



R-454B Outdoor Split System Heat Pump - XH4 3-phase



SEER2 [14.3]
 EER2 [10 to 11]
 HSPF IV [7.5]
 Cooling capacity [34,000 to 56,000]
 Heating capacity [33,500 to 57,500]

Description

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The XH4 3-phase models are part of our successful split system heat pump lineup. These outdoor units are optimized for 14.3 SEER2/7.5 HSPF2 Minimum Efficiency in all US Regions, and are specifically designed to be matched with our residential indoor coils, furnaces, and air handlers to provide a complete system solution.

Figure 1: Installation map

FOR INSTALLATION IN ALL US REGIONS AND CANADA



Due to continuous product improvement, specifications are subject to change without notice.

Visit us on the web at www.simplygettingthejobdone.com.

Additional rating information can be found at www.ahridirectory.org.

Warranty Info

Description	Compressor	Parts
R-454B models: XC3 three-phase, XH4 three-phase	5 years	1 year

Tabular Data Sheet

LX Series Split-System Heat Pumps

14.3 SEER2 – R-454B – Three-Phase – 3 nominal ton to 5 nominal ton

Models: XH436 to 60

Physical and electrical data

Unit model		XH436E3S11	XH448E3S11	XH460E3S11	XH436E4S11	XH448E4S11	XH460E4S11
Unit supply voltage		208-230 V, 3 Ph, 60 Hz			460 V, 3 Ph, 60 Hz		
Normal voltage range (V) ¹		187 to 252			432 to 504		
Minimum circuit ampacity (A)		11.42	18.21	19.27	5.73	9.5	9.21
Maximum overcurrent device (A) ²		15	30	30	15	15	15
Minimum overcurrent device (A) ³		15	20	20	15	15	15
Compressor	Type	Two-stage scroll	Two-stage scroll	Two-stage scroll	Two-stage scroll	Two-stage scroll	Two-stage scroll
	Rated load (A)	8.58	13.53	14.12	4.03	7.04	6.85
	Locked rotor (A)	70.0	113.4	150	39.0	54.8	58
Crankcase heater		No	No	No	No	No	No
Factory external discharge muffler		Yes	Yes	Yes	Yes	Yes	Yes
Fan diameter (in.)		22	24	24	22	24	24
Fan motor	Type	PSC	PSC	PSC	PSC	PSC	PSC
	Rated HP	1/8	1/4	1/4	1/4	1/4	1/4
	Rated load (A)	0.70	1.30	1.30	0.69	0.65	0.65
	Nominal RPM	1075	850	850	1100	850	850
	Nominal CFM	3200	4100	4000	3200	4100	4000
Coil	Face area (sq ft)	17.9	23.8	23.8	17.9	23.8	23.8
	Rows deep	1	1	2	1	1	2
	Fins per inch	22	22	18	22	22	18
Liquid refrigerant piping outdoor (field-installed)		3/8	3/8	3/8	3/8	3/8	3/8
Vapor refrigerant piping outdoor (field-installed) ⁴		3/4	7/8	1 1/8‡	3/4	7/8	1 1/8‡
Unit charge (lb - oz) ⁵		5	8 - 6	10 - 5	5	8 - 6	10 - 5
Charge (oz/ft)		0.57	0.60	0.67	0.57	0.60	0.67
Operating weight (lb)		165	221	239	165	221	239

1. Rated in accordance with AHRI Standard 110-2012, utilization range A.

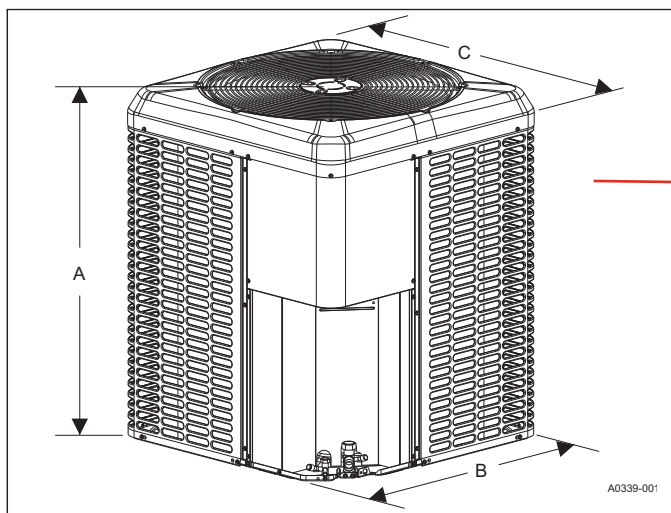
2. Dual element fuses or HACR circuit breaker. Maximum allowable overcurrent protection.

3. Dual element fuses or HACR circuit breaker. Minimum recommended overcurrent protection.

4. For applications with non-standard vapor line sizes, refer to the *Applications and Accessories* section in the *Technical Guide*.

5. The unit charge is correct for the outdoor unit, smallest matched indoor unit, and 15 ft of refrigerant tubing. For tubing lengths other than 15 ft, add or subtract the amount of refrigerant, using the difference in actual refrigerant piping length (not the equivalent length) multiplied by the per foot value.

‡ The adapter fitting must be field-installed for the required 1 1/8 in. refrigerant piping.



Dimensions

Unit model	Dimensions (in.)			Refrigerant connection service valve size (in.)	
	A	B	C	Liquid	Vapor
XH436E3S11	36 1/4	29 1/4	29 1/4	3/8	3/4
XH448E3S11	39 1/2	35 1/4	31 3/4		7/8
XH460E3S11	39 1/2	35 1/4	31 3/4		7/8‡
XH436E4S11	36 1/4	29 1/4	29 1/4		3/4
XH448E4S11	39 1/2	35 1/4	31 3/4		7/8
XH460E4S11	39 1/2	35 1/4	31 3/4		7/8‡

Notes:

All dimensions are in inches and are subject to change without notice.

The overall height is from the bottom of the base pan to the top of the fan guard.

The overall length and width include screw heads.

‡ The adapter fitting must be field-installed for the required 1 1/8 in. of refrigerant piping.

System charge for various matched systems

Charge adjustment	Upflow or horizontal left			Downflow or horizontal right		
Outdoor unit	36	48	60	36	48	60
Required indoor metering device ^{1,2}	5C1	5C1	5C1	5C1	5C1	5C1
Indoor unit ^{3,4,5}	Additional charge (oz)					
CT(F,M,U)30°C	—	—	—	—	—	—
CT(F,M,U)30°D	0	—	—	-28	—	—
CT(F,M,U)36°D	0	—	—	-28	—	—
CT(F,M,U)48°F	4	—	—	8	—	—
CT(F,M,U)60°G	—	0	—	—	-5	—
CT(F,M,U)60°H	—	1	0	—	-4	-40
CT(F,M,U)60°J	—	—	0	—	—	-11
JHE24°C	—	—	—	—	—	—
JHE30°D	0	—	—	-28	—	—
JHE36°D	0	—	—	-28	—	—
JHE42°F	4	—	—	8	—	—
JHE48°G	—	0	—	—	-5	—
JHE60°H	—	1	0	—	-4	-40
JHE60°J	—	—	0	—	—	-11
JHC24°C	—	—	—	—	—	—
JHC36°D	0	—	—	-28	—	—
JHC42°F	4	—	—	8	—	—
JHC48°G	—	0	—	—	-5	—
JHC60°H	—	1	0	—	-4	-40
JHC60°J	—	—	0	—	—	-11

Note: Some of the combinations shown in this table require advanced main air circulating fan indoor product. For approved coil-only matches, refer to the *System capacity* tables in the *Technical Guide*.

- For applications that require a TXV, use S1-1TVM*** series kit.
- Use a TXV kit with these indoor units to obtain system performance.
- Systems matched with furnaces or air handlers not equipped with blower-off delays may require blower time delay.
- Do not use CTF or CTU coils in horizontal applications.
- The charge adders shown above do not indicate that coils are rated for every application. Refer to the performance data tables in the *Technical Guide* for actual performance for specified system matches. Obtain certified system ratings from www.ahridirectory.org.

Note: A negative number indicates that you remove that charge.

Charging

- Check the factory unit charge listed on the unit nameplate to verify the refrigerant charge for the outdoor unit, the smallest matched indoor unit, and the 15 ft of interconnecting refrigeration piping.
- Verify the indoor metering device and additional charge required for the specific matched indoor unit in the system using the table above.
- Add additional charge for the amount of interconnecting refrigeration piping greater than 15 ft at the rate specified in the *Physical and electrical data* table.
- For installations requiring additional charge, weigh in refrigerant for the specific matching indoor unit and actual refrigeration piping length.
- After weighing in the charge adders for the matched indoor unit and refrigeration piping, verify the system operation against the temperatures and pressures in the charging chart for the outdoor unit. Locate the charging charts on the outdoor unit and also in the *Service Data Application Guide* on www.simplygettingthejobdone.com. Follow the subcool or superheat charging procedure in the *Installation Manual* according to the type of indoor metering device in the system, and allow 10 min after each charge adjustment for the system operation to stabilize. Record the charge adjustment made to match the charging chart.
- Permanently stamp the unit nameplate with the total system charge defined as follows: total system charge = base charge (as shipped) + charge adder for matched indoor unit + charge adder for actual refrigeration piping length + charge adjustments to match the charging chart.