

Panasonic

**Operating Instructions
Bedienungsanleitung
Instructions d'utilisation
Istruzioni per l'uso
Gebruiksaanwijzing
Manual de instrucciones
Brugsvejledning
Driftsföreskrifter
Bruksanvisning
Käyttöohjeet**

**Cordless Rotary Hammer Drill & Driver
Akku-Hammerbohren & Schrauber
Perceuse/Visseuse rotative à percussion sans fil
Trapano avvitatore a percussione rotante senza filo
Draadloze klopboormachine & schroevendraaier
Destornillador y martillo de taladro rotatorio sin cables
Akku roterende hammerbor & skruertrækker
Sladdlös borrhämmare & skruvdragare med variabel hastighet
Ledningløs roterende slagdrill og skrutrekker
Ladattava poravasara & porakone/ruuvinväännin**

Model No: EY78A1 / EY7840



Before operating this unit, please read these instructions completely and save this manual for future use.

Vor Inbetriebnahme des Gerätes die Betriebsanleitung bitte gründlich durchlesen und diese Broschüre zum späteren Nachschlagen sorgfältig aufbewahren.

Lire entièrement les instructions suivantes avant de faire fonctionner l'appareil et conserver ce mode d'emploi à des fins de consultation ultérieure.

Prima di usare questo apparecchio, leggere completamente queste istruzioni e conservare il manuale per usi futuri.

Lees deze gebruiksaanwijzing aandachtig door voor u het apparaat in gebruik neemt en bewaar de gebruiksaanwijzing voor eventuele naslag.

Antes de usar este aparato por primera vez, lea todas las instrucciones de este manual y guarde el manual para poderlo consultar en el futuro.

Gennemlæs denne betjeningsvejledning før brugen og gem den til fremtidig brug.

Läs igenom hela bruksanvisningen innan produkten tas i bruk. Spara bruksanvisningen för senare användning.

Før enheten tas i bruk, vennligst les disse alle anvisningene og oppbevar bruksanvisningen for senere bruk.

Lue ohjeet huolella ennen laitteen käyttöönottoa ja säilytä tämä käyttöohje tallessa tulevaa tarvetta varten.

Original instructions: English Translation of the original instructions: Other languages

This tool, as a complete unit with a battery pack, satisfies appropriate IP Degrees of Protection based on the IEC regulations.

I. INTENDED USE





This tool is a Rotary Hammer for drilling in concrete. In addition, the has a “rotation only mode” without hammering. The mode is suitable for drilling and screw-fastening.

Read “Safety Instructions” booklet and the following before using.

II. ADDITIONAL SAFETY RULES

- 1) **Wear ear protection.** Exposure to noise can cause hearing loss.
Use auxiliary handle (support handle) supplied with the tool. Loss of control can cause personal injury.
- 2) **Hold power tools by insulated gripping surfaces when performing an operation where the cutting tool may contact hidden wiring;** contact with a “live” wire will make exposed metal parts of the tool “live” and shock the operator.
- 3) Wear a dust mask, if the work causes dust.
- 4) Be aware that this tool is always in an operating condition, since it does not have to be plugged into an electrical outlet.
- 5) If the bit becomes jammed, immediately turn the main switch off to prevent an overload which can damage the battery pack or motor. Use reverse motion to loosen jammed bits.
- 6) Do not operate the Forward/Reverse lever when the main switch is on. The battery will discharge rapidly and damage to the unit may occur.
- 7) Use only a dry, soft cloth for wiping the unit. Do not use a damp cloth, thinner, benzine, or other volatile solvents for cleaning.
- 8) When storing or carrying the tool, set the Forward/Reverse lever to the center position (switch lock).
- 9) Do not strain the tool by holding the speed control trigger halfway (speed control mode) so that the motor stops. The protection circuit will activate and may prevent speed control operation. If this happens, release the speed control trigger and squeeze again for normal operation.

- 10) Be careful not to get dust inside the chuck.
- 11) Do not touch the rotating parts to avoid injury.
- 12) Do not continue to use the tool for a long time. Stop using the tool from time to time to avoid that the temperature of the motor rises too high.
- 13) Do not drop the tool.
- 14) Do not put the tool on the place where the chuck is depressed. The bit may come off from the chuck and fall down when the chuck is depressed. It may cause injuries.

Symbol	meaning
V	Volts
---	Direct current
n_0	No load speed
$\dots \text{min}^{-1}$	Revolutions or reciprocation per minutes
	Rotation with hammering
	Rotation only
	To reduce the risk of injury, user must read and understand instruction manual.
	For indoor use only.

⚠ WARNING:

- Do not use other than the Panasonic battery packs that are designed for use with this rechargeable tool.
- Panasonic is not responsible for any damage or accident caused by the use of the recycled battery pack and the counterfeit battery pack.
- Do not dispose of the battery pack in a fire, or expose it to excessive heat.
- Do not drive the likes of nails into the battery pack, subject it to shocks, dismantle it, or attempt to modify it.
- Do not allow metal objects to touch the battery pack terminals.
- Do not carry or store the battery pack in the same container as nails or similar metal objects.
- Do not charge the battery pack in a high-temperature location, such as next to a fire or in direct sunlight. Otherwise, the battery may overheat, catch fire, or explode.
- Never use other than the dedicated charger to charge the battery pack. Otherwise, the battery may leak, overheat, or explode.
- After removing the battery pack from the tool or the charger, always reattach the pack cover. Otherwise, the battery contacts could be shorted, leading to a risk of fire.
- When the Battery Pack Has Deteriorated, Replace It with a New One. Continued use of a damaged battery pack may result in heat generation, ignition or battery rupture.

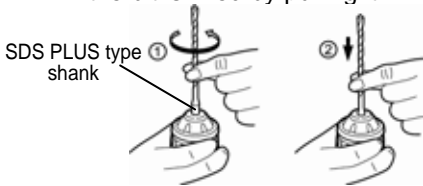
III. ASSEMBLY

⚠ CAUTION:

Use of a concrete drill bit larger than the recommended size may cause damage to the tool.

1. To insert the bit

- 1-1. Insert a bit into the mounting hole, and turn it slightly to locate an engaged position.
- 1-2. At the engaged position, push the bit as far as it goes. Make sure that the bit is fixed by pulling it.



2. To remove the bit

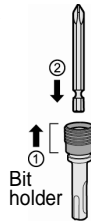
- 2-1. Depress the chuck and pull the bit.



Bit adapter

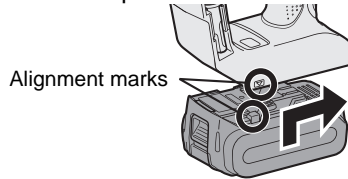
Use a bit adapter (O) and bit.

1. Remove the bit adapter from the bit adapter holder on the main unit.
2. Pull the bit holder. (1)
3. Insert the bit. (2)
4. Make sure the bit is inserted firmly by pulling it lightly.
5. Insert the bit adapter into the mounting hole and turn to locate an engaged position.
6. At the engaged position, push in as far as it goes.
 - Make sure it does not move by pulling it lightly.

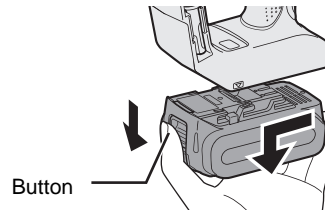


Attaching or Removing Battery Pack

1. To connect the battery pack:
 - Line up the alignment marks and attach the battery pack.
 - Slide the battery pack until it locks into position.

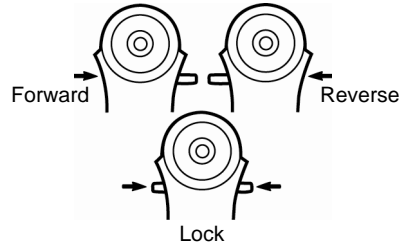


2. To remove the battery pack:
 - Pull the button from the front to release the battery pack.



IV. OPERATION



Forward/Reverse Lever




- Be sure to set the lever in the center to lock it after use.
- Operate the Forward/Reverse lever after the motor rotation is completely stopped.

Hammering/Drilling Switching Lever


NOTE: Operate the mode change after the motor rotation is completely stopped.

Position of switching lever	Action mode	Operation
	Rotation with hammering	Concrete Drilling, Block Drilling
	Rotation only	Screw Fastening, Drilling

Clutch Torque Setting

Adjust the torque to one of the 5 clutch settings or “” position.

CAUTION:

Test the setting before actual operation.
Set the scale at this mark ().



Variable Speed Control Trigger

To set the center of a hole, pull the trigger slightly to start the drill rotation slowly.

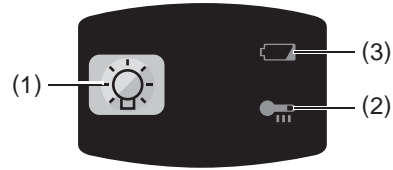
The more the speed control trigger is pulled, the higher the speed becomes.

CAUTION:

When operating the tool by pulling the trigger, there may be a momentary lag before rotation starts. This does not signal a malfunction.

- This lag occurs as the tool's circuitry starts up when the trigger is pulled for the first time after installing a new battery pack or after the tool has not been used for at least 1 minute (or at least 5 minutes when the LED is on). Rotation will start without any lag during second and subsequent operations.


Control Panel



(1) LED light



Before the use of LED light, always pull the power switch once.

Press  the LED light on button.




The light illuminates with very low current, and it does not adversely affect the performance of the tool during use or its battery capacity.

CAUTION:

- The built-in LED light is designed to illuminate the small work area temporarily.
- Do not use it as a substitute for a regular flashlight, since it does not have enough brightness.
- LED light turns off when the tool has not been used for 5 minutes.

Caution : DO NOT STARE INTO BEAM.
Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

(2) Overheat warning lamp

		
Off (normal operation)	Illuminated: Overheat (motor)	Flashing: Overheat (battery)
Indicates operation has been halted due to motor or battery overheating.		

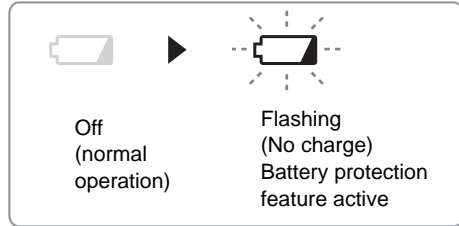
To protect the motor or battery, be sure to note the following when carrying out this operation.

- If the motor or battery becomes hot, the protection function will be activated and the motor or battery will stop operating. The overheat warning lamp on the control panel

illuminates or flashes when this feature is active.

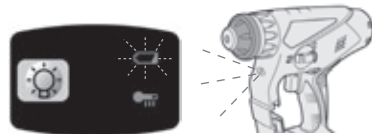
- If the overheating protection feature activates, allow the tool to cool thoroughly (at least 30 minutes). The tool is ready for use when the overheat warning lamp goes out.
- Avoid using the tool in a way that causes the overheating protection feature to activate repeatedly.
- If the tool is operated continuously under high-load conditions or if it is used in hot-temperature conditions (such as during summer), the overheating protection feature may activate frequently.
- If the tool is used in cold-temperature conditions (such as during winter) or if it is frequently stopped during use, the overheating protection feature may not activate.
- The performance of the EY9L42 deteriorates significantly at and below 10°C due to work conditions and other factors.
- The ambient temperature range is between 0°C (32°F) and 40°C (104°F). If the battery pack is used when the battery temperature is below 0°C (32°F), the tool may fail to function properly.
- Use the charger at temperatures between 0°C and 40°C, and charge the battery at a temperature similar to that of the battery itself. (There should be no more than a 15°C difference between the temperatures of the battery and the charging location.)

(3) Battery low warning lamp



Excessive (complete) discharging of lithium ion batteries shortens their service life dramatically. The driver includes a battery protection feature designed to prevent excessive discharging of the battery pack.

- The battery protection feature activates immediately before the battery loses its charge, causing the battery low warning lamp to flash.
- If you notice the battery low warning lamp flashing, charge the battery pack immediately.
- If it is started with too little battery power remaining, the tool may stop operating without the battery low warning lamp flashing first. This indicates that there is too little battery power remaining to use the tool, and the battery pack should be charged before further use.
- If the tool is subject to a sudden load during use that causes the motor to lock up, the overdischarge prevention sensor may be triggered, and the battery low warning lamp may flash. The lamp will stop flashing once you address the cause of the motor's locking up and cycle the trigger.



- The battery protection feature may activate when a high load is abruptly placed on the motor, even if ample battery charge remains. In this case, both the battery low warning lamp and LED light will flash. (EY78A1)

- If both the battery low warning lamp and LED light flash, reduce the force with which you are pushing on the driver or, if using a drill driver, adjust the speed switch to a lower setting. (EY78A1)

Installing the Shoulder Strap

CAUTION:

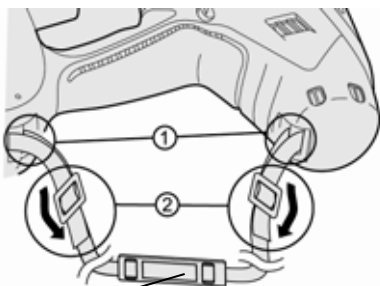
- **Install the shoulder strap firmly to the main unit of the tool and check the length of the strap before use.**
- **Check the condition of the strap and do not use if it is cut or torn etc.**

There is a risk of injury or damage if used while improperly installed.

- **Please wear the shoulder strap securely on the shoulder.**

There is a risk of injury or damage if it is accidentally dropped.

1. Pass the strap through the strap holders. (①)
2. Pass the strap through the buckles and adjust the length. (②)

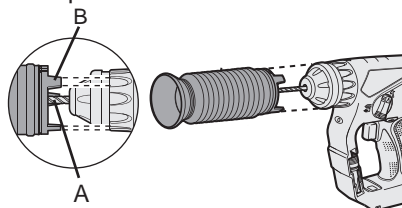


- The shoulder strap can be adjusted according to the individual.
- Adjust the shoulder pad to the shoulder.
- Pull the shoulder strap to make sure it is firmly attached to the main unit of the tool.

Dust Collection Cup (EY9X005E) (Available as an optional accessory)

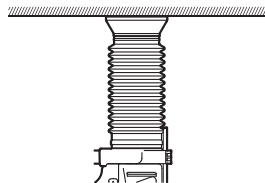
- * Drill bits of which diameter is 20 mm above cannot be inserted through dust collection cup.
- * Do not use the tool for cutting other than concrete, mortar and other ceramic materials. If used for cutting metal materials, the dust collection cup may be damaged by the metal chip heat.
- * Do not use this tool with any drill bit which is shorter than 130 mm in length.

1. Install a drill bit.
2. Pass the drill bit through A and fix the cup at B by matching with the shape of the clutch handle.



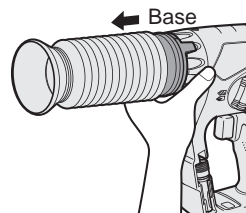
Operation

Keep the dust collection cup in close contact with the wall surface during operation.



Removal

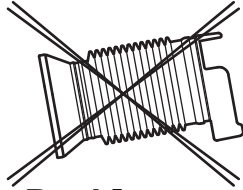
Hold the base of the dust collection cup for removal.



Please remove after thoroughly getting rid of the dust in the dust collection cup.

Storage

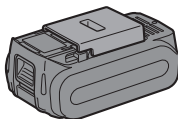
Do not store the dust collection cup in a compressed position. If kept in a compressed position, it may be impossible to return to the original shape.



[Battery Pack]

For Appropriate Use of Battery pack

- For optimum battery life, store the Li-ion battery pack following use without charging it.
- When charging the battery pack, confirm that the terminals on the battery charger are free of foreign substances such as dust and water etc. Clean the terminals before charging the battery pack if any foreign substances are found on the terminals.
The life of the battery pack terminals may be affected by foreign substances such as dust and water etc. during operation.
- When battery pack is not in use, keep it away from other metal objects like: paper clips, coins, keys, nails, screws, or other small metal objects that can make a connection from one terminal to another.
Shorting the battery terminals together may cause sparks, burns or a fire.
- When operating the battery pack, make sure the work place is well ventilated.
- When the battery pack is removed from the main body of the tool, replace the battery pack cover immediately in order to prevent dust or dirt from contaminating the battery terminals and causing a short circuit.



Battery Pack Life

The rechargeable batteries have a limited life. If the operation time becomes extremely short after recharging, replace the battery pack with a new one.

Battery Recycling

ATTENTION:

For environmental protection and recycling of materials, be sure that it is disposed of at an officially assigned location, if there is one in your country.

[Battery Charger] Charging

Cautions

- If the temperature of the battery pack falls approximately below -10°C (14°F), charging will automatically stop to prevent degradation of the battery.
- The ambient temperature range is between 0°C (32°F) and 40°C (104°F).
If the battery pack is used when the battery temperature is below 0°C (32°F), the tool may fail to function properly.
- Use the charger at temperatures between 0°C and 40°C , and charge the battery at a temperature similar to that of the battery itself. (There should be no more than a 15°C difference between the temperatures of the battery and the charging location.)
- When charging a cool battery pack (below 0°C (32°F)) in a warm place, leave the battery pack at the place and wait for more than one hour to warm up the battery to the level of the ambient temperature.
- Cool down the charger when charging more than two battery packs consecutively.
- Do not insert your fingers into contact hole, when holding charger or any other occasions.

CAUTION:

To prevent the risk of fire or damage to the battery charger.

- Do not use power source from an engine generator.
- Do not cover vent holes on the charger and the battery pack.
- Unplug the charger when not in use.

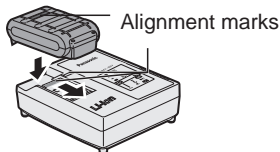
Li-ion Battery Pack

NOTE:

Your battery pack is not fully charged at the time of purchase. Be sure to charge the battery before use.

Battery charger

1. Plug the charger into the AC outlet.
2. Insert the battery pack firmly into the charger.
 1. Line up the alignment marks and place the battery onto the dock on the charger.
 2. Slide forward in the direction of the arrow.

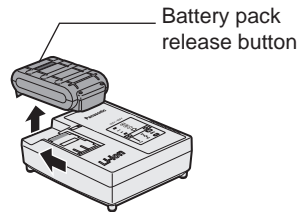


3. During charging, the charging lamp will be lit.

When charging is completed, an internal electronic switch will automatically be triggered to prevent overcharging.

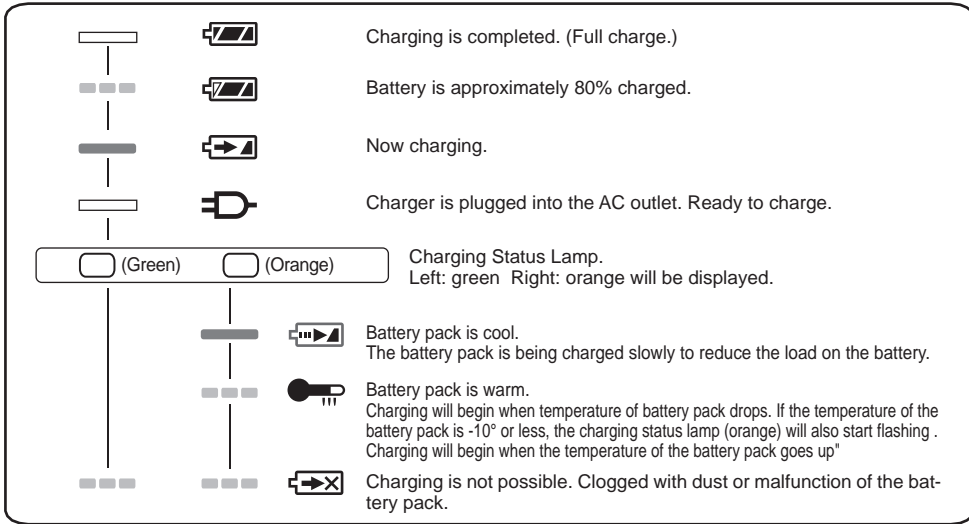
 - Charging will not start if the battery pack is warm (for example, immediately after heavy-duty operation). The orange standby lamp will be flashing until the battery cools down. Charging will then begin automatically.
4. The charge lamp (green) will flash slowly once the battery is approximately 80% charged.
5. When charging is completed, the charging lamp in green color will turn off.

6. If the temperature of the batter pack is 0°C or less, charging takes longer to fully charge the battery pack than the standard charging time. Even when the battery is fully charged, it will have approximately 50% of the power of a fully charged battery at normal operating temperature.
7. Consult an authorized dealer if the charging lamp (green) does not turn off.
8. If a fully charged battery pack is inserted into the charger again, the charging lamp lights up. After several minutes, the charging lamp in green color will turn off.



9. Remove the battery pack while the battery pack release button is held up.

LAMP INDICATIONS



 Turn off

 Lit

 Flashing

Information for Users on Collection and Disposal of Old Equipment and used Batteries



These symbols on the products, packaging, and/or accompanying documents mean that used electrical and electronic products and batteries should not be mixed with general household waste.

For proper treatment, recovery and recycling of old products and used batteries, please take them to applicable collection points, in accordance with your national legislation and the Directives 2002/96/EC and 2006/66/EC.

By disposing of these products and batteries correctly, you will help to save valuable resources and prevent any potential negative effects on human health and the environment which could otherwise arise from inappropriate waste handling.

For more information about collection and recycling of old products and batteries, please contact your local municipality, your waste disposal service or the point of sale where you purchased the items.

Penalties may be applicable for incorrect disposal of this waste, in accordance with national legislation.

For business users in the European Union

If you wish to discard electrical and electronic equipment, please contact your dealer or supplier for further information.

[Information on Disposal in other Countries outside the European Union]

These symbols are only valid in the European Union. If you wish to discard these items, please contact your local authorities or dealer and ask for the correct method of disposal.

Note for the battery symbol (bottom two symbol examples):

This symbol might be used in combination with a chemical symbol. In this case it complies with the requirement set by the Directive for the chemical involved.

V. MAINTENANCE

- Use only a dry, soft cloth for wiping the unit. Do not use a damp cloth, thinner, benzene, or other volatile solvents for cleaning.
- In the event that the inside of the tool or battery pack is exposed to water, drain and allow to dry as soon as possible. Carefully remove any dust or iron filings that collect inside the tool. If you experience any problems operating the tool, consult with a repair shop.

VI. ACCESSORIES

⚠CAUTION:

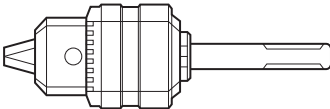
To prevent the risk of injury, only use accessory or attachment for its stated purpose.

Bit adapter (included)


- EY9HX403E

Drill chuck (Optional accessory)

- EY9HX400E

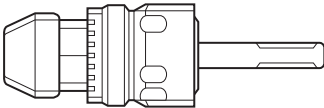


Use with wood drill bit or metal drill bit with shank of 1.5 mm to 13 mm diameter.


Do not use the drill chuck in "Rotation with hammering mode" (). Use in "Rotation with hammering mode" may cause break of chuck or bit and result in injury.

Hammer chuck (Optional accessory)

- EY9HX401E



Use with concrete drill bit, wood drill bit or metal drill bit with straight shank of 2.5 mm to 13 mm diameter.

Do not use the hammer chuck with wood drill bit or metal drill bit in "Rotation with hammering mode" (). Use in "Rotation with hammering mode" may cause break of bit and result in injury.

If you need any assistance for more details regarding these accessories, ask your local service center.

VII. USAGE SUGGESTION

1. If there isn't enough force pushing down on the bit, the tool may not be able to blow in hammering mode.
This is to prevent the hammering mode from operating with no load. Press down harder on the bit to engage the tool and cause it to blow.
2. In winter or in other situations where the temperature of the unit is low (5°C (41°F) or below), the blow of the hammering mode may be weaker than normal at the beginning stage.
This is because the grease becomes stiffer in low temperatures, increasing friction.
If this should happen, operating hammering mode with no load for approximately 30 seconds and repeat this 3 times. This will restore its blowing power.



VIII. SPECIFICATIONS

MAIN UNIT

Model		EY7840	EY78A1	
Motor voltage		14.4 V DC	14.4 V DC	18 V DC
Maximum drilling diameter	Concrete	ϕ 16.5 mm For work that can be completed with one battery pack (ϕ 12.5 mm - 16.5 mm)		
	Steel	ϕ 13 mm		
	Wood	ϕ 18 mm		
Speed at no load(RPM)		0~1000 rpm		0~1250 rpm
Blows rate per minute(BPM)		3800 bpm	3800 bpm	4750 bpm
Weight (with battery pack:EY9L44)		2.45 kg	2.45 kg	-
Weight (with battery pack:EY9L45)		2.45 kg	2.45 kg	-
Weight (with battery pack:EY9L50)		-	-	2.6 Kg
Weight (with battery pack:EY9L51)		-	-	2.6 Kg
Overall length		249 mm		
Noise,Vibration		See the included sheet		

GUIDELINE TABLE

- Select the torque for fastening screws with the clutch handle.
- Guide for the selection of torque
 Depending on the job, adjustments are possible in five levels by approximately 1 N-m (10 kgf-cm) increments.

	Setting	Torque	Guide Dependina on Material			
			Concrete		Block	
			(A)	(B)	(A)	(B)
Fastening Screws 	1	Approximately 1.5 N-m (15 kgf-cm)			●	
	2	Approximately 2.5 N-m (25 kgf-cm)			●	
	3	Approximately 3.4 N-m (35 kgf-cm)	●	●		●
	4	Approximately 4.4 N-m (45 kgf-cm)	●	●		●
	5	Approximately 5.4 N-m (55 kgf-cm)		●		
Drilling Holes 	(Drill Mark)	Approximately 14.4 V: 12.5 N-m (127 kgf-cm) 18 V: 13.5 N-m (138 kgf-cm)	Drilling holes in wood and metal			

(A) For fastening screws into plastic anchor which requires dia. 6.0 mm prehole in the concrete.

(B) For directly fastening screws into concrete (like topcon) with dia. 3.5 mm prehole.

NOTE: This is only a rough guide. Required torque is different depending on the shape, material, and application of the screws.

Set according to the work environment of the site.

BATTERY PACK

Model	EY9L41	EY9L42	EY9L44	EY9L45	EY9L50	EY9L51
Storage battery	Li-ion Battery					
Battery voltage	14.4 V DC (3.6 V x 4 cells)		14.4 V DC (3.6 V x 8 cells)		18 V DC (3.6 V x 10 cells)	

BATTERY CHARGER

Model	EY0L81					
Electrical rating	See the rating plate on the bottom of the charger					
Weight	0.93 kg					
Charging time	EY9L41	EY9L42	EY9L44	EY9L45	EY9L50	EY9L51
	Usable: 45 min	Usable: 30 min	Usable: 50 min	Usable: 65 min	Usable: 50 min	Usable: 65 min
	Full: 60 min	Full: 35 min	Full: 65 min	Full: 80 min	Full: 65 min	Full: 80 min

Model	EY0L82					
Electrical rating	See the rating plate on the bottom of the charger					
Weight	0.93 kg					
Charging time	EY9L41	EY9L42	EY9L44	EY9L45	EY9L50	EY9L51
	Usable: 35 min	Usable: 30 min	Usable: 40 min	Usable: 50 min	Usable: 40 min	Usable: 55 min
	Full: 50 min	Full: 35 min	Full: 55 min	Full: 60 min	Full: 55 min	Full: 70 min

NOTE: This chart may include models that are not available in your area.
Please refer to the latest general catalogue.

NOTE: For the dealer name and address, please see the included warranty card.

ONLY FOR U. K.



IX. ELECTRICAL PLUG INFORMATION

FOR YOUR SAFETY PLEASE READ THE FOLLOWING TEXT CAREFULLY

This appliance is supplied with a moulded three pin mains plug for your safety and convenience.

A 5 amp fuse is fitted in this plug.

Should the fuse need to be replaced please ensure that the replacement fuse has a rating of 5 amp and that it is approved by ASTA or BSI to BS1362.

Check for the ASTA mark  or the BSI mark  on the body of the fuse.

If the plug contains a removable fuse cover you must ensure that it is refitted when the fuse is replaced.

If you lose the fuse cover the plug must not be used until a replacement cover is obtained.

A replacement fuse cover can be purchased from your local Panasonic Dealer.

IF THE FITTED MOULDED PLUG IS UNSUITABLE FOR THE SOCKET OUTLET IN YOUR HOME THEN THE FUSE SHOULD BE REMOVED AND THE PLUG CUT OFF AND DISPOSED OF SAFELY.

THERE IS A DANGER OF SEVERE ELECTRICAL SHOCK IF THE CUT OFF PLUG IS INSERTED INTO ANY 13 AMP SOCKET.

If a new plug is to be fitted please observe the wiring code as shown below.

If in any doubt please consult a qualified electrician.

IMPORTANT: The wires in this mains lead are coloured in accordance with the following code:

Blue: Neutral

Brown: Live

As the colours of the wire in the mains lead of this appliance may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows.

The wire which is coloured **BLUE** must be connected to the terminal in the plug which is marked with the letter **N** or coloured **BLACK**.

The wire which is coloured **BROWN** must be connected to the terminal in the plug which is marked with the letter **L** or coloured **RED**.

Under no circumstances should either of these wires be connected to the earth terminal of the three pin plug, marked with the letter **E** or the Earth Symbol .

How to replace the fuse: Open the fuse compartment with a screwdriver and replace the fuse and fuse cover if it is removable.

