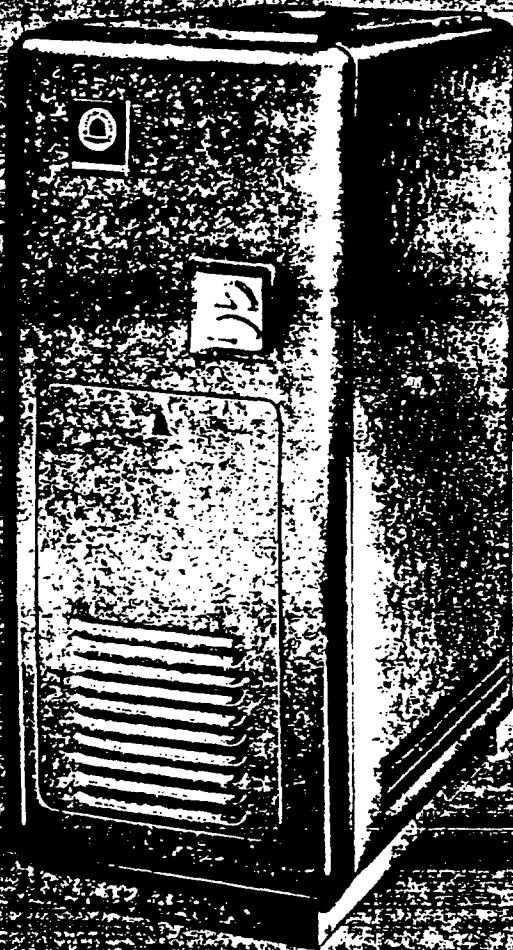


Empire | 10



gas fired boiler—w



- for homes with or without basements and small commercial installations—wet base construction—sizes up to 262.5 MBH input
- jacket encloses all controls—factory assembled sections—sub-assembled manifold piping and controls—completely automatic—burns all gases efficiently and economically—excellent for direct type hot water supply system
- approved by American Gas Association

standard equipment

- unit complete for 115 volt-60 cycle A.C.
- Detroit V 574 FW automatic gas valve with mechanical limit control
- Baso automatic pilot valve

optional equipment

- Detroit 411 CH timed cycling thermostat—● low range mechanical limit control (125°-155°) for V 574 FW gas valve
- push button electric igniter for mfd—nat—mxd gas
- runner type pilot igniter

PLAINTIFF'S
EXHIBIT

A5E-820

15308

ratings

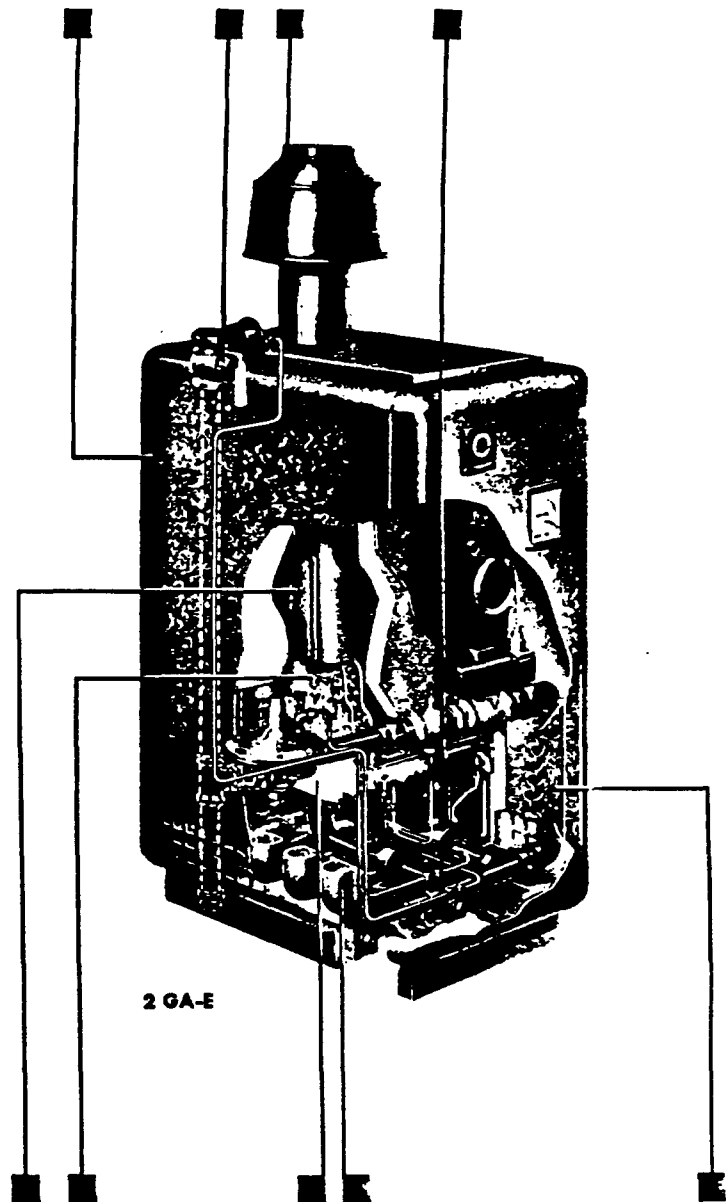
AGA water ratings						installed radiation				chimney height—feet			approx shipping weight	boiler number
mfd—nat—mxd LP-air gas*			LP-gas			mfd—nat—mxd LP-air gas*		LP-gas		10A	20	40		
input	output		input	output		MBH	sq ft	MBH	sq ft	diameter—inches				
MBH	MBH	sq ft	MBH	MBH	sq ft									
39.4	31.5	210	39.4	31.5	210	23	155	23	155	4	4	4	334	1 GA 4 E
52.5	42.0	280	52.5	42.0	280	31	205	31	205	4	4	4	378	1 GA 5 E
65.6	52.5	350	65.6	52.5	350	39	260	39	260	4	4	4	416	1 GA 6 E
78.8	63.0	420	75.0	60.0	400	47	310	45	300	5	5	4	395	2 GA 4 E
105.0	84.0	560	100.0	80.0	533	63	420	60	400	5	5	5	470	2 GA 5 E
131.3	105.0	700	125.0	100.0	666	79	525	75	500	6	6	5	542	2 GA 6 E
157.5	126.0	840	150.0	120.0	800	94	625	90	600	6	6	6	616	2 GA 7 E
183.8	147.0	980	183.8	147.0	980	110	730	110	730	6	6	6	754	4 GA 8 E
210.0	168.0	1120	210.0	168.0	1120	126	840	126	840	7	6	6	826	4 GA 9 E
262.5	210.0	1400	262.5	210.0	1400	157	1045	157	1045	7	7	7	985	4 GA 11 E

AGA water ratings						Installed radiation				chimney height—feet			approx shipping weight	boiler number
mfd—nat—mxd LP-air gas*			LP-gas			mfd—nat—mxd LP-air gas*		LP-gas		10A	20	40		
input	output	sq ft	input	output	sq ft	MBH	sq ft	MBH	sq ft	diameter—inches				
MBH	MBH		MBH	MBH										
31.5	25.2	168	31.5	25.2	168	19	125	19	125	4	4	4	334	1 GA 4 E
42.0	33.6	224	42.0	33.6	224	25	165	25	165	4	4	4	378	1 GA 5 E
52.5	42.0	280	52.5	42.0	280	31	205	31	205	4	4	4	416	1 GA 6 E
70.0	56.0	373	67.5	54.0	360	42	280	41	270	5	5	4	395	2 GA 4 E
93.3	74.6	497	90.0	72.0	480	55	365	53	355	5	5	5	470	2 GA 5 E
116.6	93.3	621	112.5	90.0	600	70	465	67	445	6	6	5	542	2 GA 6 E
140.0	112.0	748	135.0	108.0	720	83	555	80	535	6	6	6	616	2 GA 7 E
147.0	117.6	784	147.0	117.6	784	87	580	87	580	6	6	6	754	4 GA 8 E
168.0	134.4	896	168.0	134.4	896	101	670	101	670	7	6	6	826	4 GA 9 E
210.0	168.0	1120	210.0	168.0	1120	126	840	126	840	7	7	7	985	4 GA 11 E

*Butane-air gas—525 Btu—1.16 sp gr
 †for special installations where greater height is impracticable—not recommended for general practice
 ‡for altitudes above 5000 feet reduce high altitude ratings 4% for each 1000 feet above 5000 feet

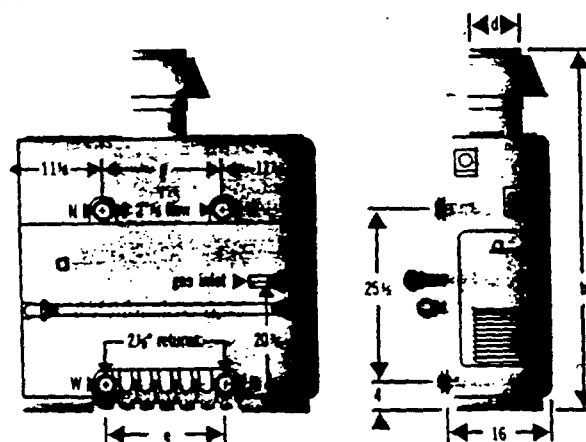
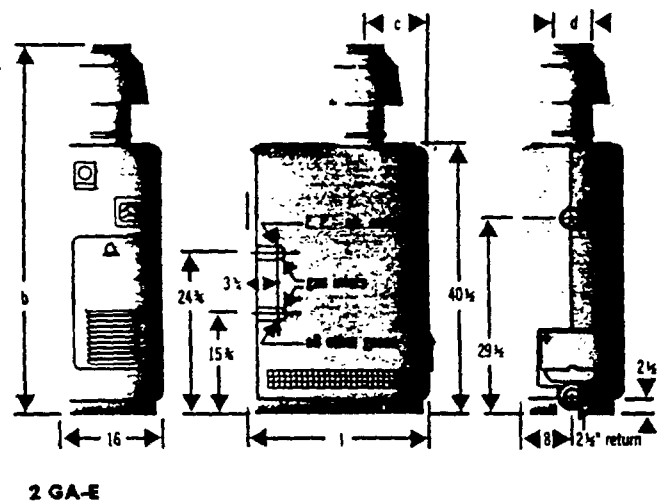
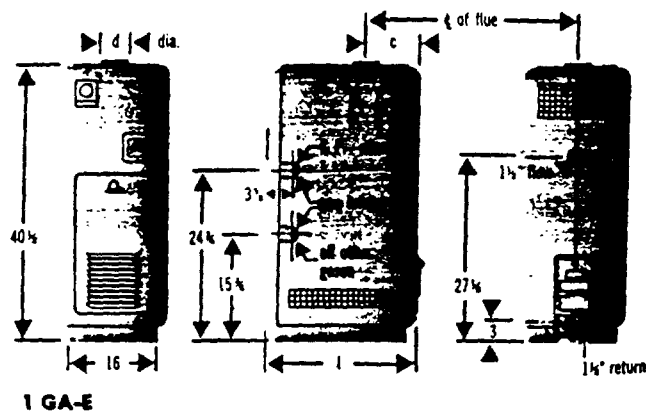
construction

- jacket—smooth Forge Red finish—rounded corners—rigid slip joint construction—completely encloses principal controls—heavy insulation reduces heat loss through jacket
- pilot filter—prevents gumming of pilot orifice
- draft hood—regulates normal draft—protects against down draft
- controls—finest quality for completely automatic operation—automatic pilot valve—100% shut-off for LP and LP-air gases
- cleanouts—easy to inspect and clean flue surfaces
- pin type sections—factory assembled—cast iron—pin type design insures rapid and efficient heat transfer—machine ground gas-tight surfaces require no cement or putty
- burners—cast iron—raised rib—drilled port—ribbon burners with high temperature alloy corrugated ribbons—optional for manufactured gas territories
- wet base construction—radiators can be installed on same floor as boiler
- access panel—for easy inspection of controls and access to combustion chamber and burners
- sub-assemblies—manifold—controls—valves are factory assembled for quick and easy attachment
- runner type pilot igniter available
- push button electric pilot igniter available
- excellent for direct type automatic hot water storage system



15310

dimensions and tapings



for forced circulation use W connections
for gravity circulation use W and N connections

4 GA-E

boiler number	dimensions—inches					number—size tapings—inches	
	b	c	d	e	f	flow	return
1 GA 4 E		6 1/4	3		19 1/4	1-1 1/4	1-1 1/4
1 GA 5 E		8 1/4	4		22 1/4	1-1 1/4	1-1 1/4
1 GA 6 E		9 1/4	4		25 1/4	1-1 1/4	1-1 1/4
2 GA 4 E	54 3/4	6 1/4	5		19 1/4	1-2 1/4	1-2 1/4
2 GA 5 E	54 3/4	8 1/4	5		22 1/4	1-2 1/4	1-2 1/4
2 GA 6 E	55 1/2	9 1/4	6		25 1/4	1-2 1/4	1-2 1/4
2 GA 7 E	55 1/2	11 1/4	6		28 1/4	1-2 1/4	1-2 1/4
4 GA 8 E	54	18 1/4	7	9	37 1/4	2-2 1/4	2-2 1/4
4 GA 9 E	54 1/2	20 1/4	7	12	40 1/4	2-2 1/4	2-2 1/4
4 GA 11 E	54 1/4	23 1/4	8	18	46 1/4	2-2 1/4	2-2 1/4

boiler number	size of gas connections—inches—IPS			number of sections	number of burners
	mid or LP-air	nat or mxd	LP-gas		
1 GA 4 E	1/2	1/2	1/2	4	1
1 GA 5 E	1/2	1/2	1/2	5	1
1 GA 6 E	1/2	1/2	1/2	6	1
2 GA 4 E	3/4	1/2	1/2	4	2
2 GA 5 E	3/4	3/4	1/2	5	2
2 GA 6 E	1	3/4	1/2	6	2
2 GA 7 E	1	3/4	1/2	7	2
4 GA 8 E	1	1	3/4	8	4
4 GA 9 E	1 1/4	1	3/4	9	4
4 GA 11 E	1 1/4	1	3/4	11	4

