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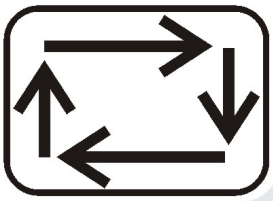

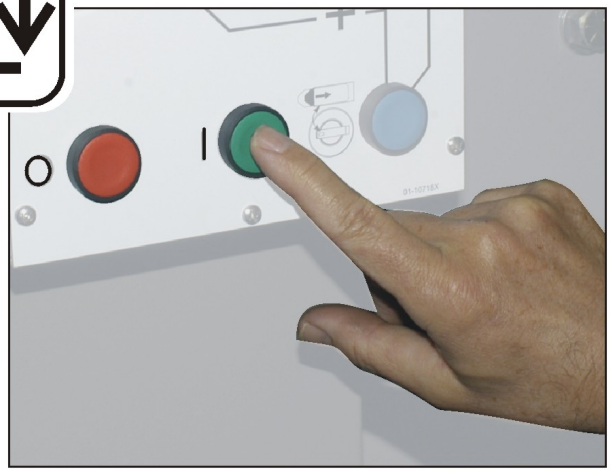

PELLERIN MILNOR CORPORATION **POST OFFICE BOX 400, KENNER, LOUISIANA 70063-0400, U.S.A.**

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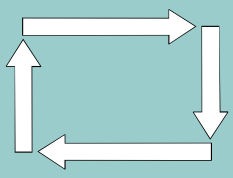
Operator Guide—

Tilting Washer-extractor with Mark VI Controller



PELLERIN MILNOR CORPORATION POST OFFICE BOX 400, KENNER, LOUISIANA 70063 - 0400, U.S.A.

Applicable Milnor® products by model number:

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Chapter 1
Controls

BICWCO02 (Published) Book specs- Dates: 20070924 / 20070924 / 20070924 Lang: ENG01 Applic: 68036F5N

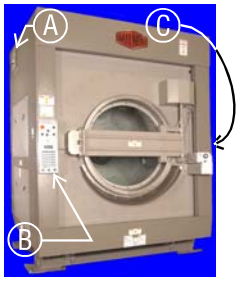
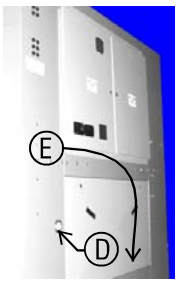
1.1. Controls on Mark VI Tilting Washer-extractors with Hydraulic Door

Refer to other parts of this document (Section 1.1.2 through Section 1.1.5) for the location and basic function of individual controls. Don't use this document as instructions for operating the machine.

1.1.1. Where are the Controls?

The essential controls for normal operation are located on the front control panel (Figure 1). Additional controls and connections are located elsewhere on the machine, as described here.

Figure 1: Locations of Controls

Front Left View	Rear View	Legend
		**A.** Microprocessor control box (68036F_B shown) **B.** Control panel **C.** Manual supply flush button **D.** Hydraulic pressure gauge for loading door **E.** Air pressure gauge for tilt system (behind lower rear panel)

1.1.2. Where do I Connect the Data Storage Device?

The microprocessor box in the upper rear corner of the machine left side panel (see Figure 1) contains a DIN-type connection for serial communications. Use this connection, labelled as shown in Figure 2, with a serial data transfer device to save or restore machine programming and configuration memory.

Figure 2: Serial Connection for Data Transfer

1.1.3. What are the Operating Controls?

The primary operating controls are required to start and stop the machine, select wash formulas, and monitor machine operation.

Figure 3: Mark VI Control Panel

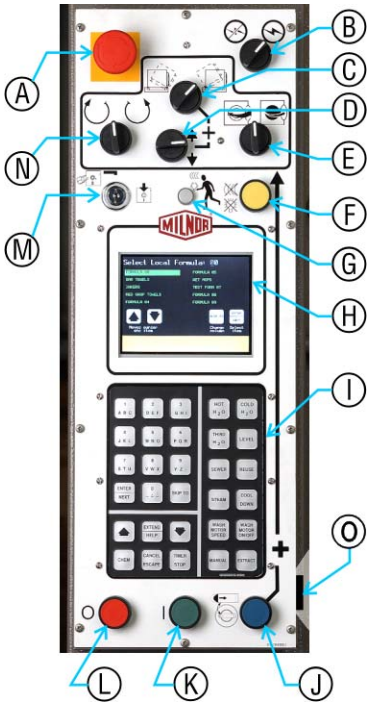
Panel and Controls	Legend
	**A.** *Emergency stop* button **B.** *Master switch* for power **C.** *Tilt front/rear selector* switch (tilting models only) **D.** *Tilt up/down selector* switch (tilting models only) **E.** *Door open/close* switch **F.** *Operator signal cancel* button **G.** *Operator signal* light **H.** Liquid crystal graphic display **I.** Keypad **J.** *Door open* button **K.** *Start* button **L.** *Stop* button **M.** *Run/Program keyswitch* **N.** *Jog direction* switch **O.** *Door open jog* button (tilting models only)

Figure 4: Keypad

Emergency stop button—disables the 3-wire circuit. This switch locks in when pressed, so you must turn it a quarter turn to allow it to return to the normal position to allow the machine to run.

Notice 1: Press the *emergency stop* button immediately in any emergency situation. This disables the 3-wire circuit, which stops all machine operation and causes the drain to open.

- When you reset this button, you have the option of cancelling or resuming the interrupted formula. The formula resumes where it was interrupted or at the beginning of the previous bath step, depending on the operation in progress when the *emergency stop* button was pressed.

Master power switch (⊗ / ⊖)—removes power from the control system. If you turn the *master switch* off (⊗) while a formula is running, the immediate result is similar to pressing the *emergency stop* button: the machine stops and the drain opens. Unlike the *emergency stop* button, resumed formulas start at the beginning of the step in which power was lost, but chemicals are not injected in the resumed step.

Operator signal cancel button (🔔)—cancels the *operator signal*. Press this button to silence the buzzer and turn off the *operator signal* light (see below), or to allow injection of a chemical programmed to require a signal before injection.

Operator signal light—indicates that the machine has encountered an error or that the operator must perform some action, such as pressing the *start* button or unloading the machine. The *operator signal* circuit includes a buzzer behind the control panel, and may include an optional beacon light mounted separately from the control panel.

Liquid crystal graphic display—displays information and help about the machine. The information on the display changes according to the status of the machine and the function selected by the operator.

Keypad—allows the operator to communicate with the machine control system. The keypad is divided into three areas: alphanumeric buttons, general buttons, and function-specific buttons. Each button may perform more than one function, based on the current machine status. Some buttons are also used in combinations for additional functions.

Start button ( )—starts the selected wash formula. The *start* button energizes the 3-wire circuit to allow the machine to operate.

Stop button ( )—stops machine operation. Like the *emergency stop* button, the *stop* button disables the 3-wire circuit; however, the *stop* button doesn't require you to manually reset it after use.

Run/Program keyswitch (/)—in the *Program* position, allows changes to machine configuration and wash formulas, among other actions. In the normal *Run* position, formulas and configuration are protected and formulas can be run.

Air pressure gauge for tilt system—located behind the lower panel on the rear of the machine; monitors the air pressure used to tilt the machine.

1.1.4. What are the Loading Controls?

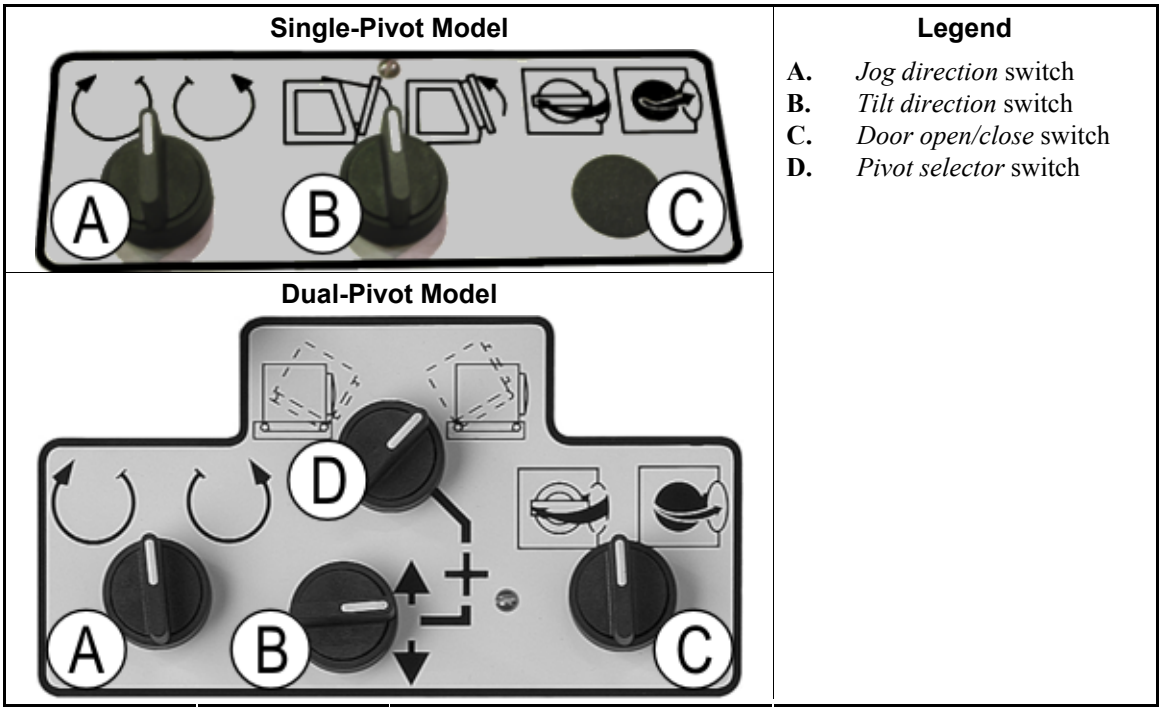
Loading controls allow you to open and close the door, as well as tilt and jog the cylinder; used primarily when loading and unloading a tilting machine.

Milnor manufactures machines with two different types of tilting mechanisms:

- **Single-pivot models**, including the E_N and J_N model lines, tilt hydraulically from a single pivot axis near the rear of the machine. These models tilt to unload by lowering the front of the machine below the normal operating position, and tilt to load by raising the front of the machine above the normal operating position.
- **Dual-pivot models**, including tilting models in the F_W line, tilt pneumatically from pivot axes near the front and rear of the machine. These models tilt to load by inflating air bladders below the front of the machine, and tilt to unload by inflating air bladders below the rear of the machine.

The symbols on the machine control panel vary according to whether the machine is a single- or dual-pivot model.

Figure 5: Typical Tilt Control Panels



***Pivot selector* switch (/)**—determines whether the machine tilts on the forward or rearward pivot. Set this switch to the left position to facilitate unloading; use the right position to tilt the front of the machine up for easier loading.

***Tilt direction* switch**—actuates the necessary devices to raise or lower the selected end of the machine. On dual-pivot machines, this switch works with the *pivot selector* switch to tilt the machine. With the *door open* button pressed, turn the switch up to raise the selected end of the machine, or down to lower it.

To tilt a dual-pivot machine backward for easier loading, first set the tilt front/rear selector switch to the right, as shown in Figure 5. This determines that the machine will tilt on the rear pivot point. Next, hold the tilt direction switch in the *up* position and press the *door open* button (). The front of the machine will tilt up and back until the front is fully tilted or you release either of the two controls. Use similar procedures to lower the front of the machine to the normal position, or to raise the rear of the machine for unloading.

To tilt a single-pivot machine, hold the tilt direction switch in the desired position and hold the *door open* button () until the machine reaches the desired angle.

***Door open/close* switch (/)**—controls the automatic door system when the machine is idle. To open the door, turn the switch to the right () while pressing the *door open* button (). Turn the switch to the left () and press the *door open* button to close the door. Release the controls when the door is in the correct position. The hydraulic pump which powers the door shuts off automatically when the door is fully open or fully closed.

Door open button ()—enables other loading controls when the machine is idle. Pressing the *door open* button while the machine is operating removes power from the 3-wire circuit, stopping the machine. When the machine is idle, this button must be pressed to perform any other loading or unloading function. This requirement helps ensure that you have both hands safely on the control panel of the machine if the basket might turn under power while the door is open.

WARNING 2: Fall, Entangle, and Strike Hazards—Contact with the turning cylinder can crush your limbs. The cylinder will repel any object you try to stop it with, possibly causing the object to strike or stab you. The turning cylinder is normally isolated by the locked cylinder door.

- Do not tamper with or disable any safety device or operate the machine with a malfunctioning safety device. Request authorized service.

Jog direction switch (/)—allows you to jog the cylinder slowly in either direction to help in loading or unloading the machine. To jog the cylinder clockwise, hold the jog direction switch to the left () while pressing the door open button.

Door hydraulic circuit pressure gauge—on the rear panel of the machine, this gauge displays the pressure in the hydraulic circuit when the door is opening and closing. During normal operation, this gauge registers 0 unless the hydraulic door opening or closing. When the door is moving, this gauge indicates about 900 psi (62 bar) when the hydraulic system is properly adjusted.

1.1.5. What does this Switch do?

Other buttons and switches are used to control additional standard and optional machine functions. These miscellaneous controls are located and described in this section.

Mildata/Local selector switch (Figure 6)—located on the microprocessor control box (see Figure 1), allows the machine to communicate with a Mildata network. A Mildata network connects several machines together and allows them to share wash formulas and other data with the Mildata computer. When this switch is in the *Mildata* position () and you enter a

formula number, the machine requests the contents of the formula from the Mildata computer. When set to the *Local* position (), only formulas present **in the machine** are available.

Figure 6: Mildata/Local Selector switch

***Door open jog* button (Figure 7)**—This button, if provided, is located on the side of the control panel box near the *door open* button. To reduce the chance of soiled goods falling out of the machine as it descends, hold this button and the *door open* button depressed with one hand, and hold the *jog direction* switch in either direction with the other hand. The cylinder rotates slowly as the door closes and the machine descends to the normal operating position.

Figure 7: *Door open jog* button

Manual supply flush button (Figure 8)—On machines equipped with an optional flushing supply injector, press this button to spray water into the supply injector to flush any remaining chemicals into the cylinder. If you manually add supplies during a wash formula, press this button to flush any remaining undiluted chemicals out of the supply chute. If the machine is not equipped with the optional supply injector, press this button to flush the liquid chemical inlets with fresh water.

Figure 8: Manual Supply Flush button

— End of BICWCO02 —

Chapter 2
Normal Machine Operation

BICWCO03 (Published) Book specs- Dates: 20070924 / 20070924 / 20070924 Lang: ENG01 Applic: 68036F5N

2.1. Operating Instructions for Plant Personnel

2.1.1. Start Here for Safety

This document is meant to remind you, the person operating this washer extractor, of what is required to operate this machine. Do not attempt to operate this machine before an experienced, trained operator explains the details to you.

DANGER 3: Multiple Hazards—Careless operator actions can kill or injure personnel, damage or destroy the machine, damage property, and/or void the warranty.

DANGER 4: Electrocution and Electrical Burn Hazards—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.

CAUTION 5: Collision, Crushing and Pinch Hazards—Contact with moving components normally isolated by guards, covers, and panels, can entangle and crush your limbs. These components move automatically.

2.1.2. Check Switch Settings

Display or Action	Explanation
	Check that the *run/program* keyswitch is at  .
	All emergency stop buttons must be unlatched and in the *ready* position to allow machine operation.
	Check that the master switch is at .

2.1.3. How do I Load a Tilting Machine?

2.1.3.1. Automated (Rail or Shuttle) Loading

Display or Action	Explanation
	Open the door
	Set the *tilt front/rear selector switch* to the *front* position.
	Tilt the front of the machine up to receive the load.
	Select the formula (07, for example). Details about selecting a formula are described in Section 2.1.4 "How do I Select a Formula?".
	Toggle column for formula selection if necessary.
	Move to the next or previous displayed formula in the current column.
	Confirm the selected formula.

Use the procedure defined by facility management to put the goods in the machine.

	Close the door.
	Tilt the front of the machine down to the normal position.

2.1.3.2. Manual Loading

Display or Action	Explanation
	Open the door.
	Select the formula (07, for example). Details about selecting a formula are described in Section 2.1.4 "How do I Select a Formula?".
	Toggle column for formula selection if necessary.
	Move to the next or previous displayed formula in the current column.
	Confirm the selected formula.

Use the procedure defined by facility management to put the goods in the machine.

	Close the door.

2.1.4. How do I Select a Formula?

The Mark VI controller can operate in either *local* or *Mildata* mode. In *local* mode, the machine does not communicate with any other devices and runs formulas contained in local controller memory. In *Mildata* mode the machine downloads and runs formulas from the Mildata computer, and frequently updates the display on the Mildata computer.

Figure 9: Selecting a Local or Remote Formula

***Select Program* Displays**

Legend

A. Local (Mildata not present or enabled)

B. Remote (Mildata enabled)

2.1.4.1. Selecting a Local Formula—If the machine is not part of a Mildata network, or if the Mildata network is not available, you can choose from any of the wash formulas stored in local memory on the machine. Use the *Select Local Formula* screen (Figure 10) to choose the correct formula for the goods in the machine.

Figure 10: *Select Local Formula* Screen

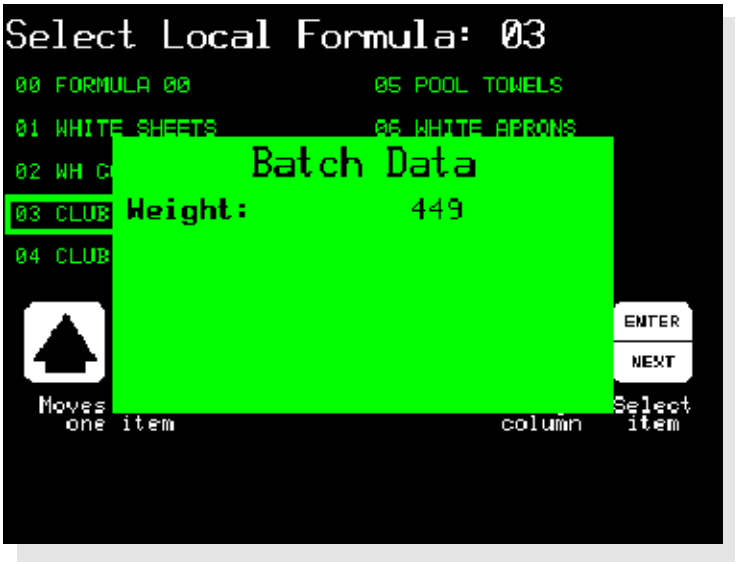
Display or Action	Explanation
0 7	Directly selects the formula you want to run (07, for example). When you enter a two-digit number, the selected formula moves to the top of the left column on this screen.
SKIP TO	Toggles the column for formula selection if necessary. If the desired formula is visible on the screen, but is in the opposite column from the selection box, this keystroke moves the selection box to the other column of formulas.
↓ / ↑	Move to the next or previous displayed formula in the current column. If the desired formula is visible on the screen and in the same column as the selection box, you can use these two keys to move the selection box down or up to select the formula.
ENTER	Confirm the selected formula. Place the selection box on the formula you want to run, then press ENTER to continue with the normal operation procedures.

Supplement 1

About Load Weight and *Metered Water*

Metered water is available on Mark VI washer-extractors equipped with optional flow meters on the incoming water lines. This feature allows the Mark VI controller to admit a quantity of water proportional to the weight of goods you enter after selecting the formula. If you enter a weight of 200 units when prompted, the machine will use twice as much water as if you entered 100 weight units. This option can save a significant amount of water if you enter accurate weights for each load.

Figure 11: Entering Load Weight for Metered Water



Display or Action	Explanation
4 4 9	Enter the weight of the goods loaded in the machine. The machine controller uses the weight to determine how much water is needed to wash the goods according to the programmed wash formula.
ENTER	Accept the entered goods weight and continue.

2.1.4.2. **Selecting a Mildata Formula**—If the machine is part of a Mildata network and the network is available, you can choose any wash formula stored on the Mildata computer. Use the *Select Remote Formula* screen (Figure 12) to choose the best formula for the goods in the machine.

> **Note 1:** You can store up to 1000 different wash formulas on the Mildata computer. All of these formulas are available to all washer-extractors that are part of the Mildata network and have compatible hardware.

Figure 12: *Select Remote Formula* Screen

Display or Action	Explanation
0 9 2 8	Select formula 928 (example) stored on the Mildata computer. The Mark VI controller requests the formula from the Mildata computer and displays the formula name, as shown in Figure 12.
ENTER	Confirm that the displayed formula name is the formula you want to run. If the displayed formula isn't the right one for the loaded goods, press CANCEL to clear the formula number, then enter another number.

After you've retrieved and verified the formula, the Mark VI controller prompts for any configured *batch data*.

2.1.4.3. **Entering *Mildata Batch Codes***—The Mark VI controller uses a screen similar Figure 13 to prompt you for the batch data fields selected in machine configuration (see the related section in document BICWCC01). The data you enter is sent to the Mildata computer for accounting and report generation.

Figure 13: Batch Data for Remote Formula Operation

Weight—the weight of the batch of goods in the machine. This information is usually used along with other batch data to calculate customer charges or employee productivity. In machines equiped with optional flow meters and configured for metered water, the weight value is also used to determine how much water is required to process the batch. The weight value can be up to three digits.

Customer Code—the identifying code for the customer. This information can help you determine how much work each customer is submitting. Ten digits are available for customer code.

Employee Number—the identifying code for the employee responsible for this batch. The employee number may be up to five digits long.

Pieces—the number of pieces in the machine. This value sometimes replaces the weight value, especially when charges are made by the piece rather than by weight. Four digits are available for the number of pieces.

Lot Number—the identifying code for several related batches or customers. At your discretion, the value entered here might represent a particular route number common to several accounts. A lot number can be up to 10 digits long.

2.1.5. Start the Selected Formula

Be sure you've completed these steps before you go any further in the operating procedure.

1. You've loaded the machine at or near its rated weight capacity.
2. You've selected a formula that's appropriate for the goods in the machine.
3. You've entered any batch data the machine controller requires for metered water or Mildata reporting.
4. You've closed the door.

5. If you tilted the machine to load it, you've returned it to the normal operating position.

Display or Action	Explanation
①	Start the selected formula.

The machine begins the wash formula. The basket begins turning and water valves open. When a safe level is achieved, the steam valve may open to begin heating the bath. Operation from this point to the end of the formula is completely automatic unless a signal is programmed with a chemical injection (see Supplement 2).

Supplement 2

Chemical Injections with the Operator Signal

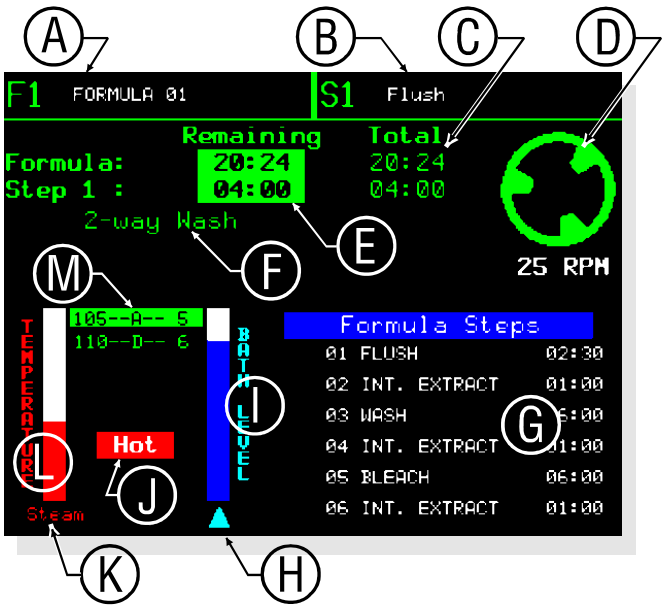
If you need to adjust the amount of a chemical injection from load to load depending on highly variable factors, the formula can be programmed to stop the timer and signal you when a chemical is required. Add the chemical, then press ⚡ to resume the formula.

2.1.6. What Does the *Run* Display Tell Me?

While the machine is running the formula you selected, the display appears similar to the one shown in Figure 14. The information shown here is explained below.

Figure 14: How to Read the *Run* Display

Typical Display



Legend

- **A.** Formula number and name
- **B.** Step number and name
- **C.** Total time for formula and current step
- **D.** Basket rotation graphic and speed
- **E.** Remaining time for entire formula and current step
- **F.** Machine status message
- **G.** Formula steps: number, name, and duration
- **H.** Indicator for filling or draining
- **I.** Graphic bath level indicator
- **J.** Water valves indicators
- **K.** Indicator for optional steam and cooldown valves
- **L.** Graphic bath temperature indicator
- **M.** Bath temperature and level data

2.1.6.1. Formula and Step Information—The top line of the display always shows the number and name of the current formula and step. The *formula number* appears in the upper left corner of the display, following the letter "F."The *formula name* follows the number.

The *step number and name of the current step* are displayed to the right of the formula information. The Mark VI controller updates the formula number and name when a formula starts and at the beginning of each subsequent step.

Below the formula and step names is *time information*. The numbers in the "Total" column (green numbers) show the total time required for the formula and step to run to completion, not including the factors described in Note 2. The controller calculates the "Formula" value when the formula begins, and this value doesn't change while the formula is running. The controller calculates and displays the "Step x" value at the start of each step.

The numbers in the "Remaining" column of the time area (black numbers on a green background) indicate the *time remaining* in the formula and in the current step. These numbers indicate the **minimum** amount of time remaining (see Note 2).

> **Note 2:** The duration of some wash formula events can't be estimated, so the controller stops the timer until a requirement is met. For example, the time required for the machine to fill to the desired level depends on the water pressure to the plant, the size of the piping to the machine, and how many other machines are filling at the same time. In addition to the time required to fill, the time required to achieve temperature or for an operator to verify a chemical injection are variable. Error conditions can also stop the timer.

The controller displays the current *machine status* below the step number and remaining time. Some of the possible machine states are listed in Table 1. Error messages appear immediately below the machine status message when required.

Table 1: Machine Status Messages

Idle	Coasting
1-way Wash	Waiting to Discharge
2-way Wash	Waiting for Load
Soak	Power-up Delay
Pre+Final Extract	Draining to Sewer
Intermediate Extract	Draining to Reuse
Final Extract	Timer Stopped
Double Extract	Please Wait xx Seconds

2.1.6.2. **Basket Rotation**—The *basket rotation graphic* near the upper right corner of the display represents the relative basket speeds in wash, drain, and extract speeds. Immediately below the basket rotation graphic, the controller displays the desired basket speed in either revolutions per minute (RPMs) or in gravitational units (G's).

2.1.6.3. **Bath Temperature and Level**—*Water valve indicators* appear when the corresponding water valve is open.

The graphic *bath temperature indicator* shows the approximate temperature in the machine. The vertical indicator bar is solid red when the temperature in the machine is at the maximum allowable value of 205 degrees Fahrenheit (95 degrees Celsius).

The steam or cooldown indicator appears below the graphic temperature indicator when either of these optional features is enabled. "Steam" appears when the steam valve is open, and "Cooldown" appears when the cooldown output is enabled.

The graphic *bath level indicator* shows the percentage of the desired level that's achieved. The vertical indicator bar is solid blue when the programmed level is achieved, and solid white when there is no water in the machine.

The *level direction indicator arrow* points upward when the actual bath level in the machine is increasing (when the machine is filling), and points downward when the drain opens. The arrow is not visible when level is achieved, or during extract steps.

The controller displays *bath temperature and level data* between the temperature and level graphic indicators. The top line displays the temperature and level that are currently achieved in the machine, and the bottom line displays the desired values.

2.1.6.4. Formula Steps and Chemical Injection—When a formula begins, the controller displays the first six steps in the *formula steps list* in the lower left area of the screen. If the program contains more steps than can be displayed at one time, the list scrolls to display more steps as the earlier ones end. The current step is highlighted.

The list of programmed *chemical injections* replaces the formula steps list during each injection, with a highlight box on the chemical that's currently injecting.

2.1.7. Unload the Machine

When the formula ends, the operator signal sounds and the machine displays a message that it is waiting to discharge (see Figure 15). Use a procedure similar to the one outlined below to unload the goods.

Figure 15: Typical Message when Formula Ends

2.1.7.1. For any *End Code*—The Mark VI controller allows you to program one of four possible actions for the end of the formula: *stopped*, *reversing at wash speed*, *turning at drain speed*, or *tumbling*. You use the same unloading procedure for formulas using the first three actions. For the fourth action, you also have the option of using the procedure described in Section 2.1.7.2.

Display or Action	Explanation
	Remove power from the 3-wire circuit, silence the operator signal, and stop any basket motion in progress. This button also unlocks the door so you can open it.
	You can also remove power from the 3-wire circuit, silence the operator signal, and stop any basket motion that was in progress with any of these buttons. However, if you use any of these buttons, you'll still need to unlock the door with before you can open it. If you use any of these buttons to stop a formula with *end code 3* (see Section 2.1.7.2), the formula is terminated and cannot be resumed.
	Open the door for unloading.

2.1.7.2. For End Code 3 (*Tumbling*)—End code 3 (*Tumbling*) allows you to open the door and remove some of the goods, then close the door and resume tumbling to loosen more goods from the basket.

Display or Action	Explanation
	Remove power from the 3-wire circuit, silence the operator signal, and stop any basket motion in progress. This button also unlocks the door so you can open it.

When the basket stops turning, open the door and remove some or all of the goods from the machine.

	Open the door for unloading.

Remove any desired portion of the load.

	Close the door.
①	Resumes the tumbling action without the operator signal. Tumbling continues for another two minutes, or until you press  .

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Chapter 3
Signals and Errors

BICWCT04 (Published) Book specs- Dates: 20070924 / 20070924 / 20070924 Lang: ENG01 Applic: 68036F5N

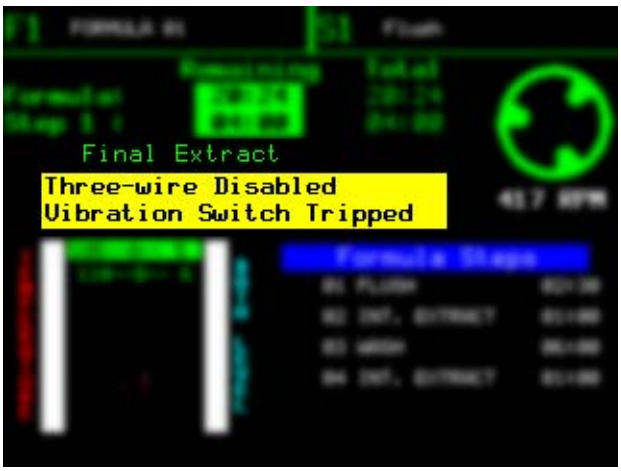
3.1. Operator Intervention

Once a formula starts, the machine usually runs automatically. The machine will sound the signal if an operator needs to make a decision or do something manually. The most common reasons you'll need to attend to the machine are errors, and to manually add chemicals in some cases.

3.1.1. Error with Operator Signal

The operator signal will sound and the beacon will flash if an error causes the machine to stop. These errors usually disable the three-wire circuit, and include a tripped vibration switch or a malfunction of the inverter that controls the motor. Figure 16 shows how a vibration switch error appears on the display.

Figure 16: Typical Error with Operator Signal



To resume the formula, silence the signal and correct the cause of the error. Then, restart the formula.

Display or Action	Explanation
	The Cancel key on the keypad stops the machine, silences the operator signal buzzer, and turns off the signal light. You'll have to restart the formula from the beginning.

Correct the cause of the error. If you don't know how to fix the problem, have someone check the reference manual for the machine.

①	If you've corrected the error, the Start button resumes the formula where it stopped. If the vibration switch caused the error, the machine goes through a distribution sequence to spread the goods around the basket, then resumes the interrupted extract step.

3.1.2. Operator Signal for a Chemical

This machine can control an automatic chemical pump system, or it can signal you to add chemicals manually. The display (Figure 17) appears the same in either case, but the operator signal sounds only if the signal is programmed.

If the formula is programmed to control a chemical pump system, the display shows the programmed chemical valve number, chemical name, and injection time. The injection time, shown at the right end of the chemical display, begins counting down immediately when the chemical injection begins.

If the formula is programmed to signal you to manually add chemicals, the machine will operate automatically until it needs a chemical, then the machine stops and waits for you to add the chemical and resume operation. The display changes to show you which chemical to add, but the injection time counter runs only after you cancel the operator signal.

Figure 17: Chemical Injection View on Run Display

Display or Action	Explanation

After you've added the chemical,

cancels the operator signal and starts the injection time counter.

— End of BICWCT04 —

Dansk 2

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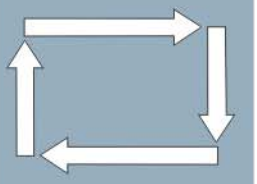
Brugervejledning [Operator Guide]—

Vipning af vaskemaskine med Mark VI-kontrolenhed [Tilting Washer-extractor with Mark VI Controller]



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Læs sikkerhedsvejledningen

PELLERIN MILNOR CORPORATION POST OFFICE BOX 400, KENNER, LOUISIANA 70063 - 0400, U.S.A.

Gældende Milnor® produkter ifølge modelnummer: [Applicable Milnor® products by model number:]

48040H7N 64040E6N 64050E5N 68036F5N 68036F5P 68036H5N

Indholdsfortegnelse [English table of contents follows]

Afsnit	Figurer, tabeller og tillæg

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Sections	Figures, Tables, and Supplements

Kapitel 1
Knapper

Chapter 1
Controls

BICWCO02 (Published) Book specs- Dates: 20070924 / 20070924 / 20110221 Lang: DAN01 Applic: 68036F5N

1.1. Knapper på Mark VI Kipbare vaskemaskiner med hydraulisk dør

Se andre dele af dette dokument (Afsnit 1.1.2 til Afsnit 1.1.5) for de enkelte knappers placering og grundlæggende funktion. Brug ikke dette dokument som instruktion til at betjene maskinen.

1.1. Controls on Mark VI Tilting Washer-extractors with Hydraulic Door

Refer to other parts of this document (Section 1.1.2 through Section 1.1.5) for the location and basic function of individual controls. Don't use this document as instructions for operating the machine.

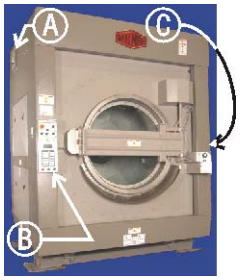
1.1.1. Hvor er knapperne?

Knapperne til normal betjening er placeret forrest på kontrolpanelet (Figur 1). Andre knapper og tilslutninger er placeret andet sted på maskinen som beskrevet her.

1.1.1. Where are the Controls?

The essential controls for normal operation are located on the front control panel (Figure 1). Additional controls and connections are located elsewhere on the machine, as described here.

Figur [Figure] **1: Placering af knapper [Locations of Controls]**

Set forfra til venstre [Front Left View]	Set bagfra [Rear View]	Beskrivelse [Legend]
		**A.** Kontrolboks til mikroprocessor (68036F_B vist) [Microprocessor control box (68036F_B shown)] **B.** Kontrolpanel [Control panel] **C.** Knap til manuel skylning af tilførsel [Manual supply flush button] **D.** Hydraulisk trykmåler for lastedør [Hydraulic pressure gauge for loading door] **E.** Lufttrykmåler for vippesystem (bag nederste bagpanel) [Air pressure gauge for tilt system (behind lower rear panel)]

1.1.2. Hvor tilslutter jeg datalagringsenheden?

Mikroprocessorboksen i øverste bageste hjørne af maskinens venstre sidepanel (se Figur 1) indeholder en tilslutning af DIN-typen til seriekommunikation. Brug denne tilslutning, der er markeret som vist i Figur 2, med en enhed til seriedataoverførsel til at gemme eller gendanne maskinens programmerings- og konfigurationshukommelse.

Where do I Connect the Data Storage Device?

The microprocessor box in the upper rear corner of the machine left side panel (see Figure 1) contains a DIN-type connection for serial communications. Use this connection, labelled as shown in Figure 2, with a serial data transfer device to save or restore machine programming and configuration memory.

Figur [Figure] **2: Serietilslutning for dataoverførsel [Serial Connection for Data Transfer]**

1.1.3. Hvad er betjeningsknapperne?

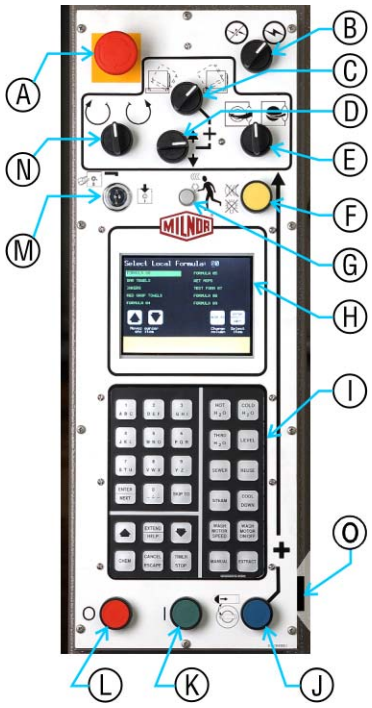
De primære betjeningsknapper er nødvendige til at starte og stoppe maskinen, vælge vaskeprogrammer og overvåge maskindriften.

What are the Operating Controls?

The primary operating controls are required to start and stop the machine, select wash formulas, and monitor machine operation.

Figur [Figure] **3: Mark VI-kontrolpanel [Mark VI Control Panel]**

Panel og knapper [Panel and Controls]



Beskrivelse [Legend]

- **A.** *Nødstop*-knap [*Emergency stop* button]
- **B.** *Hovedkontakt* til strøm [*Master switch* for power]
- **C.** *Valg af vip fortil/bagtil*-kontakt(kun vippemodeller) [*Tilt front/rear selector* switch (tilting models only)]
- **D.** *Valg af vip op/ned*-kontakt (kun vippemodeller) [*Tilt up/down selector* switch (tilting models only)]
- **E.** *Låge åben/luk*-kontakt [*Door open/close* switch]
- **F.** *Annullér operatørsignal*-knap [*Operator signal cancel* button]
- **G.** *Operatørsignal*-lys [*Operator signal* light]
- **H.** LCD-display [Liquid crystal graphic display]
- **I.** Tastatur [Keypad]
- **J.** *Låge åben*-knap [*Door open* button]
- **K.** *Start*-knap [*Start* button]
- **L.** *Stop*-knap [*Stop* button]
- **M.** *Tændingskontakt for kørsel/program* [*Run/Program keyswitch*]
- **N.** *Stødretning*-kontakt [*Jog direction* switch]
- **O.** *Låge åben stød*-knap (kun vippemodeller) [*Door open jog* button (tilting models only)]

Figur [Figure] **4: Tastatur [Keypad]**

Nødstopknap—deaktiverer det treledede kredsløb. Denne kontakt låses, når der trykkes på den. Den skal derfor drejes en kvart omgang for at sætte den tilbage til normal position, så maskinen kan køre.

Bemærkning 1: Tryk straks på knappen *nødstop* i en nødsituation. Dette deaktiverer det treledede kredsløb, hvilket stopper al maskindrift og åbner afløbet.

- Når du nulstiller denne knap, har du mulighed for at annullere eller genoptage det afbrudte program. Programmet genoptages, hvor det blev afbrudt, eller i starten af det forrige vasketrin, alt efter driften på det tidspunkt, der blev trykket på *nødstop*-knappen.

Master power switch (⊗ / ⊖)—afbryder strømmen til kontrolsystemet. Hvis du slukker for *hovedkontakt*(⊗), mens et program er i gang, er resultatet umiddelbart det samme, som når man trykker på knappen *nødstop*: maskinen stopper, og afløbet åbnes. I modsætning til knappen *nødstop* starter genoptagne programmer i starten af det trin, ved hvilket strømmen blev afbrudt, men der indsprøjtes ikke kemikalier i det genoptagne trin.

Kontakt til annullering af operatørsignal

Emergency stop button—disables the 3-wire circuit. This switch locks in when pressed, so you must turn it a quarter turn to allow it to return to the normal position to allow the machine to run.

Notice 1: Press the *emergency stop* button immediately in any emergency situation. This disables the 3-wire circuit, which stops all machine operation and causes the drain to open.

- When you reset this button, you have the option of cancelling or resuming the interrupted formula. The formula resumes where it was interrupted or at the beginning of the previous bath step, depending on the operation in progress when the *emergency stop* button was pressed.

Master power switch (⊗ / ⊖)—removes power from the control system. If you turn the *master switch* off (⊗) while a formula is running, the immediate result is similar to pressing the *emergency stop* button: the machine stops and the drain opens. Unlike the *emergency stop* button, resumed formulas start at the beginning of the step in which power was lost, but chemicals are not injected in the resumed step.

Operator signal cancel button (🔕)—

( )—annullerer *operatørsignal*. Tryk på denne knap for at dæmpe lyden på summeren og slukke for *operatørsignal*-lyset (se nedenfor), eller til at tillade indsprøjtning af et kemikalie, der er programmeret til at kræve et signal før indsprøjtning.

Operatørsignallys—angiver, at maskinen har fundet en fejl, eller at operatøren skal foretage en handling, såsom at trykke på knappen *start* eller aflæsse maskinen. Kredsløbet *operatørsignal* inkluderer en summer bag kontrolpanelet og kan inkludere et signallys, der er monteret adskilt fra kontrolpanelet.

LCD-display—viser information og hjælp vedrørende maskinen. Informationen på displayet ændres alt efter maskinens status og den funktion, der er valgt af operatøren.

Tastatur—giver operatøren mulighed for at kommunikere med maskinens styresystem. Tastaturet er opdelt i tre områder: alfanumeriske knapper, generelle knapper og funktionsspecifikke knapper. Hver knap kan udføre mere end én funktion alt efter den aktuelle maskinstatus. Visse knapper anvendes også sammen for ekstra funktioner.

Startknap ( )—starter det valgte vaskeprogram. Knappen *start* aktiverer det treledede kredsløb, således at maskinen kan køre.

Stopknap ( )—stopper maskindrift. Ligesom med knappen *nødstop* deaktiverer knappen *stop* det treledede kredsløb, men du behøver ikke manuelt nulstille knappen *stop* efter brug.

Tændingskontakt for kørsel/program(/)—i positionen *Program* kan du bl.a. ændre maskinkonfiguration og vaskeprogrammer. I normal position *Kørsel* er programmer og konfiguration beskyttet, og der kan køres programmer.

Lufttrykmåler til vippesystem—placeret bag det nederste panel bag på maskinen. Overvåger lufttrykket, der anvendes til at vippe maskinen.

cancels the *operator signal*. Press this button to silence the buzzer and turn off the *operator signal* light (see below), or to allow injection of a chemical programmed to require a signal before injection.

Operator signal light—indicates that the machine has encountered an error or that the operator must perform some action, such as pressing the *start* button or unloading the machine. The *operator signal* circuit includes a buzzer behind the control panel, and may include an optional beacon light mounted separately from the control panel.

Liquid crystal graphic display—displays information and help about the machine. The information on the display changes according to the status of the machine and the function selected by the operator.

Keypad—allows the operator to communicate with the machine control system. The keypad is divided into three areas: alphanumeric buttons, general buttons, and function-specific buttons. Each button may perform more than one function, based on the current machine status. Some buttons are also used in combinations for additional functions.

Start button ( )—starts the selected wash formula. The *start* button energizes the 3-wire circuit to allow the machine to operate.

Stop button ( )—stops machine operation. Like the *emergency stop* button, the *stop* button disables the 3-wire circuit; however, the *stop* button doesn't require you to manually reset it after use.

Run/Program keyswitch (/)—in the *Program* position, allows changes to machine configuration and wash formulas, among other actions. In the normal *Run* position, formulas and configuration are protected and formulas can be run.

Air pressure gauge for tilt system—located behind the lower panel on the rear of the machine; monitors the air pressure used to tilt the machine.

1.1.4. Hvad er lastknapper?

Lastknapperne lader dig åbne og lukke lågen , samt skubbe vip og cylinderen; anvendes primært, når en kipbar maskine læsses og aflæsses..

Milnor fremstiller maskiner med to forskellige typer vippemekanismer:

- **Modeller med enkelt drejetap**, inklusive modellinjen E_N og J_N, vipper hydraulisk fra en enkelt tapaksel nær bagsiden af maskinen. Disse modeller vipper for at aflæsse ved at sænke den forreste del af maskinen til under den normale driftsposition, og vipper for at læsse ved at hæve den forreste del af maskinen til over normal driftsposition.
- **Modeller med dobbelt drejetap**, inklusive vippemodeller i linjen F_W, vipper pneumatisk fra drejeakser nær forsiden og bagsiden af maskinen. Disse modeller vipper for at læsse ved at oppuste luftblærerne under den forreste del af maskinen og vipper for at aflæsse ved at oppuste luftblærerne under den bageste del af maskinen.

Symbolerne på maskinens kontrolpanel varierer, alt efter om maskinen er en model med enkelt eller dobbelt drejetap.

What are the Loading Controls?

Loading controls allow you to open and close the door, as well as tilt and jog the cylinder; used primarily when loading and unloading a tilting machine.

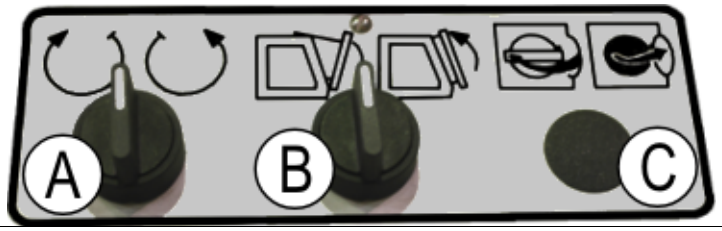
Milnor manufactures machines with two different types of tilting mechanisms:

- **Single-pivot models**, including the E_N and J_N model lines, tilt hydraulically from a single pivot axis near the rear of the machine. These models tilt to unload by lowering the front of the machine below the normal operating position, and tilt to load by raising the front of the machine above the normal operating position.
- **Dual-pivot models**, including tilting models in the F_W line, tilt pneumatically from pivot axes near the front and rear of the machine. These models tilt to load by inflating air bladders below the front of the machine, and tilt to unload by inflating air bladders below the rear of the machine.

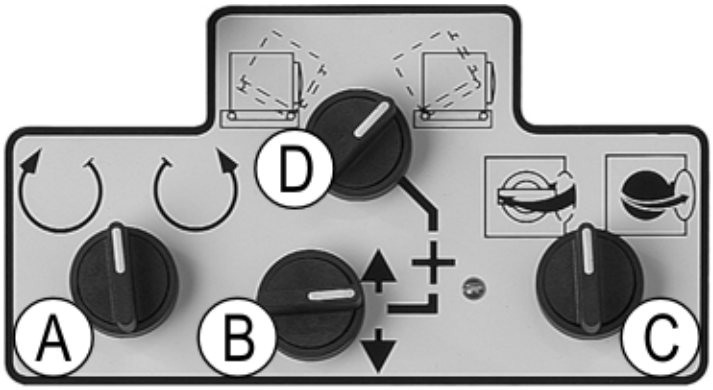
The symbols on the machine control panel vary according to whether the machine is a single- or dual-pivot model.

Figur [Figure] **5: Typiske vippekontrolpaneler [Typical Tilt Control Panels]**

Model med enkelt drejetap [Single-Pivot Model]



Model med dobbelt drejetap [Dual-Pivot Model]



Beskrivelse [Legend]

- **A.** *Stødretning*-kontakt [*Jog direction* switch]
- **B.** *Vipperetning*-kontakt [*Tilt direction* switch]
- **C.** *Låge åben/luk*-kontakt [*Door open/close* switch]
- **D.** *Tapvælger*-kontakt [*Pivot selector* switch]

***Tapvælger*-kontakt (⏢/⏢)**—bestemmer, hvorvidt maskinen vipper på den forreste eller bageste tap. Indstil kontakten til den venstre position for at muliggøre aflæsning. Brug den højre position for at vippe maskinens forside opad for nemmere læsning.

***Vipperetning*-kontakt**—aktiverer de nødvendige mekanismer til at hæve eller sænke den valgte ende af maskinen. På maskiner med dobbelt drejetap arbejder kontakten sammen med *tapvælger*-kontakten for at vippe maskinen. Med knappen *låge åben* nedtrykket drejes kontakten opad for at hæve den valgte ende af maskinen eller ned for at sænke den.

For at vippe en maskine med dobbelt drejetap bagud for nemmere læsning skal du første sætte kontakten til valg af vip foran/bagtil til højre som vist i Figur 5. Dette bestemmer, at maskinen vil vippe på det bageste drejepunkt. Derefter skal du holde vipperetningskontakten i positionen *op* og trykke på knappen *låge åben* (☜). Den forreste del af maskinen vippes op og bagud, indtil den er helt vippet, eller du slipper én af de to knapper. Brug den tilsvarende procedure til at sænke den forreste del af maskinen til normal position eller hæve den

***Pivot selector* switch (⏢/⏢)**—determines whether the machine tilts on the forward or rearward pivot. Set this switch to the left position to facilitate unloading; use the right position to tilt the front of the machine up for easier loading.

***Tilt direction* switch**—actuates the necessary devices to raise or lower the selected end of the machine. On dual-pivot machines, this switch works with the *pivot selector* switch to tilt the machine. With the *door open* button pressed, turn the switch up to raise the selected end of the machine, or down to lower it.

To tilt a dual-pivot machine backward for easier loading, first set the tilt front/rear selector switch to the right, as shown in Figure 5. This determines that the machine will tilt on the rear pivot point. Next, hold the tilt direction switch in the *up* position and press the *door open* button (☜). The front of the machine will tilt up and back until the front is fully tilted or you release either of the two controls. Use similar procedures to lower the front of the machine to the normal position, or to raise the rear of the machine

bageste del af maskinen til aflæsning.

For at vippe en maskine med en enkelt drejetap skal du holde vipperetningskontakten i den ønskede position og trykke på knappen *låge åben* (), indtil maskinen når den ønskede vinkel.

***Låge åben/luk*-kontakt (/)**—styrer det automatiske lågesystem, når maskinen er i tomgang. For at åbne lågen skal du dreje kontakten til højre (), mens du trykker på knappen *låge åben*(). Drej kontakten til venstre (), og tryk på knappen *låge åben* for at lukke lågen. Slip knapperne, når lågen er i den rette position. Den hydrauliske pumpe, der strømfører lågen, afbrydes automatisk, når den er helt åben eller lukket.

Knap til åbning af låge ()—aktiverer andre læsseknapper, når maskinen går i tomgang. Ved at trykke på knappen *låge åben*, mens maskinen kører, afbrydes strømmen fra det treledede kredsløb, og maskinen stoppes. Når maskinen går i tomgang, skal der trykkes på denne knap for at foretage enhver anden af- eller pålæsningsfunktion. Dette hjælper med til at sikre, at begge hænder er sikkert på maskinens kontrolpanel, ifald kurven drejes, mens lågen er åben.

ADVARSEL 2: ADVARSEL: Fare for fald, indvikling og slag—Kontakt med den roterende tromle kan knuse dine lemmer. Tromlen vil kaste et hvilket som helst objekt væk du måtte forsøge at stoppe den med. Det kan ramme dig. Den roterende cylinder er normalt afskærmet af den låste tromledør.

- Pil ikke ved og modificér ikke sikkerhedsanordninger og betjen ikke maskinen med en defekt sikkerhedsanordning. Bed om autoriseret reparation.

Stødretningskontakten ()/()—giver dig mulighed for at skubbe cylinderen langsomt i begge retninger for at hjælpe med til at på- eller aflæsse maskinen. For at skubbe cylinderen med uret, skal du holde stødretningskontakten til venstre (), mens du trykker på knappen til åbning af lågen.

Trykmåler til lågens hydrauliske kredsløb—

for unloading.

To tilt a single-pivot machine, hold the tilt direction switch in the desired position and hold the *door open* button () until the machine reaches the desired angle.

***Door open/close* switch (/)**—controls the automatic door system when the machine is idle. To open the door, turn the switch to the right () while pressing the *door open* button (). Turn the switch to the left () and press the *door open* button to close the door. Release the controls when the door is in the correct position. The hydraulic pump which powers the door shuts off automatically when the door is fully open or fully closed.

Door open button ()—enables other loading controls when the machine is idle. Pressing the *door open* button while the machine is operating removes power from the 3-wire circuit, stopping the machine. When the machine is idle, this button must be pressed to perform any other loading or unloading function. This requirement helps ensure that you have both hands safely on the control panel of the machine if the basket might turn under power while the door is open.

WARNING 2: Fall, Entangle, and Strike Hazards—Contact with the turning cylinder can crush your limbs. The cylinder will repel any object you try to stop it with, possibly causing the object to strike or stab you. The turning cylinder is normally isolated by the locked cylinder door.

- Do not tamper with or disable any safety device or operate the machine with a malfunctioning safety device. Request authorized service.

Jog direction switch ()/()—allows you to jog the cylinder slowly in either direction to help in loading or unloading the machine. To jog the cylinder clockwise, hold the jog direction switch to the left () while pressing the door open button.

Door hydraulic circuit pressure gauge—on

denne måler på maskinens bagpanel viser trykket i det hydrauliske kredsløb, når lågen åbnes og lukkes. Under normal drift registrerer denne måler 0, medmindre den hydrauliske låge åbnes eller lukkes. Når lågen flyttes, angiver måleren omkring 900 psi (62 bar), hvis det hydrauliske system er korrekt justeret.

the rear panel of the machine, this gauge displays the pressure in the hydraulic circuit when the door is opening and closing. During normal operation, this gauge registers 0 unless the hydraulic door opening or closing. When the door is moving, this gauge indicates about 900 psi (62 bar) when the hydraulic system is properly adjusted.

1.1.5. Hvad gør denne kontakt?

Andre knapper og kontakter anvendes til at kontrollere ekstra standardfunktioner og valgfrie maskinfunktioner. Disse forskellige knapper er placeret og beskrevet i dette afsnit.

Valgknappen Mildata/lokal (Figur 6)—på mikroprocessorens kontrolboks (se Figur 1), giver maskinen mulighed for at kommunikere med et Mildata-netværk. Et Mildata-netværk forbinder flere maskiner og lader dem dele vaskeprogrammer og andre data med Mildata-computeren. Når kontakten er i positionen *Mildata* (💻), og du indtaster et programnummer, anmoder maskinen Mildata-computeren om programindholdet. Når den er sat i positionen *Lokal* (📝), er kun de aktuelle programmer **i maskinen** tilgængelige.

What does this Switch do?

Other buttons and switches are used to control additional standard and optional machine functions. These miscellaneous controls are located and described in this section.

Mildata/Local selector switch (Figure 6)—located on the microprocessor control box (see Figure 1), allows the machine to communicate with a Mildata network. A Mildata network connects several machines together and allows them to share wash formulas and other data with the Mildata computer. When this switch is in the *Mildata* position (💻) and you enter a formula number, the machine requests the contents of the formula from the Mildata computer. When set to the *Local* position (📝), only formulas present **in the machine** are available.

Figur [Figure] **6: Valgknappen Mildata/lokal [Mildata/Local Selector switch]**

***Låge åben stød*-knap (Figur 7)**—Denne knap, hvis den findes, er placeret på siden af kontrolpanelboksen nær knappen *låge åben*. For at reducere sandsynligheden for at beskidt vaskelast kan falde ud af maskinen, idet den bevæger sig nedad, skal du trykke på denne knap og knappen *låge åben* med en hånd og holde dem inde, og holde kontakten *Stødretning* i én af retningerne med den anden hånd. Cylinderen drejer langsomt, idet lågen lukkes, og maskinen bevæger sig

***Door open jog* button (Figure 7)**—This button, if provided, is located on the side of the control panel box near the *door open* button. To reduce the chance of soiled goods falling out of the machine as it descends, hold this button and the *door open* button depressed with one hand, and hold the *jog direction* switch in either direction with the other hand. The cylinder rotates slowly as the door closes and the machine descends to the normal

nedad til normal driftsposition.

operating position.

Figur [Figure] **7: *Låge åben stød*-knap [*Door open jog* button]**

Knap til manuel skylning af tilførsel (Figur 8)—På maskiner, der er udstyret med en valgfri tilførselsindsprøjter, skal du trykke på denne knap for at sprøjte vand ind i tilførselsindsprøjteren for at skylle eventuelle resterende kemikalier ind i cylinderen. Hvis du vil foretage tilførsel manuel under et vaskeprogram, skal du trykke på denne knap for at skylle eventuelle ufortyndede kemikalier ud af doseringsrenden. Hvis maskinen ikke er udstyret med den valgfri tilførselsindsprøjter, skal du trykke på denne knap for at skylle kemikalieindløbene med friskt vand.

Manual supply flush button (Figure 8)—On machines equipped with an optional flushing supply injector, press this button to spray water into the supply injector to flush any remaining chemicals into the cylinder. If you manually add supplies during a wash formula, press this button to flush any remaining undiluted chemicals out of the supply chute. If the machine is not equipped with the optional supply injector, press this button to flush the liquid chemical inlets with fresh water.

Figur [Figure] **8: Knap til manuel skylning af tilførsel [Manual Supply Flush button]**

— Slutning på BICWCO02 —

— End of BICWCO02 —

Kapitel 2
Normal maskindrift

Chapter 2
Normal Machine Operation

BICWCO03 (Published) Book specs- Dates: 20070924 / 20070924 / 20110221 Lang: DAN01 Applic: 68036F5N

2.1. Betjeningsvejledning for fabrikspersonale

2.1. Operating Instructions for Plant Personnel

2.1.1. Start her af sikkerhedsmæssige årsager

Dette dokument er fremstillet for at påminde dig, operatøren af denne vaskemaskine, om, hvad der er nødvendigt for at betjene denne maskine. Forsøg ikke at betjene denne maskine, før en erfaren, oplært operatør forklarer detaljerne for dig.

FARE 3: FARE: Meget farligt—Handlinger foretaget uden omtanke kan dræbe eller tilføje skade til personer, beskadige eller ødelægge maskinen, forvolde skade på ejendom og/eller gøre garantien ugyldig.

FARE 4: FARE: Fare for stød og forbrænding fra elektricitet—Kontakt med elektrisk strøm kan slå dig ihjel eller skade dig alvorligt. Der er elektrisk strøm i kabinettet, medmindre hovedstrømmen til maskinen er afbrudt.

- Oplås eller åbn ikke låger til elektriske bokse.
- Vær bekendt med hovedafbryderen til maskinen og anvend den i nødstilfælde til at afbryde al elektrisk strøm fra maskinen.
- Foretag ikke reparation på maskinen, medmindre du er kvalificeret og autoriseret hertil. Du skal forstå farerne og vide, hvordan de kan undgås.

2.1.1. Start Here for Safety

This document is meant to remind you, the person operating this washer extractor, of what is required to operate this machine. Do not attempt to operate this machine before an experienced, trained operator explains the details to you.

DANGER 3: Multiple Hazards—Careless operator actions can kill or injure personnel, damage or destroy the machine, damage property, and/or void the warranty.

DANGER 4: Electrocution and Electrical Burn Hazards—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.

FORSIGTIG 5: Fare for kollision, knusning og klemme—Kontakt med bevægelige dele som normalt er afskærmet af rækværk, afdækning og paneler, kan indfange og knuse dine lemmer. Disse dele bevæges automatisk.

CAUTION 5: Collision, Crushing and Pinch Hazards—Contact with moving components normally isolated by guards, covers, and panels, can entangle and crush your limbs. These components move automatically.

2.1.2. Kontrollér kontaktindstillingerne

Check Switch Settings

Visning eller handling [Display or Action]	Forklaring	Explanation
	Kontrollér, at tastaturet *kørsel/program* er ved .	Check that the *run/program* keyswitch is at .
	Alle nødstopknapper skal være oplåste og i positionen *klar* for at muliggøre maskindrift.	All emergency stop buttons must be unlatched and in the *ready* position to allow machine operation.
	Check that the master switch is at .	Check that the master switch is at .

2.1.3. Hvordan fylder jeg en kipbar maskine? / How do I Load a Tilting Machine?

2.1.3.1. Automatisk påfyldning (skinne eller spole) / Automated (Rail or Shuttle) Loading

Visning eller handling [Display or Action]	Forklaring	Explanation
	Åbn lågen	Open the door
	Indstil *kontakt til valg af vip fortil/bagtil* til positionen *fortil*.	Set the *tilt front/rear selector switch* to the *front* position.
	Tilt the front of the machine up to receive the load.	Tilt the front of the machine up to receive the load.
	Vælg program (f.eks. 07). Detaljer vedrørende programvalg er beskrevet i Afsnit 2.1.4 “Hvordan vælger jeg program?”.	Select the formula (07, for example). Details about selecting a formula are described in Section 2.1.4 “How do I Select a Formula?”.
	Skift kolonne til programvalg, hvis det er nødvendigt.	Toggle column for formula selection if necessary.
	Gå til næste eller forrige viste program i den aktuelle kolonne.	Move to the next or previous displayed formula in the current column.
	Bekræft det valgte program.	Confirm the selected formula.

Følg proceduren, der er angivet af fabrikken, til at lægge materialer i maskinen.	Use the procedure defined by facility management to put the goods in the machine.
 Luk lågen.	Close the door.
 Vip forsiden af maskinen nedad til normal position.	Tilt the front of the machine down to the normal position.

2.1.3.2. Manuel påfyldning / Manual Loading

Visning eller handling [Display or Action]	Forklaring	Explanation
	Åbn lågen.	Open the door.
0 7	Vælg program (f.eks. 07). Detaljer vedrørende programvalg er beskrevet i Afsnit 2.1.4 "Hvordan vælger jeg program?".	Select the formula (07, for example). Details about selecting a formula are described in Section 2.1.4 "How do I Select a Formula?".
SKIP TO	Skift kolonne til programvalg, hvis det er nødvendigt.	Toggle column for formula selection if necessary.
↓ / ↑	Gå til næste eller forrige viste program i den aktuelle kolonne.	Move to the next or previous displayed formula in the current column.
ENTER	Bekræft det valgte program.	Confirm the selected formula.

Følg proceduren, der er angivet af fabrikken, til at lægge materialer i maskinen.

Use the procedure defined by facility management to put the goods in the machine.

	Luk lågen.	Close the door.

2.1.4. Hvordan vælger jeg program? / How do I Select a Formula?

Kontrolenheden Mark VI kan køre i tilstanden *lokal* eller *Mildata*. I tilstanden *lokal* kommunikerer maskinen ikke med andre apparater og kører programmer, der er indeholdt i en lokal kontrolenheds hukommelse. I tilstanden *Mildata* overfører og kører maskinen programmer fra Mildata-computeren og opdaterer ofte displayet på Mildata-computeren.

The Mark VI controller can operate in either *local* or *Mildata* mode. In *local* mode, the machine does not communicate with any other devices and runs formulas contained in local controller memory. In *Mildata* mode the machine downloads and runs formulas from the Mildata computer, and frequently updates the display on the Mildata computer.

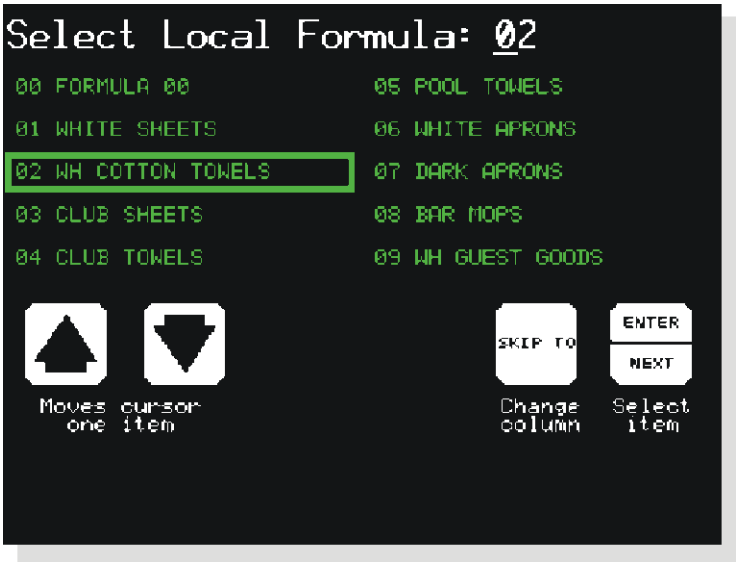
Figur [Figure] **9: Valg af lokalt eller eksternt program [Selecting a Local or Remote Formula]**

***Vælg program*-displays [*Select Program* Displays]**	**Beskrivelse [Legend]**
	**A.** Lokal (Mildata ikke tilstede eller aktiveret) [Local (Mildata not present or enabled)] **B.** Eksternt (Mildata aktiveret) [Remote (Mildata enabled)]

2.1.4.1. Valg af lokalt program—Hvis maskinen ikke er en del af et Mildata-netværk, eller hvis Mildata-netværket ikke er tilgængeligt, kan du vælge mellem et af de vaskeprogrammer, der er lagret i maskinens lokale hukommelse. Brug skærmen *Vælg lokalt program* (Figur 10) til at vælge det rette program for materialet i maskinen.

Selecting a Local Formula—If the machine is not part of a Mildata network, or if the Mildata network is not available, you can choose from any of the wash formulas stored in local memory on the machine. Use the *Select Local Formula* screen (Figure 10) to choose the correct formula for the goods in the machine.

Figur [Figure] **10:** ***Vælg lokalt program*-skærm [*Select Local Formula* Screen]**



Visning eller handling [Display or Action]	**Forklaring**	**Explanation**
0 7	Vælger direkte det program, du vil køre (f.eks. 07). Når du indtaster et tocifret tal, flyttes det valgte program til øverst i venstre kolonne på denne skærm.	Directly selects the formula you want to run (07, for example). When you enter a two-digit number, the selected formula moves to the top of the left column on this screen.
SKIP TO	Skifter kolonne til programvalg, hvis det er nødvendigt. Hvis det ønskede program er synligt på skærmen, men er i den modsatte kolonne fra valgboksen, flytter dette tastetryk valgboksen til den anden kolonne af programmer.	Toggles the column for formula selection if necessary. If the desired formula is visible on the screen, but is in the opposite column from the selection box, this keystroke moves the selection box to the other column of formulas.
↓ / ↑	Gå til næste eller forrige viste program i den aktuelle kolonne. Hvis det ønskede program er synligt på skærmen og i samme kolonne som valgboksen, kan du anvende disse to taster til at flytte valgboksen op eller ned for at vælge program.	Move to the next or previous displayed formula in the current column. If the desired formula is visible on the screen and in the same column as the selection box, you can use these two keys to move the selection box down or up to select the formula.

Visning eller handling [Display or Action]		Forklaring	Explanation
	ENTER	Bekræft det valgte program. Placér valgboksen på det program, du vil køre, og tryk derefter på ENTER for at fortsætte med de normale betjeningsprocedurer.	Confirm the selected formula. Place the selection box on the formula you want to run, then press ENTER to continue with the normal operation procedures.

Tillæg 1

Om lastvægt og *Målt vand*

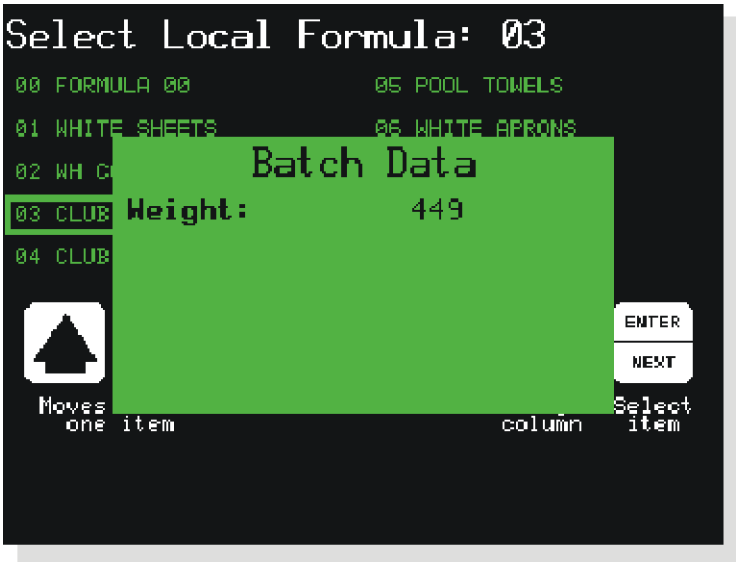
Målt vand er tilgængelig på Mark VI-vaskemaskiner, der er udstyret med ekstra strømmålere på de indgående vandledninger. Denne funktion lader Mark VI-kontrolenheden tillade en vandmængde, der er proportionel med den mængde, du lægger i efter valg af program. Hvis du indtaster en vægt på 200 enheder, når du bliver bedt om det, anvender maskinen dobbelt så meget vand, som hvis du indtastede 100 vægtenheder. Denne funktion kan spare en betydelig mængde vand, hvis du indtaster den rette vægt for hver mængde.

Supplement 1

About Load Weight and *Metered Water*

Metered water is available on Mark VI washer-extractors equipped with optional flow meters on the incoming water lines. This feature allows the Mark VI controller to admit a quantity of water proportional to the weight of goods you enter after selecting the formula. If you enter a weight of 200 units when prompted, the machine will use twice as much water as if you entered 100 weight units. This option can save a significant amount of water if you enter accurate weights for each load.

Figur [Figure] **11: Indtastning af lastvægt for målt vand [Entering Load Weight for Metered Water]**



Visning eller handling [Display or Action]	Forklaring	Explanation
4 4 9	Indtast vægten på vaskelasten, der er lagt i maskinen. Maskinens kontrolenhed anvender vægten til at bestemme, hvor meget vand der er nødvendigt til at vaske lasten i henhold til det programmerede vaskeprogram.	Enter the weight of the goods loaded in the machine. The machine controller uses the weight to determine how much water is needed to wash the goods according to the programmed wash formula.
ENTER	Acceptér den indtastede vaskelast og fortsæt.	Accept the entered goods weight and continue.

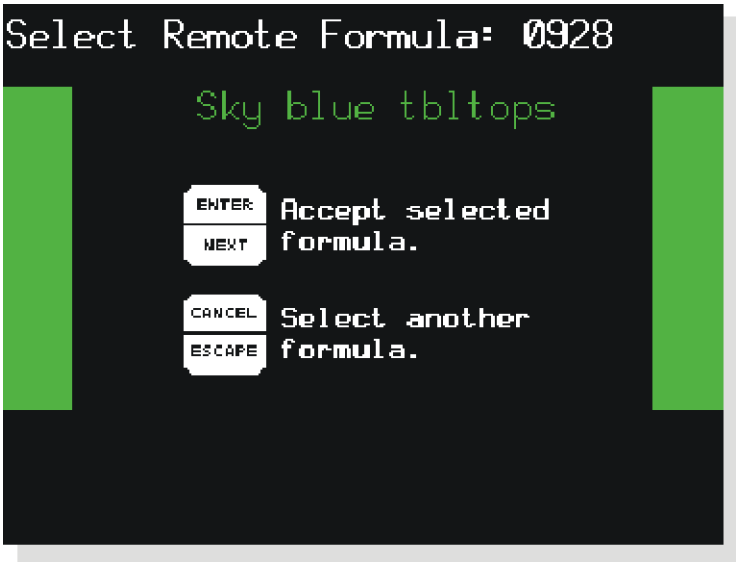
2.1.4.2. **Selecting a Mildata Formula**—Hvis maskinen er del af et Mildata-netværk, og netværket er tilgængeligt, kan du vælge et hvilket som helst vaskeprogram, der er lagret på Mildata-computeren. Brug skærmen *Vælg eksternt program* (Figur 12) til at vælge det bedste program for lasten i maskinen.

Bemærk 1: Du kan lagre op til 1000 forskellige vaskeprogrammer på Mildata-computeren. Alle disse programmer er tilgængelige for alle vaskemaskiner, der er del af Mildata-netværket, og har kompatibel hardware.

Selecting a Mildata Formula—If the machine is part of a Mildata network and the network is available, you can choose any wash formula stored on the Mildata computer. Use the *Select Remote Formula* screen (Figure 12) to choose the best formula for the goods in the machine.

Note 1: You can store up to 1000 different wash formulas on the Mildata computer. All of these formulas are available to all washer-extractors that are part of the Mildata network and have compatible hardware.

Figur [Figure] **12: *Vælg eksternt program*-skærm [*Select Remote Formula* Screen]**



Visning eller handling [Display or Action]	Forklaring	Explanation
0 9 2 8	Vælg f.eks. program 928, der er lagret på Mildata-computeren. Mark VI-kontrolenheden anmoder Mildata-computeren om programmet og viser programnavnet, som vist i Figur 12.	Select formula 928 (example) stored on the Mildata computer. The Mark VI controller requests the formula from the Mildata computer and displays the formula name, as shown in Figure 12.
ENTER	Kontrollér, at det viste programnavn er et program, du vil køre. Hvis det viste program ikke er det rette for vaskelasten, skal du trykke på CANCEL for at rydde programnummeret og derefter indtaste et andet nummer.	Confirm that the displayed formula name is the formula you want to run. If the displayed formula isn't the right one for the loaded goods, press CANCEL to clear the formula number, then enter another number.

Når du har hentet og verificeret programmet, spørger Mark VI-kontrolenheden om eventuelle konfigurerede *batchdata*.

After you've retrieved and verified the formula, the Mark VI controller prompts for any configured *batch data*.

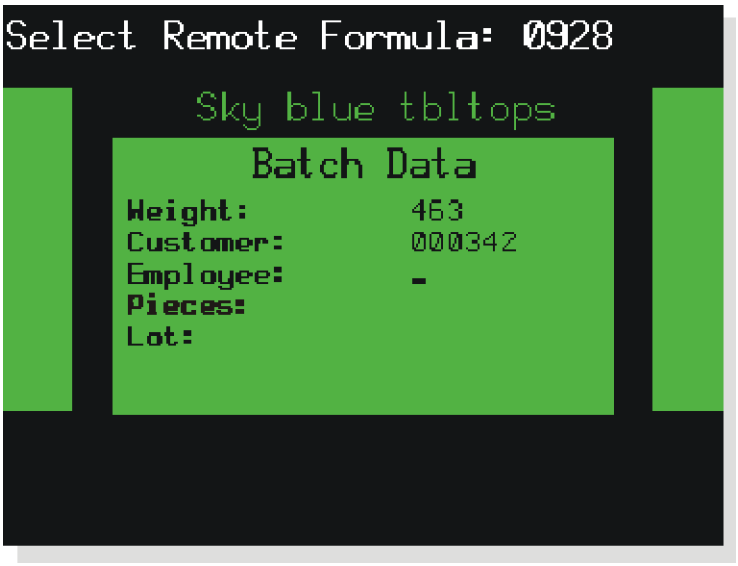
2.1.4.3. Indtastning af *Mildata-batchkoder*—

Mark VI-kontrolenheden anvender en skærm magen til Figur 13 til at forespørge om de valgte felter i maskinkonfigurationen (se det relevante afsnit i dokument BICWCC01). De data, du indtaster, sendes til Mildata-computeren til revision og rapportgenerering.

Entering *Mildata Batch Codes*—

The Mark VI controller uses a screen similar Figure 13 to prompt you for the batch data fields selected in machine configuration (see the related section in document BICWCC01). The data you enter is sent to the Mildata computer for accounting and report generation.

Figur [Figure] **13: Batchdata til betjening af eksternt program [Batch Data for Remote Formula Operation]**



Weight (Vægt)—vægten af vaskelasten i maskinen. Disse oplysninger anvendes normalt sammen med andre batchdata til at beregne kundepris eller arbejdsproduktivitet. I maskiner, der er udstyret med ekstra strømmålere, og som er konfigureret til vandmåling, anvendes vægtværdien også til at bestemme den nødvendige vandmængde. Vægtværdien kan være på op til tre cifre.

Customer (Kundekode)—den kundeidentificerene kode. Disse oplysninger hjælper dig med at fastslå, hvor meget arbejde hver kunde indsender. Der er ti cifre tilgængelige for kundekoden.

Employee (Arbejdstagernummer)—den identificerende kode for den ansatte, der er ansvarlig for dette batch. Arbejdstagernummeret kan være på op til fem cifre.

Pieces (Emner)—antallet af emner i maskinen. Denne værdi erstatter sommetider vægtværdien, særligt hvis der opkræves pr. emne i stedet for efter vægt. Der er fire cifre tilgængelige for antallet af emner.

Lot (Lotnummer)—den identificerende kode for flere tilknyttede partier eller kunder. Efter din skønsmæssige vurdering kan den indtastede værdi repræsentere et særligt rutenummer, der er fælles for flere konti. Et

Weight—the weight of the batch of goods in the machine. This information is usually used along with other batch data to calculate customer charges or employee productivity. In machines equiped with optional flow meters and configured for metered water, the weight value is also used to determine how much water is required to process the batch. The weight value can be up to three digits.

Customer Code—the identifying code for the customer. This information can help you determine how much work each customer is submitting. Ten digits are available for customer code.

Employee Number—the identifying code for the employee responsible for this batch. The employee number may be up to five digits long.

Pieces—the number of pieces in the machine. This value sometimes replaces the weight value, especially when charges are made by the piece rather than by weight. Four digits are available for the number of pieces.

Lot Number—the identifying code for several related batches or customers. At your discretion, the value entered here might represent a particular route number common to several accounts. A lot

lotnummer kan være op til 10 cifre langt.

number can be up to 10 digits long.

2.1.5. Start det valgte program

Sørg for, at du har udført disse trin, før du fortsætter driftsproceduren.

1. Du har lastet maskinen ved eller nær den fastsatte vægtkapacitet.
2. Du har valgt et program, der er egnet til vaskelasten i maskinen.
3. Du har indtastede eventuelle batchdata, maskinens kontrolenhed skal bruge til målt vand eller Mildata-rapportering.
4. Du har lukket lågen.
5. Hvis du vippede maskinen for at fylde den, skal du sætte den tilbage til den normale driftsposition.

Start the Selected Formula

Be sure you've completed these steps before you go any further in the operating procedure.

1. You've loaded the machine at or near its rated weight capacity.
2. You've selected a formula that's appropriate for the goods in the machine.
3. You've entered any batch data the machine controller requires for metered water or Mildata reporting.
4. You've closed the door.
5. If you tilted the machine to load it, you've returned it to the normal operating position.

Visning eller handling [Display or Action]	**Forklaring**	**Explanation**
①	Start det valgte program.	Start the selected formula.

Maskinen starter vaskeprogrammet. Kurven begynder at dreje, og vandventilerne åbnes. Når der er nået et sikkert niveau, åbnes dampventilen eventuelt for at opvarme badet. Driften er fra dette trin og frem til slut fuldstændig automatisk, medmindre der er programmeret et signal med en kemisk indsprøjtning (se Tillæg 2).

The machine begins the wash formula. The basket begins turning and water valves open. When a safe level is achieved, the steam valve may open to begin heating the bath. Operation from this point to the end of the formula is completely automatic unless a signal is programmed with a chemical injection (see Supplement 2).

Tillæg 2

Kemiske indsprøjtninger med operatørsignalet

Hvis du skal justere mængden af en kemisk indsprøjtning fra last til last alt efter højt varierende faktorer, kan programmet programmeres til at stoppe ved den timer og signal, du angiver, når et kemikalie er nødvendigt. Tilføj kemikalie, og tryk derefter på for at genoptage programmet.

Supplement 2

Chemical Injections with the Operator Signal

If you need to adjust the amount of a chemical injection from load to load depending on highly variable factors, the formula can be programmed to stop the timer and signal you when a chemical is required. Add the chemical, then press to resume the formula.

2.1.6. Hvad fortæller displayet *Kørsel* mig?

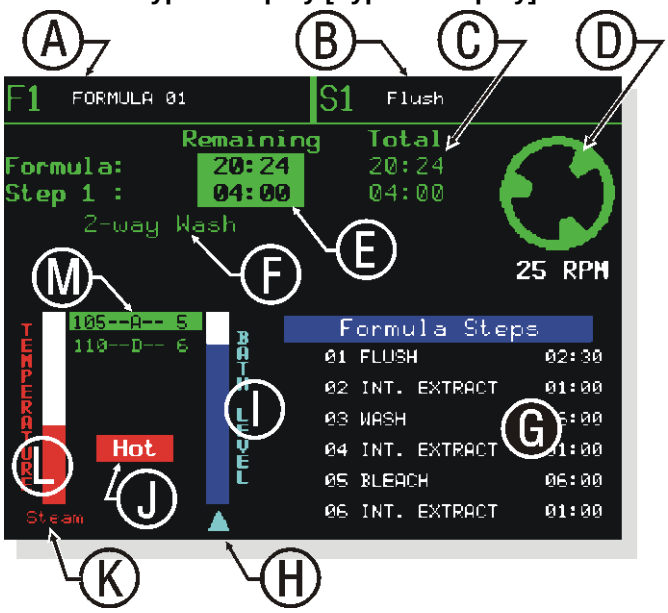
Mens maskinen kører det valgte program, vises et display, der minder om det, der er vist i Figur 14. Informationen, der vises her, forklares nedenfor.

What Does the *Run* Display Tell Me?

While the machine is running the formula you selected, the display appears similar to the one shown in Figure 14. The information shown here is explained below.

Figur [Figure] **14: Sådan læses displayet *Kørsel* [How to Read the *Run* Display]**

Typisk display [Typical Display]



Beskrivelse [Legend]

- **A.** Programnummer og -navn [Formula number and name]
- **B.** Trinnummer og -navn [Step number and name]
- **C.** Samlet tid for program og aktuelt trin [Total time for formula and current step]
- **D.** Grafik over kurverotation og hastighed [Basket rotation graphic and speed]
- **E.** Resterende tid for hele programmet og aktuelt trin [Remaining time for entire formula and current step]
- **F.** Maskinstatusmeddelelse [Machine status message]
- **G.** Programtrin: nummer, navn og varighed [Formula steps: number, name, and duration]
- **H.** Indikator for påfyldning og tømning [Indicator for filling or draining]
- **I.** Grafisk indikator for vandniveau [Graphic bath level indicator]
- **J.** Indikatorer for vandventiler [Water valves indicators]
- **K.** Indikator for valgfri damp- og afkølingsventiler [Indicator for optional steam and cooldown valves]
- **L.** Grafisk indikator for vandtemperatur [Graphic bath temperature indicator]
- **M.** Vandtemperatur og -niveaudata [Bath temperature and level data]

2.1.6.1. Program- og trininformation—Den øverste linje på displayet viser altid nummeret og navnet på det aktuelle program og trin. *programnummer* vises i det øverste venstre hjørne på displayet efterfulgt af bogstavet “F.”. *programnavn* kommer efter nummeret.

trinnummer og navn på aktuelt trin vises til højre for programoplysningerne. Mark VI-kontrolenheden opdaterer programnummeret og navnet, når et program starter og i starten af hvert efterfølgende trin.

Under program og trinnavne er *tidsinformation*. Tallene i kolonnen “Samlet” (grønne tal) viser den samlede tid, der er nødvendig for programmet, og trin, der skal køres før afslutning, heri ikke inkluderet de faktorer, der er beskrevet i Bemærk 2. Kontrolenheden beregner “Program”-værdien, når programmet starter, og denne værdi ændres ikke, mens programmet kører. Kontrolenheden beregner og viser “Trin x”-værdien i starten af hvert trin.

Tallene i kolonnen “Resterende” i tidsområdet (sorte tal på grøn baggrund) angiver *resterende tid* i programmet og i det aktuelle trin. Disse tal angiver den resterende tid **minimum** (se Bemærk 2).

Bemærk 2: Varigheden på visse vaskeprogrammer kan ikke beregnes, så kontrolenheden stopper timeren, indtil krav er opfyldt. For eksempel afhænger den tid, der er nødvendig for at maskinen fyldes til det ønskede niveau, af vandtrykket i fabrikken, størrelsen på rørene til maskinen samt antallet af maskiner, der fyldes på samme tid. Udover opfyldningstiden varierer tiden, indtil den rette temperatur nås, eller tiden for at en operatør kan bekræfte en kemisk indsprøjtning også. Forkerte forhold kan også stoppe timeren.

Kontrolenheden viser den aktuelle *maskinstatus* under trinnummer og resterende tid. Nogle af de mulige maskintilstande er angivet i Tabel 1. Fejlmeddelelser vises umiddelbart under maskinstatusmeddelelsen, når det er nødvendigt.

Formula and Step Information—The top line of the display always shows the number and name of the current formula and step. The *formula number* appears in the upper left corner of the display, following the letter “F.”The *formula name* follows the number.

The *step number and name of the current step* are displayed to the right of the formula information. The Mark VI controller updates the formula number and name when a formula starts and at the beginning of each subsequent step.

Below the formula and step names is *time information*. The numbers in the “Total” column (green numbers) show the total time required for the formula and step to run to completion, not including the factors described in Note 2. The controller calculates the “Formula” value when the formula begins, and this value doesn't change while the formula is running. The controller calculates and displays the “Step x” value at the start of each step.

The numbers in the “Remaining” column of the time area (black numbers on a green background) indicate the *time remaining* in the formula and in the current step. These numbers indicate the **minimum** amount of time remaining (see Note 2).

Note 2: The duration of some wash formula events can't be estimated, so the controller stops the timer until a requirement is met. For example, the time required for the machine to fill to the desired level depends on the water pressure to the plant, the size of the piping to the machine, and how many other machines are filling at the same time. In addition to the time required to fill, the time required to achieve temperature or for an operator to verify a chemical injection are variable. Error conditions can also stop the timer.

The controller displays the current *machine status* below the step number and remaining time. Some of the possible machine states are listed in Table 1. Error messages appear immediately below the machine status message when required.

Tabel 1: Maskinstatusmeddelelser [English table follows]

Idle (Tomgang)	Coasting (Kørsel i tomgang)
1-way Wash (1-vejs vask)	Waiting to Discharge (Venter på tømning)
2-way Wash (2-vejs vask)	Waiting for Load (Venter på fyldning)
Soak (Iblødlægning)	Power-up Delay (Forsinket opstart)
Pre+Final Extract(start- og slutudtræk)	Draining to Sewer (Tømmer til kloak)
Intermediate Extract (Mellemliggende udtræk)	Draining to Reuse (Tømmer til genbrug)
Final Extract (Endeligt udtræk)	Timer Stopped (Timer stoppet)
Double Extract (Dobbelt udtræk)	Please Wait xx Seconds (Vent xx sekunder)

Table 1: Machine Status Messages

Idle	Coasting
1-way Wash	Waiting to Discharge
2-way Wash	Waiting for Load
Soak	Power-up Delay
Pre+Final Extract	Draining to Sewer
Intermediate Extract	Draining to Reuse
Final Extract	Timer Stopped
Double Extract	Please Wait xx Seconds

2.1.6.2. Kurverotation—*grafik over kurverotation*

nær det øverste højre hjørne af displayet repræsenterer den relative kurvehastighed i vaske-, tømnings- og udtrækshastigheder. Umiddelbart under grafikken for kurverotation viser kontrolenheden den ønskede kurvehastighed i omdrejninger pr. minut (o./min) eller i tyngdeenheder (G'er).

Basket Rotation—The *basket rotation graphic*

near the upper right corner of the display represents the relative basket speeds in wash, drain, and extract speeds. Immediately below the basket rotation graphic, the controller displays the desired basket speed in either revolutions per minute (RPMs) or in gravitational units (G's).

2.1.6.3. Vandtemperatur og -niveau—*Vandventilindikatorer*

vises, når den tilsvarende vandventil er åben.

Grafikken *vandtemperaturindikator* viser den omtrentlige temperatur i maskinen. Den lodrette indikatorlinje er rød, når temperaturen i maskinen er ved den maksimalt tilladt værdi på 205 grader Fahrenheit (95 grader Celsius).

Indikatoren for damp eller afkøling vises under den grafiske temperaturindikator, når én af disse ekstrafunktioner er aktiveret. “Damp” vises, når dampventilen er åben, og “Afkøling” vises, når nedkølingsudgangen er aktiveret.

Bath Temperature and Level—*Water valve indicators*

appear when the corresponding water valve is open.

The graphic *bath temperature indicator* shows the approximate temperature in the machine. The vertical indicator bar is solid red when the temperature in the machine is at the maximum allowable value of 205 degrees Fahrenheit (95 degrees Celsius).

The steam or cooldown indicator appears below the graphic temperature indicator when either of these optional features is enabled. “Steam” appears when the steam valve is open, and “Cooldown” appears when the cooldown output is enabled.

Grafikken *indikator for vandniveau* viser den opnåede procentdel af det ønskede niveau. Den lodrette indikatorlinje er blå, når det programmerede niveau er opnået, og hvid, når der ikke er noget vand i maskinen.

Indikatorpil for niveauretning peger opad, når det aktuelle vandniveau i maskinen øges (når maskinen fyldes), og peger nedad, når afløbet åbnes. Pilen er ikke synlig, når niveauet er opnået eller under udtrækning.

Kontrolenheden viser *vandtemperatur og -niveaudata* mellem de grafiske indikatorer for temperatur og niveau. Den øverste linje viser den aktuelle temperatur og niveau i maskinen, og den nederste linje viser de ønskede værdier.

The graphic *bath level indicator* shows the percentage of the desired level that's achieved. The vertical indicator bar is solid blue when the programmed level is achieved, and solid white when there is no water in the machine.

The *level direction indicator arrow* points upward when the actual bath level in the machine is increasing (when the machine is filling), and points downward when the drain opens. The arrow is not visible when level is achieved, or during extract steps.

The controller displays *bath temperature and level data* between the temperature and level graphic indicators. The top line displays the temperature and level that are currently achieved in the machine, and the bottom line displays the desired values.

2.1.6.4. Programtrin og kemisk indsprøjtning

Programtrin og kemisk indsprøjtning—Når et program starter, viser kontrolenheden de første seks trin i *liste over programtrin* i det nederste venstre område på skærmen. Hvis programmet indeholder flere trin end dem, der kan vises på én gang, bladrer listen for at vise flere trin, efterhånden som de første trin afsluttes. Det aktuelle trin markeres.

Listen over programmerede *kemiske indsprøjtninger* erstatter listen over programtrin under hver indsprøjtning med en markeringsboks på det kemikalie, der indsprøjtes på det pågældende tidspunkt.

Formula Steps and Chemical Injection

Formula Steps and Chemical Injection—When a formula begins, the controller displays the first six steps in the *formula steps list* in the lower left area of the screen. If the program contains more steps than can be displayed at one time, the list scrolls to display more steps as the earlier ones end. The current step is highlighted.

The list of programmed *chemical injections* replaces the formula steps list during each injection, with a highlight box on the chemical that's currently injecting.

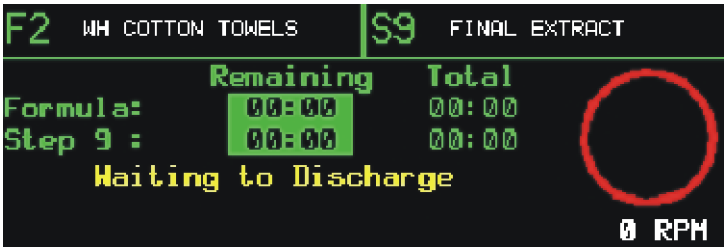
2.1.7. Tøm maskinen

Når programmet stopper, lyder operatørsignalet, og maskinen viser en meddelelse om, at den venter på at blive tømt (se Figur 15). Brug en procedure magen til nedenstående for at tømme maskinen.

Unload the Machine

When the formula ends, the operator signal sounds and the machine displays a message that it is waiting to discharge (see Figure 15). Use a procedure similar to the one outlined below to unload the goods.

Figur [Figure] **15: Typisk meddelelse, når et program slutter [Typical Message when Formula Ends]**



2.1.7.1. For en hvilken som helst *slutkode*—

giver kontrolenheden Mark VI dig mulighed for at programmere én ud af fire mulige handlinger ved slutningen af programmet: *stopped (stoppet), reversing at wash speed (reversering ved vaskehastighed), turning at drain speed (drejning ved tømningshastighed)* eller *tumbling (centrifugering)*. Du kan bruge den samme tømningsprocedure for programmer ved hjælp af de første tre handlinger. For den fjerde handling har du også mulighed for at bruge proceduren, der er beskrevet i Afsnit 2.1.7.2.

For any *End Code*—

The Mark VI controller allows you to program one of four possible actions for the end of the formula: *stopped*, *reversing at wash speed*, *turning at drain speed*, or *tumbling*. You use the same unloading procedure for formulas using the first three actions. For the fourth action, you also have the option of using the procedure described in Section 2.1.7.2.

Visning eller handling [Display or Action]	**Forklaring**	**Explanation**
	Afbryd strømmen til det tretrådede kredsløb, dæmp lyden for operatørsignalet og stop eventuel kurverotation. Denne knap oplåser også lågen, så du kan åbne den.	Remove power from the 3-wire circuit, silence the operator signal, and stop any basket motion in progress. This button also unlocks the door so you can open it.
	Du kan også afbryde strømmen til det tretrådede kredsløb, dæmpe lyden til operatørsignalet og stoppe kurverotation med en hvilken som helst af disse knapper. Hvis du anvender én af disse knapper, skal du dog stadig oplåse lågen med , før du kan åbne den. Hvis du anvender én af disse knapper til at stoppe et program med *slutkode 3* (se Afsnit 2.1.7.2), afsluttes programmet og kan ikke genoptages.	You can also remove power from the 3-wire circuit, silence the operator signal, and stop any basket motion that was in progress with any of these buttons. However, if you use any of these buttons, you'll still need to unlock the door with before you can open it. If you use any of these buttons to stop a formula with *end code 3* (see Section 2.1.7.2), the formula is terminated and cannot be resumed.
	Åbn lågen for aflæsning.	Open the door for unloading.

2.1.7.2. For slutkode 3 (*Centrifugering*)—Slutkode 3 (*Centrifugering*) giver dig mulighed for at åbne lågen og fjerne noget af vaskelasten, lukke lågen og derefter genoptage centrifugering for at løsne mere vaskelast fra kurven.

For End Code 3 (*Tumbling*)—End code 3 (*Tumbling*) allows you to open the door and remove some of the goods, then close the door and resume tumbling to loosen more goods from the basket.

Visning eller handling [Display or Action]	Forklaring	Explanation
	Afbryd strømmen til det tretrådede kredsløb, dæmp lyden for operatørsignalet og stop eventuel kurverotation. Denne knap oplåser også lågen, så du kan åbne den.	Remove power from the 3-wire circuit, silence the operator signal, and stop any basket motion in progress. This button also unlocks the door so you can open it.

Når kurven holder op med at dreje, kan du åbne lågen og fjerne hele vaskelasten eller dele af den fra maskinen.

When the basket stops turning, open the door and remove some or all of the goods from the machine.

+	Åbn lågen for aflæsning.	Open the door for unloading.

Fjern den ønskede mængde af vaskelasten.

Remove any desired portion of the load.

+	Luk lågen.	Close the door.
①	Genoptager centrifugering uden operatørsignalet. Centrifugering fortsætter i yderligere to minutter, eller indtil du trykker på .	Resumes the tumbling action without the operator signal. Tumbling continues for another two minutes, or until you press .

— Slutning på BICWCO03 —

— End of BICWCO03 —

Kapitel 3
Signaler og fejl

Chapter 3
Signals and Errors

BICWCT04 (Published) Book specs- Dates: 20070924 / 20070924 / 20110221 Lang: DAN01 Applic: 68036F5N

3.1. Operatørindblanding

Når et program starter, kører maskinen normalt automatisk. Maskinen afgiver signalet, hvis en operatør skal tage en beslutning eller foretage noget manuelt. De mest almindelige årsager til, at du skal tilse maskinen, er fejl eller i visse tilfælde manuel tilsætning af kemikalier.

Operator Intervention

Once a formula starts, the machine usually runs automatically. The machine will sound the signal if an operator needs to make a decision or do something manually. The most common reasons you'll need to attend to the machine are errors, and to manually add chemicals in some cases.

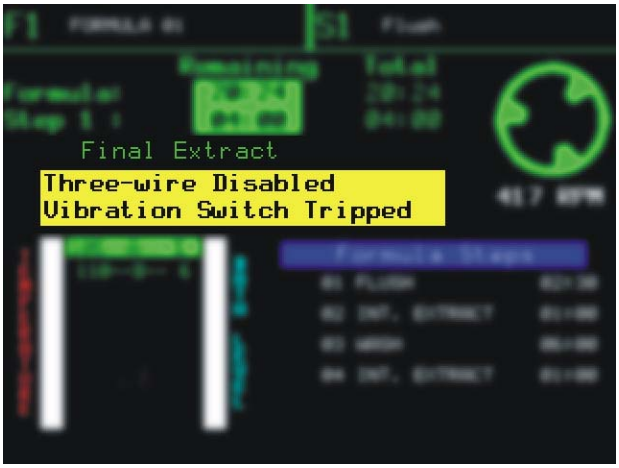
3.1.1. Fejl med operatørsignalet

Operatørsignalet lyder, og signallyset blinker, hvis en fejl forårsager maskinstop. Disse fejl deaktiverer normalt det treledede kredsløb, og inkluderer en udløst vibrationskontakt eller fejl i omformeren, der kontrollerer motoren. Figur 16 viser, hvordan en vibrationskontaktfejl forekommer på displayet.

Error with Operator Signal

The operator signal will sound and the beacon will flash if an error causes the machine to stop. These errors usually disable the three-wire circuit, and include a tripped vibration switch or a malfunction of the inverter that controls the motor. Figure 16 shows how a vibration switch error appears on the display.

Figur [Figure] **16: Typisk fejl med operatørsignalet [Typical Error with Operator Signal]**



For at genoptage programmet skal du dæmpe lyden på signalet og udbedre årsagen til fejlen. Start derefter programmet igen.

To resume the formula, silence the signal and correct the cause of the error. Then, restart the formula.

Visning eller handling [Display or Action]	**Forklaring**	**Explanation**
	Tasten Cancel (Annullér) på tastaturet stopper maskinen, dæmper lyden på operatørsignalsummeren og slukker for signallyset. Du skal genstarte programmet fra starten.	The Cancel key on the keypad stops the machine, silences the operator signal buzzer, and turns off the signal light. You'll have to restart the formula from the beginning.

Korrigér årsagen til fejlen. Hvis du ikke ved, hvordan du løser problemet, henvises der til maskinens referencemanual.

Correct the cause of the error. If you don't know how to fix the problem, have someone check the reference manual for the machine.

①	Hvis du har udbedret fejlen, genoptager Start-knappen programmet, hvor det blev stoppet. Hvis vibrationskontakten forårsagede fejlen, går maskinen gennem en distributionssekvens for at fordele lasten rundt i kurven og genoptager derefter det afbrudte udtrækstrin.	If you've corrected the error, the Start button resumes the formula where it stopped. If the vibration switch caused the error, the machine goes through a distribution sequence to spread the goods around the basket, then resumes the interrupted extract step.

3.1.2. Operatørsignal for et kemikalie

Operator Signal for a Chemical

Denne maskine kan styre et automatisk kemisk pumpesystem, eller den kan signalere, at du skal tilføje kemikalier manuelt. Displayet (Figur 17) er det samme i begge tilfælde, men operatørsignalet lyder kun, hvis signalet er

This machine can control an automatic chemical pump system, or it can signal you to add chemicals manually. The display (Figure 17) appears the same in either case, but the operator signal sounds only if the

programmeret.

Hvis programmet er programmeret til at styre et kemisk pumpesystem, viser displayet det programmerede kemiske ventilnummer, kemisk navn og indsprøjtningstid. Indsprøjtningstiden, der vises i højre ende af det kemiske display, starter nedtælling, når den kemiske indsprøjtning starter.

Hvis programmet er programmeret til at give dig et signal om manuel tilsætning af kemikalier, kører maskinen automatisk, indtil den behøver et kemikalie. Da stopper maskinen og afventer tilsætning af kemikaliet, hvorefter den fortsætter driften. Displayet ændres og viser hvilket kemikalie, der skal tilsættes, men tælleren for indsprøjtningstiden kører kun, når du har annulleret operatørsignalet.

signal is programmed.

If the formula is programmed to control a chemical pump system, the display shows the programmed chemical valve number, chemical name, and injection time. The injection time, shown at the right end of the chemical display, begins counting down immediately when the chemical injection begins.

If the formula is programmed to signal you to manually add chemicals, the machine will operate automatically until it needs a chemical, then the machine stops and waits for you to add the chemical and resume operation. The display changes to show you which chemical to add, but the injection time counter runs only after you cancel the operator signal.

Figur [Figure] **17: Visning af kemisk indsprøjtning på driftsdisplayet [Chemical Injection View on Run Display]**

Visning eller handling [Display or Action]	Forklaring	Explanation
Når du har tilføjet kemikaliet,		After you've added the chemical,
	annulleres operatørsignalet, og tælleren for indsprøjtningstiden starter.	cancels the operator signal and starts the injection time counter.

— Slutning på BICWCT04 —

— End of BICWCT04 —

Deutsch 3

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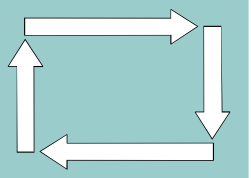
Betriebshandbuch [Operator Guide]—

Kippbare Wasch/Schleudermaschine Mark VI Steuerung [Tilting Washer-extractor with Mark VI Controller]



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PELLERIN MILNOR CORPORATION POST OFFICE BOX 400, KENNER, LOUISIANA 70063 - 0400, U.S.A.

Anwendbare Milnor® Maschinen der Modelle: [Applicable Milnor® products by model number:]

48040H7N 64040E6N 64050E5N 68036F5N 68036F5P 68036H5N

Inhaltsverzeichnis [English table of contents follows]

Abschnitte	Abbildungen, Tabellen und Ergänzungen

Table of Contents

Sections	Figures, Tables, and Supplements

Kapitel 1
Steuerung

Chapter 1
Controls

BICWCO02 (Published) Book specs- Dates: 20070924 / 20070924 / 20081208 Lang: GER01 Applic: 68036F5N

1.1. Steuerung Mark VI kippbare Wasch/Schleudermaschinen mit Hydrauliktür

Hinweis auf andere Abschnitte dieser Anleitung(Abschnitt 1.1.2 bis Abschnitt 1.1.5) in denen Anordnung und Basisfunktionen der Steuerung beschrieben sind. Benutzen sie dieses Dokument nicht als Anleitung für den Maschinenbetrieb!

1.1. Controls on Mark VI Tilting Washer-extractors with Hydraulic Door

Refer to other parts of this document (Section 1.1.2 through Section 1.1.5) for the location and basic function of individual controls. Don't use this document as instructions for operating the machine.

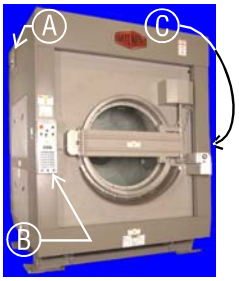
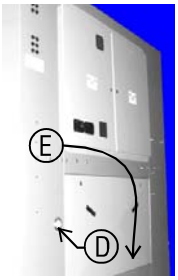
1.1.1. Wo befinden sich die Steuerelemente?

Die für den normalen Betrieb erforderlichen Steuerelemente befinden sich auf dem vorderen Bedienfeld (Abbildung 1). Zusätzliche Steuerelemente und Anschlüsse befinden sich, wie hier beschrieben, anderswo an der Maschine.

1.1.1. Where are the Controls?

The essential controls for normal operation are located on the front control panel (Figure 1). Additional controls and connections are located elsewhere on the machine, as described here.

Abbildung [Figure] **1: Platz der Steuerelemente [Locations of Controls]**

Vordere Linksansicht [Front Left View]	Hintere Ansicht [Rear View]	Legende [Legend]
		**A.** Mikroprozessor Steuerungskasten (68036F_B angezeigt) [Microprocessor control box (68036F_B shown)] **B.** Bedienfeld [Control panel] **C.** Manuelle Spültaste [Manual supply flush button] **D.** Hydraulik Mannometer für die Ladetür [Hydraulic pressure gauge for loading door] **E.** Luftdruck Mannometer für Kippsystem (hinter der unteren Abdeckung) [Air pressure gauge for tilt system (behind lower rear panel)]

1.1.2. Wo schließe ich ein Gerät für den Datentransfer an?

Der Mikroprozessorkasten in der oberen, hinteren Ecke der Maschine, links (siehe Abbildung 1), beinhaltet einen DIN-genormten Anschluss für die serielle Kommunikation. Benutzen Sie diesen Anschluss, beschriftet wie in Abbildung 2, um ein Gerät für den Datentransfer (Externe Rechner) anzuschließen. Programme oder Konfigurationen können so gespeichert und abgelegt oder auf einem externen Rechner bestehende Programme in die Maschine kopiert werden.

Where do I Connect the Data Storage Device?

The microprocessor box in the upper rear corner of the machine left side panel (see Figure 1) contains a DIN-type connection for serial communications. Use this connection, labelled as shown in Figure 2, with a serial data transfer device to save or restore machine programming and configuration memory.

Abbildung [Figure] **2: Serielle Anschluss für den Datenaustausch [Serial Connection for Data Transfer]**

1.1.3. Was sind die Betriebssteuerelemente?

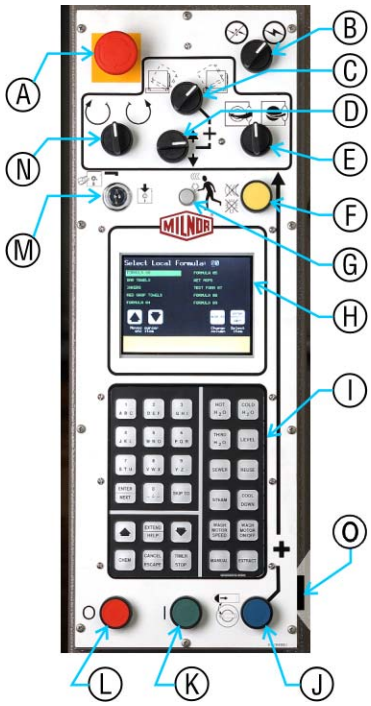
Die wichtigsten Betriebssteuerelemente sind erforderlich, um die Maschine zu starten und zu stoppen, das Waschprogramm zu wählen und den Betrieb der Maschine zu überwachen.

What are the Operating Controls?

The primary operating controls are required to start and stop the machine, select wash formulas, and monitor machine operation.

Abbildung [Figure] **3: Mark VI Bedienfeld [Mark VI Control Panel]**

Bedienfeld und Steuerelemente [Panel and Controls]



Legende [Legend]

- **A.** *Notaus* Taste [*Emergency stop* button]
- **B.** *Hauptschalter* für Energie [*Master switch* for power]
- **C.** *Kippe vorne/hinten-Schalter* Schalter (nur kippbare Modelle) [*Tilt front/rear selector* switch (tilting models only)]
- **D.** *Kippe hoch/runter-Schalter* Schalter (nur kippbare Modelle) [*Tilt up/down selector* switch (tilting models only)]
- **E.** *Tür öffnen/schließen* Schalter [*Door open/close* switch]
- **F.** *Benutzersignalabbruch* Taste [*Operator signal cancel* button]
- **G.** *Benutzersignal* Licht [*Operator signal* light]
- **H.** Flüssigkristallgrafikanzeige [Liquid crystal graphic display]
- **I.** Tastenfeld [Keypad]
- **J.** *Tür öffnen* Taste [*Door open* button]
- **K.** *Start* Taste [*Start* button]
- **L.** *Stop* Taste [*Stop* button]
- **M.** *Betrieb/Programmieren Schlüsselschalter* [*Run/Program keyswitch*]
- **N.** *Tipprichtung* Schalter [*Jog direction* switch]
- **O.** *Bei-Offener-Tür-Tippen* Taster (nur kippbare Modelle) [*Door open jog* button (tilting models only)]

Abbildung [Figure] **4: Tastenfeld [Keypad]**

Notaus—unterbricht den Sicherheitsstromkreis. Diese Taste rastet ein wenn sie gedrückt wird, Sie müssen ihn durch leichtes drehen in die Ausgangsposition bringen, um die Maschine erneut starten zu können.

Beachtung 1: Drücken Sie im Notfall sofort die *Notaus* Taste. Der Sicherheitsstromkreis wird unterbrochen, stoppt den Betrieb der Maschine und ermöglicht es, den Abfluss zu öffnen.

- Wenn Sie diese Taste zurücksetzen, haben Sie die Möglichkeit das unterbrochene Programm abzubrechen oder fortzusetzen. Das Programm macht an der Stelle weiter, wo es unterbrochen wurde oder am Anfang des vorherigen Waschschrittes. Es kommt darauf an, in welcher Phase des Programmes die *Notaus* Taste gedrückt wurde.

Hauptenergieschalter (⊗ / ⊖)—nimmt die Energie vom Steuerungssystem. Wenn Sie den *Hauptschalter* ausschalten (⊗) während ein Programm läuft, ist das umgehende Ergebnis ähnlich dem, als würden Sie die *Notaus* Taste drücken: die Maschine stoppt und der Abfluss öffnet sich. Im Gegensatz zur *Notaus* Taste, starten wiederaufgenommene Programme am Anfang des Schritts, in dem die Energie abgeschaltet wurde. Waschmittel werden

Emergency stop button—disables the 3-wire circuit. This switch locks in when pressed, so you must turn it a quarter turn to allow it to return to the normal position to allow the machine to run.

Notice 1: Press the *emergency stop* button immediately in any emergency situation. This disables the 3-wire circuit, which stops all machine operation and causes the drain to open.

- When you reset this button, you have the option of cancelling or resuming the interrupted formula. The formula resumes where it was interrupted or at the beginning of the previous bath step, depending on the operation in progress when the *emergency stop* button was pressed.

Master power switch (⊗ / ⊖)—removes power from the control system. If you turn the *master switch* off (⊗) while a formula is running, the immediate result is similar to pressing the *emergency stop* button: the machine stops and the drain opens. Unlike the *emergency stop* button, resumed formulas start at the beginning of the step in which power was lost, but chemicals are not injected in the resumed step.

allerdings nicht wieder in dem wiederaufgenommenem Schritt eingespült.

Benutzersignalabbruch-Taste ( )—bricht den *Benutzersignal* ab. Drücken Sie diese Taste, um den Summer abzustellen und schalten Sie das *Benutzersignal* Licht aus (siehe unten), oder um ein Signal vor dem programmierten Einspülen zu erhalten.

Benutzersignal Licht—zeigt einen Fehler an oder dass der Benutzer handeln muss, wie die *Start* Taste drücken oder die Maschine entladen. Die *Benutzersignal* Steuerung beinhaltet einen Summer hinter dem Bedienfeld. Optional gibt es ein an der Maschine angebrachtes Blinklicht das zusätzlich ein optisches Signal gibt.

Flüssigkristallgrafikanzeige—zeigt Informationen und Hilfen für die Maschine an. Die Informationen auf dem Display wechseln, je nach Status der Maschine und der vom Benutzer gewählten Funktion.

Tastenfeld—erlaubt dem Benutzer, mit dem Steuersystem der Maschine zu kommunizieren. Das Tastenfeld ist in drei Bereiche aufgeteilt: Alphanumerische Tasten, allgemeine Tasten und funktionsspezifische Tasten. Jede Taste kann mehr als eine Funktion haben, basierend auf dem gegenwärtigen Maschinenstatus. Einige Tasten werden auch in Kombination für zusätzliche Funktionen benutzt.

Starttaste ( )—startet das gewählte Waschprogramm. Die *Start* Taste versorgt Sicherheitsstromkreis mit Strom, um die Maschine betriebsbereit zu machen.

Stoptaste ( )—stoppt den Maschinenbetrieb. Wie die *Notaus* Taste unterbricht auch die *Stop* Taste den Sicherheitsstromkreis; die *Stop* Taste muss nicht manuell zurückgesezt werden.

Betrieb/Programmieren Schlüsselschalter (/)—in der *Programm* Position, ermöglicht Änderung der Maschinenkonfiguration und der Waschprogramme, neben anderen Optionen. In der normalen *Betrieb* Position sind Programme und Änderungen geschützt. Programme können gestartet werden.

Operator signal cancel button ( )—cancels the *operator signal*. Press this button to silence the buzzer and turn off the *operator signal* light (see below), or to allow injection of a chemical programmed to require a signal before injection.

Operator signal light—indicates that the machine has encountered an error or that the operator must perform some action, such as pressing the *start* button or unloading the machine. The *operator signal* circuit includes a buzzer behind the control panel, and may include an optional beacon light mounted separately from the control panel.

Liquid crystal graphic display—displays information and help about the machine. The information on the display changes according to the status of the machine and the function selected by the operator.

Keypad—allows the operator to communicate with the machine control system. The keypad is divided into three areas: alphanumeric buttons, general buttons, and function-specific buttons. Each button may perform more than one function, based on the current machine status. Some buttons are also used in combinations for additional functions.

Start button ( )—starts the selected wash formula. The *start* button energizes the 3-wire circuit to allow the machine to operate.

Stop button ( )—stops machine operation. Like the *emergency stop* button, the *stop* button disables the 3-wire circuit; however, the *stop* button doesn't require you to manually reset it after use.

Run/Program keyswitch (/)—in the *Program* position, allows changes to machine configuration and wash formulas, among other actions. In the normal *Run* position, formulas and configuration are protected and formulas can be run.

Luftdruckmannometer für das Kippsystem—Befindet sich hinter der unteren Tafel auf der Rückseite der Maschine; überwacht den Luftdruck, der benutzt wird, um die Maschine zu kippen.

Air pressure gauge for tilt system—located behind the lower panel on the rear of the machine; monitors the air pressure used to tilt the machine.

1.1.4. Was sind ist die Beladesteuerung?

Mit der Beladesteuerung können Sie die Tür öffnen und schließen, so wie auch die Trommel kippen und tippen; wird überwiegend beim Be- und Entladen einer kippbaren Maschine benutzt.

Milnor stellt Maschinen mit zwei verschiedenen Typen von Kippmechanismen her:

- **Eindrehpunktmodelle**, einschließlich der E_N und J_N Modellen, kippen hydraulisch von nur einer Drehpunktachse neben der Rückseite der Maschine. Diese Modelle kippen zum Entladen, indem man die Vorderseite der Maschine unter die normale Betriebsposition senkt. Sie kippen zum Beladen, indem man die Vorderseite der Maschine über die normale Betriebsposition hebt.
- **Doppeldrehpunktmodelle**, einschließlich der F_W Modelle, kippen pneumatisch von Drehpunktachsen neben den Vorder- und Rückseiten der Maschine. Diese Modelle kippen zum Beladen, indem man Luftblasen unter der Vorderseite der Maschine aufbläst. Sie kippen zum Entladen, indem man Luftblasen unter der Rückseite der Maschine aufbläst.

Die Zeichen am Bedienfeld der Maschine wechseln, je nachdem, ob die Maschine ein Ein- oder Doppeldrehpunktmodell ist.

What are the Loading Controls?

Loading controls allow you to open and close the door, as well as tilt and jog the cylinder; used primarily when loading and unloading a tilting machine.

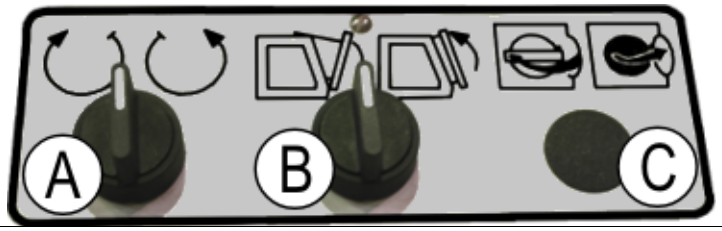
Milnor manufactures machines with two different types of tilting mechanisms:

- **Single-pivot models**, including the E_N and J_N model lines, tilt hydraulically from a single pivot axis near the rear of the machine. These models tilt to unload by lowering the front of the machine below the normal operating position, and tilt to load by raising the front of the machine above the normal operating position.
- **Dual-pivot models**, including tilting models in the F_W line, tilt pneumatically from pivot axes near the front and rear of the machine. These models tilt to load by inflating air bladders below the front of the machine, and tilt to unload by inflating air bladders below the rear of the machine.

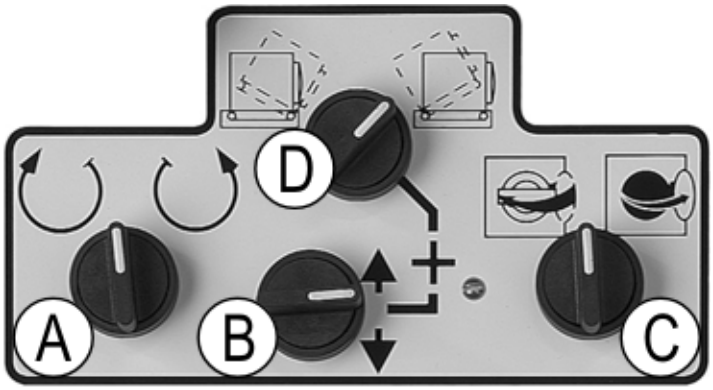
The symbols on the machine control panel vary according to whether the machine is a single- or dual-pivot model.

Abbildung [Figure] **5: Typische Kippbedienfelder [Typical Tilt Control Panels]**

Eindrehpunktmodell [Single-Pivot Model]



Doppeldrehpunktmodell [Dual-Pivot Model]



Legende [Legend]

- **A.** *Tipprichtung* Schalter [*Jog direction* switch]
- **B.** *Kipprichtung* Schalter [*Tilt direction* switch]
- **C.** *Tür öffnen/schließen* Schalter [*Door open/close* switch]
- **D.** *Drehpunktschalter* Schalter [*Pivot selector* switch]

***Drehpunktschalter* Schalter (/)**—entscheidet, ob die Maschine am vorderen oder am hinteren Drehpunkt kippt. Setzen Sie diesen Schalter in die linke Position, um das Entladen zu erleichtern; benutzen Sie die rechte Position, um die Vorderseite der Maschine nach oben zu kippen, um sie leichter beladen zu können.

***Kipprichtung* Schalter**—ermöglicht das gewählte Ende der Maschine zu heben oder zu senken. Bei Doppeldrehpunktmaschinen arbeitet dieser Schalter mit dem *Drehpunktschalter* Schalter, um die Maschine zu kippen. Mit der *Tür öffnen* Taste gedrückt, drücken Sie den Schalter nach oben, um das gewählte Ende der Maschine zu heben, oder drücken Sie ihn runter, um es zu senken.

Um eine Doppeldrehpunktmaschine für einen erleichterten Beladevorgang nach hinten kippen zu lassen, legen Sie zuerst den "Kippe vorne/hinten Schalter" nach rechts um, wie in Abbildung 5. Diese Schalterstellung bestimmt, dass die Maschine am hinteren Drehpunkt kippt. Als nächstes legen Sie den Kipprichtungsschalter in die *Hoch* Position und drücken die *Tür öffnen* Taste (). Die Vorderseite der Maschine wird nach oben

***Pivot selector* switch (/)**—determines whether the machine tilts on the forward or rearward pivot. Set this switch to the left position to facilitate unloading; use the right position to tilt the front of the machine up for easier loading.

***Tilt direction* switch**—actuates the necessary devices to raise or lower the selected end of the machine. On dual-pivot machines, this switch works with the *pivot selector* switch to tilt the machine. With the *door open* button pressed, turn the switch up to raise the selected end of the machine, or down to lower it.

To tilt a dual-pivot machine backward for easier loading, first set the tilt front/rear selector switch to the right, as shown in Figure 5. This determines that the machine will tilt on the rear pivot point. Next, hold the tilt direction switch in the *up* position and press the *door open* button (). The front of the machine will tilt up and back until the front is fully tilted or you release either of the two controls. Use similar procedures to lower

kippen und zurück bis die Vorderseite völlig gekippt ist, oder Sie eine der beiden Tasten los lassen bzw. umlegen. Das Prinzip, um die Vorderseite der Maschine in ihre normale Position zu senken, oder um die Hinterseite der Maschine zum Entladen zu heben ist das Gleiche.

the front of the machine to the normal position, or to raise the rear of the machine for unloading.

Um eine Eindrehpunktmaschine zu kippen, legen und halten Sie den Kipprichtungsschalter in die gewünschte Position und halten die *Tür öffnen* Taste (), bis die Maschine den gewünschten Winkel erreicht.

To tilt a single-pivot machine, hold the tilt direction switch in the desired position and hold the *door open* button () until the machine reaches the desired angle.

***Tür öffnen/schließen* Schalter (/)**—kontrolliert das automatische Türsystem, wenn die Maschine stillsteht. Um die Tür zu öffnen, legen Sie den Schalter nach rechts () um, während Sie die *Tür öffnen* Taste () drücken. Legen Sie den Schalter nach links () und drücken Sie die *Tür öffnen* Taste, um die Tür zu schließen. Lassen Sie die Tasten los, wenn sich die Tür in der richtigen Position befindet. Die Hydraulikpumpe, welche die Tür antreibt, schaltet sich automatisch aus, wenn die Tür vollständig geöffnet oder geschlossen ist.

***Door open/close* switch (/)**—controls the automatic door system when the machine is idle. To open the door, turn the switch to the right () while pressing the *door open* button (). Turn the switch to the left () and press the *door open* button to close the door. Release the controls when the door is in the correct position. The hydraulic pump which powers the door shuts off automatically when the door is fully open or fully closed.

Tür-Öffnen-Taste ()—ermöglicht andere Beladesteuerungen, wenn die Maschine stillsteht. Wenn man die *Tür öffnen* Taste drückt, während die Maschine läuft, nimmt das die Energie vom Sicherheitsstromkreis und bringt die Maschine zum Stillstand. Wenn die Maschine stillsteht, muss diese Taste gedrückt werden, um andere Be- oder Entladefunktionen zu verrichten. Durch diese Funktion wird sicher gestellt, dass beide Hände auf dem Bedienfeld sind, für den Fall, dass sich die Trommel drehen sollte, während die Tür offen ist.

Door open button ()—enables other loading controls when the machine is idle. Pressing the *door open* button while the machine is operating removes power from the 3-wire circuit, stopping the machine. When the machine is idle, this button must be pressed to perform any other loading or unloading function. This requirement helps ensure that you have both hands safely on the control panel of the machine if the basket might turn under power while the door is open.

WARNUNG 2: Rutsch-, Quetsch- und Stoßgefahr—Berührung der drehenden Trommel kann Stoßverletzungen an Gliedmaßen hervorrufen. Die Trommel stößt jeden Gegenstand zurück, mit dem versucht wird, sie anzuhalten. Dies kann zu Stoß- oder Stichverletzungen führen. Im Normalfall ist die drehende Trommel durch die geschlossene Tür abgeschirmt.

- Unternehmen Sie keine unsachgemäszen Eingriffe an den Sicherheitseinrichtungen, und setzen Sie diese nicht außer Betrieb. Betreiben Sie

WARNING 2: Fall, Entangle, and Strike Hazards—Contact with the turning cylinder can crush your limbs. The cylinder will repel any object you try to stop it with, possibly causing the object to strike or stab you. The turning cylinder is normally isolated by the locked cylinder door.

- Do not tamper with or disable any safety device or operate the machine with a malfunctioning safety device. Request authorized service.

die Maschine auch nicht mit schadhaften Sicherheitseinrichtungen. Fordern Sie Instandsetzungen durch autorisierte Fachkräfte an.

Tipprichtungsschalter (↻/↺)—ermöglicht Ihnen, die Trommel langsam in eine Richtung zu tippen, was beim Be- oder Entladen der Maschine hilfreich ist. Um den Zylinder im Uhrzeigersinn zu tippen, halten Sie den Tipprichtungsschalter nach links (↺), während Sie die Tür-öffnen Taste drücken.

Türhydraulik Mannometer—auf der hinteren Tafel der Maschine zeigt das Mannometer der Hydraulikdruck an, wenn die Tür sich öffnet oder schließt. Während des Betriebs zeigt dieses Messgerät 0 an, es sei denn, die Tür öffnet oder schließt sich. Wenn sich die Tür bewegt, zeigt das Mannometer etwa 900 psi (62 Bar) an, wenn das hydraulische System richtig eingestellt ist.

Jog direction switch (↻/↺)—allows you to jog the cylinder slowly in either direction to help in loading or unloading the machine. To jog the cylinder clockwise, hold the jog direction switch to the left (↺) while pressing the door open button.

Door hydraulic circuit pressure gauge—on the rear panel of the machine, this gauge displays the pressure in the hydraulic circuit when the door is opening and closing. During normal operation, this gauge registers 0 unless the hydraulic door opening or closing. When the door is moving, this gauge indicates about 900 psi (62 bar) when the hydraulic system is properly adjusted.

1.1.5. Was macht dieser Schalter?

Andere Tasten und Schalter werden benutzt, um andere standart- und optionale Funktionen der Maschine zu steuern. Diese verschiedenen Steuerelemente befinden sich in diesem Abschnitt und werden hier beschrieben.

Mildata/Lokal-Schalter (Abbildung 6)—befindet sich am Mikroprozessor Kontrollkasten (siehe Abbildung 1), ermöglicht der Maschine, mit einem Mildata Netzwerk zu kommunizieren. Ein Mildata Netzwerk kann mehrere Maschinen zusammenschalten und ermöglicht es, Waschprogramme und andere Daten mit dem Mildata Computer auszutauschen. Wenn dieser Schalter sich in der *Mildata* Position (💻) befindet und Sie eine Programmnummer eingeben, erbittet die Maschine die Inhalte des Programms vom Mildata Computer. Wenn Sie ihn in die *Lokal* Position setzen (🖳), werden nur Programme gezeigt, die **in der Maschine** verfügbar sind.

What does this Switch do?

Other buttons and switches are used to control additional standard and optional machine functions. These miscellaneous controls are located and described in this section.

Mildata/Local selector switch (Figure 6)—located on the microprocessor control box (see Figure 1), allows the machine to communicate with a Mildata network. A Mildata network connects several machines together and allows them to share wash formulas and other data with the Mildata computer. When this switch is in the *Mildata* position (💻) and you enter a formula number, the machine requests the contents of the formula from the Mildata computer. When set to the *Local* position (🖳), only formulas present **in the machine** are available.

Abbildung [Figure] **6: Mildata/Lokal-Schalter [Mildata/Local Selector switch]**

***Bei-Offener-Tür-Tippen* Schalter (Abbildung 7)**—Diese Taste, falls verfügbar, befindet sich auf der Seite des Bedienfeldes neben der *Tür öffnen* Taste. Um die Möglichkeit zu verringern, dass verschmutzte Wäschestücke aus der Maschine herausfallen, während sie absenkt, halten Sie diese Taste und die *Tür öffnen* Taste mit einer Hand gedrückt, und halten Sie den *Tipprichtung* Schalter in einer der beiden Richtungen mit der anderen Hand. Der Zylinder dreht sich langsam, während die Tür sich schließt und die Maschine in ihre normale Betriebsposition absenkt.

***Door open jog* button (Figure 7)**—This button, if provided, is located on the side of the control panel box near the *door open* button. To reduce the chance of soiled goods falling out of the machine as it descends, hold this button and the *door open* button depressed with one hand, and hold the *jog direction* switch in either direction with the other hand. The cylinder rotates slowly as the door closes and the machine descends to the normal operating position.

Abbildung [Figure] **7: *Bei-Offener-Tür* Taste [*Door open jog* button]**

Manuelle Spültaste (Abbildung 8)—Bei Maschinen die optional mit einer manuellen Waschmitteleinspülung ausgestattet sind, drücken Sie diese Taste um Waschmittelrückstände in die Maschine zu spülen. Wenn Sie die manuell Versorgungen während eines Waschprogrammes benutzen wollen, drücken Sie diese Taste um restliches unverdünntes Waschmittel aus der Versorgungsrutsche zu spülen. Für den Fall, dass die Maschine nicht mit einer manuellen Waschmitteleinspülung ausgestattet ist, werden durch Betätigung dieser Taste die Kammern der Flüssigdosierung gespült.

Manual supply flush button (Figure 8)—On machines equipped with an optional flushing supply injector, press this button to spray water into the supply injector to flush any remaining chemicals into the cylinder. If you manually add supplies during a wash formula, press this button to flush any remaining undiluted chemicals out of the supply chute. If the machine is not equipped with the optional supply injector, press this button to flush the liquid chemical inlets with fresh water.

Abbildung [Figure] **8: Manuelle Spültaste [Manual Supply Flush button]**

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Kapitel 2
Normaler Maschinenbetrieb

Chapter 2
Normal Machine Operation

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2.1. Arbeitsanweisungen für Betriebspersonal

2.1. Operating Instructions for Plant Personnel

2.1.1. Beginnen Sie hier, bezüglich der Sicherheit

Dieses Dokument hat die Aufgabe den Maschinenbenutzer über alles Erforderliche für den Umgang mit dieser Maschine zu informieren. Bedienen Sie diese Maschine nicht, bevor ein erfahrener Mitarbeiter Ihnen die Details des Umganges mit dieser Maschine erklärt hat.

VORSICHT GEFAHR 3: Mehrfache Gefahren —Unvorsichtige Bedienung kann zu Verletzung oder gar Tod von Personen führen, zur Beschädigung oder Zerstörung der Maschine und anderer Gegenstände sowie zum Erlöschen der Garantie.

VORSICHT GEFAHR 4: Todes- und Verbrennungsgefahr durch Stromschlag—Die Berührung von unter Hochspannung stehenden Teilen kann ernsthafte Verletzungen oder Stromschlag mit Todesfolge hervorrufen. Hochspannung liegt im Inneren des Schaltschranks an, solange der Trennschalter für die Stromversorgung zur Maschine nicht ausgeschaltet ist.

- Entriegeln oder öffnen Sie nicht die Türen der Schaltkästen.
- Machen Sie sich mit der Position des Hauptschalters der Maschine vertraut und betätigen Sie diesen im Notfall, damit kein Strom mehr an der Maschine

2.1.1. Start Here for Safety

This document is meant to remind you, the person operating this washer extractor, of what is required to operate this machine. Do not attempt to operate this machine before an experienced, trained operator explains the details to you.

DANGER 3: Multiple Hazards—Careless operator actions can kill or injure personnel, damage or destroy the machine, damage property, and/or void the warranty.

DANGER 4: Electrocution and Electrical Burn Hazards—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

anliegt.

- Die Maschine darf ausschließlich von qualifiziertem und autorisiertem Personal instandgesetzt werden. Sie müssen die Gefahrenquellen eindeutig verstanden haben und wissen, wie Gefahren zu vermeiden sind.

clearly understand the hazards and how to avoid them.

ACHTUNG 5: Zusammenstoß, Erdrücken und Qquetschungen—Berührung von sich bewegenden Teilen, die normalerweise durch Führungen, Abdeckungen oder Seitenbleche abgeschirmt sind, kann Gliedmaßen einquetschen und Stoßverletzungen hervorrufen. Diese Teile bewegen sich automatisch.

CAUTION 5: Collision, Crushing and Pinch Hazards—Contact with moving components normally isolated by guards, covers, and panels, can entangle and crush your limbs. These components move automatically.

2.1.2. Überprüfen Sie die Schalterstellungen

Check Switch Settings

Anzeige oder Aktion [Display or Action]	**Erklärung**	**Explanation**
	Überprüfen Sie, ob der *Betrieb/Programmieren* Schlüsselschalter auf steht.	Check that the *run/program* keyswitch is at .
	Um die Maschine in Betrieb nehmen zu können, müssen alle Notaus-Schalter unbetätigt und in der Position *Bereit* sein.	All emergency stop buttons must be unlatched and in the *ready* position to allow machine operation.
	Stellen Sie sicher, dass der Hauptschalter auf steht.	Check that the master switch is at .

2.1.3. Wie belade ich eine kippbare Maschine? / How do I Load a Tilting Machine?

2.1.3.1. Automatisiertes (Hub- oder Verfahrband) Beladen / Automated (Rail or Shuttle) Loading

Anzeige oder Aktion [Display or Action]	Erklärung	Explanation
	Öffnen Sie die Tür	Open the door
	Setzen Sie den *kippe vorne/hinten Schalter* auf die *Vorderseite* Position.	Set the *tilt front/rear selector switch* to the *front* position.
	Zum Beladen kippen Sie die Vorderseite der Maschine nach oben.	Tilt the front of the machine up to receive the load.
	Wählen Sie das Programm (07 zum Beispiel). Details über das auswählen eines Programms sind in Abschnitt 2.1.4 “Wie wähle ich ein Programm?” beschrieben.	Select the formula (07, for example). Details about selecting a formula are described in Section 2.1.4 “How do I Select a Formula?”.
	Wechseln Sie in die Spalte für Programmauswahl, falls notwendig.	Toggle column for formula selection if necessary.
	Gehen Sie zum nächsten oder vorherigen angezeigten Programm in der aktuellen Spalte.	Move to the next or previous displayed formula in the current column.
	Bestätigen Sie das ausgewählte Programm.	Confirm the selected formula.
Beladen Sie die Maschine wie für dieses Programm vorgesehen.		Use the procedure defined by facility management to put the goods in the machine.
	Schließen Sie die Tür.	Close the door.
	Kippen Sie die Vorderseite der Maschine nach unten in die normale Position.	Tilt the front of the machine down to the normal position.

2.1.3.2. Manuelles Beladen — Manual Loading

Anzeige oder Aktion [Display or Action]	Erklärung	Explanation
	Öffnen Sie die Tür.	Open the door.
	Wählen Sie das Programm (07 zum Beispiel). Details über das Auswählen eines Programms sind in Abschnitt 2.1.4 "Wie wähle ich ein Programm?" beschrieben.	Select the formula (07, for example). Details about selecting a formula are described in Section 2.1.4 "How do I Select a Formula?".
	Wechseln Sie in die Spalte für Programmauswahl, falls notwendig.	Toggle column for formula selection if necessary.
	Gehen Sie zum nächsten oder vorherigen angezeigten Programm in der aktuellen Spalte.	Move to the next or previous displayed formula in the current column.
	Bestätigen Sie das gewählte Programm.	Confirm the selected formula.
Beladen Sie die Maschine wie für dieses Programm vorgesehen.		Use the procedure defined by facility management to put the goods in the machine.
	Schließen Sie die Tür.	Close the door.

2.1.4. Wie wähle ich ein Programm? — How do I Select a Formula?

Der Mark VI Controller kann entweder im *lokal* oder im *Mildata* Modus arbeiten. Im *lokal* Modus kann die Maschine nicht mit anderen Geräten kommunizieren. Es sind nur Programme verfügbar die im lokalen Speicher abgelegt sind. Im *Mildata* Modus lädt die Maschine Programme runter und lässt Programme vom Mildata Computer laufen und aktualisiert stets das Display des Mildata Computers.

The Mark VI controller can operate in either *local* or *Mildata* mode. In *local* mode, the machine does not communicate with any other devices and runs formulas contained in local controller memory. In *Mildata* mode the machine downloads and runs formulas from the Mildata computer, and frequently updates the display on the Mildata computer.

Abbildung [Figure] **9: Auswählen eines lokalen oder abgelegten Programms. [Selecting a Local or Remote Formula]**

***Wählen Sie ein Programm* Displays [*Select Program* Displays]**

Legende [Legend]

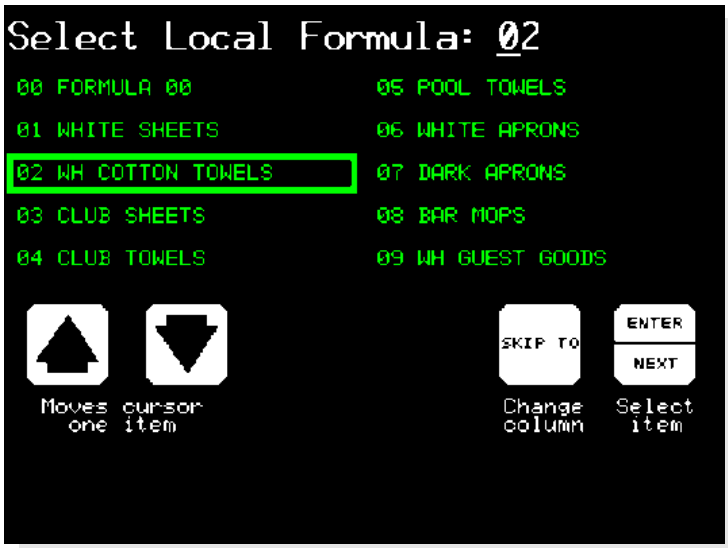
A. Lokal (Mildata nicht vorhanden oder befähigt) [Local (Mildata not present or enabled)]

B. Abgelegt (Mildata berechtigt) [Remote (Mildata enabled)]

2.1.4.1. Auswahl eines lokalen Programms—Falls die Maschine nicht Teil eines Mildata Netzwerkes ist, oder das Mildata Netzwerk nicht verfügbar ist, können Sie eines der Waschprogramme wählen, die im lokalen Speicher der Maschine abgelegt sind. Benutzen Sie den *Wählen Sie lokales Programm* Bildschirm (Abbildung 10) um das gewünschte Programm aufzurufen.

Selecting a Local Formula—If the machine is not part of a Mildata network, or if the Mildata network is not available, you can choose from any of the wash formulas stored in local memory on the machine. Use the *Select Local Formula* screen (Figure 10) to choose the correct formula for the goods in the machine.

Abbildung [Figure] **10:** ***Wählen Sie lokales Programm*** **Bildschirm [*Select Local Formula* Screen]**



Anzeige oder Aktion [Display or Action]	**Erklärung**	**Explanation**
0 7	Wählen Sie das Programm, das Sie nutzen wollen (07 zum Beispiel). Wenn Sie eine zweistellige Nummer eingeben, bewegt sich das gewählte Programm an den Anfang der linken Spalte dieses Bildschirms.	Directly selects the formula you want to run (07, for example). When you enter a two-digit number, the selected formula moves to the top of the left column on this screen.
SKIP TO	Wechseln Sie in die Spalte für Programmauswahl, falls notwendig. Wenn das gewünschte Programm sichtbar ist, sich aber in der gegenüberliegenden Spalte des Auswahlkästchens befindet, so lässt sich das Auswahlkästchen mit diesem Tastendruck in die andere Spalte der Programme schieben.	Toggles the column for formula selection if necessary. If the desired formula is visible on the screen, but is in the opposite column from the selection box, this keystroke moves the selection box to the other column of formulas.
↓ / ↑	Gehen Sie zum nächsten oder vorherigen angezeigten Programm in der aktuellen Spalte. Wenn das gewünschte Programm auf dem Bildschirm zu sehen ist und in derselben Spalte wie das Auswahlkästchen, können Sie diese beiden Tasten benutzen, um das Kästchen hoch- oder runterzubewegen.	Move to the next or previous displayed formula in the current column. If the desired formula is visible on the screen and in the same column as the selection box, you can use these two keys to move the selection box down or up to select the formula.

Anzeige oder Aktion [Display or Action]	**Erklärung**	**Explanation**
ENTER	Bestätigen Sie das gewählte Programm. Platzieren Sie das Auswahlkästchen in dem gewählten Programm. Dann drücken Sie ENTER, um mit dem normalen Arbeitsgang fortzufahren.	Confirm the selected formula. Place the selection box on the formula you want to run, then press ENTER to continue with the normal operation procedures.

Ergänzung 1

Über das Gewicht der Ladung und *Gemessenes Wasser*

Gemessenes Wasser ist in Mark VI Wasch/Schleudermaschinen verfügbar, ausgerüstet mit optionalen Durchflussmessern um die eingespülte Wassermenge zu kontrollieren. Diese Funktion ermöglicht es der Mark VI Steuerung proportional zu dem geladenen Gewicht Wasser zuzugeben. Bei einem Gewicht von 200 Einheiten wird die Maschine doppelt so viel Wasser einspülen, als bei 100 Einheiten. Bei korrekter Eingabe des Gewichts kann eine beträchtliche Menge Wasser gespart werden.

Supplement 1

About Load Weight and *Metered Water*

Metered water is available on Mark VI washer-extractors equipped with optional flow meters on the incoming water lines. This feature allows the Mark VI controller to admit a quantity of water proportional to the weight of goods you enter after selecting the formula. If you enter a weight of 200 units when prompted, the machine will use twice as much water as if you entered 100 weight units. This option can save a significant amount of water if you enter accurate weights for each load.

Abbildung [Figure] **11: Geladenes Gewicht für gemessenes Wasser [Entering Load Weight for Metered Water]**

Anzeige oder Aktion [Display or Action]	**Erklärung**	**Explanation**
4 4 9	Geben Sie das Gewicht der Wäsche an, die sich in der Maschine befindet. Die Maschinensteuerung nutzt das Gewicht um zu bestimmen, wie viel Wasser notwendig ist, die Wäsche zu waschen, entsprechend dem Waschprogramm.	Enter the weight of the goods loaded in the machine. The machine controller uses the weight to determine how much water is needed to wash the goods according to the programmed wash formula.
ENTER	Bestätigen Sie das eingegebene Wäschegewicht und fahren Sie fort.	Accept the entered goods weight and continue.

2.1.4.2. Auswählen eines Mildata Programms

Auswählen eines Mildata Programms—Wenn die Maschine Teil eines Mildata Netzwerks ist und das Netzwerk verfügbar ist, können Sie irgendein Waschprogramm wählen, das auf dem Mildata Computer gespeichert ist. Benutzen Sie den *Wählen Sie ein abgelegtes Programm* Bildschirm (Abbildung 12), um ein geeignetes Programm für die Wäsche in der Maschine auszuwählen.

Anmerkung 1: Sie können bis zu 1000 verschiedene Waschprogramme auf dem Mildata Computer speichern. Alle dieser Programme sind für alle Wasch/Schleudermaschinen verfügbar, die Teil des Mildata Netzwerks sind und kompatible Hardware haben.

Selecting a Mildata Formula—If the machine is part of a Mildata network and the network is available, you can choose any wash formula stored on the Mildata computer. Use the *Select Remote Formula* screen (Figure 12) to choose the best formula for the goods in the machine.

Note 1: You can store up to 1000 different wash formulas on the Mildata computer. All of these formulas are available to all washer-extractors that are part of the Mildata network and have compatible hardware.

Abbildung [Figure] **12: *Wählen Sie ein abgelegtes Programm* Bildschirm [*Select Remote Formula* Screen]**

Anzeige oder Aktion [Display or Action]	**Erklärung**	**Explanation**
0 9 2 8	Wählen Sie Programm 928 (Beispiel), welches auf dem Mildata Computer gespeichert ist. Die MarkVI Steuerung bittet um das Programm vom Mildata Computer und zeigt den Programmnamen an, wie in Abbildung 12 gezeigt wird.	Select formula 928 (example) stored on the Mildata computer. The Mark VI controller requests the formula from the Mildata computer and displays the formula name, as shown in Figure 12.
ENTER	Bestätigen Sie, daß der angezeigte Programmname das Programm ist, das Sie gewählt haben. Falls das angezeigte Programm nicht das richtige für die geladenen Wäsche ist, drücken Sie CANCEL, um die Programmnummer zu löschen. Dann geben Sie eine andere Nummer ein.	Confirm that the displayed formula name is the formula you want to run. If the displayed formula isn't the right one for the loaded goods, press CANCEL to clear the formula number, then enter another number.

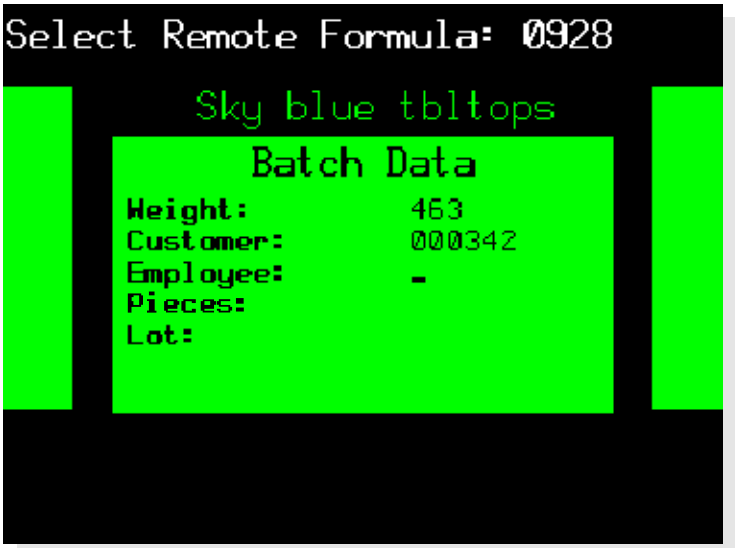
Nachdem Sie das Programm zurückgeholt und überprüft haben, sagt die Mark VI Steuerung *Waschladungs Daten (batch data)* voraus.

After you've retrieved and verified the formula, the Mark VI controller prompts for any configured *batch data*.

2.1.4.3. *"Mildata Batchcodes"* eingeben—Der Mark VI Controller benutzt ein Bild ähnlich dem Abbildung 13, um Ihnen die der Maschinenkonfiguration angewählten Waschladung Felder (batch data fields) vorauszusagen. Die eigegebenen Daten werden zum Mildatacomputer gesendet, um eine Übersicht zu erstellen.

Entering *Mildata Batch Codes*—The Mark VI controller uses a screen similar Figure 13 to prompt you for the batch data fields selected in machine configuration (see the related section in document BICWCC01). The data you enter is sent to the Mildata computer for accounting and report generation.

Abbildung [Figure] **13: Waschladungs Daten für abgelegte Programmoperationen [Batch Data for Remote Formula Operation]**



Gewicht—das Gewicht der Waschladung in der Maschine. Diese Information wird normalerweise parallel mit anderen Waschladungs Daten benutzt, um Kundenkosten zu berechnen oder die Produktivität der Angestellten. In Maschinen, die mit optionalen Durchflussmessern ausgestattet sind und für gemessenes Wasser konfiguriert sind, wird der Gewichtswert auch benutzt, um zu ermitteln, wie viel Wasser notwendig ist, um den Stapel zu verarbeiten. Der Gewichtswert kann drei Stellen lang sein.

Weight—the weight of the batch of goods in the machine. This information is usually used along with other batch data to calculate customer charges or employee productivity. In machines equiped with optional flow meters and configured for metered water, the weight value is also used to determine how much water is required to process the batch. The weight value can be up to three digits.

Kunden Code—der Identifikationscode für den Kunden. Diese Information kann Ihnen helfen zu ermitteln, wie viel Arbeit jeder Kunde einreicht. Zehn Stellen sind für den Kundencode verfügbar.

Customer Code—the identifying code for the customer. This information can help you determine how much work each customer is submitting. Ten digits are available for customer code.

Angestelltennummer—Der Identifikationscode für den Angestellten ist verantwortlich für diese Waschladung. Die Angestelltennummer kann fünf Stellen lang sein.

Employee Number—the identifying code for the employee responsible for this batch. The employee number may be up to five digits long.

Stücke—die Anzahl der Stücke in der Maschine. Dieser Wert ersetzt manchmal den Gewichtswert, besonders bei Wäschetypen bei denen die Stückzahl entscheident ist. Vier Stellen stehen für die Stückzahl zur Verfühgung.

Anzahl—Der Identifizierungscode für mehrere miteinander verbundene Waschladungen oder Kunden. Aus Gründen der Diskretion, der hier eingegebene Wert kann eine bestimmte Routenummer gemeinsam für verschiedene Konten repräsentieren. Die Anzahl kann zehn Stellen lang sein.

Pieces—the number of pieces in the machine. This value sometimes replaces the weight value, especially when charges are made by the piece rather than by weight. Four digits are available for the number of pieces.

Lot Number—the identifying code for several related batches or customers. At your discretion, the value entered here might represent a particular route number common to several accounts. A lot number can be up to 10 digits long.

2.1.5. Starten Sie das gewählte Programm

Versichern Sie sich, daß Sie diese Schritte beendet haben, bevor mit dem Arbeitsgang fortfahren.

1. Sie haben die Maschine beladen, dass oder bis fast die Gewichtskapazität erreicht ist.
2. Sie haben ein Programm gewählt, das für die Wäsche in der Maschine geeignet ist.
3. Sie Waschladungs Daten eingegeben, die Maschinensteuerung für gemessene Wassermenge oder den Mildatareport benötigt.
4. Sie haben die Tür geschlossen.
5. Wenn Sie die Maschine gekippt haben, um sie zu laden, haben Sie sie in ihre normale Betriebsposition wiedergebracht.

Start the Selected Formula

Be sure you've completed these steps before you go any further in the operating procedure.

1. You've loaded the machine at or near its rated weight capacity.
2. You've selected a formula that's appropriate for the goods in the machine.
3. You've entered any batch data the machine controller requires for metered water or Mildata reporting.
4. You've closed the door.
5. If you tilted the machine to load it, you've returned it to the normal operating position.

Anzeige oder Aktion [Display or Action]	**Erklärung**	**Explanation**
	① Starten Sie das gewählte Programm.	Start the selected formula.

Die Maschine startet das Waschprogramm. Die Trommel beginnt, sich zu drehen und das Wasserventil öffnet sich. Wenn ein sicheres Level erreicht ist, kann sich das Dampfventil öffnen, um das Bad zu heizen. Der Prozess ist von diesem Punkt bis zum Ende des Programms komplett automatisch, es sei denn, ein Programm mit einer Waschmitteleinspülung ist programmiert (siehe Ergänzung 2).

The machine begins the wash formula. The basket begins turning and water valves open. When a safe level is achieved, the steam valve may open to begin heating the bath. Operation from this point to the end of the formula is completely automatic unless a signal is programmed with a chemical injection (see Supplement 2).

Ergänzung 2

Waschmitteleinspülung mit dem Signal

Wenn die Menge der injezierten Chemikalien/Waschmittel varieren, kann ein Stop und ein Signal programmiert werden, wenn benötigt. Nachdem Chemikalien/Waschmittel hinzugefügt wurden, drücken, um mit dem Programm fortzufahren.

Supplement 2

Chemical Injections with the Operator Signal

If you need to adjust the amount of a chemical injection from load to load depending on highly variable factors, the formula can be programmed to stop the timer and signal you when a chemical is required. Add the chemical, then press to resume the formula.

2.1.6. Welche Informationen gibt mir das *Betrieb* Display?

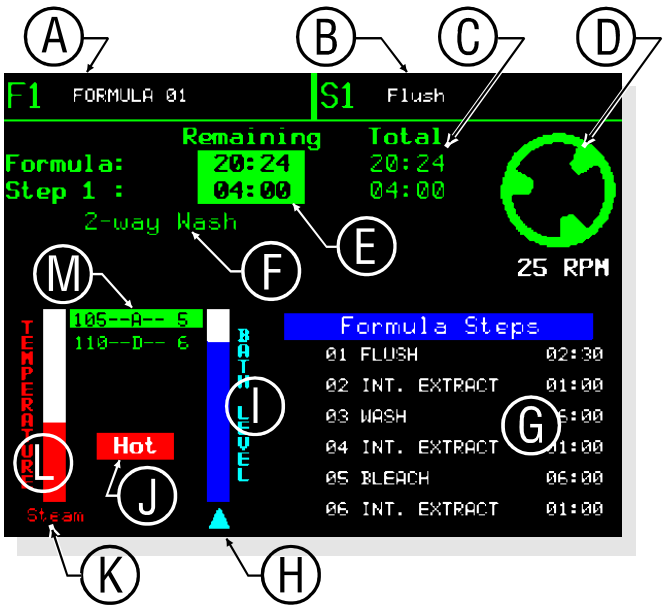
Während das gewählte Programm läuft, erscheint das Display ähnlich wie in dem gezeigten Abbildung 14. Die hier gezeigte Information ist unten erklärt.

What Does the *Run* Display Tell Me?

While the machine is running the formula you selected, the display appears similar to the one shown in Figure 14. The information shown here is explained below.

Abbildung [Figure] **14: Wie man das *Betrieb* Display liest [How to Read the *Run* Display]**

Typisches Display [Typical Display]



Legende [Legend]

- **A.** Programmnummer und Name [Formula number and name]
- **B.** Schrittnummer und Name [Step number and name]
- **C.** Gesamtzeit für das Programm und den laufenden Schritt [Total time for formula and current step]
- **D.** Trommeldrehgrafik und Geschwindigkeit [Basket rotation graphic and speed]
- **E.** Verbleibende Zeit für das vollständige Programm und den laufenden Schritt [Remaining time for entire formula and current step]
- **F.** Maschinenstatus Nachricht [Machine status message]
- **G.** Programmschritte: Nummer, Name und Dauer [Formula steps: number, name, and duration]
- **H.** Anzeige für das Füllen oder Ablaufenlassen [Indicator for filling or draining]
- **I.** Grafische Wasserstandanzeige [Graphic bath level indicator]
- **J.** Wasserventilanzeige [Water valves indicators]
- **K.** Anzeige für optionalen Dampf und Abkühlventile [Indicator for optional steam and cooldown valves]
- **L.** Grafische Wassertemperaturanzeige [Graphic bath temperature indicator]
- **M.** Wassertemperatur und Leveldaten [Bath temperature and level data]

2.1.6.1. Programm und Schrittinformation—Die oberste Zeile des Displays zeigt immer die Nummer und den Namen des laufenden Programms und Schritts. Die *Programmnummer* erscheint in der oberen linken Ecke des Displays, folgend dem Buchstaben “F.”. Der *Programmname* folgt der Nummer.

Die *Schrittnummer und Name des laufenden Schritts* werden rechts neben der Programminformation angezeigt. Die Mark VI Steuerung aktualisiert Programmnummer und -namen, wenn ein Programm startet und zu Beginn jedes späteren Schritts.

Unterhalb der Programm-und Schrittnamen befinden sich *Zeitinformationen*. Die Nummern in der “Gesamt” Spalte (grüne Nummern) zeigen die Gesamtzeit an, die bis Ende eines Programms bzw. Schrittes benötigt wird. Faktoren, wie in Anmerkung 2 beschrieben, sind nicht berücksichtigt. Die Steuerung berechnet die “Programm” Werte, wenn das Programm startet. Diese Werte ändern sich nicht während des Programmablaufs. Beim Start jedes einzelnen Schrittes berechnet die Steuerung die “Schritt x” Werte und zeigt sie auf dem Display an.

Die Nummern in der “verbleiben” Spalte des Zeitraumes (schwarze Nummern auf grünem Hintergrund) zeigen den *Zeit verbleiben* in dem Programm und in dem laufenden Schritt an. Diese Nummern zeigen den **Minimum** an die Menge der verbleibenden Zeit (siehe Anmerkung 2).

Anmerkung 2: Die Dauer einiger Schritte in einem Waschprogramm können nicht eingeschätzt werden, so daß der Benutzer den Timer stoppen muss, sobald die Dauer den Anforderungen entspricht. Zum Beispiel, die erforderte Zeit die Maschine bis zum gewünschten Level zu Füllen hängt von dem Wasserdruck des Betriebs, der Größe der Rohrleitung der Maschine und wie viele andere Maschinen zur selben Zeit befüllt werden. Zusätzlich zu der erforderten Zeit zum Füllen, braucht man Zeit um die Temperatur zu erreichen oder für einen Benutzer der überprüft, ob eine Waschmitteleinspülung veränderlich ist. Fehlerbedingungen können ebenfalls den Timer stoppen.

Die Steuerung zeigt den laufenden *Maschinenstatus* unterhalb der Schrittnummer und der verbleibenden Zeit. Einige der möglichen Maschinenzustände sind in Tabelle 1 aufgeführt. Fehlermeldungen erscheinen sofort

Formula and Step Information—The top line of the display always shows the number and name of the current formula and step. The *formula number* appears in the upper left corner of the display, following the letter “F.”The *formula name* follows the number.

The *step number and name of the current step* are displayed to the right of the formula information. The Mark VI controller updates the formula number and name when a formula starts and at the beginning of each subsequent step.

Below the formula and step names is *time information*. The numbers in the “Total” column (green numbers) show the total time required for the formula and step to run to completion, not including the factors described in Note 2. The controller calculates the “Formula” value when the formula begins, and this value doesn't change while the formula is running. The controller calculates and displays the “Step x” value at the start of each step.

The numbers in the “Remaining” column of the time area (black numbers on a green background) indicate the *time remaining* in the formula and in the current step. These numbers indicate the **minimum** amount of time remaining (see Note 2).

Note 2: The duration of some wash formula events can't be estimated, so the controller stops the timer until a requirement is met. For example, the time required for the machine to fill to the desired level depends on the water pressure to the plant, the size of the piping to the machine, and how many other machines are filling at the same time. In addition to the time required to fill, the time required to achieve temperature or for an operator to verify a chemical injection are variable. Error conditions can also stop the timer.

The controller displays the current *machine status* below the step number and remaining time. Some of the possible machine states are listed in Table 1. Error messages appear immediately below the machine status

unterhalb der Maschinenstatus Nachricht, falls erforderlich.

message when required.

Tabelle 1: Maschinenstatus Nachrichten [English table follows]

Außer Betrieb	Leerlauf
Einweg Wäsche	Auf das Entladen warten
Reversierend Waschen	Auf die Ladung warten
einweichen	Energieschubverzögerung
Vor+Leztes Schleudern	Ablaufenlassen in den abwasserkanal
Zwischenschleudern	Ablaufenlassen zum wiederbenutzen
Letztes Schleudern	Timer gestoppt
Doppel Schleudern	Bitte warten Sie xx Sekunden

Table 1: Machine Status Messages

Idle	Coasting
1-way Wash	Waiting to Discharge
2-way Wash	Waiting for Load
Soak	Power-up Delay
Pre+Final Extract	Draining to Sewer
Intermediate Extract	Draining to Reuse
Final Extract	Timer Stopped
Double Extract	Please Wait xx Seconds

2.1.6.2. Trommelrotation—Der *Trommelrotationsgrafik* in der Nähe der oberen rechten Ecke des Displays steht für die relative Trommelgeschwindigkeite beim Waschen, Ablaufenlassen und Schleudergeschwindigkeiten. Direkt unterhalb der Trommelrotationsgrafik zeigt die Steuerung die gewünschte Trommelgeschwindigkeit entweder in Umdrehung pro Minute (RPMs) oder in gravitationalen Einheiten (Gs).

Basket Rotation—The *basket rotation graphic* near the upper right corner of the display represents the relative basket speeds in wash, drain, and extract speeds. Immediately below the basket rotation graphic, the controller displays the desired basket speed in either revolutions per minute (RPMs) or in gravitational units (G's).

2.1.6.3. Wassertemperatur und Level—*Wasserventilanzeiger* erscheint, wenn das entsprechende Wasserventil offen ist.

Die Grafik *Wassertemperaturanzeiger* zeigt die ungefähre Temperatur in der Maschine. Der senkrechte Anzeigenstab ist rot, wenn die Temperatur in der Maschine auf dem maximal erlaubten Wert von 95°C ist (205°Fahrenheit).

Der Dampf- oder Abkühlanzeiger erscheint unterhalb des Grafiktemperaturanzeigers, wenn eines dieser beiden optionalen Merkmale eingeschaltet ist. “Dampf” erscheint wenn das

Bath Temperature and Level—*Water valve indicators* appear when the corresponding water valve is open.

The graphic *bath temperature indicator* shows the approximate temperature in the machine. The vertical indicator bar is solid red when the temperature in the machine is at the maximum allowable value of 205 degrees Fahrenheit (95 degrees Celsius).

The steam or cooldown indicator appears below the graphic temperature indicator when either of these optional features is enabled. “Steam” appears when the steam

Dampfventil offen ist, und “Abkühlen” erscheint, wenn der Abkühloutput eigeschaltet ist.

valve is open, and “Cooldown” appears when the cooldown output is enabled.

Die Grafik *Wasserlevel Anzeiger* zeigt den Prozentsatz des gewünschten Levels, das erreicht ist. Der senkrechte Anzeigenstab ist blau, wenn das programmierte Level erreicht ist. Er ist weiß, wenn kein Wasser in der Maschine ist.

The graphic *bath level indicator* shows the percentage of the desired level that's achieved. The vertical indicator bar is solid blue when the programmed level is achieved, and solid white when there is no water in the machine.

Der *Level Richtungsanzeigepfeil* zeigt nach oben, wenn das aktuelle Wasserlevel in der Maschine steigt (wenn die Maschine sich füllt), und zeigt nach unten, wenn sich der Abfluß öffnet. Der Pfeil ist nicht sichtbar, wenn das Level erreicht ist oder während Extraktionsschritten.

The *level direction indicator arrow* points upward when the actual bath level in the machine is increasing (when the machine is filling), and points downward when the drain opens. The arrow is not visible when level is achieved, or during extract steps.

Die Steuerung zeigt *Wassertemperatur und Leveldaten* an zwischen der Temperatur und Level Grafikanzeigen. Die oberste Zeile zeigt gegenwärtig Temperatur und Level an. Die unterste Zeile zeigt den gewünschten Wert an.

The controller displays *bath temperature and level data* between the temperature and level graphic indicators. The top line displays the temperature and level that are currently achieved in the machine, and the bottom line displays the desired values.

2.1.6.4. Programmschritte und Waschmitteleinspülung

—Wenn ein Programm startet, zeigt die Steuerung die ersten sechs Schritte in der *Liste der Programmschritte* in dem unteren linken Bereich des Bildschirms an. Falls das Programm mehr Schritte enthält, als auf einmal angezeigt werden können, scrollt die Liste zum Display mehr Schritte, wenn die vorherigen enden. Der laufende Schritt ist hervorgehoben.

Formula Steps and Chemical Injection

—When a formula begins, the controller displays the first six steps in the *formula steps list* in the lower left area of the screen. If the program contains more steps than can be displayed at one time, the list scrolls to display more steps as the earlier ones end. The current step is highlighted.

Die Liste der programmierten *Waschmitteleinspülung* ersetzt die Programmschrittliste während jeder Einspülung, durch ein leuchtendes Kästchen auf dem Waschmittel, das eingespült wird.

The list of programmed *chemical injections* replaces the formula steps list during each injection, with a highlight box on the chemical that's currently injecting.

2.1.7. Entladen Sie die Maschine

Wenn das Programm endet, ertönt das Signal und die Maschine zeigt eine Nachricht an, daß sie bereit ist, entladen zu werden (siehe Abbildung 15). Entladen sie die Maschine wie unten dar gestellt.

Unload the Machine

When the formula ends, the operator signal sounds and the machine displays a message that it is waiting to discharge (see Figure 15). Use a procedure similar to the one outlined below to unload the goods.

Abbildung [Figure] **15: Typische Nachricht, wenn ein Programm stoppt [Typical Message when Formula Ends]**

2.1.7.1. Für einige *Endcode*—Die Mark VI Steuerung erlaubt Ihnen, eine von vier möglichen Voraussetzungen für das Ende des Programms zu programmieren: *gestoppt*, *reversieren bei Waschgeschwindigkeit*, *drehen bei der Abflußgeschwindigkeit* oder *Auflockern*. Sie benutzen dieselbe Entladungsvorgehensweise für Programme, wenn Sie die ersten drei Handlungen benutzen. Bei der vierten Handlung haben Sie auch die Möglichkeit die Vorgehensweise zu benutzen, die in Abschnitt 2.1.7.2 beschrieben ist.

For any *End Code*—The Mark VI controller allows you to program one of four possible actions for the end of the formula: *stopped*, *reversing at wash speed*, *turning at drain speed*, or *tumbling*. You use the same unloading procedure for formulas using the first three actions. For the fourth action, you also have the option of using the procedure described in Section 2.1.7.2.

Anzeige oder Aktion [Display or Action]	**Erklärung**	**Explanation**
	Entfernen Sie die Energie vom Sicherheitsstromkreis, stopt das Signal und die Trommelbewegung. Diese Taste entriegelt auch die Tür, so dass Sie öffnen können.	Remove power from the 3-wire circuit, silence the operator signal, and stop any basket motion in progress. This button also unlocks the door so you can open it.
	Sie können auch die Energie vom Sicherheitsstromkreis entfernen, das Signal und die Trommelbewegung mit einer dieser Tasten stoppen. Wenn Sie eine dieser Tasten benutzen, müssen Sie die Tür mit entriegeln, bevor Sie sie öffnen können. Wenn Sie eine dieser Tasten benutzen, um ein Programm mit *Endcode 3* (siehe Abschnitt 2.1.7.2) zu stoppen, ist das Programm abgebrochen und kann nicht wiederaufgenommen werden.	You can also remove power from the 3-wire circuit, silence the operator signal, and stop any basket motion that was in progress with any of these buttons. However, if you use any of these buttons, you'll still need to unlock the door with before you can open it. If you use any of these buttons to stop a formula with *end code 3* (see Section 2.1.7.2), the formula is terminated and cannot be resumed.
	Öffnen Sie die Tür zum Entladen.	Open the door for unloading.

2.1.7.2. Für den Endcode 3 (*Auflockern*)—Endcode 3 (*Auflockern*) erlaubt Ihnen, die Tür zu öffnen und einige Wäschestücke zu entnehmen, dann schließen Sie die Tür, lassen erneut Auflockern um weitere Wäsche von der Trommel zu lösen.

For End Code 3 (*Tumbling*)—End code 3 (*Tumbling*) allows you to open the door and remove some of the goods, then close the door and resume tumbling to loosen more goods from the basket.

Anzeige oder Aktion [Display or Action]	**Erklärung**	**Explanation**
	Entfernen Sie die Energie vom Sicherheitsstromkreis, stopt das Signal und die Trommelbewegung. Diese Taste entriegelt auch die Tür, so dass Sie öffnen können.	Remove power from the 3-wire circuit, silence the operator signal, and stop any basket motion in progress. This button also unlocks the door so you can open it.
Wenn die Trommel aufhört sich zu drehen, öffnen Sie die Tür und entfernen Sie einige oder alle Wäscheteile aus der Maschine.		When the basket stops turning, open the door and remove some or all of the goods from the machine.
	Öffnen Sie die Tür zum Entladen.	Open the door for unloading.
Entfernen Sie eine gewünschte Menge der Beladung.		Remove any desired portion of the load.
	Schließen Sie die Tür.	Close the door.
	Nimmt den Auflockerungsvorgang ohne Signal wieder auf. Es wird für weitere zwei Minuten aufgelockert, oder bis Sie drücken.	Resumes the tumbling action without the operator signal. Tumbling continues for another two minutes, or until you press .

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Kapitel 3
Signale und Fehlermeldungen

Chapter 3
Signals and Errors

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3.1. Benutzereinschreiten

Sobald ein Programm startet, läuft die Maschine normalerweise automatisch. Die Maschine wird das Signal geben, wenn der Benutzer eine Entscheidung treffen oder manuell tätig werden muss. Die meisten allgemeinen Gründe, um die Sie sich bei der Maschine kümmern müssen sind Fehler. In manchen Fällen auch das manuelle Hinzufügen von Waschmitteln.

Operator Intervention

Once a formula starts, the machine usually runs automatically. The machine will sound the signal if an operator needs to make a decision or do something manually. The most common reasons you'll need to attend to the machine are errors, and to manually add chemicals in some cases.

3.1.1. Fehler mit Signal

Das Signal ertönt und die Signallampe leuchtet auf, falls ein Fehler die Maschine veranlasst zu stoppen. Diese Fehler unterbrechen normalerweise den Sicherheitsstromkreis und wurden hervorgerufen durch einen ausgelösten Vibrationsschalter oder eine Funktionsstörung des Inverters, der den Motor steuert. Abbildung 16 zeigt, wie ein vibration Schalterfehler auf dem Display erscheint.

Error with Operator Signal

The operator signal will sound and the beacon will flash if an error causes the machine to stop. These errors usually disable the three-wire circuit, and include a tripped vibration switch or a malfunction of the inverter that controls the motor. Figure 16 shows how a vibration switch error appears on the display.

Abbildung [Figure] **16: Typischer Fehler mit Signal [Typical Error with Operator Signal]**

Um das Programm wiederaufzunehmen, stoppen Sie das Signal und bringen Sie die Ursache des Fehlers wieder in Ordnung. Starten Sie dann das Programm von Neuem.

To resume the formula, silence the signal and correct the cause of the error. Then, restart the formula.

Anzeige oder Aktion [Display or Action]	**Erklärung**	**Explanation**
	Die "Abbruch"-taste auf dem Tastenfeld stoppt die Maschine, das Signallicht und den Summer. Sie müssen das Programm neu starten.	The Cancel key on the keypad stops the machine, silences the operator signal buzzer, and turns off the signal light. You'll have to restart the formula from the beginning.

Korrigieren Sie die Ursache des Fehlers. Wenn Sie nicht wissen, wie Sie das Problem lösen sollen, sehen Sie im Handbuch der Maschine nach.

Correct the cause of the error. If you don't know how to fix the problem, have someone check the reference manual for the machine.

①	Wenn Sie den Fehler korrigiert haben, setzt die Starttaste das Programm fort, wo es gestoppt hat. Falls der Vibrationsschalter den Fehler verursachte, geht die Maschine einen Verteilungsschritt durch, um die Wäsche in der Trommel zu verteilen, dann nimmt sie den unterbrochenen Schleuderschritt wieder auf.	If you've corrected the error, the Start button resumes the formula where it stopped. If the vibration switch caused the error, the machine goes through a distribution sequence to spread the goods around the basket, then resumes the interrupted extract step.

3.1.2. Signal für Waschmittel

Operator Signal for a Chemical

Diese Maschine kann ein automatisches Waschmittel Pumpsystem steuern, oder sie kann

This machine can control an automatic chemical pump system, or it can signal you

Ihnen signalisieren, daß Sie Waschmittel manuell hinzufügen müssen. Das Display (Abbildung 17) erscheint in jedem Fall, aber das Arbeitersignal ertönt nur, wenn das Signal programmiert ist.

to add chemicals manually. The display (Figure 17) appears the same in either case, but the operator signal sounds only if the signal is programmed.

Falls das Programm programmiert ist, ein Waschmittel Pumpsystem zu steuern, zeigt das Display die programmierte Waschmittelventilnummer, den Waschmittelnamen und die Einspülzeit an. Die Einspülzeit, am rechten Ende des Waschmitteldisplays, beginnt unmittelbar mit dem Countdown, wenn das Einspülen des Waschmittels beginnt.

If the formula is programmed to control a chemical pump system, the display shows the programmed chemical valve number, chemical name, and injection time. The injection time, shown at the right end of the chemical display, begins counting down immediately when the chemical injection begins.

Wenn das Programm programmiert ist, Ihnen zu signalisieren Waschmittel manuell hinzuzufügen, wird die Maschine automatisch arbeiten, bis Waschmittel hinzu gefügt werden muss. Dann stoppt die Maschine und wartet, bis Waschmittel hinzugegeben wurde. Das Display verändert sich, um Ihnen zu zeigen, welches Waschmittel Sie hinzufügen müssen. Aber der Einspülzeitzähler läuft nur, nachdem Sie das Signal aufheben.

If the formula is programmed to signal you to manually add chemicals, the machine will operate automatically until it needs a chemical, then the machine stops and waits for you to add the chemical and resume operation. The display changes to show you which chemical to add, but the injection time counter runs only after you cancel the operator signal.

Abbildung [Figure] **17: Waschmitteleinspülungsanzeige auf dem Betriebsdisplay [Chemical Injection View on Run Display]**

Anzeige oder Aktion [Display or Action]	Erklärung	Explanation
Nachdem Sie das Waschmittel hinzugefügt haben,		After you've added the chemical,
	Bricht das Signal ab und startet den Einspülzeitzähler.	cancels the operator signal and starts the injection time counter.

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Suomi 4

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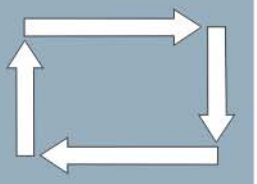
Käyttäjän opas [Operator Guide]—

Mark VI -ohjaimella varustettu kallistettava pesukone [Tilting Washer-extractor with Mark VI Controller]



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Soveltuvat Milnor® -tuotteet mallinumeroittain: [Applicable Milnor® products by model number:]

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Sisällysluettelo [English table of contents follows]

Osiot	Kuvat, taulukot ja liitteet

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Ohjaimet

Chapter 1
Controls

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1.1. Kallistettavien , hydraulisella luukulla varustettujen Mark VI - pesukoneiden ohjaimet

Yksittäisten ohjainten sijaintipaikat ja perustoiminnot on selitetty tämän oppaan muissa osissa (Osio 1.1.2 – Osio 1.1.5). Tämä opas ei ole koneen käyttöohje.

Controls on Mark VI Tilting Washer-extractors with Hydraulic Door

Refer to other parts of this document (Section 1.1.2 through Section 1.1.5) for the location and basic function of individual controls. Don't use this document as instructions for operating the machine.

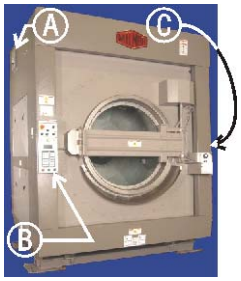
1.1.1. Ohjainten sijainti

Peruskäytön kannalta tärkeimmät ohjaimet sijaitsevat etuohjauspaneelissa (Kuva 1). Muut ohjaimet ja liitännät löytyvät koneen muista osista, kuten ohesta käy ilmi.

Where are the Controls?

The essential controls for normal operation are located on the front control panel (Figure 1). Additional controls and connections are located elsewhere on the machine, as described here.

Kuva [Figure] **1: Ohjainten sijaintipaikat [Locations of Controls]**

Edessä vasemmalla [Front Left View]	Takana [Rear View]	Selitysteksti [Legend]
		**A.** Mikroprosessorin ohjausyksikkö (kuvassa malli 68036F_B) [Microprocessor control box (68036F_B shown)] **B.** Ohjauspaneeli [Control panel] **C.** Manuaalinen huuhtelupainike [Manual supply flush button] **D.** Täyttöluukun hydraulipainemittari [Hydraulic pressure gauge for loading door] **E.** Kallistusjärjestelmän ilmanpainemittari (alemman takapaneelin takana) [Air pressure gauge for tilt system (behind lower rear panel)]

1.1.2. Tallennuslaitteen kytkeminen

Koneen vasemman sivupaneelin ylemmässä takanurkassa sijaitsevassa mikroprosessoriyksikössä (ks. Kuva 1) on DIN-tyyppinen liitäntä sarjatietoliikenteelle. Kytke sarjamuotoista tiedonsiirtoa käyttävä laite tähän liitäntään (ks. merkinnät, Kuva 2), kun haluat tallentaa tai palauttaa koneen ohjelmointiasetukset ja konfigurointimuistin.

Where do I Connect the Data Storage Device?

The microprocessor box in the upper rear corner of the machine left side panel (see Figure 1) contains a DIN-type connection for serial communications. Use this connection, labelled as shown in Figure 2, with a serial data transfer device to save or restore machine programming and configuration memory.

Kuva [Figure] **2: Tiedonsiirtoon tarkoitettu sarjaliitäntä [Serial Connection for Data Transfer]**

1.1.3. Koneen käyttöohjaimet

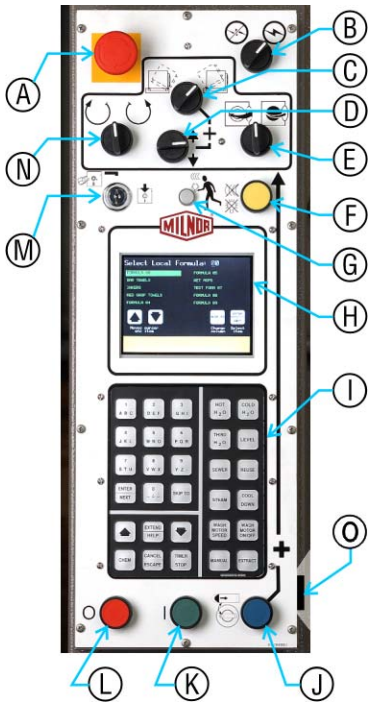
Koneen tärkeimpiä käyttöohjaimia käytetään koneen käynnistämiseen ja pysäyttämiseen, pesuohjelmien valintaan ja koneen toiminnan valvomiseen.

What are the Operating Controls?

The primary operating controls are required to start and stop the machine, select wash formulas, and monitor machine operation.

Kuva [Figure] **3: Mark VI -ohjauspaneeli [Mark VI Control Panel]**

Paneeli ja ohjaimet [Panel and Controls]



Selitysteksti [Legend]

- **A.** *Hätäpysäytys*painike [*Emergency stop* button]
- **B.** Verkkovirran *pääkytkin* [*Master switch* for power]
- **C.** *Kallistus eteen/taakse* -valintakytkin (vain kallistettavissa malleissa) [*Tilt front/rear selector* switch (tilting models only)]
- **D.** *Kallistus ylös/alas* -valintakytkin (vain kallistettavissa malleissa) [*Tilt up/down selector* switch (tilting models only)]
- **E.** *Luukun avaus- ja sulkemis*kytkin [*Door open/close* switch]
- **F.** *Käyttösignaalin peruutus*painike [*Operator signal cancel* button]
- **G.** *Käyttösignaalin* merkkivalo [*Operator signal* light]
- **H.** LCD-näyttö [Liquid crystal graphic display]
- **I.** Näppäimistö [Keypad]
- **J.** *Luukun avaus*painike [*Door open* button]
- **K.** *Käynnistys*painike [*Start* button]
- **L.** *Pysäytys*painike [*Stop* button]
- **M.** *Käyttö- ja ohjelmointikytkin* [*Run/Program keyswitch*]
- **N.** *Kiertosuunta*kytkin [*Jog direction* switch]
- **O.** *Luukun avaus*pyörä (vain kallistettavissa malleissa) [*Door open jog* button (tilting models only)]

Kuva [Figure] **4: Näppäimistö [Keypad]**

Hätäpysäytyspainike—Ottaa kolmijohdinpiirin pois käytöstä. Tämä kytkin lukittuu paikoilleen, kun sitä painetaan, joten sitä täytyy kääntää neljänneskierroksen verran, jotta se palautuisi takaisin normaaliasentoonsa ja konetta voisi käyttää.

Ilmoitus 1: Paina *hätäpysäytys*painiketta hätätilassa välittömästi. Tämä ottaa kolmijohdinpiirin pois käytöstä, pysäyttää koneen ja avaa tyhjennysaukon.

- Kun palautat painikkeen normaalitilaansa, voit joko perua keskeytetyn pesuohjelman tai jatkaa sitä. Ohjelma jatkuu joko siitä kohdasta, missä se keskeytettiin, tai edellisen pesuvaiheen alusta. Tämä riippuu siitä, mikä toiminto oli käynnissä, kun *hätäpysäytys*painiketta painettiin.

Verkkovirran pääkytkin (⊗ / ⊖)—Katkaisee ohjausjärjestelmän virran. Jos käännät *pääkytkimen* pois päältä (⊗) pesuohjelman ollessa käynnissä, vaikutus on aluksi sama kuin *hätäpysäytys*painikkeen painamisella eli kone pysähtyy ja tyhjennysaukko aukeaa. Toisin kuin *hätäpysäytys*painiketta painettaessa, pesuohjelmat jatkuvat sen vaiheen alusta, jonka aikana verkkovirta katkesi, mutta kemikaaleja ei kuitenkaan lisätä siinä vaiheessa, josta koneen toiminta

Emergency stop button—disables the 3-wire circuit. This switch locks in when pressed, so you must turn it a quarter turn to allow it to return to the normal position to allow the machine to run.

Notice 1: Press the *emergency stop* button immediately in any emergency situation. This disables the 3-wire circuit, which stops all machine operation and causes the drain to open.

- When you reset this button, you have the option of cancelling or resuming the interrupted formula. The formula resumes where it was interrupted or at the beginning of the previous bath step, depending on the operation in progress when the *emergency stop* button was pressed.

Master power switch (⊗ / ⊖)—removes power from the control system. If you turn the *master switch* off (⊗) while a formula is running, the immediate result is similar to pressing the *emergency stop* button: the machine stops and the drain opens. Unlike the *emergency stop* button, resumed formulas start at the beginning of the step in which power was lost, but chemicals are not injected in the resumed step.

jatkuu.

Käyttösignaalin peruutuspainike ( )—Peruu *käyttösignaalin*. Tätä painiketta painamalla voit hiljentää äänimerkin ja sammuttaa *käyttösignaalin* merkkivalon (lisätietoja alla) tai sallia sellaisten kemikaalien lisäämisen, jotka on ohjelmoitu vaatimaan signaalia.

Operator signal cancel button ( )—cancels the *operator signal*. Press this button to silence the buzzer and turn off the *operator signal* light (see below), or to allow injection of a chemical programmed to require a signal before injection.

Käyttösignaalin merkkivalo—Ilmoittaa, että koneen toiminnassa on sattunut jokin virhe tai että käyttäjän täytyy tehdä jotakin, esimerkiksi painaa *käynnisty*spainiketta tai tyhjentää kone. *käyttösignaali*piirin summeri sijaitsee ohjauspaneelin takana ja siinä voi myös olla lisävarusteena ohjauspaneelista erilleen asennettu merkkivalo.

Operator signal light—indicates that the machine has encountered an error or that the operator must perform some action, such as pressing the *start* button or unloading the machine. The *operator signal* circuit includes a buzzer behind the control panel, and may include an optional beacon light mounted separately from the control panel.

LCD-näyttö—Näyttää koneeseen liittyviä tietoja ja ohjeita. Näytön tiedot muuttuvat koneen tilan ja käyttäjän valitsemien toimintojen mukaisesti.

Liquid crystal graphic display—displays information and help about the machine. The information on the display changes according to the status of the machine and the function selected by the operator.

Näppäimistö—Näppäimistön avulla käyttäjä voi lähettää viestejä koneen ohjausjärjestelmään. Näppäimistö on jaettu kolmeen osaan: aakkosnumeeriset painikkeet, tavalliset painikkeet sekä toimintopainikkeet. Painikkeilla voi käynnistää useamman kuin yhden toiminnon koneen kunkinhetkisestä tilasta riippuen. Joitakin painikkeita käytetään myös yhdessä lisätoimintojen käynnistämiseen.

Keypad—allows the operator to communicate with the machine control system. The keypad is divided into three areas: alphanumeric buttons, general buttons, and function-specific buttons. Each button may perform more than one function, based on the current machine status. Some buttons are also used in combinations for additional functions.

Käynnistyspainike ( )—Käynnistää valitun pesuohjelman. *Käynnisty*spainike kytkee virran kolmijohdinpiiriin, jotta konetta voisi käyttää.

Start button ( )—starts the selected wash formula. The *start* button energizes the 3-wire circuit to allow the machine to operate.

Pysäytyspainike ( )—Pysäyttää koneen. *Hätäpysäytys*painikkeen tavoin *pysäytys*painike ottaa kolmijohdinpiirin pois käytöstä. *Pysäytys*paniketta ei kuitenkaan tarvitse manuaalisesti palauttaa normaalitilaansa käytön jälkeen.

Stop button ( )—stops machine operation. Like the *emergency stop* button, the *stop* button disables the 3-wire circuit; however, the *stop* button doesn't require you to manually reset it after use.

Käyttö- ja ohjelmointikytkin (/)—Kun kytkin on *ohjelmointi*asennossa, koneen asetuksia ja pesuohjelmia voi muokata ja joitakin muita toimintoja ohjelmoida. Normaalissa *käyttö*tilassa pesuohjelmia voi käyttää ja pesuohjelmat ja koneen asetukset pysyvät suojattuina.

Run/Program keyswitch (/)—in the *Program* position, allows changes to machine configuration and wash formulas, among other actions. In the normal *Run* position, formulas and configuration are protected and formulas can be run.

Kallistusjärjestelmän ilmanpainemittari—

Air pressure gauge for tilt system—located

Mittari sijaitsee koneen takaosassa alemman paneelin takana ja valvoo koneen kallistamiseen käytettävää ilmanpainetta.

behind the lower panel on the rear of the machine; monitors the air pressure used to tilt the machine.

1.1.4. Täyttöohjaimet

Täyttöohjaimien avulla voi avata ja sulkea koneen täyttöluukunja kallistaa ja kääntää sylinteriäNäitä ohjaimia käytetään ensisijaisesti kallistettavien koneiden täyttämiseen ja tyhjentämiseen.

Milnorin valmistamat koneet käyttävät kahdenlaisia kallistusmekanismeja:

- **Yksiakseliset mallit**, E_N- ja J_N-tuoteryhmät mukaan lukien, kallistuvat hydraulisesti yhtä, koneen takaosan lähellä sijaitsevaa kallistusakselia käyttäen. Nämä mallit kallistuvat tyhjennystä varten siten, että koneen etuosaa lasketaan tyhjennystä varten alemmaksi kuin tavallisessa käyttötilassa. Täyttöä varten koneen etuosaa taas nostetaan ylemmäksi kuin tavallisessa käyttötilassa.
- **Kaksiakseliset mallit**, F_W-tuoteryhmän kallistettavat mallit mukaan lukien, kallistuvat pneumaattisesti koneen etu- ja takaosan lähellä sijaitsevia kallistusakseleita käyttäen. Nämallit kallistuvat täyttöä varten siten, että koneen etuosan alla sijaitsevat ilmasäiliöt pumpataan täyteen. Tyhjennystä varten taas koneen takaosan alla olevat ilmasäiliöt pumpataan täyteen.

Koneen ohjauspaneelissa näkyvät symbolit ovat erilaisia yksi- ja kaksiakselisissa malleissa.

What are the Loading Controls?

Loading controls allow you to open and close the door, as well as tilt and jog the cylinder; used primarily when loading and unloading a tilting machine.

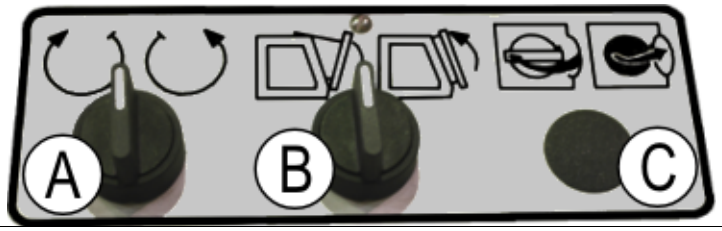
Milnor manufactures machines with two different types of tilting mechanisms:

- **Single-pivot models**, including the E_N and J_N model lines, tilt hydraulically from a single pivot axis near the rear of the machine. These models tilt to unload by lowering the front of the machine below the normal operating position, and tilt to load by raising the front of the machine above the normal operating position.
- **Dual-pivot models**, including tilting models in the F_W line, tilt pneumatically from pivot axes near the front and rear of the machine. These models tilt to load by inflating air bladders below the front of the machine, and tilt to unload by inflating air bladders below the rear of the machine.

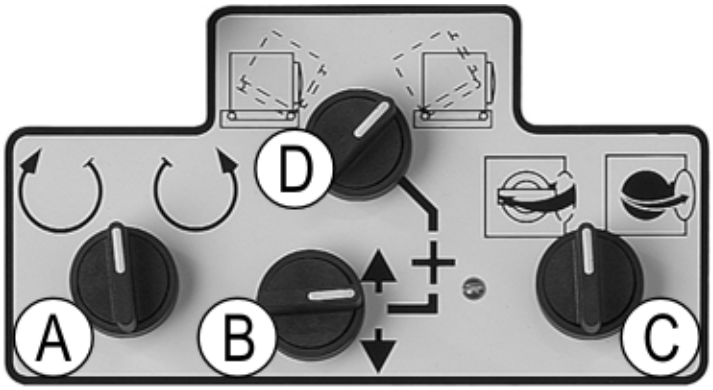
The symbols on the machine control panel vary according to whether the machine is a single- or dual-pivot model.

Kuva [Figure] **5: Tyypilliset kallistuksen ohjauspaneelit [Typical Tilt Control Panels]**

Yksiakselinen malli [Single-Pivot Model]



Kaksiakselinen malli [Dual-Pivot Model]



Selitysteksti [Legend]

- **A.** *Kiertosuunta*kytkin [*Jog direction* switch]
- **B.** *Kallistussuunta*kytkin [*Tilt direction* switch]
- **C.** *Luukun avaus- ja sulkemis*kytkin [*Door open/close* switch]
- **D.** *Kallistuksen valinta*kytkin [*Pivot selector* switch]

***Kallistuksen valinta*kytkin (⌂/⌂)**—Määrittelee, kallistuuko kone eteen- vai taaksepäin. Voit helpottaa koneen tyhjennystä kääntämällä tämän kytkimen vasemmalle. Täyttöä taas voit helpottaa kääntämällä kytkimen oikealle.

***Kallistussuunta*kytkin**—Käynnistää koneen halutun puolen nostamiseen tai laskemiseen vaadittavat laitteet. Kaksiakselisissa koneissa tätä kytkintä käytetään koneen kallistamiseen yhdessä *kallistuksen valinta*kytkimen kanssa. Nosta haluamaasi koneen puolta pitämällä *luukun avaus*painiketta painettuna ja kääntämällä kytkintä ylöspäin, tai laske puolta kääntämällä kytkintä alaspäin.

Jos haluat kallistaa kaksiakselista konetta taaksepäin, jotta se olisi helpompi täyttää, käännä ensin kallistuksen eteen- ja taaksepäinvalitsin oikealle (ks. Kuva 5). Tämä määrittelee koneen kallistumaan takana sijaitsevasta kallistuskohdasta. Pidä seuraavaksi kallistussuuntakytkintä *ylä*asennossa ja paina *luukun avaus*painiketta (☜). Koneen etuosa kallistuu ylös- ja taaksepäin, kunnes se on täysin kallistunut tai kunnes vapautat kumman tahansa kytkimen. Toimi samalla tavoin, kun haluat kallistaa koneen etuosan takaisin normaaliasentoon tai nostaa koneen takaosaa

***Pivot selector* switch (⌂/⌂)**—determines whether the machine tilts on the forward or rearward pivot. Set this switch to the left position to facilitate unloading; use the right position to tilt the front of the machine up for easier loading.

***Tilt direction* switch**—actuates the necessary devices to raise or lower the selected end of the machine. On dual-pivot machines, this switch works with the *pivot selector* switch to tilt the machine. With the *door open* button pressed, turn the switch up to raise the selected end of the machine, or down to lower it.

To tilt a dual-pivot machine backward for easier loading, first set the tilt front/rear selector switch to the right, as shown in Figure 5. This determines that the machine will tilt on the rear pivot point. Next, hold the tilt direction switch in the *up* position and press the *door open* button (☜). The front of the machine will tilt up and back until the front is fully tilted or you release either of the two controls. Use similar procedures to lower the front of the machine to the normal position, or to raise the rear of the machine for unloading.

tyhjennystä varten.

Jos haluat kallistaa yksiakselista konetta, pidä kallistussuuntakytkintä haluamassasi asennossa ja paina *luukun avaus*painiketta () niin kauan, että kone on haluamassasi kulmassa.

***Luukun avaus- ja sulkemis*kytkin ()**—Tällä kytkimellä ohjataan koneen automaattiluukkua, kun kone ei ole toiminnassa. Avaa luukku kääntämällä kytkin oikealle () ja painamalla samanaikaisesti *luukun avaus*painiketta (). Sulje luukku kääntämällä kytkin vasemmalle () ja painamalla *luukun avaus*painiketta. Vapauta kytkimet, kun luukku on oikeassa asennossa. Luukulle virtaa antava hydraulipumppu kytkeytyy automaattisesti pois päältä, kun luukku on joko täysin auki tai täysin kiinni.

Luukun avauspainike ()—Ottaa muut täyttöohjaimet käyttöön, kun kone ei ole toiminnassa. Jos *luukun avaus*painiketta painetaan koneen ollessa käytössä, kolmijohdinpiirin virta kytketään pois päältä ja kone pysähtyy. Kun konetta ei käytetä, tätä painiketta täytyy painaa, jos mitä tahansa muuta täyttö- tai tyhjennystoimintoa halutaan käyttää. Tämän avulla varmistetaan, että molemmat kätesi ovat turvallisesti koneen ohjauspaneelissa, jos rumpu sattuisi käynnistymään luukun ollessa auki.

VAROITUS 2: Putoamis-, tarttumis- ja iskuvaara—Jos raajasi osuvat pyörivään sylinteriin, ne saattavat murtua. Jos yrität pysäyttää sylinterin jollakin esineellä, sylinteri sinkoaa sen pois ja esine voi iskeytyä sinuun tai haavoittaa sinua. Lukittu luukku pitää pyörivän sylinterin tavallisesti eristettynä.

- Älä tee muutoksia turvalaitteisiin tai ota niitä pois käytöstä äläkä käytä konetta, jos jokin turvalaitteista ei toimi kunnolla. Ota yhteyttä valtuutettuun huoltoon.

Kiertosuuntakytkin ()—Tämän kytkimen avulla voit kääntää sylinteriä hitaasti jompaankumpaan suuntaan, jotta koneen täyttö tai tyhjennys olisi helpompaa. Voit kääntää sylinteriä myötäpäivään pitämällä kiertosuuntakytkintä vasemmalla () ja painamalla samanaikaisesti luukun avauspainiketta.

Luukun hydraulipiirin painemittari—Tämä

To tilt a single-pivot machine, hold the tilt direction switch in the desired position and hold the *door open* button () until the machine reaches the desired angle.

***Door open/close* switch ()**—controls the automatic door system when the machine is idle. To open the door, turn the switch to the right () while pressing the *door open* button (). Turn the switch to the left () and press the *door open* button to close the door. Release the controls when the door is in the correct position. The hydraulic pump which powers the door shuts off automatically when the door is fully open or fully closed.

Door open button ()—enables other loading controls when the machine is idle. Pressing the *door open* button while the machine is operating removes power from the 3-wire circuit, stopping the machine. When the machine is idle, this button must be pressed to perform any other loading or unloading function. This requirement helps ensure that you have both hands safely on the control panel of the machine if the basket might turn under power while the door is open.

WARNING 2: Fall, Entangle, and Strike Hazards—Contact with the turning cylinder can crush your limbs. The cylinder will repel any object you try to stop it with, possibly causing the object to strike or stab you. The turning cylinder is normally isolated by the locked cylinder door.

- Do not tamper with or disable any safety device or operate the machine with a malfunctioning safety device. Request authorized service.

Jog direction switch ()—allows you to jog the cylinder slowly in either direction to help in loading or unloading the machine. To jog the cylinder clockwise, hold the jog direction switch to the left () while pressing the door open button.

Door hydraulic circuit pressure gauge—on

koneen takapaneelissa sijaitseva mittari näyttää hydraulipiirin paineen luukkua avattaessa ja suljettaessa. Normaalikäytön aikana mittarin arvo on 0, jollei hydraulista luukkua avata tai suljeta. Kun luukku liikkuu, mittari näyttää noin 900 psi:tä (62 baria), jos hydraulijärjestelmä on oikein asetettu.

the rear panel of the machine, this gauge displays the pressure in the hydraulic circuit when the door is opening and closing. During normal operation, this gauge registers 0 unless the hydraulic door opening or closing. When the door is moving, this gauge indicates about 900 psi (62 bar) when the hydraulic system is properly adjusted.

1.1.5. Kytkinten toiminta

Muita painikkeita ja kytkimiä käytetään koneen muiden perus- ja lisätoimintojen hallintaan. Tässä osiossa kuvataan nämä sekalaiset ohjaimet ja niiden sijainti.

Mildata-/paikalliskäyttövalitsin (Kuva 6)— Tämän mikroprosessorin ohjauskotelossa sijaitsevan kytkimen (ks. Kuva 1) avulla kone voidaan yhdistää Mildata-verkkoon. Mildata-verkko yhdistää useita koneita toisiinsa ja sen avulla koneet voivat käyttää samoja pesuohjelmia tai muita Mildata-tietokoneen tietoja. Kun tämä kytkin on *Mildata*-asennossa (💻) ja syötät jonkin pesuohjelman numeron, kone pyytää pesuohjelman tiedot Mildata-tietokoneelta. *paikalliskäyttö*asennossa (📝) kone taas käyttää ainoastaan **koneessa** itsessään käytettävissä olevia pesuohjelmia.

What does this Switch do?

Other buttons and switches are used to control additional standard and optional machine functions. These miscellaneous controls are located and described in this section.

Mildata/Local selector switch (Figure 6)— located on the microprocessor control box (see Figure 1), allows the machine to communicate with a Mildata network. A Mildata network connects several machines together and allows them to share wash formulas and other data with the Mildata computer. When this switch is in the *Mildata* position (💻) and you enter a formula number, the machine requests the contents of the formula from the Mildata computer. When set to the *Local* position (📝), only formulas present **in the machine** are available.

Kuva [Figure] **6: Mildata-/paikalliskäyttövalitsin [Mildata/Local Selector switch]**

***Luukun avaus*pyörä (Kuva 7)**—Jos tämä painike on käytettävissä, se sijaitsee ohjauspaneelin sivussa *luukun avaus*painikkeen lähellä. Jotta likainen pyykki ei putoaisi koneesta sen laskeutuessa, paina tätä painiketta ja *luukun avaus*painiketta toisella kädelläsi ja käännä *kiertosuunta*kytkintä jompaankumpaan suuntaan toisella kädelläsi. Sylinteri pyörii hitaasti luukun sulkeutuessa ja koneen laskeutuessa takaisin tavalliseen toiminta-

***Door open jog* button (Figure 7)**—This button, if provided, is located on the side of the control panel box near the *door open* button. To reduce the chance of soiled goods falling out of the machine as it descends, hold this button and the *door open* button depressed with one hand, and hold the *jog direction* switch in either direction with the other hand. The cylinder rotates slowly as the door closes and the machine descends to the normal

asentoonsa.

operating position.

Kuva [Figure] **7: *Luukun avaus*pyörä [*Door open jog* button]**

Manuaalinen huuhtelupainike (Kuva 8)—Jos koneessa on lisävarusteena toimitettava huuhtelusuutin, voit suihkuttaa suuttimeen vettä painamalla tätä painiketta. Tämä huuhtoo koneeseen mahdollisesti jääneet kemikaalit sylinteriin. Jos lisäät pesuaineita manuaalisesti pesuohjelman aikana, voit huuhdella kaikki liukenemattomat kemikaalit pois syöttökourusta painamalla tätä painiketta. Jos koneessa ei ole lisävarusteena toimitettavaa huuhtelusuutinta, voit huuhdella nestemäisten pesuaineiden syöttöaukot vedellä painamalla tätä painiketta.

Manual supply flush button (Figure 8)—On machines equipped with an optional flushing supply injector, press this button to spray water into the supply injector to flush any remaining chemicals into the cylinder. If you manually add supplies during a wash formula, press this button to flush any remaining undiluted chemicals out of the supply chute. If the machine is not equipped with the optional supply injector, press this button to flush the liquid chemical inlets with fresh water.

Kuva [Figure] **8: Manuaalinen huuhtelupainike [Manual Supply Flush button]**

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Luku 2
Koneen peruskäyttö

Chapter 2
Normal Machine Operation

BICWCO03 (Published) Book specs- Dates: 20070924 / 20070924 / 20101217 Lang: FIN01 Applic: 68036F5N

2.1. Käyttöohjeet laitoksen henkilökunnalle

Operating Instructions for Plant Personnel

2.1.1. Aloita oman turvallisuutesi vuoksi tästä

Start Here for Safety

Näiden ohjeiden tarkoituksena on muistuttaa tämän pesukoneen käyttäjiä koneen käyttövaatimuksista. Älä käytä tätä konetta, jollei koneen kokenut ja koulutettu käyttäjä ole ensin kertonut sinulle, miten sitä käytetään.

This document is meant to remind you, the person operating this washer extractor, of what is required to operate this machine. Do not attempt to operate this machine before an experienced, trained operator explains the details to you.

VAARA 3: Sekalaiset vaarat—Koneen huolimaton käyttö voi aiheuttaa loukkaantumisen tai kuoleman, omaisuusvahinkoja, vaurioittaa konetta, rikkoa sen ja/tai mitätöidä takuun.

DANGER 3: Multiple Hazards—Careless operator actions can kill or injure personnel, damage or destroy the machine, damage property, and/or void the warranty.

VAARA 4: Tappavan sähköiskun ja sähköiskun aiheuttamien palovammojen vaara—Sähkövirran kanssa kosketuksiin joutuminen voi tappaa tai aiheuttaa vakavia henkilövahinkoja. Koneen sisällä on sähkövirtaa, jollei koneen virran pääkatkaisinta ole kytketty pois päältä.

- Älä avaa sähkökaapin lukitusta tai itse kaappia.
- Paina mieleesi, missä koneen virran pääkatkaisin sijaitsee ja käytä sitä hätätilanteissa koneen sähkövirran katkaisemiseen.
- Vain pätevä, valtuutettu huoltohenkilökunta saa huoltaa konetta. Sinun tulee ymmärtää kaikki koneen

DANGER 4: Electrocution and Electrical Burn Hazards—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.

käyttöön liittyvät vaarat ja miten niiltä voi välttyä.

HUOMIO 5: Törmäys-, murskautumis- ja puristumisvaara—Suojusten, kansien ja paneelien eristämien liikkuvien osien koskeminen voi saada raajat tarttumaan niihin ja raajat saattavat murskautua. Osat liikkuvat automaattisesti.

CAUTION 5: Collision, Crushing and Pinch Hazards—Contact with moving components normally isolated by guards, covers, and panels, can entangle and crush your limbs. These components move automatically.

2.1.2. Tarkista kytkinten asetukset — Check Switch Settings

Näyttö tai toiminto [Display or Action]	Selitys	Explanation
	Varmista, että *käyttö-ja ohjelmointi*kytkin on -asennossa.	Check that the *run/program* keyswitch is at .
	Kaikkien hätäpysäytyspainikkeiden tulee olla vapautettuina ja *valmius*asennossa, jotta konetta voisi käyttää.	All emergency stop buttons must be unlatched and in the *ready* position to allow machine operation.
/	Varmista, että pääkytkin on -asennossa.	Check that the master switch is at .

2.1.3. Kallistettavan koneen täyttö — How do I Load a Tilting Machine?

2.1.3.1. Automaattinen täyttö (kiskoilta tai kaukalosta) — Automated (Rail or Shuttle) Loading

Näyttö tai toiminto [Display or Action]	Selitys	Explanation
	Avaa luukku	Open the door
	Aseta *kallistuksen eteen- ja taaksepäinvalitsin etu*asentoon.	Set the *tilt front/rear selector switch* to the *front* position.
	Kallista koneen etuosaa ylöspäin täyttöä varten.	Tilt the front of the machine up to receive the load.
	Valitse pesuohjelma (esim. 07). Pesuohjelman valitseminen on kuvattu kohdassa Osio 2.1.4 “Pesuohjelman valinta”.	Select the formula (07, for example). Details about selecting a formula are described in Section 2.1.4 “How do I Select a Formula?”.
	Vaihda ohjelmanvalintasaraketta tarvittaessa.	Toggle column for formula selection if necessary.
	Siirry nykyisen sarakkeen edelliseen tai seuraavaan pesuohjelmaan.	Move to the next or previous displayed formula in the current column.
	Vahvista valitsemasi pesuohjelma.	Confirm the selected formula.
Täytä kone laitoksen esimiesten antamien ohjeiden mukaisesti.		Use the procedure defined by facility management to put the goods in the machine.
	Sulje luukku.	Close the door.
	Kallista koneen etuosaa alaspäin normaaliasentoon.	Tilt the front of the machine down to the normal position.

2.1.3.2. Manuaalinen täyttö — Manual Loading

Näyttö tai toiminto [Display or Action]	Selitys	Explanation
	Avaa luukku.	Open the door.
0 7	Valitse pesuohjelma (esim. 07). Pesuohjelman valitseminen on kuvattu kohdassa Osio 2.1.4 “Pesuohjelman valinta”.	Select the formula (07, for example). Details about selecting a formula are described in Section 2.1.4 “How do I Select a Formula?”.
SKIP TO	Vaihda ohjelmanvalintasaraketta tarvittaessa.	Toggle column for formula selection if necessary.
/	Siirry nykyisen sarakkeen edelliseen tai seuraavaan pesuohjelmaan.	Move to the next or previous displayed formula in the current column.
ENTER	Vahvista valitsemasi pesuohjelma.	Confirm the selected formula.
Täytä kone laitoksen esimiesten antamien ohjeiden mukaisesti.		Use the procedure defined by facility management to put the goods in the machine.
	Sulje luukku.	Close the door.

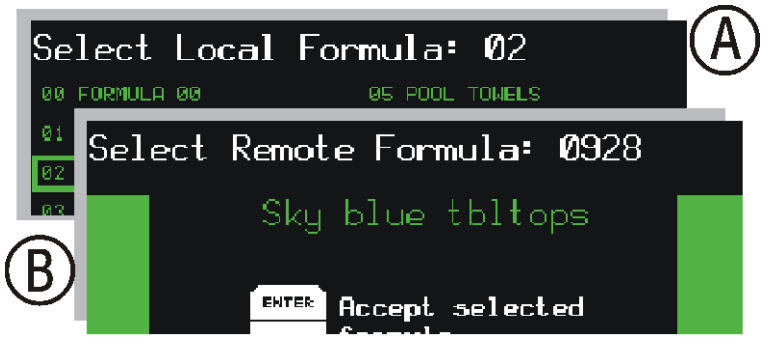
2.1.4. Pesuohjelman valinta

Mark VI -ohjainta voi käyttää joko *paikalliskäyttö*- tai *Mildata*-tilassa. *Paikalliskäyttö*tilassa kone ei ole yhteydessä mihinkään muuhun laitteeseen ja käyttää niitä pesuohjelmia, jotka on tallennettu ohjaimen paikalliseen muistiin. *Mildata*-tilassa kone lataa suorittamansa pesuohjelmat Mildata-tietokoneelta ja päivittää Mildata-tietokoneen näytön säännöllisin väliajoin.

How do I Select a Formula?

The Mark VI controller can operate in either *local* or *Mildata* mode. In *local* mode, the machine does not communicate with any other devices and runs formulas contained in local controller memory. In *Mildata* mode the machine downloads and runs formulas from the Mildata computer, and frequently updates the display on the Mildata computer.

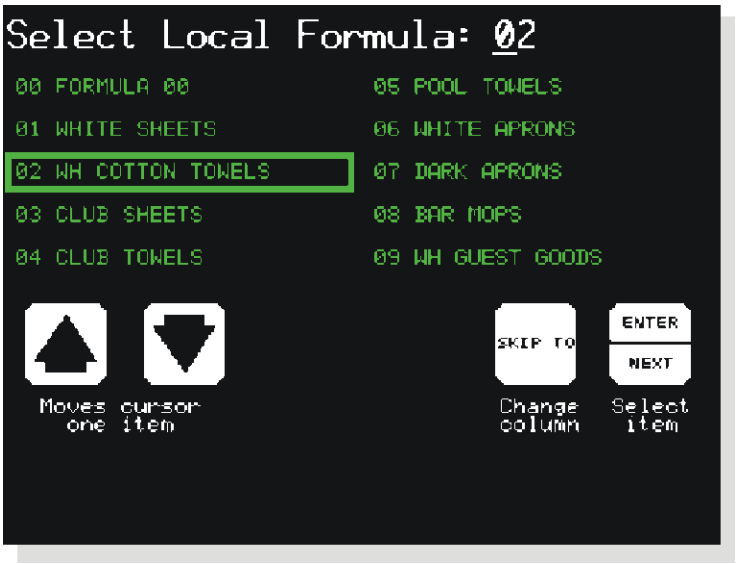
Kuva [Figure] **9: Paikallisen ja etäpesuohjelman valinta [Selecting a Local or Remote Formula]**

***Select Program (Ohjelmien valinta)* -näytöt [*Select Program* Displays]**	**Selitysteksti [Legend]**
	**A.** Paikalliskäyttö (Mildata ei ole käytettävissä tai käytössä) [Local (Mildata not present or enabled)] **B.** Etäkäyttö (Mildata on käytössä) [Remote (Mildata enabled)]

2.1.4.1. Paikallisen pesuohjelman valinta—Jos kone ei ole Mildata-verkossa tai Mildata-verkko ei ole käytettävissä, voit valita haluamasi pesuohjelman koneen paikalliseen muistiin tallennetuista ohjelmista. Valitse pestävälle pyykille sopiva pesuohjelma *Select Local Formula (Paikallisen pesuohjelman valinta)* -näytöltä (Kuva 10).

Selecting a Local Formula—If the machine is not part of a Mildata network, or if the Mildata network is not available, you can choose from any of the wash formulas stored in local memory on the machine. Use the *Select Local Formula* screen (Figure 10) to choose the correct formula for the goods in the machine.

Kuva [Figure] **10:** ***Select Local Formula (Paikallisen pesuohjelman valinta)*** **-näyttö [*Select Local Formula* Screen]**



Näyttö tai toiminto [Display or Action]	**Selitys**	**Explanation**
0 7	Valitsee suoraan haluamasi pesuohjelman (esim. 07). Kun syötät kaksinumeroisen luvun, valittu ohjelma siirtyy tämän näytön vasemman sarakkeen yläosaan.	Directly selects the formula you want to run (07, for example). When you enter a two-digit number, the selected formula moves to the top of the left column on this screen.
SKIP TO	Vaihtaa ohjelmanvalintasaraketta tarvittaessa. Jos haluamasi ohjelma näkyy näytöllä, mutta eri sarakkeessa kuin valintaruutu, voit siirtää valintaruudun toiseen ohjelmasarakkeeseen painamalla tätä painiketta.	Toggles the column for formula selection if necessary. If the desired formula is visible on the screen, but is in the opposite column from the selection box, this keystroke moves the selection box to the other column of formulas.
↓ / ↑	Siirry nykyisen sarakkeen edelliseen tai seuraavaan pesuohjelmaan. Jos haluamasi ohjelma näkyy näytöllä ja samassa sarakkeessa kuin valintaruutu, voit siirtää valintaruutua ja valita pesuohjelman painamalla näitä kahta painiketta.	Move to the next or previous displayed formula in the current column. If the desired formula is visible on the screen and in the same column as the selection box, you can use these two keys to move the selection box down or up to select the formula.

Näyttö tai toiminto [Display or Action]		Selitys	Explanation
	ENTER	Vahvista valitsemasi pesuohjelma. Siirrä valintaruutu sen pesuohjelman kohdalle, jota haluat käyttää ja jatka koneen käyttöä painamalla ENTER.	Confirm the selected formula. Place the selection box on the formula you want to run, then press ENTER to continue with the normal operation procedures.

Liite 1

Pyykin paino ja *veden mittaus*

Veden mittaus on käytettävissä niissä Mark VI -pesukoneissa, joiden vedensyöttöputkissa on lisävarusteena toimitettavat virtausmittarit. Tämän ominaisuuden ansiosta Mark VI -ohjain voi syöttää koneeseen pestävän pyykin painon mukaisen määrän vettä pesuohjelman valitsemisen jälkeen. Jos syötät pyydettäessä 200 yksikön suuruisen painon, kone käyttää kaksi kertaa enemmän vettä kuin jos syötät 100 painoyksikköä. Tämän toiminnon avulla vettä voi säästyä hyvinkin paljon, jos syötät tarkan painon jokaisella pesukerralla.

Supplement 1

About Load Weight and *Metered Water*

Metered water is available on Mark VI washer-extractors equipped with optional flow meters on the incoming water lines. This feature allows the Mark VI controller to admit a quantity of water proportional to the weight of goods you enter after selecting the formula. If you enter a weight of 200 units when prompted, the machine will use twice as much water as if you entered 100 weight units. This option can save a significant amount of water if you enter accurate weights for each load.

Kuva [Figure] **11: Painon syöttäminen veden mittausta varten [Entering Load Weight for Metered Water]**

Näyttö tai toiminto [Display or Action]	Selitys	Explanation
4 4 9	Syötä koneeseen lisätyn pyykin paino. Koneen ohjain käyttää painotietoa pesuun tarvittavan vesimäärän arvioimiseen valitun pesuohjelman mukaisesti.	Enter the weight of the goods loaded in the machine. The machine controller uses the weight to determine how much water is needed to wash the goods according to the programmed wash formula.
ENTER	Hyväksy koneessa olevan pyykin paino ja jatka.	Accept the entered goods weight and continue.

2.1.4.2. Mildata-ohjelman valinta—Jos kone on Mildata-verkossa ja verkko on käytettävissä, voit valita minkä tahansa Mildata-tietokoneelle tallennetun pesuohjelman. Valitse pestävälle pyykille sopiva pesuohjelma *Select Remote Formula (Etäpesuohjelman valinta)* -näytöltä (Kuva 12).

Huomautus 1: Mildata-tietokoneeseen voi tallentaa jopa 1 000 erilaista pesuohjelmaa. Nämä ohjelmat ovat käytettävissä kaikissa sellaisissa pesukoneissa, jotka ovat Mildata-verkossa ja joiden laitteisto on yhteensopiva tämän toiminnon kanssa.

Selecting a Mildata Formula—If the machine is part of a Mildata network and the network is available, you can choose any wash formula stored on the Mildata computer. Use the *Select Remote Formula* screen (Figure 12) to choose the best formula for the goods in the machine.

Note 1: You can store up to 1000 different wash formulas on the Mildata computer. All of these formulas are available to all washer-extractors that are part of the Mildata network and have compatible hardware.

Kuva [Figure] **12:** ***Select Remote Formula (Etäpesuohjelman valinta)*** **-näyttö [*Select Remote Formula* Screen]**

Näyttö tai toiminto [Display or Action]	**Selitys**	**Explanation**
0 9 2 8	Valitse (esimerkiksi) Mildata-tietokoneelle tallennettu ohjelma 928. Mark VI -ohjain pyytää ohjelman tiedot Mildata-tietokoneelta ja näyttää pesuohjelman nimen (ks. Kuva 12).	Select formula 928 (example) stored on the Mildata computer. The Mark VI controller requests the formula from the Mildata computer and displays the formula name, as shown in Figure 12.
ENTER	Varmista, että näytöllä näkyy sen pesuohjelman nimi, jota haluat käyttää. Jos näytöllä näkyvä pesuohjelma ei sovellu koneessa olevalle pyykille, poista ohjelman numero painamalla CANCEL (Peruuta) ja syötä uusi numero.	Confirm that the displayed formula name is the formula you want to run. If the displayed formula isn't the right one for the loaded goods, press CANCEL to clear the formula number, then enter another number.

Kun olet hakenut oikean pesuohjelman ja vahvistanut sen, Mark VI -ohjain pyytää syöttämään mahdolliset erätiedot kohtaan *batch data (erätiedot).*

After you've retrieved and verified the formula, the Mark VI controller prompts for any configured *batch data*.

2.1.4.3. *Mildata Batch Codes (Mildata-eräkoodit)* -tietojen syöttö

—Mark VI -ohjain pyytää konetta ohjelmoitaessa valittujen erätietojen syöttämistä seuraavan kuvan (Kuva 13) kaltaisella näytöllä (ks. aiheeseen liittyvä osio asiakirjassa BICWCC01). Antamasi tiedot lähetetään Mildata-tietokoneeseen laskentaa ja raporttien luontia varten.

Entering *Mildata Batch Codes*

—The Mark VI controller uses a screen similar Figure 13 to prompt you for the batch data fields selected in machine configuration (see the related section in document BICWCC01). The data you enter is sent to the Mildata computer for accounting and report generation.

Kuva [Figure] **13: Erätiedot etäpesuohjelmien käyttöön [Batch Data for Remote Formula Operation]**

Weight (Paino)—Koneeseen lisätyn pyykin paino. Näitä tietoja käytetään tavallisesti muiden erätietojen kanssa asiakkaalta laskutettavan summan tai työntekijöiden tuottavuuden arviointiin. Niissä koneissa, joissa on lisävarusteena toimitettavat virtausmittarit ja jotka on ohjelmoitu veden mittaamista varten, painotietoja käytetään myös arvioimaan, kuinka paljon erän käsittelyyn tarvitaan vettä. Paino voi olla enintään kolminumeroinen luku.

Customer Code (Asiakaskoodi)—Asiakkaan tunnistava koodi. Tämän koodin avulla voi arvioida, kuinka paljon töitä kukin asiakas lähettää. Asiakaskoodi voi olla kymmennumeroinen.

Employee Number (Työntekijänumero)—Erästä vastaavan työntekijän tunnistava koodi. Työntekijänumerossa voi olla enintään viisi numeroa.

Pieces (Vaatekappaleet)—Koneessa olevien vaatekappaleiden lukumäärä. Tämä arvo voi korvata painotiedot, erityisesti silloin, jos työstä laskutetaan kappalemäärän eikä painon mukaan. Vaatekappaleiden määrä voi olla enintään nelinumeroinen.

Lot Number (Eränumero)—Toisiinsa liittyvät erät tai asiakkaat tunnistava koodi. Jos tarpeen, tämä numero voi viitata eri asiakastileille yhteiseen reititysnumeroon. Eränumerossa voi olla enintään kymmenen numeroa.

Weight—the weight of the batch of goods in the machine. This information is usually used along with other batch data to calculate customer charges or employee productivity. In machines equiped with optional flow meters and configured for metered water, the weight value is also used to determine how much water is required to process the batch. The weight value can be up to three digits.

Customer Code—the identifying code for the customer. This information can help you determine how much work each customer is submitting. Ten digits are available for customer code.

Employee Number—the identifying code for the employee responsible for this batch. The employee number may be up to five digits long.

Pieces—the number of pieces in the machine. This value sometimes replaces the weight value, especially when charges are made by the piece rather than by weight. Four digits are available for the number of pieces.

Lot Number—the identifying code for several related batches or customers. At your discretion, the value entered here might represent a particular route number common to several accounts. A lot number can be up to 10 digits long.

2.1.5. Käynnistä valitsemasi pesuohjelma

Varmista, että olet käynyt ohessa kuvatut vaiheet läpi, ennen kuin jatkat koneen käyttöä.

1. Olet lisännyt koneeseen sen ilmoitetun enimmäiskapasiteetin verran pyykkiä tai lähes niin paljon.
2. Olet valinnut koneessa olevalle pyykille sopivan pesuohjelman.
3. Olet syöttänyt koneen ohjaimen vaatimat erätiedot veden mittausta tai Mildatan raportointitoimintoja varten.
4. Olet sulkenut luukun.
5. Jos kallistit koneen täytön ajaksi, olet palauttanut sen takaisin normaaliin käyttöasentoon.

Start the Selected Formula

Be sure you've completed these steps before you go any further in the operating procedure.

1. You've loaded the machine at or near its rated weight capacity.
2. You've selected a formula that's appropriate for the goods in the machine.
3. You've entered any batch data the machine controller requires for metered water or Mildata reporting.
4. You've closed the door.
5. If you tilted the machine to load it, you've returned it to the normal operating position.

Näyttö tai toiminto [Display or Action]	**Selitys**	**Explanation**
①	Käynnistä valitsemasi pesuohjelma.	Start the selected formula.

Kone käynnistää valitun pesuohjelman. Rumpu alkaa pyöriä ja vesiventtiilit aukeavat. Kun veden määrä on turvallisella tasolla, höyryventtiili voi aueta ja aloittaa veden lämmittämisen. Kone toimii tästä vaiheesta aina pesuohjelman loppuun asti täysin automaattisesti, jollei kemikaalien lisäämistä varten ole ohjelmoitu erillistä signaalia (ks. Liite 2).

The machine begins the wash formula. The basket begins turning and water valves open. When a safe level is achieved, the steam valve may open to begin heating the bath. Operation from this point to the end of the formula is completely automatic unless a signal is programmed with a chemical injection (see Supplement 2).

Liite 2

Käyttösignaali ja kemikaalien lisääminen

Jos kemikaalien määrää täytyy vaihdella eri koneellisissa mistä tahansa syystä, pesuohjelman voi ohjelmoida pysäyttämään ajastimen ja antamaan signaalin, kun tiettyä kemikaalia täytyy lisätä. Lisää kemikaali ja jatka ohjelman käyttöä painamalla -painiketta.

Supplement 2

Chemical Injections with the Operator Signal

If you need to adjust the amount of a chemical injection from load to load depending on highly variable factors, the formula can be programmed to stop the timer and signal you when a chemical is required. Add the chemical, then press to resume the formula.

2.1.6. *Run (Käyttö)* -näytön näyttämät tiedot

Kun kone käy läpi valitsemaasi pesuohjelmaa, näyttö on samanlainen kuin seuraavassa kuvassa (Kuva 14). Tässä näytössä näkyvät tiedot on

What Does the *Run* Display Tell Me?

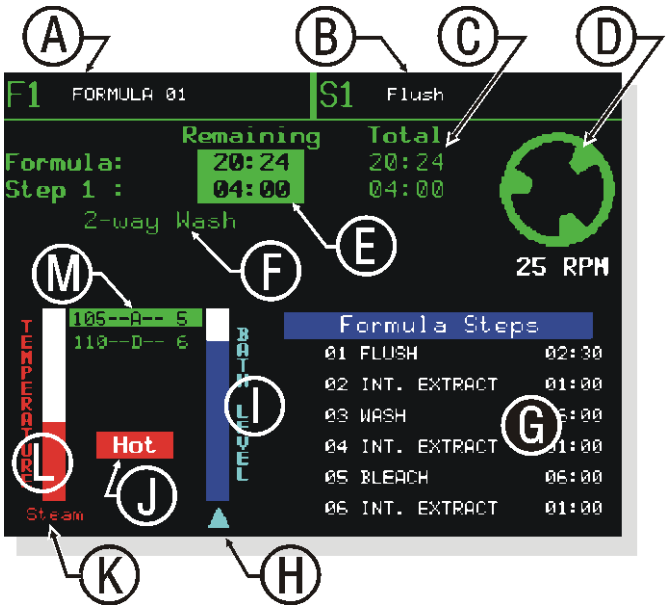
While the machine is running the formula you selected, the display appears similar to the one shown in Figure 14. The information

kuvattu ohessa.

shown here is explained below.

Kuva [Figure] **14: *Run (Käyttö)* -näytön tulkitseminen [How to Read the *Run* Display]**

Tyypillinen näyttö [Typical Display]



Selitysteksti [Legend]

- **A.** Pesuohjelman numero ja nimi [Formula number and name]
- **B.** Vaiheen numero ja nimi [Step number and name]
- **C.** Pesuohjelman ja tämänhetkisen vaiheen suorittamiseen kuluva aika yhteensä [Total time for formula and current step]
- **D.** Rummun pyörimistä kuvaava piirros ja nopeus [Basket rotation graphic and speed]
- **E.** Pesuohjelman ja tämänhetkisen vaiheen suorittamisen jäljellä oleva aika [Remaining time for entire formula and current step]
- **F.** Koneen tilasta kertova viesti [Machine status message]
- **G.** Pesuohjelman vaiheet: määrä, nimi ja kesto [Formula steps: number, name, and duration]
- **H.** Täytön ja vedenpoiston ilmaisin [Indicator for filling or draining]
- **I.** Veden tason ilmaisin [Graphic bath level indicator]
- **J.** Vesiventtiilien ilmaisimet [Water valves indicators]
- **K.** Valinnaisten höyry- ja jäähdytysventtiilien ilmaisin [Indicator for optional steam and cooldown valves]
- **L.** Veden lämpötilan ilmaisin [Graphic bath temperature indicator]
- **M.** Veden lämpötilan ja tason tiedot [Bath temperature and level data]

2.1.6.1. Pesuohjelman ja -vaiheen tiedot—Näytön ylärivillä näkyy aina senhetkisen pesuohjelman ja -vaiheen nimi ja numero. *Formula number (pesuohjelman numero)* näkyy näytön vasemmassa yläkulmassa, kirjaimen “F.” jälkeen. Numeron perässä näkyy *formula name (pesuohjelman nimi)*.

Step number and name of the current step (Vaiheen numero ja parhaillaan suoritettavan vaiheen nimi) näkyvät pesuohjelmatietojen oikealla puolella. Mark VI -ohjain päivittää pesuohjelman numeron ja nimen ohjelman käynnistyessä ja jokaisen sitä seuraavan vaiheen alussa.

Pesuohjelman ja -vaiheen nimen alla näkyvät *time information (aikatiedot)*. “Total (Yhteensä)”-sarakkeessa olevat (vihreät) numerot kertovat pesuohjelman ja -vaiheen loppuun suorittamiseen vaadittavan ajan, ottamatta huomioon kohdassa Huomautus 2 mainittuja tekijöitä. Ohjain laskee kohdan “Formula (Pesuohjelma)” arvon pesuohjelman käynnistyessä ja tämä arvo ei muutu ohjelmaa suoritettaessa. Ohjain laskee ja näyttää kohteen “Step x (vaihe x)” arvon vaiheen alussa.

Aika-alueen “Remaining (Jäljellä)”-sarakkeessa olevat (vihreällä taustalla näkyvät mustat) numerot näyttävät pesuohjelman ja parhaillaan suoritettavan vaiheen *time remaining (jäljellä oleva aika)* -tiedot. Numerot ilmaisevat jäljellä olevan ajan **minimum (vähimmäismäärä)** -tiedot (ks. Huomautus 2).

Huomautus 2: Joidenkin pesuvaiheen toimintojen kestoa ei voi arvioida, joten ohjain pysäyttää ajastimen niin pitkäksi aikaa, kunnes vaadittavat toimet on tehty. Esimerkiksi koneen täyttö tietylle tasolle riippuu laitoksen vedenpaineesta, koneeseen johtavien putkien koosta ja siitä, kuinka monta muuta konetta täytetään samanaikaisesti. Täyttöön vaadittavan ajan lisäksi myös tietyn lämpötilan saavuttamiseen kuluva aika tai käyttäjän kemikaalien lisäämiseen käyttämä aika vaihtelevat. Ajastin voi pysähtyä myös virhetilanteissa.

Ohjain näyttää *machine status (koneen tila)* -tiedot pesuvaiheen numeron ja jäljellä olevan ajan alla. Osa koneen mahdollisista tiloista on lueteltu oheisessa taulukossa (Taulukko 1). Virheviestit näkyvät tarvittaessa koneen tilasta kertovan viestin alla.

Formula and Step Information—The top line of the display always shows the number and name of the current formula and step. The *formula number* appears in the upper left corner of the display, following the letter “F.”The *formula name* follows the number.

The *step number and name of the current step* are displayed to the right of the formula information. The Mark VI controller updates the formula number and name when a formula starts and at the beginning of each subsequent step.

Below the formula and step names is *time information*. The numbers in the “Total” column (green numbers) show the total time required for the formula and step to run to completion, not including the factors described in Note 2. The controller calculates the “Formula” value when the formula begins, and this value doesn't change while the formula is running. The controller calculates and displays the “Step x” value at the start of each step.

The numbers in the “Remaining” column of the time area (black numbers on a green background) indicate the *time remaining* in the formula and in the current step. These numbers indicate the **minimum** amount of time remaining (see Note 2).

Note 2: The duration of some wash formula events can't be estimated, so the controller stops the timer until a requirement is met. For example, the time required for the machine to fill to the desired level depends on the water pressure to the plant, the size of the piping to the machine, and how many other machines are filling at the same time. In addition to the time required to fill, the time required to achieve temperature or for an operator to verify a chemical injection are variable. Error conditions can also stop the timer.

The controller displays the current *machine status* below the step number and remaining time. Some of the possible machine states are listed in Table 1. Error messages appear immediately below the machine status message when required.

Taulukko 1: Koneen tilasta kertovat viestit [English table follows]

Idle (Ei toiminnassa)	Coasting (Pyörii vapaalla)
1-way Wash (Yksisuuntainen pesu)	Waiting to Discharge (Odotetaan tyhjennystä)
2-way Wash (Kaksisuuntainen pesu)	Waiting for Load (Odotetaan täyttöä)
Soak (Liotus)	Power-up Delay (Virrankytkentäviive)
Pre+Final Extract (Esi- ja loppulinkous)	Draining to Sewer (Vedenpoisto viemäriin)
Intermediate Extract (Välilinkous)	Draining to Reuse (Kierrättävä vedenpoisto)
Final Extract (Loppulinkous)	Timer Stopped (Ajastin pysäytetty)
Double Extract (Tuplalinkous)	Please Wait xx Seconds (Odota xx sekuntia)

Table 1: Machine Status Messages

Idle	Coasting
1-way Wash	Waiting to Discharge
2-way Wash	Waiting for Load
Soak	Power-up Delay
Pre+Final Extract	Draining to Sewer
Intermediate Extract	Draining to Reuse
Final Extract	Timer Stopped
Double Extract	Please Wait xx Seconds

2.1.6.2. Rummun pyöriminen—Näytön oikean ylänurkan lähellä sijaitseva *rummun pyörimiskuvake* näyttää rummun suhteellisen pyörimisnopeuden pesun, vedenpoiston ja linkouksen aikana. Ohjain näyttää suoraan rummun pyörimiskuvakkeen alapuolella rummun halutun nopeuden joko kierroksina minuutissa (kierr/min) tai painovoiman yksikköinä (G).

Basket Rotation—The *basket rotation graphic* near the upper right corner of the display represents the relative basket speeds in wash, drain, and extract speeds. Immediately below the basket rotation graphic, the controller displays the desired basket speed in either revolutions per minute (RPMs) or in gravitational units (G's).

2.1.6.3. Veden lämpötila ja taso—*Vesiventtiilien ilmaisimet* näkyvät, kun kutakin ilmaisinta vastaava vesiventtiili on auki.

Veden lämpötilan ilmaisimen kuvake näyttää koneen arvioidun lämpötilan. Pystysuora ilmaisinpalkki on täysin punainen, kun koneen lämpötila on suurin sallittu eli 205 fahrenheitastetta (95 celsiusastetta).

Höyryn tai jäähdytyksen ilmaisin ilmestyy lämpötilan kuvakkeen alapuolelle, jos jompikumpi näistä valinnaisista toiminnoista on

Bath Temperature and Level—*Water valve indicators* appear when the corresponding water valve is open.

The graphic *bath temperature indicator* shows the approximate temperature in the machine. The vertical indicator bar is solid red when the temperature in the machine is at the maximum allowable value of 205 degrees Fahrenheit (95 degrees Celsius).

The steam or cooldown indicator appears below the graphic temperature indicator when either of these optional features is

käytössä. “Steam (Höyry)” ilmestyy näkyviin, kun höyryventtiili on auki, ja “Cooldown (jäähdytys)” ilmestyy näkyviin, kun jäähdytystoiminto on käytössä.

enabled. “Steam” appears when the steam valve is open, and “Cooldown” appears when the cooldown output is enabled.

Veden tason ilmaisimen kuvake näyttää halutun tason saavuttamisen prosenttiluvun. Pystysuora ilmaisinpalkki on täysin sininen, kun ohjelmoitu taso on saavutettu, ja täysin valkoinen, kun koneessa ei ole vettä.

The graphic *bath level indicator* shows the percentage of the desired level that's achieved. The vertical indicator bar is solid blue when the programmed level is achieved, and solid white when there is no water in the machine.

Tason suunnan ilmaiseva nuoli osoittaa ylöspäin, kun koneessa olevan veden taso nousee (eli kone ottaa vettä), ja alaspäin, kun tyhjennysaukko avataan. Nuoli ei ole näkyvissä, kun haluttu taso on saavutettu eikä myöskään linkousvaiheiden aikana.

The *level direction indicator arrow* points upward when the actual bath level in the machine is increasing (when the machine is filling), and points downward when the drain opens. The arrow is not visible when level is achieved, or during extract steps.

Ohjain näyttää *veden lämpötilan ja tason tiedot* lämpötilan ja tason kuvakkeiden välissä. Ylärivillä näkyvät koneen saavuttama lämpötila ja veden taso, ja alarivillä halutut arvot.

The controller displays *bath temperature and level data* between the temperature and level graphic indicators. The top line displays the temperature and level that are currently achieved in the machine, and the bottom line displays the desired values.

2.1.6.4. Pesuohjelman vaiheet ja kemikaalien lisääminen

—Kun pesuohjelma käynnistyy, ohjain näyttää ensimmäiset kuusi vaihetta näytön alhaalla vasemmalla sijaitsevassa *pesuohjelman vaiheluettelossa*. Jos ohjelmassa on enemmän vaiheita kuin näytöllä voidaan kerralla näyttää, luetteloa vieritetään aiempien vaiheiden päätyttyä näyttämään seuraavat vaiheet. Parhaillaan käynnissä oleva vaihe näkyy korostettuna.

Formula Steps and Chemical Injection

—When a formula begins, the controller displays the first six steps in the *formula steps list* in the lower left area of the screen. If the program contains more steps than can be displayed at one time, the list scrolls to display more steps as the earlier ones end. The current step is highlighted.

Ohjelmoitujen *kemikaalien lisäysten* luettelo ilmestyy pesuvaiheluettelon tilalle aina kemikaalien lisäämisen aikana, ja parhaillaan lisättävä kemikaali näkyy korostettuna.

The list of programmed *chemical injections* replaces the formula steps list during each injection, with a highlight box on the chemical that's currently injecting.

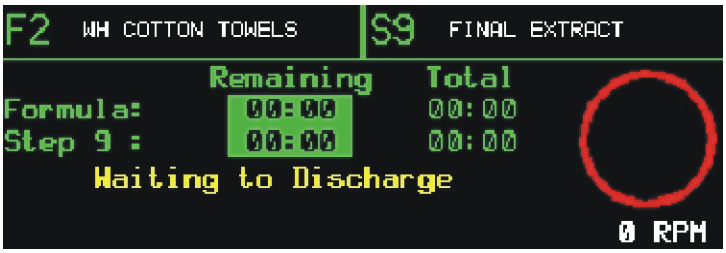
2.1.7. Tyhjennä kone

Kun pesuohjelma päättyy, käyttäjälle tarkoitettu äänimerkki kuuluu ja kone näyttää viestin, jossa kerrotaan, että se odottaa tyhjennystä (ks. Kuva 15). Poista pyykit koneesta alla kuvatulla tavalla.

Unload the Machine

When the formula ends, the operator signal sounds and the machine displays a message that it is waiting to discharge (see Figure 15). Use a procedure similar to the one outlined below to unload the goods.

Kuva [Figure] **15: Pesuohjelman päättyessä tavallisesti näkyvä viesti [Typical Message when Formula Ends]**



2.1.7.1. Kaikille *päättymiskoodeille*—Mark VI -ohjaimen avulla voit ohjelmoida yhden neljästä pesuohjelman päättyessä tapahtuvasta toiminnosta: *stopped (pysäytetty)*, *reversing at wash speed (pyörii taaksepäin pesunopeudella)*, *turning at drain speed (pyörii vedenpoistonopeudella)* tai *tumbling (kuivaus)*. Kolmea ensimmäistä toimintoa käyttävien pesuohjelmien tyhjennys tehdään samalla tavoin. Neljännen toiminnon kanssa voit myös käydä läpi seuraavassa osiossa (Osio 2.1.7.2) kuvatut vaiheet.

For any *End Code*—The Mark VI controller allows you to program one of four possible actions for the end of the formula: *stopped*, *reversing at wash speed*, *turning at drain speed*, or *tumbling*. You use the same unloading procedure for formulas using the first three actions. For the fourth action, you also have the option of using the procedure described in Section 2.1.7.2.

Näyttö tai toiminto [Display or Action]	**Selitys**	**Explanation**
	Katkaise kolmijohdinpiirin virta, hiljennä käyttösignaalin äänimerkki ja pysäytä rumpu, jos se on käynnissä. Tällä painikkeella voit myös avata lukituksen luukun avaamiseksi.	Remove power from the 3-wire circuit, silence the operator signal, and stop any basket motion in progress. This button also unlocks the door so you can open it.
	Voit katkaista kolmijohdinpiirin virran, hiljentää käyttösignaalin äänimerkin ja pysäyttää liikkeessä olevan rummun millä tahansa näistä painikkeista. Jos käytät jotakin näistä painikkeista, sinun täytyy silti avata luukun lukitus -painikkeella, ennen kuin voit avata luukun. Jos käytät jotakin näistä painikkeista *end code 3 (päättymiskoodi 3)*:a käyttävän pesuohjelman keskeyttämiseen (ks. Osio 2.1.7.2), ohjelma päättyy eikä sitä voi enää jatkaa.	You can also remove power from the 3-wire circuit, silence the operator signal, and stop any basket motion that was in progress with any of these buttons. However, if you use any of these buttons, you'll still need to unlock the door with before you can open it. If you use any of these buttons to stop a formula with *end code 3* (see Section 2.1.7.2), the formula is terminated and cannot be resumed.
	Avaa luukku pyykin poistamista varten.	Open the door for unloading.

2.1.7.2. Päättymiskoodille 3 (*Tumbling (Kuivaus)*)—Päättymiskoodilla 3 (*Tumbling (Kuivaus)*) voit avata luukun ja poistaa osan pyykistä koneen keventämiseksi, sulkea luukun uudelleen ja jatkaa kuivauksella.

For End Code 3 (*Tumbling*)—End code 3 (*Tumbling*) allows you to open the door and remove some of the goods, then close the door and resume tumbling to loosen more goods from the basket.

Näyttö tai toiminto [Display or Action]	**Selitys**	**Explanation**
	Katkaise kolmijohdinpiirin virta, hiljennä käyttösignaalin äänimerkki ja pysäytä rumpu, jos se on käynnissä. Tällä painikkeella voit myös avata lukituksen luukun avaamiseksi.	Remove power from the 3-wire circuit, silence the operator signal, and stop any basket motion in progress. This button also unlocks the door so you can open it.
Kun rumpu lakkaa pyörimästä, avaa luukku ja poista joko kaikki tai osa pyykistä.		When the basket stops turning, open the door and remove some or all of the goods from the machine.
	Avaa luukku pyykin poistamista varten.	Open the door for unloading.
Poista haluamasi osa pyykistä.		Remove any desired portion of the load.
	Sulje luukku.	Close the door.
	Aloittaa kuivauksen ilman käyttösignaalia. Kuivaus jatkuu kahden minuutin ajan tai kunnes painat -painiketta.	Resumes the tumbling action without the operator signal. Tumbling continues for another two minutes, or until you press .

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Luku 3 Signaalit ja virheet

Chapter 3 Signals and Errors

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3.1. Käyttäjän toimenpiteet

Kun pesuohjelma alkaa, kone toimii yleensä automaattisesti. Kone antaa äänimerkin, jos käyttäjän täytyy tehdä jokin valinta tai manuaalinen toimi. Tavallisimmin käyttäjän toimia vaaditaan joko virhetilanteissa tai silloin, kun kemikaaleja täytyy lisätä manuaalisesti.

Operator Intervention

Once a formula starts, the machine usually runs automatically. The machine will sound the signal if an operator needs to make a decision or do something manually. The most common reasons you'll need to attend to the machine are errors, and to manually add chemicals in some cases.

3.1.1. Käyttösignaali virhetilanteissa

Jos kone pysähtyy jonkin virheen vuoksi, käyttösignaalin äänimerkki kuuluu ja merkkivalo vilkkuu. Tällaiset virheet ottavat tavallisesti kolmijohdinpiirin pois käytöstä ja johtuvat siitä, että tärinäkytkimen virta-arvo on ylittynyt tai koneen moottoria ohjaava invertteri ei toimi oikein. Oheisesta kuvasta (Kuva 16) näkyy, miltä tärinäkytkimen virhe näyttää näytöllä.

Error with Operator Signal

The operator signal will sound and the beacon will flash if an error causes the machine to stop. These errors usually disable the three-wire circuit, and include a tripped vibration switch or a malfunction of the inverter that controls the motor. Figure 16 shows how a vibration switch error appears on the display.

Kuva [Figure] **16: Käyttösignaali tavallisimmissa virhetilanteissa [Typical Error with Operator Signal]**

Jos haluat jatkaa pesuohjelmaa, hiljennä äänimerkki ja korjaa virheen syy. Käynnistä pesuohjelma tämän jälkeen uudelleen.

To resume the formula, silence the signal and correct the cause of the error. Then, restart the formula.

Näyttö tai toiminto [Display or Action]	**Selitys**	**Explanation**
	Näppäimistön Cancel-painike (Peruuta) pysäyttää koneen, hiljentää käyttösignaalin äänimerkin ja sammuttaa signaalin merkkivalon. Pesuohjelma on aloitettava uudelleen alusta.	The Cancel key on the keypad stops the machine, silences the operator signal buzzer, and turns off the signal light. You'll have to restart the formula from the beginning.

Korjaa virheen syy. Jos et voi itse ratkaista ongelmaa, pyydä jotakuta muuta tutustumaan koneen käsikirjaan.

Correct the cause of the error. If you don't know how to fix the problem, have someone check the reference manual for the machine.

①	Jos olet jo korjannut virheen, käynnistyspainike jatkaa pesuohjelmaa siitä, mihin se jäi. Jos virheen syynä oli tärinäkytkin, kone siirtyy levitysvaiheeseen, levittää rummussa olevat pyykit tasaisemmin ja jatkaa sitten keskeytettyä linkousvaihetta.	If you've corrected the error, the Start button resumes the formula where it stopped. If the vibration switch caused the error, the machine goes through a distribution sequence to spread the goods around the basket, then resumes the interrupted extract step.

3.1.2. Kemikaaleja koskeva käyttösignaali

Tämä kone voi joko hallita automaattista kemikaalien pumppausjärjestelmää tai antaa merkin, kun kemikaaleja täytyy lisätä manuaalisesti. Näyttö (Kuva 17) on molemmissa tapauksissa samannäköinen, mutta

Operator Signal for a Chemical

This machine can control an automatic chemical pump system, or it can signal you to add chemicals manually. The display (Figure 17) appears the same in either case, but the operator signal sounds only if the

käyttösignaalin äänimerkki kuuluu vain siinä tapauksessa, että näin on ohjelmoitu.

signal is programmed.

Jos pesuohjelma on ohjelmoitu hallinnoimaan kemikaalien pumppausjärjestelmää, näytöllä näkyy ohjelmoidun kemikaalin käyttämän venttiilin numero, kemikaalin nimi ja sen lisäysaika. Kemikaalinäytön oikeassa reunassa näkyvä lisäysaika alkaa lyhetä välittömästi, kun kemikaalin lisääminen aloitetaan.

If the formula is programmed to control a chemical pump system, the display shows the programmed chemical valve number, chemical name, and injection time. The injection time, shown at the right end of the chemical display, begins counting down immediately when the chemical injection begins.

Jos pesuohjelma on ohjelmoitu antamaan merkki kemikaalien manuaalista lisäämistä varten, kone toimii automaattisesti aina lisäyshetkeen asti. Kun lisäyshetki koittaa, kone pysähtyy ja odottaa, että lisäät kemikaalin ja jatkat ohjelmaa. Näyttö muuttuu ja näyttää, mitä kemikaalia on lisättävä. Lisäysajan laskuri alkaa kuitenkin toimia vasta sen jälkeen, kun olet sammuttanut käyttösignaalin.

If the formula is programmed to signal you to manually add chemicals, the machine will operate automatically until it needs a chemical, then the machine stops and waits for you to add the chemical and resume operation. The display changes to show you which chemical to add, but the injection time counter runs only after you cancel the operator signal.

Kuva [Figure] **17: Kemikaalien lisäysnäkymä Run (Käyttö) -näytössä [Chemical Injection View on Run Display]**

Näyttö tai toiminto [Display or Action]	**Selitys**	**Explanation**
Kun olet lisännyt kemikaalin,		After you've added the chemical,
	sammuttaa käyttösignaalin ja käynnistää lisäysajan laskurin.	cancels the operator signal and starts the injection time counter.

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— End of BICWCT04 —

Français 5

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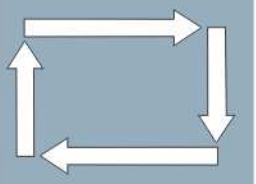
Guide de l’opérateur [Operator Guide]—

Basculement de la laveuse-essoreuse avec contrôleur Mark VI [Tilting Washer-extractor with Mark VI Controller]



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48040H7N 64040E6N 64050E5N 68036F5N 68036F5P 68036H5N

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1.1. Contrôles sur Marque VI les laveuses-essoreuses

Se réfère à d'autres chapitres de ce document (Section 1.1.2 à Section 1.1.5), pour l’emplacement et les fonctions basiques des contrôles individuels. N’utilisez pas ce document à titre d’instructions pour faire fonctionner la machine.

Controls on Mark VI Tilting Washer-extractors with Hydraulic Door

Refer to other parts of this document (Section 1.1.2 through Section 1.1.5) for the location and basic function of individual controls. Don't use this document as instructions for operating the machine.

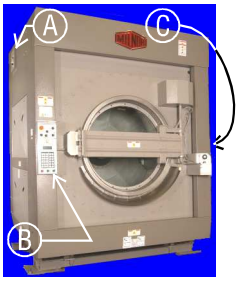
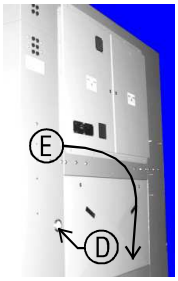
1.1.1. Que sont les Contrôles ?

Les principaux contrôles pour une utilisation normale se trouvent sur le tableau de commande avant (). Les autres contrôles et connexions se trouvent ailleurs sur la machine, comme cela est décrit ici.

Where are the Controls?

The essential controls for normal operation are located on the front control panel (Figure 1). Additional controls and connections are located elsewhere on the machine, as described here.

Illustration [Figure] **1: Emplacement des contrôles [Locations of Controls]**

Vue avant gauche [Front Left View]	Vue arrière [Rear View]	Légende [Legend]
		**A.** Microprocesseur de l'armoire de commande (68036F_B montré) [Microprocessor control box (68036F_B shown)] **B.** Panneau de commande [Control panel] **C.** Bouton de rinçage manuel [Manual supply flush button] **D.** Contrôle de la pression du système hydraulique de la porte pour le chargement [Hydraulic pressure gauge for loading door] **E.** Manomètre du système de basculement (à l'arrière du panneau inférieur arrière) [Air pressure gauge for tilt system (behind lower rear panel)]

1.1.2. Où dois-je connecter le Système de Stockage des Données ?

Le boîtier du microprocesseur se trouve dans le coin supérieur arrière de la machine, panneau gauche (voir Illustration 1) et contient une connexion DIN pour les communications sérielles. Utilisez cette connexion, marquée comme indiqué dans Illustration 2, avec un appareil sériel de transfert de données pour enregistrer ou restaurer la programmation de la machine et la mémoire de configuration.

Where do I Connect the Data Storage Device?

The microprocessor box in the upper rear corner of the machine left side panel (see Figure 1) contains a DIN-type connection for serial communications. Use this connection, labelled as shown in Figure 2, with a serial data transfer device to save or restore machine programming and configuration memory.

Illustration [Figure] **2: Connexion sérielle pour le transfert des données [Serial Connection for Data Transfer]**

1.1.3. Que sont les Organes de Contrôle ?

Les organes de contrôle primaires sont nécessaires pour faire démarrer et arrêter la machine, sélectionner les formules de lavage et contrôler le fonctionnement de la machine.

What are the Operating Controls?

The primary operating controls are required to start and stop the machine, select wash formulas, and monitor machine operation.

Illustration [Figure] **3: Panneau de commande 'Mark VI' [Mark VI Control Panel]**

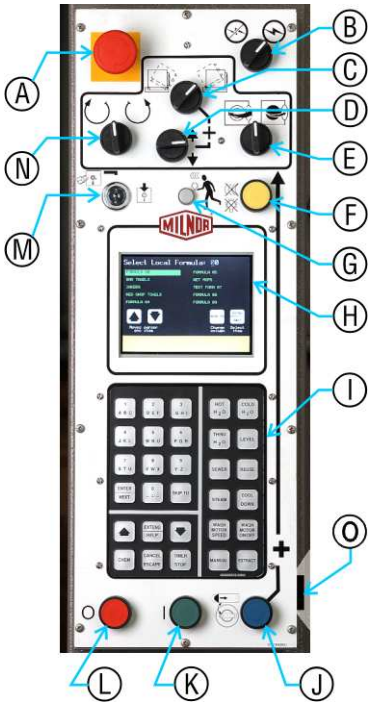
Panneau et Contrôles [Panel and Controls]	Légende [Legend]
	**A.** bouton *Arrêt d'urgence* [*Emergency stop* button] **B.** *Interrupteur principal* pour l'alimentation [*Master switch* for power] **C.** Interrupteur *Interrupteur de basculement avant/arrière* (modèles basculants uniquement) [*Tilt front/rear selector* switch (tilting models only)] **D.** Interrupteur *Interrupteur de basculement vers le haut/vers le bas* (modèles basculants uniquement) [*Tilt up/down selector* switch (tilting models only)] **E.** Interrupteur *Ouverture / fermeture de la porte* [*Door open/close* switch] **F.** bouton *Signal opérateur pour annulation* [*Operator signal cancel* button] **G.** Témoin lumineux *Signal opérateur* [*Operator signal* light] **H.** Ecran LCD [Liquid crystal graphic display] **I.** Clavier [Keypad] **J.** bouton *Ouverture de la porte* [*Door open* button] **K.** bouton *Démarrage* [*Start* button] **L.** bouton *Arrêt* [*Stop* button] **M.** *Interrupteur à clé Démarrage/Programme* [*Run/Program keyswitch*] **N.** Interrupteur *Sens de la rotation saccadée* [*Jog direction* switch] **O.** *Jog porte ouverte* bouton(modèles basculants uniquement) [*Door open jog* button (tilting models only)]

Illustration [Figure] **4: Clavier [Keypad]**

Bouton d'arrêt d'urgence—désactive le circuit à trois fils. Une fois commuté, cet interrupteur se verrouille, et vous devez lui faire faire un quart de tour pour qu'il revienne en position normale, afin de permettre à la machine de fonctionner.

Attention 1: Appuyez immédiatement sur le bouton *arrêt d'urgence* dans toutes les situations d'urgence. Le fait d'appuyer sur ce bouton désactive le circuit à trois fils, ce qui arrête la machine et ouvre l'évacuation.

- Lorsque vous réenclenchez ce bouton, vous pouvez soit annuler soit reprendre la formule de lavage interrompue. La formule reprend là où elle avait été interrompue ou au début du bain précédent, en fonction de l'état d'avancement du programme lorsque le bouton *arrêt d'urgence* fut enfoncé.

Interrupteur principal pour l'alimentation (⊗ / ⊖)—Coupe l'alimentation du système de contrôle. Si vous fermez l'interrupteur *Interrupteur principal* (⊗) alors qu'une formule est en cours, le résultat immédiat est similaire au fait d'appuyer sur le bouton *arrêt d'urgence* : la machine s'arrête et l'évacuation s'ouvre. A l'inverse du bouton *arrêt d'urgence*, une fois la machine remise en marche, la formule recommence au début de l'étape au cours de laquelle l'alimentation

Emergency stop button—disables the 3-wire circuit. This switch locks in when pressed, so you must turn it a quarter turn to allow it to return to the normal position to allow the machine to run.

Notice 1: Press the *emergency stop* button immediately in any emergency situation. This disables the 3-wire circuit, which stops all machine operation and causes the drain to open.

- When you reset this button, you have the option of cancelling or resuming the interrupted formula. The formula resumes where it was interrupted or at the beginning of the previous bath step, depending on the operation in progress when the *emergency stop* button was pressed.

Master power switch (⊗ / ⊖)—removes power from the control system. If you turn the *master switch* off (⊗) while a formula is running, the immediate result is similar to pressing the *emergency stop* button: the machine stops and the drain opens. Unlike the *emergency stop* button, resumed formulas start at the beginning of the step in which power was lost, but chemicals are not injected in the resumed step.

a été coupée, sans injection de produits chimiques toutefois.

Signal opérateur, bouton d'annulation ( )—annule le *signal opérateur*. Appuyez sur ce bouton pour couper le son de la sonnette et éteindre le témoin lumineux *signal opérateur* (voir infra) ou pour permettre l'injection d'un produit chimique programmé nécessitant un signal avant injection.

Operator signal cancel button ( )—cancels the *operator signal*. Press this button to silence the buzzer and turn off the *operator signal* light (see below), or to allow injection of a chemical programmed to require a signal before injection.

Signal lumineux opérateur—indique que la machine a rencontré une erreur ou que l'opérateur doit effectuer une action, comme par exemple appuyer sur le bouton *démarrage* ou décharger la machine. Le circuit *signal opérateur* comporte une sonnette à l'arrière du panneau de commande, et peut comporter une balise lumineuse en option, distincte du panneau de commande

Operator signal light—indicates that the machine has encountered an error or that the operator must perform some action, such as pressing the *start* button or unloading the machine. The *operator signal* circuit includes a buzzer behind the control panel, and may include an optional beacon light mounted separately from the control panel.

Ecran LCD—affiche des informations et des conseils relatifs à l'utilisation de la machine. Ces informations changent en fonction de l'état de la machine et de la fonction sélectionnée par l'opérateur.

Liquid crystal graphic display—displays information and help about the machine. The information on the display changes according to the status of the machine and the function selected by the operator.

Clavier—permet à l'opérateur de communiquer avec le système de contrôle de la machine. Le clavier comporte trois zones : des touches alphanumériques, des touches générales et des touches spécifiques à une fonction. Chaque touche peut effectuer plus d'une fonction, en fonction de la situation en cours de la machine. Certaines touches sont également utilisées en combinaisons, en vue de fonctions supplémentaires.

Keypad—allows the operator to communicate with the machine control system. The keypad is divided into three areas: alphanumeric buttons, general buttons, and function-specific buttons. Each button may perform more than one function, based on the current machine status. Some buttons are also used in combinations for additional functions.

Bouton de démarrage ( )—lance la formule de lavage sélectionnée. Le bouton *démarrage* alimente le circuit à trois fils permettant à la machine de fonctionner.

Start button ( )—starts the selected wash formula. The *start* button energizes the 3-wire circuit to allow the machine to operate.

Bouton d'arrêt ( )—arrête le fonctionnement de la machine. A l'instar du bouton *arrêt d'urgence*, le bouton *arrêt* désactive le circuit à trois fils. Toutefois, le bouton *arrêt* ne nécessite pas un ré-enclenchement manuel après avoir été utilisé.

Stop button ( )—stops machine operation. Like the *emergency stop* button, the *stop* button disables the 3-wire circuit; however, the *stop* button doesn't require you to manually reset it after use.

Interrupteur à clé Démarrage/Programme (/)—la position *Programme* permet notamment de modifier la configuration de la machine et les formules de lavage. En position normale, *Démarrage*, les formules et les configurations sont protégées, et les

Run/Program keyswitch (/)—in the *Program* position, allows changes to machine configuration and wash formulas, among other actions. In the normal *Run* position, formulas and configuration are protected and formulas

formules peuvent être lancées.

Contrôleur de pression d'air pour le système de basculement—situé derrière le panneau inférieur à l'arrière de la machine ; contrôle la pression de l'air utilisé pour basculer la machine.

can be run.

Air pressure gauge for tilt system—located behind the lower panel on the rear of the machine; monitors the air pressure used to tilt the machine.

1.1.4. Que sont les contrôles de chargement?

Les contrôles de chargement vous permettent d'ouvrir et de fermer la porte, ainsi que pour secouer le tambour; utilisés principalement pour charger et décharger une machine basculante.

Milnor fabrique des machines doteés de deux types de mécanismes d'inclination différents :

- **Modèles à pivot simple**, y compris les gammes de modèles E_N et J_N, s'inclinent de manière hydraulique à partir d'un axe pivotant simple situé près de l'arrière de la machine. Ces modèles s'inclinent pour le déchargement en abaissant l'avant de la machine sous la position de fonctionnement normale. Ils s'inclinent également pour le chargement en levant l'avant de la machine au-dessus de la position de fonctionnement normale.
- **Modèles à double pivot**, y compris les modèles inclinables de la gamme F_W, s'inclinent de manière pneumatique à partir d'axes pivotants situés près de l'avant et de l'arrière de la machine. Ces modèles s'inclinent pour le chargement en gonflant les coussins d'air situés sous l'avant de la machine. Ils s'inclinent également pour le déchargement en gonflant les coussins d'air situés sous l'arrière de la machine.

Les symboles sur le panneau de commande de la machine varient selon le type de modèle (à pivot simple ou à double pivot).

What are the Loading Controls?

Loading controls allow you to open and close the door, as well as tilt and jog the cylinder; used primarily when loading and unloading a tilting machine.

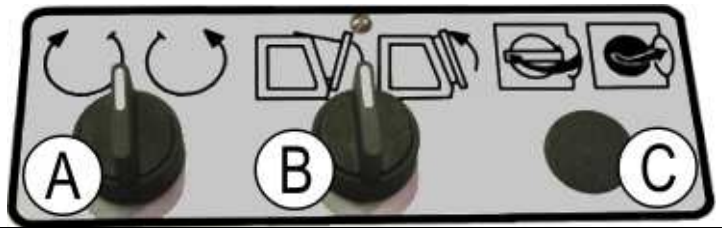
Milnor manufactures machines with two different types of tilting mechanisms:

- **Single-pivot models**, including the E_N and J_N model lines, tilt hydraulically from a single pivot axis near the rear of the machine. These models tilt to unload by lowering the front of the machine below the normal operating position, and tilt to load by raising the front of the machine above the normal operating position.
- **Dual-pivot models**, including tilting models in the F_W line, tilt pneumatically from pivot axes near the front and rear of the machine. These models tilt to load by inflating air bladders below the front of the machine, and tilt to unload by inflating air bladders below the rear of the machine.

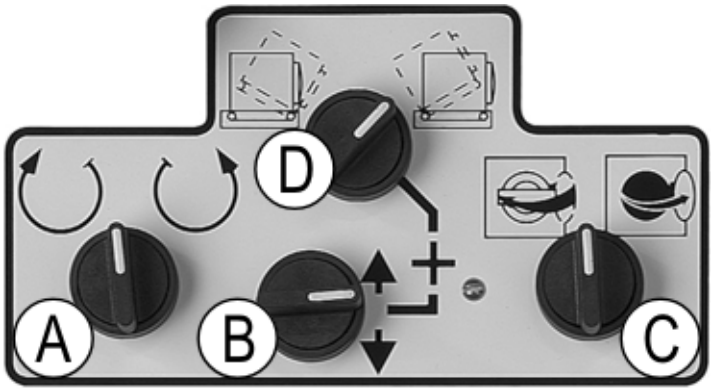
The symbols on the machine control panel vary according to whether the machine is a single- or dual-pivot model.

Illustration [Figure] **5: Panneaux de commande de l'inclinaison type [Typical Tilt Control Panels]**

Modèle à pivot simple [Single-Pivot Model]



Modèle à double pivot [Dual-Pivot Model]



Légende [Legend]

A. Commutateur *Direction de progression par à-coups* [*Jog direction* switch]

B. Commutateur *Direction d'inclinaison* [*Tilt direction* switch]

C. Commutateur *Fermeture/ouverture de la porte* [*Door open/close* switch]

D. Commutateur *Sélecteur de pivot* [*Pivot selector* switch]

Commutateur *Sélecteur de pivot* (/)— détermine si la machine s'incline sur le pivot avant ou sur le pivot arrière. Placez le commutateur en position gauche pour faciliter le déchargement ; utilisez la position droite pour relever l'avant de la machine afin de faciliter le chargement.

Commutateur *Direction d'inclinaison*— actionne les dispositifs nécessaires pour lever ou abaisser l'avant ou l'arrière de la machine. Sur les machines à double pivot, ce commutateur fonctionne avec le commutateur *sélecteur de pivot* pour incliner la machine. En maintenant le bouton *ouverture de la porte* enfoncé, déplacez le commutateur vers le haut pour lever l'extrémité de la machine souhaitée ou vers le bas pour l'abaisser.

***Pivot selector* switch (/)**—determines whether the machine tilts on the forward or rearward pivot. Set this switch to the left position to facilitate unloading; use the right position to tilt the front of the machine up for easier loading.

***Tilt direction* switch**—actuates the necessary devices to raise or lower the selected end of the machine. On dual-pivot machines, this switch works with the *pivot selector* switch to tilt the machine. With the *door open* button pressed, turn the switch up to raise the selected end of the machine, or down to lower it.

Pour incliner une machine à double pivot vers l'arrière afin de faciliter le chargement, déplacez d'abord le sélecteur avant/arrière vers la droite, comme illustré dans Illustration 5. Ainsi, vous ordonnez à la machine de s'incliner sur le point de pivot arrière. Ensuite, maintenez le commutateur de direction d'inclinaison dans la position *vers le haut* et appuyez sur le bouton *ouverture de la porte* (). L'avant de la machine s'élève alors vers l'arrière jusqu'à ce

To tilt a dual-pivot machine backward for easier loading, first set the tilt front/rear selector switch to the right, as shown in Figure 5. This determines that the machine will tilt on the rear pivot point. Next, hold the tilt direction switch in the *up* position and press the *door open* button (). The front of the machine will tilt up and back until the front is fully tilted or you release either of the two controls. Use similar procedures to lower

que l’avant soit complètement incliné ou jusqu’à ce que vous relâchiez une des deux commandes. Procédez de la même manière pour abaisser l’avant de la machine en position normale ou pour lever l’arrière de la machine pour le déchargement.

the front of the machine to the normal position, or to raise the rear of the machine for unloading.

Pour incliner une machine à pivot simple, maintenez le commutateur de direction d’inclinaison dans la position souhaitée et maintenez le bouton *porte ouverte* (☞) enfoncé jusqu’à ce que la machine atteigne l’angle d’inclinaison souhaité.

To tilt a single-pivot machine, hold the tilt direction switch in the desired position and hold the *door open* button (☞) until the machine reaches the desired angle.

Interrupteur d’ouverture/fermeture de la porte (/)—permet de contrôler le système automatique de la porte lorsque la machine est à l'arrêt. Pour ouvrir la porte, tournez l’interrupteur vers la droite () tout en appuyant sur le bouton *ouverture de la porte* (☞). Tournez le bouton vers la gauche () et appuyez sur le bouton *ouverture de la porte* pour fermer la porte. Relâchez les contrôles lorsque la porte est en bonne position. La pompe hydraulique qui fait fonctionner la porte s’éteint automatiquement lorsque la porte est totalement ouverte ou fermée.

***Door open/close* switch (/)**—controls the automatic door system when the machine is idle. To open the door, turn the switch to the right () while pressing the *door open* button (☞). Turn the switch to the left () and press the *door open* button to close the door. Release the controls when the door is in the correct position. The hydraulic pump which powers the door shuts off automatically when the door is fully open or fully closed.

Bouton d’ouverture de la porte (☞)—permet d’autres contrôles de la charge lorsque la machine est à l’arrêt. Le fait d’appuyer sur le bouton *ouverture de la porte* alors que la machine fonctionne coupe l’alimentation du circuit à trois fils, ce qui arrête la machine. Lorsque la machine est à l'arrêt, il faut appuyer sur ce bouton pour effectuer n'importe quelle fonction de chargement ou de déchargement. De ce fait, si le panier devait tourner alors que la porte est ouverte, vos deux mains sont en sécurité sur le panneau de commande de la machine.

Door open button (☞)—enables other loading controls when the machine is idle. Pressing the *door open* button while the machine is operating removes power from the 3-wire circuit, stopping the machine. When the machine is idle, this button must be pressed to perform any other loading or unloading function. This requirement helps ensure that you have both hands safely on the control panel of the machine if the basket might turn under power while the door is open.

AVERTISSEMENT 2: Risques de chute, d' enchevêtrement et de coups—Le contact avec un tambour en rotation peut écraser vos membres. Le tambour repousse tout objet avec lequel on essaie de l'arrêter, et l'objet peut se retourner contre vous et vous blesser. Le tambour en rotation est normalement protégé par le verrouillage de la porte du tambour.

- Ne touchez pas ou ne déconnectez pas un dispositif de sécurité et ne pas faire fonctionner la machine avec un dispositif de sécurité défectueux.

WARNING 2: Fall, Entangle, and Strike Hazards—Contact with the turning cylinder can crush your limbs. The cylinder will repel any object you try to stop it with, possibly causing the object to strike or stab you. The turning cylinder is normally isolated by the locked cylinder door.

- Do not tamper with or disable any safety device or operate the machine with a malfunctioning safety device. Request authorized service.

Interrupteur de sélection du sens d'essorage (↻/↺)—vous permet de faire une rotation lente du tambour dans les deux sens afin de charger ou de décharger plus facilement la machine. Pour faire une rotation du tambour dans le sens des aiguilles d'une montre, maintenez l'interrupteur du sens d'essorage vers la gauche (↺) tout en appuyant sur le bouton d'ouverture de porte.

Contrôle de la pression d'air du circuit hydraulique de la porte—situé sur le panneau arrière de la machine, ce manomètre affiche la pression du circuit hydraulique lorsque la porte s'ouvre et se ferme.
En mode normal, ce contrôle affiche 0, sauf lors de l'ouverture ou de la fermeture de la porte. Lorsque la porte est en mouvement, ce manomètre affiche environ 900 psi (62 bar), pour autant que le système hydraulique soit correctement paramétré.

Jog direction switch (↻/↺)—allows you to jog the cylinder slowly in either direction to help in loading or unloading the machine. To jog the cylinder clockwise, hold the jog direction switch to the left (↺) while pressing the door open button.

Door hydraulic circuit pressure gauge—on the rear panel of the machine, this gauge displays the pressure in the hydraulic circuit when the door is opening and closing. During normal operation, this gauge registers 0 unless the hydraulic door opening or closing. When the door is moving, this gauge indicates about 900 psi (62 bar) when the hydraulic system is properly adjusted.

1.1.5. A quoi sert cet interrupteur ?

D'autres boutons et commutateurs sont utilisés pour contrôler d'autres fonctions standard et optionnelles de la machine. Ces divers contrôles sont présentés et décrits dans cette section.

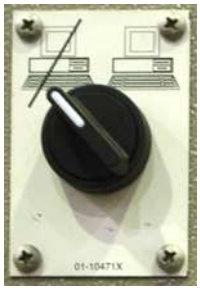
Mildata/interrupteur de sélection local (Illustration 6)—situé sur le microprocesseur de l'armoire de commande (voir Illustration 1), et permet à la machine de communiquer avec un réseau Mildata. Un réseau Mildata relie plusieurs machines entre elles et leur permet de partager des formules de lavage et d'autres données avec l'ordinateur Mildata. Lorsque cet interrupteur est en position Mildata (💻) et que vous introduisez un numéro de formule, la machine demande le contenu de la formule à l'ordinateur Mildata. Lorsque cet interrupteur est sur Local (🖊), seules les formules présentes dans la machine sont disponibles.

What does this Switch do?

Other buttons and switches are used to control additional standard and optional machine functions. These miscellaneous controls are located and described in this section.

Mildata/Local selector switch (Figure 6)—located on the microprocessor control box (see Figure 1), allows the machine to communicate with a Mildata network. A Mildata network connects several machines together and allows them to share wash formulas and other data with the Mildata computer. When this switch is in the *Mildata* position (💻) and you enter a formula number, the machine requests the contents of the formula from the Mildata computer. When set to the *Local* position (🖊), only formulas present **in the machine** are available.

Illustration [Figure] **6: Mildata/interrupteur commutateur local [Mildata/Local Selector switch]**



***Ouverture de porte par à-coups* bouton (Illustration 7)**—Le cas échéant, ce bouton est situé sur le côté du boîtier du panneau de commande, près du bouton *porte ouverte*. Pour réduire le risque de chute de marchandises souillées hors de la machine pendant la descente, maintenez d'une main ce bouton et le bouton *porte ouverte* enfoncés et de l'autre main, maintenez le commutateur *direction de progression par à-coups* dans une direction ou dans l'autre. Le vérin tourne lentement à mesure que la porte se ferme et la machine s'abaisse jusqu'à atteindre la position de fonctionnement normale.

***Door open jog* button (Figure 7)**—This button, if provided, is located on the side of the control panel box near the *door open* button. To reduce the chance of soiled goods falling out of the machine as it descends, hold this button and the *door open* button depressed with one hand, and hold the *jog direction* switch in either direction with the other hand. The cylinder rotates slowly as the door closes and the machine descends to the normal operating position.

Illustration [Figure] **7: Bouton *Ouverture de porte par à-coups* [*Door open jog* button]**

Bouton de rinçage manuel (Illustration 8)—Sur les machines équipées d'un injecteur d'approvisionnement en option, appuyez sur ce bouton pour pulvériser l'eau dans l'injecteur d'approvisionnement pour rincer les résidus chimiques se trouvant encore dans le tambour. Si vous ajoutez manuellement des produits pendant une formule de lavage, appuyez sur ce bouton pour rincer les résidus de produits chimiques non dilués dans le tuyau d'approvisionnement. Si la machine n'est pas équipée d'un injecteur d'approvisionnement en option, appuyez sur ce bouton pour rincer les arrivées de produits chimiques liquides à l'eau claire.

Manual supply flush button (Figure 8)—On machines equipped with an optional flushing supply injector, press this button to spray water into the supply injector to flush any remaining chemicals into the cylinder. If you manually add supplies during a wash formula, press this button to flush any remaining undiluted chemicals out of the supply chute. If the machine is not equipped with the optional supply injector, press this button to flush the liquid chemical inlets with fresh water.

Illustration [Figure] **8: Bouton de rinçage manuel [Manual Supply Flush button]**

— Fin BICWCO02 —

— End of BICWCO02 —

Chapitre 2
Fonctionnement normal de la machine

Chapter 2
Normal Machine Operation

BICWCO03 (Published) Book specs- Dates: 20070924 / 20070924 / 20100917 Lang: FRE01 Applic: 68036F5N

2.1. Instructions pour le personnel de l’usine

2.1. Operating Instructions for Plant Personnel

2.1.1. Commencez ici par sécurité

Ce document a pour but de vous rappeler à vous qui utilisez cet appareil, ce qu'il faut faire pour l'utiliser correctement. N’essayez pas de l’utiliser avant d’avoir lu le document ou avant qu’un opérateur expérimenté et formé ne vous explique tous les détails.

DANGER 3: Risques multiples—Toute opération effectuée par l'opérateur sans précaution peut tuer ou blesser le personnel, endommager ou détruire la machine, endommager l'installation et/ou annuler la garantie.

DANGER 4: Risques d'électrocution et de brûlure électrique—Tout contact avec le courant électrique peut entraîner la mort ou des blessures graves. Du courant électrique est présent à l’intérieur de l’armoire tant que le disjoncteur ou sectionneur principal de l’alimentation de la machine n’est pas desactivé. Ne pas déverrouiller ou ouvrir les portes des boîtiers électriques.

- Ne pas déverrouiller ou ouvrir les portes des boîtiers électriques.
- Vous devez connaître l'emplacement du sectionneur principal et l'utiliser en cas d'urgence pour couper le courant de la machine.

2.1.1. Start Here for Safety

This document is meant to remind you, the person operating this washer extractor, of what is required to operate this machine. Do not attempt to operate this machine before an experienced, trained operator explains the details to you.

DANGER 3: Multiple Hazards—Careless operator actions can kill or injure personnel, damage or destroy the machine, damage property, and/or void the warranty.

DANGER 4: Electrocution and Electrical Burn Hazards—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

- La maintenance doit être exclusivement assurée par des techniciens qualifiés et agréés. Il est impératif de bien connaître les dangers encourus et la manière de les éviter.

clearly understand the hazards and how to avoid them.

ATTENTION 5: Danger de Collision, Ecrasement et Pincement—Le contact avec des composants en mouvement normalement protégés par des protections, des couvercles ou des panneaux, peut entraîner vos membres et les casser. Ces composants se mettent en mouvement automatiquement.

CAUTION 5: Collision, Crushing and Pinch Hazards—Contact with moving components normally isolated by guards, covers, and panels, can entangle and crush your limbs. These components move automatically.

2.1.2. Contrôlez les positions des commutateurs / Check Switch Settings

Affichage ou action [Display or Action]	Explication	Explanation
	Assurez-vous que l'interrupteur à clé *Démarrage / programme* est sur .	Check that the *run/program* keyswitch is at .
	Tous les boutons d'arrêt d'urgence doivent être déverrouillés et être en position *Prêt* pour permettre le fonctionnement de la machine.	All emergency stop buttons must be unlatched and in the *ready* position to allow machine operation.
	Assurez-vous que l'interrupteur principal est sur .	Check that the master switch is at .

2.1.3. Comment charger une machine à renversement ? / How do I Load a Tilting Machine?

2.1.3.1. Chargement automatisé (rail ou navette) / Automated (Rail or Shuttle) Loading

Affichage ou action [Display or Action]	Explication	Explanation
	Ouverture de la porte	Open the door
	Met le *interrupteur de basculement avant/arrière* en position *avant*.	Set the *tilt front/rear selector switch* to the *front* position.
	Bascule l'avant de la machine pour recevoir la charge.	Tilt the front of the machine up to receive the load.
	Sélection de la formule (0.7, par exemple). Consultez les détails de la sélection de la formule sous Section 2.1.4 "Comment sélectionner une formule?".	Select the formula (07, for example). Details about selecting a formula are described in Section 2.1.4 "How do I Select a Formula?".
	Permet une alternance dans la colonne, pour la sélection des formules, si cela est nécessaire.	Toggle column for formula selection if necessary.
	Permet d'aller à la formule suivante ou précédente dans la colonne actuelle.	Move to the next or previous displayed formula in the current column.
	Confirme la formule sélectionnée.	Confirm the selected formula.

Utilise la procédure définie par la gestion pour mettre les articles en machine.

Use the procedure defined by facility management to put the goods in the machine.

	Fermer la porte.	Close the door.
	Bascule l'avant de la machine en position normale.	Tilt the front of the machine down to the normal position.

2.1.3.2. Chargement manuel / Manual Loading

Affichage ou action [Display or Action]	Explication	Explanation
	Ouvre la porte .	Open the door.
	Sélection de la formule (0.7, par exemple). Consultez les détails de la sélection de la formule sous Section 2.1.4 “Comment sélectionner une formule?”.	Select the formula (07, for example). Details about selecting a formula are described in Section 2.1.4 “How do I Select a Formula?”.
	Permet une alternance dans la colonne, pour la sélection des formules, si cela est nécessaire.	Toggle column for formula selection if necessary.
	Permet d’aller à la formule suivante ou précédente dans la colonne actuelle.	Move to the next or previous displayed formula in the current column.
	Confirme la formule sélectionnée.	Confirm the selected formula.

Utilise la procédure définie par la gestion pour mettre les articles en machine.

Use the procedure defined by facility management to put the goods in the machine.

	Fermer la porte.	Close the door.

2.1.4. Comment sélectionner une formule?

Le contrôleur Mark VI peut fonctionner en mode *local* ou en mode *Mildata*. En mode *local*, la machine ne communique pas avec d’autres appareils et utilise les formules enregistrées dans la mémoire du contrôleur local. En mode *Mildata*, la machine télécharge et utilise des formules de l’ordinateur Mildata, et actualise fréquemment l’affichage sur l’ordinateur Mildata.

How do I Select a Formula?

The Mark VI controller can operate in either *local* or *Mildata* mode. In *local* mode, the machine does not communicate with any other devices and runs formulas contained in local controller memory. In *Mildata* mode the machine downloads and runs formulas from the Mildata computer, and frequently updates the display on the Mildata computer.

Illustration [Figure] **9: Sélection d'une formule locale ou distante [Selecting a Local or Remote Formula]**

***Sélectionner le programme* Ecran [*Select Program* Displays]**

Légende [Legend]

A. Local (Mildata absent ou désactivé) [Local (Mildata not present or enabled)]

B. Distant (Mildata activé) [Remote (Mildata enabled)]

2.1.4.1. Sélection d'une formule locale—Si la machine ne fait pas partie d'un réseau Mildata, ou si le réseau Mildata n'est pas disponible, vous pouvez faire votre choix parmi les formules de lavage enregistrées dans la mémoire locale de la machine. Utilisez l'écran *Sélectionner une formule locale* (Illustration 10) pour choisir la bonne formule pour les articles se trouvant dans la machine.

Selecting a Local Formula—If the machine is not part of a Mildata network, or if the Mildata network is not available, you can choose from any of the wash formulas stored in local memory on the machine. Use the *Select Local Formula* screen (Figure 10) to choose the correct formula for the goods in the machine.

Illustration [Figure] **10:** ***Sélectionner une formule locale*** **Ecran [*Select Local Formula* Screen]**

Affichage ou action [Display or Action]	**Explication**	**Explanation**
0 7	Sélectionnez directement la formule que vous souhaitez (07, par exemple). Lorsque vous introduisez un nombre à deux chiffres, la formule sélectionnée passé au sommet de la colonne de gauche dans cet écran.	Directly selects the formula you want to run (07, for example). When you enter a two-digit number, the selected formula moves to the top of the left column on this screen.
SKIP TO	Permet une alternance dans la colonne, pour la sélection des formules, si cela est nécessaire. Si la formule désirée est visible à l'écran, mais se trouve dans la colonne oppose à la fenêtre de sélection, cette touche permet de déplacer la fenêtre de sélection dans l'autre colonne de formules.	Toggles the column for formula selection if necessary. If the desired formula is visible on the screen, but is in the opposite column from the selection box, this keystroke moves the selection box to the other column of formulas.
↓ / ↑	Permet d'aller à la formule suivante ou précédente dans la colonne actuelle. Si la formule désirée est visible à l'écran et dans la même colonne que la fenêtre de sélection, vous pouvez utiliser ces deux touches pour déplacer la fenêtre de sélection vers le haut ou vers le bas, pour sélectionner la formule.	Move to the next or previous displayed formula in the current column. If the desired formula is visible on the screen and in the same column as the selection box, you can use these two keys to move the selection box down or up to select the formula.

Affichage ou action [Display or Action]		Explication	Explanation
	ENTER	Confirme la formule sélectionnée. Mettez la fenêtre de sélection sur la formule que vous souhaitez utiliser, et appuyez ensuite sur ENTER pour continuer normalement.	Confirm the selected formula. Place the selection box on the formula you want to run, then press ENTER to continue with the normal operation procedures.

Supplément 1

Poids de la charge et *Débitmètre*

Débitmètre est disponible sur les laveuses-essoreuses Mark VI équipées de débitmètres optionnels sur les arrivées d'eau. Cela permet au contrôleur Mark VI, après la sélection de la formule, de faire entrer une quantité d'eau proportionnelle au poids des articles introduits. Si vous introduisez un poids de 200 unités lorsque le système vous le demande, la machine utilisera deux fois plus d'eau que si vous aviez introduit un poids de 100 unités. Cette option permet de réaliser une économie d'eau considérable, pour autant que vous introduisiez le poids correct de chaque charge.

Supplement 1

About Load Weight and *Metered Water*

Metered water is available on Mark VI washer-extractors equipped with optional flow meters on the incoming water lines. This feature allows the Mark VI controller to admit a quantity of water proportional to the weight of goods you enter after selecting the formula. If you enter a weight of 200 units when prompted, the machine will use twice as much water as if you entered 100 weight units. This option can save a significant amount of water if you enter accurate weights for each load.

Illustration [Figure] **11: Introduire le poids de la charge pour le débitmètre [Entering Load Weight for Metered Water]**

Affichage ou action [Display or Action]	Explication	Explanation
4 4 9	Introduisez le poids des articles introduits dans la machine. Le contrôleur de la machine utilise le poids pour déterminer la quantité d'eau nécessaire pour laver les articles dans le cadre de la formule de lavage programmée.	Enter the weight of the goods loaded in the machine. The machine controller uses the weight to determine how much water is needed to wash the goods according to the programmed wash formula.
ENTER	Accepter le poids introduit et continuer.	Accept the entered goods weight and continue.

2.1.4.2. Sélection d'une formule Mildata—Si la machine fait partie d'un réseau Mildata et que le réseau est disponible, vous pouvez sélectionner une formule de lavage enregistrée sur l'ordinateur Mildata. Utilisez l'écran *Sélection d'une formule distante* (Illustration 12) pour choisir la formule la plus adaptée aux articles se trouvant dans la machine.

Remarque 1: Vous pouvez enregistrer jusqu'à 1.000 formules de lavage différentes dans l'ordinateur Mildata. Toutes ces formules seront disponibles pour toutes les laveuses-essoreuses faisant partie du réseau Mildata et disposant de matériel compatible.

Selecting a Mildata Formula—If the machine is part of a Mildata network and the network is available, you can choose any wash formula stored on the Mildata computer. Use the *Select Remote Formula* screen (Figure 12) to choose the best formula for the goods in the machine.

Note 1: You can store up to 1000 different wash formulas on the Mildata computer. All of these formulas are available to all washer-extractors that are part of the Mildata network and have compatible hardware.

Illustration [Figure] **12: *Sélection d'une formule distante* Ecran [*Select Remote Formula* Screen]**

Affichage ou action [Display or Action]	**Explication**	**Explanation**
0 9 2 8	Sélectionnez par exemple la formule 928, enregistrée dans l'ordinateur Mildata. Le contrôleur Mark VI demande la formule à l'ordinateur Mildata et affiche le nom de la formule, comme indiqué dans Illustration 12.	Select formula 928 (example) stored on the Mildata computer. The Mark VI controller requests the formula from the Mildata computer and displays the formula name, as shown in Figure 12.
ENTER	Confirme que le nom de formule affiché est bien la formule que vous voulez exécuter. Si la formule affichée n'est pas la bonne pour les articles chargés, appuyez sur CANCEL pour supprimer la formule, et introduisez ensuite un autre numéro de formule.	Confirm that the displayed formula name is the formula you want to run. If the displayed formula isn't the right one for the loaded goods, press CANCEL to clear the formula number, then enter another number.

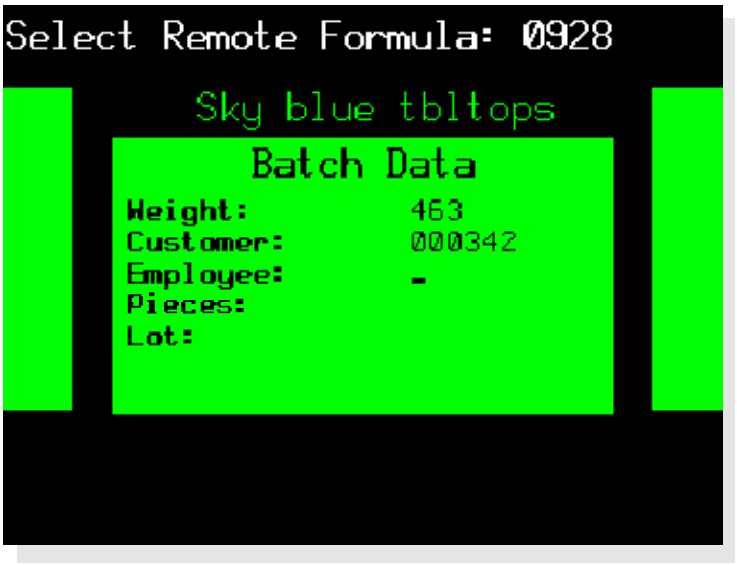
Après avoir récupéré et vérifié la formule, le contrôleur Mark VI vous demande un *Données de la charge de linge* configuré.

After you've retrieved and verified the formula, the Mark VI controller prompts for any configured *batch data*.

2.1.4.3. Introduction *Codes de la charge de linge Mildata*—Le contrôleur Mark VI utilise une fenêtre similaire, Illustration 13, pour vous demander les champs de données de la charge de linge sélectionnés dans la configuration de la machine (voir la section concernée dans le document BICWCC01). Les données que vous introduisez sont envoyées à l'ordinateur Mildata, pour la production d'un rapport et pour la comptabilité.

Entering *Mildata Batch Codes*—The Mark VI controller uses a screen similar Figure 13 to prompt you for the batch data fields selected in machine configuration (see the related section in document BICWCC01). The data you enter is sent to the Mildata computer for accounting and report generation.

Illustration [Figure] **13: Données de la charge de linge pour l'accomplissement de la formule distante [Batch Data for Remote Formula Operation]**



Poids—le poids de la charge de linge dans la machine. Cette information est généralement utilisée avec d'autres données de la charge de linge pour calculer le montant à facturer au client ou la productivité des employés. Dans les machines équipées de débitmètres optionnels et paramétrées pour les débitmètres, le poids est également utilisé pour déterminer la quantité d'eau nécessaire pour traiter la charge de linge. Cette valeur peut comporter jusqu'à trois chiffres.

Weight—the weight of the batch of goods in the machine. This information is usually used along with other batch data to calculate customer charges or employee productivity. In machines equiped with optional flow meters and configured for metered water, the weight value is also used to determine how much water is required to process the batch. The weight value can be up to three digits.

Code client—Code d'identification pour le client. Cette information peut vous aider à déterminer la quantité de travail fournie par chaque client. Ce code peut comporter jusqu'à 10 chiffres.

Customer Code—the identifying code for the customer. This information can help you determine how much work each customer is submitting. Ten digits are available for customer code.

Numéro d'employé—code d'identification pour l'employé responsable de la charge de linge. Le numéro de l'employé peut comporter jusqu'à 5 chiffres.

Employee Number—the identifying code for the employee responsible for this batch. The employee number may be up to five digits long.

Pièces—nombre de pièces dans la machines.

Pieces—the number of pieces in the

Cette valeur remplace parfois le poids, particulièrement lorsque les factures sont établies à la pièce plutôt qu'au poids. Quatre chiffres sont disponibles pour ce nombre.

Numéro de la charge de linge—code d'identification pour plusieurs charges de linge ou clients liés. C'est à vous de choisir : la valeur introduite ici peut représenter un numéro de trajet commun à plusieurs comptes. Un numéro de charge de linge peut compter jusqu'à 10 chiffres.

machine. This value sometimes replaces the weight value, especially when charges are made by the piece rather than by weight. Four digits are available for the number of pieces.

Lot Number—the identifying code for several related batches or customers. At your discretion, the value entered here might represent a particular route number common to several accounts. A lot number can be up to 10 digits long.

2.1.5. Lancer la formule sélectionnée

Soyez sûr d'avoir effectué les étapes suivantes avant d'aller plus avant dans la procédure.

1. Le chargement de la machine est égal à ou proche de sa capacité établie.
2. Vous avez sélectionné une formule appropriée pour les articles se trouvant dans la machine.
3. Vous avez introduit des données de la charge de linge dans le contrôleur de la machine, pour le débitmètre ou le rapport Mildata.
4. Vous avez fermé la porte.
5. Si vous avez incliné la machine pour la charger, vous l'avez remise en position de fonctionnement normale.

Start the Selected Formula

Be sure you've completed these steps before you go any further in the operating procedure.

1. You've loaded the machine at or near its rated weight capacity.
2. You've selected a formula that's appropriate for the goods in the machine.
3. You've entered any batch data the machine controller requires for metered water or Mildata reporting.
4. You've closed the door.
5. If you tilted the machine to load it, you've returned it to the normal operating position.

Affichage ou action [Display or Action]	**Explication**	**Explanation**
①	Lancer la formule sélectionnée	Start the selected formula.

La machine commence la formule de lavage. Le tambour commence à tourner et la valve d'arrivée d'eau s'ouvre. Lorsque le bon niveau d'eau est atteint, la valve de vapeur peut s'ouvrir pour chauffer le bain. La suite des opérations, à partir de ce point et jusqu'au terme de la formule, est totalement automatique, sauf si un signal a été programmé pour une injection chimique (voir Supplément 2).

The machine begins the wash formula. The basket begins turning and water valves open. When a safe level is achieved, the steam valve may open to begin heating the bath. Operation from this point to the end of the formula is completely automatic unless a signal is programmed with a chemical injection (see Supplement 2).

Supplément 2

Injections chimiques avec signal opérateur

Si vous devez ajuster la quantité d'une injection chimique d'une charge à l'autre, en fonction de facteurs très variables, il est possible de programmer la formule pour arrêter la minuterie et vous signaler la nécessité d'un produit chimique. Ajoutez le produit chimique, puis appuyez sur pour reprendre la formule là où elle s'était arrêtée.

Supplement 2

Chemical Injections with the Operator Signal

If you need to adjust the amount of a chemical injection from load to load depending on highly variable factors, the formula can be programmed to stop the timer and signal you when a chemical is required. Add the chemical, then press to resume the formula.

2.1.6. Quelle est la signification de l'affichage de l'écran *Démarrage* ?

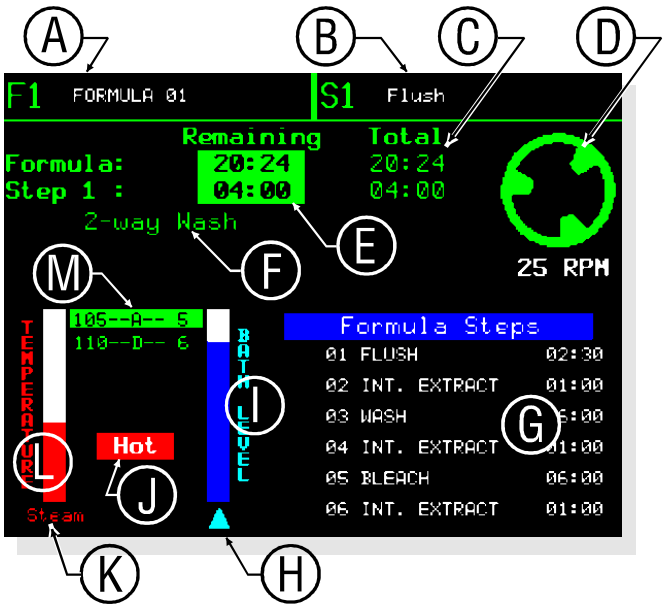
Lorsque la formule sélectionnée est en cours, l'affichage de l'écran est similaire à celui présenté sous Illustration 14. Les informations présentées dans cet affichage sont explicitées ci-dessous.

What Does the *Run* Display Tell Me?

While the machine is running the formula you selected, the display appears similar to the one shown in Figure 14. The information shown here is explained below.

Illustration [Figure] **14: Comment lire l'écran *Démarrage* ? [How to Read the *Run* Display]**

Ecran classique [Typical Display]



Légende [Legend]

- **A.** Nom et numéro de la formule [Formula number and name]
- **B.** Nom et numéro de l'étape [Step number and name]
- **C.** Durée totale de la formule et étape en cours [Total time for formula and current step]
- **D.** Graphique de rotation du tambour et de vitesse [Basket rotation graphic and speed]
- **E.** Durée résiduelle de la formule et de l'étape en cours [Remaining time for entire formula and current step]
- **F.** Message relatif à l'état de la machine [Machine status message]
- **G.** Etapes de la formule : numéro, nom et durée [Formula steps: number, name, and duration]
- **H.** Indicateur de remplissage ou de vidange [Indicator for filling or draining]
- **I.** Indicateur graphique du niveau du bain [Graphic bath level indicator]
- **J.** Indicateurs des valves d'eau [Water valves indicators]
- **K.** Indicateur pour la vapeur optionnelle et les valves de refroidissement [Indicator for optional steam and cooldown valves]
- **L.** Indicateur graphique de la température du bain [Graphic bath temperature indicator]
- **M.** Température du bain et données du niveau [Bath temperature and level data]

2.1.6.1. Informations relatives à la formule et à l'étape—La ligne supérieure de l'écran affiche toujours le numéro et le nom de la formule et de l'étape en cours. *numéro de la formule* apparaît dans le coin supérieur gauche de l'écran, suivi de la lettre "F.". *nom de la formule* suit le nombre.

numéro et nom de l'étape en cours sont affichés à droite des informations relatives à la formule. Le contrôleur Mark VI actualise le numéro et le nom de la formule lorsqu'une formule commence, et au début de chaque étape.

Sous les noms de la formule et des étapes, vous verrez *informations relatives à la durée*. Les nombres (verts) dans la colonne "Total" présentent le temps total requis pour arriver au terme de la formule et des étapes, et ne comprennent pas les facteurs décrits sous Remarque 2. Le contrôleur calcule la valeur "Formule" lorsque la formule commence, et cette valeur ne change pas tant que la formule est en cours. Le contrôleur calcule et affiche la valeur "Etape x" au début de chaque étape.

Les nombres dans la colonne "Durée résiduelle" de l'indication de la durée (chiffres noirs sur fond vert) indiquent le *durée résiduelle* pour la formule et l'étape en cours. Ces nombres indiquent la durée résiduelle **minimum** (voir Remarque 2).

Remarque 2: La durée de certaines étapes de formule de lavage ne peut être estimée, c'est pourquoi le contrôleur arrête la minuterie jusqu'à obtention du résultat exigé. Par exemple, le temps nécessaire à la machine pour se remplir jusqu'au niveau désiré dépend de la pression de l'eau, de la taille de la tuyauterie allant jusqu'à la machine et du nombre de machines qui se remplissent en même temps. En plus du temps nécessaire au remplissage, le temps nécessaire à l'obtention de la température ou le temps nécessaire à un opérateur pour vérifier l'injection chimique est variable. Des messages d'erreur peuvent également arrêter la minuterie.

Le contrôleur affiche le *état de la machine* en cours en dessous du numéro d'étape et de la durée résiduelle. Certains des états possibles de la machine figurent dans Tableau 1. Le cas échéant, les messages d'erreur apparaissent immédiatement sous le message d'état de la machine.

Formula and Step Information—The top line of the display always shows the number and name of the current formula and step. The *formula number* appears in the upper left corner of the display, following the letter "F."The *formula name* follows the number.

The *step number and name of the current step* are displayed to the right of the formula information. The Mark VI controller updates the formula number and name when a formula starts and at the beginning of each subsequent step.

Below the formula and step names is *time information*. The numbers in the "Total" column (green numbers) show the total time required for the formula and step to run to completion, not including the factors described in Note 2. The controller calculates the "Formula" value when the formula begins, and this value doesn't change while the formula is running. The controller calculates and displays the "Step x" value at the start of each step.

The numbers in the "Remaining" column of the time area (black numbers on a green background) indicate the *time remaining* in the formula and in the current step. These numbers indicate the **minimum** amount of time remaining (see Note 2).

Note 2: The duration of some wash formula events can't be estimated, so the controller stops the timer until a requirement is met. For example, the time required for the machine to fill to the desired level depends on the water pressure to the plant, the size of the piping to the machine, and how many other machines are filling at the same time. In addition to the time required to fill, the time required to achieve temperature or for an operator to verify a chemical injection are variable. Error conditions can also stop the timer.

The controller displays the current *machine status* below the step number and remaining time. Some of the possible machine states are listed in Table 1. Error messages appear immediately below the machine status message when required.

Tableau 1: Messages relatifs à l'état de la machine
[English table follows]

Machine en attente	Temps de pause
Lavage unidirectionnel	Déchargement en attente
Lavage bidirectionnel	Chargement en attente
Trempage	Délai avant mise sous tension
Pré-essorage et essorage final	Vidange aux égouts
Essorage intermédiaire	Vidange de réutilisation
Essorage final	Minuterie arrêtée
Essorage double	Veuillez attendre xx secondes

Table 1: Machine Status Messages

Idle	Coasting
1-way Wash	Waiting to Discharge
2-way Wash	Waiting for Load
Soak	Power-up Delay
Pre+Final Extract	Draining to Sewer
Intermediate Extract	Draining to Reuse
Final Extract	Timer Stopped
Double Extract	Please Wait xx Seconds

2.1.6.2. Rotation du tambour—Le *Graphique de la rotation du tambour* proche du coin supérieur droit de l'écran représente les vitesses relatives du tambour lors du lavage, de la vidange et de l'essorage. Juste sous le graphique de rotation du tambour, le contrôleur affiche la vitesse désirée du tambour en tours par minute (TPM) ou en unités gravitationnelles (G).

Basket Rotation—The *basket rotation graphic* near the upper right corner of the display represents the relative basket speeds in wash, drain, and extract speeds. Immediately below the basket rotation graphic, the controller displays the desired basket speed in either revolutions per minute (RPMs) or in gravitational units (G's).

2.1.6.3. Température et niveau du bain—*Indicateurs des valves d'eau* s'affiche lorsque la valve d'eau correspondante est ouverte.

Le graphique *Indicateur de la température du bain* indique la température approximative dans la machine. La barre verticale d'indication est d'un rouge uni lorsque la température dans la machine atteint le maximum autorisé (205 degrés Fahrenheit-95° Celsius).

L'indicateur de vapeur ou de refroidissement s'affiche sous le graphique de l'indicateur de la température lorsque l'une de ces fonctions optionnelles est activée. "Vapeur" s'affiche lorsque la valve de vapeur est ouverte, et "Refroidissement" s'affiche lorsque la sortie de vapeur est activée.

Le graphique *Indicateur du niveau du bain* indique le pourcentage du niveau désiré qui est atteint. La barre verticale d'indication est bleu

Bath Temperature and Level—*Water valve indicators* appear when the corresponding water valve is open.

The graphic *bath temperature indicator* shows the approximate temperature in the machine. The vertical indicator bar is solid red when the temperature in the machine is at the maximum allowable value of 205 degrees Fahrenheit (95 degrees Celsius).

The steam or cooldown indicator appears below the graphic temperature indicator when either of these optional features is enabled. "Steam" appears when the steam valve is open, and "Cooldown" appears when the cooldown output is enabled.

The graphic *bath level indicator* shows the percentage of the desired level that's achieved. The vertical indicator bar is solid

uni lorsque le niveau programmé est atteint, et blanc uni lorsqu'il n'y a pas d'eau dans la machine.

Le *Flèche d'indication de la direction du niveau* monte lorsque le niveau réel du bain dans la machine augmente (lorsque la machine se remplit), et baisse lorsque le tuyau de vidange s'ouvre. La flèche n'est pas visible lorsque le niveau est atteint, ni pendant les étapes d'essorage.

Le contrôleur affiche *température du bain et données du niveau* entre les indicateurs de température et de graphique de niveau. La ligne supérieure affiche la température et le niveau effectivement atteints dans la machine, et la ligne inférieure affiche les valeurs désirées.

blue when the programmed level is achieved, and solid white when there is no water in the machine.

The *level direction indicator arrow* points upward when the actual bath level in the machine is increasing (when the machine is filling), and points downward when the drain opens. The arrow is not visible when level is achieved, or during extract steps.

The controller displays *bath temperature and level data* between the temperature and level graphic indicators. The top line displays the temperature and level that are currently achieved in the machine, and the bottom line displays the desired values.

2.1.6.4. Etapes de la formule et injection chimique

—Lorsqu'une formule commence, le contrôleur affiche les six premières étapes dans la zone inférieure gauche *Liste des étapes de la formule* de l'écran. Si le programme comporte davantage d'étapes que ce qui peut être affiché en une fois, la liste est déroulante, afin d'afficher les étapes suivantes, une fois que les premières étapes sont terminées. L'étape en cours est en surbrillance.

La liste de *injections chimiques* programmées remplace les étapes de formule pendant chaque injection, avec une surbrillance sur le produit chimique en cours d'injection.

Formula Steps and Chemical Injection

—When a formula begins, the controller displays the first six steps in the *formula steps list* in the lower left area of the screen. If the program contains more steps than can be displayed at one time, the list scrolls to display more steps as the earlier ones end. The current step is highlighted.

The list of programmed *chemical injections* replaces the formula steps list during each injection, with a highlight box on the chemical that's currently injecting.

2.1.7. Décharger la machine

A la fin de la formule, le signal opérateur retentit, et la machine affiche un message précisant le déchargement en attente (voir Illustration 15). Procédez comme indiqué ci-dessous pour décharger les articles.

Unload the Machine

When the formula ends, the operator signal sounds and the machine displays a message that it is waiting to discharge (see Figure 15). Use a procedure similar to the one outlined below to unload the goods.

Illustration [Figure] **15: Message typique affiché à la fin de la formule [Typical Message when Formula Ends]**

2.1.7.1. Pour chaque *Code de fin*—Le contrôleur Mark VI vous permet de programmer une des quatre actions possibles pour la fin de la formule : *arrêt*, *inversion à vitesse de lavage*, *rotation à vitesse de vidange*, ou *séchage*. La procédure de déchargement est la même pour toutes les formules ayant les trois mêmes premières actions. Pour la quatrième action, vous pouvez appliquer la procédure décrite sous Section 2.1.7.2.

For any *End Code*—The Mark VI controller allows you to program one of four possible actions for the end of the formula: *stopped*, *reversing at wash speed*, *turning at drain speed*, or *tumbling*. You use the same unloading procedure for formulas using the first three actions. For the fourth action, you also have the option of using the procedure described in Section 2.1.7.2.

Affichage ou action [Display or Action]	**Explication**	**Explanation**
	Coupez l’alimentation du circuit à trois fils, coupez le signal opérateur et arrêtez le mouvement du tambour. Ce bouton déverrouille également la porte, de sorte que vous puissiez l’ouvrir.	Remove power from the 3-wire circuit, silence the operator signal, and stop any basket motion in progress. This button also unlocks the door so you can open it.
	Vous pouvez également couper l'alimentation du circuit à trois fils, couper le signal opérateur et arrêter le mouvement du tambour en cours avec l'un de ces boutons. Toutefois, si vous utilisez l'un de ces boutons, vous devrez toujours déverrouiller la porte avec avant de pouvoir l’ouvrir. Si vous utilisez l’un de ces boutons pour arrêter une formule avec *fin du code 3* (voir Section 2.1.7.2), la formule est clôturée et ne peut reprendre.	You can also remove power from the 3-wire circuit, silence the operator signal, and stop any basket motion that was in progress with any of these buttons. However, if you use any of these buttons, you'll still need to unlock the door with before you can open it. If you use any of these buttons to stop a formula with *end code 3* (see Section 2.1.7.2), the formula is terminated and cannot be resumed.
	Ouvre la porte pour le déchargement.	Open the door for unloading.

2.1.7.2. Pour terminer le code 3 (*Séchage*)—

La fin du code 3 (*Séchage*) vous permet d'ouvrir la porte et de sortir certains articles, pour ensuite refermer la porte et relancer le séchage pour donner plus d'espace aux autres articles dans le tambour.

For End Code 3 (*Tumbling*)—

End code 3 (*Tumbling*) allows you to open the door and remove some of the goods, then close the door and resume tumbling to loosen more goods from the basket.

Affichage ou action [Display or Action]	**Explication**	**Explanation**
	Coupez l'alimentation du circuit à trois fils, coupez le signal opérateur et arrêtez le mouvement du tambour. Ce bouton déverrouille également la porte, de sorte que vous puissiez l'ouvrir.	Remove power from the 3-wire circuit, silence the operator signal, and stop any basket motion in progress. This button also unlocks the door so you can open it.

Lorsque le tambour arrête de tourner, ouvrez la porte enlevez tout ou partie des articles.

When the basket stops turning, open the door and remove some or all of the goods from the machine.

	Ouvre la porte pour le déchargement.	Open the door for unloading.

Retirez la portion souhaitée de la charge.

Remove any desired portion of the load.

	Fermer la porte.	Close the door.
①	Reprend le séchage sans signal opérateur. Le séchage continue pendant deux minutes, ou jusqu'à ce que vous appuyiez sur  .	Resumes the tumbling action without the operator signal. Tumbling continues for another two minutes, or until you press  .

— Fin BICWCO03 —

— End of BICWCO03 —

Chapitre 3
Signaux et erreurs

Chapter 3
Signals and Errors

BICWCT04 (Published) Book specs- Dates: 20070924 / 20070924 / 20100917 Lang: FRE01 Applic: 68036F5N

3.1. Intervention de l’opérateur

Lorsqu’une formule démarre, la machine fonctionne généralement de façon automatique. La machine enclenchera le signal si un opérateur doit prendre une décision ou effectuer une opération manuelle. Les raisons d’intervention les plus fréquentes sont une erreur ou l'injection manuelle de produits chimiques.

Operator Intervention

Once a formula starts, the machine usually runs automatically. The machine will sound the signal if an operator needs to make a decision or do something manually. The most common reasons you'll need to attend to the machine are errors, and to manually add chemicals in some cases.

3.1.1. Erreur avec signal opérateur

Le signal opérateur s’enclenchera et le signal lumineux clignotera si une erreur a entraîné l’arrêt de la machine. Deux erreurs coupent la plupart du temps l’alimentation du circuit à trois fils, à savoir l'enclenchement du capteur de vibrations et la panne du variateur de vitesse. Illustration 16 indique comment une panne du sélecteur de vibration est affichée à l'écran.

Error with Operator Signal

The operator signal will sound and the beacon will flash if an error causes the machine to stop. These errors usually disable the three-wire circuit, and include a tripped vibration switch or a malfunction of the inverter that controls the motor. Figure 16 shows how a vibration switch error appears on the display.

Illustration [Figure] **16: Erreur typique avec signal opérateur [Typical Error with Operator Signal]**

Pour reprendre la formule, coupez le signal et remédiez à la cause de l'erreur. Relancez ensuite la formule.

To resume the formula, silence the signal and correct the cause of the error. Then, restart the formula.

Affichage ou action [Display or Action]	**Explication**	**Explanation**
	La touche ‘Cancel’ du clavier arrête la machine, coupe le signal opérateur et coupe le témoin lumineux. Vous devrez relancer la formule à son début.	The Cancel key on the keypad stops the machine, silences the operator signal buzzer, and turns off the signal light. You'll have to restart the formula from the beginning.

Remédiez à la cause de l’erreur. Si vous ne savez pas comment remédier au problème, demandez à quelqu’un de contrôler le manuel de référence de la machine.

Correct the cause of the error. If you don't know how to fix the problem, have someone check the reference manual for the machine.

①	Si vous avez remédié à l’erreur, le bouton 'Start' permet de reprendre la formule là où elle s'était arrêtée. Lorsque le sélecteur de vibration est à l'origine de l'erreur, la machine effectue une séquence de distribution afin d'étendre les articles dans le tambour, puis reprend ensuite l'étape d’essorage interrompue.	If you've corrected the error, the Start button resumes the formula where it stopped. If the vibration switch caused the error, the machine goes through a distribution sequence to spread the goods around the basket, then resumes the interrupted extract step.

3.1.2. Signal opérateur pour un produit chimique

Cette machine peut contrôler un système de pompe à produits chimiques automatique, ou vous signaler d’ajouter les produits chimiques

Operator Signal for a Chemical

This machine can control an automatic chemical pump system, or it can signal you to add chemicals manually. The display

manuellement. L’affichage (Illustration 17) est le même dans les deux cas, mais le signal opérateur ne retentit que s'il a été programmé.

Si la formule a été programmée pour contrôler un système de pompe à produits chimiques, l'écran affiche le numéro de valve programmé pour le produit chimique, le nom du produit chimique et le moment d'injection. Le moment d’injection, affiché du côté droit de l'écran dédié aux produits chimiques, implique un décompte lorsque l'injection commence.

Si la formule a été programmée pour vous signaler d'ajouter manuellement les produits chimiques, la machine fonctionnera automatiquement jusqu’à ce qu’elle ait besoin d’un produit chimique, auquel cas elle s'arrêtera et attendra que vous ajoutiez le produit chimique nécessaire, pour ensuite reprendre son cycle. L’affichage change pour vous indiquer quel produit chimique ajouter, mais la minuterie d'injection ne s'enclenche qu'après avoir désactivé le signal opérateur.

(Figure 17) appears the same in either case, but the operator signal sounds only if the signal is programmed.

If the formula is programmed to control a chemical pump system, the display shows the programmed chemical valve number, chemical name, and injection time. The injection time, shown at the right end of the chemical display, begins counting down immediately when the chemical injection begins.

If the formula is programmed to signal you to manually add chemicals, the machine will operate automatically until it needs a chemical, then the machine stops and waits for you to add the chemical and resume operation. The display changes to show you which chemical to add, but the injection time counter runs only after you cancel the operator signal.

Illustration [Figure] **17: Injection des produits chimiques : Ecran de visualisation du déroulement du programme [Chemical Injection View on Run Display]**

Affichage ou action [Display or Action]	Explication	Explanation
Après avoir ajouté le produit chimique,		After you've added the chemical,
	annulez le signal opérateur et lancez la minuterie d'injection.	cancels the operator signal and starts the injection time counter.

— Fin BICWCT04 —

— End of BICWCT04 —

Polski 6

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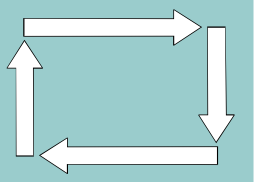
Instrukcja Użytkownika [Operator Guide]—

Pralka-wirówka z opcją przechylania ze sterownikiem Mark VI [Tilting Washer-extractor with Mark VI Controller]



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Read the **separate safety manual** before installing, operating, or servicing

Zapoznaj się z Instrukcją Bezpieczeństwa

PELLERIN MILNOR CORPORATION POST OFFICE BOX 400, KENNER, LOUISIANA 70063 - 0400, U.S.A.

Stosowane Milnor® produkty wg modelu: [Applicable Milnor® products by model number:]

48040H7N 64040E6N 64050E5N 68036F5N 68036F5P 68036H5N

Spis Treści [English table of contents follows]

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Rozdział 1
Elementy sterowania

Chapter 1
Controls

BICWCO02 (Published) Book specs- Dates: 20070924 / 20070924 / 20081017 Lang: POL01 Applic: 68036F5N

1.1. Elementy sterowania pralek-wirówek Mark VI z opcją przechylania wyposażonych w drzwi z układem hydraulicznym

Informacje dotyczące lokalizacji i podstawowych funkcji każdego elementu sterowania umieszczone zostały w kolejnych częściach niniejszego dokumentu (Rozdział 1.1.2 do Rozdział 1.1.5). Nie należy traktować tego dokumentu jak instrukcji obsługi urządzenia.

Controls on Mark VI Tilting Washer-extractors with Hydraulic Door

Refer to other parts of this document (Section 1.1.2 through Section 1.1.5) for the location and basic function of individual controls. Don't use this document as instructions for operating the machine.

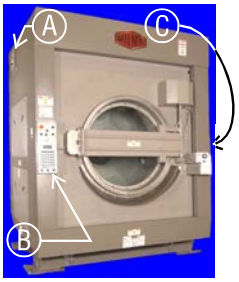
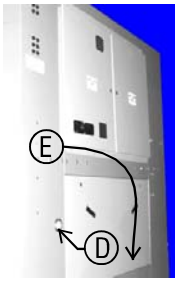
1.1.1. Lokalizacja elementów sterowania

Podstawowe elementy sterowania do standardowej obsługi urządzenia znajdują się na przednim panelu sterowania (Rysunek 1). Dodatkowe elementy sterowania i złącza umieszczone są w innym miejscu zgodnie z poniższym opisem.

Where are the Controls?

The essential controls for normal operation are located on the front control panel (Figure 1). Additional controls and connections are located elsewhere on the machine, as described here.

Rysunek [Figure] **1: Lokalizacja elementów sterowania [Locations of Controls]**

Widok z przodu; strona lewa [Front Left View]	Widok z tyłu [Rear View]	Legenda [Legend]
		**A.** Jednostka sterująca mikroprocesora (na rys. 68036F_B) [Microprocessor control box (68036F_B shown)] **B.** Panel sterowania [Control panel] **C.** Przycisk ręcznego płukania [Manual supply flush button] **D.** Wskaźnik ciśnienia hydraulicznego drzwi ładunkowych [Hydraulic pressure gauge for loading door] **E.** Wskaźnik ciśnienia powietrza układu przechylania (za tylnym dolnym panelem) [Air pressure gauge for tilt system (behind lower rear panel)]

1.1.2. Miejsce podłączenia urządzenia do przechowywania danych

Jednostka mikroprocesora w tylnym górnym rogu bocznego lewego panelu urządzenia (patrz Rysunek 1) jest wyposażona w złącze typu DIN do połączeń szeregowych. Należy użyć tego złącza (Rysunek 2)z urządzeniem do szeregowej transmisji danych, aby zapisać lub przywrócić program urządzenia i pamięć konfiguracyjną.

Where do I Connect the Data Storage Device?

The microprocessor box in the upper rear corner of the machine left side panel (see Figure 1) contains a DIN-type connection for serial communications. Use this connection, labelled as shown in Figure 2, with a serial data transfer device to save or restore machine programming and configuration memory.

Rysunek [Figure] **2: Złącze szeregowe do transmisji danych [Serial Connection for Data Transfer]**

1.1.3. Funkcje elementów sterowania

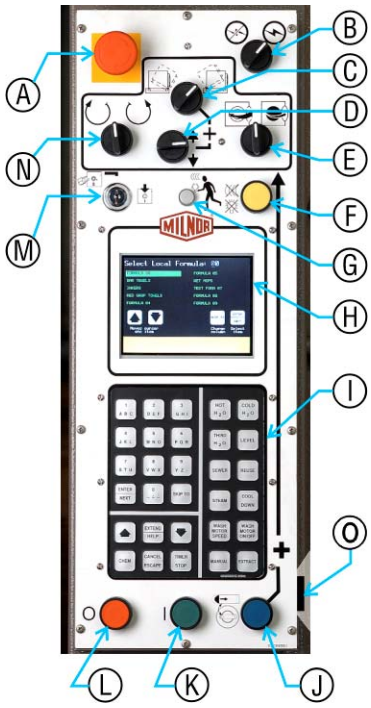
Podstawowe elementy sterowania służą do włączania i wyłączania urządzenia, wyboru formuł prania i monitorowania działania urządzenia.

What are the Operating Controls?

The primary operating controls are required to start and stop the machine, select wash formulas, and monitor machine operation.

Rysunek [Figure] **3: Panel sterowania urządzenia Mark VI [Mark VI Control Panel]**

Panel i elementy sterowania [Panel and Controls]



Legenda [Legend]

A. Przycisk *zatrzymania awaryjnego* [*Emergency stop* button]
B. *Wyłącznik główny* zasilania [*Master switch* for power]
C. Przełącznik *wyboru przechylania do przodu/do tyłu* (tylko modele z opcją przechylania) [*Tilt front/rear selector* switch (tilting models only)]
D. Przełącznik *wyboru przechylania w górę/w dół* (tylko modele z opcją przechylania) [*Tilt up/down selector* switch (tilting models only)]
E. Przełącznik *otwarcia/zamknięcia drzwi* [*Door open/close* switch]
F. Przycisk *anulowania sygnału dla operatora* [*Operator signal cancel* button]
G. Lampka *sygnału dla operatora* [*Operator signal* light]
H. Wyświetlacz ciekłokrystaliczny elementów graficznych [Liquid crystal graphic display]
I. Blok klawiszy [Keypad]
J. Przycisk *otwarcia drzwi* [*Door open* button]
K. Przycisk *uruchamiania* [*Start* button]
L. Przycisk *zatrzymywania* [*Stop* button]
M. *Przełącznik pracy/programowania* [*Run/Program keyswitch*]
N. Przełącznik *kierunku przesuwania skokowego* [*Jog direction* switch]
O. Przycisk *otwierania skokowego drzwi* (tylko modele z opcją przechylania) [*Door open jog* button (tilting models only)]

Rysunek [Figure] **4: Blok klawiszy [Keypad]**

Przycisk zatrzymania awaryjnego—wyłącza obwód 3-żyłowy. Przycisk zostaje zablokowany po naciśnięciu. Aby go zwolnić i umożliwić uruchomienie urządzenia, należy obrócić przycisk o ¼ obrotu w celu ustawienia go w standardowej pozycji.

Uwaga 1: W sytuacji awaryjnej należy natychmiast nacisnąć przycisk *zatrzymania awaryjnego*. Zostanie odłączony obwód 3-żyłowy, co powoduje zatrzymanie wszystkich funkcji urządzenia i otwarcie odpływu.

- Po zresetowaniu tego przycisku można anulować lub wznowić przerwaną formułę. Formuła zostanie wznowiona od miejsca jej przerwania lub od początku poprzedniego kroku prania, w zależności od etapu procesu w chwili naciśnięcia przycisku *zatrzymania awaryjnego*.

Wyłącznik główny (⊗ / ⊖)—odłącza zasilanie układu sterowania. Jeśli *wyłącznik główny* zostanie wyłączony (⊗) w trakcie wykonywania formuły, uzyskany zostanie natychmiastowy efekt jak w przypadku naciśnięcia przycisku *zatrzymania awaryjnego*: urządzenie jest zatrzymywane i otwierany jest odpływ. W przeciwieństwie do przycisku *zatrzymania awaryjnego*, wznowione formuły zostają rozpoczęte od

Emergency stop button—disables the 3-wire circuit. This switch locks in when pressed, so you must turn it a quarter turn to allow it to return to the normal position to allow the machine to run.

Notice 1: Press the *emergency stop* button immediately in any emergency situation. This disables the 3-wire circuit, which stops all machine operation and causes the drain to open.

- When you reset this button, you have the option of cancelling or resuming the interrupted formula. The formula resumes where it was interrupted or at the beginning of the previous bath step, depending on the operation in progress when the *emergency stop* button was pressed.

Master power switch (⊗ / ⊖)—removes power from the control system. If you turn the *master switch* off (⊗) while a formula is running, the immediate result is similar to pressing the *emergency stop* button: the machine stops and the drain opens. Unlike the *emergency stop* button, resumed formulas start at the beginning of the step in which power was lost, but chemicals are not injected in the resumed

początku kroku, w którym nastąpiła utrata zasilania. We wznowionym kroku zadane środki chemiczne nie zostaną ponownie wstrzyknięte.

Przycisk anulowania sygnału dla operatora ( )—anuluje działanie przycisku *sygnału dla operatora*. Należy nacisnąć ten przycisk, aby wyciszyć brzęczyk i wyłączyć lampkę *sygnału dla operatora* (patrz poniżej) lub w celu zaprogramowania generowania sygnału dźwiękowego przed wstrzyknięciem środka chemicznego.

Lampka sygnału dla operatora—oznacza, że wystąpił błąd lub wymagane jest podjęcie czynności przez operatora np. naciśnięcie przycisku *uruchamiania* lub rozładowanie urządzenia. Elementem układu *sygnału dla operatora* jest brzęczyk za panelem sterowania oraz opcjonalnie lampka ostrzegawcza montowana poza obszarem panelu sterowania.

Wyświetlacz ciekłokrystaliczny elementów graficznych—wyświetla informacje oraz pomoc dotyczącą urządzenia. Informacje na wyświetlaczu zmieniają się zgodnie ze stanem urządzenia i wybraną przez operatora funkcją.

Blok klawiszy—umożliwia operatorowi komunikację z układem sterowania. Blok klawiszy składa się z trzech obszarów: przyciski alfanumeryczne, przycisk ogólne i przyciski funkcji specjalnych. Każdy przycisk może mieć zaprogramowanych kilka funkcji w zależności od aktualnego stanu urządzenia. Niektóre przyciski są także używane w kombinacjach, dzięki czemu zyskiwane są dodatkowe funkcje.

Przycisk uruchamiania ( )—uruchamia wybraną formułę prania. Przycisk *uruchamiania* zasila obwód 3-żyłowy, który umożliwia działanie urządzenia.

Przycisk zatrzymywania ( )—zatrzymuje działanie urządzenia. Podobnie jak przycisk *zatrzymania awaryjnego*, przycisk *zatrzymywania* wyłącza obwód 3-żyłowy. Jednak przycisk *zatrzymywania* po naciśnięciu nie wymaga ręcznego resetowania.

Przełącznik pracy/programowania (/)—w położeniu *programowania* umożliwia

step.

Operator signal cancel button ( )—cancels the *operator signal*. Press this button to silence the buzzer and turn off the *operator signal* light (see below), or to allow injection of a chemical programmed to require a signal before injection.

Operator signal light—indicates that the machine has encountered an error or that the operator must perform some action, such as pressing the *start* button or unloading the machine. The *operator signal* circuit includes a buzzer behind the control panel, and may include an optional beacon light mounted separately from the control panel.

Liquid crystal graphic display—displays information and help about the machine. The information on the display changes according to the status of the machine and the function selected by the operator.

Keypad—allows the operator to communicate with the machine control system. The keypad is divided into three areas: alphanumeric buttons, general buttons, and function-specific buttons. Each button may perform more than one function, based on the current machine status. Some buttons are also used in combinations for additional functions.

Start button ( )—starts the selected wash formula. The *start* button energizes the 3-wire circuit to allow the machine to operate.

Stop button ( )—stops machine operation. Like the *emergency stop* button, the *stop* button disables the 3-wire circuit; however, the *stop* button doesn't require you to manually reset it after use.

Run/Program keyswitch (/)—in the *Program* position, allows changes to

m.in. zmianę konfiguracji urządzenia i formuł prania. W standardowym położeniu *pracy* formuły i konfiguracja są chronione i możliwe jest uruchomienie formuły.

machine configuration and wash formulas, among other actions. In the normal *Run* position, formulas and configuration are protected and formulas can be run.

Wskaźnik ciśnienia powietrza układu przechylania—umieszczony za dolnym panelem z tyłu urządzenia; monitoruje ciśnienie powietrza wykorzystywane do przechylania urządzenia.

Air pressure gauge for tilt system—located behind the lower panel on the rear of the machine; monitors the air pressure used to tilt the machine.

1.1.4. Funkcje elementów sterowania ładowaniem

Elementy sterowania ładowaniem umożliwiają otwarcie i zamknięcie drzwioraz przechylanie i przesunięcie skokowe siłownika; funkcja jest stosowana głównie podczas ładowania i rozładunku urządzenia z opcją przechylania.

Firma Milnor wytwarza urządzenia z dwoma typami mechanizmów przechylania:

- **Modele z pojedynczą osią obrotową**, w tym linie modeli E_N i J_N, przechylenie hydrauliczne od pojedynczej osi obrotowej w pobliżu tyłu urządzenia. W tych modelach urządzenie zostaje przechylone w celu rozładowania przez obniżenie przedniej części urządzenia poniżej normalnego położenia w trakcie działania oraz przechylone w celu załadowania przez uniesienie przedniej części powyżej położenia standardowego.
- **Modele z podwójną osią obrotową**, w tym linie modeli z opcją przechylania F_W, przechylenie pneumatyczne od osi obrotowej w pobliżu przedniej i tylnej części urządzenia. Te modele przechylają się w celu załadunku poprzez napełnienie powietrzem pęcherzy poniżej przedniej części urządzenia oraz przechylają w celu rozładunku przez napełnienie pęcherzy w części tylnej.

Symbole na panelu sterowania zależą od mechanizmu, w jaki wyposażony jest model: z pojedynczym lub podwójnym sworzniem.

What are the Loading Controls?

Loading controls allow you to open and close the door, as well as tilt and jog the cylinder; used primarily when loading and unloading a tilting machine.

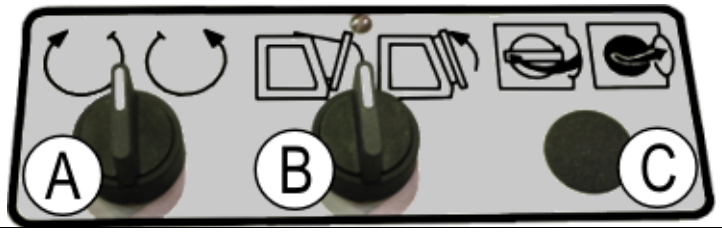
Milnor manufactures machines with two different types of tilting mechanisms:

- **Single-pivot models**, including the E_N and J_N model lines, tilt hydraulically from a single pivot axis near the rear of the machine. These models tilt to unload by lowering the front of the machine below the normal operating position, and tilt to load by raising the front of the machine above the normal operating position.
- **Dual-pivot models**, including tilting models in the F_W line, tilt pneumatically from pivot axes near the front and rear of the machine. These models tilt to load by inflating air bladders below the front of the machine, and tilt to unload by inflating air bladders below the rear of the machine.

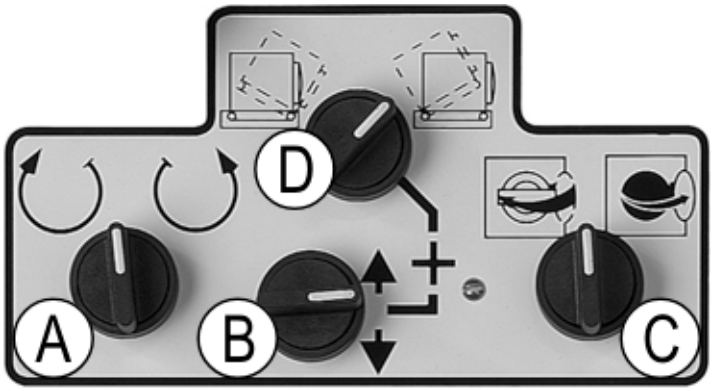
The symbols on the machine control panel vary according to whether the machine is a single- or dual-pivot model.

Rysunek [Figure] **5: Typowe panele sterowania przechylaniem [Typical Tilt Control Panels]**

Model z pojedynczą osią obrotową [Single-Pivot Model]



Model z podwójną osią obrotową [Dual-Pivot Model]



Legenda [Legend]

- **A.** Przełącznik *kierunku przesuwania skokowego* [*Jog direction* switch]
- **B.** Przełącznik *kierunku przechylania* [*Tilt direction* switch]
- **C.** Przełącznik *otwarcia/zamknięcia drzwi* [*Door open/close* switch]
- **D.** Przełącznik *wyboru sworznia* [*Pivot selector* switch]

Przełącznik *wyboru sworznia* (⌂/⌂)—określa, czy urządzenie zostanie przechylone na sworzeń w kierunku przednim czy tylnym. Ustawienie przełącznika w lewo umożliwia rozładunek;, ustawienie w prawo powoduje uniesienie przodu urządzenia, tym samym ułatwiając załadunek.

Przełącznik *kierunku przechylania*—aktywuje mechanizmy niezbędne do uniesienia/obniżenia wybranej strony urządzenia. W modelach z podwójnym sworzniem przełącznik ten jest używany z przełącznikiem *wyboru sworznia* w celu przechylenia urządzenia. Po naciśnięciu przycisku *otwarcia drzwi* należy ustawić przełącznik w położeniu górnym, aby unieść wybraną stronę urządzenia, lub w dolnym, aby ją obniżyć.

Aby odchylić model z podwójnym sworzniem w celu ułatwienia ładowania, należy najpierw obrócić w prawo przełącznik wyboru przechylenia do przodu/do tyłu (patrz Rysunek 5). Takie ustawienie oznacza, że urządzenie zostanie przechylone na tylny punkt sworznia. Następnie przytrzymać przełącznik kierunku przechylania w położeniu *do góry* i nacisnąć przycisk *otwarcia drzwi* (☜). Przednia część będzie unoszona i obniżana aż do całkowitego

***Pivot selector* switch (⌂/⌂)**—determines whether the machine tilts on the forward or rearward pivot. Set this switch to the left position to facilitate unloading; use the right position to tilt the front of the machine up for easier loading.

***Tilt direction* switch**—actuates the necessary devices to raise or lower the selected end of the machine. On dual-pivot machines, this switch works with the *pivot selector* switch to tilt the machine. With the *door open* button pressed, turn the switch up to raise the selected end of the machine, or down to lower it.

To tilt a dual-pivot machine backward for easier loading, first set the tilt front/rear selector switch to the right, as shown in Figure 5. This determines that the machine will tilt on the rear pivot point. Next, hold the tilt direction switch in the *up* position and press the *door open* button (☜). The front of the machine will tilt up and back until the front is fully tilted or you release either of the two controls. Use similar procedures to lower

przechylenia lub zwolnienia jednego z dwóch elementów sterowania. Aby obniżyć przód urządzenia do położenia standardowego lub podnieść tył urządzenia w celu rozładunku, należy wykonać podobną procedurę.

Aby przechylić model z pojedynczym sworzniem, należy przytrzymać przełącznik kierunku przechylania w żądane położenie i przytrzymać przycisk *otwarcia drzwi* (), aż zostanie ustawiony żądany kąt.

Przełącznik *otwarcia/zamknięcia drzwi* (/)—steruje układem automatycznego otwierania/zamykania drzwi, gdy urządzenie jest w stanie bezczynności. Aby otworzyć drzwi, należy obrócić przełącznik w prawo (), naciskając przycisk *otwarcia drzwi*). Aby zamknąć drzwi, należy obrócić przełącznik w lewo (), naciskając przycisk *otwarcia drzwi*. Gdy przełącznik znajduje się w prawidłowym położeniu, zwolnić elementy sterowania. Pompa hydrauliczna zasilająca drzwi jest automatycznie odcinana, jeżeli drzwi są maksymalnie otwarte lub zamknięte.

Przycisk otwarcia drzwi ()—umożliwia użycie innych elementów sterowania ładowaniem, gdy urządzenie jest w stanie bezczynności. Naciśnięcie przycisku *otwarcia drzwi* podczas działania urządzenia powoduje odcięcie zasilania w obwodzie 3-żyłowym i zatrzymanie pracy urządzenia. Jeżeli urządzenie jest w stanie bezczynności, należy nacisnąć ten przycisk, aby wykonać funkcje ładowania lub rozładunku. Ten warunek zapewnia, że ręce operatora spoczywają bezpiecznie na panelu sterowania urządzenia, ponieważ istnieje ryzyko obrócenia bębna w chwili uruchomienia, gdy otwarte są drzwi.

OSTRZEŻENIE 2: Ryzyko upadku, zaplątania oraz wciągnięcia—Dotykanie obracającego się bębna może spowodować zmiażdżenie kończyn. Bęben odepchnie każdy przedmiot, którym będziesz próbował go zatrzymać, odrzucony przedmiot może Cię uderzyć lub wbić się w ciało. Obracający się bęben jest zwykle oddzielony zamkniętymi drzwiami pralnicy.

- Nie należy manipulować przy zabezpieczeniach ani nie blokać żadnego z nich oraz nie uruchamiać urządzenia z

the front of the machine to the normal position, or to raise the rear of the machine for unloading.

To tilt a single-pivot machine, hold the tilt direction switch in the desired position and hold the *door open* button () until the machine reaches the desired angle.

***Door open/close* switch (/)**—controls the automatic door system when the machine is idle. To open the door, turn the switch to the right () while pressing the *door open* button (). Turn the switch to the left () and press the *door open* button to close the door. Release the controls when the door is in the correct position. The hydraulic pump which powers the door shuts off automatically when the door is fully open or fully closed.

Door open button ()—enables other loading controls when the machine is idle. Pressing the *door open* button while the machine is operating removes power from the 3-wire circuit, stopping the machine. When the machine is idle, this button must be pressed to perform any other loading or unloading function. This requirement helps ensure that you have both hands safely on the control panel of the machine if the basket might turn under power while the door is open.

WARNING 2: Fall, Entangle, and Strike Hazards—Contact with the turning cylinder can crush your limbs. The cylinder will repel any object you try to stop it with, possibly causing the object to strike or stab you. The turning cylinder is normally isolated by the locked cylinder door.

- Do not tamper with or disable any safety device or operate the machine with a malfunctioning safety device. Request authorized service.

niesprawnym zabezpieczeniem. Skontaktować się z autoryzowanym serwisem.

Przełącznik kierunku przesuwania (↻/↺)—umożliwia powolne poruszanie siłownika w każdym kierunku, co ułatwia ładunek i rozładowanie urządzenia. Aby przesunąć siłownik zgodnie z kierunkiem ruchu wskazówek zegara, należy nacisnąć i przytrzymać przełącznik kierunku przesuwania (↻), naciskając jednocześnie przycisk otwarcia drzwi.

Wskaźnik ciśnienia układu hydraulicznego drzwi—na tylnym panelu urządzenia. Ten wskaźnik wyświetla ciśnienie w układzie hydraulicznym podczas otwierania i zamykania drzwi. Podczas normalnego działania wskaźnik ten pokazuje wartość 0, jeśli drzwi hydrauliczne nie są otwierane/zamykane. W trakcie otwierania/zamykania drzwi wskaźnik przedstawia wartość ok. 900 psi (62 bar), jeżeli układ hydrauliczny jest prawidłowo ustawiony.

Jog direction switch (↻/↺)—allows you to jog the cylinder slowly in either direction to help in loading or unloading the machine. To jog the cylinder clockwise, hold the jog direction switch to the left (↻) while pressing the door open button.

Door hydraulic circuit pressure gauge—on the rear panel of the machine, this gauge displays the pressure in the hydraulic circuit when the door is opening and closing. During normal operation, this gauge registers 0 unless the hydraulic door opening or closing. When the door is moving, this gauge indicates about 900 psi (62 bar) when the hydraulic system is properly adjusted.

1.1.5. Funkcja przełącznika

Inne przyciski i przełączniki są używane do sterowania dodatkowymi standardowymi i opcjonalnymi funkcjami urządzenia. Niniejsza część opisuje rozmieszczenie i funkcje tych elementów sterowania.

Przełącznik wyboru trybu Mildata/Local (Lokalny) (Rysunek 6)—umieszczony na jednostce sterującej mikroprocesora (patrz Rysunek 1); umożliwia komunikację urządzenia z siecią Mildata. Sieć Mildata łączy kilka urządzeń i umożliwia im współużytkowanie formuł prania i innych danych za pośrednictwem komputera Mildata. Po ustawieniu przełącznika w położeniu *Mildata* (💻) i wprowadzeniu numeru formuły urządzenie zgłosi żądanie treści formuły z komputera Mildata. Po ustawieniu położenia *Local (Lokalny)* (📝) dostępne są tylko formuły zapisane **w urządzeniu**.

What does this Switch do?

Other buttons and switches are used to control additional standard and optional machine functions. These miscellaneous controls are located and described in this section.

Mildata/Local selector switch (Figure 6)—located on the microprocessor control box (see Figure 1), allows the machine to communicate with a Mildata network. A Mildata network connects several machines together and allows them to share wash formulas and other data with the Mildata computer. When this switch is in the *Mildata* position (💻) and you enter a formula number, the machine requests the contents of the formula from the Mildata computer. When set to the *Local* position (📝), only formulas present **in the machine** are available.

Rysunek [Figure] **6: Przełącznik wyboru trybu Mildata/Local (Lokalny) [Mildata/Local Selector switch]**

Przycisk *otwierania skokowego drzwi* (Rysunek 7)—Ten przycisk, jeśli jest na wyposażeniu, znajduje się po stronie bocznej jednostki panelu sterowania w pobliżu przycisku *otwarcia drzwi*. Aby zmniejszyć ryzyko wypadnięcia z urządzenia zabrudzeń w trakcie opuszczania, należy jedną ręką naciskać ten przycisk i przycisk *otwarcia drzwi*, a drugą ręką przycisk *kierunku przesuwania skokowego* w dowolnym kierunku. Zamykając drzwi siłownik powoli się obraca i urządzenie powraca do położenia standardowego.

***Door open jog* button (Figure 7)**—This button, if provided, is located on the side of the control panel box near the *door open* button. To reduce the chance of soiled goods falling out of the machine as it descends, hold this button and the *door open* button depressed with one hand, and hold the *jog direction* switch in either direction with the other hand. The cylinder rotates slowly as the door closes and the machine descends to the normal operating position.

Rysunek [Figure] **7: Przycisk *otwierania skokowego drzwi* [*Door open jog* button]**

Przycisk ręcznego płukania (Rysunek 8)—W urządzeniach z opcjonalną funkcją płukania wtryskowego; należy nacisnąć ten przycisk, aby rozpylić wodę na wtryskiwacze w celu wypłukania pozostałości środka chemicznego do cylindra. W przypadku ręcznego dodawania środków podczas formuły prania naciśnięcie przycisku powoduje wypłukanie pozostałości nierozcieńczonych środków chemicznych z podajnika. Jeżeli urządzenie nie jest wyposażone w opcję płukania wtryskowego, należy nacisnąć ten przycisk, aby przepłukać dysze ciekłych środków chemicznych świeżą wodą.

Manual supply flush button (Figure 8)—On machines equipped with an optional flushing supply injector, press this button to spray water into the supply injector to flush any remaining chemicals into the cylinder. If you manually add supplies during a wash formula, press this button to flush any remaining undiluted chemicals out of the supply chute. If the machine is not equipped with the optional supply injector, press this button to flush the liquid chemical inlets with fresh water.

Rysunek [Figure] **8: Przycisk ręcznego płukania [Manual Supply Flush button]**

— Koniec BICWCO02 —

— End of BICWCO02 —

Rozdział 2
Standardowa eksploatacja urządzenia

Chapter 2
Normal Machine Operation

BICWCO03 (Published) Book specs- Dates: 20070924 / 20070924 / 20081017 Lang: POL01 Applic: 68036F5N

2.1. Instrukcja obsługi dla personelu zakładowego

2.1. Operating Instructions for Plant Personnel

2.1.1. Ważne informacje dotyczące bezpieczeństwa

Ten dokument został opracowany, aby dostarczyć operatorom pralki-wirówki informacji niezbędnych do obsługi urządzenia. Nie należy podejmować prób obsługi urządzenia przed uzyskaniem szczegółowych instrukcji od przeszkolonego, doświadczonego operatora.

Niebezpieczeństwo 3: Inne zagrożenia—Nieostrożne działanie użytkownika może doprowadzić do śmierci lub kalectwa personelu, uszkodzenia urządzenia i innego sprzętu w pralni i/lub utratę gwarancji.

Niebezpieczeństwo 4: Porażenie prądem i ryzyko poparzeń wywołanych prądem—Kontakt z wysokim napięciem grozi śmiercią lub poważnymi obrażeniami. Elementy wewnątrz obudowy urządzenia pozostają pod napięciem do momentu wyłączenia zasilania odłącznikiem głównym.

- Nie należy odblokowywać ani otwierać drzwi skrzynki elektrycznej.
- Znaleźć miejsce podłączenia głównej linii zasilania elektrycznego i skorzystać z niego w sytuacji zagrożenia, odłączając całe zasilanie od urządzenia.

Start Here for Safety

This document is meant to remind you, the person operating this washer extractor, of what is required to operate this machine. Do not attempt to operate this machine before an experienced, trained operator explains the details to you.

DANGER 3: Multiple Hazards—Careless operator actions can kill or injure personnel, damage or destroy the machine, damage property, and/or void the warranty.

DANGER 4: Electrocution and Electrical Burn Hazards—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

- Serwisowania urządzenia nie powinny podejmować się osoby niewykwalifikowane i nieuprawnione. Należy zapoznać się z zagrożeniami oraz sposobami ich unikania.

qualified and authorized. You must clearly understand the hazards and how to avoid them.

OSTRZEŻENIE 5: Ryzyko kolizji, połamania i zablokowania—Dotykanie ruchomych elementów, które standardowo zakryte są panelami ochronnymi, pokrywami i płytami, może spowodować wciągnięcie i zmiażdżenie kończyn. Części te poruszają się automatycznie.

CAUTION 5: Collision, Crushing and Pinch Hazards—Contact with moving components normally isolated by guards, covers, and panels, can entangle and crush your limbs. These components move automatically.

2.1.2. Sprawdzanie ustawienia przełączników

Check Switch Settings

Display or Action [Display or Action]	Wyjaśnienie	Explanation
	Sprawdzić, czy przełącznik *praca/programowanie* jest ustawiony w położeniu .	Check that the *run/program* keyswitch is at .
	Aby praca urządzenia była możliwa, należy odblokować wszystkie przyciski zatrzymania awaryjnego i uzyskać położenie *gotowości*.	All emergency stop buttons must be unlatched and in the *ready* position to allow machine operation.
/	Sprawdzić, czy wyłącznik główny znajduje się w położeniu .	Check that the master switch is at .

2.1.3. Sposób ładowania urządzenia z opcją przechylania / How do I Load a Tilting Machine?

2.1.3.1. Ładowanie automatyczne(szyna lub naprzemiennie) / Automated (Rail or Shuttle) Loading

Display or Action [Display or Action]	Wyjaśnienie	Explanation
	Otworzyć drzwi	Open the door
	Ustawić *przełącznik wyboru przechylania do przodu/do tyłu* w położeniu *do przodu*.	Set the *tilt front/rear selector switch* to the *front* position.
	Przechylić przednią część urządzenia w górę w celu uzyskania dostępu do ładunku.	Tilt the front of the machine up to receive the load.
0 7	Wybrać formułę (np. 07). Szczegóły dotyczące wybierania formuły patrz Rozdział 2.1.4 “Sposób wybrania formuły”.	Select the formula (07, for example). Details about selecting a formula are described in Section 2.1.4 “How do I Select a Formula?”.
SKIP TO	Jeśli to konieczne, przełączyć pozycję kolumny w celu wybrania formuły.	Toggle column for formula selection if necessary.
/	Przesunąć do następnej lub poprzedniej wyświetlanej formuły w bieżącej kolumnie.	Move to the next or previous displayed formula in the current column.
ENTER	Potwierdzić wybraną formułę.	Confirm the selected formula.

Aby załadować urządzenie, należy wykonać procedurę określoną przez kierownictwo zakładu.

Use the procedure defined by facility management to put the goods in the machine.

	Zamknąć drzwi.	Close the door.
	Przechylić przednią część urządzenia w dół do położenia standardowego.	Tilt the front of the machine down to the normal position.

2.1.3.2. Ładowanie ręczne / Manual Loading

Display or Action [Display or Action]	Wyjaśnienie	Explanation
	Otworzyć drzwi.	Open the door.
0 7	Wybrać formułę (np. 07). Szczegóły dotyczące wybierania formuły patrz Rozdział 2.1.4 "Sposób wybrania formuły".	Select the formula (07, for example). Details about selecting a formula are described in Section 2.1.4 "How do I Select a Formula?".
SKIP TO	Jeśli to konieczne, przełączyć pozycję kolumny w celu wybrania formuły.	Toggle column for formula selection if necessary.
↓ / ↑	Przesunąć do następnej lub poprzedniej wyświetlanej formuły w bieżącej kolumnie.	Move to the next or previous displayed formula in the current column.
ENTER	Potwierdzić wybraną formułę.	Confirm the selected formula.
Aby załadować urządzenie, należy wykonać procedurę określoną przez kierownictwo zakładu.		Use the procedure defined by facility management to put the goods in the machine.
	Zamknąć drzwi.	Close the door.

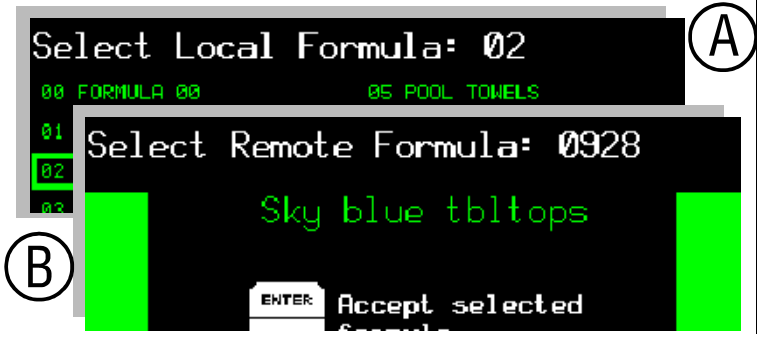
2.1.4. Sposób wybrania formuły / How do I Select a Formula?

Sterownik Mark VI może działać w trybie *local (lokalny)* lub *Mildata*. W trybie *local (lokalny)* urządzenie nie komunikuje się żadnym innym urządzeniem i wykonuje formuły zapisanej w pamięci lokalnego sterownika. W trybie *Mildata* urządzenie pobiera i wykonuje formuły z komputera Mildata i często aktualizuje ekran na komputerze Mildata.

The Mark VI controller can operate in either *local* or *Mildata* mode. In *local* mode, the machine does not communicate with any other devices and runs formulas contained in local controller memory. In *Mildata* mode the machine downloads and runs formulas from the Mildata computer, and frequently updates the display on the Mildata computer.

Rysunek [Figure] **9: Wybór formuły Local (Lokalny) lub Remote (Zdalny) [Selecting a Local or Remote Formula]**

Ekrany *wyboru programu* [*Select Program* Displays]



Legenda [Legend]

A. Local (Lokalny) (brak lub wyłączona opcja Mildata) [Local (Mildata not present or enabled)]

B. Remote (Zdalny) (włączona opcja Mildata) [Remote (Mildata enabled)]

2.1.4.1. Wybór formuły Local (Lokalny)—Jeśli urządzenie nie jest częścią sieci Mildata lub sieć Mildata jest nieosiągalna, można wybrać dowolną formułę prania zapisaną w pamięci lokalnej urządzenia. Należy wybrać ekran *Select Local Formula (Wybierz formułę trybu lokalnego)* (Rysunek 10), aby wybrać prawidłową formułę dla rodzaju ładunku urządzenia.

Selecting a Local Formula—If the machine is not part of a Mildata network, or if the Mildata network is not available, you can choose from any of the wash formulas stored in local memory on the machine. Use the *Select Local Formula* screen (Figure 10) to choose the correct formula for the goods in the machine.

Rysunek [Figure] **10: Ekran *Select Local Formula (Wybierz formułę trybu lokalnego)* [*Select Local Formula* Screen]**

Display or Action [Display or Action]	**Wyjaśnienie**	**Explanation**
0 7	Bezpośredni wybór formuły do wykonania (np. 07). Po wprowadzeniu dwucyfrowego numeru wybrana formuła jest przesuwana na początek lewej kolumny wyświetlanej na ekranie.	Directly selects the formula you want to run (07, for example). When you enter a two-digit number, the selected formula moves to the top of the left column on this screen.
SKIP TO	Przełączenie pozycji kolumny w celu wybrania formuły, jeśli jest to konieczne. Jeżeli żądana formuła jest wyświetlana na ekranie, ale w innej kolumnie niż pole wyboru, naciśnięcie klawisza powoduje przejście pola do innej kolumny formuł.	Toggles the column for formula selection if necessary. If the desired formula is visible on the screen, but is in the opposite column from the selection box, this keystroke moves the selection box to the other column of formulas.
↓ / ↑	Przesunięcie do następnej lub poprzedniej wyświetlanej formuły w bieżącej kolumnie. Jeżeli żądana formuła jest wyświetlana na ekranie w tej samej kolumnie co pole wyboru, naciśnięcie klawiszy spowoduje przesunięcie pola w górę lub w dół do żądanej formuły.	Move to the next or previous displayed formula in the current column. If the desired formula is visible on the screen and in the same column as the selection box, you can use these two keys to move the selection box down or up to select the formula.

Display or Action [Display or Action]		Wyjaśnienie	Explanation
	ENTER	Potwierdzenie wybranej formuły. Ustawić pole wyboru na formule, która zostanie wykonana, a następnie nacisnąć ENTER, aby kontynuować standardowe procedury obsługi.	Confirm the selected formula. Place the selection box on the formula you want to run, then press ENTER to continue with the normal operation procedures.

Suplement 1

Informacje dotyczące obciążenia i *zużycia wody*

Funkcja *licznika zużycia wody* jest dostępna w pralkach-wirówkach Mark VI wyposażonych w opcjonalne przepływomierze na podłączonych wężach wody. Ta funkcja umożliwia sterownikowi Mark VI ustalenie ilości wody proporcjonalnie do wagi ładunku wprowadzonej po wybraniu formuły. Jeśli po zgłoszeniu została wprowadzona waga 200 jednostek, urządzenie zużyje dwa razy tyle wody w porównaniu z wprowadzeniem wartości 100 jednostek. Ta opcja może zaoszczędzić znaczą ilość wody po wprowadzeniu dokładnej wagi każdego ładunku.

Supplement 1

About Load Weight and *Metered Water*

Metered water is available on Mark VI washer-extractors equipped with optional flow meters on the incoming water lines. This feature allows the Mark VI controller to admit a quantity of water proportional to the weight of goods you enter after selecting the formula. If you enter a weight of 200 units when prompted, the machine will use twice as much water as if you entered 100 weight units. This option can save a significant amount of water if you enter accurate weights for each load.

Rysunek [Figure] **11: Wprowadzanie wagi ładunku dla opcji licznika zużycia wody [Entering Load Weight for Metered Water]**

Display or Action [Display or Action]	**Wyjaśnienie**	**Explanation**
4 4 9	Wprowadzić wagę ładunku w urządzeniu. Sterownik korzysta z wartości wagi w celu określenia ilości wody wymaganej do prania zgodnie z zaprogramowaną formułą.	Enter the weight of the goods loaded in the machine. The machine controller uses the weight to determine how much water is needed to wash the goods according to the programmed wash formula.
ENTER	Zaakceptować wprowadzoną wagę ładunku i kontynuować.	Accept the entered goods weight and continue.

2.1.4.2. Wybór formuły Mildata—Jeśli urządzenie jest częścią sieci Mildata i sieć jest dostępna, można wybrać dowolną formułę prania zapisaną w komputerze Mildata. Należy użyć ekranu *Select Remote Formula (Wybierz formułę trybu zdalnego)* (Rysunek 12), aby wybrać najlepszą formułę dla ładunku w urządzeniu.

Notka 1: W komputerze Mildata można zapisać maksymalnie 1000 różnych formuł. Wszystkie formuły są dostępne dla każdej pralki-wirówki, która jest są częścią sieci Mildata i jest wyposażona w kompatybilny sprzęt.

Selecting a Mildata Formula—If the machine is part of a Mildata network and the network is available, you can choose any wash formula stored on the Mildata computer. Use the *Select Remote Formula* screen (Figure 12) to choose the best formula for the goods in the machine.

Note 1: You can store up to 1000 different wash formulas on the Mildata computer. All of these formulas are available to all washer-extractors that are part of the Mildata network and have compatible hardware.

Rysunek [Figure] **12: Ekran *Select Remote Formula (Wybierz formułę trybu zdalnego)* [*Select Remote Formula* Screen]**

Display or Action [Display or Action]	**Wyjaśnienie**	**Explanation**
0 9 2 8	Wybierz formułę, np. 928, zapisaną w komputerze Mildata. The Mark VI controller requests the formula from the Mildata computer and displays the formula name, as shown in Rysunek 12.	Select formula 928 (example) stored on the Mildata computer. The Mark VI controller requests the formula from the Mildata computer and displays the formula name, as shown in Figure 12.
ENTER	Sprawdzić, czy wyświetlana nazwa formuły jest prawidłowa. Jeśli wyświetlana jest błędna formuła dla ładunku, nacisnąć CANCEL, aby usunąć numer formuły, a następnie wpisać inny numer.	Confirm that the displayed formula name is the formula you want to run. If the displayed formula isn't the right one for the loaded goods, press CANCEL to clear the formula number, then enter another number.

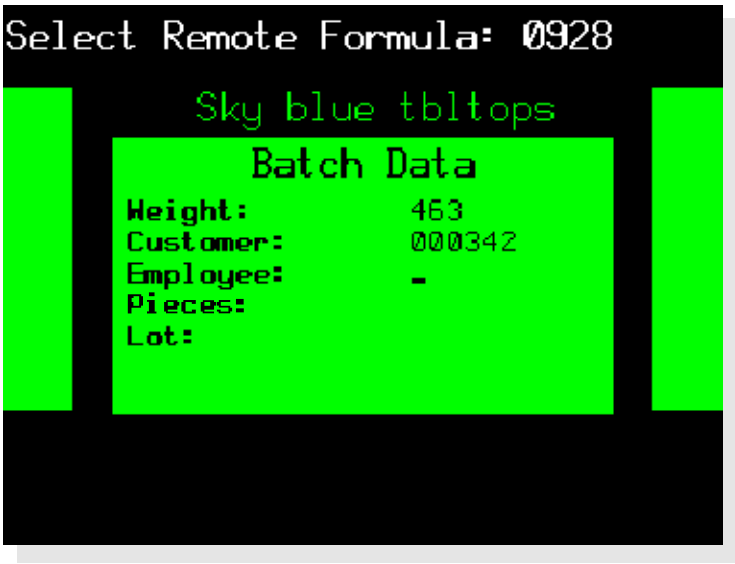
Po wyszukaniu i sprawdzeniu formuły kontroler Mark VI wysyła zapytanie o skonfigurowane *dane wsadu*.

After you've retrieved and verified the formula, the Mark VI controller prompts for any configured *batch data*.

2.1.4.3. **Wprowadzanie *kodów wsadu Mildata***—Kontroler Mark VI korzysta z ekranów (podobny: Rysunek 13) w celu informowania o polach danych wsadu wybranych w konfiguracji urządzenia (patrz the related section in document BICWCC01). Wprowadzone dane są wysyłane do komputera Mildata w celu zaksięgowania i utworzenia raportu.

Entering *Mildata Batch Codes*—The Mark VI controller uses a screen similar Figure 13 to prompt you for the batch data fields selected in machine configuration (see the related section in document BICWCC01). The data you enter is sent to the Mildata computer for accounting and report generation.

Rysunek [Figure] **13: Dane wsadowe dla wykonania formuły w trybie zdalnym [Batch Data for Remote Formula Operation]**



Opcja Weight (Waga)—waga wsadu w urządzeniu. Ta informacja jest zazwyczaj używana wraz z innymi danymi wsadu w celu obliczenia należności klienta lub produktywności pracownika. W przypadku urządzeń wyposażonych w opcjonalne przepływomierze, w których zostały skonfigurowane liczniki przepływu wody, wartość wagi jest także używana do określania ilości wymaganej wody do przetworzenia wsadu. Wartość wagi może składać się z maksymalnie trzech cyfr.

Weight—the weight of the batch of goods in the machine. This information is usually used along with other batch data to calculate customer charges or employee productivity. In machines equiped with optional flow meters and configured for metered water, the weight value is also used to determine how much water is required to process the batch. The weight value can be up to three digits.

Kod klienta—kod identyfikacyjny klienta. Ta informacja ułatwia określenie ilości cykli pracy urządzenia wykonanej dla każdego klienta. Dla kodu klienta dostępnych jest dziesięć cyfr.

Customer Code—the identifying code for the customer. This information can help you determine how much work each customer is submitting. Ten digits are available for customer code.

Numer pracownika—kod identyfikacyjny pracownika odpowiedzialnego za ten wsad. Numer pracownika może składać się z maksymalnie pięciu cyfr.

Employee Number—the identifying code for the employee responsible for this batch. The employee number may be up to five digits long.

Opcja Pieces (Sztuki)—liczba sztuk w urządzeniu. Ta wartość może czasami zastępować wartość wagi, zwłaszcza gdy opłaty naliczane są według liczby sztuk, a nie na podstawie wagi. Można wprowadzić 4-cyfrową liczbę elementów.

Pieces—the number of pieces in the machine. This value sometimes replaces the weight value, especially when charges are made by the piece rather than by weight. Four digits are available for the number of pieces.

Numer partii—kod identyfikacyjny kilku związanych ze sobą wsadów lub klientów. W zależności od uznania użytkownika wartość wpisana w tej pozycji może reprezentować

Lot Number—the identifying code for several related batches or customers. At your discretion, the value entered here might represent a particular route number

konkretną liczbę cykli wspólną dla kilku klientów. Numer partii może składać się z maksymalnie 10 cyfr.

common to several accounts. A lot number can be up to 10 digits long.

2.1.5. Uruchomienie wybranej formuły

Przed kontynuacją procedury roboczej należy upewnić się, że zostały zakończone te etapy.

1. Urządzenie jest załadowane lub bliskie znamionowej pojemności wagi.
2. Została wybrana formuła odpowiednia dla wsadu w urządzeniu.
3. Zostały wprowadzone wszystkie dane wsadu wymagane przez kontroler urządzenia do pomiaru zużycia wody lub utworzenia raportu Mildata.
4. Zostały zamknięte drzwi.
5. Po przechyleniu urządzenia w celu załadunku, zostało przywrócone położenie standardowe.

Start the Selected Formula

Be sure you've completed these steps before you go any further in the operating procedure.

1. You've loaded the machine at or near its rated weight capacity.
2. You've selected a formula that's appropriate for the goods in the machine.
3. You've entered any batch data the machine controller requires for metered water or Mildata reporting.
4. You've closed the door.
5. If you tilted the machine to load it, you've returned it to the normal operating position.

Display or Action [Display or Action]	**Wyjaśnienie**	**Explanation**
①	Uruchom wybraną formułę.	Start the selected formula.

Urządzenie rozpocznie formułę prania. Rozpoczyna się obracanie bębna i otwierane są zawory wodne. Po osiągnięciu poziomu bezpieczeństwa może zostać otwarty zawór pary w celu rozpoczęcia ogrzewania wody. Od tego kroku do końca procedura jest wykonywana w pełni automatycznie, oprócz programowania sygnału wstrzykiwania środka chemicznego (patrz Suplement 2).

The machine begins the wash formula. The basket begins turning and water valves open. When a safe level is achieved, the steam valve may open to begin heating the bath. Operation from this point to the end of the formula is completely automatic unless a signal is programmed with a chemical injection (see Supplement 2).

Suplement 2

Wstrzykiwanie środka chemicznego z sygnałem dla operatora

Aby regulować ilość wstrzykiwanego środka chemicznego dla ładunków w zależności od wysoce zmiennych współczynników, można zaprogramować formułę tak, aby zatrzymać licznik czasu i zasygnalizować zapotrzebowanie na środek chemiczny. Dodać środek chemiczny, a następnie nacisnąć , aby wznowić formułę.

Supplement 2

Chemical Injections with the Operator Signal

If you need to adjust the amount of a chemical injection from load to load depending on highly variable factors, the formula can be programmed to stop the timer and signal you when a chemical is required. Add the chemical, then press to resume the formula.

2.1.6. Informacje na ekranie *pracy*

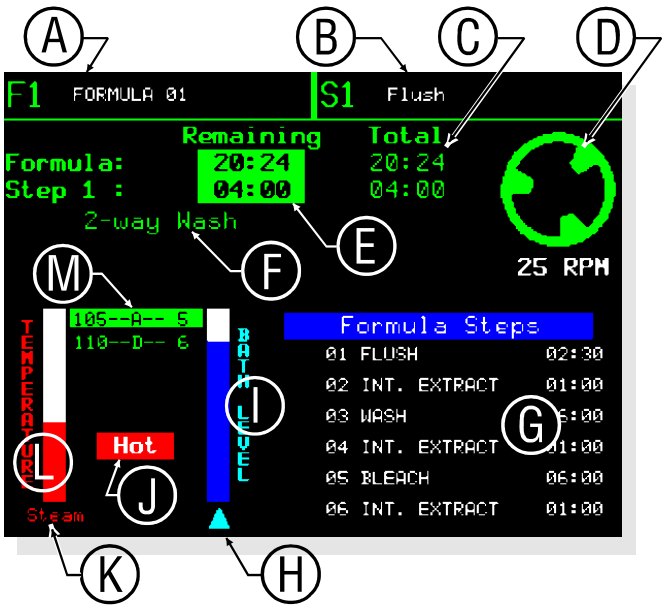
Podczas wykonywania wybranej formuły wyświetlany jest ekran (podobny: Rysunek 14). Wyświetlane informacje zostały wyjaśnione poniżej.

What Does the *Run* Display Tell Me?

While the machine is running the formula you selected, the display appears similar to the one shown in Figure 14. The information shown here is explained below.

Rysunek [Figure] **14: Odczyt informacji z ekranu *pracy* [How to Read the *Run* Display]**

Typowy ekran [Typical Display]



Legenda [Legend]

- **A.** Numer formuły i nazwa [Formula number and name]
- **B.** Numer kroku i nazwa [Step number and name]
- **C.** Całkowity czas formuły i aktualny krok [Total time for formula and current step]
- **D.** Element graficzny obracania bębna i jego prędkość [Basket rotation graphic and speed]
- **E.** Pozostały czas całej formuły i aktualny krok [Remaining time for entire formula and current step]
- **F.** Komunikat dotyczący statusu urządzenia [Machine status message]
- **G.** Kroki formuły: numer, nazwa i czas trwania [Formula steps: number, name, and duration]
- **H.** Wskaźnik napełnienia lub opróżnienia [Indicator for filling or draining]
- **I.** wskaźnika poziomu prania [Graphic bath level indicator]
- **J.** Wskaźniki zaworów wodnych [Water valves indicators]
- **K.** Wskaźnik opcjonalnych zaworów parowych i schładzania [Indicator for optional steam and cooldown valves]
- **L.** Graficzny wskaźnik temperatury prania [Graphic bath temperature indicator]
- **M.** Temperatura prania i dane dotyczące poziomu [Bath temperature and level data]

2.1.6.1. Informacje o formule i kroku—W pierwszym wierszu zawsze wyświetlany jest numer i nazwa aktualnej formuły i kroku. *Numer formuły* jest wyświetlany w lewym górnym rogu ekranu po literze “F.”Po numerze wyświetlana jest *nazwa formuły*.

Po prawej stronie informacji o formule wyświetlane są *numer i nazwa aktualnego kroku*. Kontroler Mark VI aktualizuje numer formuły i nazwę po rozpoczęciu formuły oraz na początku każdego kolejnego kroku.

Poniżej nazw formuły i kroku umieszczona jest *informacja o czasie*. Liczby w kolumnie “Total (Całkowity)” (zielone) przedstawiają całkowity czas wymagany do zakończenia formuły i kroku; nie uwzględnia współczynników, których opis zawiera Notka 2. Po rozpoczęciu formuły sterownik oblicza wartość “Formula (Formuła)”. Podczas wykonywania formuły ta wartość pozostaje niezmienna. Sterownik oblicza i wyświetla wartość “Step x (Krok x)” na początku każdego kroku.

Liczby w kolumnie “Remaining (Pozostały)” obszaru czasu (czarne cyfry na zielonym tle) wskazują *pozostały czas* formuły oraz aktualny krok. Te wartości określają **minimalny** pozostały czas (patrz Notka 2).

Notka 2: Nie jest możliwe oszacowanie czasu trwania niektórych zadań formuły prania. Kontroler zatrzymuje licznik do czasu spełnienia warunku. Na przykład, wymagany czas napełnienia urządzenia do żądanego poziomu zależy od ciśnienia wody w instalacji, wymiaru połączenia rurowego urządzenia i liczby wypełnianych jednocześnie urządzeń. Oprócz wymaganego czasu napełnienia zmienny jest także czas wymagany do osiągnięcia temperatury oraz czas sprawdzenia przez operatora wstrzyknięcia substancji chemicznych. Licznik może być również zatrzymany w wyniku wystąpienia błędu.

Sterownik wyświetla aktualny *stan urządzenia* poniżej numeru kroku i pozostałego czasu. Niektóre możliwe stany urządzenia zawiera Tablica 1. Komunikaty o błędach są wyświetlane natychmiast poniżej komunikatu o stanie urządzenia.

Formula and Step Information—The top line of the display always shows the number and name of the current formula and step. The *formula number* appears in the upper left corner of the display, following the letter “F.”The *formula name* follows the number.

The *step number and name of the current step* are displayed to the right of the formula information. The Mark VI controller updates the formula number and name when a formula starts and at the beginning of each subsequent step.

Below the formula and step names is *time information*. The numbers in the “Total” column (green numbers) show the total time required for the formula and step to run to completion, not including the factors described in Note 2. The controller calculates the “Formula” value when the formula begins, and this value doesn't change while the formula is running. The controller calculates and displays the “Step x” value at the start of each step.

The numbers in the “Remaining” column of the time area (black numbers on a green background) indicate the *time remaining* in the formula and in the current step. These numbers indicate the **minimum** amount of time remaining (see Note 2).

Note 2: The duration of some wash formula events can't be estimated, so the controller stops the timer until a requirement is met. For example, the time required for the machine to fill to the desired level depends on the water pressure to the plant, the size of the piping to the machine, and how many other machines are filling at the same time. In addition to the time required to fill, the time required to achieve temperature or for an operator to verify a chemical injection are variable. Error conditions can also stop the timer.

The controller displays the current *machine status* below the step number and remaining time. Some of the possible machine states are listed in Table 1. Error messages appear immediately below the machine status message when required.

Tablica 1: Komunikaty o stanie urządzenia [English table follows]

Idle (Stan bezczynności)	Coasting (Rozruch)
1-way Wash (Pranie jednokierunkowe)	Waiting to Discharge (Oczekiwanie na wyładowanie)
2-way Wash (Pranie dwukierunkowe)	Waiting for Loa (Oczekiwanie na załadunek)
Soak (Namaczanie)	Power-up Delay (Opóźnienie załączenia zasilania)
Pre+Final Extract (Wirowanie wstępne/końcowe)	Draining to Sewer (Opróżnianie do kanalizacji)
Intermediate Extract (Wirowanie pośrednie)	Draining to Reuse (Opróżnianie do ponownego użycia)
Final Extract (Wirowanie końcowe)	Timer Stopped (Zatrzymany licznik czasu)
Double Extract (Dwukrotne wirowanie)	Please Wait xx Seconds (Proszę czekać xx sekund)

Table 1: Machine Status Messages

Idle	Coasting
1-way Wash	Waiting to Discharge
2-way Wash	Waiting for Load
Soak	Power-up Delay
Pre+Final Extract	Draining to Sewer
Intermediate Extract	Draining to Reuse
Final Extract	Timer Stopped
Double Extract	Please Wait xx Seconds

2.1.6.2. Obracanie bębna—*Element graficzny obrotów bębna* w pobliżu prawego górnego rogu na ekranie oznacza względną prędkość obrotów bębna podczas prania, opróżniania i wirowania. Poniżej elementu graficznego bębna wyświetlana jest żądana prędkość bębna w jednostce liczby obrotów/minutę (RPM) lub w jednostkach grawitacyjnych (G).

Basket Rotation—The *basket rotation graphic* near the upper right corner of the display represents the relative basket speeds in wash, drain, and extract speeds. Immediately below the basket rotation graphic, the controller displays the desired basket speed in either revolutions per minute (RPMs) or in gravitational units (G's).

2.1.6.3. Temperatura prania i poziom—*Wskaźniki zaworu wody* są wyświetlane po otwarciu odpowiedniego zaworu wody.

Element graficzny *wskaźnika temperatury prania* wskazuje przybliżoną temperaturę w urządzeniu. Pionowy pasek wskaźnika jest wypełniony kolorem czerwonym, gdy temperatura w urządzeniu jest na maksymalnym dopuszczalnym poziomie 95 stopni Celsjusza (205 stopni Fahrenheita).

Poniżej elementu graficznego wskaźnika temperatury wyświetlany jest wskaźnik pary lub

Bath Temperature and Level—*Water valve indicators* appear when the corresponding water valve is open.

The graphic *bath temperature indicator* shows the approximate temperature in the machine. The vertical indicator bar is solid red when the temperature in the machine is at the maximum allowable value of 205 degrees Fahrenheit (95 degrees Celsius).

The steam or cooldown indicator appears below the graphic temperature indicator

schładzania, jeśli jedna z tych opcjonalnych funkcji jest włączona. Po otwarciu zaworu pary wyświetlany jest napis “Steam (Para)”, a po włączeniu opcji schładzania napis “Cooldown (Schładzanie)”.

when either of these optional features is enabled. “Steam” appears when the steam valve is open, and “Cooldown” appears when the cooldown output is enabled.

Element graficzny *wskaźnika poziomu prania* reprezentuje wartość procentową osiągniętego żądanego poziomu. Pionowy pasek wskaźnika wypełniony jest kolorem niebieskim po osiągnięciu zaprogramowanego poziomu, a kolorem białym, gdy urządzenie zostanie opróżnione z wody.

The graphic *bath level indicator* shows the percentage of the desired level that's achieved. The vertical indicator bar is solid blue when the programmed level is achieved, and solid white when there is no water in the machine.

Strzałka wskaźnika kierunku poziomu jest skierowana w górę, gdy wzrasta aktualny poziom prania w urządzeniu (wypełnianie urządzenia) oraz skierowana w dół w trakcie opróżniania. Strzałka nie jest widoczna po osiągnięciu poziomu i w czasie wirowania.

The *level direction indicator arrow* points upward when the actual bath level in the machine is increasing (when the machine is filling), and points downward when the drain opens. The arrow is not visible when level is achieved, or during extract steps.

Między elementami graficznymi wskaźników temperatury i poziomu kontroler wyświetla *temperaturę prania i dane dotyczące poziomu*. Pierwszy wiersz zawiera aktualnie uzyskaną wartość temperatury i poziom w urządzeniu, a dolny żądane wartości.

The controller displays *bath temperature and level data* between the temperature and level graphic indicators. The top line displays the temperature and level that are currently achieved in the machine, and the bottom line displays the desired values.

2.1.6.4. Kroki formuły i wstrzyknięcie środka chemicznego

Kroki formuły i wstrzyknięcie środka chemicznego—Po rozpoczęciu formuły w lewym dolnym obszarze ekranu kontroler wyświetla pierwsze sześć kroków na *liście kroków formuły*. Jeśli program składa się z większej liczby kroków, których jednoczesne wyświetlenie nie jest możliwe, po zakończeniu już wyświetlanych kroków należy przewinąć listę w celu wyświetlenia pozostałych. Zaznaczony jest aktualny krok.

Formula Steps and Chemical Injection

Formula Steps and Chemical Injection—When a formula begins, the controller displays the first six steps in the *formula steps list* in the lower left area of the screen. If the program contains more steps than can be displayed at one time, the list scrolls to display more steps as the earlier ones end. The current step is highlighted.

Podczas każdego wstrzyknięcia listę zaprogramowanych *wstrzyknięć środka chemicznego* zastępuje lista kroków formuły. Zaznaczony jest aktualnie wstrzykiwany środek chemiczny.

The list of programmed *chemical injections* replaces the formula steps list during each injection, with a highlight box on the chemical that's currently injecting.

2.1.7. Rozładowanie urządzenia

Unload the Machine

Po zakończeniu formuły generowany jest sygnał dla operatora i wyświetlany komunikat dotyczący oczekiwania na rozładowanie (patrz Rysunek 15). Aby rozładować urządzenie należy wykonać procedurę zbliżoną do opisanej poniżej.

When the formula ends, the operator signal sounds and the machine displays a message that it is waiting to discharge (see Figure 15). Use a procedure similar to the one outlined below to unload the goods.

Rysunek [Figure] **15: Typowe komunikaty wyświetlane po zakończeniu formuły [Typical Message when Formula Ends]**

2.1.7.1. Dla każdego *kodu zakończenia*—

Sterownik Mark VI umożliwia zaprogramowanie jednej z czterech możliwych czynności po zakończeniu formuły: *zatrzymanie*, *zmiana kierunku obrotów*, *zmiana prędkości opróżniania* lub *obracanie bębna*. W przypadku pierwszych trzech czynności wykonywana jest identyczna procedura rozładunku. Dla czwartej czynność możliwe jest także wykonanie procedury, której opis zawiera Rozdział 2.1.7.2.

For any *End Code*—

The Mark VI controller allows you to program one of four possible actions for the end of the formula: *stopped*, *reversing at wash speed*, *turning at drain speed*, or *tumbling*. You use the same unloading procedure for formulas using the first three actions. For the fourth action, you also have the option of using the procedure described in Section 2.1.7.2.

Display or Action [Display or Action]	**Wyjaśnienie**	**Explanation**
☜	Odłączyć zasilanie obwodu 3-żyłowego, wyciszyć sygnał dla operatora i zatrzymać ruch bębna. Ten przycisk także zwalnia blokadę drzwi, aby możliwe było ich otwarcie.	Remove power from the 3-wire circuit, silence the operator signal, and stop any basket motion in progress. This button also unlocks the door so you can open it.
0 / ↺ /	Można także odłączyć zasilanie obwodu 3-żyłowego, wyciszyć sygnał dla operatora i zatrzymać wszystkie ruchy bębna za pomocą dowolnego z tych przycisków. Po naciśnięciu dowolnego z tych przycisków nadal wymagane jest odblokowanie drzwi za pomocą przycisku ☜, aby możliwe było ich otwarcie. Naciśnięcie dowolnego z tych przycisków w celu zatrzymania formuły za pomocą *kodu zakończenia 3* (patrz Rozdział 2.1.7.2) powoduje zakończenie formuły. Nie jest możliwe jej wznowienie.	You can also remove power from the 3-wire circuit, silence the operator signal, and stop any basket motion that was in progress with any of these buttons. However, if you use any of these buttons, you'll still need to unlock the door with ☜ before you can open it. If you use any of these buttons to stop a formula with *end code 3* (see Section 2.1.7.2), the formula is terminated and cannot be resumed.
☜+▭	Otworzyć drzwi w celu rozładowania.	Open the door for unloading.

2.1.7.2. Dla kodu zakończenia nr 3 (*Obracanie bębna*)

—Kod zakończenia nr 3 (*Obracanie bębna*) umożliwia otwarcie drzwi i wyjęcie kilku sztuk ze wsadu w celu uzyskania luzu w bębnie, następnie zamknięcie drzwi i wznowienie obrotów bębna.

For End Code 3 (*Tumbling*)

—End code 3 (*Tumbling*) allows you to open the door and remove some of the goods, then close the door and resume tumbling to loosen more goods from the basket.

Display or Action [Display or Action]	**Wyjaśnienie**	**Explanation**
	Odłączyć zasilanie obwodu 3-żyłowego, wyciszyć sygnał dla operatora i zatrzymać ruch bębna. Ten przycisk także zwalnia blokadę drzwi, aby możliwe było ich otwarcie.	Remove power from the 3-wire circuit, silence the operator signal, and stop any basket motion in progress. This button also unlocks the door so you can open it.
Po zatrzymaniu obracania bębna należy otworzyć drzwi i wyjąć z urządzenia kilka sztuk lub cały wsad.		When the basket stops turning, open the door and remove some or all of the goods from the machine.
	Otworzyć drzwi w celu rozładowania.	Open the door for unloading.
Wyjąć żądaną część ładunku.		Remove any desired portion of the load.
	Zamknąć drzwi.	Close the door.
	Wznowić obracanie bębna bez generowania sygnału dla operatora. Obracanie bębna jest kontynuowane przez kolejne dwie minuty lub do naciśnięcia przycisku .	Resumes the tumbling action without the operator signal. Tumbling continues for another two minutes, or until you press .

— Koniec BICWCO03 —

— End of BICWCO03 —

Rozdział 3 Sygnały i błędy

Chapter 3 Signals and Errors

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3.1. Działanie podejmowane przez operatora

Po uruchomieniu formuły urządzenie zazwyczaj uruchamia się automatycznie. Jeżeli wymagane jest podjęcie działań przez operatora lub ręczne wykonanie zadania, zostanie wygenerowany sygnał. Najczęstszymi przyczynami jest występowanie błędów i ręczne dodawanie środka chemicznego.

Operator Intervention

Once a formula starts, the machine usually runs automatically. The machine will sound the signal if an operator needs to make a decision or do something manually. The most common reasons you'll need to attend to the machine are errors, and to manually add chemicals in some cases.

3.1.1. Błąd wskazywany generowaniem sygnału dla operatora

Jeśli błąd spowoduje zatrzymanie urządzenia, zostanie wygenerowany sygnał dla operatora i zaświeci się lampka ostrzegawcza. Te błędy powodują zazwyczaj wyłączenie 3-żyłowego obwodu. Dotyczą także zablokowania przełącznika wibracji lub nieprawidłowego działania przemiennika, który steruje silnikiem. Rysunek 16 przedstawia błąd przełącznika wibracji wyświetlany na ekranie.

Error with Operator Signal

The operator signal will sound and the beacon will flash if an error causes the machine to stop. These errors usually disable the three-wire circuit, and include a tripped vibration switch or a malfunction of the inverter that controls the motor. Figure 16 shows how a vibration switch error appears on the display.

Rysunek [Figure] **16: Typowe błędy wskazywane generowaniem sygnału dla operatora [Typical Error with Operator Signal]**

W celu wznowienia formuły, wyciszenia sygnału i zlikwidowania przyczyny błędu. Następnie należy ponownie uruchomić formułę.

To resume the formula, silence the signal and correct the cause of the error. Then, restart the formula.

Display or Action [Display or Action]	**Wyjaśnienie**	**Explanation**
	Przycisk anulowania w bloku klawiszy zatrzymuje urządzenie, wycisza brzęczyk i wyłącza lampkę ostrzegawczą. Należy ponownie uruchomić formułę od początku.	The Cancel key on the keypad stops the machine, silences the operator signal buzzer, and turns off the signal light. You'll have to restart the formula from the beginning.

Zlikwidować przyczynę błędu. Jeśli nie jest znana procedura zlikwidowania problemu, należy poprosić osobę z otoczenia o sprawdzenie informacji w podręczniku referencyjnym urządzenia.

Correct the cause of the error. If you don't know how to fix the problem, have someone check the reference manual for the machine.

①	Jeżeli przyczyna błędu została zlikwidowana, naciśnięcie przycisku uruchamiania powoduje wznowienie formuły od miejsca jej zatrzymania. Jeśli przyczyną błędu jest przełącznik wibracji, urządzenie przechodzi przez etap rozmieszczenia wsadu w bębnie, a następnie wznawiany jest przerwany krok wirowania.	If you've corrected the error, the Start button resumes the formula where it stopped. If the vibration switch caused the error, the machine goes through a distribution sequence to spread the goods around the basket, then resumes the interrupted extract step.

3.1.2. Generowanie sygnału dla operatora z powodu środka chemicznego

To urządzenie może sterować automatycznym układem pompy środka chemicznego lub sygnalizować o konieczności ręcznego dodania środka. W każdym przypadku wyświetlany jest ten sam ekran (Rysunek 17), jednak sygnał dla operatora jest generowany, jeśli został on zaprogramowany.

Jeżeli w formule została zaprogramowana opcja sterowania układem pompy środka chemicznego, na ekranie zostanie wyświetlony zaprogramowany numer środka chemicznego, jego nazwa i czas wstrzyknięcia. Natychmiast po rozpoczęciu wstrzyknięcia w dolnej części ekranu po prawej stronie zaczyna się odliczanie czasu wstrzyknięcia.

Jeśli została zaprogramowana opcja sygnalizowania o ręcznym dodaniu środka chemicznego, urządzenie będzie pracować automatycznie do czasu wystąpienia zapotrzebowania na środek. Wówczas urządzenie zostanie zatrzymane, a po dodaniu środka działanie zostanie wznowione. Na ekranie wyświetlany jest rodzaj środka, który należy dodać. Jednak licznik czasu wstrzyknięcia jest uruchamiany dopiero po anulowaniu sygnału dla operatora.

Operator Signal for a Chemical

This machine can control an automatic chemical pump system, or it can signal you to add chemicals manually. The display (Figure 17) appears the same in either case, but the operator signal sounds only if the signal is programmed.

If the formula is programmed to control a chemical pump system, the display shows the programmed chemical valve number, chemical name, and injection time. The injection time, shown at the right end of the chemical display, begins counting down immediately when the chemical injection begins.

If the formula is programmed to signal you to manually add chemicals, the machine will operate automatically until it needs a chemical, then the machine stops and waits for you to add the chemical and resume operation. The display changes to show you which chemical to add, but the injection time counter runs only after you cancel the operator signal.

Rysunek [Figure] **17: Widok wstrzyknięcia środka chemicznego na ekranie pracy [Chemical Injection View on Run Display]**

Display or Action [Display or Action]	Wyjaśnienie	Explanation
Po dodaniu środka chemicznego		After you've added the chemical,
	należy anulować sygnał dla operatora i uruchomić licznik czasu wstrzyknięcia.	cancels the operator signal and starts the injection time counter.

— Koniec BICWCT04 —

— End of BICWCT04 —