

AIR-COOLED MODELS A-20SC TO A-62SC

Model A-47SC

YEAR-ROUND CHILLING WITH PRECISE CONTROL

Engineered to meet the most demanding job schedules, these chillers are ideal for plastic processors. Units are self-contained and easy to install and maintain. The modular microprocessor control coordinates the actions of the chillers and provides stand-alone operation of the unit. The small size, convenient lifting and complete wiring allow fast, easy integration into your central cooling system.

NOMINAL CAPACITY FROM 20 TONS TO 62 TONS

The Conair air-cooled central chillers are totally self-contained for easy, economical installation and use. These chillers are designed for year-round applications in ambient conditions from 30°F to 115°F {-1°C to 46°C}.

Made of high strength cast iron, the scroll compressor is designed for less thermal distortion, less leakage, and higher efficiencies.

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

The optional hot gas bypass provides stable temperature control under varying loads. "Low ambient" kits are also available.

All units are factory tested with water running through the evaporator to confirm proper operation.

■ **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. Control uses common English language interface and no symbols or codes.

■ **Customized to fit your needs**

Choose sizes, capacities and horsepower; Conair has the chiller to match your process. Pick capacities from 20 tons up to 62 tons.

■ **Simple compressor design**

The scroll compressor has 70% fewer parts than an equal capacity reciprocating compressor, eliminating the need for pistons, connecting rods, wrist pins and valves. Fewer moving parts mean less internal friction and greater efficiency.

■ **"Smart" auto lead/lag**

The chiller is designed for even compressor starts and even run times to decrease wear on the compressors.



AIR-COOLED MODELS A-20SC TO A-62SC**Top air discharge**

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

Evaporator

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

Factory tested

All chillers are factory tested at typical ambient air and water conditions to confirm proper operation.

Condenser

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

**Refrigerant circuit**

Larger chillers have dual refrigerant circuits with two compressors. Passive oil management maintains proper oil levels within compressor.

3-D Scroll compressor

The compressor has simple mechanical design with minimal moving parts, inherently low vibration for increased efficiency.

Heavy gauge galvanized steel panels

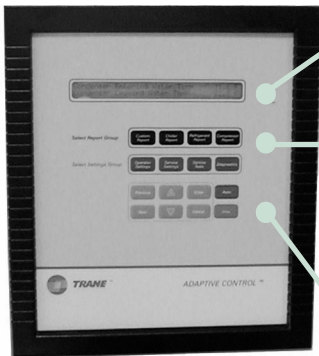
Fourteen and Sixteen gauge panels and access doors for support and strength. All are finished with heavy-duty paint.

Weather protected control

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

Low flow switch

Field installed to positively detect flow loss of evaporator solution.

CONTROL**LCD Display**

easy-to-read, 80-character screen provides system information.

The Main Menu

monitor 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

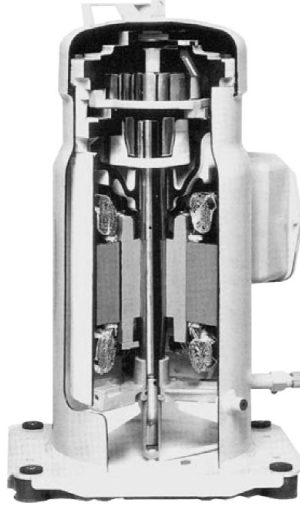
- monitor 41 different diagnostics; stores 20.
- designed to minimize nuisance chiller downtime.
- limit compressor operation with smart safety controls, avoiding compressor or evaporator failures.
- built-in chiller flow protection automatically detects no-water flow condition.
- improved chiller start-up, 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-20SC TO A-62SC**SCROLL COMPRESSOR****70% fewer parts**

when compared to an equal capacity reciprocating compressor. Fewer moving parts means greater efficiency.

Single orbiting scroll

eliminates the need for pistons, connecting rods, wrist pins and valves.

**Smooth compression cycle**

with torque variations only 30% of that produced by a reciprocating compressor, stress on the motor is very low; noise and vibration are reduced.

Matched scroll plates

touch in all three dimensions, forming a completely enclosed compression chamber for higher efficiency.

Suction gas-cooled motor

keeps the motor cooler for longer life and better efficiency.

OPTIONS**Hot Gas Bypass**

modulates capacity for close temperature control. Increases minimum low ambient to 40°F {4.4°C}.

Low Ambient Air Temperatures

down to 0°F {-17.8°C} (10°F {-12.2°C} hot gas bypass). Condenser pressure controlled with variable condenser fan speed.

Remote Evaporator

allows pure water solution (no ambient freeze protection required).

Compressor Warranty

choose a two- to five-year compressor replacement warranty.

Different LWT Ranges

standard leaving water temperature ranges from 40°F to 50°F {4.4°C to 10°C} and optional temperature ranges from 20°F to 29°F {-6.7°C to -1.7°C}; 30°F to 39°F {-1.1°C to 3.9°C} and 51°F to 65°F {10.6°C to 18.3°C}.

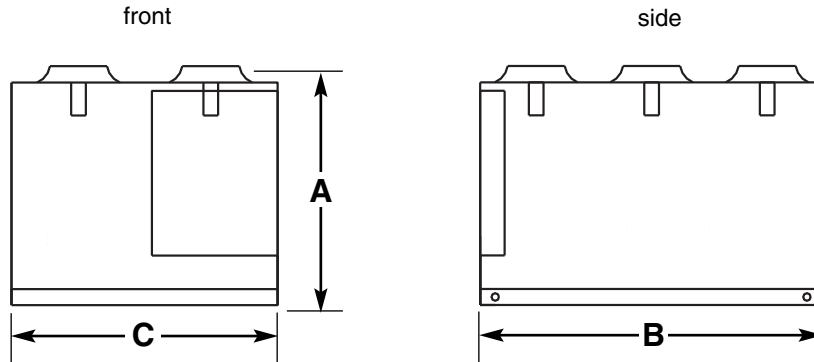
Disconnect

external handle allows local power shut-off to control center.

Remote Setpoint

input for integration into the control system. Choose 0-5VDC or 0-10VDC.

AIR-COOLED MODELS A-20SC TO A-62SC



MODEL	A-20SC		A-26SC		A-31SC		A-38SC		A-47SC		A-62SC	
Performance characteristics												
Capacity* tons at 95°F ambient and leaving water temperature												
40°F {4.4°C}	16.5		21.6		26.2		31.7		39.6		50.6	
45°F {7.2°C}	18.0		23.6		28.7		34.7		43.4		55.5	
50°F {10°C}	19.6		25.8		31.2		37.8		47.4		60.4	
55°F {12.8°C}†	21.3		28.1		34.0		41.0		51.5		65.6	
60°F {15.5°C}†	23.0		30.3		36.8		44.4		55.8		71.0	
Compressor, tons	10,10		10,15		15,15		10,10,10,10		10,10,15,15		15,15,15,15	
Unloading steps, %	50/100		100/60/40		50/100		25/50/75/100		30/60/80/100		25/50/75/100	
Chilled water flow, gpm {lpm}	46.6 {176}		61.9 {234}		73.9 {280}		90.7 {343}		114 {432}		150 {568}	
Evaporator pressure drop‡, psi {bar}	6.3 {0.43}		7.5 {0.51}		8.1 {0.55}		8.3 {0.57}		9.1 {0.63}		7.3 {0.50}	
Evaporator capacity, gal {l}	11.7 {44.3}		10.7 {40.5}		16.3 {61.7}		13.8 {52.2}		21.0 {79.5}		37.8 {143.1}	
Dimensions in {mm}												
A-Height	67.9 {1724}		73.4 {1864}		78.4 {1991}		78.4 {1991}		78.4 {1991}		78.4 {1991}	
B-Width	88.3 {2242}		88.3 {2242}		88.3 {2242}		88.3 {2242}		113.9 {2892}		113.9 {2892}	
C-Length	60.1 {1527}		60.1 {1527}		88.4 {2245}		88.4 {2245}		88.4 {2245}		88.4 {2245}	
Connections, type	2 {50} GRV		2 {50} GRV		2 {50} GRV		3 {76} GRV		3 {76} GRV		3 {76} GRV	
Weight lb {kg}												
Installed	1994 {904}		2187 {992}		3223 {1462}		3438 {1559}		4072 {1847}		5289 {2399}	
Shipped	2091 {948}		2277 {1033}		3319 {1505}		3553 {1612}		4193 {1902}		5545 {2515}	
Utility requirements												
Power consumption, amps §	MCA	RLA	MCA	RLA	MCA	RLA	MCA	RLA	MCA	RLA	MCA	RLA
200V/3 phase/60hz	98	39.4/39.4	124	39.3/56.9	146	56.9/56.9	187	39.4/39.4	224	35.5/55.5	270	56.9/56.9
230V/3 phase/60hz	98	39.4/39.4	124	39.3/56.9	146	56.9/56.9	186	39.4/39.4	223	35.5/55.5	269	56.9/56.9
460V/3 phase/60hz	44	17.2/17.2	56	17.1/25.4	65	25.1/25.1	82	17.2/17.2	98	15.5/24.2	120	25.4/25.4
575V/3 phase/60hz	33	13.2/13.2	44	13.8/20.2	51	19.9/19.9	62	13.2/13.2	77	12.4/19.4	95	20.2/20.2

SPECIFICATION NOTES

* Based on 50°F {10°C} water temperature (100% water) leaving the chiller, standard pump selections, 95°F {35°C} ambient air temperature condenser water supply for the 60 Hz units. Capacity ratings are (+/-) 5% based on compressor manufacturer's ratings and are subject to change without notice.

† With optional leaving temperature range.

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

§ MCA: Minimum circuit ampacity. RLA: Rated load amps. GRV: Groove

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