

MIRKA



Mirka® AOS-B 130NV & AROS-B 150NV



Exploded view

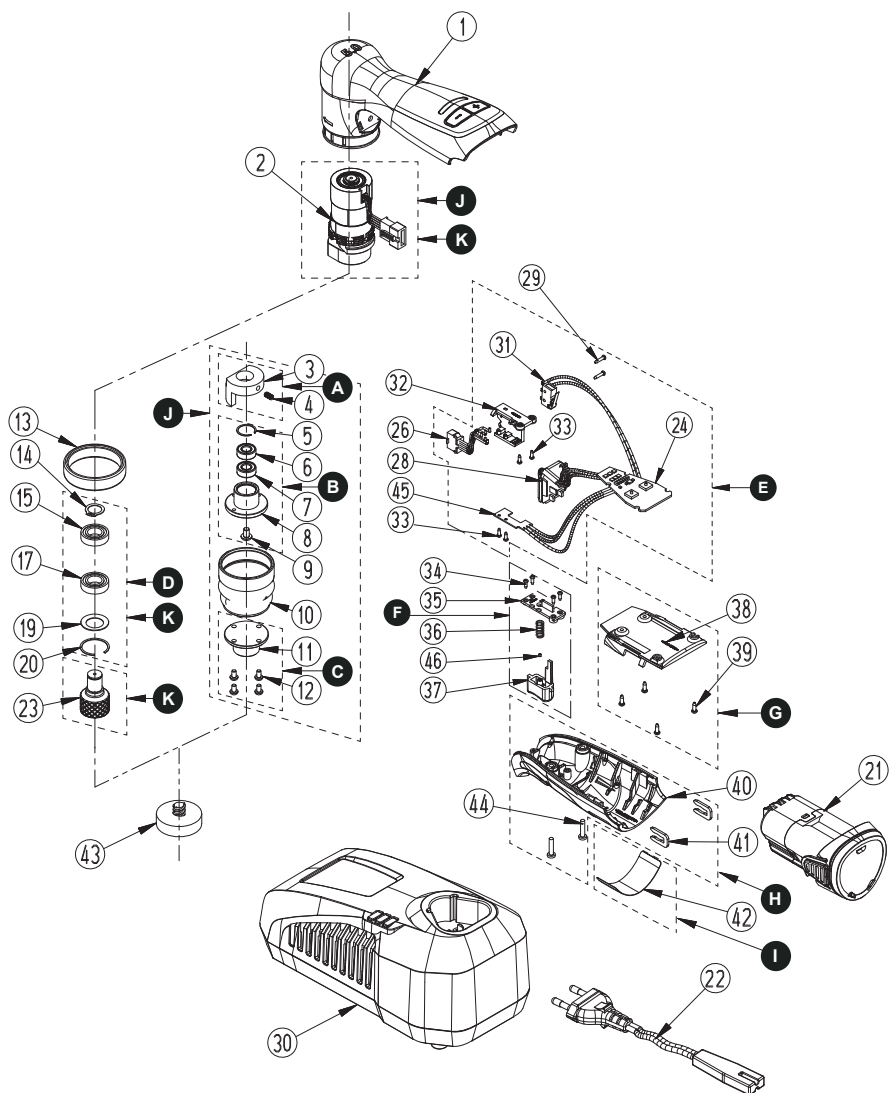


Figure 1



Figure 2

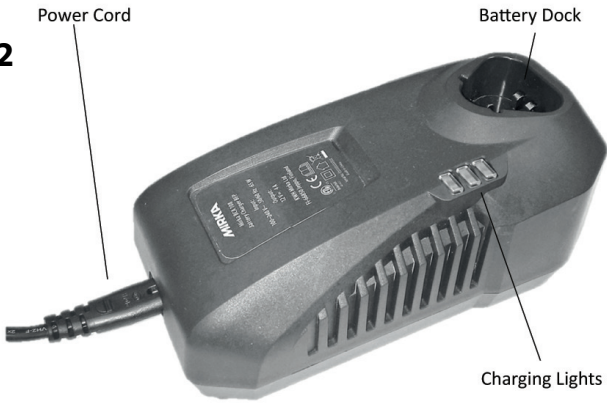


Figure 3



Parts list – kits

Mirka code	Item	Description	Kit	Quantity	Tightening torque
8991120311		Counter Weight kit for AOS-B	A		
	3	Counter Weight		1	
	4	Set Screw		1	
8991120511		Spindle Bearing kit for AOS-B	B		
	5	Retaining Ring		1	
	6	Ball Bearing		1	
	7	Ball Bearing		1	
	8	Balance Shaft		1	
	9	Assembly Screw		1	
8991121111		Quick Lock Plate Assembly for AOS-B	C		
	11	Quick Lock Plate		1	
	12	Assembly Screws		4	
8991121411		Spindle Bearing kit for AROS-B	D		
	14	Retaining Ring		1	
	15	Ball Bearing		1	
	17	Ball Bearing		1	
	19	Washer		1	
	20	Retaining Ring		1	
8991162411		Speed Controller (Variable) kit	F		
	24	Speed Controller		1	
	26	Motor Connector Assembly		1	
	28	Battery Terminal		1	
	29	Assembly Screws for Switch		2	
	31	Switch		1	
	32	Holder		1	
	33	Assembly Screws for Switch Holder		4	
	45	PCB Switch		1	
8991123411		Trigger Button kit	F		
	34	Assembly Screws for Trigger Button Cover		4	
	35	Trigger Button Cover		1	
	36	Trigger Spring		1	
	37	Trigger Button		1	
8991022511		Trigger Button (Variable) kit	F		
	34	Assembly Screws for Trigger Button Cover		4	
	35	Trigger Button Cover		1	
	36	Trigger Spring		1	
	37	Trigger Button		1	
	46	Magnet		1	
8991022111		PCB Cover kit	G		
	38	PCB Cover		1	
	39	Assembly Screws		4	
8991124011		Cover kit	H		
	40	Cover		1	
	41	Assembly Clamps		2	

Mirka code	Item	Description	Kit	Quantity	Tightening torque
8991124211	44	Assembly Screws for Cover		2	
		Label kit (EU)	I		
	42	Type Label, AROS-B		10	
	42	Type Label, AOS-B		10	
		Label kit (North America)	I		
	42	Type Label, AROS-B		10	
8991110231	42	Type Label, AOS-B		10	
		AOS-B Motor kit Orbit 3.0 mm	J		
	2	AOS-B Motor Orbit 3.0 mm		1	
	3	Counter Weight		1	
	4	Set Screw		1	
	5	Retaining Ring		1	
	6	Ball Bearing		1	
	7	Ball Bearing		1	
	8	Balance Shaft		1	
	9	Assembly Screw		1	
	10	Rubber Mount		1	
	11	Quick Lock Plate		1	
8991110251	12	Assembly Screws		1	
		AROS-B Motor kit Orbit 5.0 mm	K		
	2	AROS-B Motor Orbit 5.0 mm		1	
	14	Retaining Ring		1	
	15	Ball Bearing		1	
	17	Ball Bearing		1	
	19	Washer		1	
	20	Retaining Ring		1	
	23	Spindle Quick Lock Insert		1	

NOTE! Repairs done by non-authorized repairer will breach the Mirka warranty.

Electrical tools must be serviced by a qualified repair person and in accordance with national requirements.

Parts list – spareparts & accessories

Mirka code	Item	Description	Kit	Quantity	Tightening torque
8991110111	1	Housing for AROS-B, 5.0mm		1	
8991110211	1	Housing for AOS-B, 3.0mm		1	
	2	AOS-B Motor Orbit 3.0 mm	J	1	
	2	AROS-B Motor Orbit 5.0 mm	K	1	
	3	Counter Weight for AOS-B	A,J	1	
	4	Set Screw for AOS-B	A,J	1	
	5	Retaining Ring for AOS-B	B,J	1	
	6	Ball Bearing for AOS-B	B,J	1	
	7	Ball Bearing for AOS-B	B,J	1	
	8	Balance Shaft for AOS-B	B,J	1	
	9	Assembly Screw for AOS-B	B,J	1	
8991111011	10	Rubber Mount for AOS-B	J	1	
	11	Quick Lock Plate Assembly for AOS-B	C,J	1	
	12	Assembly Screws for AOS-B	C,J	4	
8991111311	13	Soft Ring for AROS-B		1	
	14	Retaining Ring for AROS-B	D,K	1	
	15	Ball Bearing for AROS-B	D,K	1	
	17	Ball Bearing for AROS-B	D,K	1	
	19	Washer for AROS-B	D,K	1	
	20	Retaining Ring for AROS-B	D,K	1	
8991122211	21	Mirka Intelligent Battery BPA 10825 10.8V 2.5Ah		1	
8991122311	21	Mirka Intelligent Battery BPA 10850 10.8V 5.0Ah		1	
8991112211	22	Power Cord 2.0 m EU		1	
8991112311	22	Power Cord 2.0 m US		1	
8991112411	22	Power Cord 2.0 m UK		1	
8991112611	22	Power Cord 2.0 m CN		1	
8991112711	22	Power Cord 2.0 m ANZ		1	
8991112301	23	Spindle Quick Lock Insert for AROS-B	K	1	
	24	Speed Controller	E	1	
	26	Motor Connector Assembly	E	1	
	28	Battery Terminal	E	1	
	29	Assembly Screws for Switch	E	2	
8991123011	30	Battery Charger		1	
8991123011US	30	Battery Charger (North America)		1	
	31	Switch	E	1	
	32	Holder	E	1	
	33	Assembly Screws for Switch Holder	E	4	
	34	Assembly Screws for Trigger Button Cover	F	4	
	35	Trigger Button Cover	F	1	
	36	Trigger Spring	F	1	
	37	Trigger Button	F	1	
	38	PCB Cover	G	1	
	39	Assembly Screws	G	4	
	40	Cover	H	1	

Mirka code	Item	Description	Kit	Quantity	Tightening torque
8991012711	41	Assembly Clamps	H	1	
	42	Type Label	I	1	
8294595311	43	Backing Pad Quick Lock 32mm PSA Hard		1	
8294598311	43	Backing Pad Quick Lock 32mm Grip Sof		1	
	44	Assembly Screws for Cover	H	2	
	45	PCB Switch	E	1	
	46	Magnet	F	1	

NOTE! Repairs done by non-authorized repairer will breach the Mirka warranty.

Electrical tools must be serviced by a qualified repair person and in accordance with national requirements.

Please read and comply with

- General Industry Safety & Health Regulations, part 1910, OSHA 2206, available from: Superintendent of Documents; Government Printing Office; Washington DC 20402
- State and local regulations



General Power Tool Safety Warnings



WARNING Read all safety warnings and all instructions. Failure to follow the warnings and instructions may result in electric shock, fire and/or serious injury.

Save all warnings and instructions for future reference. The term “power tool” in the warnings refers to your mains-operated (corded) power tool or battery-operated (cordless) power tool.

1. Work area safety

- Keep work area clean and well lit.** Cluttered or dark areas invite accidents.
- Do not operate power tools in explosive atmospheres, such as in the presence of flammable liquids, gases or dust.** Power tools create sparks which may ignite the dust or fumes.
- Keep children and bystanders away while operating a power tool.** Distractions can cause you to lose control.

2. Electrical safety

- Power tool plugs must match the outlet. Never modify the plug in any way. Do not use any adapter plugs with earthed (grounded) power tools.** Unmodified plugs and matching outlets will reduce risk of electric shock.
- Avoid body contact with earthed or grounded surfaces, such as pipes, radiators, ranges and refrigerators.** There is an increased risk of electric shock if your body is earthed or grounded.
- Do not expose power tools to rain or wet conditions.** Water entering a power tool will increase the risk of electric shock.
- Do not abuse the cord. Never use the cord for carrying, pulling or unplugging the power tool. Keep cord away from heat, oil, sharp edges and moving parts.** Damaged or entangled cords increase the risk of electric shock.
- When operating a power tool outdoors, use an extension cord suitable for outdoor use.** Use of a cord suitable for outdoor use reduces the risk of electric shock.
- If operating a power tool in a damp location is unavoidable, use a residual current device (RCD) protected supply.** Use of an RCD reduces the risk of electric shock.

3. Personal safety

- Stay alert, watch what you are doing and use common sense when operating a power tool. Do not use a power tool while you are tired or under the influence of drugs, alcohol or medication.** A moment of inattention while operating power tools may result in serious personal injury.
- Use personal protective equipment. Always wear eye protection.** Protective equipment such as a dust mask, non-skid safety shoes, hard hat, or hearing protection used for appropriate conditions will reduce personal injuries.
- Prevent unintentional starting. Ensure the switch is in the off-position before connecting to power source and/or battery pack, picking up or carrying the tool.** Carrying power tools with your finger on the switch or plugging in tools when the switch is in the on-position invites accidents.
- Remove any adjusting key or wrench before turning the power tool on.** A wrench or a key left attached to a rotating part of the power tool may result in personal injury.
- Do not overreach. Keep proper footing and balance at all times.** This enables better control of the power tool in unexpected situations.
- Dress properly. Do not wear loose clothing or jewellery. Keep your hair, clothing and gloves away from moving parts.** Loose clothes, jewellery or long hair can be caught in moving parts.
- If devices are provided for the connection of dust extraction and collection facilities, ensure these are connected and properly used.** Use of dust collection can reduce dust-related hazards.
- Do not let familiarity gained from frequent use of tools allow you to become complacent and ignore tool safety principles.** A careless action can cause severe injury within a fraction of a second.

4. Power tool use and care

- Do not overload the power tool. Use the correct power tool for your application.** The correct power tool will do the job better and safer at the rate for which it was designed.

- b. **Do not use the power tool if the switch does not turn it on and off.** Any power tool that cannot be controlled with the switch is dangerous and must be repaired.
 - c. **Disconnect the plug from the power source and/or the battery pack from the power tool before making any adjustments, changing accessories, or storing power tools.** Such preventive safety measures reduce the risk of starting the power tool accidentally.
 - d. **Store idle power tools out of the reach of children and do not anyone who is unfamiliar with the power tool or these instructions to operate the power tool.** Power tools are dangerous in the hands of untrained users.
 - e. **Maintain power tools. Check for misalignment or binding of moving parts, breakage of parts and any other condition that may affect the power tool's operation. If damaged, have the power tool repaired before use.** Many accidents are caused by poorly maintained power tools.
 - f. **Keep cutting tools sharp and clean.** Properly maintained cutting tools with sharp cutting edges are less likely to bind and are easier to control.
 - g. **Use the power tool, accessories and tool bits etc. in accordance with these instructions, taking into account the working conditions and the work to be performed.** Use of the power tool for operations different from those intended could result in a hazardous situation.
 - h. **Keep handles and grasping surfaces dry, clean and free from oil and grease.** Slippery handles and grasping surfaces do not allow for safe handling and control of the tool in unexpected situations.
5. **Service**
- a. **Have your power tool serviced by a qualified repair person using only identical replacement parts.** This will ensure that the safety of the power tool is maintained.
6. **Battery tool use and care**
- a. **Recharge only with the charger specified by the manufacturer.** A charger that is suitable for one type of battery pack may create a risk of fire when used with another battery pack.
 - b. **Use power tools only with specifically designated battery packs.** Use of any other battery packs may create a risk of injury and fire.
 - c. **When battery pack is not in use, keep it away from other metal objects, like paper clips, coins, keys, nails, screws or other small metal objects, that can make a connection from one terminal to another.** Shorting the battery terminals together may cause burns or a fire.
 - d. **Under abusive conditions, liquid may be ejected from the battery; avoid contact. If contact accidentally occurs, flush with water. If liquid contacts eyes, additionally seek medical help.** Liquid ejected from the battery may cause irritation or burns.



Safety rules for battery pack and charger

- Important safety and operating instructions for your battery and charger. Before using the charger, read all instructions and warnings on the charger, the battery pack and the tool.
- If the battery pack casing is cracked or damaged, do not insert into charger. There is a danger of electric shock or electrocution.
- Do not allow any liquid to get inside charger. Electric shock may result.
- This charger is not intended for any uses other than charging rechargeable batteries.
- Do not place any object on top of the charger, near any heat source or place the charger on a soft surface that may result in excessive internal heat.
- Make sure the cord is located so it will not be stepped on, tripped over, or otherwise subjected to damage or stress.
- Do not use the charger if it has received a sharp blow, been dropped or otherwise damaged in any way.
- Do not store or use the tool and battery pack in locations where the temperature may reach or exceed 50 °C (122 °F).
- The charger is designed to operate on standard household electrical power (100–240 VAC). Do not attempt to use it on any other voltage.



Additional Safety Warnings

- Always ensure that the work piece to be sanded is firmly fixed in place.
- Always remove battery during any transportation of the tool.
- Do not allow the tool to free speed without taking precautions to protect surrounding people and objects in the event that the abrasive or backing pad should come loose.
- Read all instructions before using this tool. All operators must be fully trained in the proper, safe use of this tool.
- All maintenance must be carried out by trained personnel. For service, contact a Mirka authorized service center.
- If the tool appears to malfunction, stop using it immediately and arrange for service and repair.

- Before changing the abrasive always disconnect the power source
- Never carry, store or leave the tool unattended with the power source connected.
- Keep hands clear of the spinning pad during use.
- Always wear required personal safety protection in accordance with manufacturer's instructions and local/national standards while using this tool.
- Read the Materials Safety Data Sheet (MSDS) for the working surface.
- If any physical hand/wrist discomfort is experienced, stop working and seek medical attention. Hand, wrist and arm injury may result from repetitive work, motion and overexposure to vibrations.

Additional information on battery and charger

- Never attempt to open the battery pack for any reason. If the plastic housing of the battery pack breaks or cracks, immediately discontinue use and do not recharge.

Technical data

Mirka*	AOS-B 130NV	AROS-B 150NV
Voltage	10.8 VDC	10.8 VDC
Speed	4000 – 8000 rpm	4000 – 8000 rpm
Orbit	3 mm (1/8")	5 mm (3/16")
Size of backing pad	Ø 32 mm (1 1/4")	Ø 32 mm (1 1/4")
Weight (incl. battery)	0.57 kg (1.3 lbs)	0.56 kg (1.2 lbs)

Battery charger	Mirka BCA 108
Input	100–240 VAC , 50–60Hz
Charging time	< 50 min (2.5 Ah) < 100 min (5.0 Ah)
Storage temperature range	-20 °C – 80 °C (-4 °F – 176 °F)
Charging temperature	4 °C – 40 °C (39 °F – 104 °F)
Dimension	191 x 102 x 86 mm (7 1/2 x 4 x 3 3/8")
Weight	0.66 kg (1.5 lbs)
Degree of protection	II / □

Battery pack	Mirka BPA 10825	Mirka BPA 10850
Type	Rechargeable Li-ion 31NR19/65	Rechargeable Li-ion 31NR19/65-2
Battery voltage	10.8 VDC	10.8 VDC
Capacity	2.5 Ah / 27.0 Wh	5.0 Ah / 54.0 Wh
Weight	0.18 kg (0.4 lbs)	0.38 kg (0.8 lbs)
Intelligent battery	Yes	Yes

Noise and vibration information

Measured values are determined according to EN 62841.

Cordless	AOS-B 130NV	AROS-B 150NV
Sound pressure level (L_{pA})	61.2 dB(A)	61.6 dB(A)
Sound power level (L_{WA})	72.2 dB(A)	72.6 dB(A)
Sound measurement uncertainty K	3.0 dB(A)	3.0 dB(A)

Cordless	AOS-B 130NV	AROS-B 150NV
Vibration emission value a_h^*	2.54 m/s ²	1.9 m/s ²
Vibration emission uncertainty K^*	1.5 m/s ²	1.5 m/s ²

Specifications subject to change without prior notice. Model range may vary between markets.

- * In order to reflect normal working conditions of the sander the operating conditions did deviate from the standard method as follows: Grain size of the abrasive was 5 µm. Feed force was 10 N.
- * The values stated in the table are derived from laboratory testing in conformity with stated codes and standards and are not sufficient for risk evaluation. Values measured in a particular work place may be higher than the declared values. The actual exposure values and amount of risk or harm experienced by an individual are unique to each situation and depend upon the surrounding environment, the way the individual operates the machinery, the particular material being worked, work station design and the user's exposure time and physical condition. Mirka Ltd accepts no responsibility for the consequences of using declared values instead of actual exposure values for any individual risk assessment.

Further occupational health and safety information can be obtained from the following websites:

<https://osha.europa.eu/en> (Europe) or <http://www.osha.gov> (USA)

Proper use of tool

This sander is designed for sanding all types of materials such as paints, metals, wood, stone, plastics, etc., using abrasives specially designed for this purpose. Do not use this sander for any other purpose than that specified without consulting the manufacturer or the manufacturer's authorized supplier. Do not use backing pads with an operating speed of less than 8 000 rpm free speed. Any maintenance or repair work requiring the motor housing to be opened may only be carried out by an authorized service center.

Battery and charger

- The battery pack is not fully charged out of the carton. First read the safety instructions and then charge your battery according to the instructions.
- For optimal charging capacity the battery should be charged at an ambient temperature between 18 °C (64 °F) and 24 °C (75 °F). To prevent damage to the battery pack, do not charge the battery pack where the air temperature is below 4 °C (32°F) or above 40 °C (104 °F).
- To obtain the longest possible battery life, we suggest the following:
 - Store and charge your battery in a cool area. Temperatures above or below normal room temperature will shorten battery life.
 - Never store the battery in a discharged condition. Recharge it immediately after it has been discharged.
- All batteries gradually lose their charge. The higher the temperature, the quicker they lose their charge.

If you store your tool for long periods of time without use, recharge the battery every month. This practice will prolong battery life.

Charging procedure

- Connect the power cord to the charger, and then plug into an outlet before inserting battery pack. All three charging lights will be on for two seconds and then turn off.
- Insert the battery pack into the charger. The lights will start to flash within 30 seconds.
- During the charging process, the charging lights will indicate the status as follows:
 - Three charging lights will flash in sequence during the charging process.
 - Fully charged, all three lights will remain on continuously.
- The charging process will last approximately 50 minutes for BPA 10825 and 100 minutes for BPA 10850 battery pack.

NOTE! This charger can only charge Mirka 10.8 V battery packs.

NOTE! Charging times may be longer depending on the surrounding temperature and battery conditions.

LED indication of 10.8 V charger

LED						
3						
2						
1						
Status						
	Pre-charge (Trickle charge)	Charging...	Charging...	Charging finished	Over temperature	Battery failure

Remain continuously on

Flashing

Charger diagnostics

The charger will indicate if:

- A battery pack is overheated. All three charging lights will flash. Remove the battery and allow it to cool down for 15–30 minutes and re-insert.
- A malfunction occurs in the battery or the charger. Two charging lights will flash. Remove the battery and allow it to cool down. Re-insert the battery pack into the charger. If two charging lights still flash, the battery or charger may require service.

How to get started

- When unpacking the tool, make sure it is intact, complete and has not been damaged in transport. Never use a damaged tool.
- Before use, check that the backing pad is correctly mounted.
- Install the fully charged battery pack into the sander until it locks in place with a click.

Operating instructions

- The tool is intended to be operated as a hand held tool. The tool can be used in any position.
- Select a suitable abrasive and secure it to the backing pad. Make sure the abrasive is centered on the backing pad.
- The sander can now be activated / turned on and started by pressing the switch trigger.
- The sander will run and stay in active mode as long as the trigger is pressed. After the trigger is released the sander will stop but continue to stay in active mode for a short time before it automatically deactivates / turns off.
- When sander is in active mode the right LED is green.
- In active mode the left LED shows the battery status:

Green: Battery charge level is OK.

Flashing green/red: Battery charge level is weak.

Red: Battery voltage too low. Sander is not operable.

- In active mode the max rpm can be adjusted by pressing rpm+ or rpm–, Figure 1. The rpm can be adjusted in steps of 4 000, 5 000, 6 000, 6 500, 7 000, 7 500 and 8 000 rpm.
- The rpm can be locked to prevent an accidental rpm change. Wait until the sander is not in active mode. Simultaneously press and hold both rpm+ and rpm– buttons and then pull the switch trigger. In order to unlock the tool, repeat same operation. If rpm+ or rpm– is pressed in speed lock mode the right led flashes red twice but no speed change occur.
- When sanding, always place the tool on the work surface before starting the tool. Always remove the tool from the work surface before stopping it. This will prevent gouging of the work surface due to excess speed of the abrasive.
- When sanding is finished, remove the battery from the sander by simultaneously pressing the button on both sides and removing the battery from the tool. Charge the battery.

Bluetooth

This tool is equipped with Bluetooth® low energy technology and can be connected to an app from which additional tool functionality can be accessed. For more information on the app functionality and if it is available in your country, go to www.mirka.com/mymirka

Activate Bluetooth on your Mirka® AOS-B 130NV & AROS-B 150NV as follows:

1. Connect the battery to the tool.
2. Press and hold the rpm+ button while activating the tool by pressing the switch trigger.
3. Middle LED is flashing green, to indicate that Bluetooth is active and ready for connections.
4. Middle LED is lit green when the tool is connected to another Bluetooth device.
5. Bluetooth is deactivated when the tool is deactivated/turned off.

NOTE! If the app is not installed or if it is not available in your country, Bluetooth shall not be activated.

The Bluetooth® word mark and logos are registered trademarks owned by the Bluetooth SIG, Inc. and any use of such marks by Mirka Ltd is under license. Other trademarks and trade names are those of their respective owners.

Maintenance



Always remove the battery before maintenance!
Only use original Mirka spare parts!

Replacing the backing pad

1. Hold the spindle with fingers.
2. Turn the backing pad counterclockwise to remove it.
3. Fit and tighten the new backing pad.

Cleaning

Use a soft brush to remove any accumulated dust. Wear safety glasses to protect your eyes while cleaning.

If the body of the tool needs cleaning, wipe it with a soft damp cloth. A mild detergent can be used.



WARNING: Never use alcohol, petrol or other cleaning agent. Never use caustic agents to clean plastic parts.

Charger cleaning instructions

Dirt and grease may be removed from the exterior of the charger using a cloth or soft non metallic brush. Do not use water or any cleaning solutions.



Further service

Servicing must always be performed by trained personnel. To keep the tool warranty valid and ensure optimal tool safety and function, servicing must be carried out by a Mirka authorized service centre. To locate your local Mirka authorized service centre, contact Mirka Customer Service or your Mirka dealer.

Troubleshooting guide

Symptom	Possible cause	Solution
No light from sander right LED when trigger is pressed.	Battery pack not properly attached to the sander. Battery totally empty.	Insert the battery properly. Charge the battery.
The sander LED (right) is red and the sander slows down to 4,000 rpm when sanding.	Temperature too high in the sander. Too heavy long term load.	Reduce the load on the sander for some time and the sander will speed up again.

Symptom	Possible cause	Solution
The sander LED (right) is red and rpm is slightly reduced.	Too heavy short term load.	Use lighter load and the LED (right) will automatically change to green.
The left LED is red and the sander is not running.	The battery voltage is too low.	Charge the battery.

Disposal information

DANGER



Render redundant power tools unusable by removing the power cord.

Observe applicable country-specific regulations regarding disposal and recycling of disused machines, packaging and accessories.

EU only: Do not dispose electric power tools in house-hold waste. According to European Directives on waste electrical and electronic equipment and its implementation under national law, electric tools that have reached the end of their life must be collected separately and taken to an environmentally compatible recycling facility.

For more information regarding REACH, RoHS and our corporate social responsibility visit www.mirka.com

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