

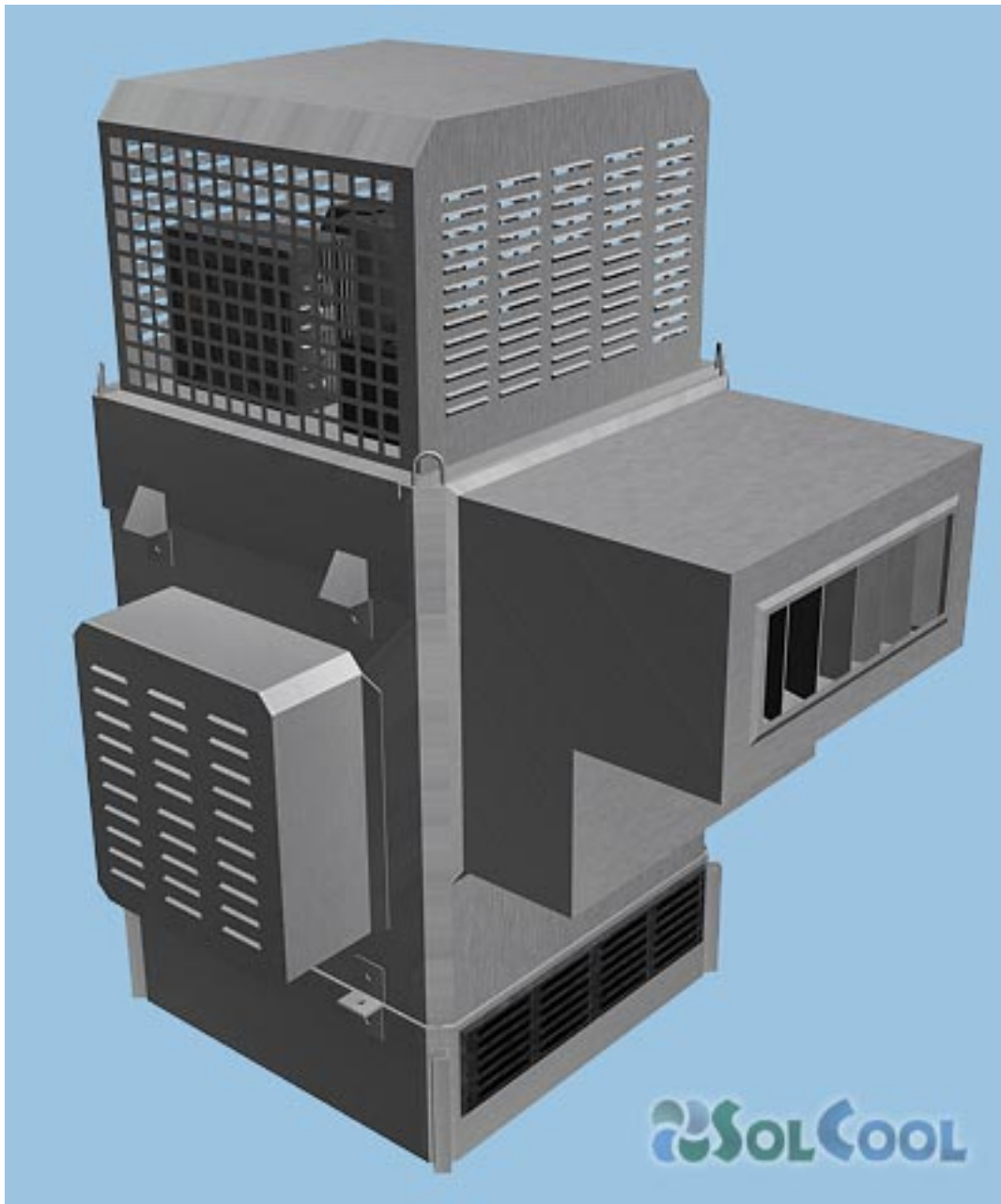


SolCool

A Breath of Fresh Air

# Care and Use Manual

Model No. SCO24



# Table of Contents

<b>THE SOLCOOL AIR CONDITIONING SYSTEM .....</b>	<b>3</b>
<b>HOW IT WORKS .....</b>	<b>4</b>
<b>OUR MISSION: .....</b>	<b>4</b>
<b>PRODUCT DESCRIPTION.....</b>	<b>5</b>
<b>OPERATION.....</b>	<b>6</b>
<b>OPERATING GUIDELINES .....</b>	<b>6</b>
<b>HOW TO OPERATE .....</b>	<b>6</b>
<b>ELECTRICAL GUIDELINES.....</b>	<b>6</b>
<b>WATER SOURCE GUIDELINES .....</b>	<b>7</b>
<b>COOLING AREA .....</b>	<b>7</b>
<b>MAINTENANCE .....</b>	<b>8</b>
<b>OFF-SEASON GUIDELINES .....</b>	<b>8</b>
<b>COOLING PAD REPLACEMENT .....</b>	<b>8</b>
<b>STEPS TO REPLACE PADS: .....</b>	<b>8</b>
<b>CLEANING .....</b>	<b>9</b>
<b>INSULATION AND ATTIC VENTS.....</b>	<b>9</b>
<b>SHADING.....</b>	<b>9</b>
<b>TROUBLESHOOTING.....</b>	<b>10</b>
<b>REPAIR AND REPLACEMENT PARTS .....</b>	<b>11</b>
<b>COMPONENT LIST .....</b>	<b>11</b>
<b>WARRANTY STATEMENT.....</b>	<b>14</b>
<b>LIMITED LIFETIME WARRANTY .....</b>	<b>14</b>
<b>LIMITED COMPONENT PART WARRANTY.....</b>	<b>14</b>
<b>GENERAL CONDITIONS .....</b>	<b>14</b>

# The SolCool Air Conditioning System

Congratulations! You have chosen a quality innovative new technology product, which will give you many years of enjoyable comfort while drastically reducing your current energy bills.

Solar air conditioning uses the principal of evaporation to lower the air temperature. Hot, dry air is passed through wet filters and converted to refreshingly cool air.

The SolCool Hybrid HVAC System delivers reliable cooling at approximately one fourth of the energy consumption of a comparable HVAC system by harnessing the power of the sun. It makes best use of the evaporative process by controlling the flow of water, spreading the water evenly over the filters and keeping a steady stream of cooled air entering your home. The warm air is then exhausted out via ceiling vents carrying the heat and humidity out with it.

The SolCool Hybrid HVAC System offers simple options like battery powered night lighting, zone climate control, a 12-volt off-grid HVAC version and the option of low cost capacity addition. The flexibility to add capacity makes this versatile hybrid design far more comfortable, reliable, sustainable and secure than any other HVAC system on the market.

With its versatile base unit and accessories, the SolCool Hybrid HVAC System will provide extreme comfort at the lowest energy cost throughout the entire year.



SolCool is a subsidiary of GPM, Inc. with a regional facility located in Banning, CA. We are dedicated to the exploration and implementation of alternative energy technologies.

## How it works

Harnessing the power of the sun, the SolCool Hybrid HVAC System combines innovative design with proven technologies that deliver reliable comfort at a 75 percent greater reduction in energy costs.

The SolCool system offers many benefits not available with conventional cooling systems, including fresher air quality, an alternative power supply, reduced energy bills, energy conservation, and continued operation during interruptions in power.

The following grid shows a comparison of annual energy costs for conventional air conditioning compared to the SolCool system. Numbers are approximate and based on six months of operation for eight hours per day at \$0.16 kilowatt per hour. Estimates will vary due to weather fluctuation.

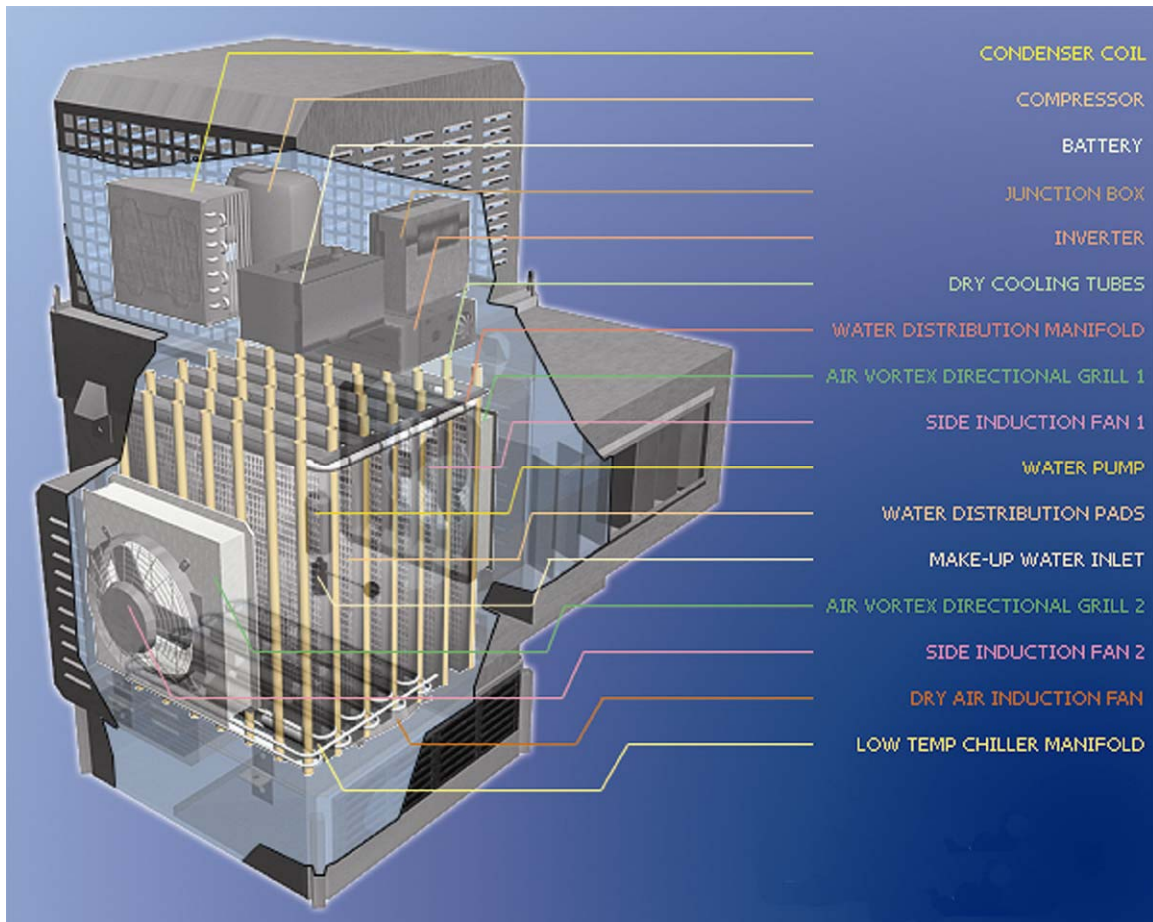


### Our Mission:

The mission of SolCool One, LLC is to ethically facilitate global sustainability and energy independence through the deployment of efficient, high-quality products that generate exemplary commercial success and supreme customer satisfaction.

For more information, call 866.746.0444 or find us on the web at [www.solcool.net](http://www.solcool.net).

# Product Description



The SolCool unit uses efficiency fans, cooling media and a water refrigeration system to sweep chilled air throughout your home or office. Constructed of heavy gauge steel, the SolCool air conditioning system offers a long life with energy conserving fan motors, corrosion-resistant materials and our company's own cellulose materials designed specifically to create ease of operation and long product life.

The unit is powered by a 120-volt outlet, a water source and solar panels. A portable 60-gallon tank is available as an extra option.

The cooler features:

- Low maintenance
- Easy operation
- Three-hour back-up emergency lighting
- No waste system
- Secure venting
- Cooler and cleaner air
- Low humidity

Note: The SolCool has ETL approval, which conforms to UL standards.

## Operation

Please read all instructions before beginning operation.

### Operating guidelines

Your cooler and windows or vents are the two elements of your air-cooling system. As outside air is filtered and cooled, it moves through your home or office and cools the space. It then carries away heat and household odors through its venting system. You control the air-cooling flow to your rooms by opening doors, windows or vents.

Following are operating guidelines:

- Please ensure that there are window, door, or vent openings to let air out when the cooler runs.
- Please ensure that there are not obstacles preventing air circulation in the intended cooling area. Also insure that the intake fans are not obstructed.
- Attic ventilation is necessary for this unit to be a secure system.

### How to Operate

The operation of the air conditioning system can be automated by turning the unit power on and setting the thermostat connected to the unit. Setting the thermostat at, for example, 74 degrees Fahrenheit will activate the system early in the morning on a typical summer day and keep it running well into the evening hours.

### Electrical guidelines

Your SolCool unit must be plugged into a fused or circuit breaker protected 20 Amp, 120 Volt, 60 Hz circuit, unless specifically manufactured for another voltage or frequency configuration. For further information, please see manufacturer's label on your unit. A ground fault circuit interrupter protected circuit is strongly recommended.

**WARNING:** Do not use this unit in hazardous environments where the fans electrical system could provide ignition of combustible or flammable materials, unless the fans are designed to operate in a hazardous environment.

Following are electrical guidelines:

- Always disconnect your SolCool unit from electric power source before performing any service action.
- Do not remove the grounding lug from the electric power cord plug. Use only three-prong, grounded receptacles.
- Do not use three to two prong adapters on electrical power cord.

- Check electrical power cord for insulation breaks, cracks, or fraying. If conditions are found, do not use. See your distributor for immediate service parts.
- To reduce the risk of fire or electrical shock, do not use with any solid-state speed control device.

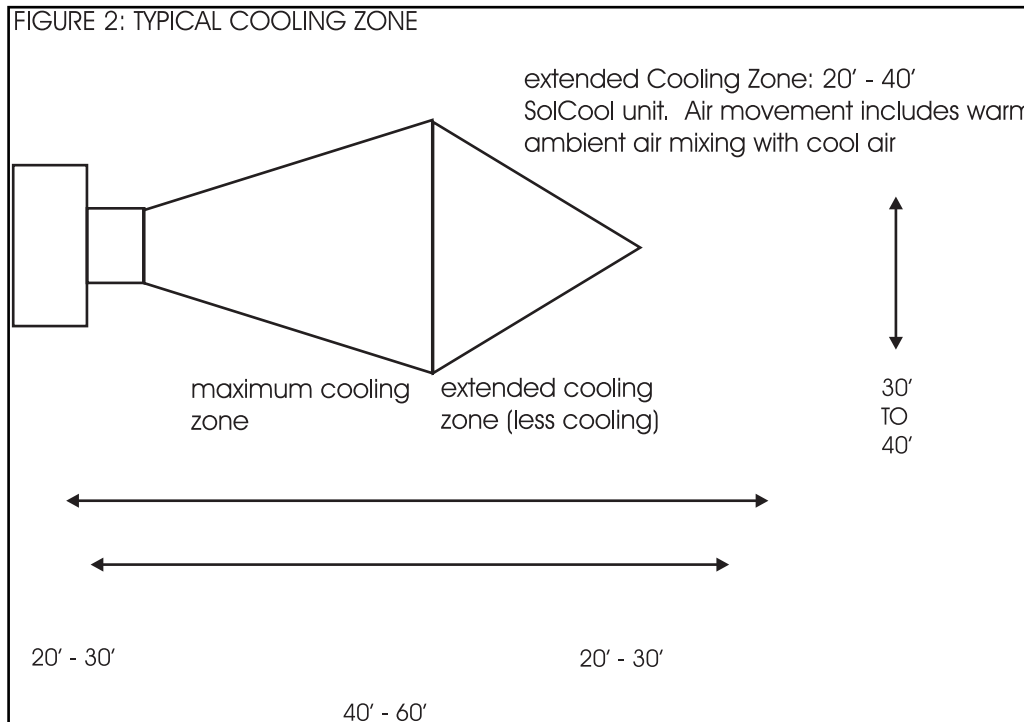
**Water source guidelines**

Do not connect your SolCool to any water source where water pressure exceeds 60 PSI.

**Cooling area**

One SolCool unit will cool an approximate 1,000 square foot area. Note that multiple SolCool units may be required to cover larger areas.

**Typical cooling zone**



# Maintenance

Your Sol Cool unit is engineered to give you years of trouble-free operation. However, through proper care and maintenance, you can increase the life span and performance of your cooler.

Maintenance is the most important thing you can do to insure maximum cooling and trouble-free operation. Never start a season without servicing and preparing your cooler for the hot season.

Several routine inspections during the season will prevent aggravating and costly breakdowns during a hot spell. Service and maintenance contracts are available through your distributor.

**CAUTION:** Always disconnect your SolCool unit from the electric power source before performing any service action.

Follow these maintenance guidelines to obtain the best performance from your cooler:

## **Off-season guidelines**

Turn off and drain water supply to unit if you plan to discontinue use for longer than two months.

Ensure that the sump has been completely drained of water in the event of freezing temperatures. The pump does not need to be drained, as it is designed to be frozen. To drain the sump, unscrew the manifold supply hose and run unit for 15 seconds.

Drain the sump at the end of the hot season.

## **Cooling pad replacement**

Replace cooling pads at the beginning of each cooling season and as necessary throughout the season. Changing the filter pads at least twice per year will keep your cooling comfort at a maximum. Hard water areas may require more frequent filter changes.

To avoid damage to pads, handle only when dry.

### **Steps to replace pads:**

(See graphic cutaway on page 5)

1. Turn OFF power to unit
2. Remove service panel from rear of unit
3. Slide manifold forward
4. Carefully remove pads from rack
5. Install new filter pads
6. Replace service panel

**Cleaning**

If the SolCool is used in a heavy dust environment, cleaning the sump more often will assure that your SolCool will functional the optimum levels.

Rinsing off the cooling pads and intake filter will keep performance levels up.

**Insulation and attic vents**

Whole house insulation will improve any cooler's performance. Insulation around ductwork will keep the incoming air as cool as possible. Attic vents will also help keep temperatures lower and help your cooler operation.

**Shading**

Mounting a cooler in the shade or in the sun makes little difference as to temperature of the air produced by the cooler.

**CAUTION:** Turn off all electrical power to the cooler before attempting to open or service your cooler.

**CAUTION:** The motor has automatic thermal protection. If it shuts off on its own for any reason, it can start back up without warning.

Occasionally inspect your cooler for leaks, blocked water lines, and excessive residue buildup on the pads.

# Troubleshooting

Occasional troubleshooting may be necessary. See following list of solutions.

<b>Problem</b>	<b>Cause</b>	<b>Solution</b>
Water draining from overflow	Float improperly adjusted	Adjust or replace float
Fails to start	No electrical power	Check power
	Blown fuse	Replace fuse
	Circuit breaker	Reset
	Unplugged	Plug in
Not cooling	Water valve turned off	Turn valve on
	Blocked water lines	Disconnect lines, flush and reconnect
	Uneven pad wetting	Check water level

# Repair and replacement parts

All repair/replacement parts are obtainable through your SolCool distributor. Should a part be temporarily out of stock at your distributor, or if you are unable to contact your distributor, you can contact SolCool directly at 1-877-4GPMINC. Please have model number and serial number ready when you contact either your manufacturer or distributor. In case you are unable to contact your distributor by phone or fax, please address correspondence to:

SolCool/GPM, INC.  
Attn: Service Dept.  
2981 W. Lincoln St. Suite 202  
Banning, CA 92220

Following is a list of optional accessories for your SolCool. Please see your distributor for price and availability.

- Solar Panels
- Additional Batteries
- Lighting
- Sump Guards
- D.C. Ceiling Fans
- Portable Tanks

## Component list

LIST #	MODEL#	SOLCOOL PART #
1	COMPRESSOR	COM2422
2	CONDENSOR	C2532
3	START RELAY	SR1964
4	START CAP	SC1543
5	RUN CAP	RC1542
6	CLICKS ON	CO1541
7	FAN MOTOR	FM2533
8	CONDENSOR FAN BLADE	CFB2423

9	SHROUD	S1952
10	THERMOSTAT	T30109
11	ROTOR LOCK	RL4130
12	DRYER	D2424
13	CAP TUBE	CT3333
14	CAP TUBE ASSEMBLY	CTA3334
15	FLARE NUT	FN2534
16	DOUBLE SHOCK MANIFOLD	DSM2425
17	ARMOR FLEX	AF1000
18	CHASIS COMPONENTS	CC3335
19	12 INCH HOSE	H1239
20	18 INCH HOSE	H1839
21	24 INCH HOSE	H2439
22	FLOAT VALVE	FV2535
23	PADS	P2765
24	LEGS	L3765
<b>ELECTRICAL PARTS</b>		
25	CONNECTOR	C3336
26	FUSE BLOCK/FUSES	FBF2536
27	30 AMP THERMAL BREAKER	TB30A1
28	GROUND BASE	GB4321
29	ELECTRICAL BOX & COVER	EBC7865

30	BATTERY	B6732
31	1-GANG HANDY BOX	GHB439
32	15 AMP RECEPTACLE	R15A1
33	CORD ENDS	CE3337
34	INVERTER	14508
35	1-GANG WATERPROOF BOX	GWB440
36	1-GANG WATERPROOF BLANK COVER	GWBC441
37	SMART CHARGER	SC1544
38	1 INCH CHASSE NIPPLE	CN1960
39	HANDY COVERPLATE	HC4356
40	½ PLASTIC KO	PKO1264
41	2-12 INCH FANS	F112
42	1-10 INCH FAN	F110
43	WATER PUMP	WP9995
44	SOLAR PANEL	SP102

**DATE OF PURCHASE** \_\_\_\_\_ **COMPRESSOR #** \_\_\_\_\_

# Warranty Statement

## LIMITED LIFETIME WARRANTY

GPM warrants the external housing of each new air conditioning unit to be free from rust and corrosion for the lifetime of the unit subject to the General Conditions section below. This lifetime warranty is limited to parts and labor to replace the external housing of the unit.

## LIMITED COMPONENT PART WARRANTY

GPM warrants the component part of each air conditioning unit to be free from defects in material and workmanship under normal use within the operating conditions listed below for a period equivalent to that of the OEM's warranty for the specific component part from the date of unit installation. During the warranty period, GPM will provide parts and labor based on the conditions listed in the General Conditions section.

## GENERAL CONDITIONS

Damage to any part of the air conditioning unit due to misuse, misapplications, neglect, alteration, accident, physical damage, installation or operation contrary to manufacturer's printed instructions or damage caused by acts of God are not covered by this warranty. In all such cases, regular parts, service and shipping charges will be the responsibility of the owner. This warranty may be voided if the unit is altered or repaired by anyone other than an authorized service representative. Shipping charges of units or parts submitted to manufacturer's facility for servicing will be borne by the owner.

GPM assumes no warranty liability in connection with the unit other than herein specified. This warranty is in lieu of all other warranties expressed or implied, including warranties of fitness for a particular purpose.



**SolCool**

**A Breath of Fresh Air**

**For more information:**

**[www.solcool.net](http://www.solcool.net)**