4. Stirring, Shaking, Mixing Contents

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IKA

4. Stirring, Shaking, Mixing

Magnetic stirrers / Hotplates/Without heating, with motor

IP Protection classes

| ΙP | Characteristic 1 | IP | Characteristic 2 |
|----|---|----|---|
| | for special protection | | for waterproofing |
| 0 | No special protection | 0 | No waterproofing |
| 1 | Protection from solid objects greater than 50 mm in diameter | 1 | Protection from dripping water |
| 2 | Protection from object greater than 12 mm in diameter | 2 | Protection from vertically dripping water (tilted up to 15°) |
| 3 | Protection from object greater than 2.5 mm in diameter | 3 | Protection from sprayed water (tilted up to 60°) |
| 4 | Protection from object greater than 1 mm in diameter | 4 | Protection from splashed water |
| 5 | Complete protection against contact, Protection against dust deposit | 5 | Protection from water projected from a nozzle |
| 6 | Complete protection against contact, Protection from infiltration of dust | 6 | Protection against heavy seas or powerful jets of water. |
| | | 7 | Protection against immersion |
| | | 8 | Protection against complete, continuous submersion in water. |
| | | 9 | Protection against the ingress of water from all directions even under |
| | | | greatly high pressure on the housing. (High-pressure/steam cleaner, 80-100 bar) |

IP 64

IP 64 **6**: Complete protection against contact, Protection from infiltration of dust **4**: Protection from splashed water



Magnetic stirrer LLG-uniSTIRRER 2

Compact and cost-efficient magnetic stirrer without heating for volumes up to 1000 ml. Adjustable speed from 0 to 2000 rpm. Plate diameter 120 mm. Body made of ABS.

Support rod, aluminium (Cat. No. 6.263 435) available as an optional accessory.

Scope of supply: magnetic stirrer, mains adapter, 2 stirring rods 27 x 8mm and 34 x 8mm

Specifications

Stirring quantity (H2O): 1000 ml Speed range: 0 ... 2000 min⁻¹ Permissible ambient temperature: 0 ... 50 °C 25 x 8 mm Magnetic bar: Display: Analog 120 x 120 mm Heating plate: Dimensions (W x D x H): 150 x 135 x 53mm Weight: 0.5 kg Power supply: 100 ... 230 V, 50/60 Hz

IP code: IP 21 Warranty: 3 years

| Туре | Plug type | PK | Cat. No. |
|------------------|-----------|----|-----------|
| LLG-uniSTIRRER 2 | EU | 1 | 6.263 430 |
| LLG-uniSTIRRER 2 | UK | 1 | 6.263 431 |



Magnetic mini-stirrers topolino

Without heating. Extremely convenient magnetic mini-stirrer for mixing volumes up to 250ml.

- Durable, brushless motor

- Infinitely variable speed range
- Strong magnetic coupling

Specifications

Stirring quantity max. (H₂O): 250 ml 300 ... 1800 rpm Speed range: Permissible ambient temperature: 5 ... 40 °C Permissible relative humidity: 80 %

PP Material: Dimensions Top plate (\emptyset) : 80 mm

Dimensions (W x H x D): 95 x 37 x 115 mm

Weight: 0.32 kg

100 ... 240 V, 50/60 Hz Power supply:

IP code: IP 21

| Туре | Plug type | PK | Cat. No. |
|----------|-----------|----|-----------|
| Topolino | EU/CH | 1 | 9.720 220 |

Magnetic stirrers / Hotplates/Without heating, with motor

Magnetic stirrer MST Digital

Small, lightweight magnetic stirrer for volumes up to 5 l. Ideal for titrations, BOD determination, microbiological and biochemical applications.

Velp Scientifica

- Bright LED display
- The device remains cold even in continuous use
- Timer
- Very good chemical resistance
- Torque compensation to keep the speed constant in case of viscosity changes
- Auto reverse function

Specifications

Volume (H₂O): Speed (max.): 1500 min-1 Display: Digital 1 ... 900 min Timer: Auto reverse: 5 ... 900 s Dimensions (W x D x H): 120 x 145 x 50 mm

Weight: 0.6 kg

100 ... 240 V, 50/60 Hz Power supply:

Warranty: 3 years

| Туре | PK | Cat. No. |
|-------------|----|-----------|
| MST Digital | 1 | 4.666 683 |

Magnetic stirrer Mini MR standard

Without heating.

- For stirring quantities up to 1L (H₂O).

- Infinitely variable speed from 0 to 2500rpm
- White top plate suitable for observing colour reactions
- Power supply with adapter for EU/CH/UK/USA

Specifications

Max. stirring volume, (H₂O): 1 I

0 ... 2500 rpm Speed range: Permissible ambient temperature: 5 ... 40 °C Permissible relative moisture: 80 % Plate material: Polyester film Top plate dimensions (W x D): 115 x 115 mm Overall dimensions (W x D x H): 115 x 129 x 37 mm

Weight: 0.25 kg

Supply requirements: 100 ... 240 V, 50/60 Hz IP42

Protection to DIN EN 60529:

Tested to DIN EN IEC 61010-1.

| Туре | Plug type | PK | Cat. No. |
|-----------------|----------------|----|-----------|
| Mini MR standar | d EU/CH/UK/USA | 1 | 9.720 211 |

Magnetic stirrer Hei-Mix

Without heating. Suitable for titration.

Heidolph

- Stir quickly and efficiently with an extended speed range up to 2200rpm
- Long-lasting polyamide housing and PVDF top plate material
- Ideal for titrations due to white-colored top plate
- Space saving unit for efficiently mixing sample sizes up to 5l. Small footprint of 126 x 80 x 140mm (W x H x D) only, and the top plate comes with a diameter of 104mm
- Powerful stirring magnet for safe rotation of the stirring bar even with more viscous solutions

Specifications

Stirring quantity (H₂O):

Speed range: 0 ... 2.200 rpm Permissible ambient temperature: 5 ... 31 °C Permissible relative moisture: 80 % Plate Material: **PVDF** Plate Dimensions (Ø): 104 mm

Dimensions (W x D x H): 126 x 140 x 80 mm

Weight: 1.1 kg Power supply: 230 V Protection class: IP 21

| Туре | Plug type | РК | Cat. No. |
|---------|-----------|----|-----------|
| Hei-Mix | S EU | 1 | 9.720 167 |
| Hei-Mix | S UK | 1 | 6.201 570 |







Magnetic stirrers / Hotplates/Without heating, with motor



Magnetic stirrer AMI, illuminated

Magnetic stirrer with illuminated stirring position for stirring volumes up to 5 l. With epoxy-coated metal housing for protection against liquid spills.

Velp Scientifica

- Gentle start-up
- Illuminated stirring position
- Electronic speed control up to 1100 min-1
- Low height

Specifications

 $\begin{array}{lll} \mbox{Max. volume (H_2O):} & 5 \ \mbox{I} \\ \mbox{Motor rating:} & 1.2 \ \mbox{W} \\ \mbox{Max. speed:} & 1100 \ \mbox{min}^{-1} \\ \mbox{Weight:} & 1.2 \ \mbox{kg} \end{array}$

Dimensions (W x D x H): 150 x 270 x 55 mm Power supply: 100 ... 240 V, 50/60 Hz

Warranty: 3 years

| Туре | Plug type | PK | Cat. No. |
|------|-----------|----|-----------|
| AMI | EU | 1 | 4.666 684 |



2 Magnetic stirrer myPlate

The magnetic stirrer myPlate combines the excellent technical features of the magnetic stirrers colour squid and big squid with the option of creative individualisation. Thanks to the interchangeable frame the image template provided can be exchanged easily through a personal image.

Specifications

Stirring volume (H₂O):

Speed range:

0 ... 2000 rpm

Permissible ambient temperature:

5 ... 40 °C

Permissible relative humidity:

80 %

Material:

Glass

Dimensions Top plate (Ø):

1.5 l

6 ... 2000 rpm

5 ... 40 °C

80 %

135 mm

Dimensions (W x D x H): $150 \times 160 \times 30 \text{ mm}$

Weight: 500 g
Supply requirements: 100 ... 240 V
Protection class acc. to DIN EN 60529: IP 54

| Туре | PK | Cat. No. |
|---------|----|-----------|
| myPlate | 1 | 4.665 612 |



Magnetic stirrer SS151/CS151

Without heating. Stirrers with powerful magnets and motor for mixing large volumes. With LED display indicating the set and actual speed of the unit.

NEW Stuart

IKA

- Spill-resistant front control panel with a chemically toughened glass for extra resilience
- With an integral fixing point for a retort rod
- With BioCote, silver-based, antimicrobial protection

Scope of supply: Stirrer, 2 x 25 mm PTFE coated stirring bars



4.672 497

Specifications SS151 // CS151

Max. stirring capacity (H₂O): 15 l

Speed: 50 ... 1400 rpm // 50 ... 1250 rpm Permissible ambient temperature: 5 ... 40 °C

Permissible relative humidity: <80~%Top plate dimensions (W x D): 150~x~150~mm~//~120~x~120~mm

Overall dimensions (W x D x H): 180 x 300 x 93 mm

Weight: 2.3 kg

Power supply: 230 V, 50/60 Hz

| Туре | Material stirring surface | Colour housing | PK Cat. No. |
|--------|---------------------------------|-------------------|--------------------|
| SS151B | Aluminium, ceramic coated | Blue | 1 4.672 493 |
| SS151K | Aluminium, ceramic coated | Black | 1 4.672 494 |
| SS151W | Aluminium, ceramic coated | White | 1 4.672 495 |
| CS151B | Glass ceramic | Blue | 1 4.672 496 |
| CS151K | Glass ceramic | Black | 1 4.672 497 |
| CS151W | Glass ceramic | White | 1 4.672 498 |

Magnetic stirrers / Hotplates/Without heating, with motor

Magnetic stirrer for cell cultures with external control, bioMIXdrive 1/2/3/4

Maintenance free motor drive. Magnetic stirrer with 1/2/3/4 stirring positions, for careful, protective and warming-free mixing of cell cultures and culture broths, also for viscous cultures, maintenance-free, large surface. 100 % jerk-free, speed range 5rpm to 250 rpm, encapsulated stainless steel housing, water-, dust-, germproof, IP 68, submersible, easy to clean, robust construction, flat design, suitable for propeller and spinning ball culture flasks, individual measurement on request. 3 years warranty. Made in Germany. Suitable for underwater use. Please order control unit separately.



2mag



Specifications

5 I Max. stirring quantity (H2O):

5 ... 250 min⁻¹ Speed:

Permissible ambient temperature: -10 up to +50 °C at 100 % H.R. max.

+50 °C submerged in water

Housing: Stainless steel

Protection class: IP 68

| Туре | Stirring positions | Dimensions (W x D x H) | Weight | PK | Cat. No. |
|---------------|--------------------|---------------------------|--------|----|-----------|
| | | mm | kg | | |
| bioMIXdrive 1 | 1 | 180 x 180 x 38 | 2.5 | 1 | 9.645 950 |
| bioMIXdrive 2 | 2 | 130 x 270 x 38 | 2.5 | 1 | 9.645 978 |
| bioMIXdrive 3 | 3 | 130 x 410 x 38 | 3.5 | 1 | 9.645 979 |
| bioMIXdrive 4 | 4 | 270 x 270 x 38 | 4.7 | 1 | 9.645 980 |

Control units for stirring drives bioMIXdrive

bioMIXcontrol

Control unit for 1x bioMIXdrive 1/2/3/4, speed range 5 rpm to 250 rpm.

Identical to bioMIXcontrol, but with stackable housing and vertical control panel.

bioMIXcontrol MS4

Identical to bioMIXcontrol, but for 4x bioMIXdrive 1, individual and independent speed setting for each stirring drive, synchronous speed mode for all drives with one touch.



9.645 981

Specifications

0 ... 40 °C at 80 % H.R. max. Operation conditions: Operating voltage: 100-240 V 50/60 Hz, 1.5 A

Stainless steel Housing:

Protection category: IP 20

| Туре | PK Cat. No. |
|--------------------------|----------------------|
| bioMIXcontrol | 1 9.645 951 |
| bioMIXcontrol S | 1 9.645 981 2 |
| bioMIXcontrol MS4* | 1 9.645 982 |
| * only for bioMIXdrive 1 | |



Magnetic stirrer MIX 1 XL

Wear-free 2mag motor drive, powerful, up to 40 liters, 70-2000 rpm, internal controller with 20 watts, incl. mixWATCH stirring bar monitoring with fully automatic trim of the max. Reachable speed for reliable and unattended operation, digital display, 4-step power setting for high power with regard to large and viscous media and reduced power for warming-free continuous operation, adjustable SoftStart for different volumes/viscosity, QuickStop against after-run and breakage, reliable sealed stainless-steel housing, 3 years warranty. Made in Germany.



Operating conditions: -10°C to +50 °C at 95 % R.H. max.

Stainless steel Housing: IP code: IP 64

| Туре | PK | Cat. No. |
|----------|----|-----------|
| MIX 1 XL | 1 | 6.236 109 |



Magnetic stirrers / Hotplates/Without heating, with motor

Magnetic stirrers C-MAG MS 4/C-MAG MS 7/C-MAG MS 10

Without heating. With glass ceramic top plate which offers excellent chemical resistance.

- powerful motor for stirring quantities of up to 5l, 10l, or 15l (H₂O)

- raised control panel for protection against leaking liquids

Specifications

Magnetic stirrer

Stirring volume max. (H₂O) C-Mag MS 4/MS 7/MS 10: 51/101/151 Motor rating input/output: 15/1.5W 100 to 1500rpm Speed range: Speed display: scale

Max. magnetic bar (L x dia.)

C-MAG MS 4: 30 x 8mm C-MAG MS 7/MS 10: 80 x 10mm

Set-up plate

Material: Dimensions (W x D) C-MAG MS 4: 100 x 100mm C-MAG MS 7: 180 x 180mm C-MAG MS 10: 260 x 260mm

Dimensions (W x D x H) C-Mag MS 4: C-Mag MS 7:

C-Mag MS 10: Weight

C-Mag MS 4/MS 7/MS 10:

Protection class acc. to DIN EN 60529: Tested to DIN EN IEC 61010-1.

glass ceramic

150 x 260 x 105 mm 220 x 330 x 105 mm 300 x 415 x 105 mm

3kg/5kg/6kg IP 21

| Туре | Plug type | PK | Cat. No. |
|-------------|-----------|----|-------------|
| | | | |
| | | | |
| C-MAG MS 4 | | | 9.720 493 1 |
| C-MAG MS 7 | EU | 1 | 9.720 494 |
| C-MAG MS 10 | EU | 1 | 9.720 495 |







9.720 494



9.720 495



Magnetic stirrer Hei-Mix L

Without heating. For heat-sensitive samples, because the top plate is insulated from the

- Gentle and protective treatment of samples due to smooth start function

- Hermetically-sealed housing prevents corrosion and increases the service life of the unit
- When working with dry ice a robust thermal insulation prevents corrosion inside the housing which prohibits dripping of condensate on the electronic components
- Due to the Kera-Disk® ceramic coating, the top plate is chemical-resistant and scratch-proof

Specifications

Stirring quantity (H2O): 20 I Speed range: 100 ... 1.400 rpm Permissible ambient temperature: 5 ... 31 °C Permissible relative moisture: 80 % Kera-Disk® Plate Material: Plate Dimensions (Ø): 145 mm Dimensions (W x D x H): 173 x 277 x 94 mm

2.9 kg Weight: Power supply: 230 V IP 32 IP code:

| Туре | PK | Cat. No. |
|-----------|----|-----------|
| Hei-Mix L | 1 | 9.720 137 |

IKA

Heidolph

Magnetic stirrers / Hotplates/Without heating, with motor

Multi-position Magnetic stirrer AMI 4, illuminated

Multi-position magnetic stirrer with illuminated stirring positions for stirring volumes up to 5 l per position. With epoxy-coated metal housing for protection against liquid spills.





- Gentle start-up

- Illuminated stirring positions

- Electronic speed control up to 1100 min-1

- Low height

Specifications

 $\begin{array}{lll} \text{Stirring volume each (H_2O$):} & 5 \text{ I} \\ \text{Motor rating:} & 4.8 \text{ W} \\ \text{Speed (max.):} & 1100 \text{ min}^{-1} \\ \text{Number of stirring positions:} & 4 \\ \text{Distance between stirring positions:} & 150 \text{ mm} \\ \end{array}$

Distance between stirring positions: 150 mr
Display: Analog
Dimensions (W x D x H): 600 x 2

Dimensions (W x D x H): $600 \times 270 \times 55 \text{ mm}$ Weight: 4.0 kg

Power supply: 100 ... 240 V, 50/60 Hz Warranty: 3 years

| Туре | Plug type | PK | Cat. No. |
|-------|-----------|----|-----------|
| AMI 4 | EU | 1 | 4.666 685 |



Multi-position magnetic stirrers RO 5/10/15 series

Without heating. 5, 10 or 15-position digital magnetic stirrers, designed for synchronous

IKA stirring. The magnetic coil technology provides noiseless and consistent stirring on all positions. Speed remains constant, even when load changes. The closed and compact design allows easy cleaning and protects the equipment against the penetration of liquids. Additionally, a removable transparent anti-slip mat is included.

- Adjustable reverse operation
- Eco-mode for a low self-warming of the surface
- Wear free magnetic coils
- Error Code Display
- Easy operation with touch keypad
- Suitable for continuous operation
- Adjustable speed in increments of 10rpm



9.720 208

Specifications

Max. stirring quantity per stirring position (H₂O): Distance between stirring places: Deviation for individual stirring positions:

Speed range: Speed display: Set-up plate material:

Protection class acc. to DIN EN 60529:

Power supply:

0.4l 90mm 0% 0 to 1200rpm LED line stainless steel 1.4301 IP 40

100-240V, 50/60Hz



9.720 226

| Туре | Stirring positions | Dimensions (W x D x H) | Weight | PK |
|-------|--------------------|---------------------------|--------|----|
| | | mm | kg | |
| 0 5 | 5 | 120 x 570 x 60 | 3 | 1 |
| RO 10 | 10 | 190 x 570 x 60 | 5 | 1 |
| RO 15 | 15 | 280 x 570 x 60 | 7 | 1 |

| Bath tanks for multi-position magnetic stirrers RO 15 | | NEW |
|---|------------------------------------|----------------------|
| Туре | Description | PK Cat. No. |
| IB R RO 15 pr | o Stainless steel bath vessel | 1 4.672 783 |
| IB R RO 15 ec | o Plastic bath vessel, max. 100 °C | 1 6.283 206 4 |



6.283 206

IKA

4. Stirring, Shaking, Mixing

Magnetic stirrers / Hotplates/Without heating, with induction



Magnetic stirrer LLG-uniSTIRRER 1

An **ultra-flat** inductive magnetic stirrer without heating with timer. The modern magnet coil technology consists only of non-moving parts and therefore guarantees a wear-free drive.

For a better mixing of samples it is possible to change the direction of rotation every 30 seconds.

- Timer (1 min to 99 min, infinetly)
- 100 % wear- and maintenance-free inductive drive
- LED-display for an exact adjustment of the rotation speed
- Digital regulated rotation speed
- Alteration of the stirring direction
- Protection class IP 65
- Stainless steel surface

Delivery includes: magnetic stirrer, power cable, adapters for UK and universal plug.

Specifications

Stirring positions: 1 Stirring quantity (H_2O): 0.8 I

Speed range: 15 ... 1500 min⁻¹
Permissible ambient temperature: 5 ... 40 °C
Magnetic bar: max. 25 mm
Display: LED
Heating plate: Ø 94 mm

Dimensions (W x D x H): 110 x 155 x 12 mm

Weight: 0.5 kg

Power supply: 100 ... 230 V, 50/60 Hz

IP code: IP 65 Warranty: 3 years

| Туре | Plug type | PK | Cat. No. |
|------------------|-----------|----|-----------|
| LLG-uniSTIRRER 1 | Universal | 1 | 6.263 420 |



Magnetic stirrers, lab disc

Without heating. Lab disc is an innovative, very flat, magnetic stirrer. It's modern, toroidal coil technology with no moving parts guarantees a maintenance-free drive. Lab disc can automatically change it's rotational direction every 30secs. and therefore enhances mixing of the medium.

- High IP protection class (IP 65)
- Set-up plate and casing made from chemically resistant materials
- Slip-proof, safe stand
- lab disc white with white surface, lab disc stream and lab disc pattern with decorative surface

Specifications

 $\begin{array}{ll} \mbox{Max. volume stirred (H_2O):} & 0.8 \ \mbox{I} \\ \mbox{Motor rating input/output:} & 5W/3W \end{array}$

Speed range: 15rpm to 1500rpm

Stirring bar length max.: 25mm
Set-up plate material: polyester
Set-up plate dimensions: Ø 100mm

Dimensions (W x H x D): 117mm x 12mm x 180mm

Weight: 0.3 kg
Permissible ambient temperature: 5°C to 40°C
Permissible relative humidity: 80%
IP code IP 65

Voltage/Frequency 100V - 240V/50/60Hz

| Туре | Plug type | PK | Cat. No. |
|----------------|-----------|----|-----------|
| lab disc white | EU/CH | 1 | 9.720 480 |
| lab disc white | UK | 1 | 4.008 137 |

Optional accessories: Ikaflon®- stirring bars, Trika®- stirring bars, RSE Stirring bar retriever



Magnetic stirrers / Hotplates/Without heating, with induction

2mag

Magnetic stirrer MIX 1 and MIX 1 eco

Wear-free inductive drive, powerful, up to 10liters, 100-2000 rpm, internal controller with 20 watts, digital display, 4-step power setting for high power with regard to large and viscous media and reduced power for warming-free continuous operation, adjustable SoftStart for different volumes/viscosity. 3 years warranty. Made in Germany.

MIX 1 eco

Identical to MIX 1, but price optimized, up to 3 liters, speed range 120 -1400 rpm, extremely robust, simple operation by speed knob and scale.

Specifications MIX 1 // MIX 1 eco

 $\begin{array}{lll} \text{Max. volume stirred (H}_2\text{O}): & & 10 \,\text{I}\,\text{//}\,\,3\,\text{I} \\ \text{Motor rating input:} & & 10 \,\text{W}\,\text{//}\,\,20\,\,\text{W} \\ \end{array}$

Stirring positions: 1 Speed range: $100 \dots 2000 // 120 \dots 1400 \text{ min}^{-1}$

Permissible ambient temperature: -10 ... 50 °C Permissible humidity: 80 %

Display: digital // analogue

Dimensions (W x D x H): 188 x 238 x 38 mm // 120 x 120 x 35 mm

Weight: 3.4 kg // 1.4 kg IP code: IP 65

Power supply: 115/230 V, 50/60 Hz





9.645 954



9.645 955

Magnetic stirrer atexMIXdrive 1 with external control



Explosion protected. 1 stirring position with maintenance-free and wear-free inductive drive for powerful mixing of liquids. Jerk-free stirring even at low speed.

- Very robust construction, easy to clean, with maximum resistance $\,$
- Completely sealed housing made from stainless steel
- Magnetic stirrer is water- dust- and germproof
- Control unit atexMIXcontrol or atexMIXcontrol cleanroom with protection class IP65
- Magnetic stirrer submersible in water- or oil baths
- Suitable for use in CO2 incubators and ovens
- Certified acc. to ATEX II 2G Ex mb IIC T4 Gb

The magnetic stirrer can only be used together with control unit atexMIXcontrol or atexMIXcontrol cleanroom, which have to be ordered separately. Magnetic stirrer, control unit and power supply are firmly connected to each other to ensure Ex protection.

Specifications

Max. volume stirred (H_2O) atexMIXdrive 1: 10 l Motor rating input: 20 W Stirring positions: 1

Speed range: 100...2000 min⁻¹
Permissible ambient temperature: -10...40 °C
Permissible humidity: 100 %
Display: digital
IP code: IP 68

| Туре | PK | Cat. No. |
|--------------------------|----|-----------|
| atexMIXdrive 1 | 1 | 6.238 005 |
| atexMIXcontrol | 1 | 6.238 006 |
| atexMIXcontrol cleanroom | 1 | 9.646 000 |

^{*} Control unit explosion protection zone 2.



Magnetic stirrers / Hotplates/Without heating, with induction

4-Position-Magnetic Stirrer LLG-uniSTIRRER 1/M4

An Ultra-flat inductive magnetic stirrer without heating with timer. The modern magnet coil technology consists only of non-moving parts and therefore guarantees a wear-free drive.

For a better mixing of samples it is possible to change the direction of rotation every 30 seconds.

- Max. stirring quantity per stirring position 400 ml
- Timer (1 to 99 min, infinitely)
- 100 % wear- and maintenance-free inductive drive
- LED-display for an exact adjustment of the rotation speed
- Digital regulated rotation speed
- Alteration of the stirring direction
- High Protection class IP 65
- Stainless steel surface

Scope of supply: magnetic stirrer, 1 mains adapter each US, AUS, UK, 1 stirring rod 25 x 8 mm

Specifications

Stirring positions: Distance between Stirring postions: 95 mm Max. Stirring quantity (H_2O): 4 x 0.4 l = 1.6 l Speed range: 15 ... 1200 min⁻¹ 5 ... 40 °C Permissible ambient temperature: Magnetic bar: max. 25 mm Display: LED Heating plate (W x D): 122 x 385 mm Dimensions (W x D x H): 126 x 457 x 13.5 mm 1.9 kg

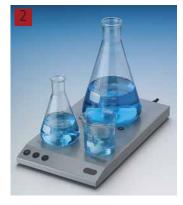
Weight:

100 ... 240 V, 50/60 Hz Power supply:

IP code: IP 65 Warranty: 3 years

| Туре | Plug type | PK | Cat. No. |
|---------------|-------------|----|-----------|
| LLG-uniSTIRRE | FR 1/M4 EU | 1 | 6.263 425 |
| LLG-uniSTIRRF | FR 1/M4 LIK | 1 | 6.263 426 |





Multi-position magnetic stirrers, Cimarec i Poly 15

Without heating. With non-mechanical, electronic induction drive. With 15 stirring Thermo Scientific spaces, for e.g. 6 x 1L erlenmeyer flasks or 15 x 250ml beakers. For mass screening and biological applications, even in humidity incubators. With built-in controller, digital speed indicator and soft-start drive. With mains adaptor.

Specifications

Max. stirring volume (H₂O): Motor rating input: 10 W Stirring positions: 15 130 ... 990 min⁻¹ Speed range: Permissible ambient temperature: -10 ... 40 °C Permissible humidity: 95 % Display: digital Dimensions (W x D x H): 240 x 420 x 35 mm

Weight: 6 kg IP code: IP 32

115/230 V, 50/60 Hz Power supply:

| туре | PK | Cat. No. |
|-------------------|----|-----------|
| Cimarec i Poly 15 | 1 | 9.720 650 |

Magnetic stirrers / Hotplates/Without heating, with induction

Multi-position magnetic stirrers MIX 15 eco

Without heating. Non-mechanical, electronic induction drive, 100% wear-free and maintenance-free. With 15 stirring positions, e.g. for $6 L \times 1 L$ erlenmeyer flasks or $15 \text{ ml} \times 250 \text{ ml}$ beakers (high form). Suitable for mass screening and biological applications of the property of the proper

15 ml x 250 ml beakers (high form). Suitable for mass screening and biological applications, even in humidity incubators. With built-in controller, digital speed indicator and SoftStart drive. Supplied with mains adapter. 3 years warranty. Made in Germany.



Specifications

 $\begin{array}{lll} \text{Max. stirring volume (H}_2\text{O}): & 3 \text{ I} \\ \text{Motor rating input:} & 10 \text{ W} \\ \text{Stirring positions:} & 15 \end{array}$

Speed range: 120 ... 1200 min⁻¹
Permissible ambient temperature: -10 ... 50 °C
Permissible humidity: 80 %
Display: digital

Dimensions (W x D x H): 245 x 425 x 38 mm

Weight: 7.7 kg IP code: IP 65

Power supply: 115/230 V, 50/60 Hz

| Туре | PK | Cat. No. |
|------------|----|-----------|
| MIX 15 eco | 1 | 9.645 958 |

Multi-position magnetic stirrers MIX 6/15/8 XL/12 XL

Without heating. With non-mechanical, electronic induction drive, 100 % wear-free and maintenance-free. Ideal for batch series stirring. Choice of 6-place, stirring position models which can stir up to $6 \times 1000 \text{ ml}$. Erlenmeyer flasks or 15-place models for up to $15 \times 250 \text{ ml}$ (high form) or $8/12 \times 600 \text{ ml}$ beakers (high form). Digital stirring speed display and soft-start function. With 4 adjustable power level stirring speeds (5 % to 20 %). Easy to clean, hermetically sealed casing which can be washed under running water, ultra flat, space-saving profile and 100 % synchronous speed control in all stirring positions. SoftStart. 3 years warranty, Made in Germany.

2mag

Specifications

Max. volume stirred (H_2O): 3 | Motor rating input: 20 W

Speed range Mix 6/15: 100 ... 2000 min⁻¹
Speed range Mix 8 XL/Mix 12 XL 100 ... 1600 min⁻¹
Permissible ambient temperature: -10 ... 50 °C
Permissible humidity: 80 %
Display: digital
IP code: IP 65

Power supply: 115/230 V, 50/60 Hz

| Туре | Stirring positions | Stirring centre distances | Dimensions (W x D x H) | Weight | PK Ca |
|-----------|-----------------------|---------------------------------|---------------------------|--------|-------------|
| | | mm | mm | kg | |
| MIX 6 | 6 | 130 | 245 x 425 x 38 | 7.6 | 1 9. |
| MIX 15 | 15 | 65 | 245 x 425 x 38 | 7.7 | 1 9. |
| MIX 8 XL | 8 | 90 | 185 x 420 x 38 | 6.4 | 1 9. |
| MIX 12 XL | 12 | 90 | 275 x 420 x 38 | 8.9 | 1 9. |





9.645 956



Magnetic stirrers and reaction blocks



- № 100% wear- and maintenance-free
- → Durable and sustainable

- ∂ years warranty

www.2mag.de



Multi-position magnetic stirrers MIXdrive with external control use in waterbath and oven

Without heating. With non-mechanical, electronic inductive drive and dust/water tight housing, 100 % wear-free and maintenance-free. Ideal for batch series stirring and for use in water baths. Choice of 6-place stirring position models which can stir up to $6 \times 1 L$ erlenmeyer flasks, 15-place models for up to $15 \times 250 \text{ ml}$ beakers (high form) and 60-place models for small sample containers and using appropriate test tube stands, up to 60 test tubes or centrifuge tubes. Control units available as price-optimized eco 10 W, high-power 20 W or ultra high-power 40 W version. Preselectable mixing power. SoftStart. 3 years warranty. Made in Germany. **Please order control unit separately.**

2mag

Sprecifications

Operating conditions:

Operating temp. range Standard:

in air and water +50 °C

HT-Version:

in air (ovens) +200 °C, in water +95 °C

-10 °C to +50 °C at 100 % R.H. max.

Stirrer unit housing:

Stainless steel IP 68

IP code:

| Туре | Stirring capacity | Stirring positions | Stirring centre distances | Dimensions (W x D x H) | Weight | PK | Cat. No. |
|-------------------|----------------------|-----------------------|---------------------------------|---------------------------|--------|----|-----------|
| | 1 | | mm | mm | kg | | |
| MIXdrive 1 XS | 1.0 | 1 | | 48 x 48 x 18 | 0.23 | 1 | 9.645 985 |
| MIXdrive 1 XS HT | 1.0 | 1 | | 48 x 48 x 18 | 0.22 | 1 | 9.645 986 |
| MIXdrive 1 eco | 3.0 | 1 | | 120 x 120 x 35 | 1.40 | 1 | 9.645 961 |
| MIXdrive 1 eco HT | 3.0 | 1 | | 120 x 120 x 35 | 1.40 | 1 | 9.645 962 |
| MIXdrive 1 | 10.0 | 1 | | 180 x 180 x 38 | 3.20 | 1 | 9.645 959 |
| MIXdrive 1 HT | 10.0 | 1 | | 180 x 180 x 38 | 3.00 | 1 | 9.645 960 |
| MIXdrive 6 | 3.0 | 6 | 130 | 245 x 375 x 38 | 8.50 | 1 | 9.645 963 |
| MIXdrive 6 HT | 3.0 | 6 | 130 | 245 x 375 x 38 | 8.10 | 1 | 9.645 964 |
| MIXdrive 15 | 3.0 | 15 | 65 | 245 x 375 x 38 | 8.60 | 1 | 9.645 965 |
| MIXdrive 15 HT | 3.0 | 15 | 65 | 245 x 375 x 38 | 8.30 | 1 | 9.645 966 |
| MIXdrive 60 | 0.5 | 60 | 32 | 245 x 375 x 38 | 8.00 | 1 | 9.645 967 |
| MIXdrive 60 HT | 0.5 | 60 | 32 | 245 x 375 x 38 | 7.50 | 1 | 9.645 968 |

Please order control unit **MIXcontrol** separately.

Control units for mixers MIXdrive

MIXcontrol eco: Prize-optimized control unit, speed setting and ON/OFF by turning 2 units.

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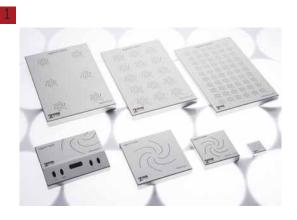
MIXcontrol 20: Stainless steel housing, digital speed display, 4-step power setting, 20 watts.

MIXcontrol 40: Identical to MIXcontrol 20, but 10-step power setting, 40 watts, 2 sockets for MIXdrive stirres.

Specifications

Display: digital

| Туре | Min. speed | Max. speed | Dimensions (W x D x H) | Weight | PK Cat. No. |
|------------------------------|---------------|---------------|---------------------------|--------|--------------------|
| | rpm | rpm | mm | kg | |
| MIXcontrol eco, with EU-plug | 120 | 1200 | 65 x 50 x 45 | 0.08 | 1 9.645 969 |
| MIXcontrol 20, with EU-plug | 100 | 1600 | 200 x 155 x 38 | 1.30 | 1 9.645 970 |
| MIXcontrol 40, with EU-plug | 100 | 2000 | 200 x 155 x 38 | 1.30 | 1 9.645 971 |





9.645 971

Magnetic stirrers / Hotplates/Without heating, cable free



Magnetic mini-stirrers topolino mobil

Mobile magnetic mini-stirrer for mixing quantities up to 250 ml for battery and mains operation.

- Durable, brushless motor

- Continuously adjustable speed range

- Portable operation with long operating time (8-12 h)

- Short charging time (2-3 h)

- Operation with standard replaceable AA rechargeable batteries and with supplied mains adapter

Specifications

250 ml Stirring quantity max. (H2O): Speed range: 300 ... 1800 rpm Permissible ambient temperature: 5 ... 40 °C 80 % Permissible relative moisture: Material: PP Dimensions Top plate (Ø): 80 mm

Dimensions (Ø x H): 140 x 42 mm Weight: 0.6 kg

Power supply: 100 ... 240 V, 50/60 Hz

IP code: IP 21

| Туре | PK | Cat. No. |
|----------------|----|-----------|
| Topolino mobil | 1 | 9.720 219 |



Magnetic stirrer SM27, with battery operation.

For use in the field or inside incubators or glove boxes where external power supply is impractical. With BioCote, silver-based, antimicrobial protection. Maximum speed 1300rpm. Maximum volume stirred 1.5L (H₂O). Top plate 150 mm x 160 mm. Variable speed control with battery status indicator. ABS casing 70 mm high. Accessory adapters are available for use on 230V 50Hz mains or 12V vehicle supply using the cigar lighter socket.

Specifications

Max. volume stirred (H₂O): 1.5 l Stirring positions:

Speed range: 0...1300 min-1 Permissible ambient temperature: 5...60 °C 80 % Permissible humidity: Display: analog

150 x 160 x 70 mm Dimensions (W x D x H):

Weight: 1.3 kg Power supply: Battery

| Туре | PK | Cat. No. |
|------|----|-----------|
| SM27 | 1 | 9.950 408 |



Magnetic stirrer accuMIX, with battery operation

Mobile magnetic stirrer, 100 % maintenance-free and wear-free by inductive

2mag-Magnetic-Drive concept for mixing of solutions, speed range from 100 rpm up to

1600 rpm, jerk-free stirring also at low speeds, two-step power setting for high power with regard to large and viscous stirring amounts and reduced power for battery-saving long-term operation. Constructed for the independent batteryand stationary mains operation, equipped with 8 commercially available high performance rechargeable batteries (Mignon/AA), universal charging/power supply device, intelligent battery charging station with single controlled charging slots as well as battery service function and 12 V adapter cable for the operation at cigarette lighter car sockets.

Specifications

Max. volume stirred (H₂O): 3 I Motor rating input: 10 W Stirring positions:

100 ... 1600 min-1 Speed range: Permissible ambient temperature: -10 ... 50 °C 80 % Permissible humidity: Display: analog

Dimensions (W x D x H): 215 x 130 x 40 mm

Weight: 1.5 kg IP 30 IP code: Power supply: 8 x AA

| Туре | PK | Cat. No. |
|---------|----|-----------|
| accuMIX | 1 | 9.646 011 |

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Magnetic stirrer with heating LLG-uniSTIRRER 3, complete set

Universal magnetic stirrer with all essential functions and equipment features. A LED display to control all parameters, an integrated temperature control as well as an enclosed design (IP 42) are integrated features. The included PT1000 sensor ensures an exact temperature control. A stand rod with a sensor holder is supplied with this instrument. The integrated **HOT-sign** warns the user of a hot plate even if the device is switched off.

- LED display to set the exact rotation speed and the temperature
- Digital controlled rotation speed and temperature
- 'HOT' warning sign, even if the device is switched off
- Stainless steel surface
- Delivered as complete set: magnetic stirrer, sensor Pt1000, stand rod and sensor holder
- Integrated temperature control

Delivery includes: Magnetic stirrer with PT1000 probe, rod and holder



Specifications

Stirring quantity (H₂O):

200 ... 1500 min⁻¹ Speed range: Display accuracy: ±10 min-1 max. 50 mm Magnetic bar: Display: LED Heating plate: Ø 135 mm Permissible ambient temperature: 5 ... 40 °C RT ... 280 °C Temperature range: ±1 °C Setting accuracy: ±2 °C Control accuracy: Heat output: 500 W 320 °C Safety temperature:

Dimensions (W x D x H): 155 x 215 x 100 mm

Weight: 1.5 kg

Power supply: 200 ... 240 V, 50/60 Hz

IP code: IP 42 Warranty: 3 years

| Туре | Plug type | PK | Cat. No. |
|--------------------------------------|-----------|----|------------------------|
| LLG-uniSTIRRER 3 LLG-uniSTIRRER 3 | | 1 | 6.263 410 6.263 411 |

Accessories for LLG-uniSTIRRER 3/LLG-uniSTIRRER 5/LLG-uniSTIRRER 7

| Description | For | PK | Cat. No. |
|---|--------------------------|----|-----------|
| Stand and sensor holder | LLG-uniSTIRRER 3 | 1 | 6.263 416 |
| Adjustment knob | LLG-uniSTIRRER 3 | 1 | 6.263 414 |
| Heating plate, stainless steel | LLG-uniSTIRRER 3 | 1 | 6.263 613 |
| Silicone Protective cover | LLG-uni <i>STIRRER</i> 5 | 1 | 6.263 445 |
| PT1000 temperature sensor | LLG-uniSTIRRER 3/5/7 | 1 | 6.263 415 |
| PT1000-B temperature sensor, glass coated | LLG-uniSTIRRER 3/5/7 | 1 | 6.263 417 |



Magnetic stirrer with heating LLG-uniSTIRRER 5, complete package

Universal magnetic stirrer with an outstanding price-performance ratio. Safety features include a "hot" warning display and a stirring function that continues to run until the plate temperature is below 50 °C, even when the device is switched off. A digital timer enables unattended operation and can be set from 1 min to 99 h 59 min. When the set time has elapsed, the unit stops automatically. An integrated control function offers precise control of the heated fluid temperature via a remote PT1000 temperature probe. The device is equipped with a Ø 135 mm stainless steel plate with glass ceramic, suitable for the LLG-Universal reaction block systems.

- Timer (1 min to 99 h 59 min)
- Maintenance-free, brushless DC motor
- Stainless steel plate with glass ceramics coating
- Digital control and backlit display
- Stirrer and display can be controlled remotely via an RS232 interface
- Hot surface indicator
- Sturdy metal housing
- Powerful stirring
- Connection for PT1000, integrated control function

Scope of delivery: Magnetic stirrer with PT1000 probe, rod and holder



Specifications

Max. stirring quantity (H2O): 20 I Speed: $100\,\ldots\,1500\;\text{min}^{\text{-}1}$ Accuracy: ±1 min-1 Magnetic bar: max. 80 mm Display: LCD Heating plate: Ø 135 mm 5 ... 40 °C Permissible ambient temperature: Temperature range: RT ... 340 °C ±0.1 °C Setting accuracy: ±0.2 °C Control accuracy: 550 W Heat output:

360 °C Safety temperature: Dimensions (W x D x H): 160 x 285 x 85 mm

Weight: 2.8 kg 200 ... 240 V, 50/60 Hz Power supply:

IP code: IP 42 Warranty: 3 years

| Туре | Plug type | PK | Cat. No. |
|------------------|-----------|----|-----------|
| | | | |
| LLG-uniSTIRRER 5 | EU | 1 | 6.263 440 |
| LLG-uniSTIRRER 5 | UK | 1 | 6.263 441 |



LLG-Magnetic stirring bars, cylindrical, PTFE, eco pack

Circular, smooth and PTFE-coated. Packaging size: 10 pieces

| Diam. | Length | PK | Cat. No. |
|-------|--------|----|-----------|
| mm | mm | | |
| 6 | 10 | 10 | 9.198 910 |
| 3 | 12 | 10 | 9.198 766 |
| 6 | 15 | 10 | 9.198 919 |
| 6 | 20 | 10 | 9.198 920 |
| 6 | 25 | 10 | 9.198 925 |
| 8 | 25 | 10 | 9.198 767 |
| 6 | 30 | 10 | 9.198 930 |
| 6 | 35 | 10 | 9.198 935 |
| 8 | 40 | 10 | 9.198 940 |
| 8 | 45 | 10 | 9.198 945 |
| 8 | 50 | 10 | 9.198 950 |
| 9 | 60 | 10 | 9.198 960 |
| 9 | 70 | 10 | 9.198 970 |
| 9 | 80 | 10 | 9.198 980 |

Magnetic stirrer with heating LLG-uniSTIRRER 7, complete package

Universal magnetic stirrer with an outstanding price-performance ratio. Safety features include a "hot" warning display and a stirring function that continues to run until the plate temperature is below 50 °C, even when the device is switched off. An integrated control function offers precise control of the heated fluid temperature via a remote PT1000 temperature probe. The device is equipped with a stainless steel plate with glass ceramic (184 x 184 mm).

- Maintenance-free, brushless DC motor
- Digital control and backlit display
- Stirrer and display can be controlled remotely via an RS232 interface
- Hot surface indicator
- Stainless steel plate with glass ceramic
- Sturdy metal housing
- Powerful stirring
- Connection for PT1000, integrated control function
- Mountable rod on the left and on the right side of the stirrer

Scope of delivery: Magnetic stirrer with PT1000 probe, rod and holder

Specifications

Max. stirring quantity (H2O):

Speed range: 100 ... 1500 min⁻¹ Accuracy: ±1 min-1 Magnetic bar: 80 mm Display: LCD Heating plate: 184 x 184 mm Permissible ambient temperature: 5 ... 40 °C

Temperature range: ambient ... 550 °C Setting accuracy: ±0.1 °C ±0.2 °C Control accuracy: 1000 W Heat output: Safety temperature: 580 °C

Dimensions (W x D x H): 215 x 360 x 112 mm

Weight: 5.3 kg

Power supply: 200 ... 240 V, 50/60 Hz

IP code: IP 42 Warranty: 3 years

| Туре | Plug type | PK | Cat. No. |
|------------------|-----------|----|-----------|
| | | | |
| LLG-uniSTIRRER 7 | EU | 1 | 6.263 450 |
| LLG-uniSTIRRER 7 | UK | 1 | 6.263 451 |





Accessories for LLG-uniSTIRRER 3/LLG-uniSTIRRER 5/LLG-uniSTIRRER 7

| Description | For | PK | Cat. No. |
|---|--------------------------|----|-----------|
| | | | |
| Stand and sensor holder | LLG-uni <i>STIRRER</i> 3 | 1 | 6.263 416 |
| Adjustment knob | LLG-uni <i>STIRRER</i> 3 | 1 | 6.263 414 |
| Heating plate, stainless steel | LLG-uniSTIRRER 3 | 1 | 6.263 613 |
| Silicone Protective cover | LLG-uniSTIRRER 5 | 1 | 6.263 445 |
| PT1000 temperature sensor | LLG-uniSTIRRER 3/5/7 | 1 | 6.263 415 |
| PT1000-B temperature sensor, glass coated | LLG-uniSTIRRER 3/5/7 | 1 | 6.263 417 |

LLG-Magnetic Stirring Bar Retrievers, PTFE

PTFE-encapsulated stirring bar retriever with strong permanent magnet (Alnico 5), universal chemical resistance. For the removal of stirring bars from aggressive liquids, prevents loss of stirring bars. Lower end diameter 10mm.

| Diam. | Length | PK | Cat. No. |
|-------|--------|----|-----------|
| mm | mm | | |
| 8 | 150 | 1 | 9.197 717 |
| 8 | 250 | 1 | 9.197 725 |
| 8 | 300 | 1 | 4.008 501 |
| 8 | 350 | 1 | 9.197 735 |



Universal reaction block system for magnetic stirrers please see page 475.

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4. Stirring, Shaking, Mixing

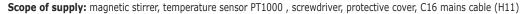
Magnetic stirrers / Hotplates/With heating and motor



1 2 LLG-RCT standard safety control

Magnetic stirrer with new technology and new functions:

- integrated temperature control
- incl. PT 1000 temperature sensor (PT 1000.60)
- exact temperature and speed setting via digital display, even when switched off
- digital display of set safety temperature limit
- hot top indicator, hot surface warning to prevent burns
- digital error code display
- with adjustable safety circuit of heating plate temperature (50 to 360 °C)
- safety magnetic stirrer with heating, suitable for unsupervised operation
- DIN 12878 connector for attaching a contact thermometer, e.g. ETS-D5;
 enables precise temperature control directly in the heated medium
- enhanced safety due to improved heat control technology
- enclosed assembly (IP42) guarantees long service life
- highly polished, aluminium hotplate for optimal heat transfer
- improved magnetic coupling
- supplied with housing protection cover H 98
- Tested acc. to DIN EN IEC 61010-1





Specifications

Max. stirring quantity (H2O): 50 ... 1500 min⁻¹ Speed range: ±1 min-1 Accuracy: Magnetic bar: 80 mm Display: LED Heating plate: Ø 135 mm Permissible ambient temperature: 5 ... 40 °C ambient ... 310 °C Temperature range: Setting accuracy: ±1 K Control accuracy: ±2 K Heat output: 600 W 50 ... 360 °C Safety temperature: Dimensions (W x D x H): 160 x 270 x 85 mm Weight:

 Weight:
 2.5 kg

 Power supply:
 220 ...

Power supply: 220 ... 230 V, 50/60 Hz IP code: IP 42 Warranty: 3 years

| Туре | Plug type | PK | Cat. No. |
|---|-----------|----|-----------|
| RCT Standard safety control incl. PT 1000 | EU | 1 | 9.720 250 |
| RCT Standard safety control incl. PT 1000 | UK | 1 | 6.242 087 |
| RCT Standard safety control incl. PT 1000 | CH | 1 | 4.008 142 |



Magnetic stirrer/hotplate RH basic 2

Low-priced, magnetic stirrer/hotplate, with heating, with stainless steel top plate.

Specifications

Stirring volume: 10L
Motor rating input/output: 15/2W
Speed indication: Scale (0 to 6)
Speed range 100 to 2000rpm
Heating power: 400W
Heating rate (1 litre water): 3K/min

Temperature range: Amb. to +320°C
Hotplate surface: Stainless steel (AISI 304), 125mm dia.

Dimensions W x D x H: 168 x 220 x 105mm

Weight: 2.4kg
Protection class acc. to DIN EN 60529: IP21

Supply requirement: 230V 50/60 Hz
Tested to DIN EN IEC 61010-1.

| Туре | Plug type | PK | Cat. No. |
|------------|-----------|----|-----------|
| RH basic 2 | EU | 1 | 9.720 402 |

Magnetic stirrers / Hotplates/With heating and motor

Velp Scientifica

Magnetic stirrer ARE

Magnetic stirrer with aluminium heating plate for stirring speeds up to 1500 min⁻¹.

- Suitable for stirring volumes of up to 20 $\mbox{\scriptsize I}$
- Operating temperature up to 370 °C
- Chemical- and scratch-resistant heating plate
- Electronic speed control for stable stirring speeds
- Torque compensation to keep the speed constant even on viscosity changes

Specifications

Volume (H2O):20 IPower rating:630 WSpeed (max.):1500 min⁻¹Number of stirring positions:1Display:Analog

Display: Analog
Temperature range: RT ... 370 °C
Stirring position material: Aluminium
Stirring position: Ø 155 mm

Dimensions (W x D x H): 165 x 280 x 115 mm Weight: 2.6 kg

IP code: IP 42
Power supply: 230 V, 50/60 Hz
Warranty: 3 years

| Туре | Plug type | PK | Cat. No. |
|------|-----------|----|-----------|
| ARE | EU | 1 | 4.661 100 |

ARE EU 1 4.6

Magnetic stirrers RH basic/digital

Economic magnetic stirrer with heating. High heat output of 600 watts and the steel-copper compound hot plate ensures rapid heating. Adjustable safety temperature from 50 to 370 °C. Soft-start stirring motor. Includes M 10 thread for a support rod. Strong magnetic field and wide speed range for volumes up to 15 litres. RH basic white/RH digital white with chemically resistant hot plate.

RH digital only: Bushing according to DIN 12878 for connecting an electronic contact thermometer, such as the ETS-D5. Highly accurate temperature control is possible with the sensor placed directly in the medium.

- Digital display of temperature and speed
- Error code display
- Easy operation with touch keypad

Specifications

Max. stirring quantity (H₂O): 151 Motor rating input/output: 15/2 W Speed range: 50... 2000 min-1 Speed display RH basic/RH digital: scale/LED Heat output: 600 W Heating rate (11 H₂O): 6K/min Temperature range min./max. 50 to 320 °C Setting accuracy RH digital: ±5K Adjustable safety circuit min./max.: 50 to 370 °C Connection for ext. temp. sensor: DIN 12878

Control accuracy with sensor: ± 1 K ETS-D5/ETS-D6: ± 0.5 K/ ± 0.2 K

Set-up plate: Stainless steel 1.4301, diam. 135 mm

Dimensions (W x D x H): 160 x 246 x 90 mm

Weight: 2.8 kg Protection class acc. to DIN EN 60529: IP 21

Power supply: 220-240 V, 50/60 Hz



9.720 411



9.720 414



9.720 418

| туре | Plug type | PK | Cat. No. |
|------------------|-----------|----|-------------|
| | | | |
| RH basic | EU | 1 | 9.720 411 2 |
| RH basic | UK | | 9.720 412 |
| RH basic white | EU | 1 | 9.720 417 |
| RH digital | EU | 1 | 9.720 414 3 |
| RH digital white | EU | 1 | 9.720 418 4 |
| | | | |

Magnetic stirrers SS/SD/SP/CS/CD/CP 152

With heating. Magnetic stirrers with strong magnets and powerful motor for mixing large volumes. The analog models have a LED display for the set and actual temperature of

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NEW

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Stuart

the device. With the digital models, the set and actual temperature is shown on the display, while the speed is indicated

- Spill-resistant front control panel with a chemically toughened glass for extra resilience
- Hot surface warning light flashes when plate temperature is above 50 °C
- With an integral fixing point for a retort rod
- With BioCote, silver-based, antimicrobial protection

SP152/CP152 additionally with:

- Full-colour 10-cm TFT screen which simultaneously displays target settings and the actual temperature
- Individual profiles can be created and saved
- User calibration for adjusting the temperature output (±5% at 50 and 450 °C)
- Incl. Pt100 Temperature sensor

Specifications

Maximum Stirring Capacity: 15 I Display resolution: 1°C ±1 °C Accuracy: Plate Dimensions: 150 x 150 mm Dimensions (W x D x H): 180 x 300 x 93 mm

Weight: 2.9 kg

Power supply: 230 V, 50/60 Hz Warranty: 3 years



Magnetic stirrer SS152/SD152 /SP152

Durable chip-resistant aluminum top plate offers excellent heat transmission, rapid Stuart

heating, and oven temperature distribution

Specifications

Plate Material: Aluminium, ceramic coated

Heated Area: 150 x 150 mm Heater Power: 700 W Max plate temp: 325 °C Stirrer Speed: 50 ... 1400 rpm



4.672 580

| Туре | Colour | Display | PK | Cat. No. |
|--------|---------|----------|----|-------------|
| | housing | type | | |
| | | | | _ |
| SS152B | Blue | Analogue | 1 | 4.672 505 1 |
| SS152K | Black | Analogue | 1 | 4.672 506 |
| SS152W | White | Analogue | 1 | 4.672 507 |
| SD152B | Blue | Digital | 1 | 4.672 517 |
| SD152K | Black | Digital | 1 | 4.672 518 |
| SD152W | White | Digital | 1 | 4.672 519 |
| SP152B | Blue | Digital | 1 | 4.672 579 |
| SP152W | Black | Digital | 1 | 4.672 580 2 |
| SP152K | White | Digital | 1 | 4.672 581 |
| SP152P | Pink | Digital | 1 | 4.672 582 |



Magnetic stirrers CS152/CD152 /CP152

Ceramic top plate is chemical resistant and easy to clean, plus the white surface ensures good visibility of colour changes.

Specification

Plate Material: Glass ceramic Heated Area: 120 x 120 mm Heater Power: 500 W 450 °C Max plate temp: Stirrer Speed: 50 ... 1250 rpm



4.672 522

4.672 585

| Туре | Colour | Display | PK | Cat. No. |
|--------|---------|----------|----|-------------|
| | housing | type | | |
| CS152B | Blue | Analogue | 1 | 4.672 508 |
| CS152K | Black | Analogue | 1 | 4.672 509 |
| CS152W | White | Analogue | 1 | 4.672 510 |
| CD152B | Blue | Digital | 1 | 4.672 520 |
| CD152K | Black | Digital | 1 | 4.672 521 |
| CD152W | White | Digital | 1 | 4.672 522 |
| CP152B | Blue | Digital | 1 | 4.672 583 |
| CP152W | Black | Digital | 1 | 4.672 584 |
| CP152K | White | Digital | 1 | 4.672 585 4 |
| CP152P | Pink | Digital | 1 | 4.672 586 |

Magnetic stirrers / Hotplates/With heating and motor

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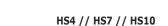
Magnetic stirrer C-MAG HS 4/C-MAG HS 7/C-MAG HS 10

With heating. Ceramic hotplate which offers excellent chemical resistance.

- powerful motor for stirring quantities of up to 5L, 10L or 15L (H₂O).
- fixed safety circuit of 550°C
- Hot Top indicator hot surface warning to prevent burns
- exact temperature setting via digital display (LED)
- digital error code display
- elevated control panel for protection against spilled liquids

C-MAG HS 7 and C-MAG HS 10:

Connection acc. to DIN 12878 for attaching a contact thermometer, e.g. ETS-D5; enables precise temperature control.



Magnetic stirrer $5 \mid // \mid 10 \mid // \mid 15 \mid$ Stirring quantity (H_2O): $5 \mid // \mid 10 \mid // \mid 15 \mid$ Motor rating input/output:15/1.5WSpeed range: $100 \dots 1500 \text{rpm}$

Speed display: scale

Heating function

Specifications

Temperature display: digital

 $\begin{array}{lll} \mbox{Heat output:} & 250 \mbox{W // } 1000 \mbox{W // } 1500 \mbox{W} \\ \mbox{Heating rate (1 | H_2O):} & 2.5 \mbox{ K/min // } 5 \mbox{ K/min // } 5 \mbox{ K/min // } \\ \end{array}$

 $\begin{array}{lll} \mbox{Heating temperature range:} & 50 \dots 500 \mbox{°C} \\ \mbox{Heat control accuracy:} & \pm 10 \mbox{K} \\ \mbox{Fixed safety circuit:} & 550 \mbox{°C} \\ \end{array}$

Control accuracy with sensor

C-MAG HS 4: C-MAG HS 7/HS 10: ETS-D5/±0.5K

Top plate

Material: glass ceramic

Dimensions: 100 x 100mm // 180 x 180mm // 260 x 260mm

Protection class according to DIN EN 60529: IP21



9.720 490



9.720 491



9.720 492

| Туре | Plug type | PK | Cat. No. |
|-------------|-----------|----|-------------|
| | | | |
| C-MAG HS 4 | EU | 1 | 9.720 490 1 |
| C-MAG HS 4 | UK | 1 | 4.008 087 |
| C-MAG HS 7 | EU | 1 | 9.720 491 2 |
| C-MAG HS 7 | UK | 1 | 4.008 090 |
| C-MAG HS 10 | EU | 1 | 9.720 492 |
| C-MAG HS 10 | UK | 1 | 4.008 093 |

Magnetic stirrer C-MAG HS 7 Package

C-MAG HS 7 Package includes: Magnetic stirrer/hotplate C-MAG HS 7, ETS-D5 Electronic contact thermometer, H 38 Holding rod, H 16 V Support rod and H 44 Bosshead.

Specifications

Speed range: 100...1500 min⁻¹
Permissible ambient temperature: 5...40 °C
Permissible humidity: 80 %
Display: digital

Plate (W x D): 180 x 180 mm Dimensions (W x D x H): 220 x 330 x 105 mm

Weight: 5 kg IP code: IP 21

Power supply: 230/120/100 V, 50/60 Hz



| Туре | PK | Cat. No. |
|--------------------|----|-----------|
| C-MAG HS 7 Package | 1 | 6.235 183 |

Magnetic stirrers / Hotplates/With heating and motor

Magnetic stirrer AREX-6 Connect PRO

Magnetic stirrer with ceramic-coated aluminium heating plate, stirring speeds up to 1700 min⁻¹, timer and PT100 temperature sensor. With WiFi connection to the VELP Velp Scientifica

1 **4.666 733**

Ermes Cloud Platform for uploading, managing, monitoring and exchanging results and parameters.

Access to the device is possible via PC, Smartphone and Tablet.

Equipped with extensive safety functions: independent safety circuits protect the device in case of overtemperature, adjustable temperature limitation, warning in case of hot surface, protection against unattended heating as well as alarm and switch-off function if the temperature sensor is not immersed in the medium.

- Suitable for stirring volumes up to 20 I
- Powerful, brushless motor
- Torque compensation to keep the speed constant even on viscosity changes
- Reverse of stirring direction
- Resistant housing made of die-cast
- Chemical- and scratch-resistant heating plate
- Gentle start of the stirrer
- Temperature control via software up to 370 °C
- All settings configurable on menu
- Clear display of all parameters
- Software updates by WiFi

Scope of delivery AREX-6 Connect PRO: Magnetic stirrer AREX-6 Connect PRO, PT100 temperature sensor Scope of delivery AREX-6 Connect PRO Set: Magnetic stirrer AREX-6 Connect PRO, PT100 temperature sensor, support rod, clamp for the temperature

Specifications

AREX-6 Connect PRO Set

Volume (H2O): 20 I Motor rating: 630 W Speed range: 30 ... 1700 min⁻¹ Speed accuracy: 5 min⁻¹ Number of stirring positions: Digital Display: Temperature range: RT ... 370 °C Temperature accuracy: ±1 °C Aluminium, ceramic coated Stirring position material: Stirring position: Ø 135 mm Permissible ambient temperature: 5 ... 40 °C 160 x 280 x 105 mm

Dimensions (W x D x H): Weight: 2.6 kg IP code: IP 42 230 V, 50/60 Hz Power supply: Warranty: 3 years

Plug type Type PK Cat. No. AREX-6 Connect PRO 1 4.666 720 1



4.666 720

Magnetic Stirrers MR Hei-PLATE

The Hei-PLATE series with heating consists of models Hei-Standard, Hei-Tec and Hei-Connect.

Heidolph

- The chemically resistant KeraDisk® hot plate allows for immediate heat transfer resulting in guick heat-up times
- In case the heating function fails, stirring will not be discontinued to prevent bumping
- A separate on/off button for heating prevents unintentional heat-up
- With fire-resistant aluminum die-cast housing, which prevents the stirrer from damage, even if exposed to highest temperatures
- In case of a short-circuit, damage to the temperature sensor or disorder of the process, the unit powers off completely
- The temperature sensor consists of two independent safety circuits which switches off heating in case of any overtemperature situation
- Hermetically-sealed housing protects all mechanical and electronic components from aggressive environments
- With connection for optional temperature sensor Pt 1000

Hei-Tec and Hei-Connect additionally with:

- Digital display enables full process monitoring and precise setting of all parameters.
- This unit features a digital display and allows for easy setting and monitoring of values in the illuminated readout
- An illuminated button indicates clearly if the stirring mode is activated
- Precise adjustment of the desired hotplate temperature by turn-push-button
- Overheating protection by a safety circuit that switches off heating if the temperature sensor is not immersed in the media vessel



Stirring quantity (H2O): 201

Speed range: 100 ... 1400 rpm Heating power: 800 W Temperature range: 20 ... 300 °C Permissible ambient temperature: 5 ... 31 °C Permissible relative moisture: 80 % Plate Material: Kera-Disk® Plate Dimensions (Ø): 145 mm

173 x 277 x 94 mm Dimensions (W x D x H):

2.9 ka Weight: Power supply: 230 V IP code: IP 32 Warranty: 3 years





6.256 440

Magnetic stirring hotplates MR Hei-Standard

Model for standard applications without temperature sensor. Heidolph

| Туре | Plug type | PK | Cat. No. |
|-----------------|-----------|----|-----------|
| MR Hei-Standard | EU | 1 | 9.720 201 |
| MR Hei-Standard | UK | 1 | 6.263 289 |

Magnetic stirring hotplates MR Hei-Tec

Precise adjustment and monitoring of device parameters via digital display. Heidolph

| Туре | Plug type | PK Cat. No. |
|--------------------------|-----------|--------------------|
| MR Hei-Tec with Pt 1000 | EU | 1 6.256 440 |
| MR Hei-Tec, stirrer only | EU | 1 9.720 145 |
| MR Hei-Tec, stirrer only | UK | 1 6.240 766 |

Packages Magnetic stirrers MR Hei-PLATE

Package Hei-PLATE Silver 1

- Magnetic Stirrer MR Hei-Tec
- Temperature sensor Pt 1000
- Support rod for Pt 1000
- Clamp for Pt 1000

| | | - | | |
|---|------|---|-----------------------|--|
| | | | | |
| I | 40.0 | | - 4 | |
| | 1 | | | |
| | | | Statement of the last | |
| | | | | |

Heidolph

| Туре | PK | Cat. No. |
|-------------------------------|----|-----------|
| Package MR Hei-PLATE Silver 1 | 1 | 6.256 441 |

Magnetic stirrers / Hotplates/With heating and motor



Magnetic stirrers Guardian 7000



The durable Hotplate Stirrers are designed with outstanding safety features and superior heating and mixing performance.

- SmartRate™ enables to select fast or slow temperature and speed ramp rates
- SmartHousing™ stays cool to the touch and is chemical-resistant
- SmartHeat™ safely controls and monitors the maximum temperature
- SafetyHeat™ assures safety in heating applications with dual monitoring of system health
- SmartLink™ turns off heating function if Bluetooth® link is broken
- SmartPresence™ turns off heating function if users are not recognised nearby

Scope of supply: Magnetic stirrer, temperature sensor, in use cover



Specifications

Speed: 60 ... 1600 rpm Timer: 1 min ... 99 h 59 min Permissible ambient conditions: 5 ... 40 °C Power supply: 230 V, 50/60 Hz

| Туре | Stirring capacity | | | Plate dimensions | Dimensions (W x D x H) | PK Cat. No. |
|------------|----------------------|----------------|-----------|---------------------|---------------------------|----------------------|
| | I | °C | | mm | mm | |
| e-G71HS07C | 15 | ambient +5 500 | Ceramic | 178 x 178 | 223 x 309 x 122 | 1 6.312 903 |
| e-G71HS10C | 18 | ambient +5 500 | Ceramic | 254 x 254 | 286 x 415 x 122 | 1 6.312 904 |
| e-G71HSRDM | 20 | ambient +5 380 | Aluminium | Ø 135 | 173 x 267 x 126 | 1 6.312 905 2 |



Magnetic stirrer IKA Plate (RCT digital)

With glass surface. The control can be optimized by regular firmware updates. The integrated timer and counter function supports the control of kinetics and sensitive reactions. The IKA SmartTemp® function protects users intelligently and predictably.

- Alteration of the stirring direction possible
- Heating plate made of aluminium alloy for optimum heat transmission
- Clearly arranged LCD display
- Housing made of glass for optimum cleaning and chemical resistance
- Temperature control directly in the medium with PT 1000 temperature sensor
- Adjustable safety circuit up to 360 °C
- IKA SmartTemp® function prevents users from burn injuries
- Timer
- USB-/RS232 interface
- 10 years warranty

Scope of supply: Magnetic stirrer incl. Temperature sensor PT1000

Specifications

Max. stirring quantity (H2O): Motor rating input/output: Speed range:

Max. stirring bar length: Heating power: Heating rate (1 | H₂O): Temperature range:

Heat control accuracy at 100 °C:

Safety circuit:

Connection for ext. temp. sensor:

Control accuracy with sensor PT1000, ETS-D5/ETS-D6:

Set-up plate Material: Set-up plate Dimensions:

Protection class acc. to DIN EN 60529: Overall dimensions (W x D x H):

Weight:

Power supply:

20 I 50 W/9 W 50 to 1500 rpm 80 mm 600 W 7 K/min

ambient +10 to 310 °C ±5 K

50 to 360 °C

PT1000, ETS-D5, ETS-D6

±0.5 K/±0.2 K Aluminium alloy diam. 135 mm

IP 42

160 x 270 x 85 mm

2.4 kg

220-230/115/100 V, 50/60 Hz

Cat No

| Туре | rk cat. No. |
|-------------|--------------------|
| RCT digital | 1 6.286 692 |

ΙΚΑ









Magnetic stirrers / Hotplates/With heating and motor

Magnetic stirrer RCT 5 digital

Powerful Magnetic stirrer with glass surface for demanding stirring tasks. The stirring process can be programmed individually from beginning to end and so the reaction runs reliably and safely even without monitoring.

- Alteration of the stirring direction is possible
- Timer functions or sequence programming is adjustable
- Set-up plate made of white, scratch-resistant ceramic coating
- Warning in case of a hot surface
- Adjustable safety circuit up to 370 °C
- USB-/RS232 interface

Specifications

Max. stirring quantity (H2O): Motor rating input/output: Speed range: Max. stirring bar length:

Heating power: Heating rate (1 | H₂O): Temperature range:

Heat control accuracy at 100 °C: Safety circuit:

Connection for ext. temp. sensor:

Control accuracy with sensor PT1000, ETS-D5/ETS-D6:

Set-up plate Material: Set-up plate Dimensions: Overall dimensions (W x D x H):

Weight:

IP code acc. to DIN EN 60529:

Power supply:



IKA



20 I 50 W/9 W 50 ... 1500 rpm 80 mm 850 W 7.5 K/min

ambient +13 to 310 °C

±5 K 50 ... 370 °C

PT1000, ETS-D5, ETS-D6

±0.5 K/±0.2 K

Aluminium, ceramic coating

137 x 137 mm 160 x 270 x 85 mm

2.6 kg IP 42

220-230/115/100 V, 50/60 Hz

| Туре | Plug type | PK | Cat. No. |
|---------------|-----------|----|-----------|
| RCT 5 digital | EU | 1 | 4.669 085 |

Magnetic stirrer C-MAG HS 7 control

The magnetic stirrer C-Mag HS 7 control has a square top made of ceramic which offers excellent chemical resistance. The C-Mag HS 7 control improves over time with regular firmware updates. Control of kinetics and sensitive reactions are supported by the integrated timer and counter function.

- Alteration of the stirring direction possible
- Clearly arranged LCD display
- Temperature control directly in the media with PT1000 temperature sensor
- Adjustable safety circuit up to 650 °C
- IKA SmartTemp® hot surface warning to prevent burns
- Elevated control panel for protection against leaking liquids
- Timer
- USB/RS232 interface
- 10 years warranty

Scope of supply: Magnetic stirrer incl. Temperature sensor PT1000

Specifications

Max. stirring quantity (H₂O): 20 I 20 W/9 W Motor rating input/output: 50 to 1500 rpm Speed range: Max. stirring bar length: 80 mm Heat output: 1000 W

Heating rate (11 H₂O): 5 K/min ambient + 5 to 500 °C Temperature range: ±5 K

Heat control accuracy at 100 °C: Safety circuit:

Connection for ext. temp. sensor:

Control accuracy with sensor PT1000, ETS-D5/ETS-D6:

Set-up plate Material:

Set-up plate Dimensions (W x D): Protection class acc. to DIN EN 60529:

Overall dimensions (W x D x H):

Weight:

Power supply: 220-230/115/100 V, 50/60 Hz Type

PK Cat. No. C-MAG HS 7 control 6.288 285





100 to 650 °C

±0.5 K/±0.2 K

180 x 180 mm

220 x 354 x 88 mm

ceramic

IP 21

PT1000, ETS-D5, ETS-D6

Magnetic stirrers / Hotplates/With heating and motor





Magnetic stirrer/hotplates, RET basic

Wide speed range from 0/50 to 1700rpm. Integrated temperature control. Incl. PT IKA 1000 temperature sensor (PT 1000.60). Exact temperature and speed setting via digital display, even when switched off. Set safety temperature limit displayed digitally. Hot Top indicator: hot surface warning to prevent burns. Digital error code display.

- With adjustable safety circuit of heating plate temperature (50 to 380°C)
- Safety magnetic stirrer with heating, suitable for unsupervised operation
- Bushing according to DIN 12878 for connecting a contact thermometer, e.g. ETS-D5, enables precise temperature
- High level of safety thanks to improved heat control technology
- Enclosed assembly (IP 42) guarantees long service life
- Very broad temperature range (RT to 340°C)
- Extremely fast heating times
- Electronic speed control
- High magnetic adhesion
- Incl. protection cover H 100

Specifications

Magnetic stirring:

Volume stirred (water): 20L Motor rating input/output: 16/9W Speed adjustment: Dial Speed range: 50 to 1700 rpm 80 x 10 mm

Maximum magnetic stirrer bar (L x dia.):

Heating

600W Heat output: Heating rate (1 | H₂O in H15): 7 K/min Amb. to 340 °C Temperature range: Accuracy: ±1 K Speed control: stepless Adjustable safety circuit: min 50 °C max 360 °C DIN 12 878 Connection for ext. temperature sensor: Control accuracy with temp. probe: PT 1000/ ±1 K ETS-D 5/ ±0.5 K

Hotplate material: Stainless steel Dimensions: dia. 135 mm 160 x 270 x 95 mm Dimensions (W x D x H): Weight: 2.5 kg

Protection system to DIN EN 60529: IP 42 Tested to DIN EN IEC 61010-1.

230 V 50/60 Hz Supply requirements:

| Туре | Plug type | PK | Cat. No. |
|-------------------------|-----------|----|-----------|
| RET® basic control-visc | EU | 1 | 9.720 248 |
| RET® basic control-visc | UK | 1 | 4.008 113 |

Optional Accessories: Electronic contact thermometer: ETS-D5, IKAFLON®- Stirring bars, TRIKA®-Stirring bars, RS 1 Set of stirring bars, RSE Stirring bar remover, Protection cover H 100, Temperatur sensors: PT 1000.60, PT 1000.70

Overall accessories for IKA magnetic stirrers

IKA

| Туре | For model | Description | PK | Cat. No. |
|------------|---|---|----|-----------|
| | | | | |
| PT 1000.60 | RCT basic, RET basic, C-MAG HS digital | Temperature sensor, 230 mm | 1 | 6.229 702 |
| PT 1000.70 | RCT basic, RET basic, C-MAG HS digital | Temperature sensor, glass-coated | 1 | 6.231 283 |
| PT 1000.80 | RCT basic , RET basic, C-MAG HS digital | Temperature sensor, 150 mm | 1 | 9.720 352 |
| H 104 | RET control | Protective cover | 1 | 9.910 338 |
| H 29 | RET, RCT | Oil bath attachment, i. d. : 136 - 180 mm, H: 81 mm, Vol. : 1 l | 1 | 7.017 796 |
| H 30 | RET, RCT | Oil bath attachment, i.d. : 136 - 190 mm, H: 110 mm, Vol. : 1.5 l | 1 | 7.017 797 |

Accessories for ETS-D5/ETS-D6 contact thermometer

IKA

| Туре | Description | PK | Cat. No. |
|---------|---------------------------------------|----|-----------|
| | | | |
| H 44 | Bosshead | 1 | 9.232 994 |
| H 16 V | Stainless steel support rod | 1 | 9.720 257 |
| H 62.51 | Replacement sensor, stainless steel | 1 | 9.232 998 |
| H 66.51 | Stainless steel sensor, glass sleeved | 1 | 9.232 999 |
| H 70 | Extension cable, 1 metre | 1 | 9.233 000 |
| H 11 | Replacement power cable | 1 | 9.720 276 |
| H 38 | Holding rod | 1 | 9.232 996 |

Magnetic stirrers / Hotplates/With heating and motor

Electronic Contact thermometer ETS-D5/ETS-D6

3 possible operation modes guarantee optimum adjustment to your application:

Operating mode A: Suitable for work with varying parameters (from -50°C to 450°C).

Adjustable safety temperature

Operating mode B: Suitable for repeated operation under uniform conditions and parameters

Operating mode C: Suitable for unsupervised operation

- with optimised PID control
- reset function
- includes stainless steel sensor probe H 62.51
- for all magnetic stirrers with a DIN 12878 class 2 contact thermometer connection, e.g. IKA®, Heidolph and Corning with adapter AD-C1.

ETS-D6 additionally with integrated pH measuring instrument (without pH electrode) and large, graphic LCD display with multilingual user guide.



Specifications

Temperature

-50 to 450°C Measuring range: Resolution: ±0.1K Accuracy*: ±0.2K Control accuracy: 0.1K Control accuracy (with sensor) ±0.5K Voltage: 8 to 16V d.c. Current (at 9V) 15 mA DIN 12878 Class 2 Connection:

Operating range: 0 to 60°C 80% Max. R.H.: Protection class: IP54

6-pole, DIN 45322 Connector:

Weight: 0.2kg

Tested to DIN EN IEC 61010-1.

| 2 | IKA® ETS-D6 |
|---|--|
| | 41.11° A A A A A A A A A A A A A A A A A A |
| | 9.720 242 |

| Туре | Dimensions (W x D x H) mm | PK | Cat. No. |
|--------|---------------------------|----|-------------|
| ETS-D5 | 82 x 22 x 83 | 1 | 9.720 241 1 |
| ETS-D6 | 96 x 45 x 98 | 1 | 9.720 242 2 |

Multiposition magnetic stirrer with heating Multi-HS digital

For synchronous stirring and heating at homogeneous temperatures up to 120°C.

Velp Scientifica

NEW

- CerAlTop™ plate easy cleaning and maximum resistance
- Brushless motor quarantees constant speed
- SpeedServo™ technology maintains speed constant when viscosity changes
- Digital interface with icons
- Integral timer
- Programmable auto-reverse of the stirring direction
- Safe hot plate warnings when the plate temperature is above 50°C
- The Lock feature prevents unintentional changes

Multi-HS 6 // Multi-HS 15 **Specifications**

Max. stirring quantity per stirring position (H2O): 400 ml // 250 ml Number of stirring positions: 6 // 15 0 ... 120 °C Temperature range: Speed range: 100 ... 1000 min⁻¹ 1 min ... 99 h : 59 min Timer: Plate dimension: 223 x 432 mm Distance between stirring positions: 100 mm // 74 mm Dimensions (W x D x H): 240 x 550 x 65 mm 4.7 kg // 4.8 kg

Weight: Power rating:

Heating output: 600 W 230 V/50 ... 60 Hz



620 W



Magnetic stirrer with heating, 3-Position, SB162-3

With 3 independently adjustable aluminium hotplates, Overheat protection mechanism and warning light which switches on when the plate temperature exceeds 50°C. With facility for mounting a 12.5mm retort rod at the rear of each plate and 3mm x 25mm PTFE coated followers. With BioCote, silver-based, antimicrobial protection.

Stuart

Specifications

Max. stirring quantity (H₂O): 15l

Speed range: 100 - 1500 rpm Heat output: $3 \times 700 \text{W}$ Max. plate temperature: 325 °C

Set-up plate (W x D): $3 \times 160 \times 160 \text{ mm}$ Dimensions (W x D x H): $600 \times 270 \times 110 \text{mm}$ Weight: 11 kg

Weight: 11kg
Power supply: 230V, 50Hz
IP code: IP 32

| Туре | PK | Cat. No. |
|---------|----|-----------|
| SB162-3 | 1 | 9.950 424 |





Magnetic stirrers/hotplates, multi-position, RT 5/10/15

Digital magnetic hotplate stirrers with 5, 10 or 15 positions, designed for synchronous heating and stirring. The magnetic coil technology provides noiseless and consistent stirring on all positions. The surface temperature is infinitely adjustable up to 120°C, producing a maximum medium temperature of 70°C (depending on type of vessel). Speed remains constant, even when load changes.

- Homogeneous temperature distribution across heating plate
- Adjustable reverse operation
- Eco-mode for a low self-warming of the surface
- Wear free magnetic coils
- Error code display
- Easy operation with touch keypad
- Suitable for continuous operation
- Adjustable speed in increments of 10rpm



Specifications

Max. stirring quantity per stirring position (H_2O): 0.4 l
Distance between stirring places: 90 mm
Speed range: 0 to 1000 rpm
Heating rate (1l H_2O in H_1S): 3 K/min
Temperature range heatig plate: RT to 120 °C
Max. temperature medium (dep. on vessel): 70 °C
Temperature display: LED

Heat control accuracy: ±1 K
Speed display: LED line
Set-up plate material: aluminium alloy
Protection class acc. to DIN EN 60529: IP 40

Power supply: 100-240 V, 50/60 Hz

| Туре | Stirring positions | Dimensions (W x D x H) | Plug type | Weight | PK | Cat. No. |
|-------|--------------------|---------------------------|-----------|--------|----|-----------|
| | | mm | | kg | | |
| RT 5 | 5 | 120 x 610 x 60 | EU | 4.0 | 1 | 9.720 603 |
| RT 5 | 5 | 120 x 610 x 60 | UK | 4.0 | 1 | 9.720 604 |
| RT 5 | 5 | 120 x 610 x 60 | CH | 4.0 | 1 | 9.720 605 |
| RT 10 | 10 | 190 x 610 x 60 | EU | 7.5 | 1 | 9.720 606 |
| RT 10 | 10 | 190 x 610 x 60 | UK | 7.5 | 1 | 9.720 607 |
| RT 10 | 10 | 190 x 610 x 60 | CH | 7.5 | 1 | 9.720 608 |
| RT 15 | 15 | 280 x 610 x 60 | EU | 10.5 | 1 | 9.720 609 |
| RT 15 | 15 | 280 x 610 x 60 | UK | 10.5 | 1 | 9.720 610 |
| RT 15 | 15 | 280 x 610 x 60 | CH | 10.5 | 1 | 9.720 611 |

1 2 3

LLG-Universal reaction block system for magnetic stirrers

Universal alternative to oil bath

The reaction block allows syntheses to be carried out in round flasks at temperatures of up to 250 °C. As a result, with this system, oil as a heat transfer media is made redundant and your lab is a safer place. The reaction block ensures safety at work and prevents oil baths and heating mantles from overheating in your lab. The messy oil clean-ups that results from changing oil or removing flasks from an oil bath will be eliminated. Injuries and burns from hot oil will never happen again. Uniform mixing is also guaranteed because there is no interference to the magnetic field from the aluminium blocks. This system ensures optimal heat transfer from the heating plate directly into the medium.

- Universal model
- For round plates of 135 to 145mm diameter
- With adapter plate for all square plates of min. 145mm length side
- Reaction blocks are available in six standard sizes.
- Delivered adapter allows the use with either IKA or Heidolph magnetic stirrers.
- Syntheses in round flasks without oil bath up to 250 °C.
- Uniform and constant mixing
- High-precision thermal conduction directly into the reaction block
- Safe and clean working
- Made in Germany

| Description | PK | Cat. No. |
|---|----|-----------|
| | | |
| LLG-Universal reaction block system 50ml | 1 | 9.728 890 |
| LLG-Universal reaction block system 100ml | 1 | 9.728 891 |
| LLG-Universal reaction block system 250ml | 1 | 9.728 892 |
| LLG-Universal reaction block system 500ml | 1 | 9.728 893 |
| LLG-Universal reaction block system 1000ml | 1 | 9.728 897 |
| LLG-Universal reaction block system 2000ml | 1 | 9.728 898 |
| Adapter plate for rectangular hotplates, for attachment 1000 and 2000ml | 1 | 9.728 900 |
| 2 spare screws (countersunk), for attachment 1000 and 2000ml | 1 | 9.728 901 |







4 LLG-Magnetic stirring bars, cylindrical, PTFE, **eco pack**

Circular, smooth and PTFE-coated. Packaging size: 10 pieces

| Diam. | Length | PK | Cat. No. |
|-------|--------|----|-----------|
| mm | mm | | |
| 6 | 10 | 10 | 9.198 910 |
| 3 | 12 | 10 | 9.198 766 |
| 6 | 15 | 10 | 9.198 919 |
| 6 | 20 | 10 | 9.198 920 |
| 6 | 25 | 10 | 9.198 925 |
| 8 | 25 | 10 | 9.198 767 |
| 6 | 30 | 10 | 9.198 930 |
| 6 | 35 | 10 | 9.198 935 |
| 8 | 40 | 10 | 9.198 940 |
| 8 | 45 | 10 | 9.198 945 |
| 8 | 50 | 10 | 9.198 950 |
| 9 | 60 | 10 | 9.198 960 |
| 9 | 70 | 10 | 9.198 970 |
| 9 | 80 | 10 | 9.198 980 |



BRAND

behr

BRAND

Magnetic stirrers / Hotplates/Accessories, Magnetic stirring bars



Magnetic stirring bars, PTFE, cylindrical



PTFE-coated. Cylindrical. Round, smooth surface. Versatile. Autoclavable. Further sizes available on request.

| Diam. | Length | PK | Cat. No. |
|-------|---------|----|-----------|
| mm | mm | | |
| 2.5 | 2.5 | 1 | 9.197 502 |
| 3.5 | 3.5 | 1 | 9.197 505 |
| 2.0 | 5.0 | 1 | 9.197 503 |
| 3.0 | 6.0 | 1 | 9.197 506 |
| 2.0 | 7.0 | 1 | 9.197 504 |
| 3.0 | 8.0 | 1 | 9.197 509 |
| 3.0 | 10.0 | 1 | 9.197 507 |
| 6.0 | 10.0 | 1 | 9.197 510 |
| 4.5 | 12.0 | 1 | 9.197 512 |
| 3.0 | 13.0 | 1 | 9.197 508 |
| 6.0 | 15.0 | 1 | 9.197 515 |
| 4.5 | 15.0 | 1 | 9.197 514 |
| 6.0 | 20.0 | 1 | 9.197 520 |
| 6.0 | 25.0 | 1 | 9.197 525 |
| 6.0 | 30.0 | 1 | 9.197 530 |
| 6.0 | 35.0 | 1 | 9.197 535 |
| 8.0 | 40.0 | 1 | 9.197 540 |
| 8.0 | 45.0 | 1 | 9.197 545 |
| 8.0 | 50.0 | 1 | 9.197 550 |
| 9.0 | 60.0 | 1 | 9.197 560 |
| 9.0 | 70.0 | 1 | 9.197 570 |
| 9.0 | 80.0 | 1 | 9.197 580 |
| 27.0 | 108.0 * | 1 | 7.019 622 |
| 27.0 | 159.0 * | 1 | 7.019 623 |

^{*} flattened sides



6.267 317

Magnetic stirring bar behrotest, set 1 + 2

Magnetic stirring bars behrotest $^{\circ},$ Set 1 in a transparent box with hinged lid Consisting of:

2x 20 x 6 mm, 2x 25 x 6mm, 2x 30 x 6 mm, 2x 40 x 8 mm, 1x 50 x 8 mm, 1x 60 x 9 mm

Magnetic stirring bars behrotest®, Set 2 in a transparent box with hinged lid including magnetic stirring bar retriever, length 245 mm

Consisting of:

 $1x\ 15\ x\ 6\ mm,\ 2x\ 20\ x\ 6\ mm,\ 2x\ 25\ x\ 6mm,\ 1x\ 30\ x\ 6\ mm,\ 2x\ 40\ x\ 8\ mm,\ 1x\ 50\ x\ 8\ mm,\ 1x\ 60\ x\ 9\ mm$

Both sets with a deep insert for easier removal and sorting of the stirring bars.



6.267 318

| Description | PK | Cat. No. |
|-------------|----|-------------|
| MS-Set 1 | 1 | 6.267 317 2 |
| MS-Set 2 | 1 | 6.267 318 |

4 Magnetic stirring bars, triangular, PTFE



Triangular. PTFE-coated. Wedge-shaped, ideal for dissolving solids and re-suspending sediments due to scraping action. Angular surface produces high turbulence, even at low stirring speeds.

| Diam. | Length | PK | Cat. No. |
|-------|--------|----|-----------|
| mm | mm | | |
| 8 | 25 | 1 | 9.197 652 |
| 14 | 25 | 1 | 7.019 672 |
| 10 | 35 | 1 | 7.019 673 |
| 14 | 40 | 1 | 9.197 654 |
| 12 | 50 | 1 | 7.019 675 |
| 14 | 55 | 1 | 9.197 655 |
| 16 | 80 | 1 | 9.197 658 |

476

1

Magnetic stirring bars ASTEROID, triangular, PTFE



2mag



More than 4x higher torque transmissible. Unbeatably enhanced mixing effect in comparison to conventional stirring bars. Strong, stable, long-lasting magnetic field, with no demagnetization effect. Concave design for minimal surface contact and reliable rotation, triangular shape for powerful shear force and enhanced mixing at lower rotational speeds. Significantly higher rotation speeds achievable, high quality, even and sealed PTFE encapsulation. Conform to FDA requirements, steam sterilisable at 121 °C. Multiple enhancements against all types of magnetic stirrers.

| Diam. | Length | PK | Cat. No. |
|-------|--------|----|-----------|
| mm | mm | | |
| 12 | 25 | 1 | 9.646 057 |
| 32 | 40 | 1 | 9.646 040 |
| 39 | 70 | 1 | 9.646 058 |

Magnetic stirring bars, oval, PTFE

Encapsulated in PTFE. Oval. Ideal for round bottom flasks.

BOLA



| Diam. | Length | PK | Cat. No. |
|-------|--------|----|-----------|
| mm | mm | | |
| 10 | 20 | 1 | 9.197 590 |
| 12 | 25 | 1 | 9.197 591 |
| 15 | 30 | 1 | 9.197 592 |
| 15 | 35 | 1 | 9.197 593 |
| 20 | 40 | 1 | 9.197 594 |
| 20 | 50 | 1 | 9.197 595 |

3 Magnetic stirring bars, PTFE, oval

For vessels with round bottom.

BRAND

| Diam. | Length | PK | Cat. No. |
|-------|--------|----|-----------|
| mm | mm | | |
| 5 | 10 | 1 | 7.019 637 |
| 6 | 15 | 1 | 7.019 638 |
| 10 | 20 | 1 | 6.072 442 |
| 12 | 25 | 1 | 6.073 271 |
| 15 | 32 | 1 | 6.072 441 |
| 15 | 34 | 1 | 4.667 792 |
| 20 | 40 | 1 | 4.667 793 |
| 20 | 50 | 1 | 4.667 794 |
| 20 | 65 | 1 | 9.197 596 |
| 20 | 70 | 1 | 9.197 597 |



4 Magnetic Stirring Beakerliner, PTFE

PTFE-encapsulated magnetic core (Alnico 5) axially mounted in a guide cage made of PTFE, universal chemical resistance. No shear action on the bottom of the beaker, smooth running in glass beakers also on an uneven bottom. The cage acts like a baffel and thus provides optimum mixing results.

BOLA

| For beaker | Ext. diam. | Height | Length | Diam. | PK | Cat. No. |
|---------------|---------------|--------|--------|-------|----|-----------|
| ml | mm | mm | mm | mm | | |
| 400 | 67 | 21 | 50 | 8 | 1 | 9.197 585 |
| 600 | 74 | 28 | 60 | 9 | 1 | 9.197 586 |
| 2000 | 103 | 32 | 80 | 10 | 1 | 9.197 587 |
| 3000, 5000 | 125 | 48 | 106 | 25 | 1 | 9.197 588 |



5 LLG-Magnetic Stirring Bar Retrievers, PTFE

PTFE-encapsulated stirring bar retriever with strong permanent magnet (Alnico 5), universal chemical resistance. For the removal of stirring bars from aggressive liquids, prevents loss of stirring bars. Lower end diameter 10mm.

| Diam. | Length | PK | Cat. No. |
|-------|--------|----|-----------|
| mm | mm | | |
| 8 | 150 | 1 | 9.197 717 |
| 8 | 250 | 1 | 9.197 725 |
| 8 | 300 | 1 | 4.008 501 |
| 8 | 350 | 1 | 9.197 735 |



Overhead stirrers/Instruments

1 2

Overhead stirrer LLG-uniSTIRRER OH2, digital

Cost-effective laboratory stirrer designed for simple stirring tasks for quantities up to 20 l (H_2O). Automatic speed adjustment in the range between 50 and 2200 min⁻¹ via microprocessor-controlled technology. Safety circuits ensure automatic cut-off in an anti-stall or overload situation. Actual and set speed are constantly monitored ensuring no undesired speed variations, even if the sample viscosity changes.

- Brushless, maintenance-free motor
- Digital speed display
- Display for speed or torque changeable
- Infinitely adjustable speed
- Overload protection
- Non-slippery mat
- Slim casing
- Quiet operation
- Error code display
- RS232 port

Stand:

Stainless steel stand incl. boss head, dimension (W x D x H): 200 x 310 x 780 mm, non-slippery mat

Stirrer:

4-blade propeller stirrer, stainless steel, shaft length 400 mm, stirrer diameter 50 mm

Scope of supply: Overhead stirrer LLG-uniSTIRRER OH2, stand, non-slippery mat and 4-blade-propeller stirrer

Specifications

Max. stirring quantity (H₂O):20 ISpeed range:50 ... 2.200 min¹Max. viscosity:10.000 mPasMotor rating input/output:60/50 WSpeed display accuracy:±3 min¹Max. torque at stirring shaft:40 Ncm

 Display:
 LCD

 Chuck range:
 0.5 ... 10 mm

 Dimensions (W x D x H):
 83 x 186 x 220 mm

 Power supply:
 110 ... 240 V, 50/60 Hz

IP code: IP 21 Warranty: 3 years

| Туре | Plug type | РК | Cat. No. |
|--------------------|-----------|----|-----------|
| LLG-uniSTIRRER OH2 | EU | 1 | 6.263 455 |
| LLG-uniSTIRRER OH2 | UK | 1 | 6.263 456 |

Accessories for Overhead stirrer LLG-uniSTIRRER OH2

| Description | PK | Cat. No. |
|--|----|-----------|
| | | |
| 4-blade propeller stirrer, diam. 50, shaft diam. 8, 400 mm | 1 | 6.263 454 |
| 2-blade propeller stirrer, diam. 60, shaft diam. 8, 400 mm | 1 | 6.263 457 |
| 3-hole paddle stirrer, diam. 67, shaft diam. 8, 400 mm | 1 | 6.263 458 |
| 2-blade centrifugal stirrer, diam. 80, shaft diam. 8, 400 mm | 1 | 6.263 459 |
| Spare boss head | 1 | 6.263 453 |
| Replacement power adapter | 1 | 6.263 452 |



4. Stirring, Shaking, Mixing **Overhead stirrers/Instruments**

NEW

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ΙΚΑ

Overhead Stirrer Nanostar 7.5 digital

This powerful overhead stirrer convinces with perfect basic functionalities. It has a compact, space-saving design and is easy-to-use.

- Operation via a stable rotary knob
- Hardened glass display for maximum visibility and chemical resistance
- Display clearly shows the rotational speed
- Regular software updates can be made rapidly and simply via the USB interface
- Chemical resistant housing
- Microprocessor-controlled speed governor for constant rotational speed, even with changes in viscosity
- 10 years warranty



Specifications

Stirring quantity max. (H₂O): 4000 mPas Max. viscosity: Motor rating input/output: 32 W/22 W 0/50 ... 2000 rpm Speed range: 7.5 Ncm Max. torque: Display: LED Chuck range: 0.5 ... 8 mm Dimensions (W x D x H): 53 x 130 x 147 mm

Weiaht: 0.8 kg Protection class DIN EN 60529: IP 54

Power supply: 100 ... 240 V, 50/60 Hz

| Туре | PK | Cat. No. |
|----------------------|----|-----------|
| Nanostar 7.5 digital | 1 | 6.311 510 |

Overhead Stirrers MICROSTAR Digital

These powerful overhead stirrers convince with perfect basic functionalities. They have a compact, space-saving design and are easy-to-use.

- Operation via a stable rotary knob
- Hardened glass display for maximum visibility and chemical resistance
- Display clearly shows the rotational speed
- Regular software updates can be made rapidly and simply via the USB interface
- Chemical resistant housing
- Microprocessor-controlled speed governor for constant rotational speed, even with changes in viscosity
- 10 years warranty



6.274 940

7.5 digital // 15 digital // 30 digital **Specifications**

5 | // 10 | // 20 | Stirring quantity max. (H2O):

Max. viscosity: 4000 mPas // 8000 mPas // 20000 mPas

Motor rating input/output:

Speed range: 0/50 ... 2000 rpm// 0/50 ... 1000 rpm// 0/50 ... 500 rpm

Max. torque: 7.5 Ncm // 15 Ncm // 30 Ncm

Display: LED Chuck range: 0.5 ... 8 mm Dimensions (W x D x H): 60 x 126 x 173 mm 1.18 kg // 1.26 kg // 1.26 kg

Protection class DIN EN 60529: IP 54

Power supply: 100 ... 240 V, 50/60 Hz

| Туре | PK Cat. No. |
|-----------------------|----------------------|
| MICROSTAR digital 7.5 | 1 4.665 208 |
| MICROSTAR digital 15 | 1 6.313 057 |
| MICROSTAR digital 30 | 1 6.274 940 2 |

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4. Stirring, Shaking, Mixing

Overhead stirrers/Instruments



Overhead Stirrers MINISTAR Digital

These powerful overhead stirrers convince with perfect basic functionalities. They have a compact, space-saving design and are easy-to-use.

- Operation via a stable rotary knob

- Hardened glass display for maximum visibility and chemical resistance
- Display clearly shows the rotational speed
- Regular software updates can be made rapidly and simply via the USB interface
- Chemical resistant housing
- Microprocessor-controlled speed governor for constant rotational speed, even with changes in viscosity
- 10 years warranty

20 digital // 40 digital // 80 digital Specifications

15 | // 25 | // 50 | Stirring quantity max. (H₂O):

10000 mPas // 30000 mPas // 60000 mPas Max. viscosity:

Motor rating input/output: 60 W/46 W

Speed range: 0/50 ... 2000 rpm// 0/50 ... 1000 rpm// 0/50 ... 500 rpm

Max. torque: 20 Ncm // 40 Ncm // 80 Ncm

Display: LED Chuck range: 0.5 ... 8 mm

Dimensions (W x D x H): 70 x 147 x 193 mm 1.56 kg // 1.72 kg // 1.72 kg

Protection class DIN EN 60529: IP 54

Power supply: 100 ... 240 V, 50/60 Hz

| Туре | PK Cat. | No. |
|---------------------|----------------|----------|
| MINISTAR 20 digital | 1 7.98 | 33 353 |
| MINISTAR 40 digital | 1 4.60 | 55 663 1 |
| MINISTAR 80 digital | 1 7.9 8 | 33 354 |





Overhead stirrer EUROSTAR 20 digital

Overhead stirrer designed for simple stirring tasks for quantities up to 15 I (H₂O). It automatically adjusts the speed through microprocessor controlled technology within the speed range of 0/30 to 2000 rpm. Safety circuits installed ensures automatic cut-off in an anti-stall or overload conditions. Continuous comparison of shaft speed to desired speed is maintained and variations are adjusted automatically. This guarantees a constant speed even with changes in viscosities of the sample.

- Digital speed display
- Infinitely adjustable speed
- Push-through agitator shafts
- Overload protection
- Short-term overload operation

Specifications

15 l Stirring quantity max. (H2O): 10000 mPas Max. viscosity: Motor rating input/output: 70/42 W Speed range: 0/30 to 2000 rpm Max. torque at stirring shaft: 20 Ncm LFD Display:

Chuck range: 0.5 to 10 mm Dimensions (W x D x H): 86 x 208 x 248 mm 4.4 kg

Protection class DIN EN 60529: IP 42 Power supply: 230 V, 50/60 Hz

Type Connector Cat No

| .,,,, | | | |
|---------------------|----|---|-----------|
| | | | |
| EUROSTAR 20 digital | EU | 1 | 9.816 691 |
| EUROSTAR 20 digital | UK | 1 | 9.816 692 |
| EUROSTAR 20 digital | CH | 1 | 9.816 693 |

4. Stirring, Shaking, Mixing Overhead stirrers/Instruments

Overhead stirrer EUROSTAR 40 digital

Universal laboratory stirrer designed for simple stirring tasks for quantities up to 25I IKA (H₂O). It automatically adjusts the speed through microprocessor controlled technology within the speed range of 0/30 to 2000rpm. Safety circuits installed ensures automatic cut-off in an anti-stall or overload conditions. Continuous comparison of shaft speed to desired speed is maintained and variations are adjusted automatically. This guarantees a constant speed even with changes in viscosities of the sample.

- Digital speed display
- Infinitely adjustable speed
- Push-through agitator shafts
- Overload protection
- Short-term overload operation

Specifications

Stirring quantity max. (H₂O): Max. viscosity: 30000mPas Motor rating input/output: 118/84W Speed range: 0/30 to 2000rpm Max. torque at stirring shaft: 40Ncm Display: Chuck range: 0.5 to 10mm Dimensions (W x D x H): 86 x 208 x 248mm

Weight: 4.4 kg IP 42 Protection class DIN EN 60529: 230V, 50/60Hz Power supply:

| Туре | Plug type | PK | Cat. No. |
|-------------------------|-----------|----|-----------|
| EUROSTAR 40 digital | EU | 1 | 9.816 697 |
| EUROSTAR 40 digital S 2 | UK | 1 | 9.816 698 |
| EUROSTAR 40 digital S 3 | CH | 1 | 9.816 699 |



Overhead stirrer EUROSTAR 60 digital

Universally used strong overhead stirrer for quantities up to 40l (H₂O). It automatically adjusts the speed through microprocessor controlled technology within the speed range of 0/30 to 2000rpm. Safety circuits installed ensures automatic cut-off in an anti-stall or overload conditions. Continuous comparison of shaft speed to desired speed is maintained and variations are adjusted automatically. This guarantees a constant speed even with changes in viscosities of the sample.

- Digital speed display
- Infinitely adjustable speed
- Push-through agitator shafts
- Overload protection
- Short-term overload operation
- Slim casing
- Quiet operation
- Error code display

Specifications

Stirring quantity max. (H2O): 401 Max. viscosity: 50000mPas

Motor rating input/output: 176/126 W Speed range: 0/30 to 2000rpm Max. torque at stirring shaft: 60Ncm

Display: LED 0.5 to 10mm Chuck range: Dimensions (W x D x H): 86 x 208 x 248mm

Protection class DIN EN 60529: Power supply: 230V, 50/60Hz

| Туре | Plug type | PK | Cat. No. |
|-------------------------|-----------|----|-----------|
| EUROSTAR 60 digital | EU | 1 | 9.816 700 |
| EUROSTAR 60 digital S 2 | UK | 1 | 9.816 701 |
| EUROSTAR 60 digital S 3 | CH | 1 | 9.816 702 |



Overhead stirrers/Instruments



Overhead stirrer EUROSTAR 100 digital



IKA

Powerful laboratory stirrer for highly viscous applications and intensive mixing for quantities up to 100 I (H₂O). It automatically adjusts the speed through microprocessor controlled technology. Safety circuits installed ensures automatic cut-off in an anti-stall or overload conditions. Continuous comparison of shaft speed to desired speed is maintained and variations are adjusted automatically. This guarantees a constant speed even with changes in viscosities of the sample.

- Digital speed display
- Infinitely adjustable speed
- Push-through agitator shafts
- Overload protection
- Short-term overload operation
- Slim casing
- Quiet operation
- Error code display

Specifications

Stirring quantity max. (H₂O):

Max. viscosity:

70000 mPas

Motor rating input/output:

Speed range:

0/30 ... 1300 rpm

Max. torque at stirring shaft:

Display:

Chuck range:

100 l

70000 mPas

186/136 W

0/30 ... 1300 rpm

LED

Chuck range:

0.5 ... 10 mm

Protection class DIN EN 60529: IP 42 Power supply: 230 V, 50/60 Hz

| Туре | Dimensions (W x D x H) mm | Plug type | PK | Cat. No. |
|--------------------------|---------------------------------|-----------|----|-----------|
| EUROSTAR 100 digital | 86 x 208 x 248 | EU | 1 | 9.816 706 |
| EUROSTAR 100 digital S 2 | 86 x 208 x 248 | UK | 1 | 9.816 707 |
| EUROSTAR 100 digital S 3 | 86 x 208 x 248 | CH | 1 | 9.816 708 |



Overhead stirrer OHS 200 Digital

Powerful, robust overhead stirrers with display and electronic speed control. With integrated timer and overload, overtemperature and overcurrent protection.

Velp Scientifica

- For high viscosities up to 100000 mPas or large volumes up to 100 l
- With 2 speed gears
- Stable torque over the entire speed range with automatic compensation
- Torque indication in the display
- LED display
- Timer
- Key lock
- Brushless, quiet motor
- Rotor change without tools
- USB interface for installing software updates

Specifications

Number of speed gears:

Speed range: 6 ... 400 min⁻¹/30 ... 2000 min⁻¹

Power rating: 190 W

Chuck range: Ø 1 ... 13 mm

Display: Digital

Dimensions (W x D x H): $90 \times 235 \times 315 \text{ mm}$

Weight: 4.6 kg IP code: IP 54

Power supply: 230 V, 50/60 Hz Warranty: 3 years

| Туре | Stirring capacity | max. Viscosity | Torque | PK | С |
|-----------------|-------------------|-------------------|--------|----|------|
| | I | mPa. | Ncm | | |
| OHS 200 Digital | 100 | 100000 | 200 | 1 | 4.66 |

Overhead stirrer EUROSTAR 400 digital/400 control

NEW IKA



Powerful laboratory stirrer for highly viscous applications and intensive mixing for quantities up to 150 l (H₂O). It automatically adjusts the speed through microprocessor controlled technology. Safety circuits installed ensures automatic cut-off in an anti-stall or overload conditions. Continuous comparison of shaft speed to desired speed is maintained and variations are adjusted automatically. This guarantees a constant speed even with changes in viscosities of the sample.

EUROSTAR 400 digital:

- Digital speed display
- Infinitely adjustable speed
- Push-through agitator shafts
- Overload protection
- Short-term overload operation
- Slim casing
- Quiet operation
- Error code display

EUROSTAR 400 control additionally:

- Multilingual TFT display
- Programmable functions
- Integrated temperature measurement
- Interval operation
- Timer function
- Adjustable safety circuit
- Locked function
- Connection for external temperature sensor

Scope of supply EUROSTAR 400 control: Overhead stirrer, temperature sensor H 67.60, WiCo holder WH 11



6.291 143

Specifications

Stirring quantity max. (H₂O):

Max. viscosity:

Motor rating input/output:

Speed range:

Max. torque at stirring shaft:

Display: Chuck range:

Dimensions (W x D x H):

Protection class DIN EN 60529:

Power supply:

EUROSTAR 400 control only:

Temperature sensor:

Temperature measuring range:

400 digital // 400 control

150 l 100000 mPas 220/176 W 0/6 ... 2000 rpm 400 Ncm

LED // TFT 3 ... 16 mm

114 x 245 x 325 mm // 114 x 268 x 345 mm

IP 42 // IP 40 230 V, 50/60 Hz

PT1000

-10 ... +350 °C



6.310 512

| Туре | Plug type | PK | Cat. No. |
|----------------------|-----------|----|-------------|
| EUROSTAR 400 digital | EU | 1 | 6.291 143 1 |
| EUROSTAR 400 control | EU | 1 | 6.310 512 2 |







More than hot plate stirrers! Superior Safety and state-of-the-art thermoregulation delivering you an Organic synthesis solution with all relevant accessories

Overhead Stirrers

OHS Series



Whatever your application, we've got you covered. Safe and powerful Overhead stirrers guaranteeing constant torque at any speed, ease-of-use, unique connectivity and reliability.

Vortex Mixers

IR Vortex



Unmatched experience! The truly ergonomic vortex mixer with patented IR sensor reducing arm stress.

Biochemical Oxygen Demand

BOD EVO



Perform your Biochemical Oxygen Demand analysis without altering the incubation condition. Manage up to 80 BOD sensors directly from your PC thanks to the unique connectivity of VELP BOD EVO.

www.velp.com

Overhead stirrers/Instruments

Overhead strirrers OHS Advance

Powerful, robust overhead stirrers with digital display, electronic speed control and integrated PT100 temperature probe. With vibration sensor, timer and overload,

Velp Scientifica

overtemperature and overcurrent protection. The connection via WLAN to the VELP Ermes Cloud Platform is used for uploading, managing, monitoring and exchanging results and parameters.

Access to the devices is possible via PC, Smartphone and Tablet.

- Direct measurement of temperature in the medium via PT100 sensor
- Stable torque over the entire speed range with automatic compensation
- Torque indicated in display
- 3.5" TFT display
- Timer
- Key lock
- Brushless, quiet motor
- Easy rotor change without tools
- Various methods programmable
- USB interface for installing software updates and process documentation

Specifications OHS 60 Advance // OHS 100 Advance

Number of speed gears:

Speed range: 30 ... 2000 min⁻¹ // 30 ... 1300 min⁻¹

Motor rating: 190 W Chuck range: Ø 1 ... 13 mm Digital Display: -10 ... 350 °C Temperature measuring range: 0.1 °C Temperature measuring accuracy:

Dimensions (W x D x H): 90 x 235 x 285 mm

Weight: 4.1 kg IP code: IP 54 Power supply:

230 V, 50/60 Hz Warranty: 3 years

| Туре | Stirring capacity | max. Viscosity | Torque | PK Cat. No. |
|-----------------|-------------------|-------------------|--------|----------------------|
| | 1 | mPa. | Ncm | |
| OHS 60 Advance | 40 | 50000 | 60 | 1 4.666 655 1 |
| OHS 100 Advance | 100 | 70000 | 100 | 1 4.666 654 |

Overhead stirrer OHS 200 Advance

Powerful, robust overhead stirrers with digital display, electronic speed control and Velp Scientifica integrated PT100 temperature probe. With vibration sensor, timer and overload, overtemperature and overcurrent protection. The connection via WLAN to the VELP Ermes Cloud Platform is used for uploading, managing, monitoring and exchanging results and parameters. Access to the devices is possible via PC, Smartphone and Tablet.

- With 2 speed gears
- For high viscosities up to 100000 mPas or large volumes
- Direct measurement of temperature in the medium via PT100 sensor
- Stable torque over the entire speed range with automatic compensation
- Torque indicated in display
- 3.5" TFT display
- Timer
- Key lock
- Brushless, quiet motor
- Easy rotor change without tools
- Various methods programmable
- USB interface for installing software updates and process documentation

Specifications

Number of speed gears:

6 ... 400 min⁻¹/30 ... 2000 min⁻¹ Speed range:

Power rating: 190 W Chuck range: Ø 1 ... 13 mm Digital Display: -10 ... 350 °C Temperature measuring range: Temperature measuring accuracy: 0.1 °C

Dimensions (W x D x H): 90 x 235 x 315 mm

Weight: 4.6 kg IP 54 IP code: Power supply: 230 V, 50/60 Hz Warranty: 3 years

| Туре | Stirring capacity | max. Viscosity | Torque | PK | Cat. No. |
|-----------------|----------------------|-------------------|--------|----|-----------|
| | 1 | mPa. | Ncm | | |
| OHS 200 Advance | 100 | 100000 | 200 | 1 | 4.666 653 |







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4. Stirring, Shaking, Mixing

Overhead stirrers/Instruments



Overhead stirrer RW 20 digital

- Technical improvements on the trusted RW20 series design, mechanically controlled

- with digital display

- robust, ergonomic design

- constant power-drive

- two speed ranges for universal use from 60rpm to 2000rpm

- hollow-shafted chuck for rotor shaft height adjustment (only when stationary)

Specifications

Stirring volume max. (H₂O): 20L

Viscosity range: up to 10000mPas Motor rating input/output: 70/35W Output max. at stirring shaft: 26W Max. stirring shaft torque (at 100rpm.): 150Ncm Speed range I (at 50Hz): 60 to 500rpm. Speed range II (at 50Hz): 240 to 2000rpm. 0.5 to 10mm Chuck range: Diameter/length of extension arm: 13mm/160mm Dimensions (W x D x H) 88 x 212 x 294mm

Weight: 3.1kg Protection class acc. to DIN EN 60529: IP20

Supply requirements: 230V 50/60Hz

Tested to DIN EN IEC 61010-1.

| Туре | Plug type | PK | Cat. No. |
|---------------|-----------|----|-----------|
| RW 20 digital | EU | 1 | 9.816 622 |
| RW 20 digital | UK | 1 | 6.227 717 |

Optional accessories: Stands: R 1825, R 1826, R 1827, R 182 Boss head, FK 1 Flexible coupling, RH 3 Strap clamp, R 301 Stirring shaft protection, Stirring elements: e.g. R 1342, R 1381



Overhead stirrer RW 28 digital

Powerful, mechanically controlled laboratory stirrer designed for highly viscous applications for quantities up to 80l (H₂O). It is suitable for intensive mixing for use in laboratories and pilot plants. The stirrer comes equipped with a protection for overheating

laboratories and pilot plants. The stirrer comes equipped with a protection for overheating of the motor by means of self-locking temperature limiter. Additionally, to secure bowls, a stirring shaft protection and clamping fixture are optionally available.

- Digital speed display

- Infinitely adjustable speed in two speed ranges

- Push-through agitator shafts

- Overload protection

- Error code display

- Robust, ergonomic design

- Quiet operation

- With constant power-drive

Specifications

Stirring quantity max. (H₂O):

Max. viscosity:

Motor rating input/output:

80l

50000mPas

220/90W

 Speed range (at 50/60 Hz):
 60 to 1400rpm/72 to 1680rpm

 Speed range I (at 50/60 Hz):
 60 to 400rpm/72 to 480rpm

 Speed range II (at 50/60 Hz):
 240 to 1400rpm/288 to 1680rpm

Max. torque at stirring shaft:900NcmDisplay:LEDChuck range:1 to 10mmDimensions (W x D x H):123 x 252 x 364mm

Protection class DIN EN 60529: IP 40

Power supply: 220-240V,/50/60Hz

| Туре | Plug type | PK | Cat. No. |
|-------------------|-----------|----|-----------|
| RW 28 digital | EU | 1 | 9.816 630 |
| RW 28 digital S 2 | UK | 1 | 9.816 631 |
| RW 28 digital S 3 | CH | 1 | 9.816 632 |

Overhead stirrers/Instruments

Stand with Laboratory balance IKA [scale] for overhead stirrers



The stand with integrated scale and data interface is ideally suited for for the direct and controlled addition of sample material while stirring. The quantities of samples to be added are weighed immediately and continuously documented during the stirring process.

IKA

- Clear LCD display
- Stable die cast zinc housing
- Overload protection
- USB interface
- Bluetooth connection

Specifications

Weighing range: 5 ... 6000 g Readability: 1 g ±6 g Accuracy: max. 10 kg Load capacity weighing function: Dimensions - Weighing plate: 200 x 200 mm Dimensions (W x D x H): 213 x 391 x 570 mm 5.2 kg Weight:

100 ... 240 V, 50/60 Hz Power supply:

IP 21 IP code:

Type Cat. No. IKA [scale] 4.672 719

Overhead stirrer STARVISC 200-2.5 control



High precision torque-measuring stirrer with direct display of the measured values for a wide range of applications. Especially suitable for product development, because precise measuring is taking place during the manufacturing process and the viscosity can be calculated via the user friendly display. Samples no longer have to be taken separately.

IKA

- Viscosity calculation
- Stepless adjustable speed
- With detachable remote control Wireless Controller (WiCo)
- Powerful stirrer for highly viscous substances

Specifications

Stirring quantity max. (H₂O): 100 l 100000 mPas Max. viscosity: Motor rating input/output: 130 W/84 W Speed range: 0/6 ... 2000 rpm Speed range I (at 50Hz): 6 ... 400 rpm Speed range II (at 50Hz): 30 ... 2000 rpm Max. torque at stirring shaft: 200 Ncm Display: Chuck range: 0.6 ... 10 cm

Dimensions (W x D x H): 91 x 231 x 395 mm IP 40

IP code acc. to DIN EN 60529:

230/100, 115/100 V, 50/60 Hz Power supply:

Type PK Cat. No. STARVISC 200-2.5 control 4.672 715





4. Stirring, Shaking, Mixing

Overhead stirrers/Instruments



Overhead stirrers Hei-TORQUE Value

Ideal for all standard stirring tasks. They are designed to mix and disperse media that require non-reproducible results in high-viscosity applications.

Heidolph

- Indication of torque tendencies to monitor viscosity changes
- Digital 2.4" display for ease of operation
- Constant speed even under changing loads
- Safe start and stop of operation via slide touch panel
- Minimum noise level at maximum power (<50 dB)



Overhead stirrers Hei-TORQUE Value 100

Heidolph

Heidolph

Specifications

Max. stirring quantity (H₂O): Speed range:

Max. viscosity:

Motor rating input/output: Max. torque at stirring shaft:

Display: Chuck range:

Dimensions (W x D x H):

Weight:

Power supply:

Protection class:

10 ... 2000 rpm 60000 mPas 90/50 W 100 Ncm

digital 8 ... 10.5 mm

86 x 247 x 350 mm 4.4 kg

230 V, 50/60 Hz

IP 54

| Туре | Plug type | PK | Cat. No. |
|----------------------|-----------|----|-----------|
| | | | |
| Hei-TORQUE Value 100 | EU | 1 | 7.981 688 |
| Hei-TORQUE Value 100 | UK | 1 | 6.283 476 |



Overhead Stirrers Hei-TORQUE Core

Compact, electronic overhead stirrer for easy operation.

- Can be integrated in closed systems such as fume hoods, reactors or production systems
- Suitable for low to medium viscosity media
- Quick-action chuck for stirring tools up to 10 mm diameter
- "Max" button for short-term operation at maximum speed
- Timer function
- Digital rotation speed display
- Automatic switch-off with overheating protection

Specifications

Stirring quantity max. (H2O): Speed range:

Max. viscosity: Motor rating input/output:

Max. torque at stirring shaft: Display:

Chuck range: Dimensions (W x D x H):

Weight: Power supply:

Protection class:

25 I

20...2000 rpm 10000 mPas 105/75 W 40 Ncm digital

8 ... 10.5 mm 70 x 195 x 281.5 mm

2.3 kg

230 V, 50/60 Hz

IP 42

PK Cat. No. Type Hei-TORQUE Core

4.662 304

Accessories for Overhead Stirrers Hei-TORQUE

Heidolph

| Туре | For | PK Cat. No. |
|--|-----------------|----------------------|
| | | |
| Stand clamp for holder rod 13 to 32mm | Hei-TORQUE | 1 9.816 562 |
| Stand S 2, 425 x 420 x 700mm, 5.8kg | Hei-TORQUE | 1 9.816 564 1 |
| Stirrer shaft guard, PMMA, height-adjustable | Hei-TORQUE Core | 1 9.816 566 |
| Stirrer shaft guard, PMMA, height-adjustable | Hei-TORQUE | 1 6.284 078 |
| Flexible shaft including chuck, 8mm | Hei-TORQUE | 1 7.047 043 2 |
| Base Stand S2 XXL | Hei-TORQUE | 1 6.228 500 |
| Stirrer shaft gland NS 29/32 - PTFE | Hei-TORQUE | 1 7.076 415 |
| Telescopic stand | Hei-TORQUE | 1 7.621 811 |





3 Flexible clutch

Required for stirring tasks using glass stirring rods. The flexible coupling compensates for any structural variances.

Clamping range: 6 to 10mm Torque max. 10 Ncm

| Туре | PK | Cat. No. |
|------|----|-----------|
| FK 1 | 1 | 9.197 060 |



Globe Stirrer Couplings, POM

Made of POM, a plastic material with a good mechanical strength, powerful transmission
of up to 300 Ncm, suitable for a speed of up to 1.200 rounds per minute, maximum
misalignment of axes 10 mm. Ideal for balancing misalignment of axes between agitator and stirrer shaft,
suitable for glass, metal or PTFE stirrer shafts.

- very low centrifugal forces due to low weight
- suitable for both left and right-handed rotation
- no resonance
- simple assembly by means of screw joints with clamp rings
- pivot (length 90 mm) can be shortened by the user

| Opening for stirrer shaft | Chuck adaptor Ø bottom | Overall length | PK Cat. No. |
|---------------------------|------------------------------|-------------------|----------------------|
| mm | mm | mm | |
| Diam. 6.5 + 10 | 10 | 190 | 1 6.240 637 |
| Diam. 8 + 10 | 10 | 190 | 1 7.632 676 4 |
| Inner square SW6 | SW8 | 180 | 1 6.231 539 |



7.632 676

5 Keyless chuck for overhead stirrers

Only for use with EUROSTAR 20/40/60/100/200/RW 20, excluding EUROSTAR 20 high speed digital and control.

Clamping range: 0.5 to 10 mm.

| Туре | PK | Cat. No. |
|------|----|-----------|
| R 60 | 1_ | 6.258 335 |



NEW

IKA

4. Stirring, Shaking, Mixing

Overhead stirrers/Stirrer Heads



Magnetic stirrer bearing with ground joint

Stirrer head with a permanent magnetic coupling for mixing applications under vacuum. No straight-through shaft, no shaft sealing rings required as the torque is provided contactless by magnetic force.

Buddeberg

Rotational speed: 2500rpm Material: 1.4435 (AISI 316L)

Seal: Viton

Bearings: Ball bearing steel

| Туре | Joint size | Capacity | Temp. range | For fluid viscosity | Torque | PK Cat. No. |
|------------|------------|----------|----------------|---------------------|--------|----------------------|
| | NS | ml | °C | mPa. | Ncm | |
| BUK K20 S1 | 29/32 | 500 | 240 | 500 | 20 | 1 9.779 201 1 |
| BUK K40 S1 | 29/32 | 1000 | 240 | 1500 | 40 | 1 9.779 202 |
| BUK K60 S1 | 29/32 | 3000 | 240 | 6000 | 60 | 1 9.779 203 |
| BUK K90 S1 | 29/32 | 5000 | 240 | 10000 | 90 | 1 9.779 204 |



Connection couplings

Fixed-diameter connection between motor and stirring shaft. Suitable for use in potentially explosive atmospheres (ATEX). Material no. 1.4404

Buddeberg

| Туре | For | PK | Cat. No. |
|----------------|-------------------|----|-----------|
| \//\/ 14 ·· 10 | DCD C4 with stand | 1 | C 207 71C |
| | BSR 64 with stand | | 6.287 716 |
| VK 14 x 14 | BSR 64 with stand | 1 | 6.287 718 |
| VK 7 x 8 | BUK/MRK | 1 | 9.779 342 |



Bossheads for overhead stirrers

IKA

| Туре | Jaw opening mm | PK | Cat. No. |
|-------|---|----|-------------|
| R 182 | Stand / extension arm: 6 to 16 | 1 | 9.224 292 |
| R 270 | Stand / extension arm: 25 to 36 / 5 to 21 | 1 | 9.224 293 4 |
| R 271 | Stand / extension arm: 34 / 16 | 1 | 9.224 266 |



Strap clamps for overhead stirrers

IKA

| Туре | Rod diam. | Vessel diam. | PK | Cat. No |
|-------|--------------|-----------------|----|---------|
| | mm | mm | | |
| RH 3 | 8 to 16 | 40 to 300 | 1 | 9.224 |
| RH 5* | 25 to 36 | 40 to 300 | 1 | 9.224 |

*with R 270 bosshead



Stands for overhead stirrers

IKA

| Туре | Description | Rod diam. | Height | Max. load | PK Cat. No. |
|--------|----------------------|--------------|------------|--------------|-------------|
| | | mm | mm | kg | |
| R 1825 | Stand with baseplate | 16 | 560 | 5 | 1 9.224 031 |
| R 1826 | Stand with baseplate | 16 | 800 | 5 | 1 9.224 032 |
| R 1827 | Stand with baseplate | 16 | 1000 | 5 | 1 9.224 033 |
| R 2722 | H-stand | 34 | 1010 | 10 | 1 9.224 026 |
| R 2723 | Telescopic stand | 34 | 620 - 1010 | 10 | 1 9.224 028 |
| R 474 | Telescopic stand | 48 | 500 - 1000 | 30 | 1 9.816 735 |
| R 472 | Floor stand | 80x80 | 980 - 1860 | 30 | 1 9.816 736 |

Further stands available on request.

4. Stirring, Shaking, Mixing **Overhead stirrers/Stirrer Heads-Stirrers**

PLR compressed air laboratory stirrers up to 30 L for use in potentially explosive atmospheres, without/with tachometer

PLR compressed air laboratory stirrers are designed for all kinds of standard mixing tasks. The vane type, air-driven motor offers a high power density and is significantly lighter and smaller than an equivalent electric motor.

Buddeberg



9.778 950



General specifications:

- operating pressure max. 6 bar
- air consumption 260 L/min. at 6 bar
- power output 200W at 6 bar
- clockwise rotation
- ATEX certification

Basic models include:

- all-stainless steel housing
- continuously adjustable speed control valve
- support arm diam. 14 mm
- snap connection for NW 5
- output shaft L x diam. 26 x 10 mm

| Туре | Capacity max. | Off-load speed | Torque | For fluid viscosity | Rating | ATEX certification | PK Cat. No. |
|----------|------------------|-------------------|--------|---------------------|--------|-------------------------|----------------------|
| | litres | rpm. | Nm | mPa. | w | | |
| PLR 10 | 3 | 15000 | 0.3 | 1000 | 200 | Ex II 2G Ex h IIC T4 Gb | 1 9.778 950 1 |
| PLR 11 | 30 | 1900 | 3.5 | 50000 | 200 | Ex II 2G Ex h IIC T5 Gb | 1 9.778 951 |
| PLR 12 | 30 | 870 | 5.3 | 70000 | 200 | Ex II 2G Ex h IIC T5 Gb | 1 9.778 952 |
| PLR 28 | 30 | 580 | 10.4 | 100000 | 200 | Ex II 2G Ex h IIC T5 Gb | 1 9.778 954 |
| PLR 13 | 30 | 80 | 19.8 | 150000 | 200 | Ex II 2G Ex h IIC T5 Gb | 1 9.778 953 |
| PLR 10T* | 3 | 15000 | 0.3 | 1000 | 200 | Ex II 2G Ex h IIC T4 Gb | 1 9.778 960 2 |
| PLR 11T* | 30 | 1800 | 3.5 | 50000 | 200 | Ex II 2G Ex h IIC T5 Gb | 1 9.778 961 |
| PLR 12T* | 30 | 950 | 5.3 | 70000 | 200 | Ex II 2G Ex h IIC T5 Gb | 1 9.778 962 |
| PLR 28T* | 30 | 550 | 10.4 | 100000 | 200 | Ex II 2G Ex h IIC T5 Gb | 1 9.778 964 |
| PLR 13T* | 30 | 80 | 19.8 | 150000 | 200 | Ex II 2G Ex h IIC T5 Gb | 1 9.778 963 |

Compressed air industrial stirrers BSR 64 with floor stand

BSR series stirrers perform routine mixing tasks up to 200 l.

Buddeberg

Buddeberg



General specifications:

- operating pressure max. 6 bar
- air consumption 800 l/min. at 6 bar
- power output 640 W at 6 bar
- clockwise rotation
- ATEX rating to Ex II 2G Ex h IIC T5 Gb

Basic models include:

- all-stainless steel housing
- continuously adjustable speed control valve
- spherical clamping device with support arm diam. 16 mm, length 200 mm
- floor stand with rod (height 1000 mm, width 600 mm) and bosshead
- plug-in connector DN 7.8
- silencer
- output shaft L 32 mm x diam. 14 mm

| Туре | Capacity max. | Off-load speed | For fluid viscosity | Rating | PK | Cat. No. |
|----------------|------------------|-------------------|---------------------|--------|----|-----------|
| | litres | rpm. | mPa. | W | | |
| BSR 64/160-A-V | 200 | 1600 | 20000 | 640 | 1 | 9.779 163 |
| BSR 64/65-A-V | 200 | 650 | 50000 | 640 | 1 | 9.779 164 |
| BSR 64/30-A-V | 200 | 300 | 100000 | 640 | 1 | 9.779 165 |

Stands

Floor stand BS

with angled foot, side length 600 mm, rod diam. 34 mm.

Wall bracket WS

Rod diam. 34 mm, clearance from wall: 200 mm.

| Туре | Description | Length | PK Cat. No. |
|------|--------------|--------|--------------------|
| | | mm | |
| BS 1 | Floor stand | 1000 | 1 9.224 000 |
| BS 2 | Floor stand | 1500 | 1 6.206 348 |
| BS 3 | Floor stand | 1000 | 1 6.314 306 |
| WS | Wall bracket | 1000 | 1 6.225 791 |



The viscosity data are intended as a guideline.

Buddeberg

4. Stirring, Shaking, Mixing

Overhead stirrers/Stirrers



9.198 010

Compressed air powered stirrers, PLR, accessories

Connection couplings VK:

Fixed-diameter connection for motor/magnetic coupling drive shaft and stirring rod.

Suitable for use in potentially explosive atmospheres. Material No. 1.4404.

Flexible glass stirring shaft couplings PK:

For stirring tasks using glass stirring rods. Elastic connector between motor and stirring shaft. Provides exact alignment of motor and shaft, and evens out axial and height differences. Accepts 6mm to 10mm diameter shafts.

Flexible glass stirring shaft couplings K:

For stirring tasks using glass stirring rods. Elastic connector between motor and stirring shaft. Provides exact alignment of motor and shaft, and evens out axial and height differences. Accepts 6mm to 10mm diameter shafts

Double-Cardan-Coupling DCK I:

With 8mm dia. hexagonal input drive receiver and 6mm square socket drive output.



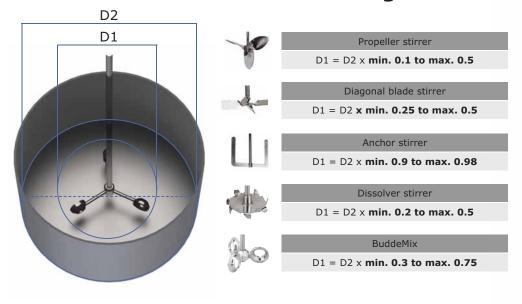
3

9.779 065

| Description | PK | Cat. No. |
|--------------------------------------|--|---|
| | | |
| Connection couplings 10 x 8 mm | 1 | 6.286 426 |
| Connection couplings 10 x 10 mm | 1 | 6.285 834 |
| Flex coupling receiver i. d. 10mm | 1 | 9.779 013 2 |
| Flex coupling receiver i. d. 10/13mm | 1 | 9.779 014 |
| Flex coupling receiver i. d. 10mm | 1 | 9.198 010 |
| Flex coupling receiver i. d. 10/13mm | 1 | 9.197 400 |
| Stainless steel, L = 110mm | 1 | 9.779 065 |
| | Connection couplings 10 x 8 mm Connection couplings 10 x 10 mm Flex coupling receiver i. d. 10/mm Flex coupling receiver i. d. 10/13mm Flex coupling receiver i. d. 10/mm Flex coupling receiver i. d. 10/13mm | Connection couplings 10 x 8 mm 1 Connection couplings 10 x 10 mm 1 Flex coupling receiver i. d. 10mm 1 Flex coupling receiver i. d. 10/13mm 1 Flex coupling receiver i. d. 10mm 1 Flex coupling receiver i. d. 10/13mm 1 Flex coupling receiver i. d. 10/13mm 1 |

LABORATORY TECHNOLOGY®

How to select the correct stirring rotor size



Buddeberg Laboratory Technology GmbH develops and manufactures explosion-protected compressed air laboratory stirrers and industrial stirrers as well as magnetic stirrer couplings and drives for the chemical, pharmaceutical, coating and food industry.

Furthermore, we offer **individual solutions** tailored to suit your special requirements. Please feel free to contact us.



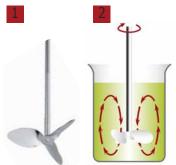
Your Contact

Marcel Schreiber **↓** +49 621 87690-52 **⊉** +49 621 87690-39 **⊇** schreiber@buddeberg.de

Propeller stirring rotors, 3-blade, stainless steel 1.4305

The 3-blade propellers produce axial flow, and reduce shear forces to a minimum, even at high stirring speeds, thanks to their optimised blade design. Recommended for medium to high speed operations. Other sizes available on request.

| Туре | Ø | Ø asitatar shaft | Length | PK | Cat. No. |
|--------|----------|---------------------|--------|----|-----------|
| | agitator | agitator shaft | | | |
| | mm | mm | mm | | |
| R 1381 | 45 | 8 | 350 | 1 | 9.197 021 |
| R 1382 | 55 | 8 | 350 | 1 | 9.197 022 |
| R 1385 | 140 | 10 | 550 | 1 | 9.197 023 |
| R 1388 | 140 | 10 | 800 | 1 | 9.197 024 |



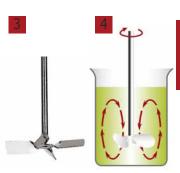
3 4

Diagonal blade stirring rotors, 4-blade, stainless steel 1.4305

The 4-blade diagonal blade stirring rotor provides axial flow and creates increasing shear forces at higher stirring speeds. Recommended for medium to high speed operations.

Other sizes available on request.

| Ø agitator | Ø agitator shaft | Length | PK | Cat. |
|---------------|---------------------|--------|----|-------|
| mm | mm | mm | | |
| 50 | 8 | 350 | 1 | 9.197 |
| 100 | 8 | 540 | 1 | 9.197 |
| 100 | 10 | 550 | 1 | 4.662 |



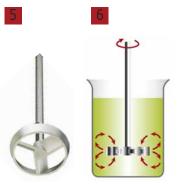


Turbine stirring rotors, 3-blade with guide ring, stainless steel 1.4305

The 3-blade turbine stirring rotor produces axial flow; the guide ring surrounding the blades reduces shear forces, and offers protection when contacting the wall or bottom of the vessel.

Recommended for medium to high speed operations.

| Ø agitator | Ø agitator shaft | Length | PK | Cat. No. |
|---------------|---------------------|--------|----|-----------|
| mm | mm | mm | | |
| 30 | 8 | 350 | 1 | 9.197 030 |
| 50 | 8 | 350 | 1 | 9.197 031 |
| 70 | 10 | 400 | 1 | 9.197 032 |



/ 8

Dissolver stirring rotors, stainless steel 1.4404

The dissolver stirring rotor creates a radial flow with high turbulence. The mixture is drawn from top to bottom. High shear forces are created at the dissolver disk, which provides effective particle reduction. Recommended for medium to high speed operations.

| Ø | Ø | Length | PK | Cat. No. |
|----------|----------------|--------|----|-----------|
| agitator | agitator shaft | _ | | |
| mm | mm | mm | | |
| 30 | 8 | 350 | 1 | 9.779 322 |
| 40 | 8 | 350 | 1 | 9.197 007 |
| 50 | 10 | 550 | 1 | 9.779 336 |
| 60 | 10 | 550 | 1 | 9.779 337 |
| 70 | 10 | 550 | 1 | 9.779 338 |
| 80 | 8 | 350 | 1 | 9.197 001 |
| 80 | 10 | 550 | 1 | 9.779 339 |
| 100 | 10 | 350 | 1 | 9.197 003 |

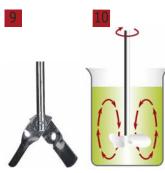




Centrifugal stirring rotors, 2-blade, stainless steel 1.4305

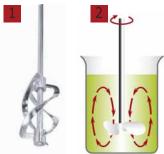
The folding blades of this 2-blade centrifugal stirring rotor open with increasing speed, allowing use with narrow-neck vessels. The stirring effect it provides is similar to a standard diagonal blade stirring rotor. Recommended for medium to high speed operations.

| Ø agitator open / closed | Ø agitator shaft | Length | PK | Cat. No. |
|-----------------------------|---------------------|--------|----|-----------|
| mm | mm | mm | | |
| 60/15 | 8 | 350 | 1 | 9.197 011 |
| 100/24 | 8 | 550 | 1 | 9.197 013 |



4. Stirring, Shaking, Mixing

Overhead stirrers/Stirrers

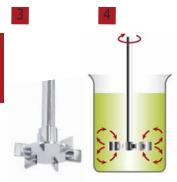


1 2 Spiral stirrer, stainless steel 1.4571

Generates axial flow. Medium is conveyed from the bottom upwards. For homogeneous mixing and heat exchange of medium to high viscosity media. Recommended for medium speed operations.

IKA

| Туре | Ø | Ø | Length | PK | Cat. No. |
|----------|----------|----------------|--------|----|-----------|
| | agitator | agitator shaft | | | |
| | mm | mm | mm | | |
| R 3003 | 50 | 8 | 350 | 1 | 6.265 595 |
| R 3003.1 | 100 | 10 | 550 | 1 | 6.265 596 |
| R 3003.2 | 150 | 10 | 800 | 1 | 6.265 597 |



3 4 Blade stirrer, stainless steel 1.4571

Generates a radial flow. For drawing the material to be mixed from the top and bottom. For aerating of low viscosity media and for homogenizing solids in liquids. Used at medium to high speeds.

IKA

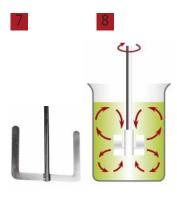
| Туре | Ø | Ø | Length | PK | Cat. No. |
|----------|----------|----------------|--------|----|-----------|
| | agitator | agitator shaft | | | |
| | mm | mm | mm | | |
| R 3004 | 30 | 8 | 359 | 1 | 6.265 598 |
| R 3004.1 | 50 | 10 | 565 | 1 | 6.265 599 |
| R 3004.2 | 70 | 10 | 819 | 1 | 6.265 700 |



Paddle stirring rotors, 6 holes, stainless steel 1.4305

The paddle stirring rotor creates a tangential flow with minimum turbulence. Its design ensures a gentle action on sensitive products and good heat exchange. Recommended for low to medium speed operations. Other sizes available on request.





7 8 Anchor stirring rotors, stainless steel

The anchor-shape rotor creates a tangential flow and high shear forces between the vessel wall and stirring blades. This stirrer is especially suitable for medium to high viscosity fluids. Recommended for low speed operations.

| Ø agitator | Ø agitator shaft | Length | PK | Cat. No. |
|---------------|---------------------|--------|----|-----------|
| mm | mm | mm | | |
| 45 | 8 | 350 | 1 | 9.197 033 |
| 80 | 10 | 500 | 1 | 9.779 346 |
| 90 | 8 | 350 | 1 | 9.197 034 |
| 100 | 10 | 500 | 1 | 9.779 347 |
| 150 | 10 | 550 | 1 | 9.197 036 |



BuddeMix Stirring System 1 - 4

This novel stirring system has been conceived to mix low viscosity fluids as well as highly viscous media at slow speeds. Its special design creates inherent dynamic currents to produce perfectly homogeneous mixing results in very little time. Additional components like baffles, bottom bearings, etc. are not needed.

Advantages at a glance:

- suitable for low to highly viscous fluids
- stirs media containing solids and fibres without any difficulty
- gentle, low-shear stirring, due to slow stirring speed
- constant product temperature, with no heating effect
- short mixing times as the entire contents of the container are agitated
- no air addition, no foaming
- no baffles required
- low gear wear due to balanced forces
- minimal power consumption thanks to low speeds and short operation times
- easy cleaning
- material no. 1.4404

Particularly for potentially explosive atmospheres:

- a single stirring zone, near to the container base, ensures easy mixing of settled residues, e.g. in flow-through mixing containers
- no baffles required, thus no additional sources of ignition

| Туре | Ø agitator | Ø agitator shaft | Length | Material No. | PK | Cat. No. |
|------------------|---------------|---------------------|--------|-----------------|----|-----------|
| | mm | mm | mm | | | |
| BuddeMix 1 | 60 | 10 | 350 | 1.4404 | 1 | 9.779 352 |
| BuddeMix 2 | 80 | 10 | 350 | 1.4404 | 1 | 9.779 332 |
| BuddeMix 3 | 120 | 10 | 550 | 1.4404 | 1 | 9.779 333 |
| BuddeMix 4 | 150 | 10 | 850 | 1.4404 | 1 | 9.779 334 |
| BuddeMix Mini 30 | 35 | 8 | 350 | 1.4404 | 1 | 6.314 307 |
| BuddeMix Mini 40 | 46 | 8 | 350 | 1.4404 | 1 | 6.314 308 |

Customised shaft length possible. Fine polishing Ra 0.6 to 0.8 µm and/or material certificate available on request.

Impellers VISCO JET®

The worldwide patented VISCO JET® Mixing System is the result of the so-called cone-principle. Turbulent flows are created at the taper end by acceleration, displacement and retardation. These flows advance through the stirred medium and result in the new dynamic mixing motion.

- One system for literally all mixing tasks for low to high viscosity media
- Patented cone-principle creates even at low speeds a turbulent flow which is unique to the VISCO JET®
- Even with high-viscosity media and gels which naturally do not mix by using common impellers you will observe an immediate flow through the entire beaker
- This technology allows for de-gassing of gels while preventing air intake and foaming
- Reduce process times significantly while performing the best mixing result ever

The stirring systems are made of stainless steel (V4A or AISI 316 Ti) or polyoxymethylene (POM).

| Material | For Vessels | Ø | Length | I | PΚ | Cat. No. |
|------------|-------------|----------------|--------|---|----|-------------|
| | | agitator shaft | | | | |
| | mm | mm | mm | | | |
| V4A | 80-150 | 10 | 500 | | 1 | 9.816 595 |
| V4A | 115-200 | 10 | 500 | | 1 | 9.816 596 |
| POM | 115-200 | 10 | 500 | | 1 | 9.816 597 |
| V4A | 170-300 | 10 | 500 | | 1 | 9.816 598 |
| POM | 170-300 | 10 | 500 | | 1 | 9.816 599 |
| AISI 316Ti | 115-200 | 10 | 500 | | 1 | 6.290 570 4 |
| AISI 316Ti | 170-300 | 10 | 500 | | 1 | 7.646 872 |

AISI 316Ti 1 Other versions available.



Heidolph

9.816 595



6.290 570

Stirring rotors made of PTFE

The stirrer shafts consist of a PTFE-jacketed, stainless steel shaft and a stirrer paddle made of solid PTFE. The stainless steel core assures stability of the stirrer shaft and allows safe attachment of the stirrer chuck. Thanks to the thick PTFE coat and the paddle made of solid PTFE, the medium will only come into contact with PTFE. High chemical resistance makes it almost universally suitable. PTFE is extremely nonstick so that residues are repelled from shaft and paddle. The stirrer shafts are similar in size to (KPG) glass stirring rods and are therefore interchangeable easily.

Operating temperature: -200 °C to +250 °C

Additional sizes and accessories are available on request.

Information on the mixing effects of the different stirring geometries can be found in the descriptions of the stainless steel stirring rotors.



Propeller, 3 blades, PTFE

The blades are inclined at 45 °. Recommended for medium to high speed operations.

BOLA

| Ø agitator | Ø agitator shaft | To fit chuck diam. | Length | Blades | PK | Cat. No. |
|---------------|---------------------|--------------------------|--------|---------|----|-----------|
| mm | mm | mm | mm | | | |
| 50 | 6 | 4.0 | 450 | round | 1 | 9.197 138 |
| 75 | 8 | 6.5 | 350 | angular | 1 | 9.197 130 |
| 75 | 10 | 8.0 | 450 | angular | 1 | 9.197 140 |
| 75 | 10 | 8.0 | 800 | angular | 1 | 9.197 149 |
| 140 | 10 | 8.0 | 600 | round | 1 | 9.197 194 |
| 140 | 10 | 8.0 | 800 | round | 1 | 9.197 195 |
| 14 | 16 | 14.0 | 1000 | round | 1 | 6.244 067 |



Crescent-shaped stirring rotors, PTFE

The semi-circular shape of the paddle is ideal for mixing in round-bottom flasks. The pivoting blade allows insertion into vessels with narrow necks and/or ground joints.

BOLA

| Ø agitator | Ø agitator shaft | To fit chuck diam. | Length | PK | Cat. No. |
|---------------|---------------------|--------------------------|--------|----|-----------|
| mm | mm | mm | mm | | |
| 65 | 8 | 6.5 | 350 | 1 | 9.197 121 |
| 90 | 8 | 6.5 | 450 | 1 | 9.197 122 |
| 90 | 10 | 8.0 | 350 | 1 | 9.197 127 |
| 90 | 10 | 8.0 | 450 | 1 | 9.197 124 |
| 90 | 10 | 8.0 | 510 | 1 | 9.197 128 |
| 90 | 10 | 8.0 | 600 | 1 | 9.197 125 |
| 125 | 16 | 14.0 | 800 | 1 | 9.197 126 |



3 Anchor stirrer, PTFE

Recommended for low speed operations.

BOLA

| Ø agitator | Ø agitator shaft | To fit chuck diam. | Length | PK | Cat. No. |
|---------------|---------------------|--------------------------|--------|----|-----------|
| mm | mm | mm | mm | | |
| 60 | 8 | 6.5 | 350 | 1 | 9.197 144 |
| 60 | 8 | 6.5 | 450 | 1 | 6.076 374 |
| 80 | 8 | 6.5 | 450 | 1 | 6.076 375 |
| 100 | 10 | 8.0 | 450 | 1 | 6.286 974 |
| 100 | 8 | 6.5 | 600 | 1 | 9.197 145 |
| 80 | 10 | 8.0 | 350 | 1 | 9.197 146 |
| 100 | 10 | 8.0 | 600 | 1 | 9.197 147 |
| 130 | 10 | 8.0 | 800 | 1 | 7.659 979 |
| 150 | 16 | 14.0 | 1000 | 1 | 6.210 121 |

Additional wings available on request



Overhead stirrer rotors, centrifugal paddle, PTFE

With PTFE-coated, stainless steel shaft.

BOLA

| Shaft diam. | To fit chuck diam. | Ø Paddle | Length | PK | Cat. No. |
|----------------|--------------------------|-------------|--------|----|-----------|
| mm | mm | mm | mm | | |
| 6 | 4.0 | 50 | 350 | 1 | 9.197 176 |
| 8 | 6.5 | 90 | 350 | 1 | 7.510 300 |
| 8 | 6.5 | 90 | 450 | 1 | 9.197 177 |
| 10 | 8.0 | 90 | 350 | 1 | 9.197 178 |
| 10 | 8.0 | 90 | 450 | 1 | 9.197 179 |

Test tube shaker LLG-uniTEXER 1

Compact and **cost-efficient** test tube shaker with brushless motor drive and touch function for short-term operation. Adjustable speed control up to 4500 rpm for excellent mixing results in a very short time. Especially for small volumes.

Scope of supply: vortexer, 1 mains adapter each US, AUS, UK



Specifications

Type of movement: orbital Orbit: 4.5 mm Speed: 0 ... 4500 min^{-1} Permissible ambient temperature: 5 ... 40 °C Permissible relative moisture: < 80 %

Dimensions (W x D x H): 100 x 100 x 70 mm

Weight: 0.55 kg

Power supply: 100 ... 240 V, 50/60 Hz

IP code: IP 43 Warranty: 3 years

| Туре | Plug type | РК | Cat. No. |
|-------------|-----------|----|-----------|
| LLG-uniTEXE | R 1 EU | 1 | 6.263 490 |
| LLG-uniTEXE | FR 1 UK | 1 | 6.263 491 |

2 3 4

Vortexer LLG-uniTEXER with universal attachment

One head - multiple uses

Vortexer with single carrier head, accommodating the most popular consumables and tubes: for 1 x assay plate, 2 x 50 ml conical tubes, 2 x 15 ml conical tubes, 2 x 5 ml conical tubes, 4 x 1.5/2 ml microcentrifuge tubes, 6 x 0.5 ml and 24 x 0.2 ml microcentrifuge tubes.

- Touch function for short-term operation
- Very easy to clean
- Elastomeric feet ensure excellent stability on the bench
- Modern design
- Robust housing made of ABS

Scope of supply: vortexer, 1 x universal attachment



Specifications

Type of movement: orbital/vortex Orbital diameter: 3.7 mm

Speed: 1000, 2000 und 3000 min⁻¹ Dimensions (W x D x H): 173 x 198 x 198 mm

 Weight:
 3.8 kg

 Power supply:
 220 V, 50/60 Hz

 IP code:
 IP 20

 Warranty:
 3 years





| Туре | Plug type | PK | Cat. No. |
|----------------------|-----------|----|-----------|
| LLG-uni <i>TEXER</i> | EU | 1 | 6.261 826 |
| LLG-uniTEXER | UK | 1 | 4.655 191 |

Velp Scientifica

4. Stirring, Shaking, Mixing

Shakers and mixers/Vortexer



7.971 461



4.666 537



4.666 537



Vortexers with patented IR sensor for sample recognition: the shaking process starts automatically when the sample tube approaches the mixing cup head. This enables fatigue-free working, as the sample doesn't have to be pressed on the device.

- For IR sensor and continuous operation
- Electronic speed control
- Adjustable shaking speeds up to 3000 min-1
- Very good chemical resistance
- Broad range of accessories available

ZX4: Analog vortex mixer

WIZARD: Compact, analog vortex mixer

TX4: Digital vortex mixer with timer and LCD display

Scope of delivery: Vortex mixer with mixing head

Specifications

Type of movement: orbital Orbital diameter: 4.5 mm Speed range: 0 ... 3000 min⁻¹ 15 W

Input power IP 42 IP code:

Power supply: 100 ... 240 V, 50 ... 60 Hz

Warranty: 3 years

| Туре | Net weight | Plug type | PK | Cat. No. |
|----------------------|------------|-----------|----|-------------|
| | kg | | | |
| ZX4 | 2.7 | EU | 1 | 7.971 461 1 |
| ZX4 with foam stands | 2.7 | EU | 1 | 4.666 714 |
| WIZARD | 2.2 | EU | 1 | 4.666 536 2 |
| TX4 | 2.7 | EU | 1 | 4.666 537 3 |

4.659 498

Mini Vortex Mixer VXMN series

Four Mini Vortex Mixer models for gentle to high-speed mixing are available. Analog **OHAUS** model offers variable speed control, and digital model allows input of the exact speed and time to achieve reproducible results. Pulsing model features a unique pulse action that reduces heat generation, while providing more effective mixing and cell disruption. Fixed speed model offers one-touch, high-speed mixing.

VXMNFS: Fixed high speed mixing, TOUCH mode operation

VXMNAL: Auto/Off/On Rocker switch, Speed Knob: Variable 1 to 10 Dial Marks, continuous or TOUCH mode operation VXMNDG: Auto/Standby/On Rocker Switch, LED Displays for Speed/Time, Up/Down Buttons for Set-Point Control, continuous or TOUCH mode operation

VXMNPS: Auto/Standby/On Rocker Switch, LED Displays for Speed/Time, Up/Down Buttons for Set-Point Control Pulse Button

Scope of supply:

VXMNFS/AL/DG: Vortexer incl. Cup head and 76 mm head with cover

VXMNPS: Vortexer incl. Cup head and 76 mm head with cover and stainless steel tube holder



Specifications

Type of movement: orbital Type of movement PS: pulsing 4.9 mm Orbit PS: 2.5 mm Timer (DG and PS only): 1 s to 160 h Permissible ambient conditions: 4 to 40 °C

Dimensions (L x W x H): 211 x 122 x 165 mm

Weight: 4.5 kg

230 V, 50/60 Hz Power supply:

| 6 | | |
|---|-----------|--|
| | | |
| | - | |
| | 4.659 501 | |

| Туре | Min. | Max. | PK | Cat. No. |
|--------|-------|-------|----|-------------|
| | speed | speed | | |
| | rpm | rpm | | |
| VXMNFS | 2500 | 2500 | 1 | 4.659 498 4 |
| VXMNAL | 500 | 2500 | 1 | 4.659 499 5 |
| VXMNDG | 300 | 2500 | 1 | 4.659 500 |
| VXMNPS | 500 | 2500 | 1 | 4.659 501 6 |

IKA

4. Stirring, Shaking, Mixing Shakers and mixers/Vortexer

Vortex mixer PV-1

With low profile and small footprint for gentle mixing to vigorous re-suspension of cell or chemical pellets.

- variable speed: 750rpm to 3000rpm

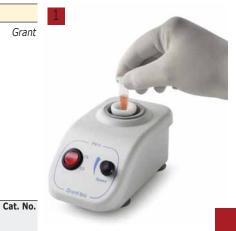
- continuous or touch operation
- for tubes up to 28.5 mm (50 ml) diameter

Specifications

Type of movement: orbital Orbit: 4mm

Speed range: 750 to 3000rpm Dimensions (WxDxH): 90 x 150 x 80mm 4 to 40°C Temperature range:

| Туре | Plug type | PK | Cat. No. |
|------|-----------|----|-----------|
| | | | |
| PV-1 | EU/UK | 1 | 9.721 000 |



Shaker VORTEX 2

Vortex shaker especially for short time operation (Touch function) or continuous operation.

Specifications

Type of movement: orbital Orbital diameter: 4 mm Max. shaken quantity: 400 g Motor rating input/output: 39/9 W

Speed range: 500 to 2500 rpm Dimensions (W x H x D): 120 x 138 x 140 mm

Weight: 3.9 kg Enclosure according to DIN EN 60529: IP 21

| Туре | PK | Cat. No. |
|----------|----|-----------|
| VORTEX 2 | 1 | 7.971 443 |



Test Tube Shakers Reax top/control

Ideal for mixing samples in Eppendorf tubes, vials and similar vessels of different Heidolph diameters at extremely high speed rates. The strong 5 mm vibration orbit yields the best results even with high viscosity media or solids out of solution and quickly gives a smooth and even dispersion. Short time and continuous mode.

Standard model Reax top:

- Features an analog dial speed control, no settings of specified rpm numbers

Precise model Reax control additionally with:

- Features analog dial speed control with accurate rpm numbers setting
- Electronic speed control provides constant rpm output even at very low speed and under changing loads
- Precise speed control with settings of specified rpm numbers

Scope of delivery: Test tube shaker incl. attachment diam. 20 mm. Optional attachment for vessels up to 50 mm available.

Specifications

Type of movement: orbital Orbit: 5 mm 0 ... 2500 rpm Speed range: 51 W Power consumption: Permissible ambient temperature: 5 ... 31 °C Permissible relative moisture: 80 %

Dimensions (W x D x H): 134 x 172 x 105 mm

Weight: 2.8 kg Power supply: 230 V, 50 Hz IP code: **TP 22**





9.730 040



9.730 042

4. Stirring, Shaking, Mixing

Shakers and mixers/Vortexer



Test tube shaker, lab dancer

Inexpensive, compact test tube vortex shaker. Designed for mixing small test samples by touch function.

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- Small, compact and reliable
- For small containers up to 30mm in diameter, e.g. test tubes, centrifuge tubes, Eppendorf tubes
- Fixed speed (2800rpm)
- Excellent mixing
- Top of housing and the test tube accessories are made from chemically inert plastic. The bottom section is a coated, zinc die-casting.
- Includes lightweight 12V mains adapter

Specifications

Mixing: orbital Orbit: 4.5mm

1 tube, max. 50ml Capacity, volume: Motor rating input/output: 1.2/0.8W 2800rpm (fixed) Speed: Dimensions (Diam. x H): 100 x 70mm Weight: 550g Material housing: Material attachment: TPU Material base: Zinc, coated Enclosure according to DIN EN 60529: IP40

Supply requirements: 100-240V 50/60 Hz

Tested to DIN EN IEC 61010-1.

| Туре | Plug type | PK | Cat. No. |
|------------|-----------|----|-----------|
| lab dancer | EU/CH | 1 | 9.729 936 |
| lab dancer | UK | 1 | 4.008 065 |



2 Shaker Vortex 3

Vortex shaker suitable for intermittent operation (touch function), activated by pressing shaker attachment, or for continuous operation.

- Wide speed range, infinitely adjustable

- Versatile, due to 3 accessory interchangeable attachments and 7 inserts (e.g. Eppendorf tubes, microtitre plates, 250ml Erlenmeyer flasks etc.), please order separately
- Attachments securely click onto shaker in any position
- Strap clamp (VG3.36) ensures easy holding of round/Erlenmeyer flasks
- Sturdy, die cast zinc casing
- Stable at high speeds due to special feet (silicone base with ultra-high vibration damping)
- Eccentric drive with ball bearings
- Self-ventilated motor allows continuous operation with minimal warm-up of the housing

Supplied with standard attachment.

Specifications

Type of movement: orbital
Orbital diameter: 4mm
Motor rating input/output: 58/10W

Speed range: 500rpm to 2500rpm Speed indication: scale 0 to 6
Dimensions (W x D x H): 127 x 149 x 136mm

Weight: 4.5kg
Protection class acc. to DIN EN 60529: IP 21

Supply requirements: 230V 50/60 Hz

Tested to DIN EN IEC 61010-1.

| Туре | Plug type | PK | Cat. No. |
|----------|-----------|----|-----------|
| VORTEX 3 | EU | 1 | 9.729 950 |
| VORTEX 3 | CH | 1 | 4.008 062 |
| VORTEX 3 | UK | 1 | 4.008 061 |

4. Stirring, Shaking, Mixing Shakers and mixers/Vortexer

Orbital Shaker Hula Dancer Basic/Digital

The Hula Dancer is a powerful orbital shaker with robust housing for high stability. It is suitable for a maximum load of 100 g. Hula Dancer basic with fixed speed of 2800 rpm. IKA



Specifications

Mixing: orbital Orbit: 4.5 mm Capacity, volume: 100 g Motor rating input/output: 9.5/5 W Permissible ambient temperature: 5 ... 40 °C 80 % Permissible relative moisture:

Dimensions (Diam. x H): 123 x 123 x 42 mm

Weight: 700 g

Power supply: 100 ... 240 V, 50 ... 60 Hz

Enclosure according to DIN EN 60529: IP 40

| Туре | Speed range | PK | Cat. No. |
|---------------------|-------------|----|-------------|
| | rpm | | |
| Hula Dancer basic | 2800 | 1 | 6.274 875 |
| Hula Dancer digital | 1200 2800 | 1 | 4.665 611 1 |

Vortex-Genie®-series

Robust and reliable shakers for speedy mixing and shaking of samples. Multiple accessories: e.g. adapter tops for test tubes, beakers, centrifuge tubes etc. Adapter tops can be changed easily with the snap fit system.

Vortex-Genie® 2: Variable speed for precise mixing from gentle to vigorous. Broad range of attachments for most tubes, plates and other containers. Hands-Free or Touch On control.

Vortex-Genie® 2T with an integrated timer: Timer function: (Touch On) 1-60 seconds, (Hands-Free) 1-60 minutes or continuous. Unit automatically stops at the end of user programmed time.

Digital Vortex-Genie® 2 with digital control and display of speed and time: Digital display provides accuracy, reproducibility and repeatability. Timer function: (Touch On) 1-99 seconds, (Hands-Free) 1-99 minutes or continuous. Specially configured unit for Applied Biosystems protocol available.

Vortex Genie® Pulse: Fully programmable vortex mixer with ON/OFF feature. Pulse 0.1 sec to 99 min.

Scope of supply: Vortexer, 3-inch Platform with rubber cover, Pop-off cup



Specifications Vortex-Genie® 2/Vortex-Genie® 2T/Digital Vortex-Genie® 2/ **Vortex Genie® Pulse**

Shaking movement: orbital

Speed display/Timer: Scale/No/Scale/Scale/Digital/Digital

Speed range: 600-2700rpm/600-2700rpm/500-2850rpm/500-2850rpm

Timer

Interval operation: -/ 1 to 60s/1 to 99s/0.1 s to 99 min -/ 1 to 60min/1 to 99min/1 to 99 min Hands-free mode:

Dimensions (L x W x H): 165 x 122 x 165mm Permissible ambient conditions: 0 to 38°C at 95% rh

Weight: 4kg

230V, 50/60Hz Power supply:

| Туре | Min. | Max. | Plug type | PK | Cat. No. |
|-------------------------|-------|-------|-----------|----|-----------|
| | speed | speed | | | |
| | rpm | rpm | | | |
| Vortex Genie® 2 | 600 | 2700 | EU | 1 | 9.730 060 |
| Vortex Genie® 2 | 600 | 2700 | UK | 1 | 6.251 939 |
| Vortex Genie® 2 | 600 | 2700 | CH | 1 | 6.235 684 |
| Vortex-Genie® 2T | 600 | 2700 | EU | 1 | 6.252 823 |
| Vortex-Genie® 2T | 600 | 2700 | UK | 1 | 6.252 946 |
| Vortex-Genie® 2T | 600 | 2700 | CH | 1 | 9.730 121 |
| Digital Vortex-Genie® 2 | 500 | 2850 | EU | 1 | 6.242 793 |
| Digital Vortex-Genie® 2 | 500 | 2850 | UK | 1 | 9.730 120 |
| Digital Vortex-Genie® 2 | 500 | 2850 | CH | 1 | 6.240 599 |
| Vortex Genie® Pulse | 500 | 2850 | EU | 1 | 6.287 671 |
| Vortex Genie® Pulse | 500 | 2850 | UK | 1 | 6.287 674 |
| Vortex Genie® Pulse | 500 | 2850 | CH | 1 | 6.287 675 |

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4. Stirring, Shaking, Mixing

Shakers and mixers/Vortexer



9.729 938

Shaker MS3 basic/digital

Compact, universal small shaker suitable for shaking tasks with all small vessels and microtitre plates.

Continuous or touch operation (with standard attachment)

Two operating modes available:

Mode A (safe mode with attachment detection)

the maximum speed of 3000rpm is only attained with the standard attachment in touch mode.

When using other attachments the speed is limited to 1300rpm.

Mode B (without attachment detection)

a speed of 3000rpm is possible with all attachments.

- Stable in all speed ranges
- Sturdy, zinc, die-cast casing

MS 3 digital additionally with countdown function timer (1sec to 999min).

Items supplied with MS3 basic + digital: Standard attachment, universal attachment, one-hand insert Additional items supplied with MS3 digital: Microtitre plate attachment, test tube insert with 6 holes for 12mm diameter tubes

Specifications:

Type of movement: orbital 4.5mm Orbit: Max. permitted shaking weight (incl. attachment): 0.5kg 10/8W Motor rating input/output: Speed display: Scale 0 to 3000rpm Speed range: Dimensions (W x D x H): 148 x 205 x 63mm

Weight: 2.9kg Protection class acc. to DIN EN 60529 IP21

100-240V 50/60Hz Supply requirements:

Tested to DIN EN IEC 61010-1.

| Туре | Plug type | PK | Cat. No. |
|--------------|-------------|----|-------------|
| | | | |
| MS 3 basic | EU/UK/CH/US | 1 | 9.729 938 1 |
| MS 3 digital | EU/UK/CH/US | 1 | 9.729 939 |



Mini shaker Matrix Orbital



Powerful thermoshaker available for samples with small volumes, e.g. blood samples, pharmaceutical agents, DNA/RNA samples, DNA/RNA samples or Elisa assays. Without cross-contamination and with an optimal mixing result.

- Large and clear display with a simple menu structure allows for intuitive operation
- Two different speed modes for optimal mixing
- Speed adjustment according to insert, attachment and filling volume
- Robust aluminum die cast housing

Scope of supply: Shaker, 3 inserts (1 x 0.5 ml tubes, 1 x 1.5/2.0 ml tubes and 1 x 0.2 ml PCR tubes)

Specifications

Type of movement: orbital Orbit: 3 mm

300 ... 3000 rpm Speed range:

Power consumption: 80 W Max. permitted shaking weight (incl. attachment): 0.3 kg

1 s ... 6000 min Permissible ambient temperature: 5 ... 40 °C 80 % Permissible relative moisture:

Dimensions (W x D x H): 198 x 318 x 124 mm

Weight: 7.2 kg

Power supply: 100 ... 240 V, 50/60 Hz

IP code: IP 21

| Туре | PK | Cat. No. |
|----------------|----|-----------|
| Matrix Orbital | 1 | 4.664 739 |

Microplate shakers, see page 539.

Vortex Mixer VX-200

Economical vortex mixer for mixing all kinds of samples. The continuously variable speed makes the Vortex Mixer useful for a variety of applications.





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OHAUS



- Pressure on vibrating plate starts device and enables effective working with one hand
- Continuously variable mixing speed

Specifications

Speed range 230 V: 0 ... 2850 rpm Operating modes: Touch or continuous Dimensions (W x D x H): 140 x 160 x 130 mm

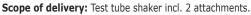
Weight: 2.2 kg

| Туре | PK | Cat. No. |
|--------------|----|-----------|
| Vortex Mixer | 1 | 6.292 017 |

Test tube shakers Multi Reax

Versatile Test tube shaker with 3 mm vibration orbit, accomplishes excellent results especially in large vessels. The Multi Reax allows for rigid to smooth dispersion of viscous media and solids.

- Short term and continuous run
- Stepless speed adjustment
- Digital display
- Timer function allows for unattended operation and can be set from 1 to 999 minutes. With acoustic alarm when the operation stops.



- Attachment for 26 vessels with diameters from 10 mm to 16 mm
- Attachment for 12 vessels with diameters from 16 mm to 32 mm

Specifications

Type of movement: orbital Orbit: 3 mm

Speed range: 150 ... 2000 rpm

Power consumption: 50 W Permissible ambient temperature: 5 ... 31 °C 80 % Permissible relative moisture:

Dimensions (W x D x H): 270 x 410 x 172 mm

9.8 kg Weight:

230 ... 240 V/50/60 Hz Power supply:

IP code: IP 30

| Туре | PK | Cat. No. |
|------------|----|-----------|
| Multi Reax | 1 | 9.839 810 |

Vortex Mixers for multi tubes

Multi-Tube Vortexers are ideal for high throughput sample processing.

Holds up to 50 samples simultaneuosly. Interchangeable foam racks for vortexing tubes

from 10 to 29 mm in diameter available. Vortexing action is created by securing the top of the sample in place while allowing the bottom to rotate freely in a 3.6 mm orbit. Suction cup feet reduce motion and prevent sliding on work surface. Analog and digital models, both microprocessor-controlled and run in continuous or timed mode.

- Digital Model is ideal for Applications that Require Accuracy and Repeatability
- Pulsing Mode on Digital Model to Enhance Vortexing Action
- Analogue Model Offers an Economical Alternative When Exact Speed/Time is not required

Scope of supply: Vortex Mixer incl. Tray Pad Set for support and one 12 mm Test Tube Foam Rack.



Orbit: 3.6 mm Max. load: 4.5 kg

Timer VXMTAL/VXMTDG: 0 to 60 s/1 s to 160 h

Permissible ambient conditions: 4 to 40 °C

Dimensions (L x W x H): 241 x 384 x 406 mm

Weiaht: 19.1 kg Power supply: 230 V, 50/60 Hz

| Туре | Min. speed rpm | Max. speed rpm | Display type | PK Cat. No. |
|--------|----------------------|----------------------|-----------------|--------------------|
| VXMTAL | 1200 | 2400 | analogue | 1 4.659 506 |
| VXMTDG | 500 | 2500 | digital | 1 4.659 507 |







4. Stirring, Shaking, Mixing

Shakers and mixers/Vortexer



Shaker MixMate®



The 3-in-1 mixer for plates, tubes and vortex mixing. High speed instrument for the complete resuspending of pellets, mixing PCR setups, mixing viscous liquids and suspensions (incl. beads), mixing restriction digestions, immunoassays, colorimetric assays, reporter gene assays, vortexing numerous tube formats (e.g. 15 and 50 ml conical tubes). Fully mixing in plates (96 or 384-wells) or reaction tubes in seconds.

- High-speed mixer for fast and efficient mixing of small volumes in all common vessel formats up to 50 ml
- 5 soft keys with pre-defined standard mixing parameters for easy usage
- Integrated vortex function for individual sample mixing
- 2DMix-Control (planar mixing orbit) and anti-spill technology for controlled mixing in seconds, without lid wetting and cross-contamination
- Minimal hand/arm vibration transfer during vortexing (PhysioCare Concept®)
- Very stable, remains stationary even at maximum mixing speed
- Whisper quiet operation

Specifications

Type of movement: orbital Orbit: 3 mm

Speed range: 300 ... 3000 rpm Touch vortex frequency 3500 rpm

Timer: 15 s ... 99.5 h, continuous

Noise level <50 dB(A)

Dimensions (W x D x H): $170 \times 230 \times 130 \text{ mm}$ Weight: 4.2 kg

Max. power consumption 4.2 kg

Power supply: 230 V, 50/60 Hz

| Туре | PK | Cat. No. |
|----------|----|-----------|
| MixMate® | 1 | 4.671 525 |



9.730 090

Shaker Multi Vortex Genie®/Vortex-Genie® Max

Robust and reliable shaking device for mixing and shaking of samples in Erlenmeyer flasks, vials, tubes, beakers or microplates.

Scientific Industries

- Digital display for speed and time
- Speed increase in steps of 10 rpm
- Robust metal case
- Secure stand at high speed thanks to supports with high vibration damping
- Can be loaded with e. g. max. 6 Erlenmeyer flasks 250 ml or 2 multi racks each for 12 test tubes (max. tube diameter 29 mm, length min. 85 mm)

Vortex-Genie® Max additionally:

- Unique ratcheting clamping system, ideal for repetitive protocols and use with open containers
- Fully programmable
- Revers and interval mixing
- Pulse function

Scope of supply:

Multi Vortex-Genie®: Shaker, Platform with clamp/tension roller (for securely attaching standing vessels), 2 multi-racks

Vortex-Genie® Max: Shaker, Platform with 2 ratcheting clamps



4.670 816

Specifications Multi Vortex-Genie® // Vortex-Genie® Max

Type of movement: orbital Orbit: 4 mm

Speed range: 200 ... 950 rpm // 500 ... 2000 rpm

Overall dimensions (W x D x H): 310 x 270 x 195 mm
Weight: 11.3 kg // 10.4 kg
Supply requirements: 230 V, 50 Hz

| Туре | Plug type | PK | Cat. No. |
|---------------------|-----------|----|-------------|
| Multi Vortex-Genie® | EU | 1 | 9.730 090 2 |
| Multi Vortex-Genie® | UK | 1 | 6.265 221 |
| Multi Vortex-Genie® | CH | 1 | 6.265 222 |
| Vortex-Genie® Max | EU | 1 | 4.670 816 |
| Vortex-Genie® Max | UK | 1 | 4.670 817 |
| Vortex-Genie® Max | CH | 1 | 4.670 818 |

Suitable accessories can be found in our online shop.

4. Stirring, Shaking, Mixing Shakers and mixers/Orbital shakers

Grant

Orbital Shaker PSU-10i

Microprocessor controlled shaking platform providing smooth and quiet horizontal orbital motion for mixing in bottles, flasks and beakers.

- Continuous or timed operation with automatic switch-off

- Reliable direct drive system
- Automatic load balancing system
- The five interchangeable accessory platforms enable a wide choice of vessels to be used, including bottles, flasks and beakers, dishes, boxes and petri-dishes.

Specifications

Type of movement: orbital Orbit: 10mm 3kg Max. Load:

Speed range: 50 to 450rpm/10rpm increments Timer range: 1min to 96 hours or continuous

Overall dimensions (W x D x H): 220 x 205 x 90mm Power supply: 100 - 240V, 50/60Hz

| Туре | PK | Cat. No. |
|---------|----|-----------|
| PSU-10i | 1 | 9.721 019 |

Accessories for Orbital shaking platform PSU-10i

Grant

| Туре | Description | PK | Cat. No. |
|----------|--|----|-------------|
| Bio PP-4 | Flat platform, working area 230 x 230mm | 1 | 9.721 018 |
| PUP-12 | Universal platform, working area 270 x 195mm | | 9.721 021 2 |
| P12-100 | Platform with clamps for 12 x 100ml flasks / 150ml beakers | 1 | 9.721 023 |
| P6-250 | Platform with clamps for 6 x 250ml flasks / 300ml beakers | 1 | 9.721 024 |
| P16-88 | Platform with spring holders for 88 tubes up to 30mm | 1 | 9.721 049 |



Orbital shakers SHLD series

These light Duty Shakers are designed for applications with loads up to 3.6 kg. Choose from two orbits and speed ranges to optimize your sample mix.

Microprocessor-controlled and available as an analog model with basic speed control, 3 digital models which include a non-slip mat. The mat can be removed to mount flask clamps and tube racks directly onto the tray. The digital Microplate Shaker model can hold up to 4 microplates or 2 microtube racks.

- Microprocessor Control
- Triple Eccentric Drive
- Speed Ramping Feature
- Spill-Resistant Design
- Suitable for CO₂ environments

Digital models additionally with:

- Overload protection
- LED display for speed and time
- Audible Alarm

Scope of supply:

0415AL/0415DG/0403DG: Shaker incl. built-in tray and non-slip rubber mat

MP03DG: Microplate shaker incl. built-in tray with holder for 4 microplates or 2 microtube racks



Type of movement: orbital Max. Load: 3.6 kg

Max. Load MP03DG: 4 microplates or 2 microtube racks

brushless DC motor Motor:

1 s to 160 h (0415AL without Timer) Timer:

413 x 254 x 102 mm Dimensions (L x W x H): Weight: 11.3 kg

230 V, 50/60 Hz Power supply:

| Туре | Min. | Max. | PK | Cat. No. |
|--------|-------|-------|----|-------------|
| | speed | speed | | |
| | rpm | rpm | | |
| 0415AL | 40 | 300 | 1 | 4.659 467 3 |
| 0415DG | 40 | 300 | 1 | 4.659 470 4 |
| 0403DG | 100 | 1200 | 1 | 4.659 468 |
| MP03DG | 100 | 1200 | 1 | 4.659 469 5 |







4. Stirring, Shaking, Mixing Shakers and mixers/Orbital shakers



Orbital shaker RS-OS series

A compact, orbital shaker with ideal swivel motion. The shakers can be set up individually by using the comprehensive range of accessories.

Phoenix Instrument

Features at a glance RS-OS 10/20:

- compact shaker for a maximum shaking weight of 2.5 and 7.5 kg
- Backlight LCD display for speed and timer adjustment.
- Speed, time and operating mode can be viewed simultaneously
- Comprehensive accessories
- Adjustable safety speed
- PC control via RS232 interface, the special Shaker PC software can realise the setting of instrument parameters on the PC and the display of working curves real-time.
- 2 years warranty

Please order attachments and further accessories separately.

Specifications RS-OS10 // RS-OS 20

Type of movement: orbital Orbit: 4 mm

Speed range: $100 \dots 800 \text{ rpm} // 100 \dots 500 \text{ rpm}$

Max. Load: 2.5 kg // 7.5 kg

Power consumption: 30 W
Speed display: digital
Interface: RS-232
Platform dimensions (W x D): 240 x 240 mm

Overall dimensions (W x D x H): 340 x 300 x 100 mm // 420 x 370 x 100 mm

Weight: 8.1 kg // 13.5 kg Voltage: 100 ... 240 V IP code: IP 21

| Туре | PK | Cat. No. |
|----------|----|-----------|
| RS-OS 10 | 1 | 9.852 120 |
| RS-OS 20 | 1 | 9.852 121 |



Accessories for shakers RS-OS/RS-LS/RS-RS 5/RS-DS 5 series

Phoenix Instrument

| Туре | Description | For Type | PK | Cat. No. |
|-----------|--|----------------------|----|-----------|
| | | | | |
| RSS-E 100 | Universal attachment with clamping rolls | OS/LS 10, RS/DS 5 | 1 | 9.852 125 |
| RSS-E 110 | Universal attachment with vertical adjustable clamping rolls | OS/LS 10, RS/DS 5 | 1 | 9.852 127 |
| RSS-E 200 | Universal attachment with clamping rolls | OS/LS 20 | 1 | 9.852 129 |
| RSS-E 220 | Dish attachment with tensioning belt | OS/LS 20 | 1 | 9.852 146 |
| RSS-E 160 | Dish attachment, 200 x 300 mm | OS/LS 10, RS/DS 5 | 1 | 4.660 779 |
| RSS-E 165 | Dish attachment, 280 x 280 mm | OS/LS 10, RS/DS 5 | 1 | 4.660 780 |
| RSS-E 168 | Connectors for 2 dish attachments | RSS-E 160, RSS-E 165 | 4 | 4.660 781 |



Platform shaker Mini-100 Orbital-Genie®

Benchtop orbital shaker with non-slip, rubber-coated platform and spill-proof edges for gentle shaking.

Scientific Industries

- Variable shaking speed up to 100 min-1
- Also suitable for use in cold rooms and incubators (not CO2 incubators)
- Further platform optionally available

Scope of delivery: Shaker incl. platform

Specifications

Type of movement: orbital Orbit: 19 mm Speed range: 20 ... 100 rpm Max. Load: 3 kg 0 ... 38 °C Working temperature: 290 x 290 mm Platform dimensions (W x D): Overall dimensions (W x D x H): 350 x 350 x 85 mm Net weight: 3.5 kg

| Туре | Plug type | PK | Cat. No. |
|------------------------|-----------|----|-----------|
| Mini-100 Orbital-Genie | EU | 1 | 4.667 502 |
| Mini-100 Orbital-Genie | UK | 1 | 4.667 503 |
| Mini-100 Orbital-Genie | CH | 1 | 4.667 504 |

4. Stirring, Shaking, Mixing Shakers and mixers/Orbital shakers

Heathrow Scientific

Digital Orbital Shaker

- Electronically controlled and programmable shakers

- Slow, soft-start greatly decreases the risk of spills
- Erlenmeyer flasks, beakers, culture flasks and micro plates can easily be fixed using 8 rubber strips
- Digital LCD display for speed and run time control
- Integrated overload shutdown
- Permanent motor feedback, which automatically adjusts the speed even if the load is changed during operation
- Continuous mode or timer for up to 49 hours
- Soft rubber feet minimise system movement
- Platform with non-slip surface

Platform capacity:

Erlenmeyer Flasks e.g.: 25 x 50 ml, 16 x 125 ml, 9 x 250 ml, 4 x 500 ml, 4 x 1000 ml, 1 x 2000 ml

Beakers e.g.: 36×50 ml, 25×100 ml, 16×250 ml, 9×400 ml, 4×1000 ml Deep well assay plates e.g.: 6×300 standard (more if stacking is an option)

Supplied with: Orbital Shaker incl. universal attachment, universal power supply, non-slip rubber mat and 8 elastic ties



Specifications

Type of movement: orbital
Orbit: 19.0 mm
Speed range: 20 to 300rpm

Max. Load: 4.5kg

Timer range: 1min to 49 hours or continuous

Speed display: digital

Ambient conditions: 4 to 40°C; 20% to 40% RH, non-condensing

Platform interior dimensions: 279 x 279mm Overall dimensions (W x D x H): 314 x 310 x 197 mm

Weight: 8.2kg

Power supply: 100 to 240 V, 50/60 Hz

Warranty: 5 years



| Туре | PK | Cat. No. |
|----------------|----|-----------|
| Orbital shaker | 1 | 6.270 566 |

Orbital shaker SSM1

- Smooth orbital shaking action
- Built-in digital timer
- Variable speed control 30 to 300rpm
- Supplied with non-slip mat for microplates etc.
- Optional accessory cradle system for flasks and bottles

The compact SSM1 provides a smooth uniform circular motion with an orbit of 16mm. It is supplied with a non-slip mat that can hold up to four microplates or diagnostic cards. Alternatively, an accessory cradle system is available that can accommodate a variety of vessels including flasks, bottles or beakers via four rubber securing bars. It will hold up to: 4×250 ml or 2×500 ml or 1×1000 ml Erlenmeyer Flasks or bottles.

Speed is variable from 30rpm to 300rpm. Once set on the digital display, the shaking speed is effectively maintained even over long periods of time. Shaking times can be set to run for 1 second to 9 hours on the built-in digital timer, or the unit can also be set for continuous operation.

With BioCote, silver-based, antimicrobial protection.



Specifications

Type of movement: orbital
Orbit: 16mm
Speed range: 30 to 300rpm
Max. Load: 3kg

Platform dimensions (W x D): 220 x 220mm Overall dimensions (W x D x H): 240 x 300 x 140mm

Net weight: 5kg

Supply requirement: 230V, 50Hz, 50W

| Туре | PK | Cat. No. |
|------|----|-----------|
| SSM1 | 1 | 9.728 830 |

Attachments are not included. - Please order separately



Orbital Shaker PSU-20i

Powerful and efficient microprocessor controlled, multi-functional orbital shaker

Grant

providing all that is required to mix your samples: rotation, reciprocation and

vibration. This enables optimisation of the mixing whether in flasks, beakers, Petri dishes or other laboratory vessels.

- Orbital motion, orbital reciprocation and vibration functions all in one product
- Reciprocal rotation: 0 to 360° turning angle, in 30 degree steps
- Vibration: 0 to 5° turning angle, 1 degree steps
- Loading capacity: 8 kg
- Fully programmable sequence that can use one or all the functions
- 6 interchangeable platforms for vessels up to 1000ml including a multi-level platform to hold a large number of various microplates, Petri dishes and culture bags.

Scope of supply: Orbital Shaker PSU-20i, external power adapter, manual and certificate.

Optional Platform attachments please order separately.

Specifications

Type of movement: orbital/reciprocal/vortex 20mm/0 to 360°/0 to 5° Orbit:

20 to 250rpm Speed range:

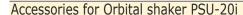
Max. Load: 8kg

Timer: 1min to 96h Permissible ambient temperature: 4 to 40°C

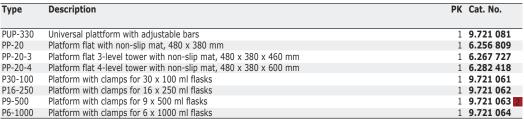
Dimensions (W x D x H): 410 x 410 x 130mm

Weight: 11.7kg 240V, 50/60Hz Power supply:

| Туре | Plug type | PK | Cat. No. |
|---------|-----------|----|-----------|
| | | | |
| PSU-20i | EU/UK | 1 | 6.256 816 |



Grant





Platform shaker Mini-300 Orbital-Genie®

NEW Scientific Industries

Compact and powerful high-speed benchtop shakers with a choice of 3 models for various applications.

- Model with ratcheting clamps provides the flexibility for using a mix of different size and shape vessels on one single
- Model with flask clamps for accommodating various flask or beaker sizes
- Model with adhering mat is perfectly suitable for open containers
- Suitable for use in cold rooms and incubators (Not for CO2 incubators)

Scope of supply: Shaker, platform

Please order clamps for Mini-300 Orbital-Genie with flask separately.

Specifications

Type of movement: orbital Orbit: 19 mm 35 ... 300 rpm Speed range: Max. Load: 3 kg 0 ... 38 °C Working temperature: Platform dimensions (W x D): 305 x 305 mm Overall dimensions (W x D x H): 350 x 350 x 85 mm

| net weight: | | 10.5 Kg |
|-------------|-------------|-----------|
| Туре | Description | Plug type |

| Туре | Description | Plug type | PK | Cat. No. |
|-------------------------|-------------------|-----------|----|-----------|
| | | | | |
| Mini-300 Orbital-Genie® | Ratcheting Clamps | EU | 1 | 4.670 823 |
| Mini-300 Orbital-Genie® | Ratcheting Clamps | UK | 1 | 4.670 824 |
| Mini-300 Orbital-Genie® | Flask Clamps | EU | 1 | 4.670 826 |
| Mini-300 Orbital-Genie® | Flask Clamps | UK | 1 | 4.670 827 |
| Mini-300 Orbital-Genie® | Adhering Mat | EU | 1 | 4.670 829 |
| Mini-300 Orbital-Genie® | Adhering Mat | UK | 1 | 4.670 830 |





4. Stirring, Shaking, Mixing Shakers and mixers/Orbital shakers

4.659 457

Orbital shaker SHHD series

With load capacities from 16 to 68 kg and over 70 accessory options, the Heavy Duty Shakers are designed **OHAUS** to handle a range of applications. Available as analog or digital models with microprocessor control to provide variable speed and consistent shaking, while ramping to the set speed. Microprocessor displays the last set-point and will restart if power is interrupted. Built-in tray and non-slip rubber mat included with all models.

- Microprocessor Control
- Triple Eccentric Drive
- Speed Ramping Feature
- Spill-Resistant Design
- Suitable for CO2 environments

Digital models additionally with:

- Patented Accu-Drive Shaking System
- Touchpad Control with Independent LED Displays for speed and time
- Speed Calibration Mode
- RS232 Interface
- Load Sensor and Overload Protection
- Audible Alarm

Scope of supply: Shaker incl. built-in tray and non-slip rubber mat



Specifications

Type of movement: orbital

brushless DC motor Motor: Timer Models analogue/digital: 1 s to 120 min/1 s to 160 h 0 to +40 °C/-10 to +60 °C Environment Models analogue/digital:

Power supply: 230 V, 50/60 Hz

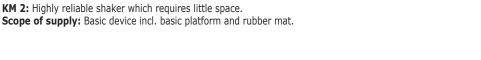
| Туре | Permissible shaking quantity / maximum load | Min. speed | Max. speed | Shaking stroke / Shaking orbit | Dimensions (W x D x H) | PK Cat. No. |
|--------|---|---------------|---------------|-----------------------------------|---------------------------|----------------------|
| | kg | rpm | rpm | mm | mm | |
| 1619AL | 16.0 | 25 | 500 | 19 | 355 x 413 x 149 | 1 4.659 457 1 |
| 1619DG | 16.0 | 15 | 500 | 19 | 355 x 413 x 149 | 1 4.659 458 |
| 2325AL | 22.7 | 25 | 500 | 25 | 678 x 610 x 149 | 1 4.659 461 |
| 2325DG | 22.7 | 20 | 500 | 25 | 678 x 610 x 149 | 1 4.659 462 |
| 4525DG | 45.4 | 15 | 500 | 25 | 678 x 729 x 170 | 1 4.659 463 |
| 4550DG | 45.4 | 15 | 300 | 51 | 678 x 729 x 170 | 1 4.659 464 |
| 6825DG | 68.0 | 15 | 300 | 25 | 914 x 744 x 170 | 1 4.659 465 |
| 6850DG | 68.0 | 15 | 300 | 51 | 914 x 744 x 170 | 1 4.659 466 |

Orbital shaker KM CO₂/KM 2

KM CO2/KM CO2-FL: Stainless Steel Shaker especially for incubators with

CO₂ concentration.

Scope of supply: Shaker incl. basic platform with rubber mat and external control unit.



Specifications

orbital Type of movement: 20 mm Orbit:

Speed range: 5 ... 220 rpm, in steps of 5

Max. Load: 2 kg CO₂ concentration (KM CO₂): 20 %

0 ... 99 h 59 min/continuous Timer:

Power consumption: 4 W 4 ... 45 °C Permissible ambient temperature: Length standard cable (KM CO₂): 2000 mm Length ribbon cable (KM CO2-FL): 1200 mm Dimensions platform (B x T): 200 x 295 mm Power supply: 100 ... 240 V, 50/60 Hz

Protection class: IP 21



6.285 189



9.838 140

| Туре | Dimensions (W x D x H) | Net weight | PK | Cat. No. |
|------------------------|---------------------------|------------|----|-------------|
| | mm | kg | | |
| KM CO ₂ | 230 x 340 x 145 | 7.6 | 1 | 6.285 189 3 |
| KM CO ₂ -FL | 230 x 340 x 145 | 7.6 | 1 | 6.275 858 |
| KM 2 | 250 x 415 x 145 | 8.1 | 1 | 9.838 140 4 |

4. Stirring, Shaking, Mixing Shakers and mixers/Orbital shakers

6.900 348

Accessories for Orbital shaker KM CO₂/KM 2

Bühler

| Description | PK | Cat. No. |
|---|----|-------------|
| Universal tray KM Mini for KM (without spring clamps) | 1 | 6.070 276 |
| Universal tray KM (without spring clamps) | 1 | 6.900 348 1 |
| Clamping strips KM | 1 | 6.070 277 |



2 Orbital shaker MaxQ 2000 CO₂ Plus, CO₂ resistant



 CO_2 -resistant orbital shaker with variable speed and external digital control unit. Suitable for use in CO_2 incubators.

Thermo Scientific

- Speed adjustment from 30 to 300 min-1
- Brushless magnetic shaker motor
- External control unit with LED display for easy setting and display of device parameters without opening the incubator door
- Minimum heat output
- With timer
- Stainless steel construction for protection against atmospheres up to 20 % CO $\!_{2}$ content

Platforms are not included - Please order separately.

Scope of supply: shaker, control unit, mains adapter

Specifications

 Type of movement:
 orbital

 Speed range:
 30 ... 300 min⁻¹

 Accuracy:
 ±1 min⁻¹

 Orbit:
 19 mm

 Max. load:
 6 kg

 Timer:
 59 min ... 99 h

 Environment:
 4 ... 60 °C, r.F. 90 %

Dimensions (W x D x H): 360 x 300 x 96 mm
Weight: 13 kg
Warranty: 2 years

Power supply: 100 ... 240 V, 50/60 Hz

| Туре | PK | Cat. No. |
|--------------------|----|-----------|
| MaxQ 2000 CO2 Plus | 1 | 6.311 871 |

Accessories for orbital shaker MaxQ 2000 CO₂ Plus, CO₂-resistant



Thermo Scientific

| Туре | PK | Cat. No. |
|---------------------------------|----|-----------|
| Clamp for 50 ml flasks | 1 | 4.671 320 |
| Clamp for 100 ml flasks | 1 | 4.671 321 |
| Clamp for 150 ml flasks | 1 | 4.671 322 |
| Clamp for 200 ml flasks | 1 | 4.671 323 |
| Clamp for 250 ml flasks | 1 | 4.671 324 |
| Clamp for 500 ml flasks | 1 | 4.671 325 |
| Clamp for 1000 ml flasks | 1 | 4.671 326 |
| Clamp for 2000 ml flasks | 1 | 4.671 327 |
| Clamp for 3000 ml flasks | 1 | 4.671 328 |
| Clamp for 5000 ml flasks | 1 | 4.671 329 |
| 500 ml Infusion bottle clamp | 1 | 4.671 330 |
| 1000 ml Infusion bottle clamp | 1 | 4.671 331 |
| Separating funnel clamp | 1 | 4.671 332 |
| Tube rack 40 x 14 mm | 1 | 4.671 333 |
| Tube rack 40 x 16 mm | 1 | 4.671 334 |
| Adjustable tube rack 40 x 14 mm | 1 | 4.671 335 |
| Adjustable tube rack 40 x 16 mm | 1 | 4.671 336 |
| Aluminium universal platform | 1 | 4.671 337 |
| Platform with rubber mat | 1 | 4.671 338 |
| 96-well microplate holder | 1 | 4.671 339 |
| Spring wire frame | 1 | 4.671 340 |
| Adhesive mat 140 x 140 mm | 1 | 4.671 341 |

4. Stirring, Shaking, Mixing Shakers and mixers/Orbital shakers

Orbital shakers SSL1

- digital speed selection up to 300rpm with soft start

- built-in digital timer
- reliable, quiet running mechanism
- fully adjustable cradle system

This lab scale platform shaker has powerful yet quiet shaking mechanisms and has been designed for trouble-free, continuous use. The cradle type platforms have four rubber cushioned horizontal securing bars which can be easily adjusted both vertically and horizontally to hold most sizes and types of vessel, including flasks, bottles and beakers. For example, they will accommodate the following Erlenmeyer flasks or bottles: 12 x 250ml or 9 x 500ml or 6 x 1000ml or 2 x 2000ml. Speed is continuously adjustable and is set digitally. The speed is accurately maintained, even over long runs. A built-in digital timer allows shaking times from 1 to 999 minutes to be set. Alternatively the unit can be set for continuous operation.

With BioCote silver based antimicrobial protection.

Specifications

Type of movement: orbital Orbit: 16 mm Speed range: 30 ... 300 rpm 10 kg Max. Load: 1 ... 999 min Timer: Power consumption: 50 W 4 ... 40 °C Working temperature: Platform dimensions (W x D): 335 x 335 mm Overall dimensions (W x D x H): 360 x 420 x 270 mm

Net weight: 11 kg Supply requirements: 230 V, 50 Hz Protection class: IP 31

| Туре | PK | Cat. No. |
|------|----|-----------|
| SSL1 | 1 | 9.728 840 |

Orbital shaker, KS 260 basic/Package/KS 260 control/Package

Compact, low-level, platform shaker with highly effective, orbital motion, maximum capacity 7.5 kg. Large selection of attachments enable use with a wide variety of vessel shapes and sizes. Electronic speed control and timer adjustment.

Only Orbital shaker KS 260 control/ Package:

- Separate digital speed and timer displays with operating mode indication
- Timer: 0 to 9 h 59 min or continuous operation
- Controlled stop-point positioning function (enables use in automated robotic sampling routines)
- All functions can be controlled and documented using labworldsoft® software
- Interface: RS 232/analogue
- Special variant with reverse rotation function available on request

Attachments are not included - Please order separately.

Specifications

Type of movement: orbital Orbit: 10mm Max. Load (incl. attachment): 7.5kg Motor rating input/output: 45/10W

Speed range KS 260 basic/KS 260 control: 20 to 500rpm/10 to 500rpm

Speed indication KS 260 basic/KS 260 control: LED/digital

Timer KS 260 basic/KS 260 control: 5 to 50min/continuous/1 to 599min/continuous

Dimensions (W x D x H): 360 x 420 x 98mm Weight KS 260 basic/KS 260 control: 8.5kg/8.8kg Housing IP rating to DIN EN 60529: IP21

RS232/analogue Interface: Supply requirements: 230V 50/60Hz

Tested to DIN EN IEC 61010-1.

| Туре | Plug type | PK | Cat. No. |
|----------------|-----------|----|-------------|
| KS 260 basic | EU | 1 | 9.838 074 2 |
| KS 260 control | EU | 1 | 9.838 175 |









9.838 074



9.838 175

OHAUS

IKA

4. Stirring, Shaking, Mixing Shakers and mixers/Orbital shakers



Orbital shaker SHEX1619DG

Ideal for applications that require CO_2 and humidity for optimal cell growth, the Extreme

Environment Shaker is designed for use in extreme environments such as

CO2 incubators. A remote controller allows for external control of settings without disturbing the incubator atmosphere, and the shaker base is placed inside of the incubator.

- Designed for use in CO₂ Incubators
- Can withstand extreme environments up to 100 % humidity
- Remote controller magnetically attaches to most incubators
- Patented Accu-Drive Shaking System
- Microprocessor Control
- Triple Eccentric Drive
- Speed Ramping Feature
- Spill-Resistant Design
- Touchpad Control with Independent LED Displays for Speed/Time
- Speed Calibration Mode
- RS232 Interface
- Overload Protection
- Audible Alarm

Scope of supply: Shaker incl. buitl-in tray and non-slip rubber mat

Specifications

Type of movement: orbital
Orbit: 19 mm
Speed range: 15 to 500 rpm
Max. Load: 16 kg

Motor: brushless DC Motor Permissible ambient conditions: brushless DC Motor -10 to +60 °C

Dimensions (W x D x H)

 Instrument:
 294 x 355 x 149 mm

 Remote control:
 150 x 356 x 112 mm

 Weight:
 22.2 kg

 Power supply:
 230 V, 50/60 Hz

| туре | PK | Cat. No. |
|------------|----|-----------|
| SHEX1619DG | 1 | 4.659 459 |



Orbital shaker KS501 digital

Low-profile laboratory shaker with large platform and 15kg load capacity. With continuously adjustable speed range: 0 to 300rpm, digital display and timer. Continuous operation is guaranteed even under extreme loads. Requires accessory attachments for operation (these are not supplied)

Ideally suited for vessel sizes over 250ml, e.g. round bottom flasks, erlenmeyer flasks, culture flasks, bottles etc. Developed for biological and microbiological growth tests and for production of stock solutions.

Specifications

Type of movement: orbital
Orbit: 30mm

Max. Load (incl. attachment): 15kg

Motor rating input/output: 70/19W

Speed range: 0 to 300rpm

Timer: 0 to 56 min./continuous

Interface: RS 232

Dimensions (W x D x H): 505 x 585 x 120mm

Weight (without attachment): 26kg Protection class acc. to DIN EN 60529: IP21

Supply requirements: 230V 50/60Hz

Tested to DIN EN IEC 61010-1.

| Туре | PK | Cat. No. |
|----------------|----|-----------|
| KS 501 digital | 1 | 6.285 448 |

Optional accessories: Shaking attachments: AS 501.1, AS 501.4, AS 501.5, Non-slip mat STICKMAX

4. Stirring, Shaking, Mixing Shakers and mixers/Orbital shakers

Shakers, KS/HS501 digital, accessories

For orbital shaker Ika KS501 digital and reciprocating shaker Ika HS501 digital.

AS 501.1 Universal attachment

For a variety of vessels (flasks, beakers etc.) with volumes of at least 50 ml (ideally greater than 250 ml). With tension rollers that can be mounted on 2 levels.

Usable area: 420 mm x 420 mm.

Dimensions (W x D x H) 480 mm x 500 mm x 120 mm. Weight: 4000 g.

AS 501.4 Gridded clip attachment

(Without spring clips). For shaking round bottom, flat-bottom, pear-shaped, volumetric and erlenmeyer flasks etc. Minimum volume 25 ml. Dimensions (W x D x H) 475 mm x 460 mm x 95 mm, weight 2640 g. Capacity: Number of fixing clips (volume held) $110 \times AS 2.1 (25ml)$, $55 \times AS 2.2 (50 ml)$, $35 \times AS 2.3 (100 ml)$, $16 \times AS 2.4 (250 ml)$, $12 \times AS 2.5 (500 ml)$, $8 \times AS 2.6 (1000 ml)$

AS 501.5 Dish attachment

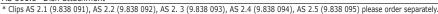
For the gentle movement of petri dishes, but also suitable for gentle mixing in vessels with large, flat bottoms (wide mouth erlenmeyers, beakers). Fitted with a non-slip, plastic mat.

Dimensions (W x D x H) 450 mm x 450 mm x 45 mm.

Usable area: 420 mm x 420 mm, weight 1120 g

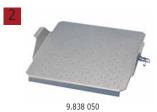
Further accessories on request.







9.838 046







Orbital shakers Solaris™ 2000 and 4000

Robust, high-capacity orbital shakers for advanced research, production and routine tasks. Can be used in incubators, climatic cabinets and refrigerators. With variable speed adjustment from 15 to $525 \, \text{min}^{-1}$.

- For timer and continuous operation
- 99 individual programs can be stored
- Gentle starting and stopping of the device
- Automatic Imbalance detection with optical/acoustic alarm: the device stops until the incorrect loading has been corrected
- Automatic restart after disconnection of the power supply while maintaining all parameters
- Large, easy-to-read touchscreen display with speed and run time indication
- With maintenance-free, brushless motor
- Logging of warnings, alarms and operating steps
- USB and Ethernet connection for data output and device monitoring
- Low noise level
- Easily removable platforms and rounded corners for rapid cleaning

Scope of supply: shaker, mains cable, universal platform, platform screws and screw locking lacquer



NEW

Thermo Scientific

6.311 880

Specifications

 Type of movement:
 orbital

 Speed range:
 15 ... 525 min⁻¹

 Accuracy:
 ±1 min⁻¹

 Orbit:
 25 mm

 Timer:
 59 min ... 99 h

 Environment:
 -5 ... 40 °C, 80 % r.H.

IP code: IP 20 Warranty: 2 years

Power supply: 100 ... 240 V, 50/60 Hz

| Туре | Permissible shaking quantity / maximum load | Width of the moving table | Depth of the moving table | Dimensions (W x D x H) | Net weight | PK Cat. No. |
|---------------|---|---------------------------|---------------------------|---------------------------|------------|----------------------|
| | kg | mm | mm | mm | kg | |
| Solaris™ 2000 | 19 | 305 | 356 | 370 x 470 x 150 | 20.9 | 1 6.311 880 4 |
| Solaris™ 4000 | 20 | 762 | 457 | 580 x 650 x 180 | 75.1 | 1 6.311 881 |

4. Stirring, Shaking, Mixing Shakers and mixers/Orbital shakers

1 Pour



1 2 Orbital shaker LLG-uniSHAKER 25

Powerful and smooth running orbital shaker. The maintenance-free brushless motor and the shaking mechanism with counterweight ensure smooth and stable running at all times. Digital display for speed and time. Two different platforms ($610 \times 460 \text{ mm}$ or $760 \times 460 \text{ mm}$) and 7 clamps for vessels from 25 ml to 2000 ml available.

Please order platforms and clamps separately.

- Maximum load 25 kg
- Sturdy and robust steel housing
- Digital display with speed and time settings
- Variable speed from 50 to 500 min⁻¹
- Orbital Diameter of 25 mm for thorough mixing
- Timer setting from 1 to 99 min and continuous mode
- Various platforms and brackets available

Scope of supply: shaker, mains cable



Specifications

Type of movement: orbital
Orbital diameter: 25 mm
Speed range: 50 ... 500 min⁻¹
Max. load: 25 kg

Motor: brushless DC motor
Timer: 1 ... 99 min, continuous

Power consumption: 250 W Permissible ambient temperature: 4 \dots 75 °C

Dimensions (W x D x H): 600 x 550 x 150 mm

Weight: 48 kg
Power supply: 230 V, 50 Hz
Warranty: 3 years

| Туре | Plug type | PK | Cat. No. |
|------------------|-----------|----|-----------|
| LLG-uniSHAKER 25 | EU | 1 | 6.263 590 |
| LLG-uniSHAKER 25 | UK | 1 | 6.263 599 |



Accessories for Orbital shaker LLG-uniSHAKER 25

| Description | PK | Cat. No. |
|--|----|-----------|
| | | |
| Universal attachment, 610 x 460 mm | 1 | 6.263 591 |
| Universal attachment, 610 x 460 mm, with securing bars | 1 | 6.263 589 |
| Universal attachment, 760 x 460 mm | 1 | 6.263 592 |
| Clamp, 25 ml | 1 | 6.263 699 |
| Clamp, 50 ml | 1 | 6.263 700 |
| Clamp, 100 ml | 1 | 6.263 593 |
| Clamp, 250 ml | 1 | 6.263 594 |
| Clamp, 500 ml | 1 | 6.263 595 |
| Clamp, 1000 ml | 1 | 6.263 596 |
| Clamp, 2000 ml | 1 | 6.263 597 |
| Adhesive rubber mat, blue, 150 x 150 x 3 mm | 2 | 6.263 598 |



9.838 400

Multi-Flask Shaker VKS 75 control

Big heavy-duty shaker for high loads also during continuous operation (floor installation only). Further accessories on request.

Scope of supply: Basic device without shaking plate, without rack system. With digital display and programmable control with Touch-Display.

Specifications

Speed range: 30 ... 200 rpm in steps of 5

Orbit or stroke: 26 mm (model A)

50, 36, 60 or 80 mm (model B)

Bühler

 Max. loading:
 max. 75 kg

 Platform (W x D):
 760 x 600 mm

 Overall (W x D x H):
 1050 x 835 x 250 mm

Weight: 110 kg

Supply requirements: 100 ... 240 V, 50/60 Hz

| Туре | PK Cat. No. |
|------------------|--------------------|
| VKS 75 A control | 1 9.838 400 |
| VKS 75 B control | 1 9.838 403 |

Stuart

Combi shaker KL 2

Mini shaker which can be switched between orbital and reciprocating motions. Includes

flask attachment system with 3 clamping rollers. Versatile, for use in medical

diagnostics, haemotology, for cell cultivation or analysis. Max. load 4 x 500 ml or 2 x 1000 ml Erlenmeyer flasks.

Scope of supply: Shaker and accessory platform with 3 clamping rollers and anti-slip mat.

Speed range: 30 ... 420 rpm with stepless electronic adjustment

Orbit or stroke: 8 mm Max. loading: 2 kg

Platform (W x D): 300 x 300 mm

Timer: 0 ... 120 min/continuous Overall (W x D x H): 355 x 455 x 195 mm

Weight: 13.5 kg

Supply requirements: 230 V, 50/60 Hz

Protection class: IP 21

| Туре | РК | Cat. No. |
|------|----|-----------|
| KL 2 | 1 | 9.838 320 |

2 Flask shaker SF1

Creates a vigorous reciprocal shaking action. With clamps to accept 8 flasks up to 500ml capacity. With stepless variable speed control from 80 to 800 oscillations/min. and 10 to

60 minute timer with off and continuous run settings. Electronic feedback control ensures a constant speed irrespective of the load. For 230V 50Hz single phase supplies.

With BioCote, silver-based, antimicrobial protection.

Scope of delivery: Flask shaker incl. 2 arms, 8 clamps and allen key..

Please order extension kit for shaking of 12 bottles or flasks separately.

Specifications

Type of movement: reciprocal
Orbit: 1.5 mm
Speed range: 8 ... 800 rpm
Max. Load: 3 kg

Timer: 10 ... 60 min/continuous

Power consumption: 50 W Permissible ambient temperature: 5 ... 40 °C Dimensions (W x D x H): 780 x 270 x 240 mm

Weight: 8.3 kg
Power supply: 230 V, 50 Hz

| Туре | PK | Cat. No. |
|------|----|-----------|
| SF1 | 1 | 9.950 372 |

Reciprocating shaker HS 501 digital

Low-profile laboratory shaker with large platform and 15kg load capacity. With continuously adjustable speed range: 0 to 300rpm, digital display and timer. Continuous operation is guaranteed even under extreme loads. Requires accessory attachments for operation (these are not supplied). Ideally suited for flasks, measuring cylinders and particularly separating funnels. Developed for universal applications.

Specifications

Type of movement: reciprocal
Shaking diameter: 30 mm

Max. Load (with attachment): 15 kg
Motor rating input/output: 70/19 W
Speed range: 0 to 300rpm

Timer: 0 to 56 mins./continuous

Dimensions (W x D x H): 505 x 585 x 120 mm

Weight (without attachment): 26 kg Protection class acc. to DIN EN 60529: IP 21

Supply requirements: 230 V, 50/60 Hz

Tested to DIN EN IEC 61010-1.

| Туре | PK | Cat. No. |
|----------------|----|-----------|
| HS 501 digital | 1 | 6.270 850 |









IKA

4. Stirring, Shaking, Mixing

Shakers and mixers/Reciprocating shakers



9.838 305

Compact shakers, KS 15 series / KS 15 control

Robust shakers for medium loads. Cost-effective. Suitable for continuous operation.

From gentle orbital movement for cell or tissue cultures to powerful reciprocating movement of shallow vessels or separating funnels in food or environmental analysis. Programmable controller with Touch-Display and advanced features for control devices.

Comprises: shaker without platform. Requires, but is not supplied with, platform attachments for operation.

Accessories:

- Attachment Combifix KS with 3 clamping strips and rubber mat
- Universal tray KS with holes for spring clips

Shaking speed: 30 ... 420 rpm

continuously electronically adjustable, control devices in steps of 5

Orbit/travel: 17 mm Max. loading: 15 kg

Timer: 0 ... 120 min/continuous, control devices programmable/continuous

Usable platform area (W x D): $400 \times 300 \text{ mm}$ Overall (W x D x H): $510 \times 490 \times 150 \text{ mm}$

Weight: 19 kg

Supply requirements: 230 V, 50/60 Hz

| Туре | Type of movement | PK | Cat. No. |
|-----------------|------------------|----|-------------|
| | | | |
| KS 15 A control | orbital | 1 | 9.838 305 1 |
| KS 15 B control | reciprocal | 1 | 9.838 306 |
| KS 15 A | orbital | 1 | 9.838 307 |
| KS 15 B | reciprocal | 1 | 9.838 308 |



9.838 063

Reciprocating shaker, HS 260 basic / HS 260 control

Compact, low-level, platform shaker with highly effective, reciprocating motion, maximum capacity 7.5 kg. Electronic speed control and timer adjustment Large selection of attachments enable use with a wide variety of vessel shapes and sizes.

Attachments are not included - Please order separately.

Only Reciproatng shaker HS 260 control:

- Separate digital speed and timer displays with operating mode indication
- Timer: 0 to 9 h 59 min or continuous operation
- Controlled stop-point positioning function (enables use in automated robotic sampling routines)
- All functions can be controlled and documented using labworldsoft® software



9.838 185

Specifications

Type of movement: reciprocal
Shaking diameter: 20 mm
Max. Load (incl. attachment): 7.5 kg
Motor rating input/output: 45W/10 W
Speed range HS 260 basic/ HS 260 control: 20 to 300 rpr

Speed indication HS 260 basic/ HS 260 control: LED/digital

Time switch clock HS 260 basic/ HS 260 control: 5 to 5

Dimensions (W x D x H):

Weight HS 260 basic/ HS 260 control: Housing IP rating to DIN EN 60529: Interface:

Power supply:

Tested to DIN EN IEC 61010-1.

| 20 mm |
|--|
| 7.5 kg |
| 45W/10 W |
| 20 to 300 rpm/10 to 300 rpm |
| LED/digital |
| 5 to 50min/continuous/1 to 599min/continuous |
| 360 x 420 x 100 mm |
| 8.5 kg/8.8 kg |
| IP 21 |
| RS 232/analogue |
| 230V, 50/60Hz |
| |

| Туре | Plug type | PK Cat. No. |
|----------------|-----------|--------------------|
| HS 260 basic | EU | 1 9.838 063 |
| HS 260 control | EU | 1 9.838 185 |

Accessories for shakers HS/KS 260

AS 260.1 Universal attachment

Able to hold most types of container using adjustable tension rollers. Surface: 320 \times 320mm

AS 260.2 Fixing clip platform

For shaking round bottom vessels, volumetric and Erlenmeyer flasks. Supplied without clips.

Max. number of clips (capacity held): $56 \times AS 2.1 (25ml)$, $23 \times AS 2.2 (50ml)$, $23 \times AS 2.3 (100ml)$, $11 \times AS 2.4 (250ml)$, $9 \times AS 2.5 (500ml)$, $5 \times AS 2.6 (1000ml)$

AS 260.3 Petri dish attachment

For gentle mixing and suspension of cell cultures or growth media in petri dishes, culture bottles and containers. With integral anti-slide mat (PP).

AS 260.5 Separating funnel attachment

For HS 260 basic and control

For shaking, elution, extraction, gassing out, dissolving, enriching. The 3 tension rollers supplied are height-adjustable to accommodate different separating funnel sizes. The separating funnels are secured by means of O-rings (6 O-rings supplied).

Capacity: Number of funnels (pear shaped) x volume 6 x 50ml, 5 x 100ml, 3 x 250ml, 3 x 500ml

| Туре | Description | Dimensions (W x D x H) mm | PK | Cat. No. |
|----------|-----------------------------------|---------------------------------|----|-------------|
| AS 260.1 | Universal attachment | 425 x 335 x 135 | 1 | 9.838 080 1 |
| AS 260.2 | Gridded clip platform attachment* | 330 x 330 x 24 | 1 | 9.838 191 2 |
| AS 260.3 | Petri dish attachment | 410 x 370 x 32 | 1 | 9.838 192 |
| AS 260.5 | Separating funnel attachment | 334 x 425 x 145 | 1 | 9.838 193 4 |

^{*} Clips AS 2.1 (9.838 091), AS 2.2 (9.838 092), AS 2. 3 (9.838 093), AS 2.4 (9.838 094), AS 2.5 (9.838 095) please order separately.



9.838 193

Universal shakers, SM 30 series /SM 30 control

Powerful shakers for large loads. Choice of orbital or reciprocating action models. Suitable for continuous operation. For analytical or diagnostic processes in biology, chemistry or pharmacy, plant culture or in the food industry, e.g. for transport simulations. Various attachments for different requirements are available as accessories. Programmable controller with Touch-Display and advanced features for control devices.

Scope of supply: supplied with shaking rack and rubber mat.

Attachments required, please order separately.

Speed range: 15 ... 300 rpm

stepless, electronic adjustment, control devices in steps of 5

Orbit or travel: 26 mm (A + C models)

30, 46 or 50 mm (B models)

Max. loading: 30 kg

Timer: 0 ... 120 min/continuous, control devices programmable/continuous

Platform (W x D): 560 x 400 mm Overall (W x D x H): 680 x 610 x 160 mm

Weight: 33 kg

Supply requirements: 230 V, 50/60 Hz



| Туре | Type of movement | PK | Cat. No. |
|-----------------|------------------------|----|-------------|
| | | | |
| SM 30 A | orbital | 1 | 9.838 101 |
| SM 30 B | reciprocating | 1 | 9.838 111 |
| SM 30 C | orbital, reciprocating | 1 | 9.838 115 |
| SM 30 A control | orbital | 1 | 9.838 121 5 |
| SM 30 B control | reciprocating | 1 | 9.838 131 |
| SM 30 C control | orbital, reciprocating | 1 | 9.838 135 |
| | | | |

7 Accessories for universal shaker SM 30

Bühler

| Туре | PK | Cat. No. |
|---|----|-----------|
| Rack system Combifix SM, Set A | 1 | 9.838 201 |
| Rack system Combifix SM, Set B | 1 | 9.838 205 |
| Rack system Combifix SM, Set C | 1 | 9.838 208 |
| Universal tray SM (without spring clamps) | 1 | 9.838 210 |
| Sliding plate for top frame with Combifix SM, Set A | 1 | 6.231 576 |
| Sliding plate for top frame with Combifix SM, Set B | 1 | 6.285 190 |
| Sliding plate for top frame with Combifix SM, Set C | 1 | 6.285 191 |
| Mounting set for universal trays or sliding plates | 1 | 6.255 238 |
| 2-storey top frame SM (without platforms) | 1 | 9.838 211 |
| 2-storey top fram SM/TH (for using SM with TH) | 1 | 6.510 572 |



4. Stirring, Shaking, Mixing

Shakers and mixers/Rocking shakers



Rocking shaker RS-RS 5

Analogue laboratory shaker with a maximum load of 3 kg for gentle and effective mixing of samples.

Phoenix Instrument

- Safe stand
- Adjustable screw feet
- D.c. motor
- Wide range of accessories

Scope of supply: Shaker incl. tray attachment

Specifications

Type of movement: rocking Rocking angle: Max. Load: 3 kg Rating 16 W Speed range: 0 to 80 rpm Dimensions (W x D x H): 270 x 330 x 130 mm Dimensions platform (W x D): 240 x 240 mm 2.7 kg Protection class acc. to DIN EN 60529: IP 21 100-240 V, 50/60 Hz Power supply:

| Туре | PK | Cat. No. |
|---------|----|-----------|
| RS-RS 5 | 1 | 4.660 777 |

Rocking shaker 35 EZ

The Rocker 35 EZ is the next generation large capacity rocker from Labnet. Labnet This upgraded Rocker 35 is designed for durability in laboratories requiring a larger platform area and precise control over rocking parameters. It is backed by a 5 year warranty. Both speed and time are easily selectable and the analog control has been upgraded to display discreet values. The tilt is now easily adjustable with knob on side. This system can easily handle up to 5 kg of load so a double platform can be fully loaded without any variation to speed. This unit comes in both single and dual platform models and includes a ribbed non-slip rubber mat to keep containers in place.



Type of movement: Rocking angle: Max. Load (incl. attachment):

Timer:

Speed range:

Dimensions (W x D x H)single/double platform:

Weight single/double platform:

Power supply:

rockina adjustable, ±20°

5 kg

10 to 120 min or continuous

10 to 120 rpm

360 x 360 x 170 mm/360 x 360 x 260 mm

6.5 kg/7.8 kg 230 V, 50/60 Hz

| Туре | Description | Plug type | PK | Cat. No. |
|-------|-----------------|-----------|----|-------------|
| 35 EZ | Single platform | EU/UK | 1 | 6.283 296 2 |
| 35 EZ | Double platform | EU/UK | 1 | 6.283 298 |

4. Stirring, Shaking, Mixing Shakers and mixers/Rocking shakers

Rocking shaker Rocker 2D basic/2D digital

Rocking shaker with fixed speed for smooth mixing tasks. For homogeneous mixing in flasks, culture flasks, Petri dishes and tubes. Even with load and voltage fluctuations the shaking speed remains constant. A fixed tilt angle ensures reproducible test results.

- Different attachments allow a variety of applications
- Usable at 4 to 50 °C in incubators
- Anti-slip rubber mat included
- Easy operation by foil keypad
- Suitable for continuous operation

Rocker 2D digital only:

- Timer: Countdown, adjustable from 1s to 99h 59min
- Counter: Display of shaking time
- Error code display



Type of movement: rocking Rocking angle Rocker 2D basic/2D digital: 8°/0 - 15° Max. Load (incl. attachment): 2kg Motor rating input/output: 16/9W Speed range: 5 to 80rpm Speed display: 7 segment LED Dimensions (W x D x H): 280 x 330 x 150mm

2.2kg Protection class acc. to DIN EN 60529: IP 21

Power supply: 100-240V, 50/60Hz

| Туре | PK Cat. No. |
|-------------------|--------------------|
| Rocker 2D basic | 1 9.729 984 |
| Rocker 2D digital | 1 9.729 985 |

Rocking Shakers SHRK series

The Rocking Shakers are ideal for cell culture and blotting applications and are designed to be used in a variety of environmental conditions.

- Variable control for speed, tilt and time
- Two-tier model 07AL2 doubles workable capacity
- Low Profile Design
- Microprocessor Control
- Independent Control Knobs (analogue)
- Overload Protection
- Speed Ramping Feature
- Spill-Resistant Design
- Clock timer
- Suitable for CO2 environments

Scope of supply:

07AL1/04DG: Shaker incl. built-in tray with non-slip rubber mat 07AL2: as 07AL1/04DG, additionally incl. second tray with screws and mat

Specifications

Type of movement: rocking Rocking angle: 0 to 15°

Timer models analogue/digital: 1 to 120 min/1 s to 160 h

Motor: Stepper Motor Permissible ambient conditions: -10 to +60 °C

7 kg Weight:

230 V, 50/60 Hz Power supply:

| Туре | Permissible shaking quantity / maximum load | Min. speed | Max. speed | Display type | Dimensions (I x w x h) | PK | Cat. No. |
|-------|---|---------------|---------------|-----------------|---------------------------|----|-----------|
| | kg | rpm | rpm | | mm | | |
| 07AL1 | 7 | 1 | 75 | analogue | 425 x 279 x 140 | 1 | 4.659 476 |
| 07AL2 | 7 | 1 | 75 | analogue | 425 x 279 x 241 | 1 | 4.659 477 |
| 04DG | 4 | 1 | 50 | digital | 425 x 254 x 140 | 1 | 4.659 481 |









4. Stirring, Shaking, Mixing Shakers and mixers/Rocking shakers

Rocking Shaker, Mini, SSM4

This compact rocker is ideal where gentle mixing is required. It has a see-saw rocking action that creates a wave motion within vessels such as culture flasks, Petri dishes etc. Stuart

9.728 821

Stuart

- Small space saving design, ideal for personal use
- Gentle rocking action
- Digital speed control and built-in timer
- Optional tier system available to increase capacity
- supplied with a non-slip mat
- digital selection of both speed and time

An accessory tier system is available. Fitted in seconds, without the need for tools, it triples the available space for samples. With BioCote, silver-based, antimicrobial protection.

Specifications

Type of movement: Rocking angle: Angle adjustable: Speed range: Max. Load: Platform dimensions (W x D):

Overall dimensions (W x D x H): Net weight:

Power supply:

SSM4

rocking 70

No 5 to 70rpm 3kg

235 x 235mm 240 x 300 x 150mm

5kg

230V 50Hz, 50W

Type Cat. No.





Rocking shaker SSL4, large platform

- Large platform rockers ideal for multiple users
- Gentle rocking action
- Digital speed control and built-in timer
- Optional tier system available to increase capacity
- Incl. non-slip mat

This rocker has large platform able to accommodate a number of samples, ideal for a busy lab. It is very quiet in operation and designed to be run continuously.

The see-saw rocking action creates a wave motion within vessels such as culture flasks, petri dishes etc.

An accessory tier system is available. Fitted in seconds, without the need for tools, it triples the available space for samples. With BioCote, silver-based, antimicrobial protection.

Specifications

Type of movement: Rocking angle: Angle adjustable: Speed range: Max. Load:

Platform dimensions (W x D): Overall dimensions (W x D x H):

Net weight:

Supply requirements:

rocking

No 5 to 70rpm 10kg

355 x 355mm 360 x 420 x 160mm

10kg

230V, 50Hz, 50W

Type Cat. No. 9.728 801 SSL4

Attachments are not included - Please order separately

Shakers and mixers/Rocking shakers-Tumbling shakers

Rocking shaker PMR-100

Large capacity, adjustable angle and speed platform rocker, providing soft or intensive side to side rocking for optimal mixing of samples. For use in cold rooms or incubators with ambient operating temperature range $+4^{\circ}\text{C}$ to $+40^{\circ}\text{C}$. Continuous or timed operation, with automatic switch-off. Integral timer: 1min to 99h 59min.





Specifications

Type of movement: rocking
Rocking angle (adjustable): 0 to 10° (fixed at 10° over 50 rpm)

Max. Load (incl. attachment):5 kgPower consumption:13 WSpeed range:1 to 99 rpmSpeed display:LCD

 Dimensions platform (W x D):
 480 x 380 mm

 Dimensions (W x D x H):
 430 x 480 x 210 mm

Weight: 12 kg
Protection class acc. to DIN EN 60529: IP20
Power supply: 12 V

| Туре | PK | Cat. No. |
|---------|----|-----------|
| PMR-100 | 1 | 9.721 015 |

Rocking shakers Duomax 1030

The Rocking shakers Duomax are suitable for the modular Incubator 1000 and are recommended for applications which require variable temperatures. With 2-dimensional tilting movement, suitable for petri dishes, culture bottles, erlenmeyer flasks and all standard vessels.

- 2 models available: Tilt angle to 5° for soft and gentle movements or tilt angle to 10° for a much stronger motion
- An overtemperature sensor preventatively shuts off the unit in a dangerous heat-up situation, particularly valuable for you in case of continuous operation
- Insulated drive system prevents any heat-up coming from the motor and consequently thermal damage to your sample
- Designed with a low center of gravity which prevents gliding at high speed, even on a damp surface
- Set and continuously adjust the variable speed on the analog control knob, suitable for all standard vessels
- An analog process timer allows for unattended operation. When the set time has elapsed, an acoustic alarm will sound and the operation stops





Specifications

Type of movement: rocking 5° or 10° Tumbling angle: Speed range: 2 ... 50 rpm Max. Load: 5 kg Timer: 1 ... 120 min Power consumption: 115 W Permissible ambient temperature: 5 ... 31 °C Permissible relative moisture: 80 % Platform dimensions (W x D): 290 x 258 mm Overall dimensions (W x D x H): 320 x 375 x 185 mm

Weight: 8 kg

Power supply: 230 V, 50/60 Hz

Protection class acc. to DIN EN 60529: IP 40

| Туре | Inclination angle | PK | Cat. No. |
|-------------|-------------------|----|-----------|
| Duomax 1030 | 5 | 1 | 9.839 855 |
| Duomax 1030 | 10 | 1 | 9.839 856 |

Shakers and mixers/Tumbling shakers



Tumbling Shaker LLG-uniSHAKER 2

Multi-functional shaker with dimpled mat, perfect for foam-free mixing of blood and other biological samples in centrifuge tubes. Suitable for a variety of tubes and dishes.

Scope of supply: shaker, non-slip mat

Specifications

Type of movement: tumbling
Tumbling angle: 20°
Speed: fixed, 20 min⁻¹
Max. Load: 1.6 kg
Ambient Temperature: 4 ... 45 °C
Platform Dimensions (W x D): 202.5 x 152.5 mm

 Dimensions (W x D x H):
 202.5 x 152.5 x 202.5 mm

 Weight:
 2 kg

 Power supply:
 230 V, 50 Hz

Warranty: 3 years

Type Plug type

| Type | | riug type | FIX | Cat. No. |
|-----------|-----------|-----------|-----|-----------|
| | | | | |
| | | | | |
| | | | | |
| 11.0:0 | TIMED 2 | | -1 | C 2C2 C40 |
| LLG-unis | SHAKER 2 | EU | 1 | 6.263 640 |
| II G-uniS | SHAKER 2 | l IK | 1 | 6.263 641 |
| LLO UIII | MIMILIN Z | OK . | | 0.203 041 |
| | | | | |



Platform tumbling shaker PS-3D

Platform shaker with smooth, 3-dimensional tumbling movement. Ideal for mixing tubes, culture bottles, culture dishes and microtiter plates. Space-saving, robust and quiet.

Grant

- Simple speed adjustment
- Robust drive
- Suitable for continuous operation up to 7 days
- Low energy consumption
- With anti-slip mat
- Fixed angle of 7°

Specifications

Type of movement: tumbling
Tumbling angle: 7°
Speed range: 5 to 60 rpm
Max. Load: 1.0 kg
Ambient Temperature: +4 to 40 °C
Dimensions Plattform (W x D): 215 x 215 mm
Dimensions (W x D x H): 235 x 235 x 140 mm

Weight: 1.2 kg Power supply: 12 V

| Type Plug type | PK | Cat. No. |
|----------------|----|-----------|
| PS-3D EU/UK | 1 | 9.721 014 |



3 Platform tumbling shaker PMR-30

Smooth rocking motion for gentle sample agitation in tubes, culture flasks, dishes and boxes. Continuous or timed operation with automatic switch-off.

Grant

Specifications

Type of movement: tumbling
Tumbling angle: 7°
Speed range: 5 to 30rpm
Max. Load: 1.0kg

Timer: 1min to 23h 59min Ambient Temperature: +4 to 40° C Dimensions Platform (W x D): 215 x 215 mm Dimensions (W x D x H): 220 x 205 x 120mm

Weight: 2kg Power supply: 12V

| Туре | Plug type | PK | Cat. No. |
|--------|-----------|----|-----------|
| PMR-30 | FU/UK | 1 | 9.721 011 |

Shakers and mixers/Tumbling shakers

Tumbling shakers Mini Twist and Mini Mixer

Both shakers may be used in temperature controlled environments.

- Gyratory action provides gentle, thorough mixing
- Mini Twist: Perfect for centrifuge and blood tubes
- Mini Mixer: Designed for processing blots and staining gels

Supplied with:

Mini Twist incl. positioning mat

Mini Mixer incl. anti-slip mat and 2 large blot boxes

Specifications

Speed range 20rpm

Motion/Pitch Mini Twist: 3-D/fixed 20° Mini Mixer: 3-D/fixed 5°

0.8 kg Maximum load +4°C to 65°C Ambient operating range

Mini Twist: 24.1cm x 17.15cm x 15.24 cm Dimensions (W x D x H): Mini Mixer: 24cm x 17.5cm x 15cm

Weight 0.88kg Electrical supply 230V, 50 Hz

| Туре | PK | Cat. No. |
|------------|----|-----------|
| Mini Twist | 1 | 9.595 330 |
| Mini Mixer | 1 | 9.595 331 |

Multi-function tumbling shaker PS-M3D

With consistent and reproducible agitation throughout the speed range, multi segment program.

Specifications

Type of movement: orbital (diam. 22mm)

reciprocal (0 to 360°, 30° steps) vibrating (0 to 5°, 1° steps)

Tumbling angle: Speed range: 1 to 100rpm

1.0kg Max. Load:

Timer Type of movement orbital and reciprocal/vibrating: 0 to 250 sec/0 to 5 sec

Ambient Temperature: +4 to 40°C Dimensions Plattform (W x D): 215 x 215 mm Dimensions (W x D x H): 235 x 235 x 140 mm

Weight: 2kg Power supply: 12V

| Туре | Plug type | PK | Cat. No. |
|--------|-----------|----|-----------|
| PS-M3D | EU/UK | 1 | 9.721 017 |





Shakers and mixers/Tumbling shakers



9.729 986

Tumbling shakers Rocker 3D basic/3D digital

Shaker with three-dimensional tumbling motion and a fixed speed for smooth mixing tasks. A fixed angle ensures reproducible test results.

- Different attachments allow a variety of applications
- Usable at 4 to 50°C in incubators
- Anti-slip rubber mat included
- Easy operation by foil keypad
- Suitable for continuous operation

Rocker 3D digital only:

- Timer: Countdown, adjustable from 1s to 99h 59min
- Counter: Display of shaking time
- Error code display

Specifications

Type of movement: tumbling Tumbling angle Rocker 3D basic/3D digital: 8°/0 - 15° Max. Load (incl. attachment): 2kg 16/9W Motor rating input/output:

Speed range Rocker 3D basic/3D digital: 30rpm (fixed)/5 to 80rpm

Speed display (Rocker 3D digital only): 7 segment LED Dimensions (W x D x H) Rocker 3D basic/3D digital: 280 x 330 x 165mm/280 x 330 x 185mm

Weiaht: 2.2kg Protection class acc. to DIN EN 60529: IP 21

100-240V, 50/60Hz Power supply:

| Туре | Min. speed rpm | Max. speed rpm | PK | Cat. No. |
|-------------------|----------------------|----------------------|----|-------------|
| Rocker 3D basic | 30 | 30 | 1 | 9.729 986 1 |
| Rocker 3D digital | 5 | 80 | 1 | 9.729 987 |



4.664 342

Orbital Platform S haker Belly Button®

This shaker is designed with available space in mind. The easily adjustable speed and IBI Scientific platform pitch angle controls provide a wide range of agitation conditions, from extremely gentle to vigorous. The Belly Button® shaker is an exceptionally simple liquid agitation system consisting of an orbiting platform flexibly anchored at four corners so that the platform motion, when adjusted by the platform pitch control collar, is an extremely effective combination of rocking platform and orbital shaker.

- Compact version with low space requirement
- Ideal for cell and tissue culture applications, gel or blot processing
- Suitable for cold store and incubator
- Made of chemically resistant materials such as stainless steel and anodised aluminium
- Solid, robust and long-lasting design

BBUAAUV1S: With round 220 V power cord, white silicone mat and operation manual. BBULS0001: With tube mat and round 220 V European power cord.



4.664 343

Specifications

Type of movement: tumbling 0° ... 8° Tumbling angle: Speed range: 0 ... 100 rpm Max. load: 2.2 kg Overall dimensions (W x D x H):

203 x 203 x 133 mm Platform dimensions (W x D): 178 x 178 mm Rel. humidity: 97 % Operation temperature: 0 ... 60 °C Supply requirements: 230 V Power: 11 W

| Туре | PK Cat. No. |
|-----------|----------------------|
| BBUAAUV1S | 1 4.664 342 2 |
| BBULS0001 | 1 4.664 343 3 |

IKA

4. Stirring, Shaking, Mixing Shakers and mixers/Tumbling shakers

Tumbling Shakers SHWV series

The Tumbling Shakers are ideal for cell culture and blotting applications and are designed to be used in a variety of environmental conditions.

- Variable control (analogue model) or display (digital model) for speed, tilt and time
- Low Profile Design
- Microprocessor Control
- Independent Control Knobs (analogue)
- Overload Protection
- Speed Ramping Feature
- Spill-Resistant Design
- Clock timer
- Suitable for CO2 environments

Scope of supply: 02DG/02AL Shaker incl. built-in tray with non-slip rubber mat

Specifications

Type of movement: tumbling 0 to 16°/0 to 20° Tilt angle Model analogue/digital:

Max load: 2.3 kg

Timer Model analogue/digital: 1 to 120 min/1 s to 160 h

Stepper Motor Motor: Permissible ambient conditions: -10 to +60 °C

approx. 7 kg Weight: 230 V, 50/60 Hz Power supply:



4.659 475



4.659 478

| Туре | Min. speed rpm | Max. speed rpm | Display type | Dimensions (I x w x h) mm | PK Cat. No. |
|------|----------------------|----------------------|-----------------|---------------------------------|----------------------|
| 02AL | 1 | 75 | analogue | 425 x 279 x 165 | 1 4.659 478 2 |
| 02DG | 1 | 30 | digital | 413 x 254 x 165 | 1 4.659 475 1 |

Tumbling shaker SSL3, large platform

- Large platform rocker ideal for multiple users
- Gentle rocking action
- Digital speed control and built-in timer
- Optional tier system available to increase capacity
- incl. non-slip mat

This rocker has a large platform able to accommodate a number of samples, ideal for a busy lab. Designed to be run continuously, they are very quiet in operation. The tumbling gyratory motion is ideal for low foaming agitation, DNA extractions, staining and de-staining procedures etc. The tilt angle can be adjusted to any position by hand to optimise mixing of vessels.

An accessory tier system is available. Fitted in seconds, without the need for tools, it triples the available space for

With BioCote, silver-based, antimicrobial protection.

Specifications

Type of movement: tumbling Tumbling angle: 3° to 12° Angle adjustable: Yes by hand Speed range: 5 to 70rpm Max. Load: 10kg Platform dimensions (W x D): 355 x 355mm 360 x 420 x 170mm Overall dimensions (W x D x H):

Net weight: 10kg

Supply requirements: 230V, 50Hz, 50W

| Туре | PK | Cat. No. |
|--|----|-----------|
| SSL3 | 1 | 9.728 800 |
| Attachments are not included - Please order separately | | |



525

Tumbling Shakers Polymax 1040/2040

The Tumbling Shakers Polymax are suitable for the Modular Incubator 1000 and are recommended for applications which require variable temperatures. With 3-dimensional tilting movement, suitable for Petri dishes, culture bottles, Erlenmeyer flasks and all standard vessels. Heidolph

- An overtemperature sensor preventatively shuts off the unit in a dangerous heat-up situation, particularly valuable for you in case of continuous operation
- Designed with a low center of gravity which prevents gliding at high speed, even on a damp surface
- Set and continuously adjust the variable speed on the analog control knob, suitable for all standard vessels
- An analog process timer allows for unattended operation.

Specifications

Type of movement: tumbling Tumbling angle: 5° or 10° 1 ... 120 min Timer: Power consumption: 115 W 5 ... 31 °C Permissible ambient temperature: Permissible relative moisture: 80 %

100 ... 240 V, 50/60 Hz Power supply:



Tumbling Shakers Polymax 1040

Suitable for a medium sample throughput.

Heidolph

IBI Scientific

Specifications

Speed range: 2 ... 50 rpm Max. Load: 5 kg Platform dimensions (W x D): 290 x 258 mm Overall dimensions (W x D x H): 320 x 375 x 195 mm

8 kg Weight: Protection class acc. to DIN EN 60529: IP 40

| Туре | Inclination angle | PK | Cat. No. |
|--------------|-------------------|----|-----------|
| Polymax 1040 | 5 | 1 | 9.839 857 |
| Polymax 1040 | 10 | 1 | 9.839 859 |



Orbital platform shaker Belly Dancer®

The undulating, three-dimensional motion of this lab shaker has been designed to provide optimal movement for tissue culture, staining and destaining gels, Northern,

Southern or Western blotting and immunoprecipitation. The simple liquid agitation system, consisting of an orbiting platform, which is flexibly anchored at four corners, so that the platform movement, with an appropriately set inclination, is an effective combination of orbital and tumble shaker.

- Ideal for gel or blot processing
- Suitable for cold store and incubator
- Made of chemically resistant materials such as stainless steel and anodised aluminium
- Solid, robust and long-lasting design
- Low-noise

BDRLS0004: With additional 2nd story platform (approx. 300 x 300 mm), aluminium spacer legs (approx. 114 mm) and a non-skid removable mat.

BDRLS0005: With extension platform (approx. 450 x 450 mm) and a non-skid removable mat.

BDRLS0006: With non-skid mat for tubes. BDRAA220S: With white silicone mat.



4.663 380

Specifications

Type of movement: tumbling Orbit size: 25.4 mm Tumbling angle: 0° ... 8° Speed range: 0 ... 100 rpm Max. load: 9.1 kg Overall dimensions (W x D x H):

381 x 381 x 229 mm Platform dimensions (W x D): 305 x 305 mm Rel. humidity: 97 % Operation temperature: 0 ... 40 °C Supply requirements: 230 V/50/60 Hz

70 W Power:

| Туре | PK | Cat. No. |
|-----------|----|-------------|
| | | |
| BDRLS0004 | 1 | 4.663 380 2 |
| BDRLS0005 | 1 | 4.664 345 |
| BDRLS0006 | 1 | 4.664 346 |
| BDRAA220S | 1 | 4.664 344 |

Suitable accessories can be found in our online shop.

4. Stirring, Shaking, Mixing Shakers and mixers/Thermoshakers

Thermo shaker LLG-uniTHERMIX 1 pro and 2 pro

The LLG-uniTHERMIX pro is ideal for shaking and temperature control of a variety of tubes or plates (depending on the block used). With its high temperarture uniformity, fast heating rate and excellent mixing results the LLG-uniTHERMIX pro is perfect for the incubation of samples of any kind, in particular for Life Science applications, e.g. Enzyme reactions, transformations, denaturation of DNA and RNA. The heating blocks are magnetically attached to the LLG-uniTHERMIX pro and do not have to be screwed down.

- Easy and quick change of heating blocks due to magnetic fastening
- Precise temperature control system
- Temperatures up to 100 °C
- Temperature accuracy of ±0.5 °C (20 ... 45 °C)
- Efficient mixing up to 1500 rpm (depending on the heating block)
- Up to 9 storable programs
- Many block options available
- Automatic block recognition

LLG-uniTHERMIX 1 pro:

with shaking and heating function, Temperature range: RT + 5 °C ... approx. 100 °C

LLG-uniTHERMIX 2 pro:

with shaking, cooling and heating function, Temperature range: 15 °C below RT ... approx. 100 °C

Blocks must be ordered separately.

Scope of supply: thermal shaker, 4 suction feet



6.263 482



6.263 484

Specifications

Temperature range LLG-uniTHERMIX 1 pro: LLG-uniTHERMIX 2 pro: Temperature control:

Uniformity: Max. heating rate:

Max. cooling rate (LLG-uniTHERMIX 2 pro only):

Electrical heating/cooling power:

Speed range: Orbit: Display: Programs: Timer:

Capacity: Dimensions (W x D x H):

Weight:

Power supply: Warranty:

RT + 5 °C ... approx. 100 °C

15 °C below RT ... approx. 100 °C ±0.5 °C (at 20 ... 45 °C)

±0.5 °C (at 20 ... 45 °C)

5.5 °C/min

5 °C/min (100 °C ... RT) 0.5 °C/min (below RT)

200 W

300 ... 1500 min⁻¹

3 mm LCD

6 stages, 9 programs 1 ... 99 hours or continuous 1 exchangeable block* 200 x 235 x 120 mm

7.3 kg

220 ... 240 V, 50/60 Hz

3 years

| Туре | Plug type | PK | Cat. No. |
|----------------------|-----------|----|-------------|
| LLG-uniTHERMIX 1 pro | EU | 1 | 6.263 482 1 |
| LLG-uniTHERMIX 1 pro | UK | 1 | 6.263 483 |
| LLG-uniTHERMIX 2 pro | EU | 1 | 6.263 484 2 |
| LLG-uniTHERMIX 2 pro | UK | 1 | 6.263 485 |

Heating blocks for Thermo shaker LLG-uniTHERMIX 1 and 2 pro

| For | PK | Cat. No. |
|----------------------------------|----|-----------|
| 24 tubes, 0.5 ml | 1 | 6,263 486 |
| 24 tubes, 0.5 ml | | 6.263 487 |
| 24 tubes, 2 ml | 1 | 6.263 494 |
| 8 tubes, 5 ml | 1 | 6.263 495 |
| 8 tubes, 15 ml | 1 | 6.263 496 |
| 4 tubes, 50 ml | 1 | 6.263 497 |
| 96 well PCR plates, 0.2 ml tubes | 1 | 6.263 498 |
| 96/384 microplate | 1 | 6.263 499 |



6.263 487



Thermoshaker PCMT for microtubes and PCR plates

Variable speed, variable temperature heating and cooling thermoshaker with a choice of blocks for microtubes and microplates. The PCMT can cool down to 15° C below ambient temperature.

- Fast heat-up and cooling times
- Temperature setting range +4°C to +100°C
- Temperature control range 15°C below ambient to +100°C
- Shaking speed: 250 to 1400 rpm
- Temperature uniformity at 37°C: ±0.1°C
- Choice of 5 interchangable blocks
- orbit 2mm

Block is required and not included in delivery. Please order separately.

Applications:

- Genetic analyses, extraction of DNA, RNA and further sample preparation
- Biochemical studies of enzymatic reactions and processes
- Extraction of metabolites from cellular material

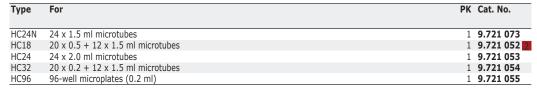
| Туре | PK | Cat. No. |
|------|----|-----------|
| PCMT | 1 | 9.721 050 |



Accessory blocks for Thermoshaker PCMT

Grant

Grant





3 Thermo shaker AccuTherm

Labnet

The AccuTherm is a temperature controlled mixer that uses peltier technology to rapidly heat and cool precious samples. The combination of heating/cooling with mixing makes the AccuTherm ideal for many life science research applications in the fields of molecular biology, biochemistry and clinical chemistry. It's compact footprint incorporates an intuitive control panel with a large multicolor display, which allows users to easily program and view temperature, time and speed settings. Eight interchangeable aluminum blocks accommodate PCR plates and tubes ranging in size from 0.2ml to 15ml.



Power supply:

Amb. -14°C to +100°C Temperature operation range: Temperature adjustable range: 0°C to +105°C Accuracy/resolution: ±0.5°C/0.5°C 6.5°C/min Max. heating time: 1.5°C/min Max. cooling time: Shaking frequency: 300 to 1500rpm Orbit: 3mm Dimensions (W x D x H): 330 x 166 x 240mm Capacity: 1 exchangeable block* Weight: 8.5kg Electrical heating/cooling power: 150W

| Туре | PK | Cat. No. |
|-----------|----|-----------|
| AccuTherm | 1 | 6.261 411 |

230V, 50/60Hz

Accessories for Thermo shaker AccuTherm

Labnet

| Description | PK | Cat. No. |
|--|----|-----------|
| Block A for 40 x 1.5 ml reaction tubes | 1 | 6.261 695 |
| Block B for 54 x 0.5 ml reaction tubes | 1 | 6.261 696 |
| Block C for 96 x 0.2 ml reaction tubes | 1 | 6.261 697 |
| Block D for 24 x 15 mm reaction tubes | 1 | 6.261 698 |
| Block E, water bath (115 x 73 x 38mm) | 1 | 6.261 699 |
| Block G for 26 x 0.5 ml and 24 x 1.5 ml reaction tubes | 1 | 6.261 706 |
| Block H for 40 x 2.0 ml reaction tubes | 1 | 6.261 707 |
| Block J for 96 well Elisa plates | 1 | 6.261 708 |



^{*}Exchangeable blocks are not included in delivery.

4. Stirring, Shaking, Mixing Shakers and mixers/Thermoshakers

Grant

OHAUS

Microtube thermoshaker PHMT

By combining the mixing operation with the incubation phase, reaction process times and operator workload are reduced and efficiency of many procedures is increased, resulting in a higher throughput.

- temperature range: +5 to 100 °C - uniformity at 37 °C: ±0.1°C - shaking speed: 250rpm to 1400 rpm - timed shaking operation: 1 min to 96 hours

- rapid heat-up

- continuous or timed operation, with alarm buzzer and automatic switch-off facility

- incl. interchangeable block

- mixing and incubation phases are combined reducing reaction processing times

Scope of supply: Thermoshaker with one block as indicated. Further blocks on request.

| Туре | For | PK | Cat. No. |
|-------------|---------------------------|----|-------------|
| | | | |
| PHMT-PSC18 | 20 x 0.5 ml + 12 x 1.5 ml | 1 | 6.234 725 1 |
| PHMT-PSC32 | 20 x 0.2 ml + 12 x 1.5 ml | 1 | 9.721 079 |
| PHMT-PSC24 | 24 x 2.0 ml | 1 | 9.721 041 |
| PHMT-PSC24N | 24 x 1.5 ml | 1 | 9.721 072 |
| PHMT-PSC96 | 1 x 96 well | 1 | 9.721 080 |



6.234 725

Thermal Shaker ISTHB

The Thermal Shakers and Cooling Thermal Shakers are designed for applications that require consistent and precise results. With heating, cooling and shaking capabilities. These shakers use interchangeable blocks to accommodate a wide variety of tubes and microplates.

The easy-to-use, 4.3", colour, LCD touch screen allows the user to save and visibly track progress through the live status bar for five user defined programs, each with five individual steps. The unit's enhanced electronics and dual temperature sensors provide accurate, dependable temperature settings across the operating range.

- 4.3" colour LCD touch screen display provides an intuitive interface

- Rapid heating, cooling and high speed shaking ability

- Internal memory stores five separate 5-step programs, unlimited with USB

- Temperature ramp rate, 0.5 °C steps

- Single Point Calibration Mode

- Pulse Mode Feature

- Maximum Temperature Limiting Function

- Hot Top Indicator

- Audible Alarm

Scope of supply: Thermal Shaker incl. 1.5 ml block, clear rack and cover

Specifications

Temperature range Thermal Shaker: 4 °C above ambient up to 100 °C Cooling Thermal Shaker: 17 °C below ambient up to 100 °C Temperature Accuracy

±1 °C from 20 °C to 45 °C Thermal Shaker: ±2 °C above 45 °C ±0.5 °C from 20 °C to 45 °C Cooling Thermal Shaker:

±2 °C below 20 °C and above 45 °C Speed/Accuracy: 300 to 3000 rpm/±2 %

Timer: 1 min to 99 h, 59 min Orbit: 3 mm

Cooling rate

above ambient: 2 to 3 °C/min below ambient: 0.5 to 1.0 °C/min Heating rate: 5 °C/min Permissible ambient conditions: 5 to 35 °C

Dimensions (L X W X H): $260\times\,248\times\,132~mm$

5.4 kg Weight: 230 V, 50/60 Hz Power supply:

| Туре | PK | Cat. No. |
|-----------------------------|----|-----------|
| LHTS Thermal Shaker | 1 | 4.659 483 |
| LCTS Cooling Thermal Shaker | 1 | 4.659 482 |



4.659 483



4.659 482

Thermo shaker Matrix Orbital Δ/Orbital Δ +



Powerful thermoshakers available for samples with smallest volumes, e.g. blood samples, pharmaceutical agents, DNA/RNA samples, DNA/RNA samples or Elisa assays. Without cross-contamination and with an optimal mixing result. Thermo shaker Orbital Δ + with heating/cooling function (cooling rate 2.5 K/min). IKA

- Large and clear display with a convenient menu structure allows for intuitive operation
- Two different speed modes for optimal mixing
- Speed adjustment according to insert, attachment and filling volume
- Robust aluminum die cast housing

Specifications Orbital Δ // Orbital Δ +

Temperature range: ambient +5 ... 100 °C // ambient -15 ... 100 °C

Temperature control: 0.5 °C Uniformity: Orbit: 1.5 mm Display: TFT Programs:

1 s ... 6000 min Timer: Capacity: 0.3 kg

Dimensions (W x D x H): 220 x 350 x 150 mm // 220 x 350 x 125 mm

Weight: 9.5 kg // 8.8 kg 100 W Power consumption:

100 ... 240 V, 50/60 Hz Power supply:

IP code: TP 21

| Туре | Description | Min. speed | Max. speed | max. heating rate | PK Cat. No. |
|------------------------------|--------------------------------|---------------|---------------|-------------------------|----------------------|
| | | rpm | rpm | K/min | |
| Matrix Orbital Δ F0.5 | fix attachment, 24 x 0.5 ml | 300 | 2000 | 15 | 1 4.664 742 |
| Matrix Orbital Δ F1.5 | fix attachment, 24 x 1.5 ml | 300 | 1500 | 11 | 1 4.664 740 |
| Matrix Orbital △ F2.0 | fix attachment, 24 x 2.0 ml | 300 | 1500 | 13 | 1 4.664 743 1 |
| Matrix Orbital △ FP | fix attachment, 1 x microplate | 300 | 2000 | 18 | 1 4.664 741 2 |
| Matrix Orbital ∆+ | variable attachments | 300 | 3000 | 7 | 1 4.664 744 |

Suitable accessories can be found in our online shop.





4.664 743

4.664 741

Labnet



Shaking Incubators VorTemp™ 56/1550

VorTemp™ 56 is supplied with interchangeable platforms for microtubes (56 x 1.5ml tubes, or small tubes with adapters) or microplates (accepts standard and deepwell plates, up to 2.0ml). VorTemp™ 1550 includes platforms for 8 x 50ml and 18 x 15ml tubes. The shaker in the VorTemp™ 56 may be turned off, allowing the unit to be used as a static incubator.

- shake and incubate samples simultaneously

- interchangeable platforms

Timer:

- broad temperature and speed range
- intelligent control with digital LED display

Specifications VorTemp™ 56 // VorTemp™ 1550

Temperature range: 5...100 °C Temperature accuracy: ±1 °C Speed range: 200 ... 1300 min⁻¹// 200 ... 900 min⁻¹

Motion/orbit: 3 mm, circular

Capacity: 56 x 1.5/2.0ml tubes, 4 standard or 2 deep well microplates //

1 ... 999 minutes or continuous

18 x 15ml, 8 x 50ml tubes

230 x 310 x 230 mm // 260 x 310 x 310 mm Dimensions (W x D x H):

Weight: 11 kg // 12 kg

230 V/50 Hz or 120 V/60 Hz Power supply:

| Туре | PK | Cat. No. |
|--------------|----|-----------|
| VorTemp 56 | 1 | 9.945 760 |
| VorTemp 1550 | 1 | 9.945 761 |

4. Stirring, Shaking, Mixing Shakers and mixers/Thermoshakers

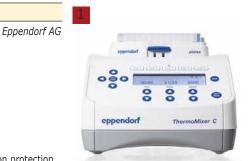
Eppendorf ThermoMixer C

The Eppendorf ThermoMixer C combines unique mixing performance with excellent temperature control to consistently quarantee complete, dependable and reproducible test results. Improve your assay results by mixing and incubating samples at the same time.

- Excellent mixing performance due to unique 2DMix-Control technology

- Prevent condensation and improve temperature homogeneity with the new ThermoTop
- Ergonomic design
- Eppendorf QuickRelease™ Technology for fast and simple block exchange of Eppendorf SmartBlocks™
- Highest flexibility thanks to broad choice of exchangeable SmartBlocks™
- Heating, mixing and cooling of all common tubes and microplates with a volume range of 5µl to 50ml

Now you can control the temperature of your samples with ease: The ThermoTop, with unique condensation protection technology, reliably prevents condensation formation on the tube lid and wall. It also improves temperature homogeneity. The Eppendorf ThermoTop does not have a cable connection. It is detected by the device as soon as it is positioned, via inductive signal transmission, and thermo-regulation starts automatically. The sample temperature is not affected: optimal sample protection with optimal reaction conditions produce optimal results.



Specifications

Temperature operation range: min: 15°C below RT, max: +100°C

Temperature adjustable range: +1 to +100°C

Accuracy/Resolution: ±0.5°C at +20 to +45 °C

Max. heating time: 6°C/min

Max. cooling time: 2.5°C/min between +100°C and RT

Shaking frequency: 300 to 3000rpm

Orbit: 3mm

Dimensions (W x D x H): 206 x 304 x 131mm

Capacity: dependent on Eppendorf SmartBlock™

Weight: Electrical heating power: 200W (max.)

Power supply: 220 - 240V ±10%, 50/60Hz

| Туре | PK | Cat. No. |
|----------------|----|-----------|
| ThermoMixer™ C | 1 | 9.776 902 |

Eppendorf ThermoMixer™ F0.5/F1.5/F2.0/FP

To simplify lab routines. Whether work with regularly 0.5, 1.5 or 2.0 ml reaction vessels Eppendorf AG or plates (MTP and DWP) - the customized systems from Eppendorf offer the perfect solution for special applications. The devices combine precise heating and mixing with the highest stability, even at maximum mixing frequency. Mixing and incubation steps can be performed independently.

- For 24 reaction vessels or one microplate/deepwell plate
- Efficient mixing thanks to 2DMix-Control and anti-spill technology
- Simple and intuitive operation using predefined temperature keys (37 °C, 42 °C, 56 °C and 95 °C)
- Improved temperature homogeneity with the new ThermoTop

Specifications

Temperature operation range: Temperature adjustable range:

Accuracy/Resolution:

Max. heating time:

Shaking frequency ThermoMixer™ F1.5/F2.0: Shaking frequency ThermoMixer™ FP/F0.5:

Orbit: Weight:

Electrical heating power:

Power supply:

FP//F0.5//F1.5//F2.0

Min. 4 °C above RT, max. 100 °C

1 °C/100 °C

±0.5°C at 20 ... 45 °C

18 °C/min//15 °C/min //11 °C/min//13 °C/min

300 to 1500 rpm 300 to 2000 rpm

3 mm

6.1 kg//6.2 kg//6.3 kg//6.3 kg

200 W

220-240 V, 50/60 Hz

| Туре | Dimensions | PK | Cat. No. |
|-------------------|-----------------|----|-----------|
| | (W x D x H) | | |
| | mm | | |
| ThermoMixer™ FP | 206 x 304 x 164 | 1 | 9.776 905 |
| ThermoMixer™ F0.5 | 206 x 304 x 163 | 1 | 9.776 936 |
| ThermoMixer™ F1.5 | 206 x 304 x 170 | 1 | 9.776 904 |
| ThermoMixer™ F2.0 | 206 x 304 x 170 | 1 | 9.776 937 |



4. Stirring, Shaking, Mixing Shakers and mixers/Thermoshakers



Exchangeable blocks Eppendorf SmartBlocks™ and accessories for Eppendorf ThermoMixer™ C and ThermoStat C

Exchangeable blocks: Eppendorf AG

Flexibility has never been this easy. Eppendorf offers a variety of SmartBlocks $^{\text{TM}}$ for tubes from 0.5ml to 50ml.

- Fast and simple block exchange due to Eppendorf Quick Release
- Optimized block design guarantees maximum temperature transfer to the sample

Transfer Racks:

- Autoclavable transport aid for tubes from 0.5 to 2.0 ml
- For transferring up to 24 tubes in/from the heating block at the same time
- Offers protection against burns when transferring hot samples

SmartExtender:

A heatable frame/attachment for mixer, with separate temperature control (3 °C above RT to 110 °C), for simultaneous operation at two different temperatures.

- Enables 2 incubations at the same time

| Туре | Description | PK | Cat. No. |
|-------------------------------|--|----|-----------|
| | | | |
| Eppendorf SmartBlock™ 0.5 mL | 24 tubes, 0.5ml | 1 | 9.776 906 |
| Eppendorf SmartBlock™ 1.5 mL | 24 tubes, 1.5ml | 1 | 9.776 907 |
| Eppendorf SmartBlock™ 2.0 mL | 24 tubes, 2.0ml | 1 | 9.776 908 |
| Eppendorf SmartBlock™ 5.0 mL | 8 Eppendorf Tubes®, 5.0ml | 1 | 9.776 909 |
| Eppendorf SmartBlock™ 15 mL | 8 conical tubes, 15ml | 1 | 9.776 910 |
| Eppendorf SmartBlock™ 50 mL | 4 conical tubes, 50ml | 1 | 9.776 911 |
| Eppendorf SmartBlock™ 12 mm | 24 tubes, diam. 11 to 11.9mm | 1 | 9.776 912 |
| Eppendorf SmartBlock™ cryo | 24 cryogenic tubes, 1.5 to 2.0ml, all bottom forms | 1 | 9.776 913 |
| Eppendorf SmartBlock™ plates | For micro plates and Deepwell plates, incl. lid | 1 | 9.776 914 |
| Eppendorf SmartBlock™ PCR 96 | PCR plates 96, incl. lid | 1 | 9.776 915 |
| Eppendorf SmartBlock™ PCR 384 | PCR plates 384, incl. lid | 1 | 9.776 916 |
| Eppendorf SmartExtender™ | 12 tubes 1.5 - 2.0 ml | 1 | 4.664 579 |
| Transfer Rack | For 24 tubes, 0.5ml | 1 | 6.280 936 |
| Transfer Rack | For 24 tubes, 1.5 to 2.0ml | 1 | 6.280 935 |

Accessories for Eppendorf Thermomixer™

Eppendorf ThermoTop® with condens.protect® technology avoids condensation and improves temperature uniformity.

Eppendorf AG

Lid for Eppendorf Thermomixer [↑]M F1.5 and FP, for Eppendorf Smart Blocks [↑]M 0.5-2.0 mL, plates, PCR 96 and PCR 384

| Туре | PK | Cat. No. |
|----------------------|----|-----------|
| Eppendorf ThermoTop® | 1 | 9.776 918 |
| Lid | 1 | 9.776 917 |





4. Stirring, Shaking, Mixing Shakers and mixers/Overhead shakers

Overhead mixer LLG-uniROTATOR 2

Analogue overhead mixer with vertical rotary motion for gentle but effective mixing. Ideal for biological samples. Suitable for cutting and mixing processes of powdered and liquid samples in tubes up to 50 ml. With easily interchangeable clamps that allow a quick cleaning of the mixer.

- Compact design
- Housing easy to clean
- Non-slip, adjustable screw feet

Scope of delivery: Overhead mixer incl. 12 clamps each for 2 ml, 15 ml and 50 ml tubes

Specifications

Motor rating input:

Type of movement: overhead Speed: 0 ... 80 min -1 Rotation angle: 360°
Permissible shaking weight (incl. attachment): 2 kg
Permissible relative moisture: 80 %
Permissible ambient temperature: 5 ... 40 °C

Dimensions (W x D x H): 530 x 150 x 190 mm Power supply: 100 ... 240 V, 50/60 Hz

IP code: IP 21 Warranty: 3 years

| Туре | Plug type | PK | Cat. No. |
|------------------|-----------|----|-----------|
| LLG-uniROTATOR 2 | EU | 1 | 6.263 660 |
| LLG-uniROTATOR 2 | UK | 1 | 6.263 661 |

Vertical mini rotator PTR-25

Compact, economy solution with simple to use controls, providing thorough mixing of samples in tubes up to 50ml. Suitable for preventing blood coagulation in tubes and for fulfilment of procedures of extraction of biological components. For use in cold rooms and incubators.

20 W

- 360° vertical rotation
- Vertical rotation speed range: 5rpm to 30 rpm
- Timer: 1 min to 24 hours, with audible alarm and automatic switch-off
- Simple to use controls
- Platform accommodating 22 tubes (up to 16mm diameter) is included as standard





| Туре | Plug type | PK | Cat. No. |
|--------|-----------|----|-----------|
| PTR-25 | EU/UK | 1 | 9.721 016 |

Vertical mini rotator RotoFlex™ Plus

This simple benchtop rotator is ideal for a number of laboratory applications including

DNA purification, hybridization or sample mixing. It is digitally controlled and can also be
set in an oscillating mode to increase mixing efficiency. This tube rotator accepts tubes from 0.5 to 50 ml. The
rotisseries to hold each of the tubes are included in the set.

Features:

- 360° revolution, adjustable angle from 0 to 90°
- Speed: 10 to 40 rpm, adjustable
- For tubes of 0.5 to 50 ml, interchangeable tube racks
- Can be used in a cold room or incubator (4 °C to 60 °C)

| Туре | PK | Cat. No. |
|-----------------|----|-----------|
| D. J. El. W. Di | | 4 204 244 |
| RotoFlex™ Plus | 1 | 6.281 561 |





Shakers and mixers/Overhead shakers



Multi-function rotator PTR-35/PTR-60

360° vertical multi-function rotator for thorough mixing in tubes, with multi-segment programme.

Grant

IKA

Heidolph

- Multi-function: vertical rotation, reciprocation, vibration
- Continuous or timed operation for each phase
- Choice of two models with different microtube capacities
- Speed: 1 rpm to 100 rpm with 1 rpm increment
- Reciprocal rotation: 1° to 90° turning angle
- Vibration: programmable in a burst of 1 to 5 seconds
- Fully programmable sequence of functions, including pause
- Alternative platforms for larger tubes

| Туре | Permissible shaking quantity / maximum load kg | Plug type | PK | Cat. No. |
|--------|---|-----------|----|-----------|
| PTR-35 | 0.5 | EU/UK | 1 | 9.721 028 |
| PTR-60 | 0.8 | EU/UK | 1 | 9.721 030 |



Overhead shaker Trayster basic/digital

Overhead shaker with vertical rotation for smooth but effective mixing with a fixed speed. Ideal for biological samples, particularly blood samples. Suitable for separating and mixing processes of powdered and liquid samples in Eppendorf tubes and Greiner tubes up to 50 ml. The easy removable attachments allow simple and quick cleaning of the unit of spilled samples.

- Different attachments allow a variety of applications
- Usable at 4 to 50°C in incubators
- Suitable for continuous operation
- Easy operation by foil keypad

Trayster digital only:

- Timer: Countdown, adjustable from 1s to 99h 59min
- Counter: Display of shaking time
- Error code display

Attachments are not included. Please order separately.

Specifications

Type of movement: overhead

Shaking diameter: vertical or horizontal

Permissible shaking weight (incl. attachment): 2kg Motor rating input/output: 16/9 W

Dimensions (W x D x H): 460 x 140 x 180 mm

Protection class acc. to DIN EN 60529: IP 21

Power supply: 100-240V, 50/60Hz

| Туре | PK Cat. No. |
|----------------------|----------------------|
| Trayster basic, EU | 1 9.837 870 |
| Trayster digital, EU | 1 9.837 871 2 |



Overhead Shaker Reax 2

- Incl. Universal adapter with clamps for 2 closed vessels of 50 to 160 mm height

- Especially suitable for hematology, medical diagnostics and biochemistry

- Speed continuously adjustable

- Additionally an optional adaptor is available for the use of 20 test tubes

Specifications

Type of movement: overhead
Speed: 20 ... 100 rpm
Rotation angle: 360°
Permissible shaking weight: 1 kg
Motor rating input: 27 W

Dimensions (W x D x H): 510 x 235 x 180 mm

Weight: 5.2 kg
Power supply: 230 V/50 Hz
Protection class: IP 21

| Туре | Plug type | PK | Cat. No. |
|--------|-----------|----|-----------|
| Reax 2 | EU | 1 | 6.270 264 |
| Reax 2 | UK | 1 | 6.290 978 |

4. Stirring, Shaking, Mixing Shakers and mixers/Overhead shakers

Overhead shaker Reax 20

- Overhead Shaker for 4, 8 or 12 bottles or mixing cylinders with 160 to 270 mm height and max. 136 mm diameter
- Ideal for waste water analysis acc. to DIN 38414 Part 4
- Bottles can be easily inserted and removed by quick-release technology
- Set and continuously adjust the variable speed on the analog control knob
- Other rotation speeds available upon request, for example 0.5 to 8 rpm or 2 to 32 rpm

Specifications

Type of movement:

Speed:

1 ... 16 rpm

Rotation angle:

Permissible shaking weight:

Motor rating input:

Power supply:

Protection class:

Overhead

1 ... 16 rpm

360°

280 W

280 W

Power supply:

Protection class:

IP 21



| Туре | Dimensions (W x D x H) | Net weight | PK | Cat. No. |
|--------------|---------------------------|------------|----|-------------|
| | mm | kg | | |
| Reax 20 / 4 | 490 x 520 x 465 | 23 | 1 | 9.839 805 1 |
| Reax 20 / 8 | 770 x 520 x 465 | 28 | 1 | 9.839 806 |
| Reax 20 / 12 | 1050 x 520 x 465 | 33 | 1 | 9.839 807 |

Disc rotator LLG-uniLOOPMIX 2

Analogue Disc rotator for gentle and effective sample mixing. Suitable for all biological samples. With easily interchangeable clamps that allow a **quick cleaning** of the rotator.

For a maximum of 48×1.5 ml, 16×5 or 15 ml, 8×50 ml tubes. Also for parallel use of different sizes, can be equipped individually.

- Compact design
- Housing easy to clean
- Non-slip, adjustable screw feet
- Additional clamps on request

Scope of delivery: Disc rotator incl. 12 clamps each for 2 ml, 15 ml and 50 ml tubes

Specifications

Type of movement: rotating
Speed: 0 ... 80 min -1
Rotation angle: 360°
Permissible shaking weight (incl. attachment): 2 kg
Permissible relative moisture: 80 %
Permissible ambient temperature: 5 ... 40 °C
Motor rating input/output: 20 W

Dimensions (W x D x H): 220 x 300 x 310 mm Power supply: 100 ... 240 V, 50/60 Hz

IP code: IP 21 Warranty: 3 years

| Туре | Plug type | PK | Cat. No. |
|------------------|-----------|----|-----------|
| LLG-uniLOOPMIX 2 | EU | 1 | 6.263 665 |
| LLG-uniLOOPMIX 2 | UK | 1 | 6.263 666 |

Rotators SB2/SB3

The Stuart rotators give gentle but effective mixing, ideal for life sciences applications such as keeping blood samples in suspension. The angle of tilt is fully adjustable. The Rotators can be used in incubators up to 60° C and in cold rooms down to 4° C.

SB2: Fixed speed of 20rpm.

SB3: Variable speed of 2rpm to 40rpm. Additional digital timer of 1 to 999 minutes. Digital speed control.

There are six types of tube holder available. Please order separately.

Specifications:

Dimensions (W x D x H): 200 x 270 x 230mm Supply: 230 V/50 Hz, 50W

Weight: 3.2kg

| Туре | PK Cat. No. |
|------|--------------------|
| SB2 | 1 9.645 322 |
| SB3 | 1 9.645 323 |





Stuart

9.645 323

535

4. Stirring, Shaking, Mixing Shakers and mixers/Overhead shakers

Tube holders for rotators SB2/SB3

Stuart

| Туре | For | No. of vessels | PK | Cat. No. |
|--------------|--|-------------------|----|-----------|
| SB3/1 | Micro tubes, 10 to 11.5mm dia. | 46 | 1 | 9.645 324 |
| SB3/2 | Test/blood tubes, 9 to 20mm dia. | 20 | 1 | 9.645 325 |
| SB3/3 | 50ml centrifuge tubes, 25 to 35mm dia. | 12 | 1 | 9.645 326 |
| SB3/4 | Culture tubes, 12mm dia. | 63 | 1 | 9.645 327 |
| SB3/5 | Culture tubes, 16mm dia. | 63 | 1 | 9.645 328 |
| SB3/6 | Culture tubes, 26mm dia. | 30 | 1 | 9.645 329 |
| SB3/1/PC | Spare Clips for SB3/1 | - | 1 | 6.258 527 |
| Additional a | ccessories on request. | | | |

Rotators Loopster basic/digital

Rotators for smooth but effective mixing with a fixed speed. Ideal for biological samples, IKA particularly blood samples. Suitable for separating and mixing processes of powdered and liquid samples in Eppendorf tubes and Greiner tubes up to 50ml. The easy removable attachments allow simple and quick cleaning of the unit of spilled samples.

- Freely adjustable rotary angle
- Different attachments allow a variety of applications
- Usable at 4 to 50°C in incubators
- Easy operation by foil keypad
- Suitable for continuous operation

Loopster digital only:

- Timer: Countdown, adjustable from 1s to 99h 59min
- Counter: Display of shaking time
- Error code display

Specifications

Type of movement: Shaking diameter:

Permissible shaking weight (incl. attachment):

Motor rating input/output:

Dimensions (W x D x H):

Protection class acc. to DIN EN 60529:

Power supply:

rotating adjustable from horizontal to vertical 2kg 16/9W

300 x 300 x 360mm

IP 21

100-240V, 50/60Hz

| Туре | Min. speed | Max. speed | PK Cat |
|------------------|---------------|---------------|---------------|
| | rpm | rpm | |
| Loopster basic | 20 | 20 | 1 9. |
| Loopster digital | 5 | 80 | 1 9. : |





4. Stirring, Shaking, Mixing Shakers and mixers/Roller mixers

NEW

Roller Mixers LLG-uniROLLER 6 easy and pro

Analog or digital tube rollers with 6 rolls for the efficient mixing of biological samples, viscous substances and liquidsolid suspensions. Used in a variety of applications, such as the prevention of blood coagulation, immune precipitation.

- Max speed 70 rpm
- For gentle rolling of samples
- Easy to clean

LLG-uniROLLER 6 easy:

- Analog control
- Easy to use

LLG-uniROLLER 6 pro:

- LCD display

Specifications

- Continuous or timer operation

LLG-uniROLLER 6 easy // LLG-uniROLLER 6 pro

Type of movement: rocking and rolling Amplitude: 24 mm Speed: 0 ... 70 rmp Timer: - // 1 ... 1199 min

Load max .: 4 kg Ambient temperature: 5 ... 40 °C 80 % RH Max. humidity:

Dimensions ($W \times D \times H$): 260 x 450 x 120 mm Weight: 4.5 kg // 5.1 kg Power consumtion: 25 W // 30 W Power supply: 100 ... 240 V, 50/60 Hz

IP code: IP 21



6.263 645



6.263 647

| Туре | Plug type | PK | Cat. No. |
|----------------------|-----------|----|-------------|
| LLG-uniROLLER 6 easy | EU | 1 | 6.263 645 1 |
| LLG-uniROLLER 6 easy | UK | 1 | 6.263 646 |
| LLG-uniROLLER 6 pro | EU | 1 | 6.263 647 2 |
| LLG-uniROLLER 6 pro | UK | 1 | 6.263 648 |

Tube Roller Mixer, SRT6, SRT6D, SRT9, SRT9D

There are four models available, two analogue models with either 6 or 9 rollers, with a fixed speed of 33 rpm. Or two more advanced digital models with either 6 or 9 rollers, with digitally controlled speed between 5 and 60 rpm and programmable timer. The rollers conveniently detach to accommodate larger vessels. Recommended for mixing blood samples, viscous substances and liquid-solid suspensions where minimum aeration is required. Units can be used in incubators up to 60 °C and humidity up to 80 %, or in cold rooms down to 4 °C.

- Rocking and rolling action for complete mixing
- 6 or 9 roller design with footprint
- With antimicrobial BioCote protection

Specifications SRT6/SRT6D // SRT9/SRT9D

Type of movement: rocking and rolling

Amplitude: 16 mm

Speed: 33 rpm// 5 ... 60 rpm

Number of rollers: 6 // 9 Load max.: 3 kg

continuous // 1 s ... 9 h, continuous Timer:

up to 60 °C Ambient temperature:

Max. humidity: up to 80 %

Dimensions (W x D x H): 565 x 240 x 110 mm // 565 x 360 x 110 mm

Roller size $(I \times \emptyset)$: 340 x 30 mm Weight: 5.1 kg // 6.9 kg Power supply: 230 V, 50/60 Hz IP code: IP 20

| Туре | Display type | РК | Cat. No. |
|-------|-----------------|----|-------------|
| SRT6 | analogue | 1 | 9.728 810 |
| SRT6D | digital | 1 | 9.728 811 3 |
| SRT9 | analogue | 1 | 9.728 812 |
| SRT9D | digital | 1 | 9.728 813 |



9.728 811

Shakers and mixers/Roller mixers



Tube roller Roller 6 basic/6 digital/10 basic/10 digital

Roller shaker with 6 or 10 rolls, with smooth rocking and rolling action and a fixed speed. Particularly for mixing blood samples, solid and liquid suspensions and viscous samples. The unit can be used for all conventional tubes and cylindrical bottles. The easy removable rolls allow simple and quick cleaning of the unit from spilled samples.

- Usable from 4 to 50°C in incubators
- Suitable for continuous operation
- Removable rolls make it suitable for larger tubes
- Easy operation by foil keypad
- Easy removable rolls

Roller 6 digital/10 digital only:

- Timer: Countdown, adjustable from 1s to 99h 59min
- Counter: Display of shaking time
- Error code display



Specifications Roller 6 /10 basic // Roller 6 /10 digital

Type of movement: rocking and rolling Amplitude: 24.5 (height) 30 rpm// 5 ... 80 rpm Speed: Number of rollers: 6 // 10

Load max.: 2 kg Timer:

- // 1 s ... 99 h 59 min Ambient temperature: +4°C to +50°C Max. humidity:

Dimensions (W x D x H): 240 x 545 x 115 mm // 380 x 545 x 115 mm

310 x 32 mm Roller size (I x Ø): Weight: 4 kg // 6 kg Power supply: 100-240V, 50/60Hz

IP code: IP 21

| Туре | PK | Cat. No. |
|-------------------|----|-------------|
| | | |
| Roller 6 basic | 1 | 9.729 970 1 |
| Roller 6 digital | 1 | 9.729 971 |
| Roller 10 basic | 1 | 9.729 972 |
| Roller 10 digital | 1 | 9.729 973 2 |



Tube roller RM 2

Robust tube roller with gentle tilting and rolling movement. Small space requirement. Suitable for all common tube sizes, bottles and other cylindrical vessels with a diameter

- Gentle start-up for optimum development of cell cultures.
- Minimal heat emission, thus no influence on the ambient conditions
- Can be used at CO2 concentrations up to 5%.
- Easy setting of speed and time via LED display
- Drip tray and plastic rollers can be removed for easy cleaning
- Overhead attachment available as accessory

Scope of delivery: basic unit including 6 removable plastic rollers and drip tray

Specifications

Type of movement: rocking and rolling Amplitude/angle: 15 mm, 3° fixed Speed: 5 ... 80 rpm Max. load: 2 kg Number of rollers:

0 ... 99 h 59 min/continuous Timer:

Temperature range: 5 ... 45 °C Max. CO2 range: 5 %

Max. humidity: 85 %, not condensing Dimensions (W x D x H): 244 x 465 x 115 mm Roller size (l x Ø): 300 x 32 mm Weight: 7.3 kg

100 ... 240 V, 50/60 Hz Power supply:

Protection class: IP 21

| Туре | PK | Cat. No. |
|------|----|-----------|
| | | |
| RM 2 | 1 | 4.663 359 |

538

Bühler

IKA

Shakers and mixers/Roller mixers-Microtitre plate shakers

Overhead attachment RM 2, PVC

For tube rollers RM 2. With 12 holes at 29.5 mm Ø. Other borings available on request.

Bühler

| Туре | PK | Cat. No. |
|--------------------|----|-----------|
| Overhead rack RM 2 | 1 | 4.663 360 |



2 3 Microtitre shaker LLG-uniPLATESHAKER 1

The LLG-uniPLATESHAKER 1 has been designed for accommodating and mixing a single micro plate. Due to its **small footprint** it can be used in working areas with limited space such as fume hoods and bio safety cabinets. It can also be used inside a cold-room.

- Digital display with speed and time settings
- Variable speed from 300 to 1800 min-1
- Maintenance-free brushless DC motor
- Orbital Diameter of 2 mm for thorough mixing
- Timer setting from 1 to 99 min and continuous mode
- Universal fit; comes with interchangeable clamps for different micro plate sizes
- Comes with foam attachment for 20 x 1.5/2 ml microtubes





Type of movement: orbital Orbital diameter: 2 mm

Speed range: 300 ... 1800 min⁻¹

Max. load: 1 kg

Motor: brushless DC motor Timer: 1 ... 99 min, continuous

Power consumption: 15 W Permissible ambient temperature: 4 ... 40 °C Dimensions (W x D x H): 127 x 85 x 86 mm

Weight: 1.4 kg

Power supply: 100 ... 230 V, 50/60 Hz

Warranty: 3 years

| Туре | Plug type | PK | Cat. No. |
|------------------------------|-----------|----|-----------|
| LLG-uni <i>PLATESHAKER</i> 1 | EU | 1 | 6.263 488 |
| LLG-uniPLATESHAKER 1 | UK | 1 | 6.263 489 |

4 Microtitre shaker PMS-1000i

Reliable, regulated shaking for two or four microplates. Simple screw attachments allow quick and easy fitting of any standard depth 96 or 384 well plates, holding the plate securely in place.

- direct drive
- brushless motor
- RPM set and display
- variable speed: 150rpm to 1200rpm
- orbit: 2mm
- continuous or timed operation
- integral timer: 1 min to 24 hours
- standard option for two microplates
- optional platform MPP-4 for four microplates
- ambient 4°C to 40°C



Accessories for Microtitre shaker PMS-1000i

Grant

Grant

| Description | PK | Cat. No. |
|-----------------------------|----|-----------|
| Platform for 4 micro plates | 1 | 9.721 026 |



Heidolph

Heidolph

Heidolph

Grant

Microtitre Plate Shakers Titramax 100/101/1000

 Set and continuously adjust the variable speed on the analog control knob for gentle to powerful mixing

- An analog process timer allows for unattended operation.

Specifications

Type of movement: orbital, vibrating
Speed range: 150 ... 1350 rpm
Timer: 120 min, continuous

Power consumption: 31 W
Permissible ambient temperature: 5 ... 31 °C
Permissible relative moisture: 80 %
Weight: 5.5 kg

Power supply: 100 ... 240 V, 50/60 Hz

Protection class: IP 30



9.839 831

Microtitre Plate Shakers Titramax 100/101

Compact and space-saving models for 4 microtiter plates. Titramax 100 with 1.5 mm shaking orbit is ideal for gentle mixing. Titramax 101 with a 3 mm shaking orbit is especially suitable for mixing of viscous media and solids.

Specifications

 Max. Load:
 2 kg

 Platform dimensions (W x D):
 220 x 220 mm

Overall dimensions (W x D): 220 x 220 mm

245 x 310 x 125 mm

| Туре | Shaking stroke / Shaking orbit mm | PK | Cat. No. |
|--------------|-----------------------------------|----|-------------|
| Titramax 100 | 1.5 | 1 | 9.839 831 📘 |
| Titramax 101 | 3.0 | 1 | 9.839 832 |



Microtitre Plate Shakers Titramax 1000

Compact model for 6 microtiter plates for gentle mixing. The Titramax 1000 is suitable for the modular Incubator 1000 and is recommended for applications which require variable temperatures.

Specifications

 Orbit:
 1.5 mm

 Max. Load:
 5 kg

 Platform dimensions (W x D):
 290 x 258 mm

 Overall dimensions (W x D x H):
 320 x 375 x 125 mm

| Туре | PK | Cat. No. |
|---------------|----|-----------|
| Titramax 1000 | 1 | 9.839.830 |



9.721 033



6.227 761

Microplate thermoshaker PHMP/PHMP-100/PHMP-4

For 96- and 384-well plates. The PHMP is a variable speed, variable temperature microplate shaker incubator with excellent temperature uniformity across the microplate.

The patented heated lid and base which completely cover the plate produce a controlled micro-environment.

This is combined with powerful orbital shaking to produce the maximum yield from your incubations.

- Stability ±0.1 °C, uniformity ±0.25 °C, rapid heat-up
- For standard 96 or 384-well plates (max. 14mm height)
- Variable speed: 250 rpm to 1200 rpm
- 2mm shaking orbit for effective mixing
- Temperature setting range: +25 to 60°C, PHMP-100: +25 to 100°C
- Temperature control range: RT +5 to 60°C, PHMP-100: RT +5 to 100°C
- Timed operation: 1 min to 96 hours

| Туре | Min. operating temperature RT + °C | Max. operating temperature °C | For | PK | Cat. No. |
|----------|--|-------------------------------|---------------|----|-------------|
| PHMP | 5 | 60 | 2 microplates | 1 | 9.721 033 |
| PHMP-4 | 5 | 60 | 4 microplates | 1 | 6.227 761 4 |
| PHMP-100 | 5 | 100 | 2 microplates | 1 | 6.280 073 |