

Excel energy

Process Cooling Systems

CO2

R410a

R717

R134a

R404a

HC



Process Refrigeration Systems
Integrated cooling solutions

www.excelenergy.co.in

About Excel Group

Excel Energy System, a member of Excel group of Companies, is one of the premier refrigeration engineering solutions providers and refrigeration systems specialists.

Excel Group Founded in 2006, ventured into Engineering, Infra, Skilled Manpower resources, Logistics etc., Excel Energy Systems is part of our engineering group offering engineering Systems for process cooling applications of industries like pharma. Bulk drugs, chemicals, fine chemicals, refineries, food processing and cold chain solutions.

Our strengths lie principally in:

Engineering Expertise with more than 25 Years rich experience in the refrigeration industries with the back ground of systems evaluations and integration, product development and validations.

Manufacturing Experts with more than 25 years experience, talent and technique from world class manufacturing companies

Team of technical Sourcing with knowledge of international manufacturer and latest technologies.

Team of 20 years experience in installation, testing , commissioning and servicing of refrigeration systems - serving the pan India clients with our associates.

Group Companies:

Excel Group Companies Involved in five independent business-specific solutions and each of these has its own facilities for market coverage and service to customers.

**Excel Maritime | Beats Jobs | Excel Infra
Excel Energy Systems | MD IMPEX | Zeal TNE**

Excel Energy Systems - manufacturer of :

Low Temperature Refrigeration system (Up to Minus 90°C) | Brine and Water Chilling Packages, Condensing Units and Rack System | Components for Refrigeration systems | Heat Exchangers and pressure Vessel

Project:

Low temperature refrigeration | Cold storage | Customized Process Chilling.

Sales & service

Sales project execution provides | PAN India/ Overseas support | Services.

About Excel energy

Excel Energy Systems Pvt Ltd is a Team of Professionals providing end to end solutions in Process Cooling Industrial Applications covering Design, Manufacture and Supply of customised Industrial Refrigeration Systems catering to cross segments industrial needs.

We serve the following Industrial Applications:

- Pharma and Bulk Drugs
- Chemicals and Fertilizers
- Liquefaction, condensation and Storage
- Heat Pump / Hot Water Generation
- Refineries and Petrochemicals
- Oil, fluid and Concrete cooling
- Health care Industries
- Food Processing and Dairies
- Cold stores and Cold Chain Solutions
- Plastic/Injection Moldings Industries

With our Competent professionals enriched with vast Industrial experience, We provide customized solutions on an end-to-end basis for all Industrial Cooling and Refrigeration systems.

Our full-fledged expertise in System Design, innovative Engineering and Quality Manufacturing aiming to deliver all our products at high Quality and less time.

Our Design accounts for Energy efficiency, reliability with the integration of latest Technologies and centralised Automation systems. Our Products are Energy efficient using eco-friendly refrigerants like Ammonia, Propane, Propylene, CO₂, R134a, R404a, R407c, R410a, R507, Low GWP Refrigerants, Natural refrigerants, etc.,

Our Design and Manufacturing process meet the requisite Industrial Standards and Energy norms. Our principle on Continuous improvement approach driving always high reliable product design and flawless service support throughout the Life Cycle of the product.



Process Refrigeration Systems

Factory built packages for the process cooling applications

Water & Brine Chilling Packages (Air-cooled and Water Cooled)

Low and Ultra-low temperature system

Liquefaction, condensation, unloading and storage System

Group	Temperature Range	Application	Capacity Range (TR)
High Temperature	80 to 5 °C	Hotel, Hospital, Industrial	5 - 1500
Medium Temperature	5 to Minus 10 °C	Pharma / Chemical / Bulk Drugs	5 - 750
Low Temperature	Minus 11 to Minus 40 °C	Fine Chemicals / Petro-chemicals Research / Food Processing	5 - 500
Ultra-Low Temperature	Minus 41 to Minus 90 °C	Other Industrial	5 - 500



Excel Energy Systems Pvt Ltd is a Team of Professionals providing end to end Solutions in Industrial process cooling applications

Our Customized refrigeration packages are

- Design in accordance with the latest Engineering and Manufacturing standards
- Skid Mounted, Factory wired, Tested and Refrigerant charged units
- Robust construction for continuous reliable for seamless operation
- Highly Reliable compressors - Reciprocating, Single and Twin-Screw technologies
- Available in Screw/Reciprocating Semi-Hermetic and Open type compressors
- Refrigerants: Ammonia, R22, R404a, R134a, R407c, CO2, R23 etc.,
- Secondary Fluid Cooling like Methanol, MEG, PPG, MDC, Cacl2, Acetone, Water, Oil and other industrial heat transfer fluids like Marlotherm, Dowtherm etc.
- Built-in super-Efficient Oil management system for compressors
- Compact Low foot print packages using high efficient imported finned tubes
- Step less capacity control - Option with VFD driven motors for better part Load Efficiency
- Vibration Free Low Noise units
- Complete Automation using imported Microprocessors and PLCs with colour touch pad HMI's



Our Refrigeration Products

Ultra-Low Temperature System

With our vast experience, we offer customized ultra-low temperature cooling solutions up to Minus 90°C with process fluids like Methanol, MDC, Acetone and other industrial heat transfer fluids like Marlotherm, Dowtherm etc.,

Brine Chilling System

Our brine chilling system uses reciprocating/Screw compressor technology



Features of our Process refrigeration products

- Two stage/three stage open/cascade systems based on the temperature applications.
- Reciprocating, Screw compressor with Single and Twin-screw technology.
- Low refrigerant charge using highly efficient heat transfer tubes and Plate heat exchangers
- Step-less variable speed capacity control system meeting process demand accurately
- Fully automated controls using flexible PLC Programs capable of handling load fluctuations for efficient operation.
- Automated In-built oil management system with best oil separation technologies.
- Wide range of natural and eco-friendly refrigerants
- Compact Skid Mounted package for wide range of applications
- Suitable for Dual Temperature mode to use the system for different Process reaction temperatures

Liquefaction, Condensation, Unloading and Storage units:

We design and manufacture the products for liquefaction, condensation and storage systems of Industrial gases refrigerant like Chlorine, Carbon-di-oxide, Ethylene, Ammonia, HFC, etc.



Heat Pump / Hot Water Generation

We manufacture simultaneous cooling and heating generation system with screw/scroll and reciprocating compressors.

- Air Cooled and Water-Cooled Hot water units for Hotels/Restaurants, Swimming pool heating, etc.,
 - Simultaneous heating and cooling units for achieving maximum efficiency
 - Maximum Hot water temperature up to 90°C and other heating medium up to 120 °C
 - Eco-Friendly Refrigerant with Semi-hermetic screw compressors
- Heating Capacity Range: 60 KW to 450 Kw.

Cold Storage, Food Processing and Dairy applications:

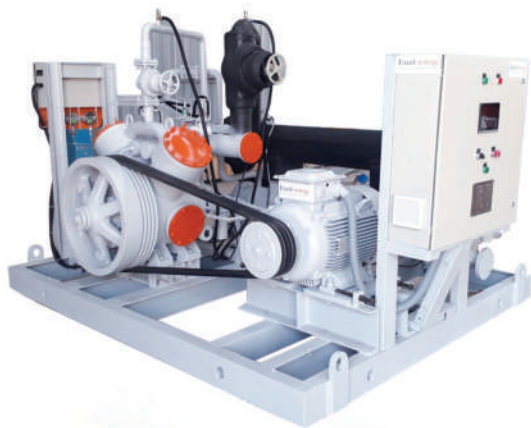
We manufacture single /two stage refrigeration systems for

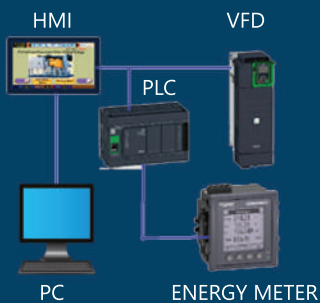
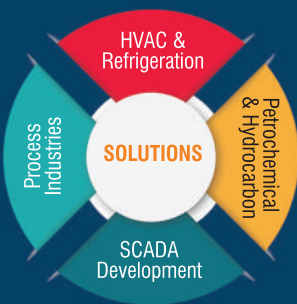
- Ammonia Over Feed system for cold storages, IQF, Blast Freezer etc.
- Chilling of water up to 0.5°C for food product chilling and process
- Flake/Tube ice system
- Rack System for Cold storage application with screw and reciprocating compressors using refrigerants like R134a, R404a for chiller and freezer room applications
- Condensing and evaporator units for cold rooms



PLASTIC /INJECTION MOLDING/ OIL/CONCRETE COOLING

- Higher Chilled water temperature up to 25°C Water Chillers
- 4°C Chilled water package for Concrete mixing and cooling
- Direct and Indirect Hydraulic oil cooling and units
- Chilling Units with tank and Pump circulation unit
- Lab Over Hand water tank cooling





Customised Automation Solutions For Industrial Application

- Skid mounted reputed make IP55 PLC Enclosure with Dust & Water Protection
- Option of choosing the PLC / Automation Giants like Siemens Schneider MCS USA Programmable Micro PLC's - Optional
- Provision of Modbus RTU protocol over RS 485.
- Options Profibus & Profinet, Modbus TCP/IP Communication Protocols over RS 485 & Ethernet Ports
- Downloading PLC & HMI Programs through Memory Card & USB enabling total Software & Hardware integrations
- IP65, High Resolution HMI Panels with Data logging of all the inputs on USB
- Remote Monitoring Facility, SCADA Solutions
- Option of VFD starter with Star Delta Bypass to eliminate the down time of the system.

HAZARDOUS ENVIRONMENT

- Flameproof Instrumentation and Controls suitable for Hazardous Area application e.g. Zone1 / Zone2, Gas Gr. IIA/IIB, T3
- Instrumentation Hook ups / Cabling as per hydrocarbon industry standards.
- Instruments, Junction Boxes, Signal & Control Cables , Local Control Panels with the required certification of hazardous area such as CCOE/ PESO/ ATEX
- Hook up to client's DCS/ ESD systems
- Provision of Vibration Monitoring System for preventive maintenance

OUR EXPERIENCE....



**85 TR / Minus 25 °C
Brine Chiller**



**168 TR / Minus 5 °C
Brine Chiller**



**50 TR / 5 °C
Water Chiller**



**72 TR / Minus 25 °C
Brine Chiller**



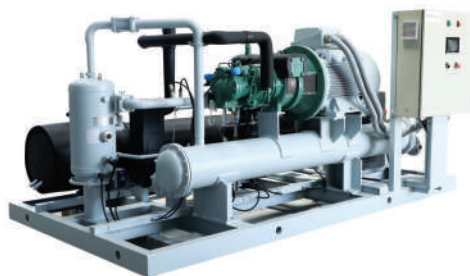
**50TR / Minus 10 °C
Brine Chiller**



**48 TR / Minus 30 °C
Brine Chiller**



**50TR / 5 °C
Water Chiller**



**30TR / Minus 20°C
Brine Chiller**



**25TR / Minus 25°C
Brine Chiller**

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