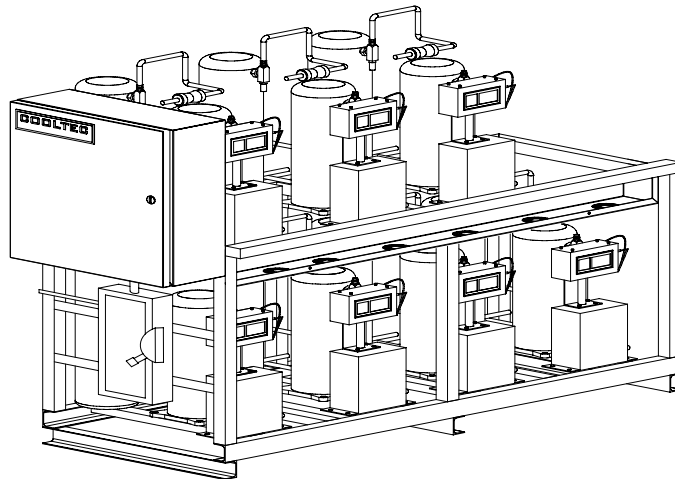


# COOLTEC

## “WATER COOLED INDOOR-PAK” CUSTOM DESIGNED REFRIGERATION SYSTEMS WITH WATER COOLED CONDENSING UNITS



### FEATURES:

- **Wide Range Of Types & Sizes-** This is the key to a custom-tailored refrigeration system. By using standard components, Cooltec refrigeration engineers can specify units which will provide the most efficient operation to meet the requirements of any refrigerated equipment.
- **Centralized Controls-** The specially engineered electrical control panel is mounted on the unit with main fused disconnect, compressor circuit breakers, contactors, defrost time clocks, relays and controls. This eliminates costly maintenance difficulties.
- **Accessibility-** installation and maintenance are quicker and easier because motor-compressors, shut-off valves and controls are readily accessible.
- **Rigid Construction-** The all welded frame is constructed of heavy duty steel and painted with two coats of baked enamel epoxy backed paint.
- **Lower Installation-** Field labor contributes major portion of construction cost. The WATER COOLED INDOOR-PAK reduces such high cost by utilizing factory pre-piping and pre-wired system.

Cooltec has the design and manufacturing capability for any type of refrigeration system large or small. Water cooled Indoor-Pak condensing units are designed for use in Hotels, Restaurants, Coffee Shops, Hospitals and commercial and industrial applications.

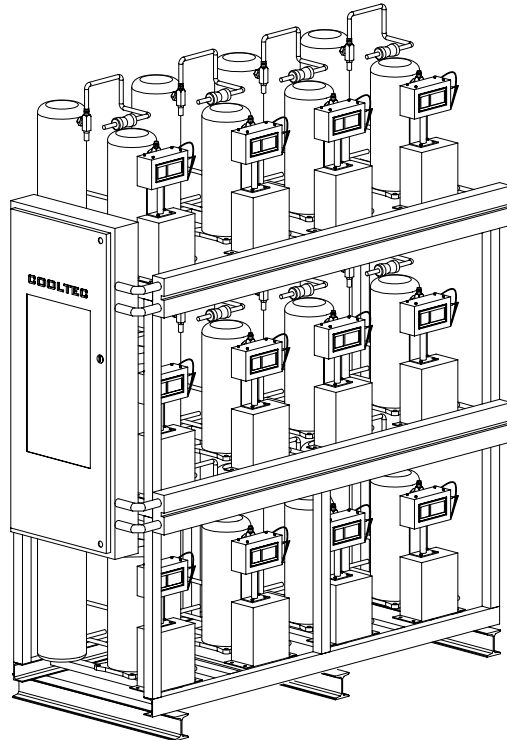
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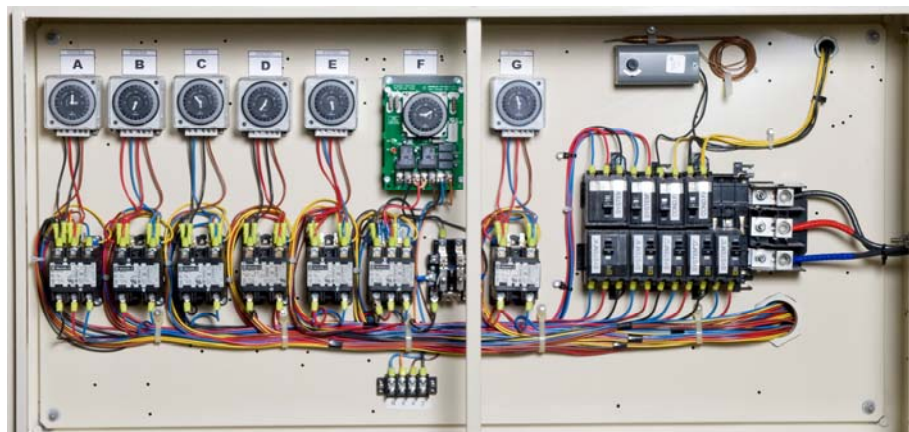
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## “WATER COOLED INDOOR-PAK” CUSTOM DESIGNED REFRIGERATION SYSTEMS WITH WATER COOLED CONDENSING UNITS



CONTROL PANEL



The Cooltec Water Cooled Indoor-Pak arrives at the job site with all components mounted and ready for final electrical and refrigeration hook-up. This eliminates coordination as well as the confusion often related to wiring and piping of refrigeration systems. Water manifold and piping is factory installed on the rack for simple field installation.

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## "WATER COOLED INDOOR-PAK" CUSTOM DESIGNED REFRIGERATION SYSTEMS WITH WATER COOLED CONDENSING UNITS

### SCROLL COMPRESSOR

CONDENSING UNIT CAPACITY							COIL CAPACITY						LINE SIZE 100 FT.		TOTAL SYSTEM AMPS.		NET WT. LBS
H.P.	MODEL NO.	CAPACITY MBH @ 95F AMB	POWER AMPS, VOLTS, PH, 60HZ.		DIMENSIONS (INCHES)			COIL QTY	COIL NO.	RATING 1-PH., 60 HZ		DEF HTR · RLA 208V 1PH	SUC O.D	LIQ O.D	208 V 1PH	208 V 3PH	
			208 V 1PH	208 V 3PH	L	W	H			FAN MOTOR							
										RLA	VOLTS						
<b>MEDIUM TEMPERATURE</b>										<b>R-404A</b>							
1/2	RS43C2E-CAV	5.9	5.4	----	10.75	6.63	11.25	1	ADT052	1.8	115	----	1/2	1/4	5.4	----	100
3/4	RS64C1E-CAV	8.2	7.7	----	10.75	6.63	11.25	1	ADT070	3.6	115	----	5/8	3/8	7.7	----	110
1.0	RS80C2E-TF5	10.8	----	6.4	10.75	6.63	11.25	1	ADT104	3.6	115	----	7/8	3/8	----	6.4	120
1.3	ZB10KCE-PFV	12.2	10.0	----	9.5	9.5	14.86	1	ADT120	3.6	115	----	7/8	3/8	10.0	----	125
1.5	ZB11KCE-PFV	13.4	10.0	----	9.5	9.5	14.86	1	ADT130	3.6	115	----	7/8	3/8	10.0	----	130
1.8	ZB13KCE-PFV	16.3	12.9	----	9.5	9.5	14.86	1	ADT156	5.4	115	----	7/8	3/8	12.9	----	140
2.0	ZB14KCE-PFV	17.9	13.6	----	9.5	9.5	14.86	1	ADT180	5.4	115	----	7/8	1/2	13.6	----	150
2.5	ZB19KCE-TF5	22.5	----	10.0	9.5	9.5	15.76	1	ADT208	7.2	115	----	1 1/8	1/2	----	10.0	200
3.0	ZB21KCE-TF5	27.1	----	12.1	9.5	9.5	15.76	1	ADT260	9.0	115	----	1 1/8	1/2	----	12.1	220
3.5	ZB26KCE-TF5	31.6	----	13.9	9.5	9.5	15.76	1	ADT312	10.8	115	----	1 1/8	1/2	----	13.9	300
4.0	ZB30KCE-TF5	36.2	----	15.7	9.5	9.59	17.25	1	ADT370	10.8	115	----	1 1/8	1/2	----	15.7	350
5.0	ZB38KCE-TF5	45.2	----	22.1	9.5	9.59	17.25	2	ADT208	14.4	115	----	1 1/8	5/8	----	22.1	390
<b>LOW TEMPERATURE</b>										<b>R-404A</b>							
1/2	RS43C2E-CAV	1.4	5.4	----	10.75	6.63	11.25	1	TL21	1.0	115	9.6	1/2	1/4	6.4	----	100
3/4	RS64C1E-CAV	2.3	7.7	----	10.75	6.63	11.25	1	TL28	1.2	115	5.7	5/8	3/8	8.9	----	110
1.0	CF04K6E-TF5	3.05	----	6.4	10.28	9.09	13.31	1	LET035	1.0	208	3.9	5/8	3/8	----	7.4	120
1.25	CF06K6E-TF5	5.19	----	7.0	10.28	9.09	13.31	1	LET047	1.0	208	3.9	7/8	3/8	----	8.0	125
1.5	ZF06K4E-TF5	7.1	----	9.28	9.5	9.5	14.5	1	LET065	2.0	208	7.8	7/8	3/8	----	11.28	130
2.0	ZF09K4E-TF5	10.1	----	11.1	9.5	9.5	15.4	1	LET090	2.0	208	7.8	1 1/8	3/8	----	13.1	140
2.5	ZF11K4E-TF5	12.4	----	13.6	9.5	9.5	15.9	1	LET120	3.0	208	11.7	1 1/8	3/8	----	16.6	150
3.0	ZF13K4E-TF5	14.0	----	15.0	9.47	9.6	17.4	1	LET140	3.0	208	11.7	1 1/8	3/8	----	18.0	200
3.5	ZF15K4E-TF5	17.5	----	21.4	9.47	9.6	17.4	1	LET160	4.0	208	15.7	1 1/8	1/2	----	25.4	220
4.0	ZF18K4E-TF5	21.2	----	23.9	9.47	9.6	17.4	1	LET200	5.0	208	19.6	1 3/8	1/2	----	28.9	300
5.0	ZF24K4E-TWC	25.7	----	30.0	12.63	14.06	21.17	1	LET240	6.0	208	23.5	1 3/8	1/2	----	36.0	350

**NOTES:**

1. Condensing units capabilities are 95°F ambient. Cooler temp. is at 35° with 25° suction gas temp. Freezer temp is at -10° with 20° suction gas temp.
2. Unit cooler and condensing units will have a separate power supplies for walk-in cooler applications and a single power supply for walk-in freezer applications. The unit coolers is electrically connected to the condensing unit with a 4-wire color-coded defrost harness.
3. 1 MBH = 1000 BTU's/HOUR

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## “WATER COOLED INDOOR-PAK” CUSTOM DESIGNED REFRIGERATION SYSTEMS WITH WATER COOLED CONDENSING UNITS

### ITEM NO. \_\_\_\_\_ REMOTE REFRIGERATION PACKAGE

The refrigeration package shall be pre-engineered and factory assembled unit, trade name “WATER COOLED INDOOR-PAK”, as manufactured by **COOLTEC REFRIGERATION CORP.** 1280 E. Ninth Street, Pomona, CA 91766  
Phone: (909) 865-2229 Fax: (909) 868-0777. E-mail: sales@cooltecrefrigeration.com

#### 1. CONSTRUCTION

The frame shall be made of structural steel. The entire frame shall be pre-assemble, welded, cleaned and painted with prime coat of zinc chromate, then finished with a coat of baked enamel epoxy – based paint.

#### 2. REFRIGERATION SYSTEMS

- A. Single stage compressors with air-cooled condenser operating within the recommended range of suction and discharge pressures for economical operating and with required capacity, are to be furnished and installed in accordance with the refrigeration schedule.
- B. All units shall be new factory assembled, to operate with the refrigerant specified. Refrigerant R404A is used for all medium temperature and low temperature applications.
- C. Compressor shall be Copeland. The speed shall not exceed 1750 RPM. Compressor shall be equipped with suction and discharge service valves.
- D. All units shall be equipped with high-low pressure control switches having adjustable range and differential. The high pressure cut-out shall be of automatic reset type.
- E. Each condensing unit shall include liquid line drier and sight glass, all assembled and piped
- F. All units shall be equipped with water regulating valves to control the head pressure.

#### 3. REFRIGERATION PIPING

- A. All refrigerant lines shall be extended to one side of the package in a neat and orderly manner.
- B. All tubing shall be securely supported and anchored with “Unistrut” or equal clamps and channels.
- C. Ends of lines shall be capped against contamination after the units are completed. These capped ends are to be only at final connection of the package to fixtures.

#### 4. WATER PIPING

- A. Water supply and return header shall be installed using copper tubing.
- B. All water lines shall be pre-piped with shut-off valves for supply and return of each unit.

#### 5. CONTROL PANEL

- A. The package shall have factory mounted and pre-wired control panel complete with circuit breakers, contractors and time clocks wired for single power connection at main disconnect at the end of refrigeration rack.
- B. Electrical contractor shall provide and install main power lines to panel, wiring for control and defrost heater between the panel and the refrigeration fixtures, all in accordance with the wiring diagram and local codes.

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## 6. SAFETY CAUTION

Each system and evaporator is shipped under nitrogen pressure. Use caution and exercise safety at all times when preparing for final hookup.

## 7. EVAPORATOR COIL

Evaporator coils shall be direct expansion type fabricated of copper tubes with aluminum fins. All evaporator coils shall be provide with solenoid valve, thermostatic expansion valve and thermostat. Piped and wired to the junction box for positive pump down.

## CONSTRUCTION NOTES FOR TRADES

### 1. GENERAL CONTRACTORS

- A. General contractors shall verify all dimensions and coordinate with other trades.
- B. General contractors shall prepare wall openings.

### 2. REFRIGERATION CONTRACTOR

- A. All copper tubing to be refrigerant grade A.C.R. or type "L".
- B. Silver solder and/or sil-fos shall be used for all refrigerant piping. Soft solder is not acceptable.
- C. All piping to be pressure tested with nitrogen at 300 PSI. After the condensing unit and coil have been connected, the balance of the system shall be leak tested with all valves open.
- C. The complete system shall be evacuated with vacuum pump.
- E. Charge, test and adjust each unit.
- F. Refrigerant contractor to provide and install drain-line heater in freezer to be connected by electrical contractor.
- G. Refrigerant suction lines outside of refrigerated compartments, not run in conduit, shall be insulated back to compressor with Armstrong Arma-Flex AP – 25/50 foamed plastic insulation or equal in accord with direction of the manufacturer. Minimum thickness shall be ½ inch for commercial temperature and ¾ inch for low temperature.

### 3. ELECTRICAL CONTRACTOR

- A. Electrical contractor provide power for refrigeration package and connect control and defrost system as called for in the wiring diagram.
- B. Electrical contractor to provide 4-wire color coded service from the time clock at the refrigeration package to blower coil in fixture for automatic defrost.
- C. Electrical contractor to connect drain-line heater in freezer.
- D. All electrical wiring and installation shall be in accordance with the wiring diagram and local codes.

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## 4. PLUMBING CONTRACTOR

- A. Plumbing contractor to provide cold water supply and return to water cooled refrigeration package.
- B. Plumbing contractor to provide type "M" copper drain lines for walk-in cooler and freezer, pitched 1/2" per foot of run. In freezer, unheated drain line must be outside of insulation to prevent freezing. Trap drain line outside of refrigerated space to avoid entrance of warm and moist air.
- C. Plumbing contractor to provide individual drain line for each evaporator unless otherwise called for.
- D. All plumbing installation shall be in accordance with local codes.

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