

Series TC™

Large Commercial Boilers



Standard Equipment

- High Efficiency Power Burners*
- Burner Mounting Plate with Insulation Block
- Front and Rear Observation Port
- Graphite Port Connectors
- Insulated Enameled Steel Jacket
- Cast Iron Flue Collector with Integral Damper
- Manual Reset, Limit Control
- Tankless Coils—For Domestic Hot Water

*choice of Beckett, Carlin, Power Flame or Webster

Series TC™ Boiler Features

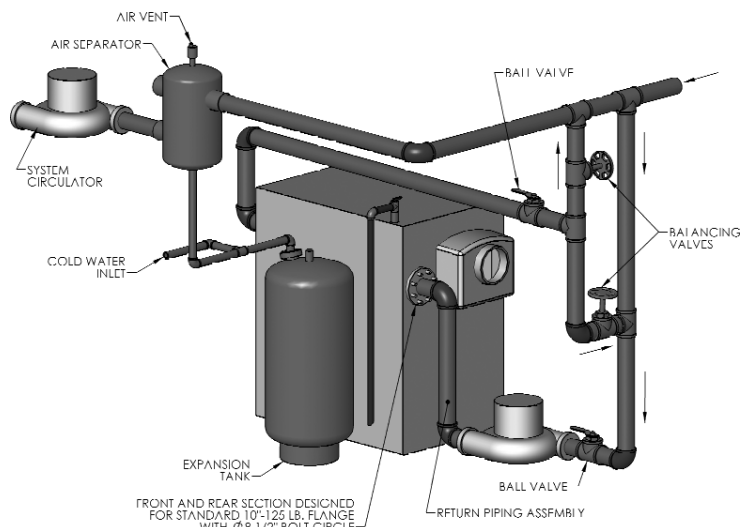
- Equipped with Balanced Temperature Return (Water Boilers)
- Constructed of Rugged, Cast Iron, Wet-Base Sections
- Oil, Gas or Combination Gas/Oil-fired for Hot Water or Steam Systems
- 15 Sizes, 4–18 Sections—Ideal for Large Commercial Applications
- Forced Draft Firing for the Highest Possible Efficiencies

Balanced Temperature Return Technology (For Hot Water Boilers)

- Simplest, Most Effective Method to Reduce or Eliminate Stress Failures in Cast Iron Boilers
- Installation Requires No Additional Controls, Pumps or Piping!
- Easy to Install; Fits in Top Nipple Port
- Each Balanced Temperature Return System is Completely Self-adjusting and Sized for a Specific TC™ Boiler Model

All commercial cast iron boilers include a full one-year warranty. A limited, ten-year warranty is provided on the cast iron sections for all commercial hot water and steam boilers. Visit PeerlessBoilers.com for complete details.

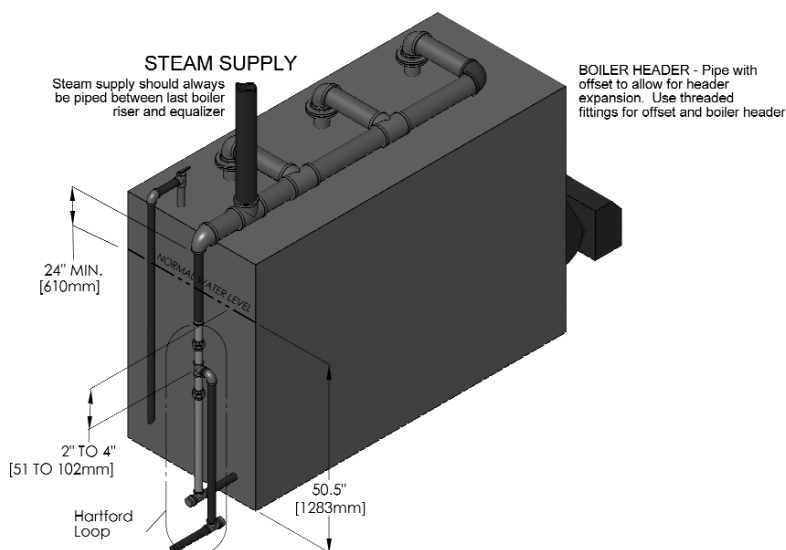
Water Piping



Boiler Piping (Water)

Boiler Model Number	Supply & Return Size
TC-04 & TC-05	3"
TC-06 to TC-09	4"
TC-10 to TC-18	5"

Steam Piping



Boiler Piping (Steam)

Boiler Model Number	Number of 5" NPT Risers	Header Size (NPT)	Equalizer Size (NPT)
TC-04 & TC-05	1	5"	2-1/2"
TC-06 & TC-07	2	5"	2-1/2"
TC-08 to TC-10	2	6"	4"
TC-11 to TC-18	3	8"	4"

Burner Specifications

Boiler Model Number	Burners – Light Oil								Burners – Gas						Burners – Gas/Oil			
	Beckett		Carlin		Power Flame		Webster		Beckett		Power Flame		Webster		Power Flame		Webster	
	Model No.	H.P.	Model No.	H.P.	Model No.	H.P.	Model No.	H.P.	Model No.	H.P.	Model No.	H.P.	Model No.	H.P.	Model No.	H.P.	Model No.	H.P.
TC-04	CF1400 ²	1/2	702CRD ²	1/2	C1-0 ¹	1/2	JB10-03 ¹	1/2	CG-15.2 ²	1/2	J30A-12 ¹	1/3	JB1G-03 ¹	1/3	C1-G0-12 ¹	1/2	JB1C-03 ¹	1/2
TC-05	CF1400 ²	1/2	702CRD ²	1/2	C1-0 ²	1/2	JB10-03 ¹	1/2	CG-25.2 ²	3/4	J50A-15 ¹	1/3	JB1G-03 ¹	1/3	C1-G0-12 ¹	1/2	JB1C-03 ²	1/2
TC-06	CF2300 ²	3/4	801CRD ²	3/4	C2-0A ²	3/4	JB10-07 ²	3/4	CG-25.3 ²	3/4	J50A-15 ²	1/3	JB1G-05 ²	1/2	C2-G0-15 ²	3/4	JB1C-07 ²	3/4
TC-07	CF2300 ²	3/4	801CRD ²	3/4	C2-0A ²	3/4	JB10-07 ²	3/4	CG-25.4 ²	3/4	J50A-15 ²	1/2	JB1G-05 ²	1/2	C2-G0-15 ²	3/4	JB1C-07 ²	3/4
TC-08	CF2300 ²	3/4	801CRD ²	3/4	C2-0B ²	1	JB10-07 ²	3/4	CG-25.5 ²	3/4	C2-G-20A ²	3/4	JB1G-07 ²	3/4	C2-G0-20A ²	1	JB1C-07 ²	3/4
TC-09	CF2300 ²	3/4	1050FFD ²	1	C2-0B1 ²	1-1/2	JB20-10 ²	1	CG-50.3 ²	2	C2-G-20B1 ²	1	JB2G-10 ²	1	C2-G0-20B ²	1-1/2	JB2C-10 ²	1
TC-10	CF2500 ²	2	1050FFD ²	1	C2-0B1 ²	1-1/2	JB20-10 ²	1	CG-50.3 ²	2	C2-G-20B1 ²	1	JB2G-10 ²	1	C2-G0-20B ²	1-1/2	JB2C-10 ²	1
TC-11	CF2500 ²	2	1150FFD ²	1-1/2	C3-0 ²	2	JB20-10 ²	1	CG-50.4 ²	2	C3-G-20 ²	1-1/2	JB2G-10 ²	1	C3-G0-20 ²	2	JB2C-10 ²	1
TC-12	CF3500A ²	2	1150FFD ²	1-1/2	C3-0 ²	2	JB20-20 ²	2	CG-50.5 ²	2	C3-G-25 ²	1-1/2	JB2G-20 ²	2	C3-G0-25 ²	2	JB2C-20 ²	2
TC-13	CF3500A ²	2	1150FFD ²	1-1/2	C3-0 ²	2	JB20-20 ²	2	CG-50.5 ²	2	C3-G-25 ²	1-1/2	JB2G-20 ²	2	C3-G0-25 ²	2	JB2C-20 ²	2
TC-14	—	—	1150FFD ²	1-1/2	C3-0 ²	2	JB20-30 ²	3	CG-50.5 ²	2	C3-G-25 ²	1-1/2	JB2G-30 ²	3	C3-G0-25 ²	2	JB2C-30 ²	3
TC-15	—	—	—	—	C3-0B ²	3	JB20-30 ²	3	—	—	C3-G-25B ²	3	JB2G-30 ²	3	C3-G0-25B ²	3	JB2C-30 ²	3
TC-16	—	—	—	—	C3-0B ²	3	JB20-30 ²	3	—	—	C3-G-25B ²	3	JB2G-30 ²	3	C3-G0-25B ²	3	JB2C-30 ²	3
TC-17	—	—	—	—	C4-0A ²	5	JB30-30 ³	3	—	—	C4-G-25 ²	3	JB3G-30 ³	3	C4-G0-25 ²	5	JB3C-30 ³	3
TC-18	—	—	—	—	C4-0A ²	5	JB30-30 ³	3	—	—	C4-G-25 ²	3	JB3G-30 ³	3	C4-G0-25 ²	5	JB3C-30 ³	3

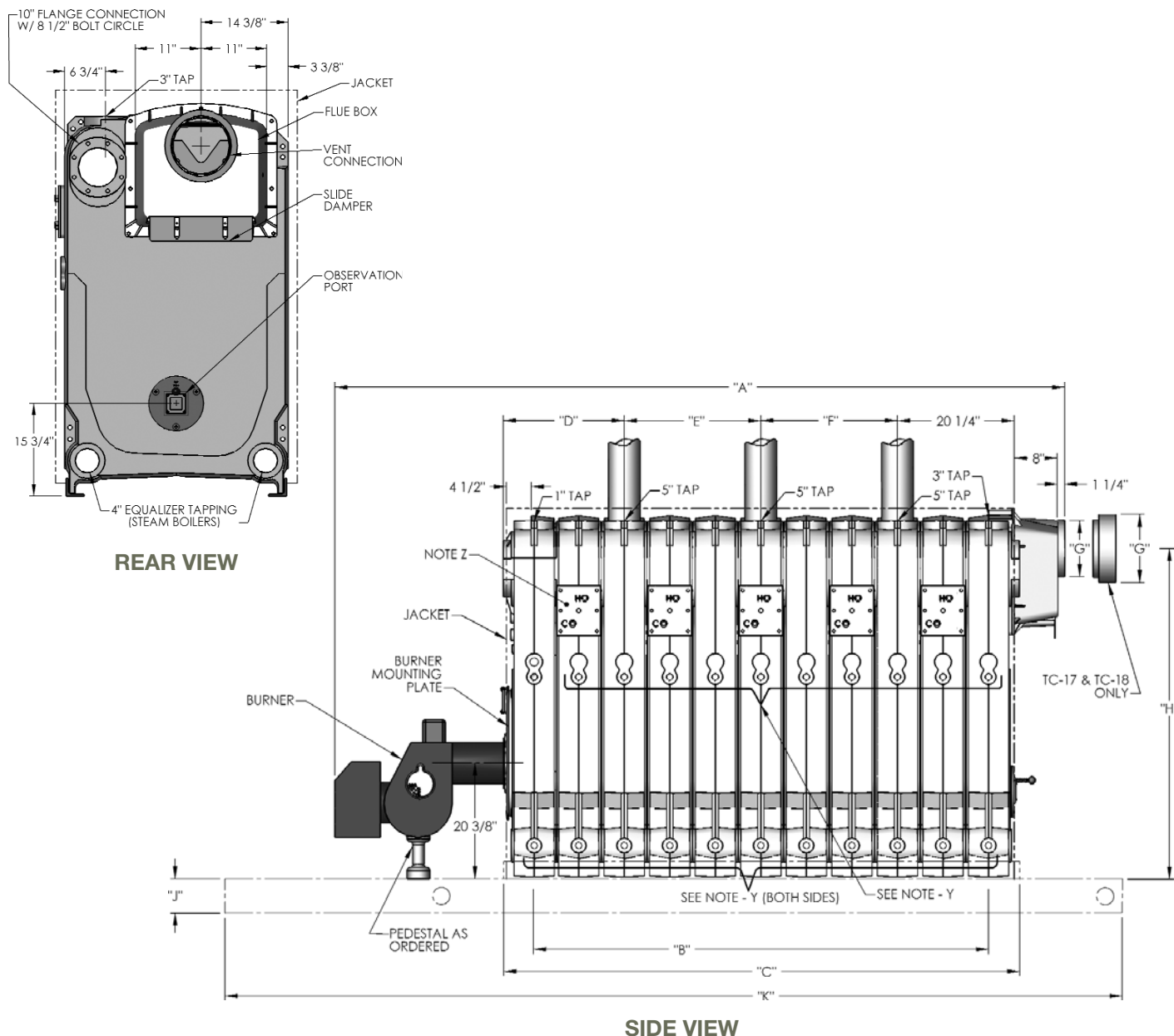
1 Burner operation: on-off.

2 Burner operation: low-fire start, high-fire run.

3 Burner operation: full modulation.

Note: Low-High-Low or Modulation Firing consult the factory.

Your representative should be consulted before selecting boilers for installation having unusual piping and pick-up requirements, such as intermittent system operation, extensive piping systems, etc. For forced hot water heating systems where the boiler and all the piping are within the area to be heated, the boiler may be selected on the basis of its Gross Output.



Note Y: 1-1/2" Inspection tappings when ordered.
 Note Z: Tankless heater sections when ordered.

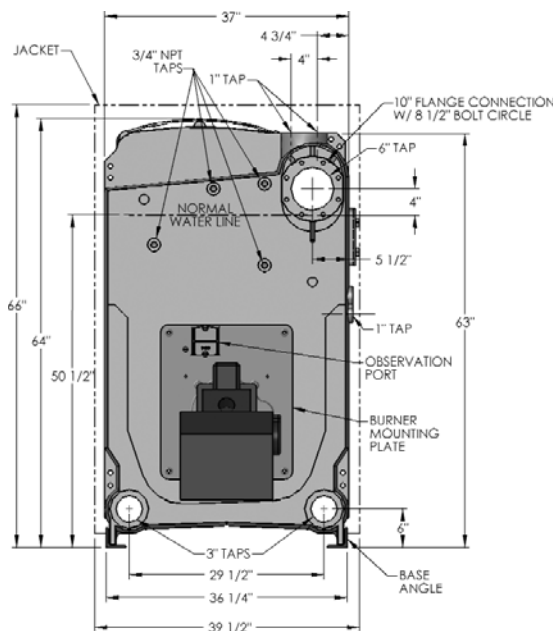
Boiler Dimensions

Boiler Model Number	Overall Length - "A" ¹ (inch)				Optional Packaged Base Dimension "K" (inch)	Firebox Length "B" (inch)	Boiler Length "C" (inch)	Riser Tapping Locations			Dia. Vent Conn. "G" (inch)	Height Vent Conn. "H" (inch)	Base Height "J" (inch)
	Beckett	Carlin	Power Flame	Webster				"D" (inch)	"E" (inch)	"F" (inch)			
TC-04	64-1/4	62-1/4	71-3/4	66-1/2	91-1/4	23-5/16	33	12.5	—	—	10	57.625	6
TC-05	72-1/4	70-1/4	83-1/4	74-1/2	104-1/4	31-5/16	41	20.5	—	—	10	57.625	6
TC-06	80-1/4	80-1/4	91-1/4	82-1/2	112-1/4	39-5/16	49	12.5	16	—	10	57.625	6
TC-07	88-3/4	88-1/4	99-1/4	90-1/2	120-1/2	47-5/16	57	12.5	24	—	12	56.625	6
TC-08	96-3/4	96-1/4	107-1/4	98-1/2	128-1/2	55-5/16	65	12.5	32	—	12	56.625	6
TC-09	104-3/4	108-3/4	115-1/4	110-1/2	136-1/2	63-5/16	73	12.5	40	—	14	55.625	6
TC-10	116-1/2	116-3/4	128-1/4	118-1/2	144-3/4	71-5/16	81	20.5	40	—	14	55.625	6
TC-11	124-1/2	125-1/4	137-1/4	126-1/2	157-3/4	79-5/16	89	20.5	24	24	14	55.625	6
TC-12	132-1/2	133-1/4	145-1/4	134-1/2	166-1/4	87-5/16	97	20.5	24	32	14	55.625	6
TC-13	N/A	141-1/4	153-1/4	142-1/2	173-3/4	95-5/16	105	20.5	32	32	14	55.625	6
TC-14	N/A	149-1/4	161-1/4	150-1/2	181-3/4	103-5/16	113	20.5	32	40	16	54.625	6
TC-15	N/A	N/A	169-1/4	158-1/2	189-7/8	111-5/16	121	20.5	40	40	16	54.625	8
TC-16	N/A	N/A	177-1/4	166-1/2	198-1/4	119-5/16	129	20.5	48	40	16	54.625	8
TC-17	N/A	N/A	191-1/4	183-3/4	211-1/4	127-5/16	137	20.5	48	48	18	54.625	8
TC-18	N/A	N/A	199-1/4	191-3/4	219-1/4	135-5/16	145	20.5	56	48	18	54.625	8

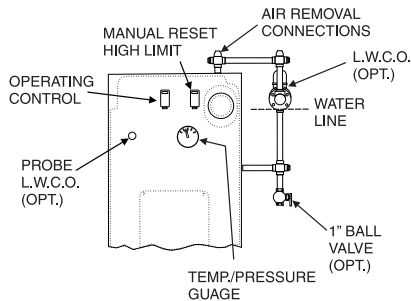
¹ Add 2 3/4" (70 mm) to TC-17 & TC-18 for flue outlet adapter.



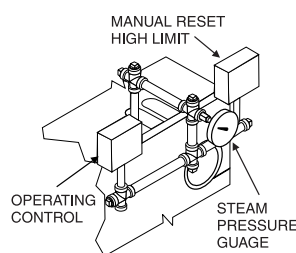
Technical Information



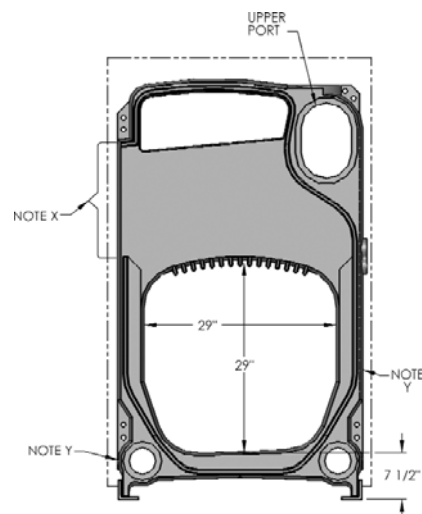
**FRONT VIEW
(Steam Boiler)**



**CONTROL LOCATIONS
(Water Boiler)**



**CONTROL LOCATIONS
(Steam Boiler)**



INTERMEDIATE SECTION

Note X: Flue cleanout opening. Allow 36" clear work space for using flue brush.

Note Y: 1-1/2" Inspection tappings when ordered.

Boiler Ratings

Series TC™											Boiler H.P.	Water Content, gal		Furnace Volume, cuft	Water Working Weight, lbs.	Heating Surface, sqft
Boiler Model Number	Oil Input ²		Gas Input ³ , MBH	Net I=B=R Ratings ¹			Oil		Gas							
	GPH	MBH		Steam, sqft	Water ² , MBH	Steam ³ , MBH	Combustion Efficiency ⁵ , %	Thermal Efficiency ⁵ , %	Combustion Efficiency ⁵ , %	Thermal Efficiency ⁵ , %						
TC-04	8.0	1,120	1,154	2,813	783	675	83.5	80.4	81.0	78.0	27	123.4	103.8	12.04	4,215	81.2
TC-05	10.4	1,456	1,491	3,646	1,014	875	83.5	80.7	81.0	78.2	35	150.3	125.8	16.14	5,038	105.3
TC-06	12.6	1,764	1,827	4,538	1,246	1,089	83.5	80.8	81.0	78.4	43	177.2	147.8	20.24	5,861	129.4
TC-07	15.0	2,100	2,163	5,458	1,477	1,310	83.5	81.0	81.0	78.5	51	204.1	169.8	24.34	6,684	153.5
TC-08	17.4	2,436	2,499	6,358	1,709	1,526	83.5	81.1	81.0	78.6	59	231.0	191.8	28.44	7,507	177.6
TC-09	19.6	2,744	2,836	7,221	1,941	1,733	83.5	81.1	81.0	78.7	67	257.9	213.8	32.54	8,331	201.7
TC-10	22.0	3,080	3,172	8,079	2,172	1,939	83.5	81.2	81.0	78.8	75	284.8	235.8	36.64	9,169	225.8
TC-11	24.5	3,430	3,508	8,942	2,403	2,146	83.5	81.2	81.0	78.8	83	311.7	257.8	40.74	9,992	249.9
TC-12	26.5	3,710	3,844	9,804	2,636	2,353	83.5	81.3	81.0	78.8	91	338.6	279.8	44.84	10,815	274.0
TC-13	29.0	4,060	4,180	10,667	2,867	2,560	83.5	81.3	81.0	78.9	98	365.5	301.8	48.94	11,649	289.1
TC-14	31.5	4,410	4,517	11,525	3,098	2,766	83.5	81.3	81.0	78.9	106	392.4	323.8	53.04	12,467	322.2
TC-15	33.5	4,690	4,853	12,392	3,330	2,974	83.5	81.4	81.0	78.9	114	419.3	345.8	57.14	13,511	346.3
TC-16	36.0	5,040	5,189	13,250	3,562	3,180	83.5	81.4	81.0	78.9	122	446.2	367.8	61.24	14,375	370.4
TC-17	38.5	5,390	5,525	14,113	3,793	3,387	83.5	81.4	81.0	79.0	130	473.1	389.8	65.34	15,239	394.5
TC-18	40.5	5,670	5,862	14,975	4,025	3,594	83.5	81.4	81.0	79.0	138	500.0	411.8	69.44	16,103	418.6

1 Net I=B=R Water Ratings are based on allowance of 1.15. Net I=B=R Ratings for steam boilers are based on piping and pick-up factor as follows:

4 and 5 section = 1.333, 6-section = 1.305, 8 section and larger = 1.288.

2 Light oil having a heat content of 140,000 BTU/Gal.

3 Gas having a heat content of 1,000 BTU/Cu. Ft., 0.60 specific gravity.

4 Consult factory before selecting a boiler for installation having unusual piping and pickup requirements, such as intermittent system operation, extensive piping systems, etc.

5 Combustion and thermal efficiency determined in accordance with The Hydronics Institute's Testing and Rating Standard for Heating Boilers.



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