OGD Adaptive

Opto Generic Devices, Inc.

An Environmentally Responsible HVAC Technology

The Adaptive Climate Controller

The Intelligent Solution for Energy Conservation and Greater Indoor Comfort Control

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Height: 2.78" x Width: 3" x Depth: 4"

Benefits:

- Reduced kWh Energy Costs
- Reduces KW Demand
- Improves Indoor Air Quality
- Reduces System Noise
- Precise Temperature Control
- Eliminates Hot & Cold Spots
- Reduces Humidity
- Reduces Moisture in System
- Reduces Mold and Spores
- Reduces Contamination in Air
- Lowers Environmental Emissions
- No System Cold Starts/Stops
- Lowers Strain on Fan Motors
- Increases Mechanical Efficiency
- Increases Life of Motors
- Easy Installation
- Requires No Expensive Adapters
- Compact size for installation inside PTACs

Adaptive Climate Controller

Patented Smart HVAC Motor Controller Saves Energy and Improves Air Quality

Adaptive Speed Control

The *Adaptive Climate Controller (ACC)* is designed on the patented concept of *Optical Graphic Programming*, and controls the speed of heating and air conditioning fan motors for unmatched energy efficiency, and improved environmental effects. It is unlike any other motor controller, which may offer limited variable speeds, such as low, medium or high. The ACC Motor Controller is a unique *closed loop system*, consistently monitoring the changes in the system, and based on this monitoring and analysis, it *adapts* the speed of the fan on an *infinitely variable speed* basis. The speed of the fan is exactly matched and adapted to the constantly changing temperature of the system for maximum efficiency and delivery of the right amount or air to the room.

Reduced Energy Costs & Emissions

The *ACC* guarantees *less operational run time*, and a drastic reduction in energy consumption, which translates into lower costs for personal or business objectives, and the intelligent use of fossil fuels, with *less impact on the environment*.

Eliminates Indoor Noise Pollution

Patented *Fan Idle Speed* eliminates cold starts and stops, and the annoying sudden rush of system noise that is produced.

More Comfortable Indoor Climate

More *precise control of air temperature*, matched to infinitely var- iable fan speed, delivers a more even and consistent climate control over longer durations of time. There are no sudden spikes or drops in temperature; no hot or cold spots in the room; no noisy cold starts or stops of motors and fans. Occupants enjoy a *more comfortable, noise free lifestyle* in the home or at work.

A Healthier Environment

The system insures continuous movement of the air through the ducts, *reducing humidity and preventing moisture and mildew*, for a cleaner, healthier, indoor air quality.

Who Benefits:

- **Hotels**
- **Schools**
- **Hospitals**
- **Senior/Assisted Care Living**
- **Businesses**
- **Colleges & Universities**
- **Homeowners**

OGD is committed to making a significant contribution to global sustainability.

<u>System Compatibility</u>: The ACC is an analog controller and therefore widely compatible with:

- PTACs
- Fan Coils, Unit Ventilators & Air Handlers
- Heat Pumps
- Split and Mini Split Systems

<u>Requires no expensive digital converters or interface Analog operation creates no harmonics!</u>

iTACC: The Ultimate OGD PTAC!

- Smart adaptive speed system control of indoor and outdoor fan.
- Soft start power demand energy reduction
- Quiet operation & comfortable temperature control
- Healthier indoor climate control

Summary Comparison of PTAC Performance Using the *ACC* Motor Controller Tested On Three Different Major Manufacturer Lines

PTAC Manufacturer	Reduction in Room Temperature Variation	Reduction in PTAC Operation Energy Usage	Noise Level Reduction in Decibels
Mfg. A	40%	29%	-8dB
Mfg. B	38%	35%	-9dB
Mfg. C	37%	33%	-10dB

Tests & Verifications:

U.S. Dept. of Energy: *"This controller...provides climate control and healthy indoor air quality with energy efficiency, noise reduction, relative humidity control, and moisture control for mold abatement."*

New York State Energy Research & Development Authority (NYSERDA): Old Draper School, Rotterdam, NY

"The logged data shows a decrease in daily consumption of nearly 6 kWh, or 44% [reduction in kWh usage]".

San Diego Gas & Electric: PTAC Hotel Test:

"26% energy saving on heating and 30% savings on cooling".

Con Ed Study; NYC; Manhattan Plaza:

Total Energy Savings: *2,981,472 kWh*

ETL Independent Testing Labs:

"In multiple side-by-side tests with the same conditions, PTACs using the ACC saved 30% to >50% energy in all cases, over PTACs not using the ACC."

PTAC Unit ID	Temp Set Point	Normal Watts	ACC Watts	Saved Watts	% Saved Watts
#3 Carrier	Ann74	725	335	390	54%
#4 Carrier	70	831	448	383	46%
#4 Carrier	68	884	628	256	29%
#2 LG	70	539	266	273	51%
#1 LG	68	604	347	257	43%
#1 LG	72	538	318	220	41%

Who we are:

OGD is a minority owned high-tech company located in upstate New York, and has patented products that will provide environmental and economic benefits for families, businesses and communities.

Financing: Lease to Own

All OGD customers have the option of using the services of our financing companies that will arrange for low monthly payments.

Customer Installations:

New York State Museum; Albany, NY
SUNY New Paltz, NY
SUNY Oneonta, NY
Hartwick School, Oneonta, NY
Old Draper School; Rotterdam, NY
Indiana State University
Purdue University
Marriott Marquis Hotel, NYC
Hilton Hotel, NYC
Otesaga Hotel, Cooperstown,
NY Warwick Hotel, NYC
Bassett Hospital, Cooperstown,
NY Manhattan Plaza Apartments, NYC
Johnson Controls
Carrier Corporation

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