

TECHNICAL INFORMATION



PRODUCT

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Model No. ▶ DHP481 (XPH07*1)

Description ▶ 18V Cordless Hammer driver drill

*1 Model number for USA

CONCEPT AND MAIN APPLICATIONS

Model DHP481 (XPH07*1) is a supreme class cordless hammer driver drill powered by 18V Li-ion battery of BL1815N (1.5Ah)/ BL1820 (2.0Ah)/ BL1830 (3.0Ah)/ BL1840 (4.0Ah)/ BL1850 (5.0Ah).

Its main features are:

- Max lock torque: 125N·m. (1,090in.lbs)
- Compact tool size with an overall length of 205mm (8-1/8")
- Efficient Brushless DC motor provides higher power and productivity than that of 18V Cordless driver drill model BDF458.

Note: BL1815 is not compatible.

Specification

Battery	Voltage: V	18
	Capacity: Ah	1.5/ 2.0/ 3.0/ 4.0/ 5.0
	Energy capacity: Wh	27/ 36/ 54/ 72/ 90
	Cell	Li-ion
	Charging time (approx.): min.	15/ 18/ 22/ 36/ 45 with DC18RC
Max output: W		640
No load speed: min. ⁻¹ = rpm	High	0 - 2,100
	Low	0 - 550
Impacts per minute: min. ⁻¹ = ipm	High	0 - 31,500
	Low	0 - 8,250
Capacity of drill chuck: mm (")		1.5 (1/16) - 13 (1/2)
Capacity: mm (")	Masonry	16 (5/8)
	Steel	13 (1/2)
	Wood	76 (3)
Torque setting		21 stage + drill mode
Clutch torque setting: N·m (in.lbs)		1.0 - 10.0 (9 - 89)
Max lock torque: N·m (in.lbs)		125 (1,090)
Max fastening torque: N·m (in.lbs)	Soft joint	60 (530)
	Hard joint	115 (1,020)
Electric brake		Yes
Mechanical speed control		Yes (2 speed)
Variable speed control		Yes
Reversing switch		Yes
LED job light		Yes
Weight according to EPTA-Procedure 01/2003*4: kg (lbs)		2.4 (5.2)*2/ 2.7 (5.9)*3

*4: with Grip assembly

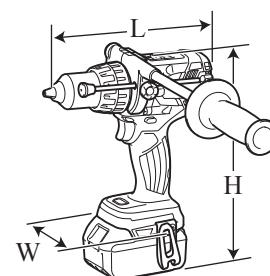
Standard equipment

Battery	1 or 2*5
Charger	1*5
Battery cover	1*6
+ - bit 2-45	2
Belt clip	1
(+) Screw M4x12	1
Grip assembly	1
Depth gauge	1
Bit holder	1
Plastic carrying case	1

*5: Battery and charger are not supplied with "Z" model

*6: Supplied with the same quantity of extra Battery

Note: The standard equipment for the tool shown above may vary by country.



Dimensions: mm (")	
Length (L)	205 (8-1/8)
Width (W)	79 (3-1/8)
Height (H)	249 (9-3/4)*2
	266 (10-1/2)*3

*2: with BL1815N

*3: with BL1830 or BL1840

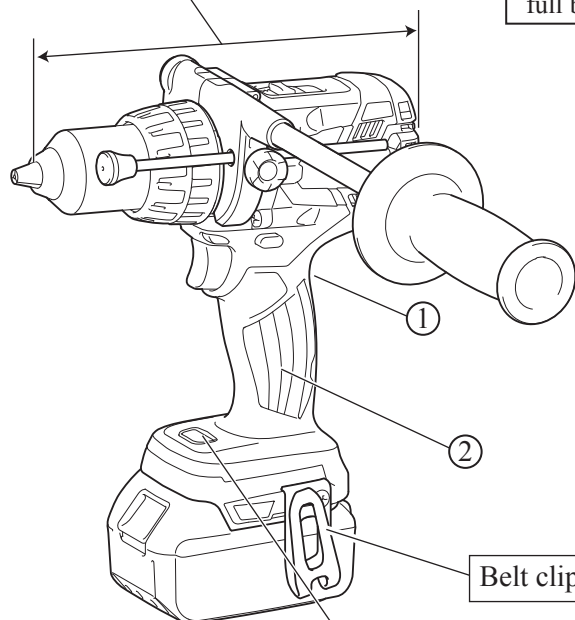
Optional accessories

Fast charger DC18RC	Battery BL1840
Charger DC18SD	Drill bits for wood
Charger DC24SC	Drill bits for steel
Automotive charger DC18SE	Drill bits for masonry
Quad Port Charger DC18SF	Driver bits
Battery BL1815N	Belt clip
Battery BL1820	Bit holder
Battery BL1830	
Battery BL1840	
Battery BL1850	

► Features and benefits

Compact overall length: 205mm for increased maneuverability

20mm more compact than the existing
model BHP458



Single sleeve keyless chuck
allows for easy bit
installation/removal by one hand. *

Mechanical 2-speed gearing *

Durable aluminum gear housing *

All metal gear construction
for extra-high transmission durability *

Variable speed control by trigger *

Twin LED Job light
with after-glow function *

XPT (eXtreme Protection Technology) *

For use in outdoor applications or harsh environments,
protection from dust and dripping water is enhanced.

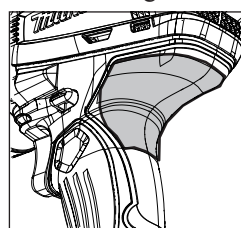
New Brushless DC motor

- Maintenance-free due to no brush
- High speed 2,100 rpm⁻¹
- 20% increase in work efficiency compared with BHP458
- More work amount than brush motor model BHP458 on a single full battery charge because of no friction loss caused by brushes

Max lock torque: 125 N·m (1,090 in.lbs)

Best possible ergonomic handle for driver-drill applications *

- ① In order to provide maximum thrust to the bit, the top back of the handle is ergonomically contoured and widened to perfectly fit the U-shape formed between user's thumb and index finger.
- ② Ribbed soft grip enables all finger tips to hold the handle securely against the strong rotational force of counter torque even in single-handed operation.



Powered by *

18V/ 5.0Ah Li-ion battery BL1850
18V/ 4.0Ah Li-ion battery BL1840
18V/ 3.0Ah Li-ion battery BL1830
18V/ 2.0Ah Li-ion battery BL1820
18V/ 1.5Ah Li-ion battery BL1815N

Battery fuel gauge *

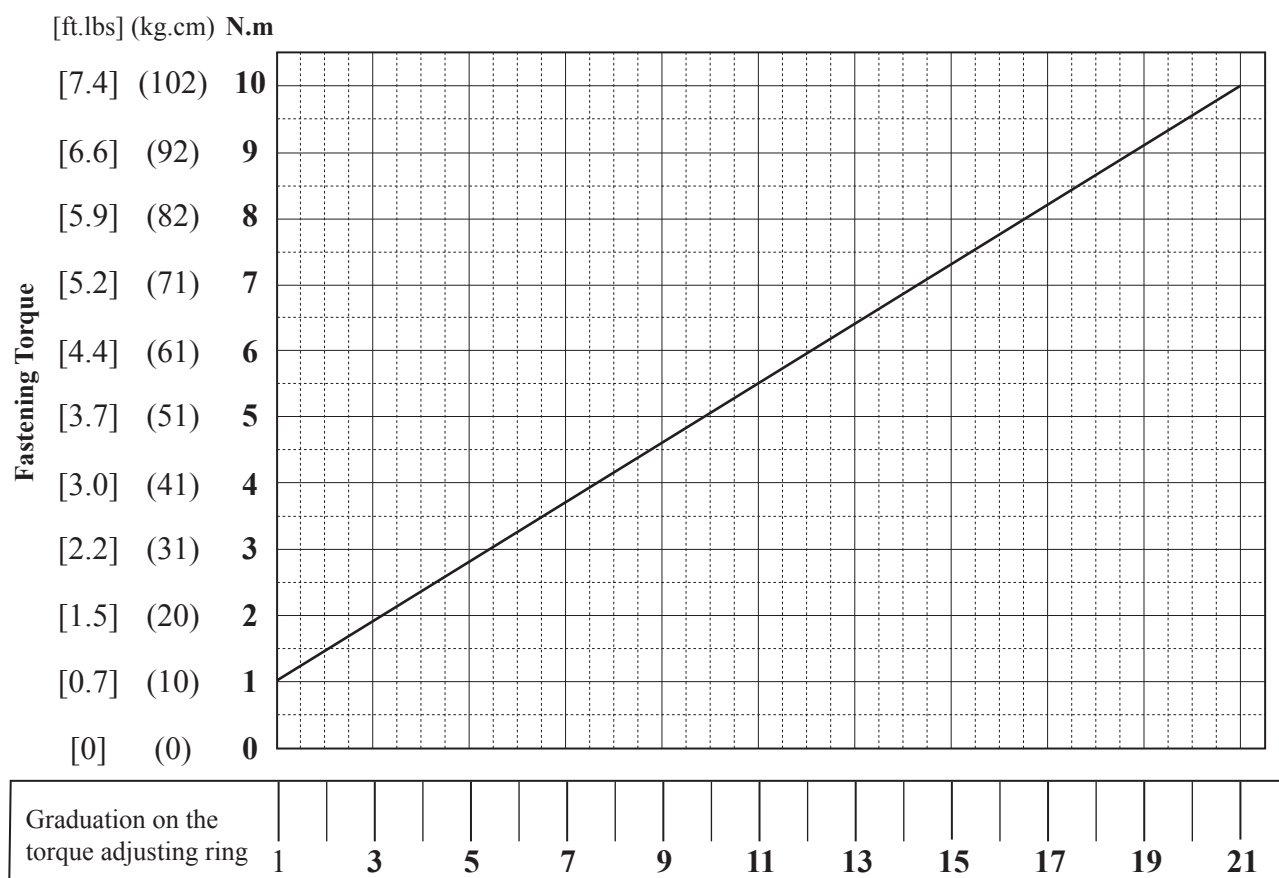
The power remaining in the battery can be indicated in 3 stages simply by pushing a button;
3 lights on: more than 50% of full battery capacity
2 lights on: 20% to 50% of full battery capacity
1 light on : less than 20% of full battery capacity

Compatible with the 18V Li-ion batteries equipped with the Battery protection circuit designed to protect the battery from damages due to overdischarge, high temperature or overload current. *

* The same advantages as Model BHP458

► Features and benefits

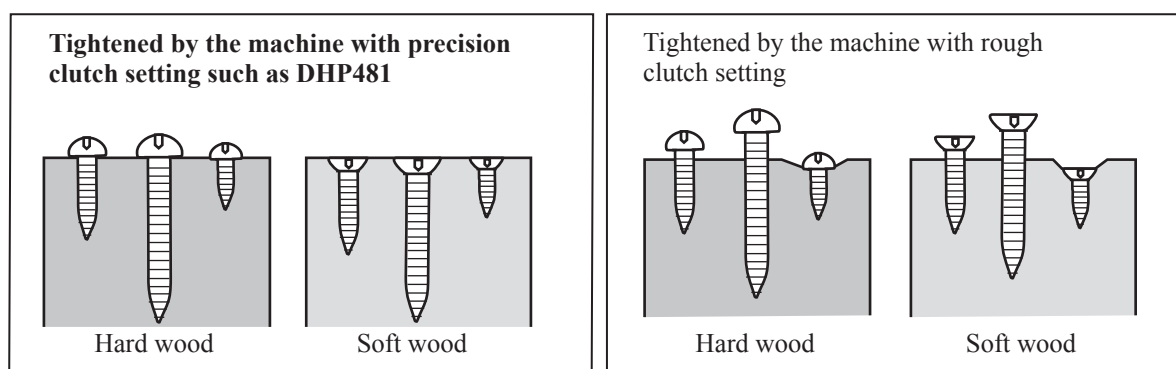
The Graduation on Torque Adjusting Ring and Corresponding Fastening Torque (The Torque When Clutch Is Disengaged=Max. clutch torque)



Applicable screw	Machine screw		M4	M5	M6
	Wood screw				
	Soft wood (pine, etc.)	ø3.5 x 22mm →		ø4.1 x 38mm →	ø5.1 x 50mm →
	Hard wood (lauan, etc.)	ø3.5 x 22mm →		ø4.1 x 38mm →	ø5.1 x 50mm →

21 Stage torque settings allows;

- 1) to perform appropriate torque setting in tightening M4 to M6 machine screws.
- 2) in tightening wood screws, to drive the screw heads to a uniform height regardless of the screw size or the hardness of wood. (See the figures below.)



Comparison of products

Specification Comparison

Model No.		Makita		DEWALT	Milwaukee	BOSCH
Specification		DHP481 (XPH07*1)	BHP458	DCD985L2	2604-22CT/2604-22	HDH181-01
Battery	Voltage: V	18	18	18 (20V/MAX)	18	18
	Capacity: Ah	1.5, 2.0 3.0, 4.0, 5.0	1.5, 3.0, 4.0	3.0	1.5/3.0	3.0
	Energy capacity: Wh	27, 36, 54, 72, 90	27, 54, 72	54	27/54	54
	Cell	Li-ion	Li-ion	Li-ion	Li-ion	Li-ion
	Charging time (approx.): min.	15, 18, 22, 36, 45 with DC18RC	15, 22, 36 with DC18RC	60	30/60	60
No load speed: min. ⁻¹ = rpm	3rd	N/A	N/A	0 - 2,000	N/A	N/A
	2nd (High)	0 - 2,100	0 - 2,000	0 - 1,350	0 - 1,850	0 - 1,800
	1st (Low)	0 - 550	0 - 400	0 - 575	0 - 550	0 - 420
Impacts per minute: min. ⁻¹ = ipm	3rd	N/A	N/A	0 - 34,000	N/A	N/A
	2nd (High)	0 - 31,500	0 - 30,000	0 - 22,950	0 - 31,450	0 - 27,000
	1st (Low)	0 - 8,250	0 - 6,000	0 - 9,775	unknown	unknown
Type of keyless drill chuck		Single sleeve (metal)	Single sleeve (metal)	Single sleeve (metal)	Single sleeve (metal)	Single sleeve (metal)
Chuck capacity: mm (")		13 (1/2)	13 (1/2)	13 (1/2)	13 (1/2)	13 (1/2)
Capacity: mm (")	Masonry	16 (5/8)	16 (5/8)	16 (5/8)	16 (5/8)	unknown
	Steel	13 (1/2)	13 (1/2)	13 (1/2)	unknown	unknown
	Wood	76 (3)	76 (3)	50 (2)	38 (1-1/2)/ 76 (3) w/hole saw	unknown
Max lock torque: N·m (in.lbs)		125 (1,090)	84 (750)	80 (710)	74 (650)/ 82 (725)	79 (700)
Max fastening torque: N·m	Hard joint	115	91	80	unknown	unknown
	Soft joint	60	58	38	unknown	unknown
Torque setting		21 + Drill mode	21 + Drill mode	22 + Drill mode	24 + Drill mode	26 (25 + 1) + Drill mode
Battery fuel gauge		Yes	Yes*2	Yes	Yes	Yes
Metal gear housing		Yes	Yes	Yes	Yes	Yes
LED Job light		Twin	Twin	Single	Single	Single
Dimensions: mm (")	Length	205 (8-1/8)	225 (8-7/8)	238 (9-3/8)	206 (8-1/8)	unknown
	Width	79 (3-1/8)	79 (3-1/8)	unknown	unknown	unknown
	Height	249 (9-3/4)*3/ 266 (10-1/2)*4	242 (9-1/2)*3/ 259 (10-1/4)*4	250 (9-7/8)	unknown	unknown
Weight according to EPTA-Procedure 01/2003: kg (lbs)		2.4 (5.2)*3/ 2.7 (5.9)*4	2.3 (5.1)*3/ 2.6 (5.6)*4	2.6 (5.7)	2.3 (5.1)/ 2.6 (5.7)	unknown

*1 Model number for USA

*2 This gauge is available for all countries except USA

*3 with BL1815N

*4 with BL1830 or BL1840

Comparison of products

Performance Comparison

Models Tested for Comparison:

See the table on right.

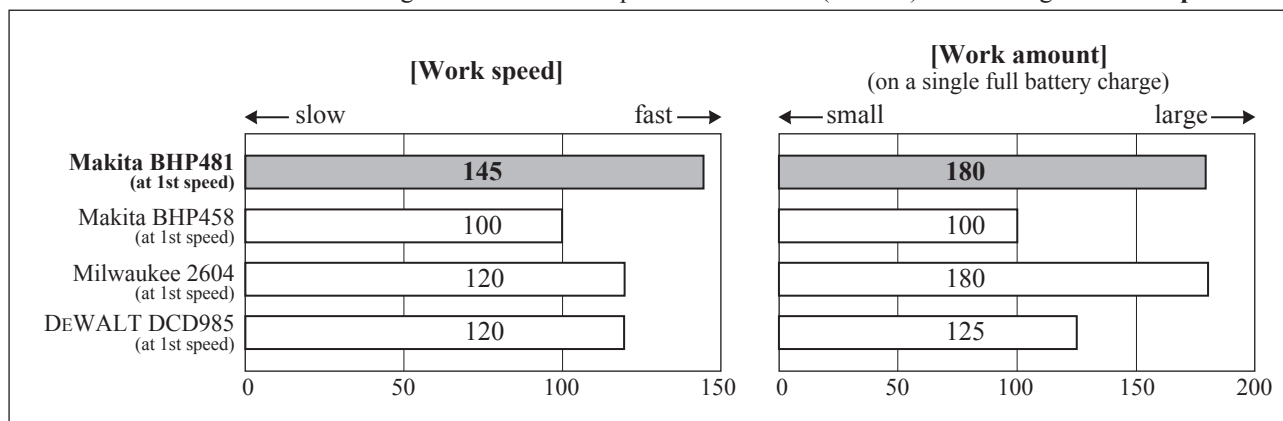
Model No.	Makita		Milwaukee	DEWALT
	DHP481	BHP458	2604	DCD985
Capacity of the battery used	4.0Ah	3.0Ah	4.0Ah	3.0Ah

Note:

1. The test results depend to a great extent on the hardness of materials, etc.
2. Numbers in the bar charts below are relative values when the capacities of Makita BHP458 are indexed at 100.

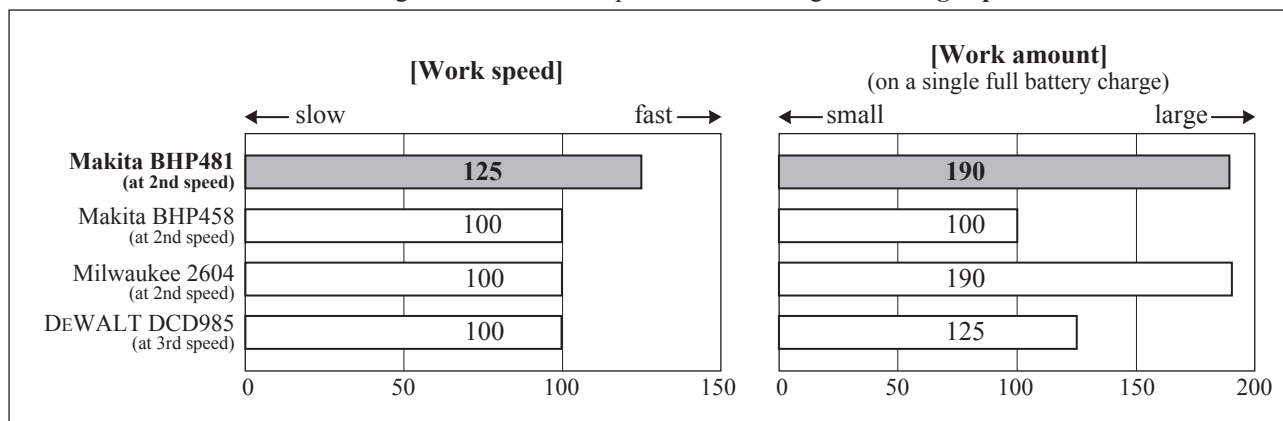
Drilling (1)

Test conditions: Drilled holes through 38mm thick SPF plate with ø65mm (2-9/16") self-feeding bit **at low speed**.



Drilling (2)

Test conditions: Drilled holes through 30mm thick melapi with ø21mm auger bit **at high speed**.



Drilling (3)

Test conditions: Drilled in a brick to a depth of 30mm with ø8mm TCT drill bit **at high speed**.

