

Instructions for Use and Operation

This documentation uses the term battery to describe rechargeable Hilti Li-Ion battery packs containing several Li-Ion cells joined together. These batteries are to be used in Hilti power tools exclusively. When using Hilti power tools, use **Hilti** original battery packs!

Hilti batteries are state of the art and are equipped with cell management and cell protection systems.

Description

The batteries are composed of cells that contain lithium-ion storage materials that are capable providing high specific energy density. Unlike NiMH and NiCd batteries, Li-Ion batteries have a minimal memory effect, but they are extremely susceptible to external impact, deep discharge, and high temperatures. See **Safety WARNING**

Find our battery-powered products at your **Hilti Store** or at:

www.hilti.group | USA: **www.hilti.com**

Safety



WARNING

Danger through improper use! Risk of damaging the battery.

- ▶ Treat batteries with care in order to prevent damage or leakages which can severely damage your health! Observe the following safety precautions for the safe handling and use of Li-ion power tools batteries. Failure to follow can result in skin irritation, severe corrosive injury, chemical burns, fire, or explosion.

- ▶ Batteries must not be modified or tampered with!
- ▶ Never use recycled or repaired batteries conducted by non-**Hilti** companies.
- ▶ Do not use or charge batteries that have suffered mechanical impact, have been dropped from a height or show signs of damage. Examine your batteries regularly for signs of damage, such as shredding, cuts or punctures.
- ▶ Never use the battery or a battery-operated power tool as a hammer.
- ▶ Avoid eye or skin contact with leaking liquids!
 - ◀ See **(What to do in case of damaged batteries)**.
- ▶ Damaged batteries can leak fluid which may moisten adjacent objects. Clean these objects with warm soapy water and replace the damaged batteries.
 - ◀ See **(What to do in case of damaged batteries)**.
- ▶ Never expose batteries to elevated temperature, sparking, or an open flame because the battery may explode.
- ▶ Do not touch the battery poles with your fingers, tools, jewelry, or other metallic objects because this may cause a short circuit, electrical shock, burns or explosions.
- ▶ Keep batteries away from rain or moisture. Penetrating moisture can cause short circuits, electrical shock, burns or explosions.
- ▶ Only use chargers and power tools approved for the specific battery type. Read and follow the instructions in the respective user manuals.
- ▶ Do not store or use the battery in explosion-prone environments containing combustible liquids or gases. An unexpected battery malfunction can cause an explosion under those conditions.

What to do in case of damaged batteries

- ▶ If a Hilti battery is found to be damaged, contact your **Hilti** service partner.
- ▶ If a battery is leaking, use safety goggles and gloves to avoid direct eye or skin contact.

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- ▶ To store a damaged battery, place the battery in a non-flammable container and cover the battery with dry sand, chalk powder (CaCO₃) or silicate (Vermiculite). Then, close the lid air-tight and store the container away from flammable gases, liquids, or objects.
- ▶ Dispose of the container at your **Hilti Store**, or consult your local governmental garbage disposal or public health and safety resources for disposal instructions. **DO NOT ship or mail any damaged batteries.**
- ▶ Use a chemical spill cleanup kit to remove leaked battery fluid.

What to do in case of dysfunctional batteries

 **WARNING**
Danger through improper use! Risk of damaging the battery.

- ▶ Treat batteries with care in order to prevent damage or leakages which can severely damage your health! Observe the following safety precautions for the safe handling and use of Li-ion power tools batteries. Failure to follow can result in skin irritation, severe corrosive injury, chemical burns, fire, or explosion.
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- ▶ Watch for abnormal battery behavior, such as faulty charging or unusually long charging times, noticeable power loss, unusual charger LED activity, or leaking fluids. These are signs of an internal problem.
 - ▶ If you suspect an internal battery problem, contact your **Hilti** service partner.
 - ▶ Should the battery be in operational or no longer chargeable or leaking fluid, dispose of it as described above.
 - ▶ See **(What to do in case of damaged batteries)**.

What to do in case of a battery fire

 **WARNING**
Battery fire hazard! A burning battery will release hazardous and potentially explosive liquids and fumes which may result in a corrosion injury, burns or explosion.

- ▶ Wear your personal protective equipment when you tackle a battery fire.
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- ▶ Provide sufficient venting to permit hazardous and potentially explosive fumes to escape.
 - ▶ Leave the room immediately in case of intense smoke emission.
 - ▶ Consult a doctor in case of any skin or respiratory irritation.
 - ▶ Battery fires should be extinguished with water. Powder fire extinguishers and fire blankets are ineffective with Li-Ion batteries. Fires started by a lithium-ion battery in nearby materials can be extinguished with any appropriate extinguishing agent.
 - ▶ Do not try to move large quantities of damaged, burning, or leaking batteries. Instead, remove surrounding materials and isolate the batteries. If the scale of the fire is larger than can be extinguished with available methods, contact the nearest firefighting authority.

In the case of a single burning battery,

- ▶ Scoop the battery up with a shovel and drop it into a bucket of water, which will reduce the risk of igniting adjacent cells that have not yet reached run-away temperature.
- ▶ Wait for the battery to cool down completely.
- ▶ See **(What to do in case of damaged batteries)**.

Shipping and storage

- ▶ Ambient operating temperature to be kept between -17°C and +60°C / 1°F and 140°F.
- ▶ Storage temperature to be kept between -20°C and +40°C / -4°F and 104°F.

- ▶ Do not store batteries on the charger. Separate battery from charger after use.
- ▶ Store batteries in a cool and dry place. Cool storage will increase battery life.
- ▶ Batteries should not be sent through the mail. Consult your shipper for instructions on how to ship undamaged batteries.
- ▶ Do not transport batteries in bulk, loosely packaged. During transport, batteries should be protected from excessive shock and vibration and isolated from any conductive materials or other batteries that may come in contact with the terminals and cause a short circuit.

Maintenance and Disposal

- ▶ Keep the battery free of oil and grease. If the battery is exposed to oil or grease, remove the contamination with a clean dry rag.
- ▶ Never use a battery with clogged venting slots. Clean the venting slots carefully with a soft brush to prevent debris from entering the battery.
- ▶ Prevent unnecessary exposure of the battery to dust or debris and never subject the battery to soaking moisture (e.g., submerged in water or left out in the rain).
- ▶ If the battery becomes dirty, clean it with a soft brush or clean, dry rag.
- ▶ If a battery is exposed to soaking moisture, treat it as a damaged battery and isolate it in a non-flammable container.
 - ◀ See above **(What to do in case of damaged batteries)**.
- ▶ Improper disposal may cause health hazards from leaking gases or fluids. Dispose of the battery at your Hilti store, or consult your local governmental garbage disposal or public health and safety resources for disposal instructions. **DO NOT send any batteries through the mail.**
- ▶ Batteries may not be disposed of in household garbage.
- ▶ Dispose of your battery out of the reach of children. Cover the terminals with a non-conductive material (such as electrical tape) to prevent short circuiting.