



**Lochinvar**<sup>®</sup>  
HIGH EFFICIENCY BOILERS & WATER HEATERS

**CREST COMMERCIAL CONDENSING BOILERS**  
**MODELS FBD0751-6001**

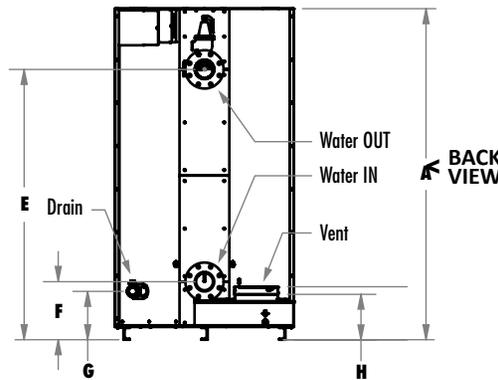
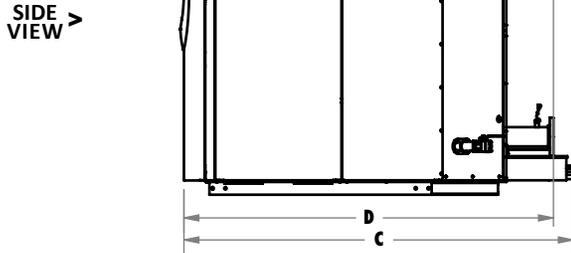
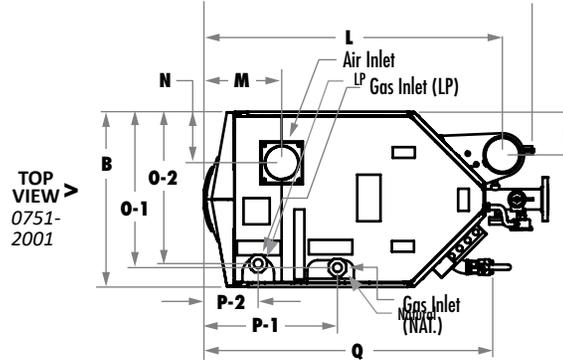
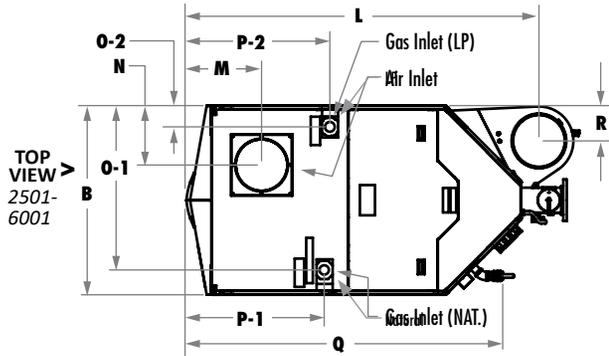


Submittal Sheet

FBD-Sub-03

Job Name: \_\_\_\_\_  
Engineer: \_\_\_\_\_  
Contractor: \_\_\_\_\_

Location: \_\_\_\_\_  
Model #: \_\_\_\_\_  
Agent/Wholesaler: \_\_\_\_\_



Equipment Tag(s): \_\_\_\_\_

**JOB NOTES:**

- Notes:**
- Indoor installation only.
  - 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   | Fuel Connections |         |         |         |
|---------|------------------|---------|---------|---------|
|         | Natural          |         | LP      |         |
|         | O-1              | P-1     | O-2     | P-2     |
| FBD0751 | 26-3/4"          | 23"     | 26"     | 9-1/4"  |
| FBD1001 | 26-3/4"          | 22-1/2" | 26"     | 8-3/4"  |
| FBD1251 | 26-3/4"          | 21"     | 26-1/4" | 7-3/4"  |
| FBD1501 | 27"              | 28-1/4" | 24-3/4" | 11"     |
| FBD1751 | 27"              | 27-1/2" | 25-3/4" | 11-3/4" |
| FBD2001 | 27"              | 27"     | 25-3/4" | 11-1/2" |
| FBD2501 | 28-3/4"          | 32"     | 5-3/4"  | 32-1/4" |
| FBD3001 | 28-3/4"          | 32"     | 6-3/4"  | 32-1/4" |
| FBD3501 | 35-1/2"          | 31-3/4" | 5-1/4"  | 33-1/2" |
| FBD4001 | 39-1/2"          | 42-1/4" | 6-1/2"  | 42-1/4" |
| FBD5001 | 39-3/4"          | 39-1/4" | 6-3/4"  | 40"     |
| FBD6001 | 43-1/2"          | 36-1/2" | 5-3/4"  | 38"     |

| Model Number | Input MBH |       | Turn-down | Gross Output MBH | Net AHRI Rating MBH | Combustion Efficiency | Thermal Efficiency | A       | B       | C        | D       | E       | F       | G       | H       | L       | M       | N       | Q       | R       | Gas Conn. | Water Inlet/Outlet | Air Inlet | Vent Size | Oper. Weight (lbs.) | Ship. Weight (lbs.) |
|--------------|-----------|-------|-----------|------------------|---------------------|-----------------------|--------------------|---------|---------|----------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|-----------|--------------------|-----------|-----------|---------------------|---------------------|
|              | Min       | Max   |           |                  |                     |                       |                    |         |         |          |         |         |         |         |         |         |         |         |         |         |           |                    |           |           |                     |                     |
| FBD0751      | 50        | 750   | 15:1      | 722              | 628                 | 96.4%                 | 96.2%              | 78"     | 30"     | 55-1/2"  | 57-5/8" | 66-1/8" | 11-7/8" | 11-3/8" | 11-1/4" | 51"     | 13"     | 8-3/4"  | 49-1/2" | 7-3/8"  | 1-1/4"    | 3"                 | 6"        | 6"        | 1,838               | 1,630               |
| FBD1001      | 50        | 999   | 20:1      | 961              | 836                 | 96.4%                 | 96.2%              | 78"     | 30"     | 56-1/2"  | 57-5/8" | 66-1/8" | 11-7/8" | 11-3/8" | 11-1/4" | 51"     | 13"     | 8-3/4"  | 49-1/2" | 6-1/2"  | 1-1/4"    | 3"                 | 6"        | 6"        | 1,908               | 1,666               |
| FBD1251      | 62.5      | 1,250 | 20:1      | 1,203            | 1,046               | 96.4%                 | 96.2%              | 78"     | 30"     | 56-1/2"  | 57-3/4" | 66-1/8" | 11-7/8" | 11-3/8" | 11-1/4" | 51-3/8" | 13"     | 8-3/4"  | 49-1/2" | 6-1/2"  | 1-1/2"    | 3"                 | 6"        | 8"        | 2,045               | 1,718               |
| FBD1501      | 60        | 1,500 | 25:1      | 1,443            | 1,255               | 96.4%                 | 96.2%              | 78"     | 30"     | 67-3/4"  | 68"     | 65-3/8" | 12-3/8" | 11-3/8" | 11-1/4" | 62-3/8" | 15-7/8" | 9"      | 59-1/4" | 5-1/8"  | 1-1/2"    | 4"                 | 8"        | 8"        | 2,377               | 2,031               |
| FBD1751      | 70        | 1,750 | 25:1      | 1,684            | 1,464               | 96.4%                 | 96.2%              | 78"     | 30"     | 66-1/4"  | 68"     | 65-3/8" | 12-3/8" | 11-3/8" | 11-1/4" | 61-1/2" | 15-7/8" | 9"      | 58-3/4" | 5-1/8"  | 1-1/2"    | 4"                 | 8"        | 8"        | 2,528               | 2,087               |
| FBD2001      | 80        | 1,999 | 25:1      | 1,923            | 1,672               | 96.4%                 | 96.2%              | 78"     | 30"     | 66-1/2"  | 68"     | 65-3/8" | 12-3/8" | 11-3/8" | 11-1/4" | 61-1/2" | 15-7/8" | 9"      | 58-3/4" | 5-1/8"  | 1-1/2"    | 4"                 | 8"        | 8"        | 2,640               | 2,157               |
| FBD2501      | 125       | 2,500 | 20:1      | 2,400            | 2,087               | 96.1%                 | 96.0%              | 77-3/4" | 35"     | 83-3/4"  | 83-3/4" | 63-3/4" | 13-1/2" | 11-1/4" | 10-1/2" | 76-1/4" | 19-3/4" | 9-1/4"  | 71"     | 7-1/4"  | 2"        | 4"                 | 8"        | 9"        | 3,670               | 2,627               |
| FBD3001      | 150       | 3,000 | 20:1      | 2,883            | 2,507               | 96.1%                 | 96.0%              | 77-3/4" | 35"     | 83-3/4"  | 83-3/4" | 63-3/4" | 13-1/2" | 11-1/4" | 10-1/2" | 76-1/4" | 19-3/4" | 9-1/4"  | 71"     | 7-1/4"  | 2"        | 4"                 | 10"       | 10"       | 3,970               | 2,951               |
| FBD3501      | 175       | 3,500 | 20:1      | 3,364            | 2,925               | 96.1%                 | 96.0%              | 77-3/4" | 42"     | 91-1/2"  | 86-3/4" | 63-1/2" | 13-1/4" | 11-1/2" | 10-3/4" | 82"     | 20-1/4" | 12-3/4" | 73-1/4" | 8-3/4"  | 2"        | 4"                 | 10"       | 10"       | 4,670               | 3,288               |
| FBD4001      | 333.3     | 3,999 | 12:1      | 3,843            | 3,342               | 96.1%                 | 96.0%              | 77-3/4" | 45-1/2" | 103-1/2" | 99"     | 63-1/2" | 13-3/4" | 11-1/2" | 10-3/4" | 94"     | 24-3/4" | 13-1/2" | 85-1/4" | 10-1/2" | 2-1/2"    | 4"                 | 12"       | 12"       | 5,270               | 3,875               |
| FBD5001      | 499.9     | 4,999 | 10:1      | 4,804            | 4,177               | 96.1%                 | 96.0%              | 77-3/4" | 46-1/2" | 102-1/4" | 99-1/2" | 63-1/2" | 15"     | 11-1/2" | 10-3/4" | 92-1/2" | 22"     | 14"     | 84"     | 9"      | 2-1/2"    | 6"                 | 14"       | 14"       | 5,970               | 4,171               |
| FBD6001      | 600       | 6,000 | 10:1      | 5,766            | 5,014               | 96.1%                 | 96.0%              | 77-3/4" | 50"     | 102-3/4" | 99-3/4" | 63-1/4" | 14-3/4" | 11-1/2" | 10-3/4" | 93-1/4" | 20"     | 15-3/4" | 83-3/4" | 9-1/4"  | 3"        | 6"                 | 14"       | 14"       | 6,970               | 4,781               |

Information subject to change without notice. Dimensions shown are approximate and should not be used for construction purposes.

# CREST<sup>®</sup>

## CONDENSING BOILER

### Codes & Registrations

ANSI Z21.13/CSA Certified

ASME Certified, "H" Stamp / National Board

California Code Compliant

Canadian Registration Number (CRN)

CSD1 / Factory Mutual / GE Gap Compliant

South Coast Air Quality Management District  
Qualified & Energy Star Rated (FBD0751-2001)

### Smart Touch™ Features

#### CON-X-US Remote Connect

#### SMART TOUCH Touchscreen Operating Control

#### Full-Color 8" 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 System
- › 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, Space Heating
- › Hours Running, Domestic Hot Water
- › Hours Running, Modulation Rate
- › Ignition Attempts
- › Last 10 Lockouts

#### Programmable System Efficiency Optimizers

- › Night Setback
- › Anti-Cycling
- › Outdoor Air Reset Curve
- › Ramp Delay
- › Boost Temperature & Time
- › Modulation Factor Control

#### Three Pump Control

- › System Pump
- › Boiler Pump
- › Domestic Hot Water Pump



#### High-Voltage Terminal Strip

- › 120V/1PH/60Hz Power Supply (FBD 0751-2001)
- › 208V/3PH/60Hz Power Supply (FBD 2501-3501)
- › 480V/3PH/60Hz Power Supply (FBD 4001-6001)
- › System Pump, Boiler Pump and DHW Pump Power

#### 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 Contacts
- › System Sensor Contacts
- › 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

### Standard Features

Proof of Closure Valve (FBD6001)

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 100 Feet
- › PVC, CPVC, Polypropylene or AL29-4C (FBD0751-4001)
- › AL29-4C (FBD0751-6001)

ASME "H" Stamped Heat Exchanger

316L Stainless Steel Fire Tubes

160 psi Working Pressure

On/Off Switch

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

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

High Altitude Models Available

SCCR of 5,000 A

10-Year Limited Warranty (See Warranty for Details)

1-Year Warranty on Parts (See Warranty for Details)

### 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 Kits Damper

Modbus Communication

#### Short Circuit Current Rating Options:

**FBD 2501 - 6001**

100,000 A

200,000 A

Motorized Isolation Valve

RealTime O<sub>2</sub> Feedback™

Variable Speed Boiler Pump

Wireless Outdoor Temperature Sensor

#### Electrical Transformer Options (Shipped Loose):

› FBD0751-2001

208V/3PH/60Hz → 120V/1PH/60Hz

480V/3PH/60Hz → 120V/1PH/60Hz

600V/3PH/60Hz → 120V/1PH/60Hz

› FBD2501-3501

480V/3PH/60Hz → 208V/3PH/60Hz

600V/3PH/60Hz → 208V/3PH/60Hz

› FBD4001-6001

208V/3PH/60Hz → 480V/3PH/60Hz

600V/3PH/60Hz → 480V/3PH/60Hz



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