

NANO-X NextGen 150L SV

When designing NextGen, our goal was to create a truly unique and highly advanced single-vessel (SV) brewing system—one that surpasses anything currently available. We aimed to eliminate the need for pieced-together malt pipes and consumable accessories, integrating all essential brewing functions into a single vessel for seamless, end-to-end brewing.

The **NANO-X NextGen 150L SV** redefines single-vessel brewing with its cutting-edge design, unparalleled temperature control, and hard-plumbed stainless-steel system. Whether you're a brewer or distiller, NextGen provides the ultimate efficiency, reliability, and ease of use in one comprehensive unit.

Why NextGen?

No other single-vessel system offers the versatility and capability of NextGen, making it truly deserving of its name—NextGen SV.

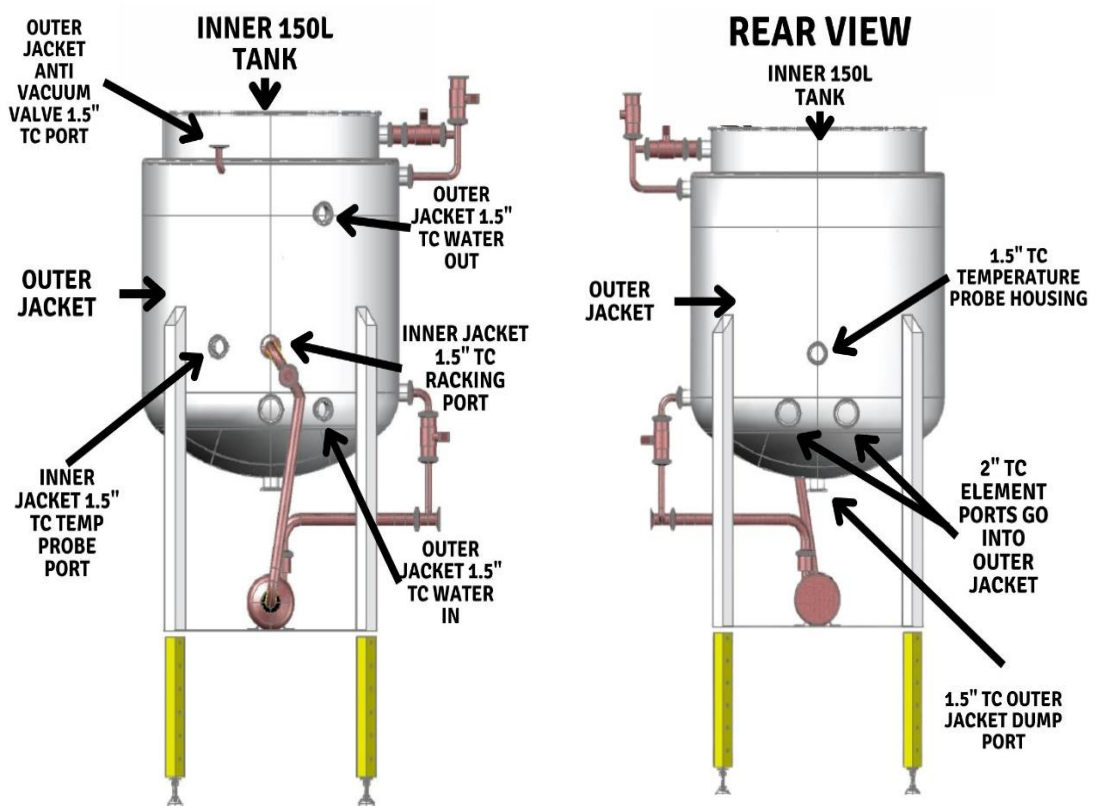
What Can It Do?

- **Superior Brewing:** Brew your Favorite beer with unmatched precision and zero risk of caramelization.
- **Multi-Function Heating & Cooling:** Reheat and chill wort—all within a single vessel.
- **Distilling & Fermentation:** Effortlessly produce whisky, rum, or vodka distilling washes and even ferment them in the same vessel.
- **Perfect for HERMS & 3V Systems:** Ideal as a HERMS recirculating vessel in a three-vessel setup. Use it as a boil kettle while utilizing the HERMS coil in the water jacket for mash recirculation, then chill your wort in the same kettle after boiling.
- **On-Grain Mash, Ferment, & Distill:** Designed for seamless on-grain mashing, fermentation, and distillation. Once distillation is complete, easily remove spent wash through the massive 2" dump valve coming off the centre of the dished base inner tank.
- **Hard Plumbing:** A separate hard plumbing set is not required, as NextGen includes it.

Water-Jacketed Design

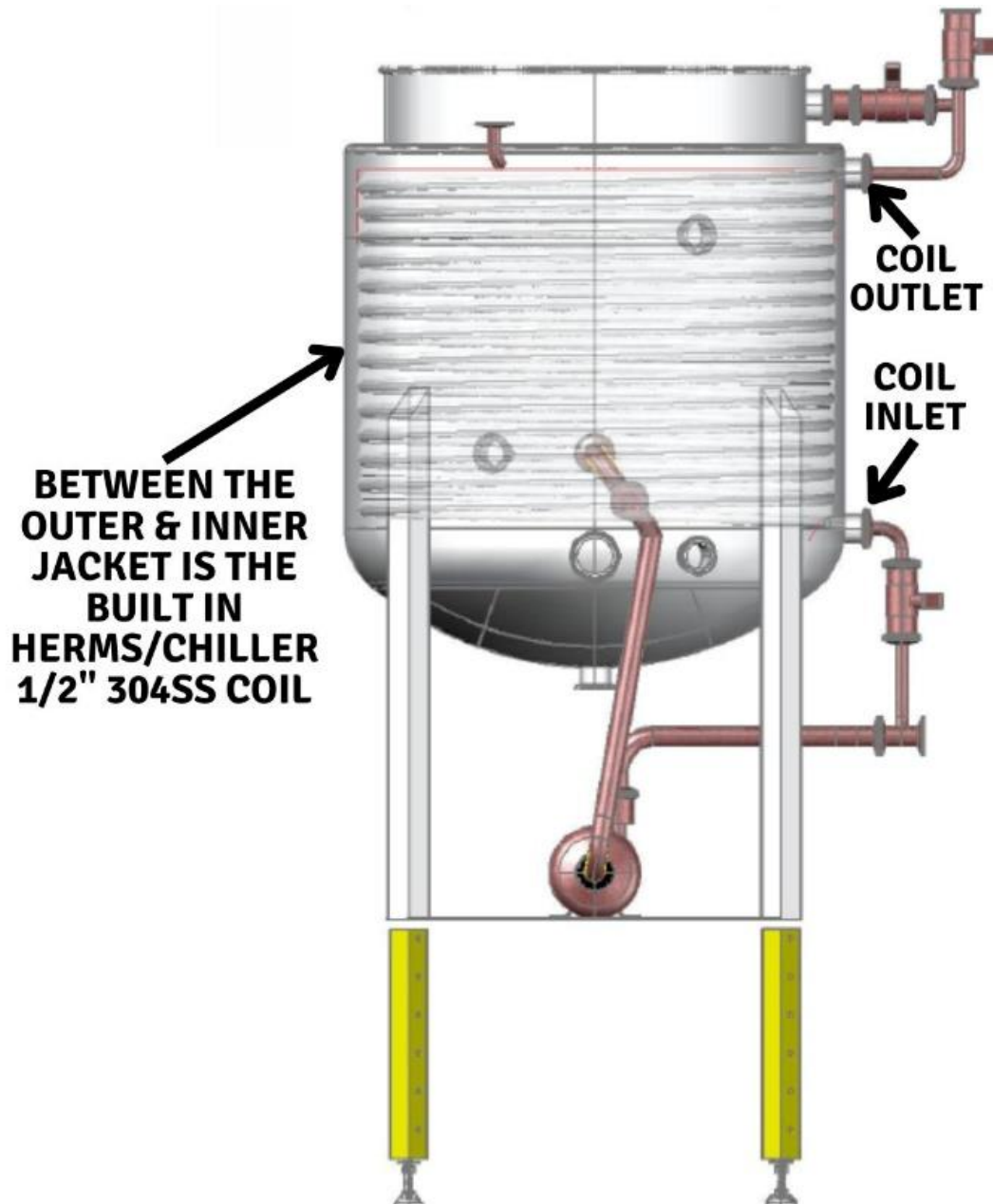
NextGen features an outer water jacket that provides uniform heating and precise temperature control for the inner brew tank. By surrounding the tank, this design ensures even heat distribution throughout the entire mash, rather than focusing heat only at the bottom. Functioning like a Bain-Marie system, the water jacket serves as both a heater and a cooler for the inner tank.

The heating elements in NextGen are located within the base of the vessel and inside the outer water jacket, eliminating direct contact with the brewing contents. Unlike conventional designs that rely on exposed heating elements attached to the vessel floor, NextGen utilizes fully concealed elements for enhanced efficiency and reliability.



Integrated HERMS/Counterflow Chiller

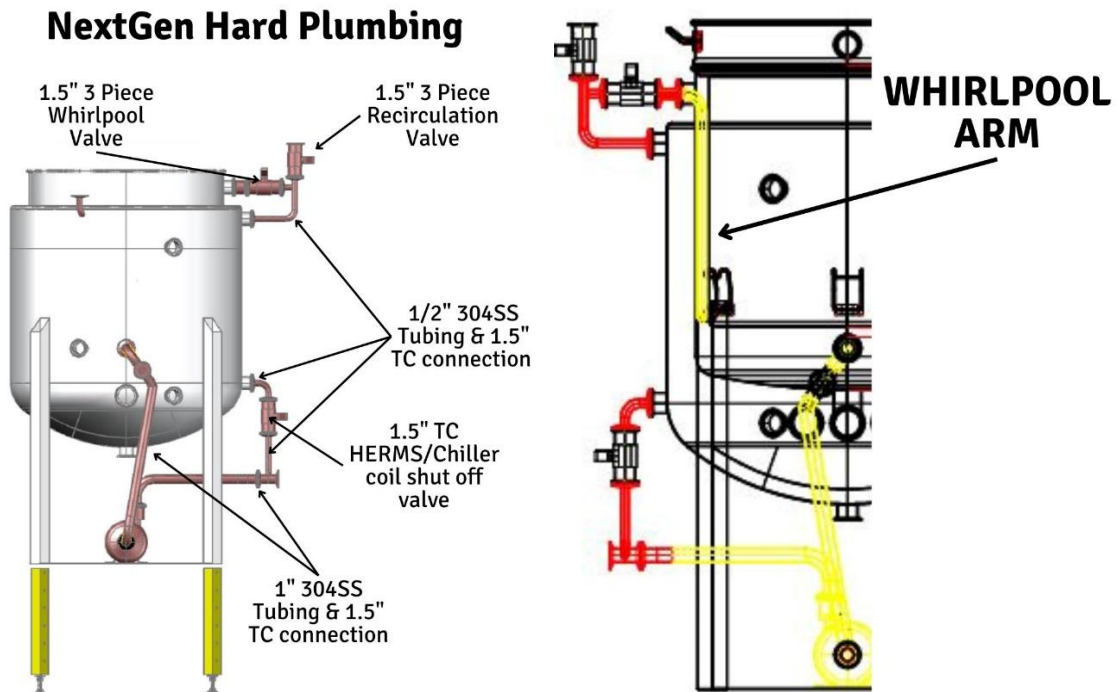
The built-in 304 stainless steel coil within the water jacket functions as both a Heat Exchange Recirculating Mash System (HERMS) and a wort chiller. This ensures consistent mash temperatures during recirculation while allowing rapid cooling for yeast pitching and precise temperature adjustments for whirlpool additions. No other system offers this level of temperature control and brewing efficiency in one package.



NextGen 304SS Hard-Plumbing

NextGen is fully hard-plumbed with 304 stainless steel for maximum durability and performance. Key features include:

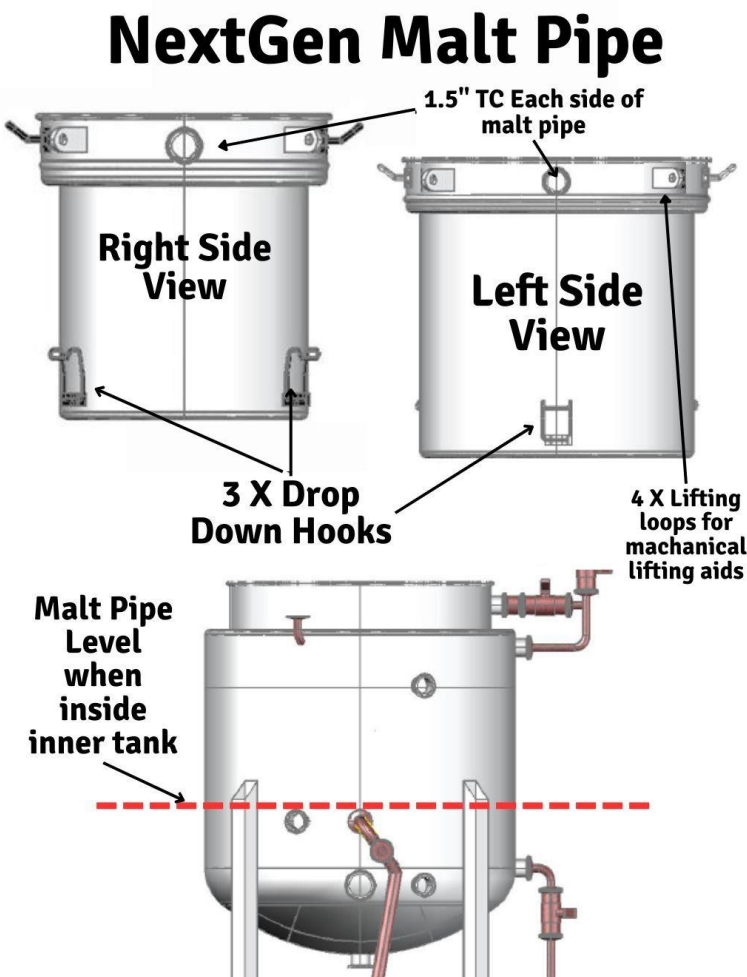
- A 1.5" TC rotatable racking cane and butterfly valve feeding into a 65W pump via 1" stainless steel tubing, ensuring unrestricted flow for high-speed transfers.
- A dedicated 1.5" TC port with a gas ball lock fitting for CO2 injection, enabling complete fluid flushing of internal and external plumbing.
- A 1.5" TC flow control valve that directs liquid flow for either wort transfer or recirculation through the internal coil.
- Two-directional flow from the internal coil: recirculation into the malt pipe (via the vertical valve) or whirlpooling/chilling (via the horizontal valve).



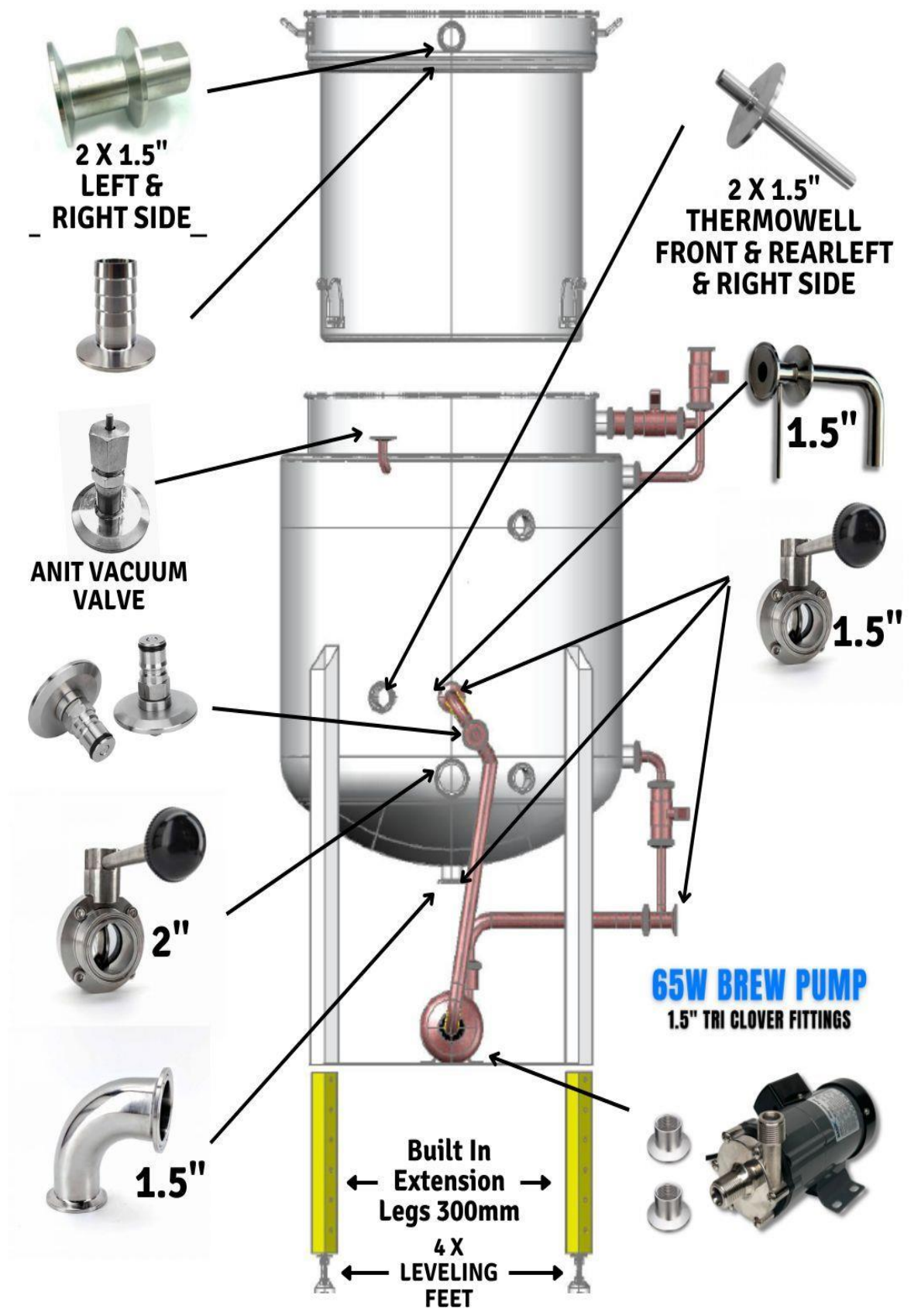
NextGen Malt Pipe

The NextGen malt pipe is designed for convenience, safety, and efficiency:

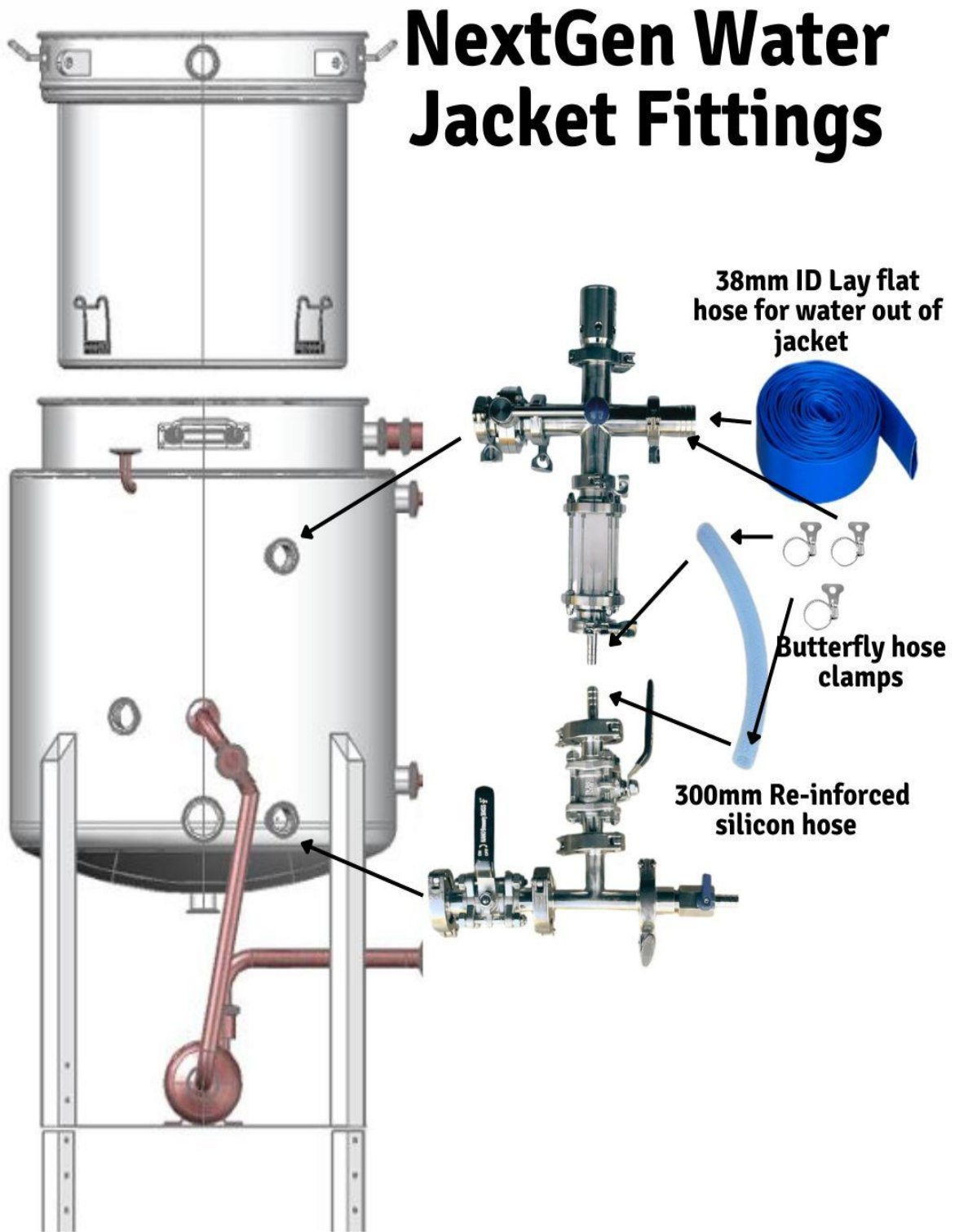
- **One-piece construction** for easy grain disposal, eliminating risks associated with detachable false bottoms.
- **Slitted false floor** (1.5mm-wide slots) ensures optimal wort flow and prevents clogging.
- **Top-profile landing channel** evenly disperses recirculated wort, preventing grain bed channelling.
- **Integrated hooks** for effortless lifting and draining, with optional mechanical lifting aid compatibility.
- **Heavy-duty silicon-dipped handles** for secure handling.
- **Two 1.5" TC ports** at the top for seamless sparging and recirculation—simply connect your water source to one port and return recirculated wort through the other.



What comes with your NextGen SV



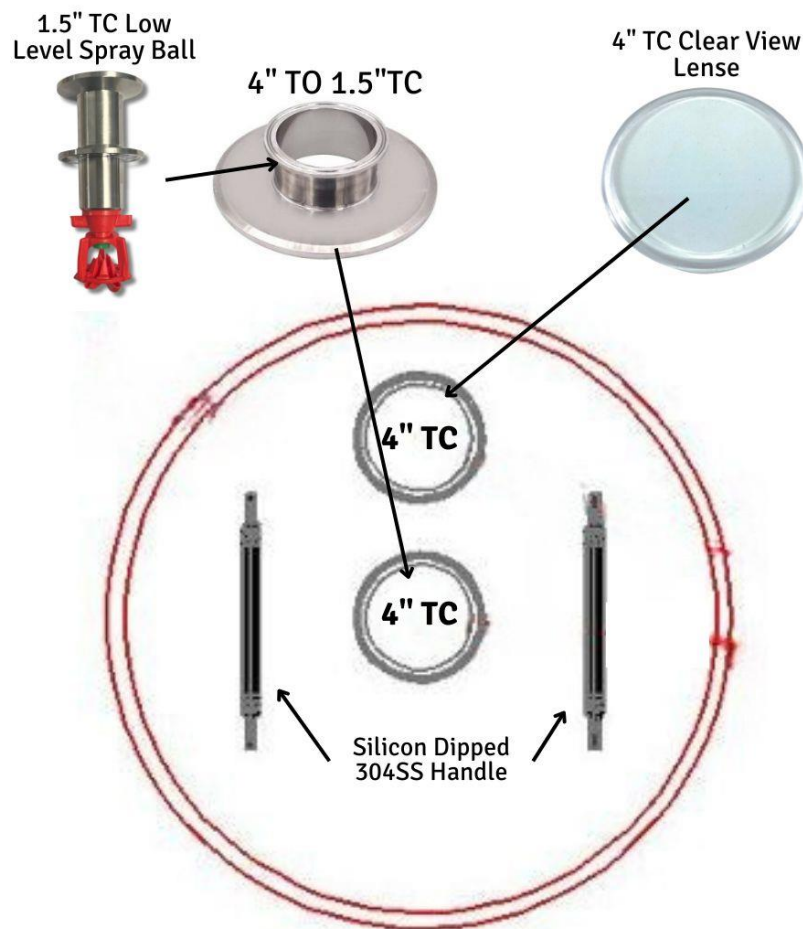
NextGen water jacket fittings supplied



NextGen Malt Pipe & main vessel lid

When chilling wort with the lid on your NextGen vessel, make sure the spray ball fitting on top is open to allow air to enter as the contents cool. This will help prevent the formation of a vacuum. The same applies when filling a cold vessel with hot water.

NEXTGEN VESSEL & MALT PIPE LID

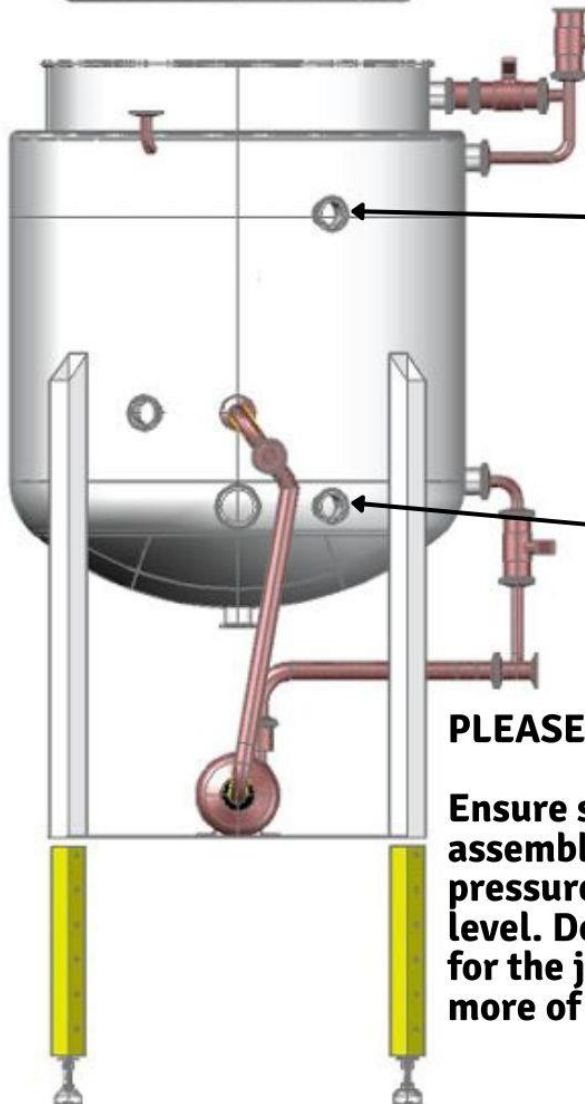


Heating your NextGen 150L



Heating your external water jacket

Step 3:
Heat water in water jacket



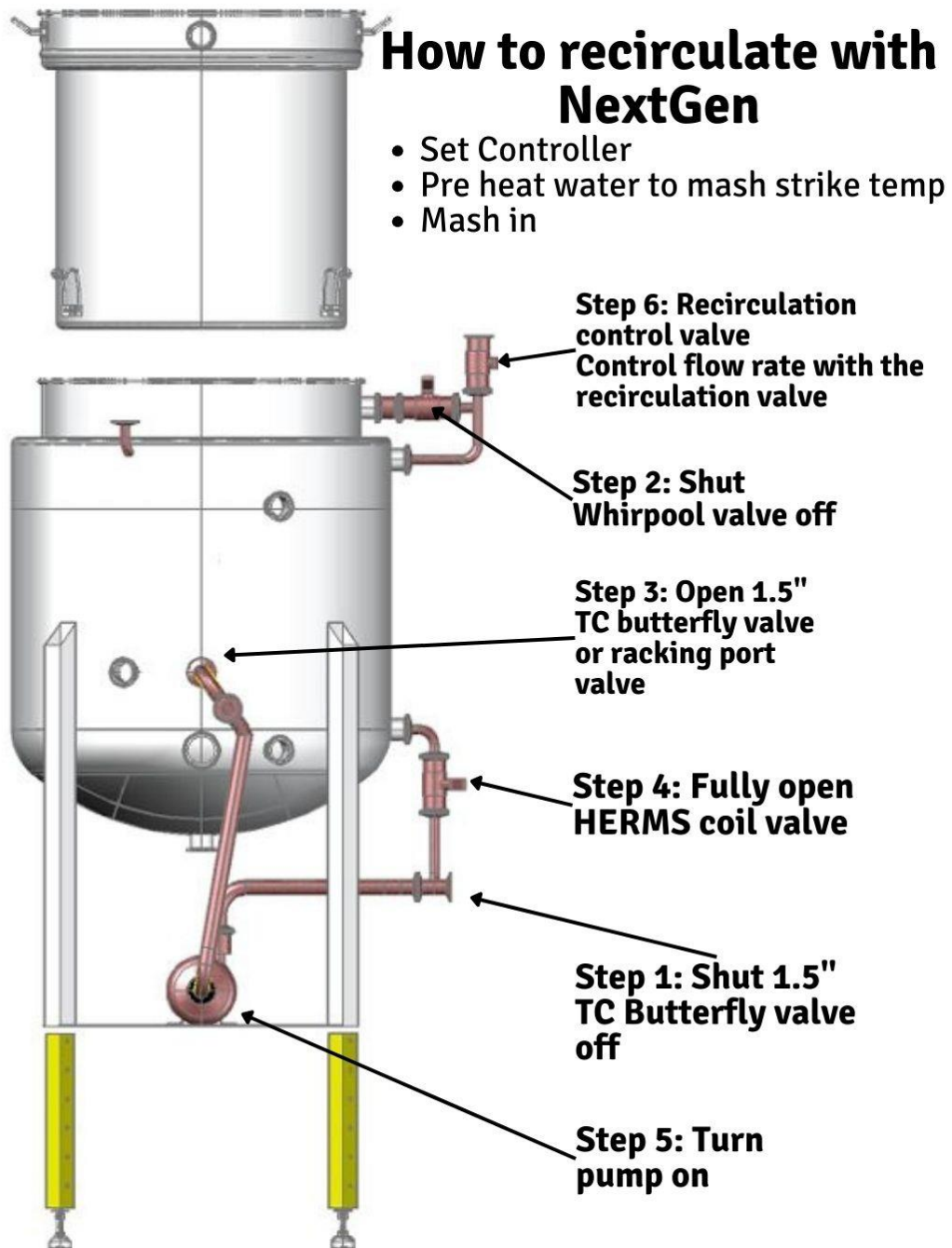
Step 2:
Open steam release valve so the jacket is able to release steam and not build pressure. Run hose off steam valve to atmosphere and a safe place with provided hosing

Step 1:
Add water up to the $\frac{2}{3}$ mark of the sight glass

PLEASE NOTE:

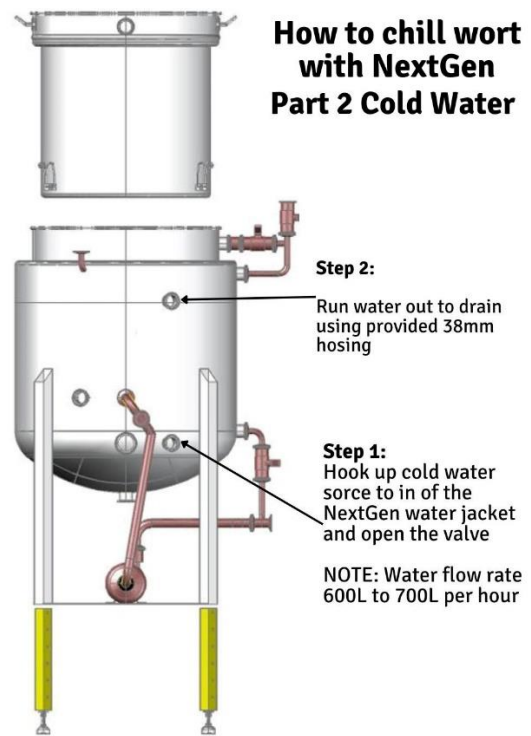
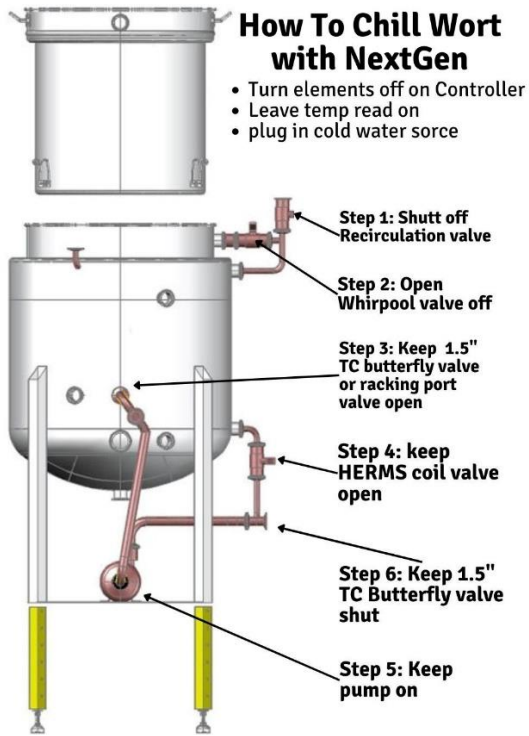
Ensure steam is released for the valve assembly at the top of the jacket or pressure could build to a dangerous level. Do not rely on the provided PRV for the jacket steam release, this is more of a back up.

How to recirculate your mash in NextGen

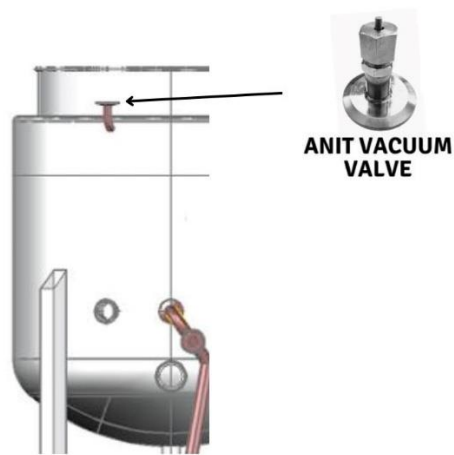


How to chill wort using your NextGen 150L

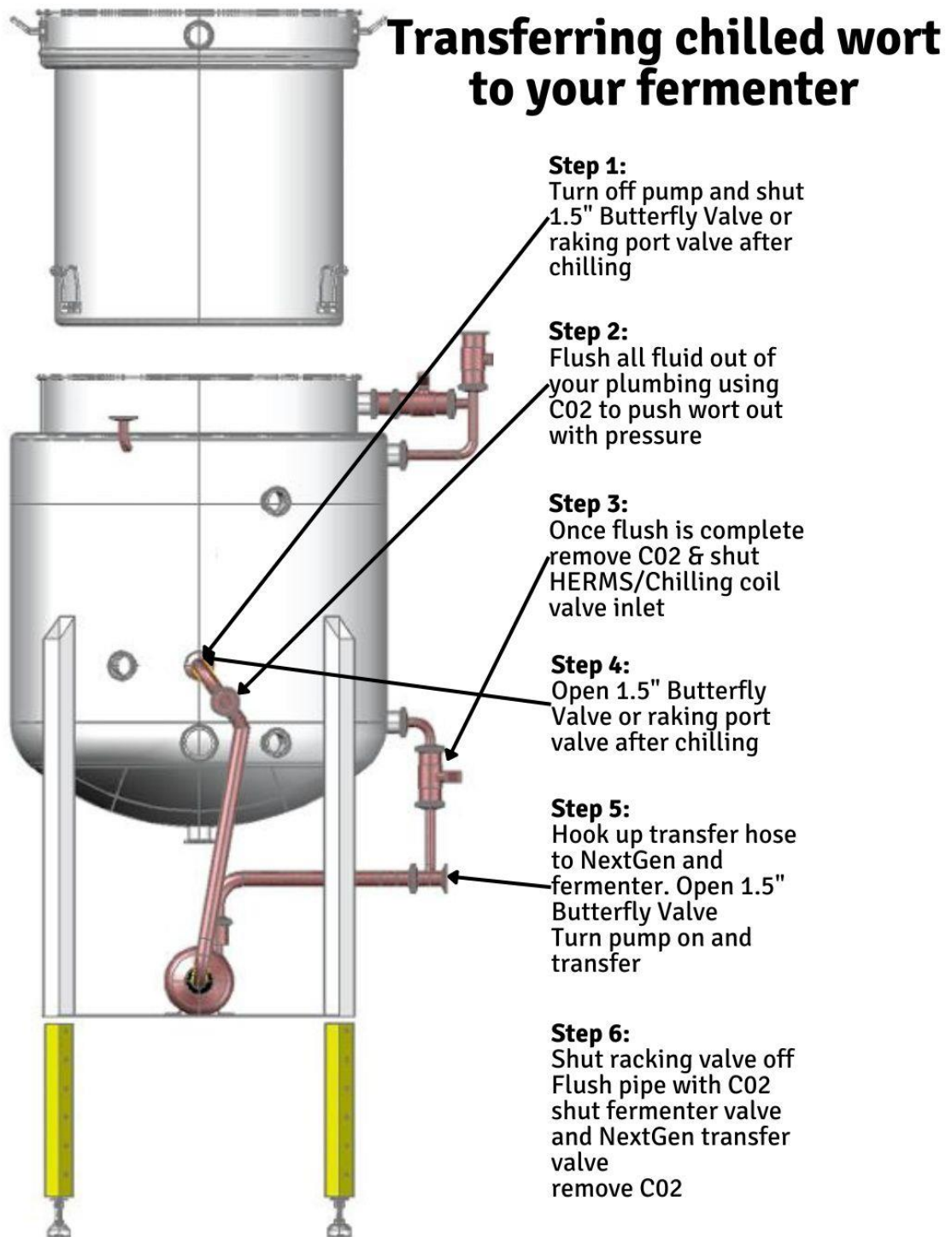
When chilling wort in your NextGen SV please ensure your vacuum valve is in place and serviced. Also make sure the spray ball fitting on top is open to allow air to enter as the contents cool. This will help prevent the formation of a vacuum.



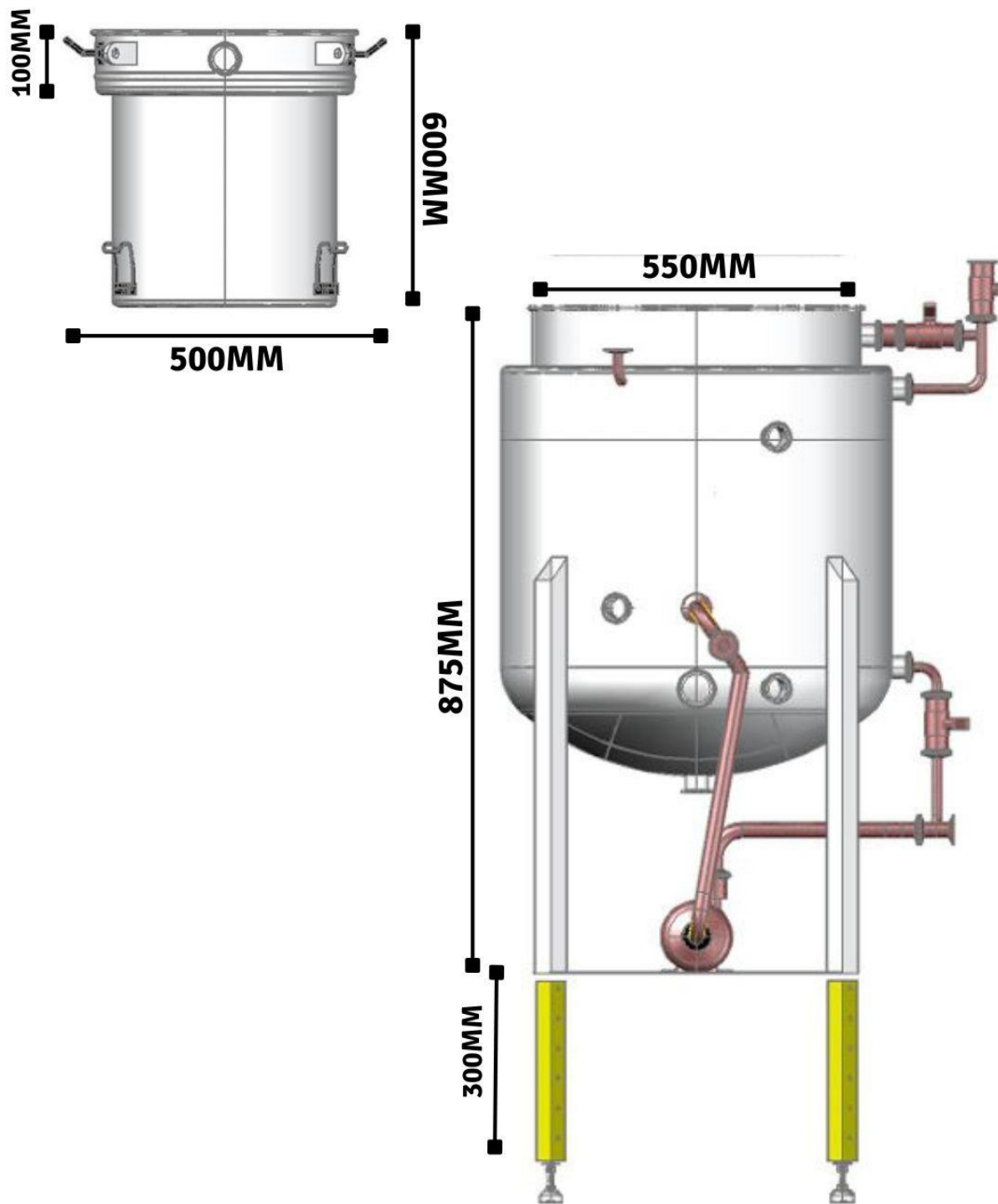
MAINTAIN AND SERVICE YOUR WATER JACKET ANTI VACUUM VALVE ALWAYS



Transferring to your NANO-X Unitank



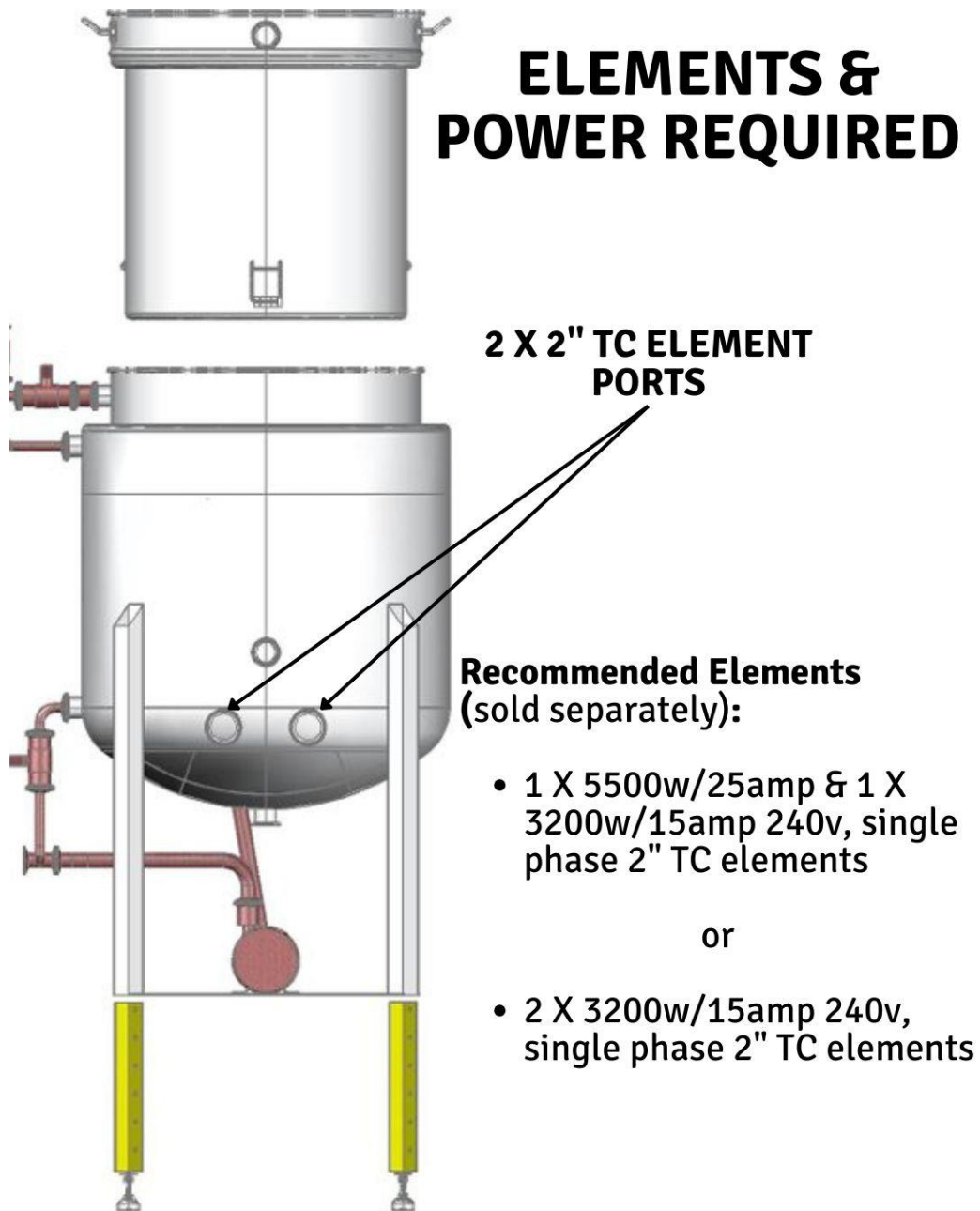
150L NextGen Dimensions



Elements for the NextGen 150L (Sold Separately)

The NextGen element ports are positioned at the base of the outer water jacket of the main vessel. These ports are designed so that elements insert straight into the jacket base rather than at an angle, allowing for longer elements without the risk of collision in the centre of the vessel.

At CPB, we sell elements separately because circuit availability varies by location (e.g., 15-amp or 25-amp circuits). We recommend purchasing either 2 x 15-amp elements or a combination of 1 x 25-amp and 1 x 15-amp. Selling elements separately also gives customers the flexibility to find competitively priced alternatives or choose elements we may not stock.



150L NextGen Controllers (Sold Separately)

In today's brewing industry, many brewers prefer to build their own control systems or already have compatible controllers. Additionally, since we cannot determine the specific heating elements each customer will use, we offer controllers as a separate purchase rather than bundling them with the system.

For optimal performance with the NextGen 150L system, we recommend:

- NANO Boss Commercial Controller – Ideal when element amperage exceeds 15 amps.
- NANO Boss 15amp Controller – Recommended for use with 15-amp elements.

Available controller options:

1. NANO Boss 32amp, 240V Single Phase – Touchscreen PID Temperature & Voltage Controller.
2. NANO Boss 15amp, 240V Single Phase – Touchscreen PID Temperature & Voltage Controller.

NANO BOSS COMMERCIAL 32AMP TOUCHSCREEN PID & VOLTAGE CONTROLLER



NANO BOSS DOMESTIC 15AMP TOUCHSCREEN PID & VOLTAGE CONTROLLER



NextGen Accessories (sold separately)

To distill using the NextGen system, you will need one of the designated domed lids along with a compatible still. These lids also support the installation of an agitator. By incorporating a domed lid, an agitator, and a still, you can mash, ferment, and distill on grain within your NextGen setup.

How to Mash, Ferment, and Distillation on Grain

Important: Keep the agitator running throughout all steps except during fermentation and Step 8. **Do not recirculate the mash** at any stage, as this is unnecessary and may cause blockages in the system's plumbing.

Step 1: Prepare Your Mash Strike Water

- Heat the required water volume to the mash strike temperature.
- The recommended strike water temperature is **4–5°C above** your desired mash temperature.

Step 2: Mashing In

- Add your grain to the NextGen system.
- The agitator will stir the mash continuously for **30 minutes**.

Step 3: Mash Out

- Raise the boiler temperature to **75°C** after the 30-minute agitation period.
- Hold this temperature for **10 minutes** to complete the mash-out process.

Step 4: Cool the Mash

- Lower the mash temperature to yeast pitching levels by circulating cold water through the NextGen water jacket.

Step 5: Pitch Yeast & Ferment

- Add yeast and ferment on the grain.
- To control fermentation temperature:
 - Use an **ice bank chiller** for cooling—no glycol needed.
 - Use the system elements and water jacket to maintain the desired fermentation temperature.

Step 6: Distillation

- Once fermentation is complete, attach your still and begin distilling the fermented wash in the boiler.

Step 7: Removing the Wash or Slurry

There are **three methods** to remove the wash or slurry:

1. **Centrifugal Pump** – Ideal for handling solids.
2. **CO₂ Pressure** – Pushes the slurry out using applied gas pressure.

3. **Gravity Dumping** – Let the slurry flow out naturally.
 - To assist, run the agitator and add extra water to make the slurry more fluid.

Step 8: Boiler Cleaning

- Use the **2" dump port** to drain the wash completely.



NANO-X 150L Steam Condenser – An incognito stripping still basically

Welcome to the new NANO-X Steam Condenser that suits our NextGen 150L. This product is very popular with our customers who brew indoors and wish to prevent mould build up on the shed or house sealing.

incognito stripping still: The major difference with this steam condenser is that it can also be used as a still, so if your beer goes south, you can strip the alcohol out, barrel and age it and then away you go.

This steam condenser is constructed from 304ss is the most efficient on the market.



NANO-X Fermenter or Unitank size recommendation to suit NextGen 150L

For single batching only we recommend a 150L Fermenter or our NANO-X 2.0 150L Jacketed Unitank



For double batching or completing one batch on one day and the next batch the following day, which is then added directly into the fermenter on top of the first batch, we recommend using a 300L fermenter or our NANO-X 2.0 300L Jacketed Unitank.



Passivation guide for your NextGen 150L SV

All NANO 304SS gear is made from high grade 304 stainless steel as used by commercial brewers in the food industry. Commercial brewers understand that quality equipment is an investment that will provide years of service when properly maintained. Home and craft brewers can benefit in the same way by following simple cleaning and care processes described in this guide.

Stainless steel is made from iron, carbon, chromium and other elements. The 300 series include 304 and 316 grades which are highly resistant to corrosion and tolerant to a wide range of temperatures without losing structural integrity.

The chromium content of stainless-steel alloys creates a thin passivation layer which protects iron within the material by preventing oxygen from having direct access to the underlying iron. When the protective layer is broken as happens during manufacture and fabrication, small surface imperfections and free iron are inevitable. Scrubbing your 304-grade stainless steel or using an abrasive cleaning agent can also break through the passivation layer or leave free iron residues. These provide opportunities for attack by corrosive agents causing surface rust and/or pitting to occur.

DO clean, rinse, and dry your equipment immediately after use. Dirt and residues from brewing processes can concentrate as they dry causing damage to the passivation layer and the underlying alloy.

DO NOT use steel wool or steel scourers to clean stainless steel. Avoid abrasive cleaners.

DO use synthetic scourers such as scotch Brite as these will not leave harmful residues and are less likely to damage the protection layer.

DO NOT use chlorine-based cleaners or sanitisers. Chlorine is the enemy we must live with but only in our brew water adjustments such as Sodium Chloride or Calcium Chloride.

DO use oxygen bleach or citric and oxalic acid-based cleaners such as Sodium Percarbonate, PBW, Oxyper, Trisodium Phosphate. If you have electronic etched markings avoid Oxalic Acid based cleaners as these will fade or erase the etched markings.

DO use phosphoric acid based sanitisers such as Starsan or Stellarsan. These are no rinse products that protect against bacteria or wild yeast infection without tainting your beer, damaging your equipment or harming the environment.

DO passivate your equipment prior to first use. In the case of your NextGen system this includes:

- Water jacket internally and Inner 150L tank
- Vessel Lid
- Internal HERMS/chilling coil
- Exterior stainless steel
- Internal and external of the malt pipe

Use one of the methods described below.

Method 1 - Passivating with Citric Acid

The international standards for passivating stainless steel (Designation: A967/A967M – 17, and A380/A380M – 17) from ASTM outline several methods for passivating various grades of stainless steel. The primary methods involve the use of either Nitric Acid or Citric Acid. Nitric Acid is highly corrosive and must be handled with great care. It is also harmful to the environment as products of its reactions to metals and other chemicals include noxious gases such as NO and NO₂. Citric Acid is a weak organic acid which can be handled with simple precautions even at high concentrations and has no significant impact on the environment. Passivation of parts with citric acid can be achieved as follows:

STEP 1: The parts must be thoroughly cleaned to remove dirt, grease, and other contaminants all of which can interfere with the passivation reactions creating holes in the passivation layer. Cleaning agents suitable for this step include Sodium Percarbonate, PBW, Tri Sodium Phosphate, Bar Keepers Friend. Whatever you use, take the time to understand the ingredients in your cleaning product and avoid the use of any that contains chlorine bleach. Avoid using an Oxalic Acid based cleaner such as Bar Keepers Friend on Nano vessels with etched volume marks as these may be faded or removed by such products. After thorough cleaning of all parts (including dismantling and cleaning of your removable valves and pipework), rinse well in clean water and dry the parts prior to the passivation step.

STEP 2: Mix a solution of 4-10% citric acid by weight with clean water. Eg. 1 litre of water requires 40-100g of citric acid. At lower concentrations use the higher end of the recommended time.

STEP 3: Soak parts in citric acid solution at room temperature (20C) for 20-30 minutes. In the case of 304 SS Nano pots or fermenters it is clearly not economical to fill these with a citric acid solution, so we recommend using an appropriate CIP spray ball and pump to maintain contact between the acid solution and the interior surfaces of the vessel. Regarding the external surfaces of these vessels, thorough cleaning, rinsing and drying should provide sufficient protection given these are not subject to extensive periods of contact with brewing liquids.

STEP 4: Immediately after removal from the passivating solution, the parts shall be rinsed thoroughly in clean water and dried

Method 2 - Passivating with Starsan/Stellarsan

The international standards recognise other chemicals and methods for passivation, provided these meet standard test conditions. Home brewers have access to no rinse sanitizers containing phosphoric acid and these provide an accessible and economical alternative to citric acid for those without access to CIP spray cleaning systems. You can passivate your 304SS Nano and Nano X brew pots and fermenters using Stellarsan/Starsan phosphoric acid-based sanitisers as follows:

STEP 1: Clean your parts using the same cleaning products and procedure as in Method

STEP 2: Mix a solution of Starsan/Stellarsan that is 5 times more concentrated than standard for sanitizing. I.e.

1.5 ml per litre becomes 7.5 ml per litre.

STEP 3: Soak parts in the Starsan/Stellarsan solution at room temperature (20C) for 20-30 minutes. The CIP spray ball solution can also be used here, but for those without access to this equipment, the solution required to fill a 30-litre vessel requires 225 ml of Stellarsan which can be purchased for a reasonable price from our online store or other home brew shops. If you have more than one vessel it would be acceptable to reuse the passivating solution for a second and third vessel and indeed for the smaller parts that make up your system.

STEP 4: Immediately after removal from the passivating solution, the parts shall be rinsed thoroughly in clean water, and dried.

References:

<https://beersmith.com/blog/2017/01/09/passivating-stainless-steel-beer-brewing-equipment-to-prevent-corrosion/>

<http://howtobrew.com/>