

Mirka® FBS-B 10 & 13



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**United States of America, Mexico &
Canada**

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Declaration of conformity

Mirka Ltd, 66850 Jeppo, Finland

declare under our sole responsibility that the Mirka® products (listed below and see "Technical data" table for particular model) to which this declaration relates are in conformity with the following standards or other normative documents: EN 62841-1:2015/A11:2022, EN 62841-2-4:2014, EN 55014-1:2021, EN 55014-2:2021, EN IEC 61000-3-2:2019/A1:2021, EN 61000-3-3:2013/A2:2021, EN 300 328 V2.2.2, EN 301 489-1 V2.2.3, EN 301 489-17 V3.2.4 & EN IEC 63000:2018 in accordance with the regulations 2006/42/EC, 2014/53/EU & 2011/65/EU. The battery charger are in conformity with the following standards and directives; EN 60335-1:2012/A15:2021, EN 60335-2-29:2021/A1:2021, EN 62233:2008, EN 55014-1:2017, EN 55014-2:2015, EN 61000-3-2:2014, EN 61000-3-3:2013 & EN IEC 63000:2018 in accordance with the regulations 2014/35/EU, 2014/30/EU, 2011/65/EU, 2015/863/EU & 2012/19/EU.

Products: Mirka® FBS-B 10 & 13

Jeppo 12.06.2023 Place and date of issue	MIRKA Company	 Stefan Sjöberg, CEO	Manufacturer / Supplier Mirka Ltd 66850 Jeppo, Finland Tel. +358 20 760 2111 Fax +358 20 760 2290 www.mirka.com	
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Original instructions. We reserve the right to make changes to this manual without prior notice.

Important

Read these safety and operating instructions carefully before installing, operating or maintaining this tool. Keep these instructions in a safe and accessible place. Read and comply with state and local regulations.

Note: Mirka products are in continuous development. Please visit mirka.com for the latest version of these instructions.

Required personal safety equipment



Read
operator's manual



Wear
safety glasses



Wear
ear protection



Wear
safety gloves



Wear
face mask

Symbols

	Complies with EU relevant standards
	Complies with UK relevant regulations
	Complies with China RoHS requirement
	Complies with Australia & New Zealand RCM requirement



Warning: Potential hazardous situation that may result in death or serious injury and/or property damage.

Caution: Potential hazardous situation that may result in minor or moderate injury and/or property damage.



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

- a. **Keep work area clean and well lit.** Cluttered or dark areas invite accidents.
- b. **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.
- c. **Keep children and bystanders away while operating a power tool.** Distractions can cause you to lose control.

2. Electrical safety

- a. **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.
- b. **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.
- c. **Do not expose power tools to rain or wet conditions.** Water entering a power tool will increase the risk of electric shock.
- d. **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.
- e. **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.
- f. **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

- a. **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.
- b. **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.
- c. **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.
- d. **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.
- e. **Do not overreach. Keep proper footing and balance at all times.** This enables better control of the power tool in unexpected situations.
- f. **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.
- g. **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.
- h. **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

- a. **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 allow persons 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 and accessories. 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. **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.
 - e. **Do not use a battery pack or tool that is damaged or modified.** Damaged or modified batteries may exhibit unpredictable behaviour resulting in fire, explosion or risk of injury.
 - f. **Do not expose a battery pack or tool to fire or excessive temperature.** Exposure to fire or temperature above 130 °C may cause explosion.
 - g. **Follow all charging instructions and do not charge the battery pack or tool outside the temperature range specified in the instructions.** Charging improperly or at temperatures outside the specified range may damage the battery and increase the risk of fire.
6. **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.
 - b. **Never service damaged battery packs.** Service of battery packs should only be performed by the manufacturer or authorized service providers



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.
- Children should be supervised to ensure that they do not play with the appliance.



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 other moving parts 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 abrasive belt 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.

Additional Warnings

Some dust created by power sanding, sawing, grinding, drilling, and other construction activities contains chemicals known to cause cancer, birth defects or other reproductive harm. Some examples of these chemicals are:

- lead from lead-based paints,
- crystalline silica from bricks and cement and other masonry products, and
- arsenic and chromium from chemically treated lumber.

Your risk from these exposures varies, depending on how often you do this type of work. To reduce your exposure to these chemicals: work in a well ventilated area, and work with approved safety equipment, such as those dust masks that are specially designed to filter out microscopic particles.

Technical data

Mirka®	FBS-B 10	FBS-B 13
Voltage	12 VDC	12 VDC
Weight (incl. battery)		
Belt size	10 x 330 mm (3/8" x 13")	13 x 457 mm (1/2" x 18")
Belt speed		

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	Mirka BPA 11125	Mirka BPA 11150
Type	Rechargeable Li-ion	Rechargeable Li-ion	Rechargeable Li-ion	Rechargeable Li-ion
Battery voltage	10.8 VDC	10.8 VDC	11.1 VDC	11.1 VDC
Capacity	2.5 Ah / 27.0 Wh	5.0 Ah / 54.0 Wh	2.5 Ah / 27.75 Wh	5.0 Ah / 55.5 Wh
Weight	0.18 kg (0.4 lbs)	0.38 kg (0.8 lbs)	0.18 kg (0.4 lbs)	0.38 kg (0.8 lbs)
Intelligent battery	Yes	Yes	Yes	Yes

Noise and vibration information

The measured values may be used for comparing one tool with another and in a preliminary assessment of exposure.

Cordless	FBS-B 10	FBS-B 13
Sound pressure level (L_{pA})		
Sound power level (L_{WA})		
Sound measurement uncertainty K_{WA}		
Vibration emission value a_h^*	m/s^2	m/s^2
Vibration emission uncertainty K_{pA}	m/s^2	m/s^2

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

* 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 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, composites, 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. 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 10825/11125 and 100 minutes for BPA 10850/11150 battery pack.

NOTE! This charger can only charge Mirka 12V battery packs.

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

LED indication of BCA 108 charger

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

Remain continuously on Flashing

Charger diagnostics

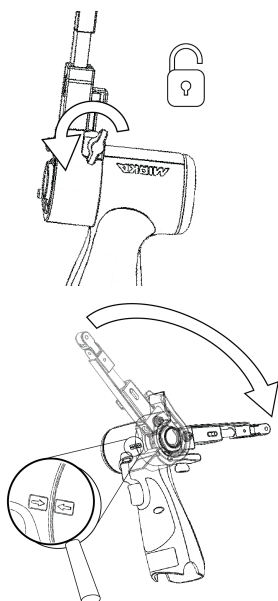
The charger will indicate if:

- 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

1. When unpacking the tool, make sure it is intact, complete and has not been damaged in transport. Never use a damaged tool.
2. Before assembling the tension arm onto the tool, make sure that the protective plastic heat cover, rubber guard (**FBS-B 10 only**) and other parts are correctly mounted onto the tension arm.

FBS-B 10 tension arm assembly on tool:



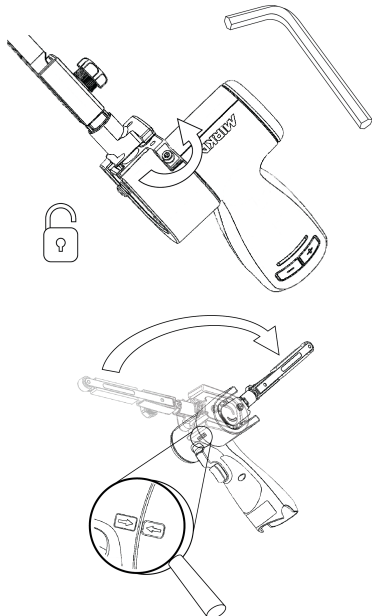
Make sure that the clamping hole is concentrically and perpendicularly aligned against the tool metal sleeve and that the wing nut is opened.

The two arrows on the tool body and tension arm heat cover should be pointing towards each other.

Gently push the arm all the way against the plastic housing and ensure that the plastic tilt angle limiter slots into the tension arm, then position the arm at desired angle and tension the wing nut.

The arm can be fixed at any desired angle within the adjustment range (-90° to 90°).

FBS-B 13 tension arm assembly on tool:



Make sure that the clamping hole is concentrically and perpendicularly aligned against the tool metal sleeve and that the 3mm hex nut is opened.

Verify that the small tensioning part is correctly aligned to prevent damaging the tensioning surface of the tool during assembly.

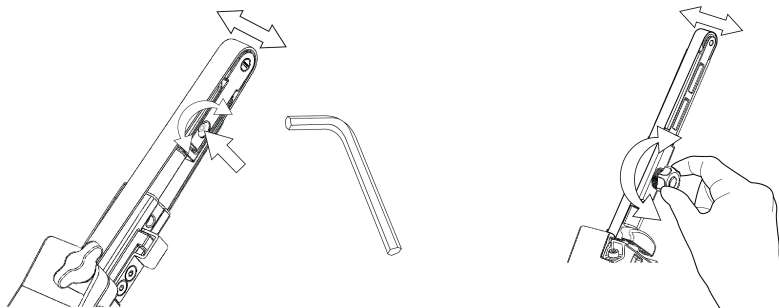
Gently push the arm all the way against the plastic housing and ensure that the plastic tilt angle limiter slots into the tension arm, then position the arm at desired angle and tension the hex nut.

The arm can be fixed at any desired angle within the adjustment range (-90° to 90°).

3. 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 belt and secure it to the tool. Make sure the abrasive is centered on the nose pulley wheel and adjust alignment on FBS-B 10 using the small hex nut, on FBS-B 13 using the plastic knob on the side of the tension arm.



- 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 the rpm+ or rpm- buttons on the tool handle. The rpm can be adjusted in steps of 2 200, 4 000, 6 000, 9 000, 12 000, 15 000 and 17 000 rpm.
- The rpm can be locked to prevent an accidental rpm change. In order to lock rpm:
 1. Wait until the sander is not in active mode.
 2. Simultaneously press and hold both rpm+ and rpm- buttons and then pull the switch trigger.
 3. Repeat this process to unlock the rpm.

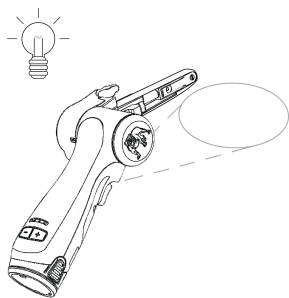
If rpm+ or rpm- is pressed when the rpm is locked the right led flashes red twice and the rpm will not change.

- When sanding, always place the tool close to 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 buttons on both sides and removing the battery from the tool. Charge the battery.

Worklight



Caution: Do not stare directly into worklight!



This tool is equipped with a worklight which is fixed in position at a 30° forward angle.

Push the switch trigger to activate the worklight.

The light will automatically turn off 60 seconds after the switch trigger is released.

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® FBS-B 10 & 13 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.

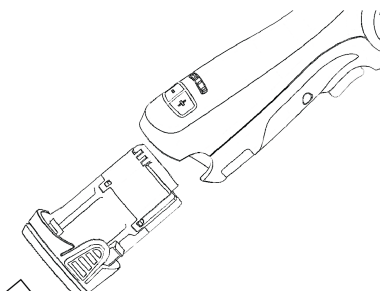
The Bluetooth® word mark and logos are registered trademarks owned by the Bluetooth SIG, Inc. and any use of such marks by Mirka Ltd is under license. Other trademarks and trade names are those of their respective owners.

Maintenance

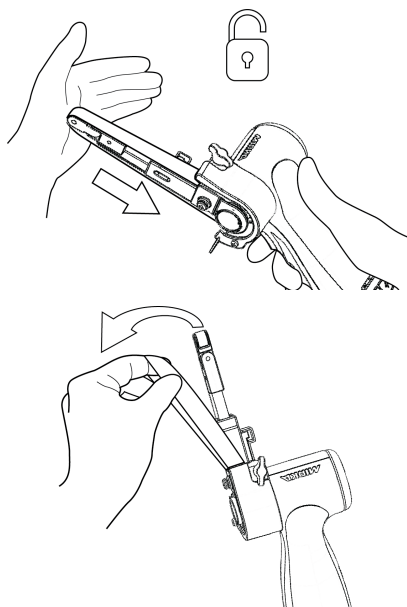


Always remove the battery before maintenance!
Only use original Mirka spare parts!

Replacing the belt FBS-B 10



Remove the battery.

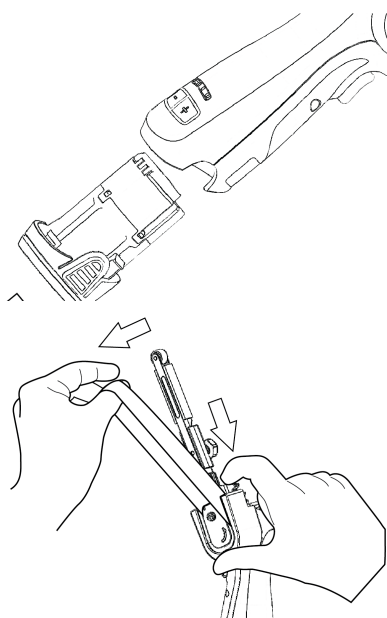


Push the tension arm towards the steel protect cover to release the lock function.

Change the belt, make sure that the belt is centered.

Press the lock function on the tension arm towards the steel cover to engage tension.

Replacing the belt FBS-B 13



Remove the battery.

Push the plate to loosen the belt tension.

Keep the plate compressed in order to change the belt, make sure that the belt is centered.

Release the push plate to engage tension.

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, your Mirka dealer or go to www.mirka.com

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

Declaration of conformity

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Products: Mirka® FBS-B 10 & 13			
Jeppo 2023.12.06 Place and date of issue	 Company	 Stefan Sjöberg, CEO	Manufacturer / Supplier Mirka Ltd 66850 Jeppo, Finland Tel. +358 20 760 2111 Fax +358 20 760 2290 www.mirka.com
			

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	Complies with EU relevant standards
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	Complies with Australia & New Zealand RCM requirement



Warning: Potential hazardous situation that may result in death or serious injury and/or property damage.
Caution: Potential hazardous situation that may result in minor or moderate injury and/or property damage.

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



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- Keep work area clean and well lit.** Cluttered or dark areas invite accidents.
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- 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.
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- 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.
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4. Power tool use and care

- a. **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 allow persons 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 and accessories. 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. **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.
 - e. **Do not use a battery pack or tool that is damaged or modified.** Damaged or modified batteries may exhibit unpredictable behaviour resulting in fire, explosion or risk of injury.
 - f. **Do not expose a battery pack or tool to fire or excessive temperature.** Exposure to fire or temperature above 130 °C may cause explosion.
 - g. **Follow all charging instructions and do not charge the battery pack or tool outside the temperature range specified in the instructions.** Charging improperly or at temperatures outside the specified range may damage the battery and increase the risk of fire.
6. **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.
 - b. **Never service damaged battery packs.** Service of battery packs should only be performed by the manufacturer or authorized service providers



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.
- Children should be supervised to ensure that they do not play with the appliance



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.
- 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.



Additional Warnings

Some dust created by power sanding, sawing, grinding, drilling, and other construction activities contains chemicals known to cause cancer, birth defects or other reproductive harm. Some examples of these chemicals are:

- lead from lead-based paints,
- crystalline silica from bricks and cement and other masonry products, and
- arsenic and chromium from chemically treated lumber.

Your risk from these exposures varies, depending on how often you do this type of work. To reduce your exposure to these chemicals: work in a well ventilated area, and work with approved safety equipment, such as those dust masks that are specially designed to filter out microscopic particles.

Technical data

Mirka*	FBS-B 10	FBS-B 13
Voltage	12 VDC	12 VDC
Weight (incl. battery)		
Belt size	10 x 330 mm (3/8" x 13")	13 x 457 mm (1/2" x 18")
Belt speed		

Battery charger	Mirka BCA 108
Input	120 VAC, 60 Hz
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	Mirka BPA 11125	Mirka BPA 11150
Type	Rechargeable Li-ion	Rechargeable Li-ion	Rechargeable Li-ion	Rechargeable Li-ion
Battery voltage	10.8 VDC	10.8 VDC	11.1 VDC	11.1 VDC
Capacity	2.5 Ah / 27.0 Wh	5.0 Ah / 54.0 Wh	2.5 Ah / 27.75 Wh	5.0 Ah / 55.5 Wh
Weight	0.18 kg (0.4 lbs)	0.38 kg (0.8 lbs)	0.18 kg (0.4 lbs)	0.38 kg (0.8 lbs)
Intelligent battery	Yes	Yes	Yes	Yes

Noise and vibration information

The measured values may be used for comparing one tool with another and in a preliminary assessment of exposure.

Cordless	FBS-B 10	FBS-B 13
Sound pressure level (L _{pA})		
Sound power level (L _{WA})		
Sound measurement uncertainty K _{WA}		
Vibration emission value a _h *	m/s ²	m/s ²
Vibration emission uncertainty K _{pA} *	m/s ²	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 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, composites, 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. 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 10825/11125 and 100 minutes for BPA 10850/11150 battery pack.

NOTE! This charger can only charge Mirka 12V battery packs.

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

LED indication of BCA 108 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:

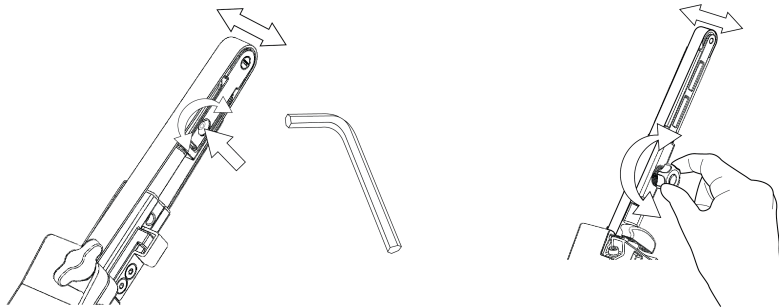
- A battery pack is overheated. All three charging lights will flash. Remove the battery and allow it to cool down for 15–30 minutes and re-insert.
- A malfunction occurs in the battery or the charger. Two charging lights will flash. Remove the battery and allow it to cool down. Re-insert the battery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

How to get started

1. When unpacking the tool, make sure it is intact, complete and has not been damaged in transport. Never use a damaged tool.
2. Before use, check that the backing pad is correctly mounted.
3. 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 belt and secure it to the tool. Make sure the abrasive is centered on the nose pulley wheel and adjust alignment on FBS-B 10 using the small hex nut, on FBS-B 13 using the plastic knob on the side of the tension arm.



- 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 the rpm+ or rpm- buttons on the tool handle. The rpm can be adjusted in steps of 2 200, 4 000, 6 000, 9 000, 12 000, 15 000 and 17 000 rpm.
- The rpm can be locked to prevent an accidental rpm change. In order to lock rpm:
 1. Wait until the sander is not in active mode.
 2. Simultaneously press and hold both rpm+ and rpm- buttons and then pull the switch trigger.
 3. Repeat this process to unlock the rpm.

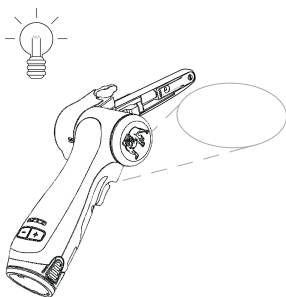
If rpm+ or rpm- is pressed when the rpm is locked the right led flashes red twice and the rpm will not change.

- When sanding, always place the tool close to 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 buttons on both sides and removing the battery from the tool. Charge the battery.

Worklight



Caution: Do not stare directly into worklight!



This tool is equipped with a worklight which is fixed in position at a 30° forward angle.

Push the switch trigger to activate the worklight.

The light will automatically turn off 60 seconds after the switch trigger is released.

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® FBS-B 10 & 13 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.

FCC Rules & Industry Canada's licence-exempt RSS

Compliance with the radio regulations in North America has been verified in accordance with FCC Part 15 subpart B and C, RSS-GEN, RSS-247 and FCC §15.247. Operation is subject to the following two conditions:

1. This device may not cause harmful interference.
2. This device must accept any interference received, including interference that may cause undesired operation.

NOTE! This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

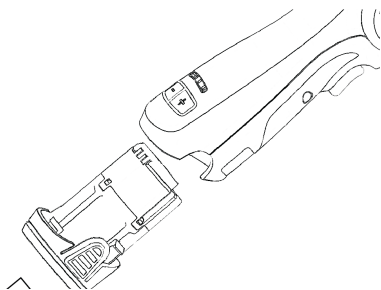
CAUTION TO THE USER: Changes or modification not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Maintenance

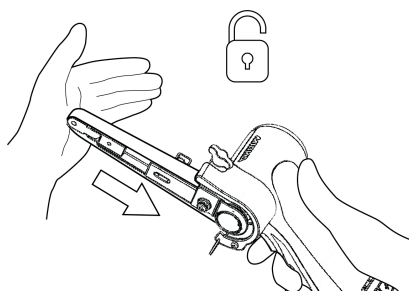


Always remove the battery before maintenance!
Only use original Mirka spare parts!

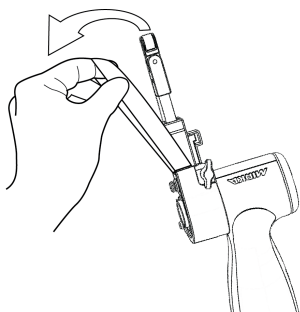
Replacing the belt FBS-B 10



Remove the battery.



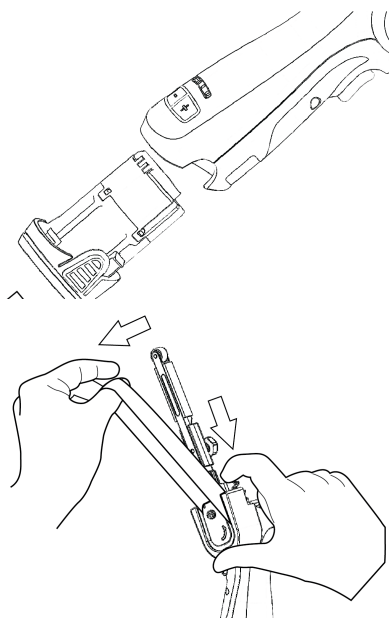
Push the tension arm towards the steel protect cover to release the lock function.



Change the belt, make sure that the belt is centered.

Press the lock function on the tension arm towards the steel cover to engage tension.

Replacing the belt FBS-B 13



Remove the battery.

Push the plate to loosen the belt tension.

Keep the plate compressed in order to change the belt, make sure that the belt is centered.

Release the push plate to engage tension.

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, your Mirka dealer or go to www.mirka.com

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

MIRKA



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For contact information,
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