## **BRUSHLESS MOTORS ARE DRIVING REVOLUTIONARY** PERFORMANCE



LONGER



## **BRUSHLESS MEANS LONGER MOTOR LIFE**

PROS CHOOSE MILWAUKEE® FUEL™ BECAUSE IT OUTLASTS COMPETITIVE BRUSHLESS PRODUCTS WITH UP TO 10X LONGER MOTOR LIFE.

Milwaukee® FUEL™ 2604-22

> Makita® BL™ LXPH05

**Brushless LXT** 

## LESS MOTOR WEAR = **BETTER PERFORMANCE**

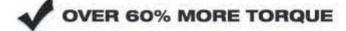
Instead of wearable brushes, Milwaukee® engineered more steel and copper into its POWERSTATE™ brushless motor. This results in longer motor life as a result of reduced friction, less heat buildup, and higher efficiency.



## MILWAUKEE® IS THE **PERFORMANCE LEADER** IN BRUSHLESS







Milwaukee® POWERSTATE™



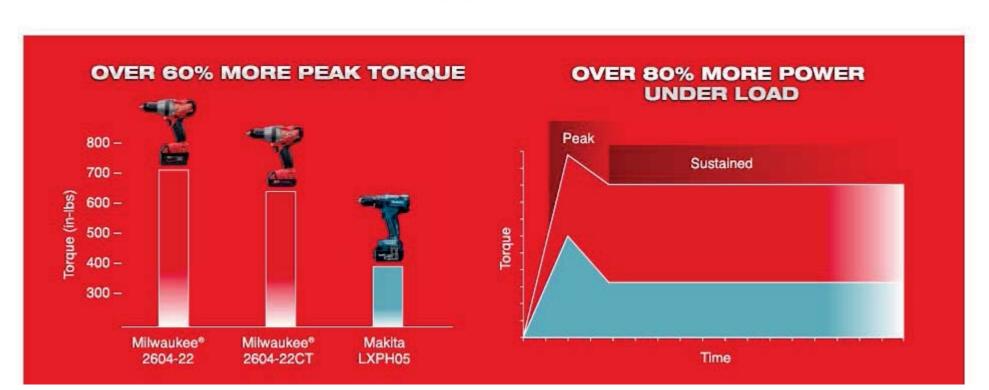


The Milwaukee® POWERSTATE™ brushless motor has nearly 4X the amount of power generating components than Makita's LXT LXPH05 brushless hammer drill. It also carries higher-grade rare earth magnets and a higher steel and copper content, which allows the M18™ FUEL™ Hammer Drill (725 in-lbs of torque) to overpower Makita's in tough applications (400 in-lbs of torque.)

To produce more strength...engineers at Milwaukee redesigned the motor of the new M18 FUEL drill. The result is a tool that generates about 25% more torque than the average 18 volt drill and can create big holes faster than any of them.

#### Popular Science

Read the full article:
A New Motor Makes for A Stronger 18-volt Drill



## **BRUSHLESS MEANS MORE RUN-TIME**

Milwaukee's® POWERSTATE™ brushless motor is what makes the M18™ FUEL™ 18V drills and impact drivers last longer. The POWERSTATE™ motor is also supported by the world's most advanced battery pack - REDLITHIUM™ - and system of

hardware and software - REDLINK PLUS™ Intelligence. This, three-piece, internal network is what makes the new M18™ FUEL™ brushless drills and brushless impact drivers stand out from DeWalt® 20V Max and Makita® LXT brushless tools.



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Combine an uber-efficient brushless motor and super-smart electronic intelligence with lithium battery power and what do you get?

M18 FUEL... The benefits are lots more power, longer run time and unmatched durability - in an ever shrinking, lighter-weight tool.

Handyman Club of America Magazine
Tools on Steroids

### **BRUSHLESS COMPETITION SCORECARD**

VS HIGH CAPACITY DRILLS VS COMPACT DRILLS VS HIGH CAPACITY IMPACTS VS COMPACT IMPACTS Makita® **DeWalt®** Milwaukee® **Makita® DeWalt®** Milwaukee® DCD985L2 2604-22 LXPH05 **BHP454** 2603-22 **BDF451** DCD980L2 HAMMER DRILL/DRIVERS DRILL/DRIVERS **Clutch Settings** 24 22 24 22 16 16 16 **RPM** 0-575 / 0-2.000 0-550 / 0-1,850 0-400 / 0-1,500 0-400 / 0-1,700 0-550 / 0-1,850 0-300 / 0-1,700 | 0-575 / 0-2,000 Power 725 400 560 535 UWO 725 535 UWO 560 **BPM** 31,450 25,500 25,500 34,000 N/A N/A N/A Weight (lbs.) 5.3 5.2 5.0 3.8 5.0 4.9 5.3 8.1" 7.9" Length 7.625" 9.7" 9.5" 9.4" 9.3" Chuck Metal Plastic Metal Metal Metal Metal Metal **Tool Warranty** 5 Years 3 Years 3 years 3 Years 5 Years 3 Years 3 years **POWERSTATE™** POWERSTATE™ Makita® BL Standard **Motor Type** Standard Standard Standard Brushless Brushless Brushless Sequential 18V Only 18V Only 20V / 12V Sequential 18V Only 20V / 12V Charger Multi-Voltage Multi-Voltage Side Handle Yes No Yes Yes Yes Yes Yes

Tools with brushless motors

VS HIGH CAPACITY DRILLS

VS COMPACT DRILLS

VS HIGH CAPACITY IMPACTS

Milwaukee®

VS COMPACT IMPACTS

**DeWalt®** 

**Makita®** 





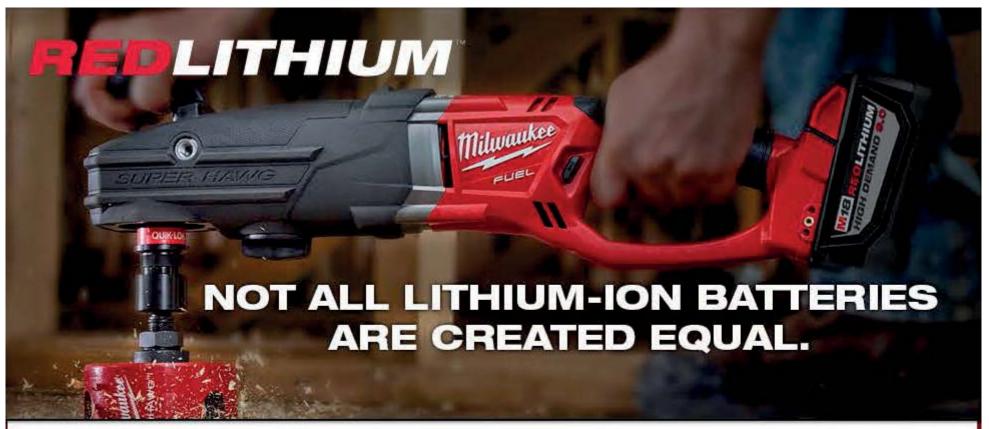
Tools with brushless motors

IMPACT DRIVERS							
Speed / Torque Control	DRIVE CONTROL™	Yes	Yes	No	No		
RPM	0-2900	0-2850	0-2600	0-2800	0-2300		
Torque (in-lbs)	1600	1500	1460	1400	1420		
IPM	0-3600	0-3300	0-3400	0-3200	0-3200		
Weight (lbs.)	3.6	3,5	3.3	3.4	3.3		
Length	5.5"	5.25*	5.5"	5.55"	5.45"		
Tool Warranty	5 Years	3 Years	3 years	3 Years	3 years		
Motor Type	POWERSTATE™ Brushless	DeWalt® Brushless	Makita® BL™ Brushless	Standard	Standard		
Charger	Sequential Multi-Voltage	20V / 12V	18V Only	20V / 12V	18V Only		

Tools with brushless motors

Tools with brushless motors

VS HIGH CAPACITY DR	ILLS VS COMPACT DRI	LLS VS HIGH	CAPACITY IMPACTS	VS COMPACT IMPACTS	
				~	
	Milwaukee®	DeWalt®	Makita®	DeWalt®	
		4		•	
	2653-22CT	Brushless DCF895C2	Standard BTD142HW	Standard DCF885C2	
		IMPACT DRIVERS			
Speed / Torque Control	DRIVE CONTROL™	Yes	No	No	
RPM	0-2900	0-2850	0-2300	0-2800	
Torque (in-lbs)	1600	1500	1280	1400	
IPM	0-3600	0-3300	0-3200	0-3200	
Weight (lbs.)	3	3	2.8	2.8	
Length	5.5"	5.25"	5.75*	5.55*	
Tool Warranty	5 Years	3 Years	3 years	3 Years	
Motor Type	POWERSTATE™ Brushless	Brushless	Standard	Standard	
Charger	Sequential Multi-Voltage	20V / 12V	18V Only	20V / 12V	

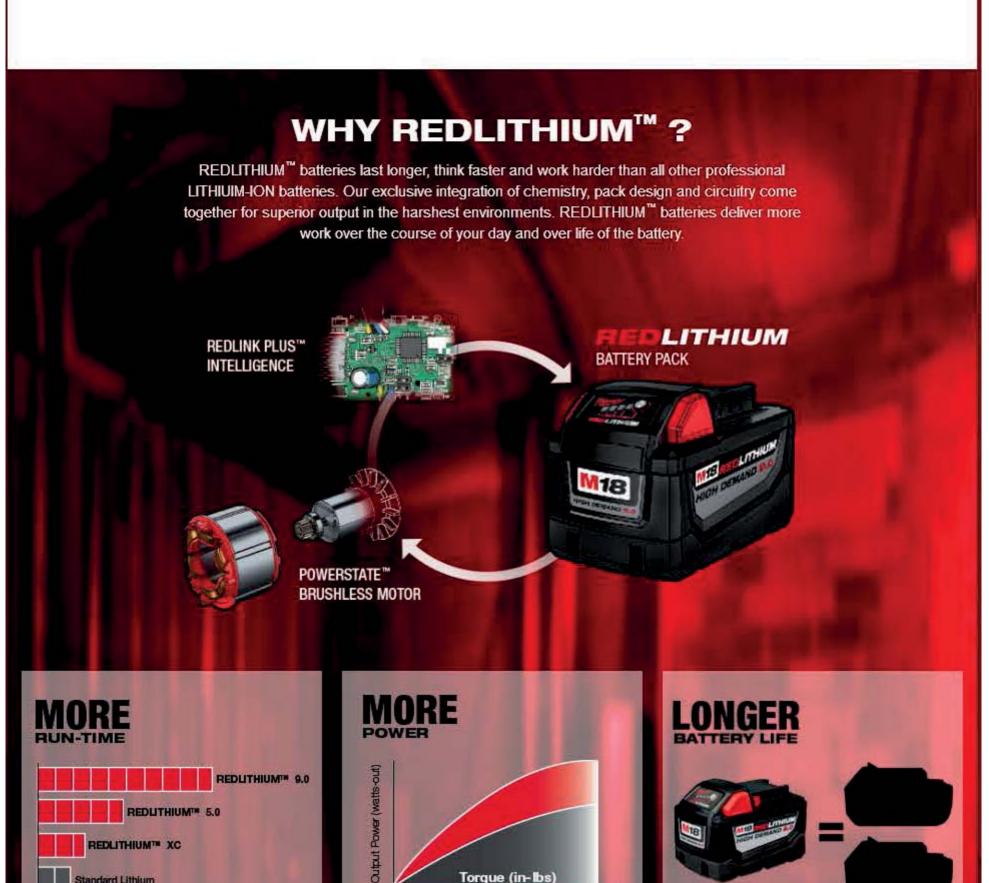


### **NOW AVAILABLE**



# THE WORLD'S FIRST & ONLY 18V HIGH DEMAND™ 9.0 BATTERY

- Up to 2X the performance of REDLITHIUM<sup>™</sup> XC 5.0
- · More run-time
- · More power
- · Runs cooler
- · Exceeds higher voltage or multi-battery platform performance
- Fits all 100+ M18<sup>™</sup> tools



## REDLITHIUM<sup>™</sup> Performance Details



Standard Lithium

Cross Cuts in 2° x 12° PT Pine

### LITHIUM-ION CELLS

 Latest technology advancements provide the most energy & power output by a single cell



Torque (in-lbs)

MILWAUKEE® Standard Lithium

### MOTOR

- · Low-impedance, highpower cells deliver more power output to the motor
- · Advanced framework of motor and electronics take advantage of increased power



#### **CELL, PACK** CONSTRUCTION, & **ELECTRONICS**

from the cells

- · Cell chemistry minimizes energy
- · Temp control frame pulls heat away
- · Electronics control charge & discharge analytics to optimize performance and extend life

## **REDLITHIUM™** Protection

### SUPERIOR PACK CONSTRUCTION

It lasts longer, thinks faster and works harder than standard, 18-volt lithium-ion and NiCd batteries











#### LATCH COVER

Prevents water from entering pack through the latch buttons

#### WATER PROTECTION BARRIER

Routes water away from the electronics & out of the battery pack

#### **ELECTRONIC COATING**

Protects the electronics from water and condensation

## **REDLITHIUM<sup>™</sup> Protection**

### SUPERIOR PACK CONSTRUCTION

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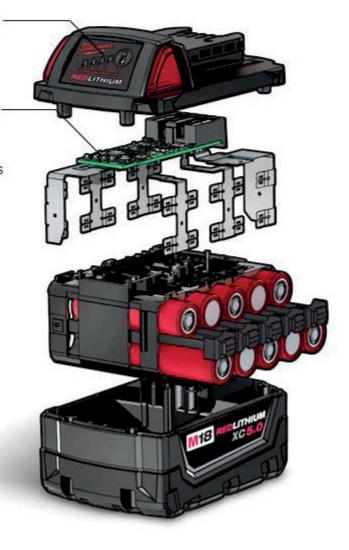






### PATENTED REDLINK™

INTELLIGENCE
Protects the pack in abusive situations, provides optimum performance, and monitors the cells for maximum life



# **REDLITHIUM<sup>™</sup> Protection**

### SUPERIOR PACK CONSTRUCTION

It lasts longer, thinks faster and works harder than standard, 18-volt lithium-ion and NiCd batteries











# **REDLITHIUM<sup>™</sup> Protection**

#### SUPERIOR PACK CONSTRUCTION

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