

# Battery Charger

## Operator's Manual



### **⚠ WARNING!**

Read this Operator's Manual carefully before using this tool. Failure to understand and follow the contents of this manual may result in electrical shock, fire and/or serious personal injury.


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Original instructions


## Safety Symbols

In this operator's manual and on the product, safety symbols and signal words are used to communicate important safety information. This section is provided to improve understanding of these signal words and symbols.

 This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.

 **DANGER** DANGER indicates a hazardous situation which, if not avoided, will result in death or serious injury.

 **WARNING** WARNING indicates a hazardous situation which, if not avoided, could result in death or serious injury.

 **CAUTION** CAUTION indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.

**NOTICE** NOTICE indicates information that relates to the protection of property.



This symbol means read the operator's manual carefully before using the equipment. The operator's manual contains important information on the safe and proper operation of the equipment.



This symbol means always wear safety glasses with side shields or goggles when handling or using this equipment to reduce the risk of eye injury.



This symbol indicates a risk of electrical shock.

## General Safety Rules

### **WARNING**

**Read all safety warnings and all instructions. Failure to follow the warnings and instructions may result in electric shock, fire and/or serious injury.**

### **SAVE ALL WARNINGS AND INSTRUCTIONS FOR FUTURE REFERENCE!**

#### Work Area Safety

- **Keep your work area clean and well lit.** Cluttered or dark areas invite accidents.
- **Do not operate electrical devices in explosive atmospheres, such as in the presence of flammable liquids, gases, or dust.** Electrical devices create sparks which may ignite the dust or fumes.
- **Keep children and by-standers away while operating electrical devices.** Distractions can cause you to lose control.

#### Electrical Safety

- **Tool plugs must match the outlet. Never modify the plug in any way. Do not use any adapter plug with earthed (grounded) power tools.** Unmodified plugs and matching outlets will reduce risk of electrical shock.
- **Avoid body contact with earthed or grounded surfaces such as pipes, radiators, ranges and refrigerators.** There is an increased risk of electrical shock if your body is earthed or grounded.

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- **Do not expose electrical devices to rain or wet conditions.** Water entering an electrical device will increase the risk of electrical shock.
- **Do not abuse the cord. Never use the cord for carrying, pulling or unplugging the electrical device. Keep cord away from heat, oil, sharp edges or moving parts.** Damaged or entangled cords increase the risk of electric shock.
- **When operating electrical devices 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 electrical devices in a damp location is unavoidable, use a ground fault circuit interrupter (GFCI) protected supply.** Use of an GFCI reduces the risk of electric shock.

#### Personal Safety

- **Stay alert, watch what you are doing and use common sense when operating electrical devices. Do not use electrical devices while you are tired or under the influence of drugs, alcohol, or medication.** A moment of inattention while operating electrical devices may result in serious personal injury.
- **Use personal protective equipment. Always wear eye protection.** Protective equipment such as dust

mask, non-skid safety shoes, hard hat, or hearing protection used for appropriate conditions will reduce personal injuries.

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

### Power Tool Use and Care

- **Do not force electrical device. Use the correct electrical device for your application.** The correct electrical device will do the job better and safer at the rate for which it is designed.
- **Do not use electrical device if the switch does not turn it ON and OFF.** Any electrical device that cannot be controlled with the switch is dangerous and must be repaired.
- **Disconnect the plug from the power source and/or the battery pack from the electrical device before making any adjustments, changing accessories, or storing power tools.** Such preventive safety measures reduce the risk of starting the electrical device accidentally.
- **Store idle electrical devices out of the reach of children and do not allow persons unfamiliar with the electrical device or these instructions to operate the electrical device.** Electrical devices are dangerous in the hands of untrained users.
- **Maintain electrical devices. Check for misalignment or binding of moving parts, breakage of parts and any other condition that may affect the electrical device's operation. If damaged, have the electrical device repaired before use.** Many accidents are caused by poorly maintained electrical devices.
- **Use the electrical device and accessories etc. in accordance with these instructions, taking into account the working conditions and the work to be performed.** Use of the electrical device for operations different from those intended could result in a hazardous situation.

### Service

- **Have your electrical device serviced by a qualified repair person using only identical replacement parts.** This will ensure that the safety of the electrical device is maintained.

## Specific Safety Information

### **⚠ WARNING**

**This section contains important safety information that is specific to this tool.**

**Read these precautions carefully before using the battery charger to reduce the risk of electrical shock or serious personal injury.**

### **SAVE THESE INSTRUCTIONS!**

### Battery Charger Safety

- **Charge only the RIDGID® rechargeable batteries listed in the *Accessories Section* with the RIDGID RBC 20 Advanced Lithium 18V Battery Charger.** Other types of batteries may burst causing personal injury and property damage.
- **Do not probe battery charger with conductive objects.** Shorting of battery terminals may cause sparks, burns or electrical shock.
- **Do not insert battery into charger if charger has been dropped or damaged in any way.** Damaged charger increases the risk of electrical shock.
- **Charge battery in temperatures above 41°F (5°C) and below +104°F (40°C). Store charger and battery packs in temperatures above -4°F (-20°C) and below +104°F (40°C).** Proper care will prevent serious damage to batteries. Improper care of batteries may result in battery leakage, electrical shock or burns.
- **Use an appropriate power source. Do not attempt to use a step-up transformer, an engine generator or DC power receptacle.** May cause damage to charger resulting in electrical shock, fire or burns.
- **Do not allow anything to cover the charger while in use.** Proper ventilation is required for correct operation of charger. Covering vents may result in fire. Allow a minimum of 4" (10 cm) of clearance around the charger for proper ventilation.
- **Unplug the charger when not in use.** Reduces risk of injury to children and untrained persons.
- **Do not charge battery pack in damp, wet or explosive environment. Do not expose to rain, snow or dirt.** Contaminants and moisture increase the risk of electrical shock.
- **Do not open the charger housing.** Have repairs performed only at authorized locations.
- **Do not carry charger by power cord.** Reduces risk of electrical shock.

### Battery Safety

- **Properly dispose of the battery.** Exposure to high temperatures can cause the battery to explode, so do not dispose of in a fire. Place tape over the terminals to prevent direct contact with other objects. Some countries have regulations concerning battery disposal. Please follow all applicable regulations. Also, refer to *Disposal* section.
- **Do not insert battery with cracked case into charger.** Damaged batteries increases the risk of electrical shock.
- **Never disassemble batteries.** There are no user-serviceable parts inside the battery pack. Disassembling batteries may cause electrical shock or personal injury.
- **Avoid contact with fluids oozing from damaged batteries.** Fluids may cause burns or skin irritation. Thoroughly rinse with water in case of accidental contact with fluid. Consult doctor if fluid comes into contact with eyes.

The EC Declaration of Conformity (890-011-320.10) will accompany this manual as a separate booklet when required.

### Specifications

Input .....	Available for 120V AC or 230V AC
Output.....	14.4V – 18V DC
Battery Type .....	Lithium Ion (Li-Ion)
Input Current .....	0.65A – 1.34A
Weight .....	1.87 lb (0.85 kg)
Dimensions (LxWxH) .....	6.0" x 5.6" x 3.7" (153 x 142 x 94 mm)
Charge Time	
18V Advanced	
Lithium Ion .....	2.0 Ah = 45 min. 4.0 Ah = 60 min.
18V Lithium Ion .....	1.1 Ah = 35 to 40 min. 2.2 Ah = 70 to 75 min. 3.3 Ah = 105 to 110 min.
Cooling .....	Passive convection cooling (no fan)

NOTE! This charger is only compatible with the RIDGID Li-Ion Batteries listed in the *Accessories* section.

### Icons

- Double Insulated
-  For Indoor Use Only

## Charger Inspection and Set-Up

### WARNING



**Daily before use, inspect the charger and batteries and correct any problems. Set up charger according to these procedures to reduce the risk of injury from electric shock, fire and other causes, and to prevent tool and system damage.**

1. Make sure the charger is unplugged. Inspect the power cord, charger and batteries for damage or modifications, or broken, worn, missing, mis-aligned or binding parts. If any problems are found, do not use charger or batteries until the parts have been properly repaired or replaced.
2. Clean any oil, grease or dirt from the equipment as described in the Maintenance section. This helps to prevent the equipment from slipping from your grip and allows proper ventilation as well as allowing any cracks or damage to be seen.

## Description and Specifications

### Description

The RIDGID RBC 20 Advanced Lithium 18V Battery Charger, when used with appropriate battery packs (batteries) listed in the *Accessories Section*, is designed to charge an 18V 2.0 Ah Advanced Lithium-Ion RIDGID battery in approximately 45 minutes or an 18V 4.0 Ah Advanced Lithium-Ion RIDGID battery in approximately 55 minutes. This charger requires no adjustments.



Figure 1 – RIDGID RBC 20 Advanced Lithium 18V Battery Charger and Battery Pack

3. Check to see that all warning labels and decals on the charger and batteries are intact and readable. *Figure 2* shows the warning label on the bottom of the charger. *Figure 3* shows the labels on the bottom of a battery.



Figure 2 – Warning Label Location On Charger



Figure 3 – Warning Label Location On Battery

4. Select an appropriate location for the charger before use. Check work area for:
  - Flammable liquids, vapors or dust that may ignite. If present, do not work in area until sources have been identified and corrected. Battery charger is not explosion proof and can cause sparks.
  - Clear, level, stable dry place for charger. Do not use the machine in wet or damp areas.
  - Proper operating temperature range. The charger and battery must both be between 41°F (5°C) and 104°F (40°C) for charging to begin. If the temperature of either is outside this range at any point during charging, the operation will be suspended until brought back into the correct temperature range.
  - Appropriate power source. Check to see that the plug fits correctly into the desired outlet.
  - Sufficient ventilation area. The charger needs a clearance of at least 4" (10 cm) on all sides to maintain the proper operating temperature.

5. With dry hands, plug tool into the appropriate power source.
6. This charger is provided with a convenient key hole hanging feature if wall mounting is desired. Screws should be installed at a center distance of 4" (102mm).

## Charging Procedure/Operating Instructions

### ⚠ WARNING



**Always wear eye protection to protect your eyes against dirt and other foreign objects.**

**Follow operating instructions to reduce the risk of injury from electrical shock.**

NOTE! New batteries reach their full capacity after approximately 5 charging and discharging cycles.

NOTE! It is not necessary to completely discharge a battery pack before recharging.

1. Set up charger according to Charger Inspection and Set-Up section.
2. While charger is in the standby “ready to charge” mode, the yellow LED will blink continuously.
3. With dry hands insert the battery pack onto the charger. The battery pack will be charged automatically.
  - The yellow LED may illuminate solid for up to 2 seconds while battery condition is checked.
  - If the battery fails to make proper contact or the battery or charger are damaged, a red LED will blink with the light ON 95% of the time and OFF 5% of the time (Fast Blink). Check battery contact by removing and reinserting battery into charger.
  - While the battery is charging, the green LED will blink with the light ON 50% of the time and OFF 50% of the time (Slow Blink).
  - The battery pack will become slightly warm to the touch during charging. This is normal and does not indicate a problem.
  - When the battery charge level reaches 85% charged, the green LED will change the blinking pattern to 95% ON and 5% OFF (Fast Blink). The battery may be used in this condition if necessary. However, leave the battery plugged in to attain 100% charge level.



- If the battery pack or charger is too hot or cold, the red LED will glow solid. Once the battery and charger are within the correct temperature range 41°F (5°C) to 104°F (40°C), the red LED will stop. The charging process will begin automatically and the green LED will blink until the battery is fully charged.
4. When the battery is fully charged the green LED glows solid. The battery may be removed and used. See LED Diagnostic section for a complete description of LED indicators.
    - Once the battery is charged, it may remain on the charger until it is ready to be used. There is no risk of over-charging the battery. When the battery has been fully charged, the charger automatically switches to retention charging.
  5. With dry hands, unplug charger from outlet once charging completes.

## Cleaning

### WARNING

**Unplug charger and remove the battery before cleaning. Do not use any water or chemicals to clean charger or batteries to reduce the risk of electrical shock.**

Remove any dirt or grease from the exterior of the charger and battery pack with a cloth or soft, non-metallic brush.

## Accessories

### WARNING

**The following accessories have been designed to function with the RIDGID RBC 20 Advanced Lithium Battery Charger. To prevent serious injury, use only the accessories specifically designed and recommended for use with the RBC 20 Advanced Lithium Battery Charger, such as those listed below. Included chargers and batteries are not compatible with other models of RIDGID Li-Ion batteries and chargers.**

## RBC 20 Advanced Lithium Battery Chargers & Cords


Catalog No.	Voltage	Region	Plug Type
43458	120V	USA, Canada and Mexico	A
43333	230V	Europe	C
43468	120V	China	A
44418	230V	Australia & Latin America	I
44793	100V	Japan	A
44833	230V	United Kingdom	G
44798	—	North America Charger Cord	A
44808	—	Europe Charger Cord	C
44803	—	China Charger Cord	A
44813	—	Australia & LA Charger Cord	I
44818	—	Japan Charger Cord	A
44828	—	United Kingdom Charger Cord	G

## Battery Packs


Catalog No.	Capacity	Region
44693	18V 2.0Ah	North & Latin America, Australia
44698	18V 4.0Ah	North & Latin America, Australia
43323	18V 2.0Ah	Europe & China
43328	18V 4.0Ah	Europe & China
31013	18V 1.1Ah	North & Latin America, Australia
32743	18V 2.2Ah	North & Latin America, Australia
31018	18V 3.3Ah	North & Latin America, Australia
32473	18V 1.1Ah	Europe & China
28218	18V 2.2Ah	Europe & China
28448	18V 3.3Ah	Europe & China

All listed batteries will work with any model RBC 20 charger. The difference between batteries for different regions is in label markings.

## Storage

** WARNING** Store the charger and batteries in a dry, secured, locked area that is out of reach of children and people unfamiliar with proper charger operation.

The battery packs and charger should be protected against hard impacts, moisture and humidity, dust and dirt, extreme high and low temperatures, and chemical solutions and vapors.

** NOTICE** Long term storage in the fully charged state, the fully discharged state or in temperatures above 104°F (40°C) can permanently reduce the capacity of a battery pack.

## Battery Transport

The battery is tested according to UN document ST/SG/AC.10/11/Rev/3 Part III, subsection 38.3. It has effective protection against internal overpressure and

short circuiting as well as devices for the prevention of violent rupture and dangerous reverse current flow.

The lithium-equivalent content in the battery is below applicable limit values. Therefore, the battery is not subject to national or international regulations pertaining to dangerous mediums, neither as an individual component nor when inserted into a machine. However, the regulations governing dangerous goods may be relevant when transporting several batteries. In this case, it may be necessary to comply with special conditions (e.g., concerning the packaging).

## Service and Repair

### **WARNING**

**Improper service or repair can make the machine unsafe to operate.**

There are no user-serviceable parts for this charger or battery packs. Do not attempt to open charger or battery cases, charge individual battery cells, or clean internal components.

## Disposal

Parts of the unit contain valuable materials and can be recycled. There are companies that specialize in recycling that may be found locally. Dispose of the components in compliance with all applicable regulations. Contact your local waste management authority for more information.



**For EC countries:** Do not dispose of electrical equipment with household waste!

According to the European Guideline 2002/96/EC for Waste Electrical and Electronic Equipment and its implementation into national legislation, electrical equipment

that is no longer usable must be collected separately and disposed of in an environmentally correct manner.

## Battery Disposal



**For USA and Canada:** The RBRC™ (Rechargeable Battery Recycling Corporation) Seal on the battery packs means that RIDGID has already paid the cost of recycling the lithium-ion battery packs once they have reached the end of their useful life.



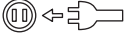

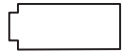


RBRC™, RIDGID®, and other battery suppliers have developed programs in the USA and Canada to collect and recycle rechargeable batteries. Normal and rechargeable batteries contain materials that should not be directly disposed of in nature, and contain valuable materials that can be recycled. Help to protect the environment and conserve natural resources by returning your used batteries to your local retailer or an authorized RIDGID service center for recycling. Your local recycling center can also provide you with additional drop off locations.

RBRC™ is a registered trademark of the Rechargeable Battery Recycling Corporation.

**For EC countries:** Defective or used battery packs/batteries must be recycled according to the guideline 91/157/EEC.



## LED Diagnostic

Charger Icon	Solid Light 	Blinking Light 	Meaning
	—	Yellow	Charger is plugged in with no battery installed - ready to charge.
	Yellow (2 sec.)	—	Battery condition being checked by charger.
	—	Green (Slow)	Battery is being charged. Charge level <85%.
	—	Green (Fast)	Battery is being charged. Charge level >85%.
	Green	—	Battery fully charged.
	—	Red	Battery is misaligned in charger. Remove battery and reinsert onto charger.
	—	—	Battery is damaged. See <i>Accessories Section</i> to select an appropriate replacement battery. See <i>Recycling Section</i> for disposal instructions.
	—	—	Charger is damaged. See <i>Service and Repair</i> section for contact information.
	Red	—	Battery or charger outside of charging range (41°F (5°C) to 104°F (40°C)). Allow battery and charger to reach temperature range by sitting in a conditioned environment.
NO LEDs ON			Charger does not have power. Ensure that charger is properly connected to electrical outlet.
			Charger is not working properly. See <i>Service and Repair Section</i> for contact information.

**What is covered**

RIDGID® tools are warranted to be free of defects in workmanship and material.

**How long coverage lasts**

This warranty lasts for the lifetime of the RIDGID® tool. Warranty coverage ends when the product becomes unusable for reasons other than defects in workmanship or material.

**How you can get service**

To obtain the benefit of this warranty, deliver via prepaid transportation the complete product to RIDGE TOOL COMPANY, Elyria, Ohio, or any authorized RIDGID® INDEPENDENT SERVICE CENTER. Pipe wrenches and other hand tools should be returned to the place of purchase.

**What we will do to correct problems**

Warranted products will be repaired or replaced, at RIDGE TOOL'S option, and returned at no charge; or, if after three attempts to repair or replace during the warranty period the product is still defective, you can elect to receive a full refund of your purchase price.

**What is not covered**

Failures due to misuse, abuse or normal wear and tear are not covered by this warranty. RIDGE TOOL shall not be responsible for any incidental or consequential damages.

**How local law relates to the warranty**

Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you. This warranty gives you specific rights, and you may also have other rights, which vary, from state to state, province to province, or country to country.

**No other express warranty applies**

This FULL LIFETIME WARRANTY is the sole and exclusive warranty for RIDGID® products. No employee, agent, dealer, or other person is authorized to alter this warranty or make any other warranty on behalf of the RIDGE TOOL COMPANY.

**Ce qui est couvert**

Les outils RIDGID® sont garantis contre tous vices de matériaux et de main d'oeuvre.

**Durée de couverture**

Cette garantie est applicable durant la vie entière de l'outil RIDGID®. La couverture cesse dès lors que le produit devient inutilisable pour raisons autres que des vices de matériaux ou de main d'oeuvre.

**Pour invoquer la garantie**

Pour toutes réparations au titre de la garantie, il convient d'expédier le produit complet en port payé à la RIDGE TOOL COMPANY, Elyria, Ohio, ou bien le remettre à un réparateur RIDGID® agréé. Les clés à pipe et autres outils à main doivent être ramenés au lieu d'achat.

**Ce que nous ferons pour résoudre le problème**

Les produits sous garantie seront à la discrétion de RIDGE TOOL, soit réparés ou remplacés, puis réexpédiés gratuitement ; ou si, après trois tentatives de réparation ou de remplacement durant la période de validité de la garantie le produit s'avère toujours défectueux, vous aurez l'option de demander le remboursement intégral de son prix d'achat.

**Ce qui n'est pas couvert**

Les défaillances dues au mauvais emploi, à l'abus ou à l'usure normale ne sont pas couvertes par cette garantie. RIDGE TOOL ne sera tenue responsable d'aucuns dommages directs ou indirects.

**L'influence de la législation locale sur la garantie**

Puisque certaines législations locales interdisent l'exclusion des dommages directs ou indirects, il se peut que la limitation ou exclusion ci-dessus ne vous soit pas applicable. Cette garantie vous donne des droits spécifiques qui peuvent être éventuellement complétés par d'autres droits prévus par votre législation locale.

**Il n'existe aucune autre garantie expresse**

Cette GARANTIE PERPETUELLE INTEGRALE est la seule et unique garantie couvrant les produits RIDGID®. Aucun employé, agent, distributeur ou tiers n'est autorisé à modifier cette garantie ou à offrir une garantie supplémentaire au nom de la RIDGE TOOL COMPANY.

**Qué cubre**

Las herramientas RIDGID® están garantizadas contra defectos de la mano de obra y de los materiales empleados en su fabricación.

**Duración de la cobertura**

Esta garantía cubre a la herramienta RIDGID® durante toda su vida útil. La cobertura de la garantía caduca cuando el producto se torna inservible por razones distintas a las de defectos en la mano de obra o en los materiales.

**Cómo obtener servicio**

Para obtener los beneficios de esta garantía, envíe mediante porte pagado, la totalidad del producto a RIDGE TOOL COMPANY, en Elyria, Ohio, o a cualquier Servicentro Independiente RIDGID®. Las llaves para tubos y demás herramientas de mano deben devolverse a la tienda donde se adquirieron.

**Lo que hacemos para corregir el problema**

El producto bajo garantía será reparado o reemplazado por otro, a discreción de RIDGE TOOL, y devuelto sin costo; o, si aún resulta defectuoso después de haber sido reparado o sustituido tres veces durante el período de su garantía, Ud. puede optar por recibir un reembolso por el valor total de su compra.

**Lo que no está cubierto**

Esta garantía no cubre fallas debido al mal uso, abuso o desgaste normal. RIDGE TOOL no se hace responsable de daño incidental o consiguiente alguno.

**Relación entre la garantía y las leyes locales**

Algunos estados de los EE.UU. no permiten la exclusión o restricción referente a daños incidentales o consiguientes. Por lo tanto, puede que la limitación o restricción mencionada anteriormente no rija para Ud. Esta garantía le otorga derechos específicos, y puede que, además, Ud tenga otros derechos, los cuales varían de estado a estado, provincia a provincia o país a país.

**No rige ninguna otra garantía expresa**

Esta GARANTIA VITALICIA es la única y exclusiva garantía para los productos RIDGID®. Ningún empleado, agente, distribuidor u otra persona está autorizado para modificar esta garantía u ofrecer cualquier otra garantía en nombre de RIDGE TOOL COMPANY.

We  
Build  
Reputations™

**RIDGID**

  
**EMERSON**  
Commercial & Residential Solutions

**EMERSON. CONSIDER IT SOLVED.™**