



AERON - total contractor of HVAC Systems to the global shipping industry





Aeron is a total contractor of marine and industrial Heating, Ventilation and Air-Conditioning, HVAC systems. We are a leading supplier of complete HVAC systems to the global shipping industry. Our headquarter is located in the Norwegian coastal city of Flekkefjord.

AERON MARINE HVAC systems are designed to ensure optimal climate solutions for people, cargo, machinery and instruments onboard all types of ships. We want to be involved in all stages of the building process, as well as during the lifespan of installed systems.

With more than 25 years of experience in the HVAC business, AERON has developed a high quality product range specially designed for shipboard enviroments. Years in the business have turned us into a reliable company with a good track record.

Aeron makes shipbuilding even more attractive through providing specialised products and services tailored for modern quality ships.

We offer complete Heating, Ventilation and Airconditioning system packages comprising:

Pre studies Design & Engineering Equipment Installation / Supervising Commissioning / Testing Operator Training After Sales services

You will find more technical information in our product catalogue at our web site www.aeron.no

# **AERON MARINE SYSTEMS**



As a total contractor of HVAC systems, AERON want to take full responsibility in every step of a project in order to give the customer the optimal climate solution for personnel and machinery.

## PRE-STUDIES

It is important to involve AERON in the early stage of a project. Pre-studies are essential to clarify the customer's requirements. We can contribute with a wide range of important information such as technical and economical consequence calculations and analysis.

This approach ensures high quality HVAC systems and reduces installation and operational costs. An increasing number of customers have seen the true benefit of using AERON as their reliable partner for HVAC solutions.

## **DESIGN & ENGINEERING**

Providing designs for a variety of HVAC applications requires innovation, flexibility and experience. AERON make extensive use of state-of-the-art software to design and optimise HVAC systems tailor made for each customer. Instructions for installation, operation and maintenance are available on CD-ROM or as paper printouts.

### DELIVERY

AERON has a lean and effective organisation with a short and secure delivery time of all necessary components and systems. All parts are manufactured by skilled workers using modern technology in our OEM partners manufacturing plants. All parts are manufactured in compliance with AERON's strict specifications and quality assurance standards.

### SUPERVISION AND COMMISSIONING

Correct installation and adjustments are important factors for overall performance and end result. Our experienced service engineers can provide supervisory and commissioning services on site. Undertaking skilled inspection, measuring, regulation and testing all around the world.

## TRAINING

When delivering a plant to the customer, we feel it is right to make sure that the staff involved are trained in the use of the HVAC systems. Learning the right procedures for operation and maintenance are equally important. We offer a wide range of general training programs related to our HVAC technology. Customised training programs for a specific installation are also available on request.



# **AERON HVAC SYSTEMS**

| Single pipe systems              | Car deck ventilation          |
|----------------------------------|-------------------------------|
| Single pipe reheat systems       | Thruster room ventilation     |
| Dual pipe system                 | Cargo room ventilation        |
| Low pressure systems             | Pump room ventilation         |
| Wheelhouse defroster systems     | All types of HVAC systems     |
| Air Conditioning systems         | Provision room refrigeration  |
| Galley ventilation system        | Cargo room refrigeration      |
| Engine room ventilation          | Dehumidifiers and Humidifiers |
| • Engine room high speed systems | Low sound level systems       |

# **AERON MARINE PRODUCTS**



We have always worked closely with our customers in the marine environment, learning their needs and meeting their special requirements. The experience gained has been incorporated into our products and made Aeron a highly competent supplier of marine HVAC systems.

With our extensive experience, we have developed a large range of high quality products that are specially designed for shipboard environments.

In our ongoing product development, we put high emphasis on increased fuctionality, and noise reduction in every part of our systems.

Our Product Catalogue contains more than 650 pages of technical documentations. The Product Catalogue is available on CD-ROM and our web site *www.aeron.no*.

## THE FEELING OF FRESH AIR

It is a known fact how important a well dimensioned HVAC system is for the indoor environment onboard a ship. Fresh air is vital to both personnel and machinery. Feeling good improves productivity.

With an optimised AERON HVAC system installed you are sure to get the feeling - every hour, every day, every year and all around the world - The Feeling Of Fresh Air...

One of the specialities in AERON's Marine HVAC solutions are high-speed systems. These systems meet the requirements for less space consumption onboard ships, and eliminate noise and vibration problems. We supply all types of marine HVAC systems to all sections of a ship.



# AIR HANDLING UNITS AND AUTOMATION







Aeron airhandling units are designed to satisfy HVAC requirements for all accommodation spaces onboard ships. We offer a flexible range of units. The units are made up of modules that enable us to deliver solutions tailor made to each vessel and ventilation room. Our products come in selections of single or dual-pipe units, low or high pressure units.

**AERON Marine Air Handling Units:** 

- are assembled from a wide range of standard sections
- are available in 13 sizes from 700 to 54 000 m3/h
- have very good acoustic and thermal insulation
- can be delivered both as galvanised or stainless steel
- are delivered with wave breakers and water traps
- fan and motor are mounted on vibration dampers with flexible connections

AERON Marine Air Handling Units are delivered with all necessary accessories in order to minimise installation work at the yard. The heat exchangers and evaporators can be delivered in any type of materials the customer demands.

To control the system we deliver everything from simple, virtually maintenancefree plants to state of the art computerised systems. All necessary control panels, starters, frequency converter systems, valves, motors, sensors and other accessories necessary for controlling and monitoring of AERON HVAC systems.



# CABIN UNITS AND SPIRO PIPES



AERON Marine Cabin Units and air terminals are designed for use in high speed marine air conditioning systems. Their task is to control the flow of air, its distribution and temperature. The units are tested for optimum performance. Important factors includes air throw, air induction, insulation capability and sound attenuation.

We have a comprehensive range of Cabin Units. A range containing units for wall mounting or ceiling suspension, units for 1-pipe, 2 pipe, 1 pipe with reheat and a wide selection of air terminal units for low pressure systems. Air diffusers for the ceiling Cabin Units are available in square or circular shapes to fit ceiling panels.

The Cabin Units is ready for easy and quick installation and may be delivered according to IMO resolution A.754 (18) for false ceilings with fire resistance rating B15. The units satisfies the Comfort Class requirements for noise, vibrations and indoor climate from Det Norske Veritas.

## SPIRO PIPES

Our spiro pipe systems and Cabin Units complies with EUROVENT 2.2 Class C specifications for tightness and withstands negative and positive pressure up to 3000 Pa.

The preinsulated spiro pipes provide an excellent guarantee against heat loss during the winter, and against condensation in the period of cooling all through the summer.





# **REFRIGERATIONS PLANTS**



Aeron's range of refrigerating units will cover every need for refrigeration onboard a modern vessel. Tailor made to fulfill all requirements from ship yards, ship owners, classification and national authorities.

Our refrigeration machineries are constructed for marine applications. Components and materials are chosen on the basis of our long experience in the marine refrigeration business. Emphasis is put on small dimensions, low weight and easy maintenance as well as site installation friendly solutions.

The refrigeration plants can be delivered either as direct expansion systems or as chilling-water plants for indirect cooling. Our plants can be delivered with compressors for reciprocating or screw type systems, or as multi compressor units fitted with several compressors and different degree of prefabrication, for instance so called "Deck-units".

Whatever the requirements, AERON will provide an optimal designed plant that meet your demands.

Our self contained units come in a high quality finish designed for installation in both accommodation areas and technical areas. The units can be used with all common refrigerants from 4 to 98 kW. Custom made units can be delivered for larger capacities.







# VENTILATION FANS



Aeron are offering all types of fans needed to create an optimal ventilation system for marine applications. With requisite certificates according to class and governmental requirements.

## AXIAL AND VANEAXIAL FANS.

Typical applications for these fans are mechanical ventilation of engine rooms, cargo rooms, a.o. where you transport large air volumes at relative small pressure drops.

### EXPLOSION-PROOF FANS FOR HAZARDOUS AREA.

Hazardous areas onboard chemical tankers, oil tankers and gas carriers, have very stringent requirements with regard to design and execution of the ventilation fans, concerning safety. We offer a wide range of special fans for installation in these areas.

### CENTRIFUGAL FANS.

Typical applications for these fans are exhaust air from different rooms in accommodation areas, or as supply or exhaust fans for any room with narrow spaces that requires small ducts with high speed air distribution. Also to be used as Inert Gas fans or Gas Freeing fans.

## DAMPERS.

Heavy duty dampers for marine applications. LSS Butterfly valves with circular housingSSVent - Rectangular Shut Off dampers with circular connection

# SILENCERS.

LD Circular high efficiency silencers for flange connections LDC Circular high efficiency silencers with core for flange connections







# LOUVRES









Humidity does more damage than most people realise. Humidity leads to corrosion which will shorten the lifespan of machinery, metal structures, electrical installations and electronic systems.

Installation onboard offshore platforms and various types of ships are often exposed to extreme environmental conditions. Louvers in general, particular the intake louvers, are often exposed to larger amounts of water from heavy rain, strong winds, green sea and water spray. To ensure the longevity of the louvres, but also to increase the lifespan and performance of machinery, electronic systems and more, a well dimensioned and high quality intake louver systems is always well invested money.

AERON droplet separators are heavy duty, high efficient water and moisture eliminators that yield high efficiency with low operating pressure drop. The separators are available in sea water resistant aluminium alloy or in stainless steel. The droplet separators can be combined with a filter coalescor system for water and dust separation.

All our louvres and droplet separators that can be delivered in combination with a damper or hatch for weather-tight closing. In addition to the advanced moisture eliminators, we also supply all kind of simple louvers, hoods and goose necks.

# SPARE PARTS AND AFTER SALE SERVICE



Our After Sales Department is the customer's link and lifeline to spare parts and installation. Regular follow-ups of systems in operation are offered to all our customers. As when it comes to supervision and suggestions for alterations and improvements of systems, whenever regulatory authorities require it, or when new and better technology is available.

Our staff will ensure that our plants continue to live up to the customer's expectations. Our spare part service department will always be at hand. A variety of service programs are available. From service on demand, service contracts for preventive maintenance to system management. AERON will be at your service with professionals ready to analyse and solve any problem before they become critical.

To maintain smooth operation and minimal downtime of the installed equipment, AERON holds an extensive stock of spare parts available though an efficient parts service system. In conjunction with our international representatives and business partners we do our utmost to satisfy our customers needs.

## CLEANING AND UPGRADING

We have state-of-the-art cleaning equipment that enables us to clean and upgrade duct systems and air-treatment systems. By using a remote-controlled video camera with a light source, the duct system can be inspected from the inside. Utilising this technology, the situation are documented both before and after the cleaning process. Our personnel are qualified for this kind of work, which are becoming increasingly important for ships after several years of commercial use.

# **AERON REFERENCES**



### 1. M/V Bourbon Orca

Owner: Bourbon Offshore, *Norway* Shipyard: Ulstein Verft, *Norway* Year: 2006 Type: Anchor Handling Vessel AX104

2. M/T Christina Owner: Anders Utkilen Rederi, *Norway* Shipyard: Aker Aukra, *Norway* Year: 1997

Type: Chemical Tanker

#### 3. M/V Far Sword

Owner: Farstad Shipping, *Norway* Shipyard: Aker Brevik, *Norway* Year: 2006 Type: Supply Vessel UT-712

## 4. M/V Far Grip

Owner: Farstad Shipping, *Norway* Shipyard: Ulstein Verft, *Norway* Year: 1992 Type: Anchor Handling Supply UT-722

#### 5. M/V Heralden

Owner: Engship, *Finland* Shipyard: Umoe Sterkoder, *Norway* Year: 1996 –1998 Type: Sto-Ro Container Ship

# 6. M/V Maersk Defender

Owner: A.P. Møller, *Denmark* Shipyard: Ulstein Verft, *Norway* Year: 1996 Type: Cable Laying Vessel UT-756











# **AERON REFERENCES**



### 7. M/F Fjordveien

Owner: Stavangerske AS, Norway Shipyard: Flekkefjord Slipp & Maskinfabrikk AS, Norway Year: 2001 Type: Ferry

#### 8. H/S Dodekanisos Pride

Owner: Dodekanisos Seaways, Greece Shipyard: Båtservice Mandal, Norway Year: 2006 Type: High speed Catamaran

#### 9. M/V Normand Progress

Owner: Solstad Shipping, *Norway* Shipyard: Ulstein Verft, *Norway* Year: 1994 Type: Anchor Handling Supply UT-742

10. M/V Ramform Explorer
Owner: PGS/ Rieber Shipping, Norway
Shipyard: Aker Langsten, Norway
Year: 1995 - 1998
Type: Seismic Reearch Vessels

#### 11. M/V Normand Installer

Owner: Solstad Shipping, *Norway* Shipyard: Ulstein Verft, *Norway* Year: 2005 Type: VS 4204 OCV

#### 12. M/V G.O. Sars

Owner: Institute of Marine Research, Norway Shipyard: Flekkefjord Slipp & Maskinfabrikk, Norway Year: 2001 Type: Research Vessel

### 13. M/V Stena Traveller

Owner: Stena Line, *Norway* Shipyard: Fosen Mek. Verksteder, *Norway* Year: 2006 Type: Ro-Pax Vessel 212m

14. M/V Bourbon Mistral Owner: Bourbon Offshore, Norway Shipyard: Ulstein Verft, Norway Year: 2006 Type: Supply PX105













# **AERON REPRESENTATIVES**



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Please find updated agent information on our website - *www.aeron.no* 

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