

TAILOR MADE SOLUTIONS
MARINE & OFFSHORE
PRODUCT LINE



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ABOUT US

Discover TMS, stands for “Tailor Made Solutions”

Established in 2002, TMS leverages experience from various heavy industries since 1990 to provide customized industrial and process cooling systems. We focus on engineering, design, quality, reliability, durability, and on-time delivery, offering solutions for highly corrosive environments, extreme temperatures, and high dust levels.

Research & Development

Our 18-engineer R&D team, collaborating with Istanbul’s Technical Universities, offers innovative HVAC and refrigeration solutions. Our Design Center specializes in:

- Cooling system design
- HVAC/Refrigeration software development
- Automation and control panel design
- Mechanical design and analysis

Using software like Unilab Shark, EPlan, and Solidworks, we optimize and test designs in our Climatic Test Rooms. Our custom software “CoolZone” aids in equipment selection and site-specific analyses.

Quality Management

We adhere to ISO 9001:2015, ISO 14001:2015, and ISO 45001:2018 standards, emphasizing continuous improvement and customer satisfaction. Our CE and EAC certified products meet various international regulations like NORSOK, SOLAS, RMRS, ATEX, and IECEx. We provide after-sales service in 34 locations worldwide.



Design Center

Our Design Center, recognized by the Ministry of Industry and Trade, focuses on:

- Cooling system design
- HVAC/Refrigeration software development
- Automation and control panel design
- Mechanical design and analysis

We use advanced software for cooling cycle optimization, electrical project design, and 3D structural design. Our in-house “CoolZone” software streamlines equipment selection and site-specific analyses. Climatic Test Rooms allow rigorous testing of prototypes under varied conditions.

Manufacturing

Our dedicated production staff ensures prompt, high-quality product delivery. Using an ERP system, we integrate processes from order management to logistics, ensuring efficiency. We comply with IEC 81346-2:2019 standards and employ lean manufacturing techniques.

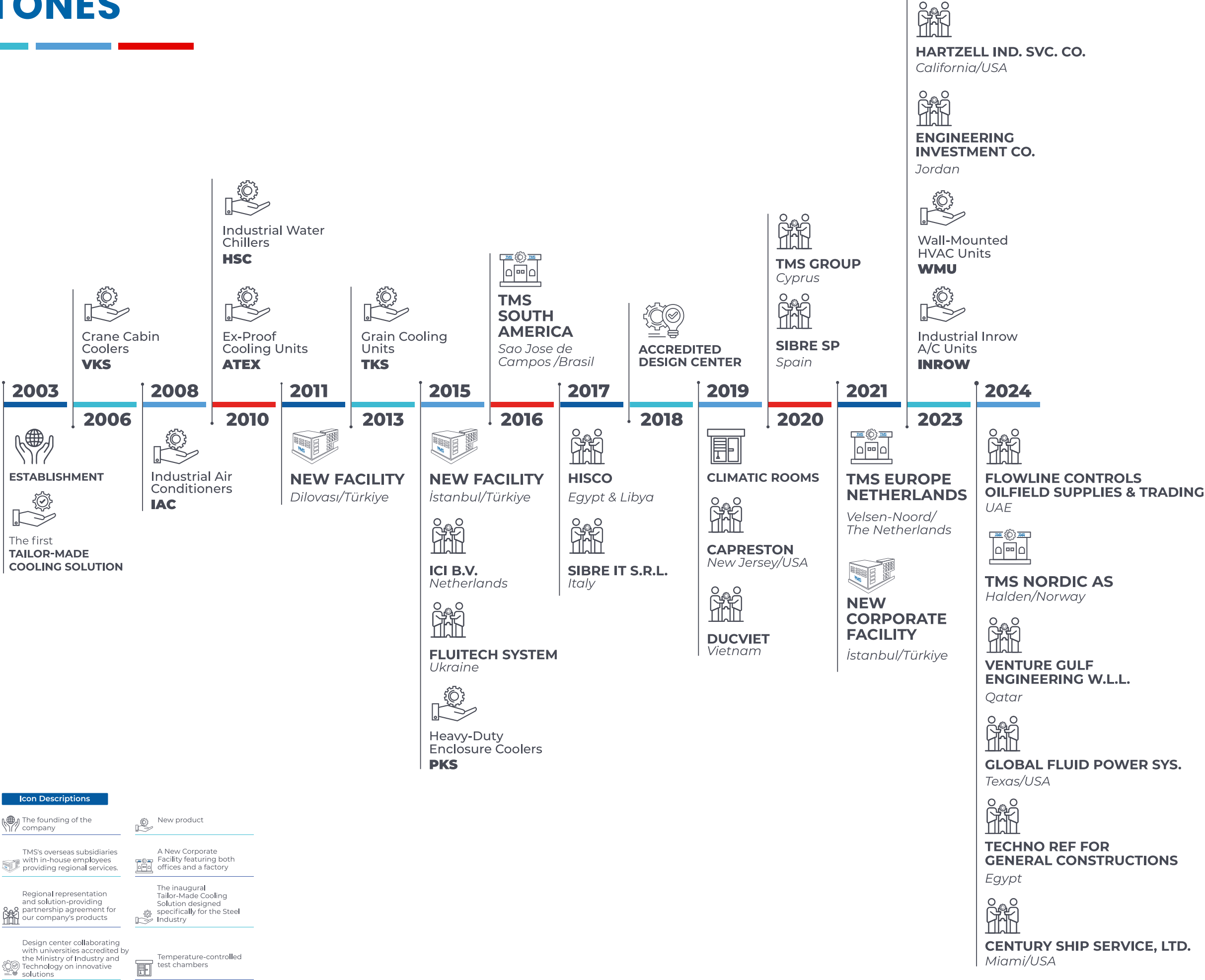
Our facility includes assembly and metal production lines, with rigorous quality checks at each stage. Spanning over 6500m², it includes 1200m² for quality control and Factory Acceptance Testing (FAT), and 1000m² for storage.

Quality Control

Quality control starts with material checks and continues through six assembly stages, with intermediate inspections. Final products undergo mechanical, electrical, and performance testing, with a Pre-Delivery Inspection (PDI) before packaging and shipment.



MILESTONES



SELF CONTAINED UNITS

Manage & Condition The Air Locally!



Air Cooling /
Air Heating



Reliable Operation
on Pitch & Roll



Environmentally
Friendly Refrigerants



Quiet
Operation



Corrosion
Resistant



Ease of
Maintenance



Modular
Design



Fresh Air
Supply

Applications

Local Cooling and Heating | Engine Control Room | Switchboard Room | Galley

Self-contained units operate with environmentally friendly refrigerants with zero ozone depletion and low global warming potential. Their compact, durable, robust, and attractive cabinet fits any working environment such as wavy sea conditions and corrosion. Various compressor and refrigerant type usages bring trouble-free operation with a large range of cooling water temperatures. Heating can be carried out with an electrical heater, steam, hot water, thermal oil resources options.



- Tailor made manufacturability
- Hermetic scroll or semi-hermetic reciprocating compressors
- Corrosion protections for heat-exchangers and body structure
- Built-in or remote fresh water and sea water condensers
- Low sound level
- Dual power supply 400VAC/3Ph/50Hz and 440VAC/3Ph/60Hz
- Lowest GWP in the market with refrigerant R513A, 631
- Designed for 24/7 smooth running and continuous operation
- Ease of maintenance and use
- Fresh air intake, piping connections from both sides

PACKAGE A/C UNITS

Conditioned Air Distribution Center!



Air Cooling /
Air Heating



Reliable Operation
on Pitch & Roll



Environmentally
Friendly Refrigerants



Fresh Air
Supply



Ease of
Maintenance



Modular
Design



Wide Capacity
Range

Applications

Various Locations on the Vessels | Engine Control Room | Switchboard Room | Galley

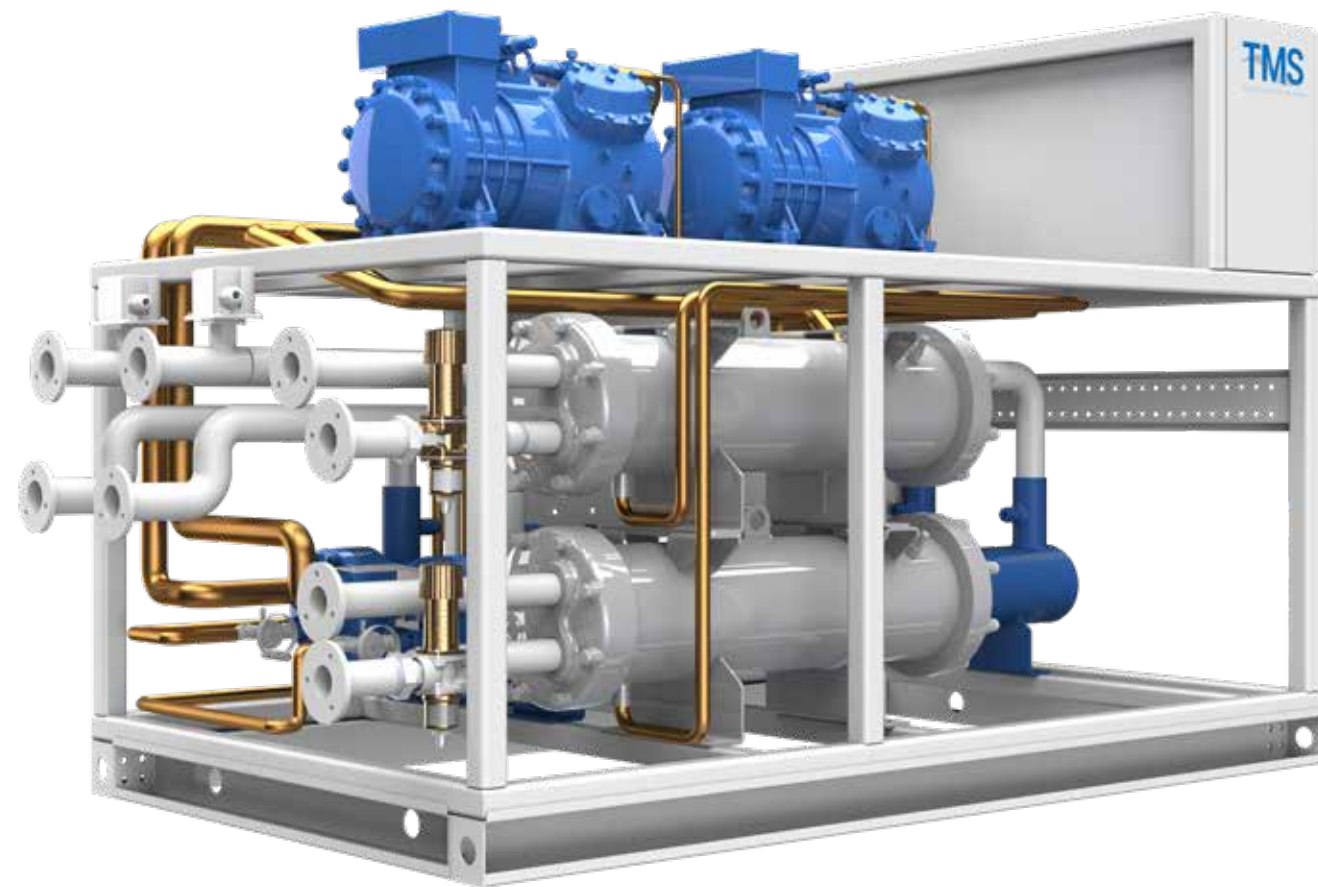
Packaged A/C units bring the air to the desired cooling and heating conditions, free from dust, and make it ready for distribution. This integrated structure consists of DX type AHU and condensing unit, which can be detached from each other according to the dimensions of the settlement and used in different places. When located on the ship's deck, it is minimally affected by harsh environmental conditions with its robust chassis materials and CX coating levels that show high corrosion resistance. Evaporator coils can be structured by copper fins and tubes. Semi-hermetic reciprocating and screw compressors are used upon the cooling capacity needs.

- Tailor made manufacturability
- Semi-hermetic reciprocating and semi-hermetic screw compressors
- Corrosion protections for heat-exchangers and body structure
- Shell-tube seawater or freshwater condensers
- Heating with electrical heater, steam, hot water, thermal oil resources
- Steam Humidifying system
- Dual power supply 440VAC/3Ph/60Hz and 400VAC/3Ph/50Hz. Other power supplies are also available
- Environmentally friendly refrigerants with zero ozone depletion and low global warming potential
- Lowest GWP in the market with refrigerant R513A, 631
- Designed for 24/7 smooth running and continuous operation
- Ease of maintenance and use



WATER CHILLER UNITS

Tailor Made Water Chilling Systems
For All Needs at Vessels!



Water Cooling &
Water Heating



Reliable Operation
on Pitch & Roll



Environmentally
Friendly Refrigerants



Ease of
Maintenance



Modular
Design



Wide Capacity
Range

Applications

Various Locations on the Vessels | Engine Control Room | Switchboard Room | Galley

Water chiller units provide chilled water inside the ships for air handling units, cabin units, fan coils, and different air conditioning solutions, where many water-operated cooling systems are needed. These systems, which have the widest cooling capacity range among TMS Marine Cooling systems, are completely tailor-made for your needs. It is built to work with sea water and fresh water, mainly with shell-tube type heat exchangers and sometimes with plate heat exchangers, together with semi-hermetic reciprocating and screw compressors. New water chillers can be designed and produced in a modular way with a tailor-made solution logic for the replacement of old units on ships.

- Tailor made manufacturability
- Semi-hermetic reciprocating and semi-hermetic screw compressors
- Corrosion protections for heat-exchangers and body structure
- Shell-tube seawater or freshwater condensers
- Heating with electrical heater, steam, hot water, thermal oil resources
- Steam humidifying system
- Dual power supply 440VAC/3Ph/60Hz and 400VAC/3Ph/50Hz. Other power supplies are also available.
- Environmentally friendly refrigerants with zero ozone depletion and low global warming potential
- Lowest GWP in the market with refrigerant R513A, 631
- Designed for 24/7 smooth running and continuous operation
- Ease of maintenance and use



FAN COILS UNITS

Cool the Air with Water Systems



Applications

Various Locations on the Vessels | Engine Control Room | Switchboard Room | Galley

Fan coil units bring the air to the desired cooling and heating conditions. It shall be connected to a chilled water plant. Their compact, durable, robust and attractive cabinet fits any working environment. Heating can be carried out with an electrical heater or hot water options. It can work with fresh air connection optionally.



Air Cooling /
Air Heating



Reliable Operation
on Pitch & Roll



Quiet
Operation



Corrosion
Resistant



Ease of
Maintenance



- Tailor made manufacturability
- Corrosion protections for heat-exchangers and body structure
- Dual power supply 440VAC/3Ph/60Hz and 400VAC/3Ph/50Hz. Other power supplies are also available
- Designed for 24/7 smooth running and continuous operation
- Ease of maintenance and use

REFRIGERATION UNITS

Condensing Units For All Refrigeration
Needs on Board!



Environmentally
Friendly Refrigerants



Reliable Operation
on Pitch & Roll



Ease of
Maintenance



Corrosion
Resistant



Wide Capacity
Range

Applications

Cold Storage | Rooms Deep | Freeze Rooms | Mortuary Rooms

Refrigeration units provide liquid-phase refrigerant to cold storages, morgues, deep freezers on the ship. They are also engaging with air handling units when the distance between units is short thus the complete system becomes more simple than Water Chiller units. Refrigeration units, which have air-cooled, fresh water, and sea water-cooled options, can serve rooms operating at different temperatures. Systems equipped with capacity control feature provide maximum efficiency. Refrigerants in use are environmentally friendly with zero ozone depletion and low global warming.



- Tailor made manufacturability
- Semi-hermetic reciprocating and Semi-hermetic screw compressors
- Corrosion protections for heat-exchangers and body structure
- Shell-tube sea water, freshwater condensers or air cooled
- Capacity control, step or stepless
- 440VAC/3Ph/60Hz
- Environmentally friendly refrigerants with zero ozone depletion and low global warming potential
- Designed for 24/7 smooth running and continuous operation
- Ease of maintenance and use

A large red crane with 'PSG' written on its boom is mounted on a blue ship deck. A white and grey ATEX Series explosion-proof air conditioning unit is attached to the crane's base. The ship is on the water, with other offshore structures visible in the distance.

ATEX SERIES

Explosion Proof Air Conditioning &
Refrigeration Units

SWL 12T x 37 m - 16T x 32 m

EXPLOSION PROOF PACKAGE TYPE AIR CONDITIONING UNITS

IRAX Series



Applications

IRAX25045 | 25kW Portable AC Unit | Zone I | II 2G Ex db IIB T3 Gb

IRAX autonomous Exproof Package type air cooled air conditioner series for the environment exposed to high risk of explosion. These units deliver complete air management for the needs of cooling, heating, ventilation, dust and chemical filtration and pressurization in control rooms, crane cabins, containers-shelters, e-houses and electrical cabins .

Different variants of IRAX are available, such as Package AC unit, Portable and/or Emergency AC unit, Mobile AC unit with trailer, Crane AC unit and moreover.

IRAX are designed to fit for purpose with their structural design, performance and built-in automation characteristics.

- Body made in variants with welded/bolted frames and panels with carbon steel up to C5-M class coating, stainless steel 304-1.4301 and 316L-1.4404
- Perfect insulation at evaporator section and AC control panel with IP66 class protection
- Exproof type semi-hermetic reciprocating or screw compressors with crankcase heater, vibration dampers and eliminators, oil pressure and level switches, high/low pressure switches
- Capacity control regulation is available with capacity control head, step-stepless control and frequency drive
- Single or double refrigerant circuits
- Air cooled condenser with high pressure regulation
- Evaporator and condenser heat exchanger coils are made of copper/aluminium, copper/copper or stainless steel/stainless steel tube and fin combinations. Coil frames are stainless steel, galvanized steel or aluminium
- Large fin spacing between 2,5mm to 4mm upon dustiness of environment
- Epoxy, heresite, e-coating or blygold coating options for evaporator and condenser are available
- Thermostatic expansion valves with external equalizer
- Electrical heaters with galvanized or stainless steel frame
- Condensed water pans are made with stainless steel
- Exproof direct drive radial fans or belt-driven radial fans are used for evaporator, axial fans for condenser with fixed or variable speed. Various coatings are available
- Head pressure control for extreme cold environments
- Operation range for extreme cold and hot environments between -40°C to +95°C
- Environmentally friendly refrigerants. R513a, R450a, R134a, R407c
- Built-in D type aluminium control panel or remote option with junction box
- Siemens, Schneider and Danfoss PLC and remote monitoring and control system through various communication protocol outputs and wifi/gsm availability
- Dual-phase operation with 380-415V/3Ph/50Hz and 440-460V/3Ph/60Hz. Other power supplies are on request

EXPLOSION PROOF SPLIT TYPE AIR CONDITIONING UNITS

ISAX Series



Applications

ISAX10095 | 10kW Split AC Unit | Zone I | II 2G Ex db IIC T3 Gb

ISAX autonomous Exproof Split type air cooled air conditioners delivers cooling, heating, ventilation in control rooms, crane cabins, containers-shelters, e-houses and electrical cabins located at high risk of explosion environment. ISAX units consists of outdoor and indoor unit/s. Indoor unit types and quantities vary depending on availability in applied areas. There is also availability to design/produce particular outdoor or indoor unit without being explosion proof feature when the related area is safe in order to reduce the costs. ISAX are designed to fit for purpose with their structural design, performance and built-in automation characteristics.

- Different indoor unit variants such as wall, ceiling or standing types
- Body made in variants with welded/bolted frames and panels with carbon steel up to C5-M class coating, stainless steel 304-1.4301 and 316L-1.4404
- AC control panel with IP66 class protection
- Exproof type semi-hermetic reciprocating or screw compressors with crankcase heater, vibration dampers and eliminators, oil pressure and level switches, high/low pressure switches
- Capacity control regulation is available with capacity control head, step-stepless control and frequency drive
- Single or double refrigerant circuits
- Air cooled condenser with high pressure regulation
- Evaporator and condenser heat exchanger coils are made of copper/aluminium, copper/copper or stainless steel/stainless steel tube and fin combinations. Coil frames are stainless steel, galvanized steel or aluminium
- Large fin spacing between 2,5mm to 4mm upon dustiness of environment
- Epoxy, heresite, e-coating or blygold coating options for evaporator and condenser are available
- Thermostatic expansion valves with external equalizer
- Electrical heating
- Exproof direct drive axial or radial fans or belt-driven radial fans are used for evaporator, axial fans for condenser with fixed or variable speed. Various coatings are available.
- Head pressure control for extreme cold environments
- Operation range for extreme cold and hot environments between -40°C to +95°C
- Environmentally friendly refrigerants. R513a, R450a, R134a, R407c
- Built-in D type aluminium control panel or remote option with junction box
- Siemens, Schneider and Danfoss PLC and remote monitoring and control system through various communication protocol outputs and wifi/gsm availability
- Dual-phase operation with 380-415V/3Ph/50Hz and 440-460V/3Ph/60Hz. Other power supplies are on request

EXPLOSION PROOF CONDENSING UNITS

ISAOX Series



Applications

ISAX10095 | 10kW Split AC Unit | Zone I | II 2G Ex db IIC T3 Gb

ISAOX Exproof Air Cooled Condensing Units delivers the refrigerant supply for your setup with fan coils, AHU's and any kind of DX coils which are positioned at high risk of explosion environment.

Condenser, compressor block and control box can be placed on a skid or can be designed to be separated from each other considering the explosive and safe zones.

ISAX are designed to fit for purpose with their structural design, performance and built-in automation characteristics.

- Body made in variants with welded/bolted frames and panels with carbon steel up to C5-M class coating, stainless steel 304-1.4301 and 316L-1.4404
- AC control panel with IP66 class protection
- Exproof type semi-hermetic reciprocating or screw compressors with crankcase heater, vibration dampers and eliminators, oil pressure and level switches, high/low pressure switches
- Capacity control regulation is available with capacity control head, step-stepless control and frequency drive
- Single or double refrigerant circuits
- Air cooled condenser with high pressure regulation
- Condenser heat exchanger coils are made of copper/aluminium, copper/copper or stainless steel/stainless steel tube and fin combinations. Coil frames are stainless steel, galvanized steel or aluminium
- Large fin spacing between 2,5mm to 4mm upon dustiness of environment
- Epoxy, heresite, e-coating or blygold coating options for condenser coils are available
- Exproof axial fans for condenser with fixed or variable speed. Various coatings are available
- Head pressure control for extreme cold environments
- Operation range for extreme cold and hot environments between -40°C to +95°C
- Environmentally friendly refrigerants. R513a, R450a, R134a, R407c
- Built-in D type aluminium control panel or remote option with junction box
- Custom-made software is made depending on tubing distances, number of fancoil/ahu systems etc.
- Siemens, Schneider and Danfoss PLC and remote monitoring and control system through various communication protocol outputs and wifi/gsm availability
- Dual-phase operation with 380-415V/3Ph/50Hz and 440-460V/3Ph/60Hz. Other power supplies are on request

EXPLOSION PROOF WATER CHILLER UNITS

HSCX Series



Applications

HSCX70 | 7kW Air Cooled, Water Chiller Unit | Zone I | II 2G Ex db IIB T3 Gb

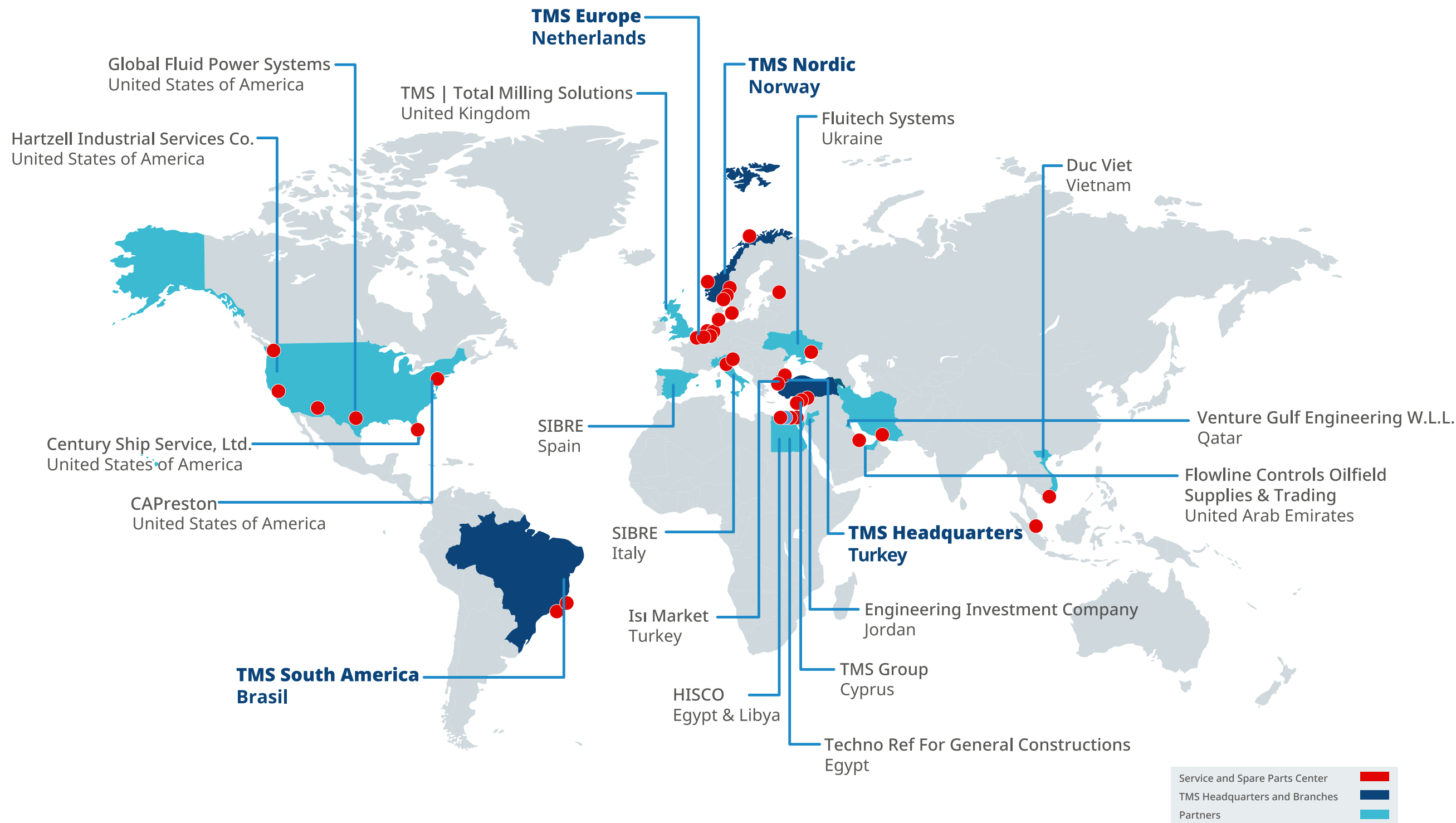
HSCX series Ex Proof Water Chiller units deliver the desired water temperature within a large operational range for the environments at high risk of explosion.

HSCX series have wide of use for chilled water needs with specific temperatures in refineries, oil drilling rigs, offshore processing plants, chemical plants, mining and zones classified to have an explosion risk.

Tailored to fit to the requirements with structural design, performance and automation factory built-in.

- Body made in variants with welded/bolted frames and panels with carbon steel up to C5-M class coating stainless steel 304-1.4301 and 316L-1.4404
- AC control panel with IP66 class protection
- Exproof type semi-hermetic reciprocating or screw compressors with crankcase heater, vibration dampers and eliminators, oil pressure and level switches, high/low pressure switches
- Capacity control regulation is available with capacity control head, step-stepless control and frequency drive
- Single or double refrigerant circuits
- Air cooled condenser with high pressure regulation
- Condenser heat exchanger coils are made of copper/aluminium, copper/copper or stainless steel/stainless steel tube and fin combinations. Coil frames are stainless steel, galvanized steel or aluminium
- Large fin spacing between 2,5mm to 4mm upon dustiness of environment
- Epoxy, heresite, e-coating or blygold coating options for condenser are available
- Shell&Tube evaporators with high-efficiency internally grooved heat exchange copper or cupronickel CuNi 90/10 tubes, stainless steel, carbon steel or plastic baffles, carbon steel or stainless steel tube sheets
- Thermostatic expansion valves with external equalizer
- Head pressure control for extreme cold environments
- Operation range for extreme cold and hot environments between -40°C to +65°C
- Environmentally friendly refrigerants. R513a, R134a, R407c
- Built-in D type aluminium control panel or remote option with junction box
- Siemens, Schneider and Danfoss PLC and remote monitoring and control system through various communication protocol outputs and wifi/gsm availability
- Dual-phase operation with 380-415V/3Ph/50Hz and 440-460V/3Ph/60Hz. Other power supplies are on request

TMS GLOBAL



TMS HEADQUARTER | TURKEY

TMS Endüstriyel Soğutma San. Tic. A.Ş.



TMS EUROPE | NETHERLANDS

TMS Industrial Refrigeration Europe B.V.



TMS NORWAY

TMS Nordic AS



TMS BRAZIL | SOUTH AMERICA

TMS South America



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