AMERICANCHILLERS
& Cooling Tower Systems

3-7.5 Tons
CPWC-R03 Series

Water Cooled Cold Plunge Chiller

Standard Features

- Single Circuit, R454B Hermetic Scroll Compressor with Crankcase Heater
- Coaxial Condenser Coil with water regulating valve for head pressure control up to 150PSI water pressure
- Cupronickel Coaxial Evaporator for light chemical resistance
- Liquid Line Filter Drier and sight glass
- High and Low Refrigeration Pressure Safeties
- Water Flow Safety Switch on evaporator water circuits
- Weather Proof Electrical Panel / Single Point Power Connection
- Electronic Digital Temperature Control
- Chilled Water Supply and Return Temperature Indicators
- Compressor Motor Contactor with Overload Protector
- Non-ferrous Water Lines Insulated With 1/2” Closed Cell
- Charged With Refrigerant and Factory Tested
- Heavy duty welded steel frame, powder coated for corrosion resistance
- Refrigerant leak detection sensor
- Warranty: One (1) years limited parts, five (5) years limited compressor warranty

Options & Accessories

- Other voltages and options available upon request
- Titanium Coaxial Evaporator saltwater pools and continuous filtration
- Factory technician for startup, training & service

CPWC-R03 Series

General Data

Model (CPWC****-R03)		0151	0201	0301	0401	0501
Nominal Tons Cooling		1.5	2	3	4	5
Refrigerant Charge (lbs.)		7	7	7	7	7
Refrigerant		R454A	R454A	R454B	R454B	R454B

Electrical Data

Supply Power	Voltage	208-230	208-230	208-230	208-230	208-230
	Phase	1	1	1	1	1
	Frequency (Hz)	60	60	60	60	60
Compressor	Quantity	1	1	1	1	1
	Rated Load Amps (RLA)	12.2	16.0	16.0	24.3	29.0
	Locked Rotor Amps (LRA)	69.0	96.7	87.5	150	145
Total Circuit	Full Load Amps (FLA)	12.2	16.0	16.0	24.3	29.0
	Min Circuit Ampacity (MCA)	15.3	20.0	20.0	30.4	36.3
	Max Overcurr. Protect. (MOP)	25	35	35	50	60

Physical Data

Unit Size (in)	Length (L)	30	30	30	30	30
	Width (W)	30	30	30	30	30
	Height (H)	35	35	35	35	35
Weight (lb)	Ship	525	525	550	550	565
	Operating	300	300	330	330	350
Connection Sizes (in)	Chiller Water Connections (FPT)	3/4	3/4	1	1	1
	Condenser Connections (FPT)	1/2	1/2	3/4	3/4	3/4
Condenser Flow Rate (GPM)	Max Flow Rate	7.5	10	15	20	25
	Min Flow Rate	3.6	4.8	7.2	9.6	12
Chiller Flow Rate (GPM)	Max Flow Rate	7.5	10	15	20	25
	Min Flow Rate	3.6	4.8	7.2	9.6	12
Recommended Clearances (in)	Front / Back	24	24	24	24	24
	Sides	24	24	24	24	24
	Top	36	36	36	36	36

- ♦All specs are subject to change without notice
- ♦May require ventilation

CPWC-R03 Series

General Data

Model (CPWC****-R03)		0153	0203	0303	0403	0503	0753
Nominal Tons Cooling		1.5	2	3	4	5	7.5
Refrigerant Charge (lbs.)		7	7	7	7	7	11
Refrigerant		R454A	R454A	R454B	R454B	R454B	R454B

Electrical Data

Supply Power	Voltage	208-230	208-230	208-230	208-230	208-230	208-230
	Phase	1	1	3	3	3	3
	Frequency (Hz)	60	60	60	60	60	60
Compressor	Quantity	1	1	1	1	1	1
	Rated Load Amps (RLA)	9.3	12.8	12.8	16.7	17.3	27.9
	Locked Rotor Amps (LRA)	60.0	95.0	95	120	120	250
Total Circuit	Full Load Amps (FLA)	9.3	12.8	12.8	16.7	17.3	27.9
	Min Circuit Ampacity (MCA)	11.6	16.0	16.0	20.8	21.6	34.9
	Max Overcurr. Protect. (MOP)	20	25	25	35	35	60

Physical Data

Unit Size (in)	Length (L)	30	30	30	30	30	30
	Width (W)	30	30	30	30	30	30
	Height (H)	35	35	35	35	35	54
Weight (lb)	Ship	525	525	550	550	565	595
	Operating	300	300	330	330	350	385
Connection Sizes (in)	Chiller Water Connections (FPT)	3/4	3/4	1	1	1	1
	Condenser Connections (FPT)	1/2	1/2	3/4	3/4	3/4	3/4
Condenser Flow Rate (GPM)	Max Flow Rate	7.5	10	15	20	25	37.5
	Min Flow Rate	3.6	4.8	7.2	9.6	12	18
Chiller Flow Rate (GPM)	Max Flow Rate	7.5	10	15	20	25	37.5
	Min Flow Rate	3.6	4.8	7.2	9.6	12	18
Recommended Clearances (in)	Front / Back	24	24	24	24	24	24
	Sides	24	24	24	24	24	24
	Top	36	36	36	36	36	36

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CPWC-R03 Series					
General Data					
Model (CPWC****-R03)		**0304**	**0404**	**0504**	**0754**
Nominal Tons Cooling		3	4	5	7.5
Refrigerant Charge (lbs.)		7	7	7	11
Refrigerant		R454B	R454B	R454B	R454B
Electrical Data					
Supply Power	Voltage	460	460	460	460
	Phase	3	3	3	3
	Frequency (Hz)	60	60	60	60
Compressor	Quantity	1	1	1	1
	Rated Load Amps (RLA)	6.4	8.6	9.6	16
	Locked Rotor Amps (LRA)	45	60	70	125
Total Circuit	Full Load Amps (FLA)	6.4	8.6	9.6	16
	Min Circuit Ampacity (MCA)	8.0	10.8	12.0	20
	Max Overcurr. Protect. (MOP)	15	15	20	35
Physical Data					
Unit Size (in)	Length (L)	30	30	30	30
	Width (W)	30	30	30	30
	Height (H)	35	35	35	54
Weight (lb)	Ship	550	550	565	595
	Operating	330	330	350	385
Connection Sizes (in)	Chiller Water Connections (FPT)	1	1	1	1
	Condenser Connections (FPT)	3/4	3/4	3/4	3/4
Condenser Flow Rate (GPM)	Max Flow Rate	15	20	25	37.5
	Min Flow Rate	7.2	9.6	12	18
Chiller Flow Rate (GPM)	Max Flow Rate	15	20	25	37.5
	Min Flow Rate	7.2	9.6	12	18
Recommended Clearances (in)	Front / Back	24	24	24	24
	Sides	24	24	24	24
	Top	36	36	36	36

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- ♦ See next page for ventilation requirements

A2L Installation Requirements

R-454B, R454A and R32 are classified by **UL 60335-2-40** and **ASHRAE 34** as **mildly flammable A2L refrigerant**s. According to the UL standard, mitigation is required when the amount of refrigerant used indoors could lead to concentrations that exceed **25% of the Lower Flammability Limit (LFL)** in the event of a leak.

Mitigation can be handled in one of the following ways:

1. **Adequate Room Volume**: The mechanical room must be large enough (Amin) that a full refrigerant leak would not exceed the safety threshold. This option requires no fans or detection equipment, provided sufficient room volume.
2. **Mechanical Ventilation:** If the space is not large enough, continuous mechanical ventilation to the outdoors can be used to safely dilute any potential refrigerant leaks. The ventilation system must meet minimum airflow levels (Qmin) based on the refrigerant charge.

In many states and local codes, a **Refrigerant Detection System (RDS)** is required, especially when ventilation is not continuous or when isolation valves are not used. American Chillers provides an integrated RDS that includes:

- A refrigerant sensor installed near the indoor evaporator
- A controller that automatically shuts down the compressor and closes the liquid line valve if refrigerant levels exceed a safe threshold
- A lockout feature that prevents restart until the refrigerant level returns to normal
- Field-replaceable components that can be serviced/tested without replacing full unit

Releasable Refrigerant Charge (lbs)	Minimum Area (ft^2) for an *Unventilated Space*			Minimum Air Flow (CFM) for a *Ventilated space**		
	R454B (ft^2)	R454A (ft^2)	R32 (ft^2)	R454B (CFM)	R454A (CFM)	R32 (CFM)
4	62	69	65	132	137	130
6	93	103	98	198	206	195
8	123	137	130	264	275	261
10	154	172	163	330	344	326
12	185	206	195	396	412	391
16	247	275	260	528	550	521
18	278	309	293	594	619	586
22	340	378	358	726	756	717
26	401	446	423	858	893	847
30	463	515	488	990	1031	977
35	540	601	570	1155	1203	1140
40	617	687	651	1320	1375	1303
45	694	773	732	1485	1546	1466
50	772	859	814	1650	1718	1629
55	849	944	895	1815	1890	1792