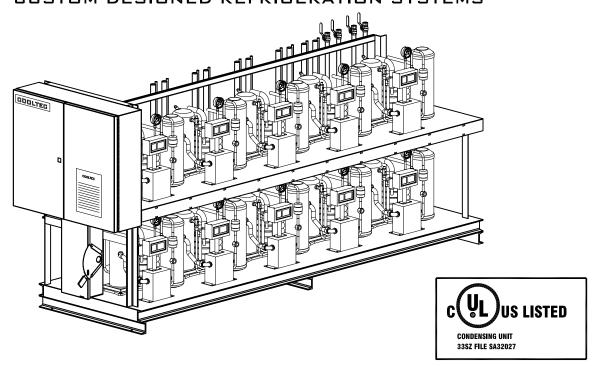


OTY:

CHILLED WATER AND "WATER COOLED INDOOR-PAK" CUSTOM DESIGNED REFRIGERATION SYSTEMS



TYPICAL APPLICATIONS:

Auditoriums, Bars, Bakeries, Schools, Supermarkets, Warehouses, Liquor Stores, Restaurants, Cafeterias. Reach-In Units, Display Cases, Grab-N-Go Cases, Under-Counter Refrigerators and Freezers, Walk-In Coolers and Freezers, Cold Pans, and various types of related equipment for food service operations.

CAPACITY RANGE:

Cooltec has the design and manufacturing capability for any type of refrigeration system large or small. Custom design refrigeration system available in 4' to 14' lengths, available in single, double and triple tier arrangements. The Water cooled Indor-Pak refrigeration system is designed for use in hotels, restaurants, coffee shops, hospitals, commercial and industrial applications.

FEATURES:

<u>Wide Range of Types & Sizes</u> 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.

<u>Centralized Controls</u> 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.

<u>Rigid Construction</u>— The all welded frame is constructed of heavy duty structural steel, powder coated epoxy enamel and baked.

<u>Lower Installation</u> 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 for single point connection.

COOLTEC REFRIGERATION CORP.

1250 E. FRANKLIN AVE. UNIT B, POMONA, CA 91766

T: 909-865-2229

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CHILLED WATER AND WATER COOLED REFRIGERATION SYSTEM FOR FOOD SERVICE INDUSTRY

Cooltec's Water Cooled Refrigeration System and electrical control panels have been the best in the market for over 40 years. We are committed to provide our customers with the highest quality and best value in the refrigeration industry. We also have an outstanding commitment to customer service.

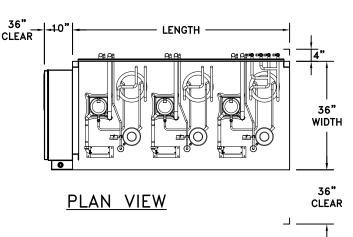
Our systems are legendary for their ease of installation and their convenient service access. We provide excellent value in a reliable, energy-efficient package:

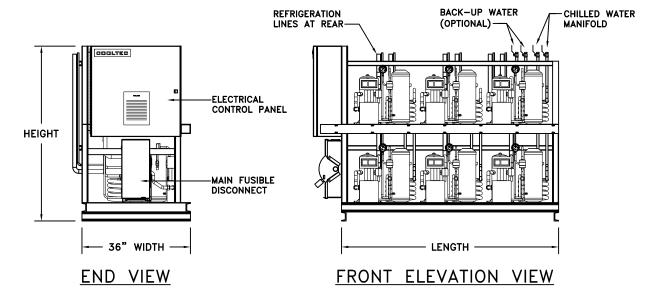
- Assisting You Toward Sustainable Resource Management
- Lower Cost of Ownership & Higher Return on Investment
- Engineered Custom Systems for Your Unique Needs
- Greater Application Flexibility
- Ease of Installation & Maintenance
- Reliability & Long Life
- Superior Accesibility

COOLTEC REFRIGERATION

COOLTEC

GENERAL SPECIFICATIONS





STANDARD FEATURES

- Water-cooled condenser, designed for 15°F TD to meet jobsite ambient conditions.
- U.L. listed refrigeration package with main fused disconnect.
- Heavy duty structural steel frame construction with powder coat finish.
- Suction and discharge valves on all compressors.
- Condensing unit with pre-assembled liquid line drier and sight glass, pressure control, water regulator, water manifolds, contactors, breakers, 24 hour timer for medium temp units (for cooler defrost application) defrost timer for freezer's electric defrost applications. Fusible disconnect and electrical control panel for single point connection. All are pre-pipped and pre-wired, electrically and pressure tested at 300 PSI, and started.

OPTIONS

- Additional four (4) year compressor warranty.
- · Prison packages.
- Factory start-up trips.

- 480V/3PH operation.
- 50 cycle for export projects.
- Heat reclaim

COOLTEC REFRIGERATION CORP.

1250 E. FRANKLIN AVE. UNIT B, POMONA, CA 91766



T: 909-865-2229





CONDENSING UNIT & COIL CAPACITY

M	EDIUM TEM	PERA	ATUI	RE	HERN	METIC/SCROLL COMPRESSORS						R-404A WALK-IN COOLER						ER
CONDENSING UNIT CAPACITY							COIL CAPACITY					TOTAL SYSTEM						
HP	COMPRESSOR MODEL NO. (Copeland)	CAPA MB: 95°F		(Al	IIC DATA MPS) HASE/60Hz	COIL QTY	COIL MODEL	FAN M	TING @ 1-PH, 60 HZ MOTOR DEFROST		SUCTION	LINE SIZE (100' MAX.) SUCTION LIQUID		AT 85°F MAX.			TOTAL SYSTEM AMPS VOLTS/PHASE/60Hz	
		+20°F	+25°F	208-230/1	208-230/3		NO.	RLA	VOLTS	HTR.RLA 208V/1PH	OD	OD	GPM	WATER IN	WATER OUT	208V 1PH	208V 3PH	LBS.
0.5	RST45C1E-CAV	5.6	6.2	3.9		1	ADT-052	0.9	115		5/8	3/8	1.5	3/8	3/8	3.9		100
0.75	RST65C1E-CAV	8.9	9.9	6.8		1	ADT-090	1.8	115		7/8	3/8	2.1	3/8	3/8	6.8		110
1.0	ZS09KAE-TF5	11.6	12.8		4.8	1	ADT-104	1.8	115		7/8	3/8	2.1	3/8	3/8		4.8	120
1.3	ZS11KAE-TF5	14.0	15.5		5.5	1	ADT-140	2.7	115		7/8	3/8	2.5	1/2	1/2		5.5	125
1.5	ZS13KAE-TF5	16.0	17.7		6.1	1	ADT-156	2.7	115		7/8	3/8	3.3	1/2	1/2		6.1	130
1.8	ZS15KAE-TF5	19.2	21.3		6.9	1	ADT-180	2.7	115		7/8	1/2	4.0	1/2	1/2		6.9	140
2.0	ZS19KAE-TF5	21.6	23.9		7.9	1	ADT-208	3.6	115		7/8	1/2	4.0	1/2	1/2		7.9	150
2.5	ZS21KAE-TF5	29.0	32.0		10.4	1	ADT-312	5.4	115		1 1/8	1/2	5.0	1/2	1/2		10.4	200
3.0	ZS26KAE-TF5	32.3	35.7		11.1	1	ADT-312	5.4	115		1 1/8	1/2	6.0	1/2	1/2		11.1	220
3.5	ZS29KAE-TF5	36.8	40.7		11.9	1	ADT-370	5.4	115		1 1/8	1/2	6.0	1/2	1/2		11.9	300
4.0	ZS33KAE-TF5	40.5	44.8		13.0	2	ADT-208	7.2	115		1 3/8	1/2	8.0	3/4	3/4		13.0	350
5.0	ZB38KCE-TF5	46.6	51.6		16.6	2	ADT-260	9.0	115		1 3/8	5/8	8.0	3/4	3/4		16.6	390
6.0	ZB45KCE-TF5	55.2	61.2		18.6	2	ADT-260	9.0	115		1 3/8	5/8	10.0	3/4	3/4		18.6	400
7.0	ZB50KCE-TF5	65.3	72.3		23.1	2	ADT-312	10.8	115		1 3/8	5/8	13.0	3/4	3/4		23.1	425
8.0	ZB58KCE-TF5	71.9	79.8		26.0	2	ADT-370	10.8	115		1 5/8	5/8	14.0	1	1		26.0	4.25
9.0	ZB66KCE-TF5	81.7	90.5		28.5	2	BMA-450	16.8	115		1 5/8	5/8	15.0	1	1		28.5	450
10.0	ZB76KCE-TF5	96.2	106.6		33.1	2	BMA-510	22.4	115		2 1/8	7/8	15.0	1	1		33.1	500
15.0	ZB95K5E-TWC	121.0	134.0		43.4	2	BMA-600	22.4	115		2 1/8	7/8	20.0	1 1/4	1 1/4		43.4	600

NOTES: 1. Condensing unit capabilities are 95°F ambient. Cooler temp is at 35°F with 25°F suction gas temp.

Unit cooler and condensing units will have separate power supplies for walk-in cooler applications.
 1MBH=1000TUs/Hour

LOW TEMPERATURE HERM							METIC/SCROLL COMPRESSORS						R-404A WALK-IN FRE				FREEZ	ER
CONDENSING UNIT CAPACITY							COIL C	APA	.CITY	<i>I</i>		TOTAL SYSTEM						
HP	COMPRESSOR MODEL NO. (Copeland)	MB	ACITY H @ AMB	(Al	CIC DATA MPS) HASE/60Hz	COIL QTY	COIL MODEL	FAN M	OTOR	PH, 60 HZ DEFROST	LINE SIZE (100' MAX.) SUCTION LIQUID		WATER SUPPLY AT 85°F MAX.		XX.	TOTAL SYSTEM AMPS VOLTS/PHASE/60Hz		WT LBS.
		-10°F	-20°F	208-230/1	208-230/3	i	NO.	RLA	VOLTS	HTR.RLA 208V/1PH	OD	ÒD	GPM	WATER IN	WATER OUT	208V 1PH	208V 3PH	LDS.
0.5	RST45C1E-CAV	2.7	1.8	2.7		1	TL-21	0.5	208	4.8	5/8	3/8	1.5	3/8	3/8	3.2		100
0.75	RST65C1E-CAV	4.4	3.3	5.0		1	LET-035	0.5	208	3.9	5/8	3/8	2.0	3/8	3/8	5.5		110
1.0	CFO4K6E-TF5	5.9	4.0		3.8	1	LET-040	0.5	208	3.9	7/8	3/8	2.1	3/8	3/8		4.3	120
1.5	CFO6K6E-TF5	9.7	6.8		4.7	1	LET-065	1.0	208	7.8	7/8	3/8	2.5	3/8	3/8		5.7	125
2.0	ZFO6K4E-TF5	9.9	7.8		6.0	1	LET-075	1.0	208	7.8	7/8	3/8	3.0	3/8	3/8		7.0	130
3.0	ZFO9K4E-TF5	14.0	11.1		7.7	1	LET-090	1.0	208	7.8	1 1/8	3/8	4.0	3/8	3/8		8.7	140
3.5	ZF11K4E-TF5	17.4	13.8		9.2	1	LET-120	1.5	208	11.7	1 1/8	3/8	5.0	1/2	1/2		11.7	150
4.0	ZF13K4E-TF5	20.2	15.8		10.2	1	LET-140	1.5	208	11.7	1 1/8	3/8	6.0	1/2	1/2		11.7	200
5.0	ZF15K4E-TF5	24.7	19.5		12.6	1	LET-180	2.0	208	15.7	1 1/8	1/2	6.0	1/2	1/2		15.7	220
6.0	ZF18K4E-TF5	29.7	23.5		15.9	1	LET-200	2.5	208	19.6	1 3/8	1/2	8.0	3/4	3/4		19.6	300
7.5	ZF25K4E-TF5	37.2	29.1		18.6	1	LET-280	3.0	208	23.5	1 3/8	1/2	8.0	3/4	3/4		23.5	350
10.0	ZF34K5E-TFC	48.2	38.4		26.7	2	LET-180	4.0	208	31.4	1 3/8	1/2	10.0	3/4	3/4		31.4	425
12.0	ZF41K5E-TFC	60.5	48.4		34.1	2	LET-240	6.0	208	47.0	1 5/8	5/8	15.0	1	1		47.0	500
15.0	ZF49K5E-TWC	73.2	58.2		36.3	2	LET-280	6.0	208	47.0	1 5/8	5/8	15.0	1	1		47.0	600

NOTES: 1. Condensing unit capabilities are 95°F ambient. Freezer is at -10°F with -20°F suction gas temp.

- 2. Unit cooler and condensing units will have SAME power supplies for walk-in freezer (low temp.) applications.
- 3. 1MBH=1000BTUs/Hour

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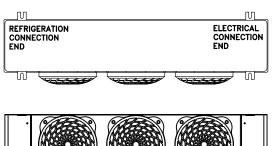


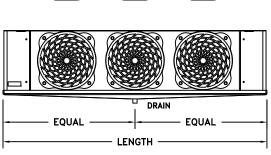
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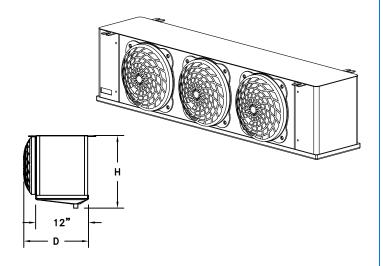




UNIT COOLER DETAIL







	UNIT MODEL	CAPACITY DIMENSIONS BTU (INCHES)				F	ANS		FLEC	CON	NECTION	NS (In.)	APPROX.	
_	No.	10°F TD +25 SST	LENGTH	D	Н	QTY.	CFM		EC MOTOR 208/1/60	ELEC DEFROST 208-1-60	COIL INLET OD	SUCTION ID	DRAIN MPT	SHIP WT. (Lbs.)
ן ט	ADT040AEK	4000	29-1/2"	15"	15"	1	730	0.9			1/2"	5/8"	3/4"	28
	ADT052AEK	5200	29-1/2"	15"	15"	1	700	0.9		-	1/2"	5/8"	3/4"	31
ן ב	ADT065AEK	6500	29-1/2"	15"	15"	1	650	0.9			1/2"	5/8"	3/4"	34
Ι Σ	ADT070AEK	7000	45-1/2"	15"	15"	2	1460	1.8			1/2"	7/8"	3/4"	45
l 🗔	ADT090AEK	9000	45-1/2"	15"	15"	2	1400	1.8			1/2"	7/8"	3/4"	48
	ADT104AEK	10400	45-1/2"	15"	15"	2	1400	1.8		-	1/2"	7/8"	3/4"	49
	ADT120AEK	12000	45-1/2"	15"	15"	2	1300	1.8		-	1/2"	7/8"	3/4"	51
2	ADT130AEK	13000	45-1/2"	15"	15"	2	1300	1.8			1/2"	7/8"	3/4"	53
=	ADT140AEK	14000	61-1/2"	15"	15"	3	2100	2.7			1/2"	7/8"	3/4"	63
	ADT156AEK	15600	61-1/2"	15"	15"	3	2100	2.7			1/2"	7/8"	3/4"	67
	ADT180AEK	18000	61-1/2"	15"	15"	3	1950	2.7			1/2"	7/8"	3/4"	69
	ADT208AEK	20800	77-1/2"	15"	15"	4	2800	3.6			1/2"	1-1/8"	3/4"	82
Ш	ADT260AEK	26000	93-1/2"	15"	15"	5	3250	4.5		-	1/2"	1-1/8"	3/4"	103
2	ADT312AEK	31200	109-1/2"	15"	15"	6	3900	5.4		-	1/2"	1-1/8"	3/4"	124
	ADT370AEK	37000	109-1/2"	15"	15"	6	3900	5.4			1/2"	1-3/8"	3/4"	127

ı	UNIT MODEL	CAPACITY BTU	DIMEN (INC)				FA	ANS		ELEC	CON	NECTION	NS (In.)	APPROX.
=	No.	10°F TD +25 SST	LENGTH	D	Н	QTY.	CFM	EC MOTOR 115/1/60		ELEC DEFROST 208-1-60	COIL INLET OD	SUCTION ID	DRAIN MPT	SHIP WT. (Lbs.)
	LET035BEK	3500	29-1/2"	15"	15"	1	700		0.5	3.9	1/2"	5/8"	3/4"	24
ן ט	LET040BEK	4000	29-1/2"	15"	15"	1	700		0.5	3.9	1/2"	5/8"	3/4"	26
ட	LET047BEK	4700	29-1/2"	15"	15"	1	650		0.5	3.9	1/2"	5/8"	3/4"	29
	LET065BEK	6500	45-1/2"	15"	15"	2	1400		1.0	7.8	1/2"	5/8"	3/4"	43
Σ	LET075BEK	7500	45-1/2"	15"	15"	2	1300		1.0	7.8	1/2"	5/8"	3/4"	45
ші	LET090BEK	9000	45-1/2"	15"	15"	2	1300		1.0	7.8	1/2"	5/8"	3/4"	48
=	LET120BEK	12000	61-1/2"	15"	15"	3	2100		1.5	11.7	1/2"	7/8"	3/4"	60
. [LET140BEK	14000	61-1/2"	15"	15"	3	1950		1.5	11.7	1/2"	7/8"	3/4"	62
≥	LET160BEK	16000	77-1/2"	15"	15"	4	2600		2.0	15.7	1/2"	1-1/8"	3/4"	81
	LET180BEK	18000	77-1/2"	15"	15"	4	2600		2.0	15.7	1/2"	1-1/8"	3/4"	84
ן יַי	LET200BEK	20000	93-1/2"	15"	15"	5	2600		2.5	19.6	1/2"	1-1/8"	3/4"	101
┙	LET240BEK	24000	109-1/2"	15"	15"	6	3900		3.0	23.5	1/2"	1-1/8"	3/4"	121
	LET280BEK	28000	109-1/2"	15"	15"	6	3900		3.0	23.5	1/2"	1-3/8"	3/4"	124

CORP. REFRIGERATION

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F: 909-868-0777

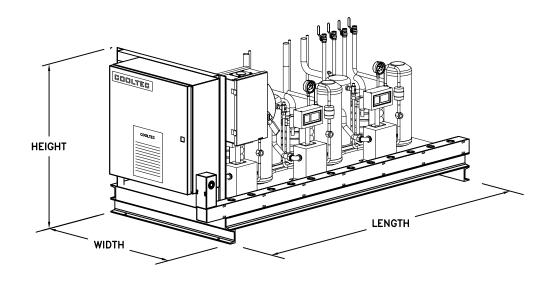
sales@cooltecrefrigeration.com



www.cooltecrefrigeration.com



WATER COOLED INDOOR-PAK CUSTOM DESIGNED REFRIGERATION SYSTEMS



	GENERAL SPECIFICATIONS													
	MODEL NO.	MAXIMUM	I	DIMENSIO	NS	NUMBER								
	WODEL NO.	NUMBER OF COMP.(SPACE)	LENGTH	WIDTH	HEIGHT	OF TIERS	ELECTRICAL							
~	WIPS-4	2	48"	36"	30"	1	208V/3PH/60HZ							
TIER	WIPS-6	3	72"	36"	30"	1	208V/3PH/60HZ							
	WIPS-8	4	96"	36"	30"	1	208V/3PH/60HZ							
GL	WIPS-10	5	120"	36"	36"	1	208V/3PH/60HZ							
SINGLE	WIPS-12	6	144"	36"	36"	1	208V/3PH/60HZ							
J	WIPS-14	7	168"	36"	36"	1	208V/3PH/60HZ							

NOTES: *Electrical power also available in 480V/3PH/60HZ consult factory. *5HP - 8HP will take 2 spaces. *Installation clearance 3 feet. *Refrigeration lines at rear.

STANDARD FEATURES

- Water-cooled condenser, designed for 15°F TD.
- U.L. listed refrigeration package with main fused disconnect.
- Heavy duty structural steel frame construction with powder coat finish.
- Suction and discharge valves on all compressors.
- Condensing unit with pre-assembled liquid line drier and sight glass, pressure control, water regulator, water manifolds, contactors, breakers, 24 hour timer for medium temp units (for cooler defrost application) defrost timer for freezer's electric defrost applications. Fusible disconnect and electrical control panel for single point connection. All are pre-pipped and pre-wired, electrically and pressure tested at 300 PSI, and started.

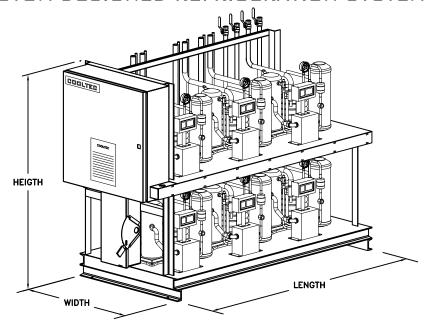


COOLTEC REFRIGERATION CORP.



ITEM:

"WATER COOLED INDOOR-PAK" CUSTOM DESIGNED REFRIGERATION SYSTEMS



	GENERAL SPECIFICATIONS													
	MODEL NO.	MAXIMUM	I	DIMENSIO	NS	NUMBER								
	WODEL NO.	NUMBER OF COMP.(SPACE)	LENGTH	WIDTH	HEIGHT	OF TIERS	ELECTRICAL							
~	WIPD-4	4	48"	36"	68"	2	208V/3PH/60HZ							
TIER	WIPD-6	6	72"	36"	68"	2	208V/3PH/60HZ							
	WIPD-8	8	96"	36"	68"	2	208V/3PH/60HZ							
BI	WIPD-10	10	120"	36"	68"	2	208V/3PH/60HZ							
DOUBLE	WIPD-12	12	144"	36"	68"	2	208V/3PH/60HZ							
	WIPD-14	14	168"	36"	68"	2	208V/3PH/60HZ							

NOTES: *Electrical power also available in 480V/3PH/60HZ consult factory. *5HP - 8HP will take 2 spaces. *Installation clearance 3 feet. *Refrigeration lines at rear.

STANDARD FEATURES

- Water-cooled condenser, designed for 15°F TD.
- U.L. listed refrigeration package with main fused disconnect.
- Heavy duty structural steel frame construction with powder coat finish.
- Suction and discharge valves on all compressors.
- Condensing unit with pre-assembled liquid line drier and sight glass, pressure control, water regulator, water manifolds, contactors, breakers, 24 hour timer for medium temp units (for cooler defrost application) defrost timer for freezer's electric defrost applications. Fusible disconnect and electrical control panel for single point connection. All are pre-pipped and pre-wired, electrically and pressure tested at 300 PSI, and started.



COOLTEC REFRIGERATION CORP.

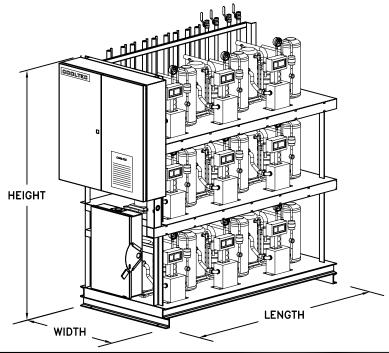
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T: 909-865-2229

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WATER COOLED INDOOR-PAK CUSTOM DESIGNED REFRIGERATION SYSTEMS



	GENERAL SPECIFICATIONS													
	MODEL NO.	MAXIMUM NUMBER OF	Ι	DIMENSIO	NS	NUMBER								
	MODEL NO.	COMP.(SPACE)	LENGTH	WIDTH	HEIGHT	OF TIERS	ELECTRICAL							
$\exists R$	WIPT-4	6	48"	36"	77"	3	208V/3PH/60HZ							
TIER	WIPT-6	9	72"	36"	77"	3	208V/3PH/60HZ							
LE	WIPT-8	12	96"	36"	77"	3	208V/3PH/60HZ							
TRIPLE	WIPT-10	15	120"	36"	77"	3	208V/3PH/60HZ							
	WIPT-12	18	144"	36"	77"	3	208V/3PH/60HZ							

NOTES: *Electrical power also available in 480V/3PH/60HZ consult factory. *5HP - 8HP will take 2 spaces. *Installation clearance 3 feet. *Refrigeration lines at rear.

STANDARD FEATURES

- Water-cooled condenser, designed for 15°F TD.
- U.L. listed refrigeration package with main fused disconnect.
- Heavy duty structural steel frame construction with powder coat finish.
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- Condensing unit with pre-assembled liquid line drier and sight glass, pressure control, water regulator, water manifolds, contactors, breakers, 24 hour timer for medium temp units (for cooler defrost application) defrost timer for freezer's electric defrost applications. Fusible disconnect and electrical control panel for single point connection. All are pre-pipped and pre-wired, electrically and pressure tested at 300 PSI, and started.



COOLTEC REFRIGERATION CORP.

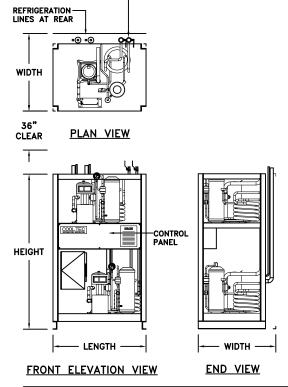
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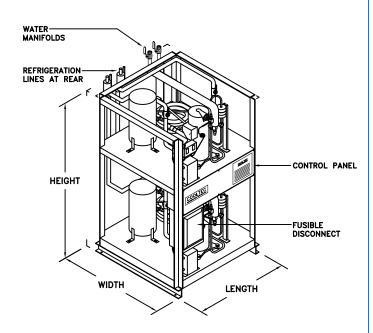
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"WATER COOLED INDOOR-PAK" CUSTOM DESIGNED REFRIGERATION SYSTEMS WATER MANIFOLDS. COMPACT DESIGN





GENERAL SPECIFICATIONS										
COMPACT TWO TIER	MODEL NO.	MAXIMUM NUMBER OF COMP.(SPACE)	DIMENSIONS			NUMBER OF				
			LENGTH	WIDTH	HEIGHT	TIERS	ELECTRICAL			
	WIPC-1	2	34"	30"	60"	2	208V/3PH/60HZ			
	WIPC-2	4	48"	30"	60"	2	208V/3PH/60HZ			

NOTES: *Compact design for up to 4HP medium temp, and 3HP for low temp compressors*Parallel system available, consult factory.*Installation clearance 3 feet at front. *Refrigeration lines at rear.*

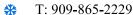
STANDARD FEATURES

- Water-cooled condenser, designed for 15°F TD.
- U.L. listed refrigeration package with main fused disconnect.
- Heavy duty structural steel frame construction with powder coat finish.
- Suction and discharge valves on all compressors.
- Condensing unit with pre-assembled liquid line drier and sight glass, pressure control, water regulator, water manifolds, contactors, breakers, 24 hour timer for medium temp units (for cooler defrost application) defrost timer for freezer's electric defrost applications. Fusible disconnect and electrical control panel for single point connection. All are pre-pipped and pre-wired, electrically and pressure tested at 300 PSI, and started.



COOLTEC REFRIGERATION CORP.

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"WATER COOLED INDOOR-PAK"

ITEM NO. INDOOR WATER COOLED 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.,

1250 E. Franklin Ave., Pomona, ca 91766. phone: (909) 865-2229, fax: (909) 868-0777.

e-mail address: sales@cooltecrefrigeration.com

Contractor shall furnish and install, where shown on plans, (1) **COOLTEC** U.L. approved "WATER COOLED INDOOR-PAK" remote refrigeration package, model , with control panel, Volts, Phase, Hertz.

1. CONSTRUCTION

The frame, enclosure, and panels shall be fabricated of galvanized steel and heavy duty structural steel. The entire unit shall be pre-assembled, welded, cleaned, and primed and powder coated epoxy enamel and baked. The entire structure shall be protected against rust and corrosion. The water cooled condensers shall be designed for 15°F TD.

2. WATER COOLED REFRIGERATION UNITS

- **A.** Water cooled condensing units shall be hermatic/glacier scroll type (copeland). Each unit shall be equipped with high-low pressure control, liquid line drier, sight glass, head pressure control, time clocks.
- **B.** All compressor units shall be new factory assembled to operate with the refrigerant specified in the engineering summary sheet. Refrigerant r-404a shall be used on all commercial temperature units and low temperature units.
- C. All units shall be new factory assembled, to operate with the refrigerant specified.
- **D.** Compressors shall be Copeland. The speed shall not exceed 1750 RPM. Compressors shall be equipped with suction and discharge service valves.
- E. 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.
- **F.** All units shall be equipped with water regulating valves to control the head pressure.

3. PRE-PIPING

- **A.** All refrigerant lines shall be extended to one side of the package in a neat and orderly manner. Suction lines must be insulated with armaflex (1" thick for low temp, 3/4" thick for medium temp).
- **B.** All tubing shall be securely supported and anchored with clamps.
- C. Silver solder and/or sil-fos shall be used for all refrigerant piping. Soft solder is not acceptable.
- **D.** 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 leaked tested with all valves opened.

4. CONTROL PANEL

- **A.** The refrigeration package shall contain a factory mounted and pre-wired control panel with main fused disconnect. Compressor circuit breakers, contactors, and time clocks wired for single point connection. Complete with wire harness, wiring for control, defrost clocks and refrigerant fixtures; all in accordance with the wiring diagram and local codes.
- **B.** Electrical contractor shall provide and install main power lines to panel, and provide wire harness wiring for control and defrost heater between the defrost clock and the refrigeration fixtures, all in accordance with the wiring diagram and per local codes.

5. SAFETY CAUTION

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

6. EVAPORATIVE COIL

- **A.** Evaporative coils shall be direct expansion type, fabricated of copper tubes with aluminum fins. All evaporative coils shall be provided with solenoid valve, thermostatic expansion valve, and electronic thermostat, piped and wired to the junction box for positive pump down.
- **B.** Evaporative coils shall be equipped with energy saving "EC" motors.

CONSTRUCTION NOTES FOR TRADES

1. GENERAL CONTRACTOR

- **A.** Contractors shall verify all dimensions and coordinate with other trades.
- **B.** General contractor to verify and co-ordinate location of refrigeration rack with refrigeration contractor to satisfy local code requirements and maintenance of the rack.
- C. General contractor to verify refrigeration line runs thru to roof or multi-story building prior to construction with refrigeration contractor for accessibility.
- **D.** General contractor to verify access of crane or mechanical lift with refrigeration contractor prior to construction (if required).



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- E. General contractor is responsible to hang and support refrigeration rack over walk-in box.
- F. General contractor to submit for approval and pull all permits for hanging this rack.
- G. General contractor to allow 3'-0" (36") of clear space around refrigeration rack for maintenance.
- **H.** All core drilling required for remote refrigeration piping work by the refrigeration contractor, is in the general contractor's scoop of work. Coordinate exact location and number of penetrations with the refrigeration contractor and comply with all landlord requirements for x-ray of slab prior to work.
- I. Any attachment to building structure for load bearing weight to be provided and co-ordinated by general contractor.

2. REFRIGERATION CONTRACTOR

- **A.** a. refrigeration contractor shall run all refrigeration lines which extend down thru wall(s) before wall(s) are closed up when conduit is not provided. Refrigeration contractor to seal both ends of conduit with fomofil after all lines have been run. If pull box(es) are specified, they must be a minimum 12"x 12". Refrigeration contractor shall insulate all refrigeration suction lines. Refrigeration contractor shall verify location of blower coil(s) and compressor(s) for all refrigerated areas.
- **B.** Refrigeration contractor shall verify location of pitch pocket(s) for refrigeration line penetration thru roof with general contractor. General contractor to install all pitch pockets. Contractor shall use only clean dehydrated, sealed refrigeration grade a.c.r. copper tubing or type "l". Use only long radius elbows to reduce flow resistance and line breakage.
- C. Silver solder and/or sil-fos shall be used on all refrigerant piping. Soft solder is not acceptable. use minimum 35% silver solder for dissimilar metals.
- **D.** All piping must be supported with hangers that can withstand the combined weight of tubing, insulation, valves, and fluid in the tubing.
- **E.** Use nitrogen in the copper tubing during brazing to prevent formation of copper oxides. Liquid and suction lines must be free to expand independently of each other. Do not exceed 100 feet without a change in direction or an offset. Plan proper pitching, expansion allowance, and p-traps at the base of all suction risers and at every 15 feet of every vertical rise. Install service valves at several locations for ease of maintenance, these valves must be approved for 450 PSI working pressure.
- **F.** All piping to be pressure tested with nitrogen at 300 psi with all valves open and held for 12 hours. Electronic leak detectors shall be used to locate all leaks.
- G. Complete system shall be evacuated to 500 microns with vacuum pump before charging the system.
- **H.** Once system is charged and running, adjust all controls _____ including pressure controls, expansion valves, thermostats, and time clocks. Return after 24 hours to verify proper operation of systems.
- Refrigeration contractor to provide and install drain line heater with insulation in freezer to be connected by electrical contractor.
- **J.** 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 3/4 inch for commercial temperature and 1.0 inch for low temperature.
- **K.** Fill roof refrigeration and electrical pitch pockets with foam and sealant.
- L. Refrigeration contractor to seal all refrigeration line penetrations made thru walk-in coolers/freezers, and refrigerated base sections of counters.

3. ELECTRICAL CONTRACTOR

- A. Electrical contractor to provide main power for the refrigeration package and connect control and defrost systems.
- **B.** Electrical contractor to provide 5-wire color-coded service from the time clock at the refrigeration system.
- C. Electrical contractor to connect drain-line heater in the freezer.
- **D.** All electrical wiring and installation shall be accordance with the wiring diagram and per local codes.
- E. If contracted, electrical contractor to install all conduits for refrigeration lines in walls, prior to walls are closed up. all pull boxes must be a minimum of 12"x 12".

3. PLUMBING CONTRACTOR

- A. Plumbing contractor to provide "chilled" water supply and return water to refrigeration package.
- **B.** Plumbing contractor to provide type "m" copper drain lines for walk-in refrigerator and freezer, pitched 1/2 inch per foot of run. In freezer, heated drain line must be insulated to prevent freezing. Trap drain lines outside of refrigerated space to avoid entrance of warm and moist air. Contractor to provide individual drain line for each evaporator unless otherwise called for in the plans.
- C. All plumbing installation shall be in accordance with local codes.
- **D.** Plumbing contractor to install a secondary "back-up" cold water supply and return water in case primary chilled water and return water fail or is temporary turned off.
- **E.** Plumbing contractor to supply and mount a union fitting below each evaporative blower coil's drain line for disconnecting and servicing purposes.

Since product improvement is a continuing effort with the engineers at COOLTEC Refrigeration Corp. we reserve the right to make changes in specifications without notice.

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CHILLED WATER AND WATER COOLED REFRIGERATION SYSTEM

REPRES	ENTED BY:		

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