

S3BN Series

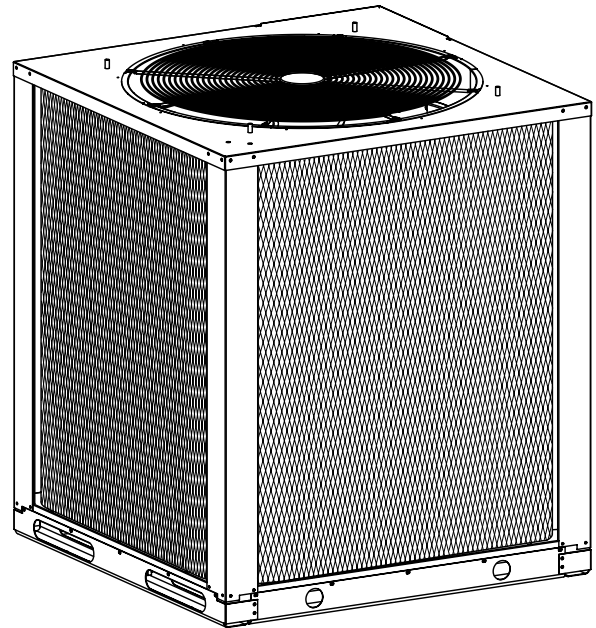
Split System Air Conditioner

10.3 EER Commercial System

7½ and 10 Ton Capacity

R-22 Refrigerant

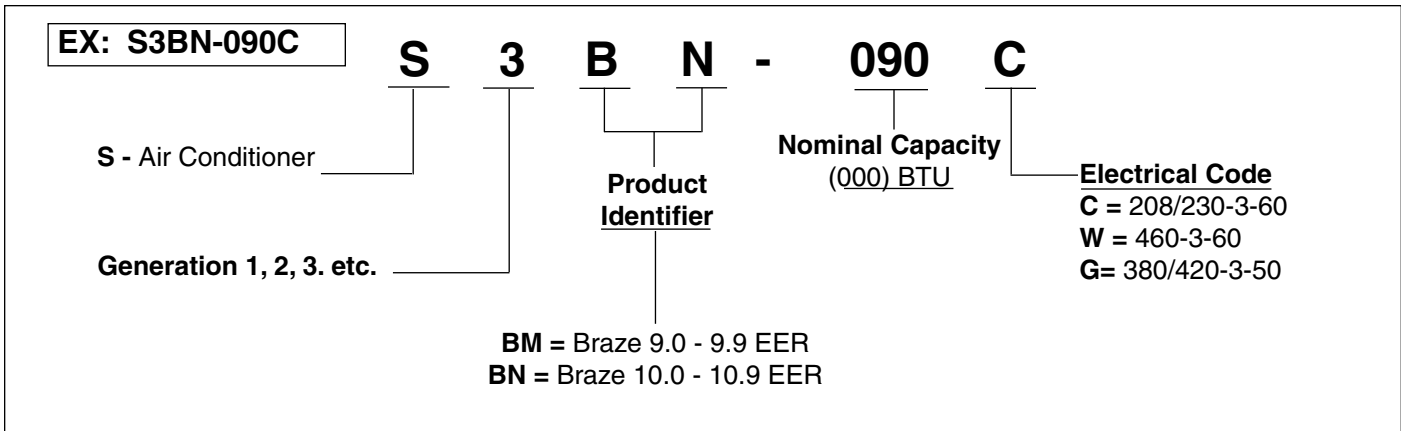
The S3BN Series of air conditioners offers exceptional performance from a small, compact package. The unit, when combined with our air handlers, offers a line of quality, split system cooling equipment. The S3BN is rated at 10.3EER when matched with our air handler. Units are ideally sized for slab or rooftop mounting in light commercial applications.



FEATURES and BENEFITS

- **Quality Compressor** - State of the art scroll compressor is standard equipment.
 - **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** – Both indoor and 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 from the top without disconnecting fan motor leads.
 - **Raised Base** – The sturdy base keeps the bottom of the coil out of harms way and allows water from rain 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.
 - **1 Year Limited All Parts Warranty, 5 Year Parts Coverage on Compressor** – Proven to be a major benefit to the end user.
 - **90 VA Transformer** - Includes 4 Amp circuit breaker to protect low voltage circuit.
 - **Liquid Line Filter Drier** - Factory installed for convenience.
 - **Suction Accumulator and Crankcase Heater** - Protection from liquid floodback and future compressor failures.
-

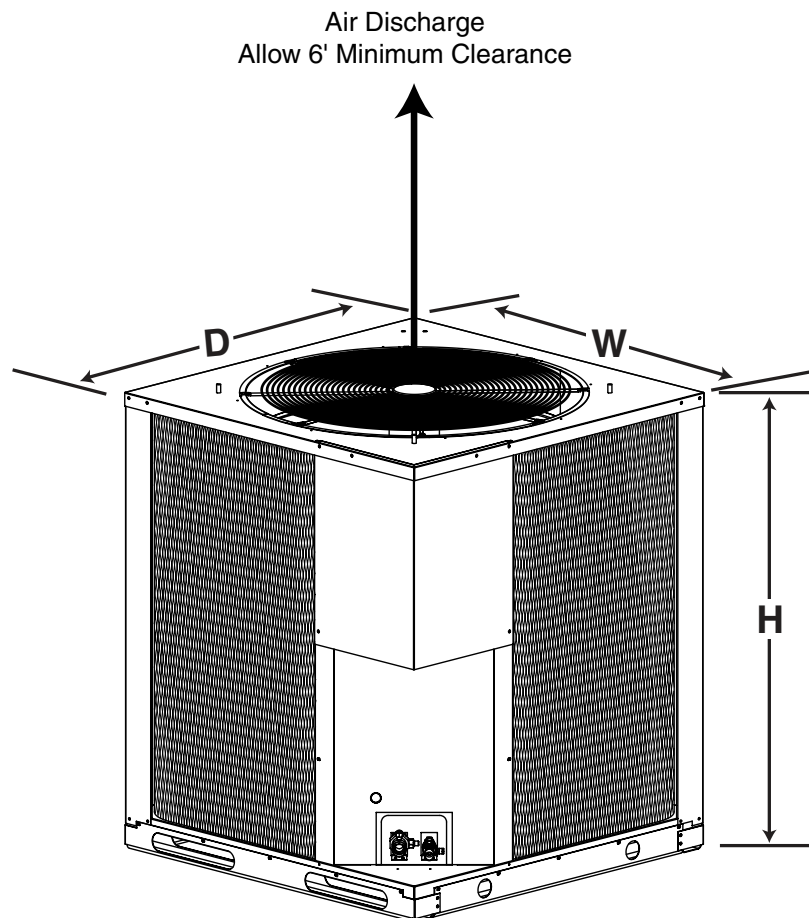
MODEL IDENTIFICATION CODES



DIMENSIONS (Inches)

AIR CONDITIONER OUTDOOR SECTION

S3BN-	090	120
Height	44-1/4	44-1/4
Width	37-1/2	37-1/2
Depth	37-1/2	37-1/2
Shipping Height	50	50



PHYSICAL AND ELECTRICAL SPECIFICATIONS / OUTDOOR UNITS

10.3 EER —High Efficiency — Three Phase

Model No. S3BN-			090C	090W	120C	120W
Electrical Data	Volts-Phase-Hz		208/230-3-60	460-3-60 380/420-3-50	208/230-3-60	460-3-60 380/420-3-50
	Voltage Range (Min-Max)		187-253	414-506	187-253	414-506
	Total Amps		32.1	16.4	33.4	17.2
	Min Circuit Ampacity		41.4	21.7	43	22.7
	Delay Fuse Max. (1)		60	35	70	35
	Wire Size/Max Length (AWG 60°C Cu)		4/100	8/100	4/100	8/100
	Wire Size/Max Length (AWG 75°C Cu)		6/100	8/100	4/100	8/100
Component Data	Coil	Area (ft^2)	31.94	31.94	31.94	31.94
		Rows-FPI	2-16	2-16	2-18	2-18
		Tube Dia.	3/8" OD	3/8" OD	3/8" OD	3/8" OD
	Fan Motor	Volts-Phase-Hz	208/230-3-60	460-3-60 380/420-3-50	208/230-3-60	460-3-60 380/420-3-50
		Qty	1	1	1	1
		Horsepower	3/4	3/4	3/4	3/4
		Full Load Amps	3.3	1.7	3.3	1.7
	Fan Blade	Dia./Pitch/#Blades	30/19/3	30/19/3	30/26/3	30/26/3
		RPM/CFM (Max-Total)	825/7500	825/7500	825/8500	825/8500
	Compressor Data	Volts-Phase-Hz	208/230-3-60	460-3-60	208/230-3-60	460-3-60
		Qty./Type	1 / Scroll	1 / Scroll	1 / Scroll	1 / Scroll
		RLA	28.8	14.7	30.1	15.5
		LRA	195	95	225	114
		Stages/Percent	1 / 100	1 / 100	1 / 100	1 / 100
	Crankcase Heater Qty./Type		1 / Band	1 / Band	1 / Band	1 / Band
Refrigerant Suction Line-Length/O.D.		0 - 15 ft.	1 1/8"	1 1/8"	1 1/8"	1 1/8"
(Liq. Line All Lengths - 5/8" O.D.) Circuits (Qty) - 1		16 - 25 ft	1 3/8" (3)	1 3/8" (3)	1 3/8" (3)	1 3/8" (3)
		26 - 75 ft.	1 3/8" (3)	1 3/8" (3)	1 3/8" (3)	1 3/8" (3)
Refrigerant Charge R-22 Ounces	Holding Charge		56	56	76	76
	Total System with 15' Line Set (2)		294	294	430	430
Weight		Net	395	395	405	405
Approximate (lbs.)		Ship	407	407	417	417

(1) HACR Type Circuit Breakers may be used.

(2) Add 9.0 oz. of refrigerant per 5 feet of additional line set.

(3) Requires a 1-3/8" to 1-1/8" reducer line to unit.

ACCESSORIES - Condensing Unit

Low Ambient Kit - 913549A — Maintains system pressures during low ambient conditions.

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
2	3	4	6	55
1	2	3	4	60

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

10.3 EER — High Efficiency — Three Phase

Outdoor Unit Model Number	Indoor Unit Model Number	BTUH	EER	SCFM
S3BN-090C	B4SM-090	90000	10.3	3000
S3BN-090C	B5BM-T48K (2)	89000	10.3	1500 (ea)
S3BN-090W	B4SM-090	90000	10.3	3000
S3BN-090W	B5BM-T48K (2)	89000	10.3	1500 (ea)
S3BN-120C	B4SM-120	108000	10.3	3750
S3BN-120C	B5BM-T60K (2)	108000	10.3	1875 (ea)
S3BN-120W	B4SM-120	108000	10.3	3750
S3BN-120W	B5BM-T60K (2)	108000	10.3	1875 (ea)

See current ARI Directory for certified combinations and ratings.

EXPANDED RATINGS WITH B4SM

S3BN-090* with B4SM-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.	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.
2500	75	62	86.0	64.7	6.48	83.9	63.4	7.01	81.5	62.1	7.61	78.8	60.5	8.29	75.7	58.8	9.07	72.3	56.9	9.95
	75	67	93.0	51.1	6.60	90.8	50.0	7.12	88.3	48.8	7.72	85.4	47.4	8.40	82.2	45.9	9.18	78.5	44.1	10.06
	75	72	104.1	46.0	6.80	101.8	45.0	7.31	99.1	43.8	7.91	96.0	42.4	8.59	92.4	40.8	9.37	88.4	39.1	10.26
	80	62	86.6	73.3	6.49	84.3	72.8	7.01	81.9	71.4	7.61	79.2	69.9	8.29	83.0	59.0	9.19	79.4	57.2	10.07
	80	67	93.6	64.7	6.61	91.4	63.5	7.13	89.1	62.2	7.72	86.2	60.7	8.41	76.2	68.1	9.07	72.8	66.2	9.95
	80	72	101.1	55.2	6.73	98.8	54.2	7.25	96.1	52.9	7.85	93.1	51.5	8.53	89.6	49.9	9.31	85.8	48.1	10.22
	85	62	87.3	78.5	6.49	85.2	77.3	7.01	82.8	75.9	7.61	80.2	74.4	8.30	77.2	72.6	9.08	73.9	70.5	9.96
	85	67	94.1	74.0	6.60	91.9	72.9	7.13	89.4	71.5	7.72	86.6	70.0	8.41	83.4	68.3	9.19	79.8	66.4	10.07
	85	72	101.8	80.1	6.74	99.7	79.0	7.26	97.0	77.6	7.86	94.0	75.9	8.54	90.5	74.1	9.32	86.7	72.2	10.21
3000	75	62	89.4	69.5	6.54	87.2	68.3	7.06	84.7	66.9	7.66	81.8	65.3	8.34	78.6	63.5	9.12	75.0	61.5	10.00
	75	67	96.6	58.5	6.66	94.3	57.3	7.18	91.6	56.0	7.78	88.5	54.4	8.46	85.1	52.7	9.24	81.3	50.8	10.11
	75	72	107.6	47.6	6.86	105.2	46.5	7.37	102.2	45.3	7.97	98.9	43.9	8.65	95.0	42.3	9.43	90.7	40.6	10.31
	80	62	90.4	79.0	6.55	87.7	79.3	7.06	85.9	76.4	7.67	83.0	74.7	8.35	85.9	63.6	9.24	82.1	61.6	10.12
	80	67	97.2	69.5	6.67	95.0	68.3	7.19	92.3	66.9	7.78	89.0	65.3	8.46	79.8	72.8	9.13	76.1	70.7	10.01
	80	72	104.9	58.3	6.80	102.4	57.2	7.32	99.6	55.9	7.91	96.4	54.4	8.59	92.7	52.8	9.37	88.7	50.9	10.26
	85	62	91.3	85.0	6.56	89.2	83.7	7.08	86.7	85.9	7.68	83.9	80.2	8.36	80.2	77.0	9.13	76.5	75.8	10.01
	85	67	97.8	80.4	6.67	95.5	79.2	7.19	92.9	77.8	7.78	89.9	76.3	8.47	86.5	74.5	9.25	82.7	72.5	10.13
	85	72	105.6	69.2	6.81	103.2	68.1	7.32	100.4	66.8	7.92	97.4	65.3	8.60	93.8	63.6	9.39	89.7	61.7	10.25
3500	75	62	92.0	74.1	6.58	89.7	72.8	7.10	87.1	71.3	7.70	84.1	69.6	8.38	80.8	67.8	9.16	77.0	65.7	10.03
	75	67	99.3	61.4	6.71	96.9	60.2	7.23	94.1	58.8	7.82	90.9	57.2	8.50	87.3	55.4	9.28	83.3	53.5	10.15
	75	72	109.9	48.9	6.90	107.4	47.9	7.41	104.2	46.6	8.00	100.6	45.2	8.68	96.4	43.6	9.45	91.6	41.8	10.32
	80	62	93.1	85.5	6.60	91.3	83.0	7.12	88.7	81.5	7.72	85.6	79.7	8.40	82.3	77.7	9.18	78.5	75.3	10.06
	80	67	100.0	73.9	6.72	97.6	72.7	7.23	94.9	71.2	7.83	91.8	69.6	8.51	88.3	67.9	9.29	84.3	65.9	10.17
	80	72	107.7	61.1	6.85	105.2	60.0	7.37	102.2	58.6	7.96	98.9	57.1	8.64	95.1	55.4	9.42	90.8	53.5	10.30
	85	62	94.2	93.4	6.62	92.2	87.4	7.11	88.4	87.5	7.71	86.0	86.0	8.40	83.2	82.3	9.19	80.1	79.3	10.08
	85	67	100.6	86.5	6.72	98.2	85.2	7.24	95.6	83.8	7.83	93.3	80.1	8.53	89.8	78.4	9.31	85.7	76.3	10.21
	85	72	108.4	73.6	6.86	106.0	72.4	7.37	103.3	71.1	7.97	99.9	69.5	8.65	96.1	67.8	9.43	91.9	65.8	10.32

EXPANDED RATINGS WITH B4SM (continued)

S3BN-120* with B4SM-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.	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.
3250	75	62	106.6	83.4	8.03	103.7	81.8	8.65	100.4	80.8	9.35	97.8	78.0	10.14	93.6	76.8	11.06	88.8	75.6	12.07
	75	67	115.8	84.6	8.19	112.5	83.2	8.82	109.0	81.5	9.53	105.2	80.4	10.32	101.2	78.3	11.22	96.8	85.8	12.25
	75	72	128.2	86.5	8.42	124.9	85.1	9.05	121.0	83.4	9.76	116.8	81.6	10.56	112.3	80.7	11.47	107.4	87.7	12.48
	80	62	107.4	95.0	8.03	104.5	93.4	8.66	101.3	91.6	9.36	97.8	89.6	10.16	101.9	76.1	11.22	97.5	73.9	12.26
	80	67	116.1	83.4	8.19	113.2	81.8	8.82	109.7	80.1	9.52	105.9	78.2	10.32	94.0	87.4	11.05	90.0	85.1	12.09
	80	72	125.8	70.0	8.37	122.4	68.4	8.99	118.7	66.7	9.70	114.6	64.9	10.50	110.2	62.9	11.40	105.4	60.8	12.42
	85	62	108.2	102.2	8.03	105.4	100.4	8.66	102.3	98.4	9.37	97.8	96.8	10.16	94.5	93.5	11.04	91.1	90.2	12.10
	85	67	116.5	96.5	8.18	113.5	94.9	8.81	110.0	93.1	9.52	106.3	91.2	10.31	102.6	87.7	11.23	98.3	85.6	12.24
	85	72	127.0	105.2	8.39	123.2	103.0	8.99	119.4	101.1	9.70	115.3	99.0	10.50	110.9	94.8	11.41	106.2	92.5	12.43
3750	75	62	109.6	88.8	8.08	106.6	87.2	8.71	103.7	86.5	9.42	99.4	85.5	10.19	94.8	84.2	11.05	89.9	82.7	11.99
	75	67	118.8	73.6	8.25	115.6	72.0	8.88	111.9	70.3	9.58	107.9	68.3	10.38	103.7	66.3	11.28	99.1	64.1	12.29
	75	72	131.4	58.2	8.48	127.9	56.7	9.11	123.9	55.0	9.82	119.4	53.2	10.62	114.7	51.3	11.52	109.6	49.3	12.53
	80	62	110.8	101.6	8.09	107.8	99.8	8.72	104.4	97.9	9.42	100.8	95.7	10.22	104.5	81.3	11.28	99.9	79.1	12.29
	80	67	119.4	88.8	8.25	116.4	87.2	8.88	112.7	85.4	9.59	108.0	83.4	10.38	96.8	93.4	11.11	92.6	90.8	12.12
	80	72	129.1	73.4	8.43	125.6	71.8	9.05	121.7	70.1	9.77	117.4	68.2	10.56	112.8	66.2	11.46	107.9	64.0	12.48
	85	62	110.8	110.0	8.09	108.0	106.9	8.71	105.2	104.1	9.42	102.1	101.1	10.23	98.9	97.9	11.15	95.3	94.4	12.18
	85	67	120.7	101.9	8.26	117.5	100.3	8.89	113.8	98.4	9.59	109.8	96.4	10.39	105.5	94.2	11.29	100.9	91.8	12.29
	85	72	130.6	89.5	8.44	126.5	86.9	9.06	122.6	85.1	9.77	118.2	83.2	10.57	113.7	81.1	11.47	108.7	78.9	12.49
4250	75	62	112.1	94.1	8.13	109.0	92.4	8.75	104.9	93.5	9.41	100.6	92.0	10.18	96.0	90.1	11.05	90.0	85.6	11.96
	75	67	121.4	76.9	8.30	118.1	75.3	8.92	114.3	73.5	9.63	110.1	71.5	10.42	105.7	69.4	11.32	101.0	67.2	12.32
	75	72	133.8	59.7	8.53	130.2	58.2	9.16	126.0	56.5	9.87	121.4	54.7	10.66	116.3	52.7	11.55	111.0	50.6	12.56
	80	62	113.7	107.4	8.14	110.6	105.6	8.77	107.1	103.4	9.47	103.3	101.0	10.27	99.3	98.3	11.17	94.4	93.5	12.16
	80	67	122.0	93.9	8.29	118.9	92.3	8.92	115.1	90.4	9.63	110.9	88.4	10.42	106.5	86.3	11.32	101.8	84.0	12.32
	80	72	131.8	76.6	8.48	128.2	75.0	9.10	124.1	73.3	9.81	119.7	71.3	10.61	114.9	69.2	11.51	109.8	67.0	12.53
	85	62	114.8	113.6	8.15	112.2	111.1	8.79	109.3	108.2	9.50	106.1	105.0	10.31	102.6	101.6	11.23	98.9	97.9	12.26
	85	67	123.6	108.1	8.31	120.2	106.4	8.94	116.4	104.4	9.64	112.3	102.3	10.44	107.8	99.9	11.34	103.1	97.4	12.36
	85	72	133.3	94.6	8.49	129.1	92.0	9.11	125.0	90.1	9.82	120.6	88.2	10.61	115.8	86.0	11.52	110.7	83.8	12.53

EXPANDED RATINGS WITH B5BM

S3BN-090* with B5BM-T48K (Twin)

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.
2500	80	62	81.9	72.3	7.61	79.2	70.7	8.29	76.2	68.9	9.07	72.8	66.9	9.95
	80	67	89.0	63.1	7.72	86.2	60.5	8.41	83.0	57.3	9.19	79.4	55.5	10.07
	80	72	96.1	53.9	7.85	93.1	52.4	8.53	89.6	50.8	9.31	85.8	48.9	10.22
	75	63	81.5	62.9	7.61	78.8	61.3	8.29	75.7	59.6	9.07	72.3	57.6	9.95
3000	80	62	85.9	77.2	7.67	83.0	75.5	8.35	79.8	73.6	9.13	76.1	71.5	10.01
	80	67	92.3	67.8	7.78	89.0	65.1	8.46	85.9	60.2	9.24	82.1	58.4	10.12
	80	72	99.6	56.9	7.91	96.4	55.4	8.59	92.7	53.7	9.37	88.7	51.8	10.26
	75	63	84.7	67.7	7.66	81.8	66.1	8.34	78.6	64.3	9.12	75.0	62.2	10.00
3500	80	62	88.7	82.4	7.72	85.6	80.6	8.40	82.3	81.4	9.18	78.5	77.7	10.06
	80	67	94.9	71.0	7.83	91.8	67.7	8.51	88.3	64.4	9.29	84.3	62.6	10.17
	80	72	102.2	59.7	7.96	98.9	58.1	8.64	95.1	56.4	9.42	90.8	54.4	10.30
	75	63	87.1	72.2	7.70	84.1	70.5	8.38	80.8	68.6	9.16	77.0	66.5	10.03

S3BN-120* with B5BM-T60K (Twin)

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.
3250	80	62	101.3	93.6	9.36	97.8	91.5	10.16	94.0	89.3	11.05	90.0	86.9	12.09
	80	67	109.6	82.2	9.52	105.9	78.7	10.32	101.9	74.3	11.22	97.5	72.2	12.26
	80	72	118.8	69.1	9.70	114.6	67.2	10.50	110.2	65.1	11.40	105.4	62.9	12.42
	75	63	100.4	82.8	9.35	97.8	79.9	10.14	93.6	78.7	11.06	88.8	77.4	12.07
3750	80	62	104.4	100.0	9.42	100.8	97.7	10.22	96.8	95.3	11.11	92.6	91.7	12.12
	80	67	112.7	87.6	9.59	108.0	84.0	10.38	104.5	77.2	11.28	99.9	75.2	12.29
	80	72	121.7	72.5	9.77	117.4	70.5	10.56	112.8	68.4	11.46	107.9	66.2	12.48
	75	63	103.7	88.6	9.42	99.4	87.5	10.19	94.8	86.1	11.05	89.9	84.5	11.99
4250	80	62	107.1	105.6	9.47	103.3	102.3	10.27	99.3	98.3	11.17	95.3	94.4	12.16
	80	67	115.1	91.0	9.63	110.9	86.5	10.42	106.5	82.1	11.32	101.8	80.0	12.32
	80	72	124.1	75.7	9.81	119.7	73.7	10.61	114.9	71.5	11.51	109.8	69.2	12.53
	75	63	104.9	95.6	9.41	100.6	94.0	10.18	96.0	92.0	11.05	90.0	87.4	11.96

