

HIGH EFFICIENCY COMMERCIAL POOL PACKAGE SYSTEMS

AQUAS™

COMMERCIAL POOL PACKAGE

Lochinvar™ SMART SYSTEM™

- LCD DISPLAY, NAVIGATION DIAL
- INDIRECT POOL WATER HEATING
- 285,000 TO 850,000 BTU/HR INPUT
- UP TO 10:1 TURNDOWN RATIO
- PVC DIRECT VENT UP TO 100 EQUIVALENT FT.
- POOL HEAT EXCHANGER RATED FOR SALT WATER

Optional
**TITANIUM
POOL
HEAT EXCHANGER**



Lochinvar®
HIGH EFFICIENCY POOL & SPA HEATERS

DESIGNED ★ ENGINEERED ★ ASSEMBLED

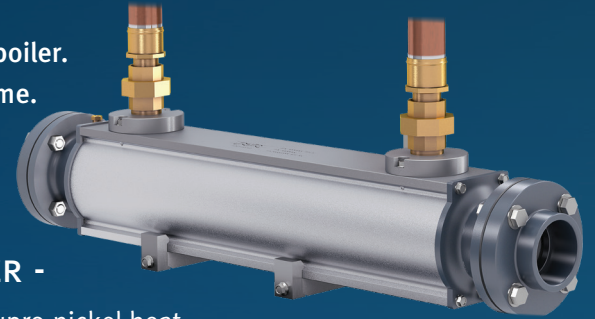
USA

INNOVATION IN DESIGN

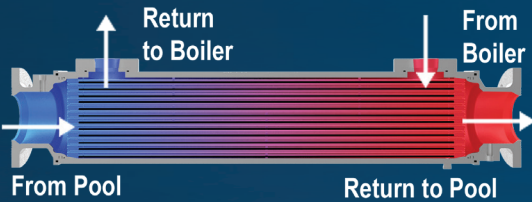
The AQUAS commercial pool package is a dramatic advancement in the design of pool heating systems. The AQUAS package is a factory assembled system featuring a free-standing boiler piped to a dedicated cupro-nickel pool heat exchanger.

The AQUAS indirect pool heating design gives you...

- 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 cupro-nickel heat exchanger provides effective heat transfer. The pool water flows through a series of cupro-nickel tubes. Surrounding the tubes is a chamber filled with heated water from the boiler. This simple design keeps the pool water separate from the heat source while allowing for complete and highly efficient heat transfer.

OPTIONAL TITANIUM POOL HEAT EXCHANGER

Now, Lochinvar offers an optional titanium pool heat exchanger. 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.

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

AT-A-GLANCE COLOR CODING



BLUE SCREEN

Normal system operation.



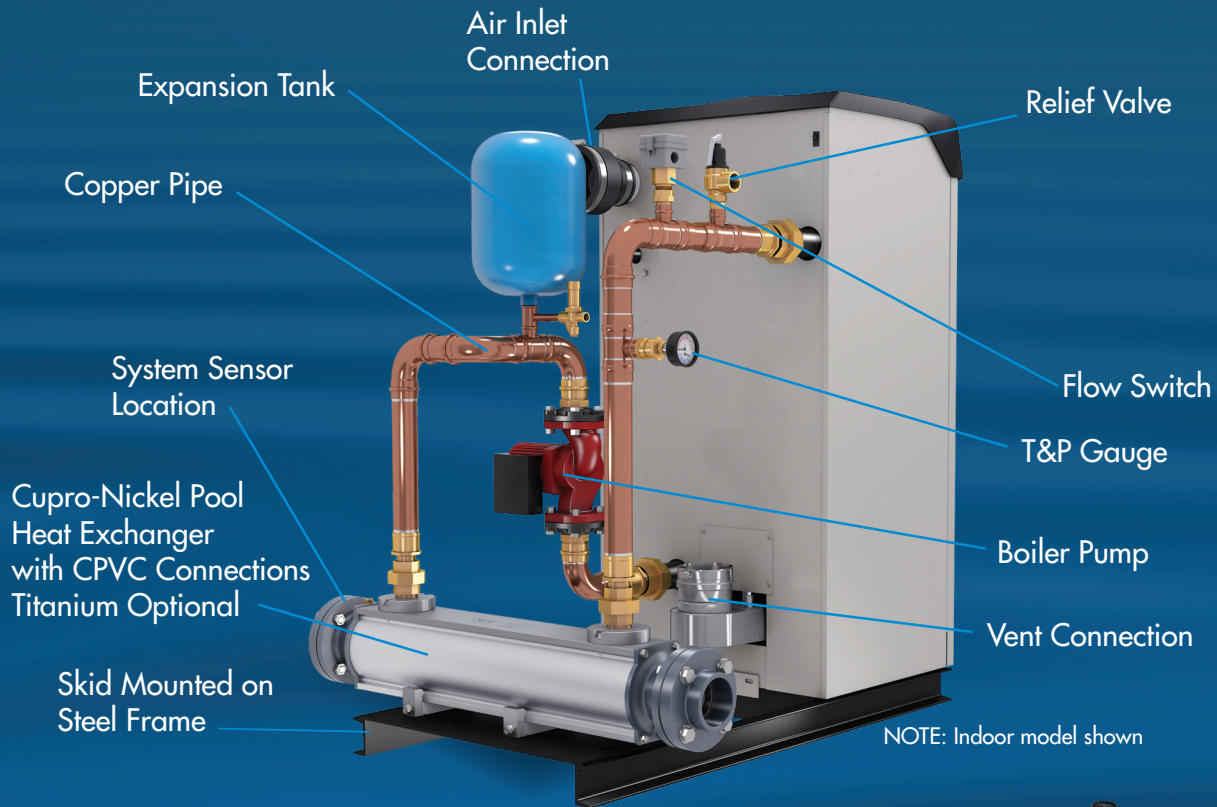
YELLOW SCREEN

Maintenance due - with installer's name and number



RED SCREEN

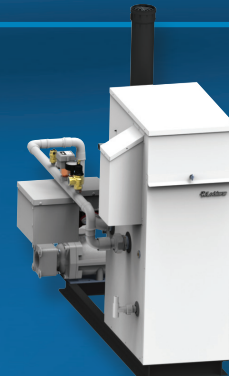
Lockout mode.



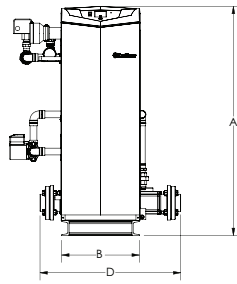
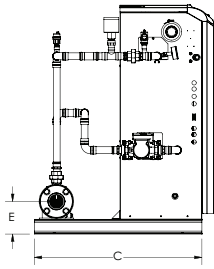
OUTDOOR RATED MODELS

The AQUAS OXN402-802 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.

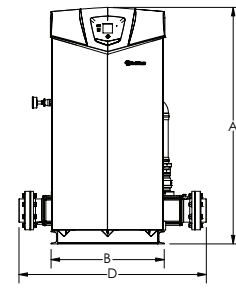
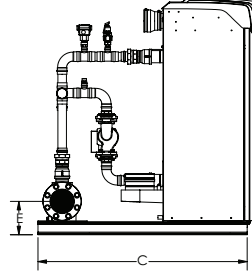
*Outdoor models utilize Lochinvar's water tube design heat exchanger.



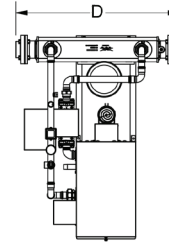
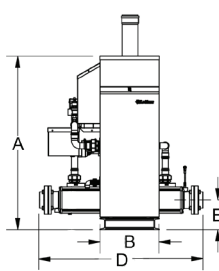
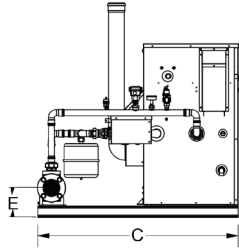
APN 285



APN 400 - 850



OXN 402 - 802



Model Number	Input Btu/hr	Turn Down	A	B	C	D	E	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	399,999	10:1	55-1/2"	26-1/2"	49"	43-1/4"	7-3/4"	3"	1"	4"	4"	96	622
APN500	500,000	10:1	55-1/2"	26-1/2"	49"	43-1/4"	7-3/4"	3"	1"	4"	4"	120	647
APN600	600,000	7:1	55-1/2"	26-1/2"	49"	43-1/4"	7-3/4"	3"	1"	4"	4"	144	664
APN725	725,000	7:1	56"	26-1/2"	49"	44"	7-3/4"	4"	1"	6"	6"	174	774
APN850	850,000	7:1	56"	26-1/2"	49"	44"	7-3/4"	4"	1"	6"	6"	204	801
Outdoor Models													
OXN402	400,000	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
OXN702	700,000	5:1	46"	15-3/4"	74"	44"	7-3/4"	3" or 4"	1"	6"	4"	166	634
OXN802	800,000	5:1	46"	15-3/4"	79"	44"	7-3/4"	3" or 4"	1"	6"	4"	202	671

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 285)
- › 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
- › Standard Cupro-Nickel Pool Heat Exchanger
 - Salt Water Ready
 - Flanged CPVC Connections
- › 10 Yr Boiler Warranty (See Warranty for Details)
- › 1 Yr Parts Warranty (See Warranty for Details)
- › 3 Yr Pool Heat Exchanger 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
 - › Outdoor Reset Control w/ Outdoor Air Sensor
 - › 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 Pool Heat Exchanger, 5 Yr Warranty
 - › Alarm Bell
 - › 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
- › M13 CSD1 / Factory Mutual / GE Gap (500-850)

For Ease In Ordering By Model Number
AP/OX N 500 M9



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



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