

**HIGH EFFICIENCY COMMERCIAL
POOL PACKAGE SYSTEMS**

AQUAS™

COMMERCIAL POOL PACKAGE

12 MODELS FROM 750,000
TO 6,000,000 BTU/HR

UP TO 96.2% THERMAL EFFICIENCY

UP TO 25:1 TURNDOWN RATIO

TITANIUM INDIRECT PLATE AND
FRAME POOL HEAT EXCHANGER

INDOOR/OUTDOOR INSTALLATION

 **SMART TOUCH™**
OPERATING CONTROL

 **CON-X-US®**
REMOTE CONNECT CAPABLE



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.
- Jacket design is suitable for outdoor installations with optional outdoor hood kit.

POOL HEAT EXCHANGER

A durable industrial grade titanium heat exchanger provides effective heat transfer. 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 96.2% 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, 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.

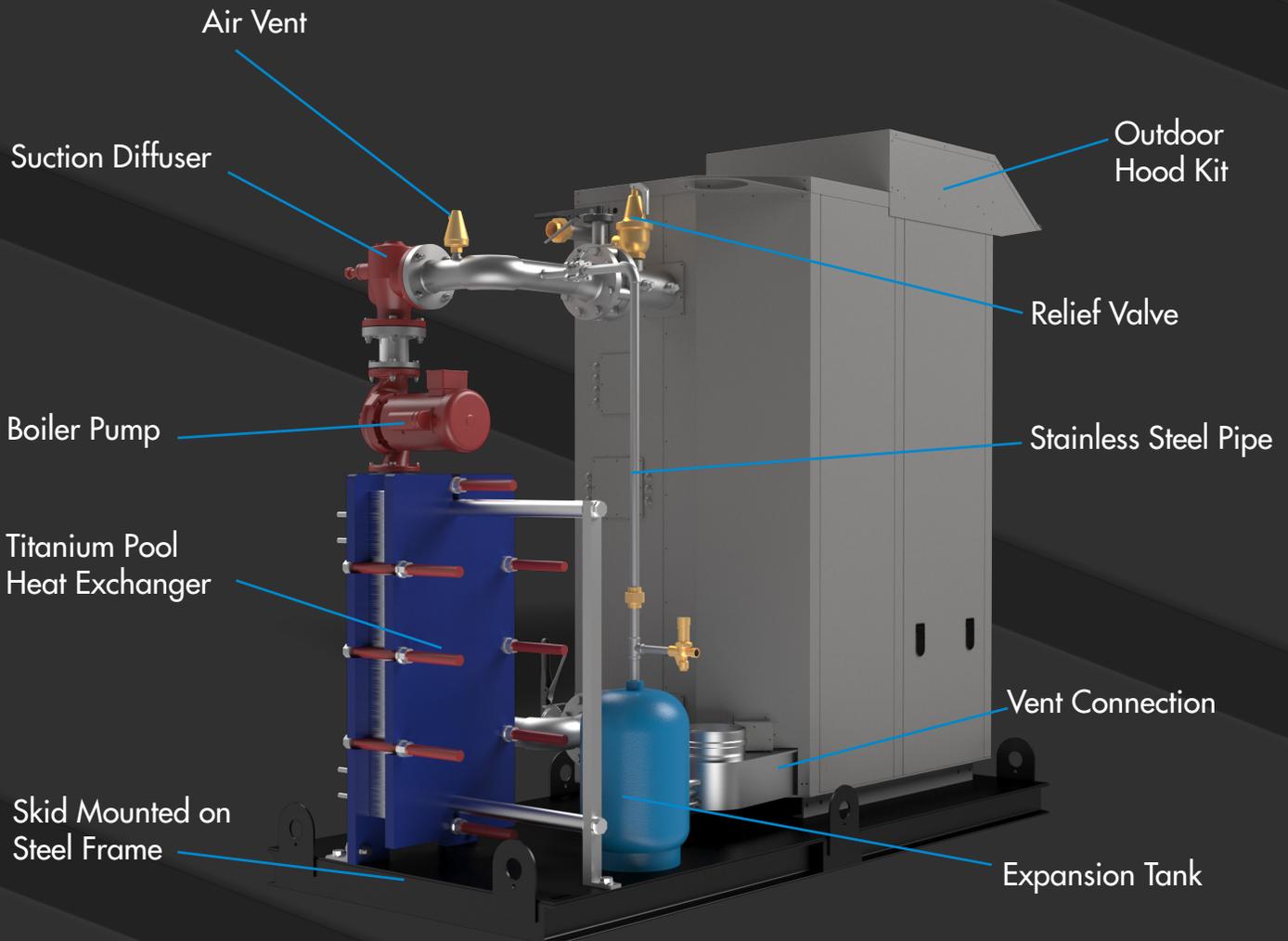




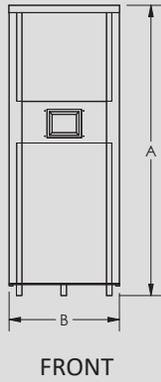
REFINED DESIGN PUTS MORE CONTROL AND INFORMATION AT YOUR FINGERTIPS

JUST A FEW OF THE ADVANCED FEATURES:

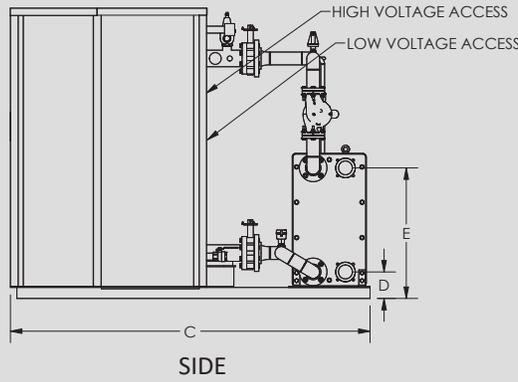
- Multi-Color Graphic LCD Touch Display
- Cascade of up to 8 AQUAS Packages
- USB Port for PC Connection
- Maintenance Reminder with Installer Name & Number
- BACnet MSTP Communication (Modbus Optional)
- Password Security
- Operational and Alarm Readouts



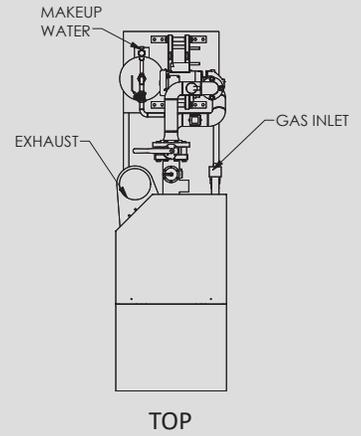
AQUAS DIMENSIONS AND SPECIFICATIONS



FRONT



SIDE



TOP

*Add 9" to height when outdoor hood required.

AQUAS POOL PACKAGE		DIMENSIONS & SPECIFICATIONS										
Model Number	Input Btu/hr	A	B	C	D	E	Pool Conn.	Gas Conn.	Vent Size	Air Inlet	Pool Flow (GPM)	Ship Wt.(lbs)
APO0750N	750,000	79"	30"	87-3/4"	7-1/4"	35-1/2"	3"	1-1/4"	6"	6"	96	2,623
APO1000N	999,000	79"	30"	87-3/4"	7-1/4"	35-1/2"	3"	1-1/4"	6"	6"	128	2,659
APO1250N	1,250,000	79"	30"	87-3/4"	7-1/4"	35-1/2"	3"	1-1/2"	8"	6"	167	2,809
APO1500N	1,500,000	79"	30"	97-3/4"	7-1/4"	35-1/2"	3"	1-1/2"	8"	8"	192	3,097
APO1750N	1,750,000	79"	30"	97-3/4"	7-1/4"	35-1/2"	3"	1-1/2"	8"	8"	215	3,247
APO2000N	1,999,000	79"	30"	97-3/4"	7-1/4"	35-1/2"	3"	1-1/2"	8"	8"	225	3,397

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. For sizes larger than 2,000,000 Btu/Hr contact factory.

STANDARD FEATURES

- › Up to 96.2% Thermal Efficiency
- › Modulating Burner with up to 25:1 Turndown
 - Direct-Spark Ignition
 - Low NOx Operation
 - Sealed Combustion
 - Low Gas Pressure Operation
- › Vertical and Horizontal Direct Venting
 - Category IV up to 100 Feet
 - PVC, CPVC, Polypropylene or AL29-4C Vent
- › ASME "H" Stamped Heat Exchanger
 - 316L Stainless Steel Fire Tubes
 - Gasketless Design
 - 160 psi Working Pressure
 - On/Off Switch
 - Air Inlet Filter w/Replacement Reminder
- Adjustable High Limit with Manual Reset
- Low Water Cutoff with Manual Reset & Test
- High & Low Gas Pressure Switches w/Manual Reset
- Low Air Pressure Switches
- Condensate Trap w/Blocked Drain Switch
- Drain Valve
- Pool Sensor
- Inlet & Outlet Temperature Sensors
- High-Voltage Terminal Strip
- Low-Voltage Terminal Strip
- Downstream Gas Test Cocks
- 50 psi ASME Relief Valve
- Temperature & Pressure Gauge
- Zero Clearances to Combustible Materials
- 10-Year Limited Warranty (See Warranty for Details)
- 5-Year Warranty on Pool Heat Exchanger (See Warranty for Details)
- 1-Year Warranty on Parts (See Warranty for Details)
- › Titanium Pool Heat Exchanger
 - Salt Water Ready

SMART TOUCH™ FEATURES

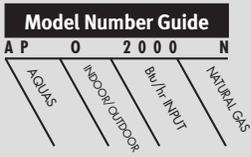
- › CON-X-US Remote Connect
- › SMART TOUCH™ Touchscreen Operating Control
- › Full-Color 8" Touchscreen LCD Display
- › Built-in Cascading Sequencer for up to 8 Pool Heaters
 - Built-in Redundancy
 - Cascade Multiple Sized Boilers
 - Lead/Lag Cascade
 - Efficiency Optimized Cascade
- › Building Management System Integration with 0-10 VDC Input
- › BACnet MSTP Communications
- › Modbus Communications
- › Password Security
- › Low Water Flow Safety Control & Indication
- › Inlet & Outlet Temperature Readout
- › Freeze Protection
- › Service Reminder
- › Time Clock
- › Data Logging
 - Ignition Attempts
 - Last 10 Lockouts
- › High-Voltage Terminal Strip
 - 120 VAC / 60 Hertz / 1 Phase Power Supply
- › Low-Voltage Terminal Strip
 - Device Relay Contacts
 - Proving Switch Contacts
 - Alarm on Any Failure Contacts
 - Runtime Contacts
 - Spa Thermostat Contacts
 - Unit Enable/Disable Contacts
 - Pool Sensor Contacts
 - Spa Sensor Contacts
 - Outdoor Air Sensor Contacts
 - Cascade Contacts
 - 0-10 VDC BMS External Control Contacts

OPTIONAL EQUIPMENT

- Alarm on Any Failure
- BMS Gateway - BACnet IP or LonWorks
- Outdoor Hood Kit for Non-sheltered Installations
- Condensate Neutralization Kit
- SMART TOUCH PC Software
- Common Vent Kits
- › Electrical Options (Shipped Loose):
 - 208V/3Ø/60Hz
 - 480V/3Ø/60Hz
 - 600V/3Ø/60Hz

CODES & REGISTRATIONS

- ANSI Z21.13/CSA Certified
- ASME Certified, "H" Stamp / National Board
- California Code Compliant
- CSD1 / Factory Mutual / GE Gap Compliant
- Canadian Registration Number (CRN)
- South Coast Air Quality Management District Qualified
- AHRI Certified Boiler



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

