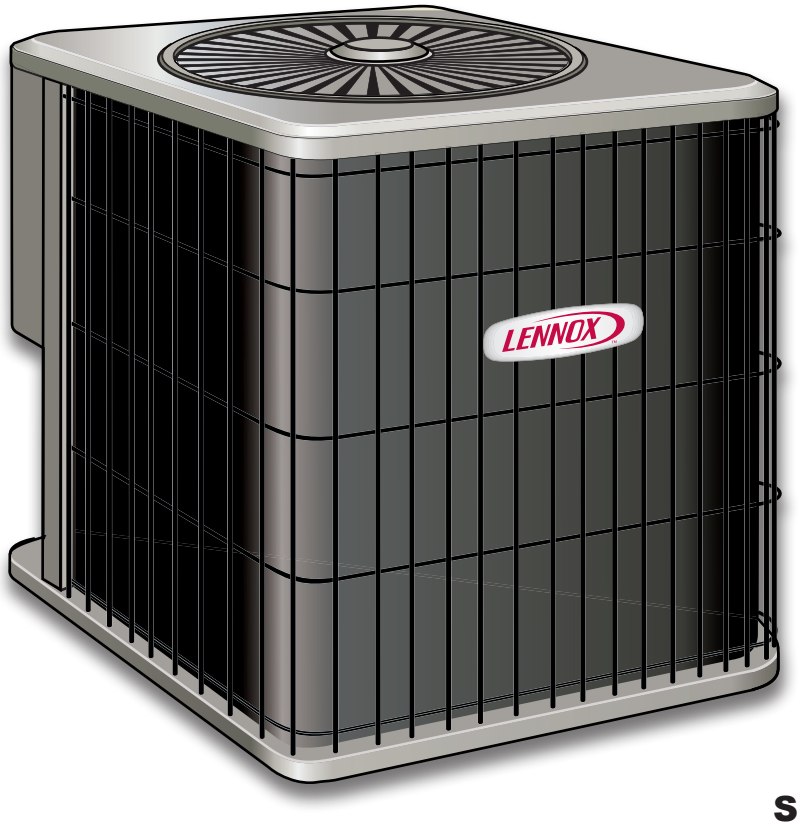
TP

T-CLASS™ SPLIT SYSTEM UNITS
Standard Efficiency - R-410A - 60 HZ

PRODUCT SPECIFICATIONS

Bulletin No. 210849
January 2018
Supersedes Bulletin No. 210802



SEER up to 14.50
HSPF up to 8.70
3 to 4 Tons
Cooling Capacity - 34,800 to 42,000 Btuh
Heating Capacity - 32,200 to 40,000 Btuh

MODEL NUMBER IDENTIFICATION

T P A 036 S 4 N 4 1 Y

- **Brand/Family**
  T = T-Class™ Product Line
- **Unit Type**
  P = Heat Pump Outdoor Unit
- **Major Design Sequence**
  A = 1st Generation
  B = 2nd Generation
- **Nominal Cooling Capacity – Tons**
  036 = 3 Tons
  042 = 3.5 Tons
  048 = 4 Tons
- **Cooling Efficiency**
  S = Standard Efficiency
- **Refrigerant Type**
  4 = R-410A
- **Part Load Capability**
  N = No part load, Single Circuit
- **Coil Type**
  4 = Four-Sided
- **Minor Design Sequence**
  1 = 1st Revision
  2 = 2nd Revision
  3 = 3rd Revision
- **Voltage**
  Y = 208/230V-3 phase-60hz
  G = 460V-3 phase-60hz

CONTENTS

NOTE!

For the latest AHRI System Matches please see the **Residential Matchup Tool** at www.LennoxPros.com or see the separate document **AHRI Heat Pump Matches** that contains all outdoor unit matches.

WARRANTY

Compressor - Limited warranty for five years. installations.

All other covered components - One year.
Refer to Lennox Equipment Limited Warranty certificate included with unit for specific details.

APPROVALS

Certified in Accordance with the USE certification program, which is based on AHRI Standard 210/240-2008.

Sound rated in Lennox reverberant sound test room in Accordance with test conditions included in AHRI Standard 270-2008.

Tested in the Lennox Research Laboratory environmental test room.

Rated According to U.S. Department of Energy (DOE) test procedures.

Units and components within bonded for grounding to meet safety standards for servicing required by UL, NEC and CEC.

Units are ETL certified for the U.S. and Canada.

ISO 9001 Registered Manufacturing Quality System.

APPLICATIONS

Sound levels as low as 76 dB

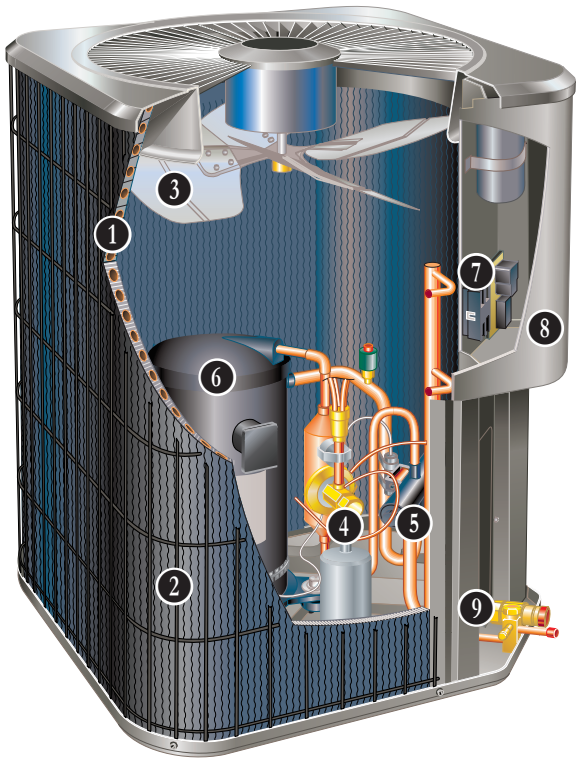
3 through 4 tons.

Three phase power supply.

Vertical air discharge allows concealment behind shrubs at grade level or out of sight on a roof.

Designed for applications with remotely located indoor air handler units or matching indoor coils with gas furnaces (dual fuel applications).

See Indoor Coils and Air Handlers sections for indoor unit data.



Units shipped completely factory assembled, piped and wired. Each unit is test operated at the factory insuring proper operation.

Installer must set outdoor unit, connect refrigerant lines and make electrical connections to complete job.

For expanded ratings, see www.LennoxPros.com

REFRIGERATION SYSTEM

R-410A Refrigerant
Non-chlorine, ozone friendly, R-410A.

Unit is factory pre-charged with refrigerant. See Specification table. Total system refrigerant charge is dependant on outdoor unit size, indoor unit size and refrigerant line length.

Refer to Installation Instructions for "*Indoor Unit Match-Up and Sub-Cooling Charge Levels*" to determine correct amount of charge required.

1 **Copper Tube/Enhanced Fin Coil**
Lennox designed and fabricated coil.

Ripple-edged aluminum fins.

Copper tube construction.

Lanced fins provide maximum exposure of fin surface to air stream resulting in excellent heat transfer.

Fin collars grip tubing for maximum contact area.

Flared shoulder tubing connections/silver soldering construction.

Coil is factory tested under high pressure to ensure leakproof construction.

Entire coil is accessible for cleaning.

2 PVC coated steel wire coil guard furnished.

REFRIGERATION SYSTEM (continued)

3 Outdoor Coil Fan

Direct drive fan moves large air volumes uniformly through entire condenser coil for high refrigerant cooling and heating capacity.

Vertical air discharge minimizes operating sounds and eliminates damage to lawn and shrubs.

Fan motor has ball bearings and is inherently protected.

Motor totally enclosed for maximum protection from weather, dust and corrosion.

Rain shield on motor provides additional protection from moisture.

Louvered steel top fan guard furnished as standard.

Fan service access accomplished by removal of top panel.

4 Expansion Valve - Outdoor Unit

Designed and sized specifically for use in heat pump system.

Sensing bulb is located on the suction line between the reversing valve and the compressor to sense evaporator suction temperature in any cycle.

Factory installed and piped.

High Capacity Liquid Line Drier

Factory installed in the liquid line, the drier traps moisture or dirt that could contaminate the refrigerant system.

100% molecular-sieve, bead type bi-flow drier.

High Pressure Switch

Protects the system from high pressure conditions that can be a result of fan failure or a blocked/dirty coil.

Automatic reset.

Low Pressure Switch

Helps protect the compressor from damage due low refrigerant charge conditions.

SPST, normally-closed switch, automatic reset switch mounted on vapor line.

5 Reversing Valve

4-way interchange reversing valve effects a rapid change in direction of refrigerant flow resulting in quick changeover from cooling to heating and vice versa.

Valve operates on pressure differential between outdoor unit and indoor unit of the system. Factory installed.

Optional Accessories

Refrigerant Line Kits

Refrigerant lines (suction & liquid) are shipped refrigeration clean. Lines are cleaned, dried, pressurized and sealed at factory.

Suction line fully insulated.

Lines are stubbed at both ends.

Not available for -060 models. Must be field fabricated.

Check/Expansion Valve Kits

Must be ordered separately and field installed on certain indoor units. See Check/Expansion Valve Kit Usage Table.

Chatleff-style fittings.

COMPRESSOR

6 Scroll Compressor

Compressor features high efficiency with uniform suction flow, constant discharge flow and high volumetric efficiency and quiet operation.

Compressor consists of two involute spiral scrolls matched together to generate a series of crescent shaped gas pockets between them.

During compression, one scroll remains stationary while the other scroll orbits around it.

Gas is drawn into the outer pocket, the pocket is sealed as the scroll rotates.

As the spiral movement continues, gas pockets are pushed to the center of the scrolls. Volume between the pockets is simultaneously reduced.

When pocket reaches the center, gas is now at high pressure and is forced out of a port located in the center of the fixed scrolls.

During compression, several pockets are compressed simultaneously resulting in a smooth continuous compression cycle.

Continuous flank contact, maintained by centrifugal force, minimizes gas leakage and maximizes efficiency.

Scroll compressor is tolerant to the effects of slugging and contaminants. If this occurs, scrolls separate, allowing liquid or contaminants to be worked toward the center and discharged.

Low gas pulses during compression reduces operational sound levels.

Compressor motor is internally protected from excessive current and temperature.

Muffler in discharge line reduces operating sound levels.

Compressor is installed in the unit on resilient rubber mounts for vibration free operation.

Compressor Crankcase Heater

Protects against refrigerant migration that can occur during low ambient operation.

Optional Accessories

Compressor Sound Cover

A reinforced vinyl compressor cover containing a 1-1/2 inch thick batt of fiberglass insulation.

All open edges are sealed with a one-inch wide hook and loop fastening tape.

CONTROLS

❼ **Defrost Control**

Time/temperature defrost control is furnished as standard equipment.

Control initiates a defrost cycle every 30, 60 or 90 minutes of compressor “on” time at outdoor coil temperatures below 42°F (factory setting 90 minutes).

Anti-short cycle, timed-off control incorporated into the board.

High and low pressure switch monitoring with five-trip lockout.

Diagnostic LED’s furnished as an aid in troubleshooting.

Conveniently located in control box.

Optional Accessories

L Connection® Commercial Building Automation System

Complete building automation control system for single or multi-zone applications. Options include local interface, software for local or remote communication, and hardware for networking other control functions. See L Connection Network Product Specifications Bulletin for details.

Compressor Low Ambient Cut-Off

Non-adjustable switch (low ambient cut-out) prevents compressor operation when outdoor temperature is below 35°F.

Freezestat

Installs on or near the vapor line of the indoor coil or on the suction line.

Senses suction line temperature and cycles the compressor off when suction line temperature falls below it’s setpoint.

Opens at 29°F and closes at 58°F.

Indoor Blower Off Delay Relay

Delays the indoor blower-off time during the cooling cycle.

See AHRI System Matches for usage.

Low Ambient Kit

Heat pump will operate satisfactorily in the cooling mode down to 45°F outdoor air temperature without any additional controls.

Two low ambient control options are available for field installation:

1. Low Ambient Control Kit (30°F) - Allows unit operation down to 30°F.
2. Low Ambient Control (0°F) - Allows unit operation down to 0°F. Requires Speed Control and Weatherproof Kit (ordered separately). Available for 208/230V models only.

NOTE - Freezestat should be installed on compressors equipped with a low ambient kit.

Mild Weather Kit

Heat pump units operate satisfactorily in the heating mode at outdoor air temperatures up to 75°F.

Mild Weather Kit can be field installed, allowing heating operation above 75°F.

Monitor Kit - Service Light

Contains ambient compensating thermistor and service light thermostat.

For use with thermostats requiring input for indicator lights.

Outdoor Thermostat Kit

An outdoor thermostat can be used to lock out some of the electric heating elements on indoor units where two stage control is applicable.

Outdoor thermostat maintains the heating load on the low power input as long as possible before allowing the full power load to come on the line.

Thermostat kit and mounting box must be ordered separately.

Thermostat

Thermostat not furnished with unit. See Thermostat bulletins in Controls Section and Lennox Price Book.

FEATURES

CABINET

8 Heavy gauge steel cabinet with five station metal wash process.

Powder paint finish provides superior rust and corrosion protection.

Control box is conveniently located with all controls factory wired.

Corner patch plate allows access to compressor components.

Drainage holes are provided in base section for moisture removal.

PermaGuard™ Unit Base
Durable zinc-coated base section resists rust and corrosion.

9 **Refrigerant Line Connections, Electrical Inlets, Service Valves**
Sweat connection vapor and liquid lines are located on corner of unit cabinet.

Fully serviceable brass service valves prevent corrosion and provide access to refrigerant system. Vapor valve can be fully shut off, while liquid valve may be front seated to manage refrigerant charge while servicing system.

Refrigerant line connections and field wiring inlets are located in one central area of cabinet for easy access. See dimension drawing.

Optional Accessories

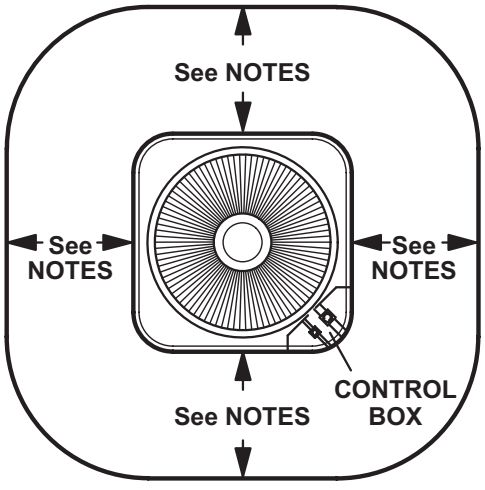
Hail Guards
Constructed of louvered, heavy-gauge steel painted to match cabinet.

Surrounds unit on all four sides to prevent damage to the coil.

Unit Stand-Off Kit
Black high density polyethylene feet are available to raise unit off of mounting surface away from damaging moisture.

Four feet are furnished per order number.

INSTALLATION CLEARANCES - INCHES (MM)



NOTES:

Service clearance of 30 in. (762 mm) must be maintained on one of the sides adjacent to the control box.

Clearance to one of the other three sides must be 36 in. (914 mm)

Clearance to one of the remaining two sides may be 12 in. (305 mm) and the final side may be 6 in. (152 mm).

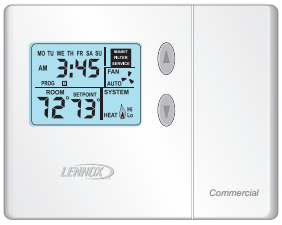
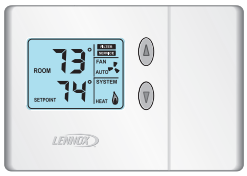
A clearance of 24 in. must be maintained between two units.

48 in. (1219 mm) clearance required on top of unit.

OPTIONAL CONVENTIONAL TEMPERATURE CONTROL SYSTEMS

Item	Model No.	Catalog No.
COMFORTSENSE® 7500 COMMERCIAL 7-DAY PROGRAMMABLE THERMOSTAT		
 • Four-Stage Heating / Two-Stage Cooling Universal Multi-Stage • Intuitive Touchscreen Interface • Remote Indoor Temperature Sensing with Averaging • Outside or Discharge Air Temperature Display • Full Seven-Day Programming • Four Time Periods Per Day • Occupancy Scheduling with Economizer Relay Control • Away Mode • Holiday Scheduling • Smooth Setback Recovery (SSR) • Performance Reports • Notifications/Reminders • Dehumidification/Humiditrol® Control for Split Systems and Rooftop Units • Economizer Relay Control • Backlit Display • Wallplate Furnished	C0STAT06FF1L	**13H15**
Optional Accessories		
[1] Remote non-adjustable wall mount 20k temperature sensor	C0SNZN01AE2-	**47W36**
[1] Remote non-adjustable wall mount 10k temperature sensor	C0SNZN73AE1-	**47W37**
Remote non-adjustable discharge air (duct mount) temperature sensor	C0SNDC00AE1-	**19L22**
Outdoor temperature sensor	C0SNSR03AE1-	**X2658**
Locking cover (clear)	C0MISC15AE1-	**39P21**

[1] Remote sensors can be applied in any of the following combinations:
One Sensor - (1) 47W36
Two Sensors - (2) 47W37
Three Sensors - (2) 47W36 and (1) 47W37
Four Sensors - (4) 47W36
Five Sensors - (3) 47W36 and (2) 47W37

COMFORTSENSE® 3000 COMMERCIAL 5-2 DAY PROGRAMMABLE THERMOSTAT		
 • Two-Stage Heating / Two-Stage Cooling Conventional Systems • Intuitive Interface • 5-2 Day Programming • Program Hold • Remote Indoor Temperature Sensing • Smooth Setback Recovery (SSR) • Economizer Relay Control • Maintenance/Filter/Service Reminders • Backlit Display • Wallplate Furnished • Simple Up and Down Temperature Control.	C0STAT05FF1L	**11Y05**
Optional Accessories		
Remote non-adjustable wall mount 10k averaging temperature sensor	C0SNZN73AE1-	**47W37**
Optional wall mounting plate	C0MISC17AE1-	**X2659**
DIGITAL NON-PROGRAMMABLE THERMOSTAT		
 • One-Stage Heating / Cooling Conventional Systems • Intuitive Interface • Automatic Changeover • Backlit Display • Simple Up and Down Temperature Control.	C0STAT12AE1L	**51M32**
Optional Accessories		
Outdoor temperature sensor	C0SNSR04AE1-	**X2658**
Optional wall mounting plate	C0MISC17AE1-	**X2659**

SPECIFICATIONS

General Data		**Model No.**	**TPA036S4**		**TPA042S4**		**TPA048S4**	
		Nominal Tonnage	3		3.5		4	
Connections (sweat)		Liquid line o.d. - in.	3/8		3/8		3/8	
		Vapor line o.d. - in.	7/8		7/8		7/8	
[1] **Refrigerant (R-410A) furnished**			6 lbs. 6 oz.		7 lbs. 11 oz.		9 lbs. 11 oz.	
Outdoor Coil	Net face area sq. ft.	Outer coil	21.00		24.50		18.67	
		Inner coil	- - -		- - -		18.01	
		Tube diameter - in.	5/16		5/16		5/16	
		Number of rows	1		1		2	
		Fins per inch	22		22		22	
Outdoor Fan		Diameter - in.	22		22		22	
		Number of blades	3		4		4	
		Motor hp	1/6		1/4		1/4	
		Cfm	2890		3520		3375	
		Rpm	847		844		833	
		Watts	200		285		290	
Shipping Data - lbs. 1 package			187		223		236	

ELECTRICAL DATA

		Line voltage data - 60 hz - 3ph	208/230V	460V	208/230V	460V	208/230V	460V
		[2] Maximum overcurrent protection (amps)	20	15	30	15	25	15
		[3] Minimum circuit ampacity	11.9	5.6	18.6	8.4	15.5	7.8
Compressor		Rated load amps	8.7	4.0	13.5	6.0	11.0	5.5
		Locked rotor amps	70	31	88	44	86	37
		Power factor	0.85	0.84	0.83	0.81	0.90	0.92
Outdoor Fan Motor		Full load amps	1.0	0.6	1.7	0.9	1.7	0.9
		Locked rotor amps	1.9	1.0	3.1	2.3	3.1	2.3

OPTIONAL ACCESSORIES - ORDER SEPARATELY

Compressor Low Ambient Cut-Off		**45F08**	•	•	•
Compressor Sound Cover		**69J03**	•	•	•
Freezestat	3/8 in. tubing	**93G35**	•	•	•
	5/8 in. tubing	**50A93**	•	•	•
Hail Guards	28 x 28 x 36 in.	**14X14**	•		
	28 x 28 x 42 in.	**14X17**		•	
	28 x 28 x 32 in.	**14X19**			•
Indoor Blower Off Delay Relay		**58M81**	•	•	•
[4] **Low Ambient Kit (30°F)**		**54M89**	•	•	•
[4] **Low Ambient Control (0°F) 208/230V only**	Speed Control	**X5867**	•	•	•
	Weatherproof Kit	**56N41**	•	•	•
Low Pressure Switch Bypass Thermostat		**13W07**	•	•	•
Mild Weather Kit		**33M07**	•	•	•
Monitor Kit - Service Light		**76F53**	•	•	•
Outdoor Thermostat Kit	Thermostat	**56A87**	•	•	•
	Mounting Box	**31461**	•	•	•
Refrigerant Line Sets	L15-65-30, L15-65-40, L15-65-50		•	•	•
Unit Stand-Off Kit		**94J45**	•	•	•

NOTE - Extremes of operating range are plus 10% and minus 5% of line voltage.

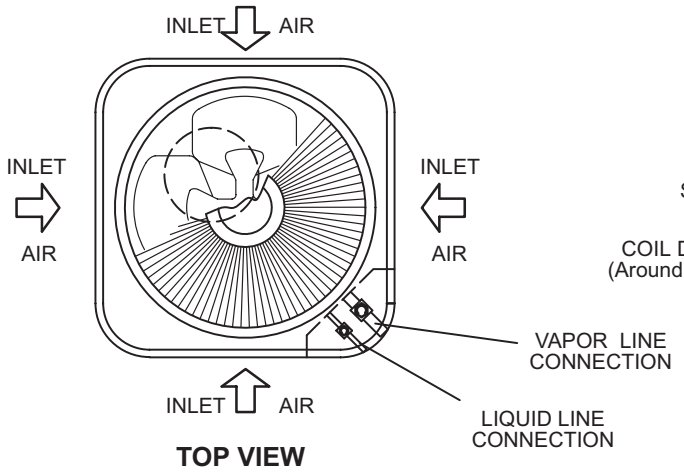
[1] Refrigerant charge sufficient for 15 ft. length of refrigerant lines.

[2] HACR type circuit breaker or fuse.

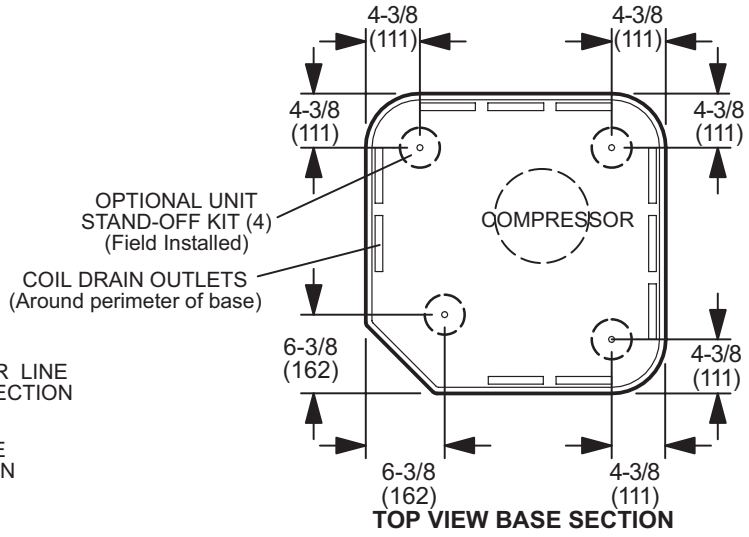
[3] Refer to National or Canadian Electrical Code manual to determine wire, fuse and disconnect size requirements.

[4] Freezestat is recommended with Low Ambient Control.

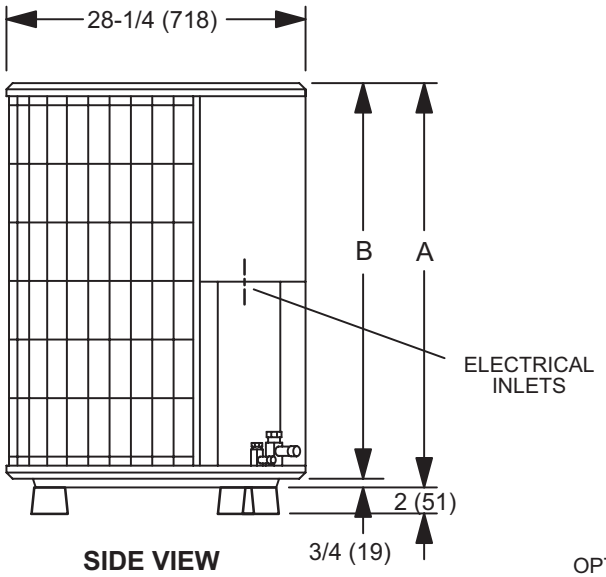
DIMENSIONS - INCHES (MM)



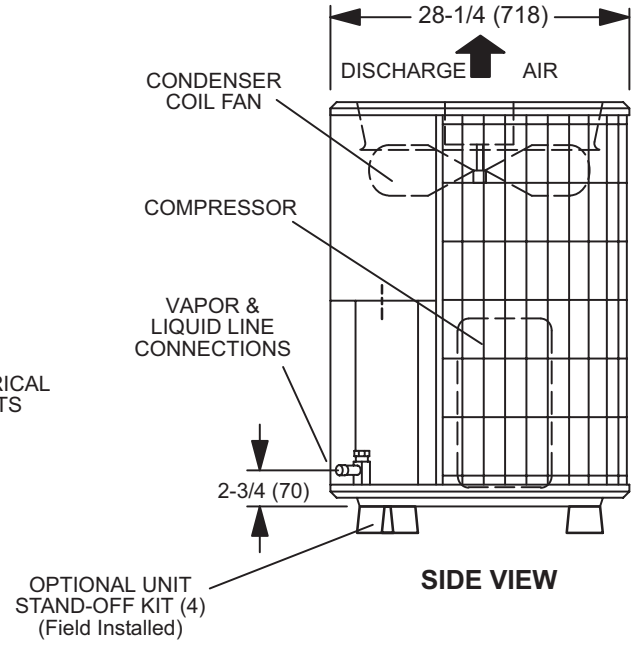
TOP VIEW



TOP VIEW BASE SECTION



SIDE VIEW



SIDE VIEW

Model No.	A		B	
	inches	mm	inches	mm
TPA036S4	37-1/4	946	36-1/2	927
TPA042S4	43-1/4	1099	42-1/4	1073
TPA048S4	33-1/4	845	32-1/2	826

SOUND DATA

[1] Unit Model No.	Octave Band Linear Sound Power Levels dB, re 10^{-12} Watts Center Frequency - HZ							[1] Sound Rating Number (dB)
	125	250	500	1000	2000	4000	8000	
TPA036S4	69.5	70.5	71.5	69.5	68.5	62.5	60.5	76
TPA042S4	75.5	79.5	79.5	75.5	70	63.5	58.5	80
TPA048S4	75.5	74.5	75	73.5	70	66.5	63.5	80

NOTE - the octave sound power data does not include tonal correction.

[1] Tested according to AHRI Standard 270-2008 test conditions.

TXV USAGE

Model No.	Order No.
TPA036S4	**12J19**
TPA042S4	**12J20**
TPA048S4	**12J20**

CX34 upflow coils and all Lennox air handlers are shipped with a factory installed TXV. In most cases, no change out of the valve is needed.

C35 coils and all horizontal and downflow coils are shipped without a TXV. The TXV must be ordered and field installed.

AHRI STANDARD 210/240

Cooling or heating capacities are net values, including the effects of blower motor heat, and do not include supplementary heat. Power input is the total power input to the compressor(s) and fan(s), plus any controls and other items required as part of the system for normal operation.

Units which do not have an indoor air-circulating blower furnished as part of the model, i.e., split system with indoor coil only, is established by subtracting from the total cooling capacity 1250 Btu/h per 1,000 cfm, and by adding the same amount to the heating capacity. Total power input for both heating and cooling is increased by 365 W per 1,000 cfm of indoor air circulated.

NOTE!

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REVISIONS

Sections	Description of Change
Document	Moved all AHRI Matches to a separate document.

LENNOX®

Visit us at www.lennox.com

For the latest technical information, www.lennoxcommercial.com

Contact us at 1-800-4-LENNOX

NOTE - Due to Lennox' ongoing commitment to quality, Specifications, Ratings and Dimensions subject to change without notice and without incurring liability.
Improper installation, adjustment, alteration, service or maintenance can cause property damage or personal injury.
Installation and service must be performed by a qualified installer and servicing agency.