Heating with a unique gas fired high efficiency unit. Robur GAHP-A is the first air-source water-ammonia absorption heat pump. By using natural gas as the primary energy source it supplies hot water up to 140 °F. The right choice for heating systems where the most efficient gas appliance available is desired. With a gas efficiency at rated conditions of 129%, this unit is suitable for raising the average efficiency of traditional boiler heating systems. In moderate climate areas, operating with a Robur GAHP-A unit in conjunction with a standard heating unit will raise the average overall heating system efficiency up to approximately 112-122%. The GAHP-A unit offers a wide variety of convenient applications:
- high efficiency hot water heating systems for light commercial, industrial, residential and multi-family buildings;
- any system where hot water, up to 140 °F, is required;
- any system that has continuous hot water demands or 24 hour industrial requirements.

GAHP Line RTA Series
Gas Fired Absorption Heat Pump Modular Configurations

Heating

Use
Type Air to water
Heat transfer fluid Water
Heating capacity From 247,000 to 617,500 Btu/h
Renewable energy percentage contributing to the total heat output 38
Heating efficiency 129%
Outlet water temperature 140 °F
Main applications High efficiency medium-low temperature hydronic heating systems: radiant panels, fan coils, swimming pools, industrial heating.
Main advantage Savings up to 40% in heating operational costs in comparison with the best gas boilers, due to the energy recovered from a renewable source (air).

Additional advantages
- Single Phase Power.
- This unit may be linked to lower performance boilers to raise total system efficiency.
- High Efficiency recovering part of the thermal energy from the outdoor air.
- The prevailing use of gas reduces the need of electric power by approximately 67% in comparison with electric compression units (4.5 electric kW for 617,500 Btu/h heating).
- Complete flexibility for capacity control. Robur units may be combined for greater heating capacity, modularity and redundancy.
- Minimal Electrical Panel requirements.
- For application requiring standby power, the electric generator size and electric output will be lower.
- No Comfort Reduction during Defrosting Cycles: the unit supplies about 50% of its rated heating capacity.
- Remote management and staging by Direct Digital Controller (DDC - Optional). One DDC can manage up to 16 Heat Pump modules on a common water loop.
- High Reliability due to few moving parts inside the unit.
- Easy Maintenance, similar to gas fired boilers.
- No Use of Harmful Refrigerants.
- Outdoor Installation. Save valuable indoor space usually required for a mecanical room.
- Features
- Patented absorption cycle.
- Air source evaporator with single row aluminium fin coil.
- Pre-mixed gas burner. Stainless steel multiple gas type with ignitor and flame sensor device controlled by an electronic ignition control.
- Microprocessor control. Printed resin electronic circuit with LED display. Ensures optimum operation of the absorption cooling process while allowing easy access of unit data for preventative maintenance and diagnostics.
- Optional Direct Digital Controller (DDC). A single device to fully manage and control Robur units.
- Built-in safety and control devices.
Performance Ratings - Heating

<table>
<thead>
<tr>
<th>RTA 00-240</th>
<th>RTA 00-360</th>
<th>RTA 00-480</th>
<th>RTA 00-600</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heating capacity (**)</td>
<td>Btu/h</td>
<td>247,000</td>
<td>370,500</td>
</tr>
<tr>
<td>Gas input</td>
<td>Btu/h</td>
<td>191,000</td>
<td>286,500</td>
</tr>
<tr>
<td>Ambient operating temperature</td>
<td>°F</td>
<td>maximum</td>
<td>113</td>
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<tr>
<td></td>
<td>minimum</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td>Hot water temperature</td>
<td>°F</td>
<td>maximum (to hydronic system)</td>
<td>140</td>
</tr>
<tr>
<td></td>
<td>minimum (to unit)</td>
<td>122</td>
<td>122</td>
</tr>
<tr>
<td>Hot water flow</td>
<td>GPM</td>
<td>272</td>
<td>40.8</td>
</tr>
<tr>
<td>Internal pressure drop of nominal hot water flow</td>
<td>psi</td>
<td>4.3</td>
<td>4.3</td>
</tr>
</tbody>
</table>

Electrical Ratings (**)

| V | 208 - 230 |
| kW | 1.8 | 2.7 | 3.6 | 4.5 |

Physical Data (**)

| pounds | 2,086 | 3,144 | 4,027 | 5,242 |
| FPT | 1 1/2 | 1 1/2 | 2 | 2 |
| FPT | 1 | 1 | 1 | 1 |
| inches | 49 | 49 | 49 | 49 |
| inches | 112 | 153 | 204 | 255 |
| inches | 53 1/4 | 53 1/4 | 53 1/4 | 53 1/4 |

Optional DDC

- One Robur DDC can control up to 16 units working on a common hydronic loop or up to 48 units on a common loop when connected to two additional Robur DDCs.
- Programmable time scheduling.
- Monitoring of inlet and outlet water temperatures.
- Sequence step control of multiple units (Stacking).
- Equals run time of individual modules.
- Visual and audible alarm for each module.
- Constant display of the system operating parameters.
- Logging and displaying of fault events.
- General fault and burner lockout signal for remote connection.

Due to continuous product innovation and development, Robur reserves the right to change product specifications without prior notice.

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