QUOTATION

DEMAND REGULATOR TEST STATION

Description

The ANSTI Demand Regulator Test Station is a cost effective, fully calibrated, turnkey system specifically designed to conduct routine dynamic performance testing, in dry conditions, of new and serviced SCUBA demand regulators to a simulated depth of 80 msw. It is suitable for use by a manufacturer for both the initial phase of product development and for routine testing of production demand regulators. The system is designed to combine the effectiveness of a compact test pressure vessel with a fixed 2.5 litre displacement breathing machine test. The system is fully integrated into control console and linked to the ANSTI Compudat computerised data acquisition system. The test station will allow you to quickly identify regulators passing / failing specified test criteria and to print Test Certificates. There is push button control of breathing rate (10, 15, 20, 25, 30 & 40 breaths per minute) providing ventilations in the range of 25 to 100 litres per minute. The test vessel is fitted with a quick release lid system and automatic Chamber Depth Control to ensure safe testing. The test station is extremely 'user-friendly' and provides a rapid method of test which is both simple and accurate. The latest version of the software allows dual display of the standard Pressure-Volume Diagram along with the corresponding performance of the first stage output pressure.

Options

Any permutation of the following is available at the additional cost indicated:

1. Larger Test Vessel / increased depth rating.
2. Provision of an anatomically correct 'Sheffield' type head to allow testing of Surface Breathing Apparatus (masks etc) on the same station.
3. Additional software and gauge interface connections to allow calibration checking of High Pressure Air Gauges, with printout of Calibration Certificate.

General

The system is CE approved and is supplied as a fully calibrated, turnkey package. It price includes on-site Installation, Commissioning, and Staff Training. A Technical Manual is supplied with comprehensive details of the equipment and full Operating Instructions.

Technical Specification

Test Vessel

1. The horizontal test vessel is constructed from Stainless Steel and rated to a maximum working pressure of 80 msw. Micro-switches and lights indicate when the chamber is fully closed and engaged so pressurisation can proceed. Fitted with automatic control the chamber depth can be pre-set (and adjusted during testing) to a maximum depth of 80 msw.

Breathing Simulator

2. The Breathing Simulator is constructed from Hard Anodised Aluminium / Stainless Steel and rated to a maximum working pressure of 8 bar (116 psi). Mounted on a machined, solid base plate it is designed and built for maximum robustness, reliability, and longevity. It has a pre-set tidal volume of 2.5 litres and push button control of breathing rate (10, 15, 20, 25, 30 & 40 breaths per minute) providing ventilations in the range of 25 to 100 litres per minute.

Computer and Instrumentation

3. The Ansti Compudat system incorporates an IBM compatible PC fitted with a high speed data acquisition card and is controlled via menu selection of calibration check routines, displays and results etc. The computer monitor provides real time values of mouthpiece pressure, chamber depth, interstage pressure, and HP cylinder pressure whilst simultaneously generating real time displays of the Pressure-Volume diagram and IP-Volume. One or two Test Certificates can be printed, one for your records and the other (if desired) to accompany the regulator.

Test Station

4. Items 1 and 2 fully integrated into a stainless steel fabricated test station that also incorporates the instrumentation, test sequence controls, pneumatic systems, and the automatic Chamber Depth Control.