

# CENTRAL CHILLER

# TTI-WC SERIES

with Water-Cooled Condenser

- 20°F - 65°F Process Fluid Temperature
- 20 - 180 Tons Capacity
- Multiple Refrigerant Zones
- Integral Pump Distribution System
- Water-Cooled Condenser
- Using Non-Ozone Depleting Refrigerants
- Microprocessor Control

The **Series** central chiller is a multiple zone chiller and pump tank station on a single platform. This allows the greatest flexibility in installation and operation. The refrigerant zones can precisely match the process load without over extending compressor life, and the dual pump distribution system provides full flow to the plant, while maintain 100% evaporator flow at all time. Product features include:



## RESERVOIR CONSTRUCTION:

- Seamless, rotationally molded, non-rusting polyethylene
- Tank insulation
- Drain valve
- Overflow port
- Hot/cold section partition (baffle)
- Structural base
- Automatic water-level control
- Pump decking
- Spare pump ports
- Hinged tank lid

## REFRIGERANT CIRCUITS:

- Hermetic scroll or rotary screw compressors
- Liquid line solenoid valve
- Refrigerant sight glass with moisture indicator
- Thermostatic expansion valve
- Brazed plate or shell & tube evaporator
- Hot gas by-pass or unloading capacity control systems
- HFC-407C & HFC-410A refrigerant
- Water-cooled Condenser with
  - Regulator valve
  - Manifolder with isolation valves
  - Removeable heads for service

## COOLANT CIRCUIT:

- Large capacity process pump with suction and discharge service valves
- Evaporator pump with suction and discharge service valves
- Discharge basket strainers (on models with brazed plate evaporators)

## LIMIT DEVICES: (per zone)

- Refrigerant circuit with high pressure limit, low pressure limit and evaporator flow limit
- Coolant circuit with pump motor overload relay and coolant freeze-stat
- Instrument control circuit fuse

## PRESSURE GAUGES (per zone):

- Refrigerant high pressure
- Refrigerant low pressure
- Coolant pressure

## ELECTRICAL:

- Nema rated electrical cabinet
- Fused pump motor starters
- Fused compressor motor starters
- Fused transformer
- Power entry terminal block

## WARRANTY:

- 1 year on parts and labor
- 2nd year complementary preventative maintenance visit (U.S. only)

## OPTIONS

### TANK CONSTRUCTION:

- Epoxy coated mild steel
- Stainless steel wetted surfaces

### REFRIGERANT CIRCUIT:

- Compressor hour meter
- Oversized condensers for higher efficiency and for higher operating ambients

### COOLANT CIRCUIT:

- Larger process pumps
- Standby pumps and manifolding

### ELECTRICAL:

- UL listed electrical panel
- Disconnects

### INSTRUMENTATION:

- Remote display kit
- PLC instrument with color touch screen
- Modbus RTU or TCP interface

### WARRANTIES:

- Extended compressor warranty



# Specifications

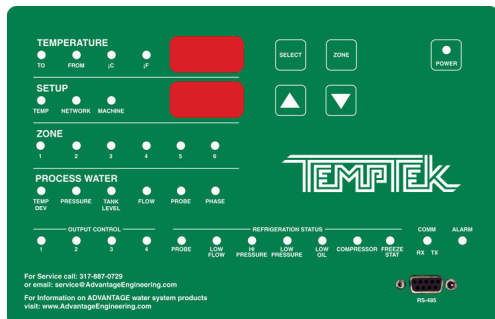
MODEL <sup>1</sup>	TTI-	20W	30W	40W	50W	60W	70W	80W	100W	120W	150W	180W
<b>COMPRESSOR</b>	Type / Zone	Scroll	Scroll	Scroll	Scroll	Scroll	Discus	Scroll	Screw	Screw	Screw	Screw
<b>REFRIGERANT ZONES</b>		2	2	2	2	2	2	2	2	2	2	2
<b>CAPACITY @ 50°F LWT</b>	Tons <sup>2</sup>	20.5	30	40	52	60	72.5	85.2	100	120	147	178
	KW	72	105	140		210						
<b>EVAPORATOR</b>	Type	Brazed Plate	Brazed Plate	Brazed Plate	Brazed Plate	Brazed Plate	Shell & Tube	Brazed Plate	Brazed Plate	Shell & Tube	Shell & Tube	Shell & Tube
<b>REFRIGERANT<sup>3</sup></b>		R-410A	R-407C	R-407C	R-407C	R-407C	R-407C	R-407C	R-407C	R-407C	R-407C	R-407C
<b>PROCESS PUMP<sup>4 5</sup></b>	HP	3	5	5	7.5	10	10	15	15	20	20	20
	GPM	60	90	120	120	180	210	240	30	360	360	432
	PSI	55	60	45	45	65	60	70	60	65	65	55
<b>EVAPORATOR PUMP</b>	HP	1.5	2	2	3	3	5	5	5	7.5	10	10
	GPM	55	72	96	125	144	174	205	239	288	360	432
<b>STANDBY PUMP<sup>6</sup></b>		A	A	A	A	A	A	A	A	A	A	A
<b>TANK</b>	Operating (gallons)	350	350	350	350	350	1,200	1,200	1,200	1,200	1,200	1,200
	Holding (gallons)	450	450	450	450	450	1,600	1,600	1,600	1,600	1,600	1,600
	Construction <sup>7</sup>	PE	PE	PE	PE	PE	PE	PE	PE	PE	PE	PE
<b>CONNECTION</b>	Process <sup>8</sup>	2	3	3	4	4	4	4	4	6	6	6
<b>SIZES (inches)</b>	Make-Up	1	1	1	1	1	1	1	1 1/2	1 1/2	1 1/2	1 1/2
	Overflow	4	4	4	4	4	4	4	4	4	4	4
	Condenser	2	3	3	3	3	4	4	4	4	4	4
<b>DIMENSIONS (inches)</b>	Height	82	82	82	82	82	112	112	112	112	112	112
	Width	87	87	92	92	92	136	136	136	136	136	136
	Depth	96	96	96	96	96	128	128	128	128	128	128
<b>CONTROL</b>	Standard	MZC	MZC	MZC	MZC	MZC	MZC	MZC	MZC	MZC	MZC	MZC
<b>UNIT AMPERAGE<sup>9</sup></b> @ 3ø / 60 Hz <sup>10</sup> (full load)	230 volt	94	131	174	232	256	294	342	334	508	496	758
	460 volt	47	65.5	87	116	128	147	171	167	254	248	379
	575 volt	38	53	70	93	103	119	137	134	204	199	304
<b>WEIGHTS (pounds)</b>	Shipping <sup>11</sup>	3,550	4,170	4,350	4,990	5,155	6,100	7,600	6,505	6,705	7,000	7,500
	Operating	7,9250	8,530	8,710	9,650	9,515	17,500	18,800	17,705	17,905	20,500	21,000
<b>WATER-COOLED CONDENSER</b>		20	30	40	50	60	70	80	100	120	150	180
<b>REQUIRED WATER</b>	City	31	45	60	75	90	109	128	149	173	220.5	267
<b>SUPPLY (GPM)</b>	Tower	61	90	120	150	180	218	256	298	346	441	534

## Notes

1. Since product innovation and improvement is our constant goal, all features and specifications are subject to change without notice or liability. Selection of certain optional features may change listed specifications.
2. Tons or Kilowatts capacity at 12,000 Btu/hr/ton @ 50°F LWT, 95°F ambient and 115°F condensing. Capacities may be +/- 5% as reserved by the compressor manufacturer. Capacity multipliers are 50°F - 1.00; 40°F - .80; 30°F - .60; 20°F - .40. The minimum recommended operating temperature when no glycol is used is 48°F.
3. This is a non ozone depleting refrigerant.
4. Consult FYI #4-C-38 and 5-A-261 for characteristics relating to pump curves.
5. Selection of optional pumps for higher flow rates will raise the minimum recommended operating temperature when no glycol is used in coolant.

6. A = standby pump is available for this model. N/A = standby pump is not available for this model
7. PE = polyethylene reservoir. Mild steel and stainless steel are optional.
8. Process connections may vary based on unique pump flow requirements of your process. Confirm you connection size requirement with your Advantage sales representative.
9. Full Load amps are higher than run load amps and must be used for sizing disconnects and supply wiring.
10. Consult factory for 50hz operation.
11. Approximate unit weight crated for shipment.

## CHILLER CONTROL INSTRUMENT



- Microprocessor based multizone controller
- Intelligent zone boards
- Each compressor staged individually
- Large temperature display in °F or °C for to and from process
- Large setup display
- Refrigerant circuit indicators per zone: probe, low flow, high pressure, low pressure, compressor, freestat, capacity
- Water circuit indicators: temperature deviation, low pressure, tank level, flow, probe, phase
- SPI communications interface
- Selectable lead/lag mode
- Audible and visual alarm

For More Information ... call **317-887-6352**

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