

# NORTHSTAR ICE MAKER

ISO-9002



Underwriters Laboratories  
Inc. ® USA

## NORTH STAR

FREEZING EQUIPMENT IND. P. LTD.

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# Proven USA Designed Northstar Ice Makers now from ISO-9002 Approved Facility In India.

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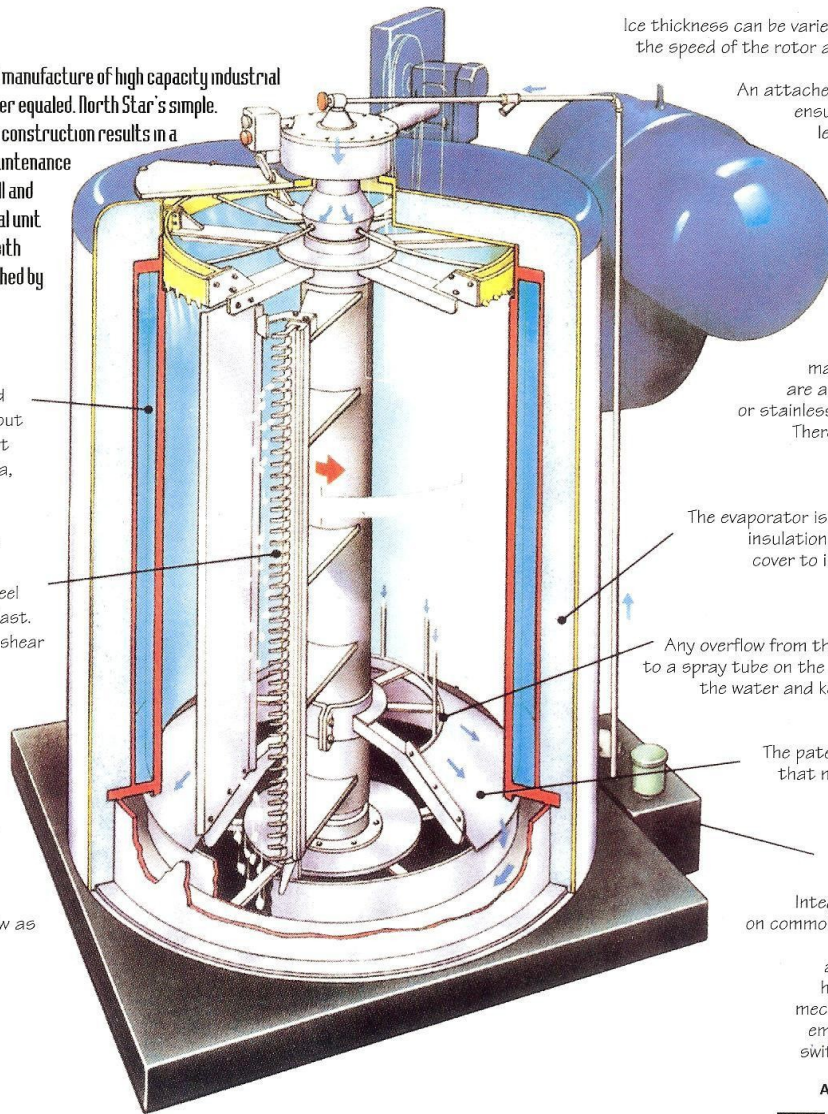
**NORTHSTAR**

has led the world the design and manufacture of high capacity industrial ice makers. Often copied but never equaled. North Star's simple, vertical drum design and expert construction results in a low stress, low wear, and low maintenance ice maker that is simple to install and operate. The compact, economical unit produces totally subcooled ice with efficiency and reliability unmatched by other ice machines.

The stationary double-walled evaporator is designed without seals to eliminate refrigerant leaks. The unit uses ammonia, ozone-friendly refrigerants, glycol, or brine in flooded or pump recirculation systems.

Investment cast stainless steel ice removal tools are built to last. The tools hold their edge and shear the ice without touching the freezing surface. Tools are fitted after installation of ice maker at site.

North Star ice flakes and can be subcooled as low as 0° F, eliminating the need for mechanical devices to dry the ice. Dry, subcooled ice is more free flowing for better long term storage and handling.



Ice thickness can be varied in the field by changing the speed of the rotor at the external drive unit.

An attached insulated accumulator ensures accurate refrigerant level control and complete separation of liquid and gas refrigerant.

The high efficiency evaporator produces cold, dry ice with more cooling power than any other ice maker on the market today. Evaporators are available with solid carbon or stainless steel freezing surfaces. There is no coating or plating to chip off.

The evaporator is encased in polyurethane insulation with a molded fiberglass cover to increase energy efficiency and eliminate corrosion.

Any overflow from the water rings is directed to a spray tube on the drip shield. This precools the water and keeps the drip shield from freezing.

The patented drip shield ensures that no water falls into the ice storage bin.

Stainless steel water tank with optional cover. Integral water cooler working on common compressor is optional. Safety features include a see-through inspection hatch with safety switch, mechanical load limit switch, emergency stop switch, jog switch, and drive belt guard.

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Performance & Reliability assured by 14 factory conducted tests included in our ISO-9002 procedures

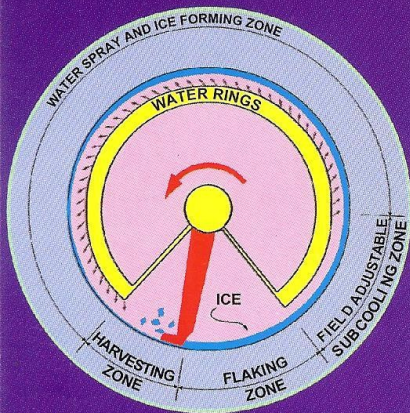
## Built for Years of Trouble Free Operation

Nine North Star models produce between two and 56 tons of ice continuously with no defrost cycles to interrupt the supply.

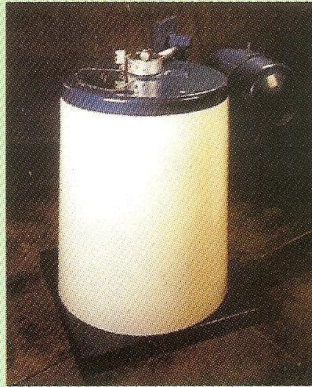
To begin the ice-making process, water is pumped from the stainless steel recirculating water tank to the top of the rotor. It is then distributed to the freezing surface via water rings.

The water freezes immediately on contact with the freezing surface, then is thoroughly subcooled to make dry ice with superior cooling power. The temperature of the ice can be easily adjusted by changing the subcooling zone located ahead of the ice removal tools.

After subcooling, the ice is sheared from the surface by the ice removal tools and falls out of the bottom of the ice maker. Any water that does not freeze returns to the water tank for recirculation.



## North Star Makes Better Ice



**North Star Ice is the most effective and economical choice for your cooling needs.**

### Faster cooling and mixing

North Star flake ice provides more than 17,000 square feet of cooling surface area per ton of ice for the greatest cooling efficiency. Other types of ice offer only 4,260 to 11,050 square feet of cooling surface area. Thorough subcooling also ensures that North Star ice contains more BEUs per ton than any other type of ice.

### Greater product protection

North Star ice stays dry, packs well and cushions products against damage. Its flat shape will not create indentations in perishable products.

### Better product coverage

Flat ice flakes flow more freely and provide greater contact area than other types of ice.

### Easier storage and distribution

Because North Star ice is completely dry, it remains free-flowing in a low-temperature storage bin and conveys easily via screw or pneumatic systems.

## No Ice Maker Delivers More

### Versatile

Makes ice from fresh water, seawater or other liquids.

Uses standard or ozone-friendly refrigerants.

Can be installed on land or aboard ships with a broad range of power options.

Approved by the USDA for use in food processing plants.

Choose either a solid carbon or stainless steel freezing surface.

Manufactured with standard stainless steel water makeup tank and ice removal tools. Other stainless steel options are available.

Combine two or more models for greater ice making capacity.

### Economical

Produces more ice than any other ice maker using an equally rated compressor.

Operates continuously with no defrost cycles.

Makes the coldest ice with better cooling power than any other ice maker.

Reduces refrigeration losses with insulated fiberglass enclosure.

Converts all water to ice without water loss.

Saves space with compact design.

Installs easily and requires minimal maintenance.

### Dependable

Designed with only one major moving part and no refrigerant seals.

Built for industrial use with high quality heavy-duty parts. No other ice maker is as compact and heavy-duty as North Star.

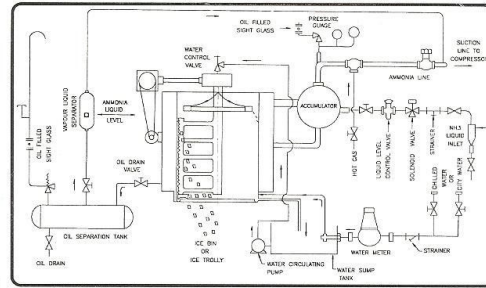
Covered by a one year warranty on all North Star produced parts and a North Star performance guarantee.



## Ice Maker Specifications

Model numbers indicate the square feet of freezing surface for each model.

"CS" designates a carbon steel freezing surface; "SS" indicates a stainless steel freezing surface.



Product Specifications			Dimensions			Shipping Information		
IM Models	Pump HP	* Capacity (MT/24 Hrs)	Height	Width	Length	Domestic Wt	Export Wt	Volume
M-15 SS	0.5	6.5	51 in	46 in	56 in	700 Kg	882 Kg	110 ft <sup>2</sup>
M-15 CS	0.5	8.2	1320 mm	1150 mm	1450 mm			3 m <sup>3</sup>
M-20 SS	0.5	10.0	62 in	46 in	56 in	900 Kg	1018 Kg	140 ft <sup>3</sup>
M-20 CS	0.5	13.0	1530 mm	1150 mm	1450 mm			4 m <sup>3</sup>
M-30 SS	0.5	13.0	63 in	56 in	83 in	2000 Kg	2200 Kg	285 ft <sup>3</sup>
M-30 CS		17.0	1600 mm	1422 mm	2108 mm			8.1 m <sup>3</sup>
M-40 SS	0.5	18.0	75 in	56 in	83 in	2364 Kg	2591 Kg	326 ft <sup>3</sup>
M-40 CS		21.0	1905 mm	1422 mm	2108 mm			9.2 m <sup>3</sup>
M-50 SS	1.0	23.0	87 in	56 in	83 in	2850 Kg	3050 Kg	420 ft <sup>3</sup>
M-50 CS		27.0	2210 mm	1422 mm	2108 mm			12.0 m <sup>3</sup>
M-60 SS	1.0	30.0	81 in	76 in	107 in	3632 Kg	3864 Kg	510 ft <sup>3</sup>
M-60 CS		36.0	2057 mm	1930 mm	2718 mm			14.4 m <sup>3</sup>
M-75 SS	1.0	35.0	87 in	76 in	109 in	4200 Kg	4500 Kg	560 ft <sup>3</sup>
M-75 CS		42.0	2210 mm	1930 mm	2769 mm			16 m <sup>3</sup>
M-90 SS	2.0	43.0	105 in	76 in	109 in	4773 Kg	5091 Kg	645 ft <sup>3</sup>
M-90 CS		50.0	2667 mm	1930 mm	2769 mm			18.3 m <sup>3</sup>

**Capacity** is based on the following - Refrigerant R-717 (Ammonia) reasonably oil Free, (-) 35°C Freezing temperature, + 16°C inlet feed water temperature to the Ice Maker, Average Ice Temperature (-) 4°C, Average ice thickness 1.5 mm. For any other requirements and conditions other than above consult us freely. In built water chiller available when freezing temp. of -13°C to -17°C used.

**Note :** Models & Specification are subject to change without prior notice.

### The World Leader in Ice Technology

Since 1950, North Star Ice Equipment Corporation has been known the world over for its line of ice makers and ice handling systems. The company's product line includes ice rakes and storage systems, ice delivery systems, contems, containerized ice plants and other related products. North Star ice systems and now operating in over 90 countries in a wide variety of applications.

#### Seafood

Fishing, aquaculture, at-sea & land-based processing, holding, transportation & display

#### Agro-Produce

Perishable cooling & transport

#### Meat & Poultry

Processing & value-added products

#### Bakery

Dough cooling

#### Chemical

Dye & chemical manufacturing

#### Construction

Concrete cooling

#### Grocery

Perishable food holding & display

#### Recreation

Ski resort snow-making

#### Sales Agents

#### North Star Equipment Sales P. Ltd.

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PACKAGED ICE MAKERS, READY TO MAKE  
ICE WITHIN HOURS OF  
PURCHASE OF UNIT, AVAILABLE.  
ASK FOR MORE DETAILS.