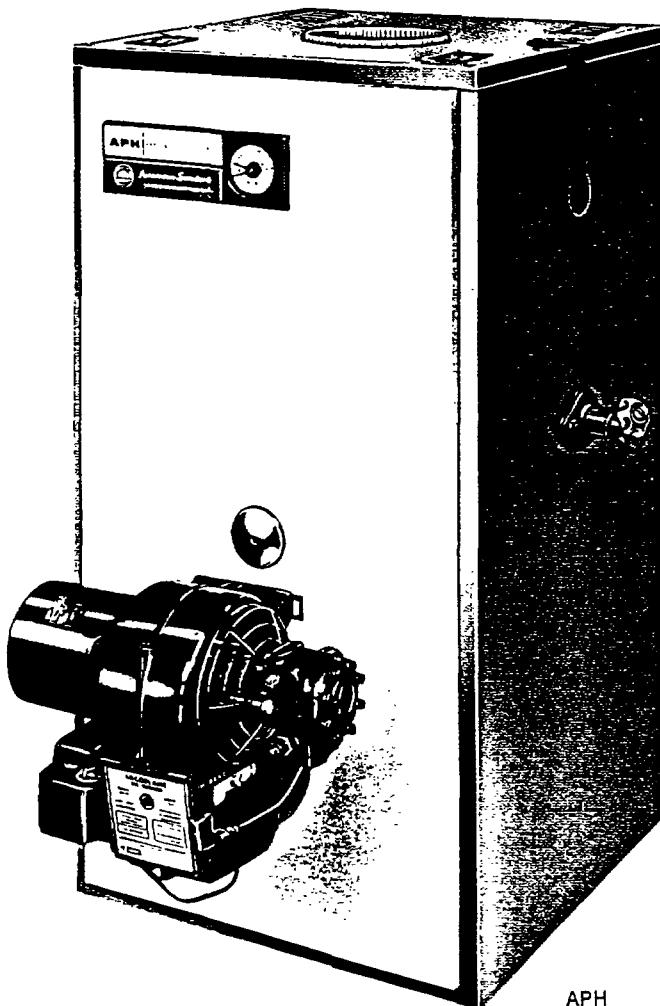


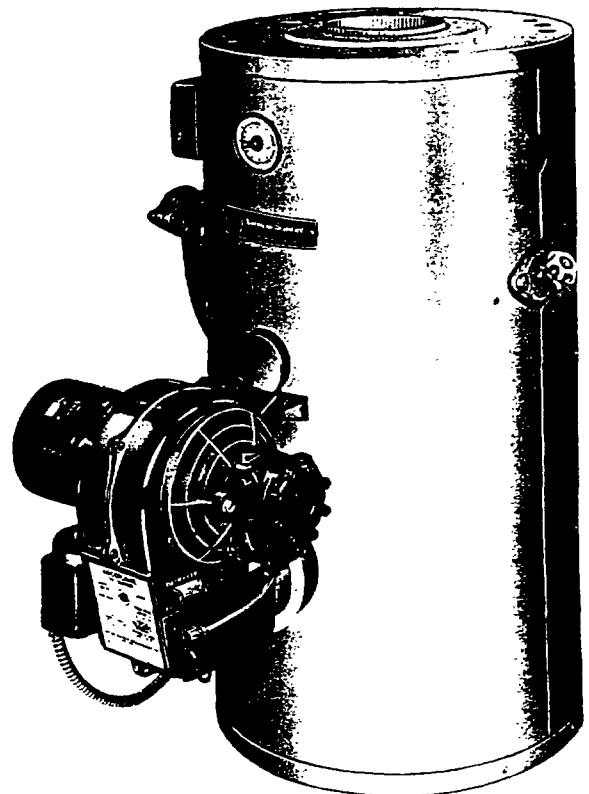
AMERICAN-Standard

APR & APH

packaged oil-fired boilers



APH



APR

**PLAINTIFF'S
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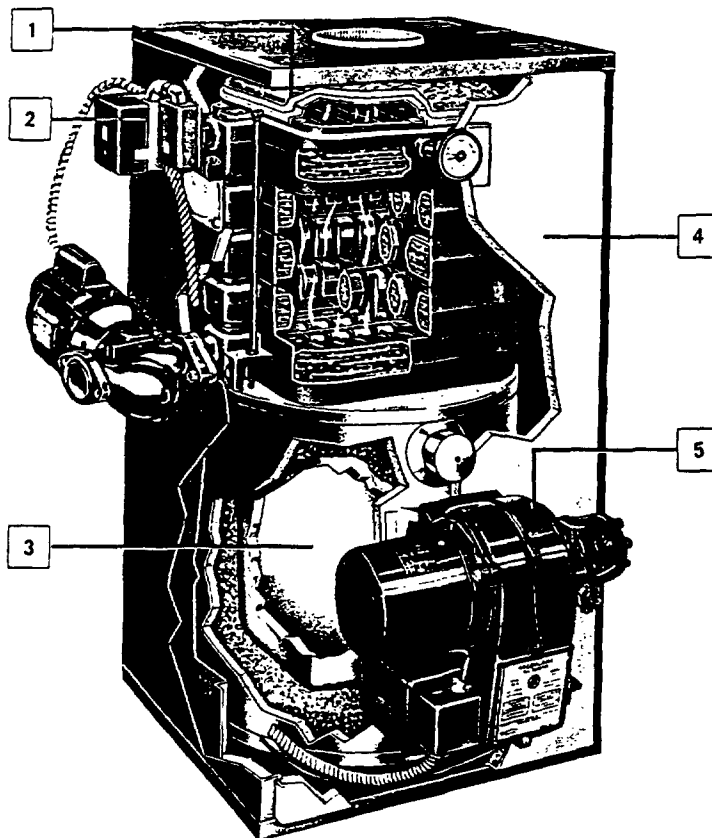
A.I.A. File No. 30-C-1 [March, 1965]

00346

APR and APH packaged oil-fired boilers — compact, lightweight, big on output

These lightweight big output boilers make up a cast iron line that's ideal for low-cost hydronic heating in new home construction. The key to their efficiency is the high heat transfer rate of the THERM-O-GRID section—an exclusive American-Standard design. Both the round jacket APR and the rectangular APH are packaged for forced water circulation. For easy

installation, all controls are pre-mounted and pre-wired. Both units also feature smooth-firing DH-5 Arcoflame burner and cost-reducing built-in air separation. I=B=R-approved outputs in the 72,000-195,000 Btuh range meet requirements in just about any size home today. For big output from a compact boiler, make it the APR or APH.



APH-185 shown in cutaway

THERM-O-GRID, Arcoflame, EXACT-AIRE and ELIMINAIRE are trademarks of AR&SS Corp.

1—sturdy steel canopy—is easily removable for servicing. Integral asbestos gasket forms gas-tight seal.

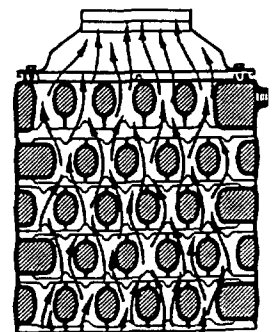
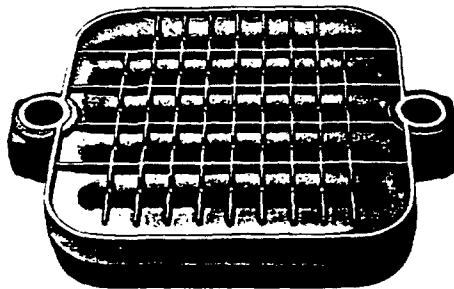
2—controls—are factory mounted, pre-wired and easily accessible for service. Primary control features light-sensing detector for instant response to ignition.

3—cast ceramic fiber refractory combustion chamber—is supported within vermiculite-lined steel container suspended from section assembly. Combustion chamber and container can be quickly and easily replaced as a single unit.

4—insulated steel jacket—features top and front panels are easily removable for access to section assembly and combustion area. Round APR jacket finished in gray. Two-tone APH jacket has brown top and side panels, light beige front.

5—model DH-5 Arcoflame oil burner is engineered to provide top operating efficiency. EXACT-AIRE control and special turbulator-disc combination insure proper air-oil mixture for clean, economical firing.

The exclusive THERM-O-GRID is a compact, light-weight cast iron section designed to produce a high ratio of heat output per pound, through the use of tubular-finned surfaces. When assembled in the boiler (far right) the tubes and fins oppose each other to increase flue gas turbulence and further improve heat transfer. Air removal is accomplished internally by using the ELIMINAIRE principle. Air collects in top section and passes directly to expansion tank through a special tapping. No additional external device is necessary.



APR & APH

packaged oil-fired boilers



APR and APH ratings

boiler number	gross I=B=R output (Btu/hr)	net I=B=R ratings water (Btu/hr)	I=B=R burner capacity (gph)	chimney		water content (gallons)
				size (inches)	height (feet)	
APR-72	72,000	54,000	0.70	8 x 8	15	2.1
APR-90	90,000	67,500	0.90	8 x 8	15	2.7
APH-115	115,000	86,300	1.15	8 x 8	15	3.4
APH-150	150,000	112,500	1.45	8 x 8	15	4.4
APH-185	185,000	138,800	1.80	8 x 8	15	5.4

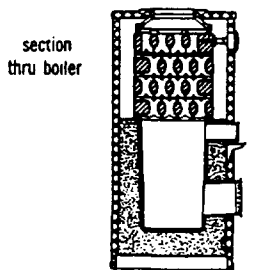
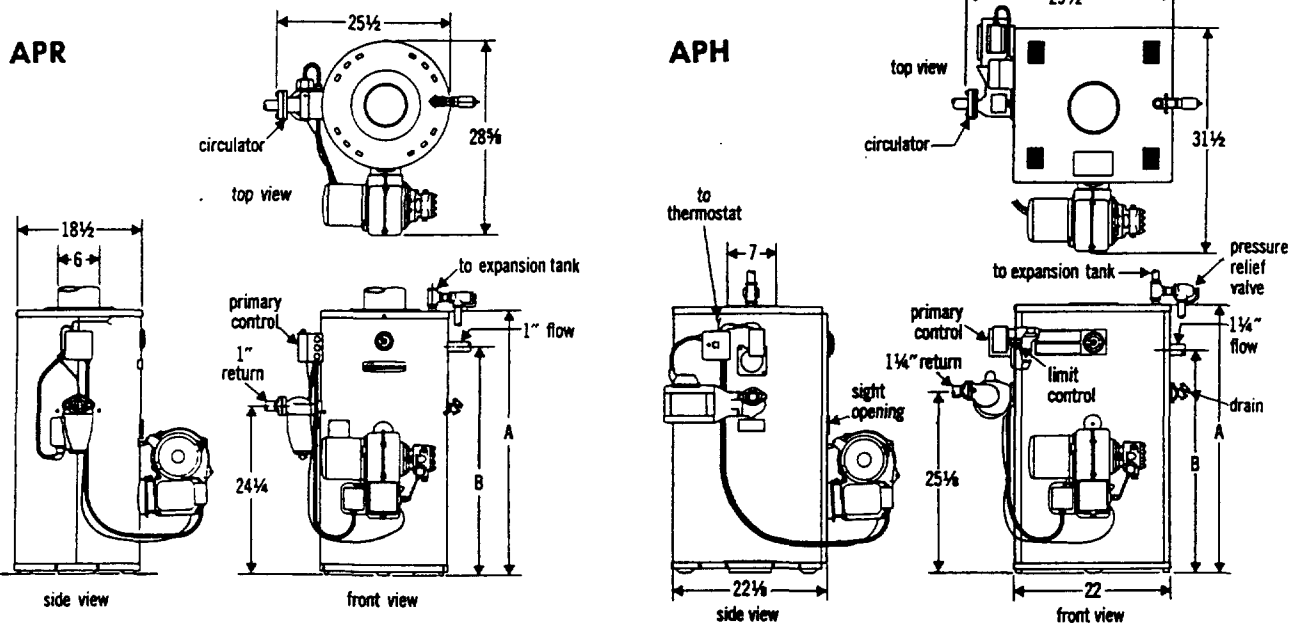
Nozzle sizes, gph, furnished with APR and APH packaged boilers: APR-72, 0.75-60°S; APR-90, 0.85-60°S; APH-115, 1.10-60°S; APH-150, 1.35-60°S; APH-185, 1.75-60°S.

Net I=B=R ratings shown are based on a piping and pick up allowance of 1.333. American-Standard should be consulted before selecting a boiler for installations having unusual piping and pick up requirements.

Measured from top of canopy.

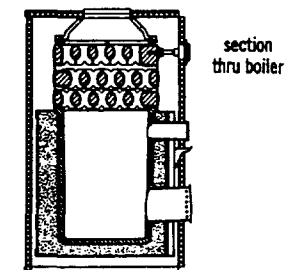
Note: APR and APH packaged boilers furnished for forced hot water circulation.

dimensions and tappings



boiler number	number of THERM-O-GRID sections	size of tappings (inches)		dimensions (inches)	
		flow	return	A	B
APR-72	3	1	1	35 1/4	29 7/8
APR-90	4	1	1	38 1/4	32 7/8
APH-115	3	1 1/4	1 1/4	37 1/2	31 1/8
APH-150	4	1 1/4	1 1/4	40 1/2	34 1/8
APH-185	5	1 1/4	1 1/4	43 1/2	37 1/8

• THERM-O-GRID section dimensions and weights:
APR boiler: 12x12x3", 30 lbs.; APH boiler: 15x15x3", 51 lbs.



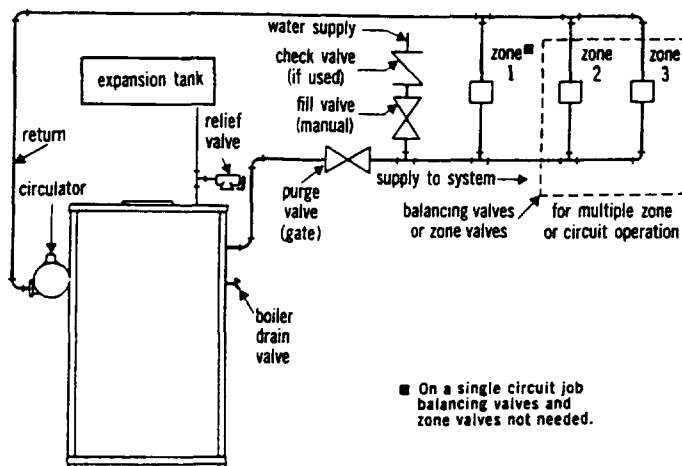
APR and APH packaged oil-fired boilers are designed and built to comply with the American Society of Mechanical Engineer's Code, and bear their approval symbol. Ratings have been approved by the Institute of Boiler and Radiator Manufacturers. The Model DH-5 Arcoflame Oil Burner is listed by the Underwriters' Laboratories, Inc.

for No. 1 and No. 2 fuel oil; complies with Commercial Standard CS-75; and is approved by the New York City Board of Standards and Appeals, by the State Fire Marshal of the Commonwealth of Massachusetts, and by the Department of State Police, State of Connecticut.

APR & APH

packaged oil-fired boilers

near boiler piping



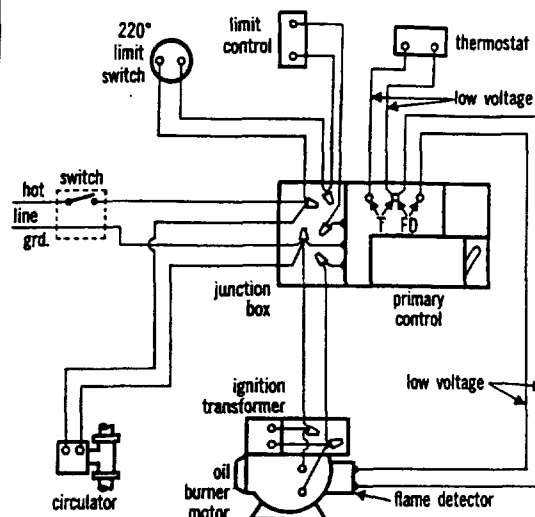
Procedure for filling series loop Heatrim System:

1. Close all zone valves except zone to be purged.
2. Open boiler drain valve.
3. Open fill valve.
4. Close purge valve.
5. Vent air from boiler by manually opening relief valve.
6. Open second valve to be purged. Close first zone. After second zone is purged, open third zone valve and close second zone. Repeat for as many zones as in system.
(Note: Always have one zone valve open).
7. When all zones have been purged, close boiler drain cock.
8. When water appears at relief valve, release lever and allow to close.
9. Continue filling until pressure gauge reads approximately 12 lbs./sq. in. Close fill valve.
10. Open purge valve.

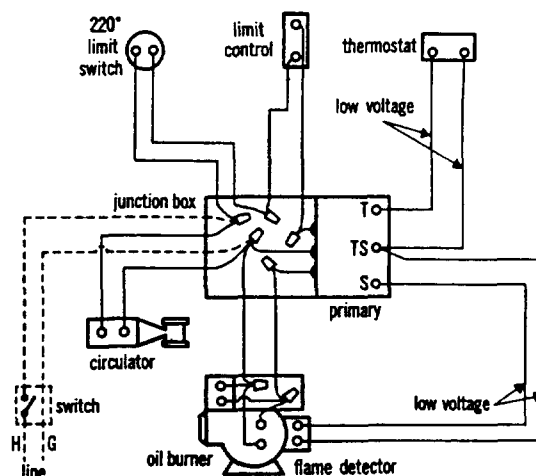
Note 1: Where multiple circuits are used without zone valves, balancing valves should be installed for balancing. These valves can be shut off to purge each circuit individually.

Note 2: For a single loop Heatrim System, no additional vents, valves, drains, or other accessories are required.

APR basic wiring diagram



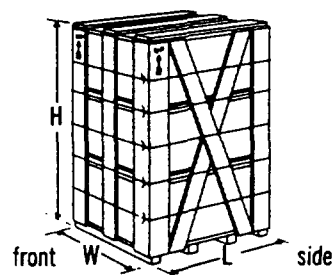
APH basic wiring diagram



crated dimensions

boiler number	dimensions (inches)			approximate shipping weight • (lbs)
	H	W	L	
APR-72	37 $\frac{1}{4}$	22 $\frac{7}{8}$	28 $\frac{3}{4}$	306
APR-90	40 $\frac{7}{8}$	22 $\frac{7}{8}$	28 $\frac{3}{4}$	344
APH-115	39 $\frac{1}{4}$	27 $\frac{1}{2}$	34	330
APH-150	42 $\frac{1}{4}$	27 $\frac{1}{2}$	34	375
APH-185	45 $\frac{1}{4}$	27 $\frac{1}{2}$	34	420

• DH-5 Arcoflame burner shipped in separate carton.



AMERICAN-Standard

PLUMBING AND HEATING DIVISION

AMERICAN RADIATOR & STANDARD SANITARY CORPORATION
40 WEST 40TH STREET • NEW YORK, N.Y. 10018

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