

Mills/Mixers

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452-000



452-001



452-043







IKA, Models A11 basic, M20 and MF10 basic Mills

IKA, Model A11 basic, Analytical Mill

Hard, brittle or fibrous samples can be ground to fine powder in a few seconds with the IKA A11 basic analysis mill. The A11 basic analysis mill is delivered with a standard airtight grinding container of 80 ml effective volume and a high-grade steel beater (A11.1). A grinding chamber with an effective volume of 250ml can be ordered as an option.

IKA, Model M20, Universal Mill

This mill is suitable for grinding hard and brittle substances. The maximum grain size is 6 to 7mm. Supplied with stainless steel cutter M21. Has a double walled, coolable chamber, which can be removed. This facilitates cleaning. A second grinding chamber and grinding tool can be ordered and used alternately.

IKA, Model MF10 basic, Micro-fine Mill

The MF10 basic is a continuously operating universal mill. Two different grinding heads can be attached to the drive and easily changed. The grinding head must be ordered separately:

There are five interchangeable sieves for insertion into the grinding chamber to ensure maximum particle size filtration.

Specifications

Model	A11 basic	M20	MF10 basic
Nominal speed, rpm	28000	20000	3000-6500
Required intermission, mins	10	_	_
Safety device	Beaker contact	Lid contact	Door contact
Overload protection	Electronic	Current limiter	Current limiter
Grinding chamber volume, ml	80*	250	_
Permissible ambient temp. °C	5 to 40	5 to 40	5 to 40
Permissible humidity, %	80	80	80
Dimensions (wxdxh), mm	85x85x240	170x170x350	320x300x380
Weight, kg	1.5	6.6	11
Cat. No.	452-000	452-001	452-043
Price	POA	POA	POA

^{* 250}ml with optional chamber

Accessories

Cat. No.	Description	For model	Price
For A11	mill		
452-046	A11.2 Cutting blade	A11	POA
452-047	A11.3 Beater	A11	POA
452-048	A11.4 Grinding container, 250ml volume	A11	POA
For M20 r	mill		
452-005	M22 Hard metal cutter	M20	POA
452-006	M23 St/steel star-shaped cutter	M20	POA
452-049	M20.1 Grinding chamber	M20	POA
For MF10 mill			
452-044	MF10.1 Cutting grinding head for soft, fibrous material	MF10	POA
452-045	MF10.2 Impact grinding head for brittle and hard materials	MF10	POA

Note: Other accessories including interchangeable sieves are available. Please enquire for details on 01342 826836.

Spiramix Mixers

A purpose-built blood mixer in 5 and 10 roller versions, giving a highly-efficient rocking and rolling action for the complete mixing of all liquid solid suspensions with minimum aeration. All the rollers are positively driven and will accommodate all types of blood tubes. Both models have 320mm rollers and operate at 50rpm.

Specifications

Model	Spiramix, 5 roller version	Spiramix, 10 roller version
Model	Spiratilix, 5 totter version	Spirallix, 10 foller version
Number of rollers	5	10
Shipping weight, kg	5.4	8.8
Electrical requirements	230-250V AC, 50HZ	230-250V AC, 50Hz
Dimensions (wxhxl), mm	220x100x460	410x100x460
Weight, kg	4.8	7.8
Cat. No.	454-028	454-030
Price	POA	POA

Variable speed models with timer are also available. Please contact our Technical Office on 01342 826836 for details.



Rollers/Rotators

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364-069

Stuart, SRT1 and SRT2 Roller Mixers

The roller mixers provide a gentle, but highly effective, rocking and rolling action. The rollers rotate at 33rpm and rise and fall 16mm. Recommended for mixing blood samples, viscous substances and liquid-solid suspensions where minimum aeration is required. Both roller mixers are robustly constructed and designed for easy cleaning, having plastic rollers and a stainless steel drip tray to collect accidental spillages. Most sizes of tubes, Bijoux, Universals and bottles can be accommodated. For large capacity bottles (up to 120mm diameter), one or more of the rollers is easily removed to give improved grip. Similarly, it is possible to quickly convert the units to provide a 'roll only' action and function as a simple bottle roller.

- Rocking and rolling action for complete mixing
- Ideal for mixing blood samples

Specifications

- Removable rollers to accommodate large bottles
- Designed for continuous operation between 4°C and 60°C
- Choice of two sizes, 5 rollers or 10 rollers





640-050 with 640-023 (test tube clip plates sold separately)



640-050 with 640-020



640-050 with 640-021



640-050 with 640-022



640-050 with 640-001



Model	SRII	SRIZ	
No. of rollers	5	10	
Roller diameter/length, mm	30/340	30/340	
Speed per minute, rpm	33	33	
Orbit dia./amplitude, mm	16	16	
Dimensions (wxdxh), mm	200x500x90	380x500x90	
Weight, kg	5	7	
Cat. No.	364-061	364-069	
Price	POA	POA	

Stuart, Rotator, Drive Unit STR4

The STR4 rotator drive unit is used in conjunction with a wide range of drums designed to take different sizes and types of vessels. The five drums are designed to give different mixing actions and are listed below.

- Highly versatile accepts a choice of tubes of 5 drums
- Built in timer
- Variable speed control 6 to 60rpm

Dimensions (wxdxh), mm

650x250x250

Speed of rotation is variable from 6 to 60rpm for a range of mixing applications. For added convenience a built in analogue timer can be set from 10 to 60 minutes. Alternatively the unit can be set for continuous operation.

Specification

Rotation speed, rpm

Electrical s		230V, 50Hz, 50W	Weight, kg	6.4	
Cat. No.	Description				Price
640-050	STR4 Rotator drive	unit (does not include ve	ssel holdina drum)		POA

Drum, Test Tube Holder STR4/1

Designed to rotate test tubes in a 'end-over-end' movement. Up to 4 plates can be mounted on the drum.

Drum, Two Platforms STR4/2

This drum accepts 2x500ml conical flasks or reagent bottles for 'end-over-end' mixing.

6 to 60

Drum, Figure 8 STR4/3

Designed to hold vessel at 45° angle to give 'figure of eight' mixing. Accepts almost any container.

Drum, Bottle Holder STR4/4

Drum consists of a 4 segment Perspex cradle. Holds bottles and containers up to 120mm diameter.

Drum, Microcentrifuge Tube STR4/5

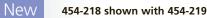
Designed for mixing 1.5ml microcentrifuge tubes

Cat. No.	Description	Price
640-023	STR4/1 Drum to hold test tube clip plates	POA
640-051	STR1/1 Clip plates for 12x12mm tubes (per pair)	POA
640-052	STR1/2 Clip plates for 10x16mm tubes (per pair)	POA
640-053	STR1/3 Clip plates for 8x19mm tubes (per pair)	POA
640-054	STR1/4 Clip plates for 7x24mm tubes (per pair)	POA
640-020	STR4/2 Drum with 2 platforms to hold 2x500ml conical flasks or bottles	POA
640-021	STR4/3 Drum with figure 8 mixing action	POA
640-022	STR4/4 Drum with 4 segment cradles holding up to 4 bottles (up to 120mm dia.)	POA
640-001	STR4/5 Drum with 4 segment cradles and four tube racks, each	POA
	accommodating 60x1.5ml tubes	



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Rotators







Heidolph, Reax Mixers

The Reax mixers come in four different models, for 2 bottles, 4 bottles, 8 bottles and 12 bottles. They all provide one dimensional swirling action and feature a maintenance-free, balanced drive system and are suitable for continuous use. The sealed drive is isolated from spills (IP21) making them ideal for use in cold rooms. All models have a 3 year warranty.

The Reax 2 has a speed range of 20 to 100rpm (continuously adjustable); it features an analogue dial for speed control and is suitable for haematology, medical diagnostics, materials testing and biochemistry. It is supplied with a basic shaking table comprising a rubber pad with raised edge. A universal adaptor and test tube adaptor are available as accessories.

Models Reax 20/4, 20/8 and 20/12 will accommodate 2 litre bottles as standard (attachment supplied) and 0.5 or 1 litre bottles with accessory attachments. Model Reax 20/4 can mix 4 bottles, the Reax 20/8 8 bottles and model Reax 20/12 12 bottles. Other vessels of 270mm height and max. diameter of 136 mm are also compatible. They all feature an analogue dial for speed control.

Specifications

			_
Model	Reax 2	Reax 20/4	
Type of Motion	Overhead mixing	Overhead mixing	
Rotation speed, rpm	20-100	1-16*	
RPM display	Scale	Scale	
Dimensions (lxwxh), mm	510x235x180	490x520x465	
Weight, kg	5.2	23	

Specifications

Model	Reax 20/8	Reax 20/12
Type of Motion	Overhead mixing	Overhead mixing
Rotation speed, rpm	1-16*	1-16*
RPM display	Scale	Scale
Dimensions (lxwxh), mm	770x520x465	1050x520x465
Weight, kg	28	33

* Models with speed ranges of 0.5–8rpm and 2–32rpm are also available. Please contact our Technical Office on 01342 826836 for details.

Cat. No.	Description	Price
454-218	Reax 2 overhead mixer	POA
454-221	Reax 20/4 overhead mixer	POA
454-222	Reax 20/8 overhead mixer	POA
454-223	Reax 20/12 overhead mixer	POA

Accessories for Reax 2

Cat. No.	Description	Price
454-219	Universal adaptor for various vessels	POA
454-220	Test tube attachment for 20 test tubes (10-18mm diameter)	POA

Accessories for Reax 20/4, 20/8, 20/12

Cat. No.	Description	Price
454-224	Attachment for the use of four 1 litre bottles	POA
454-225	Attachment for the use of four 0.5 litre bottles	POA

Blenders

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BagMixer® Laboratory Sample Blenders

The BagMixer® 400 line is a complete system to cover the full range of laboratory blending applications. The range comprises three models of BagMixer® each with its own range of highly competitive and innovative mixing bags. The MiniMix® 100 has a 5-100ml capacity, BagMixer® 400 has a 100-400ml capacity and the JumboMix® 3500 has a 400–3500ml capacity.

- Stainless steel body and blending chamber
- Easy to clean

Specifications

Capacity, ml

Timer, seconds

Dimensions (lxwxh), mm

Model

- Adjustable paddles
- Silent operation
- Compatible with other manufacturers' bags

Stroke frequency, strokes per second

BagMixer® 400

30−210 or ∞

400x270x260

100-400

■ New for old – special reduced prices on this range when disposing of your old Stomacher

JumboMix® 3500

400-3500

410x500x380

3 - 630-210 or ∞

Drip tray supplied with all models with transparent door







Cat. No.	Description	Price
454-080	MiniMix® 100 Sample Blender with stainless steel front door	POA
454-081	MiniMix® 100 Sample Blender with transparent front door	POA
454-084	BagMixer® 400 Sample Blender with stainless steel front door	POA
454-085	BagMixer® 400 Sample Blender with transparent front door*	POA
454-082	JumboMix® 3500 Sample Blender with stainless steel front door	POA
454-083	JumboMix® 3500 Sample Blender with transparent front door	POA

MiniMix® 100

10−360 or ∞

350x200x180

5-100

6-9

BagFilter® Sterile Bags For Sample Blenders

All sterile bags by Interscience, BagFilter®, BagPage® and BagLight® fit all models of laboratory sample blender currently on the market. They are all sterilised by gamma irradiation.

BagFilter®

These are highly robust plastic bags with a filter compartment. After blending, the solid fibres remain captive in the filter compartment whereas the solution to be analysed is ready to be pipetted.

BagFilter® comes in two models – BagFilter® P is designed to allow removal of the filtrate by pipetting after blending and filtration, BagFilter® S has a transverse weld to retain the solid contents of the bag to allow pouring of the blended solution into a container.

BagPage® Plus

BagPage®Plus is an extremely robust plastic bag fitted with a full membrane filter, separating the two compartments. It has a wide opening for samples and is printed on the front for easy pipetting.

BagLight®

These are robust plastic bags designed for sample mixing without a filter. BagLight® bags are available in 100ml, 400ml and 3500ml sizes.



Cat. No.	Description	Capacity, ml	Dimensions, mm	Pack	Price
454-086	BagLight® 100 Sample mixing bags without filter	100	110x185	500	POA
454-087	BagLight® 400 Sample mixing bags without filter	400	180x290	1000	POA
454-088	BagLight® 3500 Sample mixing bags without filter	3500	380x510	500	POA
454-089	BagFilter® 400 P Sample mixing bags with lateral surface filter. For pipetting	400	190x300	500	POA
454-090	BagFilter® 400 S Sample mixing bags with lateral surface filter. For pouring	400	190x300	500	POA
454-091	BagFilter® 3500 Sample mixing bags with lateral surface filter	3500	380x510	100	POA
454-092	BagPage® 100 Sample mixing bags with filter	100	95x180	500	POA
454-093	BagPage® Plus 400 Sample mixing bags with full surface filter	400	190x300	500	POA
454-108	BagPage® 3500 Sample mixing bags with filter	3500	380x510	100	POA

Accessor	ies		
Cat. No.	Description	Pack	Price
454-094	BagOpen® 400 bag opener stand for holding 400ml lab blender bags	1	POA
454-095	BagClip® 400 closing clips for 400ml lab blender bags	50	POA
454-109	BagClip® 3500 closing clips for 3500ml lab blender bags	50	POA
454-096	RagRack® 400 storage rack for 10v400ml hags with RagClin®	1	ΡΩΔ

Other accessories are available, including drip tray for BagRack® 400. Please contact our Technical Office on 01342 826836 for details.

^{*} A BagMixer® 400 Sample Blender with transparent front door and variable speed range (6-9 strokes per second) is available. Please contact our Technical Office on 01342 826836 for details.



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Dilutors





Gravimat®, Gravimetric Dilutor

The Gravimat® is easy to use, fast and accurate. It automatically dilutes a solid sample with the appropriate mass of solvent and any diluting and dispensing method used may be selected directly on the screen. Using an accessory printer, results can be printed after each dilution. A customised dilution factor is saved automatically to be applied to the following dilution.

The unit is supplied with a BagOpen® 400 stand and base for use with 400ml bags (bags not supplied). The BagOpen® opens bags automatically; the bag is pinched and held open by adhesive gums. A BagOpen® 100 is available as an accessory allowing the Gravimat® to be used with 80/100ml bags.

- Fast, accurate and easy to use
- Stainless steel housing for easy cleaning
- Multilingual screen: English, French, German, Italian, Spanish, Chinese and Japanese
- Self-regulated weighing and dispensing system
- Compatible with LIMS, printer and barcode reader
- Dilution factor of 1/2 to 1/999
- Weighing and dispensing function in one unit

Single pump model - the pump distributes the liquid from the 5 litre bottle to the bag containing the sample. It allows the distribution of 250ml in 20 seconds thanks to a peristaltic pump. The Gravimat® is easily set-up without the need for tools. It may be equipped with a second pump in order to use a second dilutant.

Specification

Dilution time, seconds <20 for 250ml

<10 for 250ml with Booster kit

Dilution factor 1/2 to 1/999

Accuracy, g <0.05 for sample weighing

>99% for mass of liquid dispensing*

 $\begin{array}{ll} \text{Maximum weight, g} & 2,500 \\ \text{Weighing platform accuracy, g} & \pm 0.05 \\ \text{Dispensing of liquid accuracy, g} & \pm 0.1 \end{array}$

Output RS232 for printer or LIMS. Printable parameters: date, time,

user code, pump selection, sample ID, sample weight,

total weight, dilution factor, dilution accuracy

Dimensions (wxdxh), mm 250x300x420 Electrical requirement 220V/50Hz Weight, kg 10

ullet for a sample weight of >1g

Cat. No.	Description	Price
454-210	Gravimat® single pump model	POA
454-211	Gravimat® double pump model	POA

The Gravimat® is supplied with BagOpen® 400 stand and base, 5 litre autoclavable bottle (1 per pump), autoclavable dispensing assemblies (2 per pump) and user manual.

Accessories

Cat. No.	Description	Price
454-212	Printer (with 2 rolls of paper)	POA
454-213	Barcode reader	POA
454-214	Booster kit (double pump assembly and tubing)*	POA
454-215	100ml bag kit (BagOpen® stand and base)	POA
454-216	5 litre autoclavable bottle	POA
454-217	Calibrated Cofrac weight, 500g, F1	POA

^{*} One or two booster kits can be ordered for the double pump model depending on requirements.

Other accessories are available including: dispensing arm for operation in air flow cabinets and consumables (dispensing assembly, air filters, tubing, printer paper and bags). Please contact our Technical Office on 01342 826836 for details.

Bags

Cat. No.	Description	Capacity, ml	Dimensions, mm	Pack	Price
454-086	BagLight® 80 Sample	80	110x185	500	POA
	mixing bags without filter				
454-087	BagLight® 400 Sample mixing	400	180x290	1000	POA
	bags without filter				



Blenders/Vortex

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Seward, Stomacher Lab System

This system offers fast blending and processing of laboratory samples. It uses a mechanical action in which contoured paddles apply pressure to a sample bag, allowing homogenised samples to be produced continuously and cleanly and without fear of cross contamination.

The Stomacher 400, with its 80–400ml capacity, is an ideal size for the majority of blending applications. The Stomacher 3500 is designed for blending larger volumes from 1000–3500ml with a gentler action. The Stomacher 80 has all the technical features of the larger units but is a compact model with a capacity of 5–80ml.

Each Stomacher model in the range has microprocessor controls positioned for easy access, three pre-set processing speeds and three time settings, plus continuous running for operational flexibility.

To ensure optimum performance from your Stomacher lab blender use only genuine Seward Stomacher bags manufactured from specially formulated high quality polyethylene copolymer.

Specifications

Model

Model Capacity, m		5-80 290x320x190	80-400 350x330x280	1000-3500 480x480x440	
Power supp	s (wxdxh), mm oly	240V, 50Hz	240V, 50Hz	240V, 50Hz	
Cat. No.		454-016	454-018	454-033	
Price		POA	POA	POA	
Cat. No.	Description				Price
454-017	Model 80, plain ste	rile bag, box of 2000			POA
454-145	Model 400, plain st	erile bag, box of 500			POA
454-146	Model 400, perforate supplied in a box of	ted sterile bag with wi	re closure, rounded bo	ottom,	POA
454-147	Model 400, plain st	erile bag with interna	l strainer, supplied in	a box of 200	POA
454-034	Model 3500, plain s	sterile bag, box of 250)		POA

Classic bags are available for older style Stomacher 400 models. Contact our Technical Office on 01342 826836.

IKA, MS 1 and MS 2 Vortex Mixers

The MS vortex mixer is a one-handed, variable speed unit for thorough mixing of samples in test tubes, blood collection tubes, and cuvettes, up to a maximum diameter of 30 mm. The rubber attachment for mixing the tubes can be interchanged with a large selection of attachments, some of which are supplied with the mixers. The unit offers continuous or intermittent operation with automatic start and stop. With a robust and slim ergonomic design, the unit is supplied with a two year warranty.

Specification

Models	MS 1 and MS 2	Orbit, mm	4.5
Shaking frequency, rpm	20–2500	Dimensions (wxdxh), mm	115x225x60
Power supply	230V, 50/60Hz	Weight, kg	3.5

Cat. No.	Description	Price
454-054	MS 2 vortex mixer, supplied complete with one-hand attachment with 85mm diameter foam platform	POA
454-050	MS 1 vortex mixer, supplied with a test tube attachment (6x10mm diameter tubes), one-hand insert and microtitre plate attachment	POA

Heidolph, REAX Vortex Mixers

The REAX vortex mixer units are mounted in a highly stable, splash-proof, heavy die-cast housing. The vibrating nitrile rubber cap accommodates a variety of sizes of tubes and can be switched from periodic to continuous operation, with an automatic switch-off facility. The units have a three year warranty. Two models are available which both have a circular and vibrating motion:

REAX Top: with speed selection

REAX Control: with speed control for speeds in the low range (maximum control deviation $\pm 2\%$), which is an advantage when using holders.

Specification

Shaking frequency, rpm	0-2500	Dimensions (wxhxd), mm	134x105x172
Power supply	230V, 50/60Hz	Weight, kg	3.3
Orbit mm	5		

Cat. No.	Description	Price
454-068	Heidolph REAX top vortex mixer	POA
454-069	Heidolph REAX control vortex mixer	POA









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Vortex



New 454-131 shown with microtitre plate holder (included in accessory pack 454-132)







Stuart, SA7 and SA8 Vortex Mixers

For rapid mixing of samples contained in test tubes, small flasks and bottles. These mixer units have a robust die cast base to avoid unnecessary movement during use. There are two models, a fixed speed model and a variable speed model. The fixed speed model starts automatically when the cup is depressed.

- Ergonomic design with low profile
- Powerful vortex mixing action ideal for a range of tubes
- Integral retort rod fixing (accepts 12.5mm diameter retort rod)
- Range of accessory heads available

Accessory heads for SA8

The pack of accessory heads contains: 1 x microtitre plate holder, 1 x circular foam insert for beakers and flasks (up to 500ml capacity), 1 x rectangular foam insert (hold 8×0.2 ml, 8×0.5 ml and 16×1.5 ml microcentrifuge tubes), 1 x rectangular foam insert (blank for custom holes).

Specifications

Model	SA7	SA8
Speed setting, rpm	2500	200-2500
Orbit, mm	4.2	4.2
Continuous mode	No	Yes
Accessory heads	No	Yes
Maximum load	1kg	1kg
Dimensions, mm	78x135x215	78x135x215
Electrical supply	90-240V, 20W	90-240V, 20W
Weight, kg	3.2	3.2

Cat. No.	Description	Price
454-130	SA7 Fixed speed vortex mixer	POA
454-131	SA8 Variable speed vortex mixer	POA
454-132	SA8/1 Accessory pack for microtitre plate and microcentrifuge tubes	POA

Clifton, Cyclone Vortex Mixer

For rapid and efficient mixing. The Cyclone creates a vortex in the tube which gives the highly efficient mixing action. The unit may be set for continuous running at the chosen speed or on demand. The Cyclone is fitted with an automatic 'press-start' operation, providing instant action as the tube is pressed into the rubber cap. It also offers variable speed control over a wide speed range, from very slow mixing to vigorous shaking. The skirted rubber cup prevents liquid entering the mixer casing. It will accept vessels up to 25mm diameter. Excellent stability is achieved by a combination of weight and non-slip feet.

Specification

Operational modes	Continuous/touch	Dimensions, mm	150x175x150
Speed	200-2800rpm	Weight, kg	3.6 kg
Orbit	7mm		

Cat. No.	Description	Price
583-120	CM-1 Cyclone vortex mixer	POA

IKA, lab dancer Vortex Mixer

A new, attractively designed, test tube shaker. Designed for mixing small samples with a touch function. The upper casing and the mixing surface are made from inert plastic. The bottom section is a coated, zinc die-casting. It is a fixed speed model (2800rpm) which starts automatically when the cup is depressed.

- For small containers up to 30 mm in diameter, e.g. test tubes, centrifuge tubes, Eppendorf vessels
- Small, compact and reliable
- Excellent mixing action
- Includes light 12V power pack set

Specification

Speed setting, rpm 2800
Orbit, mm 4.5
Operational mode touch

Maximum load 1 test tube/50ml max.

Motor rating input/output, W 1.2/0.8
Protection class IP40
Dimensions (Øxh), mm/Weight, kg 100x70/0.55
Electrical supply 230V, 50/60Hz

Cat. No.	Description	Price	
454-310	lab dancer fixed speed vortex mixer	POA	

Vortex/Rotary

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Jencons-PLS Vortex Mixer

Continuously adjustable speed control makes the Jencons-PLS VX-100 vortex mixer useful for a variety of applications from gentle mixing of samples to resuspending pellets. Two modes of operation can be selected. 'Touch' control allows the unit to be activated only when needed by depressing the sample head. When set to 'on' the unit operates continuously.

The general purpose cup attachment supplied with the mixer accepts a variety of tube sizes. Additional heads are available for mixing larger sample tubes, multiple microtubes and microplates. Heavy duty construction ensures a long life. Suction cup feet keep the unit stable to prevent 'walking'. A small footprint allows the unit to be used virtually anywhere, including temperature controlled environments.

Powerful motor for efficient mixing

Safe for cold room or incubator use

Specification

Speed setting, rpm 200-3000 Touch or continuous Modes of operation Ambient operating temperature range, °C +4 to 65 Power supply 230V, 50Hz Dimensions (wxdxh), mm/Weight, kg 120x155x130/5.5

Cat. No.	Description	Price
454-311	VX100 variable speed vortex mixer with pop-off cup	POA
Accessori	ies	
454-312	Head attachment, 7.6cm (3") for mixing multiple tubes	POA
454-313	Head attachment for 60x microtubes, 0.5 or 1.5/2.0ml	POA
454-314	Head attachment for 1x standard or deep well microplate	POA
454-315	Head attachment for 12x 1.5ml tubes - held horizontally	POA
454-316	Head attachment for 4x 15ml tubes - held horizontally	POA
454-317	Head attachment for 2x 50ml tubes - held horizontally	POA

Clifton, RM Series Rotary Mixers

The Clifton range of tube rotators are available as fixed or variable speed models with a broad range of optional accessory heads available for mixing micro tubes, tubes or flasks. The angle of mixing is fully adjustable and suitable for continuous or intermittent mixing. Benchtop or wall mountable, saving space.

Range of accessories are autoclaveable

3 year warranty

Specifications

Model RM 1 RM 2 Variable 5 to 30 Speed, rpm 30 Dimensions (with the disc vertical), mm 210x250x200 210x250x200 Electrical supply 220-240V, 50/60Hz 220-240V, 50/60Hz Weight, kg

Cat. No.	Description	Price
583-110	RM-1 Rotary mixer, 30rpm fixed speed (requires mixer disk)	POA
583-170	RM-2 Rotary mixer, 5 to 30rpm variable speed (requires mixer disk)	POA
Accessor		
149-166	RMD024 Rotary mixer disc with 24 clips for tube diameters 8mm to 11mm	POA
149-165	RMD012 Rotary mixer disc with 12 clips for tube diameters 15mm to 17mm	POA
149-164	RMD006 Rotary mixer disc with 6 clips for tube diameters 27mm to 30mm	POA
583-171	RMD24-3 Rotary mixer disc, 3 tier complete with 24 clips for each disc for tube	POA
	diameters between 8mm and 11mm	
583-172	RMD012-3 Rotary mixer disc, 3 tier complete with 12 clips for each disc for tube	POA
	diameters between 15mm and 17mm	
583-173	RMD016 Rotary mixer carousel for tube diameters up to 16mm	POA
583-174	RMD025 Rotary mixer carousel for tube diameters up to 25mm	POA
583-175	RMD-1 Rotory mixer disc without clips	POA
149-150	FC0025 Flask clip for 25ml flask for use with RMD-1 disc	POA
149-151	FC0050 Flask clip for 50ml flask for use with RMD-1 disc	POA
149-152	FC0100 Flask clip for 100ml flask for use with RMD-1 disc	POA
149-153	FC0250 Flask clip for 250ml flask for use with RMD-1 disc	POA
149-193	TC0811 Clip for 8mm to 11mm diameter tube for use with RMD-1 disc	POA
149-194	TC1517 Clip for 15mm to 17mm diameter tube for use with RMD-1 disc	POA
149-195	TC2730 Clip for 27mm to 30mm diameter tube for use with RMD-1 disc	POA





454-312

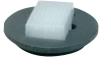
New

454-313

New

















New 583-170 shown with 149-164





583-173

New

583-175 New Flask clips sold separately



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Rotary

New 454-140 shown with 454-142



New 454-139 shown with 454-141







Stuart, SB2 and SB3 Blood Tube Rotator Mixers

The Stuart rotators give gentle but effective mixing, ideal for keeping biological samples such as blood in suspension. There are two models to choose from; the fixed speed SB2 or the more advanced SB3, which has variable speed control and a digital timer as standard.

A choice of six accessory tube holders is available. For those requiring more adaptability and greater capacity an adaptor is available that allows two accessory tube holders to be used simultaneously* on either the SB2 or SB3. (* Excludes culture tube holders)

- Quick and easy loading and removal of tubes
- Fully adjustable tilt angle
- Suitable for use at 4°C to 60°C (incubators and coldrooms)
- Choice of two models SB2 fixed speed at 20rpm SB3 variable speed (2 to 40rpm) with timer
- Accessory tube holders to hold a number of different sized tubes

Specifications

Model	SB2	SB3
Rotation speed, rpm	Fixed 20	Variable 2–40
Timer		up to 999mins
Dimensions (wxdxh), mm	200x270x240	200x270x240
Weight, kg	3.2	3.2
Electrical supply	230V, 50Hz, 50W	230V, 50Hz, 50W
Cat. No.	454-140	454-139
Price	POA	POA

Accessories tube holders

Cat. No.	Description	Tube capacity	Price
End-over-	end action		
454-141	SB3/1 microcentrifuge tube holder (0.5ml and 1.5ml)	40x10 to 11.5mm diameter tubes	POA
454-142	SB3/2 test/blood tube holder	20x9 to 20mm diameter tubes	POA
454-143	SB3/3 50ml centrifuge tube holder	12x25 to 35mm diameter tubes	POA
454-207	SB3/DUAL tube holder adaptor	Allows two tube holders to be used simultaneously*	POA
Rolling a	ction		
454-165	SB3/4 culture/test tube holder	63x12mm diameter tubes	POA
454-166	SB3/5 culture tube holder	63x16mm diameter tubes	POA
454-167	SB3/6 culture tube holder	30x26mm diameter tubes	POA

^{*} Excludes culture tube holders.

Heidolph, MULTI REAX Mixer

The MULTI REAX is a unique mixer/shaker designed to accommodate up to 26 vessels with various diameters. It is supplied with two carousel attachments - one for 26 test tubes (ø10-16mm) and one for 12 test tubes (ø16-32mm). For customised test tube attachments please contact our Technical Office on 01342 826836.

- Vibration orbit of 3mm
- Vibration accuracy to 2,000rpm
- Digital speed setting
- Digital process timer allows for unattended operation
- Protection class IP30
- Three year warranty

Specification

Shaking frequency, rpm 150–2000
Orbit, mm 3
Speed setting Digital
Power supply 230/240 V, 50 Hz
Dimensions (wxhxd), mm 270x410x172
Weight, kg 9.8

Cat. No.	Description	Price
454-151	MULTI REAX supplied with 2 carousel attachments	POA

Vortex

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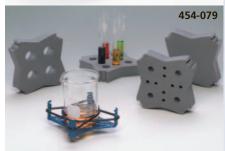
Vortex-Genie 2® Vortex Mixer

The Vortex-Genie 2° vortex mixer is a mixer/shaker available with a wide range of mixing attachments. The popular vortex mixer has a heavy 4kg cast iron case with rubber feet to prevent vibration and creeping.

- Shaking or vortex action
- Variable speed control
- Robust and reliable
- Touch or continuous operation
- Quick-Change[™] snap on/snap off attachments
- 2 year warranty
- Automatic touch start and stop, for one-handed operation









Specification

Operational modes Continuous/Touch with variable speed

Weight, kg

Dimensions (hxwxd), mm 165x121x156

The Vortex-Genie 2° is supplied with a 75mm diameter platform and a pop-off cup as standard. However it has a wide range of attachments described below which allow the mixing of fluids in virtually all types of small containers.

Cat. No.	Description	Price
454-077	Vortex Genie 2® vortex mixer with platform and pop-off cup	POA

Multiple Sample Starter Set

This includes a 150mm diameter platform, an insert for 60 microtubes (5.0mm to 10.5mm diameter) and an insert for a microplate.

Cat. No.	Description	Price
454-078	Multiple sample starter set	POA

Large Sample Starter Set

Large sample set designed for varying sizes of beakers, flasks and large tubes. This includes a recessed platform, elasticated flask retainers and an assortment of foam inserts for tubes from 9mm to 37mm diameter.

Cat. No.	Description	Price
454-079	Large sample starter set	POA

TurboMix™ High Performance Attachment

This attachment is designed to dramatically increase vortexing efficiency in 1.5ml snap-cap tubes or 2.0ml screw-cap tubes. Applications include cell disruption of yeast, bacteria, plant and animal tissue when used in glass bead procedures. Suitable for use in cold rooms or incubators. Includes a mounting bracket assembly and tube holder for either (12) 1.5ml snap-top tubes or (12) 2.0ml screw-top tubes.

Specification

12x1.5ml or 12x2.0ml tubes Capacity Construction Stainless steel mounting bracket Dimensions (hxwxd), mm 200x112x169 (Installed on mixer)

Cat. No.	Description	Price
454-097	TurboMix [™] high performance attachment, 12x1.5ml tubes	POA
454-177	TurboMix™ high performance attachment, 12x2.0ml tubes	POA
454-178	Micro tube holder for TurboMix™, 12x1.5ml snap-top tubes*	POA
454-136	Micro tube holder for TurboMix™, 12x2.0ml screw-top tubes*	POA

* Interchangable tube holders for TurboMix™ attachments

Small Ampoule/Tube Attachment

Attachment for vigorous end-to-end agitation combined with vortexing up to four 15mm to 17mm diameter plastic tubes; or 15mm to 17mm diameter glass or plastic ampoules.

Cat. No.	Description	Price
454-114	Small ampoule/tube head attachment	POA

Large Ampoule/Tube Attachment

Attachment that provides vigorous end-to-end agitation combined with vortexing for up to four 10mm to 17mm diameter glass or plastic tubes or ampoules.

Cat. No.	Description	Price
454-137	Large ampoule/tube head attachment	POA



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Vortex











Vortex-Genie® 1 Vortex Mixer

The Vortex-Genie® 1 Touch Mixer is a constant high-speed mixer which is easy to use and provides the strongest vortex mixing available in any mixer. The operator simply holds the container on the mixing attachment and the mixer starts automatically at maximum speed. Stops on release. Built of a solid 4kg metal casting with rubber feet that prevent walking. Optional platform attachment available. 2 year warranty.

Specification

Modes of operation Touch
Power supply 230/240V, 50Hz
Dimensions (lxwxh), mm/Weight, kg 165 x122x165/4

The Vortex-Genie® 1 is supplied with a pop-off cup as standard, which accommodates single test tubes. An optional 7.6cm (3 inch) platform suitable for beakers, flasks and multiple test tubes is also available.

Cat. No.	Description	Price
454-133	Vortex-Genie® 1 vortex mixer for touch mixing with pop-off cup	POA
454-134	Platform head, 7.6cm (3")	POA

Disruptor Genie™, Cell Disruptor

The Disruptor Genie™ is an affordable alternative to expensive ultrasonic disruptors. Automatic timer or continuous operation. The Disruptor Genie™ provides patented multi-directional action which simultaneously agitates and vortexes at high speed, dramatically increasing disruption efficiency.

Spherical lead free soda lime glass beads are available in two sizes. Applications include rapid disruption of yeast cells, bacteria, plant and animal tissue, pellet resuspensions, glass bead procedures. Suitable for use in cold rooms or incubators. Built of a solid 4kg metal casting with rubber feet that prevent walking. Two models are available, the 1.5ml Disruptor Genie™ holds up to twelve 1.5ml snap-top microtubes, whilst the 2.0ml Disruptor Genie™ holds up to twelve 2.0ml screw-top microtubes. 2 year warranty.

Specification

Modes of operation Timer (0-15 mins) or continuous Power supply 230/240V, 50Hz
Dimensions (lxwxh), mm/Weight, kg 165 x122x190/4.3

Cat. No.	Description	Price
454-135	1.5ml Disruptor Genie™ supplied with 1.5ml microtube holder and pop-off cup	POA
454-136	Micro tube holder, 12x2.0ml screw-top tubes	POA
454-179	2.0ml Disruptor Genie™ supplied with 2.0ml microtube holder and pop-off cup	POA
454-178	Micro tube holder, 12x1.5ml snap-top tubes	POA
454-180	0.1mm diameter beads for bacteria	POA
454-181	0.5mm diameter beads for yeast	POA

WiggenHauser, VM Vortex Mixers

The new VM series vortex mixers from WiggenHauser are available in standard and digital versions. Both models feature touch and continuous operation, have a speed range of 0–3600rpm and generate excellent vortex mixing in test tubes and capped vials. The VM are fitted with rubber feet to prevent the mixers from "walking" across the laboratory bench, and are supplied with a standard test tube attachment and a standard 3 inch platform head for Erlenmeyer flasks and larger vessels. Two year warranty.

Specifications

VM Digital Model VM Standard Speed setting, rpm 0 - 36000 - 3600Speed display Digital display (rpm) Scale Orbit, mm Operational mode continuous/touch continuous/touch 145x90 Dimensions (Øxh), mm Electrical supply 100-240V, 50-60Hz with 12 volt adaptor (both models) Weight, kg

Cat. No.	Description	Colour	Price
454-059	VM Digital, variable speed vortex mixer with digital display	Blue	POA
454-060	VM Standard, variable speed vortex mixer	Blue	POA
454-035	VM Digital, variable speed vortex mixer with digital display	White	POA
454-037	VM Standard, variable speed vortex mixer	White	POA
454-036	VM Digital, variable speed vortex mixer with digital display	Green	POA
454-038	VM Standard, variable speed vortex mixer	Green	POA

Other colours are available; please contact our Technical Office on 01342 826836 for details.



Multi-purpose

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Roto-Shake Genie™ Mixer/Rotator/Rocker

The Roto-Shake Genie™ is designed to provide rotating and rocking in one compact and durable unit. An optional 3-D orbital shaker attachment transforms the unit into an orbital shaker. The moving portion consists of a two-sided, 203x343mm stainless steel platform which easily converts from rotating to rocking. The surfaces are magnetised to hold a non-skid metal rocker tray and various sizes of autoclavable spring-clip mounting plates.

- Changes function with a simple mechanical adjustment or platform replacement
- Easily removed magnets and platform
- Maintains set speed between 0°C and 38°C
- Ensures complete and even soaking of membrane-based blot assays/ washings
- Various size tubes, as well as large membrane blots, can be rotated or rocked simultaneously
- Attachments can be mounted at any angle
- Suitable for use in cold rooms and incubators
- Wide variety of accessories for maximum versatility
- Two year warranty

Specification

Standard capacity (with supplied clips): Supplied with:

Capacity: Tubes 1 plate (12 clips per plate) 12 tubes (10–13mm diameter) 1 plate (6 clips per plate) 6 tubes (15–17mm diameter) 3 tubes (28-30mm diameter) 1 plate (3 clips per plate) Bags 4 magnetic stainless steel mounting strips 2 plastic bags (152x152mm)

Trays 1 non-skid metal rocker tray (305x305mm) Any number of samples (up to 305x305mm)

Size (hxwxd), mm 267x508x252 (305 with metal rocker platform)

Weight, kg 11.8

Rocking: infinitely variable from 10-70 cycles per minute Speeds

Rotating: infinitely variable from 5-35rpm

Workload

Rocking angle ±10° from the horizontal

capacity, kg 4.5

Cat. No.	Description	Price
454-098	Roto-Shake Genie [™] , supplied with 3 plates, 4 mounting strips and rocker tray	POA

Accessories

Cat. No.	Description	Price
454-100	Expansion kit containing 6 additional plates increases capacity to 84 (10–13mm) tubes (including plates already supplied with unit)	POA
454-101	Expansion kit containing 6 additional plates increases capacity to 42 (15–17mm) tubes (including plates already supplied with unit)	POA
454-102	Expansion kit containing 6 additional plates increases capacity to 21 (28–30mm) tubes (including plates already supplied with unit)	POA
454-106	Expansion kit containing 16 magnetic stainless steel mounting strips, increases capacity to 4 bags maximum	POA
454-107	Expansion kit containing 2 trays and 24 mounting strips, increases capacity to 8 (152x152mm) bags (including strips already supplied with unit)	POA
454-103	Single clip mounting plate, 10–13mm dia. tubes	POA
454-104	Single clip mounting plate, 15–17mm dia. tubes	POA
454-105	Single clip mounting plate, 28–30mm dia. tubes	POA
454-121	Hybridisation tubes plates (2)	POA
454-124	Universal clip plate attachment (2)	POA
454-125	Covered rack for 100 microtubes	POA
454-126	100ml Volumetric flask attachment	POA
454-127	3-D Orbital shaker attachment	POA













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Multi-purpose Refrigerated Incubator











Enviro-Genie®, Temperature Controlled Bench-top Refrigerator/Incubator/Rotator/Stirrer/Rocker/3-D Orbital Shaker

The Enviro-Genie® is the ideal self-contained bench-top culture incubator for the study of microorganisms and tissue cell growth under strictly controlled conditions of temperature and agitation.

Designed to provide the security of precise temperature control and uniformity necessary for demanding incubation/refrigeration applications without taking up a great deal of space.

It performs membrane-based assays/ washings and hybridisations more efficiently. Chamber air is gently and continuously circulating at a rate that ensures the temperature consistency and uniformity of all test samples. Shatter-resistant viewing window allows for inspection of samples, without affecting the chamber environment.

- Rocks. With digital control/ display from 2 to 70 cycles per minute
- Rotates. With digital control/ display from 1 to 35rpm
- Stirs. Two magnetic stirrers with digital control/ display from 1 to 2000rpm and featuring 'Stir Reverse' facility
- Optional 3-D orbital shaker attachment
- Accommodates most standard tubes, vials, beakers, plates, bags and trays. Wide variety of accessories available
- Can be used as standard incubator/ refrigerator

Microprocessor controls easily achieve the desired rotating, rocking and stirring speed. Temperature and time are displayed on large LED's for accurate reproducible conditions. Timer displays 'elapsed time' or 'remaining time', until programmed off. There are visible and audible alarms for both temperature and time. Equipped with an RS232 port for data acquisition and optimal control. Unit can easily be cleaned and decontaminated.

Specification

Temperature, °C		Time, hours	Programmable to 96
Heating	to 75	Alarms	Visible and audible, temperature and time
Cooling	to 4	Dimensions, mm	495x622x368
Accuracy	±0.2	Weight, kg	36
Uniformity	±0.5		
Resolution	0.1		
Stability	±0.1		

Cat. No.	Description	Price
454-099	Enviro-Genie® bench-top incubator/refrigerator*	POA

^{*} Enviro-Genie[®] is supplied complete with: Magnetic platform, 3 plates for 10-13, 15-17 and 28-30mm tubes, 4 mounting strips, non-skid metal rocker tray, two magnetic stirrers and one wire rack

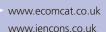
Accessories

Cat. No.	Description	Price
454-100	Expansion kit containing 6 additional plates increases capacity to 84 (10–13mm) tubes (including plates already supplied with unit)	POA
454-101	Expansion kit containing 6 additional plates increases capacity to 42 (15–17mm) tubes (including plates already supplied with unit)	POA
454-102	Expansion kit containing 6 additional plates increases capacity to 21 (28–30mm) tubes (including plates already supplied with unit)	POA
454-106	Expansion kit containing 16 magnetic stainless steel mounting strips, increases capacity to 4 bags maximum	POA
454-107	Expansion kit containing 2 trays and 24 mounting strips, increases capacity to 8 (152x152mm) bags (including strips already supplied with unit)	POA
454-103	Single clip mounting plate, 10–13mm dia. tubes	POA
454-104	Single clip mounting plate, 15–17mm dia. tubes	POA
454-105	Single clip mounting plate, 28–30mm dia. tubes	POA
454-121	Hybridisation tubes plates (2)	POA
454-122	Wire rack	POA
454-123	Serial cable	POA
454-124	Universal clip plate attachment (2)	POA
454-125	Covered rack for 100 microtubes	POA
454-126	100ml Volumetric flask attachment	POA
454-128	3-D Orbital shaker attachment	POA



Rotators/Rollers

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Bag Rotator

Powerful and rugged rotator for effective mixing of transfer packs or random sealed bags, maintaining platelets and other sample components in suspension without risk of damage. The wire basket holds up to 40 standard 300ml transfer packs (5 packs per compartment).

- Specialised basket design prevents bag movement
- Can effectively mix contents of almost any sealed bag type
- Gentle yet thorough mixing eliminates the risk of sample damage or trauma
- Bags rotate 'end-over-end' with a fixed speed of 3rpm regardless of the number of bags
- Maintains platelets in even suspension throughout the bag
- Durable and robust motor provides reliability and reproducibility
- Heavy and durable base prevents unit from tipping over
- Two year warranty

Specification

Speed Fixed rotation, 3rpm ±0.5rpm

up to 40 standard 300ml transfer packs or random bags Capacity

Power supply 230V, 50Hz, 0.08 amps

267x508x252 Dimensions (dxwxh), mm

Weight, kg 7.7

Cat. No. Description	Price
454-000 Bag rotator supplied with wire basket	POA
Accessories	
454-001 Replacement wire basket	POA

RM1 Roller Mixer

The roller mixer has a fixed speed of 30rpm and is ideal for the mixing of cells. A drip tray allows small amounts of spillage to be easily cleaned

- Rolling action, ideal for mixing cells
- Easily clean drip tray
- Bottles up to 50mm can be accommodated
- Small footprint

Quiet operation

Specification

Speed range, rpm 30 30x320 Roller size, mm Number of rollers up to 50 Bottle size, mm Overall dimensions (wxdxh), mm 390x190x110 Carrying capacity, kg

Cat. No.	Description	Price
454-171	RM1 5 Roller mixer	POA

MM1 and MM5 Multimixers

The MM1 and MM5 Multimixers enable samples to be rocked whilst rolling, the perfect blending action. The units have variable speed (10-50rpm for rock action, 20-100rpm for roll action) and may be converted to roll only units. Bottles up to 114mm can be accommodated.

- Rocking and rolling action for complete mixing
- Can be converted to roll only unit

Electrical requirements, V/Hz

■ Bottle up to 114mm can be accommodated

Specification

Speed range, rpm 10 to 50 (rock action)/20-100 (roll action)

220/50

Roller size, mm 30x320* Bottle size, mm 12-114 Overall dimensions (wxdxh), mm 385x350x175 Carrying capacity, kg

* Rollers can be removed to accommodate larger bottles, but an idler gear is required. Please contact our Technical Office on 01342 823836 for details.

Cat. No.	Description	Price
454-169	MM1 5 Roller Multimixer	POA
454-170	MM5 9 Roller Multimixer	POA









454-169







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Rotary/Vortex



4400 Cell Mixer

The 4400 cell mixer was designed for the mixing of cells and for use in extraction procedures. The drum rotates at a fixed speed of 30rpm and will hold up to 32 tubes. The clips supplied will accommodate tubes from 11-13mm diameter.

Specification

Speed range, rpm 30 Tube capacity 32

Tube size, mm 11–13 diameter
Overall dimensions (wxdxh), mm 160x220x200

Carrying capacity, kg 1 Electrical requirements, V/Hz 220/50

Other tubes sizes can be accommodated (e.g. 20mm, 25mm tubes), please contact our Technical Office on 01342 826836 for details.

Cat. No.	Description	Price
454-119	4400 Cell mixer	POA

New 454-172 shown with 454-174



CM200 Cell Mixer Majors

The CM200 cell mixer majors were introduced to fill the needs of many users who use a variety of tube sizes. These instruments with their removable tube carousel (not supplied) will allow the user to mix cells in almost any size tube length or diameter. The variable speed (0 to 10rpm or 0 to 30rpm) indicated on the analogue meter allows the operator to reproduce experimental conditions.

Specification

Speed range, rpm 0–10 or 0–30

Tube size, mm Must be specified by the customer

Overall dimensions (wxdxh), mm 540x450x410 Electrical requirements, V/Hz 220/50

Cat. No.	Description	Price
454-172	Cell mixer, 0-10rpm, supplied without carousel	POA
454-173	Cell mixer, 0-30rpm, supplied without carousel	POA
454-174	Custom tube carousel*	POA

^{*} Customer to supply tube diameter and length. Please contact our Technical Office on 01342 826836 for details.

V400 Multi-Vortexer

The V400 Vortexer was designed as a multiple tube vortexer. A new model has been designed to accommodate deepwell microplates. The unit has a capacity of up to 150 micro reaction tubes or 4 deepwell microplates and provides effective and consistent vortexing throughout. This is achieved via a unique 'floating' vortexing plate that has continuously adjustable energy input. The unit comes complete with an adjustable carrying plate. The speed is variable between 800-2300rpm and the height between the carrying plate and the adjustable plate is 100mm.

Specification

Speed range, rpm800 to 2300Vortexing plate dimensions, mm300x255Overall dimensions (wxdxh), mm400x310x420

Carrying capacity 150 micro reaction tubes or 4 deepwell microplates

Carrying capacity, kg 3 Electrical requirements, V/Hz 220/50

Models with timers are available (0-5mins and 0-70mins), please enquire on 01342 826836.

Cat. No	Description	Price
454-112	V400 Multi-vortexer	POA
454-168	V400DW Multi-vortexer for deepwell plates	POA



Suspension

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M802 Suspension Mixer

The M802 Suspension mixer utilises a unique mixing action that enables carefully controlled and reproducible conditions to be maintained. It is suitable for a wide variety of applications including Coombes, serological and agglutination tests as well as blood mixing. The platform rotates on a central axis with the angle of tilt oscillating between 0° and the set angle (max 15°). Speeds between 10–100rpm are achievable.

Specification

Speed range, rpm 10 to 100

Angle of tilt, $^{\circ}$ 0 to 15 (continuously variable)

Platform size, mm 330x245

Overall dimensions (hxwxd), mm 406x311x165

Carrying capacity, kg 2.75

Electrical requirements, V/Hz 220/50

Cat. No	Description	Price
454-110	M802 Suspension mixer	POA

An analogue timer can be fitted, please contact our Technical Office on 01342 826836 for details.

Platform Inserts

Cat. No	Description	Price
454-182	CP/1 for 28x Microscope slides 76x25mm	POA
454-183	CP/2 for 16x Microscope slides 76x51mm	POA
454-184	CP/3 for 12x Microscope slides 76x54mm	POA
454-185	CP/4 for 35x10ml Conical flasks	POA
454-186	CP/5 for 24x25ml Conical flasks	POA
454-187	CP/6 for 20x50ml Conical flasks	POA
454-188	CP/7 for 12x100ml Conical flasks	POA
454-189	CP/8 for 6x250ml Conical flasks	POA
454-190	CP/9 for 6x500ml Conical flasks	POA
454-191	CP/10 for 20x100ml Beakers	POA
454-192	CP/11 for 2x Haemagglutination plates - 8 cavity	POA
454-193	CP/12 for 4x Microtitre plates	POA
454-194	CP/13 for 10x Boerner merco plates	POA
454-195	CP/14 for 4x Coplin jars	POA
454-196	CP/15 for 6x Petri dishes 90mm	POA
454-197	CP/16 for 16x Glass universal bottles	POA
454-198	CP/17 for 12x Quickfit and quartz MF/24 tubes (specify tube diameter and length)	POA
454-199	CP/18 for 1x Winchester bottle	POA
454-200	CP/19 for Leakproof tray 50mm deep	POA
454-201	CP/20 for Adjustable plate (with two adjustable rollers)	POA
454-202	CP/21 for 6x Diagnostic cards (77x128mm)	POA
454-203	CP/22 for 2x1000ml Conical flasks	POA
454-204	CP/23 for 3x250ml Separating funnels	POA
454-205	CP/24 for 2x500ml Separating funnels	POA
454-206	CP/25 for 1x1000ml Separating funnel	POA





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Vortex





Grant-bio, PV-1 Vortex Mixer

Ideally sized for personal use, the Grant-bio PV-1 vortex mixer is compact, with a low profile and small footprint. The reliable motor produces regulated and reproducible agitation throughout the speed range. It is also extremely quiet.

With variable speed from 300 to 3000 rpm, the PV-1 can be used for gentle through to vigorous mixing and pellet resuspension in 0.5ml, 1.5ml, and 15ml tubes. Suitable for operation in room temperatures from 4 to 45°C, the PV-1 can be used in many different environments, including cold rooms, fume hoods and Class II microbiological cabinets.

The PV-1 is extremely simple to operate, with either continuous or touch operation and adjustable speed control. The shaking mechanism is robust and durable, it is housed in a sturdy case, resistant to common laboratory chemicals.

- Pressure sensitive cup for tubes up to 20mm diameter
- Rubber suction pads prevent walking and absorb vibration
- Low voltage power supply enables safe cold room operation
- Low energy consumption
- Meets the requirements of IEC61010 parts 1 and 2
- CE marked
- Two year warranty

Specification

Speed, rpm 300 to 3000
Orbit, mm 2
Max. tube diameter, mm 20
Ambient temperature range, °C 4 to 45
Dimensions (wxdxh), mm 82x145x75
Input voltage, V 12
Input type dc
Input current, A 1.2

Cat. No.	Description	Price
454-158	PV-1 Vortex mixer	POA

New 454-159



Grant-bio, Combi-spin PCV-2400 and Multi-spin PCV-3000 Combined Centrifuge/Vortex Mixers

The Grant-bio Combi-spin and Multi-spin are combined centrifuge/vortex mixers for spinning and mixing of microtubes and 0.2ml strips. Both instruments can be used for independent centrifuge and vortex mixing applications. Combi-spin can also be used for vortex mixing of an individual tube concurrently with spinning of multiple tubes, while Multi-spin enables consecutive spin and mix phases of multiple tubes. Each comprising two instruments in one, Combi-spin and Multi-spin are compact and convenient, fitting neatly into the smallest workspace.

Applications

Suitable for spin-mix-spin applications in many fields, including:

- PCR diagnostic laboratories
- Biochemical clinical laboratories

Specific applications include:

- Preparing samples prior to PCR reactions, gel electrophoresis and enzyme reactions immunoprecipitations
- Cell permeabilisation by chelating or hydrophobic agents for reaction in-situ
- Low solubility drug testing
- Cell washing from culture media after fermentation

Features

- Two interchangeable rotors supplied as standard for: 12x1.5/2.0ml microtubes
 - 12x0.5ml + 12x0.2ml microtubes
- Optional rotors for:
 8x1.5/2.0ml + 8x0.5ml microtubes
 6x1.5/2.0ml + 6x0.5ml + 6x0.2ml microtubes
 2x8-well 0.2ml microtube strips
- Safety interlock stops the rotor when the lid is opened
- Amazingly quiet
- Extremely easy to operate
- Operating ambient temperature range 4°C to 45°C, for use in a cold room or incubator
- Low energy consumption
- Meets the requirements of IEC61010 parts 1 and 2
- CE marked
- Two year warranty



Vortex

Order by phone ➤ 01342 826836 Order on-line ➤ www.ecomcat.co.uk
Order by fax ➤ 01342 826771 Website ➤ www.jencons.co.uk



Grant-bio, Combi-spin PCV-2400 and Multi-spin PCV-3000 Combined Centrifuge/Vortex Mixers, continued...

Combi-spin

Tubes are loaded into the rotor for simultaneous spinning, then removed for individual mixing in the vortex cup, which is located at the top of the central shaft. With the vortex cup emerging through an opening in the closed lid, individual tubes can be mixed while a full load of tubes is spinning.

- Fixed speed combined centrifuge/vortex mixer
- Fixed speed: 2,400rpm
- Continuous operation or short spin

Multi-spin

Multi-spin enables consecutive spin and mix phases of multiple tubes. Tubes are loaded into the rotor for spinning and remain in position for vortex mixing. User control of all parameters ensures maximum flexibility and complete sample reproducibility, with accurate setting of spin speed and mixing level, and a time setting for each. Consecutive spin and mix phases can be linked and a sequence of linked phases may be repeated up to 999 times. Set-up is extremely easy and the two line LCD display clearly indicates the current operating status.

With the tubes positioned in the rotor during the mix step, the mixing strength is fully reproducible.

- Adjustable speed combined centrifuge/vortex mixer
- Spin speed: 1,000 to 3,500rpm, adjustable in steps of 100rpm
- Integral spin timer, 1 second to 99 minutes, with automatic switch-off
- Vortex mixing speed adjustable in three levels: soft, medium, hard
- Integral mix timer, 1 to 20 seconds, with automatic switch-off
- Low voltage power supply enables safe cold room operation

Reduced volumes

By the simple practice of spinning samples before and after mixing, lower reagent volumes can be used without any increase in sample error, and the Combi- and Multi-spin were developed specifically for this purpose. Combi-spin is highly effective for use with volumes down to approximately 50μ I, and Multi-spin can be used with volumes as low as 5μ I.

Specifications

Specifications		
Model	Combi-spin PCV-2400	Multi-spin PCV-3000
Maximum RCF, xg	700	1000
Speed, rpm	2400	1000 to 3500
Spin time	continuous up to 60 mins or	continuous or
	short spin	timer: 1 sec to 99 min
Mixing intensity	n/a	soft, med, hard
Mixing time, sec	n/a	1 to 20
Cycle regulation	n/a	1 to 999
Tube capacity	12x1.5/2.0ml	12x1.5/2.0ml
	12x0.5ml + 12x0.2ml	12x0.5ml + 12x0.2ml
Footprint (wxd), mm	225x180	225x180
Height, mm	115	115
Ambient operating temperature, °C	4 to 45	4 to 45
Input voltage, V	220-240/110-120	12
Input type	AC (50-60Hz)	DC
Input current, A	0.63 (220-240V)	1

Cat. No.	Description	Price
454-159	Combi-spin PCV-2400 combined centrifuge/vortex mixer supplied with two	POA
	interchangeable rotors (12x1.5/2.0ml microtubes &	
	12x0.5ml + 12x0.2ml microtubes)	
454-160	Multi-spin PCV-3000 combined centrifuge/vortex mixer supplied with two	POA
	interchangeable rotors (12x1.5/2.0ml microtubes &	
	12x0.5ml + 12x0.2ml microtubes)	

Interchangeable Rotors

Cat. No.	Description	Price
454-161	8x1.5/2.0ml plus 8x0.5ml microtubes	POA
454-162	6x1.5/2.0ml plus 6x0.5ml plus 6x0.2ml microtubes	POA
454-163	2x8-well 0.2ml microtube strips	POA







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Rotators





Grant-bio, PTR-30, PTR-60 360° Vertical Multi-Function Rotators

The Grant-bio PTR-30 and PTR-60 multi-function rotators provide all that is required for thorough mixing of microtubes, for reproducible sample preparation:

- 360° vertical rotation
- Reciprocal rotation, turning angle from 15° to 90°
- Vibration, settable in a burst of 1 to 5 seconds
- 5 second pause
- All actions may be set for continuous or timed operation and individual phases may be linked together for absolute flexibility:
 - 360° vertical rotation; 360° and reciprocal; 360° and reciprocal and vibration; 360° and reciprocal and pause; reciprocal; reciprocal and pause; vibration and reciprocal.

The Grant-bio vertical rotators are compact, with a low profile and small footprint, fitting neatly into the smallest workspace.

The stepper motor produces regulated and reproducible rotation throughout the speed range and, combined with the sturdy construction, will guarantee years of consistent operation. The Grant-bio vertical rotators are quiet and extremely easy to operate, with very simple set-up of a multi-segment program, using the two line set-up and status display.

Features:

- Standard platform for microtubes up to 15mm diameter
- Low voltage power supply enables safe cold room operation
- Operating ambient temperature range 4°C to 45°C - for use in a cold room or an incubator
- Low energy consumption
- Meets the requirements of IEC61010 parts 1 and 2
- CE marked
- Two year warranty

Mixing of small volumes is extremely difficult due to surface tension of viscous liquids, but insufficient mixing can lead to a high percentage error. 360° vertical rotation (turning the tube end over end) has a highly efficient mixing effect. The Grant-bio PTR-30 and PTR-60 not only provide 360° vertical rotation, they also emulate other manual actions used for mixing in small tubes: reciprocal rotation has the effect of backward and forward shaking, a brief pause allows droplets to slide down the tube walls and the vibration motion emulates a light tap with a finger.

Specifications

PTR-30	PTR-60	
22	48	
1min to 24hrs (with automa	tic switch-off) (both models)	
5 to 30	5 to 60	
1 to 250	1 to 250	
15 to 90	15 to 90	
1 to 250	1 to 250	
1 to 5	1 to 5	
1 to 5	1 to 5	
1 to 5	1 to 5	
1 to 125	1 to 125	
0.4	0.8	
310x125x175	420x230x230	
12V DC, 1.2A	12V DC, 5A	
	22 1min to 24hrs (with automa 5 to 30 1 to 250 15 to 90 1 to 250 1 to 5 1 to 5 1 to 5 1 to 5 1 to 125 0.4 310x125x175	22 48 1min to 24hrs (with automatic switch-off) (both models) 5 to 30 5 to 60 1 to 250 1 to 250 15 to 90 15 to 90 1 to 250 1 to 5 1 to 125 0.4 310x125x175 420x230x230

Cat. No.	Description	Price
454-153	PTR-30, 360° Multi-function rotator supplied with platform for 22 microtubes	POA
454-154	PTR-60, 360° Multi-function rotator supplied with platform for 48 microtubes	POA

Accessories

Cat. No.	Description	For model	Price
454-155	Platform for 4 tubes up to 30mm diameter (e.g. 50ml centrifuge tubes)	PTR-30	POA
	plus 12 tubes up to 15mm diameter (e.g. 1.5ml, 2.0ml tubes)		
454-156	Platform for 8 tubes up to 30mm diameter (e.g. 50ml centrifuge tubes)	PTR-60	POA
	plus 24 tubes up to 15mm diameter (e.g. 1.5ml, 2.0ml, 15ml tubes)		
454-157	Platform for 14 tubes up to 30mm diameter (e.g. 50ml centrifuge tubes)	PTR-60	POA

