

CREST COMMERCIAL CONDENSING BOILER WITH HELLCAT COMBUSTION TECHNOLOGY

Submittal Sheet



Lochinvar®

HIGH EFFICIENCY BOILERS & WATER HEATERS

MODELS
FCB1000 - FCB6000



FCB-Sub-03

Job Name: _____

Location: _____

Contractor: _____

Type Gas: _____

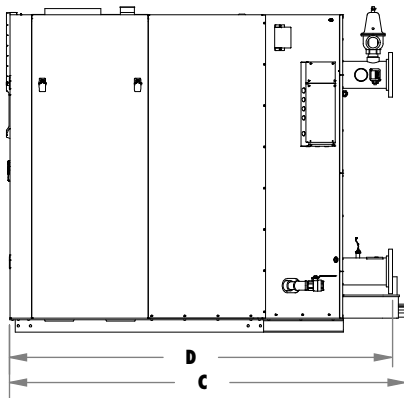
Engineer: _____

Model #: _____

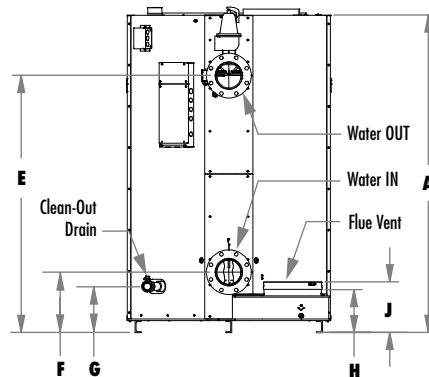
Agent/Wholesaler: _____

Equipment Tag(s): _____

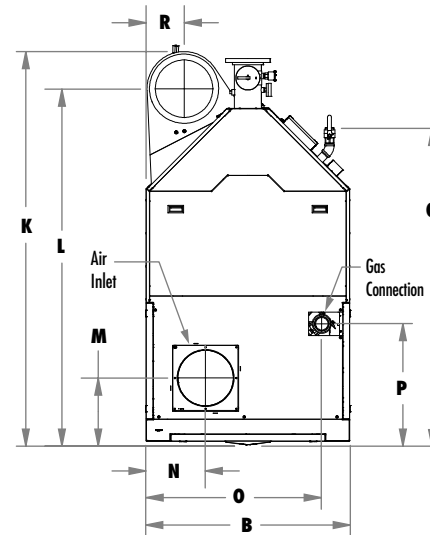
SIDE



BACK



TOP



JOB NOTES:

Notes:

- * Add "N" for natural gas, "L" for LP gas models
- Low NOx Operation.
- Lochinvar should be consulted before selecting a boiler for installations having unusual piping and pickup requirements, such as intermittent system operation, extensive piping systems, etc.
- The ratings have been determined under the provisions governing forced draft burners.
- The Net AHRI water ratings shown are based on a piping and pickup allowance of 1.15.

Model Number	Input MBH		Gross Output MBH	Net Rating MBH	Combustion Eff. %	Thermal Eff. %	Turn down	Flow Rate GPM		A	B	C	D	E	F	G	H	J	K	L	M	N	O	P	Q	R	Gas Conn.	Water Inlet/Outlet	Air Intake	Vent Size	Oper. Weight (with water)	Ship. Weight (lbs.)
	Min	Max						Min	Max																							
FCB1000	50	999	961	836	96.4%	96.2%	20:1	18	350	78"	30"	56"	57-1/2"	66-1/8"	11-7/8"	11-3/8"	11-1/4"	12-1/2"	55-1/2"	51-3/4"	12-3/4"	6-1/2"	26"	21-1/2"	48-3/4"	6-1/2"	1-1/4"	3"	6"	6"	1,939	1,721
FCB1500	60	1,500	1,443	1,255	96.4%	96.2%	25:1	25	350	78"	30"	63-3/4"	64"	65-3/8"	12-3/8"	11-3/8"	11-1/4"	12-1/2"	63-1/4"	58-1/4"	13-1/4"	7-1/2"	25-3/4"	23-1/4"	55-3/4"	5-1/8"	1-1/2"	4"	8"	8"	2,345	1,985
FCB2000	80	1,999	1,923	1,672	96.4%	96.2%	25:1	25	350	78"	30"	62-1/2"	64-1/4"	65-3/8"	12-3/8"	11-3/8"	11-1/4"	12-1/2"	62-1/4"	57-1/4"	12"	7-1/2"	26"	21-1/2"	55-1/2"	5-1/8"	1-1/2"	4"	8"	8"	2,622	2,120
FCB2500	125	2,500	2,400	2,087	96.1%	96%	20:1	25	350	77-3/4"	35"	79-1/4"	79-1/4"	63-3/4"	13-1/2"	11-1/4"	10-1/2"	12-1/4"	79"	71-3/4"	17-1/4"	9-1/4"	30-1/4"	28"	67"	7-1/4"	2"	4"	8"	9"	3,555	2,812
FCB3000	150	3,000	2,883	2,507	96.1%	96%	20:1	25	350	77-3/4"	35"	79-1/4"	79-1/4"	63-3/4"	13-1/2"	11-1/4"	10-1/2"	12-1/4"	79"	71-3/4"	17-1/4"	9-1/4"	30-1/4"	28"	67"	7-1/4"	2"	4"	10"	10"	3,582	2,848
FCB4000	200	3,999	3,843	3,342	96.1%	96%	20:1	45	350	78"	43-1/4"	95-1/4"	90-3/4"	63-1/2"	13-3/4"	11-1/2"	10-3/4"	12-1/2"	94-3/4"	85-3/4"	19"	11-1/4"	36-1/2"	35"	77"	10-1/2"	2-1/2"	4"	12"	12"	4,882	3,874
FCB5000	250	4,999	4,804	4,177	96.1%	96%	20:1	50	600	78"	46-1/2"	96-1/2"	94"	63-1/2"	15"	11-1/2"	10-3/4"	12-1/2"	96-1/4"	87"	18-3/4"	13"	39-3/4"	34"	78-1/2"	9"	2-1/2"	6"	14"	14"	5,920	4,470
FCB6000	300	6,000	5,766	5,014	96.1%	96%	20:1	60	600	78"	50"	97-3/4"	94-3/4"	63-1/4"	14-3/4"	11-1/2"	10-3/4"	12-1/2"	96-1/2"	87-1/2"	16-1/2"	14-3/4"	43-1/4"	29-3/4"	78"	6-3/4"	3"	6"	14"	14"	6,755	4,862

CREST[®] + HELLCAT[™]

CONDENSING BOILER COMBUSTION TECHNOLOGY

Codes & Registrations

ANSI Z21.13/CSA Certified	CSD1 / Factory Mutual / GE Gap Compliant
ASME Certified, "H" Stamp / National Board	South Coast Air Quality Management District Qualified (FB 1000-2000)
California Code Compliant	AHRI Certified
Canadian Registration Number (CRN)	

Standard Features

- › Hellcat Combustion Technology featuring RealTime O₂ Trim[™]
- › Proof of Closure Valve (FCB 6000)
- › Modulating Burner with up to 25:1 Turndown
- › Direct-Spark Ignition
- › Low NOx Operation
- › Sealed Combustion
- › Air Inlet Filter
- › Low Gas Pressure Operation
- › Vertical and Horizontal Direct Venting
 - › Direct Vent up to 150 Feet
 - › PVC, CPVC, Polypro or AL29-4C (FCB 1000-4000)
 - › AL29-4C (FCB 1000-6000)
- › ASME "H" Stamped Heat Exchanger
- › 316L Stainless Steel Fire Tubes
- › 160 psi Working Pressure
- › On/Off Switch
- › Interior Service Light
- › Adjustable High Limit with Manual Reset
- › Low Water Cutoff with Manual Reset & Test
- › High & Low Gas Pressure Switches w/Manual Reset
- › Low Air Pressure Switches indicate Blocked Vent/Air
- › Condensate Trap w/Blocked Drain Switch
- › Drain Valve
- › System Sensor
- › Outdoor Air Sensor
- › Inlet & Outlet Temperature Sensors
- › High-Voltage Terminal Strip
- › Low-Voltage Terminal Strip
- › Downstream Gas Test Cocks
- › 50 psi ASME Relief Valve
- › Temperature & Pressure Gauge
- › Zero Clearances to Combustible Materials
- › SCCR of 5,000 A
- › See Warranty for Details
 - › 10-Year Limited Warranty
 - › 5-Year Warranty on Burner
 - › 18-Month Warranty on Parts
 - › Lifetime Thermal Shock

Smart Touch[™] Features

- › CON-X-US Remote Connect
- › SMART TOUCH Touchscreen Operating Control
- › Full-Color 10" Capacitive Touchscreen LCD Display
- › Built-in Cascading Sequencer for up to 8 Boilers
 - › Built-in Redundancy
 - › Cascade Multiple Sized Boilers
 - › Lead/Lag Cascade
 - › Efficiency Optimized Cascade
- › Front-End Loading Capability with Copper-Fin II[®] and Power-Fin[®] Boilers
- › Building Management System Integration with 0-10 VDC Input
- › BACnet MSTP Communications
- › Outdoor Reset Control with Outdoor Air Sensor
- › Password Security
- › Domestic Hot Water Prioritization
 - › DHW tank piped with priority in the boiler loop
 - › DHW tank piped as a zone in the system with the pumps controlled by the Smart Touch
 - › DHW Modulation Limiting
 - › Separately Adjustable SH/DHW Switching Times
- › Low Water Flow Safety Control & Indication
- › Inlet & Outlet Temperature Readout
- › Freeze Protection
- › Service Reminder
- › Time Clock
- › Data Logging
 - › Hours Running, Modulation Rate
 - › Ignition Attempts
 - › Last 10 Lockouts with Burner State
 - › Recycling Reporting
- › Programmable System Efficiency Optimizers
 - › Night Setback
 - › Anti-Cycling
 - › Outdoor Air Reset Curve
 - › Ramp Delay
 - › Boost Temperature & Time
 - › Modulation Factor Control
- › Pump Control Board (24V) with LED Indicators
 - › System Pump, Boiler Pump, DHW Pump, DHW Recirculation Pump (future) and Bypass Pump (future)



DESIGNED * ENGINEERED * ASSEMBLED

USA

- › High-Voltage Terminal Strip
 - › 120V/1PH/60Hz Power Supply (FCB 1000-2000)
 - › 208V/3PH/60Hz Power Supply (FCB 2500-3000)
 - › 480V/3PH/60Hz Power Supply (FCB 4000-6000)
- › Low-Voltage Terminal Strip
 - › 24 VAC Auxiliary Device Relay
 - › Auxiliary Proving Switch Contacts
 - › Alarm on Any Failure Contacts
 - › Runtime Contacts
 - › DHW Thermostat Contacts
 - › Unit Enable/Disable (Demand) Contacts
 - › System Sensor Input
 - › DHW Tank Sensor Contacts
 - › Outdoor Air Sensor Contacts
 - › Cascade Contacts
 - › 0-10 VDC BMS External Control Contact
 - › 0-10 VDC Variable Speed Boiler Pump Control Contact
 - › 0-10 VDC System Pump Speed Input Contact
 - › Flow Switch / Low Water Cutoff Contact

Optional Equipment

Alarm on Any Failure

ASME Relief Valve Option:

75 psi 100 psi 125 psi 150 psi

BMS Gateway - BACnet IP or LonWorks

Condensate Neutralization Kit

Common Vent Damper Kits

Modbus Communication

Short Circuit Current Rating (SCCR) Options:

FCB 2500 - 6000

100,000 A
200,000 A

Motorized Isolation Valve

Variable Speed Boiler Pump

Wireless Outdoor Temperature Sensor

Electrical Transformer Options (Shipped Loose)

› FCB 1000-2000:

208V/3PH/60Hz → 120V/1PH/60Hz
480V/3PH/60Hz → 120V/1PH/60Hz
600V/3PH/60Hz → 120V/1PH/60Hz

› FCB 2500-3000:

480V/3PH/60Hz → 208V/3PH/60Hz
600V/3PH/60Hz → 208V/3PH/60Hz

› FCB 4000-6000:

208V/3PH/60Hz → 480V/3PH/60Hz
600V/3PH/60Hz → 480V/3PH/60Hz



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