

Universal Oxygen Test Bench

The B001 Universal Oxygen Test Stand is designed for MRO maintenance stations looking for a solution for testing oxygen components in aeronautical breathing systems, from cylinders to respirators. Our bench can perform the tests required by the CMMs for fixed cylinder valves (CMM 35-21-20 , 35-21-93 , 35-22-02 , 35-23-07); portable cylinder regulators and respirators (CMM 35-31-55 , 35-32-18), RCF67 Series Transmitter-Regulators (C 35-50-05), RMC1000/2000/3000 Series Oxygen Regulators (CMM 35-13-70 , 35-13-74 , 35-13-80) and MC10/MF10/20 Series Oxygen Masks with regulators (CMM 35-13-60 , 35-13-61 , 35-13-63).

It has 3 independent pressure generation channels (from -14.5 to +3100PSIG) combined with 5 flow measurement/regulation circuits (from 160cc/min to 2100L/min), enabling leak, proof or flow tests to be carried out over a very wide test range. The altimeter chamber and oxygen analyser enable tests to be carried out on civil oxygen regulators and masks.

The touch-sensitive HMI displays measurements from the various instruments and allows control setpoints to be entered, all centralised in an intuitive synoptic display for the user.

The integrated instruments (pressure sensors, flowmeters, analysers) are Plug & Play: they are therefore automatically recognised by the bench, which simplifies their maintenance. They can also be calibrated in a laboratory specialising in oxygen applications.



KEY STRENGTHS

- Complete test solution with integrated controllers and measuring instruments
- Plug & Play pressure sensor
- Integrated software with touchscreen HMI
- Extended and scalable test capability

USESS

X	MRO
	R&D TEST
	Calibration
	Production
	Other

KEY WORDS

- Banc de test Oxygène
- Oxygen mask regulator
- Pressure regulator transmitter RCF67
- Oxygen cylinder Valves
- Portable oxygen bottle and regulator system

TECHNICAL SPECIFICATIONS

Test capacity:	Oxygen Valves on Cylinder & Valve Assembly (CVA)
	CMM 35-22-02 P/N B42085-1 CMM 35-21-93 P/N 803440-94
	CMM 35-23-07 P/N 801308-31 CMM 35-21-20 P/N 10850-12
	Portable bottle regulators and respirator:
	CMM 35-31-55 P/N 801160-03/04 CMM 35-32-18 P/N 5510-10
	Pressure Regulator Transmitter RCF67 Serie
	CMM 35-50-05 P/N RCF6708 and 6709
	Full-face quick donning & Oxygen crew mask regulator
	CMM 35-13-60 MF20 series masks CMM 35-13-63 MC10 series masks
	CMM 35-13-61 MF10 series masks
Test circuit	Oxygen Regulator Assembly
	CMM 35-13-70 RMC1000 Regulator Assy CMM 35-13-80 RMC3000 Regulator Assy
	CMM 35-13-74 RMC2000 Regulator Assy
	Pressure
	1 manual HP channel: 0/3100PSIG
	1 manual LP channel: 0 /250 PSIG *
	1 differential channel: -14.5/ +2 PSIG
	Flow
	5 flow measurement/regulation circuits: 160 cc/min to 2100L/min
	Altitude
Measurement chains	Altimetric chamber with porthole
	Automatic vacuum level control with integrated absolute sensor
	(*) Automatic regulation of the LP channel on request
	Pressure (x6)
	Measurement ranges: -50/+50mbarG; 1100mbar Absolute; -14.5/+2PSIG ; 150PSIG ; 250PSIG ; 3100PSIG
	Precision: < 0.1% EM
	Output signal: digital (CANOPEN bus)
	Flow (x5)
	Measurement ranges: 160cc/min; 1L/min; 20L/min, 200L/min, 2100L/min
	Precision: ±0.5% RD ±0.1% FS
Mechanical connections	Output signal: digital (Bus RS485)
	Oxygen levels
	Measurement range: 0....100% O2
	Precision: < 0.1% EM
	Output signal: digital (CANOPEN bus)
	37° JIC fittings (Dash 4 to 10) for connection to various test circuits
	Oxygen-compatible vacuum pump (integrated into the bench)
	B021 - Electrical Test Box (for RCF67 Series)
	Bonding & Insulation resistance test kit (for RCF67 Series)
	Simulated lung capacity (for Oxygen Regulator Assembly)
Options and additional accessories	Cycling module (for overhaul on Oxygen Regulator Assembly)
	Microphone Test Box (for Mask Regulator Assembly)

TECHNICAL SPECIFICATIONS

HMI	PC with dedicated, custom-developed software Simple, intuitive graphical touch interface
Software functions	Display of bench measurements with specific synoptic for different tests Setpoint input for flow and pressure regulators (except manual) Automatic conversion of units (pressure, flow) STPD flow calculation (for tests on Oxygen regulator assembly)
Power supply	Mains 200-240VAC $\pm 10\%$; 50/60Hz - 15A (110V 60Hz compatibility optional) IEC C14 socket connection
Pneumatic power supply	Pressure: 6 to 7 bar (85 to 100PSI) Fluid: Nitrogen or upstream filtered dry air Staubli RBE06 end connection
Oxygen supply	Fluid: Oxygen gas Pressure: 200 to 220 bar Flow capacity: 1500 NL/min @ 100 bar 6mm stainless steel double ring connection
Oxygen evacuation circuit	Oxygen-compatible Evacuation pipework connected to the outside of the building (min. DN20) Connection to corrugated sleeve for DN24mm hose
Suction network*	Oxygen-compatible network Pressure limit: < 1mbarA Flow capacity: 14 m ³ /h Connection on corrugated sleeve for DN24mm hose (*) not required if integrated vacuum pump option
Operating temperature	+10 to +40°C
Storage temperature	+5 to +45°C
Dimensions	1500 x 650 x 1600 mm (W x D x H)
Mass	< 250kg
Accessories supplied	Mechanical fittings and adapters Customised connection hoses


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