

ELORA

EmPower Your Mobility

ELORA 3 STATION CHARGING CABINET

Owner's Manual



7595-0445
Revision A

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IMPORTANT

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READ AND UNDERSTAND THIS MANUAL BEFORE OPERATION!



The ELORA™ 3 Station Charging Cabinet is specifically designed to be operated with current ELORA Series batteries. Do not attempt to use a non-ELORA Series battery or batteries not manufactured by ELORA.



USE OF THIS CHARGER WITH ANY BATTERY NOT MANUFACTURED BY ELORA MAY RESULT IN BATTERY DAMAGE AND CAUSE RISK OF FIRE OR PERSONAL INJURY. ELORA ACCEPTS NO RESPONSIBILITY FOR ANY INJURY OR DAMAGE ASSOCIATED WITH THE USE OF BATTERIES NOT MANUFACTURED (OR BATTERIES SERVICED OTHER THAN) BY ELORA. SUCH USE WILL VOID ANY WARRANTY.

Special precautions and handling instructions are contained in this manual and should be strictly adhered to for safe and reliable operation. Contact ELORA Customer Support Group at 1-888-77ELORA or customersfirst@elorapower.com with any questions regarding this product.

Elora Customer Support
customersfirst@elorapower.com
1-888-77ELORA

INTRODUCTION

KEY FEATURES & BENEFITS



The Elora Battery Charging Cabinet is a wall mountable charger capable of charging 3 batteries in parallel. The cabinet can be mounted flush to the wall or recessed for a more aesthetic appeal. Like all Elora chargers, everything is automatic. Once a battery is placed onto one of the stations the charger will read the battery's current state of charge and will then automatically go into one of the applicable Three Stage Charging modes. At the same time the charger will begin a disinfection sequence via its UV LEDs that will aid in keeping the battery germ and bacteria free.

When the user is prepared to remove a battery from the Elora Charging Cabinet, a green LED will illuminate the battery that should be used next. This feature ensures that all batteries throughout the fleet are used equally to ensure maximum battery life.

STANDARD FEATURES

- Simultaneous Charging for all ELORA batteries
- 300W Output
- Full InterActive® technology (including I-Min), which makes 3 simultaneous charge termination systems, rejuvenation modes, and LifeSaver® maintenance mode.
- UV LED to aid in disinfection control during the charging process
- LED "ready" Indicator Lighting

Once the battery has completed the disinfection cycle the LEDs inside the cabinet will indicate the current state of the battery.

BLUE LED

An illuminated blue LED indicates that the battery has been completely charged and is ready for use.

GREEN LED

An illuminated green LED indicates that the battery has been completely charged, is ready for use and has the highest capacity (run-time). This is the battery that should be removed first. Only one battery will indicate green at a given time. Once this battery has been removed the next fully charged battery (if available) will illuminate green indicating that it is ready for use and has the highest capacity (run-time). This assures that not only will the battery with the highest capacity be used but also ensures that only batteries that have been fully charged will be put into workflow, ensuring that the workflow will not be interrupted prematurely.

LED INDICATOR LIGHTS

The Elora Battery Charging Cabinet contains a series of LED indicators that inform the user of the current status of each battery.

UV LED

When a battery is first placed onto a station and the door is closed, the UV LED will begin the disinfection cycle to aid in keeping the battery germ and bacteria free. This is indicated via the violet LEDs that will illuminate the charging station. If the cabinet door is opened during disinfection the cycle will be suspended while the door is open and will recommence once the door has been closed.

KEY FEATURES & BENEFITS

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OPERATING ENVIRONMENT	
TEMPERATURE RANGE	0°C to 30°C / 32°F to 86°F
RELATIVE HUMIDITY	20-70% non-condensing
PRESSURE	985 hPa – 1040hPa
TRANSPORTATION & STORAGE ENVIRONMENT	
TEMPERATURE RANGE	-20°C to 40°C / -4°F to 104°F
RELATIVE HUMIDITY	20-70% non-condensing
PRESSURE	985 hPa – 1040 hPa
Device intended for Indoor Use Only.	
Never use flammable or combustible solvents around batteries or chargers.	
Clean out dust and debris from charger vents and electrical contacts by blowing with compressed air.	

SAFEGUARDS

- Important: When powering with a generator, the generator MUST produce a sine wave or modified sine wave output, otherwise the charger may be damaged
- Risk of electrical shock: Refer servicing to qualified service personnel.

DISPOSAL

DO NOT dispose of the Elora Charging Cabinet and its associated components and/or accessories in municipal waste at the end of their expected service life. Consult Elora Customer Support Group for information on disposal/recycling of the Elora Charging Cabinet and its associated components and/or accessories.

SPECIFICATIONS



SYSTEM SPECIFICATIONS

Power Supply Input Voltage = 120V/240V, 60/50Hz,
5A/2A

MAINTENANCE

Daily:

- Ensure all connections between the device, associated components, and accessories are snug and secure.

Weekly, or as needed:

- Clean the device, associated components, and accessories as needed with a damp, non-saturated cloth or paper towel. Do not wet the exposed metal part of the charging unit. Do not use solvents or scouring agents. Examples of approved solvents are Cidex® and Windex®. Consult Elora Customer Support Group for approved list of cleaning agents. Contact Elora Customer Support Group with additional inquiries as to maintenance.

GROUNDING / EARTHING

IMPORTANT WARNING: THIS APPARATUS MUST BE EARTHED

To ensure safe operation, the three pin plug supplied must be inserted only into a standard three-pin power point that is effectively grounded through normal household wiring. Extension cords used with the equipment must be three-conductor and be correctly wired to provide connection to earth ground. Improperly wired extension cords are a dangerous electrical hazard.

The fact that the equipment operates satisfactorily does not imply that the power point is properly grounded and that the installation is completely safe. If any doubt exists about the correct grounding of the power point, consult a qualified electrician.

IMPORTANT: The wires in this main lead are colored in accordance with the following code:

- Green and yellow – earth
- Blue – neutral
- Brown – live

See installation instructions below for proper hard wiring installation instructions.

CHARGE TIMES

The Elora Battery Charging Cabinet is fully compatible with all current and future Elora series batteries and delivers the advancements and proven reliability of InterActive charging.

- Elora 240 Battery – 4 Hours Nominal

NOTE: If battery is completely discharged battery charging may be delayed as the charger will enter the REJUVE function, which brings the battery up to acceptable levels for charging.

REPAIR

The charger has no user serviceable parts. Please consult Elora Customer Support Group for any service questions.

SPECIFICATIONS



THREE STAGE CHARGING METHODOLOGY

In general, the Elora Battery Charging Cabinet will deliver a Three Stage charge routine to each battery.

1. Stage One will deliver a high rate charge matched to the capabilities of the battery. During this stage, six separate cutoff methods are in operation, simultaneously, ensuring the fastest, safest charge for that battery:

CCO - This method requires the identification of the particular battery size (capacity) and chemistry, an exclusive Elora feature. The charger determines the maximum charge time for the particular battery and uses this information to ensure that overcharge conditions are avoided.

STAGE ONE will deliver a charge matched to the capabilities of the battery. During this stage, seven separate cutoff methods are in operation, simultaneously, ensuring the fastest, safest charge for that battery:

TCO - Temperature cutoff which stops the Stage one charge precisely when a temperature indicative of full charge is reached;

DI/dT - A microprocessor based algorithm which measures a rise in temperature over a specific time, very accurately indicating full charge. This method is also the recommended method for charging Ni-MH technology;

-ΔV - A method to determine the end of stage one charging by identifying a characteristic "reverse slope" of a Ni-Cd cell. Since this characteristic can be disguised by the age, temperature and the number of the cells in a battery, it can never be employed alone;

CCO - This method requires the identification of the particular battery size (capacity) and chemistry, an exclusive Elora Logic Series® feature. The charger determines the maximum charge time for the particular battery and uses this information to ensure that overcharge conditions are avoided.

FUL - This determination is made when a fully charged DIGITAL battery is returned to a charger within specified parameters of time, temperature, and battery voltage. The DIGITAL battery communicates its fully charged condition and the charger confirms the parameters and immediately indicates a fully charged condition, without additional verification.

TEMPERATURE COMPENSATED VCO – For HyTRON™ series of batteries. Similar to a VCO, however, only operates within certain temperature parameters;

I-Min – for Dionic® batteries, a seventh cutoff method is employed. The battery is charged to specific voltage and I-Min current until full charge is reached. I-Min is the "minimum current" flow required for proper cutoff

2. Stage Two charging is a "balancing" or "stabilizing" mode which calculates each battery pack type to offset any imbalance of the battery's cells, created by unequal self-discharge or any capacity mismatch of the individual cells in the pack. This stage can vary in duration from zero to as much as 16 hours, depending on the condition of the battery. The Stage Two charge for Elora Series batteries reduces current automatically as the battery charges maintaining the Lithium-ion cells at a safe voltage level.

3. Stage Three charging is the Elora exclusive Lifesaver® maintenance mode. This patented pulse routine keeps batteries fully charged, free from self-discharge - indefinitely – without damaging heat associated with a so-called "trickle charge". The Stage Three programming for Elora monitors the self-discharge of the battery, providing charge only when the battery self-discharges to about 95% of its capacity.

4. NOTE: Batteries may be kept on a charger until ready for use. The Lifesaver mode will keep them 100% charged.

NOTE: Elora recommends that each battery have a charge position, for when the battery is not in use. A battery can remain on an Elora charger indefinitely.

SPECIFICATIONS

EmPower Your Mobility

REMOVAL OF AC MAINS POWER

Elora recommends that batteries remain on the charger and plugged into AC mains for best results.

NOTE: Due to the specialized communications between the charger and the battery, only Elora Series batteries should be used in this charging cabinet.

SHUTDOWN PROCEDURE

If the unit were to require shut down, the ON/OFF switch to the unit is mounted on the front panel in the lower right corner. The “O” indicates that the power is OFF. This switch in the OFF position isolates the supply mains from the device. The system may continue to run if batteries are mounted while the device is isolated from supply mains. If full shutdown is required then be sure to disconnect all batteries as well.

ORDERING INFORMATION

F/G Part number	Description
84750123	Elora 3 Station Charging Cabinet Wi-Fi ready



RECOGNIZED COMPONENT



Intertek



Made in USA

IEC60601-1

SPECIFICATIONS



INSTALLATION INSTRUCTIONS FOR ELORA 3 STATION CHARGING CABINET

! CAUTION !

Make sure the wall meets the load capacity requirements for the cabinet being installed. The wall the unit is to be mounted to shall be ½" thick drywall or greater with studs spaced 16" on center apart from each other. Refer to local building codes for proper mounting requirements.

SAFETY PRECAUTIONS

READ THESE INSTRUCTIONS BEFORE INSTALLATION.

THIS INSTALLATION WILL REQUIRE AT LEAST 2 PEOPLE.

THE WALL MOUNTING BRACKETS MUST BE BOLTED SOLIDLY TO THE WALL.

THE MOUNTING BRACKETS MUST BE LEVEL AND SPACED APPROPRIATELY BEFORE THE CABINETS ARE INSTALLED.

ITEMS SHOULD NOT BE PLACED ON THE TOP OF THE CABINETS.

USE CAUTION WHEN HANDLING SHEET METAL PARTS, THE EDGES MAY BE SHARP.

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customersfirst@elorapower.com
1-888-77ELORA

SPECIFICATIONS



INSTALLATION INSTRUCTIONS FOR WALL MOUNTED ELORA CHARGING CABINETS

TOOLS NEEDED FOR INSTALLATION

- Drill
- 1/8" Drill Bit
- 1/2" Drill Bit
- Philips Head Screwdriver
- Level
- Square

REQUIRED COMPONENTS

- Hardware to mount brackets to the wall (Not Provided by Elora)
- A. Elora Charging Cabinet
- B. Wall Mounting Bracket
- C. #10 x 1 1/4 Self Tapping Pan Head Screws
- D. (4) Toggler Snap toggle BA Heavy Duty 3/16" Toggle Bolts
- E. Recessed Mounting Bezel (for recessed applications ONLY)

MOUNTING THE CABINET TO WALL

1. Remove the Elora Charging Cabinet from its packaging
2. Open the charging cabinet door and locate to the (2) 6-32 x 1/4 Pan Head Screws in the top charging bay that hold on the mounting plate to the rear of the cabinet. (see figure 1)
3. Remove these two screws (do NOT discard)
4. Push down on the mounting plate on the back of the cabinet. This should allow it to be removed from the cabinet.
5. Determine the vertical position at which the top of the cabinet is to be located. This location should be aligned with a stud within the wall. Failure to do so could result in the cabinet becoming dislodged from the wall and could cause injury and or damage to the unit.
6. Use the mounting bracket as a template and mark the locations on the line for the Bolts. Drill pilot holes using a 1/8" drill bit.
7. Level and secure the mounting bracket to the wall using (4) #10 x 1 1/4 Self Tapping Pan Head Screws through the center holes on the mounting plate.
8. Reattach the cabinet to the mounting plate using the (2) 6-32 x 1/4 Pan Head screws removed in step 2.
9. Plug in the cabinet using the 120V power cord supplied with the unit.
10. Switch the on/off switch, located on the bottom of the unit, to the on position.

SPECIFICATIONS



RECESSING THE CABINET WITHIN THE WALL

! CAUTION !

Recessing the cabinet within the wall requires a licensed electrician. Please consult local electric code for requirements on installing this device within the wall.

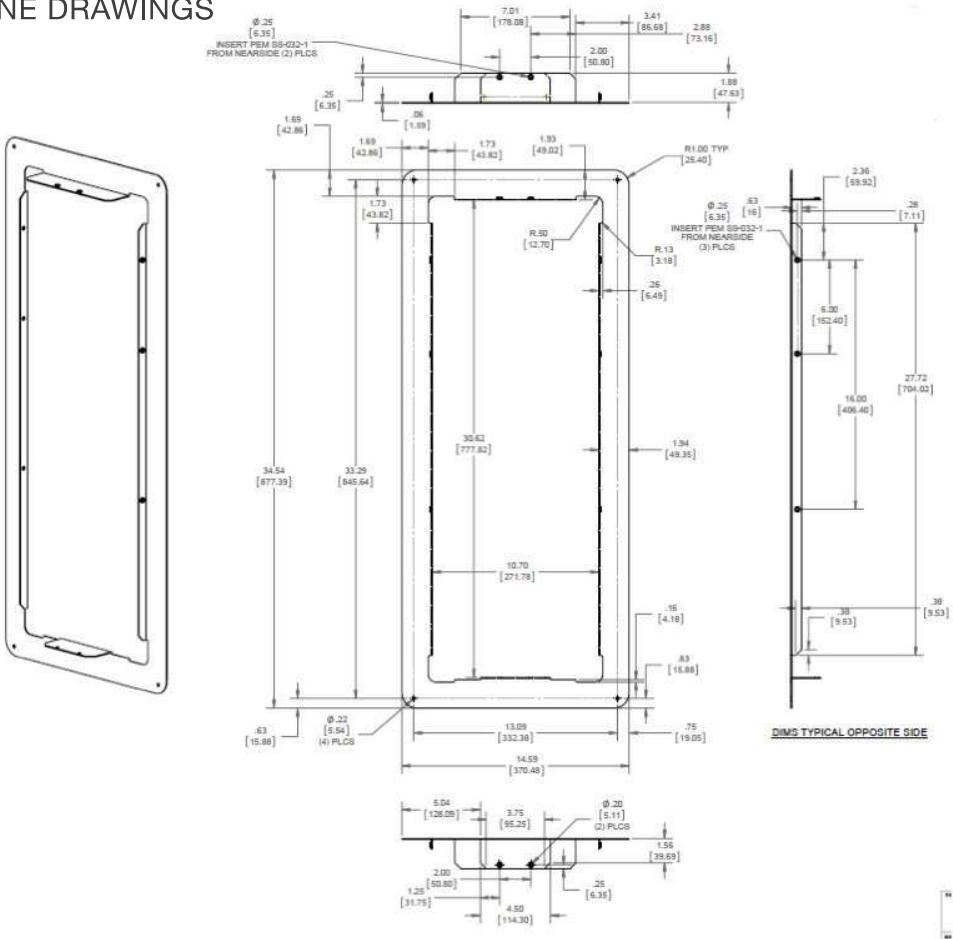
NOTE: In order to recess the cabinet into the wall you must obtain the mounting bezel (sold separately from Elora, part number 80750236). This part is not shipped as part of the standard mounting hardware and must be purchased separately.

1. Remove the Elora Battery Charging Cabinet from its packaging.
2. Remove the rubber corner caps from the cabinet.
3. Locate the conduit knockout on bottom of the right hand side of the cabinet and remove it.
4. Determine the vertical position at which the top of the cabinet is to be located. The Elora Battery Charging Cabinet is designed to be installed between two studs (16" on center). This location should be aligned between 2 studs within the wall. Failure to do so could result in the cabinet becoming dislodged from the wall and could cause injury and or damage to the unit.
5. The rough opening in the sheet rock should be approx. 31-1/8" tall and 12-1/8" wide. This will allow for the cabinet to fit inside of the opening and for the mounting bezel to attach to the wall without any open spaces around the cabinet to be visible. Use caution when removing sheetrock to ensure that no existing wiring or plumbing within the wall is disturbed.
6. After creating the rough opening use the mounting bezel as a template and mark the locations for the bolts.
7. Drill pilot holes using a 1/2" drill bit.
8. Adhering to local electric code connect the wiring to the cabinet.
9. Test the power to the cabinet by switching the on/off switch to the on position. The green LED lights in each bay should light up. Then turn power back off to complete installation.
10. Attach the mounting bezel to the cabinet using the (10) 10-32 x 3/8 Pan Head screws.
11. Level and secure the Charging Cabinet and Bezel to the wall using 4 Toggler Snap toggle BA heavy Duty 3/16" Toggle Bolts to align with the 4 corner holes on the mounting bezel.
12. Switch the on/off switch, located on the bottom of the unit, to the on position.

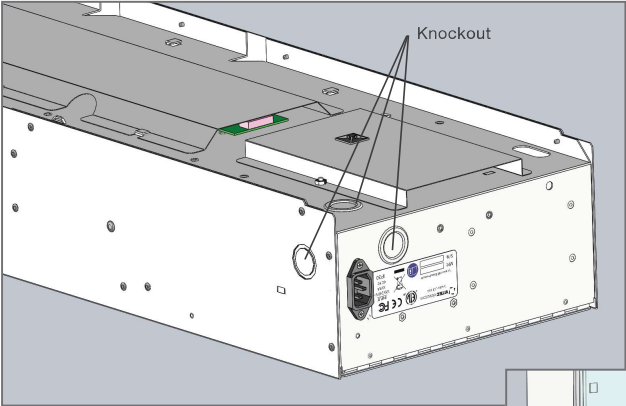
SPECIFICATIONS

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LINE DRAWINGS



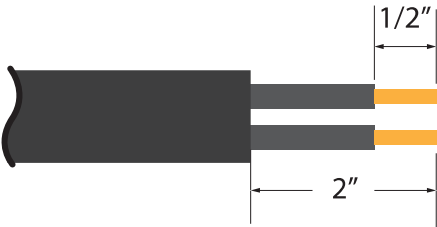
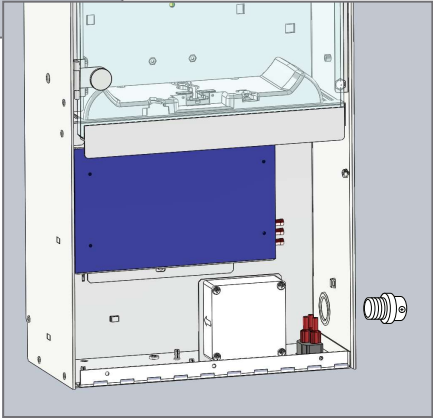
SPECIFICATIONS



Direct Wire
-Remove applicable knockout

Assemble a UL listed conduit connector in the opening

- A. Removable Retaining Nut
- B. Strain Relief

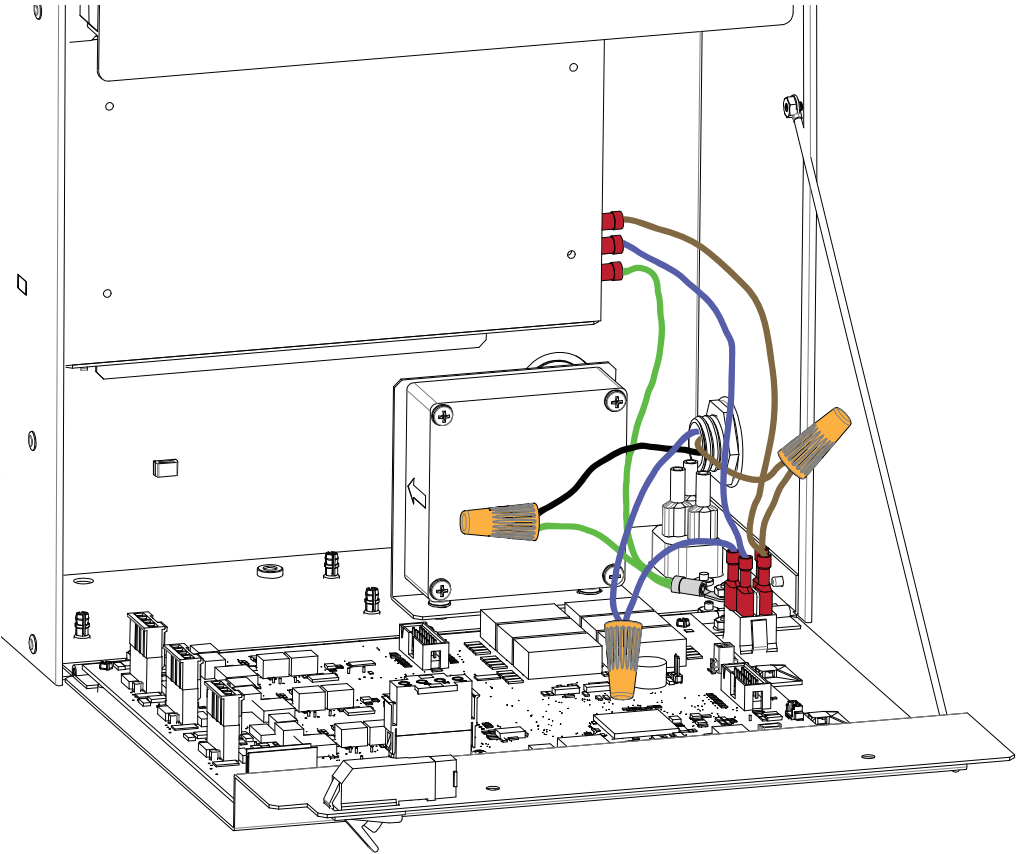


Feed the flexible conduit through the strain relief, allowing enough slack to easily attach wiring to the device.

Tighten strain relief screw against the flexible conduit.

SPECIFICATIONS

Complete wiring as shown below.



WARNINGS/PRECAUTIONS

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WARNING!

Indicates possibility of physical harm to the user in case of non-compliance



CAUTION!

Indicates possibility of damage to the equipment in case of non-compliance



FOLLOW OPERATING INSTRUCTIONS



WARNINGS!

1. DO NOT OPEN TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK. THERE ARE NO SERVICEABLE PARTS INSIDE – REFER TO QUALIFIED SERVICE PERSONNEL
2. It is recommended that you return the interface to a qualified dealer for any service or repair; incorrect assembly may result in electric shock or fire.
3. To reduce risk of electric shock, unplug the DC input (battery) before attempting any maintenance or cleaning.
4. To reduce risk of damage to electric plug and cord, pull by plug rather than cord when disconnecting anything from the unit.
5. An extension cord should not be used unless absolutely necessary. If an extension cord is used, make sure that it has a 3-prong, male plug (NEMA1-15P and 3-Prong), female receptacle (NEMA1-15R). The size of the current carrying conductors should be such that they are able to carry at least 2.5A for the length of the extension.
6. Place the unit in an area that will allow air to flow freely around the unit. DO NOT block or obstruct vent openings or install the unit in an enclosed compartment.
7. Keep the unit away from moisture and water
8. Never operate two or more units in parallel.
9. Not approved for use in the patient environment.
10. Never attempt to charge any battery that is damaged in any way.
11. **WARNING:** To avoid risk of electric shock, this equipment must only be connected to a supply mains with protective earth.
12. **WARNING:** No modification of this equipment is allowed.
13. Do not manually depress and/or override the cabinet door's interlock switch.
14. **WARNING:** This device is designed to conform to Electromagnetic Compatibility (EMC) standard IEC 60601-1-2 and will operate accurately in conjunction with other medical equipment which also meets this requirement. To avoid interference problems affecting the device, do not use the device in the presence of equipment which does not conform to these specifications.

FCC NOTICE

This equipment has been tested and found to comply with the limits for a Class A digital device pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at their own expense. This equipment has been approved by one or more agencies. All changes and/or modifications not expressly approved by Elora International, could void the users' warranty and authority to operate this equipment. There are no serviceable parts in this equipment.

WARRANTY



This warranty for the product specified in this document ("Product") is given by Elora Power. If you (the purchaser of the Product from Elora, or the person for whom the Product was purchased, if it was a gift) have any questions regarding Product applications, Product specification, or to obtain warranty service on this or any Elora product, contact the company at the address above.

THIS PRODUCT MUST BE REGISTERED WITH ELORA WITHIN **30 DAYS OF PURCHASE** TO ASSURE WARRANTY COVERAGE.

REGISTER ONLINE AT www.elorapower.com

Warranty registration, including the serial numbers of Elora chargers used with this battery, must be supplied to Elora. Elora will warranty the Product only against defects in material and workmanship for the period as follows from the date of purchase, in accordance with the terms set forth below, and then, only if the Product is used exclusively in conjunction with compatible Elora chargers. If this charger is returned to Elora for warranty service it will be required that you provide model names and serial numbers of compatible Elora chargers with which this product was used.

ELORA 3 STATION CHARGE

24 months: Elora will repair or replace the Product at Elora's option and cost.

This warranty shall be effective only if Elora receives notice of such defects in materials or workmanship during the period of the warranty.

The liability of Elora hereunder is expressly limited to a claim for repair or replacement of the Product or as otherwise stated herein at Elora's sole discretion. Notice of any claim under this warranty shall be delivered to Elora during the period of the warranty and the Product shall be returned with its packaging promptly, at your expense, to an Elora Customer Support Center or to the address above. Upon receipt of the Product and a record of your compliance with the conditions of this warranty, Elora will repair or replace the Product and return it to you, or issue a credit, as applicable. You are responsible for all shipping and handling charges to and from authorized facility. **THIS WARRANTY DOES NOT APPLY TO AND IS VOID IN THE CASE OF DEFECTS OR**

DAMAGE RESULTING FROM ACCIDENTS, DISASTER, NEGLIGENCE, MISUSE, IMPROPER INSTALLATION, IMPROPER OR UNAUTHORIZED SERVICE OR MAINTENANCE, UNAUTHORIZED REPLACEMENT PARTS OR ATTACHMENTS; OR DYSFUNCTION OR MALFUNCTION OF, OR CAUSED BY, ANY OTHER PRODUCT OR DEVICE. Misuse includes any use of the Product in other than its intended application, including the use of this Product with any charging device or accessory not manufactured by and/or specified by Elora International. This warranty does not cover, and Elora assumes no responsibility for, any equipment or devices used in conjunction with the Product.

ELORA INTERNATIONAL DISCLAIMS ANY LIABILITY FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES FOR BREACH OF ANY WRITTEN OR IMPLIED WARRANTY OF THE PRODUCT. UNDER NO CIRCUMSTANCES WILL ELORA INTERNATIONAL BE RESPONSIBLE FOR ANY SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES.

This Warranty is to be construed and enforced in accordance with the law of the State of Ohio, including the provisions of the Uniform Commercial Code as adopted and from time to time amended in the State of Ohio, and not the Convention for the International Sale of Goods. This choice of Ohio law is exclusive of any Ohio law that would require reliance on any law foreign to Ohio. Should any action of law or in equity be brought by any person under this Warranty, such action shall be brought only in the United States District Court for the District of Ohio, or in any Superior Court in Delaware County, Ohio, USA. Some states do not allow limitations on how long a warranty lasts, so the time period limitation herein may not apply to you. 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 legal rights and you may have other legal rights which may vary from state to state.

Use of unauthorized equipment in conjunction with Elora products constitutes misuse under our warranties and may limit or void those warranties. Elora does not authorize, condone, recommend, or otherwise assume any liability or responsibility resulting from the use of any battery, charger, or accessory made by Elora with any battery, charger or accessory not manufactured, produced or sold by Elora. Elora only authorizes the use of original Elora products with this Product. Use only original Elora equipment with this Product.

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customersfirst@elorapower.com
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Visit our website at
www.elorapower.com

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TOGGLER® ANCHOR SYSTEM

Technical Bulletin



SNAPTOGGLE® HEAVY-DUTY HOLLOW-WALL ANCHORS

The latest generation of the ever-evolving TOGGLER hollow-wall anchor technology...

The SNAPTOGGLE anchor is a heavy-duty hollow-wall anchor for use in walls, ceilings, or floors of materials such as gypsum board, drywall with a steel stud, concrete block, tile over drywall, etc. The anchor is pre-assembled and ready for immediate use. The ratcheting strap / locking cap assembly positions the one-piece zinc-plated (or stainless) steel anchoring channel flush against the rear of the wall. The cap slides down the straps to lock flush against the front of the wall. The straps on the outside of the wall are then easily and quickly snapped off by hand flush with the surface of the wall (no extra tools required). Holding is dependent only on a metal bolt to metal channel connection. *The SNAPTOGGLE anchor complies with all existing fire codes for critical applications.*

Benefits compared to wing toggles:

- Holds up to 2x the load
- Solid metal channel resists vibration & shock
- Pre-assembled and ready for immediate use
- Pre-installs without fixture or bolt
- Installs in a significantly smaller hole
- Automatically adjusts to thickness of wall, ceiling, or floor
- Does NOT spin—bolt installs with a screw gun
- Uses a shorter bolt—no need to carry a wing
- New plating is 7 times more corrosion-resistant
- Does NOT fall behind wall when bolt is removed; fixture can be removed and reinstalled as often as desired

ULTIMATE TENSILE PULL-OUT VALUES [lb]

Anchor	UNC thread	Drill dia.	1/2" Drywall	5/8" Drywall	*1/2" with 25 gauge stud	*5/8" with 25 gauge stud	Concrete block	1/2" steel plate	Stainless in 1/2" steel ³
BA	3/16"-24	1/2"	238	356	412	462	802	918 ¹	1,193 ¹
BB	1/4"-20	1/2"	265	356	425	464	1,080	1,288 ²	1,735 ¹
BE	5/16"-18	3/4"	270	480	439	477	1,400	1,680	2,118
BC	3/8"-16	3/4"	275	576	466	488	1,745	1,692	2,523 ¹
BD	1/2"-13	3/4"	275	576	468	513	**2,038 ²	2,605	3,150

ULTIMATE SHEAR [lb]

Anchor	UNC thread	Drill dia.	1/2" Drywall	5/8" Drywall
BA	3/16"-24	1/2"	247	298
BB	1/4"-20	1/2"	241	324
BC	3/8"-16	3/4"	292	406

* Failure measured as breakage of drywall portion

** Failure of block

¹ Stainless steel bolts used

² Hardened bolts used

³ Stainless steel channel tested with stainless bolts in 1/2" steel plate

- Industry standards recommend 1/4 of ultimate test load.
- Holding strength for a SNAPTOGGLE heavy-duty hollow-wall anchor varies directly with the strength and condition of the substrate and the bolt size—and inversely with variations in hole diameter and the distance of the load from the wall.
- All figures in pounds. Pull-out values based on independent laboratory tests done according to U.S. Government standards. They should be used as guides only and cannot be guaranteed. The age, condition, and capacity of the substrate must be considered.

SNAPTOGGLE® HEAVY-DUTY HOLLOW-WALL ANCHORS

Specifications

Description — SNAPTOGGLE Heavy-Duty Hollow-Wall Anchors (Toggle Bolts)

Material — zinc-plated 1010 cold rolled steel (or 300 series stainless steel) metal channel, high-impact polystyrene straps and handle, translucent polypropylene copolymer cap

Screw specification — UNC-thread machine screw (bolt) to match thread in metal channel

Minimum screw length — thickness of wall or ceiling + thickness of item being fastened + 1/2"

Minimum clearance behind wall — 1 7/8"

Minimum drywall thickness — 3/8"

Maximum drywall thickness — 3 5/8" for BA & BB anchors

2 1/2" for BC, BD & BE anchors

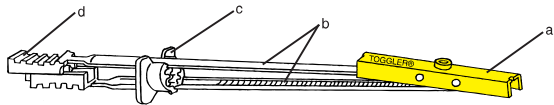
9 1/2" for BAL & BBL anchors

Also available:

- metric-threaded channels [M5, M6, M8 & M10]
- RoHS-compliant channels
- stainless steel channels

The plastic straps and cap washer are positioning and retention elements only. They do not otherwise function as anchoring elements. Holding is dependent only on a metal bolt to metal channel connection. The SNAPTOGGLE anchor complies with all existing fire codes for critical applications.

- a = anchoring channel /
zinc-plated cold rolled steel or
300 series stainless steel
b = straps / high-impact polystyrene / locking ratchet
c = cap / translucent polypropylene copolymer
d = ergonomic handle / same as straps



Code	Bolt thread	Drill Diameter	Grip Range
BA	3/16"-24 (#10-24)	1/2"	3/8" - 3 1/8"
BB	1/4"-20	1/2"	3/8" - 3 5/8"
BE	5/16"-18	3/4"	3/8" - 2 1/8"
BC	3/8"-16	3/4"	3/8" - 2 1/2"
BD	1/2"-13	3/4"	3/8" - 2 1/8"
BAL*	3/16"-24 (#10-24)	1/2"	2" - 9 1/2"
BBL*	1/4"-20	1/2"	2" - 9 1/2"

The same product codes with an "S" at the end indicate stainless steel, e.g., BB = 1/4"-20 thread in the zinc-plated channel

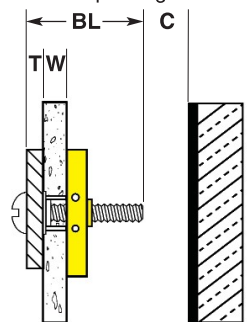
BBS = 1/4"-20 thread in a stainless steel channel

* Long straps (L) for roofing and for very thick walls or ceilings

- Gently hand engage at least one thread of bolt with channel before using screw gun to avoid cross threading the bolt.
- For maximum shear holding, orient channels vertically to floor.
- Use hardened or stainless bolts for maximum weight load.
- Enlargement of specified insertion holes size will reduce anchor effectiveness.
- Remove anchor by removing bolt, inserting screwdriver and popping channel behind wall off plastic straps with a sharp blow.
- All SNAPTOGGLE anchors meet the requirements of Type V anchors in Federal Specification FF-B-588-D (superseded).
- All bolts and threaded rods used with SNAPTOGGLE anchors must meet ANSI or HR 3000 standards to ensure safety and effectiveness.

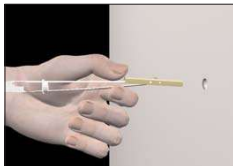
$$BL = T + W + 1/2"$$

[For min. W & max. W., see "Grip Range" at left]

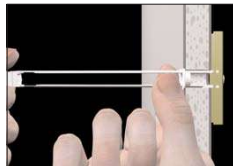


$$C = 1 7/8"$$

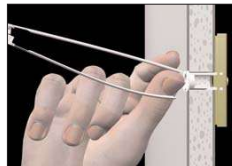
Installation Instructions



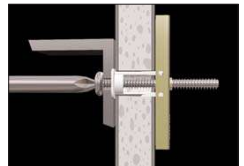
Drill appropriate size hole. Hold metal channel flat alongside plastic straps & slide channel through the hole. Minimum clearance behind wall: only 1 7/8".



Hold ends of straps together between thumb & forefinger and pull toward you until channel rests behind wall. Ratchet cap along straps with other hand until flange of cap is flush with wall.



Place thumb between straps at wall. Push thumb side to side, snapping off straps level with flange of cap.



Place item over flange. Insert bolt and tighten until snug against item, then stop. Use machine screw or bolt to match thread in metal channel.

SNAPTOGGLE® HEAVY-DUTY HOLLOW-WALL ANCHORS

Applications

- | | | | |
|-----------------------|--------------------|----------------|-------------------|
| • Flat panel TV's | • Hand rails | • Partitions | • Sinks |
| • TV mounts | • Grab bars | • Cabinets | • Heavy fans |
| • Lighting fixtures | • ADA hardware | • Shelving | • DSS antennas |
| • Window treatments | • Office furniture | • Solar panels | • Reinstallations |
| • Marine applications | • Heavy machinery | • Garage doors | • Roofs & decking |

For maximum holding in

- | | | | |
|------------------|---------------------|--------------|----------------------|
| • Cinder block | • Tile over drywall | • Greenboard | • Plywood |
| • Concrete block | • Plasterboard | • Plaster | • Steel plate |
| • Gypsum board | • Composite panels | • Stucco | • Plastic |
| • Drywall | • Cement board | • Fiberglass | • Wood studs / beams |

Benefits

- **Strong**—up to **2x the load** of an old-fashioned wing toggle
- Solid metal channel **resists vibration and shock**
 - bolt is centered in channel and positioned for precise installation
 - bolt threads never touch interior surface of hole and so can't saw through substrate
- **Save time**—at least **6 minutes** per anchor versus wing toggles
- Can use a screw gun—anchor does not spin
- **Save money**—turn a 2-person job into a 1-person job
- Use a **shorter bolt**—no need to carry a wing through the wall
- New, patented strap design with sturdier straps and smaller ratchet interval:
 - adjusts more precisely and **snaps off flush** to wall, ceiling, or floor
 - does **not break** prematurely
 - pushes aside insulation
- **Smallest installation hole** for each bolt size—
 - maintains integrity of wall, ceiling, or floor, **strengthening the anchoring**
 - ends the need to patch an oversized hole
[a 1/4" wing toggle requires a 3/4" diameter hole: **50% larger** than the 1/2" diameter hole used by the 1/4" SNAPTOGGLE anchor]
- New plating is **7x more corrosion-resistant** than B633-85 Type III/SC 1 government spec high quality zinc plating [350 hours to red rust in salt spray test versus only 48 hours for government spec]
- **Pre-installs without the bolt** to make handling of fixture easier
- **Reusable** in the same hole—remove the bolt without losing the anchor
- New **ergonomic design**—fingers grip straps more naturally and more easily with **no slipping**



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