

The Unico System[®]

Green Series

Same on the outside —
Better on the inside!

Typical of Unico: We have taken our traditional air handler that for decades has enjoyed success in countless applications and made it a more intelligent, energy-efficient, and environmentally friendly unit. Features of the new Green Series such as the SCB (S.M.A.R.T. Control Board) and the new EC (Electronically Commutated) motor give us a Small-Duct High-Velocity air delivery system superior to any other in the industry. Our objective was to significantly improve the motor performance by incorporating EC motor technology managed by our enhanced software application within the S.M.A.R.T. (Software Managed Air Rate Technology) Control Board—all while keeping the modular design of our air handler intact.

The result..... The new **Unico System Green Series** Small-Duct High-Velocity air-handler.



The ability to precisely manage airflow in a variety of operating modes is key to maximizing comfort. The new Unico System Green Series air handlers, combined with the new S.M.A.R.T. Control Board and the new EC motor, will provide just the perfect amount of airflow whether cooling, heating or simply circulating air. With all the new features, the new Unico System Green Series will provide:

- Greater comfort in heating, cooling and circulation modes.
- Availability in both 120v and 240v
- Perfect solution for multiple zoning capabilities without by-pass dampers
- Greater efficiencies when paired with 2 stage condensers



The new Green Series EC motor is the heart of our new air handler series. The *variable-speed fan motor* adjusts speed to provide a consistent flow of comfortable conditioned air with quiet operation. It features advanced design characteristics for maximum efficiency, comfort, and reliability. Key features of the new motor are:

- At low speeds the new EC motor is up to two decibels quieter
- The new EC motor is 17% more energy efficient at full speed and 30 % more efficient at low speed than our current PSC motor
- Can be used to upgrade existing air handlers manufactured after 2003



The new S.M.A.R.T. Control Board is the brains of the new air handler series. Combined with the EC motor it provides the highest level of Indoor Comfort that a homeowner demands.

Features of the SCB are:

- The ability to manage both airflow and motor speed according to the needs of the thermostat and or zoning needs.
- Two options to set airflow
 1. Programmable via a laptop by ordinary USB cable, or
 2. On board, switch selectable pre-programmed settings
- Diagnostic feedback
- An enhanced soft start and soft stop

The Unico System[®]

SMART

Control

Board

www.unicosystem.com

The Unico System[®]

Green Series

Precise Airflow Control

With the new EC motor and SCB you have a high performance air distribution system that is a step above the SDHV industry standard. Our advanced software gives you unrivaled control of the EC motor, resulting in a constant CFM across a wide range of operating conditions. When compared to the industry, most EC motors are factory programmed for specific airflow and do not allow changes which limits your ability to provide a customized heating and cooling solution.

The new SCB gives you the following advantages:

- Several pre-set options to choose from
- Customizable in six different modes of operation, from minimum and maximum CFM to maximum motor RPM
- Connect to a laptop or notebook to adjust the program through a USB cable
- Dedicated Unico webpage to download software
- Addition of Low Heat setting which was not available with the ACB

The Unico System[®]
S.M.A.R.T. * Control Board
ECM configuration program
Variable Speed Setup

Model Number: 1218, 2430, 3642, 4860
 Actual Airflow: CFM, RPM
 Actual Speed: CFM, RPM
 Requested Airflow: [Slider]
 Requested Speed Limit: [Slider]

Lock to HiCool: Fan, Lo Cool, Hi Cool
 Lo Heat, Hi Heat, Emergency

Yes Communication to ACB
 Yes Communication to VS motor
 Yes Communication from VB

Save Load

Instructions
 Make sure the correct model and capacity are selected using ACB board switches (note: this only takes affect during power up).
 Establish communication to the ACB by connecting the USB cable. Then verify the ACB has power (ACB's power light flashing).
 Select the CommPort the USB is connected to.
 Adjust Hi Cool speed first, note other speeds will change in unison with Hi Cool unless ratio box is unchecked.
 Adjust speed limits while most system dampers are closed.

Watts Used by Motor Type* at 1000 CFM

Static Pressure	PSC	EC	EC Savings
1.5	780	650	17%
1.2	780	600	23%
1.0	780	550	30%

* Data based on a M4860 blower with a 240v EC motor

Because Saving Energy Matters

In order to reduce the carbon foot print of our new green series air handlers we replaced our current PSC (Permanent Split Capacitor) motors with new energy saving EC motors. The PSC motor was oversized in order to meet all performance requirements, where the new EC motor is optimized to meet just the performance you need. Just by adding a few outlets, you can lower your duct pressure and your energy use. The result is the EC motor uses less energy than does the PSC motor. Less energy used means lower energy bills.

EC Blower Quick Reference Guide

Model #	Modular	Hz	Voltage	Min. CFM (L/s)	Max CFM (L/s)	EC Motor
1218	No	50 or 60	120v or 240v	100 (47)	500 (235)	1/2 hp
2430	Yes	50 or 60	120v or 240v	200 (94)	750 (354)	1/2 hp
3642	Yes	50 or 60	120v or 240v	300 (142)	1200 (566)	1 hp
4860	Yes	50 or 60	120v or 240v	400 (189)	1500 (708)	1 hp

UNICO, Inc.

7401 Alabama, St. Louis, MO. 63111
 800-527-0896 . www.unicosystem.com
 Manufacturers of:

