

BUYER'S GUIDE TO

SWIMMING POOL HEAT PUMP BRANDS

THE WORLD'S MOST HONEST & COMPREHENSIVE COMPARISON



AQUACAL • HAYWARD
PENTAIR • JANDY • RHEEM

AquaCal
SWIMMING POOL/SPA HEAT PUMPS
WWW.AQUACAL.COM

Buyer's Guide to Swimming Pool Heat Pump Brands

Manufacturer Warranties, Features, and Other Benefits

AquaCal AutoPilot, Inc.
October 2013

Table of Contents

Introduction	4
What Factors Should I Consider When Choosing a Heat Pump Brand?	5
Warranty	5
Duration	5
Coverage	6
Claims.....	6
Service.....	7
Efficiency.....	7
Air-Conditioning, Heating, and Refrigeration Institute.....	7
Coefficient of Performance.....	7
Heat Exchanger	8
Compressor	8
Costs.....	9
Initial costs	9
Operating costs	9
Repair costs.....	9
Maintenance costs.....	10
Who Are the Best Swimming Pool Heat Pump Manufacturers?	11
AquaCal	11
Warranty	12
Service.....	12
Heat Exchanger and Compressor.....	13
Costs.....	13
Hayward.....	13
Warranty	14
Service.....	14
Heat Exchanger and Compressor.....	14
Costs.....	14
Jandy	15
Warranty	15
Service.....	15
Heat Exchanger and Compressor.....	15

Costs.....	16
Pentair.....	16
Warranty.....	16
Service.....	16
Heat Exchanger and Compressor.....	17
Costs.....	17
Rheem.....	17
Warranty.....	17
Service.....	18
Heat Exchanger and Compressor.....	18
Costs.....	18
Where Should I Purchase My Swimming Pool Heat Pump?	19
Authorized Dealers	19
Online Retailers.....	19
Retail Stores	20
Conclusion.....	20
About AquaCal	21
Appendix	22

Introduction

This e-book serves as a guide to prospective swimming pool owners, swimming pool distributors, and swimming pool professionals as they compare the benefits of different swimming pool heat pump manufacturers. A heat pump is a large investment. It is crucial that you learn about a heat pump manufacturer's warranty, benefits, and efficiency in order to make an informed purchase.

In this e-book, we first discuss key factors you should consider when choosing a heat pump manufacturer. Factors such as warranty, service, efficiency, heat exchanger and compressor, and costs affect the value of a brand and the lifespan of your heat pump.

We next review the top swimming pool heat pump manufacturers. Specifically, we break down each by the factors listed above: warranty, service, efficiency, heat exchanger and compressor, and costs. Each manufacturer has its own advantages and disadvantages. In order to make the best decision for your needs, you should familiarize yourself with the basics of each manufacturer.

Lastly, we provide you with guidance as to where to buy heat pumps to make sure you can take full advantage from all the benefits your heat pump has to offer. It is crucial, for example, to purchase your heat pump through an authorized dealer in order to qualify for full warranty coverage.

By writing this e-book, we hope to educate you on the key aspects of heat pumps so that you can make the best purchase for your individual needs and obtain the best value for your money. If you have any questions about different heat pump manufacturers or characteristics, feel free to contact us at AquaCal at 727-823-5642 or by clicking [here](#). We would be happy to guide you through your purchasing process.



What Factors Should I Consider When Choosing a Heat Pump Brand?

Many manufacturers offer heat pumps of very good quality. In fact, most heat pumps are similar in design and operation. You therefore need to compare heat pump manufacturers on several different levels in order to select the best one for you. Some features you should review are: warranty, service, efficiency, heat exchanger, compressor, and costs.

Warranty

Fine print and tricky wording can make any warranty difficult to understand. How are you supposed to benefit from warranties if you cannot understand them? A warranty can minimize your heat pump's repair costs. So to help you save money, we discuss key aspects of heat pump warranties below.

Duration

If you properly register your heat pump with your manufacturer (registration typically includes home address, model number, serial number, and purchase and installation dates), your warranty will usually begin on your installation date. If you do not register your unit and cannot provide documentary proof of the installation date, your warranty will begin after a certain number of days following the manufacture of your unit. View your unit's warranty document for specific information regarding initiation dates.



Parts, on-site labor, heat exchangers, and compressors have different warranty durations. Most manufacturers cover parts and on-site labor for two years and compressors for five years. Duration for heat exchanger coverage, however, varies greatly, depending on the manufacturer. Some offer five-year coverage, some offer ten-year coverage, and some, like AquaCal and Pentair, offer lifetime coverage.

Your location also determines your warranty duration. Some manufacturers, for example, offer longer coverage for Florida customers than for other customers.

Warranty durations for commercial applications differ from those for residential applications. If you are looking to purchase a heat pump for a hotel, condominium, apartment complex, etc., contact the manufacturer or your heat pump professional to obtain warranty information.

Coverage

As mentioned above, most heat pump manufacturers' warranties cover parts, on-site labor costs, heat exchangers, and compressors. They do not, however, cover the shipping costs of the product to and/or from the manufacturer. You may be required to return parts to the factory, **freight prepaid**, in order for the manufacturer to provide warranty service. Warranties also do not cover the transportation charges of factory technical representatives or the use of expendables, such as glue and refrigerants.



Manufacturers' warranties are void if units are handled by unauthorized individuals. You should only do business with qualified professionals. Keeping in mind the following:

- Purchase your unit from an authorized dealer (for a list of authorized AquaCal dealers, click [here](#)).
- Only a licensed installer should install your unit.
- A qualified heat pump professional should maintain your heat pump and inspect it annually.
- Only authorized technical representatives should repair your unit.

Never try to repair your unit yourself.

The use of non-factory authorized parts or accessories with your unit will also void your manufacturer's warranty. For a list of approved parts and materials, refer to your unit's manual.

You must maintain proper care of your heat pump in order to qualify for warranty coverage.

Manufacturers' warranties do not cover damages due to acts of God, improper winterizing (click [here](#) for tips on winterizing your heat pump), improper installation, negligence, or abuse. **Most importantly, most warranties do not cover damages due to insufficient water chemistry.** Proper water balancing is imperative not only for warranty coverage, but also for a safe swimming environment.

Manufacturers offer different warranty coverage to customers living in different locations. Contact your manufacturer directly or check their website to determine warranty coverage for your area.

Most manufacturers warrant with the original owners and locations of their heat pump. Transferring the ownership of your heat pump, transferring ownership of your home, and moving your unit from its original installation site all void manufacturers' warranties. **Be sure to keep records of your heat pump's purchase and installation dates.**

Claims

Contact your manufacturer as soon as you learn of your heat pump's damages to initiate. Most manufacturers require you to provide the following information: proof of purchase, model number, serial number, date of retail purchase, and date of installation.

To qualify for warranty coverage, claims must be reported to and authorized by the manufacturer. Only authorized factory service personnel may perform repairs. Any parts returned to the manufacturer must be accompanied by a return of goods authorization (RGA) form. Shipping for these parts must be prepaid.

Service

Manufacturer service is a key feature, as the contractor selling and installing your heat pump is unlikely to be qualified to provide service to the heat pump's refrigeration components. Specifically, you should consider the factory support offered by each manufacturer. Most manufacturers hire third-party companies to perform field service to their heat pumps. We at AquaCal hire third-party companies in some areas, but in most, we provide CPO-certified and HVAC-licensed Factory Direct Service Technicians, who are trained not only in the area of heat pumps, but in the entire swimming pool system.



Efficiency

Efficiency is just as important as initial cost because it gives you a better understanding of your heat pump's overall performance. For example, your heat pump's efficiency will help you calculate operating costs throughout its lifetime.

Air-Conditioning, Heating, and Refrigeration Institute

The top heat pump manufacturers (including all discussed in this e-book) participate in an efficiency rating program conducted by the Air-Conditioning, Heating, and Refrigeration Institute (AHRI). You can view a list of all participating manufacturers and their heat pump efficiency reports by visiting www.ahridirectory.org. Because manufacturers are not required by law to report accurate efficiency ratings in advertisements, many often exaggerate their ratings in their brochures. As an independent party, the AHRI reports accurate heat pump ratings of those companies who voluntarily participate in the program.

You can refer to the AHRI website to view British Thermal Unit (BTU) output, Coefficient of Performance (COP), refrigerant material, and heat pump type (heat only or heat/cool). BTU output and COP, specifically, are important factors to consider when choosing a high-efficiency unit.

Coefficient of Performance

The Coefficient of Performance (COP) is a rating used to express the energy efficiency of air conditioners, space heaters, swimming pool heaters, and other heating and cooling devices. It measures the ratio of energy output to the energy input.

The equation to find the COP of a device is:

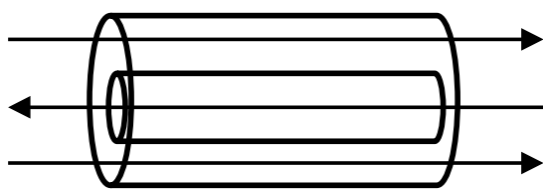
$$COP = \frac{E_o}{E_i}$$

where E_o is energy output, and E_i is energy input.

The higher the COP, the higher the efficiency. The higher the efficiency, the lower the operating costs. Most heat pumps have COPs that measure over 5.0, meaning they produce over five units of energy for every unit they consume. In other words, a heat pump can provide you with over \$5 of heat for every \$1 of energy it consumes.

Keep in mind that not all heat pumps are created equally: some heat pumps have higher COPs than others. **A heat pump with a lower COP may cost you less initially, but it will cost you more in the long run due to higher operating costs.**

Heat Exchanger



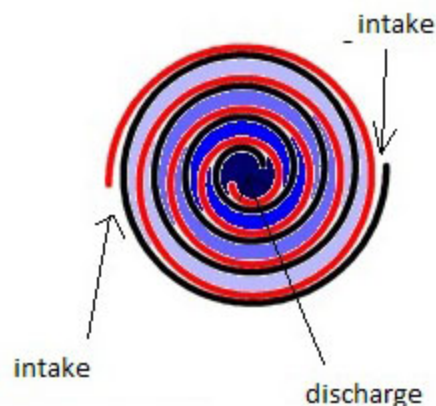
The heat exchanger's main purpose is to transfer heat from the refrigerant to the swimming pool's water. Traditionally, heat pumps used copper and cupronickel heat exchanger tubing because they are inexpensive and transfer heat efficiently. Most manufacturers have since moved away from these materials because they are prone to water chemistry damage. Most heat pumps in the market now utilize titanium heat exchanger tubing. While they are more expensive, they are more durable and impervious to chemical corrosion.

Compressor

The function of a compressor is to condense refrigerant into a high-pressure, hot gas. Two types of compressors are common amongst heat pumps: reciprocating and scroll.

Reciprocating compressors use pistons to compress refrigerant. When the pistons stroke downward, they draw warm, gaseous refrigerant into a chamber. Then, when they stroke upward, they squeeze and compress that refrigerant to heat it. These upward and downward movements, however, result in energy waste. The pistons can compress refrigerant only during their upstrokes, not their down strokes. While most manufacturers have abandoned reciprocating compressors, some still use them in smaller models because they are compact and economical.

Most manufacturers now use **scroll compressors** in their heat pumps. Rather than pistons, scroll compressors utilize metal scrolls to compress refrigerant. One scroll is fixed to the base of a chamber, while another orbits around it (think of your hip movements when using a hula hoop). Together, these scrolls



create moving pockets which shrink as they approach the scrolls' center. Refrigerant travels between these scrolls and compresses into a hot gas as it is squeezed by these shrinking pockets. Scroll compressors offer consumers many benefits over reciprocal compressors. The movements of their scrolls allow for continuous compression, which minimizes energy waste. They also contain 50% fewer moving parts than reciprocal compressors, which makes them quieter and more durable. And though they are more expensive than reciprocal compressors, their efficiency provides for savings in the long-run.

Costs

Many consumers only look at purchase price when determining the total cost of a heat pump. There are several other (perhaps more important) costs to consider. In this section, we try to give you a reasonable idea of the total cost of a heat pump by discussing initial, operating, repair, and maintenance costs.

Initial costs

Despite the low operating costs of heat pumps, many consumers decide against them because they are relatively expensive to purchase and install. Specifically, most heat pumps cost between \$2,000 and up to \$8,000 purchase price plus the installation cost.

We at AquaCal strongly advise against choosing a heat pump based solely on purchase price. Many heat pumps with lower purchase prices have lower BTUs and COPs and will therefore have higher operating costs.



Operating costs

Heating costs vary with each swimming pool. Size of the swimming pool, starting water temperature, desired water temperature, cost of electricity, circulation pump run time, and outdoor environment all affect heating costs. In fact, heating costs vary so much that many companies are hesitant to provide specific numbers to their customers.

A heat pump uses nature's free heat: it transfers heat from either the air or from a nearby water source to your swimming pool. Heat pumps are therefore very energy-efficient and, as such, cost very little to operate. In fact, some consumers spend as little as \$2 per day to heat their swimming pools. If you utilize a solar cover, you can usually heat your swimming pool for between \$100 and \$400 per swimming season. If you choose not to use a solar cover, you should expect to spend between \$800 and \$1,000 per swimming season.

Repair costs

Repair costs of heat pumps vary, depending on the manufacturer. Different manufacturers offer different scope of coverage under their warranties. They also offer warranties that expire after different lengths of time. For example, some manufacturers cover their parts for two years, while others cover them for seven years. For more information on warranty coverage and duration, refer to the “Warranty” section of this e-book.

Heat pump repair costs can be anywhere from \$100 and up. You can reduce your repair costs by regularly inspecting your heat pump and by purchasing a maintenance plan when available from the manufacturer.

Maintenance costs

In order to optimize the efficiency and maximize the lifespan of your heat pump, **you should hire a licensed heat pump professional to perform annual maintenance tasks.** Some of these tasks include the following:

- Cleaning evaporator coil
- Checking valves
- Checking air flow and water flow
- Checking refrigerant pressures
- Check compressor amperage draw
- Checking internal electrical connections

Never try to maintain any of your heat pump’s internal components yourself. Doing so will not only void your warranty, but can also be extremely dangerous.



Who Are the Best Swimming Pool Heat Pump Manufacturers?

Many manufacturers offer heat pumps of similar design and performance, though some offer more energy-efficiency and heating power than others. This is reflected in the chart below, which shows a direct comparison of the top brands in the industry.

Breakdown of Swimming Pool Heat Pump Specifications

Brand	Model	COP*	BTU Output*	Warranty	Water Flow (Min/Max)	Noise Level
AquaCal	SQ175	6.1	134,000	Parts – 7 Years Labor – 2 Years Heat Exchanger – Lifetime Compressor – 7 Years	30 GPM/70 GPM	55 dB
Hayward	HP21404T	5.7	130,000	Parts – 2 Years Labor – 2 Years Heat Exchanger – 10 Years Compressor – 5 Years	30 GPM/75 GPM	60 dB
Jandy	EE3000T	5.5	130,000	Parts – 1 Year Labor – 1 Year Heat Exchanger – 5 Years Compressor – 5 Years	30 GPM/125 GPM	59 dB
Pentair	140	5.5	132,000	Parts – 2 Years Labor – 2 Years Heat Exchanger – Lifetime Compressor – 10 Years	30 GPM/120 GPM	58 dB
Rheem	M8350ti	5.2	125,000	Parts – 7 Years Labor – 2 Years Heat Exchanger – 10 Years Compressor – 7 Years	15 GPM/60 GPM	64 dB

**BTU and COP ratings are inside the scope of AHRI standard 1160 water temperature/ambient air/relative humidity*

In the following sections, we provide background information and additional characteristics of each of the manufacturers listed above.

AquaCal

AquaCal is a Florida-based company that manufactures a wide variety of heat pumps, including commercials and water-source units. Since its inception in 1981, it has served over 200,000 domestic and worldwide customers. AquaCal is part of the [Team Horner](#) family.

AquaCal revolutionized the swimming pool industry when it introduced SuperQuiet™ technology. This technology has allowed AquaCal to produce the quietest units in the market. Specifically, SuperQuiet™ units produce only 55 dB (compare this to a normal conversation, which produces 60 dB, or to a whisper, which produces 30 dB).

All units also feature dual digital control panels, which allow you to set individual temperatures for your swimming pool and your spa. These panels maintain your swimming pool water temperature within 1°F of the set point. These panels are also equipped with user lock code options to restrict access and prevent tampering.

AquaCal units feature UV-treated plastic cabinets, which are corrosion-, rust-, and fade-proof and are also impact-resistant.

Warranty

A warranty will begin on the unit's date of purchase, which must be verified by "proof of purchase" documents. In the absence of these documents, the warranty will begin 60 days after the unit's manufacture.

AquaCal prides itself on having "the best heat pump warranty in the industry." This warranty covers parts for seven years, labor for two years, heat exchangers for the heat pump's lifetime, and compressors for seven years. Like most other manufacturers' warranties, AquaCal's warranty does not cover damage due to water chemical imbalances. You should regularly test and maintain your swimming pool water in order to ensure chemical balance.

The warranty for AquaCal's commercial unit, the Great Big Bopper, is slightly different than the warranty for its residential units. The commercial warranty covers parts for seven years, labor for two years, the heat exchanger for the unit's lifetime, and the compressor for five years.

Service

Most AquaCal heat pump services and repairs in the United States are performed by AquaCal service technicians, who are CPO-certified and HVAC-licensed. In areas where these technicians are not available, factory-authorized service providers can perform services and repairs instead.

Like most other manufacturers, AquaCal offers technical support to its customers for all troubleshooting issues and sizing questions. To contact AquaCal's technical support, you can call 727-823-5642. Be sure to have the follow information ready when you call:

- Model number
- Serial number
- Installation date
- Name of company who installed your unit

You can also click [here](#) to contact AquaCal's technical support.

AquaCal offers a 20-point planned maintenance and safety check for Florida residents. This maintenance plan includes cleaning internal components, checking valves, checking swimming pool water chemistry, and other services. To learn more about this program, click [here](#).

Heat Exchanger and Compressor

AquaCal units feature patented [ThermoLink titanium heat exchangers](#). These heat exchangers allow AquaCal units to operate with flow rates as low as 30 GPM (gallons per minutes). AquaCal units, therefore, work very well with variable-speed and multi-speed pumps. AquaCal's heat exchangers also add very little pressure to swimming pool circulation systems. Specifically, they add only 1 PSI when operating with a flow rate of 30 GPM. This ultimately provides for high COPs and BTU outputs.

AquaCal's SuperQuiet™ units utilize scroll compressors, while their smallest, most economical units use reciprocating compressors. For more information on scroll and reciprocating compressors and the advantages they each offer, refer to the "Compressor" section of this e-book.

Costs

Operating cost estimates can be attained by taking advantage of AquaCal's free [online heat pump cost estimator](#), this program will give you an idea of the monthly cost of running your heat pump for the swimming season. Please keep in mind that the use of a Solar Blanket is recommended in order to prevent heat loss during the overnight hours.

Scheduled, monthly planned maintenance should also be considered when thinking of purchasing a heat pump. This will not only help you calculate your monthly operating costs but protect your investment by assuring proper operation.

Hayward

Hayward is a globally-recognized brand that has provided the swimming pool and spa industry with quality products for over 80 years. They expanded their heat pump line in 2008 when they acquired the Summit Heat Pump brand.

Their heat pumps use "ultra gold" evaporator coil fins. These coated coil fins are both energy-efficient and corrosion resistant, making them particularly beneficial to swimming pool owners living in coastal areas.

Hayward's heat pumps feature stainless steel hardware and UV-resistant body panels, which allow them to withstand harsh climates. Polyethylene screens surround the heat pumps' evaporator coils to protect them from debris and to ensure maximum performance.

All units are equipped with dual electronic thermostats. These thermostats offer swimming pool owners conveniences such as constant temperature readings, temperature set point lock out, and easy-to-read self-diagnosis codes.

Warranty

Hayward's heat pump warranty begins on either the purchase date or six months after the manufacture date, whichever occurs first.

The warranty for Florida residents covers parts and labor for two years, heat exchangers for ten years, and compressors for five years. Unlike other manufacturers, **Hayward will not void its warranty due to damages from improper water chemistry**. You should still maintain proper water chemistry, however, to ensure swimmer health and safety.

While Hayward does not produce commercial heat pumps, they do produce commercial heaters. Hayward offers three-year coverage for its commercial heaters. Unlike its residential heat pump warranty, its commercial heater warranty does not cover damages due to improper water chemistry.

Service

In 2012, Hayward established Hayward University, an online program which offers education to Hayward's swimming pool partners. Its most valuable resources are perhaps its certification courses. These courses include modules, quizzes, and APSP (Association of Pool and Spa Professionals) certification tests and are designed to assist swimming pool professionals in furthering their product and service knowledge.

Hayward offers multiple resources to help customers solve any issues they encounter with their heat pumps. You can view their troubleshooting guide [here](#), find an authorized service center [here](#), or call their technical support hotline at 908-355-7995.

Heat Exchanger and Compressor

Hayward's HeatPro® units feature scroll compressors (read more about scroll compressors under the "Compressor" section of this article). They also use acoustic compressors wraps in order to reduce noise levels.

Like most manufacturers, Hayward uses counter flow heat exchangers in their heat pumps. In these exchangers, swimming pool water flows in the direction opposite to the refrigerant (see the diagram to the right). These opposite flows ultimately provide for efficient heat transfer from the refrigerant to the swimming pool water without sacrificing heat pump performance.

Costs

Like AquaCal, Hayward also offers an online heat pump analysis tool which can help you estimate the cost of running your heat pump for the swimming pool season. If interested in using this program please click [here](#). Weekly maintenance is also recommended to minimize repair costs.

Hayward offers a variety of articles or newsletters on line that provide information on maintenance, energy saving products, legislative information and other pool related articles. You can access this information by clicking [here](#)

Jandy

Founded in 1958 Jandy is widely recognized among swimming pool professionals. They manufactured pool gas heaters for over 60 years and after acquiring Air Energy® in 2003, they entered the heat pump market.

Jandy's heat pumps feature high energy efficiency and offer high hydraulic flow. Additionally, they have an Auto-Heat feature that allows it to bypass the system's time clock and lets the heat pump turn on the pool pump in order to maintain the desired set temperature 24 hours a day. Lastly, these heat pumps are automation ready for easy connection to Jandy controls and other wireless controls such as the Aqualink®

Warranty

As with other manufactures, warranty coverage for Jandy heat pumps begins on the date of purchase. They carry a two (2) year warranty; the compressor and heat exchanger have a five (5) year warranty. Refrigerants and other expendables are not included in the warranty nor are the freight and labor costs for repairs.

Warranty is void if the product is not installed by a licensed, qualified pool professional. Pool water chemistry and the use of non-authorized parts or accessories are also factors that will cancel the heat pump's warranty.

Service

The Zodiac/Jandy website is a robust source of information when seeking service. In it, you will find online support request forms, a knowledge base, and warranty information. You will also be able to register your product, find a dealer or download a copy of your product's manual. You can reach this website by clicking [here](#)

Heat Exchanger and Compressor

The Air Energy® heat pumps feature patented titanium heat exchangers which offer high BTU (British thermal unit) output. Titanium is impervious to corrosion, which means it will not corrode or wear out and also provides high efficiency heat transfer capabilities. The units also contain commercial grade scroll compressors that allow for quiet operation and higher COP (Coefficient of performance) ratings. Again, the higher the COP rating the lower the operational costs.

Costs

Zodiac has a section in their website dedicated to energy savings. In it, you will find information on energy efficient equipment, energy calculators (though only for heaters, not heat pumps) and pool pumps, you can reach this site by clicking [here](#)

Pentair

Pentair has been manufacturing swimming pool equipment since 1966. They have a vast range of products; white goods, pumps, filters, automation systems, LED lights and water features are some of the items they offer. UltraTemp® heat pumps were introduced to complement their gas heater line in 2008.

UltraTemp® heat pumps feature user-friendly dual digital controls panels that display full phrases rather than codes. These phrases can be programmed to read in either English or Spanish. Like the Jandy units, they also have the time clock over-ride to maintain desired pool temperature day or night and are compatible with all automated control systems.

Pentair's heat pumps have corrosion resistant plastic cabinets which stand up to UV rays, high temperatures, and pool chemicals. Their self-diagnostic software assures for consistent peak performance and their thermostatic expansion valve (TXV) controls refrigerant flow for maximum efficiency over a wider operating range.

Warranty

Pentair's warranty begins on date of installation. They cover parts for 2 years, labor for 2 years, the compressor for 10 years and the heat exchanger for lifetime. Commercial units are covered for one year only. An extended 3 year limited warranty program is also available for those who qualify. For this, you must buy your pool pump, filter and either a heater, heat pump, automation control system, automatic cleaner or color light from them at the same time.

As with other manufacturers there are factors which will void your warranty; careless handling, failure to operate the heat pump as specified, unauthorized modifications, improper maintenance and failure to maintain water chemistry could result in denial of a warranty claim.

Service

Pentair has authorized service and product repair professionals within the United States as well as globally. By following this [link](#) you will be able to find a dealer or repair representative near you.

Another interesting part of their website is the "Pool FYI" section. In it, you can find information on pool building and design, energy saving tips and pool lifestyle; where members talk about anything from pool safety to summer barbecuing. You can reach this part of their website by clicking [here](#)

Pentair also has the “Pentair University online” which offers technical education and equipment workshops. This service is only available to pool professionals. Its purpose is to help further educate their partners by providing training on new products as well as tools for everyday functionality such as sizing programs, salinity calculator (Tells you demand of salt for the size of your pool), energy savings, etc. This is all designed to help service and maintenance personnel help the homeowner.

Heat Exchanger and Compressor

The Ultratemp® heat pumps have titanium heat exchangers as well as Emerson Copeland Scroll compressors™ on their 60Hz, single phase models. The titanium assures long lasting corrosion-free performance while the compressors have 70% fewer moving components which lower the chances of damage and improve noise levels these types of compressors are also more reliable than piston-driven compressors, though Pentair still utilizes piston-driven compressors on their 50Hz units.

Costs

Just like AquaCal, Pentair also has a pool volume calculator that will help you determine the best size heat pump for your swimming pool. Unlike AquaCal’s calculator, which is all in their website, the Pentair program needs to be downloaded into your “C” drive in order to be able to operate. It does give you useful information on the size unit you need, an approximate swimming pool season cost to operate your heat pump.

Rheem

Founded in 1925, Rheem is a widely-recognized brand and known for manufacturing a variety of residential heating and cooling products. Rheem began manufacturing heat pumps for swimming pools in 1997.

Manufactured in Mexico, the Rheem pool heat pumps have a non-corrosive polyester powder-coated cabinet and steel construction. Additionally, they have sound insulation pads that improve sound levels and at the same time elevate the base pan of the unit for better water drainage.

The Rheem units are also available with a digital or an analog control unit, specially designed fan blades for improved efficiency and noise levels, and sealed ball bearing motors that are matched for the specific fan blade assembly.

Warranty

Warranty begins on installation if properly documented. If you cannot provide documentary proof of installation date, effective date will be 30 days after date of manufacture.

Single family dwelling: 2 years labor 7 year parts. Multiple family dwelling: 1 year parts 1 year labor.

Titanium tube 10 years in single family dwelling, 1 year on other than residential

Service

Rheem heat pumps are backed by the manufacturer's warranty. To initiate a claim, you will need to have the following information ready: Your unit's model number, serial number, date of installation and a description of the trouble. Please note that if the heat pump is serviced by a non-authorized Rheem representative it voids the warranty. Also, repairs cannot be initiated until proper authorization has been received from Rheem.

A number of authorized contractors are available nationwide, to access this data base please click [here](#)

Heat Exchanger and Compressor

All Rheem units feature spiral "rifled" titanium tube in tube heat exchangers, which provide for efficient heating and reduced deposit buildup, by increasing the gas surface area; the spiral tube transfers heat more efficiently to the pool water.

Lastly, Rheem units contain Copeland Scroll® compressors, which decrease potential for damage by utilizing 70% fewer moving internal components. As scroll compressors have been proven to be up to three times quieter than reciprocating models, this improves sound levels of the heat pumps.

Costs

The Homeowners Resource Center within the Rheem website provides you with energy and savings calculators, local and federal tax rebates as well as documentation and contractor information. To reach this site please click [here](#)

Where Should I Purchase My Swimming Pool Heat Pump?

Once you have decided which swimming pool heat pump you would like to purchase your next step is to find a reputable pool professional to purchase and install your unit, you will have different choices:

Authorized Dealers

An authorized dealer is one recommended by a manufacturer and who must meet a number of requirements to become an authorized representative. By visiting the manufacturer's website you will be able to find a list of the dealers they recommend. Remember, there are a number of benefits to purchasing and having your heat pump installed by an authorized dealer; like assuring that your warranty will be valid, as using an authorized dealer is specified in most manufacturers' warranties. You will also have maximum after sales support should there be something wrong with your unit, as they have full relationships with the manufacturers. Additionally, authorized dealers often are offered ongoing training, which helps them stay up to date with new technology and upgrades available on the heat pump market.

Online Retailers

Online retailers have become popular in this technologically advanced era. There are pro's and con's with online retailers. Online, you are able to compare pricing between many brands, and do all shopping from the convenience of your home. At the same time, precaution needs to be taken. What would happen should something go wrong with the unit? Would you be covered under warranty? Instead of calling a pool professional you are handling your claim through a complaint department, what about shipping charges? Pricing is another grey area when it comes to online shopping, there are some online retailers that sell refurbished heat pumps as new, and some do not provide you with a full serial number or change this number to their serial number, making it extremely difficult to receive service under warranty from the original manufacturer. There are reputable online retailers available, again, you should find them through the manufacturer's website and make sure they are authorized.



Retail Stores

Retail stores are another popular way of shopping for a swimming pool heat pump. In the store you will be able to see the heat pump, listen to measure the noise impact along with the size of the unit. Retail stores are a good source of information and they can also help find a licensed electrician and plumber for installation of your new heat pump. And they are a good resource as most have pool professionals in staff that will be able to answer any question you may have while you are shopping for your new unit.

Conclusion

There are many variables when it comes to choosing the right swimming pool heat pump for you and your family. In this eBook, we have gone through many key factors that should be considered when making this decision. We have looked at warranty, service, efficiency, heat exchangers and compressors, and costs. All of which affect the value and lifespan of your heat pump.

With the recent technological and engineering advances in the swimming pool industry, the heat pump market is the largest and most diverse it has ever been. The savings provided by utilizing a typical swimming pool heat pump and a solar blanket or a liquid solar blanket such as the “Cover Free”, which creates an invisible blanket that conserves water and heat, help maintain the operating costs to the lowest possible levels thus giving you a high return on your initial investment.

Because of the warranty implications care should be given as to whom you purchase your swimming pool from and who you have install your unit. Also, make sure to keep all of your documentation in case of a needed repair under warranty, as this is a requirement from most, if not all, heat pump manufacturers.

We hope this eBook helps you in your research, if you would like further information on heat pump manufacturers or have any general questions regarding swimming pool heaters, please do not hesitate to contact us at AquaCal by calling 727-823-5642 or by clicking [here](#).

About AquaCal

Since 1981, we at AquaCal have been providing quality products, services, and repairs to our customers all over the world. Each of our heat pumps is tested by our CPO-certified and HVAC-licensed factory technicians to ensure optimal performance and reliability.

We at AquaCal know that each of our customers is unique. Our heat pumps are available in a variety of sizes with an assortment of features in order to accommodate every customer. From our economically-priced unit to our commercial-sized [Great Big Bopper](#) unit and from our geothermal [Water Source](#) unit to our reverse-cycle [HeatWave IceBreaker](#) unit, our heat pumps tailor to every need and every budget.



Overall, we at AquaCal strive to provide you with the greatest possible benefit. We are passionate about the swimming pool industry, and are committed to communicating that passion by offering you superior products and services. It is our sincere belief that we can only succeed by continually providing you with quality.



Working together. Growing together. Winning together

Cost of Operation

Cost per million BTUs of heat

