

designed for scientists



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COMPACT YET POWERFUL | CENTRIFUGES

The IKA mini G is a mini centrifuge ideal for applications which do not require ultra high speeds e.g. micro-filtrations and cell separation. The unit features a compact design and a small footprint which requires minimal bench space. A transparent cover allows for constant observation and it can be used for both microcentrifuge and PCR strip tubes.

# 9)93€ -15% Popust | 349,15€ | Popust

2+1 years warranty\*



\*2+1 years after registering at www.ika.com/register, wearing parts excluded

#### **FEATURES**

- > Fixed speed of 6000 rpm
- > Digital timer adjustable from 1 to 99 min
- > Fast startup of speed
- > Compact design and quiet operation
- > Rotor exchangeable without tools
- > Easy operation with touch keypad

#### SPECIAL SAFETY FEATURES

- > The centrifuge will run only when the lid is closed
- > The lid can be opened easily at the push of a button
- > Integrated quick stop
- > Protection class acc. to DIN EN 60529: IP 30
- > Rotor and adapters can be autoclaved (121 °C, 2 bar)

#### SCOPE OF DELIVERY

- > IKA mini G centrifuge
- $\rightarrow$  Rotor for 8  $\times$  1.5/2 ml vessels
- $\rightarrow$  Rotor for  $4 \times 8 \times 0.2$  ml PCR strips
- > Adapters for 0.5 ml vessels (8 pcs.)
- > Adapter set for 0.4 ml vessels (8 pcs.)
- > Adapter set for 0.2 ml vessels (8 pcs.)



#### **FEATURES**

- > Fitted with a metal cover
- > Does not start until firmly closed
- Intuitive navigation through a membrane keypad allows an easy setting of speed, timer or programs
- > Rotational speed of up to 15 700 rpm
- > Intergrated unbalance sensor
- > Display RPM or RCF
- All rotors, rotor lids and adapters can be autoclaved (121°C, 2 bar)

Separating substances at medium rotational speeds: IKA G-L is the ideal midi centrifuge for all types of separation processes such as those found in molecular biology. It can be used with standard 1.5/2 ml vessels, as well as with PCR strips. The cover opens automatically at the press of a button.

# IKA G-L

Ident. No. 0030000774

#### SCOPE OF DELIVERY

> IKA G-L centrifuge

Metal rotor set 12 x 1.5/2 ml
 Screwdriver for opening the lid in case of emergency
 USB cable

The clearest display in its class







#### TECHNICAL DATA

Capacity	8 × 1.5/2.0 ml	12 × 1.5/2.0 ml
Speed	6000 rpm	800 – 15 700 rpm
Speed deviation	5 %	2.5 %
Centrifugal acceleration	2000 G	16 500 G
Timer	Yes	Yes
Timer display	7 Segment LED	7 Segment LED
Unbalance sensor	No	Yes
Quick stop	Yes	Yes
Cover opening	Automatic	Automatic
Rotor exchange	Without tool	Without tool
Protective cover	Yes	Yes
Interface	_	USB

#### GENERAL DATA

Weight	1.4 kg	3.9 kg
Dimensions (W $\times$ H $\times$ D)	155 × 105 × 175 mm	200 × 140 × 280 mm
Permissible ambient temperature	5 – 40 °C	5 – 40 °C
Permissible relative humidity	80 %	80 %
Protection class according to DIN EN 60529	IP 20	IP 20
Voltage	220 – 230 V	220 – 230 V
Frequency	50/60 Hz	50/60 Hz
Motor rating input	12 W	65 W
Power input	12 W	92 W
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# FAQ | mini G

Does IKA offer a rotor for PCR strip tubes?

Yes, a rotor for four strips 8 x 0.2 ml is included with the mini G.

What is the maximum kinetic energy for the mini 62

The maximum kinetic energy is 20 Nm.

What happens when the lid of the centrifuge is opened?

The centrifuge stops immediately.

What tool is needed to change the rotor?

The rotor can be changed without any tool.

Is a timer included in the mini G?

Yes, the timer can be adjusted from 1 - 99 min.

What is the centrifugal acceleration for the mini G?

The centrifugal acceleration for the mini G is 2000 G.

Does the mini G posses a digital display?

Yes, the mini G has an integrated 7 segment LED timer.

Is it possible to change the speed?

No, the speed is fixed at 6000 rpm.

# FAQ | G-L

Does the IKA G-L have a digital display?

Yes, there are three displays. It is possible to see the rpm/rcf value on one display, the timer/counter setting on another display and the selected program on the third display.

Is it possible to change the speed?

Yes, the speed is variable in steps of 100 rpm/rcf.

What tool is needed to change the rotor?

The rotor can be changed without any tool.

In the case of a power failure, will the lid of the G-L open automatically?

No, when there is a power failure, the lid will remain closed to protect the samples. However, an emergency opening is located at the bottom



#### Accessories

#### for IKA G-L









IKA G-L, PCR Set Capacity: 2 × PCR strips,  $8 \times 0.2$  ml tubes.

Ident. No. 0030001345

#### Adapter 0.4 ml tube

Adapters for 0.4 ml tubes (6 pcs.) The capacity of G-L centrifuge is 12 × 1.5/2.0 ml

Ident. No. 0030001334

#### Adapter 0.5 ml tube

Adapters for 0.5 ml tubes (6 pcs.) The capacity of G-L centrifuge is 12 × 1.5/2.0 ml

Ident. No. 0030001347

#### Adapter PCR tube

Adapters for 0.2 ml PCR tubes (6 pcs.) The capacity of G-L centrifuge is 12 × 1.5/2.0 ml

Ident. No. 0030001346

#### for IKA mini G



mini G, Rotor 4 × HPLC Rotor for  $4 \times HPLC$  vials. Ident. No. 0020022341



#### LABORATORY SOFTWARE

labworldsoft® is a laboratory software to control lab devices, automate processes, and to document your measurements and results. The software provides access to a huge library of different laboratory devices. labworldsoft® does not integrate only IKA laboratory devices, but supports several other devices from different manufacturers as well. You stay flexible in the choice of your lab devices you want to use and profit from the whole device range of the laboratory world.

labworldsoft® 6 Starter

Ident. No. 0020019397

labworldsoft® 6 Pro

Ident. No. 0020017366

labworldsoft® 6 Advanced

Ident. No. 0020105873



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MIXING, HEATING, COOLING | MATRIX THERMOSHAKERS

# 2 | MATRIX

**IKA F 1.5** 

IKA® MATRIX ORBITAL △

**3000** 

LIMIT 3000

### MATRIX

/// THERMOSHAKERS



Mixing, heating, cooling, or all at once? MATRIX is a powerful thermoshaker family and your ideal companion for sample preparation in laboratories for molecular biology, pharmaceuticals or biochemistry. Regardless whether blood samples, pharmaceutical agents, DNA/RNA samples or ELISA assays – samples with even the smallest volumes are mixed reliably and completely in all laboratory applications.

# Intuitive use

The large clear display allows an absolutely intuitive navigation with a user-friendly and self-explanatory menu structure.

# High speed

Speeds of up to 3000 rpm ensure that the liquid is mixed particularly quick and effective thanks to its orbital movement.

# Extra stable housing

Excellent stability and everyday robustness is achieved by the aluminum die cast housing. This ensures a secure positioning and strengthens the whole device.



# DIFFERENT MODELS

The models of the MATRIX thermoshaker family have different features, to provide you with a device fulfilling precisely the functions you need for your experiments.

Mixing

1899€

1444,15€

Popust

#### MATRIX ORBITAL

/// Suitable for three different inserts.

Ident. No.: 0030000627



#### MATRIX DELTA PLUS

/// Available with variable attachments.

Ident. No.: 0030000717



#### MATRIX ORBITAL DELTA

/// Available with different fixed attachments.

Model: FP | F0.5 | F1.5 | F2.0

Ident. No.: 0030000751 | 0030000747 | 0030000750 | 0030000753



#### MATRIX ORBITAL DELTA PLUS

/// Available with variable attachments.

Ident. No.: 0030000731

MATRIX ORBITAL DELTA PLUS Ident. No.: 0030000731

# VARIETY OF ATTACHMENTS

A wide range of interchangeable attachments enables the thermoshakers to be flexibly adapted to different requirements and applications. Sample vessels with different volumes as well as microtiter plates and deep well plates can be mixed and tempered. A stable quick-release fastener makes it easier to exchange the attachments, and at the same time ensures they are optimally fixed for effective temperature transfer.

User safety is guaranteed, as high temperatures are not transferred to the frame. Also, the MATRIX unit automatically recognizes which attachment the user has chosen







#### ATTACHMENTS

MX 0.5 ml / Ident. No.: 0030000840 MX 1.5 ml / Ident. No.: 0030000829 MX 2.0 ml / Ident. No.: 0030000834



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The model MATRIX Delta Plus allows incubation of the reaction mix at the enzyme specific temperature, without shaking.

The attachments are adapted to the shape of the tubes to ensure uniform conditions throughout the entire vessel.



MATRIX DELTA PLUS
Ident. No.: 0030000713



High-throughput samples can be incubated with the attachments for 96 and 384 well PCR plates and tubes.

With the models MATRIX Delta Plus and MATRIX Orbital Delta Plus the plates can be heated, cooled and mixed as desired.



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MX PCR96 / Ident. No.: 0030000853 MX PCR384 / Ident. No.: 0030000857





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# Cell culture

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Media, components or cell cultures can be tempered and mixed with the 5 ml, 15 ml, 50 ml and the 12 mm attachments for the models MATRIX Delta Plus and MATRIX Orbital Delta Plus.



For gentle thawing of frozen cells the attachment for 1.5 ml and 2 ml cryo vials is ideal. To ensure cell viability the slow tempering mode can be activated, which increases the temperature slowly and carefully.

The MX carrier attachment for cell culture plates allows tempering and mixing of various plates. The two inbuild tempering modes adjust the heating or cooling as needed.



(D) MX 12.0 mm / Ident. No.: 0030000844

(E) MX cryo / Ident. No.: 0030000848

(F) MX 5.0 ml / Ident. No.: 0030000859

G MX 15.0 ml / Ident. No.: 0030000821

(H) MX 50.0 ml / Ident. No.: 0030000863

# **AUTOMATED TEMPERATURE SHIFT**

Through programmable temperature ramps the model MATRIX Orbital Delta Plus can perform mixing, cooling and heating steps automatically. A series of 5 steps can be programmed to perform an experiment independently and reliably.

# Restriction digestion

The digestion of DNA samples is performed automatically with no further supervision needed. The programs are set following the reaction protocol. In step 1 ideal reaction conditions for the enzyme are established to digest the DNA. The reaction is then stopped with step 2 by heating up and therefore denaturing the enzyme. To prevent DNA degradation the sample is cooled in step 3 until the sample is processed further.

#### PROGRAMMED STEPS:

Step 1: 37 °C for 1 h Step 2: 65 °C for 10 min

Step 3: 4 °C



#### **ATTACHMENT**

MX 1.5 ml / Ident. No.: 0030000829



#### MATRIX ORBITAL DELTA PLUS

Ident. No.: 0030000731



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# Incubation of Elisa plates

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With MATRIX Orbital Delta FP the ELISA plates can be mixed at room temperature or heated during incubation.

If also cooling of the plates while mixing is required, the MX carrier attachment and model MATRIX Orbital Delta Plus can be used.





Ident. No.: 0030000751



# Mixing samples at room temperature

MATRIX Orbital can mix samples in various tubes or microplates with a speed range from 300 – 3000 rpm.

The shaking diameter of 3.0 mm generates effective mixing of the samples even in the microliter range.

With the "Quick mix"-button the samples are mixed fast for as long as the button is pressed (touch function).



#### ATTACHMENTS

MX insert PCR96 / Ident. No.: 0030001159 MX insert 0.5 ml / Ident. No.: 0030001157 MX insert 1.5/2.0 ml / Ident. No.: 0030001158

MATRIX ORBITAL



#### LIGHT PROTECTION

The cover can be used to shield light sensitive samples.

MX cover / Ident. No.: 0030001253



The heatable ThermoCover prevents condensation on the vial lid and wall. At the same time it enables constant reaction conditions.

MX thermocover / Ident. No.: 0030001244

# Why should the formation of condensate be avoided?

When the samples are heated, liquid evaporates from the tubes or wells and accumulates on the vessel lid. This shifts the concentrations in the reaction mix. For example, the decreased amount of substrate leads to a reduced enzyme activity.



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# TECHNICAL DATA

MODEL	MATRIX ORBITAL	MATRIX ORBITAL DELTA FP   F0.5   F1.5   F2.0	MATRIX DELTA PLUS	MATRIX ORBITAL DELTA PLUS
Mixing	Yes	Yes		Yes
Heating	_	Yes	Yes	Yes
Cooling	_	<del>-</del>	Yes	Yes
Type of movement	Orbital	Orbital	_	Orbital
Attachments	Variable inserts	Fixed attachment for plates   0.5   1.5   2.0 ml	Variable attachments	Variable attachments
Shaker diameter	3 mm	3 mm	_	3 mm
Permissible shaking weight (excl. attachment)	_	0.3 kg	0.3 kg	0.3 kg
Speed min (adjustable)	300 rpm	300 rpm	_	300 rpm
Speed max.	3000 rpm	FP   F0.5: 300 - 2000 rpm F1.5   F2.0: 300 - 1500 rpm	_	3000 rpm (depending on attachment)
Heating temperature min.	_	Room temp. +4 °C	Room temp30 °C	Room temp15 °C
Heating temperature max.	_	100 °C	110 °C	100 °C



# ACCESSORIES

#### SHAPES OF THE HOLE

	ATTACHMENTS	Diameter	Depth	Bottom Shape	e Ident No.
A	MX 0.5 ml	8.1 mm	28.0 mm	Conical	0030000840
B	MX 1.5 ml	11.1 mm	36.5 mm	Conical	0030000829
(C)	MX 2.0 ml	11.1 mm	36.7 mm	Conical	0030000834
(D)	MX 12.0 mm	12.5 mm	33.5 mm	Flat	0030000844
E	MX cryo	12.5 mm	33.5 mm	Flat	0030000848
F	MX 5.0 ml	17.0 mm	54.5 mm	Conical	0030000859
G	MX 15.0 ml	17.0 mm	105 mm	Conical	0030000821
H	MX 50.0 ml	30.0 mm	97.0 mm	Conical	0030000863
	MX PCR96	6.44 mm	14.0 mm	Conical	0030000853
J	MX PCR384	4.0 mm	8.0 mm	Conical	0030000857
	CARRIER AND INSERTS	Usage			ldent No.
(K)	MX carrier	Suitable for microtiter and deep-well plates			0030000849
1	MX insert PCR96	For PCR tubes	0030001159		
2	MX insert 1.5/2.0 ml	For 1.5 ml & 2.0 m	0030001158		
3	MX insert 0.5 ml	For 0.5 ml reaction tubes			0030001157
	COVER AND THERMOCOVER	Usage			ldent No.
	MX cover	For attachments F	0030001253		





For attachments PCR 96, 384; 0.5, 1.5, 2.0 ml



# 202301\_Thermoschüttler\_MATRIX\_EN\_ 94000578



#### designed for scientists



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