Ammonia & Freon Models

TURBO C-LINE ICE MAKERS

Self-contained and remote units

1 to 85 U.S. tons

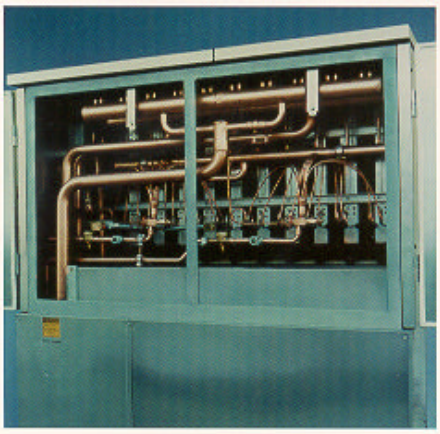
Dry, hard ice

Clear product

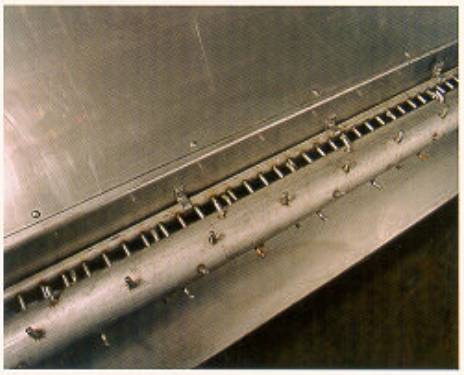
Ideal for packaged ice and industrial uses

TURBO® REFRIGERATING

Features & benefits



Water and refrigerant piping for 10 ton ice maker CF88.



Breaker bar sizing mechanism gives operator control of ice size.

Stainless steel piping and breaker bar for 60 ton ammonia evaporator.

TURBO REFRIGERATING

Self-contained air-cooled 10 ton ice maker CF88SCA.

Turbo gives you dry, hard ice at low cost that chills quicker, lasts longer

If you use ice in your business to protect or improve your product or service, then you should know how important it is to use the right kind of ice.

All ice is not the same, nor does it protect and cool the same, or cost the same. **TURBO ICE MAKERS** are a triumph of Ice Engineering and deliver a better kind of hard ice at a substantially lower cost.

If you are a profit-minded business person, compare **TURBO ICE** with other ice and you will observe this list of major differences:

Dry-tempered

At the end of each ice making cycle, **TURBO ICE** and only **TURBO ICE**, is subcooled by additional low temperature freezing. This cold tempering makes **TURBO ICE** remain extra dry and therefore, mobile longer than any other form of ice… and it requires no extra drying apparatus.

Easy handling

Because of this dry tempered procedure, the hard and dry form of **TURBO ICE**, when placed in storage, does not crust and fuse together like other forms of ice. It is easier to handle by scoop, shovel, conveyor or in a packaged form. This is a proven feature required in the packaged ice, fishing, poultry and chemical industries.

Longer lasting

The Engineered Freezing Process built into this hard **TURBO ICE** makes it last longer than other forms of ice in use today. Because **TURBO ICE** lasts as much as 29% longer than flake or slush ice, your ice costs are substantially reduced.

Turbo's system

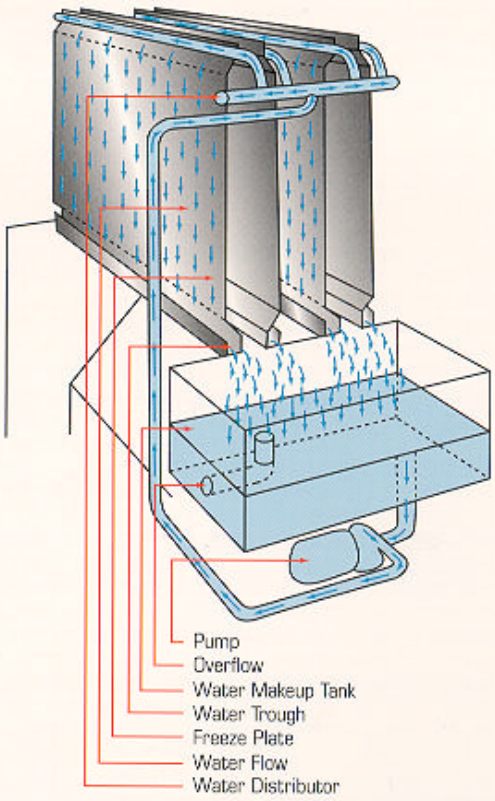
You get full ice production from any **TURBO** unit when you need ice the most. **TURBO ICE** Production is rated at 90°F ambient air and 70°F fresh water, making its nominal ratings higher than most any other ice machine on the market today.

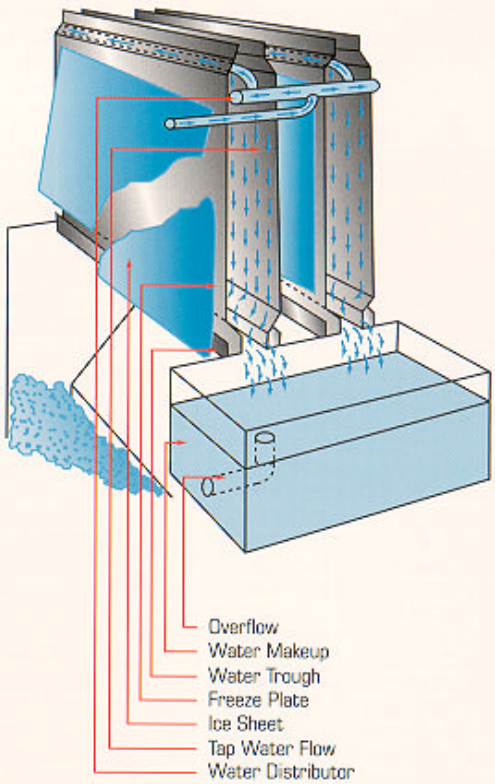
TURBO ICE Engineers are specialists in the field of automatic ice manufacturing, ice storage and ice distribution systems. All of these outstanding qualifications make the **TURBO SYSTEMS** the leaders in the industry.

That's why we can safely say:

TURBO is the leader…

PRODUCING, STORING AND DISTRIBUTING ICE.





Ice freezing cycle

Water is sprayed on **TURBO's Freezing Plates**. This water then flows, by gravity, over the plates, forming a freezing cycle.

Ice harvesting cycle

For harvesting, fresh water is sprayed on the back of the plates, releasing the ice, which then falls, by gravity, into a breaker bin where the ice is broken into selected-size pieces. **TURBO's Exclusive Ice Drying Cycle** is built into all units.

Turbo plate ice makers deliver a proven ice, with the largest selection of machines in the world!

Consumer's packaged ice

A package of consumer ice today must serve many varied needs. That's why the majority of all established packaged-ice manufacturers in the U.S. produce **TURBO ICE**, because **TURBO** meets all the consumers' ice requirements in one machine. **TURBO'S** quality consumer ice is manufactured everyday by a proven, sanitary, labor-saving, low-cost method.

Chemical

Ice is necessary in dye processing, as ice will keep the product at a consistency of 32°F. Therefore, the qualities of **TURBO ICE** allow for better ice storage and distribution. **TURBO ICE** will not "ball up" or congeal in the dye vats. Instead, it is hard and remains mobile in the vats, maintaining a more uniform temperature.

Processing, packing and shipping

Seafood, fresh poultry, dairy products and produce… there's always a **TURBO ICE MAKER** that's just right for these uses. **TURBO ICE** drops clean, hard and dry, with no slushing or soft ice that creates wasteful handling and mess. **TURBO ICE** does not shrink away from the product. The thickness of the ice makes it last longer and minimizes dehydration. For quality ice protection, use **TURBO ICE**.

Storage and distribution

TURBO is the only ice machine manufacturer who produces the complete package of ice machines, storage bins, pneumatic ice blowing units, ice rakes*… or whatever distribution system you desire… and all in their own plant. Another point to remember is that all our **TURBO ICE MAKERS** have been accepted by the U.S.D.A.

* **TURBO'S AUTOMATIC ICE RAKE SYSTEMS** are patented and designed for ice storage capacities from 20 to 300 tons. These systems automatically load and unload the ice storage bin to pre-determined ice quantities up to 60 tons an hour. This eliminates manual labor and makes automation possible.

Specifications

TURBO REFRIGERATING

Thick ice: self-contained R-22 ice makers

Nominal Ice Capacity U.S. tons (24 hrs)	Model Number	Overall Dimensions L x W x H (inches)	Net Weight (lbs)	Ship Weight (lbs)	Comp (hp)	Water Pump (hp)	Breaker Bar (hp)	Defrost Water Flow (gpm)	Feed Water Conn (inches)
3	CF6SC	78 x 44 x 88	3420	3610	15	1/3	1-1/2	9	1-1/4
3	CF6SCAR	78 x 44 x 88	3170	3360	20	1/3	1-1/2	9	1-1/4
3	CF6SCER	78 x 44 x 88	3170	3360	20	1/3	1-1/2	9	1-1/4
5	CF8SC	78 x 44 x 88	3730	3920	25	1/2	1-1/2	15	1-1/4
5	CF8SCAR	78 x 44 x 88	3420	3610	30	1/2	1-1/2	15	1-1/4
5	CF8SCER	78 x 44 x 88	3420	3610	25	1/2	1-1/2	15	1-1/4
7	CF14SC	78 x 72 x 94	5596	5854	35	3/4	1-1/2	22	1-1/2
7	CF14SCAR	78 x 72 x 94	5466	5766	35	3/4	1-1/2	22	1-1/2
7	CF14SCER	78 x 72 x 94	5466	5724	35	3/4	1-1/2	22	1-1/2
10	CF88SC	78 x 72 x 94	6626	6884	(2) 25	3/4	3	30	1-1/2
10	CF88SCAR	78 x 72 x 94	6425	6680	(2) 30	3/4	3	30	1-1/2
10	CF88SCER	78 x 72 x 94	6425	6680	(2) 25	3/4	3	30	1-1/2
14	CF28SC	99 x 94 x 110	9039	9390	(2) 35	(2) 3/4	3	22	2
14	CF28SCAR	96 x 94 x 110	8519	8870	(2) 35	(2) 3/4	3	22	2
14	CF28SCER	99 x 94 x 110	8519	8870	(2) 35	(2) 3/4	3	22	2
15	CF28SC	99 x 94 x 110	9039	9390	(1) 60	(2) 3/4	3	22	2
15	CF28SCAR	96 x 94 x 110	8519	8870	(1) 60	(2) 3/4	3	22	2
15	CF28SCER	99 x 94 x 110	8519	8870	(1) 60	(2) 3/4	3	22	2
20	CF40SC	128 x 94 x 110	11702	12160	(1) 75	(2) 3/4	3	30	2
20	CF40SCAR	128 x 94 x 110	9206	9664	(1) 75	(2) 3/4	3	30	2
20	CF40SCER	128 x 94 x 110	9206	9664	(1) 75	(2) 3/4	3	30	2
30	CF56SC	198 x 94 x 110	21012	21540	(2) 60	(4) 3/4	(2) 3	22	2
30	CF56SCAR	198 x 94 x 110	19972	20500	(2) 60	(4) 3/4	(2) 3	22	2
30	CF56SCER	198 x 94 x 110	19972	23600	(2) 60	(4) 3/4	(2) 3	22	2
40	CF80SC	256 x 94 x 110	22580	23220	(2) 75	(4) 3/4	(2) 3	30	2
40	CF80SCAR	256 x 94 x 110	21760	22400	(2) 75	(4) 3/4	(2) 3	30	2
40	CF80SCER	256 x 94 x 110	21760	22400	(2) 75	(4) 3/4	(2) 3	30	2
60	CF120SC	480 x 94 x 121	40075	40775	(2) 100	(6) 3/4	(2) 3	30	2
60	CF120SCER	480 x 94 x 121	38475	39175	(2) 100	(6) 3/4	(2) 3	30	2

Specifications

Thick ice: remote ice makers for applications with R-22 high side

Nominal Ice Capacity U.S. tons (24 hrs)	Model Number	Overall Dimensions L x W x H (inches)	Net Weight (lbs)	Ship Weight (lbs)	Recommended Comp Cap TR @ 0°F Suct	Breaker Bar (hp)	Water Pump (hp)	Defrost Water Flow (gpm)	Feed Water Conn (inches)
3	CF6R	78 x 44 x 88	2220	2410	5.58	1-1/2	1/3	9	1-1/4
5	CF8R	78 x 44 x 88	2930	3120	9.30	1-1/2	1/2	15	1-1/4
7	CF14R	78 x 72 x 88	4762	5020	13.02	1-1/2	3/4	22	1-1/2
10	CF16R	78 x 72 x 88	5029	5284	18.60	3	3/4	30	1-1/2
14	CF28R	99 x 94 x 88	7769	8120	26.04	3	(2) 3/4	22	2
20	CF40R	128 x 94 x 88	8500	8958	37.20	3	(2) 3/4	30	2
28	CF56R	198 x 94 x 94	14772	15300	52.08	(2) 3	(4) 3/4	22	2
40	CF80R	256 x 94 x 94	15800	16440	74.40	(2) 3	(4) 3/4	30	2
60	CF120R	384 x 94 x 94	23185	23865	111.60	(2) 3	(6) 3/4	30	2

Thick ice: remote ice makers for applications with ammonia high side

Nominal Ice Capacity U.S. tons (24 hrs)	Model Number	Overall Dimensions L x W x H (inches)	Net Weight (lbs)	Ship Weight (lbs)	Recommended Comp Cap TR @ 0°F Suct	Breaker Bar (hp)	Water Pump (hp)	Defrost Water Flow (gpm)	Feed Water Conn (inches)	Liquid Ammonia Flow
5	CAR8	78 x 44 x 88	2930	3120	9.30	1-1/2	1/2	15	1-1/4	3.8
5	CAR8LR	78 x 44 x 88	3250	3440	9.30	1-1/2	1/2	15	1-1/4	
7	CAR14	78 x 72 x 92	4762	5020	13.02	1-1/2	3/4	22	1-1/2	6.0
7	CAR14LR	78 x 72 x 92	5258	5516	13.02	1-1/2	3/4	22	1-1/2	
10	CAR16	78 x 72 x 92	5029	5284	18.60	3	3/4	30	1-1/2,	7.5
10	CAR16LR	88 x 72 x 92	5525	5780	18.60	3	3/4	30	1-1/2	
14	CAR28	99 x 94 x 108	7319	7670	26.04	3	(2) 3/4	22	2	11.0
14	CAR28LR	99 x 94 x 108	7819	8170	26.04	3	(2) 3/4	22	2	
20	CAR40	128 x 94 x 110	8500	8958	37.20	3	(2) 3/4	30	2	15.0
20	CAR40LR	128 x 94 x 110	8800	9260	37.20	3	(2) 3/4	30	2	
28	CAR56	198 x 94 x 110	14772	15300	52.08	(2) 3	(4) 3/4	22	2	23.0
28	CAR56LR	198 x 94 x 110	15272	15800	52.08	(2) 3	(4) 3/4	22	2	
40	CAR80	256 x 94 x 110	15800	16440	74.40	(2) 3	(4) 3/4	30	2	30.0
40	CAR80LR	256 x 94 x 110	16400	17040	74.40	(2) 3	(4) 3/4	30	2	
60	CAR120	384 x 94 x 119	23185	23865	111.60	(3) 3	(6) 3/4	30	2	45.0
60	CAR120LR	384 x 94 x 119	24091	24771	111.60	(3) 3	(6) 3/4	30	2	

Entering water temperature capacity multipliers

Water Temperature	65	70	75	80	85	90
Capacity Multiplier	1.028	1.00	0.974	0.950	0.925	0.902

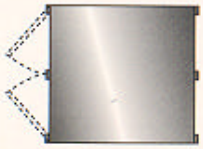
Suction temperature capacity multipliers – R, CAR models only

Suction Temperature °F *	+5	+4	+3	+2	+1	0	–1	–2	–3	–4	–5
Capacity Multiplier	.84	.87	.90	.93	.96	1.00	1.03	1.06	1.09	1.12	1.15

* Refers to suction temperature at icemakers — no allowance for suction line losses!

Model legends

TURBO REFRIGERATING

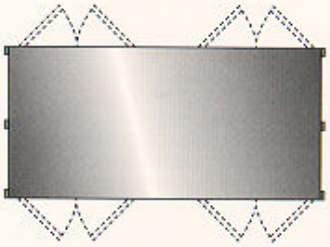


Plan View

C Series 6-28

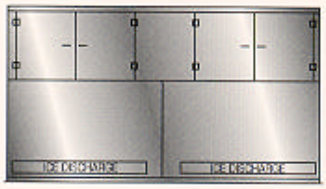
Front Elevation

Right End Elevation



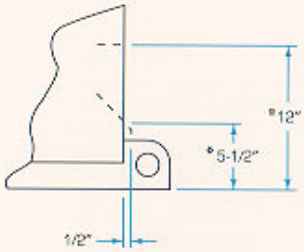
Plan View

C Series 40-80



Front Elevation

Right End Elevation



Ice Discharge Detail

* Note: CFB & CARB 4" & 9"

CF-SC **(self contained models with water cooled condensers)**
Shipped with a complete operating charge of R-22 (domestic only). Includes condenser water regulating valve(s) (shipped loose). May be used with city, well or tower water. Seawater condensers for salt water or brackish water are available. Seawater condensers have 90/10 cupro-nickle tubes, steel tube sheets and steel shell. Water cooled condensing operation based on 85°F tower water to the condenser and 105°F SCT.

CF-SCA **(self contained air cooled models)**
Icemaker and air cooled condensers are mounted on a common steel base. Each unit contains an operating charge of R-22 (domestic only), is completely wired and refrigerant piped. SCA units are designed for 100°F ambient air and 120°F condensing temperature.

CF-SCAR **(self contained models for remote air cooled condenser application)**
Shipped without a refrigerant charge. SCAR models include the receiver, relief valve and liquid king valve (shipped loose). If other than **TURBO** remote air cooled condensers are to be used with this model, you must indicate the make, model number and low ambient control information.

CF-SCE **(self contained evaporative condenser models)**
Same as the SCA models but with an evaporative condenser replacing the air cooled condenser. Unless otherwise specified, units are designed for 78°F wet-bulb temperature and 95°F condensing temperature.

CF-SCER **(self contained models for remote evaporative condenser application)**
Are shipped without refrigerant charge. SCER models include the receiver, relief valve and liquid king valve (shipped loose).

CF-R **(remote models for application with remote R-22 high-side equipment)**
Supplied with a factory installed suction-line heat exchanger, expansion valves, liquid line solenoid valve, liquid line sight glass and liquid line drier. Starters for the water pump and breaker bar motor are installed. The unit is internally wired. Refrigerant evaporator temperature of 0°F (24.9 PSI) at the evaporator is required for nominal ice production.

Questions & answers

Q. How thick is C-Line ice and can it be varied?

A. The equipment capacity rating is based on 5/8″ ice thickness. By changing the time cycle in the ice maker, the ice thickness may be varied from 3/16″ to 1″ thick. This allows the user to adapt the ice to their own process whether it is thin ice used in fish icing or thick ice used for packaged ice.

Q. How wet is C-Line ice? Describe the quality.

A. Due to a unique sub-cooling process and a non-hot gas harvest, the ice the C-Line produces is the driest possible. In addition to being the driest (easiest to handle), **TURBO C-LINE** type ice is the clearest, hardest available. This means that it will last the longest whether your process is cooling a drink or chilling produce.

Q. What are the base rating conditions for the C-Line ice maker?

A. **TURBO C-LINE ICE MAKING EQUIPMENT** is rated on 70°F inlet water, 95°F SCT, 90°F ambient and 5/8″ thick ice. Operating conditions that deviate from the base rating will affect actual performance. Refer to the correction tables in this brochure to determine your actual capacity.

Q. Do you need the breaker bar on your C-Line ice maker if you are using a TURBO ICE SIZER?

A. No. By eliminating the breaker bar assembly, you move larger pieces of ice through the system, minimizing snow. The **TURBO ICE SIZER** will handle the larger pieces, produce a more uniform ice product and minimize the amount of snow product.

Q. How critical is it that the TURBO ICE MAKER maintain a 70°F inlet water temperature?

A. 70°F inlet water is essential for producing the driest ice and maintaining a consistent ice harvest. If your inlet water temperature is lower than 70°F, **TURBO** offers a preheater kit (for R-22 units) or hot gas assist (for ammonia units) that assures you of a consistent ice harvest.

Q. Why would I want to use the dump valve option on my C-Line ice maker?

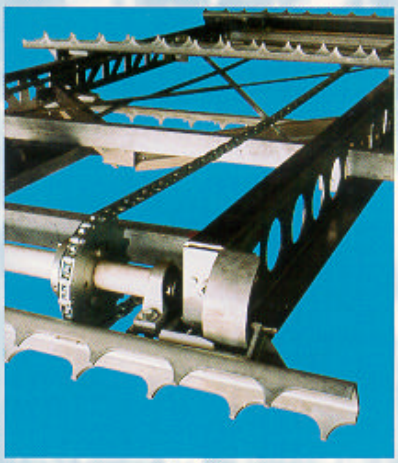
A. If you have poor water quality, the normal water blown down (removed) during the harvest cycle may not be enough to eliminate all of the suspended solids in the water. After extended run time under these conditions, the solids in the tank will continue to concentrate. This will result in poor quality ice (cloudy, bad odor, etc.). To prevent this, a dump valve is installed in the water pump suction line and is opened for a preset time at the beginning of the harvest cycle to drain the water left in the tank at the end of the ice making cycle. By dumping the excess water, all of the solids are removed and the tank is refilled with fresh water.

Q. What is the advantage of outboarding compressors on a TURBO C-LINE ICE MAKER?

A. Outboarding the compressors offers you several advantages: 1) easy access to the compressor; 2) the condenser is more accessible; and 3) ease of maintenance.

TURBO REFRIGERATING®

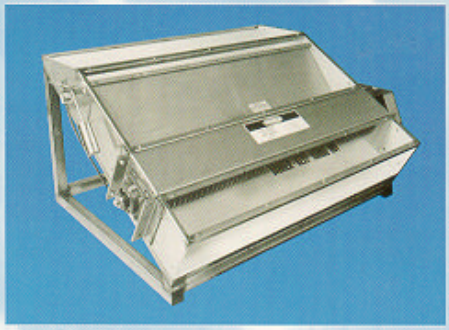
D-Line Ice Maker



Ice Rake

Company profile

TURBO began manufacturing specialized ice making and industrial refrigeration systems in 1952. Our business philosophy has been a simple one: offering equipment that increases output and reduces operating costs for the industries that require ice systems. **TURBO** has been the pioneer in industrial ice harvesting and consumer packaged ice all these years. **TURBO** has become a world leader in ice harvesting, thermal storage systems and liquid heat exchangers.



Ice Sizer

TIG Ice Maker

TURBO...innovative solutions to tough cooling problems.

TURBO® REFRIGERATING

ICE SYSTEMS ☐ FLUID CHILLERS ☐ THERMAL STORAGE

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fax 940-382-0364
e-mail info@vogtice.com
internet http://www.vogtice.com

Consider these facts

- Over 8,500 ice harvester units installed and operating worldwide.
- Over 80 years experience designing and manufacturing ice making equipment.
- Complete packaged systems available up to 340 tons.
- Fast and easy installation.
- Single source responsibility.
- Standard product line as well as custom designs available.
- Multiple refrigerant based systems: R-22, ammonia and propane.
- All system components readily accessible.
- Use utilities lowest rate structures.