



Compact Table Top Refrigerated Centrifuge

2800/2810



2800

Available for a wide range of tubes from micro-tubes upto 24x15mL or 4x100mL tubes.

6x Micro-plate or 2x deep well plate centrifuged at RCF 1,790xg. Sealing cap for biohazard proof operating condition is available.

2810

Swing bucket rotor of biohazard proof spins at 4,300rpm with RCF 3,000xg. Model 2810 uses only RS-1004/2 rotor.



Appearance of 2810 is similar to 2800.

Easy-to-operate and convenient functions

- **Program memories (3 channels) for repeated routine operation**
A memory function is available for repetitive operation using the same set values of operation, i.e. speed, time and temperature.
- **Buzzer at the end of operation**
5 different buzzer sounds allow recognition of the end of a centrifugal operation from across the room.
- **Compliance with GMP requirements**
Equipped with a tachometer port. Actual rotor speed is easy to check. Actual rotation radius can be set and the indication of correct RCF is realized.
- **Pre-cooling**
- **Spin down with FLUSHING MEMORY (Patent pending)**

Safety pursued

- The various alarm detector sensors secure operation.
- 2800/2810 conform to the International Safety Standard IEC 61010-2-020.

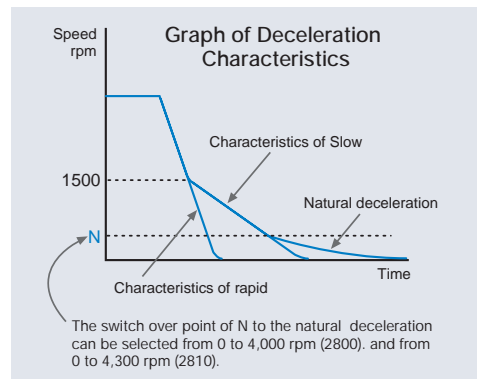
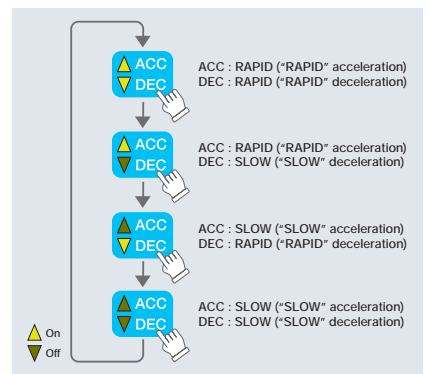


Center lock mechanism ensures that the lid will keep the rotor inside the centrifuge if it is damaged during the centrifugal operation. The interlock part is protected from mechanical shock and is provided with a double protected electrical circuit.

Sample temperature is kept at least 4°C at the maximum speed (ambient temperature at 25°C)

Acceleration/Deceleration Function

Rapid/slow acceleration and rapid/slow deceleration can be switched according to the type of sample and experimental conditions. The switch pattern is shown on the right.



RS-240 Swinging Bucket Rotor



Bucket



48x2mL
Code No.053-5040



40x6mL
Code No.053-5030



24x5mL blood
collecting tube/10mL
Code No.053-5850



4x10mL blood
collecting tube/
15mL glass tube/
15mL conical tube
Code No.053-4910



8x10mL blood
collecting tube/
15mL conical tube
Code No.053-4900

RMP-23 Plate Rotor

6x microplate



Autoclavable (121°C)



16x10mL blood
collecting tube/
15mL glass tube
Code No.053-4980



24x10mL blood
collecting tube/
15mL glass tube
Code No.053-7340



4x10mL blood collecting tube/
15mL glass tube/50mL glass tube
Code No.053-4990
Adaptor for 10mL blood collecting tube/
15mL glass tube
Code No.055-7400



4x50mL conical tube
Code No.053-5010
Adaptor common to 15mL/50mL
Code No.055-6010

Rotor, Bucket, Tube Rack Table for Model 2800

Rotor Name	Nominal Capacity	Tube size (mm) diam. x length	Rotation Radius cm	Maximum Speed rpm	Maximum RCF *1	Bucket Code No.	Tube Rack Adaptor Code No.
RS-240	48x2mL *2	9.5 ~ 11x36 ~ 60	10.9	4,000	1,950	053-5040	
	40x6mL *2	12.5 ~ 13.3x36 ~ 80	11.0	4,000	1,970	053-5030	
	24x5mL blood collecting tube/10mL *4	12.5 ~ 13.3x46 ~ 105	13.6	4,000	2,430	053-5850	
	4x10mL blood collecting tube/15mL	15 ~ 17.2x86 ~ 110	14.2	4,000	2,540	053-4910	
	4x15mL Conical tube	17x121	14.4	4,000	2,580	053-4910	
	8x10mL blood collecting tube/15mL	15 ~ 17.2 x 86 ~ 110	14.1	4,000	2,520	053-4900	
	8x15mL Conical tube	17x121	14.4	4,000	2,580	053-4900	
	16x10mL blood collecting tube/15mL	15 ~ 17.2x86 ~ 110	14.0	4,000	2,500	053-4980	
	24x10mL blood collecting tube/15mL	15 ~ 17.2x89 ~ 105	13.9	4,000 *8	2,490	053-7340	
	4x10mL blood collecting tube/15mL	15 ~ 17.8x87 ~ 110	14.0	4,000	2,500	053-4990	055-7400 *9
	4x50mL	27 ~ 37x95 ~ 110	14.2	4,000	2,540	053-4990	
	4x50mL Conical tube	30x117	14.3	4,000	2,560	053-5010	
4x15/50mL Conical tube	17x121/30x117	14.6/14.0	4,000	2,610/2,500	053-5010	055-6010 *3	
RS-1004	20xRIA tube	11.8 ~ 12.8x65 ~ 85	11.3	4,000	2,020	S13009	
	20x7mL	11.5 ~ 12.5x95 ~ 105	13.4	4,000	2,400	S13004	
	20x7mL	11.5 ~ 12.5x65 ~ 105	14.0	4,000	2,500	S13041 *6	S14029
	16x5mL blood collecting tube *4	12.5 ~ 13.5x70 ~ 110	14.0	4,000	2,500	S13041 *6	S14033
	4x15mL Conical tube	16.5x120.6	14.3	4,000	2,560	S13150 *6	S13060
	8x15mL Conical tube	16.5x120.6	14.3	4,000	2,560	S13152	
	16x15mL	16 ~ 17x90 ~ 105	13.4	4,000	2,400	S13012	
	16x15mL	15.2 ~ 16.2x80 ~ 110	14.0	4,000	2,500	S13041 *6	S14030
	4x25mL *5	23 ~ 24x95 ~ 100	13.4	4,000	2,400	S13097	S17925
	4x25/30mL	24 ~ 25.3x75 ~ 105	14.0	4,000	2,500	S13041 *6	S14031
	4x50mL Conical tube *7	29.5x117	14.5	4,000	2,590	S13150 *6	
	4x50mL *5	34 ~ 35x95 ~ 100	13.4	4,000	2,400	S13097	S17950
4x50mL *5	34 ~ 35x70 ~ 105	14.0	4,000	2,500	S13041 *6	S14032	
4x100mL *5	44.5 ~ 45.5x95 ~ 105	13.4	4,000	2,400	S13097	with S16051 Cushion Rubber	
RMP-23	6x Microplate	86(W)x128(D)x52(H)	10.0	4,000	1,790	attached to rotor	
	2x Deepwell plate						

Rotor, Bucket, Tube Rack Table for Model 2810 *10

Rotor Name	Nominal Capacity	Tube size (mm) diam. x length	Rotation Radius cm	Maximum Speed rpm	Maximum RCF *1	Bucket Code No.	Tube Rack Adaptor Code No.
RS-1004/2	20xRIA tube	11.8 ~ 12.8x65 ~ 85	11.3	4,300	2,340	S13009	
	20x7mL	11.5 ~ 12.5x95 ~ 105	13.4	4,300	2,770	S13004	
	20x7mL	11.5 ~ 12.5x65 ~ 105	14.0	4,300	2,890	S13041 *6	S14029
	16x5mL blood collecting tube *4	12.5 ~ 13.5x70 ~ 110	14.0	4,300	2,890	S13041 *6	S14033
	4x15mL Conical tube	16.5x120.6	14.3	4,300	2,960	S13150 *6	S13060
	8x15mL Conical tube	16.5x120.6	14.3	4,300	2,960	S13152	
	16x15mL	16 ~ 17x90 ~ 105	13.4	4,300	2,770	S13012	
	16x15mL	15.2 ~ 16.2x80 ~ 110	14.0	4,300	2,890	S13041 *6	S14030
	4x25mL *5	23 ~ 24x95 ~ 100	13.4	4,300	2,770	S13097	S17925
	4x25/30mL	24 ~ 25.3x75 ~ 105	14.0	4,300	2,890	S13041 *6	S14031
	4x50mL Conical tube *7	29.5x117	14.5	4,300	3,000	S13150 *6	
	4x50mL *5	34 ~ 35x95 ~ 100	13.4	4,300	2,770	S13097	S17950
	4x50mL *5	34 ~ 35x70 ~ 105	14.0	4,300	2,890	S13041 *6	S14032
	4x100mL *5	44.5 ~ 45.5x95 ~ 105	13.4	4,300	2,770	S13097	with S16051 Cushion Rubber

*1 To show the RCF exactly, input the rotation radius. At the factory, the rotation radius is pre-set at 14.6cm. The above Maximum RCF is the calculated value at the maximum speed at each rotation radius.

*2 Tube support can be produced for special tube sizes. Please contact your local dealer.

*3 This adaptor is used commonly for both 15mL and 50mL conical tubes.

*4 The blood collecting tube is the Hemolyse tube made by Becton & Dickinson.

*5 25mL (Code No.S15025), 50mL (Code No.S15050), and 100mL (Code No.S15100) glass tubes only are acceptable.

*6 Sealing cap is attached to buckets S13041 and S13150 as standard.

*7 4 x 15mL conical tube can be accommodated if adaptor S13060 is used.

*8 In the case of 15mL taper tubes, please operate at 3,000rpm or less. Bucket 053-7340 is exclusively used with 2420 & 2800.

*9 Rubber cushion 024-1400 is necessary.

*10 Rotor RS-1004/2 can be mounted on Model 2810 only.

RS-1004 Swinging Bucket Rotor



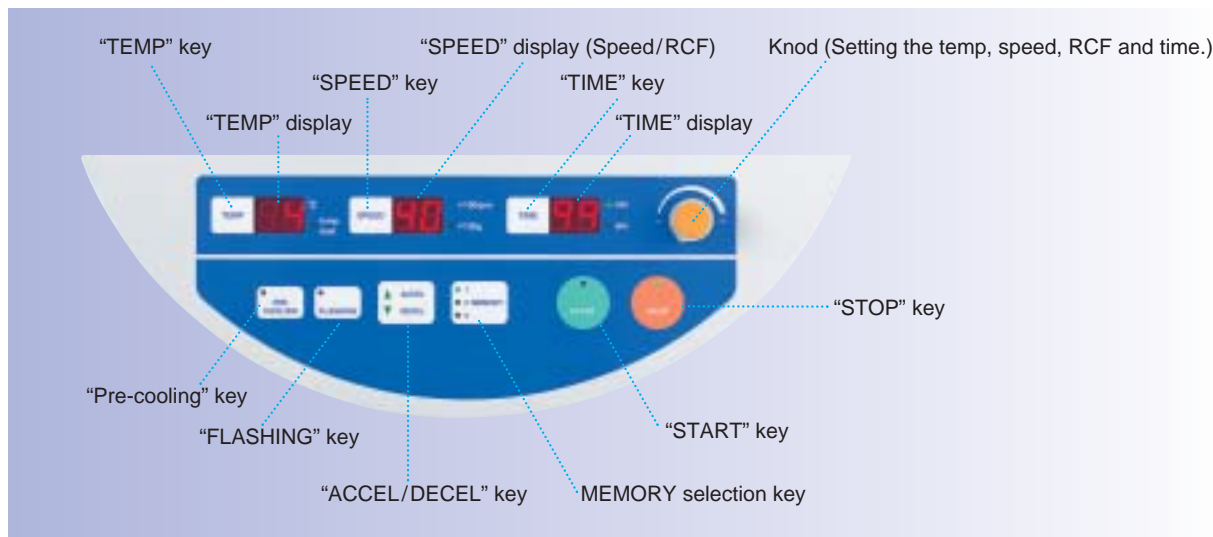
S13041 Bucket/Tube Rack

 Bucket with sealing cap Code No.S13041	 20x7mL Code No.S14029	 16x5mL blood collecting tube Code No.S14033	 16x15mL Code No.S14030	 4x25mL/30mL Code No.S14031	 4x50mL Code No.S14032
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Bucket/Adaptor

 4x50mL conical tube with sealing cap Code No.S13150	 Adaptor Code No.S13060	 20x7mL Code No.S13004	 16x15mL Code No.S13012	 8x15mL conical tube Code No.S13152	 4x100mL Code No.S13097
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Operation Panel



Specifications

Model 2800/2810

- Maximum Speed ● 4,000rpm (2800) / 4,300rpm (2810)
- Maximum RCF ● 2,610xg (digital indication of 2800 is 2,600xg) / 3,000xg (2810)
- Maximum Capacity ● 400mL
- Control system ● Micro-processor control (Brushless motor)
- Speed, RCF, Time, Acceleration & Deceleration, 3 channel memories
- Alarm display ● Lid open, Imbalance, Over speed, abnormal high temperature
- Function for detecting an occurrence of electrical abnormality in speed sensor, Inverter, lid lock, motor
- Acceleration / Deceleration ● Rapid, Slow, 4 ways of switching with natural deceleration
- Speed setting / indication ● Digital display in 100rpm increments
- RCF setting / indication ● Digital display in 100xg increments (Actual rotation radius can be set.)
- Timer setting and indication ● Digital display, with Hold
 - from 1 sec to 99 sec, in 1 sec increment setting
 - from 1 min to 99 min, in 1 min increment setting
- Setting the sound that informs the end of the operation ● 5 kinds + Sound none
- Temperature setting / indication ● Digital display -9°C to 40°C in 1°C increments, with pre-cooling
- Refrigerant ● R-134a
- Power requirements ● Single phase AC115V±10%, 50/60Hz, 15A
- Single phase AC220V±10%, 230V±10%, 50/60Hz, 10A
- Rated voltage and Rated current ● 115V, 4.8A, 220/230V, 2.4A
- Power consumption and Heat output ● 390W·1.4MJ/h (2800) / 420W·1.5MJ/h (2810)
- Dimensions, weight ● 37(W) x 64(D) x 37(H)cm^{*1}, 115V, 48kg, 220/230V, 51kg
- Test standard ● Manufactured and tested in accordance with IEC 61010-2-020




(*1) Those of projections are not included.

All specifications and external appearance subject to change without notice.

* On Model 2800/2810 only use KUBOTA made rotor, adapter and tube rack. Do not attempt use rotors, adapters or tube racks made by other manufacturers.

* The rotor mentioned in the catalogue is usable on other KUBOTA centrifuge models. For details, refer to the catalogues relevant to each model.

* Follow instructions given in the relevant Instruction & Service Manual for operating centrifuges.

 Safety Precautions	For your safe use of the equipments, be sure to read the instruction manual carefully before you start its operation.	Parts may be adversely affected by heat, humidity and specimens or deteriorated by aging resulting in functional failures or may even lose their safety characteristic to cause accidents.
 DISCONTINUE USE Always discontinue use when phenomena listed at right appear.	<ul style="list-style-type: none"> •The rotor or bucket has been found to be damaged or corroded. •A burnt smell comes out of the equipment. •You receive a minor electrification when you touch the equipment body by a naked hand. •Some other abnormality or failure has been found occurring. 	 IMPORTANT To prevent occurrences of functional failures or accidents, turn off the power switch, pull out the power cable plug from the plug socket and be sure to contact your nearest Kubota Dealer, or an office of Kubota Corporation when there is no Kubota Dealer in your neighbourhood.

KUBOTA CORPORATION

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