25.0	84,000	4.5	96,000	19.0	64,500	3.7
NLH120	28.0	3600	123,000	16.0	151,000	5.0	138,000	23.5	120,000	4.4	125,500	18.3	90,000	3.6

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 May-06
 All ratings based upon operation at lower voltage of dual voltage rated models

ARI/ASHRAE/ISO 13256-1 Metric (SI) Units

Model	Liquid Flow (l/s)	Air Flow (l/s)	Water Loop Heat Pump				Ground Water Heat Pump				Ground Loop Heat Pump			
			Cooling 30°C		Heating 20°C		Cooling 15°C		Heating 10°C		Cooling 25°C		Heating 0°C	
			Capacity Watts	EER (W/W)	Capacity Watts	COP	Capacity Watts	EER (W/W)	Capacity Watts	COP	Capacity Watts	EER (W/W)	Capacity Watts	COP
NLV080	1.39	1227	24,326	5.3	26,671	5.5	26,671	7.7	22,274	4.8	24,912	6.1	16,911	3.9
NLV095	1.51	1321	29,015	5.5	31,653	5.6	32,239	8.1	25,938	4.9	29,308	6.1	20,076	4.0
NLV120	1.77	1699	35,170	5.0	42,644	5.5	41,911	7.6	33,998	4.8	36,929	5.6	25,645	3.8
NLH080	1.39	1227	22,861	5.0	24,326	5.1	25,498	7.2	20,662	4.5	23,593	5.5	15,827	3.7
NLH095	1.51	1510	27,726	5.0	28,722	5.1	30,451	7.3	24,619	4.5	28,136	5.6	18,904	3.7
NLH120	1.77	1699	36,049	4.7	44,256	5.0	40,446	6.9	35,170	4.4	36,782	5.4	26,378	3.6

Cooling capacities based upon 27°C DB, 19°C WB entering air temperature • Heating capacities based upon 20°C DB, 15°C WB entering air temperature May-06
 All ratings based upon operation at lower voltage of dual voltage rated models
 cfm*0.4719 = l/s gpm*0.0631 = l/s in wg*249 = pascals ft of hd*2990 = pascals

Physical Characteristics

Model	Vertical			Horizontal		
	080	095	120	080	095	120
Compressor (2 each)	SCROLL			SCROLL		
Factory Charge R410A, oz [kg]	80 [2.26]	92 [2.60]	114 [3.23]	72 [2.04]	82 [2.32]	114 [3.23]
PSC Fan Motor & Blower						
Fan Motor- hp [W]	1.0 [746]	1.5 [1120]	2.0 [1492]	1.5 [1120]	2.0 [1492]	3.0 [2238]
Blower Wheel Size (Dia x W), in. [mm]	15 x 11 [381 x 280]	15 x 11 [381 x 280]	15 x 11 [381 x 280]	12 x 12 [305 x 305]	12 x 12 [305 x 305]	12 x 12 [305 x 305]
Coax and Water Piping						
Water Connections Size - FPT - in [mm]	1 1/4 [31.75]	1 1/4 [31.75]	1 1/4 [31.75]	1 1/4 [31.75]	1 1/4 [31.75]	1 1/4 [31.75]
Coax & Piping Water Volume - gal [l]	2.87 [10.85]	3.20 [12.13]	3.46 [13.11]	3.40 [12.91]	3.75 [14.19]	4.00 [15.16]
Air Coil & Filters						
Air Coil Dimensions (H x W), in. [mm]	28 x 25 [711 x 635]	32 x 25 [813 x 635]	36 x 25 [915 x 635]	20 x 35 [508 x 889]	20 x 40 [508 x 1016]	20 x 40 [508 x 1016]
Air Coil Total Face Area, ft ² [m ²]	9.72 [0.90]	11.10 [1.03]	12.50 [1.16]	9.74 [0.91]	11.11 [1.03]	11.11 [1.03]
Air Coil Tube Size, in [mm]	3/8 [9.52]	3/8 [9.52]	3/8 [9.52]	3/8 [9.52]	3/8 [9.52]	3/8 [9.52]
Air Coil Number of rows	3	3	4	3	3	3
Filter Standard - 2" [50.8], in [mm]	28 x 36 (2) [711 x 914]	28 x 36 (2) [711 x 914]	28 x 36 (2) [711 x 914]	20 x 20 (3) [508 x 508] 20 x 25 (1) [508 x 635]	20 x 20 (3) [508 x 508] 20 x 25 (1) [508 x 635]	20 x 20 (3) [508 x 508] 20 x 25 (1) [508 x 635]
Weight						
Weight - Operating, lb [kg]	644 [292]	762 [346]	849 [385]	700 [318]	796 [361]	843 [382]
Weight - Packaged, lb [kg]	620 [281]	735 [333]	820 [372]	690 [313]	785 [356]	830 [376]

May-06

