

Milwaukee M12 System Compatibility — Batteries, Chargers, Tools (M12, M12 FUEL, REDLITHIUM CP/XC/HO)

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Milwaukee M12 system compatibility reference: battery-to-tool matrix across M12 (brushed) and M12 FUEL (POWERSTATE brushless) tools, REDLITHIUM CP1.5/CP2.0/CP3.0, XC3.0/XC4.0/XC6.0 and HIGH OUTPUT HO2.5/HO5.0 pack ratings (Ah, Wh, cell count, weight), M12 charger compatibility (48-59-2401 sequential, 48-59-1801 SUPER, 48-59-1808 packout), M12 jigsaw 2545-20 blade compatibility (T-shank), and cross-platform notes on M18 and REDLINK/One-Key connectivity. Covers M12 FUEL 2545-20 jigsaw, 2554-20 impact wrench, 2504-20 hammer drill, 2551-20 Surge, 2960-20 ¾ 3 impact.

Milwaukee M12 system compatibility — batteries, chargers, tools

The Milwaukee M12 platform is a 12 V cordless system with a single stem-pack battery interface used across roughly 130 tools and lights. Every M12 battery fits every M12 tool and every M12 charger — the compatibility question is about runtime and power under load, not physical fit. M12 tools split into two motor classes: base M12 (traditional brushed motor) and M12 FUEL (POWERSTATE brushless motor with REDLINK PLUS electronic overload protection). The batteries split into three chemistries within the REDLITHIUM family: CP (Compact), XC (Extended Capacity) and HIGH OUTPUT (HO) — differing in cell count, cell chemistry and discharge rate.

M12 REDLITHIUM battery pack reference

Pack | Milwaukee P/N | Capacity | Energy (Wh) | Cell count | Weight | Discharge class |

REDLITHIUM CP1.5 | 48-11-2401 | 1.5 Ah | 18 | 3 | 0.31 kg | Compact |

REDLITHIUM CP2.0 | 48-11-2420 | 2.0 Ah | 24 | 3 | 0.32 kg | Compact |

REDLITHIUM CP3.0 | 48-11-2430 | 3.0 Ah | 36 | 3 | 0.35 kg | Compact (21700 cells) |

REDLITHIUM XC3.0 | 48-11-2402 | 3.0 Ah | 36 | 6 | 0.51 kg | Extended |

REDLITHIUM XC4.0 | 48-11-2440 | 4.0 Ah | 48 | 6 | 0.55 kg | Extended |

REDLITHIUM XC6.0 | 48-11-2460 | 6.0 Ah | 72 | 6 | 0.60 kg | Extended |

REDLITHIUM HIGH OUTPUT HO2.5 | 48-11-2425 | 2.5 Ah | 30 | 3 | 0.34 kg | High-discharge |

REDLITHIUM HIGH OUTPUT HO5.0 | 48-11-2450 | 5.0 Ah | 60 | 6 | 0.59 kg | High-discharge |

The HO packs use higher-current cells and deliver up to 50 % more sustained output than the equivalent CP/XC pack at the same nominal capacity, which is what M12 FUEL tools need to hit their published torque, cut speed or SPM figures. Using a CP pack on a FUEL tool works fine (protection cuts in earlier) but the tool runs slower and hotter and cycles fewer holes / cuts per charge.

M12 charger compatibility

Charger | P/N | Bay count | Charge current | CP2.0 charge time | XC6.0 charge time | Cross-platform |

M12 Standard Charger | 48-59-2401 | 1 | 1.5 A | 30 min | 90 min | M12 only |

M12 & M18 Multi-Voltage | 48-59-1812 | 1 | Auto | 30 min | 90 min | M12 + M18 |

M12 & M18 Rapid Charger | 48-59-1808 | 1 | 3 A | 15 min | 45 min | M12 + M18 |

M12 & M18 Six-Pack Sequential | 48-59-1806 | 6 (sequential) | 3 A | 15 min | 45 min | M12 + M18 |

Packout M12/M18 Charger | 48-59-1809 | 4 (parallel) | 3 A each | 15 min each | 45 min each | Packout stack |

Common M12 FUEL tools — battery pairing recommendation

Tool | P/N (bare) | Recommended pack | Notes |

M12 FUEL Jig Saw | 2545-20 | XC4.0 or HO2.5 | 3,000 SPM top; HO2.5 sustains high SPM in steel |

M12 FUEL 3/8" Hammer Drill | 2504-20 | XC4.0 | 500 in-lb; XC extends bit-per-charge |

M12 FUEL 3/8" Impact Wrench | 2554-20 | HO2.5 or XC6.0 | 250 ft-lb; HO for full torque |

M12 FUEL 1/2" Impact Wrench | 2555-20 | HO2.5 or XC6.0 | Compact; HO required for rated torque |

M12 FUEL SURGE 1/4" Hex Impact | 2551-20 | CP2.0 or XC4.0 | Oil-hammer, quieter; CP fine for finish work |

M12 FUEL 1/4" Right-Angle Impact | 2557-20 | XC4.0 | Access-restricted torque work |

M12 FUEL 3/8" Ratchet | 2557-20 / 2560-20 | CP2.0 or XC4.0 | Automotive service |

M12 FUEL Compact Band Saw | 2529-20 | XC6.0 or HO5.0 | 1-5/8" cut capacity; HO for continuous cutting |

M12 FUEL Rotary Hammer SDS+ | 2416-20 | XC4.0 or HO2.5 | Concrete anchors up to 5/8" |

M12 FUEL 1/2" Drill/Driver | 2903-20 | XC6.0 or HO5.0 | 350 in-lb; steel hole saws OK |

M12 FUEL Multi-Tool | 2526-20 | XC4.0 | Oscillating; blade compatibility Open-Lok + Universal |

M12 FUEL Threaded Rod Cutter | 2872-20 | XC4.0 or HO2.5 | Cuts 3/8" to 1/2" B7 in one pull |

M12 FUEL 2545-20 jig saw — blade & accessory compatibility

The M12 FUEL Jig Saw 2545-20 uses the industry-standard T-shank blade mount with tool-less quick-release. All Milwaukee

T-shank jig saw blades and third-party T-shank blades from Bosch, DeWalt, Makita, Festool, Hitachi/Metabo HPT and Freud fit. Recommended pairings:

Softwood, fast cuts — Milwaukee 48-42-5001 (T-shank, 6 TPI, 8 mm wide). Cuts to 60 mm depth.

Hardwood, fine finish — Milwaukee 48-42-5011 (T-shank, 10 TPI, reverse-tooth for splinter-free top-face cuts on veneer).

Mild steel to 10 mm — Milwaukee 48-42-5211 (T-shank, 21 TPI, bi-metal). Reduce SPM to setting 2-3.

Stainless steel to 6 mm — Milwaukee 48-42-5031 (T-shank, 24 TPI, bi-metal). Setting 2 with cutting fluid.

Aluminium sheet 3-25 mm — Milwaukee 48-42-5217 (T-shank, 14 TPI). Setting 3-4.

Plaster, drywall, fibreglass — Milwaukee 48-42-5202 (T-shank, 12 TPI, carbide-grit).

The 2545-20 ships as bare tool (no battery, no charger). Kits: 2545-21 ships with CP2.0 pack, charger and case; 2545-22 ships with XC4.0. For pack retrofit, verify the target pack date-code — pre-2018 REDLITHIUM packs (before HIGH OUTPUT release) still work but are limited to CP/XC discharge.

M12 vs M18 — physical and electrical compatibility

M12 and M18 are NOT physically compatible. The stem-pack interface is a different footprint, so M12 batteries do not fit M18 tools and vice versa. The chargers listed above with an "M12 + M18" note have separate bays that auto-detect and configure per-pack. There is no adapter that safely bridges an M12 pack onto an M18 tool because the current draw and undervoltage lockout of M18 tools require the 18 V M18 pack's 5-cell stack.

REDLINK PLUS and One-Key

REDLINK PLUS intelligence is bundled with every M12 FUEL tool: bidirectional communication between pack and tool, over-current protection, over-temperature protection and cell-balance protection. It requires no user setup. One-Key is a separate Bluetooth-based inventory and control system for select M12 FUEL tools (e.g. 2555-22 impact, 2404-22 drill/driver) — it enables customisation of tool speed/torque profiles from the Milwaukee One-Key app, and asset-tracking via Bluetooth beacon. One-Key is opt-in; non-One-Key M12 FUEL tools run at fixed factory profiles.

Related products and references

Milwaukee M12 FUEL Jig Saw 2545-20 on cBallast

All Milwaukee M12 tools and accessories

Milwaukee REDLITHIUM batteries and chargers

Milwaukee M12 FUEL / M18 FUEL brushless tools

Milwaukee Tool on cBallast

Tools category

Battery capacities, charge times and tool torque figures are the current Milwaukee published values. Verify against the specific tool and pack date-code before selection. Milwaukee, M12, M18, FUEL, POWERSTATE, REDLITHIUM, REDLINK and One-Key are trademarks of Milwaukee Electric Tool Corporation.

Frequently asked questions

Do all M12 batteries fit all M12 tools? Yes — the M12 interface is one platform: a CP1.5 from 2010-era tools and a 6.0 Ah XC pack both click into any M12 tool; runtime and weight are the only differences. What is the difference between CP and XC packs? Cell count and capacity: CP packs run one row of three cells (1.5–3.0 Ah, ~0.3 kg), XC packs two rows for 4.0–6.0 Ah with correspondingly longer runtime and more weight. Which M12 battery gives the best power-to-weight? CP3.0 (48-11-2430) — 3.0 Ah on 21700 cells at roughly the weight of the old 2.0 Ah pack, per the guide's table.

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