

Please read and save these instructions. Read carefully before attempting to assemble, install, operate or maintain the product described. Protect yourself and others by observing all safety information. Failure to comply with instructions could result in personal injury and/or property damage! Retain instructions for future reference.

KOLDWAVE

Portable Air Conditioners

Description

Koldwave Portable Air Conditioners feature spot cooling for large areas where cooling of the entire area is not practical. A dedicated spot cooling thermostat controls the unit in this application. These air conditioners can also be used in smaller areas for room cooling.

A control panel provides ease of use and contains a self-diagnostic function and display, showing operating modes, room and set temperatures, and faults. If an abnormal operation occurs, a visual display of the fault is shown. Caster wheels are included for easy portability. Suitable applications include: a factory or work place, industrial kitchen, computer room, emergency cooling, outdoor event, etc.



**5KK30BGA2AA00 /
6KK37BFA0**

Figure 1

Unpacking

After unpacking the unit, carefully inspect unit for any damage that may have occurred during transit. Check for any loose, missing, or damaged parts.

Table of Contents

IMPORTANT SAFETY INSTRUCTIONS.....	4
INTRODUCTION	6
PRODUCT DESCRIPTION.....	6
ASSEMBLY	7
Component Parts	
Power Cord Holder	
Discharge Ducts / Supply Air Duct	
Top Fan Exhaust Flange	
Condenser Plenum	
INSTALLATION GUIDE.....	8
Moving the Unit	
Plugging in the Unit	
OPERATION.....	10
Control Panel	
MAINTENANCE.....	11
Filter Cleaning	
Spring Replacement	
TROUBLESHOOTING.....	13
Alarm Codes	
Troubleshooting Chart	
SPECIFICATIONS	16
WIRING DIAGRAM	17
SHIPPING LIST	18
OBTAINING SERVICE	18

Thank you for selecting this Koldwave Portable Air Conditioner. It provides you with spot cooling for large areas where cooling of an entire area is not practical or possible. **Please read this manual** before installing the 5KK30B-GA2AA00, 6KK37BFA0 as it provides important information that should be followed during installation and maintenance of the Portable Air Conditioner, allowing you to correctly set up your system for the maximum safety and performance. Included is information on customer support and service, if it is required. If you experience a problem with the unit, please refer to the Troubleshooting section in this manual to correct the problem. If the problem is not corrected, please collect information so that the Technical Support personnel can more effectively assist you.

IMPORTANT SAFETY INSTRUCTIONS:

(SAVE THESE INSTRUCTIONS)

Please read this manual carefully for instructions on correct installation and usage. Please read all safety instructions.

1. Transport and store the unit in an upright position only. Leave the unit in an upright position for at least 3 hours before use.
2. Always place the unit on an even, level surface.
3. Ensure the unit is connected to a grounded utility of the correct rating / capacity.
4. The unit will cool when the room temperature is between 64.4°F - 113°F (18°C - 45°C) depending on the thermostat setting.
5. **DO NOT** use this unit for functions other than those described in this User's Manual.
6. **DO NOT** tilt the unit.
7. **DO NOT** cover or obstruct the unit's inlet and/or outlet grilles.
8. **DO NOT** use the unit in areas where it will be exposed to rain or water.
9. **NEVER** unplug the unit while it is operating



WARNING

DO NOT use the unit in wet environments, such as a laundry room, to avoid risk of electrical shock

10. **DO NOT** place any foreign objects on the unit.
11. **DO NOT** operate the unit with wet or damp hands.
12. **DO NOT** allow chemical substances to come in contact with the unit.
13. **DO NOT** operate the unit in the presence of flammable substances or vapors such as alcohols, pesticides, gasoline, etc.



WARNING

DO NOT operate the unit in explosive or flammable environments

14. **DO NOT** use the plug to start or to stop the unit. Always use the control panel to start and to stop the unit.
15. Always turn off the unit when it is not in use, and unplug the power plug from the electrical outlet.

16. Always turn the unit off and unplug the main power plug from the electrical outlet before cleaning, moving, or performing maintenance.
17. AVOID the use of adapter plugs or extension cords. If it is necessary to use an extension cord or an adapter plug to operate the unit, ensure that they are correctly rated for the application. Consult a local qualified electrician and all local electrical codes to ensure proper setup.
18. DO NOT unplug the unit by pulling on the electrical cord. Keep the electrical cord away from heat sources and always completely unroll the cord to avoid overheating. If the power cord becomes damaged, a qualified service agent, qualified electrician, or similarly qualified person must replace it, in order to avoid a hazard or shock.



WARNING *DO NOT operate a unit with a damaged power cord*

19. The filters must be used with the product at all times. When the filters are removed for cleaning, always ensure that the unit has been turned off and unplugged from the electrical outlet.
20. Regularly clean the filters to maintain efficiency. If the filters are not cleaned regularly, the units output performance and efficiency will decline and energy consumption will increase.
21. DO NOT operate the unit with a damaged power cord or plug, after it malfunctions, or if the unit has been dropped or damaged.
22. Only use the unit in the upright position on a even, flat surface. Unit must be positioned at least 24 inches (60 cm) from the nearest object in any direction.
23. Stop operation immediately if abnormal noise or odor is noticed. Contact local service center.

INTRODUCTION

The information provided in this manual covers 29,000 – 37,000 BTU/HR Koldwave Portable Air Conditioners, their basic functions, operating procedures, options available and emergency situations. It also includes information on how to ship, store, handle, and install the equipment. Only detailed requirements of the Koldwave Portable Air Conditioners are described herein, and installation must be carried out in accordance with this manual. Electrical installation must also carefully follow local legislation and regulations. Only qualified personnel should conduct these installations as failure to acknowledge electrical hazards could prove to be fatal.

PRODUCT DESCRIPTION

Koldwave Portable Air Conditioners feature spot cooling for large areas where cooling of the entire area is not practical or possible. A dedicated spot cooling thermostat controls the unit in this application. These air conditioners can also be used in smaller areas for room cooling.

A control panel provides ease of use and contains self-diagnostic functions and displays, showing operating modes, room and set temperatures, and faults. If an abnormal operation occurs, a visual display of the fault is shown.

Caster wheels are included for ease of portability.

Suitable applications include: factory or work place, industrial kitchen, computer room, emergency cooling, outdoor event, etc.

ASSEMBLY

Component Parts

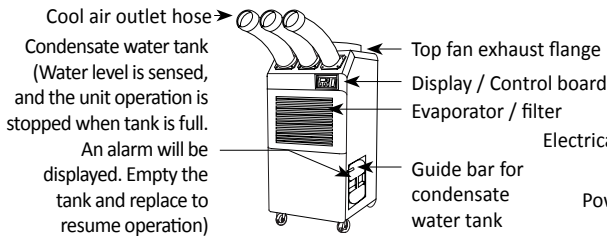


Figure 2 – Front and Right Side View

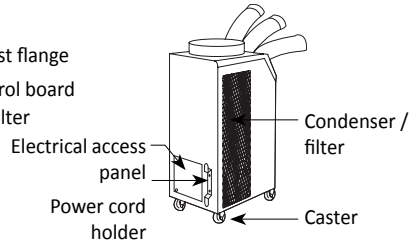


Figure 3 – Back and Left Side View

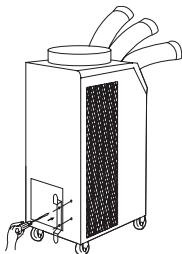


Figure 4

Power Cord Holder

1. Take out the cord holder from the accessory box.
2. Place the cord holder on the back side of air conditioner.
3. Use screws (enclosed inside of accessory box with cord holder) to install the cord holder on the air conditioner as shown in Figure 4.

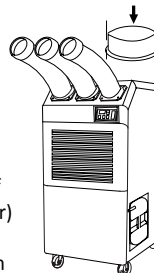


Figure 5

Top Fan Exhaust Flange

1. Remove the top fan exhaust flange from carton.
2. Place the top fan exhaust flange on the top of air conditioner.
3. Use screws (enclosed inside of box with the top fan exhaust flange) to install the top fan exhaust flange on air conditioner as shown in Figure 5.

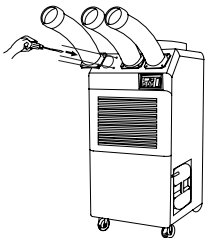


Figure 6

Discharge Ducts / Supply Air Duct

1. Remove cool air outlet hose(s) from carton.
2. Place the cool air outlet hose(s) on the front top of air conditioner.
3. Use screws (enclosed inside of box with cool air outlet hose(s)) to install the cool air outlet hose(s) on the air conditioner as shown in Figure 6.

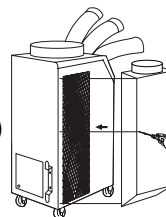


Figure 7

Condenser Plenum (Optional)

Condenser Plenum can be purchased separately. Condenser Plenum fits over the condenser to duct condenser air to the unit to improve cooling efficiency.

1. Remove Condenser Plenum from carton.
2. Place Condenser Plenum on the side of air conditioner.
3. Use screws (enclosed inside of box with Condenser Plenum) to install the Condenser Plenum on the air conditioner as shown in Figure 7.

INSTALLATION GUIDE

WARNINGS REGARDING PROPER LOCATION FOR INSTALLATION



WARNING

DO NOT use the unit in explosive environments or in areas where flammable gas leakage may occur



WARNING

DO NOT use the unit in areas where it will be exposed to rain or water



WARNING

DO NOT use the unit in a corrosive atmosphere



WARNING

DO NOT use the unit above 113° F (45° C)



WARNING

DO NOT install the unit on uneven or sloping surface. The unit may roll or topple over even if casters are set in the locked position

Moving the Unit

Unlock the casters and push the unit using the side handles to a flat, level surface and set the caster brakes to the locked position.

Plugging in the Unit

Check the prongs and surface of the power cord plug for dust/dirt. If dust and/or dirt are present, wipe off with a clean, dry cloth.

Check the power cord, plug, and prongs for damage or excess play.

If any damage or excess play is found, contact a qualified repair technician or a qualified electrician to perform replacement or repair of the power cord, plug, or prongs.



WARNING

If the power cord or plug are damaged, repair should only be performed by a qualified electrician.



WARNING

DO NOT connect / disconnect the power cord or attempt to operate buttons with wet hands. This could result in electrical shock.

NOTE: Make sure the AC outlet is free of dirt, dust, oil, water, or any other foreign material.

The unit is equipped with an approved NEMA plug configuration (5KK30BGA2AA00= 6-20P; 6KK37BFA0 = 6-30P).

The appropriate outlet must be used for each plug type.

OPERATION

Control Panel

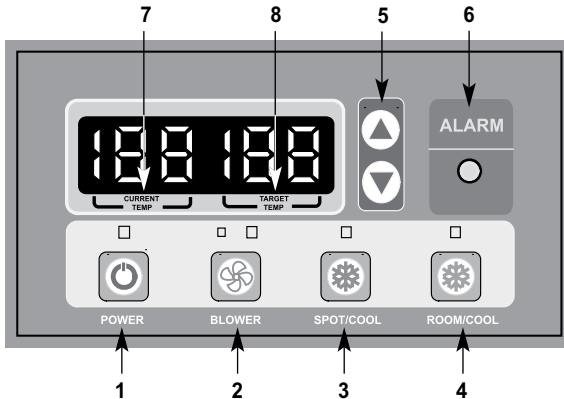


Figure 8 - Control Panel

1. POWER BUTTON

- Activates unit when POWER BUTTON is pressed.
- Fan starts on low speed.
- If POWER BUTTON is pressed during operation, unit stops.

2. BLOWER BUTTON

- Changes fan speed from LOW to HIGH when pressed.

3. SPOT / COOL BUTTON

- Activates compressor and begins producing cool air 5 seconds after button is pressed.
- Regulates temperature based on outlet cool air temperature.

4. ROOM / COOL BUTTON

- Activates compressor and produces cool air 5 seconds after button is pressed.
- Regulates temperature based on inlet ambient air temperature.

5. SET TEMP BUTTON

- Change target temperature / data value by ± 1 .
- Change data value by ± 10 by pressing continually.
- Press the SET TEMP BUTTONS to set temperature.
- Upper button is to raise temperature and lower button is to lower temperature.

6. ALARM

- Alarm indicator light blinks and indicates abnormal system operation.
- If Alarm occurs, compressor stops.
- System operation stops when ALARM light is activated /blinking longer than 3 minutes.

7. CURRENT TEMP

- Room cool mode displays current room temperature in display in degrees Fahrenheit
- SPOT / COOL Mode displays outlet (cool air) temperature during normal operations.
- In order to change °F to °C, press SPOT / COOL and ROOM / COOL buttons together for 2 seconds.
- C will blink 2 times and the figure will change to °C
- ALARM codes blink and are displayed when abnormal operation occurs.

8. TARGET TEMP

- Displays the unit set temperature for ROOM COOL mode only

OFF-TIMER: Enter to Timer Setting Mode if you press BLOWER Button and SPOT/COOL Button together for 1 second. Press UP/DOWN Button to set the timer until it shows the number you want to set. After 5 seconds, the number will be memorized and the compressor will stop after the time set.

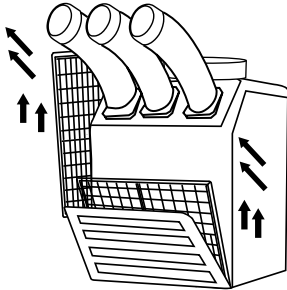
AUTO RESTART: If the unit goes off due to an electrical interruption, the unit will automatically restart when the power resumes.

MAINTENANCE

Filter Cleaning

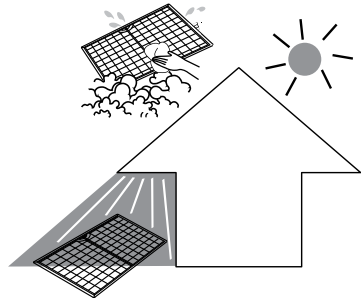
1. To clean the evaporator filter, pull the front filter guard forward from the top until the guard is open (in an angled position) and resting on the supporting cables.
2. Slide the filter up and use a vacuum cleaner to remove the dust from the filter.

Figure 9 – Removing Filters



- Loosen up 2 bolts on the front filter guard.
- Slide filter up and use a vacuum cleaner to remove the dust from the filter.
- Lift up on the side filter from the middle bar slightly and then angle the filter outwards from the bottom and remove.

Figure 10 – Removal of Dust



- Remove dust from the filter using a vacuum cleaner hose attachment.
- If required, wash the filter in lukewarm water with a mild detergent. Leave to dry in a shaded area before reinstalling.

3. If the filter is heavily covered with dust and dirt, warm water and mild soap or neutral detergent may be used to wash the filter. Do not use any other chemicals to clean the filter, as they will likely damage the filter.
4. Dry the filter in a shaded area before replacing it. Do not operate the unit without the filter installed and the filter guard in the closed position.
5. Replace the clean filter and close the filter guard.
6. To clean the condenser filter, lift up on the rear or side filter from the middle bar slightly and then angle the filter outwards from the bottom and remove.
7. Use the same cleaning procedure as in steps 3-5 above.
8. To replace the condenser filter, place the top of the filter in the guide and slide the filter up until the bottom of the filter clears the frame. Then push the bottom of the filter into the guide and let the filter gently fall inside the guide.

NOTE: For effective cooling, clean the filter at least every 2 weeks.



WARNING

DO NOT operate without the filter installed



WARNING

DO NOT operate the unit with a damaged cord or plug, after the unit malfunctions, or if the unit has been dropped or damaged.

Spring Replacement

There are two springs on the rear of the condenser water tank guide.

1. Release the screw on the spring hook.
2. Take off the spring hook, and then pull out the opposite spring hook from the hole in the condenser water tank guide.
3. Replace with a new spring in reverse order.
4. Repeat these steps for the other spring.

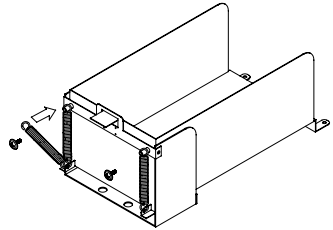









Figure 11 – Spring Replacement

TROUBLESHOOTING

The alarm light is activated if abnormal operation occurs, and a code is displayed on the control panel. The compressor and condenser fan motor will stop operating. The evaporator fan will continue to run for 3 minutes. If the fault is rectified within 3 minutes, the unit will resume operation. If the fault persists for more than 3 minutes, the evaporator fan also stops. The fault must be rectified before the unit can resume normal operation.

Alarm Codes

SELF-DIAGNOSTIC ALARM CODES			
Alarm Display	Problem	Cause	Corrective Action
	Frost prevention sensor and Abnormal temperature sensor value	<ul style="list-style-type: none"> Indoor heat exchanger temperature too low TH3 temperature sensor has a loose or broken connection 	<ul style="list-style-type: none"> Do not use the air conditioner if ambient temperature is lower than 18°C (64°F) Contact a qualified service agent
	Refrigerant high pressure switch	<ul style="list-style-type: none"> Blocked air filter Blocked /kinked exhaust duct Ambient temperature is too high 	<ul style="list-style-type: none"> Clean air filter Ensure exhaust duct is not blocked / kinked Do not use the air conditioner if ambient temperature is higher than 45°C (113°F)
	Abnormal temperature sensor value	TH1(Outlet) temperature sensor has a loose or broken connection	Contact a qualified service agent
	Abnormal temperature sensor value	TH2(Inlet) temperature sensor has a loose or broken connection	Contact a qualified service agent
	Compressor over-loaded	<ul style="list-style-type: none"> Ambient temperature is too high Unstable voltage supply Defective compressor 	<ul style="list-style-type: none"> Do not use the air conditioner if ambient temperature is higher than 45°C (113°F) Contact a qualified service agent Replace compressor
	Condensate water level alarm	Condensate tank is full	<ul style="list-style-type: none"> Empty the water tank After installation of the water tank, press the SPOT/COOL or ROOM/COOL button to resume operation
	Drain pump alarm	Drain pump defective or improper hose connection (including kink or blockage)	<ul style="list-style-type: none"> Check the hose connection and hose Replace drain pump

Troubleshooting Chart

Symptom	Possible Causes	Corrective Action
Water leakage	High water level in condensate tank	<ul style="list-style-type: none"> Remove blockage from drain hose Remove any object stuck underneath of the black panel under the water tank
The unit doesn't work	<ul style="list-style-type: none"> Check the utility to verify that power is available to the unit Verify that the power cord is connected 	<ul style="list-style-type: none"> Reset the circuit breaker and restart the unit Connect the power cord
No cold air flows from the cold air outlet	<ul style="list-style-type: none"> Ambient air cannot be properly cooled if the filter is dirty and not regularly cleaned Compressor restart in 2 minutes after turning off to protect the compressor The ambient air temperature may be too high 	<ul style="list-style-type: none"> Clean air filter Verify that 2 minutes have passed since the compressor off The temperature of the compressor can be higher when the ambient temperature is too high. The compressor will not work unless the ambient air temperature is within the acceptable operating range of the unit
Water flow can be heard after compressor shuts off	No cause	Common to hear coolant flowing after unit shuts off
Alarm displays "FT" with less than half of the condensate water in the tank	Spring is possibly broken	Replace the spring (see Maintenance section)

Specifications

Specifications	5KK30BGA2AA00	6KK37BFA0
Power Supply Ph-V-Hz	Single Phase, 208/230V, 60Hz	Single Phase, 208/230V, 60Hz
Cooling Capacity Btu/h	29,000	37,000
Power Consumption Watts	3,300	4400
Rated Current Amps	15	19.5
EER Btu/Wh	8.8	8.4
Nema Plug	6-20P	6-30P
Power Cord Gauge AWG	12	10
Power Cord Length ft	10	10
Dimensions W x D x H - in. (mm)	22.1 X 29.5 X 47.3 (560 X 750 X 1200)	26 X 34.8 X 54.3 (660 X 885 X 1380)
Weight (Net/Gross) Lbs(kg)	216/234 lbs.(98/106 kg)	253/271 lbs.(115/123 kg)
Condensate tank Gallons(Liters)	3.17 (12)	3.17 (12)
No. of Cool Air Outlets Pcs	3	3
Ambient temperature range °F(°C)	64 ~ 113 (18~45)	64 ~ 113 (18~45)
Setting temperature (Room cool mode) °F(°C)	64 ~ 86 (18 ~ 30)	64 ~ 86 (18 ~ 30)
Setting temperature (Spot cool mode) °F(°C)	32 ~ 86 (0 ~ 30)	32 ~ 86 (0 ~ 30)
Application Area (Room cool mode) ft ² (m ²)	743(70)	1300(100)
Refrigerant Type / oz(g)	R-410a / 44.5 (1260)	R-410a / 61 (1730)
Design Pressure Hi/Low Psig	450 / 280	450 / 250
Indoor Air Flow (High/Low) CFM(CMH)	741 / 635 (1259 / 1078)	882 / 776 (1499 / 1318)
Wheels pcs / diameter	4 / 102 mm	4 / 102 mm
Hot Air Duct Diameter in. (mm)	16 (400)	16 (400)
Maximum Duct Length ft(m)	60 (18)	60 (18)
Safety Devices	Compressor overload protector, Anti-freezing thermister, Full drain tank switch, Automatic restart (Power interruption), Compressor time delay program, High pressure switch	
Features	Temperature control, Self-diagnostic function, Two speed fan, Optional drain pump kit, Washable filters, °F(°C)display, off-timer.	

Wiring Diagram

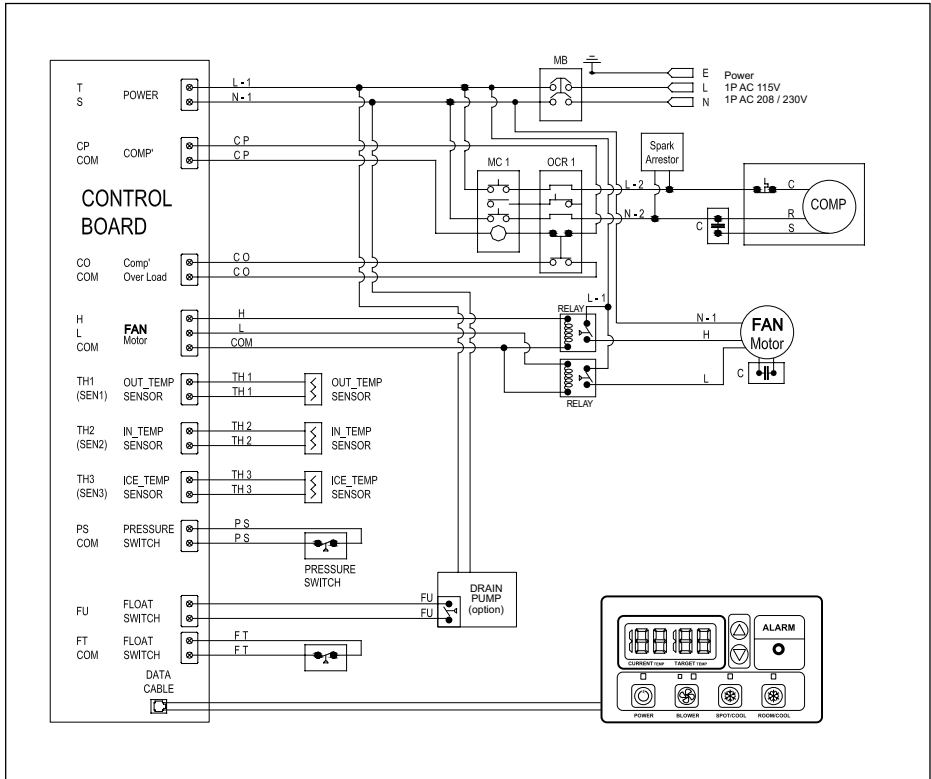


Figure 12 - Circuit Wiring Diagram (5KK30BGA2AA00 / 6KK37BFA0)

SHIPPING LIST

- (1) PORTABLE AIR CONDITIONER
- (1) Owner's Manual
- (1) POWER CORD HOLDER
- (3) DISCHARGE / SUPPLY AIR DUCTS
- (1) EXHAUST FLANGE

OBTAINING SERVICE

If the Koldwave Portable Air Conditioner requires Service:

1. Use the TROUBLESHOOTING section in this manual to eliminate obvious causes.
2. Verify there are no circuit breakers tripped.
3. Call your dealer for assistance. If you cannot reach your dealer, or if they cannot resolve the problem, call Koldwave Portable Air Conditioner Technical Support at 413-564-5520. Please have the following information available BEFORE calling the Technical Support Department:
 - a. Your name and address.
 - b. The serial number of the unit.
 - c. Where and when the unit was purchased.
 - d. All of the model information about your Koldwave Portable Air Conditioner.
 - e. Any information on the failure, including LED's that may or may not be illuminated.
 - f. A description of the protected equipment, including model numbers if possible.

For Koldwave warranty please visit
<http://koldwave.com/html/literature.asp>

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