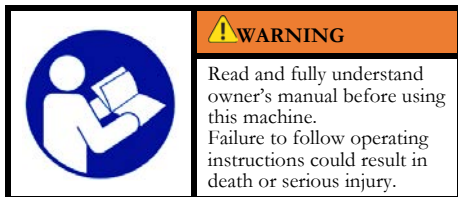




DAIRY TECH, INCORPORATED

We Make Colostrum Management SIMPLE!



User's Manual

for Adda 10G, 30G & 60G
Pasteurizers

User's Manual for Adda 10G, 30G & 60G Pasteurizers

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Say “Hello” to Adda

Every newborn calf represents an opportunity for you to improve your herd’s production and health. The most influential, cost-effective way to accomplish this is to ensure she receives the correct volume of high quality, pathogen-free colostrum within the first hour of her life.

Thank you for purchasing Adda, our newest pasteurizer and warmer for colostrum and milk. She is specifically engineered to maximize the efficiency of our Perfect Udder® bags and our proven pasteurization technology. Your satisfaction with this product is very important to us. This guide will help you understand how your pasteurizer operates, and how to get the most benefit from it for you and your dairy operation.

Did you know?

On-site visits are also available to more thoroughly investigate any problems you may be encountering with calf health. Additional charges may apply for on-farm consultations. Contact your Dairy Tech, Inc representative for more information.

For Your Safety

SAFETY SYMBOLS

	CAUTION
	HIGH VOLTAGE
	HOT SURFACE
	IMPORTANT

These Safety Symbols are used to alert you to potential physical injury hazards. Obey all safety messages that follow these symbols.

If you are burned by the heating coil, hot water, steam or hot colostrum, contact a physician, or other medical personnel for expert advice, or go to an emergency treatment facility.

Please read this guide carefully and thoroughly before installing and operating the pasteurizer. This unit contains HIGH VOLTAGE electricity that can cause serious harm or death. For your safety, the recommendations and information in this manual must be followed to minimize the risk of serious burn or electrocution, as well as to prevent property damage, personal injury, or death.

CE Declaration



CERTIFICATE & DECLARATION OF CONFORMITY FOR CE MARKING

Company contact details:

Dairy Tech Inc.
10027 CR 70, Windsor, Colorado 80550, USA
Tel: 866-384-2697 Fax: 970-454-8898 Email: Office@DairyTechinc.com

Dairy Tech Inc. declares under their sole responsibility that their:

Calf Milk and Colostrum Pasteurizers
listed as the following models: Matilda, Adda DT10G, DT30G & DT60G

comply with the Essential Requirements of the following EU Directives:

Machinery Directive 2006/42/EC
Low Voltage Directive 2014/35/EU
EMC Directive 2014/30/EU
RoHS 2 Directive 2011/65/EU

and further conform with the following EU Harmonized Standards:

EN 60204-1:2006 + A1:2009
EN 61010-1:2010
EN 61000-6-2:2005
EN 61000-6-4:2007+A1:2011

Dated: 29 January 2021

Position of signatory: CEO

Name of Signatory: Richard Dumm

Signed below:

on behalf of Dairy Tech Inc.

Disclaimers

THIS PASTEURIZER IS INTENDED TO BE USED IN THE MANNER DESCRIBED IN THIS USE AND CARE GUIDE. IT IS NOT INTENDED TO PASTEURIZE MILK OR OTHER GOODS FOR HUMAN CONSUMPTION.

Dairy Tech, Inc. has provided this use and care guide to assist you in the assembly, installation, and maintenance of your Adda Model Pasteurizer (the "Pasteurizer"). Serious injury and even death to persons and livestock can occur from improper installation and use of the Pasteurizer. Serious property damage can result from improper installation and use of the Pasteurizer. We recommend professional installation by qualified plumbers and electricians familiar with such devices.

DAIRY TECH, INC. RECOMMENDS THAT INSTALLATION OF ANY ELECTRICAL, MECHANICAL, GAS OR PLUMBING DEVICES REQUIRED FOR THE INSTALLATION, OPERATION AND MAINTENANCE OF THE DAIRY TECH PASTEURIZERS BE DONE ONLY BY QUALIFIED INDIVIDUALS.

It is your responsibility, or the responsibility of the electrician, plumber or other qualified installation expert, to obtain all necessary permits and certifications required by your town, county, state or other jurisdiction before installation of the Pasteurizer. It is your responsibility to read and understand the operational requirements of the pasteurizer before using it and to observe all safety precautions. It is also your responsibility to see that your personnel are properly trained to operate and maintain the Pasteurizer.

DAIRY TECH, INC. PROVIDES YOU WITH INSTRUCTIONS AND WARNINGS IN THIS USE AND CARE GUIDE, BUT WE ARE UNABLE TO COVER ALL POSSIBLE CONDITIONS AND SITUATIONS THAT MAY OCCUR IN YOUR DAIRY OPERATION. IT MUST BE UNDERSTOOD THAT COMMON SENSE, CAUTION AND CAREFULNESS ARE FACTORS WHICH CANNOT BE BUILT INTO THE PASTEURIZER. THESE FACTORS MUST BE SUPPLIED BY THE PERSON(S) INSTALLING, MAINTAINING OR OPERATING THE PASTEURIZER.

Under no circumstances is Dairy Tech, Inc., its directors, officers, shareholders or employees responsible for damage to property or injury to persons or livestock resulting from the improper installation or use of the Pasteurizer. Installation by an unqualified individual and improper use and improper maintenance may also void any equipment warranty that Dairy Tech, Inc. offers.

This use and care guide is based on information and data considered to be accurate; however, no warranty is expressed or implied regarding the accuracy of the information or data herein or the results to be obtained from the use of this data or information.

If you believe the pasteurizer is operating incorrectly, please refer to the trouble shooting guide included with these instructions before calling our service department. If you still have questions, contact your local representative or call 1-866-384-2697 and we will help you to address your needs.



Product Warranty

This product is warranted to be free of manufacturing defects for up to 12 months from the date of purchase. All parts will be covered by a free replacement guarantee not including shipping or service. This warranty is intended for equipment in use under normal operating conditions and does not cover damages

incurred by improper use or unforeseen acts of nature. Determination of covered defects, damages or repairs is at the discretion of Dairy Tech, Inc.

To obtain warranty service, you must obtain a Return Material Authorization ("RMA"). RMA number can be requested from Dairy Tech, Incorporated by calling 1.866.384.2697.

You will need your product identification information, including model number and serial number (*if applicable*) and a detailed description of the problem you are experiencing. You must also include proof of the date of original purchase as evidence that the product is within the applicable warranty period.

After obtaining your RMA number, you must, within thirty (30) days, send the product to:

Dairy Tech, Inc.

10027 CR 70

Windsor, CO 80550

or an Authorized Dairy Tech, Inc. Dealer.

You are responsible for the cost of insuring and shipping. Products shipped to our Service Department must be properly packaged to prevent damage in transit. The Dairy Tech RMA number must be prominently displayed on the outside of the package. If you send the product to the Service Department without RMA number prominently displayed on the outside of the package, it will be returned unopened.



Parts not returned will be charged to customer at retail pricing.

Product Registration

If this product was purchased directly from Dairy Tech in Windsor, CO, it has already been registered and no further action is required. If the product was purchased through a distributor or other representative, please call Dairy Tech, Inc. at 866-384-2697 within 10 days of receipt to register the Pasteurizer.

Failure to do so may result in a decreased or voided warranty period for your unit. When calling, please have the serial number which can be found on the back side of the Pasteurizer.

You may also register on-line at www.dairytechinc.com where you can "Contact Us", fill in your and then use the notes section to provide the product model, serial number, and type the word 'Register'.



WARNING To reduce the risk of electric shock, burns, serious injury or death to persons when using the Pasteurizer, follow these basic precautions.

Important Safety Instructions

- Read all instructions before using the Pasteurizer.
- Do not operate the pasteurizer without ensuring that the water jacket is completely full of water. If water is not present, the heaters will become damaged beyond repair.
- Always disconnect the electrical power before attempting service. All power sources must be disconnected before the cover is removed for repair.
- Do not allow children to operate or play around the Pasteurizer. Close observation of children is necessary when the unit is used with children nearby.
- Do not reach into the Pasteurizer when the power is on and the paddle is turning as this can cause serious harm.
- Hot Surfaces include the water, baskets, motor, propeller, Perfect Udder bags, electrical fixtures, hoses, heating elements, draining water and the colostrum. Touching these surfaces during operation may result in severe burns. Do not touch hot surfaces.
- This equipment is designed to operate in an ambient temperature range of 35°F - 104°F (2°C - 40°C), altitude up to 6560 ft (2000 m), maximum relative humidity 80% for temperatures up to 88°F (31°C) decreasing linearly to 50% RH at 104°F (40°C), for indoor use only.
- Do not change locked settings in the pasteurizer controller without consulting a technical expert at Dairy Tech, Inc.
- Do not repair or replace any part of the Pasteurizer or attempt any servicing unless specifically recommended in the trouble-shooting portion of this manual. Any modifications made to the unit beyond these instructions will void all warranties.
- Always clean the unit immediately after each use, according to the instructions in the "Cleaning of your Pasteurizer" section of this manual. Build-up of residue on the propeller or tank will decrease heating and cooling efficiency, as well as harbor potentially harmful pathogens.
- During the heating cycle, always make certain the Pasteurizer lid is closed.
- Use the pasteurizer only for its intended purpose. DO NOT use for milk intended for human consumption as this product has not been approved for such use.
- Do not touch the motor, hoses, lid, handle, or brass fittings while the unit is hot and working.
- Do not attempt to tilt the machine while it is full. It is extremely heavy and can cause severe injury to the operator.
- To prevent severe burns to employees or calves, always allow Adda to complete the selected program before handling or feeding the colostrum/milk to your calves.
- The Pasteurizer must be electrically grounded. DO NOT modify the plug that is provided with the Pasteurizer. Always have a certified electrician confirm proper power supply and connections.
- The pasteurizer must be installed on a level surface to evenly distribute weight to all the support structures.

Installation



WARNING: Install the unit according to the installation instructions. To reduce the risk of fire, electric shock, serious injury or death to persons, read the important safety instructions before operating this pasteurizer.



Before using this unit for the first time, wash out the inside of the tank with hot soapy water and rinse clean.

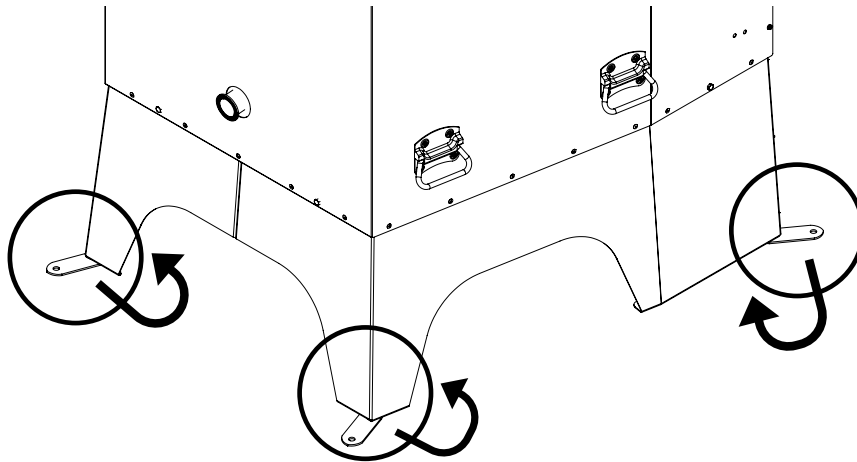
Choosing and Preparing a Location

- Choose an indoor spot that will be protected from the elements. Extreme heat and freezing temperatures will damage the unit.
- Cold water is required for water supply and cooling.
- Floor drains located near the unit will allow for proper cleaning and rinsing of the product as well as to clean up colostrum spills.
- Avoiding extremely drafty areas will improve heating efficiency of the unit.
- Always have 2 people lift and carry the unit grasping with both hands on the sides of the unit. Never attempt to move the unit while it is full of water, milk or colostrum

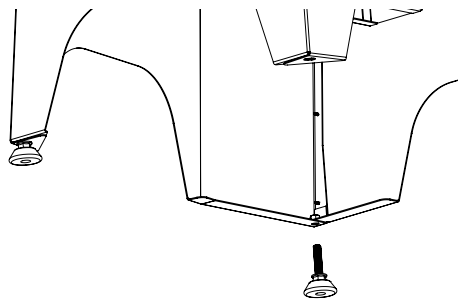
Unpacking

Use care when unpacking your Adda Model pasteurizer. It will have arrived in one box or crate. Please make a note of any cautionary labels that are used on the carton suggesting orientation, where to cut with a knife, fragile, etc.

- **Figure 1** Remove Screws to unpack, then turn tabs inward

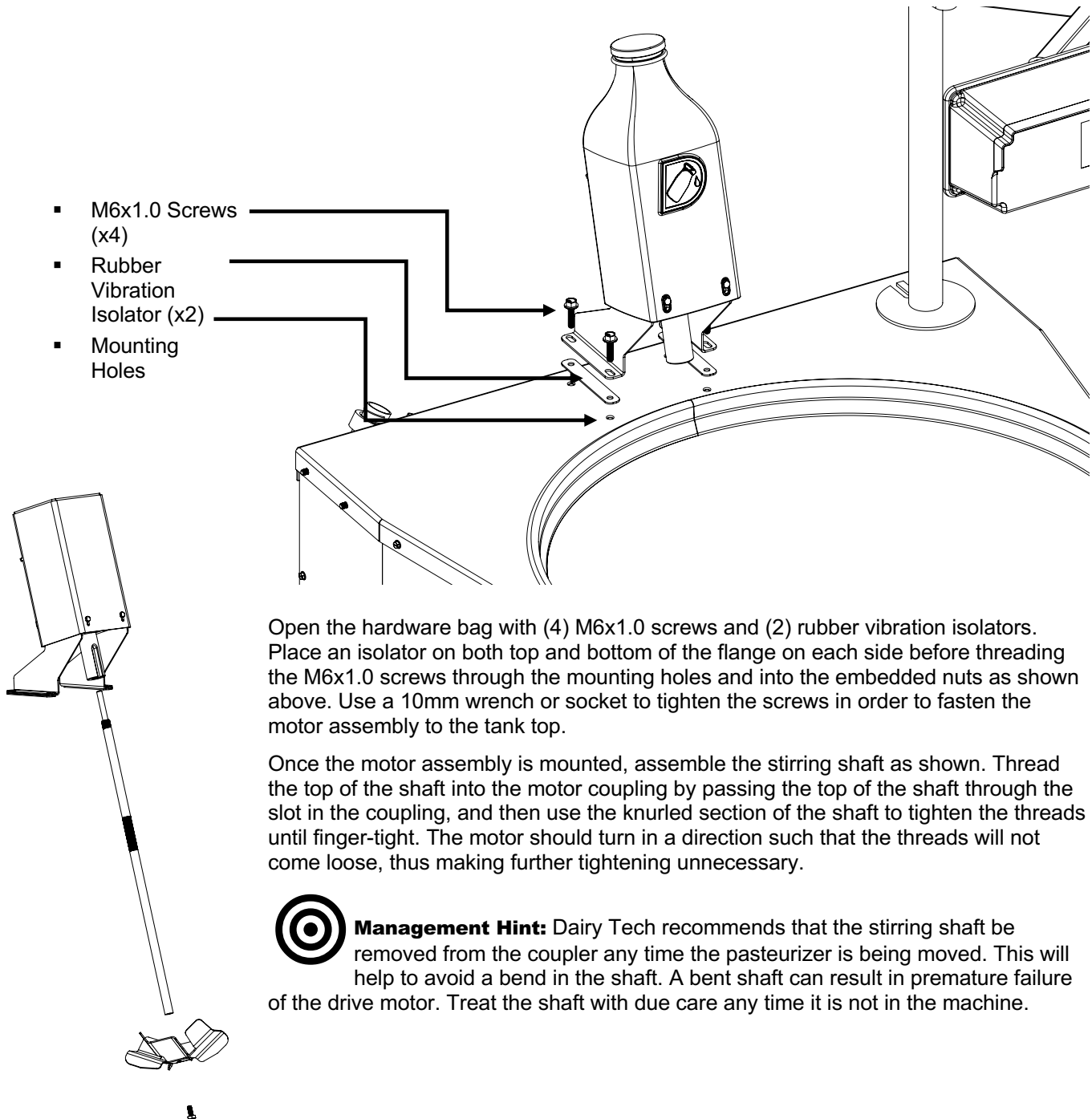


NOTE: If you have an uneven floor, you may purchase adjustable leveling feet and install them in these locations.



Mounting the Motor

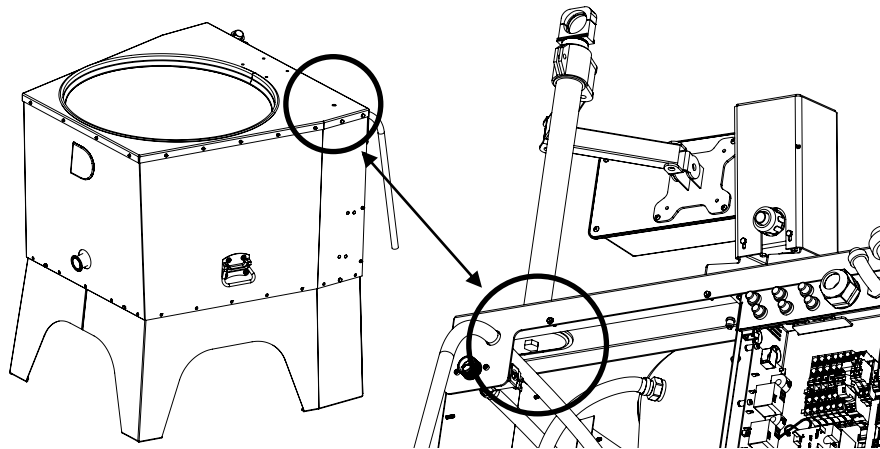
When the Adda is shipped, the motor assembly is wrapped in foam and packed in the tank. The motor assembly will have all electrical terminations already connected, and it will have flexible conduit already attached to it. Remove the motor assembly from the tank and set it upright near the four mounting holes at top rear of the machine.



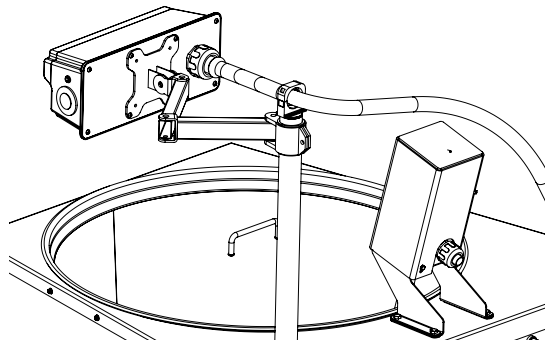
Mounting the Control Panel

The pasteurizing unit is shipped with the control box/stand detached from the machine and packed inside the tank of the unit. In order to begin using the pasteurizer, the control stand must be mounted. Gently remove the controller/stand from the tank. The control support consists of a hinged arm that is clamped onto a round vertical post that mounts to the pasteurizer top panel.

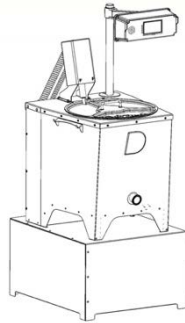
- Remove the back panel and locate the necessary installation hardware found in a bag in the lower left-hand corner of the machine. Panel removal also allows access for control support installation and any necessary wiring.
- At the bottom of the post, there is a single bolt holding the oval-shaped bottom plate of the stand loosely onto the post. Unscrew the bolt and remove the bottom plate.
- There is a single bolt hole on the case of the machine. Pass the bolt through the bottom plate, and through the hole in the case to screw into the bottom of the post. Tighten the bolt until the post is tight and does not wobble.



- Once the control stand is mounted, place the cable conduit in the supplied conduit clip as shown in the image below.



Mounting the Adda 10G onto the Base



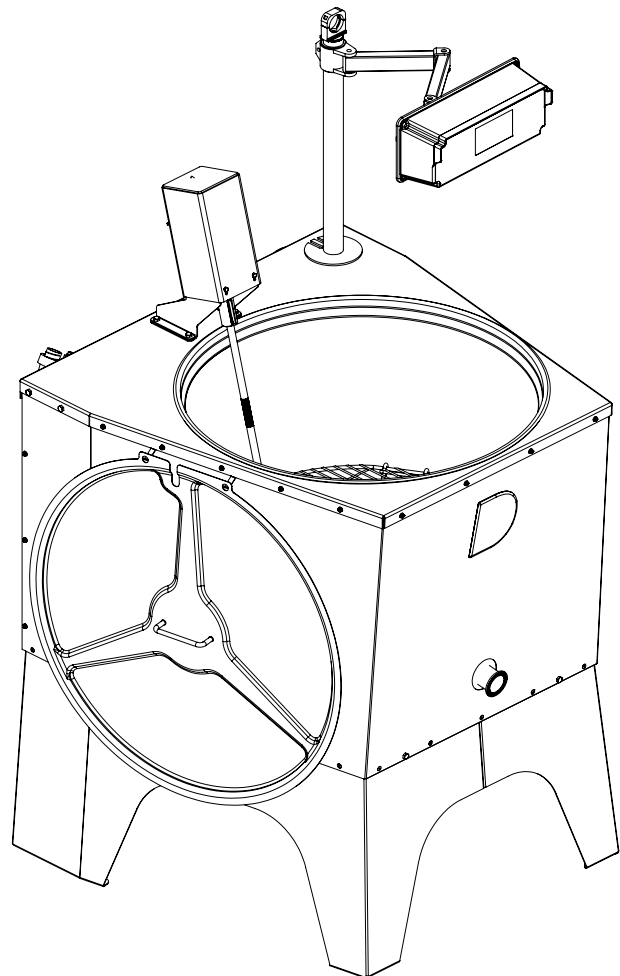
The Adda 30G and Adda 60G each come with a fully assembled leg stand to support the machines. The Adda 10G ships inside of the base platform. Remove the platform and turn upright. With an assistant, carefully lift the pasteurizer out of the stainless steel box and set the Adda 10G to the side. Turn the box over and move it to the location where you wish to install the machine. Lift the pasteurizer and place it on the box so that the sides and front line up with the mounting holes. You will find two mounting brackets and hardware included in the packaging which you can use to secure the Adda 10G cabinet to the support box. *Refer to the illustration.*

Lid Storage

The lid is packaged with the unit and can be hung from the two holes in the tab at the top of the lid. This provides a

convenient place to store the lid while the unit is being cleaned or filled.

See illustration for proper lid storage.



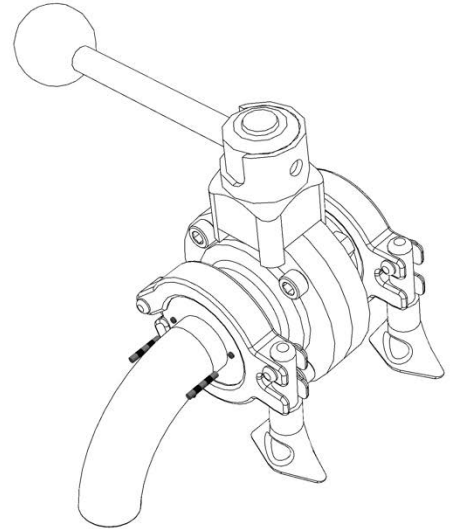
Connecting the Milk Spigot

Adda Pasteurizers come supplied with the highest quality 304SS butterfly drain valve. These are installed on the front flange of the tank drain much the same as connections are made to a bulk tank flange using the clamps provided. Make certain to include the gasket between each fitting. These parts can then be easily removed for thorough cleaning in a sink.

Filling Perfect Udder® Bags from the tank is easy.

- **BagFiller 1B:** Fill one bag at a time.
- **BagFiller 6B:** Fill up to 6 bags at a time.

Visit www.dairytechinc.com for more information.

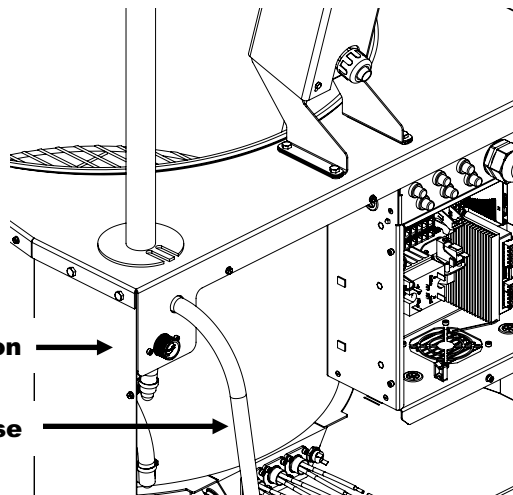


Connecting the Hoses



WARNING: It is important to keep water turned on anytime the pasteurizer is in operation to prevent damage to the heating elements.

Cold Water Connection: A 6' (1.8 m) black supply hose is supplied with the machine. This hose with factory ends supplies all the cold water to cool the product when pasteurization is finished. It can connect to any normal domestic pressure cold water source including a hose, but it **MUST BE ON AT ALL TIMES DURING OPERATION**. Using the supplied hose, attach one end to the threaded solenoid valve on the back of the unit, with the other end going to a regular hose bib supply. **NOTE:** If water pressures exceed 80psi (5.5BAR), install a pressure reducer.



Water Drain: The drain hose is connected internally and must not be tampered with or obstructed in any way. It should be directed to a drain, cistern, stock tank or other collection system. Do not connect the drain hose to another hose or to any system that can create back-pressure. This will prevent proper water circulation. If you wish to salvage the wastewater, direct the drain line to a 5-gallon bucket and place an inexpensive sump pump in that bucket to send water where it needs to go. This prevents any back pressure to the unit.

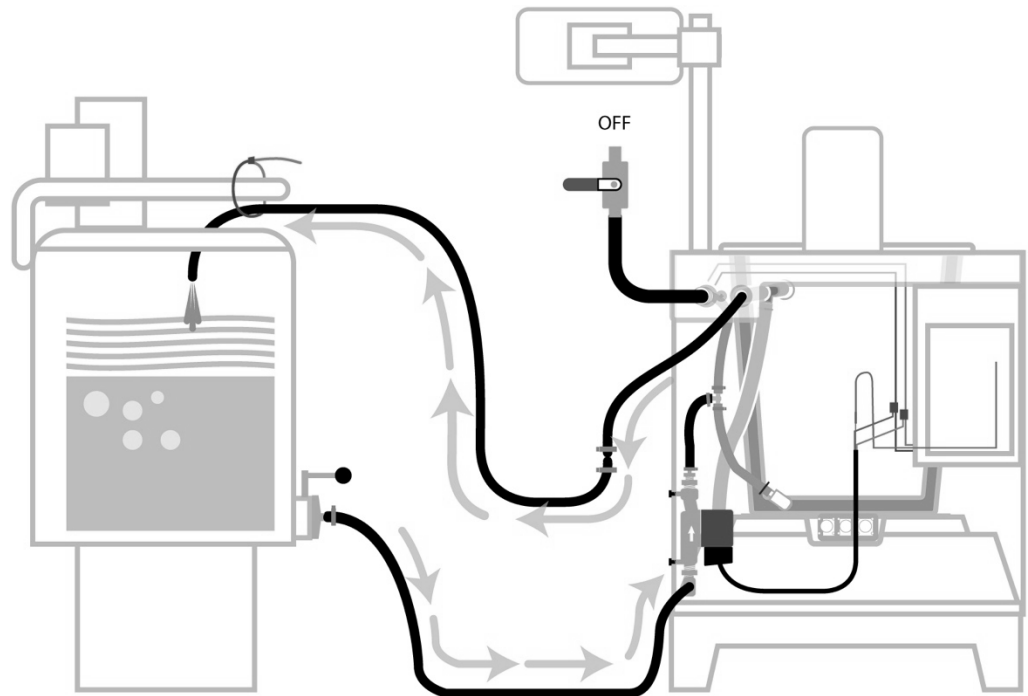
Cooling Tank Option

The entire family of Dairy Tech equipment utilizes cold water for indirect cooling after warming and pasteurization processes. Due to variable temperatures of incoming cold water on dairies, this may create limitations in speed of cooling as well as timeliness of the cooling process. Water is also a valuable resource for most dairies and where possible, we must work together to conserve.

In light of these considerations, Dairy Tech offers the ability to utilize independent cooling tanks to serve as a reservoir for cooling water. These tanks provide a large batch of chilled water that can be used to quickly and efficiently cool milk or colostrum post-pasteurization AND they allow for recycling of water indefinitely. See the image below for a better understanding and contact our sales team Sales@dairytechinc.com for more information about cooling tank size recommendations and availability. Your Adda pasteurizer is already designed with a reserved spot to locate the circulating pump and automation of the process.

Parts you would need:

- MP-Cooling Transfer Pump Kit
- O-MPV100L 1PH (100L cooling tank to accompany a 10G Model)
- O-MPV300L (300L cooling tank to accompany a 30G Model)
- O-MPV650L (650L cooling tank to accompany a 60G Model)



Cleaning your Pasteurizer

Before using this unit for the first time, wash out the inside of the tank with hot soapy water and rinse clean. Adda should be cleaned thoroughly after each use, or if it will not be used again to pasteurize within the next hour.



NOTE: NEVER SPRAY Adda's CONTROLLER ENCLOSURE WITH WATER!! Serious Electrical System Damage can occur and will void your warranty.



HELPFUL TIP:
Always keep the lid closed to keep insects and other contaminants out of the tank.

1. Be sure the equipment is powered OFF
2. With the stir motor stopped, raise the lid from the milk pot and place it on the hook on either side of the unit after thorough cleaning in a sink.
3. Perform a warm water rinse to remove milk and dirt. *(avoid hot water rinse as this can cause calcium deposits to stick to surfaces at this step)*
4. Clean the following milk surfaces with hot water and soap. We routinely recommend a powerful dish soap such as DAWN. Go over all the exposed surface areas with the included scrub brushes and appropriate disinfectants. A mild scrub pad may be used to remove any residue on the following components:
 - a. Motor shaft, coupler, and propeller *(shaft can be unthreaded for cleaning by grasping the coupler with the slot facing forward and unthread the shaft by grasping the knurling mid shaft for a better grip.)*
 - b. Thermocouple well at bottom of pot
 - c. Milk tank and drain spigot/valve. *(the milk exit valve should be completely disassembled at least weekly so that the black rubber gasket can be thoroughly cleaned and replaced as needed)*
 - d. Accessory spigots, pitchers, pumps, or hoses
5. For stubborn residues or buildup, consult with your dairy chemical distributor. Avoid the use of acids on non-stainless-steel surfaces as they may corrode some of the brass or aluminum parts on the equipment. Follow manufacturers handling recommendations for all chemicals.
6. Perform a final hot water rinse of all surfaces and allow to dry completely if possible.
7. Spray the stainless-steel surfaces with a disinfectant and allow it to dry on the surface. This will help to eliminate the build-up of a biofilm. *(Dairy Tech recommends Effersan reconstituted tablets as a proven disinfectant for the final spray of the milk surfaces. Call for ordering information.)*



Poor water quality will have an adverse effect on heating element longevity as well as the other components of this equipment that are in contact with water of poor quality.

Water Quality

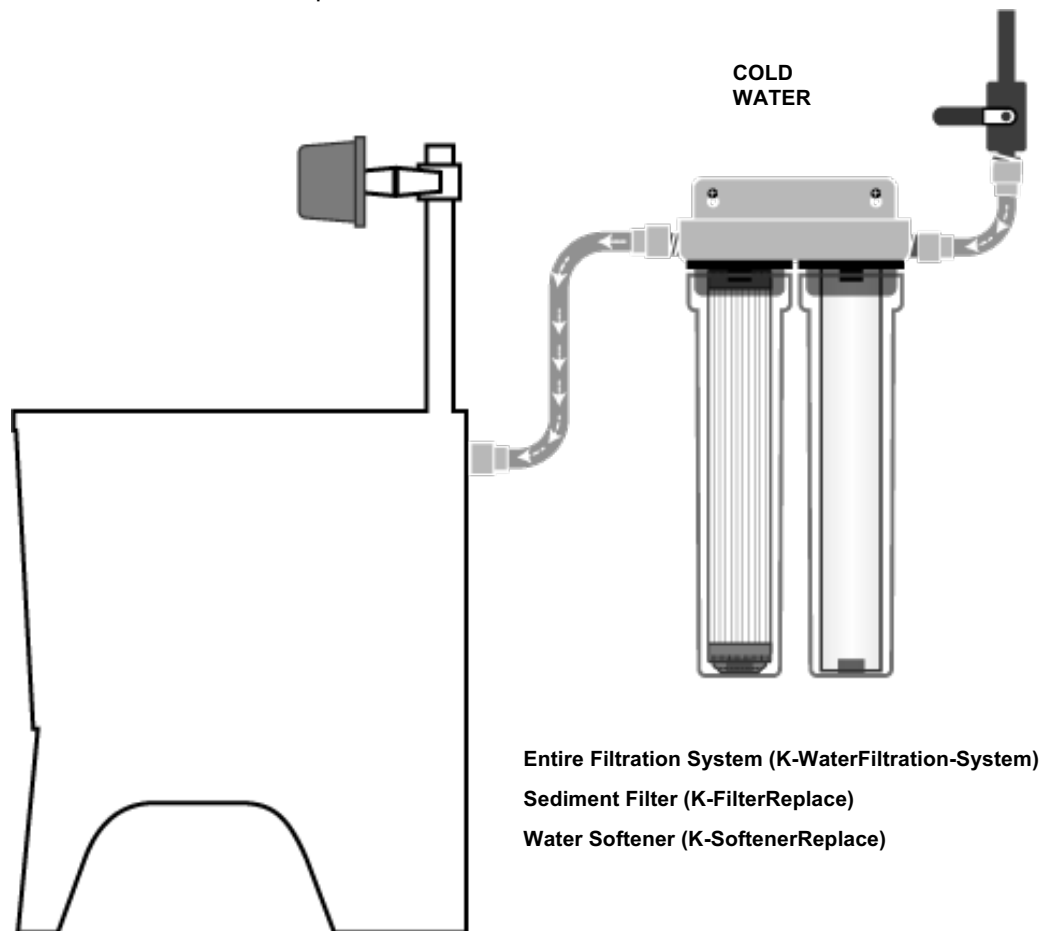
Dairy Tech Inc is not responsible for your water quality and the effects that it may have on our equipment.

If you have dirty, hard or otherwise poor quality water, consider purchasing and installing a Dairy Tech water filtration/softener system (*see part number below*).

Dairy Tech recommends the following steps:

Test a sample of water that will be used with the Dairy Tech equipment. Local experts will be able to tell you if your water quality will be detrimental to electric heating elements and other components of our system.

- **If the starting water quality is acceptable**, take additional samples at monthly intervals to help determine how often to replace the cartridges in your system
- **If your water quality is NOT acceptable**, install the water filtration/softener system and replace cartridges every 3 months or anytime they are visibly dirty, or if water flow is compromised.



NOTE: This system will not remove chemicals or disinfect water and is not intended for drinking water.



WARNING: ALL CONNECTIONS SHOULD BE PERFORMED BY AN ELECTRICIAN OR OTHER TRAINED PERSONNEL.

Electrical Requirements

The electrical supply cord is not included with your purchase due to many jurisdictions that require installation only by certified electricians. It may be purchased separately and installed on your farm. Local ordinances and electrical codes will dictate wire sizing, lengths and connections including the need for power kill switches in some locations. Always check with your local electrician for installation assistance. Carefully review the decal on the inside of the rear panel to see which power supply your Adda is prepared for per your ordering instructions. Instructions and a wiring diagram are provided for your benefit but always call our service department for additional assistance. Failure to meet these requirements will void the warranty and could result in serious damage to the unit, bodily injury or death. The receptacle may need to be fitted with a water-resistant cover for added protection.

- The receptacle should be sharing minimal usage with other equipment to avoid unexpected outages and tripping of the breaker. If the power is lost, but returns within 1 hour, the cycle will resume automatically in most instances.
- Check your electrical system to make certain it is properly grounded to avoid the possibility of electrical shock.

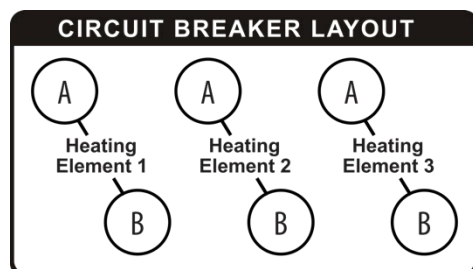
Specifications	10G	30G	60G
Power Input Circuit Breaker Size	30A	30A	50A
Heater Circuit Breaker Size	15A	15A	20A
Fuse Size (F1/F2)	3A	3A	3A
Floor Dimensions W x D in (mm)	22.0 x 26.8 (560 x 680)	33.1 x 31.3 (840 x 796)	35.1 x 35.0 (892 x 888)
Empty Weight Lbs (kg)	151 (68)	242 (110)	369 (167)
Operating Weight Lbs (kg)	234 (106)	492 (223)	868 (394)

International Installations:

Adda can utilize a variety of power sources. Consult the wiring options diagram in this owner manual (*page **Error! Reference source not found.**45*) as well as those on the machine for further instruction and options. Follow the labels attached to the back of the machine for specific wiring instructions in these instances.

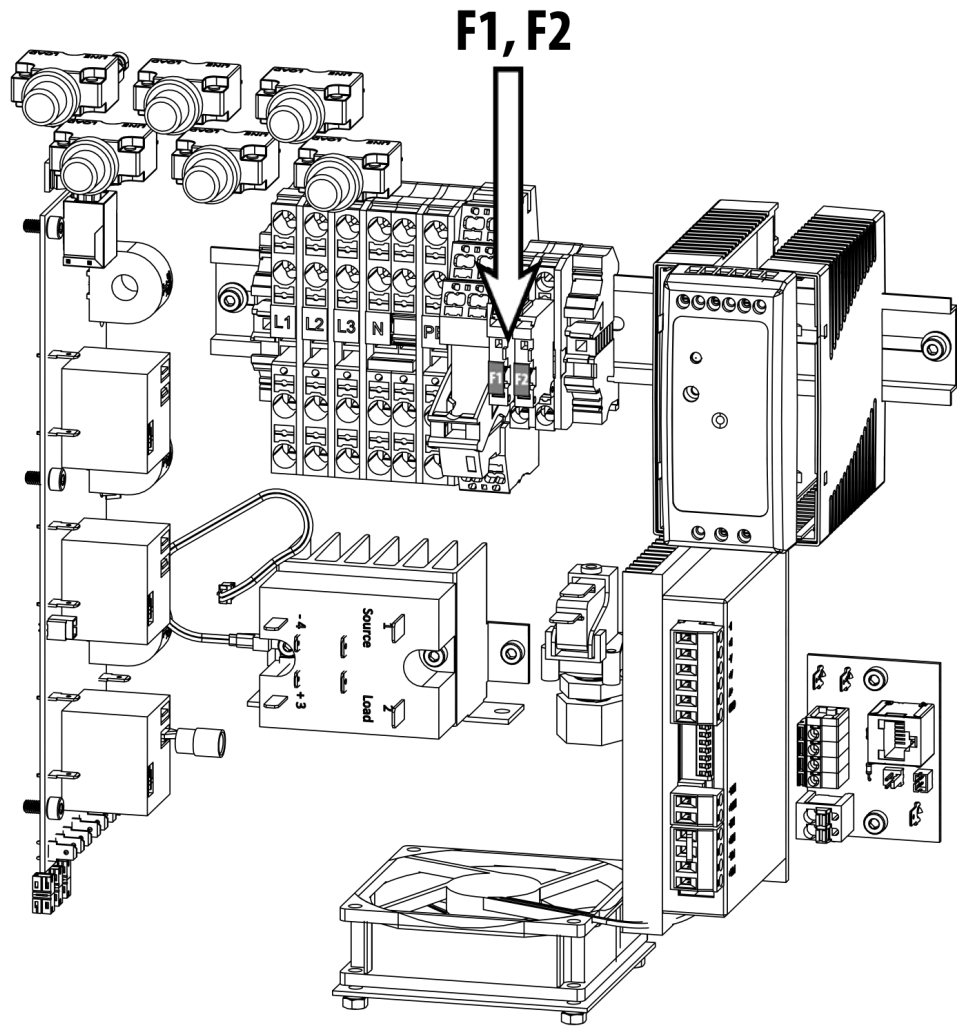
External Circuit Breakers

The unit is equipped with 6 external circuit breakers on the back of the unit. These circuit breakers protect both sides of the heating elements from internal and external damage. The layout of the circuit breakers is shown below, as well as on the unit itself. *Refer to Troubleshooting for further information.*



Internal Fusing

There are two fuses located inside the internal electrical box that protect the input for the power supply for the system. They are located in fuse blocks that are mounted on the DIN rail as shown in the figure below. If the controller is not getting power, check to make sure that these fuses have not blown. Blown fuses likely indicate a short in the system.



Filling and Emptying the Milk Drum

While some dairies may elect to have the milk line pump directly into the pasteurizer, most dairies will be dealing with volumes that can be dumped into the unit from milk cans or collection buckets. You may need to provide a sturdy step for short employees who may have trouble comfortably dumping milk into the unit.

- Try to avoid excessive splashing or spilling of the product as it is being poured into the unit.
- Clean spills with a damp cloth as quickly as possible.
- Do not overfill the tank as the milk will splash out from under the lid while being stirred.

To remove the milk: Open the spigot to fill buckets, bottles or storage bags.



DO NOT TILT THE EQUIPMENT TO GET MILK OUT! This may cause undue stress on the support system and could potentially damage the unit or harm the operator. Any residual milk or colostrum can easily be wiped or brushed from the unit

When Service is Required

If you purchased Adda from an authorized dealer, contact them directly with inquiries or repair questions. For prompt service, work through the troubleshooting guide in this manual to give an accurate description of the problem.

The Dairy Tech, Inc. service department can also assist when needed 1-866-384-2697



REPAIR BY AN
UNAUTHORIZED
SERVICE
TECHNICIAN MAY
VOID YOUR
WARRANTY.

Using and Programming the Touchscreen Controller

Adda's touchscreen controller is easy to use. Choose a program and let her take care of the rest. Our Pasteurization Technology ensures that your colostrum/milk will be heat-treated with precision. Please familiarize yourself with each of the following images and their functions BEFORE you turn on the machine.

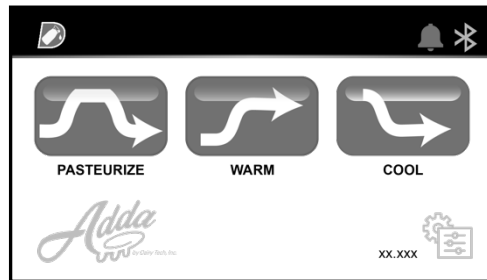


Be sure the pasteurizer is charged with water using the instructions on page 19 prior to the first use of your pasteurizer.



START UP SCREEN

This screen is displayed during the start up cycle. If you need to recalibrate your touch screen, please refer to the Troubleshooting Guide for detailed instructions.



HOME SCREEN

Adda's HOME SCREEN appears after she completes her start up cycle. DO NOT run any programming until you have filled the water jacket. See instructions on page 19.

BUTTONS



Pasteurize



Warm



Cool



Settings



Back



Forward



Home



Adjust
Down



Adjust Up



Adjustable
Setting



Locked
Requires
Password



Unlocked



Yes



No



Cancel

FUNCTION INDICATORS are displayed to the left of the control screen in the form of colored LED's. Their purpose is to let you know what is happening during operation.



IDLE TEMP:

GREEN = Set Idle Temperature is reached (*This function is only applicable to Matilda® at this time*)



HEAT:

RED = Heaters are turned ON.



MOTOR:

YELLOW = Motor is turning.



WATER:

BLUE = Water solenoid valve is open and cool water is flowing into the jacket.

ERROR SYMBOLS are displayed in RED on the control screen when Adda detects a problem. See page 43 for detailed explanations.



Hardware



Heat



Motor



Temperature



Water

First Use of Adda



FAILURE TO FOLLOW THESE INSTRUCTIONS MAY DAMAGE THE UNIT AND VOID THE WARRANTY.



Before you process your first tank of colostrum/milk, you need to charge the jacket with water to prevent damage to the heating elements.

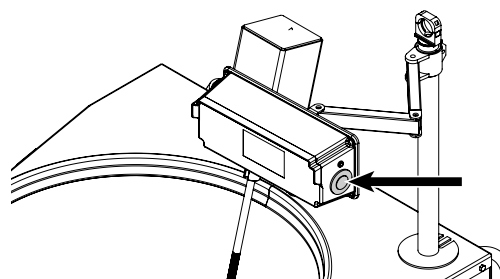
This is very important.

Charging the Jacket with Water

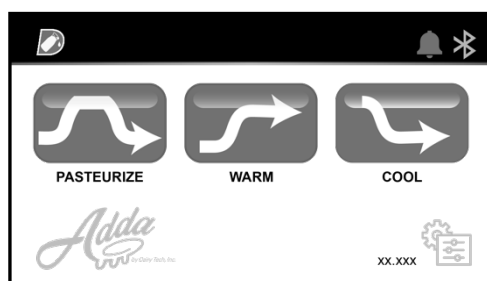
Step 1. Make sure that the water line is connected and turned ON, and the drain directed to the floor drain.

Step 2. Plug in the unit to the power source.

Step 3. The power switch for the unit is located on the right side of the orange control box. (See Figure) This is a mechanical switch that pushes a pulse of air to activate an internal switch inside the electrical box. There is not a noticeable click felt at the switch. Simply press and release the button and give the unit a second to power up.



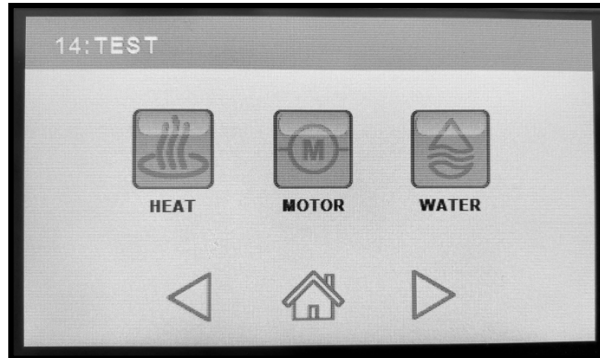
The control screen will power on and will be ready when the HOME screen appears.



Select “SETTINGS”



Use the “FORWARD” button to scroll to page 14, the ‘TEST’ Screen.



Select “WATER”



This will open the water inlet solenoid valve on the back of the machine, allowing water to flow into the water jacket. It may take several minutes to completely fill the jacket.

Once water is flowing freely from the discharge line, press “Water” once more to turn off the valve. Now the Water Jacket is filled and safe for operating.

Charging the jacket with water is a one-time process. Once the jacket has been filled before first use, you DO NOT need to repeat this process unless the jacket is drained of water.

Before using this unit for the first time, wash out the inside of the TANK with hot soapy water and rinse clean. Initial cleaning of the sink is necessary to remove dirt and contamination from transit. *See Cleaning Instructions on page 12.*

You are now ready to make your adjustments to Adda’s Settings.

Adjusting Settings

Settings Categories

- 01: Language
- 02: Temperature Scale (Fahrenheit or Celsius)
- 03: Electricity (3 Phase or 1 Phase)
- 04: Alert (ON or OFF)
- 05: Bluetooth (ON or OFF)
- 06: Feeding Temperature
- 07: Feed Now Hold
- 08: Cool Temperature
- 09: Cool Hold
- 10: Warm Dwell
- 11: Idle Temperature
- 12: Pasteurize, Feed Later Times
- 13: Clock
- 14: Test

The following settings require a password to modify.

- 15: Model Selection
- 16: Temperature Calibration
- 17: Pasteurization Temperature
- 18: Pasteurization Dwell
- 19: Change Password
- 20: Factory Reset

To Access “Settings”

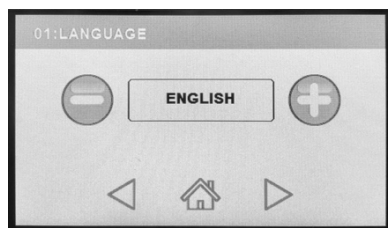
Select “SETTINGS” icon on home screen



This will open the first adjustable setting “LANGUAGE”. Use the arrow buttons to scroll through the Settings Categories until you arrive at the setting you wish to adjust. Follow the on-screen prompts to customize your controller settings.

01: LANGUAGE

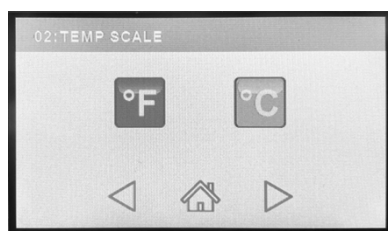
English is the default language.



Use the Plus (+) or Minus (-) buttons to scroll to the language you prefer.

02: TEMPERATURE SCALE

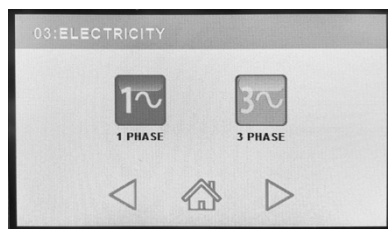
Select how you want the temperature displayed.



To change the scale, simply touch the °F/°C buttons.

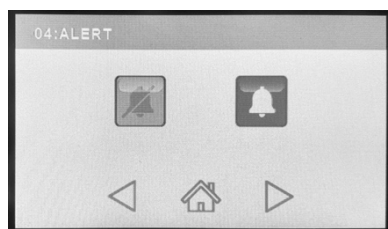
03: ELECTRICITY

3-Phase is the default setting. Select the electrical setting for your power supply.



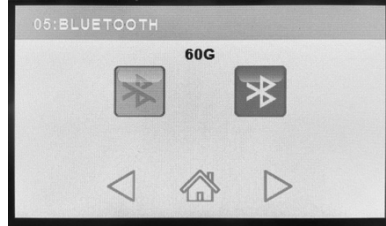
04: ALERT

ALERT determines whether or not you will hear audible alarms made by the machine .



05: BLUETOOTH

This option must be "ON" if you want to be able to communicate with Adda with the Perfect Udder phone app.

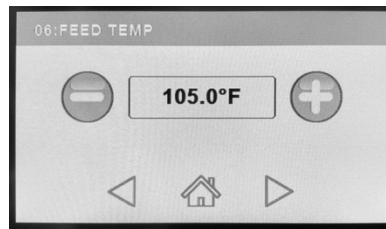


06: FEED TEMP

The default feeding temperature is 105°F (40°C). Only increase this temperature in extremely cold conditions.



WARNING: Feeding at a temperature HIGHER than 110°F/43°C can cause serious injury to the calf.



Use the (-) or (+) buttons to decrease or increase this setting to your desired feeding temperature.

07: FEED NOW HOLD

This setting dictates how long the cycle will hold the colostrum/milk at the selected feeding temperature after a 'PASTEURIZE/FEED NOW' cycle. Once the colostrum/milk in the tank reaches the feeding temperature, Adda will hold the fluid at its feeding temperature until the 'FEED NOW HOLD' time has elapsed, at which point the cycle will complete and sound an audible warning that the product is now ready to feed.

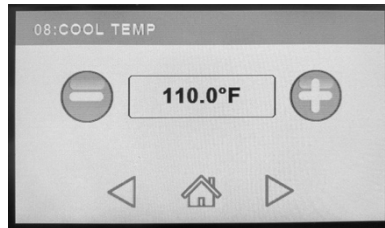


The default feeding hold time is 5 minutes.

Use the (-) or (+) buttons to decrease or increase this setting to your desired Feeding Temperature Dwell time.

08: COOL TEMP

This is the temperature that the unit will COOL to when a cycle has completed pasteurization. The Adda uses your water supply to cool the colostrum: make sure to select a COOL TEMP that is at least 10°F (6°C) higher than the temperature of your supply water. If you set a COOL TEMP that is too close to the supply water temperature, the unit will take an excessively long time to cool, thus wasting water. If you set a COOL TEMP below that of your water supply temperature, the unit will never reach your setting and will continue to dump water until the unit is shut off.

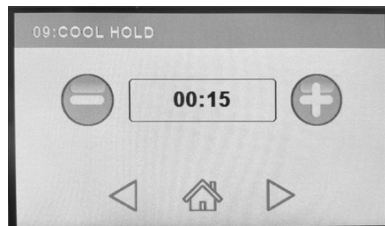


The default "COOL" temperature is 90°F (32°C).

Use the (-) or (+) buttons to decrease or increase this setting to your desired feeding temperature.

09: COOL HOLD

This setting is important. Adda cannot see the temperature inside of the bag, only the water bath; therefore, we must ask her to continue to hold at the Cool Temp for a period of time to make certain that excess heat is removed from the Perfect Udder® bags.



The default cooling hold time is 15 minutes.

Use the (-) or (+) buttons to decrease or increase this setting to your desired Cool Hold time.

10: WARM DWELL

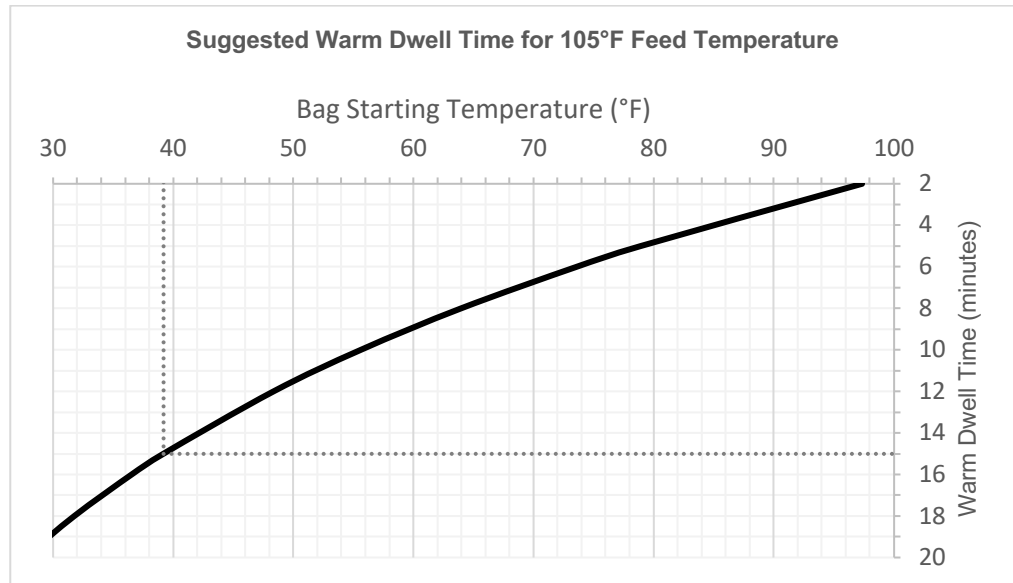
This setting determines how long Adda will hold the colostrum/water at the selected feed temperature at the end of a “WARM” cycle. This cycle will warm the fluid inside the tank to the ‘FEED TEMP’, and then hold that temperature until the ‘WARM DWELL’ time has elapsed, at which point the cycle will complete and sound an audible warning that the product is now ready to feed.”

“If you are using Adda to warm Perfect Udder bags, you will need to adjust the ‘WARM DWELL’ time based on the starting temperature of the bag in order to allow enough time for the fluid inside the bag to fully warm. Remember that Adda is measuring the temperature of the fluid in the tank, not the temperature of the fluid inside the bags. The chart below shows approximate recommended dwell times for different bag starting temperatures. If you are using Adda to warm colostrum directly in the tank, the colostrum will be at the ‘FEED TEMP’ as soon as the machine reaches the ‘DWELL’ stage of the ‘WARM’ cycle. A chart with suggested settings is shown below.



The default warm dwell time is 15 minutes.

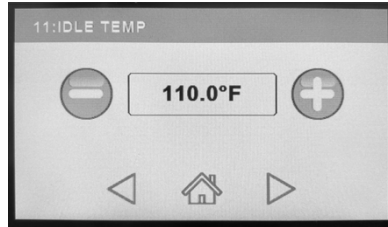
Use the (-) or (+) buttons to decrease or increase this setting to your desired Cool Hold time.



These times are approximations and may need to be adjusted for your specific application.

11: IDLE TEMPERATURE

Currently, this is a “Matilda Only” feature and not applicable to any Adda programing.



12: FEED LATER TIMES

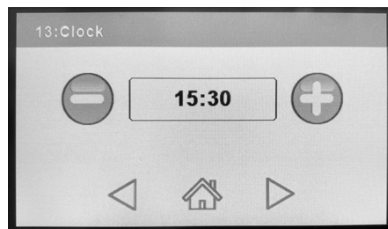
This setting allows you to set up 2 separate feeding times. Refer to page 32 for more information about the PASTEURIZE - FEED LATER program.



- Touch the Top Time (default is 06:00) and use the – or + buttons to set your First Feeding time.
- Touch the Bottom Time (default is 18:00) and use the (-) or (+) buttons to set your Second Feeding time.

13: CLOCK

Set/adjust the time on the controller to your current local time.



Use the (-) or (+) buttons to set the time.

14: TEST

The purpose of the three buttons on the TEST screen is to allow you to test that these key functions are operating correctly. The three buttons are explained in detail below.



Touching the 'HEAT' button will power the three heating elements. NEVER test the heating elements without first charging the

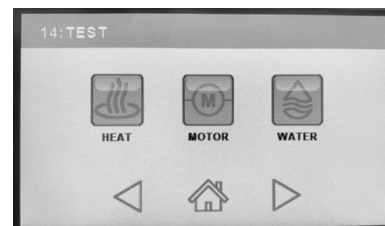
jacket as described in the "Charging the Jacket with Water" section above. Once this button is touched, the motor and heating elements will turn on, the temperature will be displayed just above the button, and the current draw (in amps) will be displayed for the three heating elements (labeled L1/L2/L3) in the lower right corner. The controller will throw an error if one or more of the elements are drawing an unexpectedly low/high amount of current based on the machine configuration (single- vs. three-phase, and supply voltage will determine the correct expected amp draw range). If a heating element is not drawing the correct current, it is likely damaged and needs to be replaced. Call Dairy Tech support for advice and instructions on how to accomplish this, or refer to the "HEATING ELEMENTS" sub-section on pg. 38 of the "Troubleshooting Adda" section



Touching the "MOTOR" button will turn on the motor. If the motor does not begin to spin, follow the instructions in the troubleshooting portion of this manual.



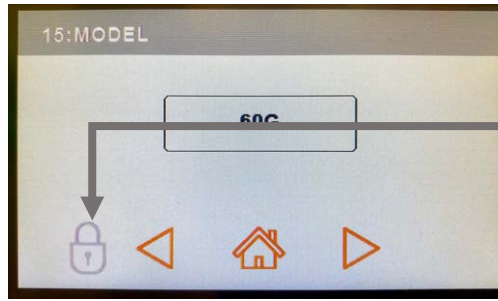
Touching the "WATER" button will turn on the water valve. If the valve does not turn on, follow the instructions in the troubleshooting portion of this manual. This is also the button you will use to charge the water jacket during "First Use" set up.



When you are finished testing, touch the active button again to deactivate the test, then touch "HOME" to save and return to the Main Menu or press "FORWARD/BACK" to make other modifications.



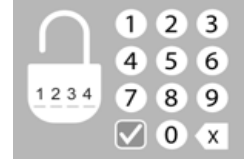
Settings 15-20 are protected by a password. You will be asked to enter a password to continue. If you lose your password, contact Dairy Tech Support for assistance. 1-866-384-2697



If you wish to modify any of these settings, touch the "LOCKED" icon in the bottom left side of the screen.

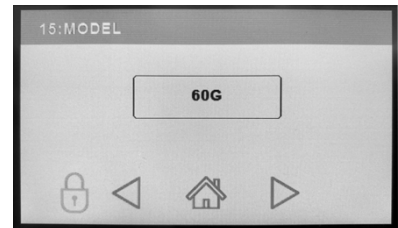
This will open a keypad. Enter the 4-digit password then touch the Green button. If you have entered the correct pass code, the screen will unlock.

Once you have unlocked this screen, ALL pass code protected screens will be unlocked until you press "LOCK" or "HOME" to save.



15: MODEL

The Adda Model should be set by Dairy Tech before leaving the factory, and thus should never need to be changed unless the controller is reset or the firmware is updated. Changing the model designation will affect your machine's performance, so make sure that the correct model is selected before using the machine.



Use the (-) or (+) buttons to select the correct machine model.

16: TEMP CALIBRATE

Adda is calibrated by Dairy Tech before leaving the factory. Before adjusting the calibration, make sure that you are using a high-quality secondary thermometer. The temperature reading is calibrated to the pasteurization temperature since this is the most critical value being measured by the machine, and thus it is very important that the calibration is performed with the colostrum/water heated to the PASTEURIZE TEMP. If the temperature reading is calibrated to any other temperature (like the FEED TEMP, or the COOL TEMP), the reading may be inaccurate at the PASTEURIZE TEMP. Allow a pasteurization cycle to climb to the pasteurization temperature and wait until it is at this level for five minutes. Now it is okay to check the water bath temperature with a high-quality thermometer. If the control does not match very closely, then you can adjust. If the control reads high, reduce offset, if the control reads low, increase offset.



Use the (-) or (+) buttons to decrease or increase this setting to your desired temperature.

17: PASTEURIZE TEMP



NOTE: Years of research has proven that the temperature for proper colostrum pasteurization is 140°F (60°C). Changes to this setting are strongly discouraged.

Use the (-) or (+) buttons to decrease or increase this setting to your desired temperature.



18: PASTEURIZE DWELL



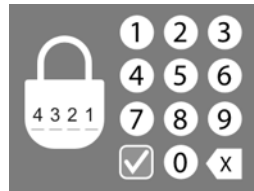
NOTE: This setting will dictate how long the colostrum/milk in the tank will be held at the 'PASTEURIZE TEMP' once the cycle reaches the Pasteurization temperature. Years of research has proven that the proper colostrum pasteurization time is 60 minutes at 140°F (60°C). Changes to this setting are strongly discouraged.



19: CHANGE PASSWORD

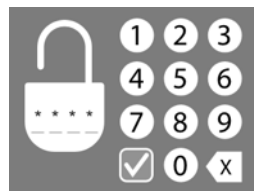
If you like, you can change the password to protect your custom settings. Unlocking this screen will display an orange keypad.

Enter your new 4-digit password then touch the Green button. (Password displayed is used only for example.)



This will "Lock" ALL settings screens again. You will need to enter your New Password to make additional changes to any password protected screens.

If at any time the new password is lost or cannot be remembered, the system has default password that can retrieved by contacting your Dairy Tech Dealer or our Service Department at 1-866-384-2694 or Service@DairyTechInc.com.



20: FACTORY RESET

This action will return all settings back to factory defaults. After unlocking this screen, you will be reminded that this action will replace ALL custom settings and ask if you want to proceed.



Selecting "NO" will keep your current custom settings in place and return you to the FACTORY RESET SCREEN.



Selecting "YES" will return all settings back to factory defaults including the screen calibration.

NOTE: After resetting, the screen will not be responsive to touch inputs. You will need to switch off Adda, power her back up, and recalibrate the touchscreen.

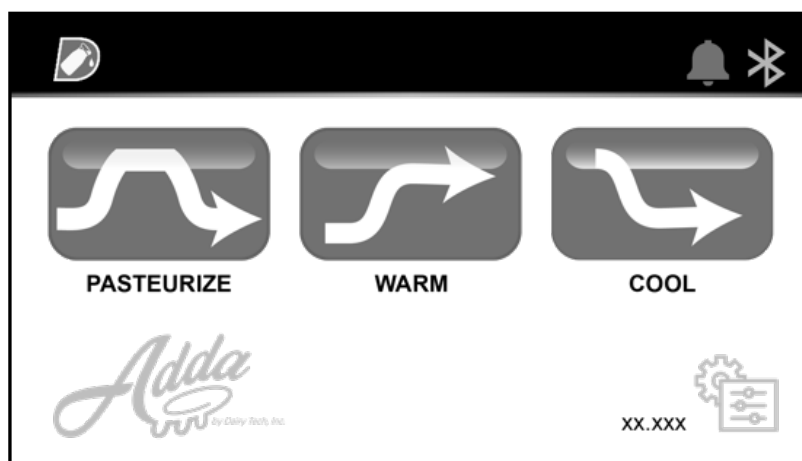
Before operating, you will need to go back into your setting and select:

- Electricity
- Model
- Temperature Calibration (*use the same value as before the controller was reset*)

Now you may set up your custom settings.

Operating Adda

Using Adda is simple. This chapter will explain the programming choices and how they function. When Adda completes her start up, you will see the following screen which offers you three options.



PASTEURIZE

WARM

COOL



NOTE: Time & Temperature for Proper Colostrum Pasteurization is 140°F (60°C)/ 60 minutes.

PASTEURIZE



This option completes a full pasteurization cycle whether you are filling the tank with milk, colostrum or making a water bath in which to pasteurize inside of the Perfect Udder bags.

Once you select 'PASTEURIZE', you will have your choice of THREE different Pasteurization Profiles as detailed below.

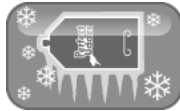


FEED NOW: Colostrum or Milk is pasteurized then cooled to a predetermined FEEDING TEMPERATURE for immediate use.

Or



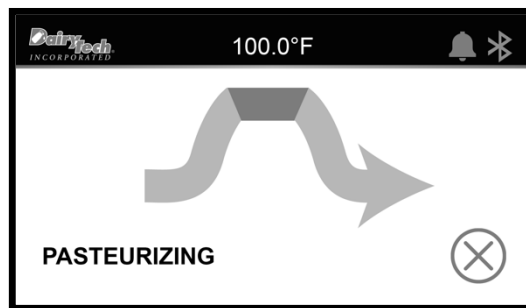
FEED LATER (For MILK ONLY. Do not use this for colostrum): Milk is pasteurized then cooled to a predetermined COOL temperature and held at that temperature until the next predetermined FEED LATER TIME is reached (*see Feed Later Times in Settings*). At that time, Adda will begin warming the milk to the specified FEEDING TEMPERATURE.



STORE: Colostrum or Milk is pasteurized then cooled to a predetermined COOL temperature for storage in a refrigerator or freezer for future use.

NOTE: The parameters for setting all of these temperatures and dwell times can be adjusted in the Settings menu. (*see Adjust Settings*)

Adda will begin processing your colostrum/milk based on your program selection.



Upon completion, Adda will sound an ALERT to notify you that your colostrum/milk is ready (*If you are using the Perfect Udder® app, you can also receive this notification on your phone.*)





IMPORTANT: The FEED TEMP and/or WARM DWELL settings can be increased to affect faster warming of Perfect Udder bags depending on their starting temperature and state (frozen vs. liquid) (see pg. 25). However, if the time required to bring the bags fully to feed temperature is over-estimated, the colostrum may be too hot to feed to the calves and could result in harm to the animals.

Take great care to ensure that the fluid inside the bags is not greater than 110°F (43°C) before feeding.

WARM

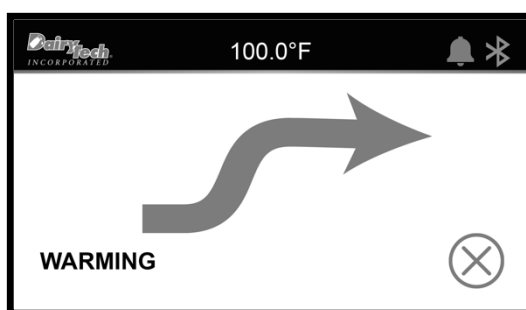


Warm is to be used when you would like to warm pasteurized colostrum or milk to a feeding temperature.

In this program, Adda will warm to your pre-set Feeding Temperature and then hold there for your pre-set FEED NOW HOLD Time. Do not take the bags from the machine early as there may still be ice in the bag which will lead to poor colostrum absorption and loss of energy for the calf.

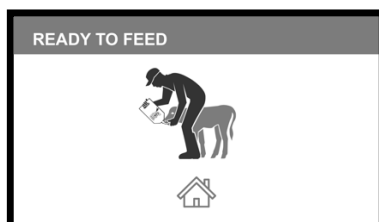
Pressing the "WARM" button will start the warming program.

NOTE: The parameters for setting these temperatures and dwell times can be adjusted in the Settings menu. (see *Adjust Settings*)



Adda will sound an ALERT to notify you when your selected profile is complete (*If you are using the Perfect Udder® app, you can also receive this notification on your phone.*)

Your colostrum/milk is now ready for FEEDING.



Management Hint: Colostrum fed either too hot or too cold will have a great impact on absorption of IgG. Colostrum greater than 110°F can be dangerous for the calf. Cold colostrum can also deplete the calf of much needed energy and can often lead to failure of passive transfer.



Cooling: We offer an optional cooling system for all Adda pasteurizers. (See [page 11](#) for more information.)

COOL

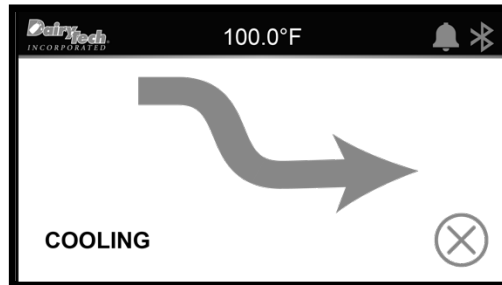


In this cycle, Adda will cool to your pre-set COOL TEMP and then hold there for your pre-set COOL HOLD Time.

Cool is to be used when you would like to cool pasteurized milk or colostrum to a lower temperature for storage or to be held for a later feeding.

Pressing the “COOL” button will start the cooling program.

NOTE: The parameters for setting these temperatures and dwell times can be adjusted in the Settings menu. (see *Adjust Settings*)



Adda will sound an ALERT to notify you when your selected profile is complete (*If you are using the Perfect Udder® app, you can also receive this notification on your phone.*)

Your colostrum/milk is now ready for FEEDING.



CANCEL PROGRAM



If you want to cancel a program, simply touch the “CANCEL” button in the lower right corner of the controller screen.

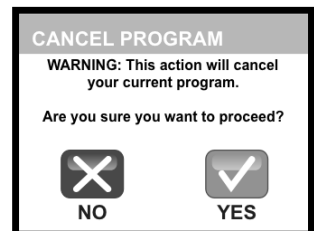
After you select “CANCEL”, you will see another screen that will ask you to confirm that you wish to cancel the current program.



Selecting “NO” takes user back to program already in progress.

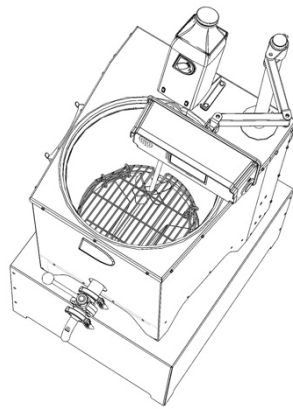


Selecting “YES” terminates program and takes user back to HOME Screen



Pasteurizing and Warming Colostrum in Perfect Udder® Bags

Perfect Udder® is a unique colostrum management system in a bag. This allows for collection, pasteurization, storage and feeding of correct amounts of colostrum in a timely manner to your calves.



Using the BagGuard

A Perfect Udder® BagGuard is included with each Adda 10G pasteurizer to protect the colostrum bags from contacting the propeller of the machine. The guard is to be used only when Perfect Udder® bags are being pasteurized in a batch of milk or a water bath. Always be certain to choose a profile of 140°F (60°C) for 60 minutes for colostrum. Clean the bag guard thoroughly after each use.

Do not lay bags on dry rack. Use of the BagGuard without enough water or milk to submerge the bag(s) will not allow the pasteurizer to function properly and will damage the heaters of the unit.

Using the BagFloats

BagFloats are included with each Adda 30G and Adda 60G pasteurizer. They are designed to hold our Perfect Udder® colostrum management bags in a submerged, vertical position allowing for better water circulation which means quicker thawing and warming times.

Insert the end of each BagFloat into the handle of a Perfect Udder® bag and place into the tank of one of our 30 or 60 gallon pasteurizers filled with water. Select "Pasteurize" or "WARM" and then close the lid.



Quality Control and System Monitoring

The following recommendations should be carried out when the system is first installed and then on a monthly schedule to make certain that the pasteurization process is working adequately.

- **Follow all instructions for proper installation by thoroughly reading the manual.**
- **Use quality colostrum in the machine. The process can be overwhelmed if there are too many bacteria to begin with.**
- **Handle the colostrum cleanly after pasteurization to prevent recontamination.**
- **Verify display temperatures periodically with a second thermometer to be sure that the displayed reading matches closely with a trusted calibrated source.**

Helpful Hints for Successful Pasteurization

Time pasteurization so that it happens as quickly as possible after harvest of the colostrum. If pasteurization is not going to be started within the first couple hours after collection, it is highly recommended that the colostrum be cooled before later pasteurization so that spoilage and pathogenic bacteria do not multiply in the product.

Will I need to add anything to the colostrum after it has been pasteurized?

Not Usually. There are certain vitamins that are heat sensitive and may be decreased in concentration due to the pasteurization process but to our knowledge, no cases of deficiency or hypovitaminosis have been attributed to proper pasteurization. There may be circumstances due to regional or farm-specific conditions that would dictate supplementation of vitamins, minerals or even added fat/protein. Always check with your local veterinarian if there are such suspicions and treat according to their instructions.

What if the colostrum becomes spoiled before I pasteurize it? This condition is common and can happen at times even when the same successful routines have been followed. There are spoilage bacteria in colostrum that release acid as their by-products. This is usually lactic acid, but there are also others. The release of acid from these proliferating bacteria then drives down the pH of the colostrum making it more acidic. Colostrum that is high in acid will be safe for calves to drink after pasteurization. However, low pH can lead to rancid odors and flavors that might decrease consumption by the calves. Digestibility might also be different which can lead to scours. In cases of severe drop in pH, the colostrum will separate completely with a very thick layer of “cheese” on top or thick like pudding throughout the product. This is not due to overheating. Protein denaturation and separation is made worse by the added heat of the pasteurization process. Heat combined with spoiled colostrum of low pH is a bad recipe which is why we recommend that you always try to pasteurize as soon as possible after harvest.

What is the optimal routine for handling colostrum? We recommend that colostrum be pasteurized immediately after harvest and then either fed at once or cleanly transferred to a colostrum bank to be refrigerated or frozen. The colostrum can then be warmed to body temperature prior to feeding.

Are there ways to preserve the colostrum if refrigeration is not an option?

Yes. Potassium Sorbate and other preservatives can be added to colostrum that is already pasteurized and this will help to prevent the growth of any remaining bacteria in the product. It is important to note that Potassium Sorbate will not kill existing bacteria but will prevent any new growth.

NOTE: Do not add it prior to pasteurization as it will cause a lower pH and the symptoms described above including thickened or separated product and bad flavors.

Will I harm immunoglobulins if I pasteurize colostrum? NO. When done properly colostrum can be successfully pasteurized to eliminate the same pathogens that can be found in the milk. These pathogens are even more dangerous in colostrum since these bacteria and viruses can easily pass through the gut wall along with the large proteins that impart immunity to the calf. Colostrum can be safely pasteurized at 140F for 60 minutes to remove all pathogens without significant damage to immunoglobulins. Colostrum pasteurization should be as much a part of herd biosecurity as milk pasteurization

Energy and Time Saving Tips

1. Pasteurize the milk/colostrum as quickly as possible after collection. This will prevent the excessive growth of bacteria in the colostrum and also take advantage of the heat to improve energy efficiency.
2. Avoid placing the unit in an area of high drafts to prevent convection heat losses while pasteurizing.
3. Colostrum can be stored in the refrigerator for 24-48 hours if it is handled cleanly once it has been pasteurized. Filling Perfect Udder® Colostrum management bags allow for a disposable system that makes it easy to keep track of dates and colostrum quality. These bags also allow the product to be warmed more quickly when they are needed for the newborn and can then be fed without recontamination of the product. Order more bags from your local veterinary supply dealer or online at www.dairytechinc.com
4. Do not try to use plastic calf bottles in Adda. It is impossible to transfer heat across the thick plastic to ensure adequate pasteurization.
5. Always wear nitrile or latex gloves when handling the colostrum to prevent the spread of pathogens from your skin surface.
6. Keep the lids closed on Adda when not in use. This will keep the heat inside and prevent contamination with dirt and insects.
7. Water quality is very important. The heating elements will be inefficient if deposits begin to build up and they will also experience early failure. If signs of poor water quality exist, we recommend a filter and water softener combination (part no. K-WaterFiltration-System) available at www.dairytechinc.com
8. Adda can be turned off during non-busy times to conserve energy.

Troubleshooting Adda

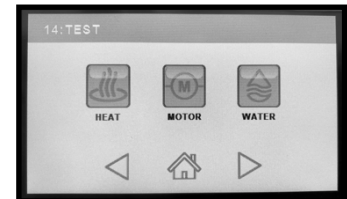
SAFETY SYMBOLS

- ⚠ CAUTION
- ⚡ HIGH VOLTAGE
- 🔥 HOT SURFACE
- 🔧 IMPORTANT

This guide is intended for use as a troubleshooting directive. All electrical tests and diagnostics should be performed only by those skilled in the electrical profession.

All electrical testing and repairs should be performed by an experienced professional or technician trained in the electrical trade.

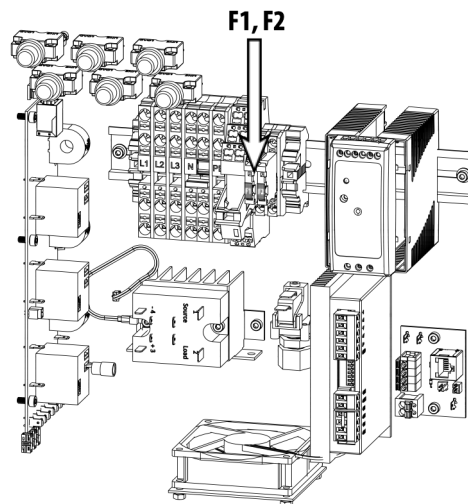
Remember, if you are experiencing issues with your Adda, you can go into her settings and scroll to "TEST". Once you are there, you can perform a checkup on the three main components: HEAT, MOTOR, WATER.



No Power to the Control Panel

Check to be certain unit is plugged into 240vac outlet and that there is power at the outlet.

Check fuses F1 & F2 on the DIN rail in the back of the machine. These are the Line 1 and Line 2 supply fuses. If blown, replace with 5x20mm 3.0A 250V fast blow fuses. DO NOT REPLACE WITH OVERSIZED FUSES.



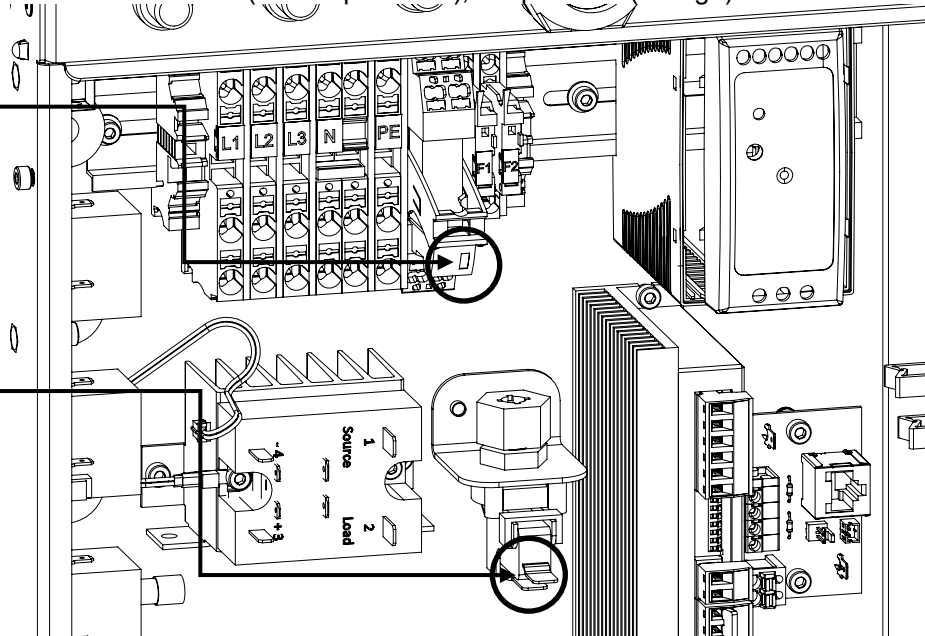
Check the LED indicator on the side of the orange controller box to see if it is lit. If the LED is not lit, and the screen will not turn on, then the controller is likely not getting power.

With the power cord plugged in, check to see if the orange indicator LED on the relay module is lit up. This will indicate that the relay module (*used to switch power to the control board*) is receiving power.

Check the voltage between the terminals on the air switch. If the switch is open (control power off), there should be 240 VAC present between the two terminals. Once the switch is closed (control power on), the potential (voltage) difference will be zero

▪ **Relay Module LED indicator**

▪ **Air Switch Terminals**



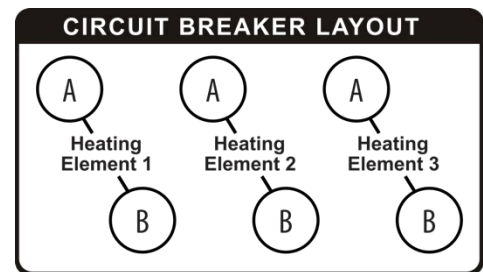
The controller itself could be malfunctioning or internally damaged. This is only rarely seen. Call Dairy Tech Support for assistance.

Adda Does Not Heat:

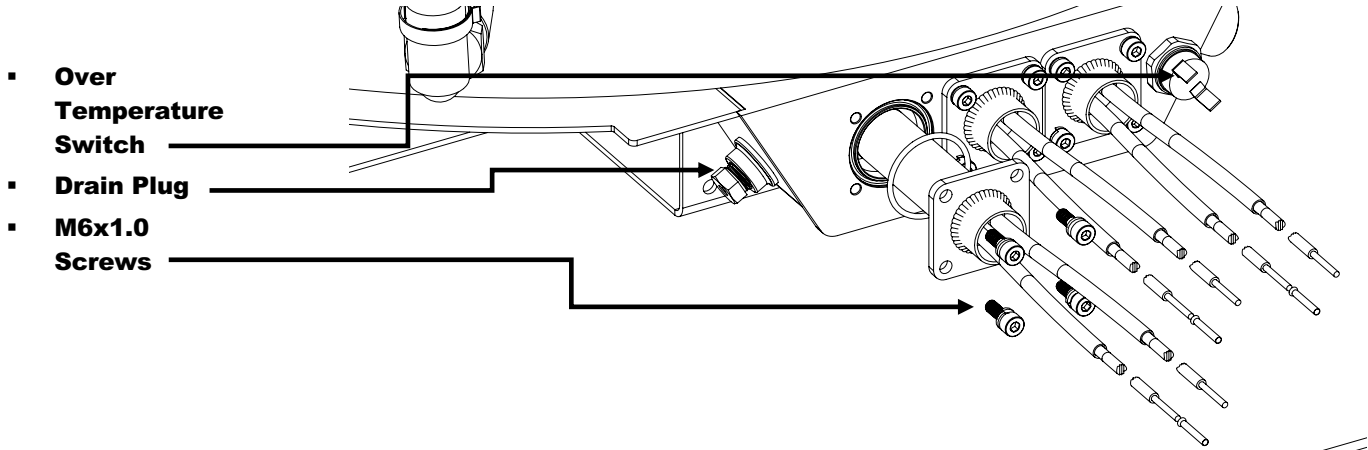
Be certain that the breakers on the back of the machine are not tripped. If the breakers are tripped, the black button on the tripped breaker will protrude from the threaded steel housing further than usual. To reset, simply push in the black button.

If the breaker immediately trips after re-setting, one of the heater wires is shorting to ground and needs to be replaced.

Look for damage to the power cord, wire insulation in the electrical box, terminal blocks, and heaters to indicate trouble areas. Have the system checked by a certified electrician before operating.



An over-temperature switch is located near the heating elements inside the back panel of the machine. This switch is set to open when the temperature inside the water jacket reaches 172°F (78°C). Once the switch opens, it will cut off all power to the heating elements and display an error code on the controller screen. The switch will not close again until the jacket cools to lower than 140°F (60°C). If power is cut off to the controller, check to see if the switch is open or closed by un-plugging the unit, pulling the spade connectors off the switch terminals, and using a multimeter on the "Resistance" setting to check continuity across the switch. If the switch is open, it should close once the water jacket cools down. If it has failed open, call Dairy Tech for a replacement part.



- Is power getting to the relays? Check for 230VAC across the lower terminals of relays 1 and 2 on the power board.
- Once activated, check continuity across the terminals of each relay on the power board and across SSR Terminals 1 and 2 to be certain they are closing.
- Is the DC signal from the control arriving at the SSR? Check across SSR Pins 3 and 4 for 24VDC.

240 VAC is Getting to the Heating Elements, but Still No Heat.

Check for continuity through the heating elements. If no continuity, order a replacement from Dairy Tech, Inc.

HEATING ELEMENTS: The heating elements can be replaced when necessary. Start by disconnecting all power to the unit before removing the back panel. Next, remove the brass drain plug and drain the tank of water. Electrical connections to the elements are disconnected from the relays and thermostat. Loosen the 4 bolts that attach the heating element. Use caution when removing to retain the O-ring which is necessary for installation of the replacement element.

Take this opportunity with the element out of the hole to inspect for excessive amounts of deposits in the heater reservoir. Flush deposits out with a hose. If severe, the unit can be tipped forward at a slight angle and a gallon of vinegar can be poured into the element hole until it is full. This acid will help to remove other deposits in the heater reservoir and on other elements. Leave vinegar in place for several hours for best results. Severe deposits may also warrant the installation of a water softener for this piece of equipment.

Replace the element using the O-ring and reconnect the wires the opposite of their removal. **DO NOT OVER-TIGHTEN THE MACHINE SCREWS WHEN REPLACING THE HEATING ELEMENT AS THE THREADS MAY STRIP.** Torque machine screws to 25 in-lbs

Adda Does Not Get to Temperature, but the Heater is Hot or Heats Slowly.

Check the internal resistance of the (3) heaters by removing the spade terminals for each element from the circuit breaker and the relay, respectively and measuring the resistance through the heater. The values of the resistances measured should be within 10-15% of each other. If one of the heaters is significantly different from the other two, it should be replaced. As a general rule, the resistance values for the heaters on the three respective Adda models should be:

- **10G: $\geq 35.4\Omega$**
- **30G: $\geq 31.1\Omega$**
- **60G: $\geq 19.2\Omega$**

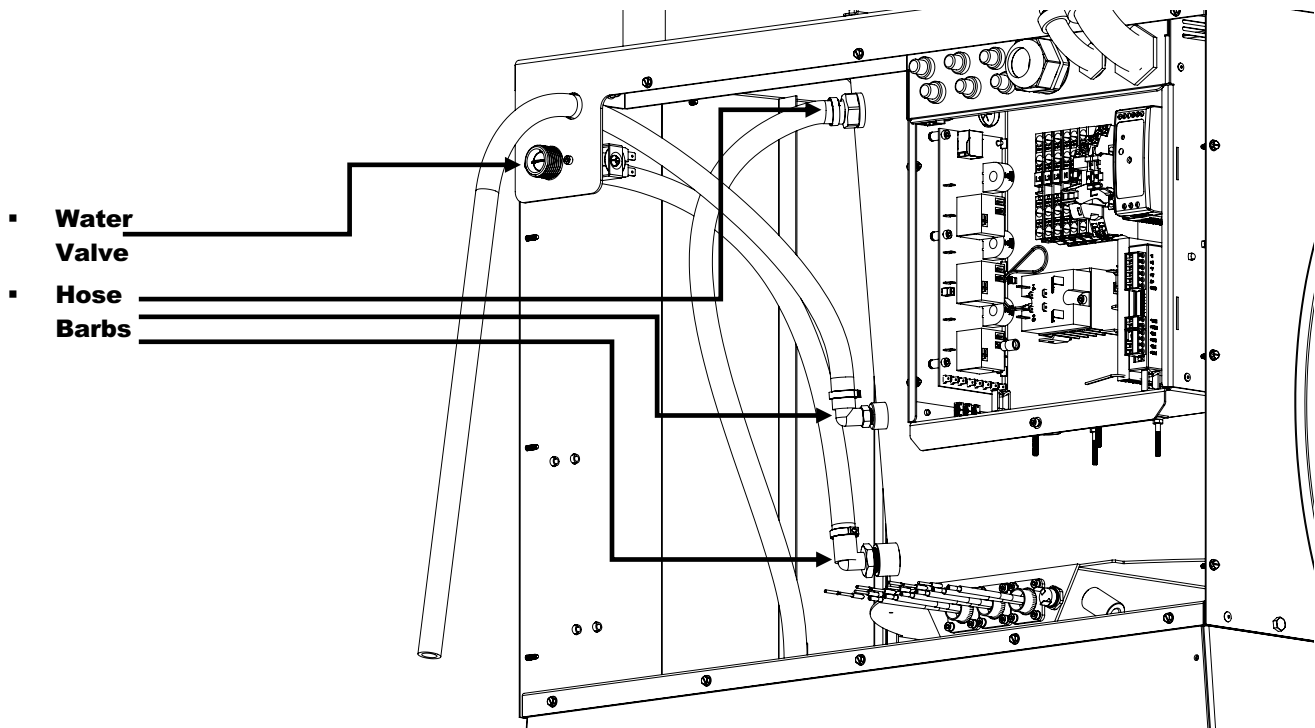
Make certain that the agitator motor is turning during the cycle. Replace if it is not working.

Cold water is coming into the system.

If there is a leak in the system, such as a leaking cold-water solenoid valve, the heater cannot keep up and the colostrum will not heat properly. Repair the leak or replace the valve.

Water is Leaking from Under the Unit

With power disconnected from the unit, open the back panel and check the heating elements, over-temperature switch, drain plug (*See illustration on previous page*), water valve and hose barbs on the side of the tank for leaks. Also check the thermostat in the bottom of the tank and for damage to the tank itself.



Cooling Solenoid Valve Will Not Stop Running

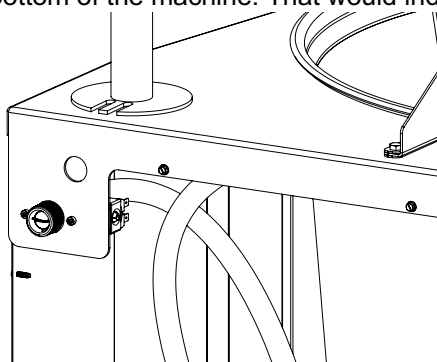
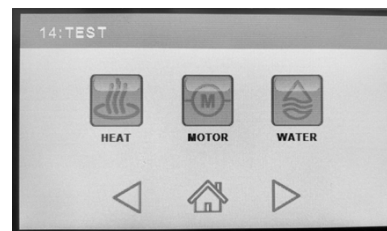
Check the power supply to the valve. If there is power keeping it open during unwanted times, the control could be malfunctioning, especially if the blue cold output LED is on at inappropriate times. Replace control.

It is possible that some debris has held the solenoid open. Disconnect power and remove tubing from valve inside cabinet. Blow into the supply hose to eject any debris from the valve or force water backward through the valve. The valve may need to be replaced if it is not closing when power to the solenoid is cut off.

Adda Will Not Cool:

At the end of the heating and time-out cycle, the cooling solenoid valve should automatically open and allow cool water into the machine.

- Make certain the discharge drain is not blocked, kinked, or obstructed with back pressure of any kind.
- Make certain the cold-water supply to the unit is always on. It is common to find that someone has shut the valve not knowing its importance.
- Check the cooling solenoid valve.
- Troubleshoot valve by pressing SETTINGS – TEST – then WATER. Is there power to the solenoid valve? If the power is on but water will not flow, replace the valve.
- No power to the valve? Check for power at the water valve terminals on the power board. Replace if necessary.
- Check the water supply to make sure screens and filters are free from debris and kinks in the hoses.
- Check that water is not flowing out of the over-pressure dump valve at the bottom of the machine. That would indicate the drain is blocked.



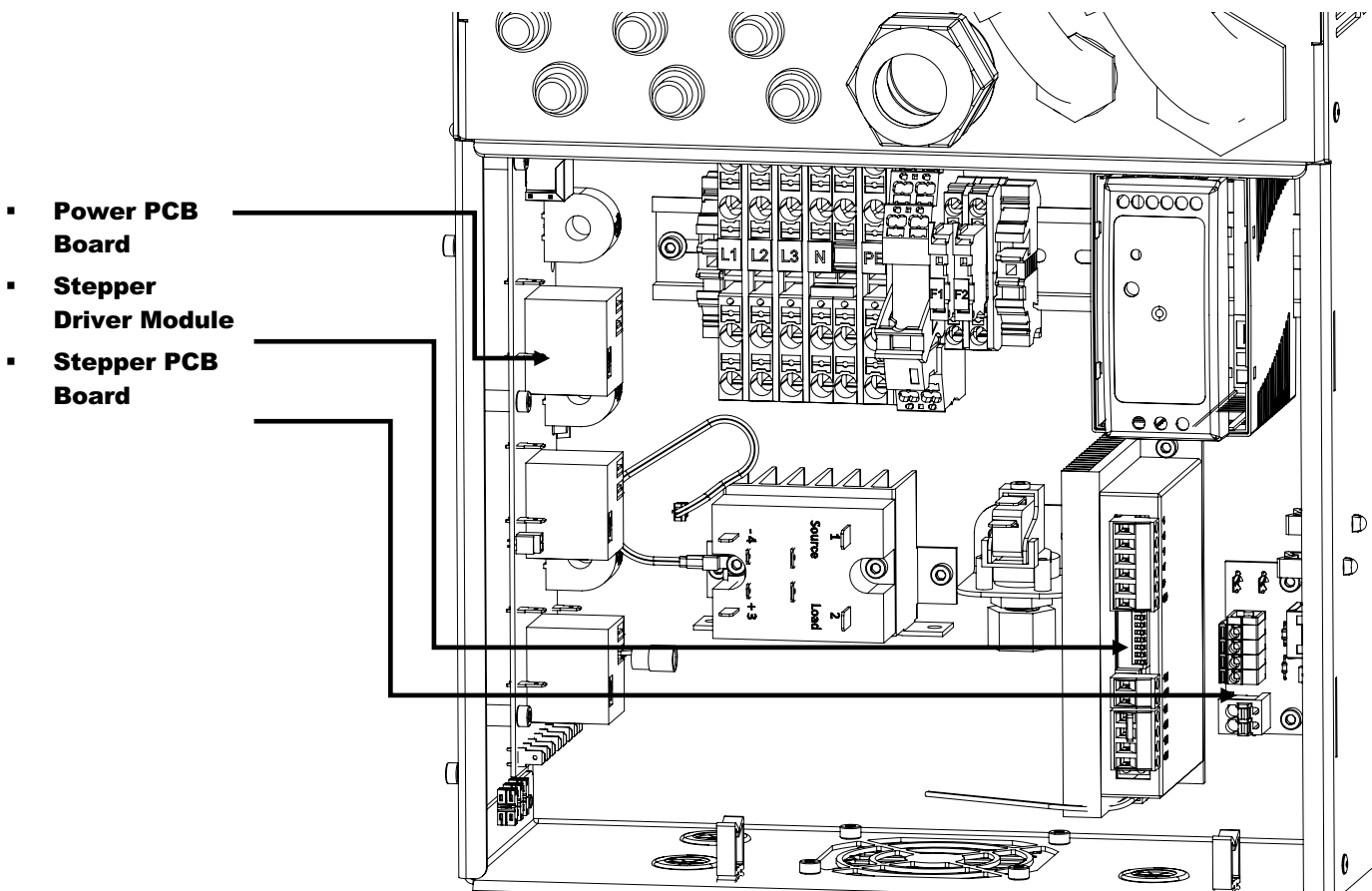
Colostrum is Separated or Congealed:

The most common cause for colostrum to separate or congeal is acidification. Fermentation of the colostrum by bacteria will cause the release of lactic acid and other acidic by-products resulting in a lower pH. This in turn allows it to separate. The heat of pasteurization will exacerbate this problem. To control this, cool the colostrum during holding stages or pasteurize the colostrum sooner after collection to prevent the start of fermentation.

A less common cause is temperatures that are too high (*rarely a problem since our units cannot superheat water*). However, this could be the result of a modified PASTEURIZATION TEMPERATURE. Check this setting to verify that it is set to 140°F (60°C).

Stir Motor is NOT Turning:

- Make certain that the wires to the motor have not been damaged or pulled out of either the motor housing, or the Stepper Driver Module.
- Ensure that there are no loose connectors on the Power PCB board, the Stepper Driver Module, or the Stepper PCB Board (see figure): Call Dairy Tech Support for assistance in properly re-locating any loose connections.
- If there is power to the motor and it will not turn, replace the motor.
- If there is no power to the motor, check the control screen for errors.
- If the motor sounds like it is on, but the stir shaft is not turning; check to make sure the couplings between the motor and the stir shaft coupling are fully tight. You can remove the motor to check rotation of the motor output shaft.



Stir Motor is Turning Slowly:

Make certain that the DIP switches on the Stepper Driver Module are properly configured according to the picture below.



Touchscreen is Not Responsive

If your touchscreen becomes unresponsive, try recalibrating.

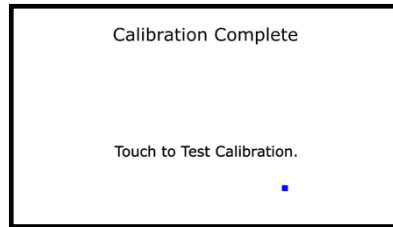
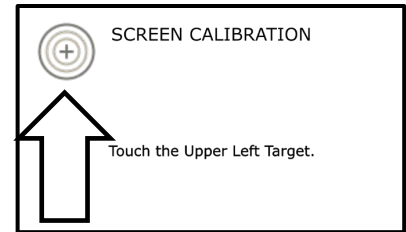
Note: Users may accidentally enter screen calibration mode during machine startup if they impatiently tap on the screen. If the calibration steps are then tapped through incorrectly, the miscalibration can result in a screen that does not respond to normal touches.

During startup, press and hold your finger on the startup screen until the calibration screen appears.



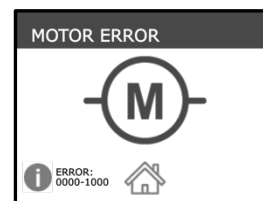
Then tap the center of each bullseye target to calibrate the screen.

When the process is complete, touch the screen to verify the calibration. You should see a small blue dot where your finger made contact with the screen. If you are satisfied with the results, do nothing and the machine will resume the startup process.



Error Symbols

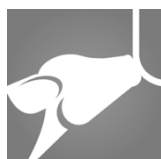
If a problem is detected, Adda will display a RED symbol to help you determine what the issue could be. Tapping on the error number will give additional information about the error. Additional troubleshooting steps are given in the table below.



Symbol	#	Issue	Solution
	1	Tank Temperature Failed to Rise	This failure will occur if the tank temperature does not reach its set temperature within 120 minutes of the cycle start time • Check that the water supply has not been turned off. • Check the heating elements for damage. • Check the line voltage and wiring. • Try power cycling the machine and checking if the problem persists. • Check the 1 Phase / 3 Phase machine setting. • Check if the circuit breakers need to be reset. • Check the line voltage and wiring. • Check the heating elements for damage. • Check for other temperature sensor faults.
	28	Water Valve Electrical Error	• Check the solenoid valve for visual damage and/or scorching. • Check the terminals on the back of the solenoid valve to ensure they are receiving 24 VDC when the BLUE LED is on at the controller interface
	12	Motor Temperature Over or Under Limit	• Do not operate the machine in freezing conditions. • Do not operate the machine if the air temperature exceeds 50°C (122°F). • Check that the Motor Temperature Sensor is plugged into the Bridge PCB. • When powered off, check that the propeller shaft rotates freely, and the propeller is clean. • Try power cycling the machine and checking if the problem persists.
	10	The Tank Temperature Sensor measurement was out of range.	• Check that the Tank Temperature Sensor is plugged into the Controller PCB. • Try power cycling the machine and checking if the problem persists. • It is possible that the water jacket really is too hot. Check to make sure that the jacket is completely full of water by opening the water valve and ensuring that water flows out of the drain hose immediately.
	11	The Process Temperature Sensor measurement was out of range.	• Check that the Process Temperature Sensor is plugged into the Controller PCB. • Verify that the temperature of the fluid in the tank matches the temperature reported by the machine using an independent thermometer. • Try power cycling the machine and checking if the problem persists.
	13	The temperature of the heater SSR was outside of its operating range.	• Do not operate the machine in freezing conditions. • Do not operate the machine if the air temperature exceeds 50°C (122°F). • Check if the air flow to the power PCB and SSR is blocked, and check if the fan is still spinning (the fan should be on at all times when the controller is powered). • Check that the SSR Temperature Sensor is plugged into the Power PCB. • Try power cycling the machine and checking if the problem persists.
	14	A large temperature difference was measured between the Tank Temperature Sensor and Process Temperature Sensor.	• This could indicate that one of the temperature sensors has failed and needs to be replaced. • Check to make sure that there is fluid present in the tank and that the water jacket is full. • Ensure the water solenoid valve is closing. • Check for other temperature sensor faults.

	2, 3, 6	Element #1, #2, or #3 was using more current than expected.	- Check that the voltage across indicated heating element does not exceed 250 VAC. - Disconnect power and check that element resistance is greater than 18 Ω.
	3, 5, 7	Element #1, #2, or #3 was using less current than expected	- Check that the voltage across the middle heating element is at least 200VAC. - Disconnect power and check that element resistance is less than 30 Ω.
	8	The temperature sensors in the tank measured a significant difference.	- Check that the tank is full of water. - Check that the solenoid valve turns off when tank is full during heating.
	15	The power board was not detected.	- Check that the Power PCB data cable is connected to both the Controller PCB and the Power PCB. - Check that the Power PCB power supply cable is connected at both the Power Supply and the Power PCB. - Look for any loose spade connectors on the power board, and re-connect if necessary - Try power cycling the machine and checking if the problem persists.
	16, 17, 18	The 24VDC, 3.3VDC, or 1.8VDC line in the power board measured out of range.	- Try power cycling the machine and checking if the problem persists. - Check if the wires have been disconnected from the temperature switch terminals. - Check for continuity between the over-temperature switch terminals.
	20, 21, 22, 23	The 24VDC, 5.0VDC, 3.3VDC, 1.2VDC line in the controller board measured out of range.	- Try power cycling the machine and checking if the problem persists. - Check that the Controller PCB power supply cable terminals are fully connected to the Controller PCB.
	24, 25, 26	The power board relay #1, #2, or #3 output driver reported an error.	- Try power cycling the machine and checking if the problem persists. - Check for additional error codes.
	27	The power board SSR #2 output driver reported an error.	- Check the solid-state relay wiring at the Power PCB - Check for additional error codes.

This is only a basic list of possible error symbols, possible issues and solutions. For the most comprehensive diagnostic tool, please consider downloading the Perfect Udder® App. It not only has the most up-to-date trouble shooting guides, it also gives you the ability to monitor individual machine performance and install system software updates.



Perfect Udder App

Our simple, easy-to-use app keeps accurate colostrum management in the palm of your hand. View all process data and be 100% confident that your equipment is working properly.

Use the Perfect Udder® App to check:

1. Is Adda being used properly by all of your employees?
2. Is the last batch ready for use? The Perfect Udder® App can alert you so you can stay focused on other tasks.
3. Do you have a question about proper use of Adda? Open the owner manual directly from the app - in different languages!
4. Need help from our service team? With the Perfect Udder® App, you can send us critical Adda data that will help us sort through any issues.
5. Give Adda a nickname and keep track of multiple machines on your farm all from your handheld device.

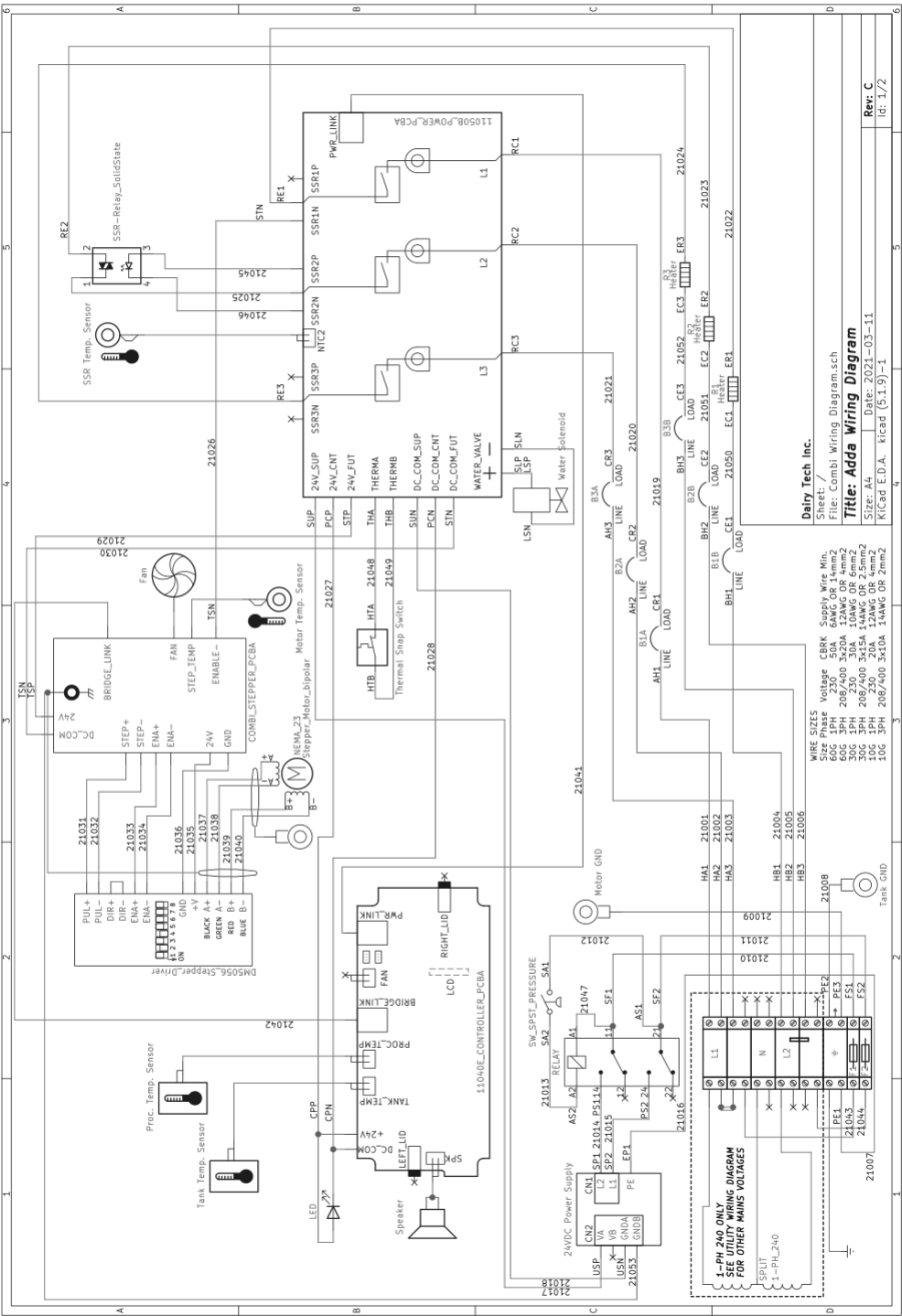
6. Adda upgrades can be sent directly to your equipment with the press of a button.



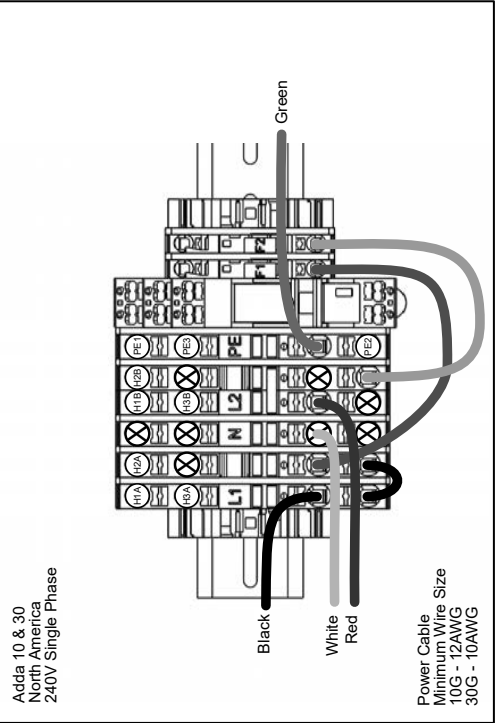
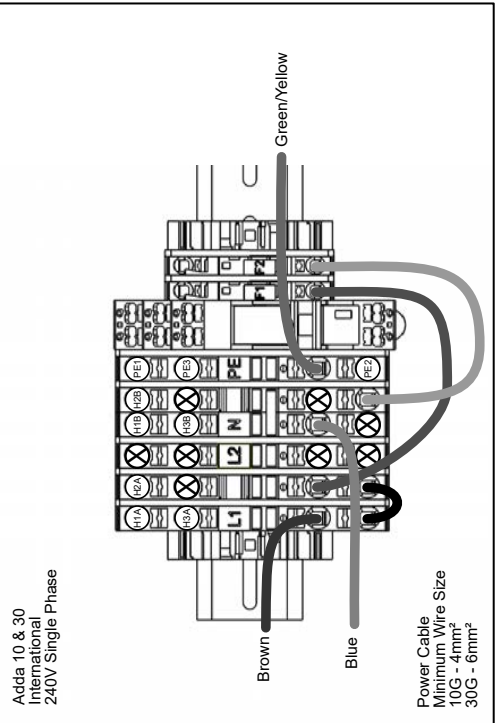
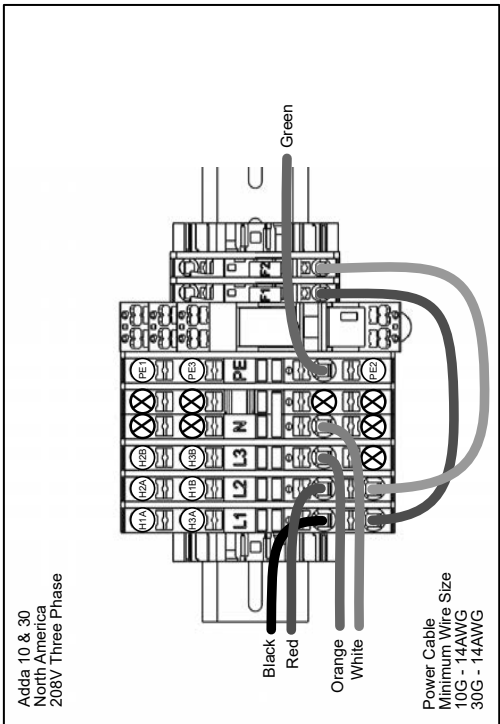
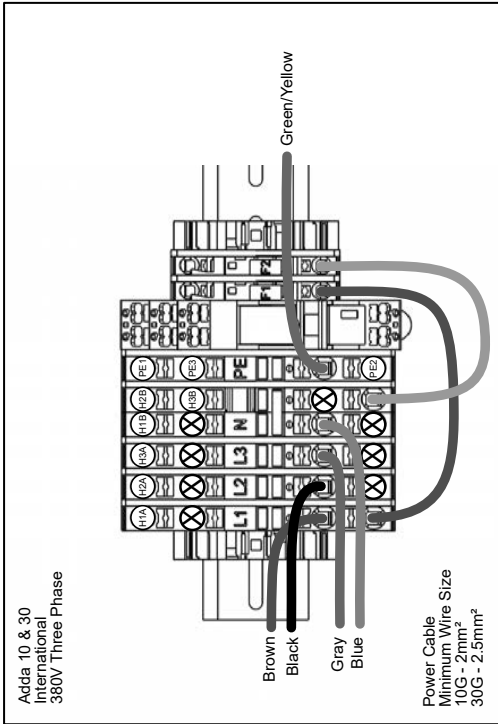
More features to come as Adda matures ... get in on the App today for lifelong support!

Scan this QR code to be taken directly to the Perfect Udder app on GooglePlay!

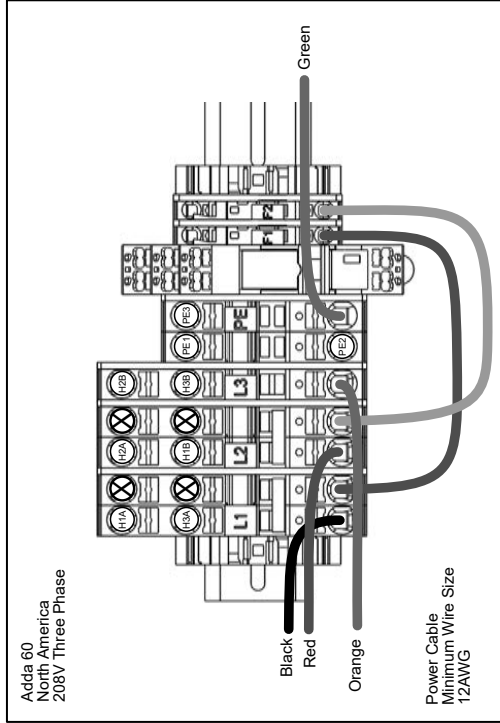
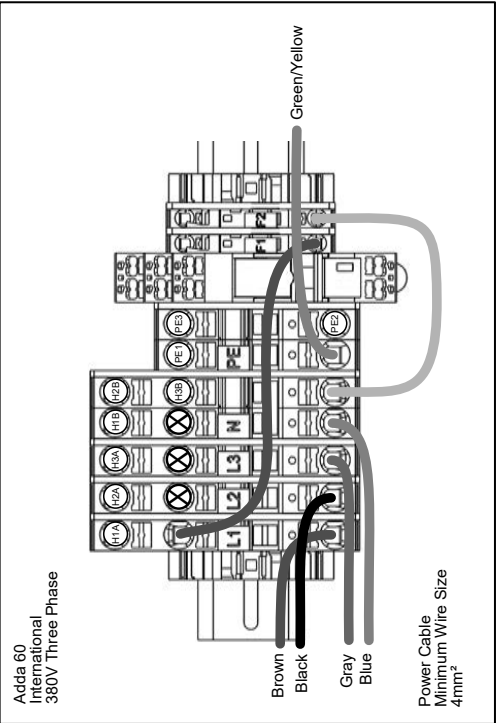
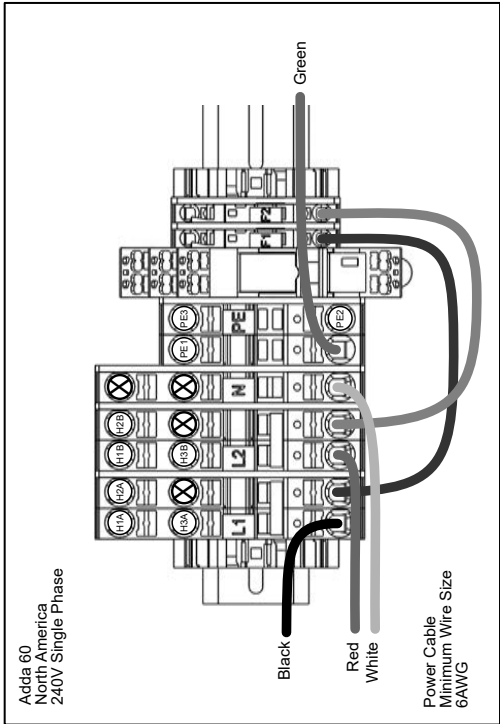
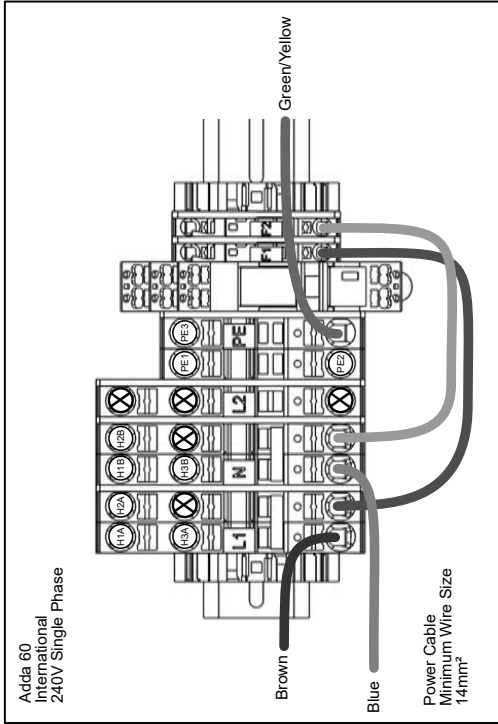
Adda Wiring Diagram



Adda 10G/30G Wiring Options



Adda 60G Wiring Options



Replacement Parts

This section lists the replacement parts and their part numbers. If you need assistance, please visit our website, or call our Service Department at 866.384.2697 x2101.

Part Name	DESCRIPTION
ME-AirSwitch	Air Switch/ 7D114 Is the button
ME-PowSupply-Adda	24V 96W Industrial DIN Rail Power Supply
ME-Panel-LED	LED Panel Indicator, 24V, 8mm
ME-fanDC24V	80mm Fan 24VDC
ME-Relay-Adda	Relay Module
ME-TB-FuseBlk	Fuse Terminal Block PT 4 HESI
QE-Fuse 5x20mm	5x20mm glass cartridge fuse 3A 250V
QE-Speaker	Loudspeaker PUI Audio
QE-RelaySS-240	SSR - Picker
ME-RibbonCable	CABLE FFC 22POS 1.00MM 4"
MP-ValveClampSS1"	sanitary clamp 1"
MP-ValveSS1"	304SS 1.25" sanitary butterfly valve
MP-Spigot	Custom flanged spigot 1"SS
QE-PCA-Power	Power Board Rev C
ME-StepPCB	Combi Stepper PCB
QE-PCA-MainControl	Controller PCB Assy
MM-5D290-Prop30/60G	HD 30 & 60 GT Stirring Prop
MP-Gasket 1"	1" sanitary gasket for SS tube
QP-Valve 24VDC	Water Valve, 24VDC, GHT to 12mm Barb
QE-TouchScreen4.3	Touch Screen EMBED LCD 4.3" 480272 RGB RTP
ME-Step Motor	IP65 NEMA 23 Stepper Motor
ME-Step Driver	5.6A Digital Stepper Drive
MH-Flex Coupler	10mm Flexible Shaft Coupling
QE-TempSensorRingTerminal	NTC Surface Temp Sensor
QE-TempSensorProbe	NTC Temp Sensor, 28mm Long Tank Temp
MM-3D182-Step Tower Assy	Stepper Stir Tower Assembly
MM-MotorCoverBottle	Combi Cast Motor Cover
MP-ValRelief	Pressure Relief Valve 4.5#
MH-Control Mount Arm	Single Monitor Desk Mount
QE-Thermostat-75C	Thermostat, OverTemp
QE-CircuitBreaker15	Circuit Breaker, Wuyue, 88-15A(m)-Metal+Cap
MM-Decal-Bezel	Combi Controller Decal

MM-Decal-D

DTI Equipment Badge

10G Only	
BM-shaft10G	10G Stirring Shaft
BH-Box-10G	10G shipping box single pc
BM-10G-Tank	10G Milk Tank
BM-LidSS-10G	10G Lid
BE-elem1500w Bolt-In	10G 1500w bolt-in style heating element
BM-Prop -10G	10G SS Prop
30G Only	
MM-5D290-Prop30/60G	HD 30 & 60 GT Stirring Prop
AM-shaft30G	30GT Stirring Shaft
AM-30G-Tank	30G Milk Tank
AM-LidSS-30G	30G Lid
AE-elem 1850w Bolt-In	30G Heat Element, 1.85KW, Flange Mount
60G Only	
JM-2548-StirShaft	60GT Stirring Shaft
JM-tank60G	60G Milk Tank
JM-LidSS	60G Lid
JE-element 3000w Bolt-In	60G Heat Element, 3000W Bolt-In immersion/flanged.
JE-CircuitBreaker20	Circuit Breaker, Wuyue, 88-20A(m)-Metal+Cap
MM-5D290-Prop30/60G	HD 30 & 60 GT Stirring Prop