

OXYGEN MASK TEST RIG

IEICOS Oxygen Mask Test Rig

IEICOS Oxygen Mask Test Rig suitable for testing of various types of masks both with and without chin support such as Mark I, Mark II, Mark III, Hawk, CFF, Helicopter, etc., in a single test rig for expiratory test, inspiratory test, compensatory test, inward and outward leakage test and anti-suffocation valve test as per test schedule.



Pneumatic Lines, Manual Pressure Controllers, Manual Flow Controllers, Solenoid valves, head forms, interface block/adapters, piping, etc.:

IEICOS Oxygen Mask Test Rig is designed such that the masks can be mounted on head form with flexible rubber surface around the nose to ensure tight fitting of the mask. Two head forms – one small (nose to chin height of 11.2 cm, width of 11.4 cm) and one large (nose to chin height of 13.2 cm, width of 11.4 cm) are provided to mount the masks. Only one mask can be tested at one time and necessary solenoids required for switching between head forms are provided. IEICOS provides a ribbon strap around the head form for installation of press-studs which helps to install masks on to the head form. The end clamps for press-studs and the connectors for the masks are provided.

IEICOS Oxygen Mask Test Rig consists of both positive pressure line and negative pressure line for conducting the tests mentioned above. Necessary manual pressure regulators, manual flow controllers of ranges 200 lpm and 1 lpm with flow meters, pressure transducers, solenoid valves, interface block are provided as suitable for conducting the above tests. A compensatory port which is parallel but drawn from the same positive pressure line output, required for the compensatory function is provided at the interface block.

IEICOS provides adapters suitable for 3 to 4 types of end connectors of the inspiratory line hose. One adapter of each type is provided. The interface block has ¼ NPT threaded connections.

IEICOS Oxygen Mask Test Rig is designed to run with air medium. A compressed air line for positive pressure at 5 Kg/cm² must provided by the user. IEICOS provides a small vacuum pump to use with the suction line.

Specifications:

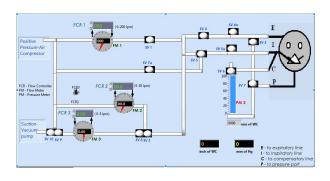
- 1. The test rig has provision to get connected to compressed air in the range 0-7kg/cm2 and the output pressure in the range 0-5kg/cm2 through a pressure controller in the range 0-200 lts/min
- 2. The test rig has pressure and flow sensors with digital indicators to measure back pressure during mask tests in the flow range 0-200lts/min. The pressure measuring devices has differential pressure grading in the range 0-1200, 0-100,0-10mm WG
- 3. A separate –ve pressure line is provided with vacuum generator capable of generating –ve pressure up to 27"WG and suitable measuring device for measuring the negative pressure shall be provided.
- 4. A separate compensatory pressure line is provided with set pressures 15"WG and 30"WG. These set pressures does not vary during the test of compensatory characteristics at flow ranges 5, 15, 30 and 100 LTS/min
- 5. The mask is firmly mounted on the head form with good fitting so that during any functional test for flows between 0-200lts/min, the reflected edge of the mask will not develop any leak around the contours of the face mask interface.

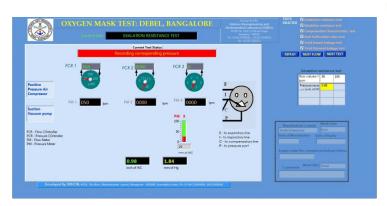
- 6. The test rig has been designed such that the mask can be mounted on to the head form having human like soft surface around the nose and mouth to ensure tight fitting of mask with adequate face mask seal. Two head formsone small and one large shall be supplied to mount masks of small and large sizes.
- 7. Suitable ribbon straps around the head form for anchoring different types of mask are provided
- 8. Suitable inlet hose connectors, compensatory connector parts and their counterparts on the test rig are provided for the best fitment of sub-assemblies without any leak for different masks.
- 9. Appropriate adaptors to connect different mask types are provided and there are arrangements for connecting the compensatory tube for testing the compensation characteristics.
- 10. The test rig has provision to set the +ve pressure or at least in the range 2", 14" and 30" WG so as to apply the same pressure on the inlet hose of the mask to measure the outward leak at 0-200lts/min'.
- 11. The test rig is capable of delivering suction in the range 0-27" WG in the mask fitted on the head form to measure corresponding inward flow in the range 0-200lts/min
- 12. All the test and measuring equipment has accuracy of +/- 0.5 to +/-1% for flow and +/- 0.5% for pressure on each test.
- 13. MFC and pressure gauges with digital indicators of high accuracy, resolution and range is used for accurate measurement and control along with computer interface facilities.

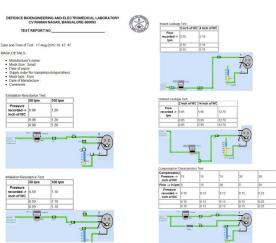
Software:

Fully automated control software for operation of the oxygen mask test rig with graphical menu driven user interface is provided. Software has simulation, hardware test, self test and actual test modes for use with oxygen mask test rig. Report generation feature is provided for to create test reports.











INDUSTRIAL ENGINEERING INSTRUMENTS

203, 12th Main Road, 3rd Phase, Peenya Industrial Area, Peenya, Bangalore-560058. Karnataka, India. Phone: 91-80-28394520 Fax: 91-80-28371386

Email: info@ieicos.com Web Site: www.ieicos.com

Due to continuous improvement, specifications, dimensions, look, color, feel and features subject to change without notice.