

# CREATING FOR LIFE SCIENCE



- BENCH TOP EQUIPMENT
- LIQUID HANDLING
- CENTRIFUGATION
- PCR
- MICROBIOLOGY
- ELECTROPHORESIS

## Welcome to the new edition of the **ABDOS LIFESCIENCES EQUIPMENT CATALOG**

Abdos now has a new and meaningful vision for its stakeholders; “To be the first choice of customers by building long-term relationships with them through our product range, service levels, innovations and sustainability endeavours.” In 2019-20 Abdos started its first overseas plant in Nigeria (Western Africa) in its packaging division. They set up a new greenfield state of the art manufacturing plant (in Kolkata, Eastern India) in its FMCG division. Abdos is into the diversified business of packaging, FMCG, distribution, contract manufacturing, and life sciences. Please connect with us through our websites and various social media platforms to know more about us.

The Life Sciences vertical of Abdos began in the year 2010 with a state of the art manufacturing and distribution centre in Roorkee (India) with offices in New Delhi (India), Kolkata (India), and it’s logistics subsidiary in Venlo (Netherlands). Our products are used in various applications, from research to drug discovery & from quality control to diagnostics. Our products add value and improve the lives of people around us.

Last year Abdos Life sciences had undergone massive expansion in both manufacturing and logistics space. This new capability makes us one of the biggest clean room manufacturers in South East Asia. Two years back, Abdos set up its first logistics subsidiary in Europe, which has brought us closer to our customers in 32 European countries. In times to come, there are more subsidiaries planned in other parts of the world. Currently, Abdos products are available through our distributors in India and 65 countries worldwide.

In 2020, the global COVID-19 pandemic has changed the landscape of the world and has affected our families, businesses, communities, and our way of life. Our heart goes out to anyone who is impacted by the virus, to whom we extend our heartfelt wishes for a speedy recovery. We’re genuinely inspired by the selfless healthcare workers around the world who are on the front lines, working tirelessly to care for people in need. During this time, Abdos team, in all our business verticals, continued to work tirelessly and relentlessly, and we have emerged more reliable than ever before.

Abdos continues to invest in products, infrastructure, customer services, and after-sales. Still, the future is ‘digital,’ and at Abdos, we embrace the future, so we look forward to connecting with you on our digital platforms like LinkedIn, Facebook, our mobile app, and at our website: [www.abdoslifesciences.com](http://www.abdoslifesciences.com). These platforms serve as a knowledge base on products, services, latest events, technical support, and certifications. It also provides some unique scientific utility tools that can be of help to researchers and technicians.

We thank all our stakeholders for their continuous support towards the growth of Abdos.

Jai Hind



Team Abdos



### **ASSURED QUALITY**

Abdos is investing into the future with cutting-edge robotics and automation platform to provide consistent and high-performance products. We have initiated manufacturing happiness” at all our production locations and automation continues to be an integral strategy to achieve it.

### **QUALITY OBJECTIVE**

We are committed to provide the best quality products to our consumers at best possible price. We will strive to innovate and respond creatively and competitively to changes in external environment and technological advancement. We believe our strength lies in our employees and we are ever so willing to give them training, equipment and tools to empower them to be confident of quality. We conduct periodic reviews to ensure our plant and maintenance systems run effectively and efficiently so that there is no compromise on quality.

*“We, at Abdos, promise to provide complete consumer satisfaction by emphasizing strongly on continual improvement through lean business processes with the engagement of employees at all levels.”*

## **QUALITY MANAGEMENT**

Abdos quality standards are certified according to ISO 9001:2015 through its state of the art production processes, quality inspections, process parameters, SOP and automations. Since 2015 Abdos has received NS-EN ISO 13485:2016 to establish itself as a high quality manufacturer of medical devices. Abdos believes in using the latest technologies with stringent quality control measures and periodic reviews to ensure our plants and warehouses run efficiently and effectively. We believe in the qualification and development of people in our organization and provide them with training, equipment and resources to empower them to be confident of quality.

## **CE MARKING**

Products that fall under the scope of European Directive 98/79/EC on In Vitro Diagnostic Device have been specified as CE IVD in the catalogue. This helps us to comply with the general requirements and safety regulations of CE. Find CE IVD logo on the inside pages as shown here:



# Quality Control Process

**01**

## Check Incoming Products

Incoming products like raw materials, packaging materials and consumables are checked for contaminants, strength and aesthetics according to the agreed specifications with the supplier.

**02**

## On-line Quality Inspection

During the manufacturing process, the product quality is checked in every shift based on Standard Testing Protocols. If any deviations arise, the required improvements are done during manufacturing.

**03**

## Application Tests in Laboratory

Each product is checked for physical, chemical and biological functions. Our in-house labs perform the necessary application tests as an end-user, to certify the products are fit to be dispatched to customers.

**04**

## Final Pre-Dispatch Audit

Products are finally tested for proper verification of labels, packaging and documents. Traceability of products is verified at this stage for lot number, expiry date, manufacturing date, etc.

## Quality Certifications

Products from Abdos Life Sciences provide the following certifications and application dependent features.



**E.A.R - CERTIFICATE  
GPSD 2001/95/EC &  
IVD 98/79/EC**



**ENVIRONMENT  
MANAGEMENT SYSTEM  
ISO 14001**



**QUALITY  
MANAGEMENT SYSTEM  
ISO 9001**



**MEDICAL DEVICES  
(Quality Management System)  
EN ISO 13485**

# Abdos Knowledge Center

Abdos is more than just products. Our endeavour has always been to provide information on our products and services to optimize the daily work flow. Visit our knowledge center below.



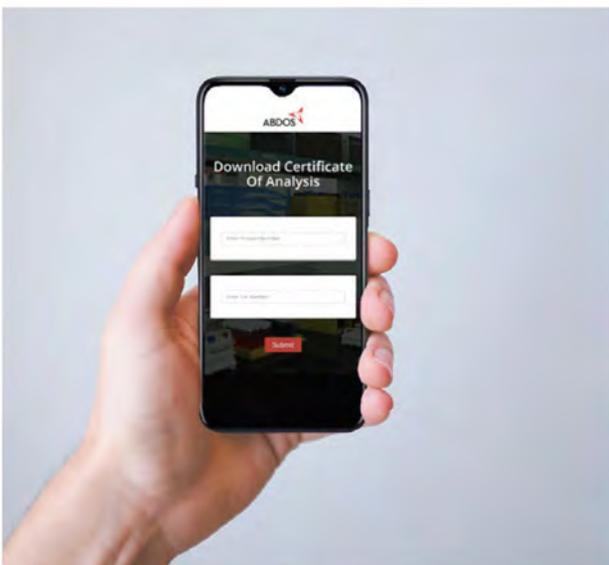
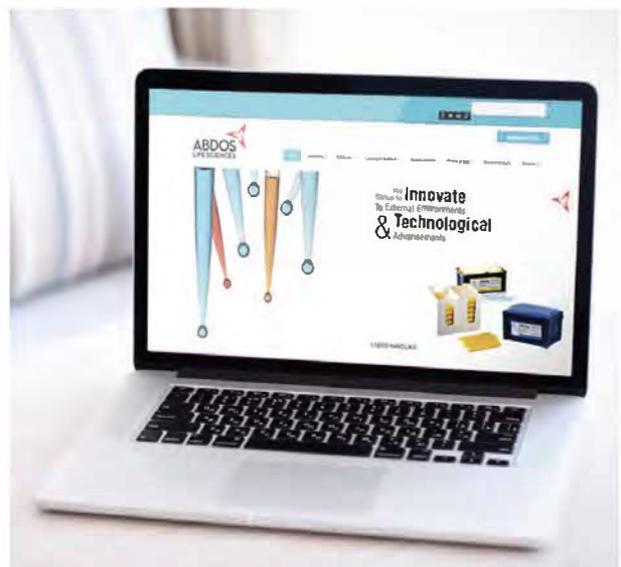
## Mobile App

Featuring Data Comparisons, FAQs & More Download Now From



## Website

Everything you need to know about Abdos Life Sciences, right from product catalog, with ordering facility to technical information, data comparisons & more.



## COA Online

Visit ABDOS website and access all the latest COA files online.



# COMMITTED TO THE EARTH

*Pursuing "Green" has become a quest for ABDOS towards Go Green Earth, with competitiveness and global excellence.*

**As a young, and innovative company, ABDOS is setting the environmental standards for others to follow.**

## **STEPS TAKEN FOR BEING A GREEN ORGANIZATION**

Green Logistics; Goods are transported by rail or sea whenever possible.

Hot runner moulds save on plastic usage.

Closed water cycle cooling process saves energy.

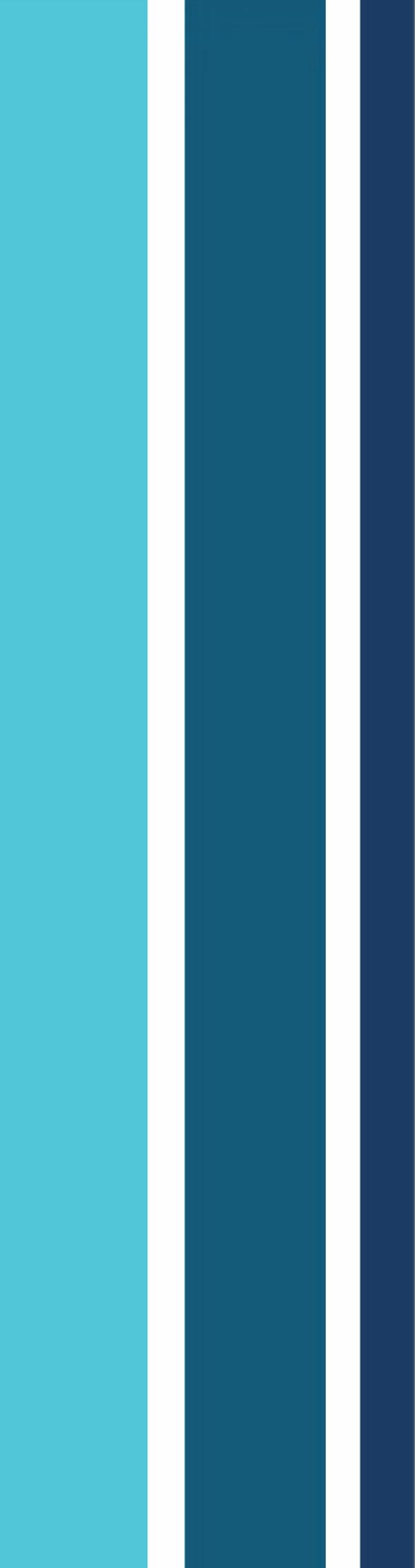
The use of modern, electronic moulding machines which consume less energy than the older, hydraulic machines.

The use of robotic and automation reduce human interference thereby reducing carbon footprint.

As a manufacturer, ABDOS has control over the design and manufacturing of its products by reducing waste and weight of the plastic, paper, bags, and foils generated at ours and our supplier's plant.

Abdos eliminates printing waste by e-marketing its products and services.

A Large expanse of greenery and plants at all locations of ABDOS reduce ozone levels, helping to remove carbon dioxide and other greenhouse gases from the air, which cools the earth.



# Centrifuge Techniques

Mini Centrifuge  
Maxi Centrifuge  
High Speed Centrifuge  
Plate Centrifuge  
& More

## Swirl Mini Micro Centrifuge

- Swirl is a small, compact and reliable centrifuge for spin-down and microfiltration procedures.
- Swirl is supplied with 8 place angular rotor of 1.5 ml and a PCR rotor that admit four strips of 0.2 mL PCR strip.
- It has a maximum speed of 7000 rpm/2680 xg RCF.
- It uses minimal bench-top space.
- Rotor can change without tools and the machine accelerates and brakes in seconds.
- Swirl adapts a Brushless DC Motor.
- CE explosion proof safe test IEC/EN61010-2-20.



Code	Product	No. / Case
E11501	Swirl Mini Micro Centrifuge Including 8 Place Rotor for 15 & 2.0 ml Tube & 4 Place Rotor for 8 x 0.2 ml Tube Strip	1

Spare Accessories:		
Code	Product	No. / Case
E11502	8 Place Rotor for 1.5 & 2.0 ml	1
E11503	32 (8 x 4) Strips Place Rotor for 0.2 ml PCR & 64 Place Rotor for 0.2 ml PCR tubes	1

### SPECIFICATIONS :

Voltage	220-240 V
Frequency	50-60 Hz
Max Speed	7000 rpm
Max RCF	2680 xg
Run Time	Continuous operation
Rotor Capacity	0.2/0.5/1.5/2.0 mL x 8 0.2 mL x 32 PCR Strips 2.0 mL x 4 PCR 8 Strips
Noise Level	≤45 dB
Dimensions	160 x 170 x 122 mm
Weight	0.5 kg
Permissible ambient temperature	4°C to 45°C
Permissible relative humidity	80%



## Swirl Maxi Micro Centrifuge

- Swirl Maxi is a personal micro centrifuge used for sedimentation of cells and virus, separation of sub-cellular organelles and isolation of macromolecules such as DNA, RNA, proteins or lipids.
- Swirl Maxi is used in physical and chemical analysis, biochemistry, cellular biology, clinical labs, blood donation centre and high-end research.
- Swirl Maxi has a large ergonomic design with easy to read display and sound.
- Both RPM and G-force can be displayed.
- Swirl Maxi is stable and silent during operation. It also delivers fast acceleration and deceleration.
- Swirl Maxi conforms to international safety standards and regulations. It has also passed the explosion proof test from CE, TUV and FCC.
- Swirl Maxi adapts a Brushless DC Motor.
- Automatic lid-lock release prevents sample warming and allows easy access to samples.
- The short spin function is used for quick spins by pressing and holding PULSE key. The centrifuge speed can be accelerated and held at the target speed.
- High strength aluminium alloy rotors are fully autoclavable, and can withstand steam sterilizing at 121°C for 20 minutes.



Code	Product	No. / Case
E11510	Swirl Maxi Micro Centrifuge with 12 Place Rotor for 0.2, 0.5, 1.5 & 2.0 ml	1

### Spare Accessories:

Code	Product	No. / Case
E11511	12 Place Rotor for 0.2, 0.5, 1.5 & 2.0 ml	1
E11512	Rotor Adapter for 0.2 ml - 2.0 ml used with E11511	24
E11513	Rotor Adapter for 0.5 ml - 2.0 ml used with E11511	24

### SPECIFICATIONS :

Voltage	220-240 V
Frequency	50-60 Hz
Current	3 A
Max Speed	15000 rpm (500-15000 rpm with increment of 100 rpm)
Max. RCF [xg]	15100 xg with increment of 100 xg
Speed Accuracy	±20 rpm
Rotor Capacity	0.2mL, 0.5mL, 1.5 mL & 2mL x 12 places.
Run Time	30 sec - 99 min - HOLD (Continuous operation)
Driving Motor	Brushless DC motor
Safety Devices	Dual door interlock Over-speed detection Over temperature detection Automatic internal diagnosis
Noise Level	≤54 dB
Additional Features	Speed/RCF switch Short-time run function Sound-alert function
Acceleration /Braking time	11 sec for Acceleration & 9 sec for Braking
Dimensions	255 x 245 x 140 mm
Weight	6 kg
Permissible Ambient Temperature	4°C to 40°C
Permissible Relative Humidity	80%



## Swirl Pro High Speed Micro Centrifuge

- Swirl Pro is a micro centrifuge used for sedimentation of cells and virus, separation of sub-cellular organelles and isolation of macromolecules such as DNA, RNA, proteins or lipids.
- Swirl Pro is used in physical and chemical analysis, biochemistry, cellular biology, clinical labs, blood donation centre and high-end research.
- Swirl Pro has a large ergonomic design with easy to read display and sound alert.
- Automatic lid opening when run is complete prevents sample warming and allow easy access of samples.
- Both RPM and G-force can be displayed.
- Swirl Pro is stable and silent during operation. It also delivers fast acceleration and deceleration.
- Swirl Pro conforms to international safety standards and regulations. It has also passed the explosion proof test and CE, TUV and FCC marked.
- Special multi-flow air-cooling design helps to keep lower rotor temperature.
- Bio-safe rotor and anti-sample overflow prevents sample does not leak in centrifugal process causing microbial contamination.
- Robust aluminum alloy rotor can be fully autoclaved.
- Swirl Pro adapts a Brushless DC Motor.



Code	Product	No./case
E11520	Swirl Pro High Speed Micro Centrifuge with 24 Place Rotor for 0.2, 0.5, 1.5 & 2.0 ml	1

Spare Accessories:		
Code	Product	No./case
E11521	24 Place Rotor for 0.2, 0.5, 1.5 & 2.0 ml	1
E11522	18 Place Rotor for 5.0 ml	1
E11528	12 Place Rotor for 5.0 ml(Eppendorf Tube)	1
E11523	36 Place Rotor for 0.2 & 0.5 ml	1
E11524	32 (8 x 4) Place Rotor for 0.2 ml PCR	1
E11525	Rotor Adapter for 2.0 ml - 0.2 ml used with E11521	24
E11526	Rotor Adapter for 2.0 ml - 0.5 ml used with E11521	24
E11527	Rotor Adapter for 0.5 ml - 0.2 ml used with E11523	36

### SPECIFICATIONS :

Voltage	220-240 V
Frequency	50-60 Hz
Current	3 A
Max speed	15000 rpm (200-15000rpm) with increment of 10 rpm
Max. RCF [xg]	21380 xg with increment of 10 xg
Speed Accuracy	±20 rpm
Rotor Capacity	5 mL x 18 places. 0.2ml/0.5ml/ 1.5 ml/2mL x 24 places. 0.5mL x 36 places PCR 8 x 4 places
Run Time	30sec-99min-HOLD (Continuous operation)
Driving Motor	Brushless DC motor
Safety Devices	Dual door interlock Over-speed detection Over temperature detection Automatic internal diagnosis
Noise Level	≤54 dB
Additional Features	Speed/RCF switch Short-time run function Sound-alert function
Acceleration / Braking Time	25 sec for both Acceleration and Braking
Dimensions	80 x 364 x 266 mm
Weight	12 kg
Permissible ambient temperature	4°C to 45° C
Permissible ambient Humidity	80%



## Swirl Clinical Centrifuge

- Swirl Clinical Centrifuge is used for separation of serum, plasma, urea, urine, blood samples and other routine applications in hospital and research. They are also used in environmental analyses for clarification of water and soil samples and in schools as a teaching aid.
- Swirl Clinical Centrifuge has a large ergonomic design with easy to read display and sound alert.
- Automatic lid opening when run is complete prevents sample warming and allow easy access of samples.
- Both RPM and G-force can be displayed.
- Digital LCD display can show real time parameters and has symbol showing experimental process.
- Swirl Clinical is used for quick spins by pressing and holding the pulse key.
- It has precise control, high accuracy of speed and has gentle breaking at low speeds with efficient separation.
- Swirl Clinical conforms to international safety standards and regulations. It has also passed the explosion proof test from CE, TUV and FCC.
- Bio-safe rotor and anti-sample overflow prevents sample leakage in the centrifugal process causing microbial contamination.
- Swirl Clinical adapts a Brushless DC Motor.
- Passed EN61010-2-101:2002 for invitro diagnostic (IVD) medical equipment.
- Goes into a self-diagnostic check when switched on and then displays accumulative time & last running parameter.



Code	Product	No. / Case
E11540	Swirl Clinical Clinical Centrifuge with 8 Place Rotor for 15 ml & 12 Place Rotor for 5, 7 & 10 ml centrifuge tube & Rotor Adapter for 10 ml centrifuge tube	1

### Spare Accessories:

Code	Product	No. / Case
E11541	8 Place Rotor for 15 ml & 12 Place Rotor for 5, 7 & 10 ml	1
E11542	Rotor Adapter for 10 ml used with E11541	12

### SPECIFICATIONS :

Voltage	220-240 V
Frequency	50-60 Hz
Current	3 A
Max Speed	300-4500 rpm with increment of 100 rpm
Max. RCF [xg]	2490 xg with increment of 100 xg
Speed Accuracy	±20 rpm
Rotor Capacity	5 mL/7 mL/10 mL x 12 places. 15 mL x 8 places
Run Time	30 sec-99 min-HOLD (Continuous operation)
Driving Motor	Brushless DC motor
Safety Devices	Dual door interlock Over-speed detection Over temperature detection Automatic internal diagnosis
Noise Level	≤56 dB
Additional Features	Speed/RCF switch Short-time run function Sound-alert function
Acceleration /Braking time	20 sec for both Acceleration & Breaking
Dimensions	301 x 354 x 217 mm
Weight	6 kg
Permissible Ambient Temperature	4°C to 40°C
Permissible Relative Humidity	80%



## Swirl Micro Plate Centrifuge

- Less than half the size of conventional centrifuge (9 x 10 inches).
- The easily reachable rotor chamber includes two plate carriers that rest at a 75° angle, thus allowing plates to be inserted confidently without seal in tapes or caps.
- Upon closing the lid of the centrifuge, the rotor accelerates and the centrifugal force swings the plates into a horizontal position. Any droplets on the walls of the plate quickly concentrate into the well bottoms.
- With a G-force of 600 xg, most samples can be spun.
- Just open the lid and the automatic electric brake brings the rotor to a quick & smooth stop in just 4.0 seconds.



Code	Product	No. / Case
E11550	Swirl Micro Plate Centrifuge	1

### Spare Accessories:

Code	Product	No. / Case
E11551	Adapter, 96 x 0.2 ml or 8 and 12 x PCR strips.	2
E11552	Rotor with carriers for deepwell plates upto 35mm tall (max speed 1500 rpm)	1

### SPECIFICATIONS :

Voltage	220-230 V
Frequency	50-60 Hz
Max Speed	2550 rpm/600 xg
Rotor Capacity	2 x 2 PCR Plates 2 x Microtiter plates 24 x 0.2 mL PCR Strips
Deceleration	4 seconds
Dimensions	230 x 260 x 197 mm
Weight	4.0 kg
Permissible Ambient Temperature	4°C to 40°C
Permissible Relative Humidity	80%



*\*When stacking skirted PCR plates, max capacity is 4 plates.*



(angled position) Before & after centrifugation



During centrifugation (Horizontal position)



# Liquid Handling

Single Channel Micropipettes  
Multichannel Micropipettes  
Pipette Filler  
Bottle Top Dispenser  
& More

# Abdos Pipettes

ABDOS pipette meets the highest needs in precision and accuracy – combined with ultimate ergonomics and increased flexibility with sophisticated blend of features and functionality.

It is easy to calibrate and maintain with tools supplied.

It is supplied with operator manual that provides complete information on recalibration and maintenance of the pipette.



Comfortable Finger Support: helps in prolonged pipetting operation with less fatigue.

Easy Calibration: Calibrated accordance with ISO8655. Each pipette is supplied with Individual Calibration Certificate.

Display: Clear and easy read display with large numbers and precise increment.

Ejector: Very low operating force and position in such a way that thumb strain is reduced when moving to eject tips.

Fully Autoclavable without disassembly with steam Sterilization at 121°C, 1atm for 20 minutes. Does not require any special preparations.

Premium Pipette with lower part autoclavable to ensure contamination free operations.

Slim Pipette Shaft: Allows Pipetting into narrow vessels.

Tip Cone: Optimized Standard Design. Pipette tips from ABDOS and other manufacturers can be used.



## Fixed Premium Pipette, PP



Code	Capacity	Test Volume	Maximum Permissible Systematic Error		Maximum Permissible Random Error		No. / Case
			Inaccuracy	Inaccuracy	Imprecision	Imprecision	
E10001	5 µl	5 µl	± 1.3 %	± 0.065 µl	± 1.2 %	± 0.06 µl	1
E10002	10 µl	10 µl	± 0.8 %	± 0.08 µl	± 0.8 %	± 0.08 µl	1
E10003	20 µl	20 µl	± 0.6 %	± 0.12 µl	± 0.5 %	± 0.1 µl	1
E10004	25 µl	25 µl	± 0.5 %	± 0.125 µl	± 0.3 %	± 0.075 µl	1
E10005	50 µl	50 µl	± 0.5 %	± 0.25 µl	± 0.3 %	± 0.15 µl	1
E10006	100 µl	100 µl	± 0.5 %	± 0.50 µl	± 0.3 %	± 0.30 µl	1
E10007	200 µl	200 µl	± 0.4 %	± 0.80 µl	± 0.2 %	± 0.40 µl	1
E10008	250 µl	250 µl	± 0.4 %	± 1 µl	± 0.2 %	± 0.50 µl	1
E10009	500 µl	500 µl	± 0.3 %	± 1.5 µl	± 0.2 %	± 1.0 µl	1
E10010	1000 µl	1000 µl	± 0.3 %	± 3 µl	± 0.2 %	± 2.0 µl	1

## Premium Pipettes Semi-Autoclavable, PP



Code	Capacity	Increment	Test Volume	Maximum Permissible Systematic Error		Maximum Permissible Random Error		No. / Case
				Inaccuracy	Inaccuracy	Imprecision	Imprecision	
E11100	0.1 – 2.5 µl	0.05 µl	2.5 µl	± 2.50 %	± 0.062 µl	± 2.00 %	± 0.05 µl	1
			1.25 µl	± 3.00 %	± 0.037 µl	± 3.00 %	± 0.0375 µl	
			0.25 µl	± 12.00 %	± 0.03 µl	± 6.00 %	± 0.015 µl	
E11101	0.5 – 10 µl	0.1 µl	10 µl	± 1.00 %	± 0.1 µl	± 0.80 %	± 0.08 µl	1
			5 µl	± 1.50 %	± 0.175 µl	± 1.50 %	± 0.075 µl	
			1 µl	± 2.50 %	± 0.025 µl	± 1.50 %	± 0.015 µl	
E11102	2 – 20 µl	0.5 µl	20 µl	± 0.90 %	± 0.18 µl	± 0.40 %	± 0.08 µl	1
			10 µl	± 1.20 %	± 0.12 µl	± 1.00 %	± 0.10 µl	
			2 µl	± 3.00 %	± 0.06 µl	± 2.00 %	± 0.04 µl	
E11103	10 – 100 µl	1.0 µl	100 µl	± 0.80 %	± 0.80 µl	± 0.15 %	± 0.15 µl	1
			50 µl	± 1.00 %	± 0.50 µl	± 0.40 %	± 0.20 µl	
			10 µl	± 3.00 %	± 0.30 µl	± 1.50 %	± 0.15 µl	
E11104	20 – 200 µl	1.0 µl	200 µl	± 0.60 %	± 1.20 µl	± 0.15 %	± 0.30 µl	1
			100 µl	± 0.80 %	± 0.80 µl	± 0.30 %	± 0.30 µl	
			20 µl	± 3.00 %	± 0.60 µl	± 1.00 %	± 0.20 µl	
E11105	100 – 1000 µl	5 µl	1000 µl	± 0.60 %	± 6 µl	± 0.20 %	± 2 µl	1
			500 µl	± 0.70 %	± 3.50 µl	± 0.25 %	± 1.25 µl	
			100 µl	± 2.00 %	± 2 µl	± 0.70 %	± 0.70 µl	
E11106	5 – 50 µl	0.5 µl	50 µl	± 0.60 %	± 0.3 µl	± 0.30 %	± 0.15 µl	1
			25 µl	± 0.90 %	± 0.225 µl	± 0.60 %	± 0.15 µl	
			5 µl	± 2.00 %	± 0.1 µl	± 2.00 %	± 0.1 µl	
E11112	50 – 200 µl	1.0 µl	200 µl	± 0.60 %	± 1.20 µl	± 0.15 %	± 0.30 µl	1
			100 µl	± 0.80 %	± 0.80 µl	± 0.30 %	± 0.30 µl	
			50 µl	± 1.00 %	± 0.50 µl	± 0.40 %	± 0.2 µl	
E11131	1000 – 5000 µl	50 µl	5000 µl	± 0.50 %	± 25 µl	± 0.15 %	± 7.5 µl	1
			2500 µl	± 0.60 %	± 15 µl	± 0.30 %	± 7.5 µl	
			1000 µl	± 0.70 %	± 7 µl	± 0.30 %	± 3 µl	
E11132	2000 – 10000 µl	100 µl	10000 µl	± 0.60 %	± 60 µl	± 0.20 %	± 20 µl	1
			5000 µl	± 1.20 %	± 60 µl	± 0.30 %	± 15 µl	
			2000 µl	± 3.00 %	± 60 µl	± 0.60 %	± 12 µl	

## Premium Plus Pipettes Fully-Autoclavable, PP



Code	Capacity	Increment	Test Volume	Maximum Permissible Systematic Error		Maximum Permissible Random Error		No. / Case
				Inaccuracy	Inaccuracy	Imprecision	Imprecision	
E11107	0.5 – 10 µl	0.1 µl	10 µl	± 1.00 %	± 0.1 µl	± 0.80 %	± 0.08 µl	1
			5 µl	± 1.50 %	± 0.175 µl	± 1.50 %	± 0.075 µl	
			1 µl	± 2.50 %	± 0.025 µl	± 1.50 %	± 0.015 µl	
E11108	2 – 20 µl	0.5 µl	20 µl	± 0.90 %	± 0.18 µl	± 0.40 %	± 0.08 µl	1
			10 µl	± 1.20 %	± 0.12 µl	± 1.00 %	± 0.10 µl	
			2 µl	± 3.00 %	± 0.06 µl	± 2.00 %	± 0.04 µl	
E11109	10 – 100 µl	1.0 µl	100 µl	± 0.80 %	± 0.80 µl	± 0.15 %	± 0.15 µl	1
			50 µl	± 1.00 %	± 0.50 µl	± 0.40 %	± 0.20 µl	
			10 µl	± 3.00 %	± 0.30 µl	± 1.50 %	± 0.15 µl	
E11110	20 – 200 µl	1.0 µl	200 µl	± 0.60 %	± 1.20 µl	± 0.15 %	± 0.30 µl	1
			100 µl	± 0.80 %	± 0.80 µl	± 0.30 %	± 0.30 µl	
			20 µl	± 3.00 %	± 0.60 µl	± 1.00 %	± 0.2 µl	
E11111	100 – 1000 µl	5.0 µl	1000 µl	± 0.60 %	± 6 µl	± 0.20 %	± 2 µl	1
			500 µl	± 0.70 %	± 3.50 µl	± 0.25 %	± 1.25 µl	
			100 µl	± 2.00 %	± 2 µl	± 0.70 %	± 0.70 µl	
E11134	1000 – 5000 µl	50 µl	5000 µl	± 0.50 %	± 25 µl	± 0.15 %	± 7.5 µl	1
			2500 µl	± 0.60 %	± 15 µl	± 0.30 %	± 7.5 µl	
			1000 µl	± 0.70 %	± 7 µl	± 0.30 %	± 3 µl	
E11145	0.1 – 2.5 µl	0.05 µl	2.5 µl	± 2.50 %	± 0.062 µl	± 2.00 %	± 0.05 µl	1
			1.25 µl	± 3.00 %	± 0.037 µl	± 3.00 %	± 0.0375 µl	
			0.25 µl	± 12.00 %	± 0.03 µl	± 6.00 %	± 0.015 µl	
E11146	5 – 50 µl	0.5 µl	50 µl	± 0.60 %	± 0.3 µl	± 0.30 %	± 0.15 µl	1
			25 µl	± 0.90 %	± 0.225 µl	± 0.60 %	± 0.15 µl	
			5 µl	± 2.00 %	± 0.1 µl	± 2.00 %	± 0.1 µl	
E11147	50 – 200 µl	1.0 µl	200 µl	± 0.60 %	± 1.20 µl	± 0.15 %	± 0.30 µl	1
			100 µl	± 0.80 %	± 0.80 µl	± 0.30 %	± 0.30 µl	
			50 µl	± 1.00 %	± 0.50 µl	± 0.40 %	± 0.2 µl	



# Premium Plus Multi Channel Pipettes

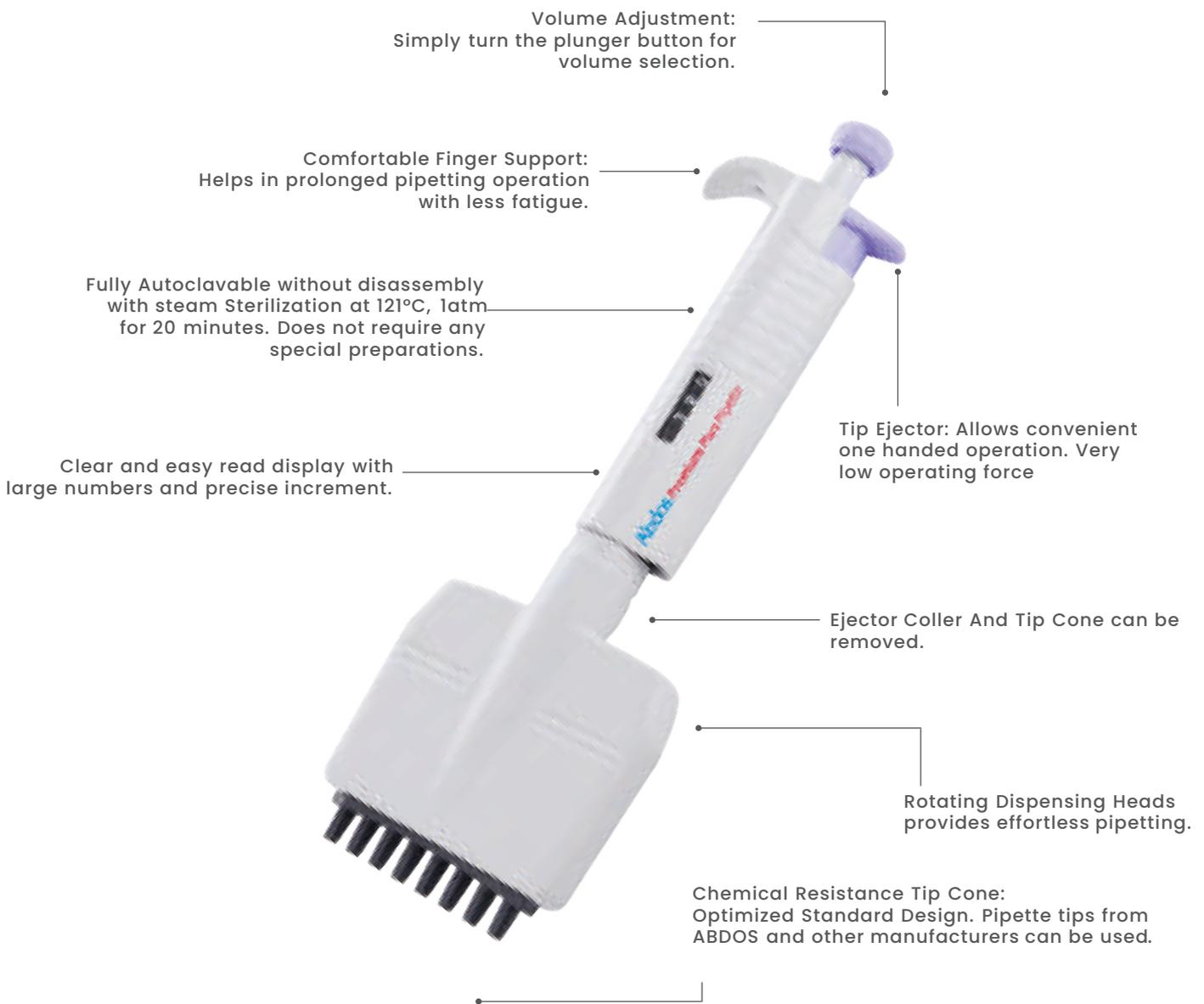
ABDOS Premium Plus Multi-Channel Pipette meets the highest needs in precision and accuracy – combined with ultimate ergonomics and increased flexibility with sophisticated blend of features and functionality.

These fully autoclavable 8-channel and 12-multichannel pipette is available for Standard 96-well plates

Individual piston and Tip cone assemblies allow easy repair and maintenance

It is easy to calibrate and maintain with tools supplied. Calibrated in accordance with ISO8655. The quality control includes the gravimetric testing with distilled water at 22°C.

It is supplied with operator manual that provides complete information on recalibration and maintenance of the pipette.



## Premium Plus 8-Channel Adjustable Multichannel Pipette

- Abdos Premium Plus Multi-channel Pipettes have a unique ergonomic design for comfortable finger support and convenient tip ejector design allows one-handed operation.
- The dispensing head of these pipettes rotate for optimum pipetting.
- The special compound material tip cone design allows visual seal verification and has excellent chemical resistance.
- Individual piston and tip cone assemblies allow easy repair and maintenance.
- Volume settings can be clearly read through digital display.
- Abdos Premium Plus Multi-channel Pipettes are easy to calibrate and maintain with the tools supplied.
- These pipettes are designed to avoid repetitive strain injuries.
- All Abdos pipettes are supplied with operator manual that provides complete information on recalibration and maintenance of the pipettes.



Code	Capacity	Increment	Test Volume	Maximum Permissible Systematic Error		Maximum Permissible Random Error		No. / Case
				Inaccuracy	Inaccuracy	Imprecision	Imprecision	
E11136	0.5 – 10 µl	0.1 µl	10 µl	± 1.50 %	± 0.15 µl	± 1.50 %	± 0.15 µl	1
			5 µl	± 2.50 %	± 0.125 µl	± 2.50 %	± 0.125 µl	
			1 µl	± 4.00 %	± 0.04 µl	± 4.00 %	± 0.04 µl	
E11137	5 – 50 µl	0.5 µl	50 µl	± 1.00 %	± 0.50 µl	± 0.50 %	± 0.25 µl	1
			25 µl	± 1.50 %	± 0.375 µl	± 1.00 %	± 0.25 µl	
			5 µl	± 3.00 %	± 0.15 µl	± 2.00 %	± 0.10 µl	
E11138	50 – 300 µl	5 µl	300 µl	± 0.70 %	± 2.10 µl	± 0.25 %	± 0.75 µl	1
			150 µl	± 1.00 %	± 1.50 µl	± 0.50 %	± 0.75 µl	
			50 µl	± 1.50 %	± 0.75 µl	± 0.80 %	± 0.40 µl	

## Premium Plus 12-Channel Adjustable Multichannel Pipette



Code	Capacity	Increment	Test Volume	Maximum Permissible Systematic Error		Maximum Permissible Random Error		No. / Case
				Inaccuracy	Inaccuracy	Imprecision	Imprecision	
E11139	0.5 – 10 µl	0.1 µl	10 µl	± 1.50 %	± 0.15 µl	± 1.50 %	± 0.15 µl	1
			5 µl	± 2.50 %	± 0.125 µl	± 2.50 %	± 0.125 µl	
			1 µl	± 4.00 %	± 0.04 µl	± 4.00 %	± 0.04 µl	
E11140	5 – 50 µl	0.5 µl	50 µl	± 1.00 %	± 0.50 µl	± 0.50 %	± 0.25 µl	1
			25 µl	± 1.50 %	± 0.375 µl	± 1.00 %	± 0.25 µl	
			5 µl	± 3.00 %	± 0.15 µl	± 2.00 %	± 0.10 µl	
E11141	50 – 300 µl	5 µl	300 µl	± 0.70 %	± 2.10 µl	± 0.25 %	± 0.75 µl	1
			150 µl	± 1.00 %	± 1.50 µl	± 0.50 %	± 0.75 µl	
			50 µl	± 1.50 %	± 0.75 µl	± 0.80 %	± 0.40 µl	

## Pipette Rack Stand, ACRYLIC

- Holds five standard size pipettes.
- Racks are mounted on their own stand.
- Keeps working area or desk free from clutter.



Code	No. of Places	L x W x H	No. / Case
P70201	5	190 x 135 x 265 mm	1



## Pipette Rack Stand (Carousel Type), PP

- Holds Six standard size pipettes.
- The Carousel Stand rotates smoothly and comfortably.
- Keeps working area or desk free from clutter.



Code	No. of Places	No. / Case
P70203	6	1



## Premium Electronic Pipette

- Abdos Premium electronic pipette is fast, precise with an ergonomic design that is easy to use in laboratories.
- High accuracy, high performance stepper motor ensures accuracy and repeatability, eliminating manual pipetting errors. A motor driven digital control pipette with multi-function Pipetting, Mixing, Stepper and Dilution.
- 2 buttons handle all operational settings.
- Light weight, ergonomic design, small body dimension for easy handling that guarantees fatigue free pipetting.
- Adjustable speeds for aspiration and dispensing.
- Comprehensive range with easy programming.
- Motor driven with build-in-error control improving pipetting precision and providing reliable results.
- Highly efficient lithium-ion battery offering long running time with each charge makes the Premium Electronic Pipette a work-horse during busy times in the laboratories.
- Lower part is autoclavable.
- Reduces workload and improves the accuracy and precision.
- A bright LED display makes setting and reading easy, thus reducing or eliminating errors.
- User can Self-calibrate by limiting the pipette to a PC via USB connector.



Code	Capacity	Increment	Test Volume	Inaccuracy	Inaccuracy	Imprecision	Imprecision	No. / Case
E11161	0.5 – 10 µl	0.01 µl	10 µl	± 1.0 %	± 0.10 µl	0.05 *s.d µl	0.5 CV%	1
			1 µl	± 3.5 %	± 0.035 µl	0.03 *s.d µl	3.0 CV%	
E11162	5 – 50 µl	0.1 µl	50 µl	± 0.8 %	± 0.40 µl	0.15 *s.d µl	0.3 CV %	1
			5 µl	± 3.0 %	± 0.15 µl	0.125 *s.d µl	2.5 CV %	
E11163	30 – 300 µl	1 µl	300 µl	± 0.6 %	± 1.8 µl	0.6 *s.d µl	0.2 CV %	1
			30 µl	± 3.0 %	± 0.9 µl	0.21 *s.d µl	0.7 CV %	
E11164	100 – 1000 µl	5 µl	1000 µl	± 0.6 %	± 6.0 µl	2.0 *s.d µl	0.2 CV %	1
			100 µl	± 3.0 %	± 3.0 µl	0.6 *s.d µl	0.6 CV %	



## Stepmate Stepper

- Stepmate Stepper is ideal for routine or research applications in diagnostics, molecular biology, environmental analysis and more.
- Stepmate stepper works on positive displacement pressure and offers highest precision dispensing of liquid media with high viscosity, high density and high vapour pressure.
- It provides up to 48 dispensing steps and improves work efficiently.
- It is lightweight and ergonomic.
- It can be used with one hand and is maintenance free.
- Factory fitted calibration.



### Stepmate Stepper

Code	Capacity	No. / Case
E11171	0.5 - 50 ml	1

### Suitable Tips & Adapter For Stepmate Stepper

Code	Capacity	Colour	No. / Case
E11172D	0.5 ml	Natural	5
E11173D	1.25 ml	Natural	5
E11174D	2.5 ml	Natural	5
E11175D	5 ml	Natural	5
E11176D	12.5 ml	Natural	5
E11177D	25 ml	Natural	2 pcs piston + 1 pcs adaptor
E11178D	50 ml	Natural	2 pcs piston + 1 pcs adaptor
E11179D	25 & 50 Adaptor		10

\* The first and last dispensing liquid should be discarded for precision.

Dial Setting	01	02	03	04	05
Number of Steps	48	23	15	11	8

Syringe Volume	Test Volume (µl)					A%	P%
0.50 ml	10	20	30	40	50	± 0.8	<= 0.7
1.25 ml	25	50	75	100	125	± 0.8	<= 0.5
2.50 ml	50	100	150	200	250	± 0.8	<= 0.4
5.00 ml	100	200	300	400	500	± 0.4	<= 0.3
12.50 ml	250	500	750	1000	1250	± 0.3	<= 0.3
25.00 ml	500	1000	1500	2000	2500	± 0.2	<= 0.3
50.0 ml	1000	2000	3000	4000	5000	± 0.2	<= 0.2



## Supreme Bottle Top Dispenser

- Supreme is a robust and reliable basic bottle top dispenser designed through years of research.
- Supreme has a smooth and soft plunger for easy working in difficult laboratory conditions.
- Fully Autoclavable.



### SPECIFICATIONS :

Piston	PTFE & ETP
Cylinder	Borosilicate Glass
Volume Adjustment Knob	PP, 180° Rotation
Value Housing	PFA
Value Assembly	Borosilicate Glass Ball & Seat
Discharge Assembly	PTFE
Delivery Tube	FEP
Inlet Tube	FEP
Calibration	Individually Calibrated and Certified
Accuracy & Reproducibility	According to ISO 8655 Standards
Compatibility	Excellent with all reagents except HF

Code	Capacity	Increment	Accuracy	CV	No. / Case
E11701	0.25 – 2.5 ml	0.05 ml	± 0.6 % ± 0.015 ml	± 0.2 % ± 0.005 ml	1
E11702	0.50 – 5 ml	0.1 ml	± 0.6 % ± 0.030 ml	± 0.2 % ± 0.010 ml	1
E11703	1 – 10 ml	0.2 ml	± 0.6 % ± 0.060 ml	± 0.2 % ± 0.020 ml	1
E11704	2.5 – 30 ml	0.5 ml	± 0.6 % ± 0.180 ml	± 0.2 % ± 0.060 ml	1
E11705	5 – 60 ml	1 ml	± 0.6 % ± 0.360 ml	± 0.2 % ± 0.120 ml	1
E11706	10 – 100 ml	2 ml	± 0.6 % ± 0.600 ml	± 0.2 % ± 0.200 ml	1



## Supreme Plus Bottle Top Dispenser

- Supreme duet is the most advanced, next generation, highly robust and reliable bottle top dispenser designed through years of research.
- Supreme duet has a recirculation valve for redirecting the liquid into the bottle for bubble free dispensing without any loss of reagent.
- Supreme duet has a smooth and soft plunger for easy working in difficult laboratory conditions.
- Fully Autoclavable.



### SPECIFICATIONS :

Piston	PTFE & ETP
Cylinder	Borosilicate Glass
Volume Adjustment Knob	PP, 180° Rotation
Value Housing	PFA
Re-Circulation Value Housing	PFA
Value Assembly	Borosilicate Glass Ball & Seat
Discharge Assembly	PTFE
Delivery Tube	FEP
Inlet Tube	FEP
Calibration	Individually Calibrated and Certified
Accuracy & Reproducibility	According to ISO 8655 Standards
Compatibility	Excellent with all reagents except HF

Code	Capacity	Increment	Accuracy	CV	No. / Case
E11711	0.25 – 2.5 ml	0.05 ml	± 0.6 % ± 0.015 ml	± 0.2 % ± 0.005 ml	1
E11712	0.50 – 5 ml	0.1 ml	± 0.6 % ± 0.030 ml	± 0.2 % ± 0.010 ml	1
E11713	1 – 10 ml	0.2 ml	± 0.6 % ± 0.060 ml	± 0.2 % ± 0.020 ml	1
E11714	2.5 – 30 ml	0.5 ml	± 0.6 % ± 0.180 ml	± 0.2 % ± 0.060 ml	1
E11715	5 – 60 ml	1 ml	± 0.6 % ± 0.360 ml	± 0.2 % ± 0.120 ml	1
E11716	10 – 100 ml	2 ml	± 0.6 % ± 0.600 ml	± 0.2 % ± 0.200 ml	1



## Supreme Duet Bottle Top Dispenser

- Supreme duet is the most advanced, next generation, highly robust and reliable bottle top dispenser designed through years of research.
- Supreme duet has a recirculation valve for redirecting the liquid into the bottle and rinsing the instrument without dismounting from the bottle.
- Supreme duet with a worldwide patent can be used in 4 modes: dilution, rinsing, dual liquid handling and re-circulation all in a single unit.
- Supreme duet has a smooth and soft plunger for easy working in difficult laboratory conditions.
- Fully Autoclavable.



### SPECIFICATIONS :

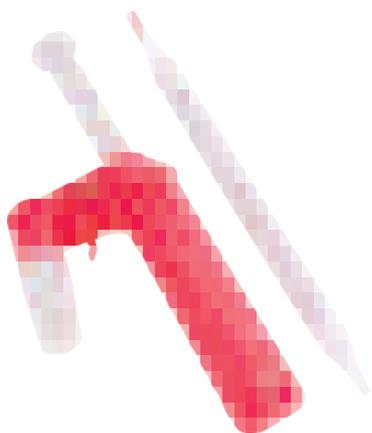
Piston	PTFE & ETP
Cylinder	Borosilicate Glass
Volume Adjustment Knob	PP, 180° Rotation
Value Housing	PFA
Re-Circulation Value Housing	PFA
Value Assembly	Borosilicate Glass Ball & Seat
Discharge Assembly	PTFE
Delivery Tube	FEP
Inlet Tube	FEP
Calibration	Individually Calibrated and Certified
Accuracy & Reproducibility	According to ISO 8655 Standards
Compatibility	Excellent with all reagents except HF

Code	Capacity	Increment	Accuracy	CV	No. / Case
E11731	0.25 – 2.5 ml	0.05 ml	± 0.6 % ± 0.015 ml	± 0.2 % ± 0.005 ml	1
E11732	0.50 – 5 ml	0.1 ml	± 0.6 % ± 0.030 ml	± 0.2 % ± 0.010 ml	1
E11733	1 – 10 ml	0.2 ml	± 0.6 % ± 0.060 ml	± 0.2 % ± 0.020 ml	1
E11734	2.5 – 30 ml	0.5 ml	± 0.6 % ± 0.180 ml	± 0.2 % ± 0.060 ml	1
E11735	5 – 60 ml	1 ml	± 0.6 % ± 0.360 ml	± 0.2 % ± 0.120 ml	1
E11736	10 – 100 ml	2 ml	± 0.6 % ± 0.600 ml	± 0.2 % ± 0.200 ml	1



## Fast Release Pipette Pump

- Abdos fast release pipette pump ensures quick and accurate operation.
- This lightweight pipette pump has a fast release trigger that dispenses the entire pipette contents.
- The thumb wheel easily rotates for precision aspirating or dispensing, down to a volume of one drop at a time.
- The thumb wheel can be used to blow out the contents of the pipette.
- Resistant to acids, alkalis.
- Easily disassemble for cleaning.

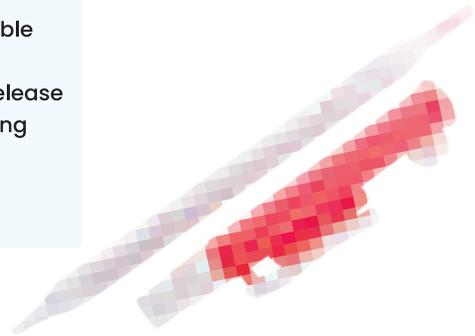


Code	Capacity	No. / Case
E11219	2 ml	4
E11220	10 ml	4
E11221	25 ml	4

## Handypette Pipette Aid

- Colour coded by volume with green for 10 ml and red for 25 ml.
- Users can easily insert glass and plastic pipettes into the collar with stable fingers for secure hold.
- Rotating the knurled thumbwheel draws liquid to desired volumes. To release liquid apply light pressure to the fast release lever. For gradual dispensing rotate the thumb wheel.
- Resistant to acids, alkalis.
- Easily disassemble for cleaning.

Code	Capacity	No./case
E11216	25 ml	4
E11218	10 ml	4
E11222	2 ml	4



## Rubber Pipette Pump

- Pump opening is standard to fit almost all glass and plastic pipettes.
- One size can be used for pipetting liquid upto 100 ml.
- The pump has a heavy wall and easy to grip body.

Code	Capacity	No./case
E11217	Up to 100 ml	4



## Rave Pipette Controller, PP

- Abdos Rave Pipette Controller is robust, lightweight and its simple to use operations makes it ideal for repetitive pipetting.
- Users can use Volumetric and Serological Pipettes ranging from 1 ml to 100 ml.
- Abdos Rave Pipette Controller has autoclavable silicone pipette holder.
- Abdos Rave Pipette Controller is supplied with integral and replaceable 0.3 um filter. The in-line filter prevents contamination.
- Precise Pipetting control is possible in Abdos Rave Pipette Controller.

Rave Pipette Controller		
Code	Product	No./case
E11113	Rave Pipette Controller	1

Spare Filters		
Code	Product	No./case
E11119	Spare 3.00 um Filter	1



## Rave Pipette Filler

- Abdos Rave Plus Pipette Filler is robust, light-weight and is ergonomically designed to allow longer, fatigue-free pipetting.
- Abdos Rave Plus Pipette Filler is powerful and can fill a 50 ml Pipette in less than 10 seconds. Motor & pump operate quietly with very low vibration.
- Users can use Volumetric and Serological Pipettes ranging from 1 ml to 100 ml.
- Abdos Rave Plus Pipette Filler is supplied with Lithium-ion battery that provides enough battery power to finish the users series.
- Abdos Rave Pipette Controller is supplied with integral and replaceable 0.45 µm filter.

### SPECIFICATIONS :

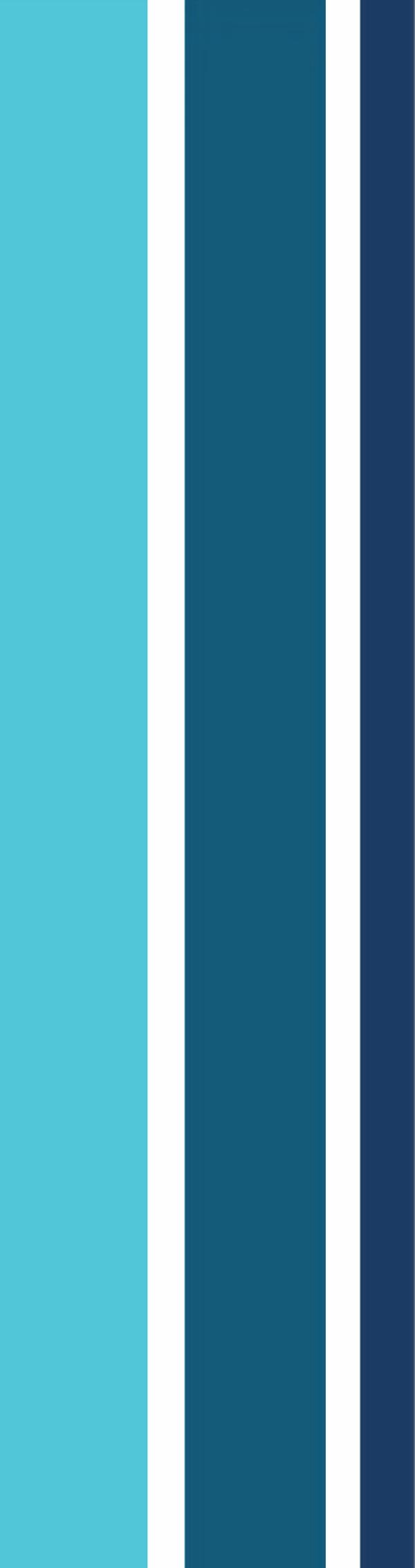
Battery	Lithium-Ion
Battery Service Life	More than 8 hours of Intermittence use.
Charging Time	Approx. 2 Hours.
Pipette Types	Glass or Plastic Pipettes (0.1-100ml)
Aspirate Speeds	8
Dispense Speeds	8 Gravity Dispense
Filter	0.45 µm Hydrophobic



Rave Pipette Filler		
Code	Product	No./case
E1114	Rave Plus Pipette Filler	1
E1120	Rave Eco Pipette Filler	1

Spare Accessories		
Code	Product	No./case
E1116	Spare 0.45 µm Filter	1
E1117	Spare Lithium - ion	1
E1118	Spare Adapter	1





# Microbiology

Hand Held Homogenizers  
Stomaker

## Swirlex – Digital Handheld Homogenizer

- ABDOS Swirlex-Digital Handheld Homogenizer is a powerful handheld homogenizer designed to rapidly homogenize, disperse and disintegrate biological samples in 10–30 seconds with adjustable speed ranging from 8,000 rpm up to 30,000 rpm.
- The homogenizer is ideal to use with samples from 0.5ml to 250ml with three types of generator probes available for different sample volume range.
- It is lightweight, can be held with one hand and also mounted to a stand for fatigue-free and longer operation. Complete homogenization of tissues (muscle, liver, breast tissue, etc.) is generally achieved in a few seconds.
- Autoclavable generator shaft is made up of 316L stainless steel Interchangeable generator probes that are easily disassembled for clean-up.
- Optional H-type stand with adjustable height and angle available for more convenient and lengthier operation.

Swirlex-Digital Hand Held Homogenizer			
Code	Product	Volume Range	No./case
E12410	Swirlex-Digital Hand Held Homogenizer with Dispensing shaft Supporting for volume 0.1-50 ml & Support Stand.	0.1 -50 ml	1
E12420	Swirlex-Digital Hand Held Homogenizer with Dispensing shaft Supporting for volume 1-250 ml & Support Stand	1 -250 ml	1

Spare Accessories			
Code	Product	Diameter Range	No./case
E12411	Dispensing Shaft - Length-90mm, process volume- 0.1-50 ml	5 mm	1
E12412	Dispensing Shaft - Length-160mm, process volume- 0.3-50 ml	7 mm	1
E12413	Dispensing Shaft - Length-150mm, process volume-1-250 ml	10 mm	1
E12414	Dispensing Shaft Length-170mm;process volume-2-250 ml	14 mm	1
E12415	Support Stand	-	1

### SPECIFICATIONS :

Voltage	220–240 V
Frequency	50–60 Hz
Motor Type	Universal Motor
Motor Type	AC Carbon Brush Motor
Speed range	8000–30000 rpm
Max. Circum Speed	6.3-14 m/sec
Speed Control	Dial Knob
Working Volume (ml, H <sub>2</sub> O)	0.1-50 ml (5mm Dispensing Shaft-EI2411) 1-250 ml (10mm Dispensing Shaft-EI2413)
Maximum Viscosity	5,000 mPas
Material of Dispensing	SS 316L Stainless steel, PTFE
Shaft Weight	0.6 kg
Dimension (L x W x H)	46 x 55 x 230 mm
Noise	72 dB
Permissible ambient Temperature	5–40°C
Permissible relative humidity	80%
Protection Class	IP20



## Swirlex – Flapping Homogenizer (Stomaker)

- Swirlex-Flapping Homogenizer (Stomaker) is a new generation lab blender, silent, easy-to-use & has a new design, with great new features, along with the silent blending. It is adapted to all kinds of applications and with a guarantee of optimal extraction, it is a great tool for lab analyses avoiding all risk of cross-contamination and damage.
- It can be used to extract bacteria from solid samples as well as homogenization of animal tissues, cosmetics, and biological samples. It is convenient, very quick, mild, accurate and also provides good repeatability.
- To extract bacteria from solid samples, put the original samples and the diluents into a sterile bag. Put the bag then into the homogenizer, through the flapping of the paddles. The material inside the bag can rapidly reach a homogenized state by the pressure, shaking, and vibration inside.
- In order to get a guaranteed uniformity of the effective extraction of the bacteria inside and on the surface of the solid samples, make sure to include all the materials in the sterile bag to the homogenizer. Then the homogenized sample can be used for analysis, the sterile bag avoids the cross-contamination.
- The main advantage of Swirlex -flapping homogenizer is that it is convenient, very quick, mild, accurate and also provides good repeatability. Samples used for the extraction will not be contaminated, damaged, heated, and no sterilization, as well as no container is needed, thus no container cleaning process either.

### Swirlex – STOMAKER – Flapping Homogenizer

Code	Product	Flapping Speed	Exterior Size	Interior Size	No./case
EI2430	Stomaker, Stainless Steel Door	Adjustable between 20-600 Stokes/min (10-300rpm/min)	45 x 21 x 24 cm	10 x 19 x 22 cm	1
EI2431	Stomaker Plus, Stainless Steel Door with Observation Window	Adjustable between 20-600 Stokes/min (10-300rpm/min)	45 x 21 x 24 cm	10 x 19 x 22 cm	1

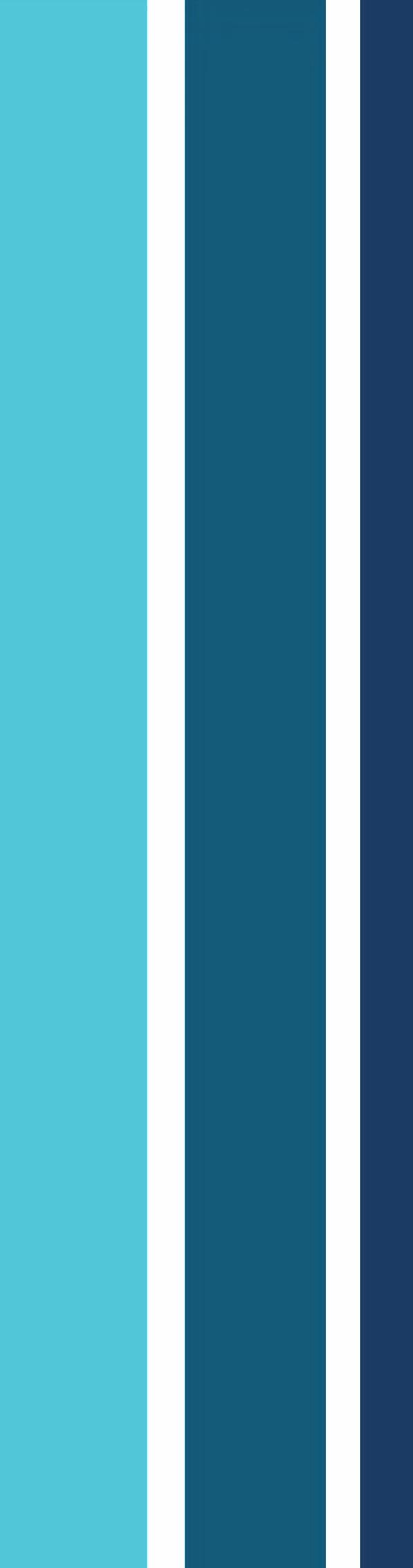
### Spare Accessories

Code	Product	Capacity	No. of bag / Box
EI2432	Sterilization Bag	80 ml	1500 (25 pcs per pack, 60 packs per case)
EI2433	Sterilization Bag	400 ml	500 (25 pcs per pack, 20 packs per case)
EI2435	Sterilization Bag with filter on one side	400 ml	500 (25 pcs per pack, 20 packs per case)
EI2436	Sterilization Bag with overall filter	400 ml	500 (25 pcs per pack, 20 packs per case)
EI2437	Clip for Sterilization Bag	-	1

### SPECIFICATIONS :

	STOMAKER	STOMAKER PLUS
Voltage	220-240 V	220-240 V
Frequency	50-60 Hz	50-60 Hz
Door Design	Stainless Steel Door	Stainless Steel Door with observation window
Capacity Range	50-400 mL	50-400 mL
Flapping Speed	Adjustable between 20-600 Stokes/min(10-300rpm/min)	Adjustable between 20-600 Stokes/min(10-300rpm/min)
Exterior Size (W x D x H)	45 x 21 x 24 cm	45 x 21 x 24 cm
Interior Size (W x D x H)	10 x 19 x 22 cm	10 x 19 x 22 cm





# Electrophoresis

Horizontal Gel Unit  
Vertical Gel System  
Digital Power supply  
& More

## ABDOS Mini Horizontal Gel Unit

- The system has moulded basic unit with fixed platinum electrode assembly along with Gel running and Gel casting Tray.
- The combs are adjustable by height to offer complete control over loading volume and well depth, upto a maximum of 32 samples throughput.
- Gel length is a short 6 cm ideal for rapid separations.
- The tank is very compact reducing the buffer volume required to cover the gel, providing greater control over the voltage gradient and run-time.



### ABDOS-Mini Horizontal Electrophoresis System

Code	Product	No./case
E12100	Mini Horizontal System includes Basic unit with fixed Platinum Electrode Assembly, Gel RunningTrays of 6 x 7.5 cm (1 No.), 16 Well ABS comb with 1.5 mm thickness (2 Nos.), Connecting Cord (1 Pair).	1

### Spare Accessories

Code	Product	No./case
E12101	Gel Running Tray : 6 X 7.5 cm	1
E12102	Gel Casting Tray : 6 X 7.5 cm	1
E12103	16 Well Adjustable Comb	1
E12104	Connecting Cord for E12100	2

### SPECIFICATION :

Material	ACRYLIC
Unit Dimensions (L x B x H)	14 x 25 x 7 cm
Gel Dimensions (W x L)	6 x 7.5 cm
Buffer Volume	325 ml
Maximum Sample Capacity	32
Adjustable Combs	16 Well Adjustable comb (2 Nos)
Comb Thickness	1 mm, 1.5 mm or 2 mm
Comb Throughput	16 samples
Comb Slots	2
UV Trays	Gel Running Tray with inbuilt Casting Gates
Platinum Electrode	Red and Black (1 Pair)
Connecting Cord	Red and Black (1 Each)
Recommended Power Supply	E12376, E12377 & E12378



## ABDOS Mini Submarine Horizontal Gel Unit

- The system has moulded basic unit with fixed platinum electrode assembly along with Gel running and Gel casting Tray.
- The combs having a maximum 8-sample throughput.



### ABDOS Mini Submarine Horizontal Gel Unit

Code	Product	No./case
E12111	Mini Submarine Gel System includes Basic unit with Platinum Electrode Assembly, Gel running Trays of 100 x 70 mm (1 No.), 50 x 70 mm (2 Nos.) 8 -well Acrylic comb with 1.5mm thickness (2 Nos.), 3-well preparative Acrylic comb with 3 mm thickness (1 No.), connecting Cord(1 Pair)	1

### Spare Accessories

Code	Product	No./case
E12112	Gel Scoop for 10X7cm Gels	1
E12113	Gel Scoop for 10X7cm Gels-UV Transparent	1
E12114	Spare Electrode	2
E12115	Gel running tray 70X50 mm	2
E12116	Gel casting tray 70X50 mm	1
E12117	UV Transparent Gel running tray 70X50 mm	1
E12118	Gel running tray 100X70 mm	1
E12119	Gel casting tray 100X70 mm	1
E12120	UV Transparent Gel running tray 100X70 mm	1
E12121	Acrylic Comb Mini 8 well 1.5mm	1
E12122	Acrylic Comb Mini 14 well 1.0 & 1.5mm	1
E12123	Acrylic Comb Mini 3 well preparative 3.0 mm	1
E12124	Connecting Cord for E12111	1

### SPECIFICATION :

Material	ACRYLIC
Unit Dimensions (L x B x H)	20 x 10 x 8 cm
Gel Dimensions (W x L)	10 x 7 cm
Gel Running Tray	10 x 7 cm : 1 No 5 x 7 cm : 2 Nos
Gel Casting tray	1 No
Maximum Sample Capacity	8
Combs	8 well Acrylic comb ;1.5 mm thickness : 2 Nos 3 well preparative Acrylic comb ;3 mm thickness : 1 No
Platinum Electrode	Red and Black : 1 Pair
Connecting Cord	Red & Black (1Each)
Recommended Power Supply	E12376, E12377 & E12378



## ABDOS Mini Plus Horizontal Gel Unit

- The system has moulded basic unit with fixed platinum electrode assembly along with Gel running and Gel casting Tray.
- The combs are adjustable by height to offer complete control over loading volume and well depth, upto a maximum of 80 samples throughput.
- Gel length is a short 10 cm ideal for rapid separations.
- The tank is very compact reducing the buffer volume required to cover the gel, providing greater control over the voltage gradient and run-time.



### ABDOS Mini Plus Horizontal Electrophoresis System

Code	Product	No./case
E12126	Mini Plus Horizontal System includes Basic unit with fixed Platinum Electrode Assembly, Gel Running Trays of 10 x 11.5cm (1 No.), 20 Well ABS Comb with 1.5 mm thickness (2 Nos.), Connecting Cord (1 Pair)	1

### Spare Accessories

Code	Product	No./case
E12127	Gel Running Tray : 10 X 11.5 cm	1
E12128	Gel Casting Tray : 10 X 11.5 cm	1
E12129	20 Well Adjustable Comb	1
E12130	Connecting Cord for E12126	2

### SPECIFICATION :

Material	ACRYLIC
Unit Dimensions (L x B x H)	17 x 23.5 x 7 cm
Gel Dimensions (W x L)	10 x 11.5 cm
Buffer Volume	450 ml
Maximum Sample Capacity	80
Adjustable Combs	20 Well Adjustable comb (2 Nos)
Comb Thickness	1, 1.5 or 2 mm
Comb Throughput	20 samples
Comb Slots	4
UV Trays	Gel Running Tray with inbuilt Casting Gates
Platinum Electrode	Red and Black (1 Pair)
Connecting Cord	Red and Black (1 Each)
Recommended Power Supply	E12376, E12377 & E12378



## ABDOS Midi Horizontal Gel Unit

- The system has moulded basic unit with fixed platinum electrode assembly along with Gel running and Gel Casting Tray.
- The combs are adjustable by height to offer complete control over loading volume and well depth, up to a maximum of 112 samples throughput.
- Gel length is a short 10 cm ideal for rapid separations.
- The tank is very compact reducing the buffer volume required to cover the gel, providing greater control over the voltage gradient and run-time.



### ABDOS-Midi Horizontal Electrophoresis System

Code	Product	No./case
E12151	Midi Horizontal System includes Basic unit with fixed Platinum Electrode Assembly, Gel Running Trays of 12.8 x 15 cm (1 No.), 28 Well ABS Comb with 1.5 mm thickness (2 Nos.), Connecting Cord(1 Pair)	1

### Spare Accessories

Code	Product	No./case
E12152	Gel Running Tray : 12.8 X 15 cm	1
E12153	Gel Casting Tray : 12.8 X 15 cm	1
E12154	28 Well Adjustable Comb	1
E12155	Connecting Cord for E12151	2

### SPECIFICATION :

Material	ACRYLIC
Unit Dimensions (L x B x H)	21 x 30.5 x 8 cm
Gel Dimensions (W x L)	12.8 x 15 cm
Buffer Volume	900 ml
Maximum Sample Capacity	112
Adjustable Combs	28 Well Adjustable comb (2 Nos)
Comb Thickness	1, 1.5 or 2 mm
Comb Throughput	28 samples
Comb Slots	4
UV Trays	Gel Running Tray with inbuilt Casting Gates
Platinum Electrode	Red and Black (1 Pair)
Connecting Cord	Red and Black (1 Each)
Recommended Power Supply	E12377 & E12378



## ABDOS Maxi Horizontal Gel Unit

- The system has large 20 x 20 cm gel Tray that is ideal for high resolution techniques, such as screening PCR Products and RFLP analysis.
- The combs are height adjustable to offer complete control over loading volume and well depth.
- The system has four comb positions along the tray for fast separation of a maximum of 168 samples.
- The Combs in this system are compatible with Multichannel pipette with a maximum of 42 sample throughput to reduce gel loading time.



### ABDOS MAXI Horizontal Electrophoresis System

Code	List of Power Supply Systems	No./case
E12176	Maxi Horizontal System includes Basic unit with fixed Platinum Electrode Assembly, Gel Running Trays of 20 x 20cm (1 No.), 42 Well ABS Comb with 1.5 mm thickness (2 Nos.), Connecting Cord (1 Pair)	1

### Spare Accessories

Code	Product	No./case
E12177	Gel Running Tray : 20 X 20 cm	1
E12178	Gel Casting Tray : 20 X 20 cm	1
E12179	42 Well Adjustable Comb	1
E12180	Connecting Cord for E12176	2

### SPECIFICATION :

Material	ACRYLIC
Unit Dimensions (L x B x H)	26 x 47 x 8.5 cm
Gel Dimensions (W x L)	20 x 20 cm
Buffer Volume	2200 ml
Maximum Sample Capacity	168
Adjustable Combs	42 Well Adjustable comb (2 Nos)
Comb Thickness	1, 1.5 or 2 mm
Comb Throughput	42 samples
Comb Slots	4
UV Trays	Gel Running Tray with inbuilt Casting Gates
Platinum Electrode	Red and Black (1 Pair)
Connecting Cord	Red and Black (1 Each)
Recommended Power Supply	E12377 & E12378



## ABDOS Maxi Plus Horizontal Gel Unit

- The system has large 25 x 30 cm gel Tray that is ideal for high resolution techniques, such as screening PCR Products and RFLP analysis.
- The combs are height adjustable to offer complete control over loading volume and well depth.
- The system has 12 comb positions at different intervals along the tray for fast separation of a maximum of 624 samples.
- The Combs in this system are compatible with Multichannel pipette with a maximum of 52 sample throughput to reduce gel loading time.



ABDOS-MAXI Plus Horizontal Electrophoresis System		
Code	List of Power Supply Systems	No./case
E12201	Maxi Plus Horizontal System includes Basic unit with fixed Platinum Electrode Assembly, Gel Running Trays of 25 x 30 cm (1 No.), 52 Well ABS Comb with 1.5 mm thickness (2 Nos.), Connecting Cord (1 Pair)	1

Spare Accessories		
Code	Product	No./case
E12202	Gel Running Tray : 25 X 30 cm	1
E12203	Gel Casting Tray : 25 X 30 cm	1
E12204	52 Well Adjustable Comb	1
E12205	Connecting Cord for E12201	2

### SPECIFICATION :

Material	ACRYLIC
Unit Dimensions (L x B x H)	34 x 57 x 10 cm
Gel Dimensions (W x L)	25 x 30 cm
Buffer Volume	3000 ml
Maximum Sample Capacity	624
Adjustable Combs	52 Well Adjustable comb (6 Nos)
Comb Thickness	1, 1.5 or 2 mm
Comb Throughput	52 samples
Comb Slots	12
UV Trays	Gel Running Tray with inbuilt Casting Gates
Platinum Electrode	Red and Black (1 Pair)
Connecting Cord	Red and Black (1 Each)
Recommended Power Supply	E12377 & E12378



## ABDOS Vertical Dual Mini Gel System

- The system is a twin plate 8 x 7 cm mini-gel unit designed specifically for PAGE techniques requiring self-cast gels, although precast gels may also be used.
- The system contains standard casting units.
- The system is compatible with standard, 8 x 7cm (W x H) commercially available precast gels.
- Low buffer volume within the inner chamber of the GRM and bottom reservoir economises buffer consumption.
- Combs and spacers available in 0.5 & 1 mm thickness.
- The system has a small footprint area and occupies minimal bench space.



ABDOS Vertical Mini Dual Slab Gel Electrophoresis System			SPECIFICATION :	
Code	Product	No./case		
E12226	Vertical Mini Dual Slab Gel Electrophoresis System - Basic unit includes Dual Vertical Assembly, Glass Plates (Rectangular & Notched) : 2 sets, Comb 0.5 mm Thickness (7 wells) - 2 No's, Comb 1 mm Thickness (7 wells) - 2 No's, Spacer 0.5 mm Thickness - 4 No's, Spacer 1.0 mm Thickness - 4 No's, Gel Casting Stand - 1No, Supporting Screws-2 No's, Safety Lid - 1 No, Connecting Cord - 1 Pair	1	Material	ACRYLIC
			Unit Dimensions (L x B x H)	16 x 20 x 15 cm
			Upper Buffer Tank Dimension (L x B x H)	70 x 70 x 43 cm
			Lower Buffer Tank Dimension (L x B x H)	150 x 130 x 115 cm
			Active Gel Dimension (W X H)	8 x 7 cm
			Maximum Sample Capacity	14
			Recommended Buffer Volume	Upper Tank : 150 ml Lower Tank : 200 ml
			Water Circulation Facility	Yes
			No. of Combs	7 well Teflon comb 0.5 & 1.0 mm (2 Nos each)
			No. of Teflon Spacer	0.5 & 1 mm (4 Nos each)
			Glass plates	Notched & Rectangular (2 Sets)
			Platinum Electrode	Red and Black (1 Pair)
			Connecting Cord	Red and Black (1 Each)
			Recommended power supply	E12377 & E12378
Spare Accessories				
Code	Product	No./case		
E12227	Glass Plates(Notched & Rectangular)	1 set		
E12228	Mini Multiple Gel Casting Unit(For 2 Gels)	1		
E12229	Teflon Comb 7 well 0.5 mm	1		
E12230	Teflon Comb 7 well 0.75 mm	1		
E12231	Teflon Comb 7 well 1.0 mm	1		
E12232	Teflon Comb 7 well 1.5 mm	1		
E12233	Teflon Comb 10 well 0.5 mm	1		
E12234	Teflon Comb 10 well 0.75 mm	1		
E12235	Teflon Comb 10 well 1.0 mm	1		
E12236	Teflon Comb 10 well 1.5 mm	1		
E12237	Teflon Spacers 0.5 mm	6		
E12238	Teflon Spacers 0.75 mm	6		
E12239	Teflon Spacers 1.0 mm	6		
E12240	Teflon Spacers 1.5 mm	6		
E12241	ACRYLIC Clamp(1 pcs) and Screws(2 pcs)	1 set		
E12242	Gel Developing Tray with Gel Holder 8 x 7 cm (05-02)	1		
E12243	Glass Plate Stand	1		
E12244	Connecting Cords	2		



## ABDOS Vertical Midi – Gel System

- The system is a single plate 16 x 14 cm midi-gel unit a simple, non-cooled cost-effective solution for low throughput PAGE.
- Low buffer volume within the inner chamber of the GRM and bottom reservoir economises buffer consumption.
- Ventilation holes in the system prevent the build-up of condensation during electrophoresis.
- Combs and spacers available in 0.5, 1.0 and 1.5 mm thickness.
- The system has a small footprint area and occupies minimal bench space.



### ABDOS Vertical Midi Slab Gel Electrophoresis System

Code	Product	No./case
E12276	Vertical Midi Slab Gel Electrophoresis System- basic unit includes Vertical Assembly, Glass plates (Rectangular and Notched): 2 sets, Comb 0.5 mm Thickness (13 wells) - 1 No, Comb 1 mm Thickness (13 wells) - 1 No, Comb 1.5 mm Thickness (13 wells) - 1 No., Spacer 0.5 mm Thickness - 2 No's, Spacer 1.0 mm Thickness - 2 No's, Spacer 1.5 mm Thickness - 2 No's, Gel Casting Stand - 1No, Supporting Screws-2 No's, Safety Lid-1 No, Connecting cord-1 Pair.	1

### Spare Accessories

Code	Product	No./case
E12277	Glass Plates(Notched & Rectangular)	1 set
E12278	Regular Multiple Gel Casting Unit(For 2 Gels)	1
E12279	Gel Developing Tray with Gel Holder for 16 x 14 cm	1
E12280	Gradient Maker, total Capacity 25 + 25 ml	1
E12281	Teflon Comb 13 well 0.5 mm	1
E12282	Teflon Comb 13 well 1.0 mm	1
E12283	Teflon Comb 13 well 1.5 mm	1
E12284	Teflon Comb 20 well 0.5,1.0, 1.5 mm	1
E12285	Teflon Spacers 0.5 mm	1 pack (6 pcs per pack)
E12286	Teflon Spacers 1.0 mm	1 pack (6 pcs per pack)
E12287	Teflon Spacers 1.5 mm	1 pack (6 pcs per pack)
E12288	Teflon Spacers 3.0 mm	1 pack (6 pcs per pack)
E12289	ACRYLIC Combprep. 3 well 3.0 mm	1
E12290	ACRYLIC Combprep. 3 well 6.0 mm	1
E12291	ACRYLIC Clamp (1 pcs) and Screws (2 pcs)	1 pack
E12292	Lavelling Screws	3
E12293	Glass Plate Stand	1
E12244	Connecting Cords	2



### SPECIFICATION :

Material	ACRYLIC
Unit Dimensions (L x B x H)	25 x 20 x 27 cm
Upper Buffer Tank Dimension (L x B x H)	140 x 60 x 25 cm
Lower Buffer Tank Dimension (L x B x H)	200 x 60 x 60 cm
Active Gel Dimension (WX H)	16 x 14cm
Maximum Sample Capacity	13
Recommended Buffer Volume	Upper Tank : 150 ml, Lower Tank : 200ml
No. of Combs	13 well Teflon comb, 0.5, 1.0 & 1.5 mm (1 Nos each)
No. of Spacer	0.5, 1 mm & 1.5 mm (4 Nos each)
Glass plates	Notched and Rectangular (2 Sets)
Gasket	Fixed
Clamp & Screws	4 Sets
No. of Platinum Electrode	Red and Black (1 Pair)
Connecting Cord	Red and Black (1 Each)
Recommended power supply	E12377 & E12378

## ABDOS Vertical Dual Midi Gel System

- The system is a twin plate 16 x 14 cm midi-gel unit designed specifically for PAGE techniques requiring self-cast gels, although precast gels may also be used.
- The system contains standard casting units.
- The system is compatible with standard, 16 x 14cm (W x H) commercially available precast gels.
- Low buffer volume within the inner chamber of the GRM and bottom reservoir economises buffer consumption.
- Combs and spacers available in 0.5 & 1 mm thickness.
- The system has a small footprint area and occupies minimal bench space.



ABDOS Vertical Midi Dual Slab Gel Electrophoresis System			Spare Accessories		
Code	Product	No./case	Code	Product	No./case
E12326	Vertical Midi Dual Slab Gel Electrophoresis System – Basic unit includes Dual Vertical Assembly, Glass Plates(Rectangular & Notched): 2 sets, Comb 0.5 mm Thickness (13 wells) – 2 No's., Comb 1 mm Thickness (13 wells) – 2 No's., Spacer 0.5 mm Thickness – 4 No's, Spacer 1.0 mm Thickness – 4 No's, Gel Casting Stand – 1 No, Supporting Screws – 4 No's, Safety Lid – 1 No, Connecting Cord-1 Pair	1	E12327	Glass Plates(Notched & Rectangular)	1 set
			E12328	Regular Multiple Gel Casting Unit(For 2 Gels)	1
			E12329	Gel Developing Tray with Gel Holder for 16 x 14 cm	1
			E12330	Gradient Maker,total Capacity 25 + 25 ml	1
			E12331	Teflon Comb 13 well 0.5 mm	1
			E12332	Teflon Comb 13 well 1.0 mm	1
			E12333	Teflon Comb 13 well 1.5 mm	1
			E12334	Teflon Comb 20 well 0.5,1.0, 1.5 mm	1
			E12335	Teflon Spacers 0.5 mm	6
			E12336	Teflon Spacers 1.0 mm	6
			E12337	Teflon Spacers 1.5 mm	6
			E12338	Teflon Spacers 3.0 mm	6
			E12339	ACRYLIC Combprep. 3 well 3.0 mm	1
			E12340	ACRYLIC Combprep. 3 well 6.0 mm	1
			E12341	ACRYLIC Clamp(1) and Screws(2)	1 pack
			E12342	Lavelling Screws	3
			E12343	Glass Plate Stand	1
			E12244	Connecting Cords	2

### SPECIFICATION :

Material	ACRYLIC
Unit Dimensions (L x B x H)	23 x 18 x 27.5 cm
Upper Buffer Tank Dimension (L x B x H)	140 x 70 x 20 cm
Lower Buffer Tank Dimension (L x B x H)	200 x 160 x 190 cm
Active Gel Dimension (W x H)	16 x 14 cm
Maximum Sample Capacity	26
Recommended Buffer Volume	Upper Tank : 250 ml Lower Tank : 500 ml
Water Circulation Facility	Yes
No. of Combs	13 well Teflon comb 0.5 & 1.0 mm (2 Nos each)
No. of Teflon Spacer	0.5 & 1 mm (4 Nos each)
Glass plates	Notched and Rectangular (2 Sets)
Clamp & Screws	4 Sets
No. of Platinum Electrode	Red and Black (1 Pair)
Gasket	Fixed
Connecting Cord	Red and Black (1 Each)
Recommended power supply	E12377 & E12378



## Digital Model Power Supply

- It consists of a small Power supply suitable for most Electrophoresis System tanks and applications. The front panel and graphical display are designed for ease of use. The display provides all useful information during runs.
- Digital Power supplies are the most robust, long lasting and durable electrophoresis power supplies in the market.



### FEATURES :

- Operates in constant Voltage and Constant Current Method
- Digital Display for Volt, Current and Timer
- Runs two gels simultaneously
- Feather Touch Knobs
- Overload protection
- Short Circuit Protection



Code	Product	No./case
E12376	Digital Power Supply 0-300 V ; 0-100 mA ; 30 Watts Power supply for 230 V main supply; Two(2) output Terminal.	1
E12378	Digital Power Supplies PS- 0-300 V ; 0-300 mA ; 90 watts power supply for 230 Vac main supply;Three(3) output Terminal.	1

### SPECIFICATION :

	E12376
Body	MS with Powder Coated Body
Dimension (LxWxH)	24 x 16 x 11 cm
Input	220-240 V,50-60 Hz, AC
Output Voltage	0 to 300 V DC
Output Current	0 to 100 mA
Timer	0 minutes to 9.99 Hrs cut off timer
Input Power Cable	3-Wire Grounded
Output Power	30 W
Protection	Auto balancing facility for constant voltage (V) and current modes (mA) with overload and short circuit protection
Display	Digital display for Volt, Current and Run time
Output Terminal	Can run 2 units simultaneously

### E12378

Body	MS with Powder Coated Body
Dimension (LxWxH)	24 x 28 x 12 cm
Input	220-240 V,50-60 Hz, AC
Output Voltage	0 to 300 V DC
Output Current	0 to 300 mA
Timer	0 minutes to 9.99 Hrs cut off timer
Input Power Cable	3-Wire Grounded
Output Power	90 W
Protection	Auto balancing facility for constant voltage(V) and current modes (mA)with overload and short circuit protection
Display	Digital display for Volt, Current and Run time
Output Terminal	Can run 3 units simultaneously

## Microprocessor based Programmable Power Supply



### FEATURES

- Compact and Lightweight
- LCD Digital Display & Digital Control
- Runs Four Gels simultaneously
- Short circuit & overload protection
- Pause Key function to hold the output power
- Auto Recovery after Power failure
- Alarm & Memory option



Code	Product	No./case
E12377	Microprocessor Based Programmable Power Supplies 0-300V;0-400mA	1

### SPECIFICATION :

Body	MS with Powder Coated
Dimension (L x W x H)	24 x 26 x 12 cm
Power Requirement	220-240 V,50-60 Hz, AC
Output Voltage	0 to 300 V
Output Current	0 to 400 mA
Timer	0 minutes to 24 Hrs
Parameters	16 programmable LCD
Display	Digital Display
Output Terminal	4 Parallel (4mm Socket)

# Equipments

Magnetic Stirrers & Hotplates  
Dry Bath  
Shakers & Mixers  
Digital Incubator  
Vacuum Pumps  
& More

## Swirltop – Ultra Flat & Eco Magnetic Stirrer

- SWIRLTOP magnetic stirrer is used in biotech labs, provides better mixing & is ideal for application of physical & chemical analysis.
- Its body is made of ABS material.
- It comes with automatic reverse rotation for better mixing result.
- Top plate is made from chemically resistant materials (PET).



Code	Product	Workplate Size	No./case
E11307	Ultra Flat Magnetic Stirrer	9 x 9 cm	1
E11308	Eco Magnetic Stirrer	12 x 12 cm	1

### SPECIFICATIONS :

Code	E11307	E11308
Voltage	220 - 240 V	220 - 240 V
Frequency	50 - 60 Hz	50 - 60 Hz
Motor Type	Motor less	Brushless DC Motor
Stirring position	01	01
Speed range	15 - 1500 rpm	300 - 2000 rpm
Max. stirring quantity (H <sub>2</sub> O)	0.8 L	1.5 L
Maximum magnetic bar (length)	40 mm	40 mm
Dimensions of work plate	90 x 90 mm	120 x 120 mm
Dimensions	176 x 120 x 15 mm	150 x 145 x 50 mm
Weight	0.3 kg	0.3 kg
Speed setting	Button	Scale
Permissible ambient Temperature	5 - 40° C	5 - 40° C
Permissible relative humidity	80%	80%
Protection Class	IP65	IP21



## Swirltop – Digital (LED) Magnetic Stirrer & Hot Plate

- Swirl Top unit features an extremely durable, chemical resistant white stainless steel ceramic coated surface that allows immediate heat transfer.
- LED Display shows temperature and speed.
- External Temperature sensor accessory is available with accuracy of  $\pm 0.5^{\circ}\text{C}$ .
- Extremely accurate digital control system is ideal for applications of analytical and biological laboratory.
- Swirl Top has advanced microprocessor control with convenient turn knobs that allows quick, precise adjustment and maintains accurate temperature and speed.
- Large, backlit LCD display provides constant visualization of speed and temperature while safety LED indicates when the top plate is above  $50^{\circ}\text{C}$ .
- This digital system is compatible with a wide variety of popular glass beakers, flasks, bottles and vessels.
- Heat resistant ABS casing.



SWIRLTOP – LED Digital Magnetic Stirrer & Hot Plate			
Code	Product	Circular Workplate Size	No./case
E11231	LED Digital Magnetic Stirrer & Hot Plate with support rod & external temperature probe	13.5 cm	1
E11234	LED Digital Magnetic Stirrer & Hot Plate	13.5 cm	1

Spare Accessories		
Code	Product	No./case
E11232	SP – Support Rod	1
E11233	ETP – External Temperature Probe	1

### SPECIFICATIONS :

Voltage	220–240V
Frequency	50–60Hz
Motor type	DC Motor
Maximum stirring capacity	3L
Work plate dimensions diameter	Diameter 5 Inch
Work plate material	SS Cover Ceramic
Shaking movement	Orbital
Temperature range	Room Temperature – $280^{\circ}\text{C}$
Speed range	200 – 1500 rpm
Dimension	150 x 260 x 80 mm
Weight	1.8 kg
Permissible ambient temperature	5 – $40^{\circ}\text{C}$
Permissible relative humidity	80%
Protection Class	IP21



## Swirltop – Digital (LCD) Magnetic Stirrer & Hot Plate

- Swirl Top unit features an extremely durable, chemical resistant white ceramic work surface.
- It has advanced microprocessor control with convenient turn knobs that allows quick, precise adjustment and maintains accurate temperature and speed.
- Large, backlit LCD display provides constant visualization of speed and temperature while safety LCD indicates when the top plate is above 50°C.
- This digital system is compatible with a wide variety of popular glass beakers, flasks, bottles and vessels.
- Optional probe is available to derive precise temperature control. When connected, the probe provides direct feedback to the microprocessor that continuously adjusts and maintains the selected temperature in the sample within an accuracy of  $\pm 0.5^{\circ}\text{C}$ .



### SWIRLTOP – LCD Digital Magnetic Stirrer & Hot Plate

Code	Product	Workplate Size	No./case
E11227	Digital Magnetic Stirrer & Hot Plate	16.5 x 16.5 cm	1

### Spare Accessories

Code	Product	No./case
E11228	Support Rod	1
E11229	External Temperature Probe	1

### SPECIFICATIONS :

Voltage	220-240V
Frequency	50-60 Hz
Shaking movement	Orbital
Maximum stirring capacity	5 L
Temperature range	5 – 380°C
Speed Range	200-1500rpm
Dimension	177 x 265 x 100mm
Weight	1.8kg
Permissible ambient temperature	5 – 40°C
Permissible relative humidity	80%



## SWIRLTOP- 380°C Digital Magnetic Stirrers & Hotplate

- Swirl top 380°C Digital Magnetic stirrers & Hotplate include all leading safety standards and is chemically-resistant with white ceramic work plate. They can be used in physical, chemical, analytical and biological laboratories.
- Digital temperature control with max. temperature at 380°C.
- Digital speed control with max. speed up to 1500rpm.
- High resolution LCD displays for actual temperature and speed.
- Brushless DC motor is maintenance free.
- Ceramic plate for chemical resistance and easy clean.
- Aluminium cover with ceramic work plate, allows for immediate heat transfer.
- Hot warning sign if temperature is above 50°C.
- Max. stirring quantity of H2O at 5L.
- External temperature control is available as temperature sensor PT1000.



SWIRLTOP- 380°C Digital Magnetic Stirrers & Hotplate			
Code	Product	Workplate Size	No./case
E11224	380°C Digital Magnetic Stirrer & Hot Plate with Support Rod and External Temperature Probe	14.0 x 14.0 cm	1

Spare Accessories		
Code	Product	No./case
E11232	SP - Support Rod	1
E11233	ETP - External Temperature Probe	1

### SPECIFICATIONS :

Voltage	220-240V
Frequency	50-60Hz
Motor type	DC Motor
Maximum stirring capacity	5L
Work plate dimensions diameter	140 x 140 mm
Work plate material	Aluminium Cover Ceramic
Temperature range	Room Temperature +5°C – 380°C
Speed range	200 – 1500rpm
External Temperature Sensor	PT1000(Accuracy ±0.5°C)
Dimension	320 x 180 x 108 mm
Weight	2.2 kg
Permissible ambient temperature	5 – 40°C
Permissible relative humidity	80%
Protection Class	IP21



## Swirltop – 7 inch LCD Digital Magnetic Stirrer & Hot Plate

- LCD display for precise monitoring of speed and temperature for Magnetic stirrer & Hot plate.
- Built in PID Controller ensures the safe heating of the medium with overheating and protection.
- Max heating plate temperature 550°C.
- Glass ceramic work plate provides excellent chemical resistant performance and efficient heat transfer.
- External temperature control is possible by connecting the temperature sensor (PT 1000) with an accuracy at  $\pm 0.2^{\circ}\text{C}$ .
- Digital speed control.
- Maximum Speed at 1500rpm.
- Outstanding brushless DC motor performance enables more stirring power.
- Two rotating knobs enable the easy and direct change of speed and temperature.
- HOT WARNING will flash when the work plate temperature is above 50°C or even the hot plate is turned off.
- Remote Function provides PC Control and data transmission via RS232 using 3rd Party Software.



### SWIRLTOP – LED Digital Magnetic Stirrer & Hot Plate

Code	Product	Workplate Size	No./case
E11650	LCD DIGITAL Magnetic Stirrer & Hotplate with support Rod & External Temperature Probe	18.4 x 18.4 cm	1
E11651	LCD DIGITAL Hotplate with support Rod & External Temperature Probe	18.4 x 18.4 cm	1
E11652	LCD DIGITAL Magnetic Stirrer & Hotplate	18.4 x 18.4 cm	1
E11653	LCD DIGITAL Hotplate	18.4 x 18.4 cm	1

### Spare Accessories

Code	Product	No./case
E11654	SS/Support Rod–Seven Inch	1
E11233	ETP – External Temperature Probe	1



### SPECIFICATIONS :

Code	E11650 & E11652	E11651 & E11653
Voltage	220-240V	220-240V
Frequency	50-60 Hz	50-60 Hz
Motor Type	Brushless DC Motor	Brushless DC Motor
Maximum stirring capacity	20 L	NA
Work plate dimensions diameter	184 x 184mm (7Inch)	184 x 184mm (7Inch)
Work plate material	Glass Ceramic	Glass Ceramic
Temperature range	Room Temperature – 550°C, Increment 1°C	Room Temperature – 550°C, Increment 1°C
Overheating protection	580°C	580°C
Temperature control accuracy	$\pm 0.1^{\circ}\text{C}$	$\pm 0.1^{\circ}\text{C}$
Speed display	LCD	NA
Temperature display	LCD	LCD
Speed range	100 – 1500 rpm, resolution $\pm 1\text{rpm}$	NA
Maximum magnetic bar (length)	80mm	NA
Dimension	215x360x112mm	215x360x112mm
Weight	5.3kg	5.3kg
Permissible ambient temperature	5 – 40°C	5 – 40°C
Permissible relative humidity	80%	80%
Protection class	IP21	IP21

## Swirltop – Multi Channel Magnetic Stirrer & Hot Plate

- SWIRLTOP Unit features an extremely durable stainless steel plate with anti-slip and anti-corrosion silicon surface.
- SWIRLTOP advanced Microprocessor based electronic speed control motor provides constant speed.
- High performance multi-position magnetic stirrer with uniform temperature distribution.
- Micro-processor based stirring controls to provide consistency with various samples.
- Brushless DC Motor for maintenance free & quiet operations.



Code	Product	Workplate Size	No./case
E11235	10 Channel Magnetic Stirrer	18 x 45 cm	1
E11236	10 Channel Magnetic Stirrer & Hot Plate	18 x 45 cm	1

### SPECIFICATIONS :

	E11235	E11236
Code	E11235	E11236
Voltage	220-240V	220-240V
Frequency	50-60 Hz	50-60 Hz
Dimension of work plate	180 x 450 mm	180 x 450 mm
Speed display	Scale	Scale
Shaking Movement	Orbital	Orbital
Temperature range	NA	Room Temperature – 120°C
Motor Type	DC Motor	DC Motor
Stirring Speed	0 – 1100 rpm	0 – 1100 rpm
Stirring Position	10	10
Maximum Stirring capacity	0.4 L(Each stirring position)	0.4 L(Each stirring position)
Max. Stirring Bar	40 mm	40 mm
Plate Material	Stainless Steel with silicon Film	Stainless Steel with silicon Film
Dimension	182 x 622 x 65mm	182 x 622 x 65mm
Weight	5.3 kg	5.3kg
Permissible ambient temperature	5 – 40°C	5 – 40°C
Permissible relative humidity	80%	80%
Protection class	IP42	IP42



## Swirlmax – Tube Roller

- Swirlmax is a classic tube roller that can be used for rocking and rolling for complete mixing.
- It has a wide speed range of 0-70rpm.
- It has a total of six rollers with small footprints and it is very easy to clean.
- Swirlmax has a quiet DC brushless motor which is reliable, sound free and maintenance free.
- Swirlmax can be used in cold rooms or in incubators.



Code	Product	No./case
E11230	Tube Roller	1

### SPECIFICATIONS :

Voltage	220-240V
Frequency	50Hz
Power	25W
Motor Type	DC Motor
Rocking Motion	Rocking and Rolling
Amplitude	24mm
Max. load capacity	4kg
Number of Rollers	6
Roller Size	280mm
Speed Range	0-70rpm
Speed Display	Scale
Operation Type	Continuous operation
Dimensions	450 X 260 X 120 mm
Weight	4.5 kg
Permissible ambient temperature	5-40°C
Permissible relative humidity	80%
Protection Class	IP21



## HOTBLOCK – LED Digital Dry Bath

- ABDOS-LED Digital Dry Bath Heaters are available in single and dual block configurations and provide a broad temperature range up to 150°C, which makes them useful for a variety of applications in molecular biology, histology, clinical, environmental, and industrial laboratories.
- They have been designed to incorporate the best combination of features including block capacity, dual displays, and an external temperature probe that gives life science researchers the confidence and efficiency they need when working with precious lab samples.
- This is ideal for including melting and boiling point determination, enzyme reactions, incubation and activation of cultures, immunoassays, DNA denaturation, culture and media tests, coagulation, tests, blood urea nitrogen determinations and in-situ hybridizations.
- The blocks are precision machined to match the conical size and shape of 0.5, 1.5, 2.0, 15 and 50ml tube sizes, providing unsurpassed temperature transfer. Assorted blocks are available for compatibility with nearly all common laboratory tubes and plates.
- Various optional blocks are available for best performance.
- Protection class according to DIN EN 60529.



HOTBLOCK - LED Digital Dry Bath				
Code	Product	Block Capacity	Temperature Range	No./case
E11330	LED Digital Dry Bath with one Heating Block	Single	Ambient +5°C -120°C	1
E11360	LED Digital Dry Bath with one heating Block	Single	Ambient +5°C -105°C	1
E11370	LED Digital Dry Bath with two Heating Block	Dual	Ambient +5°C -105°C	1
E11380	LED Digital Dry Bath with one heating Block	Single	Ambient +5°C -150°C	1
E11390	LED Digital Dry Bath with two Heating Block	Dual	Ambient +5°C -150°C	1

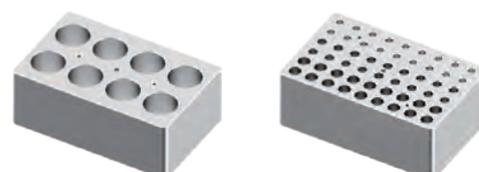
Spare Accessories of E11330				
Code	Product	Places	No./case	
E11331	Heating Block, used for 0.2 ml	54	1	
E11332	Heating Block, used for 0.5 ml	40	1	
E11333	Heating Block, used for 1.5 ml	40	1	
E11334	Heating Block, used for 5/15 ml	28	1	
E11335	Heating Block, used for 50 ml	8	1	
E11336	Heating Block, used for 0.2, 0.5, 1.5/2.0 ml	18	1	
E11337	Heating Block, used for 96/384 Microplate	96 /384 Microplate	1	
E11338	Heating Block, used for 2.0 ml	40	1	
E11339	Heating Block, used for 2.0 ml (Thin)	40	1	
E11368	Heating Block, used for 1.5 ml (Thin)	40	1	

Spare Accessories of E11360, E11370, E11380, E11390				
Code	Product	Places	No./case	
E11361	Heating Block, used for 0.2 ml	30	1	
E11362	Heating Block, used for 0.5 ml	20	1	
E11363	Heating Block, used for 1.5 ml	20	1	
E11364	Heating Block, used for 2 ml	20	1	
E11365	Heating Block, used for 5 ml	12	1	
E11366	Heating Block, used for 15 ml	12	1	
E11367	Heating Block, used for 50 ml	4	1	



E11331

E11333



E11335

E11336



E11361

E11364



E11365

E11367

SPECIFICATIONS :	E11330	E11360	E11370	E11380	E11390
Voltage	220-240V	220-240V	220-240V	220-240V	220-240V
Frequency	50-60Hz	50-60Hz	50-60Hz	50-60Hz	50-60Hz
Adaptor block material	Aluminium	Aluminium	Aluminium	Aluminium	Aluminium
Maximum heating rate	5.5°C/min	5.5°C/min	5.5°C/min	5.5°C/min	5.5°C/min
Heating temperature Range	Room Temperature +5-120°C	Room Temperature +5-105°C	Room Temperature +5-105°C	Room Temperature +5-150°C	Room Temperature +5-150°C
Temperature Setting Range	25-120	25-105	25-105	25-150	25-150
Temperature Control accuracy	±0.5°C	25-90 : ±0.3 90-105 : ±0.6	25-90 : ±0.3 90-105 : ±0.6	25-90 : ±0.3 90-150 : ±0.6	25-90 : ±0.3 90-150 : ±0.6
Temperature Uniformity @ 37°C	±0.5	±0.2	±0.2	±0.2	±0.2
Sound Alarming Function	-	Yes	Yes	Yes	Yes
Timer	Yes	Yes	Yes	Yes	Yes
Time setting range	1 Min - 99Hr 59Min	0 Min - 99Hr 59Min	0 Min - 99Hr 59Min	0 Min - 99Hr 59Min	0 Min - 99Hr 59Min
Operation type	Continuous/timed operation	Continuous/timed operation	Continuous/timed operation	Continuous/timed operation	Continuous/timed operation
External Sensor	-	Yes	Yes	Yes	Yes
USB Interface	-	Yes	Yes	Yes	Yes
Dimension (W x D x H)	175 x 220 x 85mm	290 x 210 x 120mm			
Permissible ambient temperature	5-40°C	5-40°C	5-40°C	5-40°C	5-40°C
Permissible relative humidity	80%	80%	80%	80%	80%
Protection Class	IP21	IP21	IP21	IP21	IP21



E11330



E11360 & E11380



E11370 & E11390

## THERMO MIX– LCD Digital

- ABDOS Thermo Mix Series allows for precise and efficient shaking and mixing as well as excellent temperature accuracy and uniformity, offering a wide range of applications, such as Gene Synthesis, Gene Purification, Gene Denaturation, Protein Denaturation, Enzymatic reaction, Bacterial growth and many more.
- ABDOS Thermo Mix is equipped with quick interchange of blocks with magnet Adhesion technology and without any tools.
- It is programmable and has three points calibration with precise temperature control for heating and cooling.



Thermo Mix - LCD Digital		
Code	Product	No./case
E11340	LCD Digital Thermo Mix with Heating and Cooling and Mixing with 1.5 ml Heating Block	1
E11341	LCD Digital Thermo Mix with Heating and Cooling with 1.5 ml Heating Block	1
E11342	LCD Digital Thermo Mix with Heating and Mixing with 1.5 ml Heating Block	1

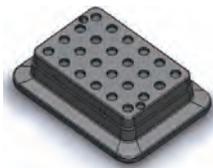
Spare Accessories				
Code	Product	Speed	Places	No./case
E11343	Heating Block, used for 0.2 ml / 96 well PCR plate	1500rpm	96	1
E11344	Heating Block, used for 96/384 well microplate	1500rpm	96/384	1
E11345	Heating Block, used for 0.5 ml	1500rpm	24	1
E11346	Heating Block, used for 1.5 ml	1500rpm	24	1
E11347	Heating Block, used for 2.0 ml	1500rpm	24	1
E11348	Heating Block, used for 5 ml (Round Bottom)	1500rpm	8	1
E11358	Heating Block, used for 5ml (Conical Bottom)	1400rpm	8	1
E11349	Heating Block, used for 15 ml	800rpm	8	1
E11350	Heating Block, used for 50 ml	600rpm	4	1

### SPECIFICATIONS :

	E11340	E11341	E11342
Code	E11340	E11341	E11342
Voltage	220-240 V	220-240 V	220-240 V
Frequency	50-60 HZ	50-60 HZ	50-60 HZ
Functions	Heating, cooling & Mixing	Heating & Cooling	Heating & Mixing
Adaptor Block Material	Aluminium	Aluminium	Aluminium
Temperature Range	Heating : 25°C-100°C Cooling : 25°C - below 15°C	Heating : 25°C-110°C Cooling : 25°C - below 25°C	Heating : 25°C-100°C
Setting Temperature Range	0.1-100°C	-5-100°C	15-100°C
Temperature Uniformity	±0.5°C	±0.5°C	±0.5°C
Temperature control accuracy	±0.5°C	±0.5°C	±0.5°C
Maximum Heating Rate	5.5°C/min	5.5°C/min	5.5°C/min
Maximum Cooling Rate	5.5°C/min(100°C-25°C) 0.5°C/min(below 25°C)	2.5°C/Min(100°C-25°C) 0.5°C/Min(below 25°C)	- -
Mixing Frequency	200-1500 rpm	NA	200-1500 rpm
Mixing Orbit	3 mm	NA	3 mm
Program	9	9	9
Overheating Protection	150°C	150°C	150°C
Dimension(WXDxH)	200 x 235 x 120 mm	200 x 235 x 120 mm	200 x 235 x 120 mm
Weight	7.3 kg	7.3 kg	7.3 kg



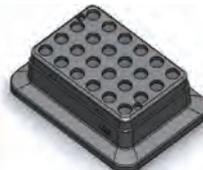
## THERMO MIX- LCD Digital



E11345



E11346



E11347



E11348



E11349



E11350



E11344



E11343

## Swirlex – LCD Digital Overhead Stirrer

- Swirlex overhead stirrer is widely used in chemical synthesis, pharmaceutical synthesis, physical and chemical analysis, petrochemical industry and more.
- Reliability, long continuous service and outstanding performance are its hallmarks.
- Digital LCD display for precise monitoring of set and actual speed.
- LCD Torque displays real time information on viscosity changes.
- Protection and safety circuits ensure automatic cut-off in an anti-stall or overload conditions.
- Provides a constant speed even with changes in viscosities of sample.
- RS232 interface PC can control and document all operation values.



### Swirlex - Digital Overhead Stirrer

Code	Product	Maximum Stirring Quantity	No./case
E11310	LED Digital Overhead Stirrer with Universal Plate Stand including support (holder) and fixing device and (E11312) Stainless Steel crossed Stirrer(E11313)	20L	1
E11311	LED Digital Overhead Stirrer with Universal Plate Stand including support (holder) and fixing device and (E11312) Stainless Steel crossed Stirrer(E11313)	40L	1
E11321	LCD Digital Overhead Stirrer with Timer with Universal Plate Stand including support (holder) and fixing device and (E11312) Stainless Steel grand crossed Stirrer(E11324)	70L	1
E11322	LCD Digital Overhead Stirrer with Timer with Grand Plate Stand including support (holder) and fixing device and (E11323) Stainless Steel grand crossed Stirrer(E11324)	70L	1

### Spare Accessories for E11310, E11311, E11321 & E11322

Code	Product	Dimensions	No./case
E11312	Universal Plate Stand including support (holder) & fixing device	20 x 31 cm (L x W)	1
E11313	Stainless Steel Crossed Stirrer	40 x 5 cm (L x $\Phi$ )	1
E11314	Stainless Steel Straight Stirrer	40 x 6 cm (L x $\Phi$ )	1
E11315	Stainless Steel Blade Stirrer	40 x 6.8 cm (L x $\Phi$ )	1
E11316	Stainless Steel Centrifugal Stirrer	40 x 9 cm (L x $\Phi$ )	1
E11317	PTFE Crossed Stirrer	35 x 6.5 cm (L x $\Phi$ )	1
E11318	PTFE Straight Stirrer	35 x 7 cm (L x $\Phi$ )	1
E11319	PTFE Blade Stirrer	35 x 6.8 cm (L x $\Phi$ )	1
E11320	PTFE Centrifugal Stirrer	35 x 8.5 cm (L x $\Phi$ )	1

### Spare Accessories for E11321 & E11322

Code	Product	Dimension	No./case
E11323	Universal Grand Plate Stand including support (holder) & fixing device	33.5 x 46.3 cm (L x W)	1
E11324	Stainless Steel Grand Crossed Stirrer	60 x 10 cm (L x $\Phi$ )	1
E11325	Stainless Steel Grand blade Stirrer	60 x 10 cm (L x $\Phi$ )	1
E11326	Stainless Steel grand anchor Stirrer	60 x 10 cm (L x $\Phi$ )	1
E11327	Stainless Steel grand Centrifugal Stirrer	60 x 10 cm (L x $\Phi$ )	1



**SPECIFICATIONS :**

Code	E11310	E11311	E11321 & E11322
Voltage	220-240V	220-240V	220-240V
Frequency	50-60Hz	50-60Hz	50-60Hz
Power	70W	130W	200W
Speed Range	50 - 2200rpm	50 - 2200rpm	50 - 1100rpm
Speed Display	LED	LED	LCD
Max. Stirring Quantity	20L	40L	70L
Max Torque	40Ncm	60Ncm	300Ncm
Max Viscosity	10000mPas	50000mPas	100000mPas
Chuck range diameter	0.5 - 10mm	0.5 - 10mm	0.5 - 10mm
Overload Protection Display	LED Lights, Motor Automatically Stops	LED Lights, Motor Automatically Stops	LED Lights, Motor Automatically Stops
Dimensions	83 x 220 x 186 mm	83 x 220 x 186 mm	83 x 220 x 186 mm
Weight	2.8 kg	2.8 kg	3.2 kg
Data Interface RS232	No	No	Yes
Permissible ambient Temperature	5-40°C	5-40°C	5-40°C
Permissible relative Humidity	80%	80%	80%
Protection class according to DIN/EN 60529	IP21	IP21	IP21



## Swirlex – Vortex Shaker

- Swirlex-Vortex is suitable for touch or continuous or fixed operation.
- Used for gentle mixing to vigorous re-suspension of biological cells and canonical liquid components in tubes using eccentric mechanism.
- These vortex shakers contain specially designed silicone feet and steel base excellent for damping vibration.
- Swirlex vortex Shaker is eccentric with oil less ball bearing.
- A wide range of accessories are also available.



SWIRLEX - Vortex Shaker			
Code	Product	Work Plate Diameter	No./case

E11190	Swirlex Adjustable Vortex Shaker	4 mm	1
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Spare Accessories			
Code	Product	No./case	

E11191	Tube holding Rod		1
E11192	Universal 100mm top plate with 4 vacuum suction feet		1
E11198	Platform pad for tubes and vessels $\phi$ 99 mm		1
E11197	Tube Adapter for 48 holes test tube $\phi$ 6mm		1
E11193	Tube Adapter for 15 holes test tube $\phi$ 10mm		1
E11194	Tube Adapter for 16 holes test tube $\phi$ 12mm		1
E11195	Tube Adapter for 8 holes test tube $\phi$ 16mm		1
E11196	Tube Adapter for 8 holes test tube $\phi$ 20mm		1

Kindly Note: E11192 is required to run E11198, E11197, E11193, E11194, E11195 & E11196 Adapter.

### SPECIFICATIONS :

Voltage	220–240V
Frequency	50–60Hz
Speed Range	0 – 2500 rpm
Shaking Movement	Orbital
Motor Type	Shaded Pole Motor
Outer Diameter	4mm
Speed Display	Analog Type
Run Type	Continuous/Touch operation
Dimensions	127x130x160 mm
Weight	3.5 kg
Power	60W
Permissible ambient temperature	5–40°C
Permissible relative humidity	80%
Protection Class	IP21



## Swirlex – Microplate Mixer

- SWIRLEX-Micro plate Mixer is used for holding single or double micro plates with an SBS footprint.
- This is widely used in life sciences including microbiology, cell and molecular biology, immunology and biotechnology for various mixing applications with optional adapters.
- The high speed and small diameter combine to offer a true vortexing action in each well of the micro plate. This action ensures both complete and uniform mixing.



SWIRLEX – Microplate Mixer			Spare Accessories		
Code	Product	No./case	Code	Product	No./case
E11200	Swirlex Microplate Mixer Including Microplate Clamp(E11201) as standard	1	E11201	Microplate clamp	1
			E11202	Double microplate clamps	1

### SPECIFICATIONS :

Voltage	220-240V
Frequency	50-60Hz
Shaking Movement	Orbital
Speed Range	Single Microplate : 0-1500 rpm Double Microplate : 0-1000 rpm
Orbit Diameter	4.5 mm
Maximum Shaking Weight (With accessory)	0.5 Kg
Motor Type	Brushless DC Motor
Dimensions	260x150x80mm
Permissible ambient temperature	5-40°C
Permissible relative humidity	80%
Protection Class	IP21



## Wavex – Classic Tube Rotator

- Wavex tube rotators provide gentle but effective mixing of biological samples, held in 1.5 ml to 50 ml tubes.
- Used in a variety of applications including immune precipitations, prevention of blood coagulation & ELISA diagnostics.
- Wavex-Classic Tube Rotator has Disk Type Design.



SWIRLEX – Classic Tube Rotator			Spare Accessories		
Code	Product	No./case	Code	Product	No./case
E11300	Wavex-Classic Tube Rotator	1	E11301	Plastic Clips for 1.5 ml x 12 micro centrifuge tubes,Disk accessory	12
			E11302	Plastic Clips for 15 ml x 12 micro centrifuge tubes,Disk accessory	12
			E11303	Plastic Clips for 50 ml x 12 micro centrifuge tubes,Disk accessory	12

### SPECIFICATIONS :

Voltage	220-240V
Frequency	50-60Hz
Power	20W
Motor Type	DC Motor
Tilt Angle	90°
Speed Range	0-80rpm
Speed Display	Scale
Operation Type	Continuous
Dimensions	300 x 220 x 310mm
Weight	2 kg
Permissible ambient Temperature	5-40°C
Permissible relative Humidity	80%
Protection Class	IP21



## Wavex – LCD Tube Rotator

- Wavex tube rotators provide gentle but effective mixing of biological samples, held in 1.5 ml to 50 ml tubes.
- Used in a variety of applications including immune precipitations, prevention of blood coagulation & latex diagnostics.
- Wavex tube rotator has a disk type design.
- LCD displays and digital speed control allows procedures to be accurate.
- Speed range of 10 to 70 rpm.
- Wavex tube rotator has an adjustable mixing angle between 0 - 90°.
- Wavex tube rotator has dual dish accessories for larger tubes.



### SWIRLEX – Microplate Mixer

Code	Product	No./case
E11270	Wavex-LCD Digital Tube Rotator with Disk accessory for 50ml x 8 Centrifuge Tubes	1

### Spare Accessories

Code	Product	No./case
E11271	Disk accessory for 1.5 ml x 60 micro centrifuge tubes	1
E11272	Disk accessory for 50 ml x 8 centrifuge tubes	1
E11273	Disk accessory for 15 ml x 16 centrifuge tubes	1
E11274	Disk support rods used with disk accessories	4

### SPECIFICATIONS :

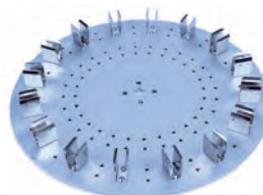
Voltage	220-240V
Frequency	50Hz
Power	40 W
Motor Type	DC Motor
Tilt Angle	0 - 90°
Speed Range	0-70 rpm
Speed & Timer Display	LCD
Time Setting Range	1- 1199 min.
Operation Type	Continuous / timed operation
Dimensions	510 x 190 x 260 mm
Weight	8 kg
Permissible ambient Temperature	5-40°C
Permissible relative Humidity	80%
Protection Class	IP 21



E11271



E11272



E11273



E11274

## Wavex – Classic Rotating Mixer

- Wavex tube rotators provide gentle but effective mixing of biological samples, held in 1.5 ml to 50 ml tubes.
- Used in a variety of applications including immune precipitations, prevention of blood coagulation and latex diagnostics.
- Wavex-Classic Tube Rotator has Disk Type Design.



### SWIRLEX – Vortex Shaker

Code	Product	No./case
E11305	Wavex-Classic Rotating Mixer	1

### Spare Accessories

Code	Product	No./case
E11301	Plastic Clips for 1.5 ml x 12 micro centrifuge tubes,Disk accessory	12
E11302	Plastic Clips for 15 ml x 12 micro centrifuge tubes,Disk accessory	12
E11303	Plastic Clips for 50 ml x 12 micro centrifuge tubes,Disk accessory	12

### SPECIFICATIONS :

Voltage	220-240V
Frequency	50-60Hz
Power	20W
Motor Type	DC Motor
Tilt Angle	90°
Speed Range	0-80rpm
Speed Display	Scale
Operation Type	Continuous
Dimensions	150 x 530 x 190mm
Weight	1.7 kg
Permissible ambient Temperature	5-40°C
Permissible relative Humidity	80%
Protection Class	IP21



## Wavex-LCD Rotating Mixer

- Wavex –LCD Rotating Mixer give gentle but effective mixing of biological samples to be held in 1.5 ml to 50 ml tubes used in a variety of applications including immune precipitations, prevention of blood coagulation and latex diagnostics.
- Wavex rotating mixer has a rotisserie type design.
- LCD displays and digital speed control allows procedures to be accurate.



### Wavemax – LCD Rotating Mixer

Code	Product	No./case
E11280	LCD Digital Rotating Mixer with Rotisserie accessory for 50 ml x 24 centrifuge tubes horizontally	1

### Spare Accessories

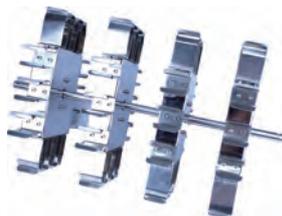
Code	Product	No./case
E11281	Rotisserie accessory for 1.5 ml x 48 micro centrifuge tubes horizontally	1
E11282	Rotisserie accessory for 50 ml x 24 centrifuge tubes horizontally	1
E11283	Rotisserie accessory for 15 ml x 24 centrifuge tubes horizontally	1
E11284	Rotisserie accessory for 1.5 ml x 32 micro centrifuge tubes vertically	1
E11285	Rotisserie accessory for 50 ml x 16 centrifuge tubes vertically	1
E11286	Rotisserie accessory for 15 ml x 16 centrifuge tubes vertically	1
E11274	Disk support rods with disk accessories	4

### SPECIFICATIONS :

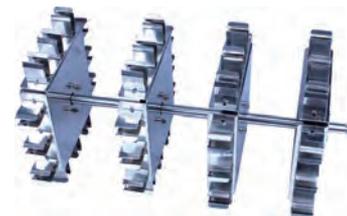
Voltage	220-240V
Frequency	50Hz
Power	40 W
Motor Type	DC Motor
Tilt Angle	0 - 90°
Speed Range	0-70 rpm
Speed & Timer Display	LCD
Time Setting Range	1 - 1199 min.
Operation Type	Continuous / timed operation
Dimensions	510 x 190 x 260 mm
Weight	8 kg
Permissible ambient Temperature	5-40°C
Permissible relative Humidity	80%
Protection Class	IP 21



E11281



E11282



E11283



E11284



E11285



E11286

## Wavemax – Digital Rocking Shaker

- Abdos Digital rocking shakers are used for staining and destaining gels, hybridization procedures, haematology and blotting techniques. Designed to provide precise speed and tilt angles required for broad range of molecular and biological mixing applications.
- It boasts of digital speed control and large LED display, speed and timer can be viewed simultaneously.
- Aluminium-alloyed platform provides strong bearing capability, with non-slip mat that holds vessels and prevents it from slipping.
- Specially designed and developed compact space-saving design fits easily in the incubator.
- Space Accessories have a wide range of platforms for use with a variety of vessels.



### WAVEMAX – LED Digital Rocking Shaker

Code	Product	No./case
E11410	Wavemax – Digital Rocking Shaker with platform with Dish Attachment with non-Slip Mat	1

### Spare Accessories for Digital Rocking Shaker (E11410)

Code	Product	No./case
E11451	Universal attachment with 3 Bars	1
E11452	Dish attachment with non-slip mat	1
E11453	Fixing clip attachment	1
E11415	Fixing clip for 25 ml flask	1
E11416	Fixing clip for 50 ml flask	1
E11417	Fixing clip for 100 ml flask	1
E11418	Fixing clip for 200/250 ml flask	1
E11419	Fixing clip for 500 ml flask	1

\* PIs note E11453 is required to run E11415, E11416, E11417, E11418 & E11419.

### SPECIFICATIONS :

Voltage	220-240V
Frequency	50-60Hz
Power	50W
Motor type	DC Motor
Rocking motion	See-saw rocking
Maximum load capacity (With Platform)	3.0 kg
Tilt angle	7°
Speed range	10-70rpm
Speed & timer display	LED
Time range	1 min – 19 h 59 min
Operation Type	Continuous /timed operation
Dimensions	270 x 330 x 130mm
Weight	3.2 Kg
Permissible ambient temperature	5-40°C
Permissible relative Humidity	80%
Protection class	IP21



Universal attachment with bars



Dish attachment with non-slip mat

## Wavemax – Digital (3D) Dancing Shaker

- Wavemax classic dancing shakers are used for staining and destaining gels, hybridization procedures, haematology and blotting techniques.
- This 3 dimensional shaker is designed to provide precise speed and tilt angles required for broad range of molecular and biological mixing applications.
- Abdos LED dancing shaker boasts of digital speed control and large LED display, speed and timer can be viewed simultaneously.
- Aluminium-alloyed platform provides strong bearing capability, with non-slip mat that holds vessels and prevents it from slipping.
- Specially designed and developed compact space-saving design fits easily in the incubator.
- Space accessories have a wide range of platforms for use with a variety of vessels.



### WAVEMAX – Digital (3D) Dancing Shaker

Code	Product	No./case
E11430	Wavemax – Digital Dancing Shaker with platform with Dish Attachment with non-Slip Mat	1

### Spare Accessories for Digital (3D) Dancing Shaker (E11430)

Code	Product	No./case
E11451	Universal attachment with 3 Bars	1
E11452	Dish attachment with non-slip mat	1
E11453	Fixing clip attachment	1
E11415	Fixing clip for 25 ml flask	1
E11416	Fixing clip for 50 ml flask	1
E11417	Fixing clip for 100 ml flask	1
E11418	Fixing clip for 200/250 ml flask	1
E11419	Fixing clip for 500 ml flask	1

\*Please note E11453 is required to run E11415, E11416, E11417, E11418 & E11419.

### SPECIFICATIONS :

Voltage	220-240V
Frequency	50-60Hz
Power	40W
Motor type	DC Motor
Rocking motion	3 Dimensional
Maximum load capacity (With Platform)	3.0 kg
Tilt angle	7°
Speed range	10-80 rpm
Speed & timer display	LED
Time range	1 min – 19h59min
Operation Type	Continuous /timed operation
Dimensions	270 x 330 x 130mm
Weight	2.7Kg
Permissible ambient temperature	5-40°C
Permissible relative Humidity	80%
Protection class	IP21



Universal attachment with bars



Dish attachment with non-slip mat

## Wavemax – Orbital Shaker Junior

- Abdos orbital shaker has digital speed control of upto 300 rpm.
- These shakers have horizontal circular 19 mm orbit for aeration and mixing.
- Universal magnetic clamp can be instantly exchanged.
- These shakers have a capacity of up to 20 x 50ml, 12 x 125 ml, 8 x 250 ml, 5 x 500 ml, 4 x 1L flasks.



WAVEMAX – Orbital Shaker Junior			
Code	Product	Platform Dimension	No./case
E11260	Wavemax – Orbital Shaker Junior with flat mat	9.5" x 8"	1
Spare Accessories			
Code	Product	Platform Dimension	No./case
E11261	Universal Magnetic platform for flasks and tube racks	11" x 9.5"	1
E11262	Adjustable Spring platform for unique vessel types	-	1

Kindly Note: Flask clamps and Fixed Platforms are sold separately. See page No. 67 for complete listing

### SPECIFICATIONS :

Voltage	220–240 V
Frequency	50 Hz
Shaking Movement	Orbital
Timer	1min–99hrs59min
Speed Range	50 – 300 rpm, Variable
Speed Increment	10 rpm
Orbit	19 mm
Load Capacity	Maximum 4 kg
Dimension	280 x 270 x 130 mm
Weight	5.5 kg
Permissible ambient temperature	+4 to +65° C
Permissible relative humidity	80%



## Wavemax – Orbital Shaker

- Abdos powerful orbital shaker is capable of mixing liquids upto a load capacity of 6 kg in bottles, flasks, test tubes & dishes.
- Abdos orbital shaker has digital speed control of upto 300 rpm.
- These shakers have high capacity of upto 24 x 125 ml, 14 x 250 ml, 9 x 500 ml, 5 x 1l and 2 x 2l flasks and bottles.
- These shakers have horizontal circular 19 mm orbit for aeration and mixing.
- Universal magnetic clamp can be instantly exchanged.



WAVEMAX – Orbital Shaker			
Code	Product	Platform Dimension E11290	No./case
	Wavemax – Orbital Shaker with flat mat	13" x 12"	1
Spare Accessories			
Code	Product	Platform Dimension E11291	No./case
	Universal Magnetic platform for flasks and tube racks	14" x 12"	1

Kindly Note: Flask clamps and Fixed Platforms are sold separately. See page No. 67 for complete listing

### SPECIFICATIONS :

Voltage	220–240V
Frequency	50 Hz
Shaking Movement	Orbital
Speed Range	30 – 300 rpm, Variable
Speed Increment	1 rpm
Orbit	19 mm
Load Capacity	Maximum 6 kg
Dimension	280 x 330 x 75 mm
Weight	11.25 kg
Permissible ambient temperature	+4 to +65° C
Permissible relative humidity	80%



## Wavemax – LED Digital Orbital & Linear Shaker

- Abdos orbital and linear shakers are capable of mixing and shaking liquids in bottles, flasks, vessels, test tubes & dishes.
- Independent LED display for adjusting speed and time. Speed and timer can be viewed simultaneously.
- Maximum load capacity of 3.0 kg with platform.
- Specially designed and developed compact space-saving design fits easily in the incubator and refrigerator.
- Electronic time switching clock controls time or continuous operation mode.
- Space Accessories have a wide range of platforms for use with a variety of vessels.
- Over speed detection and protection.



### WAVEMAX – Digital Orbital Shaker

Code	Product	No./case
E11460	Wavemax – LED Digital Orbital Shaker with dish attachment with non-slip mat.	1

### WAVEMAX – Digital Linear Shaker

Code	Product	No./case
E11470	Wavemax – LED Digital Linear Shaker with dish attachment with non-slip mat.	1

### Spare Accessories for E11460 & E11470

Code	Product	No./case
E11451	Universal attachment with 3 Bars	1
E11452	Dish attachment with non-slip mat	1
E11453	Fixing clip attachment	1
E11415	Fixing clip for 25 ml flask	1
E11416	Fixing clip for 50 ml flask	1
E11417	Fixing clip for 100 ml flask	1
E11418	Fixing clip for 200/250 ml flask	1
E11419	Fixing clip for 500 ml flask	1

\* Pls note E11453 is required to run E11415, E11416, E11417, E11418 & E11419.

### SPECIFICATIONS :

	E11460	E11470
Voltage	220-240V	220-240V
Frequency	50-60Hz	50-60Hz
Power	20W	20W
Motor Type	Brushless DC Motor	Brushless DC Motor
Shaking Motion	Orbital	Linear
Orbital Diameter	20mm	20mm
Maximum load capacity (With Platform)	3.0 kg	3.0 kg
Speed Range	40-200rpm	40-200rpm
Speed & Timer Display	LED	LED
Time Range	1 min – 19h59min	1 min – 19h59min
Operation Type	Continuous /timed operation	Continuous/timed operation
Dimensions	270 x 330 x 110 mm	270 x 330 x 110 mm
Weight	3.1 Kg	3.1 Kg
Permissible ambient Temperature	5-40°C	5-40°C
Permissible relative Humidity	80%	80%
Protection Class	IP21	IP21



Universal attachment with bars



Dish attachment with non-slip mat



Fixing clamp attachment

## Wavemax – Heavy Duty LCD Digital Orbital & Linear Shaker

- Abdos orbital and linear shakers are capable of mixing and shaking liquids in bottles, flasks, vessels, test tubes & dishes.
- Independent LCD display for adjusting speed and time, speed and timer can be viewed simultaneously.
- Maximum load capacity of 7.5 kg with platform.
- Specially designed and developed compact space-saving design fits easily in the incubator and refrigerator.
- Electronic time switching clock controls time or continuous operation mode.
- Space Accessories have a wide range of platforms for use with a variety of vessels.
- Over speed detection and protection.



### WAVEMAX – Heavy Duty LCD Digital Orbital Shaker

Code	Product	No./case
E11480	Wavemax – Heavy Duty Orbital Shaker with universal Attachment with 4 Bar	1

### WAVEMAX – Heavy Duty LCD Digital Linear Shaker

Code	Product	No./case
E11490	Wavemax – Heavy Duty Linear Shaker with universal Attachment with 4 Bar	1

### Spare Accessories for E11480 & E11490

Code	Product	No./case
E11411	Universal attachment with 4 Bars	1
E11413	Dish attachment with non-slip mat & fixed string	1
E11414	Fixing clip attachment	1
E11415	Fixing clip for 25 ml flask	1
E11416	Fixing clip for 50 ml flask	1
E11417	Fixing clip for 100 ml flask	1
E11418	Fixing clip for 200/250 ml flask	1
E11419	Fixing clip for 500 ml flask	1

\* Pls note E11414 is required to run E11415, E11416, E11417, E11418 & E11419.



**SPECIFICATIONS :**

	<b>E11480</b>	<b>E11490</b>
Voltage	220-240V	220-240V
Frequency	50-60Hz	50-60Hz
Power	30W	30W
Motor Type	Brushless DC Motor	Brushless DC Motor
Shaking Motion	Orbital	Linear
Orbital Diameter	10 mm	10 mm
Maximum load capacity (With Platform)	7.5kg	7.5kg
Speed Range	100-500 rpm	100-350 rpm
Speed & Timer Display	LCD	LCD
Time Range	1 min – 19 h 59 min	1 min – 19 h 59 min
Operation Type	Continuous /timed operation	Continuous /timed operation
Data Connector	RS232	RS232
Dimensions	370 x 420 x 100 mm	370 x 420 x 100 mm
Weight	13.5 Kg	13.5 Kg
Permissible ambient Temperature	5-40°C	5-40°C
Permissible relative Humidity	80%	80%
Protection Class	IP21	IP21



Fixing Clamps



Universal attachment with bars



Dish attachment with non-slip mat

## Wavemax-Digital Incubator

- Wavemax-Digital Incubators provide the facility to monitor the chamber temperatures in real time.
- Has large internal chambers with two adjustable shelves for increased space. Internal Power Outlet for Installation of other Equipment for sample agitation within the Digital Incubators.
- Wavemax-Digital Incubator is available in a heating unit or heating and cooling for lower temperature applications.



### Wavemax - Digital Incubator

Code	Product	No./case
E11355	Heating Digital Incubator	1
E11356	Heating & Cooling Digital Incubator	1

### Spare Accessories

Code	Product	Platform Dimension	No./case
E11357	Extra Shelf, 10.5 x 8 inch, Plastic (not autoclavable)	10.5" x 8"	1

### SPECIFICATIONS :

	E11355	E11356
Voltage	220-240 V	220-240 V
Frequency	50-60 HZ	50-60 HZ
Temp. Range (Heating)	Ambient +5°C to 60°C	Ambient -15°C to 60°C
Temp. Operation	Only Heating	Heating & Cooling
Temp. Accuracy	±0.5°C (at 37°C)	±0.5°C (at 37°C)
Temp. Uniformity	±1.5°C (at 37°C)	±1.5°C (at 37°C)
Temp. Increment	1°C	1°C
Platform Dimensions	235 x 290 mm(9.5x11.5 in)	235 x 290 mm(9.5x11.5 in)
Operating Temp. Range	+4 to +65°C	+4 to +65°C
Exterior	335 x 370 x 475 mm	335 x 370 x 475 mm
Interior	260x235x325mm	260x235x325mm
Capacity	20L	20L
Weight	6.5 kg	6.5 kg

\*Minimum temperature is approx. 7°C in 22°C room temp.



## Wavemax – Incu-shaker Mini

- Wavemax-Incu-Shaker Mini is a compact shaking incubator that can accept a variety of flasks, tubes, trays, etc.
- The standard platform features a non-slip surface ideal for staining trays, tissue culture flasks, and Petri dishes.
- Abdos Incu-Shaker offer exceptional temperature uniformity and accuracy due to a proprietary heat distribution technology that ensures temperatures are precisely maintained throughout the chamber within 0.25%, even in the corners.
- Featuring the MAGIC Clamp platform, this shaker lets you customize the size and types of vessels being used by simply exchanging clamp sizes. Clamps utilize a powerful magnetic base to securely attach to the shaking platform without screws, bolts, or tools.
- Speed, temperature, and time are controlled with a push of a button and are displayed on the LED panel.
- Over temperature and over speed controls ensure safety, long life, and sample integrity.
- Advanced motor isolation system minimizes noise and vibration.



WAVEMAX – INCU-SHAKER			
Code	Product	Platform Dimension	No./case
E11920	Wavemax-Incu-Shaker Mini with Non-Slip Rubber Mat	9.5" x 11.5"	1

Spare Accessories			
Code	Product	Platform Dimension	No./case
E11925	Universal Magnetic Platform for Flasks and Tube racks (For E11920)	9.5" x 11.5"	1

Kindly Note: Flask clamps and Fixed Platforms are sold separately, see page No. 67 for complete listing

### SPECIFICATIONS :

Voltage	220-240V
Frequency	50-60Hz
Speed	Variable, 30 to 300rpm
Speed Adjustment	1rpm
Shaking Orbit	19mm
Temperature Range	Room Temperature +5°C to 70°C
Temperature Increment	0.1°C
Temperature Accuracy	±0.1°C
Temperature Uniformity	±0.25%
Timer	1 min to 48 hours/continuous
Platform Dimensions	23.5 x 29cm (9.5"x11.5")
Overall Dimensions (W x D x H)	280 x 410 x 330 mm
Weight	11.5 kg



Spare Accessories for E11260, E11290 & E11920			Spare Accessories for E11290 & E11920		
Code	Product	No./case	Code	Product	No./case
E11928	Universal Magnetic Clamp for 125ml, 250ml, 500ml flasks	1	E11939	Magnetic Clamp for Tube Rack 4x500ml or 600ml conical bottles	1
E11929	Magnetic Clamp for 1000 ml flask	1	E11940	Magnetic Clamp for Tube Rack 12x1.5/2.0 ml tubes horizontal	1
E11930	Magnetic Clamp for 500 ml flask	1	E11941	Magnetic clamp for tube Rack 4x15ml tubes horizontal	1
E11931	Magnetic Clamp for 250 ml flask	1	E11942	Magnetic Clamp for Tube Rack 2x50ml tubes horizontal	1
E11932	Magnetic Clamp for 125 ml flask	1	E11943	Magnetic Clamp for tilted holder for 15ml and 50ml tube rack	1
E11933	Magnetic Clamp for 50 ml flask	1	E11944	Universal spring Platform	1
E11934	Magnetic Clamp for one Microplate	1	E11948	Platform for 5 x 500 ml	1
E11935	Magnetic Clamp for Tube Rack 30x15ml & 20x50ml tubes	1	E11949	Platform for 8 x 250 ml	1
E11936	Magnetic Clamp for Tube Rack 72x14mm culture tubes	1	E11950	Platform for 1 x 125 ml	1
E11937	Magnetic Clamp for Tube Rack 32x15ml, tubes	1	E11951	Platform for 4 microplates	1
E11938	Magnetic Clamp for Tube Rack 15x50ml, tubes	1			

## AEROVAC-Oil-Free Vacuum Pumps

- ABDOS Aerovac Oil Free Vacuum Pump is a compact, lightweight and mobile oil-free piston Vacuum pump.
- It features manual pressure control and a gauge for pressure monitoring.
- The unit is maintenance-free and its oil-free design reduces its environmental impact.
- The pump can achieve flow rates of up to 52 L/min and an ultimate vacuum down to 13 mbar.
- A wide range of optional accessories are available.
- Application Areas: Abdos Vacuum Pump is useful for Biology laboratories, Food industry, Microbiological detection, Vacuum extraction, Liquid filtration, Vacuum drying, Suspended solids measurement.



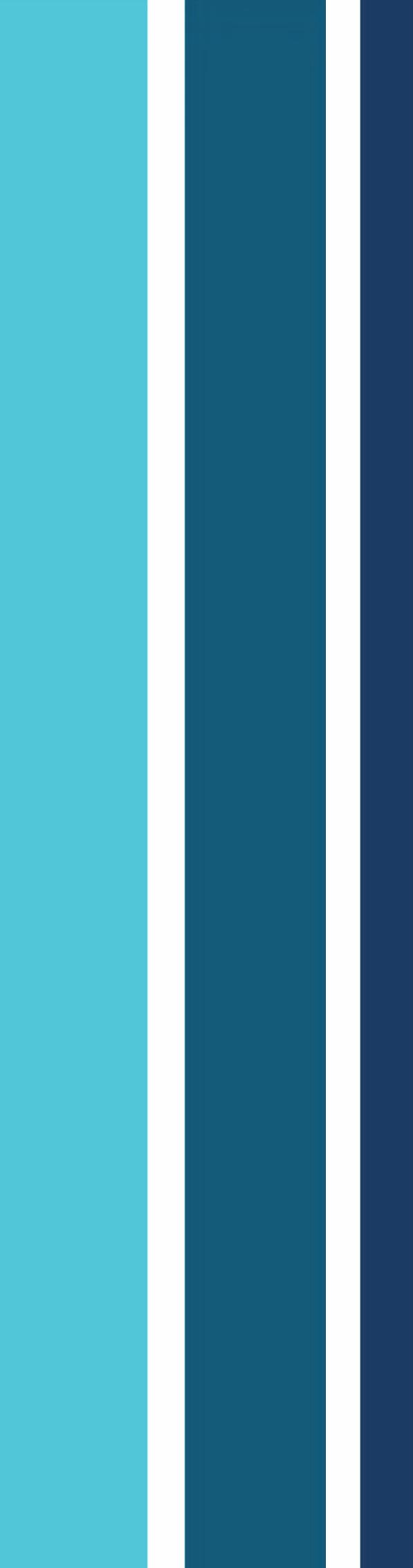
### Oil Free Vacuum Pump

Code	Product	Product Dimension	No./case
E11800	Aerovac-300	Vacuum: 100mbar; Max. Flow Rate: 17 L/min(220V)	1
E11801	Aerovac-400	Vacuum: 100 mbar; Max. Flow Rate: 34 L/min(220V)	1
E11802	Aerovac-600	Vacuum: 100 mbar; Max. Flow Rate: 60 L/min(220V)	1
E11803	Aerovac-410	Vacuum: 30 mbar; Max. Flow Rate: 19 L/min(220V)	1
E11804	Aerovac-610	Vacuum:30 mbar; Max. Flow Rate: 40 L/min(220V)	1
E11805	Aerovac-430	Vacuum:150/ 5.5 bar(max.pressure); Max. Flow Rate: 28L/min(220V)	1
E11806	Aerovac-800	Vacuum: 100 mbar; Max. Flow Rate: 80 L/min(220V)	1
E11807	Aerovac-810	Vacuum: 30 mbar; Max. Flow Rate: 50 L/min(220V)	1



Spare Accessories			
Code	Product	Product Dimension	No./case
E11810	Connectors	Outlet diameter: 9.5mm	1
E11815	L-shape connector	Outlet diameter: 8mm	1
E11816	Quick connection outlet	Outlet diameter: 12mm	1
E11821	Silencer	Suitable for Aerovac300 / Aerovac400 / Aerovac410	1
E11822	Silencer	Suitable for Aerovac600 / Aerovac610	1
E11823	Vacuum regulator / filter	Incl. pressure gauge	1
E11824	Vacuum regulator / filter	without pressure gauge	1
E11825	Foot pedal	Suitable for Aerovac series vacuum pumps	1
E11826	FEP tubing	Outer diameter: 6mm, Inner diameter: 4mm, Thickness: 1 mm, Length : 1m	1
E11830	Silicon tubing	Outer diameter: 12mm, Inner diameter: 6mm, Thickness: 3mm, Length : 1m	1

SPECIFICATIONS :	E11800	E11801	E11802	E11803	E11804	E11805	E11806	E11807
Volt	220 V	220 V	220 V					
Frequency	50 Hz	50 Hz	50 Hz					
Maximum Power	60 W	80 W	190 W	80 W	210 W	125 W	220 W	220 W
Maximum Current	0.3 A	0.4 A	1.0 A	0.4 A	1.0 A	0.6 A	1.0 A	1.0 A
Maximum Vacuum	100 mbar	100 mbar	100 mbar	30 mbar	30 mbar	150/5.5 bar	100 mbar	30 mbar
Maximum Flow Rate	17 L/min	34 L/min	60 L/min	19 L/min	40 L/min	28 L/min	80 L/min	50 L/min
Motor Rotation	1450 rpm	1450 rpm	1450 rpm					
Dimension (W x D x H)mm	272 x 142 x 165	310 x 152 x 165	340 x 155 x 195	310 x 152 x 165	340 x 155 x 195	247 x 235 x 200	340 x 185 x195	340 x 185 x 195
Weight	4.4 Kg	5.4 Kg	5.4 Kg	5.5 Kg	8.6 Kg	5.5 Kg	8.6 Kg	8.6 Kg
Noise Level	50 dB	60 dB	50 dB	50 dB	52 dB	50 dB	52 dB	52 dB



# PCR Techniques

PCR Workstation

## ABDOS PCR Work Station

- PCR amplification is extremely sensitive to contamination, prevention of contamination requires good laboratory practices to minimize external or cross-contamination during reagent and sample preparation.
- ABDOS PCR Workstation is designed to protect against contamination in sensitive PCR amplification reactions. ABDOS manufactures Mini and Midi PCR workstations which are designed for UV Irradiation of PCR Chemicals. These PCR workstations are self-contained work area that will help protect your PCR runs against contamination.
- It is ideally suited for use with non-hazardous contaminants and when flexible access to the instrumentation in the cabinet is required.

Code	Product	Working Platform	No./case
E12480	ABDOS-Mini PCR Work Station	250 x 120 x 120 mm	1
E12481	ABDOS-Midi PCR Work Station	650 x 450 x 300 mm	1
E12482	ABDOS-Midi PCR Work Stationwith HEPA Filter	600 x 500x450 mm	1

### SPECIFICATION :

	E12480	E12481	E12482
Code	E12480	E12481	E12482
Voltage	220-240 V	220-240 V	220-240 V
Frequency	50-60HZ	50-60HZ	50-60HZ
HEPA Filters	----	----	2 Nos (10X10 cm)
Fluorescent Tube	1 Nos	2 Nos	2 Nos
UV Tubes	1 No	1 No	1 No
Pipet Holder	-----	1 Nos for standing 5 Micropipettes	1 Nos for standing 5 Micropipettes
Switches	At Side	At Side	At Side
Socket Inside	---	Yes; For Running Mini Equipment	Yes; For Running Mini Equipment
Sliding Door	Yes, From Front Side	Yes, From Front Side	Yes, From Front Side
Cabinet	MS Powder coated with Stainless Steel working top	MS Powder coated with Stainless Steel working top	MS Powder coated with Stainless Steel working top
Working Area (LXHXD)	250 X 120 X 120 mm	650 x 450 x 300 mm	600 x 500 x 450 mm



# Index

Code	Page No.	Code	Page No.	Code	Page No.	Code	Page No.	Code	Page No.
E11501	09	E11731	23	E12236	36	E11337	49	E11430	61
E11502	09	E11732	23	E12237	36	E11338	49	E11451	61
E11503	09	E11733	23	E12238	36	E11339	49	E11452	61
E11510	10	E11734	23	E12239	36	E11368	49	E11453	61
E11512	10	E11735	23	E12240	36	E11361	49	E11415	61
E11513	10	E11736	23	E12241	36	E11362	49	E11416	61
E11520	11	E11219	23	E12242	36	E11363	49	E11417	61
E11521	11	E11220	23	E12243	36	E11364	49	E11418	61
E11522	11	E11221	23	E12244	36	E11365	49	E11419	61
E11528	11	E11216	24	E12276	37	E11366	49	E11260	62
E11523	11	E11218	24	E12277	37	E11367	49	E11261	62
E11524	11	E11222	24	E12278	37	E11340	51	E11262	62
E11525	11	E11217	24	E12279	37	E11341	51	E11290	62
E11526	11	E11113	24	E12280	37	E11342	51	E11291	62
E11527	11	E11119	24	E12281	37	E11343	51	E11460	63
E11540	12	E11114	25	E12282	37	E11344	51	E11470	63
E11541	12	E11120	25	E12283	37	E11345	51	E11451	63
E11542	12	E11116	25	E12284	37	E11346	51	E11452	63
E11550	13	E11117	25	E12285	37	E11347	51	E11453	63
E11551	13	E11118	25	E12286	37	E11348	51	E11415	63
E11552	13	E12410	27	E12287	37	E11358	51	E11416	63
E10001	16	E12420	27	E12288	37	E11349	51	E11417	63
E10002	16	E12411	27	E12289	37	E11350	51	E11418	63
E10003	16	E12412	27	E12290	37	E11310	53	E11419	63
E10004	16	E12413	27	E12291	37	E11311	53	E11480	64
E10005	16	E12414	27	E12292	37	E11321	53	E11490	64
E10006	16	E12415	27	E12293	37	E11322	53	E11411	64
E10007	16	E12430	28	E12244	37	E11312	53	E11413	64
E10008	16	E12431	28	E12326	38	E11313	53	E11414	64
E10009	16	E12432	28	E12327	38	E11314	53	E11415	64
E10010	16	E12433	28	E12328	38	E11315	53	E11416	64
E11100	16	E12435	28	E12329	38	E11316	53	E11417	64
E11101	16	E12436	28	E12330	38	E11317	53	E11418	64
E11102	16	E12437	28	E12331	38	E11318	53	E11419	64
E11103	16	E12100	30	E12332	38	E11319	53	E11355	66
E11104	16	E12101	30	E12333	38	E11320	53	E11356	66
E11105	16	E12102	30	E12334	38	E11323	53	E11357	66
E11106	16	E12103	30	E12335	38	E11324	53	E11920	67
E11112	16	E12104	30	E12336	38	E11325	53	E11925	67
E11131	16	E12111	31	E12337	38	E11326	53	E11928	67
E11132	16	E12112	31	E12338	38	E11327	53	E11929	67
E11107	17	E12113	31	E12339	38	E11190	55	E11930	67
E11108	17	E12114	31	E12340	38	E11191	55	E11931	67
E11109	17	E12115	31	E12341	38	E11192	55	E11932	67
E11110	17	E12116	31	E12342	38	E11198	55	E11933	67
E11111	17	E12117	31	E12343	38	E11197	55	E11934	67
E11134	17	E12118	31	E12244	38	E11193	55	E11935	67
E11145	17	E12119	31	E12376	39	E11194	55	E11936	67
E11146	17	E12120	31	E12378	39	E11195	55	E11937	67
E11147	17	E12121	31	E12377	40	E11196	55	E11938	67
E11136	19	E12122	31	E11307	42	E11200	56	E11939	67
E11137	19	E12123	31	E11308	42	E11201	56	E11940	67
E11138	19	E12124	31	E11231	43	E11202	56	E11941	67
E11139	19	E12126	32	E11234	43	E11300	56	E11942	67
E11140	19	E12127	32	E11232	43	E11301	56	E11943	67
E11141	19	E12128	32	E11233	43	E11302	56	E11944	67
P70201	19	E12129	32	E11227	44	E11303	56	E11948	67
P70203	20	E12130	32	E11228	44	E11270	57	E11949	67
E11161	20	E12151	33	E11229	44	E11271	57	E11950	67
E11162	20	E12152	33	E11224	45	E11272	57	E11951	67
E11163	20	E12153	33	E11232	45	E11273	57	E11800	68
E11164	20	E12154	33	E11233	45	E11274	57	E11801	68
E11171	21	E12155	33	E11650	46	E11305	58	E11802	68
E11172D	21	E12176	34	E11651	46	E11301	58	E11803	68
E11173D	21	E12177	34	E11652	46	E11302	56	E11804	68
E11174D	21	E12178	34	E11653	46	E11303	58	E11805	68
E11175D	21	E12179	34	E11654	46	E11280	59	E11806	68
E11176D	21	E12180	34	E11233	46	E11281	59	E11807	68
E11177D	21	E12201	35	E11235	47	E11282	59	E11810	69
E11178D	21	E12202	35	E11236	47	E11283	59	E11815	69
E11179D	21	E12203	35	E11230	48	E11284	59	E11816	69
E11701	22	E12204	35	E11330	49	E11285	59	E11821	69
E11702	22	E12205	35	E11360	49	E11286	59	E11822	69
E11703	22	E12226	36	E11370	49	E11274	59	E11823	69
E11704	22	E12227	36	E11380	49	E11410	60	E11824	69
E11705	22	E12228	36	E11390	49	E11451	60	E11825	69
E11706	22	E12229	36	E11331	49	E11452	60	E11826	69
E11711	22	E12230	36	E11332	49	E11453	60	E11830	69
E11712	22	E12231	36	E11333	49	E11415	60	E12480	71
E11713	22	E12232	36	E11334	49	E11416	60	E12481	71
E11714	22	E12233	36	E11334	49	E11417	60	E12482	71
E11715	22	E12234	36	E11335	49	E11418	60		
E11716	22	E12235	36	E11336	49	E11419	60		

	Product	Page No.
A	ABDOS Maxi Horizontal Gel Unit	34
	ABDOS Maxi Plus Horizontal Gel Unit	35
	ABDOS Midi Horizontal Gel Unit	33
	ABDOS Mini Horizontal Gel Unit	30
	ABDOS Mini Plus Horizontal Gel Unit	38
	ABDOS Mini Submarine Horizontal Gel Unit	31
	ABDOS PCR Work Station	70
	ABDOS Vertical Dual Midi Gel System	38
	ABDOS Vertical Dual Mini Gel System	36
	ABDOS Vertical Midi - Gel System	37
	AEROVAC-Oil-Free Vacuum Pumps	68
	D	Digital Model Power Supply
F	Fast Release Pipette Pump	39
	Fixed Premium Pipette, PP	16
H	Handypette Pipette Aid	24
	HOTBLOCK – LED Digital Dry Bath	49
M	Microprocessor based Programmable Power Supply	40
P	Pipette Rack Stand (Carsol Type), PP	20
	Pipette Rack Stand, ACRYLIC	19
	Premium Electronic Pipette	20
	Premium Pipettes Semi- Autoclavable, PP	16
	Premium Plus 12-Channel Adjustable Multichannel Pipette	19
	Premium Plus 8-Channel Adjustable Multichannel Pipette	19
	Premium Plus Pipettes Fully- Autoclavable, PP	17
R	Rave Pipette Controller, PP	24
	Rave Pipette Filler	25
	Rubber Pipette Pump	24
S	Stepmate Stepper	21
	Supreme Bottle Top Dispenser	22
	Supreme Duet Bottle Top Dispenser	23
	Supreme Plus Bottle Top Dispenser	22
	Swirl Clinical Centrifuge	12
	Swirl Maxi Micro Centrifuge	10
	Swirl Micro Plate Centrifuge	13
	Swirl Mini Micro Centrifuge	09
	Swirl Pro High Speed Micro Centrifuge	11
	Swirlx - Digital Handheld Homogenizer	27
	Swirlx - Flapping Homogenizer (Stomaker)	28
	Swirlx – LCD Digital Overhead Stirrer	53
	Swirlx - Microplate Mixer	56
	Swirlx – Vortex Shaker	55
	Swirlmax –Tube Roller	48
	Swirltop – 7 inch LCD Digital Magnetic Stirrer & Hot Plate	46
	Swirltop – Digital (LCD) Magnetic Stirrer & Hot Plate	44
	Swirltop – Digital (LED) Magnetic Stirrer & Hot Plate	43
	Swirltop – Multi Channel Magnetic Stirrer & Hot Plate	47
Swirltop – Ultra Flat & Eco Magnetic Stirrer	42	
SWIRLTOP- 380°C Digital Magnetic Stirrers & Hotplate	45	
T	THERMO MIX– LCD Digital	51
W	Wavemax – Digital (3D) Dancing Shaker	61
	Wavemax – Digital Rocking Shaker	60
	Wavemax - Heavy Duty LCD Digital Orbital & Linear Shaker	64
	Wavemax - Incu-shaker Mini	67
	Wavemax – LED Digital Orbital & Linear Shaker	63
	Wavemax – Orbital Shaker	62
	Wavemax – Orbital Shaker Junior	62
	Wavemax-Digital Incubator	66
	Wavex – Classic Rotating Mixer	58
	Wavex – Classic Tube Rotator	56
	Wavex – LCD Tube Rotator	57
Wavex-LCD Rotating Mixer	59	

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- Our responsibility shall be within the competent courts in Kolkata.
- Goods will be dispatched in standard packaging or multiple thereof.
- Capacity measures are for laboratory use only and not for commercial use.
- The company reserves the rights to change the colour and modify the design.

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