



# CWB

FLUID CHILLERS  
28 TO 150 TONS

# The CWB Series is designed specifically to meet industrial and commercial process cooling requirements.

These units provide reliable control of the chilled fluid temperature while delivering exceptional energy savings.

All air-cooled models are equipped with variable-speed fans and are suitable for outdoor installation.

Units are available with a variety of pump and tank configurations to satisfy any installation requirement.

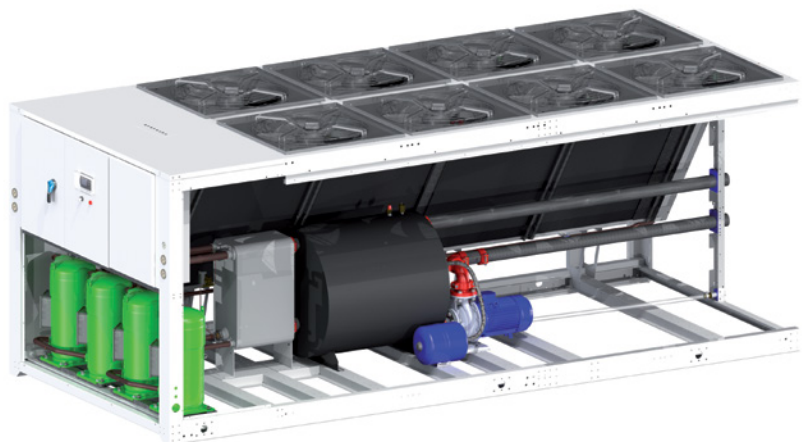
The CWB Series consists of 12 models with cooling capacities from 28 to 150 tons.<sup>(1)</sup>

<sup>(1)</sup> Capacity varies with operating conditions. See technical data table for capacity at standard rating point or contact factory for alternate conditions.

## STANDARD FEATURES, OPTIONS, AND ACCESSORIES

FEATURE	MODEL CWB: 140-220	270-570
Variable-Speed Condenser Fans	S	S
Refrigerant Pressure Gauges	S	S
Low Fluid Flow Protection	S	S
Environmentally Friendly R410A Refrigerant	S	S
High-Efficiency Scroll Compressor	S	S
Multiple Refrigerant Compressors	S	S
Stainless Steel Brazed Plate Evaporator	S	S
Grooved Fluid Connections	S	S
Threaded Fluid Connections	O	X
Flanged Fluid Connections	X	O
Washable Stainless Steel Condenser Filters	O	O
Condenser Wind Baffles	O	O
Electro-Coated Condenser	O	O
Integrated Free-Cooler Circuit	X	O
Integral Circulation Pump	O	O
Duplex Pumps	O	O
Fluid Pressure Gauge	O	O
Adjustable Fluid Bypass	O	O
Insulated Unpressurized Tank	O	O
Pressurized Tank (Stainless or Carbon Steel)	O	O
Fluid Level Gauge	O	O
Non-Ferrous Fluid Circuit	O	O
Freeze Protection Heaters	O	O
Ethernet and RS485 Interface	S	S
Remote Control Panel	O	O

**Key:** S = Standard, O = Optional, X = Not available



## FLUID CIRCUIT

- Standard models include a stainless steel, brazed plate evaporator, without tank or pump
- Options include single and dual pumps in a variety of pressures
- Available with insulated tank in carbon steel or stainless steel
- Optional non-ferrous fluid circuit
- Fluid differential pressure switch protects evaporator against low-flow condition
- Fluid pressure gauge (pump discharge pressure)
- Ability to use glycol mixtures up to 50%

## REFRIGERATION CIRCUIT

- Manufactured with high-quality materials following rigorous brazing procedures and conforming to international standards (PED 97/23/EC)
- Environmentally friendly R410A refrigerant
- Refrigerant sight glass with moisture indicator and filter-dryer
- Electronic expansion valve managed by the controller
- High and low pressure switches
- High and low pressure gauges
- High and low pressure access fittings for maintenance and troubleshooting

### COMPRESSOR

- Tandem, hermetic scroll compressors chosen for reliability and efficiency
- Multiple compressors for energy efficiency and low starting amps
- Mounted on rubber isolators for noise reduction
- Scroll compressors are especially quiet and can handle liquid return without damage
- Protected against reverse rotation by an electronic phase monitor
- Crankcase heater prevents liquid slugging on start-up

### EVAPORATOR

- Stainless steel, brazed plate evaporators are compact and highly efficient
- Evaporators are protected against freezing by the microprocessor controller
- Evaporator has two refrigerant circuits and a single fluid circuit (CWB270 to CWB570)

### CONDENSER

- Microchannel design is compact and highly efficient
- All-aluminum construction eliminates the risk of galvanic corrosion
- Variable-speed fan allows operation over a wide ambient temperature range

CHILLER TECHNICAL DATA	Model	CWB 140	CWB 160	CWB 190	CWB 220	CWB 270	CWB 300	CWB 320	CWB 380
Power Supply	[V/Ph/Hz]	460/3/60	460/3/60	460/3/60	460/3/60	460/3/60	460/3/60	460/3/60	460/3/60
Cooling Capacity <sup>(1)</sup>	[tons]	28.3	33.5	38.0	44.1	55.4	61.1	64.1	76.9
Fluid Flow Rate	[gal/min]	68	80	91	106	133	146	154	184
P3 Pump (Standard Pressure)	[psig]	58	56	56	54	49	48	47	46
P5 Pump (High Pressure)	[psig]	79	76	77	74	78	77	76	76
P2 Pump (Low Pressure)	[psig]	34	32	33	30	40	38	38	37
Refrigerant Type	---	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A
Compressor Type	---	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll
Number of Compressors	---	2	2	2	2	4	4	4	4
Number of Refrigerant Circuits	---	1	1	1	1	2	2	2	2
Evaporator Type	---	Brazed Plate	Brazed Plate	Brazed Plate	Brazed Plate	Brazed Plate	Brazed Plate	Brazed Plate	Brazed Plate
Condenser Type	---	Microchannel	Microchannel	Microchannel	Microchannel	Microchannel	Microchannel	Microchannel	Microchannel
Electrical Enclosure Rating <sup>(2)</sup>	---	IP54	IP54	IP54	IP54	IP54	IP54	IP54	IP54
Sound Pressure Level <sup>(3)</sup>	[dbA]	60	60	59	59	61	62	62	62
Tank Capacity	[gal]	124	124	124	124	159	159	159	159
Fluid Connection Type	---	Grooved	Grooved	Grooved	Grooved	Grooved	Grooved	Grooved	Grooved
Fluid Connection Size	[inch]	2 1/2	2 1/2	2 1/2	2 1/2	3	3	3	3
Width	[inch]	43.5	43.5	43.5	43.5	86.8	86.8	86.8	86.8
Depth	[inch]	118.3	118.3	157.6	157.6	118.3	118.3	118.3	157.6
Height	[inch]	78.0	78.0	78.0	78.0	78.0	78.0	78.0	78.0
Weight (with empty tank)	[lb]	2579	2601	2844	2866	3990	4034	4079	4960
Weight (with full tank)	[lb]	3615	3637	3879	3902	5312	5356	5400	6282

<sup>(1)</sup> Rating point: 95°F Ambient, 55°F Fluid inlet, 45°F Fluid outlet, 0% Glycol. Contact factory for capacity at alternate operating conditions.

<sup>(2)</sup> IP40: Indoor, IP44/IP54: Outdoor.

<sup>(3)</sup> Measured at 10 m [33 ft] in free field.

## ELECTRICAL PANEL

- Manufactured in compliance with international standards (EN 60204) using UL-recognized components
- Electrical cabinet constructed of powder-coated galvanized steel
- Disconnect switch with door lock prevents access to panel when energized

## MICROPROCESSOR CONTROLLER

- Optimizes unit performance and maintains fluid temperature
- Controls and displays the fluid temperature
- Turns the compressors on and off while protecting against short cycling
- Turns the pump(s) on and off; equalizes pump operating times (double pump models)
- Regulates condenser fan speed
- Protected by a watertight cover
- Displays key operating parameters and the following alarm conditions
  - High and low refrigerant pressure
  - High refrigerant discharge temperature
  - Low fluid differential pressure
  - Incorrect phase sequence
  - Compressor, pump, or fan motor protector tripped
  - Temperature probe or pressure sensor failure
  - High fluid temperature
  - Evaporator anti-freeze
  - Electronic expansion valve fault
- Optional remote control panel

## UNIT CONSTRUCTION AND MAINTENANCE

- Cabinet frame and panels are powder-coated and suitable for outdoor installation
- Panels are easily removed, providing convenient access for maintenance and repair
- All fasteners are stainless or zinc-plated steel for corrosion resistance
- Protection to IP54 standard on all models; suitable for outdoor installation
- Designed for ease of operation and maintenance

## FACTORY TESTING OF EVERY CWB UNIT

- Pressurization and helium leak detection of refrigeration circuit
- Pressurization and leak testing of fluid circuit
- Chiller/Heat pump performance and power consumption at full load
- Proper operation of all controls, safety devices, and alarms
- Electrical tests according to international standards (EN 60204)

CWB 420	CWB 450	CWB 510	CWB 570
460/3/60	460/3/60	460/3/60	460/3/60
83.9	90.1	103.4	116.7
201	216	248	280
44	42	52	49
74	73	63	61
35	33	38	36
R410A	R410A	R410A	R410A
Scroll	Scroll	Scroll	Scroll
4	4	4	4
2	2	2	2
Brazed Plate	Brazed Plate	Brazed Plate	Brazed Plate
Microchannel	Microchannel	Microchannel	Microchannel
IP54	IP54	IP54	IP54
61	61	62	62
159	159	159	159
Grooved	Grooved	Grooved	Grooved
3	3	3	3
86.8	86.8	86.8	86.8
157.6	157.6	197.0	197.0
78.0	78.0	78.0	78.0
5004	5049	5842	5842
6326	6370	7164	7164



## ADDITIONAL PRODUCTS AND SERVICES FROM CHASE COOLING SYSTEMS

### QBE

FLUID CHILLERS  
0.6 TO 7 TONS



### CWT

FLUID CHILLERS  
2 TO 35 TONS



### CWE/HWE

FLUID CHILLERS AND HEAT PUMPS  
3 TO 40 TONS



### REMOTE MONITORING



### DRY COOLERS



### PUMPS & PUMP SKIDS



### HEAT TRANSFER FLUIDS & CHEMICALS



### FILTERS & STRAINERS



### HEAT EXCHANGERS



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