



ENVISION™

NXW Series 8 to 50 Tons

Commercial Reversible Chiller - 60 Hz



ENVISION REVERSIBLE CHILLER

Water-to-water heat pumps are an excellent choice to provide water heating and cooling for a wide range of applications. Whether the product is used for pools, commercial aquariums, radiant floor heating, ice melt, chilled water applications, industrial process water, or to provide precisely heated or cooled water for fan coils or other applications, Envision Series products are designed to perform to the highest standards in the industry.

With a large range of capacities in a compact sized cabinet, these units will fit through most doors for easy installation. High efficiencies are obtained using scroll compressors — two are used in the dual circuited unit. Units are controlled using the Johnson Controls FX10 microprocessor which sequences all components and functions to achieve maximum performance, and enables easy connection to a Building Automation System with N2 Open, BACnet, or LonWorks protocols. The unit's brazed plate heat exchangers are constructed with 316 stainless steel for long life. Environmentally responsible R-410A refrigerant is used.

As an industry leader, WaterFurnace is dedicated to innovation, quality, and customer satisfaction. The team of WaterFurnace engineers, customer support staff, and skilled assembly technicians is dedicated to providing the finest systems available. By choosing or specifying WaterFurnace Envision Series products, you can be assured that your customer is investing in a product that provides an exceptional combination of performance, versatility, reliability, and control.



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KEY FEATURES

Flexibility

- Designed to operate with entering source temperatures (EST) of 20° to 90°F in heating and 30° to 120°F in cooling. Entering load temperatures (ELT) can range from 60° to 120°F in heating, and from 30° to 110°F in cooling.
- Hot and chilled water from the same machine
- Modularized design for optimum capacity matching and staging
- Compact size allows passage through most doors
- Fast response lessens system changeover time on two-pipe fan-coil systems
- Replacement for low efficiency water-cooled chillers
- Replacement for electric boilers
- Used for tempering of outside air, process heating and cooling operations

Control

- All unit functions controlled by FX10 microprocessor
- Optional communications with BacNet, LonWorks, or N2 Open Building Automation Systems
- User interface to aid in unit setup and diagnostics
- For more information, refer to the Submittal Data, Specification Catalog, or Installation Manual

Efficiency

- High cooling EERs
- High heating COPs

Quality

- 316 stainless steel plate with cupronickel brazed heat exchangers
- Long-life hermetic scroll compressors
- Bidirectional thermostatic expansion valves
- Heavy duty liquid fittings accept Victaulic couplings
- Environmentally friendly R-410A
- Compressor control module
- Liquid line filter-dryers
- 24 VAC-75 VA controls transformer with circuit breaker
- Structural steel frame with optional acoustic cabinet
- Phase Guard

Options

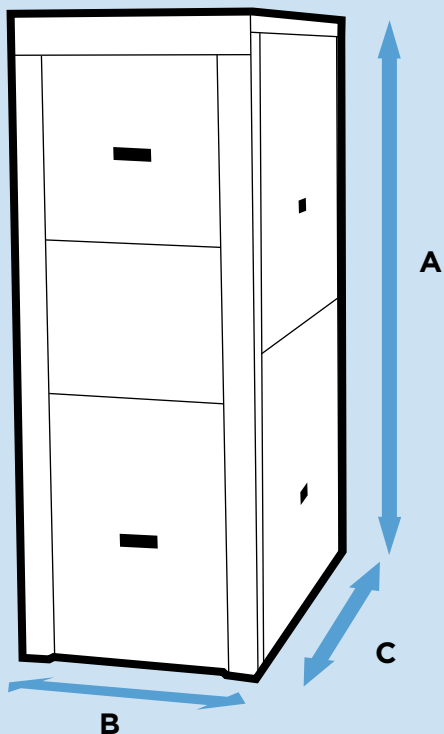
- Voltages 208-230/60/3 (8-30 ton only), 460/60/3, 575/60/3
- Sound attenuation enclosure package
- Communication cards for N2 Open, Lonworks or BacNet

Accessories (field installed)

- Connection Kit: Victaulic to 2" FPT
- Connection Kit: Victaulic to bolted flange
- Optional heavy duty isolation springs

ENVISION REVERSIBLE CHILLER 8-50 Tons

- ① User interface (mounted on control box in units without enclosures)
- ② Environmentally friendly R-410A
- ③ Extended range operation for entering source fluid (20-120° F) [-1.1 - 32.2° C]
- ④ 316 stainless steel brazed plate heat exchangers (insulated)
- ⑤ Optional noise reducing heavy gauge sheet metal enclosure (insulated)
- ⑥ 2" (50.8 mm) Victaulic coupling water connections
- ⑦ Expansion valve
- ⑧ Reversible: heating and cooling
- ⑨ Short changeover time for 2-pipe fan coil applications
- ⑩ Narrow width for passage through doorways
- ⑪ Protected wiring
- ⑫ Long life scroll compressor
- ⑬ Optional BACnet, Open N2, and LON communications
- ⑭ Control box with FX10 controller
- ⑮ Lifting points
- ⑯ Fork truck accessible frame
- ⑰ Durometer rated vibration isolators (heavy duty spring vibration isolators optional accessory)



DIMENSIONAL DATA

Model	A	B	C
NXW096-240 w/o Enclosure	51.0 [1295]	22.5 [572]	38.0 [965]
NXW360 w/o Enclosure	63.17 [1605]	22.50 [572]	50.00 [1270]
NXW540 w/o Enclosure	70.00 [1778]	22.50 [572]	52.00 [1321]
NXW096-240 w/ Enclosure	53.0 [1347]	22.4 [568]	38.0 [965]
NXW360 w/ Enclosure	64.16 [1630]	23.92 [608]	50.00 [1270]
NXW540 w/ Enclosure	71.00 [1803]	23.90 [607]	52.35 [1330]

Dimensions: inches [mm]. Water connections: 2" Victaulic

ARI/ASHRAE/ISO 13256-2 Water to Water Ratings - 60 Hz

English (IP) Units

Model	Capacity Modulation	Flow Rate		Water Loop Heat Pump				Ground Water Heat Pump				Ground Loop Heat Pump			
				Cooling EST 86°F ELT 53.6°F		Heating EST 68°F ELT 104°F		Cooling EST 59°F ELT 53.6°F		Heating EST 50°F ELT 104°F		Cooling Full EST 77°F Part EST 68°F ELT 53.6°F		Heating Full EST 32°F Part ELT 41°F ELT 104°F	
		Sgpm	Lgpm	Capacity Btuh	EER Btuh/W	Capacity Btuh	COP	Capacity Btuh	EER Btuh/W	Capacity Btuh	COP	Capacity Btuh	EER Btuh/W	Capacity Btuh	COP
096	Full	23	23	95,000	14.8	127,000	4.1	108,000	23.0	106,000	3.4	102,000	17.2	84,000	3.1
	Part	23	23	52,000	16.3	68,000	4.7	59,000	25.5	56,000	3.8	57,000	22.5	49,000	3.5
108	Full	28	28	105,000	14.2	145,000	4.0	125,000	22.0	120,000	3.3	116,000	16.5	95,000	3.0
	Part	28	28	60,000	15.8	78,000	4.5	67,000	24.0	64,000	3.8	65,000	21.5	56,000	3.4
120	Full	32	32	128,000	13.8	175,000	3.8	151,000	21.0	145,000	3.2	139,000	16.0	115,000	2.8
	Part	32	32	72,000	15.4	94,000	4.3	79,000	22.5	78,000	3.7	78,000	20.5	68,000	3.1
140	Full	36	36	143,000	14.5	193,000	4.2	166,000	22.5	160,000	3.8	155,000	17.0	127,000	3.1
	Part	36	36	79,000	15.5	103,000	4.7	89,000	23.4	83,000	4.2	87,000	21.0	75,000	3.5
180	Full	45	45	170,000	14.0	209,000	3.9	183,000	20.0	189,000	3.5	177,000	15.8	153,000	2.8
	Part	45	45	89,000	15.0	110,000	4.2	100,000	19.8	98,000	3.8	98,000	18.8	89,000	3.1
210	Full	52	52	202,000	14.8	257,000	4.2	227,000	21.8	219,000	3.8	212,000	17.0	173,000	3.1
	Part	52	52	107,000	15.5	136,000	4.7	122,000	23.8	116,000	4.2	120,000	20.8	91,000	3.4
240	Full	60	60	222,000	13.3	286,000	3.9	257,000	20.0	244,000	3.5	242,000	15.5	193,000	2.8
	Part	60	60	117,000	13.9	150,000	4.3	137,000	21.0	123,000	3.8	132,000	18.7	102,000	3.0
360	Full	86	86	335,000	14.3	452,600	4.3	na	na	na	na	351,000	16.2	296,500	3.2
	Part	86	86	175,000	15.1	237,600	4.6	na	na	na	na	191,500	19.6	170,000	3.5
540	Full	135	135	533,400	14.5	691,200	4.3	na	na	na	na	558,500	16.4	485,800	3.3
	Part	135	135	277,300	15.2	359,400	4.5	na	na	na	na	302,800	19.5	282,600	3.7

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Metric (SI) Units

Model	Capacity Modulation	Flow Rate		Water Loop Heat Pump				Ground Water Heat Pump				Ground Loop Heat Pump			
				Cooling EST 30°C ELT 12°C		Heating EST 5°C ELT 40°C		Cooling EST 15°C ELT 12°C		Heating EST 10°C ELT 40°C		Cooling Full EST 25°C Part EST 20°C ELT 12°C		Heating Full EST 0°C Part ELT 5°C ELT 40°C	
		Source L/S	Load L/S	Capacity Watts	EER (W/W)	Capacity Watts	COP	Capacity Watts	EER (W/W)	Capacity Watts	COP	Capacity Watts	EER (W/W)	Capacity Watts	COP
096	Full	1.5	1.5	27,843	4.3	37,222	4.1	31,653	6.7	31,067	3.4	29,894	5.0	24,619	3.1
	Part	1.5	1.5	15,240	4.8	19,930	4.7	17,292	7.5	16,413	3.8	16,706	6.6	14,361	3.5
108	Full	1.8	1.8	30,774	4.2	42,497	4.0	36,635	6.4	35,170	3.3	33,998	4.8	27,843	3.0
	Part	1.8	1.8	17,585	4.6	22,860	4.5	19,637	7.0	18,757	3.8	19,050	6.3	16,413	3.4
120	Full	2.0	2.0	37,515	4.0	51,290	3.8	44,256	6.2	42,497	3.2	40,739	4.7	33,705	2.8
	Part	2.0	2.0	21,102	4.5	27,550	4.3	23,154	6.6	22,860	3.7	22,860	6.0	19,930	3.1
140	Full	2.3	2.3	41,911	4.2	56,565	4.2	48,652	6.6	46,893	3.8	45,428	5.0	37,222	3.1
	Part	2.3	2.3	23,154	4.5	30,188	4.7	26,084	6.9	24,326	4.2	25,498	6.2	21,981	3.5
180	Full	2.8	2.8	49,824	4.1	61,254	3.9	53,634	5.9	55,393	3.5	51,876	4.6	44,842	2.8
	Part	2.8	2.8	26,084	4.4	32,239	4.2	29,308	5.8	28,722	3.8	28,722	5.5	26,084	3.1
210	Full	3.3	3.3	59,203	4.3	75,322	4.2	66,530	6.4	64,185	3.8	62,134	5.0	50,703	3.1
	Part	3.3	3.3	31,360	4.5	39,859	4.7	35,756	7.0	33,998	4.2	35,170	6.1	26,671	3.4
240	Full	3.8	3.8	65,064	3.9	83,822	3.9	75,322	5.9	71,512	3.5	70,926	4.5	56,565	2.8
	Part	3.8	3.8	34,291	4.1	43,962	4.3	40,152	6.2	36,049	3.8	38,687	5.5	29,894	3.0
360	Full	5.4	5.4	98,183	4.2	132,649	4.3	na	na	na	na	102,872	4.7	86,899	3.2
	Part	5.4	5.4	51,290	4.4	69,637	4.6	na	na	na	na	56,125	5.7	49,824	3.5
540	Full	8.5	8.5	156,331	4.2	202,579	4.3	na	na	na	na	163,687	4.8	142,380	3.3
	Part	8.5	8.5	81,272	4.5	105,334	4.5	na	na	na	na	88,746	5.7	82,825	3.7

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