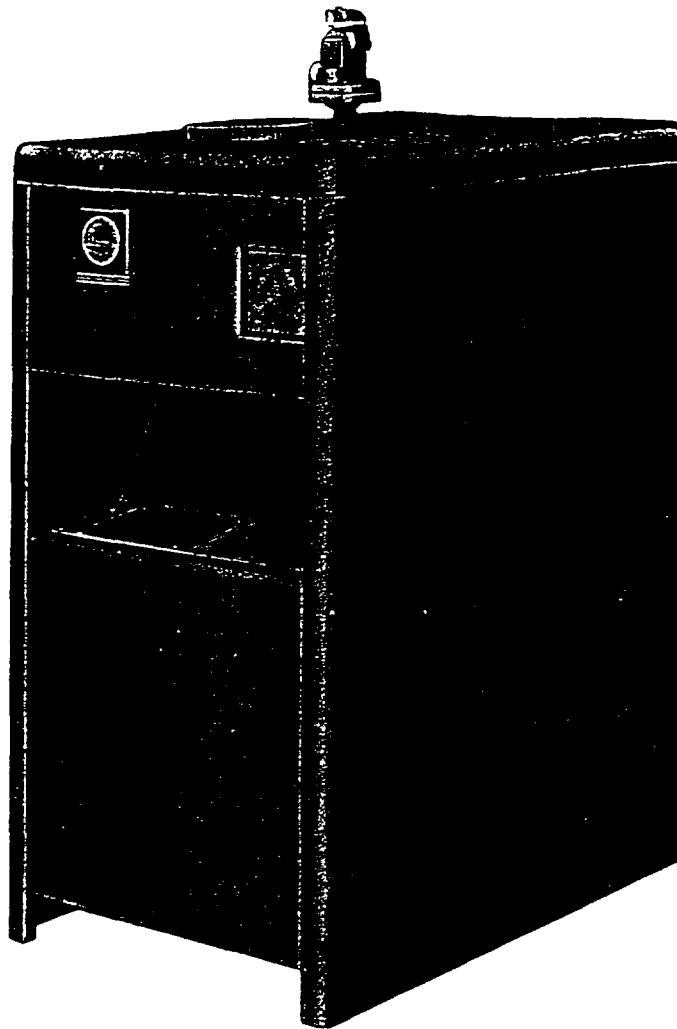


PLAINTIFF'S EXHIBIT

ASI-104



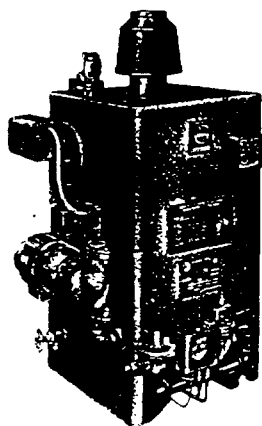
**Guaranteed for 25 Years!**

The cast iron sections — the working core of this boiler — are guaranteed for 25 years in residence. Guarantee applies to water models of this boiler. See guarantee for full responsibility assumed by American-Standard.

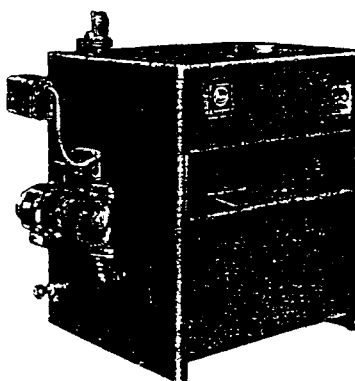
**G-2** gas-fired boilers

**AMERICAN-Standard**

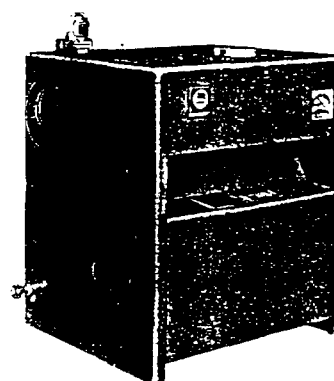
▶ the G-2—new, extra-compact models for every type of installation



packaged flush jacket model  
for forced circulation



packaged deluxe jacket model  
for forced circulation



packaged all-purpose model  
for forced or gravity circulation

The G-2 is a completely new, fully automatic cast iron gas boiler for water or steam heating developed by American-Standard for fast, economical installation, peak operating efficiency and long-lasting dependability. This extremely compact gas boiler stands only 33½" high—requires minimum space, making it particularly suited for all residential installations where space is at a premium.

■ **Packaged water boiler for any application**—Five popular sizes (3-7 sections) of the forced circulation packaged units are shipped completely assembled and crated, ready for immediate installation. All controls, burners, accessories—even the circulator—are installed and wired before shipment. Three units (5-7 sections) may be equipped with a specially built, factory-installed, I=W=H rated tankless heater for forced circulation installations. These same sizes are also furnished as an all-purpose package that excludes the circulator to permit either forced or gravity circulation installations.

■ **Nonpackaged water and steam boilers**—available in all sizes (3-11 sections) with flush or deluxe jacket as forced circulation water boiler or all-purpose steam or water (forced or gravity) boiler. Nonpackaged boilers feature factory-assembled sections, preassembled manifold and pre-assembled gas controls. (Factory-installed I=W=H rated tankless heater available for forced circulation water boiler only.)

■ **Top-rated domestic hot water**—High domestic hot water ratings (I=W=H approved) are one of the major features of the G-2. These outstanding ratings are realized through the use of a specially designed built-in tankless heater developed exclusively for, and tested with, the G-2.

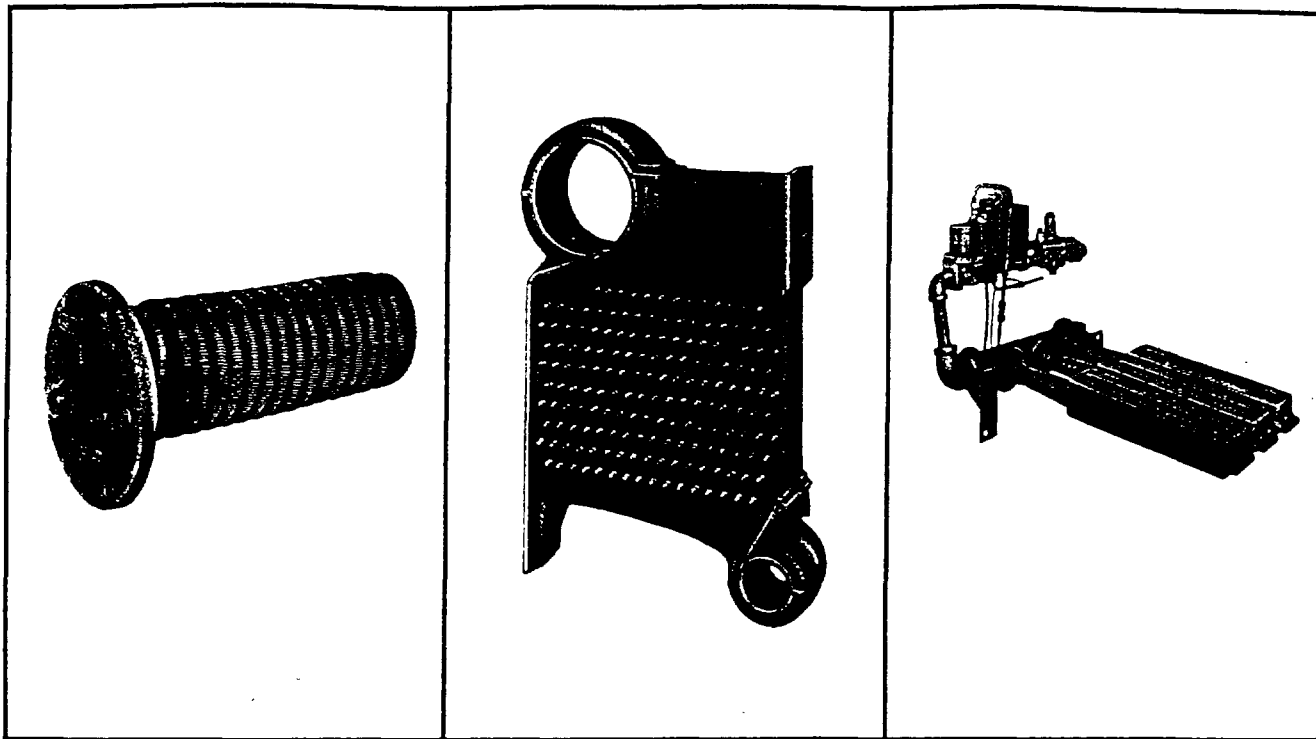
Units are available, beginning with the 5-section boiler, with a large-coil heater factory installed (optional).

■ **Simplified piping and control arrangement**—Convenient location of all controls, piping, accessories and circulator on the left and front of the boiler means fast, low-cost wiring and piping hook-ups. This arrangement speeds up installation time, simplifies adjustments and reduces over-all labor and expense on every job. Packaged models of the G-2 have all components pre-assembled and mounted for immediate connection.

■ **Highly efficient sections and burners**—A combination of newly designed cast iron sections, plus integral one-piece burners, makes the G-2 an extremely compact boiler with a high heating output. Pin-type surfaces of the sections and the high, off-center location of the 5" nipple port assure rapid heat transfer, peak circulation for quick pick-up. Another plus feature of the G-2 is the spacing of one burner to each flueway for maximum heating efficiency.

■ **New jacket design for installation flexibility**—Another outstanding advantage of the G-2 is its "off-the-floor" jacket design (jacket rides 1" off the floor). This prevents damage in shipment, helps prevent rust and corrosion and allows boilers to be "walked" into position with the jacket in place.—Additional installation flexibility is achieved through the compactness of the G-2, plus an A.G.A. approved special floor shield for combustible flooring (regularly furnished with packaged models, optional for non-packaged models). Also, extra-low height and "zero" clearance approval for deluxe jacket models make the G-2 especially suited for installation in utility rooms and almost any convenient location.

► **note these important new design features**



■ **I = W = H rated, high-capacity tankless water heater** — designed exclusively for G-2 forced circulation boilers—fits into the large, off-center, over-sized 5" nipple port at the top of the boiler sections. The unusual location of the nipple port creates a continuous pumping action that accentuates the boiler water circulation around the coil — surrounds the heater with the hottest water. The large-coil tankless heater consists of variable lengths of loosely wound finned tubing designed for maximum heat extraction from the boiler water. It is available in 3 sizes and factory installed in boilers beginning with the 5-section size. I = W = H approved ratings are obtained by testing the heaters with each size G-2 boiler.

■ **Research-engineered cast iron sections** — combine a large heating surface with a 5" nipple port for maximum heating efficiency with the G-2. Each section contains scientifically placed, pin-type projections for the greatest possible heat extraction from hot flue gases. Top location of the nipple port also provides the best circulation—assures rapid boiler water recovery. The new section design permits placement of one burner to each flue-way. This arrangement means high concentration of heating gases—rapid heat transfer to boiler water. Basic assembly of the G-2 requires only a left-hand end, right-hand end and center sections. Sections are cleaned from the front of the boiler.

■ **Complete factory-installed manifold and wiring** — saves installation time and costs on all packaged models of the G-2. Newly designed one-piece burner-mixing tube is precision fitted into manifold spud and rests securely on the rear boiler base plate. Simple regulation of the air shutter is the only adjustment required for correct firing. All non-packaged boilers have the complete manifold assembly shipped separately as illustrated. Both drilled port and ribbon type burners are available with the G-2 for highly efficient, economical burning of all gases. Provision is also made for optional dual fuel equipment, runner type and push button electric ignitions with all sizes and models of the G-2.

► G-2 gas boilers by American-Standard have ratings approved by the Institute of Boiler and Radiator Manufacturers and are constructed to the specifications of the American Society of Mechanical Engineers. The boilers are approved by the American Gas Association for all gases and for high altitude installations. They also have the approval of the A. G. A. for installation on combustible flooring with a special floor shield and for "zero" clearance installation with deluxe jacket models. All sizes of the G-2 are available in models for forced hot water, gravity and steam systems.

1—controls—(water boiler illustrated) all controls (including new control that combines operating, high limit and low voltage relay into one control) mounted on front and left side of boiler for easy adjustment and maintenance. Controls, accessories, manifold and circulator factory mounted and assembled on all packaged forced circulation boilers. (Not illustrated — steam boiler controls include external low water cut-off, water gauge glass, steam safety valve, steam limit controls.)

2—tappings—2" supply (top) and 1½" returnappings (side) simplify piping hook-up, reduce bushing expense and labor.

3—water heater—large, copper coil, finned tubing tankless type with outstanding I=W=H ratings. Exclusive with the G-2. (See design features.)

4—built-in drafthood—completely enclosed in deluxe jacket models — keeps boiler height at an extra-low 33½". External type drafthood furnished on all flush jacket models.

5—jacket—sturdy 20-gauge steel with new warm gray finish, modern radius corners. Inner surfaces finished with corrosion-resistant, heat-reflecting aluminum paint. Shipped factory installed with all packaged boilers.

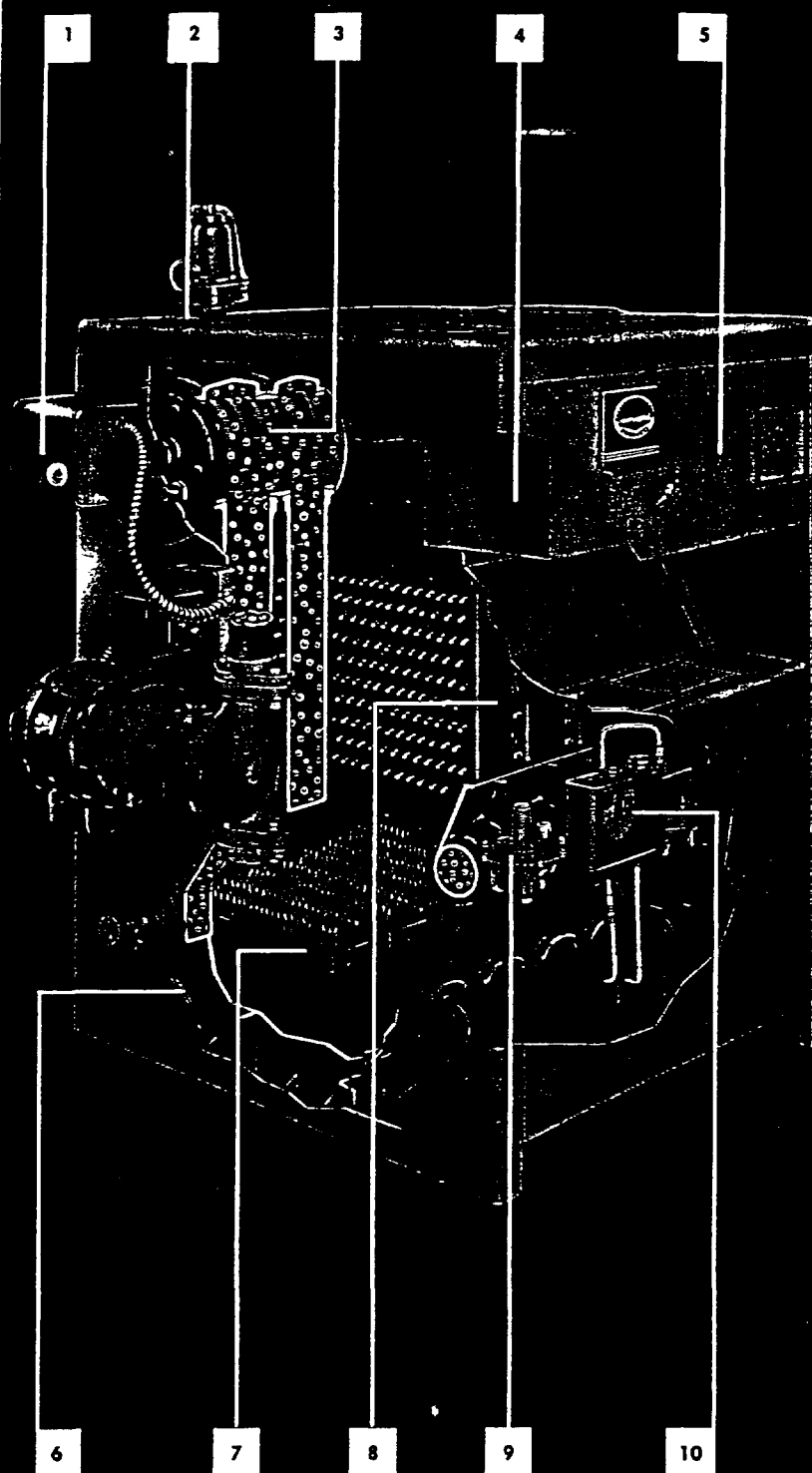
6—insulation—heavy fiberglass insulation prevents wasteful heat loss, keeps jacket cool.

7—burners—precision-engineered, one-piece cast iron drilled port (or ribbon type) factory tested for quiet, efficient operation. Air shutter and mixing tube integrated into single-piece burner.

8—boiler sections—constructed of rugged cast iron; multiple pin-type projections stud flue surfaces for maximum heat extraction. End sections have extended base design — form supporting legs of boiler. All sections may be cleaned from the front by removing cleanout plate (not shown) bolted to boiler sections.

9—gas pressure regulator—maintains uniform gas pressure to all main burners. Regulator not required for LP gas.

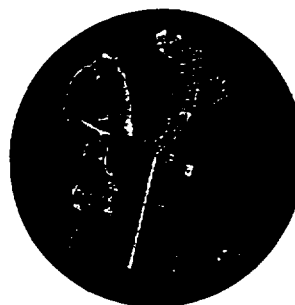
10—manifold controls—including automatic gas valve, pilot filter and 100% safety shutoff for all gases are completely factory assembled and installed in all packaged boilers. Manifold rigidly attached to boiler with heavy steel brackets. Completely enclosed by jacket on deluxe models.



► the G-2 packaged boiler for fast, low-cost installation

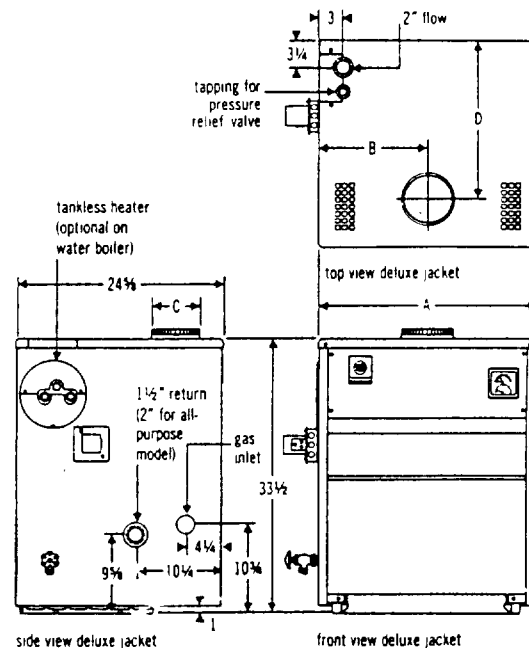
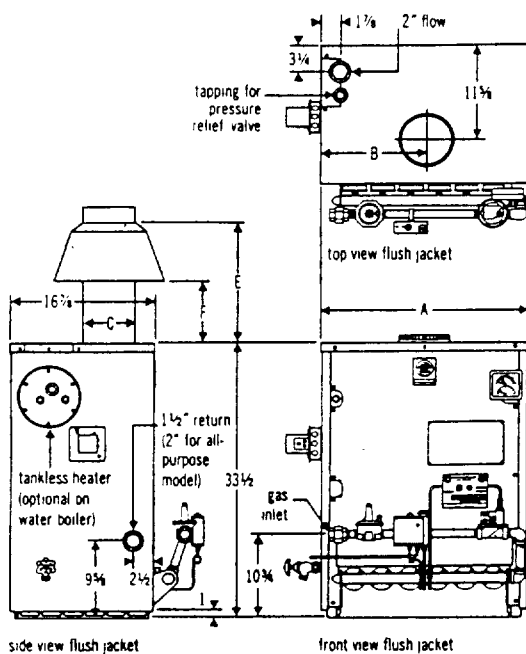


Packaged models of the G-2 are factory assembled complete with wiring, accessories, controls, circulator and main burners already mounted for quick, economical installation. Entire boiler assembly is shipped completely crated—boiler is kept clean during shipment by protective, polyethylene cover.



Highly compact construction of the G-2 permits boiler to be moved into position for final hook-up quickly and easily. Suspended jacket design allows boiler to be "walked" from crate to installation without pipe rollers. Complete installation, from crate to connections, takes less than an hour.

### dimensions and tappings



size gas connections — inches — IPS

dimensions — inches

| boiler number | nat-mxd & LP-air gas (800-1400 Btu) | mfd & LP-air gas (525-800 Btu) | LP gases | dual fuel |         | A flush | B flush | E flush | F flush | C | A deluxe | B deluxe | D deluxe | number of sections | number of burners |
|---------------|-------------------------------------|--------------------------------|----------|-----------|---------|---------|---------|---------|---------|---|----------|----------|----------|--------------------|-------------------|
|               |                                     |                                |          | natural   | propane |         |         |         |         |   |          |          |          |                    |                   |
| G-23-F        | 1/2                                 | 1/2                            | 1/2      | 1/2       | 1/2     | 11      | 5 1/2   | 13      | 7       | 4 | —        | —        | —        | 3                  | 2                 |
| G-24          | 1/2                                 | 1/2                            | 1/2      | 1/2       | 1/2     | 14 1/4  | 7 1/8   | 13 3/4  | 7       | 5 | 16 3/8   | 8 3/4    | 19 1/2   | 4                  | 3                 |
| G-25          | 1/2                                 | 3/4                            | 1/2      | 1/2       | 1/2     | 17 1/2  | 8 3/4   | 13 3/4  | 7       | 5 | 19 5/8   | 9 1/8    | 19 1/2   | 5                  | 4                 |
| G-26          | 1/2                                 | 3/4                            | 1/2      | 1/2       | 1/2     | 20 3/4  | 10 3/8  | 16 1/2  | 9       | 6 | 22 7/8   | 11 3/8   | 19       | 6                  | 5                 |
| G-27          | 3/4                                 | 3/4                            | 1/2      | 3/4       | 1/2     | 24      | 12      | 16 1/2  | 9       | 6 | 26 1/8   | 13 1/8   | 19       | 7                  | 6                 |
| G-28          | 3/4                                 | 1                              | 1/2      | 3/4       | 1/2     | 27 1/4  | 13 3/8  | 20 3/4  | 12      | 7 | 29 3/8   | 14 1/8   | 19 3/8   | 8                  | 7                 |
| G-29          | 3/4                                 | 1                              | 1/2      | 3/4       | 1/2     | 30 1/2  | 15 1/4  | 20 3/4  | 12      | 7 | 32 3/8   | 16 1/8   | 19 3/8   | 9                  | 8                 |
| G-210         | 3/4                                 | 1                              | 1/2      | 3/4       | 1/2     | 33 3/4  | 16 7/8  | 25 3/4  | 16      | 8 | 35 3/8   | 17 1/8   | 19 3/8   | 10                 | 9                 |
| G-211         | 3/4                                 | 1                              | 1/2      | 3/4       | 1/2     | 37      | 18 1/2  | 25 3/4  | 16      | 8 | 39 3/8   | 19 1/8   | 19 3/8   | 11                 | 10                |

## G-2 ratings (all gases)



for installations from sea level to 2000 ft ♦

chimney

| boiler number | A. G. A. input Btuh | A. G. A. output Btuh | net I = B = R ratings |               |           | size inches | height feet |
|---------------|---------------------|----------------------|-----------------------|---------------|-----------|-------------|-------------|
|               |                     |                      | steam Mbh             | steam sq. ft. | water Mbh |             |             |
| G-23          | 60,000              | 48,000               | 36                    | 150           | 36        | 4           | 20          |
| G-24          | 90,000              | 72,000               | 54                    | 225           | 54        | 5           | 20          |
| G-25          | 120,000             | 96,000               | 72                    | 300           | 72        | 6           | 20          |
| G-26          | 150,000             | 120,000              | 90                    | 375           | 90        | 6           | 20          |
| G-27          | 180,000             | 144,000              | 108                   | 450           | 108       | 6           | 20          |
| G-28          | 210,000             | 168,000              | 126                   | 525           | 126       | 7           | 20          |
| G-29          | 240,000             | 192,000              | 144                   | 600           | 144       | 7           | 20          |
| G-210         | 270,000             | 216,000              | 162                   | 675           | 162       | 7           | 20          |
| G-211         | 300,000             | 240,000              | 180                   | 750           | 180       | 7           | 20          |

♦ For altitudes above 2000 ft., ratings should be reduced at the rate of 4% for each 1000 ft. above sea level.

Note: Suffixes used with G-2 boilers denote the following: F—flush jacket; D—deluxe jacket; T—with tankless heater; P—packaged ship-

ment; C—with floor shield approved for combustible flooring. For example—to order a deluxe G-25 complete with heater, combustible flooring shield and completely packaged—the following boiler designation would apply (G-25-DPTC).

### built-in tankless heaters ■

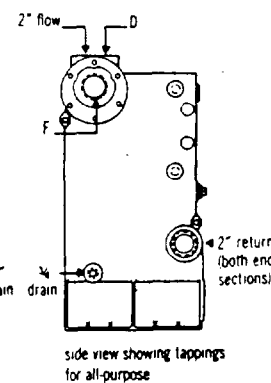
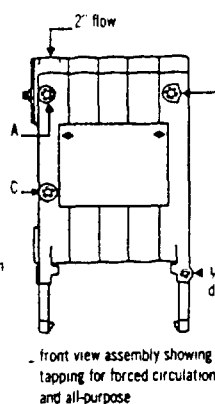
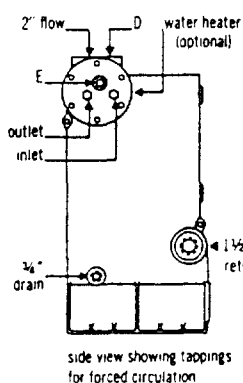
| heater number ● | I = W = H rating ▲ | boiler number | A. G. A. input Mbh | heater number ● | I = W = H rating ▲ | boiler number | A. G. A. input Mbh |
|-----------------|--------------------|---------------|--------------------|-----------------|--------------------|---------------|--------------------|
| 222             | 3                  | G-25          | 120                | 226             | 4                  | G-27          | 180                |
| 222             | 3-1/4              | G-26          | 150                | 226             | 4-1/4              | G-28          | 210                |
| 222             | 3-1/2              | G-27          | 180                | 226             | 4-1/4              | G-29          | 240                |
| 222             | 3-1/2              | G-28          | 210                | 226             | 4-1/4              | G-210         | 270                |
| 222             | 3-1/2              | G-29          | 240                | 226             | 4-1/2              | G-211         | 300                |
| 222             | 3-1/2              | G-210         | 270                | 232             | 4-1/2              | G-29          | 240                |
| 222             | 3-1/2              | G-211         | 300                | 232             | 4-3/4              | G-210         | 270                |
|                 |                    |               |                    | 232             | 5                  | G-211         | 300                |

■ Heaters have been tested with G-2 boilers and are available only factory installed in all models in the above sizes except for the all purpose boilers.

● Last two digits designate lineal feet of Tru Fin tubing in heater coil  
▲ Gallons water per minute heated from 40°F to 140°F with 200°F boiler water temperature.

### control applications \*

| location on boiler | tappings size — inches | water                                                                     | steam          |
|--------------------|------------------------|---------------------------------------------------------------------------|----------------|
| A                  | 3/4                    | immersion limit control                                                   | —              |
| B                  | 3/4                    | temperature and altitude gauge                                            | pressure gauge |
| C                  | 3/4                    | reverse acting control                                                    | —              |
| D                  | 3/4                    | pressure relief valve                                                     | safety valve   |
| E                  | 3/4                    | combination operating, high limit and low voltage relay immersion control | —              |
| F                  | 3.                     | gravity flow                                                              | blow-off       |



\*Every all-purpose nonpackaged boiler is shipped with tappings for both hot water and steam.

► American-Standard G-2 Gas-Fired Boilers are another development in hydronics—the science of heating and cooling with water.



## AMERICAN-Standard

### PLUMBING AND HEATING DIVISION

AMERICAN RADIATOR & STANDARD SANITARY CORPORATION

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Litho in U.S.A.