



PRODUCTION SOLUTIONS

UNPARALLELED
ACCURACY



FEEL | innovation

WIRELESS TRACEABILITY

Torque Tracer



makitatools.com

Makita
14.4V



WHY MAKITA CORDLESS?

Torque Tracer Series



Pages 3-4

Torque Control Screwdrivers



Pages 5-6

Torque Control Nutrunners



Pages 7-8

Hazloc Screwdrivers



Pages 10

VTS Impacts



Pages 11

Close Quarters Drivers

Pages 11

18V LXT Impacts

Pages 12

Accessories

Pages 13-14

• 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.

Makita cordless tools are steadily emerging as the fastening system of choice within the Assembly and Manufacturing industries. While manufacturing processes were once dominated by air tools, manufacturers are recognizing the many advantages of using Makita cordless tools, such as, reduced energy costs, more freedom and increased safety at the workplace. To meet the needs of today's manufacturers, Makita has developed a full range of assembly and manufacturing cordless power tools that are designed for precise torque accuracy. Makita cordless tools are your cost saving solutions.

Makita's launch of the Torque-Tracer wireless data communication tools add additional value within the manufacturing environment through providing features with improved Quality Assurance methods. Torque-Tracer's ability to capture fastening characteristics adds a traceability and communicate component to quality management with subsequent gains in productivity.

• REDUCED ENERGY COSTS •

- **Less Energy Consumption** needed to power cordless tools than to power air tools
- **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

WHY MAKITA CORDLESS?

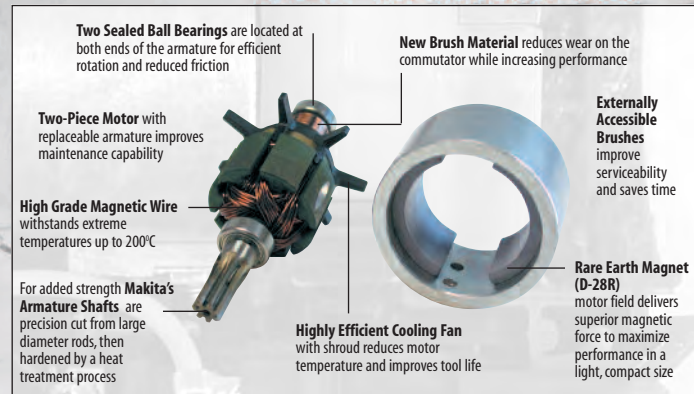


ADVANCED MOTOR TECHNOLOGIES



Makita has been designing and manufacturing the highest quality motor in the industrial power tool industry for nearly 90 years. Our high performance motors last longer and are more efficient than competing motors because we utilize the latest technology and the best raw materials. Makita DC motors have the following characteristics that prove to set the standard for quality, reliability and performance:

- **Exclusive Externally Accessible Brushes** extend the life of the motor by up to five times by allowing for quick and easy servicing
- **Newly Developed Brush Material** is commutator friendly for reduced sparks, allowing increased motor performance and reduced wear on the commutator
- **Thicker Armature Shaft** will handle greater torque for heavy duty applications
- **More Armature Poles** to create a stronger electrical current and generate more power
- **Dual Ball Bearings** creates less friction and thus a smoother running motor than competitive motors that have one bearing and one bushing
- **Larger Fan** for a cooler running motor and longer life out of the motor
- **Strategically Located Heat Sink** in the cooling path of the motor to dissipate heat away from the switch
- **Thicker Gauge Lead Wires** than the competition for more efficient current flow
- **Motor Design** - Two-piece motor offers easy serviceability while delivering extreme performance



TORQUE CONVERSION TABLE

[in.lbs.] → [N·m]

in.lbs.	0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
0	0.00	0.01	0.02	0.03	0.05	0.06	0.07	0.08	0.09	0.10
1	0.11	0.12	0.14	0.15	0.16	0.17	0.18	0.19	0.20	0.21
2	0.23	0.24	0.25	0.26	0.27	0.28	0.29	0.31	0.32	0.33
3	0.34	0.35	0.36	0.37	0.38	0.40	0.41	0.42	0.43	0.44
4	0.45	0.46	0.47	0.49	0.50	0.51	0.52	0.53	0.54	0.55
5	0.56	0.58	0.59	0.60	0.61	0.62	0.63	0.64	0.66	0.67
6	0.68	0.69	0.70	0.71	0.72	0.73	0.75	0.76	0.77	0.78
7	0.79	0.80	0.81	0.82	0.84	0.85	0.86	0.87	0.88	0.89
8	0.90	0.92	0.93	0.94	0.95	0.96	0.97	0.98	0.99	1.01
9	1.02	1.03	1.04	1.05	1.06	1.07	1.08	1.10	1.11	1.12

[N·m]

in.lbs.	0	1	2	3	4	5	6	7	8	9
10	1.1	1.2	1.4	1.5	1.6	1.7	1.8	1.9	2.0	2.1
20	2.3	2.4	2.5	2.6	2.7	2.8	2.9	3.1	3.2	3.3
30	3.4	3.5	3.6	3.7	3.8	4.0	4.1	4.2	4.3	4.4
40	4.5	4.6	4.7	4.9	5.0	5.1	5.2	5.3	5.4	5.5
50	5.6	5.8	5.9	6.0	6.1	6.2	6.3	6.4	6.6	6.7
60	6.8	6.9	7.0	7.1	7.2	7.3	7.5	7.6	7.7	7.8
70	7.9	8.0	8.1	8.2	8.4	8.5	8.6	8.7	8.8	8.9
80	9.0	9.2	9.3	9.4	9.5	9.6	9.7	9.8	9.9	10.1
90	10.2	10.3	10.4	10.5	10.6	10.7	10.8	11.0	11.1	11.2

[N·m]

in.lbs.	0	10	20	30	40	50	60	70	80	90
100	11.3	12.4	13.6	14.7	15.8	16.9	18.1	19.2	20.3	21.5
200	22.6	23.7	24.9	26.0	27.1	28.2	29.4	30.5	31.6	32.8
300	33.9	35.0	36.2	37.3	38.4	39.5	40.7	41.8	42.9	44.1
400	45.2	46.3	47.5	48.6	49.7	50.8	52.0	53.1	54.2	55.4
500	56.5	57.6	58.8	59.9	61.0	62.1	63.3	64.4	65.5	66.7
600	67.8	68.9	70.1	71.2	72.3	73.4	74.6	75.7	76.8	78.0
700	79.1	80.2	81.4	82.5	83.6	84.7	85.9	87.0	88.1	89.3
800	90.4	91.5	92.6	93.8	94.9	96.0	97.2	98.3	99.4	100.6
900	101.7	102.8	103.9	105.1	106.2	107.3	108.5	109.6	110.7	111.9

[N·m]

in.lbs.	0	100	200	300	400	500	600	700	800	900
1,000	113	124	136	147	158	169	181	192	203	215
2,000	226	237	249	260	271	282	294	305	316	328
3,000	339	350	362	373	384	395	407	418	429	441
4,000	452	463	475	486	497	508	520	531	542	554
5,000	565	576	588	599	610	621	633	644	655	667
6,000	678	689	701	712	723	734	746	757	768	780
7,000	791	802	814	825	836	847	859	870	881	893
8,000	904	915	926	938	949	960	972	983	994	1,010
9,000	1,020	1,030	1,040	1,050	1,060	1,070	1,090	1,100	1,110	1,120

[N·m]

[N·m] → [in.lbs.]

N·m	0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
0	0.00	0.89	1.77	2.66	3.54	4.43	5.31	6.20	7.08	7.97
1	8.85	9.74	10.6	11.5	12.4	13.3	14.2	15.0	15.9	16.8
2	17.7	18.6	19.5	20.4	21.2	22.1	23.0	23.9	24.8	25.7
3	26.6	27.4	28.3	29.2	30.1	31.0	31.9	32.8	33.6	34.5
4	35.4	36.3	37.2	38.1	39.0	39.8	40.7	41.6	42.5	43.4
5	44.3	45.1	46.0	46.9	47.8	48.7	49.6	50.5	51.3	52.2
6	53.1	54.0	54.9	55.8	56.7	57.5	58.4	59.3	60.2	61.1
7	62.0	62.9	63.7	64.6	65.5	66.4	67.3	68.2	69.0	69.9
8	70.8	71.7	72.6	73.5	74.4	75.2	76.1	77.0	77.9	78.8
9	79.7	80.6	81.4	82.3	83.2	84.1	85.0	85.9	86.8	87.6

[in.lbs.]

N·m	0	1	2	3	4	5	6	7	8	9
10	89	97	106	115	124	133	142	150	159	168
20	177	186	195	204	212	221	230	239	248	257
30	266	274	283	292	301	310	319	328	336	345
40	354	363	372	381	390	398	407	416	425	434
50	443	451	460	469	478	487	496	505	513	522
60	531	540	549	558	567	575	584	593	602	611
70	620	629	637	646	655	664	673	682	690	699
80	708	717	726	735	744	752	761	770	779	788
90	797	806	814	823	832	841	850	859	868	876

[in.lbs.]

N·m	0	10	20	30	40	50	60	70	80	90
100	885	974	1,060	1,150	1,240	1,330	1,420	1,510	1,590	1,680
200	1,770	1,860	1,950	2,040	2,130	2,210	2,300	2,390	2,480	2,570
300	2,660	2,740	2,830	2,920	3,010	3,100	3,190	3,280	3,360	3,450
400	3,540	3,630	3,720	3,810	3,900	3,980	4,070	4,160	4,250	4,340
500	4,430	4,520	4,600	4,690	4,780	4,870	4,960	5,050	5,130	5,220
600	5,310	5,400	5,490	5,580	5,670	5,750	5,840	5,930	6,020	6,110
700	6,200	6,290	6,370	6,460	6,550	6,640	6,730	6,820	6,910	6,990
800	7,080	7,170	7,260	7,350	7,440	7,520	7,610	7,700	7,790	7,880
900	7,970	8,060	8,140	8,230	8,320	8,410	8,500	8,590	8,680	8,760

[in.lbs.]

Conversion Formulas

1 kgf = 2.205 lbs. 1 N = 0.101972 kg 1 m = 39.37 in.

A N·m = A x 8.8523 in.lb → 1 N·m = 8.8523 in.lbs.

B in.lbs. = B x 0.1130 N·m → 1 in.lbs. = 0.1130 N·m

C ft.lbs. = C in.lbs. → C in.lbs. = C ft.lbs. x 12



TORQUE-TRACER



"Quick Change"
1/4" Hex Shank Chuck

Auto-Stop Fastening
Functioning

Built-in L.E.D. Lamps

Long-Life Clutch for High
Repeatability

Makita-Built Brushless
DC Motor

Slim-Line
Anti-Slip Dimpled Grip

L.E.D. Operator Signal
and Audible Alarm

Low Voltage
Shut Off Sensor

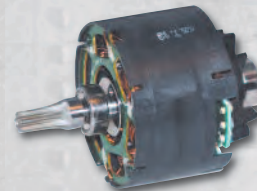
Built-in L.E.D.
Lamps

Auto-Stop
Fastening
Functioning



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



BRUSHLESS MOTOR

Makita-built motor technologies. Provide higher speeds and advanced monitoring.



LITHIUM-ION BATTERY

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

TORQUE-TRACER WIRELESS COMMUNICATION TOOLING



BFT041Z (1-4 N-m)



BFT08ZRZ (4-8 N-m)



BFT124RZ (6-12 N-m)



BFL201RZ (10-20 N-m)



BFL301RZ (16-30 N-m)



BFL402RZ (25-40 N-m)

Voltage	14.4V	14.4V	14.4V	14.4V	14.4V	14.4V
Capacities	1/4" Hex Shank	1/4" Hex Shank	1/4" Hex Shank	3/8" Square	3/8" Square	3/8" Square
Fastening Torque:	1-4(8.9-35.4)	4-8(35.4-70.8)	6-12(53.1-106)	10-20(88.5-177)	16-30(142-266)	25-40(221-354)
No Load Speed (RPM)	800	860	600	360	260	200
Length	7-1/2"	7-1/2"	7-1/2"	16-7/8"	18-3/4"	18-3/4"
Height (w/Battery)	10-1/2"	10-1/2"	10-1/2"	3-7/8"	3-7/8"	3-7/8"
Width	2-13/16"	2-13/16"	2-13/16"	2-13/16"	2-13/16"	2-13/16"
Weight (w/Battery)	3.3 lbs.	3.3 lbs.	3.3 lbs.	3.8 lbs.	4.4 lbs.	4.4 lbs.
Battery	BL1430	BL1430	BL1430	BL1430	BL1430	BL1430

WIRELESS DATA COMMUNICATION

- Best-in-class engineering
- Wireless communication with PLC or directly through your personal computer
- Extreme accuracy and long life
- Traceability through communication
- Confirmation of individual parameter
- Low voltage shut-off sensor



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



PRECISE CONTROL SCREWDRIVERS



Higher Torque Accuracy
+/- 7% with $C_m \geq 1.67$

Rubber Chuck Cover
to protect the workpiece

"Quick Change"
1/4" Hex
Shank Chuck

Built-in L.E.D. Lamps
activate when trigger is
pulled for low light conditions

**Conveniently Located
Forward/Reverse Switch**

Large On/Off Switch
Equipped with a Delayed
Re-Start

Nut and Bolt Construction
allows repeat disassembly,
preventing damage to the housing



Auto Battery Shutoff
Ensures consistent
fastening torque

User Friendly Electronic Controls
Soft Start to suppress reaction and allow for
smooth fastening

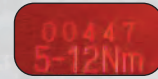
One-second restart delay minimizes the
potential for operator double-hits

Delayed restarter controls the motor so that
it does not start until one second passes
after a screw has been driven; the motor
does not start even if switch trigger is pulled

Reduces deviation from pre-set fastening
torque caused by unintentional
over-tightening

Torque Set Window
allows the operator
to view the desired
torque setting

Smooth Shut-Off Operation
Once preset torque is achieved,
the clutch activates automatically
halting applied torque



**Color Coded
Identification Plate**
for easy tool and
application identification

**Externally Accessible
Brushes** allow for easy
service replacement and
extended motor life

Two-Piece D-28R Motor
with replaceable
armature and powerful
rare earth magnet



**Indicator Lamp &
Audible Signal**
provides operator
immediate feedback on
fastening achievement

Anti-Slip Dimpled Grip
provides comfort and
operator control

Fuel Gauge Lamp
indicates percentage of
remaining battery fuel



Utilizing ISO5393 Standards
all BFT Series models provide
 C_m ratings > 1.67

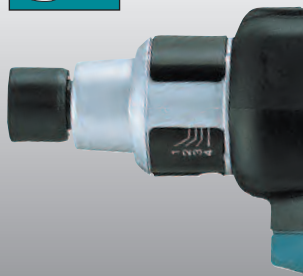
Model BFT122FZ



REPETITIVE ACCURACY

Torque Accuracy

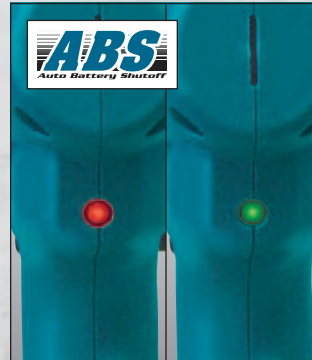
- Long-life clutch provides consistent operation within +/-10% of mean torque with real-world repeatability consistencies within +/-3%.
- User-certified to within +/- 5% of mean torque
- C_m values of well over 1.67 (+/- 3 sigma)



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



PRECISE CONTROL SCREWDRIVERS



PRECISE TORQUE CONTROL SCREWDRIVERS

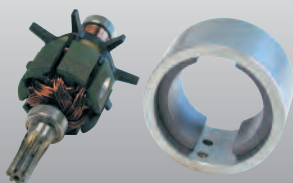
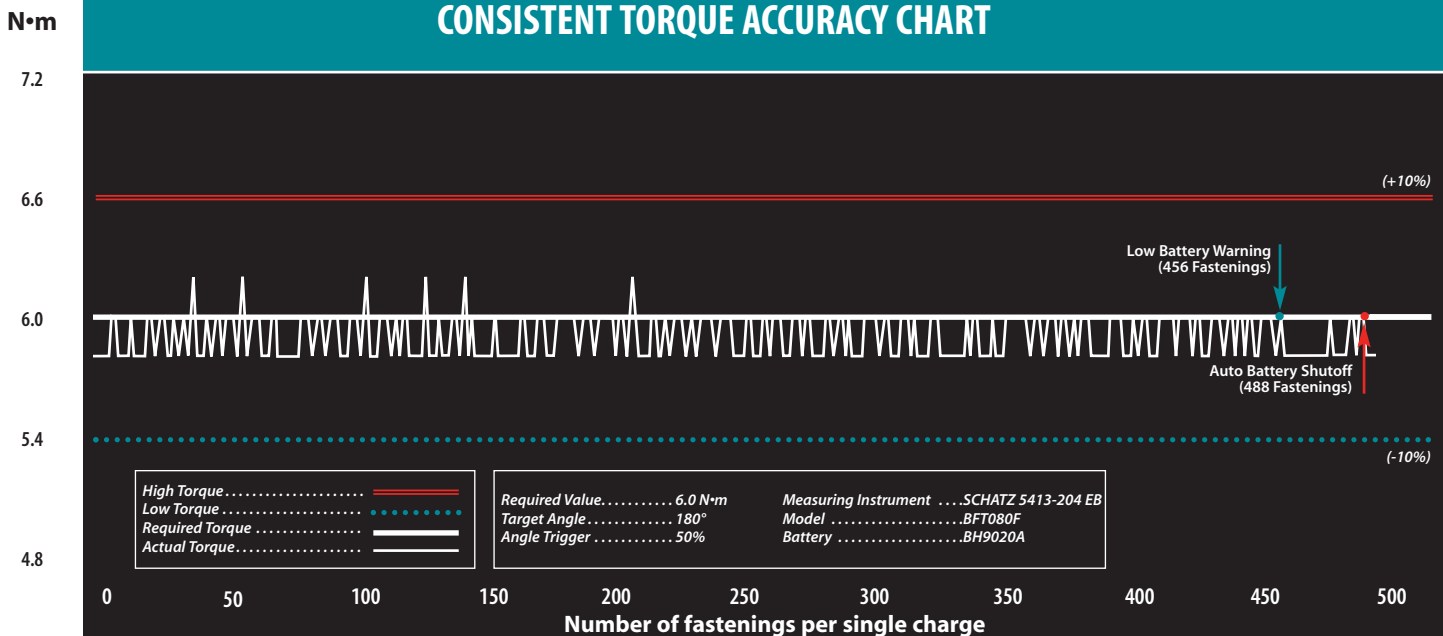


BFT020FZ (2.0 N·m) BFT040FZ (4.0 N·m) BFT080FZ (8.0 N·m) BFT122FZ (12 N·m) BFT081FZ (8 N·m) BFT123FZ (12 N·m) BFT083FZ (8.0 N·m) BFT125FZ (12 N·m)

Voltage	9.6V	9.6V	9.6V	9.6V	12V	12V	14.4V	14.4V
Capacities	1/4" Hex Drive	1/4" Hex Drive	1/4" Hex Drive	1/4" Hex Drive	1/4" Hex Drive	1/4" Hex Drive	1/4" Hex Drive	1/4" Hex Drive
Fastening Torque [Nm (in.lbs.)]:								
(Hard)	0.5-2.0(4.4-17.7)	1-4 (8.9-35.4)	3-8 (26.6-70.8)	5-12 (44.3-106)	3-8 (26.6-70.8)	5-12 (44.3-106)	3-8 (26.6-70.8)	5-12 (44.3-106)
(Soft)	0.5-2.0(4.4-17.7)	1-3.5 (8.9-31.0)	3-6.5 (26.6-57.5)	5-10 (44.3-88.5)	3-8 (26.6-70.8)	5-12 (44.3-106)	3-8 (26.6-70.8)	5-12 (44.3-106)
No Load Speed (RPM)	540	950	540	320	700	390	80	150
Length	7-7/8"	7-7/8"	7-7/8"	7-7/8"	7-7/8"	7-7/8"	7-7/8"	7-7/8"
Height (w/Battery)	9-7/8"	9-7/8"	9-7/8"	9-7/8"	10-1/4"	10-1/4"	10-1/4"	10-1/4"
Width	2-9/16"	2-9/16"	2-9/16"	2-9/16"	2-13/16"	2-13/16"	2-13/16"	2-13/16"
Weight (w/Battery)	2.9 lbs.	2.9 lbs.	2.9 lbs.	2.9 lbs.	3.5 lbs.	3.5 lbs.	3.3 lbs.	3.3 lbs.
Battery	BH9033A, BH9020A	BH9033A, BH9020A	BH9033A, BH9020A	BH9033A, BH9020A	BH1233C, BH1220C	BH1233C, BH1220C	BL1430	BL1430

*Hard Torque

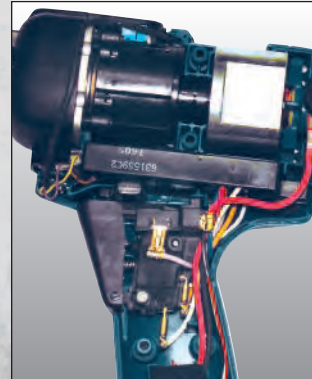
CONSISTENT TORQUE ACCURACY CHART



ADVANCED TECHNOLOGY

Two-Piece D-28 Motor

- Replaceable armature allows greater serviceability
- Dual sealed ball bearings for less friction and greater efficiency
- High performance fan reduces temperatures and increases tool life
- High-grade magnet generates maximum performance



LOW COST OF OWNERSHIP

Designed for High Endurance Applications

- Nut and bolt housing assembly ensures long term housing integrity
- Replaceable brushes easily accessed without the need to open the tool housing
- Solderless internal components for easy and fast replacement



RIGHT ANGLE NUT-RUNNERS



Higher Torque Accuracy
+/- 7% with $C_m \geq 1.67$

Torque Adjusting System for manufacturing lines; Impossible to change fastening torque previously set by factory without grip adjustment

Color Coded Identification Plate for easy tool and application identification



Indication Lamp and Beeper

Two-Piece D-28R Motor with replaceable armature and powerful rare earth magnet



1-1/8"

Extra-Rigid Aluminum-Alloy Angle Head

Built-in Job Light lights up automatically with start of motor and remains on for 10 seconds after switching off

Conveniently Located Forward/Reverse Switch



Auto Battery Shutoff Ensures consistent fastening torque

Easy On/Off Switch Equipped with a Delayed Re-Start

Anti-Slip Dimpled Grip

Built-in Electronic System Soft start to suppress return torque at start-up

Delayed restarter controls the motor so that it does not start until one second passes after a screw has been driven; the motor does not start even if switch trigger is pulled

Reduces deviation from pre-set fastening torque caused by unintentional over-tightening

Model BFL121FZ

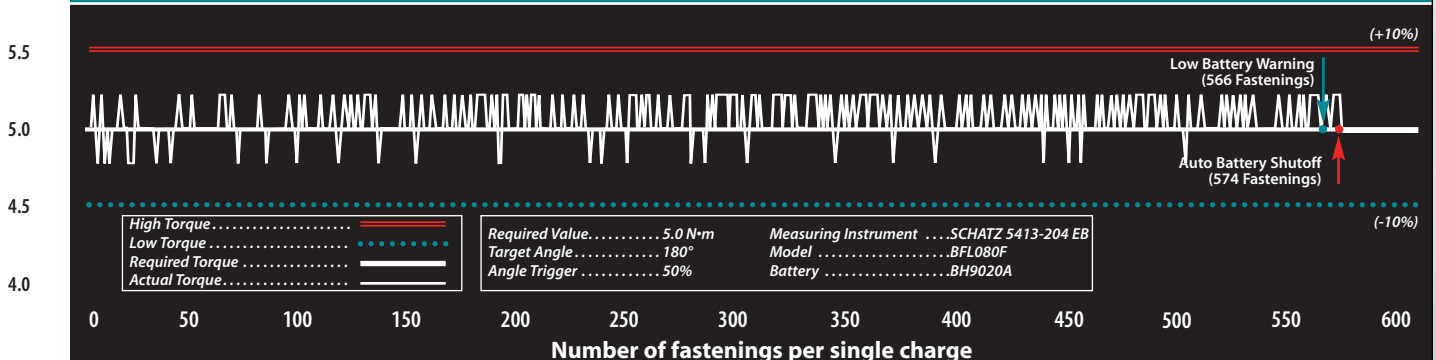
ANGLE NUTRUNNERS



	BFL080FZ (8.0 N·m) (BFL080F5Z)	BFL120FZ (12 N·m)	BFL081FZ (8.0 N·m)	BFL121FZ (12.0 N·m) (BFL121F5Z)	BFL200FZ (20 N·m)
Voltage	9.6V	9.6V	12V	12V	12V
Capacities	3/8" Square Drive 1/4" Square Drive (BFL080F5Z)	3/8" Square Drive	3/8" Square Drive	3/8" Square Drive 1/4" Square Drive (BFL121F5Z)	3/8" Square Drive
Fastening Torque [N·m (in.lbs.)]:					
(Hard)	2-8 (17.7-70.8)	5-12 (44.3-106)	2-8 (17.7-70.8)	5-12 (44.3-106)	8-20 (70.9-177)
(Soft)	2-7.5 (17.7-66.4)	5-12 (44.3-106)	2-7.5 (17.7-66.4)	5-11.5 (44.3-102)	8-18 (70.9-159)
No Load Speed (RPM)	450	250	700	410	220
Length (w/Battery)	17"	17"	16-1/4"	16-1/4"	16-1/4"
Height	2-15/16"	2-15/16"	3-5/8"	3-5/8"	3-5/8"
Width	2-9/16"	2-9/16"	2-15/16"	2-15/16"	2-15/16"
Weight (w/Battery)	3.3 lbs.	3.3 lbs.	3.5 lbs.	3.5 lbs.	3.5 lbs.
Battery	BH9033A, BH9020A	BH9033A, BH9020A	BH1233C, BH1220C	BH1233C, BH1220C	BH1233C, BH1220C

N·m

CONSISTENT TORQUE ACCURACY CHART



BRUSHLESS ANGLE NUTRUNNERS



Higher Torque Accuracy
+/- 7% with $C_m \geq 1.67$



Color Coded Identification Plate

Torque Adjusting System for manufacturing lines; Impossible to change fastening torque previously set by factory without grip adjustment

Indication Lamp and Beeper



Brushless Motor for higher no load speed and more powerful and faster driving

MAKSTAR

MAKSTAR Battery
New battery cell configuration for more power and efficiency

1-5/16"

Extra-Rigid Aluminum-Alloy Angle Head

Conveniently Located Forward/Reverse Switch

Easy On/Off Switch Equipped with a Delayed Re-Start

Built-in Job Light lights up automatically with start of motor and remains on for 10 seconds after switching off



Auto Battery Shutoff Ensures consistent fastening torque



Optional Paddle Switch Adapter converts trigger switch to paddle switch for easy operation

Built-in Electronic System Soft start to suppress return torque at start-up

Delayed restarter controls the motor so that it does not start until one second passes after a screw has been driven; the motor does not start even if switch trigger is pulled

Reduces deviation from pre-set fastening torque caused by unintentional over-tightening

Model BFL400FZ

BRUSHLESS ANGLE NUTRUNNERS



BFL300FZ (16-30 N·m)



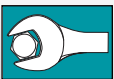
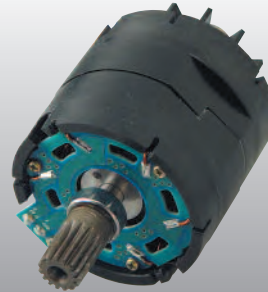
BFL400FZ (25-40 N·m)

	BFL300FZ (16-30 N·m)	BFL400FZ (25-40 N·m)
Voltage	14.4V	14.4V
Capacities	3/8" Square Drive	3/8" Square Drive
Fastening Torque [N·m (in.lbs.)]:		
(Hard)	16-30 (142-266)	25-40 (221-354)
(Soft)	16-30 (142-266)	25-40 (221-354)
No Load Speed (RPM)	400	260
Length (w/Battery)	20"	20-1/4"
Height	4-1/8"	4-1/8"
Width	2-7/8"	2-7/8"
Weight (w/Battery)	5.3 lbs.	5.5 lbs.
Battery	BH1427, BL1430	BH1427, BL1430

ADVANCED TECHNOLOGY

DC Brushless Motor

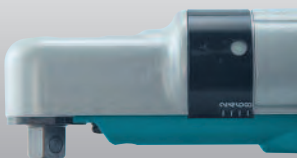
- Generates higher no load speed
- Dual ball bearings for greater efficiency and longer life
- Maintenance free through service life of ball bearings
- Brush free motor reduces noise



REPITITIVE ACCURACY

Torque Accuracy

- Long-life clutch provides consistent operation within +/-10% of mean torque with real-world repeatability consistencies within +/-3%.
- User-certified to within +/- 5% of mean torque
- C_m values of well over 1.67 (+/- 3 sigma)



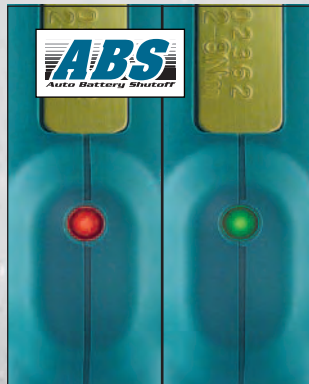
SMART SYSTEM

Auto Battery Shutoff

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

Indication Lamp and Beeper

- Precision sensor indicates fastening sufficiency and battery power conditions with light and/or beeping





CLASS I DIVISION 2 SCREWDRIVERS

HAZLOC™
CLASS 1 DIVISION 2 RATED



"Quick Change"
1/4" Hex Shank Chuck

Torque Adjusting System

Auto-Stop
Fastening Function

L.E.D. Indicator

Built-in L.E.D. Light

Anti-Slip Dimpled Grip

Beeper Indicator

MAKSTAR®
CHARGING SYSTEM



Kit Includes:
2 Ea. (2.0Ah) Makstar®
Battery BH1220,
Makstar® Charger
DC18RA & Steel Case



CLASS I DIVISION 2 RATED

ADVANCED TECHNOLOGY



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

SMART SYSTEM

AUTO BATTERY SHUT-OFF



- Shuts off the tool when battery capacity drops below 5%

Indication Lamp and Beeper

- Precision sensor indicates following conditions with light and/or beeping: sufficient fastening, insufficient fastening, low battery power, and battery too low to operate

REPETITIVE ACCURACY

TORQUE ACCURACY

- Torque accuracy of: +/- 10% with Cm ≥ 1.67
- Automatically shuts-off tool when pre-set fastening torque is reached to ensure accuracy

PRECISE TORQUE CONTROL SCREWDRIVERS



BFH040FRAE



BFH040RAE



BFH090FRAE



BFH090RAE



BFH120FRAE

	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 (in.lbs.)]	.8 - 4.5(7-40)	.8 - 4.5(7-40)	3.4 - 9.0(30-80)	3.4 - 9.0(30-80)	5.0 - 12.0(44-106)
No Load Speed (RPM)	400	400	400	400	400
LED Lamp	YES	NO	YES	NO	YES
LED 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.

IMPACT DRIVERS & WRENCHES



Model BTD061Z

IMPACT DRIVERS



Model BTD061SAG includes Kit

BTD061Z (65 N·m)



BTD062Z (65 N·m)



**BTD1205AE (100 N·m)
BTD1505AE (130 N·m)**

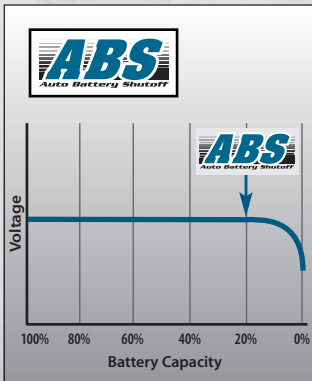


BTW151Z (150 N·m)



BTW070Z (65 N·m)

Voltage	9.6V	9.6V	12V / 14.4V	12V / 14.4V	9.6V
Capacities	1/4" Hex Shank	1/4" Hex Shank	1/4" Hex Shank	1/2" Square Drive	3/8" Square Drive
Fastening Torque: [N·m (in.lbs.)]	65 (575)	65 (575)	100 (885)	150 (1,327)	BTW070Z 65 (575)
			BTD1505AE: 130 (1,150)		
No Load Speed (RPM)	0 - 2,500	0 - 2,500	0 - 2,300	0 - 2,500	0 - 2,500
Impacts per Minute (IPM)	0 - 3,000	0 - 3,000	0 - 3,000	0 - 3,000	0 - 3,000
Length	6-7/16"	6-7/16"	6-5/8" / 7-1/2"	6-15/16" / 7-5/8"	6-1/2"
Height (w/Battery)	9-5/16"	9-5/16"	9-7/8" / 10"	9-7/8" / 10"	9-5/16"
Width	2-5/8"	2-5/8"	2-15/16" / 3-1/16"	2-15/16" / 3-1/16"	2-5/8"
Weight (w/Battery)	2.4 lbs.	2.5 lbs.	3.3 lbs. / 4.0 lbs.	3.3 lbs. / 4.2 lbs.	2.5 lbs.
Battery	BH9033A, BH9020A	BH9033A, BH9020A	BH1233C, BH1220C / BH1433, BH1427, BH1420	BH1233C, BH1220C / BH1433, BH1427, BH1420	BH9033A, BH9020A



SMART SYSTEM

Auto Battery Shutoff

- Shuts-off the tool when battery capacity is less than 20%
- Ensures consistent fastening torque



REPETITIVE ACCURACY

Vari-Torque System

- VTS allows the operator to adjust the number of impacts to match the fastening application
- Prevents over-tightening that could cause the fastener to fail
- Torque adjusting dial for operator convenience (for model BTW151Z)

7.2V Lithium-Ion Cordless Driver-Drill



Model DF010DSE

- High torque accuracy with auto-clutch system stops the motor when clutch is disengaged
- Makita built 2-speed motor delivers 50 in.lbs. of torque
- Compact design at only 1.2 lbs. for reduced operator fatigue

Voltage	7.2V
Capacities	1/4" Hex Shank
Fastening Torque [Nm (in.lbs.)]	Hard Joint 5.6 (50) Soft Joint 3.6 (32)
No Load Speed (RPM)	Low 200 High 650
Length	11"
Height (w/Battery)	5-9/16"
Width	1-11/16"
Weight (w/Battery)	1.2 lbs.
Battery	BL7010

7.2V Lithium-Ion Cordless Impact Driver



Model TD020DSEW

- Makita-built motor delivers 177 in.lbs. of torque, 2,300 RPM and 3,000 IPM
- Compact design at only 1.17 lbs. for reduced operator fatigue
- Built-in L.E.D. light illuminates the work area

Voltage	7.2V
Capacities	1/4" Hex Shank
Fastening Torque [Nm (in.lbs.)]	20 (177)
No Load Speed (RPM)	2,300
Impacts per Minute (IPM)	3,000
Length	10-7/8"
Height (w/Battery)	5-1/8"
Width	1-9/16"
Weight (w/Battery)	1.17 lbs.
Battery	BL7010

12V Max Lithium-Ion Cordless Impact Driver



Model DT01W

- Makita-built motor delivers 800 in.lbs. of torque
- Compact design at only 6-1/8" long and 2.0 lbs. to reduce operator fatigue
- Built-in L.E.D. light illuminates the work area

Voltage	10.8V
Capacities	1/4" Hex Shank
Fastening Torque [Nm (in.lbs.)]	90 (800)
No Load Speed (RPM)	2,400
Impacts per Minute (IPM)	3,000
Length	6-1/8"
Height (w/Battery)	7"
Width	2-1/8"
Weight (w/Battery)	2.0 lbs.
Battery	BL1013

12V Max Lithium-Ion Cordless 3/8" Driver-Drill



Model FD02W

- Makita-built delivers 200in.lbs. of max torque
- Variable 2-speed design (0-350 & 1,300 RPM)
- Ultra compact design at only 7-7/16" long and weighs only 2.2 lbs.

Voltage	12V
Capacities	3/8" Chuck
Fastening Torque	200
No Load Speed (RPM)	Low 0-350 High 0-1,300
Length	7-7/16"
Height (w/Battery)	7-1/8"
Width	2"
Weight (w/Battery)	2.2 lbs.
Battery	BL1014

14.4V Lithium-Ion Cordless Impact Driver



Model BTD130FW

- Makita-built motor delivers 1,240 in/lbs of max torque
- High power/weight ratio provides for comfortable operation
- Built-in LED lamp allows illumination of work surface

Voltage	14.4V
Capacities	1/4" Hex Shank
Fastening Torque	1,240
No Load Speed (RPM)	0-2,400
Impacts per Minute (IPM)	3,200
Length	5-3/4"
Height (w/Battery)	9-1/4"
Width	3"
Weight (w/Battery)	3.1 lbs.
Battery	BL1430

14.4V Lithium-Ion 1/2" Cordless Driver-Drill



Model BDF440Z

- Makita-built, 4-pole motor delivers 363 in.lbs. of torque
- Compact design at only 7-3/8" long and 3.5 lbs. to reduce operator fatigue
- Built-in L.E.D. light illuminates the work area

Voltage	14.4V
Capacities	1/2" Chuck
Fastening Torque [Nm (in.lbs.)]	41 (363)
No Load Speed (RPM)	Low 400 High 1,400
Length	7-3/8"
Height (w/Battery)	9-1/2"
Width	3-1/8"
Weight (w/Battery)	3.5 lbs.
Battery	BL1430

18V LXT LITHIUM-ION SERIES



1/4" Hex One-Touch Chuck for Simple Bit Insertion. No Need to Pull the Sleeve

Makita-Built 4-Pole Motor Design delivers 1,330 in.lbs. of Maximum Torque

Built-in L.E.D. Light Illuminates the Work Area

Ergonomic Shape Fits like a Glove with Even Pressure and Easy Control

Variable Speed 0-2,300 RPM for a Wide Range of fastening Applications

Compact Design only 5-3/4" Long and Weighs in 3.4lbs for reduced Operator Fatigue

18V Li-Ion Battery Change in 30 Minutes and Produces 430% Total Lifetime Work with 2.5x More Cycles

Model BT141



18V LXT LITHIUM-ION CORDLESS



BT141 BTL061 (BTL063) BTW251 (BTW253) BTW450 LXDT01

Voltage	18V	18V	18V	18V	18V
Capacities	1/4" Hex Shank	1/4" Hex Shank (3/8" Square)	1/2" Square (3/8" Square)	1/2" Square	1/4" Hex Shank
Max. Fastening Torque:	150 Nm (1,330 in./lbs.)	60 Nm (60 Nm)	230 Nm (210 Nm)	440 Nm (325 ft./lbs.)	200/490/1,460 in./lbs.
No Load Speed (RPM)	0 - 2,300 rpm	0 - 2,000 rpm	0 - 2,400 rpm (0 - 2,100 rpm)	1,600 rpm	0 - 1,300/0 - 2,000/0 - 2,600 rpm
Impacts per Minute	0 - 3,200	0 - 3,000	0 - 3,000 (0 - 3,200)	2,200	0 - 1,300/0 - 2,800/0 - 3,400 ipm
Length	5-3/4"	15-1/4"	6-1/2" (6-1/8")	10-1/2"	5-1/2"
Weight (w/Battery)	3.5 lbs.	3.7 lbs.	3.7 lbs. (3.5 lbs.)	7.5 lbs.	3.3 lbs.
Battery	BL1830	BL1830	BL1830	BL1830	BL1830

All tools available in kits or as bare tool

MORE POWER

Makita built, 4-pole maximum torque motor delivers more efficient power in a compact size

LESS WEIGHT

40% less weight and more compact design

BETTER FIT

Ergonomic shape fits like a glove with even pressure and easy control

MORE WORK

LXT LITHIUM-ION BATTERY
LEADING PROFESSIONAL CORDLESS BATTERY

2X More Cycles

LXT LITHIUM-ION BATTERY
LEADING PROFESSIONAL CORDLESS BATTERY

Longer Run Time

Charges to Maximize Cycle Life + Work Volume

LXT Battery and Optimum Charging System produces 280% more work with 2x more cycles

SOLUTIONS



BATTERY CHARGING SYSTEM

THE MOST ADVANCED SYSTEM IN THE WORLD

ADVANCED RAPID CHARGING SYSTEM

MAKSTAR®

Forced Air Cooling Fan cools the battery by forcing cool air through the battery's built-in air vents to minimize charging time

Multi-Contact Terminals ensure tight connection to the tool under extreme vibration

Secure-Slide™ Connection keeps battery locked in place

Data Memory Chip memorizes battery usage history which is then transmitted to the MAKSTAR® charger's CPU to determine the optimal charging action

Heat-Sinks protect the battery cells by absorbing heat

Built-in Air Vents receive cool air from the charger, further increasing the battery life

Shock Absorbing Construction protects each battery cell while preventing dust and debris contamination

Automatic Control Function and CPU
CPU gathers usage information from the battery's data chip. Then it charges the battery in the manner most suitable for longer life

Digital Power Display lets the user know the condition of the battery, as well as the current charge level of the battery (-80%, +80%, 100%)

BATTERY CHECKING SYSTEM



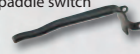


- Facility Troubleshooting Capabilities
- Determines:
 - # Full Charges
 - # Partial Charges
 - Internal Resistance
 - Level of Utilization
- Proprietary System Allows Support Staff to Assess Productivity Levels



BATTERIES & CHARGERS								Cell Type	Amp Hour (Ah)	Style	Part#	
	18	Li-ion	3.0	Slide	BL1430	BL1430	DC18RA, DC18SE, DC24SA	Lithium-Ion 18V Charger	(Li-ion/Ni-MH)	1.3 - 3.3	Slide	DC18RA
	14.4	Li-ion	3.0	Slide	BL1830	BL1830						
	12	Li-ion	1.3	Stick	BL1014	BL1014						
	7.2	Li-ion	1.0	Stick	BL7010	BL7010						
	14.4	(Ni-MH)	3.3	MAKSTAR®	BH1433	193355-1	BTD150SAE, BTW150SAE, BTW151SA	Optimum Automotive Charger	(Li-ion/Ni-MH)	1.3 - 3.3	Slide	DC18SE
	14.4	(Ni-MH)	2.0	MAKSTAR®	BH1420	193352-7						
	14.4	(Ni-MH)	2.7	MAKSTAR®	BH1427	193392-1						
	12	(Ni-MH)	3.3	MAKSTAR®	BH1233C	193931-1	BFH040RAE, BFH040FRAE, BFH090RAE, BFH090FRAE, BFH120FRAE, BFL081FZ, BFL121FZ, BFL200FZ, BFT081FZ, BFT123FZ, BTD120Z, BTW120SAE, BTW121SA	MAKSTAR® Refreshing Battery Adapter (ADP03)	(Ni-MH)	1.7 - 3.3	MAKSTAR®	193681-8
	12	(Ni-MH)	2.0	MAKSTAR®	BH1220C	193929-8						
	9.6	(Ni-MH)	3.3	MAKSTAR®	BH9033A	193536-7	BFL080FZ, BFL120FZ, BFT040FZ, BFT080FZ, BFT122FZ, BTD040Z, BTD042Z, BTD061SAG, BTD061Z, BTD062Z, BTW070Z, BTW072Z	MAKSTAR® Interchangeable Battery Adapter	(Ni-MH) & Ni-Cd	1.3 - 3.0	Pod & Stick	193205-0
	9.6	(Ni-MH)	2.0	MAKSTAR®	BH9020A	193531-7						
	7.2V - 12V Max	Li-ion	1.3	Stick				7.2V - 12V Max Lithium-Ion Battery Charger	(Li-ion)	1.3	Stick	DC10WB

PRODUCTION TOOLING ACCESSORIES



Description	Part#	Models	Description	Part#	Models	Description	Part#	Models
Torque Adjusting Key 	765024-0	6798FDZ	Cordless Tool Impact Protectors Resists impacts that can damage tool 	417476-8	BDT120Z, BTW120SAE, BTW1215A	Two-Piece Impact Protector Sets* Clear (A) 418745-0 Red (A) 418744-2 Blue (A) 418743-4 Yellow (A) 418691-7		
	765025-8	BFT040FZ, BFT080FZ, BFT122FZ, BFT123FZ, BFL080FZ, BFL081FZ, BFL120FZ, BFL121FZ, BFL200FZ, BFL300FZ, BFL400FZ		417349-5	BTDO40Z, BTDO42Z, BTDO61SAG, BTDO61Z, BTDO62Z, BTW070Z & BTW072Z		Clear (B) 418748-4 Red (B) 418747-6 Blue (B) 418746-8 Yellow (B) 418692-5	
Paddle Switch Adapter Converts trigger switch to paddle switch 	194008-5	BFL300FZ, BFL400FZ		418065-2	BFL080FZ, BFL081FZ, BFL120FZ, BFL121FZ, BFL200FZ	Clear (A) 418745-0 Red (A) 418744-2 Blue (A) 418743-4 Yellow (A) 418691-7		
				418064-4		Red 418425-8 Blue 418424-0 Yellow 418423-2	BFT040FZ, BFT080FZ, BFT122FZ, BFT123FZ	Clear (B) 418751-5 Red (B) 418750-7 Blue (B) 418749-2 Yellow (B) 418693-3

*Set requires both (A) and (B)

LITHIUM-ION FLASHLIGHTS

Description	Run Time (in Hours)	Flashlight Part #	Replacement Bulb #
18V LXT Flashlight	4.3*	BML185	A-90261
18V Compact Flashlight (White)	4.3*	BML185W	A-90261
18V LXT Fluorescent/Incandescent Flashlight	4.0* (Fluorescent) 15.0 (Incandescent)	BML184	SM00000050 A-94502
18V Compact L.E.D. Flashlight	25.0	LXLM01W	-
10.8V L.E.D. Flashlight	9.0	ML100W	-

BML185 Shown
LXLM01W Shown
BML184 Shown

*Battery and Charger sold separately

DRILL & DRIVER BIT SETS

Description	Part #
15 Pc. Drill & Driver Set Includes: (1) "Stubby" Finder/Driver™ Retracting Screw Holder (7) Insert Bits (1 ea. #1 Phillips, #3 Phillips, #4-5 Slotted, #6-8 Slotted, #2 Robertson & 2 ea. #2 Phillips), (7) Black Oxide Drill Bits (1/16", 3/32", 1/8", 5/32", 3/16", 7/32" & 1/4"	784864-A
17 Pc. Impact Drill & Driver Set Includes: Compact Quad-Driver™; (1) #8 Countersink insert; (3) Titanium Hex Shank Drill Bits: 1/8", 3/16", 1/4"; (7) 2" Driver Bits: (2) P2, (2) P3, (2) R2, T20; (1) Hex to Square Adapter-1/4" to 1/4"; (1) 1" P2 Driver Bit; (3) Magnetic Nutsetters: 1/4", 5/16", 3/8"	T-00153
28 Pc. Impact Drill & Driver Set Includes: (1) Square Drive Adapter - 1/4" to 1/4"; (4) Magnetic Nutsetters: 1/4", 5/16", 3/8", 7/16"; (1) 3" Finder/Driver™ Bit; (4) Insert Bits: (1) P1, (2) P2, (1) P3, (2) Flat, (3) R2; (9) Power Driver Bits: (2) P1, (5) P2, (2) P3, (2) R2, (1) T20, (2) Flat	T-00169
38 Pc. Impact Drill & Driver Set Includes: (4) Black Oxide Drill Bits Sizes: 1/16", 3/32", 1/8", 1/4" (3) 3.5" Ext. Length Driver Bits (6) 2" Power Bits: (2) P2, (2) P3, R15, R20 (21) 1" Insert Bit Assortment: Slotted, Phillips, Robertson & Torx (1) Hex-to-Square Socket Adapter: 1/4"-1/4" (1) Magnetic Bit Holder (2) Magnetic Nutsetter: 1/4", 5/16"	T-01373
62 Pc. Impact Drill & Driver Set Includes: (7) Black Oxide Drill Bits Sizes: (2) 1/16", 3/32", (2) 1/8", 3/16", 1/4" (3) 3.5" Ext. Length Driver Bits (4) Spade Bits: 3/8", 1/2", 5/8", 3/4" (9) 2" Power Bits: Slotted, Phillips, Robertson & Torx (32) 1" Insert Bit Assortment: Slotted, Phillips, Robertson & Torx (2) Hex-to-Square Socket Adapter: 1/4"-1/4", 1/4"-3/8" (1) Magnetic Bit Holder w/P2 (3) Magnetic Nutsetters: 1/4", 5/16", 3/8"	T-01389

DRILL & IMPACT CHUCKS

Description	Capacity	Part #	Model	Capacity	Part #	Model	
Keyless Chuck Thread Size: 3/8" - 24	3/8"	763132-1	6226DWE, 6227DWE, 6228DWE, DA312DWD, DA391DWD, DA392DWD	Keyless Chuck Thread Size: 1/2" - 20			
	3/8"	763184-2	6176DWD		1/2"	763191-5	8444DWE, 6339DWE, 6349DWE, BHP451, BDF451
	3/8"	193692-3	6213D		1/2"	763193-1	BDF452, BDF452HW, BHP452, BHP452HW
	3/8"	193690-7	6217DWE				
Keyless Chuck Attachment Converts Impact Driver into Driver-Drill	3/8"	763198-1	1/4"	763198-1	1/4" Hex Shank Impact Drivers		
Keyless Chuck Attachment Converts Key Drill Chuck into Keyless Chuck	3/8"	192077-0	1/4"	192077-0	Cordless Driver-Drills		
Keyed Drill Chuck Attachment Set	3/8"	191881-4	1/4"	191881-4	Cordless Driver-Drills		
	3/8"	763054-5A	1/4"	763054-5A	Cordless Driver-Drills		
Replacement 1/4" Shank		784643-3	1/4"	784643-3	Cordless Impact Driver		

DRILL & DRIVER BIT SETS

Description	Size	1-3/4" Long Part #	2-5/8" Long Part #	
Magnetic Nutsetters Drives hex head screws, bolts & nuts	1/4"	784819-A	784803-7	
	5/16"	784820-A	784804-5	
	3/8"	784821-A	784802-9	
	7/16"		784805-3	
3 Pc. Magnetic Nutsetter Set Includes: 1/4", 5/16", 3/8" Nutsetter & Storage Holder			784819-A-A	
Impact Socket Sets 6-Point Drive Heavy-Duty design	Description		Part #	
	8 Pc. 1/4" Drive Set: 3/16", 1/4", 5/16", 11/32", 3/8", 7/16", 1/2" & 1/4" x 1/4" Socket Adapter		785501-A-A	
9 Pc. 3/8" Drive Set: 5/16", 3/8", 7/16", 1/2", 9/16", 5/8", 11/16", 3/4" & 3/8 x 1/4" Socket Adapter		785508-A-A		
Socket Adapters Converts drill into a power nutsetter	Description	Size	Hex Shank Size	Part #
		1/4"	1/4"	785516-A
		3/8"	1/4"	785517-A

MANUFACTURING & ASSEMBLY

INDUSTRY MEASUREMENT STANDARDS

Makita's success and growth can be attributed to our total commitment to quality and our driven dedication to the industry to design high quality tools for professionals throughout the world. To remain the #1 Quality power tool leader we use the most rigorous testing to include electrical resistance, surge durability and mechanical efficiency. We utilize the most current and recommended testing equipment for our power tools to ensure precise torque accuracy and quality performance.

Available at: