

# ARMEC COOLING SYSTEM LIMITED

## Ammonia Chilling Plant



### Expandable, Fully Automatic, Ammonia Chillers

- Legislation is in place to phase out chlorofluorocarbons (CFCs) and hydro-chlorofluorocarbons refrigerants due to their harmful effect on the earth's ozone layer. This has led to the development of a new range of synthetic hydro-fluorocarbon refrigerants. The effect of these refrigerants on global warming, when released into the atmosphere is thousands of times greater than carbon dioxide. This has resulted in tighter legislations on the sale and usage of HFC refrigerants.
- The ARMEC made Chiller overcomes these environmental and long term availability concerns. Ammonia is naturally occurring refrigerant, with zero ozone depletion potential and zero global warming potential.
- The unit comes pre-charged and tested, to simplify site installation works and minimizing commissioning time. It is ideally suited for applications including chemical process cooling. There are many models of water cooled Ammonia Chiller with nominal capacities ranging from 20 TR to 500 TR based on cooling water at +5°C Alternative secondary fluids including glycol enable Ammonia Chiller to operate at fluid temperatures down to -10°C to -40°C without modification to the standard design.

### Advantages of our chilling plant

- ✓ It saves up to 40% power in comparison to conventional Chilling plant.
- ✓ Factory tested, Portable and ready to install.
- ✓ Fully automatic.
- ✓ No need of operator
- ✓ Very less gas required (6 times) compared to conventional chilling plant.
- ✓ Required 1/3 space than conventional chilling plant.
- ✓ Oil return from oil separator is also automatic.
- ✓ Variable capacity in single chiller.
- ✓ Automatically adjustable capacity as per heat load.
- ✓ Can be expanded as per the need and load.
- ✓ Useful in applications where temperature requirement ranges from -40°C to +25°C.
- ✓ Chiller capacity ranges from 20TR to 500TR.
- ✓ Less maintenance.

# ARMEC COOLING SYSTEM LIMITED

## Technical Description

- ✓ ARMEC continuing with its never ending Endeavour to provide the latest and most advanced technology, now introduces for the first time in India, the fully Automatic, Expandable, Ammonia Chiller
- ✓ Ammonia chiller is naturally Expandable without much change to the standard design. The ammonia chiller can expand up to 30% of the actual of the plant.
- ✓ Ammonia chiller has been designed to meet the space constraints of a new or existing plant. All necessary components are mounted on the package, eliminating the need for additional site wiring or ammonia piping work installation. Optional heat recovery from the oil cooling circuit takes waste heat from the compression process and can be used for applications such as heating of glycol.
- ✓ Bringing down 1kW/1TR to just 0.8- the best in its own class, this saves power up to 40% as compared to conventional system.
- ✓ In addition to this, some sparkling advantages of the machine will make you feel that having any other requirement for your cooling needs will be a compromise.
- ✓ Unlike conventional chillers, this chiller operates at a wide range of capacities
- ✓ By ensuring consistent quality of the product, end user can provide the constant temperature to the process, starting at zero load and adjust to the process load, ensuring almost no breakdown of the components resulting in longer life.
- ✓ Designed for extreme ambient conditions (up to +50°C), considering highest engineering standards.
- ✓ The fully automatic expandable ammonia chiller is 40% power saving compared to conventional chilling system.

# ARMEC COOLING SYSTEM LIMITED

## ARMEC MADE reciprocating chiller

- We Design and Manufacture Ammonia based Packaged Chillers/Chilling Plants up to (-) 40° C, at our Factory situated at Changodar, Ahmedabad, which is one of the Developed Industrial Areas of Gujarat. The System is designed in accordance with latest National and International Standards.
- We offer range of Packaged Chiller/Chilling Plant with Water Cooled Type
- Condenser, Hermetic, Semi Hermetic, Open Type Reciprocating, Screw etc. type compressors, Evaporators, Complete Control Panel, Expansion Valve, Electrical Panel with Complete Interlocking System and fault Indication. The Packaged Chillers are tested for more than 48 hours under our stringent quality control System. Physical inspection and performance run trial of Packaged Chillers, is always insisted to the Client before dispatch.



## Technical Description

- ✓ **Optimum Operating Parameters**  
With ARMEC Chillers Capacities, Temperature, Refrigerant and the choice of ancillaries can be tailored to individual requirements.
- ✓ **Variable Packaged Contents**  
Dependent of customer wishes the Packaged can include components say for example the Compressor, Drive Motors, Pumps, Panels etc.
- ✓ **Compact Package**  
ARMEC Packages are delivered complete with internal piping, instrumentation, and wiring and ready for connection to the customer system immediately on arrival at site.
- ✓ **Simple Operating System**  
All Operation and maintenance elements are accessible from one side for easy operation and maintenance.
- ✓ **On Site Utilities**  
ARMEC Packages does not require any site and are ready to use type.

# ARMEC COOLING SYSTEM LIMITED

## ARMEC MADE Screw chillers

- We manufacture and supply wide Ammonia based Screw Chillers, with Water Cooled with variety of (Low / Medium) temperature range up to (-) 40 Deg C.
- We provide varied range and makes of **Screw Compressors** with Single and Twin Screw arrangements and with required fittings.
- We Provide Screw Chillers with Environment Friendly and HFC Free Refrigerant Ammonia.
- Selection of Excellent and first grade Raw material and fittings, and Experienced, Excellent and Quality workmanship is the key to guaranteeing Screw Chiller **Quality**.



### Characteristics

- ✓ Full Product Range Suitable for Low Temperature and Medium Temperature Applications
- ✓ High Performance Compressors manufactured by specialized manufacturer like (JE HALL, BITZER, REFCOMP, FUSHENG, etc.), is adopted to ensure that the Chiller is Economical and durable.
- ✓ Precise Capacity Control 3 Steps/ 4 Steps or Continuous – Step less Capacity Control System. Both the Capacity Control System consists of Modulation Slide Valve, piston rod, cylinder and piston rings.
- ✓ Advanced control algorithm is adopted to control chiller in advance and hence avoid frequent stoppage.
- ✓ High Efficiency, Energy Saving & Low Operating Cost.
- ✓ Wide Operating Range.
- ✓ Automatic PLC Control.
- ✓ Robust and Simplified Structure, high reliability.
- ✓ Top Level Efficiency, Energy Efficient Performance and Long Lasting Reliability.
- ✓ Maximum Accessibility and Total Connectivity.
- ✓ **High Energy Efficiency** Variation in the Load of the Plant, whether seasonal or Daily, mean that the Chiller functions mainly with partial loads. The high number of capacity Steps available, the capacity to supply a load that meets the needs of the Chiller with less power absorption and the optimization of performance with partial loads distinctive features of these chillers, allow attainment of the high level of EER energy efficiency. High Energy efficiency means more respect for the environment and more cost savings. Conforming to ASME, TEMA Standards.