

**HIGH EFFICIENCY COMMERCIAL
POOL PACKAGE SYSTEMS**

AQUAS™

COMMERCIAL POOL PACKAGE

9 INDOOR & OUTDOOR MODELS FROM
285,000 TO 850,000 BTU/HR

UP TO 98% THERMAL EFFICIENCY

UP TO 10:1 TURNDOWN RATIO

TITANIUM INDIRECT PLATE AND
FRAME POOL HEAT EXCHANGER
ON SELECT MODELS

 **SMART SYSTEM™**
OPERATING CONTROL



DESIGNED ★ ENGINEERED ★ ASSEMBLED

USA

 **Lochinvar®**

INNOVATION IN DESIGN

The AQUAS commercial pool package is a dramatic advancement in the design of pool heating systems. The AQUAS package is a factory assembled system featuring a free-standing boiler piped to a dedicated titanium pool heat exchanger.

- Effective heat transfer from a high efficiency, modulating condensing boiler.
- A complete factory assembled package reduces installation cost and time.
- Separating the pool water from the direct-fired heat source reduces maintenance and promotes longer equipment life.
- Reliability and performance with a positive user experience.

POOL HEAT EXCHANGER

A durable industrial grade titanium heat exchanger provides effective heat transfer. The pool water flows through a series of plates. Titanium is a strong but light-weight alloy used in aerospace, automotive and military applications. Used in pool systems, titanium is highly resistant to corrosion from salt water and chlorine. This simple design keeps the pool water separate from the heat source while allowing for complete and highly efficient heat transfer.



INSIDE THE BOILER

The AQUAS is an innovative pool package that begins with the most advanced boilers in the industry today. The AQUAS heat source is a high efficiency, condensing boiler perfectly suited for the low water temperatures typical of pool heating. The following are some of the exciting features you get with the advanced boiler design.

FULLY MODULATING BURNER

Modulation is an important combustion feature that is long overdue in the pool industry. Why fire the appliance at 100% input in short bursts to heat the pool water? With a modulating burner, the boiler will tune in the input rate to exactly match the Btu/hr losses of the pool water. The burner will then “cruise” along comfortably, heating the pool water in long, low input burn cycles that dramatically increase the overall life of the boiler.

THERMAL EFFICIENCY

The AQUAS pool package is constructed with stainless steel modulating condensing boilers that deliver up to 98% thermal efficiency. Low return water temperature from a pool makes for an ideal application. The heat exchanger is sized to maximize the heat transfer of the boiler water to the pool water flowing through the heat exchanger. Higher thermal efficiency reduces your fuel costs.

DIRECT VENT WITH PVC

Reduce your installation cost and save time and effort by installing the AQUAS pool package with PVC pipe. The AQUAS pool package offers a variety of vent designs in your choice of PVC, CPVC, Polypropylene or Stainless Steel vent material. What’s more, you can Direct Vent the AQUAS. By drawing the combustion air into the appliance with a dedicated intake pipe, the AQUAS is protected from corrosive pool chemicals that could damage the combustion system.

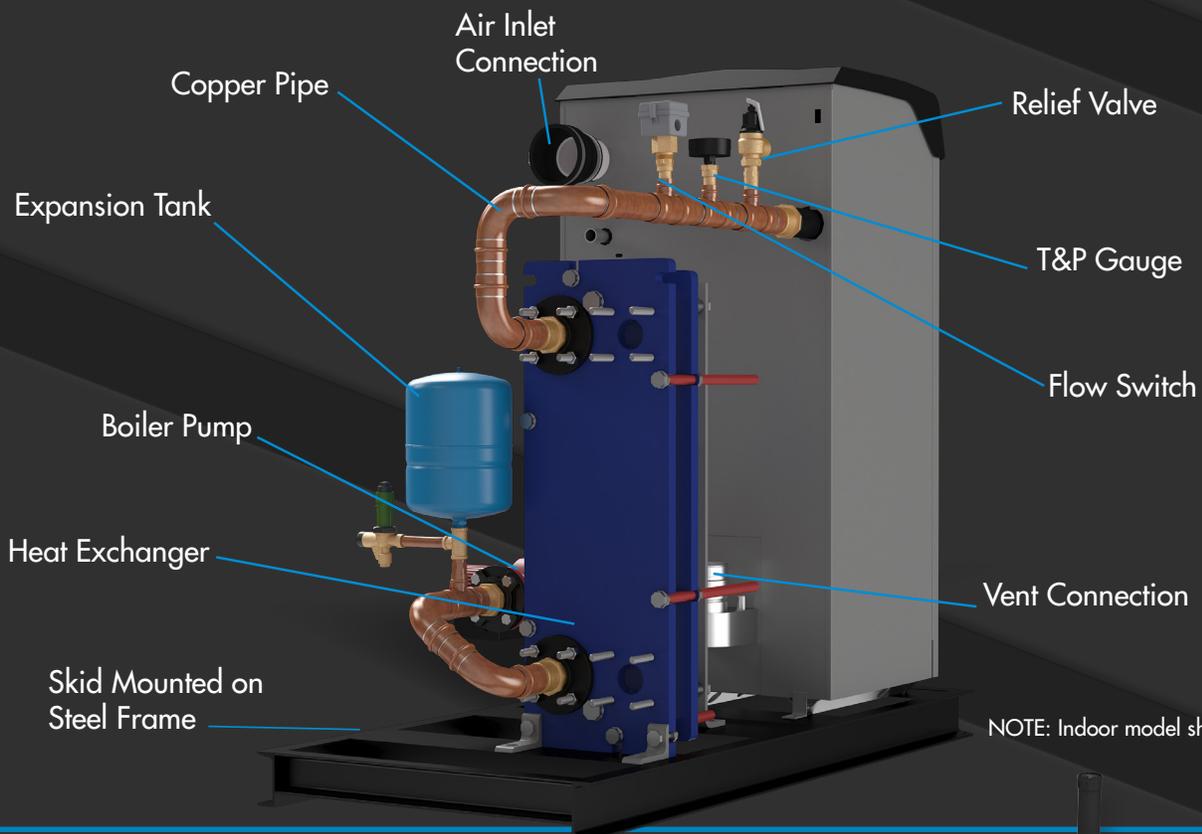
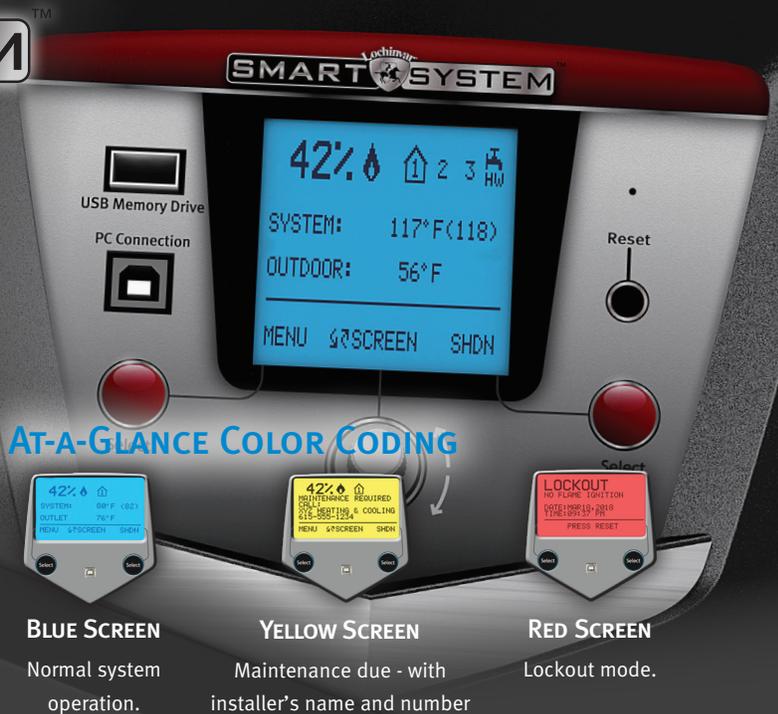


Lochinvar SMART SYSTEM

REFINED DESIGN PUTS MORE CONTROL AND INFORMATION AT YOUR FINGERTIPS

Just a Few of the Advanced Features:

- MULTI-COLOR GRAPHIC LCD DISPLAY
- NAVIGATION DIAL
- CASCADE OF UP TO 8 AQUAS PACKAGES
- USB PORT FOR PC CONNECTION
- MAINTENANCE REMINDER WITH INSTALLER NAME & NUMBER
- MODBUS COMMUNICATION (OPTIONAL)
- PASSWORD SECURITY
- OPERATIONAL AND ALARM READOUTS



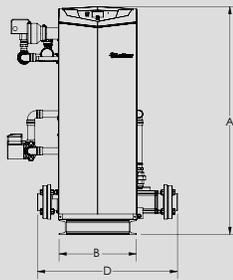
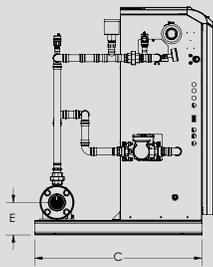
OUTDOOR RATED MODELS

The AQUAS OXN402-602 models are specially trimmed for outdoor installation. The jacket is sealed and rated to protect the boiler against the elements. Pump covers, air intake covers and a specially-designed vent assembly complete the package to allow for easy installation outdoors.

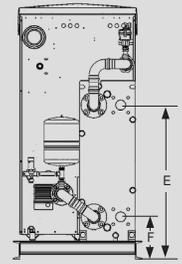
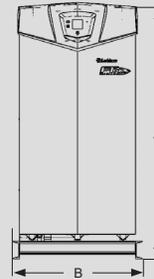
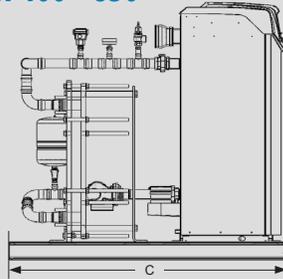
*Outdoor models utilize Lochinvar's water tube design heat exchanger and cupro-nickle shell & tube pool heat exchanger. Optional titanium shell and tube pool heat exchanger available.



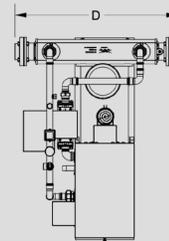
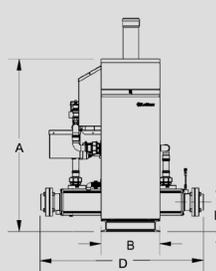
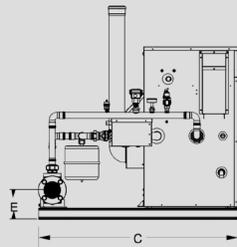
APN 285



APN 400 - 850



OXN 402 - 602



Model Number	Input Btu/hr	Turn Down	A	B	C	D	E	F	Pool Conn.	Gas Conn.	Vent Size	Air Inlet	Pool Flow (GPM)	Ship Wt.
Indoor Models														
APN285	285,000	10:1	46-1/2"	15-3/4"	34"	28-1/2"	6-3/4"	-	2-1/2"	1/2"	3"	3"	68	390
APN400	399,000	10:1	57-1/2"	29-1/4"	62-1/2"	-	34-3/4"	9-1/2"	2"	1"	4"	4"	52	1224
APN500	500,000	10:1	57-1/2"	29-1/4"	62-1/2"	-	34-3/4"	9-1/2"	2"	1"	4"	4"	65	1250
APN600	600,000	7:1	57-1/2"	29-1/4"	62-1/2"	-	34-3/4"	9-1/2"	2"	1"	4"	4"	78	1250
APN725	725,000	7:1	57-1/2"	29-1/4"	62-1/2"	-	35-1/4"	10"	2"	1"	6"	4"	94	1338
APN850	850,000	7:1	57-1/2"	29-1/4"	62-1/2"	-	35-1/4"	10"	2"	1"	6"	4"	90	1367
Outdoor Models														
OXN402	399,000	5:1	45-3/4"	15-3/4"	53"	43-1/4"	7-3/4"	-	2-1/2" or 3"	1"	4"	4"	93	465
OXN502	500,000	5:1	45-3/4"	15-3/4"	57-1/2"	43-1/4"	7-3/4"	-	2-1/2" or 3"	1"	4"	4"	117	497
OXN602	600,000	5:1	46"	15-3/4"	69"	43-1/4"	7-3/4"	-	3"	1"	4"	4"	142	534

Notes: Change 'N' to 'L' for LP gas models. No deration on LP models. Performance data is based on manufacturer test results. Agency certification applies to the boiler.

STANDARD FEATURES

- ▶ **Up to 98% Thermal Efficiency**
 - Modulating Burner with up to 10:1 turndown
 - Direct-Spark Ignition
 - Low NOx Operation
 - Sealed Combustion
 - Low Gas Pressure Operation
- ▶ **Vertical & Horizontal Venting**
 - Category IV Venting up to 100 Feet PVC, CPVC
 - Polypropylene or AL29-4C Vent Material
 - Sidewall Vent Terminations Provided (Except APN285)
- ▶ **ASME Stainless Steel Boiler Heat Exchanger**
 - ASME Certified, "H" Stamped
 - Gasketless Design
 - 160 PSI Working Pressure
- ▶ On/Off Switch
- ▶ Expansion Tank w/ Fill Valve
- ▶ Adjustable High Limit w/ Auto Reset
- ▶ Adjustable High Limit w/ Manual Reset
- ▶ Flow Switch
- ▶ Low Air Pressure Switches
- ▶ Inlet & Outlet Temperature Sensors
- ▶ Two Easy Access Terminal Strips
- ▶ Temperature & Pressure Gauge
- ▶ Zero Clearances to Combustible Material
- ▶ ASME Pressure Relief Valve

- ▶ **Titanium Plate & Frame Heat Exchanger** (APN400-850)
 - Salt Water Ready
- ▶ **Titanium Shell & Tube Heat Exchanger** (APN285)
 - Salt Water Ready
 - Flanged CPVC Connections
- ▶ **Cupro-Nickel Pool Shell & Tube Heat Exchanger** (Outdoor Models)
 - Salt Water Ready
 - Flanged CPVC Connections
- ▶ 10 Yr Boiler Warranty (See Warranty for Details)
- ▶ 5 Yr Titanium Pool Heat Exchanger Warranty (See Warranty for Details)
- ▶ 3 Yr Cupro-Nickel Pool Heat Exchanger Warranty (See Warranty for Details)
- ▶ 1 Yr Parts Warranty (See Warranty for Details)

SMART SYSTEM™ FEATURES

- ▶ **SMART SYSTEM™ Operating Control**
 - Multi-Colored Graphic LCD Display w/ Navigation Dial
- ▶ **Built in Cascading Sequencer for up to 8 Pool Heaters**
 - Lead Lag
 - Efficiency Optimization
 - Mix multiple input sizes
- ▶ **Building Management System Integration**
 - Optional Modbus communication
 - 0-10 VDC Input Control for Modulation or SetPoint
 - 0-10 VDC Output for Modulation Rate

OPTIONAL EQUIPMENT

- ▶ **CON-X-US Remote Connect**
 - Titanium Shell & Tube Pool Heat Exchanger, 5 Yr Warranty (Outdoor Models)
- ▶ Alarm on Any Failure
- ▶ Condensate Neutralization Kit
- ▶ High & Low Gas Pressure Switches w/ Manual Reset
- ▶ Room Air Kit
- ▶ Secondary Heat Exchangers
- ▶ BMS Gateways for LON or BACnet

FIRING CODES

- ▶ M9 Standard Construction
- ▶ M7 California Code (APN 285 & Outdoor)
- ▶ M13 CSD1 / Factory Mutual / GE Gap (500-850)

For Ease In Ordering By Model Number

AP/OX N 5 0 0 M 9



This heater is 500,000 Btu/hr natural gas Pool Heater. It has M9 firing controls.



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