

Pool and Spa Heaters Fact Sheet

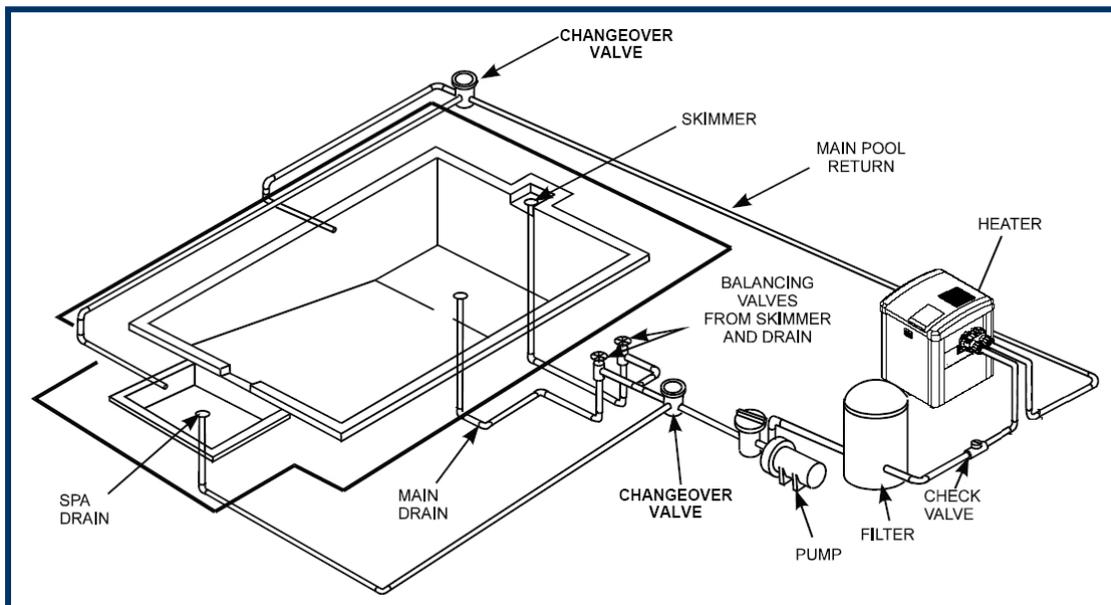
Summary

Pool heaters are manufactured in large part by the same manufacturers of water heaters and boilers. The principal difference is that their heat exchangers must be able to resist corrosion from pool chemicals and the thermal shock of operating at lower temperatures. Indoor and outdoor units are available. Pool heaters are available for spas and residential pools and commercial markets like hotels and motels. Input rates vary from 60,000 to 825,000 Btu/hr.

Pool heaters are sized according to the pool surface area. Most pool heaters have atmospheric burners and only require 0.25 psi (7") gas delivery pressure. The pool they serve and their size will give an indication of their BTU rating. Common indoor pools, such as those located at schools, will have heaters in the 1,000,000 BTU/hr size range. Indoor pools that are in continuous use have a relatively low heater load factor. Outdoor pools in northern climates used year round, such as at resorts, are a tremendous load. The use of pool covers can reduce a pool heater's load by up to 50% and eliminate use of the heater during warmer months. Prices for commercial pool heaters range from \$6,000 to \$25,000.

Principles of Operation

How Heater Fits in with Filters and Pumps



Source: Raypak

Strengths/Opportunities

- Natural gas pool and spa heaters can warm pool and spa water twice as fast as electricity, at half the average cost.
- Natural gas pool heaters have faster heat recovery than electric heaters.

Pool Heaters Fact Sheet

- Automatic ignition eliminates the need for a constantly burning pilot light, reducing energy costs.
- Pool heaters extend the outdoor season.
- Heaters are available in different sizes and price ranges.
- There is no odor as heating oil produces.
- Natural gas heaters are less expensive and less complicated installation than electric resistance heaters.
- There are no CFC chemicals which contribute to ozone layer depletion.

Weaknesses/Barriers

- High bill concerns - recommend pool/spa cover to minimize heat loss.

Market Niches

- Hotels and Motels
- Spas and Fitness Facilities
- Hospital Rehabilitation Centers
- Schools and Institutions
- Municipals and Water Parks
- Multi-family Dwellings
- Clubs and Associations
- Single-family Residential Homes

Competition

Oil-fired gas heaters – provides fast heat but oil has an odor requiring the heater to be placed away from the pool

Electric resistance heaters – most expensive option for pool heating and require special heavy duty electrical wiring and large amperage circuit breakers, making the electrical installation complicated and expensive.

Electric heat pump – four times more efficient than an electric resistance pool heater. Heat pumps are less costly to operate than an electric resistance heater but are substantially more expensive to operate than solar systems. Heat pumps are a slower heating process than gas, oil, or electric resistance.

Propane pool heaters – provides fast heat like natural gas and can be delivered anywhere.

Solar panels – most inexpensive way to heat pool. Solar energy is non-polluting and a completely renewable energy source. Over 90 percent of solar panels sold today are used in pool heating applications. However, solar panels disrupt the architectural presentation of homes, gardens, and yards by requiring large panel arrays. Also, when the sun doesn't shine, there is no energy available to heat the pool and a back-up fossil fuel heater may be recommended. Solar panels are exposed to the elements and can be damaged over time. Solar energy provides a slower heating process than gas, oil, or electric resistance.

Pool Heaters Fact Sheet

Manufacturers

A.O. Smith Water Products Co., Inc
World Headquarters
11270 West Park Place
Milwaukee, WI 53224
p: (414) 359-4000 f: (414) 359-4064
www.hotwater.com

Local A.O. Smith Water Products Rep:
Emerson-Swan Company, Inc.
300 Pond Road
Randolph, MA 02368
p: (781) 986-2000 f: (781) 968-2028

Laars Heating Systems
6000 Condor Drive
Moorpark, CA 93021
p: (805) 529-2000 f: (805) 529-5934
www.laars.com

Local Laars Rep:
Mechanical Marketing
410 Surf Avenue
Stratford, Connecticut 06615
p: (203) 375-6482

Lochinvar Corporation
2005 Elm Hill Pike
Nashville, TN 37210
p: (615) 889-8900
www.lochinvar.com

Go to this page to find reps in Connecticut:
<http://www.lochinvar.com/contact.asp?page=salesrep>

Raypak Corporate Office and Principal Manufacturing Facility
2151 Eastman Avenue
Oxnard, CA 93030
p: (805) 278-5300 f: (805) 278-5468
<http://www.raypak.com/poolframe.htm>

Local Raypak Rep:
Ed Lynch
Ipswich, MA
p: (805) 278-5300 ext. 2116 f: (800) 872-9725