TECHNICAL SPECIFICATIONS

REZNOR®

T5BP Series

Split System Heat Pump
11.0 EER Commercial System

7½ and 10 Ton Capacity
R-410A Refrigerant

The T5BP Series of heat pumps offers exceptional performance. The unit, when combined with our air handlers, offers a line of quality, split system heat Pump equipment. The T5BP is rated at 11.0 EER and 3.3 COP when matched with our air handler. Units are ideally sized for slab or rooftop mounting in light commercial applications.

FEATURES and BENEFITS

- **Quality Compressor:** State of the art scroll compressor is standard equipment providing single stage operation.
- **Auto-Reset Hi/Low Pressure Switches:** Ensure long compressor life.
- **Durable, Attractive Cabinet:** Designed using galvanized steel with a polyester urethane finish. The 950 hour salt spray finish is 1.5 mil thick and resists corrosion 50% better than comparable units.
- **Copper Tube / Aluminum Fin Coils:** Outdoor coils are designed to optimize heat transfer, minimize size and cost, and increase durability and reliability.
- **Permanently Lubricated Motor:** A heavy duty PSC motor for long lasting reliability and quiet operation. Requires no maintenance and is completely protected from rain and snow.
- **Full Service Valves:** These brass valves are easily accessible and simplify servicing of the refrigeration system.
- **Plastic Mesh Hail Guard:** A guard that will never rust and protects the units coil from being damaged.
- **Removable Top Grille Assembly:** Allows ease of service to the fan motor.
- **Raised Base:** The sturdy base keeps the bottom of the coil out of harms way and allows water from rain or defrost to flow away from the unit.
- **Five Minute Restart Time Delay:** When the unit shuts down, a five minute delay keeps the unit from restarting, eliminating the highest cause for compressor failure.
- **Easy Compressor and Control Access:** Designed to make servicing easier for the contractor, access panels are provided to all controls and the compressor from the side of the unit.
- **Time/Temperature Defrost:** A reliable, industry standard control offers various time settings to meet any type climate.
- **Suction Accumulator:** Protection from liquid flood back and future compressor failures.
- **90 VA Transformer:** Includes 4 Amp circuit breaker to protect low voltage circuit.
- **Liquid Line Filter Drier:** Field installed for convenience.
- **Crankcase Heater:** Prevents damaging flooded starts and future compressor failures.

MODEL IDENTIFICATION CODES

EX: T5BP-090C

T 5 B P - 090 C

T - Heat Pump

Generation 1, 2, 3. etc.

Product Identifier

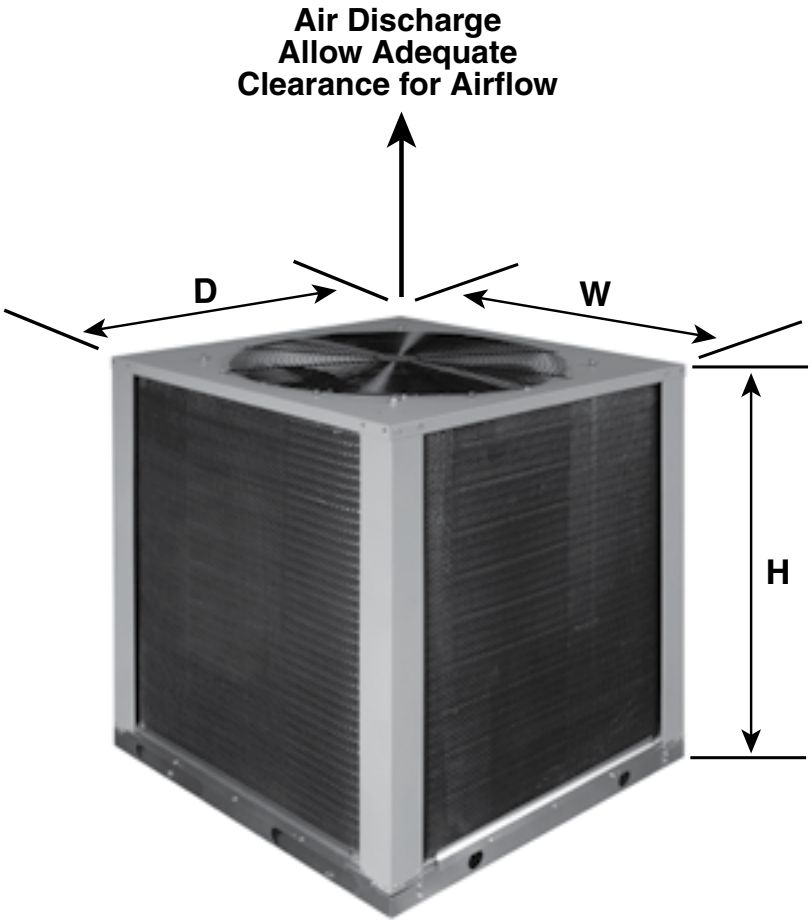
BP = 11.0 - 11.9 EER

Nominal Capacity
(000) BTU

Electrical Code
C = 208/230-3-60
D = 460-3-60

DIMENSIONS (Inches)
HEAT PUMP OUTDOOR SECTION

Model Number T5BP-	Unit Weights (Lbs.)		Height -H-	Width -W-	Depth -D-	Shipping Height
	Without Packaging	Shipping Weight	All dimensions in inches			
090C	390	424	44 1/4	37 1/2	37 1/2	50
090D	390	424	44 1/4	37 1/2	37 1/2	50
120C	427	461	52 1/4	37 1/2	37 1/2	58
120D	427	461	52 1/4	37 1/2	37 1/2	58



PHYSICAL AND ELECTRICAL SPECIFICATIONS / OUTDOOR UNITS
High Efficiency — Three Phase

Model Number T5BP-	090C 208-230V	090D 460V	120C 208-230V	120D 460V
PERFORMANCE DATA				
Gross Cooling Capacity (95°F) Btuh	92,400	92,400	120,700	120,700
[1] Net Cooling Capacity - Btuh	90,000	90,000	116,000	116,000
[1] A.R.I. Rated Airflow - C.F.M.	3,000	3,000	4,000	4,000
[2] Cooling - Efficiency E.E.R. (Btu/Watt)	11.00	11.00	11.00	11.00
[3] Cooling - Efficiency I.E.E.R.	11.80	11.80	11.50	11.50
Gross Heating Capacity (47˚F) - Btuh	86,000	86,000	107,000	107,000
[4] Heating - Efficiency - C.O.P.	3.30	3.30	3.30	3.30
Gross Heating Capacity (17˚F) - Btuh	54,000	54,000	70,000	70,000
[4] Heating - Efficiency - C.O.P.	2.40	2.40	2.40	2.40
ELECTRICAL RATINGS				
Volts / Phase / Hz.	208-230 / 3 / 60	460 / 3 / 60	208-230 / 3 / 60	460 / 3 / 60
Operating Voltage	187-253	414-506	187-253	414-506
Unit Rated Ampacity	28.3	13.9	33.4	18.4
Minimum Circuit Ampacity (MCA)	34.6	17.0	40.9	22.6
[5] Max. Overcurrent Protection (MOP)	50	25	70	35
Compressor Data:	1 ea.	1 ea.	1 ea.	1 ea.
Compressor(s) (Scrolls)	ZP83KCE-TF5	ZP83KCE-TFD	ZP103KCE-TF5	ZP103KCE-TFD
Volts / Phase /Hz.	208-230 / 3 / 60	460 / 3 / 60	208-230 / 3 / 60	460 / 3 / 60
Rated Load Amps (RLA)	25.0	12.2	30.1	16.7
Lock Rotor Amps (LRA)	164	100	225	114
Outdoor Fan Assembly:	1 ea.	1 ea.	1 ea.	1 ea.
Volts / Phase /Hz.	208-230 / 1 / 60	460 / 1 / 60	208-230 / 1 / 60	460 / 1 / 60
Motor - HP / RPM	3/4 - 875	3/4 - 875	3/4 - 875	3/4 - 875
Motor Amps	3.3	1.7	3.3	1.7
Fan Blade - Diameter / Pitch / # Blades	30" / 22 / 3	30" / 22 / 3	30" / 26 / 3	30" / 26 / 3
RPM / CFM (Max. - Total)	850 - 7,200	850 - 7,200	850 - 8,000	850 - 8,000
PHYSICAL DATA & REFRIGERANT SPECS				
Outdoor Coil Assembly:	1 ea.	1 ea.	1 ea.	1 ea.
Area (Ft.^{2})	31.94	31.94	38.33	38.33
Rows - FPI	2 - 16	2 - 16	2 - 18	2 - 18
Tube Diameter	3/8" OD	3/8" OD	3/8" OD	3/8" OD
Refrigerant Suction Line - Length / OD	0 - 75 Ft. / 1-1/8" 76 - 100 Ft. / 1-3/8" [7]	0 - 75 Ft. / 1-1/8" 76 - 100 Ft. / 1-3/8" [7]	0 - 100 Ft. / 1-3/8" [7]	0 - 100 Ft. / 1-3/8" [7]
Refrigerant Liquid Line - OD	5/8" OD	5/8" OD	5/8" OD	5/8" OD
Refrigerant	R410A	R410A	R410A	R410A
Holding Charge - (oz.)	90	90	90	90
[6] Total System with 25' Line Set	480	480	528	528
High Pressure Switch (PSIG)	Cut Out: 650 +/- 15 Cut In: 460 +/- 15			
Loss of Charge Pressure Switch (PSIG)	Cut Out: 5 +/- 5 Cut In: 20 +/- 5			

NOTE: Net capacity includes indoor blower motor heat deduction. Gross capacity does not include indoor blower motor heat deduction.

[1] Certified in accordance w/ A.R.I. Standard 340/360 at 95° F Outdoor DB and 80° F db/67° F wb evaporator entering air at minimum external duct static pressures allowed by the standard.

[2] E.E.R. - Energy Efficiency Ratio. E.E.R. is determined @ 95˚F Outdoor DB & 80˚F DB / 67˚F WB Air Indoor

[3] I.E.E.R. - Integrated Energy Efficiency Ratio. Certified in accordance with A.R.I. Standard 340/360.

[4] C.O.P. - Coefficient of Performance.

[5] Delay Fuse or HACR Type Circuit Breakers can be used.

[6] Add / Subtract 9.0 oz. of refrigerant per 5 Ft. change in length from original 25 Ft. lineset total system charge.

[7] Requires a 1-3/8" to 1-1/8" reducer line to unit.

COPPER WIRE SIZE — AWG (1% Voltage Drop)				
Supply Wire Length-Feet				Supply Circuit
200	150	100	50	Ampacity
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
2	3	4	6	55
1	2	3	4	60

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

ACCESSORIES - Condensing Unit

Low Ambient Kit 920463 — Maintains system pressures during low ambient conditions.

High Efficiency — Three Phase

Outdoor Unit Model Number	Indoor Unit Model Number	COOLING		HEATING		
		BTUH	EER	BTUH	COP	SCFM
T5BP-090C	B5SM-090	90000	11.0	86000	3.3	3000
T5BP-090D	B5SM-090	90000	11.0	86000	3.3	3000
T5BP-120C	B5SM-120	116000	11.0	107000	3.3	4000
T5BP-120D	B5SM-120	116000	11.0	107000	3.3	4000

See current ARI Directory for certified combinations and ratings.

COOLING EXPANDED RATINGS WITH B5SM

T5BP-090* with B5SM-090*

O.D.T			65°F			75°F			85°F			95°F			105°F			115°F		
CFM	E.D.B.	E.W.B.	T.C.	S.C.	kW	T.C.	S.C.	kW	T.C.	S.C.	kW	T.C.	S.C.	kW	T.C.	S.C.	kW	T.C.	S.C.	kW
2750	75	62	93.2	70.8	5.77	89.4	68.1	6.21	85.0	65.4	6.78	80.1	62.7	7.48	75.3	60.1	8.30	70.1	57.5	9.61
		67	100.0	54.1	6.07	97.4	52.4	6.51	93.8	50.6	7.10	89.1	48.9	7.80	84.0	47.1	8.60	78.0	45.5	9.69
		72	108.3	40.1	6.15	105.7	38.4	6.66	102.1	36.8	7.21	97.4	35.2	7.95	92.3	33.6	8.74	86.3	32.0	9.80
	80	62	91.7	80.2	5.88	87.9	77.0	6.32	84.0	74.0	6.89	79.4	71.0	7.61	75.1	68.0	8.37	69.9	65.0	9.46
		67	98.4	67.9	6.15	95.9	65.8	6.57	92.0	63.6	7.12	87.5	61.4	7.77	82.1	59.2	8.62	75.8	57.0	9.76
		72	107.9	52.4	6.20	104.7	50.1	6.64	100.6	47.8	7.21	96.0	45.6	7.93	91.1	43.4	8.69	84.8	41.2	9.78
3000	75	62	94.2	72.3	5.85	90.4	69.6	6.33	86.0	66.9	6.90	81.1	64.2	7.60	76.2	61.8	8.42	70.8	59.4	9.71
		67	100.9	56.6	6.18	98.3	54.5	6.69	94.7	52.6	7.26	91.2	51.0	7.98	84.9	49.0	8.78	78.8	47.2	9.82
		72	109.5	43.1	6.30	106.3	41.5	6.81	102.7	39.8	7.38	98.0	38.1	8.10	92.9	36.4	8.90	86.8	34.7	9.93
	80	62	93.1	82.9	5.96	89.2	80.1	6.40	84.9	77.2	6.97	80.3	74.3	7.69	76.1	71.4	8.45	70.8	68.5	9.54
		67	99.7	69.0	6.23	97.0	67.5	6.65	93.1	65.8	7.20	**90.0**	**64.0**	**8.05**	83.3	61.7	8.80	76.7	59.0	9.85
		72	109.3	54.7	6.32	106.0	52.8	6.76	101.8	50.5	7.33	97.0	48.2	8.05	92.3	45.9	8.81	85.5	43.6	9.90
3250	75	62	95.2	73.8	6.00	91.3	71.3	6.48	86.9	68.8	7.05	82.1	66.1	7.75	77.3	63.6	8.59	71.6	61.3	9.84
		67	101.7	59.1	6.35	99.0	56.8	6.82	95.4	54.5	7.39	90.7	52.8	8.09	85.6	50.3	8.87	79.3	48.9	9.96
		72	109.3	45.5	6.48	106.6	43.7	6.95	103.0	41.9	7.55	98.3	40.1	8.25	93.2	38.3	9.02	86.9	36.5	10.07
	80	62	95.0	85.6	6.08	91.0	82.5	6.52	86.6	79.5	7.09	81.6	76.5	7.81	77.1	73.5	8.57	71.5	70.5	9.66
		67	101.7	72.6	6.40	99.0	70.8	6.82	94.8	68.6	7.39	90.6	66.4	8.05	85.3	64.3	8.91	78.4	62.2	10.00
		72	110.2	57.4	6.53	107.9	56.5	6.97	103.8	54.8	7.54	98.8	52.9	8.26	93.8	50.1	9.02	87.5	48.2	10.11

Notes:

1) T.C. = Total (Net) Cooling Capacity, S.C. = Sensible Cooling Capacity, kW = Kilowatts

2) Expanded Ratings are based on 230 Volt - 60 Hz operation.

3) Bold values indicate certified AHRI rating point.

4) Energy Efficiency Ratio (EER) = T.C. / kW

COOLING EXPANDED RATINGS WITH B5SM (continued)

T5BP-120* with B5SM-120*

O.D.T			65°F			75°F			85°F			95°F			105°F			115°F		
CFM	**E.D.B.**	**E.W.B.**	**T.C.**	**S.C.**	**kW**	**T.C.**	**S.C.**	**kW**	**T.C.**	**S.C.**	**kW**	**T.C.**	**S.C.**	**kW**	**T.C.**	**S.C.**	**kW**	**T.C.**	**S.C.**	**kW**
3750	75	62	124.1	91.8	7.91	117.3	88.0	8.76	111.3	84.6	9.61	105.3	82.1	10.47	99.2	79.4	11.32	94.0	77.1	12.17
		67	134.8	73.1	8.07	129.9	70.9	8.94	124.1	69.7	9.81	117.7	66.7	10.68	111.1	64.4	11.55	104.4	61.5	12.42
		72	147.7	47.3	8.23	141.3	46.6	9.12	134.9	46.0	10.00	128.6	45.0	10.89	122.3	44.0	11.78	115.9	42.9	12.67
	80	62	120.2	109.2	7.94	113.6	106.1	8.82	108.0	102.7	9.70	102.0	98.1	10.58	96.0	94.3	11.46	91.2	91.5	12.34
		67	133.6	90.8	8.11	134.3	88.8	9.00	122.5	87.2	9.89	115.2	83.5	10.77	109.2	81.3	11.66	101.0	78.9	12.55
		72	146.3	67.3	8.29	139.7	67.0	9.19	133.1	66.5	10.09	126.4	65.7	10.99	119.6	64.7	11.89	112.0	64.5	12.80
4000	75	62	126.4	89.7	8.04	120.1	87.7	8.90	113.8	85.4	9.77	107.6	82.8	10.63	101.3	81.0	11.50	95.0	78.9	12.36
		67	138.9	69.8	8.21	133.7	69.1	9.11	127.8	68.6	10.01	121.1	66.6	10.85	113.7	64.8	11.72	105.6	62.9	12.61
		72	151.4	43.9	8.39	144.6	44.8	9.29	137.7	45.4	10.19	130.9	45.8	11.09	124.1	44.7	11.99	117.2	44.5	12.89
	80	62	121.4	111.2	8.08	115.3	107.6	8.96	109.4	103.7	9.84	103.0	99.4	10.73	96.9	95.9	11.61	91.8	91.9	12.49
		67	134.3	94.1	8.25	129.3	92.4	8.36	123.4	90.7	9.39	**116.4**	**86.8**	**10.52**	110.0	84.5	11.44	101.7	80.8	12.76
		72	147.0	70.6	8.43	139.9	70.0	9.35	133.5	69.1	10.27	126.9	67.9	11.19	120.4	67.0	12.12	113.1	65.8	13.04
4250	75	62	128.3	91.1	8.18	122.3	89.3	9.05	116.3	87.2	9.91	110.3	84.9	10.78	104.3	83.4	11.64	98.3	81.6	12.51
		67	142.5	71.3	8.37	137.3	71.4	9.25	131.4	70.9	10.13	124.8	69.9	11.01	117.4	68.0	11.89	109.2	65.5	12.78
		72	156.1	46.8	8.56	149.1	46.2	9.46	142.1	46.9	10.36	135.2	47.3	11.25	128.2	46.8	12.15	121.2	46.1	13.05
		62	123.2	114.6	8.23	117.1	110.7	9.12	111.0	106.0	10.01	104.9	101.8	10.90	98.9	97.4	11.79	92.8	92.8	12.68
	80	67	135.4	96.5	8.41	130.8	95.1	8.52	124.9	93.3	9.55	117.5	89.3	10.68	111.5	87.0	11.60	103.1	83.5	12.94
		72	148.3	74.1	8.59	141.5	73.6	9.52	134.7	72.7	10.44	127.9	71.7	11.37	121.2	70.3	12.29	114.4	68.6	13.22

Notes:

1) T.C. = Total (Net) Cooling Capacity, S.C. = Sensible Cooling Capacity, kW = Kilowatts

2) Expanded Ratings are based on 230 Volt - 60 Hz operation.

3) Bold values indicate certified AHRI rating point.

4) Energy Efficiency Ratio (EER) = T.C. / kW

HEATING EXPANDED RATINGS T5BP WITH B5SM

T5BP-090* with B5SM-090*

CFM	Indoor T. Deg.F	OUTDOOR TEMPERATURE (Deg. F)																							
		10			17			20			30			40			47			50			60		
		MBH	COP	kW	MBH	COP	kW	MBH	COP	kW	MBH	COP	kW	MBH	COP	kW	MBH	COP	kW	MBH	COP	kW	MBH	COP	kW
2750	60	47.2	2.39	5.80	54.7	2.64	6.07	57.8	2.74	6.18	68.5	3.06	6.56	79.1	3.35	6.94	86.6	3.53	7.20	89.8	3.60	7.31	100.4	3.83	7.69
	70	45.9	2.10	6.42	53.3	2.35	6.67	56.5	2.45	6.78	67.1	2.76	7.14	77.7	3.04	7.49	85.1	3.22	7.75	88.3	3.30	7.85	98.9	3.53	8.21
	80	45.5	1.89	7.05	52.8	2.12	7.31	55.9	2.21	7.42	66.3	2.50	7.79	76.7	2.76	8.15	84.0	2.93	8.41	87.1	3.00	8.52	97.5	3.22	8.89
3000	60	47.7	2.42	5.77	55.3	2.69	6.02	58.5	2.80	6.13	69.3	3.14	6.48	80.0	3.44	6.83	87.6	3.63	7.07	90.8	3.71	7.18	101.5	3.95	7.53
	70	46.5	2.15	6.36	**54.0**	**2.40**	**6.59**	57.2	2.51	6.69	67.9	2.83	7.02	78.5	3.13	7.36	**86.0**	**3.32**	**7.59**	89.2	3.40	7.69	99.9	3.65	8.02
	80	45.9	1.92	7.01	53.3	2.16	7.24	56.4	2.25	7.34	66.9	2.56	7.66	77.4	2.84	7.99	84.8	3.03	8.21	88.0	3.10	8.31	98.5	3.35	8.63
3250	60	47.7	2.42	5.77	55.4	2.70	6.00	58.7	2.82	6.11	69.7	3.17	6.45	80.7	3.48	6.79	88.4	3.69	7.03	91.7	3.77	7.13	102.7	4.03	7.47
	70	47.2	2.17	6.38	54.7	2.43	6.59	57.9	2.54	6.68	68.6	2.88	6.99	79.3	3.19	7.29	86.8	3.39	7.51	90.0	3.47	7.60	100.7	3.74	7.90
	80	46.4	1.94	7.01	53.8	2.19	7.21	57.0	2.29	7.30	67.6	2.61	7.59	78.1	2.91	7.88	85.6	3.11	8.08	88.7	3.19	8.17	99.3	3.44	8.46

T5BP-120* with B5SM-120*

CFM	Indoor T. Deg.F	OUTDOOR TEMPERATURE (Deg. F)																							
		10			17			20			30			40			47			50			60		
		MBH	COP	kW	MBH	COP	kW	MBH	COP	kW	MBH	COP	kW	MBH	COP	kW	MBH	COP	kW	MBH	COP	kW	MBH	COP	kW
3750	60	62.2	2.42	7.55	70.8	2.65	7.85	74.4	2.74	7.97	86.7	3.03	8.39	98.9	3.29	8.81	107.5	3.46	9.11	111.2	3.53	9.23	123.4	3.75	9.65
	70	60.6	2.11	8.43	69.2	2.33	8.70	72.9	2.43	8.81	85.2	2.72	9.19	97.5	2.99	9.56	106.1	3.17	9.83	109.8	3.24	9.94	122.0	3.47	10.32
	80	60.3	1.89	9.34	68.8	2.10	9.60	72.4	2.19	9.71	84.5	2.46	10.09	96.6	2.71	10.46	105.0	2.87	10.72	108.7	2.94	10.83	120.8	3.16	11.21
4000	60	62.8	2.47	7.47	71.5	2.71	7.74	75.2	2.81	7.86	87.6	3.11	8.25	99.9	3.39	8.64	108.6	3.57	8.91	112.3	3.65	9.02	124.7	3.88	9.41
	70	61.4	2.17	8.30	**70.0**	**2.40**	**8.55**	73.7	2.50	8.65	86.0	2.80	9.00	98.4	3.09	9.35	**107.0**	**3.27**	**9.59**	110.7	3.35	9.69	123.0	3.59	10.04
	80	60.7	1.93	9.23	69.3	2.15	9.46	72.9	2.24	9.55	85.1	2.53	9.87	97.3	2.80	10.19	105.9	2.98	10.42	109.5	3.06	10.51	121.8	3.30	10.83
4250	60	62.6	2.48	7.42	71.5	2.73	7.68	75.3	2.83	7.80	87.9	3.15	8.18	100.6	3.45	8.56	109.4	3.64	8.82	113.2	3.72	8.94	125.9	3.96	9.32
	70	62.1	2.20	8.29	70.8	2.44	8.51	74.5	2.54	8.60	86.8	2.86	8.91	99.1	3.15	9.23	107.8	3.35	9.45	111.4	3.43	9.54	123.8	3.68	9.85
	80	61.3	1.96	9.18	69.9	2.19	9.38	73.5	2.28	9.46	85.8	2.58	9.74	98.1	2.87	10.01	106.7	3.06	10.21	110.4	3.15	10.29	122.6	3.40	10.57

Notes:

1) T.C. = Total (Net) Cooling Capacity, S.C. = Sensible Cooling Capacity, kW = Kilowatts

2) Expanded Ratings are based on 230 Volt - 60 Hz operation.

3) Bold values indicate certified AHRI rating point.

4) Coefficient of performance (C.O.P.) = TC / kW / 3.413

Intertek

AHRI CERTIFIED
www.ahridirectory.org
Unitary Large HP
AHRI Standard 340/360
Certification applies only when the complete system is listed with AHRI

We Encourage Professionalism
Through Technician Certification by NATE

HRAI
MEMBER COMPANY

For complete catalog information including submittals, energy calculations, dimension drawings, and more go to www.ReznorHVAC.com or call 800-695-1901.

Note: In keeping with our policy of continuous product improvement, we reserve the right to alter, at any time, the design, construction, dimensions, weights, etc., of equipment information shown here.

262E-0914 Form S-T5BP-0110

REZNOR®