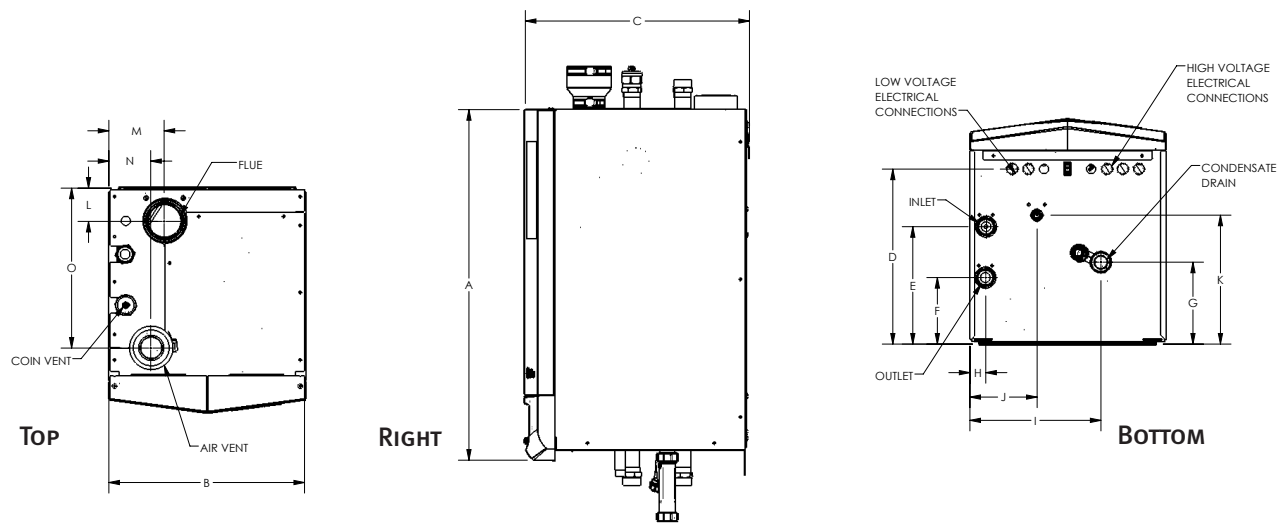




**KNIGHT Wall Mount  
HEATING BOILER  
Submittal Sheet  
WHN-Sub-05**

**KNIGHT® WALL MOUNT HEATING BOILERS**

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



KNIGHT BOILER		AHRI CERTIFIED					DIMENSIONS AND SPECIFICATIONS																		
Model Number	Max. Input MBH	Min. Input MBH	AFUE % MBH	Heating Capacity MBH	Net AHRI Rating MBH	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	Gas Conn.	Water Conn.	Air Inlet	Vent Size	Shipping Wt. (lbs.)
WHN056	55	8.3	95	51	44	33-1/4"	18-1/2"	16"	11-3/4"	9"	3-1/2"	3-3/4"	1-1/2"	3"	6-1/8"	7-1/4"	3-3/4"	6-1/2"	4-1/2"	8-1/2"	1/2"	1"	2"	2"	139
WHN086	85	8.5	95	79	69	33-1/4"	18-1/2"	16"	11-3/4"	9"	3-1/2"	3-3/4"	1-1/2"	3"	6-1/8"	7-1/4"	3-3/4"	8-1/2"	4-1/2"	8-1/2"	1/2"	1"	2"	2"	142
WHN111	110	11	95	102	89	33-1/4"	18-1/2"	19"	14-1/2"	8-3/2"	5"	7-3/4"	1-1/8"	12-3/8"	4-1/4"	11-1/4"	3"	5-1/4"	5-1/8"	10"	1/2"	1"	3"	3"	159
WHN156	155	15.5	95	144	125	33-1/4"	18-1/2"	19"	14-1/2"	8-1/2"	5"	7-3/4"	1-1/8"	12-3/8"	4-1/4"	11-1/4"	3"	5-1/4"	5-1/8"	10"	1/2"	1"	3"	3"	166
WHN200	199.9	19.9	95	185	161	33-1/4"	18-1/2"	19"	14-1/2"	11"	6-1/4"	7-3/4"	1-1/2"	12-3/8"	4-1/4"	9-1/2"	3"	5-1/4"	5-1/2"	10-3/4"	1/2"	1-1/4"	3"	3"	175
WHN286	285	28.5	95	264	229	33-1/4"	18-1/2"	21-3/4"	16-1/2"	11-1/8"	6-1/4"	7-3/4"	1-1/2"	12-3/8"	16-3/8"	12-1/4"	3-1/8"	5-1/4"	4"	15-1/8"	1/2"	1-1/4"	3"	3"	184
WHN400	399	80	94.4*	377#	328	35-1/2"	25"	21-3/4"	17-1/2"	12-1/2"	9-1/4"	9-1/2"	2-1/4"	13-1/4"	21-1/2"	9"	4-3/4"	4"	22-1/2"	3-3/4"	3/4"	1-1/2"	4"	4"	213

\*Thermal Efficiency%  
 # Gross Output MBH

\*\*10:1 Turndown ratio and top and bottom water connections are not included on WHN400. WHN400 operates with a 5:1 turndown.

Information subject to change without notice. Change "N" to "L" for LP gas models. The Net AHRI Water Ratings shown are based on a piping and pickup allowance of 1.15. 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.



## FIRING CODES

- › M9 Standard Construction
- › M7 California Code



## SMART SYSTEM FEATURES

- › **Smart System Digital Operating Control**  
Multi-Color Graphic LCD Display w/Navigation Dial, Soft Keys and Loch-N-Link™ USB programming
- › **Three Boiler Setpoint Temperature Inputs**  
Plus Domestic Hot Water Prioritization
- › **Built-in Cascading Sequencer for up to 8 Boilers, with Cascade Redundancy**  
Multiple Size Boiler Cascade  
Lead Lag  
Efficiency Optimization  
Front End Loading Capability
- › **Outdoor Reset Control with Outdoor Air Sensor**  
Programmable for Three Reset Temperature Inputs
- › **Programmable System Efficiency Optimizers**  
SH Night Setback  
DHW Night Setback  
Anti-Cycling  
Outdoor Air Reset Curve  
Ramp Delay  
Modulation Factor Control  
Boost Temperature & Time
- › **Four Pump Control**  
System Pump with Parameter for Continuous Operation  
Boiler Pump with Variable Speed Control  
Domestic Hot Water Pump  
Domestic Hot Water Recirculation
- › **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 Space Heat/DHW Switching Times
- › **Building Management System Integration**  
0-10 VDC Input to Control Modulation or Setpoint  
0-10 VDC Modulation Rate Output  
0-10 VDC Input to Enable/Disable Call for Heat

- › **Access to BMS Settings through Graphic LCD Display**
- › **High-Voltage Terminal Strip**  
120 VAC / 60 Hertz / 1 Phase Power Supply  
Three Sets of Pump Contacts
- › **Low-Voltage Terminal Strip**  
DHW Recirculation Pump Start/Stop  
24 VAC Device Relay  
Proving Switch Contacts  
Flow Switch Contacts  
Alarm on Any Failure Contacts  
Runtime Contacts  
DHW Thermostat Contacts  
3 Space Heat Thermostat Contacts  
System Sensor Contacts  
DHW Tank Sensor Contacts  
Outdoor Air Sensor Contacts  
Cascade Contacts  
0-10 VDC BMS External Control Contact  
0-10 VDC Boiler Rate Output Contacts  
0-10 VDC Variable Speed System Pump Signal Input  
0-10 VDC Signal to Control Variable Speed Boiler Pump  
Modbus Contacts
- › **Time Clock**
- › **Data Logging**  
Hours Running, Space Heating  
Hours Running, Domestic Hot Water  
Ignition Attempts  
Last 10 Lockouts
- › **Maintenance Reminder**  
Custom Maintenance Reminder with Contractor Contact Information  
Installer Ability to De-activate Service Reminder
- › **Low-Water Flow Safety Control & Indication**
- › **Password Security**
- › **Customizable Freeze Protection Parameters**

## STANDARD FEATURES

- › **ENERGY STAR Most Efficient Product**
- › **95% DOE AFUE Efficiency (56-286)**
- › **Modulating Burner with up to 10:1 Turndown\*\***  
Direct Spark Ignition  
Low NOx Operation
- › **ASME Stainless Steel Heat Exchanger**  
30 PSI ASME Relief Valve
- › **Top and bottom water connections (MNPT)\*\***
- › **Vertical & Horizontal Direct Vent**  
PVC, CPVC, Polypropylene or SS Venting up to 100 feet
- › **SMART SYSTEM Control**
- › **Condensate Trap**
- › **Other Features**  
Automatic Reset High Limit  
Adjustable High Limit w/Manual Reset  
Boiler Circulating Pump  
Zero Clearances to Combustible Materials  
15-Year Limited Warranty (See Warranty for Details)  
5-Year Limited Parts Warranty

## OPTIONAL EQUIPMENT

- CON-X-US® Remote Connectivity
- Modbus Communication
- BACnet MSTP
- Flow Switch
- Low-Water Cutoff w/Manual Reset & Test
- Alarm Bell
- Concentric Vent Kit
- Condensate Neutralization Kit
- BMS Gateway to LON or BACnet IP
- Multi-Temperature Loop Control
- Sidewall Vent Termination
- Wireless Outdoor Sensor
- LP Gas Conversion Kit

\*\*Not included on WHN400



Lochinvar, LLC  
300 Maddox Simpson Parkway  
Lebanon, Tennessee 37090  
P: 615.889.8900 / F: 615.547.1000  
Lochinvar.com

