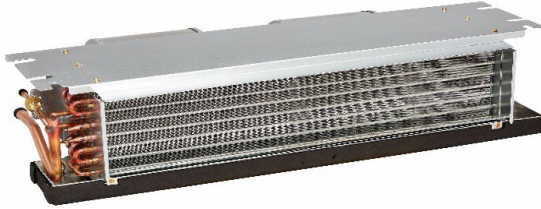


Specification Guide

US Air Conditioning Distributors

AC Series Air Handlers – Compact Ceiling Mount Air Handlers



General Features

- Available in uncased or factory-installed cased configurations.
- “No-hassle” 5 year warranty.
- Designed for drop ceiling or Fur-Down application.
- Constructed of heavy-gauge, corrosion-resistant galvanized steel.
- Left hand refrigerant connections.
- Decorative panel available as accessory.
- Air pressure leak tested.
- Suitable for free air-return installation (non-ducted return).

<p>Series A = Air Handler</p> <p>Configuration C = Ceiling Mount</p> <p>Unit Size (Nominal MBTUH) 18, 22, 24, 28, 30 = 2-speed PSC motor 19, 23, 25, 31 = 5-speed ECM motor</p> <p>Series/ Line Voltage 240/208v, 1 ph. 60 hz w/Time Delay</p>	<p>A C 25 0 U T 05</p>	<p>Electric Heat 00 = No Heat 03 = 3 kW (18 - 25) 05 = 5 kW (all sizes) 06 = 6 kW (all sizes) 08 = 8 kW (all sizes) 10 = 10 kW (24-31)</p> <p>Metering Device N = Piston (R-410A) T = Non-bleed HP TXV (R-410A) C = Bleed HP-AC TXV (R-410A)</p> <p>C = Cased U = Uncased</p>
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Evaporator Coil Features

- Available in copper or aluminum construction.
- AC or HP applications; R-22 & R-410A compatible.
- Field or factory installed threaded expansion valve.
- Rifled copper tubing.

Electrical Features

- ECM Constant Torque motor or PSC motor available.
- Easy to service electric heat section.
- Pull disconnect line voltage connection standard on all factory-installed heat models.
- Patented condensate drain pan safety float switch available as accessory.
- Includes thermostat connections, time delay, & motor speed settings (PSC motor uses control board; functions are built into the ECM Constant Torque motor).

Physical Data

		Unit Size									
		AC18	AC19	AC22	AC23	AC24	AC25	AC28	AC29	AC30	AC31
Available Voltages		208/240 V, 60 Hz, 1 Phase									
Maximum Elec. Heat available (kW)		8	8	8	8	10	10	10	10	10	10
Transformer Size and Type		40VA, Class 2									
Blower Data:	Motor H.P.	1/8	--	1/3	--	1/3	--	1/3		1/3	--
	F.L.A. @ 240 V	1.25	--	1.9	--	1.9	--	1.9		1.9	--
Blower Data:	Motor H.P.	--	1/4	--	1/4	--	1/4	--	1/4	--	1/4
	F.L.A. @ 240 V	--	2	--	2	--	2	--	2	--	2
Nominal CFM		600	600	800	800	800	800	1000	1000	1000	1000
Refrigerant Conn. (IDS) Suction		3/4"									
Refrigerant Conn. (IDS) Liquid		3/8"									
R-410A Piston Size (in)		0.049	0.049	0.053	0.053	0.053	0.053	0.059	0.059	0.059	0.059
Pallet Quantity (min order per model)		8									
Max Unit Weight (uncased)		60	63	63	63	65	68	68	70	70	73
Max Shipping Weight (uncased)		63	66	66	66	68	71	71	73	73	76
Max Unit Weight (cased)		89	92	92	92	97	100	103	105	105	108
Max Shipping Weight (cased)		92	95	95	95	100	103	106	108	108	111



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Blower Performance: PSC and ECM Motor

- All data is given while air handler is operating with a dry coil and air filter installed.
- Speeds marked ***bold with asterisk** are the factory speed settings for both heating and cooling.
- Heating speeds should not be reduced below factory setting.
- Different speeds can be set for cooling mode; see installation instructions for changing cooling speeds.
- When matched with heat pump, and the room thermostat calls for second stage heat (electric heat strips), the first stage (heat pump) operation must be locked out. See parts sheet for Heat Pump Relay Kit - Part #76701444.

ECM Constant Torque		Airflow (CFM) vs. External Static Pressure (inches W.C.)						
Model	Tap	0.10	0.20	0.30	0.35	0.40	0.45	0.50
AC19	Tap 1 (G)	604	514	453	445	437	369	301
	Tap 2 (DS)	604	514	453	445	437	369	301
	Tap 3 (Y1)	735	651	577	542	506	475	444
	Tap 4 (Y2)	890	826	764	732	700	653	605
	^Tap 5 (W1)	890	826	764	732	700	653	605
AC23 AC25 AC29	Tap 1 (G)	618	547	464	404	344	307	270
	Tap 2 (DS)	617	547	469	410	351	312	273
	Tap 3 (Y1)	779	720	633	591	549	495	441
	Tap 4 (Y2)	940	876	812	781	750	713	675
	^Tap 5 (W1)	937	875	812	781	750	712	674
AC31	Tap 1 (G)	630	557	485	433	380	329	277
	Tap 2 (DS)	630	556	483	431	378	328	277
	Tap 3 (Y1)	803	719	640	608	576	549	521
	Tap 4 (Y2)	981	909	833	799	766	736	705
	^Tap 5 (W1)	984	909	837	803	769	739	709

^ Factory setting for heating.

2-Speed PSC		Airflow (CFM) vs. External Static Pressure (inches W.C.)						
Model	Tap	0.10	0.20	0.30	0.35	0.40	0.45	0.50
AC18	Low - Red	610	536	468	430	392	354	316
	* ^ High -Black	680	607	532	494	456	412	368
AC22	Low - Red	846	777	702	665	627	587	546
	* ^ High -Black	902	830	755	711	667	628	589
AC24 AC28	Low - Red	833	781	725	692	658	619	580
	* ^ High -Black	1039	976	903	864	825	776.5	728
AC30	Low - Red	839	771	706	675	644	599	553
	* ^ High -Black	1050	975	901	861	820	782	744

* Factory setting for cooling.

^ Factory setting for heating.

Electrical Data

ECM Constant Torque

Unit Size	Heating Capacity		Blower Amps		Minimum Circuit Ampacity		Pull Disconnect Amps
	kW	BTUH	208 V	240 V	208 V	240 V	
	240 V ^[1]	240 V ^[1]					
AC19	0.0	-	2.00	2.00	2.60	2.5	15
	3.0	10,236	2.00	2.00	16.00	18.13	30
	5.0	17,060	2.00	2.00	24.13	27.50	30
	6.0	20,472	2.00	2.00	29.50	33.75	45
	8.0	27,296	2.00	2.00	38.50	44.16	45
AC23 AC25 AC29	0.0	-	2.00	2.00	2.60	2.5	15
	3.0	10,236	2.00	2.00	16.00	18.13	30
	5.0	17,060	2.00	2.00	24.13	27.50	30
	6.0	20,472	2.00	2.00	29.50	33.75	45
	8.0	27,296	2.00	2.00	38.50	44.16	45
	10 ^[2]	34,120	2.00	2.00	41.56	54.50	60
AC31	0.0	-	2.00	2.00	2.60	2.5	15
	5.0	17,060	2.00	2.00	24.13	27.50	30
	6.0	20,472	2.00	2.00	29.50	33.75	45
	8.0	27,296	2.00	2.00	38.50	44.16	45
	10.0	34,120	2.00	2.00	41.56	54.50	60

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

[2] 10kW not available in AC23 model

2-Speed PSC

Unit Size	Heating Capacity		Blower Amps		Minimum Circuit Ampacity		Pull Disconnect Amps
	kW	BTUH	208 V	240 V	208 V	240 V	
	240 V ^[1]	240 V ^[1]					
AC18	0.0	-	1.25	1.25	1.60	1.6	15
	3.0	10,236	1.25	1.25	15.1	17.2	30
	5.0	17,060	1.25	1.25	23.2	26.6	30
	6.0	20,472	1.25	1.25	28.6	32.8	45
	8.0	27,296	1.25	1.25	37.6	43.2	45
AC22 AC24 AC28	0.0	-	1.90	1.90	2.50	2.4	15
	3.0	10,236	1.90	1.90	15.9	18.0	30
	5.0	17,060	1.90	1.90	24.0	27.4	30
	6.0	20,472	1.90	1.90	29.4	33.6	45
	8.0	27,296	1.90	1.90	38.4	44.0	45
	10 ^[2]	34,120	1.90	1.90	41.4	54.4	60
AC30	0.0	-	1.90	1.90	2.50	2.4	15
	5.0	17,060	1.90	1.90	24.0	27.4	30
	6.0	20,472	1.90	1.90	29.4	33.6	45
	8.0	27,296	1.90	1.90	38.4	44.0	45
	10.0	34,120	1.90	1.90	41.4	54.4	60

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

[2] 10kW not available in AC22 model

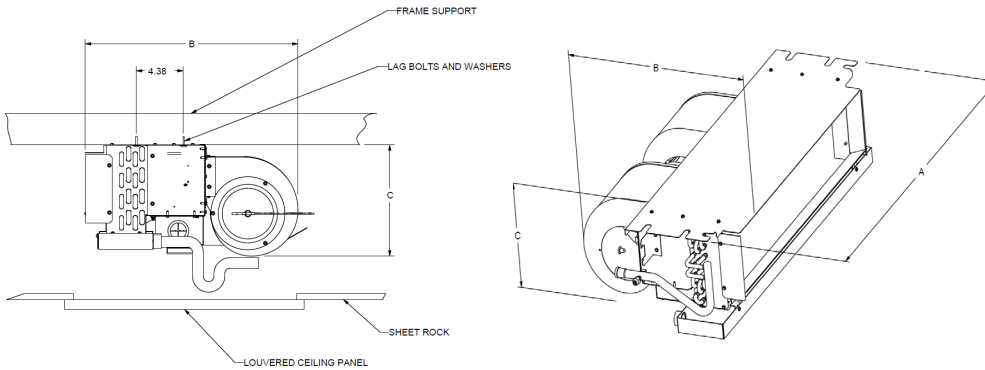
Electrical Connections

1. Disconnect all power supplies.
2. Remove the control panel.
3. Using the pre-punched wiring holes, install UL listed wires and fittings.
4. Connect appropriate size wire to the pull disconnect terminals.
5. Connect green ground wire(s) (1 or 2) to the ground terminal(s) (1 or 2) marked "GND".
6. Install conduit-opening plugs in any unused openings.
7. Reinstall the air handler control panel.
8. Reconnect power.
9. Dispose of all remaining parts.

Dimensions

Uncased

Tonnage (nominal)	Air Handler Size		Supply Duct Opening				
	PSC	ECM	A (in)	B (in)	C (in)	Depth (in)	Height (in)
1.5	AC180UN	AC190UN	37"	19.5"	10.5"	30"	6.5"
	AC180UT	AC190UT					
	AC180UC	AC190UC					
2	AC220UN	AC230UN	37"	19.5"	10.5"	30"	6.5"
	AC220UT	AC230UT					
	AC220UC	AC230UC					
2	AC240UN	AC250UN	43"	20.5"	10.5"	36"	6.5"
	AC240UT	AC250UT					
	AC240UC	AC250UC					
2.5	AC280UN	AC290UN	43"	20.5"	10.5"	36"	6.5"
	AC280UT	AC290UT					
	AC280UC	AC290UC					
2.5	AC300UN	AC310UN	49"	20.5"	10.5"	42"	6.5"
	AC300UT	AC310UT					
	AC300UC	AC310UC					



Cased

Tonnage (nominal)	Air Handler Size		A (in)	B (in)	C (in)	D (in)	E (in)
	PSC	ECM					
1.5	AC180CN	AC190CN	39.7"	24"	11"	30.5"	7"
	AC180CT	AC190CT					
	AC180CC	AC190CC					
2	AC220CN	AC230CN	39.7"	24"	11"	30.5"	7"
	AC220CT	AC230CT					
	AC220CC	AC230CC					
2	AC240CN	AC250CN	45.7"	24"	11"	36.5"	7"
	AC240CT	AC250CT					
	AC240CC	AC250CC					
2.5	AC280CN	AC290CN	45.7"	24"	11"	36.5"	7"
	AC280CT	AC290CT					
	AC280CC	AC290CC					
2.5	AC300CN	AC310CN	51.7"	24"	11"	42.5"	7"
	AC300CT	AC310CT					
	AC300CC	AC310CC					

