



Multipurpose Centrifuge S700 Series

S700 Series



new design,
innovation
and
user-oriented

Benchtop Refrigerated Centrifuge

S700TR Refrigerated

220V 230V



Benchtop Centrifuge

S700T Non-refrigerated

110V 115V 220V 230V



Floor Standing Refrigerated Centrifuge

S700FR Refrigerated

110V 220V 230V





new design

New design

Renewal of the design for total coordination of the entire centrifuge form, lime green accent line, interface unit, rotor, bucket, and tube rack

innovation

Innovation – Newly developed rotor

- Significantly increased quantity of blood collecting tubes or conical tubes based on the new rotor design
- Compatibility with 250-mL conical tubes (Corning) in contrast to the incompatibility of conventional centrifuges of the same class
- Mix loading of round buckets and plate buckets realized by RS-7504M



user-oriented

User-oriented features

- VFD (vacuum fluorescent display, emits very bright with high contrast) based on Japanese original technology
Realization of distant visibility and wide view angle by VFD
- 3-channel direct memory and simplified panel unit for the ease of use in routine operations

Safety

International safety standard for centrifuge IEC61010-2-020

- The rotor has strong motion energy during centrifugation.
All rotors are certified to have passed the strict durability test at the maximum load; however, some reason may cause the rotor to be destroyed during centrifugation.
- Even in the case that the rotor would be destroyed during centrifugation, our IEC61010-2-020-compliant centrifuge can keep all debris inside to secure safety of the user.

Multipurpose Centrifuge S700 Series

S700 Series

➤ New design

Breathing new life into the centrifuge/rotor design including the entire form, user interface such as the panel unit, lime green accent line, and colorful rotor/bucket/shield cover/tube rack to change the previous cold appearance.



S700FR



**15 mL Conical tube × 68
Tube rack**

055-2020 (4-unit set)



**50 mL Conical tube × 28
Tube rack**

055-2030 (4-unit set)



**5-10 mL Blood
collecting tube × 96
Tube rack**

055-1420 (4-unit set)



**5-7 mL Slim blood
collecting tube × 144
Tube rack**

055-1410 (4-unit set)

Realization of total coordination
by arranging the colors of rotor, bucket,
shield cover, and tub rack in total,
like clothes or shoes.



RS-1440M rotor (bucket attached)

027-9240 Shield cover (4-unit set)

new design

➤ Innovation – Newly developed rotor

Newly developed rotor RS-7504M

- New structure realizing mix loading of two round buckets and two plate buckets **MiX**
- Significant increase of 50 mL/15 mL Conical tubes compared with the conventional rotor (RS-3020M)
Compatibility with 250 mL Conical tubes (Corning)
- Achieve 3,330xg with 750 mL bottles by S700FR/TR, and 3,000xg by S700T.
Features optimal for centrifugation of large-capacity bottles at high centrifugal force for environmental analysis, etc.



Shield cover-attached round bucket × 4



Round bucket × 2 / Plate bucket × 2



Plate bucket × 4

RS-7504M specification

	S700T	S700FR / S700TR
50 mL Conical tube × 28	3,800 rpm / 3,080 xg	4,000 rpm / 3,420 xg
15 mL Conical tube × 56	3,800 rpm / 3,050 xg	4,000 rpm / 3,380 xg
250 mL Conical tube (Corning) × 4	3,800 rpm / 3,100 xg	4,000 rpm / 3,430 xg
750 mL Bottle (Beckman) × 4	3,800 rpm / 3,000 xg	4,000 rpm / 3,330 xg
Microplate × 16	3,800 rpm / 2,710 xg	4,000 rpm / 3,010 xg

RS-3020M specification (conventional rotor)

	8420 (conventional model)	5930 (conventional model)
50 mL Conical tube × 20	—	4,000 rpm / 3,420 xg
15 mL Conical tube × 48	—	4,000 rpm / 3,400 xg
250 mL Conical tube (Corning) × 4	—	—
750 mL Bottle × 4	—	4,000 rpm / 3,430 xg
Microplate × 16	—	—

Newly developed rotor RS-1440M

- Achievement of more than 20% increase in the blood collecting tube quantity compared with the conventional rotor (RS-3013M)
- Integration of handle with shield cover for the increased bucket size and realization of easy bucket removal
- Ingenuity in the attachment of tube rack handle for smooth removal and transfer
- Increased conical tube quantity and compatibility with 250 mL Conical tube (Corning)



5-7 mL Slim blood collecting tube × 144
Shield cover attached



50 mL Conical tube × 14
15 mL Conical tube × 34



5-10 mL Blood collecting tube × 96

RS-1440M specification

	S700T	S700FR / S700TR
5-7 mL Slim blood collecting tube × 144	3,500 rpm / 2,530 xg	3,500 rpm / 2,530 xg
5-10 mL Blood collecting tube × 96	3,500 rpm / 2,530 xg	3,500 rpm / 2,530 xg
50 mL Conical tube × 28	3,500 rpm / 2,600 xg	3,500 rpm / 2,600 xg
15 mL Conical tube × 68	3,500 rpm / 2,600 xg	3,500 rpm / 2,600 xg
250 mL Conical tube (Corning) × 4	3,500 rpm / 2,630 xg	3,500 rpm / 2,630 xg

RS-3013M specification (conventional rotor)

	8420 (conventional model)	5930 (conventional model)
5-7 mL Slim blood collecting tube × 80	3,300 rpm / 2,280 xg	3,300 rpm / 2,280 xg
5-10 mL Blood collecting tube × 80	3,300 rpm / 2,280 xg	3,300 rpm / 2,280 xg
50 mL Conical tube × 24	3,300 rpm / 2,280 xg	3,300 rpm / 2,280 xg
15 mL Conical tube × 48	3,300 rpm / 2,280 xg	3,300 rpm / 2,280 xg
250 mL Conical tube (Corning) × 4	—	—

innovation

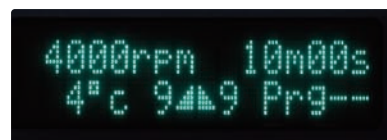
➤ User-oriented features

VFD display, very bright emission with high contrast

VFD

Minimum view angle of 126°

- Installation of VFD (vacuum fluorescent display) based on Japanese original technology
- In general, display visibility depends on the contrast ratio of the display dot unit. VFD is characterized by a **large contrast ratio and clear distant visibility** because displayed dots spontaneously emit light while other dots are turned off.
- The minimum view angle is as wide as 126° and allows checking of the display even from an oblique direction.



User interface

3 direct memory channel

- **3-channel direct memory**, easy-to-recognize START/STOP/OPEN buttons enable routine centrifugation operation with these simple keys.
- The arrow keys is used for setting. Various menus and errors are also displayed.



Error display



Motorized lid lock

- Newly developed motorized lid lock system has been adopted for lid lock.
- When the lid is lightly pushed, the motor functions to automatically lock the lid.

Energy-saving mode



- S700FR/S700TR automatically turns the refrigerator and display "OFF." Energy consumption is about 12W in this mode.
- S700T automatically turns the display "OFF." Energy consumption is about 12W in this mode.

user-oriented

➤ Safety-oriented measures

International safety standard for centrifuge: **IEC61010-2-020**

- The rotor has strong motion energy during centrifugation.
All rotors are certified to have passed the strict durability test at the maximum load; however, some reason may cause the rotor to be destroyed during centrifugation.
- Even in the case that the rotor would be destroyed during centrifugation, our IEC61010-2-020-compliant centrifuge can keep all debris inside to secure safety of the user.

Limit of durable use of rotor

- The rotor and the bucket constituting the rotary body of the centrifuge are made of metal material such as stainless steel and aluminum.
- Metallic fatigue means breakage of metal plate after repetitive bending and extension.
- As the rotor and the bucket are rotated at high speed, they are subjected to “bending and extension” and thus get broken at a certain point due to metallic fatigue.
- For safe use, please replace the rotor when the actual use reaches the limit of durable use.
Thank you for your understanding and cooperation.

For delivery of high-quality products

- We create prototypes at the development stage and conduct the durability test under actual use conditions. Only the prototypes that have passed the durability test are allowed to move on to the next step.
- After the durability test, we further create prototypes and conduct the field test at the on-site place of the user. After the test, we receive feedback from the user to reflect their opinion to our products.
- Skillful technicians conduct testing before shipping.
Every product is carefully examined to check, for example, whether sound or vibration is actually recognized by a tester.



Safety

System Package

University laboratory: CELL CULTURE AND PLATE PACKAGE

Product name / Item	Quantity
Benchtop Refrigerated Centrifuge S700TR	1
Swing rotor RS-7504M	1
Round bucket 053-0104	4
Tube rack 055-1464 (50 mL Conical tube × 28)	4
Tube rack 055-1454 (15 mL Conical tube × 56)	4
Plate bucket 053-0112 (Microplate × 8)	2

Company laboratory: CELL CULTURE AND PLATE PACKAGE

Product name / Item	Quantity
Benchtop Refrigerated Centrifuge S700TR	1
Swing rotor RS-7504M	1
Round bucket 053-0104	4
Tube rack 055-1464 (50 mL Conical tube × 28)	4
Tube rack 055-1454 (15 mL Conical tube × 56)	4
Plate bucket 053-0112 (Microplate × 8)	2

Hospital laboratory: BLOOD TUBE PACKAGE

Product name / Item	Quantity
Benchtop Centrifuge S700T	1
Swing rotor RS-1440M (bucket attached)	1
Tube rack 055-1420 (5-10 mL Blood collecting tube × 96)	4

Hospital laboratory: BLOOD TUBE PACKAGE

Product name / Item	Quantity
Benchtop Refrigerated Centrifuge S700TR	1
Swing rotor RS-1440M (bucket attached)	1
Tube rack 055-1420 (5-10 mL Blood collecting tube × 96)	4

Bacterial laboratory: BACTERIOLOGICAL TEST PACKAGE

Product name / Item	Quantity
Benchtop Refrigerated Centrifuge S700TR	1
Swing rotor RS-7504M	1
Round bucket 053-0104	4
Tube rack 055-1464 (50 mL Conical tube × 28)	4
Tube rack 055-1454 (15 mL Conical tube × 56)	4
Shield cover 027-9254	4

Environmental analysis: LARGE VOLUME PACKAGE

Product name / Item	Quantity
Benchtop Centrifuge S700T	1
Swing rotor RS-7504M	1
Round bucket 053-0104 (750 mL × 4)	4

Rotor specification

RS-7504M

Tube			S700T		S700FR / S700TR		2-unit set*5				4-unit set			
Nominal Capacity mL	Product Name or Code No.	Tube Size diam. × length	Acceptable Speed rpm	Maximum RCF ×g	Acceptable Speed rpm	Maximum RCF ×g	Quantity	Bucket Code No.	Tube Rack Code No.	Shield Cover Code No.	Quantity	Bucket Code No.	Tube Rack Code No.	Shield Cover Code No.
5-7	5-7 mL Slim blood collecting tube	φ 12-13.2 × 108 CAPφ 17 or less*1	3,800	2,870	4,000	3,180	46	053-0102	055-1432	027-9252	92	053-0104	055-1434	027-9254
5-10	5-10 mL Blood collecting tube	φ 12-17 × 110 CAPφ 18 or less*2	3,800	2,940	4,000	3,260	42		055-1442		84		055-1444	
15	15 mL Conical tube (e.g., Falcon)	φ 17 × 121 CAPφ 23 or less	3,800	3,050	4,000	3,380	28		055-1452		56		055-1454	
50	50 mL Conical tube (e.g., Falcon)	φ 30 × 117 CAPφ 36 or less	3,800	3,080	4,000	3,420	14		055-1462		28		055-1464	
250	250 mL Bottle Nalgene (e.g., 3120-0250)	φ 61.8 × 134.4 or less	3,800	3,100	4,000	3,430	2		055-1472	4	055-1474			
250	250 mL Conical tube (Corning 430776)	φ 60.2 × 161 CAPφ 35.2	3,800	3,100	4,000	3,430	2		055-1482	—	4	055-1484	—	
750	750 mL Bottle Herolab (253580, 253581)	φ 98 × 154 CAPφ 60	3,800	3,100	4,000	3,430	2		—	—	4	—	—	
750	750 mL Bottle Beckman (356855, 358299)	φ 97 × 135 CAPφ 69	3,800	3,000	4,000	3,330	2		Beckman bottle sleeve 349846	027-9252	4	Beckman bottle sleeve 349846	027-9254	
Microplate	96-well microplate*3	86(W) × 128(D) × 52(H)	3,800	2,710	4,000	3,010	8	053-0112	—	—	16	053-0114	—	—
	Deep well plate		3,800	2,710	4,000	3,010	2				4			

50mL, 100mL and 350mL glass tube racks are available. Please contact us for details.

RS-1440M (bucket attached)

Tube				S700T / S700FR / S700TR		Bucket Code No.	Tube Rack Code No.	Shield Cover Code No.
Nominal Capacity mL	Quantity	Product Name or Code No.	Tube Size diam. × length	Acceptable Speed rpm	Maximum RCF ×g			
5-7	144	5-7 mL Slim blood collecting tube	φ 12-13.2 × 108 CAPφ 17 or less*1	3,500	2,530	Bucket Code No. (listed on the rotor)	055-1410	027-9240
5-10	96	5-10 mL Blood collecting tube	φ 12-17 × 110 CAPφ 18 or less*2	3,500	2,530		055-1420	
15	96	15 mL Glass tube (e.g., 052-6330)	φ 12-17 × 110 or less	3,500	2,530		055-1420	
15	68	15 mL Conical tube (e.g., Falcon)	φ 17 × 121 CAPφ 23 or less	3,500	2,600		055-2020	
50	28	50 mL Conical tube (e.g., Falcon)	φ 30 × 117 CAPφ 36 or less	3,500	2,600		055-2030	
250	4	250 mL Conical tube (Corning 430776)	φ 60.2 × 161 CAPφ 35.2	3,500	2,630		055-1520*4	—
750	4	750 mL Bottle (Herolab: 253580, 253581)	φ 98 × 154 CAPφ 60	3,500	2,630		055-1520	—
750	4	750 mL Bottle (Beckman: 356855, 358299)	φ 97 × 135 CAPφ 69	3,500	2,630		055-1520	027-9240

AT-508C

Tube				S700T / S700FR / S700TR	
Nominal Capacity mL	Quantity	Product Name or Code No.	Tube size diam. × length	Acceptable Speed rpm	Maximum RCF ×g
50	8	50 mL Conical tube (e.g., Falcon)	φ 30 × 117 CAPφ 36 or less	6,000	5,350

* 1: A 5-7 mL slim blood collecting tube with a length (below the cap) of 60 mm or more can be used (Sekisui Insepack II, Nipro Neotube, BD Vacutainer, etc.).

* 2: A 5-10 mL blood collecting tube with a length (below the cap) of 60 mm or more can be used (Sekisui Insepack II, Terumo Venoject II, Nipro Neotube, BD Vacutainer, etc.).

* 3: Please test the strength of plates prior to centrifugation before use. There may be a case where the lower plate would be crushed.

* 4: A 250 mL Conical tube adopter (No. 055-1530) is necessary.

* 5: 4 buckets are necessary for the rotor.

RA-2724M

Tube				S700T		S700FR / S700TR	
Nominal Capacity mL	Quantity	Product Name or Code No.	Tube size diam. × length	Acceptable Speed rpm	Maximum RCF ×g	Acceptable Speed rpm	Maximum RCF ×g
2	24	1.5 / 2 mL Micro tube	φ 11 × 42	—	—	12,000	13,200

S700FR

Trade name	Floor Standing Refrigerated Centrifuge
Swing rotor	
Maximum capacity	750 mL × 4
Maximum speed	4,000 rpm (RS-7504M)
Maximum RCF	3,430 ×g (RS-7504M)
Angle rotor	
Maximum capacity	50 mL × 8 (AT-508C)
Maximum speed	12,000 rpm (RA-2724M)
Maximum RCF	13,200 ×g (RA-2724M)
Dimension	54(W) × 63(D) × 84(H) cm Height for lid opening: 136 cm
Weight	118 kg
Power consumption and heat output	110V 950W, 115V 950W, 3.4MJ/h 220V 910W, 230V 910W, 3.3MJ/h (energy-saving mode: about 12W)
Power requirements	Single phase AC 110V ± 10%, AC 115V ± 10%, 50/60 Hz, 15A Single phase AC 220V ± 10%, AC 230V ± 10%, 50/60 Hz, 10A
Rated voltage and rated current	110V 9.8A, 115V 9.8A, 220V 5.9A, 230V 5.9A
Operating environment	Temperature: 10°C to 35°C Humidity: 30% to 85% Atmospheric pressure: 70 to 106 kPa (700 to 1,060 mbar)
Certificates of conformity	IEC61010-2-020
Speed setting and indication	200 rpm - 12,000 rpm 10 or 100 rpm step
Timer setting and indication	59 minutes 59 seconds: 1 sec. increments 99 hours 59 minutes: 1 min. increments HOLD (∞)
Temperature setting and indication	-10°C ~ +40°C: 1°C increments
Refrigerant	R134a 340 g
Program memory	99 settings (including 3 settings for direct execution using panel buttons)
Acceleration and deceleration change	9 steps

S700TR

Trade name	Benchtop Refrigerated Centrifuge
Swing rotor	
Maximum capacity	750 mL × 4
Maximum speed	4,000 rpm (RS-7504M)
Maximum RCF	3,430 ×g (RS-7504M)
Angle rotor	
Maximum capacity	50 mL × 8 (AT-508C)
Maximum speed	12,000 rpm (RA-2724M)
Maximum RCF	13,200 ×g (RA-2724M)
Dimension	77(W) × 63(D) × 40(H) cm Height for lid opening: 93 cm
Weight	103 kg
Power consumption and heat output	220V 900W, 230V 900W, 3.2MJ/h (energy-saving mode: about 12W)
Power requirements	Single phase AC 220V ± 10%, AC 230V ± 10%, 50/60 Hz, 10A
Rated voltage and rated current	220V 5.5A, 230V 5.2A
Operating environment	Temperature: 10°C to 35°C Humidity: 30% to 85% Atmospheric pressure: 70 to 106 kPa (700 to 1,060 mbar)
Certificates of conformity	CE Marking
Speed setting and indication	200 rpm - 12,000 rpm 10 or 100 rpm step
Timer setting and indication	59 minutes 59 seconds: 1 sec. increments 99 hours 59 minutes: 1 min. increments HOLD (∞)
Temperature setting and indication	-10°C ~ +40°C: 1°C increments
Refrigerant	R134a 340 g
Program memory	99 settings (including 3 settings for direct execution using panel buttons)
Acceleration and deceleration change	9 steps

S700T

Trade name	Benchtop Centrifuge
Swing rotor	
Maximum capacity	750 mL × 4
Maximum speed	3,800 rpm (RS-7504M)
Maximum RCF	3,100 ×g (RS-7504M)
Angle rotor	
Maximum capacity	50 mL × 8 (AT-508C)
Maximum speed	6,000 rpm (AT-508C)
Maximum RCF	5,350 ×g (AT-508C)
Dimension	54(W) × 63(D) × 38(H) cm Height for lid opening: 91 cm
Weight	59 kg
Power consumption and heat output	110V 570W, 115V 570W, 230V 590W, 2.1MJ/h 220V 600W, 2.2MJ/h (energy-saving mode: about 12W)
Power requirements	Single phase AC 110V ± 10%, AC 115V ± 10%, 50/60 Hz, 15A Single phase AC 220V ± 10%, AC 230V ± 10%, 50/60 Hz, 8A
Rated voltage and rated current	110V 6.9A, 115V 6.9A, 220V 3.7A, 230V 3.6A
Operating environment	Temperature: 10°C to 35°C Humidity: 30% to 85% Atmospheric pressure: 70 to 106 kPa (700 to 1,060 mbar)
Certificates of conformity	IEC61010-2-020: 110V, 115V model CE Marking: 220V, 230V model
Speed setting and indication	200 rpm - 6,000 rpm 10 or 100 rpm step
Timer setting and indication	59 minutes 59 seconds: 1 sec. increments 99 hours 59 minutes: 1 min. increments HOLD (∞)
Program memory	99 settings (including 3 settings for direct execution using panel buttons)
Acceleration and deceleration change	9 steps

Kubota has acquired ISO 9001 and ISO 13485 certification.

NOTE

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



DISCONTINUE
USE
INDICATIONS

Always discontinue
use if any of the
conditions listed at
right are evident.

- The rotor or bucket appears to be damaged or corroded.
- The equipment emits a burnt smell.
- You receive a minor electric shock when you touch the equipment with your bare hand.
- Any other abnormality or indication of failure is noticed.

IMPORTANT

In the event of any observed abnormality in the equipment or its parts, to prevent occurrence of functional failure or accidents, immediately turn off the power switch, disconnect the power cable plug from the mains socket and contact your local distributor or Kubota Corporation if there is no local distributor in your neighbourhood.



Safety Precautions

For your safe use of the equipment, be sure to read the instruction manual carefully before you start operations.

Do not misplace the instruction manual.
Keep the instruction manual nearby so 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.

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