



### TC-RefrigSpin Micro high speed refrigerated centrifuge

TC-RefrigSpin micro-high-speed freezing centrifuge has the advantages of powerful function, high versatility, simple operation and so on. It adopts advanced control technology, reliable quality and superior performance. It is widely used in medical laboratory, biochemical and molecular biology research and routine analysis in industrial laboratory, genetic genes, protein nucleic acid. PCR products and other experimental studies are more significant. A variety of rotors can be adapted to meet the needs of daily experiments.

### Feature

Temperature control range: -20~+40 C.

The temperature can be maintained at -4 C /+4 C at the highest speed.

The pre-cooling function can be quick cooling the samples.

The setting temperature can be maintained continuously when centrifugal function is not used and the door cover is closed.

It has automatic standby function, optimizes the refrigeration effect and prolongs the service life of the compressor.













TC-TR01

capacity: 1.5/2.2mIX24 Max. Speed:16000rpm

Max .Rcf:23470×g

capacity: capillary blood tube X24

Max. Speed:12000rpm Max .Rcf:14330×g

TC-TR02

capacity: 5mIX10

TC-TR03

Max. Speed:16000rpm Max .Rcf:18140×g

TC-TR04 capacity: 0.2mIX8X4

Max. Speed:14800rpm Max .Rcf:16200×q

TC-TR05 capacity: 0.5mIX36

Max. Speed: 15000rpm Max .Rcf:16350×g

Stainless steel cavity, solid structure, suitable for continuous use, new and innovative automatic inhalation double lock, easy to open and close machine cover, open and close machine cover quiet and safe.

Optimized imported 5 inch LCD high-brightness black-and-white LCD display, setting and operating parameters real-time on-line clear.

It is equipped with automatic ID identification function of turning head to make the multi-turning head high-speed machine more safe and convenient to use, door cover protection, overspeed and unbalanced detection system. It can monitor the centrifugal process in real time, ensure the safe operation of the instrument, prompt the sound signal at the end of operation, error and unbalance, and stop running at the same time. LCD displays the result code.

Equipped with a sealed corner rotor equipped with rotor cover to prevent staff from being contaminated by samples.

### Introduction

Advanced and reliable Infineon vector sine wave drive control system can accurately control the speed, time and relative centrifugal force.

The maintenance free brushless frequency conver-sion induction motor is adopted. The speed range is 100 to 16000rpm, and the accuracy is 10rpm.

The single flash instantaneous centrifugal button can be quickly and conveniently centrifuged by pressing down.

High-strength main engine and turning head mate-rials, can resist various chemical corrosion, with sealing performance and unlimited high-temperature disinfection function, Teflon coated stainless steel cavity, excellent corrosion resistance, in-situ foaming, good insulation effect; accidental power off cover opening device reliable and convenient; cover with speed hole, easy to do speed monitoring Meet GMP requirements.



### Order information

| Cat.No.   | Code No.      | Specification  |
|-----------|---------------|--|
| 8011770   | TC-RefrigSpin | Refrigerant high speed centrifuge                              |
| 8011770-1 | TC-TR01       | 1.5/2.2×24 Angle rotor Max:16000 (r/min)                       |
| 8011770-2 | TC-TR02       | Capillary blood volume tube X24 Angle rotor Max: 12000 (r/min) |
| 8011770-3 | TC-TR03       | 5×10 Angle rotor Max:16000 (r/min)                             |
| 8011770-4 | TC-TR04       | PCR 0.2×8×4 Angle rotor Max: 14800 (r/min)                     |
| 8011770-5 | TC-TR05       | 0.5×36 Angle rotor Max: 15000 (r/min)                          |



### **ECOplate Magnetic Stirrer**

The TM-ECOplate series of the digital magnetic stirrer hot plate series is made of special Ceramic and the special heating technique, the hot plate can reach temperature up to 360°C. Use the large Alnico material which can be provide the powerful magnetic force, it can be prevented the high temperature demagnetization and stir bar decoupling. Humanized design for convenient operation to meet various heating and stirring experimental needs.



### **Feature**

The plate with white ceramic with excellent corrosion resistance and keep it safety.

The special electrical insulation composite material provide the excellent heating performance and the surface of hot plate can reach temperature up to 380°C.

Advanced microprocessor controls allow quick, precise adjustment of speed and temperature.

The integration timer which for monitoring the sensitive chemical reaction.

DC brushless motor makes stable operation, low noise, long using life and no spark.

HOT warning prompted to avoid scalding .

Use the large Alnico material which can be provide the powerful magnetic force, it can be prevented the high temperature demagnetization and stir bar decoupling.

### Power indication Hearing overheating indication external sensor indication



| Actual Temp. | Actual Speed |
|--------------|--------------|
|              |              |

### **Specification**

| Model                         | TM-ECOplate-S | TM-ECOplate-HS |
|-------------------------------|---------------|----------------|
| Max stirrer volume            | 20L           | 20L            |
| Speed range                   | 100- 1500rpm  | 100- 1500rpm   |
| Heating power                 |               | 1000W          |
| Max heating temp.             |               | 50/360℃        |
| Speed range                   | LED           | LED            |
| Max length for the stir bar.  | 30mm          | 30mm           |
| Max safty adjustable temp.    |               | 50/360℃        |
| sensor control accuracy       |               | PT1000/±0.5K   |
| The material of surface plate | Ceramic       | Ceramic        |

### **Order information**

| Cat.No. | Code No.       | Specification                                      |
|---------|----------------|--|
| 8011780 | TM-ECOplate-S  | 220V Magnetic Stirrer ( LED display )              |
| 8011781 | TM-ECOplate-S  | 110V Magnetic Stirrer ( LED display )              |
| 8011782 | TM-ECOplate-HS | 220V Magnetic Stirrer ( LED display ) with heating |
| 8011783 | TM-ECOplate-HS | 110V Magnetic Stirrer ( LED display ) with heating |

### **ECOplatePlus Magnetic Stirrer**

Product description: The TM-ECOplate series of the digital magnetic stirrer hot plate series is made of special Ceramic and the special heating technique, the hot plate can reach temperature up to 360°C. Use the large Alnico material which can be provide the powerful magnetic force, it can be prevented the high temperature demagnetization and stir bar decoupling. Humanized design for convenient operation to meet various heating and stirring experimental needs.



### **Feature**

The plate with white ceramic with excellent corrosion resistance and keep it safety.

The special electrical insulation composite material provide the excellent heating performance and the surface of hot plate can reach temperature up to 380°C.

Advanced microprocessor controls allow quick, precise adjustment of speed and temperature.

The integration timer which for monitoring the sensitive chemical reaction.

LED display which can be show the setting temperature and actual temperature .

DC brushless motor makes stable operation, low noise, long using life and no spark.

HOT warning prompted to avoid scalding .

Use the large Alnico material which can be provide the powerful magnetic force, it can be prevented the high temperature demagnetization and stir bar decoupling.

# Power indication Hearing overheating indication external sensor indication Actual Temp. Actual Speed

Set Speed

### **Specification**

| •  |                   |                    |
|--|-------------------|--------------------|
| Model  | TM-ECOplatePlus-S | TM-ECOplatePlus-HS |
| Max stirrer volume                               | 20L               | 20L                |
| Speed range                                      | 100- 1500rpm      | 100- 1500rpm       |
| Heating power                                    |                   | 1000W              |
| Max heating temp.                                |                   | 50/360℃            |
| Speed range                                      | LCD               | LCD                |
| Integration timer<br>(operation time avalibale ) | 99hours 59mins    | 99hours 59mins     |
| Max length for the stir bar.                     | 40mm              | 40mm               |
| Max safty adjustable temp.                       |                   | 50/360°C           |
| sensor control accuracy                          |                   | PT1000/±0.5K       |
| The material of surface plate                    | Ceramic           | Ceramic            |

### Order information

Set Temp.

| Cat.No. | Code No.           | Specification                                      |
|---------|--------------------|--|
| 8011784 | TM-ECOplatePlus-S  | 220V Magnetic Stirrer ( LCD display )              |
| 8011785 | TM-ECOplatePlus-S  | 110V Magnetic Stirrer ( LCD display )              |
| 8011786 | TM-ECOplatePlus-HS | 220V Magnetic Stirrer ( LCD display ) with heating |
| 8011787 | TM-ECOplatePlus-HS | 110V Magnetic Stirrer ( LCD display ) with heating |









flask fixture



ELISA Plate fixture





triangular flask gasket 100~240V adapter









(centrifuge tube) adapter, Together with ELISA Plate fixture,30 jacks , Hole Diameter 10mm

(centrifuge tube) (centrifuge tube) adapter, Togeth adapter with ELISA Plate er with fixture, 16 jacks , Hole Diameter 12mm Hole I

Feature

Compact structure designing, low center of gravity provide the stable operation when high speed.

Use the DC Brushless motor, long-life, low noise the motor drive directly, no belt loss.

Induction and variable frequency motor(without beltwork)

All the fixture, the instrument will distinguish automatic, speed limit automatic.

Chuck installing more conveniently.

Inching feature and consecutive operation, easy for switching.

Centric balance piece designing, amplitude can be achieved 4.5mm, nice oscillation effects.

Metal hull, reliable and strong.

Timing function, also can be countdown and digital showing.

Digital show the setting speed and operation speed,easy and clearly.

All the fixture can be inching feature and consecutive operation, suited to the lab requirement.

All the fixture, the instrument will distinguish automatic, speed limit autoatic.

### **Technical data**

| Model                        | TVM-47   | TVM-A8   |
|------------------------------|--|--|
| Oscillation Mode             | Circumferential  | Circumferential  |
| Turnaround diameter          | 4.5mm  | 4.5mm  |
| Speed range                  | 200-3000rpm/min,<br>stepless speed regulating  | 200-3000rpm/min,<br>stepless speed regulating  |
| Volatage                     | 100~240V   | 100~240V   |
| Maximum load                 | 1.0kg  | 1.0kg  |
| Maximum load                 | All the fiture will be distinguished automatic, speed limit automatic, security and reliable, easy for operation | All the fiture will be distinguished automatic, speed limit automatic, security and reliable, easy for operation |
| Timing functions and showing | 1s-999min<br>Timing function, also can be countdown and<br>digital showing                                       | 1s-999min<br>Timing function, also can be countdown and<br>digital showing                                       |
| Speed setting and showing    | Simulation setting and digital time showing  | 0-3000rpm ,Peal-time digital showing for speed and time  |
| Driving                      | Induction and variable frequency motor<br>(without beltwork)   | Induction and variable frequency motor<br>(without beltwork)   |
| Motor input power            | 20W  | 20W  |
| Motor input power            | 15W  | 15W  |
| Operator schema              | Inching feature and consecutive operation  | Inching feature and consecutive operation  |
| ( WxDxH ) /Dimension(MM)     | 210x150x69   | 210x150x69   |
| Weight                       | 4kg  | 4kg  |
| Protection class             | IP 21  | IP 21  |
| Standard configuration       | V1.1/Standard gasket   | V1.1/Standard gasket   |
| Adaptive fixture             | Standard gasket,EISA Plate fiture,universal fixture (flask、tube、centrifuge tube)                                 | Standard gasket,EISA Plate fiture,universal fixture (flask、tube、centrifuge tube)                                 |
|                              |  |  |

### **Order information**

| nd model Specilficati  | Part name and model | Code No   |
|--|---------------------|-----------|
| Simulation setting and digital time showi  | TVM-A7              | 8011250   |
| Real-time digital showing for speed and tir  | TVM-A8              | 8011251   |
| use for setting tube which the diameter no more than 65mm smaller container, triangular flask gasket: 0/200-3000rp | TVM-A8-1            | 8011250-1 |
| ELISA Plat fixture. Use for, ELISA plate and square adapter, Speed range:0/200-1500r                               | TVM-A8-2            | 8011250-2 |
| Flasks fixture ,Together with flasks gaskets, Speed range:0/200-3000rp   | TVM-A8-3            | 8011250-3 |
| 100-240V adap  | TVM-A8-4            | 8011250-4 |
| Flasks gasket fixtu  | TVM-A8-5            | 8011250-5 |
| ( Centrifuge tube ) adapter, Together with ELISA pLate fixture, 30 jacks, Hole diameter 10n                        | TVM-A8-6            | 8011250-6 |
| ( Centrifuge tube ) adapter, Together with ELISA pLate fixture, 16 jacks, Hole diameter 12n                        | TVM-A8-7            | 8011250-7 |
| ( Centrifuge tube ) adapter, Together with ELISA pLate fixture, 12 jacks, Hole diameter 16n                        | TVM-A8-8            | 8011250-8 |
|  |                     |           |



### Magic Programmable Mixer

360 ° vertical rotating- for larger particles longer wavelength mixing

Swinging -for culture medium and larger particles medium- longer wavelength mixing

Oscillating- for small particles short wavelength mixing

### **Feature**

Tube holder assemble discretionary

Large LCD show the all the parameter

2 sdditional custom programs (6 segments /program) can be created easily

10 different programs for rotation and mixing

360° rotation and 0-360° discretionary mixing angle is available

Adjustable speed and time for effective mixing

Accept tubes from 0.2ml to 50ml

Cold room and incubator compatible



The Magic mixer is a combination of variable speed rotator, advanced multiple tube vortex in one machine, it accept tubes from 0.2ml to 50ml, all kinds of tube holder can be assembled discretionary in one rack.

The mixer can be used in ambient temperatures from +4 to  $65^{\circ}$ C, making it ideal for a variety of laboratory settings such as Molecular Biology, Biochemistry, Clinical and Histochemistry.

 $Small\ enough\ to\ fit\ on\ a\ crowded\ bench\ . the\ mixer\ is\ easily\ moved\ where\ it\ is\ needed\ the\ bench\ .\ cold\ room\ , incubator\ or\ biological\ hood\ .$ 



### Specification

| GIC MIXER   |
|-------------|
| 12V, 1000mA |
| 1-99rpm     |
| ±4-65°C     |
| up to 80    |
|             |

### **Orde information**

360 rotation and 0-360

discretionary mixing angle

ANY KIND OF TEST TUBES from 0.2 ml up to 50 ml

Adjustable speed and time for effective

| Cat.No.   | Code No | Specilfication  |
|-----------|---------|---|
| 8011252   | TMM-5L  | 420mm length Magic Mixer with standard rack (D10-12.5mm tubeX20, D16-16.5mm tubeX8,D29-29.5mm tubeX2)   |
| 8011252-1 | LH5X36  | Rack for diameter 10-12.5mm tubes X 36  |
| 8011252-2 | LH15X22 | Rack for diameter 16-16.5mm tubes X 22  |
| 8011252-3 | LH50X12 | Rack for diameter 29-29.5mm tubes X 12  |
| 8011252-4 | LR15X12 | Rack for diameter 16-16.5mm tubes X 12  |
| 8011252-5 | LR50X12 | Rack for diameter 29-29.5mm tubes X 12  |
| 8011253   | TMM-5M  | 344mm length Magic Mixer with standard rack (D10-12.5mm tubeX12, D16-16.5mm tubeX2,D29-29.5mm tubeX2)   |
| 8011253-1 | MH5X24  | Rack for diameter 10-12.5mm tubes X 24  |
| 8011253-2 | MH15X14 | Rack for diameter 16-16.5mm tubes X 14  |
| 8011253-3 | MH50X8  | Rack for diameter 29-29.5mm tubesx8   |
| 8011253-4 | MR15X6  | Rack for diameter 16-16.5mm tubes X 6   |
| 8011253-5 | MR50X6  | Rack for diameter 16-16.5mm tubes X 6   |
| 8011254   | TMM-5S  | 316mm length Magic Mixer with standard rack<br>(D10-12.5mm tubeX8, D16-16.5mm tubeX2,D29-29.5mm tubeX2) |
| 8011254-1 | SH5X20  | Rack for diameter 10-12.5mm tubes X 20  |
| 8011254-2 | SH15X10 | Rack for diameter 16-16.5mm tubes X10   |
| 8011254-3 | SH50X6  | Rack for diameter 29-29.5mm tubes X 6   |
| 8011254-4 | SR15X6  | Rack for diameter 16-16.5mm tubes X 6   |
| 8011254-5 | SR50X6  | Rack for diameter 29-29.5mm tubes X 6   |
| 8011255   | TMM-PL  | Mixer 420x125x168 with Platform (267X154)   |
| 8011256   | TMM-PM  | Mixer 344x125x168 with Platform (169X154)   |
| 8011257   | TMM-PS  | Mixer 316x125x168 with Platform (139X154)   |



### **Decolorising Shaker**

This Decolorising Shaker which swings up and down with little swing amplitude. Frequency adjustable. it's used for fixing of running gel spectral band, rocking of Coomassie blue and decolorization and fixing of silver nitrate staining, etc. It's used for development and fixation of X-ray film, further treatment cellulose membrane after electrophoretic migration, molecular hybridization, cell culture and blood mixing.

### **Technical Data**

Rocking Speed: 0-25 rpm Rocking angle: ±25°

Working plate size: 250×200mm External dimention: 420×200×200mm

N.W.: 2.5Kg

Cat.No.

8011259

### **Order information**

Voltage: AC 80-230V (50/60Hz)

**TRM-7S digital Roller Mixer** TRM-7S digital Roller Mixer provides a gentle but highly efficient rocking and rolling motions, ideal for mixing blood samples, viscous substances and liquid-

### **Technical Data:**

and immune precipitation etc.

Speed: (adjustable,) 10-99 rpm +-10% Motion: (Simultaneous roll&tilt +-5%)

Operating Temp :4°C-40°C

Electrical: 80-230V,50-60Hz 50W

### **Feature**

Rocking and rolling motions for complete mixing

Part.No.

TMM-5DS

Display show the speed and time

Speed range of 10-99rpm

Seven roller design with small footprint and easy clean

Digital setting speed and time

## solid suspensions. Used in a variety applications, prevention of blood coagulation

**Feature** 

Rocking angle adjustable

Large LCD show the all the parameter

Speed adjustable

Time setting



Specilfication

Decolorising Shaker

### **Order information**

| Cat.No. | Part.No. | Specilfication                |
|---------|----------|-------------------------------|
|         |          |                               |
| 8011560 | TM-7S    | Roller Mixer(digital showing) |

### **Mivot mixer**

The Vortex mixer widely used in life science, physical and chemical analysis fields, for vigorous re-suspension of cells or chemical pellets in tubes up to 15 ml.

### **Features**

Touch and continuous operations

Mini and compact appearance, powerful function, sucker type under-chassis, super shockproof, ideal for high speed operation.

Wide speed range:0-3000rpm/min, continuously variable motor and Brushless DC Motor are optional. Stable low speed, powerful high speed.

Shaking block convenient for replacement, stable and reliable, sturdy and durable eccentric bearing design.

Various shaking block adapters optional.(Suitable for Eppendorf Tube)



### **Specification**

| Orbit          | 4mm                           |
|----------------|-------------------------------|
| Shaking mode   | circle                        |
| Operation mode | Continuous running/ Short Mix |
| Speed Range    | 100 ~ 3000rpm                 |
| Voltage        | AC220V/AC110V,50/60Hz         |
| Power          | 60W                           |







MT-C



MT-D



MT-E





MT-G

**Order information** 

| Cat.No.   | Part.No. | Specilfication  |
|-----------|----------|---|
| 8011690   | TM-Mivot | Vortex Mixer 220V/50Hz(with standard head)                              |
| 8011690-1 | MT-S     | Standard head. Suit for 1.5mlX8 centrifuge tubes                        |
| 8011690-2 | MT-A     | Foam tube holder for 15mlX8 &10mlX8                                     |
| 8011690-3 | MT-B     | 50mlX6/Foam tube holder for 50mlX6                                      |
| 8011690-4 | MT-C     | Plate holder platform. For all standard plates                          |
| 8011690-5 | MT-D     | Plate adapter suitable for less than 120mm diameter tube or container . |
| 8011690-6 | MT-E     | Tube holder platform. For 1.5ml/2.0ml tubes x 12                        |
| 8011690-7 | MT-F     | Tube holder platform. For 15ml tubes x 4                                |
| 8011690-8 | MT-G     | Tube holder platform. For 50ml tubes x 2                                |