

# Orbital Shaking Incubators



The REMI Orbital Shaking Incubators are designed for precise temperature control and simultaneous shaking applications required in fermentation studies, enzyme reactions, life science, tissue culture and biotechnology research labs.

**These chambers are available in standard & GMP versions.**

## Performance

- Brushless Induction Motor with variable frequency drive suitable for continuous operation
- Step less variable frequency drive ensures gentle shaking start and maintains set speed
- Maximum shaking capacity - 9 flasks x 2000 ml
- Powerful fan motor for forced air circulation to maintain uniform conditions inside chamber
- Heating by long life SS tubular heaters
- Validation protocol with IQ, OQ, PQ Documentation as per ICH guidelines

## Leading Technology

- Counter balanced mechanism for high stability in uneven load of different sized flasks
- Microprocessor controller with 4" LCD display for display of shaking speed & temperature
- Battery Backup for Controller
- Auto tuning of controller
- Self-Diagnosis for errors
- Power failure and resumption recorded with date and time
- Machine filled PUF insulation to eliminate void pockets
- Unique design of thermal barrier for better energy efficiency
- Hermetically sealed Compressor with CFC free refrigerant

## User Friendly

- Universal Shaking Platform to accommodate different sized assorted flasks
- Additional tray to store samples
- 9 Programs memory
- Histogram format of 24 hours temperature recording
- Settable High / low alarm points





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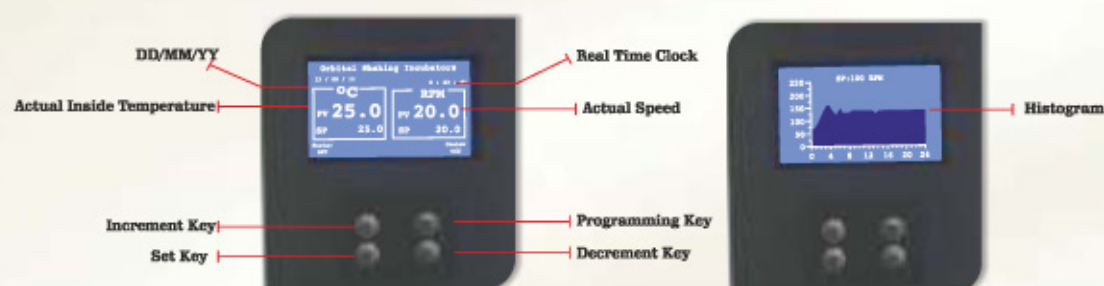
- Memory for storage of up to 1000 records
- Centronic interface to record Temperature, shaking speed, Date & Time by attaching Dot Matrix printer with adjustable print interval
- Chamber calibration port on side
- PC communication with RS-485 and software compiling to 21 CFR part 11 as per USFDA guidelines (Optional)
- Chamber illumination by UV and / or Fluorescent tubes (Optional)
- 24 hours Cyclic timer for regulating illumination conditions (Optional)
- Data logger for 8 Point temperature recording with sensor, printer interface and software (Optional)

## Safety

- High temperature safety cut off & alarms for high / low set temperature
- Electrical circuit breaker
- Time delay for compressor switch on (CIS-24 Plus)
- Overload cut off relay for compressor (CIS-24 Plus)

## Features of Remi 'Datasoft' Software as per 21 CFR part 11 requirements

- Multiple level alpha numerical password with password ageing
- Electronic signature and menu entered comment
- Secured audit trail report
- Alarm report with mention of alarm condition
- Mean Kinetic Temperature able to be calculated for any days & alarm deviation report
- Reports in graphical and tabular form
- Data Stored in PC server with Lan connectivity and can be monitored on any PC with password authentication
- Multi chamber data acquisition on single software
- Communication through RS485/TCP-IP



## Technical Data

	CIS-24 Plus	RIS-24 Plus
Temperature Range & Accuracy	5°C to 60°C, $\pm 0.5^\circ\text{C}$	5°C above ambient to 60°C, $\pm 0.5^\circ\text{C}$
Internal Volume (Liters)	215	
Platform Size	580mm x 600mm	
Maximum Shaking Capacity (Volume x No. of flasks)	100ml x 49, 150ml x 49, 250ml x 33, 500ml x 24, 1000ml x 15, 2000 ml x 9	
Shaking Speed range (RPM)	20 to 250	
Shaking Amplitude	25 mm	
Internal Dimensions W x D x H (mm)	660 x 765 x 650	
External Dimensions W x D x H (mm)	800 x 1150 x 1300	
Temperature control	Microprocessor with PT-100 sensor	
Display	4" LCD Screen, Large size Display for ease of reading	
Power Failure Alarm	Audio Visual Alarm	
Door Open Alarm	Audio Alarm in case door open for over one minute	
Temperature Variation Alarm	Set Temperature $\pm 2^\circ\text{C}$ , Audio Visual Alarm	
Illumination	8 Watts Fluorescent Tube	
Internal Body Material	Stainless Steel - 304 grade (Standard Models), Stainless Steel - 316 grade (GMP Models)	
External Body Material	Powder Coated CRCA Steel (Standard Models), Stainless Steel - 304 grade (GMP Models)	
Insulation (CFC free polyurethane foam)	70 mm minimum for Body & 80 mm for Door	
Noise Level	Less Than 65 db (A)	
Recommended Voltage Stabilizer	VS-02	X
Electrical	220-240 volts, 50Hz, Single Phase	



Specifications subject to change without notice