

# vat pasteurizer



# Why buy a C-Stainless vat pasteurizer?

Our vat pasteurizers are engineered with high-quality standards. Whether it's thicker inside walls that discourage denting, or flexible batch sizes for versatility, we pay attention to details that count. We aim to strike a balance between quality, longevity, and affordability.



CS-VP03 300 gal. with butterfly lids Arethusa Farm Dairy Litchfield, CT



CS-VP02 200 gal. with removable lids Deliteful Dairy Williamsport, MD



CS-VP03 300 gal. with butterfly lids Moo Echo Dairy Somerset, PA

## Flexible batch sizes

C-Stainless vat pasteurizers are designed to be flexible for the small to mid-sized processor. We understand that sometimes you need the efficiency of a large batch, but other times you need the ability to do a much smaller batch. Perhaps you have a seasonal herd, or perhaps you have some unique but low-volume products. The C-Stainless vat will work for you.

Our agitation design is at the core of our vat's flexibility—we use a sweep agitator mounted low in the vat. In contrast to the smaller prop-style agitator that some vats use, a sweep agitator can effectively and gently blend small volumes of products. Batch sizes as small as 30% of the total capacity are no problem.

Whether you choose a model with a preinstalled thermowell design or a model with drop-in thermometers, we've designed our pasteurizers to be able to sense product temperature low in the vat, which also allows for smaller batch sizes.

## **Energy-efficient**

C-Stainless vat pasteurizers are designed with a triple-wall construction—an inner wall, a water jacket, and an outer wall—to maximize the heat transfer and minimize heat loss.

The water jacket has two zones: one covers the bottom of the vat, and the other surrounds the sides. When water is pumped through the jacket, a thin wall of water circulates around the inner tank wall. The large contact surface maximizes heat transfer and promotes even heating and cooling of the product. When the circulator is turned off, temperature drift is virtually nonexistent, allowing for truly low-temp pasteurization.

C-Stainless pasteurizers are pressure-wall units. This means that the water jacket can withstand the normal pressure levels of a water system. Hot or cold water can be pumped through the pasteurizer jacket, and then back to the source to recirculate through the system. This minimizes energy loss, in contrast to atmospheric vats, where the water or steam may need to be discharged to the floor.



## Versatile

Our vat pasteurizers are designed to be as versatile as possible. Many smaller processors need to use the same piece of equipment to produce multiple products. We understand. We offer a wide range of sizes (100–1,000 gal.), and each size can accommodate a wide range of products and batch sizes.

The smaller models (100, 200, and 300) come standard with butterfly lids, allowing easy access to blend in ingredients, etc. Models with completely removable lids are also available, allowing your pasteurizer to double as a cheese vat.

The larger models come with a dome top and an easy-access manhole. Dome tops contain wash water and air space heat better than butterfly lids.



#### Thorough agitation

The sweep agitation design of our vat pasteurizers allows for gentle but thorough agitation. This agitation system exceeds PMO requirements, which specify a temperature difference of less than one degree anywhere in the vat.

The curled agitator blades reach almost to the side wall of the vat. This maximizes product contact, but allows the blades to move more slowly if necessary to avoid damaging the product.

An optional variable speed drive can be installed on the agitator drive motor to provide you with the flexibility of speeding up or slowing down the agitator for best results with a specific product.

# Heavy-duty design

Like the other equipment in the C-Stainless product line, our vat pasteurizers are built tough and heavy. We know that dented bottoms and sidewalls are not a good thing.

The inner tank wall is made with 12-gauge 304 stainless steel. Many competitors' vats are made of a lighter gauge stainless (such as 14-gauge). Our heavier inner vat resists denting and distortion caused by the normal wear and tear that vats experience.

The agitator drive system is robust—with proper lubrication and maintenance, the agitator will run for years with virtually no repairs.

Inner wall thickness (actual size): Competitor's vat pasteurizer

C-Stainless vat pasteurizer **14-gauge** stainless 0.0781"

**12-gauge** stainless 0.1094"

## Anderson digital pasteurization system

We offer an optional Anderson AJ-300 digital pasteurization system that can be purchased with our pasteurizers. The system includes probes to measure both air space and product temperature. The air space temperature probe is inserted through a port in the lid. The product temperature probe is inserted into a thermowell through the lower sidewall of the vat, except for models with removable lids for cheese making, where it is also inserted through the lid.

The AJ-300 digital control system meets PMO standards for both product temperature and air space.





# **Technical Specifications**

		CS-VP01	CS-VP02	CS-VP03
		100 gal. pasteurizer	200 gal. pasteurizer	300 gal. pasteurizer
VAT	Rated Capacity	100 gal.	200 gal.	300 gal.
	Total Capacity	120 gal. <sup>1</sup>	215 gal. <sup>1</sup>	335 gal. <sup>1</sup>
	Outside Diameter	42 in.	50 in.	50 in.
	Inside Diameter	37 in.	46 in.	46 in.
	Depth	29 in.	33 in.	48 in.
	Inner Wall Thickness	12 Ga.	12 Ga.	12 Ga.
	Outer Wall Thickness	14 Ga.	14 Ga.	14 Ga.
	Material	304 SS / #4 finish	304 SS / #4 finish	304 SS / #4 finish
AGITATOR	Agitator type	Sweep	Sweep	Sweep
	Motor	1⁄4 hp	1⁄2 hp	1⁄2 hp
	Power Requirements	1.8 FLA 208 VAC 3PH	2.2 FLA 208 VAC 3PH	2.2 FLA 208 VAC 3PH
	Gearbox Ratio	59:1	60:1	60:1
	Agitator RPM	29.7 RPM <sup>2</sup>	29.2 RPM <sup>2</sup>	29.2 RPM <sup>2</sup>
	Heating required	100,000 BTU/hr. min.	200,000 BTU/hr.	300,000 BTU/hr.
HEATING JACKET	Heating Jacket Type	Dimplo inclust	Dimplo inclust	Dimple ischet
	Thickness	Dimple jacket 3/8 in.	Dimple jacket 3/8 in.	Dimple jacket 3/8 in.
	Maximum Pressure	70 psi	70 psi	70 psi
	Inlet Port	1.5 in.	2 in.	2 in.
	Outlet Port	1.5 in.	2 in.	2 in. 2 in.
	Flow Requirements	25 GPM minimum	40 GPM minimum	40 GPM minimum
	now requirements			40 GFM minimum
	Side & Bottom Insulation	1.5" rigid fiberglass	1.5" rigid fiberglass	1.5" rigid fiberglass
TEMP. RECORDER	Туре	AJ300	AJ300	AJ300
	Power Requirements	5AMP 120VAC 1PH	5AMP 120VAC 1PH	5AMP 120VAC 1PH
	Air Space Thermometer	Digital	Digital	Digital
	Product Thermometer	Digital	Digital	Digital
	Outlet (optional)	2 in. leak detect valve	2 in. leak detect valve	2 in. leak detect valve
	Weight	510 lb.	810 lb.	950 lb.

<sup>1</sup> Capacity calculated with 2" of air space

 $^{2}$  An optional variable speed drive allows the agitator speed to be regulated from 0 – 29 RPM.

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# About Us

Conococheague Stainless is a small manufacturing company located near Hagerstown, Maryland. Our name comes from the nearby Conococheague Creek, which the Delaware Indians named for its many twists and turns. Our focus is building high-quality stainless steel dairy processing equipment.

Many of us have worked in the dairy industry for years. After noticing the scarcity of quality small-scale processing equipment, both new and used, we decided to make some ourselves! Our C-Stainless product line is the result. With input from food processing experts, we've designed durable, user-friendly, and efficient products that bridge the gap between counter-top kitchen equipment and large commercial processing equipment. We offer pasteurizers, bottle fillers, cheese vats, and much more.

In addition to equipment, we offer plant design and installation services for our customers. If you're thinking about processing your own milk, check out the information section on our website. And if you have more questions, feel free to contact us!

#### **Conococheague Stainless LLC**

11906 Wheatfield Dr, Hagerstown, MD 21740 717-372-8702 info@cstainlessllc.com www.cstainlessllc.com

