ATR KNOWS HOW TO HELP YOU GROW

**Large Capacity Incubator Shaker
20-400 rpm Shaking Speed
Available Options:
CO_2 Control
Refrigeration
Humidity
Lighting
Slide-out Shelf**

MULTITRON II

INFORS KNOW-HOW PUTS YOU AHEAD

MULTITRON II large capacity shaker system

The Multitron II is a large capacity incubator shaker. Multitron II may be configured as a single unit, or stacked as doubles or triples. The units allow for the optimum configuration in a limited space. The ingenious design of the INFORS shakers features a front-loading, pullout platform, stainless interior, a panoramic front window and inspection light. The patented drive provides uniform motion and quiet operation without vibration. The sealed cabinet ensures fast and accurate heating. Refrigeration, humidity and CO_2 control are available as optional controls.

Operation

Each unit has a control panel with a splashproof keypad and LED display. A comfortable working height on each unit allows easy access to setpoints, on/off control and program cycles (day/night simulations). The display alternates between the current values of temperature and speed while the unit is operating.

Microprocessor technology and PID control guarantee the precise maintenance of setpoints. The machine will resume operation each time the door is closed or following a power failure. Whenever the door is opened, a brake is applied to the shaker drive and the circulation fans are switched off . The platform is released when the door is fully opened.

All input measurement signals are isolated and can be logged or used for external control via a RS232 serial link to a computer. Alarm modes are also available for external monitoring.

Construction

The new Multitron II incubators each incorporate a fully indepentant control and power system. Each deck is fully redundent in terms of control of speed, temperature, lights, humidification, CO_2 and RS232 output. This new feature allows exsisting cabinets to be easily upgraded to a stacked system that saves valuable floor space. A single cabinet can be bench mounted or supplied with a fixed base support that allows for future expansion. All Multitron II Stacked systems come with the base support and stacking sytem.

The fully insulated incubation chamber coupled with the use of efficient blowers ensures accurate temperature control and minimal temperature variations over the surface of the platform.

Cooling can be fitted on any unit in a stacked system. Top or side mounted conventional refrigeration or rear mounted thermo-electric (Peltier) cooling can be specified depending on space limitations, ambient temperature and end temperatures requirments.

Lighting, CO_2, and humidity, as options, can be installed in any cabinet location. Lighting requires cooling for stable temperature control.

The Multitron II can have a 25 mm or 50 mm diameter orbit (or throw) to optimize the oxygen transfer rate for different sized flasks.

Speed control ranges between 20 and 400 rpm. Cabinet location, throw, and the size of flasks determine maximum speed.

The cabinet base is formed to be a water tight tray and comes equiped with a drain fitting for complete containment of spills. The drive motor is located outside of and above the enviromental cabinet for reliability and safety.

A work light is provided on the cabinet. Activated by pressing any key on thefront panel, this allows you to see the contents of the shaker without opening the door.

With a modest cabinet footprint the MULTITRON II platform (850 x 470mm) accepts large numbers of Erlenmeyer flasks. The Universal and dedicated platforms are designed with threaded holes for mounting of INFORS clamps and test tube racks. The slide-out shelf option allows the Multitron II to double as a static incubator. The shelf is easy to load and is also removable. When installed, the slide-out shelf limits the flask height to 12".

As an alternative to the traditional clamp style platform INFORS offers an adhesive material platform of "Green Sticky Stuff" for maximum flexibility of different sized flasks and carriers. "Green Sticky Stuff", with its proprietary formula, is remarkable in its ability to hold flat bottom vessels. It can be rejuvenated by simple washing with water and liquid dish detergent. Customers can request combination platforms of "Green Sticky Stuff", flask clamps and tube racks.

External Dimensions and Weight

Single Unit	21" (H) x 42" (W) x 34" (D)	Wt. 195 lbs.
Double stack	46" (H) x 42" (W) x 34" (D)	Wt. 390 lbs.
Triple stack	67" (H) x 42" (W) x 34" (D)	Wt. 585 lbs.
Triple w/ top cooling	78" (H) x 42" (W) x 34" (D)	Wt. 695 lbs.
Units w/ side cooling	as above except 53" (W)	add 40 lbs / cabinet

Specifications

Drive:	Brushless AC induction motor with drive belt
Shaking Speed:	20 to 400 rpm
Orbital Throw:	25 or 50 mm diameter
Accuracy:	$\pm$ 1% at maximum speed
Temperature Range :	5°C above ambient to 65°C without cooling
	15°C below ambient to 65°C with cooling
Accuracy:	$\pm$ 0.2 °C (Pt 100 sensor)
Temperature Uniformity:	$\pm$ 0.5 °C over working surface
Air Circulation:	210 CFM (360 m3/h)
Data Interface:	RS232 bi-directional
Power Supply:	115V @ 60 Hz standard cabinet 9 Amps
	w/ cooling & lighting 13 Amps

Appropriate Technical Resources   ATR In the Service of Science!   P.O.Box 460 Laurel, MD 20725-0460

800-827-5931   www.atrbiotech.com

MULTITRON II large capacity shaker system

INFORS HT®

Models		Individual Options	

Master Unit, 25 mm	AJ118	**Cooling System**	
Master Unit, 50 mm	AJ119	Cooling in side box	ZK120
		Peltier cooling	ZKPC
Base		Casing w/cooling	ZM110
Trolley	ZM101		
Support 6"	ZM106	**Lighting/cabinet**	
Support 9"	ZM109	Daylight	ZL110
		Photosynthesis	ZL111
Cover Frame	ZM110	Algae	ZL116
Fixing Bars		**Slide-out shelf**	SS110
Anchor Bar double	ZM111		
Anchor Bar triple	ZM110	**Humidity Control**	HC110
		CO$_2$ Control	CO110

Fixed Trays and Clamps		Additional Accessories	

Universal with threaded holes ATM0
For fitting different clamps, test tubes racks, etc.

Fixed Trays ATM...
Fitted with clamps for one size of Erlenmeyer flasks.

Fixed Trays with Stainless Steel Clamps

ATM50	50 ml	131 clamps
ATM100	100 ml	87 clamps
ATM250	250 ml	48 clamps
ATM500	500 ml	31 clamps
ATM1000	1000 ml	18 clamps
ATM2000	2000 ml	13 clamps
ATM4000	4000 ml	8 clamps

Additional Clamps

ATK25	25 ml clamp
ATK50	50 ml clamp
ATK100	100 ml clamp
ATK250	250 ml clamp
ATK500	500 ml clamp
ATK1000	1000 ml clamp
ATK2000	2000 ml clamp
ATK3000	3000 ml clamp
ATK4000	4000 ml clamp
ATK5000	5000 ml clamp

Universal with sticky stuff ATM00
 For flasks, bottles or any container with a wide, flat base.

Universal Tray for Microtiter plates ATM30

ATH001	1 roll Sticky Stuff 5 m
ATH008	8 rolls Sticky Stuff 5 m
ATKF2	1.8L Fernbach
ATKF3	2.8L Fernbach

Tube Racks

ATR 08	Tube rack 144 x 8 mm
ATR 10	Tube rack 100 x 10 mm
ATR 12	Tube rack 72 x 12 mm
ATR 14	Tube rack 64 x 14 mm
ATR 16	Tube rack 42 x 16 mm
ATR 18	Tube rack 39 x 18 mm
ATR 20	Tube rack 36 x 20 mm
ATR 22	Tube rack 33 x 22 mm
ATR 25	Tube rack 20 x 25 mm
ATR 30	Tube rack 15 x 30 mm