Gas Absorption Heat Pumps

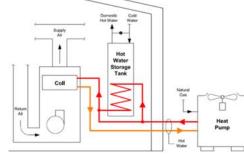
"The Next Revolution in gas-fired building heating equipment where you live and work"

by Stone Mountain Technologies, Inc.

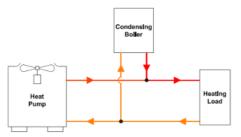
Gas-fired furnaces, boilers, water heaters, combi units, with space cooling options

Key Benefits & General Features

- ✓ New class of ultra fuel-efficient gas heating appliances
- ✓ Historically proven thermodynamic cycle, updated for modern applications
- ✓ Fuels: Natural Gas, Propane, Heating Oil and Bio-Diesel
- ✓ SCAQMD Compliant
- Modulating/Condensing burner technology
- \checkmark Refrigerant pair (H₂O/NH₃) has zero GHG impact and remains within the hermetically sealed thermal compressor system
- ✓ Outdoor installation: No refrigerant indoors or flue venting required. (Indoor option available for residential storage water-heater)
- ✓ Ideal option for Net Zero Energy buildings
- ✓ Core "Thermal Compressor" is sold to OEMs who finish and distribute to market



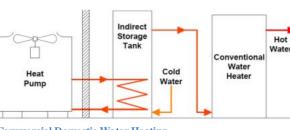
Space (forced air) & Water Heating

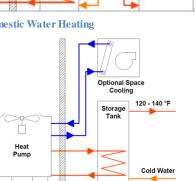


Commercial Hydronic Heating

Space-Heating & Pool-Heating

- ✓ Residential or Light Commercial
- ✓ Output Range: 25 140 MBH (can be staged > 1,000 MBH)
- ✓ COP: 1.45 (@+47°F ambient)
 - 1.15 (@-20°F ambient) 1.60 (Pool heating)
- ✓ Delivered Heat: 90 160°F
- ✓ Modulation: 4:1
- \checkmark Hydronically coupled to forced air; or can provide direct water input to radiant/baseboard or pool heating systems

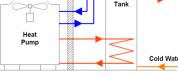






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Water Heating with Space Cooling

Domestic Hot Water Heating

- ✓ Residential or Commercial
- \checkmark EF: 1.3 (as a storage water heater)
- ✓ Delivered Heat: 95 160°F ✓ Storage Tank Applications
- o Residential: 10 kBTU
- o Commercial: 25 140 MBH (can be staged > 1,000 MBH)
- ✓ In commercial applications, GAHP can be tied to indirect storage tank for baseloading, with traditional equipment to provide for peak loads.

Heating with Cooling Configurations

- Mode 1: Space cooling is "free" when water-heating load is present
- ✓ Mode 2: Reversible heat-pump ideal for heating-dominated climates with short cooling seasons.
- ✓ Delivered Heating: 90 160°F
- ✓ Delivered Cooling: $40 60^{\circ}$ F
- \checkmark Various capacities available, residential or commercial
- ✓ Modulation: 4:1



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