

ORBITEK®		MDS		
Speed range	30 - 400 rpm (25 mm Diameter) / 30- 300 rpm (50mm Diameter) / 30- 250 rpm (70 mm Diameter)			
Orbital Diameter	25, 50, 70 mm			
Universal Platform size	420 x 800 mm			
Speed Drive	Brushless DC			
Speed Accuracy	+/- 1 RPM			
Temperature Range	5° C to 80° C			
Temperature Control Accuracy *	+/- 0.1°C *			
Power Watts	3700			
Electrical Requirement	230V,50Hz, 1 ϕ 16A – 2 nos			
Display	Colour LCD			
Operation control	PLC based with Touch Screen			
Cabinet	Coated Steel exterior and Stainless Steel interior			
Dimensions WxDxH(Internal)mm	890 x 440 x 1790			
Dimensions WxDxH(External)mm	1470 x 670 x 2070			
Basic Weight	680 Kgs			
Flask Size	Flasks Per Universal Platform	Chamber Capacity		
		Shakers Per Chamber	Shakers using 1light bank	Shakers using 2light banks
100 ml	38	4	3	2
250 ml	38	4	3	2
500 ml	26	4	3	2
1000 ml	15	4	3	2
2000 ml	09	3	3	2
2800ml	04	3	3	3
5000ml	04	2	2	2
Optional Features				
Illumination light bank		Yes		
UVC lamp for de-contamination		Yes		
Gas Purging		Yes		
Humidity measurement		Yes		

* Temperature accuracy @37.0°C at an ambient temperature of < 32.0° C

** While using illumination the operable temperature range is 15° C to 60° C

Registered Office

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ORBITEK®

Range of Bio-equipment

PILOT SHAKERS

Reliable Solutions for Large Scale
Microbial & Cell Culturing.



Scigenics Biotech

Innovation inspired

SCIGENICS BIOTECH since its inception in 1997 has been an indigenous venture in manufacturing of **ORBITEK®** range of Shakers and Plant Growth Chambers, specifically addressing the field of Life-Sciences & Biotechnology.

Dynamic leadership combined with a talented pool of professionals has established **ORBITEK®** as a preeminent entity in biotech equipment manufacturing in India.

Product development with advanced features and reliability to benefit customers has been organizations focus initiative.

Customization of the equipment through close interaction with user scientists has been the organizations forte.

An ISO 9001:2008 Company

Recognition

- Largest installation base of Shakers with a prestigious customer bank of Pharmaceutical organisations, Reputed Universities, Research Institutes and Multi national corporations
- Widest range of models for lab and production scale shakers including bespoke design for specific applications
- Government of India (DSIR*) recognized in-house R & D Unit
- ISO 9001 : 2008 certified company
- CE certified products assuring safety standards
- Pioneer in innovative indigenous design with comprehensive back-up and support
- First Indian company to develop Muti-deck shakers and Stackable shakers under DBT**-SBIRI scheme

* DSIR - Department of Scientific and Industrial Research.

** DBT - Department of Bio-Technology.

Open Air Shakers

ORBITEK® open air pilot shakers are typically designed to suit , researchers application demands in large scale cultivation of microbial, tissue cultures and cell cultures. The constant agitation with large orbital diameter provides the optimum oxygen transfer to the cultures, resulting in better and homogenous yield.

These large scale open air shakers are available in 3 different variants to choose from. Based on clamp holding capacity and speed, **ORBITEK®** open air pilot shakers address the user scientists requirements in Life – Sciences.



ORBITEK® P – Orbital Large capacity Shaker

Universal Tray – 770 x 770 mm
Brushless AC drive
Maximum shaking speed of 300 rpm with full load
Large capacity to hold upto 5 x 5000 ml flasks.

ORBITEK® P X – Orbital Large capacity Shaker with extended tray

Universal Tray – 1000 x 1000 mm
Brushless AC drive
Large capacity to hold upto 9 x 5000 ml flasks, 5x 10000 ml
Round bottom flasks



ORBITEK® P D – Orbital Large capacity Double Deck Shaker

Universal Tray – 770 x 770 mm – 2 Nos
Brushless AC drive
Large holding capacity with minimal foot print.

Salient features

- ✎ Ergonomically designed with optimal footprint
- ✎ Penta-eccentric counterbalanced drive mechanism for uniform agitation with 50.0 mm orbital dia
- ✎ Maintenance free permanently lubricated ball bearings for noiseless operation
- ✎ FRP & Coated steel exterior with anti-vibration mount for smooth running
- ✎ Precise shaking speed control with gentle start /stop cycle , preventing spillage and shear to cultures
- ✎ High torque AC drive with intuitive control and digital LED display of speed
- ✎ Auto re-start to set speed after power outage
- ✎ Universal platform to accommodate Erlenmeyer , Round bottom , volumetric flasks ,test tube holders & micro plate holders

Safety Features

- ✎ Residual Current Circuit Breaker (RCCB) for user safety
- ✎ Emergency stop switch

Optional Features

- ✎ Timer function for speed
- ✎ Data logging facility for speed
- ✎ Illumination bank available for all above models

ORBITEK®	P	PX	PD	
Speed range	50 - 300 rpm	50 - 200 rpm	50 - 180 rpm	
Speed Accuracy	+/- 2% of set value	+/- 2% of set value	+/- 2% of set value	
Orbital Diameter	50 mm	50 mm	50 mm	
Tray size	770x770 mm	1000x1000 mm	770x770 mm – 2 nos	
Speed Drive	AC	AC	AC	
Display	Digital LED	Digital LED	Digital LED	
Cabinet	FRP/Coated Steel	Coated Steel	FRP/Coated Steel	
Dimensions WxDxH	1000x1142x580 mm	1250x1250x610 mm	1000x1142x980 mm	
Power watts	375	375	375	
Electrical requirement	230V, 50Hz, 1 ϕ 6A	230V, 50Hz, 1 ϕ 6A	230V, 50Hz, 1 ϕ 6A	
Basic Weight	280 Kg	320 Kg	350 Kg	
Flasks Holding Capacity (Erlenmeyer)			Top Tier	Bottom Tier
100 ml	64	100	64	60
250 ml	64	100	64	60
500 ml	36	64	36	32
1000 ml	25	36	25	21
2000 ml	16	25	16	-
5000ml	05	09	-	-

Temperature Controlled Shakers

ORBITEK® Temperature controlled pilot shakers are robust yet flexible to be used in research & industrial applications. The proven penta-eccentric counterbalanced drive mechanism coupled with high efficient temperature control module delivers the desired results in shake flask culturing of microorganisms. Wide speed and temperature range enables growth of varied cell types.



ORBITEK® P T – Orbital Large capacity Incubator shaker

Universal Platform Size : 770 x 770 mm
 Orbital Diameter : 50 mm
 Brushless AC drive
 Temperature range from : Amb +5° C to 60° C
 Large capacity to hold upto 5 x 5000 ml flasks.



ORBITEK® P E – Orbital Large capacity Refrigerated Shaker

Universal Platform Size : 770 x 770 mm
 Orbital Diameter : 50 mm
 Brushless AC drive
 Temperature range from : 10° C to 60° C
 Large capacity to hold upto 5 x 5000 ml flasks.

Salient features

- ✎ Robust construction for noiseless operation
- ✎ Penta -eccentric counterbalanced drive for uniform agitation
- ✎ High grade insulation on all sides for uniform temperature maintenance
- ✎ Micro-controller based PID for Precise temperature maintenance
- ✎ Better temperature accuracy ensuring suitable environment for cultures to grow
- ✎ Flexibility to extend for various applications including anaerobic, algae, microbial & plant cell cultures
- ✎ Universal platform to accommodate Erlenmeyer , Round bottom , volumetric flasks ,test tube holders & micro plate holders
- ✎ Finned tubular air heater for efficient heat transfer
- ✎ CFC free refrigeration system
- ✎ Low energy consumption
- ✎ Forced air circulation inside the chamber ensures uniform distribution of air into all culture flasks

Safety Features

- Residual Current Circuit Breaker (RCCB) for user safety
- Door sensor to stop the movement upon door opening
- Emergency stop switch

Optional Features

- Timer function for speed and temperature
- Data logging facility for speed and temperature
- Illumination bank available for all above models

ORBITEK®	PT	PE
Speed range	50 - 300 rpm	50 - 300 rpm
Speed Accuracy	+/- 2% of set value	+/- 2% of set value
Orbital Diameter	50 mm	50 mm
Speed Drive	AC	AC
Temperature Range	Amb +5° C to 60° C	10° C to 60° C
Temperature Control accuracy *	+/- 0.1° C *	+/- 0.1° C *
Power watts	950	1900
Electrical requirement	230V, 50Hz, 1 ϕ 6A	230V, 50Hz, 1 ϕ 16A
Display	Digital LED	Digital LED
Cabinet	FRP and Coated Steel with SS inner	FRP and Coated Steel with SS inner
Dimensions WxDxH (Internal)	900x900x600 mm	1030x1030x540 mm
Dimensions WxDxH (External)	1005x1280x1148 mm	1130x1560x950 mm
Basic Weight	400 Kg	500 Kg
Flasks Holding Capacity (Erlenmeyer)		
100 ml	64	64
250 ml	64	64
500 ml	36	36
1000 ml	25	25
2000 ml	16	16
5000ml	05	05
Optional Features		
Illumination **	Yes	Yes
UVC lamp for de-contamination	Yes	Yes
Timer for Speed	Yes	Yes
Timer for Temperature	Yes	Yes
Gas purging facility	Yes	Yes
Humidity measurement	Yes	Yes
Data Logging facility	Yes	Yes

* Temperature accuracy @37.0°C at an ambient temperature of < 32.0° C

** While using illumination the operable temperature range is 15° C to 60° C

Multi - Deck Shaker

Salient features

- Versatile Multi-deck shaker with large holding capacity with 4 individual shaking platforms
- Amplitudes of 25mm, 50 mm and 70 mm for shaking decks to meet different application needs in life sciences
- All stainless steel inner chamber for easy cleaning and disinfection
- DAHS (Distributed Air Handling System) with uniquely designed air-plenum for uniform temperature distribution
- Minimal foot print, robust structure for stable operation at full load
- High grade insulation for constant temperature maintenance
- Single door with large double glass window for clear view of culture flasks in all the decks
- Heavy duty gaskets with magnetic catch ensuring perfect door sealing
- Touch screen operation with 7.5" colour LCD display for visual comfort
- Side mounted CFC free refrigeration unit for ease in serviceability
- Data logging facility for temperature and speed
- Co2/N2 purging inside the chamber and humidity measurement available as option
- Optional detachable light bank with fluorescent or LED lamps
- Programming facility for speed, temperature, Illumination and UV-C decontamination
- Full length slide-out platform for easy accessibility during loading/unloading of culture flasks
- Brushless DC drive with feed back sensor for accurate speed control
- Perfectly counterbalanced direct drive (beltless) mechanism ,ensuring smooth running at full load and no load conditions, at all amplitudes
- Temperature uniformity with minimum gradient for reliable growth results
- Multi step Temperature ramp up facility

Sterilization

- Optional UV-C lamp for de-contamination

Safety features

- Programmed acceleration and deceleration circuit for smooth Start/Stop cycle to prevent spillages or cell shear
- Audible & Visual alarm for speed and temperature deviation
- Auto re-start to set speed and temperature after power outage
- Residual Current Circuit Breaker (RCCB) for user safety
- Thermostat cut-off for temperature over shoot
- Door sensor to stop the movement upon door opening

