

TECHNICAL SPECIFICATIONS

P8SE Series

14 SEER, Single Phase Packaged Air Conditioner

3, 4, 5 Ton Units

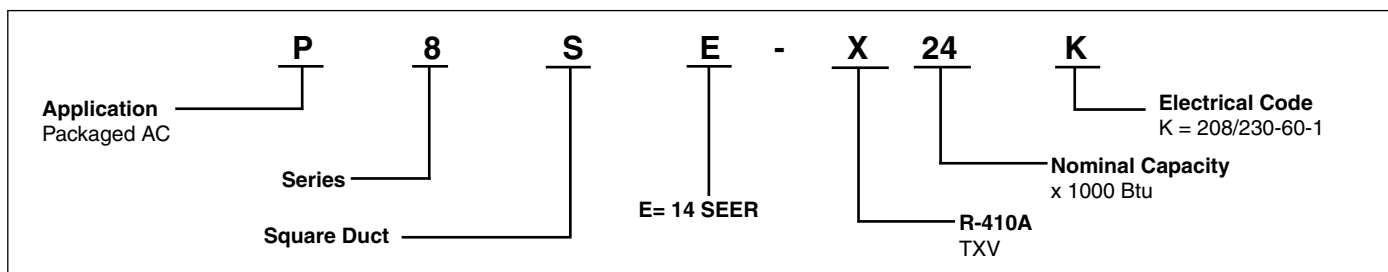
The P8 Series single packaged air conditioners are high efficiency self contained cooling units that can be installed on a roof or on a slab. The convertible unit design makes installations simple in all applications. Units are ETL and ETLc listed.



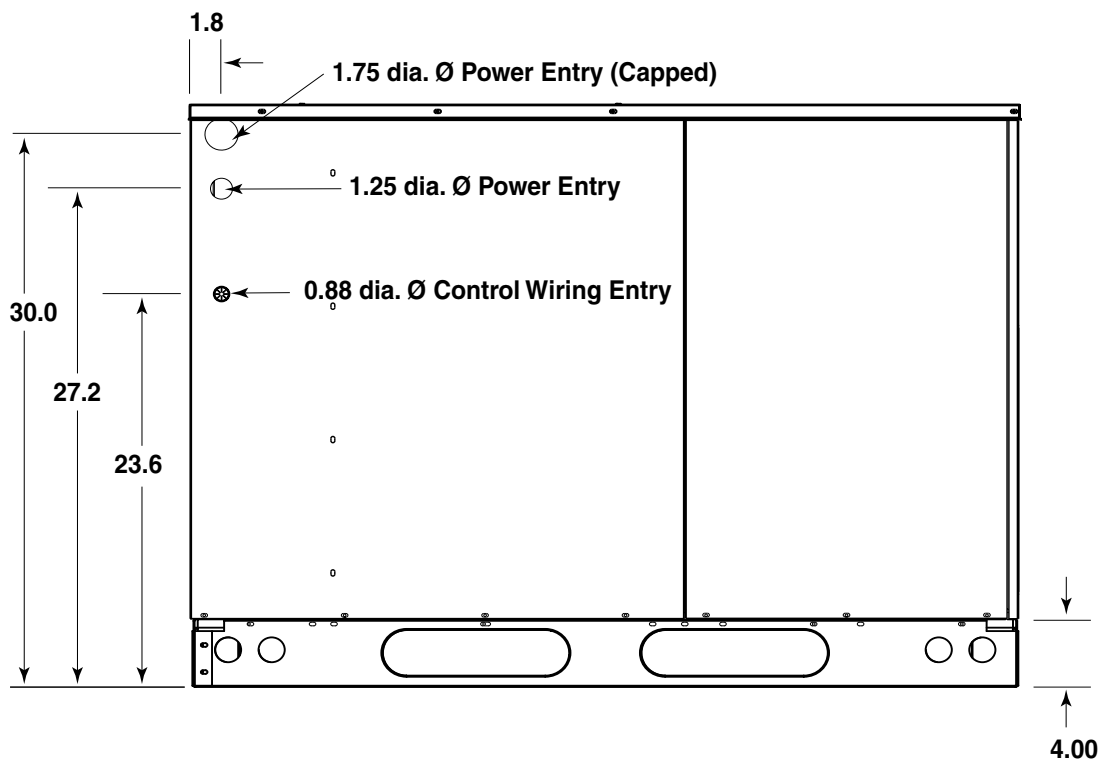
FEATURES and BENEFITS

- **State-of-the-Art Compressor:** Copeland scroll is a standard component.
- **Micro-Channel Coils:** Both indoor and outdoor coils are robustly designed for harsh conditions while reducing unit weight and refrigerant charge.
- **5-Speed ECM Blower Motor:** Provides greater airflow flexibility even in challenging duct applications.
- **Proven, Industry Standard Components:** Easier service and availability.
- **TXV Externally Equalized:** Provides precise refrigerant control under varying load conditions.
- **High and Low Pressure Switches:** Added compressor protection.
- **Liquid Line Filter Drier:** Insures clean and dry refrigeration system.
- **Externally Accessible Service Ports:** Quick access to refrigerant system without disrupting operation.
- **Compact Footprint/Low Profile:** Easy to handle and transport.
- **Convertible Air Delivery:** Horizontal or downflow to accommodate slab or rooftop application.
- **Heavy-Gauge, Full Perimeter Base Rails:** Facilitates forklift handling and curb mounting.
- **Galvanized Steel Cabinet:** Polyurethane finish provides 950 hours salt spray protection.
- **Wire Guard Coated with Earth Friendly Epoxy and Mesh Hail Guard:** Will never rust and protects the coil from being damaged by balls, lawnmowers, hail etc.
- **Drain Pan:** Quickly drains away evaporator condensate.
- **Quiet Operation and Low Vibration:** Fan blade combined with custom venturi condenser fan.
- **Access to Controls and Major Components:** Easy in and out service.
- **Service Access Panels:** Allows easy access to all major components and the compressor. Designed to make servicing easier for the Contractor.
- **Corner Protectors:** Prevent injury from sharp edges of unit's top pan.
- **Easy to Install:** Electric heat strip provides up to 20 KW of heat output.
- **Accessories:** Roof curbs, title 24 compliant economizers, fresh air dampers and more.

MODEL IDENTIFICATION CODE



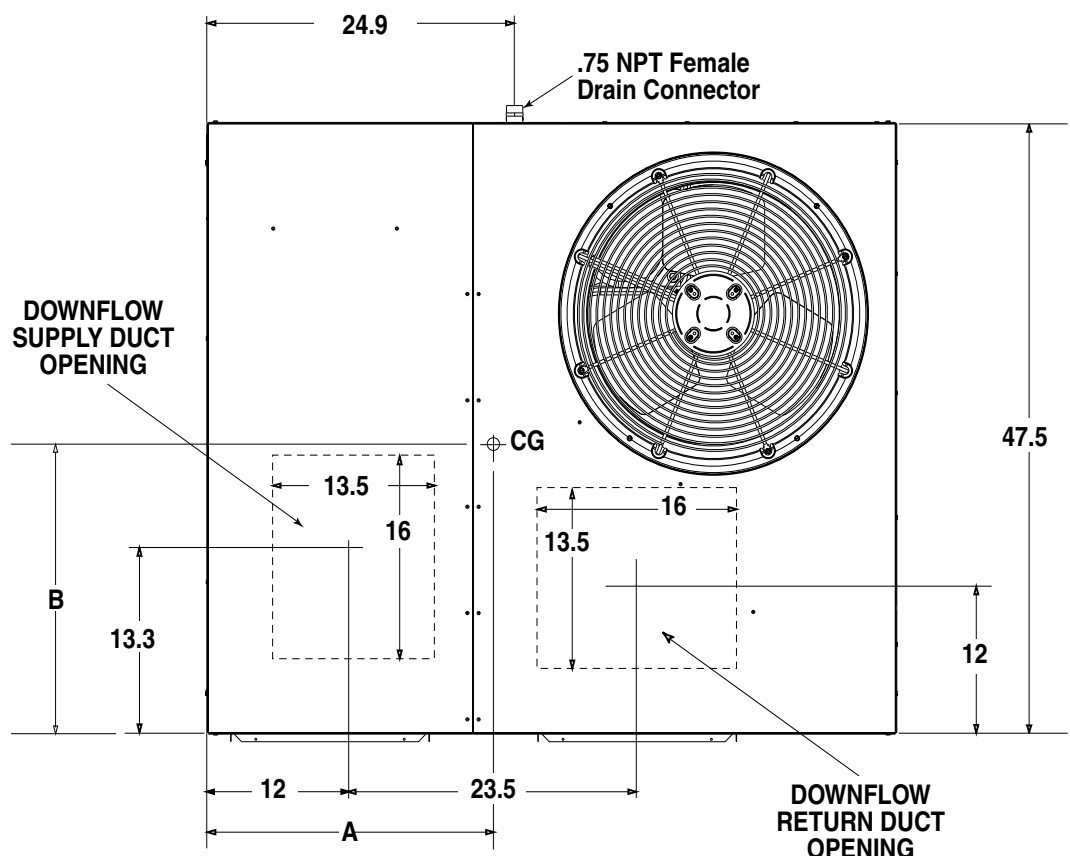
DIMENSIONS (inches and pounds)



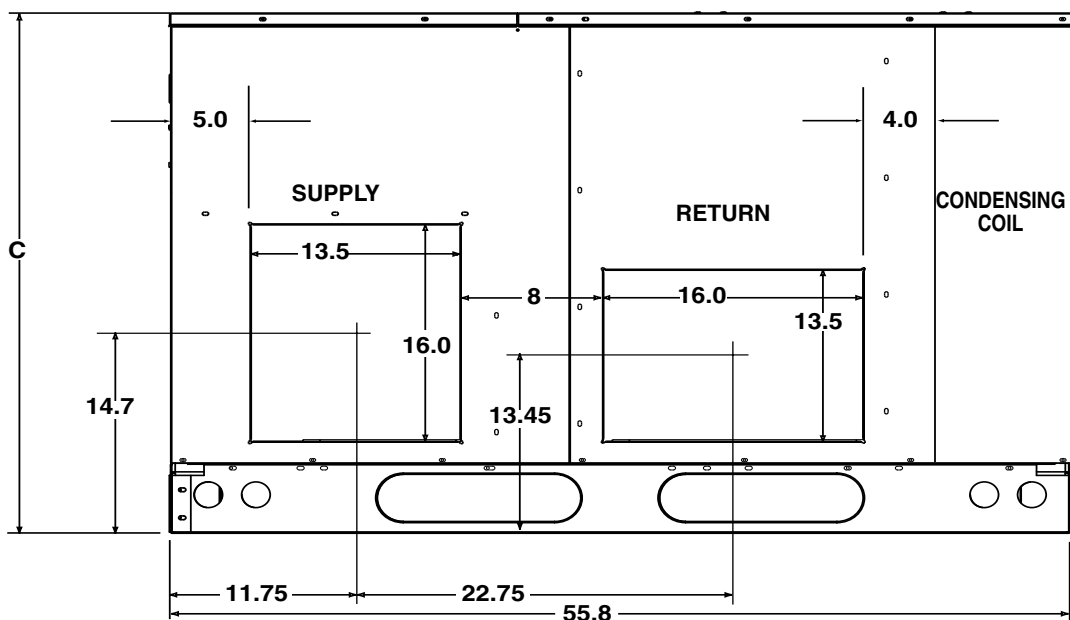
Side View

Model Number P8SE-	Net Weight	Ship Weight	Center of Gravity		Height (in inches) C	
			A	B	with base rails	without base rails
X36K	354	375	29.0	20.5	35.0	30.76
X48K	377	398	29.0	20.5	35.0	30.76
X60K	416	437	27.75	23.5	43.0	39.0

DIMENSIONS (Continued)



Top View



Back (Duct) View

SPECIFICATIONS

Model Number	P8SE		
	X36K	X48K	X60K
Performance			
Capacity -Cooling BTUH	35,000	46,500	57,000
Efficiency - SEER	14	14	14
EER (Btuh/watt)	11.2	11.5	11.0
Electrical Rating - 60 Hz			
Phase	1	1	1
Operating Voltage Range	187 - 253	187 - 253	187 - 253
Compressor Data			
Volts	208 / 230	208 / 230	208 / 230
Rated Load Amps	18.6	24.3	29.3
Lock Rotor Amps	79	117	134
Indoor Blower			
Type / No. of Speeds	Fixed Torque / 5	Fixed Torque / 5	Fixed Torque / 5
Motor - HP / RPM	1/2	3/4	3/4
Motor - Amps	3.8	5.4	5.4
Outdoor Fan			
Motor - HP - RPM	1/4 - 1100	1/4 - 1100	1/4 - 1100
Motor - Amps	1.46	1.46	1.46
Fan Diameter (in.) / CFM	20/3600	20/3600	20/3600
Refrigerant Charge - Oz.	57.6	60.8	67.2

BLOWER PERFORMANCE

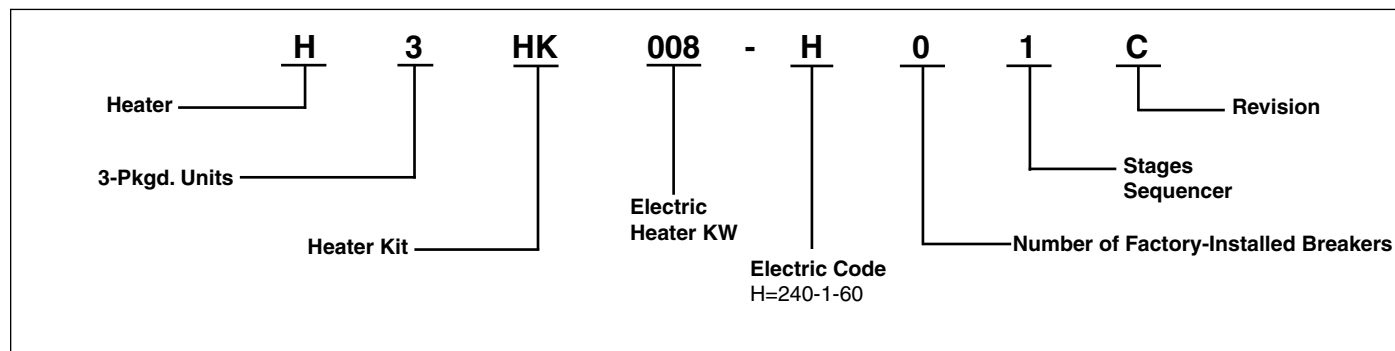
Model Number		External Static Pressure Drop - inches water column															
P8SE-		0.1		0.2		0.3		0.4		0.5		0.6		0.7		0.8	
X36K	Tap T1**	1091	28.96	1031	30.64	995	31.75	929	34.01	871	36.27	774	41	704	45	629	50
	Tap T2*	1296	24.38	1244	25.40	1169	27.03	1153	27.40	1089	29.01	1030	30.67	961	32.88	863	36.61
	Tap T3	1525	20.72	1499	21.08	1448	21.82	1391	22.71	1338	23.61	1264	25.00	1221	25.88	1159	27.26
	Tap T4	1641	19.25	1590	19.87	1543	20.48	1489	21.22	1444	21.88	1386	22.80	1345	23.49	1285	24.59
	Tap T5	1791	17.64	1740	18.16	1659	19.04	1610	19.62	1555	20.32	1521	20.77	1467	21.54	1414	22.34
X48K	Tap T1**	1264	25.00	1183	26.71	1126	28.06	1051	30.06	954	33.12	848	37.26	774	40.82	716	44.13
	Tap T2	1462	21.61	1397	22.62	1322	23.90	1240	25.48	1181	26.75	1133	27.89	1006	31.41	888	35.58
	Tap T3*	1776	17.79	1717	18.40	1654	19.10	1573	20.09	1533	20.61	1484	21.29	1422	22.22	1369	23.08
	Tap T4	2127	14.85	2037	15.51	2008	15.73	1957	16.14	1865	16.94	1801	17.54	1743	18.13	1690	18.69
	Tap T5	2419	13.06	2355	13.42	2311	13.67	2267	13.94	2194	14.40	2150	14.69	2085	15.15	2027	15.59
X60K	Tap T1**	1209	26.13	1145	27.59	1106	28.57	1020	30.97	928	34.05	843	37.48	776	40.71	709	44.56
	Tap T2	1629	19.39	1550	20.38	1479	21.36	1435	22.02	1369	23.08	1300	24.30	1244	25.40	1139	27.74
	Tap T3*	1847	17.11	1800	17.55	1718	18.39	1668	18.94	1611	19.61	1556	20.30	1497	21.10	1449	21.80
	Tap T4	2128	14.85	2059	15.34	1992	15.86	1961	16.11	1887	16.74	1828	17.28	1779	17.76	1718	18.39
	Tap T5	2500	12.64	2444	12.93	2417	13.07	2345	13.47	2285	13.83	2228	14.18	2172	14.55	2109	14.98

* Denotes factory set cooling speed

** Denotes factory set electric heating speed

Calculations made based on 10KW/H, airflow performance with dry coil

HEATER KIT MODEL IDENTIFICATION CODE



HEATER KIT APPLICATION MATRIX

TONNAGE & PHASE	UNIT	NOMINAL KW	HEATER KIT MODEL	HEATER KIT PART NUMBER	BREAKERS REQUIRED
3 Ton, Single Phase	P8SE	5	H3HK005H-01C	917166C	None
		8	H3HK008H-01C	917167C	None
		10	H3HK010H-01C	917168C	None
		15	H3HK015H-01C	917169C	2
		15	H3HK015H-21C	917172C	None
4 Ton, Single Phase	P8SE	5	H3HK005H-01C	917166C	None
		8	H3HK008H-01C	917167C	None
		10	H3HK010H-01C	917168C	None
		15	H3HK015H-01C	917169C	2
		15	H3HK015H-21C	917172C	None
		20	H3HK020H-01C	917170C	2
5 Ton, Single Phase	P8SE	20	H3HK020H-21C	917173C	None
		5	H3HK005H-01C	917166C	None
		8	H3HK008H-01C	917167C	None
		10	H3HK010H-01C	917168C	2
		15	H3HK015H-01C	917169C	2
		15	H3HK015H-21C	917172C	None
		20	H3HK020H-01C	917170C	3
		20	H3HK020H-21C	917173C	1

ELECTRICAL DATA

P8SE SERIES - 208/230V - SINGLE PHASE MODELS									
MODEL NUMBER P8SE	HEATER INSTALLED NOMINAL KW	SINGLE CIRCUIT		MULTIPLE SUPPLY CIRCUIT OPTION					
		MCA	MOP	CIRCUIT A (COMPRESSOR, BLOWER, & FAN)		CIRCUIT B (HEATER ONLY)		CIRCUIT C (HEATER ONLY)	
				MCA	MOP	MCA	MOP	MCA	MOP
P8SE-X36K	0	28.5	45	-	-	-	-	-	-
	5	29.8	45	-	-	-	-	-	-
	8	44.3	45	28.5	45	39.6	40	-	-
	10	54.8	60	28.5	45	50	60	-	-
	15	79.8	80	28.5	45	79.8	80	-	-
P8SE-X48K	0	34.1	50	-	-	-	-	-	-
	5	34.1	50	-	-	-	-	-	-
	8	46.3	50	34.1	50	39.6	40	-	-
	10	56.8	60	34.1	50	50	60	-	-
	15	81.8	90	34.1	50	75	80	-	-
	15(3 CIR)			34.1	50	25	30	50	60
	20	106.8	110	56.8	60	50	60	-	-
	20(3 CIR)			34.1	50	50	60	50	60
P8SE-X60K	0	43.5	70	-	-	-	-	-	-
	5	43.5	70	-	-	-	-	-	-
	8	46.3	70	43.5	70	39.6	40	-	-
	10	56.8	70	43.5	70	50	60	-	-
	15	81.8	90	43.5	70	75	80	-	-
	15(3 CIR)			43.5	70	25	30	50	60
	20	106.8	110	43.5	70	100	110	-	-
	20(3 CIR)			43.5	70	50	60	50	60

COPPER WIRE SIZE — AWG (1% Voltage Drop)				
Supply Wire Length-Feet				Supply Circuit Ampacity
200	150	100	50	
6	8	10	14	15
4	6	8	12	20
4	6	8	10	25
4	4	6	10	30
3	4	6	8	35
3	4	6	8	40
2	3	4	6	45
2	3	4	6	50

Wire Size based on N.E.C. for 60° type copper conductors.

ACCESSORIES

Description	Part Number
Roof Curb (8")	547830
Roof Curb (14")	547831
Roof Curb (18")	547850
Roof Curb (24")	547851
Supply/Return Transition, 16"	547834
Supply/Return Transition, 18"	547835
Concentric Diffuser, flush, 16"	547836
Concentric Diffuser, flush, 18"	547837
Concentric Diffuser, step down 16"	547838
Concentric Diffuser, step down 18"	547839
Manual Fresh Air Damper	547832
Motorized Fresh Air Damper	547840
Economizer, Downflow, Modulating w/filter (does not require filter kit)	558870
Economizer, Horizontal, Modulating	547841
Economizer, Downflow, Modulating w/filter (does not require filter kit) CA, title 24, 3 - 4 Ton	562533
Economizer, Downflow, Modulating w/filter (does not require filter kit) CA, title 24, 5 Ton	563209
Economizer, Horizontal, Modulating, CA, title 24	562534
Power Exhaust, Downflow Economizer (special order)	547842
Power Exhaust Horizontal Economizer (special order)	547843
Hood Type Hail Guard 34" X 76" P8SE-X36K, P8SE-X48K	547846
Hood Type Hail Guard 38" X 76" P8SE-X60K	547847
Duct Smoke Detector Photo Elec	558863
Multi Signal Control	558866
Sampling Tube DST5, 2-4'	558864
Sampling Tube DST5, 4-8'	558865
Filter Rack Kit (not required with downflow economizer) P8SE-X36K, P8SE-X48K	10079911R
Filter Rack Kit (not required with downflow economizer) P8SE-X60K	10079915R
Universal Hard Start Kit	912933
Low Ambient Kit	918837
Skirt Trim Kit	919729
Heater Kit - 4-Pole single circuit adaptor	913350
Heater Kit - 6-Pole single circuit adaptor	913556
Heater Kit - Circuit breaker single phase (2-pole)	913554
Outdoor Tstat Kit	913852
Duct Adaptor, 12" Round (2 each)	913811A
Duct Adaptor, 14" Round (2 each)	913812A
CO2 Sensor Kit, Wall Mount	920317
CO2 Sensor Kit, Duct Mount	920318
Differential Enthalpy Kit	922431

COOLING EXPANDED RATINGS

P8SE-X36K

O.D.T												85°F			95°F			105°F			115°F		
CFM	E.D.B.	E.W.B.	T.C.	S.C.	K.W.	T.C.	S.C.	K.W.	T.C.	S.C.	K.W.	T.C.	S.C.	K.W.	T.C.	S.C.	K.W.	T.C.	S.C.	K.W.	T.C.	S.C.	K.W.
1100	80	62	38.6	31.3	1.94	36.0	30.1	2.22	33.5	29.0	2.50	30.9	27.8	2.78	28.3	26.6	3.05	25.7	25.5	3.33			
	80	67	41.4	26.0	1.93	38.8	24.8	2.21	36.2	23.6	2.48	33.7	22.5	2.76	31.1	21.3	3.04	28.5	20.1	3.32			
	80	72	44.2	20.7	1.92	41.6	19.5	2.19	39.0	18.3	2.47	36.4	17.2	2.75	33.9	16.0	3.03	31.3	14.8	3.30			
	75	63	39.2	25.3	1.94	36.7	24.2	2.21	34.1	23.0	2.49	31.5	21.8	2.77	28.9	20.7	3.05	26.4	19.5	3.33			
1200	80	62	40.1	33.0	1.98	37.5	31.8	2.26	35.0	30.6	2.54	32.4	29.5	2.81	29.8	28.3	3.09	27.2	27.1	3.37			
	80	67	42.9	27.6	1.97	40.3	26.5	2.24	37.7	25.3	2.52	35.2	24.1	2.80	32.6	23.0	3.08	30.0	21.8	3.36			
	80	72	45.7	22.3	1.95	43.1	21.2	2.23	40.5	20.0	2.51	37.9	18.8	2.79	35.4	17.7	3.06	32.8	16.5	3.34			
	75	63	40.8	27.0	1.97	38.2	25.8	2.25	35.6	24.7	2.53	33.0	23.5	2.81	30.4	22.3	3.08	27.9	21.2	3.36			
1400	80	62	40.7	33.9	2.05	38.1	32.7	2.33	35.5	31.5	2.61	33.0	30.4	2.89	30.4	29.2	3.17	27.8	27.8	3.44			
	80	67	43.5	28.6	2.04	40.9	27.4	2.32	38.3	26.2	2.60	35.8	25.1	2.87	33.2	23.9	3.15	30.6	22.7	3.43			
	80	72	46.3	23.2	2.03	43.7	22.1	2.31	41.1	20.9	2.58	38.5	19.7	2.86	36.0	18.6	3.14	33.4	17.4	3.42			
	75	63	41.3	27.9	2.05	38.8	26.8	2.33	36.2	25.6	2.60	33.6	24.4	2.88	31.0	23.3	3.16	28.5	22.1	3.44			

P8SE-X48K

O.D.T												85°F			95°F			105°F			115°F		
CFM	E.D.B.	E.W.B.	T.C.	S.C.	K.W.	T.C.	S.C.	K.W.	T.C.	S.C.	K.W.	T.C.	S.C.	K.W.	T.C.	S.C.	K.W.	T.C.	S.C.	K.W.	T.C.	S.C.	K.W.
1300	80	62	50.1	38.4	2.71	47.6	37.4	3	44.8	36.1	3.36	41.6	34.5	3.77	38.1	32.5	4.25	34.2	30.2	4.79			
	80	67	53	32.3	2.72	50.5	31.3	3.02	47.6	30	3.39	44.4	28.3	3.82	40.9	26.3	4.31	37.1	24	4.86			
	80	72	55.9	26.2	2.73	53.4	25.2	3.04	50.5	23.8	3.42	47.3	22.2	3.86	43.8	20.2	4.36	40	17.9	4.92			
	75	63	51.3	31.7	2.61	48.3	30.8	2.9	45	29.5	3.26	41.4	28	3.67	37.5	26.1	4.14	33.2	23.9	4.68			
1500	80	62	51.1	40.5	2.7	48.9	39.8	2.99	46.3	38.8	3.35	43.4	37.4	3.76	40.2	35.7	4.24	36.7	33.7	4.78			
	80	67	54.9	34.4	2.71	52.6	33.7	3.01	50	32.6	3.38	47.1	31.3	3.8	43.9	29.6	4.29	40.4	27.6	4.84			
	80	72	58.6	28.3	2.71	56.3	27.6	3.03	53.8	26.5	3.4	50.9	25.2	3.84	47.6	23.5	4.34	44.1	21.4	4.91			
	75	63	52.9	33.1	2.6	50.2	32.5	2.89	47.2	31.5	3.24	43.9	30.3	3.66	40.3	28.7	4.13	36.3	26.8	4.67			
1700	80	62	48.7	39.2	2.87	46.8	38.8	3.17	44.5	38.1	3.52	41.9	37	3.94	39	35.6	4.42	35.7	33.9	4.96			
	80	67	53.3	33.1	2.88	51.4	32.7	3.19	49.1	31.9	3.55	46.5	30.9	3.98	43.5	29.5	4.47	40.3	27.7	5.02			
	80	72	57.9	27	2.89	55.9	26.5	3.2	53.6	25.8	3.58	51	24.7	4.02	48.1	23.3	4.52	44.8	21.6	5.08			
	75	63	51.1	31.1	2.78	48.8	30.8	3.07	46.1	30.1	3.42	43	29.2	3.83	39.7	27.9	4.31	36	26.3	4.84			

P8SE-X60K

O.D.T												85°F			95°F			105°F			115°F		
CFM	E.D.B.	E.W.B.	T.C.	S.C.	K.W.	T.C.	S.C.	K.W.	T.C.	S.C.	K.W.	T.C.	S.C.	K.W.	T.C.	S.C.	K.W.	T.C.	S.C.	K.W.	T.C.	S.C.	K.W.
1600	80	62	61.4	47.3	3.45	57.8	45.4	3.81	54.1	43.5	4.26	50.4	41.6	4.81	46.7	39.6	5.46	42.9	37.6	6.2			
	80	67	66.9	41	3.53	63.3	39.1	3.88	59.6	37.2	4.33	55.9	35.2	4.88	52.1	33.3	5.52	48.4	31.3	6.26			
	80	72	72.4	34.6	3.6	68.7	32.7	3.95	65	30.8	4.39	61.3	28.9	4.94	57.6	26.9	5.58	53.8	24.9	6.32			
	75	63	62.1	39.7	3.45	58.5	37.9	3.81	54.9	36.1	4.27	51.3	34.3	4.82	47.7	32.4	5.48	44	30.5	6.22			
1750	80	62	62.6	48.8	3.54	58.8	46.8	3.9	55.1	44.8	4.35	51.2	42.8	4.9	47.4	40.7	5.54	43.5	38.6	6.29			
	80	67	68	42.5	3.61	64.3	40.5	3.96	60.5	38.4	4.41	56.7	36.4	4.96	52.9	34.3	5.6	49	32.2	6.35			
	80	72	73.5	36.1	3.68	69.7	34.1	4.03	66	32.1	4.48	62.1	30	5.02	58.3	28	5.67	54.4	25.9	6.4			
	75	63	62.8	40.8	3.54	59.1	38.9	3.9	55.5	37	4.35	51.7	35	4.91	48	33.1	5.56	44.2	31	6.31			
1900	80	62	63.4	50	3.6	59.6	47.9	3.96	55.7	45.8	4.41	51.8	43.6	4.96	47.8	41.5	5.61	43.9	39.2	6.35			
	80	67	68.9	43.6	3.67	65	41.5	4.03	61.1	39.4	4.48	57.2	37.3	5.03	53.3	35.1	5.67	49.3	32.9	6.41			
	80	72	74.3	37.3	3.74	70.5	35.2	4.1	66.6	33.1	4.54	62.7	30.9	5.09	58.7	28.7	5.73	54.8	26.5	6.47			
	75	63	63.2	41.6	3.6	59.5	39.6	3.96	55.7	37.6	4.42	51.9	35.5	4.97	48	33.4	5.63	44.1	31.3	6.37			



GENERAL TERMS OF LIMITED WARRANTY

Nortek Global HVAC, LLC will furnish a replacement for any part of this product which fails in normal use and service within the terms and conditions of the warranty.

For complete details of the Limited Warranty, including applicable terms and conditions, see your local installer or contact the Nortek Global HVAC, LLC warranty department for a copy.

Before purchasing this appliance, read important energy cost and efficiency information available from your retailer. Specifications and illustrations subject to change without notice and without incurring obligations. Printed in U.S.A (03/2016)