



Stainless Steel Jacketed Centrifuge

Model: XTC Series V2.0

XTC-20, XTC-45, XTC-100



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1 Safety Instructions and Features

1.1 Safety Instructions

Do Not Over Fill Centrifuge, It Will Cause an Overload Condition.

The use of Personal Protection Equipment (PPE) is REQUIRED.

Follow all federal, state and municipal laws, codes and ordinances.

Please make sure the power connection is correct and well-grounded. (see the technical parameters for details)

Fluid lines should be unobstructed without any hard bends in the run. Install gasket inside fittings before use.

Apply a rag to wipe the parts clean after washing away stains; do not use hard objects.

Do not use flammable, corrosive or explosive substances on, in, or near the equipment.

If there is a problem, do not continue to use the centrifuge. Contact us immediately.

Safety Precautions and Explanations

At USA Lab, safety is our number one priority. The following information provides guidelines for safety when using USA Lab equipment. Any piece of machinery can become dangerous to personnel when improperly operated or poorly maintained.

ALL employees operating and maintaining USA Lab equipment should be familiar with its operation, thoroughly trained, and Instructed on the best safety practices.

Most industry accidents are preventable through safety awareness.

Training

It is the responsibility of the customer to ensure that all personnel who will be expected to operate or maintain the equipment. Participate in training and instruction sessions to become trained operators. All personnel operating, inspecting, servicing, or cleaning this equipment must be properly trained in the operation and machine safety. **BEFORE** operating this equipment, read the operating instructions in this equipment manual. Become thoroughly familiar with the machinery and its controls.

Safety

- Never leave the equipment running unattended and use this equipment only for its intended purpose.
- Ensure that all power sources are turned off when the machine is not in use. This encompasses electrical and pneumatic power.
- Read the manual for any special operational instructions for each piece of equipment. All USA Lab authored manuals are typically included with each device as well as posted online.
- Know how the equipment functions and understand the operating and halting processes.
- Wear the appropriate personal protective equipment for the task.
- When working on or around all equipment, avoid wearing loose clothing, jewelry, unrestrained long hair, loose ties, belts, scarves, or articles that may be caught in moving parts. Keep all extremities away from moving parts. Entanglement can cause death or severe injury.
- For new equipment, check input voltage and compare with the equipment voltage rating. DO NOT supply the incorrect power to any equipment for any reason whatsoever. Electrical specifications for your machine are printed on the machine tag. A properly grounded receptacle is required for safe operation regardless of voltage requirements.
- Keep the equipment operating zone free of obstacles that could cause a person to trip or fall toward an operating machine. Keep fingers, hands, or any part of the body out of the machine and away from moving parts when the machine is operating.
- Any machine with moving parts and/or electrical components can be potentially dangerous no matter how many safety features it contains. Stay alert and think clearly while operating or servicing the equipment. Be aware of operations and personnel in your surroundings. Be attentive to indicator lights, warning lights, and/or operator interface screens displayed on the machine and know how to respond.
- Do not operate machinery if you are fatigued, emotionally distressed, or under the influence of drugs or alcohol.
- Know where the FIRST AID SAFETY STATION is located.
- Know where the FIRE EXTINGUISHING EQUIPMENT is located.
- Never sit or stand on the machine or on anything that might cause you to fall against the machine.
- Rotating and moving parts are dangerous. Keep clear of the operating area. Never put any foreign object into the operating area.
- Use proper lifting and transporting devices for heavy equipment. Some types of equipment can be extremely heavy. An appropriate lifting device should be used.
- Use caution when moving portable equipment. In some cases, the machinery can be heavy and/or may be top heavy. Portable equipment can gain momentum during transporting and must always be controlled.

Symbols and Warnings

Below are examples of commonly used symbols and what they mean.
Understand them and their potential consequences.



High Voltage or Electrical Hazard



Explosive Hazard



Not User Serviceable



Flammable Hazard



Hot Surface or Steam Hazard

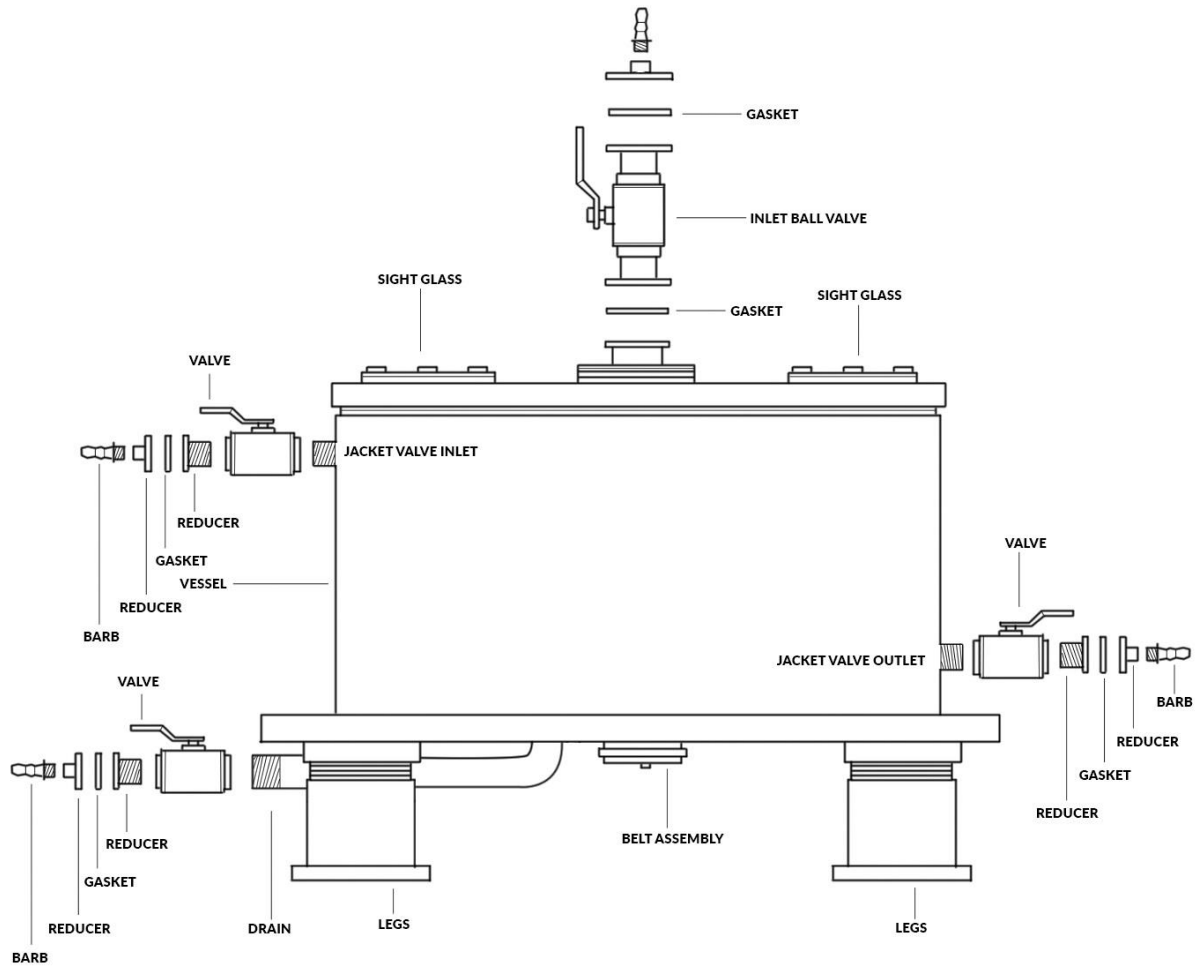
1.2 Features

Our centrifuge systems allow users to perform botanical extraction while maintaining a closed loop system, exposing no solvents to the air. Our system is designed for easy material loading and unloading. 2" Tri-clamp drain. Reinforced sight glass. Bi-Directional agitation. Variable speed control. Explosion proof motor. Gas spring assisted lid. 4 speed levels with timer. Digital valve control (optional). Single phase converter (optional).

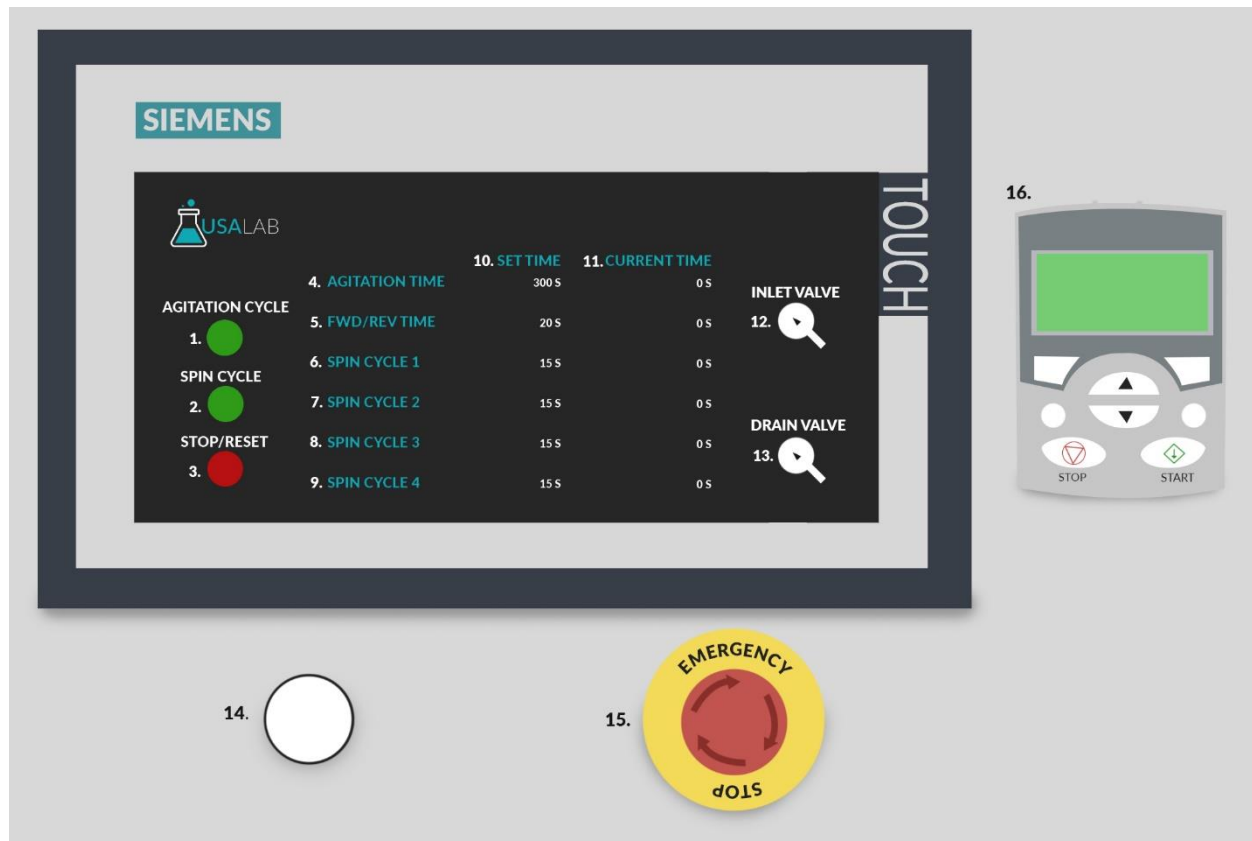
1.3 Technical Parameters

Model	XTC-20	XTC-45	XTC-100
Basket Diameter (mm)	450mm	600mm	800mm
Basket Volume (L)	20L	45L	100L
Maximum Bio Mass (Kg / Lbs.)	8 Kg / 17 Lbs.	18 Kg / 39 Lbs.	40 Kg / 88 Lbs.
Maximum Speed	910 RPM	755 RPM	1,200 RPM
Power (Phase / V)	Three Phase / 240 V		
Current (kW / A)	1.5 kW / 4.3 A	3 kW / 8.5 A	5.5kW / 15.6 A
Dimensions (in)	37" x 24" x 34"	51" x 35" x 35"	70" x 48" x 48"
Weight	661 Lbs.	1,984 Lbs.	4,000 Lbs.

2 Diagrams



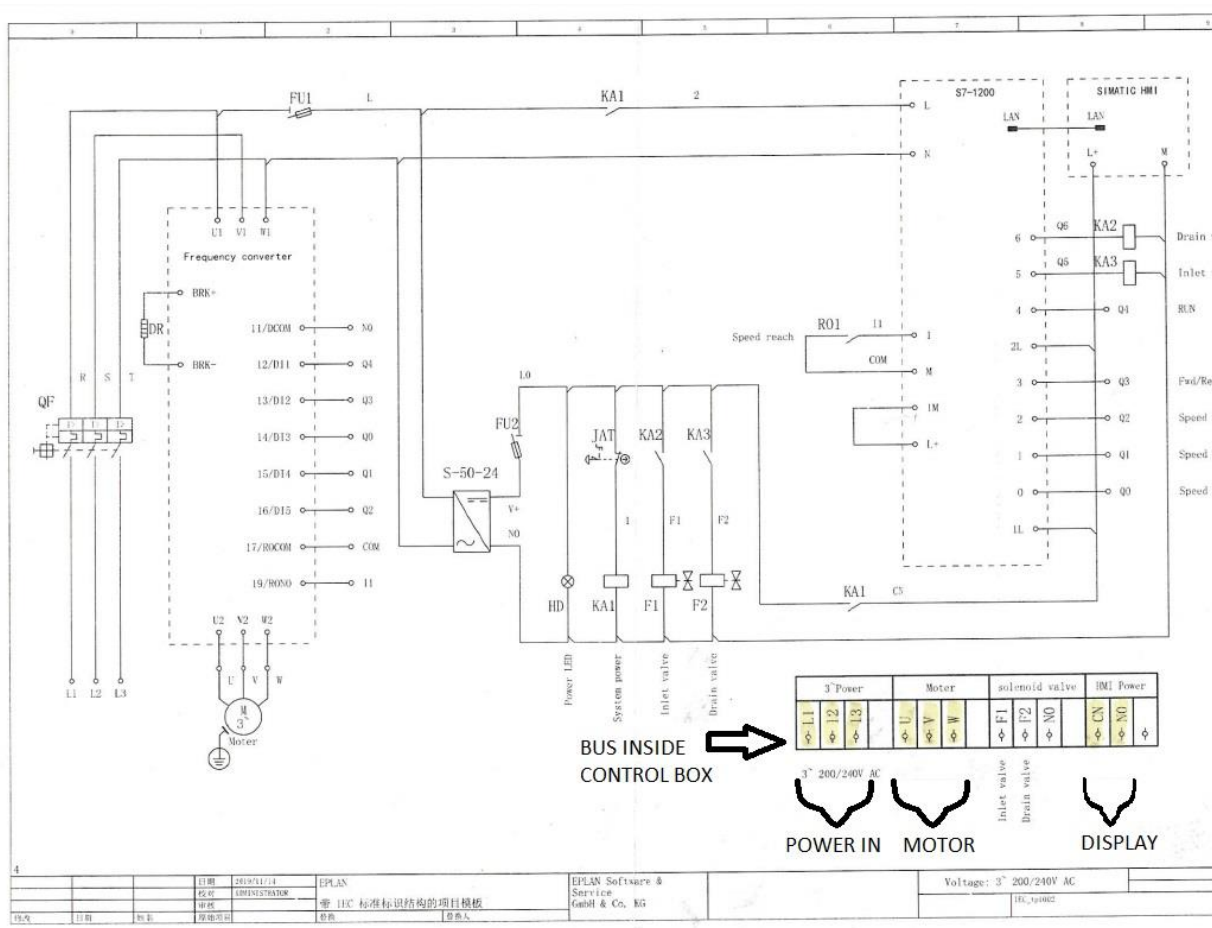
3 Control Panel



1. Agitation Cycle Start
2. Spin Cycle Start
3. Stop Current Cycle
4. Agitation Total Time (press the seconds to change the value)
5. Agitation Time Per Direction (press the seconds to change the value)
6. Spin Cycle Stage 1 (press the seconds to change the value)
7. Spin Cycle Stage 2 (press the seconds to change the value)
8. Spin Cycle Stage 3 (press the seconds to change the value)
9. Spin Cycle Stage 4 (press the seconds to change the value)
10. Set Time Value Column (press the seconds to change the value)
11. Current Time in Stage
12. Inlet Valve (optional) ON / OFF
13. Outlet Valve (optional) ON / OFF
14. Power Indicator
15. Emergency Shut-off Switch, Press IN to Shut Down.
16. Driver / Motor Controller. DO NOT CHANGE PARAMETERS.

Notes: The driver / motor controller plugs into the touch screen and is only for display of the Hz of the motor. Do not change the parameters unless instructed to do so by a USA Lab Technician.

4 Wiring Diagram



5 Instructions for Installation

- Mount the centrifuge to the floor of the facility
- Mount the control box outside of the C1D1 area
- Have a certified electrician run the wiring between the centrifuge and the controller
- Have the electrician run the wiring from the 240V 3-phase supply to the controller
- (Optional) Have the electrician wire and install the phase converter
- (Optional) Have the electrician wire and install the solenoid valves

6 Notes

This system has a Delta Style 3-phase power input.

Inside the controller is a circuit breaker, make sure that it is enabled when using the centrifuge.

Valves should be closed during the agitation cycle and open during the spin cycle.

Recommended time settings:

Agitation

- Total Time 600s

- Forward / Reverse 30s

Spin

- Stage 1 180s
- Stage 2 180s
- Stage 3 180s
- Stage 4 120s

Typically, there is 20-30 seconds lag time in between cycles.
Total run time is around 15 minutes including lag.

7 Maintenance

- Shut off the power switch and disconnect the power cord before any maintenance.
- Use a damp soft cloth to wipe clean. Stubborn stains should be cleaned by neutral detergents.
- The maintenance of internal electrical parts must be performed by professionals or trained electricians.
- Do not directly splash water over the product or use abrasive powder, diluent, oil, kerosene, acidic material and similar substances during cleaning, or else shock or other accidents will occur.

8 Service

Our company provides limited warranty for any product with failures due to manufacturing quality within 12 months after the date of delivery on the premise of normal operation by users. Reasonable repair costs will be charged for damage caused by improper use. After-sales service Tel : (734) 855-4890 or sales@usalab.com

USA Lab reserves the right of ultimate interpretation of the instruction manual. Additionally, USA Lab is not responsible for damages or injuries caused by improper use; knowingly or unknowingly. Glassware is not covered under warranty. We ship all glassware products with additional care, but sometimes they arrive broken. If glassware arrives broken, please contact us within 3 days of receiving your product and we will either send you a brand new piece or send you a refund. Any glassware broken 3 days after or later will not be covered by warranty. Maintenance items such as seals and gaskets are not covered under the warranty. Thank you for understanding!

Return Policy:

We offer a 30-day return policy from when your package is delivered to your shipping address. By placing an order with USA Lab, you express that you have read and agreed to the following return policies.

- We do not accept returns for customized items. When purchasing a customized item, you agree that there are no returns due to the nature of the item(s) being specific to your needs.
- By default, a 15% restocking fee is applied on all items that are in original packaging and unused with no damage. This applies to all items returned within 30 days. No exceptions. You will be responsible for the return shipment unless deemed defective by USA Lab. In that case, we will pay for return shipment and replacement shipment costs.
- The item(s) must be returned in original packaging and in undamaged condition. The item(s) must have no signs of usage or wear including stickers, scratches, dents, resins, non-standard fluids, plant matter, or any other wear not representing a new, unused item. Products deemed defective with any signs of usage or wear will result in a 25% restocking fee.
- Once the returned item is received, tested, inspected, and processed, a refund will be issued. If your item(s) are in original packaging and unused, you will be refunded the initial purchase price with the 15% restocking fee deducted. If your item(s) are deemed damaged or used, you will be refunded the initial purchase price with the 25% restocking fee deducted.
- If an item has been deemed to be severely misused, modified resulting in catastrophic failure, operated anywhere but inside of a climate-controlled facility. A minimum of 25% restocking fee will be deducted from the refund.