

# 5

## Mixer Rotator Stirrer

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NEW

We want to provide reliable performance and quality because you use our products every day. TAI TEC offers Mixers, Rotators, and Stirrers.

**Rotating Incubator**

Rotator RT-025R  
RT-050R



Rotator RT-5N  
RT-50N



Rotator RT-30mini



*Suitable for ImmunoPrecipitation and cultivation in a low temperature room and incubator.*

| Page  | Model     | Capacity  |
|-------|-----------|---|
| P.090 | RT-025R   | •Vessel holders is an option<br>1.5 mL Microtube, 2.0 mL Microtube<br>φ13 to 15 mm tube, 15 mL Centrifuge tube, 50 mL Centrifuge tube<br>φ18 mm × 110 mm test tube, φ25 mm × 110 mm test tube<br>100 mL Erlenmeyer flask, 200 mL Erlenmeyer flask,<br>φ25 mm × 50 mm vial |
|       | RT-050R   |   |
| P.091 | RT-5N     | •Vessel holders is an option<br>1.5 mL Microtube, 2.0 mL Microtube<br>φ13 to 15 mm tube, 15 mL Centrifuge tube, 50 mL Centrifuge tube<br>φ18 mm × 110 mm test tube, φ25 mm × 110 mm test tube<br>100 mL Erlenmeyer flask, 200 mL Erlenmeyer flask,<br>φ25 mm × 50 mm vial |
|       | RT-50N    |   |
| P.092 | RT-30mini | •Vessel holders is an option<br>1.5 mL Microtube, 2.0 mL Microtube,<br>15 mL/50 mL Centrifuge tube  |

**Test tube Mixer**

Delta Mixer Se-04



Delta Mixer Se-08



*TAITEC Test tube Mixer "Never moving around".*

| Page  | Model | Capacity  |
|-------|-------|---|
| P.093 | Se-04 | •Hand-held stirring<br>Microtubes and 50 mL in Centrifuge tubes<br>•Stirring with Microtubes fixed<br>4 pcs × 0.5 mL + 4 pcs × 1.5/2.0 mL |
| P.093 | Se-08 | •Hand-held stirring<br>Microtubes and 50 mL in Centrifuge tubes<br>•Stirring with Microtubes fixed<br>8 pcs × 0.5 mL + 8 pcs × 1.5/2.0 mL |

**Hot plate**

PC-200



PC-400D  
PC-600D



*Corning hot plate*

| Page  | Model   | Maximum load   |
|-------|---------|--|
| P.094 | PC-200  | •Approx. 11 kg (maximum loadable container: 500 mL beaker) |
| P.095 | PC-400D | •Approx. 11 kg (maximum loadable container: 2 L beaker)    |
|       | PC-600D | •Approx. 11 kg (maximum loadable container: 10 L beaker)   |

**Stirrer**

PC-210



PC-410D  
PC-610D



*Corning magnetic stirrer*

| Page  | Model   | Maximum load   |
|-------|---------|--|
| P.094 | PC-210  | •Approx. 11 kg (maximum loadable container: 500 mL beaker) |
| P.095 | PC-410D | •Approx. 11 kg (maximum loadable container: 2 L beaker)    |
|       | PC-610D | •Approx. 11 kg (maximum loadable container: 10 L beaker)   |

**Hot plate stirrer**

PC-220



PC-420D  
PC-620D



*Corning hot plate stirrer*

| Page  | Model   | Maximum load   |
|-------|---------|--|
| P.094 | PC-220  | •Approx. 11 kg (maximum loadable container: 500 mL beaker) |
| P.095 | PC-420D | •Approx. 11 kg (maximum loadable container: 2 L beaker)    |
|       | PC-620D | •Approx. 11 kg (maximum loadable container: 10 L beaker)   |

**Planetary centrifugal stirrer**

GR-5



*Planetary centrifugal stirring that has strong stirring force and easily restituted from deviation of stir bars.*

| Page  | Model | Capacity                    |
|-------|-------|-----------------------------|
| P.096 | GR-5  | •to 500 mL Erlenmeyer flask |

NEW

Constant temperature incubator shaker OD Monitor

For cell culture related products

Shaker

Mixer Rotator Stirrer

Bead beater Ultrasonic homogenizer

Aluminum block Bath Mini-size Bath

Water bath Spiking Water bath Immersion cooler

Hybridization Incubator Constant temperature Chambers

Centrifugal Concentrators Cold Trap

Freeze dryers

Substrate Electroporation apparatus Blotting device for hybridization

Constant-temperature water circulating system [Chilled]

Appendix



**[Delta balance]**

We developed three legs and a triangle body to realize our customer's request "Desired a mixer that is never moving around". We received results that the Mixer did not moved around on slippery planes and slopes that were painted with oil.



**[Miracle Head]**

Our original Miracle Head where multiple Microtubes can be fixed (The numbers differ depends on the models). Enables to Hand-held stirring of 50 mL (Liquid volume approx. 30 mL) Centrifuge tubes smoothly.

|  | Features  | Applications  | Ambient temperature | Rotational speed/ Angle variable range   | Page  |
|--|---|---|---------------------|--|-------|
|  | <ul style="list-style-type: none"> <li>Standard size, two models with different speeds</li> <li>Ensures stable rotation from low to high speed</li> <li>Vessel holders are optional</li> </ul>                    | <ul style="list-style-type: none"> <li>ImmunoPrecipitation in refrigerators or cold rooms</li> <li>Extraction of Genomic DNA</li> <li>Culture of Microbe and Plant cells in incubators</li> </ul> | •4°C to 40°C        | <ul style="list-style-type: none"> <li>•2 to 25 r/min</li> <li>•0° to 90° Optional setting</li> <li>•5 to 50 r/min</li> <li>•0° to 90° Optional setting</li> </ul> | P.090 |
|  | <ul style="list-style-type: none"> <li>Standard size, two models with different speeds</li> <li>Can be operated certainly in refrigerators and low temp. rooms</li> <li>Vessel holders are optional</li> </ul>    | <ul style="list-style-type: none"> <li>ImmunoPrecipitation in refrigerators or cold rooms</li> <li>Extraction of Genomic DNA</li> <li>Culture of Microbe and Plant cells in incubators</li> </ul> | •4°C to 50°C        | <ul style="list-style-type: none"> <li>•0.5 to 5 r/min</li> <li>•0° to 90° 7-step variable</li> <li>•5 to 50 r/min</li> <li>•0° to 90° 7-step variable</li> </ul>  | P.091 |
|  | <ul style="list-style-type: none"> <li>Ultra-small size that can be carried with one hand</li> <li>Can be operated certainly in refrigerators and low temp. rooms</li> <li>Vessel holders are optional</li> </ul> | <ul style="list-style-type: none"> <li>Culture of Microbe and Plant cells in incubators</li> </ul>  | •0°C to 50°C        | <ul style="list-style-type: none"> <li>•3 to 30 r/min</li> <li>•0° to 90°</li> </ul>   | P.092 |

|  | Features  | Applications   | Stirring motion                     | Vibration speed                          | Page  |
|--|---|--|-------------------------------------|--|-------|
|  | <ul style="list-style-type: none"> <li>"Delta balance" prevents the Mixer from moving around during operation</li> <li>Hand-held stirring and "Miracle head" that holds Microtubes</li> </ul>   | <ul style="list-style-type: none"> <li>Mixing-stirring of samples and reagents</li> <li>Promotion of various reactions by stirring</li> <li>Crushing of fungal, etc. with beads</li> </ul> | •Horizontal eccentric vortex mixing | •Approx. 2,800 r/min (Fixed)             | P.093 |
|  | <ul style="list-style-type: none"> <li>"Delta balance" prevents the Mixer from moving around during operation</li> <li>Hand-held stirring and "Miracle head" that holds Microtubes</li> <li>Operation mode by touch switch, Stirring strength adjustment</li> </ul> | <ul style="list-style-type: none"> <li>Mixing-stirring of samples and reagents</li> <li>Promotion of various reactions by stirring</li> <li>Crushing of fungal, etc. with beads</li> </ul> | •Horizontal eccentric vortex mixing | •Up to 2,800 r/min (Strength adjustment) | P.093 |

|  | Features  | Applications                        | Stirring motion | Configurable temperature | Page  |
|--|---|-------------------------------------|-----------------|--------------------------|-------|
|  | <ul style="list-style-type: none"> <li>Corrosion/scratch resistant glass-ceramic top panel</li> <li>Support rods (optional) available</li> </ul>  | •Boiling of electrophoresis samples | •None           | •25°C to 550°C (*)       | P.094 |
|  | <ul style="list-style-type: none"> <li>Corrosion/scratch resistant glass-ceramic top panel</li> <li>External temperature controller (optional) available</li> <li>Digital display of temperature</li> </ul> |                                     |                 | •5°C to 550°C (*)        | P.095 |

(\*)Temperature control is not possible below room temperature. Also, sample temperature may not reach the maximum temperature for evaporating samples.

|  | Features   | Applications                             | Stirring motion            | Rotational speed  | Page  |
|--|--|--|----------------------------|-------------------|-------|
|  | <ul style="list-style-type: none"> <li>Corrosion/scratch resistant glass-ceramic top panel</li> <li>Support rods (optional) available</li> </ul> | •Mixing-stirring of samples and reagents | •Depending on the stir bar | •60 to 1100 r/min | P.094 |
|  | <ul style="list-style-type: none"> <li>Corrosion/scratch resistant glass-ceramic top panel</li> <li>Digital display of speed</li> </ul>          |  |                            | •60 to 1150 r/min | P.095 |

|  | Features  | Applications   | Stirring motion            | Configurable temperature/ Rotational speed  | Page  |
|--|---|--|----------------------------|---|-------|
|  | <ul style="list-style-type: none"> <li>Corrosion/scratch resistant glass-ceramic top panel</li> <li>Support rods (optional) available</li> </ul>  | <ul style="list-style-type: none"> <li>Mixing-stirring of samples and reagents</li> <li>Heating and melting of reagents and samples</li> <li>Boiling of electrophoresis samples</li> </ul> | •Depending on the stir bar | <ul style="list-style-type: none"> <li>•25°C to 550°C (*)</li> <li>•60 to 1100 r/min (*)</li> </ul> | P.094 |
|  | <ul style="list-style-type: none"> <li>Corrosion/scratch resistant glass-ceramic top panel</li> <li>External temperature controller (optional) available</li> <li>Digital display of temperature/speed</li> </ul> | <ul style="list-style-type: none"> <li>Mixing-stirring of samples and reagents</li> <li>Heating and melting of reagents and samples</li> <li>Boiling of electrophoresis samples</li> </ul> |                            | <ul style="list-style-type: none"> <li>•5°C to 550°C (*)</li> <li>•60 to 1150 r/min (*)</li> </ul>  | P.095 |

(\*)Temperature control is not possible below room temperature. Also, sample temperature may not reach the maximum temperature for evaporating samples.

|  | Features   | Applications  | Stirring motion  | Rotational speed   | Page  |
|--|--|---|--|--------------------|-------|
|  | <ul style="list-style-type: none"> <li>Excellent stirring with Planetary centrifugal motion</li> <li>Faster suspension efficiency than normal suspension speeds</li> <li>Stirrer recovers quickly after stir bar deconditioning</li> </ul> | <ul style="list-style-type: none"> <li>Stirring of some liquid containing pebbles, gravel, and particulates</li> <li>For suspension with fixed stirring time</li> <li>Various dissolution testing, mixing-stirring of samples and reagents</li> </ul> | •Proprietary planetary centrifugal stirring using stir bar | •100 to 1200 r/min | P.096 |

NEW

# Rotator RT-025R/050R

*Simple operation that anyone can use.*

*Non-direct drive ensures stable rotation speed from low to high speed.*

•Equipped with temperature control and capable of Inverting stir --> P.150-151 •Constant temperature chambers --> P.154-156



TAITEC's new brand  
[NEXT]



RT-025R with  
Vessel holders (Optional)

Please prepare an electrical adapter compatible with your country for use.

We can design customized holders compatible with your vessels.

| Model                | RT-025R  | RT-050R       |
|----------------------|--|---------------|
| Rotational speed     | 2 to 25 r/min  | 5 to 50 r/min |
| Angle variable range | 0° to 90° Optional setting   |               |
| Ambient temperature  | +4°C to +40°C  |               |
| Driving system       | Non-direct drive   |               |
| Safety devices       | Fuse (3 A), Overvoltage/overcurrent protection, Fall stop device                           |               |
| Safety functions     | Nonvolatile memory error, Speed limit error, Motor overload, Display/measuring range error |               |
| Dimensions(WxDxH)    | 200 × 265 × 266mm  |               |
| Weight               | Approx. 3.5 kg   |               |
| Power supply         | AC 100 to 240 V  |               |
| Standard accessories | Fuse (with built-in Fuse Holder)×1 pc, Power cord×1 pc                                     |               |

## Optional accessories for RT-025R/050R: Vessel holders



| Model    | Vessels/Capacity/Remarks                         | Qty. of attachment |
|----------|--|--------------------|
| SE-0108R | 1.5/2.0 mL Microtube × 24 (Inverting stir)       | Up to 2            |
| SE-1315R | φ13 to 15 mm tube × 24 (Inverting stir)          |                    |
| SE-1800R | 15 mL tube (φ17 × 120 Lmm) × 16 (Inverting stir) |                    |
| SE-3500R | 50 mL tube (φ29 × 115 Lmm) × 8 (Inverting stir)  |                    |
| SA-1811R | φ18 mm × 110 mm test tube × 41 (Rotation)        | 1                  |
| SA-2511R | φ25 mm × 110 mm test tube × 24 (Rotation)        |                    |
| SC-0100R | 100 mL Erlenmeyer flask × 5 (Rotation)           |                    |
| SC-0200R | 200 mL Erlenmeyer flask × 4 (Rotation)           |                    |
| SD-2550R | φ25 mm × 50 mm vial × 24 (Rotation)              |                    |

•Holders other than those listed above can also be custom-made. Please contact us with a sample vessel.

## Features

- Standard size, 2 models by difference in speed
- Ensures stable rotation from low to high speed
- Vessel holders are available as an option

## Applications

- ImmunoPrecipitation in refrigerators or cold rooms
- Extraction of Genomic DNA
- Culture of Microbe and Plant cells in incubators

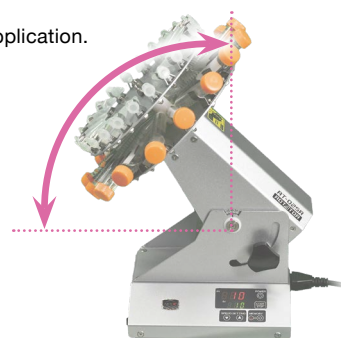
## 2 models by difference in speed

RT-025R has a rotational speed range of 2 to 25 r/min, and RT-050R has a range of 5 to 50 r/min.

Please select according to your application.

## Variable tilt angle

The angle can be fixed at any degree between 0 and 90°. Inverting stir and rotation can be performed at an angle suitable for various optional vessel holders.



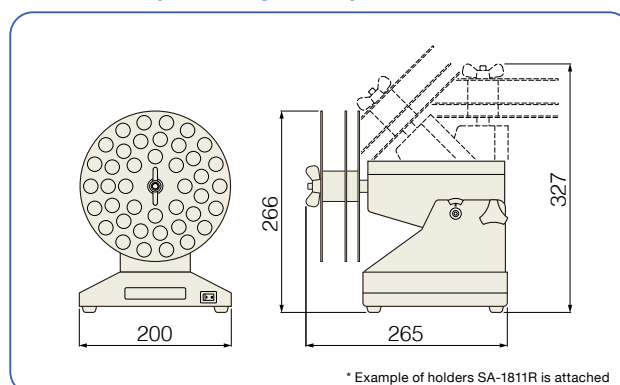
## Secure operation from low to high speed with Non-direct drive

"Non-direct drive structure" is provided with a gear between the rotating shaft and the motor shaft to reduce the direct load on the motor. This structure ensures stable rotation from low to high speeds, and also improves quietness and durability.

## Fall stop device

This function is provided to stop the operation in the event of the equipment falling over. It provides safety in the event that the equipment falls over due to an earthquake, etc.

## Dimensions (Front/Right side)



# Rotator RT-5N/RT-50N

*Simple operation that anyone can use.  
Non-direct drive ensures stable rotation speed from low to high speed.*

•Equipment with temperature control and capable of Inverting stir --> P.150-151 •Constant temperature chambers --> P.154-156

## Features

- Standard size, 2 models by difference in speed
- Secure operation even inside refrigerators and low temp. rooms
- Vessel holders are available as an option

## Applications

- ImmunoPrecipitation in refrigerators or cold rooms
- Extraction of Genomic DNA
- Culture of Microbe and Plant cells in incubators

### 2 models by difference in speed

RT-5N has a rotational speed range of 0.5 to 5 r/min, and RT-50N has a range of 5 to 50 r/min. Please select according to your application.

### Variable tilt angle

The angle can be varied in 7 steps of 0, 15, 30, 45, 60, 75, and 90° to fix it firmly in place. Inverting stir and rotation can be performed at the optimum angle suitable for the vessels and holders.



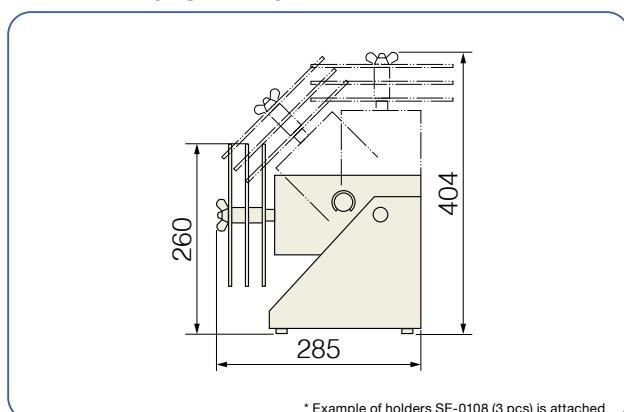
### Renewal and increase the number of capacities, up to 3 pcs of holders.

Renewed design allows up to 3 vessel holders to be attached. Compact design while maintaining capacity. It can also be used in a constant temperature chamber. (Refer to the optional accessories list on the lower right for the maximum number of holders that can be attached.)

### Stable rotational speed

Feedback control of the motor provides stable rotational speed with good reproducibility even at low speeds.

### Dimensions (Right side)



RT-50N with Vessel holders  
(RT-5N same as RT-50N in shape)

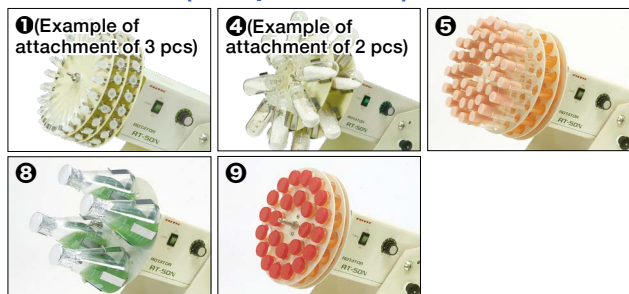
We can design customized holders compatible with your vessels.

| Model                | RT-5N   | RT-50N        |
|----------------------|---|---------------|
| Rotational speed     | 0.5 to 5 r/min  | 5 to 50 r/min |
| Angle variable range | Variable in 7 steps of 0, 15, 30, 45, 60, 75, and 90°                                   |               |
| Ambient temperature  | +4°C to +50°C   |               |
| Dimensions(W×D×H)    | 200 × 285 × 260 mm (*)  |               |
| Weight               | Approx. 4.3 kg (*)  |               |
| Power supply         | AC100V / 0.3A (Need a step-down transformer)  |               |
| Standard accessories | Fuse×1 pc, Fixed nut for holders×1 pc, Spaces×2 pcs, Resin collar×1 pc, Power cord×1 pc |               |

(\*)When 3 pcs of holders are attached at tilt angle 0°

•The vessel holder is common with the former RT-5/50 and is not compatible with the vessel holder for RT-30mini.

### Optional accessories for RT-5N/50N: Vessel holders (dia. up to 200 mm)



| Model    | Vessels/Capacity/Remarks                         | Qty. of attachment on RT |
|----------|--|--------------------------|
| ①SE-0108 | 1.5/2.0 mL Microtube × 24 (Inverting stir)       | Up to 3                  |
| ②SE-1315 | φ13 to 15 mm tube × 24 (Inverting stir)          |                          |
| ③SE-1800 | 15 mL tube (φ17 × 120 Lmm) × 16 (Inverting stir) | Up to 2                  |
| ④SE-3500 | 50 mL tube (φ29 × 115 Lmm) × 8 (Inverting stir)  |                          |
| ⑤SA-1811 | φ18 mm × 110 mm test tube × 41 (Rotation)        | 1                        |
| ⑥SA-2511 | φ25 mm × 110 mm test tube × 24 (Rotation)        |                          |
| ⑦SC-0100 | 100 mL Erlenmeyer flask × 5 (Rotation)           |                          |
| ⑧SC-0200 | 200 mL Erlenmeyer flask × 4 (Rotation)           |                          |
| ⑨SD-2550 | φ25 mm × 50 mm vial × 24 (Rotation)              |                          |

•Holders other than those listed above can also be custom-made. Please contact us with a sample vessel.

NEW

Constant  
temperature  
incubator/shaker  
OD MonitorFor cell culture  
related products

Shaker

Mixer  
Rotator  
StirrerBead beater  
homogenizer  
Ultrasonic  
homogenizerAluminum  
block Bath  
Mini-size BathWater bath  
Stirring Water bath  
Immersion coolerHybridization  
Incubator  
Constant temperature  
ChambersCentrifugal  
Concentrators  
Cold Trap

Freeze dryers

Submarine  
Electrophoresis apparatus  
Blotting device for  
hybridizationConstant-temperature  
water circulating  
system [Chilled]

Appendix

# Rotator RT-30mini

**Ultra-small size rotator.**

**Easy Inverting stir at a corner of a laboratory table or in a refrigerator.**

•Equipment with temperature control and capable of Inverting stir --> P.150-151 •Constant temperature chambers --> P.154-156



RT-30mini with  
Vessel holders (Optional)

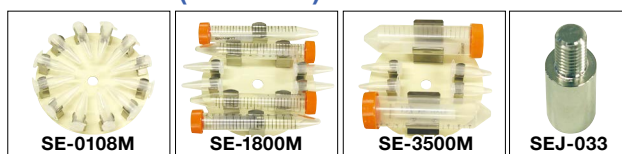
We can design customized holders compatible with your vessels.

| Model                | RT-30mini  |
|----------------------|--|
| Rotational speed     | 3 to 30 r/min  |
| Angle variable range | 0° to 90° Optional setting   |
| Ambient temperature  | 0°C to +50°C   |
| Dimensions(W×D×H)    | 120 × 172 × 182 mm (*)   |
| Weight               | Approx. 2 kg (*)   |
| Power supply         | AC100V / 0.1A (Need a step-down transformer)                                       |
| Standard accessories | Angle pointer ×1 pc, Fixed knob for holders ×1 pc, Fixed packing for holders ×1 pc |

(\*)When 1 pc of holder is attached at tilt angle 0°.

•The vessel holders for RT-5N/50N is not compatible with the vessel holder for RT-30mini.

## Optional accessories for RT-30mini: Vessel holders (dia.115 mm)



[The three combinations of holders (2 pcs) are as follows.]

Firstly, attach the SE-0108M and then any holder with SEJ-033.



| Model    | Vessels/Capacity/Remarks  |
|----------|---|
| SE-0108M | 1.5/2.0 mL Microtube × 2, Rotate (Inverting stir)                             |
| SE-1800M | 15 mL Centrifuge tube × 4 + 1.5/2.0 mL Microtube × 4, Rotate (Inverting stir) |
| SE-3500M | 50 mL Centrifuge tube × 2 + 1.5/2.0 mL Microtube × 4, Rotate (Inverting stir) |
| SEJ-033  | Joint parts for the combination of two holders                                |

•We can even design customized holders other than the ones shown here.

## Features

- Ultra-small size, as small as the palms of both hands
- Secure operation even inside refrigerators and low temp. rooms
- Vessel holders are available as an option

## Applications

- ImmunoPrecipitation in refrigerators or cold rooms
- Extraction of Genomic DNA
- Culture of Microbe and Plant cells in incubators

## Ultra-small size design, as small as the palms of both hands

It is easily portable and is large enough to be used in an incubator, refrigerator, or in a small space on a laboratory table without stress.



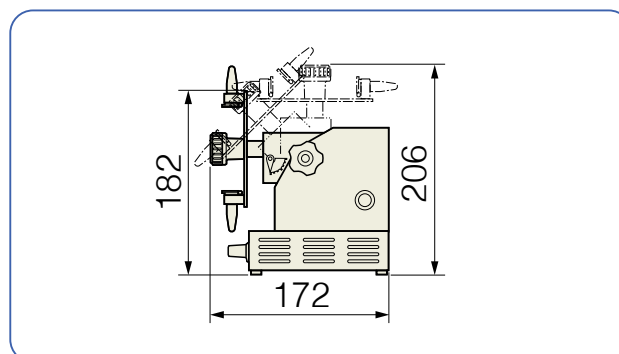
## Rotational speed of 3 to 30 r/min, and is safe for use in refrigerators

Rotation speed is 3 to 30 r/min. It works reliably in an environment of 0°C to 50°C and is safe for use in refrigerators and incubators. Timer operation is not available, but it has the same functions as the series model shown on the previous page, such as variable angle and two holders.

## Special design for vessel holders

In addition to Microtubes, holders for Centrifuge tubes are also available. As a feature of the holder for this product only, microtubes can be attached to the Centrifuge tube holder simultaneously.

## Dimensions (Right side)



# Delta Mixer Se-04/Se-08

Our proprietary technology "Delta balance" prevents the Mixer from moving around during operation. Developed by our customer's request, this user-friendly mixer offers excellent stirring and stability.

•Stirring Microtube and Well plate "Micro mixer E-022" --> P.062 •Crusher "Beads crusher" series --> P.100-101

## Features

- "Delta balance" prevents the Mixer from moving around during operation
- Hand-held stirring and "Miracle head" holds Microtubes
- Operation mode by touch switch, Stirring strength adjustment [Se-08]

## Applications

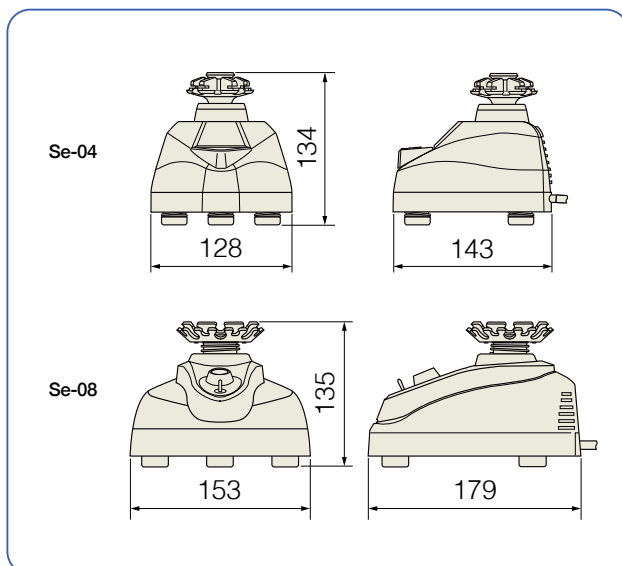
- Mixing-stirring of samples and reagents
- Promotion of various reactions by stirring
- Crushing of fungal, etc. with beads, DNA extraction from fecal samples

### Microtubes can be fixed to the "Miracle Head"

Our original Miracle Head enables smooth hand-held stirring of 15 mL and 50 mL Centrifuge tubes, up to 30 mL can be stirred. Microtubes can be fixed to the periphery of the Miracle Head. Useful for long-time stirring.



## Dimensions



Se-04

Se-08

### Well-balanced Mixer that never moves around thanks to Delta balance

We developed three legs and a triangle body to realize our customer's request "Desired a mixer that is never moving around". We received results that the Mixer did not moved around on slippery planes and slopes that were painted with oil.



### "Soft touch switch for stirring" and "Continuous stirring" [Se-08]

Switching between the Touch switch that "turns on/off" when the head is lightly pressed and the Continuous stirring. The Touch switch was designed with optimal sensitivity in order to start by light touching.



| Model                  | Se-04  | Se-08   |
|------------------------|--|---|
| Stirring motion        | Horizontal eccentric   |   |
| Vibration speed (*1)   | Approx. 2800 r/min (Fixed)   | Up to 2800 r/min (Strength adjustment)        |
| Operation mode         | Continuous   | Switching Touching mode/Continuous            |
| Capacity               | •Hand-held stirring Microtubes and 50 mL in Centrifuge tubes (*2)<br>•Stirring with Microtubes fixed<br>Se-04: 0.5 mL x4 pcs + 1.5/2.0 mL x4 pcs<br>Se-08: 0.5 mL x8 pcs + 1.5/2.0 mL x8 pcs |   |
| Ambient temperature    | +5°C to +35°C  |   |
| Dimensions (W x D x H) | 128 x 143 x 134 mm (Miracle Head is included)  | 153 x 179 x 135 mm (Miracle Head is included) |
| Weight                 | Approx. 2 kg (Miracle Head is included)  | Approx. 3 kg (Miracle Head is included)       |
| Power supply           | AC100V / AC220V- 240V / 0.5A   | AC100V / 0.5A (Need a step-down transformer)  |
| Standard accessories   | Miracle Head 04 x1 pc  | Miracle Head 08 x1 pc                         |

(\*1)The value at 50 Hz. The value at 60 Hz is under 3300 r/min in Se-08.  
 (\*2)Up to 30 mL out of 50 mL in Centrifuge tubes can be stirred for sure.

NEW

Constant-temperature Incubator/shaker OD Monitor

For cell culture related products

Shaker

Mixer Rotator Stirrer

Bead beater Ultrasonic homogenizer

Aluminum block Bath Mini-size Bath

Water bath Shaking Water bath Immersion cooler

Hybridization Incubator Constant temperature Chambers

Centrifugal Concentrators Cold Trap

Freeze dryers

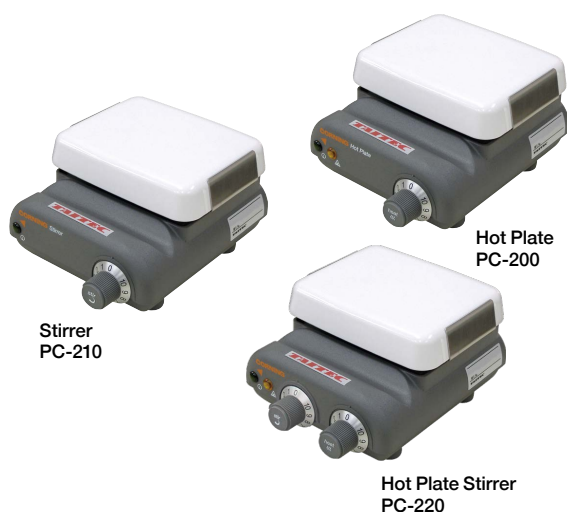
Submarine Electroporation apparatus Blotting device for hybridization

Constant-temperature water circulating system [Chillief]

Appendix

# Corning hot plate/stirrer PC-200/210/220

Corning hot plate, stirrer, and hot plate stirrer.  
The small and simple 200 Series can hold up to a 500 mL beaker.



## Features

- 3 models with different functions
- Corrosion/scratch resistant glass-ceramic top panel
- Support rods (optional) available

## Applications

- Mixing-stirring of samples and reagents [PC-210/220]
- Heating and melting of reagents and samples [PC-220]
- Boiling of electrophoresis samples [PC-200/220]

### Long-selling product from Corning Inc. worldwide brand

Hot plates/stirrers from Corning have been sold worldwide for a long time and have a wealth of trust and achievements.

### Simple analog type that only requires turning a dial

This product is the most compact one of Corning's hotplates/stirrers and is an analog type as before.

### Three types in the lineup with different functions

Three types are available: Hot Plate, Stirrer, and Hot Plate Stirrer.

### Scratch-resistant Pyroceram® glass-ceramic top panel

The top panel made of "Pyroceram," a unique glass-ceramic material, is resistant to corrosion and scratching and provides uniform heat conductivity.

| Product type                 | Hot Plate   | Stirrers                                     | Hot Plate Stirrers                           |
|------------------------------|---|--|--|
| Model                        | <b>PC-200</b>   | <b>PC-210</b>                                | <b>PC-220</b>                                |
| Configurable temperature (*) | +25°C to +550°C   | -  | +25°C to +550°C                              |
| Rotational speed             | -   | 60 to 1100 r/min                             | -  |
| Platform size                | 127 × 102 mm  |  |  |
| Maximum load                 | Approx. 11 kg (maximum loadable container: 500 mL beaker) |  |  |
| Dimensions(WxDxH)            | 147 × 185 × 112 mm  |  |  |
| Weight                       | Approx. 1.8 kg  | Approx. 2.0 kg                               | Approx. 2.3 kg                               |
| Power supply                 | AC100V / 2.6A (Need a step-down transformer)              | AC100V / 0.3A (Need a step-down transformer) | AC100V / 2.8A (Need a step-down transformer) |
| Standard accessories         | -   | Stir bar ×1 pc                               | -  |

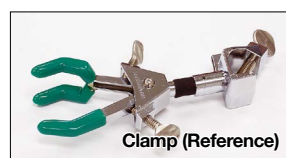
(\*)Temperature control below the ambient temperature is not possible. Also, the sample temperature may not reach the maximum temperature for evaporating samples. The temperature on the top plate surface may be higher than the set temperature due to differences in heat conduction between the sample and the vessel. Please note this.

### Optional

| Product/Model | Support rod (30 cm) PC-40084   |
|---------------|--|
| Remarks       | A metal rod is to be attached to the back of the unit. Use in conjunction with a laboratory instrument clamp (*), etc. to secure a thermometer, etc. |

(\*)Please prepare a standard one as shown on the right figure separately.

•PC-200/210/220 do not support the external temperature controller for digital type shown on the next page.



Clamp (Reference)



# Corning Digital Hot Plate/Stirrer PC-400D/600D/410D/610D/420D/620D

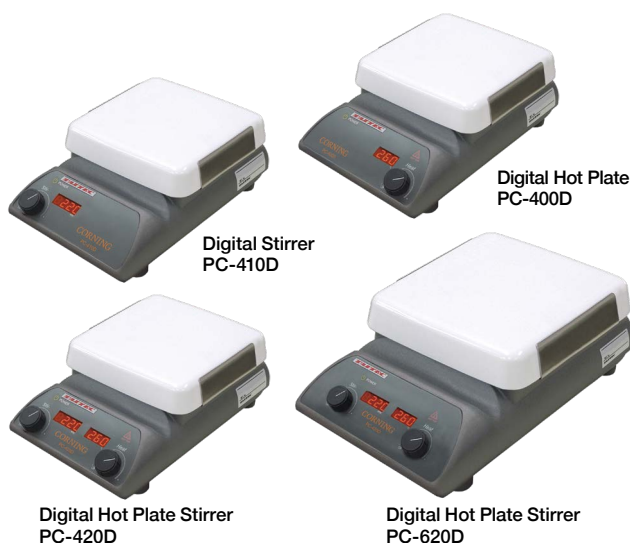
Corning Hot Plate/Stirrer/Hot Plate Stirrer, with digital display.  
The 400 series can handle up to 2 L beakers, and the 600 series can handle up to 10 L beakers.

## Features

- 6 models by difference in function and size, With digital display
- Corrosion/scratch resistant glass-ceramic top panel
- External temperature controller (optional) available

## Applications

- Mixing-stirring of samples and reagents [Except for PC-400D/600D]
- Heating and melting of reagents and samples [PC-420D/620D]
- Boiling of electrophoresis samples [Except for PC-410D/610D]



| Product type                      | Hot Plate   |   | Stirrers   |                    | Hot Plate Stirrers                                 |   |
|-----------------------------------|---|---|--|--------------------|--|---|
| Models                            | <b>PC-400D</b>  | <b>PC-600D</b>                                      | <b>PC-410D</b>                                     | <b>PC-610D</b>     | <b>PC-420D</b>                                     | <b>PC-620D</b>                                      |
| Configurable temperature (*1)(*2) | +5°C to +550°C (Digital display)  |   | -  |                    | +5°C to +550°C (Digital display)                   |   |
| Rotational speed (*3)             | -   |   | 60 to 1150 r/min (Digital display)                 |                    |  |   |
| Platform size                     | 178 × 127 mm  | 254 × 254 mm  | 178 × 127 mm                                       | 254 × 254 mm       | 178 × 127 mm                                       | 254 × 254 mm  |
| Maximum load                      | Approx. 11 kg (maximum loadable container: 2 L beaker for PC-400D/410D/420D)<br>Approx. 11 kg (maximum loadable container: 10 L beaker for PC-600D/610D/620D) |   |  |                    |  |   |
| Dimensions(W×D×H)                 | 198 × 277 × 112 mm  | 269 × 401 × 122 mm                                  | 198 × 277 × 112 mm                                 | 269 × 401 × 122 mm | 198 × 277 × 112 mm                                 | 269 × 401 × 122 mm                                  |
| Weight                            | Approx. 2.7 kg  | Approx. 4.5 kg                                      | Approx. 2.9 kg                                     | Approx. 4.5 kg     | Approx. 3.2 kg                                     | Approx. 5.2 kg                                      |
| Power supply                      | AC 100 V / 5.5 A<br>(Need a step-down transformer)  | AC 100 V / 10.5 A<br>(Need a step-down transformer) | AC 100 V / 0.8 A<br>(Need a step-down transformer) |                    | AC 100 V / 6.3 A<br>(Need a step-down transformer) | AC 100 V / 11.2 A<br>(Need a step-down transformer) |
| Standard accessories              | -   |   | Stir bar × 1 pc                                    |                    |  |   |

(\*1) Temperature control below the ambient temperature is not possible. Also, the sample temperature may not reach the maximum temperature for evaporating samples. The temperature on the top plate surface may be higher than the set temperature due to differences in heat conduction between the sample and vessel. Please note this.

[Reference] When 400 mL of water at +25°C is added to a 600 mL PYREX beaker, it takes approximately 15 minutes for the water to boil completely.

(\*2) The temperature setting unit is 5°C. When the optional external temperature controller is used, the setting range is +5°C to +200°C and the setting unit is 1°C.

(\*3) The setting unit of the Rotational speed varies depending on the rotational speed (minimum 5 r/min).

## Optional

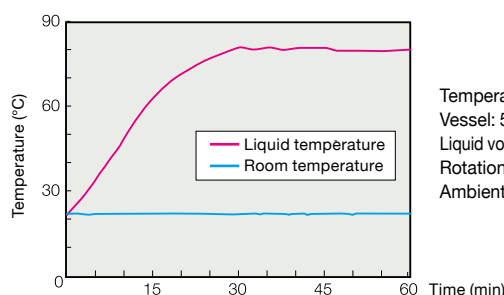
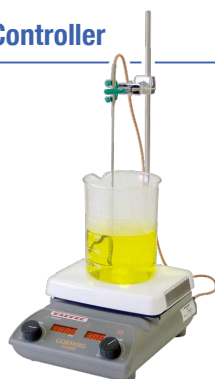
| Product/Model                                    | Remarks   | Applicable models        |
|--|---|--------------------------|
| <b>External temperature controller PC-6795PR</b> | Throw-in probe type sensor, feedback control of sample temperature (*)                                  | PC-400D/600D/420D/620D   |
| <b>Support rod (30 cm) PC-400084</b>             | For fixing the external temperature controller, etc. $\phi 7.9 \times 305$ Lmm                          | Mainly PC-400D/410D/420D |
| <b>Support rod (45 cm) PC-440129</b>             | For fixing the external temperature controller, etc. 2 rods of $\phi 7.9 \times 225$ Lmm are connected. | All models               |

(\*) Support rods and laboratory instrument clamps appropriate for the model are required for use (please prepare clamps separately, referring to those listed on the previous page).

## Effect of External Temperature Controller

Tap water (room temperature) in a 500 mL beaker was heated to +80°C using a PC-420D with an additional external temperature controller. We confirmed that the liquid temperature reached +80°C about 30 minutes after the start of heating, and then measured the liquid temperature for the next 30 minutes. We could confirm that the fluctuation of the liquid temperature remained within  $\pm 2\%$ .

Example of using the external temperature controller and the support rod



# Planetary centrifugal stirrer GR-5

**Proprietary Planetary centrifugal stirring that exerts high stirring force compared to ordinary stirrers.**

**It is designed to have a strong stirring force and an easy return of stirrer bars that have deviated due to sand and gravel.**

•"TS-10N/20N" for Elution of harmful metals from soil. --> P.085-086



## Features

- Excellent stirring with Planetary centrifugal motion
- Faster suspension efficiency than normal suspension speeds
- Faster recovery after stirring stir bar deconditioning

## Applications

- Stirring of some liquid containing pebbles, gravel, and particulates
- For suspension with fixed stirring time
- Various dissolution testing, mixing-stirring of samples and reagents

### Planetary centrifugal stirring that has a strong stirring force and easily restituted from deviation of stir bars

Proprietary Planetary centrifugal stirring that exerts high stirring force compared to ordinary stirrers. Even if the stirrer is repelled and deviated by particulate waste, gravel, etc., it will be automatically restituted reliably in standard use (adjustment volume 6 to 7).

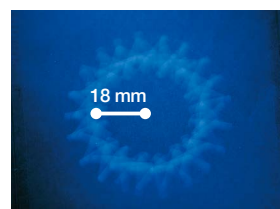
### Included stir bar with 36 mm vinyl membrane

Cut the tube so that both ends come out slightly and put it on the stir bar.



### Radius of the revolution is 18 mm.

Applicable to the 1 L flask, which is larger than the 500 mL flask. In that case, the guide attached to the unit should be removed and the capacity is limited to 3 pcs.

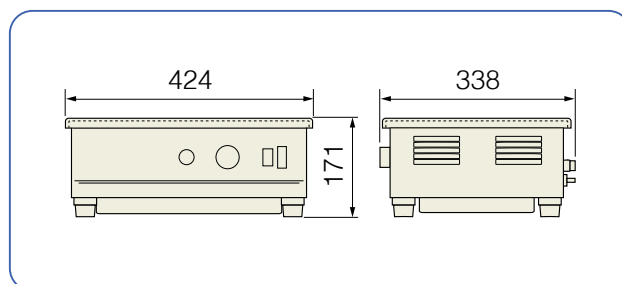


Proprietary Planetary centrifugal stirring

## Optional accessory

| Model                    | Remarks                      |
|--------------------------|------------------------------|
| <b>Stir bar for GR-5</b> | Stir bar length: 36 mm, 1 pc |

## Dimensions



| Model                    | GR-5   |
|--------------------------|--|
| Rotational speed         | 100 to 1200 r/min  |
| Capacity                 | Erlenmeyer flask × Max. 5 (5 positions)                        |
| Rotation/Revolution rate | 10:1   |
| Timer                    | 6-hour Timer for the operation (Buzzer is rung when finished.) |
| Platform size            | 408 × 312 mm   |
| Dimensions(W×D×H)        | 424 × 338 × 171 mm   |
| Weight                   | Approx. 12.5 kg  |
| Power supply             | AC100V / 1A (Need a step-down transformer)                     |
| Standard accessories     | Acrylic guide ×1 pc, Stir bar × 5 pcs, Vinyl tube (*) ×1 pc    |

(\*)Make sure that the vinyl tube is attached to stir bar for use so that the unit can last a long time. Recommended that the stir bars are replaced regularly.

NEW

Constant temperature incubator/shaker  
OD Monitor

For cell culture related products

Shaker

Mixer  
Rotator  
StirrerBead beater  
homogenizer  
Ultrasonic  
homogenizerAluminum  
block Bath  
Mini-size BathWater bath  
Shaking Water bath  
Immersion coolerHybridization  
Incubator  
Constant temperature  
ChambersCentrifugal  
Concentrators  
Cold Trap

Freeze dryers

Substrate  
Electrophoresis apparatus  
Blotting device for  
hybridizationConstant-temperature  
water circulating  
system [Chiller]

Appendix