

TECHNICAL SPECIFICATIONS

S6BQ Series

Split System 2-Stage Air Conditioner

**7 1/2 and 10 Ton rated at
11.2 EER and 12.9 IEER**

Meets ASHRAE 90.1-2013

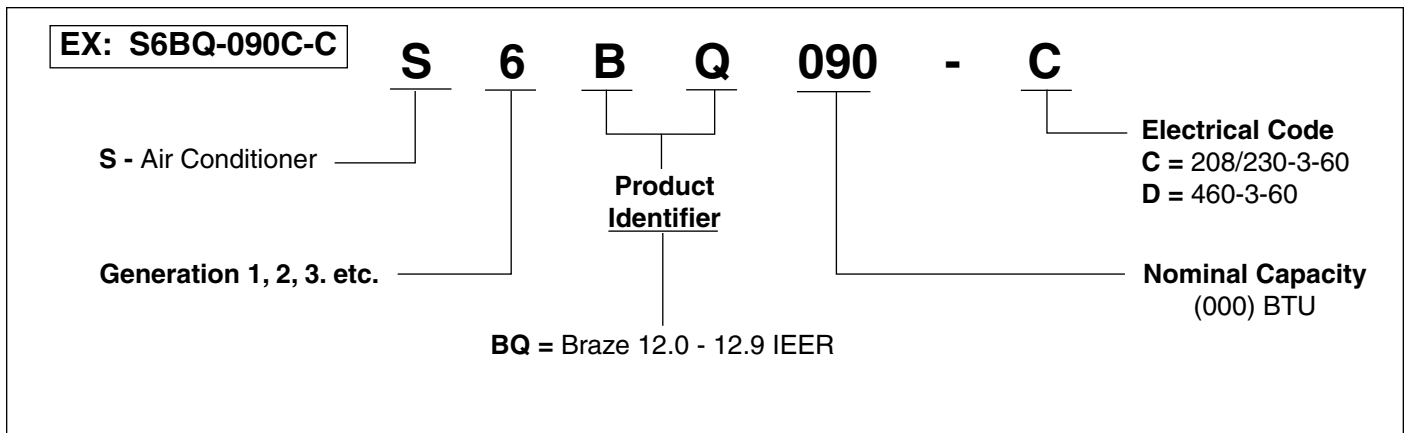
The S6BQ Series of air conditioners offers exceptional performance. The unit, when combined with our air handlers, offers a line of quality, split system cooling equipment. Units are ideally sized for slab or rooftop mounting in light commercial applications.



FEATURES and BENEFITS

- **Quality Compressor:** State-of-the-art Copeland Scroll™ UltraTech™ two-stage scroll compressor is standard equipment providing two-stage operation.
- **Hi/Low Pressure Switches:** Ensure long compressor life. Featuring auto reset.
- **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 to the fan motor.
- **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.
- **90 VA Transformer:** Includes 4 Amp circuit breaker to protect low voltage circuit.
- **Liquid Line Filter Drier:** Field installed for convenience.
- **Suction Accumulator and Crankcase Heater:** Protection from liquid floodback and future compressor failures.

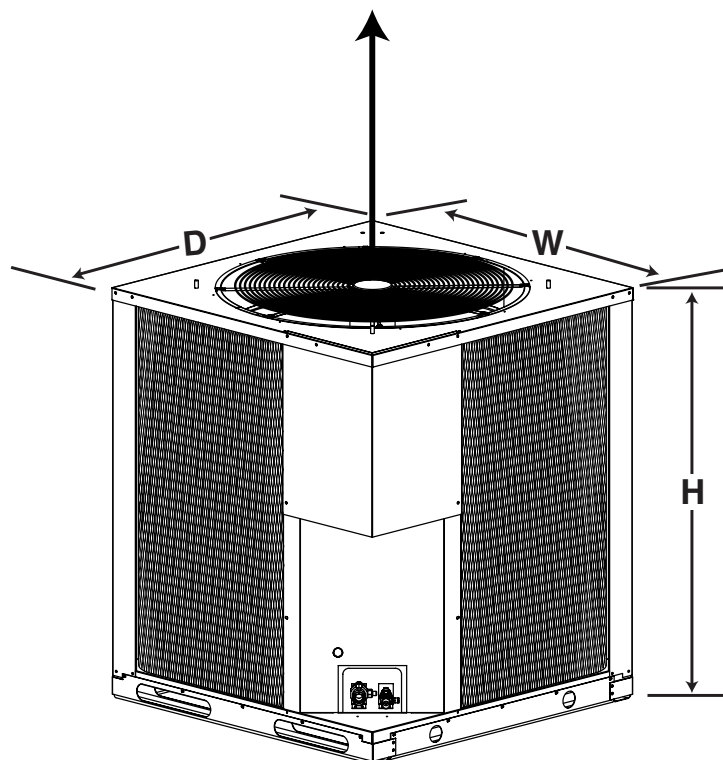
MODEL IDENTIFICATION CODES



DIMENSIONS (Inches) AIR CONDITIONER OUTDOOR SECTION

Model Number S6BQ	Unit Weights (Lbs.)		Height -H-	Width -W-	Depth -D-	Shipping Height
	Without Packaging	Shipping Weight				
090-C	370	390	44 1/4	37 1/2	37 1/2	50
090-D	370	390	44 1/4	37 1/2	37 1/2	50
120-C	386	406	52 1/4	37 1/2	37 1/2	58
120-D	386	406	52 1/4	37 1/2	37 1/2	58

Air Discharge
Allow 6' Minimum Clearance



PHYSICAL AND ELECTRICAL SPECIFICATIONS / OUTDOOR UNITS

High Efficiency — Three Phase

MODEL NUMBER S6BQ	090-C	090-D	120-C	120-D
PERFORMANCE DATA				
Gross Cooling Capacity (95°F) Btuh	92,400	92,400	121,700	121,700
¹ Net Cooling Capacity - Btuh	90,000	90,000	117,000	117,000
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)	11.20	11.20	11.20	11.20
³ Cooling - Efficiency I.E.E.R.	12.9	12.9	12.9	12.9
ELECTRICAL RATINGS				
Volts / Phase / Hz.	208-230 / 3 / 60	460 / 3 / 60	208-230 / 3 / 60	460 / 3 / 60
Unit Rated Ampacity	30.2	13.7	35.9	16.5
Minimum Circuit Ampacity (MCA)	36.9	16.7	44.1	20.2
⁴ Max. Overcurrent Protection (MOP)	60	25	70	35
Compressor Data:	1 ea.	1 ea.	1 ea.	1 ea.
Stages - Percent	2-100 / 67	2-100 / 67	2-100 / 67	2-100 / 67
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	3/4	3/4	3/4	3/4
PHYSICAL DATA & REFRIGERANT SPECS				
Refrigerant Suction Line - Length / OD	0 - 75 Ft. / 1-1/8"	0 - 75 Ft. / 1-1/8"	0 - 100 Ft. / 1-3/8" ⁽⁶⁾	0 - 100 Ft. / 1-3/8" ⁽⁶⁾
	76 - 100 Ft. / 1-3/8" ⁽⁶⁾	76 - 100 Ft. / 1-3/8" ⁽⁶⁾		
Refrigerant Liquid Line - Length / OD	All Lengths - 5/8" OD	All Lengths - 5/8" OD	All Lengths - 5/8" OD	All Lengths - 5/8" OD
Refrigerant Charge.	R410A	R410A	R410A	R410A
Factory Holding Charge - oz	90	90	90	90
⁵ Total System with 25' Line Set	416	416	512	512

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

¹ Certified in accordance with 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 Delay Fuse or HACR Type Circuit Breakers can be used.

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

⁶ Requires a 1-3/8" to 1-1/8" reducer line to unit.

High Efficiency — Three Phase

Outdoor Unit Model Number	Indoor Unit Model Number	BTUH	IEER	SCFM	AHRI Reference Number
S6BQ090-C	B6TM090*	90,000	12.9	3000	201796174
S6BQ090-D	B6TM090*	90,000	12.9	3000	201796182
S6BQ120-C	B6TM120*	117,000	12.9	4000	201796175
S6BQ120-D	B6TM120*	117,000	12.9	4000	201796183

See current AHRI Directory for certified combinations and ratings.

S6BQ SERIES - EXPANDED RATINGS - COOLING OPERATION

S6BQ090-(C/D) (High Speed Compressor / Blower Operation)

O.D.T			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
2750	75	62	85.3	62.4	7.33	81.1	63.8	7.96	76.4	62.7	8.77	71.4	59.1	9.76
		67	93.7	51.0	7.27	89.5	52.4	7.90	84.8	51.3	8.71	79.7	47.7	9.70
		72	102.0	37.1	7.41	97.8	38.5	8.04	93.1	37.4	8.85	88.1	33.8	9.83
	80	62	85.7	76.3	7.33	81.2	77.3	8.04	76.2	75.9	8.93	70.8	70.8*	9.99
		67	94.1	64.9	7.27	89.6	66.0	7.98	84.6	64.5	8.87	79.2	60.6	9.93
		72	102.0	51.0	7.41	97.9	52.1	8.12	92.9	50.6	9.01	87.6	46.7	10.10
3000	75	62	86.0	67.6	7.48	81.7	68.5	8.10	77.0	66.8	8.90	71.8	62.7	9.87
		67	94.4	56.2	7.42	90.1	57.1	8.04	85.4	55.5	8.84	80.2	51.4	9.81
		72	103.0	42.3	7.56	98.4	43.2	8.18	93.7	41.6	8.98	88.5	37.5	9.95
	80	62	87.5	76.3	7.44	82.9	76.9	8.14	77.9	74.9	9.02	72.4	70.5	10.10
		67	95.9	65.0	7.38	90.9	65.5	8.08	86.3	63.5	8.96	80.8	59.1	10.00
		72	104.0	51.1	7.52	99.6	51.6	8.22	94.6	49.6	9.10	89.1	45.2	10.10
3250	75	62	87.3	77.9	7.81	82.9	78.3	8.42	78.1	76.1	9.21	72.9	71.5	10.20
		67	95.7	66.6	7.75	91.3	66.9	8.36	86.5	64.8	9.15	81.3	60.1	10.10
		72	104.0	52.7	7.89	99.6	53.0	8.50	94.9	50.9	9.29	89.6	46.2	10.20
	80	62	89.9	81.6	7.74	85.3	81.6	8.43	80.2	79.1	9.29	74.7	74.1	10.30
		67	98.3	70.2	7.68	93.7	70.2	8.37	88.6	67.7	9.23	83.1	62.8	10.30
		72	107.0	56.3	7.82	102.0	56.3	8.51	96.9	53.8	9.37	91.4	48.9	10.40

S6BQ090-(C/D) (Low Speed Compressor / Blower Operation)

O.D.T			55°F			65°F			75°F			85°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
1800	75	62	77.0	33.1	3.05	77.9	35.8	3.63	76.3	36.3	4.21	72.2	34.5	4.80
		67	68.5	33.9	2.92	68.9	36.5	3.48	66.8	36.8	4.05	62.3	34.9	4.62
		72	77.6	27.0	3.02	77.5	29.5	3.57	75.0	29.7	4.12	70.0	27.6	4.68
	80	62	78.5	44.6	3.38	79.1	46.0	3.91	77.2	45.2	4.44	72.8	42.2	4.97
		67	69.3	44.5	3.09	69.4	45.8	3.60	67.0	44.9	4.11	62.2	41.7	4.63
		72	77.8	36.7	3.03	77.4	37.9	3.53	74.5	36.8	4.03	69.2	33.5	4.53
2000	75	62	78.2	35.2	3.00	79.1	38.1	3.61	77.5	38.7	4.22	73.5	37.0	4.84
		67	69.7	36.0	2.87	70.1	38.7	3.46	68.1	39.2	4.06	63.6	37.4	4.66
		72	78.8	29.1	2.97	78.8	31.7	3.55	76.3	32.0	4.13	71.3	30.1	4.72
	80	62	79.7	46.6	3.33	80.3	48.3	3.89	78.4	47.6	4.45	74.1	44.7	5.01
		67	70.5	46.5	3.04	70.6	48.0	3.58	68.3	47.2	4.12	63.5	44.2	4.67
		72	78.9	38.7	2.98	78.6	40.1	3.51	75.8	39.2	4.04	70.5	36.0	4.57
2200	75	62	80.1	37.1	2.92	81.1	40.1	3.56	79.5	40.9	4.20	75.5	39.3	4.85
		67	71.6	37.9	2.79	72.1	40.8	3.41	70.1	41.4	4.04	65.6	39.7	4.67
		72	80.7	31.0	2.89	80.7	33.7	3.50	78.3	34.2	4.11	73.3	32.4	4.73
	80	62	81.7	48.6	3.26	82.3	50.3	3.84	80.4	49.8	4.43	76.1	47.0	5.02
		67	72.4	48.5	2.96	72.6	50.1	3.53	70.3	49.4	4.10	65.5	46.5	4.68
		72	80.9	40.7	2.91	80.6	42.1	3.46	77.8	41.4	4.02	72.5	38.3	4.58

Notes:

- 1) T.C.= Total (Net) Cooling Capacity (Kbtu), S.C.= Sensible Cooling Capacity (Kbtu), kW = Kilowatts
- 2) Expanded Ratings are based on 230 Volt - 60 Hz operation
- 3) Expanded Ratings are based on Factory Standard Blower Drive
- 4) Bolded Values indicate ARI rating point
- 5) Energy Efficiency Ratio (EER) = T.C. / kW

EXPANDED RATINGS WITH S6BQ (continued)

S6BQ120-(C/D) (High Speed Compressor / Blower Operation)

O.D.T			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
3750	75	62	113.0	85.8	9.32	105.0	82.5	10.30	98.5	80.2	11.40	92.7	78.8	12.40
		67	123.0	68.9	9.38	116.0	65.6	10.40	109.0	63.3	11.50	103.0	61.9	12.50
		72	134.0	48.2	9.65	126.0	44.9	10.70	120.0	42.6	11.70	114.0	41.2	12.80
	80	62	113.0	103.0	9.21	105.0	99.1	10.30	97.6	96.1	11.40	91.2	91.2*	12.60
		67	124.0	86.1	9.27	116.0	82.2	10.40	108.0	79.2	11.50	102.0	77.3	12.70
		72	134.0	65.4	9.54	126.0	61.5	10.70	119.0	58.5	11.80	112.0	56.5	12.90
4000	75	62	114.0	87.1	9.45	106.0	83.9	10.40	99.6	81.6	11.50	93.7	80.3	12.60
		67	125.0	70.2	9.51	117.0	67.0	10.50	110.0	64.7	11.60	104.0	63.4	12.70
		72	135.0	49.5	9.78	127.0	46.2	10.80	121.0	44.0	11.80	115.0	42.7	12.90
	80	62	114.0	107.0	9.33	106.0	103.0	10.40	98.7	98.7*	11.50	92.2	92.2*	12.70
		67	125.0	89.9	9.39	117.5	86.1	10.50	109.0	83.2	11.60	103.0	81.2	12.80
		72	135.0	69.2	9.66	127.0	65.3	10.80	120.0	62.4	11.90	113.0	60.5	13.00
4250	75	62	115.0	86.0	9.58	107.0	82.9	10.60	101.0	80.7	11.60	94.5	79.5	12.70
		67	126.0	69.2	9.64	118.0	66.0	10.70	111.0	63.8	11.70	105.0	62.6	12.70
		72	136.0	48.4	9.91	128.0	45.3	10.90	122.0	43.1	12.00	116.0	41.8	13.00
	80	62	115.0	108.0	9.45	107.0	104.0	10.60	99.6	99.6*	11.70	93.1	93.1*	12.80
		67	126.0	91.4	9.51	118.0	87.6	10.70	110.0	84.7	11.70	104.0	82.9	12.80
		72	136.0	70.7	9.78	128.0	66.9	10.90	121.0	64.0	12.00	114.0	62.2	13.10

S6BQ120-(C/D) (Low Speed Compressor / Blower Operation)

O.D.T			55°F			65°F			75°F			85°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
2475	75	62	86.0	64.0	3.90	82.8	63.4	4.48	78.9	61.9	5.15	74.5	59.5	5.89
		67	96.3	51.2	3.88	93.0	50.6	4.46	89.1	49.1	5.13	84.7	46.7	5.87
		72	106.0	38.4	3.86	103.0	37.8	4.44	99.4	36.3	5.11	94.9	33.9	5.85
	80	62	85.6	75.0	3.92	81.8	74.3	4.52	77.5	72.7	5.20	72.5	70.2	5.96
		67	95.9	62.2	3.90	92.1	61.5	4.50	87.7	59.9	5.18	82.7	57.4	5.94
		72	106.0	49.4	3.88	102.0	48.7	4.48	97.9	47.1	5.16	92.9	44.6	5.92
2600	75	62	86.8	66.2	3.99	83.7	65.8	4.51	79.9	64.4	5.12	75.5	62.2	5.80
		67	97.1	53.4	3.97	93.9	53.0	4.49	90.1	51.6	5.10	85.7	49.4	5.78
		72	107.0	40.6	3.95	104.0	40.2	4.47	100.0	38.8	5.08	95.9	36.6	5.76
	80	62	86.4	77.2	4.01	82.7	76.7	4.55	78.4	75.3	5.17	73.5	72.9	5.87
		67	96.7	64.4	3.99	92.9	63.9	4.53	88.6	62.5	5.15	83.7	60.1	5.85
		72	107.0	51.6	3.97	103.0	51.1	4.51	98.9	49.6	5.13	94.0	47.3	5.83
2725	75	62	88.7	67.3	4.07	85.6	67.1	4.53	81.9	65.9	5.08	77.6	63.8	5.70
		67	98.9	54.5	4.05	95.8	54.3	4.51	92.1	53.1	5.06	87.8	51.0	5.68
		72	109.0	41.7	4.03	106.0	41.4	4.49	102.0	40.3	5.04	98.1	38.2	5.66
	80	62	88.3	78.3	4.09	84.7	78.0	4.57	80.4	76.7	5.13	75.6	74.5	5.77
		67	98.5	65.5	4.07	94.9	65.2	4.55	90.7	63.9	5.11	85.9	61.7	5.75
		72	109.0	52.7	4.05	105.0	52.4	4.53	101.0	51.1	5.09	96.1	48.9	5.73

Notes:

- 1) T.C.= Total (Net) Cooling Capacity (Kbtu), S.C.= Sensible Cooling Capacity (Kbtu), kW = Kilowatts
- 2) Expanded Ratings are based on 230 Volt - 60 Hz operation
- 3) Expanded Ratings are based on Factory Standard Blower Drive
- 4) Bolded Values indicate ARI rating point
- 5) Energy Efficiency Ratio (EER) = T.C. / kW

†Required POE Oil Charge for S5 and T5 Commercial Splits:

Lineset Length (ft): -090 Units	<u>0 - 25'</u> None	<u>26' - 75'</u> 3 oz.	<u>76' - 125'</u> 4 oz.	<u>>125'</u> 1 oz. / 50ft
Lineset Length (ft): -120 Units	<u>0 - 25'</u> None	<u>26' - 85'</u> None	<u>86' - 130'</u> 1 oz.	<u>>130'</u> 1 oz. / 45ft

†Accounts for oil charge required to meet compressor requirements only. Additional oil may be required due to line-set configuration to account for bends and riser traps.

*For computation of the oil charge required, the lineset length is measured in "Actual" feet.



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 (07/2019)