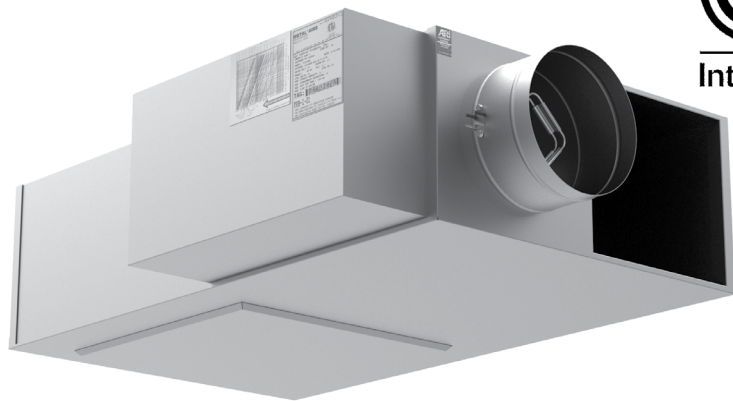


## ATU PRODUCT CATALOG



# AIR TERMINAL UNITS

FCL-600  
LOW PROFILE  
CONSTANT VOLUME  
FAN TERMINAL UNIT



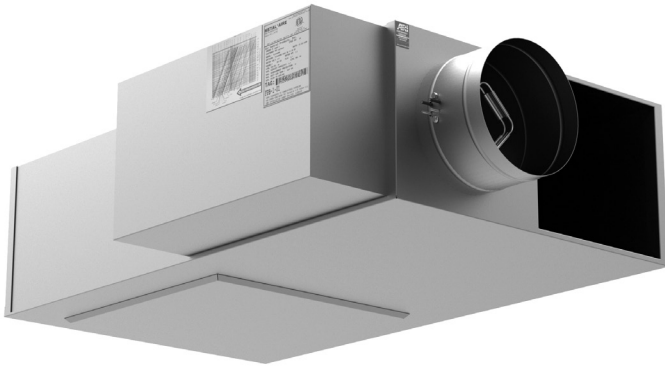
## FCL-600 LOW PROFILE CONSTANT VOLUME FAN TERMINAL UNIT

### SPECIFIABLE FEATURES

- Galvanized steel casing, mechanically sealed for low leakage construction
- NEMA Type 1 rated hinged control enclosure with stand off to prevent penetration of casing
- Single speed high efficiency PSC motor with SCR motor speed control
- Butt welded round primary inlet duct to minimize leakage
- Damper constructed of double layer 18 gauge equivalent with integral blade seal
- Metal construction inlet flow sensor with extra balancing taps
- Single point electrical connection

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## FCL-600 LOW PROFILE CONSTANT VOLUME FAN TERMINAL UNIT

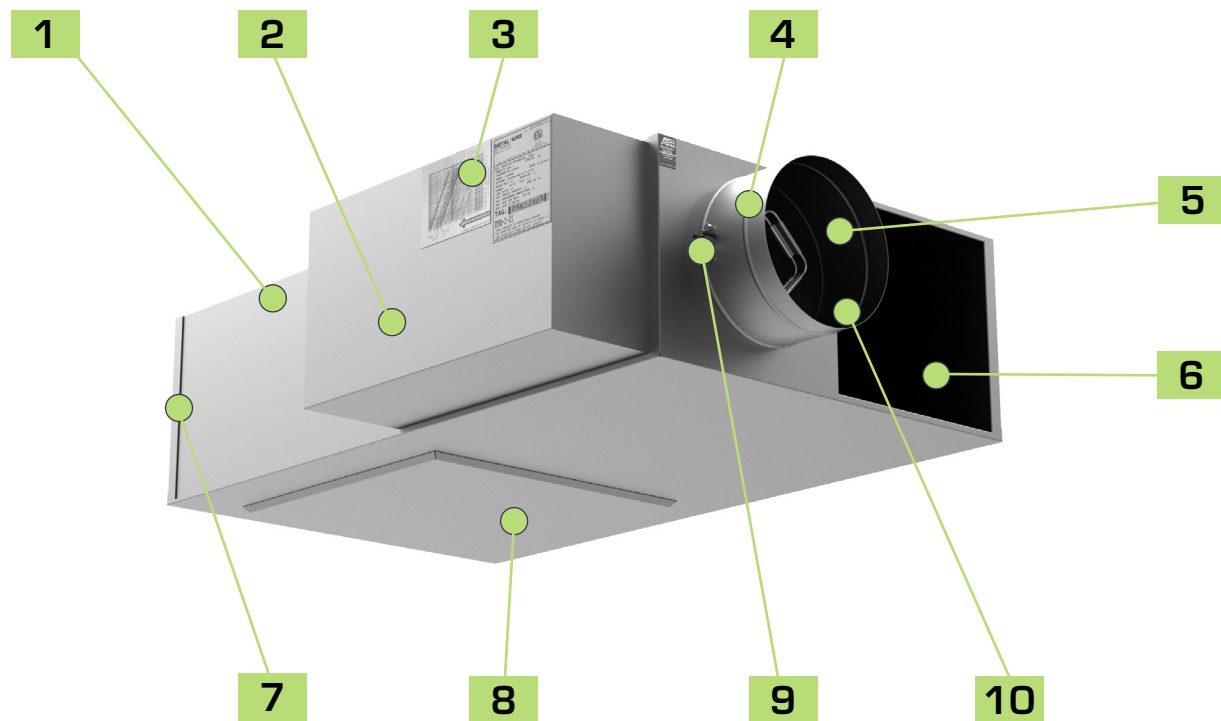
The METALAIRE FCL low profile series fan-powered terminal unit has been engineered to provide a balance between quiet operation, minimal footprint, and a broad flow range with a reduced height for low clearance ceiling applications. The FCL is constructed from 22 gauge metal construction designed to mitigate vibration and increase rigidity. The unique 4-piece case allows for fewer seams and low leakage. Every FCL includes bottom rigid access panel. These simple-to-remove panels provide access to allow trouble-free maintenance of the fan motor and blower assembly. The control enclosure for the FCL allows critical component access.

FCL units include 1/2" thick, matte-faced fiberglass insulation that complies with UL 181 horizontal burn test, NFPA 90 and UL 723/ASTM E 84 flame spread and smoke developed ratings of 25/50. Optional insulations include metal-foil-faced and fiber- and erosion-free ThermoPure (closed-cell foam), a polyolefin product with superior acoustical properties compared to solid metal duct liner.

Optional electronically commutated motors (ECM) are available to minimize energy usage. Up to 75% energy savings is typical with the ECM option. Refer to the fan curves for proper selection and to maximize energy savings.

### STANDARD FEATURES

- Available in 2 casing sizes to handle 340-1800 CFM.
- 22 ga. galvanized steel casing.
- Low leakage construction.
- Low leakage inlet damper (< 1% at 3" static pressure).
- Optional factory calibrated controls per each job requirement.
- Metalaire inlet flow sensor provides +/- 5% flow readings after certified balancer has balanced terminal.
- Easy access, steel balancing taps.
- Energy efficient PSC motors with adjustable SCR solid state fan speed controller.
- External control cabinet with offset mounting plate.
- Single point electrical connections.
- Beaded primary inlet connection tube for added rigidity and secure flex duct connections.
- Inlets available in sizes 8" and rect. 8 x 16".
- 1/2" thick, dual density (1.5 lb min.) fiberglass insulation with edges coated.
- Rectangular discharge with optional slip and drive cleat duct connection.
- Large removable bottom access panel provides access to fan motor / blower assembly.
- Independently tested and certified laboratory performance data.
- Full range of options and accessories available (heating coils, disconnects, attenuators, etc.).
- Full range of liners / insulation available.
- Auto and manual thermal resets on every electric heater.
- High efficiency six-pole, single speed permanent split capacitor (PSC) motors.
- Available fan motor voltages of 120, 277, and 208-240 (50 / 60 Hz).

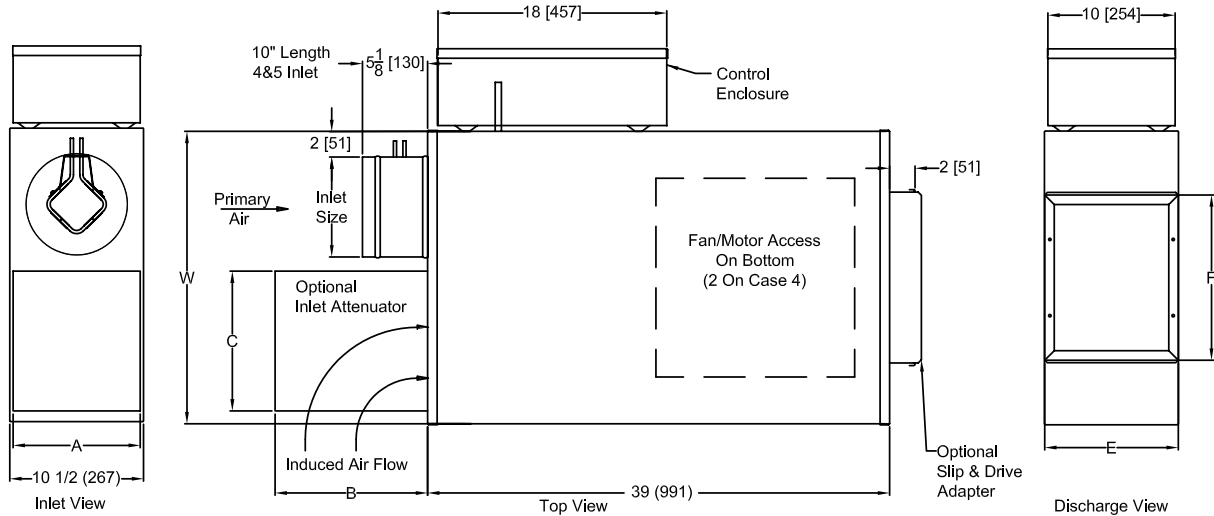


## FCL-600 LOW PROFILE CONSTANT VOLUME FAN TERMINAL UNIT

### FEATURES AND BENEFITS

- 1** Galvanized steel casing, mechanically sealed for low leakage construction.
- 2** NEMA Type 1 rated hinged control enclosure with stand off to prevent penetration of casing.
- 3** Single speed high efficiency PSC motor with SCR motor speed control.
- 4** Continuous welded primary inlet duct to minimize leakage with 3 stiffening beads for added rigidity.
- 5** Damper constructed of double layer 18 gauge equivalent with integral blade seal.
- 6** Hand adjustable restrictor plates top and bottom for balancing.
- 7** Discharge panel is manufactured with 18 gauge galvanized steel to mitigate vibration.
- 8** Bottom access panel provided for easy motor / blower servicing.
- 9** Metal construction inlet flow sensor with extra balancing taps.
- 10** Damper assembly rotates in long life, low friction, self lubricating thermoplastic bearing.

## FCL-600 SERIES FAN POWERED AIR TERMINAL UNIT COOLING ONLY



The standard location for control enclosure is Left Hand on Model FCL. Looking in the direction of airflow, the control enclosure is on the left.

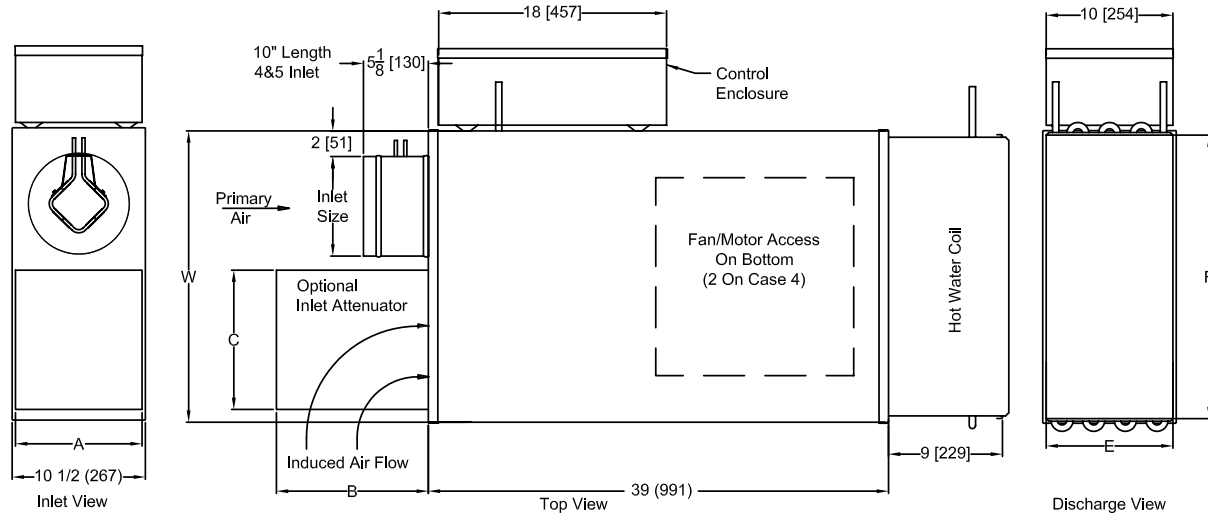
Case size	Inlet Size	Horse-power PSC	Rated Motor Amps		Unit Dimensions			Induction Attenuator			Discharge	
	Standard		120 V	277 V	Height H	Width W	Length L	Height A	Width B	Length C	Height E	Width F
2	8 (203) Round	1/4	5.8	1.8	10 1/2 (267)	23 (584)	39 (991)	10 (254)	12 (305)	11 (279)	10 1/2 (267)	13 (330)
4	8 (203) x16 (406) Rect.	1/4 (2)	11.6	3.6	10 1/2 (267)	42 (10.67)	39 (991)	10 (254)	12 (305)	11 (279)	10 1/2 (267)	24 1/2 (622)
		<b>ECM</b>										
2	8 (203) Round	1/3	6	2.6	10 1/2 (267)	23 (584)	39 (991)	10 (254)	12 (305)	11 (279)	10 1/2 (267)	13 (330)
4	8 (203) x16 (406) Rect.	1/3 (2)	11.3	4.9	10 1/2 (267)	42 (10.67)	39 (991)	10 (254)	12 (305)	11 (279)	10 1/2 (267)	24 1/2 (622)

Optional inlet sizes 4, 5 and 6 are available on Case Size 2 only.

All filter sizes are equal to induction attenuator dimensions A & B.

All dimensions are in inches; parentheses ( ) indicate millimeters.

## FCL-600 SERIES FAN POWERED AIR TERMINAL UNIT WITH HOT WATER COIL



The standard location for control enclosure is Left Hand on Model FCL. Looking in the direction of airflow, the control enclosure is on the left.

Case size	Inlet Size	Horse-power PSC	Rated Motor Amps		Unit Dimensions			Induction Attenuator			Discharge	
	Standard		120 V	277 V	Height H	Width W	Length L	Height A	Width B	Length C	Height E	Width F
2	8 (203) Round	1/4	5.8	1.8	10 1/2 (267)	23 (584)	39 (991)	10 (254)	12 (305)	11 (279)	10 (254)	22 (559)
4	8 (203) x16 (406) Rect.	1/4 (2)	11.6	3.6	10 1/2 (267)	42 (10.67)	39 (991)	10 (254)	12 (305)	11 (279)	10 (254)	32 (813)
		<b>ECM</b>										
2	8 (203) Round	1/3	6	2.6	10 1/2 (267)	23 (584)	39 (991)	10 (254)	12 (305)	11 (279)	10 (254)	22 (559)
4	8 (203) x16 (406) Rect.	1/3 (2)	11.3	4.9	10 1/2 (267)	42 (10.67)	39 (991)	10 (254)	12 (305)	11 (279)	10 (254)	32 (813)

Optional inlet sizes 4, 5 and 6 are available on Case Size 2 only.

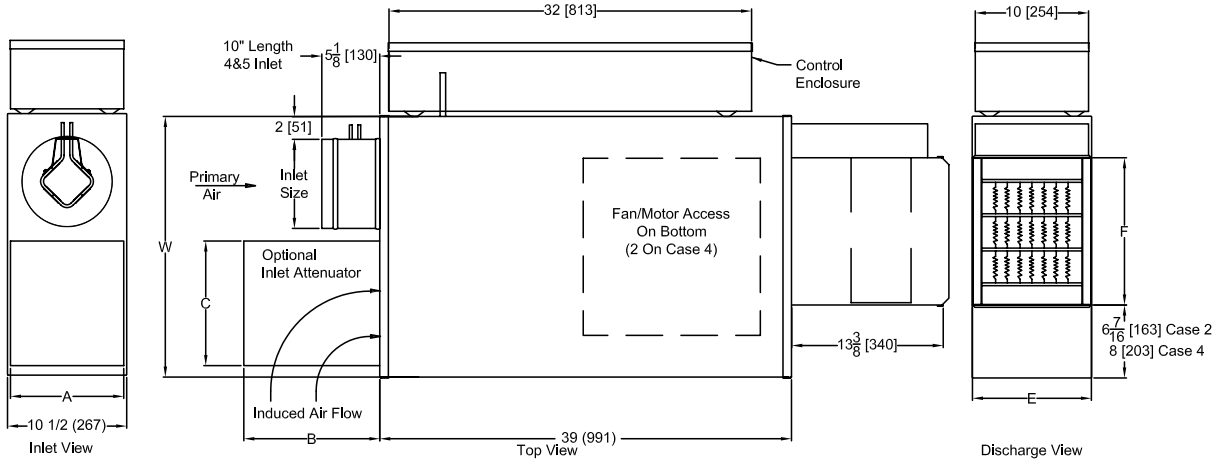
All filter sizes are equal to induction attenuator dimensions A & B.

All dimensions are in inches; parentheses ( ) indicate millimeters.

## FCL-600 SERIES FAN POWERED AIR TERMINAL UNIT WITH ELECTRIC HEAT

SERIES FAN POWERED

FCL-600 LOW PROFILE CONSTANT VOLUME



The standard location for control enclosure is Left Hand on Model FCL. Looking in the direction of airflow, the control enclosure is on the left.

Case size	Inlet Size	Horse-power PSC	Rated Motor Amps		Unit Dimensions			Induction Attenuator			Discharge	
	Standard		120 V	277 V	Height H	Width W	Length L	Height A	Width B	Length C	Height E	Width F
2	8 (203) Round	1/4	5.8	1.8	10 1/2 (267)	23 (584)	39 (991)	10 (254)	12 (305)	11 (279)	10 1/2 (267)	13 (330)
4	8 (203) x16 (406) Rect.	1/4 (2)	11.6	3.6	10 1/2 (267)	42 (10.67)	39 (991)	10 (254)	12 (305)	11 (279)	10 1/2 (267)	26 (660)
		<b>ECM</b>										
2	8 (203) Round	1/3	6	2.6	10 1/2 (267)	23 (584)	39 (991)	10 (254)	12 (305)	11 (279)	10 1/2 (267)	13 (330)
4	8 (203) x16 (406) Rect.	1/3 (2)	11.3	4.9	10 1/2 (267)	42 (10.67)	39 (991)	10 (254)	12 (305)	11 (279)	10 1/2 (267)	26 (660)

Optional inlet sizes 4, 5 and 6 are available on Case Size 2 only.

All filter sizes are equal to induction attenuator dimensions A & B.

All dimensions are in inches; parentheses ( ) indicate millimeters.

## FCL-600 AHRI CERTIFIED RATING POINTS

AHRI Certified Radiated Sound Power, Fan Only

Unit Size	Fan CFM	Octave Band						Electrical Power (Watts)
		2	3	4	5	6	7	
208	400	53	48	50	46	38	33	210
416	1750	76	69	64	63	53	46	900

AHRI Certified Radiated Sound Power, Inlet Ps = 1.5 in. wg Static Pressure

Unit Size	Fan CFM	Primary CFM	Min Ps	Octave Band					
				2	3	4	5	6	7
208	400	400	0.02	57	52	52	46	42	45
416	1750	1750	0.38	79	73	68	67	57	50

AHRI Certified Discharge Sound Power, Fan Only

Unit Size	Fan CFM	Octave Band						Electrical Power (Watts)
		2	3	4	5	6	7	
208	400	56	53	54	55	49	42	210
416	1750	74	73	72	74	72	70	900

### CERTIFICATIONS AND STANDARDS

- Units tested per ANSI / ASHRAE Standard 130.
- All model sizes certified in accordance with AHRI 880 certification program.
- ETL listed to meet requirements of UL 1995 and CSA 236.
- Dual-density fiberglass insulation meets UL 181 and NFPA 90A requirements.
- Insulation meets ASHRAE 62.1 requirements for resistance to mold growth and erosion.





## FCL-600

### RADIATED SOUND POWER LEVEL at Fan Only, Inlet Ps = 0.50 and 0.75 in. wg

Case	Inlet	CFM (L/s)	Min Ps in. WC (Pa)		Fan Only								Inlet Ps = 0.50 in. wg (125 Pa)								Inlet Ps = 0.75 in. wg (187 Pa)							
					Octave Band Sound Power, Lw, dB							NC w/ SA	Octave Band Sound Power, Lw, dB							NC w/ SA	Octave Band Sound Power, Lw, dB							NC w/ SA
					2	3	4	5	6	7	NC		2	3	4	5	6	7	NC		2	3	4	5	6	7	NC	
2	8	350 (165)	0.014 (3)	50	46	45	43	35	31	19	< 15	51	47	46	44	36	32	20	< 15	52	48	47	45	37	33	21	< 15	
		400 (189)	<b>0.022 (5)</b>	<b>53</b>	48	50	46	38	33	24	18	54	49	50	45	39	38	24	18	55	50	50	44	40	43	24	18	
		600 (283)	0.037 (9)	54	51	52	48	41	36	26	20	55	52	52	47	42	41	26	20	56	53	52	46	43	46	26	20	
		800 (378)	0.090 (22)	57	55	56	50	44	38	31	24	58	56	56	49	45	43	31	24	59	57	56	48	46	48	31	24	
		1000 (472)	0.126 (31)	60	58	59	52	47	39	34	27	61	59	59	51	48	44	34	27	62	60	59	50	49	49	34	27	
4	16 x 8	625 (295)	0.031 (8)	64	56	55	51	37	29	30	26	65	59	57	54	43	36	32	27	66	61	59	56	48	43	34	29	
		850 (401)	0.045 (11)	66	58	57	53	40	32	32	29	68	61	59	56	45	38	34	31	69	63	60	58	49	44	35	32	
		1100 (519)	0.160 (40)	69	63	59	56	44	37	34	32	70	65	61	58	48	41	36	34	71	66	63	60	51	45	38	35	
		1350 (637)	0.240 (60)	72	65	62	59	48	41	38	36	74	68	64	61	51	44	40	39	75	70	65	63	54	47	41	40	
		1650 (779)	0.320 (80)	74	69	64	63	52	46	40	39	77	71	66	65	55	48	44	43	79	73	68	66	57	49	46	45	
		1750 (826)	<b>0.380 (95)</b>	<b>76</b>	69	64	63	53	46	43	41	78	71	66	65	55	48	45	44	79	73	68	67	57	50	46	45	
		1825 (861)	0.415 (103)	76	72	65	66	55	49	44	41	79	74	67	67	57	50	46	45	81	75	69	68	58	50	49	48	

## FCL-600

### RADIATED SOUND POWER LEVEL at Inlet Ps = 1.0, 1.5 and 2.0 in. wg

Case	Inlet	CFM (L/s)	Min Ps in. WC (Pa)		Inlet Ps = 1.0 in. wg (250 Pa)								Inlet Ps = 1.5 in. wg (375 Pa)								Inlet Ps = 2.0 in. wg (500 Pa)							
					Octave Band Sound Power, Lw, dB							NC w/ SA	Octave Band Sound Power, Lw, dB							NC w/ SA	Octave Band Sound Power, Lw, dB							NC w/ SA
					2	3	4	5	6	7	NC		2	3	4	5	6	7	NC		2	3	4	5	6	7	NC	
2	8	350 (165)	0.014 (3)	53	49	48	46	38	34	22	15	54	50	49	47	39	35	23	17	55	51	50	48	40	36	24	18	
		400 (189)	<b>0.022 (5)</b>	56	51	51	45	41	44	25	19	57	52	52	46	42	45	26	20	58	53	55	51	43	38	30	23	
		600 (283)	0.037 (9)	57	54	53	47	44	47	27	21	58	55	54	48	45	48	29	22	59	56	57	53	46	41	32	25	
		800 (378)	0.090 (22)	60	58	57	49	47	49	32	25	61	59	58	50	48	50	33	26	62	60	61	55	49	43	36	30	
		1000 (472)	0.126 (31)	63	61	60	51	50	50	35	29	64	62	61	52	51	51	36	30	65	63	64	57	52	44	39	33	
4	16 x 8	625 (295)	0.031 (8)	66	61	59	56	48	43	34	29	66	61	59	56	48	43	34	29	67	62	60	57	49	44	35	30	
		850 (401)	0.045 (11)	69	63	60	58	49	44	35	32	69	63	60	58	49	44	35	32	70	64	61	59	50	45	36	34	
		1100 (519)	0.160 (40)	71	66	63	60	51	45	38	35	71	66	63	60	51	45	38	35	72	67	64	61	52	46	39	36	
		1350 (637)	0.240 (60)	75	70	65	63	54	47	41	40	75	70	65	63	54	47	41	40	76	71	66	64	55	48	43	41	
		1650 (779)	0.320 (80)	79	73	68	66	57	49	46	45	79	73	68	66	57	49	46	45	80	74	69	67	58	50	48	46	
		1750 (826)	<b>0.380 (95)</b>	<b>79</b>	73	68	67	57	50	46	45	79	73	68	67	57	50	46	45	80	74	69	68	58	51	48	46	
		1825 (861)	0.415 (103)	81	75	69	68	58	50	49	48	81	75	69	68	58	50	49	48	82	76	70	69	59	51	50	49	

- Performance data contained within a bold border outline are AHRI certified data.
- Performance data not contained within a bold border outline are application ratings. Application ratings are outside the scope of the Certification Program.
- Performance data is obtained from laboratory testing in accordance with AHRI 880-2011 and ANSI / ASHRAE 130-2008.
- NC values are calculated using attenuation credits outlined in Appendix E of AHRI 885-2008.
- Air terminal units were tested with an external static pressure of 0.25 in. wg
- Discharge Sound power levels shown with End Reflection Corrections Included in dB (ref: 10<sup>-12</sup> watts).
- Minimum Ps is the static pressure drop across the air terminal unit while the inlet damper is in the wide-open position at a given airflow rate, and the fan is on.

## FCL-600

### DISCHARGE SOUND POWER LEVEL at Fan Only, Inlet Ps = 0.25 and 0.50 in. wg

Case	Inlet	CFM (L/s)	Min Ps in. WC (Pa)		Fan Only								Inlet Ps = 0.25 in. wg (62 Pa)								Inlet Ps = 0.50 in. wg (125 Pa)							
					Octave Band Sound Power, Lw, dB								Octave Band Sound Power, Lw, dB								Octave Band Sound Power, Lw, dB							
					2	3	4	5	6	7	NC	2	3	4	5	6	7	NC	2	3	4	5	6	7	NC			
2	8	350 (165)	0.014 (3)	58	53	50	52	46	40	< 15	58	53	50	52	46	40	< 15	58	53	50	52	46	40	< 15				
		400 (189)	<b>0.022 (5)</b>	62	56	55	55	49	42	< 15	62	56	55	55	49	42	< 15	62	56	55	55	49	42	< 15				
		600 (283)	0.037 (9)	62	58	57	57	52	45	15	62	58	57	57	52	45	15	62	58	57	57	52	45	15				
		800 (378)	0.090 (22)	65	62	61	59	55	47	19	65	62	61	59	55	47	19	65	62	61	59	55	47	19				
		1000 (472)	0.126 (31)	68	65	64	61	58	48	22	68	65	64	61	58	48	22	68	65	64	61	58	48	22				
4	16 x 8	625 (295)	0.031 (8)	63	59	59	56	52	48	16	63	59	59	56	52	48	16	63	59	59	56	52	48	16				
		850 (401)	0.045 (11)	67	64	62	60	57	54	21	67	64	62	60	57	54	21	67	64	62	60	57	54	21				
		1100 (519)	0.160 (40)	72	69	65	65	63	61	27	72	69	65	65	63	61	27	72	69	65	65	63	61	27				
		1350 (637)	0.240 (60)	74	71	68	70	67	66	30	74	71	68	70	67	66	30	74	71	68	70	67	66	30				
		1650 (779)	0.320 (80)	77	74	72	74	72	70	33	77	74	72	74	72	70	33	77	74	72	74	72	70	33				
		1750 (826)	<b>0.380 (95)</b>	78	75	72	74	72	70	34	78	75	72	74	72	70	34	78	75	72	74	72	70	34				
		1825 (861)	0.415 (103)	80	76	73	75	73	71	35	80	76	73	75	73	71	35	80	76	73	75	73	71	35				

## FCL-600

### DISCHARGE SOUND POWER LEVEL at Inlet Ps = 1.0, 1.5 and 2.0 in. wg

Case	Inlet	CFM (L/s)	Min Ps in. WC (Pa)		Inlet Ps = 1.0 in. wg (250 Pa)								Inlet Ps = 1.5 in. wg (375 Pa)								Inlet Ps = 2.0 in. wg (500 Pa)							
					Octave Band Sound Power, Lw, dB								Octave Band Sound Power, Lw, dB								Octave Band Sound Power, Lw, dB							
					2	3	4	5	6	7	NC	2	3	4	5	6	7	NC	2	3	4	5	6	7	NC			
2	8	350 (165)	0.014 (3)	59	54	51	53	47	41	< 15	60	55	52	54	48	42	< 15	60	55	52	54	48	42	< 15				
		400 (189)	0.022 (5)	63	57	56	56	50	43	< 15	64	58	57	57	51	44	16	64	58	57	57	51	44	16				
		600 (283)	0.037 (9)	63	59	58	58	53	46	16	64	60	59	59	54	47	18	64	60	59	59	54	47	18				
		800 (378)	0.090 (22)	66	63	62	60	56	48	20	67	63	62	61	57	48	20	67	64	63	61	57	49	21				
		1000 (472)	0.126 (31)	69	66	65	62	59	49	24	70	67	66	63	60	50	25	70	67	66	63	60	50	25				
4	16 x 8	625 (295)	0.031 (8)	64	60	60	57	53	49	18	65	61	61	58	54	50	19	65	61	61	58	54	50	19				
		850 (401)	0.045 (11)	68	65	63	61	58	55	22	69	66	64	62	59	56	24	69	66	64	62	59	56	24				
		1100 (519)	0.160 (40)	73	70	66	66	64	62	28	74	71	67	67	65	63	29	74	71	67	67	65	63	29				
		1350 (637)	0.240 (60)	75	72	69	71	68	67	31	76	73	70	72	69	68	32	76	73	70	72	69	68	32				
		1650 (779)	0.320 (80)	78	75	73	75	73	71	34	79	76	74	76	74	72	35	79	76	74	76	74	72	35				
		1750 (826)	0.380 (95)	79	76	73	75	73	71	35	80	77	74	76	74	72	37	80	77	74	76	74	72	37				
		1825 (861)	0.415 (103)	81	77	74	76	74	72	37	82	78	75	77	75	73	38	82	78	75	77	75	73	38				

1. Performance data contained within a bold border outline are AHRI certified data.
2. Performance data not contained within a bold border outline are application ratings. Application ratings are outside the scope of the Certification Program.
3. Performance data is obtained from laboratory testing in accordance with AHRI 880-2011 and ANSI / ASHRAE 130-2008.
4. NC values are calculated using attenuation credits outlined in Appendix E of AHRI 885-2008.
5. Air terminal units were tested with an external static pressure of 0.25 in. wg
6. Discharge Sound power levels shown with End Reflection Corrections Included in dB (ref: 10<sup>-12</sup> watts).
7. Minimum Ps is the static pressure drop across the air terminal unit while the inlet damper is in the wide-open position at a given airflow rate, and the fan is on.

## FCL-600 ECM

### RADIATED SOUND POWER LEVEL at Fan Only, Inlet Ps = 0.50 and 0.75 in. wg

Case	Inlet	CFM (L/s)	Min Ps in. WC (Pa)		Fan Only								Inlet Ps = 0.50 in. wg (125 Pa)								Inlet Ps = 0.75 in. wg (187 Pa)							
					Octave Band Sound Power, Lw, dB							NC w/ SA	Octave Band Sound Power, Lw, dB							NC w/ SA	Octave Band Sound Power, Lw, dB							NC w/ SA
					2	3	4	5	6	7	NC		2	3	4	5	6	7	NC		2	3	4	5	6	7	NC	
<b>2</b>	<b>8</b>	150 (71)	0.017 (4)	48	43	44	42	33	30	18	< 15	49	44	45	43	34	31	19	< 15	50	45	46	44	35	32	20	< 15	
		350 (165)	0.014 (3)	50	46	45	43	35	31	19	< 15	51	47	46	44	36	32	20	< 15	52	48	47	45	37	33	21	< 15	
		400 (189)	0.022 (5)	53	48	50	46	38	33	24	< 15	54	49	51	47	39	34	25	< 15	55	50	52	48	40	35	26	< 15	
		600 (283)	0.037 (9)	54	51	52	48	41	36	26	18	55	52	53	49	42	37	27	19	56	53	54	50	43	38	29	20	
		800 (378)	0.090 (22)	57	55	56	50	44	38	31	20	58	56	57	51	45	39	32	21	59	57	58	52	46	40	33	22	
		1000 (472)	0.126 (31)	60	58	59	52	47	39	34	24	61	59	60	53	48	40	35	25	62	60	61	54	49	41	36	26	
<b>4</b>	<b>16 x 8</b>	550 (260)	0.008 (2)	62	54	53	49	36	28	27	23	64	57	55	52	41	34	30	26	65	59	56	54	45	40	31	27	
		850 (401)	0.045 (11)	66	58	57	53	40	32	32	29	68	61	59	56	45	38	34	31	69	63	60	58	49	44	35	32	
		1100 (519)	0.160 (40)	69	63	59	56	44	37	34	32	70	65	61	58	48	41	36	34	71	66	63	60	51	45	38	35	
		1350 (637)	0.240 (60)	72	65	62	59	48	41	38	36	74	68	64	61	51	44	40	39	75	70	65	63	54	47	41	40	
		1650 (779)	0.320 (80)	74	69	64	63	52	46	40	39	77	71	66	65	55	48	44	43	79	73	68	66	57	49	46	45	
		1750 (826)	0.380 (95)	76	69	64	63	53	46	43	41	78	71	66	65	55	48	45	44	79	73	68	67	57	50	46	45	
		1825 (861)	0.415 (103)	76	72	65	66	55	49	44	41	79	74	67	67	57	50	46	45	81	75	69	68	58	50	49	48	
		1950 (920)	0.455 (113)	77	73	66	67	56	50	45	43	80	75	68	68	58	51	48	46	82	76	70	69	59	51	50	49	

## FCL-600 ECM

### RADIATED SOUND POWER LEVEL at Inlet Ps = 1.0, 1.5 and 2.0 in. wg

Case	Inlet	CFM (L/s)	Min Ps in. WC (Pa)		Inlet Ps = 1.0 in. wg (250 Pa)								Inlet Ps = 1.5 in. wg (375 Pa)								Inlet Ps = 2.0 in. wg (500 Pa)							
					Octave Band Sound Power, Lw, dB							NC w/ SA	Octave Band Sound Power, Lw, dB							NC w/ SA	Octave Band Sound Power, Lw, dB							NC w/ SA
					2	3	4	5	6	7	NC		2	3	4	5	6	7	NC		2	3	4	5	6	7	NC	
<b>2</b>	<b>8</b>	150 (71)	0.017 (4)	50	46	45	43	35	31	19	< 15	51	47	46	44	36	32	20	< 15	52	48	47	45	37	33	21	< 15	
		350 (165)	0.014 (3)	53	49	48	46	38	34	22	15	54	50	49	47	39	35	23	17	55	51	50	48	40	36	24	18	
		400 (189)	0.022 (5)	56	51	53	49	41	36	27	21	57	52	54	50	42	37	29	22	58	53	55	51	43	38	30	23	
		600 (283)	0.037 (9)	57	54	55	51	44	39	30	23	58	55	56	52	45	40	31	24	59	56	57	53	46	41	32	25	
		800 (378)	0.090 (22)	60	58	59	53	47	41	34	27	61	59	60	54	48	42	35	29	62	60	61	55	49	43	36	30	
		1000 (472)	0.126 (31)	63	61	62	55	50	42	37	31	64	62	63	56	51	43	38	32	65	63	64	57	52	44	39	33	
<b>4</b>	<b>16 x 8</b>	550 (260)	0.008 (2)	65	60	58	55	46	42	33	27	65	60	58	55	46	42	33	27	66	61	59	56	47	43	34	29	
		850 (401)	0.045 (11)	69	63	60	58	49	44	35	32	69	63	60	58	49	44	35	32	70	64	61	59	50	45	36	34	
		1100 (519)	0.160 (40)	71	66	63	60	51	45	38	35	71	66	63	60	51	45	38	35	72	67	64	61	52	46	39	36	
		1350 (637)	0.240 (60)	75	70	65	63	54	47	41	40	75	70	65	63	54	47	41	40	76	71	66	64	55	48	43	41	
		1650 (779)	0.320 (80)	79	73	68	66	57	49	46	45	79	73	68	66	57	49	46	45	80	74	69	67	58	50	48	46	
		1750 (826)	0.380 (95)	79	73	68	67	57	50	46	45	79	73	68	67	57	50	46	45	80	74	69	68	58	51	48	46	
		1825 (861)	0.415 (103)	81	75	69	68	58	50	49	48	81	75	69	68	58	50	49	48	82	76	70	69	59	51	50	49	
		1950 (920)	0.455 (113)	82	76	70	69	59	51	50	49	82	76	70	69	59	51	50	49	83	77	71	70	60	52	52	50	

1. Performance data contained within a bold border outline are AHRI certified data.
2. Performance data not contained within a bold border outline are application ratings. Application ratings are outside the scope of the Certification Program.
3. Performance data is obtained from laboratory testing in accordance with AHRI 880-2011 and ANSI / ASHRAE 130-2008.
4. NC values are calculated using attenuation credits outlined in Appendix E of AHRI 885-2008.
5. Air terminal units were tested with an external static pressure of 0.25 in. wg
6. Discharge Sound power levels shown with End Reflection Corrections Included in dB (ref: 10<sup>-12</sup> watts).
7. Minimum Ps is the static pressure drop across the air terminal unit while the inlet damper is in the wide-open position at a given airflow rate, and the fan is on.

## FCL-600 ECM

### DISCHARGE SOUND POWER LEVEL at Fan Only, Inlet Ps = 0.50 and 0.75 in. wg

Case	Inlet	CFM (L/s)	Min Ps in. WC (Pa)	Fan Only								Inlet Ps = 0.50 in. wg (125 Pa)							Inlet Ps = 0.75 in. wg (187 Pa)						
				Octave Band Sound Power, Lw, dB								Octave Band Sound Power, Lw, dB							Octave Band Sound Power, Lw, dB						
				2	3	4	5	6	7	NC	2	3	4	5	6	7	NC	2	3	4	5	6	7	NC	
<b>2</b>	<b>8</b>	150 (71)	0.017 (4)	52	49	49	52	45	40	< 15	52	50	50	53	46	41	< 15	52	51	51	54	47	42	< 15	
		350 (165)	0.014 (3)	52	50	49	52	46	40	< 15	52	50	49	52	46	40	< 15	52	50	49	52	46	40	< 15	
		400 (189)	0.022 (5)	56	53	54	55	49	42	< 15	56	53	54	55	49	42	< 15	56	53	54	55	49	42	< 15	
		600 (283)	0.037 (9)	56	55	56	57	52	45	< 15	56	55	56	57	52	45	< 15	56	55	56	57	52	45	< 15	
		800 (378)	0.090 (22)	59	59	60	59	55	47	15	59	59	60	59	55	47	15	59	59	60	59	55	47	15	
		1000 (472)	0.126 (31)	62	62	63	61	58	48	19	62	62	63	61	58	48	19	62	62	63	61	58	48	19	
<b>4</b>	<b>16 x 8</b>	550 (260)	0.008 (2)	60	60	59	57	54	51	18	60	60	59	57	54	51	18	60	60	59	57	54	51	18	
		850 (401)	0.045 (11)	63	62	62	60	57	54	19	63	62	62	60	57	54	19	63	62	62	60	57	54	19	
		1100 (519)	0.160 (40)	68	67	65	65	63	61	25	68	67	65	65	63	61	25	68	67	65	65	63	61	25	
		1350 (637)	0.240 (60)	70	69	68	70	67	66	30	70	69	68	70	67	66	30	70	69	68	70	67	66	30	
		1650 (779)	0.320 (80)	73	72	72	74	72	70	33	73	72	72	74	72	70	33	73	72	72	74	72	70	33	
		1750 (826)	0.380 (95)	74	73	72	74	72	70	33	74	73	72	74	72	70	33	74	73	72	74	72	70	33	
		1825 (861)	0.415 (103)	76	74	73	75	73	71	34	76	74	73	75	73	71	34	76	74	73	75	73	71	34	
		1950 (920)	0.455 (113)	77	75	74	76	74	72	35	77	75	74	76	74	72	35	77	75	74	76	74	72	35	

## FCL-600 ECM

### DISCHARGE SOUND POWER LEVEL at Inlet Ps = 1.0, 1.5 and 2.0 in. wg

Case	Inlet	CFM (L/s)	Min Ps in. WC (Pa)	Inlet Ps = 1.0 in. wg (250 Pa)								Inlet Ps = 1.5 in. wg (375 Pa)							Inlet Ps = 2.0 in. wg (500 Pa)						
				Octave Band Sound Power, Lw, dB								Octave Band Sound Power, Lw, dB							Octave Band Sound Power, Lw, dB						
				2	3	4	5	6	7	NC	2	3	4	5	6	7	NC	2	3	4	5	6	7	NC	
<b>2</b>	<b>8</b>	150 (71)	0.017 (4)	51	50	50	52	46	40	< 15	52	51	51	53	47	41	< 15	53	52	52	54	48	42	< 15	
		350 (165)	0.014 (3)	56	55	55	57	51	45	< 15	57	56	56	58	52	46	< 15	58	57	57	59	53	47	< 15	
		400 (189)	0.022 (5)	58	58	59	60	55	48	15	59	59	60	61	56	49	16	60	60	61	62	57	50	18	
		600 (283)	0.037 (9)	60	60	61	61	56	48	18	61	61	62	62	57	49	19	62	62	63	63	58	50	20	
		800 (378)	0.090 (22)	61	62	63	62	58	50	19	62	63	64	63	59	51	20	63	64	65	64	60	52	21	
		1000 (472)	0.126 (31)	64	65	66	64	61	51	22	65	66	67	65	62	52	24	66	67	68	66	63	53	25	
<b>4</b>	<b>16 x 8</b>	550 (260)	0.008 (2)	61	61	60	58	55	52	19	62	62	61	59	56	53	20	62	62	61	59	56	53	20	
		850 (401)	0.045 (11)	64	63	63	61	58	55	20	65	64	64	62	59	56	21	65	64	64	62	59	56	21	
		1100 (519)	0.160 (40)	69	68	66	66	64	62	26	70	69	67	67	65	63	27	70	69	67	67	65	63	27	
		1350 (637)	0.240 (60)	71	70	69	71	68	67	31	72	71	70	72	69	68	32	72	71	70	72	69	68	32	
		1650 (779)	0.320 (80)	74	73	73	75	73	71	34	75	74	74	76	74	72	35	75	74	74	76	74	72	35	
		1750 (826)	0.380 (95)	75	74	73	75	73	71	34	76	75	74	76	74	72	35	76	75	74	76	74	72	35	
		1825 (861)	0.415 (103)	77	75	74	76	74	72	35	78	76	75	77	75	73	36	78	76	75	77	75	73	36	
		1950 (920)	0.455 (113)	78	76	75	77	75	73	36	79	77	76	78	76	74	37	79	77	76	78	76	74	37	

1. Performance data contained within a bold border outline are AHRI certified data.
2. Performance data not contained within a bold border outline are application ratings. Application ratings are outside the scope of the Certification Program.
3. Performance data is obtained from laboratory testing in accordance with AHRI 880-2011 and ANSI / ASHRAE 130-2008.
4. NC values are calculated using attenuation credits outlined in Appendix E of AHRI 885-2008.
5. Air terminal units were tested with an external static pressure of 0.25 in. wg
6. Discharge Sound power levels shown with End Reflection Corrections Included in dB (ref: 10<sup>-12</sup> watts).
7. Minimum Ps is the static pressure drop across the air terminal unit while the inlet damper is in the wide-open position at a given airflow rate, and the fan is on.



## FCL-600 FAN MOTOR AMPERAGE RATINGS

Case Size	Motor HP	Standard PSC Motor Amperage Ratings		
		115V-1 Phase 60 Hz Rated Amps	208-240V-1 Phase 60 Hz Rated Amps	277V-1 Phase 60 Hz Rated Amps
2	1/4	3.1	1.7	1.3
4	1/4 (two motors)	4.6	2.5	1.9

## FCL-600 ECM FAN MOTOR AMPERAGE RATINGS

Case Size	Motor HP	ECM Motor Amperage Ratings		
		115V-1 Phase 60 Hz Rated Amps	208-240V-1 Phase 60 Hz Rated Amps	277V-1 Phase 60 Hz Rated Amps
2	1/3	3.7	2.4	1.9
4	1/3 (two motors)	7.3	4.7	3.7

## FCL-600 DAMPER LEAKAGE

Inlet Size	Damper Leakage, CFM		
	1.5" ΔPs	3.0" ΔPs	6.0" ΔPs
6	3	4	7
8	2	4	7
16 x 8	8	9	16

## FCL-600 ECM DAMPER LEAKAGE

Inlet Size	Damper Leakage, CFM		
	1.5" ΔPs	3.0" ΔPs	6.0" ΔPs
6	3	4	7
8	2	4	7
16 x 8	8	9	16

## FCL-600 HOT WATER COILS MBH SELECTION DATA - IMPERIAL UNITS

Unit Size	Rows	Connection (OD)	GPM	Head Loss (ft-H <sub>2</sub> O)	CFM							
					350	400	500	600	700	800	900	1000
2	One	0.63	1	0.12	13.0	13.8	15.0	16.0	16.9	17.6	18.3	18.8
			2	0.45	14.8	15.8	17.5	18.9	20.2	21.2	22.2	23.1
			4	1.71	16.0	17.1	19.2	20.9	22.4	23.8	25.0	26.1
			6	5.05	16.5	17.7	19.8	21.7	23.3	24.8	26.1	27.3
			Airside Ps (in. wg)	0.02	0.03	0.04	0.05	0.07	0.09	0.1	0.12	
2	Two	0.875	1	0.29	18.5	19.7	21.5	22.9	24.1	25.1	26.0	26.7
			2	1.16	22.2	23.9	26.7	29.1	31.1	32.9	34.4	35.8
			4	4.65	24.7	26.8	30.5	33.7	36.5	39.0	41.2	43.2
			6	10.45	25.7	28.0	32.0	35.6	38.8	41.6	44.2	46.5
			Airside Ps (in. wg)	0.05	0.06	0.08	0.11	0.15	0.19	0.23	0.27	

Unit Size	Rows	Connection (OD)	GPM	Head Loss (ft-H <sub>2</sub> O)	CFM							
					500	600	800	1000	1200	1400	1600	1800
4	One	0.875	1	0.15	17.7	19.0	21.0	22.6	23.8	24.8	25.7	26.4
			2	0.90	20.7	22.5	25.5	27.8	29.8	31.4	32.9	34.1
			4	2.24	22.7	24.9	28.6	31.6	34.1	36.3	38.3	40.0
			6	4.91	23.4	25.8	29.8	33.1	35.9	38.4	40.5	42.5
			Airside Ps (in. wg)	0.02	0.03	0.04	0.07	0.09	0.12	0.15	0.18	
4	Two	0.875	2	0.34	30.5	33.4	38.1	41.8	44.8	47.3	—	—
			4	1.33	34.6	38.5	45.1	50.5	55.1	58.9	—	—
			6	2.95	36.3	40.6	48.1	54.3	59.6	64.2	—	—
			8	5.20	37.2	41.8	49.8	56.5	62.2	67.3	—	—
			Airside Ps (in. wg)	0.05	0.06	0.10	0.14	0.19	0.25	—	—	

Heating capacity data in tables assume an entering water temperature (EWT) of 180°F, and an entering air temperature (EAT) of 65°F, which corresponds to a temperature difference of 115°F. Smaller temperature differences will result in a decrease of heating capacity. To obtain the heating capacity at another temperature difference, refer to the hot water coil notes located in the Reference Section.

## FCL-600 HOT WATER COILS kW SELECTION DATA – METRIC UNITS

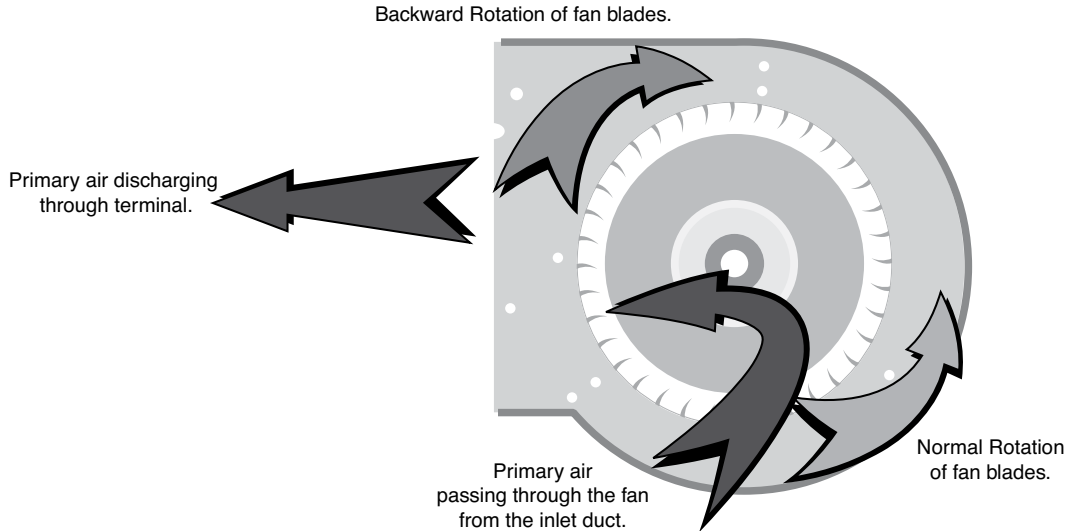
Unit Size	Rows	Connection OD (mm)	Water Flow (L/s)	Head Loss (kPa)	Airflow (L/s)							
					165	189	236	283	330	378	425	472
2	One	16.0	0.01	0.36	3.8	4.0	4.4	4.7	4.9	5.2	5.4	5.5
			0.03	1.35	4.3	4.6	5.1	5.5	5.9	6.2	6.5	6.8
			0.11	5.11	4.7	5.0	5.6	6.1	6.6	7.0	7.3	7.6
			0.32	15.09	4.8	5.2	5.8	6.4	6.8	7.3	7.6	8.0
			Airside Ps (kPa)		0.00	0.01	0.01	0.01	0.02	0.02	0.02	0.02
2	Two	22.2	0.02	0.87	5.4	5.8	6.3	6.7	7.1	7.3	7.6	7.8
			0.07	3.47	6.5	7.0	7.8	8.5	9.1	9.6	10.1	10.5
			0.29	13.90	7.2	7.8	8.9	9.9	10.7	11.4	12.1	12.6
			0.66	31.24	7.5	8.2	9.4	10.4	11.4	12.2	12.9	13.6
			Airside Ps (kPa)		0.01	0.01	0.02	0.03	0.04	0.05	0.06	0.07

Unit Size	Rows	Connection OD (mm)	Water Flow (L/s)	Head Loss (kPa)	Airflow (L/s)							
					236	283	378	472	566	661	755	850
4	One	22.2	0.01	0.45	5.2	5.6	6.1	6.6	7.0	7.3	7.5	7.7
			0.06	2.69	6.1	6.6	7.5	8.1	8.7	9.2	9.6	10.0
			0.14	6.70	6.6	7.3	8.4	9.3	10.0	10.6	11.2	11.7
			0.31	14.68	6.9	7.6	8.7	9.7	10.5	11.2	11.9	12.4
			Airside Ps (kPa)		0.00	0.01	0.01	0.02	0.02	0.03	0.04	0.04
4	Two	22.2	0.02	1.02	8.9	9.8	11.2	12.2	13.1	13.8	—	—
			0.08	3.98	10.1	11.3	13.2	14.8	16.1	17.2	—	—
			0.19	8.82	10.6	11.9	14.1	15.9	17.5	18.8	—	—
			0.33	15.54	10.9	12.2	14.6	16.5	18.2	19.7	—	—
			Airside Ps (kPa)		0.01	0.01	0.02	0.03	0.05	0.06	—	—

Heating capacity data in tables assume an entering water temperature (EWT) of 82°C, and an entering air temperature (EAT) of 18°C, which corresponds to a temperature difference of 64°C. Smaller temperature differences will result in a decrease of heating capacity. To obtain the heating capacity at another temperature difference, refer to the hot water coil notes located in the Reference Section.

## FCL-600 AIR TERMINALS ACCESSORIES AND COMPONENTS OPTIONAL ELECTRONIC ANTI-REVERSE ROTATION DEVICE

The fan wheel in a constant fan box may rotate backward whenever the fan motor is not running and primary air from the inlet duct is passing through the fan. In some cases the torque developed by the fan wheel when rotating backward cannot be overcome by the starting torque of the fan motor. In this condition the fan motor will run in reverse rotation, resulting in insufficient airflow delivery.



Constant fan boxes must have means to coordinate energizing the fan motor with start up of the Primary Fan System to prevent the reverse rotation or a positive method to create enough motor torque to reverse the rotation of the fan wheel.

Other manufacturers choose to deal with this issue by running their motors with larger capacitors than recommended by the motor manufacturer. The oversized capacitor will cause the motor to run less efficiently, run hotter than normal and draw more current than with a proper capacitor. All of this will result in reduced motor life and increased energy costs.

METALAIRE'S Model FCL-600 is available with an optional Electronic Anti-Reverse Rotation Device which will positively prevent the reverse rotation of any fan. This option does not draw additional current while running and will not cause the motor to run at higher temperatures.

The results are greater efficiency, quieter motors, longer motor life and happier building owners.

### FCL-600 APPROXIMATE SHIPPING WEIGHTS

Case	FCL
2	118 lbs.
4	197 lbs.

### FCL-600 FILTER SIZES PER CASE SIZE

Case Size	Filter Dimensions
2	10" x 20"
4	10" x 12" quantity 2

*Filters are mounted on the fan induction and are available in 1" or 2" thickness.*



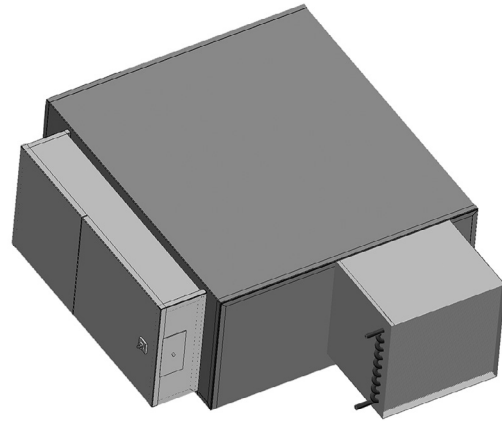
## FCL-600 ACCESSORIES AND COMPONENTS HOT WATER COILS

When ordered with the air terminal, the hot water coil is shipped attached to the discharge of the terminal casing. The discharge end of the casing has slip and drive connections for easy connection to downstream ductwork. The hot water coil is constructed of aluminum fin and copper serpentine-type tubes with male sweat connections tested at 300 psig.

Coil selection can be made using METALAIRE's Air Terminal Unit Selection Software. Contact your representative for a copy. In the interest of energy conservation and due to the possibility of condensation, all hot water coils are marked "Coil must be externally insulated after installation in the field." Hot water coils are tested in accordance with AHRI Standards 410. Hot water coils may be ordered with optional access doors for inspection and cleaning to meet requirements of ASHRAE Standard 62.1.

### HOT WATER COIL CONSTRUCTION DETAILS

- Hot Water Coils are factory mounted to the discharge of the terminal and are available with an optional factory mounted discharge plenum section with access door.
- Hot water coils are enclosed in a 20 gauge coated steel casing allowing for attachment to metal ductwork with a slip and drive connection.
- Fins are rippled and sine wave type constructed from heavy gauge aluminum and are mechanically bonded to the tubes.
- Tubes are copper with a minimum wall thickness of 0.016" with male sweat header connections.
- Coils are leak tested to 300 psi with minimum burst of 2000 psi at ambient temperature. Coil performance data is based on tests run in accordance with AHRI standard 410. Coils are AHRI certified and include an AHRI label.



Tubing Connections		
Case Size	Standard HW Coil Inches (mm)	
	1 Row	2 Row
2	7/8 (22)	7/8 (22)
4	7/8 (22)	7/8 (22)

Outlet Dimensions		
Case Size	Standard HW Coil Inches (mm)	
	H	W
2	10.125 (233)	22 (550)
4	10.125 (233)	33 (825)

All coils have 10 fins per inch

**All accessories that can be attached to the Series Fan Boxes  
are not a part of the AHRI certification program  
but ratings can be affected by their use.**

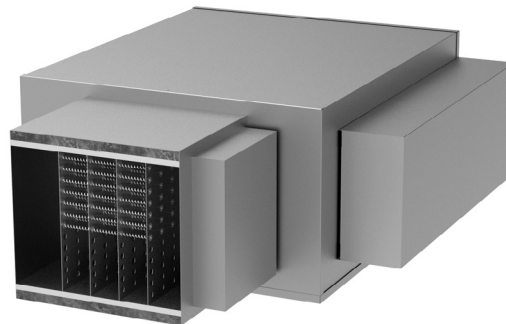


## FCL-600 ACCESSORIES AND COMPONENTS ELECTRIC HEAT

Electric heater elements, as illustrated on this page, are integral to the air terminal. The discharge end has slip and drive connections for easy connection to downstream ductwork. ETL® listed heaters are provided with a fan interlock relay. Heaters that will be controlled electronically must include a 24 VAC control circuit to operate with the low voltage controls on the air terminal. Heater plenums are internally insulated. When an air terminal is ordered with clean room lining and electric heat, the heater plenum is either internally lined with optional foil backed insulation or closed cell foam or may require external insulation in field.

### INCLUDED WITH EACH HEATER ASSEMBLY:

- Heater and cabinet mounted on the discharge of the FCL-600
- Electric Heater is interlocked into fan control relay
- De-energizing magnetic contactors per step
- Primary automatic reset high temperature limit (disc type)
- Backup manual reset high temperature limit (disc type)
- Non-fused transformer with voltage to match Heater voltage
- Single point power wiring connection
- Heater is shipped factory mounted and wired



### ELECTRIC HEATER ASSEMBLY CONSTRUCTION DETAILS

- Electric Reheat Coils are factory mounted on the discharge of the Air Terminal. The heaters are ETL® listed for zero clearance, are tested in accordance with UL® Standard 1995, CSA-C22.2 No. 236 and the National Electric Code (NEC). Heater casings are constructed of galvanized steel. Element wire is high grade nichrome alloy derated to 45 watts per square inch density. Element wire is supported by moisture-resistant steatite ceramics.
- Ceramics are enclosed in reinforcement brackets spaced across the heater element rack at 2" to 4" intervals. Controls are contained in a NEMA 1 control cabinet with a hinged, latching door. A permanent wiring diagram is affixed to the inside of the control cabinet door for field reference.
- The 208 and 480 volt units require a neutral connection for both single and three phase service. Our standard motors are 120 and 277 volt single phase. The 208-240 volt single phase motor is optional. 480 volt motors are not available for our units. See table for reference.

Heater Voltage	Fan Motor Voltage	Separate Neutral Required
120 V 1PH	120 V 1PH	NO
208 V 1PH	120 V 1PH	YES
277 V 1PH	277 V 1PH	NO
480 V 1PH	277 V 1PH	YES
208 V 1PH	208 V 1PH	NO
208 V 3PH	120 V 1PH	YES
480 V 3PH	277 V 1PH	YES
208 V 3PH	208 V 1PH	NO

**All accessories that can be attached to the Series Fan Boxes are not a part of the AHRI certification program but ratings can be affected by their use.**

## FCL-600 ELECTRIC HEATER CAPACITIES

Single Phase FCL kW Limits				
Unit Size	Heater Voltage	Min. kW Step	Max. kW	Max. Steps
2	120	0.5	5.0	3
2	208	0.5	8.0	3
2	240	0.5	8.0	3
2	277	0.5	8.0	3
2	480	0.5	8.0	3
4	120	0.5	5.0	3
4	208	0.5	8.5	3
4	240	0.5	10.0	3
4	277	0.5	11.0	3
4	480	0.5	15.0	3

Three Phase FCL kW Limits				
Unit Size	Heater Voltage	Min. kW Step	Max. kW	Max. Steps
2	208	0.5	8.0	3
2	480	0.5	8.0	3
4	208	1.5	13.0	3
4	480	1.5	15.0	3

**NOTES:**

1. Heaters less than 10 kW are specifiable to nearest 0.5 kW. Heaters greater than 10.0 kW are specifiable to nearest 1.0 kW.
2. Minimum flow rate for electric heat is 70 CFM / kW. Lower CFM's can cause nuisance tripping, excessive discharge temperatures, rapid cycling, and rapid element failure. Electric Heat units running below 70 CFM / kW will void all warranties.
3. For optimum thermal comfort, the suggested discharge temperature should not exceed 20°F above room set point.
4. We do not recommend discharge temperatures in excess of 115°F to protect heater coils.
5. Maximum number of steps at minimum kW is one step.
6. If more than 1 heater is wired into a building's circuit breaker (multi-outlet branch circuit), each heater will require the addition of power side fusing.

**ELECTRIC HEAT SELECTION:**

A. Specify electric duct heaters using voltage, phase, kW, and number of steps.

B. Use above chart to select voltage. Calculate required kW using following equations:

$$kW = \frac{BTU / HR}{3413} \qquad kW = \frac{CFM \times \Delta \times 1.085}{3413} \qquad \Delta = \frac{kW \times 3413}{CFM \times 1.085}$$

$$CFM = \frac{kW \times 3413}{\Delta \times 1.085} \qquad CFM = \frac{kW \times 3413}{\Delta \times 1.085}$$

\* air density at sea level—reduce by 0.036 for each 1000 feet of altitude above sea level

Where: BTU / Hr = Required heating capacity

CFM = volume of air during heating. Typically 100% of maximum cooling air volume

Δ = desired air temperature rise across the electric heater

Inlet air temperature = primary air temperature, usually 55°F



## FCL-600 CONTROL SEQUENCE OFFERINGS



### PPD-PNEUMATIC PRESSURE DEPENDENT

- 910 DA / NC
- 912 RA / NO



### PPI-PNEUMATIC PRESSURE INDEPENDENT

- 914 DA / NC
- 915 DA / NO
- 916 RA / NC
- 917 RA / NO



### EPD-ELECTRIC PRESSURE DEPENDENT

- 960 Cooling Only
- 961 Cooling with Heat
- 964 Night Shutdown / Morning Warm-up
- 965 Heating / Cooling Changeover



### API-ANALOG PRESSURE INDEPENDENT

- Consult Factory



### DDC-DIRECT DIGITAL CONTROL

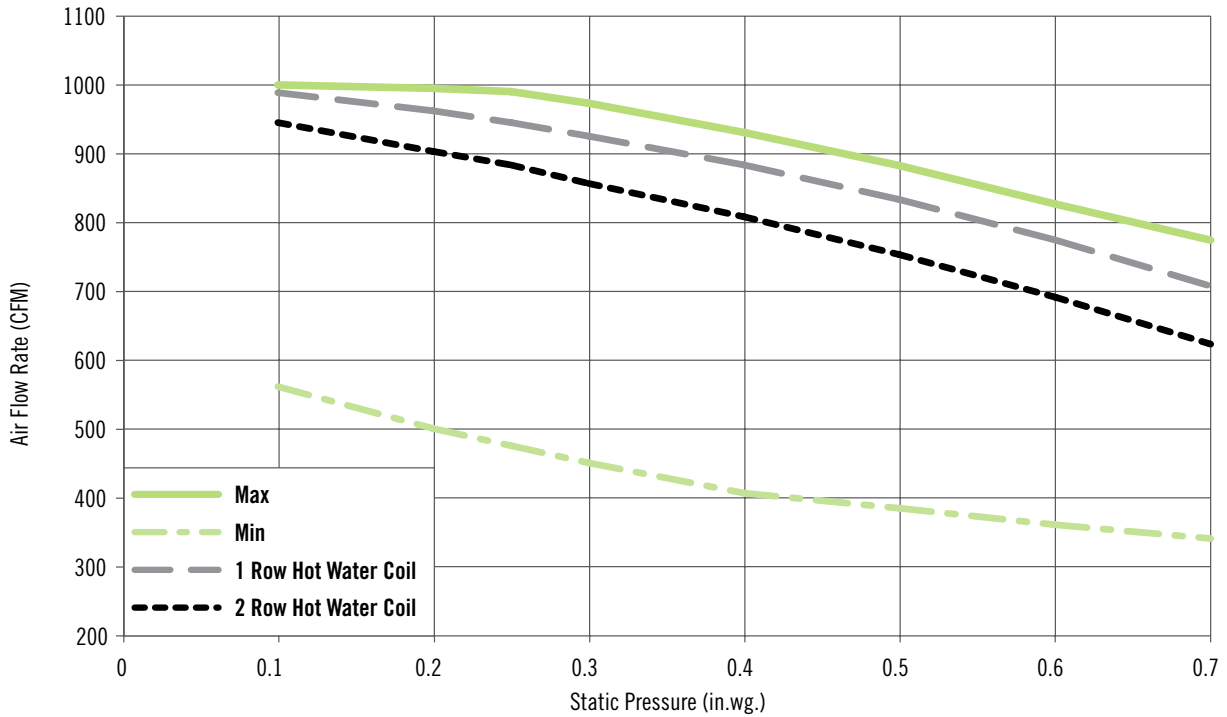
#### BACnet

- 980 Constant Fan—No Auxiliary Heating
- 982 Constant Fan—Modulating Floating Control—Hot Water Heat
- 983-E Electric Heat

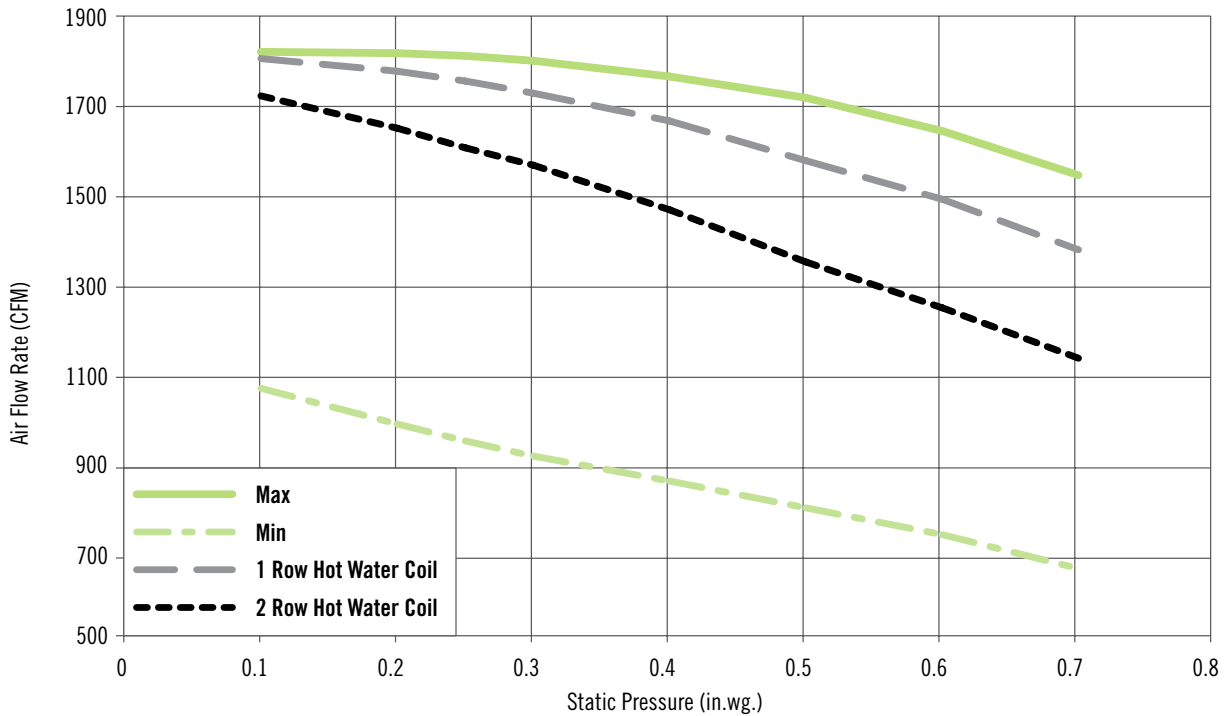


Refer to ACC 24 for complete description.

## FCL-600 FAN PERFORMANCE CURVES CASE 2

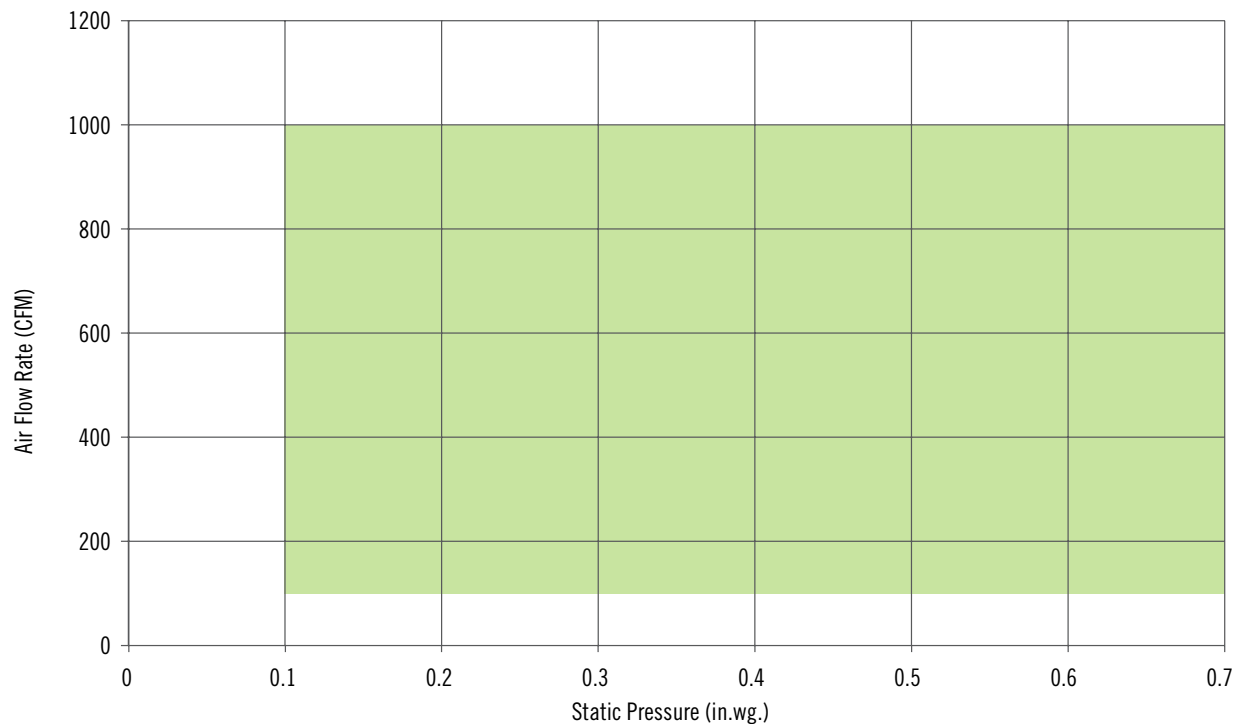


## FCL-600 FAN PERFORMANCE CURVES CASE 4

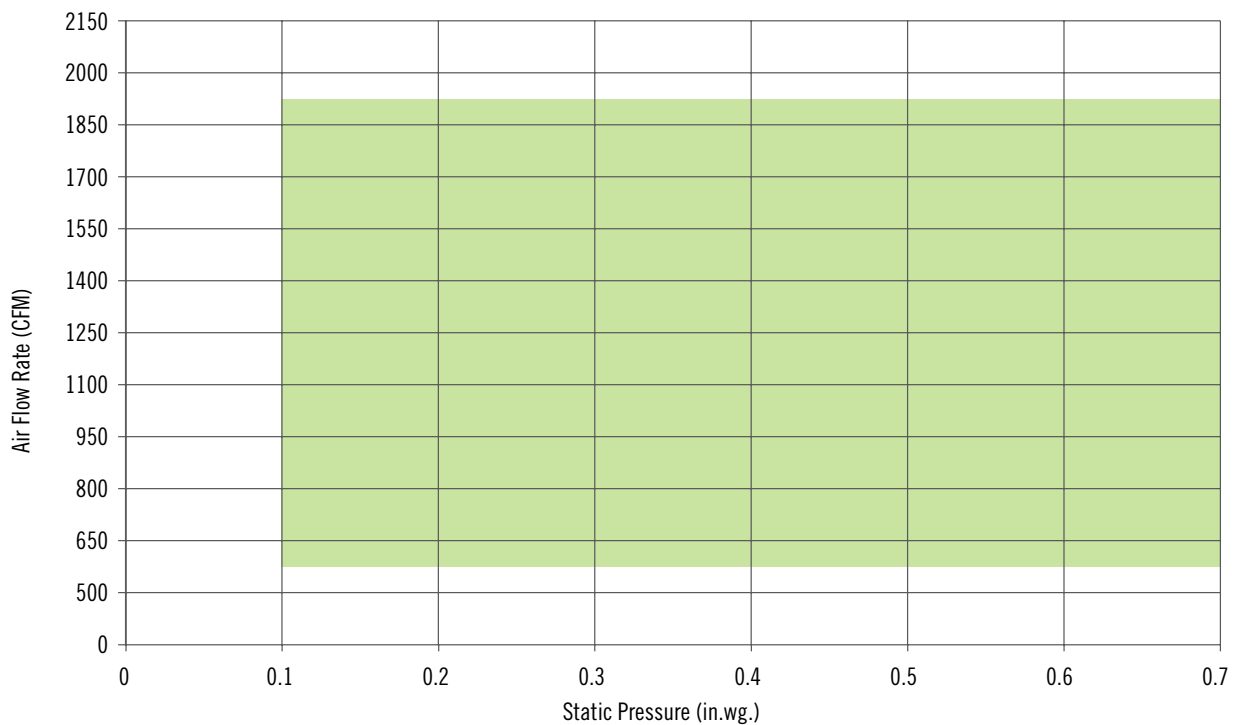




## FCL-600 ECM FAN PERFORMANCE CURVES CASE 2



## FCL-600 ECM FAN PERFORMANCE CURVES CASE 4



**SERIES**  
**FAN POWERED**

**FCL-600 LOW PROFILE CONSTANT VOLUME**



SERIES  
FAN POWERED

FCL-600 LOW PROFILE CONSTANT VOLUME