



innovative solutions

OXYGEN \ AIR PRESSURE CHAMBER

IS: 10810 (PT.16) & (Pt. 56), IS 6380, IEC 811
SSI 519 AOPCH (with HMI)



An ISO 9001:2008 Company
GMP compliant

The instrument is manufactured as per IS: 10810 (Pt.16) and IS: 10810 (Pt.56), for heat Ageing test under oxygen \air pressure for insulation & sheath of electric cables. This apparatus is also used for estimating the relative resistance of vulcanized rubber to age determination by assessment of change in tensile strength & elongation of material by subjecting them to accelerated ageing in oxygen\air pressure.

Temperature Range : Ambient to 200°C

Pressure Range : 0-22 Kg/cm² (0-2.2 Mpa)

The instrument consist of the following :

- Inner chamber of seamless steel pipe of at least 8 mm thickness.
- SS lid and provision for placing the rubber test pieces,
- Pressure Control by Digital Pressure Controller
- Jacket Heaters outside the Inner Chamber
- PID Digital Temperature Indicating Controller , least count 0.1°C
- Pressure Gauge Digital (least count 0.1 kg/cm².)
- Inlet, outlet , Safety valve (preset / sealed)
- Manifold with pressure switch, solenoid valve for compensating drop in pressure of gas from cylinders
- Power cord, extra seal, rubber pipe to connect instrument with cylinder



(Actual instrument may differ from the photograph due to regular improvements)

S.S. INSTRUMENTS PVT. LTD.

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Salient Features

- + Pressure Chamber is made of 8 mm Thick Stainless steel seamless pipe.
- + The Lid and screws are made of very thick SS plate
- + The Pressure is monitored by imported pressure transmitter
- + The Pressure Control is done using highly sophisticated imported PLC system.
- + Pressure inlet and release controlled by PLC.
- + Pressure Control within 0.1 Kg/cm².
- + Temperature is controlled using PID temperature controller
- + Temperature Control within +/- 2 Deg C.
- + Excess pressure in the chamber is released automatically using solenoid valve.
- + Pressure Release at the test end through HMI.
- + After test, when the gas pressure is released from the chamber, the software automatically shuts down the inlet of the chamber. No need to manually close the cylinder.
- + Gas released done in 1 sec steps to eliminate sudden pressure release.
- + After Stabilization of Temperature, if the temperature varies for more than 3 deg C, the system automatically goes in Error mode.
- + After Stabilization of pressure, if the pressure varies more than 0.2 kg/cm², the system automatically goes in Error mode.
- + **Remote access of complete system is provided using Ethernet. All the functions of HMI can be monitored and controlled using Ethernet at remote location on a computer. The user can start , modify and monitor the test using remote access.**
- + Data Logging of Temperature / pressure provided for complete duration of test.

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Safety Features

The instrument contains pressure up to 22 Kg/cm² (300 psi) which is about 10 times the pressure in a car tyre.

The safety of instrument and operator is paramount while using this instrument. SSIPL has introduced various safety features in the instrument. Some of the are

- ✚ Pressure Control using fail safe PLC controller.
- ✚ Release of excess pressure automatically using solenoid valve. This process is controlled by PLC.
- ✚ Separate Electro Mechanical Switch is provided with is factory set at ~24 Kg / cm². This will stop the inlet of pressure in case digital Pressure controller fails.
- ✚ Separate mechanical safety valve is provided to release the pressure if both digital as well as electro mechanical switch fails.
- ✚ Analog pressure gauge is provided on the lid, to indicate the pressure in the chamber, so that the operator does not open the lid with pressure in the chamber.
- ✚ A manual pressure release valve is provided on the lid to release pressure manually.
- ✚ A remote emergency switch (can be installed 15mt from oven) is provided for emergency stopping the test, and cutting the pressure inlet.
- ✚ **Specially designed software to automatically detect leakage in the system and close pressure input. This isolate the gas cylinder from the chamber.**

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Reset

Prepare for new test

Press to reset HMI/ PLC and go to operator screen

Save test data (upon reset)

Release pressure from chamber

Operator Screen

Company name: AAAAAAAAAAAAAAAAAAAAAAAAAA

Operator name: AAAAAAAAAAAAAAAAAAAAAAAAAA

Sample code: AAAAAAAAAA 1A 1A 1A AAAAAAAAAA

Gas type: Oxygen

Date: 08-08-2008

Time: 08:00:00 PM

Parameters Remote Access Save Screen

Input parameters

Sample code: AAAAAAAAAAAAAAAAAAAAAAAAAA

Gas type: Oxygen

Set temperature (Deg. C): ###.##

Set pressure (Kg/cm²): ##.##

Set sampling time (minut⁻): ##

Test duration (HH:MM): #### ##

Operator Screen Start Test Save Screen

Status

Sample code: AAAAAAAAAAAAAAAAAAAAAAAAAA

Gas type: Oxygen

Test Status: Test Stopped

Set Temperature (Deg. C): ###.## Present: ###.##

Pressure (Kg/cm²): ##.##

Time (HH:MM): #### ##

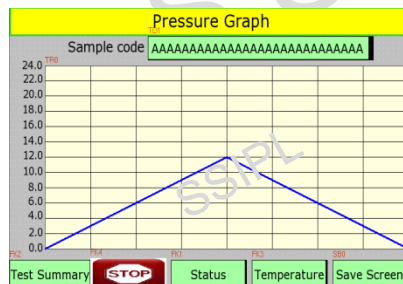
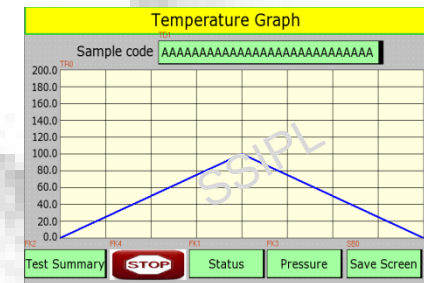
Test Summary STOP Status Save Screen

Table

Sample code: AAAAAAAAAAAAAAAAAAAAAAAAAA

S.No.	Temp.	Pre.	HH	MM	S.No.	Temp.	Pre.	HH	MM
1	###.##	###.##	##	##	9	###.##	###.##	##	##
2	###.##	###.##	##	##	10	###.##	###.##	##	##
3	###.##	###.##	##	##	11	###.##	###.##	##	##
4	###.##	###.##	##	##	12	###.##	###.##	##	##
5	###.##	###.##	##	##	13	###.##	###.##	##	##
6	###.##	###.##	##	##	14	###.##	###.##	##	##
7	###.##	###.##	##	##	15	###.##	###.##	##	##
8	###.##	###.##	##	##	16	###.##	###.##	##	##

Test Summary STOP Status Save Screen



Test Summary

Test Time is Over

Average temperature (Deg.C): ###.##

Average pressure (Kg/cm²): ##.##

Time (HH:MM): #### ##

Shut down Home Test Summary Save Screen

Shut down

Release pressure from chamber

Please wait for pressure to release.

Shut off the instrument.

Disconnect the main.

Open the lid to remove samples.

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