

Inspectron ITB7-2022 Plumbing Reel & Camera Training Manual



1. Connector cable – tablet to reel
2. Tablet
3. Camera head (with Sonde)
4. Camera reel cable
5. Reel cage

Not Visible:

- Tablet holder (on back)
- Carrying handle (under cage)
- Guide ball (accessory)

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1. Introduction

Welcome to the Inspectron ITB7-2022 Plumbing Reel and Camera product manual. This guide provides comprehensive instructions for using, maintaining, and troubleshooting the ITB7-2022 tablet and plumbing reel system.

2. Product Overview

The Inspectron ITB7-2022 is a portable imaging control device designed for professional inspection applications. It works in tandem with a plumbing reel.

Tablet features:

- Rechargeable lithium-ion battery
- 7" capacitive touch display
- USB-C connectivity
- Micro SD media storage
- Dual LED indicators (Power & Charging)
- Kickstand for hands-free operation

The system supports image capture and video recording (no audio) and integrates seamlessly with various Inspectron imagers and reels.

3. System Components

Included in the system kit:

- (1) ITB7 Tablet
- (1) Plumbing Reel Cage
- (1) 20mm (0.79in) diameter camera, with sonde, and 22m (73 foot) cable reel
- (1) USB-A Cable - (1) USB-C Cable

- Case
- (2) AA Alkaline Batteries (for Sonde)
- (1) Guide Ball

4. Setup & Operation

Powering On/Off

To power on the device, press the Power button for 3 seconds. The unit will display a splash screen and boot to live video within 15 seconds.

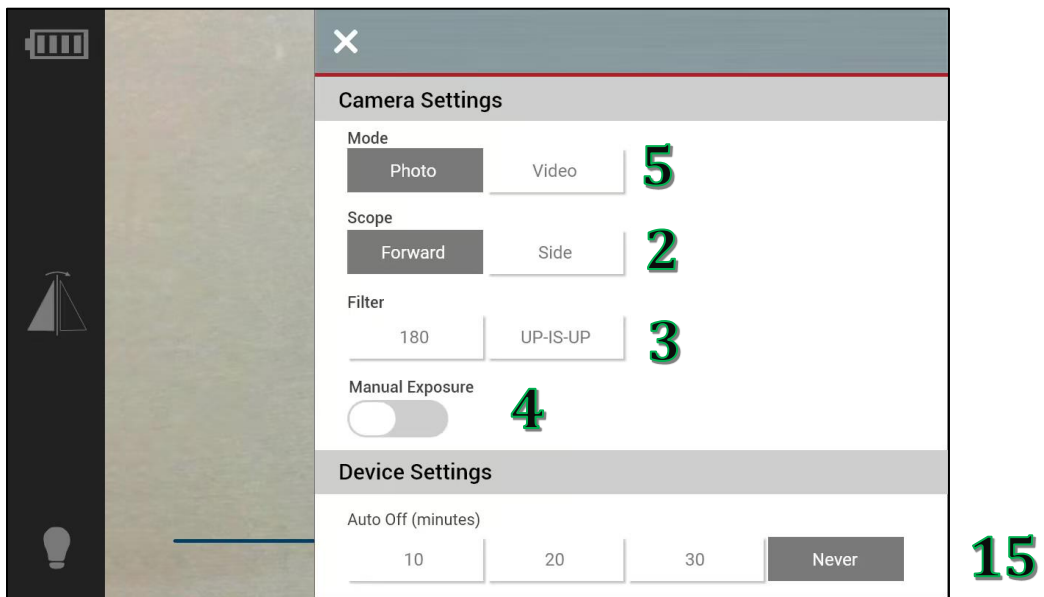
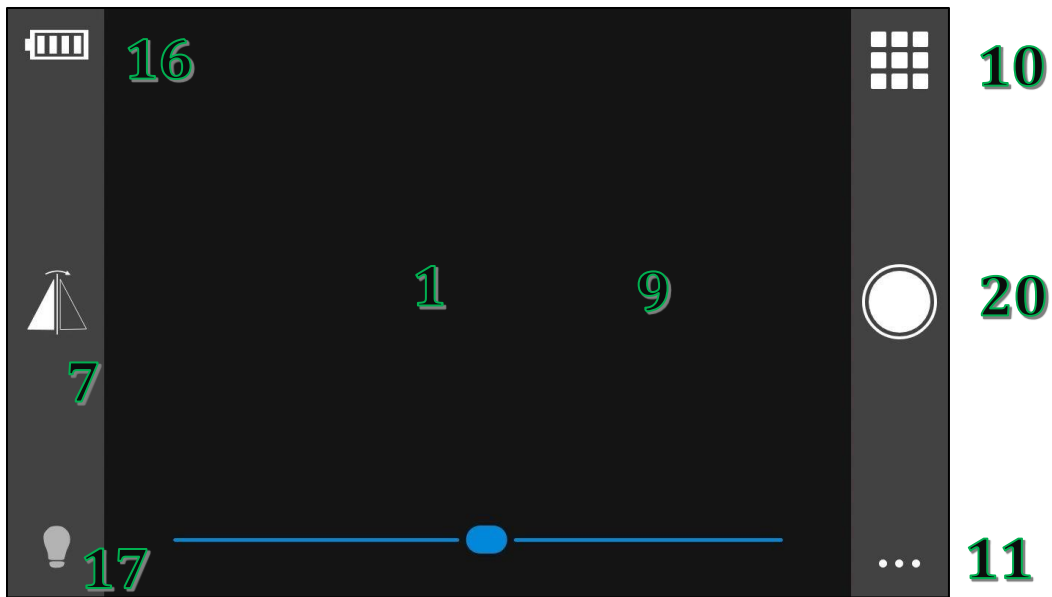
To power off, press and hold the Power button for 3 seconds. A shutdown splash screen will display briefly before the unit powers down.

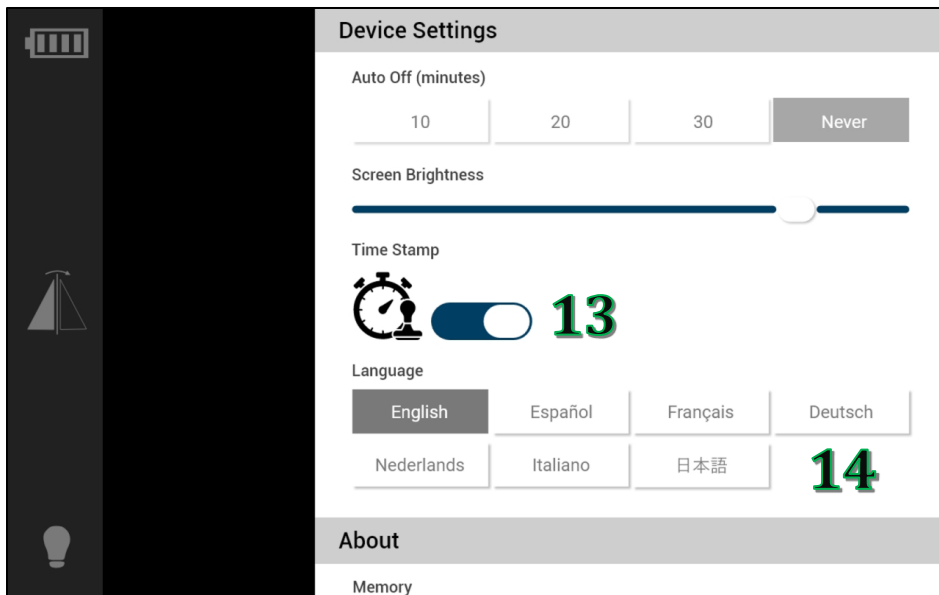
Connecting Accessories

Insert compatible imagers into the appropriate port. The video circuit will activate once the imager is securely connected. When the imager is removed, the video is disabled.

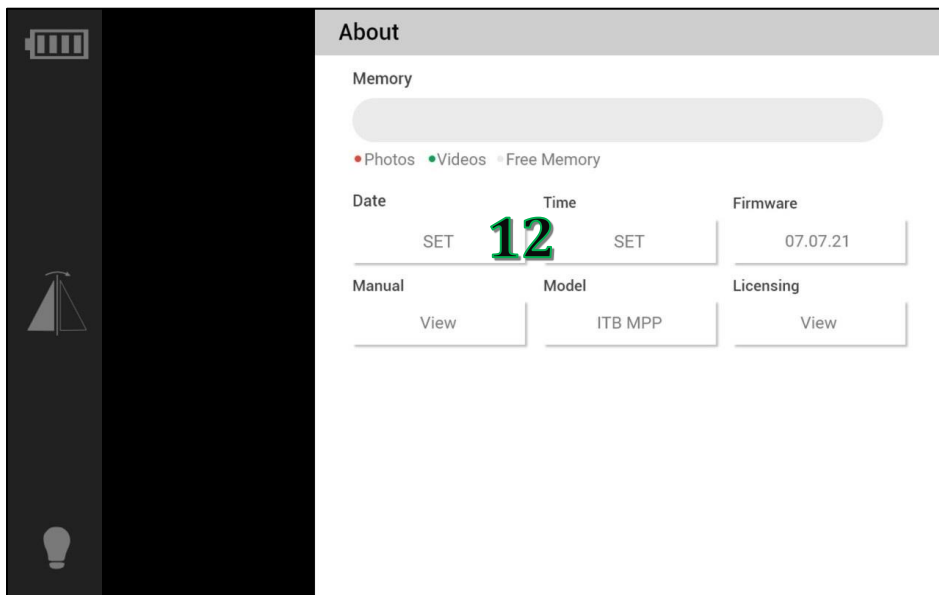
Using the GUI

1. Live video display from connected imager
2. Switch between front and side (if applicable) camera views (defaults to front)
3. Enable “Up-is-Up” (self-leveling)
4. Enable “Manual Exposure” – LED slider turns red upon activation
5. Photo and video capture modes
6. 180 Camera flip
7. Flip icon screen
8. Adjust display and backlight brightness
9. Digital zoom up to 3x (pinch-to-zoom)
10. Gallery access
11. Settings access
12. Real-time clock/date settings with 12/24-hour format
13. Enable timestamp
14. On-screen keyboard with multiple language support
15. Auto-off timer: 10, 20, 30 minutes, or disabled
16. Battery level
17. LED brightness adjustment bar
18. Memory status
19. Manual access, model identification, firmware level and licensing
20. Capture photo / start & stop video





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Capturing Media

Use the on-screen buttons to capture photos or start/stop video recording. Media is saved to the micro-SD card and displayed in a scrollable thumbnail gallery. Access gallery by tapping the thumbnails icon.

Feature Definition

Up-is-Up™ is a self-leveling features allows the camera image to always be upright while advancing through multiple bends.

Manual Exposure allows the camera to adjust exposure illumination in different areas of the camera's view.

5. Reel and Sonde Operation

The ITB7-2022 supports 20mm camera head diameter/22m length. A built-in sonde can be toggled ON/OFF with a short button press. The sonde LED indicates power states:

- Off: Sonde is powered off
- Solid Green: Sonde is on
- Blinking Green (1Hz): Sonde auto powers off after 20 minutes

The reel has a handle for easy transport and connects to the tablet via a coiled cable.

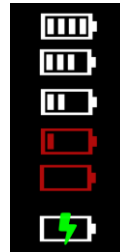
The sonde transmits via 512 Hz.

Compatible with locator tool that recognizes 512 Hz.

6. Battery Management

The unit uses a lithium-ion rechargeable battery with up to 3 hours of operation. Charging and power LEDs indicate current status. A critical battery warning is displayed when 10% capacity remains, and the device shuts down at 5% to protect the battery.

- 4 white bars: 76–100%
- 3 white bars: 51–75%
- 2 white bars: 26–50%
- 1 red bar: 10-25%
- No bars, red: <10%
- Green lightning bolt icon: Charging



Note – the battery is not field replaceable.

It's recommended to store the unit at moderate temperatures, roughly 25°C (77°F), to maximize battery life.

Always use the supplied USBA to USBC cable for charging or Data Transfer; note that a USBC to USBC cable will NOT charge the module.

7. Firmware & Software Updates

Firmware can be updated via www.inspectrontools.com/service page using the provided USB-C cable. Minimum 25% battery is required to initiate updates. Firmware versions and update status are visible through the GUI.

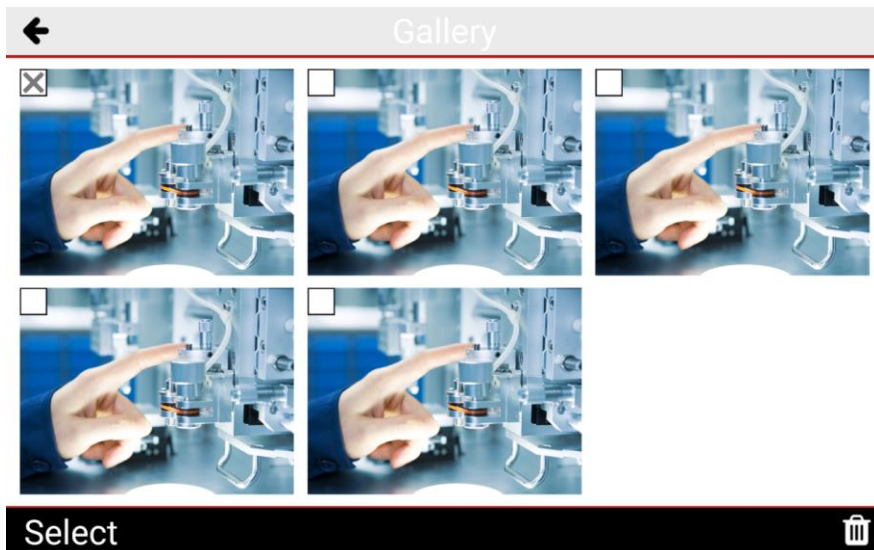
8. Media Management

Photos are saved as JPEGs and videos are stored on the SD card (no audio), and can be access via the on unit gallery. Users can view media and edit media names. Users can delete

individual or multiple files through the gallery, with a confirmation popup before deletion. Recording stops automatically when SD storage drops below 10MB.

To transfer photos and videos to a computer, turn off the unit, and carefully remove the card from the SD card slot. The unit comes with an 8 GB SD Card. Larger SD Cards than 8 GB will work, but the SD card must be formatted to FAT32. You can also connect the unit to a computer using the USB-C to USB-A power cord that is included with the unit. Once the external drive appears on the computer, open it. The pictures and videos can be transferred and saved to the location of your choice.

NOTE – When viewing media on Windows Media Player v11, drag and drop media to PC prior to viewing. Do not delete media on the memory card while plugged into a PC. It's recommended to move media files to the PC before viewing. Inspectron is not held liable for consequences resulting from such operations via the computer. Recommended Media Players for use are VLC or Legacy Windows Media Player. Apple PC's may require third party software (ex: Commander One) to transfer media files to the PC.



9. Technical Specifications (Tablet and Reel)

- Display: 7" 1000 NIT LCD, 1280x800 resolution, capacitive touch
- Picture format: .JPG
- Video format: .MOV
- Memory capacity: 8 GB SD Card
- Power: USB-C charging, 2.0A at 5V
- Battery: Single cell 3.7V lithium-ion
- Imagers: 930-0230, 930-0280, 923-0581, 923-0582, 930-0258, 923-0526
- Operating Temp: 0°C to 50°C (32°F to 122°F)
- Storage Temp: -20°C to 60°C (-4°F to 140°F)
- Humidity: Up to 95% RH non-condensing

- Tablet Dimensions : 225mm x 175mm x 50mm (8.9 x 6.9 x 2.0 in)
- Tablet Weight: 1 kg (2.2 lb)
- Reel Cage Dimensions: 380mm x 110mm (15.0 x 4.3 in)
- Reel Weight: 3.6 kg (7.9 lb)
- Reel: Supports 22m/20mm and 22m/25mm cables with CFAST connection
- Pressure Resistance: 1 bar (14.5 PSI)
- Sonde Frequency: 512 Hz.
- Functioning Sonde range from Locator tool: depth 0.6 – 1.8m (2' - 8'), horizontal 0 – 4.5m (0' – 15'). Note - Deviation and maximum range always depend on the Sonde receiver, soil, pipe material etc.

10. Safety, Compliance & Maintenance

Complies with CE, FCC, IC, RoHS, REACH, CP65, and UKCA standards. Device materials are UL rated and designed for chemical and impact resistance. Clean with approved workshop cleaners.

Avoid aggressively bending the reel camera and pulling the reel camera over sharp edges as it may damage the camera.

Avoid exposing the tablet to water. The camera head and reel cable may come in contact with water.



11. Troubleshooting

- Unit won't power on: Ensure battery is charged or replace if necessary.
- No image: Confirm imager is properly connected and powered, and not damaged.
- Video won't save: Check SD card space and format compatibility (min. 8GB).
- Unit shuts down early: Battery may be below 5%; recharge fully.
- Blurry image: ensure camera is clean
- Unit will not charge: Ensure correct USB cable is used
- Frozen image: power cycle the unit

12. Warranty & Support

This product is covered under a limited 2-year warranty. For warranty claims, repairs, or technical support, visit: www.inspectron.com/support or contact support@inspectron.com.

Please retain your purchase receipt and serial number for warranty validation.

13. Safety

1 Safety Notes

FCC Notice – Declaration of Conformity Information



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 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 on and off, 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.

WARNING: Only peripherals complying with the FCC class B limits may be attached to this equipment.

Changes or modifications made to this equipment, not expressly approved by us or parties authorized by us could void the user's authority to operate the equipment. This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

1.1 Intended use

The user bears sole responsibility for any damage caused by improper use.

Generally accepted accident prevention regulations and the enclosed safety information must be observed.

The inspection system is solely for inspecting pipes, hollow cavities and hollow spaces. Other uses are discouraged.

Do not leave camera heads in the sun for extended periods. This can damage the camera module! All applicable standards and regulations must be observed.

1.2 General Tool Safety Warnings



WARNING! Read all safety warnings, instructions, illustrations and specifications provided with this tool.

Failure to follow all instructions listed below may result in electric shock, fire and/or serious injury.

Save all warnings and instructions for future reference.

1) Work area safety

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

2) Electrical safety

- a) **Tool plugs must match the outlet. Never modify the plug in any way. Do not use any adapter plugs with earthed (grounded) 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) **Limit tool exposure to rain or wet conditions.** Water entering a tool will increase the risk of electric shock.
- d) **Do not abuse the cord. Never use the cord for carrying, pulling or unplugging the tool. Keep cord away from heat, oil, sharp edges and moving parts.** Damaged or entangled cords increase the risk of electric shock.

3) Personal safety

- a) **Stay alert, watch what you are doing and use common sense when operating a tool. Do not use a tool while you are tired or under the influence of drugs, alcohol or medication.** A momentary lack of attention while operating tools may result in serious personal injury.
- b) **Use personal protective equipment. Always wear eye protection.** Protective equipment such as 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 tools with your finger on the switch or energizing tools that have the switch on invites accidents.
- d) **Do not overreach. Keep proper footing and always balance.** This enables better control of the tool in unexpected situations.
- e) **Dress properly. Do not wear loose clothing or jewelry. Keep your hair, clothing and gloves away from moving parts.** Loose clothes, jewelry or long hair can be caught in moving parts.
- f) **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) Tool use and care

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

- b) **Do not use the tool if the switch does not turn it on and off.** Any tool that cannot be controlled with the switch is dangerous and must be repaired.

- c) **Disconnect the plug from the power source and/or remove the battery pack, if detachable, from the tool before making any adjustments, changing accessories, or storing tools.** Such preventive safety measures reduce the risk of starting the tool accidentally.
- d) **Store idle tools out of the reach of children and do not allow people unfamiliar with the tool or these instructions to operate the tool.** Tools are dangerous in the hands of untrained users.
- e) **Maintain tools and accessories. Check for misalignment or binding of moving parts, breakage of parts and any other condition that may affect the tool's operation. If damaged, have the tool repaired before use.** Many accidents are caused by poorly maintained tools.
- f) **Use the tool, accessories and tool bits etc., in accordance with these instructions, considering the working conditions and the work to be performed.** Use of the tool for operations different from those intended could result in a hazardous situation.
- g) **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 OEM supplied charging cable.**
WARNING! Use tools only with specifically designated battery packs and respectively battery types. Use of any other battery packs may create a risk of explosions, injury and fire.
- b) **Do not use a damaged or modified battery.** Damaged or modified batteries can behave unexpectedly and lead to fires, explosions or injuries.
- c) **Do not expose a tool to high temperatures.** Fire or temperatures above 130°C (265°F) can cause an explosion.
- d) **Follow all the instructions for charging and never charge the battery or the cordless tool outside the temperature range specified in the operating instructions.** Incorrect charging or charging outside the permitted temperature range can destroy the battery and increase the fire risk.
- 6) **In case of damage and improper use of the battery, vapors may also be emitted.** Ensure the area is well-ventilated and seek medical attention should you experience any adverse effects. The vapors may irritate the respiratory system.
- 7) **Do not open the battery.** There is a risk of short-circuiting.
- 8) **The battery can be damaged by pointed objects such as nails or screwdrivers or by force applied externally.** An internal short circuit may occur, causing the battery to burn, smoke, explode or overheat.
- 9) **Only use the battery in the manufacturer's products.** This is the only way in which you can protect the battery against dangerous overload.
- 10) **Protect the battery against heat, e.g. against continuous intense sunlight, fire, dirt, water and moisture.** There is a risk of explosion and short-circuiting!

11) Service

- a) **Have your tool serviced by a qualified repair person using only identical replacement parts.** This will ensure that the safety of the tool is maintained.
- b) **Never service damaged batteries.** All maintenance of batteries should only be carried out by the manufacturer or authorized customer service points.

1.3 Special safety instructions

Wear proper work clothes, work gloves, safety glasses and safety shoes.

Do not perform any work inside the device! Only trained technical personnel (customer service) are allowed to work in this area!

It is prohibited to use the inspection system for medical uses of any sort! Do not use excessive force to pull the camera head and reel cable out of the pipe!

The reel cable is rigid and is therefore under mechanical stress! Hold firmly when unwinding from the reel!

Keep a firm footing.

Before each use, check the reel cables for damage. Damaged reel cable must be replaced! Contact with electrically charged live parts can be fatal!

Transporting li-ion battery packs: The contained lithium-ion batteries are subject to the Dangerous Goods Legislation requirements. The user can transport the batteries by road without further requirements. When transported by third parties (e.g.: air transport or forwarding agency), special requirements on packaging and labelling must be observed. For preparation of the item being shipped, consulting an expert for hazardous material is required. Only send the battery pack if the housing is intact and no fluid is leaking. Remove the battery pack from the machine for sending. Prevent the contacts from short circuiting (e.g. by protecting them with adhesive tape).

Dispatch batteries only when the housing is undamaged. Tape or mask off open contacts and pack up the battery in such a manner that it cannot move around in the packaging. Please also observe possibly more detailed national regulations.