

HIGH-EFFICIENCY BOILERS

EMERALD SERIES

Residential Steel Boilers



Welcome home!

COLUMBIA



Keeping Families Warm for over 70 Years!

EMERALD SERIES

RESIDENTIAL STEEL BOILERS

Comfort, Reliability, Serviceability, Quality, and Efficiency

An Emerald boiler provides the advantages of hydronic heat *and* a domestic hot water system ... all in one package! It's the perfect choice for maximizing comfort and convenience.

Emerald boilers have a history of proven service and reliability and are backed by a Limited Lifetime Warranty.

Emerald Advantages



- All trim is mounted on the front of the units for easy access during servicing.
- Jacket top and smoke hood can be removed to expose the fire tubes for cleaning.
- A raised coil flange with bolts and nuts allows easy servicing.
- One-piece, ceramic-fiber combustion chamber is accessible from the front of the boiler.
- Large cast peep site allows an unobstructed view of the flame pattern.
- Eleven different Emerald-series units are available to meet a broad range of installation requirements (see specs on back).
- Can be matched with a built-in tankless coil to supply your family's domestic hot water needs.
- Backed by a Limited Lifetime Warranty.
- The Emerald boiler is packaged with the oil burner primary and the high/low limit circulator relay, pressure temperature gauge, circulator, and clean-cut pump.
- Boiler jacket is painted with a powder coat process to insure a durable finish.
- Capability of front or rear return piping.
- Designed, constructed, and hydrostatically-tested to ASME Standards.



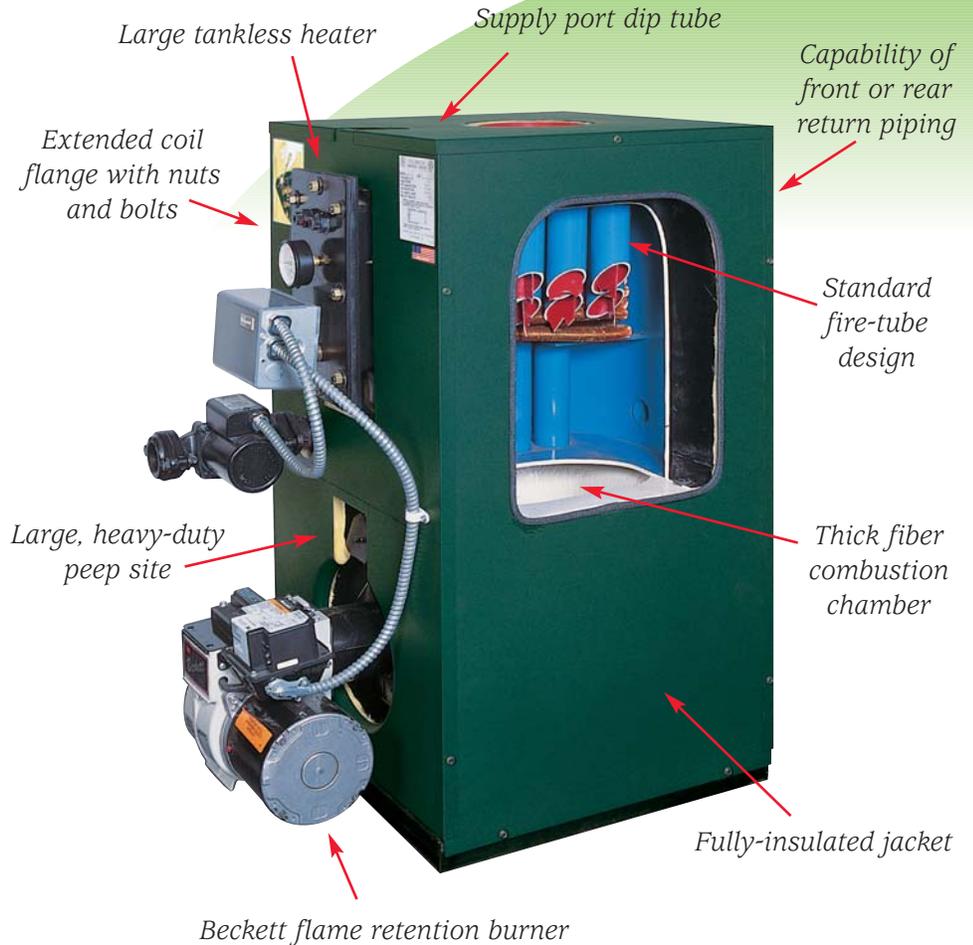
A built-in "Air Scoop System" provides quiet, air-free operation of your hot water system by removing noisy air pockets.



Unique, one-piece, ceramic-fiber chamber forms a durable seal between the heat exchanger and boiler base.



Riello R40 (above) and Carlin (below) burners are available for the Emerald.



You can Count on Columbia Steel Boilers

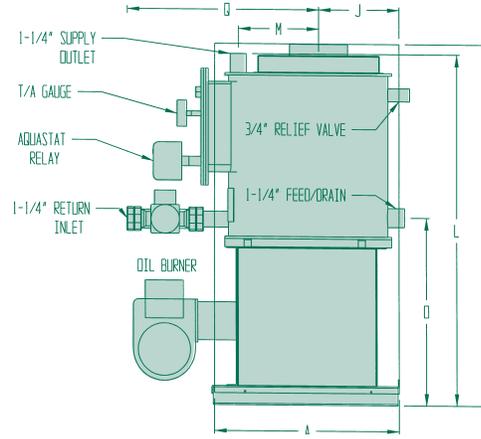
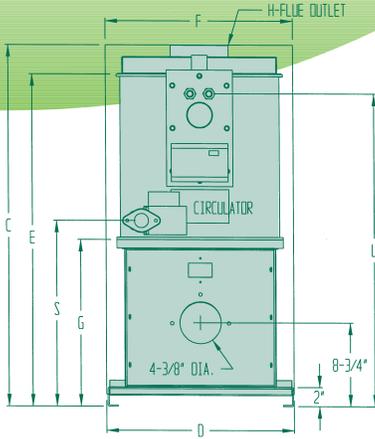
Our company's history dates back to 1936 when we began making boilers for simple steam process operations. With the exception of a few wartime years, we have specialized in steel boilers. Today, our hydronic units range from domestic to commercial use ... with world-wide distribution.

Our Commitment to You

Our commitment doesn't end with the installation of your boiler. We are committed to outstanding performance, ease of service, and parts availability. We are there for you after the sale. We've been around since 1936 and we'll be around tomorrow.

EMERALD SERIES

BOILER SPECIFICATIONS



| IBR/DOE RATINGS AND DATA | | | | | | | | | | | |
|-------------------------------|----------|----------|----------|----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Boiler Model No. | EM-85 | EM-100 | EM-3100 | EM-110 | EM-125 | EM-3125 | EM-135 | EM-150 | EM-165 | EM-175 | EM-200 |
| Firing Rate - #2 Fuel | .85 | 1.00 | 1.00 | 1.10 | 1.25 | 1.25 | 1.35 | 1.50 | 1.65 | 1.75 | 2.00 |
| Input - MBTU/Hr. | 119 | 140 | 140 | 154 | 175 | 175 | 189 | 210 | 231 | 245 | 280 |
| Net Output | 84 | 98 | 103 | 109 | 123 | 127 | 136 | 153 | 166 | 178 | 201 |
| Nozzle @140 psi (Beckett) | .65 80°B | .75 80°B | .75 80°B | .85 80°B | 1.00 80°B | 1.00 80°B | 1.10 80°A | 1.25 80°A | 1.35 80°A | 1.50 80°A | 1.65 80°A |
| Nozzle @150 psi (Riello) | .65 60°A | .75 60°A | NA | .85 60°A | 1.00 60°A | NA | 1.10 80°A | 1.25 80°A | 1.35 80°A | 1.50 80°A | 1.65 80°A |
| Nozzle @140 psi (Carlin) | .65 70°A | .75 70°A | NA | .85 70°A | 1.00 60°B | NA | 1.10 60°B | 1.25 60°B | 1.35 60°B | 1.50 70°A | 1.65 70°A |
| AFUE Ratings | 83.6 | 83.1 | 85.5 | 83.6 | 83.3 | 85.0 | 83.9 | 83.8 | 83.0 | 83.6 | 82.5 |
| GPM Tankless Coil | 3 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Number of Fire Tubes | 8 (2") | 10 (2") | 8 (3") | 12 (2") | 14 (2") | 8 (3") | 8 (3") | 10 (3") | 10 (3") | 14 (3") | 14 (3") |
| Water Capacity (gallons) | 14 | 13.5 | 22 | 13 | 12.5 | 22 | 22 | 20 | 20 | 16 | 16 |
| Approx. Shipping Weight (lbs) | 285 | 290 | 355 | 295 | 300 | 355 | 355 | 370 | 370 | 390 | 390 |

| DIMENSIONS | | | | | | | | | | | | | |
|---------------|---|----------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| Casing | A | Length | 20" | 20" | 21" | 20" | 20" | 21" | 21" | 21" | 21" | 21" | 21" |
| | C | Height | 37-1/4" | 37-1/4" | 46" | 37-1/4" | 37-1/4" | 46" | 46" | 46" | 46" | 46" | 46" |
| | D | Width | 19-1/2" | 19-1/2" | 21" | 19-1/2" | 19-1/2" | 21" | 21" | 21" | 21" | 21" | 21" |
| Boiler | E | Height | 34-3/8" | 34-3/8" | 43-3/8" | 34-3/8" | 34-3/8" | 43-3/8" | 43-3/8" | 43-3/8" | 43-3/8" | 43-3/8" | 43-3/8" |
| | F | Diameter | 16-3/4" | 16-3/4" | 18-3/4" | 16-3/4" | 16-3/4" | 18-3/4" | 18-3/4" | 18-3/4" | 18-3/4" | 18-3/4" | 18-3/4" |
| | G | Base Hgt. | 17" | 17" | 20-1/2" | 17" | 17" | 20-1/2" | 20-1/2" | 20-1/2" | 20-1/2" | 20-1/2" | 20-1/2" |
| Flue Outlet | H | Size | 6" | 6" | 6" | 6" | 6" | 6" | 8" | 8" | 8" | 8" | |
| | I | Height | 37-1/2" | 37-1/2" | 47" | 37-1/2" | 37-1/2" | 47" | 47" | 47" | 47" | 47" | |
| | J | C.L. to Rear | 9-1/2" | 9-1/2" | 10-1/2" | 9-1/2" | 9-1/2" | 10-1/2" | 10-1/2" | 10-1/2" | 10-1/2" | 10-1/2" | |
| Supply Outlet | | Size | 1-1/4" | 1-1/4" | 1-1/4" | 1-1/4" | 1-1/4" | 1-1/4" | 1-1/4" | 1-1/4" | 1-1/4" | 1-1/4" | |
| | L | Height | 35-1/4" | 35-1/4" | 45" | 35-1/4" | 35-1/4" | 45" | 45" | 45" | 45" | 45" | |
| | M | C.L. to Outlet | 8-1/2" | 8-1/2" | 8-3/8" | 8-1/2" | 8-1/2" | 8-3/8" | 8-3/8" | 8-3/8" | 8-3/8" | 8-3/8" | |
| Feed/ Drain | | Size | 1-1/4" | 1-1/4" | 1-1/4" | 1-1/4" | 1-1/4" | 1-1/4" | 1-1/4" | 1-1/4" | 1-1/4" | 1-1/4" | |
| | O | Height | 19-1/4" | 19-1/4" | 22-3/4" | 19-1/4" | 19-1/4" | 22-3/4" | 22-3/4" | 22-3/4" | 22-3/4" | 22-3/4" | |
| Return Inlet | | Size | 1-1/4" | 1-1/4" | 1-1/4" | 1-1/4" | 1-1/4" | 1-1/4" | 1-1/4" | 1-1/4" | 1-1/4" | 1-1/4" | |
| | Q | C.L. to Inlet | 19-1/2" | 19-1/2" | 20" | 19-1/2" | 19-1/2" | 20" | 20" | 20" | 20" | 20" | |
| | S | Height | 19" | 19" | 22-1/2" | 19" | 19" | 22-1/2" | 22-1/2" | 22-1/2" | 22-1/2" | 22-1/2" | |
| Coil Connect. | | Nominal Size | 1/2" | 1/2" | 1/2" | 1/2" | 1/2" | 1/2" | 1/2" | 1/2" | 1/2" | 1/2" | |
| | U | Height | 32-1/4" | 32-1/4" | 42" | 32-1/4" | 32-1/4" | 42" | 42" | 42" | 42" | 42" | |

2.5m-6/08-BP



Constructed and hydrostatically-tested in accordance with ASME Boiler Code, Section IV.

COLUMBIA BOILER COMPANY

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