

Sous Vide Equipment Review and Comparison Chart

Released by Sousvidecooking.org

For more detailed information about reviews and test comparison go to <http://www.sousvidecooking.org/sous-vide-equipment-review-tests-123/>

Addelice
Swid



Julabo
Pearl



Polyscience
Sous Vide Professional



Vac-Star
Sous Vide Chef



Polyscience
Creative Series



Vac-Star
Sous Vide Chef II



Type	★★★★★ Immersion Circulator, adaptatif	★★★★★ Immersion Circulator, adaptatif	★★★★★ Immersion Circulator, adaptatif	★★★★☆ Immersion Circulator, with mechanical relay	Same as Vac-Star SousVide Chef I	Immersion Circulator, adaptatif
Size	★★★★★ 124mm/190/268mm = 4,200 cm3 4.9"/7.5"/10.5"	★★★★☆ 339mm/190/335mm = 15,700 cm3 13.3"/7.4"/13.1"	★★★★★ 98mm/187/358mm = 6,600 cm3 3.8"/7.3"/14.1"	★★★★★ 95mm/170/352mm = 5,700 cm3 3.8"/6.7"/13.9"	Same as Vac-Star SousVide Chef I	99mm/158/350mm = 5,500 cm3 3.8"/6.7"/13.9"
Weight	★★★★★ 2.1 kg 4.6 lb	★★★★☆ 6.5 kg 14.3 lb	★★★★★ 5.8 kg 12.7 lb	★★★★★ 2.1 kg 4.6 lb	Same as Vac-Star SousVide Chef I	2.4 kg 5.3 lb
Power (220V)	★★★★★ 2,000 W	★★★★★ 2,000 W	★★★★☆ 1,100 W	★★★★☆ 1,300 W	Same as SousVide Chef I	1,300 W
Tank/vessel capacity	★★★★☆ From 5 to 58 L From 1.3 to 15.3 gal	★★★★★ From 20 to 58 l From 5.2 to 15.3 gal	★★★★★ Up 30 L Up to 7.5 gal	★★★★☆ Up to 20 L Up to 5 gal	Same as Vac-Star SousVide Chef I	Vac-Star indicates 40L (to be checked)
Water pump	★★★★★ 8 L/min. To 58 L max. capacity.	★★★★★ 14 L/min. IMO the pump is oversized in a 20L tank.	★★★★★ 12 L/min (not checked). Fits perfectly to 30 L max. capacity.	★★★★★ No clear information provided by Vac-star. Some distributors say 12 L/min somme say 4 L/min. Obviously closer to 4L/min than 12L/min. Fits perfectly to 20 L max. capacity.	Polyscience indicates 6 liters per min which is the most realistic information disclosed so far about this topic.	Vac-Star indicates 14 L per min, others 16L per min which is unrealistic ! Julabo Pearl was 12 L per min and this was too much or a 20 liters tank. This information should be checked.
Safety	★★★★★ Float switch	★★★★★ Float switch	★★★★☆ Low liquid protection : overheating protection. No float switch	★★★★☆ Float switch (IMO low quality) and overheating protection	Same as Vac-Star SousVide Chef I	Low liquid protection : overheating protection. No float switch (to be checked)
Stability	★★★★★ Excellent	★★★★★ Excellent	★★★★★ Excellent	★★★★☆ Average + due to the output switch device (mechanical relay) known to be less efficient and with shorter life expectancy.	Same as SousVidechef I. So far I haven't seen any information indicating this device doesn't contain a mechanical relay.	Not tested. Vac-Star says the electronics doesn' contain a mechanical relay anymore. To be checked.
Ease of use	★★★★★ Very good	★★★★★ Very good	★★★★★ Very good	★★★★☆ Good but buttons of the panel are too small and the use of the timer is not convenient	Same as Vac-Star SousVide Chef I	Not tested to date
Comfort/silent	★★★★★ Silent machine	★★★★★ Noise caused by the big water turbulence generated by the pump. This noise is acceptable.	★★★★☆ Annoying noise of the machine, especially for home cooks.	★★★★★ Silent machine.	Probably the same (to be confirmed)	Not tested to date
Maintenance/cleaning	★★★★★ Very good. Immersed components are made of stainless steel. Heater element easy to clean.	★★★★☆ Good, immersed components are made of stainless steel but the protective grid is difficult to remove and the heater element is difficult to clean	★★★★☆ Protective grid is made out of plastic. Other immersed components are made of stainless steel. Heater element difficult to clean	★★★★☆ Average quality of the plastic casing and protected grid selected by Vacstar. Float switch (made of plastic and foam) and heater element are difficult to clean. Unmounting and mounting the plastic grid for cleaning isn't friendly user	Average quality of the plastic casing and protected grid Float switch (still made of plastic and foam ?) and heater element are difficult to clean. Unmounting and mounting the plastic grid for cleaning isn't friendly user	Not tested to date but comments on internet indicate the plastic is of poor quality and opening the plastic grid is a little bit easier than on the first version. Nevertheless the heater element seems still difficult to clean.
Warranty	★★★★★ 2 years	★★★★★ 2 years	★★★★☆ 1 year	★★★★☆ 1 year	1 year	2 years
Price (excl. VAT)	★★★★★ EUR 380 (incl. shipping costs)	★★★★☆ EUR 899 (excl. shipping costs)	★★★★☆ EUR 627 (excl. shipping costs)	★★★★★ EUR 360 (excl. shipping costs)	EUR 429 (excl. shipping costs)	EUR 380 (excl. Shipping costs)



One of the lightest sous vide equipment of the market. It is compact, powerful and temperature control is excellent. Fits to amateur cooks and professionals (58 L max. capacity). Silent machine. Price is very competitive and includes a worldwide 2 years warranty.



What to say ?



Very good immersion circulator that controls very precisely temperature up to 58L.



Due to its size, weight and very powerful pump the Pearl immersion circulator isn't an option for amateur cooks.



Well designed immersion circulator. Excellent temperature control. Can fit to amateur cooks and professionals.



Takes a long time to heat a 20 L container (1,100 W only). No float switch, no timer. Makes a loud noise wich is annoying if you are in a private kitchen.



Cheapest immersion circulator of the market. Temperature stability is acceptable for sous vide cooking. Silent machine.



Machine made of low quality plastic. On/Off temperature controller (mechanical relay) known to be short life expectancy. Float switch and heater element difficult to clean.

You may have understood that Creative Series of Polyscience is the SousvideChef v1 rebranded Polyscience. This immersion circulator is now officially made in China. If purchased through Polyscience onlineshop price would be approx EUR 385 excl. Shipping costs...

Not tested to date so I can't give my general impression.

How To Choose Your Sous Vide Equipment ?

Top 7 Questions to Determin Which Sous Vide Gear is Best For You

Question 1 Size & weight of my sous vide equipment ?

I Want to Cook Sous vide at Home

I am a Professional Cook

Size and weigh matter when choosing you sous vide equipment. Some equipments are light, others are very heavy. Just check if the sous vide gear you are interested in will fit in one of your kitchen drawer.

If you are a caterer and you need to carry your equipment with you, better choose the most compact and light one.

Question 2 Power - Do I need 2,000 W or a 800 W machine is enough ?

I Want to Cook Sous vide at Home

I am a Professional Cook

Power is needed to heat the waterbath to reach the cooking temperature. After reaching the desired temperature your sous vide gear will use a very small amount of power (except On/Off controler and devices containing a mechanical relay – see comments about this issue below). It is usually recommended to put hot water in the pot prior switching on your sous vide device. If you do so you will reduce significantly the time to heat your water bath. For example a pot of 20L at 10°C will take more than 1 hour to reach 85°C with 2,000 W and twice longer if you have a 1,000 W gear ...

To sum up, power is not the most important issue when choosing a sous vide equipment (except if you need to cook in containers above 18L), nevertheless the more powerful is a device, the most comfortable it will be for you.

This technical characteristic is very important for you. Heating a big quantity of water can take really long, high power device is therefore an absolute need. To reach high temperature you'll need in any case to cover your container with a lid or plastic wrap. If you are a caterer and frequently move to individuals home with your sous vide equipment be careful to avoid On/Off controllers and devices that contains a mechanical relay (this issue will be discussed below). Especially if you bring several immersion circulators to one place.

Some machine have a an « energy saving feature limiting the energy consumption ». Don't be fool. Remember you need strong power to pre heat a bath (otherwise it will take ages) and very few to stabilize the temperature (less than 100 W) of your water bath. This energy saving function makes sens for On/Off controller and mecanical relay only (this issue will be discussed below).

Question 3 PID Controller, what kind of « hardware » technologie to choose ?

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A PID temperature controller is a very sophisticated controller providing excellent performance needed for sous vide cooking. This is, lets say, the « software » of your machine. Most sous vide equipments are PID controlled therefore you don't really have to worry about that (anyway ask the reseller if mot mentionned). A most important question is related to the « hardware » of your equipment : **should I choose a device that contains a mecanical relay or a more sophisticated technologie (SSR)?**

Please read the comment regarding sous vide at home.



In addition keep in mind a PID controlled sous vide device that contains a SSR will allow you to use several machines at the same time (at the condition the temperature of the water bath is already stabilised). This is particularly important for you if you are a caterer and want to reheat big quantities of foods in a private kitchen. A sous vide equipment that contains a mecanical relay will not allow you to do that otherwise you will take the risk to blow the fuses at all time.

A sous vide equipement that contains a mecanical relay is enough for cooking sous vide but is known to have a limited lifetime because of the mecanical parts of the relay that can break.

Most immersion circulator of the market benefit from a « non mecanical relay » named « Solid State Relay or SSR ». These machines are high performance machines, with a perfect and stable control of the temperature. This technologie was previously invented for laboratories equipments.

No misunderstood. Both technologies will use the same amount of energy to stabilise the temperature of your water bath. The mecanical relay technologie will use a sous vide equipementt full power periodically during some seconds while the SSR technologie will use a little bit of power (less than 100 W) constantly.

To sum up :

	Mecanical Relay	Sophisticated SSR Equipment
	Very cheap. Enough to cook sous vide.	Perfect control of the temperature. Long life and heavy duty machine. When the water bath has reached the desired cooking temperature the sous vide equipment uses very few power (less than 100 W) which allows you using other electric equipments at the same time in your kitchen.
	Limited life equipment due to the mecanical relay. You should take care about other electrical equipments working at the same time in you kitchen so that fuse don't blow.	This is kind of equipment is usually more expensive than a device that contains a classic mecanical relay.

Question 4 Maximum tank/vessel capacity – What capacity do I need ?

I Want to Cook Sous vide at Home

I am a Professional Cook

8 to 15 liters capacity should be enough. Having the possibility to cook in a 20 liters tank for a big party from time to time should be considered.

How many times in a year do you use a 50 liters containers to cook ?

Question 5 Safety – What safety functions do I need ?

I Want to Cook Sous vide at Home

I am a Professional Cook

You have to make a difference between safety functions to protect your sous vide equipement (overheating protection) and food safety (water level protection, float switch). Don't neglecte the float switch.

Same comment than for sous vide at home.

Question 6 Stability – What magnitude of temperature fluctuation of my water bath am I ready to accept ?

I Want to Cook Sous vide at Home

I am a Professional Cook

Cooking sous vide is all about precise temperature AND time. Stability gives you the certainty to reproduce the same result each time. Fights between manufacturers mentionning $\pm 0,05^{\circ}\text{C}$ or $\pm 0,03^{\circ}\text{C}$ can make sens in laboratory but not in a kitchen. One $^{\circ}\text{C}$ could make, in some circumstances, a difference.

Same comment than for sous vide at home.

Question 7 Maintenance – Is my sous vide equipement easy to clean ?

I Want to Cook Sous vide at Home

I am a Professional Cook

Limescale can appear on immerged parts of the sous vide machine and can be removed easily with an anti limescale agent. This operation should be done at least each month of normal use. In my opinion sous vide equipments with stainless steal immerged parts give a better feeling than those made of plastic.

As a professional and intensive user a deep cleaning of your sous vide equipement should be done each week. Some protective grids of immersion circulators of the market are not easy to remove. Sometimes a screw driver is needed. Sous vide equipement with stainless steal immerged parts should be privileged. The ease to clean the parts should also be looked carefully.