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# Concealed Water Cooled Package Unit

General Overview



## CWP Overview

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The CWP - K Series of vertical discharge water cooled package units have been designed to provide year round comfort to the space they are serving.

The CWP - K units have been designed & developed to comply with AS / NZS 3823 specified conditions



The CWP-K units are available in four versions:

- I RE - Reverse Cycle / Electric Heat
- I R - Reverse Cycle
- I CE - Cooling Only / Electric Heat
- I C - Cooling Only

The units are also available with either top condenser water connections, or front condenser water connections

Multiple CWP-K units are typically part of an overall hydronic system that incorporates some form of heat rejection equipment, usually a Cooling Tower or a Radiator cooler (Dry Cooler)

## Features

### Refrigerant

Each unit is factory charged with refrigerant R410A, which is deemed to have an ODP (Ozone Depletion Potential) of Zero.

### Evaporator Coil

Manufactured by temperzone, this is a die formed plate type, epoxy coated aluminium fins mechanically bonded to high efficiency rifle bored copper tube.

### Condenser Coil

Manufactured by temperzone, this a copper / copper tube in tube type with refrigerant flow in the annular space and water counter flow in the inside tube. Tested to a maximum water pressure of 2760kPa (400psi)

### Construction

Galvanised steel construction, the cabinet is finished in a baked powder coat finish, closed cell foam insulation is used, with a

polyester galvanised sheet steel / baked polyester powder coat finish condensate drain tray, insulated to avoid sweating.

### Compressor

A high efficiency scroll compressor or compressors are used within the units

### Insulation

CWP units are well insulated to minimise condensation and attenuate noise.

### Unit Protection

Units are fitted with a high pressure lockout protection. These protect the unit in the event of either water flow failure in cooling mode or fan failure in heating mode. Sensors protect against low air coil temperature and loss of refrigerant. Units include an anti-rapid cycle timer for compressor on/off protection.

CWP reverse cycle units also have a low refrigerant temperature safety thermostat to protect against icing up of the water within the unit's condenser during the heating cycle and a pump flow verification relay to ensure water flow is going thru the units before operating

A convenient lockout contactor resetting is simply achieved by turning off, then turning on again, avoiding the need to gain access to each unit if the cause is failure of the condenser water supply. Lockout protection will also reset when the thermostat switches, or is switched to the dead zone.

Each Compressor has internal overload protection cycle valve.

### Handing

The handing of the unit is right handed, i.e., when facing the return air, the condenser water connections are on the right hand side of the unit.

## Accessories

### Flexible Hoses

Flexible hoses, 600mm in length, are available. The hoses have female pipe threaded nut fittings at both ends. Maximum Water pressure for these hoses are 1720kPa (250psi)



## Product Comparison Single Phase Units

Model	CWP0063	CWP0083	CWP0096	CWP0109	CWP0132
Nominal Cooling Capacity*	6.27	8.31	9.63	10.9	13.14
Nominal Air Flow l/s	380	490	570	600	770
<b>Cooling Capacity</b>					
Net Cooling Capacity to AS/NZS3823	6.14	8.09	9.37	10.58	12.77
Electrical Input Cooling	1.74	2.22	2.63	2.51	3.625
EER / AEER	3.53 / 3.51	3.64 / 3.58	3.564 / 3.558	3.62 / 3.54	3.523 / 3.517
<b>Heating Capacity</b>					
Heating Capacity - Reverse Cycle	6.63	8.34	9.58	10.27	11.9
Electrical Input Heating	1.54	1.92	2.36	2.63	3.1
COP / ACOP	4.31 / 4.28	4.34 / 4.27	4.06 / 4.00	3.89 / 3.80	3.86 / 3.8
<b>Electrical</b>					
Electrical Supply Required V/ph/Hz	240/1/50	240/1/50	240/1/50	240/1/50	240/1/50
Running Amps Total	7.5	9.63	11.38	15.3	24.65
<b>Electrical Heat</b>					
Electrical Heat Option kW	2.5	3	4	4.5	5.5
<b>Refrigeration System</b>					
Refrigerant	R410A	R410A	R410A	R410A	R410A
Number of Compressors	1	1	1	1	1
Number of Refrigeration Circuits	1	1	1	1	1
<b>Water Supply</b>					
Minimum Water Flow Nominal l/s	0.42	0.5	0.58	0.67	0.8
Water Coil Pressure Drop KPA	20.7	27.6	34.5	27.6	41.4
<b>Water Connections</b>					
Water Connections BSP Male	Ø19mm (¾")	Ø25mm (1")	Ø25mm (1")	Ø25mm (1")	Ø32mm (1¼")
Water Connection Options	Top / Front	Top / Front	Top / Front	Top / Front	Top / Front
Weight Excluding Water kg	150	170	170	176	216

\* Fan Motor Heat has not been deducted



## Product Comparison Three Phase Units

Model	CWP0109	CWP0132	CWP0178	CWP0217	CWP0266	CWP0374
Nominal Cooling Capacity*	10.87	13.14	17.8	21.74	26.28	37.44
Nominal Air Flow l/s	600	770	920	1210	1535	1940
<b>Cooling Capacity</b>						
Net Cooling Capacity to AS/NZS3823	10.58	12.77	17.25	21.16	25.54	36.13
Electrical Input Cooling	3	3.625	4.81	6	7.25	9.9
EER / AEER	3.526 / 3.52	3.523 / 3.517	3.58 / 3.52	3.6/3.52	3.523 / 3.517	3.688 / 3.646
<b>Heating Capacity</b>						
Heating Capacity - Reverse Cycle	10.27	11.9	16.41	20.54	23.8	35.5
Electrical Input Heating	2.51	3.1	4.12	5.02	6.2	8.37
COP / ACOP	3.98 / 3.80	3.86 / 3.8	3.398 / 3.92	4.0.9/4.03	3.839 / 3.78	4.06 / 4.05
<b>Electrical</b>						
Electrical Supply Required V/ph/Hz	415/3/50	415 / 3 / 50	415 / 3 / 50	415 / 3 / 50	415 / 3 / 50	415 / 3 / 50
Running Amps Total	5.5 / 4.5 / 4.4	6.0 / 5.7 / 5.7	8.3/8.1/8.1	10.2 / 10.1 / 10	10.4 / 9.8 / 9.8	17.6 / 15.9 / 16.6
<b>Electrical Heat</b>						
Electrical Heat Option kW	4.5	5.5	6.5	8	10	15
<b>Refrigeration System</b>						
Refrigerant	R410A	R410A	R410A	R410A	R410A	R410A
Number of Compressors	1	1	1	2	2	2
Number of Refrigeration Circuits	1	1	1	2	2	2
<b>Water Supply</b>						
Minimum Water Flow Nominal l/s	0.67	0.8	1.08	1.34	1.6	2.27
Water Coil Pressure Drop KPA	27.6	41.4	34.5	27.6	27.6	27.6
<b>Water Connections</b>						
Water Connections BSP Male	Ø25mm (1")	Ø32mm (1¼")	Ø32mm (1¼")	Ø38mm (1½")	Ø38mm (1½")	Ø51mm (2")
Water Connection Options	Top / Front	Top / Front	Top / Front	Front / Back	Front / Back	Front / Back
Weight Excluding Water kg	176	216	226	330	460	530



## Product Comparison Three Phase Units continued

Model	CWP0447	CWP0568	CWP0890	CWP1030
Nominal Cooling Capacity*	44.7	57.54	89	101.6
Nominal Air Flow l/s	2315	2935	4800	4960
<b>Cooling Capacity</b>				
Net Cooling Capacity to AS/NZS3823	42.94	55.74	83.4	
Electrical Input Cooling	15	15	25.74	34.53
EER / AEER	3.688 / 3.57	3.716 / 3.65	3.456 / 3.24	2.99 / 2.982
<b>Heating Capacity</b>				
Heating Capacity - Reverse Cycle	46.63	54.94	84.4	98.6
Electrical Input Heating	11.68	13.72	21.97	30.6
COP / ACOP	3.99 / 3.98	4.0 / 3.93	3.59 / 3.585	3.31 / 3.308
<b>Electrical</b>				
Electrical Supply Required V/ph/Hz	415 / 3 / 50	415 / 3 / 50	415 / 3 / 50	415 / 3 / 50
Running Amps Total	22.3 / 21.8 / 22	27.4 / 26.4 / 26.8	45.1 / 45.9 / 45.7	60.3 / 60.3 / 57.1
<b>Electrical Heat</b>				
Electrical Heat Option kW	21	22.5	34.5	39
<b>Refrigeration System</b>				
Refrigerant	R410A	R410A	R410A	R410A
Number of Compressors	2	2	2	4
Number of Refrigeration Circuits	2	2	2	4
<b>Water Supply</b>				
Minimum Water Flow Nominal l/s	2.6	3.4	4.9	5.7
Water Coil Pressure Drop KPA	27.6	27.6	34.5	31.05
<b>Water Connections</b>				
Water Connections BSP Male	Ø51mm (2")	Ø51mm (2")	Ø64mm (2½")	Ø76mm (3")
Water Connection Options	Side / Side	Side / Side	Side / Side	Side / Side
Weight Excluding Water kg	655	770	795	1140

\* Fan Motor Heat has not been deducted





temperzone australia pty ltd

Sydney: (02)8822 5700

Brisbane: (07) 33088333

Adelaide: (08) 8340 0607

Tasmania: (03) 63314209

Newcastle: (02) 4962 1155

Perth: (08)9314 3844

Melbourne: (03) 8769 7600

Townsville: (07) 4773 9566

[www.temperzone.biz](http://www.temperzone.biz)

The Manufacturer reserves the right to change specifications without prior notice.

