

Celebrating
75 YEARS
1949-2024
of innovation

 **Fulton**



Lewis J. Palm
FOUNDER / INVENTOR

World-Class Fire Tube Boiler

Century Brand Global Trust



Engineering a Sustainable Future

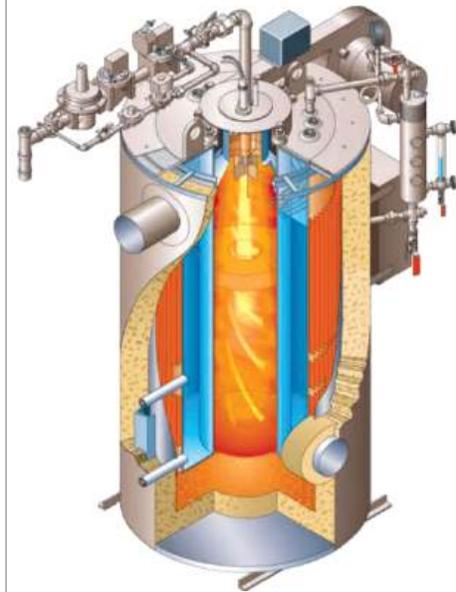
Fulton's philosophy of continual investment in innovative heat transfer solutions has resulted in numerous industry firsts and has reduced emissions, carbon footprint, and the environmental impact of our steam boilers, condensing hydronic boilers, and thermal fluid heaters.

Fulton
FB-A Fuel Fired Steam Boiler

The design feature for the standard model form 'FBA- 015 to FBA-060 is a vertical tubeless boiler. With no tubes or coils to scale up, rust or burn out. This design reduces plant operating costs by eliminating downtime and expensive repairs. The boiler features top mounted, down fired power burner. For over 50 years, this standard model has a reputation for years of trouble free operation. It is the No. 1 choice for the process industry.

The standard model from FBA-080 to FBA-150 is a vertical multi-port wet back design boiler. It speeds up boiler start up time and creates overall even heating throughout. The other design feature is the "ribbed" tabulators that extend the full length inside each flue pipe. The top mounted down fired burner is an air pre-heat design enhances the boiler efficiency.

Stainless steel jacket is available for option for both FBA series.



FB-A Steam Boiler

Model	FB-A	4	6	10	15	20	30	40	50	60	80	100	130	150
Steam output	kg/h	63	94	157	235	312	470	627	783	939	1252	1565	2034	2348
Approximate fuel consumption-applicable under altitude 610m														
Light diesel oil	kg/h	3.47	5.17	8.64	12.93	17.16	25.85	34.49	43.1	51.65	68.9	86.08	111.87	129.14
Efficiency Light Oil	%	94.0	95.3	95.0	94.8	95.0	95.1	95.2	94.8	94.8	94.9	95.1	95.2	95.0
Natural Gas	m ³ /h	4.10	6.0	10.0	15.0	20.0	29.90	39.9	50.10	59.70	80.10	99.50	130.20	149.30
Efficiency Gas Firing	%	93.9	95.2	94.9	94.6	94.4	95.1	95.2	94.6	95.2	94.6	95.2	94.6	95.2

Dimensions and Weights FB-A approximately

Heights and widths														
A Boiler Height	IN	47	57	63	69	73	82	73	87	93	103	103	114	114
	MM	1194	1448	1600	1753	1842	2083	1854	2210	2362	2609	2609	2893	2893
B Boiler Height With Trim & Fuel Train Assembly	IN	65	75	80.5	86.5	92	102	94	106	120	116	116	132	132
	MM	1651	1905	2045	2197	2336	2591	2388	2705	3045	2940	2940	3348	3348
C Overall Depth Stack To Burner Fan Housing	IN	44	44	46	47	60	68	78	78	78	114	100	128	128
	MM	1118	1118	1168	1194	1524	1720	1969	1969	1969	2898	2543	3253	3253
D Boiler Diameter	IN	26	26	28	30	39	46	55	55	55	63	69	76	76
	MM	660	660	710	762	991	1168	1397	1397	1397	1588	1740	1943	1943
E Overall Width With Water Column	IN	33	33	33.5	35.5	43	49	57	57	57	67	75	83	84
	MM	838	838	851	902	1091	1244	1448	1448	1448	1702	1905	2108	2146
F Flue Outlet Diameter	IN	6	6	6	8	10	12	12	12	12	14	14	16	16
	MM	152	152	152	203	254	305	305	305	305	350	350	400	400
G To Center of Flue Outlet	IN	42	58	58	63	66	73	62	77	83	95	95	104	104
	MM	1070	1320	1473	1600	1676	1854	1574	1962	2114	2423	2415	2641	2641

Fulton FB-A Fuel Fired Steam Boiler



Note: Fuel consumption based on: Light oil 11200 kcal/kg, Natural gas 8900kcal/m³, Propane gas 22500kcal/m³, Town gas 3500kcal/m³. Specifications are approximate. We reserve the right to change specifications, please refer to Fulton's most current drawings. (Efficiency Calculated Inclusive Economizer)

Fulton
RB Fuel Fired Steam Boiler

The philosophy of the RB boiler is to manufacture the “best” horizontal reverse flame, three pass, wet-back steam & hot water boiler in the boiler industry. The two designers with over seventy years of combined experience in designing and manufacturing set out to incorporate proven engineering principle with modern design and construction methods.

Design Features:

- Designed and constructed to BS2790 or ASME code, with standard maximum operating pressure of 1.0MPa other pressure upon to customer's request.
- Equipped with Nu-way (Special for RB series with Fulton brand) oil, gas or dual fuel automatic high/low burner, modulating burner is optional according to customer requirement.

- Large furnace volume, large furnace surface area, better combustion and higher efficiency.
- Large number of the tubes and large tube total cross-sectional area.
- Large water content, low sensitivity to load change.
- Compact design, smaller than boiler of equal capacity.
- 100% Non-Destructive Test on all major pressure vessel welds.
- Deviated front door, easy access and inspection of welds.
- 3-year warranty on pressure vessel backed by fulton world wide service and spare system.



**Fulton RB Fuel
 Fired Steam Boiler**



RB Steam Boiler

Model	RB	600	750	1000	1250	1500	1850	2100	2500	3000
Steam Output	kg/hr	1000	1200	1500	2000	2500	3000	3500	4000	5000
Approximate fuel consumption-applicable under altitude 610m										
Light diesel oil	kg/hr	55.0	66.0	82.5	110.0	137.5	165.0	192.5	220.0	275.0
Efficiency Light oil Firing	%	94.0	95.0	95.0	94.8	95.0	95.1	95.1	94.8	95.0
Heavy diesel oil	kg/hr	57.0	68.4	85.5	114.0	142.5	171.0	199.5	228.0	285.0
Efficiency Heavy oil Firing	%	93.5	94.0	94.0	93.6	93.8	94.0	94.0	93.5	94.5
Natural Gas	m ³ /hr	63.8	76.7	95.7	128.0	160.0	192.6	224.0	256.0	319.0
Efficiency Gas Firing	%	94.9	94.8	94.9	94.6	94.6	94.3	94.6	94.6	94.9
Boiler length	mm	2445	2545	3045	3435	3435	3745	3745	3795	3895
Boiler width	mm	1960	1960	1960	2150	2150	2280	2280	2450	2450
Boiler height	mm	2100	2100	2100	2250	2250	2400	2400	2616	2616

Note: Consumption based on Natural gas 8900kcal/m³, Town gas 3600kcal/m³, Light diesel oil 11200 kcal/kg; Heavy diesel oil 10960 kcal/kg.
 Specifications and Dimensions are approximate. The Fulton Companies reserve the right to change, please refer to company's most current drawings. (Efficiency Calculated Inclusive Economizer)

Fulton
FB-C Fuel Fired Steam Boiler



FB-C boiler is designed and manufactured to comply with ASME code and Chinese boiler Standard, with standard maximum working pressure of 1.0 MPa (150 PSI) or 1.25 MPa (185PSI). The standard model is three pass, wet back, and corrugated furnace. The factory also supplies 4-pass, wet back corrugated furnace boiler or higher-pressure boiler upon customer's request.

FB-C boiler is equipped with highly efficient industrial Combustion burner. This quality forced draft burner has a reputation for long life, trouble free performance and high efficient operation. Full modulation provides optimum performance to meet varying load demand. Multi-fuel versatility is available by just the trip of a switch to select between gas or oil combination burners. For oil fuel, the burner utilizes low pressure air atomizing design for proper oil atomization, maximum combustion efficiency and low maintenance. For gas fuel multi-port burner design for high gas velocities, and complete fuel/air mixing provide combustion efficiency. Microprocessor based burner control provides high level of safety, reliability, functional capability and features beyond those of conventional controls to perform automatic burner sequencing, system status function, system or self-diagnostics and trouble shooting.

Corrugated Furnace

- Better thermal expansion management
- Faster startup and shutdown
- Stable Operation Under Fluctuating Loads
- Enhances Combustion Efficiency
- Improves steam quality
- Improves Heat Distribution
- More compact design saves boiler space
- Increases heat transfer efficiency
- Reduces risk of damage
- Higher pressure tolerance
- Enhances structural strength avoiding deformation under high heat conditions.

MODSYNC[®]
Boiler Plant Sequencing
Control System



Fulton FB-C Fuel
Fired Steam Boiler

FB-C FULTON
BOILER

FB-C Steam Boiler

Model	FBC	FBC-300	FBC-350	FBC-400	FBC-500	FBC-650	FBC-800	FBC-1000	FBC-1300	FBC-1650									
Rated Steam Output	t/h	4.7	5.5	6	7.8	10	12	15	20	25									
Maximum fuel consumption-applicable under altitude 610m(2000 ft)									3P										
		3P	4P	3P	4P	3P	4P	3P	4P	3P	4P								
Light oil	kg/h	258	258	302	302	330	330	429	429	550	550	660	660	825	825	1100	1100	1375	1375
Efficiency Light oil Firing	%	94.0	94.0	95.0	95.0	95.0	95.0	94.8	94.8	95.0	95.0	95.1	95.1	95.1	95.1	94.8	94.8	95.0	95.0
Natural Gas	m ³ /h	299.9	299.9	351.5	351.5	384.0	384.0	496.9	496.9	636.0	636.0	769.2	769.2	963.0	963.0	1288	1288	1595	1595
Efficiency Gas Firing	%	94.9	94.9	94.8	94.8	94.6	94.6	95.1	95.1	95.2	95.2	94.5	94.5	94.3	94.3	94.0	94.0	94.9	94.9
Heavy oil	kg/h	263	263	308	308	336	336	437	437	560	560	672	672	840	840	1120	1120	1400	1400
Efficiency Heavy oil Firing	%	93.5	93.5	94.0	94.0	94.0	94.0	93.6	93.6	93.8	93.8	94.0	94.0	94.0	94.0	93.5	93.5	94.5	94.5
Boiler length	mm	7405	6681	6550	6500	6530	6530	7262	7680	8352	7682	9140	8200	8655	8655	10460	10605	11000	11000
Boiler width	mm	2401	2390	2830	2880	2850	2930	3037	3080	3068	3161	3058	3200	3520	3500	3620	3640	3770	3820
Steam outlet to floor	mm	2470	2459	3114	3164	3214	3246	3100	3264	3146	3314	3144	3386	3516	3556	3916	3814	4015	4040
Maximum water capacity	m ³	11	11	12.2	12.6	13.57	13.57	17.7	17.7	17.8	18.1	20	20	23	23	29	29	30	32
Weight	t	15	15	16	16	16.8	16.8	23	23	25	28	30	31	40	40	48	48	52	55

Note: Fuel consumption based on light oil 11200 kcal/kg ; Heavy oil 10960 kcal/kg; Natural gas 8900kcal/m³. Specifications and Dimensions are approximate, The Fulton Companies reserve the right to change.(Efficiency Calculated Inclusive Economizer)

Fulton
FB-S Fuel Fired Steam Boiler

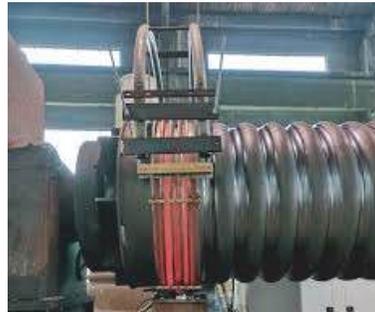


FB-S boiler is a three-pass wet back corrugated furnace boiler.

Design Features:

- Large furnace heating surface, sufficient heat transfer area, good load change tolerance and high efficiency.
- Furnace located well below the water level, large safety margin.
- The large steam vaporization area, high quality steam.
- Equipped with Nuway (Special for FB-S) burner with high./lo firing rate control feature.
- Fully automated boiler control system with the part for customers to connect to the Building Automation System

MODSYNC
Boiler Plant Sequencing
Control System



Corrugated Furnace

- Better thermal expansion management
- Faster startup and shutdown
- Stable Operation Under Fluctuating Loads
- Enhances Combustion Efficiency
- Improves steam quality
- Improves Heat Distribution
- More compact design saves boiler space
- Increases heat transfer efficiency
- Reduces risk of damage
- Higher pressure tolerance
- Enhances structural strength avoiding deformation under high heat conditions.

Fulton FB-S
Fuel Fired
Steam Boiler

FB-S FULTON
BOILER

FB-S Steam Boiler

Model FB-S		FBS-60	FBS-100	FBS-125	FBS-150	FBS-200	FBS-250	FBS-300	FBS-400
Nominal steam output ¹	kg/hr	939	1566	1958	2350	3133	3916	4699	6266
Operating pressure	psi	150	150	150	150	150	150 (185)	150(185)	150(185)
Fuel consumption at rated output-applicable under altitude 610m									
Light diesel oil	kg/h	51.6	86.1	107.7	129.3	172.2	215.4	258.4	344.6
Efficiency Light Oil Firing	%	94.0	95.3	95.0	94.8	95.0	95.1	95.2	94.8
Heavy diesel oil	kg/h	53.1	88.5	110.7	132.8	177.1	221.3	265.5	354.2
Efficiency Heavy oil Firing	%	93.5	94.0	94.0	93.6	93.8	94.0	94.0	93.5
Natural Gas	m ³ /h	60.6	99.6	124.9	150.4	200.0	249.4	298.9	401.0
Efficiency Gas Firing	%	93.9	95.2	94.9	94.6	94.9	95.1	95.2	94.6
Dimension									
Boiler length (IC)	mm	4830	5050	5450	5450	5710	6040	7415	7800
	inch	190	199	215	215	225	237	292	307
Boiler length (NUWAY)	mm	4610	4900	5300	5315	5570	5815	7010	7340
	inch	181	193	209	209	219	229	275	289
Boiler width	mm	2040	2140	2162	2162	2140	2350	2350	2440
	inch	80	84	85	85	84	93	93	96
Boiler height	mm	2080	2230	2190	2190	2180	2420	2420	2430
	inch	82	88	86	86	86	95	95	96

Note: 1) All steam output rating from 0 Psi at 212°F. Fuel consumption based on light oil 20,160Btu/Lb (11200 kcal/kg), heavy oil 19,728Btu/Lb (10960kcal/ kg), Natural gas 1,000 Btu / R3(8900kcal/ m³).

2) Specifications and dimensions are for your reference only. The Fulton Company reserves the right to change specifications and/or dimensions. Please refer to the factory's most current drawings. (Efficiency Calculated Inclusive Economizer)

Fulton
FT-C Coil Design Thermal Fluid Heater



High efficiency four pass design

The Combustion air enters the burner fan inlet. Travels upward between the inner and outer jacket. Preheating the air before it enters the top mounted burner. Hot gases travel down the full length of the vessel Creating the first (radiant) pass. The gases then travel back across the inner row of coils, creating the second (convection) pass. The third (convection) pass is created as the continue back down between the inner and outer coil. The last pass is upward between the outer coil and inner jacket to the flue outlet, creating the fourth (convection) pass.

Combination Expansion/Deaerator/ Thermal Buffer Tank

- Designed to work as an open system where applicable, eliminating the expense of an inert gas blanket.
- Continue reaeration of steam and other non-condensables.
- Protects fluid from oxidation
- Ease of installations
- Simplification of pipe work.



Fulton FT-C
Coil Design Thermal
Fluid Heater

FT-C FULTON
BOILER

FT-C Thermal Fluid Heater

Model	FT-C	0080	0120	0160	0240	0320	0400	0600	0800	1000	1200	1400
Output	1000kacl/hr	200	300	400	600	800	1000	1500	2000	2500	3000	3500
Thermal Fluid Content	L	38	80	72	116	258	288	500	648	1097	1450	1741
Recommended Flow rate	m ³ /hr	11.4	17	22.7	34	56.8	56.8	85.2	113	139	167	182
Typical Circulation Pump Motor	kw	5.6	7.5	7.5	11.2	14.9	14.9	22.4	29.8	37.3	37.3	45
Typical Burner Motor	kw	1.1	2.2	2.2	2.2	5.8	5.6	5.6	11.2	14.9	14.9	33.3
Approximate fuel consumption-applicable under altitude 610m												
Light Oil	kg/h	27	40.6	54.1	81	108.8	136	201	263.7	329.6	395.5	461.5
Efficiency Light Oil Firing	%	95.1	95.3	95.0	94.9	95.3	95.5	95.2	95.3	95.8	95.2	95.3
Natural gas	m ³ /h	26.03	39.0	51.98	78.10	104.14	130.18	195.31	260.36	325.49	390.63	455.8
Efficiency Gas Firing	%	95.0	95.1	94.9	94.8	95.2	95.3	95.0	95.0	95.4	95.1	95.0
Overall Height	mm	1524	1930	1930	2184	2559	2793	3531	3531	3645	3658	4144
Diameter	mm	635	865	865	1015	1252	1245	1450	1805	2285	2745	2746
Overall Depth	mm	965	1422	1422	1525	2030	1780	2007	2615	3302	3772	3894
Dry Weight	kg	680	953	1150	1550	2400	2400	3750	5200	8750	9850	10455

Voltage 3 Phase for Burner and Pump-Each unit has an incorporated stepdown transformer. Fuel up to No. 6 Oil Available for Large Units, (FT-0600-C and larger) Efficiency up to 80% minimum Based on High Heating Value of the Fuel (No. 2 Oil @ 14,000BTU/GHHV; Natural Gas @ 1000BTU/R3 HHV. Modulation 3 to 1 Turn Down Ratio, Optional on FT-0080,0120 and 0160-Standard on all others. Circulating pump motor sizes based on standard pressure (55PSIG and viscosity 1 cs, specific gravity 0.7, with 25-37 PSID available head for installation. We reserve the right to change, please consult factory for the most current drawings. (Efficiency Calculated Inclusive Economizer)

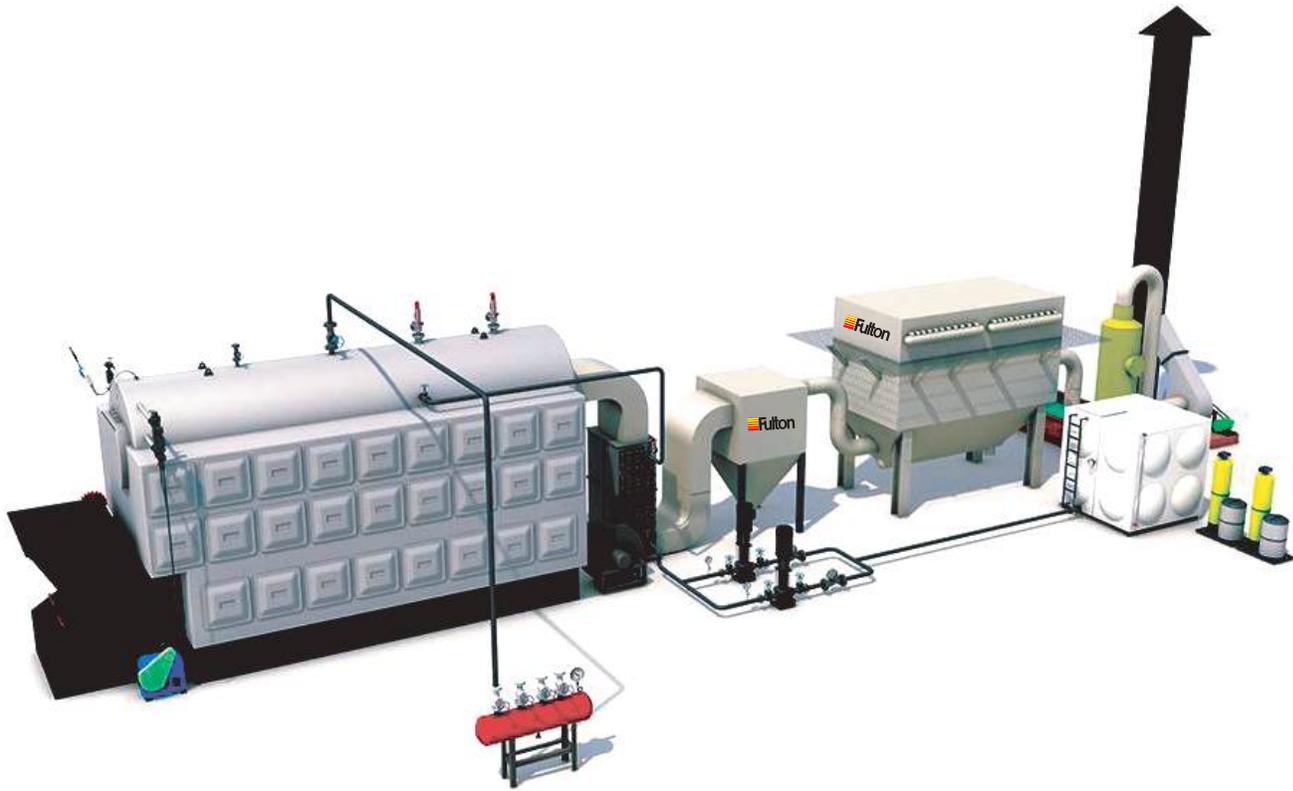
Fulton
Biomass/Multi Solid Fuel Fired Steam Boiler

Fulton's Ningbo factory has over 50 years of manufacturing multi solid fuel /coal fired steam boiler experience with Chinese A Class Manufacturing Permit.

The newly designed corner- type boilers have a lot of advantages over the traditional other biomass/multi solid fuel steam boilers.

Largest heating surface, highly efficient furnace & shell part ensure boiler efficiency & APH, Pressurized Economizer increases the efficiency. Multi cyclone dust separator, Wet Scrubber specially designed.

European's best branded & quality full valve & accessories, feed pump, intelligent-siemens PLC & overall efficient design ensure world Class Biomass/Multi Solid Fuel Boilers less fuel ,less co2 footprint & less maintenance.



specification and dimension

Boiler Model	DZL10-1.25 -AI(III)	DZL15-1.25 -AI(II)	DZL15-1.6 -AI(II)	DZL15-2.45/400 -AI(III)	DZL15-2.45 -AI(III)	DZL20-1.6 -AI(III)	DZL20-2.45/400 -AI(II)	DZL20-2.45 -AI(II)	DZL30-1.25 -AI(II)	DZL35-1.6/350 -AI(II)	DZL45-1.25/300 -AI(III)	DZL50-3.0/300 -AI(III)	
Type	Semi-packaged/ field assembly		Semi-packaged						Semi-packaged/ field assembly		Semi-packaged		Semi-packaged/ field assembly
Nominal Output t/h	10	15	15	15	15	20	20	20	30	35	45	50	
Working pressure MPa	1.25	1.25	1.6	2.45	2.45	1.6	2.45	2.45	1.25	1.6	1.25	3.0	
	II, III												
Total weight t	90	105	110	120	125	145	180	160	170				
Boiler dimension after installation													
Length m	9.25	11.2	11.2	11.7	11.2	10.5	11.2	10.5	13	12.1	11	12	
Width m	3.34	3.3	3.3	4.8	3.3	5.5	7.4	5.5	11.5	7.1	7.4	12.4	
Height m	5.75	7.4	7.4	7.4	7.4	7.7	9.7	7.9	15.6	12.5	12.5	12.52	

(Efficiency Calculated Inclusive Economizer)

Fulton
Biomass/Multi Solid Fuel
Fired Steam Boiler

DZL FULTON
BOILER

Fulton Boiler Company was founded.



Fulton FTC Company was founded in USA



Fulton China LLC was founded and was mainly in charge of the business in China



Shanghai Fulton Boiler Engineering Co., Ltd. was founded.

1949



Fulton UK Company was founded.

1966

1971



Fulton expanded its business to Canada

1981

1995



Ningbo Fulton Thermal Equipment Co., Ltd was founded.

2003

2008



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