

A large iceberg floats in a blue ocean under a cloudy sky. The visible tip of the iceberg is jagged and white, while the submerged portion is much larger and darker blue. The letters 'TMS' are superimposed in white, with the 'T' and 'M' partially overlapping the submerged part of the iceberg. A large, solid blue triangle is positioned on the left side of the image, pointing towards the iceberg.

# TMS

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INDUSTRIAL REFRIGERATION

# ABOUT US

Tailor Made Solutions (TMS) was founded in 2002 based on accumulated experiences since 1990. TMS is a market leader on industrial and process refrigeration systems application and serves the broad clientele as a solution partner. TMS's philosophy is based on customer satisfaction and confidence.

TMS provides proactive approach on the successful planning, production, application and delivery of many successful projects in heavy industrial fields including iron and steel, cement and petrochemicals industries.

TMS is a leading company in the changing local and global market that aims to provide specialized refrigeration systems and tailored made solutions to your projects.

TMS is committed to ISO9001 standards that allow taking test and quality control plans under record to provide fast and efficient after sales services. All necessary information and education is provided by our specialized engineers and technicians to our clients.

All TMS products require less maintenance compared to competitive products in the market. In addition, most our spare parts are supplied from leading global brands distributed in many parts of the World that can be easily provided in case of need.

As a global company that has many distributorships and service points, we will be happy to be your local and global solution partner in your projects

Best Regards,  
TMS Team.



# WE ARE MANUFACTURING REFRIGERATION EQUIPMENTS FOR TODAY AND FUTURE'S INDUSTRIES







# VKS SERIES CRANE CABIN COOLERS

# VKS

## STRONG SOLUTIONS IN HEAVY INDUSTRIES!

TMS VKS Series Crane Cab Coolers are used in iron and steel manufacturers, coke plants, cement manufacturers, aluminum plants and similar industries. High temperature, radiation, excessive dust and corrosive environment are the nature of such heavy industries. The process cranes are subjected to such work conditions. Thus, the need to protect operator cabins, automation and electrical equipment arises for the good functioning against the challenging working conditions.

The required protection of crane cab and other working units against heavy work environment are provided via custom designed and calculated air conditioning and filtering systems.

VKS series Crane Cabs Coolers are designed for all work conditions. Tailored to the special needs of any given working condition and environment, the design can easily be altered and optimized on 12 points depending on the information provided by the client.

VKS series has a broad and flexible product range. The units are designed and produced to easily function in cooling range of 2,5 to 64kW and in temperatures of upto +95°C. Depending on the required work conditions, the series are manufactured in three types, namely package, split and compact. Tailored to the special needs of the project, VKS series provide efficient, reliable and long lasting solutions.

Environmentally friendly options, designed depending on the temperature variation of the working environment in compliance with F-gas regulation such as R134a, R227ea and R236fa are available. These groups do not include CFC or HCFC.

TMS's philosophy is based on novelty, technology and progress. We are committed in solving problems relating to air conditioning and air quality with our game changing approach.

*Every problem has a solution!*

Please contact us for more detailed information concerning our VKS series product line.



Package Type With APU Integrated



Package Type



Package Type With Stainless Steel Body



Split Units With Stand-by Option



# IAC SERIES AIR/WATER COOLED INDUSTRIAL TYPE AIR CONDITIONERS

## SOLUTIONS WITHOUT LIMITS!

IAC Series are widely used in industrial plants, electrical and automation rooms, laboratories, data processing centers, control rooms, battery rooms and various industrial applications.

IAC units manufactured with environmentally friendly refrigerants are designed to function in temperatures as high as +60°.

IAC units are manufactured Air/Water cooled in three types:

- SCU(Self-Contained Unit)
- Rooftop
- Split unit (Condensing unit + indoor units )

Depending on wide product types and models, IAC group cooling capacities range from 10kW to 400kW.

Tailored to the special needs of any given working condition and environment, the design can easily be altered and optimized on 20 points depending on the information provided by the client.

Surpass your standards with TMS

# IAC

Additional options to suit your needs are as follows:

- i. Product type: SCU, Rooftop and split unit product series depending on the project needs,
- ii. Refrigerants: refrigerant selection depending on the work place temperature,
- iii. Corrosion protection: body material selection depending on the corrosion environment of the workplace that the product is located,
- iv. Compressor type selection,
- v. Fixed or adjustable speed compressor selection,
- vi. Air duct or plenum box exited options,
- vii. Heat exchanger type: material type that can alter depending on the corrosion environment of the workplace.
- viii. Heat exchanger corrosion protection: coating on the heat exchanger depending on the corrosion environment of the workplace.
- ix. Heating options,
- x. Fixed or adjustable condenser fan selection ,
- xi. System optimization kit for colder areas,
- xii. Filter options,
- xiii. Evaporator fan type and pressure fans selection,
- xiv. Remote monitoring and control selection,
- xv. Different power supply options,
- xvi. Fresh air kit: for the Rooftop series,
- xvii. Free cooling kit: for the Rooftop series.



SCU Type



Rooftop Type



Split Type- Outdoor Unit



# ATEX EXPLOSION PROOF AIR/ WATER COOLED COOLERS



# ATEX

In order to select the right product, the below ATEX classification is being given by the clients,

**Ex II 2 G Ex de IIC T3 Gb**  
II: Other explosive zones  
2: Zone 1 ve Zone 2  
G: Gas  
Ex: European Standard  
de; d: Ex-proof body, e: Enhanced safety  
IIC: Explosive group  
T3: Surface temperature max200°C  
Gb: Equipment Protection Level (EPL)

ATEX classified products area Zone1 and Zone2, surface temperatures T1, T2,T3,T4 and explosive groups IIA, IIB, IIC are produced with certification. Electrical heater or Heat Pump options are available. APU filtration systems can be integrated to capture harmful gases.

## TOP LEVEL SAFETY AT YOUR SERVICE!

Petrol platforms on land and on open seas, petrol rafinar-ies, nuclear centrals and similar plants require highest levels of safety. All the materials for such plants require ex-proof materials.

Our production and after sale service unites are certified with 94/9/EC directive.

All TMS ATEX products are classified according to their serial numbers and ATEX classifications. Prior to shipment, all third party tests are being conducted and a certification approval is obtained for each unit.

All VKS, IAC and HSC series units are ATEX certified. Optimization is provided in accordance with unit series and work conditions.



IAC- Exproof Type With Stand-by Option



IAC- Split Ex-Proof Type



HSC Ex-Proof Type



VKS Ex-Proof Type



# TKS SERIES GRAIN DRYING AND COOLING UNITS

# TKS

## INCREASE YOUR EARNINGS WHILE REDUCING LOSSES IN THE GRAIN SILOS!

Each year millions metric tons of grain are being lost due to inappropriate storage conditions. Air humidity, temperature, insects and insufficient air conditioning affect the quality of the storage, damage the harvest and reduce the storage periods. Appropriate and efficient storage conditions are one of the most significant elements in World's grain supply. Grain is a significant nutrition element for the World in general and it's very possible to minimize losses with appropriate storage conditions.

The main enemy of grain storage is insects and mold. Microorganisms show a steep increase in temperatures above 25°C and humidity over 70%. In average, a well managed grain storage loss is about 1-2% compared with 10-12% in less well managed storages. Harvest temperature of the grain is between 25-50°C. After the harvest, grain requires drying and cooling prior to storage. Two decisive factors in storing grain without deterioration are humidity and temperature.

Every agricultural product has an appropriate temperature and humidity level. Cooling the grain to 15°C and reducing the humidity to safe levels means protection from insects and molds.

For small, medium and large storage spaces alike, TKS Series units allow your grain to remain safe while operating costs are low. The return on investment is fast due to advantageous nature of the systems.

Advantages of TKS series units:

- The effective air-conditioning of the storage spaces independently of the harvest weather conditions.
- The highest grain quality maintenance from the time the storage begins.
- The reduction of losses due to breathes.
- Maintaining the storage temperature below the critical level in order to keep safe from molds and insects.
- A more ecological and effective approach due to unnecessary re-storage and chemical transaction.
- Built-in touchpad panel shows all values, makes all temperature values adjustable, thus allowing optimization depending on the grain type.

TMS's flexible approach helps design the required units in accordance with the special needs of the clients.

Please contact us for more detailed information concerning our TKS series product line.





# ACU SERIES AIRCRAFT COOLING UNITS

# ACU

## LOWER COSTS, HIGHER SERVICE QUALITY ON GROUND SERVICES!

ACU Series (Aircraft Cooling Unit) is a mobile unit that provides service to parked aircrafts using diesel or electrical engines. For aircrafts parked at a distance from passenger stairs, the ACUs provide air-conditioning service to aircrafts.

ACU units are used in situations when there is no other outside power or air-conditioning service. The system provides filtered and conditioned air to electronic equipment, the cockpit and the passenger cabin.

The air-conditioning service is provided for the electronic equipment and the passenger cabin prior to take-off. Otherwise, the passengers would face CO2 concentration and high temperatures which creates a great deal of discomfort.

ACU has lower cost compared to the present APU systems, thus it already is a system used in many airports around the Globe. In average the return on investment (ROI) of an ACU system is between six months to year depending on the airports.

TMS-ACU units are designed and developed by TMS engineers that are highly experienced in ground services. Efficiency, safety and ease of maintenance are the core of the design and is the result of high technology used in creating ACU units.

Flexible hoses connected to the aircraft provide air-conditioning to maintain the inside of the aircraft at desired temperatures at outside temperatures ranging from 20°C to 40°C. ACU Series units can be modified to answer the needs of tropical climate conditions.

ACU series consist of five models ranging from 1,25kgs to 6,5kgs capacities. Efficient and compact heat exchangers are being used and depending on the size of the models, semi-hermetic or screw compressors are used to insure reliable and safety equipments.

Built-in, user friendly touch panel with PLC automation and special software provides the ease of remote monitoring. The air pressure is being balanced and regulated by high pressure fans and frequency invertors.

ACU series automation panel provides communication protocols using PLC and Web server, Modbus/TCP, BACNet, FTP, DHCP, DNS, NTP.

The upper body of the equipment is made of GRP (Glass Reinforced Plastic) material for weight efficiency.

The generator sets are supplied from leading global brands distributed in many parts of the World that can be easily provided in case of need.

Please contact us for more detailed information concerning our ACU series product line.





# GKS SERIES PROCESS AIR COOLING AND DRYING UNITS

# GKS

## ALWAYS HIGH QUALITY ON FOOD TRANSPORT PROCESS!

Nowadays, in modern food industry, pneumatic systems are being used to transport materials such as powdered sugar, starch, cacao and similar materials. The dew point of the process air on the pneumatic conveying belt should be reduced in order to avoid piling/clogs and maintain the necessary hygiene.

In areas where there is year round relative humidity rate in the air, hot and humid air poses an important problem. The temperature and humidity of the blown process air needs to be reduced.

Conditioned and air kept under quality limit values using GKS series units allow the continuity of production processes. The high air quality of the pneumatic conveying belt extends the shelf life of food items and critically reduces operating costs.

GKS series units are designed and manufactured in accordance with the special needs of the operating conditions. Thanks to tailored manufacturing approach, GKS series units provide full performance and efficiency offering soaring advantage when compared to standard units in the market.

Please contact us for more detailed information concerning our GKS series product line.





# APU SERIES AIR PURIFYING UNITS

# APU

## CLEAN AIR AND EQUIPMENT SAFETY!

In today's global work atmosphere safety and health of the work place is increasingly more important. Despite many precautions, work environment of heavy industries is often dusty, acidic and even carcinogenic. This environment may cause serious harm and permanent disease to humans.

APU series filter units are developed as a result of research and development conducted by TMS engineers over many years. These filter units absorb poised dust, harmful gasses and bad smell. APU Series filters offer tailored solutions to enhance human health and protect operating material at every point of your process.

Four different filter types are used in APU Series air purifying units:

- CASSETTE FILTER; Holds dust and particles at intake air, the amount of pre-filter stages can be increased depending on the density of dust in the air.
- ACTIVE CARBON FILTER; Holds bad smell and harmful gases in air purified from particles and dust. Attention must be paid to the air flow and density of bad smell in the air.
- CHEMICAL FILTER; Holds 99,5% of harmful gases in air purified from particles, dust and bad smell. Careful thinking is necessary in choosing and applying this chemical filter. Firstly, air quality measurement must be done and the nature and gas volume ratio should clearly be defined. The Chemical filter holds all the following gases: Azote Dioxyde (NO<sub>2</sub>) Hydro Carbons (VOC's) Chlorine (Cl) Ozone (O<sub>3</sub>) Hydrogen Sulfide (H<sub>2</sub>S) Sulfide Dioxyde (SO<sub>2</sub>), Ammonia (NH<sub>3</sub>) Amines (R-NH<sub>2</sub>) Mercury (Hg) Azote Oxyde (NO) Formaldehydes (CH<sub>2</sub>O) ve Organic Acids.
- HEPA FILTER; at its final stage HEPA filter holds 99% of all types of dusts including tiny and invisible dusts.

Using special calculation methods, our engineers design and configure the right filter type for the needs of your operation.

Please contact us for more detailed information concerning our APU series product line. We would be happy to design the APU series filter that best suits your needs.





# PKS SERIES PANEL COOLING SYSTEMS

## KEEP PANEL EQUIPMENT HEAT UNDER CONTROL!

In today's Global market, energy efficiency has become increasingly more significant in production processes due to ecological and energy efficiency reasons. Humidity, dirty air, dust, oily environment and corrosive gasses and high ambient temperatures prevent technological equipment from working efficiently, making it mandatory to maintain these equipments in electrical panels. As a result of this practice the heat in the panels increases to a great deal. The panels are being air-conditioned via a closed circuit cycle.

This system is of high importance as without this protection technological equipments would be seriously damaged.

TMS/PKS Series panel air-conditions protect the technological equipment against all negative conditions described above.

# PKS

TMS/PKS Series provides superior energy efficiency and ease of installation that allows differentiation from rivals in the domestic and global market.

In PKS Series panel air-condition systems; the airflow is supplied with two independent air cycles: the internal circuit cools down the hot air received from inside the panel to resupply to the panel, the external circuit discharges the air from inside the panel to outside. All this process is provided by hermetic compressors, heat exchangers and secondary cooling equipments.

Control thermostat: is provided either via microprocessors with LED/LCD controls or using electronic thermostats. Control thermostats allow indication of all fault alarm signals.

The highest system safety is achieved via integrated timers allowing optimum compressor performance.

The exterior is designed using 3D CAD/CAM software; the CNC manufactured body allows an ergonomic design.

All PKS units are CE certified.

All refrigerants are environmentally friendly and do not include HCFC and CFC.





# HSC SERIES AIR/WATER COOLED INDUSTRIAL TYPE LIQUID CHILLERS

# HSC

## ALTERNATIVE SOLUTIONS REGARDING THE REQUIREMENTS!

HSC Series process liquid cooling is widely used in modern industries.

- Process chillers used in plastics industry regulate temperature in injection and blowing moulds to reduce cycle times.
- Process chillers used in baking industry allow more mixture times resulting in higher quality flour.
- Process chillers in food industry are used for cooling purposes in chocolate, vegetables, confectionery manufacturing.
- Process chillers in pharmaceutical industry help reduce total production time and labor costs.
- Process chillers in printing industry regulate the temperatures of printing and cylinders, increasing ink absorption and reducing dropping. Thus, printing process accelerates, efficiency and product quality increases.
- HSC Series liquid coolers chiller units are used in shipbuilding, aviation, chemical, composite production and defense industries.

HSC Series Liquid Cooler chiller can be produced with ATEX certification.

HSC Series Liquid Cooler chillers have cooling capacity between 12kW to 1700kW. When compared with standard chillers, HSC Series are designed to work 24/7 at any given season offering higher reliability and less maintenance. HSC Series offers a more compact structure compared to the competitors due to the fact that the pump and tank are positioned on the unit. In addition, a single PLC automation panel allows total control over the entire system.

Please contact us for more detailed information concerning our HSC series product line.





# PFC SERIES PLASTIC FILM COOLERS

# PFC

## MAXIMUM EFFICIENCY ON PLASTIC!

PFC Series units are designed to be used in plastic film extrusion lines.

Packaging materials and plastic bags are produced in extrusion lines. Melt and liquid polymers are extruded at several meters lengths using the right cooling methods.

Cooling allows the extruded film to harden and reach the right thickness. The quality of cooling using ambient air depends on the weather and humidity, thus does not always give the same outcome. The PFC Series units provide the same cooling quality allowing the same material thickness and improved operating costs.

The PFC system operates with a HSC liquid chiller unit that supplies permanent cold water. The cold water originating from HSC chiller, the high pressure blower in PFC unit and the heat exchanger cools the blowing air needed by the extruder.

The stainless steel body of the PFC unit prevents any corrosive effects making the process corrosion free. Long adaptors located in air inlet and outlet of the PFC unit reduces pressure losses and increases heat exchanger surface efficiency.

Using the three-way automatic temperature control valve water with constant temperature is supplied to cooling heat exchanger. By means of high pressure and frequency inverter blower, the outlet air temperature and pressure remains constant.

PFC series have models with air flows ranging from 1200m<sup>3</sup>/h to 8400m<sup>3</sup>/h and cooling capacity ranging 17 to 110KW.





