

A Sustainable Retrofit Solution for Vertical Stack Fan Coil Applications

Retrofit Kits for Existing Fan Coil Units.
Make it Simple. Make it Quick.

CONTENTS

The Alternative to
Full Unit Replacement

2

EnviroKIT Comparison Matrix
Four Options

3

EnviroKIT Offerings

4

Features, Benefits
and Applications

5 – 9

Appendix

10

Example
Heating Performance Data

11 – 13

Example
Cooling Performance Data

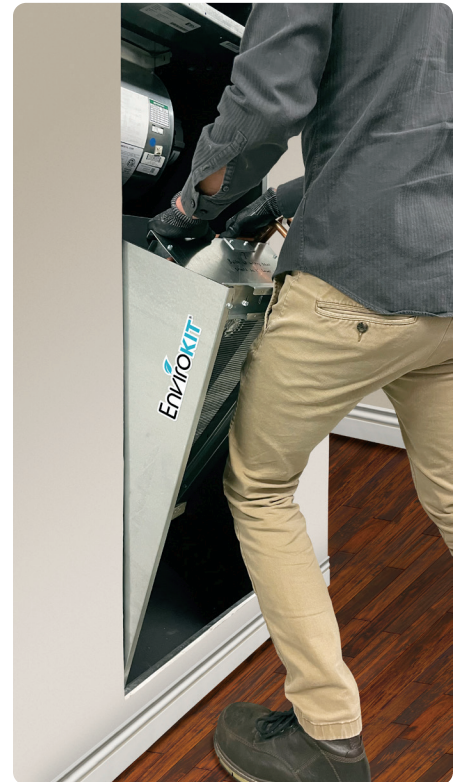
14 – 15

THE **ALTERNATIVE** TO FULL UNIT REPLACEMENT






















Simple & fast replacement for any Vertical Stack Fan Coil Units

EnviroKIT® is a kitted solution packaged to meet the technical specifications of your existing configurations by replacing aging and failing components as an alternative to full unit replacement.

As a customized solution, EnviroKIT is sustainably designed for compatibility and cost savings by extending the life of your fan coil units.



EnviroKIT® COMPARISON MATRIX | FOUR OPTIONS

EnviroKIT® Inclusions & Options		EnviroKIT® Energy	EnviroKIT® Energy+ Plus	EnviroKIT® Comprehensive	EnviroKIT® Custom Engineered
COMPONENTS	EC Motor				YOU CHOOSE
	Blower Assembly				YOU CHOOSE
	Control Integration				YOU CHOOSE
	Replacement Coil				YOU CHOOSE
	Double-Sloped Stainless Steel Drain Pan				YOU CHOOSE
	Valve Package				YOU CHOOSE
	Closed Cell Foam Insulation		OPTIONAL		YOU CHOOSE
	Factory Assembled Casing				YOU CHOOSE
SERVICES	Engineering Support & Performance Testing				
	Custom Engineering Support & Design	OPTIONAL	OPTIONAL	OPTIONAL	
	Survey & Assessment	OPTIONAL	OPTIONAL	OPTIONAL	YOU CHOOSE

 = Included

WHY EnviroKIT?

Let's see if your facility is a candidate for an EnviroKIT solution.

DO YOU CURRENTLY HAVE FAN COILS IN YOUR FACILITY?

Refrigerant-Free Hydronic Fan Coils have been heating and cooling buildings for more than half a century as a proven and superior HVAC solution and IEC has delivered HVAC excellence since 1948. Whether your current units are from IEC or another manufacturer, we can help create a like-new performance level with an EnviroKIT solution.

IS SUSTAINABILITY IMPORTANT TO YOU?

We can re-purpose materials and cabinets from your existing units and minimize wasteful landfill contribution, installation labor, and unnecessary expense.

IS CAPITAL BUDGET A CHALLENGE?

Full fan coil unit replacement is costly. The EnviroKIT solution is designed to extend the life and performance of your existing units, at often less than \$4,000 per key.

EnviroKIT OFFERINGS

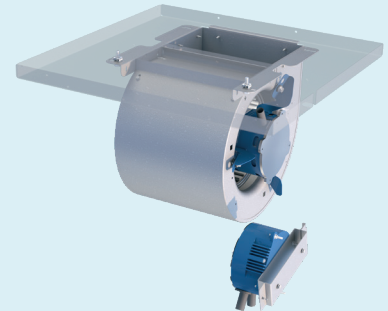
A sustainable and cost-effective kitted aftermarket solution scaled to extend the life of your installed Fan Coil Units.

EnviroKIT® Energy

ENERGY KIT INCLUDES

- New EC Motor
- New Blower Housing Assembly
- Control Kit

Installed in the field by your selected professional(s) to your existing fan deck.



EnviroKIT® Energy+ Plus

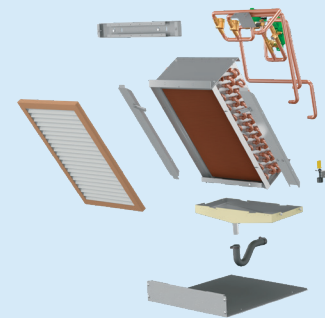
ENERGY+ PLUS KIT INCLUDES

- EnviroKIT Energy (Blower, Motor, Control)

+PLUS

- Replacement Coil Designed for Your Unit
- Double-Sloped Stainless Steel Drain Pan
- Valve Package
- Optional Insulation, Filters, etc.

Installed in the field by your selected partner(s).



EnviroKIT® Comprehensive

COMPREHENSIVE KIT INCLUDES

- All EnviroKIT Energy+ Plus Components
- Coil and valve package are factory assembled into a sheet metal casing for easy slide-in installation (*for Vertical Stack units only*).

These parts are kitted to minimize field installation labor and downtime.



EnviroKIT® Custom Engineered

SUSTAINABLY TAILORED & PREFABRICATED FOR YOUR FACILITY

Let's design an assembly that can accomplish your specific goals.

Whether your goal is to re-purpose select items, improve efficiency, reduce installation time or minimize field installation labor, IEC is your partner to build the parts solution for your precise needs.

FEATURES, BENEFITS AND APPLICATIONS

EnviroKIT® Energy

Manufactured & assembled in the USA and designed to be plug and play for existing thermostat.

Performance data can be provided based on your fan coil unit configuration and needs.

Performance varies by situation and your precise information can be shared as part of your solution. The EnviroKIT Energy is simply a collection of the aftermarket parts you would routinely replace. Refer to appendix beginning on page 10 for some example performance data.

INCLUSIONS

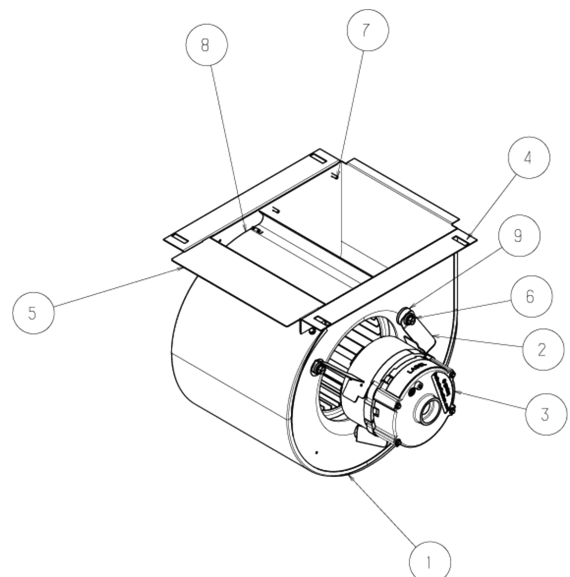
- EC Motor
- Blower Housing
- Control Kit



SUBMITTAL CONCEPT

Motor Inclusions:

1. Blower Housing
2. Motor Bracket
3. EC Motor
4. Blower Housing Mounts
5. Blower Housing Flange
6. Motor Bracket Bolts
7. Blower Housing Screws
8. Blower Mount Screws
9. Blower Housing Washers



FEATURES, BENEFITS AND APPLICATIONS (CONTINUED)

EnviroKIT® Energy+ Plus

Motor blower assembly and control kit are manufactured & assembled in the USA and designed to be plug and play for existing thermostat.

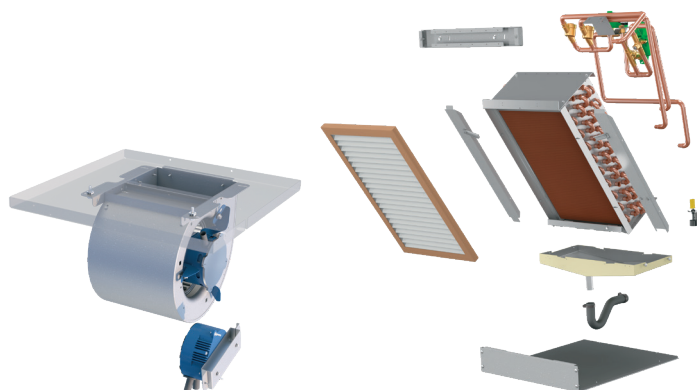
Lower components including coils, valve packages, etc. are shipped individually for field installation.

Performance data can be provided based on your fan coil unit configuration and needs.

Performance varies by situation and your precise information can be shared as part of your solution. The EnviroKIT Energy+ Plus is a collection of the aftermarket parts you would routinely replace. Refer to appendix beginning on page 10 for some example performance data.

INCLUSIONS

- EC Motor
- Blower Housing
- Control Kit
- Replacement Coil
- Double Sloped Stainless Steel Drain Pan
- Valve Package
- Engineering Support
- Optional Closed Cell Foam



ITEMS INCLUDED

- Blower Housing
- EC Motor
- EC Motor Brain
- Valve Package
- Coil
- Coil Side Baffles
- Coil Brackets
- Filter
- Stainless Steel Drain Pan
- P-Trap

FEATURES, BENEFITS AND APPLICATIONS (CONTINUED)

EnviroKIT®

Comprehensive

Motor blower assembly and control kit are manufactured & assembled in the USA and designed to be plug and play for existing thermostat.

Lower kit includes coils, valves, etc. factory assembled – designed in kit form for turnkey installation.

Performance data can be provided based on your fan coil unit configuration and needs.

Refer to appendix beginning on page 10 for some example performance data for common configurations.

Actual data varies by design and submitted per project. The Comprehensive EnviroKIT is a collection of the aftermarket parts you would routinely replace, kitted.

INCLUSIONS

- EC Motor
- Blower Housing
- Control Kit
- High Efficiency Copper Tube-Aluminum Fin Coil
- Double Sloped Stainless Steel Drain Pan
- Valve Package
- Closed Cell Foam
- Factory Assembled with 20GA Galvanized Steel Casing around the Coil
- Optional Engineering Support



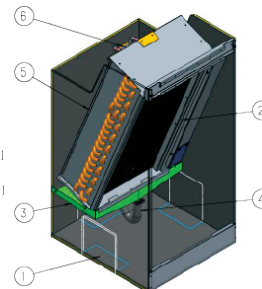
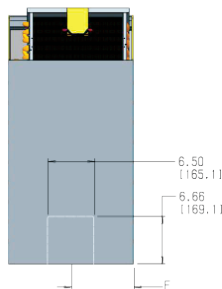
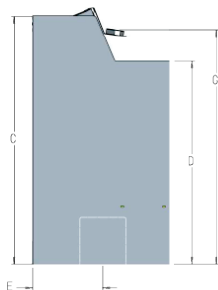
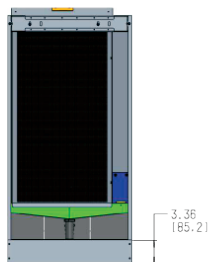
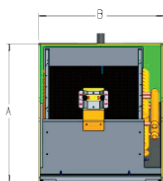
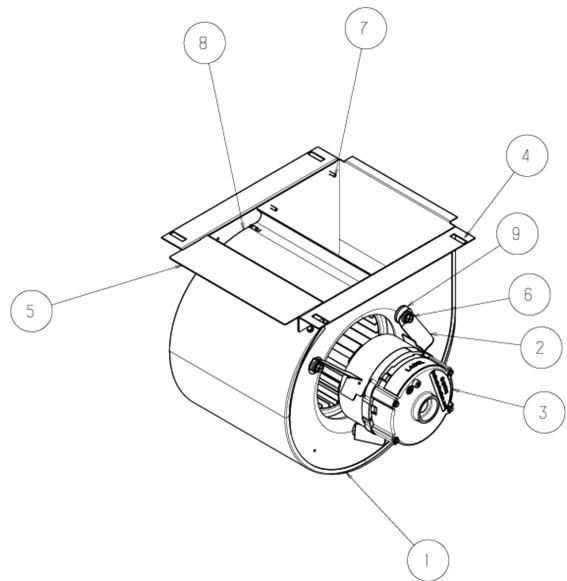
FEATURES, BENEFITS AND APPLICATIONS (CONTINUED)

EnviroKIT® Comprehensive

SUBMITTAL CONCEPT

Motor Inclusions:

1. Blower Housing
2. Motor Bracket
3. EC Motor
4. Blower Housing Mounts
5. Blower Housing Flange
6. Motor Bracket Bolts
7. Blower Housing Screws
8. Blower Mount Screws
9. Blower Housing Washers



NOTES:
A. UNITS 20 GA. GALV STEEL WITH 16 GA COIL SUPPORT BRACKET.
B. ALL COILS ARE RH WITH CENTER MOUNT THREAD HOSE CONNECTION.
C. ACTUATOR, FLOAT SWITCH, CONTROLS SHIPPED LOOSE FOR FIELD INSTALLATION.
D. DRAIN KNOCK-OUTS ON 3 SIDES OF CABINET.
E. DIMENSIONS ARE IN INCHES; DIMS IN [] ARE IN MM.
F. ALL DIMENSIONS ARE +/- .25 (6.35). DRAWING NOT TO SCALE.

ITEMS INCLUDED

1. Drain Riser Knockout
2. Filter
3. Drain Pan
4. P-Trap
5. Coil
6. Coil Hose Connections

FEATURES, BENEFITS AND APPLICATIONS (CONTINUED)

EnviroKIT®

Custom Engineered

Let's design an assembly that can accomplish your specific goals. Whether to re-purpose select items, improve efficiency, reduce installation time or minimize field installation labor, IEC is your partner to build the solution for your precise needs.

Performance data can be provided based on your fan coil unit configuration and needs.

OPTIONS TO CONSIDER

- EC Motor
- Blower Housing
- Control Kit
- Replacement Coil
- Merv 8 Filter
- EC Motor 115-277V 1/2HP or 1/4HP
- High Efficiency Copper Tube-Aluminum Fin Coil
- 20GA Galvanized Steel Casing around the Coil
- Double Sloped Stainless Steel Drain Pan
- Valve Package
- Closed Cell Foam
- Factory Assembled Sheet Metal Casing

AVAILABLE UPGRADES

- Stainless Steel Coil Casement
- Epoxy Coated Coil
- Installation Support

APPENDIX

Example Heating and Cooling Performance
Data for a comprehensive EnviroKIT solution
based on common configurations.

EXAMPLE – HEATING PERFORMANCE DATA

EnviroKIT Comprehensive Vertical Stack Heating Performance **180°F EWT**

2 Row, EC Motor

Unit Size	Coil Spec.	Heating Performance 70°F DB, 180°F EWT	GPM						
			0.5	1.0	2.0	3.0	4.0	6.0	8.0
ENVC-03 360 CFM	20 TH 9" x 14FPI 1C	Capacity (BTUH)	18,603	24,314	27,904	–	–	–	–
		Pressure Drop (FtWC)	1.30	3.70	10.90	–	–	–	–
ENVC-04 430 CFM	20 TH 9" x 14FPI 1C	Capacity (BTUH)	19,710	26,666	31,321	33,053	–	–	–
		Pressure Drop (FtWC)	1.30	3.80	11.00	20.60	–	–	–
ENVC-06 590 CFM	22 TH 12.5" x 14FPI 2C	Capacity (BTUH)	–	32,253	40,637	43,990	45,774	–	–
		Pressure Drop (FtWC)	–	0.80	2.30	4.30	6.70	–	–
ENVC-08 800 CFM	22 TH 12.5" x 14FPI 2C	Capacity (BTUH)	–	35,987	47,827	52,966	55,797	–	–
		Pressure Drop (FtWC)	–	0.80	2.30	4.30	6.80	–	–
ENVC-10 1000 CFM	24 TH 16.5" x 14FPI 2C	Capacity (BTUH)	–	41,953	58,743	66,284	70,458	74,895	–
		Pressure Drop (FtWC)	–	1.00	2.90	5.40	8.50	15.90	–
ENVC-12 1240 CFM	24 TH 16.5" x 14FPI 2C	Capacity (BTUH)	–	44,135	64,467	74,285	79,906	86,023	89,272
		Pressure Drop (FtWC)	–	1.00	2.90	5.40	8.50	15.90	24.90

1 Row, EC Motor

Unit Size	Coil Spec.	Heating Performance 70°F DB, 180°F EWT	GPM				
			0.5	1.0	2.0	3.0	4.0
ENVC-03 360 CFM	20 TH 9" x 14FPI 1C	Capacity (BTUH)	13,170	16,390	18,525	19,350	–
		Pressure Drop (FtWC)	0.60	1.80	5.30	10.00	–
ENVC-04 430 CFM	20 TH 9" x 14FPI 1C	Capacity (BTUH)	14,075	17,924	20,574	21,617	–
		Pressure Drop (FtWC)	0.60	1.80	5.30	10.00	–
ENVC-06 590 CFM	22 TH 12.5" x 14FPI 1C	Capacity (BTUH)	–	23,898	28,282	30,028	30,968
		Pressure Drop (FtWC)	–	2.30	6.80	12.70	19.90
ENVC-08 800 CFM	22 TH 12.5" x 14FPI 1C	Capacity (BTUH)	–	27,173	33,298	35,849	37,249
		Pressure Drop (FtWC)	–	2.30	6.80	12.70	19.90
ENVC-10 1000 CFM	24 TH 16.5" x 14FPI 1C	Capacity (BTUH)	–	32,945	41,887	45,693	47,791
		Pressure Drop (FtWC)	–	2.90	8.50	15.90	24.90
ENVC-12 1240 CFM	24 TH 16.5" x 14FPI 1C	Capacity (BTUH)	–	35,377	46,366	51,242	53,978
		Pressure Drop (FtWC)	–	2.90	8.50	16.00	25.00

These figures are based on modeled data, with minimal tolerance variations, depending on your environmental conditions.

EXAMPLE – HEATING PERFORMANCE DATA

EnviroKIT Comprehensive Vertical Stack Heating Performance **160°F EWT**

2 Row, EC Motor

Unit Size	Coil Spec.	Heating Performance 70°F DB, 160°F EWT	GPM						
			0.5	1.0	2.0	3.0	4.0	6.0	8.0
ENVC-03 360 CFM	20 TH 9" x 14FPI 1C	Capacity (BTUH)	15,122	19,806	22,770	–	–	–	–
		Pressure Drop (FtWC)	1.30	3.80	11.20	–	–	–	–
ENVC-04 430 CFM	20 TH 9" x 14FPI 1C	Capacity (BTUH)	16,019	21,712	25,548	26,984	–	–	–
		Pressure Drop (FtWC)	1.30	3.90	11.30	21.10	–	–	–
ENVC-06 590 CFM	22 TH 12.5" x 14FPI 2C	Capacity (BTUH)	–	26,168	33,084	35,859	37,342	–	–
		Pressure Drop (FtWC)	–	0.80	2.40	4.40	6.90	–	–
ENVC-08 800 CFM	22 TH 12.5" x 14FPI 2C	Capacity (BTUH)	–	29,173	38,902	43,140	45,485	–	–
		Pressure Drop (FtWC)	–	0.80	2.40	4.40	6.90	–	–
ENVC-10 1000 CFM	24 TH 16.5" x 14FPI 2C	Capacity (BTUH)	–	34,082	47,835	54,029	57,470	61,140	–
		Pressure Drop (FtWC)	–	1.00	3.00	5.60	8.70	16.30	–
ENVC-12 1240 CFM	24 TH 16.5" x 14FPI 2C	Capacity (BTUH)	–	35,856	52,476	60,522	65,148	70,197	72,887
		Pressure Drop (FtWC)	–	1.00	3.00	5.60	8.70	16.40	25.60

1 Row, EC Motor

Unit Size	Coil Spec.	Heating Performance 70°F DB, 160°F EWT	GPM				
			0.5	1.0	2.0	3.0	4.0
ENVC-03 360 CFM	20 TH 9" x 14FPI 1C	Capacity (BTUH)	10,668	13,325	15,098	15,786	–
		Pressure Drop (FtWC)	0.60	1.90	5.50	10.30	–
ENVC-04 430 CFM	20 TH 9" x 14FPI 1C	Capacity (BTUH)	11,394	14,564	16,760	17,630	–
		Pressure Drop (FtWC)	0.60	1.90	5.50	10.30	–
ENVC-06 590 CFM	22 TH 12.5" x 14FPI 1C	Capacity (BTUH)	–	19,440	23,053	24,500	25,281
		Pressure Drop (FtWC)	–	2.40	6.90	13.00	20.40
ENVC-08 800 CFM	22 TH 12.5" x 14FPI 1C	Capacity (BTUH)	–	22,089	27,124	29,233	30,394
		Pressure Drop (FtWC)	–	2.40	7.00	13.10	20.50
ENVC-10 1000 CFM	24 TH 16.5" x 14FPI 1C	Capacity (BTUH)	–	26,820	34,146	37,281	39,013
		Pressure Drop (FtWC)	–	3.00	8.70	16.40	25.60
ENVC-12 1240 CFM	24 TH 16.5" x 14FPI 1C	Capacity (BTUH)	–	28,793	37,784	41,794	44,050
		Pressure Drop (FtWC)	–	3.00	8.80	16.40	25.70

These figures are based on modeled data, with minimal tolerance variations, depending on your environmental conditions.

EXAMPLE – HEATING PERFORMANCE DATA

EnviroKIT Comprehensive Vertical Stack Heating Performance **150°F EWT**

2 Row, EC Motor

Unit Size	Coil Spec.	Heating Performance 70°F DB, 150°F EWT	GPM						
			0.5	1.0	2.0	3.0	4.0	6.0	8.0
ENVC-03 360 CFM	20 TH 9" x 14FPI 1C	Capacity (BTUH)	13,390	17,559	20,208	22,116	–	–	–
		Pressure Drop (FtWC)	1.30	3.90	11.40	23.10	–	–	–
ENVC-04 430 CFM	20 TH 9" x 14FPI 1C	Capacity (BTUH)	14,183	19,245	22,668	23,954	–	–	–
		Pressure Drop (FtWC)	1.30	3.90	11.40	21.50	–	–	–
ENVC-06 590 CFM	22 TH 12.5" x 14FPI 2C	Capacity (BTUH)	–	23,144	29,321	31,804	33,134	–	–
		Pressure Drop (FtWC)	–	0.80	2.40	4.50	7.00	–	–
ENVC-08 800 CFM	22 TH 12.5" x 14FPI 2C	Capacity (BTUH)	–	25,794	34,460	38,243	40,342	–	–
		Pressure Drop (FtWC)	–	0.80	2.40	4.50	7.00	–	–
ENVC-10 1000 CFM	24 TH 16.5" x 14FPI 2C	Capacity (BTUH)	–	30,165	42,401	47,918	50,990	54,272	–
		Pressure Drop (FtWC)	–	1.00	3.00	5.70	8.80	16.60	–
ENVC-12 1240 CFM	24 TH 16.5" x 14FPI 2C	Capacity (BTUH)	–	31,736	46,505	53,663	57,787	62,298	64,705
		Pressure Drop (FtWC)	–	1.00	3.00	5.70	8.90	16.60	26.00

1 Row, EC Motor

Unit Size	Coil Spec.	Heating Performance 70°F DB, 150°F EWT	GPM				
			0.5	1.0	2.0	3.0	4.0
ENVC-03 360 CFM	20 TH 9" x 14FPI 1C	Capacity (BTUH)	9,426	11,799	13,389	14,008	–
		Pressure Drop (FtWC)	0.60	1.90	5.60	10.50	–
ENVC-04 430 CFM	20 TH 9" x 14FPI 1C	Capacity (BTUH)	10,064	12,892	14,859	15,641	–
		Pressure Drop (FtWC)	0.60	1.90	5.60	10.50	–
ENVC-06 590 CFM	22 TH 12.5" x 14FPI 1C	Capacity (BTUH)	–	17,221	20,446	21,741	22,441
		Pressure Drop (FtWC)	–	2.40	7.10	13.30	20.80
ENVC-08 800 CFM	22 TH 12.5" x 14FPI 1C	Capacity (BTUH)	–	19,559	24,046	25,933	26,972
		Pressure Drop (FtWC)	–	2.40	7.10	13.30	20.80
ENVC-10 1000 CFM	24 TH 16.5" x 14FPI 1C	Capacity (BTUH)	–	23,769	30,286	33,082	34,630
		Pressure Drop (FtWC)	–	3.00	8.90	16.60	26.00
ENVC-12 1240 CFM	24 TH 16.5" x 14FPI 1C	Capacity (BTUH)	–	25,514	33,505	37,079	39,093
		Pressure Drop (FtWC)	–	3.00	8.90	16.70	26.10

These figures are based on modeled data, with minimal tolerance variations, depending on your environmental conditions.

EXAMPLE – COOLING PERFORMANCE DATA

EnviroKIT Comprehensive Vertical Stack

3 Row, EC Motor

Unit Size	Coil Spec.	EWT (°F)	Delta T (°F)	Cooling Performance – 80°F DB, 67°F WB			
				Total (BTUH)	Sensible (BTUH)	GPM	Pressure (FtWC)
ENVC-03 360 CFM	20 TH 9" x 14FPI 1C	45	10	12,024	8,801	2.40	4.80
			12	11,009	8,396	1.82	3.10
			14	10,123	8,051	1.43	2.10
			16	9,320	7,744	1.16	1.50
ENVC-04 430 CFM	20 TH 9" x 14FPI 2C	45	10	13,841	10,255	2.75	6.00
			12	12,700	9,804	2.10	3.90
			14	11,702	9,418	1.66	2.70
			16	10,794	9,073	1.34	1.90
ENVC-06 590 CFM	22 TH 12.5" x 14FPI 3C	45	10	19,463	14,298	3.86	4.50
			12	17,770	13,628	2.94	2.90
			14	16,261	13,043	2.30	2.00
			16	14,860	12,511	1.84	1.40
ENVC-08 800 CFM	22 TH 12.5" x 14FPI 3C	45	10	24,718	18,564	4.90	6.50
			12	22,699	17,772	3.75	4.30
			14	20,894	17,081	2.96	2.90
			16	19,211	16,446	2.38	2.10
ENVC-10 1050 CFM	24 TH 16.5" x 14FPI 3C	45	10	35,599	25,698	7.06	14.40
			12	33,054	24,671	5.46	9.60
			14	30,797	23,783	4.36	6.70
			16	28,712	22,975	3.56	4.90
ENVC-12 1250 CFM	24 TH 16.5" x 14FPI 3C	45	10	40,633	29,743	8.06	17.70
			12	37,792	28,612	6.25	11.90
			14	35,303	27,638	5.00	8.30
			16	32,998	26,750	4.09	6.10

These figures are based on modeled data, with minimal tolerance variations, depending on your environmental conditions.

EXAMPLE – COOLING PERFORMANCE DATA

EnviroKIT Comprehensive Vertical Stack

4 Row, EC Motor

Unit Size	Coil Spec.	EWT (°F)	Delta T (°F)	Cooling Performance – 80°F DB, 67°F WB			
				Total (BTUH)	Sensible (BTUH)	GPM	Pressure (FtWC)
ENVC-03 360 CFM	20 TH 9" x 14FPI 2C	45	10	14,388	9,936	2.85	8.50
			12	13,308	9,487	2.20	5.70
			14	12,344	9,097	1.75	3.90
			16	11,469	8,748	1.42	2.80
ENVC-04 420 CFM	20 TH 9" x 14FPI 2C	45	10	16,434	11,438	3.26	10.50
			12	15,225	10,939	2.52	7.00
			14	14,145	10,504	2.00	4.90
			16	13,163	10,114	1.63	3.50
ENVC-06 590 CFM	22 TH 12.5" x 14FPI 3C	45	10	23,419	16,211	4.64	8.10
			12	21,643	15,477	3.58	5.30
			14	20,033	14,826	2.84	3.70
			16	18,546	14,237	2.30	2.60
ENVC-08 800 CFM	22 TH 12.5" x 14FPI 3C	45	10	30,350	21,371	6.02	12.10
			12	28,179	20,482	4.66	8.10
			14	26,208	19,690	3.71	5.60
			16	24,384	18,976	3.02	4.10
ENVC-10 1000 CFM	24 TH 16.5" x 14FPI 4C	45	10	39,293	27,291	7.79	10.70
			12	36,478	26,128	6.03	7.10
			14	33,894	25,082	4.80	5.00
			16	31,482	24,128	3.90	3.60
ENVC-12 1240 CFM	24 TH 16.5" x 14FPI 4C	45	10	47,053	33,115	9.33	14.20
			12	43,828	31,798	7.24	9.50
			14	40,881	30,617	5.79	6.70
			16	38,126	29,527	4.73	4.80

These figures are based on modeled data, with minimal tolerance variations, depending on your environmental conditions.



What's Next?

Let's get started on a Unit & Site Assessment.

Next Steps

A complete site assessment will include gathering photos, measurements, physical equipment review, and more. However, each facility is unique so let's start with a conversation.

Visit iec-okc.com/EnviroKIT

You can also send an email to envirokit@iecokc.com to begin discussing options that work best for you!



5000 W I-40 Service Rd | Oklahoma City, OK 73106
Phone: 405.605.5000 | Fax: 405.605.5001
www.iec-okc.com