NEW Sentra® SR-Series Water Temperature Control Units

Proudly Made In The USA

ADVANTAGE®
MAKING WATER WORK
since 1977

ADVANTAGE®
MAKING WATER WORK™

Precise Water Temperature Control...

Since its introduction in 1991 and with over 50,000 units in service worldwide, Sentra Temperature Control Units with their advanced design & technology continue to prove why they are relied upon by a wide variety of industries that require fluid temperature control.

The Sentra® water temperature control units are engineered to provide precise fluid temperature control over a wide range of applications. These units are used to preheat industrial processes to the desired operating temperature by recirculating water through the process and engaging the unit's electric immersion heater. After reaching the operating temperature, the Sentra® can continue to add heat or become a cooling device by precisely exchanging & mixing cooling water* with the recirculated water to maintain tight temperature control.

Each and every component of this system plays an integral part in this process which is why only the finest materials & components go into the building of each Sentra unit. From the specific purpose designed & built control instruments, electric immersion heater and modulating or solenoid cooling valve, to the cast heating and cooling tanks, the components that comprise the Sentra units have been designed to improve your process by eliminating temperature as a variable.

The rugged Sentra units can be configured to supply process fluids from 30˚F to 300˚F and are equipped with 6-34 kilowatt heaters and 1/2-7.5 horsepower centrifugal pumps (20-100 gpm). The Sentra's quality build and components assure years of consistent, trouble-free performance you can count on every day.

** Cooling water supply for the Sentra is required from an external source*

Proudly Made In The USA

www.AdvantageEngineering.com

Our Technology Makes The Difference!

Advantage Control Instrument Technology is "specific purpose" designed & built for a wide array of industries and applications. From our Temptender® advanced color touch screen interface with a clearly worded display to our simple & cost efficient VE Series, all Advantage control instruments are engineered with quality & functionality in mind. This versatile line of technologically advanced control instruments allows us to tailor fit any Sentra unit to meet your specific needs and requirements and is what makes the Sentra line better than other temperature control units.

TEMPTENDER® – T SERIES

- Touch screen simplicity
- 4.3" full color touch screen interface
- More than 25 screens with custom set-up & system monitoring information.
- Home screen includes continuous set point and to process temperature.
- Process temperature on informational screen.
- % Heating or Cooling indication on home screen.
- Standard shut down pump seal cooling feature.
- User configurable automatic start-up venting.
- Out-of-spec alarm including standard audible signal.
- Pump rotation monitor.
- Selectable English or Spanish language display.
- Selectable °F or °C temperature display.
- Selectable SPI or Modbus RTU communication.
- Configurable second set point feature
- Operates exclusive AVT modulating cooling valve.
- Drop in replacement for older Advantage HE series control instrument.
- For process fluid temperature up to 250°F
- Optional: Digital flow rate display using highly accurate commercial flow meter.
- Optional: Modbus TCP communication.
- Optional: OPC UA Euromap 82.1 communication.
- Optional: High temperature fluid capability to 300°F
- Optional: Cables for second set point, SPI communication & remote set point features

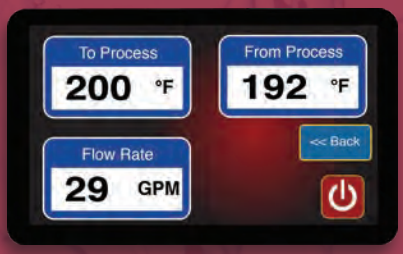
G SERIES

- Simple menu driven controller
- LCD display
- Home screen includes continuous set point and to process temperature.
- % Heating or Cooling indication on home screen.
- Operates exclusive AVT modulating cooling valve.
- Standard shut down pump seal cooling feature.
- User configurable automatic start-up venting.
- Out-of-spec alarm including standard audible signal.
- Selectable °F or °C temperature display.
- Selectable SPI or Modbus RTU communication.
- Drop in replacement for older Advantage LE series control instrument.
- For process fluid temperature up to 250°F
- Optional: Modbus TCP communication.
- Optional: High temperature fluid capability to 300°F

VE SERIES

- Single large LED display window with continuous display of To Process temperature.
- Status indicating lights for Power, Pump, Heat and Cool.
- On - Off rocker switch.
- Pulsed solenoid cooling valve is used with this instrument.
- For process fluid temperature up to 250°F.

Optional Temptender® T Series Flow Rate Display

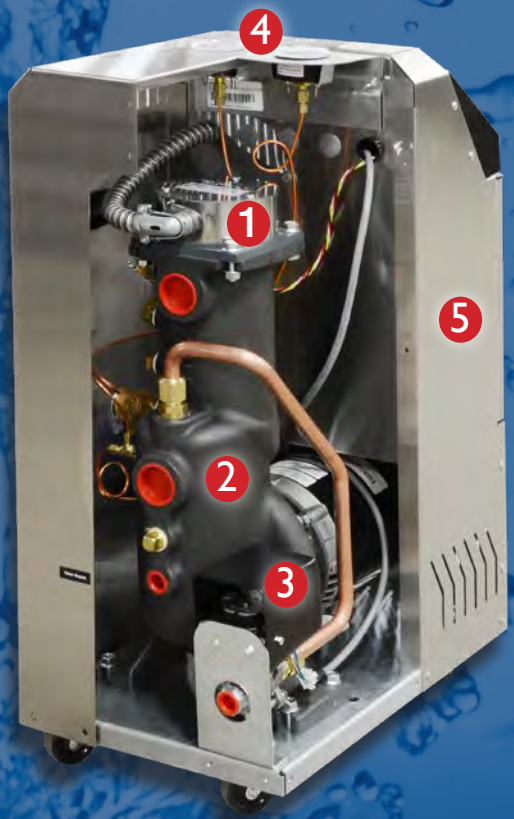


KNOW YOUR FLOW

- A highly accurate commercial flow meter senses flow in the process stream which is displayed on the control instrument screen and allows users to understand their system flow.
- High flow rates and turbulent flow is the key to optimal heat transfer which affects cycle time, part quality and ultimately your bottom line.
- An alarm can be configured to signal when flow is out of range.
- Digital flow rate display is an optional upgrade on T-Series control instruments for fluids up to 250°F.

Note: Sentra units can also be ordered without an instrument or with a non-Advantage commerical instrument.

Engineered & Constructed For Dependability...

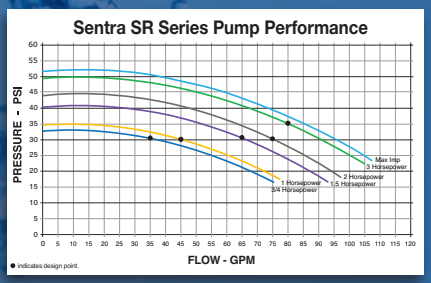


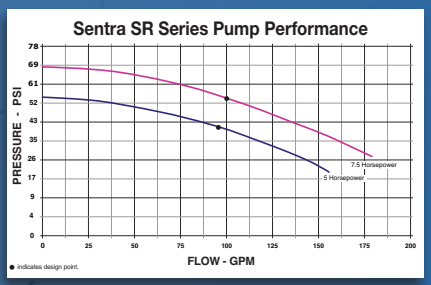
1 LOW WATT DENSITY LONG LIFE HEATER

- From 6-34 kW capacity
- High temperature rated stainless steel sheath minimizes damage from dissolved chemicals in water
- Flange mounted for easy service

2 NEW EXCLUSIVE SINGLE PIECE HIGH EFFICIENCY, HIGH FLOW PUMP, MOTOR & TANK ASSEMBLY

- Up to 20% more efficient than previous models
- Custom designed pump casing & impeller generates high flow rate
- Turbulence generated by high flow rates improves heat transfer and promotes better part quality
- Horizontal orientation and internal seal area flush extends pump seal life
- Open drip proof motor





3 EXCLUSIVE PRECISION CONTROLLED MODULATING AVT™ COOLING VALVE (T & G Series)

- Provides precise temperature control
- Only standard modulating cooling valve in the industry
- More than 2,000 incremental steps from open to close for precise metering of cooling water
- Eliminates water hammer and temperature swings
- Full port valve provides greater cooling capacity than open/close solenoid valves

Using The Highest Quality Components

3 PRECISION CONTROLLED SOLENOID COOLING VALVE (on VE Series & 300°F models)

- Precise temperature control
- Pulsed cooling
- Best suited for smaller cooling loads or when temperature difference between the cooling water and set point is greater

4 ACROSS PROCESS DIAGNOSTIC PRESSURE GAUGES

- "To" and "From" process pressure gauges standard
- Provides full process performance information

5 DURABLE, EASY ACCESS CABINETRY

- Stainless steel electrical cabinet & enclosure panels
- Polymer instrument bezel (up to 3 hp & 16 kW and 5 & 7.5 hp models)
- Galvanized steel base
- Casters for portability (2" on units up to 3 hp & 16 kW, 3" on larger units)

TEMPERATURE SENSOR

- Solid state sensor probes are embedded in a bulbwell
- Probes terminated with quick-disconnect plugs to ease service & maintenance
- High temperature limit switch prevents unit operation when temperature exceeds maximum rating for T, G & VE control instruments up to 250˚F
- 300˚F (T & G Series) use Type J thermocouples and discreet high temperature limit switch

10 FOOT POWER CORD

- Standard on models with full load amp rating of 35 or below
- Optional at additional cost on models with full load amp rating between 35 and 55
- No power cord provided on models with full load amp rating over 55

COMPACT ELECTRICAL PANEL

- Constructed using high quality components
- Hinged door for easy access
- DIN rail mounted UL approved finger safe electrical components
- Color coded & numbered wires are easy to identify for service purposes
- Control instruments are plug to plug for easy removal for service
- IEC motor starter with overload, phase loss & short circuit protection

HEATER CONTACTOR

- Selected for long operational life
- Rugged IEC mechanical contactor

WATER SUPPLY PRESSURE SWITCH

- Monitors the cooling water supply pressure
- Prevents unit operation when water supply pressure is below 20 psi on units capable of operating up to 250˚F
- Prevents unit operation when water supply is below 55 psi on units capable of operating up to 300˚F

Available Options

DUAL ZONE DOLLY

A dual zone dolly that holds two standard single zone units is a convenience for those processors that want to run different temperatures on each mold half or where the process requires two temperatures. The dolly offers a single cooling water supply & drain connection as well as an optional electrical junction box to connect both units to a single power supply.

STACKING STAND

Similar to a Dual Zone Dolly, the Stacking Stand holds two standard single zone units and provides a single cooling water supply & drain connection and optional electrical junction box where both units can be connected to a single power supply.

MOLD OR PROCESS PURGE

The purge system removes the recirculating fluid from the process piping and process or mold using compressed air from factory source.

BEACON AND/OR HIGH dB AUDIBLE ALARM

In addition to the standard audible alarm supplied on the T and G series control instruments an optional high dB audible alarm and/or alarm beacon can be supplied (T & G Series only).

NON-FERROUS COMPONENTS

Single piece pump and tanks constructed of stainless steel. Reduce rusting in your system by selecting this optional non-ferrous pump casing, suction and discharge tanks.

CLOSED CIRCUIT SYSTEMS

The standard unit uses direct injection mixing of cooling water into the recirculated fluid for cooling. Optional closed circuit units use a heat exchanger to isolate the process recirculated fluid from the cooling fluid. This option can be supplied with or without an easy to fill expansion tank integral to the unit's operation.

CUSTOM UNIT DESIGNS

Advantage staffs an Engineering Department with experienced water system designers. Working from customer supplied facility and process information, our designers can customize a temperature control unit to your exact specifications, including higher flows and greater heater capacities.

OTHER OPTIONS

- ¾" AVT™ modulating cooling valve (T & G Series only)
- ½" - 1" solenoid cooling valve (VE Series only)
- Power disconnect switch
- Solid state heater contactor (recommended when duty will be primarily heating)

Cabinet style for units with:
- 16 kW & smaller heaters
- 3 hp & smaller pumps

Approximate dimensions:
29 ½" h x 12 ½" w x 19" d

Cabinet style for units with:
- 24 & 34 kW heaters
- Up to 3 hp pumps

Approximate dimensions:
44" h x 16" w x 24" d

Cabinet style for units with:
- 5 & 7½ hp pumps

Approximate dimensions:
40" h x 18" w x 29" d

Specifications

	Model SR_ –	620	635	645	665	675	680	1020	1035	1045	1065	1075	1080	1090	10100	1620	1635	1645	1665
Heater[1]	kW	6	6	6	6	6	6	10	10	10	10	10	10	10	10	16	16	16	16
Process Pump	HP	½	¾	1	1½	2	3	½	¾	1	1½	2	3	5	7½	½	¾	1	1½
	GPM	20	35	45	62	75	80	20	35	45	62	75	80	90	100	20	35	45	62
	PSI	30	30	30	30	30	35	30	30	30	30	30	35	40	53	30	30	30	30
Full Load Amps @3ø/60hz[2]	230 volt	17.0	17.8	18.6	20.2	21.8	24.6	27.0	27.8	28.6	30.2	31.8	34.6	40.3	47.1	42.0	42.8	43.6	45.2
	460 volt	8.5	8.9	9.3	10.1	10.9	12.3	13.5	13.9	14.3	15.1	15.9	17.3	20.2	23.5	21.0	21.4	21.8	22.6
	575 volt	6.4	6.7	7.0	7.8	8.2	9.3	10.5	11.6	11.9	12.6	13.3	13.9	15.3	17.6	16.8	17.6	17.9	18.5
Dimensions (inches)	Height	29½	29½	29½	29½	29½	29½	29½	29½	29½	29½	29½	29½	40	40	29½	29½	29½	29½
	Width	12½	12½	12½	12½	12½	12½	12½	12½	12½	12½	12½	12½	18	18	12½	12½	12½	12½
	Depth	19	19	19	19	19	19	19	19	19	19	19	19	29	29	19	19	19	19
Connections (inches)	T/F[3]	1¼	1¼	1¼	1¼	1¼	1¼	1¼	1¼	1¼	1¼	1¼	1¼	2	2	1¼	1¼	1¼	1¼
	S/D[4]	½	½	½	½	½	½	½	½	½	½	½	½	½	½	½	½	½	½
Weight (pounds)	Shipping[5]	195	200	205	205	210	220	198	200	208	208	213	223	275	290	200	205	210	210

	Model SR_ –	1675	1680	1690	16100	2435	2445	2465	2475	2480	2490	24100	3435	3445	3465	3475	3480	3490	34100
Heater[1]	kW	16	16	16	16	24	24	24	24	24	24	24	34	34	34	34	34	34	34
Process Pump	HP	2	3	5	7½	¾	1	1½	2	3	5	7½	¾	1	1½	2	3	5	7½
	GPM	75	80	90	100	35	45	65	75	80	90	100	35	45	65	75	80	90	100
	PSI	30	35	40	53	30	30	30	30	35	40	53	30	30	30	30	35	40	53
Full Load Amps @3ø/60hz[2]	230 volt	46.8	49.6	55.4	62.2	63.1	63.9	65.5	67.1	69.9	75.5	82.3	88.2	89.0	90.6	92.2	95.0	100.6	107.4
	460 volt	23.4	24.8	27.7	31.1	31.6	32.0	32.8	33.6	35.0	37.6	41.2	44.1	44.5	45.3	46.1	47.5	50.3	53.7
	575 volt	19.1	20.0	21.4	23.7	25.6	26.0	26.5	27.1	28.0	29.4	31.7	35.6	36.1	36.6	37.2	38.1	39.4	41.7
Dimensions (inches)	Height	29½	29½	40	40	44	44	44	44	44	40	40	44	44	44	44	44	40	40
	Width	12½	12½	18	18	16	16	16	16	16	18	18	16	16	16	16	16	18	18
	Depth	19	19	29	29	24	24	24	24	24	29	29	24	24	24	24	24	29	29
Connections (inches)	T/F[3]	1¼	1¼	2	2	1¼	1¼	1¼	1¼	1¼	2	2	1¼	1¼	1¼	1¼	1¼	2	2
	S/D[4]	½	½	½	½	½	½	½	½	½	½	½	½	½	½	½	½	½	½
Weight (pounds)	Shipping[5]	220	225	285	300	270	275	280	285	290	295	310	280	285	290	295	300	305	320

Notes: **1.** Derate heater output by 25% for 208/3/60 operation. 2. Consult factory for 50hz operations. 3.T- to process; F- from process. 4. S- water supply; D- drain. 5.Approximate unit shipping weight.

Warranties & Model Designator

STANDARD MODELS WITH T & G SERIES CONTROL INSTRUMENTS

- 2 Years covering the entire machine
- 4 Years covering the AVT™ valve, control instrument and heater
- Lifetime covering the pump seal

STANDARD MODELS WITH VE SERIES CONTROL INSTRUMENT

- 2 Years covering the entire machine
- 4 Years covering the control instrument
- Lifetime covering the pump seal

CUSTOM AND NON STANDARD MODELS

- 2 Years covering the entire machine

Model Designator for Sentra® SR Series Temperature Control Units

SR T – 1035 – 300

- SR: Sentra® Model
- T: Instrument
  - T : T Series
  - G : G Series
  - V : VE Series
  - X : None or Other Commerical Instrument
- 1035: Heater kW / Flow Rate GPM
- 300: Temperature
  - With 300˚F max temp

(Available on T & G Series Instruments. VE Series is not available in 300˚F version)

**See Warranty Statement W-700 for full description of Limited Warranty.*

Since product innovation and improvement is our constant goal, all features and specifications are subject to change without notice or liability.

www.AdvantageEngineering.com

ADVANTAGE®
MAKING WATER WORK™

ADVANTAGE ENGINEERING, INC.
525 East Stop 18 Road
Greenwood, IN 46142
Phone: 317.887.0729
www.AdvantageEngineering.com

Proudly Made In The USA