



WaterFurnace International
9000 Conservation Way
Fort Wayne, IN 46809

Residential
ENVISION™
Geothermal/Water Source Heat Pump
R-410A Refrigerant
2, 2.5, 3, 3.5, 4, 5, 6 Ton Single Speed
2, 3, 4, 5, 6 Ton Dual Capacity
208-230/60/1

Submittal Data SD1592

Type: Split

Size: Single Speed - 022, 030,
036, 042, 048, 060, 070

Dual Capacity - 026, 038, 049,
064, 072

Purchaser's approval of this drawing signifies that the equipment is acceptable under the provisions of the job specifications.

Contractor: _____
P.O. : _____
Engineer: _____
Project Name: _____
Unit Tag: _____

General Specifications

Extended Range Operation – Designed to operate with entering water temperatures between 20° F [-6.7 ° C] and 120 ° F [48.9 ° C].

Cabinet – Fabricated from heavy-gauge galvanized steel and finished with corrosion-resistant powder coating which meets ASTM B117 (1,000 hour salt spray). Multiple access panels. Hinged and removeable front access panel and control box.

Insulation – The interior shall be insulated with ½" thick, multi-density, cleanable aluminum foil coated glass fiber which meets NFPA 90A requirements, air erosion and mold growth limits of UL-181, stringent fungal resistance test per ASTM-C1071 and ASTM G21, and zero level bacteria growth per ASTM G22.

Refrigerant Circuit – Sealed and fully insulated to prevent condensation. Includes compressor, bidirectional TXV, reversing valve, coaxial water-to-refrigerant heat exchanger, optional desuperheater coil, high and low side access valves and safety controls.

Compressor – High efficiency dual capacity or single speed scroll PSC with overload protection, double isolation mounted on vibration isolators and acoustically deadening steel bracket.

Refrigerant – R-410A

Coaxial Heat Exchanger – Fully insulated convoluted copper (optional cupronickel) inner tube and steel outer tube.

Electrical – Microprocessor control with ComfortAlert compressor sensing module. High and low pressure, low temperature safety switches, fan relay, compressor relay, 24 volt 75VA transformer, reversing valve coil, lockout circuit, control circuit board, 24 VAC control system.

Control – Field mounted 24VAC digital thermostat.

Physical Characteristics

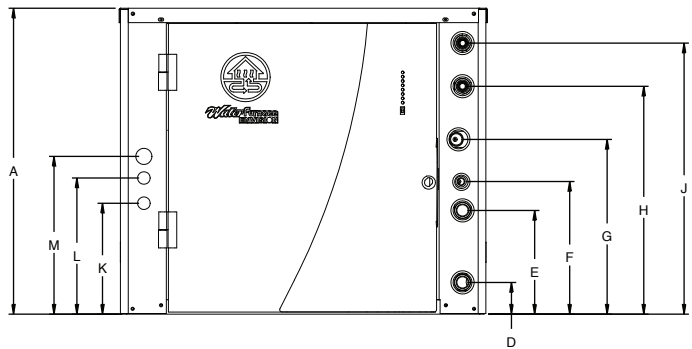
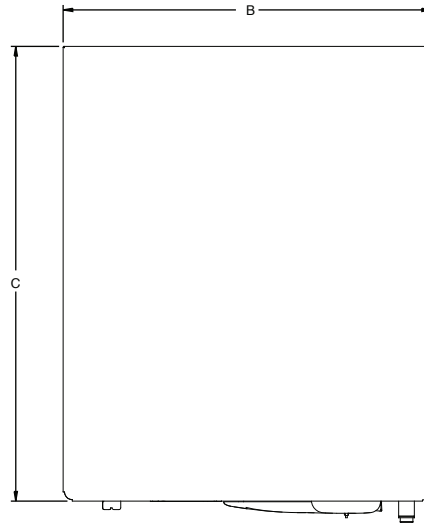
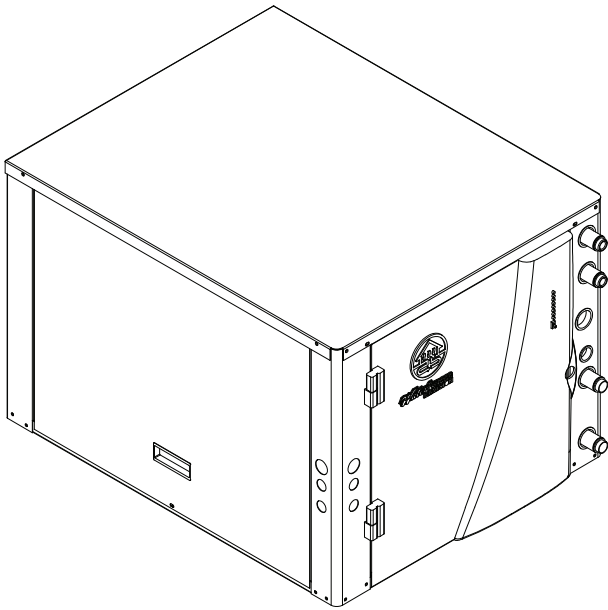
Model	022	030	036	042	048	060	070	026	038	049	064	072
Compressor (1 each)	Single Speed Scroll							Dual Capacity Scroll				
Factory Charge R410a, oz [kg]	56 [1.59]	56 [1.59]	56 [1.59]	74 [2.1]	90 [2.55]	92 [2.61]	108 [3.06]	52 [1.47]	56 [1.59]	90 [2.55]	92 [2.61]	104 [2.95]
Coax and Water Piping												
Water Connections Size - Swivel- in [mm]	1 [25.4]							1 [25.4]				
HWG Connection Size - Swivel - in [mm]	1 [25.4]							1 [25.4]				
Coax & Piping Water Volume - gal [l]	0.7 [2.6]	1.0 [3.8]	1.3 [4.9]	1.3 [4.9]	1.6 [6.1]	1.6 [6.1]	2.3 [8.7]	0.7 [2.6]	1.3 [4.9]	1.6 [6.1]	1.6 [6.1]	2.3 [8.7]
Weight - Operating, lb [kg]	164 [74]	174 [79]	212 [96]	213 [97]	246 [112]	251 [114]	292 [132]	189 [186]	236 [107]	250 [113]	271 [123]	290 [132]
Weight - Packaged, lb [kg]	184 [83]	194 [88]	232 [105]	233 [106]	266 [121]	271 [123]	312 [142]	209 [95]	256 [116]	270 [122]	291 [132]	310 [141]

Notes:

All units have TXV expansion devices, and 1/2" [12.2mm] & 3/4" [19.1mm] electrical knockouts.

Rev.:6/7/07

Physical Dimensions



ENVISION - NZ SPLIT DIMENSIONAL DATA

NZ 022-030		NZ 036-072		DESCRIPTION
DIMENSION	VALUE	DIMENSION	VALUE	
A	19.25	A	21.25	UNIT HEIGHT
B	22.50	B	25.50	UNIT WIDTH
C	26.50	C	31.50	UNIT DEPTH
D	1.93	D	2.21	WATER IN
E	6.93	E	7.21	WATER OUT
F	8.44	F	9.21	BRASS SERVICE VALVE (LIQUID)
G	11.55	G	12.14	BRASS SERVICE VALVE (GAS)
H	13.43	H	15.83	DESUPERHEATER IN
J	16.43	J	18.83	DESUPERHEATER OUT
K	8.55	K	7.71	LOW VOLTAGE
L	10.30	L	9.46	EXTERNAL PUMP
M	11.80	M	10.96	LINE VOLTAGE

Pressure Drop

Single Speed

Model	GPM	Pressure Drop (psi)				
		30°F	50°F	70°F	90°F	110°F
022	3	0.9	0.9	0.8	0.7	0.7
	4.5	1.7	1.6	1.5	1.4	1.3
	6	2.8	2.7	2.5	2.3	2.2
	8	4.7	4.4	4.1	3.9	3.6
030	4	1.5	1.4	1.3	1.2	1.1
	6	3.0	2.8	2.7	2.5	2.3
	8	5.1	4.8	4.5	4.2	3.9
036	5	1.0	1.0	0.9	0.8	0.8
	7	2.1	1.9	1.8	1.7	1.6
	9	3.6	3.3	3.0	2.8	2.6
042	12	6.3	5.9	5.5	5.1	4.8
	5	0.8	0.7	0.7	0.7	0.6
	8	2.1	2.1	1.9	1.8	1.7
048	11	4.2	4.1	3.8	3.5	3.3
	14	7.6	6.7	6.3	5.8	5.4
	6	1.1	1.0	1.0	0.9	0.8
060	9	2.4	2.2	2.1	2.0	1.8
	12	3.9	3.6	3.4	3.2	2.9
	15	5.7	5.3	5.0	4.7	4.3
070	20	9.5	8.9	8.3	7.8	7.2
	12	3.0	2.8	2.6	2.4	2.2
	15	4.4	4.0	3.8	3.5	3.3
070	18	6.0	5.5	5.1	4.8	4.4
	24	9.7	9.1	8.5	7.9	7.3

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Dual Capacity

Model	GPM	Pressure Drop (psi)				
		30°F	50°F	70°F	90°F	110°F
026 full load	4	1.4	1.3	1.2	1.1	1.0
	6	2.8	2.6	2.4	2.3	2.1
	8	4.7	4.4	4.1	3.8	3.5
	10	7.0	6.6	6.2	5.8	5.3
026 part load	3	0.8	0.7	0.7	0.7	0.6
	5	2.0	1.8	1.7	1.6	1.5
	7	3.6	3.4	3.2	3.0	2.8
038 full load	9	5.8	5.5	5.1	4.8	4.4
	5	1.2	1.2	1.1	1.0	1.0
	7	2.2	2.1	1.9	1.8	1.7
038 part load	9	3.4	3.2	3.0	2.8	2.6
	11	4.9	4.6	4.3	4.0	3.7
	4	0.9	0.8	0.8	0.7	0.7
038 part load	6	1.7	1.6	1.5	1.4	1.3
	8	2.8	2.6	2.5	2.3	2.1
	10	4.2	3.9	3.7	3.4	3.2
049 full load	6	1.2	1.2	1.1	1.0	1.0
	9	2.4	2.2	2.1	2.0	1.8
	12	3.9	3.6	3.4	3.2	2.9
049 part load	15	5.7	5.3	5.0	4.7	4.3
	5	0.9	0.9	0.8	0.8	0.7
	8	2.0	1.8	1.7	1.6	1.5
049 part load	11	3.4	3.1	2.9	2.8	2.5
	14	5.0	4.7	4.4	4.1	3.8
	8	1.8	1.7	1.6	1.4	1.3
064 full load	12	3.8	3.5	3.3	3.0	2.8
	16	6.5	6.0	5.6	5.2	4.8
	20	9.7	9.1	8.5	8.0	7.4
	6	1.0	0.9	0.9	0.8	0.8
064 part load	10	2.6	2.5	2.3	2.1	2.0
	14	5.0	4.7	4.4	4.1	3.8
	18	8.1	7.6	7.1	6.6	6.1
	12	3.2	3.0	2.8	2.6	2.4
072 full load	15	4.5	4.2	4.0	3.7	3.4
	18	6.0	5.7	5.3	4.9	4.6
	21	7.8	7.3	6.8	6.4	5.9
	10	2.3	2.1	2.0	1.9	1.7
072 part load	13	3.6	3.3	3.0	2.8	2.6
	16	5.0	4.6	4.3	4.0	3.7
	19	6.5	6.2	5.8	5.4	5.0

5/30/06

Electrical Data

Model	Rated Voltage	Voltage Min/Max	Compressor			HWA Pump FLA	Ext Loop FLA	Total Unit FLA	Min Circ Amp	Max Fuse/HACR
			MCC	RLA	LRA					
022	208-230/60/1	197/253	14.0	9.0	48.0	0.4	5.4	14.8	17.1	25
030	208-230/60/1	197/253	20.0	12.8	58.3	0.4	5.4	18.6	21.8	30
036	208-230/60/1	197/253	22.0	14.1	73.0	0.4	5.4	19.9	23.4	35
042	208-230/60/1	197/253	26.0	16.6	79.0	0.4	5.4	22.4	26.6	40
048	208-230/60/1	197/253	31.0	19.8	109.0	0.4	5.4	25.6	30.6	50
060	208-230/60/1	197/253	41.2	26.4	134.0	0.4	5.4	32.2	38.8	60
070	208-230/60/1	197/253	47.0	30.1	158.0	0.4	5.4	35.9	43.4	70
026	208-230/60/1	197/253	16.0	10.2	52.0	0.4	5.4	16.0	18.6	25
038	208-230/60/1	197/253	26.0	16.6	82.0	0.4	5.4	22.4	26.6	40
049	208-230/60/1	197/253	33.0	21.1	96.0	0.4	5.4	26.9	32.2	50
064	208-230/60/1	197/253	40.0	25.6	118.0	0.4	5.4	31.4	37.8	60
072	208-230/60/1	197/253	42.5	27.2	150.0	0.4	5.4	33.0	39.8	60

Notes:

Rated Voltage of 208-230/60/1. HACR circuit breaker in USA only. Min/Max Voltage of 197/253. All fuses Class RK-5.

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