### Description

This section covers the following unit configurations.

| Model  | 3860 V
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>3890 V</td>
</tr>
<tr>
<td>Voltage</td>
<td>1, 2</td>
</tr>
<tr>
<td>Pump</td>
<td>Piston (F)</td>
</tr>
<tr>
<td>Manifold</td>
<td>4-Port (A)</td>
</tr>
<tr>
<td></td>
<td>6-Port (B or C)</td>
</tr>
<tr>
<td>Control</td>
<td>Vista Standard (V)</td>
</tr>
</tbody>
</table>
Section A 2
Description

1. Intended Use

Series 3800 V 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 3800 V applicator. 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 3800 V 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 2-1 shows a Series 3800 V applicator along with other key components of a hot melt system.

![Fig. A 2-1 Hot Melt System with a Series 3800 V 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 system is ready for operation. You can program the system so the pump starts automatically, either when the READY light turns on or when the tank reaches the temperature you have specified. Or you can program the system so the pump must be started manually.

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. Figure A 2-2 shows the components of a typical hot melt system and the path that melted adhesive follows when being pumped through the system. Most systems use an air-operated automatic gun to apply the melted adhesive. However, you can also use an electrically driven gun or a hand-operated manual gun (shown in dotted lines in Figure A 2-2) 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.
Fig. A 2-2  Adhesive Flow Path of a Typical Hot Melt System (standard filter shown)

1. Air piston  
2. Air cylinder  
3. Pump  
4. Air pressure regulator  
5. Hydraulic plunger  
6. Tank  
7. Pressure relief valve  
8. Manifold  
9. Manifold filter  
10. Drain valve  
11. Hose  
12. Air-operated gun  
13. Handgun and hose
4. **Major Components**

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

![Diagram of Major Components](4130505)

**Fig. A 2-3** Major Components of a Typical Series 3800 V Applicator

1. Pump
2. Tank
3. Air pressure regulator
4. Manifold and manifold filter
5. 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.

---

**Fig. A 2-4 Key Parts of the Tank**

1. Hopper
2. Hopper mount
3. Reservoir
4. Melting fins
5. Heater connectors
The pump transfers the melted adhesive from the tank to the dispensing guns. With its dual-acting design, the piston pump delivers adhesive to the product or package surface on both the upstroke and the downstroke.

The pump has three main parts:

- an air motor
- a hydraulic section
- an actuator

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

Fig. A 2-5  Key Parts of the Pump

1. Air motor
2. Hydraulic section
3. Actuator
Manifold

The manifold directs the flow of adhesive from the pump to the filter and from the filter to the hoses. The manifold has four main parts:

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

![Manifold Diagram](image)

Fig. A 2-6  Key Parts of the Manifold
1. Manifold block with hose connectors
2. Drain valve
3. Manifold filter
4. 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 or six hoses can be connected to the manifold, depending upon the type of manifold selected for your applicator. To determine the maximum hose capacity of your manifold, refer to Explanation of Configuration Code at the end of this section.

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, with optional screen sizes available.

Your applicator may be equipped with either a standard or a reverse-flush filter. To determine which filter your applicator has, refer to Explanation of Configuration Code at the end of this section.
**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.

Applicators with the reverse-flush filter are equipped with two valves, one for draining the tank and one for flushing the filter.

**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.

**Air Pressure Regulator**

The air pressure regulator allows you to adjust the system air pressure, which controls the pumping rate. The regulator assembly has three main parts:

- a regulator
- a filter
- a gauge

The gauge indicates the air pressure and the filter removes contaminants from the air.

**Operator Panel**

The operator panel gives you 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 detail in the next part of this section, *Control System*. For information on programming and system operation, refer to the *Operation* section.
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.

Because the controller stores data on a special chip that does not require a battery backup, a brownout or a power failure has no negative impact on memory.

Features of the Operator Panel

The operator panel of the control system 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

![Fig. A 2-8 Operator Panel](Image)

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 2-9  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 2-1.

<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 sensor (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>
</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 ±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.

![Display Area Diagram]

Fig. A 2-10 Displays Area

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
- the day when used with CLOCK
- the feature number when used with SYSTEM SETTINGS

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)

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

**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
**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 pump
- auto-energize heaters
- time with heaters on
- fault log display
- auto-energize pump temperature setting

**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 2-2.

<table>
<thead>
<tr>
<th>Table A 2-2  Interval Settings</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>INTERVAL 1</strong></td>
</tr>
<tr>
<td><strong>Standby Settings</strong></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td><strong>Heater Settings</strong></td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>
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 main power to the applicator on or off.

**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 is turned 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.
- If the auto-energize pump feature is active, the pump turns on either when the system reaches the ready condition or when the tank reaches the temperature you have specified.
- 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.

**NOTE:** If the system is set for auto-energize pump, the pump turns on either when the READY light turns on or when the tank reaches the temperature you have specified. Refer to features 24 and 32 in Table A 4-2 in the Operation section.

**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.

**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 3860 V: 98 kg (215 lb)</td>
<td>A</td>
</tr>
<tr>
<td></td>
<td>Series 3890 V: 102 kg (225 lb)</td>
<td></td>
</tr>
<tr>
<td>Weight of Full Unit</td>
<td>Series 3860 V: 126.8 kg (285 lb)</td>
<td>A</td>
</tr>
<tr>
<td></td>
<td>Series 3890 V: 147.4 kg (325 lb)</td>
<td></td>
</tr>
<tr>
<td>Hose Ports</td>
<td>4 or 6</td>
<td>B</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>C</td>
</tr>
<tr>
<td><strong>Electrical/Controls</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Electrical Service</td>
<td>200–240 Vac 1Ø or 3Ø</td>
<td>D</td>
</tr>
<tr>
<td></td>
<td>230 Vac (with neutral) 1Ø or</td>
<td></td>
</tr>
<tr>
<td></td>
<td>400/230 Vac (with neutral) 3Ø</td>
<td></td>
</tr>
<tr>
<td>Hose/Gun Heating Capacity</td>
<td>2, 4, or 6 hose/gun pairs</td>
<td>E</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>Pump</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Air Pressure while Running</td>
<td>70–483 kPa (10–70 psi)</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 (maximum while running)</td>
<td>10,400 kPa (1500 psi)</td>
<td></td>
</tr>
<tr>
<td>Air Consumption at 415 kPa (60 psi) and Maximum Pump Speed</td>
<td>115 l/min (4.1 standard ft³/min)</td>
<td></td>
</tr>
<tr>
<td>Displacement (maximum)</td>
<td>16.00 ml/stroke (1.00 in.³/stroke)</td>
<td></td>
</tr>
<tr>
<td>Output rate (maximum)</td>
<td>910 g/min (2.00 lb/min)</td>
<td>F</td>
</tr>
<tr>
<td>Speed (maximum)</td>
<td>66 strokes/min</td>
<td></td>
</tr>
<tr>
<td><strong>Tank</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Capacity</td>
<td>Series 3860 V: 31.8 kg (70 lb)</td>
<td>A</td>
</tr>
<tr>
<td></td>
<td>Series 3890 V: 45.4 kg (100 lb)</td>
<td></td>
</tr>
<tr>
<td>Volume</td>
<td>Series 3860 V: 33.8 liters (2064 in³)</td>
<td>A</td>
</tr>
<tr>
<td></td>
<td>Series 3890 V: 48.6 liters (2964 in³)</td>
<td></td>
</tr>
</tbody>
</table>

**NOTE**

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

B: To determine the number of hose ports on your unit, refer to *Explanation of Configuration Code* at the end of this section.

C: 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.

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

E: 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.

F: The output rate is based on a material density of 0.84 g/ml (0.03 lb/in³) and a specific gravity of 0.84.
7. Dimensions

Table A 2-4  Series 3800 V 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>See Note</td>
<td>1</td>
<td>F</td>
<td>669 (26.34)</td>
<td></td>
<td>K</td>
<td>See Note</td>
<td>7</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>See Note</td>
<td>5</td>
<td>N</td>
<td>291 (11.44)</td>
<td>8</td>
</tr>
<tr>
<td>E</td>
<td>934 (36.81)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

NOTE 1: To remove filter, allow 207 (8.16) on units with four-port manifolds and 330 (13.00) on units with six-port manifolds.
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 3860 V units and 672 (26.47) on Series 3890 V units.
5. Units with four-port manifolds = 322 (12.69). Units with six-port manifolds = 348 (13.69).
7. Units with four-port manifolds = 0 (0). Units with six-port manifolds = 54 (2.13).
8. Size of tank opening = 229 mm x 254 mm (9.00 in. x 10.00 in.).
8. Explanation of Configuration Code

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 2-14.)

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 2-14 Location of Unit Number (Configuration Code)
To determine the features and options specific to your unit, match each position of the code with the chart below and then refer to the appropriate code description. 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 Capacity</th>
<th>Language</th>
<th>Tags</th>
<th>Options</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>8-11</td>
</tr>
</tbody>
</table>

**Box 1**

<table>
<thead>
<tr>
<th>Code Descriptions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model Code Descriptions</td>
</tr>
<tr>
<td>------------------------</td>
</tr>
<tr>
<td>Series 3100V</td>
</tr>
<tr>
<td>Series 3400V</td>
</tr>
<tr>
<td>Series 3500V</td>
</tr>
<tr>
<td>Series 3700V</td>
</tr>
<tr>
<td>Series 3830V</td>
</tr>
<tr>
<td>Series 3860V</td>
</tr>
<tr>
<td>Series 3890V</td>
</tr>
<tr>
<td>Series 3930V</td>
</tr>
<tr>
<td>Series 3960V</td>
</tr>
</tbody>
</table>

**Box 2**

<table>
<thead>
<tr>
<th>Voltage Code Descriptions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Voltage Code Descriptions</td>
</tr>
<tr>
<td>---------------------------</td>
</tr>
<tr>
<td>200-240 VAC 1Ø or 3Ø</td>
</tr>
<tr>
<td>230 VAC (with neutral) 1Ø, or 400/230 VAC (with neutral) 3Ø</td>
</tr>
<tr>
<td>400 VAC 3Ø</td>
</tr>
</tbody>
</table>

**Box 3**

<table>
<thead>
<tr>
<th>Pump/Drive Code Descriptions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pump/Drive Code Descriptions</td>
</tr>
<tr>
<td>-----------------------------</td>
</tr>
<tr>
<td>6:1 piston pump</td>
</tr>
<tr>
<td>14:1 piston pump</td>
</tr>
<tr>
<td>21:1 piston pump</td>
</tr>
<tr>
<td>1/3 HP, 240 VAC drive gear pump</td>
</tr>
<tr>
<td>1/3 HP, 200 VAC drive gear pump</td>
</tr>
</tbody>
</table>

**Box 4**

<table>
<thead>
<tr>
<th>Manifold/Filter Code Descriptions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manifold/Filter Code Descriptions</td>
</tr>
<tr>
<td>-----------------------------------</td>
</tr>
<tr>
<td>Non-circulating 4-port manifold with standard filter</td>
</tr>
<tr>
<td>Non-circulating 6-port manifold with standard filter</td>
</tr>
<tr>
<td>Non-circulating 6-port manifold with reverse-flush filter</td>
</tr>
<tr>
<td>Non-circulating 4-port manifold with standard filter and pressure-control valve</td>
</tr>
<tr>
<td>Externally circulating 2-port manifold with circulation valve and standard filter</td>
</tr>
<tr>
<td>Externally circulating 2-port manifold with circulation valve and reverse-flush filter</td>
</tr>
<tr>
<td>Model</td>
</tr>
<tr>
<td>-------</td>
</tr>
<tr>
<td>1</td>
</tr>
</tbody>
</table>

**Box 5** Vista Controls

- Vista control (standard) [V]
- Vista pattern control (PC) [P]
- Vista temperature control (TC) [T]

**Box 6** Electrical Control Capacity

- 2 hose/gun pairs [2]
- 4 hose/gun pairs [4]
- 6 hose/gun pairs [6]

**Box 7** Language Tags

- English/German [D]
- English/French [F]
- English/Japanese [N]

**Box 8-11** Options

- Low-level indicator [A]
- Input/output board (standard) [G]
- Input/output board with hose/gun disable (enhanced) [H]
- Input/output board for TC controller [J]
- CE certification [R]
**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 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 D</td>
<td>/</td>
<td>A R</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Position</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.