



# CGWP

*Water Cooled Cold Generator*

*Cooling Capacity : 61~352 kW*

TRANE  
TECHNOLOGIES



## Features and Benefits

With the cooling capacity ranging from 61-352kW, all the models are designed with multiple scroll compressors, thus bringing less operating vibration and lower running noise.

- Scroll compressors and durable system components designed by Trane fully exhibits Trane's leading technology in the industry.
- At least 30% EER higher and 3-5 dBA noise lower than air-cooled chiller under the same operating condition, therefore applicable to residential and especially to light commercial environments.
- Dual refrigerant circuit design brings higher part load efficiency.
- Easy installation and small unit's foot print

### High Reliability

- Scroll compressor has 60%
- fewer parts and has only 30% of torque variation compared with reciprocating compressor; thus has longer lifecycles and more reliable operation.
- Scroll compressor prevents the liquid refrigerant and dirt from coming into the machine, thereby prevents compressor damage caused by liquid strike.
- Equipped with microprocessor controller, it provides fully protective functions and operation orientation.
- Over ten thousand hours testing proved unit performance and high reliability of the systems.

### High Efficiency

- Scroll compressor features low friction loss and high efficiency.
- Designed with multiple scroll compressors, the unit can achieve outstanding efficiency at part load operation.

### Safe and Reliable

- Water-proof design enables unit to be installed outdoor to meet customers' specific requirement.
- Flat top surface prevents water droplets from getting into the unit.
- All electrical components used waterproof design for operating safety.

## Mechanical Specification

### Compressor

Hermetic scroll compressor features high EER and low operating noise. Each refrigerant circuit can operate individually and switch over according to the loading demand, hence can extend operating life of the machine.

### Condenser

Seamless external enhanced copper tube in shell design, refrigerant side is tested at 28.7kg/cm<sup>2</sup> (420psi) and 15kg/cm<sup>2</sup> (220psi) for waterside.

### Evaporator

- 020-060  
Compact size of brazed plate type heat exchanger with antifreeze protection allows the system to run more stably. 80-mesh Y-type strainer provided by the factory must be installed in the water inlet to prevent water circuitry to be blocked at jobsite.
- 080-120  
The unit uses seamless internal enhanced copper tube in shell design. A 4" flange type strainer provided by the factory must be installed in the water inlet to prevent water circuitry to be blocked at jobsite.

### Enclosure

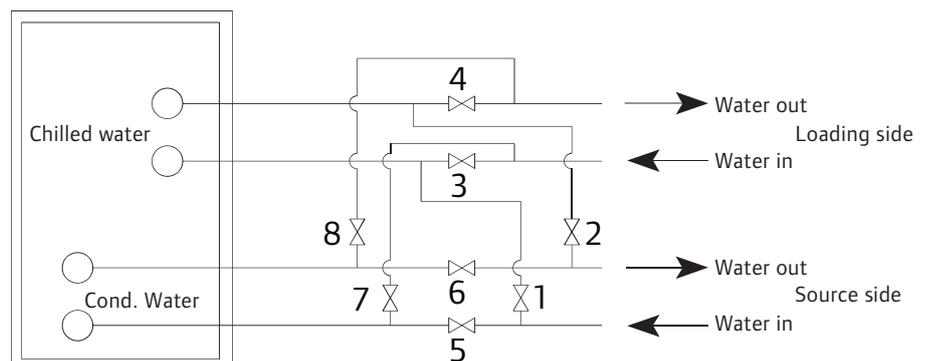
- Powder painting enclosure, free of rust for longer period of time than normal treatment.
- Deform free frame design and symmetric internal layout.
- All panels are removable to facilitate maintenance.

## System Control

- Cooling or heating (80-120 only).
- Memory setting function.
- On/Off timer.
- Compressor re-start protection and delay startup.
- Compressor high/ low pressure cutout, overload protection.
- Compressors sequential startup Self diagnosis and codes display.
- Working status display (water temperature and refrigerant pressure etc.)
- Either inlet or outlet water temperature control.

CGWP with hot water application

Cooling mode: open valves 5/6/3/4, close valves 1/2/7/8  
Heating mode: open valves 1/2/7/8, close valves 3/4/5/6



Note: Please refer to CGWP IOM for piping connection and valve operation.

# General Data

Model		020	025	030	040	050	060	080	090	100	120	
Cooling capacity (kW)		61	76	88.5	117.5	146.5	176	243.5	270.5	296.5	351.6	
Heating capacity (kW)		-	-	-	-	-	-	307.8	334	381.1	470	
Compressor		Hermetic Scroll Compressor										
Circuit		2										
Load (%)		100-50-0			100-75-50 -25-0	100-80-60 -30-0	100-75-50-25-0		100-80-60 -30-0	100-75-50-25-0		
Voltage-Phase-Hertz		380V-3Ph-50Hz										
Input (kW)	Cooling	12.56	16.24	19.4	26.4	32.03	39.47	50.28	56.73	62.68	75.49	
	Heating	-	-	-	-	-	-	62	70	76.7	93.1	
RLA (A)	Cooling	25	29.9	38.8	52.4	62.8	79.3	100.8	104	127.8	139.02	
	Heating	-	-	-	-	-	-	107	121	135	162.84	
LRA (A)		135	190	198	165	228	243	290	352	366	310	
Evaporator	Type	Braze plate heat exchanger						Shall and tube				
	Cooling	Water Flow (LPM)	175	218	254	337	420	505	698	776	850	1,008
		WPD (kPa)	32.5	25	25	24	25	24	12	14	17.5	18.4
	Heating	Water Flow (LPM)	-	-	-	-	-	-	841	926	1,026	1,096
WPD (kPa)		-	-	-	-	-	-	23	56.7	36.25	26.6	
Condenser	Type	Shall and tube										
	Cooling	Water Flow (LPM)	211	265	309	413	512	628	843	938	1,030	1,255
		WPD (kPa)	21.2	25	25	10.5	16	21.5	29	24	31	26.9
	Heating	Water Flow (LPM)	-	-	-	-	-	-	841	926	1,026	1,096
WPD (kPa)		-	-	-	-	-	-	28	23.2	31.68	19	
Refrigerant		R22										
R22 Charge (kg)		5/5	6/6	7/7	9/9	11/11	13/13	28/28	32/30	32/32	34/34	
Lubricating Oil Charge (L) (SUNISO 4GS)		7.6	10.4	13.2	15.2	20.8	26.4	32	32	32	25.2	
Dimension	Length (mm)	1,270			1,525			2,121			2,121	
	Width (mm)	630			1,121			1,171			1,301	
	Height (mm)	1,220			1,441			1,625			1,673	
Operating Weight (kg)		500	540	580	980	1,060	1,140	1,900	2,000	2,100	2,500	
Shipping Weight (kg)		475	513	551	931	1,007	1,083	1,805	1,900	1,995	2,375	
Protection		H/L pressure switches, Freezestat, Fusible plug, Current overload, Refrigerant safety valve, Phase reversal relay.										
Evap. Water Pipe in/out		1-1/4" FPT	2" FPT		2-1/2" FPT			4" Groove Type				
Cond. Water Pipe in/out		2" FPT			3" FPT			4" FPT				

NOTE: 1. Cooling capacity rated conditions  
a. Chiller water inlet/outlet temperature = 12 °C / 7 °C  
b. Condenser water inlet/outlet temperature = 30 °C / 35 °C  
2. Heating capacity rated conditions  
a. Hot water outlet temperature = 45 °C  
b. Condenser water inlet temperature = 15 °C  
3. Tolerance of the data as above is ±5% according with Standard ARI 590

## Cooling Performance Data

Model	EWT °C	25		30		35		40	
	LWT °C	Cooling Capacity (kW)	Power Input (kW)						
CGWP020	5	58.72	11.68	56.66	12.57	54.24	13.88	51.48	15.73
	7	63.1	11.68	61	12.56	58.55	13.85	55.74	15.69
	9	67.71	11.68	65.58	12.54	63.09	13.82	60.24	15.64
	11	72.57	11.68	70.4	12.53	67.87	13.79	66.51	15.59
CGWP025	5	73.82	16.16	70.45	16.2	67.29	19.85	63.72	22.04
	7	79.34	16.2	76	16.24	72.44	19.89	68.66	22.07
	9	85.16	16.24	81.63	16.29	77.87	19.93	73.87	22.1
	11	91.3	16.27	87.56	16.33	83.59	19.97	79.36	22.14
CGWP030	5	88.17	17.43	82.37	19.17	78.98	21.15	75.03	23.26
	7	94.83	17.56	88.49	19.4	86.88	21.2	80.52	23.4
	9	100.42	17.79	96.52	19.6	93.65	21.5	86.78	23.7
	11	107.05	17.84	100.95	19.75	99.96	21.55	92.7	23.75
CGWP040	5	113.12	22.68	109.14	26.47	104.49	28.24	99.16	31.61
	7	121.54	22.69	117.5	26.4	112.78	28.18	107.38	31.53
	9	130.43	22.68	126.32	26.32	121.53	28.12	116.04	31.44
	11	139.79	22.68	135.61	26.18	130.74	28.05	128.12	31.33
CGWP050	5	141.73	29.53	136.11	32.73	129.9	36.33	123.15	40.38
	7	152.36	29.59	146.5	32.03	140.04	36.36	133	40.4
	9	163.55	29.64	157.44	32.81	150.7	36.39	143.38	40.41
	11	175.31	29.68	168.94	32.84	161.92	36.41	155.73	40.42
CGWP060	5	170.81	37.01	163.54	39.88	155.78	45.2	147.59	50
	7	183.67	37.12	176	39.47	167.79	45.32	159.11	50.13
	9	197.19	37.23	189.1	39.22	180.42	45.44	171.25	50.25
	11	211.41	37.33	202.86	39.11	193.69	45.54	183.99	50.36
CGWP080	5	245.13	45.42	226.3	49.89	215.33	54.77	203.8	60.16
	7	254.5	45.8	243.5	50.28	231.84	55.14	219.58	60.53
	9	273.32	46.21	261.63	50.69	249.25	55.55	236.22	60.93
	11	293.14	46.66	280.72	51.13	267.58	55.98	253.76	61.35
CGWP090	5	267.02	51.35	251.19	56.17	238.66	61.48	225.59	67.42
	7	283.05	51.92	270.5	56.73	257.23	62.04	243.31	67.96
	9	304.35	52.54	290.99	57.34	276.87	62.64	262.05	68.55
	11	326.81	53.19	312.6	57.99	297.59	63.27	281.85	69.17
CGWP100	5	288.15	56.81	275.15	61.94	261.12	67.65	246.58	74.08
	7	310.54	57.58	296.5	62.68	281.69	68.38	266.17	74.79
	9	334.21	58.39	319.24	63.68	303.46	69.16	286.92	75.55
	11	359.22	59.24	343.28	64.32	326.48	69.99	308.88	76.36
CGWP120	5	341.55	66.92	327.61	74.7	313.67	82.83	299.73	92.27
	7	367.11	67.71	351.6	75.49	336.91	83.67	321.8	92.92
	9	393.83	68.58	377.57	76.28	361.3	84.46	346.2	93.83
	11	421.71	69.46	404.29	77.15	388.02	85.31	370.6	94.66

Note: EWT – Condenser side entering water temperature. LWT - Evaporator side chilled water leaving temperature.



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