Fulton

FULTON BOILER WORKS, INC.

CLASSIC

Vertical Tubeless Steam Boilers

4–60 BHP

- *Pair with Fulton's Feedwater / Condensate Return Systems and Blow-down Tanks for a complete steam solution*

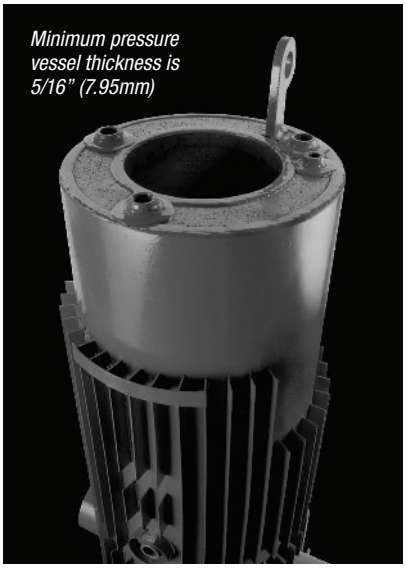
SETTING THE INDUSTRY STANDARD SINCE 1949

Since Fulton's invention of the vertical tubeless boiler in 1949, Fulton has remained the leading U.S. manufacturer of this innovative boiler type. With over 75 years in production and more than 100,000 installations worldwide, Fulton CLASSIC steam boilers serve virtually every industry imaginable.

- ***Simple, Proven Design***
- ***Compact Size; Small Footprint***
- ***Extended Boiler Life***
- ***Trouble-Free Operation***
- ***Wide Range of Sizes Available***

Superior Quality

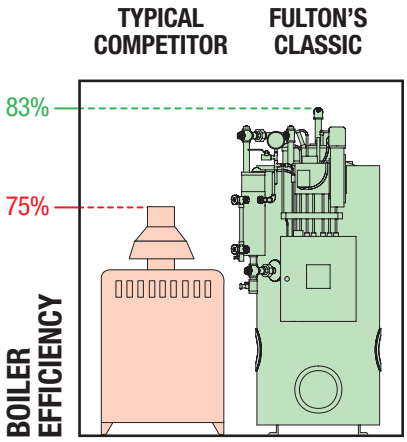
Every Fulton boiler is constructed and stamped to ASME Code standards and registered with the National Board of Boiler and Pressure Vessel Inspectors. Unlike many competitors, Fulton boilers are UL-listed in their entirety—not just their burners or electrical components—and are CSA approved.


Minimum pressure vessel thickness is 5/16" (7.95mm)

Reliable Longevity

CLASSIC vertical tubeless boilers feature a proven, rugged design that guarantees years of trouble-free operation. Many Fulton boilers over 30 years old continue operating efficiently today. With no tubes or coils to rust or burn out, Fulton boilers eliminate retubing costs and downtime, maximizing productivity.

Optional polished stainless steel jackets enhance appearance and durability, available at a minimal extra cost.



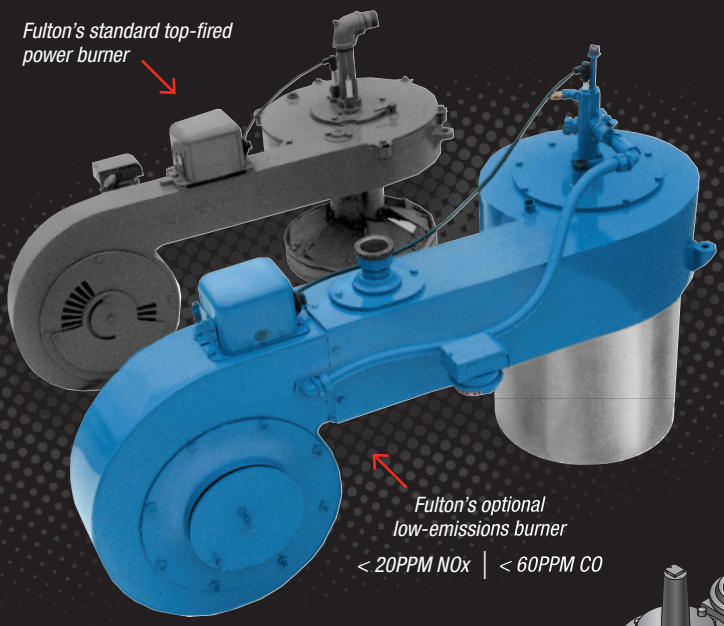
Efficient Performance

CLASSIC boilers featuring a highly efficient two-pass design including a uniquely engineered Flue Gas Enhancing System (FGE). High-velocity flue gases flow over an extensive heat transfer surface, significantly lowering stack temperatures and reducing fuel costs.

Simplified Operation

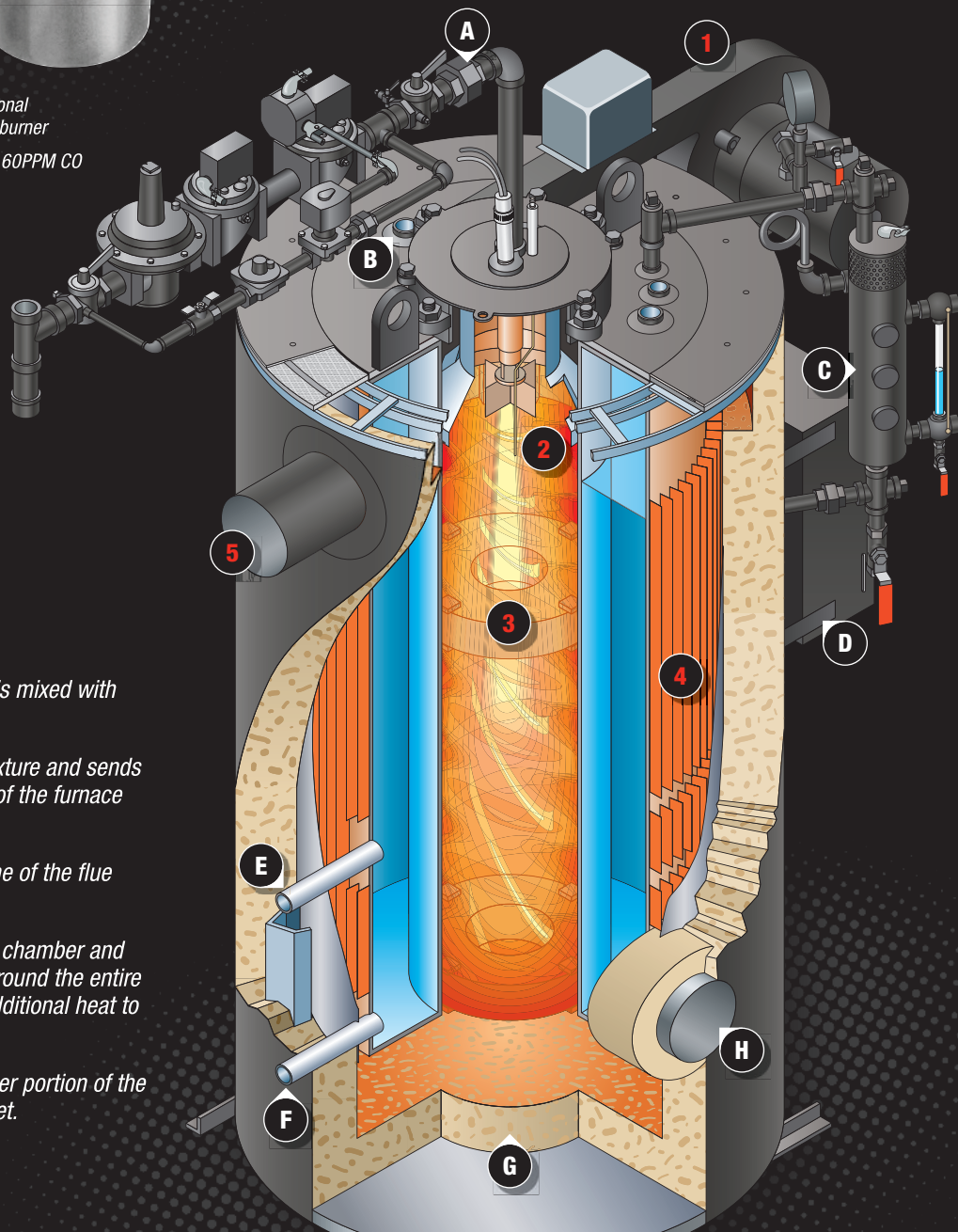
All Fulton boilers feature a complete control panel with all essential operating components, standard 7800 Series microprocessor-based controls, and optional troubleshooting display modules, simplifying operation.

A LOOK INSIDE FULTON'S VERTICAL TUBELESS BOILER



Component Identification

- **A** *Complete Gas Train*
- **B** *Steam Outlet*
- **C** *Water Column*
- **D** *Control Panel Box*
- **E** *Water Inlet*
- **F** *Blowdown Outlet*
- **G** *High-Temp Insulation*
- **H** *Large Handholes*



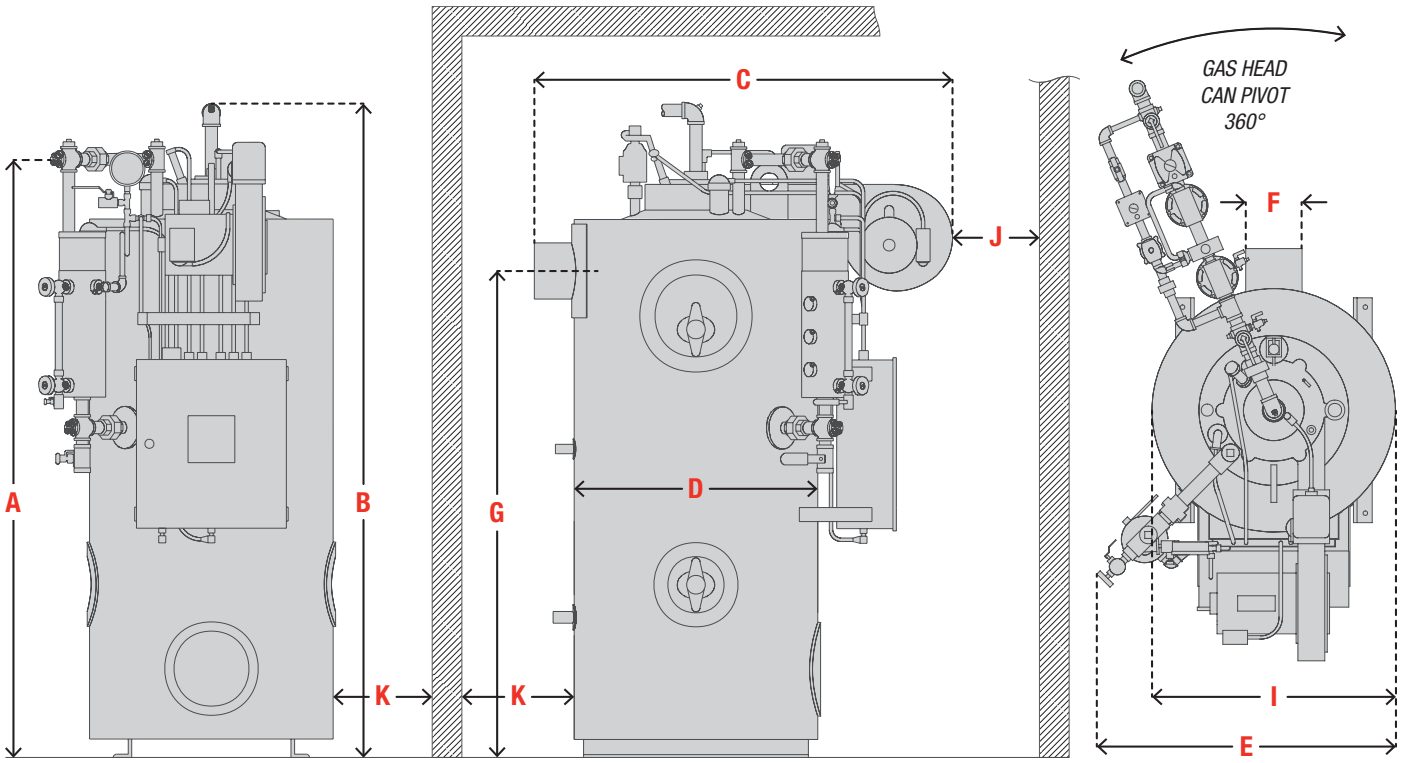
All fuel-fired boilers feature top mounted down fired forced draft burner designed and manufactured by Fulton.

Boilers can be ordered with combination fuel capabilities or can later be converted simply and economically.

The Combustion Process

1. *Air is drawn into the power burner where it is mixed with fuel for optimum combustion*
2. *The ignition assembly ignites the air/fuel mixture and sends a spinning cyclonic flame down the length of the furnace chamber, forming the first pass*
3. *Flame retainer rings increase occupancy time of the flue gases increasing heat transfer*
4. *The flue gases are turned at the base of the chamber and return over the heat convection fins that surround the entire water jacket – this second pass transfers additional heat to the water in the vessel.*
5. *The flue gases are then collected at the upper portion of the boiler and are expelled through the flue outlet.*

SPECS & DIMENSIONS



FRONT VIEW **SIDE VIEW** **TOP VIEW**

CLASSIC Model Size:	BHP	4	6	9.5	10	15	20	25	30	50	60
HEIGHTS & WIDTHS											
A: Boiler Minimum Height	IN	57	68	79	76	83	83	85	93	95	101
	MM	1,447	1,712	1,986	1,921	2,096	2,089	2,140	2,343	2,397	2,550
B: Boiler Overall Height (w/ trim & fuel train)	IN	63	74	84	80	86	92	94	105	114	120
	MM	1,601	1,866	2,118	2,029	2,181	2,315	2,365	2,561	2,886	3,038
C: Overall Depth (stack to burner fan housing)	IN	44	44	44	45	47	59.5	60	66.5	77	77
	MM	1,118	1,118	1,118	1,143	1,194	1,511	1,524	1,689	1,956	1,956
D: Boiler Diameter	IN	26	26	26	28	30	39	39	46	55	55
	MM	660	660	660	711	762	991	991	1,168	1,397	1,397
E: Overall Width (w/ water column)	IN	35.5	35.5	35.5	37	39	46.5	47	52.5	60	60
	MM	902	902	902	940	991	1,181	1,194	1,334	1,524	1,524
F: Flue Outlet Diameter	IN	6	6	6	6	8	10	10	12	12	12
	MM	152	152	152	152	203	254	254	305	305	305
G: To Center of Flue Outlet	IN	42	52	62	58	63	65	66	73.5	79	85
	MM	1,070	1,320	1,575	1,473	1,600	1,651	1,676	1,867	2,007	2,159
MINIMUM CLEARANCES											
H: Burner Removal*	IN	72	82	92	86	92	96	98	106	114	124
	MM	1,828	2,083	2,337	2,184	2,337	2,438	2,490	2,692	2,896	3,150
I: Opening Required for Install (water column removed)	IN	26	26	26	28	30	39	39	46	55	55
	MM	660	660	660	711	762	991	991	1,168	1,397	1,397
J: Front of Boiler	IN	36	36	36	36	36	36	36	36	36	36
	MM	915	915	915	915	915	915	915	915	915	915
K: Sides & Rear of Boiler	IN	24	24	24	24	24	24	24	24	24	24
	MM	610	610	610	610	610	610	610	610	610	610
WEIGHTS											
Approximate Shipping Weight	LB	1,500	1,780	2,050	2,000	2,400	3,750	3,690	5,450	7,860	8,260
	KG	680	807	929	910	1,088	1,700	1,673	2,472	3,565	3,747

** This dimension is 6" less for oil-fired units 6-50 BHP and 12" less for oil-fired units 60 BHP. Add 6" for low emissions burner removal.*

CLASSIC Model Size:	BHP	4	6	9.5	10	15	20	25	30	50	60
SPECIFICATIONS											
Output*	1K BTU/HR	134	201	319	335	503	670	837	1,005	1,674	2,009
	1K KCAL/HR	34	51	81	85	127	169	211	254	422	507
Steam Output*	LB/HR	138	207	328	345	518	690	863	1,035	1,725	2,070
	KG/HR	63	94	149	157	235	313	392	470	785	939
Water Content	GAL	14	16	16	24	39	77	82	170	245	270
	L	53	61	61	91	148	291	310	644	927	1,022
Boiler Connection Size	IN	1	1	1	1	1	1.25	1.25	1.5	1.5**	2
(Natural Gas)	MM	25	25	25	25	25	32	32	38	38	51
Burner Motor HP	Gas	0.33	0.33	0.33	0.33	0.33	0.33	0.75	0.75	1.5	1.5
(3450 RPM/60 CY)	Oil	0.33	0.33	0.33	0.33	0.33	0.75	N/A	0.75	2	2
FUEL CONSUMPTION AT RATED CAPACITY+ (APPROXIMATE)											
Light Oil	GPH	N/A	N/A	2.9	3.0	4.5	6.0	N/A	9	15.0	18.0
	LPH	N/A	N/A	11.0	11.4	17.0	22.7	N/A	34.1	56.8	68.1
Propane Gas	FT3/HR	67	97	154	161	242	323	419	484	837	1,005
	M3/HR	1.9	2.7	4.4	4.6	6.9	9.1	11.9	13.7	23.7	28.5
Natural Gas	FT3/HR	168	242	384	404	605	807	1,046	1,210	2,093	2,511
	M3/HR	4.8	6.9	10.9	11.4	17.2	22.9	29.6	34.3	59.3	71.1
ELECTRIC POWER REQUIREMENTS (IN AMPS)											
120V,60 CY, 1 Phase	Gas	7.2	7.2	7.2	7.2	7.2	7.2	13.8	13.8	20	20
	Oil	7.2	7.2	7.2	7.2	7.2	13.8	13.8	13.8	24	24
240V, 50/60 CY, 1 Phase	Gas	3.6	3.6	3.6	3.6	3.6	3.6	6.9	6.9	10	10
	Oil	3.6	3.6	7.2	7.2	7.2	6.9	6.9	6.9	12	12
208V, 50/60 CY, 3 Phase	Gas	2.4	2.4	2.4	2.4	2.4	2.4	3.7	3.7	6.9	6.9
	Oil	2.4	2.4	2.4	2.4	2.4	3.5	3.7	3.7	7.8	7.8
240V, 50/60 CY, 3 Phase	Gas	2.2	2.2	2.2	2.2	2.2	2.2	3.2	3.2	6.0	6.0
	Oil	2.2	2.2	2.2	2.2	2.2	3.2	3.2	3.2	6.8	6.8
480V, 50/60 CY, 3 Phase	Gas	1.1	1.1	1.1	1.1	1.1	1.1	1.6	1.6	3.0	3.0
	Oil	1.1	1.1	1.1	1.1	1.1	1.6	1.6	1.6	3.4	3.4

NOTE: All specifications and dimensions are approximate and for reference only. Fulton Boiler Works, Inc. practices continuous product improvement and reserves the right to change specifications and/or dimensions without notice. Comprehensive details for each model (dimensions, connections, etc.) are available on product data sheets.

NOTE: All piped connections are <3" are NPT, >3" ANSI 150 flange.

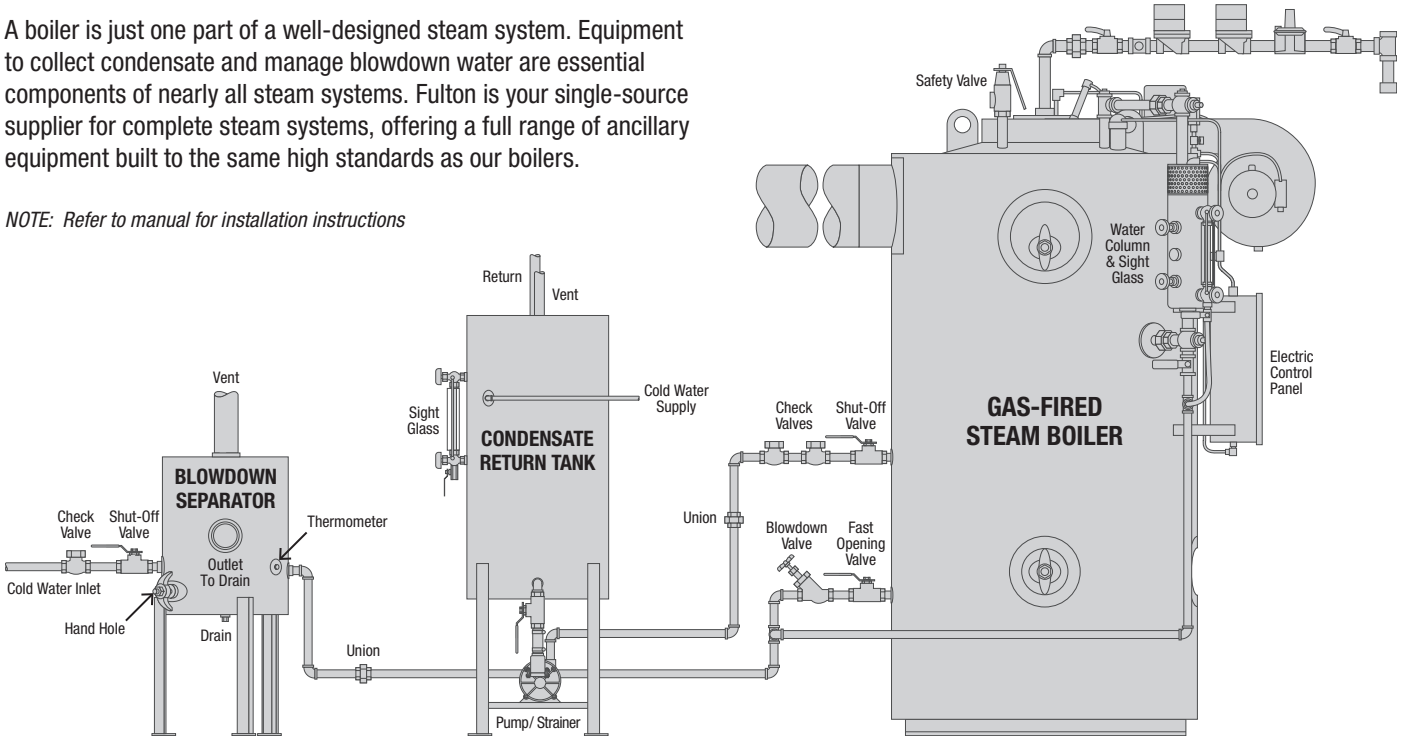
** All ratings from 0 PSIG and at 212°F and from sea level to 3000 feet | ** 2" / 51mm IRI and CSA | N/A = Not Available*

+ Consumption based on Light Oil 140,000 BTU/G/ Natural Gas 1,010 BTU/ft3; Propane 2,530 BTU/ft3.

Complete Turnkey Boiler Systems

A boiler is just one part of a well-designed steam system. Equipment to collect condensate and manage blowdown water are essential components of nearly all steam systems. Fulton is your single-source supplier for complete steam systems, offering a full range of ancillary equipment built to the same high standards as our boilers.

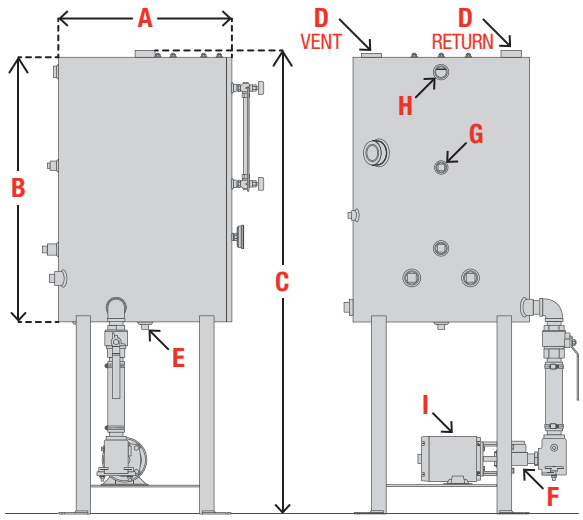
NOTE: Refer to manual for installation instructions



FEEDWATER / CONDENSATE RETURN SYSTEMS

Vertical Tanks

For boiler sizes 1–100 BHP



FRONT VIEW LEFT SIDE VIEW

NOTE: For applications below 80°F

Condensate Return Model		VT-30			VT-60		VT-100	
SPECIFICATIONS								
FOR BOILER SIZE	**BHP**	**1–30**			**31–60**		**61–100**	
Full Capacity	GAL	46			94		147	
	L	174			356		556	
Weight	LB	195			465		650	
	KG	89			211		295	
DIMENSIONS								
A: Tank Diameter	IN	18			24		30	
	MM	457			610		762	
B: Tank Height	IN	42			48		48	
	MM	1,067			1,219		1,219	
C: Overall Height (floor to top of tank)	IN	63			71		71	
	MM	1,600			1,803		1,803	
D: Vent/Return	IN	1.25			2		2	
	MM	32			51		51	
E: Drain	IN	0.50			1		1	
	MM	13			25		25	
F: Pump Outlet	IN	1			1		1	
	MM	25			25		25	
G: Cold Water Inlet	IN	0.50			0.75		0.75	
	MM	13			19		19	
H: Overflow Opening*	IN	1			1		1	
	MM	25			25		25	
FOR BOILER SIZE	**BHP**	**1–12.5**	**13–21**	**22–30**	**31–50**	**51–60**	**61–80**	**81–100**
I: Pump HP (high pressure boiler)	1 Ph. Motor	0.5	0.75	2	2	5	5	5
	3 Ph. Motor	0.5	0.75	2	2	5	5	5
I: Pump HP (low pressure boiler)	1 Ph. Motor	0.25	0.33	0.33	0.5	1	1	1
	3 Ph. Motor	0.25	0.33	0.33	0.5	1	1	1

Fulton's condensate return systems are completely factory-assembled and can be ordered separately or skid-mounted and piped directly with your boiler. Both horizontal and vertical designs feature durable, heavy-gauge steel construction and heavy-duty feedwater pumps with higher head pressure for longer pump life.

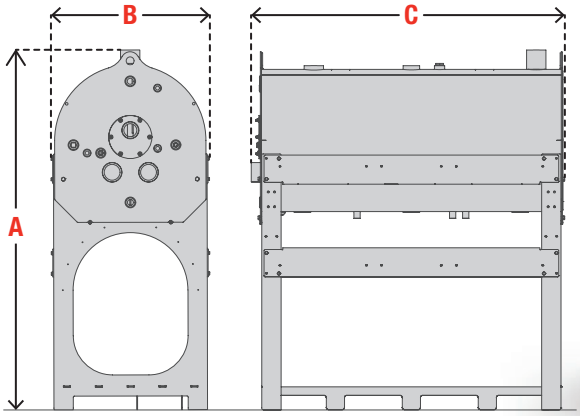
- ***Properly sized tanks with rigid welded support frames***
- ***Built for quick install / replacement***
- ***Easily serviced from the top***
- ***Complete float assembly can be removed without draining tank***
- ***Optional preheat kits are available***

All systems include:

Tank, stand, high-pressure pump, motor, strainer, float valve, shut-off valve, gauge glass assembly, and overflow / drain openings

Horizontal Tanks

For boiler sizes 22–200 BHP



FRONT VIEW SIDE VIEW

Condensate Return Model		HT-30	HT-60	HT-100	HT-200	HT-300	HT-400	HT-500	HT-600
SPECIFICATIONS									
FOR BOILER SIZE	**BHP**	**1–30**	**31–60**	**61–100**	**101–200**	**201–300**	**301–400**	**401–500**	**501–600***
Full Capacity	GAL	43	89	141	213	302	413	469	572
	L	163	337	534	806	1,143	1,563	1,775	2,165
Shipping Weight	LB	634	1,036	1,702	2,387	3,200	2,900	4,100	4,365
	KG	288	470	772	1,083	1,451	1,315	1,860	1,980
Flooded Weight	LB	900	1,629	2,633	3,785	4,820	6,350	8,475	9,135
	KG	408	739	1,194	1,717	2,186	2,880	3,844	4,144
Operational Weight	LB	767	1,345	2,383	3,437	4,175	5,350	7,120	7,660
	KG	378	610	1,081	1,559	1,894	2,427	3,230	3,475
DIMENSIONS									
A: Tank Height	IN	67.375	76.375	87.25	87.25	95	102	106	106
	MM	1,711	1,940	2,216	2,216	2,413	2,591	2,692	2,692
B: Tank Width	IN	21.375	27.5	34.875	34.875	39.125	45.625	45.625	45.625
	MM	543	699	886	886	994	1,184	1,184	1,184
C: Tank Length	IN	45.125	51.625	51.625	74.75	73.25	73.25	83.25	101.25
	MM	1,146	1,311	1,311	1,899	1,861	1,861	2,115	2,597

NOTE: All specifications and dimensions are approximate and for reference only. Fulton Boiler Works, Inc. practices continuous product improvement and reserves the right to change specifications and/or dimensions without notice. Comprehensive details for each model (dimensions, connections, etc.) are available on product data sheets.

NOTE: Consult factory for pump selection based on boiler size; stack style pumps used on horizontal tanks.

** Larger capacities available upon request.*

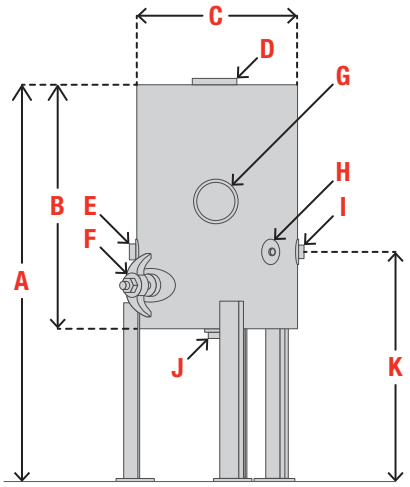
BLOW-DOWN TANKS

Constructed with the highest quality materials, all Fulton blow-down tanks meet or exceed ASME Code and include special features to ensure safe boiler blow-down. Fulton blow-down tanks operate with minimum maintenance and feature a handhole for easy cleaning and inspection.

- ***Baffle plate absorbs steam flash and pressure***
- ***Steam safely expelled through vent***
- ***Water and sludge pass through drain to sewer***
- ***Pressure vessel welded to ASME code***
- ***Fast and easy hook-up to boiler***

NOTE: Optional cooling kits available

Blow-Down Model		F-30	F-75	F-150
SPECIFICATIONS				
FOR BOILER SIZE	**BHP**	**1–30**	**31–75**	**80–150**
Maximum Boiler Pressure	PSI	150	150	150
Capacity	GAL	22	40.8	70.5
	L	83	154	267
Weight	LB	200	295	450
	KG	91	134	204
DIMENSIONS				
A: Overall Height	IN	34	44	50
	MM	864	1,118	1,270
B: Tank Height	IN	20	30	36
	MM	508	762	914
C: Diameter	IN	18	20	24
	MM	457	508	610
D: Vent	IN	3	4	4
	MM	76	102	102
E: Water Supply	IN	0.5	0.75	0.75
	MM	13	19	19
F: Handhole	IN	3 x 4	3 x 4	3 x 4
	MM	76 x 102	76 x 102	76 x 102
G: Outlet	IN	3	3	3
	MM	76	76	76
H: Thermometer	IN	0.50	0.50	0.50
	MM	13	13	13
I: Inlet	IN	1.25	2	2
	MM	32	51	51
J: Drain	IN	1.5	1.5	1.5
	MM	38	38	38
K: Inlet Height	IN	26	31	34
	MM	660	787	864



Fulton offers a full line of premier heat transfer products including:

- ***Fuel-fired vertical tubeless steam and hot water boilers***
- ***Electric steam and hot water boilers***
- ***Condensing and non-condensing commercial heating boilers***
- ***Fuel-fired and electric thermal heaters***
- ***Customized sequencing and complete system control solutions***

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