

USER GUIDE
UGE107-0317

Manual Tubing Coiler



Please record your equipment's model and serial number(s) and the date you received it in the spaces provided.

It's a good idea to record the model and serial number(s) of your equipment and the date you received it in the User Guide. Our service department uses this information, along with the manual number, to provide help for the specific equipment you installed.

Please keep this User Guide and all manuals, engineering prints, and parts lists together for documentation of your equipment.

Date:

Manual Number: UGE107-0317

Serial Number(s):

Model Number(s):

DISCLAIMER: Conair shall not be liable for errors contained in this User Guide or for incidental, consequential damages in connection with the furnishing, performance or use of this information. Conair makes no warranty of any kind with regard to this information, including, but not limited to, the implied warranties of merchantability and fitness for a particular purpose.

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Introduction

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Purpose of the User Guide

This user guide describes the Conair Manual Tubing Coiler (MTC) and explains step-by-step how to install, operate, maintain and repair this equipment.

Before installing this product, please take a few moments to read the user guide and review the diagrams and safety information in the instruction packet. You should also review manuals covering associated equipment in your system. This review won't take long, and it could save you valuable installation and operating time later.

How the Guide is Organized

Symbols have been used to help organize the User Guide and call your attention to important information regarding safe installation and operation.



Symbols within triangles warn of conditions that could be hazardous to users or could damage equipment. Read and take precautions before proceeding.



Numbers indicate tasks or steps to be performed by the user.



A diamond indicates the equipment's response to an action performed by the user or a situation.



An open box marks items in a checklist.



A circle marks items in a list.



Indicates a tip. A tip is used to provide you with a suggestion that will help you with the maintenance and the operation of this equipment.



Indicates a note. A note is used to provide additional information about the steps you are following throughout the manual.

Your Responsibility as a User

You must be familiar with all safety procedures concerning installation, operation, and maintenance of this equipment. Responsible safety procedures include:

- Thorough view of this User Guide, paying particular attention to hazard warnings, appendices, and related diagrams.
- Thorough review of the equipment itself, with careful attention to voltage sources, intended use, and warning labels.
- Thorough review of instruction manuals for associated equipment.
- Step-by-step adherence to instructions outlined in this User Guide.

ATTENTION: Read This So No One Gets Hurt

We design equipment with the user's safety in mind. You can avoid the potential hazards identified on this machine by following the procedures outlined below and elsewhere in the User Guide.



DANGER: Moving Parts; pinch hazard

Emergency stop (E-stop) buttons are located at several accessible points on the operator side of the machine at the upstream end. When pressed, it will disconnect power to the coiler. The E-stop must be physically pulled out to reset the switch. To start the coiler again after an E-stop has been pressed, the Reset button must be pressed



WARNING: Improper installation, operation, or servicing may result in equipment damage or personal injury.



This equipment should be installed, adjusted, and serviced by qualified technical personnel who are familiar with the construction, operation, and potential hazards of this type of machine.

All wiring, disconnects, and fuses should be installed by qualified electrical technicians in accordance with electrical codes in your region. Always maintain a safe ground. Do not operate the equipment at power levels other than what is specified on the machine serial tag and data plate.




WARNING: Voltage hazard

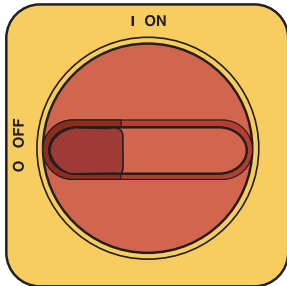
This equipment is powered by alternating current, as specified on the machine serial tag and data plate.

A properly sized conductive ground wire from the incoming power supply must be connected to the chassis ground terminal inside the electrical enclosure. Improper grounding can result in severe personal injury and erratic machine operation.

Always disconnect and lock out the incoming main power source before opening the electrical enclosure or performing non-standard operating procedures, such as routine maintenance. Only qualified personnel should perform troubleshooting procedures that require access to the electrical enclosure while power is on.

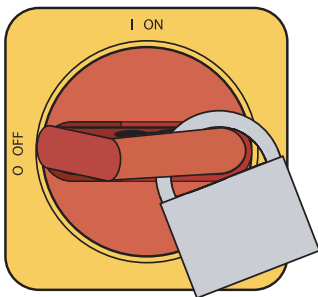
How to Use the Lockout Device


 **CAUTION:** Before performing maintenance or repairs on this product, you should disconnect and lockout electrical power sources to prevent injury from unexpected energization or start-up. A lockable device has been provided to isolate this product from potentially hazardous electricity.



Lockout is the preferred method of isolating machines or equipment from energy sources. Your Conair product is equipped with the lockout device pictured below. To use the lockout device:

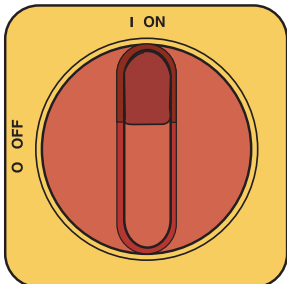
- 1 Stop or turn off the equipment.**
- 2 Isolate the equipment from the electric power.** Turn the rotary disconnect switch to the OFF, or “O” position.
- 3 Secure the device with an assigned lock or tag.** Insert a lock or tag in the holes to prevent movement.
- 4 The equipment is now locked out.**



 **WARNING:** Before removing lockout devices and returning switches to the ON position, make sure that all personnel are clear of the machine, tools have been removed and all safety guards reinstalled.

To restore power to the device, turn the rotary disconnect back to the ON position:

- 1 Remove the lock or tag.**
- 2 Turn the rotary disconnect switch to the ON or “I” position.**



 **NOTE:** Your lockout device may not look identical to this one. The illustration is for reference only.

Description

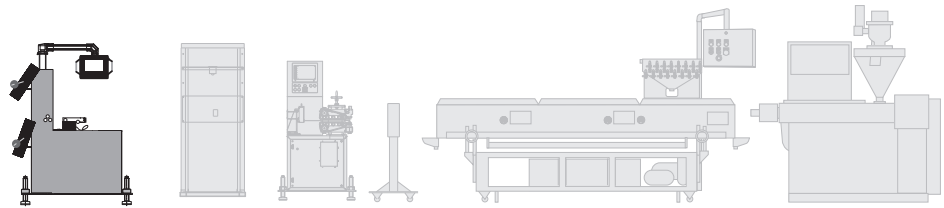
What is the Manual Tubing Coiler? 2-2

Typical Applications 2-2

How it Works 2-3

What is a MTC (Manual Tubing Coiler)?

The Conair MTCs are designed to consistently coil small flexible tubing being fed from an extrusion line. The standard servo drive system with sonic loop detection is designed to coil with little-to-no friction or winding tension.



Conair MTC Series

Typical Applications

Conair MTC Series Single Spindle is a single coiling unit designed to wind small flexible extrusions with little-to-no friction or winding tension. This eliminates deformities in delicate products making it ideal for extrusions such as: medical tubing, small hose, and filled cords. Various profiles can also be coiled on the MTC.

This MTC was configured based on your specific application needs.

Due to the small size of the machine when it is placed in the extrusion line, it is ideal for cleanroom. Its design has been optimized for lower speed and shorter run applications.

The fully servo-controlled operation creates an accurate finished spool each cycle with no need to “Dial In” for each product changeover.

This MTC is capable of storing recipes, making line change over a breeze. All MTC components that come into contact with the extrusion are made from stainless steel or are hard coat anodized.

This MTC has user-friendly design for operation and maintenance.

How it Works

The MTC requires Sonic Loop detection to detect and determine appropriate product tension and coiling speed to maintain the tension as it coils tubing from a puller. An HMI is used to set a maximum speed for the MTC coil.

As the product spools, the Sonic Loop detection system monitors the tension of the tubing. If the tubing begins to sag (low tension), the MTC will speed up to increase tension. If the tubing is too tight, the MTC will slow down to decrease tension.

Installation

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Unpacking the Boxes



CAUTION: Lifting hazard

To avoid personal injury or damage to the MTC, lift it using a forklift or hoist with straps that have been positioned at the MTC's center of gravity. The MTC is equipped with locking casters, for ease of movement on level floors.



- 1 Carefully uncrate the MTC and its components.**
- 2 Remove all packing material, protective paper, tape, and plastic.** Compare contents to the shipping papers to ensure that you have all the parts.
- 3 Carefully inspect all components** to make sure no damage occurred during shipping. Check all wire terminal connections, bolts, and any other electrical connections, which may have come loose during shipping.
- 4 Record serial numbers and specifications** in the blanks provided on the back of the User Guide's title page. This information will be helpful if you ever need service or parts.
- 5 You are now ready to begin installation.** *See Installation Section entitled, Preparing for Installation.*

Preparing for Installation



WARNING: Improper installation, operation, or servicing may result in equipment damage or personal injury.



This equipment should only be installed, adjusted, and serviced by qualified technical personnel who are familiar with the construction, operation, and potential hazards of this type of machine.

All wiring, disconnects, and fuses should be installed by qualified electrical technicians in accordance with electrical codes in your region. Always maintain a safe ground. Do not operate the equipment at power levels other than what is specified on the machine serial tag and data plate.

You will install the MTC in a position where it pools from a Sonic Loop device, behind a puller or puller/cutter combo.

1 Plan the location. Make sure the installation area provides:

A grounded power source supplying the correct current and voltage.

Check the serial tag for the correct amps, voltage, phase and cycles. All wiring should be completed by qualified personnel and should comply with your region's electrical codes.

Minimum clearance for safe operation and maintenance.

Determine the best distance from the discharge end of the MTC to the Sonic Loop device. This can be anywhere from 3 to 10 feet {0.91 to 3.05 m}, depending on the ability of your product to flex. Any more than 10 feet of distance may interfere with the coiler's ability to function.

2 Determine the correct position of the MTC.

The MTC will be positioned downstream of a puller/cutter. You must consider optional equipment and product type to determine the best spacing between the equipment.

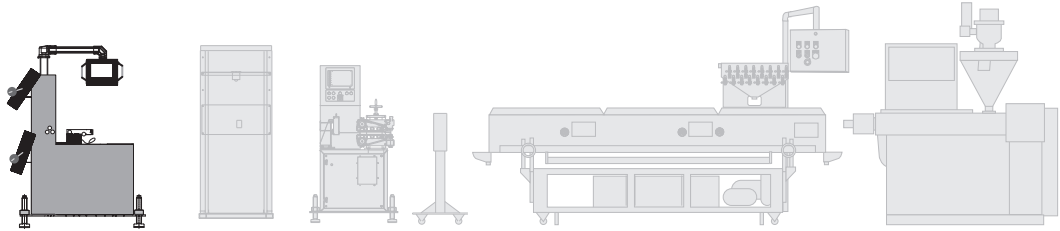
Installing the MTC



CAUTION: Lifting Hazard

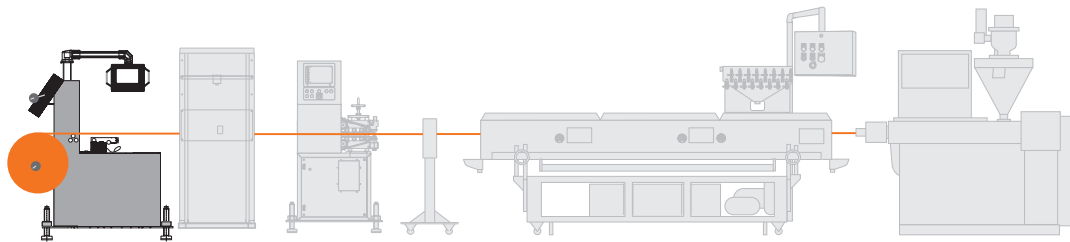
To avoid personal injury or damage to the MTC, lift it using a forklift or hoist with straps that have been positioned at the MTC's center of gravity.

- 1 Move the MTC into position.** This unit is supplied for either a right to left or left to right extrusion direction. Check your order to see which direction was purchased..



- 2 Measure the centerline height** of the extruded product as it exits the extrusion line. Make sure all equipment on the extrusion line is aligned to this height. Use a plumb line or laser to check for a straight line from the extrusion die through each line component.

- 3 Align the MTC with the centerline height of the extrusion line.** Adjust the MTC's floor lock/caster assembly to the center height of the extrusion line using an adjustable wrench. Turn the floor locks until the puller reaches the center height of the extrusion line.



IMPORTANT: Never operate the MTC on casters.

Always use the leveling jacks to support the MTC. Once the correct height is reached, adjust the pad assembly to remove the weight from the casters.

The Loop Detector - The loop detector will be positioned halfway between the puller and the MTC. Its function is to detect the height of the loop. As the loop lowers it sends a signal to speed up the drive. In likeness, as the loop gets higher it sends a signal to slow down the drive. When these functions work together, it keeps the loop at a consistent height, minimizing any stretch that could result from the MTC "pulling" the material directly from the upstream puller.

Refer to the Sonic Loop Control addendum in the user guide for height adjustment and operation instructions.

Testing the Installation



DANGER: Pinch Hazard

Never remove or disable safety devices to sustain production. Operating without these devices could lead to hazardous conditions that can cause severe injury. Take all necessary precautions when working around moving parts to prevent body parts and clothing from being pulled into the machine.

- 1 Make sure all components are installed according to assembly drawings.** Check all bolts on the MTC for tightness.
- 2 Check that the MTC is firmly anchored into position** with the floor brakes.
- 3 Check that all wiring conforms to electrical codes, and all wiring covers are in place.**
- 4 Turn on the main disconnect.** Plug in the main power cord and turn on the main disconnect.
- 5 Check that the E-Stop buttons are in the out, extended position.**
- 6 Press Start button.** The arbor shaft should begin to rotate. Ensure that the MTC is operating.

If the MTC is not working properly at any time, turn it off immediately and [refer to the Troubleshooting section of this User Guide](#).

If you do not encounter any problems, proceed to the Operation section.

- 7 Place a piece of tube in the sonic Loop sensing tool. Raising and lowering the tube should start the arbor shaft rotating.**

Operation


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Starting the MTC

To start the MTC.

- 1 Ensure that all guards are in place**
- 2 Turn on the main power.**
- 3 Check that the emergency stop buttons are functioning correctly.**
- 4 Reset the emergency stop circuit if necessary.**

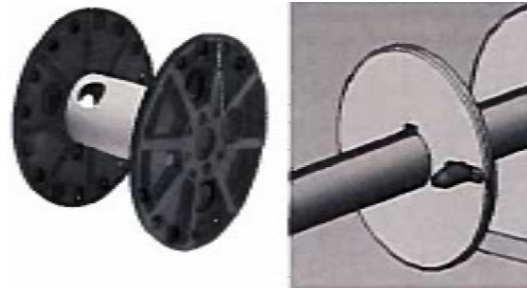


 **NOTE:** Refer to the appendix of this user guide, or the manual that came with your Sonic Loop device for operation procedures.


- 5 Place the spool on the arbor shaft.** Make sure that the spool will rotate in the correct direction to uncoil towards the Sonic Loop device. Leave the spool loose at this point, so that you can unwind it by hand.

- 6 Unwind enough tubing to go through the Sonic Loop device and into the pulling/cutting device.**

- 7 Slide the spool tightly against the adjustable spool pin, making sure that the pin slides into one of the holes on the spool.**



- 8 Adjust the outside clamp on the arbor shaft so that it holds the spool tightly in place.**

 **NOTE:** Adjustments may be necessary to the settings for the speed of the MTC. The Sonic Loop control is factory set and should not typically need adjusted.

- 9 Adjust the speed on the HMI to an appropriate level.** This may need adjusted during operation to find the perfect setting.
- 10 Adjust the range of the Sonic Loop control if necessary.** Refer to the control instructions that came with your equipment, and to the information in the appendix of this user guide. These settings are confirmed at the factory and should typically not need adjusted.
- 11 Follow the instructions for your puller or puller/cutter combo and start that machine.** As the puller starts to pull the product (tube), the Sonic Loop device will sense the need for more product, and the MTC will begin unspooling.

MTC Splash Screen

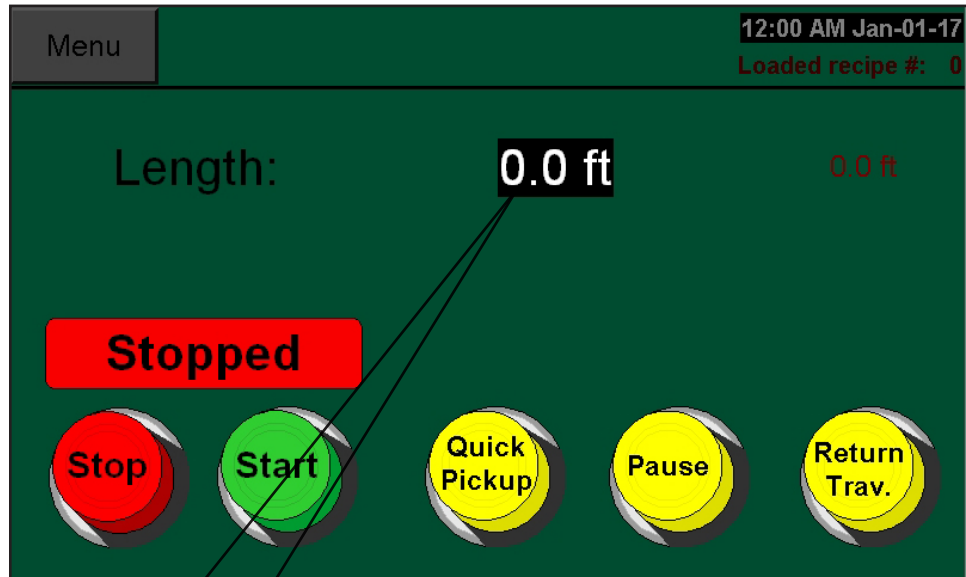


This is the first screen to appear when turning the power on to the MTC unit. After power is turned on, the HMI panel will initialize. After it has initialized the 'Splash' page will appear and the panel will establish communications with the servo controller. This page shows Conair contact information. Use the Service/Parts number to contact the Conair resource line.

Contact Conair
Parts and Service
Phone: 800-458-1960
From outside of the
United States,
Call: 814 437 6861

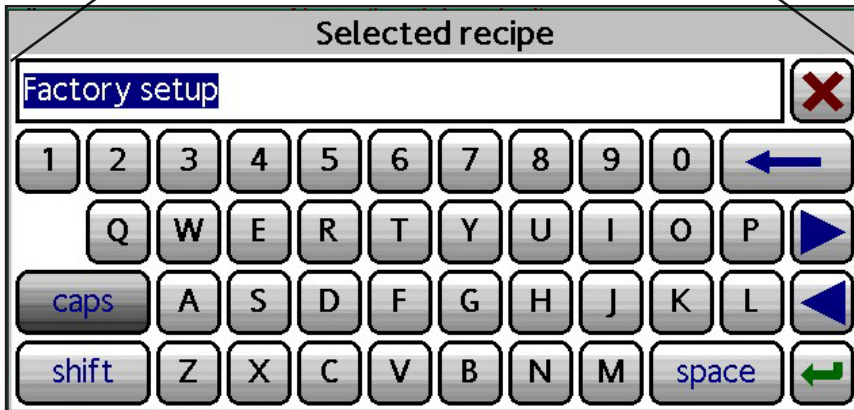
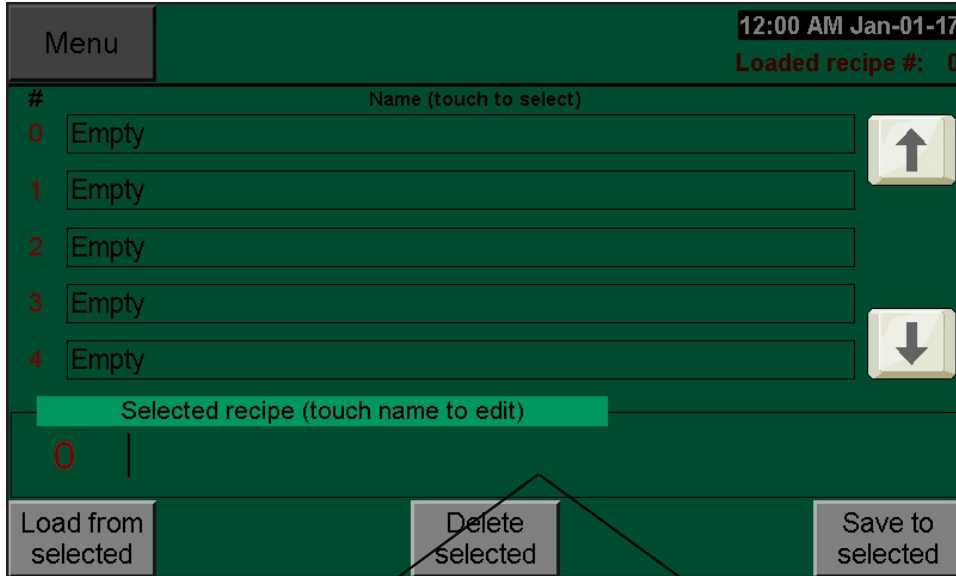
How to Navigate the Control Screens

Navigate through the MTC Control Screens by touching any black text which opens a screen or pop up window. The colored text is not selectable and represents current data being displayed.



Example of Pop Up Number Pad

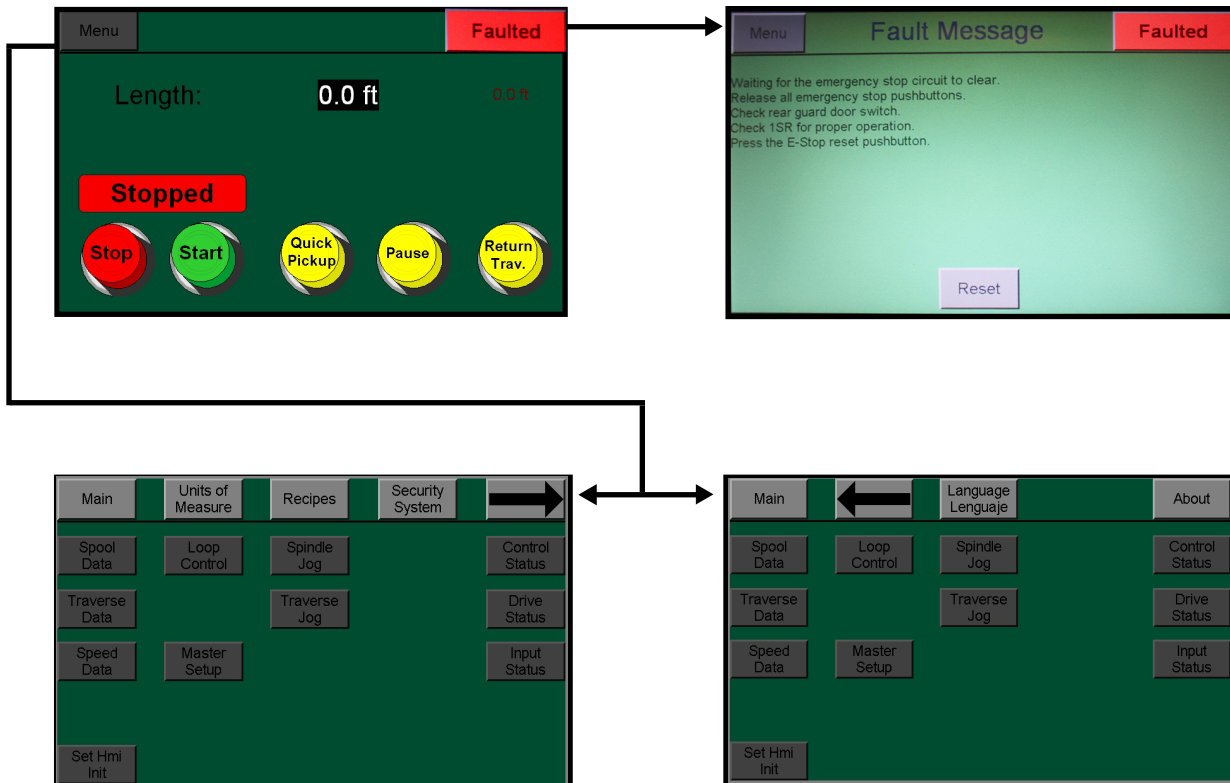
How to Navigate the Control Screens (continued)



Example of Pop Up Number Keyboard

Control Function Flow Charts

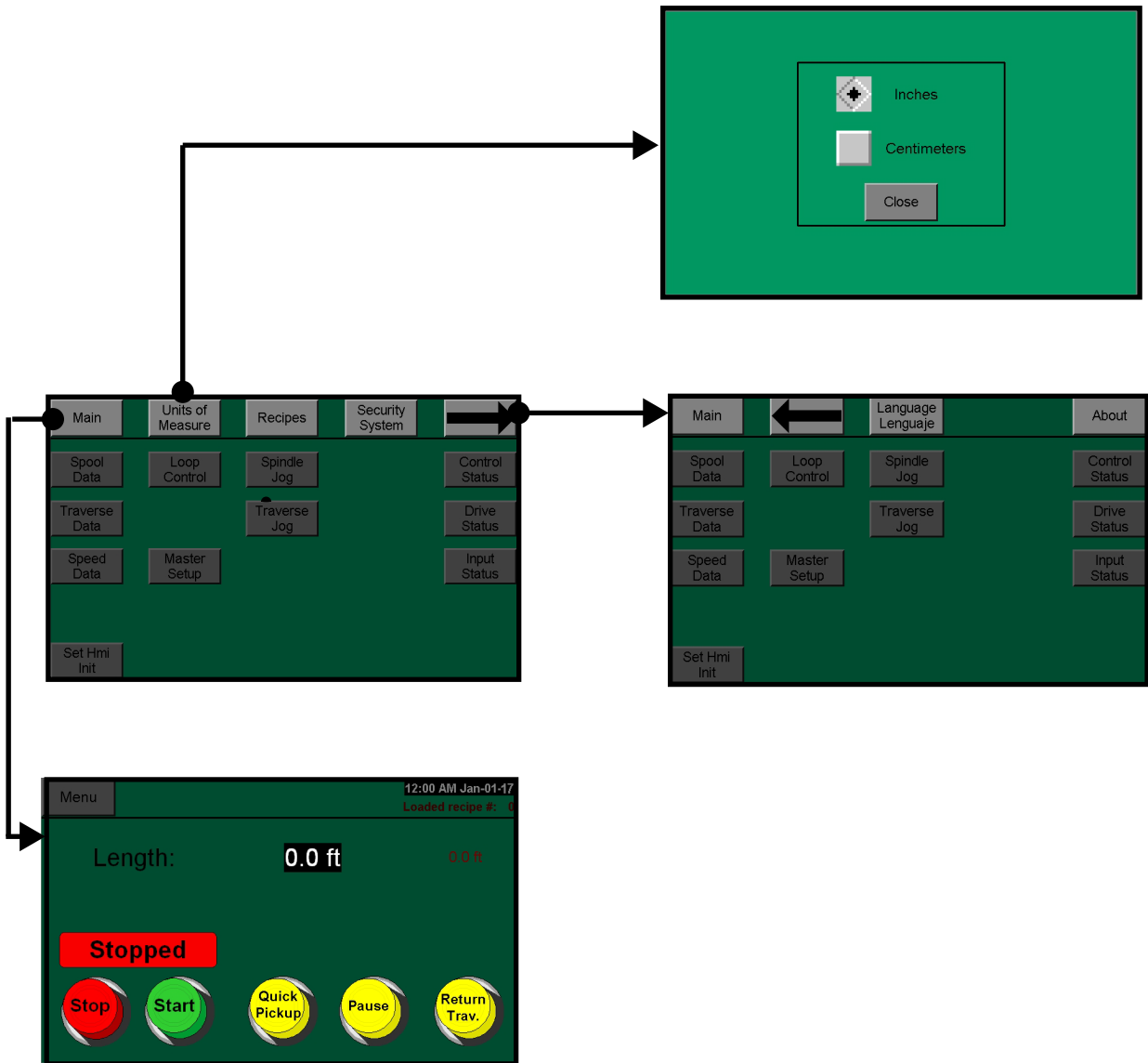
Main Page to Menu Pages



(Continued)

Control Function Flow Charts

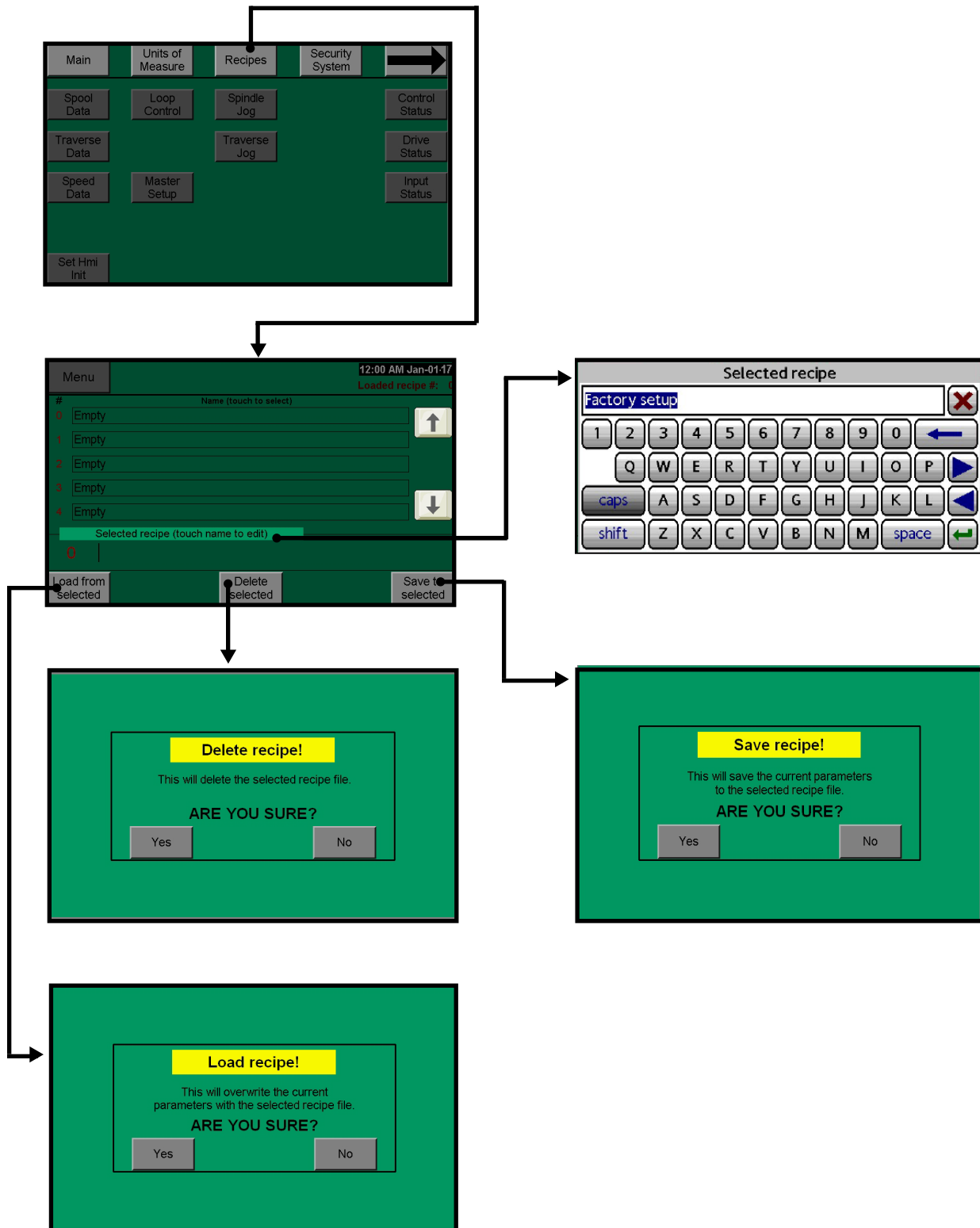
Menu 1 Header Buttons



(Continued)

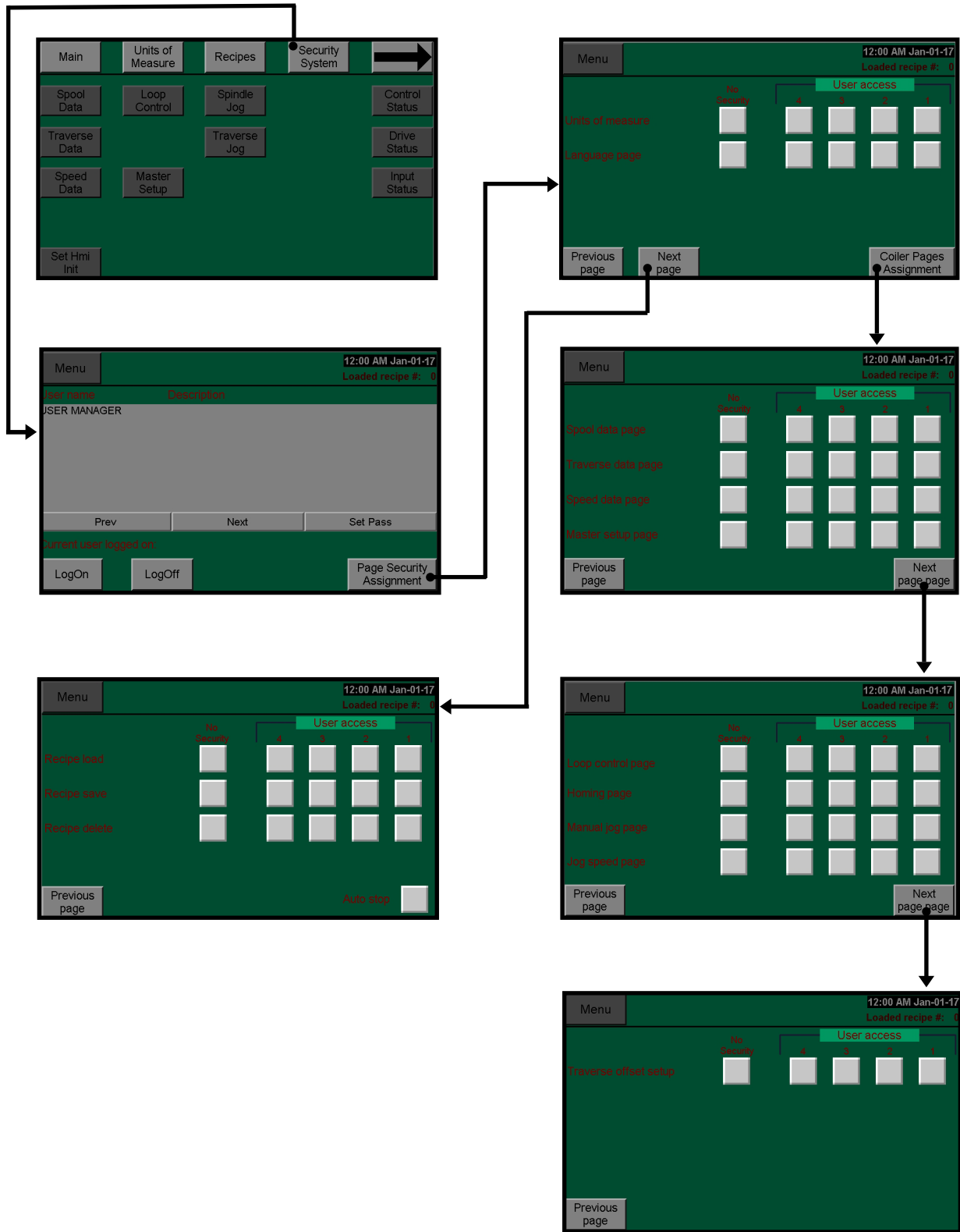
Control Function Flow Charts

Menu 1 Header Button to Recipe Pages



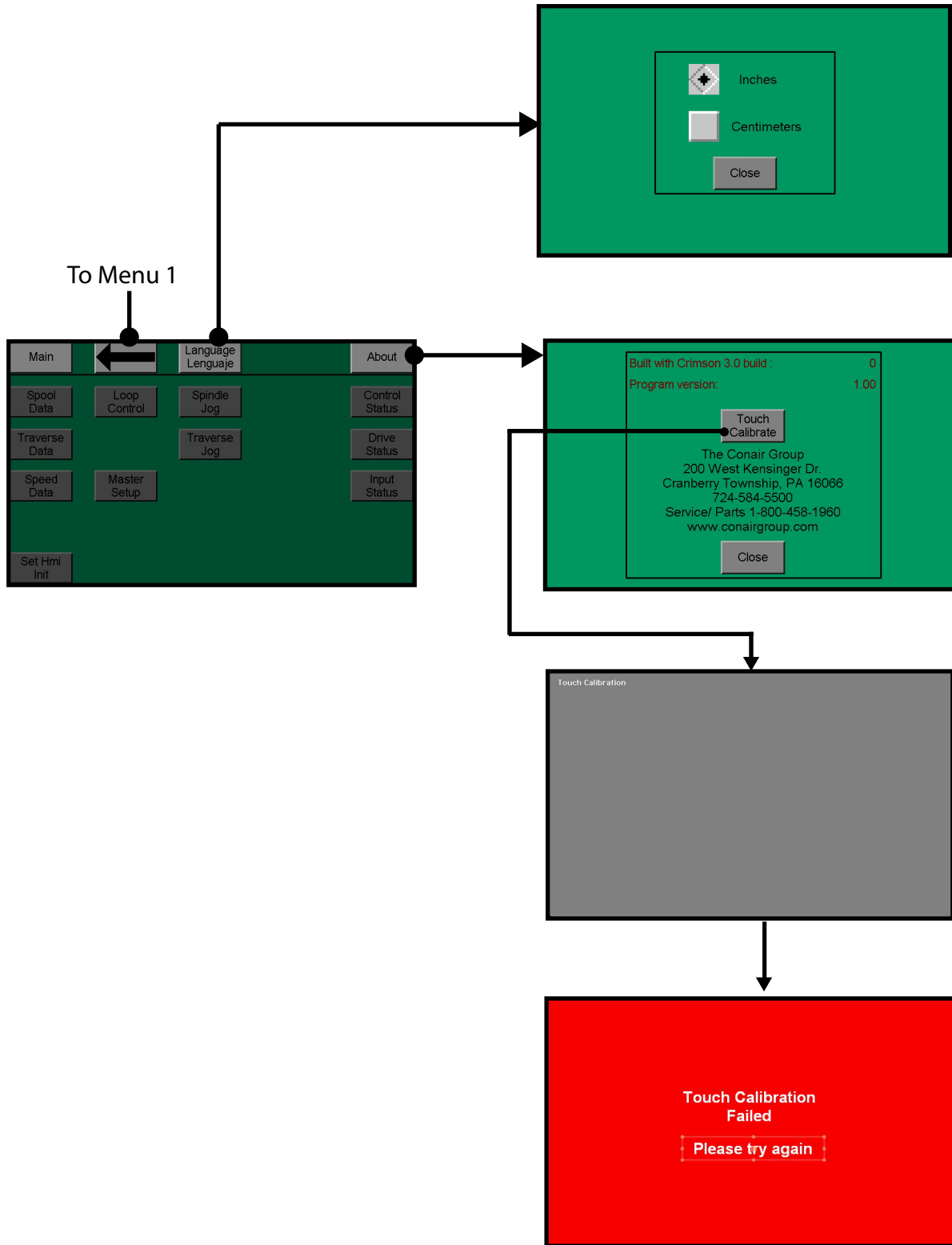
Control Function Flow Charts

Menu 1 Header Button to Security Pages



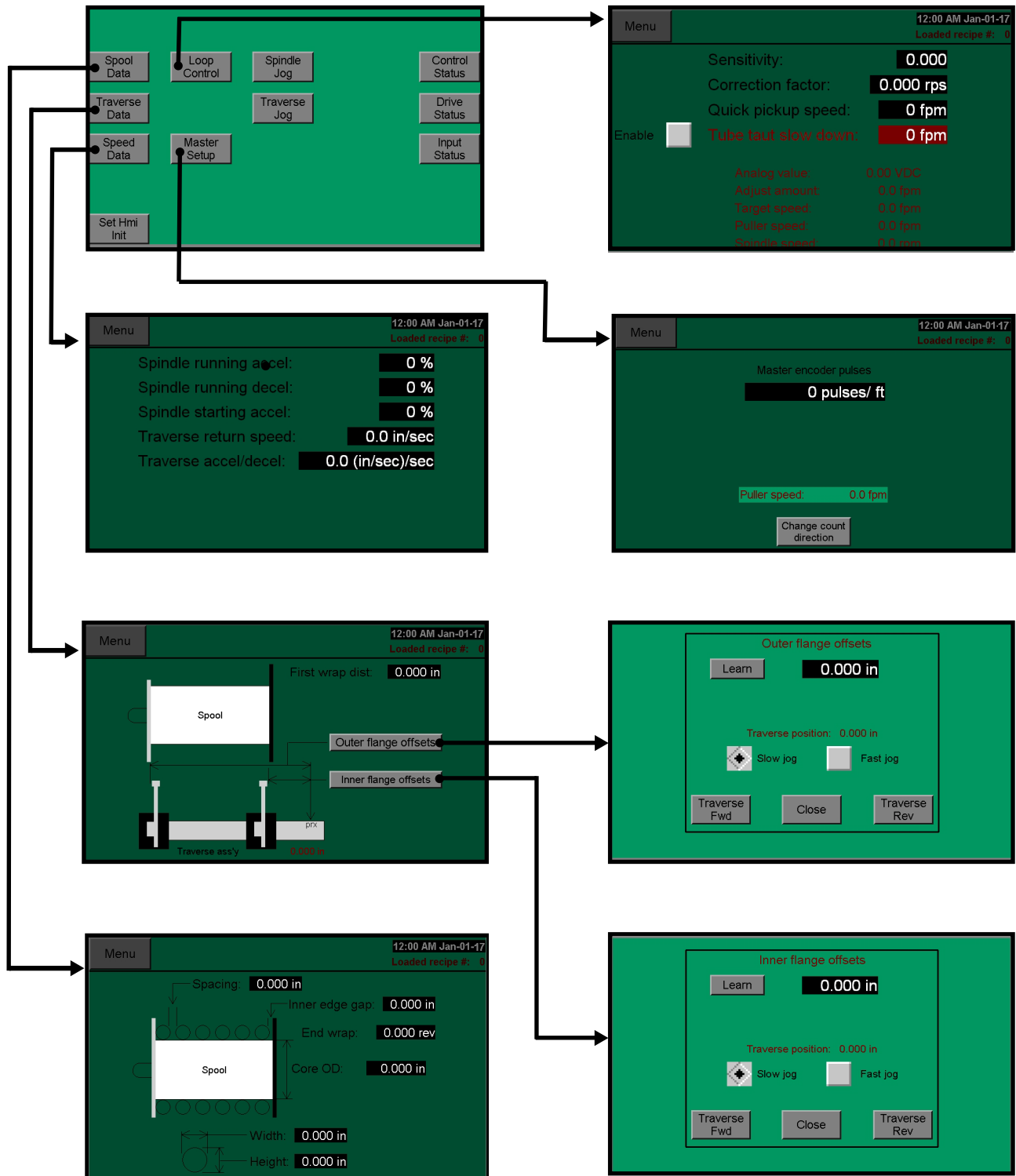
Control Function Flow Charts

Menu 2 Header Button to Language and About Pages



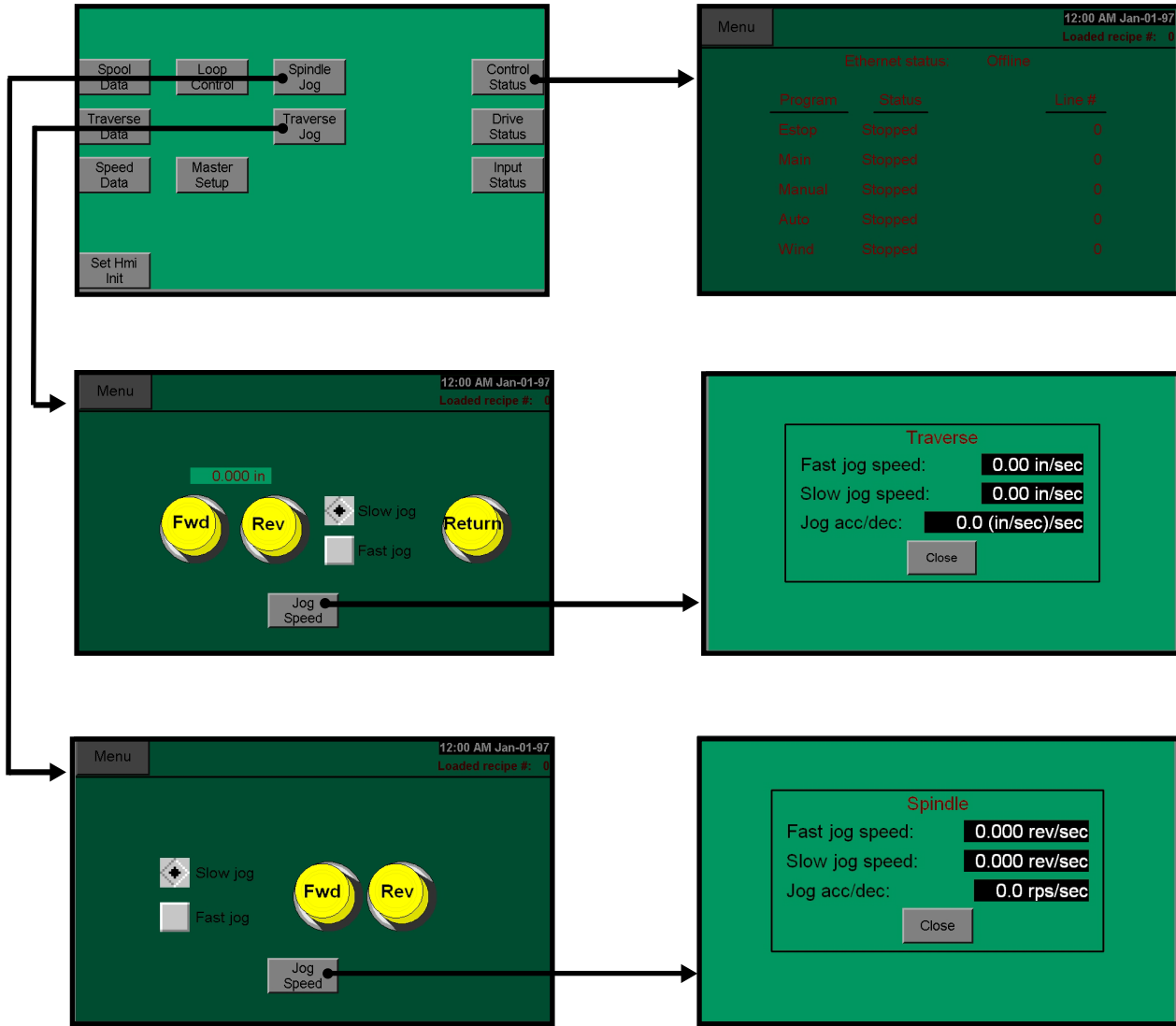
Control Function Flow Charts

Menu Page Buttons



Control Function Flow Charts

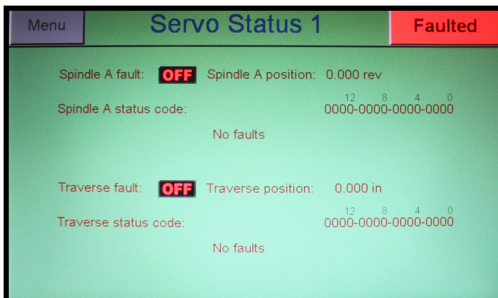
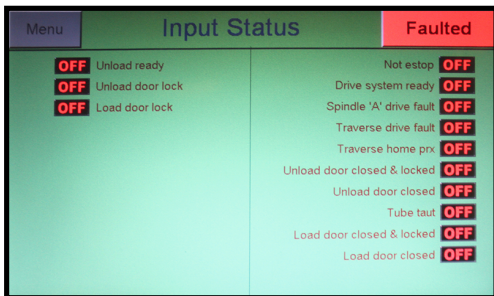
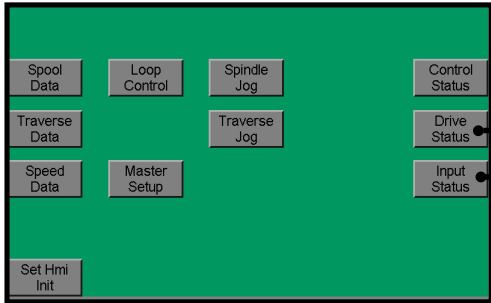
Menu Page Buttons Continued



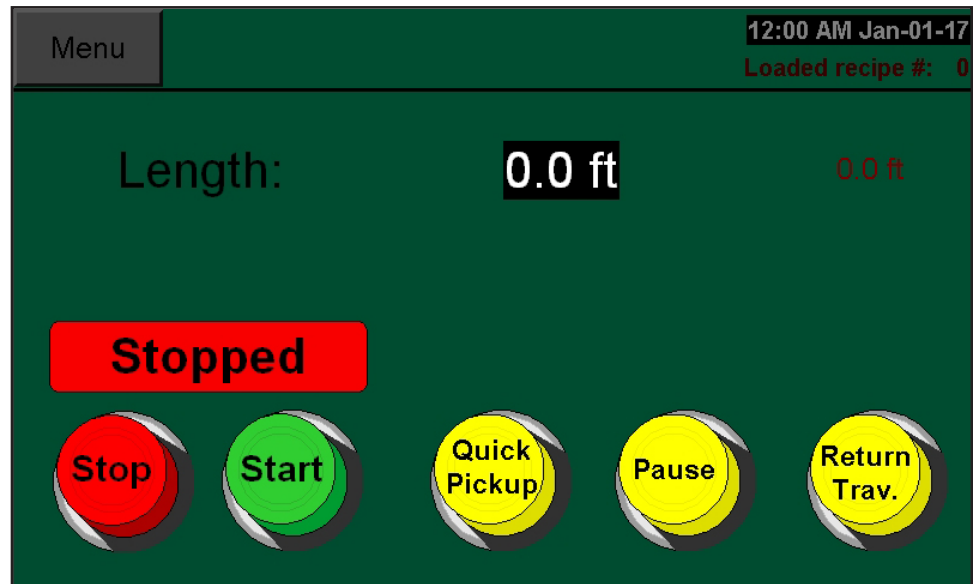
(Continued)

Control Function Flow Charts

Menu Page Buttons Continued



Control Function Descriptions



Main

The main page is displayed automatically upon power up after the system is done initializing. The main page is where most machine control functions are performed.

Length: Enter the desired length of a full spool.

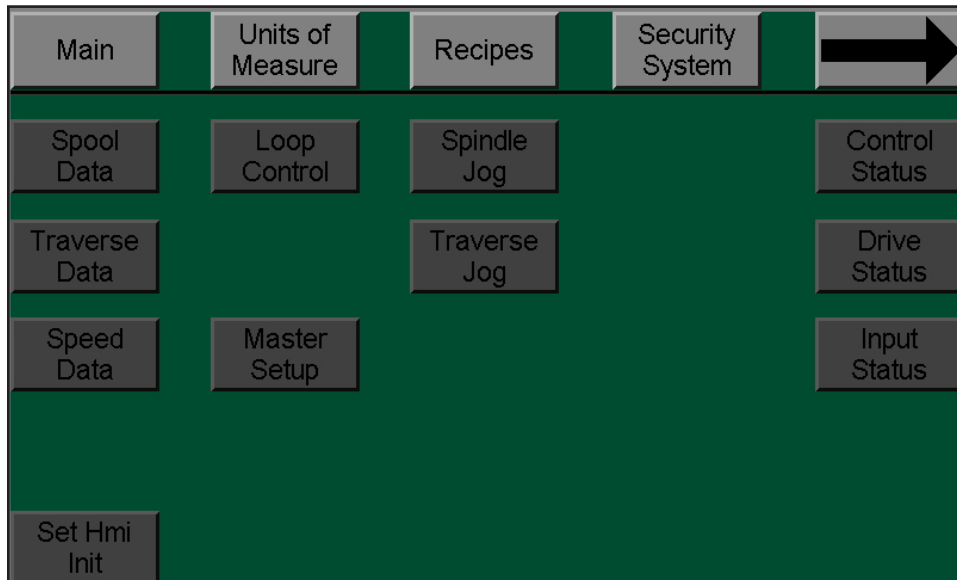
Start/Stop: The product must be strung through the laydown arm before pressing the “Start” button. The system must also be “Homed” before these buttons will work. The “Stop” button can be used at any point. But, in order to restart, the servos all must be returned to the “Home” position.

Quick Pickup: This button is used to speed up the coiler to get excess tube that accumulated during starting wrapped to get the coiling into its proper operating condition.

Return Trav.: Returns the Traverse to the starting position.

(Continued)

Control Function Descriptions (continued)



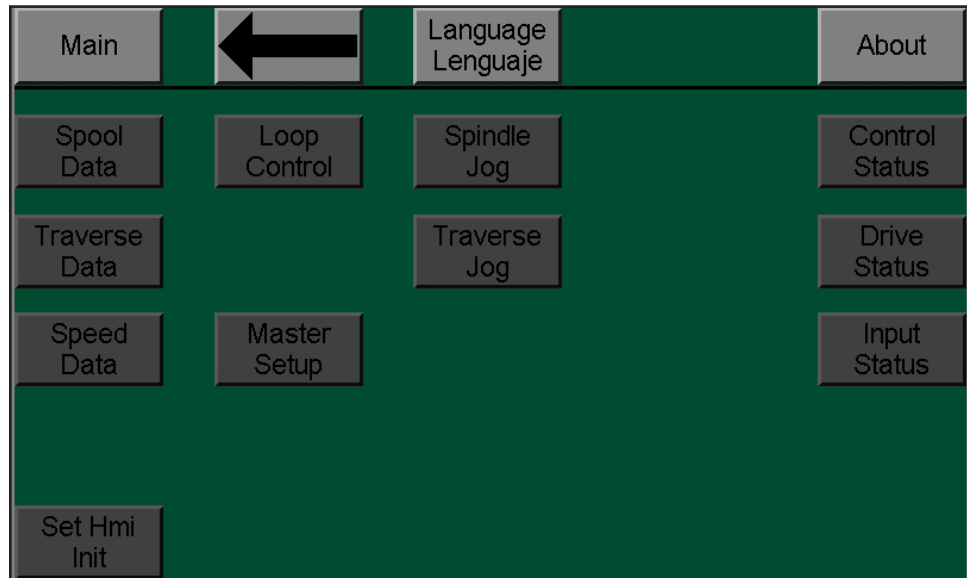
Menu Page 1

Access this menu screen from the menu button on the Main page. This page provides access to all other display pages. Press the appropriate button to change pages. When a machine fault occurs a machine fault indicator/button will appear in the upper right corner of the display page. Press this button to display the error message pop-up box.

- Main page:** This page is displayed automatically upon power up after the system is done initializing. The main page is where most machine control functions are performed.
- Units of Measure page:** This page allows customer to set the units of measure to English or Metric.
- Recipes page:** This page allows access to the recipe storage system. The current setup of the machine running parameters can be saved to a recipe file. The system allows storage of 100 recipes. The running parameters can be changed by loading a saved recipe file.
- System Security page:** This page allows the customer to create a password for a user and to “LogOn” and “LogOff” of the system. The “Set Pass” button takes the user to the Security Manager screen where the password is assigned. Once the password has been assigned, the “LogOn” and LogOff” buttons can be used to access the system.

(Continued)

Control Function Descriptions (continued)



Menu Page 2 (Only top bar is different than Menu Page 1)

Access this menu screen from the menu button on the Main page. This page provides access to all other display pages. Press the appropriate button to change pages. When a machine fault occurs a machine fault indicator/button will appear in the upper right corner of the display page. Press this button to display the error message pop-up box.

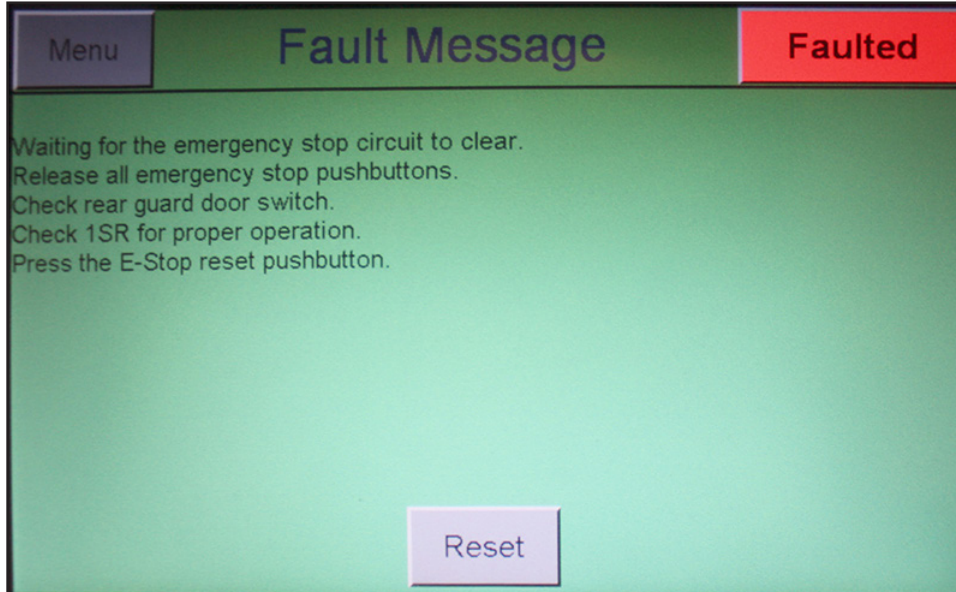
Main page: This page is displayed automatically upon power up after the system is done initializing. The main page is where most machine control functions are performed.

Language: This page allows you to choose a language preference.

About page: This page displays the version information of the Crimson programming software used to create the HMI pages. It also displays Conair's contact information. Touchscreen calibration is accessed from this page.

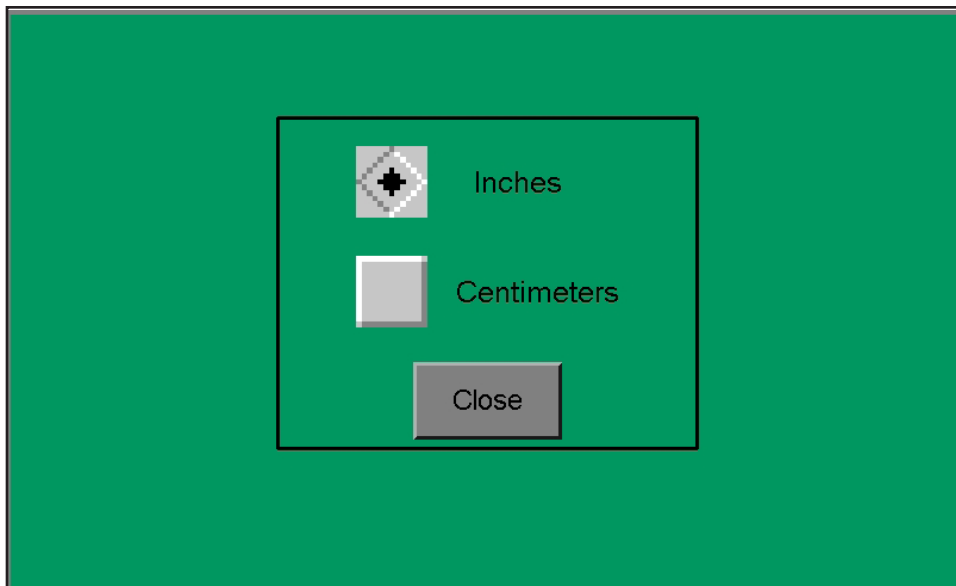
(Continued)

Control Function Descriptions (continued)



Main Fault Message

A fault indicator/button will appear in the upper right of the page if a machine fault occurs. Pressing this button will show the fault message pop-up box. The reset button will reset the fault as long as the condition that created the fault is corrected. When the fault is reset, the fault indicator will disappear.



Units of Measure

From the Main Menu screen, the units can be changed from Empirical to Metric. Selecting “inches” sets length units to inches and speed units to feet/min (FPM). Selecting “centimeters” sets length units to centimeters and speed units to meter/min, (MPM). Push the close button to return to the Main Menu.

(Continued)

Control Function Descriptions (continued)

The screenshot shows a control interface with a dark green background. At the top left is a 'Menu' button. At the top right, the time '12:00 AM Jan-01-17' and 'Loaded recipe #: 0' are displayed. Below this is a list of five recipe slots, numbered 0 to 4, each with a text input field containing the word 'Empty'. To the right of the list are two vertical navigation buttons: an upward arrow and a downward arrow. Below the list is a 'Selected recipe (touch name to edit)' field, which currently shows '0'. At the bottom of the screen are three buttons: 'Load from selected', 'Delete selected', and 'Save to selected'.

Recipes

The recipe page allows access to the recipe storage/retrieval system. Up to 100 recipe files are available and are numbered 1 through 100. Each recipe file can be given a name up to 40 characters. Five recipe file numbers/names are displayed at once. To view other recipe file names touch the “Pg Up” or “Pg Dn” buttons. The recipe files are scrolled five at a time.

The screenshot shows a confirmation dialog box with a green background. The title is 'Load recipe!' in a yellow box. Below the title is the text: 'This will overwrite the current parameters with the selected recipe file.' followed by 'ARE YOU SURE?' in bold. At the bottom are two buttons: 'Yes' and 'No'.

Recipe Load from Selected

The “Load from selected” function is only available when the ATC is stopped. This function will load the parameters from the recipe file into the active parameters.

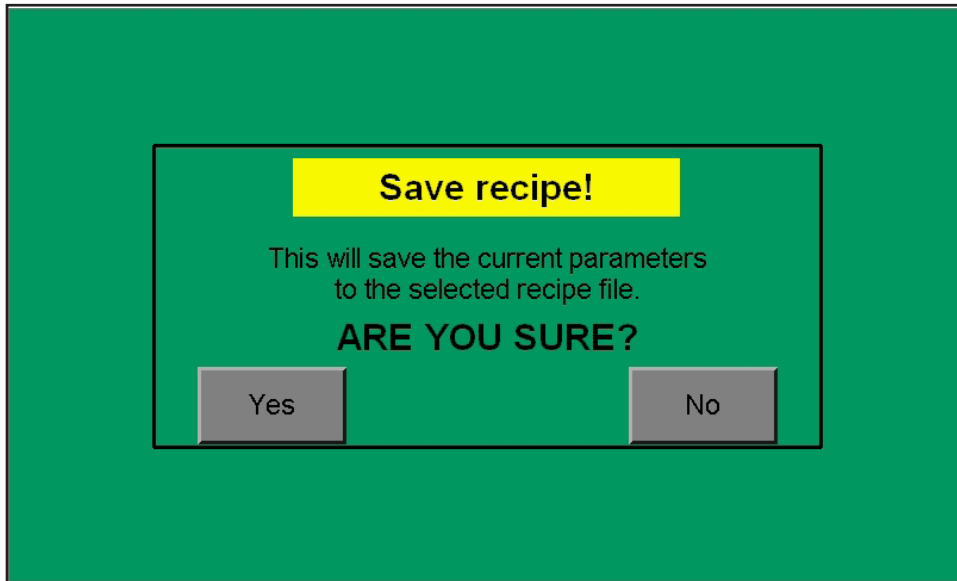
(Continued)

Control Function Descriptions (continued)



Recipe Delete Selected

The “Delete selected” function is available anytime. This function will set the name of the selected recipe file to “Empty”. The actual parameter values in the recipe file are not deleted.



Recipe Save to Selected

Individual recipes can be saved using this pop-up screen. Up to 99 different recipes can be saved. A saved recipe will collect all set points of the current ATC when it is saved. Recipes can be saved at any time. Recipes can only be loaded when the machine is in the stopped condition. This function will save the active parameters to the selected recipe file.

(Continued)

Control Function Descriptions (continued)

Menu	12:00 AM Jan-01-17 Loaded recipe #: 0	
User name	Description	
USER MANAGER		
Prev	Next	Set Pass
Current user logged on:		
LogOn	LogOff	Page Security Assignment

Security System

The System Security screen is used to create a password for a user and to “LogOn” to and “LogOff” of the system. There are five different user choices. The “Set Pass” button takes the user to the Security Manager screen where the password is assigned. Once the password has been assigned, the “LogOn” and LogOff” buttons can be used to access the system. Setting the accessibility of each user to the various pages can be done by pushing the Page Security Assignment.

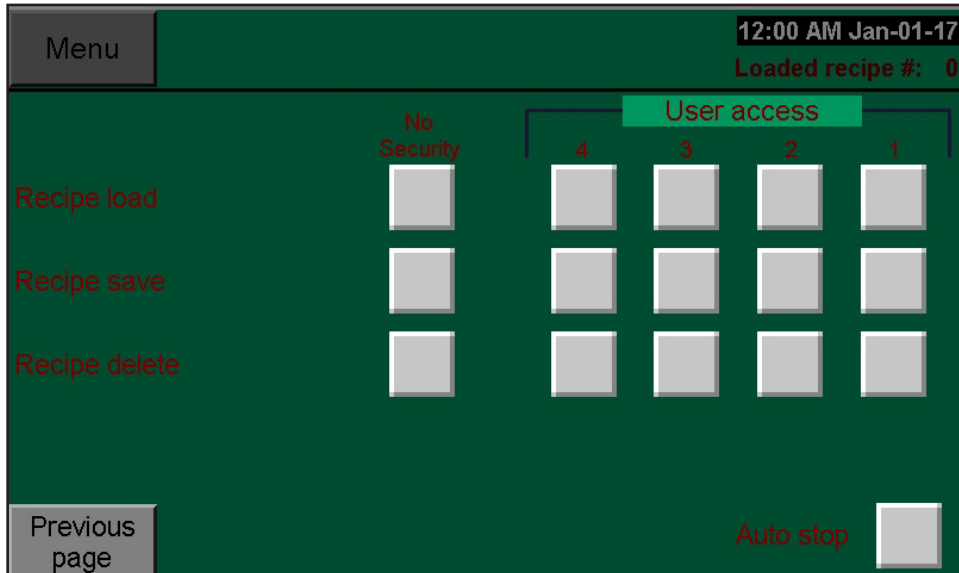
Menu	12:00 AM Jan-01-17 Loaded recipe #: 0				
	No Security	User access			
		4	3	2	1
Units of measure	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Language page	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Previous page	Next page	Coiler Pages Assignment			

System Security Access

The System Access screen is used to give access to the Units of Measure and Recipe Page functions. Access can be granted as “No Security” or to specific users.

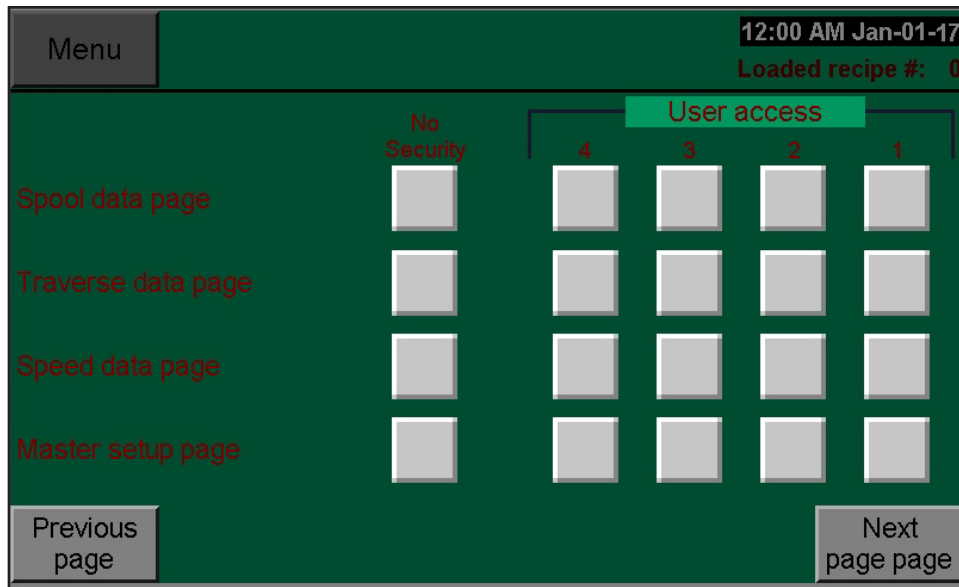
(Continued)

Control Function Descriptions (continued)



Security Page Assignment

This screen is reached by pressing the next button on the System Security Access Page.



Security Page Assignment 1

The Page Assignment 1 screen is used to give access to the Spool Data, Traverse Data, Speed Data, and Master Setup functions. Access can be granted as “No Security” or to specific users.

(Continued)

Control Function Descriptions (continued)

Menu	12:00 AM Jan-01-17 Loaded recipe #: 0				
	No Security	User access			
		4	3	2	1
Loop control page	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Homing page	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Manual jog page	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Jog speed page	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Previous page Next page

Security Page Assignment 2

The Page Assignment 2 screen is used to give access to the Loop Control, Line Direction, Homing, and Manual Jog functions. Access can be granted as “No Security” or to specific users.

Menu	12:00 AM Jan-01-17 Loaded recipe #: 0				
	No Security	User access			
		4	3	2	1
Traverse offset setup	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

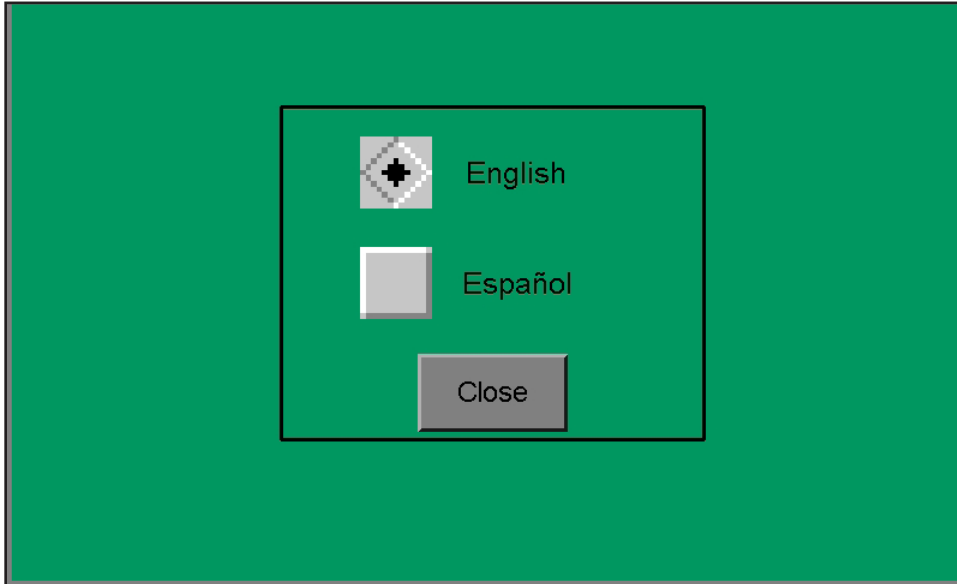
Previous page

Security Page Assignment 3

The Page Assignment 3 screen is used to give access to the Traverse offset setup. Access can be granted as “No Security” or to specific users.

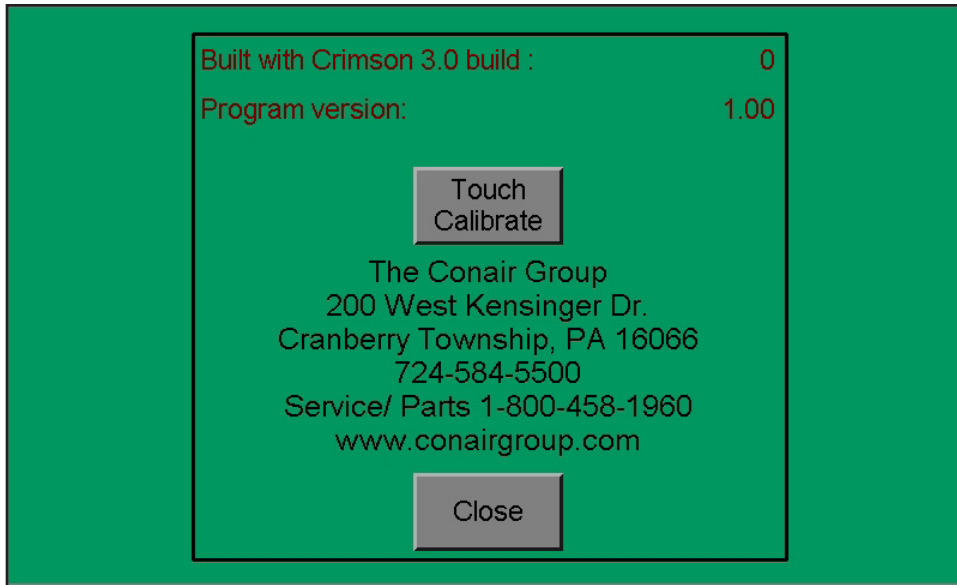
(Continued)

Control Function Descriptions (continued)



Language

This screen allows you to select a language preference.

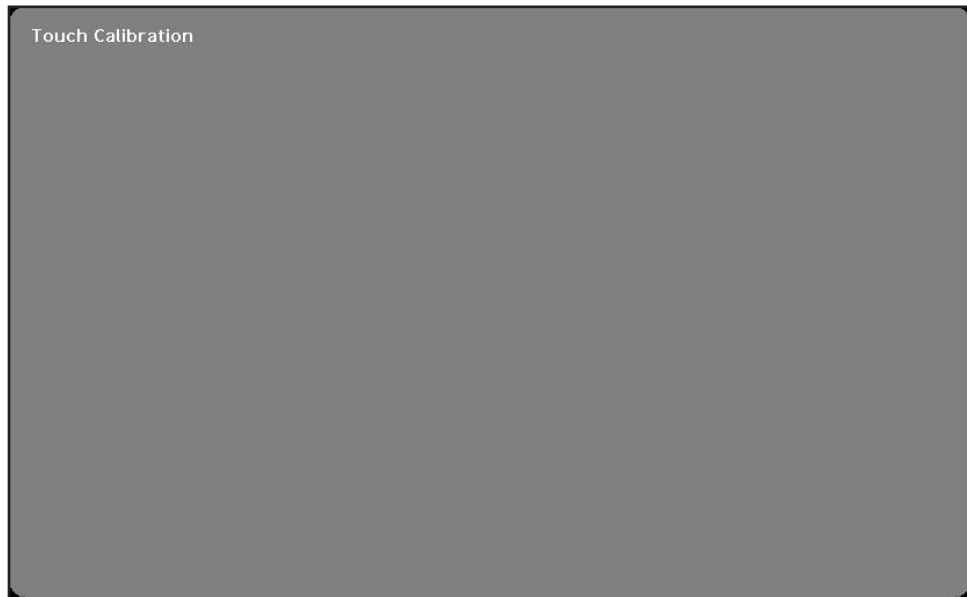


About

This page displays the version information of the Crimson programming software used to create the HMI pages. It also displays Conair's contact information. Touchscreen calibration is accessed from this page by pushing the Touch Calibrate button.

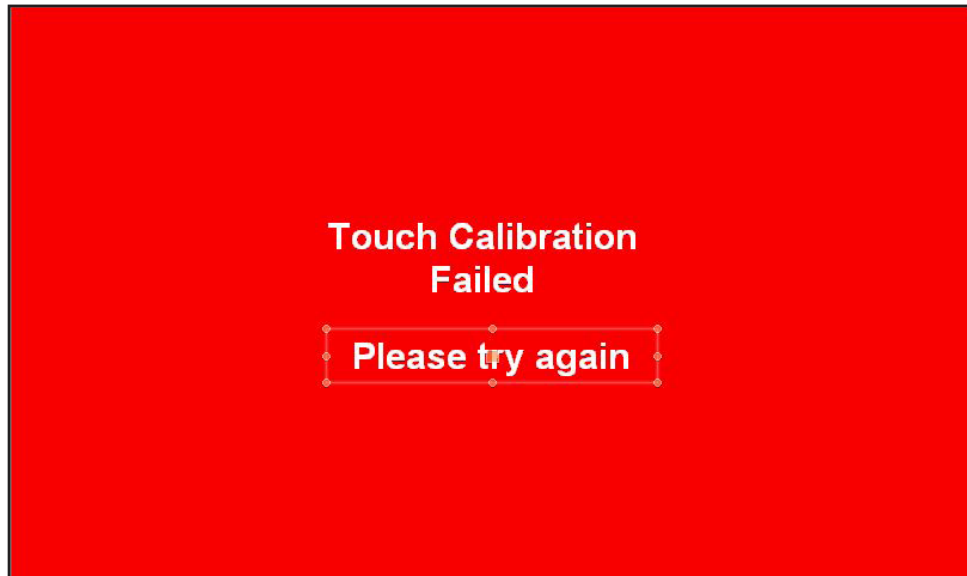
(Continued)

Control Function Descriptions (continued)



Touch Calibrate

If Calibration fails, a red warning message will appear; otherwise a Calibration Success message will be seen.



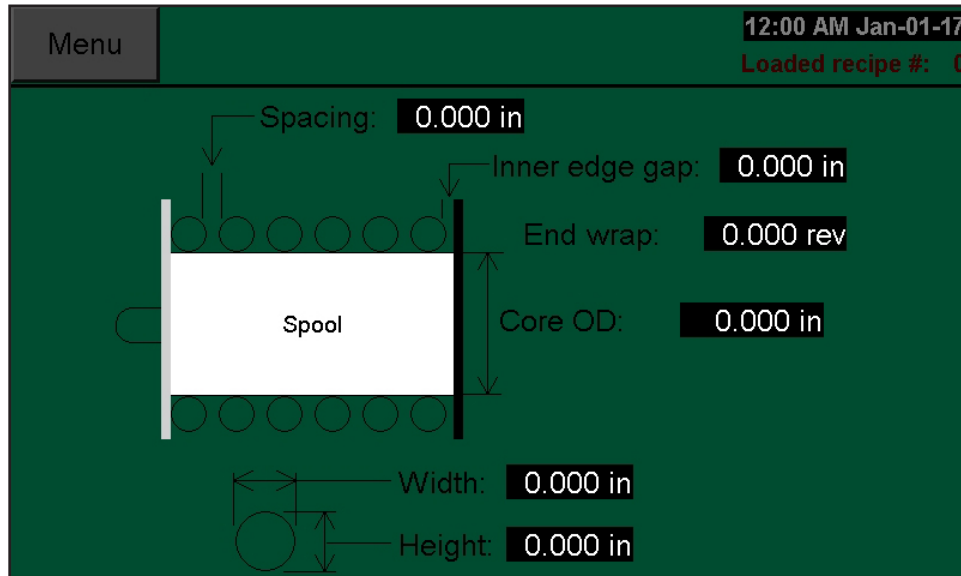
Touch Calibrate Failed

The “Calibration failed. Please try again” message will appear if the calibration process failed. If the calibration process failed, repeat the calibration process. If calibration fails again, try cleaning the HMI screen. If calibration continues to fail, contact Conair Service.

Contact Conair Service
(800) 458 1960
From outside of the
United States, call:
(814) 437 6861

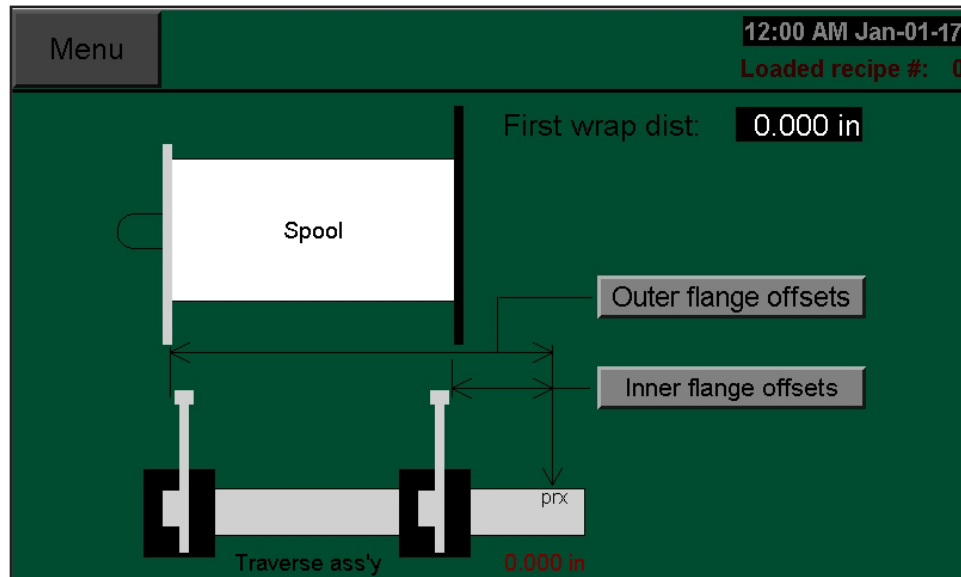
(Continued)

Control Function Descriptions (continued)



Spool Data

The Spool Data screen provides access to the parameters that affect the operation of the spool. To modify a parameter, touch the numeric field of the parameter. After doing so, a numeric keypad will appear for data entry. Upon entry of a new parameter value, the value is sent to the servo controller and takes effect immediately. Use caution when changing values while the machine is running as a data entry error can cause an unexpected machine reaction.

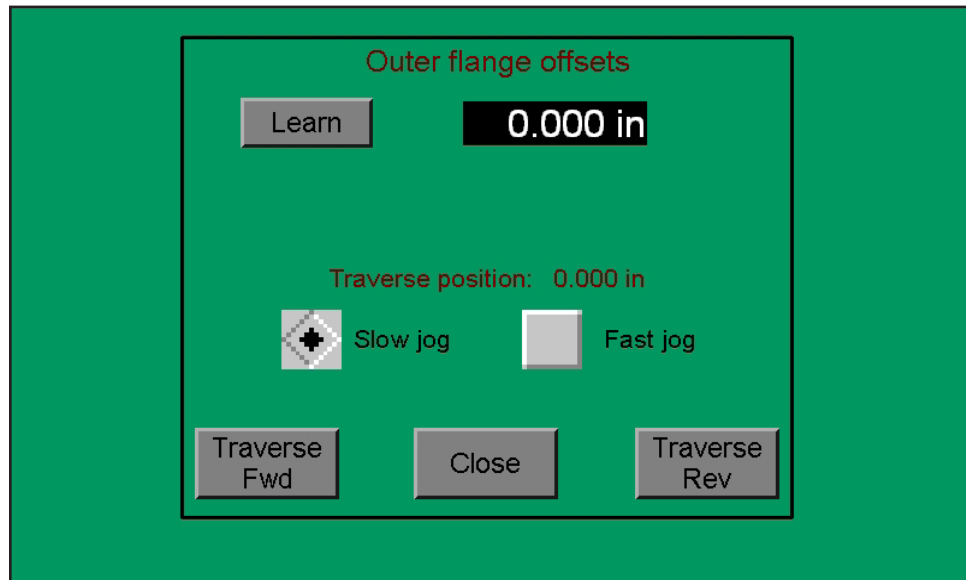


Traverse Data

Data screen provides access to the parameters that affect the traverse operation. To modify a parameter, touch the numeric field of the parameter. After doing so, a numeric keypad will appear for data entry. Upon entry of a new parameter value, the value is sent to the servo controller and takes effect immediately. Use caution when changing values while the machine is running as a data entry error can cause an unexpected machine reaction.

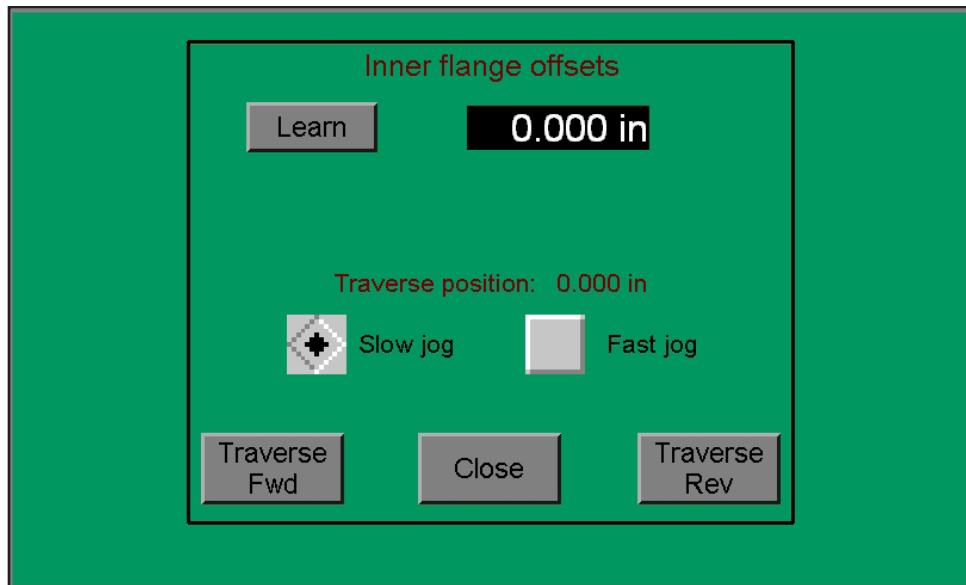
(Continued)

Control Function Descriptions (continued)



Traverse Data Outer Flange Offsets

This parameter allows the user to set the outer flange offsets for “Spool A” and “Spool B”.

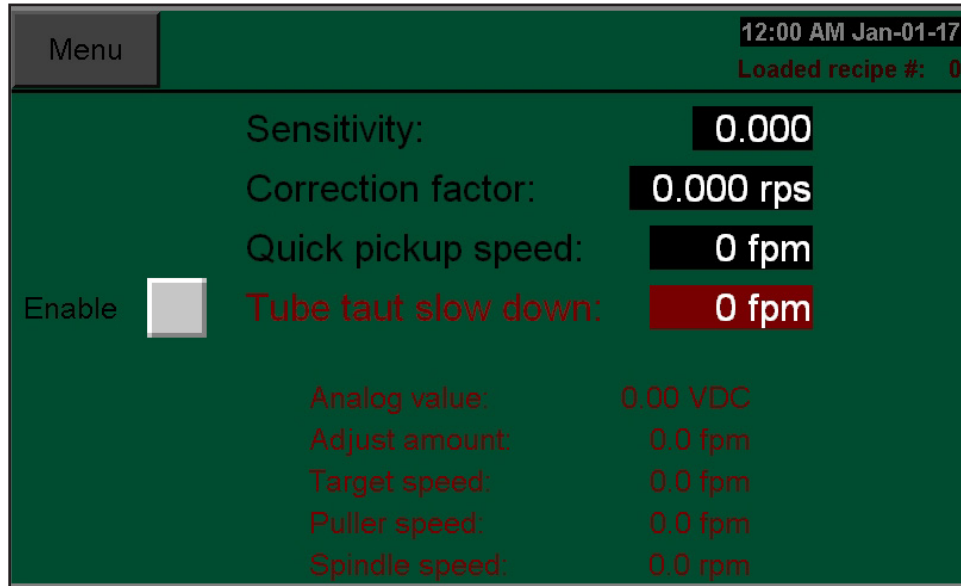


Traverse Data Inner Flange Offsets

This parameter sets the position the traverse will move to when coiling. The traverse offsets must be set up for the inner flanges of both A and B spindles.

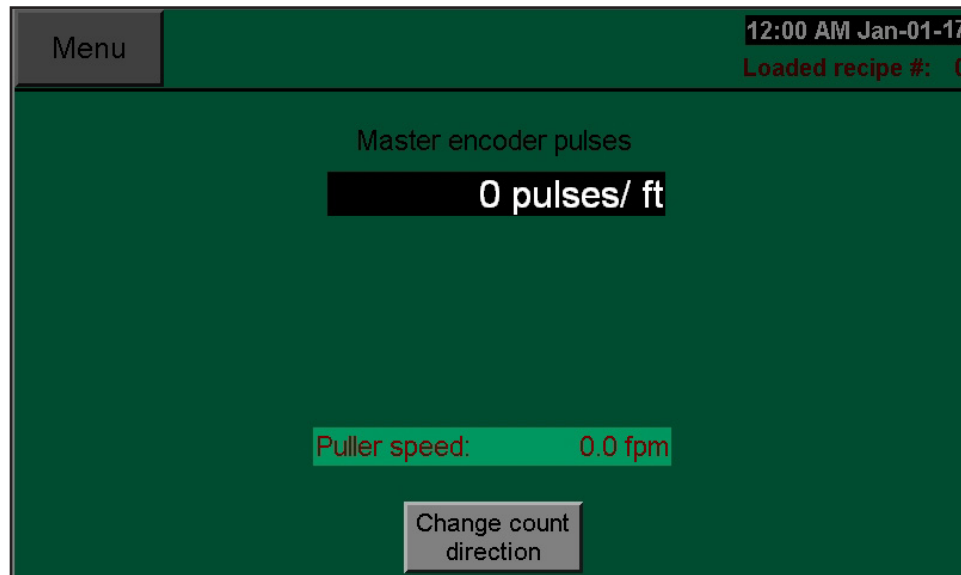
(Continued)

Control Function Descriptions (continued)



Loop Control

The Loop Control screen provides access to the parameters that affect the operation of the ultra-sonic loop control. To modify a parameter, touch the numeric field of the parameter. After doing so, a numeric keypad will appear for data entry. Upon entry of a new parameter value, the value is sent to the servo controller and takes effect immediately. Use caution when changing values while the machine is running as a data entry error can cause an unexpected machine reaction.

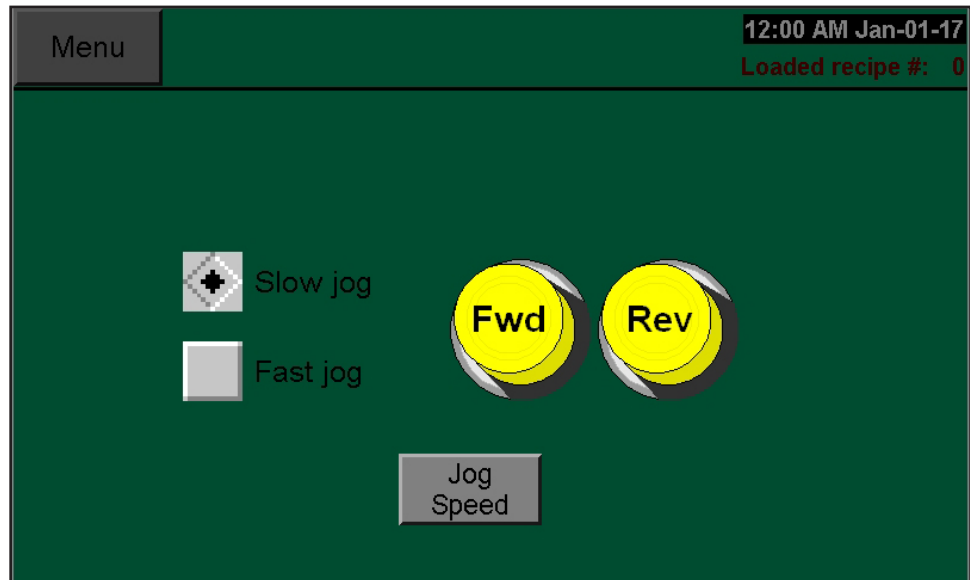


Master Setup

The Master Setup screen is used to set the puller scaling. The number of pulses per foot from the encoder on the puller are scaled. Adjust the preset until the puller speed shown matches the actual puller speed.

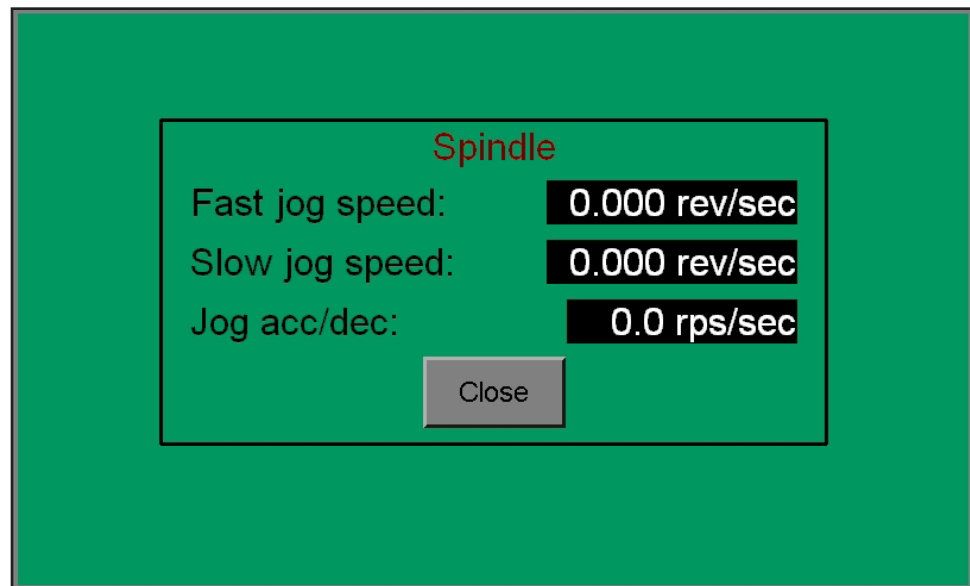
(Continued)

Control Function Descriptions (continued)



Spindle Jog

The Spindle Jog screen provides access to all the Spindle Jog functions including the Spindle Jog Speed function. To access the Spindle Jog Speed function, press the Jog Speed button near the middle of the screen.

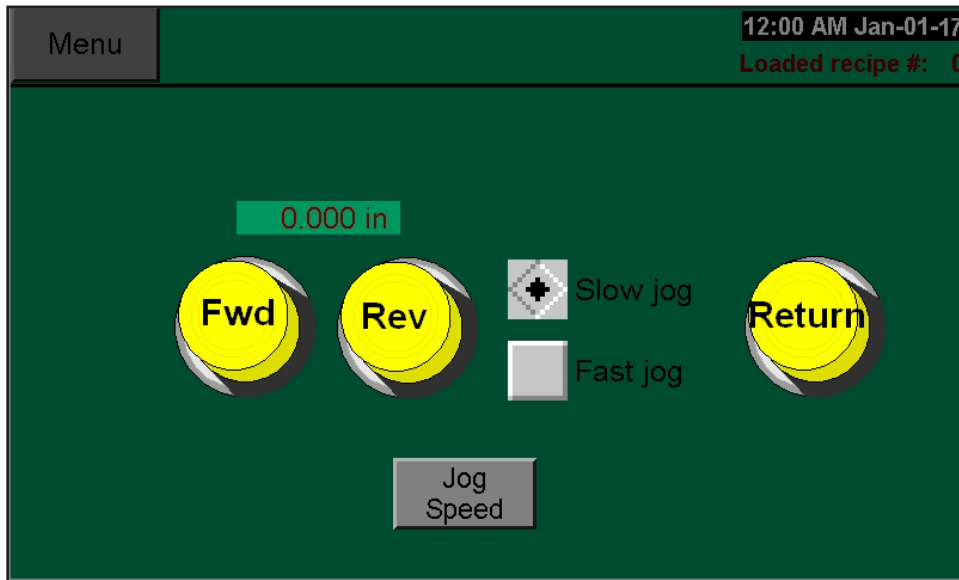


Spindle Jog Speed

The Spindle Jog Speed pop-up lists the Fast Jog Speed, Slow Jog Speed, and Jog Accelerate/Decelerate speeds. To access and change these speeds, touch the appropriate numeric field.

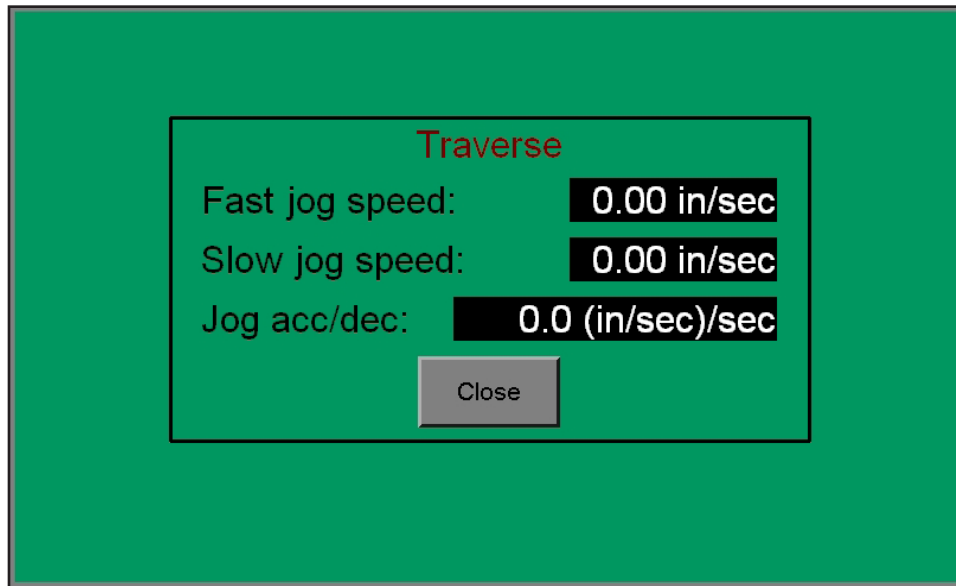
(Continued)

Control Function Descriptions (continued)



Traverse Jog

The Traverse Jog screen provides access to all the Traverse Jog functions including the Traverse Jog Speed function. To access the Traverse Jog Speed function, press the Jog Speed button near the middle of the screen.



Traverse Jog Speed

The Traverse Jog Speed pop-up lists the Fast Jog Speed, Slow Jog Speed, and Jog Accelerate/Decelerate speeds. To access and change these speeds, touch the appropriate numeric field.

(Continued)

Control Function Descriptions (continued)

Menu		Control Status		Faulted	
		Ethernet status:		Online	
Program	Status			Line #	
Estop	Running			59	
Main	Running			178	
Manual	Stopped			-1	
Auto	Stopped			-1	
Wind	Stopped			-1	

Control Status

The Control Status screen shows status information for the servo controller. Six controller programs are defined: Estop; Main; Manual; Auto; Wind; and Rotate. This page shows the status and currently executing line number for each program. This information is provided for troubleshooting purposes.

Menu		Servo Status 1		Faulted	
		Spindle A fault: OFF		Spindle A position: 0.000 rev	
		Spindle A status code:		<div style="text-align: right; margin-right: 20px;"> 12 8 4 0 0000-0000-0000-0000 </div>	
		No faults			
		Traverse fault: OFF		Traverse position: 0.000 in	
		Traverse status code:		<div style="text-align: right; margin-right: 20px;"> 12 8 4 0 0000-0000-0000-0000 </div>	
		No faults			

Drive Status

The Drive Status screen shows servo drive status. This screen is helpful for troubleshooting and contains information that the Conair Service department will ask for when helping you troubleshoot faults.

Contact Conair Service
 (800) 458 1960
 From outside of the
 United States, call:
 (814) 437 6861

(Continued)

Control Function Descriptions (continued)

Menu	Input Status	Faulted
	OFF Unload ready	Not estop OFF
	OFF Unload door lock	Drive system ready OFF
	OFF Load door lock	Spindle 'A' drive fault OFF
		Traverse drive fault OFF
		Traverse home prx OFF
		Unload door closed & locked OFF
		Unload door closed OFF
		Tube taut OFF
		Load door closed & locked OFF
		Load door closed OFF

Input Status

The Input Status screen shows the On/Off status of the servo controller inputs. This information is only valid when the emergency stop circuit is reset. This information is provided for troubleshooting purposes.

Maintenance

Maintenance Features.....	5-2
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Lubricating the Unit.....	5-5
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Maintenance Features

The MTC needs regular, scheduled maintenance for peak performance. Among the features that require maintenance are:

- Floor locks
- Electrical cables, terminals
- Gear box

Warnings and Cautions

To maintain the best performance of the MTC, it must be cleaned and inspected regularly. Maintenance includes a daily, weekly, quarterly, and semi-annual (every 6 months) schedule.

Use this maintenance schedule as a guide. You may need to shorten the time of the maintenance schedule, depending on how often you use the MTC, and the types of material for which it is used. Follow all precautions and warnings when working on the equipment.



WARNING: Improper installation, operation, or servicing may result in equipment damage or personal injury.



This equipment should be installed, adjusted, and serviced by qualified technical personnel who are familiar with the construction, operation, and potential hazards of this type of machine.

All wiring, disconnects, and fuses should be installed by qualified electrical technicians in accordance with electrical codes in your region. Always maintain a safe ground. Do not operate the equipment at power levels other than what is specified on the machine serial tag and data plate.



DANGER: Pinch Hazard



Never remove or disable safety devices to sustain production. Operating without these devices could lead to hazardous conditions that can cause severe injury. Take all necessary precautions when working around moving parts to prevent body parts and clothing from being pulled into the machine.

(Continued)

Preventative Maintenance Schedule



WARNING: Moving Parts

Improper servicing may result in equipment damage or personal injury.

This equipment should be adjusted and serviced by qualified technical personnel who are familiar with the construction, operation, and potential hazards of this type of machine.

Before performing maintenance or repairs on this product, disconnect and lock out electrical power sources to prevent injury from unexpected energization or start-up. A lockable device has been provided to isolate this product from potentially hazardous electricity.

Make sure all safety devices and belt guards are installed before resuming normal operation.



WARNING: Voltage hazard

This equipment is powered by three-phase alternating current, as specified on the machine serial tag and data plate. Do not operate the equipment at power levels other than what is specified on the machine serial tag and data plate.

A properly sized conductive ground wire from the incoming power supply must be connected to the chassis ground terminal inside the electrical enclosure. Improper grounding can result in severe personal injury and erratic machine operation.

Before performing maintenance or repairs on this product, disconnect and lock out electrical power sources to prevent injury from unexpected energization or start-up. A lockable device has been provided to isolate this product from potentially hazardous electricity.

Preventative Maintenance Schedule

(continued)

To maintain the best performance of the MTC, we recommend the following maintenance schedule. You may need to shorten the time between servicing, depending on how often you use the MTC, and the types of material for which it is used. Maintenance should be performed anytime you change materials, lines, or equipment in the extrusion line.

- **Daily**
 - Inspect MTC for wear.**

If the arbor shaft, drive pin or any other part of the unit seems worn or loose, take corrective action to remedy the situation.
 - Inspecting unit alignment.**

Proper alignment with other equipment on the line is critical for optimum performance.
 - Verify floor lock settings.**

The weight of the unit should never rest on the casters during operation. For stability during uncoiling, the MTC should rest on the locked casters and the break pad assembly. Verify that the floor locking mechanism is properly adjusted before starting the MTC. If necessary, use an adjustable wrench to turn the floor locks until the weight is shared between the locks and the caster.
 - Clean equipment**

Wipe the equipment with a clean dry cloth to eliminate dust and other build-up, which can deteriorate performance.
- **Weekly**
 - Check the Drive pin tightness.**
 - Check and lubricating all grease fittings.**


See Machine Lubrication.
- **Semi-annual (every 6 months)**
 - Inspecting electrical terminals**

Check all electrical terminals for tightness; adjust as needed.

Lubricating the Unit

Lubricate all shafts and grease fittings as needed.

- 1 Follow lockout procedures and disconnect main power from the machine prior to beginning an maintenance.**
- 2 Remove the two screws from each side of the safety guard that hold it in place.**
- 3 Carefully remove the safety guard.**
- 4 Visually inspect all components of the drive unit.**
- 5 Lubricate as necessary.**

 **NOTE:** Depending on your model or configuration, grease locations may vary from above what is shown in the manual. Visually locate the grease locations on your machine.

Machine Lubrication

The machine is supplied to you completely lubricated. After running the unit for long periods of time, this lubrication will break down and become useless. For this reason, periodic lubrication is required.

Component	Type of Lubrication	Duration
Flange Bearings	Chassis Lube	6-9 Months
Gear Reducers	Mobil 629 or Equiv.	12 Months

System Inspection

Although this unit was designed to require a minimum amount of maintenance, it should be inspected periodically to insure that it remains in top operating condition.

Items to inspect

- **Mechanical Components** - Approximately once every six months or sooner, if able, all mechanical components should be visibly inspected. While these components should stay secure and last a long time, it is always a good idea to check for any excessive wear, damage, and fastener security to these units.
- **Coupling** - Visually inspect the coupling for wear.

Checking Electrical Connections



WARNING: Electrical Hazard

Before performing any work on this product, disconnect and lock out electrical power sources to prevent injury from unexpected energization or start-up. A lockable device has been provided to isolate this product from potentially hazardous electricity.

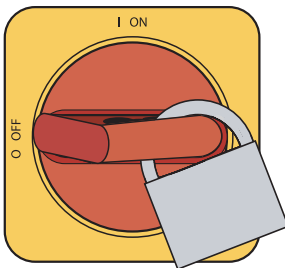


WARNING: Improper installation, operation, or servicing may result in equipment damage or personal injury.



This equipment should be installed, adjusted, and serviced by qualified technical personnel who are familiar with the construction, operation, and potential hazards of this type of machine.

All wiring, disconnects, and fuses should be installed by qualified electrical technicians in accordance with electrical codes in your region. Always maintain a safe ground. Do not operate the equipment at power levels other than what is specified on the machine serial tag and data plate.



1 Disconnect and lock out the main power.

Turn the main power disconnect to the off position before opening the electrical enclosure. This is a safety device to prevent you from opening the doors if the power is still on.

2 Open the electrical enclosure.

3 Inspect all wires and connections. Look for loose wires, burned contacts, and signs of over-heated wires. Have a qualified electrician make any necessary repairs or replacements.

4 Close the electrical enclosure door.

5 Inspect the exterior power cords. Cords should not be crimped, exposed, or rubbing against the frame. If the main power cord runs along the floor, make sure it is not positioned where it could rest in pooling water or could be run over and cut by wheels or casters.

Troubleshooting

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Identifying the Cause of a Problem	6-3
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Before Beginning

You can avoid most problems by following the recommended installation, operation and maintenance procedures outlined in this User Guide. If you have a problem, this section will help you determine the cause and tell you how to fix it.

Before you begin to take diagnostic actions, be sure to:

- Find any wiring, parts, and assembly diagrams that were shipped with your equipment.** These are the best reference for correcting a problem. The diagrams will note any custom features or options not covered in this User Guide.
- Verify that you have all instructional materials related to the machine.** Additional details about troubleshooting and repairing specific components are found in these materials.
- Check that you have manual for other equipment connected in the system.** Troubleshooting may require investigating other equipment attached to, or connected with the machine.

A Few Words of Caution



WARNING: Improper installation, operation or servicing may result in equipment damage or personal injury.

This equipment should only be installed, adjusted, and serviced by qualified technical personnel who are familiar with the construction, operation, and potential hazards of this type of machine.

All wiring, disconnects, and fuses should be installed and adjusted by qualified electrical technicians in accordance with electrical codes in your region. Always maintain a safe ground. Do not operate the equipment at power levels other than what is specified on the machine serial tag and data plate.



WARNING: Electrical hazard

Before performing maintenance or repairs on this product, disconnect and lock out electrical power sources to prevent injury from unexpected energization or start-up. A lockable device has been provided to isolate this product from potentially hazardous electricity.

Identifying the Cause of a Problem

The Troubleshooting section covers problems directly related to the operation and maintenance of the standard MTC. This section does not provide solutions to problems that originate with other equipment. Additional troubleshooting help can be found in manuals supplied with the other equipment.


The main problems you will see with the MTC could include:

- **MTC operation problems**, which focus on problems that are clearly related to the mechanical components and electrical control system.
- **Product quality concerns**, which deal with extrudate characteristics that may be related to MTC operations. Of course, other sections of the extrusion line also influence the quality of the extruded product. This section does not provide solutions to problems originating with other equipment on the extrusion line.

Additional troubleshooting help can be found in the documentation manuals included with this User Guide.

Operation Problems

Look in this section when the control or motor is not working properly.

 **NOTE:** For some materials, material tension is required to maintain a straight tube to cut. Adjust the weights on the Sonic Loop for adjusting tension to achieve the perfect cut.

Symptom	Possible Cause	Solution
The MTC 'creaks' while running.	The bearings are failing	Replace the bearings.
The MTC does not start.	The Emergency Stop button is pushed in.	Pull out the Emergency Stop button. (Make sure it clicks into position.)
	Cables between MTC and loop detect are disconnected.	Check that communication cables are connected.
Material tension too tight.	Loop control out of calibration.	Adjust loop control setpoint.
	MTC uncoiling too slowly.	Adjust speed.
Material tension too loose.	Loop control out of calibration.	Adjust loop control setpoint.
	MTC is operating too fast	Adjust to a slower speed. Add weight to the loop control to increase tension.
Spool is not rotating.	Collar is loose on arbor.	Verify that the collar is holding the spool tightly against the adjustable spool pin. Also verify that the spool pin is adjusted and seated into a hole in the spool.
	A "wrapover" or knot in the tube has stopped the MTC from uncoiling.	Verify that the product on the spool is free from knots and able to unwind easily.

Product Quality Problems

Symptom	Possible Cause	Solution
Too much tension on the product - not a good cut.	Loop control out of calibration.	Adjust loop control setpoint.
	Too much weight on the loop control.	Reduce weight to reduce tension.
	Speed potentiometer on MTC not adjusted correctly.	Adjust speed.
Too little tension on the product - not a good cut.	Loop control out of calibration.	Adjust loop control setpoint.
	Too little weight on the loop control.	Increase weight to increase tension on the loop.
	Speed potentiometer on MTC not adjusted correctly.	Adjust speed.

We're Here to Help

Conair has made the largest investment in customer support in the plastics industry. Our service experts are available to help with any problem you might have installing and operating your equipment. Your Conair sales representative also can help analyze the nature of your problem, assuring that it did not result from misapplication or improper use.


Additional manuals and prints for your Conair equipment may be ordered through the Customer Service or Parts Department for a nominal fee. Most manuals can be downloaded free of charge from the product section of the Conair website.

www.conairgroup.com

How to Contact Customer Service

To contact Customer Service personnel, call:



 **NOTE:** Normal operating hours are 8:00 am - 5:00 pm EST. After hours emergency service is available at the same phone number.

From outside the United States, call: 814-437-6861

You can commission Conair service personnel to provide on-site service by contacting the Customer Service Department. Standard rates include an on-site hourly rate, with a one-day minimum plus expenses.

Before You Call...

If you do have a problem, please complete the following checklist before calling Conair:

- Make sure you have all model, control type from the serial tag, and parts list numbers for your particular equipment. Service personnel will need this information to assist you.
- Make sure power is supplied to the equipment.
- Make sure that all connectors and wires within and between control systems and related components have been installed correctly.
- Check the troubleshooting guide of this manual for a solution.
- Thoroughly examine the instruction manual(s) for associated equipment, especially controls. Each manual may have its own troubleshooting guide to help you.

Equipment Guarantee

Conair guarantees the machinery and equipment on this order, for a period as defined in the quotation from date of shipment, against defects in material and workmanship under the normal use and service for which it was recommended (except for parts that are typically replaced after normal usage, such as filters, liner plates, etc.). Conair's guarantee is limited to replacing, at our option, the part or parts determined by us to be defective after examination. The customer assumes the cost of transportation of the part or parts to and from the factory.

Performance Warranty

Conair warrants that this equipment will perform at or above the ratings stated in specific quotations covering the equipment or as detailed in engineering specifications, provided the equipment is applied, installed, operated, and maintained in the recommended manner as outlined in our quotation or specifications.

Should performance not meet warranted levels, Conair at its discretion will exercise one of the following options:

- Inspect the equipment and perform alterations or adjustments to satisfy performance claims. (Charges for such inspections and corrections will be waived unless failure to meet warranty is due to misapplication, improper installation, poor maintenance practices, or improper operation.)
- Replace the original equipment with other Conair equipment that will meet original performance claims at no extra cost to the customer.
- Refund the invoiced cost to the customer. Credit is subject to prior notice by the customer at which time a Return Goods Authorization Number (RGA) will be issued by Conair's Service Department. Returned equipment must be well crated and in proper operating condition, including all parts. Returns must be prepaid.

Purchaser must notify Conair in writing of any claim and provide a customer receipt and other evidence that a claim is being made.

Warranty Limitations

Except for the Equipment Guarantee and Performance Warranty stated above, Conair disclaims all other warranties with respect to the equipment, express or implied, arising by operation of law, course of dealing, usage of trade or otherwise, including but not limited to the implied warranties of merchantability and fitness for a particular purpose.