

# TEMPERATURE CONTROL UNITS VTO SERIES

OIL UNITS

- **Process Temperatures to 400°F**
- **Microprocessor Control**
- **12 - 24 KW Heaters**
- **1 - 3 HP Centrifugal Pumps**
- **Cooling via Heat Exchanger Option**
- **In Stock or Short Lead Time**

The VTO Series temperature controller provides precision temperature control from an economically affordable and reliable unit. Perfect for applications such as plastic molding. Other features include:

#### **TEMPERATURE RANGE**

- 100° - 400°F

#### **ELECTRICAL**

- Nema 1 style electrical construction
- 3 Phase service with 110 volt control circuit transformer
- Control circuit fusing.

#### **INSTRUMENTATION:**

- Custom electronic microprocessor based controller
- Power ON indicating light
- Pump ON indicating light
- Heat ON indicating light
- Cool ON indicating light
- On/ off rock switch
- Setpoint selector dial
- Large and easy to read digital temperature display
- Sensor: ungrounded type J thermocouple

#### **HEATING CYLINDER AND COMPONENTS:**

- 5" ID cast iron cylinder
- Cylinder is mounted directly to pump casing
- Flange mounted heater
- Stainless steel heater sheath

#### **PUMP AND COMPONENTS**

- Horizontal centrifugal pump
- Water cooled pump seal (prolongs seal life)
- ODP motor with high temperature bearings,
- Stainless steel motor shaft
- Brass impeller with
- 500°F carbon/niresist shaft seal,
- Custom cast pump casing accepts heater and cooling cylinders



VTO 2100 Shown

#### **HEAT EXCHANGER (optional)**

- Stainless steel 3.5 sq ft. heat exchanger provides cooling of process fluid
- Consult factory for more information.

#### **LIMIT DEVICES**

- Water supply pressure switch
- Motor overload protection
- Dual high temperature limits

#### **PROCESS CONNECTIONS**

- Female NPT fittings

#### **WARRANTY**

- 1 year on parts & labor



**THERMAL  
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Engineered Solutions To  
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# SPECIFICATIONS

## VTO SERIES SPECIFICATIONS

MODELS with 12KW Heaters		2100	2150	2200	2300
HEATER <sup>1</sup>	KW	12	12	12	12
PROCESS PUMP	HP	1	1-1/2	2	3
	GPM	30	45	50	60
	PSI	24	26	28	26
FULL LOAD AMPERAGE <sup>2</sup>	230 / 3 / 60	34.8	36.4	38.0	46.6
	460 / 3 / 60	17.9	18.7	19.5	23.3
DIMENSIONS (inches)	Height	44	44	44	44
	Width	16	16	16	16
	Depth	24	24	24	24
CONNECTIONS	To / From Process	1	1	1	1
	Water Supply / Drain	1/2	1/2	1/2	1/2
WEIGHTS (lbs)	Shipping <sup>3</sup>	275	285	300	290

MODELS with 16KW Heaters		3100	3150	3200	3300
HEATER <sup>1</sup>	KW	16	16	16	16
PROCESS PUMP	HP	1	1-1/2	2	3
	GPM	30	45	50	60
	PSI	24	26	28	26
FULL LOAD AMPERAGE <sup>2</sup>	230 / 3 / 60	50.6	47.0	49.0	21.0
	460 / 3 / 60	25.4	23.5	24.5	25.5
DIMENSIONS (inches)	Height	58	58	58	58
	Width	23	23	23	23
	Depth	47	47	47	47
CONNECTIONS	To / From Process	1	1	1	1
	Water Supply / Drain	1/2	1/2	1/2	1/2
WEIGHTS (lbs)	Shipping <sup>3</sup>	580	585	595	610

MODELS with 24KW Heaters		4100	4150	4200	4300
HEATER <sup>1</sup>	KW	24	24	24	24
PROCESS PUMP	HP	1	1-1/2	2	3
	GPM	30	45	50	60
	PSI	24	26	28	26
FULL LOAD AMPERAGE <sup>2</sup>	230 / 3 / 60	73.8	75.8	77.8	71.0
	460 / 3 / 60	36.9	37.9	38.9	35.5
DIMENSIONS (inches)	Height	58	58	58	58
	Width	23	23	23	23
	Depth	47	47	47	47
CONNECTIONS	To / From Process	1	1	1	1
	Water Supply / Drain	1/2	1/2	1/2	1/2
WEIGHTS (lbs)	Shipping <sup>3</sup>	625	630	635	645

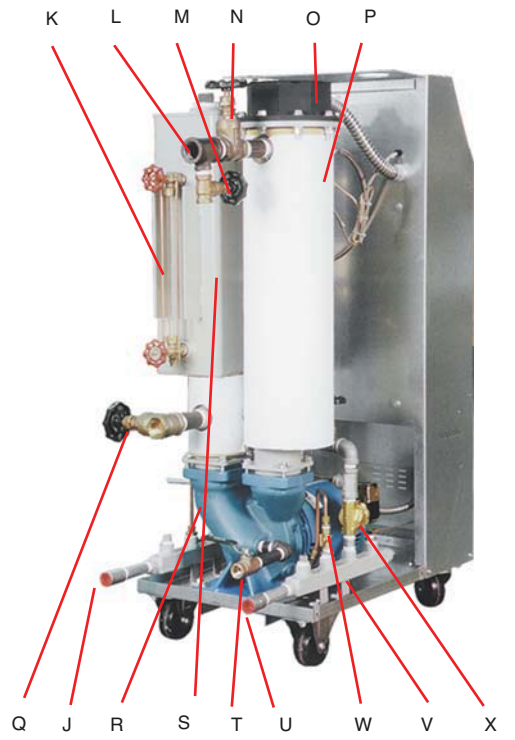
**Notes:**

- Derate heater by 25% for 208/3/60 operation.
- Full load amps are higher than run load amps and must be used for sizing disconnects and supply wiring. Service disconnect by owner. Actual running amps at design conditions. Consult factory for 50Hz operation.
- Unit weight crated for shipment.

## MECHANICAL COMPONENTS

- |                                   |  |  |
|-----------------------------------|--|--|
| A - Control Instrument            | L - Glass                                    | S - Expansion Tank                               |
| B - Optional Heat Exchanger       | L - To Process Connection                    | T - Oil Drain Valve                              |
| C - Fluid Fill Port               | M - Compressed Air Connection and Valve      | U - Water Supply Connection                      |
| D - Hinged Electrical Panel Cover | N - To Process Shut-Off Valve                | V - Water Supply Manifold                        |
| E - Caster                        | O - Heater                                   | W - Pump Seal Cooling                            |
| F - Pump Motor                    | P - Insulated Cylinder                       | X - Cooling Valve (supplied with heat exchanger) |
| G - Pressure Relief Valve         | Q - From Process Connection & Shut-Off Valve |  |
| H - Power Cord                    | R - Centrifugal Pump                         |  |
| I - Drain Manifold                |  |  |
| J - Drain Connection              |  |  |
| K - Fluid Level Sight             |  |  |

## MECHANICAL COMPONENTS



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