



Oil-Fired Warm Air Furnaces



*Made with Quality and Pride
in Boyertown, Pennsylvania*



Oil-Fired Warm Air Furnaces ... hand-crafted in Boyertown, PA

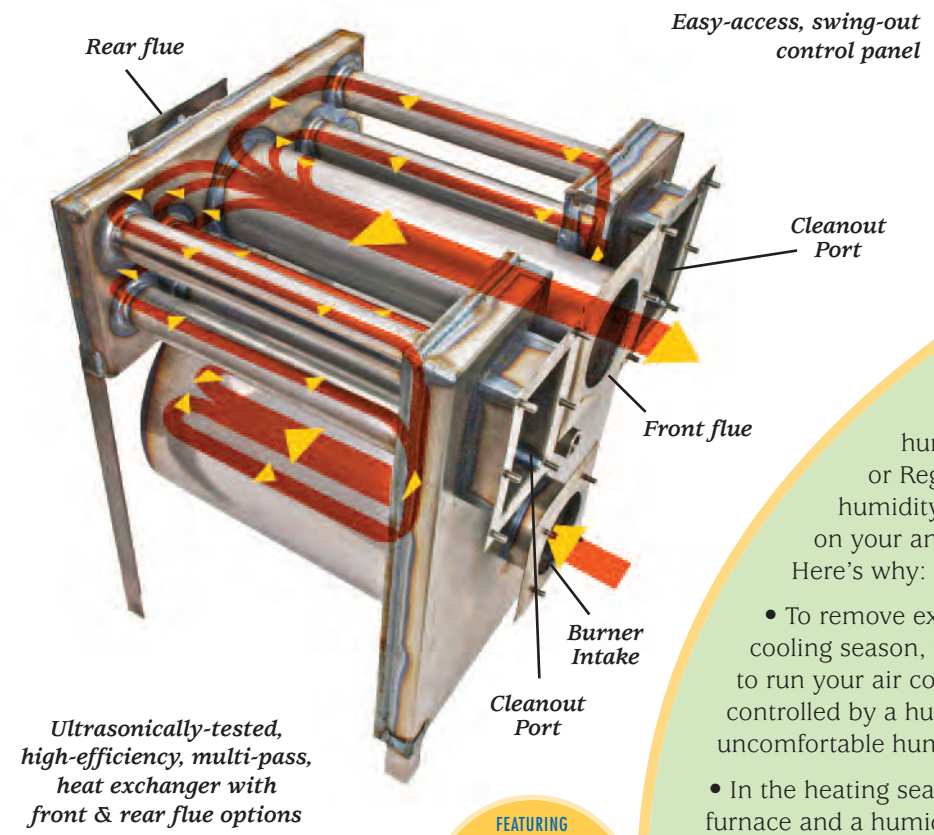


Regal Star Series

Designed for the low-profile needs of today's homes, Regal Star furnaces feature a 3-pass design (far right) with fuel efficiency of 86.2% (that may qualify for certain energy rebates)! Our signature front or rear flue design is ideal for today's retrofit oil furnace market.

Regal Star furnaces can be installed with a Beckett, Riello, or Carlin burner, and also as a direct-vent furnace with the Riello BF3.

- Available blower motors: 3-speed Direct Drive PSC or Variable Speed ECM (See details on back page)
- Heating capacity: 60,000 BTUH's to 154,000 BTUH's with multiple firing rates
- Available with our exclusive nrgMax 9103i control.
- Cooling capacity: 1-1/2 tons to 5 tons
- Easy-access cleanout ports
- Install as a low-profile Highboy (left) or as a Horizontal with a left or right discharge (right).
- Chimney-vent or direct-vent capabilities
- Packed and delivered in rugged wooden crates
- Limited Lifetime Warranty, 5-Year Parts Warranty



"Hybrid Synergy" ECM Blower Motors

Automatic Humidity Control

By installing an ECM Blower Motor, a humidifier, and a humidistat on your Regal Star or Regal Furnace, you can automatically control the humidity levels in your home ... and save up to 5% on your annual cooling bill! (See details on back page.) 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. An ECM-powered furnace, controlled by a humidistat, will automatically extract that uncomfortable humidity as your house is being cooled.
- In the heating season, the combination of an ECM-controlled 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 ECM Blower, when installed with 2-stage cooling or 2-stage heat pump backup, 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!

Improved Indoor Air Quality for Less

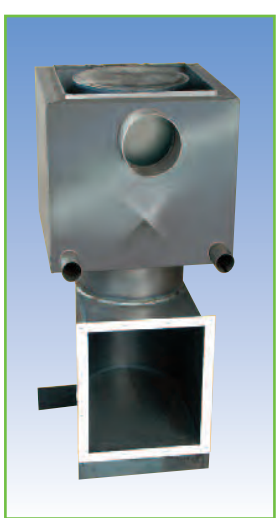
Because indoor air quality is an increasingly-important factor in home heating buying decisions (and constant air flow is needed for these measures to be effective) it is comforting to know that the Regal Star and Regal ECM Hybrid Synergy Systems consume much less energy in "Constant Fan Mode" than a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



Regal Series

Regal Series furnaces are built around a 10-gauge primary heat exchanger and a 14-gauge secondary heat exchanger and are lined with specialty-grade 18SR Stainless Steel for extra protection against premature failure. These reliable furnaces are also equipped with ceramic fiber combustion chambers that are completely removable for servicing.

- Available blower motors: 4-speed Direct Drive PSC or Variable Speed ECM (See details on back page)
- Enclosed vestibule
- Multiple firing rates
- Accessible cleanout ports
- Highboy and Lowboy models
- Your choice of burner: Beckett, Riello, or Carlin, plus Carlin EZ-H2L 2-Stage
- Packed and delivered in rugged wooden crates
- Limited Lifetime Warranty, 5-Year Parts Warranty



Ultrasonically-tested heavy-gauge Primary and Secondary Heat Exchangers

2-Stage Oil Heating

Our answer to the gas industry! The Regal REH-750 and REL-750 front and rear flue is available with the Carlin EZ-H2L Burner, so you have the capacity of 2-stage oil heating, 2-stage heat pump, and 2-stage air conditioning³. The Carlin EZ-H2L gives you a 50% turndown ability. This burner must be installed with the Regal ECM blower option (See back page).



Carlin EZ-H2L burner

³ This furnace must be installed with an ECM blower assembly and the proper heat pump and air conditioning equipment to achieve 2-stage oil heating, 2-stage heat pump, and 2-stage air conditioning.



Ceramic fiber combustion chamber



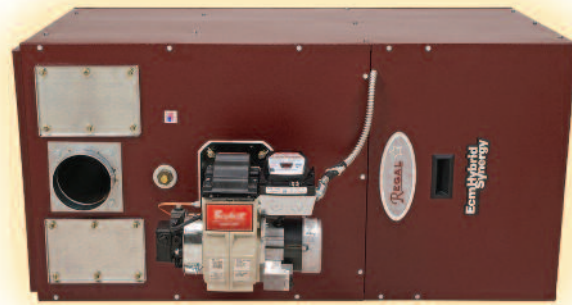
Oil-Fired Warm Air Furnaces ... hand-crafted in Boyertown, PA

Regal Star Series

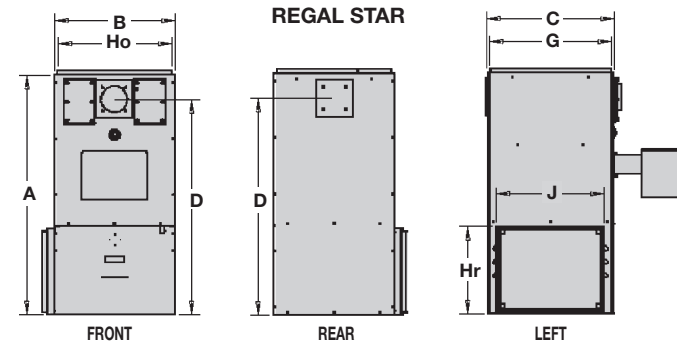
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- Install as a low-profile Highboy (left) or as a Horizontal with a left or right discharge (right).
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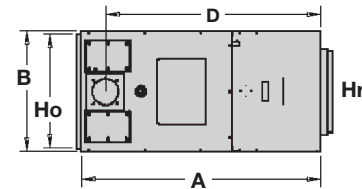


Dimensions and Specifications



The Regal Star can be installed as a low-profile highboy or as a horizontal with a left or right discharge (below).

The return air connection on the Regal Star can be installed on either the left side or right side of the furnace.



Model	Cabinet Height (A)	Cabinet Width (B)	Cabinet Depth (C)	Centerline-Flue to Floor (D) Front	Centerline-Flue to Floor (D) Rear	Warm Air Supply Depth (G)	Warm Air Supply Width (Ho)	Return Air Supply Width (Hr)	Return Air Supply Depth (J)	Filter Size	Flue Size	Blower Size	Shipping Weight	B.T.U.H. Input	B.T.U.H. Output	Beckett AFG Nozzle ¹	Riello 40 Nozzle ¹	Carlin EZ-1 Nozzle ¹	AFUE Seasonal Efficiency
REGAL STAR																			
RSM-600 and ECM RSM-600	44-1/2"	22-1/4"	23-3/8"	40"	40"	22-3/8"	21-1/16"	15-1/16"	18-7/8"	16" x 20"	5"	100-10T	215 lbs.	70,000*	60,000	.40 x 60° W ¹	.40 x 80° A ²	N/A	86.5%**
														84,000	72,000	.50 x 60° W ²	.50 x 80° A ²	.50 x 60° A ³	86.2%**
															105,000	89,000	.60 x 60° B ³	.60 x 80° A ²	.60 x 60° A ³
RSM-1005 and ECM RSM-1005	50-5/8"	22-5/16"	28-5/16"	46-7/8"	45"	21-1/16"	27-5/16"	14-1/2"	23-5/8"	16" x 25"	5"	110-9R	255 lbs.	119,000	102,000	.65 x 60° B ¹	.65 x 60° W ¹	.65 x 60° A ¹	86.7%** ^R
														140,000	118,000	.75 x 60° B ¹	.75 x 60° W ¹	.75 x 60° A ¹	86.0%** ^R
														154,000	130,000	.85 x 60° B ¹	.85 x 60° W ¹	.85 x 60° A ¹	85.3%** ^R

All RSM-600 burners are shipped with 72,000 BTU output nozzles. All RSM-1005 Burners are shipped with 118,000 BTU output nozzles.

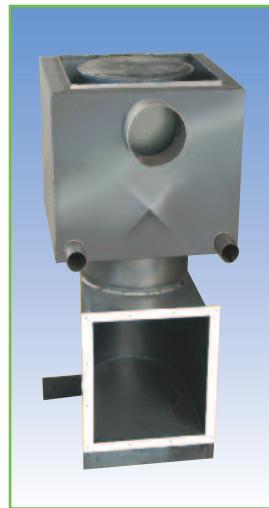
^R These AFUEs are achieved using the Riello burner with electronic air shutoff.



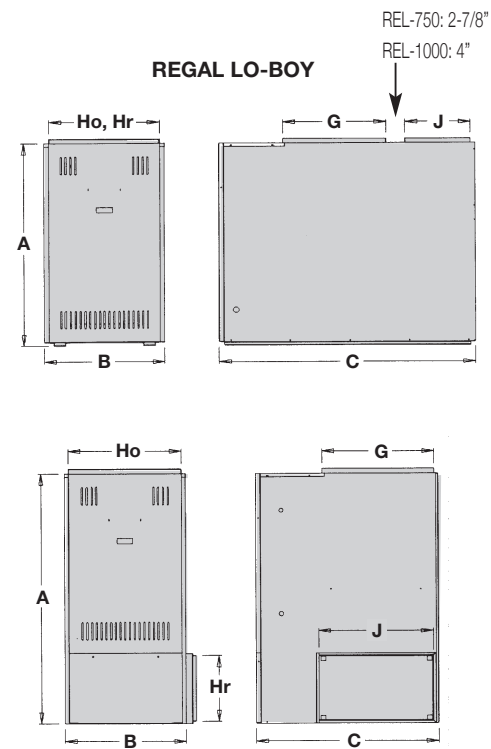
Regal Series

Regal Series furnaces are built around a 10-gauge primary heat exchanger and a 14-gauge secondary heat exchanger and are lined with specialty-grade 18SR Stainless Steel for extra protection against premature failure. These reliable furnaces are also equipped with ceramic fiber combustion chambers that are completely removable for servicing.

- Available blower motors: 4-speed Direct Drive PSC or Variable Speed ECM (See details on back page)
- Enclosed vestibule
- Multiple firing rates
- Accessible cleanout ports
- Highboy and Lowboy models
- Your choice of burner: Beckett, Riello, or Carlin, plus Carlin EZ-H2L 2-Stage
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Ultrasonically-tested heavy-gauge Primary and Secondary Heat Exchangers



The return air connection on the Regal Hi-Boy can be installed on either the left side or right side of the furnace.

REGAL

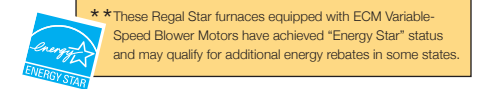
Lo-Boy ¹ REL-750	40"	20-1/4"	47-1/2"	31-1/4"	10-1/8"	17-1/2"	18-1/4"	18-1/4"	14"	16" x 20" (2)	6"	100-10T	323 lbs.	84,000	71,000	.60 x 80° A ⁴	.50 x 60° A ²	.60 x 70° A ⁴	85.9%
														105,000	88,000	.75 x 80° B ⁴	.60 x 60° A ²	.75 x 70° A ⁴	85.4%
															119,000	99,000	.85 x 80° B ⁴	.65 x 60° A ²	.85 x 70° A ⁴
Lo-Boy ¹ REL-1000	46"	25-1/8"	53-5/8"	38-1/2"	12-1/2"	21-1/2"	22-7/8"	22-7/8"	13-5/8"	16" x 20" (2)	6"	100-10T	362 lbs.	140,000	116,000	1.00 x 80° B ⁴	.85 x 80° B ²	1.00 x 60° SS ⁴	85.0%
														175,000	143,000	1.25 x 80° B ⁴	1.00 x 80° B ²	1.25 x 60° SS ⁴	83.2%
Hi-Boy REH-750	53-5/8"	22-1/4"	33-1/8"	49-1/8"	11-1/8"	19-3/4"	20-1/2"	15"	23-5/8"	16" x 25"	6"	100-10T	298 lbs.	84,000	71,000	.60 x 80° A ⁴	.50 x 60° A ²	.60 x 70° A ⁴	85.9%
														105,000	88,000	.75 x 80° B ⁴	.60 x 60° A ²	.75 x 70° A ⁴	85.4%
														119,000	99,000	.85 x 80° B ⁴	.65 x 60° A ²	.85 x 70° A ⁴	85.0%
Hi-Boy REH-1000	56-1/2"	25-1/2"	38"	52-5/8"	12-3/4"	23-3/8"	23-3/4"	15"	23-5/8"	16" x 25"	6"	100-10T	347 lbs.	140,000	116,000	1.00 x 80° B ⁴	.85 x 80° B ²	1.00 x 60° SS ⁴	85.0%
														175,000	143,000	1.25 x 80° B ⁴	1.00 x 80° B ²	1.25 x 60° SS ⁴	83.2%

¹ Specify front or rear flue on Lo-Boy models. 400 CFM = 1 ton. Additional specifications available on request.

All REL-750 and REH-750 burners are shipped with 88,000 BTU output nozzles. All REL-1000 and REH-1000 burners are shipped with 116,000 BTU output nozzles.

¹ Pump pressure: 175 psi
² Pump pressure: 150 psi
³ Pump pressure: 165 psi
⁴ Pump pressure: 100 psi

Due to ongoing engineering, specifications are subject to change.



** These Regal Star furnaces equipped with ECM Variable-Speed Blower Motors have achieved "Energy Star" status and may qualify for additional energy rebates in some states.



ECM or PSC Blower Motor?

Airflow control is one of the most important factors in maintaining your home's comfort level and managing energy consumption. By eliminating those sudden bursts of air when your furnace turns on, the ECM blower assembly gives you more balanced heating and cooling and allows you to easily and efficiently operate your furnace in "Constant Fan Mode," which typically uses only 50-75 watts of power.

It is always important to discuss your up-front vs. long-term costs with your HVAC expert to decide which blower technology will work best for you:

ECM BLOWER MOTOR	Furnace Series	Model	Blower Type	B.T.U.H. Input	B.T.U.H. Output	Heating CFM	Cooling CFM @ Tons				
							2.0	2.5	3.0	4.0	5.0
Regal	LO-BOY REL-750 ECM	3/4 HP Variable Speed	84,000	71,000	950	800	1000	1200	1600	N/A	
			105,000	88,000	1175	800	1000	1200	1600	N/A	
			119,000	99,000	1325	800	1000	1200	1600	N/A	
	LO-BOY REL-1000 ECM	3/4 HP Variable Speed	140,000	116,000	1575	N/A	1000	1200	1600	2000	
			175,000	143,000	1925	N/A	1000	1200	1600	2000	
			84,000	71,000	950	800	1000	1200	1600	N/A	
	HI-BOY REH-750 ECM	3/4 HP Variable Speed	105,000	88,000	1175	800	1000	1200	1600	N/A	
			119,000	99,000	1325	800	1000	1200	1600	N/A	
			140,000	116,000	1575	N/A	1000	1200	1600	2000	
	HI-BOY REH-1000 ECM	3/4 HP Variable Speed	175,000	143,000	1925	N/A	1000	1200	1600	2000	
			70,000	60,000	850	800	1000	1200	1600	N/A	
			84,000	70,000	1100	800	1000	1200	1600	N/A	
Regal Star	ECM RSM-600	3/4 HP Variable Speed	105,000	89,000	1325	800	1000	1200	1600	N/A	
			119,000	102,000	1525	N/A	1000	1200	1600	2000	
			140,000	118,000	1775	N/A	1000	1200	1600	2000	
	ECM RSM-1005	1 HP Variable Speed	154,000	130,000	1950	N/A	1000	1200	1600	2000	

PSC BLOWER MOTOR	Furnace Series	Model	Blower Type	B.T.U.H. Input	B.T.U.H. Output	Static Pressure (W.C.)	Cooling Speed (CFM)					
							High	Medium High	Medium Low	Low		
Regal	LO-BOY REL-750 PSC	3/4 HP 4-Speed	84,000	71,000	0.2	1903	1711	1547	1399			
					0.5	1661	1485	1355	1227			
			105,000	88,000	0.2	1903	1711	1547	1399			
					0.5	1661	1485	1355	N/A			
			119,000	99,000	0.2	1903	1711	1547	1399			
					0.5	1661	1485	1355	N/A			
	LO-BOY REL-1000 PSC	3/4 HP 4-Speed	140,000	116,000	0.2	2466	2150	1839	1600			
					0.5	2072	1859	1610	N/A			
			175,000	143,000	0.2	2466	2150	1839	N/A			
					0.5	2072	1859	N/A	N/A			
			HI-BOY REH-750 PSC	3/4 HP 4-Speed	84,000	71,000	0.2	1745	1550	1376	1250	
							0.5	1480	1343	1175	1043	
	105,000	88,000			0.2	1745	1550	1376	1250			
					0.5	1480	1343	1175	N/A			
	119,000	99,000			0.2	1745	1550	1376	1250			
					0.5	1480	1343	N/A	N/A			
	HI-BOY REH-1000 PSC	3/4 HP 4-Speed	140,000	116,000	0.2	2283	2130	1901	1717			
					0.5	2007	1832	1644	1501			
			175,000	143,000	0.2	2283	2130	1901	N/A			
					0.5	2007	1832	N/A	N/A			
			Regal Star	RSM-600	3/4 HP 4-Speed	70,000	60,000	0.2	1616	1425	N/A	1193
								0.5	1470	1256	N/A	1125
	84,000	70,000				0.7	1309	1118	N/A	1053		
						0.2	1616	1425	N/A	1193		
105,000	89,000	0.5				1470	1256	N/A	1125			
		0.7				1309	1118	N/A	1053			
RSM-1005	3/4 HP 4-Speed	119,000		102,000	0.2	2103	1761	1390	1235			
					0.5	1970	1680	1360	1220			
		140,000		118,000	0.7	1825	1614	1344	1210			
					0.2	2103	1761	1390	1235			
		154,000		130,000	0.5	1970	1680	1360	1220			
					0.7	1825	1614	1344	1210			



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