

# **Gardner Denver**

PROCESS CHILLERS

## **CHL Series**



Chilled water is often a requirement in industry. Whether keeping a mold from over-heating in a plastic-injected manufacturing operation, or making sure ingredients don't spoil during food production, or ensuring critical medical equipment is kept online, process chillers are at the heart of many operations. Many times, if the chiller goes down, the whole process shuts down. Therefore, the chiller shouldn't be seen as an afterthought, but as a vital tool at the heart of your company.

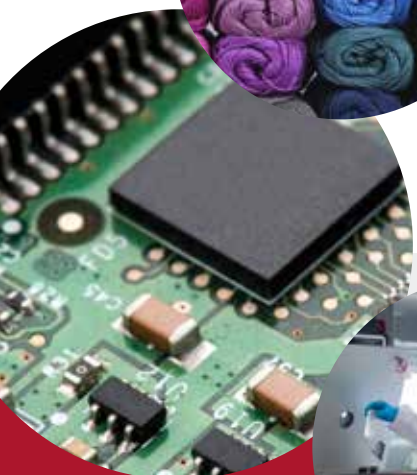
### CHL Process Chillers

At the heart of the CHL chiller is a design that has been in use world-wide for decades. With tens of thousands of units sold, the proven design has been perfected to match up to the needs of modern industry.

- Easy Installation
- Easy to Use—Plug & Play
- Easy Maintenance
- Best Components
- Optimum Energy Efficiency

### Industries & Applications

- Automotive
- Chemistry
- Food
- Plastics
- Nuclear Energy
- Textiles
- Iron & steel
- Surface Treatment
- Wind Production
- Pharmaceuticals
- Electronics
- Lasers



## Standard Features: Exceeding Expectations

The list of standard features on the CHL chiller line is extensive. While many competitors charge extra for these features, or ship them loose requiring additional installation time and cost, Gardner Denver has included these features as standard. We did this to ensure you end up with an easy-to-install, high-quality process chiller that exceeds your expectations. Not all features are available at all sizes. Please see our price book for details.

- OPTIFLUX Exchanger
- Copeland™ Scroll Compressor
- Closed Expansion Tank
- Phase Monitor
- 3 Bar Pump
- Condenser Air Filter
- Crankcase Heater

## Optional Features: Delivering Exactly the Chiller You Need

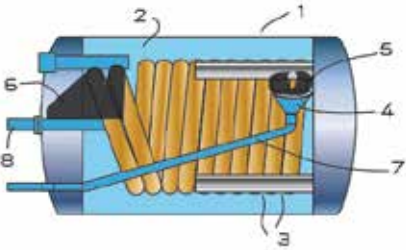
In addition to the standard features, Gardner Denver offers the following options on the CHL chiller line. Having these optional features available to you ensures your CHL chiller meets all of your needs. Not all features are available at all sizes. Please see our price book for details.

- 5 Bar Pump
- EC Fan with Modulating Pressure Control
- Aluminum & Stainless Steel Panels
- Standby Dual Pump
- Open Expansion Tank
- Auto By-Pass
- Remote Control Panel
- Casters
- RS485 Interface
- Many More—Contact Your Local Distributor for Other Needs



# CHL Process Chillers

## KEY FEATURES & BENEFITS



1. External Shell
2. Buffer Tank
3. Elastic Shell
4. Gas Distributor
5. Feeding Circuits
6. Return Circuits
7. Inlet Gas Pipe
8. Outlet Gas Pipe

### OPTIFLUX Exchanger

The patented OPTIFLUX heat exchanger, which features a tube in flexible shell design, is integral to the buffer vessel and protects against damage which can occur with improper setup and maintenance.

### Copeland™ Scroll Compressor

Standard on models CHL2.0 and up, the Copeland™ scroll compressor minimizes power consumption, noise, vibration and moving parts. At the same time, this compressor maximizes reliability and resistance to liquid refrigerant returns.



### Modular Body

An aluminum frame covered with easy-to-remove panels makes up the body of the CHL chiller. Each galvanized steel panel is PVC coated to ensure it stands the test of time. Aluminum and stainless steel panels are also available.



### Condenser Air Filter

To protect against contaminants in the incoming cooling air, the CHL comes standard with a washable air filter.

### Closed Expansion Tank

A closed expansion tank is fitted as standard for plug-and-play installation of the water circuit. Being equipped with a vent on the high point of the chiller allows for any trapped air to be removed while filling the chilling unit.

### Phase Monitor

The phase sequence monitor, standard on models CHL2.0 and above, protects against improper power and insures correct rotation direction of pump, fan and compressor.

### CAREL Microprocessor

The digital microprocessor on the CHL series continuously gives the user readouts on water outlet temperature. Additionally, the microprocessor gives the user the ability to access operating instructions and adjustable parameters and alarms.



## Air-Cooled Condenser

The axial cooling fan reduces noise levels and improves ventilation air flow.

## Integrated Manual Bypass

A manual bypass and pressure gauge comes standard on all units 2.0 ton and higher. This feature allows for easy regulation of the water supply flowing out of the chiller.

## Integral Water Pump

Integrated centrifugal pump comes standard on all models.



High-quality components  
ensure **reliable** performance

# CHL Series Specifications

MODEL	COOLING CAPACITY (1)				VOLTAGE	WATER INLET & OUTLET NPT	TOTAL INSTALLED POWER (2) KW	WATER PUMP HP	TANK CAPACITY GAL	DIMENSIONS INCHES			WEIGHT LBS
	60 HZ		50 HZ							H	W	D	
	TONS	BTU/H	TONS	BTU/H									
CHL0.6	0.6	6,824	0.5	5,687	230/1/60 220/1/50	½"	1.3	0.5	6	35	29	22	187
CHL1.1	1.1	12,966	0.9	10,805		½"	2.1	0.5	6	35	29	22	220
CHL1.6	1.6	19,108	1.3	15,923		½"	2.9	0.5	6	35	29	22	238
CHL2.0	2.0	23,885	1.7	19,904		½"	4.3	0.8	8	55	33	26	352
CHL2.7	2.7	32,893	2.3	27,411		½"	5.4	0.8	8	55	33	26	374
CHL3.6	3.6	43,675	3.0	36,396		1"	6.6	0.8	16	70	39	31	550
CHL4.6	4.6	56,983	3.8	47,486		1"	8.4	0.8	16	70	39	31	594
CHL6.1	6.1	73,702	5.1	61,418		1½"	10.5	1.5	42	81	50	39	1,078
CHL8.4	8.4	100,999	7.0	84,166		1½"	13.8	1.5	42	85	50	39	1,122
CHL10.3	10.3	123,520	8.6	102,933		1½"	16.7	1.5	42	85	50	39	1,144
CHL12.2	12.2	146,040	10.2	121,700	460/3/60 400/3/50	1½"	19.0	1.5	42	85	50	39	1,177
CHL16.8	16.8	201,999	14.0	168,333		1½"	26.5	3.0	77	85	76	39	1,562
CHL20.6	20.6	247,039	17.2	205,866		1½"	33.3	3.0	77	85	76	39	1,892
CHL24.3	24.3	292,079	20.3	243,399		2"	37.9	3.0	122	85	102	39	2,222
CHL28.0	28.0	335,755	23.3	279,796		2"	45.3	4.0	122	85	102	39	2,464
CHL31.6	31.6	379,430	26.3	316,192		3"	51.7	4.0	132	88	139	39	3,960
CHL39.8	39.8	477,700	33.2	398,083		3"	63.9	5.4	132	88	139	39	4,136
CHL46.1	46.1	552,767	38.4	460,639		3"	73.9	5.4	132	91	139	39	4,224
CHL56.0	56.0	671,510	46.7	559,592		4"	87.5	5.4	243	76	154	79	4,840
CHL63.2	63.2	758,860	52.7	632,383		4"	100.6	10.0	243	76	154	79	4,840
CHL79.6	79.6	955,400	66.3	796,167	4"	124.0	10.0	264	88	197	79	5,676	
CHL92.1	92.1	1,105,534	76.8	921,278	4"	147.4	10.0	264	88	197	79	5,940	
CHL104.6	104.6	1,255,668	87.2	1,046,390	4"	159.4	10.0	264	88	197	79	6,028	

TEMPERATURE °F	MIN	MAX
Inlet Water	32	86
Outlet Water	32	68
Ambient	23	108

For larger sizes and other voltages, please contact factory.

(1) Assumes 45°F cooling water supply, 55°F cooling water return and 95°F ambient temperature. For all other conditions, refer to the correction factors table below.

(2) Total nominal absorbed power by (all) compressor(s) at rated inlet conditions using the standard voltage power supply as applicable.

## REFRIGERANT TYPE: R401A — CORRECTION FACTORS

	°F	30	40	45	50	55	60+
Water Outlet Temp	°F						
	Correction Factor	0.68	0.91	1	1.1	1.19	1.27
Ambient Temp	°F	75	85	90	95	100	105
	Correction Factor	1.18	1.11	1.04	1	0.96	0.92
Evaporator ΔT <sup>3</sup>	°F	7	10	12	14	16	18
	Correction Factor	0.993	1.003	1.009	1.015	1.021	1.025
Condenser ΔT <sup>4</sup>	°F	10	15	17.5	20	22.5	25
	Correction Factor	1	0.98	0.97	0.96	0.95	0.93
Ethylene Glycol	%	0	20	30	40	45	50
	Correction Factor	1	0.98	0.97	0.96	0.95	0.93

To be used as a guide only. Contact [GDchiller.field.qcy@gardnerdenver.com](mailto:GDchiller.field.qcy@gardnerdenver.com) for application and sizing assistance.

(3) Assumes no change to condenser inlet water temperature.

(4) Assumes no change to evaporator outlet water temperature.

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**Gardner Denver, Inc.**

1800 Gardner Expressway  
Quincy, IL 62305  
866-440-6241

[www.gardnerdenver.com/gdproducts](http://www.gardnerdenver.com/gdproducts)



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