

COMPANY PROFILE

&

REFERENCE LISTS



Picture: LSTF RB200 (with options) – Swedish Armed Forces

COMPANY PROFILE

Introduction

Ansti Test Systems Ltd specialises in the design and manufacture of test facilities for performance measurement of underwater breathing apparatus. The facilities are turnkey packages, which utilise computerised data acquisition techniques to display in real time the dynamic performance of the breathing apparatus under test. The systems can be designed and configured to meet specific customer requirements. Our unique quick opening lid systems for the stainless pressure vessels allow rapid and accurate testing / certification of all types of diving equipment. Ansti also offers a range of testing, research, development and consultancy services for a wide range of life support systems. Now recognised worldwide, Ansti provides complete **Confidentiality** in all the services it offers and, most importantly, is **Independent**.

Achievements

- > ISO 9001: 2008 Accreditation.
- > Supplied 43 turnkey hyperbaric test systems to 39 international companies and 2 international militaries.
- > Completed > 5000 regulator tests for most SCUBA manufacturers worldwide.
- > Conducted SCUBA design / development programmes for 8 international companies.
- > Provided technical consultancy for various diving related projects.

Resources

The 2 principal directors are Stan Ellis and Ian Himmens. Stan Ellis is a Chartered / European Engineer with specialist knowledge of regulator design and diving related pressure vessel / high pressure system design to UK and International Codes. Ian Himmens, formerly head of the life support systems laboratory at DERA Alverstoke, is a specialist in underwater life support systems conducting work, ranging from SCUBA (50m) and rebreathers (100m) to return-line diving systems (350 – 400m). With a combined 40 years of experience in the diving industry, a considerable range of engineering and scientific skills is available.

Business Activities / Services

> **Manufacture of Turnkey Test Systems**

As the company name implies, Ansti is principally a designer, manufacturer, and supplier of a range of turnkey systems to test and measure the dynamic breathing performance of a wide range of life support equipment to EN 250: 2014, EN 14143: 2013, prEN15333-1 and the US Navy Unmanned Testing Procedures. They include test vessel and breathing simulator with instrumentation and computerised real time display / data acquisition system. Any combination of system can be designed to meet customer's specific needs and sub-systems manufactured for retro-fitting to existing facilities are also available.

> **Design / Supply of Chambers, Pressure Vessels and Breathing Simulators**

Ansti designs / supplies unmanned test chambers and pressure vessels for specialist testing requirements. All designs comply with relevant International codes.

Standard design sinusoidal waveform and programmable breathing simulators to 300 msw depth rating and 7 litres tidal volume are available. The standard design incorporates electronic control of breathing rate and manual adjustment of tidal volume at increments of 0.5 litres. Special designs can be accommodated. Programmable Breathing Simulators have been specifically developed to allow manufacturers, research / test laboratories to use a wide range of breathing waveforms to test the dynamic performance of surface life support equipments. Each breathing simulator system incorporates a servo electronic control system and touch screen HMI panel which are integrated into custom built stainless steel consoles. The HMI panel allows rapid changes in tidal volume and breaths per minute as well as changing between the standard pre-programmed sinusoidal and NIOSH Sedentary Cam waveforms. To utilise the full capability of the programmable breathing simulator the Human Breathing Waveform Measurement System is required. This will allow human breathing waveforms to be measured and converted into a machine download.

> **Regulator / Rebreather Testing to EN 250: 2014 / EN 14143: 2013**

A service is provided to manufacturers, importers, suppliers, and agents which allows the rapid and accurate testing of a demand regulators / rebreathers dynamic performance to the requirements of EN 250 / EN 14143, including cold water and manned testing.

> **Product Development**

A product development service has evolved in response to market forces and has now been used by 8 international companies. The Ansti facilities are used as diagnostic tools to define the limits of performance of all types of respiratory equipment under varying conditions. The performance of the equipment is enhanced by optimising the design through detailed analysis of operating principles and dynamic response.

> **Control Panels / Dive Control Systems / Umbilicals**

Ansti designs / supplies control panels, dive control systems, and umbilicals to suit customer requirements. They are manufactured to high standards for air and mixed gas diving.

> **Technical Consultancy / CE Type Test Approval**

Ansti offers technical consultancy for any respiratory equipment related project, this may range from design input / advice through to complete test programmes involving many different aspects of equipment function and performance. Ansti have both the facility hardware and access to competent HSE Part 4 approved divers to undertake any unmanned / manned test programme and equipment qualification requirements.

REFERENCE LISTS

Test Facility Reference List

Life Support Equipment Test Facility

- > Ansti Test Systems Ltd, UK
- > AP Valves, UK
- > Aqua Lung America, USA
- > Health & Safety Laboratory, UK
- > Kirby Morgan DSI, USA
- > SeacSub, Italy
- > Apeks Marine Equipment, UK
- > Aqualung Spirotechnique, France
- > Dive Lab Inc, USA
- > Israel Navy Medical Institute
- > Raytech, Belgium
- > Swedish Armed Forces, Sweden

Research & Development Test Facility

- > AP Valves, UK
- > Mares, Italy
- > Scubapro Europe, Italy
- > Cressi-Sub, Italy
- > Poseidon, Sweden
- > Scubapro, USA

Automated Production Test Station

- > Cressi-Sub, Italy
- > Scubapro Europe, Italy
- > Atomic Aquatics, USA
- > Poseidon, Sweden
- > Scubapro, USA

Demand Regulator Test Station

- > Hydrotech, UK
- > Kirby Morgan DSI, USA
- > Ocean Technology Systems, USA
- > Bism, Japan
- > Scubapro, Germany
- > Submersible Systems Inc, USA
- > High Valley Design, USA
- > Aqualung, Japan
- > Seaprex, Japan
- > High Valley Design, USA
- > Multinational, Taiwan (x2)
- > Fadis Diving, France
- > Ocean Divers Co Ltd, Taiwan
- > Scubapro, France
- > Scubapro, Italy
- > TUSA / Tabata, Japan
- > Seac Sub, Italy
- > Well Marine Diving Co Ltd, Taiwan

Programmable Breathing Simulators

- > Swedish Armed Forces, Sweden
- > Health & Safety Laboratory, UK (x2)

Positive Pressure Breathing Rig

- > Ministry of Defence, RAF Henlow

Computerised Surface Test Facility

- > Aqualung Spirotechnique, France
- > Andark Diving, UK
- > Bayeux Marine, France
- > Hytech, The Netherlands
- > Midland Diving Equipment, UK
- > Scubapro, Belgium
- > Scubapro, South Africa
- > Scubapro, UK
- > United Sterling, Hong Kong
- > Subchandlers Lille, France
- > Aqualung, Japan
- > Airmecatec, France
- > Deep Blue Dive Centre, UK
- > Health & Safety Laboratory, UK
- > North West Dive Services, Ireland
- > Scubapro Europe, Italy
- > Scubapro, Spain
- > Tigullio, Italy
- > Au Vieux Campeur, France
- > Oasis Plongee, Belgium



Computerised Surface Test Facility Cont'd

- > Aquasport, UK
- > Dykkercentret, Denmark
- > Belgium Défense, Belgium
- > Marea, France
- > Geneva Police, Switzerland
- > Diveboutik, France
- > SubMarine, France
- > Nautisport, Tahiti
- > H2O Plongée, Belgium
- > Scubazar, France
- > Travaux Maritimes & Controles, France
- > Joint Services Sub-Aqua Dive Centre, UK
- > Kirby Morgan DSI, USA
- > Cabesto, France
- > Go & Sea, France
- > Hydra Marine, South Africa
- > Army Training Group, UK & Cyprus
- > Fadis Diving, France
- > Al Boom Marine, Dubai
- > Achill Diving Services, Ireland
- > Aux Amis Plongeurs, France
- > Splash, Luxemburg
- > Scubaqua, France
- > Atlantys, Corsica
- > Flow Check, Spain
- > Decathlon, France
- > Scientific & Technical Diving Services, Belgium
- > De Zeeman Pro, Belgium
- > Apeks Marine Equipment, UK

Client Reference List

- > Achill Diving Services
- > Airmecatec
- > Apeks Marine Equipment Ltd
- > A P Valves
- > Aqualung Spirotechnique
- > Aqualung America
- > Aqualung Japan
- > Army (UK & Cyprus) Training Group
- > Atomic Aquatics Inc
- > Atlantys
- > Aux Amis Plongeurs
- > Au Vieux Campeur
- > Avon Technical Products
- > Bayeux Marine
- > Belgium Défense
- > Beuchat
- > Cabesto
- > Carleton Life Support
- > Coltri Sub
- > Cressi-sub
- > Dacor
- > Decathlon
- > DERA
- > De Zeeman Pro
- > Diveboutik
- > Dive Lab Inc
- > DIVER Magazine
- > Draeger UK
- > Dykkercentret
- > Flow Check
- > Geneva Police
- > GKSS
- > Go & Sea
- > H2O Plongée
- > Health & Safety Laboratory
- > HSE, Offshore Safety Division
- > Hydra Marine
- > Hydrotech Ltd
- > Hytech BV
- > Inovo Medical Products Inc
- > INPP
- > Interspiro
- > Israel Naval Medical Institute
- > Johnson Worldwide Assoc
- > Joint Services Sub-Aqua Dive Centre
- > Johnson Worldwide Assoc
- > Joint Services Sub-Aqua Dive Centre
- > Kirby Morgan Dive Systems Int
- > L'île aux Plongeurs
- > Mares
- > Midland Diving Equipment
- > Ministry of Defence, RAF Henlow
- > Molecular Products
- > MSI Defence Systems
- > Multinational Company Ltd
- > Nautisport
- > North West Dive Services
- > Oasis Plongee
- > Ocean Divers Supply Co Ltd
- > Ocean Reef
- > Oceanic
- > Omersub
- > Poseidon
- > Protector Technologies
- > QinetiQ
- > Racal
- > Realisation et Conseils Hyperbares
- > RINA
- > Scientific & Technical Diving Services
- > Scubapro Europe
- > Scubaqua
- > Scubazar
- > Seaprex
- > SGS Yarsley
- > SeacSub
- > Sherwood
- > Subchandlers Lille
- > Submarine Engineering
- > Submarine Systems Ltd
- > Submersible Systems Inc
- > Swedish Armed Forces
- > Tabata / TUSA
- > Tigullio
- > Travaux Maritimes & Controles
- > TÜV / Italcert
- > United Sterling
- > Well Marine Divers Co Ltd
- > Zeagle Systems Inc



QUALITY ASSURANCE

Ansti Test Systems Limited is accredited to ISO 9001: 2008 (31 July 2015).
Initial ISO accreditation was achieved on 15 November 1996.

Scope:

Design, assembly, commissioning, servicing and calibration of Turnkey Test Facilities for Breathing Apparatus & Respiratory Equipment.

Testing & Development of Breathing Apparatus & Respiratory Equipment

