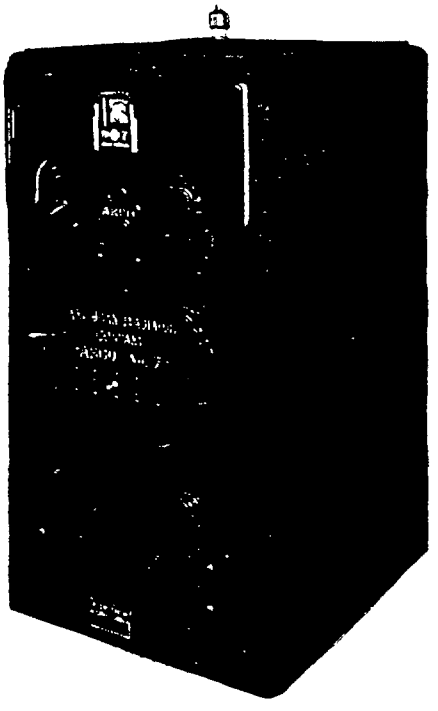
PRODUCT PARADE

No. 7 IDEAL ARCO BOILER FOR OIL BURNING



Luxury at Low Cost

Here is a new competitive type boiler ideally suited to automatic oil burning — the No. 7 Ideal Arco Boiler. This is a companion to the No. 7 for coal firing, offering the same extremely high efficiency and other exclusive modern features. The high base, together with a guard which is cast integrally with the section, provides ample space to install the oil burner. Provision is made for all necessary control devices in the rear section and for two different types of heaters for automatic domestic hot water supply.

SPECIAL FEATURES FOR OIL-FIRING

Down-to-the-floor green enameled steel jacket, thoroughly insulated . . . Large, effective heating surface with no soot-catching crevices . . . Grind strip around outer rim and flues provides iron-to-iron fit between sections . . . All heating surfaces water backed . . . Small water content — quick steaming . . . Provision for installation of gun or rotary type oil burner . . . Bosses provided for all necessary control devices . . . Tappings for domestic water heater.

COMPETITIVE TYPE HIGH-EFFICIENCY BOILER

The No. 7 Ideal Arco Boiler for Oil Burning embodies many design features which are characteristic of expensive de luxe oil-burning boilers and which make for extremely high efficiency. Yet the No. 7 is a competitive type boiler, due to large volume production. In the No. 7 the owner of the moderate-priced home will find embodied the convenience and economy features which he has long sought but which have formerly been available only in higher-priced boilers for automatic oil burning.

PLAINTIFF'S EXHIBIT
tabbies
ASF-517
14115

TENTATIVE DATA

Steel jacket with baked on green enamel finish. It fits perfectly, is well insulated and extends to floor, covering both sections and base.

Sections designed to provide large and effective heating surfaces with no soot-catching crevices to lower the boiler's efficiency.

Grind strip around outer rim and flues provides an iron-to-iron fit between sections that requires less putty and insures against wasteful air leakage.

Scientifically designed combustion chamber promotes clean, complete combustion of oil and quick heating response.

All heating surface is water-backed with a large quantity of water at water line. Total water content however is small so that quick steaming will take place.

Large seven-inch nipples between sections permit free water circulation and insure equal heating in all parts of boiler.

Large steam disengaging area insures "dry steam" and a minimum of turbulence.

Only one four-inch flow outlet on assemblages up to eight sections. Additional bosses are provided for tapping if more are required.

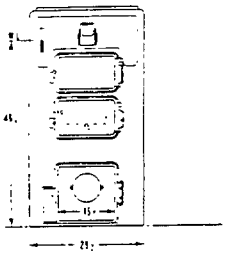
All doors have ground contact surfaces which fit against the grind strip, resulting in a tight fit. A scientifically designed lining prevents warping.

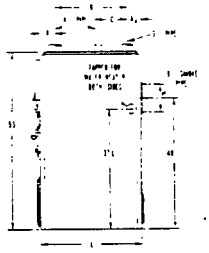
Long double-flue gallery insures the maximum use of the hot gases.

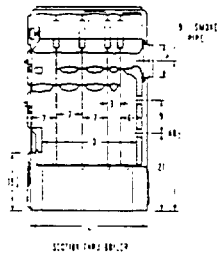
Provision is made for the installation of a gun-type oil burner from either front or rear and the ample height of base (12¼ inches) provides adequate room for a rotary type burner.

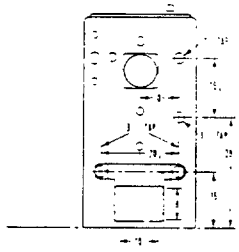
Bosses are provided on the back face of rear section for all necessary control devices. These are not regularly tapped but may either be tapped on the job or on order when shipment is made.

Domestic hot water may be provided by either a special screwed-in type Taco applied from either side of the rear section of boiler, or with an Excelso Heater on the rear of the boiler.









DIMENSIONS AND ASSEMBLY

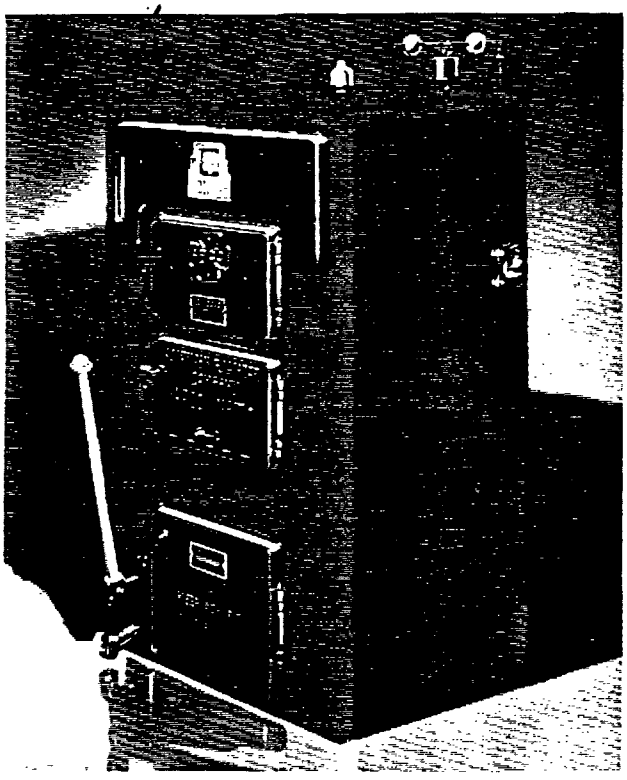
Number of Boiler		"L" Length Inches	"A" Inches	"B" Inches	"C" Inches	"D" Inches	Outlets No. and Size	Inlets No. and Size	Assemblage
Steam	Water								
S-715-0	W-715-0	21⅝	10⅜	6½	....	14 15/16	1 — 3″ 1 — 4″	2 — 3″	F - CX - BX
S-719-0	W-719-0	25⅛	10⅜	10	.	18 7/16	1 — 3″ 1 — 4″	2 — 3″	F - CX - NC - BX
S-723-0	W-723-0	28⅝	10⅜	13½	.	21 15/16	1 — 3″ 1 — 4″	2 — 3″	F - CX - C - BX
S-727-0	W-727-0	32⅛	17⅜	10	. .	25 7/16	1 — 3″ 1 — 4″	2 — 3″	F - C - CX - NC - BX
S-731-0	W-731-0	35⅝	17⅜	13½	...	28 13/16	1 — 3″ 1 — 4″	2 — 3″	F - C - CX - C - BX
S-735-0	W-735-0	39⅛	10⅜	24	10	32 7/16	1 — 3″ 2 — 4″	2 — 3″	F - CX - C - CX - NC - BX
S-739-0	W-739-0	42⅝	10⅜	27½	13½	35 15/16	1 — 3″ 2 — 4″	2 — 3″	F - CX - C - CX - C - BX

F — Front Section C — 7″ Center Section CX — 7″ Center Connecting Section. NC — 3½″ Center Section. BX — Back Connecting Section.

[RATINGS AND DATA TO FOLLOW]

PRODUCT PARADE 1937

· · · No. 7 IDEAL ARCO BOILER



8 to 18% More Efficient

A new boiler for coal-burning that embodies advantages no coal-burning boiler has ever offered before. Highest efficiency. Beauty of design. New convenience and economy. Only American Radiator's No. 7 has this complete array of features that save work and fuel. The result of several years' field and laboratory work, No. 7 Ideal Arco Boiler gives in the highest degree what everybody wants — luxury at low cost. In addition to the exceptionally efficient heating service it gives, No. 7 has provision for two different types of water heaters.

THE BOILER THAT HAS EVERYTHING

8 to 18 per cent greater efficiency . . . Unusually quick pick-up . . . Chrome green down-to-the-floor jacket . . . Large recessed gauge glass . . . Tappings for screwed-in type Taco Heater or Excelso . . . Air cell asbestos insulation . . . Double-flue galleries . . . One large piping outlet makes for lower installation cost, but additional bosses provide for tappings if required . . . Plus the superiority features of design and construction that characterize all Ideal Boilers.

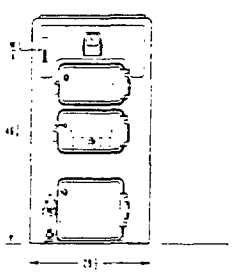
DESIGNED FOR AVERAGE HOMES

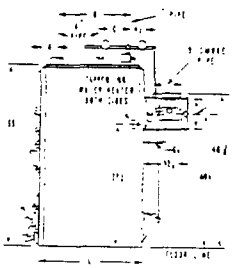
The No. 7 Ideal Arco Boiler is designed for the average small house. No. 7 has outstanding appeal for owners of new and existing homes, because it embodies in a moderate priced coal-burning boiler for hand-firing features of beauty, efficiency, and convenience that have heretofore been available only with boilers for automatic fuels. Hot water supply can be an integral part of this coal-burning boiler. In addition, No. 7 is the last word in smart appearance and has been found in many cases to require actually 8 to 18 per cent less fuel than other boilers — a substantial saving that will mean a great deal to householders.

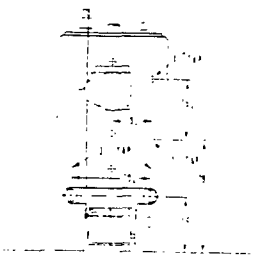
14119

TENTATIVE DATA

1. Steel jacket with baked on green enamel finish. It fits perfectly, is well insulated and extends to floor, covering both sections and base.
2. Sections designed to provide large and effective heating surfaces with no soot-catching crevices to lower the boiler's efficiency.
3. Grind strip around outer rim and flues provides an iron-to-iron fit between sections that requires less putty and insures against wasteful air leakage.
4. Scientifically designed firepot holds sufficient fuel to insure a long firing period and reduce caretaking to a minimum.
5. All heating surface is water-backed with a large quantity of water at water line. Total water content, however, is small so that quick steaming will take place.
6. Large seven-inch nipples between sections permit free water circulation and insure equal heating in all parts of boiler.
7. Large steam disengaging area insures "dry steam" and a minimum of turbulence.
8. Only one four-inch flow outlet on assemblages up to eight sections. Additional bosses are provided for tapping if more are required.
9. All doors have ground contact surfaces which fit against the grind strip, resulting in a tight fit. A scientifically designed lining prevents warping.
10. Draft and check draft doors are of butterfly design which swing on pin point bearings and are not affected by the passage of air. This design reduces to a minimum the load on the regulator, insuring more accurate control.
11. Grates are heavy and are designed to permit maximum coaling. Larger grate area than any other boiler of corresponding size.
12. Double gallery of flues are of a design and size that make possible the burning of all types of fuels without clogging. Design output is accomplished with low draft tension.
13. Domestic hot water may be provided by either a special screwed-in type Taco applied from either side of the rear section of boiler, or with an Excelso Heater on the rear of the boiler.







DIMENSIONS AND ASSEMBLY

Number of Boiler		Outlet No. and Size	Inlets No. and Size*	Length "L" Inches	Dimensions, Inches, for Locating Flow Tappings			Assemblage
Steam	Water				A	B	C	
S-711	W-711	1—3″	2—3″	18⅛				F-NC-BX
S-715	W-715	1—3″ 1—4″	2—3″	21⅝	10⅜	6½		F-CX-BX
S-719	W-719	1—3″ 1—4″	2—3″	25⅛	10⅜	10		F-CX-NC-BX
S-723	W-723	1—3″ 1—4″	2—3″	28⅝	10⅜	13½		F-CX-C-BX
S-727	W-727	1—3″ 1—4″	2—3″	32⅛	17⅜	10		F-C-CX-NC-BX
S-731	W-731	1—3″ 1—4″	2—3″	35⅝	17⅜	13½		F-C-CX-C-BX
S-735	W-735	1—3″ 2—4″	2—3″	39⅛	10⅜	24	10	F-CX-C-CX-NC-BX
S-739	W-739	1—3″ 2—4″	2—3″	42⅝	10⅜	27½	13½	F-CX-C-CX-C-BX

F—Front Section C—7″ Center Section CX—7″ Center connecting Section NC—3½″ Center Section
BX—Back Connecting Section *An additional inlet boss is provided on each side of front section, which can be tapped 2½″ if required.

RATINGS AND DATA

COAL

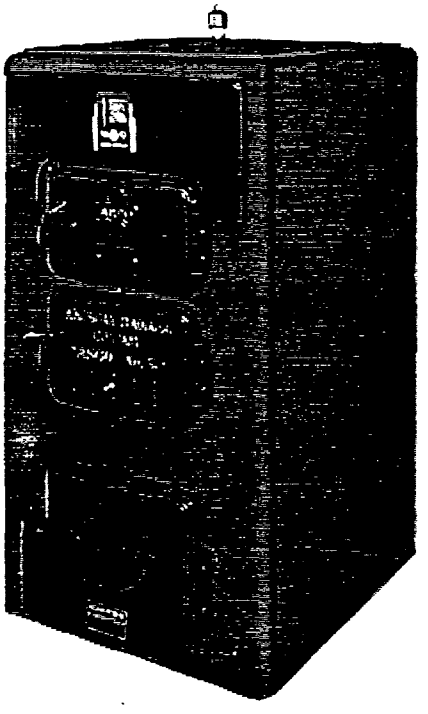
Number of Boiler	Maximum Output Full Dr. Sq. Ft.		Recommended Load E. D. R. Sq. Ft.		Installed Rad. Sq. Ft.		Grate Area Sq. Ft.	Fuel Capacity Lbs.	Available Fuel Lbs.	Chimney Size
	Steam	Water	Steam	Water	Steam	Water				
711	590	945	280	450	225	360	1.68	112	84	8″x 8″—30′
715	760	1215	375	600	300	480	2.15	150	114	8″x 8″—30′
719	930	1485	470	750	375	600	2.62	188	144	8″x 8″—35′
723	1100	1755	565	900	450	720	3.09	226	174	8″x12″—35′
727	1270	2025	660	1050	525	840	3.56	264	204	8″x12″—35′
731	1440	2305	755	1200	600	960	4.03	302	234	8″x12″—35′
735	1590	2545	850	1350	675	1080	4.50	340	264	12″x12″—35′
739	1740	2785	945	1500	750	1200	4.97	378	294	12″x12″—40′

14120

PRODUCT PARADE 1937

No. 9

IDEAL ARCO BOILER FOR STOKER FIRING



The Answer to a Crying Need

American Radiator meets today's demand for automatic coal burning equipment with the No. 9 Ideal Arco Boiler, especially developed for stoker firing. The extremely high efficiency of this newly engineered boiler is the result of tests and experiments in laboratory and field which have extended over a period of several years. The No. 9 offers many special features that make for convenience and economy, and has a clean-cut, attractively modern appearance that will greatly appeal to prospects.

SPECIAL FEATURES FOR STOKER-FIRING

Down-to-the-floor green enameled steel jacket, thoroughly insulated . . . Large, effective heating surface with no soot-catching crevices . . . Grind strip around outer rim and flues provides iron-to-iron fit between sections . . . All heating surfaces water backed . . . Small water content — quick steaming . . . High base for easy stoker installation, from front or side . . . Bosses provided for all necessary control devices . . . Tappings for domestic water heater.

HIGHEST EFFICIENCY AT MODERATE COST

In the No. 9 Ideal Arco Boiler have been embodied features of design which characterize many more expensive boilers and which make for the high efficiency usually found only in de luxe products. Yet the No. 9, due to anticipated volume production, is truly a competitive boiler for stoker firing. It offers the householder of moderate means an opportunity to enjoy the luxury, the genuine economy and the convenience of automatic heating with solid fuel which has heretofore been available only in larger, more expensive boilers.

TENTATIVE DATA

Steel jacket with baked on green enamel finish. It fits perfectly, is well insulated and extends to floor, covering both sections and base.

Sections designed to provide large and effective heating surfaces with no soot-catching crevices to lower the boiler's efficiency.

Grind strip around outer rim and flues provides an iron-to-iron fit between sections that requires less putty and insures against wasteful air leakage.

All heating surface is water-backed with a large quantity of water at water line. Total water content however is small so that quick steaming will take place.

Large 7-inch nipples between sections permit free water circulation and insure equal heating in all parts of boiler.

Large steam disengaging area insures "dry steam" and a minimum of turbulence.

Only one four-inch flow outlet on assemblages up to eight sections. Additional bosses are provided for tapping if more are required.

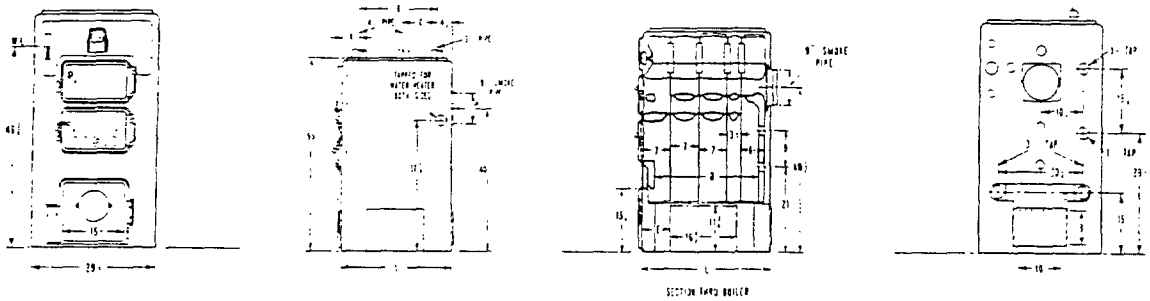
All doors have ground contact surfaces which fit against the grind strip, resulting in a tight fit. A scientifically designed lining prevents warping.

High base (12¼ inches) provides ample room for stoker installation. The stoker may be installed either from the front or at the side.

Double gallery of flues are of a design and size that permit the burning of fuel without danger of clogging. Design output is accomplished with low draft tension.

Bosses are provided on the back face or rear section for all necessary control devices. These are not regularly tapped but may either be tapped on the job or on order when shipment is made.

Domestic hot water may be provided by either a special screwed-in type Taco applied from either side of rear section of boiler or with an Excel-o Heater on the rear of the boiler.



DIMENSIONS AND ASSEMBLY

Number of Boiler		"L" Length Inches	"A" Inches	"B" Inches	"C" Inches	"D" Inches	"E"* Inches	Outlets No. and Size	Inlets No. and Size	Assemblage
Steam	Water									
S-C-919	W-C-919	25⅛	10⅜	10		18 7/16	3⅝	1—3" 1—4"	2—3"	F-CX-NC-BX
S-C-923	W-C-923	28⅝	10⅜	13½		21 15/16	3⅝	1—3" 1—4"	2—3"	F-CX-C-BX
S-C-927	W-C-927	32⅛	17⅛	10		25 7/16	7⅛	1—3" 1—4"	2—3"	F-C-CX-NC-BX
S-C-931	W-C-931	35⅝	17⅛	13½		28 15/16	7⅛	1—3" 1—4"	2—3"	F-C-CX-C-BX
S-C-935	W-C-935	39⅛	10⅜	24	10	32 7/16	10⅜	1—3" 1—4" 2—4"	2—3"	F-CX-C-CX-NC-BX
S-C-939	W-C-939	42⅝	10⅜	27½	13½	35 15/16	10⅜	1—3" 2—4"	2—3"	F-CX-C-CX-C-BX

* The boiler can be assembled so that this opening is either right or left hand. Upon request, it can be provided on both sides.
F—Front Section C—7" Center Section CX—7" Center Connecting Section NC—3½" Center Section BX—Back Connecting Section

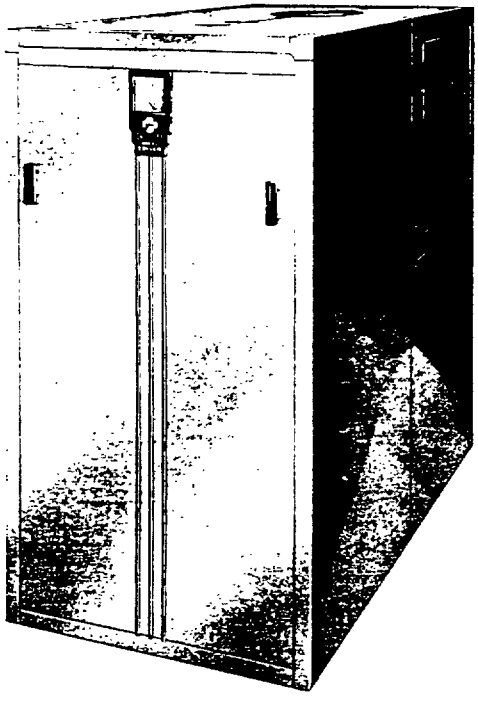
RATINGS AND DATA

Size	Actual Installed Radiation Boiler Will Handle		Minimum Coal Burner Capacity Lbs. Coal	Fire Box Dimensions		Distance from Floor to Crown Sheet of Boiler	Height of Base	Size, Inches	Chimney Height Feet
	Steam	Water	Per Hour	Width	Length				
C-919	375	600	15	18	18 7/16	32¼	12¼	8 x 8	35
C-923	450	720	18	18	21 15/16	32¼	12¼	8 x 12	35
C-927	525	840	21	18	25 7/16	32¼	12¼	8 x 12	35
C-931	600	960	24	18	28 15/16	32¼	12¼	8 x 12	35
C-935	675	1080	27	18	32 7/16	32¼	12¼	12 x 12	35
C-939	750	1200	30	18	35 15/16	32¼	12¼	12 x 12	40

When a domestic water heater is connected to the boiler add one sq. ft. per gal. of tank capacity to installed radiation on steam boilers and 2 sq. ft. per gal. of tank capacity on water boilers before selecting boiler size. When a tankless water heater is connected to the boiler add 50 sq. ft. steam radiation per bathroom or 80 sq. ft. water radiation per bathroom to installed radiation before selecting boiler size.

PRODUCT PARADE 1937

· · · No. 11 IDEAL OIL BURNING BOILER



Good Before . . . Now Better Than Ever

The No. 11 Ideal Oil Burning Boiler has earned the name of the most popular oil burning boiler in America. Now, in a striking entirely new jacket, No. 11 is without doubt the most beautiful popular-priced oil burning boiler in America. The newly designed green jacket has a square gauge, with new gauge frame and nameplate combined. The water column on steam boilers is under the door, also the observation port — leaving a smooth, streamlined exterior. The front jacket panel snaps off and on in a moment, giving quick access to the boiler.

NEW BEAUTY AT MODERATE PRICE

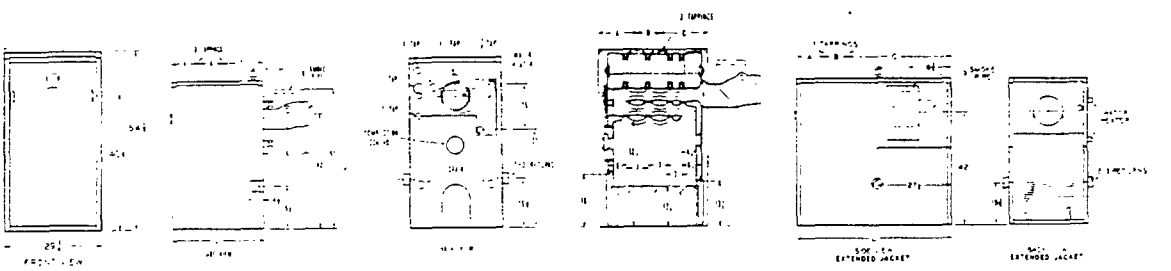
Attractive, newly designed green jacket . . . New side access doors . . . Stiffened and reinforced door . . . New catches on door . . . Reinforced perforated top sheet on extended jacket . . . New gauge frame and nameplate combined . . . Water column on steam boilers under door . . . New square gauges . . . Interlocking seams . . . Larger clearance between front jacket panel and doors.

OUTSTANDING IMPROVEMENTS

In addition to its smart, up-to-the-minute appearance, a number of outstanding improvements have been made in the jacket of the No. 11 Boiler. New side access doors clear present Taco knockouts. Seams are interlocked, eliminating screws on top jackets. There is a larger clearance between front jacket panels and doors, and side panels have been stiffened. Two large access doors and two small upper access doors are provided on the sides of the extended jacket model. There is a new smokehood with draft-o-stat frame.

TENTATIVE DATA

1. Steel cabinet finished in chrome green baked enamel.
2. Specially designed finned flue surfaces collect extra heat from hot gases.
3. Heavy, indestructible corrugated asbestos insulation prevents heat waste.
4. Machine-ground surfaces of doors and sections prevent short-cutting of gases, infiltration of air and the escape of odors.
5. Scientifically designed combustion chamber promotes clean, complete combustion of oil and quick heating response.
6. 7-inch nipples between boiler sections insure rapid circulation of boiler water and permit a built-in water heater, eliminating clumsy outside piping connections.
7. Especially large steam releasing area and steam dome insure dry steam at entrance to piping.
8. Large door for easy cleaning of flues.
9. Sight glass under front panel.
10. Easily removable front panel gives quick access to boiler.
11. Tappings for Biltin Taco Heater.
12. Two large access doors on sides of extended jacket model.
13. Two small upper access doors on sides of extended jacket.
14. Removable rear panel.
15. Stiffened and reinforced front door.
16. New catches on front door.
17. Reinforced perforated top sheet on extended jacket.
18. New gauge frame and nameplate combined.
19. Water column on steam boilers under door.
20. Observation port under door.
21. New square, easy-to-read combination water gauge.
22. Interlocking seams — elimination of screws top of jackets.
23. Larger clearance between front jacket panel and doors.
24. Stiffening of side panels.
25. New smokehood with draft-o-stat frame.



FLUSH JACKET					EXTENDED JACKET					
No. Section	L	A	B	C	L	A	B	C	No. Size of Outlets	No. Size of Inlets
0411	24	12 9/16	..	11 11/32	47 3/4	12 21/32	..	35 3/32	1—3	2—3
0511	27 1/2	12 9/16	..	14 27/32	51 1/4	12 21/32	..	38 19/32	1—3	2—3
0611	31	12 9/16	7	11 11/32	54 3/4	12 21/32	7	35 3/32	2—3	2—3
0711	34 1/2	12 9/16	7	14 27/32	58 1/4	12 21/32	7	38 19/32	2—3	2—3
0811	38	12 9/16	14	11 11/32	61 3/4	12 21/32	14	35 3/32	2—3	2—3
0911	41 1/2	12 9/16	14	14 27/32	65 1/4	12 21/32	14	38 19/32	2—3	2—3

RATINGS AND DATA

No. of Boiler	Transmission Rate — 4,500 B.t.u./sq. ft. per hr.				
	Total Output E. D. R. Sq. Ft.		Installed Radiation Boiler Will Carry Sq. Ft.		Recommended Oil Input Gals./Hr.
	Steam	Water	Steam	Water	
0411	510	815	355	565	1.25
0511	625	1000	435	695	1.50
0611	740	1185	515	825	1.75
0711	855	1370	595	955	2.00
0811	970	1555	675	1085	2.25
0911	1085	1740	755	1215	2.50

The installed radiation figures shown above are based on a maximum allowance of 20% for piping and 20% for pick-up. Selection of the proper size boiler should be made accordingly.

When a domestic water heater is connected to the boiler add one sq. ft. per gal. of tank capacity to installed radiation on steam boilers and 2 sq. ft. per gal. of tank capacity on water boilers before selecting boiler size. When a tankless water heater is connected to the boiler add 50 sq. ft. steam radiation per bathroom or 80 sq. ft. water radiation per bathroom to installed radiation before selecting boiler size.