

# HEAT SIPHON® Lasts a Lifetime



## NO CORROSION

Since gas heaters are so expensive to run, all gas heater manufacturers try to keep the cost of the heater as low as possible. Most gas pool heaters have a sheet metal cabinet and a copper heat exchanger with cast iron water connections. Usually they are assembled with galvanized steel screws. INEVITABLE RESULTS - rust and corrosion.

Heat Siphon®'s electrically isolated Pure Titanium Heat Exchanger, PVC cabinet and stainless steel hardware, make it CORROSION PROOF. Its sealed refrigeration system, weather-proof PVC control box and totally enclosed fan motor are all designed for years of trouble free service.

## NO FLAMES

Two more shortcomings of gas heaters are heat exchanger scaling & soot deposits, which drastically cut down heat transfer efficiency. The pool water flows through small flow channels and the hot combustion gas heats the outer tube surface. If the flow is too low, water boils inside the tubes leaving scaling deposits which block and overheat it. Too high water flow causes condensation & rusting or soot deposits.

Heat Siphon® uses no flame so heat transfer occurs about 2000°F lower than combustion gas. The pool water flows on the OUTSIDE of the Titanium tubes ELIMINATING heat exchanger scaling and blockage.

With Heat Siphon® there's no pilot light to blow out, no flue gases, no dangerous hot surfaces, no scaling, no gas piping to run, no unsightly gas tanks and no high fuel cost.

**ONE HEAT SIPHON® CAN EASILY LAST LONGER THAN THREE GAS POOL HEATERS!!**

## HEAT SIPHON® MADE in the USA

Sold WORLD-WIDE Since 1983



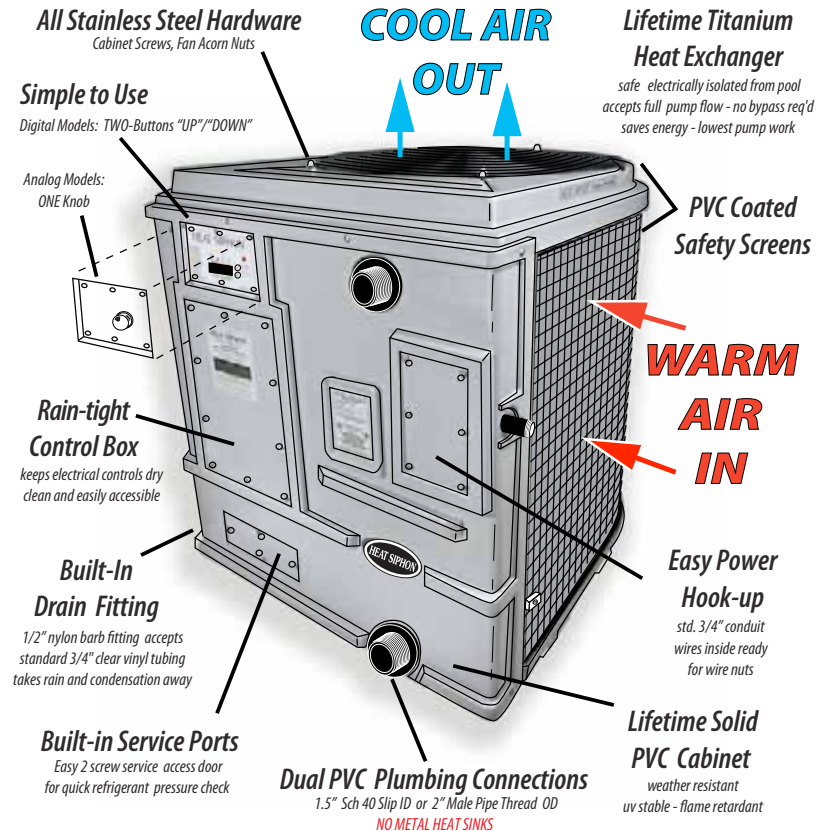
20 YEARS BEFORE Hayward  
20 YEARS BEFORE Jandy  
20 YEARS BEFORE Pentair  
10 YEARS BEFORE Horner

Heat Siphon has been manufactured in Latrobe, Pennsylvania USA since 1983 when the Founder, and still President, Bill Bernardi set up production at the current 6 acre facility.

Our success and growth result from never losing sight of CUSTOMER SATISFACTION & PRODUCT INNOVATION.

visit [www.HEATSIPHON.com](http://www.HEATSIPHON.com) "about us" for the whole story

## HEAT SIPHON® FEATURES



## HEAT SIPHON® 100% Scroll Equipped

All Heat Siphon use STATE-OF-THE ART SCROLL COMPRESSORS.

The most reliable highest efficiency compressors made today.

## FREE Certified Sizing / Cost Report = HSA

Our Exclusive 4 page HEATSIPHONALYSIS (HSA) - VIA email FAX or Post Mail

Calculating the cost of heating a swimming pool is complicated - It depends on climate, pool cover use, wind, shade, type of heater, fuel costs and more. That's why we developed the HEATSIPHONALYSIS (HSA) computer program that USES YOUR LOCAL FUEL COSTS and CLIMATE DATA to pick the proper size Heat Siphon for your pool. We certify our sizing with a money back guarantee.\*

HSA compares gas, oil, electric resistance and Heat Siphon operating costs. Shows Heat Siphon runtime, unheated pool temperature, monthly heating cost for all heaters and a payback analysis to show you how quickly your HEAT SIPHON WILL PAY FOR ITSELF.

Input: Your Pool & Climate Data, Heatsiphonanalysis Output: Heat Siphon Sizing & Cost Summary



Unheated Pool Temperature & Heat Siphon Runtime Hrs./Day

Fuel Cost per Day & per Month vs. Electric Resist., Oil, Gas & Propane

10 Year Cost Projections & Payback Analysis vs. Other Heater Types



\*Accuracy of this analysis is based on the accuracy of the data input. Variations in weather and actual conditions (hours covered, pump hrs/day etc) will affect guaranteed performance.

# No pH or Chlorine Limits - Lifetime Guaranteed

## Titanium

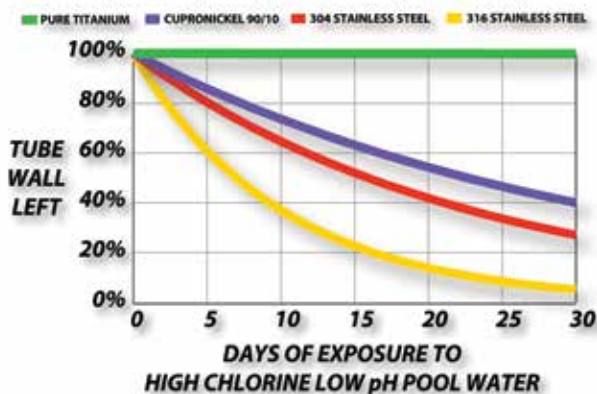
### Why Our Heat Exchangers are Unconditionally Guaranteed Corrosion Free for LIFE !!

Although Pool Heat Pump's offer up to 80% savings and are much more reliable and safer than gas pool heaters, if a water heat exchanger leaks (usually due to corrosion) and pool water enters the sealed refrigeration system, THE ENTIRE HEAT PUMP IS RUINED!!

Heat Siphon is designed and built with a special heat exchanger to totally eliminate corrosion. The pure titanium heat exchanger tube material was selected based on corrosion tests at 100°F, a pH of 4.75 and chlorine levels of 5000 parts per million (1000 times greater than normal pool water). After 48 hours cupronickel lost 9% of its original weight and 304 & 316 stainless steel corroded even more severely.

#### HEAT EXCHANGER TUBE WALL THICKNESS LEFT

Extrapolated from 3-Day Nova Analytical test data- Water 100°F, pH 4.75, Chlorine 10,000 ppm

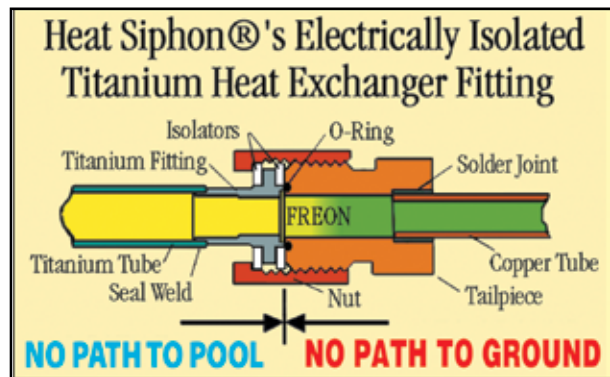


Heat Siphon's Original Inner Titanium Tube Coil

#### ONLY PURE TITANIUM SHOWED NO MEASURABLE CORROSION!!

Although titanium eliminates chemical corrosion in even the harshest pool water, a small number of heat exchanger failures occur in pool heaters found to have stray low voltage traveling to or from the pool water through the heat exchanger, which would cause corrosion no matter what metal was used.

With the aid of a digital volt meters, you can actually measure the stray voltage between the heat exchanger and the power supply ground wire or local earth grounding rods required for pool equipment bonding. Floating grounds on power supplies, electronic chlorinators and even underwater pool lights can leak harmless low voltage electricity, less than 3 volts, into the pool which force electrolytic corrosion of the heat exchanger in a matter of weeks.



#### 1992: Our First Isolation Fitting

Still striving to eliminate ALL failures, in mid-1991, we developed the first electrically isolated heat exchanger for pool heat pumps by designing a special Titanium fitting that insulates the pure titanium heat exchanger from the rest of the Heat Siphon.

By breaking the path of this stray voltage so no electrical current can travel to or from the heat exchanger, no stray voltage can cause corrosion of the tube. Our old two ring teflon fitting worked reliably for 20 years with no leaks or problems, until we had to turn it upside down for use on our inverted DUAL Heat Exchangers in our NEW Larger Z700HP and our DUAL auto reversing Z575HC Heating Cooling models.

PROBLEM: Since it was upside down, the o-ring was prone to falling out of the fitting groove as the nut was tightened causing a leak.

SOLUTION: Make a SINGLE Teflon ring that snaps over the titanium and holds the o-ring in place.

Now on ALL HEAT SIPHON MODELS use the NEW FITTING and our warranty continues since January 1, 1992 - we guarantee our Electrically Isolated Titanium Heat Exchanger Corrosion Free for LIFE !!

If pool water enters your heat pump system thru a heat exchanger leak and ruins it, we will replace your entire Heat Siphon unit FREE!!

#### 2012: One Piece Isolation Fitting





# HEAT SIPHON®

SWIMMING POOL HEAT PUMPS - WE PERFORM TO KEEP YOU WARM!!!

## DIGITAL "Z" Series



Simple Reliability YOU CAN COUNT ON:

- one** User Friendly Interface: Set It & Forget It
- two** Buttons: "UP" & "DOWN"
- three** Modes: "POOL" - "SPA" - "AUTO-PIC"™



PLAYER™ Control Panel with ON PANEL Instructions /ERROR CODES & Bright Readable LED's - BLUE =Wireless, RED=Service, GREEN=Pool, YELLOW =Spa

### SIMPLE 2 BUTTON USER INTERFACE

IT'S EASY - JUST REMEMBER - "**CHANGE WHEN FLASHING**" - When the Display is FLASHING you can change the flashing value or option by pressing either "up" or "down" key. WAIT 3 seconds and you hear a 1 second BEEP -telling you your change was accepted - DONE. The display then returns to normal scrolling. For example to:

- ★ **CHANGE Pool or Spa Temperature** - press "up" or "down" ANYTIME & the setpoint will flash - then change the TEMPERATURE - pause for 3 seconds and BEEP/DONE
- ★ **CHANGE MODE** - Press BOTH buttons & RELEASE to make the current MODE flash (POOL or SPA or AUTO) - press "up" or "down" to change mode - BEEP/DONE
- ★ **CHANGE Options** - Press BOTH buttons & HOLD to change °F/°C or Lock/Unlock RELEASE the buttons when the option is displayed-CHANGE the setting - BEEP/DONE.

### BUILT IN DIGITAL FEATURES

- **Water & Air Temperature** are monitored and displayed within 0.5° F
- **Water Flow Monitor** with 10 second start delay to ensure there is ALWAYS enough flow to prevent high refrigerant pressure-low efficiency & on/off cycling.
- **Low Air Temperature** shutdown prevents Air Coil Frosting and Icing Damage
- **Refrigerant Hi & Low Pressure** shutdown if refrigerant leak is detected and as a backup to the flow sensor cycling and low efficiency protection
- **Countdowns** for All Event & Start Delay Timers provide constant user feedback
- **Auto-Pic™** selects Pool or Spa mode automatically even with manual valves
- **Interface Jack** ready to plug in to the entire Digital Wireless FOOTBALL Family

ALTERNATIVE TO WIRELESS: Lower Cost Hardwired ADD-ON PODs (Pool Operating Devices) with REMOTE Toggle Switches

Using your DIGITAL Heat Siphon's Player Controller, these hardwired PODs can OVERRIDE (J-POD) or REPLACE (T-POD) pool timers or SWITCH your pump AND your thermostat from POOL to SPA (S-POD)!!

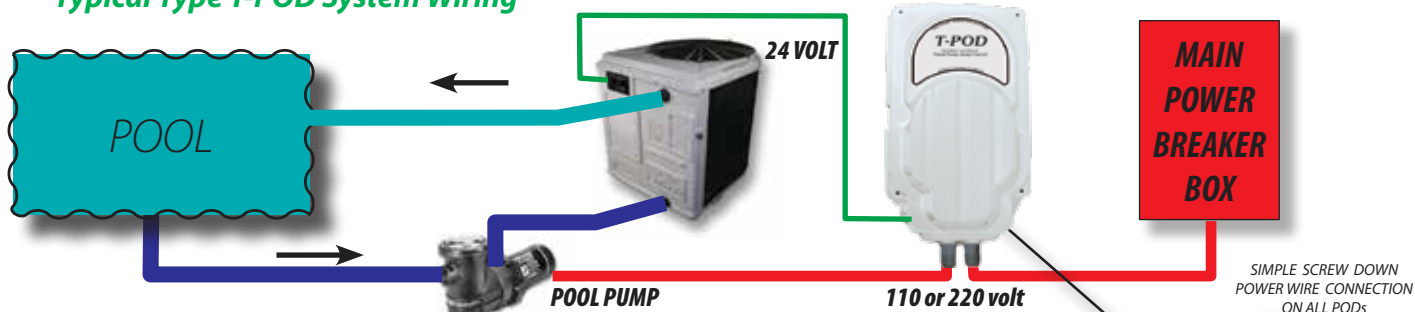
You buy and install JUST THE POD you need and let the Player Controller do the rest, and the remote toggle switch (T-POD & S-POD only) can be more than 100 ft away.

J-POD provides pump timer override (we call it PumpJump™) for off-cycle heating - it samples your pool and if needed runs your Heat Siphon.

T-POD (below) is a J-POD with One-Event-per-Day Pump Timer using the Heat Siphon's 2 Button Player Interface to set pump ON time & RUN time.

S-POD is a T-POD with remote actuated 3-position POOL/SPILOVER/SPA toggle switch that changes your Heat Siphon's Thermostat to POOL or SPA & will operate up to 3 motorized valves to switch your pump too

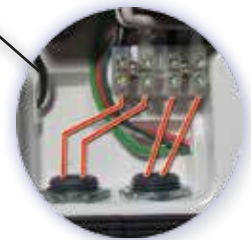
### Typical Type T-POD System Wiring



SIMPLE SCREW DOWN POWER WIRE CONNECTION ON ALL PODs

ALL Z Series HEAT SIPHONS are READY for these future WIRELESS add-ons sold separately:

- ★ PASSPORT® - Plugs into the Player Board of the "first" Heat Siphon and "PASSES" wireless control and data signals to the FOOTBALL™
- ★ PASSPORT® USB - Plugs into your computer's USB port to provide all FOOTBALL™ functions on your PC
- ★ FOOTBALL® - Indoor LCD Wireless Controller
- ★ POD® - Wireless Pool Operating Devices
- ☆ Control & Schedule up to 5 PODs (pumps, valves, lights etc)
- ☆ C-POD® - Pool/Spa Combo 1 Pump /3 valve controller
- ☆ Displays STATUS including water temp & setpoint, mode
- ☆ P-POD® - Pump Controller
- ☆ Set Heat Siphon Pool/Spa Temperature and much more!
- ☆ A-POD® Auxiliary Device Controller



**BUILT-INTO Every Digital Heat Siphon: the DIGITAL WIRELESS FUTURE**

# The Most Efficient Pool Heater in the World!

# HEAT SIPHON®

## SWIMMING POOL HEAT PUMPS

### C375HP Analog Model

Classic One Knob - Timerstat™  
Set-It & Forget It



For Average Pools - 16 feet x 32 feet No Cover  
& 18 feet x 36 feet Covered

### Z575HP Digital Model

Sophisticated Yet Simple 2 Button Digital Control



For Larger Pools - 18 feet x 36 feet No Cover  
& 20 feet x 40 feet Covered

### Z700HP Model

Dual Heat Exchangers



For Large Residential & Commercial Pool  
20 feet x 40 feet No Cover & 25 feet x 50 feet Covered

Four Heat Siphons on  
Fort Lauderdale, FL Community Pool



Twelve Heat Siphons installed on  
Cranberry Twp, PA Community Pool



## Simply the Best!

As the graph at the right shows, Heat Siphon's three flagship Models, from 80,000 btuh to 140,000 btuh, the Z375HP/C375HP, Z575HP/C575HP and the Z700HP together have the HIGHEST COP (efficiency) of all Brands tested.

Heat Siphon was tested by the same independent test lab, ETL, that was selected by the American Refrigeration and Heating Institute to certify all swimming pool heat pumps performance and in accordance with their testing standards and - WE WON.

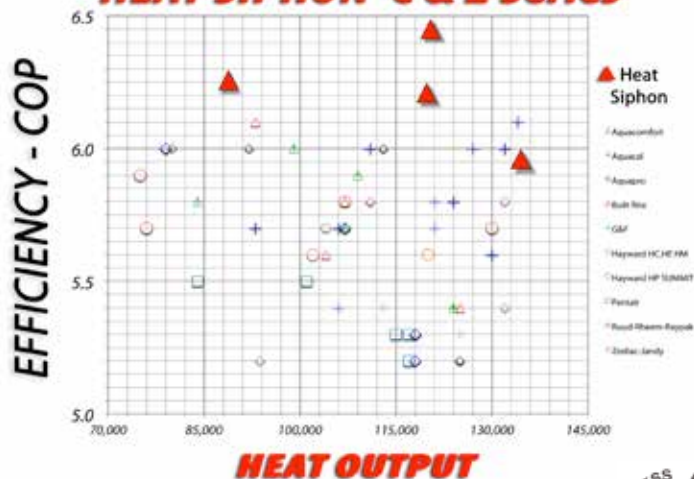
**Installs in a few hours with just a 220 volt dedicated breaker and standard PVC piping.**

Your Pool Can Be Warm & Cozy in 48 hrs. at a cost you can live with every month!!

## Top of The Class

EVERY YEAR Since 2010!!

### HEAT SIPHON C & Z Series



Tested in Accordance with AHRI Standard 1160 - 80°F Air / 80°F Water / 62% Relative Humidity



# DESIGN YOUR OWN POOL SYSTEM !!

## with Our NEW iPhone App: MY POOL (It's Free)



**MY POOL** is more than just a pool-spa calculator or a pool designing gadget - IT'S the ENERGY ANSWERBOOK for YOUR POOL. Learn how to minimize your energy costs and maximize enjoyment of your pool.

**MY POOL** has FOUR POOL (or spa) TOOLS - SIZE, PUMP, HEATER and ANALYSIS. It CONSTANTLY shows you INSTANT FEEDBACK when you change any variable in any of the four pool spa tools. Changing the pool length will instantly change the pool gallons, the pump run time and the heating cost per day.

You can let it use preset values and just enter minimal data or you can get really detailed answers by changing all the variables.



**MY POOL** answers all these questions & many more:

- What size is my pool in square feet ?
- How many gallons ?
- What size pump do I need ?
- How long should I run my pump ?
- How much will it cost to run ?
- Can I afford to heat my pool ?
- How much will a solar cover save ?

**Try our web-model before you download**

Go to [www.heatsiphon.com/mypool](http://www.heatsiphon.com/mypool) (no iPhone needed)

### HEAT SIPHON PERFORMANCE SPECIFICATIONS

There are four (4) basic sizes of Heat Siphon based on size of the compressor in approximate horsepower - 2HP, 3.75HP, 5.75HP & 7HP

There are also two (2) Heat Siphon Model Types:

C-Series Models ..... Analog Type Knob Timerstat Control

Z-Series Models ..... Digital Wireless Ready Controller

#### C-SERIES

#### Z-SERIES

Thermostat ..... TimerStat™

Thermistor

Accuracy ..... 1.5°F Diff - 104°F Max

1°F Diff - 104° Max

Restart Delay ..... Discrete Solid State

Digital Software

#### ALL MODELS

Air Flow ..... 5000 CFM - Discharge Vertical Up

Water Flow ..... 25 GPM min. - 80 GPM max.

Pressure Drop ..... less than 2 psi

Cabinet ..... PVC - UV Stabilized Flame Retardant

Hardware ..... All 18-8 Stainless Steel

Full Flow Condenser ..... Gr 2 Pure Titanium Tube in PVC Housing

Control Circuit ..... 24 VAC 40VA current limiting transformer

Low Pressure Switch ..... Auto-reset (CO 80/CI 40 psig)

High Pressure Switch ..... Auto-reset (CO 350/CI 250 psig)

Expansion Device ..... Thermostatic Expansion Valve



For the Latest Heat Siphon® Technical Information and a FREE Pool Heating Analysis visit: [www.HEATSIPHON.com](http://www.HEATSIPHON.com)

#### Shipping Information

SIZE	BOXED DIMENSION	WEIGHT
2.50HP	34" W x 39" D x 36" H	190 LBS
3.75HP	34" W x 39" D x 46" H	250 LBS
5.75HP	34" W x 39" D x 46" H	300 LBS
7HP	34" W x 39" D x 46" H	340 LBS

	MODEL	VOLTAGE	HERTZ	PH	No. WIRES	BREAKER	BTUH	COP
<b>Z250HP / C250HP Models</b>								
220v 1-PHASE	C250HP	208/230	60	1	3 (2 HOT+GND)	30 AMPS	52,400	5.01
	Z250HP	208/230	60	1	3 (2 HOT+GND)	30 AMPS	52,400	5.01
220v 1-PHASE	C250HP50	208/230	50	1	3 (2 HOT+GND)	30 AMPS	43,700*	6.01*
	Z250HP50	208/230	50	1	3 (2 HOT+GND)	30 AMPS	43,700*	6.01*
380/440v 3-PHASE	C250HPX	380/460	50/60	3	5 (3 hot+ Nuetral + Gnd)	10 AMPS	52,400	5.01
	Z250HPX	380/460	50/60	3	5 (3 hot+ Nuetral + Gnd)	10 AMPS	52,400	5.01
<b>Z375HP and C375HP Models</b>								
220v 1-PHASE	C375HP	208/230	60	1	3 (2 HOT+GND)	40 AMPS	89,000	6.26
	Z375HP	208/230	60	1	3 (2 HOT+GND)	40 AMPS	89,000	6.26
220v 1-PHASE	C375HP50	220/240	50	1	3 (2 HOT+GND)	40 AMPS	74,200*	6.26*
	Z375HP50	220/240	50	1	3 (2 HOT+GND)	40 AMPS	74,200*	6.26*
380/440v 3-PHASE	C375HPX	380/460	50/60	3	6 (3 HOT+NEUTRAL +GND)	20 AMPS	89,000	6.26
	Z375HPX	380/460	50/60	3	6 (3 HOT+NEUTRAL +GND)	20 AMPS	89,000	6.26
<b>Z575HP and C575HP Models</b>								
220v 1-PHASE	C575HP	208/230	60	1	3 (2 hot+Gnd)	50 AMPS	117,500	6.2
	Z575HP	208/230	60	1	3 (2 hot+Gnd)	50 AMPS	117,500	6.2
220v 3-PHASE	C575HP3	200/230	60	3	4 (3 hot+Gnd)	40 AMPS	120,800	6.2
	Z575HP3	200/230	60	3	4 (3 hot+Gnd)	40 AMPS	120,800	6.2
380/440v 3-PHASE	C575HPX	380/460	50/60	3	5 (3 hot+ Nuetral + Gnd)	20 AMPS	120,800	6.2
	Z575HPX	380/460	50/60	3	5 (3 hot+ Nuetral + Gnd)	20 AMPS	120,800	6.2
<b>Z700HP Models</b>								
220v 1-PH	Z700HP	208/230	60	1	3 (2 hot+Gnd)	50 AMPS	135,000	6.0
220v 3-PH	Z700HP3	200/230	60	3	4 (3 hot+Gnd)	40 AMPS	135,000	6.0
440v 3-PH	Z700HP4	380/460	50/60	3	4 (3 hot+Gnd)	20 AMPS	135,000	6.0
380v 3-PH	Z700HPX	380/460	50/60	3	5 (3 hot+ Nuetral + Gnd)	20 AMPS	135,000	6.0

The above specifications are for New 2011 Models with R410A Refrigerant. Only the most popular models are listed here - for a full listing including COOLING ONLY and HEAT/COOL UNITS call us or visit our website.

"WE PERFORM TO KEEP YOU WARM!!"™