

Specification Guide

Soffit Mount Compact Ceiling Mount Air Handlers

Electric Heat



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Nomenclature

C P 18 01C H H P 03 1 C

Series

C = Ceiling mount (uncased)

Blower Motor Type

P = PSC
E = ECM Constant Torque

Unit Size (Nominal MBTUH)

18, 19, 23, 24, 25, 29, 30

Slab No.

01C, 02C, 03C, 04C, etc. = Copper
01A, 02A, 03A, 04A, etc. = Aluminum

Metering Device

A = Piston (R-410A) w / Access Port
H = Non-bleed HP TXV (R-410A)

C = Cased
Blank = Uncased

Voltage

1 = 208/240V, 60 Hz, 1 ph

Heat

00 = No heat
03 = 3 kW (18-24)
05 = 5 kW (all sizes)
06 = 6 kW (all sizes)
08 = 8 kW (all sizes)
10 = 10 kW (24-30)

Line Connection

S = Stripped Wire (No heat models only)
P = Pull Disconnect

Airflow Configuration

H = Horizontal only



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Product Features

General Features

- Available in uncased or factory-installed cased configurations.
- Designed for drop ceiling or Fur-Down application.
- Constructed of heavy-gauge, corrosion-resistant galvanized steel.
- Left hand refrigerant connections.
- Condensate drain connections on left and right side of air handler.
- Decorative panel available as accessory.
- Air pressure leak tested.
- Suitable for free air-return installation (non-ducted return).

Coil Features

- Available in copper or aluminum construction.
- AC or HP applications; R-22 & R-410A compatible.
- Field or factory installed threaded expansion valve.
- Lanced fin design.
- 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													
	CP18	CE18	CP19	CE19	CP23	CE23	CP24	CE24	CP25	CE25	CP29	CE29	CP30	CE30
Available Voltages	208/240 V, 60 HZ, 1 Phase													
Maximum Elec. Heat available (kW)	8	8	8	8	8	8	10	10	10	10	10	10	10	10
Transformer Size and Type	40VA, Class 2													
Blower Data: Motor H.P.	1/8	--	1/8	--	1/3	--	1/3	--	1/3	--	1/3	--	1/3	--
2-Speed PSC Motor F.L.A. @ 240 V	1.25	--	1.25	--	1.9	--	1.9	--	1.9	--	1.9	--	1.9	--
Blower Data: Motor H.P.	--	1/4	--	1/4	--	1/4	--	1/4	--	1/4	--	1/4	--	1/4
ECM Constant Torque F.L.A. @ 240 V	--	2	--	2	--	2	--	2	--	2	--	2	--	2
Nominal CFM	600	600	600	600	800	800	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	0.049	0.049	0.053	0.053	0.053	0.053	0.053	0.053	0.053	0.059	0.059	0.059
Pallet Quantity (min order per model)	8													
Max Unit Weight (uncased)	60	63	65	68	63	63	65	68	70	73	68	70	70	73
Max Shipping Weight (uncased)	63	66	68	71	66	66	68	71	73	76	71	73	73	76
Max Unit Weight (cased)	89	92	97	100	92	92	97	100	105	108	103	105	105	108
Max Shipping Weight (cased)	92	95	100	103	95	95	100	103	108	111	106	108	108	111

Blower Performance

2-Speed PSC Motor

Unit Size	Blower Speed Setting	Airflow (CFM) vs. External Static Pressure (inches W.C.) ***				
		0.1	0.2	0.3	0.4	0.5
18, 19	Low - Red	610	536	468	392	316
	* ^ High -Black	680	607	532	456	368
23	Low - Red	846	777	702	627	546
	* ^ High -Black	902	830	755	667	589
24, 29	Low - Red	833	781	725	658	580
	* ^ High -Black	1039	976	903	825	728
25, 30	Low - Red	839	771	706	644	553
	* ^ High -Black	1050	975	901	820	744

* Factory setting for cooling.

^ Factory setting for heating.

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

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

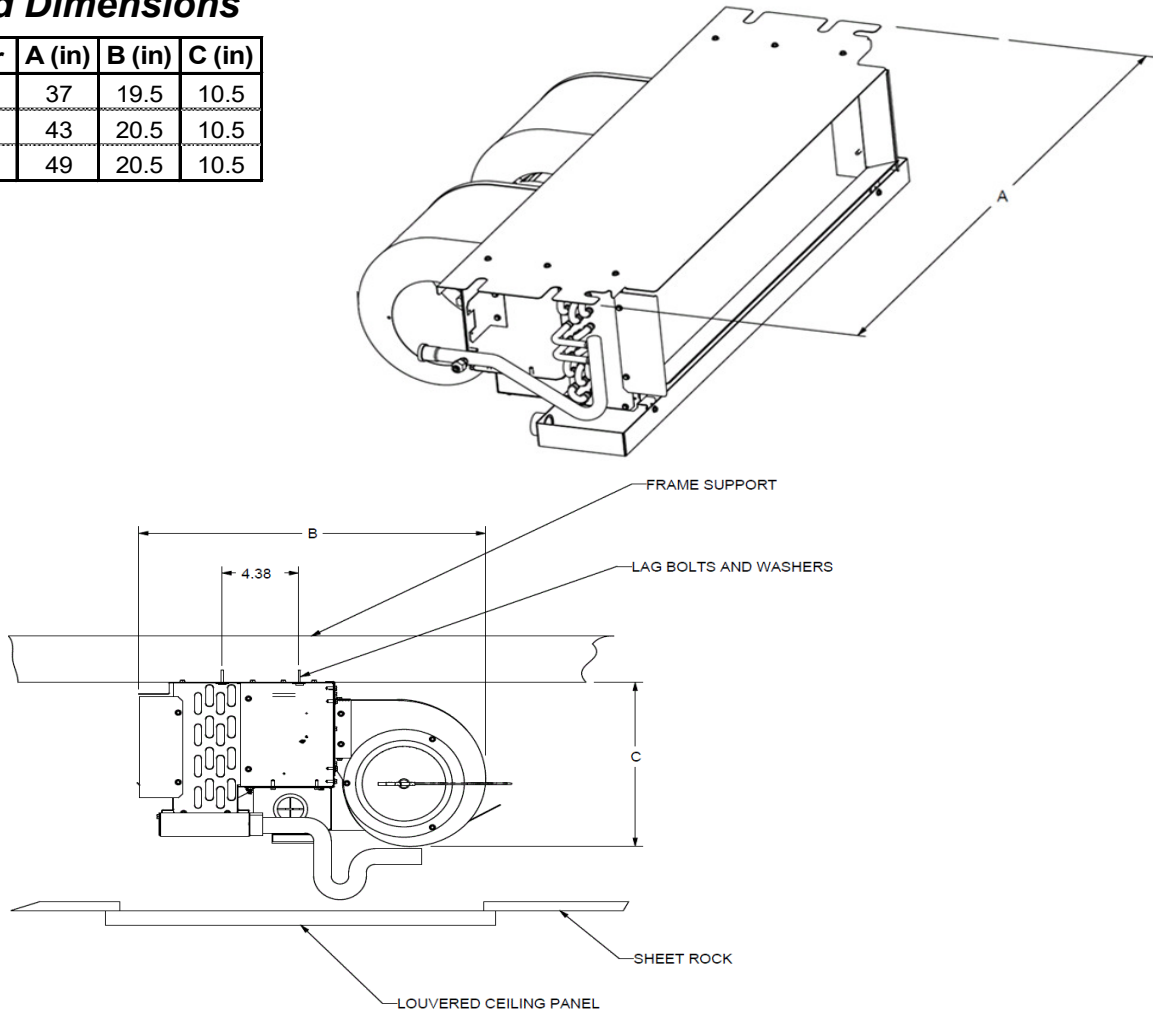
Unit Size	Blower Speed Setting	Airflow (CFM) vs. External Static Pressure (inches W.C.) ***				
		0.1	0.2	0.3	0.4	0.5
18, 19	Tap 1 (G)	604	514	453	437	301
	Tap 2 (DS)	604	514	453	437	301
	Tap 3 (Y1)	735	651	577	506	444
	Tap 4 (Y2)	890	826	764	700	605
	^ Tap 5 (W1)	890	826	764	700	605
23, 24, 29	Tap 1 (G)	618	547	464	344	270
	Tap 2 (DS)	617	547	469	351	273
	Tap 3 (Y1)	779	720	633	549	441
	Tap 4 (Y2)	940	876	812	750	675
	^ Tap 5 (W1)	937	875	812	750	674
25, 30	Tap 1 (G)	630	557	485	380	277
	Tap 2 (DS)	630	556	483	378	277
	Tap 3 (Y1)	803	719	640	576	521
	Tap 4 (Y2)	981	909	833	766	705
	^ Tap 5 (W1)	984	909	837	769	709

^ Factory setting for heating.

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

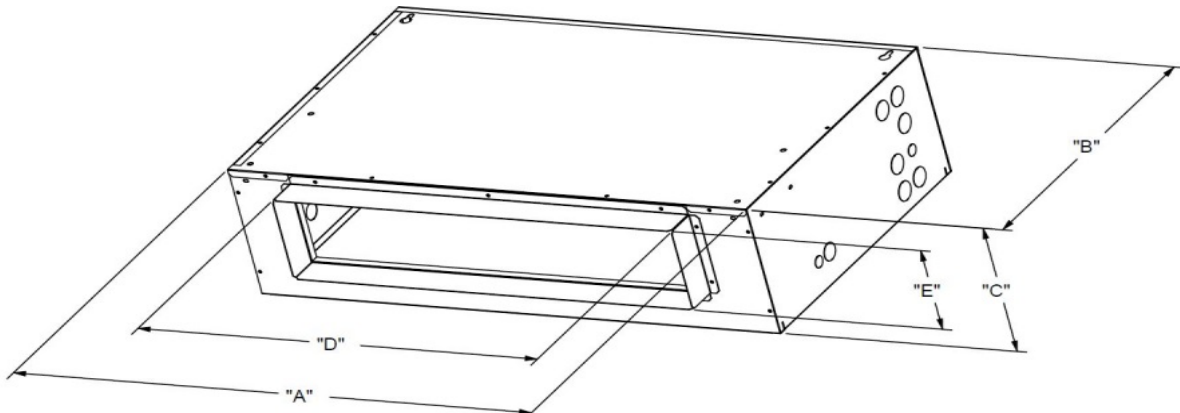
Uncased Dimensions

Air Handler	A (in)	B (in)	C (in)
18, 23	37	19.5	10.5
19, 24, 29	43	20.5	10.5
25, 30	49	20.5	10.5



Cased Dimensions

Air Handler Size	A (in)	B (in)	C (in)	D (in)	E (in)
18, 23	39.7	24	11	30.5	7
19, 24, 29	45.7	24	11	36.5	7
25, 30	51.7	24	11	42.5	7



Electrical Data

Unit Size (All have electric heat)	Heating Capacity		Blower Amps			
	kW	BTUH	PSC		ECM	
	240 V ^[1]	240 V ^[1]	208 V	240 V	208 V	240 V
18, 19	3.0	10,236	1.25	1.25	2.00	2.00
	5.0	17,060	1.25	1.25	2.00	2.00
	6.0	20,472	1.25	1.25	2.00	2.00
	8.0	27,296	1.25	1.25	2.00	2.00
23, 24, 29	3.0 ^[2]	10,236	1.90	1.90	2.00	2.00
	5.0	17,060	1.90	1.90	2.00	2.00
	6.0	20,472	1.90	1.90	2.00	2.00
	8.0	27,296	1.90	1.90	2.00	2.00
	10 ^[3]	34,120	1.90	1.90	2.00	2.00
25, 30	5.0	17,060	1.90	1.90	2.00	2.00
	6.0	20,472	1.90	1.90	2.00	2.00
	8.0	27,296	1.90	1.90	2.00	2.00
	10.0	34,120	1.90	1.90	2.00	2.00

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

[2] 3kW not available in -25 model

[3] 10kW not available in -23 model

Unit Size (All have electric heat)	Heat Capacity	Minimum Circuit Ampacity				Pull Disconnect Amps Per Stage
	kW	PSC		ECM		
	240 V ^[1]	208 V	240 V	208 V	240 V	
18, 19	0.0	1.6	1.6	2.6	2.5	15
	3.0	15.1	17.2	16.0	18.1	30
	5.0	23.2	26.6	24.1	27.5	30
	6.0	28.6	32.8	29.5	33.8	45
	8.0	37.6	43.2	38.5	44.2	45
23, 24, 29	0.0	2.5	2.4	2.6	2.5	15
	3 ^[2]	15.9	18.0	16.0	18.1	30
	5.0	24.0	27.4	24.1	27.5	30
	6.0	29.4	33.6	29.5	33.8	45
	8.0	38.4	44.0	38.5	44.2	45
	10 ^[3]	41.4	54.4	41.6	54.5	60
25, 30	0.0	2.5	2.40	2.6	2.5	15
	5.0	24.0	27.4	24.1	27.5	30
	6.0	29.4	33.6	29.5	33.8	45
	8.0	38.4	44.0	38.5	44.2	45
	10.0	41.4	54.4	41.6	54.5	60

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

[2] 3kW not available in -25 model

[3] 10kW not available in -23 model

Electrical Connections

- Determine the number of circuits needed to supply the heater with electrical power (1 or 2 circuits). See the air handler Accessory Kit label for number of circuits and ratings.
- Disconnect all power supplies.
- Remove the control panel.
- Using the pre-punched wiring holes, install UL listed wires and fittings.
- Connect appropriate size wire to the pull disconnect terminals.
- Connect green ground wire(s) (1 or 2) to the ground terminal(s) (1 or 2) marked "GND".
- Install conduit-opening plugs in any unused openings.
- Reinstall the air handler control panel.
- Reconnect power.
- Dispose of all remaining parts.

