



# RTWSHP SERIES

## ROOFTOP WATER SOURCE HEAT PUMPS

RTWSHP systems are complete water source heating I cooling packages or split systems and are also available as cooling only models. Scroll 410A compressors are mounted on rubber isolators to minimize vibration transmission. Internal overload protection is provided. Systems up to 6 tons have a single refrigeration circuit. Units with capacities above 6 tons feature two independent refrigeration circuits. Standard sizes range from 5 to 30 tons. Larger sizes are available.

- R410A refrigerant
- Onboard microprocessor control with diagnostics
- Single point power connection
- Stainless steel drain pan
- Heavy gauge steel cabinet with exterior powder cat paint finish
- Internally insulated with 2" foil faced insulation
- Forward curve DWDI belt drive centrifugal blower
- TEFC premium efficiency motors
- Factory charged and run tested
- 1yr parts warranty (extended compressor warranty available)
- 2" Merv 8 filters as standard



**>> LET US DESIGN ONE FOR YOU**





# "RTWSHP"

## **ROOFTOP WATER SOURCE HEA PUMP UNITS**

### **Self Contained Single Package or Split System Units**

Spinnaker Industries Inc. Model Series RTWSHP Rooftop packaged water source heat pumps shall be factory assembled, wired and tested prior to shipment. Units shall bear a QPS special inspection approval label.

RTWSHP systems are a complete water source packages or split systems All models utilize "Scroll" type 410A hermetic compressors. Compressors are mounted on rubber isolators to minimize vibration transmission. Internal overload protection is provided. External high pressure and low pressure cutout switches are included in each compressor control circuit. Systems up to 6 tons have a single refrigeration circuit. Units with capacities above 6 tons feature two independent refrigeration circuits. Each refrigeration circuit includes an adjustable thermal expansion valve (with external equalizer), liquid line filter drier, and service gauge ports.

The evaporator coil is constructed of internally enhanced copper tubes mechanically bonded to rippled aluminum plate fins. The evaporator coil is employed in a draw-through configuration, and features inter-laced circuiting. Larger evaporator coil face areas minimize potential water carry-over. The coaxial refrigerant-to-water heat exchanger(s) feature a convoluted inner tube design for high heat transfer efficiency. Standard models feature a copper inner tube surrounded by a steel outer tube , and carry a 400 psig water side working pressure rating .

### **TYPICAL MECHANICAL SPECIFICATION**

#### **CABINET**

Unit construction to suit specified applications. All exterior cabinet screws shall be Clima seal with bonded washer. Unit casing shall be minimum 18 gauge satin coat steel with weather resistant powder coat finish ( Sky Grey ). Units with bear metal or an air dried paint finish will not be accepted. All seams to be sealed with weather resistant caulking. All interior cabinet surfaces shall be lined with 2" thick 3# density neoprene coated fiberglass insulation. The floor shall be internally insulated and double skinned as standard . The base shall be constructed with heavy gauge galvanized steel with integral supports. Perimeter base frame designed to be such that it overhangs when mounted on a roof curb. Access doors shall be double wall constructed internally insulated with 2" thick 3# density neoprene coated fiberglass insulation. A minimum of 2 latches and hinge assemblies shall be provide for each door and shall be rated for ambient temperatures of -40° F. Each access door shall be provided with a continuous dual durometer extruded automotive style flexible seal rated to-40° F. Units with lift off access doors will not be accepted.

#### **REFRIGERATION CIRCUITS**

All models utilize high efficiency (410A) scroll compressors. Compressors are mounted on rubber isolators to minimize vibration transmission. Internal overload protection is provided. External high pressure and low pressure cutout switches are included on each compressor control circuit. Each refrigeration circuit includes an adjustable bi-flow thermal expansion valve (with external equalizer), bi-flow liquid line filter drier, and service gauge ports.

Evaporator / Condenser coils are constructed of internally enhanced copper tubes mechanically bonded to enhanced aluminum plate fins. The evaporator coil is installed in a draw-through configuration for optimum performance, and the large coil face area minimizes potential water carry over.

#### **FANS**

Fan(s) shall be DWDI forward curve centrifugal type. Fan drive shafts shall be polished with keyways for drive pulley mounting. Unit fans with machined flats on fan shafts for drive pulley mounting will not be accepted. Fans shall have ball bearings suitable for operation in ambient temperatures of -65 to 250°F . Variable pitch v-belt drives, of cast iron construction and adjustable motor mounts to be provided. Units with fans, motors, and drives that do not meet the above criteria will not be accepted.

## **MOTORS**

Fan motor(s) shall be TEFC premium efficiency aluminum ribbed frame type with ball bearings rated for continuous duty and have class F insulation. Motors shall be 2010 energy efficiency compliant. Units with motors that do not meet the above criteria will not be accepted.

## **FILTERS**

Unit(s) shall be equipped with 2"thick MERV 8 pleated filters mounted in permanent tracks. Filters shall slide out for replacement.

## **CONTROLS AND ELECTRICAL**

An onboard microprocessor controller shall be provided for flexibility in application and system design. Unit controls shall be mounted with in integral enclosure(s) with exterior hinged access doors enabling fan access doors to remain fully closed to maintain accurate fan performance during control and drive adjustments. The exterior hinged access doors shall be the same construction as the unit access doors as described in " UNIT CONSTRUCTION ".Unit shall be provided with side power entry or optional bottom power entry if specified.

Unit controls shall include: fan motor / compressor fuses, contactors, and manual reset thermal overload, control transformer(s) with primary and secondary fusing. Unit wiring shall be color coded with a numbered terminal strip for low voltage wiring and field connections. Unit shall have single point power input terminals. Units without separate motor fusing and contactors will not be accepted

## **ACCEPTANCE**

Verify prior to bidding that the unit(s) meet the specified construction, scheduled performance and electrical characteristics. Units that do not meet the specified criteria will not be accepted.

## **ADDITIONAL ACCESSORIES**

### **SPRING ISOLATION HEAD**

The isolation head assembly for rooftop units will ship with the unit for installation prior to unit mounting. The isolation head assembly shall have 1" deflection open type spring isolators mounted within a full perimeter fully welded two piece frame constructed from minimum 18 gauge satin coat steel with baked enamel finish that matches unit finish, complete with a full perimeter dual durometer extruded flexible vinyl seal rated to -40 deg. F to allow movement and maintain a water resistant seal. Flex connectors shall factory installed in the duct openings of the isolation head.

### **Extended Compressor Warranty**

An optional, four year extended compressor warranty is available at additional cost at the time of original purchase of the equipment only. This is limited one time replacement only warranty and obligates Spinnaker Industries Inc. to replace f.o.b. factory, a defective compressor of equal capacity free of charge. No responsibility is assumed by Spinnaker Industries Inc. for refrigerant, labor, or freight to and from the factory.

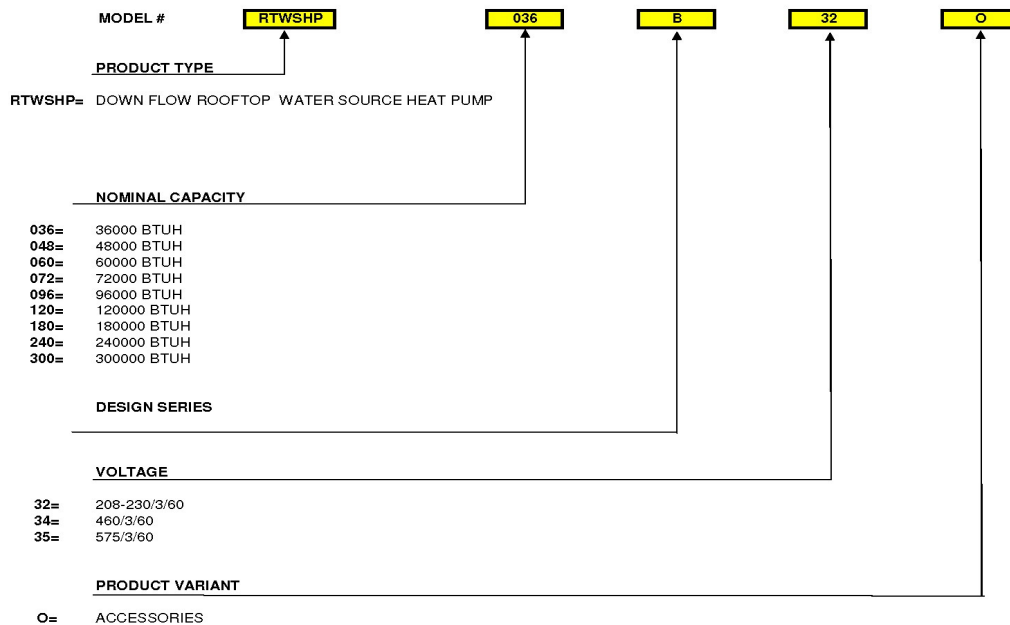
## **OTHER OPTIONS :**

- Electric heat section with SCR control
- Modulating Natural gas indirect fired heating with 409 or 304 stainless steel heat exchangers ( 10:1 turn down )
- 22 gauge inner cabinet liner
- Non-fused disconnect switch
- Manual or motorized minimum outdoor air hood
- 2" thick foam insulation ( R 12.4 )
- Circulating pump
- Larger capacity systems are available

GENERAL DATA			
<b>Model - RTSWHP</b>	72	96	120
Nominal cooling (Tons)	6	8	10
<b>Cooling Performance</b>			
Cooling Capacity (BTUH)	72600	102000	123000
EER	14.2	13.8	14
Heating Capacity (BTUH)	74300	107100	131700
COP	4.3	4.4	4.4
Design CFM	2400	3200	4000
Nominal Water Flow (gpm)	18	24	30
<b>Compressor Type</b>	<b>Scroll</b>		
Number Used	1	2	2
<b>Air Coil-Type</b>	<b>Enhanced Copper Tubes, Enhanced Aluminum Fins</b>		
Face Area (sq ft)	5.0	7.0	8.5
Rows/FPI	4/13	3/12	3/12
<b>Water Coil-Type</b>	<b>Co-Axial</b>		
Water Connection Size	1" FPT	1 1/4" FPT	1 1/4" FPT
Drain Connection Size	3/4" FPT	3/4" FPT	1" FPT
<b>Evaporator Fan Type</b>	<b>Centrifugal, Forward Curved</b>		
Number Used	1	1	1
Drive	Adjustable V Belt		
Diameter x Width (in)	12x12	12x12	15x15
Motor HP ( Standard / Oversized )	2.0	3.0	3.0
<b>Filters</b>			
2" Thick :Disposable	MERV 8	MERV 8	MERV 8
<b>Weight</b>			
Shipping	1859	2455	2557

OPTIONAL ACCESSORIES - WEIGHT			
Economizer	285	295	310
Centrifugal Power Exhaust	195	205	238
Knockdown Roof Curb	158	185	185

#### PRODUCT NOMENCLATURE





## RTWSHP - 072 @ 2400 CFM Nominal Airflow

COOLING							
EWT	GPM	WPD	EAT	TC	SC	KW	THR
(°F)		(PSI)	(db/wb)	(MBH)	(MBH)		(MBH)
60	13.0	5.5	75/62	69.9	51.3	4.09	83.9
			80/67	78.8	58.4	4.15	94.6
			85/72	84.7	62.2	4.35	101.6
	18.0	8.0	75/62	71.6	52.6	3.98	85.9
			80/67	78.9	59.3	4.07	94.6
			85/72	86.6	63.6	4.22	103.9
70	13.0	5.25	75/62	67.5	49.5	4.58	81.0
			80/67	77.4	57.6	4.65	92.8
			85/72	82.8	60.8	4.81	99.4
	18.0	8.30	75/62	69.6	51.1	4.19	83.5
			80/67	77.7	59.2	4.20	93.2
			85/72	85.2	62.5	4.36	102.2
85	13.0	5.00	75/62	64.9	47.6	4.98	77.9
			80/67	71.8	52.7	5.08	86.2
			85/72	78.5	57.6	5.23	94.2
	18.0	8.00	75/62	66.3	48.7	4.75	79.6
			80/67	72.6	53.3	4.94	86.9
			85/72	80.6	59.2	5.32	96.7
100	13.0	4.70	75/62	58.9	43.2	5.42	70.7
			80/67	67.1	55.2	5.77	80.5
			85/72	70.4	51.7	5.85	84.5
	18.0	7.60	75/62	60.6	44.5	5.33	72.7
			80/67	67.8	55.8	5.48	81.4
			85/72	74.6	57.7	5.54	89.5

Heating					
EWT	GPM	EAT	HC	KW	H Absrp.
(°F)		(db)	(MBH)		(MBH)
60	13.0	60	58.5	4.01	46.8
		70	57.7	4.20	46.2
		80	57.2	4.40	45.8
	18.0	60	65.5	4.25	52.4
		70	64.6	4.55	51.7
		80	63.7	4.80	51.0
70	13.0	60	74.5	4.37	59.6
		70	73.1	4.65	58.5
		80	72.1	4.92	57.7
	18.0	60	75.5	4.60	62.5
		70	74.3	4.90	61.5
		80	73.2	5.18	60.6
80	13.0	60	74.4	4.70	61.6
		70	73.3	5.02	60.7
		80	72.0	5.33	59.6
	18.0	60	83.1	4.80	66.5
		70	81.7	5.15	65.4
		80	80.5	5.47	64.4

**Certified Performance Data** Rated at 2400 CFM and 18 GPM

Water Loop			
Cooling		Heating	
Cap.	EER	Cap.	COP
72.6	14.7	74.3	4.44

## RTWSHP - 096 @ 3200 CFM Nominal Airflow

COOLING							
EWT	GPM	WPD	EAT	TC	SC	KW	THR
(°F)		(PSI)	(db/wb)	(MBH)	(MBH)		(MBH)
60	18.0	5.0	75/62	100.1	71.6	5.78	120.2
			80/67	110.7	79.2	5.92	133.0
			85/72	120.4	86.2	6.16	144.5
	24.0	8.0	75/62	100.4	71.8	6.14	120.5
			80/67	110.9	79.4	6.27	133.1
			85/72	121.4	86.9	6.51	145.8
70	18.0	4.7	75/62	97.6	69.8	6.10	117.2
			80/67	108.7	77.8	6.20	130.5
			85/72	116.4	83.3	6.39	139.9
	24.0	7.7	75/62	97.7	69.9	5.85	117.3
			80/67	108.2	78.1	6.00	131.1
			85/72	119.7	85.6	6.10	143.7
85	18.0	4.5	75/62	91.3	65.3	7.14	109.6
			80/67	100.9	72.2	7.26	121.1
			85/72	110.2	78.8	7.50	132.3
	24.0	7.5	75/62	93.1	66.6	7.21	111.8
			80/67	102.0	73.0	7.35	122.5
			85/72	113.3	80.9	7.60	136.0
100	18.0	4.4	75/62	82.7	59.2	7.74	99.3
			80/67	90.8	65.0	8.05	109.0
			85/72	98.9	70.8	8.35	118.8
	24.0	7.0	75/62	85.1	60.9	7.61	102.2
			80/67	94.7	67.8	7.82	113.7
			85/72	103.8	74.3	7.90	124.6

Heating					
EWT	GPM	EAT	HC	KW	H Absrp.
(°F)		(db)	(MBH)		(MBH)
60	18.0	60	99.9	6.44	81.7
		70	98.7	6.88	80.2
		80	97.6	7.07	78.4
	24.0	60	101.8	6.52	83.0
		70	100.3	6.95	81.7
		80	99.0	7.36	79.5
70	18.0	60	107.3	6.55	87.2
		70	105.4	7.01	86.2
		80	103.9	7.45	83.4
	24.0	60	108.9	6.78	87.4
		70	107.1	7.17	86.0
		80	105.6	7.58	84.8
80	18.0	60	118.5	6.95	95.8
		70	115.8	7.42	95.2
		80	114.4	7.88	91.8
	24.0	60	119.5	7.03	97.2
		70	117.4	7.53	95.9
		80	115.7	8.01	92.9

**Certified Performance Data** Rated at 3200 CFM and 24 GPM

Water Loop			
Cooling		Heating	
Cap.	EER	Cap.	COP
1020	14.46	107	4.38

## RTWSHP- 120 @ 4000 CFM Nominal Airflow

COOLING							
EWT	GPM	WPD	EAT	TC	SC	KW	THR
(°F)		(PSI)	(db/wb)	(MBH)	(MBH)		(MBH)
60	22.0	4.2	75/62	118.5	87.7	6.97	139.8
			80/67	131.0	96.9	7.13	153.4
			85/72	143.5	106.1	7.42	169.3
	30.0	6.3	75/62	121.3	89.8	6.79	143.3
			80/67	135.9	100.5	6.94	158.0
			85/72	146.6	108.5	7.21	172.9
70	22.0	4.0	75/62	114.4	84.6	7.81	137.2
			80/67	127.3	95.5	7.86	152.8
			85/72	140.4	103.8	8.20	168.4
	30.0	6.0	75/62	117.9	87.3	7.13	177.5
			80/67	130.4	96.5	7.21	156.5
			85/72	144.3	106.7	7.43	173.2
85	22.0	3.8	75/62	100.1	77.1	8.49	120.1
			80/67	121.2	89.6	8.56	145.4
			85/72	132.9	98.4	8.92	159.5
	30.0	5.8	75/62	112.2	89.4	8.10	134.6
			80/67	123.0	90.5	8.42	148.4
			85/72	136.8	92.6	9.08	165.5
100	22.0	3.6	75/62	99.7	68.8	9.24	126.4
			80/67	109.5	75.5	9.61	136.8
			85/72	119.3	82.3	9.97	149.1
	30.0	5.5	75/62	102.7	70.8	9.09	128.4
			80/67	114.2	78.8	9.35	142.8
			85/72	126.3	88.4	9.45	157.8

Heating					
EWT	GPM	EAT	HC	KW	H Absrp.
(°F)		(db)	(MBH)		(MBH)
60	22.0	60	103.7	7.05	84.6
		70	102.4	7.52	81.3
		80	101.3	7.73	78.4
	30.0	60	116.1	7.46	94.5
		70	114.5	7.96	90.8
		80	113.0	8.44	87.5
70	22.0	60	132.0	7.62	108.9
		70	129.7	8.15	104.6
		80	127.8	8.66	100.9
	30.0	60	133.9	8.75	108.3
		70	131.7	8.61	107.0
		80	129.8	9.10	103.1
80	22.0	60	131.8	8.26	109.3
		70	128.9	8.82	105.0
		80	127.6	9.37	101.2
	30.0	60	147.4	8.44	123.9
		70	144.8	9.04	119.1
		80	142.8	9.62	114.8

**Certified Performance Data** Rated at 4000 CFM and 30 GPM

Water Loop			
Cooling		Heating	
Cap.	EER	Cap.	COP
123.0	14.6	131.7	4.48

# Evap Fan Performance RTWSHP 72 - 120

Model	Supply CFM	External Static Pressure (inches w.c.)											
		0.2		0.4		0.6		0.8		1.0		1.2	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
72	2200	700	0.60	790	0.70	860	0.80	930	0.85	1000	1.10	1080	1.20
	2400	760	0.73	820	0.80	890	0.90	960	1.10	1030	1.25	1100	1.35
	2600	800	0.90	880	1.00	930	1.20	1000	1.30	1060	1.40	1130	1.60
96	3000	840	0.75	930	0.80	1000	1.00	1100	1.30	1180	1.40	1240	1.50
	3200	862	0.85	958	1.00	1042	1.15	1135	1.32	1209	1.46	1287	1.60
	3400	920	1.10	1000	1.20	1090	1.40	1160	1.50	1230	1.70	1300	1.80
120	3700	800	0.90	930	1.10	1040	1.30	1150	1.50	1200	1.70	1290	1.90
	4000	900	1.10	1000	1.30	1080	1.50	1160	1.75	1240	2.00	1305	2.26
	4300	970	1.40	1060	1.60	1140	1.80	1205	2.00	1290	2.40	1350	2.50

## Note:

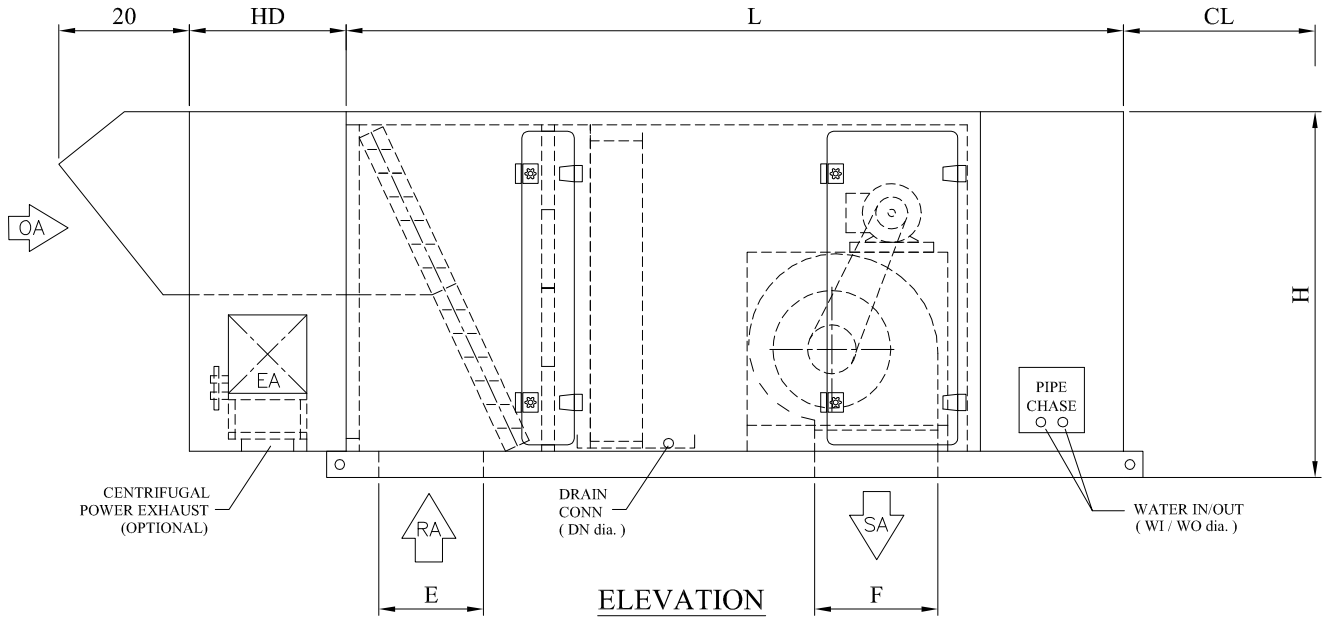
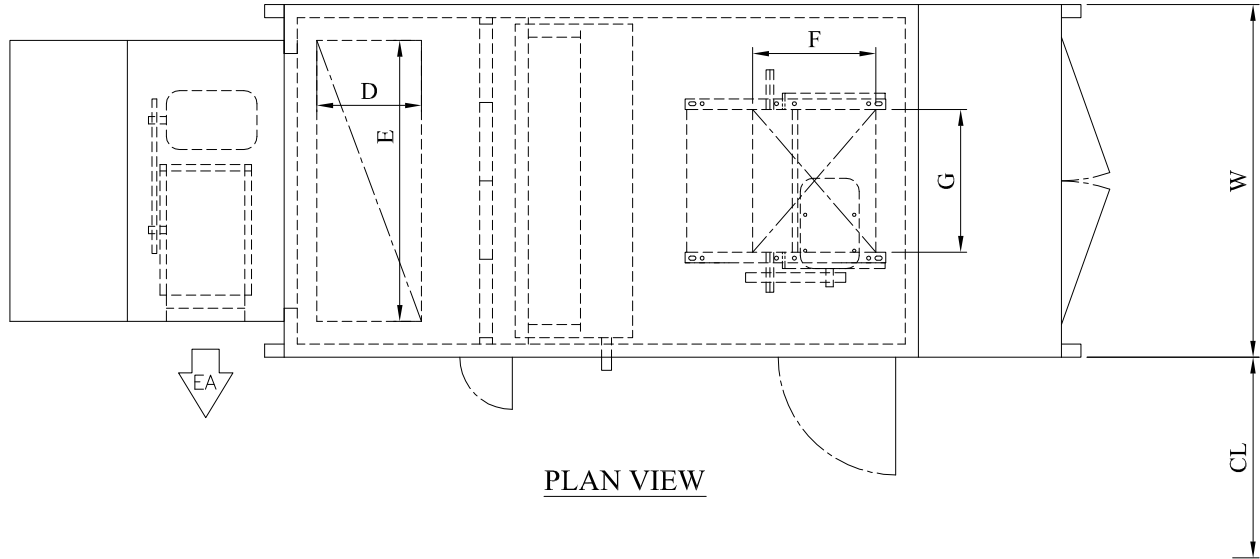
1. At higher evaporator airflows and wet bulb conditions, condensate carry over may occur. Adjust airflow downward as necessary.
2. Values include pressure drop from wet coil and clean filters.
3. Shaded areas indicate oversize motors

## ELECTRICAL DATA RTWSHP

MODEL	SUPPLY		COMPRESSOR		BLOWER		MIN. CCT.	MAX FUSE
Series	VOLTAGE	QTY	RLA	LRA	HP	FLA	AMPACITY	CCT. BKR. AMP
072	208-230/3/60	1	20.5	155	2.0	6.6	32.20	45
	460/3/60	1	11.1	75	2.0	3.0	16.90	25
	575/3/60	1	7.60	54	2.0	2.4	11.90	20
096	208-230/3/60	2	13.7	83	2.0	6.6	37.40	50
	460/3/60	2	6.2	41	2.0	3.0	16.90	25
	575/3/60	2	4.8	33	2.0	2.4	13.20	25
120	208-230/3/60	2	17.6	123	3.0	8.8	48.40	80
	460/3/60	2	9.6	62	3.0	4.0	25.60	40
	575/3/60	2	6.1	40	3.0	3.4	17.10	25



# GENERAL LAYOUT



MODEL	TON (s)	L	W	H	HD	CL	D	E	F	G	WI	WO	DN
RTWSHP-036	3	114	46	57	24	36	34	12	13-7/16	15-5/8	1/2	1/2	3/4
RTWSHP-048	4	114	46	57	24	36	34	12	13-7/16	15-5/8	3/4	3/4	3/4
RTWSHP-060	5	114	46	57	24	36	34	12	13-7/16	15-5/8	3/4	3/4	3/4
RTWSHP-072	6	114	46	57	24	36	34	12	13-7/16	15-5/8	1	1	3/4
RTWSHP-096	8	135	60	76	24	36	34	24	15-7/8	18-5/8	1-1/4	1-1/4	3/4
RTWSHP-120	10	135	60	76	24	36	34	24	18-7/8	21-7/8	1-1/4	1-1/4	1
RTWSHP-144	12	135	74	76	24	36	34	24	18-7/8	21-7/8	1-1/2	1-1/2	1

## UNIT CONSTRUCTION (STANDARD)

Floor: 18 Ga. Galv. G-90 steel  
 Underside Floor: 22 Ga. Galv. G-90 steel  
 Base: 4" C4 Formed Channel / Tube  
 Panel 1" or 2" Thk Single / Double Wall  
 Insulation: Fiberglass (Foam upgrade R12.4)  
 Outer Casing Skin: 18 Ga. steel Powder coated  
 Inner Skin: 22 Ga. Galv. G-90 steel  
 Hood: Complete w/ Bird screen & iron mesh

SA Fan (s): FC DIDW  
 Motor (s): TEFC, Prem. Eff.  
 DX/Cond./HGRH Coil: Al Fin, Cu Tube 450-500 FPM  
 Filter (s): 2" MERV 8  
 Compressor (s): Scroll, Staged or Modulating

All dimensions are in inch & connections are NPT  
 For Other Option (s) & Weight Contac factory.

REV.	BY	DATE	DESCRIPTION



1171 Gorham Street, Newmarket, Ontario, L3Y8Y2  
 Tel: 905-830-5550 Ext. 140 Fax: 905-830-5507  
 4846 Jennings Lane, Louisville, Kentucky, USA 40218  
 Tel: 1-800-932-6210 Fax: 1-800-903-7294

PROJECT:	GENERAL LAYOUT									
NAME:	GENERAL LAYOUT									
MODEL:	RTWSHP								CFM:	
DRN. BY:	S.P.	DGN. BY:	S.P.	CHK. BY:	G.M.					
DATE:	MAY-31-2013		SCALE:	NTS	REV.	0				

SPINAKE INDUSTRIES INC. RESERVES THE RIGHT TO CHANGE ANY OF THE INFORMATION HEREIN WITHOUT NOTICE. Ref.: RTWSHP

# **LIMITED WARRANTY**

## **COVERAGE AND TERMS**

RTWSHP Model Series units, and all related accessories as manufactured by Spinnaker Industries, are warranted to the original buyer to be free from defects in materials or workmanship provided that these units and accessories have been installed and maintained in accordance with instructions and operated under normal conditions. Spinnaker Industries sole obligation under this Limited Warranty is to repair or replace, at its opinion, free of charge to the customer (except as provided below), FOB factory, any part determined by Spinnaker Industries (in its sole discretion) to be defective. Warranty terms, from original ship date are as follows:

- ◆ All components ( excluding filters and fan belts ) ..... 1 year from date of shipment

## **EXCLUSIONS**

Spinnaker Industries Limited Warranty does not cover defects, reduced performance, or failure caused, directly or indirectly, by improper installation, abuse, misuse, misapplication, improper maintenance, lack of maintenance, negligence, accident, or normal deterioration, including wear and tear. This Limited Warranty shall not apply to items that require replacement due to normal wear i.e. fan drive belts, filters, etc., or to failures, defects, or reduced performance resulting, directly or indirectly, from use of its products exposed to corrosive gasses or liquids.

**Warranty claims that are not supported with a copy of the original start up report will not be considered.**

Spinnaker Industries Limited Warranty does not include costs for transportation (including, without limitation, freight and return freight charges, costs, and insurance), costs for removal or re-installation of parts or equipment, cranes and hoisting, premiums for overtime, labor for performing repairs or replacement made in the field, roofing contractors or any other sub trades. Spinnaker Industries is not responsible for damages occurring during transport of any product to or from its facilities.

## **RETURN PROCEDURE**

To return defective parts under these warranty terms, please contact Spinnaker Industries at 1-800-932-6210 to confirm the ship to address. The serial number located on the rating label of the unit must be provided so that the original ship date of the unit can be verified. All defective parts must be authorized for return and shipped pre-paid to Spinnaker Industries for inspection. A purchase order must be received prior to shipment of repaired or replacement parts. Repaired or replacement parts will be invoiced and shipped collect FOB Factory. A credit will be issued only if the defective parts are deemed the responsibility of Spinnaker Industries. Spinnaker Industries is not responsible for any damage or loss occurring during shipment to or from Spinnaker Industries.

THE OBLIGATION AND LIABILITY OF Spinnaker Industries UNDER THIS LIMITED WARRANTY DOES NOT INCLUDE LOSSES, DIRECT OR INDIRECT, FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES. THIS LIMITED WARRANTY IS PROVIDED EXCLUSIVELY TO THE ORIGINAL BUYER OF PRODUCTS AND MAY NOT BE ASSIGNED OR OTHERWISE TRANSFERRED.

THIS LIMITED WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, AND THERE ARE NO WARRANTIES WHICH EXTEND BEYOND THE DESCRIPTION ON THE FACE HEREOF.

Spinnaker Industries maintains a continuous product improvement policy , therefore specifications are subject to change without notice



Toll Free: 1-800-932-6210

Web: [www.spinnakerindustries.com](http://www.spinnakerindustries.com)