



## LITHIUM-ION BATTERY PACKS

New batteries must be charged before first use.

## IMPORTANT SAFETY INSTRUCTIONS

**WARNING** READ AND UNDERSTAND ALL INSTRUCTIONS. Failure to follow all instructions listed below, may result in electric shock, fire and/or serious personal injury.

### SAVE THESE INSTRUCTIONS.

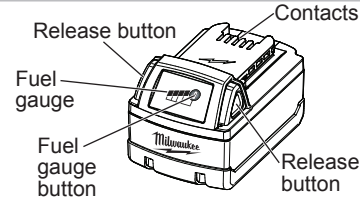
- SAVE THESE INSTRUCTIONS - THIS OPERATOR'S MANUAL CONTAINS IMPORTANT SAFETY AND OPERATING INSTRUCTIONS FOR MILWAUKEE® LI-ION BATTERY PACKS AND THE MILWAUKEE® LI-ION CHARGER.**
- BEFORE USING THE BATTERY PACK AND CHARGER, READ THIS OPERATOR'S MANUAL, YOUR TOOL OPERATOR'S MANUAL, AND ALL LABELS ON THE BATTERY PACK, CHARGER AND TOOL.**
- CAUTION - TO REDUCE THE RISK OF INJURY, CHARGE MILWAUKEE® LITHIUM-ION PACKS ONLY IN THEIR MILWAUKEE® LITHIUM-ION CHARGER.** Other types of chargers may cause personal injury or damage. Battery pack and charger are not compatible with V™-technology or NiCd systems. Do not wire a battery pack to a power supply plug or car cigarette lighter. Battery packs will be permanently disabled or damaged.
- USE MILWAUKEE® LITHIUM-ION PACKS ONLY ON COMPATIBLE MILWAUKEE® LITHIUM-ION TOOLS.** Battery pack and charger are not compatible with V™-technology or NiCd systems. Use with other tools may result in a risk of fire, electric shock or personal injury.
- AVOID DANGEROUS ENVIRONMENTS.** Do not charge battery pack in rain, snow, damp or wet locations. Do not use battery pack or charger in the presence of explosive atmospheres (gaseous fumes, dust or flammable materials) because sparks may be generated when inserting or removing battery pack, possibly causing fire.
- CHARGE IN A WELL VENTILATED AREA.** Do not block charger vents. Keep them clear to allow proper ventilation. Do not allow smoking or open flames near a charging battery pack. Vented gases may explode.
- DO NOT BURN OR INCINERATE BATTERY PACKS.** Battery packs may explode, causing personal injury or damage. Toxic fumes and materials are created when battery packs are burned.
- DO NOT CRUSH, DROP, OR DAMAGE** battery pack. Do not use a battery pack or charger that has received a sharp blow, been dropped, run over, or damaged in any way (e.g., pierced with a nail, hit with a hammer, stepped on).
- DO NOT DISASSEMBLE.** Incorrect reassembly may result in the risk of electric shock, fire or exposure to battery chemicals. If it is damaged, take it to a MILWAUKEE® service facility.
- BATTERY CHEMICALS CAUSE SERIOUS BURNS.** Never allow contact with skin, eyes, or mouth. If a damaged battery pack leaks battery chemicals, use rubber or neoprene gloves to dispose of it. If skin is exposed to battery fluids, wash with soap and water and rinse with vinegar. If eyes are exposed to battery chemicals, immediately flush with water for 20 minutes and seek medical attention. Remove and dispose of contaminated clothing.
- DO NOT SHORT CIRCUIT.** A battery pack will short circuit if a metal object makes a connection between the positive and negative contacts on the battery pack. Do not place a battery pack near anything that may cause a short circuit, such as coins, keys or nails in your pocket. Do not allow fluids to flow into battery pack. Corrosive or conductive fluids, such as seawater, certain industrial chemicals, and bleach or bleach containing products, etc., can cause a short circuit. A short circuited battery pack may cause fire, personal injury, and product damage.
- STORE YOUR BATTERY PACK AND CHARGER** in a cool, dry place. Do not store battery pack where temperatures may exceed 50°C (120°F) such as in direct sunlight, a vehicle or metal building during the summer.
- ALWAYS USE A SIDE HANDLE** when using a 9.0 Ah or higher capacity battery pack; the output torque of some tools may increase. If your drill/driver did not come with a side handle, visit [www.milwaukeetools.com.au](http://www.milwaukeetools.com.au) for the appropriate accessory handle.

## READ AND SAVE ALL INSTRUCTIONS FOR FUTURE REFERENCE.

### SYMBOLOLOGY

- Volts
- Direct Current
- Do not allow battery to contact corrosive or conductive fluid
- Properly Recycle Batteries

### FUNCTIONAL DESCRIPTION



## ADDITIONAL BATTERY SAFETY WARNINGS

**WARNING** To reduce the risk of fire, personal injury, and product damage due to a short circuit, never immerse your tool, battery pack or charger in fluid or allow a fluid to flow inside them. Corrosive or conductive fluids, such as seawater, certain industrial chemicals, and bleach or bleach-containing products, etc., can cause a short circuit.

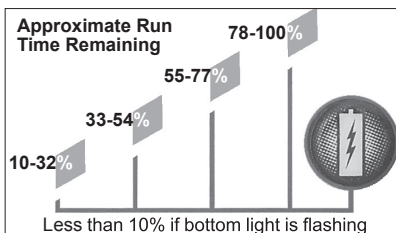
#### Charging Temperature

Recommended Ambient Charging Temperature 5°C to 40°C (40°F to 105°F)

#### Fuel Gauge

Use the Fuel Gauge to determine the battery pack's remaining run time. Press the Fuel Gauge button to display the lights. The Fuel Gauge will light up for 2-3 seconds. When less than 10% of charge is left, 1 light on the fuel gauge will flash slowly.

**NOTE:** If the Fuel Gauge doesn't appear to be working, place the battery pack on the charger and charge as needed. Compared to NiCd battery pack types, MILWAUKEE® Lithium-Ion battery packs deliver fade-free power for their entire run time. The tool will not experience a slow, gradual loss of power as you work. To signal the end of discharge, 1 light on the fuel gauge will flash quickly for 2-3 seconds and the tool will not run. Charge the battery pack.



### Battery Pack Protection

To protect itself from damage and extend its life, the battery pack's intelligent circuit monitors current draw and temperature. In extremely high torque, binding, stalling, and short circuit situations, the battery pack will turn OFF the tool if the current draw becomes too high. All the fuel gauge lights will flash. Release the trigger and restart.

Under extreme circumstances, the internal temperature of the battery could become too high. If this happens, the fuel gauge lights will flash in an alternating pattern and the tool will not run. Allow the battery to cool down.

Fuel Gauge Lights	Diagnosis	Solution
Lights 1 - 4 Solid	Remaining run time	Continue working
1 Light, flashing slowly	Less than 10% run time left	Prepare to charge pack
1 Light, flashing quickly	End of discharge	Charge pack
Lights 1-4, flashing quickly	Current draw too high	Release trigger and restart, reduce pressure
Lights 1&3 / 2&4, flashing alternatingly	Battery temperature too high	Release trigger and allow battery to cool

### Cold Weather Operation

MILWAUKEE® Lithium-Ion battery packs are designed to operate in temperatures below freezing. When the battery pack is too cold, it may need to warm up before normal use. Put the battery on a tool and use the tool in a light application. It may "buzz" for a short time until it warms up. When the buzzing stops, use the tool normally.

**WARNING** TO REDUCE THE RISK OF FIRE, PERSONAL INJURY, AND PRODUCT DAMAGE DUE TO A SHORT CIRCUIT, NEVER IMMERSE YOUR TOOL, BATTERY PACK OR CHARGER IN FLUID OR ALLOW A FLUID TO FLOW INSIDE THEM. CORROSIVE OR CONDUCTIVE FLUIDS, SUCH AS SEAWATER, CERTAIN INDUSTRIAL CHEMICALS, AND BLEACH OR BLEACH CONTAINING PRODUCTS, ETC., CAN CAUSE A SHORT CIRCUIT.

### Maintenance and Storage

Do not expose your battery pack or cordless tools to water or rain, or allow them to get wet. This could damage the tool and battery pack. Do not use oil or solvents to clean or lubricate your battery pack. The plastic casing will become brittle and crack, causing a risk of injury.

Store battery packs at room temperature away from moisture. Do not store in damp locations where corrosion of terminals may occur. As with other battery pack types, permanent capacity loss can result if the pack is stored for long periods of time at high temperatures (over 49°C). MILWAUKEE® Lithium-Ion battery packs maintain their charge during storage longer than other battery pack types. After about a year of storage, charge the pack as normal.

### Transport

Personal transport of Li-Ion battery packs is allowed when done in accordance with these warnings and instructions. The proper classification, packaging, labeling, marking, and documentation requirements for shipping Li-Ion batteries is dependent upon whether the particular batteries are rated greater than or less than 100 Wh. Generally, Li-Ion batteries rated 100Wh or less are "excepted" from certain Class 9 DG requirements. Always check compliance of Li-Ion battery consignments against the current regulations governing the chosen mode of transport. When in doubt, contact the carrier or other trained Dangerous Goods professional to confirm acceptability. Li-Ion packs are shipped under classification UN 3480 (battery only) or UN3481 (batteries contained in or packed with equipment).

### Disposing of MILWAUKEE® Li-Ion Battery Packs

MILWAUKEE® Lithium-Ion battery packs are more environmentally friendly than some other types of power tool battery packs (e.g., nickel-cadmium). Always dispose of your battery pack according to federal, state and local regulations. Contact a recycling agency in your area for recycling locations. Even discharged battery packs contain some energy. Before disposing, use electrical tape to cover the terminals to prevent the battery pack from shorting, which could cause a fire or explosion.

**WARNING** TO REDUCE THE RISK OF INJURY OR EXPLOSION, NEVER BURN OR INCINERATE A BATTERY PACK EVEN IF IT IS DAMAGED, DEAD OR COMPLETELY DISCHARGED. WHEN BURNED, TOXIC FUMES AND MATERIALS ARE CREATED.

## WARRANTY - AUSTRALIA and NEW ZEALAND

Please refer to the Techtronic Industries Pty. Ltd. Warranty Terms and Conditions for MILWAUKEE® products and accessories which is supplied with the tool or kit. This warranty applies only to product purchased from an authorised MILWAUKEE® dealer in Australia or New Zealand.

## SERVICE - AUSTRALIA and NEW ZEALAND

MILWAUKEE® prides itself in producing a premium quality product that is Nothing But Heavy Duty®. Your satisfaction with our products is very important to us! If you encounter any problems with the operation of this tool, please contact your authorised MILWAUKEE® dealer.

For a list of MILWAUKEE® dealers, guarantee or service agents please contact MILWAUKEE® Customer Service or visit our website.  
(Australia Toll Free Telephone Number 1300 361 505)  
(New Zealand Toll Free Telephone Number 0800 279 624) or visit [www.milwaukeetools.com.au](http://www.milwaukeetools.com.au) / [www.milwaukeetools.co.nz](http://www.milwaukeetools.co.nz).

### Milwaukee Electric Tool Corporation

13135 West Lisbon Road, Brookfield, Wisconsin U.S.A. 53005

#### Milwaukee Tool (Australia)

21 Kelletts Road, Rowville, VIC 3178  
Melbourne, Australia

#### Milwaukee Tool (New Zealand)

2 Landing Drive, Mangere  
Auckland, 2022, New Zealand

Designed by Milwaukee Electric Tool Corp.  
Professionally Made in China for Milwaukee Tool (Australia) / Milwaukee Tool (New Zealand)  
Printed in China