

CENTRAL CHILLERS

Water-Cooled 80 - 200 Tons

Complete Package
including
multizone chiller and
pump tank station!

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



CM-TI-120W shown.
Water-cooled unit with 120 tons capacity
and microprocessor controller.



Microprocessor controller for CM-TI models

CM-TI SERIES 80-200 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 discus reciprocating, hermetic scroll, or rotary screw compressors, tube and shell 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 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)

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



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, semi-hermetic discus or rotary screw compressors: with suction and discharge service valves • 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 • Shell & tube evaporator • Hot gas by-pass capacity control system on 80, 90, 105 and 3 circuit 120 ton models • Unloading on 2 circuit 100 and 120 ton models, and 3 circuit 150, 180 and 200 ton models

COOLANT CIRCUIT: Large capacity process pump with suction and discharge service valves
• Evaporator pumpth suction and discharge service valves

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

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

ELECTRICAL: Nema rated electrical cabinet • Fused pump starter • Fused compressor starter
• 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* and *from process* • Large setup display • Refrigerant circuit indicators per zone: *probe, low flow, high pressure, low pressure, compressor, freezestat, 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

- Special paint
- Epoxy coated steel tank
- Stainless steel tank

REFRIGERANT CIRCUIT

- Compressor CPR valve
- Compressor hour meter

COOLANT CIRCUIT

- Larger process pumps
- Standby pumps and manifold

INSTRUMENTATION

- Remote display kit
- PLC with touch screen interface

WARRANTIES:

- Extended compressor warranty

ELECTRICAL:

- UL listed electrical panel
- Power disconnects

SPECIFICATIONS

		CM-TI-80W	CM-TI-90W	CM-TI-100W	CM-TI-105W	CM-TI-120W	CM-TI-120W	CM-TI-150W	CM-TI-180W	CM-TI-200W
COMPRESSOR	Quantity	2	3	2	3	2	3	3	3	3
	Capacity ⁵	85.2	90	112	108.6	124	127.8	168	186	198
	Type ⁶	D	SC	S	D	S	D	S	S	S
PUMPS¹	Process HP	15	15	15	15	13.0	20	20	25	25
	Process GPM	205	216	269	261	290	307	405	450	450
	Process PSI	75	74	65	65	68	67	58	62	62
	Evaporator HP	5	5	7.5	7.5	7.5	7.5	10	15	15
	Evaporator GPM	205	216	269	261	298	307	405	450	475
CONNECTION SIZES (inches)	Process (to/from)	4	4	4	4	4	4	6	6	6
	Make-Up	1½	1½	1½	1½	1½	1½	1½	1½	1½
	Overflow	4	4	4	4	4	4	4	4	4
	Condensing	4	4	4	4	4	4	6	6	6
CONDENSING WATER REQUIREMENTS²	City	128	128	168	163	186	192	252	279	300
	Tower	256	255	336	326	372	384	504	558	600
FULL LOAD³	230 Volt	341.2	384	335	378.2	502	495.2	500	760	860
	AMPERAGE @3ø/60hz⁴	460 Volt	170.6	192	167	189.1	251	247.6	240	380
	575 volt	136.5	155	134	151.3	201	198.1	200	305	325
REFRIGERANT	Type HCFC	22	22	22	22	22	22	22	22	22
TANK CAPACITIES	Operating	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200
	Holding	1,600	1,600	1,600	1,600	1,600	1,600	1,600	1,600	1,600
DIMENSIONS (inches)	Height	112	112	112	112	112	112	112	112	112
	Width	126	126	126	126	126	126	126	126	126
	Depth	120	120	120	120	120	120	120	120	120
WEIGHTS (pounds)	Shipping ⁷	7,300	7,505	7,505	7,805	8,705	9,600	10,600	11,500	11,500
	Operating	18,000	17,305	18,705	19,025	19,905	20,820	21,820	22,700	22,700

Notes: 1. Consult FYI #4-C-38 for pump curves. 2. Flow (GPM) rate is based on 60°F city, 85°F tower at 20 PSI with a clean condenser. 3. No allowance for inrush. Service disconnect by owner. Full Load amps are higher and 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 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. Selection of optional pumps for higher flow rates will raise the minimum recommended operating temperature when no glycol is used. 6. D = discus compressor, S = screw compressor, SC = scroll compressor. 7. Unit weight crated for shipment. Unit shipped in two pieces. Basic field assembly required.



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