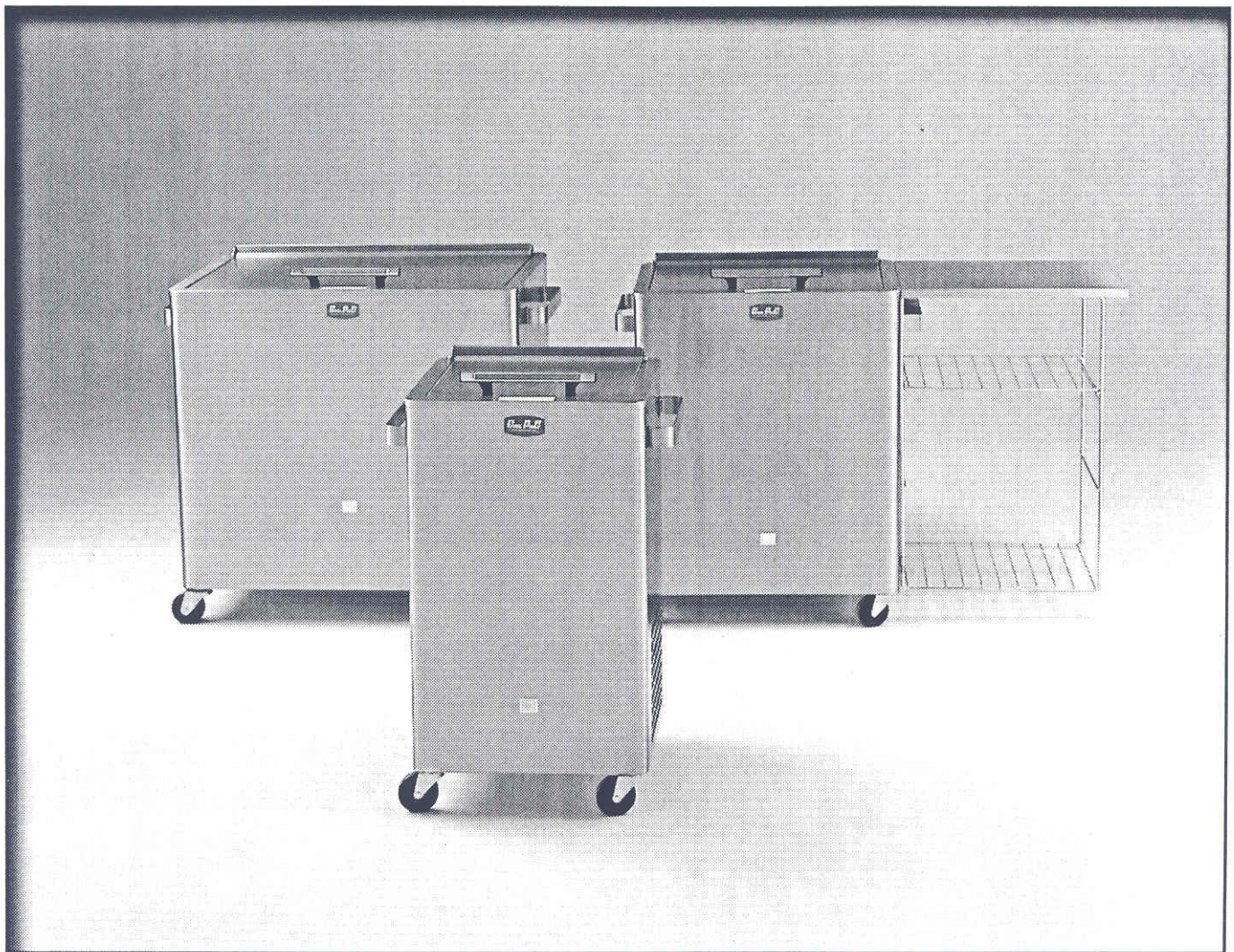


Instructions for Use and Operation of  
**COLPAC® MASTER CHILLING UNITS**

**C-2, C-5, C-6** 115 Volt



*Wellness By Design®*  
**CHATTANOOGA**  
**GROUP, INC.**

## 12 Month Warranty

Challenger Group Inc. ("Company") warrants that the Colpac® C-2, C-5 and C-6 Master Chilling Unit(s) ("Product") is free of defects in material and workmanship. This warranty shall remain in effect for one (1) year from the date of original consumer purchase of this Product and extends to any owner of the Product during the warranty period. If this Product fails to function during the one year warranty period because of a defect in material and/or workmanship, Company or the selling dealer will replace or repair the defective Product within a period of 30 days from the date on which the replacement or the repair is requested.

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### Obtaining Service

To obtain service from Company or the selling dealer under this warranty, the owner must comply by the following:

1. A written claim must be made within the warranty period to Company or the selling dealer. If the claim is made to the Company, the written claim should be sent to:

Address: 4717 Adams Rd.  
P.O. Box 489  
Hixson, TN 37343

Phone: (615) 861-7379

2. The Product must be returned to Company or the selling dealer by the owner.

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

The Company does not authorize any person or representative to create for it any other obligation or liability in connection with the sale of the Product. Any representation or agreement not contained in the warranty shall be void and of no effect.

## 12 Month Warranty

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Chattanooga Group, Inc. ("Company") warrants that the Colpac® C-2, C-5 and C-6 Master Chilling Unit(s) ("Product") is free of defects in material and workmanship. This warranty shall remain in effect for one (1) year from the date of original consumer purchase of this Product and extends to any owner of the Product during the warranty period. If this Product fails to function during the one year warranty period because of a defect in material and/or workmanship, Company or the selling dealer will replace or repair this Product without charge within a period of 30 days from the date on which the defective Product is returned to the Company or the dealer. Company or the dealer will ship the replacement or the repaired Product to the consumer's residence.

### What This Warranty Does Not Cover

1. Replacement parts or labor furnished by anyone other than the Company, the dealer or an approved Company service agent.
2. Defects or damage caused by labor furnished by someone other than Company, the dealer or an approved Company service agent.
3. Any malfunction or failure in the Product while it is in the possession of the owner during the warranty period if the malfunction or failure is not caused by a defect in material or workmanship or if the malfunction or failure is caused by unreasonable use, including the failure to provide reasonable and necessary maintenance.

### Company shall not be liable for incidental or consequential damages to property or business.

Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.

### Obtaining Service

To obtain service from Company or the selling dealer under this warranty, the owner must do or abide by the following:

1. A written claim must be made within the warranty period to Company or the selling dealer. If the claim is made to the Company, the written claim should be sent to:

Address: 4717 Adams Rd.  
P.O. Box 489  
Hixson, TN 37343

Phone: (800) 592-7329

2. The Product must be returned to Company or the selling dealer by the owner.

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## Foreword

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This manual has been prepared for the owners and operators of the Colpac® Models C-2, C-5 and C-6 Master Chilling Units. It contains instruction on operation, precautions, maintenance and parts information. To obtain maximum life and efficiency from you Colpac C-2, C-5 and C-6 units, and to aid in its proper operation, read and understand this manual thoroughly and follow all instructions prior to operating the unit. The specifications put forth in this manual were in effect at the time of publication. However, owing Chattanooga Group's policy of continuous improvement, changes to these specifications may be made at any time without obligation on the part of Chattanooga Group.

## Precautionary Instructions

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1. **CAUTION:** Read, understand and practice the Precautionary and Operating Instructions. Know the limitations associated with the Colpac Master Chilling Units. Observe the cautionary and operational decals installed on the units.
2. **CAUTION:** Do not place chemical activated and/or instant freeze type packs in the Colpac Master Chilling Unit. This type of pack may break and cause corrosive damage to the freezer compartment and refrigeration system.
3. **WARNING:** Make certain that the unit is electrically grounded by connecting to a grounded electrical service receptacle conforming to the applicable national and local electrical codes.

## Instructions for Patient Care and Comfort

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1. Know the chill characteristics of the Colpac.
2. Exercise extreme care when applying the Colpac.
3. Know your patient: use extreme care when applying Colpacs to areas where the patient may have loss of feeling.
4. **Always** have the patient inform you if the Colpac is too cold.
5. **Always** place one or more layers of dampened, thin towel between the skin and Colpac if application becomes painful. A warm, damp towel reduces the initial shock of the cold application.
6. Use care and judgement when applying Colpacs to infants and elderly. Constantly check the temperature of the Colpacs.
7. Exercise extreme caution when applying Colpacs to patients with thin skin or "bony" areas: shoulders, elbows, knees, etc.
8. **Do not** use the Colpac in the presence of poor circulation or open wounds. It should be a constant thought in the mind of the nurse or therapist that it is easier to add layers to terry toweling than to treat skin tissue damage.
9. Carefully observe your first use of the Colpac and adapt the method of application to the tolerance and needs of the patient.
10. Tolerance of cold, like tolerance of heat, will vary from patient to patient.
11. During treatment, frequently check the condition of the patient and the area being treated.
12. Patient should not sit, lie or sleep on the Colpac.
13. Treatment time should not exceed 30 minutes.

## General Information

Listen carefully after plugging unit in to make sure the compressor goes into operation immediately. Within minutes, a light frost covering should form on the dividers in the chilling chamber. Insert the individual Colpacs between the dividers in the chilling chamber and close the lid. The various Colpacs are shown below.

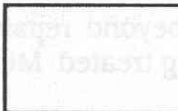




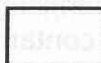
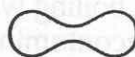
The initial Colpac chilling, starting from room temperature, will require several hours. After initial chilling, the re-chilling time of the Colpacs will vary depending on the length of time in use with patient and time out of the unit. Normally a short time is required for re-chilling your Colpacs.

**Note:** While in operation, the top of the unit will become warm because of a specially designed heating system installed under the top rim. This is to eliminate condensation of moisture around the top of the unit.

### Care of Colpacs

Always return the Colpac to the chilling chamber after each treatment. There, it is constantly chilled, kept clean and ready for immediate use. The Colpac may be cleaned by scrubbing it with soap and water. It is best not to fold the Colpac for storage. If the outside plastic cover of the Colpac should become torn or cut, minor repairs may be made with plastic or vinyl tape. Be sure to clean surface carefully and apply tape at room temperature. **Always** replace Colpacs when the plastic covering becomes damaged beyond repair. Original, replacement Colpacs may be ordered from you surgical or medical supply dealer.

Remember, the temperature of the Colpac, when chilled, is approximately 10° F to 21° F (-6° C to -12° C). Be familiar with the chill characteristics of the Colpac.

			
<b>STANDARD</b> (No. 1500) 11" x 14" (28cm x 33cm)	<b>NECK CONTOUR</b> (No. 1508) 23" (60cm) Long	<b>OVERSIZE</b> (No. 1512) 11" x 21" (28cm x 53cm)	
			
<b>HALF</b> (No. 1506) 7½" x 11" (16cm x 28cm)	<b>THROAT</b> (No. 1502) 3" x 11" (8cm x 28cm)	<b>QUARTER</b> (No. 1504) 5½" x 7½" (14cm x 17cm)	<b>EYE</b> (No. 1510)

### Individual Packs and Sizes

# General Operating Instructions

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The Colpac® Master Chilling Unit is simple and easy to operate. The thermostat controls the temperature of the chilling chamber. It is located in the rear of the unit, behind the removable panel. The refrigeration system of the Colpac Master Chilling Unit has been adjusted, tested and calibrated to chill the Colpacs to a temperature between 10° F to 21° F (-6° C to -12° C). Extensive clinical testing and observation have shown this to be the optimum temperature range. It is recommended that this adjustment not be altered until the Colpac unit and the Colpacs have been used for some time, and then only if any adjustment of the chilling temperature is absolutely necessary. A slight adjustment can be made by removing the rear panel and turning the adjustment knob on the thermostat. To lower the temperature (colder), the knob should be turned clockwise. To raise the temperature (warmer), the knob should be turned slightly counter-clockwise.

**CAUTION:** The thermostat is extremely sensitive and the slightest adjustment will alter the temperature several degrees. The temperature of the chilling chamber should be checked with a thermometer after every adjustment, before using the Colpacs.

The Colpac Master Chilling Unit operates through the use of a hydraulic capillary type thermostat and can be left connected to the power source, providing a ready supply of chilled Colpacs. Locate the unit away from humid areas to avoid excessive frost build-up on the refrigeration coils.

## General Operating Rules

1. **Always** keep the Colpacs in the chilling chamber of the unit when not in use. This keeps the packs clean, chilled, ready for use, and prevents pack damage.
2. **Never** place a damaged Colpac into the chilling chamber of the unit.
3. Check for ice/frost build-up daily, and defrost unit when Colpacs become crowded in chamber.
4. **Never** adjust the thermostat too high or too low. See caution above.
5. **Always** replace Colpacs when the plastic covering becomes damaged beyond repair or when Colpac becomes firm or hard and not moldable for contouring to area being treated. Minor repairs may be made with plastic or vinyl tape.
6. If the unit is to be left unattended for an extended period of time, unplug and follow the defrosting procedures found in the "Maintenance" section of this manual.
7. **Always** use factory authorized replacement parts.
8. **Always** clean and sterilize Colpacs which are exposed to contamination. Do not sterilize Colpacs with boiling water, nor is gas sterilizing recommended. Alcohol or similar substance may be used to decontaminate packs. If any contamination is suspected, destroy Colpac.

# Installation

Remove all packing material inside the Colpac® chilling chamber. It is important to remove all loose pieces of paper and other packing material which might otherwise plug the drain! Make certain that the drain valve is closed.

Check the voltage rating on the serial plate which is located on the back of the unit. Plug the unit into a 120 Volt AC outlet. Do not attempt to use Direct Current (D.C.). Follow the procedures indicated in the "Precautionary Instructions". Do not attempt to use the unit if it is not properly grounded.

1. Plug unit back into the power source.	1. Plug unit back into the power source.
2. Clean and return Colpac to the chilling chamber.	2. Clean and return Colpac to the chilling chamber.
3. Close chamber lid - cooling sequence begins again.	3. Close chamber lid - cooling sequence begins again.
4. Open bottom drain valve.	4. Open bottom drain valve.
5. Allow unit to defrost completely. All excess water must be removed from the chilling chamber before the unit is started again.	5. Allow unit to defrost completely. All excess water must be removed from the chilling chamber before the unit is started again.
6. Close bottom drain valve and detach extension drain hose.	6. Close bottom drain valve and detach extension drain hose.
7. Attach extension drain hose to the valve located beneath chilling chamber, behind rear access panel.	7. Attach extension drain hose to the valve located beneath chilling chamber, behind rear access panel.
8. Raise chamber lid and remove Colpac - leave lid open to permit defrosting. Warm water may be poured over the Colpac to speed defrosting.	8. Raise chamber lid and remove Colpac - leave lid open to permit defrosting. Warm water may be poured over the Colpac to speed defrosting.
9. Disconnect the unit from its power source.	9. Disconnect the unit from its power source.

## Technical Specifications

Protect the refrigeration unit from the condenser fan. The condenser may be reached by removing the rear access panel. Always disconnect power before cleaning the condenser.

Refrigerant Thermostat

1. Remove plate.
2. Remove bushing nut.
3. Remove packing in bushing nut.
4. Remove brass nut.
5. Remove rubber washer.
6. To reinstall, reverse procedure.
7. After installation, seal top of back- ing nut with silicone sealant.

Refrigerant Installation

Test Procedures, All Models

High 200 PSI

Low 150 PSI

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# Maintenance

## Care of Unit

The Colpac® Master Chilling Unit is equipped with a hydraulic capillary type thermostat in order to maintain the proper Colpac temperature evenly in the chilling chamber. The unit may be left connected to the electrical outlet, providing a ready supply of chilled Colpacs.

Periodically, the accumulated frost in the chilling chamber will build up to a point where the Colpacs are crowded and insertion or removal of the packs becomes difficult. The units should be defrosted when this occurs and the inside of the tank wiped dry with a clean towel or cloth.

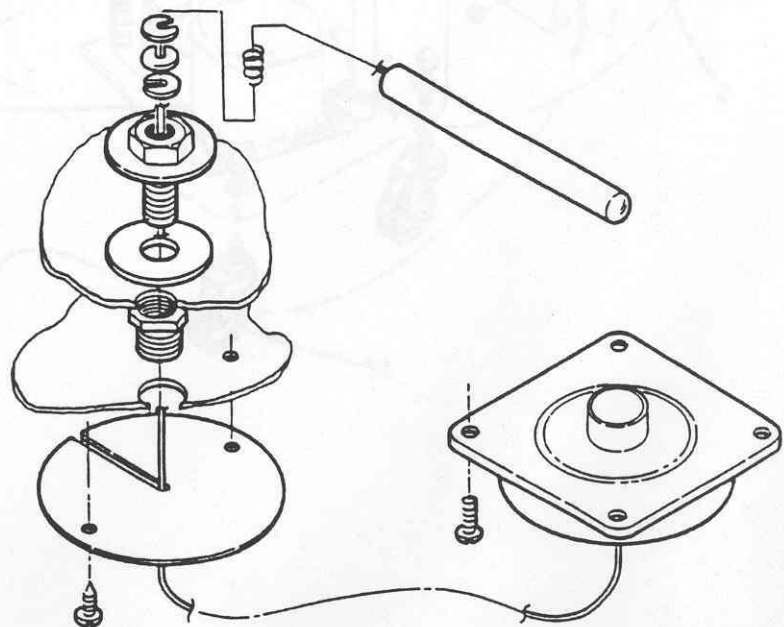
## Defrosting Unit

1. Disconnect the unit from its power source.
2. Raise chamber lid and remove Colpacs. Leave lid open to speed defrosting. A small amount of warm water may be poured over the refrigeration coils to speed defrosting.
3. Attach extension drain hose to the valve, located beneath chilling chamber, behind rear access panel.
4. Open bottom drain valve.
5. Allow unit to defrost completely. All excess water must be removed from the chilling chamber before the unit is started again.
6. Close bottom drain valve and detach extension drain hose.
7. Plug unit back into the power source.
8. Clean and return Colpacs to the chilling chamber.
9. Close chamber lid – chilling sequence begins again.

Dust and lint will accumulate on the condenser fins of the refrigeration unit. This must be removed periodically to insure highest efficiency. The condenser may be reached by removing the rear access panel. Always disconnect power before cleaning the condenser.

## Replacing Thermostat

1. Remove plate.
2. Remove bushing nut.
3. Remove packing in bushing nut.
4. Remove brass nut.
5. Remove rubber washer.
6. To reinstall, reverse procedure.
7. After installation, seal top of packing nut with silicone sealant.



## Trouble Shooting

SYMPTOM	POSSIBLE CAUSE	SUGGESTED SOLUTION
A. Unit plugged in but packs not chilled.	1. Breaker for electrical circuit off. 2. Thermostat not functioning. 3. Fan motor failure. 4. Compressor failure. 5. Refrigerant leak.	1. Turn breaker on. 2. Replace thermostat 3. Replace motor. 4. Contact factory. 5. Contact factory.
B. Packs too cool.	1. Thermostat set too low. 2. Thermostat failure.	1. Adjust Thermostat. 2. Replace Thermostat.
C. Packs too warm.	1. Thermostat set too high. 2. Thermostat failure. 3. Power failure.	1. Adjust thermostat. 2. Replace thermostat. 3. Check electrical circuit.

## Technical Specifications

Rated Voltage: 115V

Rated Frequency: 60 Hz

Current: 4 Amps

Horsepower: 1/5

Type of Refrigerant: R-134A

Amount of Refrigerant: C-2, 11 oz.  
C-5, 11 oz.  
C-6, 12.5 oz.

Test Pressures, All Models: High, 235 psi  
Low, 150 psi

Normal Operating Temperature,

All Models: -12° C to -6° C  
+10° F to +21° F

# Parts Drawing: Model C-2

Trouble Shooting

## Case of Unit

The Colmac® Master Chiller Unit is designed to maintain the proper Cellular Temperature within 1/10th of a degree. It is a self-contained unit, providing a ready supply of liquid Nitrogen for use in the laboratory. Periodically, the accumulated frost must be removed from the evaporator coils. This is done by manually operating the defrosting unit. When this occurs, the door of the unit is opened and the frost is blown off the coils.

## Defrosting Unit

1. Disconnect the unit from the power source.

2. Remove the door and remove the Colmac Master Chiller Unit from the cabinet.

3. After the door is removed, the defrosting unit can be seen. It is located on the right side of the unit.

4. One handle on the defrosting unit is used to operate the defrosting unit. It is located on the right side of the unit.

5. After the unit is defrosted, the door can be closed and the unit can be used.

6. Check the unit for proper operation and defrosting unit function.

7. Plug the unit back into the power source.

8. Check the unit for proper operation and defrosting unit function.

9. The unit will automatically defrost the evaporator coils periodically to insure highest efficiency.

10. Always disconnect power before repairing.

11. Reinstall the unit.

12. Remove the plate.

13. Remove bushing nut.

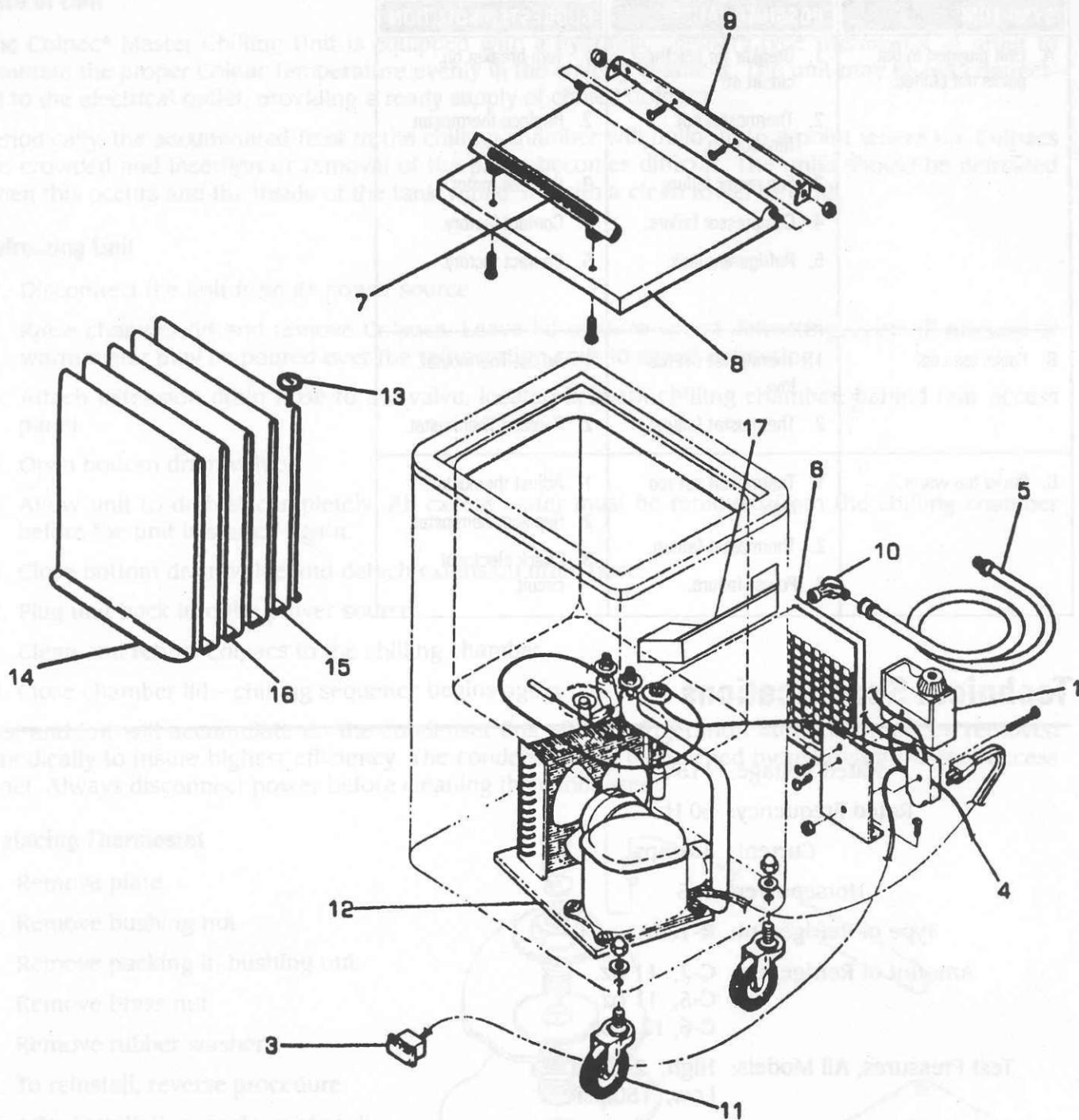
14. Remove packing & bushing unit.

15. Remove cover nut.

16. Remove rubber washer.

17. To reinstall, reverse the above steps.

18. After installation, seal up & pack the unit with insulation.



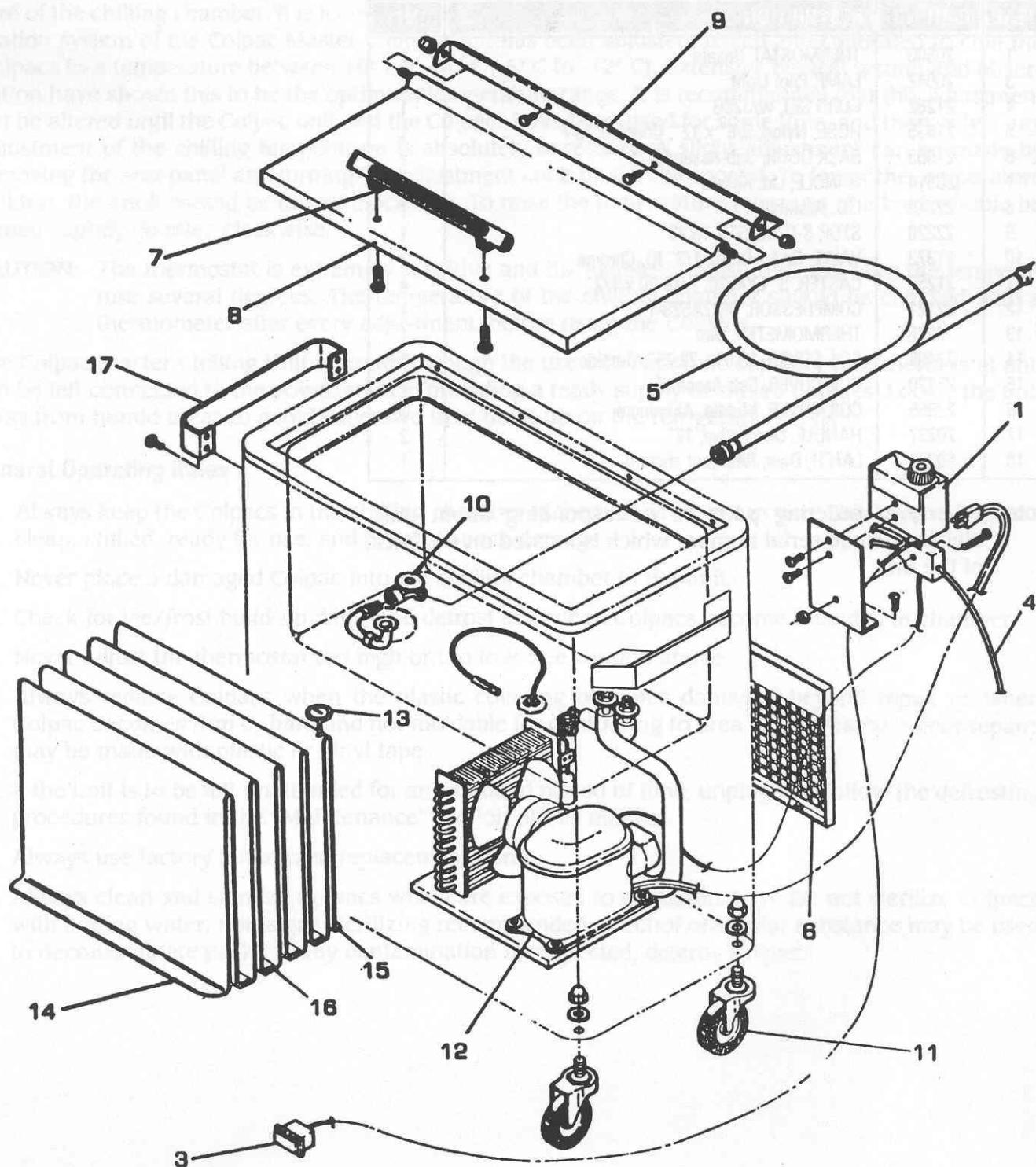
## Parts List: Model C-2

ITEM	PART NO.	DESCRIPTION	QNTY.
1	20500	THERMOSTAT, Resale	1
3	20042	LAMP, Pilot Light	1
4	21282	CORD SET, w/J28G	1
5	21635	HOSE, Nylon, 5/8" x 12", Coupled, M-F	1
6	21983	BACK DOOR, Sub-Assembly	1
7	20514	HANDLE, Lid, Resale	1
8	22219	LID, Assembly	1
9	22220	STOP, S-C 3.625" x 16.75"	1
10	21373	VALVE, Boiler Drain, 1/2" ID, Chrome	1
11	21259	CASTER, 3" EY4520, 7/16-20 x 1/2"	4
12	22121	COMPRESSOR, BM2A528-1	1
13	4228	THERMOMETER, Dial	1
14	22409	COIL COVER, 13.5" x 22.75", Outside	1
15	22420	COIL COVER, Sub-Assembly	1
16	22955	COIL COVER, Middle, Aluminum	3
17	20237	HANDLE, Decorative, 12"	2
18	60286	LATCH, Door, Rear (not shown)	1

**Note:** Whenever ordering parts or corresponding about unit, always include serial number which is located on the back of the unit.



## Parts Drawing: Model C-5

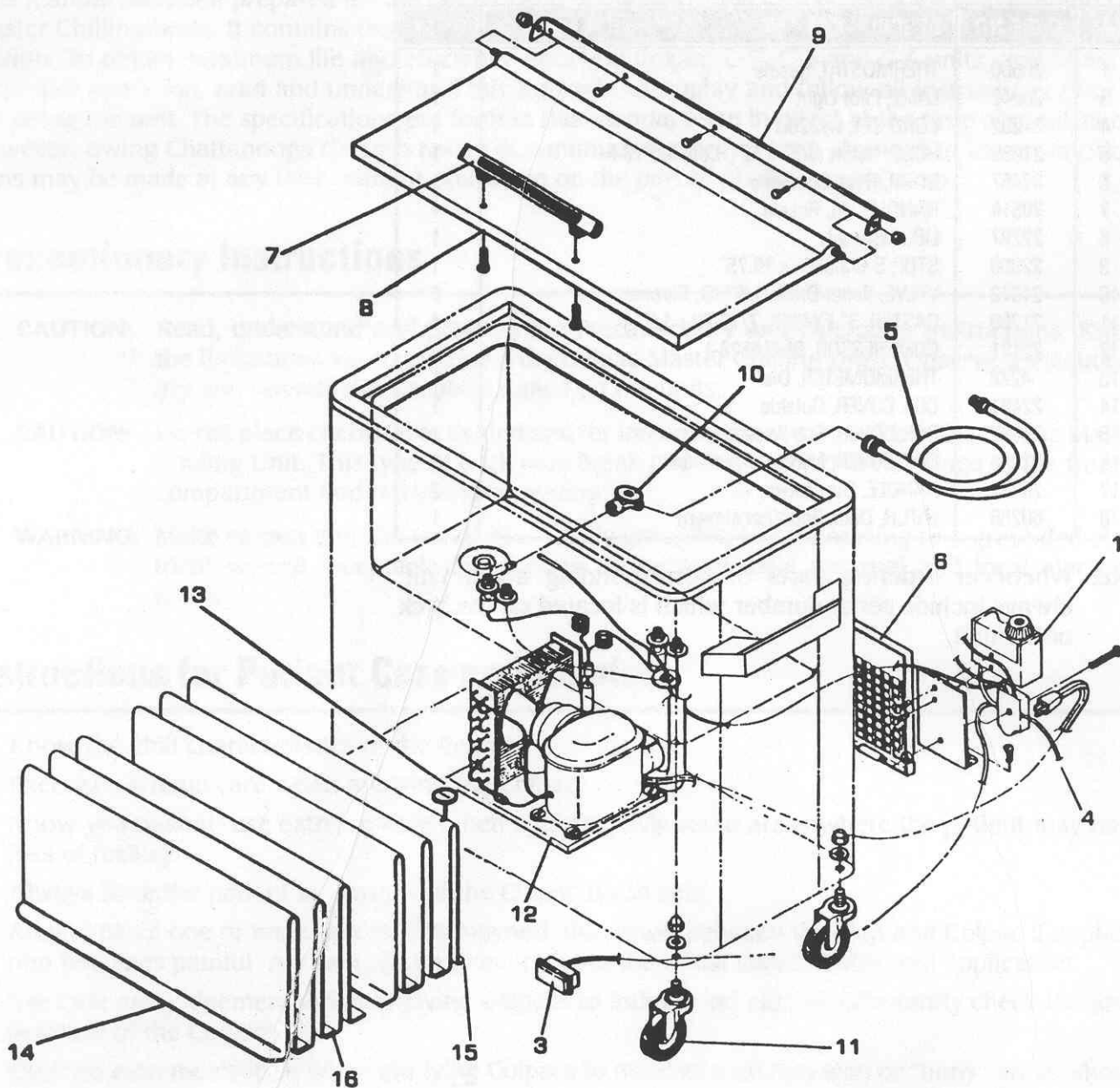


## Parts List: Model C-5

ITEM	PART NO.	DESCRIPTION	QNTY.
1	20500	THERMOSTAT, Resale	1
3	20042	LAMP, Pilot Light	1
4	21282	CORD SET, w/J28G	1
5	21635	HOSE, Nylon, 5/8" x 12", Coupled, M-F	1
6	22457	DOOR, Rear, Complete	1
7	20514	HANDLE, Lid, Resale	1
8	22297	LID, Assembly	1
9	22300	STOP, S-C 3.625" x 16.75"	1
10	21373	VALVE, Boiler Drain, 1/2" ID, Chrome	1
11	21259	CASTER, 3" EY4520, 7/16-20 x 1/2"	4
12	22121	COMPRESSOR, BM2A528-1	1
13	4228	THERMOMETER, Dial	1
14	22461	COIL COVER, Outside	1
15	22462	COIL COVER, Sub-Assembly	1
16	22956	COIL COVER, Middle, Aluminum	3
17	20237	HANDLE, Decorative, 12"	2
18	60286	LATCH, Door, Rear (not shown)	1

**Note:** Whenever ordering parts or corresponding about unit, always include serial number which is located on the back of the unit.

# Parts Drawing: Model C-6

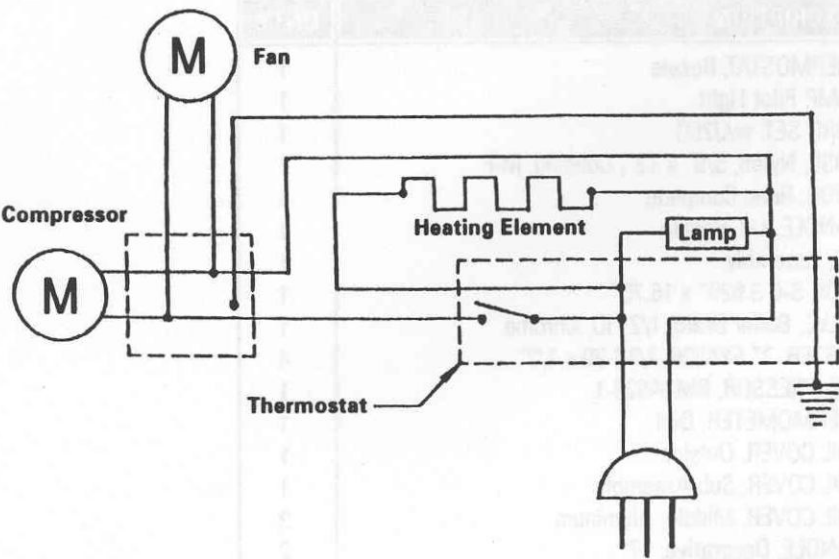


## Parts List: Model C-6

ITEM	PART NO.	DESCRIPTION	QNTY.
1	20500	THERMOSTAT, Resale	1
3	20042	LAMP, Pilot Light	1
4	21282	CORD SET, w/J28G	1
5	21635	HOSE, Nylon, 5/8" x 12", Coupled, M-F	1
6	23008	DOOR, Rear, Complete	1
7	20514	HANDLE, Lid, Resale	1
8	22348	LID, Assembly	1
9	22352	STOP, S-C 3.625" x 16.75"	1
10	21373	VALVE, Boiler Drain, 1/2" ID, Chrome	1
11	21260	CASTER, 3" EY4520, 7/16-20 x 1/2"	4
12	22121	COMPRESSOR, BM2A528-1	1
13	4228	THERMOMETER, Dial	1
14	23021	COIL COVER, Outside	1
15	23022	COIL COVER, Sub-Assembly	1
16	22954	COIL COVER, Middle, Aluminum	3
17	20237	HANDLE, Decorative, 12"	2
18	60286	LATCH, Door, Rear (not shown)	1

**Note:** Whenever ordering parts or corresponding about unit, always include serial number which is located on the back of the unit.

# Electrical Schematics: Models C-2, C-5, C-6



Notes: Whenever entering parts or corresponding items unit, always include serial number which is located on the back of the unit.

*Wellness By Design®*

**CHATTANOOGA  
GROUP, INC.**

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1-800-592-7329