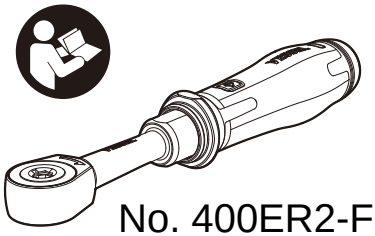
VESSEL

ENGLISH

OPERATING INSTRUCTIONS AND SAFETY INSTRUCTIONS FOR THE RECHARGEABLE MINI RATCHET WRENCH



No. 400ER2-F

Thank you for purchasing our rechargeable MINI ratchet wrench No. 400ER2-F.
Read this manual before use.
Keep it in a safe, easily accessible place for future reference.

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ENGLISH

DEFINITIONS: Safety guidelines
The following definitions describe the severity of each signal word. Read the instructions and pay attention to these symbols.
⚠ ***WARNING:*** Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.
⚠ ***CAUTION:*** Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.
⚠ ***NOTICE:*** Indicates a practice not related to personal injury which, if not avoided, may result in property damage.

SYMBOLS


Wear eye protection during use.


Do not use a screwdriver as a pry bar, chisel, punch or hammer.


Protect the battery against heat, e.g. prolonged exposure to intense sunlight.


Risk of electric shock.


WARNING: Read the instructions to reduce the risk of injury.

GENERAL POWER TOOL SAFETY WARNINGS


WARNING: **Read all safety warnings, instructions, illustrations and specifications provided with this power tool.** Failure to follow all instructions listed below may result in electric shock, fire and/or serious injury. **Save**

all warnings and instructions for future reference. The term “power tool” in the warnings refers to your mains-operated (corded) power tool or battery-operated (cordless) power tool.

Work area safety

▶Keep work area clean and well lit. Cluttered or dark areas invite accidents.

▶Do not operate power tools in explosive atmospheres, such as in the presence of flammable liquids, gases or dust. Power tools create sparks which may ignite the dust or fumes.

▶Keep children and bystanders away while operating a power tool. Distractions can cause you to lose control.

Electrical safety


▶Power tool plugs must match the outlet. Never

modify the plug in any way. Do not use any adapter plugs with earthed (grounded) power tools. Unmodified plugs and matching outlets will reduce risk of electric shock.

▶Avoid body contact with earthed or grounded surfaces, such as pipes, radiators, ranges and refrigerators. There is an increased risk of electric shock if your body is earthed or grounded.

▶Do not expose power tools to rain or wet conditions. Water entering a power tool will increase the risk of electric shock.

▶Do not abuse the cord. Never use the cord for carrying, pulling or unplugging the power tool. Keep cord away from heat, oil, sharp edges or moving parts. Damaged or entangled cords increase the risk of electric shock.

▶When operating a power tool outdoors, use an extension cord suitable for outdoor use. Use of a cord suitable for outdoor use reduces the risk of electric shock.

▶If operating a power tool in a damp location is unavoidable, use a residual current device (RCD) protected supply. Use of an RCD reduces the risk of electric shock.

Personal safety

▶Stay alert, watch what you are doing and use common sense when operating a power tool. Do not use a power tool while you are tired or under the influence of drugs, alcohol or medication. A moment of inattention while operating power tools may result in serious personal injury.


▶Use personal protective equipment. Always wear eye protection.

Protective equipment such as a dust mask, non-skid safety shoes, hard hat or hearing protection used for appropriate conditions will reduce personal injuries.

▶Prevent unintentional starting. Ensure the switch is in the off-position before connecting to power source and/or battery pack, picking up or carrying the tool. Carrying power tools with your finger on the switch or energising power tools that have the switch on invites accidents.

▶Remove any adjusting key or wrench before turning the power tool on. A wrench or a key left attached to a rotating part of the power tool may result in personal injury.

▶Do not overreach. Keep proper footing and balance at all times. This enables better control of the power tool in unexpected situations.

▶Dress properly. Do not wear loose clothing or jewellery. Keep your hair and clothing away from moving parts. Loose clothes, jewellery or long hair can be caught in moving parts.

▶If devices are provided for the connection of dust extraction and collection facilities, ensure these are connected and properly used. Use of dust collection can reduce dust-related hazards.

▶Do not let familiarity gained from frequent use of tools allow you to become complacent and ignore tool safety principles. A careless action can cause severe injury within a fraction of a second.

Power tool use and care

▶Do not force the power tool. Use the correct power tool for your application. The correct power tool will do the job better and safer at the rate for which it was designed.

▶Do not use the power tool if the switch does not turn it on and off. Any power tool that cannot be controlled with the switch is dangerous and must be repaired.

▶Disconnect the plug from the power source and/or remove the battery pack, if detachable, from the power tool before making adjustments, changing accessories or storing power tools. Such preventive safety measures reduce the risk of starting the power tool accidentally.

▶Store idle power tools out of the reach of children and do not allow persons unfamiliar with the power tool or these instructions to operate the power tool. Power tools are dangerous in the hands of untrained users.

▶Maintain power tools and accessories. Check for misalignment or binding of moving parts, breakage of parts and any other condition that may affect the power tool's operation. If damaged, have the power tool repaired before use. Many accidents are caused by poorly maintained power tools.

▶Keep cutting tools sharp and clean. Properly maintained cutting tools with sharp cutting edges are less likely to bind and are easier to control.

▶Use the power tool, accessories and tool bits etc. in accordance with these instructions, taking into account the working conditions and the work to be performed. Use of the power tool for operations different from those intended could result in a hazardous situation.

▶Keep handles and grasping surfaces dry, clean and free from oil and grease. Slippery handles and grasping surfaces do not allow for safe handling and control of the tool in unexpected situations.

Battery tool use and care

▶Recharge only with the charger specified by the manufacturer. A charger that is suitable for one type of battery pack may create a risk of fire when used with another battery pack.

▶Use power tools only with specifically designated battery packs. Use of any other battery packs may create a risk of injury and fire.

▶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 burns or a fire.

▶Under abusive conditions, liquid may be ejected from the battery; avoid contact. If contact accidentally occurs, flush with water. If liquid contacts eyes, additionally seek medical help. Liquid ejected from the battery may cause irritation or burns.

▶Do not use a battery pack or tool that is damaged or modified. Damaged or modified batteries may exhibit unpredictable behaviour resulting in fire, explosion or risk of injury.

▶Do not expose a battery pack or tool to fire or excessive temperature. Exposure to fire or temperature above 130 °C may cause explosion.

▶Follow all charging instructions and do not charge the battery pack or tool outside the temperature range specified in the instructions. Charging improperly or at temperatures outside the specified range may damage the battery and increase the risk of fire.

Service



▶Have your power tool serviced by a qualified repair person using only identical replacement parts.

This will ensure that the safety of the power tool is maintained.

▶Never service damaged battery packs. Service of battery packs should only be performed by the manufacturer or authorised service providers.

RATCHET WRENCH SAFETY WARNINGS



▶Do not use a ratchet wrench as a pry bar, chisel, punch or hammer. This may damage the ratchet wrench and cause injury.



▶Hold the power tool by insulated gripping surfaces when performing an operation where the fastener may contact hidden wiring.

Fasteners contacting a “live” wire may make exposed metal parts of the power tool “live” and could give the operator an electric shock.



▶Do not wear unsuitable gloves that could cause injury by becoming entangled in the rotating parts of the power tool.

▶Hold the power tool by the

insulated gripping surfaces when performing an operation where the fastener may contact hidden wiring. Fasteners contacting a “live” wire may make exposed metal parts of the power tool “live” and could give the operator an electric shock.

▶**Hold the tool firmly.** When driving and loosening screws, high reaction torque may occur briefly.

▶**Secure the workpiece.** A workpiece secured with clamps or in a vice is held more securely than by hand.

▶**Always wait until the tool has come to a complete stop before removing the power tool from the material.** Removing the power tool from the material during operation may cause the bit to jam, resulting in loss of control.

▶**Protect the battery against heat, e.g. prolonged exposure to intense sunlight, fire, water and moisture.** Failure to do so may cause an explosion.

▶**Vapours may be emitted if the battery is damaged or used improperly.** These vapours may irritate the respiratory system. In such cases, provide adequate ventilation and consult a doctor.

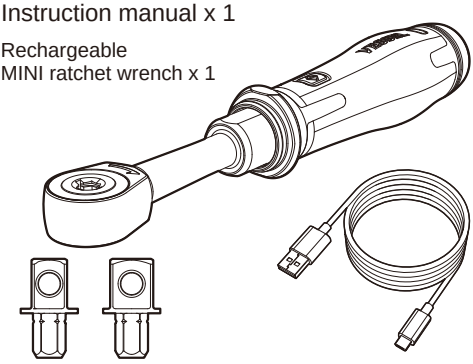
▶This product contains a lithium battery. A lithium battery reaches the end of its service life after a certain number of years of use. To protect the environment, follow the local authority regulations in your country for environmentally sound waste disposal and dispose of this battery correctly.

Li-ion **Lithium-ion batteries are recyclable**

PACKAGE CONTENTS

Instruction manual x 1

Rechargeable
MINI ratchet wrench x 1



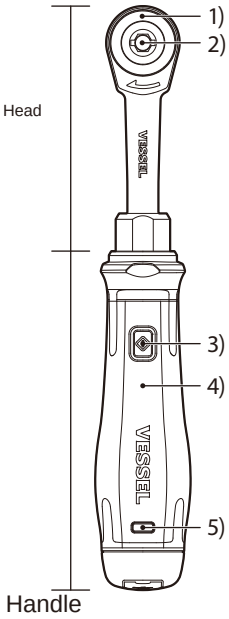
1/4" and 3/8"
square-drive adapter
(1/4" hex shank) x 2

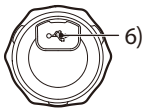
USB charging cable
(USB Type-A to
USB Type-C) x 1

Universal joint x 1



PARTS





1) Ratchet head
2) Bit holder
3) Switch
4) Handle
5) Charging indicator
6) Charging port

INTENDED USE

This product is intended for tightening and loosening screws, bolts, nuts, etc. It is an electric ratchet wrench that can be recharged by connecting a USB charging cable.

FEATURES

- The electric motor assists fast, efficient tightening, after which final tightening can be performed manually.

- The tool features a rechargeable lithium-ion battery that can be charged via USB.

- Compact and lightweight.

- The supplied socket adapters allow the use of sockets with a 1/4" and 3/8" square drive.

- Various commercially available 6.35 mm hex-shank screwdriver bits can be used.

⚠ ***NOTICE:*** Double-ended bits cannot be used. (See page 7, “INSTALLING AND REMOVING BITS/SOCKET ADAPTERS”, for details.)

SPECIFICATIONS

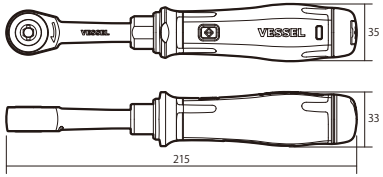
Rated voltage	3,7 V DC
Capacity	1400 mAh
No-load speed*	400 min^{-1}
Maximum output torque (electric)*	1 N·m
Maximum torque for manual operation	60 N·m
Weight (excluding accessories)	300 g
Permitted ambient temperature**	
charging	4 °C-40 °C
use and storage	0 °C-45 °C
Battery	Li-ion
Number of battery cells	1
Charging time	Approx. 90 min.
Number of charge cycles***	Approx. 300 charge cycles
Noise	LWA = 73,5 dB(A) LPA = 65,5 dB(A) K = 3 dB(A) according to EN 62841-1 Annex I, EN 62841-2-2
Vibration values	1,82 m/s^2 K=1,5 m/s^2 according to EN 62841-1 Annex I, EN 62841-2-2
Charging port	USB Type-C
Input voltage	5 V DC
Input current (max.)	1 A

*These are typical values based on our measurement environment and are not guaranteed values.
**Do not charge, use or store the product at an ambient temperature below 4 °C.
***Actual battery life varies depending on operating conditions.
*Specifications and dimensions are subject to change without notice.

NOISE AND VIBRATION INFORMATION

Noise emission values have been determined in accordance with EN 62841. The A-weighted sound pressure level of the product is typically 65.5 dB(A). Uncertainty K = 3 dB. The noise level during operation may exceed 70 dB(A). Wear hearing protection!
Driving screws without impact: ah < 1.82 m/s^2, K = 1.5 m/s^2. The vibration level stated in this information sheet has been measured according to a standardised test in accordance with EN 62841 and may be used to compare different tools. It may be used for a preliminary assessment of exposure to vibration. The declared vibration level represents the main applications of the tool. However, if the tool is used for different applications, with different accessories or insertion tools, or is poorly maintained, the vibration emission may differ. This may significantly increase the exposure level over the total working period. An estimate of exposure to vibration should also take account of periods when the tool is switched off or is running but not actually being used. This may significantly reduce the exposure level over the total working period. Take additional safety measures to protect the operator from the effects of vibration, such as maintaining the tool and accessories, keeping the hands warm and organising work patterns.

DIMENSIONS (Unit: mm)



CHARGING

⚠ ***NOTICE:*** No charger is supplied with this product. Use a mains adapter with an output voltage of 5 V DC. This product has a function that limits the output current of the power source to protect the battery. Using a fast charger does not reduce the required charging time.

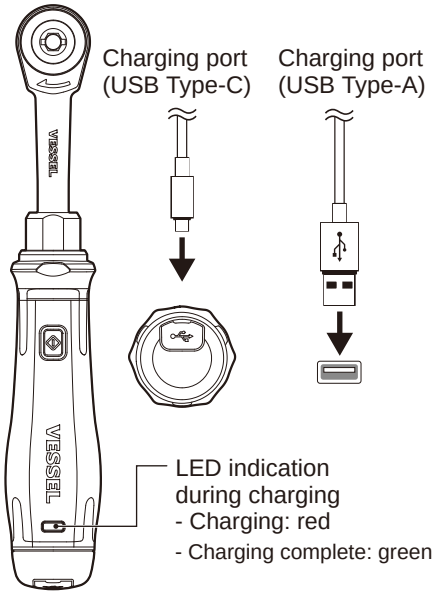
1) Open the protective cap on the tool's charging port and connect the USB charging cable (USB Type-C) to charge the battery. (See illustration on the right)



- Pull the cap outwards before opening it.

- Use the USB charging cable supplied with this product.

- Opening the cap in the opposite direction may damage it.



2) Connect the other end of the charging cable to a USB port (mains adapter, computer, power bank, etc.). The charging indicator lights red during charging. When charging is complete, the charging indicator lights green.

⚠ ***NOTICE:*** The supplied battery is partially charged. Fully charge the battery before using the product for the first time. The lithium-ion battery can be charged at any time. Interrupting charging does not damage the battery. The lithium-ion battery is protected against overcharging.

⚠ ***NOTICE:*** If the battery level falls below 10%, the charging indicator flashes red during operation (at intervals of approximately 0.5 seconds*). When the battery voltage falls to the specified value, operation is disabled to protect the battery against deep discharge. Stop use and charge the battery.

⚠ ***NOTICE:*** The product cannot be used while charging. The switch does not work during charging. This is not a malfunction.
*As the battery level falls further, the flash interval is approximately 0.25 seconds.

(Reference) LED signal patterns

	LED colour/pattern Green	LED colour/pattern Red	Condition	Remarks
Charging		—	Charging	
Charging	—		Charging complete	
Charging	. . . . . (alternating green and red)		Charging system circuit board fault Control system circuit board fault	Fault detection / motor stop (*)
When the switch is pressed	. . . . . (alternating green and red)		Short-circuit or overcurrent protection circuit board fault, battery fault	Fault detection / motor stop (*)
Operating		. . .	Battery voltage 3.4 to 3.2 V	Battery level approx. 10%
Operating		. . . . .	Battery voltage 3.2 to 3.1 V	Battery level approx. 5%
Operating		.....	Battery voltage 3.1 V or lower	Battery level approx. 0%
When the screw is seated		.....	Motor stops	Overcurrent protection

Steady light Slow flashing. Flashing .....
Rapid flashing

*The product will not operate because of the reset lockout. If this product stops working, contact the distributor from whom you purchased it.

3) When charging is complete, remove the USB charging cable and close the protective cap.

⚠ ***NOTICE:*** Always close the protective cap before use. Foreign objects may cause malfunctions.
⚠ ***NOTICE:*** Disconnect the charger from the mains when it will not be used for an extended period.

INSTALLING AND REMOVING BITS/SOCKET ADAPTERS

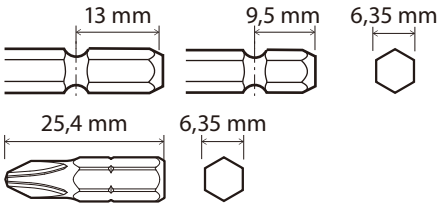
⚠ ***WARNING:*** When working at height, take care not to drop bits/socket adapters or the product. This could cause an accident.

⚠ ***CAUTION:*** Using bits/socket adapters other than those specified may cause them to jam or make repair impossible.

⚠ ***CAUTION:*** Do not touch the switch when inserting or removing the bit/socket adapter. The product could start and cause injury.

⚠ ***CAUTION:*** The bit/socket adapter must be inserted securely. If it comes loose during use, it may cause injury.

Use only the specified bits. Bits are limited to products with the following fitting dimensions.

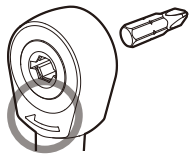


⚠ ***CAUTION:*** Double-ended bits cannot be used. (They may come loose during operation.)

⚠ ***CAUTION:*** Viewed from the front of the ratchet head, the bit holder rotates in the direction of the arrow. (The bit holder rotates in one direction only.) Pay attention to the direction of rotation when inserting bits.

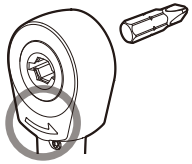
Clockwise rotation:

Insert the bit/socket adapter from the rear, with the clockwise arrow side (the side with the VESSEL marking on the shaft) facing you.



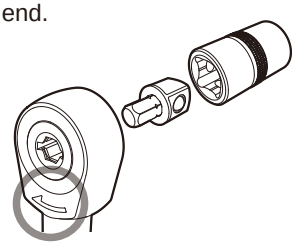
Anticlockwise rotation:

Insert the bit/socket adapter from the rear, with the anticlockwise arrow side (the side without the VESSEL marking on the shaft) facing you.



Using sockets:

Insert the socket adapter from the rear, with the arrow for the desired direction of rotation facing you, then attach the socket to the end.



OPERATION

⚠ ***CAUTION:*** Continuous overloading, whether electrically or manually, may cause malfunctions.

⚠ ***CAUTION:*** Do not keep pressing the switch after rotation has stopped automatically. The internal parts may be damaged.

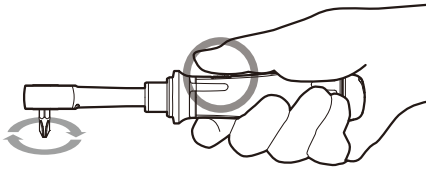
⚠ ***CAUTION:*** Do not force the switch with hard objects. This may cause damage.

⚠ ***CAUTION:*** Use your finger, not your fingernail, to press the switch.

⚠ ***NOTICE:*** If the load is excessive or the temperature inside the housing rises too high, the protection function stops working and the red charging indicator flashes (at intervals of approximately 0.1 seconds). Release the switch, stop use for a while and wait until the temperature inside the product has fallen.

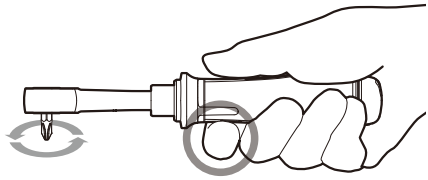
⚠ ***NOTICE:*** If the charging indicator flashes alternately red and green, there is a fault in the internal electronic circuit. The product will not operate because of the reset lockout. If the product stops working, contact the distributor from whom you purchased it.

Holding for clockwise rotation.



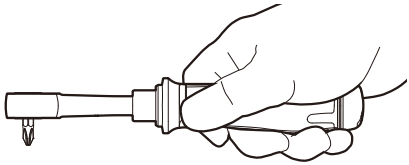
Press the switch with your thumb.

Holding for anticlockwise rotation.



Press the switch with your index finger.

Holding for manual operation



Hold the handle so that your fingers do not touch the switch.

⚠ ***NOTICE:*** Position bits and sockets on screws or bolts/nuts without touching the switch.

MAINTENANCE AND INSPECTION

⚠ ***CAUTION:*** Pay close attention to the switch before carrying out maintenance, replacing bits, etc., or when transporting or storing the product. Accidental activation of the switch may cause injury.

Periodic inspection:
- Loose or damaged screws, abnormal operation.

- Damage to the charging cable.
- Inside the bit holder. (Foreign objects left in the bit holder may prevent insertion of the bit/socket adapter.)

- Inside the charging port. (Accumulated dust may prevent the battery from charging.)

If this product stops working, contact the distributor from whom you purchased it.

CLEANING

⚠ ***CAUTION:*** The product has a reinforced plastic housing. Do not wipe the surface with parts cleaners, cleaning agents or the chemicals listed below. Risk of cracking, electric shock or malfunction.

Examples of chemicals
Petrol, thinner, ketones (e.g. acetone), ether and other similar chemicals

If the power tool becomes dirty, wipe it dry with a soft cloth.

STORAGE

Avoid the following storage conditions.

- High-temperature locations, such as inside a car.
- Locations exposed to direct sunlight.
- Locations with excessive water, moisture, etc.
- Locations with excessive debris and dust.
- Locations accessible to children.
- Locations where flammable substances such as petrol are present.
- Low-temperature locations.

⚠ ***NOTICE:***
For prolonged storage, keep the product in a cool place (approx. 20 °C) and charge the battery for about 20 minutes once a year.

CUSTOMER SERVICE

Refer to “TROUBLESHOOTING” (page 10). If you cannot resolve a fault yourself, contact the distributor from whom you purchased the product.

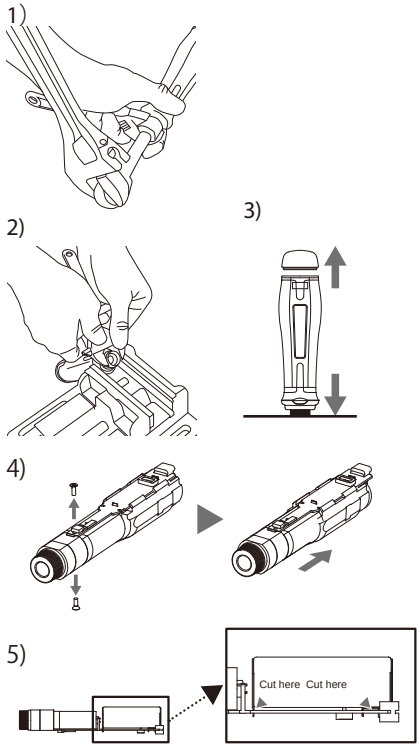
DISPOSAL

⚠ ***WARNING:*** Do not dismantle the battery or remove any parts. This may cause fire or injury.

▶Do not dispose of this product with household waste. Contact our distributor for environmentally sound disposal of used tools (without dismantling the tool). Refer to the contact details via the QR code.

REMOVING THE BATTERY

Before removing a battery that has reached the end of its service life, switch on the product and fully discharge the battery until the motor no longer operates.
1) Use an open-ended or adjustable wrench to separate the head section from the handle.
2) Remove the metal parts at the end of the handle using a vice and an adjustable wrench or similar tool.
3) Push the internal components out of the housing.
4) Remove the circuit board.
5) Cut the metal parts on the circuit board and remove the battery.



MALFUNCTIONS

⚠ ***WARNING:*** Stop use and do not operate the switch if a fault occurs. This may cause fire or electric shock.

⚠ ***WARNING:*** Never dismantle or modify the product yourself. This may cause injury, malfunction, smoke, fire or electric shock.

TROUBLESHOOTING

Problem	Possible causes	Solution
Cannot be charged	Mains adapter not connected correctly	Check that the connection is correct
	USB charging cable not connected correctly	Check that the connection is correct
	Dirt on the contacts	Remove all dirt
Does not operate / stops	Insufficient battery charge	Charge the battery
	Internal circuit fault	If the motor does not run when the switch is pressed with the battery charged, stop using the product and contact the distributor from whom you purchased it
	The motor is damaged	Stop using the product and contact the distributor from whom you purchased it
	The gear is damaged	Stop using the product and contact the distributor from whom you purchased it
Screws, bolts and nuts cannot be tightened or loosened	Protection circuit has activated	Allow a longer rest period
	The motor's maximum torque has been exceeded	Remove your finger from the switch and turn the bit holder manually
	The bit/socket shank (shape and dimensions) is unsuitable	Use the correct bit/socket
	Insufficient battery charge	Charge the battery
	Battery has reached end of service life	Stop using the product and contact the distributor from whom you purchased it
Abnormal noise	The motor is damaged	Stop using the product and contact the distributor from whom you purchased it
	The gear is damaged	Stop using the product and contact the distributor from whom you purchased it
The power tool becomes hot	Temperature rise due to overload	Allow a longer rest period
	Faulty internal components	Stop using the product and contact the distributor from whom you purchased it
	Abnormal temperature rise during charging	Stop using the product and contact the distributor from whom you purchased it
The bit holder turns without driving the bit	The motor is damaged	Check the bit holder for foreign objects and remove any found
	The gear is damaged	Check the bit holder for foreign objects and remove any found
The bit/socket adapter cannot be inserted	The bit/socket adapter shank (shape and dimensions) is unsuitable	Use a bit/socket adapter with the correct dimensions
	The bit holder is damaged	Stop using the product and contact the distributor from whom you purchased it
	Foreign object in the bit holder	Check the bit holder for foreign objects and remove any found
The head section is loose	The tool has been stored in a hot location or exposed to vibration for an extended period	Stop using the product and contact the distributor from whom you purchased it

*If a fault persists after taking the above measures, contact the distributor from whom you purchased the product.

CE

This product complies with all relevant provisions of the CE directives. For information on the Declaration of Conformity, visit the following website:

https://www.vessel.co.jp/english/support/declarations.html

Naming convention

400ERv-yz
400ERv-wxyz
(v= 2 or 3; w= 1, 2, 3 … 98, 99; x= M or IN)
(y= A-Z or blank; z= A-Z or blank)

The VESSEL application service team will be happy to answer your questions about our products and accessories.

VESSEL EUROPE S.A.R.L.

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Distributors
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