



designed for scientists



## IKA Matrix Orbital Delta Plus

/// Karta charakterystyki

The all-rounder Matrix Orbital Delta plus mixes, heats and cools reliably with variable inserts.

Whether blood samples, pharmaceutical agents, DNA/RNA samples or ELISA assays - reaction vials and plates with even the smallest volumes are reliably mixed and tempered in all laboratory applications. No cross-contamination and an optimal mixing result.

In addition, Matrix Orbital Delta plus comes with numerous user-friendly features:



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- Large and clear display with a convenient menu structure allows for an intuitive operation
- Firm quick-release fastener for quick and easy changing of the inserts/attachments as well as an automatic attachment detection
- Quick and effective mixing of liquids with up to 3,000 rpm and 1.5 mm shaker diameter
- Reduced waiting time through fast heating and cooling rates of up to 6 °C/min (heating) or 2.5 °C/min at set-point temperature above the ambient temperature (cooling, 0.5 °C/min at set-point temperature between ambient temperature and 15 °C below ambient temperature)
- Two different speed modes for sample-specific temperature control
- Automatic performance of mixing, heating and cooling tasks through programmable ramps
- Wide range of inserts for reaction vessels and plates
- Intelligent speed adaption to insert, attachment and filling volume
- Aluminum die cast housing ensures secure positioning, excellent stability and everyday robustness

The device is ideally suited for numerous applications in laboratories, such as:

- Tempering / mixing of samples
- Synthesis of cDNA
- Enzyme-catalysed linking of RNA or DNA (ligation)
- Lysis reactions
- Structural change of DNA, RNA and proteins (denaturation)

## Dane techniczne

Rodzaj ruchu	okrężna
Amplituda ruchu [mm]	3
Maximun load [kg]	0.3
Moc wyjściowa silnika [W]	88
Dopuszczalny czas pracy [%]	100
Prędkość min. (regulowana) [rpm]	300
Zakres obrotów [rpm]	0 - 3000
Wskaźnik obrotów	TFT
Odchyłka prędkości [±rpm]	30
Regulacja prędkości	co 10 obr./min
Programator czasowy	tak
Wskaźnik programatora czasowego	TFT
Czas zadany min. [s]	1
Czas zadany maks. [min]	6000
Tryb pracy	timer, continuous and program operation
Praca z nakładkami do miareczkowania	tak
Zakres temperatury zadanej min. [°C]	1
Temperatura ogrzewania maks. [°C]	100
Moc grzewcza [W]	100
Regulacja ogrzewania	TFT
Rozdzielczość nastawy temperatury [±°C]	1
Temperature control accuracy [±°C]	0.5
Temperature stability [°C]	0.5
Temperature homogeneity [±°C]	0.5
Heating rate [°C/min]	6
Wskaźnik temperatury	tak
Cooling Rate [°C/min]	0.8
Cooling Power [W]	72
Number of exchangable attachments	10
Wymiary (szer. × wys. × gł.) [mm]	216 x 127 x 351
Ciężar [kg]	9.5
Dopuszczalna temperatura otoczenia [°C]	5 - 40
Dopuszczalna wilgotność względna [%]	80
Klasa ochrony wg DIN EN 60529	IP 21
Interfejs RS 232	tak
Interfejs USB	tak
Napięcie [V]	100 - 240
Częstotliwość [Hz]	50/60
Zasilanie [W]	230
Power input max. [W]	230