



Features and Capabilities Overview



Safe-T-Rack Type SR-U

Battery Powered Remote Racking System for Low and Medium Voltage Circuit Breakers



Our products are built to rigid specifications by our team of designers and engineers in Tucson, Arizona. Each product is precisely engineered and custom designed to individually interface with unique breaker models, switch-gear types, and replacement breaker variants. You can be assured you are getting the most reliable products on the market, to keep your team safe.

Distance is the best arc flash protection



REMOTE SOLUTIONS, LLC

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A technician operating the SR-U system.



Introduction

Since its inception in 1992, Remote Solutions LLC has grown from a switchgear service company to developing the most effective and versatile remote racking system on the market. We are a team of engineers, switchgear technicians, and designers dedicated to turning out quality products that save lives and prevent equipment damage every day.

Reports suggest 30,000 arc flash incidents occur every year. No amount of arc flash gear can guarantee an operator's safety. So in 1992, Remote Solutions launched their first remote racking device, because distance is the best arc flash protection. Since 1992, the development of modern remote racking systems has assisted in dropping the number of work-related electrical injuries by more than 50%. This is why we are committed to produce the safest possible racking system.

"Because distance is the best arc flash protection."

We design and assemble every bracket in our 23,000 sq ft, state-of-art facility in Tucson, Arizona. We have grown from our overbuilt origins of welded parts to streamlined, lightweight, and strong materials neatly packaged in weatherproof cases. Our design is intended for a true closed-door racking system where possible and with our current innovation, no installation is necessary. The drive brackets attach with a switch magnet or locking mechanism and the racking system is ready to go.





Fail-safe Features

- Automatic recovery to a known and safe location in the event of:
 - Stall
 - Overtravel
 - Zero speed
 - Application specific features
- Battery charge indicator
- Automatic Application identification
- Torque limited output
- Emergency stop available during operation

Key Features & Benefits

- Ergonomic, lightweight, portable design
- Designed as a true, closed-door racking system when possible
- Breaker position identification
- Interlock integrated system to prevent racking operations without all interlocks satisfied
- Interchangeable tool adapters
- Upgraded software and application specific procedure checklist
- Weather-tight storage/transport case
- Racks original manufacturer's LV and MV circuit breakers, and roll replacements
- Battery powered with Milwaukee® lithium ion battery system
- Provides power for dozens of operations (application dependent)
- Intelligent app location management limits user errors



Key Features & Benefits Cont.

Safe-T-Rack allows for an operator to rack a breaker while remaining at a safe distance of up to 150 feet. This distance provides additional protection against the deadly effects from the possibility of an arc flash incident. Distance is the best guarantee of safety during the racking process and provides a unique advantage over cumbersome flash suits designed only to decrease exposure to burns.

Other features include:

- Torque monitoring and control prevents costly racking mechanism damage
- Portable Smart Drive Bracket that incorporates breaker interlock automation where applicable
- Supports original manufacturers' circuit breaker applications, as well as roll-in replacements
- Provides confident blind use during closed door racking
- Displays real time breaker racking position and turn count
- Custom universal modular design allows the SR-U system to rack virtually any breaker type
- NFPA & OSHA compliant, ANSI tested
- UL rated battery charging system
- Brushless DC motor
- Built-in fail-safe measures to ensure maximum operator safety by moving the breaker to a safe location

Universal Design

Our Motor Drive Unit (MDU), pictured below, secures to over 200 different Smart Drive Brackets (SDB) to rack in/out every breaker in the field. If we don't have a SDB for a breaker, we design and build them in-house. The universal MDU does the hard work.

Our SRU SDBs are zinc plated, lightweight, and durable. With options including a No Mod (no

modifications to the cubical or breaker with installation) series, we are constantly innovating our product to define the industry standards.

Every bracket engaged with the MDU communicates with a Handheld Controller so every unique racking function can be controlled.



ABB Advac CF

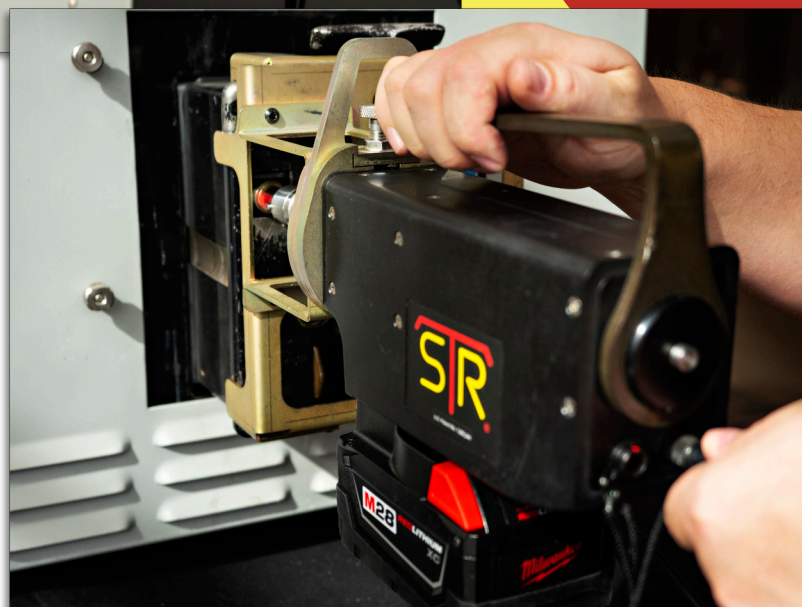


ABB K-Line No Mod



System Components



System Components for SR-U-PK-01

SR-U Portable Kit Contents:

- 28V Battery (SR-U-XCB-28)
- Motor Drive Unit (SR-U-MDU)
- 50-foot Control Cable (SR-U-CC-50)
- Handheld Controller (SR-U-HHC)



Universal Handheld Controller



1. Universal Handheld Controller (SR-U-HHC)

We designed the SR-U Handheld Controller (HHC) to operate with the SR-U family of tools. The operator has complete control and monitoring of every step of the breaker racking sequence.

The HHC is packaged in a high-impact polymer case designed to withstand the daily wear and tear associated with heavy, industrial, and utility environments.

Coupled with any of our Smart Drive Brackets, the Handheld Controller is the lightest and most durable operating tool on the market.



Motor Drive Unit (SR-U-MDU)



The SR-U Motor Drive Unit is rated at 700W and has an integrated gearbox, digital drive unit, closed loop speed, and motor control. It's packaged in an impact resistant Delrin® housing and features a quick-connect tool coupling, and rotatable carrying handle.

Battery (SR-U-XCB)



The SR-U family proudly uses Milwaukee® M28 series cordless power tool batteries. These batteries provide ample energy for hundreds of different racking applications in the Safe-T-Rack lineup. Two batteries are provided in the portable kit for quick changes in the field.

Cables (SR-U-CC-50)



Included with the Handheld Controller, the SR-U control cable features high-cycle duty mating connectors. The cable assembly is available in 50-foot segments that can be tethered with three cables for up to 150 feet of safe distance for the operator.

AC to DC Power Supply Adapter

The AC to DC Power Supply is an alternative option for powering the SRU system. It comes in a rugged, weather-protected case with 12' of cable to ensure easy set up and operation.

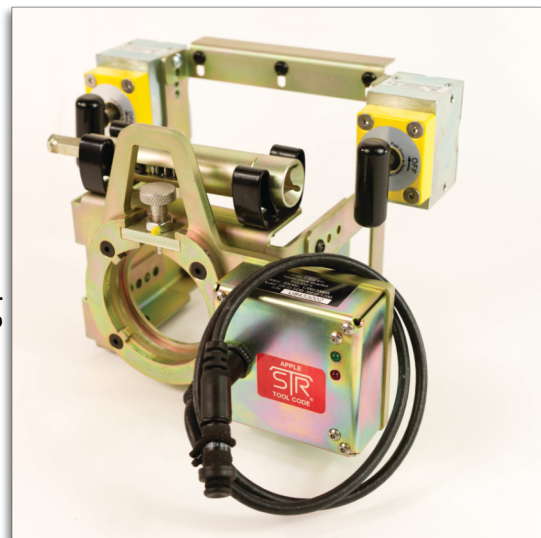
It converts 120 VAC 60 HZ of power to a 28VDC regulated DC output to get the job done right, every time.



Smart Drive Bracket (SR-U-SDB-**-***)

Our SRU Smart Drive Bracket system allows us to custom-make a specific bracket for every individual breaker model. If we don't already have a bracket designed for your breaker in our inventory of over 300 different designs, we'll custom design one to fit your equipment.

Each bracket includes embedded logic and control cards containing application-specific parameters and automation control firmware. Our brackets know the racking procedure of the breaker without any user inputs, minimizing the chance of human error.





Remote Open/Close

SB and Push Button Switches

The SR-U product line not only performs the racking function, it also acts as a remote open/close device. The system can operate pistol grip control switches, push buttons, or activate levers. Using the same components that rack a breaker in/out, the Remote Open/Close line proves to be the most diverse operating system on the market.



SR-U SB and PB Operators

Featured here are the "SB" and "PB" switch operators. They magnetically mount to the front of the breaker or switchgear and feature our exclusive Force Feedback Technology to prevent any damage to the switch handles or buttons on the breaker.

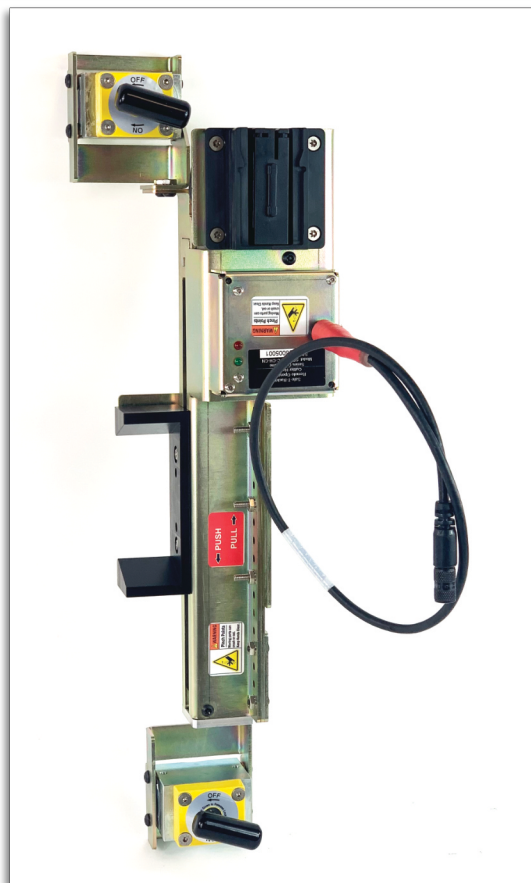
The control cable is connected to the switch operator and the Handheld Controller to operate the switches from a distance of up to 150'. All packed neatly in an impact and water resistant case, this portable, lightweight, and durable design is the most advanced operating switch system on the market.



SR-U 5kV Micro-Rupter ROC

The push/pull Molded Case Circuit Breaker operator for the Series C breaker, depicted here, is a “No Mod” device that uses switch magnets to mount to the cubicle door. The versatility of using magnets allows for the bracket to be mounted in any orientation for numerous breaker configurations.

Force Feedback technology is designed into every switch operator. This exclusive feature monitors the force required to operate the switch or push button. If the force applied by the operator is too great, the system backs off and returns to a safe location, notifying the operator.



Applicable ROC Systems

- OEM Circuit Breakers with Push Buttons and Electric Control Breakers
- Medium voltage contactors and starters
- Fused disconnect switches (rotary and lever operated)
- Molded Case Circuit Breakers (lever, rotary, slide handles)
- Built to custom needs on request
- Schneider Electric R Frame MCCB
- Cutler Hammer Series C MCCBs



Ampgard MV Starter

Guide Form

Specifications

1. The Remote Racking System shall be highly portable by a single user.
2. The Remote Racking System shall not bypass any switchgear manufacturer supplied safety systems, interlocks, etc.
3. The Remote Racking System shall be battery operated such that it can be used regardless of the availability of an AC line power.
4. The Remote Racking System shall be supplied with interchangeable batteries such that in the event of a low or drained battery, it can be replaced with a charged one.
5. The battery charging system shall have all relevant regulatory approvals and be available for all common worldwide line power standards.
6. The Remote Racking System shall have multiple redundant mechanisms to both limit the possibility of a user incorrectly operating the device and also prevent possible damage to the switchgear.
7. The Remote Racking System shall permit the end user to perform all necessary operations without tools.
8. The Remote Racking System shall have automatic recovery to a known safe location in the event of:
 - Turn count mismatch
 - Excessive torque
 - Failure to observe interlock change of state when expected (application specific)
 - Loss of data communications



Continued

9. The Remote Racking System shall provide both application specific and site specific procedure checklists to promote user awareness and improve human performance.
10. The Remote Racking System shall have a secure interface that allows adjustment of application specific parameters with external tools. The security of this mechanism is such to prevent everyday users from making such adjustments while permitting installers and trained maintenance personnel to make such adjustments as necessary.
11. The Remote Racking System shall have various levels of data logging incorporated such that failures can be reconstructed and studied to prevent future recurrence.
12. The Remote Racking System shall rack LV and MV circuit breakers, starters, and switches.
13. The Remote Racking System shall have a cable connecting the racking operator to the user interface to provide absolute noise immunity and help the user recognize the distance from the switchgear.
14. The user interface shall be rated to a minimum of IP54, and be capable of withstanding 5g impact without impairing operation.
15. All cable connections shall be rated to a minimum of 2,000 mating cycles.
16. The user interface shall make use of high grade push-buttons with firm tactile feedback suitable for use with multi-layer work gloves.
17. Drive Bracket with embedded application intelligence. .
18. The Remote Racking System will be the Safe-T-Rack SR-U System.



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by remote solutions, llc

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For any questions about our product, ordering from our dealers, timeline, or general inquiries contact our sales team above and follow the QR link to our website.

