

## SKYPAK II

### Heating & Cooling Self Contained Packages

**S**KYPAK II gives you a complete air-conditioning and heating system as an all-in-one package unit.

Designed for conventional through-the-wall installation in residential low and high rise, industrial and commercial applications. The all-indoor design eliminates the need for any unsightly exterior equipment, and refrigerant line connections, while maintaining architectural esthetics, protecting the Skypak from weathering and vandalism.



### SKYPAK II Features and Data

- Available in natural gas (direct vent), electric heating, or hot water heating.
- Gas input ratings of 20,000, 40,000, 60,000, and 80,000 BTUH.
- Cooling capacity from 12,000 to 29,000 BTUH.
- R-410A refrigerant.
- Every unit rigorously factory tested for quality control.
- Allows independent metering and temperature control, eliminating building wide service shut downs as encountered with conventional systems.
- Aluminized steel tubular heat exchanger provides 80.3% AFUE.
- Return air can be ducted if required.
- Power vented through wall sleeve, eliminating chimney.
- High efficiency scroll or rotary compressor (rotary in 12,000 BTUH models).
- Convenient indoor access to all parts and service needs, eliminating bulky chassis removal and spares.
- Condensate drain isolated from air stream.
- Left hand or right hand unit configuration.
- Exterior grilles available in five standard colours - or custom match (optional)

All components readily available through authorized stocking distributors.

# SKYPAK II GAS HEAT / ELECTRIC COOLING



<i>Model</i>	<i>SGAD201212</i>	<i>SGAD401212</i>	<i>SGAD401812</i>	<i>SGAD601812</i>
<b>Heating Section</b>				
208-230 / 1 / 60				
Rated Input-BTU / HR	20,000	40,000	40,000	60,000
Output Capacity-BTU / HR	16,160	32,320	32,320	48,480
CFM (Motor Speed)	350 (MED-LO)	525 (HI)	600 (MED)	675 (HI)
AFUE	80.30%	80.30%	80.30%	80.30%
<b>Cooling Section</b>				
208-230 / 1 / 60 197 min. Oper. VOLTS				
BTU / HR T. C*	12,100		18,000	
BTU / HR Sensible	9,300		13,800	
CFM At .30" E.S.P.	400		600	
Efficiency (S.E.E.R.)	11.0		11.5	
Compressor R.L.A.	5.7		10.0	
Compressor L.R.A.	31.0		48.0	
Min. Circuit Ampacity	9.03		14.80	
Max. Fuse / CCT. BKR.	15		20	
Filter Size / Type **	24" x 34" / 1" Thick Replaceable Media			
Approx. Ship Weight (LBS.)	295		335	

<i>Model</i>	<i>SGAD402412</i>	<i>SGAD602412</i>	<i>SGAD603012</i>	<i>SGAD803012</i>
<b>Heating Section</b>				
208-230 / 1 / 60				
Rated Input-BTU / HR	40,000	60,000	60,000	80,000
Output Capacity-BTU / HR	32,320	48,480	48,480	64,640
CFM (Motor Speed)	600 (LO)	700 (MED)	750 (LO)	800 (MED)
AFUE	80.30%	80.30%	80.30%	80.30%
<b>Cooling Section</b>				
208-230 / 1 / 60 197 min. Oper. VOLTS				
BTU / HR T. C*	24,400		29,100	
BTU / HR Sensible	19,400		23,400	
CFM At .30" E.S.P.	800		975	
Efficiency (S.E.E.R.)	11.0		11.0	
Compressor R.L.A.	14.1		15.7	
Compressor L.R.A.	58.3		73.0	
Min. Circuit Ampacity	20.63		23.03	
Max. Fuse / CCT. BKR.	30		35	
Filter Size / Type**	24" x 34" / 1" Thick Replaceable Media			
Approx. Ship Weight (LBS.)	345		365	

Caution: Cooling section of this unit should not be operated when outside temperature is below 60°F

Performance tested in accordance with ARI standard 210/240-03, and rating conditions of 95°F outdoor ambient, and 80°F D.B./67°F W.B. indoor air temperature.

\* T.C. = net cooling capacity (Heat dissipation from fan motor included).

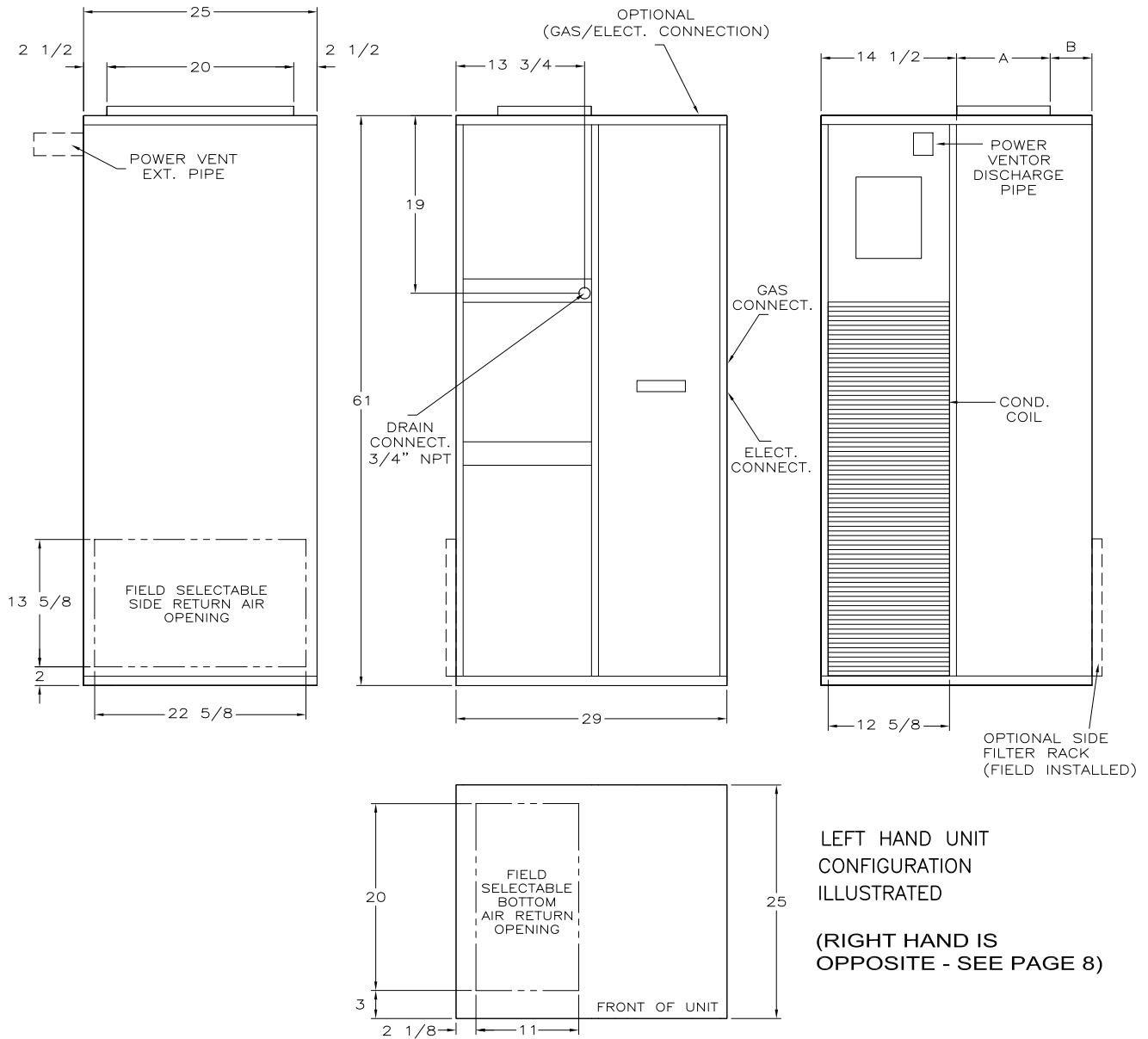
\*\* Factory Supplied.

As SKYMARK maintains a continuous product improvement policy, specifications are subject to change without notice.

LEFT SIDE

FRONT

REAR



LEFT HAND UNIT  
CONFIGURATION  
ILLUSTRATED  
  
(RIGHT HAND IS  
OPPOSITE - SEE PAGE 8)

**IMPORTANT: POWER VENTOR DISCHARGE PIPE MUST TERMINATE 1"-1 1/4" FROM EXTERIOR GRILLE/LOUVRE.**

MINIMUM CLEARANCES - FROM COMBUSTIBLE MATERIALS

TOP	SIDES	BACK	FRONT	FLUE
0"	0"	0"	1"	10"

For Installation on combustible flooring  
For Installation in an alcove or closet  
Minimum clearance for service access - 24" to front of unit

UNIT COOLING CAPACITY (Btuh)	A	B
12,000 + 18,000	8"	6.50"
24,000 + 30,000	10.00"	4.50"

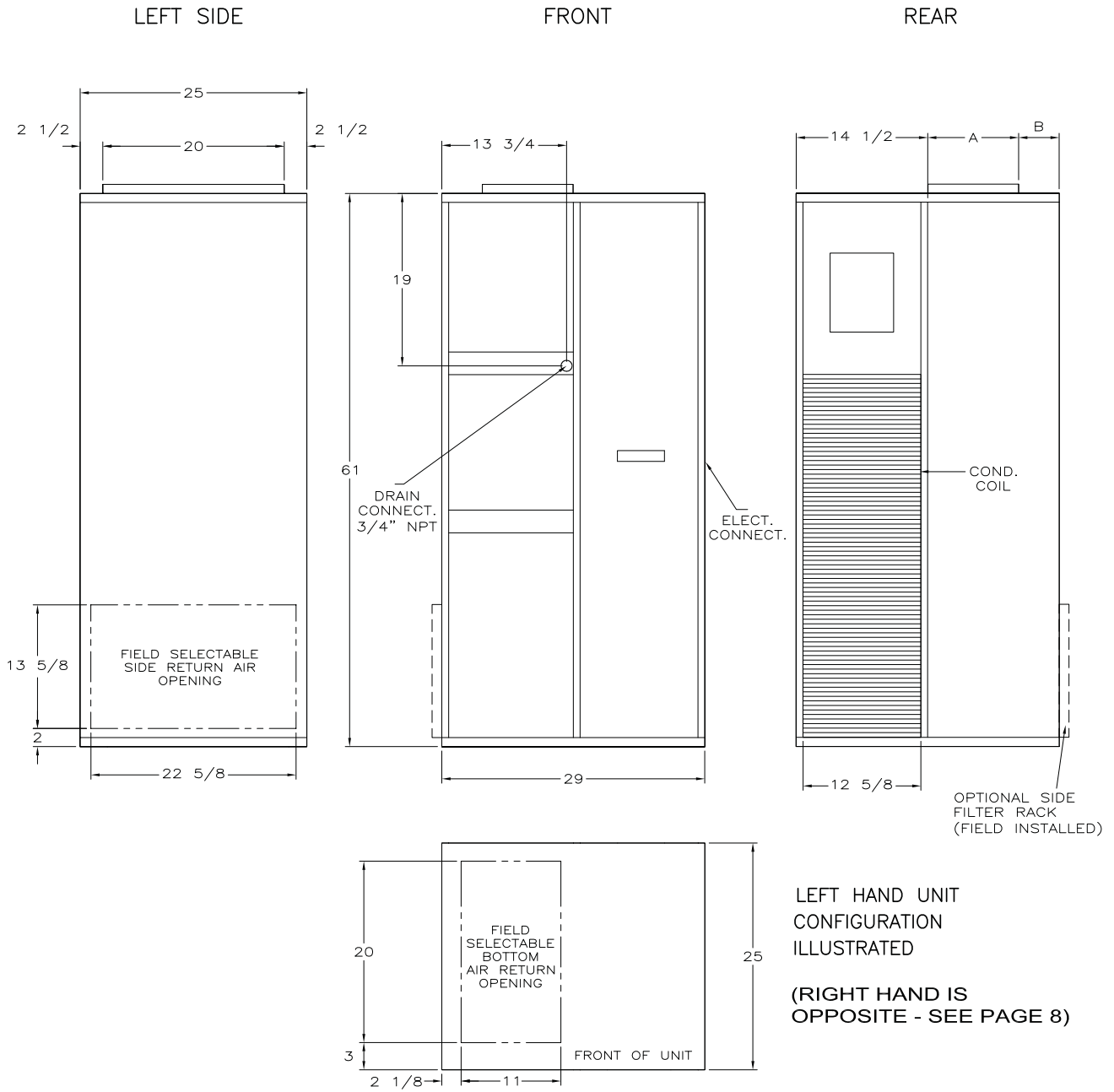
# SKYPAK II ELECTRIC HEAT / ELECTRIC COOLING



<b>Model</b>	<b>SEAD251212</b>	<b>SEAD051212</b>	<b>SEAD751212</b>	<b>SEAD051812</b>	<b>SEAD751812</b>	<b>SEAD101812</b>
<b>Heating Section</b>						
208-230 / 1 / 60						
KW Total 208 / 230	2.10 / 2.57	4.20 / 5.14	6.30 / 7.71	4.20 / 5.14	6.30 / 7.71	8.41 / 10.28
No. of Elements	1	1	2	1	2	2
CFM (Motor Speed)	300 (LO)	400 (MED)	600 (HI)	500 (LO)	600 (MED)	700 (HI)
Heating Output MBTU / HR	7.1 / 8.7	14.3 / 17.5	21.5 / 26.3	14.3 / 17.5	21.5 / 26.3	28.7 / 35.1
<b>Cooling Section</b>						
208-230 / 1 / 60 197 min. Oper. VOLTS						
BTU / HR T. C*	12,100			18,000		
BTU / HR Sensible	9,300			13,800		
CFM At .30" E.S.P.	400			600		
Efficiency (S.E.E.R.)	11.0			11.5		
Compressor R.L.A.	5.7			10.0		
Compressor L.R.A.	31.0			48.0		
Min. Circuit Ampacity 208V	13.62	26.30	38.92	26.80	39.42	52.10
Max. Fuse / CCT. BKR. 208V	15	30	40	30	40	60
Min. Circuit Ampacity 230V	14.97	28.93	42.90	29.43	43.40	57.37
Max. Fuse / CCT. BKR. 230V	15	30	45	30	45	60
Filter Size / Type**	24" x 34" / 1" Thick Replaceable Media					
Approx. Ship Weight (LBS.)	270			305		

<b>Model</b>	<b>SEAD752412</b>	<b>SEAD102412</b>	<b>SEAD152412</b>	<b>SEAD753012</b>	<b>SEAD103012</b>	<b>SEAD153012</b>
<b>Heating Section</b>						
208-230 / 1 / 60						
KW Total 208 / 230	6.30 / 7.71	8.41 / 10.28	12.61 / 15.42	6.30 / 7.71	8.41 / 10.28	12.61 / 15.42
No. of Elements	2	2	3	2	2	3
CFM (Motor Speed)	700 (LO)	800 (MED)	800 (MED)	700 (LO)	800 (MED)	800 (MED)
Heating Output MBTU / HR	21.5 / 26.3	28.7 / 35.1	43.0 / 52.6	21.5 / 26.3	28.7 / 35.1	43.0 / 52.6
<b>Cooling Section</b>						
208-230 / 1 / 60 197 min. Oper. VOLTS						
BTU / HR T. C*	24,400			29,100		
BTU / HR Sensible	19,400			23,400		
CFM At .30" E.S.P.	800			975		
Efficiency (S.E.E.R.)	11.0			11.0		
Compressor R.L.A.	14.1			15.7		
Compressor L.R.A.	58.3			73.0		
Min. Circuit Ampacity 208V	39.80	52.48	77.78	39.80	52.48	77.78
Max. Fuse / CCT. BKR. 208V	40	60	80	40	60	80
Min. Circuit Ampacity 230V	43.78	57.74	85.68	43.78	57.74	85.68
Max. Fuse / CCT. BKR. 230V	45	60	90	45	60	90
Filter Size / Type**	24" x 34" / 1" Thick Replaceable Media					
Approx. Ship Weight (LBS.)	325			345		

Caution: Cooling section of this unit should not be operated when outside temperature is below 60°F  
 Performance tested in accordance with ARI standard 210/240-03, and rating conditions of 95°F outdoor ambient, and 80°F D.B./67°F W.B. indoor air temperature.  
 \* T.C. = net cooling capacity (Heat dissipation from fan motor included).  
 \*\* Factory Supplied.  
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**MINIMUM CLEARANCES - FROM COMBUSTIBLE MATERIALS**

TOP	SIDES	BACK	FRONT
0"	0"	0"	1"

For Installation on combustible flooring  
 For Installation in an alcove or closet  
 Minimum clearance for service access - 24" to front of unit

UNIT COOLING CAPACITY (Btuh)	A	B
12,000 + 18,000	8"	6.50"
24,000 + 30,000	10.00"	4.50"

# SKYPAK II HOT WATER / ELECTRIC COOLING

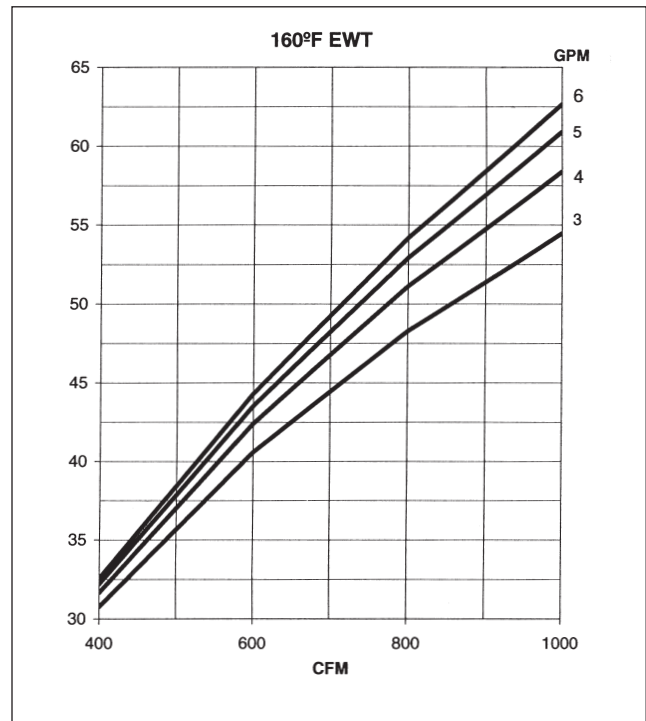
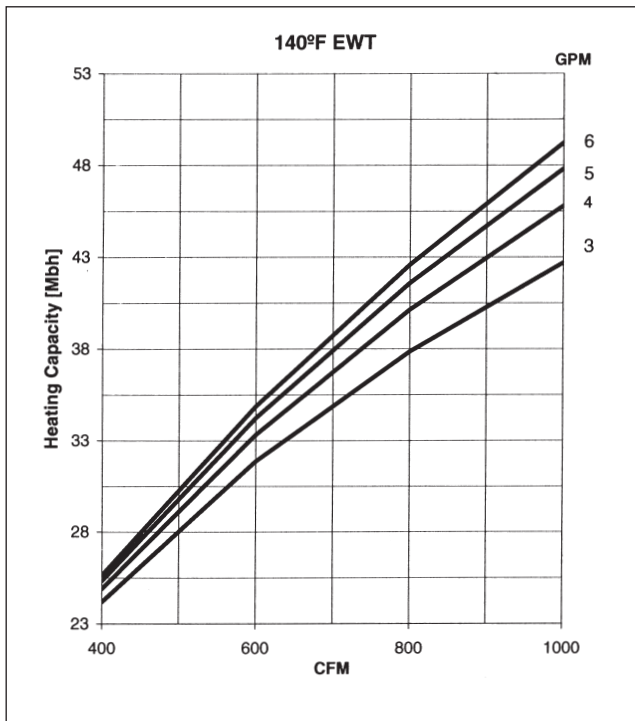


MODEL NUMBER	SWAD012	SWAD018	SWAD024	SWAD030
<b>HEATING COIL</b>				
AREA / ROWS / FPI	2.43 / 2 / 14			
FLOW RANGE (USGPM)	3 - 6			
WATER CONNECTION SIZE	1/2 in FPT			
<b>COOLING SECTION</b>				
	208-230 / 1 / 60 197 min. Oper. VOLTS			
BTUH T.C.*	12,100	18,000	24,400	29,100
BTUH SENSIBLE	9,300	13,800	19,400	23,400
CFM AT .30" E.S.P.	400	600	800	975
EFFICIENCY (S.E.E.R.)	11.0	11.5	11.0	11.0
COMPRESSOR TYPE	ROTARY	SCROLL	SCROLL	SCROLL
COMPRESSOR R.L.A.	5.7	10.0	14.1	15.7
COMPRESSOR L.R.A.	31.0	48.0	58.3	73.0
MIN. CIRCUIT AMPACITY	9.03	14.80	20.63	23.03
MAX. FUSE/CCT. BKR	15	20	30	35
FILTER SIZE / TYPE**	24" x 34" / 1" Thick Replaceable Media			
APPROX. SHIP WEIGHT (LBS.)	285	325	340	350

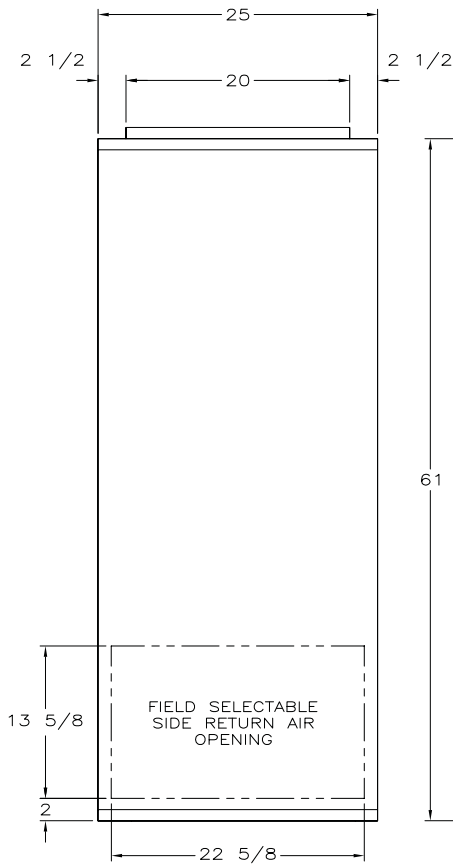
Caution: Cooling section of this unit should not be operated when outside temperature is below 60°F  
 Performance tested in accordance with ARI standard 210/240-03, and rating conditions of 95°F outdoor ambient, and 80°F D.B./67°F W.B. indoor air temperature.  
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## HEATING COIL PERFORMANCE

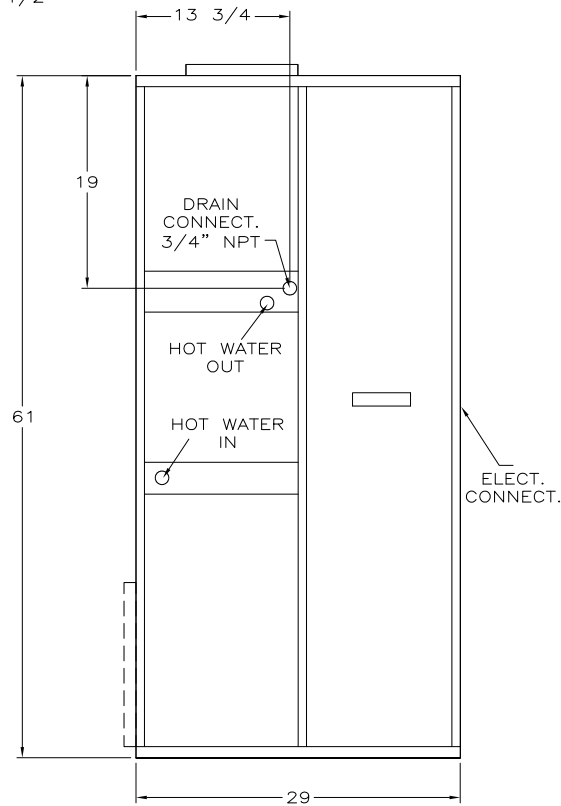
65° ENTERING AIR TEMPERATURE



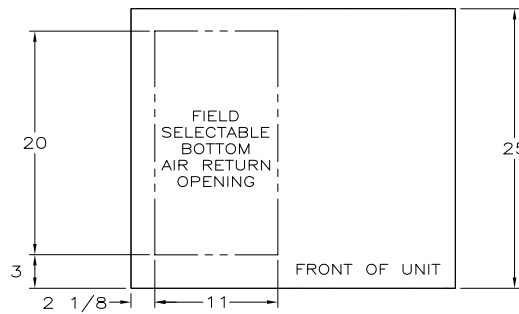
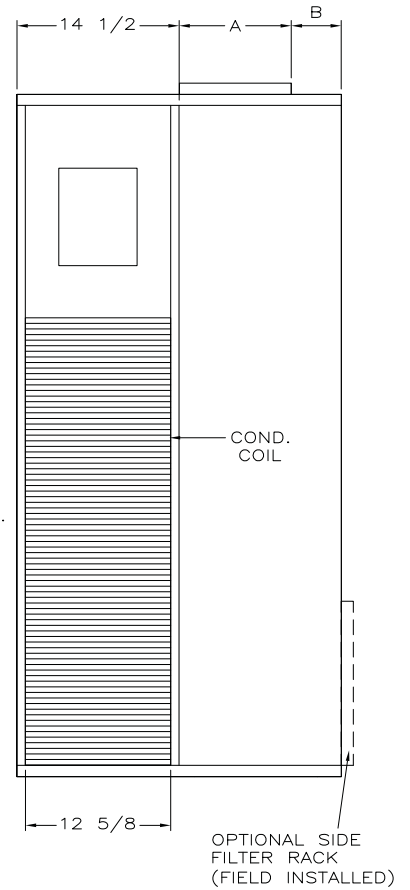
LEFT SIDE



FRONT



REAR

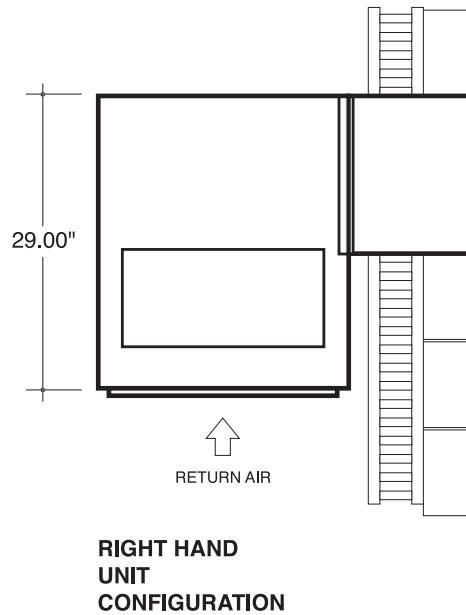
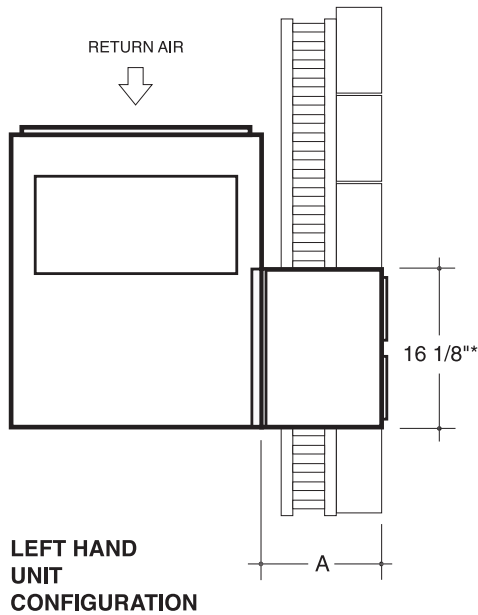


LEFT HAND UNIT  
CONFIGURATION  
ILLUSTRATED  
(RIGHT HAND IS  
OPPOSITE - SEE PAGE 8)

For installation in an alcove or closet  
Minimum clearance for service access - 24" to front of unit

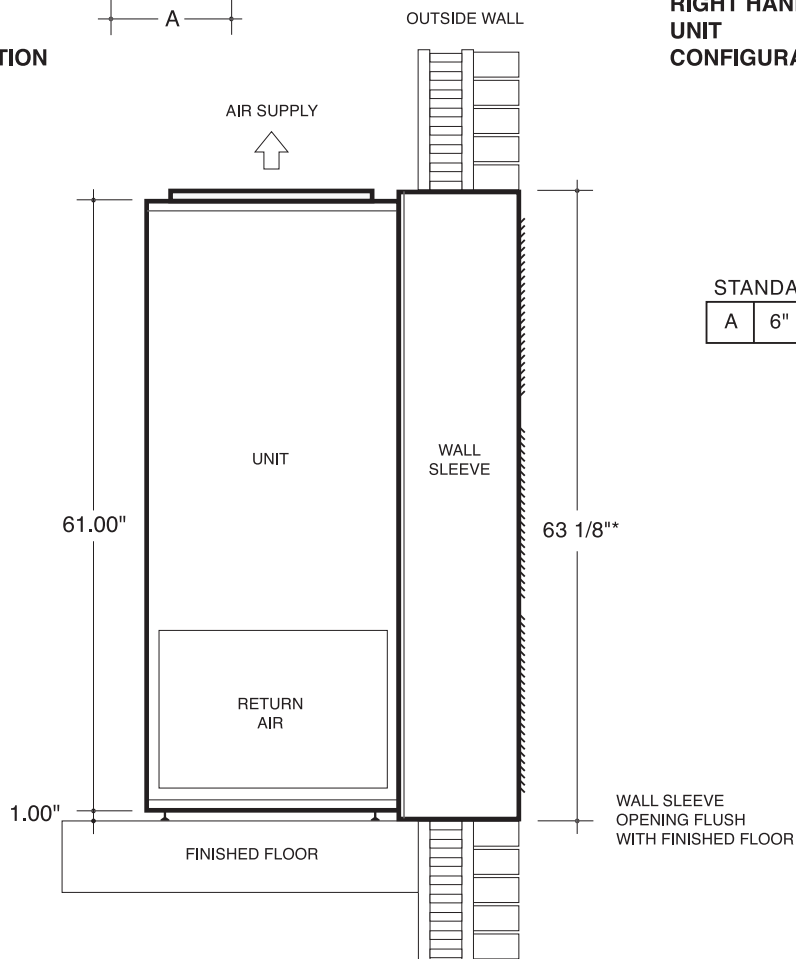
UNIT COOLING CAPACITY (Btuh)	A	B
12,000 + 18,000	8"	6.50"
24,000 + 30,000	10.00"	4.50"

# TYPICAL INSTALLATION LAYOUT



**LEFT HAND UNIT CONFIGURATION**

**RIGHT HAND UNIT CONFIGURATION**



STANDARD WALL SLEEVE DEPTHS

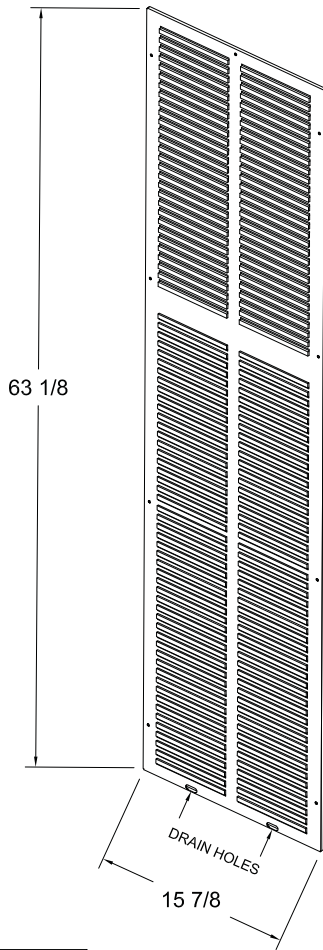
A	6"	8"	10"	12"	14"
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WALL SLEEVE OPENING FLUSH WITH FINISHED FLOOR

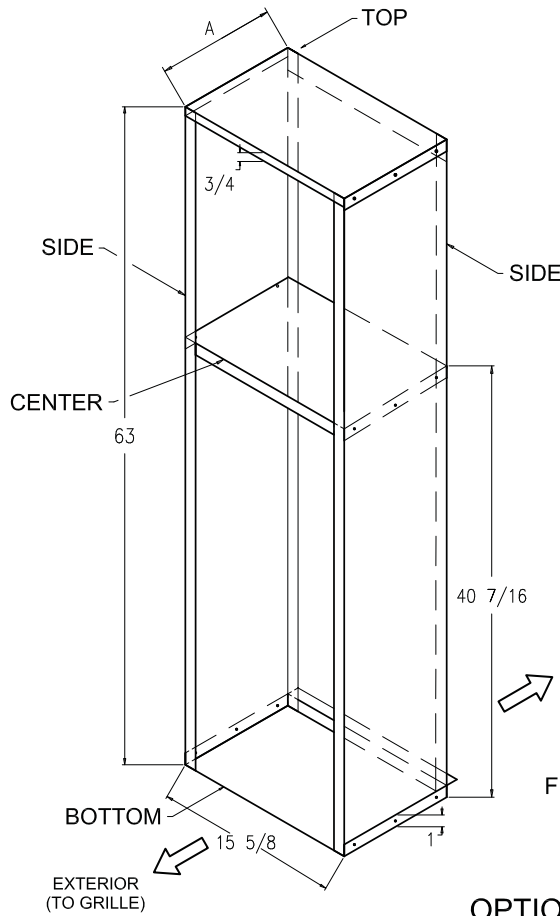
\* ROUGH-IN OPENING DIMENSIONS



## WALL SLEEVE GRILLE



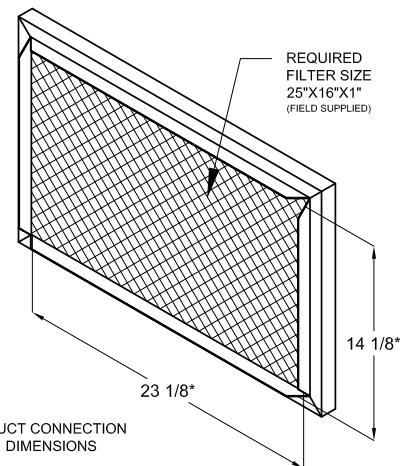
## WALL SLEEVE



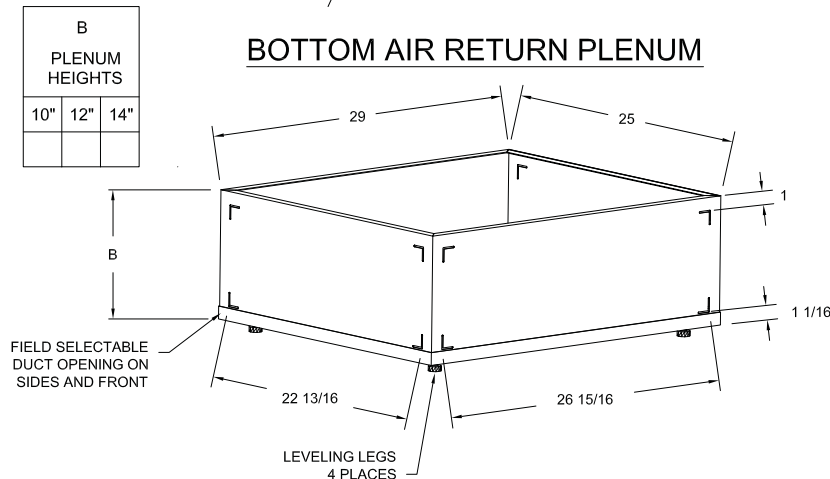
**NOTE:**  
ALLOW 1/8" CLEARANCE FOR SCREW HEADS AND PROVIDE SUFFICIENT TOLERANCE TO ALLOW FOR ANY DISCREPANCIES AND/OR IRREGULARITIES IN STRUCTURE

A SLEEVE DEPTHS				
6"	8"	10"	12"	14"

## OPTIONAL SKYPAK II SIDE RETURN FILTER FRAME



## BOTTOM AIR RETURN PLENUM



B PLENUM HEIGHTS		
10"	12"	14"

## GENERAL

All SKYPAK models feature a complete heating, cooling, and air handling system in one self-contained assembly. Units are shipped completely factory assembled, tested, pre-charged, and ready for field connection. The unit casing is made entirely of heavy gauge galvanized steel. The cabinet interior is fully insulated with foil faced fiberglass insulation, firmly attached with nonflammable adhesive, to prevent heat loss or gain to the interior space. All operating components of the mechanical systems are completely enclosed in the insulated cabinet to minimize sound transmission.

Units are designed for freestanding floor mounting, in conjunction with the companion wall sleeve. Airflow orientation is upflow, top discharge. Units may be ordered in either left hand, or right hand, return air configuration. The return air opening is field selectable for side intake or bottom intake; a pre-scored intake-opening panel requires removal from either the evaporator side panel, or the unit bottom panel.

An optional bottom return air plenum is available to allow alternate return air duct layouts. The outdoor wall grille is available in five standard colors, or may be custom color matched.

## COOLING SECTION

All models utilize high efficiency rotary or Scroll type compressors. Each refrigeration circuit is thoroughly evacuated, and fully charged with R-410A refrigerant before shipment. Internal compressor-motor overload protection is standard. Compressors are mounted on rubber isolators to minimize vibration transmission. A compressor start assist device is included to ensure reliable compressor operation in the event of low supply voltage.

The refrigeration circuit includes an adjustable thermal expansion valve, liquid line filter drier, a high refrigerant pressure switch (manual reset), and service gauge ports. The evaporator and condenser coils are constructed of internally enhanced copper tubes mechanically bonded to rippled aluminum plate fins. The evaporator coil is employed in a blow-through configuration. Large evaporator coil face area maximizes efficiency and cooling performance.

## INDOOR AND OUTDOOR FANS

Forward curved, double inlet and double width, direct-drive centrifugal blowers are used for evaporator and condenser air movement. Large diameter wheels are employed to provide required airflow performance at minimum sound levels. Blower wheels are fabricated of galvanized steel. Fan motors are PSC types, with minimum three speeds on the evaporator motor. The PSC motors feature permanently lubricated bearings and internal thermal overload protection.

## DIRECT VENT GAS FURNACE SECTION

The gas-fired heat exchanger is a tubular aluminized steel design with no-weld construction. The burner section is of the in-shot design, with hot surface ignition. All air for combustion is drawn through the outside wall grille. Flue gases are power vented through the upper wall grille section. Furnace controls include a high limit switch, flame roll out sensor, ignition sensor, ventor motor safety switch, and an indoor blower control module. The unit controls are factory wired to a low voltage terminal strip, for connection to a single stage heat/cool thermostat.

## ELECTRIC FURNACE SECTION

Electric heating elements consist of resistance type nickel-chrome wire supported in ceramic holders. The bare wire elements are exposed directly in the air stream resulting in instant heat transfer, lower element temperatures, and long service life. Each heavy gauge element frame is equipped with an auto reset limit control, and elements are individually removable for service. Relays bring the heating elements on and off, in sequence and equal increments, with a time delay between each element. In addition, relays initiate or stop blower operation, or change blower speed. The unit controls are factory wired to a low voltage terminal strip, for connection to single stage heat/cool thermostat.

## HOT WATER HEAT SECTION

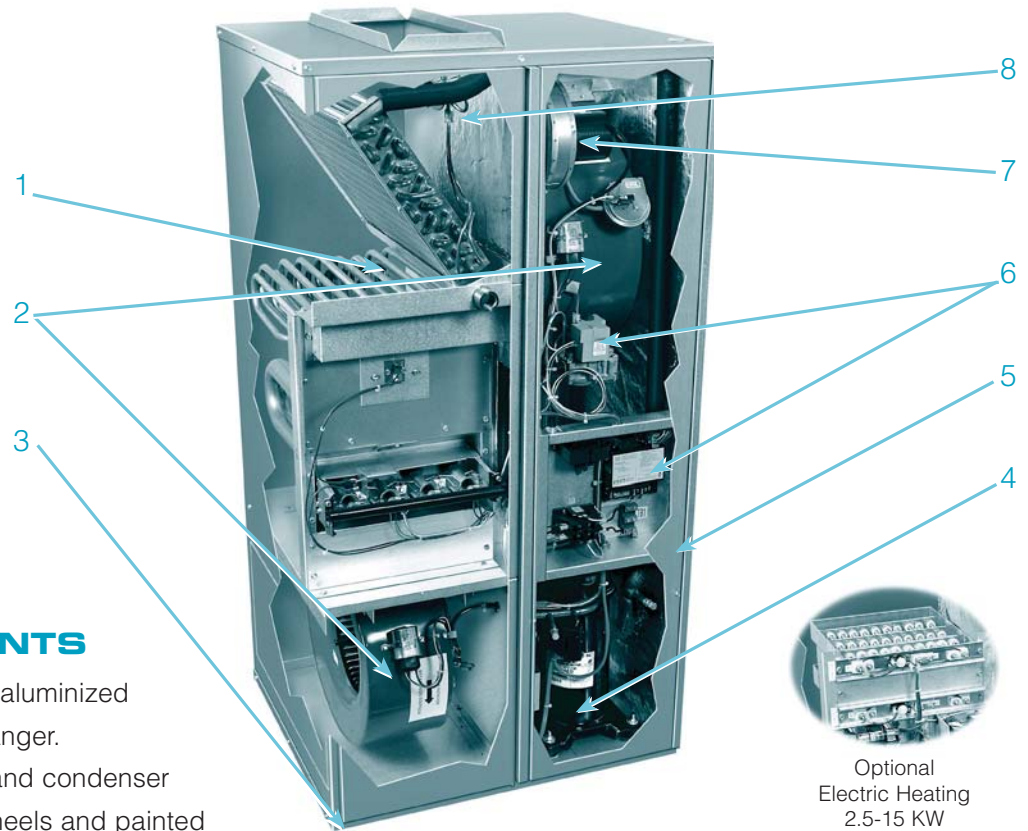
The two-row hot water heating coil is constructed of copper tubes mechanically bonded to aluminum plate fins. The large coil face area ensures maximum heat transfer from the hot water supply. An optional circulating pump may be factory installed to provide control of the water flow, simultaneous with blower operation. The unit controls are factory wired to a low voltage terminal strip, for connection to a single stage heat/cool thermostat.

## FILTERS

All models are shipped with an internal, suspended wire-frame style filter rack, for use with replaceable filter media. A one-inch thick fiberglass media filter is factory provided.

## ACCESSORIES

- Wall Sleeve (Standard depths = 6, 8, 10, 12, 14 inches)
- Exterior Grille (Five standard colors)
- Bottom Return-Air Plenum
- External Flat Panel Filter Rack – Side Return Only (allows use of higher efficiency filters; field supplied)
- Low Ambient Cooling Kit (allows compressor operation to 45°F outdoor ambient)
- Outdoor Temperature Lockout Thermostat (prevents compressor operation below 60°F outdoor ambient)
- Hi-Altitude Furnace Kit (required above 2000 feet elevation) (Canada Only)
- Propane Conversion Kit



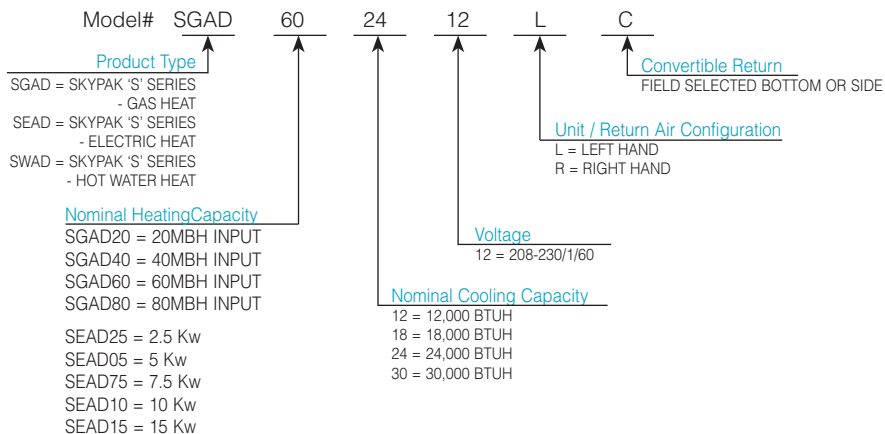
Left Hand Configuration Illustrated

Optional Electric Heating 2.5-15 KW

## KEY COMPONENTS

1. Primary and secondary aluminized steel tubular heat exchanger.
2. Centrifugal evaporator and condenser blowers, zinc coated wheels and painted housing for rust resistance.
3. Available in left hand or right hand configuration.
4. High efficiency compressor.
5. Heavy gauge galvanized steel cabinet, fully insulated.
6. Honeywell "smart" valve c/w hot surface igniter.
7. Power ventor.
8. Thermal expansion valve.

## SKYMARK MODEL # NOMENCLATURE CODE





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