

## S500T

| Product name                          | Benchtop Centrifuge                                                                                                      |
|---------------------------------------|--------------------------------------------------------------------------------------------------------------------------|
| Swing rotor                           |                                                                                                                          |
| Max. capacity                         | 68 × 15 mL                                                                                                               |
| Max. speed                            | 4,800 rpm                                                                                                                |
| Max. RCF                              | 4,300 × g                                                                                                                |
| Angle rotor                           |                                                                                                                          |
| Max. capacity                         | 8 × 50 mL conical tube                                                                                                   |
| Max. speed                            | 6,000 rpm                                                                                                                |
| Max. RCF                              | 5,350 × g                                                                                                                |
| Size                                  | 44(W) × 53(D) × 32(H) cm<br>Height with opened lid: 76 cm                                                                |
| Weight                                | 110V: 37 kg, 220/230V: 39 kg                                                                                             |
| Power consumption:<br>calorific value | 520W, 1.9MJ/h<br>(Power-saving mode: Approx. 7W)                                                                         |
| Power requirements                    | Single phase 110 ± 10 % V 50/60Hz, 15A<br>Single phase 220 ± 10 % V 50/60Hz, 8A<br>Single phase 230 ± 10 % V 50/60Hz, 8A |
| Rated voltage, rated current          | 110V: 7.0A, 220V: 3.2A, 230V: 3.1A                                                                                       |
| Use environment                       | Temperature: 10 – 35 °C<br>Humidity: 30 – 85%<br>Atmospherics pressure: 70 – 106 kPa (700 – 1,060 mbar)                  |
| Conforming standard                   | IEC61010-2-020                                                                                                           |
| Driving method                        | Direct-drive (directly connected to brushless motor)                                                                     |
| Control method                        | Inverter microprocessor control (brushless motor)                                                                        |
| Error display                         | Lid open, imbalance, over-speed, motor, rotation sensor,<br>lid sensor, inverter, rotor sensor, imbalance sensor         |
| Stoppage alarm                        | 11 types of sounds + silent,<br>5 levels of sound volume (including silent)                                              |
| Rotation radius settings              | It can be set for each rotor.                                                                                            |
| Centrifugation increments             | 3 steps (rotation speed, time)                                                                                           |
| Speed setting range                   | 200 – 6,000 rpm<br>10 or 100 rpm increments                                                                              |
| RCF setting range                     | 10 – 5,350 × g<br>10 or 100 × g increments                                                                               |
| Timer setting range                   | 1 sec. to 99 hours and 59 min.<br>Sec.: 1 sec. increments<br>Min.: 1 min. increments<br>Hour: 1 hour increments<br>Hold  |
| Temperature setting range             | —                                                                                                                        |
| Refrigerated                          | —                                                                                                                        |
| Program memory                        | 99 channels (5 for direct invocation using the panel button)                                                             |
| Acceleration / deceleration           | 3 steps                                                                                                                  |

## S500FR

| Product name                          | Floor-standing Refrigerated Centrifuge                                                                                                                        |
|---------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Swing rotor                           |                                                                                                                                                               |
| Max. capacity                         | 4 × 500 mL                                                                                                                                                    |
| Max. speed                            | 4,800 rpm                                                                                                                                                     |
| Max. RCF                              | 4,300 × g                                                                                                                                                     |
| Angle rotor                           |                                                                                                                                                               |
| Max. capacity                         | 8 × 50 mL conical tube                                                                                                                                        |
| Max. speed                            | 6,000 rpm                                                                                                                                                     |
| Max. RCF                              | 9,690 × g                                                                                                                                                     |
| Size                                  | 54(W) × 64(D) × 84(H) cm<br>Height with opened lid: 136 cm                                                                                                    |
| Weight                                | 116 kg                                                                                                                                                        |
| Power consumption:<br>calorific value | 690W, 2.5MJ/h<br>(Power-saving mode: Approx. 7W)                                                                                                              |
| Power requirements                    | Single phase 110 ± 10 % V, 50/60Hz, 15A<br>Single phase 220 ± 10 % V, 50/60Hz, 10A<br>Single phase 230 ± 10 % V, 50/60Hz, 10A                                 |
| Rated voltage, rated current          | 110V: 8.4A, 220V: 4.3A, 230V: 4.1A                                                                                                                            |
| Use environment                       | Temperature: 10 – 35 °C<br>Humidity: 30 – 85%<br>Atmospherics pressure: 70 – 106 kPa (700 – 1,060 mbar)                                                       |
| Conforming standard                   | IEC61010-2-020                                                                                                                                                |
| Driving method                        | Direct-drive (directly connected to brushless motor)                                                                                                          |
| Control method                        | Inverter microprocessor control (brushless motor)                                                                                                             |
| Error display                         | Lid open, imbalance, over-speed, motor, rotation sensor,<br>temperature sensor, lid sensor, inverter, abnormal temperature,<br>rotor sensor, imbalance sensor |
| Stoppage alarm                        | 11 types of sounds + silent,<br>5 levels of sound volume (including silent)                                                                                   |
| Rotation radius settings              | It can be set for each rotor.                                                                                                                                 |
| Centrifugation increments             | 3 steps (rotation speed, time)                                                                                                                                |
| Speed setting range                   | 200 – 8,500 rpm<br>10 or 100 rpm increments                                                                                                                   |
| RCF setting range                     | 10 – 9,690 × g<br>10 or 100 × g increments                                                                                                                    |
| Timer setting range                   | 1 sec. to 99 hours and 59 min.<br>Sec.: 1 sec. increments<br>Min.: 1 min. increments<br>Hour: 1 hour increments<br>Hold                                       |
| Temperature setting range             | —10 to +40 °C 1 °C increments                                                                                                                                 |
| Refrigerated                          | R134a 0.28 kg GWP 1,430                                                                                                                                       |
| Program memory                        | 99 channels (3 for direct invocation using the panel button)                                                                                                  |
| Acceleration / deceleration           | 3 steps                                                                                                                                                       |



### Multipurpose Centrifuge S500 Series

# S500 Series

### Kubota has acquired ISO 9001 and ISO 13485 certification.

#### Precautions for use

Products in this catalogue are designed for use only by people who have the requisite technical knowledge, and must always be used with considerable care and only for their intended purpose. People who do not have adequate technical knowledge or training should only use the products under appropriate supervision by someone with expert knowledge, or else accidents are likely to occur.



Prohibited

Please immediately stop using the products in any of the cases listed on the right.

- The rotor or buckets appear to be damaged or corroded.
- When the replacement period (years of operation, operating lifetime) of a rotor has passed.
- The equipment emits a burning smell or becomes abnormally hot.
- You receive a weak electric shock when you touch the equipment with your bare hands.
- When any other abnormality or indication of failure is noticed.

#### IMPORTANT

If any of the cases listed at the left occurs, immediately turn off the power, disconnect the power cable plug or connecting terminals from the main power outlet, place a "Do not use" sign on the unit, and contact the nearest branch of Kubota Corporation.



#### Safety Precautions

To use the equipment safely, be sure to read the instruction manual carefully before you start operations.

Do not misplace the instruction manual. Keep the instruction manual nearby so that you can refer to it whenever necessary.



unified design,  
innovation  
and  
user-oriented

### Sphera Analytics GmbH

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## ➤ Universal design

Visual and intuitive operation in an interface with a rounded body offering smooth lines and sharp lines. This design shattered the traditional image of hard, square centrifuges, while our new centrifuge is packed full of the latest technology.



Benchtop Centrifuge  
**S500T**

Floor-standing Refrigerated Centrifuge  
**S500FR** Refrigerated

Universal  
design

## ➤ Innovation—New Function

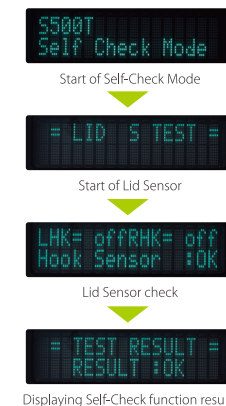
### Self-check function to support daily inspection of your centrifuge

Daily operation checks of previous centrifuges were not able to check whether sensors and lid sensors operated normally; however, the "Self-Check Function" mounted on the S500 Series allows easy checks of sensors and lid sensor operation during daily inspection by just operating the centrifuge in accordance with the display.

This new function has been developed for our customers for safe and reliable use of the centrifuge.

The self-check function checks the following items and judges acceptability. After the results of the self-check function are displayed, the available use frequency until the equipped rotor alarm is displayed.

- Lid sensor
- Rotor sensor
- Imbalance sensor
- Temperature sensor (S500FR only)
- Inverter
- Rotation sensor
- Operation test



### Fail-Safe Function Early detection of Imbalance

ST-724M, ST-2504MS, ST-480M (For S500T/S500FR)  
ST-5004M (For S500FR)

A big imbalance usually causes contact between bucket and chamber and breakage.

The impact can damage both the motor and shaft.

Fixing this damage requires high costs and the centrifuge cannot be used during repair.

KUBOTA prevents damage to centrifugal tubes and loss of time by the fail-safe function, as well as providing a centrifuge that can be used comfortably.

Innovation

## ➤ Responding to User Needs in a Multitude of Ways

### Mixed Loading **MIX**

KUBOTA achieved Mixed Loading where two different types of buckets or tube racks can be centrifuged at the same time.

Moreover, frequently used combinations of buckets are offered as a set as standard so that the accessories become more affordable.

Available swing rotors:

ST-724M, ST-2504MS, ST-5004M, ST-480M



ST-724M  
16 × 15mL conical tubes;  
8 × 50mL conical tubes



ST-2504MS  
8 × 15mL conical tubes;  
2 × 50mL conical tubes



ST-5004M  
14 × 15mL conical tubes;  
6 × 50mL conical tubes



ST-480M  
8 × 15mL conical tubes;  
4 × 50mL conical tubes

### User Interface **3-direct memory channel** **5-direct memory channel**

S500T direct memory 5-channel  
S500FR direct memory 3-channel

Three or five Short-Cut Program Keys for Direct Access.

Larger and prominent START / STOP / OPEN buttons for simple operation. Centrifuge operation for routine work can be performed with these simple keys.

Settings can be adjusted using the arrow keys.

Menu and error displays have also been enhanced.



S500T



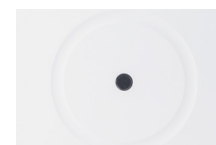
S500FR

### Equipped with self-luminous display (VFD)

**VFD**

Minimum view angle of 126°

- Equipped with technology unique to Japan, VFD (Vacuum fluorescent display)
- Visibility of display generally depends on the contrast ratio of dots in the display. VFD dots are self-luminous and other parts are blacked-out. Therefore, the contrast ratio is large and displays can be identified clearly from a distance.
- With a minimum viewing angle of 126°, the wide viewing angle allows you to see the display even from an angle.
- The display blinks to notify you of the end of centrifugation.



### Viewport **rpm**

- It responds to speed measurement for inspections by using an tachometer.

### Power-saving mode **eco**

- S500FR automatically stops the refrigeration process and turns off the display. Power consumption in this mode is approximately 7 W.
- S500T automatically turns off the display. Power consumption in this mode is approximately 7 W.



### Motorized lid lock

- A newly developed motorized lid lock system.
- A light touch is all that is needed to activate the lid motor and lock it automatically.



user-oriented

## ➤ Responding to User Needs in a Multitude of Ways

### Compact body, but wide interior

It has a wide chamber (diameter: 38 cm), but compact body (height: 32 cm, depth: 53 cm). (For S500T only)

### Equipped with a delayed start function after setting samples

Settings to delay start of operation, which is convenient for serum separation, are available. (Up to 900 sec.)

### Easy spin-down with flashing function

Rotor rotates only while the start button is pressed.

### Automatic identification of rotors by rotor sensor

It prevents the set rotor from rotating more than the maximum speed. Use frequency is recorded for each rotor.



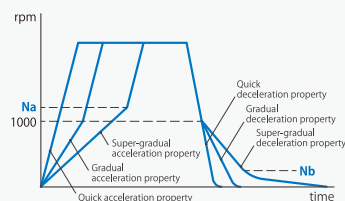
### Equipped with a toolless rotor

Rotor can be set and exchanged easily without tools.(excluding RA-508C)

### Changeable acceleration and deceleration curve

It prevents flying up during collection of cells, etc.

Acceleration/deceleration property graph



■ In cases of gradual acceleration property, property switch speed "Na" can be set at variables of 100 rpm increments between 0 and the maximum speed.

■ In cases of gradual deceleration property, natural deceleration (no brakes) can be performed.

## ➤ KUBOTA's Dedication to Safety

### IEC61010-2-020: International safety requirements for centrifuges

- Centrifuge rotors store large amounts of kinetic energy when spinning at high rates. All of the rotors pass strict tests for durability under maximum load, but wear and external factors mean that rotor breakage during centrifugation cannot be entirely ruled out.
- Centrifuges that meet the IEC61010-2-020 requirements will retain fragments within the centrifuge if the rotor breaks during centrifugation, ensuring user safety.

### Rotor durability

- The rotating parts of the centrifuge, its rotors and buckets, are made of metal, such as stainless steel and aluminum.
- If a metal plate is bent and straightened over and over, it will eventually break due to metal fatigue.
- Rotors and buckets undergo repeated "bending and straightening" during spin-up and spin-down. After a specified period of use or number of operations is reached, these parts may break due to metal fatigue.
- To use KUBOTA's products safely, we ask that you replace any rotor that has reached the end of its life time. We appreciate your understanding and cooperation.

### To deliver quality products to KUBOTA's customers:

- KUBOTA manufactures prototypes at the development phase and implements durability tests based on actual use conditions.  
Only products that pass the strict durability tests can proceed to the next stage.
- After durability tests, we produce additional prototypes and perform field tests in workplaces with actual users. Feedback from these users is then incorporated in the products.
- Experienced engineers perform release inspections.  
Every unit is inspected carefully by activating the centrifuge and carefully monitoring its sounds and vibrations.



user-oriented

Safety

## Rotor specifications

This tube rack is convenient and available for 5 mL, 7 mL, and 10 mL blood collection tubes and 15 mL glass tubes.

⚠ Rotors are subject to durability. For more details, please contact us.

|                                                                                                                  |                                 |                                                                                                                                                                                            |  |                                                                                   |                                                                                   |                                                                                   |                                                                                      |                                                                                      |                                                                                      |                                                                                     |                                                                                        |                                                                                        |                                                                                     |                                                                                        |                                                                                        |                                                                                     |       |                                                                                        |                                                                                     |                      |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |  |  |                                                                                     |  |  |
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|                                                                                                                  | Tube                            |                                                                                                           |  |                                                                                   |  |                                                                                   |                                                                                      |     |   |  |                                                                                        |                                                                                        |  |                                                                                        |                                                                                        |  |       |                                                                                        |  |                      |                                                                                     |  |                                                                                     |                                                                                     |                                                                                     |  |  |  |  |  |  |
|                                                                                                                  | Nominal capacity                | 36×1.5/2mL 72×1.5/2mL 80×1.5/2mL                                                                                                                                                           |  |                                                                                   | 68×5~7mL thin blood collection tube                                               |                                                                                   |                                                                                      | 24×8mL CPT cell preparation tube                                                     | 80×10mL glass tube                                                                   | 68×10mL long blood collection tube / 15mL glass tube                                |                                                                                        |                                                                                        | 28×5-10mL blood collection tube / 15mL glass tube                                   | 48×5-10mL blood collection tube / 15mL glass tube                                      | 48×5-10mL blood collection tube / 15mL glass tube                                      |                                                                                     |       | 16×15mL conical tube                                                                   | 28×15mL conical tube                                                                | 28×15mL conical tube | 32×15mL conical tube                                                                | 4×50mL glass tube                                                                   | 8×50mL glass tube                                                                   | 12×50mL glass tube                                                                  |                                                                                     |                                                                                     |  |  |                                                                                     |  |  |
|                                                                                                                  | Tube size (Diameter×Length)(mm) | 9.5~11×36~42                                                                                                                                                                               |  |                                                                                   | 12~13.7×62~110                                                                    |                                                                                   |                                                                                      | 13.5~15.8×81~130                                                                     | 12~13.8×65~95                                                                        | 15~17.2×52~110                                                                      |                                                                                        |                                                                                        | 12~17.2×72~110                                                                      |                                                                                        |                                                                                        | 12~16.8×72~110                                                                      |       |                                                                                        | 17×121                                                                              |                      |                                                                                     |                                                                                     | 27~36.4×85~110                                                                      |                                                                                     |                                                                                     |                                                                                     |  |  |                                                                                     |  |  |
| Swing rotor                                                                                                      | Max. speed (rpm)                | 4,800 4,000 3,500                                                                                                                                                                          |  |                                                                                   | 3,500                                                                             |                                                                                   |                                                                                      | 3,500                                                                                | 3,500                                                                                | 3,500                                                                               |                                                                                        |                                                                                        | 4,800                                                                               | 4,000                                                                                  |                                                                                        |                                                                                     | 3,500 |                                                                                        |                                                                                     | 4,800                | 3,500                                                                               | 4,000                                                                               | 3,500                                                                               | 4,800                                                                               | 3,500                                                                               | 4,000                                                                               |  |  |                                                                                     |  |  |
|                                                                                                                  | Max. RCF (×g)                   | 4,250 3,040 2,290                                                                                                                                                                          |  |                                                                                   | 2,300                                                                             |                                                                                   |                                                                                      | 2,310                                                                                | 2,080                                                                                | 2,300                                                                               |                                                                                        |                                                                                        | 4,150                                                                               | 2,970                                                                                  |                                                                                        |                                                                                     | 2,300 |                                                                                        |                                                                                     | 4,280                | 2,300                                                                               | 3,060                                                                               | 2,330                                                                               | 4,150                                                                               | 2,330                                                                               | 2,990                                                                               |  |  |                                                                                     |  |  |
| ST-724M                                                                                                          |                                 | Code No.                                                                                                                                                                                   |  |                                                                                   |                                                                                   | 055-4800                                                                          | Bucket Code No. 053-5840                                                             | Adaptor Code No. 055-0260                                                            | 055-6900                                                                             | 055-4740                                                                            | Bucket Code No. 053-5840                                                               |                                                                                        |                                                                                     |                                                                                        | 055-0880                                                                               |                                                                                     |       | Bucket Code No. 053-5840                                                               |                                                                                     |                      | 055-4780                                                                            |                                                                                     |                                                                                     | 055-4760                                                                            |                                                                                     |                                                                                     |  |  |                                                                                     |  |  |
| <br>Max 3,500rpm<br>Max 2,380×g |                                 | <br>Bucket<br>053-5820<br>(Set of 4)<br>Buckets are optional.                                             |  | —                                                                                 | —                                                                                 |  |  *4 |  *1 |  *2 |  |  *4 | —                                                                                      | —                                                                                   | —                                                                                      |  *3 | —                                                                                   | —     |  *4 | —                                                                                   | —                    |  | —                                                                                   | —                                                                                   |  | —                                                                                   | —                                                                                   |  |  |                                                                                     |  |  |
| ST-2504MS                                                                                                        |                                 | Code No.                                                                                                                                                                                   |  | 055-1190                                                                          |                                                                                   |                                                                                   | —                                                                                    | —                                                                                    | —                                                                                    | —                                                                                   | —                                                                                      | 055-1140                                                                               |                                                                                     |                                                                                        |                                                                                        |                                                                                     |       | 055-1160                                                                               |                                                                                     |                      |                                                                                     |                                                                                     | 055-1150                                                                            |                                                                                     |                                                                                     |                                                                                     |  |  |                                                                                     |  |  |
| <br>Max 4,800rpm<br>Max 4,300×g |                                 | <br>Sealing caps<br>055-0964<br>(Set of 4)<br>Buckets are equipped with rotor. Sealing caps are optional. |  |  | —                                                                                 | —                                                                                 | —                                                                                    | —                                                                                    | —                                                                                    | —                                                                                   | —                                                                                      |  *3 | —                                                                                   | —                                                                                      | —                                                                                      | —                                                                                   | —     |     | —                                                                                   | —                    | —                                                                                   | —                                                                                   |  | —                                                                                   | —                                                                                   |                                                                                     |  |  |                                                                                     |  |  |
| ST-5004M                                                                                                         |                                 | Code No.<br>(S500FR only)                                                                                                                                                                  |  |                                                                                   | 055-0770                                                                          |                                                                                   | —                                                                                    | —                                                                                    | —                                                                                    | —                                                                                   | —                                                                                      |                                                                                        |                                                                                     | 055-0730                                                                               |                                                                                        |                                                                                     |       | 055-0750                                                                               |                                                                                     |                      |                                                                                     |                                                                                     |                                                                                     |                                                                                     | 055-0740                                                                            |                                                                                     |  |  |                                                                                     |  |  |
| <br>Max 4,000rpm<br>Max 3,080×g |                                 | Buckets and sealing caps are equipped with rotor                                                                                                                                           |  | —                                                                                 |  | —                                                                                 | —                                                                                    | —                                                                                    | —                                                                                    | —                                                                                   | —                                                                                      | —                                                                                      | —                                                                                   |  *3 | —                                                                                      | —                                                                                   | —     |     | —                                                                                   | —                    | —                                                                                   | —                                                                                   | —                                                                                   | —                                                                                   |  |                                                                                     |  |  |                                                                                     |  |  |

## Rotor specifications

|                                                                                   |                                   |                                                                                   |                                                                                                     |                                                                                      |                                                                                                          |                                                                                                          |                                                                                      |                                                                                   |                                                                                     |
|-----------------------------------------------------------------------------------|-----------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Swing rotor                                                                       | Tube                              |  | <br>Flow cytometry |     |                         |                                                                                                          |                                                                                      |                                                                                   |                                                                                     |
|                                                                                   | Nominal capacity                  | 48x11.5/2mL                                                                       | 16x5-10mL blood collection tube / 15mL glass tube                                                   | 4x7-10mL long blood collection tube / 15mL glass tube                                | 8x7-10mL long blood collection tube / 15mL glass tube                                                    | 32x7-10mL long blood collection tube / 15mL glass tube                                                   | 4x50mL glass tube                                                                    | 8x50mL glass tube                                                                 |                                                                                     |
|                                                                                   | Tube size (Diameter x Length)(mm) | 9.5~11 x 36~42                                                                    | 12~17 x 65~107                                                                                      | 12~17.2 x 86~110                                                                     |                                                                                                          |                                                                                                          | 27~38 x 100~110                                                                      |                                                                                   |                                                                                     |
|                                                                                   | Max. speed(rpm)                   | 3,500                                                                             | 3,500                                                                                               | 3,500(5,000)                                                                         | 3,500                                                                                                    | 3,500                                                                                                    | 3,500(5,000)                                                                         | 3,500                                                                             |                                                                                     |
|                                                                                   | Max. RCF(xg)                      | 1,880                                                                             | 2,220                                                                                               | 2,230(4,560)                                                                         | 2,230                                                                                                    | 2,270                                                                                                    | 2,270(4,640)                                                                         | 2,270                                                                             |                                                                                     |
| ST-480M                                                                           |                                   | Code No.                                                                          | 053-5040                                                                                            | 053-4930 *5                                                                          | 053-7110                                                                                                 | 053-7150                                                                                                 | 053-7130*5                                                                           | 053-7110                                                                          | 053-7150                                                                            |
|  |                                   | Max 3,500rpm<br>Max 2,380xg                                                       |                    |  *1 |                         |                         |  *2 |  |  |
| ST-504M                                                                           |                                   | Code No.                                                                          |                                                                                                     |                                                                                      | 055-7080                                                                                                 |                                                                                                          |                                                                                      | 053-7080                                                                          |                                                                                     |
|  |                                   | Max 5,000rpm<br>Max 4,860xg                                                       | —                                                                                                   | —                                                                                    |                         | —                                                                                                        | —                                                                                    |  | —                                                                                   |
|                                                                                   |                                   | Code No.                                                                          |                                                                                                     |                                                                                      | 055-7400                                                                                                 | 055-7400                                                                                                 |                                                                                      |                                                                                   |                                                                                     |
| ST-480M-ST-504M                                                                   |                                   |                                                                                   | —                                                                                                   | —                                                                                    |  *2<br>*3<br>(Set of 4) |  *2<br>*3<br>(Set of 4) | —                                                                                    | —                                                                                 | —                                                                                   |

Please select bucket and adapter. They are optional (sold separately).

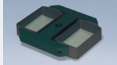
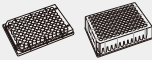
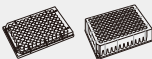
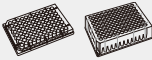
Max speed and RCF of ST-504M are the figures in parentheses.

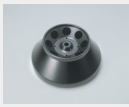
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| Swing rotor                                                                         | Tube                           |   |                  |                     |                                                                                                   |                     | <br><b>MIX</b><br>*6 | <br>Sealing type for biohazard countermeasures |                 |
|                                                                                     | Nominal capacity               | 16×15mL conical tube                                                               | 4×15mL conical tube                                                                               | 4×50mL conical tube | 8×15mL conical tube                                                                               | 8×50mL conical tube | 8×15mL conical tube<br>4×50mL conical tube                                                            | 4×15mL conical tube                                                                                                             | 4×50mL conical tube                                                                               |
|                                                                                     | Tube size(Diameter×Length)(mm) | 17×121                                                                             | 17×121                                                                                            | 30×117              | 17×121                                                                                            | 30×117              | 17×121/30×117                                                                                         | 17×121                                                                                                                          | 30×117                                                                                            |
|                                                                                     | Max. speed(rpm)                | 3,500                                                                              | 3,500(5,000)                                                                                      | 3,500(5,000)        | 3,500                                                                                             | 3,500               | 3,500                                                                                                 | 3,500(5,000)                                                                                                                    | 3,500(5,000)                                                                                      |
|                                                                                     | Max. RCF(×g)                   | 2,340                                                                              | 2,370(4,840)                                                                                      | 2,380(4,860)        | 2,370                                                                                             | 2,380               | 2,340/2,380                                                                                           | 2,370(4,840)                                                                                                                    | 2,380(4,860)                                                                                      |
| ST-480M                                                                             | Code No.                       | 053-1590                                                                           | 053-5010                                                                                          |                     | 053-5020                                                                                          |                     | 053-6040 *7                                                                                           |                                                                                                                                 | 053-0040                                                                                          |
|   | Max 3,500rpm<br>Max 2,380×g    |  |                 |                     |                 |                     |                     |                                                                                                                                 |  *4            |
| ST-504M                                                                             | Code No.                       | —                                                                                  | 053-4970                                                                                          |                     | —                                                                                                 |                     | —                                                                                                     |                                                                                                                                 | 053-0050                                                                                          |
|  | Max 5,000rpm<br>Max 4,860×g    | —                                                                                  |                |                     | —                                                                                                 |                     | —                                                                                                     |                                                                                                                                 |  *4           |
| Code No.                                                                            |                                | —                                                                                  | 055-1280                                                                                          | —                   | 055-1280                                                                                          | —                   | —                                                                                                     |                                                                                                                                 | 055-1280                                                                                          |
| ST-480M-ST-504M                                                                     |                                | —                                                                                  | <br>(Set of 2) | —                   | <br>(Set of 2) | —                   | —                                                                                                     |                                                                                                                                 | <br>(Set of 2) |

Rotors are subject to durability. For more details, please contact us.

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- \*1. A blood collection tube with a cap diameter of 18 mm or less and a length under the cap of 61 mm or more can be used. Thick/thin and long/short blood collection tubes of 5 to 10 mL of Sekisui Insepack II, Terumo Venoject II, Nipro Neo tube, and BD Vacutainer can be used. Tubes for flow cytometry can also be used.
- \*2. A blood collection tube with a cap diameter of 18 mm or less and a length under the cap of 85 mm or more can be used. Thick/thin and long blood collection tubes of 7 to 10 mL of Sekisui Insepack II, Terumo Venoject II, Nipro Neo tube, and BD Vacutainer can be used.
- \*3. Rubber cushions (Code No. 024-0159/10 pieces) that are sold separately are necessary.
- \*4. A bucket with a sealing cap. Sealing cap and O ring (silicon) are included as standard.
- \*5. This is shipped with rubber cushion (Code No. 024-0159) equipped.
- \*6. MIX set are exclusively for S500T and S500FR and cannot be used for former models.
- \*7. This bucket (Code No. 053-6040) is sold as a set 2 of Code No. 053-1590 and 2 of No. 053-5020.

| Plate rotor                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Plate                                                                               | Nominal capacity                     | Plate size:<br>Diameter×Length(mm) | Max. speed<br>(rpm) | Max. RCF<br>(×g) | Adaptor<br>Code No.                                                                                                 |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------|------------------------------------|---------------------|------------------|---------------------------------------------------------------------------------------------------------------------|
| PT-22M<br>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  | 2×PCR plate<br>6×MTP<br>2×DWP<br>*1  | 86(W)×130(D)×62(H)                 | 5,000               | 3,100            | —                                                                                                                   |
| PT-89M<br>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  | 2×PCR plate<br>8×MTP<br>4×DWP<br>*1  | 86(W)×130(D)×89(H)                 | 2,400               | 1,080            | <br>055-6370<br>(Set of 2)<br>*2 |
| PT-745MS<br>(S500FR only)<br>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |  | 2×PCR plate<br>12×MTP<br>4×DWP<br>*1 | 86(W)×128(D)×90(H)                 | 4,200               | 3,100            | <br>055-6380<br>(Set of 2)<br>*2 |
| <div>Tray<br/>055-6380(option)<br/>(Set of 2)</div> <div><br/>12×96 well plate</div> <div><br/>4×DWP</div> <div><br/>4×square-well plate</div> <div><br/>2 DWP+filter plate</div> <div><br/>2×PCR plate</div> |                                                                                     |                                      |                                    |                     |                  |                                                                                                                     |

| Angle rotor                                                                                                                                                   | Tube                                                                                                                                                                                                                                                                                                             | Nominal capacity    | Tube sizeDiameter<br>×Length(mm) | AT-508C             |                  | RA-508C             |                  | Adaptor<br>Code No.    |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|----------------------------------|---------------------|------------------|---------------------|------------------|------------------------|
|                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                  |                     |                                  | Max. speed<br>(rpm) | Max. RCF<br>(×g) | Max. speed<br>(rpm) | Max. RCF<br>(×g) |                        |
| <div>AT-508C<br/>8×50mL conical tube</div> <div></div>                     |                                                                                                                                                                                                                               | 8×12mL<br>*4        | 15.7~16.4×102~105                | 6,000               | 5,110            | 8,500               | 9,370            | 055-1120<br>(Set of 8) |
|                                                                                                                                                               |                                                                                                                                                                                                                               | 8×14mL<br>*5        | 17×100                           | 6,000               | 4,990            | 8,500               | 9,130            | 055-0560<br>(Set of 4) |
|                                                                                                                                                               |                                                                                                                                                                                                                              | 8×15mL conical tube | 17×121                           | 6,000               | 5,270            | 8,500               | 9,530            | 055-1280<br>(Set of 2) |
| <div>RA-508C<br/>8×50mL conical tube<br/>(S500FR only)</div> <div></div> |                                                                                                                                                                                                                             | 8×50mL conical tube | 30×117                           | 6,000               | 5,350            | 8,500               | 9,690            | —                      |
|                                                                                                                                                               | <div>Sartorius</div> <div></div> <div>Ⓐ Ⓑ Ⓒ</div> | Ⓐ Vivaspin 2        | 16.7×129                         | 6,000               | 5,270            | 7,780               | 7,990            | 055-1280<br>(Set of 2) |
|                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                  | Ⓑ Vivaspin 6        | 16.7×129                         |                     |                  |                     |                  |                        |
|                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                  | Ⓒ Vivaspin 15R/20   | 30×117                           | 6,000               | 5,350            | 6,680               | 5,990            | —                      |
| Lid (Code No.028-0595) is optional.                                                                                                                           | <div>Millipore</div> <div></div> <div>Ⓓ Ⓔ</div>                                                                                        | Ⓓ Amicon Ultra-4    | 17.3×124                         | 6,000               | 5,270            | 7,540               | 7,500            | 055-1280<br>(Set of 2) |
|                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                  | Ⓔ Amicon Ultra-15   | 29.7×121                         | 5,800               | 5,000            | 6,100               | 4,990            | —                      |

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※ The number of times allowed for autoclaving is limited. For more details, please contact us.

- \*1. Please test the strength of plates before starting centrifugation. The lower plate may be crushed in some cases.
- \*2. This tray is convenient when taking a plate out of the bucket.
- \*3. The tray is optional (sold separately).
- \*4. This tube is a Nalgene plastic tube (Catalog No. 3110-0120, 3117-0120).
- \*5. This tube is a Falcon tube (Catalog No. 352006, 352018, 352059).