Part A, Section 1

Description

This section covers the following unit configurations.

<table>
<thead>
<tr>
<th>Model</th>
<th>3860V</th>
</tr>
</thead>
<tbody>
<tr>
<td>Voltage</td>
<td>3890V</td>
</tr>
<tr>
<td>Pump</td>
<td>1, 2</td>
</tr>
<tr>
<td>Manifold</td>
<td>AC Gear (K or L)</td>
</tr>
<tr>
<td>Control</td>
<td>4-Port (J)</td>
</tr>
<tr>
<td></td>
<td>Vista Pattern (PC)</td>
</tr>
</tbody>
</table>
Section A 1
Description

1. Intended Use

Series 3800V applicators may be used only to melt and pump hot melt material. They are not intended for use with polyurethane-reactive hot melt material. Use the applicators only as described in this manual.

2. Overview

This manual describes how to install, operate, and service a Series 3800V applicator with pattern control. It also explains how the applicator works with other major components of a hot melt system.

This section of the manual describes the key parts of the applicator and how they work. It includes the following topics:

- Functional Description
- Major Components
- Control System
- Specifications
- Dimensions
- Explanation of Configuration Code

For information about any options or accessories you may have ordered with your unit, refer to the Options section.
3. **Functional Description**

The Series 3800V applicator is the main component of your hot melt system. The applicator melts the adhesive, controls it at your setpoint (operating) temperatures, and pumps it through hoses to the dispensing guns. The dispensing guns apply the adhesive to the surface of your product or package.

Figure A 1-1 shows a Series 3800V applicator along with other key components of a hot melt system.

![Fig. A 1-1 Hot Melt System with a Series 3800V Applicator](image)

The applicator has three basic modes of operation:

- the startup mode
- the operating mode
- the standby mode

Each mode is briefly described in the following paragraphs.
**Startup Mode**

During a sequential startup, when the clock timer or an operator turns the system on, the tank and hoses begin to heat first. After the temperatures of the tank and hoses are all within 19.5 °C (35 °F) of their setpoint temperatures, the guns begin to heat. When the tank, hoses, and guns are within 3 °C (5 °F) of their setpoint temperatures, a time delay begins. The time delay, which you can adjust, provides additional time for the material in the tank to melt. At the end of the time delay, the green READY light turns on, indicating that the pump can be turned on.

The capability to heat all zones simultaneously is also available.

**Operating Mode**

When you trigger a gun, the pump draws in the melted adhesive and sends it through a manifold, a filter, and a hose to the gun, which then applies the adhesive to the product or package surface. In most systems, an air-operated automatic gun is used to apply the melted adhesive. An electrically driven gun or a handgun may also be used to apply adhesive.

**Standby Mode**

When you place the applicator in the standby mode, the control system disables the pump and reduces the temperature of all heating zones to the standby temperature setpoints you have selected. You can use the standby mode to keep the adhesive warm when normal operation must be interrupted for a while. The lower temperature reduces char formation and conserves energy.
4. Major Components

The major components of the applicator are briefly described on the following pages.

Fig. A 1-2  Major Components of a Typical Series 3830V Applicator
1. Pump and motor assembly  3. Manifold components
2. Tank  4. Operator panel

Tank

The tank holds a large supply of adhesive and melts it before it is pumped to the dispensing guns. The tank has three main parts:

- a hopper
- a reservoir
- melting fins

Refer to Specifications in this section for the tank storage capacity and other key information about the tank.
**Hopper**

The hopper holds a supply of unmelted adhesive. It is supported by the hopper mount, which connects the hopper to the reservoir. You can open a lid in the hopper enclosure (not shown) to refill the hopper.

**Reservoir**

The reservoir maintains the melted adhesive at application temperature and directs it to the pump inlet. With its aluminum construction and cast-in heater, the reservoir is designed for efficient heat transfer.

**Melting Fins**

The melting fins improve heat transfer to the adhesive, providing faster warmup and a higher melt rate. Mounted on the bottom of the reservoir, the fins are indirectly heated by the reservoir.

![Diagram of the Tank](4130635)

**Fig. A 1-3  Key Parts of the Tank**

1. Hopper
2. Hopper mount
3. Reservoir
4. Melting fins
5. Heater connectors
Pump

The gear pump transfers the melted adhesive from the tank to the dispensing guns. Driven at a constant speed by an AC motor, the pump delivers an uninterrupted flow of adhesive through the manifold and hoses to the dispensing guns.

The pump has two main parts:

- an AC motor
- a gear pump

Refer to Specifications in this section for the pump delivery rate and other key information about the pump and motor.

![Fig. A 1-4 Key Parts of the Pump](4130732)

1. AC motor
2. Gear pump
**Manifold**

The manifold directs the flow of adhesive from the pump to the filter and from the filter to the hoses.

The manifold has five main parts:

- a manifold block with hose connectors
- a manifold filter
- a drain valve
- a pressure control valve
- a pressure relief valve

![Manifold Block and Hose Connectors](image)

**Fig. A 1-5 Key Parts of the Manifold**

1. Manifold block with hose connectors
2. Drain valve
3. Manifold filter
4. Pressure control valve
5. Pressure relief valve

---

**Manifold Block and Hose Connectors**

The manifold block has a 45-degree face for either horizontal or vertical hose routing. A maximum of four hoses can be connected to the manifold.

**Manifold Filter**

The manifold filter traps any char or foreign material, keeping it from being pumped to the dispensing guns. The applicator is shipped with a 0.15-mm (0.006-in.) filter screen. Other screen sizes are available.
**Drain Valve**

The drain valve allows you to drain the tank and manifold or to flush char and debris from the filter screen. Operators can perform the filter flushing procedure without removing the filter from the manifold.

**Pressure Relief Valve**

The pressure relief valve prevents system hydraulic pressure from exceeding 10,400 kPa (1500 psi). At this pressure, the valve opens and returns adhesive to the tank.

**Pressure Control Valve**

The pressure control valve operates as follows: when the applicator is dispensing adhesive, the valve is closed so that all of the adhesive is supplied to the dispensing guns. When the guns close, pressure begins to build in the system. If the guns remain closed long enough, the pressure will reach the pressure control valve’s pressure setting. At this point, the valve will open to maintain pressure by allowing some of the adhesive to flow back into the tank.

Figure A 2-6 shows the components of a typical hot melt system and the path that melted adhesive follows when being pumped through the system.
Fig. A 1-6  Adhesive Flow Path of a Typical Hot Melt System

1. Motor  
2. Tank  
3. Gear pump  
4. Pressure relief valve  
5. Manifold  
6. Filter  
7. Gun  
8. Hose  
9. Drain valve  
10. Pressure control valve
**Operator Panel**

The operator panel provides the controls and indicators you need to program, operate, and monitor your hot melt system. The key functions of the operator panel are described in the next part of this section, *Control System*.

5. **Control System**

The control system regulates all temperature settings and controls how the unit functions. The operator panel allows you to program the system to meet changing needs:

- Heated zones are controlled individually, giving you more flexibility in setting up your system.

- With the seven-day clock feature, you can tailor operations for a week at a time, with different schedules for each day of the week.

The control system is designed so that a brownout or power failure will not cause a loss of your programmed settings.
**Features of the Operator Panel**

The operator panel provides the controls, indicators, and messages needed to operate the system. It is divided into four functional areas:

- System Status
- Displays
- System Setup
- System Controls

![Operator Panel Diagram](image)

**Fig. A 1-7  Operator Panel**

1. System Status area  
2. Displays area  
3. System Setup area  
4. System Controls area
System Status Area

The System Status area of the operator panel gives you a quick summary of the status of your system. The FAULT and READY lights let you know if the system is prepared for operation.

![System Status Area Diagram](image)

**Fig. A 1-8** System Status Area

1. FAULT light
2. READY light

**FAULT Light**

The red FAULT light indicates different types of fault conditions. Refer to Table A 1-1.

**Table A 1-1 System Notification of FAULT Conditions**

<table>
<thead>
<tr>
<th>FAULT Light Status (see Note)</th>
<th>System Condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>FAULT light turns on and stays on.</td>
<td>A heater zone is overtemperature.</td>
</tr>
<tr>
<td>FAULT light flashes for two minutes, then stays on.</td>
<td>A resistance temperature detector (RTD) in any zone is open or shorted.</td>
</tr>
<tr>
<td>FAULT light flashes continuously.</td>
<td>A heater zone is out of band, either high or low.</td>
</tr>
<tr>
<td></td>
<td>A heater zone is more than 19.5 °C (35 °F) under the setpoint temperature.</td>
</tr>
<tr>
<td></td>
<td>The pattern control board is malfunctioning.</td>
</tr>
</tbody>
</table>

**NOTE:** When the FAULT light turns on and stays on, the system removes heater power for all zones. When the FAULT light flashes, heater power stays on.
**READY Light**

The green READY light turns on when the following conditions exist:

- All zones are within +/- 3 °C (+/- 5 °F) of the setpoint temperatures.
- The system-ready time delay has elapsed.
- No faults exist.

**Displays Area**

The Displays area of the operator panel gives you detailed information about the status of your system. When you are running the system, it shows the status of each heating zone. When you are customizing the system, it shows your current system setup.

![Fig. A 1-9 Displays Area](image)

1. Selector display  
2. Multipurpose display  
3. Actual temperature display  
4. Enter key  
5. Up and Down keys  
6. Up key
Selector Display and Up Key

The Selector display allows you to access information about the status of your system during operation and system setup. The display:

- shows the selected zone number when used with TEMPERATURE and when scanning
- shows the day when used with CLOCK
- shows the feature number when used with SYSTEM SETTINGS
- shows the currently active pattern when used with PATTERN CONTROL

The Up key, which is located below the Selector display, changes the value of a setting.

Multipurpose Display and Keys

During normal operation, the Multipurpose display shows the setpoint temperature for a selected zone. This allows you to compare the actual temperature of the displayed zone with its targeted temperature.

Actual Temperature Display

The Actual Temperature display shows the actual temperature of the heated zone. When the scan mode is enabled, each zone is displayed in sequence. When the scan mode is disabled, only the temperature for the selected zone is displayed.

Enter Key

The Enter key saves the number shown in the Multipurpose display.
The System Setup area of the operator panel allows you to customize the system to your needs. From this area you can control:

- the temperature at which each zone operates (TEMPERATURE)
- how the unit operates (SYSTEM SETTINGS)
- when the system operates (CLOCK)
- the pattern of adhesive that the system applies (PATTERN CONTROL)

To customize system controls, use the keys in the System Setup area in conjunction with the keys in the Displays area.

**Move Up and Move Down Keys**

The Move Up and Move Down keys select features within the System Setup area, allowing you to tailor the system to your needs. You can select the following features using the Move Up and Move Down keys:

- SETPOINT temperature
- STANDBY temperature
- SYSTEM SETTINGS
- SET TIME
- ENTER STANDBY
- EXIT STANDBY
- HEATERS ON
- HEATERS OFF
- Output 1
- Output 2
- LINE SPEED
- STORE
- USE

---

**System Setup Area**

Fig. A 1-10 System Setup Area

1. Move Up and Move Down keys
2. Move Right key
3. TEMPERATURE area
4. SYSTEM SETTINGS area
5. CLOCK area
6. PATTERN CONTROL area

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A2EN-03-[3V-8-ACJP]-23
Move Right Key

The Move Right key selects features within the System Setup area, allowing you to tailor the system to your needs. You can select the following features using the Move Right key:

- INTERNAL zone
- HOSE zone
- GUN zone
- INTERVAL 1
- INTERVAL 2
- bead position

TEMPERATURE Area

The TEMPERATURE area of System Setup allows you to program the setpoint and standby temperatures for three types of heated zones: internal, hose, or gun.

When used in the TEMPERATURE area,

- The Move Up and Move Down keys select SETPOINT or STANDBY.
- The Move Right key selects the zone type (internal, hose, or gun) for programming temperatures (standby or setpoint).
**SYSTEM SETTINGS Area**

From the SYSTEM SETTINGS area, you can customize or check the settings of the following system features:

- password enable
- system-ready time delay
- overtemperature setpoint
- Celsius or Fahrenheit units
- global temperature bands
- individual temperature bands
- sequential startup or simultaneous startup
- display heater proportioning
- warning or power notification
- ready or pump notification
- auto-energize heaters
- time with heaters on
- fault log display
- auto-energize pattern control

**CLOCK Area**

From the CLOCK area you can program the system to turn heaters on or off or to place the system in standby or operating mode at a time that you select. The clock stores two sets of times, referred to as intervals. Each interval stores four settings as shown in Table A 1-2.

<table>
<thead>
<tr>
<th>INTERVAL 1</th>
<th>INTERVAL 2</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Standby Settings</strong></td>
<td><strong>Heater Settings</strong></td>
</tr>
<tr>
<td>Enter</td>
<td>On</td>
</tr>
<tr>
<td>Exit</td>
<td>Off</td>
</tr>
<tr>
<td>Enter</td>
<td>On</td>
</tr>
<tr>
<td>Exit</td>
<td>Off</td>
</tr>
</tbody>
</table>
**PATTERN CONTROL Area**

The PATTERN CONTROL area of the operator panel allows you to customize the bead patterns for a fixed-speed production line. Each of the two separate outputs consists of two beads entered in either time (milliseconds) or distance (inches or millimeters). From this area you can:

- Set the location of each bead.
- Define the length of each bead.
- Define the pattern in either time or distance units.
- Store or recall different patterns.

To customize the bead patterns, use the keys in the System Setup area in conjunction with the keys in the Displays area.

**Fig. A 1-11 PATTERN CONTROL Setup Lights**

1. Bead position lights
2. Output 1 and output 2 lights
3. LINE SPEED light
4. STORE light
5. USE light
The System Controls area of the operator panel allows you to control basic system operations and override programmed controls. The lights in this area tell you whether a feature is on or off. Using the keys and switches in this area, you can

- Monitor the status of a particular zone, or scan each zone to check its status.
- Take the system into or out of standby.
- Turn the heaters on or off.
- Turn the clock feature on or off. (This is useful when you do not want the system to startup automatically.)
- Turn the pump on or off.
- Run a system test to determine whether a fault that the system has detected was corrected.
- Turn the Pattern Control feature on or off.
- Test (or manually energize) the guns operated by the Pattern Control.
- Turn main power to the applicator on or off.

Fig. A 1-12 System Controls Area
1. MONITOR/SCAN key and light
2. STANDBY key and light
3. HEATERS key and light
4. CLOCK key and light
5. PUMP key and light
6. CLEAR FAULTS key
7. PATTERN CONTROL key and light
8. Output channel test keys
9. POWER switch
**MONITOR/SCAN Key and Light**

Pressing the MONITOR/SCAN key places the system in the monitor or scan mode. In the scan mode,

- The system scans each heated zone, displaying each zone’s temperature in sequence.

- If the system-ready time delay feature is active, the system shows the number of minutes remaining until the system is ready for operation.

- The MONITOR/SCAN light turns on and stays on.

In the monitor mode,

- The system displays the temperature of only the zone currently selected.

- If the system-ready time delay feature is active and is currently selected for monitoring, the system shows the number of minutes remaining until the system is ready for operation.

- The MONITOR/SCAN light stays on.
**STANDBY Key and Light**

Pressing the STANDBY key when the HEATERS light is on takes the system into or out of the standby mode. When the standby feature is active,

- The STANDBY light turns on.
- The READY light turns off.
- The pump turns off.
- Temperatures on all zones drop until the temperature of each zone reaches the preselected standby temperature.
- The HEATERS light remains on.

If the HEATERS light is not on, you cannot place the system in the standby mode.

When the standby feature is disabled,

- The STANDBY light turns off.
- The heaters turn on and all zones begin heating.
- After all zones have reached their preselected setpoint temperature, the READY light turns on.
HEATERS Key and Light
Pressing the HEATERS key turns power to the heaters on and off. The heaters must be turned on for the unit to operate.

The HEATERS light turns on when this feature is active.

NOTE: If the system is set for auto-energize heaters, the heaters are automatically enabled and the HEATERS light turns on when the POWER switch is turned on.

CLOCK Key and Light
Pressing the CLOCK key turns the seven-day clock on and off. When the clock is on, the system is controlled by the settings for ENTER STANDBY, EXIT STANDBY, HEATERS ON, and HEATERS OFF.

The CLOCK light turns on when this feature is active.

NOTE: If the clock feature is enabled when the POWER switch is turned off, it will automatically be enabled when the switch is turned back on. The CLOCK light will turn on to show that the clock feature is enabled.

PUMP Key and Light
Pressing the PUMP key turns the pump on and off. The PUMP light turns on when this feature is active.

CLEAR FAULTS Key
Pressing the CLEAR FAULTS key runs a system test. The test lasts five seconds and verifies that the problem causing a system fault was corrected. If the problem was corrected, the FAULT light in the System Status area of the operator panel will turn off once the test is completed. If the problem was not corrected, the FAULT light will stay on.
**PATTERN CONTROL Keys and Lights**

The PATTERN CONTROL key and light on the operator panel give you a quick summary of the status of the pattern controller. The PATTERN CONTROL key turns the pattern controller on or off. The corresponding light is on when the feature is active.

Two TEST keys allow the guns to be manually fired. This function is available only when the pattern controller is OFF and is not remotely disabled.

The three lights in this area assist you in troubleshooting.

<table>
<thead>
<tr>
<th>Light</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>SENSOR</td>
<td>Blinks each time the product travels by the product sensor.</td>
</tr>
<tr>
<td>OUTPUT 1</td>
<td>Blinks each time the gun attached to output 1 fires.</td>
</tr>
<tr>
<td>OUTPUT 2</td>
<td>Blinks each time the gun attached to output 2 fires.</td>
</tr>
</tbody>
</table>

**POWER Switch**

Pressing the POWER switch turns power to the applicator on or off.
### 6. Specifications

<table>
<thead>
<tr>
<th>Item</th>
<th>Specification</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>General</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Weight of Empty Unit</td>
<td>Series 3860V: 109 kg (240 lb)</td>
<td>A</td>
</tr>
<tr>
<td></td>
<td>Series 3890V: 114 kg (250 lb)</td>
<td></td>
</tr>
<tr>
<td>Weight of Full Unit</td>
<td>Series 3860V: 140.8 kg (310 lb)</td>
<td>A</td>
</tr>
<tr>
<td></td>
<td>Series 3890V: 159.4 kg (350 lb)</td>
<td></td>
</tr>
<tr>
<td>Hose Ports</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Melt Rate</td>
<td>24.9 kg/hr (55 lb/hr)</td>
<td></td>
</tr>
<tr>
<td>Work Place Temperature Range</td>
<td>0–40 °C (32–104 °F)</td>
<td></td>
</tr>
<tr>
<td>Noise Level</td>
<td>64 dB (A) at maximum pump speed</td>
<td>B</td>
</tr>
<tr>
<td><strong>Electrical/Controls</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Electrical Service</td>
<td>200–240 Vac 1 or 3</td>
<td>C</td>
</tr>
<tr>
<td></td>
<td>230 Vac (with neutral) 1 or 4</td>
<td></td>
</tr>
<tr>
<td></td>
<td>400/230 Vac (with neutral) 3</td>
<td></td>
</tr>
<tr>
<td>Hose/Gun Heating Capacity</td>
<td>2 or 4 hose/gun pairs</td>
<td>D</td>
</tr>
<tr>
<td>Control Temperature Range</td>
<td>38–232 °C (100–450 °F)</td>
<td></td>
</tr>
<tr>
<td>Control Temperature Accuracy</td>
<td>+/- 0.5 °C (+/- 1 °F)</td>
<td></td>
</tr>
<tr>
<td><strong>Motor</strong></td>
<td>1/3 hp 230 Vac (50/60 Hz)</td>
<td>E</td>
</tr>
<tr>
<td></td>
<td>1/3 hp 250 Vac (50 Hz)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1/3 hp 200 Vac (50 Hz)</td>
<td></td>
</tr>
<tr>
<td><strong>Pump</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Viscosity</td>
<td>800–30,000 mPa•s (up to 30,000 cps)</td>
<td></td>
</tr>
<tr>
<td>Hydraulic Pressure</td>
<td>8300 kPa (1200 psi)</td>
<td></td>
</tr>
<tr>
<td>(maximum while running)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Output Rate (maximum)</td>
<td>1/3 hp 230 or 250 Vac gear pump:</td>
<td>E, F</td>
</tr>
<tr>
<td></td>
<td>410 g/min (0.90 lb/min)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1/3 hp 200 Vac gear pump:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>350 g/min (0.80 lb/min)</td>
<td></td>
</tr>
<tr>
<td>Speed (maximum)</td>
<td>1/3 hp 230 or 250 Vac gear pump:</td>
<td>E</td>
</tr>
<tr>
<td></td>
<td>139 rev/min (60 Hz)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1/3 hp 200 Vac gear pump:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>120 rev/min (50 Hz)</td>
<td></td>
</tr>
<tr>
<td><strong>Tank</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Capacity</td>
<td>Series 3860V: 31.8 kg (70 lb)</td>
<td>A</td>
</tr>
<tr>
<td></td>
<td>Series 3890V: 45.4 kg (100 lb)</td>
<td></td>
</tr>
<tr>
<td>Volume</td>
<td>Series 3860V: 33.8 liters (2064 in.³)</td>
<td>A</td>
</tr>
<tr>
<td></td>
<td>Series 3890V: 48.6 liters (2964 in.³)</td>
<td></td>
</tr>
</tbody>
</table>

**NOTE**

A: To determine whether you have a Series 3860V or 3890V unit, refer to *Explanation of Configuration Code* at the end of this section.

B: The noise level is measured at a distance of 1 m from the surface of the unit and at a height of 1.6 m from the access platform.

C: To determine the electrical service of your unit, refer to *Explanation of Configuration Code* at the end of this section.

D: To determine the number of hose and gun pairs that your unit can heat, refer to *Explanation of Configuration Code* at the end of this section.

E: To determine the motor voltage of the pump on your unit, refer to *Explanation of Configuration Code* at the end of this section.

F: The output rate is based on a material density of 0.84 g/ml (0.03 lb/in.³) and a specific gravity of 0.84.
Table A 1-5  Pattern Controller Specifications

<table>
<thead>
<tr>
<th>Item</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>General</strong></td>
<td></td>
</tr>
<tr>
<td>Type of Application</td>
<td>constant speed</td>
</tr>
<tr>
<td>Line Speed</td>
<td>1-152 m/min (1-500 ft/min)</td>
</tr>
<tr>
<td>Programming</td>
<td>time based or distance based</td>
</tr>
<tr>
<td><strong>Pattern</strong></td>
<td></td>
</tr>
<tr>
<td>Output Channels</td>
<td>two independent channels (24 Vdc @ 1A each)</td>
</tr>
<tr>
<td>Pattern Complexity</td>
<td>two delay and two duration intervals per channel</td>
</tr>
<tr>
<td>Storage</td>
<td>up to 99 patterns</td>
</tr>
<tr>
<td>Control Accuracy</td>
<td>+/- 1 ms</td>
</tr>
<tr>
<td><strong>Trigger</strong></td>
<td></td>
</tr>
<tr>
<td>Trigger Inputs</td>
<td>one (9-24 Vdc)</td>
</tr>
<tr>
<td>Trigger Type</td>
<td>compatible with sourcing or sinking devices</td>
</tr>
</tbody>
</table>
7. Dimensions

Fig. A 1-14 References for Applicator Dimensions and Clearances

Table A 1-6 Series 3800V Applicator Dimensions in Millimeters (Inches)

<table>
<thead>
<tr>
<th>Dimension</th>
<th>mm (in.)</th>
<th>Note</th>
<th>Dimension</th>
<th>mm (in.)</th>
<th>Note</th>
<th>Dimension</th>
<th>mm (in.)</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>207 (8.16)</td>
<td>1</td>
<td>F</td>
<td>669 (26.34)</td>
<td></td>
<td>K</td>
<td></td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>298 (11.75)</td>
<td>2</td>
<td>G</td>
<td>343 (13.50)</td>
<td></td>
<td>L</td>
<td>62 (2.24)</td>
<td></td>
</tr>
<tr>
<td>C</td>
<td>38 (1.50)</td>
<td>3</td>
<td>H</td>
<td>249 (9.80)</td>
<td></td>
<td>M</td>
<td>110 (4.32)</td>
<td></td>
</tr>
<tr>
<td>D</td>
<td>See Note</td>
<td>4</td>
<td>I</td>
<td>322 (12.69)</td>
<td></td>
<td>N</td>
<td>291 (11.44)</td>
<td>6</td>
</tr>
<tr>
<td>E</td>
<td>934 (36.81)</td>
<td>5</td>
<td>J</td>
<td>See Note</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

NOTE 1. Clearance needed to remove filter.
2. Clearance needed to open control panel.
3. Clearance needed to remove electrical enclosure cover.
4. To remove the pump/hopper enclosure, allow 418 (16.47) on Series 3860V units and 672 (26.47) on Series 3890V units.
5. Series 3860V units = 724 (28.50). Series 3890V units = 978 (38.50).
6. Size of tank opening = 229 mm × 254 mm (9.00 in. × 10.00 in.).
To determine the features, options, and specifications your unit has, check the unit number (configuration code) printed on your shipping order or on your unit. To find the code on your unit, look at the identification plate located above the hose ports (see Figure A 1-15).

Once you have located the configuration code, refer to the following code descriptions and example to determine the specific features and options of your unit.

Fig. A 1-15  Location of Unit Number (Configuration Code)
To determine the features and options specific to your unit, match the code in each code position (Boxes 1–11) to the codes in the following chart. The chart provides a description for each code. For more information, see the example following the chart.

<table>
<thead>
<tr>
<th>Model</th>
<th>Voltage</th>
<th>Pump/Drive</th>
<th>Manifold/Filter</th>
<th>Vista Controls</th>
<th>Electrical Control</th>
<th>Language Tags</th>
<th>Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8-11</td>
</tr>
</tbody>
</table>

**Box 1**
- **Model**
  - Series 3100V
  - Series 3400V
  - Series 3500V
  - Series 3700V
  - Series 3830V
  - Series 3860V
  - Series 3890V
  - Series 3930V
  - Series 3960V

**Box 2**
- **Voltage**
  - 200-240 VAC 1 or 3
  - 230 VAC (with neutral) 1, or 400/230 VAC (with neutral) 3
  - 400 VAC 3

**Box 3**
- **Pump/Drive**
  - 6:1 piston pump
  - 14:1 piston pump
  - 21:1 piston pump
  - 1/3 hp 230 Vac (50/60 Hz) drive gear pump
  - 1/3 hp 250 Vac (50 Hz) drive gear pump
  - 1/3 hp 200 Vac (50 Hz) drive gear pump

**Box 4**
- **Manifold/Filter**
  - Non-circulating 4-port manifold with standard filter
  - Non-circulating 6-port manifold with standard filter
  - Non-circulating 6-port manifold with reverse-flush filter
  - Non-circulating 4-port manifold with standard filter and pressure control valve
  - Externally circulating 2-port manifold with circulation valve and standard filter
  - Externally circulating 2-port manifold with circulation valve and reverse-flush filter
<table>
<thead>
<tr>
<th>Model</th>
<th>Voltage</th>
<th>Pump/Drive</th>
<th>Manifold/Filter</th>
<th>Vista Controls</th>
<th>Electrical Control Capacity</th>
<th>Language Tags</th>
<th>Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8-11</td>
</tr>
</tbody>
</table>

**Box 5**

**Vista Controls**
- Vista control (standard)
- Vista pattern control (PC)
- Vista temperature control (TC)

**Box 6**

**Electrical Control Capacity**
- 2 hose/gun pairs
- 4 hose/gun pairs
- 6 hose/gun pairs

**Box 7**

**Language Tags**
- English/German
- English/French
- English/Japanese

**Box 8-11**

**Options**
- Low-level indicator
- Input/output board (standard)
- Input/output board with hose/gun disable (enhanced)
- Input/output board for TC controller
- CE certification
Example

The following example shows how the code 3400V-2EAV4D/AR can be used to determine the features and options of the unit.

<table>
<thead>
<tr>
<th>Model</th>
<th>Voltage</th>
<th>Pump/Drive</th>
<th>Manifold/Filter</th>
<th>Vista</th>
<th>Controls</th>
<th>Electrical Control Capacity</th>
<th>Language Tags</th>
<th>Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>3400V</td>
<td>2</td>
<td>E</td>
<td>A</td>
<td>V</td>
<td>4</td>
<td>D</td>
<td>/</td>
<td>A R</td>
</tr>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8-11</td>
<td></td>
</tr>
</tbody>
</table>

Table A 1-7 Explanation of Example Configuration Code

<table>
<thead>
<tr>
<th>Box</th>
<th>Description</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Series 3400V</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>230 Vac (with neutral) 1 service or 400/230 Vac (with neutral) 3 service</td>
<td>A</td>
</tr>
<tr>
<td>3</td>
<td>14:1 piston pump</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Non-circulating 4-port manifold with a standard filter</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Standard Vista control system</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Electrical capacity for heating 4 hose/gun pairs</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Unit tags in English and German</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Low-level indicator included as an option</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>CE certification included as an option</td>
<td></td>
</tr>
</tbody>
</table>

NOTE A: All units are shipped ready for three-phase operation but include a voltage plug (and a wiring harness on some units) that allows you to quickly convert from three-phase operation to single-phase operation. Refer to Preparing the Unit for Single-Phase Operation in the Installation section.