

Product
   
*Brochure*
  
 Ammonia Refrigeration



**NH<sub>3</sub>**   
**Ammonia Division**  
**ICE MAKE**  
*Trusted Cooling Partner*

Ice Make is a strong player in the refrigeration arena by providing total cold chain solution. Ice Make provides the Industrial & Commercial Refrigeration solutions for every customer's individual needs, since 1993.

This Ammonia Refrigeration vertical includes different types of Chilling Plants and Cold Storage for Milk & Milk products and Blast Freezing & Hardening Chambers for Ice Cream, Meat, Poultry, Paneer, Cheese and Butter among Ammonia is 5 to 20% more thermodynamically efficient than its other competitive refrigerants. This allows an ammonia-based refrigeration system to achieve the same cooling effect while using less power. As a result, where ammonia refrigeration is appropriate, it can offer lower long-term operation costs. These cutting edge products are manufactured at class apart, ISO certified plant that are aided with well-developed infrastructure and process to ensure highest quality.

Ice Make is committed to help customers meet the demands of complex prescription for product & process safety and energy efficiency; also to ensure that we offer them competitive pricing, professional advice and innovative design. Our team of highly skilled design engineers and project delivery managers provide key project solutions to enable the fast, effective and reliable installation of any design requirement. All products are built for performance, reliability and durability, even in the toughest and most difficult conditions.



## Ammonia Refrigeration

Ice Make manufactures products with HCFCs and HFCs refrigerants and now offers equipment and projects based on natural refrigerant - Ammonia.

We extend our services into designing, engineering, assembling, fabrication, installation, testing and commissioning with best quality after-sales services for ammonia based water chillers for Dairy, Pharma and Beverage Industries, Glycol chillers for Dairies, Breweries and Pharma Industries, Brine Chilling Plants for Breweries, Pharma, Chemical and allied Industries using Reciprocating as well as Screw Compressors, Shell and Tube, Shell and Plate as well as Plate and Frame PHE Chillers and Shell & Tube, Atmospheric, PHE as well as Evaporative Condensers with in-house manufacturing capability for Atmospheric condensers, Shell and Tube evaporators as well as Condensers.

We will also be able to extend all above services for ammonia based large cold stores for storage of Milk & Milk products and blast freezing & hardening chambers for Ice Cream, Meat, Poultry, Paneer, Cheese and Butter etc.

### Where is ammonia used as a refrigerant?

- Industrial systems: large cold storage and process systems i.e. Chilling Plant, Plate Freezer, IQF, Ice Bank Tank (IBT)
- HVAC systems



## Advantages



Natural Refrigerant



Low Refrigerant Cost



No Ozone Depletion & Zero GWP



Efficient Compressor Operation



Highest COP



Self-Alarming



Sustainable

## We provide Ammonia Refrigeration Technology with

- **Single-stage compression with evaporators configured as,**
  - Direct-expansion
  - Flooded
  - Liquid overfeed
- **Multi-stage compression systems with economizer or two stage compressor**
- **Cascade systems**



## Evaporator Technology

### Air-cooling

- Very low temperature blast freezing
- Low temperature holding freezers
- Medium temperature storage coolers, Production areas, Air-Conditioning

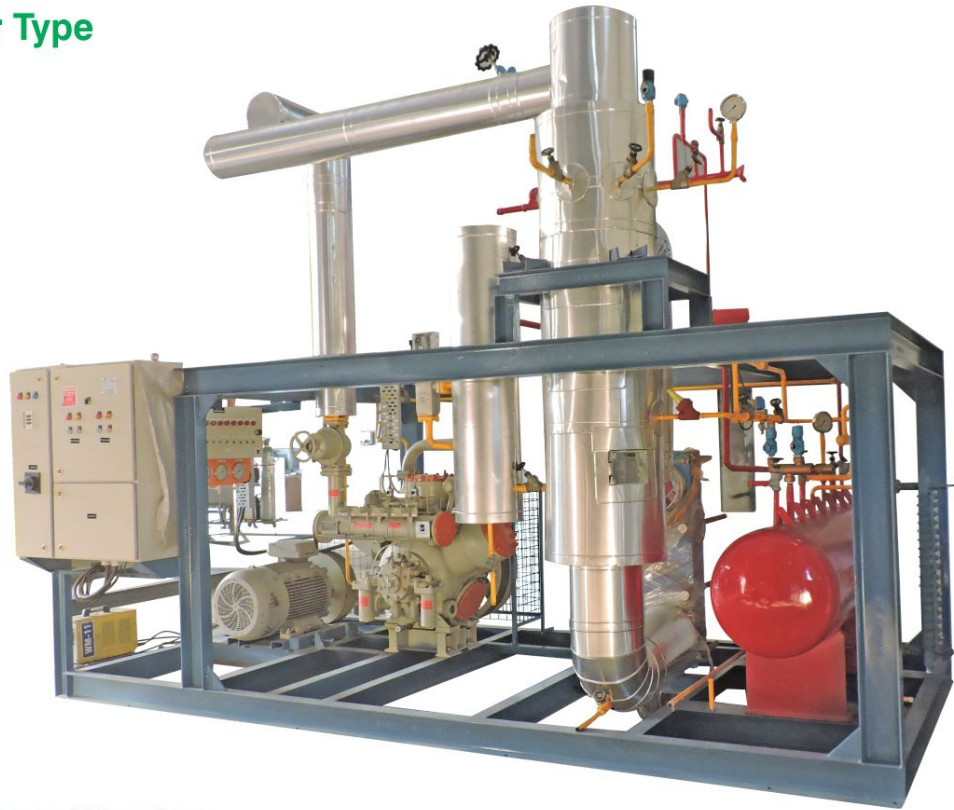
### Liquid-cooling (secondary fluids and products)

- Shell and Tube
- Plate and Frame
- Shell and Plate
- Falling Film
- Scraped Surface
- IBC/IAC

# Ammonia Refrigeration

## Condenser Type

- Evaporative
- Atmospheric
- PHE
- Air-Cooled
- Shell & Tube



## Technical Specification

Sr. no	Chiller Models	*Capacity (in TR)	Motor Rating (in KW)	Chilled water Inlet Temperature °C	Chilled water Outlet Temperature °C
1	ICAMC25	25	22	7 to 10°C	2 to 5°C
2	ICAMC30	30	30	7 to 10°C	2 to 5°C
3	ICAMC50	50	45	7 to 10°C	2 to 5°C
4	ICAMC75	75	75	7 to 10°C	2 to 5°C
5	ICAMC100	100	90	7 to 10°C	2 to 5°C
6	ICAMC150	150	125	7 to 10°C	2 to 5°C
7	ICAMC225	225	200	7 to 10°C	2 to 5°C
8	ICAMC300	300	250	7 to 10°C	2 to 5°C

\* Capacity considered at 800 RPM

## Control Panel and Switch Gear Panel



Pressure cutout  
PLC Panel



IMCC



Switch Board

# Ammonia Refrigeration

## Brine Chiller - Ammonia

Ice Make is a strong player in the refrigeration arena in providing total cold chain solution. Ice Make provides the Industrial & Commercial Refrigeration solutions for every customer's individual needs, since 1993.

Ice Make offers factory built, skid mounted package Chillers for Dairy, Beverage and Brewery Industry that produce Chilled glycol from 0 °C to (-) 6 °C with Reciprocating Compressors. Higher capacities or with Screw Compressor Package tailor made custom built can be offered as required upon request.



## Technical Specification

**Table - 1**

Sr. no	Ice Make Chiller Models	*Capacity (TR)	Motor Rating (KW)	Chilled Glycol Inlet Temperature	Chilled Glycol Outlet Temperature
1	ICABV15	15	22	-2 °C	-6 °C
2	ICABV20	20	30	-2 °C	-6 °C
3	ICABV30	30	37	-2 °C	-6 °C
4	ICABV45	45	55	-2 °C	-6 °C
5	ICABV60	60	75	-2 °C	-6 °C
6	ICABV95	95	110	-2 °C	-6 °C
7	ICABV140	140	160	-2 °C	-6 °C
8	ICABV190	190	250	-2 °C	-6 °C

Capacity In TR & Motor Rating At 800 RPM For KCX Series & 1450 RPM For Pc2.

**Table - 2**

Sr. no	Ice Make Chiller Models	*Capacity (TR)	Motor Rating (KW)	Chilled Glycol Inlet Temperature	Chilled Glycol Outlet Temperature
1	ICABR20	20	22	4 °C	-1 °C
2	ICABR25	25	37	4 °C	-1 °C
3	ICABR40	40	45	4 °C	-1 °C
4	ICABR60	60	75	4 °C	-1 °C
5	ICABR80	80	90	4 °C	-1 °C
6	ICABR120	120	125	4 °C	-1 °C
7	ICABR180	180	200	4 °C	-1 °C
8	ICABR240	240	250	4 °C	-1 °C

Capacity In TR & Motor Rating At 800 RPM For KCX Series & 1450 RPM For Pc2.

# Ammonia Refrigeration

## Ice Bank Tank (IBT)

IBT is a system, which stores energy in the form of ICE.  
It is applicable in Dairy Industry for quick cooling in short time with lower limit of power load.

### Option 1

**Portable IBT | NO NEED OF CIVIL & FABRICATION WORK AT CUSTOMER SITE  
EASY TO LIFT & SHIFT | 40% ENERGY EFFICIENT | BETTER INSULATION**

### Option 2

**M.S. FABRICATED IBT AT CUTOMER SITE WITH CIVIL CONSTRUCTION  
CUSTOMISED IBT | ENERGY EFFICIENT | BETTER INSULATION**

(IBT - COIL IN TANK TYPE)



## Advantage

- Requires less connected power load
- The ice water intensively cools the product without any risk
- Power supply is not required once ice formation is completed
- Wide range of storage tank
- Cooling energy storage

# Ammonia Refrigeration



## Application



**Freezing**  
Processcooling

**Pre-cooling**  
Banana  
Ripening

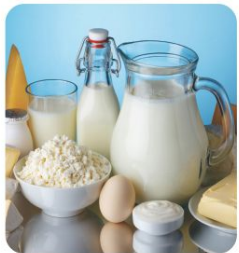


**Industrial Refrigeration**

**Chilling**  
Process cooling



**Process cooling**



**Food Dehydration**

Ammonia Refrigeration

**Chilling**



**Freezing**



**Preserving**



**Dehumidification**

**Refrigeration**



**Preservation**



**Commercial Refrigeration**

**Chilling**



**Industrial Refrigeration**



**Pre-cooling**

## Our Valued Clients



## Our Valued Clients

01. **Baroda Dist. Co-Operative Milk Producers Union Limited**  
**Location:** Vadodara, Gujarat  
 (Milk Processing)
02. **Hooghly River Bridge Commissioners**  
**Location:** Kolkata  
 (14,000 MT Potato Cold Store)
03. **Surenranagar Dist. Co-Operative Milk Producers' Union Ltd. (Sursagar Dairy)**  
**Location:** Surenranagar, Chotila, Patdi, Gujarat  
 (Milk Processing)
04. **A B C Process Solutions Pvt. Ltd. (Banas Dairy)**  
**Location:** Palanpur, Gujarat  
 (Milk Processing)
05. **MagnamNetlinkPvt. Ltd. (Panchamrut Dairy)**  
**Location:** Taloja, Maharastra  
 (Cold Storage)
06. **Swaraj Milk and Milk Products**  
**Location:** PipaliyaRaj, Vankaner, Gujarat  
 (Milk Processing)
07. **Dharwad, Haveri, Gadag, Uttarkannada Dist. Co-Op Milk Producers' Societies Union Ltd.**  
**Location:** Hirekerur Chilling Centre, Karnataka  
 (Milk Processing)
08. **Dharwad, Haveri, Gadag, Uttarkannada Dist. Co-Op Milk Producers' Societies Union Ltd.**  
**Location:** Gadag Chilling Centre, Karnataka  
 (Milk Processing)
09. **Shiv Health Foods LLP**  
**Location:** Kota, Rajasthan  
 (Cold Storage)
10. **Haldiram Snacks Pvt. Ltd.**  
**Location:** Noida, Uttar Pradesh  
 (Cold Storage)
11. **The Panchmahal District Co-Operative Milk Producers' Union Ltd.**  
**Location:** Chopda, Panchmahal, Gujarat  
 (Milk Processing)
12. **Bhilwara Zila Dugdh Utpadak Sahakari Sangh Ltd.**  
**Location:** Bhilwara, Rajasthan  
 (Milk Processing)
13. **Sabarkantha District Co-Operative Milk Producers' Union Limited**  
**Location:** Himmatnagar, Gujarat  
 (Butter Cold Store)
14. **A B C Process Solutions Pvt. Ltd. (Sumul Dairy)**  
**Location:** Surat, Gujarat  
 (Milk Processing)
15. **Chandrakamal Milk & Milk Products Pvt. Ltd.**  
**Location:** Dewas, Madhya Pradesh  
 (Milk Processing)
16. **Bikanerwala Foods Pvt. Ltd.**  
**Location:** Sonipat  
 (Frozen Project)
17. **Gujarat Agro Mega Food Park**  
**Location:** Surat  
 (Blast Freezer, Spiral Freezer, Frozen Cold Store)
18. **Sumul Dairy**  
**Location:** Surat  
 (Falling Film Chiller)
19. **Abhyuday Techno Economic Consultant Pvt. Ltd.**  
**Location:** Ahmedabad  
 (Ammonia Based Vacuum Freeze Dryer)
20. **Vasudhara Dairy**  
**Location:** Valsad  
 (Falling Film Chiller)
21. **GomaEngineering Pvt. Ltd.**  
**Location:** Mumbai  
 (Ammonia Based Skid Mounted Chiller)
22. **Vidya Dairy**  
**Location:** Anand, Gujarat  
 (Falling Film Chiller)



## Network

- Head Office & Manufacturing Plant-I
- Manufacturing Plant-II
- Branch Offices, Dealers & Associates and Company Representatives



WEBSITE



CATALOGUE

# ICE MAKE REFRIGERATION LIMITED

Commercial & Industrial Refrigeration Equipment Manufacturer & Exporter

An ISO 9001:2015, ISO 14001:2015 and ISO 45001:2018 certified Company

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