

**High Speed
Refrigerated Centrifuge**

Model **7000**



**Compact High Speed
Refrigerated Centrifuge**

Model **6000**



Simple design with easy-to-use features



High Speed
Refrigerated Centrifuge
Model 7000



Compact High Speed
Refrigerated Centrifuge
Model 6000



Optional foot switch attachable for
hands-free lid opening

Keeping routine work comfortable by enhancing basic functions and effectively supporting the varying needs everyday.

Just set the rotor in position – no complicated mounting procedures.

A beep sound lets you know that the rotor is properly set.

It prevents from accidents due to improper rotor setting.

Click sound lets you know the rotor cover is fixed correctly and it prevents from fixing errors.

It prevents from accidents by rotor cover that is not being fixed properly. Knob is large and easy to turn.

Turn the knob until you hear a click that means the rotor cover is completely installed.

Tighten a knob clockwise until it clicks.



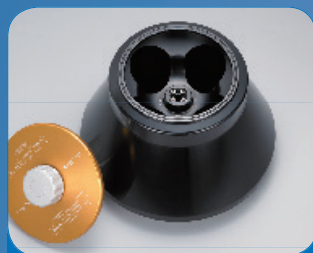
Lightweight rotors for easy replacement

New rotors are surprisingly lighter than conventional rotors. (compared with our previous rotors)



10.1kg

6 x 250mL
A-2506



13.3kg

4 x 500mL
A-5004



14.9kg

6 x 500mL
A-5006



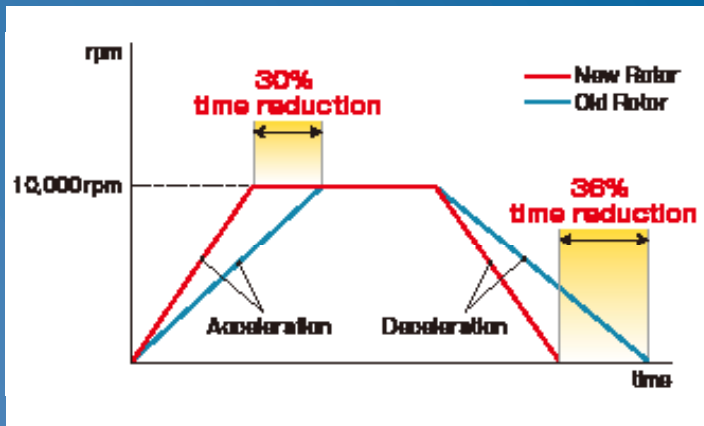
14.1kg

4 x 1,000mL
A-1K4

Fast acceleration and deceleration

Durations of acceleration and deceleration are 16~48% faster.

(compared with our previous rotors)



Comparison of 6 x 500mL rotor for Model 7000
(compared with our previous rotors)

50mL conical tubes can be used at 36,530xg~20,850xg (patented)

It allows more conical tubes to be used.

(Some conical tubes cannot be used. Refer to page 8.)

In order to prevent damaging tubes, it is necessary to neither lower rpm nor choose specific conical tubes.



A-508C
8 x 50mL 16,500rpm, 36,530xg
for model 7000



A-6512C
12 x 50mL 11,500rpm, 20,850xg
12 x 15mL 11,500rpm, 17,590xg
for model 7000

Timer function

2 kinds of timers available : to start counting down when speed reaches the setting, or to start counting down when starting of operation.

Stainless Steel Bottles

Use of full capacity of the bottle is possible. Leakage prevention with sealing caps

- A wide mouth bottle makes sample collection easy.
- Made of chemical-resistant and durable stainless steel.
- Can be used at high RCF.



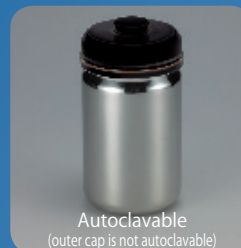
Autoclavable
(supporter is not autoclavable)

250mL
Code No.052-0050



Autoclavable

500mL
Code No.052-0060



Autoclavable
(outer cap is not autoclavable)

1,000mL
Code No.052-7080

Compact design to make the best use of laboratory

The widths of centrifuges are 64cm and 50cm, which can secure space of laboratory.



Model 7000




Model 6000


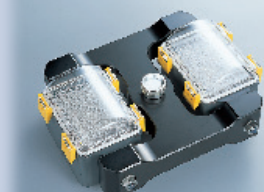



- Simple operation panel with knobs and keys
Speed, time and temperature can be set by just turning knobs.



- Function to correct temperature of rotor
Temperature of sample turns to the setting temperature.
- Pre-cooling function
Rotor pre-cooling enables rotors to reach low temperatures quickly
- Memory flashing function (patented)
The duration of the spin-down operation can be memorized automatically.
- Integrator function ($g \cdot \text{sec}$ value)
for measuring and calculating total centrifugal force
- Reminder function to prevent you from leaving the samples in a centrifuge
Buzzer sounds when samples are left behind in the centrifuge
- Function for operational supervision
Data about speed, temperature and time can be output to the computer.
- Function to adjust curve of acceleration and deceleration
- Automatic rotor identification
The rotor type and maximum speed are automatically identified when the rotor is mounted.

Guide for matching rotor

Rotor Type	Rotor for conical tubes		Fixed angle rotor for medium capacity		
Rotor Name	A-508C	A-6512C	A-1224	A-506	A-508
					
Reference page	page 8	page 8	page 8	page 8	page 8
Maximum Capacity	8 x 50mL conical tube	12 x 50mL conical tube 12 x 15mL conical tube	24 x 12mL	6 x 50mL	8 x 50mL
50mL conical tube	8	12	—	—	—
15mL conical tube	8 (with adaptor)	24 (with adaptor)	—	—	—
Model 7000 	16,500 rpm 36,530 xg	11,500 rpm 20,850 xg	18,500 rpm 42,860 xg	22,000 rpm 52,490 xg	20,000 rpm 48,300 xg
Model 6000 	15,000 rpm 30,190 xg	10,000 rpm 15,760 xg	17,000 rpm 36,190 xg	20,000 rpm 43,380 xg	17,500 rpm 36,980 xg

Rotor Type	Micro rotor	Plate rotor	
Rotor Name	A-224	P-751	P-89
			
Reference page	page 10	page 10	page 10
Maximum Capacity	24 x 1.5/2mL	12 x micro-plate 4 x deepwell-plate	8 x micro-plate 4 x deepwell-plate
50~225mL conical tube	—	—	—
15mL conical tube	—	—	—
Model 7000 	22,000 rpm 44,370 xg	5,000 rpm 4,390 xg	2,400 rpm 1,080 xg
Model 6000 	22,000 rpm 44,370 xg	5,000 rpm 4,390 xg	2,400 rpm 1,080 xg



Lightweight • Fixed angle rotor for high capacity				
A-1008	A-2506	A-5004	A-5006	A-1K4
				
page 8	page 9	page 9	page 9	page 9
8 x 100mL	6 x 250mL	4 x 500mL	6 x 500mL	4 x 1,000mL
—	—	—	—	—
—	—	—	—	—
15,500 rpm 35,190 xg	13,000 rpm 26,830 xg	12,000 rpm 23,830 xg	10,000 rpm 18,890 xg	9,000 rpm 15,760 xg
13,500 rpm 26,690 xg	11,500 rpm 21,000 xg	8,500 rpm 11,950 xg	8,000 rpm 12,090 xg	—

Swinging bucket rotor		
S-724	S-2504	S-5004
		
page 11	page 11	page 11
4 x 250mL	4 x 250mL	4 x 500mL
16 x 50mL conical tube 4 x 175/200/225mL conical tube	4 x 50mL conical tube 4 x 175/225mL conical tube	12 x 50mL conical tube 4 x 175/200/225mL conical tube
32 x 15mL conical tube	16 x 15mL conical tube	28 x 15mL conical tube
3,500 rpm 2,380 xg	4,800 rpm 4,300 xg	4,000 rpm 3,080 xg
3,500 rpm 2,380 xg	4,800 rpm 4,300 xg	4,000 rpm 3,080 xg

High RCF (36,530xg~20,850xg) Fixed angle rotor (for conical tubes)

Even at high centrifugal force, conical tube is less likely to get broken and high-viscosity proteins can be clearly separated. (patented)

It is not necessary to reduce rpm to prevent damaging the tubes nor to select a specific conical tube.

Commercially available conical tubes can be used.



Autoclavable*

A-508C
8 x 50mL conical tube
8 x 15mL conical tube*

* Code No. 055-1250 adaptor is required.



A-6512C
12 x 50mL conical tube
12 x 15mL conical tube

- 50mL conical tubes (polypropylene [PP]), whose diameter of cap is up to 36 mm, manufactured by Iwaki, Greiner, Corning, Sarstedt, Falcon, Fisher, Labcon, Sumilon, Violamo and Nunc can be used.
- A-508C rotor supports the use of 15mL conical tubes (PP) manufactured by Greiner, Corning, Labcon and Nunc. Tubes from other manufacturers can be used at 10,000 rpm or less. A-6512C rotor supports the use of 15mL conical tubes (PP) from any manufactures.

By utilizing the click mechanism for A-type fixed angle rotors, it is easy to handle on the level of tightening of the rotor cover.

Rotor Name	Nominal Capacity	Tube size (mm) diam. x length	7000		6000	
			Maximum Speed rpm	Maximum RCF x g	Maximum Speed rpm	Maximum RCF x g
A-508C *1,2	8 x 50 mL Conical tube	30 x 117	16,500	36,530	15,000	30,190
A-6512C *1,3	12 x 50 mL Conical tube	30 x 117	11,500	20,850	10,000	15,760
	12 x 15 mL Conical tube	17 x 121	11,500	17,590	10,000	13,300

12mL~100mL fixed angle rotor for medium capacity



A-1224
24 x 12 mL



A-506
6 x 50 mL
• Tube adaptors are available in various capacities. For more details, please contact us.



A-508
8 x 50 mL
• Tube adaptors are available in various capacities. For more details, please contact us.



A-1008
8 x 100 mL
• Tube adaptors are available in various capacities. For more details, please contact us.

By utilizing the click mechanism for A-type fixed angle rotors, it is easy to handle on the level of tightening of the rotor cover.

Rotor Name	Nominal Capacity	Tube size (mm) diam. x length	7000		6000	
			Maximum Speed rpm	Maximum RCF x g	Maximum Speed rpm	Maximum RCF x g
A-1224 *2,4	24 x 12 mL	15.7~16.4 x 102~105	18,500	42,860	17,000	36,190
A-506 *1,2,5,6	6 x 50 mL	28.5~29 x 102~109	22,000	52,490	20,000	43,380
A-508 *1,2,5,6	8 x 50 mL	28.5~29 x 102~109	20,000	48,300	17,500	36,980
A-1008 *1,2	8 x 100 mL	38 x 114	15,500	35,190	13,500	26,690

⚠ Rotor has prescribed operating life cycle, after that the rotor must be replaced. For more details, please contact us.

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

*1 A variety of tube adaptors are available on this rotor. For more details, please contact us.

*2 Please refer to the rotor instruction manual for sample temperature.

*3 Sample temperature with this rotor is maintained at 4°C (when ambient temperature is 25°C).

*4 Please refer to the rotor instruction manual for details of RCF display.

*5 Biohazard-proof sealing adaptors are available. Please refer to page 9.

*6 50mL conical tubes can not be used.

250mL~1,000mL (1L) Fixed angle rotor for large capacity



A-2506
6 x 250mL

Lightweight rotor
10.1kg

■ The rotor is approximately 27% lighter and acceleration/ deceleration are faster (compared with AG-2506 rotor).



A-5004
4 x 500mL

Lightweight rotor
13.3kg

■ The rotor is approximately 40% lighter and acceleration/ deceleration are faster (compared with AG-5004 rotor).



A-5006
6 x 500mL

Lightweight rotor
14.9kg

■ The rotor is approximately 30% lighter and acceleration/ deceleration are faster (compared with AG-5006A rotor).



A-1K4
4 x 1,000mL

Lightweight rotor
14.1kg

■ The rotor is approximately 26% lighter and it is easy to remove and handle. Acceleration and deceleration are faster (compared with AG-1K4 rotor).
■ The standard bottle with sealing caps can be fully filled with 1,000mL of samples.
■ The widemouth shaped makes it easy to collect samples.

By utilizing the click mechanism for A-type fixed angle rotors, it is easy to handle on the level of tightening of the rotor lid.

Rotor Name	Nominal Capacity	Tube size (mm) diam. x length	7000		6000		
			Maximum Speed rpm	Maximum RCF x g	Maximum Speed rpm	Maximum RCF x g	
A-2506	*1,2	6 x 250 mL	60~62.4 x 119~137	13,000	26,830	11,500	21,000
A-5004	*1,2	4 x 500 mL	68~70.2 x 155~170.5	12,000	23,830	8,500	11,950
A-5006	*1,2	6 x 500 mL	68~70.2 x 155~170.5	10,000	18,890	8,000	12,090
A-1K4	*1,3,4	4 x 1,000 mL	95.7~98.3 x 194.3~196.8	9,000	15,760	—	—

Biohazard-proof Sealing Adaptors



High speed rotor
A-506, A-508

Sealing Adaptor for
High Speed Fixed Angle
Rotors



for 10mL Oak Ridge
type tubes
Code No.055-4280

Rotor Name	Nominal Capacity	Tube type	Tube size (mm) diam. x length	Code No.	7000		6000	
					Maximum Speed rpm	Maximum RCF x g	Maximum Speed rpm	Maximum RCF x g
A-506	10 mL Oak ridge	FEP	3114-0010	055-4280 *4	22,000	49,240	20,000	40,700
A-508		PSF	3115-0010					
	PC	3118-0010	16.0~16.3 x 79~92					
	PPCO	3119-0010						

⚠ Rotor has prescribed operating life cycle, after that the rotor must be replaced.
For more details, please contact us.

*1 A variety of tube adaptors are available on this rotor. For more details, please contact us.

*2 Please refer to the rotor instruction manual for sample temperature.

*3 Sample temperature with this rotor is maintained at 4°C (when ambient temperature is 25°C).

*4 This adapter is made of polyacetal and cap is polycarbonate.

Micro rotor



A-224
24 x 1.5/2mL
24 x 0.5mL
24 x 0.2mL PCR

Autoclavable*

By utilizing the click mechanism for A type fixed angle rotors, it is easy to handle on the level of tightening of the rotor lid.

Rotor Name	Nominal Capacity	Tube size (mm) diam. x length	7000 *1		6000 *1		Adaptor Code No.
			Maximum Speed rpm	Maximum RCF x g	Maximum Speed rpm	Maximum RCF x g	
A-224	24 x 1.5/2 mL	9.5~11 x 36~42	22,000	44,370	22,000	44,370	—
	24 x 0.5 mL	7.0~7.9 x 25~34		39,500		39,500	
	24 x 0.2 mL PCR *2	5.9~6.3 x 20~24		34,630		34,630	

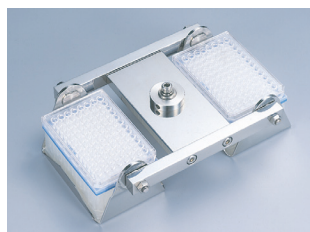
Plate rotors

P-751 is equipped with shield covers, which help prevent contamination.

It can be used for DNA extraction & purification, ethanol precipitation, purification of PCR products in PCR plates, and dye-terminator removal.



P-751
12 x Micro-plate
4 x Deepwell-plate
● Equipped with Shield Cover
Optional tray (Code No.055-6380) is required.



P-89
8 x Micro-plate
4 x Deepwell-plate
Optional tray (Code No.055-6370) is available.

Rotor Name	Plate Capacity	Maximum Plate size (mm)	7000		6000	
			Maximum Speed rpm	Maximum RCF x g	Maximum Speed rpm	Maximum RCF x g
P-751 *3,4	12 x micro-plate	86(W) x 128(D) x 90(H)	5,000	4,390	5,000	4,390
	4 x deepwell-plate					
P-89 *3,4	8 x micro-plate	86(W) x 130(D) x 89(H)	2,400	1,080	2,400	1,080
	4 x deepwell-plate					

Trays for P-751 Code No. 055-6380 (optional)



12 x 96 well plate



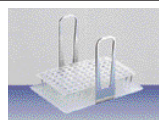
4 x deepwell-plate



4 x square-well
plate

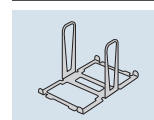


2 deep-well + filter
plate



2 x PCR plate

Tray for P-89 Code No. 055-6370 (optional)



**⚠ Rotor has prescribed operating life cycle, after that the rotor must be replaced.
For more details, please contact us.**

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

*1 Model 7000: Rotor sample temperature is maintained at 4°C (when ambient temperature is 25°C).
Model 6000: Please refer to the rotor instruction manual for sample temperature.

*2 0.2mL PCR tubes cannot withstand high centrifugal force and may not be able to be used at the maximum speed.

*3 Please consult our distributor regarding lead time.

*4 Verify the strength of plate before centrifuging. A lower position on the plate may cause a crack.

Swinging bucket rotor

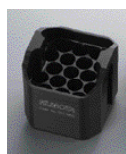


S-724
(Buckets are optional)
Max. 3,500 rpm
Max. 2,380 × g

Bucket Code No.
053-5820



Bucket Code No.
053-5840



Autoclavable*
Please contact our distributor for tube racks and adaptor.



S-2504
(Equipped with buckets)
Max. 4,800 rpm
Max. 4,300 × g

Autoclavable*



S-5004
(Equipped with buckets and sealing caps)
Max. 4,000 rpm
Max. 3,080 × g

Autoclavable*

Rotor Name	Nominal Capacity	Tube size (mm) diam. x length	7000/6000		Bucket Code No.	Tube Rack Adaptor Code No.
			Maximum Speed rpm	Maximum RCF x g		
S-724	80 x 1.5/2mL	9.5~11 x 36~42	3,500	2,290	053-5820	055-4800
	24 x 8mL CPT cell preparation tube *1	13.5~15.8 x 81~130		2,310		055-6900
	80 x 10mL glass tube	12~13.8 x 65~95		2,080		055-4740
	48 x 5~10mL blood collection tube/15mL glass tube *2	12~16.8 x 72~110		2,300		055-0880
	32 x 15mL conical tube	17 x 121		2,330		055-4780
	8 x 50mL glass tube	27~36.4 x 85~110		2,330		055-4760
	16 x 50mL conical tube	30 x 117		2,330		055-6070
	4 x 100mL glass tube	38~46.5 x 83~120		2,330		055-4770
	4 x 175/200/225mL conical tube *3,4	61 x 118/61 x 130/61 x 137		2,330		055-4850
	250mL x 4 *5	60~62 x 100~134.4		2,380		055-4850
	8x/12x/16x Self-Standing sputum collection tube	cap size φ48/φ37/φ31	2,250~2,300	*6		
	68 x 5~7mL thin blood collection tube *7	12~13.7 x 62~110	3,500	2,300	053-5840 *10	055-0260
	68 x 10mL blood collection tube/15mL glass tube	15~17.2 x 52~110	2,300	—		
28 x 15mL conical tube	17 x 121	2,300	—			
S-2504 *11	36 x 1.5/2mL	9.5~11 x 36~42	4,800	4,250	Equipped with rotor	055-1190
	28 x 5~10mL blood collection tube/15mL glass tube *2	12~17.2 x 72~110		4,150		055-1140
	16 x 15mL conical tube	17 x 121		4,280		055-1160
	4 x 50mL glass tube	27~36.4 x 85~110		4,150		055-1150
	4 x 50mL conical tube	30 x 117		4,250		055-1170
	4 x 100mL glass tube	38~46.5 x 113~120		4,250		055-1200
	4 x 175/225mL conical tube *8	61 x 118/61 x 137		4,250		*3
	4 x 250mL *5	60~62 x 100~134.4		4,300		—
4 x Self-Standing sputum collection tube	cap size φ48	4,250	055-1210			
S-5004	72 x 1.5/2mL	9.5~11 x 36~42	4,000	3,040	Equipped with rotor	055-0770
	48 x 5~10mL blood collection tube/15mL glass tube *2	12~17.2 x 72~110		2,970		055-0730
	28 x 15mL conical tube	17 x 121		3,060		055-0750
	12 x 50mL glass tube	27~36.4 x 85~110		2,990		055-0740
	12 x 50mL conical tube	30 x 117		3,040		055-0760
	4 x 100mL glass tube	38~46.5 x 113~120		2,970		055-1180
	4 x 175/200/225mL conical tube *3,4,8	61 x 118/61 x 130/61 x 137		3,080		055-0780
	4 x 250mL *5	60~62 x 100~134.4		3,080		055-0780
	8 x Self-Standing sputum collection tube	cap size φ37		3,020		055-0800
	4 x 500mL *9	85 x 135		3,080		—

**⚠ Rotor has prescribed operating life cycle and years of operation, after that the rotor must be replaced.
For more details, please contact us.**

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

- *1 The blood collection tube which can be used is Vacutainer 8mL CPT by BD.
- *2 5-10mL blood collection tubes which can be used are insepack II and ST series by SEKISUI, Venoject II by TERUMO, Neo tube by NIPRO and Vacutainer by BD. The tubes for flow cytometry can be used.
- *3 175/225mL Falcon conical tubes (catalogue no.352076/352075) require cushions (catalogue no.352090).
- *4 200mL Nunc conical tubes (catalogue no.376813) can be used with cushions (catalogue no.377585). Maximum RCF is 3,020 xg when S-5004 rotor is used.
- *5 Nalgene, Herolabo and Corning 250mL flat bottom bottles can be used.
- *6 3 types of tubes can be used: 8 x cap φ48 (code no.055-0430), 12 x cap φ37 (code no.055-0440), 16 x cap φ31 (code no.055-0450).
- *7 5-7mL thin blood collection tubes which can be used are insepack II and ST series by SEKISUI, Venoject II by TERUMO, Neo tube by NIPRO and Vacutainer by BD. The tubes for flow cytometry can be used.
- *8 Sealing caps cannot be used with 200/225mL tubes.
- *9 500mL bottles (code no. K15501C/PPCO) can be used.
- *10 The bucket cannot be used for a glass spitz tube (tapered tube).
- *11 Sealing caps and O-ring (code no.055-0964) are optional.

Specifications

	Model 7000	Model 6000
Maximum Speed	22,000 rpm	22,000 rpm
Maximum RCF	52,490 xg	44,370 xg
Maximum Capacity	4,000 mL	3,000 mL
Control system	Micro-processor control Speed, RCF(g), Time, g·sec, Temperature, Acceleration and Deceleration, 30 memory banks Fail-safe function (remind to take sample) Prevent overheating and supercooling function (TEMP LIMIT) Record function for used cycles of each rotors. Automatic rotor identification function Timer function (Start the operation at a set time)	
Alarm display	Lid open, Imbalance, Over speed, Rotor setting condition, Abnormally high temperature, Detected electrical abnormality in motor, inverter, lid interlock, speed sensor and temperature sensor	
Acceleration/Deceleration	Three selectable rates : Rapid, Slow and Super Slow	
Speed setting and indication	Digital display, 10 rpm increments	
RCF setting and indication	Digital display, 10 xg increments	
Integrator setting and indication	Digital display, from 1.00 - 9.99 x 10 ⁹ g·sec	
Timer setting and indication	Digital display, with HOLD function (continuous operation) and flashing 1 second to 100 seconds, 1 sec increments 100 seconds to 990 seconds, 10 sec increments 1 minute to 100 minutes, 1 min increments 100 minutes to 990 minutes, 10 min increments	
Temperature setting and indication	Digital display, -20°C to +40°C, 1°C increments, Pre-cooling	
Refrigerant	R 404A	
Rated voltage and rated current	Single phase 220V 15A / 230V 14A	Single phase 220V 11A / 230V 11A
Power consumption and heat output	2.6kW 9.4MJ/h	1.8kW 6.5MJ/h
Power requirements	Single phase 220/230V 50/60Hz 30A	Single phase 220/230V 50/60Hz 30A
Dimensions, weight	64(W) x 82(D) x 86(H) ¹ cm, 252 kg	50(W) x 78(D) x 85(H) ¹ cm, 213 kg
Certificates of conformity	IEC 61010-2-020 CE Marking (AC 220V and 230V versions)	—

(*1) Not including projections

All specifications and external appearance are subject to change without notice.

* Use only rotors, adaptors and tube racks made by KUBOTA. Do not attempt to use rotors, adaptors or tube racks made by other manufacturers.

* Follow all instructions in the relevant Instruction & Service Manual when operating centrifuges.

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.

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