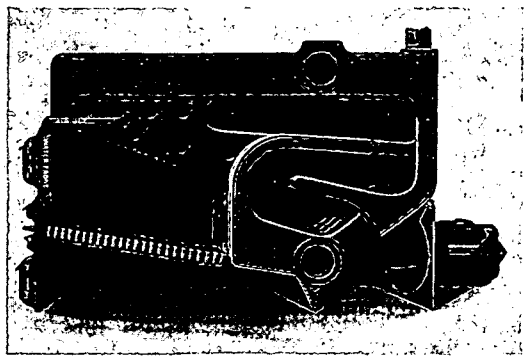
# Bernhard Boiler Mfg. Co.

3161 East 61st Street

Cleveland - Ohio

## BERNHARD TRIPLE COMBUSTION BOILERS



*Smokeless Boiler with the Lowest Water Line*

**The Con**

The [redacted] from each Grate Bar being entirely taken care of in the Section directly above it, the same Ratio of GRATE Surface, FIRE Surface and FLUE Area is always maintained. Note how Gases Expand at three different points.

| Boiler No. | Steam Rating | Water Rating | Grate Surface Sq. Ft. | Flue Area Through Sections Sq. In. | Lbs. Steam per Hour | B.t.u. per Hour | Height Water Line | Flow Openings |
|---|---|---|---|---|---|---|---|---|
| 20- 5 | 600 | 1000 | 2.50 | 42 | 150 | 145,500 | 42" | 2-3" |
| 20- 6 | 800 | 1300 | 3.33 | 56 | 200 | 194,000 | 42" | 2-3" |
| 20- 7 | 1000 | 1650 | 4.17 | 70 | 250 | 242,500 | 42" | 2-3" |
| 20- 8 | 1200 | 2000 | 5.00 | 84 | 300 | 291,000 | 42" | 2-3" |
| 20- 9 | 1400 | 2350 | 5.84 | 98 | 350 | 339,500 | 42" | 3-3" |
| 30- 6 | 1600 | 2600 | 5.00 | 80 | 400 | 388,000 | 42" | 2-4" |
| 30- 7 | 2000 | 3250 | 6.25 | 100 | 500 | 485,000 | 42" | 2-4" |
| 30- 8 | 2400 | 3900 | 7.50 | 120 | 600 | 582,000 | 42" | 2-4" |
| 30- 9 | 2800 | 4550 | 8.75 | 140 | 700 | 679,000 | 42" | 2-4" |
| 30-10 | 3200 | 5200 | 10.00 | 160 | 800 | 776,000 | 42" | 3-4" |
| 30-11 | 3600 | 5850 | 11.25 | 180 | 900 | 873,000 | 42" | 3-4" |
| 30-12 | 4000 | 6500 | 12.50 | 200 | 1000 | 970,000 | 42" | 3-4" |
| 40- 8 | 4200 | 6720 | 10.00 | 160 | 1050 | 1,018,500 | 46" | 2-5" |
| 40- 9 | 4900 | 7840 | 11.66 | 185 | 1225 | 1,188,250 | 46" | 2-5" |
| 40-10 | 5600 | 8960 | 13.33 | 210 | 1400 | 1,358,000 | 46" | 2-5" |
| 40-11 | 6300 | 10080 | 15.00 | 235 | 1575 | 1,527,750 | 46" | 2-5" |
| 40-12 | 7000 | 11200 | 16.66 | 260 | 1750 | 1,697,500 | 46" | 3-5" |
| 40-13 | 7700 | 12320 | 18.33 | 285 | 1925 | 1,867,250 | 46" | 3-5" |
| 40-14 | 8400 | 13440 | 20.00 | 310 | 2100 | 2,037,000 | 46" | 3-5" |
| 40-15 | 9100 | 14560 | 21.66 | 335 | 2275 | 2,206,750 | 46" | 3-5" |
| 40-16 | 9800 | 15680 | 23.33 | 360 | 2450 | 2,376,500 | 46" | 3-5" |
| 40-17 | 10500 | 16800 | 25.00 | 385 | 2625 | 2,546,250 | 46" | 4-5" |
| 40-18 | 11200 | 17920 | 26.66 | 410 | 2800 | 2,716,000 | 46" | 4-5" |
| 40-19 | 11900 | 19040 | 28.33 | 435 | 2975 | 2,885,750 | 46" | 4-5" |
| 40-20 | 12600 | 20160 | 30.00 | 460 | 3150 | 3,055,500 | 46" | 4-5" |
| 40-21 | 13300 | 21280 | 31.66 | 485 | 3325 | 3,225,250 | 46" | 4-5" |
| 40-22 | 14000 | 22400 | 33.33 | 510 | 3500 | 3,395,000 | 46" | 4-5" |
| *to | 700 | 1120 | 1.67 | 25 | 175 | 169,750 | ... | ... |
| 40-32 | 21000 | 33600 | 50.00 | 760 | 5250 | 5,092,500 | 46" | 6-5" |

*Add per Section.





# The Bigelow Company

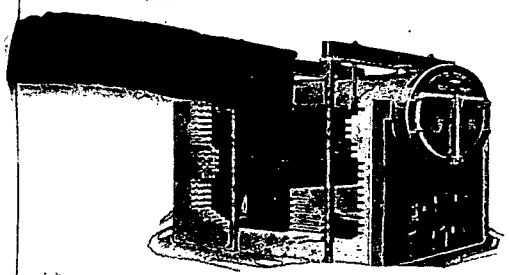
Main Office and Works

NEW HAVEN : CONNECTICUT

NEW YORK, N. Y.
85 LIBERTY STREET

BOSTON, MASS.
141 MILK STREET

**Manufacturers of Bigelow Hornsby Water Tube Boilers, Bigelow H. R. T., Bigelow Two-Pass, Bigelow Manning and Bigelow Upright Fire Tube Boilers.**

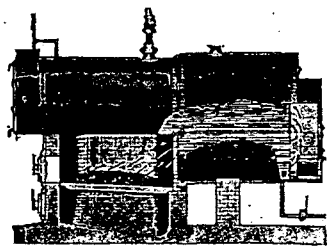


*Bigelow H. R. T. Boiler*

Investigation of the Bigelow H. R. T. boiler will convince you of its true value. Economical service has been the big feature of Bigelow products during a period of boiler building extending over 50 years. With a shop containing the most modern approved equipment for boiler construction a product is assured representing the highest quality in workmanship.

For Central Power Stations and large industrial plants the Bigelow Hornsby water tube boiler is unexcelled. High continuous economy, large overload capacity, large furnace volume and straight tubes are a few of the features contained in this type of boiler. The Hornsby is built in units of 375 H. P. to 3,000 H. P.

The Bigelow Two-Pass Boiler is the latest development of this company. After careful investigation of the existing types of steel heating boilers an effort was made to eliminate the objectionable features of many; the result being the Two-Pass Boiler. This boiler will meet heating and power requirements especially where space limitations prevail. Elimination of staybolts and special brick shapes in furnace reduces maintenance to a minimum. Large furnace volume; long gas travel, uniform velocity of gas over heating surface and low exit temperature assures maximum efficiency.



*Bigelow Two-Pass Boiler*