



*Oil-Fired Warm Air Furnaces*



FEATURING

**Hybrid  
Synergy**

TECHNOLOGY

*The Comfort of Low Costs ...  
The Beauty of Simplicity ...*



## Oil-Fired Warm Air Furnaces

### ***Safe, Secure, Comfortable, and Energy-Efficient***

*In today's uncertain economic climate, lowering energy costs is on every homeowner's mind. The Regal ECM Oil-Fired Furnace is an intelligent choice to help you conserve energy and lower your home's heating costs. With AFUE efficiencies of up to 85.9%, your Regal furnace may qualify for significant fuel and energy efficiency credits\*. The Regal is not only energy-efficient, it can make your home more comfortable!*

### ***Introducing the Regal ECM "Hybrid Synergy System"***

*Do you notice temperature swings in your home? Hot and cold spots? Is your house dry in the winter and humid in the summer? Is your heating and cooling system noisy because its motor is running continuously at full speed? Are you considering 2-stage heating and cooling options? If you answered "yes" to any of these questions, the Regal ECM Hybrid Synergy System is your solution:*



***\*Energy and fuel rebates are available for Energy Star-rated furnaces. These rebates could save you hundreds of dollars on a Regal purchase!***

### **Automatic Airflow Adjustment**

Airflow control is one of the most important factors in maintaining your home's comfort level. Unlike conventional PSC blower motors that are designed to operate at a set speed, Regal furnaces use an advanced, variable-speed ECM motor that eliminates those sudden bursts of air when your furnace comes on ... for more balanced heating & cooling.

Because of the different weights of cool and warm air, your cooling mode requires a different airflow than your heating mode. A PSC motor cannot handle these changes without sacrificing comfort, but the Regal ECM furnace automatically changes speed for heating or cooling mode requirements ... to provide maximum comfort all year round.

To maximize the comfort and quietness of your Regal ECM system, your return airflow should be equal to your supply airflow. A licensed HVAC installer can help you make sure your ductwork is properly balanced for peak performance.

### **Consistent Temperatures**

The Regal ECM motor allows you to easily and efficiently operate your furnace in "Constant Fan Mode" (which typically uses only 50-75 watts of power). The continual mixing of hot and cold air eliminates warm and cold spots throughout your home, so you can be comfortable for less than the cost of a 100-watt light bulb!

## Automatic Humidity Control

By installing the Regal ECM Furnace, a humidifier, and a humidistat, you can automatically control the humidity levels in your home ... and save up to 5% on your annual cooling bill! *Here's why:*

- To remove excess humidity from your home during the cooling season, you probably turn down your thermostat to run your air conditioner more. The Regal ECM Furnace, controlled by a humidistat, will automatically extract that uncomfortable humidity as your house is being cooled.
- In the heating season, the combination of a Regal ECM furnace and a humidifier allows you to keep the thermostat set lower, because humidified air feels warmer.

## 2-Stage Cooling, 2-Stage Heat Pump Backup

Because warm air furnaces are usually sized for your 10 hottest and coldest days of the year, your Regal ECM will probably run on low speed 90% of the time and operate in 2nd stage only on those days when really needed. It's like having two units in one!

## Lower Energy Consumption & Utility Bills

With AFUE efficiencies up to 85.9% and its remarkable ECM motor, a Regal ECM furnace costs less to operate than a standard PSC-motor oil furnace.

The amount of your electrical savings will depend on your motor use and market location, but the tables below show comparisons of PSC and ECM types of furnaces:

HEATING ELECTRICAL CONSUMPTION COMPARISON					
COST PER KW	ECM	ECM COST	PSC	PSC COST	NET
\$0.12	377 KW	\$45	820 KW	\$98	\$53
\$0.14	377 KW	\$53	820 KW	\$115	\$62
\$0.16	377 KW	\$60	820 KW	\$131	\$71

"CONSTANT FAN" ELECTRICITY CONSUMPTION				
COST PER KW	ECM	PSC	SAVINGS	SAVINGS/HR
\$0.12	200 watts	900 watts	700 watts	\$0.08
\$0.14	200 watts	900 watts	700 watts	\$0.10
\$0.16	200 watts	900 watts	700 watts	\$0.11

ANNUAL ENERGY SAVINGS*					
REGION	COST PER KWH	HEATING SAVINGS	COOLING SAVINGS	CONSTANT FAN SAVINGS	TOTAL SAVINGS
CT, MA, ME, NH, NY, RI, VT,	\$0.16	\$71	\$36	\$458	<b>\$565</b>
DC, DE, MD, NC, NJ, PA, SC, VA	\$0.12	\$53	\$35	\$333	<b>\$421</b>

## Improved Indoor Air Quality for Less

Because indoor air quality is an increasingly important factor in home heating buying decisions (and constant air flow is needed for these measures to be effective) it is comforting to know that the Regal ECM Hybrid Synergy System consumes much less energy in "Constant Fan Mode" than a PSC system.

## At Boyertown Furnace ... Oil Furnaces are our Specialty

*We have been designing and building warm air furnaces for decades. We combine "old school" commitment to the highest quality materials and construction with the latest technologies, like the ECM motor, to produce furnaces that will provide our customers with years of energy-efficient, cost-effective, and comfortable service.*

## Rugged Heat Exchangers

The Regal ECM furnace is manufactured with a durable 10-gauge Primary Heat Exchanger lined with specialty-grade 18SR Stainless Steel and a 14-gauge Secondary Heat Exchanger. Each heat exchanger is then ultrasonically tested to insure the integrity of its welding.



*Ultrasonically-tested heavy gauge Primary and Secondary Heat Exchangers*

## Ceramic-Fiber Combustion Chamber

Our ceramic fiber combustion chamber is designed in one piece for easy servicing.

## Multiple Firing Rates

The multiple firing rates on each one of the Regal furnaces provides you with the flexibility to individualize your needs.

## Dependable Controls

All of the controls offered on our furnaces are standard controls. We don't use circuit boards!

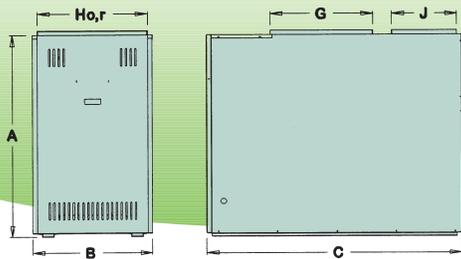
## Choice of Burner

Boyertown offers you the flexibility of the burner of your choice: Beckett, Riello, or Carlin.

## Limited Lifetime Warranty

We back up our quality workmanship with a limited lifetime warranty to the original purchaser of the furnace.

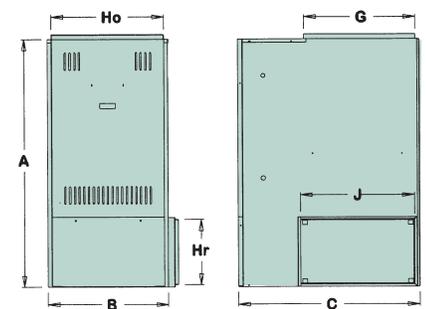
\*These are conservative estimates. Some customers have experienced even greater savings. Your actual electricity savings will vary depending on local weather and home characteristics.



LO-BOY



Oil-Fired Warm Air Furnace  
**SPECIFICATIONS**

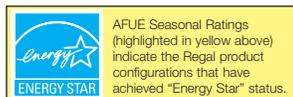


HI-BOY

FURNACE										
Furnace Type	Lo-Boy*					Hi-Boy				
Model	REL-750		REL-1000			REH-750		REH-1000		
Cabinet Height (A)	40"		46"			53-5/8"		56-1/2"		
Cabinet Width (B)	20-1/4"		25-1/8"			22-1/4"		25-1/2"		
Cabinet Depth (C)	47-1/2"		53-5/8"			33-1/8"		38"		
Centerline - Flue to Floor (D)	31-1/4"		38-1/2"			49-1/8"		52-5/8"		
Centerline - Flue to Side (E)	10-1/8"		12-1/2"			11-1/8"		12-3/4"		
Warm Air Supply Depth (G)	17-1/2"		21-1/2"			19-3/4"		23-3/8"		
Warm Air Supply Width (Ho)	18-1/4"		22-7/8"			20-1/2"		23-3/4"		
Return Air Supply Width (Hr)	18-1/4"		22-7/8"			15"		15"		
Return Air Supply Depth (J)	14"		13-5/8"			23-5/8"		23-5/8"		
Flue Size	6"		6"			6"		6"		
Filter Size	16" x 20" (2)		16" x 20" (2)			16" x 25"		16" x 25"		
Blower Size	100-10T		100-10T			100-10T		100-10T		
Shipping Weight	323 lbs.		362 lbs.			298 lbs.		347 lbs.		
B.T.U.H. Input	85,000	105,000	120,000	140,000	175,000	85,000	105,000	120,000	140,000	175,000
B.T.U.H. Output	70,000	85,000	95,000	115,000	140,000	70,000	85,000	95,000	115,000	140,000
Beckett AFG Nozzle @ 100psi	.60 80°A	.75 80°B	.85 80°B	1.00 80°B	1.25 80°B	.60 80°A	.75 80°B	.85 80°B	1.00 80°B	1.25 80°B
Riello 40 Nozzle @ 150psi	.50 60°A	.60 60°A	.65 60°A	.85 80°B	1.00 80°B	.50 60°A	.60 60°A	.65 60°A	.85 80°B	1.00 80°B
Carlin EZ-1 Nozzle @ 100psi	.60 70°A	.75 70°A	.85 70°A	1.00 60°SS	1.25 60°SS	.60 70°A	.75 70°A	.85 70°A	1.00 60°SS	1.25 60°SS
AFUE Seasonal Efficiency	85.9%	85.4%	85.0%	85.0%	84.2%	85.9%	85.4%	85.0%	85.0%	82.3%
"HYBRID SYNERGY" ECM BLOWER MOTOR										
Horsepower/Speed	3/4 HP, Variable Speed									
Heating CFM	875	1050	1175	1475	1850	875	1050	1175	1475	1850
Continuous Air Flow CFM	400	500	600	800	1000	400	500	600	800	1000
Cooling CFM @ 2 tons	800	800	800	N/A	N/A	800	800	800	N/A	N/A
Cooling CFM @ 2.5 tons	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
Cooling CFM @ 3 tons	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Cooling CFM @ 4 tons	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Cooling CFM @ 5 tons	N/A	N/A	N/A	2000	2000	N/A	N/A	N/A	2000	2000

\* Specify front or rear flue on Lo-Boy models

† 400 CFM = 1 ton. Additional specifications available on request.



**BOYERTOWN**  
BOILERS • FURNACES • CONTROLS

**BOYERTOWN FURNACE COMPANY**

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