

Product Philosophy

Panasonic Cordless Power Tool Research and Development is predicated on three priorities — Cordless Capability, Power and Design. Panasonic deems three priorities essential to satisfy the requirements of the professional around the globe.

These three priorities are defined as follows:

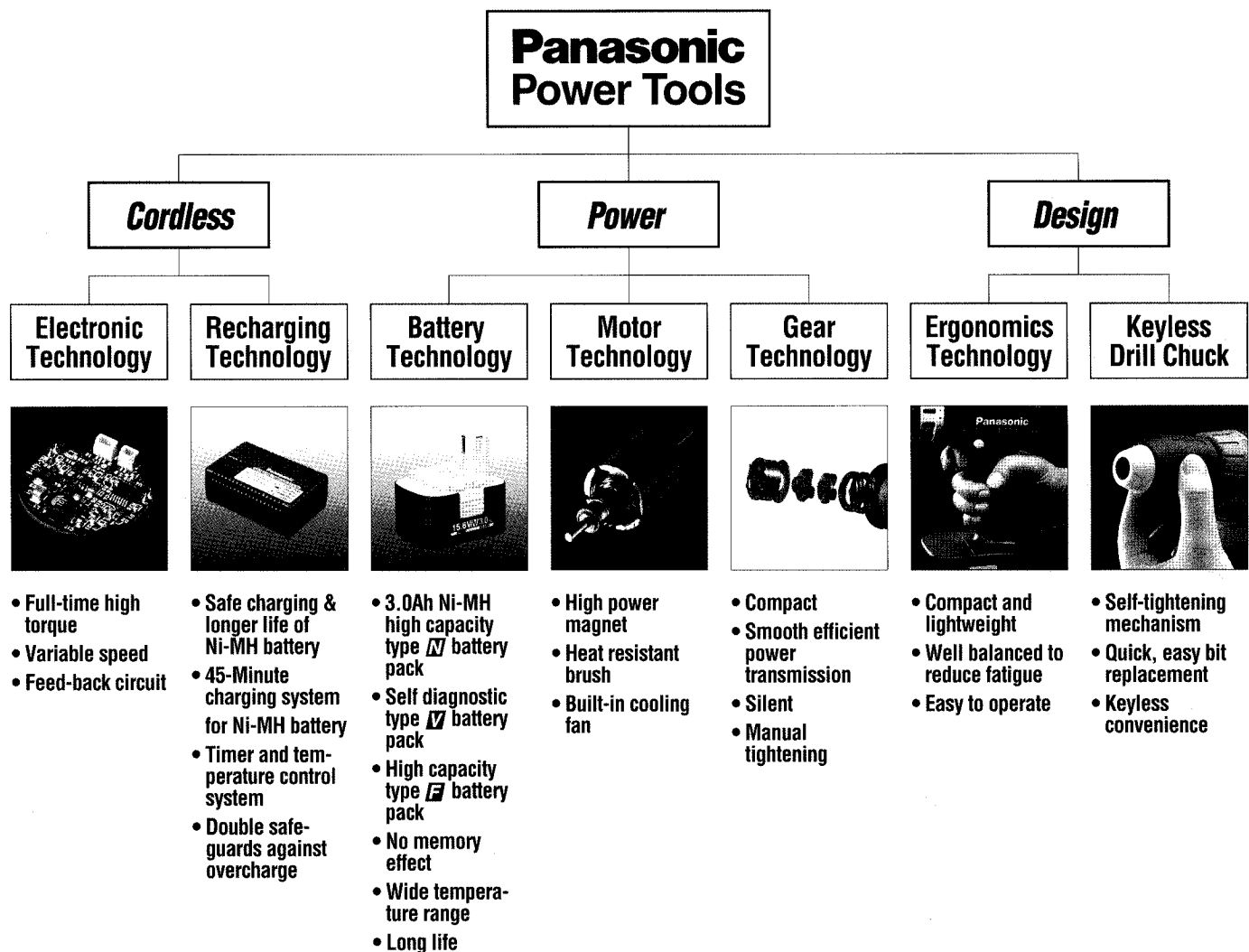
CORDLESS CAPABILITY	— Tools that can be used almost anywhere the professional requires.
POWER	— Tools that are powerful enough to replace AC tools.
DESIGN	— Tools that are compact, well-balanced and easy to operate for extended periods of time without fatigue.

Advanced Technologies Expand Categories

Panasonic Cordless Power Tools are designed utilizing the latest advances in battery, motor and gear technology. These technological advances allow us to make a full range of cordless tools meeting professional needs for concrete drilling, wood and metal drilling and cutting. All this combined with Panasonic's electronics, design and reliability help to make Panasonic the cordless specialist for the professional.

Panasonic Reliability

Panasonic tools are manufactured at factories equipped with technologically advanced automation, handling everything from initial design to manufacturing.





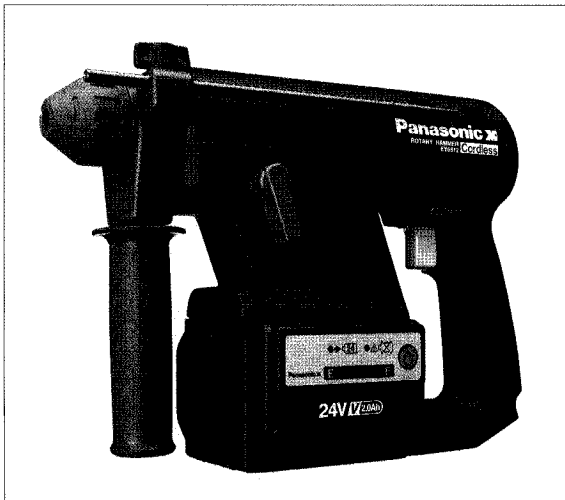
High Capacity 3.0Ah Ni-MH Battery
Compact Body & Light weight
High Power
Longer run time / Quick charge

15.6V / EY 6431NQQW
12V / EY 6407NQQW
Drill & Driver P7

High Capacity 3.0Ah Ni-MH Battery
Three Tools In One
(Brick / Masonry Drilling & Fastening, Wood Drilling)
Longer run time / Quick charge



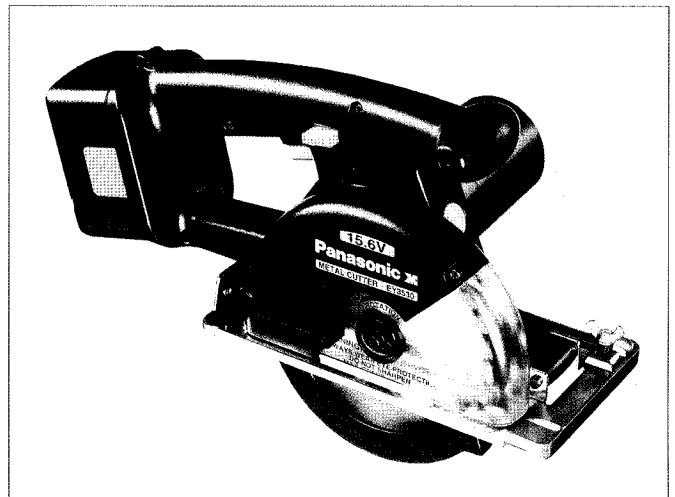
15.6V / EY 6930NQQW
Combination Impact Drill & Driver P12



High-Power & High-Speed Drilling
Good Balance
Light Weight 3.6kg / Compact Body(A4 Catalogue Size)

24V / EY 6812VQKW
Rotary Hammer P14

High Power
(Depth of cut adjustment 3mm to 46mm)
Easy to use anywhere
High Capacity & Quick charge



15.6V / EY 3530FQMKW
Metal Cutter P16

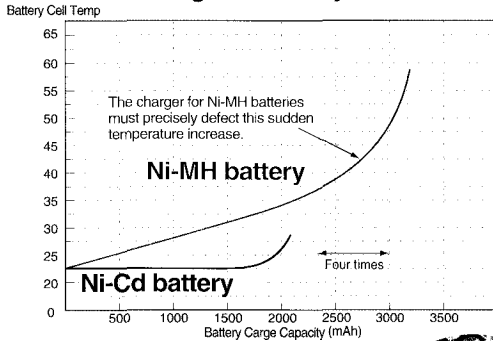
Important Facts About The 45-Minute Charging System for Ni-MH Battery

The inverter technology utilized in the 45-minute charging system for Ni-MH battery is quite unique.

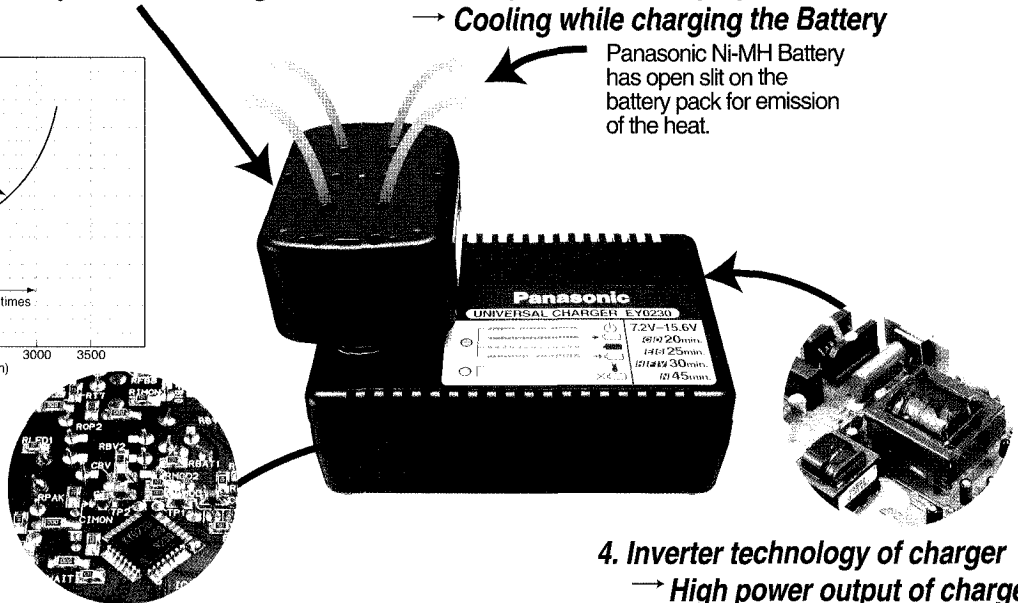
While developing this technology Panasonic's aim was to achieve two goals;

1. Minimize charging time for Ni-MH 3.0Ah high capacity battery pack.
2. Maximize protection for the battery pack thus insuring long battery life.

1. Four times more accurate temperature sensing → No damage to battery



2. Best way of quick charging Ni-MH Battery Pack → Cooling while charging the Battery



4. Inverter technology of charger → High power output of charger 1.3 times EY0230B vs previous EY0202B

3. Two way charging program-Double capacity CPU → Charging System For Ni-Cd & Ni-MH

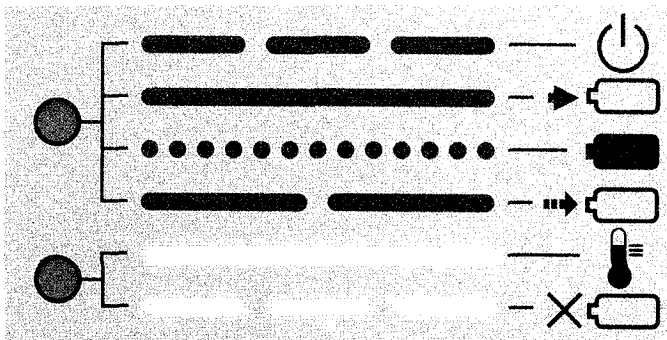
	Type of Battery				
	Ni-MH	Ni-Cd			
	N	F	E	C	D
15.6 Volt	EY9230B	EY9136B			
12 Volt	EY9200B	EY9106B	EY9101B	EY9006B	EY9001B
9.6 Volt			EY9182B	EY9086B	EY9080B
Charging time	45 min.	30 min.	25 min.	20 min.	20 min.

Longer Life Battery Pack (1200 charge/discharge cycles)

The Ni-MH battery pack (3.0Ah pack) has the same life cycle as the Ni-Cd battery pack (2.0Ah pack) in actual usage.

Self Diagnostic 45-Minute Universal Inverter Charger

1. The charging unit accepts 7.2V to 15.6V compatible Panasonic Ni-MH & Ni-Cd battery packs.
2. For the amperage, it accepts up to 3.0 Ah battery pack.
3. Equipped with a lamp system that indicates the status of the 6 charging functions at a glance.



A: Charging Lamp

- Ready to charge
- Charging
- Charging completed
- Protective Charging
Battery is not cool enough to be fully charged in the standard time period. Complete charge time may vary beyond the standard time.

B: Standby Lamp

- Standby
Battery is too hot to be charged. Charging will begin when temperature of battery pack drops.
- Charging not possible
Clogged with dust, or malfunction of the battery pack.

3. **Emergency charging function**
Our inverter charger features an "Emergency Charge". After charging the battery for only five minutes, the battery pack is charged to 15% of its capacity.

What is a Ni-MH (Nickel-Metal Hydride) battery?

A Ni-MH battery is a new type of battery which does not use cadmium and is environmentally friendly.

What are the benefits of a Ni-MH battery?


Higher Capacity-Up to 50% more

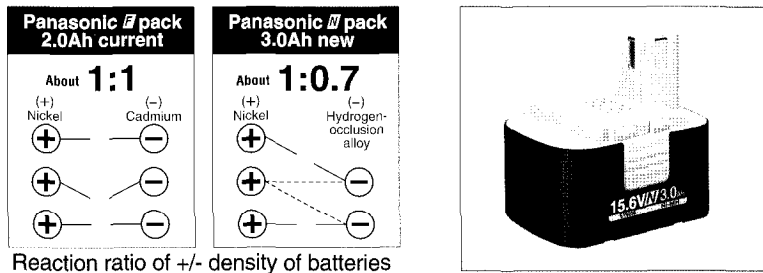
The negative pole of the newly developed nickel-metal hydride battery uses a hydrogen-occlusion alloy.

This alloy reacts with a smaller amount of nickel than the currently used cadmium.

As a result the negative pole can be made much smaller with the end result being the capability to increase the capacity of the battery since more electrical elements can be packed into battery cell.

Therefore, the same size battery can have 50% more capacity.

(compared to Panasonic  pack)



Question and Answer

- Q: Why can't Nickel Hydride batteries be used with previous chargers?**
A: Each type of battery has its own characteristics. (The way the temperature rises during charging is different for Ni-cd and Ni-MH batteries.) It is necessary to detect the minute variations (temperature) and change the control system accordingly.
- Q: Why are there holes in the cases of Ni-MH batteries?**
A: One of the characteristics of Ni-MH batteries is that the battery temperature tends to rise during charging. To prevent a reduction in battery service life due to high temperatures, it is necessary to cool the battery during charging.
- Q: Since there are holes in Ni-MH battery packs, won't they be damaged if rain falls on them?**
A: On the contrary, since there are holes in the case, it's easier to get water out of the battery. However, like conventional Ni-Cd batteries, they should not be used in the rain or where they maybe splashed by water.
- Q: What happens when they are used in cold weather?**
A: Since the chemical reactions inside the battery become weaker when the temperatures are extremely low, the batteries will not be able to provide their usual performance. (This is a common characteristic of Ni-MH batteries.) When using the batteries at temperatures colder than 0 °C (32 °F), we recommed recharging and warming them up before use if they provide their normal performance. When temperatures is colder than -10 °C (14 °F), recharge and warm batteries before use to provide the best performance.
- Q: Will the power of the product be different when using Ni-MH batteries and Ni-Cd batteries?**
A: Ni-MH batteries provide more stable power to the end of the usabale charge life.
- Q: Are there any points to be careful of when storing Ni-MH batteries and Ni-Cd batteries?**
A: The properties of Ni-MH batteries and Ni-Cd batteries are different. To get the best use and longest life from your batteries, you should store Ni-MH batteries fully charged and should store Ni-Cd batteries fully discharged.

(Ni-MH) Reason : If the voltage inside the battery drops remarkably, the transfer of electricity by the battery's electrode plates may become slower due to chemical reactions, resulting in a shorter battery sevice life.

Therefore : 1.Do top-off charging before the batteries are completely exhausted.
2.Recharege fully before storing.

It is recommended that the batteries be recharged once every 6 months.
(Batteries are charged at the time of shipment.)

(Ni-Cd) Reason : If some electricity is left in the battery, it may cause deactivation or memory effect.

Therefore : 1.Recharge after fully discharging.

2.Discharge fully before storing.

(Batteries are not charged at the time of shipment.)

POWERCOSMO Series

Product Policy : Cordless Power Tool to extend users capability

Compact & Light Ergonomic design

Tools that are compact, well-balanced and easy to operate for extended periods of time without fatigue.

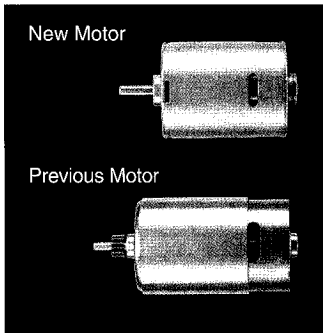
High Power

Tools that are powerful enough to replace AC tools.

Longer run time Quick charge

New battery and new charger technology.

High Power Motor

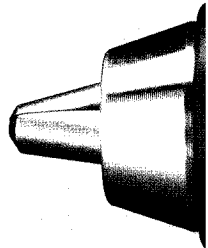
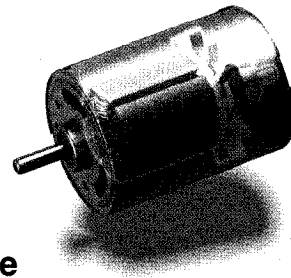
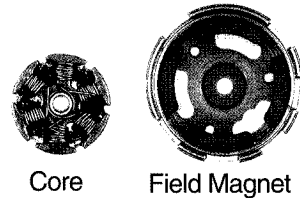


Motor	Core	Field Magnet
New	6	4
Previous	5	2



More Compact Body while keeping the maximum torque in the class

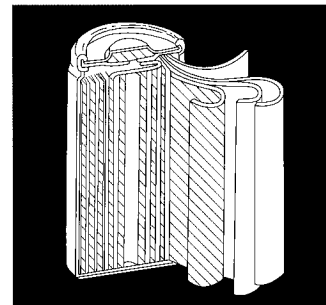
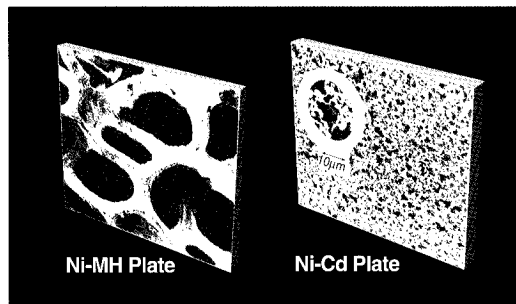
12V-Power to Weight Ratio 21% more
15.6V-Power to Weight Ratio 31% more



Longer run time / Quick charge

Battery Ni-MH Battery Pack has 50% more capacity (vs.Ni-Cd Battery) 3.0Ah vs 2.0Ah

1. Development of new terminal material (Ni-MH alloy) of the battery cell
2. Surface of plate:130% wider with many crimps
3. Plate:40% thinner



Feature of Ni-MH battery

1. Long life battery pack
1,200 charge/discharge cycles
2. 50% more capacity with no change in the size of the battery cell
3. Environmentally safe
No need to recycle Ni-MH battery pack

Charger Higher power output of charger

→ 1.3 times EY0230B vs current EY0202B



Compact & Light weight Ergonomic design

(vs. Current 12V/15.6V Models)

New Chuck

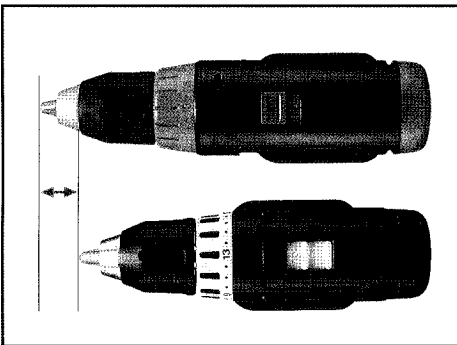
Adoption of Duralumin(Airplane material)
10mm chuck-32% reduction in weight
13mm chuck-43% reduction in weight

New Motor

12V-12% reduction in length
12V-6% reduction in weight
15.6V-20% reduction in length
15.6V-24% reduction in weight

New Body

12V-9% reduction in length
12V-7% reduction in weight
15.6V-12% reduction in length
15.6V-9% reduction in weight



Ergonomic design

5% decrease of muscular fatigue while at work

Battery

50% more capacity
(vs. typeF battery)

15.6V 3.0Ah
EY9230 NI-MH

Actual Size

15.6V**12V****EY 6431NQQW****Cordless Drill & Driver "POWERCOSMO Series"****45 Min.**

Variable speed control

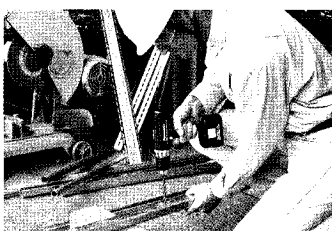
- High capacity (3.0Ah) Ni-MH Battery → 50% more work
- Compact Body → Length 208 mm
- Light weight → 2.0 kg
- High power → 31.9 Nm (325 kgf-cm)
- With an extra battery pack as standard equipment
- 45-minute charging system
- Variable speed control / Reversible
- 18-stage clutch plus drill position
- 13 mm heavy-duty keyless chuck
- 2-speed gear box
- Electric brake
- New ergonomic Design

Trade Groups

- General construction • Finishing carpentry
- Electric installation work • Plumbing

Technical Data

Charging Time: 45 minutes
Max. Torque: ① 44.1 Nm (450 kgf-cm) Instant torque
 ② 31.9 Nm (325 kgf-cm) Stalling torque
Speed at No Load: High / 200-1,450 rpm Low / 65-450 rpm
Clutch Torque: 1.0 Nm-6.9 Nm (0.35 Nm per stage)
 Max. torque at drilling position-stage 19
Chuck: 13 mm Keyless drill chuck
Weight (incl. battery): 2.0 kg
Size (L x H x W): 208 mm x 226 mm x 82 mm
Max. Drill diameter: in Wood ϕ 36 mm / in Steel ϕ 13 mm
Max. Wood Screws: ϕ 8 mm
Standard Accessories:
 2 x 3.0Ah Ni-MH 15.6V High capacity battery pack type **N**
 (EY9230B), 7.2V-15.6V Charger for Ni-MH battery pack
 (EY0230B), Carrying Case



Drilling into metal sheet



Drilling into wood

EY 6407NQQW**Cordless Drill & Driver "POWERCOSMO Series"****45 Min.**

Variable speed control

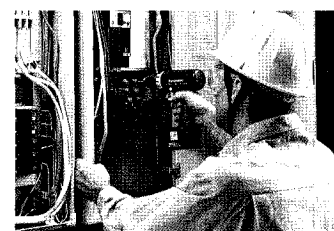
- High capacity (3.0Ah) Ni-MH Battery → 50% more work
- Compact Body → Length 208 mm
- Light weight → 1.8 kg
- High power → 22.6 Nm (230 kgf-cm)
- With an extra battery pack as standard equipment
- 45-minute charging system
- Variable speed control / Reversible
- 18-stage clutch plus drill position
- 13 mm heavy-duty keyless chuck
- 2-speed gear box
- Electric brake
- New ergonomic Design

Trade Groups

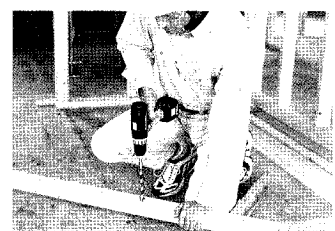
- General construction • Finishing carpentry
- Electric installation work • Plumbing

Technical Data

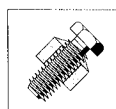
Charging Time: 45 minutes
Max. Torque: ① 33.1 Nm (338 kgf-cm) Instant torque
 ② 22.6 Nm (230 kgf-cm) Stalling torque
Speed at No Load: High / 180-1,300 rpm Low / 50-400 rpm
Clutch Torque: 1.0 Nm-5.4 Nm (0.26 Nm per stage)
 Max. torque at drilling position-stage 19
Chuck: 13 mm Keyless drill chuck
Weight (incl. battery): 1.8 kg
Size (L x H x W): 208 mm x 224 mm x 82 mm
Max. Drill diameter: in Wood ϕ 27 mm / in Steel ϕ 13 mm
Max. Wood Screws: ϕ 6.8 mm
Standard Accessories:
 2 x 3.0Ah Ni-MH 12V High capacity battery pack type **N**
 (EY9200B), 7.2V-15.6V Charger for Ni-MH battery pack
 (EY0230B), Carrying Case



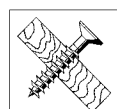
Fastening screws



Drilling into wood

Max. Torque**Instant Torque**

① Torque produced when bolt nut is fastened and when screw is driven into steel plate

**Stalling Torque**

② Torque produced when screw is driven in wood

12V**3.6V****EY 6406FQKW****Cordless Drill & Driver "POWERCOSMO Series"****30 Min.**

Variable speed control

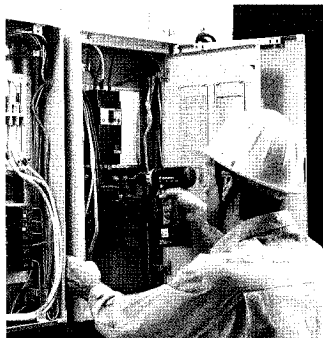
- Compact Body → Length 202 mm
- Light weight → 1.7 kg
- High power → 22.6 Nm (230 kgf-cm)
- With an extra battery pack as standard equipment
- 30-minute charging system
- Variable speed control / Reversible
- 18-stage clutch plus drill position
- 10 mm heavy-duty keyless chuck
- 2-speed gear box
- Electric brake
- New ergonomic Design

Trade Groups

- General construction • Finishing carpentry
- Electric installation work • Plumbing

Technical Data

Charging Time: 30 minutes
Max. Torque: ①33.1 Nm (338 kgf-cm) Instant torque
 ②22.6 Nm (230 kgf-cm) Stalling torque
Speed at No Load: High / 180-1,300 rpm Low / 50-400 rpm
Clutch Torque: 1.0 Nm-5.4 Nm (0.26 Nm per stage)
 Max. torque at drilling position-stage 19
Chuck: 10 mm Keyless drill chuck
Weight (incl. battery): 1.7 kg
Size (L x H x W): 202 mm x 224 mm x 82 mm
Max. Drill diameter: in Wood ϕ 27 mm / in Steel ϕ 10 mm
Max. Wood Screws: ϕ 6.8 mm
Standard Accessories:
 2 x 2.0Ah Ni-Cd 12V High capacity battery pack type **F**
 (EY9106B), 7.2V-15.6V Charger for Ni-MH battery pack
 (EY0230B), Carrying Case



Fastening screws



Drilling into wood

EY 6225C / CQ**Cordless Drill & Driver****15 Min.**

Variable speed control

- "Auto Shut-off Clutch" extends battery + clutch life by immediately stopping rotation once torque setting is reached
- New 21-stage clutch offers you more precise torque setting
- Clutch torque accuracy is \pm 5%
- Max. 600 rpm. for high speed screw driving
- Max. 4.4 Nm (45 kgf-cm) torque (in low gear) even with compact size
- 15-minute charging system
- Easily converts from straight to pistol form
- 6.5 mm hex quick connect chuck

Trade Groups

- Rack / Cabinet installers • Electricians
- Service engineers • Work inspectors
- Industrial manufacturing • Product line, assembly work

Technical Data

Charging Time: 15 minutes
Max. Torque: High / 1.5 Nm (15 kgf-cm)
 Low / 4.4 Nm (45 kgf-cm)
Speed at No Load: High / 600 rpm Low / 200 rpm
Clutch Torque / Auto shut off clutch:
 21 stage / 0.3 Nm-3.0 Nm
Weight (incl. battery): 520 g
Size (L x H x W): 296 mm x 155 mm x 40 mm
Standard Accessories:
 Battery pack (EY9025B), Charger (EY0225B)
 2 magnetised driver bits



Repair of copy machines