

# Flameproof HVAC



Stolway

[www.stolway.com.au](http://www.stolway.com.au)

# Company Overview

Stolway provides custom engineered Explosion-Proof Heating, Ventilation and Air Conditioning (Ex HVAC) equipment to the oil, gas and downstream industries. The equipment is specifically designed to operate safely in classified hazardous gas areas, both on and offshore. Since 1993 we have designed and installed a large number of systems internationally for premium oil, gas and engineering organisations.



Ex Sampling Chiller – precision temperature control

**Stolway's HVAC solutions for hazardous environments provide:**

- The best mix of custom engineered products that will operate safely in Zone 1 hazardous areas.
- The highest level of design and build quality.
- Value for money.
- Low total lifecycle costs.
- High reliability, availability.
- Extremely low maintenance down time.
- Performance to specification.
- ISO9001 accreditation.



We deliver world class innovative solutions by:

- Understanding our clients' requirements and tailoring solutions to meet unique specifications, operating conditions and purpose.
- Providing commissioning, training, maintenance and lifetime spare parts support globally.
- Adhering to a proven ISO9001 certified Quality Management System.
- Our commitment to Health and Safety.
- Product development for safe and reliable operation.
- Implementing ways to reduce the environmental footprint of our products including the use of natural refrigerants.
- Investing in research and development.
- Staff competency and investing in our people with ongoing education and training.
- Supporting our people, their families and the communities we work in.

**Our core capability is high specification Zone 1 HVAC equipment meeting IECEx and ATEX requirements.**

# Product Examples

Our core strengths are reflected in our engineering expertise and experience, enabling us to develop optimised, project specific Zone 1 solutions. The following range of products is indicative of Stolway's design, engineering and manufacturing capabilities in meeting specific customer requirements.



## Analyser House HVAC Systems

Stolway has custom engineered and manufactured thousands of Flameproof HVAC Systems for Analyser House applications in over 30 countries world wide. Each unit is designed to meet particular client specifications and operating conditions. We have extensive experience and expertise in extreme ambient temperatures from -40°C to +55°C. All units are to IECEx and ATEX.

**End User:** Saudi Polyolefins Company (SPC)

**Location:** Jubail, Saudi Arabia



## Ex Vertical Packages

Stolway Ex Vertical Package Units are available in a wide range of capacities and configurations to suit diverse customer requirements. The units are custom engineered to suit each application and numerous options are available. See [stolway.com.au](http://stolway.com.au) for details of standard features and options.

**End User:** Shell Pearl GTL Project

**Location:** Ras Laffan, Qatar

**Capacity:** 40kW DX cool, 7.2kW electric heat

**Design Conditions:** 52°C DB Summer

**Hazardous Area:** ATEX Zone 1, Group IIB+H2, T3



## Offshore Marine Packaged HVAC Equipment

These customised HVAC Packages are specifically designed for offshore oil and gas installations. Skid mounted packages can be designed in any configuration with a wide range of material options to ensure long life under harsh marine conditions. The highest level of specification and hazardous area electrical protection is assured, providing highly reliable, safe operation with low maintenance requirements.

**End User:** Esso

**Location:** Marlin A Platform, Bass Strait Australia

**Capacity:** 120kW cooling, multi-zone

**Design Conditions:** 42°C DB

**Hazardous Area:** IECEx Zone 1, Group IIB, T3



## Ex Horizontal/Roof Mount Packages

Stolway Ex Horizontal/Roof Mount Packages are available in a wide range of capacities and configurations to suit diverse customer requirements. The units are custom engineered to suit each application and numerous options are available. See [stolway.com.au](http://stolway.com.au) for details of standard features and options.

**End User:** Tasnee Ethylene

**Location:** Saudi Arabia

**Capacity:** 60kW DX cool, 7.2kW electric heat

**Design Conditions:** 52°C DB

**Hazardous Area:** IECEx Zone 1, Group IIB, T3



## Ex Field Cabinet Coolers

Designed for easy installation on outdoor field instrumentation cabinets, Stolway Ex Field Cabinet Coolers are suited for use in a wide range of aggressive, harsh environments typically present in the oil, gas and petrochemical processing facilities.

**Capacity:** From 1,900 watts

**Design Conditions:** To 55°C DB

**Hazardous Area:** IECEx and ATEX Zone 1, Group IIB+H2, T3

## Product Examples



### Ex Analyser Sampling Chillers

Stolway Analyser Sampling Chillers are available in a range of capabilities and configurations to suit all applications. They can also be used for other applications where a small quantity of chilled water is required in hazardous areas. The Chillers are supplied as a simple to install single piece package for connection of water in/water out and power supply. Circulation pumps and insulated storage buffer tanks are included.

**End User:** Caltex Australia

**Location:** Sydney

**Capacity:** 2,200 watts

**Design Conditions:** Precision water temperature control  $\pm 1^{\circ}\text{C}$

**Hazardous Area:** Zone 1, Group IIB+H2, T3



### Ex Air Cooled Chillers and Condensing Units

Stolway Flameproof Chillers and Condensing Units are engineered to suit customer specifications for both on and offshore applications.

We have the flexibility to design and manufacture equipment exactly as required by our customer within short lead times. For larger capacities we typically use leading technology Bitzer CSH compact screw type compressors, which Stolway has developed for use in Zone 1 hazardous gas areas. Screw compressors provide excellent reliability, feature integral start unloading, are exceptionally quiet in operation and are virtually vibration free. Capacity control is infinite or step between 100% and 25%, providing close temperature control along with optimum energy efficiency.

**End User:** Kuwait National Petroleum Co

**Location:** Kuwait

**Capacity:** 98kW DX cooling

**Design Conditions:** 49°C DB

**Hazardous Area:** IECEx Zone 1, Group IIB+H2, T3

**Stolway's core strengths are reflected in our engineering expertise and experience that enables us to develop custom solutions every time.**

## Ex Air Handling Units

Our Flameproof Air Handling Units can be supplied as part of a complete split system or stand alone units. Modular construction in stainless steel or galvanised powder coat finish provides robust construction and flexibility in design. Coils, fans, panel and insulation material, filters and design configuration are available in a wide range of options to meet individual customer requirements. Units can be delivered fully assembled or in sections to enable installation in confined sites.

**End User:** Ras Gas

**Location:** Qatar (offshore)

**Capacity:** 70kW DX cooling

**Hazardous Area:** IECEx Zone 1, Group IIB, T3



## Mobile/Temporary Air Conditioning Units

These ruggedized units are specifically designed for temporary installations. The robust design makes them particularly useful for installations where rough treatment is inevitable. Units can be supplied with locking casters for even greater mobility, and are available in a range of specifications to suit even the most difficult marine environments.

**End User:** Conoco Phillips

**Location:** Timor Sea, Australia

**Capacity:** 20kW spot cooling

**Design Conditions:** 38°C DB

**Hazardous Area:** IECEx Zone 1, Group IIB, T3



## Ex Trailer Mounted Units

Stolway trailer mounted units are of rugged design and are used primarily for spot cooling of spaces and personnel during maintenance operations. The units are available in a range of capacities to suit particular client requirements.

Offshore mobile unit on lockable castors are available.

**End User:** Takreer

**Location:** United Arab Emirates

**Capacity:** 42kW cooling at 566l/s 100% outside air

**Design Conditions:** 50°C DB

**Hazardous Area:** IECEx Zone 1, Group IIB, T3



## Product Examples



### Safe Area Units

High specification safe area units are available for particular applications.

**End User:** WorleyParsons for Tengizchevroil

**Location:** Kazakhstan

**Capacity:** 2 x 100% fully redundant HVAC units in a single casing, 9kW cooling and 10.8kW electric element heat.

**Design Conditions:** -40°C winter, +36°C summer

**Hazardous Area:** N/A



### Ex Warm Air Heaters

Stolway Ex Mobile Warm Air Heaters can be used for a variety of applications such as curing of vessel coatings in cold climates or spot heating for equipment and personnel.

**End User:** ESSO

**Location:** Bass Strait, Australia

**Capacity:** 9kW heating at 280l/s

**Hazardous Area:** IECEx Zone1, Group IIB, T4



### Ex Drinking Water Coolers

Stolway has supplied hundreds of Ex Drinking Water Coolers for operation in the extreme high temperatures in the Middle East.

**End User:** Kuwait National Petroleum Co

**Location:** Kuwait

**Capacity:** 72 litres per hour at 10°C supply temperature

**Design Conditions:** 49°C DB

**Hazardous Area:** IECEx Zone 1, Group IIB, T3

**These products are indicative of Stolway's unique design, engineering and manufacturing capabilities, in meeting particular customer specifications.**



## Ex Hot Water Heaters

Stolway Ex Hot Water Heaters are used to provide potable water at temperatures suitable for washrooms and bathrooms in locations remote from main facilities, such as jetty offices and loading terminals.

End User: Kuwait National Petroleum Co  
Location: Kuwait  
Capacity: 25 litres  
Design Conditions: 49°C  
Hazardous Area: IECEx Zone1, Group IIB, T4



## Ex Humidifiers

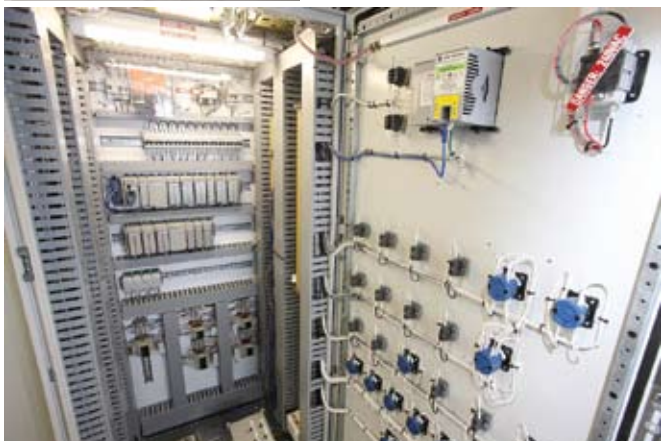
Stolway Ex Humidifiers are designed to increase humidity within conditioned spaces for human comfort and/or for the reliable operation of equipment and instruments.

End User: Kharg Island Petrochemical Complex  
Location: Iran  
Capacity: 8kg per hour  
Hazardous Area: IECEx Zone 1, Group IIB, T3



## HVAC Control Panels

Unit mounted or remote Exd, Exp or safe area. Control can be relay based or PLC to customer specifications.



# Services

## Factory Acceptance Testing

Factory acceptance testing (FAT) is a routine part of our production process. End users, EPC and client representatives are most welcome to visit our premises for FAT. Along with witnessed performance tests and provision of test reports, typical FAT involves documentation and certificates of conformity reviews.

## Third Party Inspections

Third party inspections by internationally recognised inspection agencies can be arranged by Stolway or appointed by our customers.

## Training

Training on HVAC, electrical, PLC and hazardous area safety requirements by our qualified personnel is available at our premises or at your site. Training can be combined with site commissioning visits or arranged on a stand alone basis.

## Site Commissioning

Stolway equipment is designed to be installed at site by locally based qualified technicians. Where required, site installation supervision and commissioning is provided by our experienced HVAC, electrical and PLC engineers and technicians.

## Spare Parts

Lifetime spare parts support is an integral part of our customer commitment. Components are based on industry standards such as IECEx and DIN for standardisation. Where a component part for a Stolway unit may become unavailable from the original supplier, we will provide an alternative along with a retrofit kit and installation instructions.

## Certificates of Conformity – IECEx and ATEX

Stolway Certificates of Conformity cover items such as Ex compressor assembly, solenoid coils, stepper motors and refrigeration valves.



## Documentation

Standard documentation supplied with Ex HVAC equipment includes:

- Installation and operations manual (IOM).
- General arrangement drawings.
- Electrical schematics.
- HVAC control philosophy.
- Certificates of conformity.
- Component datasheets.
- Factory acceptance test (FAT), documentation and reports.

Additional project specified documentation can be readily produced including:

- Electrical load calculations.
- Electrical block diagrams.
- Piping and instrumentation diagrams.
- Inspection and test plan (ITP)/quality control and test plan (QCP).
- Material specifications/test certificates.
- Other technical/engineering/QA documents at customers' request.

## Translations

Translation to various languages is available for all documents and drawings.

## Technical Papers

See our web site [www.stolway.com.au](http://www.stolway.com.au) for technical papers.

**Our regular customers are premium oil and gas producers and major international engineering firms.**

## End Users

Stolway equipment users represent blue chip names in the oil, gas and petrochemical industries including:

- ConocoPhillips
- Exxon Mobil
- BP
- BHP Petroleum
- Reliance Industries
- Kuwait National Petroleum Co (KNPC)
- Oman LNG
- Ras Gas
- Qatar Petroleum (QP)
- Qatar Gas
- Abu Dhabi Gas Liquefaction Co (ADGAS)
- ADMA-OPCO
- GASCO
- Total ABK
- Zakum Development Company (ZADCO)
- Santos
- Shell (China)
- Woodside
- BASF
- Shell Pearl GTL
- Shell Houdini
- Petro Rabigh
- Tasnee Ethylene
- Saudi Aramco
- Dolphin Energy
- Tengizchevroil
- Takreer
- SECCO
- BP Tunisia
- ONGC
- ESSO
- PDO
- Apache
- Petronas
- Optimal - Dow
- Shell SMPO/CSPC



### Stolway Holdings Pty Limited

Australia • UAE • Norway

9 Charcoal Close  
(PO Box 1197)

Unanderra NSW 2526 Australia

Tel: +61 (0)2 4262 3000

Fax: +61 (0)2 4262 3001

[www.stolway.com.au](http://www.stolway.com.au)

[info@stolway.com.au](mailto:info@stolway.com.au)