

North Star: A Tradition of Dependability

Since 1950, North Star Ice Equipment has been known the world over for its line of high capacity, industrial ice makers and ice handling equipment. The North Star product line includes flake ice makers, liquid ice systems, ice rakes, screw conveyor and pneumatic ice delivery systems, containerized ice plants, and auxiliary equipment. North Star ice systems are now operating in over 120 countries around the world.



North Star Liquid Ice Generators

North Star liquid ice generators are available in six models ranging in capacity from 10 to 154 tons of liquid ice per 24 hours (25% ice and 75% water ice slurry). They can be installed with a progressive cavity pump or directly over a mixing tank, and liquid ice can be easily pumped to any location. All North Star liquid ice generators are backed by a lifetime warranty on the evaporator and North Star's performance guarantee.

Liquid Ice Generator Specifications

Model	Motor Drive	Capacity*		Dimensions			Shipping Information		
		Ice Content	Total Liquid Ice	Height**	Width	Length	Domestic Wt.	Export Wt.	Volume***
5 SS	1/4 hp	2.5 T	10.2 T	45 in	25 in	35 in	708 lbs	760 lbs	61.8 ft ³
	.20 kW	2.3 MT	9.3 MT	1143 mm	635 mm	889 mm	321 kg	345 kg	1.75 m ³
10 SS	1/3 hp	4.5 T	18.2 T	46 in	32 in	48 in	1,030 lbs	1,310 lbs	70.6 ft ³
	.25 kW	4.1 MT	16.5 MT	1168 mm	813 mm	1219 mm	467 kg	594 kg	2 m ³
20 SS	1/2 hp	11 T	44.1 T	51 in	56 in	83 in	3,200 lbs	3,444 lbs	244 ft ³
	.38 kW	10 MT	40 MT	1295 mm	1422 mm	2108 mm	1452 kg	1562 kg	6.9 m ³
40 SS	3/4 hp	18.6 T	74.1 T	75 in	56 in	83 in	4,320 lbs	5,700 lbs	332 ft ³
	.56 kW	16.9 MT	67.2 MT	1905 mm	1422 mm	2108 mm	1960 kg	2586 kg	9.4 m ³
60 SS	1 hp	27.9 T	111.4 T	81 in	76 in	107 in	7,000 lbs	8,500 lbs	576 ft ³
	.75 kW	25.3 MT	101.1 MT	2057 mm	1930 mm	2718 mm	3175 kg	3856 kg	14.6 m ³
90 SS	1-1/2 hp	38.7 T	154.8 T	105 in	76 in	109 in	9,800 lbs	11,200 lbs	678 ft ³
	1.13 kW	35.1 MT	140.4 MT	2667 mm	1930 mm	2769 mm	4445 kg	5080 kg	19.2 m ³

*Capacity in US tons (T) and metric tones (MT) of ice slurry with 25% ice and 75% water per 24 hours based on -20°F (-29°C) evaporator and 34°F (1°C) seawater supply temperatures, and 3.0% and higher salt content. For other requirements and conditions consult North Star. Specifications subject to change without notice.

** Overall height requirements vary upon installation. Contact factory for more information.

*** Volume given is for export crating.

North Star

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North Star

World Leader in Ice Technology

Liquid Ice Systems



At North Star, we are proud to offer the best ice making options for fishing, aquaculture and seafood processing companies. For over 55 years, we have produced the leading flake ice makers in the business and installed them in seafood operations around the world. Now we offer even more – a seawater liquid ice generator with the reliability and performance the seafood industry has come to expect from North Star.

The North Star Liquid Ice Advantage

North Star liquid ice generators offer a number of benefits you can't find in other slurry ice machines.

- **Reliable** – We understand that downtime costs you money. You can count on North Star to deliver a dependable generator that produces seawater liquid ice using proven technology.
- **Minimum salinity** – Our liquid ice generators make seawater liquid ice with a minimum salinity of 2.5%. This allows North Star to apply seawater directly to the ice generator freezing surface. Other liquid ice makers require 3.5% salinity, requiring a brine make-up tank to be added to the system.
- **Meets all food processing standards** – North Star evaporator and water path components are stainless steel – the first and best choice for food processing.
- **Compact** – North Star's design offers the smallest footprint with the largest ice capacity in the industry.
- **Pumpable ice** – North Star liquid ice can be pumped anywhere you need it using small diameter PVC piping. This reduces the labor necessary for transporting ice and protects the ice from contamination. Pumpable North Star liquid ice is particularly adaptable to small space applications, such as on board fishing and processing vessels.
- **Versatile** – North Star liquid ice generators are available with a progressive cavity pump or can be mounted above a mixing tank for added ice storage.
- **Flexible** – Unlike other slurry ice machines, North Star units can be operated with either ammonia or Freon refrigeration systems. Multiple refrigeration units are not required.
- **Lifetime warranty** – North Star liquid ice generators are backed by the best warranty in the business – a lifetime evaporator warranty, plus North Star's performance guarantee.

Proven Technology, Superior Performance

North Star liquid ice systems are designed to produce high quality seawater liquid ice 24 hours a day for decades with minimal maintenance. Because system components will vary depending on the application, please consult North Star's sales team for a custom system design and quote.

System Components

Liquid Ice Generator

- Stainless steel pressurized water path and stainless steel freezing surface
- Seawater components standard, shipboard modifications available

Progressive Cavity Pump with Drive

- Stainless steel transition chutes

Stainless Steel Stand

Electrical Control Panel for Ice Maker, Progressive Cavity Pump and Mixing Tank (Mixing tank by others)

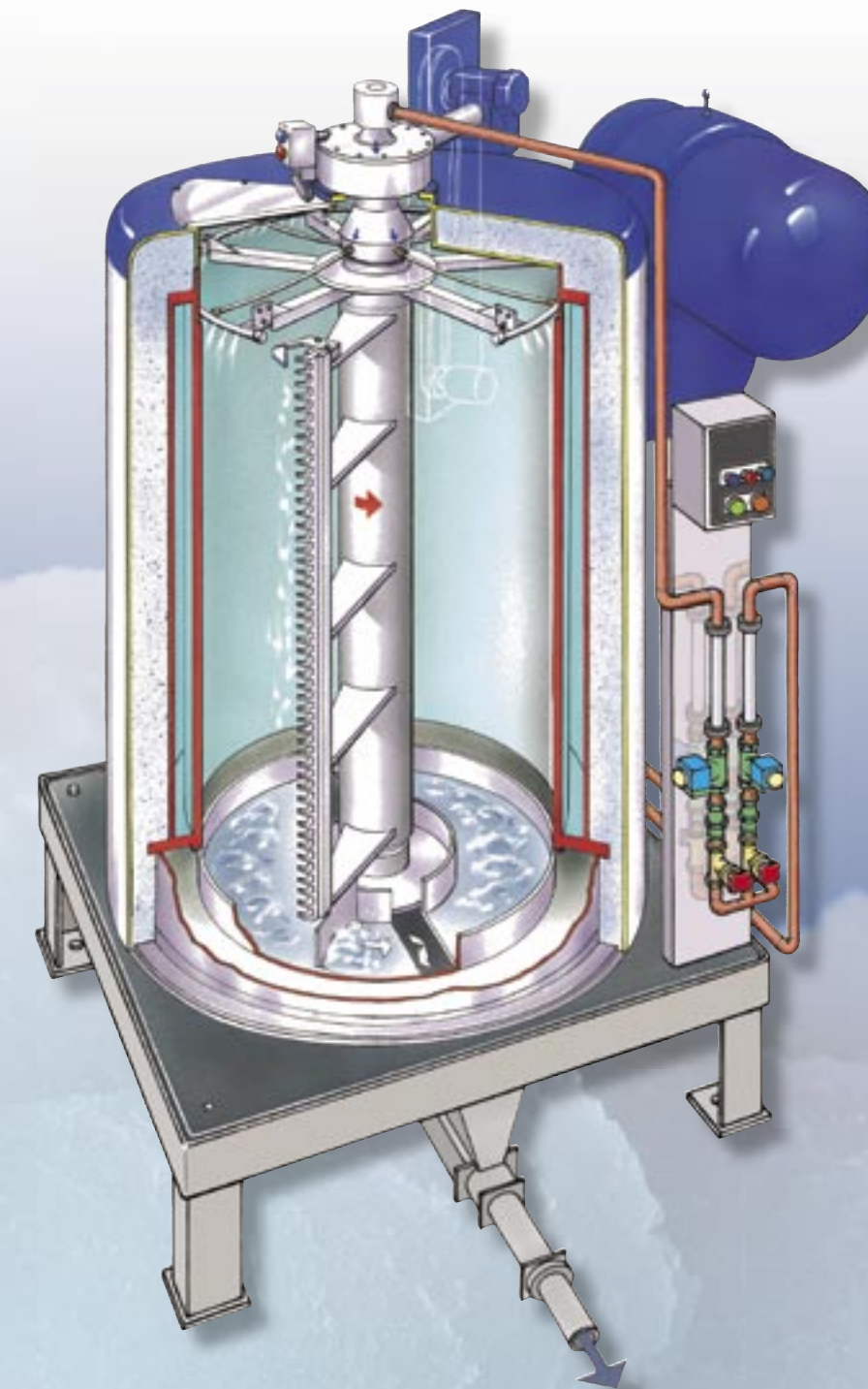
- Remote start/stop station
- Motor starters, overloads, fuses, timers and relays

Flow Control Panel

- Flow meters
- Water pressure switch (safety device)
- Valves, clamps, fittings and hardware

Water Collection Tray

- Drip pan for dry floor applications




Fishing Vessels

North Star liquid ice systems have been installed on fishing vessels around the world to preserve the quality of their catch. North Star's

high capacity, small-footprint design is a real advantage in tight spaces, and liquid ice is easily pumped to holding tanks, totes, and throughout the processing factory to maintain temperatures from harvest to finished product. Built with heavy-duty non-corrosive parts to withstand in the harsh marine environment, North Star liquid ice generators are designed to operate smoothly and dependably on the open ocean.



Shore-based Processing

On land, nothing beats North Star liquid ice for fast product cooling, from the delivery of fish to the plant, through holding

and processing. When applied, North Star liquid ice completely surrounds the product, filling all voids in the tote or container, for maximum surface area contact and heat transfer. North Star liquid ice generators are also energy efficient and can be connected directly to your plant's existing refrigeration system.



Aquaculture

In addition to the benefits for fishing vessels and seafood processors, aquaculture companies also use North Star liquid ice when harvesting and

transporting farmed fish and shellfish. The soft texture of the ice will not damage delicate perishable products, resulting in the highest possible quality for your customers, and a higher return for you.