

## Specification Guide

# S Series

## Compact Wall Mount Air Handlers

Electric or No Heat, with available 5-Speed High Efficiency ECM Motor



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# A1 Refrigerants Product Nomenclature

S	M2	1	24	05	A
<b>Series</b> S Series Wall Mount					<b>Revision</b>
<b>Slab Number</b> K# = Copper slab L# = Copper slab M# = Aluminum slab					<b>Electric Heat</b> 00 = No Heat 05 = 5 kW (all sizes) 07 = 7.5 kW (all sizes) 10 = 10 kW (all sizes)
<b>Metering Device</b> 1 = Piston (R-410A) 7 = Bleed HP-A/C TXV (R-410A) 9 = Non-bleed HP-A/C TXV (R-410A)					<b>Unit Size (Nominal MBTUH)</b> 18, 24, 30, 36 = 3-speed PSC motor 19, 25, 31, 37, 39 = 5-speed ECM motor

# A2L Refrigerants Product Nomenclature

S	M2	A	24	05	R
<b>Series</b> S Series Wall Mount					<b>Refrigerant Detection System</b> R = Included (Factory Installed)
<b>Slab Number</b> K# = Copper slab L# = Copper slab M# = Aluminum slab					<b>Electric Heat</b> 00 = No Heat 05 = 5 kW (all sizes) 07 = 7.5 kW (all sizes) 10 = 10 kW (all sizes)
<b>Metering Device</b> 1 = Piston (R-454B & R-32) A = R-454B Non-bleed HP-A/C TXV B = R-32 Non-bleed HP-A/C TXV C = R-454B Bleed HP-A/C TXV					<b>Unit Size (Nominal MBTUH)</b> 18, 24, 30, 36 = 3-speed PSC motor 19, 25, 31, 37, 39 = 5-speed ECM motor

# Product Features

## Cabinet & General Features

- Flexible copper tubing for easy motor access.
- Low 30" height on models 18 – 37.
- Cabinets constructed of heavy-gauge, corrosion-resistant galvanized steel.
- 5/8" foil-faced insulation for excellent sweat resistance and quiet operation.
- (4) Screw removal for easy access to all electrical connections.
- Dual condensate drain connections on left side, right side, and bottom of cabinet.
- 1" duct flanges on all models simplify attachment to plenums.
- Air filter included with every air handler; no tools required for changeout.
- Decorative wall panel or closet panel available as accessory; both panels reduce published sound level.
- Wall hanging bracket included for field installation.

## Evaporator Coil Features

- AC or HP applications;
- A1 models suitable for use with R-22 & R-410A.
- A2L models suitable for use with R-32 and R-454B and include factory installed Refrigerant Detection System (RDS).
- Field or factory installed threaded expansion valve.
- Corrosion proof plastic drain pan.

## Electrical Features

- 5-speed high efficiency ECM motor or PSC motor available.
- Easy to service electric heat section.
- Heat kits available factory installed.
- Pull disconnect line voltage connection standard on all models.
- Includes thermostat connections, time delay (1 sec. on, 45 sec. off), & motor speed settings (PSC motor uses control board; functions are built into the 5-speed ECM motor).

## Physical Data

		Unit Size								
		18	19	24	25	30	31	36	37	39
<b>Available Voltages</b>		208/240 V, 60 Hz, 1 Phase								
<b>Maximum Elec. Heat available (kW)</b>		10	10	10	10	10	10	10	10	10
<b>Transformer Size and Type</b>		40VA, Class 2								
<b>Blower Data:</b>	<b>Motor H.P.</b>	1/4	--	1/4	--	1/3	--	1/3	--	--
3-Speed PSC Motor	<b>F.L.A. @ 240 V</b>	1.7	--	1.7	--	2.0	--	2.0	--	--
<b>Blower Data:</b>	<b>Motor H.P.</b>	--	1/3	--	1/3	--	1/3	--	1/2	1/2
5-Speed High Eff. ECM Motor	<b>F.L.A. @ 240 V</b>	--	0.8	--	1.7	--	2.2	--	2.9	2.9
<b>Wheel (dia." x width")</b>		10 x 6	10 x 6	10 x 6	10 x 6	10 x 6	10 x 6	10 x 6	10 x 6	10 x 6
<b>Nominal CFM</b>		600	600	800	800	1000	1000	1200	1200	1200
<b>Air Filter Size (in)</b>		20 x 20	20 x 20	20 x 20	20 x 20	20 x 20	20 x 20	20 x 25	20 x 25	20 x 30
<b>Refrigerant Conn. (IDS) Suction</b>		3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"
<b>Refrigerant Conn. (IDS) Liquid</b>		3/8"	3/8"	3/8"	3/8"	3/8"	3/8"	3/8"	3/8"	3/8"
<b>R-410A Piston Size (in)</b>		0.049	0.049	0.053	0.053	0.059	0.059	0.067	0.067	0.067
<b>R-22 Piston Size (in)</b> (for replacement only)		0.053	0.053	0.059	0.059	0.067	0.067	0.073	0.073	0.073
<b>Pallet Quantity</b> (min order per model number)		4	4	4	4	4	4	4	4	4
<b>Sound Level @ 0.3 Static w/o Wall Panel (dBA)</b> <sup>[1]</sup>		60	60	64	64	69	69	72	69	69
<b>Copper Weights</b>										
<b>Max Unit Weight (lbs)</b>		78	81	78	81	81	84	81	84	87
<b>Max Shipping Weight (lbs)</b>		85	90	85	90	90	95	100	105	108
<b>Aluminum Weights</b>										
<b>Max Unit Weight (lbs)</b>		73	76	73	76	76	79	76	79	--
<b>Max Shipping Weight (lbs)</b>		80	85	80	85	85	90	95	100	--

[1] Typical sound levels based on 240V 3-speed PSC motor.

Note: 18" clearance required in front of unit for filter and coil maintenance. Can be less if front panel is directly behind a louvered closet door; check local codes and regulations.

Note: Minimum order quantity of 4 per model number.

# Blower Performance

- Heating speeds should not be reduced below factory setting.
- Different speeds can be set for cooling mode; see installation instructions.

## 3-Speed PSC Motor

Unit Size	Cooling Speed Setting	Airflow (CFM) vs. External Static Pressure (inches W.C.) ***				
		0.1	0.2	0.3	0.4	0.5
18	* ^ Low - Red	606	591	576	559	529
	Med - Blue	802	784	751	722	693
	High -Black	1046	1013	987	943	885
24	Low - Red	606	591	576	559	529
	* ^ Med - Blue	802	784	751	722	693
	High -Black	1046	1013	987	943	885
30	Low - Red	816	809	802	775	752
	* ^ Med - Blue	1000	985	970	935	889
	High -Black	1218	1175	1122	1070	1008
36	Low - Red	816	809	802	775	752
	Med - Blue	1000	985	970	935	889
	* ^ High -Black	1218	1175	1122	1070	1008

\* Factory setting for cooling.

^ Factory setting for heating.

\*\*\* All airflow data is with a dry coil, filter, & electric heat.

## 5-Speed High Efficiency ECM Motor

Unit Size	Cooling Speed Setting	Airflow (CFM) vs. External Static Pressure (inches W.C.) ***				
		0.1	0.2	0.3	0.4	0.5
19	Tap 1	547	484	366	309	268
	* Tap 2	651	600	566	516	466
	Tap 3	695	646	617	566	544
	^ Tap 4	742	700	669	627	600
	Tap 5	758	712	682	641	625
25	Tap 1	569	453	347	264	264
	Tap 2	659	600	569	518	475
	* Tap 3	847	800	787	744	722
	^ Tap 4	928	901	883	846	802
	Tap 5	970	944	927	891	864
31	Tap 1	656	600	567	522	473
	Tap 2	842	800	782	739	716
	* Tap 3	1059	1028	1004	972	946
	^ Tap 4	1106	1084	1053	1030	1000
	Tap 5	1137	1108	1085	1055	1031
37	Tap 1	848	800	769	726	692
	Tap 2	1051	1028	1000	956	930
	* Tap 3	1247	1215	1188	1161	1126
	^ Tap 4	1310	1279	1254	1228	1200
	Tap 5	1364	1334	1304	1279	1250
39	Tap 1	800	783	747	725	689
	Tap 2	1034	1003	987	959	937
	* Tap 3	1281	1253	1228	1207	1186
	^ Tap 4	1343	1314	1290	1261	1226
	Tap 5	1367	1342	1312	1277	1239

\* Factory setting for cooling.

^ Factory setting for heating.

\*\*\* All airflow data is with a dry coil, filter, & electric heat.

# Electrical Data

## 3-Speed PSC Motor

Unit Size (All have electric heat)	Heating Capacity		Blower Amps		Minimum Circuit Ampacity		Circuit Breaker Amps Per Stage	
	kW	BTUH	208 V	240 V	208 V	240 V	208 V	240 V
	240 V <sup>[1]</sup>	240 V <sup>[1]</sup>						
18	0	0	1.8	1.7	2.3	2.1	15.0	15.0
	5.0	17065.0	1.8	1.7	24.8	28.2	30.0	30.0
	7.5	25,598	1.8	1.7	36.1	41.2	40.0	45.0
	10.0	34,130	1.8	1.7	47.4	54.2	50.0	60.0
24	0	0	1.8	1.7	2.3	2.1	15.0	15.0
	5.0	17065.0	1.8	1.7	24.8	28.2	30.0	30.0
	7.5	25,598	1.8	1.7	36.1	41.2	40.0	45.0
	10.0	34,130	1.8	1.7	47.4	54.2	50.0	60.0
30	0	0	2.1	2.0	2.6	2.5	15.0	15.0
	5.0	17065.0	2.1	2.0	25.2	28.5	30.0	30.0
	7.5	25,598	2.1	2.0	36.5	41.6	40.0	45.0
	10.0	34,130	2.1	2.0	47.8	54.6	50.0	60.0
36	0	0	1.8	1.7	2.6	2.5	15.0	15.0
	5.0	17065.0	2.1	2.0	25.2	28.5	30.0	30.0
	7.5	25,598.0	2.1	2.0	36.5	41.6	40.0	45.0
	10.0	34,130	2.1	2.0	47.8	54.6	50.0	60.0

[1] For 208 Volts use .751 correction factor for kW & MBTUH.

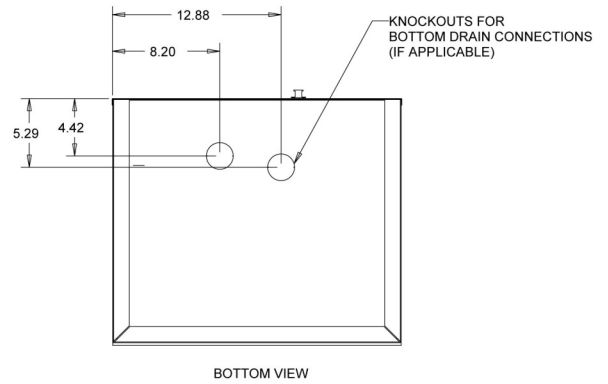
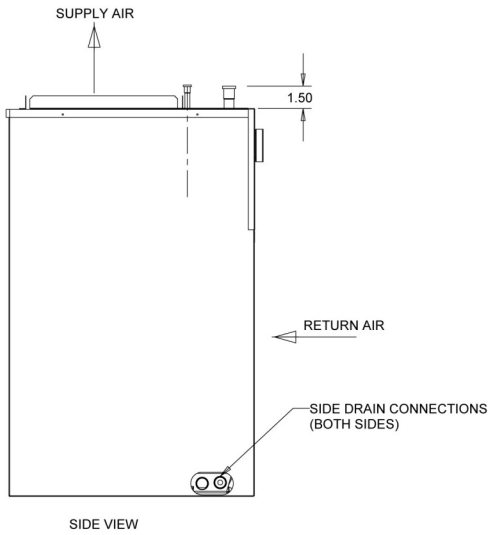
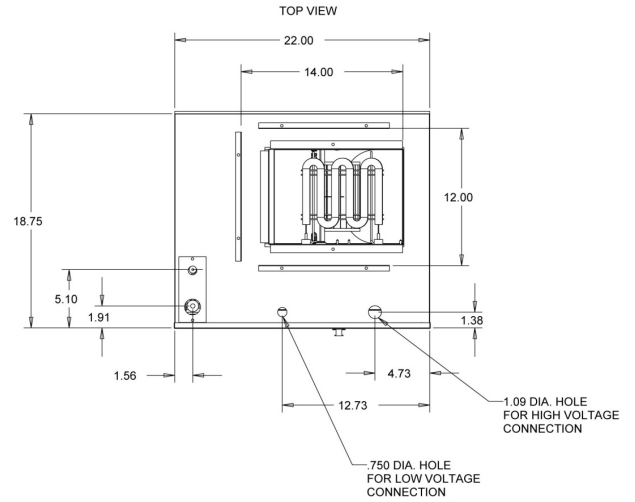
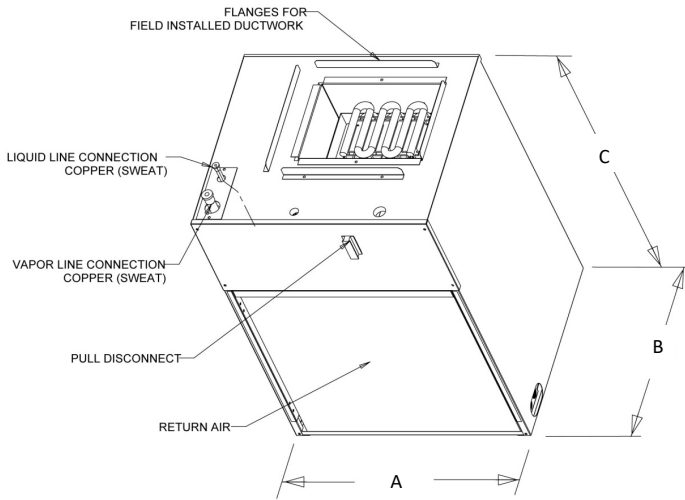
## 5-Speed High Efficiency ECM Motor

Unit Size (All have electric heat)	Heating Capacity		Blower Amps		Minimum Circuit Ampacity		Circuit Breaker Amps Per Stage	
	kW	BTUH	208 V	240 V	208 V	240 V	208 V	240 V
	240 V <sup>[1]</sup>	240 V <sup>[1]</sup>						
19	0	0	0.9	0.8	1.1	1.0	15	15
	5.0	17,065	0.9	0.8	23.7	27.0	30	30
	7.5	25,598	0.9	0.8	35.0	40.1	40	45
	10.0	34,130	0.9	0.8	46.3	53.1	50	60
25	0	0	1.8	1.7	2.3	2.1	15	15
	5.0	17,065	1.8	1.7	24.8	28.2	30	30
	7.5	25,598	1.8	1.7	36.1	41.2	40	45
	10.0	34,130	1.8	1.7	47.4	54.2	50	60
31	0	0	2.4	2.2	3.0	2.8	15	15
	5.0	17,065	2.4	2.2	25.6	28.8	30	30
	7.5	25,598	2.4	2.2	36.8	41.8	40	45
	10.0	34,130	2.4	2.2	48.1	54.8	50	60
37	0	0	3.1	2.9	3.9	3.6	15	15
	5.0	17,065	3.1	2.9	26.4	29.7	30	30
	7.5	25,598	3.1	2.9	37.7	42.7	40	45
	10.0	34,130	3.1	2.9	49.0	55.7	50	60
39	0	0	3.1	2.9	3.9	3.6	15	15
	5.0	17,065	3.1	2.9	26.4	29.7	30	30
	7.5	25,598	3.1	2.9	37.7	42.7	40	45
	10.0	34,130	3.1	2.9	49.0	55.7	50	60

[1] For 208 Volts use .751 correction factor for kW & MBTUH.

# Dimensions

Air Handler Size	A (in)	B (in)	C (in)
18 - 37	22	18.75	29.75
39	22	18.75	35.5



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