



INSTALLATION AND OPERATION INSTRUCTIONS

4400QC SERIES POWER PAKS



MODELS
4400QC Series
4410QC
4414QC
4420QC



IMPORTANT INFORMATION

To register your product, visit our web site at www.perlick.com. Click on **Commercial**, then **Service**. You will see the link to **Warranty Registration Form**. You must complete and submit this form or the installation date will revert back to the ship date.

Permanently mount the enclosed Warning/Safety Instruction label in a visible location near the CO2 regulator.

This manual has been prepared to assist you in the installation of your 4400QC Series Power Pak 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 Quik Chill product and assure you of our continuing interest in your satisfaction.

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8300 West Good Hope Road • Milwaukee, WI 53223 • Phone 414.353.7060 • Fax 414.353.7069
Toll Free 800.558.5592 • E-Mail perlick@perlick.com • www.perlick.com

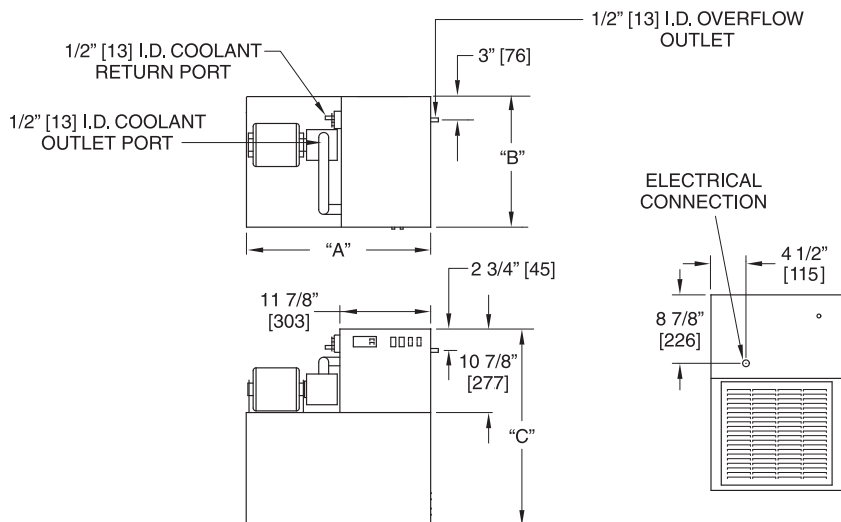


INSTALLATION AND OPERATING INSTRUCTIONS

4400QC SERIES POWER PAKS - AIR COOLED

MODEL NOS.	4410QC	4414QC	4420QC	
DIMENSIONS: EXTERIOR (mm)	Length "A"	24 ^{1/4"} (616)	24 ^{1/4"} (616)	26 ^{3/4"} (679)
	Width "B"	17 ^{1/4"} (438)	17 ^{1/4"} (438)	20 ^{1/4"} (519)
	Height "C"	25 ^{1/2"} (648)	25 ^{1/2"} (648)	31" (782)
	A minimum of six inches of clearance should be allowed around the entire unit for proper performance. Additional clearance should be considered for above the unit and in front of the unit for servcability.			
ELECTRICAL	Voltage	120 V	120 V	208/230 V**
	Frequency	60 Hz	60 Hz	60 Hz
	Phase	1 Ø	1 Ø	1 Ø
SINGLE PUMP	RLA (Rated Load Amps)	12.5	15.4	16.5
	MCA (Min. Circuit Ampacity)	17.7	19.6	23.9
DUAL PUMPS (add -2 to model #)	RLA (Rated Load Amps)	18.6	21.0	19.3
	MCA (Min. Circuit Ampacity)	23.8	25.2	26.7
TRIPLE PUMPS (add -3 to model #)	RLA (Rated Load Amps)	N/A	N/A	22.1
	MCA (Min. Circuit Ampacity)	N/A	N/A	29.5
COMPRESSOR	1/2 HP	3/4 HP	1.5 HP	
EVAPORATOR RATING @ 20°F (BTUH)	3800	6000	12000	
HEAT REJECTION (MAX)	6080	9600	19200	
REFRIGERANT	R-134a	R-134a	R-134a	
SHIPPING WEIGHT LBS (kg)	153 (69)	180 (82)	255 (116)	
MAXIMUM FOOTAGE IN SYSTEM*	250 ft.	300 ft. (1 pump) 400 ft. (2 pumps)	300 ft. (1 pump) 600 ft. (2 pumps) 850 ft. (3 pumps)	
CABINET	Stainless Steel			
CIRCULATING PUMP	70 GPH / 80 PSIG			
RESERVOIR CAPACITY	1.75 gal	1.75 gal	1.75 gal	
REFRIGERATION	Constant Pressure Expansion Valve, Condensing Unit with Service Valves			
REFRIGERANT CHARGE (grams)	8.0 oz/227 g	9.5 oz/269 g	16.0 oz/453 g	
GLYCOL CONCENTRATION	33%	33%	33%	

*Based on 75° Ambient



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Accessories

Power Cord Kit

[C22296A-20](#)--12/3 Cord, 20A, Nema Plug 5-20P,
Dedicated Circuit Models—See electrical specifications

Power Pak Racks

61790, 61790+1, 61790+2—All Models

Power Pak Wall Mounting Brackets

4408 - For Models 4404 & 4410 only

Coolant Solution-[63299-1](#)

One gallon Quick Chill Coolant solution, 33% DowFrost
HD/67% Distilled Water

Coolant Connector Kit

C23015—All Models

Leg Set - All Models

[57782](#) . . . Set of four, 5 ³/₄"-7 ¹/₂" adjustable legs

Pump Kits

4430QC—Pump kit, 115V, 6.1 A, 70 gph, 80 psig
Models 4410, 4410W

4431QC—Pump Kit, 115V, 5.6 A, 70 gph, 80 psig
Models 4414, 4414W

[4432QC](#)—Pump Kit, 230V, 2.8 A, 70 gph, 80 psig
Models 4414-230, 4420

PRODUCT DESCRIPTION

Power Paks have always been an integral part of a Beer System. The 4400QC Series Power Pak product line has been expanded to satisfy longer beer runs. A Power Pak circulates coolant solution (food grade propylene glycol with distilled water) from the walk-in cooler to the dispensing station(s) and back, maintaining the desired dispensing temperature at the faucet. The 4400QC Series Power Paks incorporate a 1/3 hp ball bearing, maintenance free motor with a 70 gallon per hour 80 psig positive displacement pump for optimum performance. The 4400QC series Power Pak product line employs a direct expansion form of refrigeration increasing the units' efficiency as well as making the units more compact. These units also employ an electronic temperature control with digital readout. This state of the art control, controls the performance of the unit as well as giving the user a visual indication of how the unit is working as well as early indication if something may be going wrong through the use of internal alarms.

INSTALLATION - 4400QC Series Power Paks

IMPORTANT SAFETY WARNINGS!

- Follow all National and Regional Codes.
- Read Installation and Operating Instructions carefully before attempting to install, operate or maintain the product.
- Protect yourself and others by observing all safety information.
- Electrical hazards exist and can cause injuries if not serviced by properly trained personnel.
- Failure to comply with instructions could result in personal injury and/or property damage!
- Retain instructions for future reference.
- Never operate the circulating pump without coolant in the reservoir.

NOTE: Air-cooled Power Paks must be installed in areas with adequate ventilation to maintain ambient temperatures of less than 105°F to achieve optimum performance and satisfy warranty requirements.

INSTALLING THE POWER PAK

Prior to installing a 4400QC Series Power Pak, it is imperative that the method of connecting it to the electrical service has been determined. Ensure that the electrical service to power the Power Pak will handle the load requirements. Perlick has a Power Cord specifically designed for a Power Pak, which has a RLA of 16 amps or less, and a MCA of 20 amps or less. All units with RLA greater than 16 amps and a MCA of greater than 20 amps should have the Power Pak hard-wired to electrical service.



ALL MODELS

- Determine the ideal placement of the Power Pak. Locate the connection point to the truck housing and place the Power Pak as close to this point as possible. **NOTE: If the Power Pak is to be located on top of the walk-in cooler, it is imperative that proper ventilation is provided to prevent system failure due to overheating. Inadequate ventilation will void warranty.**
- Place the Power Pak and Ensure that it is level to provide proper overflow protection. **REMINDER: Allow a minimum of six inches of clearance on the louvered ends of the cabinet for proper airflow. Allow accessibility room on the top of the cabinet for serviceability.**
- Remove the top panels (2).
- Ensure Power Switches for Condensing Unit and Pump(s) are in the OFF position. Make the electrical connections per their illustrations. NOTE: Electrical circuit should be a dedicated circuit for use only with the Power Pak. The circuit should be sized in accordance with the electrical requirements of each unit as well as in compliance with all National and Local Codes.
- Plumb overflow port to a suitable reservoir/drain.

CONNECTING POWER PAK TO TRUNK HOUSING

4400QC Series Power Paks require rigid fittings with a minimum pressure rating of 150 psig. Use Coolant Connector Kit C23015 to connect Power Pak to Trunk Housing.

- Inspect pump outlet port for debris. Insert barbed fitting into pump outlet port.
- Inspect Glycol Return Manifold inlet for debris. Insert barbed fitting into return manifold inlet port.
- Cut supplied coolant tubing, to required length to reach from Power Pak to Trunk Housing connection point.
- Cut tubular insulation sleeve, in half and install over previously cut coolant tubing.
- Take oetiker clamps, and install over coolant tubing ends.
- Push coolant lines, one each over pump outlet

- barbed fitting and return manifold barbed fitting.
- Position oetikers over barbed fitting and clamp securely.
- Slide tubular insulation sleeves tightly against connection points. Use insulation tape as necessary to ensure an air tight seal to prevent excessive heat gain or condensation problems.
- Drill a 3 1/2 " diameter hole in walk-in cooler to accommodate coolant lines.
- Install insulating donuts over hole (both inside and outside of cooler walls).
- Slide large insulation sleeve, over remaining coolant tubing exposed to warm air conditions including inside walk-in cooler from Power Pak to Trunk Housing connection point. Seal and tape all seams to prevent excessive heat gain or condensation problems.
- Slide coolant lines through 3 1/2 " donut hole previously cut in walk-in cooler wall.
- Position Trunk Housing coolant lines and Coolant Connector kit lines in horizontal position, to alleviate condensation runoff into Trunk Housing.
- Cut Trunk Housing coolant lines with tubing cutter to ensure clean burr free ends.
- Take oetiker clamps and install over coolant connector kit tubing ends.
- Slide coolant connector kit tubing over the trunk housing coolant lines and secure using above oetikers.
- Complete the insulation process by ensuring that all coolant lines are well insulated including all seams to prevent excessive condensation and heat gain.
- Seal donut hole to ensure an air tight seal to prevent walk-in cooler problems as well as condensation.

CONNECTION TO TRUNK HOUSING - 4400QC SERIES POWER PAKS



POWER PAK START-UP 4400QC SERIES POWER PAKS

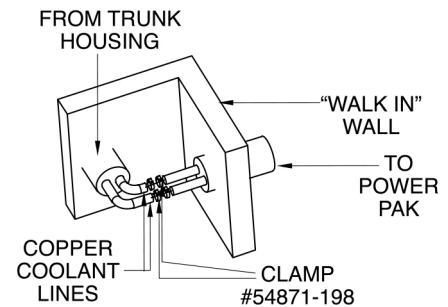
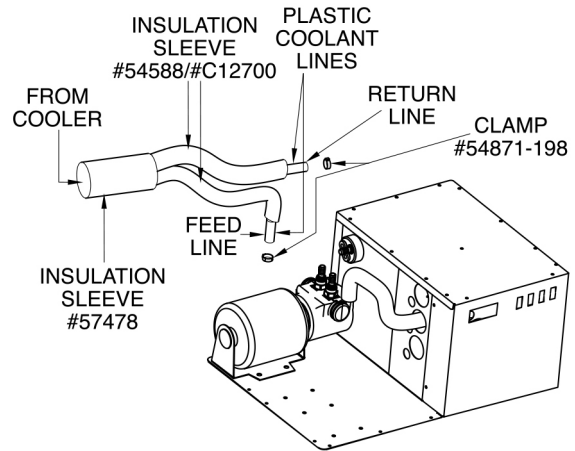
Use only Quick Chill Approved Coolant Solution, #63299-1, all other solutions and mixtures will void the warranty. The Coolant Solution has been pre-mixed for Optimum performance and wear protection. The Power Pak reservoir holds approximately 1.75 gallons of solution. It takes approximately 1 gallon of Coolant Solution to fill every 60 feet of Trunk Housing.

- Never operate the circulating pump without coolant in the reservoir.
- Fill Power Pak reservoir with Quick Chill Coolant Solution.
- Turn condensing unit switch and pump switch to the ON position. Coolant solution level will begin to drop in reservoir.
- Continue adding Quick Chill Coolant Solution until no air bubbles are apparent from the Coolant return line.

NOTE: Never allow for the Coolant level in the reservoir to drop below the heat exchanger tube inlet. Allowing the level to drop below the inlet will allow air bubbles into the lines.

- Fill Power Pak reservoir until both the return line fitting port and the overflow tube port are submersed under Coolant Solution. Watch return line fitting port for additional air bubbles as this may signify additional Coolant Solution may need to be added.
- Thoroughly check all field connection points for leaks.
- Monitor Power Pak Temperature read-out to ensure Power Pak is working properly. Depending on length of trunk housing run and surrounding ambient conditions, these factors will determine how long it takes for the Power Pak to cut-out on the temperature control.

INSTRUCTION DRAWING FOR 4400 SERIES POWER PAK COOLANT CONNECTOR KIT INSTALLATION INSTRUCTIONS



INSIDE "WALK IN" COOLER



DIGITAL TEMPERATURE CONTROLLER

The 4400QC Series Power Pak comes equipped with a Factory Programmed Electronic Thermostat with Display. The Thermostat has numerous factory settings, which should never be adjusted or tampered with to ensure proper operation of the Power Pak. The Thermostat has been factory programmed to cut-out at 30°F with a hysteresis/differential of 4°F.

Front Panel Commands–Programming Mode

SET:

Selects a parameter or confirms an operation.

UP ARROW:

Browses the parameter codes or increases the displayed value.

DOWN ARROW:

Browses the parameter codes or decreases the displayed value.

Meaning of LED's

LED	MOD	FUNCTION
SNOWFLAKE	ON	COMPRESSOR ACTIVE
SNOWFLAKE	FLASHING	DELAY, PROTECTION OR BLOCKED START-UP

ALARM	MEANING	ACTION
E1	Probe failure	Numerous - see note 1

NOTE 1: Faulty probe, loose connection, broken wire. (Power Pak will continue to operate with a faulty probe. The controller has been factory programmed to continue operation with the compressor cycling on and off in 5 minute intervals.

LEDS & PREVENTATIVE MAINTENANCE - 4400QC SERIES POWER PAKS



Replacement Parts

COMPONENT/MODEL	4410QC	4414QC	4420QC
Condensing Unit (*SN <500000)	C22600	C22634	C22639
Compressor (*SN <500000)	AK169AT-038-J7 (C22600-1)	AJ250AT-188-J7	CS18K6E-PFV-970
Cond Fan Motor (*SN <500000)	TFM91 (C6121)	TFM351	050-0265-00
Fan Blade (*SN <500000)	51564-1	083-0102-02	083-003-00
Overload (*SN <500000)	P83514 (C22600-5)	P83735-1	071-0508-31
Relay (*SN <500000)	82498-1 P82957	040-0001-55	(C22600-6)
CAPACITOR (Start) (*SN <500000) (*SN <500000)	85PS125C94 (C22600-7)	85PS110A15	014-0036-04
CAPACITOR (Run) (*SN <500000)	N/A	N/A	N/A

COMPONENT/MODEL	4410W	4414W	4420W
Condensing Unit	C22641	C22642	C22666
Compressor	RRT62C1E-IAA-901	RRT10K1E-PKA-959	CS18K6E-PKV-970
Cond Fan Motor	N/A	N/A	N/A
Fan Blade	N/A	N/A	N/A
FAN MOTOR BRACKET (*SN >500000)	2456019	-	-
OVERLOAD (*SN >500000)	2285109	-	-
RELAY (*SN >500000)	2283026	-	-
CAPACITOR (Start) (*SN >500000)	2252006	-	-
Pump Motor	63292	63293	63293
Expansion Valve	63826	63294	63294
Heat Exchanger	63300	63301	63302
Gasket, Heat Exchanger	61758	61758	61758
Grille	64197-3B	64197-3B	64285-3B
Front Panel	64407-1B	64407-1B	64286-1B
Contactors	N/A	N/A	63359
Relay	N/A	N/A	63358

Common Components

COMPONENT	ALL MODELS
Pump	63562
V-Clamp	63291-2
Coupling	63291-3
Thermostat	1007439
Probe	1006596P

COMPONENT	ALL MODELS
Compression Fitting	1008057
Switch	63303
Drier	63297
Coolant Solution	63299-1

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