



designed for scientists



MATRIX Orbital Delta Plus

/// Технический паспорт

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 3 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)

Технические данные

Траектория встряхивания	Орбитальная
Диаметр орбиты [mm]	3
Maximum load [kg]	0.3
Производимая мощность привода [W]	88
Разрешенное время во вкл. состоянии [%]	100
Скорость мин. (регулируемая) [rpm]	300
Диапазон вращающего момента [rpm]	0 - 3000
Индикатор скорости	TFT
Отклонение скорости [\pm rpm]	30
Контроль диапазона скоростей	10 RPM Steps
Таймер	да
Дисплей таймера	TFT
Контроль времени мин. [s]	1
Контроль времени макс. [min]	6000
Режим работы	timer, continuous and program operation
Работа с микротитрационными планшетами	да
Рабочая температура мин. [$^{\circ}$ C]	Температура окр. среды -15
Диапазон настройки температуры мин. [$^{\circ}$ C]	1
Макс. Температура нагрева [$^{\circ}$ C]	100
Мощность нагрева [W]	100
Контроль нагрева	TFT
Колебание температур нагрева [\pm $^{\circ}$ C]	1
Temperature control accuracy [\pm $^{\circ}$ C]	0.5
Temperature stability [$^{\circ}$ C]	0.5
Temperature homogeneity [\pm $^{\circ}$ C]	0.5
Heating rate [$^{\circ}$ C/min]	6
Индикатор температуры	да
Cooling Rate [$^{\circ}$ C/min]	0.8
Cooling Power [W]	72
Number of exchangeable attachments	10
Размеры [mm]	216 x 127 x 351
Вес [kg]	10
Допустимая температура окружающей среды [$^{\circ}$ C]	5 - 40
Допустимая относительная влажность [%]	80
Класс защиты согласно DIN EN 60529	IP 21
Разъем RS 232	да
Разъем USB	да
Напряжение [V]	100 - 240
Частота [Hz]	50/60
Потребляемая мощность [W]	230
Power input max. [W]	230
Fuse	2x T4A 250V