

# 4SHP20LX

## PRODUCT SPECIFICATIONS

UP TO 20 SEER  
VARIABLE CAPACITY HEAT PUMP

FORM NO. 4SHP20LX-100 (09/2015)



**COMFORT SYNC**  
COMMUNICATING THERMOSTAT ENABLED

### INSTALLED BY THE BEST

- Specialized training is required for dealers offering the 20LX
- Installer training available through authorized distributors

### COMPRESSOR

- Inverter-driven Scroll Compressor for true variable capacity operation, precision environmental control, and exceptional energy savings
- R410A refrigerant
- Heavy-duty compressor sound blanket for quiet operation
- Internally protected against high temperature motor overload conditions

### CABINET

- Individual metal louvered panels remove easily for coil cleaning and service
- Specialized corner-mounted controls for easy service
- Baked polyester paint finished over galvanized steel for maximum durability
- Removable PVC coated wire fan discharge grill
- Removable service panel for internal access

### COILS

- Enhanced tube-and-fin coil design featuring MHT™ Technology
- Raised coil prevents debris from impeding airflow

### DESIGN

- Designed to perform in temperatures up to 125°F
- Designed to perform in temperatures down to 0°F

### COMPONENTS

- 45-degree offset gauge ports for easy service
- Service valves positioned for quick installation and service
- Variable speed condenser fan motor
- Swept wing fan blade for quiet operation
- Factory installed crankcase heater
- Factory installed TXV for excellent refrigeration control
- Factory installed high and low pressure switches
- Thread-on pressure switches for simple, quick service
- Fan orifice for smoother airflow and sound level reduction
- Specialized sensors monitor ambient, liquid line, and coil temperatures for precision system control
- Charged for 15 feet of line set
- Discharge muffler for quiet operation
- Demand defrost for increased energy efficiency
- Quiet Shift™ capable to reduce noise during defrost
- Requires Comfort Sync™ thermostat and a Comfort Sync enabled matching indoor unit

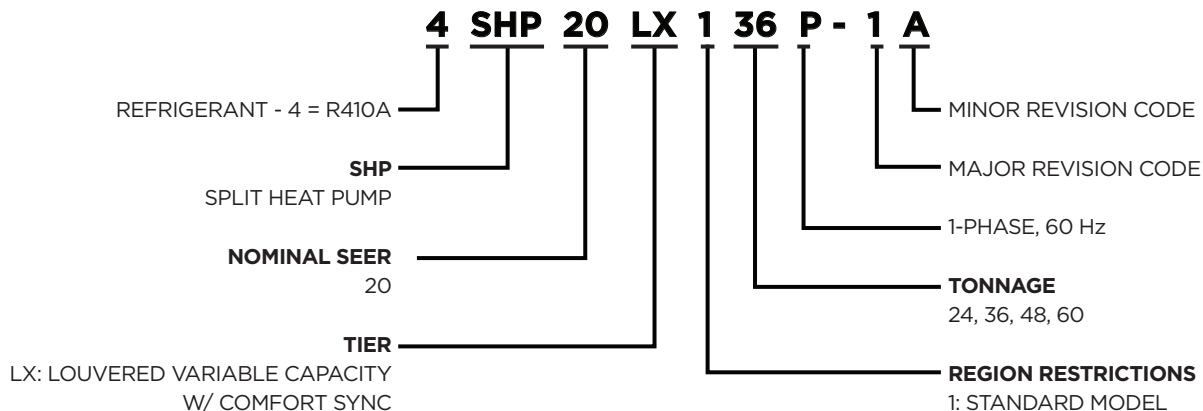
### WARRANTY

- 10 year limited warranty on compressor
- 10 year limited warranty on all parts, extended warranty available

*\*Warranty provides for a total of 10 years of limited warranty coverage (Standard 5-year limited parts warranty plus an additional 5-year limited extended parts warranty). Warranty must be registered online within 60 days of installation to qualify for 10-year coverage. Unregistered equipment defaults to 5-year coverage. Lifetime limited heat exchanger warranty applies to registered equipment only (Standard 20 years with no online registration). See full warranty at [www.alliedair.com](http://www.alliedair.com) for terms, conditions and exclusions.*



**MODEL NUMBER GUIDE**



**ELECTRICAL AND PHYSICAL DATA**

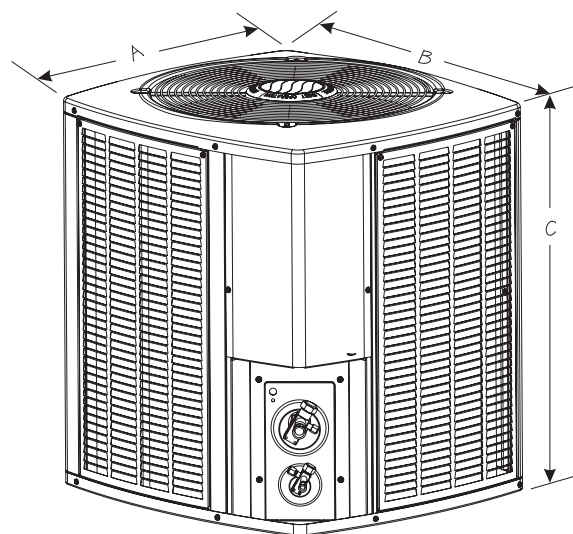
Model	Voltage/Hz/ Phase	Voltage Range	Min. Circuit Amp.	Max. Over Current Device (amps)	Compressor		Outdoor Fan Motor			Weight (lbs.)
					Rated Load (amps)	Locked Rotor (amps)	Rated Load (amps)	Rated HP	Nom. RPM	
4SHP20LX124P-1	208-230/60/1	197-253	19.1	30	13.0	13	2.8	1/3	VAR. SPD.	243
4SHP20LX136P-1	208-230/60/1	197-253	20.8	35	14.4	13	2.8	1/3	VAR. SPD.	245
4SHP20LX148P-1	208-230/60/1	197-253	29.3	50	21.2	20	2.8	1/3	VAR. SPD.	287
4SHP20LX160P-1	208-230/60/1	197-253	34.9	60	25.7	20	2.8	1/3	VAR. SPD.	321

Note:  
Weights listed are unit weights with packaging

**DIMENSIONS (IN.) AND SOUND RATINGS**

Model No.	Dimensions (inch)			Sound Rating (dBA) low	Sound Rating (dBA) High
	A - Width	B - Depth	C - Height		
4SHP20LX124P-1	37.75	35.75	37.5	65	67
4SHP20LX136P-1	37.75	35.75	37.5	67	70
4SHP20LX148P-1	37.75	35.75	43.75	68	70
4SHP20LX160P-1	37.75	35.75	43.75	69	71

Note:  
Dimensions listed are unit sizes w/o packaging



**REFRIGERATION DATA**

Model	Refrig. Charge (oz.) *	TXV	Refrigerant Line Size		Outdoor Unit Connection		Indoor Unit Connection	
			Suction	Liquid	Suction	Liquid	Suction	Liquid
4SHP20LX124P-1	123	H4TXV01	3/4	3/8	3/4	3/8	3/4	3/8
4SHP20LX136P-1	199	H4TXV02	7/8	3/8	7/8	3/8	7/8	3/8
4SHP20LX148P-1	203	H4TXV03	7/8	3/8	7/8	3/8	7/8	3/8
4SHP20LX160P-1	238	H4TXV03	1 1/8	3/8	7/8 **	3/8	7/8	3/8

\* Factory charged for 15 feet of line set; adjust per installation instructions.  
 \*\* Reducer fitting supplied with OD unit

**COOLING PERFORMANCE WITH AIR HANDLERS AND FURNACES**

Outdoor Model	Furnace	Indoor Model	Cooling				Heating					CFM High	CFM Med	CFM Low
			SEER	EER	A/HRI Rated Capacity/ BTUH	Sensible Rated Capacity	HSPF	47°		17°				
								Btuh	COP	Btuh	COP			
Evaporator Coil or Air Handler <sup>3</sup>														
4SHP20LX124P-1		BCE4M30S*	20.00	14.00	23,000	20,800	10.00	21,800	3.80	13,000	2.40	825	500	450
	A80US2V070A12	E*1P36A+H4TXV01	18.50	13.50	23,000	20,800	9.50	21,800	3.65	13,000	2.35	800	530	450
	A80US2V090B12	E*1P36B+H4TXV01	19.00	13.50	23,000	20,800	9.60	21,800	3.65	13,000	2.35	800	530	450
	A96DS2V045B12	E*1P48B+H4TXV01	19.00	13.50	22,600	20,000	9.60	21,800	3.65	13,000	2.35	800	530	450
	A96US2V045B12	E*1P36B+H4TXV01	18.50	13.50	23,000	20,800	9.60	21,800	3.65	13,000	2.35	800	530	450
	A96US2V070B12	E*1P36B+H4TXV01	18.50	13.50	23,000	20,800	9.60	21,800	3.65	13,000	2.35	800	530	450
	A97DSMV070B12	E*1P48B+H4TXV01	19.00	13.50	22,600	20,000	9.60	21,800	3.65	13,000	2.35	800	530	450
	A97USMV070B12	E*1P36B+H4TXV01	18.50	13.50	23,000	20,800	9.60	21,800	3.65	13,000	2.35	800	530	450
4SHP20LX136P-1		BCE4M36S*	20.00	13.50	34,000	27,200	10.00	33,000	3.25	21,000	2.35	1200	630	450
	A80US2V070A12	E*1P36A+H4TXV02	18.00	12.50	33,600	27,200	9.00	32,000	3.20	21,000	2.20	1200	630	450
	A80US2V090B12	E*1P36B+H4TXV02	20.00	12.50	34,000	27,200	9.60	32,400	3.20	21,000	2.20	1200	630	450
	A80US2V090B12	E*1P43B+H4TXV02	20.00	12.50	34,000	27,200	9.00	32,400	3.20	21,000	2.20	1200	630	450
	A80US2V090B12	E*1P48B+H4TXV02	19.00	12.50	33,600	27,200	9.60	32,400	3.20	21,000	2.20	1200	630	450
	A96US2V045B12	E*1P36B+H4TXV02	20.00	12.50	34,000	27,200	9.00	33,000	3.20	21,000	2.20	1200	630	450
	A96US2V045B12	E*1P43B+H4TXV02	20.00	12.50	34,000	27,200	9.00	32,400	3.20	21,000	2.20	1200	630	450
	A96US2V045B12	E*1P48B+H4TXV02	19.00	12.50	33,600	27,200	9.60	33,000	3.20	21,000	2.20	1200	630	450
	A96US2V070B12	E*1P36B+H4TXV02	20.00	12.50	34,000	27,200	9.60	33,000	3.20	21,000	2.20	1200	630	450
	A96US2V070B12	E*1P43B+H4TXV02	20.00	12.50	34,000	27,200	9.00	32,400	3.20	21,000	2.20	1200	630	450
	A96US2V070B12	E*1P48B+H4TXV02	19.00	12.50	33,600	27,200	9.60	33,000	3.20	21,000	2.20	1200	630	450
	A96US2V090C12	E*1P43C+H4TXV02	20.00	12.50	34,000	27,200	9.00	32,400	3.20	21,000	2.20	1200	630	450
	A96US2V090C12	E*1P48C+H4TXV02	19.00	12.50	33,600	27,200	9.60	32,400	3.20	21,000	2.20	1200	630	450
	A97USMV070B12	E*1P36B+H4TXV02	20.00	12.50	34,000	27,200	9.60	33,000	3.20	21,000	2.20	1200	630	450
	A97USMV070B12	E*1P43B+H4TXV02	20.00	12.50	34,000	27,200	9.00	32,400	3.20	21,000	2.20	1200	630	450
	A97USMV070B12	E*1P48B+H4TXV02	19.00	12.50	33,600	27,200	9.60	33,000	3.20	21,000	2.20	1200	630	450
	A97USMV090C12	E*1P50C+H4TXV02	20.00	12.50	34,000	27,200	9.60	32,400	3.20	21,000	2.20	1200	630	450
	A97USMV090C12	E*1P43C+H4TXV02	20.00	12.50	34,000	27,200	9.00	32,400	3.20	21,000	2.20	1200	630	450
	A97USMV090C12	E*1P48C+H4TXV02	19.00	12.50	33,600	27,200	9.60	32,400	3.20	21,000	2.20	1200	630	450

**COOLING PERFORMANCE WITH AIR HANDLERS AND FURNACES**

Outdoor Model	Furnace	Evaporator Coil or Air Handler <sup>3</sup>	Cooling				Heating				CFM High	CFM Med	CFM Low	
			SEER	EER	AHRI Rated Capacity <sup>1</sup> /BTUH	Sensible Rated Capacity	HSPF	47°		17°				
								Btuh	COP	Btuh				COP
<b>4SHP20LX148P-1</b>		BCE4M48S*	19.50	12.50	48,000	41,700	9.60	45,000	3.40	27,000	2.40	1615	915	745
	A80US2V090C20	E*1P62C+H4TXV03	18.50	12.00	48,000	41,700	9.00	43,500	3.30	27,000	2.30	1600	900	750
	A80US2V110C20	E*1P62C+H4TXV03	18.00	12.00	48,000	41,700	9.00	43,500	3.30	27,000	2.30	1600	900	750
	A96US2V090C16	E*1P62C+H4TXV03	18.50	12.00	48,000	41,700	9.00	43,500	3.30	27,000	2.30	1600	900	750
	A96US2V090C20	E*1P62C+H4TXV03	18.00	12.00	48,000	41,700	9.00	43,500	3.30	27,000	2.30	1600	900	750
	A96US2V110C16	E*1P62C+H4TXV03	18.50	12.00	48,000	41,700	9.00	43,500	3.30	27,000	2.30	1600	900	750
	A96US2V110C20	E*1P62C+H4TXV03	18.00	12.00	48,000	41,700	9.00	43,500	3.30	27,000	2.30	1600	900	750
	A97USMV090C16	E*1P62C+H4TXV03	18.50	12.00	48,000	41,700	9.00	43,500	3.30	27,000	2.30	1600	900	750
	A97USMV090C20	E*1P62C+H4TXV03	18.00	12.00	48,000	41,700	9.00	43,500	3.30	27,000	2.30	1600	900	750
	A97USMV110C20	E*1P62C+H4TXV03	18.00	12.00	48,000	41,700	9.00	43,500	3.30	27,000	2.30	1600	900	750
<b>4SHP20LX160-1</b>		BCE4M60S*	19.00	12.50	56,500	42,800	9.60	54,500	3.20	34,800	2.40	1800	1125	900
	A80US2V090C20	E*1P62C+H4TXV03	18.50	12.00	57,500	42,800	9.60	54,000	3.20	34,800	2.20	1800	1125	900
	A80US2V090C20	E*1P49C+H4TXV03	18.50	12.00	57,000	42,800	9.00	54,000	3.20	34,800	2.40	1800	1125	900
	A80US2V110C20	E*1P62C+H4TXV03	18.50	12.00	57,500	42,800	9.60	54,000	3.20	34,800	2.40	1800	1125	900
	A80US2V110C20	E*1P49C+H4TXV03	18.00	11.50	56,500	42,800	9.00	54,000	3.00	34,800	2.20	1800	1125	900
	A80US2V135D20	E*1P62D+H4TXV03	19.00	12.50	58,000	42,800	9.60	53,000	3.00	34,800	2.20	1800	1125	900
	A96US2V090C20	E*1P62C+H4TXV03	18.50	12.00	57,000	42,800	9.60	54,500	3.20	34,800	2.40	1800	1125	900
	A96US2V090C20	E*1P49C+H4TXV03	18.00	11.50	56,500	42,800	9.00	54,000	3.20	34,800	2.40	1800	1125	900
	A96US2V110C20	E*1P62C+H4TXV03	18.50	12.00	57,500	42,800	9.60	54,500	3.20	34,800	2.40	1800	1125	900
	A96US2V110C20	E*1P49C+H4TXV03	18.00	11.50	56,500	42,800	9.00	54,000	3.20	34,800	2.40	1800	1125	900
	A96US2V135D20	E*1P62D+H4TXV03	18.50	12.50	58,000	42,800	9.60	53,000	3.20	34,800	2.40	1800	1125	900
	A97USMV090C20	E*1P62C+H4TXV03	18.50	12.00	57,000	42,800	9.60	54,500	3.20	34,800	2.40	1800	1125	900
	A97USMV090C20	E*1P49C+H4TXV03	18.00	11.50	56,500	42,800	9.00	54,000	3.20	34,800	2.40	1800	1125	900
	A97USMV110C20	E*1P62C+H4TXV03	18.50	12.00	57,500	42,800	9.60	54,500	3.00	34,800	2.20	1800	1125	900
	A97USMV110C20	E*1P49C+H4TXV03	18.00	11.50	56,500	42,800	9.00	54,000	3.00	34,800	2.20	1800	1125	900
	A97USMV135D20	E*1P62D+H4TXV03	18.50	12.50	58,000	42,800	9.60	53,000	3.20	34,800	2.40	1800	1125	900

Note:

1. Certified in accordance with Unitary Air Conditioner Certification Program, which is based on AHRI Standard 210/240
2. Required to achieve AHRI rating. If NA (Not Applicable) is in the piston column, then TXV is required.
3. A blower time delay relay is standard on all Allied Air Enterprises furnace and AH products.

**ACCESSORIES**

Description	Where Used	Kit Number
TXV Kit	4SHP20LX124	H4TXV01
	4SHP20LX136	H4TXV02
	4SHP20LX148 - 4SHP20LX160	H4TXV03
Freezestat	3/8 tubing	93G35
Crankcase Heater	All models	Factory Installed
Sound Cover	All models	Factory Installed
Loss of Charge Kit	All models	Factory Installed
Comfort Sync™ Wi-Fi Thermostat	All models	1.841197
Comfort Sync™ Zoning Controller	All models	1.851399
Comfort Sync™ In-Zone Sensor	All models	1.851400
Discharge Temperature Sensor	All models	88K38



1-800-448-5872

All specifications and illustrations subject to change without notice and without incurring obligations.