



Hood

SERVICE MANUAL

MODEL: LSHD3689BD LSHD3089BD
LSHD3680ST LSHD3080ST
HCED3615S HCED3015S
HCED3615D HCED3015D

CAUTION

BEFORE SERVICING THE UNIT, READ THE SAFETY PRECAUTIONS IN THIS MANUAL.

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GENERAL

WARNING

TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT USE THIS FAN WITH ANY SOLID-STATE CONTROL DEVICE.

WARNING

TO REDUCE THE RISK OF FIRE ELECTRIC SHOCK, OR INJURY TO PERSONS, OBSERVE THE FOLLOWING:

- a. Use this unit only in the manner intended by the manufacturer, if you have questions, contact the manufacturer.
- b. Before servicing or cleaning unit, switch power off at service panel and lock panel to prevent power from being switched on accidentally. When the service disconnecting means cannot be locked, securely fasten a prominent warning device, such as a tag, to the service panel.

CAUTION

For general ventilating use only. Do not use to exhaust hazardous or explosive materials and vapors. Take care when using cleaning agents or detergents. Suitable for use in household cooking area.

WARNING

TO REDUCE THE RISK OF RANGE TOP GREASE FIRE:

- a. Never leave surface units unattended at high settings. Boilovers cause smoking and greasy spillovers that may ignite. Heat oils slowly on low or medium settings.
- b. Always turn hood ON when cooking at high heat or when flaming food
- c. Clean ventilating fans frequently. Grease should not be allowed to accumulate on fan or filter.
- d. Use proper pan size. Always use cookware appropriate for the size of the surface element.
- e. Keep fan, filters and grease laden surfaces clean.
- f. Use high setting on hood only when necessary.
- g. Don't leave hood unattended when cooking.
- h. Always use cookware and utensils appropriate for the type of and amount of food being prepared.

WARNING

TO REDUCE THE RISK OF INJURY TO PERSONS IN THE EVENT OF A RANGE TOP FIRE, OBSERVE THE FOLLOWING:

- a. **SMOTHER FLAMES** with a close-fitting lid, cookie sheet, or metal tray, then turn off the burner. **BE CAREFUL TO PREVENT BURNS.**
If the flames do not go out immediately, **EVACUATE AND CALL THE FIRE DEPARTMENT.**
- b. **NEVER PICK UP A FLAMING PAN** – You may be burned.
- c. **DO NOT USE WATER**, including wet dishcloths or towels – a violent steam explosion will result.
- d. Use an extinguisher **ONLY** if:
 1. You know you have a Class ABC extinguisher, and you already know how to operate it.
 2. The fire is small and contained in the area where it started.
 3. The fire department is being called.
 4. You can flight the fire with your back to an exit


GENERAL


WARNING

TO REDUCE THE RISK OF FIRE, ELECTRIC SHOCK OR INJURY TO PERSONS, OBSERVE THE FOLLOWING:

- a. Installation work and electrical wiring must be done by qualified person(s) in accordance with all applicable codes and standards.
- b. Sufficient air is needed for power combustion and exhausting of gases through the flue(chimney) of fuel burning equipment to prevent back-drafting. Follow the heating equipment manufacturer's guideline and safety standards such as those published by the National Fire Protection Association (NFPA) and the American Society for Heating, Refrigeration and Air Conditioning Engineers(ASHRAE) and the local code authorities.
- c. When cutting or drilling into wall or ceiling, do not damage electrical wiring and other hidden utilities.
- d. Ducted fans must always vent to the outdoors.
- e. NEVER place a switch where it can be reached from a tub or shower.
- f. Make sure the power is off before installing, wiring or maintenancing.

GENERAL

 **WARNING** TO REDUCE THE RISK OF FIRE, USE ONLY METAL DUCTWORK.

 **CAUTION** To reduce risk of fire and to properly exhaust air outside - Do not vent exhaust air into spaces within walls, ceilings, attics, crawl spaces or garages.
No for use over an outdoor grill.

OPERATION

Always leave safety grilles and filters in place. Without these components, operating blowers could catch onto hair, fingers and loose clothing.

The manufacturer declines all responsibility in the event of failure to observe the instructions given here for installation, maintenance and suitable use of the product. The manufacturer further declines all responsibility for injury due to negligence and the warranty of the unit automatically expires due to improper maintenance.

ELECTRICAL REQUIREMENTS

Important:

Observe all governing codes and ordinances.

It is the customer's responsibility:

- To contact a qualified electrical installer.
- To assure that the electrical installation is adequate and in conformance with National Electrical Code, ANSI/NFPA 70 latest edition* or CSA standards C22.1-94, Canadian Electrical Code, Part 1 and C22.2 No.0-M91 - latest edition** and all local codes and ordinances.

If codes permit and a separate ground wire is used, it is recommended that a qualified electrician determine that the ground path is adequate.

Do not ground to a gas pipe.

Check with a qualified electrician if you are not sure the range hood is properly grounded.

Do not have a fuse in the neutral or ground circuit.

*National Fire Protection Association Batterymarch Park, Quincy, Massachusetts 02269

** CSA International 8501 East Pleasant Valley Road, Cleveland, Ohio 44131-5575

This appliance requires a 120V 60Hz electrical supply and connected to an individual properly grounded branch circuit

protected by a 15 or 20 ampere circuit breaker or time delay fuse. Wiring must be 2 wire with ground. Please also refer to Electrical Diagram on product.

A cable locking connector(not supplied) might also be required by local codes. Check with local requirements, purchase and install appropriate connector if necessary.

PRODUCT SPECIFICATIONS

General Specifications

All Models

Fan Speeds	5
Filters	Decorative Aluminum Mesh type, dishwasher safe
Exhaust Vertical	6-inch
Exhaust Horizontal	N/A
Total Connect Load	120 Vac, 60 Hz, 4 Amp. maximum
Lights	12 Vac, 9 W LED

Model Specific

Model Number	LSHD3689BD, LSHD3680ST, HCED3615S, HCED3615D, LSHD3089BD, LSHD3080ST, HCED3015S, HCED3015D
Lights	1
Filters	2
Exhaust Outputs	1

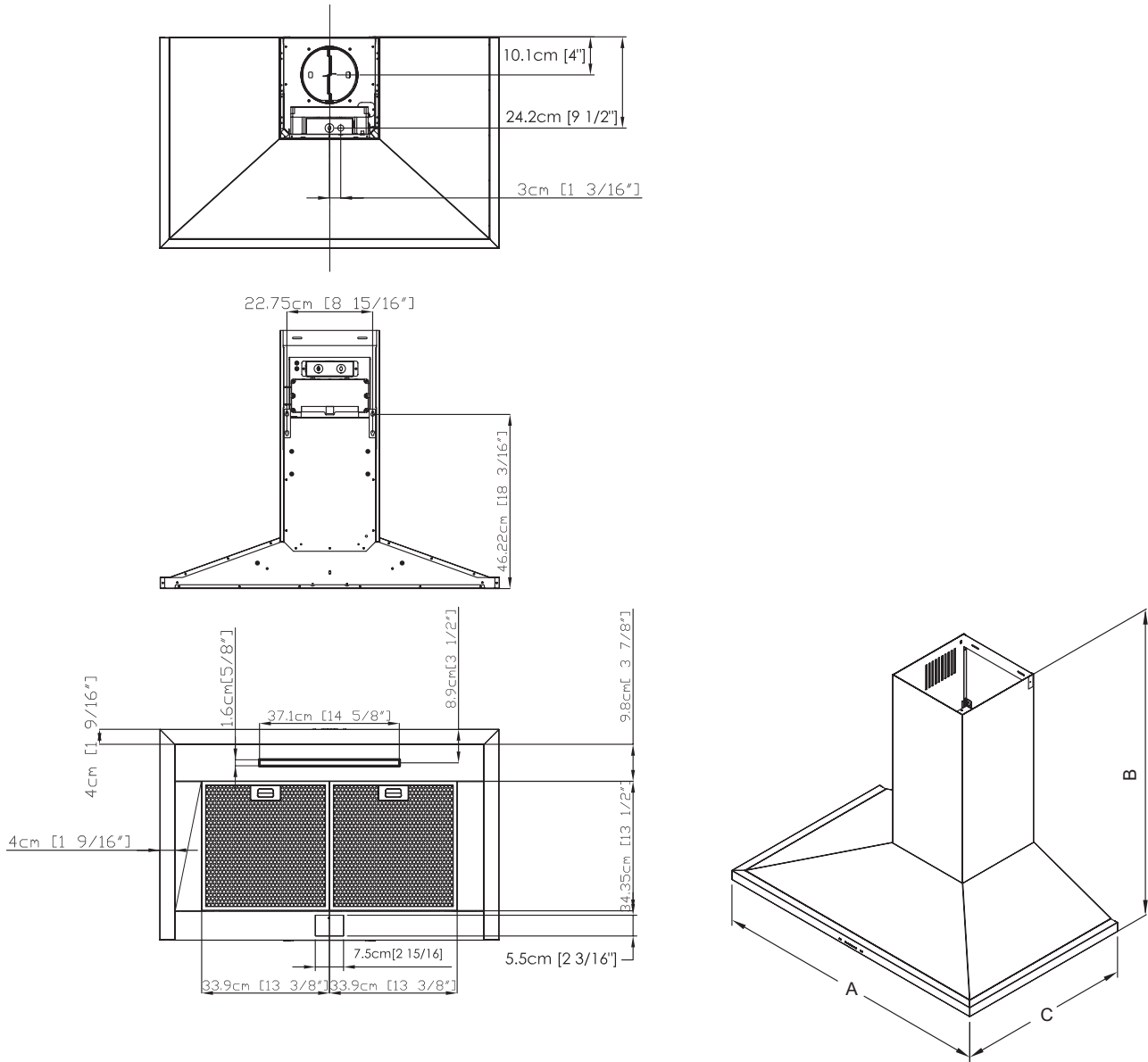
Weight Specifications

Model Number	Weight
LSHD3689BD, LSHD3680ST, HCED3615S, HCED3615D	37 lb. (17 kg)
LSHD3089BD, LSHD3080ST, HCED3015S, HCED3015D	35 lb. (16 kg)

PRODUCT SPECIFICATIONS

Dimensions

Top Dimensions

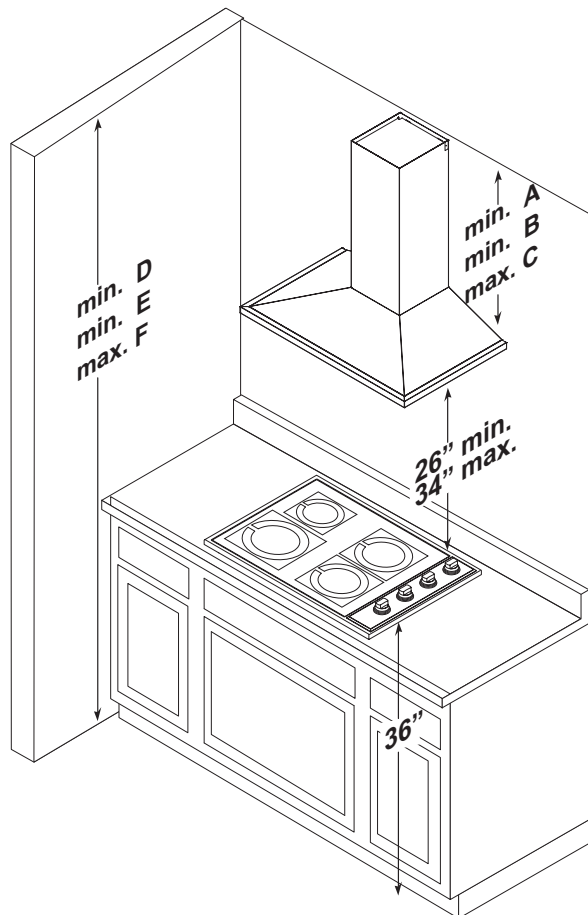


Model	A	B	C
LSHD3089BD, LSHD3080ST, HCED3015S, HCED3015D	76 cm (30")	68.5 cm (26 15/16")	56 cm (22 1/6")
LSHD3689BD, LSHD3680ST, HCED3615S, HCED3615D	90 cm (36")	68.5 cm (26 15/16")	56 cm (22 1/6")

PLANNING THE INSTALLATION

Planning the Installation

Cabinet Layout



Hood Heights	Standard Duct Cover
minimum ducted (A)	27"
minimum recirculating (B)	31"
maximum (C)	48-1/2"
Horizontal Ducting:	
minimum ducted (D)	89" (7' 5")
minimum recirculating (E)	93" (7' 9")
maximum (F)	118" (9' 10")

DUCTING

A minimum of 6" round duct must be used to maintain maximum air flow efficiency.

Always use rigid type metal ducts only. Flexible ducts could restrict air flow by up to 50%.

Use calculation worksheet to compute total duct work (page 5).

ALWAYS, when possible, reduce the number of transitions and turns. If a long duct run is required, increase duct size from 6" to 7" or 8".

If turns or transitions are required: Install as far away from duct opening and as far apart between the two transitions as possible.

Minimum mount height between range top to hood bottom should be no less than 26".

Maximum mount height should be no higher than 34".



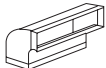
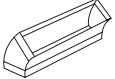

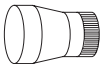
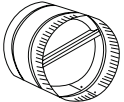
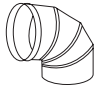

It is important to install the hood at the proper mounting height. Hoods mounted too low could result in heat damage and fire hazard; while hoods mounted too high will be hard to reach and will lose its performance and efficiency.

If available, also refer range manufacturer's height clearance requirements and recommended hood mounting height above range.

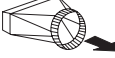
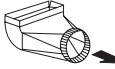
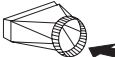
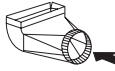
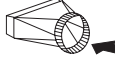
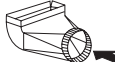
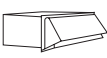
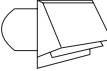

DAMAGE-SHIPMENT / INSTALLATION:

- Please fully inspect unit for damage before installation.
- If the unit is damaged in shipment, return the unit to the store in which it was bought for repair or replacement.
- If the unit is damaged by the customer, repair or replacement is the responsibility of the customer.
- If the unit is damaged by the installer (if other than the customer), repair or replacement must be made by arrangement between customer and installer.

PLANNING THE INSTALLATION

Duct pieces		Equivalent number length x used =	Total
	3- 1/4" x 10" Rect., straight	1 Ft. x () =	Ft.
	6", 7", 8", 10" Round, straight	1 Ft. x () =	Ft.
	3- 1/4" x 10" Rect. 90° elbow	15 Ft. x () =	Ft.
	3- 1/4" x 10" Rect. 45° elbow	9 Ft. x () =	Ft.
	3- 1/4" x 10" Rect. 90° flat elbow	24 Ft. x () =	Ft.
	7" to 6" or 8" to 7" Round tapered reducer	25 Ft. x () =	Ft.
	6", 7", 8" Round in-line damper	15 Ft. x () =	Ft.
	6", 7", 8", 10" Round, 90° elbow	15 Ft. x () =	Ft.
	6", 7", 8", 10" Round, 45° elbow	9 Ft. x () =	Ft.
			Ft.

Maximum Duct Length: For satisfactory air movement, the total duct length should not exceed 100 equivalent feet.

Duct pieces		Equivalent number length x used =	Total
	3- 1/4" x 10" Rect. to 6" round transition	5 Ft. x () =	Ft.
	3- 1/4" x 10" Rect. to 6" round transition 90° elbow	20 Ft. x () =	Ft.
	6" round to 3- 1/4" x 10" rect. transition	1 Ft. x () =	Ft.
	6" round to 3- 1/4" x 10" rect. transition 90° elbow	16 Ft. x () =	Ft.
	7" round to 3 1/4" x 10" rect. transition	8 Ft. x () =	Ft.
	7" round to 3- 1/4" x 10" rect. transition 90° elbow	23 Ft. x () =	Ft.
	3- 1/4" x 10" Rect. wall cap with damper	30 Ft. x () =	Ft.
	6", 7", 8", 10" Round, wall cap with damper	30 Ft. x () =	Ft.
	6", 7", 8", 10" Round roof cap	30 Ft. x () =	Ft.
		Subtotal column 2 =	Ft.
		Subtotal column 1 =	Ft.
		Total ductwork =	Ft.

PLANNING THE INSTALLATION

WARNING FIRE HAZARD

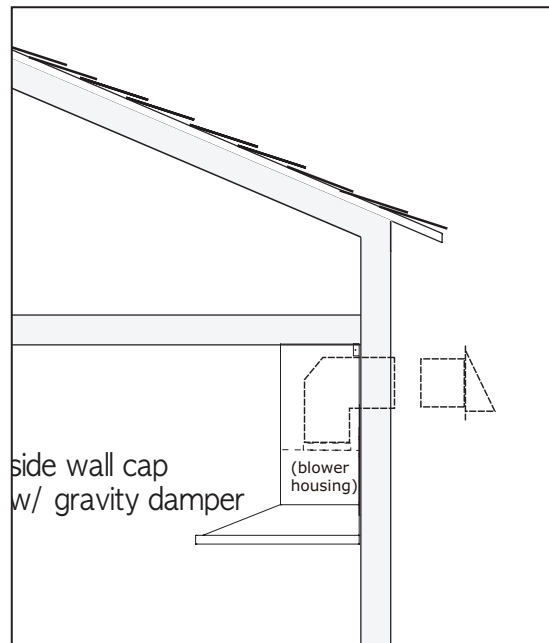
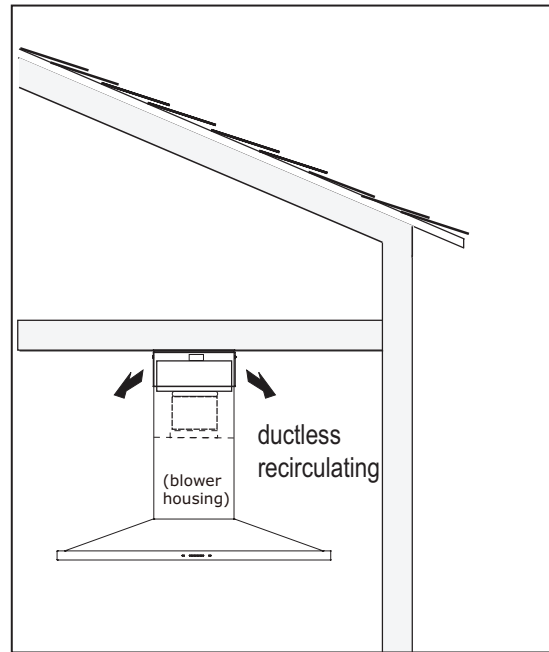
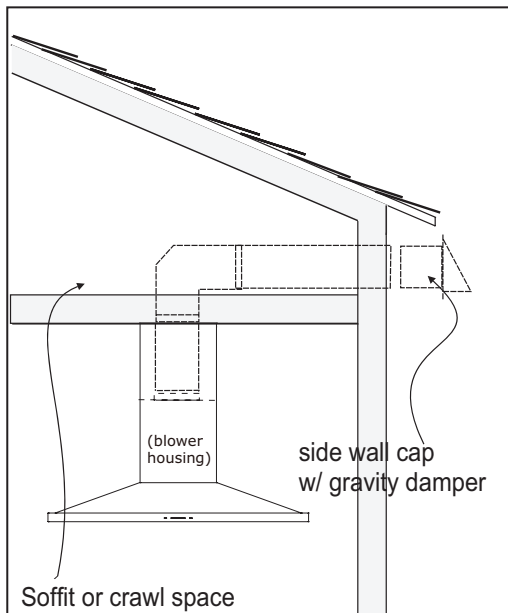
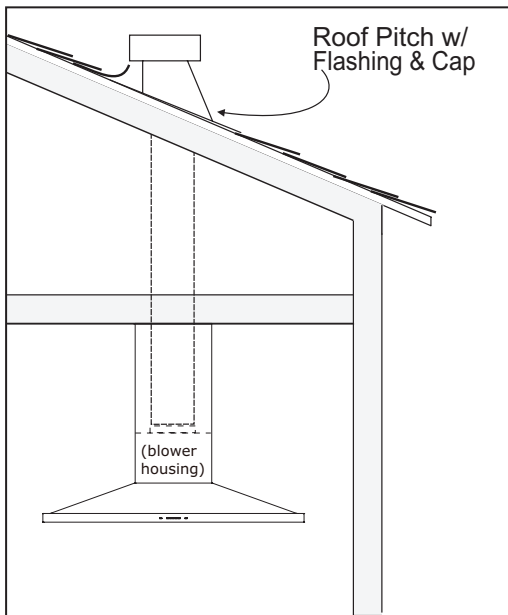
NEVER exhaust air or terminate duct work into spaces between walls, crawl spaces, ceiling, attics or garages.

All exhaust must be ducted to the outside, unless using the recirculating option.

Use single wall rigid metal ductwork only.

Fasten all connections w/ sheet metal screws and tape all joints with Silver Tape or Duct Tape.

Some Ducting Options



PLANNING THE INSTALLATION

ELECTRICAL

WARNING

All Electrical work must be performed by qualified electrician or person with similar technical know how and background.

For personal safety, remove house fuse or open circuit breaker before beginning installation. Do not use extension cord or adapter plug with this appliance.

Follow national electrical codes or prevailing local codes and ordinances.

Electrical Supply:

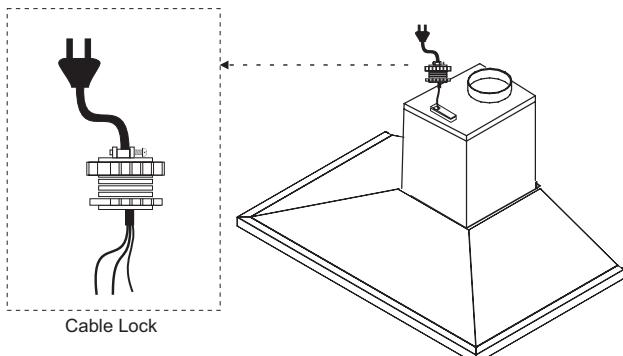
This appliance requires a 120V 60Hz electrical supply, and connected to an individual, properly grounded branch circuit, protected by a 15 or 20 ampere circuit breaker or time delay fuse. Wiring must be 2 wire w/ ground. Please also refer Electrical Diagram labeled on product.

Cable Lock:

A cable locking connector (not supplied) might also be required by local codes. Check with local requirements and codes, purchase and install appropriate connector if necessary.

WARNING

Electrical wiring must be done by a qualified person(s) in accordance with all applicable codes and standards. This range hood must be properly grounded. Turn off electrical power at service entrance before wiring.

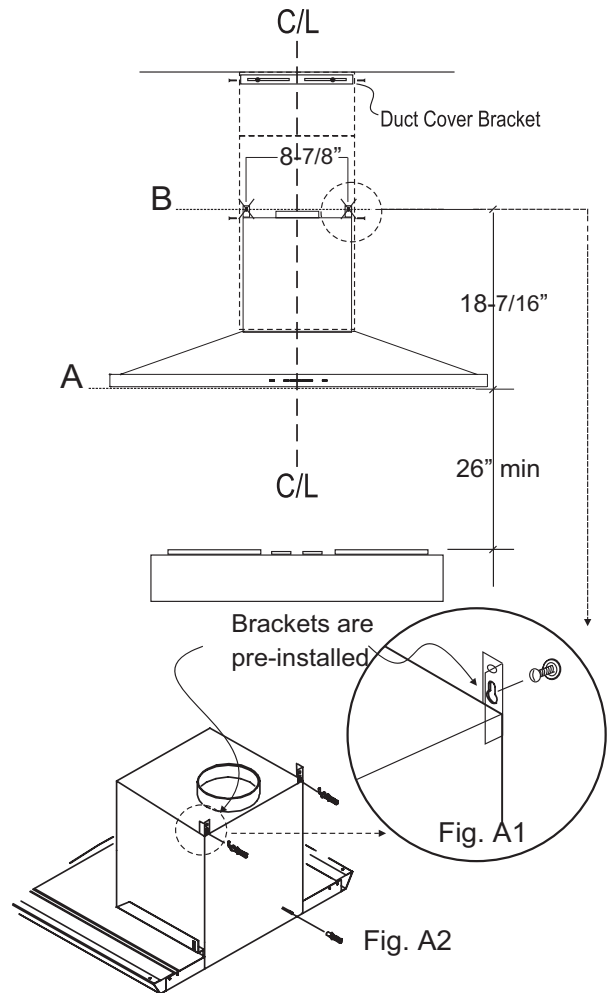


PLANNING THE INSTALLATION

CAUTION

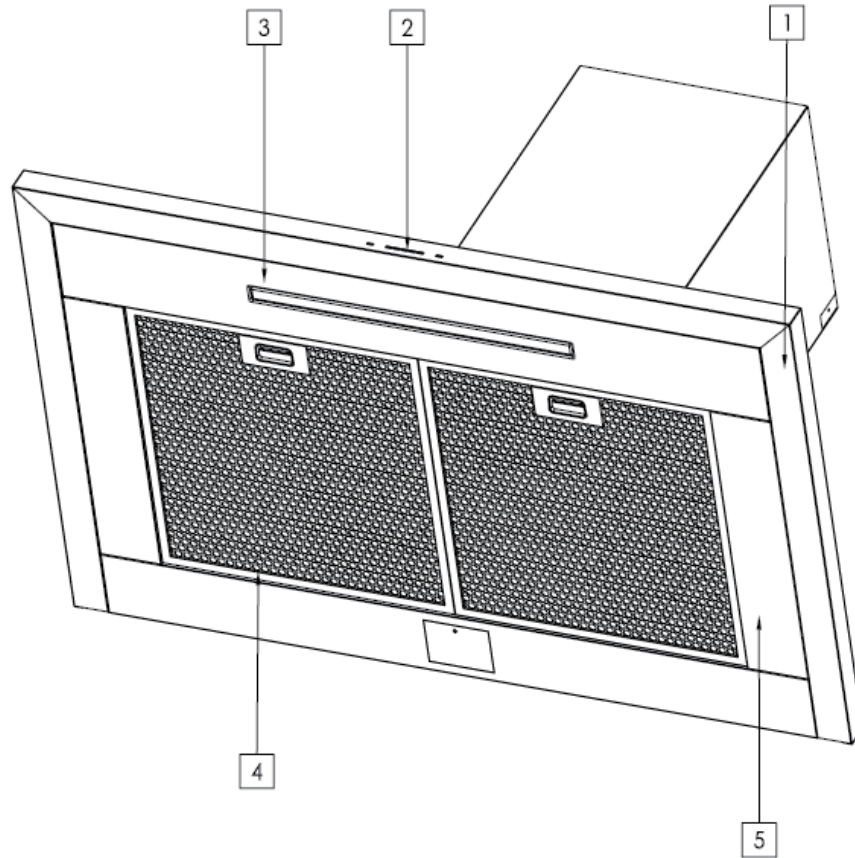
At least two installers are required due to the weight and size of the hood.

1. Measure from range top to desired hood bottom and mark line A. (26" minimum from range top).
 2. Plum and mark center line.
 3. Mark hood height line B. (18-7/16" from line A)
 4. Mark mounting spread from C/L. (8-7/8" on line B)
 5. Fasten (2) M4X 1-1/2" screws into studs on line B but do not tighten all the way. Note: Wood blocking may need to be added behind the drywall if no studs are present. Wall anchors may also be used but check local codes for compliance. Failure to use suitable wall anchors and screws to hold the weight of the hood could result in personal injury or damage to cooking surface or counter.
 6. Remove the (2) aluminum mesh filters.
 7. Hang hood onto the mounting screws and hand tighten each screw. (Fig A1) Secure a third M4 X 1 1/2" screw through inside of hood into wall for extra support. (Fig A2)
 8. Center and attach duct cover mounting bracket to wall just below the ceiling or soffit using (2) M3 X 1" screws.
 9. Install electrical and duct work. Seal duct work with aluminum duct tape.
 10. Power up hood and check for leaks around duct tape.
 11. Place telescopic duct covers onto hood and extend inner (top) duct cover upwards and secure to duct cover bracket using (2) M4 X 8 screws. Reinstall mesh filters.
- * If using hood in recirculating mode you must secure the air diverter plate onto wall before installing duct work and duct covers. You will also need to install charcoal filters and brackets. Turn to page 10 for more details.



PARTS OF THE RANGE HOOD

PARTS OF THE RANGE HOOD

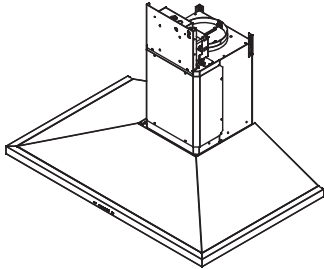


1. Hood
2. ICON Touch Control Panel
3. LED Strip Light
4. Mesh Filter
5. Side Panel (Only for LSHD3689BD, LSHD3680ST, HCED3615S, HCED3615D)

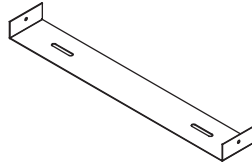
PARTS OF THE RANGE HOOD

PRODUCT OVERVIEW

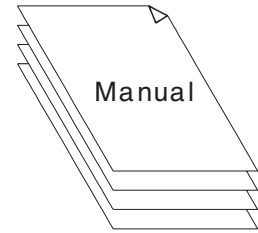
Parts List



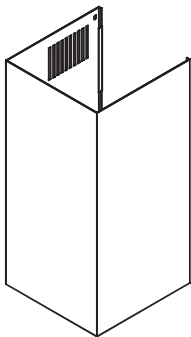
Hood



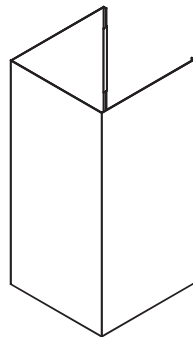
Duct cover bracket



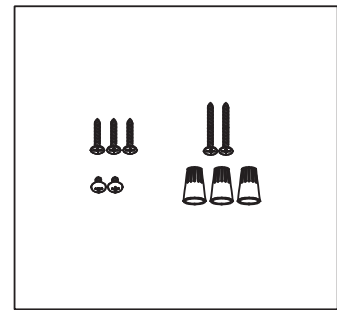
Manual



Duct cover(Upper)

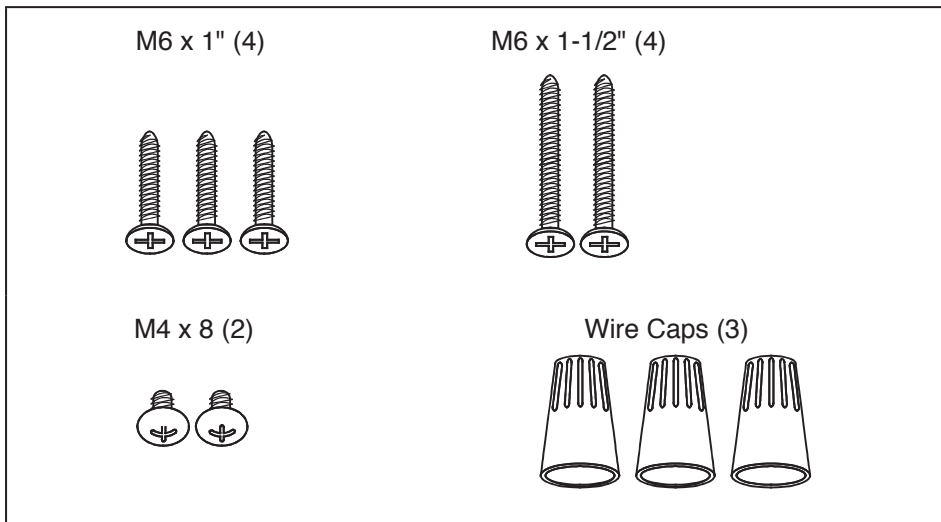


Duct cover(Lower)



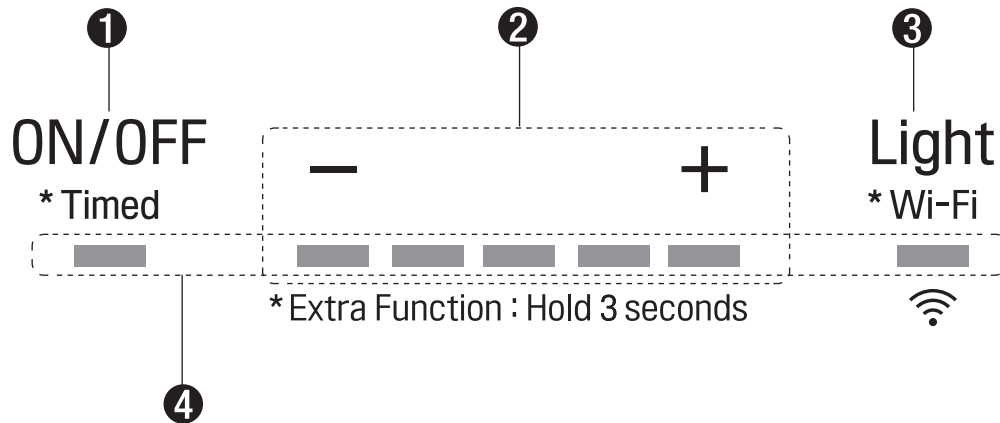
Hardware package

Content of Hardware package



PARTS OF THE RANGE HOOD

TOUCH CONTROLS & FEATURES



1. POWER / DELAY OFF BUTTON

Power Button Function ^{ON/OFF}_{* Timed}

- ^{ON/OFF}_{* Timed} Button will turn power on and off for entire hood (fan and lights).
- Hood will remember the last speed and light level it was turned off at.
(Example: Press ^{ON/OFF}_{* Timed} button to turn off the hood with fan speed at level 4 and lights on high. Press the ^{ON/OFF}_{* Timed} again and the hood will turn on with the fan speed set to 4 and the lights on high.)

Delay Off Button Function

- With the fan on, press and hold the ^{ON/OFF}_{* Timed} button for three seconds. The fan will change to speed 1 and the 5 minute delay off timer will start.

^{ON/OFF}_{* Timed} + — + LEDs will illuminate and slowly blink in accordance with the time remaining until the fan and lights automatically turn off.

- Pressing the ^{ON/OFF}_{* Timed} button while the Delay Off Function is enabled will turn the hood off and cancel the Delay Off Function.

2. SPEED SELECTION BUTTON

Fan Speed Decrease Button —

- Press this button to decrease fan speed. 5, 4, 3, 2, 1.
- If fan is On at level 1 and this button is pressed, fan will power Off.

Fan Speed Increase Button +

- Press this button to increase fan speed. Fan On, 1, 2, 3, 4, 5.
- If hood is Off and this button is pressed, fan will turn On at level 1.

PARTS OF THE RANGE HOOD

3 LIGHTS BUTTON ^{Light} ^{*Wi-Fi}

- The light has two levels: High and Low.
- From off, press one time for High. Press again for Low. Press again to power lights off.
- Press and hold the Light button for 3 seconds to connect to a home Wi-Fi network. See page 8 for more information.

4 DISPLAY INDICATORS

Mesh Filter Clean Reminder (always enabled)

- After 30 hours of fan usage, the — button indicator will begin to slowly blink indicating it is time to clean the mesh filters.
- To reset: With hood off: hold the — button for three seconds. All LED indicators will blink two times confirming the 30 hour timer has been reset.

Charcoal Filter Replace Indicator (disabled by default, must be enabled if recirculating hood)

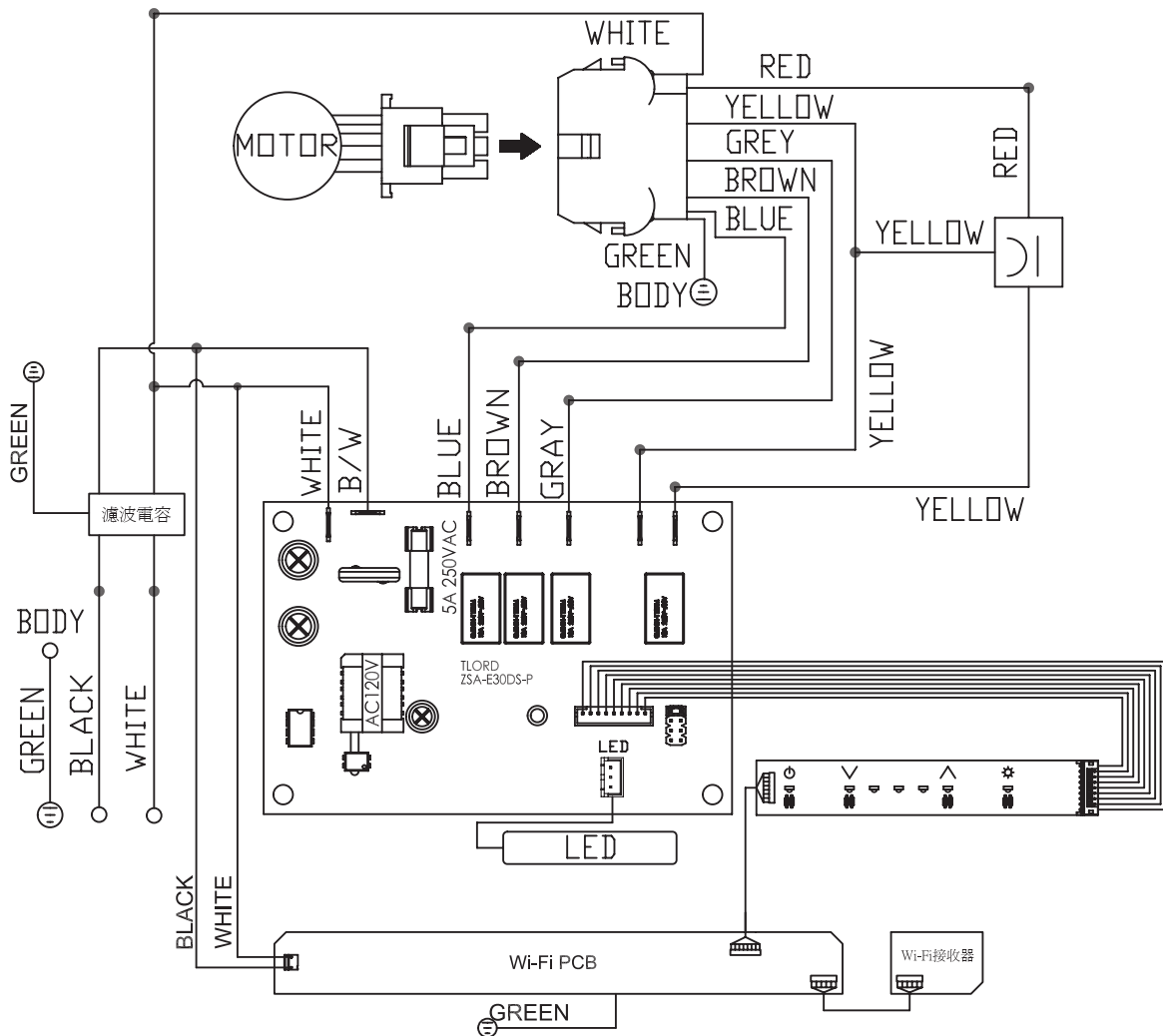
- To enable Charcoal Filter Replacement Reminder:
With hood off, hold + button and ^{Light}
^{*Wi-Fi} button simultaneously for two seconds. All LED indicators will blink two times confirming the Charcoal Filter Replace Reminder is disabled.

- To disable Charcoal Filter Replacement Reminder:
With hood off, hold + button and ^{Light}
^{*Wi-Fi} button simultaneously for two seconds. All LED indicators will blink two times confirming the Charcoal Filter Replace Reminder is disabled.
- After 120 hours of fan usage the + button will slowly blink indicating the charcoal filters need replacement.
- **To reset:** With hood off, hold the + button for two seconds. All LED indicators will blink two times confirming the 120 hour timer has been reset.

PARTS OF THE RANGE HOOD

WIRING DIAGRAM

Models	Volts	HZ	MAX Amps
LSHD3689BD/LSHD3089BD LSHD3680ST/LSHD3080ST HCED3615S/HCED3015S HCED3615D/HCED3015D	120	60	Single Motor 4

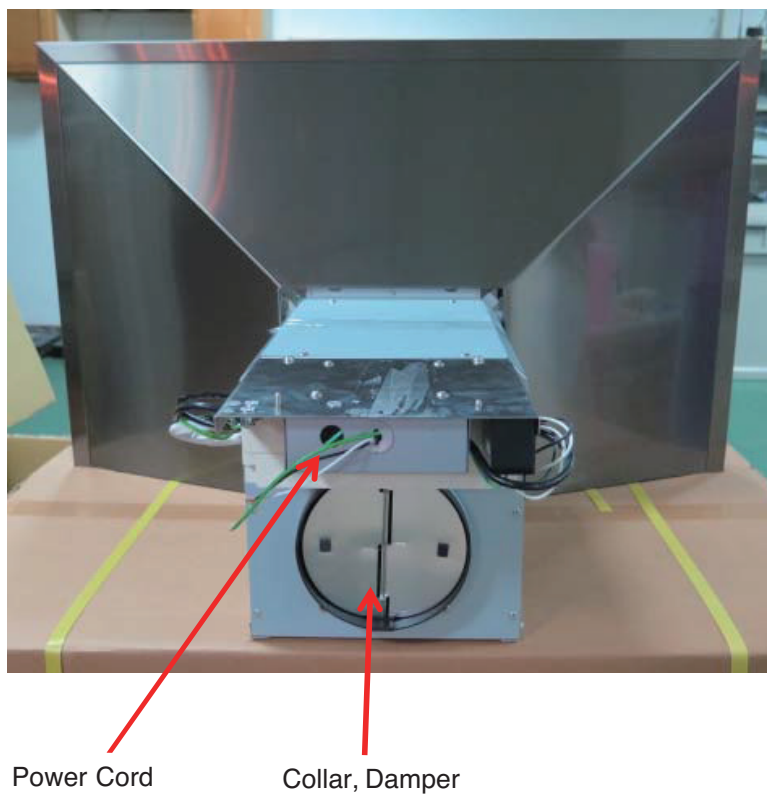
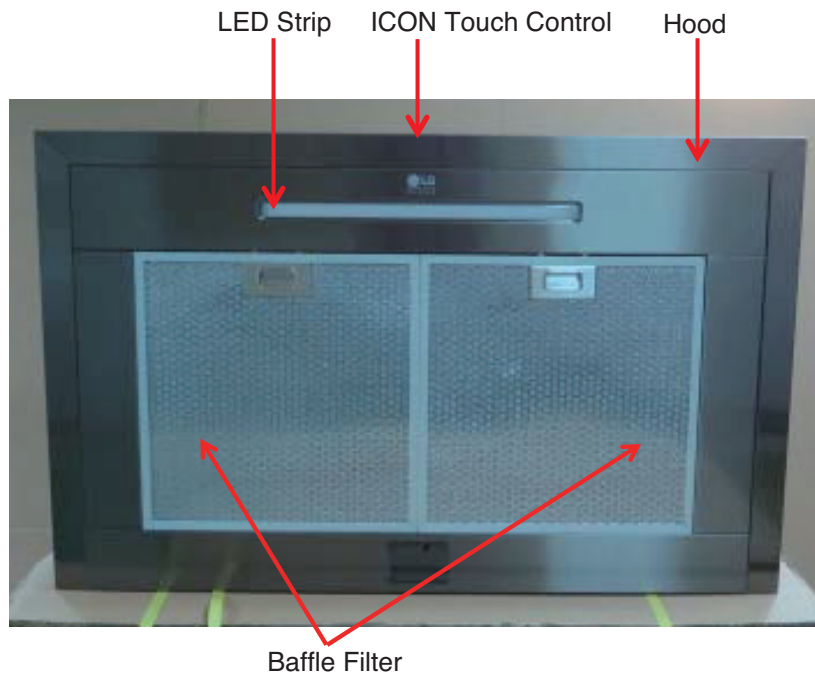


REMARKS:CONDENSER 12.5+12.5uF 250VAC FIT AC120V 60Hz

Wiring Diagram - Single Blower Models

COMPONENT LOCATIONS

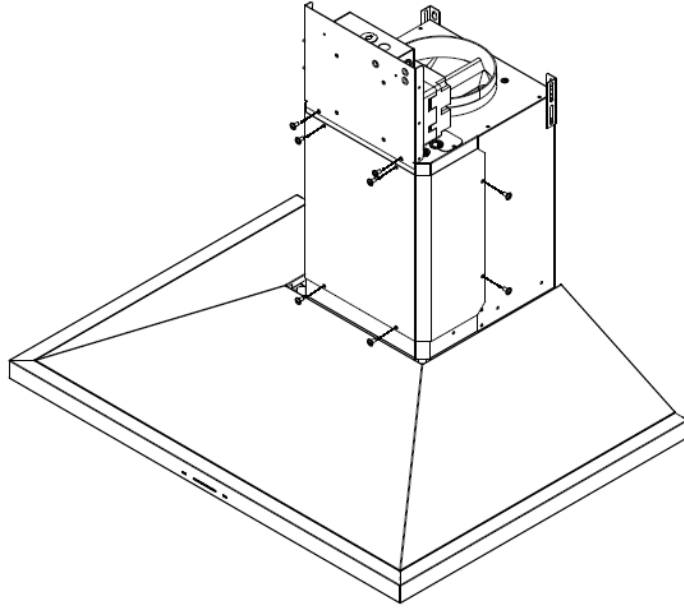
COMPONENT LOCATIONS



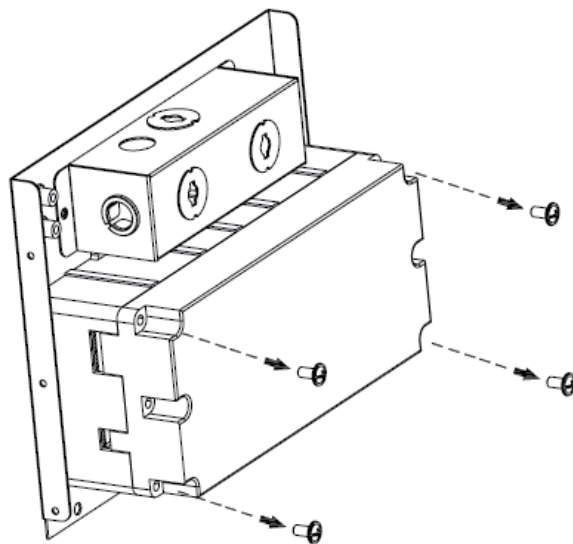
COMPONENT REPLACEMENT

BLOWER REMOVAL

Step 1. Loosen ten screws by taking out the electronic bracket and blower cover.

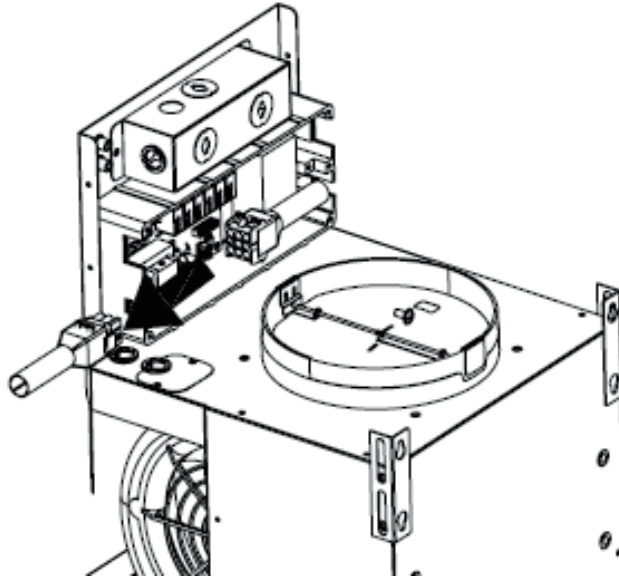


Step 2. Loosen the four screws to remove the main PCB box cover.

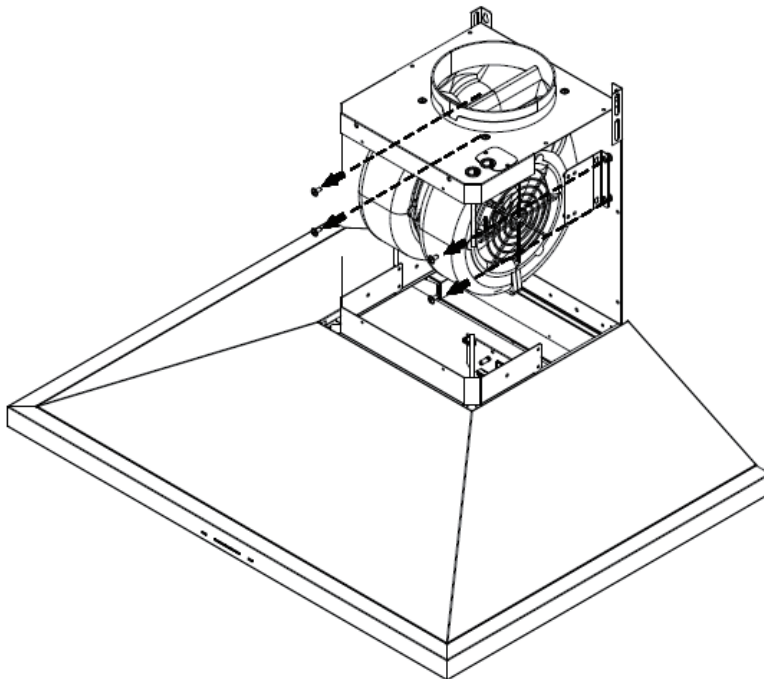


COMPONENT REPLACEMENT

Step 3. Disassemble the blower wire from main PCB.

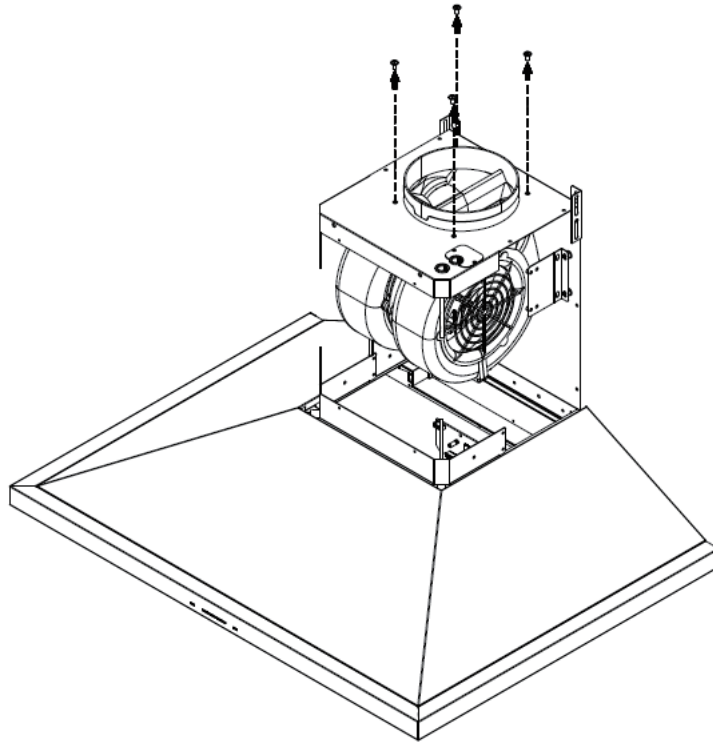


Step 4. Loosen the four screws on the blower brackets.

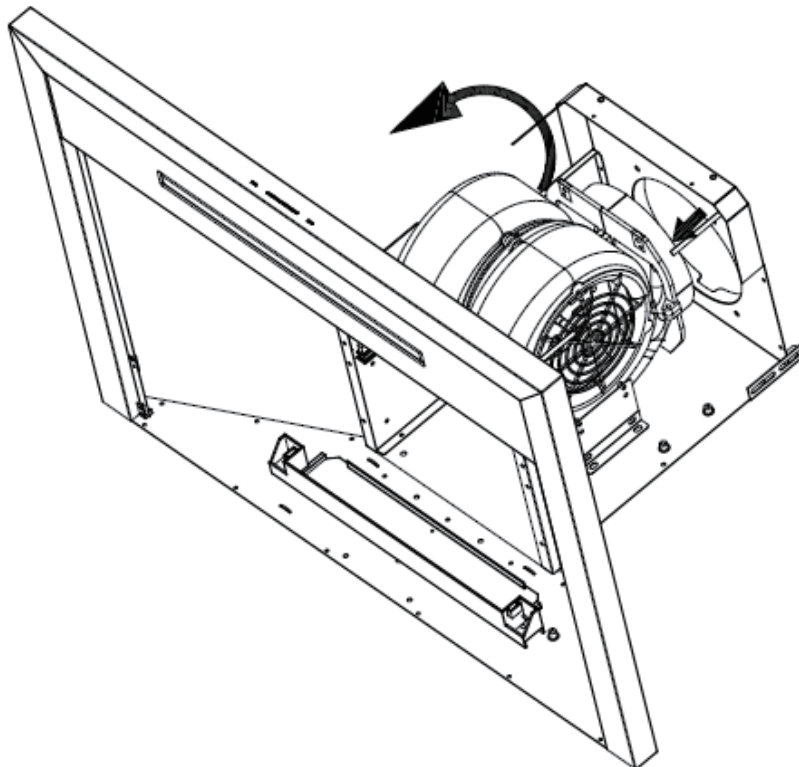


COMPONENT REPLACEMENT

Step 5. Loosen the four screws on the blower housing.



Step 6. Take out the blower.

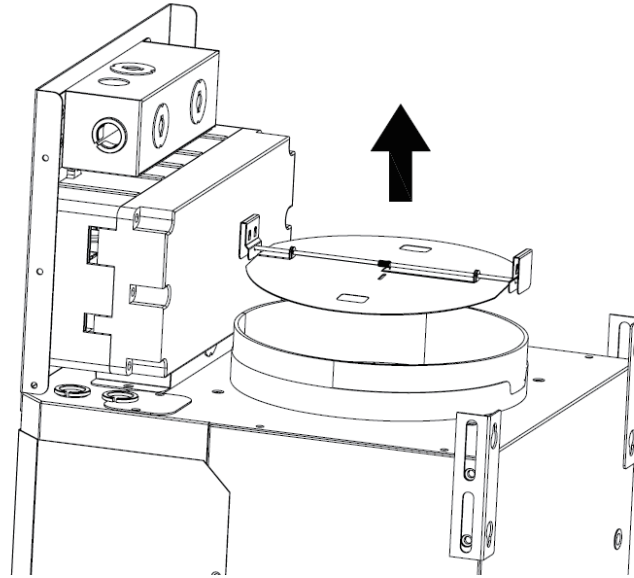


* Follow these steps in reverse to reassemble the part.

COMPONENT REPLACEMENT

DAMPER REMOVAL

Step 1. Follow the below arrow direction to take out the brackets and damper.

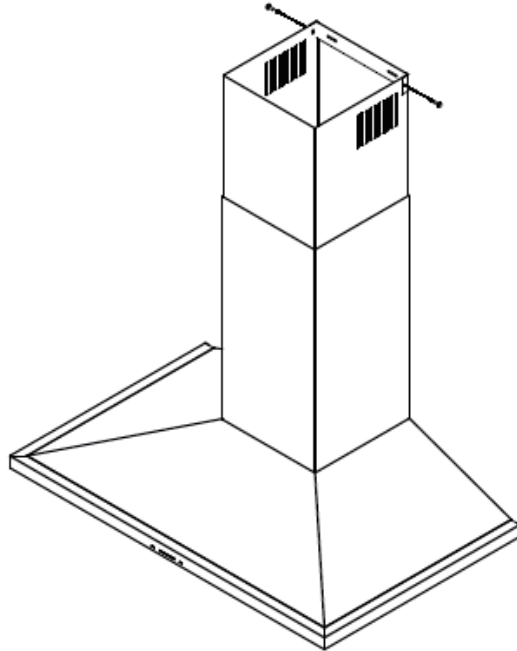


* Follow these steps in reverse to reassemble the part.

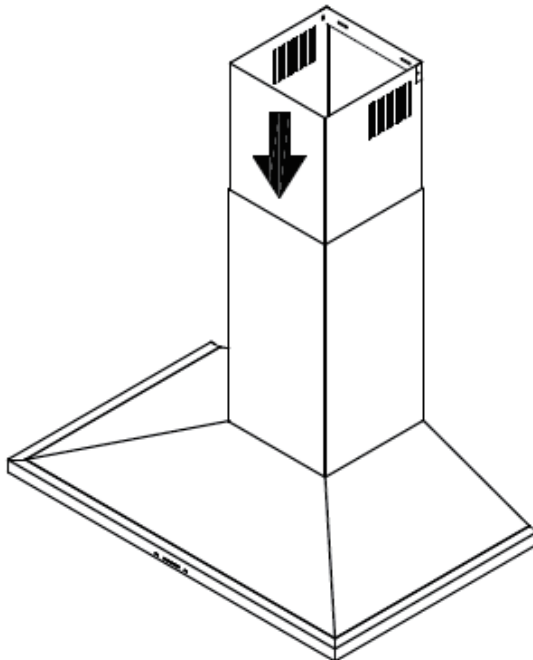
COMPONENT REPLACEMENT

DUCT COVER BRACKET REMOVAL

Step 1. Remove the screws for securing the duct cover_upper.

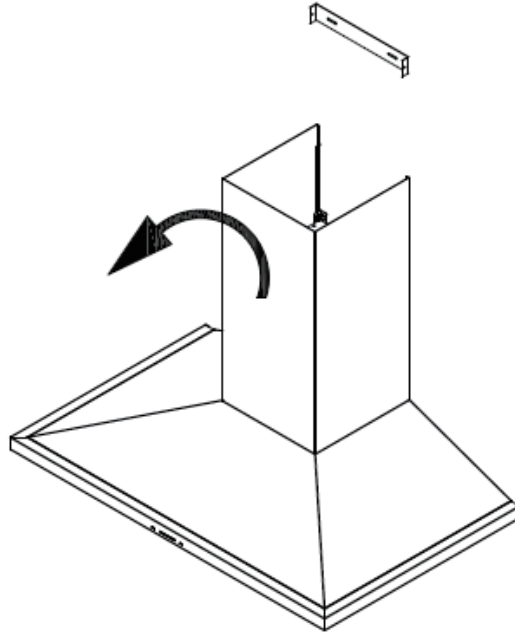


Step 2. Slide the duct cover_upper towards ground.



COMPONENT REPLACEMENT

Step 3. Take out the duct covers and loosen the screws for securing the duct cover bracket to remove the duct cover bracket.

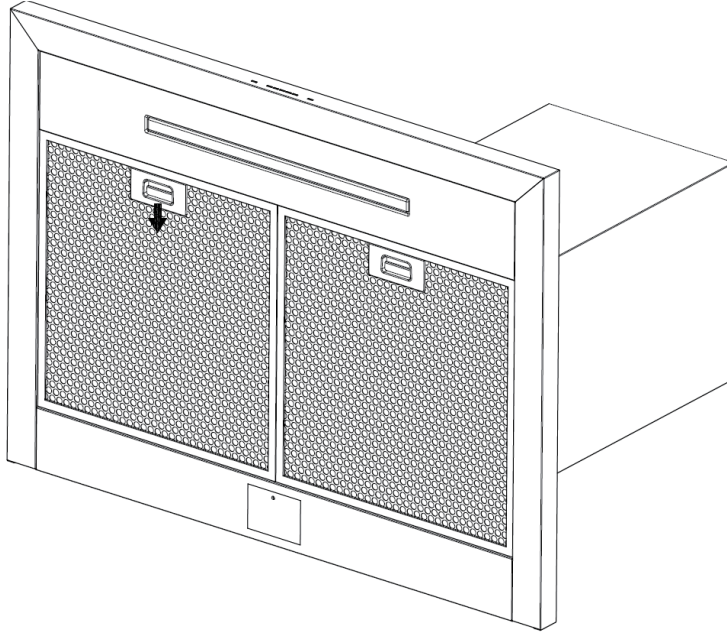


* Follow these steps in reverse to reassemble the part.

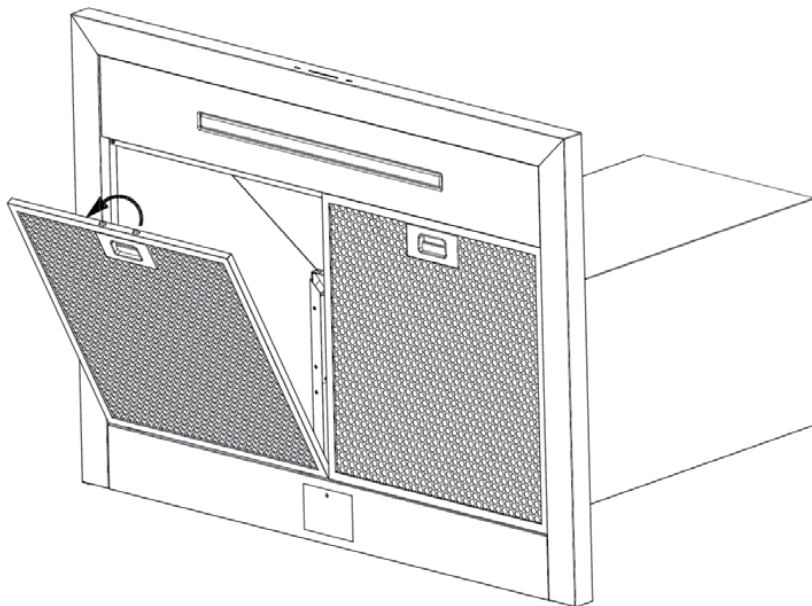
COMPONENT REPLACEMENT

FILTER REMOVAL

Step 1. Follow the below arrows direction to push in on filter handle.



Step 2. Follow the below arrow direction to remove filter by pulling away from hood.



* Follow these steps in reverse to reassemble the part.

COMPONENT REPLACEMENT

LED STRIP REMOVAL

Step 1. Remove the mesh filter and light panel.

Step 2. Follow the below arrow direction to take out the cap of LED strip and push the LED strip toward inside of light panel.



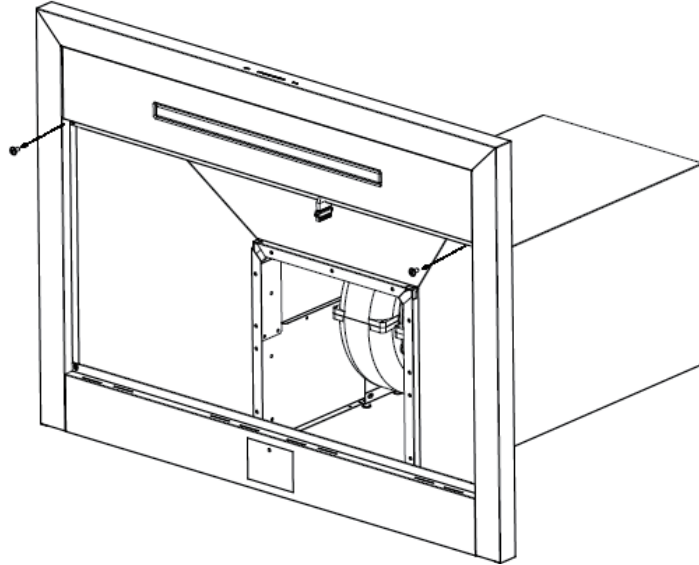
* Follow these steps in reverse to reassemble the part.

COMPONENT REPLACEMENT

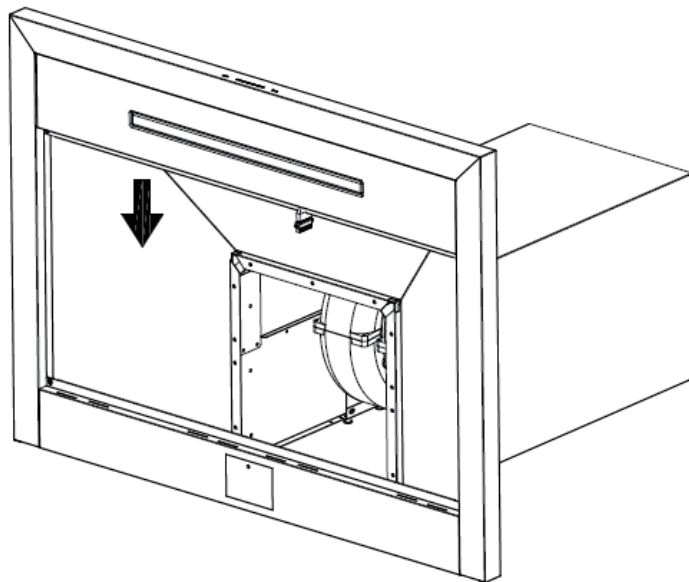
LIGHT PANEL REMOVAL

Step 1. Remove the mesh filters.

Step 2. Loose four screws for securing left side panel and right side panel. (Only for DC9700BL, two screws for each side.)



Step 3. Follow the below arrow direction to take out the light panel.



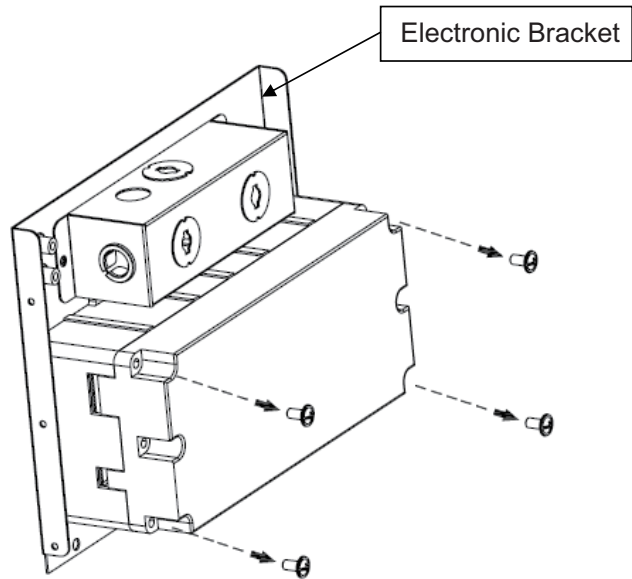
* Follow these steps in reverse to reassemble the part.

COMPONENT REPLACEMENT

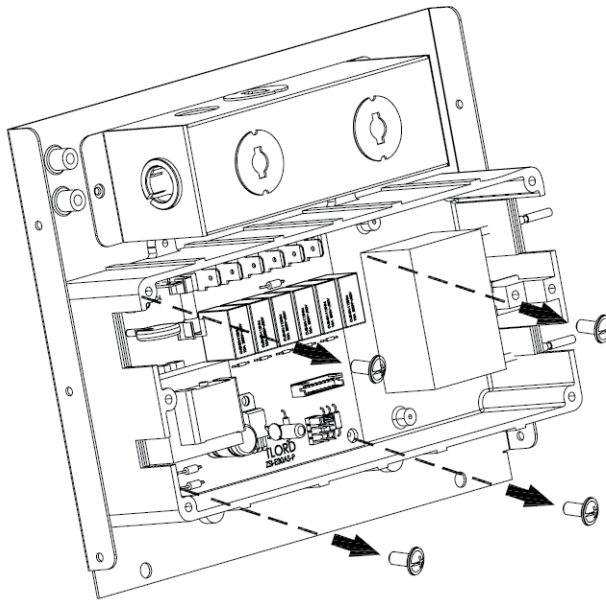
MAIN PCB REMOVAL

Step 1. Take out the electronic bracket.

Step 2. Loose the four screws for main PCB box.

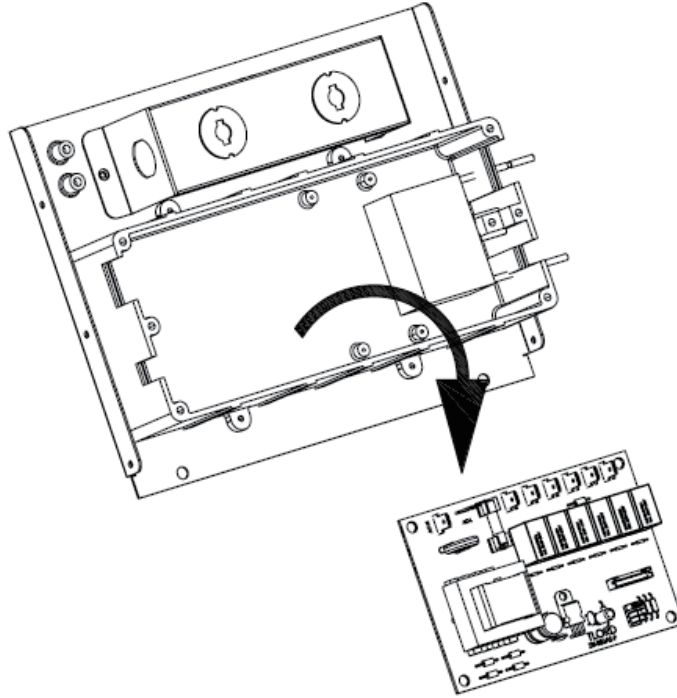


Step 3. Loose the four screws for main PCB.



COMPONENT REPLACEMENT

Step 4. Take out the main PCB.

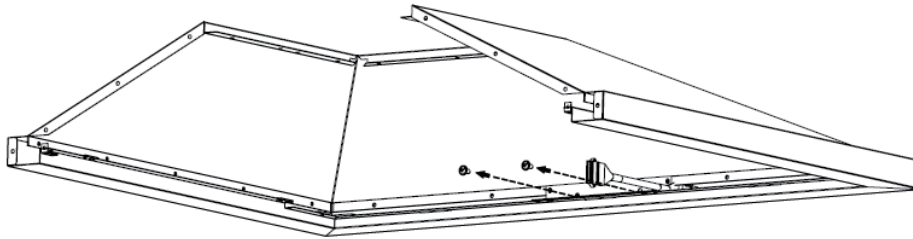


* Follow these steps in reverse to reassemble the part.

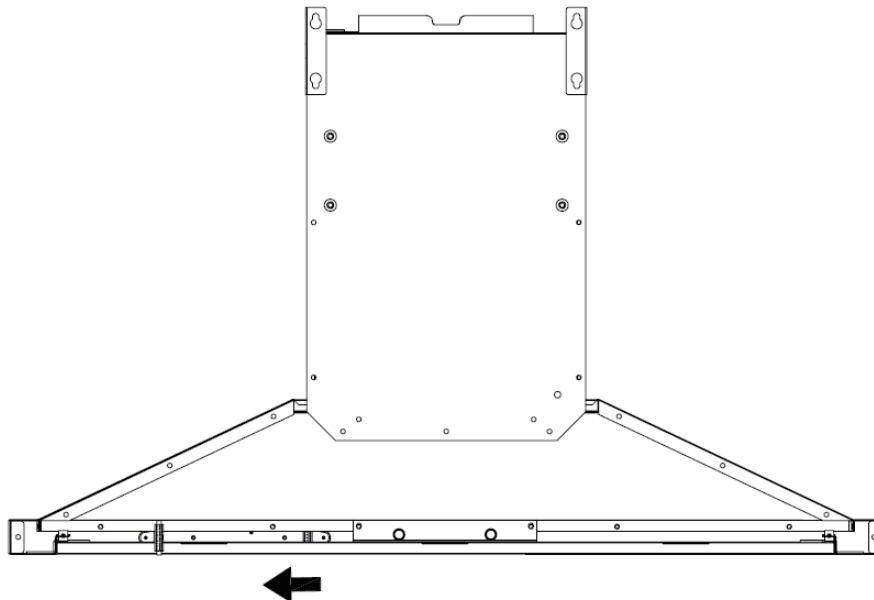
COMPONENT REPLACEMENT

SWITCH ASSEMBLY REMOVAL

Step 1. Remove the two screws for switch assembly.

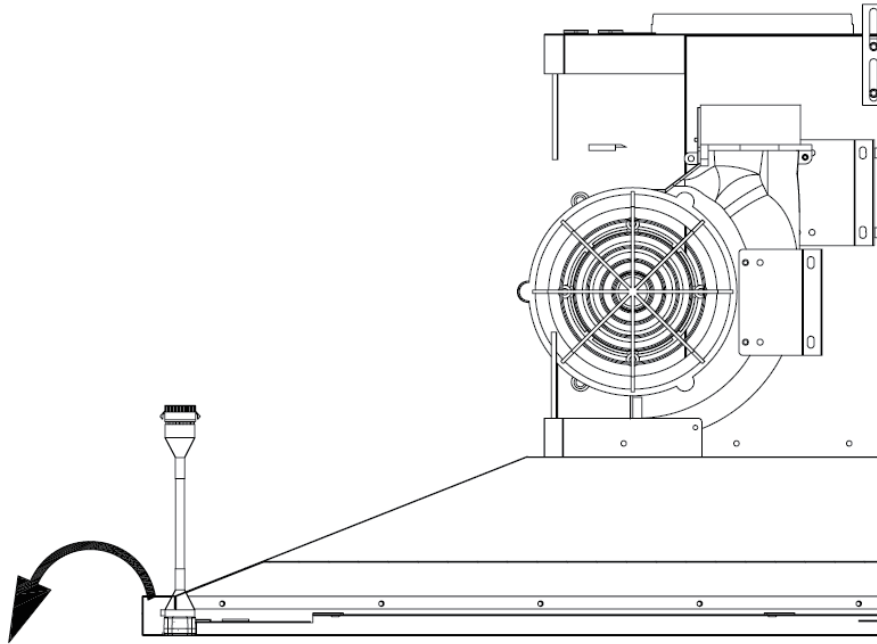


Step 2. Slider the switch assembly to left.

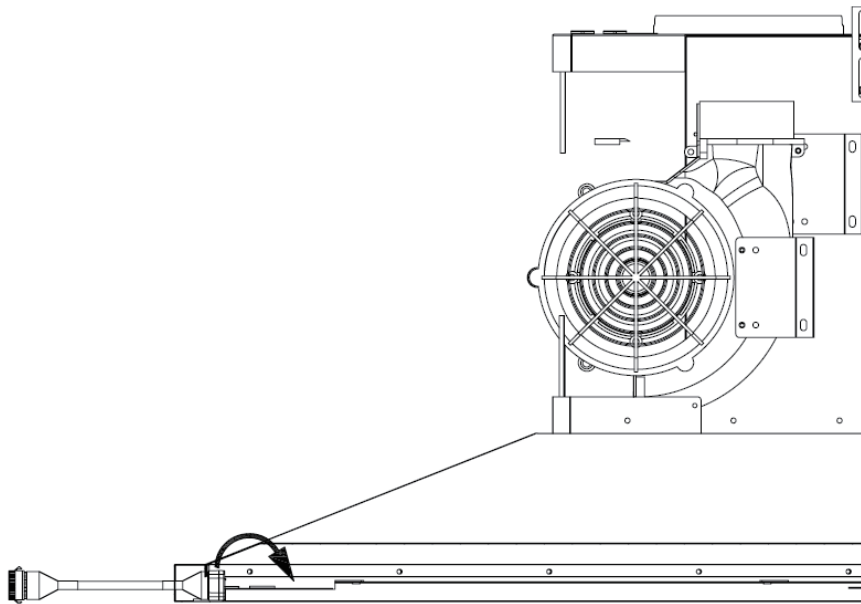


COMPONENT REPLACEMENT

Step 3. Turn and make the switch surface face toward ground.



Step 4. Turn the wire and lie down the switch assembly, then take out the switch assembly.



* Follow these steps in reverse to reassemble the part.

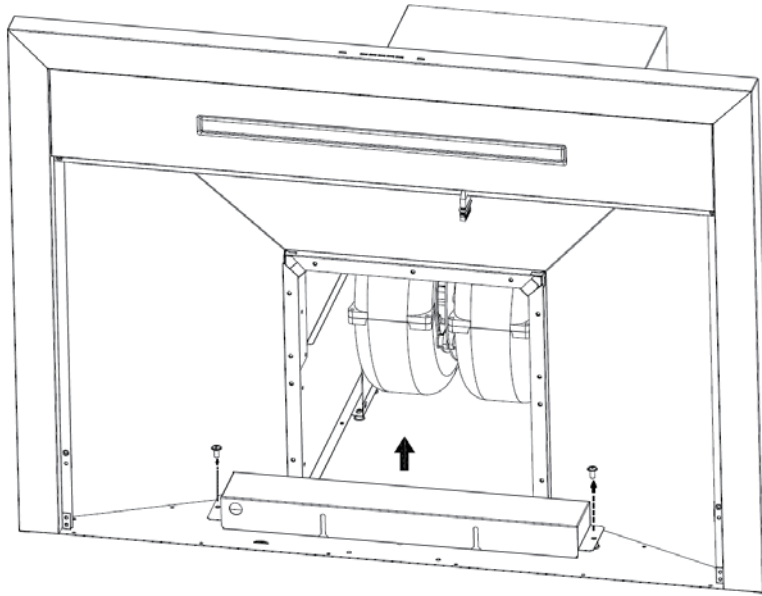
COMPONENT REPLACEMENT

WiFi INTERFACE PCB REMOVAL

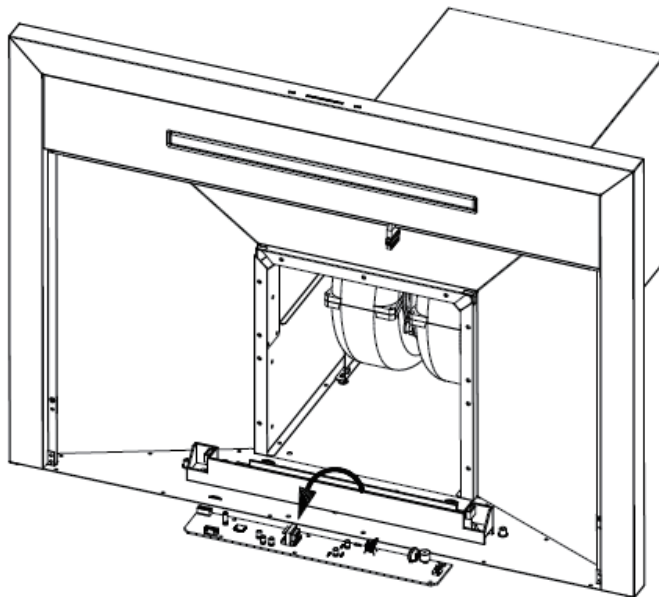
Step 1. Remove the mesh filters.

Step 2. Take out the WiFi cover by loosening two screws

Step 3. Remove the wires on the WiFi interface PCB.



Step 4. Follow the below arrow direction to take out the WiFi interface PCB.



* Follow these steps in reverse to reassemble the part.

EXPLODED VIEW

MODEL:

Customer Model	Product Code	SVC Model
LSHD3080ST	DC7700SL.FSTESTD	LSHD3080ST
LSHD3680ST	DC9700SL.FSTESTD	LSHD3680ST
LSHD3089BD	DC7700BL.FBDESTD	LSHD3089BD
LSHD3689BD	DC9700BL.FBDESTD	LSHD3689BD
HCED3015S	DC7700SL.FSTELNA	HCED3015S
HCED3615S	DC9700SL.FSTELNA	HCED3615S
HCED3615D	DC9700SL.FBDELNA	HCED3615D
HCED3015D	DC7700SL.FBDELNA	HCED3015D

