



3M™ Cable Quality Preparation System

Data Sheet

May 2026



Figure 1 – The 3M™ Cable Quality Preparation System including the rail with integrated controller, head, remote controller, tablet, and camera.

Product Description

The 3M™ Cable Quality Preparation System (CQPS) is designed to assist an installer in preparing medium voltage cable for cable accessory installation, and to improve the reliability, consistency, and efficiency of cable preparation. The CQPS cuts or scores (a partial-depth cut) the various layers of non-energized medium voltage power cables (jacket, insulation, and insulation screen – also referred to in this manual as “semi-con”) to specified lengths as part of the cable preparation process prior to installing 3M cable accessories.

Potential Applications & Product Features

- Pre-programmed cutback measurements based on the specific cable and cable accessory being used
 - Stores cutback recipes for different cable + cable accessory needs
 - Prepares medium voltage cable in less than 10 minutes (not including manual metallic shield removal)
 - Camera vision system precisely measures the diameter of each cable layer and automatically sets the blade depths accordingly
 - Detailed log record created and cable cross-section image captured for each cable preparation attempted with the system
 - Primary tool is powered by 120VAC standard line cord/power at 10A (the control tablet is powered by a separate 120VAC adapter)
 - The device can be mounted to carts or other structures for transportability and use. Mounting reference designs are available from 3M (for example portable carts with component holders and component layout)
 - Mounting holes are available on the rail for custom mounting options (contact 3M for mounting hole patterns)
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Safety Features	Two emergency-stop buttons and an interlock switch at the head cover will stop blade rotation when activated.
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Kit Contents	• Rail with integrated controller • Head, which contains the following parts: ◦ Bearings ◦ Jacket blade ◦ Insulation blade ◦ Insulation Screen (Semi-con) blade holder ◦ Insulation Screen (Semi-con) blade ◦ Motors for blade rotation and radial position of blades and bearings • Power supply • Camera • AAEON RTC-1010 or Panasonic Toughbook G2 10" Rugged Tablet • Remote controller • Cable-centering gasket for measurement (cable size specific) • Camera adapter for measurement (gasket holder) • Cable-centering insert for preparation (cable size specific) • Calibration jigs (25 mm, 35 mm, and 45 mm) • Head-to-rail calibration rod • Connecting cables • Power cables • Tool kit for general maintenance of CQPS
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Properties

Application Range*

Cable Properties	Minimum	Maximum
Outer Diameter (OD) Over Jacket	1.0 in (25 mm)	2.0 in (51 mm)
Conductor Size	1/0	(cable OD is below max OD)
Nominal Insulation Thickness	0.175 in (4.45 mm)	0.420 in (10.6 mm)

Cable shielding type: Tape shield

Cable insulation screen type: Peelable (easy-strip)

Cable insulation type: XLPE or EPR

**The system may be applicable for cables outside of the specific construction detailed above. Please contact a 3M representative to discuss your application.*

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Blade Lifetimes

Blade Type	Recommended Blade Replacement (# of uses)
Jacket	250
Insulation	250
Semi-con	85

Engineering Spec. Below specifications apply to the base rail with integrated controller and mounted head.
38.0"L x 15.5"W x 10.7"H (96.5 cm X 19.4 cm X 27.1 cm)
70 lbs. (31.8 kg)
Power supply, cords, camera, tablet and remote control will add approximately 12 lbs.

Shelf Life & Storage This product should only be stored and operated between 23°F and 95°F (-5°C to 35°C) in a humidity-controlled environment. It is not intended for unprotected outdoor use.

Regulatory Information & Availability For availability and regulatory information regarding this product, please contact 3M via email: 3mproducts.electricalmarkets.us@mmm.com or phone: 1-800-245-3573.

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