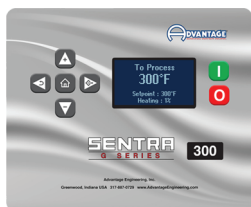


Sentra SR Series with G300 Control Instrument

REFERENCE GUIDE



Maximum Setpoint : 300°F*



This reference guide covers standard Advantage temperature control units with the G300 Series Control Instrument.

This guide may be used for customized units using the G300 Series Control Instrument even when the unit may not be physically the same as the units depicted in the included photos.

Before Installing or Operating

1. A manual is available at www.advantageengineering.com/Sentra-SR-G300_Manual or by scanning the QR code on the back of this document. Download and read the manual before starting installation.
2. This unit is designed to be used with water as the circulating fluid. The quality of fluid used in your temperature control unit will greatly effect its short and long-term operation. Lack of as well as improper water treatment can damage the temperature control unit by causing scale build-up, excessive corrosion and/or bacterial contamination. It is the equipment owner's responsibility to prevent damage caused by poor water quality. The services of a water treatment professional is recommended.
3. Before installing and operating the unit, be aware of and follow any local laws and codes that apply to the installation.
4. When contacting the Service Department always have the unit Model and Serial number from the data tag located on the side of the unit.

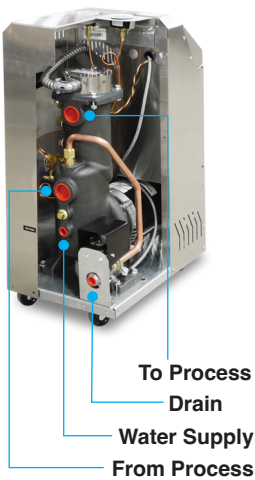


SERVICE DEPARTMENT
317-887-0729

*Reference the manual for requirements for 300°F set point.

Installation

- 1. **Electrical:** Be certain all electrical connections are tight in the unit. Install unit power cord (when supplied) to power disconnect switch. Applied power must be equal to the unit voltage and amps listed on the unit data tag. Follow all applicable local and national electrical codes.
- 2. **Plumbing:** Care should be taken to use materials (hose, rigid piping, valves or filters) rated for the temperature and pressure duty of your unit. Most units have a maximum operating temperature of 300°F or less and a maximum pressure of 150 PSI. The unit is most efficient when full size plumbing is run from the unit connections to and from the process. If necessary, reduce the plumbing size at your process, not at the unit.
- 3. Connect the unit's To Process port to the Water In port on the process manifold.
- 4. Connect the unit's From Process port to the Water Out port on the process manifold.
- 5. **Note:** Circuitry should avoid an excessive use of elbows and/or lengths of pipe or hose. If hose is the material of choice, avoid tight twists or curls and excessive lengths.
- 6. Valves and filters may be installed in the process water piping circuitry to facilitate service and maintenance, provided that such devices maintain the full inside diameter of the process connection. If installed, all such devices must be open and clean during unit operation.
- 7. Connect Unit drain to plant's open drain, tower water system return or chilled water system return. The factory recommends a minimum of 20 psi pressure differential between the water supply and drain line. A larger differential may be required for larger cooling needs.
- 8. Connect Unit water supply to plant's city water or well water source or tower water supply or chilled water supply. Water supply pressure requirements vary with operating temperatures as shown in the chart below.



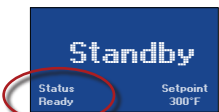
Operating Temperature

200°F	210°F	220°F	240°F	250°F	275°F	300°F
30 PSI	35 PSI	40 PSI	50 PSI	50 PSI	50 PSI	50 PSI

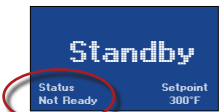
Water Supply Pressure

Starting Unit

- 1. Fill unit with water. Apply power. The Standby screen will illuminate. When Standby is displayed, the unit is not running.



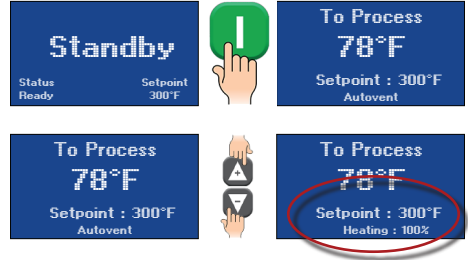
- **Status : Ready.** Indicates the unit is ready to start.
- **Status : Not Ready.** Indicates the presence of a sensor probe, pressure switch or motor overload fault. See the troubleshooting and maintenance portions of the manual for Information. The fault must be corrected in order to continue operation of the unit.



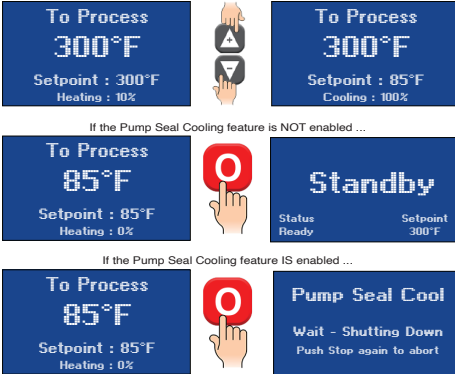
- 2. Determine the pump is rotating in a clockwise direction when viewed from the rear of the motor. Instructions are in the operations manual.

WARNING: proper care should be employed when checking pump rotation as power is applied to the unit at this point.

- The unit is ready to start when the **Status : Ready** is shown on the screen and pump rotation is correct. Press the green start button. The unit will auto vent if the fluid temperature is below 100°F or as programmed in the features menu.
- Adjust the setpoint to the desired value by pressing the Up or Down button until the value is displayed. The unit will heat or cool to maintain the setpoint temperature.



Stop Unit



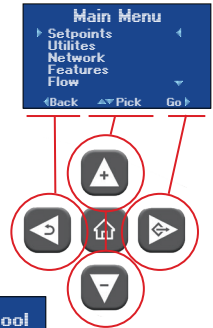
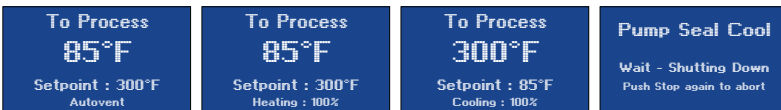
- Decrease the setpoint temperature lower than 85°F and allow the unit to cool to the temperature.
- Press the Stop Button to disengage the pump.
- Caution. Dissipate static pressure prior to disconnecting hoses.
- A pump seal cooling feature can be selected from the features menu to automatically cool the unit once the stop button is pressed.

WARNING: When the pump seal cooling feature is activated, pressing the stop button will not turn off the unit. To completely shut down the unit, press the Stop button twice.

Controller

The instrument has 5 soft keyed buttons.

- The Home button shows the Home screen.
- The Up button will add one unit of value or will scroll up through a menu.
- The Down button will subtract one unit of value or will scroll down through a menu.
- The Go button will advanced through a series of screens or save a value.
- The Back button will go backwards through a series of screens.



Operating Screens ... these show the To Process temperature, the selected Setpoint temperature and status of Autovent, Heating and Cooling. When enabled, the Pump Seal Cool screen appears when the unit is stopped. The pump will continue to run and the cooling valve will open 100% to reduce process temperature prior to shutdown.

Setpoint ... use the Go button to advance to the Setpoint select screen. Use the Up and Down buttons to select the setpoint. Save the setting by pressing the Go button.

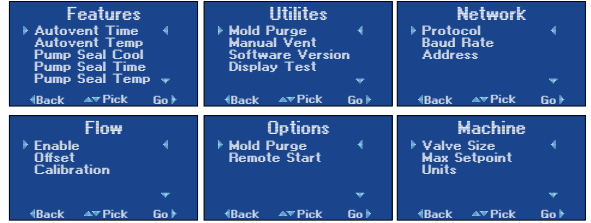


Controller

Main Menu ... from the Operating Screen, press the Go button to advance to the Main Menu.

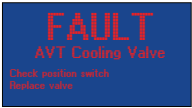


Screens ... there are six screens to set and view machine operating parameters. Use the Go button to advance screens from the Main Menu. Please note, the Flow menu requires optional components that may not be installed on your machine.



Troubleshooting

Basic Troubleshooting is shown here. Refer to the Operations Manual for full information.



Unit Will Not Start (Display is Blank & Off)

1. Fuse open at power disconnect switch.
2. Transformer fuse open

Unit Will Not Start (Display is On)

1. Error or alert indicator displayed.
2. Follow instructions on screen to troubleshoot and refer to manual or contact the service department.

Unit Overheats

1. Low water supply pressure.
2. Cooling solenoid valve defective.
3. Drain line obstructed.
4. Instrument defective.
5. Cooling requirement exceeds cooling valve capacity.

Unit Underheats

1. Process water leakage - defective cooling solenoid valve.
2. Heater element failure.
3. Process heating requirement exceeds unit heating capability.
4. Control instrument defective and not calling for heat.

Pressure Relief Valve Leaks

1. Water supply pressure too high. See manual.
2. Pressure relief valve contamination.

Consult the operation manual for details regarding Fault Screen troubleshooting



For Current Factory Operations Manual

Scan this QR code to download a PDF copy to a smart phone or tablet.
Download the PDF copy to a desktop computer for view or print by this link:

www.advantageengineering.com/Sentra-SR-G300-Manual

If you have any questions regarding this Reference Guide, the Sentra G300 Series Operations Manual, installation, operation or servicing of the unit, please call the Advantage Service Department.

317-887-0729

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