



## PRODUCTION & ASSEMBLY

PRODUCT CATALOG

## WHY MAKITA CORDLESS?

#### **INNOVATIVE CORDLESS TECHNOLOGY**

Makita designs and manufactures innovative cordless tools utilizing the latest advanced technology that allows professionals the ability to use cordless tools on tasks previously thought to be impossible. Our goal in designing manufacturing & assembly cordless tools is to break away from the historical method of costly air hose operation and allow the operator freedom with a powerful, accurate and ergonomic solution.

#### **REDUCED ENERGY COSTS**

Less Energy Consumption needed to power cordless tools than to power pneumatic tooling. Extreme Energy Savings by eliminating air line and air tool leakage.

Higher Quality Control by reducing damage to manufactured products often caused by hoses and cords. Reduced Operating Costs and down time by eliminating oilers and oil maintenance.

Reduced Maintenance Costs by minimizing down time to repair damaged products.

#### **MORE FREEDOM**

More Flexibility to roam from one workspace to the next Greater Access and Maneuverability in confined workspaces and inside closed compartments **Increased Efficiency** with the ability to interchange tools from one application to the next Easier to Reposition Fastening System when assembly lines need to be rerouted, expanded or eliminated **Quicker Recoveries** from power interruptions

#### SAFER WORKPLACE

Reduced Hazards caused by air hoses laying across floors or hanging from ceiling Lighter Weight with Ergonomic Design for operator control Lower Vibration and Noise for operator comfort **Environmentally Friendly** low toxicity battery platforms



Makita

## **BRUSHLESS MOTOR**

#### **UP TO 50% LONGER MOTOR LIFE**

The Makita-built brushless motor eliminates carbon brushes, enabling the motor to run cooler and more efficiently for longer life. The electronically-controlled brushless motor efficiently uses energy to match torque and RPM to the changing demands of the application.



## **LOW-REACTION TECHNOLOGY**

#### **BENEFITS**

Dramatically reduces repetitive motion stress experience when operating clutch-based tools within assembly facilities. Reduces cumulative wrist strain, operator fatigue, lowers the instance of injury caused by repetitive fastening tasks, and can reduce company healthcare costs related to repetitive motion stress.

#### **TECHNOLOGY**

Clutch components utilizing proprietary, patented technology significantly reduces the "kickback" experienced once final torque is applied by clutch tooling Available as a retrofit conversion to existing Makita pistol and right angle clutch tools or included as OEM component on new tool purchase from Makita.



## BRUSHLESS PROGRAMMABLE SCREWDRIVERS

PRECISION TORQUE CONTROL





#### **PASS/FAIL L.E.D. LAMP**

Large Pass/fail lamp indicates sufficient and insufficient fastening achievement and audibly alerts operator to failed fastenings.



### RPM & DIRECTIONAL PROGRAMMING

RPM and Directional programing via USB for multi-stage rundowns.



#### **PRECISION TORQUE SCREWDRIVERS**









	DFT023FMZ	DFT045FMZ	DFT085FMZ / DFT085FMAZ*	DFT127FMZ / DFT127FMAZ*
Voltage	14.4V	14.4V	14.4V	14.4V
Capacities	1/4" Hex Shank	1/4" Hex Shank	1/4" Hex Shank	1/4" Hex Shank
Fastening Torque	.5-2 Nm (4-18 in. lbs.)	1-4 Nm (9-35 in. lbs.)	3-8 Nm (27-71 in. lbs.)	5-12 Nm (44-106 in. lbs.)
No Load Speed (RPM)	400 - 1,300	150 - 900	150 - 900	100 - 600
Length (w/Battery)	6-1/4"	6-1/4"	7-1/2"	7-1/2"
Height (w/Battery)	9-3/4"	9-3/4"	10"	10"
Width (w/Battery)	2-13/16"	2-13/16"	2-13/16"	2-13/16"
Weight (w/Battery)	2.4 lbs.	2.4 lbs.	2.9 lbs.	2.9 lbs.
Battery	BL1430B, BL1415NA	BL1430B, BL1415NA	BL1430B, BL1415NA	BL1430B, BL1415NA

\*FMAZ suffix indicates Low-Reaction model.



#### **LITHIUM-ION BATTERY**

Precision sensor informs operator of insufficient battery charge level through visual and audible indicators.



#### **BRUSHLESS MOTOR**

Makita-Built motor technologies provide higher speeds and advanced monitoring.



#### **BUILT-IN L.E.D. LIGHT**

Built-in L.E.D. light illuminates work surface for better visibility in low light environments.



#### **TORQUE ACCURACY**

"Real World" accuracy has earned certification within major Automotive and Aerospace Assemblers achieving repeatability within 4% of mean torque.

## **BRUSHLESS PROGRAMMABLE RIGHT ANGLE NUT-RUNNERS**

#### **PRECISION TORQUE CONTROL**

"Real World" accuracy has earned certification within major automotive and aerospace assemblers achieving repeatability within 4% of mean torque





#### **RPM & DIRECTIONAL PROGRAMMING**

RPM and directional programming via USB port for multi-stage rundown control



#### PASS/FAIL **INDICATOR LAMP**

Indicates sufficient and insufficient fastening achievement and audibly alerts operator to failed fastenings.



visibility in low light environments

#### DFL651FZ

18V LXT® Lithium-Ion Cordless High Torque 3/8" Angle Nut Runner



#### **BALANCING/TETHERING**

Conveniently placed threaded holes on the top and side of tool allow for easy balancing or tethering in your workstation application.



counterclockwise rundown capabilities

6-Phase Rundown Programming

for better quality fastenings

and balancing

Built-in L.E.D. light illuminates work surface for better visibility in low light environments.





	(Table)		Country of the Countr		(mile )
	BRUSHLESS	BRUSHLESS	BRUSHLESS	BRUSHLESS	BRUSHLESS
	DFL083FZ	DFL083F5Z	DFL125FZ	DFL125F5Z	DFL204FZ
Voltage	14.4V	14.4V	14.4V	14.4V	14.4V
Capacities	3/8" Square Drive	1/4" Square Drive	3/8" Square Drive	1/4" Square Drive	3/8" Square Drive
Fastening Torque	2-8 Nm (18-71 in. lbs.)	2-8 Nm (18-71 in. lbs.)	5-12 Nm (44-106 in. lbs.)	5-12 Nm (44-106 in. lbs.)	8-20 Nm (71-177 in. lbs.)
No Load Speed (RPM)	150 - 700	150 - 700	100 - 700	100 - 700	100 - 440
Length (w/Battery)	22"	22"	22"	22"	22"
Height (w/Battery)	3-5/32"	3-5/32"	3-5/32"	3-5/32"	3-5/32"
Width (w/Battery	4-11/64"	4-11/64"	4-11/64"	4-11/64"	4-11/64"
Weight (w/Battery)	4.7 lbs.	4.7 lbs.	4.7 lbs.	4.7 lbs.	4.7 lbs.
Battery	BL1430B, BL1460A	BL1430B, BL1460A	BL1430B, BL1460A	BL1430B, BL1460A	BL1430B, BL1460A

	Thakita	makta	Thokida
	BRUSHLESS	BRUSHLESS	LXT BRUSHLESS
	DFL302FZ / DFL302FAZ*	DFL403FZ / DFL403FAZ*†	DFL651FZ†/DFL651FAZ*†
Voltage	14.4V	14.4V	18V LXT®
Capacities	3/8" Square Drive	3/8" Square Drive	3/8" Square Drive
Fastening Torque	16-30 Nm (142-266 in. lbs.)	25-40 Nm (221-354 in. lbs.)	25-65 Nm (221-575 in. lbs.)
No Load Speed (RPM)	70-230	50-220	80-200
Length (w/Battery)	22"	22"	23"
Height (w/Battery)	3-5/32"	3-5/32"	4-9/16"
Width (w/Battery)	4-11/64"	4-11/64"	2-15/16"
Weight (w/Battery)	5.1 lbs	5.1 lbs	6 lbs
Battery	BL1430B, BL1460A	BL1430B, BL1460A	BL1830B, BL1840B, BL1850B, BL1860B

\*FAZ suffix indicates Low-Reaction model.

†Programmability via USB port.

## **TORQUE TRACER**

### SMART TOOLS PROVIDING QUALITY ASSURANCES VIA WIRELESS COMMUNICATION

- Identifies multiple fastening characteristics for each rundown
- · Flexible systems conform to a broad variety of environments
- . Maintains cordless freedom of operator benefits while improving quality assurance best practices
- Provides an energy efficient alternative to pneumatic platforms involving verifiers/qualifiers
- · Adds traceability measures in environments wanting cordless flexibility and safety
- An alternative to expensive DC electric tool platforms
- Uses Bluetooth frequency spectrum and Adaptive Frequency Hopping to assure an interference-free environment











#### **BLUETOOTH® RECEIVER**

Bluetooth receiver provides communication with tool. 24v discreet I/O for PASS/FAIL/BATCH to communicate with PLC. Serial port for downloading fastening data and torque values to PC.



**BRUSHLESS MOTOR** 

Makita-Built motor technologies provide higher speeds and advanced monitoring.



14.4V LITHIUM-ION

High productivity with reduced weight. Very low self-discharge rates.

#### **TORQUE-TRACER WIRELESS COMMUNICATION TOOLS**







	DFT041RZ	DFT082RZ / DFT082RAZ	DFT124RZ / DFT124RAZ
Voltage	14.4V	14.4V	14.4V
Capacities	1/4" Hex Shank	1/4" Hex Shank	1/4" Hex Shank
Fastening Torque	1-4 Nm (9-35 in. lbs.)	4-8 Nm (35-71 in. lbs.)	6-12 Nm (53-106 in. lbs.)
No Load Speed (RPM)	800	860	600
Length	7-1/2"	7-1/2"	7-1/2"
Height (w/Battery)	10-1/2"	10-1/2"	10-1/2"
Width	2-13/16"	2-13/16"	2-13/16"
Weight (w/Battery)	3.3 lbs	3.3 lbs	3.3 lbs
Battery	BL1430B, BL1460A	BL1430B, BL1460A	BL1430B, BL1460A







	DFL201RZ / DFL201RAZ*	DFL301RZ/DFL301RAZ*	DFL402RZ / DFL402RAZ*
Voltage	14.4V	14.4V	14.4V
Capacities	3/8" Sq. Drive	3/8" Sq. Drive	3/8" Sq. Drive
Fastening Torque	10-20 Nm (89-177 in. lbs.)	16-30 Nm (142-266 in. lbs.)	25-40 Nm (221-354 in. lbs.)
No Load Speed (RPM)	360	260	200
Length	16-7/8"	18-3/4"	18-3/4"
Height (w/Battery)	3-7/8"	3-7/8"	3-7/8"
Width	2-13/16"	2-13/16"	2-13/16"
Weight (w/Battery)	3.8 lbs	4.4 lbs	4.4 lbs.
Battery	BL1430B, BL1460A	BL1430B, BL1460A	BL1430B, BL1460A

\*RAZ suffix indicates Low-Reaction model.

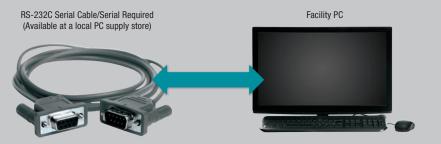
#### **TOOL RECOGNITION**

- Fastening torque values
   Fastening angle values
- Rundown rotations
- Tool ID recognition
- Time/date snap
- OK-NOK parameter achievement
- Batch achievement

#### **PROGRAMMING INTERACTIVITY**

- Torque value tolerance range
- Angle value tolerance range
- Rundown rotation min/max settings
- Tool lock down mode
- Tool brake option
- Soft start adjustment
- Calibration ability
- Batch management (PLC-based)
- Log all data from tool recognition





## **TORQUE CONTROL PROGRAMMABLE SHUT-OFF IMPACTS**



Wireless capability offers pass/fail for error proofing and batch counts

#### **TORQUE CONTROL PROGRAMMABLE IMPACT DRIVERS**









	DTDA040Z/DTDA040ZX1*	DTDA070Z / DTDA070ZX1*	DTDA100Z / DTDA100ZX1*	DTDA140Z / DTDA140ZX1*
Voltage	14.4V	14.4V	14.4V	14.4V
Capacities	1/4" Hex Shank	1/4" Hex Shank	1/4" Hex Shank	1/4" Hex Shank
Maximum Torque	35 Nm (310 in.lbs.)	65 Nm (575 in.lbs.)	95 Nm (841 in.lbs.)	140 Nm 1,239 in.lbs.)
No Load Speed (RPM)	0 - 2,300	0 - 2,600	0 - 2,700	0 - 2,600
Impacts Per Minute (IPM)	0 - 3,700	0 - 3,700	0 - 3,300	0 - 3,300
Length	5-1/2"	5-1/2"	5-3/4"	5-3/4"
Height (w/Battery)	10-1/8"	10-1/8"	10-1/8"	10-1/8"
Width	2-15/16"	2-15/16"	2-15/16"	2-15/16"
Weight (w/Battery)	2.9 lbs.	2.9 lbs.	2.9 lbs.	3.1 lbs.
Battery	BL1415NA, BL1430B, BL1460A	BL1415NA, BL1430B, BL1460A	BL1415NA, BL1430B, BL1460A	BL1415NA, BL1430B, BL1460A

<sup>\*</sup>Wireless Capable

#### TORQUE CONTROL PROGRAMMABLE IMPACT WRENCHES









	DTWA070Z / DTWA070ZX1*	DTWA100Z / DTWA100ZX1*	DTWA140Z / DTWA140ZX1*	DTWA190Z / DTWA190ZX1*
Voltage	14.4V	14.4V	14.4V	14.4V
Capacities	3/8" Square Drive	3/8" Square Drive	1/2" Square Drive	1/2" Square Drive
Maximum Torque	65 Nm (575 in.lbs.)	95 Nm (841 in.lbs.)	140 Nm (1,239 in.lbs.)	185 Nm (1,637 in.lbs.)
No Load Speed (RPM)	0 - 2,500	0 - 2,700	0 - 2,700	0 - 2,600
Impacts Per Minute (IPM)	0 - 3,700	0 - 3,300	0 - 3,300	0 - 3,300
Length	5-5/8"	5-15/16"	6-1/8"	6-1/8"
Height (w/Battery)	10-1/8"	10-1/8"	10-1/8"	10-1/8"
Width	2-15/16"	2-15/16"	2-15/16"	2-15/16"
Weight (w/Battery)	2.9 lbs.	2.9 lbs.	3.1 lbs.	3.3 lbs.
Battery	BL1415NA, BL1430B, BL1460A	BL1415NA, BL1430B, BL1460A	BL1415NA, BL1430B, BL1460A	BL1415NA, BL1430B, BL1460A

\*Wireless Capable



AUTO BATTERY SHUT OFF ABS disables the tool once battery capacity drops below 20%



RUNDOWN PROGRAMMING Allows fastening force to be adjusted and programmed for each joint condition

## **BRUSHLESS**

#### **COMPACT & ERGONOMIC DESIGN**

- Brushless Motor delivers 10 kN of pulling force (XVR01) and 20 kN of pulling force (XVR02).
- Installs rivets up to 3/16" (4.8 mm) (XVR01) and up to 1/4" (6.4 mm) (XVR02)



**Holds Rivet in Place** 

Built-In L.E.D. Light

**Ergonomically Designed Handle** 

**Brushless Motor** 

**Transparent Mandrel Catch Container** 

Powered by 18V **Lithium-Ion Battery** 



Thakita







### LXT BRUSHLESS

	XVR01T / XVR01Z	XVR02T / XVR02Z
Voltage	18V	18V
Brushless Motor	Yes	Yes
Pulling Force	10 kN	20 kN
Rivet	Up to 3/16" (4.8 mm)	Up to 1/4" (6.4 mm)
Stroke Length	25 mm	30 mm
LED Light	Yes	Yes
Length (w/Battery)	12-3/8"	12-3/4"
Height (w/Battery)	11-1/4"	11-1/4"
Width (w/Battery)	3-1/8"	3-1/8"
Weight (w/Battery)	4.9 lbs.	5.3 lbs.
Battery	BL1830B, BL1840B, BL1850B, BL1860B	BL1830B, BL1840B, BL1850B, BL1860B



#### **PERFORMANCE**

Capable of pulling aluminum, steel, and stainless steel rivets



#### **TRANSPARENT MANDREL**

Catch container for convenient viewing of container level.



#### **CLASS I DIVISION 2 RATED**

- UL listed for Class I Division 2 locations for maximum 50°C ambient
- Meets the NEC Article 513 Aircraft Hangar requirements for Class I Division 2 locations
- Tested to Mil Standard 810F, Method 511.4















	BFH040FRAE	BFH040RAE	BFH090FRAE	BFH090RAE	BFH120FRAE
Voltage	12V	12V	12V	12V	12V
Capacities	1/4" Hex Shank	1/4" Hex Shank	1/4" Hex Shank	1/4" Hex Shank	1/4" Hex Shank
Max Fastening Torque (Nm)	0.8-4.5 Nm (7-40 in. lbs.)	0.8-4.5 Nm (7-40 in. lbs.)	3.4-9.0 Nm (30-80 in. lbs.)	3.4-9.0 Nm (30-80 in. lbs.)	5.0-12.0 Nm (44-106 in. lbs.)
No Load Speed (RPM)	400	400	400	400	400
L.E.D. Lamp	YES	NO	YES	NO	YES
L.E.D. Pass/Fail	YES	YES	YES	YES	YES
Audible Signal	YES	NO	YES	NO	YES
Length	7-15/32"	7-15/32"	7-15/32"	7-15/32"	7-15/32"
Height	10-15/32"	10-15/32"	10-15/32"	10-15/32"	10-15/32"
Width	2-13/16"	2-13/16"	2-13/16"	2-13/16"	2-13/16"
Weight	3.3 lbs	3.3 lbs	3.3 lbs	3.3 lbs	3.3 lbs
Battery	BH1220	BH1220	BH1220	BH1220	BH1220



#### REPETITIVE ACCURACY

#### Torque Accuracy

 Long-life clutch provides consistent operation within +/-10% of mean torque with real-world repeatability consistencies within +/-4%.



#### **SMART SYSTEM**

#### **Auto Battery Shutoff**

- . Shuts off the tool when battery capacity is less than 5%.
- Ensures consistent fastening torque.

#### **Indication Lamp and Audible Alert**

• Precision sensor indicates fastening sufficiency and battery power conditions with light and/or audible alert.

#### **BATTERIES AND CHARGERS**







Model No.	Battery	Voltage	Cell Type	Amp Hours	Charge Time	Charger(s)
BL1460A	BL1460A	14.4v	Lithium-lon	6.0Ah	55 Minutes	
BL1430B	BL1430B	14.4v	Lithium-lon	3.0Ah	22 Minutes	DC18RC, DC18RD, DC18SF
BL1415NA	BL1415NA	14.4v	Lithium-lon	1.5Ah	20 Minutes	









#### RCV02 Wireless System Receiver

Transmits torque data to PC for storage of fastening history



#### **DF012DSE**

7.2V Lithium-Ion Cordless 1/4" Hex Driver-Drill Kit with Auto-Stop Clutch

Makita-built motor delivers 71 in.lbs. of Max Torque in a compact design



#### **TD022DSE**

7.2V Lithium-Ion Cordless 1/4" Hex Impact Driver Kit

Makita-built motor delivers 195 in.lbs. of Max Torque in a compact design



#### **PRODUCTION TOOLING ACCESSORIES**

#### SHUT-OFF IMPACT TOOL COVERS

Part No.	Color	Applicable Models
	Impact Drivers	
459404-7	Red	
459405-5	Blue	DTDA040, DTDA070, DTWA070
459408-9	Clear	
	Impact Wrenches	
459409-7	Red	
459410-2	Blue	DTDA100, DTDA140, DTWA100, DTWA140, DTWA170
459413-6	Clear	

#### **RIGHT ANGLE TOOL COVERS**

Part No.	Color	Applicable Models
422279-7	Red	
422280-2	Blue	DFL083FZ/083F5Z, DFL125FZ/125F5Z.
422281-0	Yellow	DFL125F2/125F52, DFL204FZ
422282-8	Clear	
422284-4	Red	
422285-2	Blue	DEL000EZ DEL400EZ
422286-0	Yellow	DFL302FZ, DFL403FZ
422287-8	Clear	

#### **RIVET SETUP PARTS**

Part No.	Description	Applicable Models
191F78-1	6.4 mm (1/4") Nosepiece and Jaw Pusher with Tube	XRV02
199725-2	6.0 mm (7/32") Nosepiece and Jaw Pusher with Tube	
191F80-4	4.0 mm (5/32") Nosepiece and Jaw Pusher	XRV01
199728-6	3.2 mm (1/8") Nosepiece and Jaw Pusher with Tube	
191C03-4 or 191F79-9	4.8 mm (3/16") Nosepiece and Jaw Pusher	XVR01, XVR02
162500-9	Mandrel Container	

#### **LOW REACTION CLUTCH ASSEMBLY**

Part No.	Description
195231-5	Pistol
195620-4	Right Angle
197045-8	DFL651FZ

#### PISTOL STANDARD TOOL COVERS

Part No.	Color	Description
424984-2	Clear	DFT023FMZ & DFT045FMZ
424985-0	Red	
424986-8	Blue	
424987-6	Yellow	
424969-8	Clear	DFT085FMZ & DFT127FMZ
424968-0	Red	
424967-2	Blue	
424966-4	Yellow	

#### **PISTOL LOW REACTION TOOL COVERS**

Part No.	Color	Description
424973-7	Clear	
424972-9	Red	DFT085FMAZ & DFT127FMAZ
424971-1	Blue	Low Reaction
424970-3	Yellow	

#### BL1430B & BL1415NA BATTERY COVER

Part No.	Color	Description
450599-9	Clear	BL1430B Battery Cover
454407-6	Clear	BL1415NA Battery Cover

#### **TORQUE ADJUSTING KEY**

Part No.	Description	Applicable Models
765027-4	Torque Adjusting Key	All clutch tools

#### **TOOL HOOK / BALANCER**

Part No.	Description	Applicable Models
281012-4	Tool Hook	All clutch tools
	0	

# RIVETING PERFORMANCE.





