

ZEFA

www.zefa-laborservice.de/labwit



SHAKING INCUBATORS & ACCESSORIES



1 SHAKING INCUBATORS PREMIUM RANGE

As the major product range, Labwit shaking incubators are renowned as innovative, intuitive and reliable equipment amongst its competition. All shaking incubators have the state-of-art microprocessor detection, setting and PID control of both temperature and shaking speed, together with the extra CO₂ and humidification active controlling options on Ultimate-Cell range, Labwit is now able to offer complete solutions for all lab shaking incubation needs. These units can be categorized into 4 ranges, from benchtop, horizontal, double layer to stackable models. Each model allows for maximum:

ACCURACY

The set temperature is accurately reflected in the actual temperature inside the incubator. If it deviates from the setpoint, the energy to the heater is precisely regulated to adjust the actual temperature back to the setpoint without overshoot.

UNIFORMITY

The temperature uniformity is achieved by 3D forced air circulation. A fan continuously moves the air across the incubator in order to create homogeneous conditions.

RELIABILITY

Shaking incubators are generally left on for long periods of time. The microprocessor ensures the actual temperature remains stable, even when ambient temperature varies. The brushless induction motor ensures stable shaking movement for the long-term operation, free of maintenance.

Features		Premium Range	Economic Range
Micro-processor with PID Temperature control		•	•
Self-diagnosed Alarming System		•	•
Display Panel	LCD Screen with Keypad		•
	TFT Touch Screen	•	
Cooling System	Basic Automatic Control		•
	Advanced Non-frost Control	•	
Temperature Control Mode	Fixed Value Control	•	•
	Programmable Control	•	
Built-in Printer		•	•
Heating Only Models			•
Humidity Control		•	
Multigas Control		•	

• Standard • Optional

ULTIMATE-CELL STACKABLE SHAKING INCUBATOR

4

SHAKING INCUBATORS

Thanks to the ongoing development of both technology and functionality requirements from our industry, Labwit has been thriving to innovate and is now able to offer our latest and comprehensive solution for microbial, mammalian and plant cell incubation needs, the inspiring USOK1257 Ultimate-Cell Stackable Shaking Incubator.

The spaces in the labs are spacious and expensive, the USOK1257 can be stacked up to 2-3 units high to offer multiplied incubation capacity on a single unit footprint. Stacking also can be easily managed at a later time. Each compartment unit operates independently with cooling as standard, and can be upgraded with modular controlling options of, active humidity control, CO₂ concentration controls.



USOK1257

In addition, Ultimate-Cell is also available for WiseKonec Plus™ system option for remote monitoring and controlling the unit via PC or Smartphones at any time anywhere.

The introduction of fingerprint encrypted system prevents unauthorized access to the working chamber, hence significantly enhancing the security of the precious samples inside.

INTUITIVE TOUCH SCREEN PANEL

Integrated: Comprehensive information available at fingertips. The screen panel clearly indicates all basic operational parameters, such as temperature, speed and timer; as well as the optional parameters, for example, humidity level, and CO₂ concentration just in one page.

User friendly: Graphic user interface, easy to operate with icons and prompts, which makes it easy change the operating parameters settings, even those multi set points under programmable mode intuitively.

Intelligent: Self diagnostic alarm system monitors all functions and parameters and prompts in case of errors, which are clearly indicated in the touch screen panel.

QUIN DRIVE SELF BALANCE DRIVING SYSTEM

Innovated Quin Drive system ensures smooth and reliable orbital shaking movement with a speed between 30-300rpm, even when there is imbalanced or maximum loading on the shaking platform. To achieve the maximized flexibility for all applications requiring optimized oxygen transfer rate, the shaking diameter can be easily adjustable among 12.5mm, 25mm and 50mm. Long life brushless motor provides consistent and no vibration shaking motion, maintenance free and low heat emissions.

EXTENDED CHAMBER CAPACITY

The chamber is one of the biggest of its range and can take up to 32 pieces of 500ml Erlenmeyer flasks, or 96 pieces if the units are stacked up in three*.

* Information based on a triple stacked Ultimate-Cell with sticky mats. If photosynthetic LED lighting panel is installed, the effective inner height does not change and remains as 425 mm and the maximum capacity is 5000ml flasks.

EXCELLENT TEMPERATURE CONTROLLING SYSTEM

New solid polyurethane casing optimizes the insulation of the chamber, Together with the sound air circulation system and PID controller ensures evenly distributed air flow as well as accurate and uniformed temperature control across the chamber.

Sound cooling system with CFC free refrigerant and automatic defrosting system ensures long term stable operation at as low as 4°C, or 20°C lower than ambient.

Microprocessor controller provides unmatched versatility by enabling users to create personalized program (with up to 9 segment, with cycles) to automate changes to function parameters.

DIRECT INJECTION HUMIDIFICATION SYSTEM

Humidity is important for long term cell cultivations with flasks as well as when micro plates are used. Active controlled humidification system can effectively reduce evaporations during cultivation, hence, preventing the samples from drying out.

The humidification system of Ultimate-Cell features 140°C steam direct injection into the chamber and active PID control with quality humidity sensor. Water level is clearly indicated in the home page of the screen panel and alarms when refilling is needed.

ADVANCED CO₂ CONTROLLING WITH INFRARED (IR) SENSOR

The effective controlling of CO₂ concentration is essential for cultivations of mammalian cells and algae. The CO₂ concentration is well maintained between 0-20% to keep the pH value of the solution media at healthy level.

Labwit incorporates a single beam, dual wavelength IR CO₂ sensor, which guarantees superior performance and accuracy to the situations where temperature and humidity fluctuate rapidly, such as when the door is opened frequently.

Flask (ml)	50 ml	100 ml	250 ml	500 ml	1000 ml	2000 ml	3000 ml	5000 ml
USOK1257	131	87	50	32	18	10	8	6

PHOTOSYNTHETIC LED LIGHTINGS

Ultimate-Cell can be equipped with LED lighting panel for the cultivation of those phototrophic organisms, such as plant culture, algae, etc. The combinations of light spectra are optional upon request, and the light intensity is programmable to simulate day/night cycles.

CONTAMINATION CONTROL

UV Sterilization The UV sterilization system is isolated from the samples, sterilizes chamber air in the back chamber wall to maintain contamination-free conditions within the chamber.

Easy Cleaning Chamber The chamber bottom is designed to catch and drain excess water and liquid spills in case of flask breaks through an outlet on the side.

PASSWORD AND FINGERPRINT ENCRYPTION DOOR SYSTEM

Password screen and door locking system prevents unauthorized changes of operational parameters as well as access to the valuable samples during long terms cultivation, enhancing the safety and reliability of the applications.

COMPLETE PROTECTION FOR CELL CULTURE

This model has been designed to include many features for the comprehensive of the application and the sample safety, hence providing you with added peace of mind.

- The Integrated fingerprint encrypted system protects precious cell cultures from unauthorized access.
- Automatic stop shaking motion and heating when the door is opened.
- Sensor failure alarm.
- Over-current and leakage protection.
- Non-volatile memory guarantees data integrity in the event of power interruption.
- Audible and visual alarm when parameter deviates from the set point.
- Independent temperature limit protection against over temperature.

Machine

Outside (WxDxH)	1320x870x590mm (Side Cooling)*
Inside (WxDxH)	940x570x480mm
Volume	257L
Weight (with Cooling)	200kg
Control Panel	TFT Touch Screen
Illumination	Halogen
Operation Menu in	English
Ambient Temperature	5-35°C
UV Light	≥400 mW/m2
Noise Level	<70 dB (1m above floor)
Power	1150W
Electricity	AC 220-240 Volt, 50/60Hz
Fingerprint System	Option

* Or without side cooling compartment, 1080*870*590mm

CO₂

Principle of Sensor	Infrared, NDIR
CO ₂ Range	0-20%
CO ₂ Accuracy	±0.15 @ 5.0%
Temperature Range	25-55°C
CO ₂ Supply Auto Switch	Option

Humidity

Humidity Range	40-80%RH, at 25-55°C
Humidity Accuracy	1%RH
Humidity Uniformity	±3%RH
Principle of Sensor	Capacitive
Humidification Mode	Direct Steam Injection
Water Heater	150W

Shaking Unit

Drive Type	Quin Drive System
Tray Size	850x450mm
Maximum Load	25kg
Speed Range	30-300 rpm
Speed Accuracy	±1 rpm
Timer	0-9999 mins
Shaking Mode	Orbital
Shaking Diameter	12.5mm, 25mm, 50mm

Temperature

Control Mode	Fixed Value & Program
Temperature Range	Ambient-15 to 60°C (Min. 4°C)*
Temperature Accuracy	0.1°C
Temperature Uniformity	±1.0°C @37°C
Principle of Sensor	PT100
Air Circulation	360m ³ /Hour

* Min. Operating Temperature: 15°C when Photosynthetic Lighting option is applied.

Photosynthetic Lighting

Light Type	LED, 50% Red, 50% Blue
Spectrum	Red: 640-660nm, Blue: 430-450nm
Light Intensity	13.000 Lux (R: 6500 Lux, B: 6500 Lux)
Control	Yes, Individually, from 0-100% output
Control Mode	Fixed Value & Programmable
Dimensions (WxDxH)	890x500x10nm
Power	300W

PREMIUM RANGE

Following the success of the economic shaking incubator range, the upgraded premium shaking incubator range are introduced to offer the excellent basic functions same as the economic range, but with a bunch of advanced upgraded features to enhance the user experience as well as the functionality of this one of the most common type of equipments in modern labs.

- An intuitive LCD TFT touch screen panel achieves easy operation and clear display.
- Sophisticated cooling system ensures long term non-frost operation at low temperature (4°C).
- Under the new programmable control mode, the unit can now be programmed to operate according to personalized “ramp and soak” cycles of both temperature and shaking speed.
- Built-in printer is included as standard to ensure continuous monitor over the operating parameters.



PREMIUM STACKABLE SHAKING INCUBATOR

This SOK series shaking incubators can be stacked up to three units high, providing laboratory professionals tripled culture capacity, while still only occupying the same “footprint” of a single shaker. All models feature an insulated, fold-down door with double-layer glass window for high visibility. On all refrigerating models, microprocessor controller provides unmatched versatility by enable users to create personalized program (with up to 9 segments, with cycling) to automate changes to function parameters.



- Stackable up to three units for maximum space savings.
- 5.6" LCD 640x480 touch screen panel clearly indicates all parameters in one page display and enables all complicated program settings intuitively just with finger tips.
- Wide-view fold-down door with door handle, and ergonomic sliding-out shaking platform provide convenient access to your experiment products.
- Direct beltless driving system is both durable and economical, maintenance free, allows extended speed ranges from 30 to 300 RPM, ± 1 RPM with minimized vibration, even when shakers are stacked of three high. The shaking diameter can be changed from 1-50mm for optimum oxygenation and nutrient mixing and agitation in from small to large flasks.
- The top of the casing can be further used as a work area for locating small items of lab equipment etc.
- The incubator casing is made of heavy-gauge coldrolled steel; together with high graded #304 stainless steel inner chambers with coved corners make it easy to clean with mild detergent. Chamber is tall enough to hold 2L Erlenmeyer flasks.
- The ceiling of the unit can be upgraded and fitted with LED lighting kit for cultivation of phototrophic organisms. Mono/dual light colors are possible and the intensity of each color can be independently controlled and programmed to simulate day/night cycles, perfect for plant cell culture. (See next page for more information).
- Robust brushless DC motor enables shaking motion quiet and smooth, even when unit is operating at top speed with maximum workload.
- Nonvolatile memory saves settings during a power outage and automatically restarts the unit after power is restored.
- For data recording, the units are equipped with a built-in thermo printer as standard, so that operators could check how the performance parameters vary according to specified process without having to be on site.
- Predrilled platform as standard configuration, flask clamps excluded.
- For a comfortable working height, the base stands are available in 500mm high.

	SOK1190	SOK2190	SOK3190
Control	P.I.D. Microprocessor		
Control Mode	Fix Value or Programm (up to 9 Segments)		
Control Panel	LCD Touchscreen		
Air Convection	Forced		
Shaking Mode	Orbit		
Volume / Compartment (L)	190		
Ambient Temperature (°C)	10-35		
Shaking Speed (rpm)	30-300		
Stroke (mm)	Ø1-50 Stepless Adjustable		
Temperature Range (°C)	4-60* <i>Other temperature ranges upon request available.</i>		
Temperature Accuracy (°C)	0,1		
Temperature Uniformity (°C)	±1°C@37°C		
Timer	1 to 9999 mins		
Tray (mm) (WxD)	800x430		
Tray Included	1	2	3
Inner Dimensions (mm) (WxDxH)	920x532x395		
Exterior Dimensions (mm) (WxDxH)	1300x930x735	1300x930x1315	1300x930x1895
Packing Dimensions (mm) (WxDxH)	1420x1050x905	1420x1050x1480	1420x1050x2060
Net/Gross Weight (kg)	250/290	430/500	630/730
Power (W)	1200	2400	3600
Electricity	220-240V 50/60 Hz		
Approval	CE, ISO		
Additional	Built-in Printer, RS485 COM Kit (Option), LED Lighting Control Kit (Option), Base Stand(Optional)		

* Min. Operating Temperature: 15°C when Photosynthetic Lighting option is applied.

Capacity	50 ml	100 ml	250 ml	500 ml	750 ml	1000 ml	2000 ml
SOK1190	50	50	32	26	20	14	8
SOK2190	100	100	64	52	40	28	16
SOK3190	150	150	96	78	60	42	24

Photosynthetic Lighting

Light Type	LED, 50% Red, 50% Blue
Spectrums	Red: 640-660nm, Blue: 430-450nm
Light Intensity	13,000 Lux (Red: 6500 Lux, Blue: 6500 Lux)
Control	Yes, Individually, from 0-100% output
Control Mode	Fixed Value & Programmable
Dimensions	890x500x10mm
Power	300W



PREMIUM BENCHTOP SHAKING INCUBATORS

This new premium benchtop shaking incubators provided by LABWIT offer conditions of time, broad temperature and orbital or reciprocal agitation capabilities for meeting comprehensive requirement of the growth of biological organisms. This P.I.D microprocessor controlled shakers have a number of advanced features that are really unique in bench top models. This unique benchtop model with shaking diameter stepless adjustable from 1-50mm provides unmatched flexibility for meeting comprehensive application requirements. The sophisticated PID controller provides these units with choices of not only constant controlling one fixed temperature and speed, but also programmed controlling with a series of "ramps and soaks" segments on time basis. For data recording, the units are equipped with a built-in thermo printer as standard, so that operators could check how the performance parameters vary according to specified process without having to be on site.



BOK69-II

- Robust single eccentric counterbalanced drive in cast iron housing provides vibration and trouble free operation with high shaking speed up to 600rpm.
- The versatility of the driving system allows stroke continuous adjustment from 1 to 50 mm for optimum oxygenation and nutrient mixing and agitation in from small to large flasks.
- Quality brushless AC inductive motor supports reliable, quiet and smooth shaking movements up to top speed.
- Non-volatile memory saves settings during a power outage and automatically restarts the unit after power is restored.
- Audible and visual alarms on over temperature and motor overheating, and automatically cut off the power.
- Soft start and smooth acceleration when lid is closed after short opens.
- For data recording, the units are equipped with a built-in thermo printer as standard, so that operators could check how the performance parameters vary according to specified process without having to be on site.
- Timer up to 9999 mins under fixed value control mode.
- Predrilled standard tray included, without clamps.
- 4.3" LCD 480x272 touch screen panel clearly indicates all parameters in one page display and makes it easy to change the operating parameters settings, even those multi set points under programmable mode intuitively.
- P.I.D microprocessor controller provides unmatched versatility by enable users to create personalized program (with up to 9 segments, with cycling) to automate changes to function parameters.
- Inner chamber & tray from high graded #304 electro polished stainless steel.

	BOK69-I	BOK69-II	BRK69
Control	P.I.D. Microprocessor		
Control Mode	Fix Value or Programm (up to 9 Segments)		
Control Panel	4.3" LCD Touchscreen		
Shaking Mode	Orbital		Reciprocal
Volume / Compartment (L)	69		
Ambient Temperature (°C)	5-25		
Shaking Speed (rpm)	30-600	30-400	30-240
Stroke (mm)	Ø1-50 Stepless Adjustable		
Temperature Range (°C)	4-60 <i>Other temperature ranges upon request available.</i>		
Temperature Accuracy (°C)	0,1		
Temperature Uniformity (°C)	±1°C@37°C		
Timer	1 to 9999 mins		
Inner Dimensions (mm) (WxDxH)	490x470x320	490x470x335	490x470x320
Exterior Dimensions (mm) (WxDxH)	774x740x610		
Packing Dimensions (mm) (WxDxH)	844x810x770		
Net/Gross Weight (kg)	100/132		
Power (W)	700		
Electricity	220-240V 50/60 Hz		
Approval	CE, ISO		
Security	Overtemperature Protection, Compressor Overload Protection, Electrical Leakage Protection		
Additional	Built-in Printer, RS485 COM Kit (Option)		

Capacity	50 ml	100 ml	250 ml	500 ml	750 ml	1000 ml	2000 ml
BOK69-I	23	23	12	9	7	5	-
BOK69-II	23	23	12	9	7	5	4
BRK69	23	23	12	9	7	5	-



PREMIUM HORIZONTAL SHAKING INCUBATORS

These new premium horizontal floor shaking incubators are developed for the modern biological engineering departments; large capacity of smaller size flasks, or for large volume flasks up to of 5L. The units are widely used in applications of germ culture, fermentation, hybridization, biochemical research, enzyme and cellular tissues.



HOK260

- Inner chamber with coved corners of high graded #304 electro polished stainless steel features excellent durability as well as ease of cleaning.
- Robust triple eccentric counterbalanced drive in cast iron housing provides vibration and trouble free operation with high shaking speed up to 300rpm.
- Quality brushless AC inductive motor supports reliable, quiet and smooth shaking movements up to top speed.
- Non-volatile memory saves settings during a power outage and automatically restarts the unit after power is restored.
- Audible and visual alarms on over temperature and motor overheating, and automatically cut off the power.
- Soft start and smooth acceleration when lid is closed after short opens.
- For data recording, the units are equipped with a built-in thermo printer as standard, so that operators could check how the performance parameters vary according to specified process without having to be on site.
- Timer up to 9999 mins under fixed value control mode.
- Predrilled standard tray included, without clamps.
- 4.3" LCD 480x272 touch screen panel clearly indicates all parameters in one page display and makes it easy to change the operating parameters settings, even those multi set points under programmable mode intuitively.
- P.I.D microprocessor controller provides unmatched versatility by enable users to create personalized program (with up to 9 segments, with cycling) to automate changes to function parameters.
- Large double fold tempered glass window and fluorescent light provide complete visibility of chamber interior.
- HOK300 is equipped with foot pedal for lid opening even when carrying full loads in both hands.

	HOK260	HOK300	HRK275
Control	P.I.D. Microprocessor		
Control Mode	Fix Value or Programm (up to 9 Segments)		
Control Panel	4.3" LCD Touchscreen		
Shaking Mode	Orbital		Reciprocal
Door Opening Mode	Hand Hold	Foot Pedal	Hand Hold
Volume (L)	260	300	275
Working Temperature (°C)	5-25		
Shaking Speed (rpm)	30-300		30-240
Stroke (mm)	Ø26		Stepless Adjustable
Temperature Range (°C)	4-60 Other temperature ranges upon request available.		
Temperature Accuracy (°C)	0,1		
Temperature Uniformity (°C)	±1°C@37°C		
Timer	1 to 9999 mins		
Tray (mm) (WxD)	920x500	940x584	896x530
Inner Dimensions (mm) (WxDxH)	975x565x465	1040x655x465	975x565x465
Exterior Dimensions (mm) (WxDxH)	1230x730x1065	1290x820x1065	1230x730x1065
Packing Dimensions (mm) (WxDxH)	1300x800x1225	1360x910x1225	1300x800x1225
Net/Gross Weight (kg)	183/228	263/313	213/252
Power (W)	1150	1800	1150
Electricity	220-240V 50/60 Hz		
Approval	CE, ISO		
Security	Over-temperature Protection, Compressor Overload Protection, Electrical Leakage Protection		
Additional	Built-in Printer, RS485 COM Kit (Option)		

Capacity	50 ml	100 ml	250 ml	500 ml	750 ml	1000 ml	2000 ml	3000 ml	5000 ml
HOK260	66	66	41	28	24	15	11	8	6
HOK300	77	77	54	36	26	18	15	8	6
HRK275	66	66	45	28	24	15	8	8	-



PREMIUM DOUBLE LAYER SHAKING INCUBATORS

These new double layer shaking incubators in a class of their own, are specially developed a cost effective and space saving solution for the modern biological engineering departments; the units are widely used in the applications of germ culture, hybridization, biochemical research, enzyme and cellular tissues. These incubators have a smooth compact design, which are very efficient and have an excellent floor space/performance factor. The double layer shaking frame supports two trays above each other, doubles the capacity for smaller flasks, while after removing the top tray (Shaking frame upgrade required).



DLOK170

- 4.3"/5.6" LCD touch screen panel clearly indicates all parameters in one page display and makes it easy to change the operating parameters settings, even those multi set points under programmable mode intuitively.
- P.I.D microprocessor controller provides unmatched versatility by enable users to create personalized program (with up to 9 segments, with cycling) to automate changes to function parameters.
- Large double fold tempered glass window on the front doors together with the fluorescent light provide complete visibility of chamber interior.
- Mirror-finished high quality #304 stainless steel for excellent durability of interiors.
- Non-volatile memory for set point retention after power interruption.
- Robust triple eccentric counterbalanced drive in cast iron housing provides vibration and trouble free operation with high shaking speed up to 300rpm even when both layers are fully loaded.
- Quality brushless AC inductive motor supports reliable, quiet and smooth shaking movements up to top speed even when fully loaded with 90 pieces of 250ml flasks (DLOK580, DLRK580).
- Non-volatile memory saves settings during a power outage and automatically restarts the unit after power is restored.
- Audible and visual alarms on over temperature and motor overheating, and automatically cut off the power. Soft start and smooth acceleration when doors are closed after short opens.
- Dedicated single layer shaking frame is available for the ease of using large flasks.
- For data recording, the units are equipped with a built-in thermo printer as standard, so that operators could check how the performance parameters vary according to specified process without having to be on site.
- Timer up to 9999 mins under fixed value control mode.
- Predrilled standard tray included, without clamps.

	DLOK170	DLOK330	DLOK580	DLRK580
Control	P.I.D. Microprocessor			
Control Mode	Fix Value or Programm (up to 9 Segments)			
Control Panel	LCD Touch Screen			
Shaking Mode	Orbital			Reciprocal
Volume (L)	170	330	580	580
Working Temperature (°C)	5-25			
Shaking Speed (rpm)	30-300			30-240
Stroke (mm)	Ø26			35
Temperature Range (°C)	4-60 Other temperature ranges upon request available.			1 to 50 Stepless Adjustment
Temperature Accuracy (°C)	0,1			
Temperature Uniformity (°C)	±1°C@37°C			
Timer	1 to 9999 mins			
Tray (mm) (WxD)	496x350	734x458	970x560	940x580
Inner Dimensions (mm) (WxDxH)	615x450x640	845x530x765	1105x850x664	1105x850x664
Exterior Dimensions (mm) (WxDxH)	720x685x1310	950x755x1445	1430x880x1700	1430x880x1700
Packing Dimensions (mm) (WxDxH)	790x755x1470	1020x825x1605	1500x950x1860	1500x950x1860
Net/Gross Weight (kg)	150/175	165/190	225/265	239/272
Power (W)	1000	1050	1600	1600
Electricity	220-240V 50/60 Hz			
Approval	CE, ISO			
Security	Over-temperature Protection, Compressor Overload Protection, Electrical Leakage Protection			
Additional	Built-in Printer, RS485 COM Kit (Option)			

Capacity	50 ml	100 ml	250 ml	500 ml	750 ml	1000 ml	2000 ml	3000 ml	5000 ml
DLOK170	56	56	28	22	18	6*	3*	2*	2*
DLOK330	104	104	56	44	30	24	7*	6*	4*
DLOK580	164	164	90	74	52	36	13*	8*	6*
DLRK580	164	164	90	76	48	44	12*	8*	6*

Glass dimensions may reduce max. capacity. * Applies only when single layer shaking frame is equipped.





2

SHAKING INCUBATORS ECONOMIC RANGE

ECONOMIC RANGE

As the classic version of Labwit shaking incubators, the economic models have been tested and renowned for its quality and the reliable performances in the last decades. Labwit continues to offer the diversity to its shaking incubator range by providing the solutions for basic daily applications. The robust eccentric counterbalanced shaking mechanisms together with quality heavy duty motors ensure quiet and smooth shaking movement throughout the whole speed range. P.I.D microprocessor controller creates optimum, reproducible incubation conditions for cell cultures of the applications.

ECONOMIC BENCHTOP SHAKING INCUBATORS

The benchtop orbital shaking incubators provided by LABWIT offer for small to medium capacity conditions of time, temperature and orbital agitation for the growth of biological organisms. These microprocessor controlled shakers have a number of advanced features that are really unique in bench top models, such as cooling capacity, stepless shaking diameter adjustment.

LABWIT shaking incubators are lab workhorses and provide “set and forget” programmable operating conditions and precise temperature performance for a variety of molecular biology techniques. The inner chamber is clearly visible from all angles across the room. The audible and visual alarms will alert the operator for set point deviations. The refrigerated models use CFC-free refrigerant, ozone layer friendly.



EBO34-I

- 4 Various chamber sizes available from 34L, 63L to 69L
- Smooth and easy to clean design with tempered observation glass window.
- Inner chamber and tray from electro polished stainless steel.
- Special low noise induction motor system enables high rotation speed up to 400rpm or 600rpm.
- Patented driver system allows stroke continuous adjustment from 1 to 50 mm.
- The combination of high speed and small diameter make EBO34-II, EBO63-II & EBOK69-II suitable for many applications involving microtitre plates.
- AC inductive motor, brushless and maintenance free.
- Microprocessor control with large LCD screen, showing set and actual parameters.
- Password protection against unauthorized change of parameters.
- Audible and visual alarms on over temperature and motor overheating.
- Soft start and smooth acceleration after lid opening.
- Timer up to 500 hours and continuous mode.
- Predrilled standard tray included, without clamps.

	EBO34-I	EBO34-II	EBO63-I	EBO63-II	EBR63	EBRK69	EBOK69-I	EBOK69-II
Shaking Mode	Orbital				Reciprocal		Orbital	
Volume (L)	34	34	63	63	63	69	69	69
Shaking Speed (rpm)	30-400	30-600	30-400	30-600	30-240	30-240	30-400	30-600
Stroke (mm)	Ø24,32,38,50	Ø1-50 Stepless Adjustment			40		Ø1-50 Stepless Adjustment	
Temp. Range (°C)*	A+ 5 °C - 60°C					4°C to 60°C		
Temp. Accuracy (°C)	± 0.1°C							
Temp. (°C)	≤ ± 1°C@37°C							
Timer	1 minute to 500 hours							
Flask Configurations	*Glass dimensions may reduce max. capacity							
50 ml	9	9	18	18	18	25	23	23
100 ml	9	9	18	18	18	25	23	23
250 ml	5	5	10	10	10	15	12	12
500 ml	-	-	9	9	9	10	9	9
750 ml	-	-	5	5	6	9	7	7
1000 ml	-	-	4	4	5	5	5	5
Tray (mm) (WxD)	280x220	280x220	340x370	340x370	346x400	435x420	400x370	400x370
Inner Dimensions (mm) (WxDxH)	340x300x175		410x440x295			490x470x320		
Exterior Dimensions (mm) (WxDxH)	440x410x400		600x580x520			730x740x560		
Packing Dimensions (mm) (WxDxH)	510x480x560		670x650x680			800x810x720		
Net/Gross Weight (kg)	31/54		72/94			100/132		
Power (W)	280		550			700		
Electricity	220-240V 50/60 Hz							
Approval	CE, ISO							

*Other temperature ranges upon request available.



ECONOMIC HORIZONTAL SHAKING INCUBATORS

These economic horizontal floor shaking incubators are specially developed for the modern biological engineering departments; huge capacity for various sizes of flasks, up to 5L. LABWIT offers both orbital and reciprocal models, with and without refrigeration to be used in almost all laboratories. All models have large glass viewing windows and gas spring transmission for smooth and convenient lid opening. Temperature uniformity – through a fan driven high velocity circulation system, is $\pm 1.0^{\circ}\text{C}@37^{\circ}\text{C}$, while the temperature accuracy is 0.1°C . All models are equipped with an electronic timer up to 500 hours. Heavy duty triple counterbalanced drive system provides a shaking range that can handle virtually any culturing task.



EHO170

- Various chamber sizes available from 170L, 260L to 300L
- Microprocessor controller with audible and visual alarms maintain precise temperature and speed.
- CFC-free refrigerant which causes no damage to ozone layer.(Applies on EHO/RKXX models).
- Large double-fold tempered glass window and fluorescent light, provide complete visibility of chamber interior.
- LCD display presents all actual and preset parameters.
- Electronic timer, from 0 – 500 hours, automatic stop, audio/ visual alarm.
- Password protection against unauthorized change of parameters.
- Audible and visual alarms for motor temperature and set point deviations.
- Non-volatile memory for set point retention after power interruption.
- “Long-Life” brushless AC motor creates smooth, quiet and uniformed shaking motion.
- Mirror-finished high quality #304 stainless steel for excellent durability of interiors.
- Units delivered with standard stainless steel tray, clamps excluded.
- High capacity for up to 5L flasks (except EHO170/ EHOK170, EHR300/EHRK300).

	EHO170	EHOK170	EHO260	EHOK260	EHR300	EHRK300
Shaking Mode	Orbital				Reciprocal	
Volume (L)	170		260		300	
Shaking Speed (rpm)	30-300		30-300		30-240	
Stroke (mm)	Ø26		Ø26		Ø1-50mm Stepless Adjustment	
Temp. Range (°C)*	A+5 to 60	4°C to 60°C	A+5 to 60	4°C to 60°C	A+5 to 60	4°C to 60°C
Temp. Accuracy (°C)	± 0.1°C					
Temp. (°C)	≤ ± 1°C@37°C					
Timer	1 minute to 500 hours					
Flask Configurations	*Glass dimensions may reduce max. capacity					
50 ml	64		64		66	
100 ml	64		64		66	
250 ml	40		40		45	
500 ml	28		28		28	
750 ml	23		23		24	
1000 ml	15		15		15	
2000 ml	-		11		11	
3000 ml	-		8		8	
5000 ml	-		6		-	
Tray (mm) (WxD)	920x500		920x500		896x530	
Inner Dimensions (mm) (WxDxH)	975x565x305		975x565x465		975x565x465	
Exterior Dimensions (mm) (WxDxH)	1200x740x820		1230x730x1065		1230x730x1065	
Packing Dimensions (mm) (WxDxH)	1270x810x980		1300x800x1225		1300x800x1225	
Net/Gross Weight (kg)	159/200	174/214	168/213	183/228	201/242	213/252
Power (W)	800	1050	950	1150	950	1150
Electricity	220-240V 50/60 Hz					
Approval	CE, ISO					

*Other temperature ranges upon request available.



ECONOMIC DOUBLE LAYER SHAKING INCUBATORS

These LABWIT double layer shaking incubators are specially developed for the modern biological engineering departments; a big capacity of flasks but with small footprint.

These incubators have a smooth compact design. They are very efficient and have an excellent floor space/performance factor. Two trays above each other, double the capacity for smaller flasks, while after removing the top tray, big flasks can also be used on the bottom tray (Shaking frame upgrade required). These unit are particularly ideal for fermentation and pharmacy experiments. While they are also widely used where a big amount of liquid needed to be mixed at with constant temperature.



EDLOK580

- Microprocessor controller with audible and visual alarms maintains precise temperature and speed control.
- User friendly control panel allows easy digital setting of time, temperature and speed.
- Large LCD display presents all actual and preset parameters.
- Electronic timer, from 0 – 500 hours, automatic stop, audio/ visual alarm.
- Password protection against unauthorized change of parameters.
- Audible and visual alarms for over-temperature and set point deviations.
- Non-volatile memory for set point retention after a power interruption.
- Large double-fold tempered glass window, together with fluorescent lights provides complete visibility of chamber interior.
- “Long-Life” brushless AC motor creates a smooth, quiet and uniformed shaking motion.
- Mirror-finished high quality #304 stainless steel for excellent durability of interiors.
- Standard shaking frame and standard stainless steel tray included, but without clamps.
- Vertical double trays for big capacity, though small footprint.
- Lockable outer door (on EDLO580/EDLOK580, EDLR580/EDLRK580) protects the materials against unauthorized access at all times.

	EDLO170	EDLOK170	EDLO330	EDLOK330	EDLO580	EDLOK580	EDLR580	EDLRK580
Shaking Mode	Orbital		Orbital		Orbital		Reciprocal	
Volume (L)	170		330		580		580	
Shaking Speed (rpm)	30-300		30-300		30-300		30-240	
Stroke (mm)	26		26		35		1-50 Stepless Adjustment	
Temp. Range (°C)*	A +5 to 60	4 to 60	A +5 to 60	4 to 60	A +5 to 60	4 to 60	A +5 to 60	4 to 60
Temp. Accuracy (°C)	± 0.1°C							
Temp. (°C)	≤ ± 1°C@37°C							
Timer	1 minute to 500 hours							
Flask Configurations	*Glass dimensions may reduce max. capacity							
50 ml	56		104		164		164	
100 ml	56		104		164		164	
250 ml	28		56		90		90	
500 ml	22		44		74		76	
750 ml	18		30		52		48	
1000 ml	6*		24		36		44	
2000 ml	3*		7*		13*		12*	
3000 ml	2*		6*		8*		8*	
5000 ml	2*		4*		6*		6*	
Tray (mm) (WxD)	496x350		734x458		970x560		940x580	
Inner Dimensions (mm) (WxDxH)	615x450x640		845x530x765		1105x850x664		1105x850x664	
Exterior Dimensions (mm) (WxDxH)	720x685x1310		950x755x1445		1430x880x1700		1430x880x1700	
Packing Dimensions (mm) (WxDxH)	790x755x1470		1020x825x1605		1500x950x1860		1500x950x1860	
Net/Gross Weight (kg)	150/175	165/190	225/265	235/272	425/505	456/536	455/535	486/562
Power (W)	1000	1250	1050	1300	1600	1950	1600	1950
Electricity	220-240V 50/60 Hz							
Approval	CE, ISO							

*Other temperature ranges upon request available.





3

PARTS & ACCESSORIES

STANDARD SHAKING TRAYS

We offer a broad range of parts and accessories to lift your experience with Labwit equipment. Whether it is shaking trays, flask clamps, or spring pallets, we let you keep it real with Labwit genuine parts.

As a basic platform for all shaking equipments, shaking tray/s are included with the main units. Two trays are included with all double layer units. Extra shaking trays can be ordered separately if necessary.

All shaking trays are made of high quality materials, for example, the spray coated steel trays of floor shakers, and SUS304 stainless steel trays of all shaking incubators.

All shaking trays (except for SOK series) are carefully perforated with standard holes distance intervals, which offers 100% flexibility for any attachment combinations on the shaking tray, for example, flask clamps, test tube racks, or 96 well plates, etc.

The shaking trays of SOK series stackable shaking incubators feature threaded screw holes to fit with the specialized flask clamps with countersink screws.

Order Information

10062209	Tray for EBO34I/II, S/S
10062210	Tray for EBO63I/II, S/S
10061211	Tray for EBOK69I/II, BOK69I/II, S/S
10061173	Tray for EHO170/EHOK170/EHO260/EHOK260, HOK260, S/S
10062211	Tray for HOK300, S/S
10062212	Tray for EHR300/EHRK300, HRK275, S/S
10062215	Tray for EDLO170/EDLOK170, DLOK170, S/S
10062216	Tray for EDLO330/EDLOK330, DLOK330, S/S
10062217	Tray for EDLO580/EDLOK580, DLOK580, S/S
10062218	Tray for EDLR580/EDLRK580, DLRK580, S/S



10062221



10062222



10062223

UNIVERSAL SPRING PALLETS

Universal spring pallet is designed to offer most flexibility for holding uncommon vessels and containers by using springs to divide the pallet area into a number of small sections.

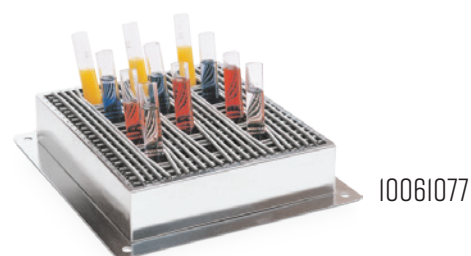
Each full size universal spring pallet has the same width and depth of the standard shaking tray of each model respectively.

Available for most shakers, rockers and shaking incubators.

Full size universal spring pallets can only be installed after the standard shaking tray is removed.

Order Information

10062227	Universal Tray for EBO34-I/EBO34-II
10062228	Universal Tray for EBO63-I/EBO63-II
10061077	Universal Tray for EBOK69-I/EBOK69-II, BOK69-I/BOK69-II
10064825	Universal Tray for SOK1190
10062229	Universal Tray for EHO170/K170/260/K260, HOK260, Ful Pcs
10062230	Universal Tray for HOK300, Ful Pcs
10065418	Universal Tray for EHR300/EHRK300, HRK275, Ful Pcs
10062232	Universal Tray for EDLO170/EDLOK170, DLOK170
10061076	Universal Tray for EDLO330/EDLOK330, DLOK330, Ful Pcs
10062233	Universal Tray for EDLO580/EDLOK580, DLOK580, Ful Pcs
10062235	Universal Tray for EDLR580/EDLRK580, DLRK580, Ful Pcs
10062241	Universal Tray for All Horizontal Model, 1/2 Pcs
10062242	Universal Tray for All Double Layer Model, 1/2 Pcs



10061077



FLASK CLAMPS

All flask clamp attachments are designed for various Erlenmeyer flasks, made of high-quality stainless steels. They are available in two types, one specific type designed for the shaking trays of SOK series and USOK1257 stackable shaking incubators, known as “O Clamp”, and the general type for all other shakers, known as “T Clamp”.

O Clamps features countersink holes on the bottom and individual countersink screws supplied. This type of clamps can be easily fixed securely onto the shaking trays of SOK series and USOK1257 units by screwing into the threaded holes with a general Philip’s screwdriver.

The traditional T Clamps have screw pins on the bottom of the clamps. Individual nuts are used to fix the clamps onto the standard trays through the predrilled holes.

Clamps of 750ml in size and below are equipped with 1 screw pin/countersink hole per unit. While 4 screw pins/countersink holes on each clamps of 1L in size and above for more security.

Clamps of 2L size and above are made of premium quality spring stainless steel for better security and grip.

We offer customization services of clamps designing for Schott glass bottles, Fernbach flasks, or your individual requests. Contact us or your local distributor to discuss your requirements.

Order Information T Type Clamps (All models, except SOK series, USOK1257)

10062259	T Clamp, S/S, for 50ml Flask, with Spring Retainer
10062260	T Clamp, S/S, for 100ml Flask, with Spring Retainer
10061079	T Clamp, S/S, for 250ml Flask, with Spring Retainer
10061081	T Clamp, S/S, for 500ml Flask, with Spring Retainer
10061082	T Clamp, S/S, for 750ml Flask, with Spring Retainer
10061083	T Clamp, S/S, for 1000ml Flask, with Spring Retainer
10061640	T Clamp, Spring S/S , for 2000ml Flask, with Spring Retainer
10062261	T Clamp, Spring S/S, for 3000ml Flask, with Spring Retainer
10062262	T Clamp, Spring S/S, for 5000ml Flask, with Spring Retainer
10062264	T Clamp, S/S, for 150ml Flask, with Spring Retainer
10062265	T Clamp, S/S, for 300ml Flask, with Spring Retainer



“T” CLAMPS

Order Information O Type Clamps (SOK series, USOK1257 only)

10065457	O Clamp, S/S, for 50ml Flask, with Spring Retainer
10065458	O Clamp, S/S, for 100ml Flask, with Spring Retainer
10065459	O Clamp, S/S, for 250ml Flask, with Spring Retainer
10065460	O Clamp, S/S, for 500ml Flask, with Spring Retainer
10065461	O Clamp, S/S, for 750ml Flask, with Spring Retainer
10065462	O Clamp, S/S, for 1000ml Flask, with Spring Retainer
10065463	O Clamp, S/S, for 2000ml Flask, with Spring Retainer



“O” CLAMPS

TUBE RACKS & 96 WELL PLATE CLAMP

Tube racks are available in stainless steel and ABS plastic.

P8010 stainless steel tube rack set contains one clamp holder and one stainless steel rack. With two adjusting knobs, the rack itself can be randomly fixed at 0-90 degree angles. It is available with different sizes of holes for various sizes of test tubes. While every tube rack has the same overall dimension, as 30x11x11cm. See the below detailed list of available sizes of tube racks.

P8011 ABS plastic tube rack set include a stainless steel clamp and an ABS plastic tube rack.

Order Information

10065464	Tube Rack S/S, Φ 14.5x60
10065465	Tube Rack S/S, Φ 15x60
10064722	Tube Rack S/S, Φ 16x60
10062279	Tube Rack S/S, Φ 17.5x55
10061000	Tube Rack S/S, Φ 18.5x52
10064709	Tube Rack S/S, Φ 20x36
10065466	Tube Rack S/S, Φ 21x36
10065467	Tube Rack S/S, Φ 22.5x36
10065468	Tube Rack S/S, Φ 25x24
10062263	Tube Rack S/S, Φ 30x20
10065469	Tube Rack S/S, Φ 32x17
10065470	Tube Rack S/S, Φ 35x15
10065471	Tube Rack ABS Plastic
10061001	Clamp for 96 Well Plate, S/S. 128 x 86mm



TUBE RACK S/S



TUBE RACK PLASTIC



CLAMP FOR 96 WELL PLATE



STICKY MAT

The Labwit Sticky Mat is designed for attaching culture vessels, such as flasks, bottles, dishes etc onto the shaking platforms for all shaking equipments, for example, shakers, rockers as well as shaking incubators. It can be used to cover the shaking platforms replacing the traditional flask clamps.

The Sticky Mat can be easily removed and repositioned by simply peeling off the shaking tray surface.

With proper care, the Sticky Mat can be durable and last for several years.

UNIVERSAL CHOICE FOR VESSELS AND SHAKING TRAYS

The Sticky Mat is suitable for use on any shaking trays/ platforms, including those with predrilled or threaded holes, to fix various types of vessels onto the shaking trays.

HIGH SHAKING SPEED

With strong stickiness, the Sticky Mat can be used for fastening the vessels with shaking speed up to 300rpm. (See specifications table for more details).

HANDY TO INSTALL AND CLEAN

Simply apply the Sticky Mat firmly without air bubble while it's wet. Rinse the mat under running water, or use mild soapy water if necessary.

WIDE TEMPERATURE RANGE

The mat is proven to be safe to use over a wide range of temperature from 15-60°C.

HANDY SHAPE AND SIZE

The size of 20 x 20cm in square shape makes it easy to place small vessels, and handy to be removed.

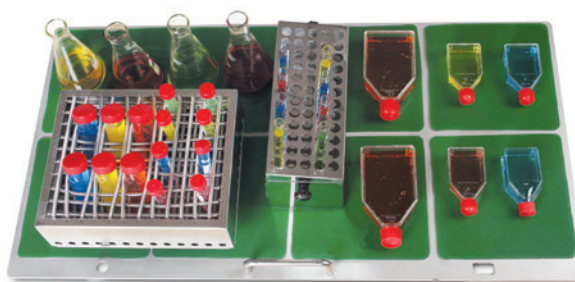
EASY TO REMOVE THE VESSELS

Gently pull the vessel and hold for a while, the vessel will be removed effortlessly.

SPECIFICATIONS:

Only apply to flasks with filling volume 20%. Both flasks and Sticky Mat must be completely intact, clean, dry and free of grease. All information supplied without liability. Only valid for standard glass Erlenmeyer Flasks. For vessels made of other materials, the maximum speed varies upon the shape and size of the vessel's bottoms.

Flask Size	Max Speed @ Shaking Diameter 25-50mm	Max Speed @ Shaking Diameter <25mm
50-750 ml	250rpm Max	250rpm Max
1000 ml	250rpm Max	300rpm Max
2000 ml	250rpm Max	300rpm Max
3000 ml	300rpm Max	300rpm Max
5000 ml	250rpm Max	300rpm Max



Order Information

Sticky Mat	Sticky Mat, 20 x 20cm
------------	-----------------------

SHAKING FRAMES & OTHER

Order Information

10065472	WiseKonec™ Data Connection Kit
10065474	Built-in Printer
10065475	Gas Tank Autoswitching Kit

Order Information

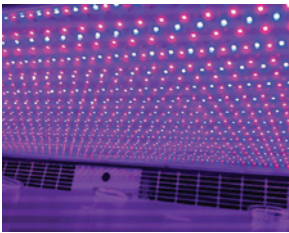
10062198	Single Layer Shaking Frame for EDLO170/EDLOK170, DLOK170, Stl S/C
10062199	Single Layer Shaking Frame for EDLO330/EDLOK330, DLOK330, Stl S/C
10061075	Single Layer Shaking Frame for EDLO580/EDLOK580, DLOK580, Stl S/C
10065476	Base Stand for SOK1190, 1300x800x500mm
10065290	LED Lighting Panel and Control Kit, For SOK Series
10065291	Base Stand for USOK1257, 1080x720x500mm
10065292	Direct Steam Humidification Kit for USOK1257
10065293	IR CO ₂ Kit for USOK1257
10065294	WiseKonec™ Plus Data Connection Kit



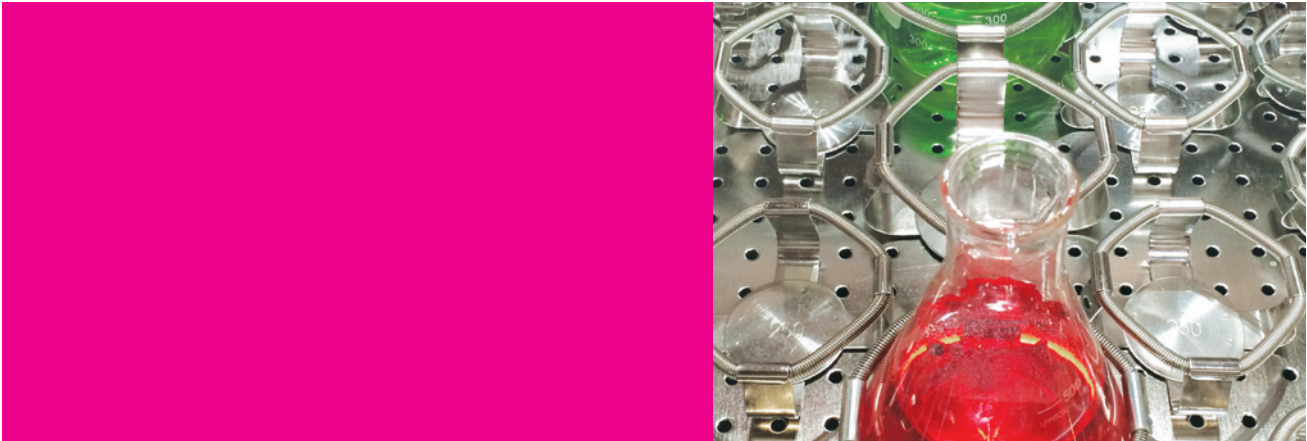
10065474



10065476



10065290





SOK3190



Ihr Fachhändler:
www.axon-labortechnik.de

Axon
Labortechnik

Axon Labortechnik GmbH
Im Braumenstück 16 - D-67659 Kaiserslautern
Verkaufsbüro Tel. 06223/95 41 190 Fax: 06223/95 40 714
info@axon-labortechnik.de