

AIR-COOLED MODELS A-76SK TO A-131SK

Model A-110SK

MULTI-USE CHILLING WITH CENTRAL CONTROL

The Conair Air-Cooled A-SK series Central Chillers are ideal when you need to provide chilled fluid for multiple users. Units are self-contained and easy to install and maintain; no need for an external water source. Chillers are space conscious – they can be positioned as close as four feet from a vertical wall. These chillers are engineered to meet the most demanding job schedules.

NOMINAL COOLING CAPACITY 76 TONS TO 131 TONS

The Conair Air-Cooled Central Chillers provide better control of process temperature, better reliability and greater efficiency. These chillers are designed for year-round applications in ambient conditions from 25°F to 115°F {-4°C to 46°C}.

Made of high strength cast iron, the screw compressor is designed for less thermal distortion, less leakage, and higher efficiencies. The variable unloader valve provides stable temperature control under varying loads.

The air-cooled chillers automatically shut down during a loss of flow to protect the evaporator from freezing up.

Options include low ambient operation, duplicate remote panel, louvered air intake, remote temperature setpoint, and extended compressor warranty.

■ **State-of-the-art control**

The up-front, easy-to-use control is the brain of the chiller. PLC displays process status information as well as lets you make quick setting changes. Display provides temperature, pressure, setpoint, and diagnostic readouts.

■ **Customized to fit your needs**

Choose sizes, capacities and horsepower; Conair has the chiller to match your process. Pick capacities from 76 tons up to 131 tons.

■ **Rugged compressor design**

The screw compressor has only four moving parts eliminating the need for pistons, connecting rods, wrist pins and valves. Fewer moving parts means less internal friction and greater efficiency.

■ **Easy to install**

Your Conair chiller arrives at the job site ready to install. Just place the unit in position, connect the piping and bring power to it. Electrical panels and instrumentation all use UL, CSA and ARI listed components.



AIR-COOLED MODELS A-76SK TO A-131SK**Top air discharge**

Direct-drive condenser fans release air away from personnel, building.

Evaporator

Shell-and-tube evaporator is designed with seamless internally finned copper tubes, roller-expanded into tube sheets.

Condenser

Air-cooled condenser coils have aluminum fins mechanically bonded to seamless copper tubing.

Suction gas-cooled motor

Motor operates at lower temperatures for longer motor life.

**Helical rotary compressor**

Compressor has only four moving parts; direct-drive, low speed for high efficiency and high reliability.

Heavy gauge galvanized steel panels

Fourteen and sixteen gauge panels and access doors for support and strength. All are finished with heavy-duty paint.

Weather-protected control

Control has automatic compressor and condenser fan sequencing, load limiting, and anti-recycle functions.

Dual refrigerant circuits

Chillers have dual refrigerant circuits. Compressors are designed to handle liquid slugging.

CONTROL**LCD Display**

easy-to-read screen provides system information.

The Main Menu

monitors temperature, pressure and setpoint status, set and edit control parameters, edit pre-set factory setpoints, and review active and historical diagnostic conditions.

Navigation buttons

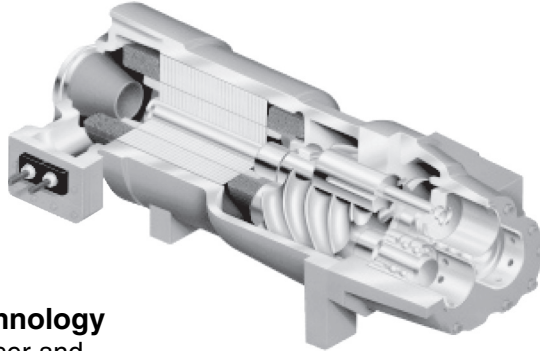
provide easy scrolling through screens.

Microprocessor Control with Human Interface Panel

- designed to take corrective action to prevent unit shutdown.
- limit compressor operation with smart safety controls, avoiding compressor or evaporator failures.
- built-in chiller flow protection automatically detects no-water flow condition.
- improved chiller start-up, load limiting, compressor anti-recycle timing, and lead/lag functions.
- alarm diagnostic displays specific information for quick action.
- service menu offers easy troubleshooting by controlling all outputs individually.
- chiller capacity algorithm optimizes setpoint control and provides evaporator freeze protection.
- failure protections include loss of chilled solution flow, chiller freeze protection, chilled solution flow interlock, head pressure control, pump down control, and low ambient lockout.

AIR-COOLED MODELS A-76SK TO A-131SK**HELICAL ROTARY SCREW COMPRESSOR**

Only four moving parts when compared to reciprocating compressors; there are no pistons, connecting rods, suction and discharge valves or mechanical oil pump.



Cutaway of helical rotary screw compressor

Reduced rotor tip clearance results in reduced leakage between the high and low pressure cavities during compression.

Latest heat transfer technology results in increased condenser and evaporator tube efficiency.

Helical screw design results in part load performance far superior to single reciprocating compressors.

Resistant to liquid slugging this compressor design can handle amounts of liquid refrigerant that would severely damage a reciprocating compressor.

OPTIONS**Different LWT Ranges**

standard leaving water temperature ranges from 40°F to 65°F {4.4°C to 18.3°C} and optional temperature ranges from 0°F to 39°F {-17.8°C to 3.9°C}.

Architectural Louvered Panels

Louvered panels cover the complete condensing coil and the service area beneath the coils.

Low Ambient Option

The low ambient option consists of a variable speed drive on the first fan of each circuit and special control logic to allow minimum load startup at as low as 0°F {-17.8°C}.

Non-Fused Power Disconnect Switch

A non-fused disconnect switch is provided to disconnect main power.

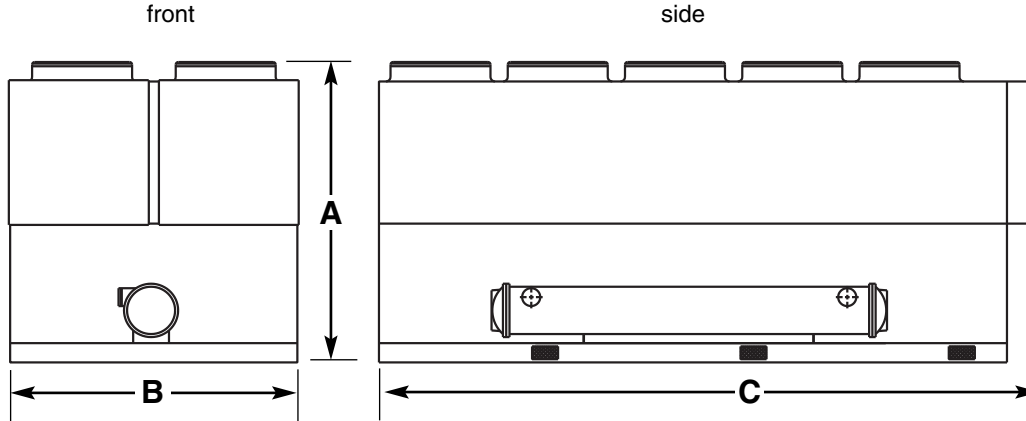
Remote Display

In addition to controlling the chiller operation from a remote location, the remote display provides the capability to monitor unit alarms and diagnostics.

Remote Evaporator

The remote evaporator is available as a standard option and is skid mounted and shipped separately from the outdoor unit. Refrigerant accessories, including electronic expansion valve, moisture indicating sight glass and removable core filter are shipped with the evaporator skid.

AIR-COOLED MODELS A-76SK TO A-131SK



MODEL	A-76SK		A-88SK		A-99SK		A-110SK		A-118SK		A-131SK	
Performance characteristics												
Capacity* tons at 95°F ambient and leaving water temperature:												
40°F {4.4°C}	64.6		74.4		84.8		94.2		101.7		112.4	
45°F {7.2°C}	70.5		81.2		92.3		102.3		110.3		122	
50°F {10°C}	76.5		88.3		100.1		110.7		119.3		132	
55°F {12.8°C}	82.8		95.8		108.2		119.4		128.6		142.3	
60°F {15.5°C}	89.2		103.5		116.6		128.5		138.2		152.9	
Compressor tons	35,35		40,40		50,40		50,50		60,50		60,60	
Chilled water flow gpm {lpm}	183.4 {694}		211.7 {801}		239.8 {908}		265.4 {1005}		285.8 {1082}		315.6 {1195}	
Evaporator pressure drop† psi {bar}	6.2 {0.43}		6.1 {0.42}		8.7 {0.59}		7.1 {0.53}		6.1 {0.42}		10.4 {0.72}	
Evaporator capacity gal {l}	39.8 {150.6}		37.3 {143.1}		34.4 {130.2}		32.1 {121.5}		53.4 {202.1}		45.8 {173.4}	
Dimensions in {mm}												
A-Height	87.5 {2222}		87.5 {2222}		87.5 {2222}		87.5 {2222}		87.5 {2222}		87.5 {2222}	
B-Width	88.2 {2240}		88.2 {2240}		88.2 {2240}		88.2 {2240}		88.2 {2240}		88.2 {2240}	
C-Length	203.6 {5171}		203.6 {5171}		203.6 {5171}		203.6 {5171}		230.6 {5857}		230.6 {5857}	
Connections type	4 {102} GRV		4 {102} GRV		4 {102} GRV		4 {102} GRV		6 {152} GRV		6 {152} GRV	
Weight lb {kg}												
Installed	7000 {3175}		7049 {3197}		7234 {3281}		7483 {3394}		8326 {3777}		8360 {3792}	
Shipped	7332 {3326}		7365 {3341}		7525 {3413}		7751 {3516}		8469 {3841}		8742 {3965}	
Utility requirements												
Power consumption amps ‡	MCA	RLA	MCA	RLA	MCA	RLA	MCA	RLA	MCA	RLA	MCA	RLA
200V/3 phase/60hz	300	115/115	361	142/142	428	192/142	483	192/192	535	233/192	576	233/233
230V/3 phase/60hz	265	100/100	319	124/124	378	167/124	426	167/167	471	203/167	507	203/203
460V/3 phase/60hz	133	50/50	160	62/62	190	84/62	214	84/84	235	101/84	253	101/101
575V/3 phase/60hz	108	40/40	131	50/50	154	67/50	173	67/67	191	81/67	205	81/81

SPECIFICATION NOTES

* Based on 50°F {10°C} water temperature (100% water) leaving the chiller, 2.4 gpm/ton, 95°F {35°C} ambient air temperature. Capacity ratings are 5% based on compressor manufacturer's ratings and are subject to change without notice.

† Differential pressure (drop) through evaporator with design flow listed above.

‡ MCA: Minimum circuit ampacity. RLA: Rated load amps, per compressor. GRV: Groove

Specifications may change without notice. Check with a Conair representative for the most current information.