

CENTRAL CHILLERS

Air-Cooled 80 - 200 Tons

Industrial Duty Package Chillers for Plant Wide Cooling

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



CM-TI-120A shown.
Air-cooled unit with 120 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 80-200 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 (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 • Air-cooled condenser with remote, outdoor condenser and variable speed fans with pressure staging • Refrigerant receiver • Liquid line solenoid valve • Oil separator on 3 circuit 80, 90, 105, 120 models • Shell & tube evaporator • Refrigerant sight glass with moisture indicator • Thermostatic expansion valve • Hot gas by-pass capacity control system on 80, 90, 105 and 3 circuit 120 ton models • Unloading on 2 circuit 100 & 120 ton models, and 3 circuit 150 & 180 ton models

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

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

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

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 freezestat • Instrument control circuit fuse

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 CCPR valve
- Compressor hour meter

COOLANT CIRCUIT:

- Larger process pumps
- Standby pumps and manifold

INSTRUMENTATION:

- Remote display kit
- PLC with touch screen interface

ELECTRICAL:

- UL listed electrical panel
- Power disconnects

SPECIFICATIONS

		CM-TI-80A	CM-TI-90A	CM-TI-100A	CM-TI-105A	CM-TI-120A	CM-TI-120A	CM-TI-150A	CM-TI-180A
COMPRESSOR	Quantity	2	3	2	3	2	3	3	3
	Capacity ⁹	80	90	105	102.3	124	120	158	186
	Type ¹⁰	D	SC	S	D	S	D	S	S
PUMPS¹	Process HP	15	15	15	15	20	20	20	25
	Process GPM	192	216	252	245	300	288	380	450
	Process PSI	75	74	65	65	68	68	58	62
	Evaporator HP	5	5	7.5	7.5	7.5	7.5	10	15
	Evaporator GPM	192	216	252	245	300	288	380	450
CONNECTION SIZES (inches)	Process (to/from)	4	4	4	4	4	4	6	6
	Make-Up	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2
	Overflow	4	4	4	4	4	4	4	4
FULL LOAD⁸ AMPERAGE @3ø/60hz⁴	230 Volt	341.2	384	335	378.2	502	495.2	500	760
	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
REFRIGERANT⁵	Type HCFC-	22	22	22	22	22	22	22	22
RESERVOIR (gallons)	Operating	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
DIMENSIONS (inches)	Height	112	112	112	112	112	112	112	112
	Width	126	126	126	126	126	126	126	126
	Depth	120	120	120	120	120	120	120	120
WEIGHTS (pounds)	Shipping ¹¹	7,300	7,505	7,505	7,805	9,600	8,705	10,600	11,500
	Operating	18,000	17,305	18,705	19,025	20,820	19,905	21,820	22,700

REMOTE AIR-COOLED CONDENSER

CONNECTIONS⁶	Liquid	2-5/8	1-5/8 ¹³	2-5/8	1-5/8 ¹³	2-5/8	2-1/8 ¹³	2-1/8 ¹³	2-1/8 ¹³
	Hot Gas	1-5/8	2-5/8	2-1/8	2-5/8	2-1/8	2-5/8	3-1/8	3-1/8
AIR FLOW⁷	Fan Quantity	⁷	3	8	3	10	3	4	4
FULL LOAD⁸ AMPERAGE @3ø/60hz⁴	230 volt	37.2	18.6	49.6	18.6	62	18.6	24.8	24.8
	460 Volt	18.6	9.3	24.8	9.3	31	9.3	12.4	12.4
	575 Volt	14.86	7.44	19.84	7.44	24.8	7.44	9.92	9.92
DIMENSIONS (inches)	Height	49	49	49	49	49	49	49	49
	Width	88	46	88	46	88	46	46	46
	Depth	187	144	243	144	243	144	243	243
WEIGHT (pounds)	Shipping	2,340	970	3,100	1,170	4,000	1,310	1,810	1,990

Notes: 1. Consult FYI #4-C-38 for pump curves. 2. No allowance for inrush. Service disconnect by owner. 3. Full Load amps are higher than run load amps and are used to size disconnects & supply wiring. 4. Consult factory for 50hz operation. 5. Field charging required. 6. Field installation and piping connection of condenser by owner. 7. Vertical air discharge from condenser. 8. Full load amperage shown for single condenser unit. Some models use multiple condenser units. 9. 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. 10. D = discus, S = screw, SC = scroll. 11. Unit weight crated for shipment Unit shipped in 2 pieces. Basic field assembly required. 12. Requires two condenser units. Specifications shown for single unit. 13. Requires three condenser units. Specifications shown for single unit.



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