

Anova Culinary LLC
Houston, TX USA
TEL: 281-980-1236
FAX: 281-980-1352
www.sousvides.com
sousvides@waterbaths.com

Anova Culinary

OPERATING MANUAL

Sous Vide Heating Circulators

Intellectual Property

All Intellectual Properties, as defined below, owned by or which is otherwise the property of Anova Industries Inc. or its suppliers relating to Anova products, including but not limited to, accessories, parts or software relating thereto (Anova Culinary LLC), are proprietary to federal and state laws, and international treaty provisions. Intellectual Property includes but is not limited to, inventions (patentable or unpatentable), patents, trade secrets, copyrights, software, firmware, computer programs, and related documentation and other works of authorship. Moreover, you agree that you will not, and will not attempt to, modify, prepare derivative works of, reverse engineer, disassemble the Anova products, decompile or otherwise attempt to create source code from the related software/firmware. No title to or ownership in Intellectual Property is transferred to you. All applicable rights of the Intellectual Property shall remain with Anova Culinary LLC and its suppliers.

Thank you for choosing Anova Culinary Temperature Control Circulators!

This manual covers basic operational usage of our circulators - this manual is not a cook book. For optimal utilization of all functions, we recommend that you thoroughly study this manual prior to beginning operation. Anova does not directly support OEM systems or systems branded for other companies. OEM systems may contain different specifications and features that are not covered in this manual. This manual also does not include usage instructions for OEM / custom designed systems or custom software designed by other companies.

Unpack the sous vide circulator and inspect for possible transport damage.

Immediately report damage to Anova and the responsible carrier.

Failure to report transport damage will not allow us support your claim for insurance.

TABLE OF CONTENTS

Introduction	4
Safety	5
Installation	5
Bath fluids	6
Technical specifications	6
Operating controls and functional elements	7-9
Disassembly	10
Maintenance	12
Calibration & Temp Read Adjustment	13
Tricks and Tips	14
Warranty	15
Trouble Shooting FAQ	16

INTRODUCTION

Anova sous vide circulators control the temperature of fluids in a bath tank. The system features a pump, temperature controller, clamp and a removable skirt.

Anova circulators are not designed for direct temperature control. Direct temperature control means direct contact with food. Do not use Anova circulators to directly cook food – at no time should food products come in contact with bath fluid. Food must be vacuum-sealed, heat sealed, or zip locked before use with circulator.

Do not use Anova circulators to directly circulate food products like juices, soup or milk products.

Only the stainless steel skirt and pump cover are dishwasher safe – the heating circulator and display contain sensitive electronics and cannot be placed into the dishwasher.

SAFETY

Anova products ensure safe operation when installed, operated, and maintained according to safety recommendations in this manual. This section explains the potential dangers that may arise when operating the Anova sous vide circulator and notes many important safety precautions.

1. This system is not a toy – do not let children operate it.
2. **Hot surfaces** - the cooking pot and the **main body of the circulator** can get hot when used. Use an oven mitt when handling. Allow system to cool before emptying the water bath.
3. Do not immerse system past the etch top mark of stainless steel skirt. If water is splashing above mark the skirt reduce water amount.
4. Only the stainless steel skirt and the pump housing are dishwasher safe.
5. Unplug from outlet when not in use and before disassembly / cleaning.
6. Use the Anova heavy gauge cord only and never operate with a damaged cord or plug, do not use an extension cord.
7. Do not use outdoors.
8. Do not place unit on or near a stove, or in an oven.
9. Take care when removing food pouches and they can be hot - use tongs to handle pouches.
10. Do not use this appliance for anything other than intended use. (Like laboratory work – most of the materials used are not rated for lab solvents or corrosives)
11. Use properly grounded electrical outlets only.
12. Some countertops such as marble, Corian, and other surfaces cannot withstand the heat generated by the circulator. Anova Culinary LLC is not liable for any damage caused to such surfaces.
13. DO NOT ATTEMPT TO DISASSEMBLE. Only Anova trained technician can service this product.
14. **BURN HAZARD** - Do not reach in to the water bath to retrieve food pouches – use tongs.
15. **OBSERVE ALL WARNING LABELS ON PRODUCT** - Read all labels on product to ensure proper usage.
16. Firmly lock the circulator on the bath tank with the screw clamp - Place the tank on an even surface to prevent spills and tipping over.
17. Do not remove warning labels.
18. If your circulator falls into water disconnect power ASAP to avoid shock and then send back system to repair. Do not retrieve the unit until you have unplugged the cord. Do not attempt to use the system if this has happened.

General Food & Cooking Safety:

We do not know if your food is “clean” or “sushi grade”, and even if your food is “clean” or “sushi grade” we cannot help determine if your handling process is “clean”.

Generally speaking:

- **Treat sous vide food that has been in the bath less than 1 hour as “raw”**
- **Know the risks of low temperature cooking – there are many resources online regarding food safety**
- **If you have suspicions on the quality of your ingredients please do not eat it**
- **If you plan on storing cooked food in the pouch - cool in an ice bath then immediately refrigerate.**

Only you can prevent forest fires and not get food poisoning. **You alone are responsible for the handling of food substances and determining if it is safe. If you think your food is not cooked enough play it safe – deep fry it or discard it.**

Installation

- The installation location should be large enough to provide sufficient air ventilation.
- Keep at least 1 feet of open space on the rear vents.

BATH FLUIDS

Only use water – no other fluid is acceptable

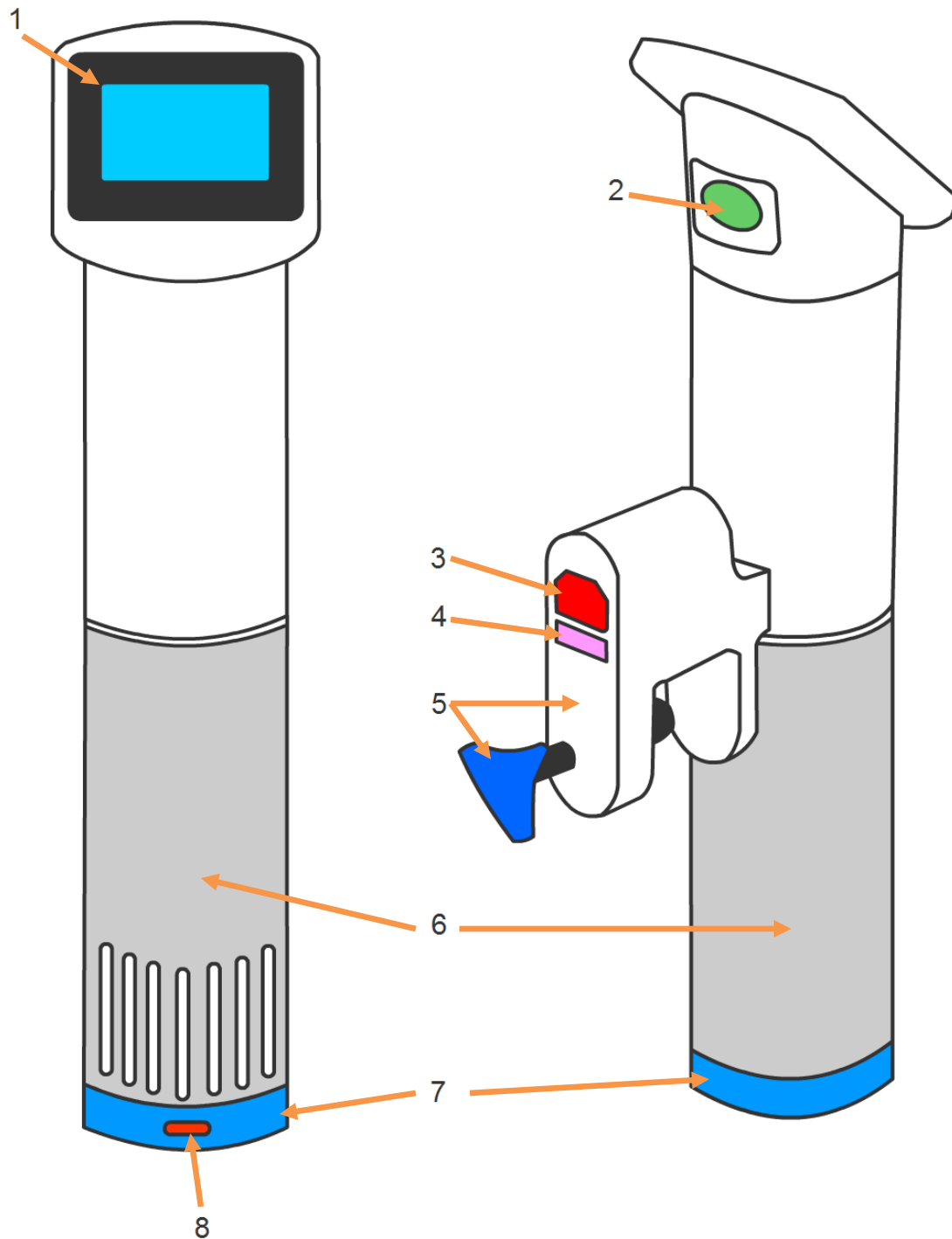
Tip: If you want to have an easier time cleaning the stainless steel parts, use soft/decalcified water to avoid water spots and calcification.

TECHNICAL SPECIFICATIONS

System	ASV Pipe 2.0
Temperature Min °C	Room
Temperature Max °C	99 °C
Stability	± .01°C
Heater Power	1.0 kW Max
Circulation Pump	12LPM Max
Input power	115-120V

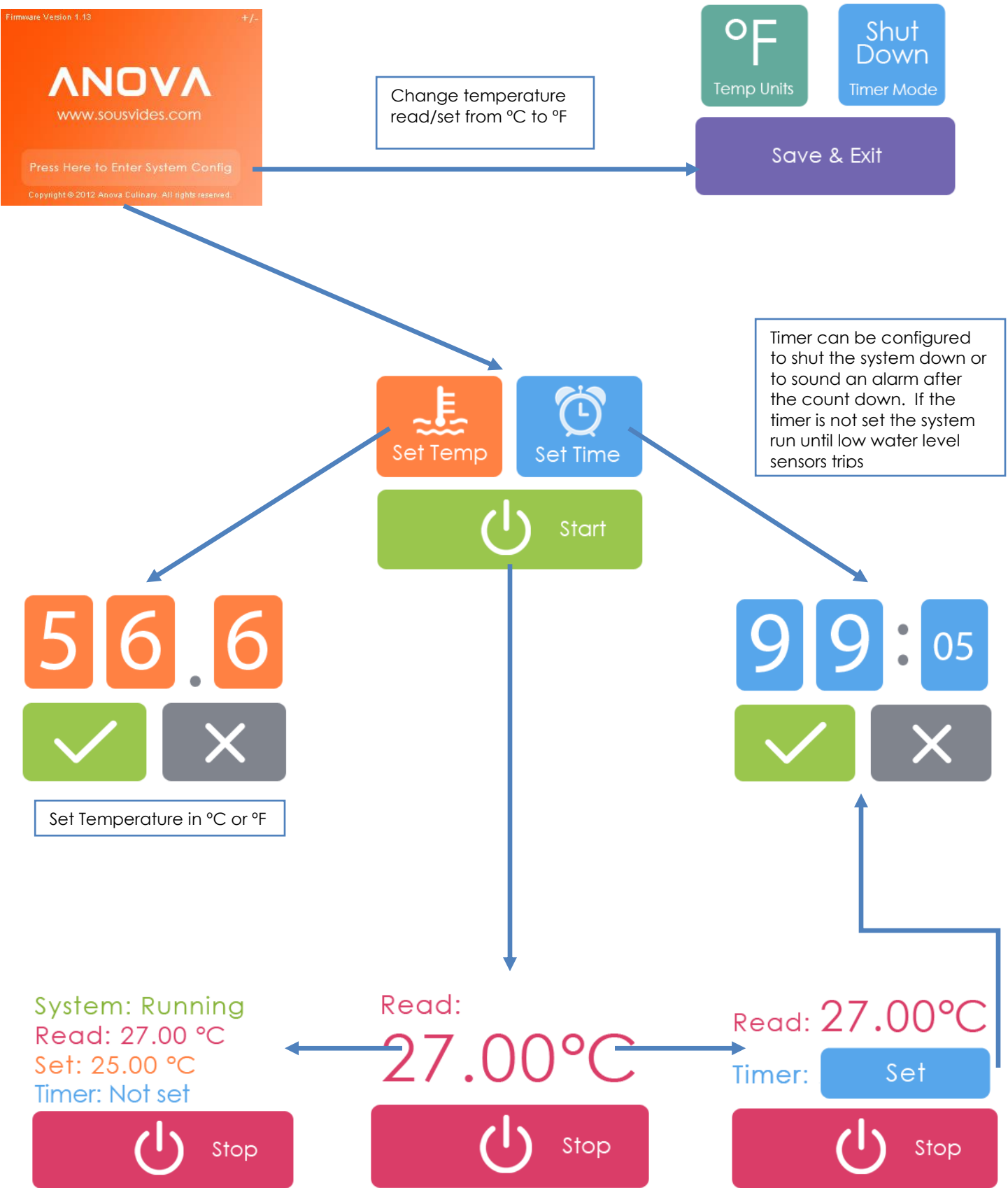
Wetted materials in the Circulator: Stainless steel

OPERATING CONTROLS & FUNCTIONAL ELEMENTS



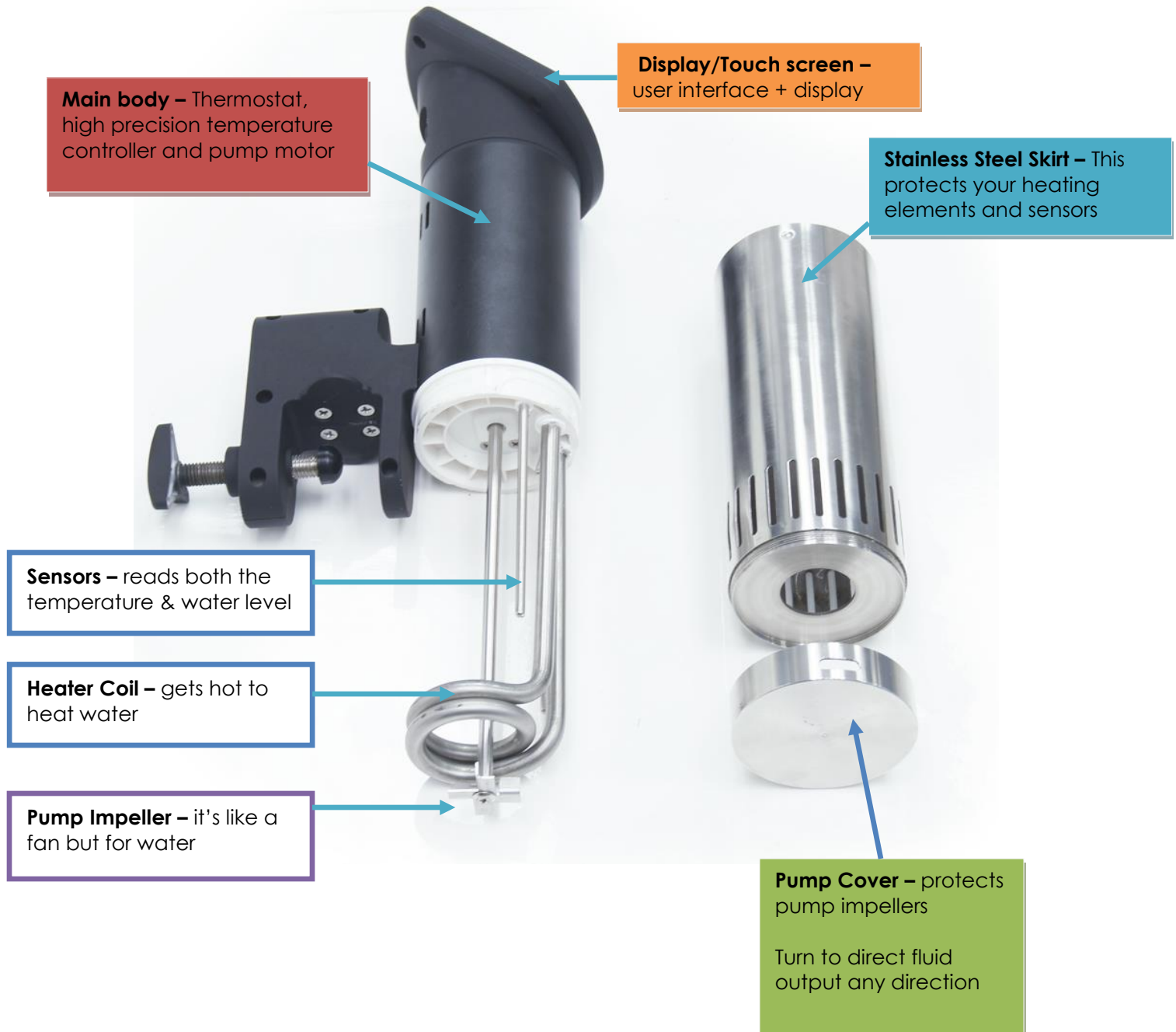
- 1) Display LCD and Touch Screen- you enter in temperature & time
- 2) Power Switch – turns the power on and off
- 3) Power Plug – plug in power here
- 4) Fuse Box – for electrical safety
- 5) Screw Clamp – this clamps on to your pot
- 6) Removable stainless steel skirt – protects the heating coil and sensors
- 7) Removable Pump Cover - protects the pump impeller
- 8) Pump Outlet – turn outlet to direct flow anywhere

Interface Elements Flow Chart



DISSASSEMBLY OVERVIEW

Your circulator disassembled – it is actually quite simple



DISSASSEMBLY



1st Step – Screw off pump cover
This exposes the pump impellers



2nd Step – Make sure skirt is not hooked on pump impellers

Turn Stainless steel skirt to the left and pull down to remove

SYSTEM MAINTENANCE & CLEANING

BEFORE BEGINNING SERVICE

- Always **turn off and unplug** the unit.
- Electrical connections and any other work must be performed by Anova certified personnel only
- Make sure system is at room temperature

Disconnect circulator from power source. Check for signs of damage including pulled cord or physical damage to system or heaters. If any signs of physical damage are found send back for factory service and replacement parts.

CLEANING THE CIRCULATOR:

For cleaning the circulator heating coil, pump shaft, and sensors, use a mild surfactant like dish soap and a soft tooth brush and rinse out under water.

Do not immerse or rinse in water the top part of the circulator including the main body and LCD display.

To clean the stainless steel skirt and pump cover – place into a dish washer or wash in the sink with detergent and other dishes.

CLEANING YOUR TANK OR BATH

From time to time algae and other microorganism will grow in the bath. All you have to do is empty out the bath and clean with detergent then let the container dry. Do not try to “kill them with heat from the circulator” - it's much better just to use fresh tap water.

Repairs

If you system falls into the water contact Anova Culinary LLC for a return and return authorization number.

We can also repair any system that is inadvertently damaged – but please contact Anova first for instructions and a return authorization number.

SYSTEM CALIBRATION

You system is pre-calibrated to a scientific primary platinum standard before arrival. This platinum standard is far more accurate than any consumer grade thermometer. If you still want to adjust your temperature read bias please read below.

BEFORE ADJUSTING YOUR TEMPERATURE READ

- **Cover your tank wait 15 minutes** and recheck the temperature. Most of the read errors come from evaporative loss or not waiting long enough for complete stabilization.
- It is not appropriate to use an analog thermometer period. Sous vide temperatures should not be approximated
- Make sure you are accurately taking the temperature read – generally you want to put the thermometer tip near the outflow of the circulator. If the thermometer is touching the cooking tank or not in the water you will read an incorrect value and your adjustments will be incorrect.

BEFORE ADJUSTING YOUR TEMPERATURE READ

Tap the top right corner of the boot screen 3 times to adjust the temperature read bias.



If your thermometer reads lower than the system use the minus sign. If your thermometer reads higher than the system use the plus sign. Press Check to accept or X to exit without saving.

Adjustment increments are in 0.1 Celsius

SOUS VIDE CIRCULATOR TRICKS & TIPS

The first rule of Sous Vide: Cover your tank or pot. (with aluminum foil)

The second rule of Sous Vide: Cover your tank or pot. (this prevents water loss dramatically, and promotes superb temperature stability and uniformity, you will need to cover the top for long runs @ 24+ hrs)

If this is your first time at Sous Vide, you have to Sous Vide.....

Books

Sous vide is not a "set it and forget it" type of technique. There are a number of sous vide cook books on amazon.com and other retailers that can teach you how to use this technique better than is manual.

Vacuum Sealers

Best:

Commercial Sealers – really any brand (like "VacMaster") works great but will cost you an arm and a leg.

Better:

Food Saver V3441 or similar – they are decently reliable and if you **double seal the bag twice** on each end, the seals hold well

Good:

"One handed Vacuum Sealers" – some have issues with sealing lumpy bags, but will work most of the time. Sometimes you also have to tape over the valve for longer time runs.

Worst:

Zip-lock bags have a habit of opening up and spilling contents everywhere especially at high temperature. If you have invested in a sous vide machine, invest in a good vacuum sealer – they are quite handy for a number of kitchen tasks other than sous vide. The only time Zip-lock is recommended is with eggs because they do not require prefect seals

WARRANTY PROVISIONS

The following Warranty Provisions shall apply to products sold in North America by Anova ("**Seller**") to the entity shown as buyer ("**Buyer**") on Seller's invoice.

1. **Initial Warranty.** Seller warrants to the Buyer that the products manufactured by the Seller are free from defects in material and workmanship for a period not to exceed one (1) year or five thousand (5,000) hours of operation, whichever comes first, from the date the product is shipped by Seller to Buyer (the "**Initial Warranty**").

2. **Exclusions.** The Initial Warranty does not include damage to the product resulting from accident, misuse, improper installation or operation, unauthorized or improper repair, replacement or alteration (including but not limited to repairs, replacements, or alterations made or performed by persons other than Seller's employees or authorized representatives), failure to provide or use of improper maintenance, unreasonable use or abuse of the product, or failure to follow written installation or operating instructions. Buyer must return the product's record of purchase to the Seller or one of Seller's authorized representatives within thirty (365) days of the date the product is shipped by Seller to Buyer in order to make a claim under the Initial Warranty.

3. **Governing Law.** The Warranty Provisions and all questions relating to their validity, interpretation, performance, and enforcement shall be construed in accordance with, and shall be governed by, the substantive laws of the State of Texas.

4. **Shipping.** Buyer will arrange and pay for shipping and handling charges for the unit to be returned to the Seller. Seller will arrange and pay for shipping and handling for the return of the unit to the Buyer.

4. **Commercial Usage.** Touch screen LCD is not covered under warranty if used in commercial environments. However the rest of the systems including motor and physical assemblies are fully covered.

TROUBLE SHOOTING & FAQ

Noise:

Under normal operation the system will hum due to the motor, impeller and cooling fan in operation.

Grinding metal on metal noise:

The stainless steel skirt is loose. Push up the stainless skirt up into the guide groove and turn to the right until you hear a click. With the skirt secure the noise will go away. There also might be the chance the stirring shaft was inadvertently bent. If this is the case, unscrew the bottom pump disk and gently push the impeller until it is centered.

Slurping noise:

Your pump has formed a water vortex like when you are emptying out a bathroom sink or tub. Add more water or gently disturb water with a spoon. There is no sure way to eliminate a vortex from forming due to the pump rotation but usually a vortex will go away on its own.

Gurgling + Woosh noise:

The pump is sucking air - add more water. You should also see small bubbles in your tank.

Food damage:

The pump's water jet is cracking eggs or damaging fish filets:

Turn the pump outlet to face the container wall; this will greatly temper the flow of the pump output. It is also good practice to bag eggs to prevent them from being "blown" around in certain containers.

System will not turn on:

My system will not turn on:

Check power plug and power switch directly behind the display.

Low water level alarm:

Low water level alarm turns on and does not turn off:

Add more water – there are 2 low water sensors and both have to be immersed in water for operation.

Low water level alarm turns on after a few seconds of operation:

Add more water – The pump generates "waves" – sometimes these waves will cause the water level at the sensors to fluctuate up and down. The waves sometimes drop the water level right under the sensor and will cause a low water alarm. This is normal and you just need to add more water.

My temperature read is not matching my thermometer.

Keep in mind Anova immersion circulators are calibrated to a scientific platinum primary standard which is far more accurate than store thermometers.

Cover your tank with foil and wait about 15 minutes for temperature equilibration – the number one source of temperature read differences is an uncovered tank

If you want your system to match your personal thermometer:

Use the calibration function to adjust the display offset of the read to match your thermometer.