



Lochinvar[®]
HIGH EFFICIENCY BOILERS & WATER HEATERS

COPPER-FIN II[®]
BOILER
Submittal Sheet
CHE-Sub-10b

COPPER-FIN II[®] GAS BOILER (MODELS 402-2072)

JOB NAME _____
LOCATION _____
ENGINEER _____
MECH. CONTRACTOR _____
MODEL NO. _____
TYPE GAS _____
Btu/hr INPUT _____ **Btu/hr OUTPUT** _____
NOTES

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)

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

SMART SYSTEMTM FEATURES

- › **SMART SYSTEMTM 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

FIRING CODES

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

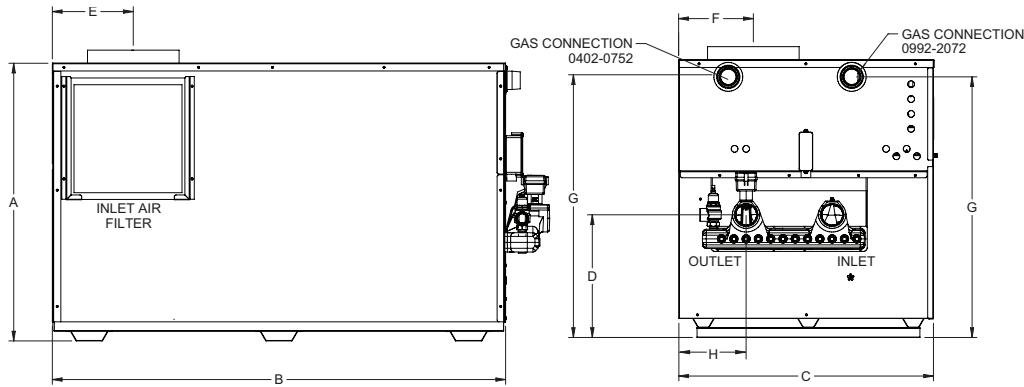
CERTIFICATIONS

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

› **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 Temperature 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

Copper-Fin II® Gas Boiler Dimensions & Specifications



Copper-Fin II Heating Boiler					Dimensions & Specifications											
Model Number	Input MBH	Thermal Efficiency	Output MBH	Net AHRI Rating MBH	A	B	C	D	E	F	G	H	Vent Size	Air Inlet	Gas Conn	Shipping Weight
					CHN0402	399	85%	339	295	31-1/2"	37-3/4"	22-1/4"	12-1/2"	7"	7"	29"
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.

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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