

Scroll Water-Cooled Chillers

20 to 70 Ton Models



Superior by Design

State-of-the-Art

The Trane CGWQ series of water cooled chillers includes seven models ranging in capacity from 20 to 70 tons to meet a wide range of load conditions. Each model is designed for quiet, reliable, high efficiency operation and built to withstand demanding continuous duty cycles.

At the heart of the Trane CGWQ product line are the highly efficient scroll compressor, brazed plate evaporator, and the serviceable shell-and tube condenser.

The integral Digital Controller continually optimizes unit operation, undertakes fault avoidance strategy during abnormal operating conditions and displays operational and diagnostic information at the unit and at a remote location if needed.

Efficiency

Trane CGWQ products combine high efficiency scroll compressors and brazed plate evaporators to offer full and part load efficiencies that are unmatched when compared to products utilizing reciprocating compressors. Still higher efficiencies are realized at part load conditions.

Reliability

Since its introduction, scroll compressors have proven to be one of the most reliable compressors available. While high reliability is inherent with the scroll technology, digital control technology has proven to increase reliability and minimize downtime through sophisticated operational logic, fault avoidance strategy and the ability to stabilize control peripherals such as water regulating valves and cooling tower fan and pump VFDs.

The 40 through 70 ton models have dual independent refrigerant circuits to eliminate 100% capacity loss in the event of a component failure such as a compressor.



CGWQ Series - Water-Cooled Chillers

- Digital Controller compatible with BMS Control Interface
- Dual independent refrigerant circuits on 40 through 70 ton models
- Serviceable shell and tube condenser
- Optional factory installed water regulating valve and full sound attenuation enclosure
- Dual circuit units include condenser headers for single water connections.

Construction

All CGWQ products are assembled on a rugged steel frame with integral lifting provisions and painted with a topcoat of durable urethane enamel.

Vessels

All CGWQ products have cleanable and serviceable shell-and-tube condensers with enhanced copper tubes for high efficiency. This makes the CGWQ products suitable for open loop systems and cooling tower applications.

Control

The powerful Digital Controller provides complete chiller control and standard interface to **BACnet IP** and **Modbus BMS** controls. **LonTalk**, **Johnson N2** and **BACnet MS/TP** interfaces are optional.

Control Panel

All CGWQ control panels are complete with fused control power transformer, safety and operational control components and digital controller boards. Digital controller display/input screen is located in the front door of control panel.

Warranty

All CGWQ products are backed by the Standard One Year Limited Warranty. Optional five year compressor warranty is available. Replacement compressors are available nation-wide.

Options

Factory installed options for CGWQ products include non-fused disconnect, full sound attenuation enclosure, phase monitor, integral digitally-controlled condenser water regulating valve, ice building control, 100kA SCCR, and fork-lift pockets. Ship loose options include flow switch and vibration isolation kit.

Dimensions and Specifications

Unit Size	Dimensions			Unit Weight	Connection Sizes				Capacity	MCA @ 60 Hz, 3 Phase		
					Evap Water (VIC)		Cond Water (See Note)			Steps (%)	208/230 Volt	460 Volt
	L	W	H		In	Out	In	Out				
20	64"	32-7/8"	54-1/4"	1200 lb.	2-1/2"	2"	2"	2"	100/50	75	41	29
26	65-3/8"	32-7/8"	54-1/4"	1330 lb.	2-1/2"	2"	3"	3"	100/50	116	52	45
30	68-1/2"	34-1/4"	54-1/4"	1400 lb.	2-1/2"	2-1/2"	3"	3"	100/50	126	61	54
40	76-1/4"	34-3/4"	72-1/4"	2100 lb.	3"	3"	3"	3"	100/75/50/25	142	77	55
52	87-5/8"	34-3/4"	72-1/4"	2300 lb.	3"	3"	4"	4"	100/75/50/25	218	99	85
60	87-5/8"	34-3/4"	72-1/4"	2655 lb.	3"	3"	4"	4"	100/75/50/25	238	115	102
70	93-1/2"	34-3/4"	72-1/4"	2975 lb.	3"	3"	4"	4"	100/71/43/21	279	123	104

Note: 20-30 ton single circuit model condenser water connections are Female Pipe Thread (FPT), and all 40-70 ton dual circuit models come with a condenser header system for single point vicaltic (VIC) connections.

Full Load and Integrated Part Load Value Performance

Unit Size	Tons	kW Input	Full Load EER	IPLV EER
20	21.1	15.5	16.3	19.9
26	26.2	20.4	15.4	19.6
30	31.2	24.8	15.1	18.3
40	42.6	30.8	16.6	20.4
52	52.7	40.4	15.7	20.2
60	61.8	47.9	15.5	19.4
70	70.9	54.8	15.5	19.5

Notes:

- Rated in accordance with AHRI Standard 550/590, based on TOPSS version 154: evaporator leaving temperature of 44°F and 2.4 gpm/ton, condenser entering temperature of 85°F and 3 gpm/ton, evaporator fouling of 0.0001°F.ft².h/Btu and condenser fouling of 0.00025°F.ft².h/Btu
- Consult Trane representative for additional performance information
- EER - Energy Efficiency Ratio (Btu/w.h)



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