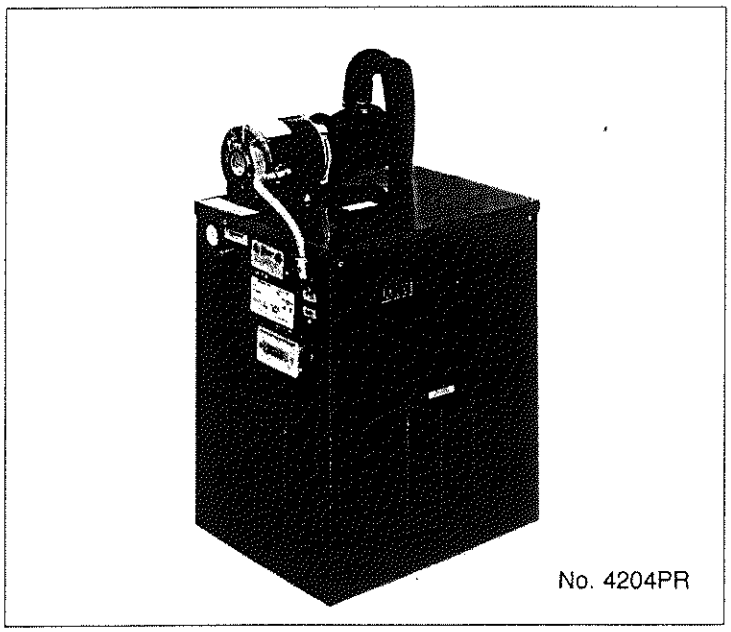
INSTALLATION and OPERATION INSTRUCTIONS

Century Remote Draft Beer Systems



No. 4204PR

Power Pak Model Nos.

4200
4204
4204PR
4210
4204W
4204WPR
4210W

IMPORTANT INFORMATION

A Warranty card is enclosed that must be filled out and mailed to the Perlick Corporation in order to register the warranty. If the card is not returned to Perlick, the warranty period will begin from the date the equipment is shipped from the factory.

Permanently mount the enclosed Warning/ Safety Instruction label in a visible location near the CO_2 regulator.

Table of Contents

This manual has been prepared to assist you in the installation of your Century Remote Beer System and to acquaint you with its operation and maintenance.

We dedicate considerable time to ensure that our products provide the highest level of customer satisfaction. If service is required, your dealer can provide you with a list of qualified service agents. For your own protection, never return merchandise for credit without our approval.

We thank you for selecting a Perlick product and assure you of our continuing interest in your satisfaction.

Perlick CORPORATION

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Form No. Z2020
Rev. 6/00

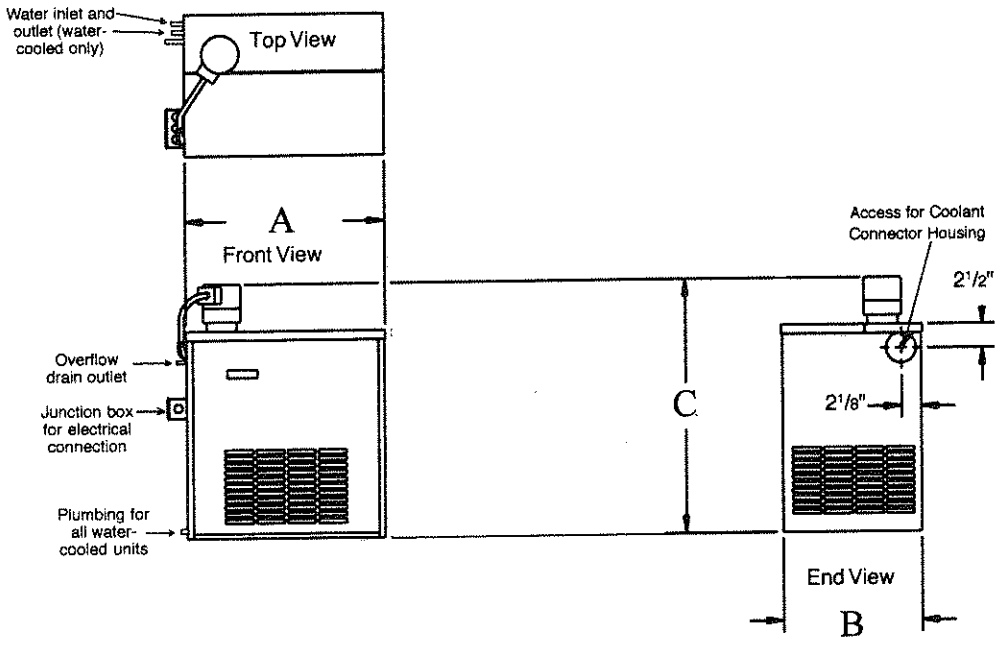
SIZES and SPECIFICATIONS for POWER PAKS

MODEL NOS.	Air-Cooled	4200	4204	4204PR	4210
	Water-Cooled	N/A	4204W	4204WPR	4210W
DIMENSIONS EXTERIOR (mm.)	Length A Dim.	15 3/4" (400)	21 1/4" (540)	21 1/4" (540)	27 3/4" (705)
	Depth B Dim.	14 3/4" (375)	15 1/4 " (387)	15 1/4 " (387)	17 3/4" (451)
	Height C Dim.	24 1/2" (622)	29" (737)	33 3/4" (857)	21 1/4" (540)
CONDENSING UNIT H.P.		1/5	1/3	1/3	1/2
AMPS		7.0	10.6/10.4	14.1/14.0	14.6/14.7
PUMP		Centrifugal	Centrifugal	Procon	Procon
SHIPPING WEIGHT lbs. (kg.)		93 (42.2)	135 (61.2)	145 (65.8)	210 (95.3)
MAXIMUM FOOTAGE IN SYSTEM		50	100	150	300
DOW THERM* REQUIRED (ltr.)		1 gal. (3.8)	2 gals. (7.6)	2 gals. (7.6)	4 gals. (15)
B.T.U.'s		1700	2550	2550	3800
REFRIGERANT CHARGE (grams)		6.5 oz. (184)	10 oz. (283)	10 oz. (283)	15/24 oz.(425/680)
REFRIGERATION		134a capillary tube-type hermetic condensing unit with service valves.			
ELECTRICAL		120 Volt, 60 hz., 1 Phase AC.			
PLUMBING		**For Water-Cooled Units Only:** Water Inlet and Outlet 3/8" male flare.			

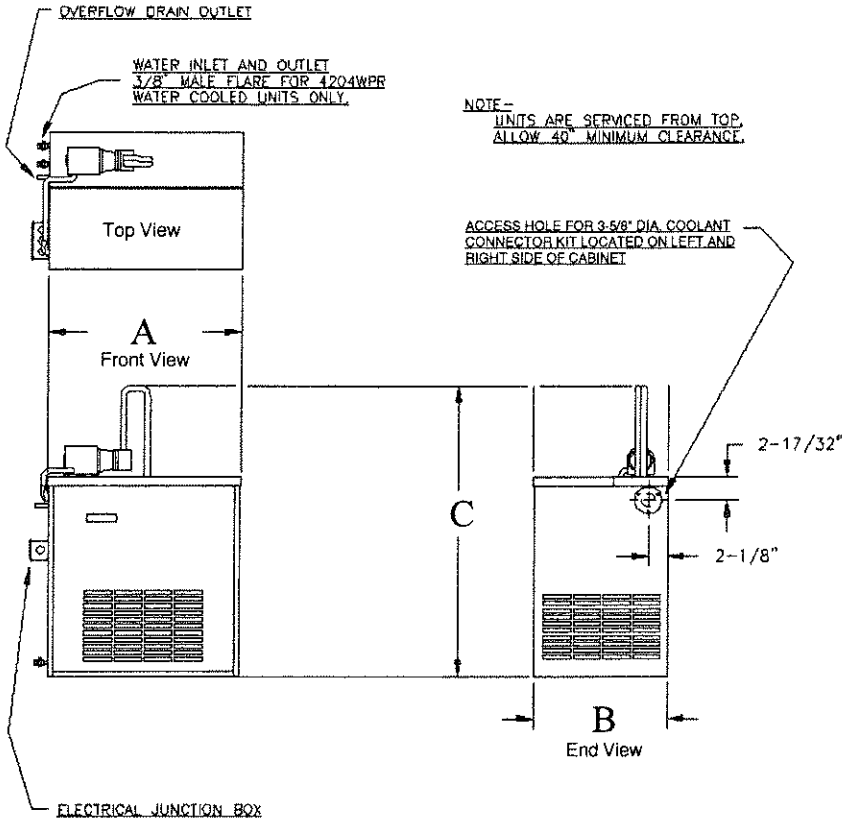
OPTIONAL ACCESSORIES				
	4208A	Set of wall-mounting brackets for 4200 and 4204 power paks	4209	Set of wall-mounting brackets for 4210 power paks
	C21499A	Stand with table top & storage shelf	7860-18A	Set of four adjustable legs for 4210 power pak
	C23625	Set of four adjustable legs for table stand		

Dow Therm is a registered trademark of the Dow Chemical Company.

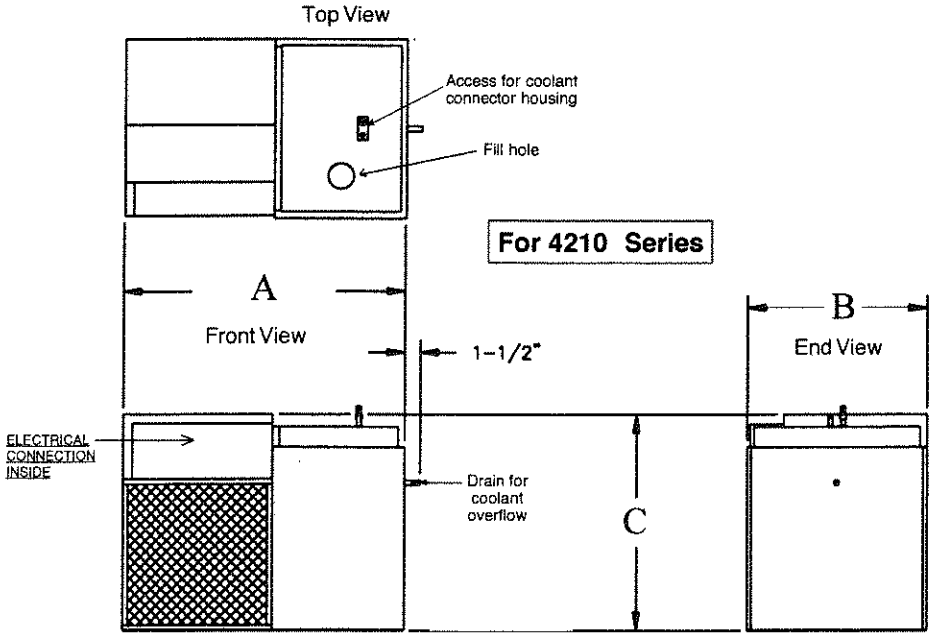
For 4200 and 4204 Series



For 4204PR and 4204WPR Series



For 4210 Series



Mounting the Power Pak

Models 4200, 4204, 4204PR, 4204W, 4204WPR
WALL MOUNTED - Use Part No. 4208A Brackets
Important Note: When mounting a power pak to a wall, there must be sufficient vertical support to carry power pak weight.
FLOOR MOUNTED - Use Part No. C21499A - Stand with Table Top

Models 4210, 4210W
WALL MOUNTED - Use Part No. 4209 Brackets
Important Note: When mounting a power pak to a wall, there must be sufficient vertical support to carry power pak weight.
FLOOR MOUNTED - Use Part No. C21499A - Stand with Table Top and No. C23625 - Leg Assembly; or No. 7860-18A - Leg kit.

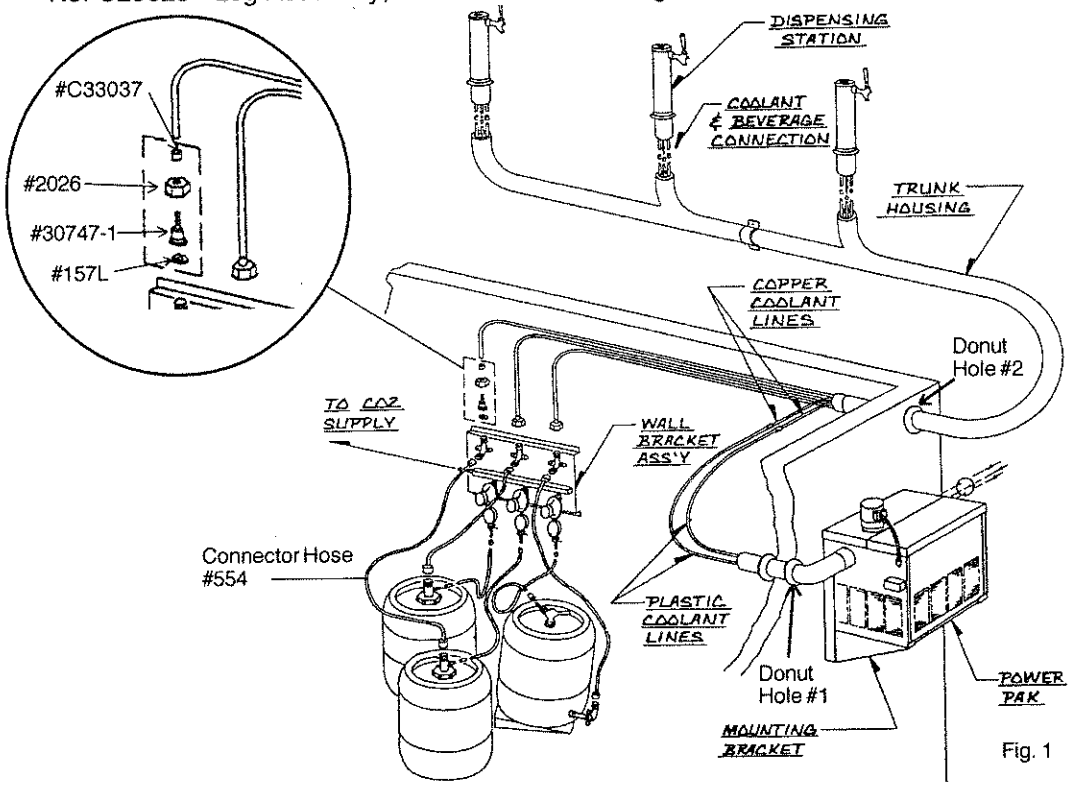


Fig. 1

Installing the Power Pak

All Models

1. Determine where trunk housing will enter walk-in cooler and place power pak as close to the Century housing as possible (See Fig. 1).
2. Install power pak level, (front to back and side to side) in order to provide proper reservoir overflow protection.
3. Allow at least two inches of clearance on all louvered sides of cabinet for proper air circulation through compressor compartment.
4. Connect overflow drain tube (supplied with power pak) to suitable collection reservoir.

Water-Cooled Models

- Supplied with two 3/8" male flare fittings for water inlet and outlet.
- May be installed inside or outside walk-in cooler.
- Must be accessible to a water supply line and drain.
- Should be mounted in the same manner as air-cooled units.

General Information

1. The minimum bending radius for the Century housing is 18 inches.
2. DO NOT TEAR the insulating cover.
3. AVOID dips or traps in housing. Use clamps (not supplied) to fasten as required, approximately every five feet.
4. AVOID contact with heating ducts or steam pipes.

NOTE: If lubricant is needed to join coolant or beverage lines, lubricate with plain water only. Do not use soap, oil, or detergents.

VERY IMPORTANT: Do not cut beverage line leads from the dispensing head.

Standard Installations

1. Determine dispensing head locations at the bar.
2. Drill a 3½" diameter hole in walk-in cooler wall to accommodate trunk housing (see Fig. 1 - Donut Hole #2).
3. Install insulating "donuts" over hole (both inside and outside of cooler walls).
4. Lay out housing from dispensing stations to the walk-in cooler. The end with the blue plastic collar is installed into the 3½" hole in walk-in cooler. The insulated portion of housing should extend 18-24 inches inside cooler. The end marked with station numbers is connected to dispensing stations.
   NOTE: For water-cooled power paks mounted inside of walk-in cooler, donut hole #2 is not needed.

Chase Installation

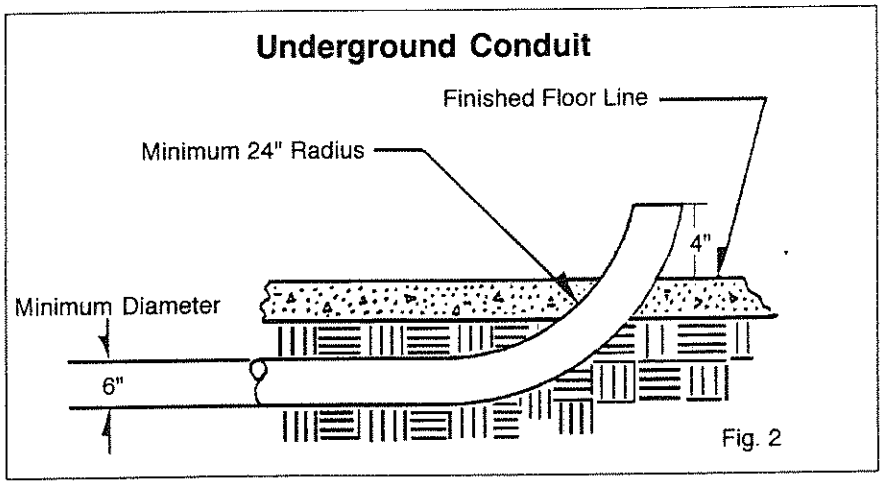


Fig. 2

- Provide six inch diameter schedule 40 PVC with fittings for trunk housings with nine lines and under.
- Provide eight inch diameter schedule 40 PVC with fittings for 10 to 12 line trunk housings.
- All joints must be solvent cemented in accordance with PVC manufacturer's recommendations to guarantee a watertight chase.
- Only one 24" or 30" radius sweep bend (45° or 90°) may be used at each end of chase.
- Conduit must be capped and sealed at both ends during construction.
- Installer must trim exposed ends to four inches above finished floor during product line installation.
- After product lines are installed, open ends of the conduit must be capped and sealed (water-tight).

Connecting Coolant Lines to Dispensing Stations

1. Position the housing so that beverage lines can be connected with minimum cutting.
2. Split trunk line housing approximately six inches from end to allow working room for connection.
3. Cut and deburr I.D. and O.D. of 7/16" O.D. copper coolant lines. Stagger lengths.
4. Slide poly tubing and two stepless ear clamps (contained in Coolant Connector Kit #C22434) onto one end of coolant line.
5. Butt trunk housing and dispensing station coolant lines together.
6. Slip poly tubing over joint to center joint inside poly tubing splicer.
7. Position clamp on poly tubing as shown and firmly squeeze ear with pliers.
   NOTE: Position stepless ear clamp so ear does not interfere with bond between coolant lines and beer tubing.
8. Repeat process for other coolant line.

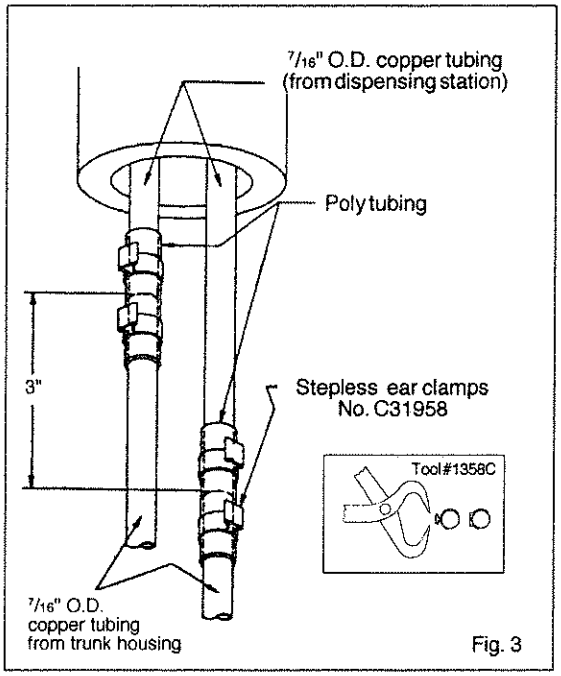


Fig. 3

Connecting Beverage Lines to Dispensing Station

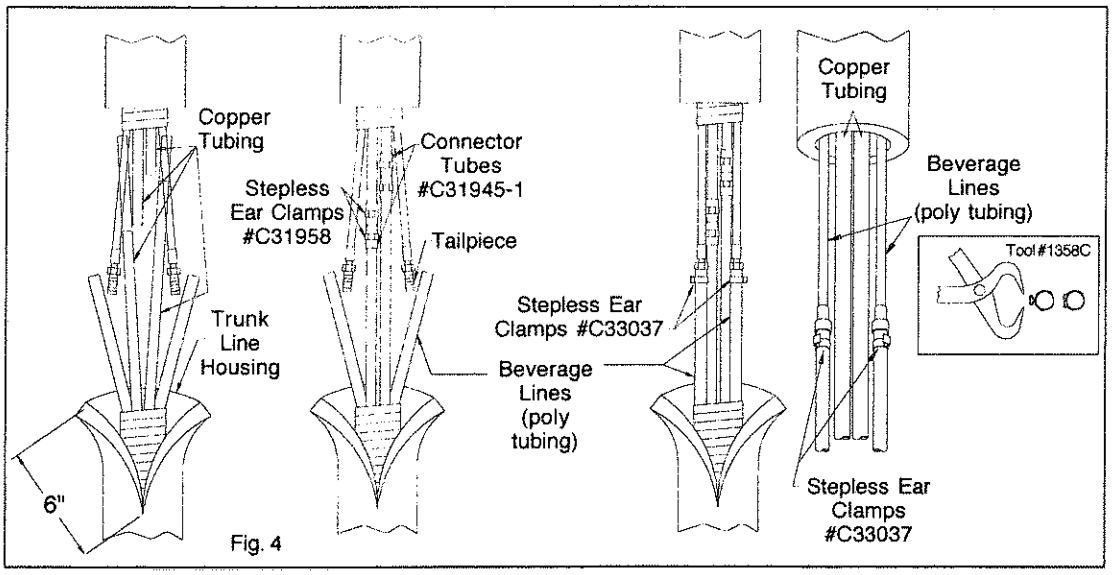


Fig. 4

Each faucet, dispensing station leads, and both ends of the tube in trunk-line housing are numbered for easy identification. Verify trunk-housing numbers on multi-station installations to ensure that the correct head is used at each station.

1. Cut poly tubing on trunk housing to match corresponding lead from dispensing station.
   NOTE: Do not shorten dispensing station leads.
2. Slide stepless ear clamp (No. C33037) over poly tubing in trunk housing.
3. Slip numbered poly tubing from trunk housing over corresponding hose tailpiece from dispensing station. Make sure it is completely installed onto tailpiece.
4. Position stepless ear clamp (No. C33037) over barbs of tailpiece.

Note: Position stepless ear clamp so ear does not interfere with bond between coolant lines and beer tubing.

5. Firmly squeeze ear of stepless ear clamp with tool (No. 1358C).

Connecting Coolant Lines to Power Pak

For Single Pump Models 4200, 4204, 4204W

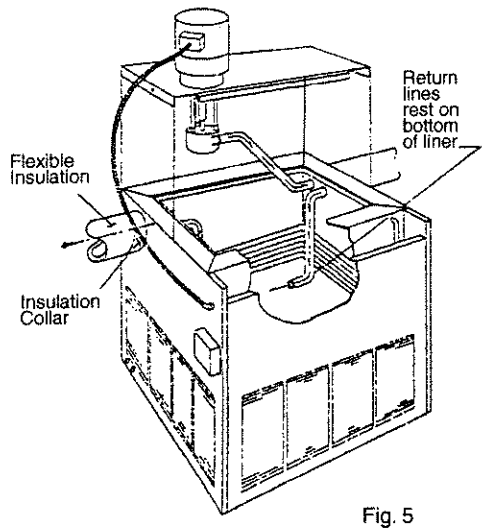


Fig. 5

For Model 4204WPR

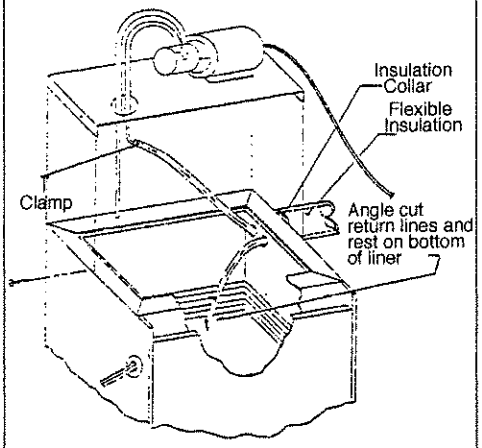


Fig. 6

For Models 4200, 4204, 4204W, 4204PR and 4204WPR

Before you begin, make sure the end of the housing inside the cooler is horizontal so that condensation from coolant tubes does not run into housing.

1. Attach insulation collar to power pak with (3) #8 x 3/8" sheet metal screws.
2. Cut the supplied coolant tubing into two pieces.
3. Install the two coolant lines onto power pak. One line is connected to the recirculating pump outlet and clamped. The return line lies in the bottom of the coolant reservoir.
4. Slide flexible insulation over coolant lines and into insulation collar installed on power pak.
5. Wrap flexible insulation joint with tape.

For Models 4210 and 4210W

Before you begin, make sure end of trunk housing inside cooler is horizontal so condensation from coolant does not run into housing.

1. Attach insulation collar to power pak with (3) #8 x 3/8" sheet metal screws.
2. Cut the supplied reinforced poly tubing in two pieces.
3. Install the two coolant lines onto power pak. One line is connected to inlet tailpiece and clamped. The other line is connected to the outlet tailpiece and clamped.
4. Slide flexible insulation over coolant lines and into insulation collar installed on power pak.
5. Wrap flexible insulation joint with tape.

Note: On Water-Cooled Models installed inside the walk-in cooler, the insulation sleeve and insulation on the coolant lines are used to prevent condensation and ice build up on the coolant tubes.

For Model 4210

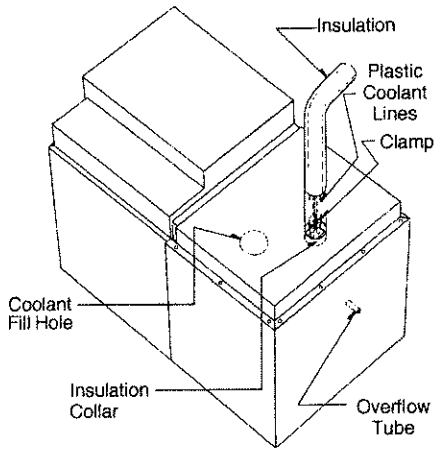


Fig. 7

Connecting Coolant Lines In the Walk-In Cooler

All Models

1. Drill a 3½" diameter hole in wall of walk-in cooler to accommodate coolant lines as shown in Fig. 1, page 4, (Donut Hole #1).
2. Install insulating donuts over hole (both inside and outside of cooler walls).
3. Slide coolant lines through donut hole #1.
4. Slip hose clamp over one end of coolant tubings from power pak.
5. Slip one end of coolant tubing over end of one of coolant lines from trunk housing.
6. Position clamp over joint and tighten.
7. Repeat process for other coolant line.

Connecting Beverage Lines In the Walk-In Cooler

1. Mount regulator wall bracket assembly on inside wall of walk-in cooler as shown in Fig. 1, page 4.
2. Place stepless ear clamp (No. C33037) and nut (No. 2026) on end of one of beer lines from trunk housing.
3. Slip beer line over hose tailpiece (No. 30747-1).
4. Slide nut and stepless ear clamp over joint and crimp securely.
5. Place gasket (#157L) into nut, thread onto top of one of wall brackets and tighten.
6. Repeat process for other beer lines.

Wall Bracket to Keg

1. Install leather washer (No. 157L) in both ends of the supplied 6 foot x ⅜" black connector hose (No. 554).
2. Connect hex nut end onto bottom of wall bracket (located above secondary regulator) and tighten.
3. Connect wing nut end onto top of keg coupler and tighten.
4. Repeat steps as needed.

Connecting Primary CO_2 Regulator to CO_2 Cylinder

1. Fill empty gas cylinder at your local CO2 distributor.
2. Remove blue plug from regulator fitting (Note: Do not remove carbonic washer).
3. Screw regulator onto gas cylinder valve. Tighten with wrench until vertically straight. Be sure shut-off valve (black lever) on regulator is in OFF (Horizontal) position.

Installing CO_2 Lines

For systems not requiring an air/gas blender system, use the following procedures:

CO_2 Source to Wall Bracket Assembly

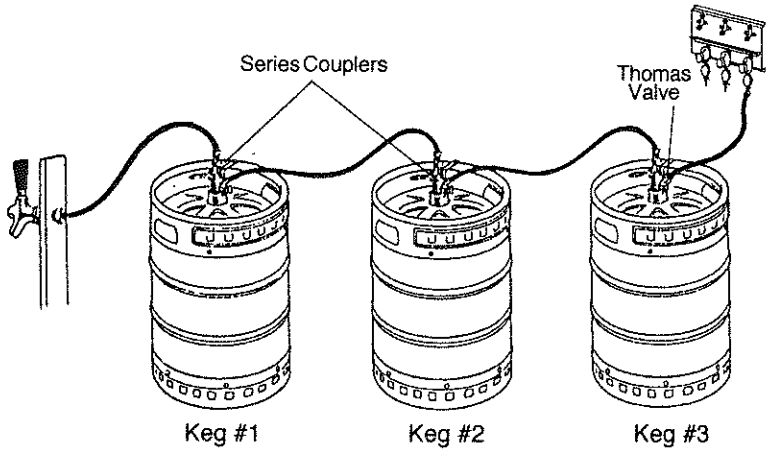
1. Slide clamp and end of tubing over barbed fitting on primary regulator shut-off valve.
2. Position clamp over joint and tighten.
3. Slide clamp over other end of tubing and slip over barbed inlet of secondary regulator manifold.
4. Position clamp over joint and tighten.
5. Secure tubing as necessary.

Secondary Regulator Wall Bracket Assembly to Keg

1. Cut air tubing to required lengths.
2. Slide clamp (No. 3079) and end of hose over barbed fitting on secondary regulator shut-off valve.
4. Position clamp over joint and tighten.
5. Slide clamp and tubing over barbed fitting on keg coupler.
6. Position clamp over joint and tighten.
7. Be sure shut--off valve (black lever) on regulator is in off (horizontal) position.
8. Repeat steps as needed.

Series Tapping System

Should a series tap system be used, refer to the information below for installation instructions.



When replenishing beer supply, any partially filled keg should be moved to Keg Position No. 3. Example: If Keg No. 2 and No. 3 are empty and some beer remains in Keg No. 1, move Keg No. 1 into keg position No. 3 and place full kegs into positions No. 1 and No. 2.
Note: Only tavern head on Keg No. 3 has a Thomas valve (check valve).

Adjusting Primary CO_2 Regulator

1. Turn regulator adjusting screw counterclockwise until it turns freely.
2. Turn hand valve counterclockwise on CO_2 cylinder to the fully open position.
3. Turn regulator adjusting screw clockwise until desired pressure is reached (approximately 40 lbs.). Tighten stop nut on adjusting screw.
4. Open shut-off valve on bottom of regulator.

Replacing CO_2 Gas Cylinder

1. Turn CO_2 cylinder hand valve clockwise until seated and close shut-off valve on regulator.
2. Unscrew regulator from cylinder fitting.
3. Replace regulator washer (Part No. 157F), if needed, and reattach regulator to filled cylinder.
4. Adjust CO_2 gas flow as required, turning clockwise for higher pressure.
5. Open shut-off valve on regulator.

Proper CO_2 Handling

Always....

- Permanently mount the enclosed Warning/Safety Instruction label in a visible location near the primary CO_2 regulator.
- Secure cylinder in upright position whether in storage or in use.
- Keep cylinder away from heat. Rupture disc vents at 122° F. maximum.
- Ventilate room after high pressure gas leakage.
- Check the last DOT test date on cylinder neck before filling. If more than five years old, the cylinder must be retested to DOT specifications.
- Be sure CO_2 cylinder outlet fitting is free of dust or dirt before attaching regulator.

Never....

- Connect cylinder directly to a keg without a regulator.
- Drop or throw regulator or CO_2 cylinder.
- Transport CO_2 cylinder in a closed vehicle.
- Apply oil to a regulator.

Adding Coolant

A Century System Power Pak must be operated with Dow-Therm SR-1. Use the chart below to determine the amount needed for your system.

Model No(s).	No. of Gallons
4200	1
4204, 4204PR, 4204WPR	2
4210, 4210W	4

Pour determined amount of Dow Therm into the Power Pak reservoir. Add water to reservoir until reaching near the bottom of the overflow tube.

Start-up

1. Clean the beer system.
2. Energize power pak and let cool for a minimum of one hour.
3. Tap precooled beer and introduce beer into system.
4. Set secondary regulators at factory recommended pressures as indicated on each dispensing station tag. Fine tune as necessary.
5. Check power pak reservoir with coolant lines full. If additional coolant is needed, fill with straight water.

Checking for Leaks

CO_2 System

1. Dilute a small amount of liquid dishwashing soap with water.
2. Rub soapy mixture around each connection. If bubbles appear, tighten connection.
3. Remove soap solution from joints.

Coolant System

1. With Power Pak engaged, visually check all coolant line connections for leaks.

Beer System

1. Connect each beer line to a water source.
2. Pressurize line and visually check all connections.
   Note: Do not use soap, detergent, or liquid leak detector solution on coolant or beer system connections. Do not exceed 40 psig.

Priming the Pump

For Models 4200, 4204, 4204W
Flow Rate: 1/4 to 1/2 gallon per minute.

1. Connect the return coolant line to a fresh water source.
2. With circulating pump on, charge coolant lines with water.
3. After system is charged, disconnect water source.
4. If coolant still does not circulate after priming, check installation for possible restrictions.

Closing the Century Trunk Housing

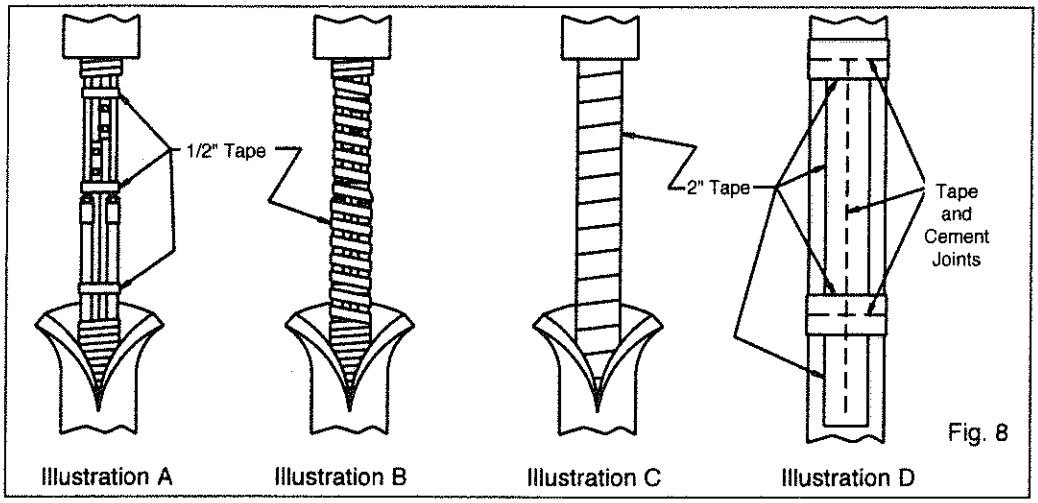


Fig. 8

1. Position beverage tubing so each line has direct contact with a copper coolant line. Spot tape bundle using 1/2" wide filament tape (No. C15393) as shown in Fig. 8, Illustration A.
2. Tightly spiral wrap the bundle with 1/2" filament tape as shown in Illustration B.
3. Use 2" plastic tape to wrap exposed section, creating a vapor-tight seal. Make sure tape is overlapped at least one inch per revolutuion to cover all exposed tubing as shown in Illustration C.
4. Brush coat all housing surfaces to be joined with adhesive supplied (No. C15392).
5. After adhesive becomes very tacky, press coated surfaces firmly together as shown in Illustration D.
6. Use 2" tape to seal all joints and splices as needed.
   Note: If trunk housing no longer fits around beverage line bundle, cut a piece of housing to fill in the gap.

Adjusting the Coolant Temperature

The coolant temperature is regulated by adjusting the temperature control located on the left outside wall of the power pak. Normal coolant temperature ranges from 29-31° F. For colder temperature, adjust the control clockwise.

Maintenance

Weekly:
Clean Beer Lines
Monthly:
Check coolant level in reservoir.
If coolant level is low, add equal amounts of Dow Therm SR-1 and water as needed to maintain a level up to the bottom of the overflow tube.
Clean condenser as required. Remove the louvered condenser cover grille to expose condenser fins. Remove dirt from the fin surface with a brush, vacuum cleaner or compressed gas (discharged from fan side of condenser).
Yearly:
Check Dow Therm concentration using an antifreeze tester. Confirm that concentration will maintain a level below freezing. If not, add straight Dow Therm to boost concentration.

Troubleshooting

APPLIED PRESSURE: An applied pressure tag is shipped with each Century System. Make sure secondary regulators are set correctly. If pressure is set too low, slow beer flow will result. If pressure is set too high, foaming will occur. If unsure as to correct settings, call Perlick's Service Department, 800-558-5592, with the serial number of the Power Pak. All Century applied pressures are kept on file.

CHECK DOW THERM TEMPERATURE: The temperature of the Dow Therm should be between 29 and 31 °F. If it is warmer, set the thermostat to a colder position by turning the slotted adjustment screw clockwise.

CHECK DOW THERM CONCENTRATION: If coolant is weak, ice will build up on the inside of the coolant reservoir walls and the coolant temperature will increase. If this occurs, unplug the power pak to melt ice. Increase Dow Therm concentration or replace with new solution with proper concentration as shown on page 10. Plug in and repeat pump priming procedure, if needed.

CHECK WALK-IN COOLER TEMPERATURE: To determine the temperature of the walk-in cooler, put a thermometer in a glass of water and place the glass inside the cooler, allowing two hours for the water temperature to stabilize. Temperature should be approximately 37 °F.

CHECK DOW THERM LEVEL: With circulating pump running, check to see that Dow Therm solution is at a level near the bottom of the overflow tube. If not, add Dow Therm/water.

REPRIMING PUMP: Reprime by injecting water from a hose, up the return line, until it flows back through the pump. After system is charged, disconnect water source.

Winterizing Century Systems

For systems which need to be shut down for a long period during cold weather temperatures, use the following winterizing procedures:

Gas System

1. Shut off CO_2 cylinder valve.
2. If air compressor is used, disconnect from power source and open bleeder valve on air compressor tank to release pressure.
3. Close shut-off valve on each secondary regulator.
4. Disconnect air lines from secondary regulator shut-off valves.
5. Open shut-off valve on each secondary regulator to release pressure.
6. Turn all primary and secondary regulator adjusting screws counterclockwise until pressure is released from regulator diaphragms.
7. Thoroughly clean outside of all CO_2 related equipment.

Power Pak

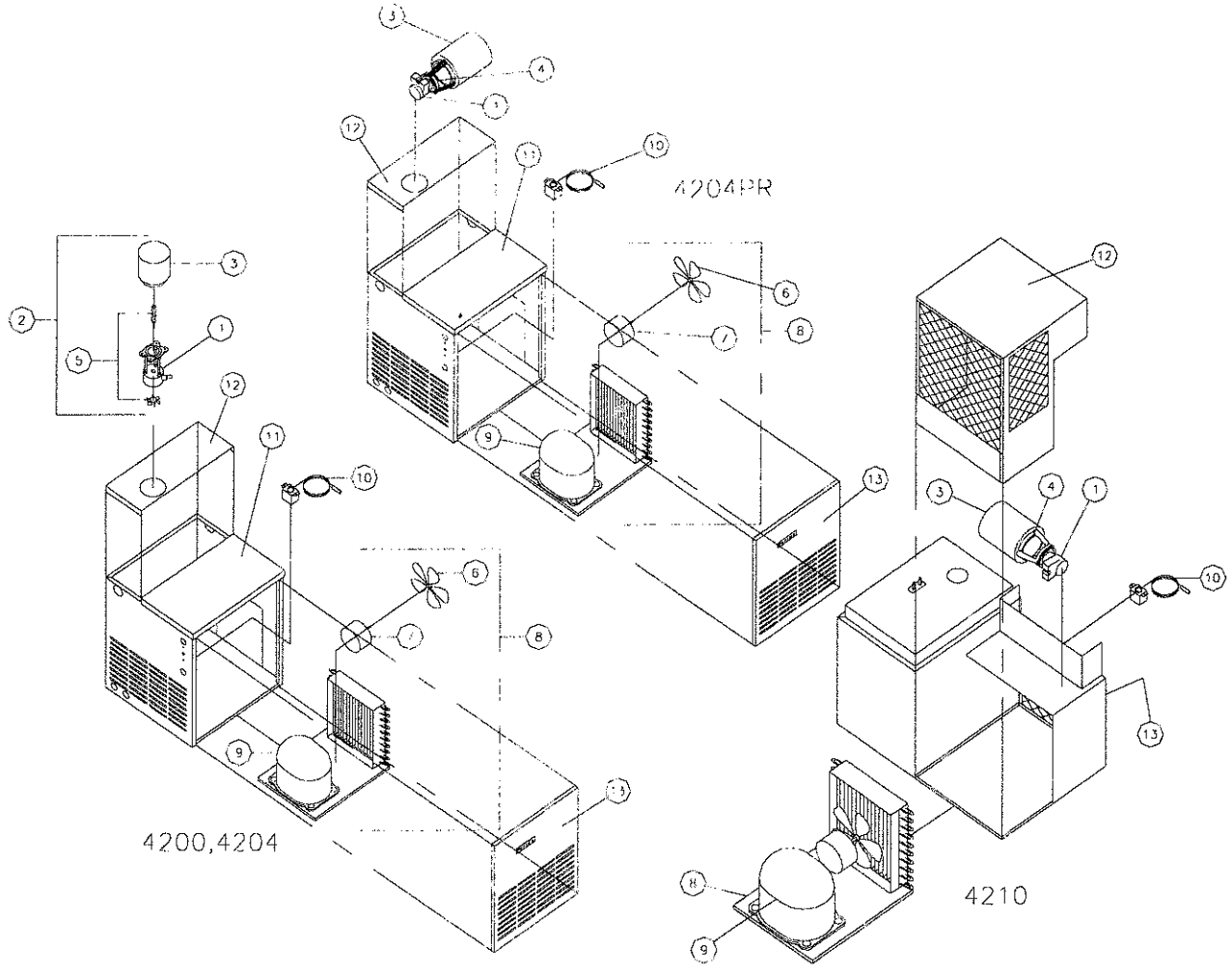
1. Disconnect from power source.
2. Test Dow Therm in power pak reservoir using an automotive antifreeze tester. Strengthen solution with additional Dow Therm until readings approximate the lowest temperature expected during the shutdown season.
3. If circulation pump is located in an area that may subject it to weathering, remove and store in a protected location.
4. Thoroughly clean outside of unit.

Product Lines

1. Untap barrels.
2. Thoroughly clean all product lines with Perlick Coil Cleaning compound and rinse with clear water using standard commercial cleaning procedures.
3. Blow out all product lines using compressed air or CO_2, removing all water possible.
4. A mixture of 50% food grade glycerine and 50% water is then pumped into lines until full.
5. Allow water/glycerine mixture to remain in lines for duration of shutdown season.
6. Thoroughly clean outside of product lines.

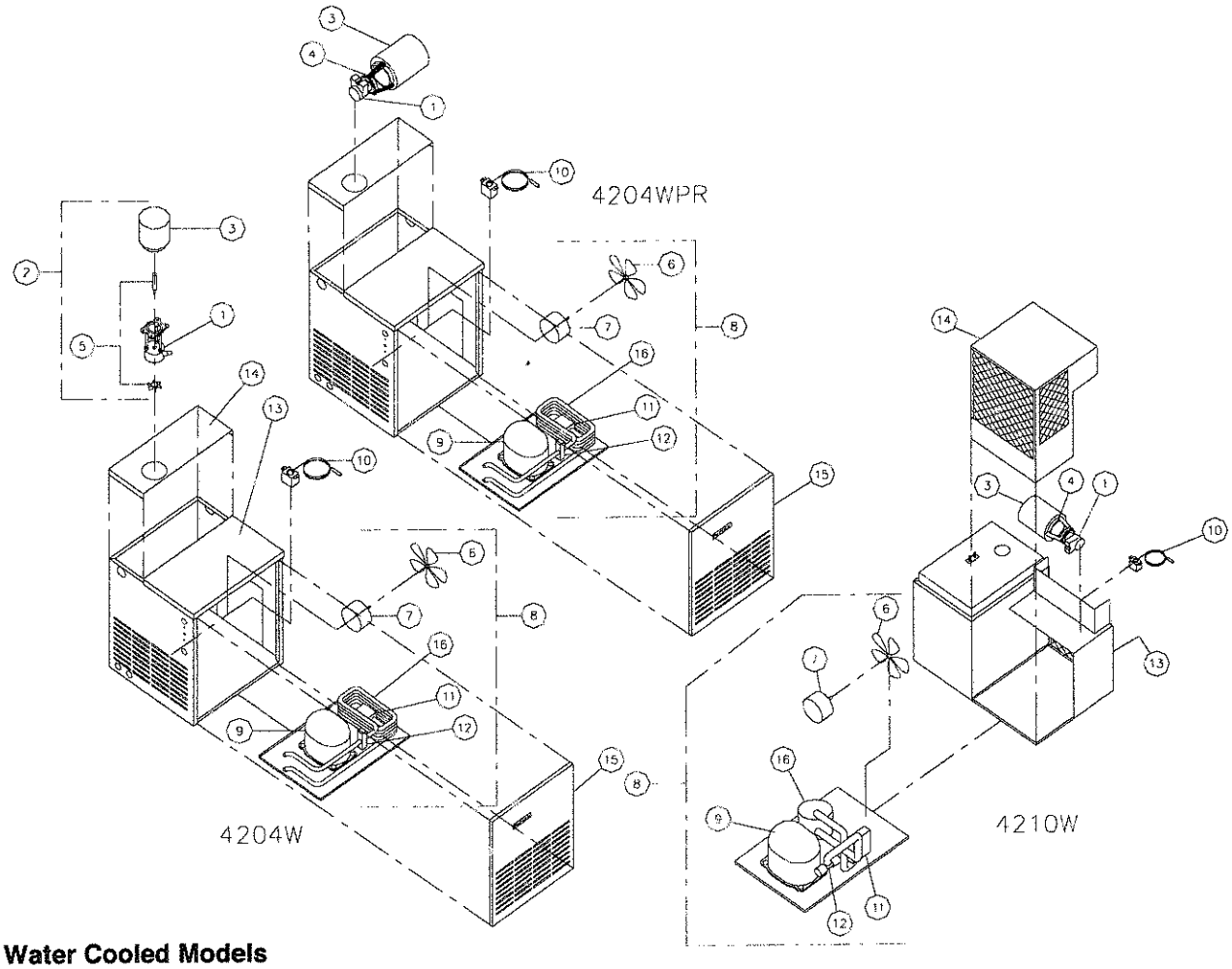
Reactivating Century System

1. Force glycerine/water mix out of product lines with compressed air or CO_2.
2. Thoroughly clean all product lines with Perlick Coil Cleaning compound and thoroughly rinse with clear water using standard commercial cleaning procedures.
3. If recirculating pump has been removed, reinstall it.
4. Reconnect electrical supply to power pak.
5. If system uses an air compressor, reconnect to power source and close bleeder valve on air compressor tank.
6. Reconnect CO_2 lines at the secondary regulators.
7. Open CO_2 cylinder valve to repressurize the CO_2 system.
8. Energize power pak and air compressor (if used).
9. Adjust primary and secondary regulators using procedures on page 8.
10. Tap kegs.



For Air Cooled Models

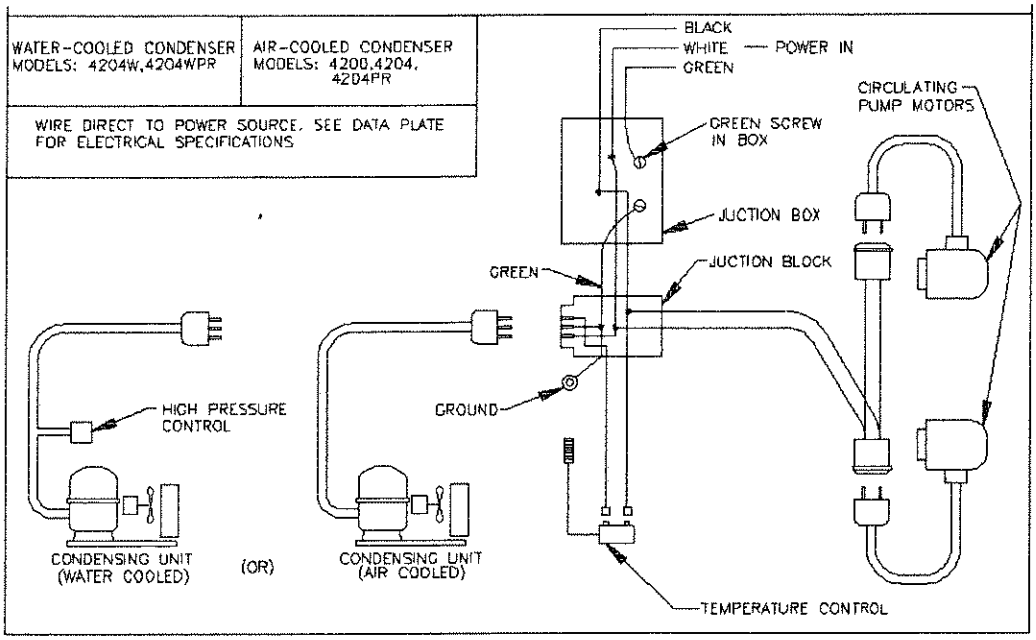
Item	Description	Model 4200	Model 4204	Model 4204PR	Model 4210
1	Circulating Pump Only	C19487	C19487	C31464	C31464
2	Circulating Pump Complete	C15969	C15969	N/A	N/A
3	Circulating Pump Motor	C15843-2	C15843-2	N/A	N/A
3a	Motor Kit, G.E.	N/A	N/A	57371	57371
3b	Motor Kit, Emerson	N/A	N/A	57371EM	57371EM
4	Circulating Pump Coupling	N/A	N/A	C27225	C27225
5	Pump Shaft & Impeller Kit	C22436-2	C22436-2	N/A	N/A
6	Condenser Fan Blade	N/A	C3150-3	C3150-3	N/A
7	Condenser Fan Motor	N/A	C6121	C6121	N/A
8	Condensing Unit (134A)	C22613	C22604	C22604	C22600
9	Compressor Only (134A)	57507	57672	57672	C22600-1
10	Temperature Control	C12213A	C12213A	C12213A	C12213A
11	Top (front) Cover	C18819	C18821	C18821	N/A
12	Top (back) Cover	C18815-1	C18817-1	C19940-1	C29483
13	Front Grille	C15074	C15075	C15075	C24907
	Wire Harness (not shown)	C19676A1	C19677A1	C19677A1	C27406A1
	Dow Therm (I gallon)	C15426	C15426	C23820	C23820



For Water Cooled Models

Item	Description	Model 4204W	Model 4204WPR	Model 4210W
1	Circulating Pump Only	N/A	C31464	C31464
2	Circulating Pump (complete)	C15969	N/A	N/A
3	Circulating Pump Motor	C15843-2	N/A	N/A
3a	Motor Kit, G.E.	N/A	57371	57371
3b	Motor Kit, Emerson	N/A	57371EM	57371EM
4	Circulating Pump Coupling	N/A	C27225	C27225
5	Pump Shaft & Impeller Kit	C22436-2	N/A	N/A
6	Condenser Fan Blade (6")	C15034	C15034	C1877-3
7	Condenser Fan Motor	C14934	C14934	C6121
8	Condensing Unit	C11511B	C11511B	59216A
9	Compressor Only	C25382A	C25382A	C22600-1
10	Temperature Control	C12213A	C12213A	C12213A
11	High Pressure Control	C16754	C16754	C16754
12	Water Regulator Valve	C16753	C16753	C16753
13	Top (front) Cover	C18821	C18821	N/A
14	Top (back) Cover	C18817-1	C19940-1	C29483
15	Front Grille	C15075	C15075	C24907
16	Condenser Assy.	C11517	C11517	C22597A
	Wire Harness (not shown)	C19677A1	C19677A1	C27406A1
	Dow Therm (I gallon)	C15426	C23820	C23820

For Models 4200, 4204, 4204PR, 4204W and 4204WPR



For Models 4210 and 4210W