

Technical Data Sheet

CFR High-Efficiency Boiler

CFR is the ideal hydronic heating solution for the retrofit commercial market to cost-effectively upgrade your boiler plant and maximize performance while safely reusing existing Cat I / Type B venting.

Delivering up to 87.1% thermal efficiency and approved for Cat I / Type B venting, the CFR boiler delivers greater energy savings, reliable heat, and flexible, cost-saving installation in a compact footprint. This makes it the perfect drop-in replacement for retrofit projects.

All models are backed by an industry-unique 10-year limited warranty on the heat exchanger, including against condensate corrosion for greater peace of mind.

AERCO's Edge® Controller comes integrated with CFR to optimize system efficiency and operation, and easily integrate the boilers with a facility-wide Energy Management or Building Automation System. This makes CFR a perfect retrofit solution in buildings striving for best-in-class system performance and operational excellence.



Key Features

- High-efficiency boiler with up to 87.1% thermal efficiency
- Natural gas, FM train
- 1500, 2000 and 3000 MBH input
- Up to 4:1 turndown ratio (25%) depending on capacity
- Low NOx emission (<20 ppm)
- Quiet operation
- Single, fully assembled unit
- Maintains dry flue gas at all times
- Durable 439 stainless-steel fire-tube heat exchanger built to withstand thermal shock
- Added peace of mind with the industry's only condensate corrosion warranty (10-year limited)

Flexible, Cost-Saving Installation

- Safely reuse existing Category I / Type B venting
- Compact footprint, light weight, freight elevator-friendly
- Requires zero side clearance between units and easy service access from front and side
- No secondary or bypass pumps required
- Work with multiple piping configurations, including variable-primary.

Operational Excellence

- Fully integrated Edge Controller for optimized system operation
- Precise temperature control
- Easy sequencing of up to 16 boilers to maximize energy efficiency
- Integrated BACnet IP, BACnet MS/TP, Modbus IP and Modbus RTU communication

Specifications

	CFR		
	1500	2000	3000
Boiler Category	Category I		
Gas Connections (NPT)	2"		
Max. Gas Pressure	14" w.c.		
Min. Gas Pressure	4" w.c.		
Max. Allowed Working Pressure	160 PSIG		
Electrical Req. 120V/1PH/60Hz ¹	16 FLA	16 FLA	N/A
Electrical Req. 208V/3PH/60Hz ¹	N/A	N/A	10 FLA
Electrical Req. 460V/3PH/60Hz ¹	N/A	N/A	5 FLA
Water Connections	4" - 150# Flg		
Min. Water Flow (GPM)	30	40	55
Max. Water Flow (GPM)	175	225	300
Water Volume Gallons	45	43	61
Water Pressure Drop	0.7 psig @ 150 gpm	0.7 psig @ 150 gpm	1.5 psig @ 200 gpm
Turndown Ratio	2.5:1 (40%)	4:1 (25%)	4:1 (25%)
Vent/Air Intake Connections ²	8" Vent/6" Air Intake	8" Vent/6" Air Intake	8 inch
Vent Materials	Category I/Type B Venting		
Type of Gas	Natural Gas		
NOx Emissions	<20ppm	<20ppm	<20ppm
Temperature Control Range	140°F to 190°F		
Ambient Temperature Range	0°F to 130°F		
Standard Listings & Approvals	UL, CSD-1, ASME		
Gas Train	FM Compliant		
Sound Rating dbA	70	74	72
Weight (dry) lbs.	1200	1200	1500
Shipping Weight lbs.	1300	1300	1600
Width	28"	28"	28"
Depth	43.6"	43.6"	56"
Height	78"	78"	78"

1. See CFR Electrical Power Guide TAG-0108 for Service Disconnect Switch amperage requirements.

2. Do not use the appliance vent connection size as minimum vent size. Refer to latest edition of NFPA 54/ANSI Z223.1 for sizing Category I venting systems.

Ratings

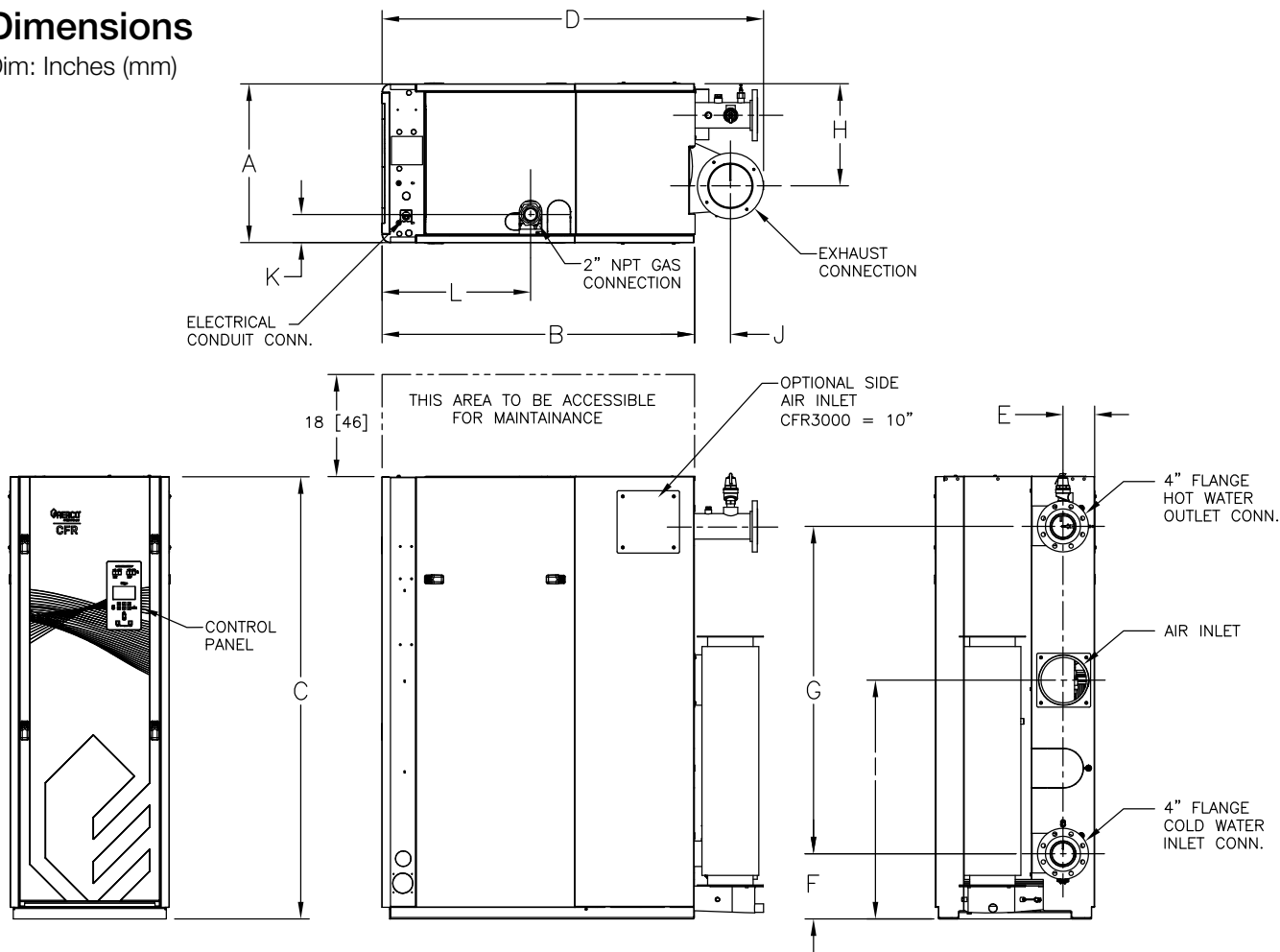
CFR	Input MBH	Output MBH	Thermal Efficiency, 80F to 180F
1500	1500	1284	85.6%
2000	2000	1704	85.2%
3000	3000	2613	87.1%

Note: The information contained in this technical data sheet is subject to change without notice.



Dimensions

Dim: Inches (mm)



CFR	(Width) A	(Depth) B	(Height) C	D	E	F	G	H	I	J	K	L
1500 / 2000	28"	43.6"	78"	58.4"	6.6"	11.5"	57.8"	18"	42"	8.9"	4.4"	19.1"
3000	28"	56"	78"	68.4"	5.6"	11.5"	57.8"	18"	42"	8.9"	4.4"	27.1"