

# CENTRAL CHILLERS

**Air-Cooled 20 - 60 Tons**

## **Industrial Duty Package Chillers for Plant Wide Cooling**

**Complete Package  
including  
multizone chiller and  
pump tank station!**



CM-TI-60A shown.  
Air-cooled unit with 60 tons capacity, microprocessor controller and remote air-cooled condenser.



Microprocessor controller for CM-TI models

### **FEATURES - AT A GLANCE**

- Multizone microprocessor control instrument
- Pump tank and central chiller package
- Delivered ready to run - not a kit
- Refrigerant and coolant pressure gauges
- Dual pump circuit
- Optional standby pump and manifold
- Automatic reservoir tank make-up

## **CM-TI SERIES 20-60 TONS AIR-COOLED**

**CM-TI Series** central chillers combines a multizone refrigerant chiller with a large capacity polyethylene pump tank station and is engineered specifically for the industrial process environment. The refrigerant circuits include discus reciprocating, hermetic scroll, or rotary screw compressors, tube and shell evaporators, capacity control system, and air-cooled condensers with variable speed fans. The non-ferrous polyethylene pump tank station includes process and evaporator pumps, suction and discharge service valves and flow safety switches. An optional standby pump with manifold is available.

**AVAILABLE CAPACITIES:** 80 to 200 tons (80-200 tons listed here)

**AVAILABLE PROCESS PUMP HP:** 15 to 40

**AVAILABLE PROCESS PUMP GPM:** 60 to 600

**STANDARD DIMENSIONS:** 112" x 126" x 120" (HxWxD)



# STANDARD FEATURES

**TANK CONSTRUCTION:** Seamless, rotationally molded, non-rusting polyethylene • Tank insulation • Drain valve • Overflow port • Hot/cold section partition • Structural steel base • Automatic water-level control • Pump decking • Spare pump ports

**REFRIGERANT CIRCUITS:** Hermetic scroll compressors • Air-cooled condenser with remote, outdoor condenser and variable speed fans with pressure staging • Liquid line solenoid valve • Refrigerant sight glass with moisture indicator • Thermostatic expansion valve • Brazed plate evaporator • Hot gas by-pass capacity control system

**COOLANT CIRCUIT:** Large capacity process pump with suction and discharge service valves • Evaporator pump with suction and discharge service valves and discharge basket strainers

**LIMIT DEVICES (per zone):** Refrigerant circuit includes high pressure limit, low pressure limit and evaporator flow limit • Coolant circuit includes pump motor overload relay and coolant freeze-stat • Instrument control circuit fuse

**PRESSURE GAUGES (per zone):** Refrigerant high pressure • Refrigerant low pressure • Coolant pressure gauge

**ELECTRICAL:** Nema rated electrical cabinet • Fused pump motor starters • Fused compressor starters • Fused transformer • Power entry terminal block

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

# OPTIONS

**TANK CONSTRUCTION:**

- Epoxy coated mild steel
- Stainless steel wetted surfaces
- Special paint

**REFRIGERANT CIRCUIT:**

- Compressor CCPR valve
- Discus compressor
- Compressor hour meter

**COOLANT CIRCUIT:**

- Larger process pumps
- Standby pumps and manifold

**ELECTRICAL:**

- UL listed electrical panel
- Disconnects

**INSTRUMENTATION:**

- Remote display kit
- PLC instrument with color touch screen

# SPECIFICATIONS

		CM-TI-20A	CM-TI-30A	CM-TI-40A	CM-TI-50A	CM-TI-60A	CM-TI-70A
<b>COMPRESSOR</b>	Quantity	2	2	4	4	4	2
	Capacity <sup>8</sup>	20.5	30	40	50	60	68.3
	HP each	10	15	10	13	15	35 <sup>10</sup>
<b>PUMPS</b> <sup>1</sup>	Process HP	3	5	5	7.5	10	10
	Process GPM	60	90	120	150	180	210
	Process PSI	45	55	45	55	65	60
	Evaporator HP	2	2	2	3	3	5
	Evaporator GPM	50	72	96	120	144	164
<b>CONNECTION SIZES (inches)</b>	Process (to/from)	2	3	3	4	4	4
	Make-Up	1	1	1	1	1	1
	Overflow	4	4	4	4	4	4
<b>FULL LOAD</b> <sup>2</sup>	230 Volt	88	124	168	232	256	260
<b>AMPERAGE @ 3ø/60hz</b> <sup>3</sup>	460 Volt	44	62	84	116	128	130
	575 volt	35	50	67	93	103	104
<b>REFRIGERANT</b> <sup>4</sup>	Type HCFC-	22	22	22	22	22	22
<b>TANK CAPACITIES (gallons)</b>	Operating	350	350	350	350	350	350
	Holding	450	450	450	450	450	450
<b>DIMENSIONS (inches)</b>	Height	82	82	82	82	82	82
	Width	87	87	92	92	92	92
	Depth (base)	96	96	96	96	96	96
<b>WEIGHTS (pounds)</b>	Shipping <sup>9</sup>	3,550	4,170	4,350	4,990	5,155	5,325
	Operating	7,925	8,530	8,710	9,350	9,515	9,683
<b>REMOTE AIR-COOLED CONDENSER</b>		<b>FCB-12</b> <sup>11</sup>	<b>RC6-0678</b>	<b>RC6-0798</b>	<b>RC6-0894</b>	<b>RC6-1196</b>	<b>RC6-1340</b>
<b>CONNECTIONS</b> <sup>5</sup>	Liquid / Hot Gas	2@3/8	2@13/8	2@15/8	2@15/8	2@15/8	2@21/8
<b>AIR FLOW</b> <sup>6</sup>	Fan Quantity	2	4	4	4	6	6
<b>FULL LOAD</b>	230 volt	10.4	28.0	28.0	28.0	42.0	42.0
<b>AMPERAGE</b> <sup>7</sup>	460 Volt	5.2	14.0	14.0	14.0	21.0	21.0
	575 Volt	4.2	11.2	11.2	11.2	16.8	16.8
<b>DIMENSIONS (inches)</b>	Height	40 1/2	50	50	50	50	50
	Width	43.0	88	88	88	88	88
	Depth	69 3/4	125	125	125	169	169
<b>WEIGHT (pounds)</b>	Shipping <sup>9</sup>	470	1,495	1,495	1,695	1,845	2,420

Notes: 1. Consult FYI #4-C-38 and 5-A-261 for characteristics relating to pump curves. 2. Full Load amps are higher than run load amps and must be used for sizing disconnects and supply wiring. 3. Consult factory for 50hz operation. 4. Field charging required. 5. Field installation and piping connection of condenser by owner. 6. Vertical air discharge from condenser. 7. Full load amperage shown for single condenser unit. Some models use multiple condenser units. 8. Tons capacity at 12,000 BTU/ton @ 50°F LWT @ 115°F condensing temperature. Capacities may be +/- 5% as reserved by the compressor manufacturer. Capacities 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. 9. Unit weight crated for shipment. 10. Discus compressors. 11. Two supplied.



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