



# Lochinvar®

HIGH EFFICIENCY BOILERS & WATER HEATERS

## COPPER-FIN II® COMMERCIAL BOILER

Submittal Sheet

CHE-Sub-11

### COPPER-FIN II GAS BOILER (MODELS 402 - 2072)

Job Name: \_\_\_\_\_ Model No. \_\_\_\_\_

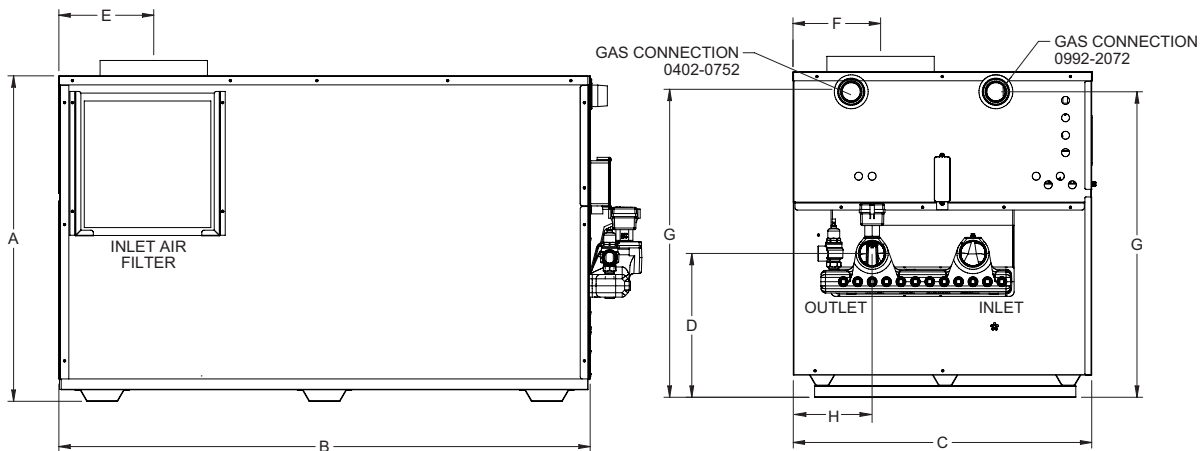
Location: \_\_\_\_\_ Type Gas: \_\_\_\_\_

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

Wholesaler: \_\_\_\_\_

Contractor: \_\_\_\_\_

**NOTES:**



Copper-Fin II Heating Boiler					Dimensions & Specifications											
Model No.	Input MBH	Thermal Eff.	Net AHRI Output Rating		A	B	C	D	E	F	G	H	Vent Size	Air Inlet	Gas Conn	Ship Wt.
			MBH	MBH												
CHN0402	399	85%	339	295	31-1/2"	37-3/4"	22-1/4"	12-1/2"	7"	7"	29"	6-1/2"	6"	6"	1-1/4"	378
CHN0502	500	85%	425	370	31-1/2"	45-1/2"	22-1/4"	12-1/2"	7"	7"	29"	6-1/2"	6"	6"	1-1/4"	414
CHN0652	650	85%	553	481	31-1/2"	56-3/4"	22-1/4"	12-1/2"	8-1/2"	8-1/4"	29"	6-1/2"	8"	8"	1-1/4"	500
CHN0752	750	85%	638	555	31-1/2"	64"	22-1/4"	12-1/2"	8-1/2"	8-1/4"	29"	6-1/2"	8"	8"	1-1/4"	543
CHN0992	990	85%	842	732	36"	48-1/4"	33-1/2"	15-3/4"	8-1/2"	8-1/2"	33-3/4"	8-3/4"	10"	10"	2"	773
CHN1262	1,260	85%	1,071	931	36"	58-1/2"	33-1/2"	15-3/4"	10-1/2"	9-1/2"	33-3/4"	8-3/4"	12"	12"	2"	863
CHN1442	1,440	85%	1,224	1,064	36"	68-3/4"	33-1/2"	15-3/4"	10-1/2"	10-1/2"	33-3/4"	8-3/4"	12"	12"	2"	965
CHN1802	1,800	85%	1,530	1,330	36"	82-1/4"	33-1/2"	15-3/4"	11"	11"	33-3/4"	8-3/4"	14"	12"	2"	1,100
CHN2072	2,070	85%	1,760	1,530	36"	92-1/2"	33-1/2"	15-3/4"	11"	11"	33-3/4"	8-3/4"	14"	12"	2"	1,219

**Notes:**

- Change 'N' to 'L' for LP gas models.
- No deration on LP models
- Water connections for models CH 0402-0752 are 2" NPT on 6-1/2" centers.
- Header increases "B" dimension 3-1/2" for models CH 0402-0752 and 6-1/4" for models CH 0992-2072
- Water connections for models CH 0992-2072 are 2-1/2" NPT on 11-1/4" centers.
- Performance data is based on manufacturer test results.

# COPPER-FIN II®



## Certifications

ANSI Z21.13/CSA 4.9 certified  
South Coast Air Quality Management District  
Texas Commission on Environmental Quality

## Standard Features

- › **85% Thermal Efficiency (AHRI Certified)**
- › **Proportional Firing up to 4:1 Turndown**
  - › Hot Surface Ignition
  - › Low NOx Operation
  - › Sealed Combustion
  - › Low Gas Pressure Operation
- › **Vertical & Horizontal Venting**
  - › Category I Venting
    - › Double Wall “B” Vent Material
  - › Category IV Venting
    - › AL29-4C Stainless Steel Vent Material
- › **ASME Copper Finned Tube Heat Exchanger**
  - › ASME Certified, “H” Stamped
  - › Gasketless design
  - › 160 psi working pressure
- › On/Off Switch
- › Combustible Floor Rated (CH 0992 - 2072)
- › Adjustable High Limit w/ Manual Reset
- › Flow Switch
- › Low Air Pressure Switch
- › Inlet & Outlet Temperature Sensors
- › Easy Access Terminal Strips
- › Downstream Test Cocks
- › 50 psi ASME Relief Valve
- › Temperature & Pressure Gauge
- › 1 Year Warranty on Parts  
(See Warranty for Details)
- › 10 Year Limited Warranty  
(See Warranty for Details)

## Smart System™ Features

- › **SMART SYSTEM™ Operating Control**
  - › 2 Line/16 Character LCD Display
  - › Built in Cascading Sequencer for up to 8 boilers
  - › Front End Loading Capability with Crest or Knight Boilers
  - › Building Management System Integration with 0-10 VDC Input
  - › Outdoor Reset Control with Outdoor Air Sensor
  - › Password Security
  - › Domestic Hot Water Prioritization

- › Low Water Flow Control & Indication
- › Inlet & Outlet Temperature Readout
- › Freeze Protection
- › Service Reminder
- › Time Clock
- › 0-10 VDC Rate Output
- › Condensing Protection
- › 0-10 VDC System Pump Speed Input
- › **Data Logging**
  - › Hours Running, Space Heating
  - › Hours Running, Domestic Hot Water
  - › Ignition Attempts
  - › Last 10 Lockouts
- › **Programmable System Efficiency Optimizers**
  - › Night Setback
  - › Anti-Cycling
  - › Outdoor Air Reset Curve
  - › Boost Temperature & Time
- › **Three Pump Control**
  - › System Pump
  - › Boiler Pump
  - › Domestic Hot Water Pump
- › **High Voltage Terminal Strip**
  - › 120 VAC / 60 Hertz / 1 Phase Power Supply
  - › Pump Contacts with Pump Relay
- › **Low Voltage Terminal Strip**
  - › 24 VAC Auxiliary Device Relay Output - Louvers
  - › Auxiliary Proving Switch Contacts - Louvers
  - › 3-way Valve Contacts for Low Temp. Protection
  - › Alarm on Any Failure Contacts
  - › 0-10 VDC System Pump Speed Contacts
  - › Runtime Contacts
  - › DHW Thermostat Contacts
  - › DHW Tank Sensor Contacts
  - › Unit Enable/Disable Contacts
  - › System Sensor Contacts - Supply and Return
  - › Outdoor Air Sensor Contacts
  - › Contacts for Air Louvers
  - › Contacts on Any Failure
  - › Cascade Contacts
  - › 0-10 VDC BMS External Control Contact
  - › 0-10 VDC Rate Contacts

## Optional Equipment

- Alarm
- High & Low Gas Pressure Switches w/ Manual Reset
- Cupro-Nickel Heat Exchanger
- Low Water Cut Off, Probe Type w/ Manual Reset & Test
- Modbus Communications
- BMS Gateway - BACnet or LonWorks
- Combustible Floor Kit (CH 0402-0752)
- Stack Frame
- Low Temperature Protection Valve
- 30 psi ASME Relief Valve
- 75 psi ASME Relief Valve
- 100 psi ASME Relief Valve
- 125 psi ASME Relief Valve
- 150 psi ASME Relief Valve

## Firing Codes

- M7 Firing Code - California Code
- M9 Firing Code - Hot Surface Ignition with Electronic Supervision
- M13 Firing Code - CSD1 / Factory Mutual / GE Gap

## Venting Options

- Aire-Lock™ Direct Vent Sealed Combustion
- DirectAire® Vertical
- DirectAire® Vertical w/ Sidewall Inlet Outdoor Installation
- Power DirectAire® Horizontal Powered Side Wall Sidewall



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