

CENTRAL CHILLERS

Water-Cooled 20 - 70 Tons

Industrial Duty Package Chillers for Plant Wide Cooling

**Complete Package
including
dual zone chiller and
pump tank station!**

CM-TI-60W shown.
Water-cooled unit with 60 tons capacity
and microprocessor controller.



Microprocessor controller for CM-TIS models

FEATURES - AT A GLANCE:

- Multizone microprocessor controller
- Pump tank and central chiller package
- Delivered ready to run - not a kit
- Scroll compressors - reliable and efficient
- Refrigerant and coolant pressure gauges
- Dual pump circuit, optional standby pump and manifold available

CM-TI SERIES 20-70 TONS WATER-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 scroll compressors, brazed plate evaporators, capacity control system, and water cooled condensers with regulator valves. The non ferrous polyethylene pump tank station includes process and evaporator pumps, suction and discharge service valves, flow safety switches and evaporator protecting basket strainers. An optional standby pump with manifold is available.

AVAILABLE CAPACITIES: 20 to 180 tons (20-70 tons listed here)

AVAILABLE PROCESS PUMP HP: 3 to 40

AVAILABLE PROCESS PUMP GPM: 60 to 600

STANDARD DIMENSIONS: 82" x 92" x 96" (HxWxD)



STANDARD FEATURES

TANK 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 compressors • Water-cooled condenser with regulator valve, manifolded with isolation valves and removable heads • 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 with 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

ELECTRICAL: Nema rated electrical cabinet • Fused pump motor starters • Fused compressor motor 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, 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 manifolding

ELECTRICAL:

- UL listed electrical panel
- Disconnects

INSTRUMENTATION:

- Remote display kit
- PLC instrument with color touch screen

SPECIFICATIONS

SPECIFICATIONS		CM-TI-20W	CM-TI-30W	CM-TI-40W	CM-TI-50W	CM-TI-60W	CM-TI-70W
INDEPENDENT REFRIGERANT CIRCUITS		2	2	2	2	2	2
COMPRESSOR	Quantity	2	2	4	4	4	2 ⁸
	Capacity ⁵	20.5	30	40	52	60	70
	HP each	10	15	10	13	15	35
PUMPS¹	Process HP ⁶	3	5	5	7.5	10	10
	Process GPM	60	90	120	150	180	180
	Process PSI	45	55	45	55	65	65
	Evaporator HP	2	2	2	3	3	5
	Evaporator GPM	50	72	96	120	144	168
CONNECTION	Process (to/from)	2	3	3	4	4	4
SIZES (inches)	Make-Up	1	1	1	1	1	1
	Overflow	4	4	4	4	4	4
	Condensing	2	3	3	3	3	4
CONDENSING REQUIREMENTS²	City	31	45	60	75	90	105
	Tower	61	90	120	150	180	210
FULL LOAD³ AMPERAGE	230 Volt	88	124	168	232	256	260
	460 Volt	44	62	84	116	128	130
	575 volt @3ø/60hz ⁴	35	50	67	93	103	104
REFRIGERANT TYPE	HCFC-	22	22	22	22	22	22
TANK CAPACITIES	Operating	350	350	350	350	350	350
	Holding	450	450	450	450	450	450
DIMENSIONS (inches)	Height	82	82	82	82	82	82
	Width	87	87	92	92	92	92
	Depth (base)	96	96	96	96	96	96
WEIGHTS (pounds)	Shipping ⁷	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

Notes: 1. Consult FYI #4-C-38 and #5-A-261 for characteristics relating to pump curves. 2. Flow (GPM) rate is based on 60°F city, 85°F tower at 20 PSI with a clean condenser. 3. Service disconnect by owner. "Full Load" amps must be used for sizing disconnects and supply wiring. 4. Consult factory for 50hz operation. 5. Tons capacity at 12,000 BTU/ton @ 50°F LWT @ 105°F condensing temperature. Capacities may be +/- 5% as reserved by the compressor manufacturer. Capacity multipliers are 40°F - .80; 30°F - .60; 20°F - .40. The minimum recommended operating temperature when no glycol is used is 48°F. 6. Selection of optional pumps for higher flow rates will raise the minimum recommended operating temperature when no glycol is used. 7. Approximate unit weight crated for shipment. 8. Semi-hermetic discus compressor used on this model.



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