

CWT Series Compact and Upright Water TCUs

CWT Series water temperature control units from Colortronic provide highly accurate control for production applications requiring a continuous supply of temperature-controlled water. They have an operating leaving temperature range of 32° F to 250° F.

CWT Series TCUs are available in either direct injection or closed circuit configurations for controlled cooling. For direct injection cooling, solenoid valves regulate the flow of heated water to the process water stream. Closed circuit configurations cycle heated water through a closed loop heat exchanger assembly.

Standard Features

- Compact, rugged cabinet with easy-access side panels
- Cast-and-flange design to reduce connection points
- Half- and full-heat capability, 9kW heater standard
- Dual stage Incoloy® immersion heater with IEC contactors
- NEMA 12 electrical enclosure
- 0.25" cooling solenoid valve on 0.75 to 3 hp models; 0.5" slow-close cooling solenoid valve on 5, 7.5, & 10 hp models
- Forward-facing liquid-filled To and From Process pressure gauges
- Independent high temperature safety thermostat
- Non-fused lockable rotary disconnect
- Off-the-shelf microprocessor-based PID temperature controller with Process and Set Point LED readouts
- Graphic control panel with indicator and warning status lights
- Adjustable low supply water pressure switch; 16psig (default)
- 150 psig (1,034 kPa/10.3 bars) pressure relief valve
- SICB/carbon pump seal
- 0.75" water supply connection, 1.5" process connections; valve size matches drain size
- Motor circuit protection
- Automatic vent sequence
- 3" (76 mm) casters
- 3-year parts and labor warranty (labor at factory), 5-year controller warranty, lifetime warranty on wetted cast components, lifetime pump seal (subject to factory review)

Optional Features

- 12 kW, 18 kW ①, 24 kW ①, 36 kW ②, or 48 kW ②
- Unit without heater (includes 0.5" solenoid valve)
- Maintained START switch (push to stop, twist to start)
- Manual bypass
- Brass construction
- Closed loop heat exchanger with 0.5" solenoid (3.7 sq. ft. U-tube, 7.4, 11.2, 18.1, 27.1 sq. ft. shell & tube)
- Quick cool switch
- Pressure regulator / relief valve for water supply, shipped loose
- Auto system water purge, shipped loose
- Y-strainer, shipped loose
- Hammer arrestor
- 10-ft. power cord, no plug, shipped loose
- Rubber feet in lieu of casters
- Cooling solenoid slow-close valve
- Modulating valve, ½" – 1 ¼"
- Stack rack with casters, 2 zone (without manifold), 3 or 4 zone (2 x 2 configuration) compact units only
- Side-by-side dolly, 2 or 3 zone with manifold
- Common wiring and/or piping for two zone
- TEFC motor
- 300 F operations, includes silicon carbide/silicon carbide seal (requires 55 psig water supply pressure)

① Not available for closed loop compact units

② Direct injection upright units only, not available for 200/3/50 or 230/3/60 VAC



Specifications

Model	Style	Pump, hp (kW)	Flow, gpm (lpm)	Pressure, psig (kPa)	Height, in. (cm)	Width, in. (cm)	Depth, in. (cm)	Shipping Weight, lbs. (kg)
CWT 075	Compact	0.75 (0.56)	30 (113.6)	25 (172.4)	28.75 (73)	13 (33)	28 (71.1)	210 (96)
CWT 100		1 (0.75)	35 (132.5)	30 (206.9)	28.75 (73)	13 (33)	28 (71.1)	210 (96)
CWT 200		2 (1.5)	50 (189.3)	30 (206.9)	28.75 (73)	13 (33)	28 (71.1)	210 (96)
CWT 300		3 (2.24)	60 (227.1)	35 (241.3)	28.75 (73)	13 (33)	28 (71.1)	210 (96)
CWT 500		5 (3.73)	90 (340.7)	50 (344.8)	28.75 (73)	13 (33)	28 (71.1)	240 (109)
CWT 750		7.5 (5.6)	120 (454.2)	50 (344.8)	28.75 (73)	13 (33)	28 (71.1)	240 (109)
CWT 075U	Upright	0.75 (0.56)	30 (113.6)	25 (172.4)	48 (122)	13 (33)	28 (71.1)	210 (96)
CWT 100U		1 (0.75)	35 (132.5)	30 (206.9)	48 (122)	13 (33)	28 (71.1)	210 (96)
CWT 200U		2 (1.5)	50 (189.3)	30 (206.9)	48 (122)	13 (33)	28 (71.1)	210 (96)
CWT 300U		3 (2.24)	60 (227.1)	35 (241.3)	48 (122)	13 (33)	28 (71.1)	210 (96)
CWT 500U		5 (3.73)	90 (340.7)	50 (344.8)	48 (122)	13 (33)	28 (71.1)	240 (109)
CWT 750U		7.5 (5.6)	120 (454.2)	50 (344.8)	48 (122)	13 (33)	28 (71.1)	240 (109)
CWT 1000U		10 (7.46)	125 (473.1)	55 (379.2)	48 (122)	13 (33)	28 (71.1)	270 (123)

Note: Consult factory for additional lead time on 7.5 hp pumps.

Full Load Amps

Pump, hp	9 kW htr	12 kW htr	18 kW htr	24 kW htr	36 kW htr	48 kW htr
0.75	12.7	16.5	24.0	31.6	47.4	62.4
1.00	13.1	16.9	24.4	32.0	47.8	62.8
2.00	14.7	18.5	26.0	33.6	49.4	64.4
3.00	16.1	19.9	27.4	35.0	50.8	65.8
5.00	18.9	22.7	30.2	37.8	56.6	71.6
7.50	22.3	26.1	33.6	41.2	57.0	72.0
10.00	26.0	30.0	37.0	45.0	60.0	75.0

Pressure Drop Flow and Loss

Pump, hp	Flow, gpm (lpm)	Loss, psi (kPa)	Recommended NPT pipe size for flow rate
0.75	30 (113.6)	0.0 (0.0)	1 ¼"
1.00	35 (132.5)	1.0 (6.9)	1 ¼"
2.00	50 (189.3)	1.5 (10.3)	1 ½"
3.00	60 (227.1)	2.0 (13.8)	1 ½"
5.00	75 (283.9)	2.5 (17.2)	2"
7.50	90 (340.7)	3.0 (20.7)	2"
10.00	120 (454.2)	5.0 (34.4)	2 ½"

Controller	Options
Standard	4 to 20 mA retransmission of process variable (E5CK only) not available with modulating valve. 4 to 20 mA remote set point & retransmission of process variable (E5AK only). Communication: RS-232, RS-485, RS-485 SPI (Athena 16 CT). Remote Probe: Local/remote control (remote probe and internal probe change to 100 ohm RTD). Digital Flow meter (includes separate indicator).
Advanced	4 to 20 mA remote set point and retransmission of process variable, set point, or flow rate Communication: RS-232 Modbus, RS-485 Modbus, RS-485 SPI, Ethernet IP via Modbus RTU Remote probe ① Digital Flow meter
Remote control enclosure with 20 ft. cable (additional cable available at extra charge)	

① Remote probe with advanced controller allows customer to either monitor or control from a customer supplied type J or K thermocouple or 100 or 1000 ohm RTD. Additional cost to have probe supplied by manufacturer.

Electrical Options

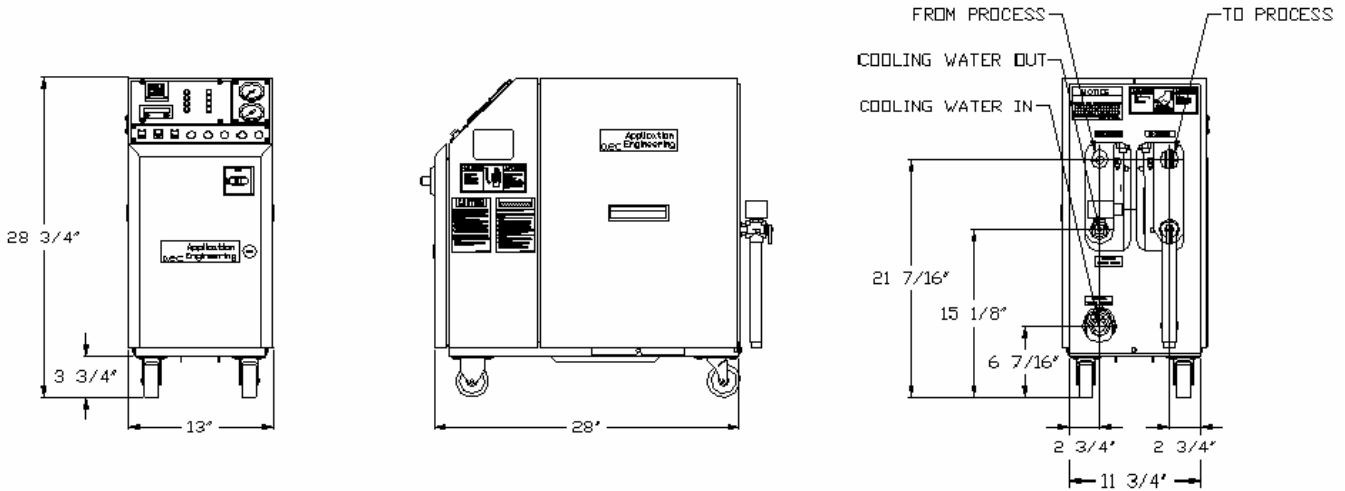
- General fault alarm, audible and visual
- 208/3/60 VAC, 200-400/3/50 VAC, or 575/3/60 VAC (200-400/3/50 VAC uses circuit breakers in place of primary transformer fuses)
- UL, cUL listed subpanel
- CE certification (circuit breakers replace primary transformer fuses)
- Ontario Hydro specifications (Inspection to be done by others.)

Other Options

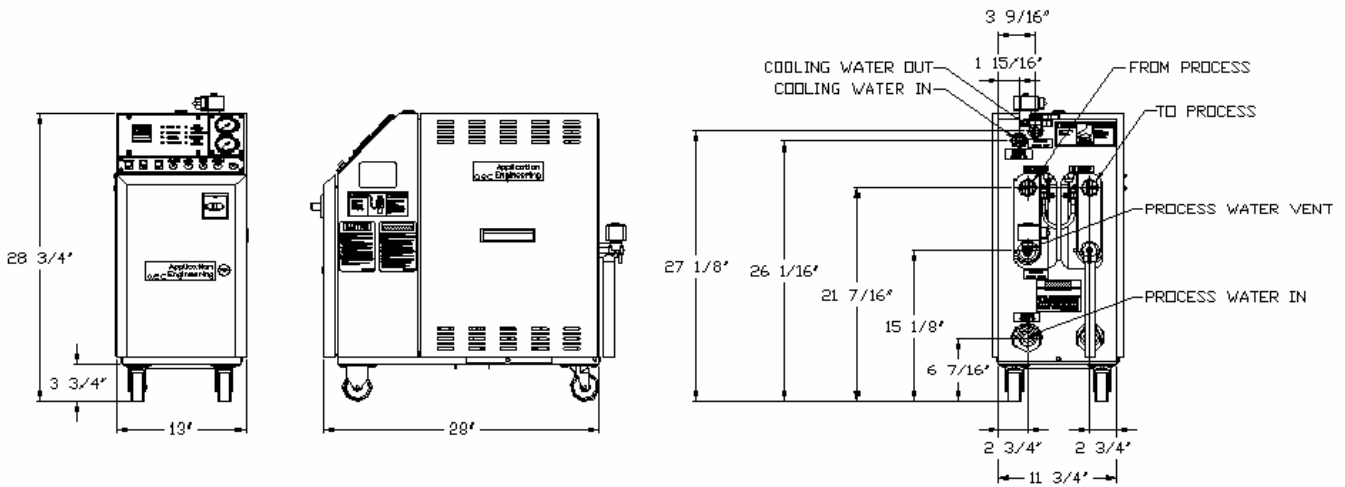
Option	Available Sizes
Cooling solenoid slow-close valve	0.5" x 0.5625" (Cv =3.5)
	0.75" x 0.75" (Cv =5.5)
	1" x 1" (Cv =11.5)
	1.5" x 1.25" (Cv =24)
Modulating valve	0.5" (Cv = 0.4, 1.3, 2.2, 3.4)
	0.75" (Cv = 5.5, 7.5)
	1" (Cv = 10, 14)
	1.25" (Cv = 20)
Part Number	
Descaler	602.88905.00
Descaler fluid (5 gallons)	692.88904.00

Dimensions

Compact TCU: Direct Injection



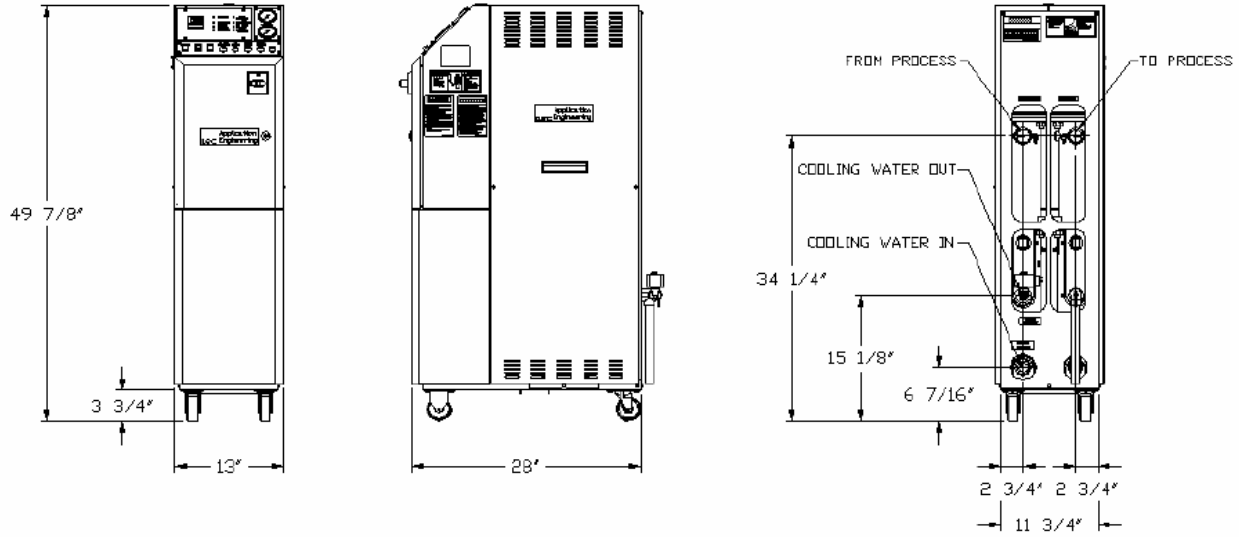
Compact TCU: Closed Circuit



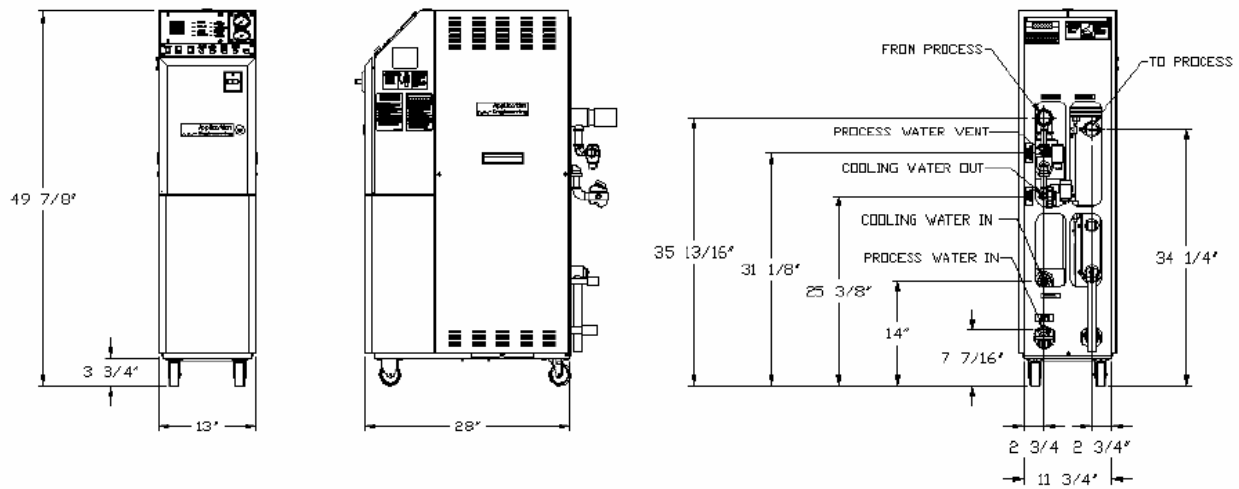
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Upright TCU: Direct Injection

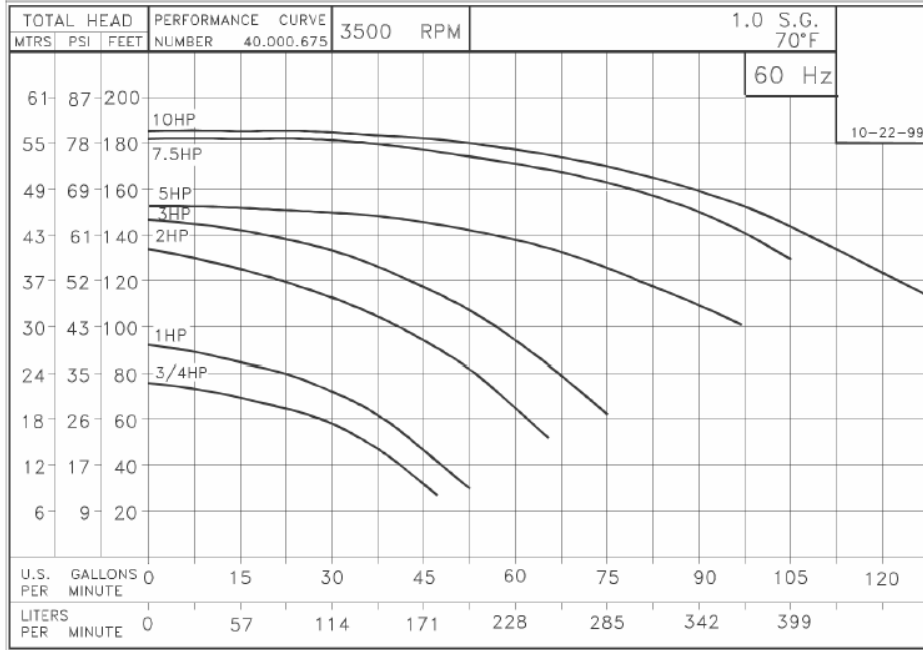


Upright TCU: Closed Circuit

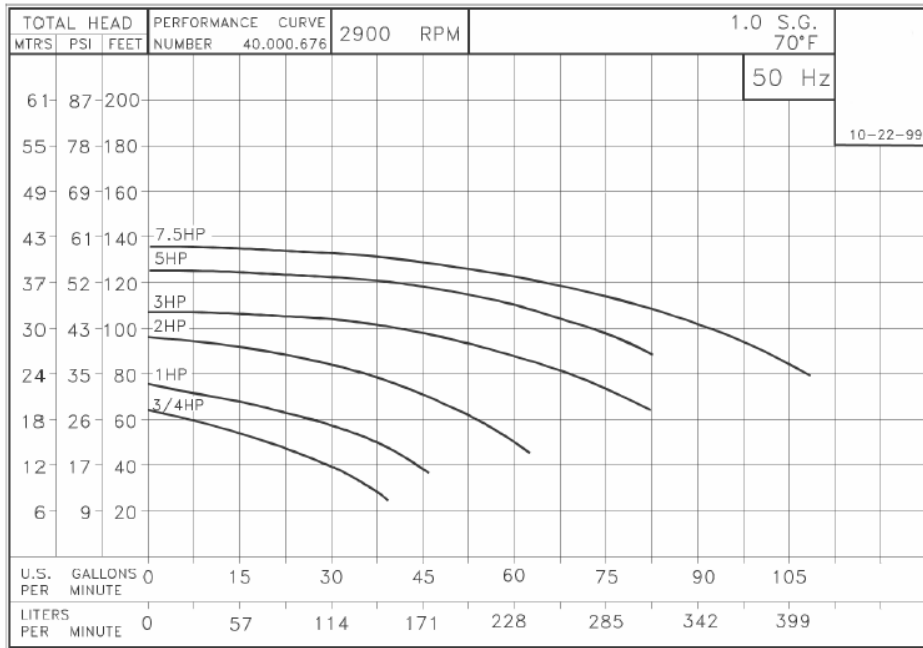


Note: Pictures on this page depict unit with 24, 36, or 48 kw heater options. For piping dimension for a unit with less than 24 kW, please refer to the compact unit.

Pump Curves, 50 Hz



Pump Curves, 60 Hz



Note: Consult factory for 10 HP pump curves.

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