

# PORTABLE LIQUID CHILLERS

- Capacities From 1/4 - 40 Tons
- Air-Cooled and Water-Cooled
- 20°F to 80°F
- Non-Ozone Depleting Refrigerants

**CF-A SERIES**  
AIR-COOLED

**CF-W SERIES**  
WATER-COOLED

David W. Ennes  
847-427-0414  
ennes@chillerconnect.com



CF-10W shown

CF-10A shown



CF- 2A Shown

CF-1A Shown

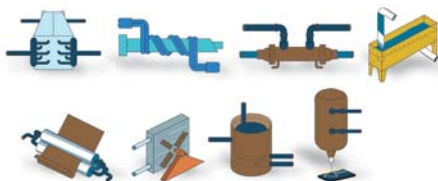
**Temptek CF Series air-cooled and water-cooled chillers are designed for processes requiring liquid temperatures from 20°F to 80°F.**

Air-Cooled and Water-Cooled units can be installed and operated easily needing only a source of electrical power, coolant fluid and a process load to be cooled and controlled. Water-cooled units require a secondary condensing water source. All portable liquid chillers are delivered fully charged, tested and ready to run right out of the box.

Temperature control is achieved by using a microprocessor control instrument designed and manufactured exclusively for Temptek. The control instrument maintains precise temperature control while protecting the system components. The control instrument information is conveniently located permitting instant diagnosis of performance.

## APPLICATIONS

Temptek Pump Tanks can be used to circulate tower or chilled water to a variety of process applications:



**PRICE & PERFORMANCE... for the LONG TERM**

**Blackhawk Machinery & Systems, Inc. 847-427-0414 www.chillerconnect.com**

**TEMPTEK**

since 1989

## AIR-COOLED : 1/4 - 30 TONS

## WATER-COOLED : 2 - 40 TONS

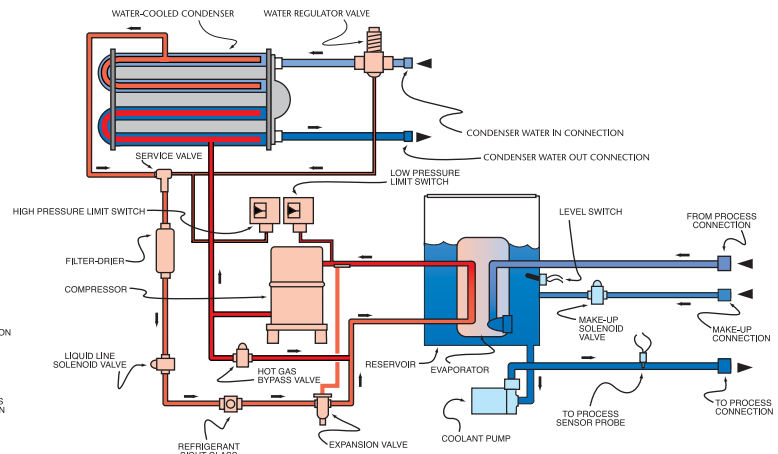
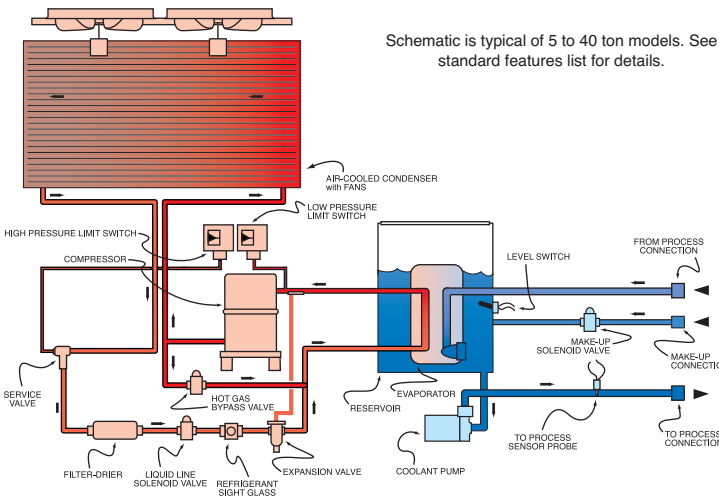
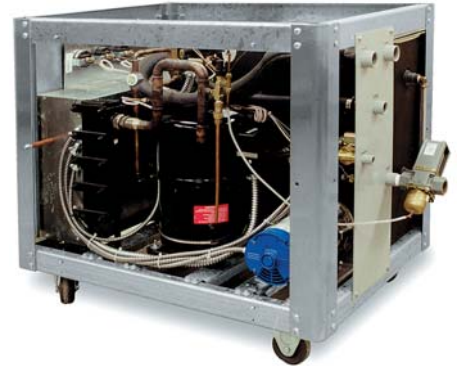
### AIR-COOLED



Air-Cooled chillers utilize plant ambient air to extract heat from the refrigeration circuit. Fan or blowers move the plant air across generously sized finned condenser coils to permit full rated capacity at design conditions.

### WATER-COOLED

Water-Cooled chillers utilize a secondary plant water source such as cooling tower or city water to extract heat from the refrigeration circuit. These units operate independently of plant ambient air temperature to provide full rated capacity even during the hottest weather. And, water-cooled chillers won't add extra heat to your building.



## COMPONENTS

Phone: 847-427-0414 Web: [www.chillerconnect.com](http://www.chillerconnect.com)



**HIGHLY EFFICIENT EVAPORATORS...**  
High efficiency stainless steel brazed plate evaporators are used in 2 - 40 ton models. Copper tube-in-tube evaporators are used in 1/4 to 1-1/2 ton models. Non-ferrous construction prevents rusting.

### HIGH PERFORMANCE COOLANT PUMPS...

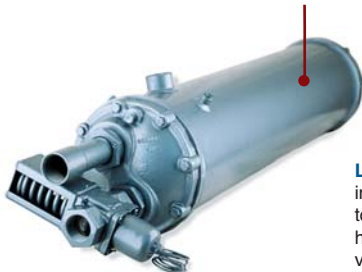
Brass positive displacement pumps are used in 1/4 - 1-1/2 ton models. Centrifugal pumps are used in 2 - 40 ton models. All pumps are selected to provide turbulent flow to promote efficient heat transfer.



### AIR-COOLED CONDENSER...

Finned tube condensers are used in all models. Propeller fans are standard in 1/4 - 20 ton models. Centrifugal blowers that allow air ducting are standard in 25 - 30 ton models and optional in 5 - 20 ton models.

**WATER-COOLED CONDENSER...** Shell and tube condensers with water regulator valves are used in 15 - 40 ton water-cooled models. 1 - 10 ton models use tube-in-tube condensers.



**RUGGED COMPRESSORS...** Reliable scroll and reciprocating compressors provide long life and energy efficient operation.



### REFRIGERANT COMPONENTS...

All refrigerant components are selected for historic reliability and performance. Components include high & low pressure limit switches, freezestat, expansion valve, relief valve, filter dryer and sight glass/moisture indicator.

**LIFETIME WATER RESERVOIR...** All chillers include a non-rusting vented water reservoir sized to support the flow rate of the chillers. The reservoir helps provide a stable water temperature under varying load conditions.

## STANDARD FEATURES

### CONSTRUCTION:

- 1/4 to 2 ton Air-Cooled Models & 1 to 3 ton Water-Cooled Models
  - Galvanized steel frame and enclosure panels
- 3 to 30 ton Air-Cooled models & 5 to 40 ton Water-Cooled models
  - Powder coated steel upright frame member
  - Galvanized steel cross frame members
  - Powder coated lift-off enclosure panels
  - Lift-off molded front panel
- All Models:
  - Casters for portability

### REFRIGERANT CIRCUIT:

- Compressors:
  - Hermetic reciprocating in 1/4 to 1 1/2 ton models
  - Hermetic scroll in 2 to 40 ton models
- Air-Cooled Condensers
  - Finned tube
  - Fan generated air flow in 1/4 to 20 ton models
  - Blower generated air flow in 25 to 30 ton models
- Water-Cooled Condensers
  - Tube in tube in 1 to 10 ton models
  - Shell and tube in 15 to 40 ton models
  - Water regulating valve in all models

- Filter-drier
- Liquid line solenoid valve
- Refrigerant sight glass with moisture indicator
- Thermostatic expansion valve
- Microprocessor controlled hot gas bypass capacity control system in 2 to 40 ton models
- Evaporators
  - Copper tube-in-tube in 1/4 to 1 1/2 ton models
  - Stainless Steel Brazed Plate in 2 - 40 ton models

### COOLANT CIRCUIT:

- Coolant pump
  - Brass positive displacement pump in 1/4 to 1-1/2 ton models
  - High flow stainless steel centrifugal pump in 2 to 30 tons models (up to 5 HP)
  - High flow cast iron centrifugal pump on the 40 ton model (above 5 HP)
- Large capacity insulated non-ferrous reservoir
- Standard NPT process fittings
- Automatic low flow bypass circuit

### LIMIT DEVICES:

- High refrigerant pressure
- Low refrigerant pressure

- Refrigerant pressure relief valve
- Process pump motor overload
- Instrument control circuit fuse

### ELECTRICAL:

- Process pump motor starter
- Compressor motor
- Fused transformer
- Power entry terminal block

### WARRANTY:

- 1 Year covering parts and labor

Standard unit features listed. Customized models may include other or different features.

## AVAILABLE OPTIONS

### ALARM OPTIONS:

- Audible alarm
- Visual / audible alarm beacon

### ELECTRICAL:

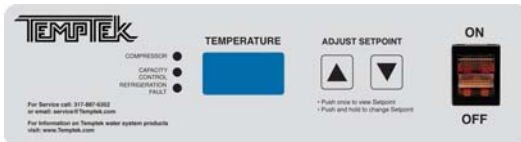
- Branch circuit fusing
- UL rated electrical enclosures

### COOLANT CIRCUIT OPTIONS:

- Overhead piping kit - prevents tank overflow when overhead piping is used
- No tank for gravity return applications
- Process line shut-off valves
- Larger process pump
- Reservoir level sight tube
- Automatic water make-up system in 5 to 40 ton models

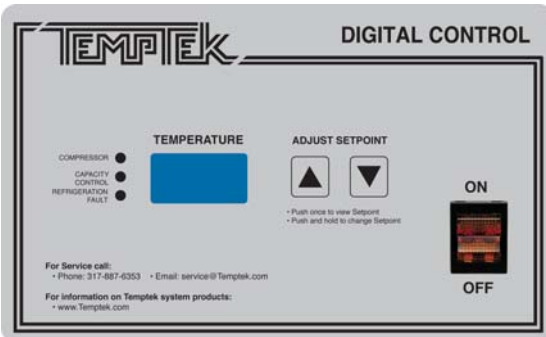
## CONTROL INSTRUMENTS

Microprocessor instruments control and monitor all aspects of the chiller operation to assure accurate control and dependable operation. The controls are designed to support the specific and unique requirements of process cooling in an industrial environment.



### For chillers from 1/4 to 1-1/2 tons:

- Accurate control
- Large & Bright LED temperature display
- Digital Setpoint selection with soft touch keys
- Illuminated Chiller On / Off switch
- Compressor On light
- Basic chiller diagnostics with Refrigeration Fault light
- Capacity control light



### For chillers from 2 to 40 tons

- Accurate control
- Large & Bright LED temperature display
- Digital Setpoint selection with soft touch keys
- Illuminated Chiller On / Off switch
- Compressor On light
- Basic chiller diagnostics with Refrigeration Fault light
- Capacity control light

### REFRIGERANT CIRCUIT:

- Centrifugal blower generated air flow for air-cooled condensers in 5 to 20 ton models
- Low temperature models to 0°F LFT
- Tandem scroll compressors

### PRESSURE GAUGES (2-40 ton models):

- Refrigerant high pressure
- Refrigerant low pressure
- Coolant pressure gauge

### WARRANTIES:

- Extended compressor warranty

Since product innovation and improvement is our constant goal, all features and specifications are subject to change without notice.

PRICE & PERFORMANCE... for the LONG TERM

Blackhawk Machinery & Systems, Inc. 847-427-0414 www.chillerconnect.com

# TEMPEK

since 1989

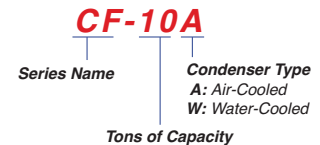
# SPECIFICATIONS : Air-Cooled

MODEL CF-		.25A	.33A	.5A	.75A	1A	1.5A	2A	3A	4A	5A	7.5A	10A	15AF	15AB	20AF	20AB	25A	30A	
CAPACITY @ 50°F LWT	Tons <sup>2</sup>	.29	.39	.50	.75	1	1.5	2	2.9	4	4.9	7.2	9.8	14.5	14.5	18.5	18.5	23.1	30	
	KW <sup>2</sup>	1	1.36	1.75	2.53	3.5	4.73	7.0	10.8	14.0	17.2	25.3	34.4	50.9	50.9	65.0	65.0	81.0	105.3	
COMPRESSOR	HP	.25	.33	.50	.75	1	1.5	2	3	4	5	7½	10	15	15	20	20	25	30	
	Type <sup>3</sup>	R	R	R	R	R	R	SC	SC	SC	SC	SC	SC	SC	SC	SC	SC	SC	SC	SC
REFRIGERANT		134A	134A	134A	134A	134A	134A	410A	410A	410A	410A	410A	410A	410A	410A	410A	410A	410A	410A	
PROCESS PUMP	HP	1/3	1/3	1/3	1/3	1/2	1/2	3/4	3/4	3/4	2	2	2	3	3	3	3	5	5	
	GPM	.7	.9	1.2	1.8	2.4	3.6	4.8	7.2	9.6	12	18	24	36	36	48	48	60	72	
	PSI	60	60	60	60	60	60	32	30	30	52	50	48	55	55	50	50	59	57	
	Type <sup>4</sup>	P	P	P	P	P	P	C	C	C	C	C	C	C	C	C	C	C	C	C
	Construction <sup>5</sup>	B	B	B	B	B	B	SS	SS	SS	SS	SS	SS	SS	SS	SS	SS	SS	SS	SS
CONNECTION SIZES	Process (to/from)	1/2	1/2	1/2	1/2	1/2	1/2	3/4	1	1¼	1¼	1¼	1¼	2	2	2	2	2	2	
	Make-Up	--	--	--	--	--	--	--	--	--	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	
AIR-COOLED	Type <sup>6</sup>	F	F	F	F	F	F	F	F	F	F	F	F	F	B	F	B	B	B	
CONDENSER	CFM x 1000	.25	.33	.45	.65	.71	1.1	2	3	5	5	10	10	15	15	20	20	20	30	
	S.P. <sup>7</sup>	--	--	--	--	--	--	--	--	--	--	--	--	--	1.35	--	1.35	1.35	1.35	
	Ambient <sup>8</sup>	90	90	90	90	90	90	95	95	95	95	95	95	95	95	95	95	95	95	
FULL LOAD <sup>9</sup> AMPERAGE	115/1/60	13	15	17	21	29	--	--	--	--	--	--	--	--	--	--	--	--	--	
	230/1/60	--	--	9	11	15	20	--	--	--	--	--	--	--	--	--	--	--	--	
	230 volt	--	--	--	--	--	--	17	20	24	34	48	56	80	87	92	103	148	184	
	460 volt	--	--	--	--	--	--	8.5	10	12	17	24	28	40	44	46	51.5	74	92	
	575 volt	--	--	--	--	--	--	--	--	--	14	19	23	32	31	37	42	60	74	
TANK CAPACITY (gallons)	Holding	4	4	4	4	4	4	7½	7½	25	25	25	25	65	65	65	65	65	65	
	Tank Lid <sup>10</sup>	S	S	S	S	S	S	O	O	S	S	S	S	S	S	S	S	s	S	
	Auto Make Up <sup>10</sup>	O	O	O	O	O	O	O	O	O	S	S	S	S	S	S	S	s	S	
DIMENSIONS (inches)	Height	33	33	33	33	37	37	30	43	60	60	60	60	66	96	66	96	96	96	
	Width	18	18	18	18	19	19	37	34	34	34	34	34	59	58	59	58	58	58	
	Depth	24	24	24	24	25	25	24	40	40	40	56	56	58	70	58	70	70	70	
WEIGHTS (pounds)	Shipping <sup>11</sup>	220	220	220	265	345	350	415	600	800	800	1,100	1,100	1,600	2,300	1,700	2,600	3,200	3,400	

- Notes**
1. Since product innovation and improvement is our constant goal, all features and specifications are subject to change without notice or liability. Selection of certain optional features may change listed specifications.
  2. Tons or Kilowatts capacity at 12,000 Btu/hr/ton @ 50°F LWT, 95°F ambient and 115°F condensing. Capacity multipliers are 50°F - 1.00; 40°F -.80; 30°F -.60; 20°F - .40. The minimum recommended operating temperature when no glycol is used is 48°F.
  3. R = hermetic reciprocating. SC = hermetic scroll.
  4. P = positive displacement. C = centrifugal.
  5. B = brass. SS = stainless steel. C = cast iron.
  6. F = fan. B = blower.
  7. Static pressure in inches of water.
  8. Design ambient conditions. Loss of capacity and/or difficulty operating will occur at higher ambient.
  9. Full load amps are higher than run load amps and must be used for sizing disconnects and supply wiring.
  10. S = standard. O = optional.
  11. Approximate unit weight crated for shipment.

Since product innovation and improvement is our constant goal, all features and specifications are subject to change without notice.

## Model Designator for CF Series Portable Chillers



**David W. Ennes**  
**847-427-0414**  
**ennes@chillerconnect.com**



since 1989

**PRICE & PERFORMANCE... for the LONG TERM**

**Blackhawk Machinery & Systems, Inc. 847-427-0414 www.chillerconnect.com**

# SPECIFICATIONS : Water-Cooled

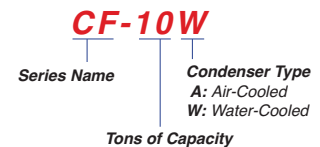
MODEL CF-		1W	2W	3W	5W	7.5W	10W	15W	20W	25W	30W	40W
CAPACITY @ 50°F LWT	Tons <sup>2</sup>	1	2	3	5.1	7.6	10.5	15	20	25	30	40
	KW <sup>2</sup>	3.5	7.0	10.5	17.9	26.7	36.8	52.6	70.2	87.7	105.3	140.4
COMPRESSOR	HP	1	2	3	5	7½	10	15	10 <sup>(2)</sup>	13 <sup>(2)</sup>	15 <sup>(2)</sup>	20 <sup>(2)</sup>
	Type <sup>3</sup>	R	SC	SC	SC	SC	SC	SC	SC	SC	SC	SC
REFRIGERANT		134A	410A	410A	410A	410A	410A	407C	407C	407C	407C	407C
PROCESS PUMP	HP	½	¾	¾	2	2	2	3	3	5	5	7½
	GPM	2.4	4.8	7.2	12	19	26	36	48	60	72	92
	PSI	60	32	30	52	48	47	55	50	59	57	61
	Type <sup>4</sup>	P	C	C	C	C	C	C	C	C	C	C
	Construction <sup>5</sup>	B	SS	SS	SS	SS	SS	SS	SS	SS	SS	SS
CONNECTION	Process (to/from)	½	¾	¾	1¼	1¼	1¼	2	2	2	2	2½
SIZES	Condenser	½	½	¾	¾	¾	1	1¼	1¼	1½	1½	2½
	Make-Up	--	--	--	½	½	½	½	½	½	½	½
WATER-COOLED	City <sup>6</sup>	1.5	3	6	8	14	17	23	32	39	45	60
CONDENSER	Tower <sup>7</sup>	3	6	9	15	28	43	45	63	78	90	120
FULL LOAD <sup>8</sup>	115/1/60	22	--	--	--	--	--	--	--	--	--	--
AMPERAGE	230/1/60	11	--	--	--	--	--	--	--	--	--	--
	230 volt	15	16	18	30	40	48	68.4	78	106	134	178
	460 volt	8	8	9	15	20	24	34.2	39	53	67	89
	575 volt	--	7	8	12	16	20	27.5	32	43	54	72
	TANK CAPACITY	Holding	4	7½	7½	25	25	25	65	65	65	65
(gallons)	Tank Lid <sup>9</sup>	S	O	O	S	S	S	S	S	S	S	S
	Auto Make Up <sup>9</sup>	O	O	O	S	S	S	S	S	S	S	S
DIMENSIONS	Height	33	30	30	40	40	40	57	57	57	57	57
	(inches)	Width	18	37	37	32	32	32	34	34	34	34
	Depth	24	24	24	40	40	40	80	80	80	80	80
WEIGHTS (pounds)	Shipping <sup>10</sup>	270	445	470	655	740	760	1,500	1,900	2,100	2,200	2,500

### Notes

1. Since product innovation and improvement is our constant goal, all features and specifications are subject to change without notice or liability. Selection of certain optional features may change listed specifications.
2. Tons or Kilowatts capacity at 12,000 Btu/hr/ton @ 50°F LWT, 85°F condensing water and 105°F condensing. Capacity multipliers are 50°F - 1.00; 40°F - .80; 30°F - .60; 20°F - .40. The minimum recommended operating temperature when no glycol is used is 48°F.
3. R = hermetic reciprocating. SC = hermetic scroll.
4. P = positive displacement. C = centrifugal.
5. B = brass. SS = stainless steel. C = cast iron.
6. City water requirements based on 60°F water supply at 20 PSI differential with a clean condenser.
7. Tower water requirements based on 85°F water supply at 20 PSI differential with a clean condenser.
8. Full load amps are higher than run load amps and must be used for sizing disconnects and supply wiring.
9. S = standard. O = optional.
10. Approximate unit weight crated for shipment.

Since product innovation and improvement is our constant goal, all features and specifications are subject to change without notice.

## Model Designator for CF Series Portable Chillers



**David W. Ennes**  
**847-427-0414**  
**ennes@chillerconnect.com**



since 1989

**PRICE & PERFORMANCE... for the LONG TERM**

**Blackhawk Machinery & Systems, Inc. 847-427-0414 www.chillerconnect.com**