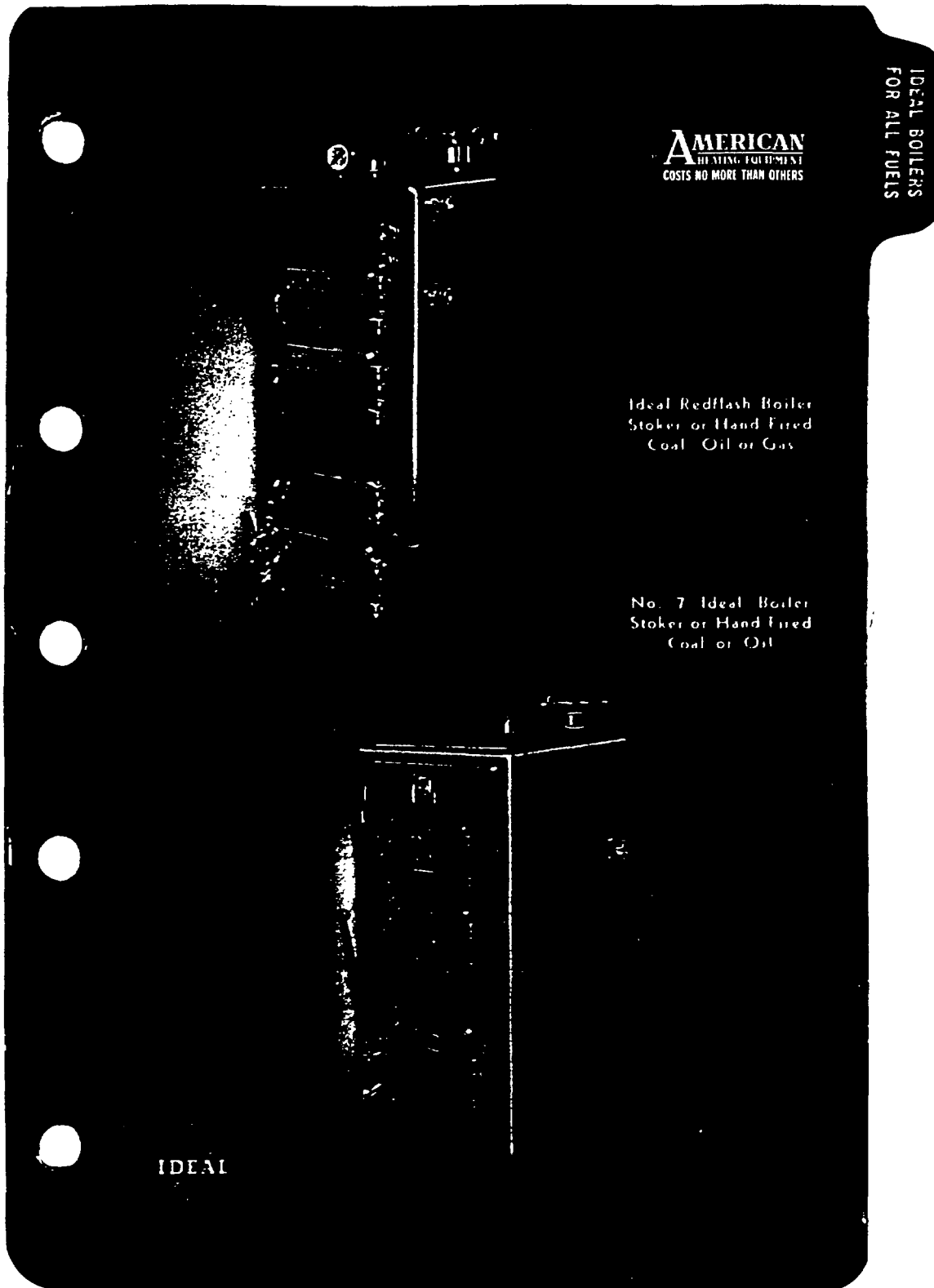




AMERICAN
HEATING EQUIPMENT
COSTS NO MORE THAN OTHERS

IDEAL BOILERS
FOR ALL FUELS

Ideal Redflash Boiler
Stoker or Hand Fired
Coal Oil or Gas

No. 7 Ideal Boiler
Stoker or Hand Fired
Coal or Oil

IDEAL

PLAINTIFF'S
EXHIBIT

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IDEAL BOILERS
FOR ALL FUELS

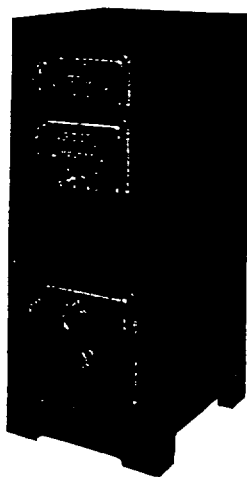
IDEAL

Ideal Oil Burning Boiler
No. 11

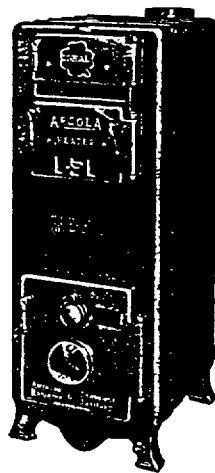
AGP "Empire" Ideal
Gas Boiler

AMERICAN
HEATING EQUIPMENT
COSTS NO MORE THAN OTHERS

IDEAL ARCOLA WATER BOILER FOR ALL FUELS



CIRCULATING JACKET



UNJACKETED

The Arcola is a boiler designed to provide hot water heating comfort for small dwellings, garages, stores, or other small buildings with or without a basement. It is economical, dependable and good-looking.

Generally the Arcola is installed in the kitchen, or living room, where no basement exists, but is equally well adapted for basement installation. The boiler itself usually furnishes sufficient heat to warm the room in which it stands, and in such installations the circulating jacket adds greatly to appearance and efficiency.

The Arcola is also supplied as part of complete hot water outfits, as described on the next page.

RATINGS AND DATA ALL FUELS

Boiler Number	*Maximum Output Full Drive	**Recommended Load—Sq. Ft. EDR	Radiating Surface of Boiler Sq. Ft.	Chimney	
				Size	Height
CIRCULATING JACKET					
4-AJ	300	150	45	8 x 8"	30'
5-AJ	400	200	50	8 x 8"	30'
6-AJ	500	250	55	8 x 8"	30'
7-AJ	600	300	60	8 x 8"	30'
8-AJ	650	350	65	8 x 8"	30'
9-AJ	750	400	70	8 x 8"	30'
UNJACKETED					
4-A	300	150	45	8 x 8"	30'
5-A	400	200	50	8 x 8"	30'
6-A	500	250	55	8 x 8"	30'
7-A	600	300	60	8 x 8"	30'
8-A	650	350	65	8 x 8"	30'
9-A	750	400	70	8 x 8"	30'

* Maximum output is output at boiler nozzle expressed in Equivalent Direct Radiation at 150 B.t.u. for water.
** Recommended Load represents attached load, including piping, which may be placed on boiler in accordance with accepted installation standards for economical operation.

NOTE—Arcola Boilers can be furnished on special order for hot water supply specially tested at 200 pounds. Automatic draft regulator can be supplied at small extra cost.
For data on trimmings and sundries, see last pages of this index section.

RATINGS AND DATA—IDEAL ARCOLA WATER BOILER

OIL BURNING

Boiler Number	*Installed Radiation Sq. Ft. EDR	Radiating Surface of Boiler—Sq. Ft.	Chimney	
			Size	Height
CIRCULATING JACKET				
5-AJ—Oil	150	50	8 x 8"	30'
6-AJ—Oil	200	55	8 x 8"	30'
7-AJ—Oil	250	60	8 x 8"	30'
8-AJ—Oil	300	65	8 x 8"	30'
9-AJ—Oil	350	70	8 x 8"	30'
UNJACKETED				
5-A—Oil	150	50	8 x 8"	30'
6-A—Oil	200	55	8 x 8"	30'
7-A—Oil	250	60	8 x 8"	30'
8-A—Oil	300	65	8 x 8"	30'
9-A—Oil	350	70	8 x 8"	30'

Arcola Boilers for oil-burning are shipped less grates and grate connections, ashpan and firing tools.
 * Capacities are based on net installed radiation and on the presence of a quantity of net installed radiation sufficient for the requirements of the building. Nothing need be added for normal piping or pick-up.

IDEAL ARCOLA HOT WATER OUTFITS— FOR ALL FUELS

Complete Arcola outfits consist of Arcola Boilers as indicated below, with Ashpan, Firing Tools and 38" Corto 5-Tube Radiation as listed, made up in any number of Radiators desired. Also including adjuncts consisting of Expansion Tank and Gauge, Draincock and Overflow Fitting.

NOTE: AUTOMATIC REGULATION NOT INCLUDED. CAN BE FURNISHED AT ADDITIONAL NET CHARGE.

With Circulating Jacket		Unjacketed		With Circulating Jacket		Unjacketed	
Outfit Number	Amount of Radiation Sq. Ft.	Outfit Number	Amount of Radiation Sq. Ft.	Outfit Number	Amount of Radiation Sq. Ft.	Outfit Number	Amount of Radiation Sq. Ft.
4-AJ-75	75	4-A-75	75	7-AJ-250	250	7-A-250	250
4-AJ-100	100	4-A-100	100	7-AJ-275	275	7-A-275	275
4-AJ-125	125	4-A-125	125	7-AJ-300	300	7-A-300	300
4-AJ-150	150	4-A-150	150				
5-AJ-150	150	5-A-150	150	8-AJ-300	300	8-A-300	300
5-AJ-175	175	5-A-175	175	8-AJ-325	325	8-A-325	325
5-AJ-200	200	5-A-200	200	8-AJ-350	350	8-A-350	350
6-AJ-200	200	6-A-200	200	9-AJ-350	350	9-A-350	350
6-AJ-225	225	6-A-225	225	9-AJ-375	375	9-A-375	375
6-AJ-250	250	6-A-250	250	9-AJ-400	400	9-A-400	400

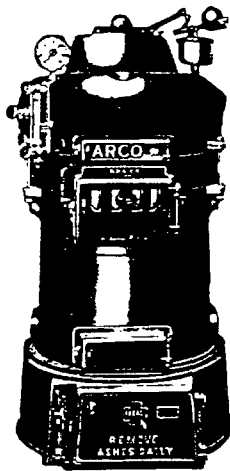
The Circulating Jacket has bottom inlets and grilled top outlet and so permits the Arcola to serve as a radiator to heat the room in which it is placed.

ARCO FULL-FLOW FITTINGS

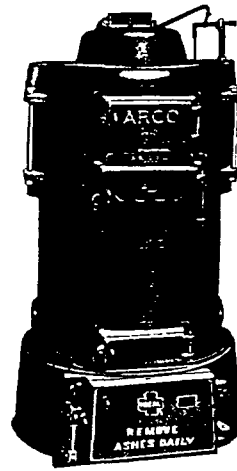
FOR THE BEST ARCOLA INSTALLATION USE ARCO FULL-FLOW WROUGHT COPPER PIPE AND FITTINGS FOR:

1. Quicker circulation—because of lessened frictional resistance of both Pipe and Fittings.
2. The perfect connection—Copper to Copper—with less likelihood of leakage, plus permanency.
3. Beauty in the installation itself—less objectionable where piping is exposed because piping is small—joints are neater and the metal is attractive.
4. With little if any added cost.
5. The simplicity of making the pipe-runs true and clean appeals to the discriminating Trade and Owner.

IDEAL ARCO ROUND BOILER
FOR ALL FUELS



STEAM



WATER

The Ideal Arco Round Boiler is the nation's favorite low-cost round boiler. It is designed on the same scientific principles as all other Ideal Boilers, and will give absolutely dependable heat service, with excellent economy. All steam boilers are equipped with automatic draft regulation, and the water boilers can be so equipped at small additional cost.

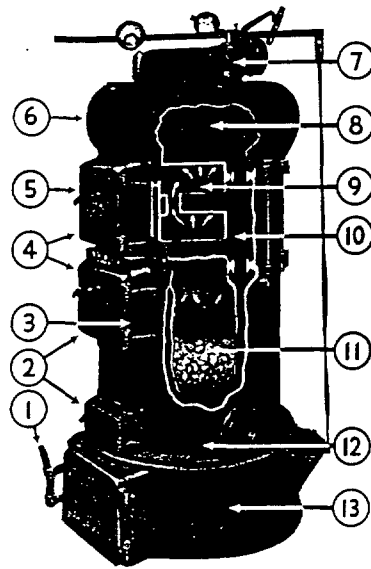
For data on external water heater tapings and trimmings see last pages of this index section

RATINGS AND DATA
FOR ALL FUELS

No. of Boiler		*Maximum Output Full Drive		**Recommended Load Sq. Ft. EDR		Fuel Capacity Lbs.	Available Fuel Lbs.	Grate Area Sq. Ft.	Chimney	
Steam	Water	Steam	Water	Steam	Water				Size Inches	Height Feet
S-1704	W-1704	400	640	200	320	142	107	1.4	8 x 8	30
S-1705	W-1705	450	720	250	400	142	107	1.4	8 x 8	30
S-1706	W-1706	450	720	300	450	142	107	1.4	8 x 8	35
S-1904	W-1904	500	800	250	400	173	130	1.88	8 x 8	30
S-1905	W-1905	550	880	300	480	173	130	1.88	8 x 8	35
S-1906	W-1906	600	960	350	560	173	130	1.88	8 x 8	35
S-2004	W-2004	650	1040	350	560	208	156	2.23	8 x 8	30
S-2005	W-2005	700	1120	400	640	208	156	2.23	8 x 8	35
S-2006	W-2006	750	1200	450	720	208	156	2.23	8 x 12	35
S-2204	W-2204	800	1280	400	640	282	212	2.62	8 x 12	35
S-2205	W-2205	850	1360	450	720	282	212	2.62	8 x 12	35
S-2206	W-2206	900	1440	500	800	282	212	2.62	8 x 12	40
S-2504	W-2504	950	1520	550	880	338	254	3.53	8 x 12	35
S-2505	W-2505	1025	1640	600	960	338	254	3.53	8 x 12	40
S-2506	W-2506	1100	1760	650	1040	338	254	3.53	8 x 12	40
S-2804	W-2804	1200	1920	700	1120	496	372	4.36	8 x 12	35
S-2805	W-2805	1300	2080	750	1200	496	372	4.36	12 x 12	40
S-2806	W-2806	1400	2240	800	1280	496	372	4.36	12 x 12	45

* Maximum output is output at boiler nozzle expressed in Equivalent Direct Radiation at 240 B.t.u. for Steam and 150 B.t.u. for water.
** Recommended Load represents attached load—including piping—which may be placed on boiler in accordance with accepted installation standards for economical operation.

**IDEAL ARCO ROUND BOILER
FOR ALL FUELS**



CUTAWAY VIEW

SPECIFICATIONS

1. **STURDY SHAKING MECHANISM**—easily operated.
2. **PLATE WORK**—substantial doors, frames and hinges.
3. **AIRTIGHT DOORS**—machine-ground contacting surfaces of doors prevent infiltration of air.
4. **PROTECTIVE LININGS**—doors have cast iron reinforced protective linings.
5. **CLEAN-OUT DOOR**—large clean-out door provides for easy and thorough cleaning of flues.
6. **DURABLE**—built entirely of time-tested cast iron.
7. **AUTOMATIC DRAFT REGULATION**—steam boilers have automatic damper regulation, also water boilers at small extra cost.
8. **STEAM SPACE**—unusually large dome insures rapid steam generation and dry steam.
9. **FLUE TRAVEL**—long flues transfer greatest possible amount of heat, insuring high economy. Low draft requirements; quick pick-up.
10. **RAPID INTERNAL CIRCULATION**—ample waterways insure proper water circulation which aids quick heat.
11. **LONG FIRING PERIODS**—ample fuel capacity. Fuel lasts for hours.
12. **STURDY GRATES**—especially trussed grates spaced for low-priced pea coal.
13. **ASH PIT**—large, substantial base with large ash pit door, reduces ash-taking to a minimum.

IDEAL ARCO ROUND BOILER—RATINGS AND DATA OIL BURNING

No. of Boiler		Transmission Rate 4,000 B.t.u. / Sq. Ft. / Hr.				Transmission Rate 4,500 B.t.u. / Sq. Ft. / Hr.				Heating Surface Sq.-Ft.		Firebox Dimensions			Chim- ney			
		† Installed Radiation Sq. Ft. EDR		* Minimum Burner Capacity Lbs. Oil / Hr.		† Installed Radiation Sq. Ft. EDR		* Minimum Burner Capacity Lbs. Oil / Hr.				Width Inches	Height Inches Floor to Crown Sheet					
		Stm.	Wat.	Stm.	Wat.	Stm.	Wat.	Stm.	Wat.			At Grate Line		9" Above Grate Line	In. Size	Ft. Ht.		
Steam	Water	Stm.	Wat.	Stm.	Wat.	Stm.	Wat.	Stm.	Wat.	Stm.	Wat.	Stm.	Wat.	At Grate Line	9" Above Grate Line	Height Inches Floor to Crown Sheet	In. Size	Ft. Ht.
S-1705-O	W-1705-O	210	310	5.7	5.0	235	350	6.6	5.8	19.9	18.2	17	17	39 3/4	8 x 8	30		
S-1905-O	W-1905-O	255	370	6.8	6.1	285	415	7.8	7.0	23.7	21.8	19	19	37 1/2	8 x 8	30		
S-2005-O	W-2005-O	280	405	7.4	6.6	315	455	8.6	7.5	26.0	23.6	20	20	37	8 x 8	30		
S-2205-O	W-2205-O	305	460	8.2	7.5	345	520	9.6	8.6	28.8	26.8	22	22	39 1/2	8 x 8	30		
S-2505-O	W-2505-O	380	565	10.2	9.2	430	635	11.8	10.6	35.8	33.1	25	25	40 1/4	8 x 8	35		
S-2805-O	W-2805-O	465	690	12.5	11.2	525	775	14.3	13.0	43.4	40.3	28	28	40 3/4	10x10	35		
S-1706-O	W-1706-O	245	355	6.4	5.7	275	410	7.3	6.7	23.1	21.4	17	17	39 1/4	8 x 8	30		
S-1906-O	W-1906-O	295	440	7.6	6.9	330	495	8.8	7.9	27.7	25.8	19	19	37 1/2	8 x 8	30		
S-2006-O	W-2006-O	325	480	8.4	7.5	365	540	9.7	8.6	30.6	28.2	20	20	37	8 x 8	30		
S-2206-O	W-2206-O	365	550	9.5	8.6	410	620	11.0	10.0	34.3	32.2	22	22	39 1/2	8 x 8	35		
S-2506-O	W-2506-O	450	675	11.6	10.6	505	760	13.4	12.2	42.3	39.6	25	25	40 1/4	8 x 9	35		
S-2806-O	W-2806-O	590	850	14.3	13.1	630	955	16.6	15.1	52.4	49.2	28	28	40 3/4	10x10	40		

* Based on oil of 19,700 B.t.u. / lb.
† Capacities are based on net installed radiation and on the presence of a quantity of net installed radiation sufficient for the requirements of the building. Nothing need be added for normal piping and pick-up.

When domestic hot water supply heater is installed add one square foot per gallon of tank capacity to installed radiation on steam boilers and two square feet per gallon of tank capacity on water boilers before selecting boiler size.

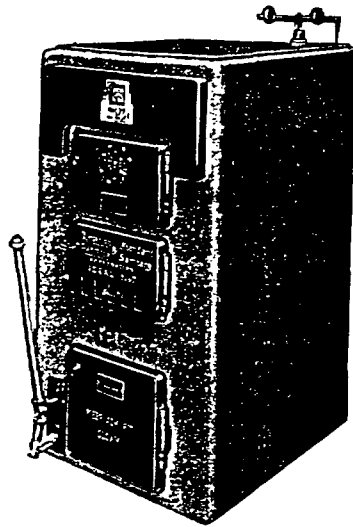
—RATINGS AND DATA—IDEAL ARCO ROUND BOILER AUTOMATIC COAL FIRING

No. of Boiler		† Installed Radiation Sq. Ft. LDR.		* Minimum Coal Burner Capacity Lbs. Coal Per Hour	Heating Surface Sq. Ft.		Firebox Dimensions			Height of Base	Chimney	
							Width-Inches		Height Floor to Crown Sheet Inches		Size Inches	Height Feet
							At Grate Line	9" Above Grate Line				
Steam	Water	Steam	Water		Steam	Water						
SC-1705	WC-1705	235	350	10	19.9	18.2	17	17	39¼	13	8 x 8	30
SC-1905	WC-1905	255	415	12	23.7	21.8	19	19	37½	13	8 x 8	30
SC-2005	WC-2005	315	455	14	26.0	23.6	20	20	37	12½	8 x 8	30
SC-2205	WC-2205	345	520	16	28.8	26.8	22	22	39½	13	8 x 8	30
SC-2505	WC-2505	430	635	18	35.8	33.1	25	25	40¼	13¼	8 x 8	35
SC-2805	WC-2805	525	775	22	43.4	40.3	28	28	40¾	13¼	10 x 10	35
SC-1706	WC-1706	275	410	12	23.1	21.4	17	17	39¼	13	8 x 8	30
SC-1906	WC-1906	330	495	14	27.7	25.8	19	19	37½	13	8 x 8	30
SC-2006	WC-2006	365	540	16	30.6	28.2	20	20	37	12½	8 x 8	30
SC-2206	WC-2206	410	620	18	34.3	32.2	22	22	39½	13	8 x 8	35
SC-2506	WC-2506	505	760	23	42.3	39.6	25	25	40¼	13¼	8 x 8	35
SC-2806	WC-2806	630	955	27	52.4	49.2	28	28	40¾	13¼	10 x 10	40

* Based on coal of 12,500 B.t.u. / lb.
† Capacities are based on net installed radiation and on the presence of a quantity of net installed radiation sufficient for the requirements of the building. Nothing need be added for normal piping and pick-up.

When domestic hot water supply heater is installed add one square foot per gallon of tank capacity to installed radiation on steam boilers and two square feet per gallon of tank capacity on water boilers before selecting boiler size.

No. 7 IDEAL BOILER
COAL, HAND FIRED



Due to advanced scientific design and construction the No. 7 Ideal Boiler reaches new heights of efficiency, dependability and economy. It also has special appeal from both the standpoints of performance and price. It provides rapid circulation of heat to rooms, has long firing periods, and requires minimum attention. An attractive chrome green jacket adds real beauty, and thorough insulation between jacket and boiler retains the heat.

For data on external water heater tapings and trimmings see last pages of this index section.

RATINGS AND DATA

No. of Boiler		Rated Output ^a Sq. Ft. EDR		Installed Radiation ^a Sq. Ft. EDR		Grate Area Sq. Ft.	Fuel Capacity Lbs.	Available Fuel Lbs.	Chimney	
Steam	Water	Steam	Water	Steam	Water				Size, In.	Ht., Ft.
S-711	W-711	500	600	225	360	1.68	112	84	8 x 8	30
S-715	W-715	670	1070	300	450	2.15	150	114	8 x 8	30
S-719	W-719	840	1340	375	600	2.62	188	144	8 x 8	35
S-723	W-723	1010	1610	450	720	3.09	226	174	8 x 12	35
S-727	W-727	1180	1880	525	840	3.56	264	204	8 x 12	35
S-731	W-731	1350	2150	600	960	4.03	302	234	8 x 12	35
S-735	W-735	1520	2420	675	1080	4.50	340	264	12 x 12	35
S-739	W-739	1690	2690	750	1200	4.97	378	294	12 x 12	40

^aBased on anthracite of 12,500 B.t.u./lb.

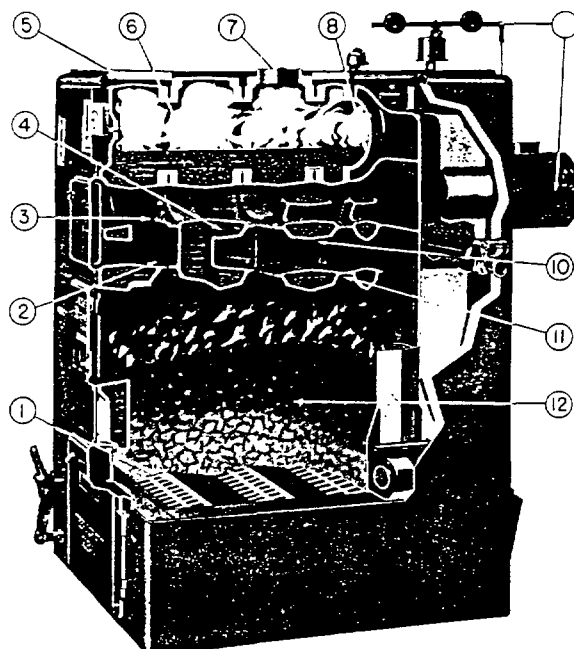
When a domestic water heater is connected to the boiler add one sq. ft. per gal. of tank capacity to installed radiation on steam boilers, and two sq. ft. per gallon of tank capacity on water boilers, before selecting boiler size.

* Rated output is the quantity of heat available at the boiler nozzle expressed in square feet EDR, and includes the installed radiation, normal piping (covered) and pick-up.

* Capacities are based on net installed radiation and on the presence of a quantity of net installed radiation sufficient for the requirements of the building. Nothing need be added for normal piping and pick-up.



No. 7 IDEAL BOILER COAL BURNING



THESE FEATURES EXPLAIN THE No. 7 BOILER'S EFFICIENCY

1. **GRATES**—scientifically proportioned grate bars assure efficient removal of ash without loss of coal. Large grate area aids quick response to heating demands. Special trussed construction withstands strain and abuse.
2. **TIGHT JOINTS**—permanent iron-to-iron fit of all sections, (instead of putty joints) and air tight doors, prevent wasteful in-leakage of air.
3. **FLUE PASSAGES**—scientifically designed so that all the hot gases come in contact with heating surface. No useful heat is wasted. Fire and clean-out doors have cast iron baffle linings.
4. **SMALL WATER CONTENT**—relatively small amount of water to be heated in the boiler waterways assures rapid steaming that gives the No. 7 boiler a quicker pick-up than any of the nine popular-make boilers tested.
5. **ATTRACTIVE INSULATED JACKET**—heavy corrugated air-cell asbestos insulation all over, completely covered by tight-fitting steel jacket, prevents heat loss. Jacket reaches to floor with unbroken lines and is amply reinforced so it will not bend. Green baked-on crinkle finish enamel will not chip.
6. **AMPLE STEAM SPACE**—dry steam for efficient, trouble-free and noiseless heating, because of broad steam liberating surface of boiler water and large space for steam to collect.
7. **SINGLE OUTLET**—low installation cost, because only one piping outlet is required in most cases.
8. **7-INCH NIPPLE**—this large connection between sections, permits water to circulate freely. Promotes equal heat transfer from all parts of the boiler.
9. **ARCO AUTOMATIC REGULATOR**—the "pin point" balance of the draft and check doors assures accurate response to the sensitive Arco Automatic Regulator and perfect control of the fire, without needless waste of fuel.
10. **PRIME HEATING SURFACE**—heating surface so designed that maximum heat absorption is assured.
11. **NO CREVICES**—sections designed to eliminate crevices which catch soot and lower boiler's efficiency.
12. **COMPLETE COMBUSTION**—scientifically designed combustion chamber promotes clean complete combustion of all kinds of fuel.

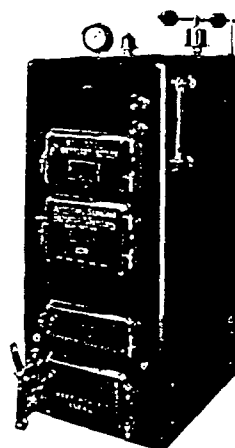
AMERICAN
HEATING EQUIPMENT

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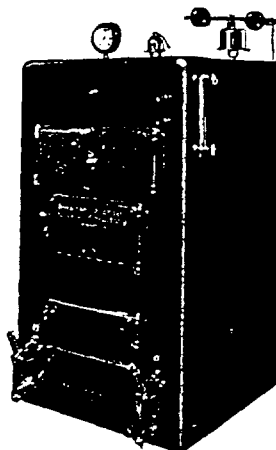
September 1, 1939

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IDEAL REDFLASH BOILER FOR ALL FUELS



No. 1 SERIES



No. 2 SERIES

The Ideal Redflash is America's best known boiler. Its many excellent features include large, scientifically designed fuel chamber, long flue travel, generous steam dome, attractive red enameled jacket, thoroughly insulated. These and many other features listed on following pages, assure highest efficiency and operating economy.

Made in capacities to meet the requirements of any size or type of building—cottage to skyscraper.

For data on external water heater tapings and trimmings see last pages of this index section

RATINGS AND DATA

COAL—Nos. 1 and 2 SERIES

No. of Boiler	Rated Output Sq. Ft. EDR ^o		Installed Radiation Sq. Ft. EDR**		Recommended Load Sq. Ft. EDR†		Fuel Capacity Lbs.	Available Fuel Lbs.	Grate Area Sq. Ft.	Chimney	
	Steam	Water	Steam	Water	Steam	Water				Size Inches	Hgt. Ft.
1-2-5	1-W-5	540	865	220	350		160	120	1.79	8 x 8	30
1-2-6	1-W-6	700	1,120	300	450		200	150	2.25	8 x 8	30
1-2-7	1-W-7	860	1,375	350	610		240	180	2.71	8 x 12	35
1-2-8	1-W-8	1,020	1,630	400	740		280	210	3.17	8 x 12	35
1-2-9	1-W-9	1,180	1,885	540	870		320	240	3.63	8 x 12	35
1-2-10	1-W-10	1,340	2,140	620	1,000		360	270	4.09	12 x 12	35
1-2-11	1-W-11	1,500	2,395	700	1,130		400	300	4.55	12 x 12	35
2-2-5	2-W-5	1,150	1,840			625	1,000	320	3.50	8 x 12	35
2-2-6	2-W-6	1,450	2,320			815	1,300	400	4.39	12 x 12	35
2-2-7	2-W-7	1,750	2,800			995	1,590	480	5.28	12 x 12	35
2-2-8	2-W-8	2,050	3,280			1,160	1,860	560	6.17	12 x 12	40
2-2-9	2-W-9	2,350	3,760			1,340	2,140	640	7.06	12 x 16	40
2-2-10	2-W-10	2,650	4,240			1,510	2,420	720	7.95	12 x 16	45
2-2-11	2-W-11	2,950	4,720			1,670	2,650	800	8.84	12 x 16	45

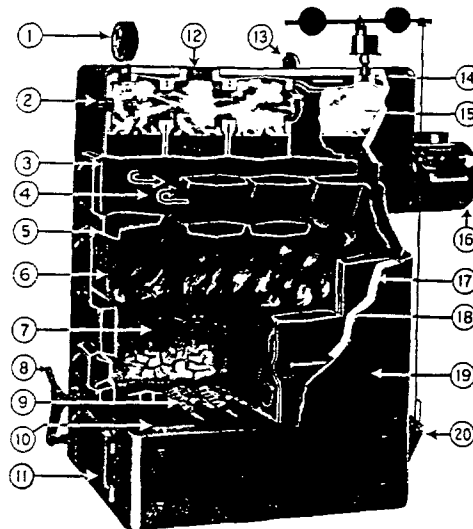
^o RATED OUTPUT is the quantity of heat available at the boiler nozzle expressed in square feet EDR and includes the installed radiation, normal piping (covered) and pick-up.

** Capacities are based on net installed radiation and on the presence of a quantity of net installed radiation sufficient for the requirements of the building. Nothing will be added for normal piping and pick-up.

† RECOMMENDED LOAD represents attached load—including piping—which may be placed on Boiler in accordance with accepted installation standards for economical operation.

AMERICAN
HEATING EQUIPMENT

IDEAL REDFLASH BOILER FOR ALL FUELS



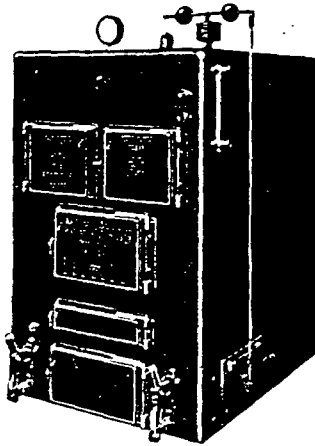
CUTAWAY VIEW—Nos. 1 and 2 Series

20 REASONS FOR REDFLASH SUPERIORITY

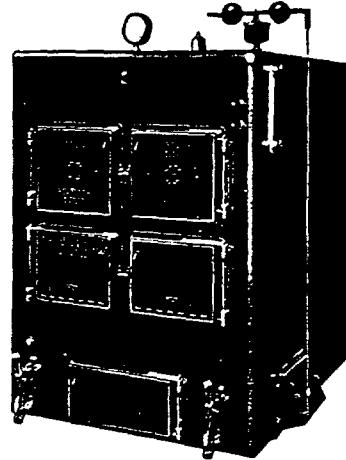
1. STEAM GAUGE—highly dependable steam gauge.
2. BLOW-OFF TAPPING—makes internal cleaning easy.
3. FLUE PASSAGES—gases travel rapidly from side to center flues, assisted by curved baffle lining inside large flue doors.
4. MAXIMUM HEAT TRANSFER—every bit of heat is transferred to surrounding water when hot gases pass through the long, scientifically-designed flues.
5. TIGHT DOORS—all contacting surfaces of doors machine-ground to keep out air and keep in heat.
6. FIRE DOOR—large and sturdy for ease in fueling. A special baffle lining contains secondary air distributor.
7. LARGE COMBUSTION CHAMBER—holds ample fuel so minimum attention is required for firing. Correctly proportioned to burn fuel completely. Large water-backed heating surface absorbs maximum heat directly from fire.
8. SHAKER HANDLE—easy to operate. Long-handled to eliminate stooping.
9. DURABLE GRATES—permit use of small size coal.
10. LARGE ASH PIT—reduces ash-taking attention.
11. DOORS AND FITTINGS—substantial, made to last for years.
12. FLOW TAPPINGS—correctly located. Makes piping connection easy. Cuts down installation cost.
13. ARCO RELIEF VALVE—protects boiler against excess pressure.
14. ARCO AUTOMATIC REGULATOR—provides proper combustion control, saving fuel and attention. Furnished on all No. 1 and 2 Series, both steam and water boilers.
15. LARGE STEAM SPACE—large steam dome and steam releasing area insure dry steam.
16. DRAFT CONTROL—drafts automatically controlled by check and choke dampers in two-way cast iron smokehood.
17. HEAVY INSULATION—heat loss prevented by the asbestocel insulation, which never needs renewing.
18. TIGHT JOINTS—special machines grind contacting faces of sections to marble-smoothness, preventing leakage and air infiltration.
19. ATTRACTIVE JACKET—with beautiful red enamel crinkle finish, baked on to last for years.
20. DAMPER—for admitting primary air supply.



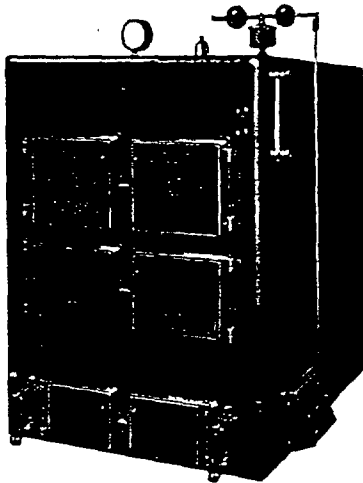
IDEAL REDFLASH BOILER
FOR ALL FUELS



No. 3 SERIES



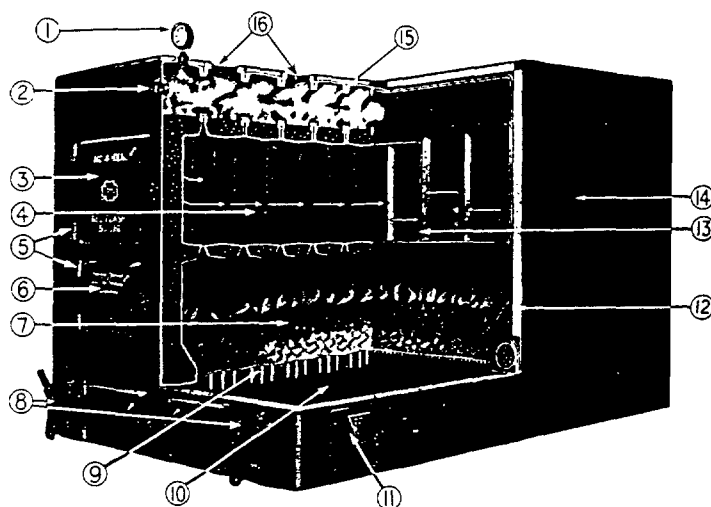
No. 4 SERIES



No. 5 SERIES

FOR EXTERNAL WATER
HEATER TAPPINGS AND TRIM-
MINGS SEE LAST PAGES OF
THIS INDEX SECTION.

IDEAL REDFLASH BOILER FOR ALL FUELS



CUTAWAY VIEW Nos. 3, 4 and 5 Series

FEATURES THAT MEAN GOOD HEATING AND FUEL-SAVING

1. SUPERIOR ARCO ACCESSORIES—provided on all boilers.
2. BLOW-OFF TAPPING—for internal cleaning, conveniently located in front.
3. LARGE FLUE DOORS—make it easy to clean remote flue surfaces. Curved cast iron baffle lining protects doors from heat and assists easy, rapid gas travel.
4. FLUE AREA—a long flue travel for hot gases insures high operating economy.
5. HINGE PLATES—carefully manufactured to assure perfect fit of doors.
6. FIRE DOORS—large and sturdy with special cast iron protective baffle lining.
7. LARGE FUEL CHAMBER—scientifically proportioned for proper burning. Abundant coal-carrying capacity reduces fueling attention.
8. SHAKING MECHANISM—easily operated, durable. Long shaker handle does away with stooping.
9. GRATES—of reinforced trussed construction, extra strong. Special grates can be supplied at no extra charge, to permit use of inexpensive buckwheat and pea coal.
10. ASH PIT—amply proportioned for easy care-taking.
11. PRIMARY DRAFT DAMPER—carefully balanced, located at side.
12. INSULATION—thick, indestructible asbestos saves fuel by reducing heat loss.
13. TIGHT JOINTS—all contact surfaces of doors and sections ground to smooth finish to prevent air leakage.
14. ATTRACTIVE JACKET—indestructible sheet steel with red baked-on crinkle finish enamel.
15. AMPLE STEAM SPACE—large dome and large steam releasing area insure dry steam.
16. FLOW TAPPINGS—correct size and location for easy connection to piping.

Also —ARCO RELIEF VALVE, precision ground, and conforming to A.S.M.E. standards, protects boiler against excess pressure.

ARCO AUTOMATIC REGULATOR controls combustion, saving fuel and attention. Provided on all steam boilers; on water boilers at slight extra cost.

TWO-WAY SMOKEHOOD with choke and check dampers permits choice of top or direct chimney connection.



RATINGS AND DATA—IDEAL REDFLASH BOILER COAL—NOS. 3, 4 AND 5 SERIES

No. of Boiler		Rated Output Sq. Ft. EDR*		Recommended Load Sq. Ft. EDR**		Fuel Capacity Lbs.	Available Fuel Lbs.	Grate Area Sq. Ft.	Chimney	
Steam	Water	Steam	Water	Steam	Water				Size Inches	Height Feet
3-S-6	3-W-6	2,900	4,640	1,790	2,860	590	443	6.65	12 x 16	40
3-S-7	3-W-7	3,400	5,440	2,060	3,300	710	533	8.00	16 x 16	45
3-S-8	3-W-8	3,900	6,240	2,340	3,740	830	623	9.35	16 x 16	50
3-S-9	3-W-9	4,400	7,040	2,600	4,160	950	713	10.70	16 x 20	50
3-S-10	3-W-10	4,900	7,840	2,880	4,600	1,070	803	12.05	16 x 20	55
3-S-11	3-W-11	5,400	8,640	3,140	5,050	1,190	893	13.40	20 x 20	60
3-S-12	3-W-12	5,900	9,440	3,400	5,450	1,310	983	14.75	20 x 20	65
3-S-13	3-W-13	6,400	10,240	3,670	5,860	1,430	1,073	16.10	20 x 20	65
4-S-7	4-W-7	5,000	8,000	3,050	4,930	950	713	11.70	16 x 20	50
4-S-8	4-W-8	5,500	8,800	3,350	5,730	1,110	833	13.05	20 x 20	55
4-S-9	4-W-9	6,000	10,720	4,040	6,420	1,270	953	15.05	20 x 20	55
4-S-10	4-W-10	7,550	12,050	4,540	7,270	1,430	1,073	17.74	20 x 20	60
4-S-11	4-W-11	8,400	13,440	5,040	8,090	1,590	1,193	19.62	20 x 24	65
4-S-12	4-W-12	9,250	14,800	5,540	8,860	1,750	1,313	21.60	20 x 24	70
4-S-13	4-W-13	10,100	16,150	6,040	9,660	1,910	1,433	23.53	20 x 24	75
5-S-5	5-W-5	5,500	13,600	5,250	9,410	1,281	951	18.83	24 x 28	70
5-S-9	5-W-9	9,900	15,360	5,920	9,580	1,464	1,098	21.52	24 x 28	75
5-S-10	5-W-10	10,700	17,120	6,720	10,750	1,647	1,235	24.21	24 x 28	75
5-S-11	5-W-11	11,500	18,880	7,450	11,920	1,830	1,373	25.90	24 x 28	80
5-S-12	5-W-12	12,900	20,640	8,180	13,090	1,464	1,098	21.52	24 x 28	85
5-S-13	5-W-13	14,000	22,400	8,910	14,250	1,647	1,235	24.21	30 x 36	85
5-S-14	5-W-14	15,100	24,160	9,640	15,430	1,830	1,373	24.21	30 x 36	90
5-S-15	5-W-15	16,200	25,920	10,370	16,600	1,830	1,373	25.90	30 x 36	95

* RATED OUTPUT is the quantity of heat available at the boiler nozzle expressed in square feet EDR and includes the installed radiation, normal piping (covered) and pick-up.

** RECOMMENDED LOAD represents attached load—including piping—which may be placed on Boiler in accordance with accepted installation standards for economical operation.

NOTE: On special order Nos. 3, 4 and 5 Series Ideal Redflash Boilers can be supplied equipped with special Grate Bars for burning buckwheat coal, at no additional charge.

For data on external water heater tapings and trimmings see last pages of this index section.

IDEAL REDFLASH BOILER—RATINGS AND DATA OIL BURNING—ALL SIZES

No. of Boiler		Transmission Rate 4,000 B.t.u./sq. ft./hr.			Transmission Rate 4,500 B.t.u./sq. ft./hr.			Firebox Dimensions					Chimney		
		Installed Radiation Sq. Ft. EDR		*Mini- mum Burner Capacity Lbs. Oil/Hr.	Installed Radiation Sq. Ft. EDR		*Mini- mum Burner Capacity Lbs. Oil/Hr.	Heating Surface Sq. Ft.	Width, Inches		Height Inches Floor to Crown Sheet	Leth. In.	Size Inches	Ht. Ft.	
		Stm.	Wat.		Stm.	Wat.			At Grate Line	9" Above Grate Line					
Stm.	Wat.	Stm.	Wat.		Stm.	Wat.									
1-S-5-0	1-W-5-0	235	380	6.2	265	430	7.1	21.9	15½	18	32	15½	8 x 8	30	
1-S-6-0	1-W-6-0	270	435	7.1	305	490	8.1	25.3	15½	18	32	19½	8 x 8	30	
1-S-7-0	1-W-7-0	320	515	8.4	360	550	9.6	30.0	15½	18	32	23½	8 x 8	30	
1-S-8-0	1-W-8-0	355	570	9.4	400	640	10.7	33.4	15½	18	32	27½	8 x 8	30	
1-S-9-0	1-W-9-0	405	650	10.7	455	730	12.2	38.0	15½	18	32	31½	8 x 12	30	
1-S-10-0	1-W-10-0	440	705	11.7	495	795	13.3	41.4	15½	18	32	35½	8 x 12	35	
1-S-11-0	1-W-11-0	490	785	13.0	550	865	14.8	46.1	15½	18	32	39½	8 x 12	35	
2-S-6-0	2-W-6-0	525	840	13.9	590	945	15.3	49.2	24½	27	35	24½	8 x 12	30	
2-S-7-0	2-W-7-0	610	975	16.1	655	1,100	18.4	57.1	24½	27	35	29½	12 x 12	30	
2-S-8-0	2-W-8-0	690	1,105	18.3	750	1,250	20.8	64.9	24½	27	35	34½	12 x 12	35	
2-S-9-0	2-W-9-0	785	1,255	20.6	855	1,420	23.4	72.9	24½	27	35	39½	12 x 12	35	
2-S-10-0	2-W-10-0	880	1,410	22.8	990	1,580	26.0	80.8	24½	27	35	44½	12 x 12	40	
2-S-11-0	2-W-11-0	965	1,545	25.1	1,090	1,750	28.5	88.8	24½	27	35	49½	12 x 16	40	
2-S-12-0	2-W-12-0	1,055	1,690	27.3	1,205	1,930	31.1	96.7	24½	27	35	54½	12 x 16	40	
2-S-13-0	2-W-13-0	1,150	1,840	29.5	1,300	2,050	33.6	104.6	24½	27	35	59½	12 x 16	40	
Transmission Rate 5,000 B.t.u./sq. ft./hr.															
3-S-8-0	3-W-8-0	1,450	2,370	35.0				105.5	32	36	35	41½	12 x 16	40	
3-S-9-0	3-W-9-0	1,680	2,690	43.0				119.2	32	36	35	47½	12 x 16	45	
3-S-10-0	3-W-10-0	1,895	3,030	48.0				132.9	32	36	35	53½	16 x 16	45	
3-S-11-0	3-W-11-0	2,110	3,375	53.0				146.6	32	36	35	59½	16 x 16	45	
3-S-12-0	3-W-12-0	2,295	3,670	57.5				159.8	32	36	35	65½	16 x 16	45	
3-S-13-0	3-W-13-0	2,520	4,030	62.5				173.6	32	36	35	71½	16 x 16	50	
3-S-14-0	3-W-14-0	2,735	4,375	67.5				187.3	32	36	35	77½	16 x 20	50	
Transmission Rate 5,000 B.t.u./sq. ft./hr.															
4-S-9-0	4-W-9-0	2,450	3,920	61.0				169	40	44	34	55½	16 x 16	45	
4-S-10-0	4-W-10-0	2,760	4,415	68.0				189	40	44	34	62½	16 x 16	50	
4-S-11-0	4-W-11-0	3,070	4,910	75.0				208	40	44	34	69½	16 x 20	50	
4-S-12-0	4-W-12-0	3,365	5,385	82.0				228	40	44	34	76½	16 x 20	55	
4-S-13-0	4-W-13-0	3,685	5,895	89.0				248	40	44	34	83½	16 x 20	55	
4-S-14-0	4-W-14-0	3,950	6,370	96.0				267	40	44	34	90½	20 x 20	55	
Transmission Rate 5,000 B.t.u./sq. ft./hr.															
5-S-10-0	5-W-10-0	3,935	6,295	95.0				255	48	51	33½	71½	20 x 20	50	
5-S-11-0	5-W-11-0	4,365	6,985	105.0				293	48	51	33½	79½	20 x 20	55	
5-S-12-0	5-W-12-0	4,920	7,870	119.0				331	48	51	33½	87½	20 x 20	55	
5-S-13-0	5-W-13-0	5,345	8,550	129.0				359	48	51	33½	95½	20 x 20	60	
5-S-14-0	5-W-14-0	5,750	9,200	139.0				386	48	51	33½	103½	20 x 24	60	
5-S-15-0	5-W-15-0	6,170	9,870	149.0				415	48	51	33½	111½	20 x 24	65	
5-S-16-0	5-W-16-0	6,570	10,510	159.0				442	48	51	33½	119½	20 x 24	65	
5-S-17-0	5-W-17-0	6,970	11,150	169.0				469	48	51	33½	127½	20 x 24	70	

* Based on oil of 19,700 B.t.u./lb.

† Capacities are based on net installed radiation and on the presence of a quantity of net installed radiation sufficient for the requirements of the building. Nothing need be added for normal piping and pick-up.

When domestic hot water supply heater is installed add one square foot per gallon of tank capacity to installed radiation on steam boilers and two square feet per gallon of tank capacity on water boilers before selecting boiler size.



RATINGS AND DATA—IDEAL REDFLASH BOILER AUTOMATIC COAL FIRING—ALL SIZES

No. of Boiler		*Installed Radiation Sq. Ft. EDR		Minimum Coal Burner Capacity Lbs. Coal Per Hr.	Boiler Heating Surface Sq. Ft.	Firebox Dimensions		Distance from Floor to Crown-sheet of Boiler	Height of Base	Chimney	
Steam	Water	Steam	Water			Width Inches	Length Inches			Size Inches	Hgt. Feet
1-SC-5	1-WC-5	265	430	11	21.9	15½	15½	32	10	8 x 8	30
1-SC-6	1-WC-6	305	490	13	25.3	15½	19½	32	10	8 x 8	30
1-SC-7	1-WC-7	360	550	15	30.0	15½	23½	32	10	8 x 8	30
1-SC-8	1-WC-8	400	640	17	33.4	15½	27½	32	10	8 x 8	30
1-SC-9	1-WC-9	455	730	19	38.0	15½	31½	32	10	8 x 12	30
1-SC-10	1-WC-10	495	795	21	41.4	15½	35½	32	10	8 x 12	30
2-SC-6	2-WC-6	590	945	25	49.2	24½	24½	35	12	8 x 12	30
2-SC-7	2-WC-7	655	1,100	29	57.1	24½	29½	35	12	12 x 12	35
2-SC-8	2-WC-8	780	1,250	33	64.9	24½	34½	35	12	12 x 12	35
2-SC-9	2-WC-9	855	1,420	35	72.9	24½	39½	35	12	12 x 12	40
2-SC-10	2-WC-10	990	1,580	42	80.8	24½	44½	35	12	12 x 12	40
2-SC-11	2-WC-11	1,125	1,805	48	88.8	24½	49½	35	12	12 x 16	40
2-SC-12	2-WC-12	1,257	2,059	55	96.7	24½	54½	35	12	12 x 16	40
2-SC-13	2-WC-13	1,445	2,312	62	104.6	24½	59½	35	12	12 x 16	40
3-SC-6	3-WC-6	1,120	1,792	30	75.6	32	29½	35	12	12 x 16	40
3-SC-7	3-WC-7	1,310	2,095	42	92.3	32	35½	35	12	12 x 16	40
3-SC-8	3-WC-8	1,480	2,370	63	105.5	32	41½	35	12	12 x 16	40
3-SC-9	3-WC-9	1,680	2,690	72	119.2	32	47½	35	12	12 x 16	45
3-SC-10	3-WC-10	1,895	3,030	81	132.9	32	53½	35	12	16 x 16	45
3-SC-11	3-WC-11	2,110	3,375	90	146.6	32	59½	35	12	16 x 16	45
3-SC-12	3-WC-12	2,295	3,670	98	159.8	32	65½	35	12	16 x 16	45
3-SC-13	3-WC-13	2,565	4,104	109	173.6	32	71½	35	12	16 x 16	50
3-SC-14	3-WC-14	2,800	4,480	120	187.3	32	77½	35	12	16 x 20	50
4-SC-7	4-WC-7	1,500	2,580	77		40	41½	34	12	16 x 16	45
4-SC-8	4-WC-8	2,180	3,488	93	148	40	45½	34	12	16 x 16	45
4-SC-9	4-WC-9	2,516	4,026	107	169	40	55½	34	12	16 x 16	45
4-SC-10	4-WC-10	2,930	4,688	125	189	40	62½	34	12	16 x 16	50
4-SC-11	4-WC-11	3,340	5,344	143	208	40	69½	34	12	16 x 20	50
4-SC-12	4-WC-12	3,746	5,994	160	228	40	76½	34	12	16 x 20	55
4-SC-13	4-WC-13	4,127	6,603	176	248	40	83½	34	12	16 x 20	55
4-SC-14	4-WC-14	4,453	7,173	191	267	40	90½	34	12	20 x 20	55
5-SC-8	5-WC-8	3,244	5,190	135	211	48	55½	33½	12	20 x 20	50
5-SC-9	5-WC-9	3,825	6,120	159	238	48	63½	33½	12	20 x 20	50
5-SC-10	5-WC-10	4,428	7,084	187	265	48	71½	33½	12	20 x 20	50
5-SC-11	5-WC-11	5,031	8,050	207	293	48	79½	33½	12	20 x 20	55
5-SC-12	5-WC-12	5,601	8,962	239	331	48	87½	33½	12	20 x 20	55
5-SC-13	5-WC-13	6,179	9,895	264	359	48	95½	33½	12	20 x 20	60
5-SC-14	5-WC-14	6,753	10,795	288	386	48	103½	33½	12	20 x 24	60
5-SC-15	5-WC-15	7,325	11,720	312	415	48	111½	33½	12	20 x 24	65
5-SC-16	5-WC-16	7,990	12,624	336	442	48	119½	33½	12	20 x 24	65
5-SC-17	5-WC-17	8,445	13,512	360	469	48	127½	33½	12	20 x 24	70

Based on coal of 12,500 B.t.u./lb.

* Capacities are based on net installed radiation and on the presence of a quantity of net installed radiation sufficient for the requirements of the building. Nothing need be added for normal piping and pick-up.

When domestic hot water supply heater is installed add one square foot per gallon of tank capacity to installed radiation on steam boilers and two square feet per gallon of tank capacity on water boilers before selecting boiler size.

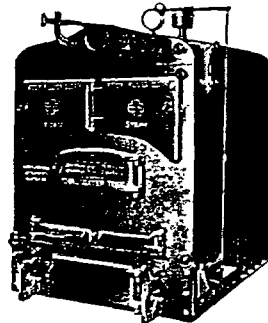
IDEAL WATER TUBE BOILERS
FOR ALL FUELS



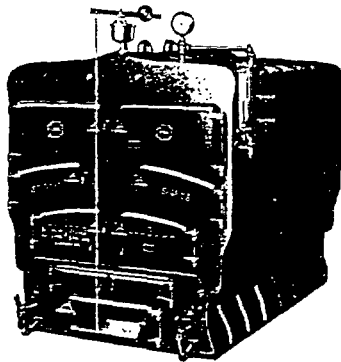
23 INCH BOILER



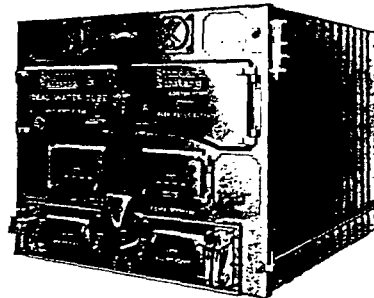
29 INCH BOILER



36 INCH BOILER



48 INCH BOILER



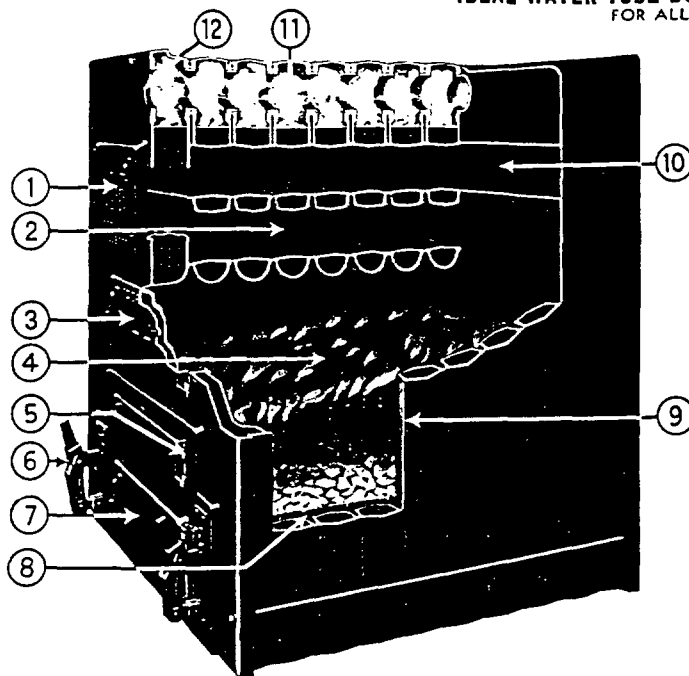
79 INCH BOILER

An outstanding feature of the Ideal Water Tube Boiler is the series of water-backed vertical tubes presenting an unusually large area of flue surface, which extracts every possible heat unit from the hot gases as they travel to the chimney. This feature, combined with correctly proportioned combustion chamber, grate area, and abundant direct heating surface, achieves rapid, economical and reliable heat service with minimum attention. Made in sizes that are suitable for any kind of building—large or small.

For data on external water heater tapings and trimmings, see last pages of this index section.



**IDEAL WATER TUBE BOILER
FOR ALL FUELS**



CUTAWAY VIEW—23 and 29" WATER TUBE

FEATURES WHICH ASSURE EXCELLENT PERFORMANCE AND ECONOMY

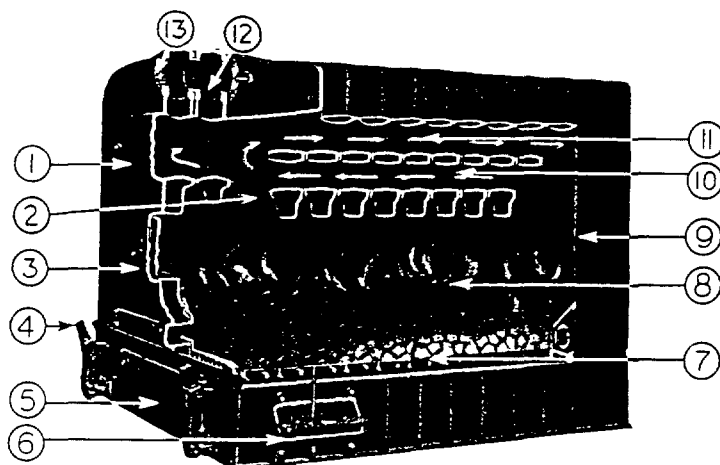
1. FLUE DOORS—large size make it easy to clean remote flue surfaces.
2. FLUE PASSAGES—correctly proportioned double-gallery flue and flue travel twice the boiler's length permit every possible heat unit to be absorbed from the flue gases, effecting an unusually high degree of operating economy.
3. FIRE DOOR—large and sturdy, protected from the heat by special cast iron baffle lining.
4. AMPLE FIRE CHAMBER—large firepot means less fuel attention.
5. GOOD PLATE WORK—accurate, unusually heavy hinge pins and plate work assure perfect fit of doors.
6. SHAKER MECHANISM—long-handled sturdy shaking mechanism operates easily and smoothly.
7. LARGE ASH PIT DOOR—permits the easy removal of ashes.
8. GRATES—extra strong with air spaces properly sized for efficient burning. Special pea coal grates can be furnished at no extra charge, when so ordered.
9. TIGHT SECTIONS AND DOORS—all contact faces of doors and sections machine-ground to smooth finish to prevent air infiltration.
10. WATER-BACKED VERTICAL TUBES—carefully designed to assure rapid water circulation. Expose unusually large amount of effective absorbing surface to the heat.
11. LARGE STEAM SPACE—large steam dome and large steam releasing area insure dry steam.
12. FLOW TAPPINGS—of correct size and location for easy connections.

Also:—SENSITIVE ARCO AUTOMATIC REGULATOR—for proper combustion control. Provided on all steam boilers; on water boilers at slight extra cost.

ARCO RELIEF VALVE—thoroughly dependable and conforming to A.S.M.E. standards.

METAL JACKET—finished in black baked enamel, thoroughly insulated, supplied at slight extra cost.

IDEAL WATER TUBE BOILER FOR ALL FUELS



CUTAWAY VIEW of 30" BOILER

THESE SALIENT POINTS OF DESIGN AND CONSTRUCTION PAY DIVIDENDS IN GOOD HEATING AND FUEL-SAVING

1. LARGE FLUE DOORS—make it easy to clean remote flue surfaces. Cast iron baffle linings protect the doors from heat.
2. CROWN SHEET—arched for strength and for unimpeded flow of water from base to dome.
3. FIRE DOOR—large and sturdy with special cast iron protective baffle lining and secondary air distributor.
4. GRATE SHAKER—unbreakable and easily operated with long handle.
5. ASH PIT—large ash pit and large ash pit door for easy caretaking.
6. PRIMARY AIR DAMPER—Carefully balanced and proportioned, operating with Arco Automatic Regulator, insures proper combustion control.
7. GRATES—non-jumping, of reinforced trussed construction that will not burn out. Special grates for burning pea coal may be supplied on order.
8. FUEL CHAMBER—scientifically and amply proportioned to promote proper burning and to hold sufficient fuel to

last for hours. Broad water-backed direct heating surface surrounding the fuel at top and sides transfers a high percentage of heat directly to the water inside the boiler.

9. TIGHT JOINTS—all contact surfaces of cast iron doors and sections machine-ground to perfect finish to prevent air infiltration or short-cutting of gases to chimney.
10. FLUE TRAVEL—double flue gallery twice the boiler's length, through which the hot gases must pass to the chimney, insures maximum transfer of heat from gases to surrounding water, for securing the ultimate in economy.
11. VERTICAL TUBES—extensive series of carefully designed, water-backed vertical tubes assure rapid water circulation and expose an unusually large and effective heat-absorbing surface.
12. STEAM SPACE—large steam dome and large steam releasing area insure dry steam.
13. FLOW TAPPINGS—of correct size and number.

Also.—METAL JACKET—finished with black baked enamel covering thick, asbestos lining may be supplied for 23, 29 and 79-inch boilers at slight extra cost.

ARCO RELIEF VALVE—thoroughly dependable and conforming to A.S.M.E. standards.

ARCO AUTOMATIC REGULATOR—provides for proper combustion control. Provided on all steam boilers; on water boilers at slight extra cost.

AMERICAN
HEATING EQUIPMENT

RATINGS AND DATA—IDEAL WATER TUBE BOILER COAL BURNING

No. of Boiler		Maximum Output Full Drive		Recommended Load Sq. Ft. EDR		Fuel Capacity Lbs.	Available Fuel Lbs.	Grate Area Sq. Ft.	Chimney	
		Steam	Water	Steam	Water				Size Inches	Height Feet
S-2303	W-2303	600	960	450	720	164	123	2.72	8 x 12	30
S-2306	W-2306	750	1,200	525	840	203	152	3.36	8 x 12	35
S-2307	W-2307	900	1,440	675	1,080	242	182	4.00	8 x 12	35
S-2308	W-2308	1,050	1,680	750	1,200	281	211	4.64	8 x 12	35
S-2309	W-2309	1,200	1,920	825	1,320	320	240	5.28	8 x 12	40
S-2310	W-2310	1,350	2,160	900	1,440	359	269	5.92	12 x 12	40
S-2905	W-2905	1,600	2,560	800	1,280	350	263	4.84	12 x 16	35
S-2906	W-2906	2,000	3,200	1,000	1,600	437	328	6.05	12 x 16	40
S-2907	W-2907	2,400	3,840	1,200	1,920	523	392	7.26	16 x 16	40
S-2908	W-2908	2,800	4,480	1,400	2,240	611	458	8.47	16 x 16	45
S-2909	W-2909	3,200	5,120	1,600	2,560	699	524	9.68	16 x 20	50
S-2910	W-2910	3,600	5,760	1,800	2,880	787	590	10.89	16 x 20	55
S-3605	W-3605	3,150	5,040	1,850	2,960	684	513	7.50	16 x 20	45
S-3607	W-3607	3,500	5,600	2,175	3,480	828	621	9.00	16 x 20	50
S-3608	W-3608	4,450	7,120	2,500	4,000	972	729	10.50	20 x 20	50
S-3609	W-3609	5,100	8,160	2,825	4,520	1,116	837	12.00	20 x 20	55
S-3610	W-3610	5,750	9,200	3,150	5,040	1,260	945	13.50	20 x 20	55
S-3611	W-3611	6,400	10,240	3,475	5,560	1,404	1,053	15.00	20 x 20	60
S-3612	W-3612	7,050	11,280	3,800	6,080	1,548	1,161	16.50	20 x 24	60
S-3613	W-3613	7,700	12,320	4,125	6,600	1,692	1,269	18.00	20 x 24	65
S-3614	W-3614	8,350	13,360	4,450	7,120	1,836	1,377	19.50	20 x 24	70
S-3615	W-3615	9,000	14,400	4,775	7,640	1,980	1,485	21.00	24 x 24	75
S-4507	W-4507	9,000	14,400	5,875	9,400	1,770	1,328	21.60	24 x 24	70
S-4508	W-4508	10,250	16,400	7,125	11,400	2,065	1,549	25.20	24 x 24	75
S-4509	W-4509	11,500	18,400	7,750	12,400	2,065	1,549	25.20	24 x 28	80
S-4510	W-4510	12,750	20,400	8,375	13,400	2,360	1,770	28.80	24 x 28	85
S-4511	W-4511	14,000	22,400	9,000	14,400	2,360	1,770	28.80	28 x 28	95
S-4512	W-4512	15,250	24,400	9,625	15,400	2,360	1,770	28.80	28 x 28	100
S-4513	W-4513	16,500	26,400	10,250	16,400	2,655	1,991	32.40	28 x 32	105
S-4514	W-4514	17,750	28,400	10,875	17,400	2,655	1,991	32.40	28 x 32	110
S-7909	W-7909	14,000	22,400	8,000	12,800	2,484	1,863	21.9	24 x 28	85
S-7910	W-7910	15,500	24,800	9,000	14,400	2,780	2,070	24.9	24 x 28	90
S-7911	W-7911	17,000	27,200	10,000	16,000	3,036	2,277	28.0	24 x 28	95
S-7912	W-7912	18,500	29,600	11,000	17,600	3,312	2,484	31.1	28 x 28	100
S-7913	W-7913	20,000	32,000	12,000	19,200	3,588	2,691	34.2	30 x 30	105
S-7914	W-7914	21,500	34,400	13,000	20,800	3,864	2,898	37.3	30 x 36	110
S-7915	W-7915	23,000	36,800	14,000	22,400	3,450	2,588	34.2	30 x 36	115
S-7916	W-7916	24,500	39,200	14,000	22,400	3,450	2,588	34.2	36 x 36	120
S-7917	W-7917	26,000	41,600	15,000	24,000	3,726	2,795	37.3	36 x 36	125

* MAXIMUM OUTPUT is output at Boiler Nozzle expressed in Equivalent Direct Radiation at 240 B.t.u. for steam and 150 B.t.u. for water.

** RECOMMENDED LOAD represents attached load—including piping—which may be placed on Boiler in accordance with accepted installation standards for economical operation.

IDEAL WATER TUBE BOILER—RATINGS AND DATA OIL FIRED—ALL SIZES

No. of Boiler	Transmission Rate 4,000 B.t.u./sq. ft. hr.			Transmission Rate 4,500 B.t.u./sq. ft. hr.			Heat- ing Sur- face Sq. Ft.	Firebox Dimensions				Chimney	
	† Installed Radiation Sq. Ft. EDR		* Mini- mum Burner Capacity Lbs. Oil/Hr.	† Installed Radiation Sq. Ft. EDR		* Mini- mum Burner Capacity Lbs. Oil/Hr.		Width Inches		Hgt. In. Floor to Crown Sheet	Lath. In.		
	Steam	Water		Steam	Water			At Grate Line	9" Above Grate Line		Size Inches	Hgt. Ft.	
S or W-0623	555	905	14.4	630	1,010	16.6	52.6	23	23	30	20½	8 x 8	30
S or W-0723	655	1,050	15.8	740	1,180	19.3	61.3	23	23	30	24½	8 x 8	30
S or W-0823	750	1,200	19.2	850	1,360	22.1	70.0	23	23	30	28½	8 x 12	30
S or W-0923	845	1,350	21.6	960	1,540	24.8	78.7	23	23	30	32½	8 x 12	35
S or W-1023	945	1,510	23.9	1,070	1,710	27.5	87.4	23	23	30	36½	8 x 12	35
S or W-1123	1,050	1,680	26.4	1,200	1,920	30.4	96.1	23	23	30	40½	12 x 12	35
S or W-1223	1,155	1,850	28.8	1,300	2,080	33.1	104.8	23	23	30	44½	12 x 12	35
S or W-0729	1,200	1,920	29.8	1,360	2,150	34.3	109.0	29	29	33	35½	12 x 12	35
S or W-0829	1,355	2,215	34.2	1,570	2,320	39.4	124.9	29	29	33	41½	12 x 12	35
S or W-0929	1,575	2,520	38.6	1,790	2,860	44.4	140.8	29	29	33	47½	12 x 16	40
S or W-1029	1,770	2,830	43.0	2,000	3,200	50.5	156.7	29	29	33	53½	12 x 16	40
S or W-1129	1,965	3,145	47.3	2,220	3,550	54.5	172.6	29	29	33	59½	12 x 16	45
S or W-1229	2,165	3,465	51.6	2,490	3,940	59.5	188.5	29	29	33	65½	12 x 16	45
Transmission Rate 5,000 B.t.u./sq. ft. hr.													
S or W-0836	2,640	4,225	64.4				180.4	36	36	35½	41½	16 x 16	40
S or W-0936	3,090	4,800	72.6				203.4	36	36	38½	47½	16 x 16	45
S or W-1036	3,340	5,345	80.7				226.4	36	36	38½	53½	16 x 16	50
S or W-1136	3,715	5,945	89.0				249.4	36	36	38½	59½	16 x 20	50
S or W-1236	4,055	6,485	97.2				272.4	36	36	38½	65½	16 x 20	55
S or W-1336	4,395	7,035	100.6				295.4	36	36	38½	71½	20 x 20	60
Transmission Rate 5,000 B.t.u./sq. ft./hr.													
S or W-4808-0	4,965	7,945	119.1				334	48	48	37½	74½	20 x 24	60
S or W-4809-0	5,645	9,035	136.0				379	48	48	37½	85½	20 x 24	65
S or W-4810-0	6,330	10,130	152.0				426	48	48	37½	96½	24 x 24	70
S or W-4811-0	7,020	11,230	169.0				472	48	48	37½	107	24 x 24	75
S or W-4812-0	7,700	12,320	185.0				517	48	48	37½	117½	24 x 24	80
S or W-4813-0	8,380	13,410	201.5				564	48	48	37½	128½	24 x 28	85
S or W-4814-0	9,060	14,500	218.4				610	48	48	37½	139½	24 x 28	90
Transmission Rate 5,000 B.t.u./sq. ft./hr.													
S or W-7909-0	7,295	11,675	175.0				490	78½	78½	41	53½	24 x 24	80
S or W-7910-0	8,115	12,985	195.0				546	78½	78½	41	59½	24 x 24	85
S or W-7911-0	8,935	14,295	214.0				601	78½	78½	41	65½	24 x 28	90
S or W-7912-0	9,755	15,605	234.0				656	78½	78½	41	71½	24 x 28	95
S or W-7913-0	10,585	16,935	254.0				711	78½	78½	41	77½	24 x 28	100
S or W-7914-0	11,415	18,265	274.0				767	78½	78½	41	83½	28 x 28	105
S or W-7915-0	12,235	19,575	294.0				822	78½	78½	41	89½	28 x 28	110
S or W-7916-0	13,065	20,905	313.0				877	78½	78½	41	95½	28 x 28	115
S or W-7917-0	13,885	22,215	334.0				933	78½	78½	41	101½	28 x 28	120

* Minimum burner capacity based on oil of 19,700 B.t.u. per pound.

† Capacities are based on net installed radiation and on the presence of a quantity of net installed radiation sufficient for the requirements of the building. Nothing need be added for normal piping and pick-up.

When domestic hot water supply heater is installed add one square foot per gallon of tank capacity to installed radiation on steam boilers and two square feet per gallon of tank capacity on water boilers before selecting boiler size.

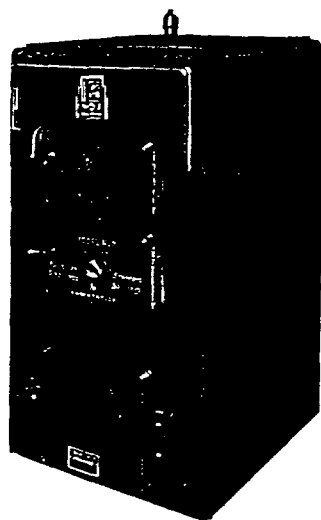


RATINGS AND DATA—IDEAL WATER TUBE BOILER AUTOMATIC COAL FIRING

Size	*Installed Radiation, Sq. Ft. EDR		Minimum Coal Burner Capacity, Lbs. Coal Per Hour	Boiler Heating Surface, Sq. Ft.	Firebox Dimensions, Inches		Distance from Floor to Crown-sheet of Boiler	Height of Base, Inches	Chimney	
	Steam	Water			Width	Lgth			Size, Inches	Height, Feet
SC or WC-23-T-5	540	864	22	43.9	23	16½	30	No Base	8 x 8	30
SC or WC-23-T-6	640	1,024	25	52.6	23	20¼	30	No Base	8 x 8	30
SC or WC-23-T-7	750	1,200	30	61.3	23	24¼	30	No Base	8 x 8	30
SC or WC-23-T-8	890	1,376	34	70.0	23	28¼	30	No Base	8 x 12	30
SC or WC-23-T-9	970	1,552	38	79.7	23	32¼	30	No Base	8 x 12	35
SC or WC-23-T-10	1,080	1,728	42	87.4	23	36¼	30	No Base	8 x 12	35
SC or WC-23-T-11	1,200	1,920	47	96.1	23	40¼	30	No Base	12 x 12	35
SC or WC-23-T-12	1,300	2,080	51	104.9	23	44¼	30	No Base	12 x 12	35
SC or WC-29-T-5	890	1,400	35	77.2	29	23¼	33	No Base	12 x 12	35
SC or WC-29-T-6	1,100	1,760	44	91.1	29	29¼	33	No Base	12 x 12	35
SC or WC-29-T-7	1,390	2,190	55	109.0	29	35¼	33	No Base	12 x 12	35
SC or WC-29-T-8	1,550	2,528	62	124.9	29	41¼	33	No Base	12 x 12	35
SC or WC-29-T-9	1,800	2,880	71	140.8	29	47¼	33	No Base	12 x 16	40
SC or WC-29-T-10	2,020	3,232	80	159.7	29	53¼	33	No Base	12 x 16	40
SC or WC-29-T-11	2,240	3,584	88	172.6	29	59¼	33	No Base	12 x 16	45
SC or WC-29-T-12	2,460	3,940	97	189.5	29	65¼	33	No Base	12 x 16	45
SC or WC-36-T-6	1,575	3,090	74	134.4	36	29½	38½	12¼	16 x 16	40
SC or WC-36-T-7	2,120	3,390	84	157.4	36	35½	38½	12¼	16 x 16	50
SC or WC-36-T-8	2,640	4,225	104	180.4	36	41½	38½	12¼	16 x 16	40
SC or WC-36-T-9	3,000	4,800	119	203.4	36	47½	38½	12¼	16 x 16	45
SC or WC-36-T-10	3,340	5,345	132	226.4	36	53½	38½	12¼	16 x 16	50
SC or WC-36-T-11	3,715	5,945	147	249.4	36	59½	38½	12¼	16 x 20	50
SC or WC-36-T-12	4,055	6,485	160	272.4	36	65½	38½	12¼	16 x 20	55
SC or WC-36-T-13	4,365	7,035	174	295.4	36	71½	38½	12¼	20 x 20	60
SC or WC-4807	4,000	6,400	158	288.0	48	64	37¼	14¼	20 x 24	60
SC or WC-4808	4,965	7,945	195	334.0	48	74¼	37¼	14¼	20 x 24	60
SC or WC-4809	5,645	9,035	223	379.0	48	85¼	37¼	14¼	20 x 24	65
SC or WC-4810	6,330	10,130	250	425.0	48	95¼	37¼	14¼	24 x 24	70
SC or WC-4811	7,020	11,230	278	472.0	48	107	37¼	14¼	24 x 24	75
SC or WC-4812	7,700	12,320	306	517.0	48	117¼	37¼	14¼	24 x 24	80
SC or WC-4813	8,380	13,410	331	564.0	48	128¼	37¼	14¼	24 x 28	85
SC or WC-4814	9,060	14,530	359	610.0	48	139¼	37¼	14¼	24 x 28	90
SC or WC-7909	7,295	11,675	288	490	78¼	53½	41	No Base	24 x 24	90
SC or WC-7910	8,115	12,955	321	546	78¼	59½	41	No Base	24 x 24	85
SC or WC-7911	8,935	14,295	352	601	78¼	65½	41	No Base	24 x 28	90
SC or WC-7912	9,765	15,625	386	656	78¼	71½	41	No Base	24 x 28	95
SC or WC-7913	10,585	16,935	418	711	78¼	77½	41	No Base	24 x 28	100
SC or WC-7914	11,415	18,265	452	767	78¼	83½	41	No Base	28 x 28	105
SC or WC-7915	12,235	19,575	507	822	78¼	89½	41	No Base	28 x 28	110
SC or WC-7916	13,065	20,905	516	877	78¼	95½	41	No Base	28 x 28	115
SC or WC-7917	13,825	22,215	543	933	78¼	101½	41	No Base	28 x 28	120

Based on coal of 12,500 B.t.u./lb.
 *Capacities are based on net installed radiation and on the presence of a quantity of net installed radiation sufficient for the requirements of the building. Nothing need be added for normal piping and pick-up.
 When domestic hot water supply heater is installed add one square foot per gallon of tank capacity to installed radiation on steam boilers and two square feet per gallon of tank capacity on water boilers before selecting boiler size.

No. 7 IDEAL BOILER OIL BURNING



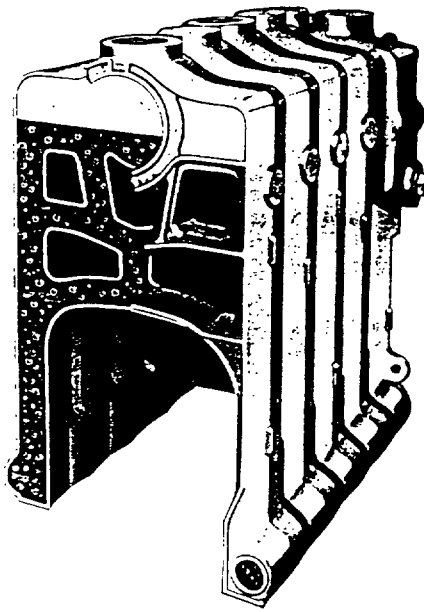
The No. 7 Ideal Boiler is the outstanding oil boiler of today. All its major parts—combustion chamber, gas passages, steam space, water content—are scientifically coordinated to provide the maximum heat with the least fuel. It has wide appeal from every standpoint—comfort, economy, appearance and efficient performance, not to mention its moderate price. At slight extra cost, Built-in Taco Heater may be installed, to supply year 'round domestic hot water with the TACO-ABBOTT System.

RATINGS AND DATA

No. of Boiler	Transmission Rate 4,250 B.t.u., sq. ft./hr.		Heating Surface Sq. Ft.	Firebox Dimensions				Chimney		
	Installed Radiation Sq. Ft. EDR *			Width, Inches		Height Inches Floor to Crown Sheet of Boiler	Length Inches	Size Inches	Height Feet	
	Steam	Water		At Grate Line	9" Above Grate Line					
S or W-715-0	220	515	9.0	25.3	18	18	32 $\frac{1}{4}$	14 $\frac{1}{2}$	8 x 8	30
S or W-719-0	280	610	9.5	31.5	18	18	32 $\frac{1}{4}$	18 $\frac{1}{4}$	8 x 8	30
S or W-723-0	440	705	10.5	35.7	18	18	32 $\frac{1}{4}$	21 $\frac{1}{2}$	8 x 8	30
S or W-727-0	500	800	12.0	40.9	18	18	32 $\frac{1}{4}$	25 $\frac{1}{4}$	8 x 12	30
S or W-731-0	560	935	13.5	45.1	18	18	32 $\frac{1}{4}$	28 $\frac{1}{2}$	8 x 12	30
S or W-735-0	620	990	14.5	50.3	18	18	32 $\frac{1}{4}$	32 $\frac{1}{4}$	8 x 12	35
S or W-739-0	680	1,055	16.0	54.5	18	18	32 $\frac{1}{4}$	35 $\frac{1}{2}$	8 x 12	35

† Based on oil of 19,700 B.t.u./lb.

* Installed radiation capacities are based on net installed radiation and on the presence of a quantity of net installed radiation sufficient for the requirements of the building. Nothing need be added for normal piping and pick-up. When a domestic water heater is connected to the boiler add one square foot per gallon of tank capacity to installed radiation on steam boilers and two square feet per gallon of tank capacity to installed radiation on water boilers before selecting boiler size.



CUTAWAY VIEW WITHOUT JACKET

THESE SPECIAL FEATURES SAVE MONEY

FLUE PASSAGES—double-gallery gas passages designed to meet the requirements of automatic oil-firing.

AMPLE HEATING SURFACE—sections scientifically designed to provide large and effective heating surfaces.

TIGHT JOINTS—grind strip around outer rim and around flues in sections provides permanent iron-to-iron fit between sections, preventing wasteful in-leakage of air which lowers boiler's operating efficiency.

COMBUSTION CHAMBER—scientifically designed to promote clean, complete combustion.

MAXIMUM HEAT ABSORPTION—all heating surfaces so arranged that maximum heat absorption is assured.

TIGHT DOORS—all doors have ground contact surfaces which fit against a grind strip, resulting in a tight fit. Baffle linings in doors prevent warping.

WATER-BACKED SURFACE—heating surface water-backed with large quantity of water at the water line. Total water content, however, is small, for

quick heating of water and quick steaming.

LARGE STEAM SPACE—large steam disengaging area insures dry steam and a minimum of turbulence.

LARGE 7-INCH NIPPLES BETWEEN SECTIONS—permit free water circulation and insure equal heating of all parts of boiler.

CONTROL TAPPINGS—bosses provided on back face of back section for all necessary control tappings.

LOW DRAFT TENSION—draft resistance through boiler reduced to minimum. Design output developed on exceptionally low draft tension.

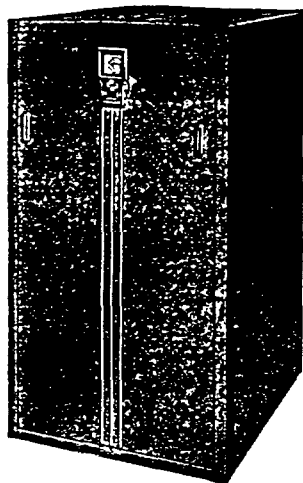
INSULATION—heavily insulated on top, sides and rear.

YEAR ROUND HOT WATER—Bilt-in Taco Heater furnished at slight extra cost.

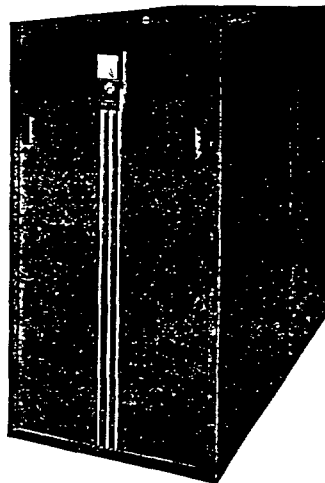
JACKET—with beautiful chrome green crinkle finish.

REAR INSTALLATION—Burner may be installed in rear if desired.

IDEAL OIL BURNING BOILER No. 11



FLUSH JACKET



EXTENDED JACKET

The No. 11 Ideal Oil Burning Boiler is scientifically engineered to perform with highest efficiency and economy. Its well proportioned combustion chamber promotes clean, complete burning of oil and quick heating response. The unique finned surfaces extract the maximum heat from the hot gases. Other special features for improved operation include tight, iron-to-iron joints between sections, 7-inch nipple connections, attractive jacket, thorough insulation, and Bilt-in Taco Heater for year 'round hot water with TACO-ABBOTT System. Furnished with either flush jacket, for outside installation of burner, or with extended jacket, for concealed burner.

For data on Bilt-in water heaters and trimmings see last pages of this index section.

RATINGS AND DATA

No. of Boiler	Transmission Rate 4,500 B.t.u./sq. ft./hr.		Minimum Burner Capacity Lbs. Oil/Hr.	Heating Surface Sq. Ft.	Firebox Dimensions			Chimney		
	†Installed Radiation Sq. Ft. EDR				Width, Inches		Height Inches Floor to Crown Sheet of Boiler	Length Inches	Size Inches	Height Feet
	Steam	Water			At Grate Line	9" Above Grate Line				
S or W-0411	355	570	8.5	27.3	18	18	32½	14½	8 x 8	30
S or W-0511	435	695	10.3	33.4	18	18	32½	18½	8 x 8	30
S or W-0611	515	825	12.1	39.6	18	18	32½	21½	8 x 8	30
S or W-0711	595	950	13.5	45.7	18	18	32½	25½	8 x 12	35
S or W-0811	675	1,080	14.9	51.8	18	18	32½	28½	8 x 12	35
S or W-0911	755	1,205	16.3	58.0	18	18	32½	32½	8 x 12	35

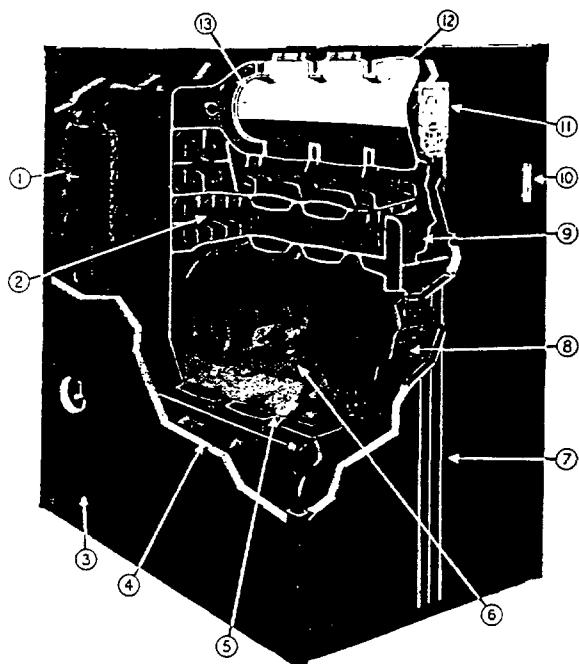
* Based on oil of 19,700 B.t.u./lb.

IMPORTANT: When ordering boilers with Flush Jackets specify whether Gun Type or Rotary Type Burner will be used.

† Capacities are based on net installed radiation and on the presence of a quantity of net installed radiation sufficient for the requirements of the building. Nothing need be added for normal piping and pick-up.

When Bilt-in heater is installed add one square foot per gallon of tank capacity to installed radiation on steam boilers and two square feet per gallon of tank capacity on water boilers before selecting boiler size.

No. 11 IDEAL BOILER
OIL BURNING



CUTAWAY VIEW

SCIENTIFIC RESEARCH DEVELOPED THESE OUTSTANDING FEATURES:

1. BILT-IN TACO WATER HEATER—40 or 100 gallons capacity, provides year 'round domestic hot water with TACO-ABBOTT system. Bilt-in Taco also available as part of an Arco Humidifier (not shown). Concealed when extended jacket model is used.

2. FINNED SURFACES—specially designed to collect the maximum amount of heat from hot gases.

3. STEEL CABINET—with Arco green baked enamel crinkle finish.

4. INSULATION—of heavy, indestructible, corrugated air cell asbestos, preventing heat waste.

5. TIGHT JOINTS—machine-ground surfaces of doors and sections prevents short-cutting of gases, infiltration of air, and the escape of odors.

6. COMBUSTION CHAMBER—scientifically designed to provide clean, complete combustion of oil and quick heating response.

7. FRONT PANEL—of modern design with chromium triple stripe. Easily removable for access to boiler.

8. PYREX SIGHT GLASS—for observing flame without opening door.

9. CLEAN-OUT DOOR—ample sized. Easy to keep flue surfaces clean. Clean flues save oil.

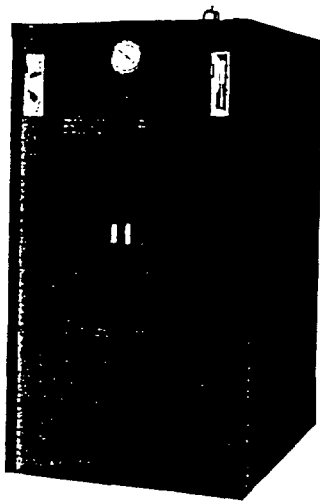
10. CHROMIUM HANDLES—for convenience in removing front jacket panel.

11. DE LUXE TRIMMINGS—square pressure and vacuum gauge on steam boilers; altitude gauge and thermometer on hot water boilers, combined with name plate and framed in chromium.

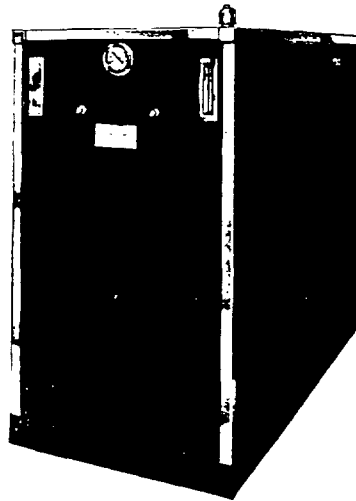
12. STEAM SPACE—especially large steam releasing area and steam dome insure dry steam at entrance to piping.

13. 7-INCH NIPPLES—extra large connections between sections insure rapid circulation of boiler water and permit a built-in water heater, eliminating clumsy outside piping connections.

No. 12 IDEAL BOILER—(DE LUXE MODEL)
OIL BURNING



FLUSH JACKET



EXTENDED JACKET

The No. 12 Boiler is made exclusively for oil burning. Experts who are thoroughly acquainted with the characteristics of oil burning, and working in the world's leading heating laboratories, designed it. It has every important feature known for burning oil with the greatest saving. It is distinctive throughout—in design, appearance and performance. It is equipped for all necessary controls, and, at small extra cost, includes a Bilt-in TACO HEATER for automatic summer and winter hot water supply with the TACO-ABBOTT System. Made in two models, one for installing burner outside and one with burner entirely concealed.

For data on Bilt-in and external water heaters, as well as trimmings, see last pages of this index section

RATINGS AND DATA

No of Boiler	Transmission Rate 4,000 B.t.u./sq. ft., hr.			Transmission Rate 4,500 B.t.u./sq. ft., hr.			Heat- ing Sur- face Sq. Ft.	Fire Box Dimensions				Chimney									
	*Installed Radiation Sq. Ft. EDR		*Mini- mum Burner Capacity Lbs. Oil/Hr.	*Installed Radiation Sq. Ft. EDR		*Mini- mum Burner Capacity Lbs. Oil/Hr.		Width Inches		Height Inches Floor to Crown Sheet of Boiler	Lgth. Inches	Size Inches	Hgt. Ft.								
	Steam	Water		Steam	Water			At Grate Line	9" Above Grate Line												
S or W-0412	450	720	10.8	510	815	12.1	42.3	23	23	32¾	22¼	8 x 8	30								
S or W-0512	585	935	13.8	660	1,055	15.6	54.7	23	23	32¾	30¼	8 x 8	30								
S or W-0612	720	1,150	16.9	810	1,300	19.1	67.1	23	23	32¾	35¾	8 x 12	30								
S or W-0712	855	1,365	20.0	960	1,535	22.6	79.5	23	23	32¾	46¾	8 x 12	35								

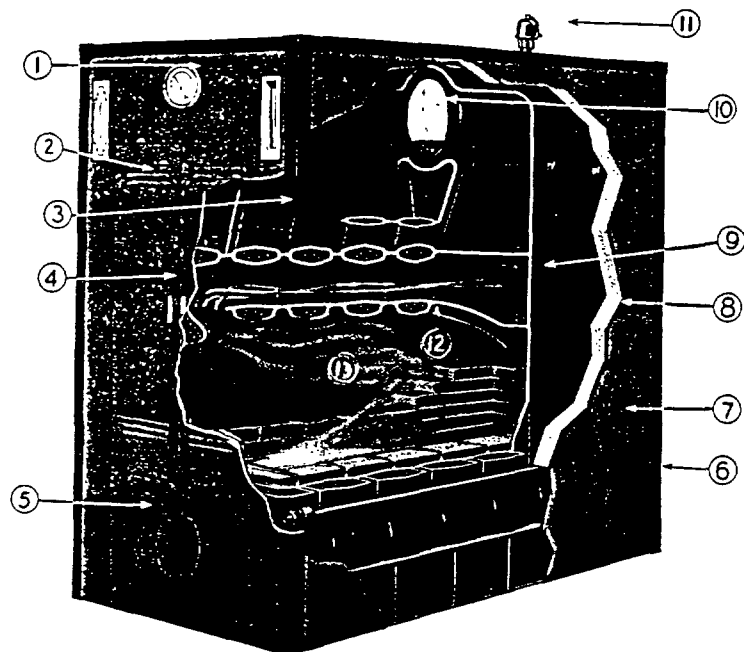
* Based on oil of 19,700 B.t.u./lb.

IMPORTANT: When ordering boilers with Flush Jackets specify whether Gun Type or Rotary Type Burner will be used. All No. 12 Boilers are available with rear jacket extension of 29 1/2". In addition 4, 5 and 6 section boilers are also available with rear extension of 25".

† Capacities are based on net installed radiation and on the presence of a quantity of net installed radiation sufficient for the requirements of the building. Nothing need be added for normal piping and pick-up.

When Bilt-in Heater is installed, add one square foot per gallon of tank capacity to installed radiation on steam boilers and two square feet per gallon of tank capacity on water boilers before selecting boiler size.

IDEAL OIL BURNING BOILER No. 12
DE LUXE MODEL



CUTAWAY VIEW (FLUSH JACKET)

THESE FEATURES CONFORM TO ALL DEMANDS OF OIL BURNING

1. TRIMMINGS—dependable steam gauge and other superior Arco accessories installed flush with jacket.
2. FRONT PANEL DOORS—for access to flue doors, permits quick and easy cleaning of all flue surfaces for better heat and fuel economy.
3. LONG FLUE TRAVEL—carefully proportioned flue passages prevent back-firing. The hot gases travel back and forth a distance four times the boiler's length, assuring the greatest possible transfer of heat to the boiler water.
4. PYREX OBSERVATION PORT—permits viewing operation of burner without opening fire door.
5. COVER PLATE attached to special frame permits use of either rotary or gun-type burner.
6. DARK GREEN TRIM—adds finishing touch to handsome jacket
7. STEEL JACKET—enameled in crinkle finish chrome green, protects the insulation, and makes the boiler exceedingly attractive.

8. INSULATION—Extra thick indestructible asbestocel prevents heat loss.
9. TIGHT JOINTS—machine-ground contacting surfaces of doors and sections make perfect joints, preventing short-cutting of hot gases and infiltration of outside air to interfere with proper burning.
10. LARGE 7-INCH NIPPLES—permit free water circulation and insure equal heating of all parts of boiler.
11. ARCO RELIEF VALVE—precision ground, thoroughly dependable and conforming to A.S.M.E. standards.
12. CURVED CROWN SHEET—together with careful arrangement and design of waterways promotes free and rapid circulation of water, resulting in quicker pick-up and higher operating economy.
13. COMBUSTION CHAMBER—scientifically designed and proportioned to assure complete combustion. Exposes extensive water-backed surface directly to the fire.

Also:—Bilt-in TACO HEATER for year 'round hot water with TACO-ABBOTT System.
Flue doors protected from heat by cast iron baffle linings which are curved to facilitate easy flow of gases.

No. 92 IDEAL BOILER—(DE LUXE MODEL)
OIL BURNING



The No. 92 Oil Burning Boiler is representative of the technical skill and research of expert engineers in our heating laboratories. It is built on scientifically correct lines for economical oil burning, is smartly jacketed and chromium trimmed for beauty and cleanliness, and is the first de luxe cast iron boiler to be produced to meet the requirements of homes and buildings larger than the average. It fills a definite need for a distinctive boiler in a higher range of capacities.

For data on external water heaters and trimmings see last pages of this index section.

RATINGS AND DATA

No. of Boiler	Transmission Rate 4,000 B.t.u. sq. ft. hr.			Transmission Rate 4,500 B.t.u. sq. ft. hr.			Heat- ing Sur- face Sq. Ft.	Firebox Dimensions				Chimney		
	*Installed Radiation Sq. Ft. EDR		*Mini- mum Burner Capacity Lbs. Oil, Hr.	*Installed Radiation Sq. Ft. EDR		*Mini- mum Burner Capacity Lbs. Oil, Hr.		Width Inches		Height Inches Floor to Crown Sheet of Boiler	Lgth. Inches	Size Inches	Hgt. Ft.	
	Steam	Water		Steam	Water			At Grate Line	9" Above Grate Line					
S or W-92-7	1,200	1,920	30.9	1,360	2,180	35.5	109.0	29	29	33	35½	12 x 12	35	
S or W-92-8	1,385	2,215	35.4	1,570	2,520	40.6	124.9	29	29	33	41½	12 x 12	35	
S or W-92-9	1,575	2,520	40.0	1,800	2,880	45.8	140.8	29	29	33	47½	12 x 16	40	
S or W-92-10	1,770	2,830	44.5	2,000	3,200	51.0	156.7	29	29	33	53½	12 x 16	40	
S or W-92-11	1,965	3,145	49.0	2,230	3,570	56.2	172.6	29	29	33	59½	12 x 16	45	
S or W-92-12	2,165	3,465	53.5	2,460	3,940	61.3	188.5	29	29	33	65½	12 x 16	45	

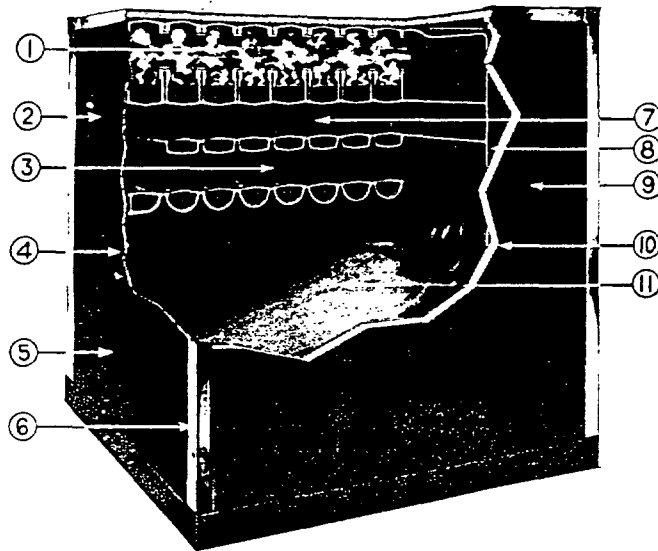
* Based on oil of 19,700 B.t.u./lb.

NOTE: Always specify whether boiler is to be used for Gun Type or Rotary Type Burner.

* Capacities are based on net installed radiation and on the presence of a quantity of net installed radiation sufficient for the requirements of the building. Nothing need be added for normal piping and pick-up.

When domestic hot water supply heater is installed add one square foot per gallon of tank capacity to installed radiation on steam boilers and two square feet per gallon of tank capacity on water boilers before selecting boiler size.

IDEAL OIL BURNING BOILER No. 92
DE LUXE MODEL

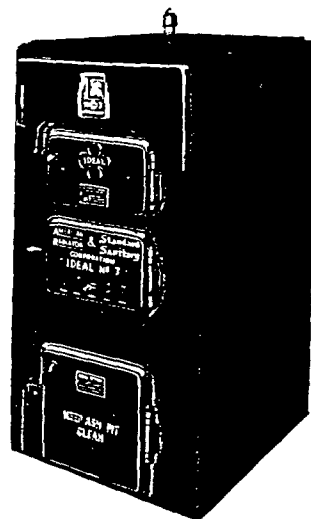


CUTAWAY VIEW

EFFICIENCY HIGHLIGHTS

1. **STEAM SPACE**—large releasing area assures quiet steaming and dry steam.
2. **REMOVABLE JACKET PANEL**—opens to large cleanout doors, making all flues easily accessible for cleaning. Flue doors, protected from heat by cast iron baffle linings which also aid hot gas travel.
3. **GAS PASSAGES**—carefully proportioned flues and a flue travel twice the boiler's length utilize every possible heat unit from the hot gases.
4. **PYREX OBSERVATION PORT**—permits viewing operation of burner without opening fire door.
5. **COVER PLATES**—insure neat, workmanlike installation of the oil burner.
6. **CHROMIUM TRIM**—bright, rust-proof, adds finishing touch to handsome enameled jacket.
7. **WATER TUBES**—extensive series of carefully designed, water-backed vertical tubes assure rapid water circulation and expose an unusually large amount of effective heat-absorbing surface to the hot gases.
8. **TIGHT JOINTS**—all contacting surfaces of doors and sections ground to smooth finish to form tight joints and prevent any cold air seepage interfering with combustion.
9. **STEEL JACKET**—finished in baked chrome green enamel, protects insulation, and gives boiler a smart appearance.
10. **INSULATION**—extra thick layer of indestructible asbestocel prevents heat loss and helps save fuel.
11. **COMBUSTION CHAMBER**—large and scientifically proportioned. Insures complete burning.

No. 7 IDEAL BOILER FOR AUTOMATIC COAL FIRING



The No. 7 Ideal Stoker Boiler meets every special requirement of automatic coal firing, for economical and dependable performance. Its scientific balance of all major features—combustion chamber, heating surface, water content and flue travel, is an assurance of successful operation with any good stoker. Attractive in appearance and low in cost, the No. 7 Boiler is the best investment in automatic coal-fired heating. Adapted for either anthracite or bituminous coal.

Bilt-in Taco Heater for supplying automatic year 'round hot water with the Taco-ABBOTT System is available at slight extra cost.

For data on bilt-in and external water heaters, also on trimmings, see last pages of this index section.

RATINGS AND DATA

No. of Boiler		Installed Radiation Sq. Ft. EDR *		Coal Consumption Lbs. Hr. ‡	Firebox Dimensions		Heating Surface Sq. Ft.	Height Firebox Floor to Crown Sheet of Boiler Inches	Height of Base Inches	Chimney	
Steam	Water	Steam	Water		Width Inches	Length Inches				Size Inches	Height Feet
SC-919	WC-919	375	600	17.0	18	18 1/4	31.5	32 1/4	12 1/4	8 x 8	30
SC-923	WC-923	450	720	20.0	18	21 1/4	35.7	32 1/4	12 1/4	8 x 8	30
SC-927	WC-927	525	840	22.0	18	25 1/4	40.9	32 1/4	12 1/4	8 x 12	30
SC-931	WC-931	600	960	25.0	18	28 1/4	45.1	32 1/4	12 1/4	8 x 12	30
SC-935	WC-935	675	1,080	27.0	18	32 1/4	50.3	32 1/4	12 1/4	8 x 12	35
SC-939	WC-939	750	1,200	30.0	18	35 1/4	54.5	32 1/4	12 1/4	8 x 12	35

‡ Based on coal of 12,500 B.t.u./lb.

- Installed radiation capacities shown for all No. 7 Ideal Boilers are based on net installed radiation and on the presence of a quantity of net installed radiation sufficient for the requirements of the building. Nothing need be added for normal piping and pick-up.

When Bilt-in Heater is installed, add one square foot per gallon of tank capacity to installed radiation on steam boilers and two square feet per gallon of tank capacity on water boilers before selecting boiler size.

No. 7 IDEAL BOILER
FOR AUTOMATIC COAL FIRING



CUTAWAY VIEW WITHOUT JACKET

FEATURES WHICH MAKE THE No. 7 SO DEPENDABLE

FLUE TRAVEL—double-gallery gas passages designed to meet the requirements of automatic coal-firing.

NO CREVICES—sections designed to eliminate soot-catching crevices which lower the boiler efficiency.

TIGHT JOINTS—grind strip around outer rim and around flues in sections provides permanent iron-to-iron fit between sections, preventing wasteful in-leakage of air which lowers boiler's operating efficiency.

COMBUSTION CHAMBER—scientifically designed to promote clean, complete combustion.

EFFECTIVE HEATING SURFACES—so arranged that maximum heat absorption is assured.

TIGHT DOORS—all doors have ground contact surfaces which fit against a grind strip, resulting in a tight fit. Specially designed baffle linings in doors prevent warping.

WATER-BACKED HEATING SURFACE—with large quantity of water at the water line. Total water content, however, is small so that quick heating will take place.

STEAM SPACE—large steam disengaging area insures dry steam and a minimum of turbulence.

LARGE SEVEN-INCH NIPPLES—between sections permit free water circulation and insure equal heating of all parts of boiler.

BOSSSES—provided on back face of back section for all necessary control tappings.

DRAFT RESISTANCE—through boiler reduced to minimum. Output developed on exceptionally low draft tension.

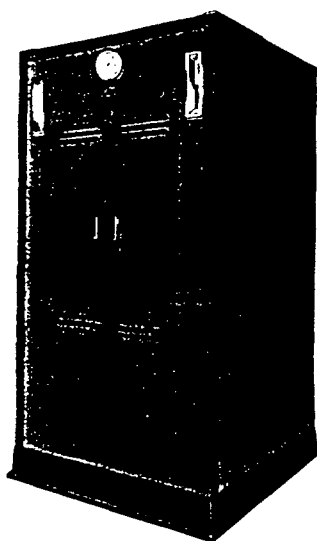
HEAVILY INSULATED—on top, sides and rear.

LOW STOKER INSTALLATION COST—because boiler may be used for all types of stoker installations—front, rear or either side, and coal-flow stokers. Saves labor cost of cutting base sides when boiler is installed.

HIGH BASE—permits installation of stoker without pitting or raising boiler.

REMOVABLE SIDE JACKET PANELS—cover openings in base sides.

No. 21 IDEAL BOILER—(DE LUXE MODEL)
FOR AUTOMATIC COAL FIRING



Special features and refinements developed in our heating laboratories are incorporated in the No. 21 Ideal Boiler, to meet the exacting demands of automatic coal firing. Therefore it is not only outstanding in efficient and economical performance, but de luxe in appearance as well.

The No. 21 can be furnished with a high base where required and is adapted for any type of stoker. Stoker may be installed in front or rear, or at either side. Bilt-in TACO Heater is provided which supplies year-round domestic hot water with the TACO-ABBOTT system.

For data on Bilt-in and external water heaters, as well as trimmings, see last pages of this index section.

RATINGS AND DATA

No. of Boiler		Installed Radiation Sq. Ft. EDR		Coal Consumption Lbs. Hr.*	Firebox Dimensions		Heating Surface Sq. Ft.	Height Firebox Floor to Crown Sheet of Boiler		Height of Base	Climney	
Steam	Water	Steam	Water		Width	Length		Front	Side		Size	Hgt.
SC-421	WC-421	510	815	20	23"	22 1/4"	42.3	32 1/4"	37 1/4"	7 1/2"	8 x 8"	30'
SC-521	WC-521	710	1136	27	23"	30 1/4"	54.7	32 1/4"	37 1/4"	7 1/2"	8 x 8"	30'
SC-621	WC-621	910	1456	34	23"	38 1/4"	67.1	32 1/4"	37 1/4"	7 1/2"	8 x 12"	35'
SC-721	WC-721	1110	1776	42	23"	46 1/4"	79.5	32 1/4"	37 1/4"	7 1/2"	8 x 12"	40'

* Based on Coal of 12,500 B.t.u./lb.

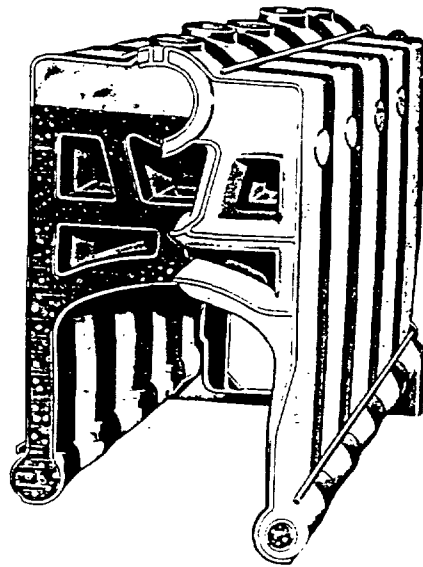
† In ordering boiler with sub-base, add "B" to Boiler No., as SC-421-B.

* Height of sub-base 5 in.

† Capacities are based on net installed radiation and on the presence of a quantity of net installed radiation sufficient for the requirements of the building. Nothing need be added for normal piping and pick-up.

When Bilt-in Heater is installed, add one square foot per gallon of tank capacity to installed radiation on steam boilers and two square feet per gallon of tank capacity on water boilers before selecting boiler size.

DE LUXE MODEL—No. 21 IDEAL BOILER
FOR AUTOMATIC COAL FIRING



CUTAWAY VIEW WITHOUT JACKET

IMPORTANT FACTS ABOUT THE No. 21 BOILER

DOUBLE FLUE-GALLERY—gas passages are designed to meet the special requirements of automatic coal firing.

SECTIONS SCIENTIFICALLY DESIGNED—to provide large and effective heating surfaces with no soot-catching crevices to lower the boiler efficiency.

TIGHT JOINTS—grind strip around outer rim and around flues in sections provides permanent iron-to-iron fit between sections, preventing in-leakage of air which affects boiler's efficiency.

COMBUSTION CHAMBER—scientifically designed to promote clean, complete combustion.

EFFICIENT HEATING SURFACES—so arranged that maximum heat absorption is assured.

TIGHT DOORS—all doors have ground contact surfaces which fit against a grind strip, resulting in a tight fit. Baffle linings in doors prevent warping.

WATER-BACKED HEATING SURFACE—with large quantity of water at the water line. Total water content, how-

Also:—Built-in Taco Heater for year-'round domestic hot water with TACO-ABBOTT system.

ever, is small so that quick heating will take place.

STEAM SPACE—large steam disengaging area insures dry steam and a minimum of turbulence.

LARGE SEVEN-INCH NIPPLES—between sections permit free water circulation and insure equal heating of all parts of boiler.

CONTROLS—bosses provided on back section for all necessary control equipment tapings.

LOW DRAFT RESISTANCE—pull through boiler reduced to minimum. Output developed on low draft tension.

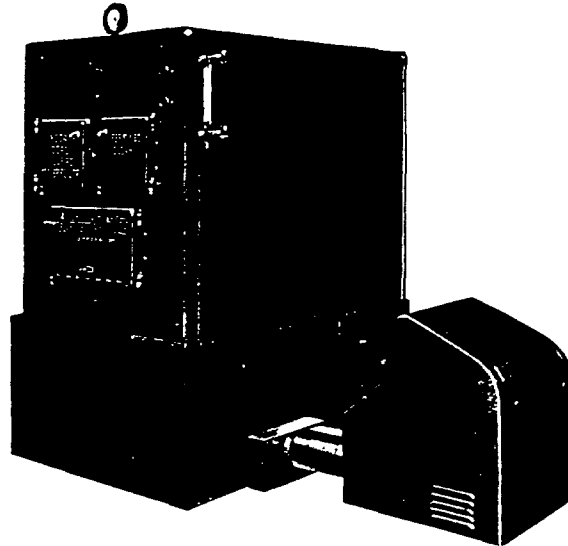
HEAVILY INSULATED—on top, sides and rear.

LOW STOKER INSTALLATION COST—because boiler may be used for all types of stoker installations—front, rear or either side, and coal-flow stokers. Saves labor cost of cutting base sides when boiler is installed.

HIGH BASE—permits installation of stoker without pitting or raising boiler.

REMOVABLE SIDE JACKET PANELS—cover openings in base sides.

No. 24 IDEAL ARCOFIRE BOILER FOR AUTOMATIC COAL FIRING



The best boiler can deliver only as much heat as the boiler will absorb. Many ordinary boilers, when stoker fired, quickly become clogged with fly-ash, which acts like insulation on the flue surfaces. The Arcofire Stoker Boiler is designed to reduce accumulation of fly-ash in the boiler flues. The novel "diving flue" does it, by collecting the fly-ash in a settling chamber instead of in the flues. The boiler runs for long periods without cleaning, with little loss of efficiency. The "diving flue" also reduces smoke. The specifications on next page list the numerous features which make the Arcofire the "ideal" boiler for better efficiency and economy, with any standard make of stoker.

For data on external water heaters and trimmings see last pages of this index section.

RATINGS AND DATA

Boiler Number		*Installed Radiation Sq. Ft. EDR		Heating Surface	* Minimum Coal per Hour	Minimum Distance Retort to Crown Sheet	** Base Heights		Distance Bottom Water-leg to Crown Sheet	Firebox Dimensions		Chimney	
Steam	Water	Stm.	Wat.				Max.	Min.		Width	Front to B. Wall	Size Inches	Ht. Feet
SC- 824	WC- 824	900	1,440	77.5	34	20	19½	12½	23	24	19½	12 x 12	40
SC- 924	WC- 924	1,075	1,720	87.5	41	20	19½	12½	23	24	24½	12 x 12	40
SC-1024	WC-1024	1,250	2,000	97.5	47	22	19½	12½	23	24	24½	12 x 16	45
SC-1124	WC-1124	1,425	2,280	103.5	53	24	19½	12½	23	24	29½	12 x 16	45
SC-1224	WC-1224	1,600	2,560	113.5	60	26	19½	12½	23	24	24½	12 x 16	45
SC-1324	WC-1324	1,775	2,840	119.2	66	28	19½	12½	23	24	29½	12 x 16	50

* Based on coal of 13,000 B.t.u./lb.

** Base heights adjustable within a range of 7 inches between the 12½ and 19½ inches.

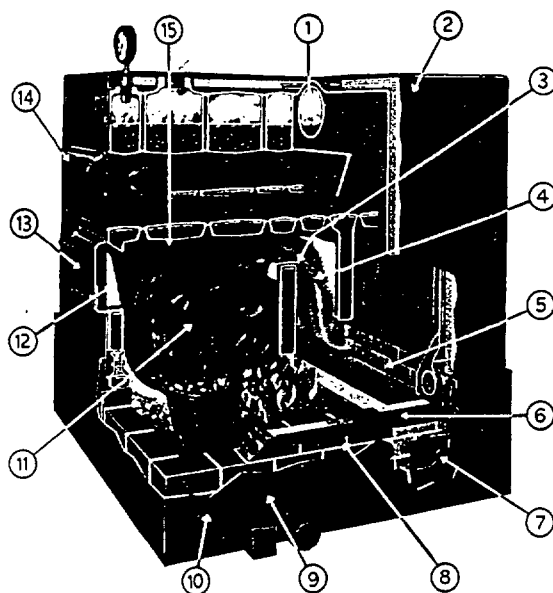
The installed radiation figures shown for the Ideal Arcofire Stoker Boiler are based on a maximum allowance of 33½% for piping and pick-up. Selection of the proper size boiler should be made accordingly.

* Installed radiation capacities shown for all Arcofire Boilers are based on actual installed radiation and on the presence of a quantity of actual installed radiation sufficient for the requirements of the building. Nothing need be added for normal piping and pick-up.

When a domestic water heater is connected to the boiler add one square foot per gallon of tank capacity to installed radiation on steam boilers and two square feet per gallon of tank capacity on water boilers before selecting boiler size.

When a tankless water heater is connected to the boiler add 50 square feet per bathroom to installed steam radiation or 80 square feet per bathroom to installed water radiation before selecting boiler size.

No. 24 IDEAL ARCOFIRE BOILER
FOR AUTOMATIC COAL FIRING



CUTAWAY VIEW

15 STAR FEATURES OF THE ARCOFIRE

1. SEVEN-INCH TOP NIPPLE—for rapid circulation; eliminates tapping all sections for hot water supply.

2. GREEN JACKET—attractive, properly insulated.

3. STEEL WALLS—high temperature resistant—aids combustion.

4. DIVING FLUE—eliminates smoke and materially reduces collection of fly-ash in boiler flues.

5. FLY-ASH SETTLING CHAMBER—decreased accumulation of fly-ash on flue surfaces results in higher efficiency, with corresponding saving in fuel.

6. BASE TOP—on which boiler sections are erected.

7. FLY-ASH CHAMBER CLEAN-OUT DOOR—may be installed either side of chamber.

8. ADJUSTABLE BRICK BASE—may be built to any height between 12½ and 19½".

9. ANY TYPE INSTALLATION—stoker may be installed in front, or either side.

10. ADJUSTABLE BASE JACKET SKIRT—finished in black. Base height adjustable within range of 7 inches.

11. HIGHER FIRE-BOX TEMPERATURES—gases are more completely consumed.

12. SLANTING FIRE DOOR BAFFLE—eliminates fly-ash from door sill.

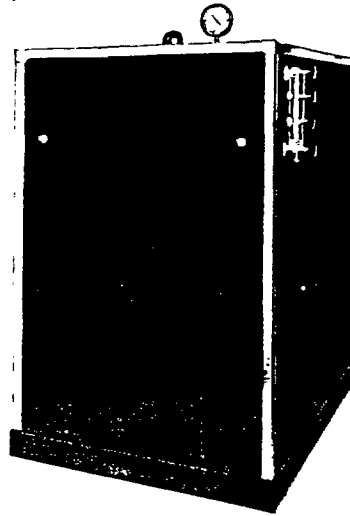
13. SECONDARY AIR SUPPLY—together with diving flue eliminates smoke.

14. LARGE FLUE CLEAN-OUT DOORS.

15. LESS HEAD ROOM—lower stoker headroom heights required due to more complete combustion of gases and volatile matter.

Also:—A special 2½" tapping is provided on back section for connecting external domestic water heater. Adapted for anthracite or bituminous coal.

No. 92 IDEAL BOILER
FOR AUTOMATIC COAL FIRING



The No. 92 Boiler is particularly well adapted for stoker operation in homes and buildings larger than the average. It possesses the essential features of design and construction required for efficient and economical performance, such as ample combustion space, rapid heat transfer and absorption, and correctly designed flue travel. It is a fine looking boiler, with its handsome green enameled jacket and chromium trim. The No. 92 Boiler has no base, which is advantageous since retort heights vary widely on stokers large enough for boilers of this size, and boiler can be set on refractory base of any height necessary.

For data on external water heaters and trimmings, see last pages of this index section.

RATINGS AND DATA

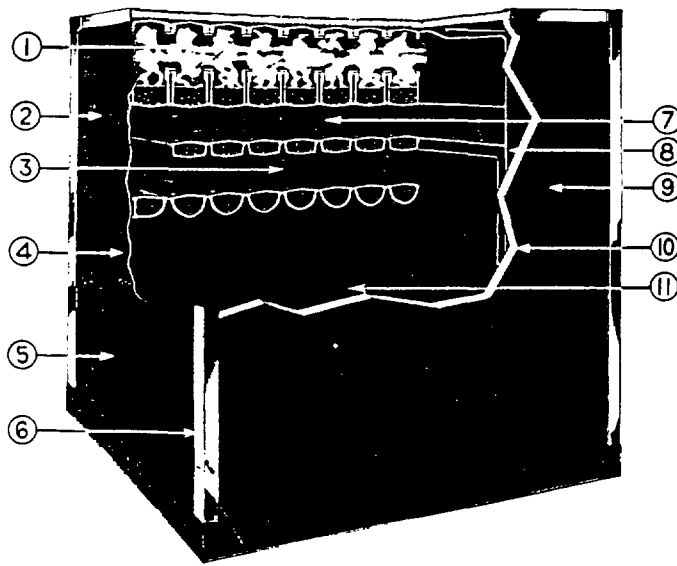
Size	*Installed Radiation Sq. Ft. EDR		Minimum Coal Burner Capacity Lbs. Coal Per Hour **	Boiler Heating Surface Sq. Ft.	Firebox Dimensions Inches		Distance from Floor to Crown Sheet of Boiler Inches	Height of Base	Chimney	
	Steam	Water			Width	Length			Size Inches	Height Feet
SC or WC-92-7	1,360	2,180	55	109.0	29	35½	33	No Base	12 x 12	35
SC or WC-92-8	1,580	2,528	62	124.9	29	41½	33	No Base	12 x 12	35
SC or WC-92-9	1,800	2,880	71	140.8	29	47½	33	No Base	12 x 16	40
SC or WC-92-10	2,020	3,232	80	156.7	29	53½	33	No Base	12 x 16	40
SC or WC-92-11	2,240	3,584	88	172.6	29	59½	33	No Base	12 x 16	45
SC or WC-92-12	2,460	3,940	97	188.5	29	65½	33	No Base	12 x 16	45

** Based on coal of 13,000 B.t.u./lb.

* Capacities are based on net installed radiation and on the presence of a quantity of net installed radiation sufficient for the requirements of the building. Nothing need be added for normal piping and pick-up.

When domestic hot water supply heater is installed, add 1 sq. ft. per gallon of tank capacity to installed radiation on steam boilers and 2 sq. ft. per gallon of tank capacity on water boilers before selecting boiler size.

No. 92 IDEAL BOILER
FOR AUTOMATIC COAL FIRING



CUTAWAY VIEW

CHECK THESE SALIENT POINTS

1. **LARGE STEAM RELEASING AREA**—assures quiet steaming and dry steam.
2. **REMOVABLE JACKET PANEL**—opens to large clean-out doors, making all flues easily accessible for cleaning. A clean boiler means generous, efficient heat. Flue doors protected from heat by cast iron baffle linings which aid hot gas travel.
3. **CAREFULLY PROPORTIONED FLUES**—and a gas travel twice the boiler's length utilize every possible heat unit from the flue gases.
4. **PYREX OBSERVATION PORT**—permits viewing fire without opening door.
5. **COVER PLATES**—attached to special frames insure neat, workmanlike installation.
6. **CHROMIUM TRIM**—bright, rust-proof, adds finishing touch to handsome jacket.
7. **WATERBACKED VERTICAL TUBES**—carefully designed, assure rapid water circulation and expose an unusually large amount of effective heat-absorbing surface to the hot gases.
8. **TIGHT JOINTS**—all contacting surfaces of doors and sections ground smooth to form tight joints and prevent cold air seepage interfering with combustion.
9. **STEEL JACKET**—finished in baked chrome green enamel, protects insulation, and gives boiler a smart appearance.
10. **INSULATION**—extra thick layer of indestructible asbestocel prevents heat loss.
11. **COMBUSTION CHAMBER**—large scientifically proportioned, insures complete burning.

Also:—Durable cast iron smoke hood.

Made of cast iron, the time tested metal which has proved its superiority for the construction of heating boilers.

Special tapplings supplied, at slight extra cost, for external water heater.