

Chinese Hot Tubs, Jacuzzis and Spas – What You NEED to Know.....

Take a few minutes to read the following guide and make an informed decision.

What's in a Name?.....

Firstly let's clear up a common misnomer - **JACUZZI**® has become a generic name for Hot Tubs and Spas, as with **HOOVER**® for vacuum cleaners. However, **Jacuzzi**® is a company that manufactures whirlpool baths and spas and is a protected trade mark.

All other hydrotherapy baths that have heated and pumped water flow, directed through jets, with contoured seating, should be referred to as a Whirlpool, Spa, Hot Tub, or Hot Tub Spa.

Introduction.....

The internet is littered with Spa and Hot Tub offerings, some at unbelievable prices, with on-line retailers usually selling lots of bells-and-whistles on their spas, hundreds of jets, lots of LED lights, sound systems and T.V.'s and sometimes include thousands of pounds worth (apparently) of extras.

You will probably be looking at a Chinese manufactured spa.

We all know that more and more products in our lives are made in China, including millions of i-Phones®, computers and all manner of consumer electronics - and some are extremely reliable.

However, the major blue-chip brands have their own quality and production control in the factories.

This is not true of the unregulated production of Hot Tubs and Spas!

Don't be Fooled.....

You will probably see many Chinese Spas advertised as using American made Acrylic from Lucite® or Aristech® - with Balboa® Control systems (also made in the USA), this is an attempt to convince purchasers that the spas are made to the same quality as one manufactured in the USA. **THEY ARE NOT!!**

It's difficult to prove the source of the Acrylic simply by its exterior appearance and there are also known to be counterfeit Balboa Control Systems being fitted to some low cost spas.

To confuse the Spa buyer further, there are a multitude of companies selling Chinese Hot Tubs with American or Canadian names and others importing into Europe and re-selling as coming from the country of import – **BE WARY!!**

How the Spa Interior is Made – and What You Need to Know.....

When manufacturing a Spa, sheets of Acrylic are heated and vacuum formed in a special mould, this creates the contoured interior of the spa, but, this process makes the acrylic very thin and so it is extremely important that it is reinforced, this is done by applying Fibre-Glass to the back surface.

This is where problems can occur, Fibre-Glass does not adhere directly to Acrylic and so a layer of a special adhesive resin (Vinyl Ester) has to be carefully applied, (in a controlled environment), to the back of the Acrylic before the Fibre-Glass can be used.

In the early 1970's, when modern Hot Tubs were born and before this special adhesive resin was first employed, many Hot Tubs failed as the Acrylic de-laminated from the Fibre-Glass, this caused blistering of the Acrylic which led to cracking of the shell and resulted in water leaks. In fact this problem was so severe that the Hot Tub industry nearly died on its feet before it started.

A big problem on some Chinese Hot Tubs is the quality of the Vinyl Ester adhesive, the method and consistency of application and the conditions in which it is applied - Factories can be over 40°C.

It is no surprise then that a common failure, in a comparatively short period of time, is blistering of the interior shell, which can lead to cracking and leaks. Allied to this, the acrylic sheets may be "second grade" quality, or old stock from USA manufacturers. The acrylic sheets have a "best before" date because they can develop faults during the moulding process if not used within 6 weeks of manufacture – It can take 6 weeks for acrylic sheet to be shipped from the USA to China!!

The Spa Structure.....

The supporting frame for the spa shell is obviously important, most leading American manufacturers use heavy gauge, pressure treated, virgin timber – whereas many Chinese spas are supported with low grade recycled softwood, plastic, or lightweight steel frames (that tend to be badly welded).

Bear in mind that an average 5 berth Hot Tub, full of water and people, will weigh well over 2 tonnes!

Spa Plumbing and Efficiency.....

To create an efficient Hot Tub the pipes to the Jets should be a wide bore with as few obstructions as possible, allowing smaller, energy efficient pumps, to be used.

In a typical Chinese Spa, no consideration is given to efficiency, so the pipe-work tends to resemble a mass of spaghetti and several large, energy hungry, pumps have to be used to create enough water flow – Often an Air Blower is also fitted, they are cheaper than water pumps and the Air Jets are also low cost, they offer very little in hydrotherapy benefit and are very noisy.

Would you get in a relaxing bath with a vacuum cleaner on full blast near you - of course you wouldn't, but that's the equivalent of having an Air Blower on a spa! Ask to hear the blower in operation!

Spa Jets – The More the Better?.....

Many Chinese Spas will have as many Jets as space allows, some even have over a hundred!! People understandably get seduced by this tactic, thinking “more is better”, but caution has to be exercised.

A downside with this “as-many-as-possible” Chinese Spa approach is that all the holes drilled into the shell for the Jets will weaken what could be an already suspect structure, increasing the potential for leaks.

The Jets within a Spa are responsible for creating hydro-massage benefit and it is important that they are the right size, positioned correctly and plumbed properly.

The construction of the Jets themselves is also important, leading U.S.A. manufacturers; Waterway Plastics, Pentair, American Products and HydroAir account for over 99% of Jets used in American spas, they hold many patents on their designs and have been developing and manufacturing them for over 40 years.

Chinese made Spa Jets vary massively in the quality of materials and manufacturing process, they can be made of low grade plastic so they discolour, go brittle and break quickly - and if they have a bright metal finish they could be Chrome plated (rather than Stainless Steel as produced in the U.S.) which flakes off. Allied to this, **Chinese Jets tend to be very simple in design with little regard to their performance and durability, their lifespan being a major problem – When they break, try and find a replacement!**

Spare Parts.....

Not only are replacement Jets difficult to find, but also Filters, Lights and Pumps can be extremely hard to source, these are all items that need replacing at some point in the short life of some Chinese Spas.

And beware if the Spa is equipped with so called waterproof T.V.'s, Radios, C.D players and Speakers, they are known to fail in a short period of time – A good quality, waterproof, media system can cost as much as a Chinese spa!!

How Much does a Spa Cost to Run?.....

The running costs of a spa are dependent on a combination of factors:

The number and size of the pumps.

How hard the in-line heater has to work, to maintain the water temperature.

But by far the biggest factor on running costs is the thermal insulation incorporated into the Spa.

A well insulated (Full Foam) Spa with a dedicated, low energy, Circulation Pump and Good Quality Rigid Thermal Cover should cost around €25.00 per month - This estimate is based on: Electricity Costs of 15 cents per Kw/Hr, 3 bathing sessions per week and an ambient temperature of 15°C. **A Spa without Full Foam will cost around €60.00 per month, so €35.00 per month more expensive = €420.00 per annum x 10 years (if a Chinese Spa lasts that long) = €4,200.00 in extra energy costs! – Not so cheap now is it!**

Energy Saving Construction.....

We have already covered the issue with poorly designed plumbing in Chinese Spas that need large, high energy, pumps to deliver adequate water flow, but the quality of the Spa's insulation is responsible for the biggest energy savings. You should always look for Spas with "Full Foam Insulation" this has the dual benefit of providing the highest level of heat retention and also supports the internal plumbing which helps to prevent leaks. **Technical Note:** When Spa pumps are switched on, the plumbing is subject to a significant amount of whip torque that creates stress at the pipe-work joints - the more support the better.

Chinese Spas rarely have Full Foam Insulation, instead they promote the benefits of utilising the heat generated by the Spa pumps - there is little insulation on the spa shell and just a foil sheet to the backside of the exterior panelling. So what happens when the pumps are not running and generating heat? The Spa loses heat at an alarming rate, so the heater has to work hard to maintain the water temperature, burning energy and money.

There is another reason why most Chinese spas don't have full foam insulation – It's easier to repair leaks without insulating foam getting in the way. – Makes you think, doesn't it?

Another significant contributor to good insulation is the quality of the Rigid Thermal Cover, which should be constructed from a High Density Polystyrene Foam Core with Steel Channel reinforcement and Marine Grade Vinyl covering, stitching and zips. Needless to say Chinese covers frequently use lightweight Foam Cores, with weak Aluminium channels and the vinyl covering, stitching and zips are of inferior quality.

Not only does this result in poor thermal retention you will also find that Chinese Spa Covers have a much shorter life than those found on most USA made spas.

Bear in mind that a good quality replacement Spa Cover will cost in the region of € 590.00.

In Summary.....

We all know that..... "In life you get what you pay for" and whilst the attraction of plenty of "Bling", like masses of Jets and LED lights on a Chinese Spa might seem irresistible, try not to let your heart rule your head.

Bear in mind that all Chinese Spas are made to a price as they have to compete with the multitude of likeminded manufacturers in China. If they can save 50 cents on a component, they will, with little regard to the performance of that item. This is one of the reasons why Chinese Spas can look very tired in a just a few years.

The USA Spa producer's World-wide market is also highly competitive! But they supply to the most demanding consumers in the World, in their home country! – American companies that don't make good products, at a fair price, fail very quickly.

So, the American Spa maker's attitude to competition is to build innovative features into their Spas and make them better than their competitors, not cut costs on components! – And don't forget they are heavily regulated, requiring stringent safety and energy certification for all their products.

In closing, consider how you make a decision when purchasing other higher value consumer or lifestyle goods, maybe a car, a new kitchen, or bathroom - something that you judge on quality, price and anticipated durability.

If you buy everything just on price then maybe a Chinese made Spa is the right choice for you, but if you want quality, performance and durability then an American made Spa should be the one to go for.

"The sweetness of a cheap price is soon replaced by the bitterness of poor quality"

How true this little proverb is when purchasing a Whirlpool, Hot Tub Spa or, Jacuzzi®.

Author: Andrew Coulton

Owner and director of: Good Life Spas - A Hot Tub Spa sales and servicing company based in the Algarve and distributor of Artesian Spas throughout Portugal - founded in 2008. www.gls spas.com

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