

OSWORLD[®]

Experiment With The Truth



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Artist impression of
upcoming Osworld factory



BOD Incubator

Cooling Incubator

Pharma Refrigerator

BOD Incubator/Cooling Incubator

BOD Incubator/Cooling Incubator



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BOD Incubator/Cooling Incubator

BOD INCUBATOR

A BOD incubator is an incubator designed to maintain a temperature of 20°C that is necessary to perform a test called Biochemical Oxygen Demand (BOD). It involves incubating samples saturated with oxygen at 20°C for (usually) five days.

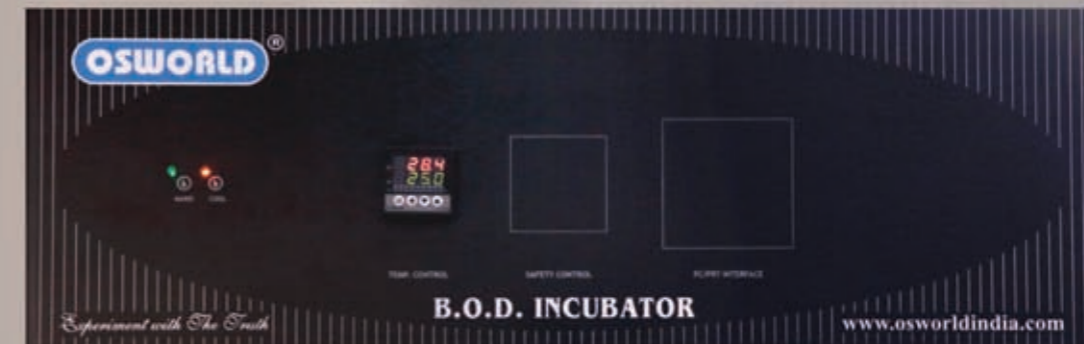


COOLING (REFRIGERATED) INCUBATOR

Cooling Incubator is a device used to grow and maintain microbiological cultures or cell cultures at temperatures between 2°C to 8°C. The incubator maintains optimal temperature, and is used to culture both bacterial as well as eukaryotic cells.

PHARMA REFRIGERATORS

Pharma Refrigerators maintain temperatures between 2°C to 8°C. They are used for storing vaccines and any temperature-critical items.



Pharma Refrigerator

Pharma Refrigerator



ACCESSORIES

- OSLOG Data Storage Device (Oslog–DSD)
- OSLOG software with 21 CFR Part 11 features
- Wireless Module—Connect OSLOG DSD to PC without cables
- GSM Module—Deviation alarm mobile alert through SMS to 5 mobile numbers
- Temperature control—PLC based
- Magnetic door lock facility
- Stand-by refrigeration system
- PLC for auto change over to stand-by systems
- Data logger 4 point temperature

Pharma Refrigerator



FEATURES

Components

Chamber: Stainless steel mirror-polished chamber with rounded corners that offer superior air flow and assists cleaning

Temperature sensor: Swiss make PT 100 RTD class 'A' sensor

Temperature: Standard model comes with digital PID controller which is CE certified

PLC control: Effective control along with latest touch screen technology with aesthetically appealing HMI display

OSLOG DSD: Meet ICH and GMP regulatory requirements by recording data of chamber conditions against time. Internal memory helps save data up to 5000 readings

Refrigeration compressor: Hermetically-sealed Copeland-make compressors utilizing R134a CFC-free refrigerant

Over temperature: Protect samples by preventing untoward rise in temperature

Internal glass door: Samples can be easily viewed from outside without disturbing internal conditions

Access port for external sensor: Multiple sensors can be inserted through port while conducting mapping cycles

Interior lighting: View samples readily as interior lighting switches on automatically when door opens

RS 485 interface: Connect to PC and manage data with the 21 CFR compliant software (option). (Refer to page 108)

Handle: Elegant German handle with firm snap lock

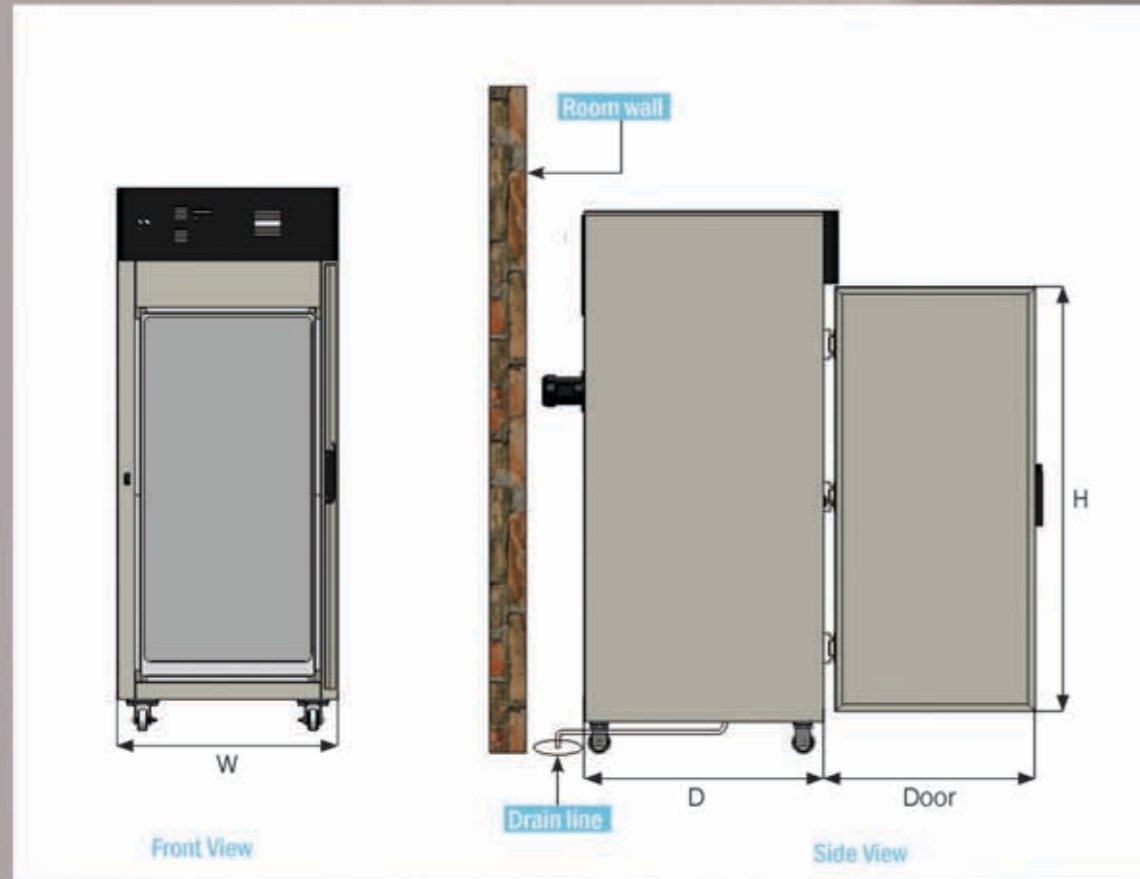
Hinges: Aesthetic German hinge, door sways conveniently

Gasket: Silicon food grade

Shelves: Stainless steel wire shelf designed to maximize air flow

Castor wheels: For easy mobility; conveniently shift equipment and place at desired location

Cooling Incubator



SAFETY FEATURES

- High temperature cut-off
- Compressor thermal cut-off
- Electrical short circuit breaker

ALARMS

- High/low temperature



Cooling Incubator

Technical Specs

Construction	Double wall with door having locking arrangement and inner glass viewing door
Temperature range	For BOD Incubator: 5.0 °C to 60.0 °C For Cooling Incubator: 2.0 °C to 8.0 °C For Pharma Refrigerator: 2.0 °C to 8.0 °C
Temperature resolution	0.1 °C
Temperature accuracy	± 0.2 °C
Temperature uniformity	± 1 °C
Temperature Control	Microprocessor-based PID Control/PLC control option
Temperature sensor	PT100 RTD type Class 'A', Made in Switzerland
Temperature sensor accuracy	± 0.25 °C
Cooling	CFC-free Copeland-make compressor utilizing R 134A eco-friendly refrigerant, with condenser, motor, relay
Heating	'U' Shaped Nichrome Wire heater in SS Sheathing
Air circulation	Flange motor with impeller/blower
Insulation	Poly Urethane Foam (PUF)
Chamber illumination	Fluorescent light with door switch
Trays	Heavy-duty SS wire mesh
Feet	Castor wheels
Electrical	230V / 15A / 50 Hz

Ordering Information

Model	Internal Size	External Size	Capacity		Shelves	Weight Kg	Shipping weight Kg	Power	
	W × D × H cm	W × D × H cm	Cu. ft.	Litres				VAC, Hz	Amps
OCI 4	45 × 45 × 60	60 × 70 × 110	4	120	2	104	150	230,50	10
OCI 8	60 × 60 × 60	75 × 83 × 110	8	200	2	130	190	230,50	10
OCI 12	60 × 60 × 90	75 × 83 × 140	12	324	3	158	244	230,50	12
OCI 16	60 × 60 × 125	75 × 83 × 175	16	450	4	220	340	230,50	12
OCI 21	60 × 80 × 125	75 × 103 × 180	21	600	5	236	384	230,50	17
OCI 28	80 × 80 × 125	95 × 103 × 180	28	800	5	315	512	230,50	20
OCI 34	80 × 80 × 155	95 × 103 × 210	34	1000	5	394	640	230,50	20

A photograph of a walk-in cooling incubator with its double doors open. The interior is empty and features a stainless steel finish. The doors are partially open, revealing the inner shelves and the door seals. A yellow text box is overlaid on the right side of the image.

Walk-in Cooling Incubator

Walk-in Cooling Incubator

Walk-in Cooling Incubator



SAFETY FEATURES

- High temperature cut-off
- Compressor thermal cut-off
- Electrical short circuit breaker

ALARMS

- High/low temperature

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Walk-in Cooling Incubator

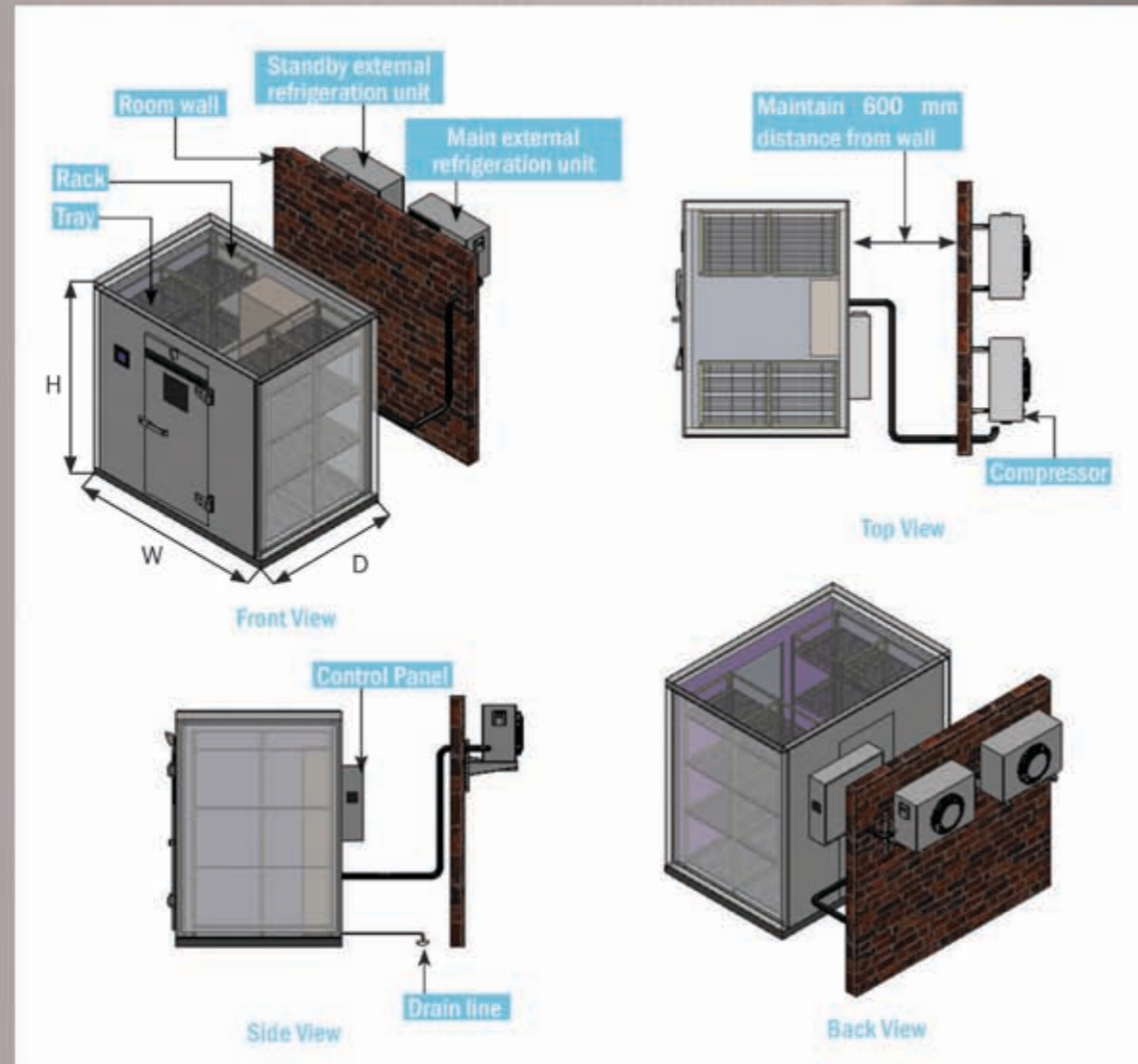
Osworld Cooling Incubators are designed to serve a wide array of requirements, more specifically to conduct life cycle testing, shelf life studies, general incubation and refrigerated storage. These Cooling Incubators guarantee extremely accurate temperature regulation and uniform temperature distribution.

A Walk-In Cooling Incubator is generally built and erected on site. The room size in which it is to be installed is measured and, depending on the available area and the internal chamber volume desired by the user, Osworld will suggest a suitable size that can fit in the room.

Walk-in Cooling Incubator



Walk-in Cooling Incubator



Technical Specs

Construction	Double wall with door having locking arrangement and inner glass viewing door
Temperature range	2.0 °C to 8.0 °C OR 5.0 °C to 60.0 °C
Temperature resolution	0.1 °C
Temperature accuracy	± 0.2 °C
Temperature uniformity	± 1 °C
Temperature Control	Microprocessor-based PID Control. Or PLC control option
Temperature sensor	PT100 RTD type Class 'A', Made in Switzerland
Temperature sensor accuracy	± 0.25 °C
Cooling	CFC-free Copeland-make compressor utilizing R 134A eco-friendly refrigerant, with condenser, motor, relay
Heating	'U' Shaped Nichrome Wire heater in SS Sheathing
Air circulation	Flange motor with impeller/blower
Insulation	Poly Urethane Foam (PUF)
Chamber illumination	Fluorescent light with door switch
Trays	Heavy-duty SS wire mesh
Feet	Castor wheels
Electrical	230V/15A/50 Hz

ACCESSORIES

- OSLOG Data Storage Device (Oslog-DSD)
- OSLOG software with 21 CFR Part 11 features
- Wireless Module—connect OSLOG DSD to PC without cables
- GSM Module. Deviation alarm mobile alert through SMS to 5 mobile numbers
- Temperature Control—PLC based
- Magnetic door lock facility
- Stand-by refrigeration system
- PLC for auto changeover to stand-by systems
- Data logger 8 point temperature

Ordering Information

Model	Internal Size	External Size	Capacity	Shelves	Weight	Volume packed	Shipping weight	Power	
	W × D × H cm	W × D × H mm						Litres	Kg
OWIC	2000 × 1250 × 2000	2160 × 1510 × 2160	5000	16	104	5	500	230,50	12
OWIC	2000 × 2000 × 2000	2160 × 2160 × 2160	8000	24	130	8	600	230,50	12
OWIC	2000 × 2500 × 2500	2160 × 2960 × 2660	12000	36	158	13	800	230,50	16

Larger sizes available on request

A suitable size for your application can be designed given particular room dimensions



Deep Freezer

Deep Freezer

Deep Freezer



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Deep Freezer

Osworld Deep Freezer is suitable for medical and scientific applications (ex. reagents, biologicals, pharmaceuticals and other commonly used laboratory materials). These Deep Freezers provide energy efficient,

convenient, safe and reliable performance for optimal storage temperature environments necessary for a wide range of life science, pharmacy, biological, medical, clinical and industrial applications.

ACCESSORIES

- OSLOG Data Storage Device (Oslog—DSD)
- OSLOG software with 21 CFR Part 11 features
- Data logger 4 point temperature

Deep Freezer



Deep Freezer



SAFETY FEATURES

- High temperature cut-off
- Compressor thermal cut-off
- Electrical short-circuit breaker

ALARMS

- High/low temperature

UTILITIES

- Room temperature around machine preferably at 25° C with air-conditioning or a well-ventilated room with exhaust fan. However, surrounding temperature should not exceed 30° C
- Stabilized Input Voltage of 230V AC 20 Amps. Use of Servo-controlled Stabilizer is recommended

Technical Specs

Construction	Double wall with door having locking arrangement and inner glass viewing door
Temperature range	-20°C / -30°C / -40°C
Accuracy/Uniformity	±2°C/± 2°C
Temperature Display	Digital LED 3 ½ digit
Temperature Sensor	PT-100
Control type	Microprocessor-based PID Control with Auto Tune CE Marked
Resolution	1°C
Cooling	CFC-free Copeland-make compressor utilizing R 134A eco-friendly refrigerant, with condenser, motor, relay
Air circulation	Flange motor with impeller/blower
Feet	Castor wheels
Trays	Heavy-duty SS wire mesh
Electrical	230V / 15A / 50 Hz

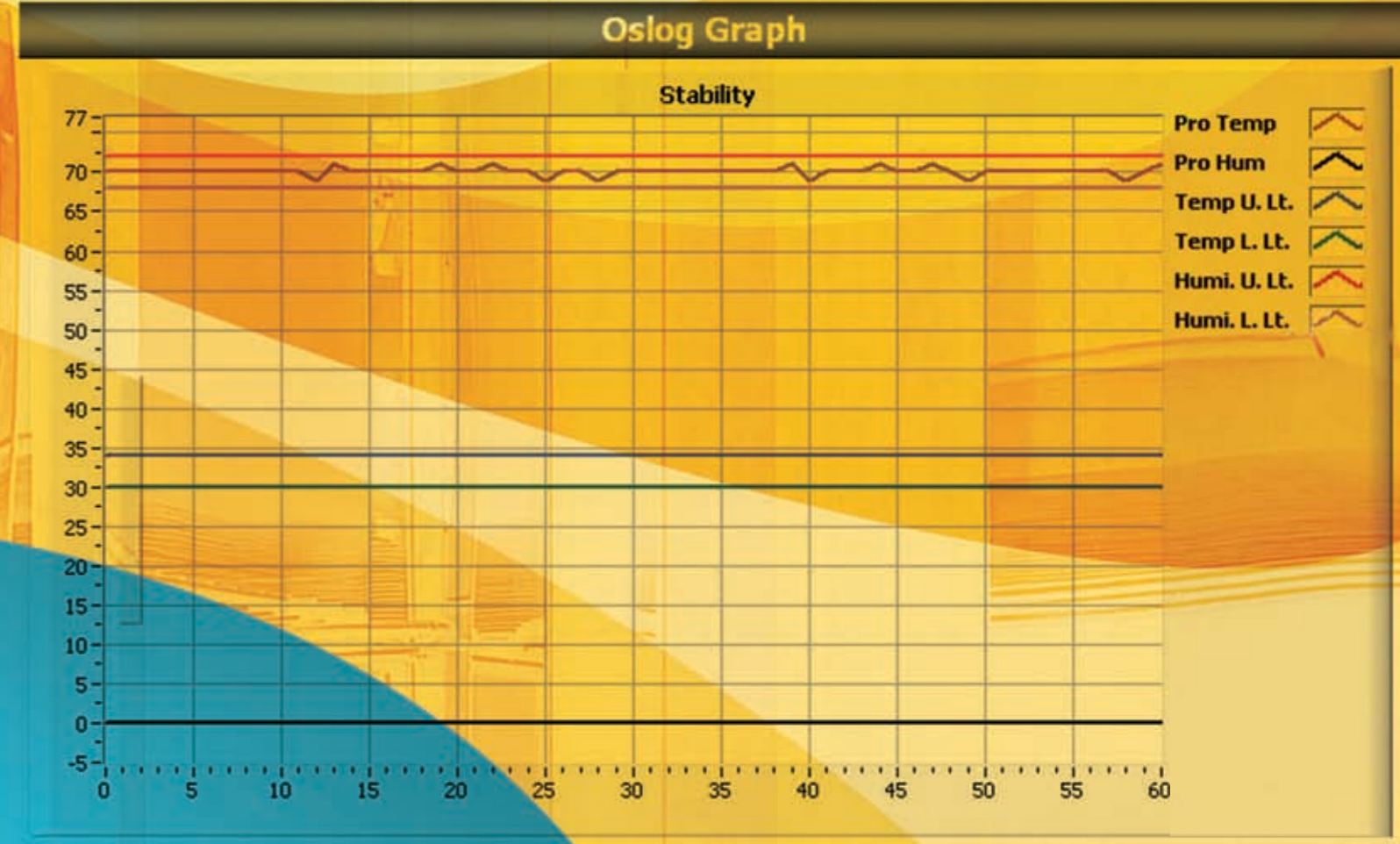
Ordering Information

Model	Internal Size	External Size	Capacity		Shelf's	Weight Kg	Shpgwt Kg	Power	
	W × D × H cm	W × D × H cm	Cu. ft.	Litres				VAC,Hz	Amps
ODF 4	45 × 45 × 60	65 × 114 × 130	4	120	2	104	150	230,50	10
ODF 8	60 × 60 × 60	79 × 121 × 130	8	200	2	130	190	230,50	10
ODF 12	60 × 60 × 90	79 × 121 × 165	12	324	3	158	244	230,50	12
ODF 16	60 × 60 × 125	79 × 121 × 199	16	450	4	220	340	230,50	12
ODF 21	60 × 80 × 125	76 × 141 × 217	21	600	5	236	384	230,50	17

DATE	TIME	Set Temp (°C)	Pro Temp (°C)	Set Hum(%)	Pro Hum(%)	Remark
01/04/2010	11:01	30.0	25.3	80.0	70	
01/04/2010	11:02	30.0	24.9	80.0	69	
01/04/2010	11:03	30.0	25.8	80.0	70	
01/04/2010	11:04	30.0	24.5	80.0	69	
01/04/2010	11:05	30.0	25.1	80.0	69	
01/04/2010	11:06	30.0	25.3	80.0	70	
01/04/2010	11:07	30.0	25.0	80.0	69	
01/04/2010	11:08	30.0	25.3	80.0	71	
01/04/2010	11:09	30.0	24.5	80.0	70	
01/04/2010	11:10	30.0	25.0	80.0	70	
01/04/2010	11:11	30.0	25.7	80.0	70	
01/04/2010	11:12	30.0	25.7	80.0	70	
01/04/2010	11:13	30.0	25.8	80.0	70	
01/04/2010	11:14	30.0	24.2	80.0	70	
01/04/2010	11:15	30.0	24.9	80.0	70	
01/04/2010	11:16	30.0	25.2	80.0	69	



TEMPERATURE		HUMIDITY	
27.5	PV	82.8	
30.0	SV	65.0	



Equipment Make : Godrej
 Equipment Name : oslog2
 From Date & Time : 01/04/2010 00:00
 To Date & Time : 01/04/2010 23:59
 Temp Limits : ± 5
 Humidity Limits : ± 10
 Prepared By : osworld
 Print Date & Time : 01/04/2010 17:49

Equipment Id : oslog2

DATE	TIME	Set Temp (°C)	Pro Temp (°C)	Set Hum(%)	Pro Hum(%)	Remark
01/04/2010	11:01	30.0	25.3	80.0	70	
01/04/2010	11:02	30.0	24.9	80.0	69	
01/04/2010	11:03	30.0	25.8	80.0	70	
01/04/2010	11:04	30.0	24.5	80.0	69	
01/04/2010	11:05	30.0	25.1	80.0	69	
01/04/2010	11:06	30.0	25.3	80.0	70	
01/04/2010	11:07	30.0	25.0	80.0	69	
01/04/2010	11:08	30.0	25.3	80.0	71	
01/04/2010	11:09	30.0	24.5	80.0	70	
01/04/2010	11:10	30.0	25.0	80.0	70	
01/04/2010	11:11	30.0	25.7	80.0	70	
01/04/2010	11:12	30.0	25.7	80.0	70	
01/04/2010	11:13	30.0	25.8	80.0	70	
01/04/2010	11:14	30.0	24.2	80.0	70	
01/04/2010	11:15	30.0	24.9	80.0	70	

From Date & Time: 00:00 01/04/10
 To Date & Time: 23:59 01/04/10

Temp Set Value : 30
 Hum Set Value : 25.4

21 CFR Part 11 Compliant Software

- Mean Kinetic Temperature (MKT), Audit Trail, Graphs, Tabular reports.
- Multiple user passwords
- Minimum, Maximum & Average value at the end of each report.
- Separate alarm report.
- Print/Scan frequency programmable (1 to 240 mins).
- Internal software logging every 1.5 seconds.
- Data acquisition, monitor & control (for PLC based).
- Password protection (Min 3 levels).
- Automatic acknowledgement within specified time with an alarm, log provided readings are logged for that particular alarm.
- Door opening/closing log (Magnetic log with passwords)
- Numeric as well as graphical report (common/individual)
- Roles & privileges for user, operator and administrator
- Electronic signature
- Scanner graph
- Current reading configurable (single/multiple) by user
- Channel-wise scanner alarm report
- Print frequency programmable through software
- Page length programmable
- Controller setting programmable
- Alarm logging with times (Actual high/low readings)

OSLOG Data Acquisition System Software

1. Login Screen



2. Security



3. Log Report



4. Log graph



OSLOG Data Storage Device (Oslog-DSD)



- Online and Offline mode. When online, it also logs data onto a pen drive.
- In offline mode, it stores data in USB pen drive. Pen drive can later be taken to PC and data downloaded using Oslog software.
- In online mode, data is continuously

updated on to the PC. For retrieval of data in PC, Oslog-DSD will be connected to PC through RS232 serial port. Oslog software will scan each equipment (every 5 seconds) connected to Oslog-DSD and will store data into database file in the hard drive of the PC.

- Data logging Interval 1 to 240 minutes.
- Pen drive detection and error or USB device full indication.
- At one time max 5 nos. Oslog DSDs and 5 nos. Oscans (Datalogger) can be connected to one single Oslog Software.
- Data Stored in USB Pen drive in ASCII FAT 32 format non manipulative.
- 2 Line, 16 characters LCD display with membrane keypad.
- Oslog-DSD can be placed on front panel of equipment next to the PC for convenience.
- Extremely user-friendly and easy to operate.
- Developed exclusively for Osworld by India's reputed brand M/s Godrej & Boyce Mfg. Co. Ltd., Mumbai.

GSM Module and Internet Connectivity...

1. GSM connectivity: Connect any Osworld equipment to a GSM mobile. The equipment sends deviation alarm of temperature/humidity high/low alarm to 5 designated mobile numbers. To avoid disturbing, spurious/false alarms like door open events from not being sent, the software is programmed to send only deviations which are continuous and need to be attended.

A) Online connectivity using Universal Modbus Protocol: In this scenario the Osworld equipment is connected to the PC directly using RS485 Universal Modbus protocol. Multiple Osworld equipments are looped once again using RS485 and finally connected to the PC. The equipment data is downloaded in micro-seconds with in-built software alarm triggers to notify break in connectivity.

The GSM connectivity is made applicable through our exclusive tie-up with India's most reputed brand, Godrej. Osworld has an exclusive tie-up with Godrej for hardware interfacing and software.

This scenario is most widely used in one-on-one connectivity or connecting a few equipments in loop which are located in one room.

2. Osworld Equipment software connectivity: There are multiple ways to connect Osworld equipments to the Oslog PC software.

B) Ethernet connectivity: Equipments located in multiple rooms in one factory can be monitored/controlled from a single server using the Ethernet connectivity software module. The different computer nodes can be connected to

GSM module



Keeps track of temperature and humidity
Alerts user via SMS on high/low temperature and humidity
Connects up to five mobiles

the equipment using Cat-5 or Cat-6 cables with RJ45 connectors. The Oslog Ethernet software allows maximum 32 nos. Osworld equipment to be connected to ONE computer node in a LAN (Local Area Network) environment.

In a multiple node LAN network where multiple Osworld equipment are connected to multiple nodes, the Oslog software permits 'Unlimited Osworld Equipment to be connected to the server. Currently, the Oslog software is programmed for a Windows platform client-server set-up.

C) Internet Connectivity: A step forward is the connectivity of Osworld equipment to the Internet using the client's IP address. Osworld equipment can be viewed from anywhere in the world using Osworld dedicated Oslog Internet software. Osworld permits its clients to use Osworld web space to monitor their equipment data anytime/anywhere in the world. LIVE Equipment Data or backdated data from the main server of the equipment can be accessed and retrieved.

3) Mobile Connectivity: Osworld provides mobility feature by offering the Osworld Mobile Application on Android handphones for people on the go and who need to keep tabs on the equipment functioning constantly due to important media placed in it. Also view earlier data on the mobile by logging into the mainframe server.

4) Wireless Module: Connect any Osworld equipment wireless (without cables) at 1Km distance line of sight to the PC. Exact data download can be defined as per (from/to... date/time) convenience.



Validation

IQ, OQ, PQ documentation compliant to FDA, GLP and GMP requirement.

Developed for Osworld by Premier Validation Ltd, Europe's leading validation consultants. Their extensive and unparalleled experience in addition to the necessary regulatory knowledge has ensured that all critical parameters are considered.

Installation and Operation Qualification

This Installation and Operation Qualification is designed to validate that the Osworld Stability Chamber is installed correctly and operates according to the functional specifications and the client-user-requirement specifications. For this purpose, a number of predefined verifications and tests will be executed. Successful completion of this protocol will prove that the Osworld Stability Chamber installation was successful and that it operates according to the functional specifications and the client-user-requirement specification.

Performance Qualification

This Performance Qualification is designed to validate that the Osworld Stability Chamber performs according to the functional specifications and the client-user-requirement specifications. For this purpose, a temperature and relative humidity mapping of locations distributed across the working area of the Stability Chamber is executed, using data loggers to measure the local temperatures and relative humidity.

The testing method is based on the principles defined in the French standard NF X15-140. The testing methodology is intended for temperature and humidity-controlled units, located in a controlled environment, with a constant temperature (at one or more set points). Osworld will execute the protocols, analyze and interpret the data collected, resolve any deviations noted during the execution and prepare final Validation report.

Calibration

All measuring devices such as temperature controllers, humidity controllers along with sensors are calibrated prior to use. The quality management system approved calibration plan is implemented by highly skilled personnel.

Sensors are calibrated against master instruments which are calibrated at ERTL which is accredited to NABL, India.

NABL, India, is the signatory of Multilateral Recognition Arrangement (MLA) of International Accreditation Forum (IAF) Inc. The NABL accredited certificates issued by STQC Services are valid worldwide.



Clients: India



Alembic Pharmaceuticals Ltd.

Alkem Laboratories Ltd.

Aurobindo Pharma Ltd.

Bharat Biotech Ltd.

Cadila Healthcare Ltd.

Cipla Ltd.

Concept Pharmaceuticals Ltd.

Dr. Reddy's Laboratories Ltd.

Dr. Sabharwal's Wound Care

E.I.Dupoint Ltd.

Epsilon Laboratories Ltd.

Fresenius Kabi Oncology Ltd.

Glaxo Smithkline Ltd.

Glenmark Pharmaceuticals Ltd.

GVK Biosciences Ltd.

Haffkine Pharmaceuticals Ltd.

Hetero Drugs

Hindustan Unilever Ltd.

Incozen Pharmaceuticals
Pvt. Ltd.

Indoco Remedies Ltd.

Ipca laboratories Ltd.

Jubilant Biosys Ltd.

Macleod Pharmaceuticals Ltd.

Maneesh Pharmaceuticals Ltd.

Manipal Academy of
Higher Education

Merck Specialities Pvt. Ltd.

MSN Laboratories Ltd.

Mylax Laboratories Ltd.

Nicholas Piramal Ltd.

Orchid Chemicals &
Pharmaceuticals Ltd.

Pharmasolve Specialities India
Pvt. Ltd.

Pfizer Ltd.

Piramal Healthcare Ltd.

Ranbaxy Laboratories Ltd.

Raptakos Brett & Company Ltd.

RCC Laboratories

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Sandoz Private Ltd.

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Saraca Laboratories Ltd.

Sarvotam Healthcare Pvt. Ltd.

Silicon Life Sciences Pvt Ltd.

Stanex Drugs and Chemicals
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Industries Ltd.

Themis Meidicare Ltd.

Torrent Pharmaceuticals Ltd.

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Unilever Industries (P) Ltd.

Vasudha Pharma Chem Ltd.

Vet India Pharmaceuticals

Virchow Biotech Ltd.

Wallace Pharmaceuticals Ltd.

Wochardt Ltd.

Zenotech Laboratories Ltd.

Zydus Cadila Ltd.

Zydus Healthcare Ltd.



Experiment With The Truth

Global Presence



BUREAU VERITAS
Certification



OSWORLD SCIENTIFIC EQUIPMENTS PVT. LTD.



B-44, NEW EMPIRE INDUSTRIAL PREMISES, KONDIVITA ROAD,
J.B. NAGAR, ANDHERI (E), MUMBAI - 400 059,
MAHARASHTRA, INDIA.

Bureau Veritas Certification certify that the Management System of the above organisation has been audited and found to be in accordance with the requirements of the management system standard detailed below

Standard

ISO 9001:2008

Scope of certification

MANUFACTURE AND DESPATCH OF OSWORLD BRAND OF ELECTRICAL EQUIPMENT USED FOR TESTING IN QUALITY CONTROL AND R & D LABORATORIES IN PHARMACEUTICAL INDUSTRIES.

Certification cycle start date: **08 May 2013**
Subject to the continued satisfactory operation of the organisation's Management System, this certificate expires on: **07 May 2016**
Original certification date: **08 May 2004**

Certificate No. **IND13.6255N** Version: 1 Revision date: **07 May 2013**


Certification Authority
R. K. SHARMA-Director



Local office: "Marwah Centre" 8th Floor, Kishanlal Marwah Marg,
Opp. Ansa Industrial Estate, CIT Saki Vihar Road,
Andheri (East), Mumbai - 400 072, India

Further clarifications regarding the scope of this certificate and the applicability of the management system requirements may be obtained by consulting the organization.
To check this certificate validity please call **+91 22 6695 6300**.