PLAINTIFF'S EXHIBIT

ASI-443

AMERICAN-Standard

*Hydronic Heating Equipment

trade price book

HH-2

JULY 5, 1961

*Hydronics . . . the science of heating and cooling with water.

notice:
The Trade Prices shown herein do not include freight or cartage.

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AMERICAN-Standard
PLUMBING AND HEATING DIVISION
AMERICAN RADIATOR & STANDARD SANITARY CORPORATION

BOILER RATINGS

Boiler ratings ("net I=B=R ratings of Mbh and sq ft of steam", "net rating sq ft water" and "installed radiation", where shown) represent the maximum net loads that may be connected to the boilers. Steam sq ft ratings are based on 240 Btu per sq ft and water sq ft ratings on 150 Btu (170° water) per sq ft. Allowances have been made in these ratings for normal piping (covered) and pick-up loads and for heating domestic hot water under the following conditions:

It is not necessary to increase the boiler size for domestic hot water supply when not more than two bathrooms are to be served or if the use of domestic hot water does not exceed seventy-five gallons in twenty-four hours.

Sufficient radiation must be installed for the requirements of the building.

In order to select the proper size boiler calculate the heat loss of the building, then divide this figure by 1,000 to get the heat loss expressed in Mbh. Select a steam or water boiler which has a net Mbh rating equal to or greater than this figure using the appropriate steam or water column.

See current literature for determining the size of radiators and convectors for hot water systems.

For an installation where unusual conditions such as large pipe losses, intermittent heating, unbalanced systems, etc., are encountered, it is suggested to calculate the actual piping loss and estimate the pick-up factor to adjust the load and then select the boiler from the published gross output in Mbh (1,000 Btu per hour).

GAS FIRED BOILERS

The input and output ratings are approved by the American Gas Association.

Ratings shown are for installations at sea level and at elevations up to 2,000 feet. For altitudes above 2,000 feet, ratings should be reduced at the rate of 4% for each 1,000 feet above sea level.

OIL FIRED BOILERS

The firing rates or I=B=R burner capacity—gallons per hour—are based on the use of oil having 140,000 Btu per gallon heat value, and with 10% CO_2 in the flue gas.

When more than two bathrooms are to be supplied with domestic hot water or when the demand for domestic hot water exceeds seventy-five gallons in twenty-four hours increase the boiler size 120 Btu per hour for each gallon of storage tank capacity.

When Built-in Tankless Heater is used increase the boiler size 12 Mbh for each bathroom in excess of two.

STOKER FIRED BOILERS

The firing rates or I=B=R burner capacity pounds per hour—are based on the use of coal having 13,000 Btu per pound heat value.

When more than two bathrooms are to be supplied with domestic hot water or when the demand for domestic hot water exceeds seventy-five gallons in twenty-four hours increase the boiler size 120 Btu per hour for each gallon of storage tank capacity.

HAND FIRED BOILERS

The ratings (installed radiation sq ft) are based on the use of stove or nut size bituminous coal, anthracite coal or coke with 13,000 Btu per pound heat value. See table below for selecting proper size boiler when using coal with less than 13,000 Btu per pound.

When more than two bathrooms are to be supplied with domestic hot water or when the demand for domestic hot water exceeds seventy-five gallons in twenty-four hours increase the boiler size 120 Btu per hour for each gallon of storage tank capacity.

BUILT-IN WATER HEATERS (for Arcoliner, Oakmont, Severn, Exbrook Boilers)

All tank type Built-in water heaters are rated on the basis of raising the temperature of the domestic hot water 100°F. in three hours with a minimum boiler water temperature of 180°F. on automatically fired boilers and 212°F. on hand fired boilers.

All tankless type Built-in water heaters are rated in gallons per minute on the basis of a minimum boiler water temperature of 180°F. on oil fired boilers. The maintaining of 180°F. boiler water temperature with rated flow through a tankless type Built-in water heater is dependent on the oil firing rate for the boiler.

In those areas where excessive lime exists in the water, use of Built-in Tankless Type water heater is not recommended except when provision is made for regularly cleaning the heater. Use of Tank Type heater is recommended in hard water areas.

WHEN PIPING LOSS IS NEGLIGIBLE

The ratings (installed radiation) of steam boilers (all fuels) and coal (hand fired) water boilers may be increased by the percentages shown below when the piping loss of the installation is negligible. The ratings (installed radiation) of automatically fired water boilers may be increased by 12% when the piping loss of the installation is negligible.

ratings Installed radiation sq ft		Increase ratings by
Steam (all fuels)	Water coal (hand fired)	
up to 250	up to 400	30%
251— 500	401— 800	28%
501—1000	801—1600	24%
1001—1500	1601—2400	21%
1501—2000	2401—3200	18%
2001—3000	3201—4800	15%
3001—4000	4801—6400	13%
over 4000	over 6400	12%

WHERE COAL HAS LESS THAN 13,000 BTU CONTENT

When selecting hand fired boilers for burning coal of lower heating value than 13,000 Btu per pound the following correction factors should be used. Multiply the net load by the proper factor and select the boiler with the corresponding rating (installed radiation sq ft).

heating value of coal	correction factor
13,000	1.00
12,500	1.04
12,000	1.08
11,500	1.13
11,000	1.18
10,500	1.24
10,000	1.30
9,500	1.37
9,000	1.44

REPAIR PARTS—TRADE PRICES

Boilers (all fuels) ..... List Price, less 25%
Gas Conversion Burners ..... List Price, less 25%
For List Prices see "American-Standard Radiator Heating Repair Parts Catalog" 1956 Edition.
Oil Burners ..... List Price, less 25%
For List Prices see "American-Standard Arcoflame Oil Burner Repair Parts Catalog" 1956 Edition.

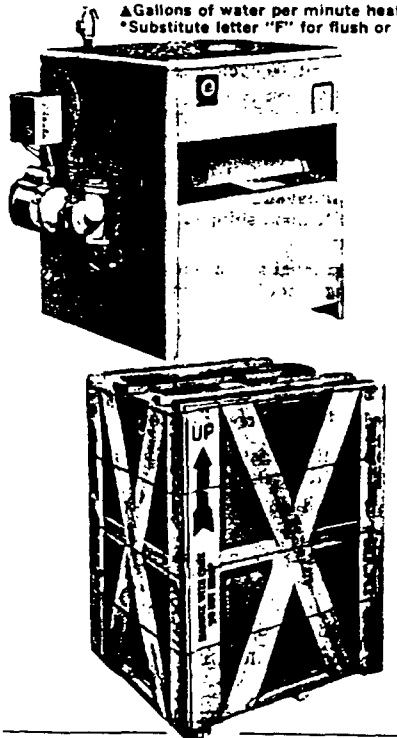
PACKAGED G-2 AMERICAN-Standard GAS BOILER

Designed and equipped with controls for forced circulation.
Factory asssmbled and crated.
Flush or Deluxe jacket.
Sections tested for 30 lbs. water working pressure.
"Eliminaire" (cast-in air eliminator in left end section).

WATER ONLY

packaged boiler number	A.G.A. input Mbh	A.G.A. output Mbh	tankless heater number	▲ I=W=H rating	■ net I=B=R rating Mbh	■ net rating sq ft water	Trade Price with standard equipment		chimney size		approx. shipping weight
	Mfd., Nat., Mixed and LP Gas; LP-Air Gas 525-1400 Btu						flush jacket	deluxe jacket	diameter inches	height feet	
Packaged boilers without tankless heater											
G-23-*P	60	48	...	...	36	240	$271.00	$285.00	4	20	315
G-24-*P	90	72	...	...	54	360	328.00	342.00	5	20	375
G-25-*P	120	96	...	...	72	480	372.00	386.00	6	20	455
G-26-*P	150	120	...	...	90	600	413.00	427.00	6	20	540
G-27-*P	180	144	...	...	108	720	449.00	463.00	6	20	630
Packaged boilers with factory installed tankless heater											
G-24-*PT	90	72	218	2½	54	360	$361.00	$375.00	5	20	390
G-25-*PT	120	96	222	3	72	480	407.00	421.00	6	20	470
G-26-*PT	150	120	222	3¼	90	600	448.00	462.00	6	20	550
G-27-*PT	180	144	222	3½	108	720	484.00	498.00	6	20	642

▲Gallons of water per minute heated from 40F to 140F with 200F boiler water temperature.
*Substitute letter "F" for flush or "D" for deluxe jacket.



Standard equipment all boilers: (see options, page 9)

V-600 combination diaphragm gas valve furnished for Natural, Manufactured, Mixed, LP-Air, and LP gas boilers. V-600 features built-in gas pressure regulator (except for LP Gas) and thermocouple type safety pilot switch. Manual shut-off valve; Pilot cock; Pilot filter (for manufactured gas and S.U.R.); Boiler drain; Draft hood; Insulated jacket; Transformer; ASME relief valve (30 lbs.); Theraltimeter (30 lbs.); Wiring Harness; 1¼" circulator with piping.

Controls regularly furnished are for 115 volt, 60 cycle current.

Additional standard equipment for boilers with heater:

Tankless heater as listed above.

RS-116-F combination immersion control (high and low limits, circulator operation, transformer and built-in relay), CA-520 thermostat.

Additional standard equipment for boilers less heater:

CA-520 thermostat, combination immersion high limit and reverse acting control.

Left hand end section without tankless heater opening.

Note: Packaged boilers are shipped with jacket, all controls (except thermostat), circulator and piping, main burners and manifold controls and piping factory installed and wired. CA-520 thermostat, manual shut-off valve and relief valve shipped fastened inside boiler crate. Draft hood shipped in separate carton for flush jacketed boiler and G-23-DP.

Ratings shown are for installations at sea level and at elevations up to 2,000 feet. For altitudes above 2,000 feet, ratings should be reduced at the rate of 4% for each 1,000 feet above sea level.

For ordering instructions for gas boilers, see page 15.

■ For complete information on boiler ratings, see page 2.
For discount on repairs, see page 2.

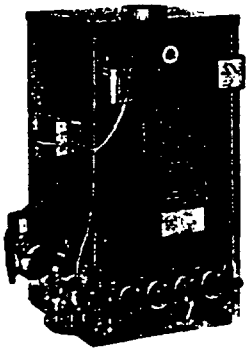
PACKAGED G-2 "FPB" AMERICAN-Standard GAS BOILERS

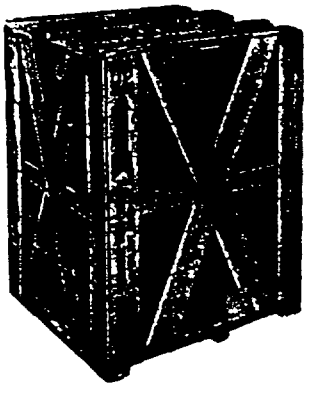
For Natural, Mixed, Manufactured Gases

Designed and equipped with controls for forced circulation.
Factory assembled and crated.
Flush jacket only.
"Eliminaire" (cast-in air eliminator in left end section).

WATER ONLY

packaged boiler number	A.G.A. input Mbh	A.G.A. output Mbh	■ net I=B=R rating Mbh	■ net rating sq. ft. water	Trade Price with standard equipment	chimney size		approx. shipping weight
						diameter inches	height feet	
G-23-FPB	60	48	36	240	$255.00	4	20	317
G-24-FPB	90	72	54	360	283.00	5	20	377
G-25-FPB	120	96	72	480	319.00	6	20	457
G-26-FPB	150	120	90	600	394.00	6	20	542
G-27-FPB	180	144	108	720	431.00	6	20	632





Standard equipment all boilers:

V-600 combination diaphragm gas valve furnished with Natural, Manufactured, Mixed gas boilers. V-600 features built-in gas pressure regulator and thermocouple type safety pilot switch. Manual shut-off valve; Pilot cock; Pilot filter (for manufactured gas and S.U.R.); Boiler drain; Draft hood; Insulated jacket; Transformer; ASME relief valve (30 lbs.); Theraltimeter (30 lbs.); Wiring Harness; 1¼" circulator.

CB-580 thermostat, CA-655 immersion limit control.

Left hand end section without tankless heater opening.

Controls regularly furnished are for 115 volt, 60 cycle current.

Note: Packaged boilers are shipped with jacket, all controls (except thermostat), circulator, main burners and manifold controls and piping factory installed and wired. CA-580 thermostat, manual shut-off valve and relief valve shipped fastened inside boiler crate. Draft hood shipped in separate carton.

Ratings shown are for installations at sea level and at elevations up to 2,000 feet. For altitudes above 2,000 feet, ratings should be reduced at the rate of 4% for each 1,000 feet above sea level.

For ordering instructions for gas boilers, see page 15.

Optional Equipment: (only those below available)

Runner Type Pilot Ignition for use with listed gases furnished at no charge when specified on order to meet local utility codes.

Floor Shield for Combustible Flooring. Add suffix letter "C" to boiler number and add $3.00 to Trade Price of boiler.

Pilot Filter for natural or mixed gas furnished at no charge when specified on order to meet local utility codes.

Manual Opening Feature on V-600 gas valve furnished at no additional when specified on order to meet local utility codes.

Zone Control Valve Sets available for water boilers, for details and prices, see page 30.

■ For complete information on boiler ratings, see page 2.
For discount on repairs, see page 2.

PACKAGED ALL-PURPOSE G-2 AMERICAN-Standard GAS BOILERS

Designed for forced or gravity circulation.

Factory assembled and crated.

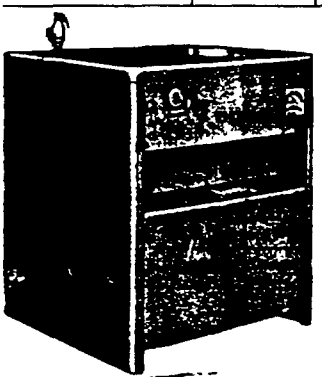
Deluxe Jacket.

Sections tested for 30 lbs. water working pressure.

"Eliminaire" (cast-in air eliminator in left end section)

WATER ONLY

packaged boiler number	A.G.A. input Mbh	A.G.A. output Mbh	■ net I=B=R rating Mbh	■ net rating sq ft water	Trade Price with standard equipment	chimney size		approx. shipping weight
	Mfd., Nat., Mixed and LP Gas; LP-Air Gas 525-1400 Btu					diameter inches	height feet	
G-23-DPG	60	48	36	240	$208.50	4	20	317
G-24-DPG	90	72	54	360	265.50	5	20	377
G-25-DPG	120	96	72	480	309.50	6	20	457
G-26-DPG	150	120	90	600	350.50	6	20	542
G-27-DPG	180	144	108	720	386.50	6	20	632



Standard equipment: (see options, page 9)

V-600 combination diaphragm gas valve furnished for all gases. V-600 features built-in gas pressure regulator (except for LP Gas) and thermocouple type safety pilot switch.

Manual shut-off valve; pilot cock; pilot filter (for manufactured gas and S.U.R.); boiler drain; draft hood; insulated jacket; transformer.

Water only:

Theraltimeter; ASME relief valve; CA-655 immersion limit control.

Controls regularly furnished are for 115 volt, 60 cycle current.

Room thermostat not included in above prices.

Ratings shown are for installations at sea level and at elevations up to 2,000 feet. For elevations above 2,000 feet, ratings should be reduced at the rate of 4% for each 1,000 feet, above sea level.

For ordering instructions for gas boilers, see page 15.

■ For complete information on ratings, see page 2.

For discount on repairs, see page 2.

04534

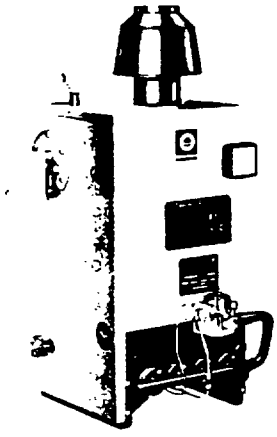
G-2 AMERICAN-Standard GAS BOILERS

Designed for forced circulation.
Flush or Deluxe jacket.
Factory Assembled Sections, tested for 30 lbs. water working pressure.
"Eliminaire" (cast-in air eliminator in left end section)

WATER ONLY

boiler number	A.G.A. input Mbh	A.G.A. output Mbh	tankless heater number	▲ I=W=H rating	■ net I=B=R rating Mbh	■ net rating sq ft water	Trade Price with standard equipment		chimney size		approx. shipping weight
	Mfd., Nat., Mixed and LP Gas; LP-Air Gas 525-1400 Btu						flush jacket	deluxe jacket	diameter inches	height feet	
Boilers without tankless heater section											
G-23-*	60	48	. . .	. . .	36	240	$187.00	$201.00	4	20	275
G-24-*	90	72	. . .	. . .	54	360	244.00	258.00	5	20	351
G-25-*	120	96	. . .	. . .	72	480	288.00	302.00	6	20	426
G-26-*	150	120	. . .	. . .	90	600	329.00	343.00	6	20	488
G-27-*	180	144	. . .	. . .	108	720	365.00	379.00	6	20	551
G-28-*	210	168	. . .	. . .	126	840	407.00	421.00	7	20	627
G-29-*	240	192	. . .	. . .	144	960	449.00	463.00	7	20	695
G-210-*	270	216	. . .	. . .	162	1080	480.00	494.00	7	20	759
G-211-*	300	240	. . .	. . .	180	1200	526.00	540.00	7	20	839
Boilers with factory installed tankless heater											
G-24-*T	90	72	218	2½	54	360	$285.00	$299.00	5	20	363
G-25-*T	120	96	222	3	72	480	331.00	345.00	6	20	438
G-26-*T	150	120	222	3¼	90	600	372.00	386.00	6	20	498
G-27-*T	180	144	222	3½	108	720	408.00	422.00	6	20	562
G-28-*T	210	168	222	3½	126	840	450.00	464.00	7	20	640
G-29-*T	240	192	222	3½	144	960	492.00	506.00	7	20	708
G-210-*T	270	216	222	3½	162	1080	523.00	537.00	7	20	774
G-211-*T	300	240	222	3½	180	1200	569.00	583.00	7	20	857

▲Gallons of water per minute heated from 40F to 140F with 200F boiler water temperature.
*Substitute letter "F" for flush or "D" for deluxe jacket.



Boiler with flush jacket and tankless heater

Standard equipment all boilers: (see options, page 9)

V-600 combination diaphragm gas valve furnished with G-23 through G-29 Natural, Mixed, LP-Air, LP gas boilers and G-23 through G-27 Manufactured gas boilers.

V-600 features built-in gas pressure regulator (except for LP Gas) and thermocouple type safety pilot switch. V-532 diaphragm gas valve furnished for all gases for sizes not listed above with separate gas pressure regulator (except LP) and Baso switch.

Manual shut-off valve; pilot cock; pilot filter (for manufactured gas and S.U.R.); Boiler drain; draft hood; insulated jacket; transformer; theraltimeter (30 lbs.); ASME relief valve (30 lbs.).

Additional standard equipment, boilers less heater:

CA-655 immersion limit control.

Left hand end section without tankless heater opening.

Additional standard equipment, boilers with heater:

Tankless heater as listed above.
Note: tankless heater is installed at factory in section assembly.

RS-116F combination immersion control (high and low limits, circulator operation, transformer and built-in relay).

Controls regularly furnished are for 115 volt, 60 cycle current.

Room thermostat not included in above prices.

Ratings shown are for installations at sea level and at elevations up to 2,000 feet. For altitudes above 2,000 feet, ratings should be reduced at the rate of 4% for each 1,000 feet above sea level.

For ordering instructions for gas boilers, see page 15.

■ For complete information on ratings, see page 2.
For discount on repairs, see page 2.

G-2 ALL-PURPOSE AMERICAN-Standard GAS BOILERS

Designed for water (forced or gravity) or steam.
Flush or Deluxe jacket.
Factory Assembled Sections.
Sections tested for 30 lbs. water working pressure.
"Eliminaire" (cast-in air eliminator in left end section)

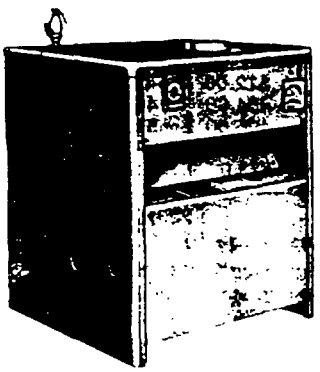
STEAM ONLY

boiler number	A.G.A. input Mbh	A.G.A. output Mbh	■ net I=B=R rating		Trade Price with standard equipment		chimney size		approx. shipping weight
	Mfd., Nat., Mixed and LP Gas; LP-Air Gas 525-1400 Btu		Mbh	sq ft	flush jacket	deluxe jacket	diameter inches	height feet	
G-23-*G	60	48	36	150	$224.00	$238.00	4	20	287
G-24-*G	90	72	54	225	281.00	295.00	5	20	363
G-25-*G	120	96	72	300	325.00	339.00	6	20	438
G-26-*G	150	120	90	375	366.00	380.00	6	20	500
G-27-*G	180	144	108	450	402.00	416.00	6	20	563
G-28-*G	210	168	126	525	444.00	458.00	7	20	639
G-29-*G	240	192	144	600	486.00	500.00	7	20	707
G-210-*G	270	216	162	675	517.00	531.00	7	20	771
G-211-*G	300	240	180	750	563.00	577.00	7	20	851

WATER ONLY

boiler number	A.G.A. input Mbh	A.G.A. output Mbh	■ net I=B=R rating Mbh	■ net rating sq ft water	Trade Price with standard equipment		chimney size		approx. shipping weight
	Mfd., Nat., Mixed and LP Gas; LP-Air Gas 525-1400 Btu				flush jacket	deluxe jacket	diameter inches	height feet	
G-23-*G	60	48	36	240	$187.00	$201.00	4	20	277
G-24-*G	90	72	54	360	244.00	258.00	5	20	353
G-25-*G	120	96	72	480	288.00	302.00	6	20	428
G-26-*G	150	120	90	600	329.00	343.00	6	20	490
G-27-*G	180	144	108	720	365.00	379.00	6	20	553
G-28-*G	210	168	126	840	407.00	421.00	7	20	629
G-29-*G	240	192	144	960	449.00	463.00	7	20	697
G-210-*G	270	216	162	1080	480.00	494.00	7	20	761
G-211 *G	300	240	180	1200	526.00	540.00	7	20	841

*Substitute letter "F" for flush or "D" for deluxe jacket.



Standard equipment: (see options, page 9)

V-600 combination diaphragm gas valve furnished with G-23 through G-29 Natural, Mixed, LP-Air, LP gas boilers and G-23 through G-27 Manufactured gas boilers. V-600 features built-in gas pressure regulator (except for LP Gas) and thermocouple type safety pilot switch. V-532 diaphragm gas valve furnished for all gases for sizes not listed above with separate gas pressure regulator (except LP) and Baso switch. Manual shut-off valve; pilot cock; pilot filter (for manufactured gas and S.U.R.); boiler drain; draft hood; insulated jacket; transformer.

Steam only:
Steam gauge; ASME safety valve; 450-BA-1 boiler pressure limit control; gauge glass with trimmings; external resetting low water cut-off.

Water only:
Theraltimeter; ASME relief valve; CA-655 immersion limit control

Controls regularly furnished are for 115 volt, 60 cycle current.
Room thermostat not included in above prices.
Ratings shown are for installations at sea level and at elevations up to 2,000 feet. For altitudes above 2,000 feet, ratings should be reduced at the rate of 4% for each 1,000 feet above sea level.
For ordering instructions for gas boilers, see page 15.

■ For complete information on ratings, see page 2.
For discount on repairs, see page 2.

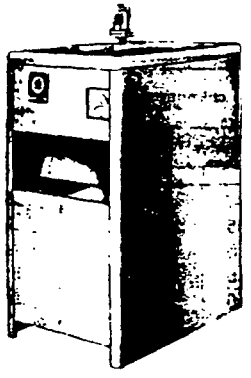
04536

G-2 ALL-PURPOSE AMERICAN-Standard GAS BOILER

FOR USE WITH "DW" EQUIPMENT

DIRECT TYPE — *Water boilers for hot water supply*

Flush or Deluxe jacket.
Hydrostatically tested at 200 lbs.
Working pressure 80 lbs.
Not recommended for use in hard water areas.



boiler number	A.G.A. input Mbh	A.G.A. output Mbh	rating—gallons water per hour			Trade Price with "DW" equipment		approx. shipping weight
			60° rise	80° rise	100° rise	flush jacket	deluxe jacket	
	Mfd., Nat., Mixed and LP Gas; LP-Air Gas 525-1400 Btu							
G-23-*G	60	48	96	72	58	$201.00	$215.00	277
G-24-*G	90	72	144	108	86	258.00	272.00	353
G-25-*G	120	96	192	144	115	302.00	316.00	428
G-26-*G	150	120	240	180	144	343.00	357.00	490
G-27-*G	180	144	288	216	173	379.00	393.00	553
G-28-*G	210	168	336	252	201	421.00	435.00	629
G-29-*G	240	192	384	288	230	463.00	477.00	697
G-210-*G	270	216	432	324	260	494.00	508.00	761
G-211-*G	300	240	480	360	288	540.00	554.00	841

*Substitute letter "F" for flush or "D" for deluxe jacket.

"DW" standard equipment: (see options, page 9)

In addition to boiler for water with "standard equipment" page 7, "DW" boilers are furnished with Ther-pressure-meter instead of Theraltimeter; 80 lb. ASME relief valve instead of 30 lb. valve; CA-666 immersion operating control for use in storage tank; tank thermometer; name and rating plate for 80 lbs. working pressure.

For ordering instructions for gas boilers, see page 15.

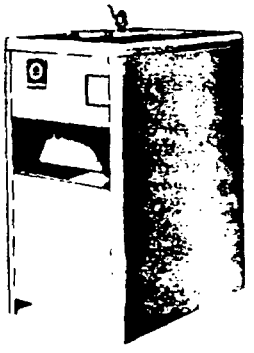
Controls regularly furnished are for 115 volt, 60 cycle current.

Ratings shown are for installations at sea level and at elevations up to 2,000 feet. For altitudes above 2,000 feet, ratings should be reduced at the rate of 4% for each 1,000 feet above sea level.

FOR USE WITH "IS" EQUIPMENT

INDIRECT TYPE — *Steam boilers for hot water supply*

Flush or Deluxe jacket.



boiler number	A.G.A. input Mbh	A.G.A. output Mbh	rating—gallons water per hour			Trade Price with "IS" equipment		approx. shipping weight
			60° rise	80° rise	100° rise	flush jacket	deluxe jacket	
	Mfd., Nat., Mixed and LP Gas; LP-Air Gas 525-1400 Btu							
G-23-*G	60	48	96	71	58	$234.00	$248.00	287
G-24-*G	90	72	144	107	86	291.00	305.00	363
G-25-*G	120	96	192	143	115	335.00	349.00	438
G-26-*G	150	120	240	179	144	376.00	390.00	500
G-27-*G	180	144	288	215	173	412.00	426.00	563
G-28-*G	210	168	336	251	201	454.00	468.00	639
G-29-*G	240	192	384	287	230	496.00	510.00	707
G-210-*G	270	216	432	323	259	527.00	541.00	771
G-211-*G	300	240	480	359	288	573.00	587.00	851

*Substitute letter "F" for flush or "D" for deluxe jacket.

"IS" standard equipment: (see options, page 9)

In addition to boiler for steam with "standard equipment" page 7, "IS" boilers are furnished with CA-666 immersion operating control for use in storage tank.

For ordering instructions for gas boilers, see page 15.

Controls regularly furnished are for 115 volt, 60 cycle current.

Ratings shown are for installations at sea level and at elevations up to 2,000 feet. For altitudes above 2,000 feet, ratings should be reduced at the rate of 4% for each 1,000 feet above sea level.

For discount on repairs, see page 2.

G-2 OPTIONAL EQUIPMENT

ALL BOILERS (Pages 3 thru 8 except "FPB" Page 4):

Runner type pilot ignition for use with listed gases furnished at no charge when specified on order to meet local Utility codes.

Push button electric ignition for use with listed gases. Not available with self-energizing controls. Specify on order and add $11.85 to Trade Price of boiler

Floor shield for combustible flooring. Add suffix letter "C" to boiler number and add $3.00 to Trade Price of boiler.

Pilot filter for natural or mixed gas furnished at no charge when specified on order to meet local utility codes.

Manual opening feature on V-600 or V-532 gas valves furnished at no additional charge when specified on order to meet local utility codes.

Zone control valve sets available for water boilers, for details and prices, see page 30.

PACKAGED GAS BOILERS (Page 3 only): only those options listed above applicable to these boilers.

GAS BOILERS (Page 6 only) for forced circulation:

Tankless heaters No. 226 or 232; available factory installed in place of No. 222, but limited to certain boiler sizes. See table below for I=W=H ratings and applicable boiler size. If desired, specify on order and add to Trade Price of boiler with tankless heater the following charges:

Heater No.	Added Charge
226	$ 8.00
232	12.00

Dual-gas boilers: available for both natural and propane gases. See below for added charges to boiler prices on Page 6.

boiler no.	added charge	boiler no.	added charge
G-23	$50.00	G-28	$60.00
G-24	52.00	G-29	62.00
G-25	54.00	G-210	64.00
G-26	56.00	G-211	66.00
G-27	58.00		

Equipment includes in addition to standard trim two V-532 gas valves, two manifolds with spuds factory assembled, outdoor changeover control.

Room thermostat prices shown on page 32.

PACKAGED ALL-PURPOSE BOILERS (Page 5 only):

Tankless heaters: when boilers (5 thru 7 section) are to be used for forced circulation I=W=H tankless heaters can be installed in opening used for gravity tapping flange cover, but limited to certain boiler sizes. See table below for I=W=H ratings and applicable boiler size. Tankless heaters can be ordered shipped separately at following prices:

Heater No.	Trade Price
222	$21.00
226	29.00

Self-energizing controls (consists of special gas valve, pilot burner, limit control) for mfd., natural and mixed gas, available when specified on order at no additional charge. Special thermostat required, for Trade Price, see page 32.

Room thermostat prices shown on page 32.

ALL-PURPOSE BOILERS (Page 7 only):

WATER BOILERS ONLY:

Tankless heaters: when boilers (5 thru 11 section) are to be used for forced circulation I=W=H tankless heaters can be installed in opening used for gravity tapping flange cover, but limited to certain boiler sizes. See table below for I=W=H ratings and applicable boiler size. Tankless heaters can be ordered shipped separately at following prices:

Heater No.	Trade Price
222	$21.00
226	29.00
232	33.00

STEAM BOILERS ONLY:

McDonnell-Miller No. 101-24V Electric Water Feeder can be added to the No. 67 Low Water Cut-off furnished with G-2 All-Purpose Steam Boilers to provide Low Water Cut-off and Feeder Combination. If desired specify on order and add $34.57 to Trade Price of Steam Boiler.

Side Outlet Pop Valve may be substituted at no additional charge if specified on order to meet local code requirements.

WATER OR STEAM BOILERS:

Dual-gas boilers: available for natural and propane gas, see added charges shown under "GAS BOILERS (Page 6 only)."

Self-energizing controls (consists of special gas valve, pilot burner, limit control, low water cut-off for steam boilers) for mfd., nat. and mixed gas, available when specified on order at no additional charge. Special thermostat required, for Trade Price, see page 32.

Room thermostat prices shown on page 32.

G-2 Tankless Heaters

boiler number	A.G.A. input Btu/hr.	I=W=H Rating •			
		heater ▲ 218	heater ▲ 222	heater ▲ 226	heater ▲ 232
G-24	90,000	2½	—	—	—
G-25	120,000	—	3	—	—
G-26	150,000	—	3¼	—	—
G-27	180,000	—	3½	4	—
G-28	210,000	—	3½	4¼	—
G-29	240,000	—	3½	4¼	4½
G-210	270,000	—	3½	4¼	4¾
G-211	300,000	—	3½	4½	5

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.

• Gallons water per minute heated from 40°F to 140°F with 200°F boiler water temperature.

▲ Last two digits designate lineal feet of Tru Fin tubing in heater coil.

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AMERICAN-Standard HYDRONIC HEATING

G-40 AMERICAN-Standard GAS BOILERS

For Built-In Water Heater Arrangement, see page 11.
Deluxe jacket.
Tested and equipped for 50 lbs. water working pressure.
"Eliminaire" (cast-in air eliminator in left end section).

STEAM ONLY — FOR NATURAL, MFD., MIXED, GASES ONLY

boiler number	A.G.A. input Mbh	A.G.A. output Mbh	■ net I=B=R rating Mbh	■ net I=B=R rating sq. ft.	Trade Price with standard equipment	chimney size diam. inches	chimney size ht. ft.	approx. shipping weight
G-403	150	120	90.0	375	$380.00	6	20	858
G-404	225	180	135.0	563	477.00	7	20	1027
G-405	300	240	180.0	750	577.00	7	20	1195
G-406	375	300	225.1	938	697.00	8	20	1370
G-407	450	360	270.1	1125	787.00	8	20	1544
G-408	525	420	315.1	1313	887.00	9	20	1713
G-409	600	480	360.1	1500	967.00	10	20	1880
G-4010	675	540	405.1	1688	1057.00	10	20	2050

WATER ONLY

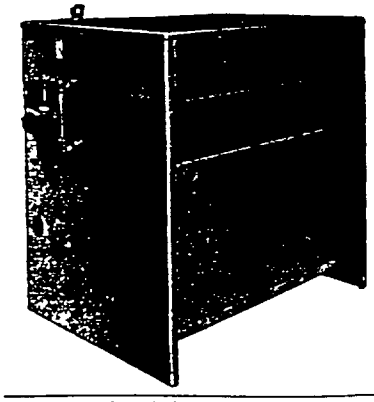
boiler number	A.G.A. input Mbh	A.G.A. output Mbh	■ net I=B=R rating Mbh	■ net rating sq. ft. water	Trade Price with standard equipment	chimney size diam. inches	chimney size ht. ft.	approx. shipping weight
G-403	150	120	90.0	600	$343.00	6	20	827
G-404	225	180	135.0	900	440.00	7	20	998
G-405	300	240	180.0	1200	540.00	7	20	1162
G-406	375	300	225.1	1500	660.00	8	20	1349
G-407	450	360	270.1	1800	750.00	8	20	1517
G-408	525	420	315.1	2100	850.00	9	20	1686
G-409	600	480	360.1	2400	930.00	10	20	1856
G-4010	675	540	405.1	2700	1070.00	10	20	2026

STEAM ONLY — FOR LP AND LP-AIR GAS ONLY

boiler number	A.G.A. input Mbh	A.G.A. output Mbh	■ net I=B=R rating Mbh	■ net I=B=R rating sq. ft.	Trade Price with standard equipment	chimney size diam. inches	chimney size ht. ft.	approx. shipping weight
G-403	120	96	72.0	300	$380.00	6	20	858
G-404	180	144	108.0	450	477.00	7	20	1027
G-405	240	192	144.0	600	577.00	7	20	1195
G-406	300	240	180.0	750	697.00	8	20	1370
G-407	360	288	216.1	900	787.00	8	20	1544
G-408	420	336	252.1	1050	887.00	9	20	1713
G-409	480	384	288.1	1200	967.00	10	20	1880
G-4010	540	432	324.1	1350	1057.00	10	20	2050

WATER ONLY

boiler number	A.G.A. input Mbh	A.G.A. output Mbh	■ net I=B=R rating Mbh	■ net rating sq. ft. water	Trade Price with standard equipment	chimney size diam. inches	chimney size ht. ft.	approx. shipping weight
G-403	120	96	72.0	480	$343.00	6	20	827
G-404	180	144	108.0	720	440.00	7	20	998
G-405	240	192	144.0	960	540.00	7	20	1162
G-406	300	240	180.0	1200	660.00	8	20	1349
G-407	360	288	216.1	1440	750.00	8	20	1517
G-408	420	336	252.1	1680	850.00	9	20	1686
G-409	480	384	288.1	1920	930.00	10	20	1856
G-4010	540	432	324.1	2160	1030.00	10	20	2026



Standard equipment includes: (see options, pages 11 and 15)

V-531 diaphragm gas valve with manual opening feature; Baso automatic pilot switch for non-100% shut-off (100% shut-off controls for LP-air and LP gases consists of Baso combination pilot switch and valve with auxiliary Baso pilot valves. Optional other gases at no additional charge). manual shut-off valve; pilot filter (mfd gas and SUR); gas pressure regulator (except for LP gas); boiler drains and pilot cocks; insulated jacket; draft hood; water heater opening cover plates.

Steam only:
Steam gauge; ASME safety valve; 450-BA-1 boiler pressure limit control; gauge glass with trimmings; external resetting low water cut-off.

Water only:
Theraltimeter; ASME relief valve for 50 lbs.; CA-655 immersion limit control.
Controls regularly furnished are for 115 volt, 60 cycle current.
Ratings shown are for installations at sea level and at elevations up to 2,000 feet.
For elevations above 2,000 feet, ratings should be reduced at the rate of 4% for each 1,000 feet above sea level.
Room thermostat not included in above prices.
For complete information on optional equipment, see pages 11 and 15.
For ordering instructions for gas boilers, see page 15.

■ For complete information on boiler ratings, see page 2. For discount on repairs, see page 2.

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G-40 OPTIONAL EQUIPMENT

BOILERS WITH TANKLESS HEATERS: water (for forced circulation) and steam boilers can be furnished with tankless heaters. Some heaters are limited to certain boiler sizes as shown in ratings table below.

Tankless heaters with controls for water boilers: RS-116-F packed in trim box in place of CA-655 for standard equipment.

Tankless heaters with controls for steam boilers: additional CA-666 immersion operating control packed in trim box.

If tankless heaters with controls are desired, specify on order with boiler and add to Trade Price of boiler with standard equipment the following charges.

Tankless heaters less controls will be furnished when specified at the Trade Prices shown below for heaters only.

HEATER NO.	HEATER WITH CONTROLS		HEATER ONLY
	Water	Steam	Water or Steam
218	$43.00	$29.00	$19.00
222	45.00	31.00	21.00
226	53.00	39.00	29.00
232	57.00	43.00	33.00
445	74.00	60.00	50.00

Water flow regulators sized for tankless heater involved will be furnished with heater when specified on order to meet local Utility requirement at $2.00 Trade Price additional charge per heater.

Factory assembled sections: G-403 through G-406 can be shipped with sections factory assembled when specified on order. If desired less tankless heater, add $15.00 to Trade Price of boiler. If desired with factory installed tankless heater, specify heater number, and add $15.00 plus price of heater to Trade Price of boiler.

Dual Gas Equipment: available with steam or water boilers for use with Natural and Propane gases only. In addition to standard trim, dual gas equipment includes tube within a tube manifold, two V-532 gas valves, gas pressure regulator (natural gas only), two manual shut-off valves, ribbon burners, 100% shut-off (consists of Baso combination pilot valve and switch with auxiliary Baso pilot valves), pilot cock, outdoor thermostatic adjustable changeover control. Boiler selection should be based on the A.G.A. and I=B=R ratings shown for LP gas. If desired specify on order and add to Trade Price of boiler with standard trim the following charge:

Boiler Number	Add to Boiler Trade Price	Boiler Number	Add to Boiler Trade Price
G-403	$60.00	G-407	$68.00
G-404	62.00	G-408	70.00
G-405	64.00	G-409	72.00
G-406	66.00	G-4010	74.00

Electronic Control Systems: available with steam or water boilers. If desired refer to page 15 for complete details and additional Trade Price charges.

Tri-cock tappings and valves: if desired for steam boilers to meet local code specify on order and add $4.00 to Trade Price of steam boiler.

Self-energizing controls: available for steam or water (gravity) less tankless heater for natural and mixed gases only. Equipment includes special gas valve, pilot burner, limit control, low water cut-off for steam boilers. Furnished at no additional charge when specified on order Special room thermostat required, for Trade Price see Page 32.

McDonnell-Miller No. 101-24 Volt Electric Water Feeder: can be added to No. 67-GAR low water cut-off furnished with G-40 Steam Boilers to provide low water cut-off and feeder combination. If desired specify on order and add $34.57 to Trade Price of steam boiler.

McDonnell-Miller No. 47-2 low water cut-off and feeder combination may be specified in place of regularly furnished No. 67-GAR for steam boilers. If desired specify on order and add $33.00 to Trade Price of steam boiler.

McDonnell-Miller No. 247-2 low water cut-off and feeder combination for water boilers is available with G-40 Water Gas Boilers when specified on order. Add to the Trade Price of the water boiler with regular equipment the current Trade Price of this item shown in the current McDonnell-Miller Price Sheet.

Runner type pilot ignition: all sizes of G-40 are available with Runner type pilot ignition for mfd., nat. and mixed gas non-100% shut-off at no additional charge when specified on order to meet local Utility codes.

Push button electric ignition: all sizes of G-40 are available with push button electric ignition for use with mfd., nat. and mixed gas non-100% shut-off and will be furnished when specified on order at $11.85 added charge.

Pilot filters for G-40 for natural and mixed gases available at no additional charge when specified on order to meet local utility codes.

Room thermostats available at Trade Prices shown on Page 32.

"IS" Equipment: G-40 Gas Boilers can be furnished for use with Indirect Steam Hot Water Supply systems. CA-666 immersion operating control for use in storage tank is required and will be furnished when specified on order at extra Trade Price as shown on Page 32.

V-532 Diaphragm Gas Valve without manual opening may be substituted for V-531 Gas Valve with manual opening at no additional charge. If desired, specify on order.

Side Outlet Steam Pop Valves may be substituted at no additional charge if specified on order to meet local code requirements.

Jacket Extension: covers all controls on left end of boiler. If desired, specify on order and add $25.00 to Trade Price of Boiler.

G-40 Tankless Heater Ratings (Gallons per minute*)

Boiler	HEATER 218		HEATER 222		HEATER 226		HEATER 232		HEATER 445	
	Steam	Water	Steam	Water	Steam	Water	Steam	Water	Steam	Water
G-403	3	4	—	—	—	—	—	—	—	—
G-404	3½	4	4	4½	—	—	—	—	—	—
G-405	3½	4	4	4½	5½	6	—	—	—	—
G-406	3½	4	4	4½	5½	6	—	—	—	—
G-407	3½	4	4	4½	6	6½	7	7½	—	—
G-408	3½	4	4	4½	6	6½	7½	8	8½	9
G-409	3½	4	4	4½	6	6½	7½	8	8½	9
G-4010	3½	4	4	4½	6	6½	7½	8	8½	9

Gallons of water per minute raised from 40°F. to 140°F. Last two digits of heater numbers indicate lineal feet of Tru-fin tubing in heater coil.

G-60 AMERICAN-Standard GAS BOILER

for Natural, Mixed, Manufactured Gases

Jacketed.

Tested and equipped for 50 lbs. water working pressure.

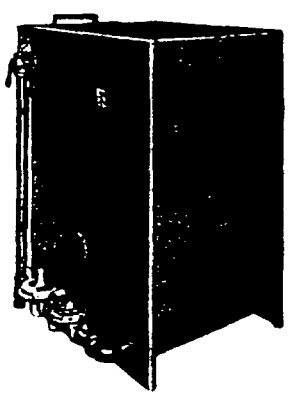
Available for 80 lbs. working pressure on special order.

STEAM ONLY

boiler number	A.G.A. input Mbh	A.G.A. output Mbh	■ net I=B=R rating Mbh	■ net I=B=R rating sq ft	Trade Price with standard equipment	chimney size diam. in.	chimney size ht ft	approx. shipping weight
G-606	725	580	435.1	1813	$ 998.00	11	20	2751
G-607	870	696	522.1	2176	1155.00	12	20	3151
G-608	1015	812	609.2	2538	1320.00	13	20	3537
G-609	1160	928	696.2	2901	1498.00	13	20	3934
G-6010	1305	1044	783.2	3263	1675.00	14	20	4346
G-6011	1450	1160	870.2	3626	1820.00	15	20	4739
G-6013	1740	1392	1054.5	4394	2129.00	15	20	6069
G-6015	2030	1624	1248.3	5201	2445.00	16	20	6855
G-6017	2320	1856	1438.8	5995	2748.00	16	30	7640
G-6019	2610	2088	1621.1	6755	3057.00	17	30	8523
G-6021	2900	2320	1801.2	7505	3366.00	18	30	9312
G-6022	3045	2436	1891.3	7880	3570.00	19	30	10154
G-6025	3480	2784	2161.5	9006	4004.00	20	30	11361
G-6028	3915	3132	2430.1	10126	4333.00	21	30	12648
G-6031	4350	3480	2701.9	11258	4932.00	22	30	13841
G-6033	4640	3712	2880.4	12002	5221.00	24	30	15068
G-6037	5220	4176	3245.3	13522	5840.00	26	30	16720
G-6041	5800	4640	3602.5	15010	6458.00	26	30	18346

WATER ONLY

boiler number	A.G.A. input Mbh	A.G.A. output Mbh	■ net I=B=R rating Mbh	■ net rating sq ft water	Trade Price with standard equipment	chimney size diam. in.	chimney size ht ft	approx. shipping weight
G-606	725	580	435.1	2900	$ 961.00	11	20	2741
G-607	870	696	522.1	3480	1118.00	12	20	3141
G-608	1015	812	609.2	4060	1283.00	13	20	3527
G-609	1160	928	696.2	4640	1461.00	13	20	3923
G-6010	1305	1044	783.2	5220	1638.00	14	20	4335
G-6011	1450	1160	870.2	5800	1783.00	15	20	4728
G-6013	1740	1392	1054.5	7030	2092.00	15	20	6049
G-6015	2030	1624	1248.3	8320	2408.00	16	20	6835
G-6017	2320	1856	1438.8	9590	2711.00	16	30	7620
G-6019	2610	2088	1621.1	10805	3020.00	17	30	8503
G-6021	2900	2320	1801.2	12010	3329.00	18	30	9292
G-6022	3045	2436	1891.3	12610	3533.00	19	30	10139
G-6025	3480	2784	2161.5	14410	3967.00	20	30	11334
G-6028	3915	3132	2430.1	16200	4296.00	21	30	12616
G-6031	4350	3480	2701.9	18010	4895.00	22	30	13809
G-6033	4640	3712	2880.4	19205	5184.00	24	30	15036
G-6037	5220	4176	3245.3	21635	5803.00	26	30	16690
G-6041	5800	4640	3602.5	24015	6421.00	26	30	18316



Standard equipment includes: (see options, pages 14 and 15)

V-531 diaphragm gas valve with manual opening feature; Baso automatic pilot switch for non-100% shut-off (100% shut-off controls consisting of Baso combination pilot switch and valve with auxiliary Baso pilot valves, optional at no additional charge); manual shut-off valve; pilot filter (mfd gas and SUR); gas pressure regulator; boiler drains and pilot cocks; insulated jacket; draft hood.

Steam only:
Steam gauge; ASME safety valve; 450-BA-1 boiler pressure limit control; gauge glass with trimmings; resetting low water cut-off.

Water only:
Theraltimeter and ASME relief valve for 50 lbs.; CA-655 immersion limit control.

Controls regularly furnished are for 115 volt, 60 cycle current.

Ratings shown are for installations at sea level and at elevations up to 2,000 feet. For elevations above 2,000 feet, ratings should be reduced at the rate of 4% for each 1,000 feet above sea level.

Room thermostat not included in above prices.

For complete information on optional equipment, see pages 14 and 15.

For ordering instructions for gas boilers, see page 15.

■ For complete information on boiler ratings, see page 2.
For discount on repairs, see page 2.

G-60 AMERICAN-Standard GAS BOILER

for LP and LP-Air Gas only

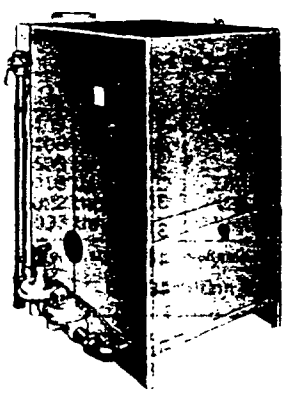
Jacketed.
Tested and equipped for 50 lbs. water working pressure.
Available for 80 lbs. working pressure on special order.

STEAM ONLY

boiler number	A.G.A. input	A.G.A. output	■ net I=B=R rating		Trade Price with standard equipment	chimney size		approx. shipping weight
	Mbh	Mbh	Mbh	sq. ft.		diam. in.	ht. ft.	
G-606	650	520	390.1	1625	$ 998.00	11	20	2751
G-607	780	624	468.[illegible]	1950	1155.00	12	20	3151
G-608	910	728	54[illegible]	2276	1320.00	13	20	3537
G-609	1040	832	624.[illegible]	2601	1498.00	13	20	3934
G-6010	1170	936	702.2	2926	1675.00	14	20	4346
G-6011	1300	1040	780.2	3251	1820.00	15	20	4739
G-6013	1560	1248	936.2	3901	2129.00	15	20	6069
G-6015	1820	1456	1108.1	4617	2445.00	16	20	6855
G-6017	2080	1664	1282.0	5342	2748.00	16	30	7640
G-6019	2340	1872	1452.3	6051	3057.00	17	30	8523
G-6021	2600	2080	1614.9	6729	3366.00	18	30	9312
G-6022	2730	2184	1695.7	7065	3570.00	19	30	10154
G-6025	3120	2496	1937.9	8075	4004.00	20	30	11361
G-6028	3510	2808	2180.1	9084	4333.00	21	30	12648
G-6031	3900	3120	2422.4	10093	4932.00	22	30	13841
G-6033	4160	3328	2585.4	10773	5221.00	24	30	15068
G-6037	4680	3744	2903.7	12099	5840.00	26	30	16720
G-6041	5200	4160	3229.8	13458	6458.00	26	30	18346

WATER ONLY

boiler number	A.G.A. input Mbh	A.G.A. output Mbh	■ net I=B=R rating Mbh	■ net rating sq. ft. water	Trade Price with standard equipment	chimney size		approx. shipping weight
						diam. in.	ht. ft.	
G-606	650	520	390.1	2600	$ 961.00	11	20	2741
G-607	780	624	468.1	3120	1118.00	12	20	3141
G-608	910	728	546.1	3640	1283.00	13	20	3527
G-609	1040	832	624.2	4160	1461.00	13	20	3923
G-6010	1170	936	702.2	4680	1638.00	14	20	4335
G-6011	1300	1040	780.2	5200	1783.00	15	20	4728
G-6013	1560	1248	936.2	6240	2092.00	15	20	6049
G-6015	1820	1456	1108.1	7385	2408.00	16	20	6835
G-6017	2080	1664	1282.0	8545	2711.00	16	30	7620
G-6019	2340	1872	1452.3	9680	3020.00	17	30	8503
G-6021	2600	2080	1614.9	10765	3329.00	18	30	9292
G-6022	2730	2184	1695.7	11305	3533.00	19	30	10139
G-6025	3120	2496	1937.9	12920	3967.00	20	30	11334
G-6028	3510	2808	2180.1	14535	4296.00	21	30	12616
G-6031	3900	3120	2422.4	16150	4895.00	22	30	13809
G-6033	4160	3328	2585.4	17235	5184.00	24	30	15036
G-6037	4680	3744	2903.7	19360	5803.00	26	30	16690
G-6041	5200	4160	3229.8	21530	6421.00	26	30	18316



Standard equipment includes: (see options, pages 14 and 15)

V-531 diaphragm gas valve with manual opening; 100% shut-off (100% shut-off controls for LP-air and LP gases consists of Baso combination pilot switch and valve with auxiliary Baso pilot valves); manual shut-off valve; gas pressure regulator (except for LP-gas); boiler drains and pilot cocks; insulated jacket; draft hood.

Steam only:

Steam gauge; ASME safety valve; 450-BA-1 boiler pressure limit control; gauge glass with trimmings; resetting low water cut-off.

Water only:

Theraltimeter and ASME relief valve for 50 lbs.; CA-655 immersion limit control.

Controls regularly furnished are for 115 volt, 60 cycle current.

Ratings shown are for installations at sea level and at elevations up to 2,000 feet. For elevations above 2,000 feet, ratings should be reduced at the rate of 4% for each 1,000 feet above sea level.

Room thermostat not included in above prices.

For complete information on optional equipment, see pages 14 and 15.

For ordering instructions for gas boilers, see page 15.

■ For complete information on boiler ratings, see page 2.

For discount on repairs, see page 2.

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G-60 OPTIONAL EQUIPMENT

Push button electric ignition: all sizes of G-60 are available with push button electric ignition for use with mfd., nat. and mixed gas non-100% shut-off, and will be furnished when specified on order at the following added charges:

boiler size	added charge
G-606 thru G-6011	$11.85
G-6013 thru G-6021	23.70
G-6022 thru G-6031	35.55
G-6033 thru G-6041	47.40

Pilot filters for G-60 for natural and mixed gases available at no additional charge when specified on order to meet local utility codes.

Room thermostats available at Trade Prices shown on page 32.

McDonnell-Miller Low Water Cut-off No. 67-AR external type can be substituted for the regular No. 69 Low Water Cut-off on G-60 steam gas boilers at no additional charge. If desired, specify on order.

"IS" Equipment: G-60 gas boilers can be furnished for use with Indirect Steam Hot Water Supply Systems. CA-666 immersion operating control for use in storage tank is required and will be furnished when specified on order at extra Trade Price as shown on page 32. This control operates gas valves on boiler electrically as required. Shipping weights of gas boilers for hot water supply are same as shown for regular gas boilers.

Tri-cock tappings and valves; if desired for steam boiler to meet local code specify on order and add $4.00 to Trade Price of steam boiler.

G-60 available tested at 80 lbs. water working pressure when specified on order. Add $3.00 per section to Trade Price of water boiler.

McDonnell-Miller No. 47-2 and 51-2 Low Water Cut-off and Feeder combinations are available with G-60 steam gas boilers in place of regularly furnished No. 69 low water cut-off, when specified on order, at the following added charges to Trade Price of steam boilers with regular equipment:

boiler number	combination number	added charges
G-606 thru G-6011	47-2	$33.00
G-6013 thru G-6041	51-2	46.00

McDonnell-Miller No. 247-2 and 51-2 low water Cut-off and Feeder combinations for water boilers are available with G-60 water gas boilers when specified on order. Add to the Trade Price of the water boiler with regular equipment the current Trade Price for these items shown in the current McDonnell-Miller price sheet.

V-532 Diaphragm gas valve without manual opening may be substituted for V-531 Gas valve with manual opening at no additional charge. If desired specify on order.

Side Outlet Steam Pop Valves may be substituted at no additional charge if specified on order to meet local code requirements.

G-60 external water heater tappings: maximum size all sections 1¼". Add to Trade Price of boiler $2.00 per section tapping and $2.00 per jacket tapping.

G-60 Right end steam trim tappings for pressure gauge and water column gauge glass furnished when specified on order at Trade Price addition charge of $10.00 per boiler.

G-60 DUAL GAS BOILERS
Natural and Propane Gases

G-60 steam or water boilers are available with dual gas equipment using natural and propane gases. If desired specify on order and add the charge shown below to boiler with standard equipment. Selection of the boiler should be based on the A.G.A. and I=B=R ratings shown on page 13.

boiler number	add to boiler Trade Price	boiler number	add to boiler Trade Price
G-606	$ 95.00	G-6019	$205.00
G-607	100.00	G-6021	225.00
G-608	105.00	G-6022	240.00
G-609	110.00	G-6025	270.00
G-6010	115.00	G-6028	300.00
G-6011	120.00	G-6031	350.00
G-6013	145.00	G-6033	375.00
G-6015	165.00	G-6037	445.00
G-6017	185.00	G-6041	480.00

Dual gas equipment:

In addition to boiler with standard trim dual gas boilers include:

Two V-532 diaphragm gas valves; two manifolds; gas pressure regulator (natural gas only); manual shut-off valves, ribbon burners; 100% safety shut-off (consists of Baso combination pilot switch and valve with auxiliary Baso pilot valves), pilot cock; outdoor thermostatic adjustable changeover control

Room thermostat not included in above prices

For ordering instructions for gas boilers see page 15

G-40 AND G-60 ELECTRONIC CONTROL PANEL SYSTEMS

Panel System EPG-0: Specifically designed for Factory Mutual (F.M.) and Factory Insurance Association (F.I.A.) installations. Provides electronic supervision of each primary pilot in each combustion chamber (1 to 4) and intermittent electric ignition of all pilots. Complete automatic operation of boiler. 100% safety shut-off. Equipment includes: one main control panel with 1 to 3 auxiliary panels pre-wired and factory assembled; Q-179-A flame rod and electric ignition pilots; ignition transformer; V-495-B pilot solenoid valves; RA-890-E electronic relay for each panel with .8 second response timing and alarm contacts. See additional charges below.

Panel System EPG-1: Provides manual ignition, non-100% shut-off. Available for Natural, Mixed and Manufactured Gas only. Electronic supervision of a primary pilot and thermocouple supervision of all auxiliary pilots. Main burner gas supply only turned off on pilot failure. Continuous flame pilot operation. Equipment includes: one main control panel and for certain boiler sizes one auxiliary panel factory wired and assembled to main panel; Q-179-B flame rod primary pilot(s); Baso auxiliary pilot burners; Baso 850-1 switches with thermocouples; RA-890-E electronic relay for each panel with .8 second response timing and alarm contacts. See additional charges below.

Panel System EPG-2: Provides a manual ignition, 100% shut-off. Available for all gases. Electronic supervision of a primary pilot and thermocouple supervision of all auxiliary pilots. Main burner and pilot burner gas supply turned off on pilot failure. Continuous flame pilot operation. Equipment includes: one main control panel and for certain boiler sizes one auxiliary panel factory wired and assembled to main panel; Q-179-B flame rod primary pilot(s) with special adapter for thermocouple, Baso auxiliary pilot burners; Baso 817-F-11 pilot valves with thermocouples; RA-890-E electronic relay for each panel with 8 second response timing and alarm contacts. See additional charges below.

Panel System EPG-3: Provides intermittent electric ignition on a primary pilot and continuous flame auxiliary pilots with 100% shut-off. Available for all gases. Electronic supervision of a primary pilot and thermocouple supervision of auxiliary pilots. Main burner and pilot burner gas supply shut-off on pilot failure. Equipment includes: one main control panel and for certain boiler sizes one auxiliary panel factory wired and assembled to main panel; Q-179-A flame rod and electric ignition primary pilot(s); primary pilot solenoid valve(s) V-495-B; Baso auxiliary pilot burner; Baso 817-F-11 pilot valves with thermocouples; 6000 volt secondary ignition transformer(s); RA-890-E electronic relay for each panel with .8 second response timing and alarm contacts. See additional charges below

ADDITIONAL CHARGES—Trade Price

Specify on order type of system desired, as described above, and add charge listed for boiler size involved to Trade Price of G-40 or G-60 boiler with regular equipment

■ Panel System EPG-0		■ Panel System EPG-1		■ Panel System EPG-2		■ Panel System EPG-3	
boiler number	added charge	boiler number	added charge	boiler number	added charge	boiler number	added charge
G- 403 thru 407	$163.00	G- 403 thru 4010	$150.00	G- 403 thru 4010	$171.00	G- 403 thru 4010	$185.00
G- 408 thru 4010	177.00	G- 606 thru 6037	150.00	G- 606 thru 6037	171.00	G- 606 thru 6037	185.00
G- 606 thru 6011	177.00	G-6041	281.00	G-6041	283.00	G-6041	334.00
G-6013 thru 6021	359.00	Mfd. gas only:		Mfd. gas only:		Mfd. gas only:	
G-6022 thru 6031	538.00	G-6028 thru 6037	$281.00	G-6028 thru 6037	$283.00	G-6028 thru 6037	$334.00
G-6033 thru 6041	718.00						

■ Panel System EPG-1 available for Natural, Mixed and Manufactured gases only. Balance for all gases.

G-40 AND G-60 ELECTRONIC CONTROL SYSTEMS (less Panels)

The following systems (EG-0, EG-1, EG-2 and EG-3) are also available, but do not include factory wired and assembled control panel. These systems provide the same function and are equipped with the same basic parts (less panel) as described for EPG-0, EPG-1, EPG-2, and EPG-3.

System EG-0: (Same function as EPG-0 less panel.) See additional charges below
System EG-1: (Same function as EPG-1 less panel.) See additional charges below
System EG-2: (Same function as EPG-2 less panel.) See additional charges below.
System EG-3: (Same function as EPG-3 less panel.) See additional charges below.

ADDITIONAL CHARGES—Trade Price

Specify on order type of system desired, as described above, and add charge listed for boiler size involved to Trade Price of G-40 or G-60 boiler with regular equipment

■ Control System EG-0		■ Control System EG-1		■ Control System EG-2		■ Control System EG-3	
boiler number	added charge	boiler number	added charge	boiler number	added charge	boiler number	added charge
G- 403 thru 407	$108.00	G- 403 thru 4010	$ 86.00	G- 403 thru 4010	$ 96.00	G- 403 thru 4010	$113.00
G- 408 thru 4010	140.00	G- 606 thru 6037	86.00	G- 606 thru 6037	96.00	G- 606 thru 6037	113.00
G- 606 thru 6011	140.00	G-6041	173.00	G-6041	175.00	G-6041	227.00
G-6013 thru 6021	280.00	Mfd. gas only:		Mfd. gas only:		Mfd. gas only:	
G-6022 thru 6031	420.00	G-6028 thru 6037	$173.00	G-6028 thru 6037	$175.00	G-6028 thru 6037	$227.00
G-6033 thru 6041	560.00						

■ Control System EG-1 available for Natural, Mixed and Manufactured gases only. Balance for all gases.

Ignition Cable: Trade Price per foot	$0.70
Flame rod wire: Trade Price per foot	$0.40

GAS BOILERS—Instructions for Ordering

Orders must specify:

(1) Complete Boiler Number.
(2) Steam or water
(3) Equipment desired: Regular, "DW" or "IS", etc
(4) Type of gas (If LP-gas, whether butane or propane)
(5) Btu (heat value of gas) and specific gravity
(6) Elevation at point of installation if in excess of 2,000 feet
(7) Pressure available at outlet of gas meter

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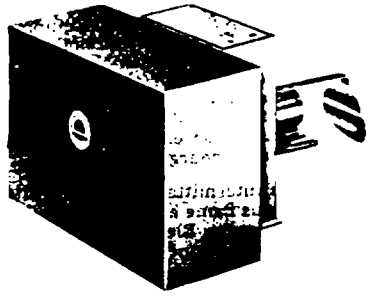


INSHOT GAS CONVERSION BURNER — *Factory assembled*

controls regularly furnished are for 115 volt, 60 cycle current

model number	A.G.A. ratings-Btu input per hour: inputs	Net. and Mxd. Gas	Mfd. Gas	Trade Price with standard equipment: Nat. and Mxd. Gas	Mfd. Gas	approx. shipping weight
IN-150	min max	80,000 150,000	80,000 150,000	$68.00	$73.25	20
IN-245	min max	130,000 245,000	not available	$74.50	not available	21
IN-275	min max	130,000 275,000	not available	$83.75	not available	21

Gas valve sizes: ½" for IN-150 Nat. and Mxd. Gas, ¾" for all other sizes.
Sheet metal mounting plate required for all other conversions except Arcoleader and Arcoliner Wet Base oil boilers. This plate to be furnished by Installer.
If CA-520 thermostat not desired, deduct $7.74 from Trade Price shown above.

INSHOT GAS BURNER MAXIMUM INPUTS FOR ARCOLEADER AND ARCOLINER BOILERS

Burner Model:	IN-150	IN-245	IN-275	IN-275
Type of gas:	Nat. Mxd. Mfd.	Nat. Mxd. only	Nat. Mxd. only	Nat. Mxd. only
	Maximum Gas Inputs — Btu/hr.			
Boiler Model	3 section	4 section	5 section	6 section
Arcoleader	115,000	160,000	210,000	260,000
Arcoliner	120,000	170,000	200,000	———

6-Section Arcoliner is not recommended for gas firing

Standard equipment includes:

CA-520 thermostat.
Runner pilot ignition.
Manual shut-off valve.
Control housing.
Stainless steel flame spreader.
Pilot throttling valve.
Pilot filter—with mfd. gas burners only.
Two main burner orifices: one drilled for minimum input, factory installed; the second, also drilled for minimum input, is provided.

Models IN-150 and IN-245

V-600 series combination gas valve, pressure regulator and safety pilot switch, transformer, manual opener.

Model IN-275

General Controls KX3H quiet solenoid gas valve, plug-in safety pilot switch, transformer, manual opener. Gas pressure regulator.

Optional equipment:

Self-energizing controls: General Controls T80-A thermostat, B-60 gas valve and PG9 pilot generator—if desired, specify on order:

Burner Model	Type of Gas	Trade Charge
IN-150	Nat. and Mxd.	No extra cost
IN-150	Mfd.	Add $2.75
IN-245	Nat. and Mxd.	Add 2.75
IN-275	Nat. and Mxd.	No extra cost

Select from list below special limit control which must be used with self-energizing controls.

100% safety shut-off, all models, specify on order and add $2.00 to Trade Price above.

Pilot filter—regularly furnished only for Mfd. gas. If desired for Nat. and Mxd. gas, specify on order and add $1.50 to Trade Price above.

Optional controls for self-energizing (millivolt) application:

Number	Description	Trade Price
L-52A10A1A	General Controls immersion limit control	$10.75
L-39PA412	General Controls pressure boiler limit control, scale 0-10 lbs.	11.44
S45A1A3A3	General Controls warm air limit control	3.30
S45A5AM3	General Controls fan and limit control	6.71

For other optional controls, see page 32.

GAS CONVERSION BURNERS—Instructions for Ordering

Orders must specify:

1. Type of gas.
2. Btu (heat value of gas) and specific gravity.
3. Pressure available at outlet of gas meter.
4. Optional controls, if desired.

For discount on repairs, see page 2.

ARCOLEADER PACKAGED BOILER-BURNER UNITS

Designed and equipped with controls for forced circulation.

Factory assembled and crated.

Wet base construction.

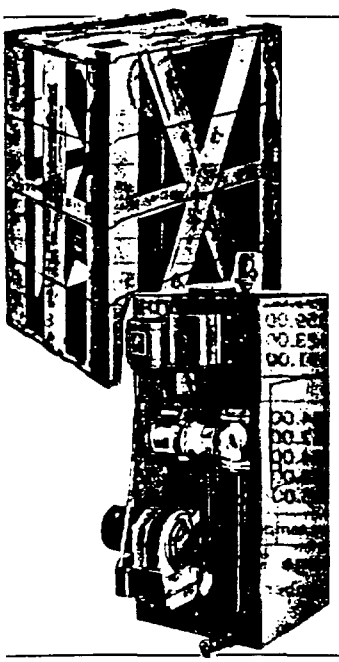
Flush jacket.

WATER

packaged unit number	gross I=B=R output Mbh	• I=B=R burner capacity gph	tankless heater number	▲ I=W=H rating	■ net I=B=R rating Mbh	■ net rating sq ft water	Trade Price with standard equipment	chimney size	approx. shipping weight
Packaged units less tankless heater									
A1-3-P	100	0.95	...	...	75.0	500	$447.00	8 x 8 x 15	661
A1-4-P	136	1.30	...	...	102.0	680	498.00	8 x 8 x 15	811
A1-5-P	173	1.65	...	...	129.8	865	569.00	8 x 8 x 15	959
Packaged units with factory installed tankless heater									
A1-3-PT	100	0.95	732	3¾	75.0	500	$469.00	8 x 8 x 15	673
A1-4-PT	136	1.30	732	4¼	102.0	680	523.00	8 x 8 x 15	824
A1-5-PT	173	1.65	743	5½	129.8	865	613.00	8 x 8 x 15	991

•Nozzle sizes, gph, furnished with Arcoleader packaged units:
A1-3-P, 0.90—70° H; A1-4-P, 1.25—60° H; A1-5-P, 1.50—60° S.

▲ Gallons of water per minute heated from 40F to 140F with 200F boiler water temperature.



Standard equipment all Units: (see options, page 19)

Model DH-5 Arcoflame oil burner with sling mounting for front firing. CA-701 primary control. Draft stabilizer. ASME relief valve. Heat Lib-O-Rator high temperature steel combustion chamber. 1¼" circulator with piping. Wiring harness. Drain valve. Theraltimeter.

Motors and controls regularly furnished are for 115 volt, 60 cycle current.

Additional standard equipment for units with factory installed heater:

Built-in tankless heater as listed above.

No. 36 Arcoflame control set (CA-520 thermostat, CA-610 combination immersion control—high, low limit, circulator control, built-in relay) and nozzle.

Additional standard equipment for units less heater:

No. 33 Arcoflame control set (CA-520 thermostat, CB-614 combination immersion control—high limit and circulator control) and nozzle.

Heater opening cover plate.

Note: Units are shipped with flush jacket and with all electrical controls (except thermostat), circulator and piping, factory installed and wired. Arcoflame oil burner shipped separately. Draft stabilizer, relief valve and thermostat are secured inside boiler crate.

■ For complete information on boiler ratings, see page 2.

For discount on repairs, see page 2.

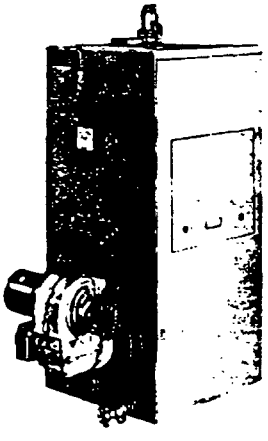
ARCOLEADER BOILER-BURNER UNITS

Designed and equipped with controls for forced circulation.
Wet base construction.
Flush jacket
Factory assembled sections.

WATER

boiler-burner unit number	gross I=B=R output Mbh	*I=B=R burner capacity gph	tankless heater number	▲I=W=H rating	■net I=B=R rating Mbh	■net rating sq ft water	Trade Price with standard equipment	chimney size	approx. shipping weight
Units less factory installed tankless heater									
A1-3-B	100	0.95	. . .	. .	75.0	500	$349.00	8 x 8 x 15	586
A1-4-B	136	1.30	. . .	. .	102.0	680	412.00	8 x 8 x 15	726
A1-5-B	173	1.65	. . .	. .	129.8	865	480.00	8 x 8 x 15	882
A1-6-B	208	1.95	. . .	. .	156.0	1040	544.00	8 x 8 x 15	1051
A1-7-B	244	2.30	. . .	. . .	183.0	1220	612.00	8 x 12 x 15	1197
Units with factory installed tankless heater									
A1-3-BT	100	0.95	732	3¾	75.0	500	$384.00	8 x 8 x 15	596
A1-4-BT	136	1.30	732	4¼	102.0	680	447.00	8 x 8 x 15	740
A1-5-BT	173	1.65	743	5½	129.8	865	534.00	8 x 8 x 15	906
A1-6-BT	208	1.95	743	6	156.0	1040	598.00	8 x 8 x 15	1087
A1-7-BT	244	2.30	743	6	183.0	1220	666.00	8 x 12 x 15	1233

*Nozzle sizes, gph, furnished with Arcoleader boiler-burner units:
A1-3-B, 0.90—70° H; A1-4-B, 1.25—60° H; A1-5-B, 1.50—60° S; A1-6-B, 1.75—60° S; A1-7-B, 2.00—60° S.
Gallons of water per minute heated from 40F to 140F with 200F boiler water temperature.



Standard equipment all Units: (see options page 19)

Model DH-5 Arcoflame oil burner with sling mounting for front firing. CA-701 primary control. Draft stabilizer. ASME relief valve. Theraltimeter. Heat Lib-O-Rator high temperature steel combustion chamber.

Motors and controls regularly furnished are for 115 volt, 60 cycle current.

Additional standard equipment for units with tankless heaters:
Tankless heater as shown above factory installed in section assembly.
No. 36 Arcoflame control set (CA-520 thermostat, CA-610 combination immersion control—high, low limit, circulator control, built-in relay) and nozzle.

Additional standard equipment for units less heater:
No. 33 Arcoflame control set (CA-520 thermostat, CB-614 combination immersion control—high limit and circulator control) and nozzle.

Heater opening cover plate.

ARCOLEADER OIL FIRED BOILERS

Wet base construction.
Factory assembled sections.
Flush jacket.

WATER

boiler number	gross I=B=R output Mbh	I=B=R burner capacity gph	tankless heater number	▲I=W=H rating	■net I=B=R rating Mbh	■net rating sq ft water	Trade Price	chimney size	approx. shipping weight
Boiler less factory installed tankless heater									
A1-3	100	0.95	. . .	.	75.0	500	$228.00	8 x 8 x 15	583
A1-4	136	1.30	. . .	.	102.0	680	291.00	8 x 8 x 15	730
A1-5	173	1.65	. . .	.	129.8	865	359.00	8 x 8 x 15	894
A1-6	208	1.95	. . .	.	156.0	1040	423.00	8 x 8 x 15	992
A1-7	244	2.30	. . .	.	183.0	1220	491.00	8 x 12 x 15	1138
Boiler with factory installed tankless heater									
A1-3-T	100	0.95	732	3¾	75.0	500	$254.00	8 x 8 x 15	593
A1-4-T	136	1.30	732	4¼	102.0	680	317.00	8 x 8 x 15	744
A1-5-T	173	1.65	743	5½	129.8	865	404.00	8 x 8 x 15	919
A1-6-T	208	1.95	743	6	156.0	1040	468.00	8 x 8 x 15	1022
A1-7-T	244	2.30	743	6	183.0	1220	536.00	8 x 12 x 15	1168

▲Gallons of water per minute heated from 40F to 140F with 200F boiler water temperature.

Standard equipment all boilers: (see options page 19)

Heat Lib-O-Rator high temperature steel combustion chamber.
ASME Relief Valve. Theraltimeter.
Additional standard equipment boilers with tankless heaters:
Tankless heater as listed above factory installed in section assembly.
Note: Boilers less factory installed tankless heater are shipped less water heater opening cover unless specified on order.

■ For complete information on boiler ratings, see page 2.
For discount on repairs, see page 2.

ARCOLEADER OPTIONAL EQUIPMENT

PACKAGED BOILER-BURNER UNITS only:

Jacket extension; if desired specify on order and add $28.00 to Trade Price of boiler. Jacket extension, shipped in separate carton, provides 15¾" enclosure in front for concealment of oil burner and controls; approximate shipping weight 35 lbs.

Two-stage fuel unit will be furnished when specified on order at $5.00 Trade Price extra.

Add-on No. 36-Z Arcoflame control set will be furnished when specified on order at $20.35 Trade Price extra. (Add-on zone. Use only with No. 36 control set.)

Zone control valve sets may be specified for separate shipment. For Trade Prices and details, see page 30.

BOILER-BURNER UNITS only:

Arcoflame control sets other than those included in Trade Price of boiler-burner units will be furnished when specified on order at the following charges:

Control Set	With Heater	Less Heater
Water control set No. 13	—	*
Water control set No. 36	—	$ 9.10
Water control set No. 36-Z	$20.35	20.35

(Add-on zone. Use only with No. 36 control set.)

*Boiler-burner units less heater can be ordered for use on gravity systems: Specify No. 13 Arcoflame control set and deduct $5.90 from Trade Price of unit less heater and specify water heater opening cover plate with 3" tapping.

Detailed description of Arcoflame control sets is shown on page 32.

Two-stage fuel unit will be furnished when specified on order at $5.00 Trade Price extra.

Zone control valve sets may be specified for separate shipment. For Trade Prices and details, see page 30.

BOILER-BURNER UNITS or OIL FIRED BOILERS:

Jacket extension; if desired specify on order and add $28.00 to Trade Price of boiler. Jacket extension provides 15¾" enclosure in front for concealment of oil burner and controls. Approximate shipping weight 35 lbs.

Oil fired boiler heater opening cover plate: furnished only when specified on order at no charge. If specified on order cover plate can be tapped 3" for gravity installations.

BUILT-IN HEATERS:

Built-in tankless heaters can be ordered for separate shipment with Boiler-Burner units or Oil Fired Boilers less factory installed tankless heaters at the following Trade Prices:

Heater number	Trade Price
723	$25.00
732	27.10
743	47.70

NOTE: for I=W=H ratings and boilers with which heaters can be used, see table below.

Water mixing valves: for prices, see page 32.

ARCOLEADER I=W=H RATED TANKLESS HEATERS

Heaters tested with boilers.

Built-in tankless heaters for Arcoleader Boiler-Burner units and Oil Boilers can be ordered for separate shipment with units or boilers specified less tankless heaters. See Trade Prices above. Select heater desired from table below.

unit or boiler size	I=B=R burner capacity gph	▲ I=W=H rating		
		heater 723	heater 732	heater 743
A1-3	0.95	3¼	3¾	. .
A1-4	1.30	3¼	4¼	. . .
A1-5	1.65	3¼	4¼	5½
A1-6	1.95	3¼	4¼	6
A1-7	2.30	3¼	4¼	6

▲ Gallons of water per minute heated from 40F to 140F with 200F boiler water temperature.

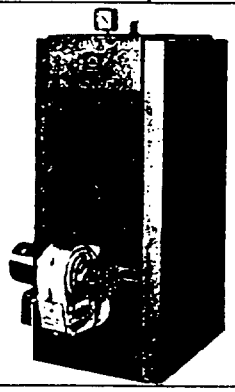
For discount on repairs, see page 2.

ARCOLINER BOILER-BURNER UNITS

Wet base construction.
Flush jacket.
Factory assembled sections.

Arranged for but less Built-in Tank or Tankless Type Water Heater

boiler-burner unit number		gross I=B=R output Mbh	I=B=R burner capacity gph	■ net I=B=R rating		■ net rating sq ft water	Trade Price with standard equipment	Chimney size	approx. shipping weight
STEAM	WATER			sq ft steam	Mbh				
WIDE BACK TYPE									
S-O-153-B-T	W-O-153-B-T	97	1.00	303	72.8	485	$353.55	8 x 8 x 20	851
S-O-154-B-T	W-O-154-B-T	132	1.35	413	99.0	660	416.55	8 x 8 x 20	1010
S-O-155-B-T	W-O-155-B-T	164	1.60	513	123.0	820	475.15	8 x 8 x 25	1163
S-O-156-B-T	W-O-156-B-T	188	1.80	588	141.0	940	518.15	8 x 8 x 25	1394



*Nozzle sizes, gal. per hour, furnished with Arcoliner Boiler-Burner Units are as follows: No. 153, 0.90—70° H; No. 154, 1.25—60° H; No. 155, 1.50—60° S; No. 156, 1.65—60° S.

Standard equipment: (see options, next page)

Model DH-5 Arcoflame oil burner with sling mounting for front firing.
CA-701 primary control.
Draft stabilizer.
Heat Lib-O-Rator high temperature steel combustion chamber (no deduction for omission).
Motors and controls regularly furnished are for 115 volt, 60 cycle current.

Steam only:
No. 11 Arcoflame control set (CA-520 thermostat, 450-BA-1 pressure limit control) and nozzle.
Steam gauge, ASME safety valve, gauge glass and trimmings.

Water only:
No. 13 Arcoflame control set (CA-520 thermostat, CA-655 immersion limit control) and nozzle.
Theraltimeter and ASME relief valve.

ARCOLINER OIL FIRED BOILERS

Wet base construction.
Flush jacket.
Factory assembled sections.

Arranged for but less Built-in Tank or Tankless Type Water Heater

boiler number		gross I=B=R output Mbh	I=B=R burner capacity gph	■ net I=B=R rating		■ net rating sq ft water	Trade Price with standard equipment	Chimney size	approx. shipping weight
STEAM	WATER			sq ft steam	Mbh				
WIDE BACK TYPE									
S-O-153-T	W-O-153-T	97	1.00	303	72.8	485	$228.00	8 x 8 x 20	772
S-O-154-T	W-O-154-T	132	1.35	413	99.0	660	291.00	8 x 8 x 20	930
S-O-155-T	W-O-155-T	164	1.60	513	123.0	820	349.00	8 x 8 x 25	1083
S-O-156-T	W-O-156-T	188	1.80	588	141.0	940	392.00	8 x 8 x 25	1234

Jacket extension shown

Standard equipment: (see options, next page)

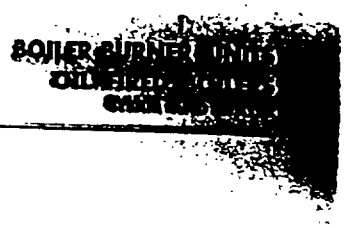
Steam:

Steam gauge, ASME safety valve, gauge glass and trimmings.

Water:

Theraltimeter and ASME relief valve.

■ For complete information on boiler ratings, see page 2.
For discount on repairs, see page 2.



ARCOLINER OPTIONAL EQUIPMENT

BOILER-BURNER UNITS only:

Arcoflame control sets other than those included in Trade Price of Boiler-Burner Units will be furnished when specified on order at the following added charges:

Control set	Added Charge
Steam control set No. 12	$13.30
Water control set No. 15	22.75
Water control set No. 16	24.40
Water control set No. 16-Z	53.20
Water control set No. 26	24.40
Water control set No. 33	5.90

Detailed description of Arcoflame control sets is shown on page 32.

Two-stage fuel unit will be furnished when specified on order at $5.00 Trade Price extra.

Zone control valve sets may be specified for separate shipment. For Trade Prices and details, see page 30.

450-BC-1 Vapor limit control; if desired in place of 450-BA-1 pressure limit control regularly furnished for steam units see page 31 for added charge.

The Heat Lib-O-Rator molded refractory type combustion chamber shown below for Arcoliner Boilers may be specified in place of steel chambers regularly furnished at no charge for No. 153-B-T or 154-B-T. Add to Trade Price for boiler No. 155-B-T $2.85 and for No. 156-B-T $5.75.

BOILER-BURNER UNITS or OIL FIRED BOILERS:

Jacket extension; if desired specify on order and add $27.50 to Trade Price of boiler. Jacket extension provides 20½" enclosure in front for concealment of oil burner and controls. Approximate shipping weight 47 lbs.

Water mixing valves: for prices, see page 32.

For low water cut-off for use with steam units, see page 32.

Molded refractory combustion chambers: available for Oil Boilers at Trade Prices below when specified on order.

Cover plate for water heater opening will be furnished if specified on order at added Trade Price charge of $4.00.

BUILT-IN HEATERS:

Below are the ratings and Trade Prices covering Built-in tank or tankless heaters available for Arcoliner Units. For detailed information on ratings, see page 2.

Heater No.	Heater Type	Heater Ratings gals. capacity	Trade Price	approx. shipping weight
587	tank	85	$22.60	23
589	tankless	3 per minute	29.90	25
596	tankless	3½ per minute	35.00	27

HEAT LIB-O-RATOR MOLDED REFRACTORY COMBUSTION CHAMBERS

boiler number	Heat Lib-O-Rator model no.	max. firing rate gal. per hour	Trade Price	approx. shipping weight
153-T, 154-T	No. 4	1.35	$10.95	77
155-T	No. 5	1.65	13.85	86
156-T	No. 6	2.00	16.75	90

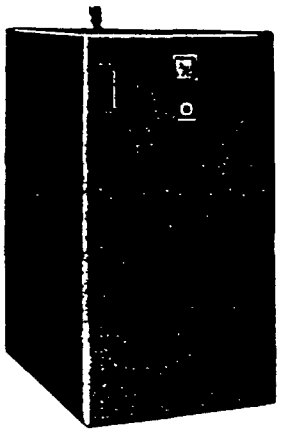
For discount on repairs, see page 2.

04550

OAKMONT BOILER-BURNER UNITS

Flush jacket.

boiler-burner unit number		gross I=B=R output Mbh	I=B=R burner capacity gph	■ net I=B=R rating		■ net rating sq ft water	Trade Price with standard equipment	chimney size	approx. shipping weight
STEAM	WATER			sq ft steam	Mbh				
Arranged for but less Built-in Tank or Tankless Type Water Heater									
S-84-OB	W-84-OB	143	1.40	447	107.3	715	$452.15	8 x 8 x 20	1338
S-85-OB	W-85-OB	175	1.75	547	131.3	875	512.70	8 x 8 x 25	1479
S-86-OB	W-86-OB	202	2.00	631	151.5	1010	557.35	8 x 8 x 25	1603
S-87-OB	W-87-OB	230	2.30	719	172.5	1150	609.85	8 x 12 x 30	1746
S-88-OB	W-88-OB	261	2.55	816	195.8	1305	666.85	8 x 12 x 30	1863
S-89-OB	W-89-OB	288	2.80	900	216.1	1440	713.85	8 x 12 x 35	2007



*Nozzle sizes, gph, 60° S, furnished with Oakmont boiler-burner units: No. 84, 1.35; No. 85, 1.65; No. 86, 2.00; No. 87, 2.25; No. 88, 2.50; No. 89, 2.75.

Standard equipment: (see options, next page)

Model DH-5 Arcoflame oil burner with sling mounting for rear firing.
CA-701 primary control.
Draft stabilizer.

Heat Lib-O-Rator refractory combustion chamber; model number and deduction for omission listed on page 23.

Motors and controls regularly furnished are for 115 volt, 60 cycle current.

Steam only:
No. 11 Arcoflame control set (CA-520 thermostat, 450-BA-1 pressure limit control) and nozzle.
Steam gauge, ASME safety valve, gauge glass and trimmings.

Water only:
No. 13 Arcoflame control set (CA-520 thermostat, CA-655 immersion limit control) and nozzle.
Theraltimeter and ASME relief valve.

OAKMONT OIL FIRED BOILERS

Flush jacket.

Arranged for but less Built-in Tank or Tankless Type Water Heater

boiler number		gross I=B=R output Mbh	I=B=R burner capacity gph	■ net I=B=R rating		■ net rating sq ft water	Trade Price with standard equipment	chimney size	approx. shipping weight
STEAM	WATER			sq ft steam	Mbh				
S-84	W-84	143	1.40	447	107.3	715	$320.00	8 x 8 x 20	1109
S-85	W-85	175	1.75	547	131.3	875	379.00	8 x 8 x 25	1245
S-86	W-86	202	2.00	631	151.5	1010	422.00	8 x 8 x 25	1352
S-87	W-87	230	2.30	719	172.5	1150	472.00	8 x 12 x 30	1485
S-88	W-88	261	2.55	816	195.8	1305	529.00	8 x 12 x 30	1602
S-89	W-89	288	2.80	900	216.1	1440	576.00	8 x 12 x 35	1746

Standard equipment: (see options, next page)

Steam:
Steam gauge, ASME safety valve, gauge glass and trimmings.

Water:
Theraltimeter and ASME relief valve.

■ For complete information on boiler ratings, see page 2.
For discount on repairs, see page 2.

OAKMONT OPTIONAL EQUIPMENT

BOILER-BURNER UNITS only:

Arcoflame control sets other than those included in Trade Price of Boiler-Burner Units will be furnished when specified on order at the following added charges:

Control Set	Added Charge
Steam control set No. 12	$13.30
Water control set No. 15	22.75
Water control set No. 16	24.40
Water control set No. 16-Z	53.20
Water control set No. 26	24.40
Water control set No. 33	5.90

Detailed description of Arcoflame control sets is shown on page 32.

Two-stage fuel unit will be furnished when specified on order at $5.00 Trade Price extra.

Zone control valve sets may be specified for separate shipment. For Trade Prices and details, see page 30.

450-BC-1 vapor limit control; if desired in place of 450-BA-1 pressure limit control regularly furnished for steam units—see page 31 for added charge.

BOILER-BURNER UNITS or OIL FIRED BOILERS:

Jacket extension; if desired specify on order and add $33.25 to Trade Price of boiler. Jacket extension provides 15¾" enclosure at rear for concealment of oil burner and controls. Approximate shipping weight 51 lbs.

Water mixing valves: for prices, see page 32.

For low water cut-off for use with steam units, see page 32.

Molded refractory combustion chambers; added Trade Prices to Oil Boiler Trade Prices are same as "Deduct for Omission" Prices shown below and will be furnished when specified.

Cover plate for water heater opening will be furnished if specified on order at added Trade Price charge of $4.50.

BUILT-IN HEATERS:

Below are the ratings and Trade Prices covering Built-in tank or tankless heaters available for Oakmont units. For detailed information on ratings, see page 2.

Heater No.	Heater Type	Heater Ratings gals. capacity	Trade Price	approx. shipping weight
598	tank	40	$16.00	23
599	tank	100	24.20	27
583	tankless	3 per minute	38.00	83
585	tankless	3½ per minute	40.50	104
597	tankless	4¼ per minute	60.00	92

HEAT LIB-O-RATOR MOLDED REFRACTORY COMBUSTION CHAMBERS

unit number	Heat Lib-O-Rator model No. included	maximum firing rate gallons per hour	deduct for omission	approx. shipping weight
84	No. 00	1.50	$17.00	148
85	No. 1	1.75	18.55	153
86	No. 2	2.25	20.20	170
87, 88, 89	No. 3	3.00	22.70	180

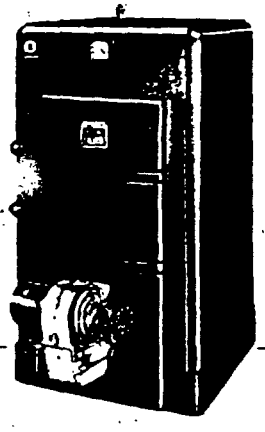
For discount on repairs, see page 2.

SEVERN BOILER-BURNER UNITS

Flush jacket.

boiler-burner unit number		gross output	firing rate	■ installed radiation			Trade Price with standard equipment	approx. shipping weight
STEAM	WATER	Mbh	gph	sq ft steam	Mbh	sq ft water		
NOT TAPPED FOR BUILT-IN TANK TYPE WATER HEATER (see options)								
S-17-OB	W-17-OB	146	1.5	456	109.5	730	$471.70	1303
S-21-OB	W-21-OB	168	1.7	525	126.0	840	509.70	1458
S-25-OB	W-25-OB	188	1.9	588	141.0	940	548.35	1570
S-29-OB	W-29-OB	216	2.2	675	162.0	1080	589.35	1710
S-33-OB	W-33-OB	247	2.5	772	185.3	1235	650.85	1815
S-37-OB	W-37-OB	278	2.8	869	208.6	1390	706.85	1975
ARRANGED FOR BUT LESS BUILT-IN TANK OR TANKLESS TYPE WATER HEATER								
S-17-OB-T	W-17-OB-T	146	1.5	456	109.5	730	$477.70	1312
S-21-OB-T	W-21-OB-T	168	1.7	525	126.0	840	515.70	1461
S-25-OB-T	W-25-OB-T	188	1.9	588	141.0	940	554.35	1579
S-29-OB-T	W-29-OB-T	216	2.2	675	162.0	1080	595.35	1719
S-33-OB-T	W-33-OB-T	247	2.5	772	185.3	1235	656.85	1824
S-37-OB-T	W-37-OB-T	278	2.8	869	208.6	1390	712.85	1984

*Nozzle sizes, gph 60°S, furnished with Severn boiler-burner units: No. 17, 1.35; No. 21, 1.50; No. 25, 1.75; No. 29, 2.00; No. 33, 2.25; No. 37, 2.50.



Standard equipment: (see options, next page)

Model DH-6 Arcoflame oil burner with sling mounting for front firing.
CA-701 primary control.
Draft stabilizer.
Heat Lib-O-Rator refractory combustion chamber; model number and deduction for omission listed on page 25.
Motors and controls regularly furnished are for 115 volt, 60 cycle current.

Steam only:

No. 11 Arcoflame control set (CA-520 thermostat, 450-BA-1 pressure limit control) and nozzle.
Steam gauge, ASME safety valve, gauge glass and trimmings.

Water only:

No. 13 Arcoflame control set (CA-520 thermostat, CA-655 immersion limit control) and nozzle.
Theraltimeter and ASME relief valve.

SEVERN OIL FIRED BOILERS

Flush jacket.

boiler-number		gross output	firing rate	■ installed radiation			Trade Price with standard equipment	approx. shipping weight
STEAM	WATER	Mbh	gph	sq ft steam	Mbh	sq ft water		
NOT TAPPED FOR BUILT-IN TANK TYPE WATER HEATER (see options)								
S-17-O	W-17-O	146	1.5	456	109.5	730	$338.00	1075
S-21-O	W-21-O	168	1.7	525	126.0	840	376.00	1230
S-25-O	W-25-O	188	1.9	588	141.0	940	413.00	1325
S-29-O	W-29-O	216	2.2	675	162.0	1080	454.00	1465
S-33-O	W-33-O	247	2.5	772	185.3	1235	513.00	1560
S-37-O	W-37-O	278	2.8	869	208.6	1390	569.00	1720
ARRANGED FOR BUT LESS BUILT-IN TANK OR TANKLESS TYPE WATER HEATER								
S-17-O-T	W-17-O-T	146	1.5	456	109.5	730	$344.00	1084
S-21-O-T	W-21-O-T	168	1.7	525	126.0	840	382.00	1239
S-25-O-T	W-25-O-T	188	1.9	588	141.0	940	419.00	1334
S-29-O-T	W-29-O-T	216	2.2	675	162.0	1080	460.00	1474
S-33-O-T	W-33-O-T	247	2.5	772	185.3	1235	519.00	1569
S-37-O-T	W-37-O-T	278	2.8	869	208.6	1390	575.00	1729

Standard equipment: (see options, next page)

Steam:

Steam gauge, ASME safety valve, gauge glass and trimmings.

Water:

Theraltimeter and ASME relief valve.

■ For complete information on boiler ratings, see page 2.

For discount on repairs, see page 2.

SEVERN OPTIONAL EQUIPMENT

BOILER-BURNER UNITS only:

Arcoflame control sets other than those included in Trade Price of Boiler-Burner Units will be furnished when specified on order at the following added charges:

Control Set	Added Charge
Steam control set No. 12	$13.30
Water control set No. 15	22.75
Water control set No. 16	24.40
Water control set No. 16-Z	53.20
Water control set No. 26	24.40
Water control set No. 33	5.90

Detailed description of Arcoflame control sets is shown on page 32.

Two-stage fuel unit will be furnished when specified on order at $5.00 Trade Price extra.

Zone control valve sets may be specified for separate shipment. For Trade Prices and details, see page 30.

450-BC-1 vapor limit control: If desired in place of 450-BA-1 pressure limit control regularly furnished for steam units—see page 31 for added charge.

BOILER-BURNER UNITS or OIL FIRED BOILERS:

Water mixing valves: for prices, see page 32.

For low water cut-off for use with steam units, see page 32.

Molded refractory combustion chamber; added Trade Prices to Oil Boiler Trade Prices are same as "Deduct for Omission" Prices shown below and will be furnished when specified.

Cover plate for water heater opening will be furnished if specified on order for "T" type boiler at an added Trade Price charge of $3.70.

BUILT-IN HEATERS:

If **2½" right or left side tapping** in back section for Built-in heater No. 703 is desired, specify on order and add $2.00 to Trade Price of unit or boiler.

Below are the ratings and Trade Prices covering Built-in tank or tankless heaters available for Severn units. For detailed information on ratings, see page 2.

Heater No.	Heater Type	Heater Ratings gals. capacity	Trade Price	approx. shipping weight
703	tank	66	$ 9.00	7
594	tank	100	48.00	54
595	tank	160	42.50	51
590	tankless	3½ per minute	36.00	60

HEAT LIB-O-RATOR MOLDED REFRACTORY COMBUSTION CHAMBERS

unit number	Heat Lib-O-Rator model No. included	maximum firing rate gallons per hour	deduct for omission	approx. shipping weight
17, 21	No. 1	1.75	$18.55	153
25, 29	No. 2	2.25	20.20	170
33, 37	No. 3	3.00	22.70	180

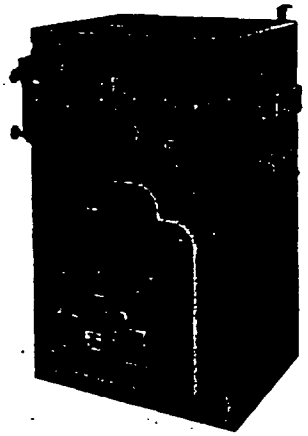
For discount on repairs, see page 2.

A-5 BOILER-BURNER UNITS

Flush jacket.
Tested and equipped for 50 lbs. water working pressure.

boiler-burner unit number		gross I=B=R output Mbh	I=B=R burner capacity gph	■ net I=B=R rating		■ net rating sq ft water	Trade Price with standard equipment	chimney size	approx. shipping weight
STEAM	WATER			sq ft steam	Mbh				
For Built-in Water Heater Arrangement, see page 27.									
A-504-SB	A-504-WB	261	2.55	816	195.8	1305	$ 692.05	8 x 12 x 15	1702
A-505-SB	A-505-WB	346	3.30	1082	259.6	1731	827.90	8 x 12 x 20	1969
A-506-SB	A-506-WB	426	4.00	1332	319.6	2131	924.55	12 x 12 x 20	2286
A-507-SB	A-507-WB	508	4.75	1588	381.1	2541	1029.55	12 x 12 x 20	2563
A-508-SB	A-508-WB	588	5.55	1838	441.1	2941	1115.55	12 x 16 x 25	2807
A-509-SB	A-509-WB	668	6.30	2088	501.1	3341	1213.60	12 x 16 x 25	3107
A-510-SB	A-510-WB	748	7.00	2338	561.1	3741	1411.60	12 x 16 x 25	3382
A-511-SB	A-511-WB	830	7.65	2594	622.7	4151	1505.60	16 x 16 x 30	3684

*Nozzle sizes, gph, furnished with A-5 units are as follows: No. A-504, 1 2.50 60°S; A-505, 2 1.65 70°S; A-506 2 2.00 70°S; A-507 1 2.25 & 1 2.50 80°S; A-508 2 2.75 80°S; A-509, 1 3.00 & 1 3.25 80°S; A-510 2 3.50 80°S; A-511 1 3.50 & 1 4.00 80°S.



Standard equipment: (see options, next page)

DH-5 sling mounted oil burner for A-504, with 1-stage fuel unit.

45W-3606 oil burner for A-505, A-506;

62A-7056 oil burner for A-507, A-508, A-509;

45W-3606 and 62A-7056, flange mounted, with 2-stage fuel unit.
The above burners are furnished with CA-701 primary control.

96-7506 oil burner for A-510, A-511; flange mounted, with 2-stage fuel unit; electronic flame safeguard control consisting of C7013A photocell installed in burner; Q270A safety switch base mounted on burner housing; RA890E safety switch packed with burner; delayed oil valve installed between fuel unit and drawer assembly.

Draft stabilizer.

Heat Lib-O-Rator refractory combustion chamber; model number and deduction for omission listed on page 27.

Motors and controls regularly furnished are for 115 volt, 60 cycle current.

Steam only:
No. 11 Arcoflame control set (CA-520 thermostat, 450-BA-1 pressure limit control) and nozzle(s).

Steam gauge, ASME safety valve, gauge glass and trimmings.

Water only:
No. 13 Arcoflame control set (CA-520 thermostat, CA-655 immersion limit control) and nozzle(s).

Theraltimeter and ASME relief valve for 50 lbs.

A-5 OIL FIRED BOILERS

Flush jacket.
Tested and equipped for 50 lbs. water working pressure.

boiler number		gross I=B=R output Mbh	I=B=R burner capacity gph	■ net I=B=R rating		■ net rating sq ft water	Trade Price	chimney size	approx. shipping weight
STEAM	WATER			sq ft steam	Mbh				
For Built-in Water Heater Arrangement, see page 27.									
A-504-S	A-504-W	261	2.55	816	195.8	1305	$ 553.00	8 x 12 x 15	1489
A-505-S	A-505-W	346	3.30	1082	259.6	1731	645.00	8 x 12 x 20	1750
A-506-S	A-506-W	426	4.00	1332	319.6	2131	733.00	12 x 12 x 20	2050
A-507-S	A-507-W	508	4.75	1588	381.1	2541	822.00	12 x 12 x 20	2306
A-508-S	A-508-W	588	5.55	1838	441.1	2941	908.00	12 x 16 x 25	2550
A-509-S	A-509-W	668	6.30	2088	501.1	3341	996.00	12 x 16 x 25	2825
A-510-S	A-510-W	748	7.00	2338	561.1	3741	1084.00	12 x 16 x 25	3075
A-511-S	A-511-W	830	7.65	2594	622.7	4151	1178.00	16 x 16 x 30	3377

Standard equipment: (see options, next page)

Steam:
Steam gauge, ASME safety valve, gauge glass and trimmings.

Water:
Theraltimeter and ASME relief valve for 50 lbs.

■ For complete information on boiler ratings, see page 2.
For discount on repairs, see page 2.

A-5 OPTIONAL EQUIPMENT

BOILER-BURNER UNITS only:

Arcoflame control sets other than those included in Trade Price of boiler-burner units will be furnished when specified on order at the following added charges:

Control Set	Added Charge
Steam control set No. 12	$13.30
Water control set No. 15	22.75
Water control set No. 33	5.90
Water control set No. 36	15.05
Water control set No. 36-Z	20.35

(Add-on zone. Use only with No. 36 control set)

Detailed description of Arcoflame control sets is shown on page 32.

Electronic flame safeguard equipment:

62A-7056F burner with electronic flame safeguard control is available instead of 62A-7056 burner for A-507, A-508 and A-509 boiler-burner units at added Trade Price charge of $93.00. The electronic control consists of C7013A photocell installed in burner, Q270A safety switch base mounted on burner housing, RA890E safety switch packed with burner; delayed oil valve installed between fuel unit and drawer assembly.

For installations requiring Factory Mutual Approval and in states and municipalities with regulations more stringent than Underwriters' Laboratories, Inc., oil burners are available with special electronic flame safeguard controls for A-5 boiler-burner units as follows:

62-A-7056 FFM burner for A-507, A-508 and A-509 boiler-burner units, at added Trade Price charge of $133.00.

96-7507 burner for A-510 and A-511 boiler-burner units at added Trade Price charge of $30.00.

Motors and controls regularly furnished are for 115 volt, 60 cycle.

450-BC-1 vapor limit control; if desired in place of 450-BA-1 pressure limit control regularly furnished for steam units—see page 31 for added charge.

Zone control valve sets may be specified for separate shipment. For Trade Prices and details, see page 30.

Two-stage fuel unit for DH-5 Arcoflame oil burner will be furnished when specified on order at $5.00 Trade Price extra.

BOILER-BURNER UNITS or OIL FIRED BOILERS:

Jacket extension; if desired specify on order and add $33.85 to Trade Price of boiler. Jacket extension provides 25" enclosure in front for concealment of oil burner and controls. Approximate shipping weight 57 lbs.

Water mixing valves: for prices, see page 32.

For low water cut-off for use with steam units, see page 32.

Molded refractory combustion chambers for A-5 boilers: Trade Prices are same as "Deduct for Omission" Prices shown below.

If desired, provision for tankless heaters is available at no additional charge. When suffix letter "T" is added on order to unit or boiler numbers, the following number of openings in center sections will be furnished.

Unit No.	Openings
A-504-T	2
A-505-T thru A-508-T	3
A-509-T thru A-511-T	4

Note: Additional openings can be specified on order.

Cover plate for water heater opening will be furnished if specified on order for "T" type boiler at added Trade Price of $3.35 each.

NO. 530 TANKLESS HEATER:

No. 530 tankless heater available in single or quantity lot price at $30.65 Trade Price each.

The following table shows the recommended number of heaters to be used with each boiler and the ratings attained if more than one heater is connected in parallel:

boiler no.	no. of heaters	*rating-gpm
All Sizes	1	4
All Sizes	2	7
A-505—A-511	3	10
A-508—A-511	4	13
A-510—A-511	5	16

Note: Additional heaters can be added if the heaters are serving different systems and it is not likely that heaters will all be in use at the same time.

*Gallons of water per minute raised from 40 F to 140 F with 200 F boiler water temperature.

Copper pipe manifolds factory assembled for multiple heater parallel hookup shipped in boxes of two manifold assemblies per box when specified with heaters are available at the following charges:

Manifold assembly	Trade Price per Box
2 heater	$4.80
3 heater	6.80
4 heater	8.80

HEAT LIB-O-RATOR MOLDED REFRACTORY COMBUSTION CHAMBERS

unit number	Heat Lib-O-Rator model No. included	maximum firing rate gallons per hour	deduct for omission	approx. shipping weight
A-504	14-A	2.55	$23.90	158
A-505	15-A	3.30	23.90	163
A-506, A-507, A-508	16-A	5.55	32.55	180
A-509, A-510, A-511	17-A	7.65	37.60	200

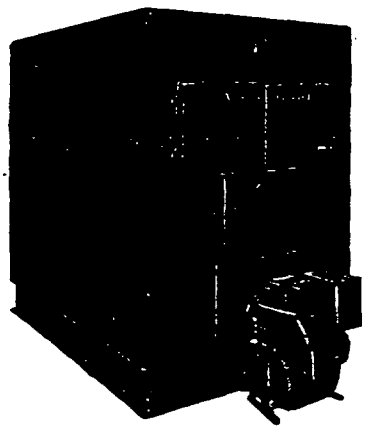
For discount on repairs, see page 2.

A-7 BOILER-BURNER UNITS

Jacketed and unjacketed.
Tested and equipped for 50 lbs. water working pressure.

boiler-burner unit number		gross I=B=R output Mbh	I=B=R burner capacity gph	■ net I=B=R rating		■ net rating sq ft water	chimney size	unjacketed		jacketed	
STEAM	WATER			sq ft steam	Mbh			Trade Price with standard equipment	approx. shipping weight	Trade Price with standard equipment	approx. shipping weight
A-705-SO-B	A-705-WO-B	866	8.15	2707	649.7	4331	16 x 16 x 28	$1571.00	4231	$1652.00	4403
A-706-SO-B	A-706-WO-B	1012	9.55	3163	759.2	5061	16 x 16 x 30	1685.00	4883	1771.00	5058
A-707-SO-B	A-707-WO-B	1196	11.25	3738	897.2	5981	16 x 20 x 36	1852.00	5532	1950.00	5715
A-708-SO-B	A-708-WO-B	1376	12.90	4340	1041.6	6944	16 x 20 x 42	2191.00	6283	2307.00	6492
A-709-SO-B	A-709-WO-B	1570	14.65	5013	1203.1	8020	16 x 20 x 45	2336.00	6919	2474.00	7134
A-710-SO-B	A-710-WO-B	1760	16.30	5672	1361.2	9075	20 x 20 x 50	2505.00	7603	2651.00	7822
A-711-SO-B	A-711-WO-B	1956	18.00	6328	1518.6	10125	20 x 20 x 55	2694.00	8195	2850.00	8456
A-712-SO-B	A-712-WO-B	2148	19.65	6949	1667.7	11118	20 x 20 x 60	2856.00	8871	3023.00	9169

*Nozzle sizes, gph. 80°S, furnished with A-7 units are as follows: A-705, 2 4.00; A-706, 1 4.50, 1 5.00; A-707, 2 5.50; A-708 1 4.00, 2 4.50; A-709, 1 4.50, 2 5.00; A-710, 1 5.00, 2 5.50; A-711, 3 6.00; A-712, 3 6.50.



Standard equipment: (see options, next page)

96-7508 oil burner for A-705, A-706, A-707.

97-7606 oil burner for A-708, A-709, A-710.

98-7706 oil burner for A-711, A-712.

All with pedestal mounting; two-stage fuel unit; electronic flame safeguard control consisting of C7013A photocell installed in burner. On model 96-7508 burner, Q270A safety switch base is mounted on burner housing. On models 97-7606 and 98-7706, W415B1 panel is furnished with Q270A safety switch base and R488E load relay. On all three models, RA890E safety switch is packed with burner; delayed oil valve installed between fuel unit and drawer assembly.

Draft stabilizer.

Steel pedestal base in addition to regular 12" base: 8" height for 5 through 7 section; 10" height for 8 through 12 section.

Steam only:

No. 11 Arcoflame control set (CA-520 thermostat, 450-BA-1 pressure limit control) and nozzles.

Steam gauge, ASME safety valve, gauge glass and trimmings.

Water only:

No. 13 Arcoflame control set (CA-520 thermostat, CA-655 immersion limit control) and nozzles.

Theraltimeter and ASME relief valve for 50 lbs.

Combustion chamber not furnished. See Installation-Operation and Maintenance Manual for combustion chambers for A-7 boiler-burner units.

A-7 OIL FIRED BOILERS

Jacketed and unjacketed.
Tested and equipped for 50 lbs. water working pressure.

boiler number		gross I=B=R output Mbh	I=B=R burner capacity gph	■ net I=B=R rating		■ net rating sq ft water	chimney size	unjacketed		jacketed	
STEAM	WATER			sq ft steam	Mbh			Trade Price	approx. shipping weight	Trade Price	approx. shipping weight
A-705-SO	A-705-WO	866	8.15	2707	649.7	4331	16 x 16 x 28	$1200.00	3882	$1281.00	4054
A-706-SO	A-706-WO	1012	9.55	3163	759.2	5061	16 x 16 x 30	1314.00	4518	1400.00	4693
A-707-SO	A-707-WO	1196	11.25	3738	897.2	5981	16 x 20 x 36	1481.00	5149	1579.00	5332
A-708-SO	A-708-WO	1376	12.90	4340	1041.6	6944	16 x 20 x 42	1643.00	5720	1759.00	5929
A-709-SO	A-709-WO	1570	14.65	5013	1203.1	8020	16 x 20 x 45	1788.00	6330	1926.00	6545
A-710-SO	A-710-WO	1760	16.30	5672	1361.2	9075	20 x 20 x 50	1957.00	6990	2103.00	7209
A-711-SO	A-711-WO	1956	18.00	6328	1518.6	10125	20 x 20 x 55	2121.00	7556	2277.00	7817
A-712-SO	A-712-WO	2148	19.65	6949	1667.7	11118	20 x 20 x 60	2283.00	8208	2450.00	8506

Standard equipment: (see options, next page)

Steam:

Steam gauge, ASME safety valve, gauge glass and trimmings.

Water:

Theraltimeter and ASME relief valve for 50 lbs.

■ For complete information on boiler ratings, see page 2.
For discount on repairs, see page 2.

A-7 OPTIONAL EQUIPMENT

BOILER-BURNER UNITS only:

Arcoflame control sets other than those included in Trade Price of boiler-burner units will be furnished when specified on order at the following added charges:

Control Set	Added Charge
Steam control set No. 12	$13.30
Water control set No. 15	22.75
Water control set No. 16	24.40
Water control set No. 16-Z	53.20
Water control set No. 26	24.40
Water control set No. 33	5.90

Detailed description of Arcoflame control sets is shown on page 32.

Electronic flame safeguard equipment:

For installations requiring Factory Mutual Approval and in states and municipalities with regulations more stringent than Underwriters' Laboratories, Inc., oil burners are available with special electronic flame safeguard controls for A-7 boiler-burner units as follows:

96-7509 oil burner for A-705, A-706 and A-707 boiler-burner units at added Trade Price charge of $30.00.

97-7607 oil burner for A-708, A-709 and A-710 boiler-burner units, and 98-7707 for A-711 and A-712 boiler-burner units at added Trade Price charge of $13.50.

450-BC-1 vapor limit control; if desired in place of 450-BA-1 pressure limit control regularly furnished for steam units—see page 31 for added charge.

Zone control valve sets may be specified for separate shipment. For Trade Prices and details, see page 30.

BOILER-BURNER UNITS or OIL FIRED BOILERS:

Water mixing valves: for prices see page 32.

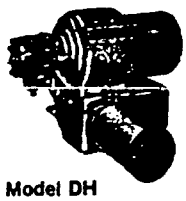
McDonnell-Miller No. 47-2 and No. 51-2 low water cut-off and feeder combinations: No. 47-2 used with A-705 through A-707 and No. 51-2 used with balance of sizes. Special equalizer tapping for bottom connection of No. 51-2 located 6 inches below water line on front section. Specify No. 47-2 or No. 51-2 on order and add to Trade Price of steam boilers with standard equipment Trade Price for these items shown in the current McDonnell-Miller price sheet.

For No. 369 low water cut-off for use with steam units, see page 32.

OIL FIRED BOILERS only:

Steel pedestal bases for installation under the regularly furnished 12" base for greater base heights will be furnished when specified on order at the following added charges:

section size	base height	added charge
5 through 7	8"	$44.00
8 through 12	10"	72.00



Model DH

Model 96-7508

OIL BURNERS for 115 volt, 60 cycle current

For Arcoleader, Arcoliner, Oakmont, Severn, A-5 and A-7 boiler-burner units

model number	capacity gal. per hour	air tube length	air tube diam.	mounting	■ Trade Price	approx. shipping weight
including CA-701 primary control						
DH-5	.65- 3.00	5	4	sling	$115.15	55
DH-6	.65- 3.00	6	4	sling	115.15	55
45W-3606	3.00- 4.00	7⅜	4¼	flange	159.00	56
*62A-7056	4.00- 7.00	10⅛	6⅛	flange	175.00	77
*62A-7056	4.00- 7.00	10⅛	6⅛	flange	180.00	82
including electronic flame safeguard control						
96-7506	6.00-12.00	10⅛	6⅛	flange	290.00	107
96-7508	6.00-12.00	10⅛	6⅛	pedestal	327.00	145
97-7606	10.00-17.00	10¼	7	pedestal	476.00	208
98-7706	14.00-20.00	10¼	8	pedestal	501.00	208

***62A-7056 burner** supplied with 9" draft stabilizer for A-507 and A-508, and with 12" draft stabilizer for A-509 boiler-burner units.

DH-5 burner for Arcoleader, Arcoliner and Oakmont boiler-burner units is shipped with pressure ring only. CA-701 primary control is shipped installed with Arcoleader Packaged units and is a separate shipping component with Arcoleader, Arcoliner and Oakmont boiler-burner units.

DH-5 burner for A-504 boiler-burner unit is shipped with CA-701 primary control and mounting accessories.

DH-6 burner for Severn boiler-burner units is shipped with CA-701 primary control. Accessories for Severn are shipped in a separate box.

45W-3606 and 62A-7056 burners for A-505 through A-509 boiler-burner units are shipped with CA-701 primary control and mounting accessories.

96-7506 burner for A-510 and A-511, and 96-7508 burner for A-705 through A-707 boiler-burner units are shipped with electronic flame safeguard control consisting of C7013A photocell installed in burner, Q270A safety switch base mounted on burner housing, RA890E safety switch packed with burner.

97-7606 and 98-7706 burners for A-708 through A-712 boiler-burner units are shipped with electronic flame safeguard control consisting of C7013A photocell installed in burner, W415B1 panel furnished with Q270A safety switch base and R488E load relay; RA890E safety switch packed with burner.

■ The above prices are for oil burners with primary control as shown, No. 11 steam or No. 13 water basic control set with CA-520 thermostat, and nozzle(s).

For optional control sets and added charges, see page 32.

OPTIONAL ELECTRONIC FLAME SAFEGUARD CONTROL EQUIPMENT:

***62A-7056F burner** with electronic flame safeguard control is available instead of **62A-7056 burner for A-507, A-508 and A-509** boiler-burner units at added Trade Price charge of $93.00. The electronic control consists of C7013A photocell installed in burner, Q270A safety switch base mounted on burner housing. RA890E safety switch packed with burner; delayed oil valve installed between fuel unit and drawer assembly.

For installations requiring Factory Mutual Approval and in states and municipalities with regulations more stringent than Underwriters' Laboratories, Inc., oil burners are available with special electronic flame safeguard controls for boiler-burner units as follows:

62A-7056FFM burner for A-507, A-508 and A-509 boiler-burner units at added Trade Price charge of $133.00.

96-7507 burner for A-510 and A-511 boiler-burner units, **96-7509 burner for A-705, A-706 and A-707** boiler-burner units at added Trade Price charge of $30.00.

97-7607 burner for A-708, A-709 and A-710 boiler-burner units, **98-7707 burner for A-711 and A-712** boiler-burner units, at added Trade Price charge of $13.50.

Two-stage fuel unit is available for DH oil burners at $5.00 Trade Price extra.

Two-stage fuel unit is regularly furnished with 45W, 62A, 96, 97 and 98 oil burners.

Delayed oil valve is standard on all the above burners with electronic controls. V4001A valve installed is available on 45W and 62A burners at $13.00 Trade Price extra.

ZONE CONTROL SETS: Using Hydronic Zone Valves

Two-zone and three-zone control sets utilize one CA-520 thermostat furnished with Packaged G-2 Gas Boilers and Arcoleader Packaged boiler-burner units. When these sets are to be used with other forced hot water installations using circulator, it will be necessary to secure an additional CA-520 thermostat to control the first zone

Set No. 2-Z For Two Zones	Set No. 3-Z For Three Zones	Set No. 4-Z For Each Zone in Addition to Three Zones
Contents of Set No. 2-Z: 1 CA-520 Round Thermostat 2 V8031B ¾" sweat M-H Zone Valves 1 40VA Transformer	Contents of Set No. 3-Z: 2 CA-520 Round Thermostats 3 V8031B ¾" sweat M-H Zone Valves 1 40VA Transformer	Contents of Add-on Set No. 4-Z: 1 CA-520 Round Thermostat 1 V8031B ¾" sweat M-H Zone Valve 1 40VA Transformer
Trade Price $45.19	Trade Price $70.67	Trade Price $27.45

OIL BURNERS for 115 volt 60 cycle current
For conversion and replacement

model number	capacity gal. per hour	air tube length	air tube diam.	mounting (specify if pedestal or flange is wanted for DH and 52A burners.)	Trade Price with control set	Trade Price with primary control and nozzle(s) only	approx. ship. weight with control set	approx. ship. weight with primary control and nozzle(s) only
including CA-701 primary control								
DH-8	.65-3.00	8	4	pedestal	$115.15	$100.50	60	55
DH-15	.65-3.00	15	4	or	117.15	102.50	65	60
DH-23	.65-3.00	23	4	or	118.15	103.50	65	60
*52A	3.00-4.00	7¾ or 10¾	4⅛	flange	155.00	139.00	65	60
62-1-7000	4.00-7.00	16⅛	6⅛	pedestal	170.00	154.00	73	66
including electronic flame safeguard control								
62-2-7002	5.00- 8.00	16⅛	6⅛	pedestal	275.00	259.00	83	80
96-7501	6.00-12.00	16⅛	6⅛	pedestal	290.00	274.00	91	88
97-7601	10.00-17.00	16¼	7	pedestal	476.00	460.00	168	165
98-7701	14.00-20.00	16¼	8	pedestal	501.00	485.00	168	165

NOTE: Optional air tube lengths are available for 52A burner. Add to Trade Price for 16¾" length $3.50; for 22¾" length $5.50.

The above prices for burners **with control set** include primary control as shown; No. 11 steam, No. 13 or No. 14 water, or No. 19 warm air control set with CA-520 thermostat, as specified on order.

For optional control sets and added charges, see page 32.

For burners shown above **with primary control and nozzle(s) only**, additional controls are available at Trade Prices shown on page 32.

DH-8, DH-15. DH-23, 52A and 62-1-7000 burners are furnished with CA-701 intermittent ignition primary control.

On models with electronic flame safeguard controls, C7013A photocell is installed on burner. On 62-2-7002 and 96-7501, Q270A safety switch base is mounted on burner housing. On 97-7601 and 98-7701, W415B1 panel is furnished with Q270A safety switch base and R488E load relay. On these models, RA890E safety switch is packed with burner; delayed oil valve is installed between fuel unit and drawer assembly.

*52A-4322F burner is available with electronic flame safeguard control consisting of C7013A photocell installed in burner, Q270A safety switch base mounted on burner housing and RA890E safety switch packed with burner; delayed oil valve installed between fuel unit and drawer assembly at $93.00 addition to Trade Price of 52A burner.

OPTIONAL ELECTRONIC FLAME SAFEGUARD CONTROL EQUIPMENT

For installations with firing rates above 4.00 gph requiring Factory Mutual Approval and in states and municipalities with regulations more stringent than Underwriters' Laboratories, Inc., oil burners are available with special electronic flame safeguard controls as follows:

62-2-7003 burner at $30.00 addition to Trade Price of model 62-2-7002.

96-7502 burner at $30.00 addition to Trade Price of model 96-7501.

97-7602 or 98-7702 burner at $13.50 addition to Trade Price of models 97-7601 and 98-7701.

Two-stage fuel unit is available for DH oil burner at $5.00 Trade Price extra.

Two-stage fuel unit is standard on 52A, 62, 96, 97 and 98 oil burners.

Delayed oil valve is standard on all the above burners with electronic controls. V4001A oil valve installed on 52A and 62-1-7000 burners is available at $13.00 Trade Price extra.

When ordering oil burners be sure to specify nozzle sizes wanted. **One** nozzle is furnished with DH, **two** nozzles with 52A, 62, 96 and 97, and **three** nozzles with 98 oil burners.

Nozzles and strainers are as follows:

For DH: **Hollow cone, 60° or 70°**, 0.65-1.25 gph.

Solid cone, 60° or 70°, 1.35-3.00 gph.

For 52A, 62, 96, 97 and 98: **Solid cone, 70°**, 1.50-2.00 gph; **80°**, 2.25-6.50 gph.

Vapor Installations: Substitute 450-BC-1 vapor limit control for 450-BA-1 pressure limit control with No. 11 or No. 12 control sets and add $10.99 to Trade Price.

Electric Clock Thermostat: Substitute T852A for CA-520 thermostat; specify on order control set number with suffix "B", and add $27.17 to Trade Price.

Substitute CB-580 for CA-520 thermostat: Deduct $2.83 from Trade Price **with control set** shown above.

Perfxray Primary Controls

Models DH-8, DH-15 and DH-23 conversion and replacement Arcoflame oil burners are available with Perfxray primary control set consisting of CT-99 flame detector factory mounted in air tube, and R-96 programming relay (for jacket mounting only) shipped with burner. Trade prices for burners with **constant ignition** are the same as shown above either with control set or with primary control and nozzle. If intermittent ignition is wanted specify on order and add $2.00 to the above Trade Prices.

Arcoflame oil burners are approved by the National Board of Fire Underwriters and comply with Commercial Standard CS-75.

Capacities of Arcoflame oil burners are for installations at sea level and at elevations up to 1,000 feet. Reduce by 4% for each additional 1,000 feet above sea level.

For discount on repairs, see page 2.

control set	for:	contents of Arcoflame control set		add to Trade Price of oil burner with basic control set
		number	description	
No. 11 Steam	Boiler without domestic hot water.	CA-520 450-BA-1	thermostat limit control	.....
No. 12 Steam	Boiler with year-round domestic hot water, built-in heater.	CA-520 450-BA-1 CA-666	thermostat limit control imm. operating control	$13.30
No. 13 Water	Boiler without domestic hot water, immersion control.	CA-520 CA-655	thermostat limit control	.....
No. 14 Water	Boiler without domestic hot water, clamp-on control.	CA-520 251-MJ	thermostat limit control	.....
No. 15 Water	Boiler with year-round domestic hot water, storage tank heater, using circulator.	CA-520 CA-655 CA-666 CA-262	thermostat limit control imm. operating control relay transformer	$22.75
No. 16 Water	Boiler with year-round domestic hot water, built-in tankless heater, using circulator.	CA-520 CA-655 CA-666-DT CA-262	thermostat limit control imm. control double throw switch relay transformer	$24.40
No. 16-Z Water	2-Zone control, for boiler with year-round domestic hot water, built-in tankless heater, using circulators. Note: For each additional zone, add 1 CA-520 thermostat and 1 CA-262 relay transformer at current prices.	2 CA-520 CA-655 CA-666 CA-666-R 2 CA-262	thermostats limit control imm. operating control rev. acting low limit control relay transformers	$53.20
No. 19 Warm Air	Gravity furnace.	CA-520 CA-844	thermostat limit control	.....
No. 20 Warm Air	Forced warm air unit.	CA-520 CA-840-S	thermostat fan and limit control	$ 1.35
No. 26 Water	Boiler with year-round domestic hot water, built-in tankless heater, using circulator.	CA-520 CA-655 CA-666-AD CA-262	thermostat limit control imm. control double throw switch, adj. differential relay transformer	$24.40
No. 33 Water	Boiler without domestic hot water, constant circulator operation.	CA-520 CB-614	thermostat high limit rev. act. control	$ 5.90
No. 36 Water	**Arcoleader and A-5 units ONLY** with year-round domestic hot water, built-in tankless heater, using circulator.	CA-520 CA-610	thermostat imm. control relay combination	$15.05
No. 36-Z Water	**Arcoleader and A-5 units ONLY.** (1 No. 36-Z set is required for each zone in addition to the first zone which is controlled by the No. 36 control set.)	CA-520 CA-260	thermostat zone control relay	Add-on zone (Use only with No. 36 set) $20.35

Controls – Regularly furnished are for 115 volt 60 cycle current

number	description	Trade Price	number	description	Trade Price
	AMERICAN-STANDARD			**AMERICAN-STANDARD**	
CA-520	thermostat, ROUND, low voltage	$ 7.74	CA-666-AD	imm. hot water control, double throw switch, adjustable differential	$11.81
CB-580	thermostat, low voltage	4.91			
CA-440	thermostat, line voltage	13.50	CA-701	primary control, intermittent ignition	27.30
			CA-704	primary control, constant ignition	25.80
251-MJ	clamp-on water limit control	8.03			
CA-260	zone control relay	12.60	CA-840-S	fan and limit control	9.77
CA-262	relay transformer	12.60	CA-844	warm air limit control	8.36
			RS-116-F	immersion control relay combination	24.90
450-BA-1	pressure limit control, 0-10 lbs.	11.59	CB-520100	mounting cover plate	.45
450-BC-1	vapor limit control, 0-3½ lbs.	22.58			
CA-610	immersion control relay combination	23.48		**GENERAL CONTROLS**	
			T-80A	thermostat for self-energizing application	5.21
CB-614	high limit reverse acting control	14.36			
CA-655	immersion limit control	8.44		**HONEYWELL**	
CA-666	immersion operating control	10.13	T86A	thermostat, low voltage	7.80
CA-666-R	reverse acting low limit control	10.13	T832A	thermostat, low voltage, manual turn-down	20.96
CA-666-DT	imm. hot water control, double throw switch	11.81	T852A	thermostat, electric clock	34.91

Vernatherm water mixing valves

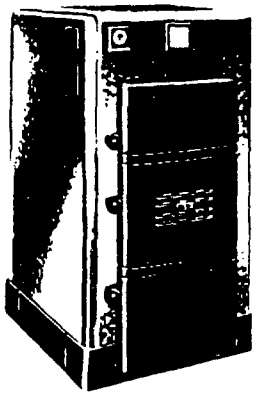
number	description	size	Trade Price	number	description	size	Trade Price
VD-203	adjustable	½"	$11.48	VD-206	adjustable	½" nom. sweat	$ 7.35
		¾"	12.06				
VD-205	non-adjustable	½"	7.92	VD-208	non-adjustable	½" nom. sweat	6.68
		¾"	8.32				

No. 369 McDonnell & Miller low water cut-off for automatically fired steam Arcoliner, Oakmont, Severn, Exbrook, A-5 and A-7 boilers and/or boiler-burner units. . . . . Trade Price each $16.75

SEVERN STOKER FIRED BOILERS

Flush jacket.

boiler number		gross output Mbh	firing rate pounds per hour	■ net installed rating			Trade Price	approx. shipping weight
STEAM	WATER			sq ft steam	Mbh	sq ft water		
Not adapted for Built-in Water Heater (see options below)								
SC-17	WC-17	146	16	456	109.5	730	$338.00	1053
SC-21	WC-21	168	18	525	126.0	840	376.00	1220
SC-25	WC-25	188	21	588	141.0	940	413.00	1301
SC-29	WC-29	216	24	675	162.0	1080	454.00	1457
SC-33	WC-33	247	27	772	185.3	1235	513.00	1534
SC-37	WC-37	278	31	869	208.6	1390	569.00	1687



Standard Equipment:

Steam: Steam gauge, ASME safety valve, gauge glass and trimmings.

Water: Theraltimeter and ASME relief valve.

Optional equipment:

Boilers arranged for but less Built-in heaters: If desired, for use with heaters No 590, 594 and 595, add suffix letter "T" to boiler number and add $6.00 to Trade Price of boiler with standard equipment.

If 2½" right or left side tapping in back section for Built-in heater No. 703 is desired, specify on order and add $2.00 to Trade Price of boiler.

Water mixing valves: for prices, see page 32.

For low water cut-off for use with steam Severn boilers, see page 32.

Cover plate for water heater opening will be furnished if specified on order for "T" type boiler at an added Trade Price charge of $3.70.

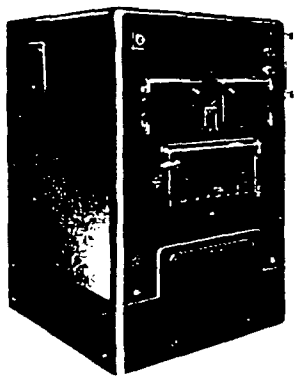
Below are the ratings and Trade Prices for Built-in heaters available for Severn stoker boilers. For detailed information on ratings, see page 2.

Heater No.	Heater Type	Heater Ratings gals. capacity	Trade Price	approx. shipping weight
703	tank	66	$ 9.00	7
594	tank	100	48.00	54
595	tank	160	42.50	51
590	tankless	3½ per minute	36.00	60

EXBROOK STOKER FIRED BOILERS

Flush jacket.

boiler number		gross I=B=R output Mbh	I=B=R burner capacity lbs/hr	■ net I=B=R rating		■ net rating sq ft water	Trade Price	chimney size	approx. shipping weight
STEAM	WATER			sq ft steam	Mbh				
Not adapted for Built-in Water Heater (see options below)									
SC-207	WC-207	276	30	863	207.1	1380	$575.00	8x12x25	2150
SC-208	WC-208	335	37	1047	251.3	1675	651.00	8x12x25	2313
SC-209	WC-209	396	43	1238	297.1	1980	731.00	12x12x30	2628
SC-2010	WC-2010	452	50	1413	339.1	2261	803.00	12x12x30	2821
SC-2011	WC-2011	508	56	1588	381.1	2541	873.00	12x12x35	3134
SC-2012	WC-2012	564	62	1763	423.1	2821	947.00	12x16x40	3309
SC-2013	WC-2013	620	68	1938	465.1	3101	1013.00	12x16x40	3641



Standard Equipment:

Steam: Steam gauge, ASME safety valve, gauge glass and trimmings.

Water: Theraltimeter and ASME relief valve.

Optional equipment:

Boilers arranged for but less Built-in heater: If desired add suffix letter "T" to boiler and add $6.00 to Trade Price of boiler with standard equipment.

Built-in water heaters are available for use with Exbrook "T" type boilers only.

Cover plate for water heater opening will be furnished if specified on order for "T" type boiler at added Trade Price of $4.25.

For low water cut-off for Exbrook steam boilers, see page 32.

Below are the ratings and Trade Prices for Built-in heaters available for Exbrook "T" type Stoker boilers. For detailed information on ratings, see page 2.

Heater No.	Heater Type	Heater Ratings gals. capacity	Trade Price	approx. shipping weight
591	tank	120	$32.50	35
592	tank	200	46.50	53

■ For complete information on boiler ratings, see page 2

For discount on repairs, see page 2.

NO. 3 REDFLASH STOKER FIRED BOILERS

Jacketed and unjacketed.

boiler number		gross output Mbh	firing rate pounds per hour	■ net installed rating			unjacketed		jacketed	
STEAM	WATER			sq ft steam	Mbh	sq ft water	Trade Price	approx. shipping weight	Trade Price	approx. shipping weight
3-SC-8	3-WC-8	706	78	2207	529.6	3531	$1076.00	3652	$1164.00	3827
3-SC-9	3-WC-9	798	88	2494	598.6	3991	1195.00	4041	1286.00	4224

Standard equipment:

Steam:
Steam gauge, ASME safety valve, gauge glass and trimmings.

Water:
Theraltimeter and ASME relief valve.

Optional equipment:

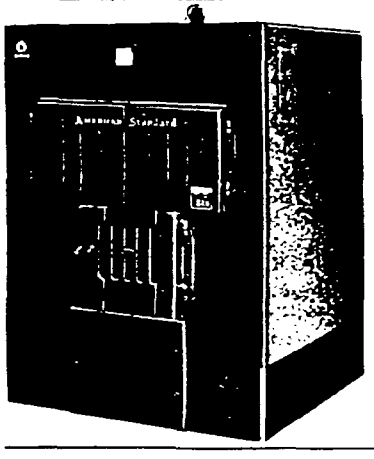
External water heater tappings available at following added charges: Jacket–$2.00 per tapping. Sections–$2.00 per tapping.

A-7 STOKER FIRED BOILERS

Jacketed and unjacketed.

Tested and equipped for 50 lbs. water working pressure.

boiler number		gross I=B=R output Mbh	I=B=R burner capacity lbs/hr	■ net I=B=R rating		■ net rating sq ft water	chimney size	unjacketed		jacketed	
STEAM	WATER			sq ft steam	Mbh			Trade Price	approx. shipping weight	Trade Price	approx. shipping weight
A-705-SC	A-705-WC	866	95	2707	649.7	4331	16 x 16 x 28	$1200.00	3882	$1281.00	4054
A-706-SC	A-706-WC	1012	111	3163	759.2	5061	16 x 16 x 30	1314.00	4518	1400.00	4693
A-707-SC	A-707-WC	1196	131	3738	897.2	5981	16 x 20 x 36	1481.00	5149	1579.00	5332
A-708-SC	A-708-WC	1376	151	4340	1041.6	6944	16 x 20 x 42	1643.00	5720	1759.00	5929
A-709-SC	A-709-WC	1570	172	5013	1203.1	8020	16 x 20 x 45	1788.00	6330	1926.00	6545
A-710-SC	A-710-WC	1760	194	5672	1361.2	9075	20 x 20 x 50	1957.00	6990	2103.00	7209
A-711-SC	A-711-WC	1956	215	6328	1518.6	10125	20 x 20 x 55	2121.00	7556	2277.00	7817
A-712-SC	A-712-WC	2148	236	6949	1667.7	11118	20 x 20 x 60	2283.00	8208	2450.00	8506



Standard Equipment:

Steam:
Steam gauge, ASME safety valve, gauge glass and trimmings.

Water:
Theraltimeter and ASME relief valve for 50 lbs.

Optional equipment:

Steel pedestal bases for installation under the regularly furnished 12" base for greater base heights will be furnished when specified on order at the following added charges:

section size	base heights	added charge
5 thru 7	8"	$44.00
8 thru 12	10"	72.00

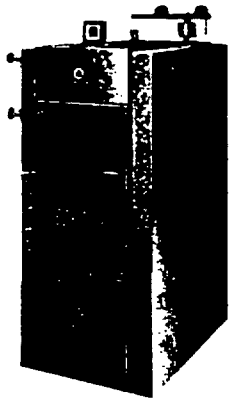
For low water cut-off for A-7 steam boilers, see page 32.

■ For complete information on boiler ratings, see page 2.
For discount on repairs, see page 2.

ARCOLINER HAND FIRED BOILERS

Factory assembled sections.
Dry base construction.
Flush jacket.

boiler number		gross output Mbh	■ net installed rating			Trade Price	approx. shipping weight
STEAM	WATER		sq ft steam	Mbh	sq ft water		
S-153-D	W-153-D	102	180	43.2	288	$286.00	771
S-154-D	W-154-D	152	272	65.3	435	334.00	928
S-155-D	W-155-D	204	373	89.4	596	384.00	1083



Standard Equipment:

Steam:
Steam gauge, ASME safety valve, gauge glass and trimmings, automatic damper regulator and firing tools.

Water:
Theraltimeter, automatic damper regulator, firing tools, and ASME relief valve.

Built-in Heaters:
If Front Section arranged for but less Built-in screw-in heaters No. 701 or 702 is desired specify on order.
Below are the ratings and Trade Prices of Built-in heaters available for Arcoliner Dry Base steam boilers. For detailed information of ratings, see page 2.

Heater No.	Heater Type	Heater ratings gals. capacity	Trade Price	approx. shipping weight
701	tank	60	$8.50	5
702	tank	40	8.00	4

Note: Built-in water heaters are not recommended for hand fired water boilers.

SEVERN HAND FIRED BOILERS

Flush jacket.

boiler number		gross output Mbh	■ net installed rating			Trade Price	approx. shipping weight
STEAM	WATER		sq ft steam	Mbh	sq ft water		
S-17	W-17	194	353	84.7	565	$374.00	1243
S-21	W-21	244	453	108.7	725	432.00	1413
S-25	W-25	296	553	132.7	885	494.00	1521
S-29	W-29	328	630	151.3	1009	544.00	1686
S-33	W-33	364	710	170.5	1137	599.00	1783
S-37	W-37	396	783	187.9	1253	646.00	1956

Standard Equipment:

Steam:
Steam gauge, ASME safety valve, gauge glass and trimmings, automatic damper regulator and firing tools.

Water:
Theraltimeter, automatic damper regulator, firing tools, and ASME relief valve.

Built-in Heaters:
If 2½" right or left side tapping in back section for Built-in screw-in heaters No. 701, 702 or 703 is desired specify on order and add $2.00 per tapping to Trade Price of boiler.
Below are the ratings and Trade Prices of Built-in heaters available for Severn hand fired steam boilers. For detailed information on ratings, see page 2.

Heater No.	Heater Type	Heater ratings gals. capacity	Trade Price	approx. shipping weight
701	tank	60	$8.50	5
702	tank	40	8.00	4
703	tank	100	9.00	7

Note: Built-in water heaters are not recommended for hand fired water boilers.

■ For complete information on boiler ratings, see page 2.
For discount on repairs, see page 2.

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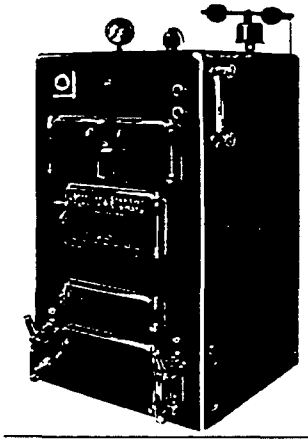
NO. 2 REDFLASH HAND FIRED BOILERS

Jacketed and unjacketed.

boiler number		gross output Mbh	■ net installed rating			unjacketed		jacketed	
STEAM	WATER		sq ft steam	Mbh	sq ft water	Trade Price	approx. shipping weight	Trade Price	approx. shipping weight
2-S-6	2-W-6	390	769	184.7	1231	$ 596.00	1966	$ 657.00	2091
2-S-7	2-W-7	464	940	225.7	1505	673.00	2293	737.00	2390
2-S-8	2-W-8	536	1111	266.7	1778	749.00	2466	817.00	2572
2-S-9	2-W-9	606	1281	307.5	2050	821.00	2782	893.00	2897
2-S-10	2-W-10	676	1453	348.8	2325	892.00	2999	969.00	3122
2-S-11	2-W-11	744	1623	389.5	2597	965.00	3313	1045.00	3446
2-S-12	2-W-12	812	1794	430.5	2870	1041.00	3503	1124.00	3644



Standard Equipment:

Steam:

Steam gauge, ASME safety valve, gauge glass and trimmings, automatic damper regulator and firing tools.

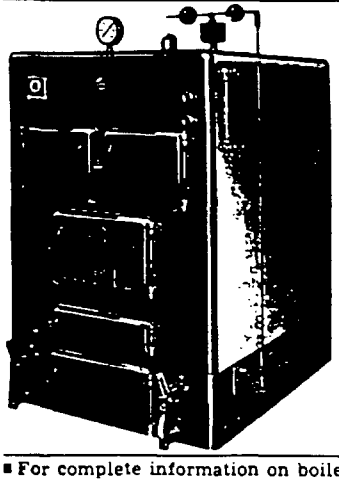
Water:

Theraltimeter, automatic damper regulator, firing tools, and ASME relief valve.

NO. 3 REDFLASH HAND FIRED BOILERS

Jacketed and unjacketed.

boiler number		gross output Mbh	■ net installed rating			unjacketed		jacketed	
STEAM	WATER		sq ft steam	Mbh	sq ft water	Trade Price	approx. shipping weight	Trade Price	approx. shipping weight
3-S-6	3-W-6	696	1503	360.6	2404	$ 912.00	3243	$ 988.00	3397
3-S-7	3-W-7	814	1799	431.8	2879	1046.00	3698	1127.00	3870
3-S-8	3-W-8	932	2100	504.1	3360	1184.00	4110	1272.00	4285
3-S-9	3-W-9	1046	2400	576.0	3840	1324.00	4549	1415.00	4732



Standard Equipment:

Steam:

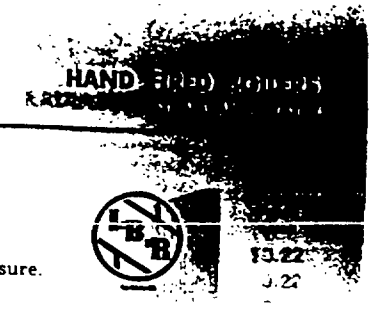
Steam gauge, ASME safety valve, gauge glass and trimmings, automatic damper regulator and firing tools.

Water:

Theraltimeter, automatic damper regulator, firing tools, and ASME relief valve.

Note: Buckwheat coal grate bars will be furnished at no additional charge when specified on order.

■ For complete information on boiler ratings, see page 2.
For discount on repairs, see page 2.

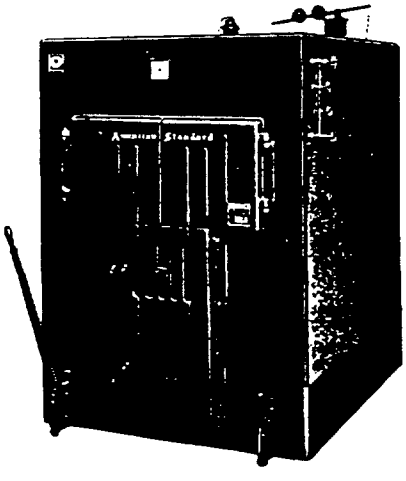


A-7 HAND FIRED BOILERS

Jacketed and unjacketed.

Tested and equipped for 50 lbs. water working pressure.

boiler number		gross I=B=R output Mbh	■ net I=B=R		■ net rating sq ft water	chimney size	unjacketed		jacketed	
STEAM	WATER		sq ft steam	Mbh			Trade Price	approx. shipping weight	Trade Price	approx. shipping weight
A-705-S	A-705-W	1122	2606	625.4	4169	16 x 16 x 40	$1327.00	4294	$1408.00	4466
A-706-S	A-706-W	1298	3101	744.3	4962	16 x 20 x 45	1447.00	5006	1533.00	5181
A-707-S	A-707-W	1510	3725	894.0	5960	20 x 20 x 50	1615.00	5738	1713.00	5921
A-708-S	A-708-W	1708	4342	1042.1	6947	20 x 20 x 55	1788.00	6392	1904.00	6601
A-709-S	A-709-W	1910	5008	1202.0	8013	20 x 20 x 60	1910.00	7199	2048.00	7334
A-710-S	A-710-W	2108	5681	1363.5	9090	20 x 24 x 65	2061.00	7858	2207.00	8077
A-711-S	A-711-W	2288	6326	1518.2	10122	20 x 24 x 70	2225.00	8506	2381.00	8767
A-712-S	A-712-W	2456	6947	1667.3	11115	24 x 24 x 75	2377.00	9231	2544.00	9529



Standard equipment:

Steam:

Steam gauge, ASME safety valve, gauge glass and trimmings, automatic damper regulator and firing tools.

Water:

Theraltimeter and ASME relief valve for 50 lbs., automatic damper regulator and firing tools.

■ For complete information on boiler ratings, see page 2.

For discount on repairs, see page 2.

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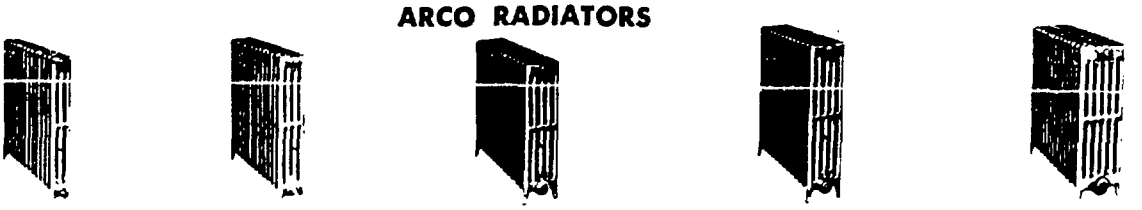
ARCO RADIATORS

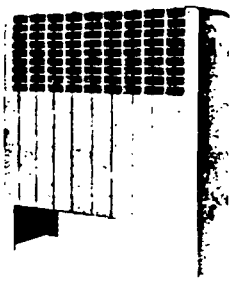


width	height, inches	Trade Price per sq ft
6 tube	32	$1.19
3 tube	25	1.19
4, 5, 6 tube	25	1.12
4, 5 tube	22	1.17
4, 6 tube	19	1.19

Three, four, five and six tube Arco Radiators are regularly furnished with two and one-half inch (2½") legs but can be supplied on Special Order with four and one-half inch (4½") legs, or without legs, at no extra charge.

Arco Radiators sold only in even number of sections up to a maximum of 56 sections.

SUNRAD® RADIATORS

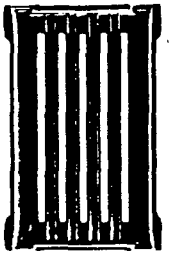


type	Trade Price per sq ft
M 5 x 20	$1.42
M 7½ x 23	1.49

M 5 x 20 and M 7½ x 23 Sunrad Radiators are regularly furnished with two and three-quarter inch (2¾") legs but can be supplied on special order without legs, at no extra charge.

Sunrad Radiators sold in even number of sections from 4 to 30 sections, and in odd number of sections with center leg from 31 to a maximum of 45 sections.

PEERLESS® WALL RADIATORS



type	Trade Price per sq ft
11-B Pattern	$1.28
8-B Pattern	1.34

Extra charge of $0.60 each will be made for tappings at Nos. 20, 50, 60 and 90 as shown on outline drawings of Peerless Wall and Ceiling Radiators in current literature.

Radiators furnished per Figures 840 or 1140 add $2.40 trade extra

Radiators furnished per Figures 842 or 1142 add $4.80 trade extra

For convenience in handling and shipping, Nos. 8-B and 11-B Radiators will be assembled in lengths not exceeding 4 sections.

RATINGS — SQUARE FEET PER SECTION

Arco Radiators

Sold only in even number of sections

height in inches	sq ft per section			
	3 tube	4 tube	5 tube	6 tube
32	...	...	...	3.7
25	1.6	2.0	2.4	3.0
22	...	1.8	2.1	...
19	...	1.6	...	2.3

Peerless Wall Radiators

11-B Pattern ..... 11 sq ft per section

8-B Pattern ..... 8 sq ft per section

*Sunrad Radiators

M 5 x 20 Pattern ..... 2.25 sq ft per section

M 7½ x 23 Pattern ..... 3.40 sq ft per section

*Important: Increase size 5% for recessed installation—¾" air space top and sides, ½" at back. Increase size 15% for tightly recessed installation—no clearance top or sides, ½" air space at back.

RADIATOR ACCESSORIES

	Trade Price each
Arco Brackets:	
For 3, 4, 5, 6 tube, with Wall Plate	$0.79
Arco Radiator Pedestals:	
½" and 1"	0.30
1½"	0.39
Sunrad Brackets:	
For M5 x 20 and M7½ x 23	0.62
Peerless Wall and Ceiling Brackets:	
Adjustable, with Bearing Plate, single spool	3.85
Adjustable, with Bearing Plate, double spool	6.99
Type L	0.22
Type M	0.15
Type MM	0.22
Type P	0.47

Nipples, Plugs, Bushings, etc.:	Trade Price each
¾", 1", 1¼", 1½" Plugs, Bushings	$0.22
¾", 1", 1¼" Slip Nipples	0.22
1½" Hexagon Nipples	0.39
⅛" Air Vent Plugs	0.01
Radiator Rod Nuts	0.01
Radiator Rods ..... per section	0.01

Above items available for use only with our Radiator products.

Sunrad Grilles

Inlet—Stamped Lattice Type ..... per section $0.18

SHIPPING WEIGHTS

For estimating purposes only, the following approximate weights per square foot may be used for radiators: Arco, 4½ pounds; Sunrad, M 5 x 20–6 pounds, M 7½ x 23–6½ pounds; Peerless Wall, 6½ pounds; New Model 8 Radiantrim Panels: 4¾ pounds per square foot, 12.16 pounds per lineal foot; Model 10 Radiantrim Panels: 4¾ pounds per square foot, 16.15 pounds per lineal foot.

For estimating purposes only, the following approximate shipping weights may be used for Convectors and Cabinets:

Arco Convectors–elements only–see page 45.

Complete Cabinets, for Arco or Multifin Convectors, per sq ft of cabinet output–1½ pounds.

Multifin Convectors–elements only–see page 42.

Multifin Units (convectors shipped mounted in cabinets) per sq ft of cabinet output–

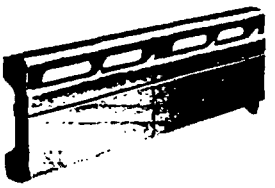
"Special Service Line"

Types F, R, RC–1⅔ pounds. Type W–1½ pounds.
Type FS –1½ pounds. Type S –1¼ pounds.

"Stock Model"–1.13 pounds; also see pages 43 and 44.

Heatrim Panels see pages 40 and 41.

RADIANTRIM BASEBOARD PANELS



New Model 8

I=B=R Steam Rating per lineal foot 2.75 sq ft

per lineal foot	per square foot
Trade Price– $3.08	$1.12

New Model 8 Radiantrim Panel lengths (2½ ft to 30 ft) are made up from the following sections:

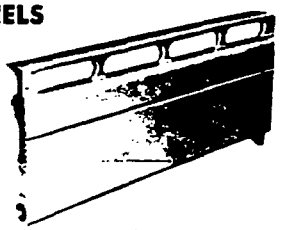
1½ ft Left hand end section — 1 ft Right hand end section
2 ft Left hand end section — 2 ft Right hand end section
2 ft Center section

Assembly length with legs and tappings at each end:
2 ft Double end section

New Model 8 Accessories	Trade Price
Extension Panel and Brackets (Two 6 ft lengths per box)	$8.40
★Extension Panel Retaining Bracket	0.22
Extension Panel Cover Strip	0.53
Assembly Clamp	7.70
Compression Corner Connection	2.40
★Retaining Block	0.15
★Adjustable Leg	0.20
★Tie Bolt	0.06

★These items are regularly furnished as required with New Model 8 Radiantrim Panels and Accessories. Prices are shown for repair or replacement purposes.

Packed in quantity of 10 per box (Available only in this minimum quantity)	Trade Price per box of 10
Inverted Corner Cover	$10.50
Extended Inverted Corner Cover	17.50
Projecting Corner Cover	14.20
Valve Enclosure (all R.H. or L.H.)	12.35
End Box (all R.H. or L.H.)	7.00



Model 10

I=B=R Steam Rating per lineal foot 3.4 sq ft

per lineal foot	per square foot
Trade Price– $3.81	$1.12

Model 10 Radiantrim Panel lengths (2½ ft to 30 ft) are made up from the following sections:

1½ ft Left hand end section — 1 ft Right hand end section
2 ft Left hand end section — 2 ft Right hand end section
2 ft Center section

Assembly length with legs and tappings at each end:
1½ ft Double end section — 2 ft Double end section

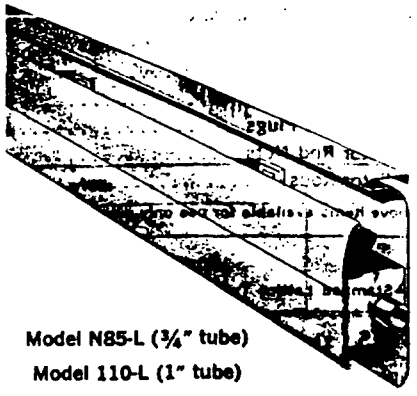
Model 10 Accessories	Trade Price
Extension Panel and Brackets (Two 6 ft lengths per box)	$13.10
★Extension Panel Retaining Bracket	0.22
Extension Panel Cover Strip	0.53
Assembly Clamp	7.70
Compression Corner Connection	2.40
★Retaining Block	0.15
★Adjustable Leg	0.20
★Tie Bolt	0.06

★These items are regularly furnished as required with Model 10 Radiantrim Panels and Accessories. Prices are shown for repair or replacement purposes.

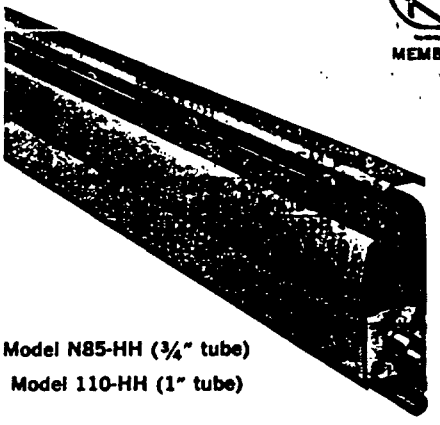
Packed in quantity of 10 per box (Available only in this minimum quantity)	Trade Price per box of 10
Inverted Corner Cover	$13.10
Extended Inverted Corner Cover	23.60
Projecting Corner Cover	16.60
Valve Enclosure (all R.H. or L.H.)	18.35
End Box (all R.H. or L.H.)	9.80

HEATRIM BASEBOARD PANELS

MEMBER



Model N85-L (¾" tube)
Model 110-L (1" tube)



Model N85-HH (¾" tube)
Model 110-HH (1" tube)

SEE CURRENT LITERATURE FOR APPROVED I-B-R HOT WATER RATINGS

description		approx. shipping weight	Trade Price
COMPLETE UNITS:			
Model N85-L—Packaged in 3', 4', 5', 6', and 8' lengths—completely assembled (package contains element, one-piece back and top section, front panel, snap-in support brackets, element slide cradles and 1 set joining pieces). Finished with white prime coat of paint.	per 3 ft. length	9	$ 5.85
	per 4 ft. length	12	7.80
	per 5 ft. length	15	9.75
	per 6 ft. length	18	11.70
	per 8 ft. length	24	15.60
	*per lineal foot	3	1.95
Model N85HH—Packaged in 3', 4', 5', 6', and 8' lengths—completely assembled (package contains element, one-piece back and top section, front panel, splitter/damper, snap-in support brackets, element slide cradles and 1 set joining pieces). Finished with white prime coat of paint.	per 3 ft. length	12	7.35
	per 4 ft. length	16	9.80
	per 5 ft. length	20	12.25
	per 6 ft. length	24	14.70
	per 8 ft.length	32	19.60
	*per lineal foot	4	2.45
HEATING ELEMENTS:			
Model N85 (¾" tube)—Packaged six equal lengths per box.	per box of six 3' lengths	18	18.00
	per box of six 4' lengths	24	24.00
	per box of six 5' lengths	30	30.00
	per box of six 6' lengths	36	36.00
	per box of six 8' lengths	48	48.00
	*per lineal foot	1	1.00
Model N85 (¾" tube)—Individually packaged one per box.	per box of one 3' length	3	3.21
	per box of one 4' length	4	4.28
	per box of one 5' length	5	5.35
	per box of one 6' length	6	6.42
	per box of one 8' length	8	8.56
	*per lineal foot	1	1.07
Model 110 (1" tube)—Packaged eight 6' lengths per box.	per box of eight	79⅔	94.08
	*per lineal foot	1⅓	1.96

*For comparative and estimating purposes only.

HEATRIM BASEBOARD PANEL ACCESSORIES

ENCLOSURES:

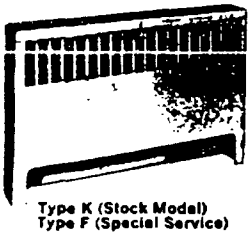
		approx. shipping weight	Trade Price
Model L—Multiple packaged in 3', 4', 5', 6', and 8' lengths—three equal lengths per box (package contains 3 one-piece back and top sections, 3 front panels, loose snap-in support brackets, element slide cradles and 3 sets joining pieces). Finished with white prime coat of paint.	per box of three 3' lengths	18	$ 7.20
	per box of three 4' lengths	24	9.60
	per box of three 5' lengths	30	12.00
	per box of three 6' lengths	36	14.40
	per box of three 8' lengths	48	19.20
	*per lineal foot	2	.80
Model L—Individually packaged in 3', 4', 5', 6' and 8' lengths unassembled. (Package contains one-piece back and top section, front panel, loose snap-in support brackets, element slide cradles and 1 set joining pieces). Finished with white prime coat of paint.	per 3 ft. length	6	2.70
	per 4 ft. length	8	3.60
	per 5 ft. length	10	4.50
	per 6 ft. length	12	5.40
	per 8 ft. length	16	7.20
	*per lineal foot	2	.90
Model HH—Multiple packaged in 3', 4', 5', 6', and 8' lengths—three equal lengths per box (package contains 3 one-piece back and top sections, 3 front panels, 3 splitter/dampers, loose snap-in support brackets, element slide cradles and 3 sets joining pieces). Finished with white prime coat of paint.	per box of three 3' lengths	31½	12.06
	per box of three 4' lengths	42	16.08
	per box of three 5' lengths	52½	20.10
	per box of three 6' lengths	63	24.12
	per box of three 8' lengths	84	32.16
	*per lineal foot	3½	1.34
Model HH—Individually packaged in 3', 4', 5', 6' and 8' lengths unassembled. (Package contains one-piece back and top section, front panel, splitter/damper, snap-in support brackets, element slide cradles and 1 set joining pieces). Finished with white prime coat of paint.	per 3 ft. length	10½	4.35
	per 4 ft. length	14	5.80
	per 5 ft. length	17½	7.25
	per 6 ft. length	21	8.70
	per 8 ft. length	28	11.60
	*per lineal foot	3½	1.45

*For comparative and estimating purposes only.

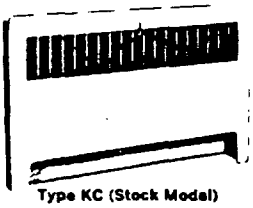
Description		approx. shipping weight	Trade Price
MODEL L ENCLOSURE ACCESSORIES:			
Inverted Corner Cover—one-piece front and top section	packed per box of 10	7	$ 8.00
Inverted Corner Cover—back section only	packed per box of 10	5	4.50
Projecting Corner Cover	packed per box of 10	12	10.00
Valve Enclosure—6" wide	packed all right hand or all left hand per box of 10	15	17.50
End Cover—4" wide	packed all right hand or all left hand per box of 10	9	12.50
End Cap—1½" wide	packed all right hand or all left hand per box of 10	5	5.00
Wall End Piece—3¼" wide	packed per box of 10	3	3.00
One-Foot Filler Pieces—14" wide	packed per box of 5	15	6.00
Joining Pieces—2" wide	packed per box of 20 sets	8	5.00
Note: Finished with white prime coat of paint.			
Dampers for Model L Enclosures:			
Packaged in twelve equal lengths per box	per 3 ft. length	12	5.40
	per 4 ft. length	16	7.20
	per 5 ft. length	20	9.00
	per 6 ft. length	23	10.80
	per 8 ft. length	32	14.40
Note: Finished with white prime coat of paint.	*per lineal foot	⅓	.15
Replacement parts for Model L enclosures:			
Enclosure fronts—8 ft. lengths only	each	..	2.00
Snap-in support bracket with slide cradle	each	..	.35
MODEL HH ENCLOSURE ACCESSORIES:			
Inverted Corner Cover—one-piece front and top section	packed per box of 10	8	8.00
Inverted Corner Cover—back section only	packed per box of 10	6	4.50
Projecting Corner Cover	packed per box of 10	14	11.50
Valve Enclosure—6" wide	packed all right hand or all left hand per box of 10	16	18.00
End Cover—4" wide	packed all right hand or all left hand per box of 10	12	12.50
End Cap—1½" wide	packed all right hand or all left hand per box of 10	8	8.00
Wall End Piece—3¼" wide	packed per box of 10	6	4.00
One-Foot Filler Pieces—14" wide	packed per box of 5	18	7.75
Joining Pieces—2" wide	packed per box of 20 sets	8	7.00
Note: Finished with white prime coat of paint.			
Replacement parts for Model HH Enclosures:			
Enclosure fronts—8 ft. lengths only	each	..	2.40
Snap-in support bracket with slide cradle	each	..	.35

*For comparative and estimating purposes only.

NOTE: Add 25% to accessory unit price when ordered in less than quantities indicated above.

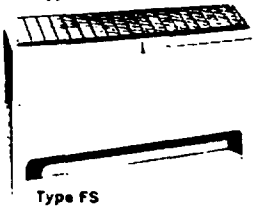


Type K (Stock Model)
Type F (Special Service)

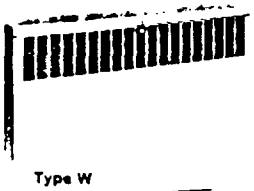


Type KC (Stock Model)

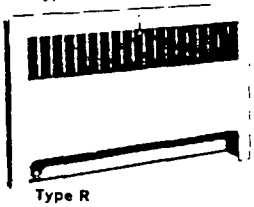
Type S



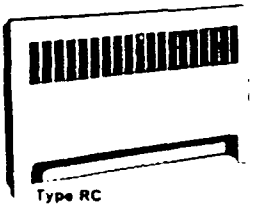
Type FS



Type W



Type R



Type RC

MULTIFIN CONVECTORS

Combination Price:

The actual output in square feet of catalog rating–Steam (215°F.) obtained with the cabinet heights furnished determines the price of convectors and cabinets sold in combination.

The total price of each order equals the amount of catalog square feet ordered multiplied by the price per square foot, plus the unit extra charge multiplied by the total number of units ordered.

cabinet type	description	Trade Price per sq ft	Trade Price unit extra charge
Stock Model			
K	Floor Type–free standing	$0.40	$11.00
KC	Semi-recessed–2½" flanged edges	.40	14.00

Note: *For expanded prices, see pages 43 and 44. For cabinet extras, see page 46.*

special service			
F	Floor Type–free standing	$ .41	$12.00
FG	Floor Type–free standing–inlet grille	.44	12.00
W	Wall Hung–flat top	.40	12.25
FS	Free Standing–sloping top	.43	13.75
FSG	Free Standing–sloping top–inlet grille	.46	13.75
S	Wall Hung–sloping top	.37	12.25
R	Recessed–½" flanged edges	.47	13.75
RG	Recessed–½" flanged edges–inlet grille	.50	13.75
RGB	Recessed–½" flanged edges–inlet grille with bottom overlap	.50	16.75
RC	Semi-recessed–2½" or 4½" flanged edges	.47	14.75
RCG	Semi-recessed–2½" or 4½" flanged edges inlet grille	.50	14.75
RCGB	Semi-recessed–2½" flanged edges–inlet grille–with bottom overlap	.50	17.75
RCGB	Semi-recessed–4½" flanged edges–inlet grille–with bottom overlap	.50	17.75

Note: *For cabinet extras, see page 46.*

Elements only (when sold less cabinets) — *steam or water*

	No. 4—3⅞" depth			No. 6—5⅞" depth			No. 8—7⅞" depth			No. 10—9⅞" depth		
convector length inches	unit no.	approx. shipping weight	Trade Price	unit no.	approx. shipping weight	Trade Price	unit no.	approx. shipping weight	Trade Price	unit no.	approx. shipping weight	Trade Price
20	420	8	$ 8.40	620	13	$10.75	820	15	$13.90	1020	21	$19.30
24	424	10	9.10	624	16	11.65	824	19	15.10	1024	26	20.55
28	428	12	9.80	628	19	12.60	828	23	16.35	1028	31	21.85
32	432	14	10.40	632	22	13.45	832	27	17.60	1032	36	23.10
36	436	16	11.15	636	25	14.30	836	31	18.80	1036	41	24.40
40	440	18	11.85	640	28	15.25	840	35	20.05	1040	46	25.60
44	444	20	12.40	644	31	16.10	844	39	21.30	1044	51	26.90
48	448	22	13.10	648	34	16.95	848	43	22.55	1048	56	28.20
56	456	26	14.50	656	40	18.75	856	51	25.00	1056	66	30.70
64	464	30	15.90	664	46	20.50	864	59	27.50	1064	76	33.25

Ratings:

Ratings of Multifin Convectors have been determined in accordance with the method of testing and rating outlined in Commercial Standard Code CS140-47 and amendments and said ratings have been approved by the Convector Rating Committee.

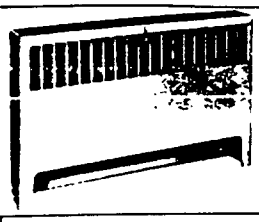
Standard Cabinets:

Standard cabinets are furnished in prime painted sheet steel–reinforced, No. 18 gauge front and No. 20 gauge back (K and KC-No. 26 gauge), ends and top rounded corners, streamline front discharge grille, and open bottom inlet arch, in heights, lengths and depths to accommodate convectors listed in current literature.

ONE-PIPE STEAM:

Particular reference must be made on order if special service convectors are to be used on one-pipe steam systems. Multifin convectors–for two-pipe steam or water systems–cannot be used, or modified, for one-pipe systems.

Elements arranged with special one-pipe steam headers—$.06 Trade Price per square foot of cabinet output extra.



MULTIFIN CONVECTORS

TYPE K — STOCK MODEL — FREE STANDING

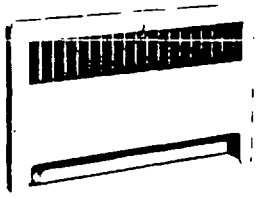
Expanded prices

For use on two-pipe steam and hot water systems only.

cabinet length inches	No. 4 depth (4¼" cabinet)				No. 6 depth (6¼" cabinet)				No. 8 depth (8¼" cabinet)				No. 10 depth (10¼" cabinet)			
	unit no.	sq ft output	approx. shipping weight	Trade Price	unit no.	sq ft output	approx. shipping weight	Trade Price	unit no.	sq ft output	approx. shipping weight	Trade Price	unit no.	sq ft output	approx. shipping weight	Trade Price
20" cabinet height																
20½	420–20	11.3	13	$15.52	620–20	16.3	24	$17.52	....	....	....	....	....	....	....	....
24½	424–20	13.9	16	16.56	624–20	20.1	27	19.04	....	....	....	....	....	....	....	....
28½	....	....	....	....	628–20	23.8	30	20.52	....	....	....	....	....	....	....	....
32½	....	....	....	....	632–20	27.6	34	22.04	832–20	33.6	38	$24.44	....	....	....	....
36½	....	....	....	....	636–20	31.3	36	23.52	836–20	38.1	42	26.24	1036–20	42.4	48	$27 96
40½	....	....	....	....	640–20	35.1	40	25.04	840–20	42.7	45	28.08	1040–20	47.6	52	30.04
44½	....	....	....	....	644–20	38.8	43	26.52	....	....	....	....	....	....	....	....
48½	....	....	....	....	648–20	42.6	46	28.04	848–20	51.8	52	31.72	1048–20	57.8	58	34.12
56½	....	....	....	....	656–20	50.1	53	31.04	856–20	60.9	60	35.36	1056–20	68.0	67	38.20
64½	....	....	....	....	664–20	57.6	59	34.04	864–20	70.0	65	39.00	1064–20	78.2	76	42 28
24" cabinet height																
20½	420–24	13.1	15	16.24	620–24	18.4	28	18.36	....	....	....	....	....	....	....	....
24½	424–24	16.1	18	17.44	624–24	22.7	32	20.08	....	....	....	....	....	....	....	....
28½	428–24	19.1	22	18.64	628–24	26.9	37	21.76	....	....	....	....	....	....	....	....
32½	....	....	....	....	632–24	31.1	39	23.44	832–24	37.9	43	26.16	....	....	....	....
36½	....	....	....	....	636–24	35.4	40	25.16	836–24	43.0	46	28.20	1036–24	48.6	52	30.44
40½	....	....	....	....	640–24	39.6	46	26.84	840–24	48.2	51	30.28	1040–24	54.4	56	32.76
44½	....	....	....	....	644–24	43 8	50	28.52	....	....	....	....	....	....	....	....
48½	....	....	....	....	648–24	48.1	52	30.24	848–24	58.4	58	34.36	1048–24	66.1	64	37.44
56½	....	....	....	....	656–24	56.5	60	33.60	856–24	68.7	66	38.48	1056–24	77.8	74	42.12
64½	....	....	....	....	664–24	65.0	69	37.00	864–24	78.9	74	42.56	1064–24	89.5	83	46.80
32" cabinet height																
20½	....	....	....	....	620–32	19.7	33	18.88	....	....	....	....	....	....	....	....
24½	....	....	....	....	624–32	24.2	37	20.68	....	....	....	....	....	....	....	....
28½	....	....	....	....	628–32	28.7	42	22.48	....	....	....	....	....	....	....	....
32½	....	....	....	....	632–32	33.3	46	24.32	832–32	41.2	52	27.48	....	....	....	....
36½	....	....	....	....	636–32	37.8	51	26 12	836–32	46.8	56	29.72	1036–32	53.1	62	32 24
40½	....	....	....	....	640–32	42.3	56	27.92	840–32	52.3	60	31.92	1040–32	59.5	65	34.80
44½	....	....	....	....	644–32	46.8	60	29.72	....	....	....	....	....	....	....	....
48½	....	....	....	....	648–32	51.3	64	31.52	848–32	63.5	70	36.40	1048–32	72.3	76	39.92
56½	....	....	....	....	656–32	60.4	72	35.16	856–32	74.6	80	40.84	1056–32	85.1	85	45 04
64½	....	....	....	....	664–32	69.4	82	38 76	864–32	85.8	89	45.32	1064–32	97.9	94	50 16

Plugs and bushings are not regularly furnished with Multifin Convectors, but are available for separate sale at prices shown on page 39.

Special air vent assemblies, Trade Price..... each $1 80
Damper, chain type–standard length, Trade Price, each 2 10
Metal trim strips, Trade Price .. each $2 75
Snap-On inlet grille, Trade Price. 2 75



MULTIFIN CONVECTORS

TYPE KC – STOCK MODEL – PARTIALLY RECESSED

Expanded prices

For use on two-pipe steam and hot water systems only.

No. 6 depth (6¼" cabinet) with 2½" flange

cabinet length inches	unit no.	sq ft output	approx. shipping weight	Trade Price
		20" CABINET HEIGHT		
20½	620–20	16.3	24	$20.52
24½	624–20	20.1	27	22.04
28½	628–20	23.8	30	23.52
32½	632–20	27.6	34	25.04
36½	636–20	31.3	36	26.52
40½	640–20	35.1	40	28.04
44½	644–20	38.8	43	29.52
48½	648–20	42.6	46	31.04
56½	656–20	50.1	53	34.04
64½	664–20	57.6	59	37.04

No. 6 depth (6¼" cabinet) with 2½" flange

cabinet length inches	unit no.	sq ft output	approx. shipping weight	Trade Price
		24" CABINET HEIGHT		
20½	620–24	18.4	28	$21.36
24½	624–24	22.7	32	23.08
28½	628–24	26.9	37	24.76
32½	632–24	31.1	39	26.44
36½	636–24	35.4	40	28.16
40½	640–24	39.6	46	29.84
44½	644–24	43.8	50	31.52
48½	648–24	48.1	52	33.24
56½	656–24	56.5	60	36.60
64½	664–24	65.0	69	40.00

Plugs and bushings are not regularly furnished with Multifin Convectors, but are available for separate sale at prices shown on page 39.

Special air vent assemblies, Trade Price ..... each $1.80

Damper, chain type–standard length, Trade Price ..... each 2.10

Snap-On inlet grille, Trade Price ..... each 2.75

ARCO CONVECTORS

SPECIAL SERVICE LINE when sold in combination with standard cabinets

COMBINATION PRICE:

The actual output in square feet of catalog rating–Steam (215°F) obtained with the cabinet heights furnished determines the price of convectors and cabinets sold in combination.

The total price of each order equals the amount of catalog square feet ordered multiplied by the price per square foot, plus the unit extra charge multipled by the total number of units ordered.

cabinet type	description	Trade Price per sq ft	Trade Price unit extra charge
F	Floor Type–free standing	$1.29	$16.30
FG	Floor Type–free standing–inlet grille	1.32	16.30
W	Wall Hung–flat top	1.29	16.30
FS	Free Standing–sloping top	1.35	17.10
FSG	Free Standing–sloping top–inlet grille	1.38	17.10
S	Wall Hung–sloping top	1.29	16.30
R	Recessed–½" flanged edges	1.28	17.30
RG	Recessed–½" flanged edges–inlet grille	1.31	17.30

cabinet type	description	Trade Price per sq ft	Trade Price unit extra charge
RGB	Recessed–½" flanged edges–inlet grille with bottom overlap	$1.31	$20.30
RC	Semi-recessed–2½" or 4½" flanged edges	1.28	18.80
RCG	Semi-recessed–2½" or 4½" flanged edges–inlet grille	1.31	18.80
RCGB	Semi-recessed–2½" flanged edges–inlet grille–with bottom overlap	1.31	21.80
RCGB	Semi-recessed–4½" flanged edges–inlet grille–with bottom overlap	1.31	21.80

Standard Cabinets are furnished in:

Prime painted sheet steel–reinforced, No. 18 gauge front and No. 20 gauge back, ends and top, rounded corners, streamline front discharge grille, and open bottom inlet arch, in heights, lengths and depths to accommodate convectors listed in current literature.

For illustrations of cabinets, see page 42.

For cabinet extras, see page 46.

ARCO CONVECTOR — *steam or water*

ELEMENTS ONLY (when sold less cabinets)

convector length inches	No. 4 3¾" depth			No. 6 5⅝" depth			No. 8 7⅝" depth			No. 10 9½" depth		
	unit no.	approx. shipping weight	Trade Price	unit no.	approx. shipping weight	Trade Price	unit no.	approx. shipping weight	Trade Price	unit no.	approx. shipping weight	Trade Price
18	418	39	$11.82	618	57	$17.41	818	71	$21.92	1018	84	$26.44
23	423	50	15.26	623	73	22.45	823	92	28.37	1023	110	34.17
28	428	61	18.69	628	90	27.52	828	113	34.83	1028	136	42.01
33	433	72	22.14	633	106	32.67	833	134	41.27	1033	162	49.74
38	438	83	25.58	638	123	37.73	838	155	47.61	1038	188	57.59
43	443	94	28.91	643	139	42.78	843	176	54.05	1043	213	65.33
48	448	105	32.33	648	146	47.83	848	197	60.50	1048	238	73.17
53	453	107	35.78	653	172	52.87	853	218	66.95	1053	264	81.01
58	458	128	39.23	658	189	57.92	858	239	73.40	1058	289	88.76
63	463	139	42.66	663	206	63.07	863	260	79.83	1063	314	96.48

Arco Convectors in lengths and depths indicated above are Standardized Sizes when sold with or without cabinets.
For sizes not listed above–price on application.

CABINET EXTRAS FOR MULTIFIN AND ARCO CONVECTORS

CABINET EXTRAS—STOCK MODEL MULTIFIN ONLY

		Trade Price
1. Chain type dampers	each	$2.10
2. Metal trim strips (type K only)	each	2.75
3. Snap-on inlet grilles	each	2.75
4. Special air vent assemblies	each	1.80

SPECIAL SERVICE CABINET EXTRAS—MULTIFIN AND ARCO CONVECTORS

1. Chain type dampers	each	2.10
2. Knob type dampers	each	2.90
3. Marking or tagging—room number or location	each	.20
4. Access doors—lift-off type	each	2.50
5. Access doors—piano hinge type	each	2.90
6. Stool outlet—regular sheet price, plus		1.40
7. Extra length—per inch or fraction thereof		.60
8. Rotary cam locks	each	.70
9. Screws other than standard slotted type—per convector		.30
10. Grille reinforcing angles—6" centers—per grille		1.00

11. Heavier gauge cabinets—trade price per sq ft of cabinet output:

	fronts only	liners only
No. 18 gauge	$ . . .	$0.04
No. 16 gauge	.04	.06
No. 14 gauge	.09	.10

12. Insulation—trade price per sq ft of cabinet output:

	back only	back, ends, and top
Aerocor—1" thick compressible to ⅛"	$0.12	$0.18
Wood Fiberboard—½" thick	.12	.24
Asbestos Millboard—¼" thick	.12	.24
Asbestos Millboard—½" thick	.18	.36

13. Front panels only:
50% of complete convector unit price (based on No. 6 depth)

14. Cabinet only:
70% of complete convector unit price

15. Providing round pipe holes or knockouts ..... price on application

16. Providing special shape cutouts ..... price on application

NOTES APPLICABLE TO MULTIFIN CONVECTORS ONLY:

Plugs and bushings are not regularly furnished with Multifin Convectors, but are available for separate sale at prices shown on page 39.

MINIMUM CABINET HEIGHTS WITH DAMPERS

	Chain Type Dampers	Knob Type Dampers
Multifin Convectors:		
Types FS, FSG	18" for #4 Depth 20" for #6 Depth 24" for #8 & #10 Depths	18" for #4 Depth 20" for #6 Depth 24" for #8 & #10 Depths
Type S	14" for #4 & #6 Depths 18" for #8 & #10 Depths	14" for #4 & #6 Depths 18" for #8 & #10 Depths
Arco Convectors:		
Types F, FG, W	20" For All Depths	20" For All Depths
Types FS, FSG	24" for #4, #6 & #8 Depths 26" for #10 Depth	24" for #4, #6 & #8 Depths 26" for #10 Depth
Type S	18" for #4 Depth 20" for #6 Depth 26" for #8 & #10 Depths	18" for #4 Depth 20" for #6 Depth 26" for #8 & #10 Depths
Types R, RG, RGB, RC, RCG, RCGB	24" For All Depths	20" For All Depths

NOTE: Minimum heights for Arco Convectors applicable to X 4 (underneath) connection only

TRADE PRICE BOOK

Illustrations and descriptions of Plate Numbers listed in this price book will be found in the current American-Standard Heating-Cooling Products Catalog and literature. Items illustrated in product literature and not included in this price book are discontinued. The illustrations in this price book although actual representations of certain product in the line, do not necessarily show sizes and details of all products in the line.

This book contains suggested Trade Prices for certain Hydronic Heating products sold by American Radiator & Standard Sanitary Corporation ("American-Standard") through its Plumbing and Heating Division. (American-Standard acting through that Division is hereinafter referred to as the "Seller"). The Seller assumes no obligation to sell to anyone at any price any of the items listed herein.

All prices herein set forth supersede all prior price lists and are subject to change without notice. The Seller may also, from time to time, discontinue without notice the sale of any of the products listed herein.

INVOICE MINIMUM

An order for items for which invoice prices aggregate less than $1.00 will be billed at $1.00.

TERMS AND CONDITIONS APPLYING TO ALL SALES OF GOODS BY AMERICAN-STANDARD THROUGH ITS PLUMBING AND HEATING DIVISION

All sales of goods by American-Standard through its Plumbing and Heating Division are made subject to terms and conditions printed below, in its bulletins and on its acknowledgment of order, invoice and quotation forms. These terms and conditions are as follows:

PRICE

Goods sold by the Seller will be billed to the Buyers according to the prices and terms contained in its current bulletins and price books. In the case of orders for goods for which no price is currently in effect, the price will be determined by the Seller and set forth in the invoice issued after shipment of the goods

Taxes. Any tax or other Government charge now or hereafter levied upon the production, sale, use or shipment of goods ordered or sold, will be charged to and paid for by the Buyer

DELIVERY

Transportation Risks. Delivery to the initial carrier shall constitute delivery to the Buyer. The Seller's responsibility ceases upon delivery in good order to such carrier, and all goods are shipped at the Buyer's risk.

The Buyer is urged to examine all deliveries carefully before signing transportation receipts. If goods are visibly damaged, the Buyer should insist that written confirmation of the damage be noted on the freight bill or dray ticket by the agent of the carrier. If damage is discovered after unpacking, the carrier should be notified at once, so that inspection can be made and the claimed damage substantiated by the carrier

Interference with Delivery. The Seller has no obligation to deliver goods against any order until it has accepted the order by issuance of its acknowledgment of order. In any event, the Seller will not be liable for any delay or failure in the delivery or shipment of goods against an accepted order or for any damages suffered by reason thereof, when such delay or failure is, directly or indirectly, due to accident (in manufacture or otherwise), fire, flood, riot, war, embargo, labor stoppages, inadequate transportation facilities, shortage of material or supplies, delay or default on the part of its vendors, regulation by Government authority, or any like or dissimilar cause or causes beyond its control

WARRANTY

Except where a different express written warranty has been issued with respect to particular products, no warranty, express or implied, is extended by the Seller to any person or persons other than its distributors and other direct Buyers. To direct Buyers, the Seller warrants only that it will furnish by freight a replacement for, or at its option repair, any product of its manufacture or part or portion thereof, proved to its satisfaction to be defective in material or workmanship under normal use and service within one year after installation. The Seller will not be responsible for any damages whatsoever, or for labor expense, in connection with the replacement of defective products or parts or portions thereof.

This warranty is in lieu of all other warranties, express or implied, and of all other obligations or liabilities, on the part of the Seller. The Seller neither assumes nor authorizes any other person to assume for it any other liabilities in connection with the sale of its products except in the case of express warranties which may be issued by it in writing from time to time with respect to particular products.

Goods of other manufacturers sold by the Seller are not warranted except by express warranties which may be issued in writing from time to time with respect to particular products or particular sales, but the Seller will endeavor to secure for its direct Buyers the benefits of warranties extended by the manufacturers of such goods sold but not manufactured by the Seller.

CONTRACT WITH BUYER

Acceptance of Orders. Orders will be accepted only by the Seller's usual acknowledgment of order containing terms and conditions applicable thereto. No terms and conditions appearing in a Buyer's order that are at variance with the Seller's terms and conditions shall be binding upon the Seller unless specifically agreed to by it in writing. Unless the Seller specifically so agrees in writing in acknowledging any order, any terms and conditions appearing in a Buyer's order contrary to those stated herein and in such acknowledgment of order are to be deemed waived by the Buyer. Receipt by the Buyer of the acknowledgment of order without prompt objection to the terms and conditions therein and herein set forth, constitutes acceptance by the Buyer of such terms and conditions

Cancellation of Orders. After the Seller's acknowledgment of order has been issued, an order may be modified or cancelled only upon written agreement by the Seller. Orders for goods other than those of standard manufacture will not be cancelled after a commitment has been made or production scheduled.

Credit for Returned Goods. Merchandise may not be returned for credit unless the Seller has agreed to accept it. Where returns are accepted, a deduction of 10% will be made for rehandling. All transportation costs for returned goods must be paid by the Buyer. In any event, only salable merchandise of standard manufacture may be returned for credit

Credit Approval. Buyers' orders are accepted subject to credit investigation and approval, and delivery may be withheld or shipment stopped in transit on accepted orders without any liability on the Seller's part, if, in its opinion, the Buyer's ability to pay for the merchandise on these terms and conditions is in doubt.

SHORTAGES OR VARIANCES

No claims for variances from or shortages in orders will be considered unless presented within 60 days after receipt of goods

PRODUCT AND PACKAGING CHANGES

Factors beyond the control of the Seller and the need for continuing improvement of product require the making of changes from time to time in products and their packaging. The right is reserved to make reasonable changes of any kind without notice and to deliver revised designs or models of goods against any order, unless on the face of the acknowledgment of order this right is specifically waived.

The Seller shall have no responsibility whatever with respect to changes made by the manufacturer in products (or their packaging) sold but not manufactured by the Seller

SHIPPING WEIGHTS

The shipping weights given herein are approximate, for Buyers' convenience only, and are not guaranteed

SALES OFFICES

ATLANTA
3110 Maple Drive
Atlanta 5, Georgia

BALTIMORE
3006 W. Cold Spring Lane
Baltimore 15, Maryland

BOSTON
31 St. James Avenue
Boston 16, Massachusetts

BUFFALO
1807 Elmwood Avenue
Buffalo 7, New York

CHICAGO
130 East Randolph Drive
Chicago 1, Illinois

CINCINNATI
1077 Celestial Street
Cincinnati 2, Ohio

CLEVELAND
Euclid Avenue and East 14th Street
Cleveland 15, Ohio

DALLAS
2501 Cedar Springs Road
Dallas 1, Texas

DENVER
1550 East 17th Avenue
Denver 18, Colorado

DETROIT
Suite 1440, Maccabees Building
Detroit 2, Michigan

HOUSTON
3400 Montrose, Suite 218
Houston 6, Texas

KANSAS CITY
4709 Belleview Street
Kansas City 12, Missouri

LONG ISLAND
39-01 Main Street
Flushing 54, Long Island, New York

LOS ANGELES
141 El Camino
Beverly Hills, California

MIAMI
46 N. E. Sixth Street
Miami 18, Florida

MILWAUKEE
208 E. Wisconsin Ave.
Milwaukee 2, Wisconsin

MINNEAPOLIS
529 S. 7th Street
Minneapolis 15, Minnesota

NEWARK
972 Broad Street
Newark 2, New Jersey

NEW ORLEANS
2400 Canal Street
New Orleans 19, Louisiana

NEW YORK
50 West 40th Street
New York 18, New York

PHILADELPHIA
30 N. 5th Street
Camden 2, New Jersey

PITTSBURGH
714 Bessemer Bldg.
Pittsburgh 22, Pennsylvania

RALEIGH
611 Tucker Street
Raleigh, North Carolina

ST. LOUIS
2725 Clifton Avenue
St. Louis 9, Missouri

SALT LAKE CITY
1879 S. Main Street
Salt Lake City 15, Utah

SAN FRANCISCO
681 Market Street
San Francisco 5, California

SEATTLE
306 West Republican Street
Seattle 99, Washington

SILVER SPRING
8641 Colesville Road
Silver Spring, Maryland

EXPORT SALES
Export Marketing Department
American-Standard
40 West 40th Street
New York 18, New York

AMERICAN-Standard
PLUMBING AND HEATING DIVISION
AMERICAN RADIATOR & STANDARD SANITARY CORPORATION
40 WEST 40TH STREET • NEW YORK 18, NEW YORK