KUBOTA

Benchtop Centrifuge S300 Series

S300 Series

unified design,
innovation
and
user-oriented

Ergonomic design

Because it is part of routine operations, our stress-free design will make your operations with this centrifuge faster and faster.
A gap between the interface and the lid is created so that your fingers can hold the lid naturally.
Moreover, the chamber is designed forward to make it easier when placing and removing tubes.
Usually most refrigerated centrifuges have a cooling pipe around the chamber, which made the body wider.
However, the S300TR's feature has a curve around its body as a design, with unnecessary parts trimmed. As a result, S300TR has a slim and sophisticated body line.

Benchtop Centrifuge
S300T

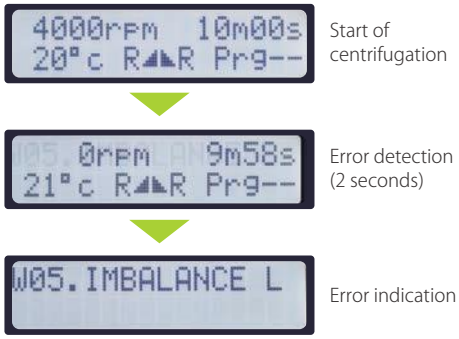
Benchtop Refrigerated Centrifuge
S300TR Refrigerated

ergonomic design

Innovation–New Function

Carefully Examined Fail-Safe Function Two-Second Imbalance Detector

The S300 series have a new function to detect imbalances quicker at lower speed than before.
Approximately 2 seconds after the start of centrifugation, it detects abnormal vibration and alerts that there is an imbalance.
This function enables you to notice end of the centrifugation when an imbalance occurred.



Achieving Zero Re-Centrifugation

The centrifuge was stopped due to imbalance I had just known it when I returned to the machine.
"I am busy, but I have to re-centrifuge...." Have you ever experienced this before?
In particular, hospitals engage in daily routine to reduce TAT (Turn Around Time).
KUBOTA will support a reduction in TAT by eliminating re-centrifugation.

Achieving Zero Breakage of Centrifugal Tubes

If the wrong bucket is placed and centrifuged, the bucket will be removed during centrifuging and centrifugal tubes will get broken on impact.
If a blood collection tube gets broken, blood must be collected again from patients. It would be troublesome for patients and this process requires labor and time.
There are also researchers who never want to lose precious samples since it takes time to prepare them. KUBOTA prevents the breakage of centrifugal tubes and the loss of important samples with this function.

Reduction of Repair Costs and Repair Time

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.

Responding to User Needs in a Multitude of Ways

Mixed Loading MiX

KUBOTA achieved Mixed Loading where two different types of buckets 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.

"A bucket (Code No. 053-4930) can be used conveniently to spin both long and short blood collection tubes; however, I'd like to use more long blood collection tubes at a time."
"It is troublesome to exchange buckets; however, when short blood collection tubes are placed in the bucket for long blood collection tubes, it is difficult to take the short tubes out."
MiX set (Code No. 053-0140) is your solution.
When centrifuging long blood collection tubes alone, up to 20 tubes can be set.

8 × Short blood collection tubes;
12 × long blood collection tubes

In addition, a MiX set (Code No. 053-0130) for 50 mL conical tubes and 15 mL conical tubes is available.

4 × 15 mL conical tubes;
2 × 50 mL conical tubes

LCD Display LCD

- User-friendly display. LCD display lights turn on and off repeatedly when the centrifugation is complete.
  Therefore, you can check completion of the centrifuge from a distance.

User Interface 3 direct memory 3-channel

- Three 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.

user-oriented

Viewport

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

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.

Power-saving mode

- S300TR automatically stops the refrigeration process and turns off the display. Power consumption in this mode is approximately 7 W.
- S300T automatically turns off the display. Power consumption in this mode is approximately 7 W.

Rotor durability

- Rotors and buckets of the centrifuges are made of metal, which consists of stainless steel and aluminum.
- If a metal plate is bent and straightened over and over, it will eventually get broken 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 get broken 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.

KUBOTA’s Dedication to Safety

- 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.

Rotor specifications

S300T/S300TR Rotor, Bucket, Adapter

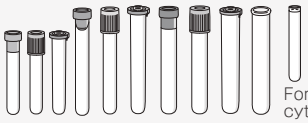
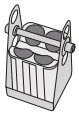
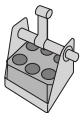
Swing rotor

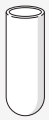
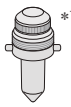
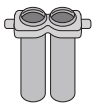
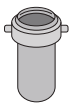
RS-240A

Autoclavable※

(Bucket and adapter are optional.)

Max 4,000rpm
Max 2,610×g

Tube			 For flow cytometry	
Nominal capacity	48 × 1.5/2mL *2	40 × 6 mL RIA tube *2	16 × 5 - 10 mL blood collection tube/ *3 15 mL glass tube	24 × 10 mL glass tube
Tube size: Diameter×Length(mm)	9.5 - 11 × 36 - 60	12 - 13.3 × 36 - 75	12 - 17 × 65 - 107	12 - 13.3 × 46 - 105
Max. speed(rpm)	4,000	4,000	4,000	4,000
Max. RCF(×g)*1	1,950	1,950	2,400	2,410
Code No.	053-5040 (Equipped with rubber cushion) *8	053-5030 (Equipped with rubber cushion) *8	053-4930 (Equipped with rubber cushion) *9 	053-5850 (Equipped with rubber cushion) *14 

Tube				
Nominal capacity	4 × 15 mL conical tube	4 × 15 mL conical tube	8 × 15 mL conical tube	4 × 50 mL glass tube
Tube size: Diameter×Length(mm)	17 × 121	17 × 121	17 × 121	27 - 37 × 95 - 110
Max. speed(rpm)	4,000	4,000	4,000	4,000
Max. RCF(×g)*1	2,590	2,590	2,580	2,520
Code No.	053-5010 055-1280 (Set of 2)	053-0040 *7  055-1280 (Set of 2)	053-1580 	053-4990 

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

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

＊ 1 : In order to display RCF more accurately, you can input the radius of rotation. At delivery of S300T/S300TR, the radius of rotation is input to be 14.6 cm.
The max. RCF indicated on this page is calculated at the max. speed for each radius of rotation.

＊ 2 : Buckets for tubes with special dimensions can be made with special order. Please contact us.

＊ 3 : 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 too.

＊ 4 : 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.

＊ 5 : When using a tapered glass tube, please use it at a speed of 3,000 rpm or lower. This bucket (Code No.053-7340) is exclusively for S300T/S300TR and cannot be used for other models.

＊ 6 : When using a glass tube, rubber cushion (Code No.024-0159) is necessary.

＊ 7 : A bucket with a sealing cap. Sealing cap and O ring (silicon) are included as standard. Autoclaving (at 121oC) is available.

＊ 8 : This is shipped with rubber cushion (Code No.024-1880) equipped.

＊ 9 : This is shipped with rubber cushion (Code No.024-0159) equipped.

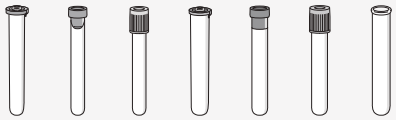
＊10 : This is shipped with rubber cushion (Code No.024-2610) equipped.

＊11 : This bucket (Code No. 053-0140) is sold as a set 2 of Code No. 053-4930 and 2 of Code No. 053-7340. For rubber cushion, please refer to *9 and *10.

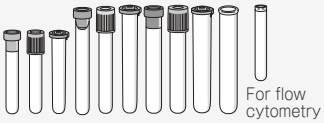
＊12 : This bucket (Code No. 053-0130) is sold as a set 2 of Code No. 053-1580 and 2 of Code No. 053-5010.

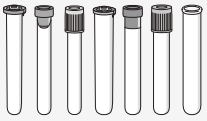
＊13 : Mix set are exclusively for S300T/S300TR and cannot be used for other models.

＊14 : This is shipped with rubber cushion (Code no.024-1890) equipped.

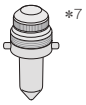
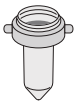
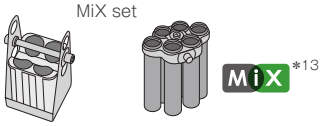
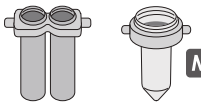


4 × 7 - 10 mL long blood collection tube / *4 15 mL glass tube	4 × 7 - 10 mL long blood collection tube / *4 15 mL glass tube	8 × 7 - 10 mL long blood collection tube / *4 15 mL glass tube	16 × 7 - 10 mL long blood collection tube / *4 15 mL glass tube	24 × 7 - 10 mL long blood collection tube / *4 15 mL glass tube
12 - 17.2 × 86 - 110	12 - 17.8 × 87 - 110	12 - 17.2 × 86 - 110	12 - 17.2 × 86 - 110	12 - 17.2 × 89 - 107
4,000	4,000	4,000	4,000	4,000
2,470	2,430	2,470	2,450	2,470
053-6010 (Equipped with rubber cushion) *9	053-4990	055-7400 *6 (Set of 4)	024-0159 (optional) (Set of 10)	053-6020 (Equipped with rubber cushion) *9	053-6030 (Equipped with rubber cushion) *9	053-7340 *5 (Equipped with rubber cushion) *10





4 × 50 mL conical tube	4 × 50 mL conical tube	8 × 5 - 10 mL blood collection tube/ *3 15 mL glass tube	12 × 7 - 10 mL long blood collection tube/ *4 15 mL glass tube	4 × 15 mL conical tube	2 × 50 mL conical tube
30 × 117	30 × 117	12 - 17 × 65 - 107	12 - 17.2 × 89 - 107	17 × 121	30 × 117
4,000	4,000	4,000	4,000	4,000	4,000
2,610	2,610	2,400	2,470	2,580	2,610
053-0040 *7	053-5010	053-0140 *11 (Equipped with rubber cushion) MiX set *13	053-0130 *12 MiX set *13

Recommended configurations

Clinical laboratory

Product / description	Quantity
Benchtop Centrifuge S300T	1
Rotor RS-240A	1
MiX set 053-0140 (8 × 5 - 10 mL blood collection tube/ 12 × 7 - 10 mL blood collection)	1

Clinical laboratory

Product / description	Quantity
Benchtop Refrigerated Centrifuge S300TR	1
Rotor RS-240A	1
MiX set 053-0140 (8 × 5 - 10 mL blood collection tube/ 12 × 7 - 10 mL blood collection tube)	1

Academic/Company laboratory

Product / description	Quantity
Benchtop Refrigerated Centrifuge S300TR	1
Rotor RS-240A	1
MiX set 053-0130 (4 × 15 mL conical tube /2 × 50 mL conical tube)	1

S300T

Product name	Benchtop Centrifuge
Swing rotor	
Max. capacity	15mL×24
Max. speed (rpm)	4,000 rpm
Max. RCF (×g)	2,610×g
Size	34(W)×42(D)×33(H) cm Height with opened lid 66 cm
Weight	20 kg
Power consumption: calorific value	170W, 0.61MJ/h (Power-saving mode: Approx. 7W)
Power requirements	Single phase 110/115V ± 10%, 50/60Hz, 8A Single phase 220/230V ± 10%, 50/60Hz, 5A
Rated voltage, rated current	110V 2.7A, 115V 2.5A, 220/230V 1.3A
Use environment	Temperature: 10 - 35℃
	Humidity: 30 - 85%
	Atmospherics pressure: 70 - 106kPa (700 - 1,060 mbar)
Conforming standard	IEC61010-2-020: 110/115V model CE Marking: 220/230V model
Speed setting range	200 - 4,000 rpm
	10 rpm step
Timer setting range	seconds: 1 second step
	minutes: 1 minute step
	hour: 1 hour step
	Hold
Temperature setting range	—
Refrigerated	—
Program memory	99 channels at the maximum (3 for direct invocation using the panel button)
Acceleration/ deceleration	2 ways of switching, natural deceleration

S300TR

Product name	Benchtop Refrigerated Centrifuge
Swing rotor	
Max. capacity	15mL×24
Max. speed (rpm)	4,000 rpm
Max. RCF (×g)	2,610×g
Size	36(W)×64(D)×33(H) cm Height with opened lid 66 cm
Weight	110/115V 40 kg, 220/230V 44 kg
Power consumption: calorific value	360W, 1.3MJ/h (Power-saving mode: Approx. 7W)
Power requirements	Single phase 110/115V ± 10%, 50/60Hz, 10A Single phase 220/230V ± 10%, 50/60Hz, 8A
Rated voltage, rated current	110V 4.9A, 115V 4.6A, 220V 2.5A, 230V 2.4A
Use environment	Temperature: 10 - 35℃
	Humidity: 30 - 85%
	Atmospherics pressure: 70 - 106kPa (700 - 1,060 mbar)
Conforming standard	IEC61010-2-020: 110/115V model CE Marking: 220/230V model
Speed setting range	200 - 4,000 rpm
	10 rpm step
Timer setting range	seconds: 1 second step
	minutes: 1 minute step
	hour: 1 hour step
	Hold
Temperature setting range	−10℃ - +40℃ in 1℃ step
Refrigerated	R134a
Program memory	99 channels at the maximum (3 for direct invocation using the panel button)
Acceleration/ deceleration	2 ways of switching, natural deceleration

Size comparison between S300T and S300TR

S300TR has a cooling function for temperature control and for controlling increases in sample temperature. For that reason, width is wider by 1 cm on both right and left sides and depth is longer by 22 cm.

Centrifuge table for S300TR
(Code No. 047-0000)

A table with casters for centrifuge. This table has two drawers that are convenient for storing items and the table can be secured with adjusters.
Dimensions: 41(W)×64(D)×46(H) cm

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.

- The term of supplying spare parts for repair is 7 years after discontinuation of production (except spare parts which we are unable to procure).
- This catalogue is not for distribution in the USA, Canada and Mexico as products shown are not for sale in these countries.

KUBOTA CORPORATION
www.centrifuge.jp
29-9 Hongo 3-chome, Bunkyo-ku, Tokyo 113-0033, Japan
Tel +81 3 3815 1331 Fax +81 3 3814 2574

Copyright © 2019 KUBOTA CORPORATION W-MAY, Printed in Japan