



designed for scientists



## MATRIX Orbital Delta Plus

/// Data Sheet

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)
- 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)



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## Technical Data

|  |   |
|--|---|
| Type of movement                           | orbital                                 |
| Shaking stroke [mm]                        | 3                                       |
| Maximum load [kg]                          | 0.3                                     |
| Motor rating output [W]                    | 88                                      |
| Permissible ON time [%]                    | 100                                     |
| Speed min (adjustable) [rpm]               | 300                                     |
| Speed range [rpm]                          | 0 - 3000                                |
| Speed display                              | TFT                                     |
| Speed deviation [rpm]                      | ±30                                     |
| Speed adjustment                           | 10 RPM Steps                            |
| Timer                                      | yes                                     |
| Timer display                              | TFT                                     |
| Time setting min. [s]                      | 1                                       |
| Time setting max. [min]                    | 6000                                    |
| Operating mode                             | timer, continuous and program operation |
| Working with microtiter plates             | yes                                     |
| Working temperature min. [°C]              | room temp. -15                          |
| Temperature setting range min. [°C]        | 1                                       |
| Heating temperature max. [°C]              | 100                                     |
| Heat output [W]                            | 100                                     |
| Heat control                               | TFT                                     |
| Set temperature resolution [°C]            | ±1                                      |
| Temperature control accuracy [°C]          | ±0.5(@ 20°C ... 45°C)                   |
| Temperature stability [°C]                 | 0.5                                     |
| Temperature homogeneity [°C]               | ±0.5(@ 20°C ... 45°C)                   |
| Heating rate [°C/min]                      | 6                                       |
| Temperature display                        | yes                                     |
| Cooling Rate [°C/min]                      | 2.5                                     |
| Cooling Power [W]                          | 72                                      |
| Number of exchangeable attachments         | 10                                      |
| Dimensions (W x H x D) [mm]                | 216 x 127 x 351                         |
| Weight [kg]                                | 10                                      |
| Permissible ambient temperature [°C]       | 5 - 40                                  |
| Permissible relative humidity [%]          | 80                                      |
| Protection class according to DIN EN 60529 | IP 21                                   |
| RS 232 interface                           | yes                                     |
| USB interface                              | yes                                     |
| Voltage [V]                                | 100 - 240                               |
| Frequency [Hz]                             | 50/60                                   |
| Power input [W]                            | 230                                     |
| Power input max. [W]                       | 230                                     |
| Fuse                                       | 2x T4A 250V                             |





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**The specifications listed in this brochure are subject to change by the manufacturer and therefore cannot be guaranteed, please provide these to our sales team so that details can be confirmed.**

