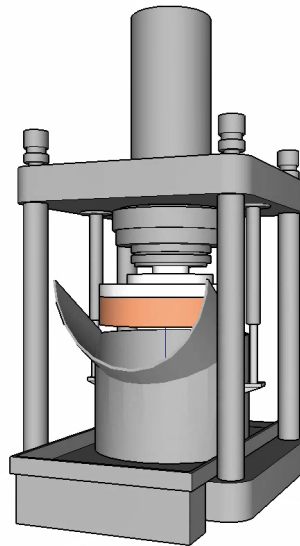
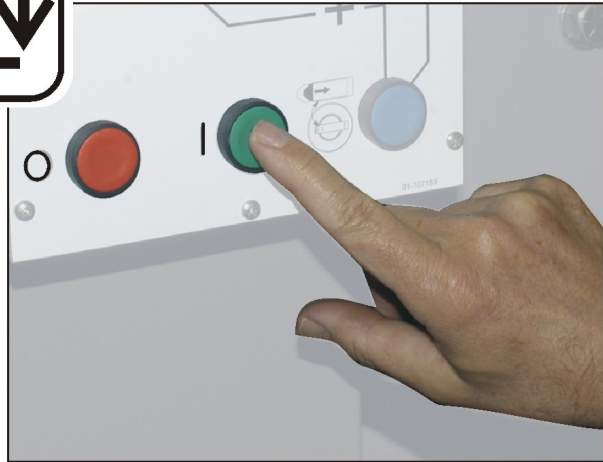
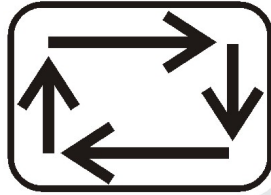


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MKP1UO01U1/24106A

1. English

Operator Guide - MilTouch™ Single-Stage Press

MKP1UO01EN/2024104

English

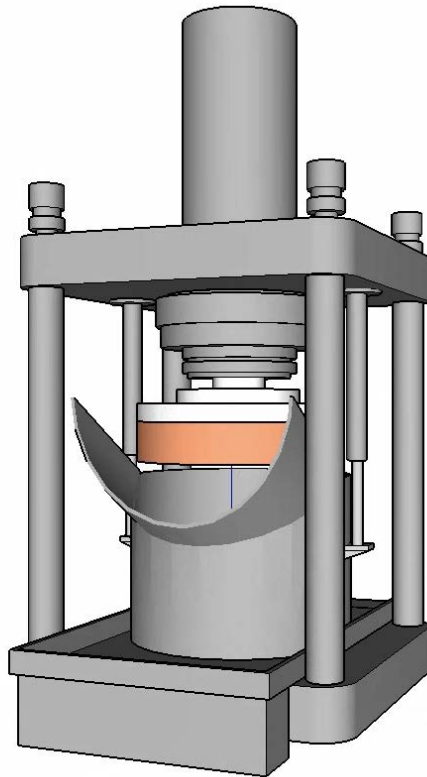
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Manual Number: MKP1UO01EN
Edition (ECN): 2024104



Operator Guide

MilTouch™ Single-Stage Press



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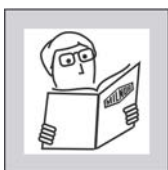
Preface

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About This Operator Guide and the MilTouch™ Single Stage Press Controller

This operator guide explains routine operation. It is for the operator and for supervisory personnel responsible for operator training. The system must be fully commissioned and ready before you attempt to operate it. A separate controller reference manual (MCP1UB01) is available from Milnor® for use by technicians involved in the commissioning, programming, and servicing of the machine.



WARNING: Careless use — can cause death or serious injury and property damage.

- ▶ Read the machine manuals before you install, operate, service, or clean the machine.

The Milnor® MilTouch™ single-stage press controller has physical switches and buttons (electromechanical controls) and uses a touch-sensitive display screen to operate the machine. All the functions and information you need to configure, program, and run the machine appear on this screen. Operators will use the MilTouch™ controller to operate the press.



CAUTION: Excessive pressure — can damage the display screen.

- ▶ Do not push hard on the glass.
- ▶ Use only a finger to touch the glass. Do not touch the screen with a tool.

The MilTouch™ controller contains several displays organized into a hierarchy. Top-most is the **Main Menu** display ([Figure 4: Press Main Menu Display, page 12](#)). Each display contains buttons that access lower level displays.

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How to Contact Milnor®

Your authorized Milnor® dealer can assist you with your Milnor® machine and knows about the local conditions that may be pertinent to the installation, use, or maintenance of the machine. Contact your dealer first. For assistance from the Milnor® factory, refer to [Table 1, page 2](#) for contact information.

Table 1. Pellerin Milnor® Corporation Contact Information

Purpose	Department	Telephone	FAX	E-mail/Web site
Order or ask about replacement parts	Parts	504-712-7775 or 800-299-1500	504-469-9777	parts@milnor.com
Get advice on installing, servicing, or using	Customer Service/ Technical Support	504-712-7780	504-469-9777	service@milnor.com www.milnor.com (Customer Service)
Learn about, request, or enroll in Milnor® service seminars	Training	504-712-7716	504-469-9777	training@milnor.com
Determine warranty eligibility or claim status	Warranty Administration	504-712-7735	504-469-9777	service@milnor.com (Attention: Warranty)
Ask about, comment on, or report an error in equipment manuals	Technical Publications	504-712-7636	504-469-1849	techpub@milnor.com
European contacts	Milnor® International	+ 32 2 720 5822	—	milnor@milnor.be
Ask about the shipping weight of your machine before it arrives at your facility	Logistics Department	504-712-7686	504-471-0273	—

Pellerin Milnor Corporation
 Post Office Box 400
 Kenner, LA 70063-0400

Telephone: 504-467-9591
<http://www.milnor.com>

1 Controls

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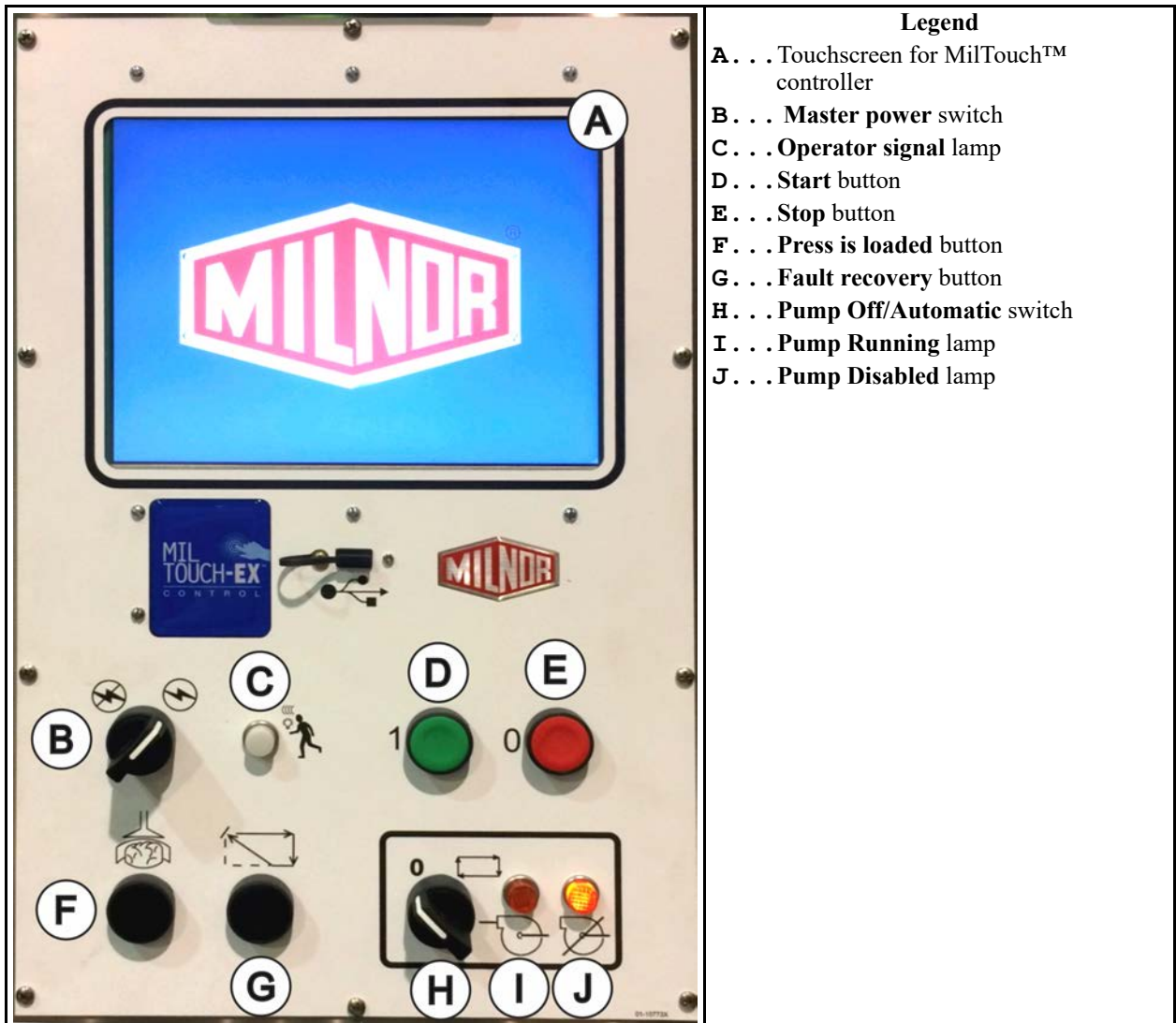
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1.1 Physical Controls

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Various control panel configurations are used throughout the family of MilTouch™ press models. These configurations vary depending on the machine's equipment, such as a reuse pump (press return pump). The control panel shown in the following figure contains all of the physical controls you might find on your machine.


Figure 1. Typical MilTouch™ Press Control Panel





Main Controls — The controls in this section occur on all MilTouch™ presses.



Touchscreen for MilTouch™ controller — This is a touch-sensitive display screen that you use for most machine functions.


Master power switch ( / ) — This switch controls power to the machine control circuit. When the **master power** switch is off, the entire control circuit is disabled, i.e., the microprocessor controller is not powered. The  symbol represents the OFF position and the  symbol represents the ON position.

Operator Signal lamp () — This lamp illuminates when the press needs the attention of an operator. The lamp may be accompanied by a flashing beacon near the top of the press and an audible horn.

Start button () — When power is enabled through the **master power** switch and all safety conditions are met for the machine to run, this button allows machine operation.

Stop button () — This button stops operation, but does not remove power from the control system. This is the same function as the **emergency stop** switch ([Section 1.2 : Emergency Stop Switch \(locking push button\), page 5](#)), but the **stop** button resets immediately when the button is released.

Fault recovery button () — This button, when pressed, sends a signal to the microprocessor controller to indicate that the cause of the previous fault has been cleared. This signal also notifies the microprocessor controller that it is safe to resume operating when the operator presses the **start** button ()

Press-is-loaded button () — This button, when pressed, sends a signal to the microprocessor controller to indicate that the press contains a load and should prompt the operator for cake data.

Reuse Pump (Press Return Pump) Controls — The reuse pump (press return pump) controls occur on presses with the optional reuse pump.

The reuse pump sends water extracted by the press back to the CBW® washer, where the water is used to flush goods down the receiving chute and to fill the first module of the CBW® washer. The press microprocessor control turns this pump on and off as necessary to move the water and minimize the time the pump runs dry. The two-position switch allows a person to disable the pump, and the two indicator lamps help determine if the pump is running, or not running when it should run.

Pump Off/Automatic switch (⓪ / ↔) — The **pump off/automatic** switch allows the operator to disable the reuse pump, primarily for maintenance. The ⓪ symbol represents the OFF—or disabled—switch position. The ↔ symbol represents the automatic operation switch position. In the automatic operation position, the controlled component operates under the control of the microprocessor.

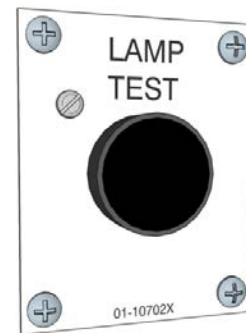
Pump Running lamp (Ⓜ) — This lamp is illuminated when the reuse pump is running.

Pump Disabled lamp (Ⓜ) — This lamp is illuminated when the reuse pump did not run after operation was commanded, which is an error condition. The most common cause of this error is a tripped reuse pump motor overload.

Additional Controls

Lamp Test button — Certain equipment standards require a **lamp test** button, shown in the following figure. When this button is pressed, all indicator lamps on the switch panel illuminate, which allows the operator to check for malfunctioning bulbs. When it is provided, this button is mounted near the main switch panel.

Figure 2. Lamp Test Button



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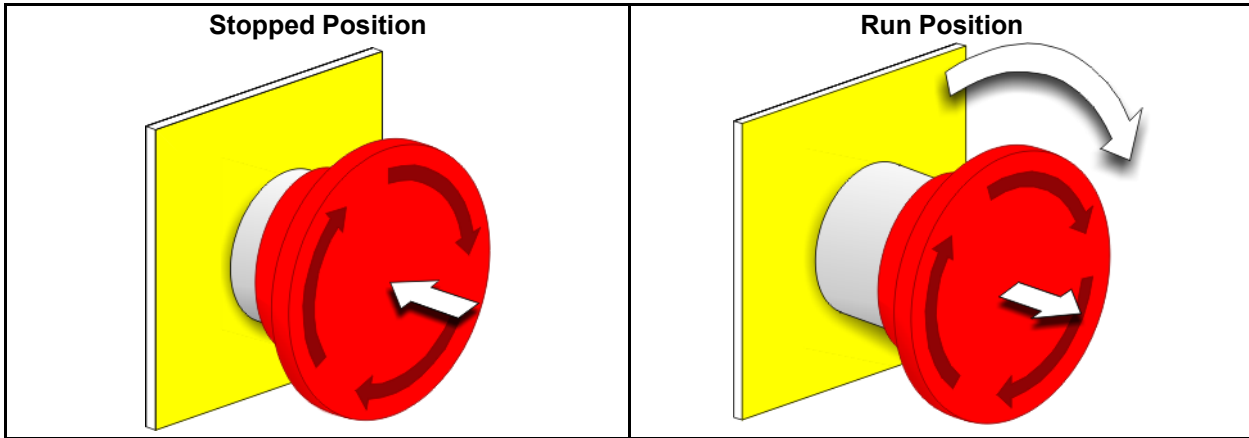
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1.2 Emergency Stop Switch (locking push button)

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One or more **emergency stop** switches (pictured below) may be provided on the device. When pressed, any **emergency stop** switch removes power from the machine controls, stops the machine, and locks in the depressed (switch actuated, machine stopped) position. When safe to do so, turn the button clockwise to unlock the switch. To resume operation, perform the device's normal startup procedure.

Figure 3. Emergency Stop Switch



NOTICE: Press the **emergency stop** switch immediately in an emergency situation.

Display or Action



Explanation

This symbol represents the **emergency stop** switch in Milnor® documents other than electrical wiring diagrams.

2 Initialization and Shutdown

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2.1 Initialization

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WARNING: Contact with electric power — can kill or seriously injure you. Electric power is present inside the cabinetry unless the main machine power disconnect is off.

- ▶ Do not unlock or open electric box doors.
- ▶ Know the location of the main machine disconnect and use it in an emergency to remove all electric power from the machine.
- ▶ Do not service the machine unless qualified and authorized. You must clearly understand the hazards and how to avoid them.

2.1.1 Press Initialization Steps

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When you first power-on the machine for morning startup (after a power loss, after a safety circuit error, etc.) the machine performs the following sequence of actions:

1. The controller runs the COINC (discharge) conveyor, if equipped.
2. The press checks if the load door is down, if equipped.
 - If YES: Skip to [Step 4](#).
 - If NO: Continue to the next step.
3. The controller lowers the load door, if it is not down.
The display shows “Waiting for Load Door Down.”
4. The press checks if the can is fully lowered.
 - If YES: Continue to the next step.
 - If NO: Skip to [Step 1](#), “Goods on Belt” Steps.
5. The controller lowers the discharge door, if it is not down.
The display shows “Waiting for Discharge Door Down.”
6. The controller raises the ram.
The display shows “Waiting for Ram Full Up.”

7. The controller checks if the COINC conveyor is running, if equipped. The conveyor runs for the configured **Time for Cake to Block COINC Eye** value, the duration of initialization, or a minimum of 10 seconds.
8. The controller stops the COINC conveyor, if not stopped by the photoeye.
9. Go to [Section 2.1.2.1 : Cake Data Confirmation Procedure, page 9](#).

2.1.1.1 “Goods on Belt” Steps

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This sequence only occurs if the can is raised and if there are goods on the belt when the operator initializes the press (Press Initialization Process) or initiates the Evening Shutdown Process.

1. The controller raises the ram to the unload position, if it is not in the unload position.
The display shows “Waiting for Ram at Unload Position.”
2. The controller raises the can, if it is not up.
The displays shows “Waiting for Can Full Up.”
3. The controller raises the discharge door, if it is not up.
The display shows “Waiting for Discharge Door Full Up.”
4. The controller runs the belt for 15 seconds, or until the photoeye is blocked.
The display shows “Checking for Load on Belt.”
5. The press checks if the discharge photoeye is blocked.
 - If YES: The controller issues a “Clear Belt Eye Before Proceeding” error. The operator presses **Signal Cancel** to clear the error.
 - If NO: Continue to the next step.
6. The controller lowers the discharge door.
The display shows “Waiting for Discharge Door Down.”
7. The controller lowers the can.
The display shows “Waiting for Can Full Down.”
8. Return to the initial (Evening Shutdown Process **or** Press Initialization Process) sequence.
 - If this procedure began during the Evening Shutdown Process, return to that sequence’s [Step 4](#).
 - If this procedure began during the Press Initializing Process, return to that sequence’s [Step 6](#).

2.1.2 When Cake Data Must be Confirmed

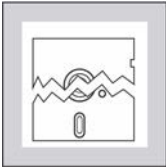
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Sometimes, the controller cannot determine if goods are present in the press or on the conveyor. This can occur:

- When you first power on the machine for morning startup;
- After you use manual intervention (manual functions);

- After a power loss;
- After a safety (three-wire) circuit (CRS+) error.

When the controller cannot determine if goods are present, it prompts the user to enter the batch data, as described in the following process.



CAUTION: Goods Damage and Wasted Resources — Entering incorrect cake data causes improper processing, routing, and accounting of batches.

- ▶ Understand the consequences of entering cake data.

2.1.2.1 Cake Data Confirmation Procedure

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From “The Press Initialization Procedure”...

1. If the press is configured for a load door, the controller prompts: “Open the load door?”
Opening the door permits the operator to look into the press to determine if a cake is present.
Operator selects...
 - YES: Continue to the next step.
 - NO: Skip to [Step 3](#).
2. The controller raises the load door and displays “Waiting for Load Door Full Up” while it raises.
3. The controller prompts: “Does press have a cake?” Operator selects...
 - YES: Continue to the next step.
 - NO: Skip to [Step 5](#).
4. Operator enters cake data at prompts. See [Section 3.2.2.1 : Cake Data Display, page 14](#) for more information.
5. If the press is configured for a COINC conveyor, the controller prompts: “Does COINC have a cake?” Operator selects...
 - YES: Continue to the next step.
 - NO: Skip to [Step 7](#).
6. Operator enters cake data at prompts. See [Section 3.2.2.1 : Cake Data Display, page 14](#) for more information.
7. The controller checks if the load door is down, if equipped.
8. The controller lowers the load door, if it is not down.
The display shows “Waiting for Load Door Down” while it lowers.
9. The press checks if there is a cake on the belt.
 - If YES: Continue to the next step.
 - If NO: Return to Automatic Operation.
10. The controller prompts: “Discharge cake in can?” Operator selects...

- YES: Continue to the next step.
- NO: Return to Automatic Operation.

11. The controller lowers the ram until the ram clears the unload position.

The display shows “Waiting for Ram Down.”

12. Return to Automatic Operation.

2.1.3 Power Loss or Safety (Three-Wire) Circuit Disabled Condition

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If the press loses power or the safety (three-wire) circuit (CRS+) is disabled (e.g., an emergency stop switch is pressed), the press stops immediately. Some manual intervention may be required to return the press to normal operation again, depending on the state of the press at the time of power loss.

If the press was discharging when power was lost, use Manual Mode to remove the cake from the belt to allow the press to return to automatic operation.

- If the press is equipped with a COINC conveyor, use **Run Belt** (see [Run Belt](#)) to move the cake from the press to the COINC conveyor. The COINC belt stops when the cake blocks the COINC photoeye.
- If the press is not equipped with a COINC conveyor, use **Track Belt** (see [Track Belt](#)) to move the cake from the press to the receiving device.

When the belt is clear, exit Manual Mode. The press will begin the initialization sequence described in [Section 2.1.1 : Press Initialization Steps, page 7](#), then prompt the operator for cake data for any goods which may be in the press or on the COINC belt, as described in [Section 2.1.2 : When Cake Data Must be Confirmed, page 8](#). The press returns to automatic operation after cake data entry is complete.

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2.2 Evening Shutdown

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The Evening Shutdown procedure prepares the press for the operator to turn off power. Touch **Evening Shutdown Procedure** on the **Main Menu** display to initiate the shutdown steps.

This procedure is fully automatic. The operator only needs to monitor the press for shutdown procedure errors.

2.2.1 Evening Shutdown Procedure

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After you initiate the **Evening Shutdown Procedure** from the **Main Menu** display, the press will perform the following sequence of actions:

1. The controller checks if the load door is down, if equipped.

2. The controller lowers the load door, if it is not down.
The display shows “Waiting for Load Door Down.”
3. The press checks if the can is fully down.
 - If YES: Continue to the next step.
 - If NO: Skip to [Step 1, “Goods on Belt” Steps](#).
4. The controller lowers the discharge door, if it is not down.
The display shows “Waiting for Discharge Door Down.”
5. The controller lowers the ram to the full down position, if it is not down.
The display shows “Waiting for Ram Down.”
6. Turn the master switch to the OFF position (⊗) to power-down the press.
The display shows “Shutdown Procedure Complete.”

3 Automatic Operation

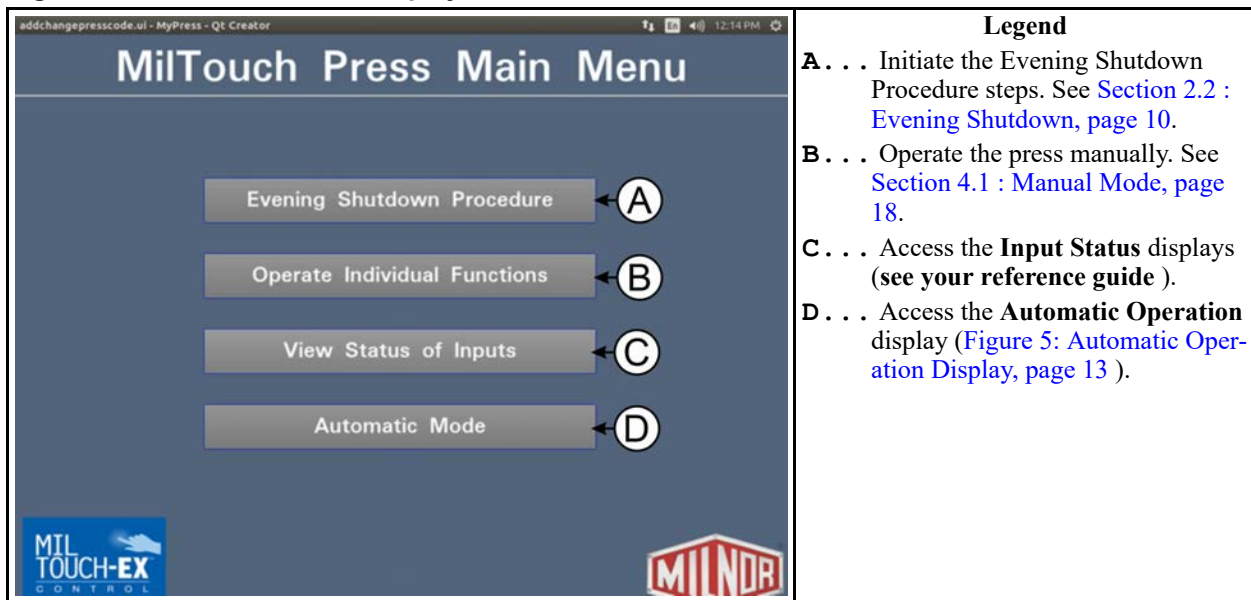
3.1 Automatic Mode

The normal operating mode of this machine is fully automatic. When the machine meets the requirements for automatic operation, a new load and corresponding data passes from the loading device to the press each time the loading device (usually a CBW® tunnel washer) is ready to discharge and the press is ready to receive. Before a new load is received, the cake of processed goods is discharged to a storage belt or the receiving shuttle, freeing the machine for the next load.

In the automatic operating mode, the operator only needs to monitor the press for load errors and ensure that the desired pressure is achieved.

From the **Main Menu** display (shown in the following figure), touch **Automatic Mode** to activate Automatic Mode.

Figure 4. Press Main Menu Display

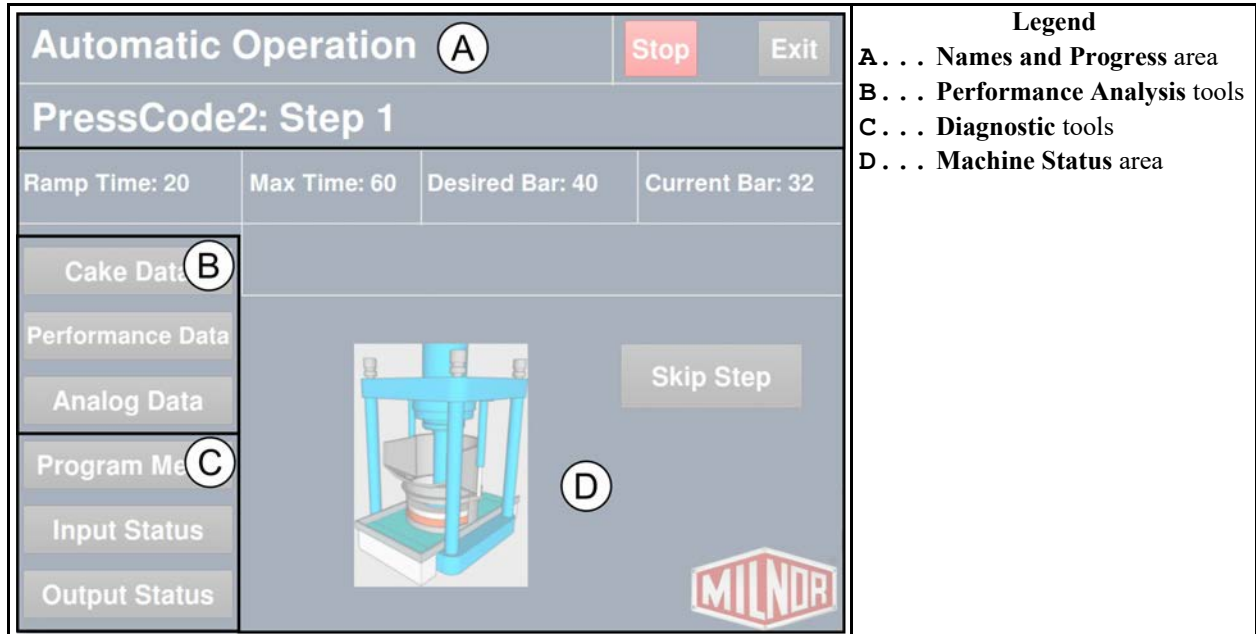


3.2 The Automatic Operation Display

The **Automatic Operation** display, shown in the following figure, appears when you activate **Automatic Mode**.

From the **Automatic Operation** display, you can monitor the press code progress and the machine status. Four types of information are given on the **Automatic Operation** display. These types are grouped into four areas of the display, as shown in the following figure.

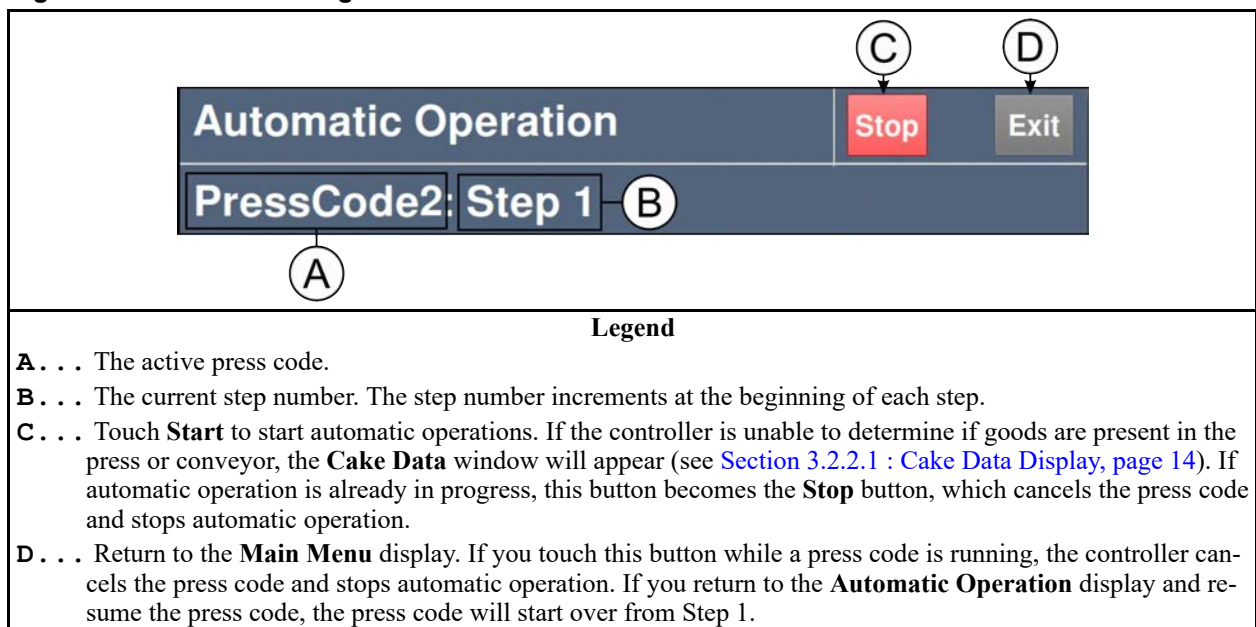
Figure 5. Automatic Operation Display



3.2.1 Names and Progress Area (A)

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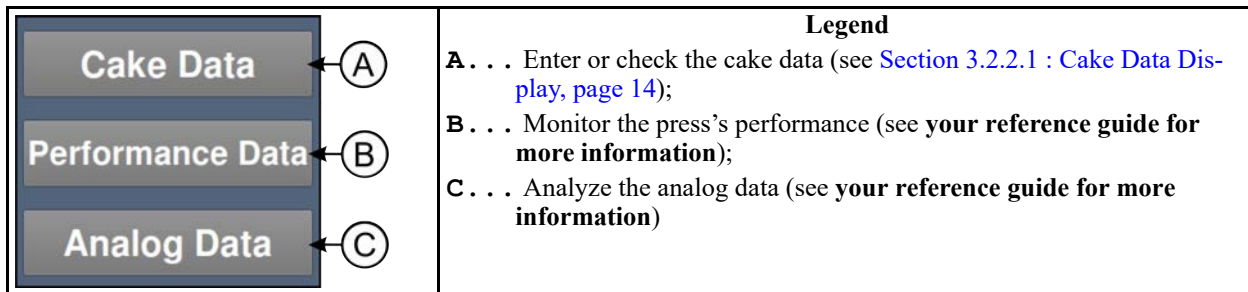
Figure 6. Names and Progress Area



3.2.2 Performance Analysis Tools (B)

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Figure 7. Performance Analysis Tools



3.2.2.1 Cake Data Display

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When the press receives a batch, the loading device passes a press code number to the press, along with other batch data, either through Miltrac™ or allied data inputs. During normal operation, the press executes the press code that corresponds to the press code number it receives from the loading device. If the press prompts for goods data at startup, this information is entered by the operator.

The data you enter on this display is used for two purposes:

- instructing the press and other equipment (such as drying or conditioning equipment) how to process the goods;
- accounting and record-keeping.

Formula identifies the wash formula used in the tunnel.

Although in some systems, the wash formula may affect post-wash processing, formula codes are passed to post-wash devices primarily for accounting and record-keeping purposes.



NOTE: Although formula code and extract code are technically different things, they can be thought of as the same by programming the Milnor® centrifugal extractor or single stage press so that the proper extract formula is invoked by a formula code of the same number. For example, program extract code 05 so that it is the proper extraction process for batches processed with formula code 05. Then simply pass the formula code to the extractor or single stage press as the extract code.

Press Code identifies the press formula (code) to be used in the press.

Dry Code identifies the drying formula to be used in the drying or conditioning equipment.

Destination identifies a storage location within the laundry to send the load.

Customer identifies the customer (commercial laundry) or department (institutional laundry) the batch belongs to.

Figure 8. Cake Data Display

Press Cake Data	
Formula:	<input type="text" value="0"/>
Press Code:	<input type="text" value="0"/>
Dry Code:	<input type="text" value="0"/>
Destination:	<input type="text" value="0"/>
Customer:	<input type="text" value="0"/>
Goods Code:	<input type="text" value="0"/>
Weight:	<input type="text" value="0"/>
Cake Number:	<input type="text" value="0"/>

Goods Code identifies a subset of a general class of goods. All batches conforming to the general class are processed using the same wash formula. Each specific goods code within a general class of goods causes variations in processing, essentially extending the range of available wash formulas. Although in some systems the goods code may affect post-wash processing, goods codes are passed to postwash devices primarily for accounting and record-keeping purposes.

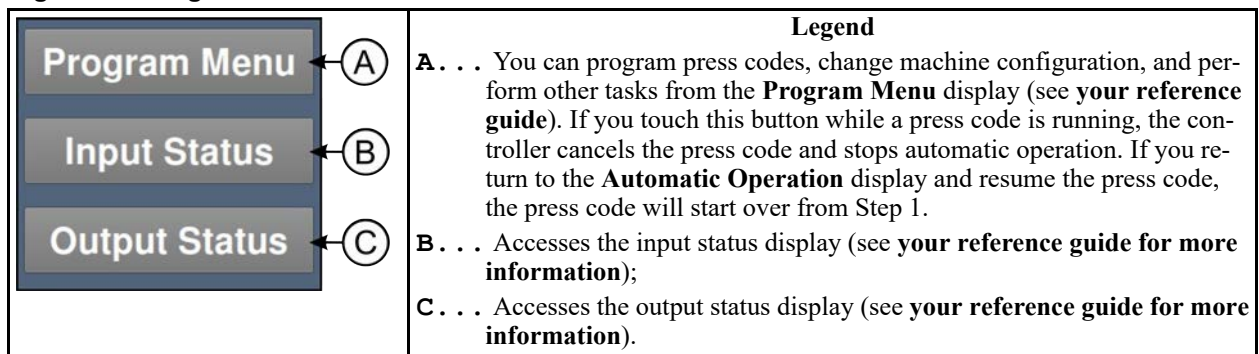
Weight the dry, soiled weight of a batch, as measured by a weighing device, such as a weighing type load conveyor. Although in some systems, weight may affect post-wash processing, weights are passed to post-wash devices primarily for accounting and record-keeping purposes.

Cake Number an identification number associated with each batch. The rail system or CBW® automatically assigns a number between 000 to 255. This code is used solely for accounting and record-keeping purposes. Allied signals are not currently available on any machine for passing this code.

3.2.3 Diagnostics Tools (C)

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Figure 9. Diagnostic Tools



3.2.4 Machine Status Area (D)

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Figure 10. Machine Status Area

Legend

- A** . . . The time that remains until the desired pressure is achieved for the current step . The timer resets at the beginning of each step and starts counting down when diaphragm pressurization starts.
- B** . . . The time that remains in current step . The timer begins counting down when diaphragm pressurization begins. The step ends when this timer expires, even if the desired pressure has not been achieved.
- C** . . . The desired diaphragm pressure in bar for the current step .
- D** . . . The current (approximate) diaphragm pressure in bar for the current step.
- E** . . . The message region, which shows messages describing the current operational state of the press during normal operation. See [Section 4.3.4 : Other Press States, page 27](#) for explanations of all the press state messages. If the machine encounters an error while it runs a press code, an error message will appear in this region. See [Section 4.4.1.1 : Mechanical and Processing Faults, page 29](#) for explanations of all the error messages.
- F** . . . Skip to the next step in a press code (even if the desired pressure has not been achieved for the current step). This button becomes **Signal Cancel** (which silences the operator signal) when the machine encounters an error.
- G** . . . Animation that shows current ram and can positions.

3.3 About the Optional Steam Disinfect Feature

BNP1UW01.T06 0000351566 B.4 C.5 A.15 2/5/24, 10:10 AM Released

The optional steam disinfect feature uses steam to disinfect the water inside the reuse tank before the reuse pump sends the water back to the CBW[®] tunnel washer. The steam disinfection process automatically begins every time the press discharges a cake and waits for a new load.

If your machine is equipped to use the steam disinfect feature and you enable it on the **Configure Controls** display (see your reference guide for more information), the press performs the following sequence of actions while it waits for a load:

1. The controller asks for steam and makes the “Disinfect Active” input (5MTA4-7).
2. The controller opens the fresh water valve to fill the reuse tank and closes the valve when the water level reaches the configured high level.



NOTE: If the water level in the reuse tank drops below the configured low level during the steam disinfection process, an error occurs.

3. The steam valve opens and the steam disinfection process begins. The message region of the **Automatic Operation** display indicates that the press is in steam disinfect mode, as shown in the following figure. The display shows the desired steam disinfect temperature in degrees Fahrenheit (D), the actual temperature (A), and the time remaining (seconds).

Figure 11. Steam Disinfect Mode



4. Steam disinfect time is fixed at 180 seconds. The timer starts when the desired temperature inside the reuse tank (set on the **Configure Controls** display) is achieved.
 - If the temperature inside the reuse tank exceeds the desired temperature, the steam valve closes.
 - If the temperature inside the reuse tank drops below the desired temperature, the steam valve opens again.
 - If the temperature inside the reuse tank drops five degrees below the desired temperature, the steam valve opens and the steam disinfect timer resets. The timer starts again when the desired temperature is achieved.

4 Troubleshooting

BNP1UO03 / 2024104

BNP1UO03 0000220187 A.15 3/6/24, 1:05 PM Released

4.1 Manual Mode

BNP1UO03.C01 0000220269 B.3 B.4 A.15 1/31/24, 11:54 AM Released

You may occasionally need to operate the press manually to troubleshoot error conditions or perform maintenance tasks according to the service and maintenance manual. From the **Main Menu** display, touch **Operate Individual Functions** to activate Manual Mode.



NOTICE: You can safely operate machine components, provided you do not attempt to enter any part of the machine. You must understand and abide by the warnings on the machine, and the precautions in this manual and your safety manual.



WARNING: Multiple Hazards — Careless operator actions can kill or injure personnel, damage or destroy the machine, damage property, and/or void the warranty.

- ▶ Understand the consequences of operating manually.
- ▶ Do not attempt unauthorized servicing, repairs, or modification.
- ▶ Do not use the machine in any manner contrary to the factory instructions.
- ▶ Use the machine only for its customary and intended purpose.
- ▶ Do not operate a damaged or malfunctioning machine. Request authorized service.
- ▶ Do not tamper with or disable any safety device or operate the machine with a malfunctioning safety device. Request authorized service.



WARNING: Entangle and Crush Hazards — Contact with moving components normally isolated by guards, covers, and panels, can entangle and crush your limbs. These components move automatically.

- ▶ Do not service the machine unless qualified and authorized. You must clearly understand the hazards and how to avoid them.
- ▶ Do not remove guards, covers, or panels.
- ▶ Do not reach into the machine housing or frame.
- ▶ Keep yourself and others off of machine.
- ▶ Know the location of all emergency stop switches, pull cords, and/or kick plates and use them in an emergency to stop machine motion.

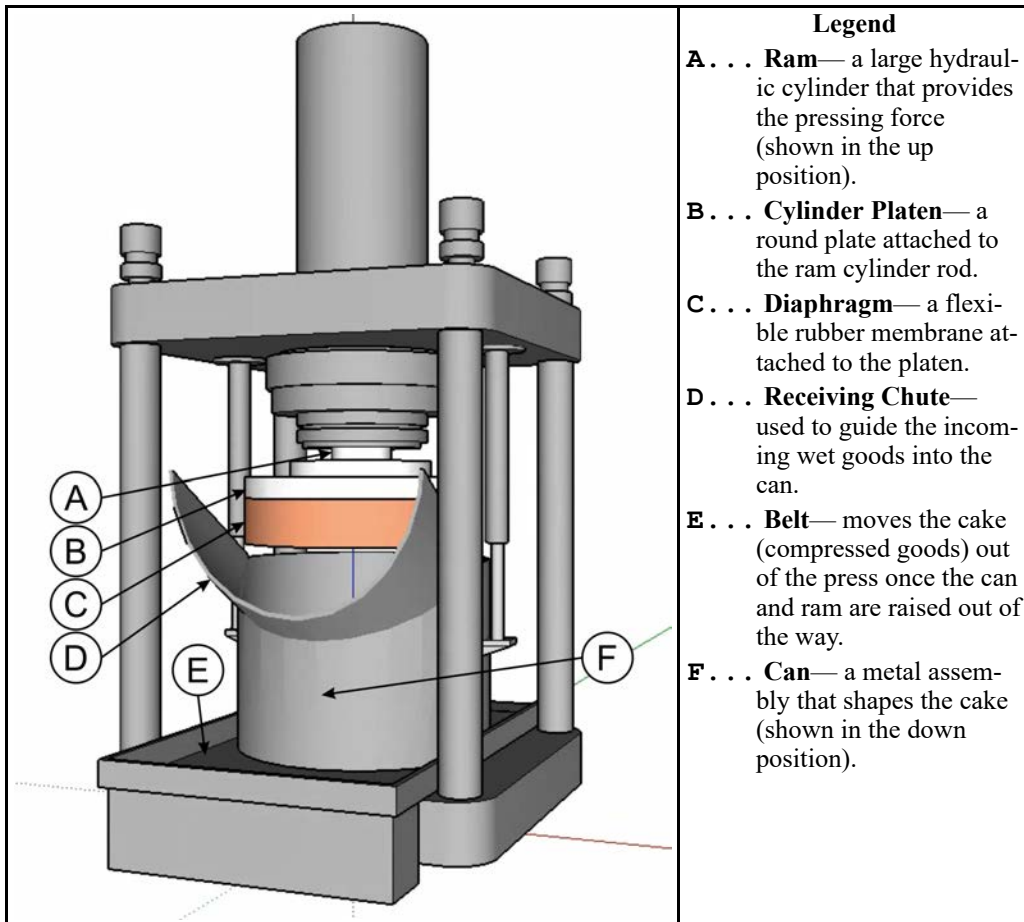


WARNING: Crush and Entrap Hazards — The can and ram will crush your body or limbs if these components descend while you are under them. These components can descend with power off or on.

- ▶ Do not reach into the machine housing or frame.
- ▶ Use the factory supplied gaff-hook to move objects inside the housing.

Most of the press components that you can manually operate are identified in the following figure.

Figure 12. Parts of the Press

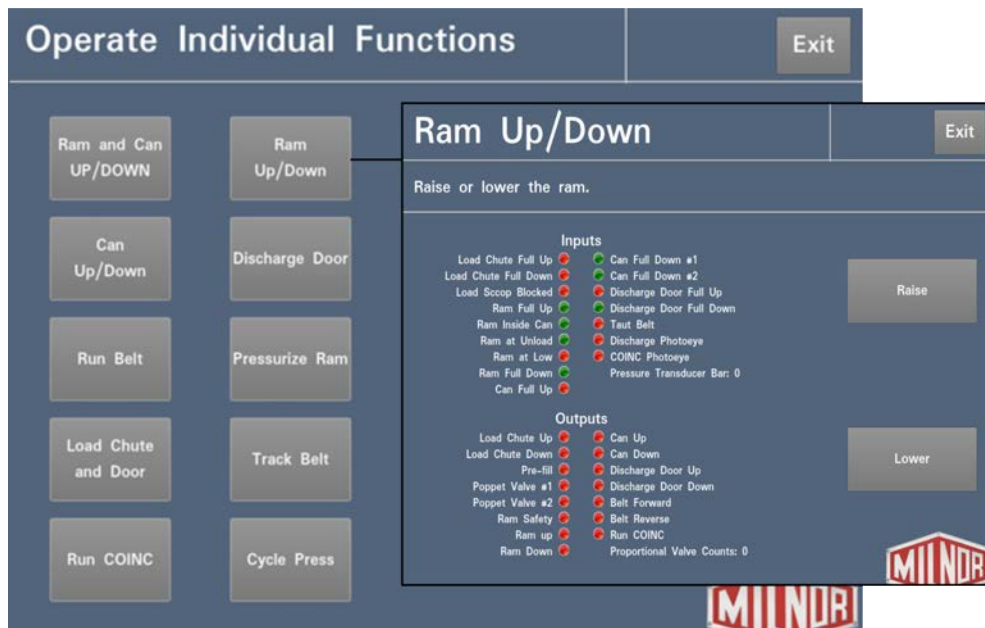


4.2 Manual Functions

BNP1UO03.R01 0000220267 B.4 B.5 A.15 2/22/24, 3:27 PM Released

Touch a button to view the control window for the function named on that button. For example, the **Ram Up/Down** control window appears when you touch **Ram Up/Down**, as shown in the following figure.

Figure 13. Operate Individual Functions



The indicated actions on the buttons occur while the button is held. For example, to raise the ram, touch and hold the **Raise** button on the **Ram Up/Down** control window. The **Start** button, however (used on the **Track Belt** and **Cycle Press** control windows), will start the indicated action when it is touched, and does not need to be held.

Ram and Can Up/Down — This function raises or lowers the ram while forcing the can down. The belt and the receiving chute must both be clear of goods when you lower the ram. Pump pressure is not allowed to exceed 1500 psi while lowering the ram.



NOTE: The controller requires a delay of four seconds after you command the ram down before you can command the ram up.

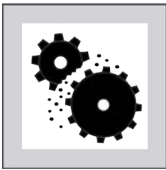
Raise Raises the ram while driving the can down. The controller displays “Ram Full Up” when the “Ram Full Up” input is actuated

Lower Lowers the ram while driving the can down. The controller displays “Ram Full Down” when the “Ram Full Down” input is actuated.

Can Up/Down — This function raises and lowers the can. The belt must be clear of goods when you move the can down, and the receiving chute must be clear of goods when you move the can up.

Raise Raises the can by actuating the “Can Up” output if all safety conditions are met. The controller displays “Can Full Up” when the “Can Full Up” input is actuated.

Lower Lowers the can by actuating the “Can Down” output if all safety conditions are met. The controller displays “Can Full Down” when the “Can Full Down” inputs are actuated.



CAUTION: Moving the ram through the bottom of the can — will cause the diaphragm to forcefully rub against the can, possibly causing damage.

- ▶ If you must raise the can above the ram (for maintenance purposes): 1) lower the can onto the press bed, 2) lower the diaphragm onto the press bed, 3) raise the can.
- ▶ If goods become jammed between the ram and can, withdraw the ram through the top of the can, not through the bottom of the can.

Run Belt — This function opens the discharge door and runs the main belt forward and backward. The ram must be above the “Ram Inside Can” position, and the can must be fully raised. The COINC (inclined conveyor that the press discharges to) runs when the belt is commanded to run forward if the COINC eye is not blocked.

Forward Automatically raises the discharge door and runs the main belt forward by actuating the “Belt Forward” output if all safety conditions are met. If present, the discharge conveyor belt also runs forward.

Reverse Automatically raises the discharge door and runs the main belt backward by actuating the “Belt Reverse” output if all safety conditions are met. The discharge conveyor belt, if present, does not run when the main belt runs in reverse.

Load Chute and Door — If your machine is equipped with a load door, this function raises and lowers the load door. If your machine is not equipped with a load door, this function does nothing.



NOTE: The load chute that this function was originally named for is no longer used on any single-stage presses.

Raise Raises the load door by actuating the “Load Chute Up” output. The controller displays “Load Chute Full Up” when the “Load Chute Full Up” input is actuated.

Lower Lowers the load door by actuating the “Load Chute Down” output. The controller displays “Load Chute Full Down” when the “Load Chute Full Down” input is actuated.

Run COINC — This function runs the inclined discharge conveyor belt in the forward direction only. This belt will not run in the reverse direction.

Forward Runs the discharge conveyor belt forward by actuating the Run COINC output.

Ram Up/Down — This function raises and lowers the ram. The belt and the receiving chute must both be clear of goods to lower the ram. Pump pressure is not allowed to exceed 1500 psi while lowering the ram. See the Note and Hazard Statement in [Can Up/Down](#) about moving the ram through the bottom of the can.

Raise Raises the ram by actuating the “Ram Up” output if all safety conditions are met. The controller displays “Ram Full Up” when the “Ram Full Up” input is actuated.

Lower Lowers the ram by actuating the “Ram Down” output if all safety conditions are met. The controller displays “Ram Full Down” when the “Ram Full Down” input is actuated.

Discharge Door — This function opens and closes the discharge door.

Open Raises the discharge door by actuating the “Discharge Door Up” output. The controller displays “Discharge Door Full Up” when the “Discharge Door Full Up” input is actuated.

Close Lowers the discharge door by actuating the “Discharge Door Down” output. The controller displays “Discharge Door Full Down” when the “Discharge Door Full Down” input is actuated.

Pressurize Ram — This function pressurizes the ram. The receiving chute must be clear of goods and the can must be fully down. Pump pressure is not allowed to exceed 1500 psi if the ram is above the “Ram Inside Can” position. The pressure transducer bar is displayed under the inputs and the proportional valve counts are displayed under the outputs.

- Pressure Transducer PSI: The approximate hydraulic pump pressure in pounds per square inch.
- Proportional Valve Counts: The counts representing the opening of the proportional valve. This value is 4095 while the ram is pressurizing, which indicates that the proportional valve is fully open.

Down Drives the ram and the can down.

Track Belt — This function runs the belt forward to facilitate belt tracking adjustment by a qualified technician and/or manual cake discharge. This function starts only if the “Can Full Up” input is actuated.

1. The controller raises the ram to the full up position.
2. The discharge door begins opening when the “Ram Inside Can” input is actuated.
3. The belt begins running when the “Ram Full Up” input is actuated.



WARNING: Moving parts inside — can pull in and mutilate body parts.

- ▶ Do not operate unless all guards and covers are in place.
- ▶ Do not put hands/fingers beyond a guard/cover.

Start The belt runs until commanded to stop.

Stop The belt stops.

Cycle Press — This function operates the press through a complete pressing cycle. Before the cycle begins, the two “Can Full Down” inputs must be actuated and the receiving chute must be clear of goods.



NOTICE: This is a maintenance tool intended as a temporary measure to address the issue of the ram sticking. Only use these features in consultation with the Milnor® factory or when advised by the Milnor® factory.



CAUTION: Operating the press without a load — can cause unnecessary wear on the machine components.

- ▶ Do not pressurize the ram without a load in the press unless necessary for troubleshooting.

Start Starts the press cycle, as described in [Section 4.2.1 : The Press Cycle Summarized, page 23](#), and repeats the cycle until **Stop** is pressed.

Stop Stops the press cycle.

Enable Ram Break-in Delays the time before the controller opens the prefill valve during automatic operation, which causes the ram to come down under greater hydraulic force than it otherwise would. Enable Ram Break-in is effective during Automatic Operation (see note below).

Enable Power-down Limits the use of the proportional valves to pressurize the ram , which causes the ram to come down under greater hydraulic force than it otherwise would. Enable Power-down is only effective during the manual Cycle Press function and is disabled when you exit the **Cycle Press** function.



NOTE: If ram break-in is enabled, the user is prompted to re-enable ram break-in every time the press control starts a new press code (returns to automatic operation). This prompt does not appear if ram break-in is disabled. Ram break-in is automatically disabled when press power is turned off.

4.2.1 The Press Cycle Summarized

BNP1UO03.T01 0000220344 B.3 B.4 A.15 2/21/24, 11:56 AM Released

The following sequence occurs when you activate the “Cycle Press” function.



NOTE: More detailed information on the press cycle can be found in the document titled “How the Single Stage Press Hydraulic System Works” in service manual MTPPMM03.

1. The ram descends past the “Ram at Unload” position, where it begins to pressurize.



NOTE: In normal operation, the prefill valve is enabled 1 second after the press controller commands the ram down. When ram break-in is enabled, this delay is extended to 20 seconds.

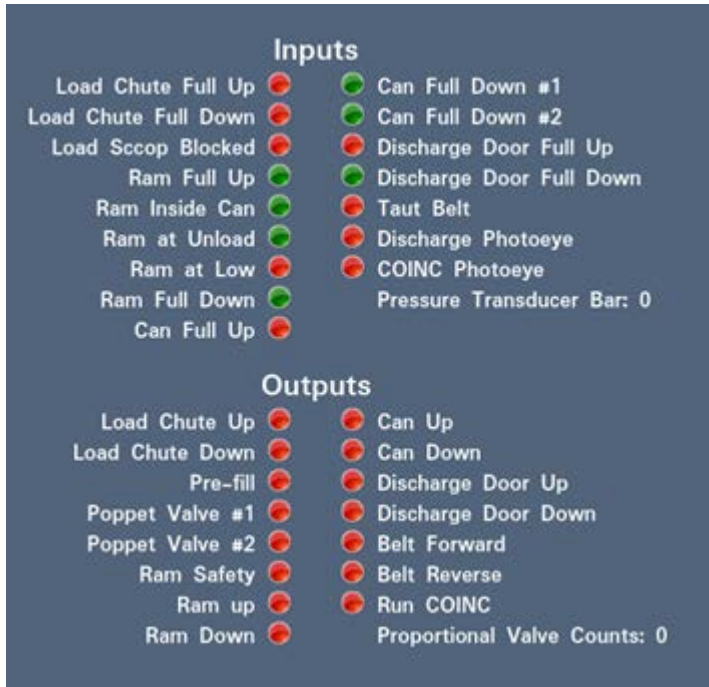
2. The pump and proportional valves operate to pressurize the ram to the maximum pressure based on the machine model.
3. Pressure is released.
4. The ram is raised until the “Ram Full Up” input is actuated.
5. The cycle repeats.

4.2.2 Monitor Inputs and Outputs Related to Manual Functions

BNP1UO03.C03 0000220516 B.3 B.4 A.15 2/22/24, 3:28 PM Released

You can monitor the status of these inputs and outputs, as well as the pressure transducer PSI and the proportional valve counts from the various control windows in Manual Mode, as shown in the figure below. Actuated inputs and outputs display a green status light.

Figure 14. Manual Functions Input and Output Status



For a full list of inputs and outputs, see your reference manual.

BNP1UO05 / 2024104

BNP1UO05 0000220890 A.15 3/6/24, 10:43 AM Released

4.3 Press State Messages

BNP1UO05.C01 0000220889 B.2 B.3 A.15 2/2/24, 4:27 PM Released



During normal operation, the press controller displays status messages to keep the operator informed about what the press is doing. These messages do not necessarily indicate that an error occurred, but rather that the controller issued a command that can not be completed immediately.

For example, it may take the press ram two or more seconds to move from the bottom of its travel to the unload position. The controller displays “Waiting for Ram at Unload Position” while the ram is rising. When the ram reaches the unload position, another status message appears.

For more detailed descriptions of Press State Messages, including pin numbers and actuations, see your reference guide.

4.3.1 Press Receiving a Load

BNP1UO05.R03 0000230624 B.3 A.15 2/5/24, 10:07 AM Released

Clear Belt Eye Before Proceeding — This message indicates that the discharge end photo-eye was blocked while the press was checking for a load on the belt. Clear the photoeye and press  or  to continue.

Loading — The press is receiving a load.

Waiting for Can Full Down — The press can is descending to the press bed.

Waiting for Load — The following conditions have been achieved, and the press is ready to accept a batch:

- The ram is fully up.
- The can is fully down.

Waiting for Load Door Full Up — This press state message only occurs if your machine is equipped with a load door. The load door is ascending to the full-up position so that the press can accept a load from the COBUC.



Waiting for Ram Full Up — The press ram is rising to the full-up position, the top of travel.

4.3.2 Press Discharging

BNP1U005.R02 0000230229 B.3 B.4 A.15 2/22/24, 2:19 PM Released

Checking for Load on Belt — The press control monitors the input from the discharge end photoeye while running the belt forward for 15 seconds (belt clear time).

Discharging: Wait for Eye Blocked — The press control looks for the discharge end photoeye input to be actuated during discharging when the cake initially blocks the photoeye. If the photoeye input is not actuated before the 15 seconds of belt clear time expires, the control displays “Eye Did Not Block.” See [Section 4.4.1.1 : Mechanical and Processing Faults, page 29](#).

Discharging: Wait for Eye Clear — The press control looks for the discharge end photoeye input (IMTA4-6) to clear (when the cake is no longer blocking the discharge end photoeye). If the discharge end photoeye input does not clear before the 15 seconds of belt clear time expires, the control displays “Eye Blocked—Press Fault Recovery.” See [Section 4.4.1.1 : Mechanical and Processing Faults, page 29](#). Clear the photoeye and press  or  to continue.

Ready to Discharge — The press can and ram are up, the discharge door is open, and the press is waiting for the signal to start the discharge sequence.

Waiting to Discharge — The press formula is finished and the press is waiting to discharge to the receiving device.

Discharging — The press is discharging a load.

Waiting for Can Up/Full Up — The press can is rising to the full-up position, the top of travel.

Waiting for Ram at Unload Position — The press ram is rising to the unload position in preparation to discharge.

Waiting for Belt to Finish Discharging — This message appears for two seconds during discharge, while the belt is running after the cake clears the discharge-end photoeye.

Waiting for Discharge Door Full Up — The discharge door is ascending to the full-up (open) position. The belt under the can will not run until the discharge door is fully open.

4.3.3 Operation

BNP1U005.R04 0000230679 B.3 A.15 2/5/24, 10:08 AM Released

Decompression Delay — Please Wait — The press control provides a decompression delay of less than 10 seconds after closing the proportional valve after pressurization.

Waiting for Mode Selection — This message indicates that the press is idle and waiting for the operator to press **Start** to initiate Automatic Mode.

Waiting for Ram Half Up — The ram is ascending or descending to the half-up position.

Waiting for Discharge Door Down — The belt has discharged the cake and stopped running, and the discharge door is descending to the full-down (closed) position. The can will not descend until the discharge door is fully closed.

Waiting for Load Door Down — The load door is descending to the closed position.

4.3.4 Other Press States

BNP1UO05.R01 0000220888 B.3 B.4 A.15 2/22/24, 2:01 PM Released

Error-Related

Press [Fault Recovery] to Lower Door — This message appears with either of two additional messages: “Load Door Not Fully Closed” and “Discharge Door Not Fully Closed.” See [Section 4.4.1.1 : Mechanical and Processing Faults, page 29](#).

Press [Fault Recovery] to Lower Ram — This message appears with either of two additional messages: “Ram Not Down” and “Scoop Blocked.” See [Section 4.4.1.1 : Mechanical and Processing Faults, page 29](#).

Evening Shutdown-Related

Waiting for Ram Down — The ram is moving to the fully-down position as part of the evening shutdown procedure.

Shutdown Procedure Complete — This messages appears when the Evening Shutdown Procedure is completed to indicate it is safe to power-down the machine.

BNP1UT02 / 2024104

BNP1UT02 0000220514 A.15 3/6/24, 10:43 AM Released

4.4 Errors

BNP1UT02.C01 0000220513 B.3 A.15 2/1/24, 4:30 PM Released

Error faults are caused by mechanical or electrical malfunctions that either actuate inputs that should not occur, or don’t actuate inputs that should occur during press operation. When an error occurs, an error message appears in the message/error region of the **Automatic Operation** display, the operator signal may sound, and the beacon near the top of the press may flash.



NOTICE: Some errors can be cleared using the functions on the press controller— for example, by running the belt in Manual Mode or pressing the **Fault Recovery** button. **If the error cannot be cleared using the press controller, a qualified maintenance technician must perform the necessary corrective action.**



DANGER: Descending press ram — will strike and/or crush anyone under it. Ram can descend with power **on** or **off**.

- ▶ Ensure personnel are clear of the press before operating it in manual or automatic mode. The ram may move automatically when certain controls are used, such as when **Start** is pressed or cake data is entered.
- ▶ Know how to use factory-supplied emergency stop switches and where they are located.
- ▶ Lock out/tag out power, lock ram up, and secure factory-supplied safety supports in place before crawling or reaching under the ram.
- ▶ Use the gaff hook supplied with your machine to remove obstructions in the path of the ram or can.



DANGER: Contact with high voltage electricity — will kill or seriously injure you. High voltage electricity is present in electrical devices on this machine whenever external power is supplied, even if power switches are off.

- ▶ Lock out/tag out power at wall disconnect before opening any electrical control box or accessing any other electrical component.
- ▶ Always employ the services of a licensed, qualified electrician when troubleshooting the electrical system.



WARNING: Devices in and above the press — move without warning and can entangle, crush or sever limbs on contact.

- ▶ Do not reach or lean into the press frame during operation.
- ▶ Lock out/tag out power before touching or reaching into assemblies in or above press frame during service or maintenance.
- ▶ Ensure personnel are clear of the press and receiving conveyor before operating either machine.
- ▶ Know how to operate factory-supplied emergency stop switches and where they are located.
- ▶ Close all press side doors and install guards before operating the press.
- ▶ Do not climb on press unless press power is locked out/tagged out.

4.4.1 Error Messages and Corrective Actions

BNP1UT02.C02 0000232982 B.3 B.4 A.15 2/22/24, 3:30 PM Released

Errors may be caused by failed input devices or failed output relays. See your reference guide for more information on troubleshooting inputs and outputs.

If you are unable to correct an error or determine the cause of the error from the information in this section, call your dealer service technician or the Milnor[®] factory for assistance using the information in [Section : How to Contact Milnor[®], page 1.](#)

The following are error messages the controller can issue, explanations, and possible solutions. Operation stops and cannot be resumed until the cause of the error is corrected. This can require a maintenance or goods processing technician.

4.4.1.1 Mechanical and Processing Faults

BNP1UT02.R01 0000220512 B.3 A.15 2/22/24, 2:02 PM Released

These errors are most likely caused by an obstruction, such as a piece of goods that prevents the ram or can from descending, but may be caused by a malfunctioning switch.

Can Not Fully Raised — Indicates the can is not completely up. The error clears automatically if the “Can Full Up” input is actuated. The “Can Full Up” switch may be malfunctioning or out of adjustment.

Solutions:

- Ensure correct actuation of the switch(es).
- Adjust or replace the switch(es), if necessary.

Can Not Fully Down — Indicates the can is not all the way down. The error clears automatically if both “Can Full Down” inputs are actuated.

This error may be caused by the following conditions:

- Goods are under the can edge.
- Either or both can full down switches are malfunctioning or are out of adjustment.

Solutions:

- Manually raise the can, remove press power, and use the gaff hook to remove the goods or other obstruction from under the can.
- Ensure the can is down.
- Ensure correct actuation of the switch(es).
- Adjust or replace the switch(es), if necessary.



Ram Not Fully Raised — Indicates the ram is not all the way up. The error clears automatically if the “Ram Full Up” input is actuated.

This error may be caused by the following conditions:

- Hydraulic oil pressure is low.
- Ram at unload switch is malfunctioning or is out of adjustment.

Solutions:


- Check oil lines for leaks and repair or replace as needed.
- Verify that the hydraulic pump is working. Repair or replace as needed.
- Ensure correct actuation of the switch(es).
- Adjust or replace the switch(es), if necessary.

Ram Not Down. Press Fault Recovery — Indicates the ram did not clear the “Ram Inside Can” proximity switch, suggesting that the ram did not move down. Press the **Fault Recovery** button on the control panel () once to raise the ram. Press  again to lower the ram. If the press does not return to automatic operation, this error may be caused by the following conditions:

- A double or especially large load is in the can.
- The “Ram Inside Can” switch (ram half-up input) is malfunctioning or is out of adjustment.

Solutions:



- Remove some of the goods from under the ram using the gaff hook supplied by the factory.
- Ensure the ram is below the “Ram Inside Can” position.
- Ensure correct actuation of the switch(es).
- Adjust or replace the switch(es), if necessary.


Eye Blocked. Press Fault Recovery — Indicates that the discharge photoeye is blocked, which suggests that there are goods on the belt. The press cannot bring the can down until this eye is cleared. Press . If the press does not return to automatic operation, this error may be caused by the following conditions:

- There are goods on the end of the belt.
- The photoeye (belt eye input) is malfunctioning or is out of adjustment.



Solutions:

- Use the gaff hook to clear the goods from the belt.
- Ensure proper actuation of the photoeye.
- Adjust or replace the photoeye if necessary.


Receive Fault. Press Fault Recovery — This error applies to Miltrac™ loading only. Indicates Miltrac™ transfer was aborted by the loading device. This usually occurs when the operator removes power from the tunnel after it has committed to transfer, but before the transfer has taken place. Press  or  to clear the error and put the press in manual mode.


Transfer Fault. Press Fault Recovery — This error applies to Miltrac™ discharge only. Indicates the receiving device aborted the transfer. This can happen if the receiving device loses the safety (three-wire) circuit (CRS+) during operation (i.e., a safety plate is kicked,  is pressed, power failure, etc).

Solution:

1. Use the manual controls to move the shuttle back to the receive position.
2. Press  or  to clear the error and put the press in manual mode.
3. Manually discharge goods from the press.
4. Return to automatic mode.

5. Verify cake data when prompted.

Scoop Blocked. Press Fault Recovery — Indicates goods are laying on the receiving chute (scoop). This can occur if the goods are not wet enough to slide down the chute. Use the gaff hook to clear the chute and press  to return to automatic operation.

No Goods in Can. Press Fault Recovery — Indicates the ram cleared the "Ram Full Down" proximity switch, which suggests there is no load in the can when the press expected one (the loading device did not indicate an empty pocket). Press  to clear the error and put the press in manual mode.

This error may be caused by the following conditions:

- The tunnel transferred an empty pocket that was not properly coded.
- The cake is undersized.
- The "Ram Full Down" switch is malfunctioning or is out of adjustment.
- Batches have ceased to exit the tunnel.

Solutions:

- If batches have ceased to exit the tunnel, notify supervisory or maintenance personnel immediately for tunnel corrective action.
- Ensure correct actuation of the switch(es).
- Adjust or replace the switch(es), if necessary.


Ram Not at Unload Position — Indicates the ram did not pass the unload point when the press attempted to raise the ram. The error clears automatically if the "Ram at Unload" input is actuated.

This error may be caused by the following conditions:

- Hydraulic oil pressure is low.
- The "Ram at Unload" switch is malfunctioning or is out of adjustment.

Solutions:

- Check oil lines for leaks. Repair or replace as needed.
- Verify that the hydraulic pump is working. Repair or replace as needed.
- Ensure correct actuation of the switch(es).
- Adjust or replace the switch(es), if necessary.

Load Door Not Fully Open — Applies only to machines equipped with a load door. Indicates the load door was not fully open after the press attempted to raise the load door. After correcting the problem, press  to return to automatic operation.


This error may be caused by the following conditions:

- There is a load door obstruction.

- The “Load Chute Full Up” switch is malfunctioning or is out of adjustment.

Solutions:

- Remove the obstruction and restart the press.
- Ensure correct actuation of the switch(es).
- Adjust or replace the switch(es), if necessary.

Load Door Not Fully Closed — Applies only to machines equipped with a load door. Indicates the load door was not fully closed after the press attempted to lower the load door. After you correct the problem, press  to lower the door and return to automatic operation.

This error may be caused by the following conditions:

- There is a load door obstruction.
- The “Load Chute Full Down” switch is malfunctioning or is out of adjustment.

Solutions:

- Remove the obstruction and restart the press.
- Ensure correct actuation of the switch(es).
- Adjust or replace the switch(es), if necessary.

Eye Did Not Block — Indicates the cake did not block the photoeye when the press attempted to discharge. The error clears automatically if the “Discharge Photoeye” input is actuated.

This error may be caused by the following conditions:

- The cake is missing or stuck in the can.
- The belt is slipping or failed to run.
- The discharge photoeye is malfunctioning or is out of adjustment.

Solutions:

- Inspect the belt. Repair or replace as needed.
- Ensure correct actuation of the switch(es).
- Adjust or replace the switch(es), if necessary.

Discharge Door Not Fully Open — Indicates the discharge door did not fully open when the press attempted to raise the door. The error clears automatically if the “Discharge Door Full Up” input is actuated.



This error may be caused by the following conditions:

- There is a discharge door obstruction.
- The “Discharge Door Full Up” switch is malfunctioning or is out of adjustment.

Solutions:

- Remove the obstruction and restart the press.
- Ensure correct actuation of the switch(es).

- Adjust or replace the switch(es), if necessary.


Discharge Door Not Fully Closed — Indicates the discharge door did not fully close when the press attempted to lower the door. Press  once to raise the discharge door. Press  again to lower the door and return to automatic mode. The error also clears automatically if the “Discharge Door Full Down” input is actuated.

This error may be caused by the following conditions:

- There is a discharge door obstruction.
- The “Discharge Door Full Down” switch is malfunctioning or is out of adjustment.

Solutions:

- Remove the obstruction and restart the press.
- Ensure correct actuation of the switch(es).
- Adjust or replace the switch(es), if necessary.

Water Sensor Did Not Sense Goods — Indicates the water sensor (“Load Scoop Blocked”) input was not actuated (the press did not detect goods) during loading when the press expected a load (the load was not an empty pocket). Press . If the press does not return to automatic operation, this error may be caused by the following conditions:


- The tunnel transferred an empty pocket that was not properly coded.
- The “Load Scoop Blocked” switch is malfunctioning or is out of adjustment.
- Batches have ceased to exit the tunnel.


Solutions:

- If batches have ceased to exit the tunnel, notify supervisory or maintenance personnel immediately for tunnel corrective action.
- Ensure correct actuation of the switch(es).
- Adjust or replace the switch(es), if necessary.

Press Code is Invalid — Indicates the press received a non-existent press code from the loading device. This is usually due to a data entry error.

Solution:

1. Press  to clear the error and put the press in manual mode.
2. Return to automatic mode
3. Verify the cake data when prompted, and enter a valid press code.


Press Should be Empty — Indicates the ram did not clear (deactuate) the “Ram Full Down” proximity switch, which suggests that there is a load in the can when the press does not expect it (loading device indicated an empty pocket). Press  to clear the error and put the press in manual mode.

This error may be caused by the following conditions:

- The tunnel transferred a cake which was improperly coded as an empty pocket.
- The “Ram Full Down” switch is malfunctioning or is out of adjustment.

Solutions:

- Check empty pocket programming in the tunnel and make the necessary corrections.
- Ensure correct actuation of the switch(es).
- Adjust or replace the switch(es), if necessary.


COINC Eye Blocked — Applies only to machines equipped with a COINC (inclined conveyor). Indicates the COINC photoeye did not clear during discharge. This error is enabled only when the configuration decision **X = Time for Cake to Clear COINC Eye** is set to a non-zero value. Press  to clear the error and put the press in manual mode.

This error may be caused by the following conditions:

- There are goods on the end of the COINC belt blocking the photoeye.
- The COINC belt is slipping or failed to run.
- The COINC photoeye (COINC loaded input) is malfunctioning or is out of adjustment.

Solutions:

- Clear the goods from the belt and restart the press.
- Inspect and repair the belt as necessary.
- Ensure proper actuation of the photoeye.
- Adjust or replace the photoeye if necessary.

Ram Not Fully in Can — Indicates the ram failed to clear the “Ram at Unload” proximity switch when the press attempted to lower the ram, which suggests that the ram is not fully in the can. The press makes two attempts to lower the ram before it signals the error. Press  to clear the error and put the press in manual mode.


This error may be caused by the following conditions:

- A double or oversized load is in the can.
- The “Ram at Unload” switch is malfunctioning or is out of adjustment.

Solutions:

- Remove some of the goods from under the ram using the gaff hook supplied by the factory.
- Ensure the ram is below the unload point.
- Ensure correct actuation of the switch(es).

- Adjust or replace the switch(es), if necessary.


Can Stuck Down. Press Fault Recovery — Indicates one or both of the “Can Full Down” switches was still actuated after the press attempted to raise the can. Press  to clear the error and put the press in manual mode.

This error may be caused by the following conditions:

- The can cannot move up because goods are stuck in it.
- One or both of the can full down switches are malfunctioning or out of adjustment.

Solutions:

- Remove the goods from the can using the gaff hook supplied by the factory.
- Ensure the can is down.
- Ensure correct actuation of the switch(es).
- Adjust or replace the switch(es), if necessary.

Unexpected Pressure in Ram — Indicates the press detected pressure in the ram before the ram cleared the “Ram Inside Can” proximity switch. Press  to clear the error and put the press in manual mode.

This error may be caused by the following conditions:

- The ram encountered an obstruction while moving down.
- The pre-fill valve is malfunctioning.
- The pressure transducer is malfunctioning.
- The ram inside can switch (ram half up input) is malfunctioning or is out of adjustment.

Solutions:

- Clear any obstructions in the ram’s path.
- Check the pre-fill valve for proper operation. Repair or replace as necessary.
- Check the transducer. Repair or replace as necessary.
- Check that the ram is above the “ram inside can” position.
- Ensure correct actuation of the switch(es).
- Adjust or replace the switch(es), if necessary.


Ram Not Fully Down — Applies only to empty pocket formulas. Indicates that the ram did not clear the “Ram Full Down” proximity switch within 20 seconds of passing the “Ram at Unload” proximity switch. This error may also occur if the ram doesn't clear the “Ram Full Down” switch before any programmed **Max Press Time** expires.

This error may be caused by the following conditions:

- The tunnel transferred a cake which was improperly coded as an empty pocket.
- Goods are jammed between the ram and can.

- The “Ram Full Down” switch is malfunctioning or is out of adjustment.

Solutions:

- Check empty pocket programming in the tunnel and make the necessary corrections.
- Remove the goods from the can using the gaff hook supplied by the factory. Press  to clear the error and command the ram down.
- Ensure correct actuation of the switch(es).
- Adjust or replace the switch(es), if necessary.

Three-Wire Disabled — Indicates the safety circuit (three-wire circuit) was disabled (the relay CRS+ was de-energized).

This error may be caused by the following conditions:

- The operator attempted to run the press in Manual or Automatic mode but did not energize the press with the **start** button (①).
- One of the several safety devices, such as an emergency stop switch or a motor disconnect switch, disabled the safety (three-wire) circuit (CRS+).

Solution:

- Press the **start** button (①) to energize the press.
- If a safety device disabled the safety (three-wire) circuit (CRS+), this error condition requires electrical troubleshooting. See the electrical schematic. Contact your Milnor® dealer for further assistance (see [Section : How to Contact Milnor®, page 1](#)).

4.4.1.2 Switch Faults

BNP1UT02.R02 0000232984 B.3 A.8 A.15 1/2/20, 1:58 PM Released

The ram, can, and discharge door each have limit (full-up and full-down) proximity switches at both ends of travel. If the limit switches on opposite ends of travel are actuated at the same time, the microprocessor stops automatic operation and displays a switch fault error message.

The error is usually caused by a switch that was damaged when a moving device exerted too much force on the switch plunger. Usually, the malfunctioning switch is opposite the current position of the moving device.

- Ensure correct actuation of the switch(es).
- Adjust or replace the switch(es), if necessary.

Once the error condition is corrected, press the **Fault Recovery** button on the control panel () to clear the error message.

Can Up and Down — The “Can Full Up” and one of the “Can Full Down” inputs were actuated at the same time.

Ram at Unload & Not Full Down — The “Ram at Unload” input was actuated while the “Ram Full Down” was not actuated. The “Ram at Unload” input implies that the “Ram Full Down” input should also be actuated.

Ram Half-Up & Not Ram at Unload — The “Ram Inside Can” input was actuated while the “Ram at Unload” input was not actuated. The “Ram Half Up” input implies that the “Ram at Unload” input should also be actuated.

Ram Full Up & Not Ram Half Up — The “Ram Full Up” input was actuated while the “Ram Inside Can” input was not actuated. The “Ram Full Up” input implies that the “Ram Half Up” input should also be actuated.

Discharge Door Up and Down — The “Discharge Door Full Up” and “Discharge Door Full Down” inputs were actuated at the same time.

4.4.1.3 Miscellaneous Faults

BNP1UT02.R03 0000232983 B.3 A.5 A.15 1/2/20, 1:58 PM Released

Board failure — Indicates a peripheral board is not communicating with the controller. This error can indicate an I/O board, output board, D/A board, or A/D board failure.

This error may be caused by the following conditions:

- The machine is incorrectly configured.
- The identified board is addressed improperly (see schematic).
- There is one or more loose wire connection to or from the board.

Solutions:


- Verify that configure decision values match the equipment.
- Verify that the switches on the board referenced on the display are set to the correct address.
- Check the wires to and from the board.
- If the error persists, replace the board.


Taut Belt: Check Belt Rollers — Goods are wrapped around the drive, tension, and/or tracking roller, between the roller and the underside of the belt. This results in an increased effective roller diameter and increased belt tension. Unless corrected, the increased belt tension can damage the belt or the bearings on either end of the roller.

Observing all safety precautions, remove the wrapped goods from the roller(s) as described in the service manual (see document BIPPM12 “Clearing Taut Belt Errors”).

Main Filter Dirty — The main oil filter is dirty and needs to be replaced. Replace the filter and return the press to normal operation.

Recirc Filter Dirty — The recirculation oil filter is dirty and needs to be replaced. Replace the filter and return the press to normal operation.

Oil Temperature High — The hydraulic oil is too hot. This error shuts down the press. Wait for the oil to cool and press  to return the press to normal operation.

Oil Level Low — The hydraulic oil level has dropped too low. This error shuts down the press. Press  to clear the error display. Add just enough oil to prevent the error. Start the press and raise the ram. Check oil level with the ram raised and add more oil as necessary.

Pressure High in Hydraulic Tank: Check Filter — The hydraulic tank pressure has exceeded a certain (preset) threshold, which indicates the filter needs to be replaced.

Discharge Fault. Shuttle Left Too Soon — The condition that caused this error no longer occurs. If the error appears, consult your dealer or the Milnor® factory using the information in [Section : How to Contact Milnor®, page 1](#).