POWER-TREX®

Medium Voltage Power Solutions 5kV – 35kV

TPC WIRE & CABLE CORP.
EXPECT HIGH PERFORMANCE®

Quality & Service When You Need It Most

- **Cable —** Extremely durable high flex mobile substation cables 5kV-35kV simplify installation

- **Connector Services —** Medium voltage connections installed by certified technicians built to highest industry standards per ANSI/NEMA WC 58-2008, 6.17; supporting test documents provided for traceability and quality standards

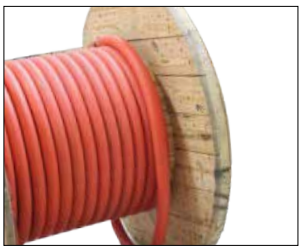
- **In-House Engineering Services —** Provided to assist with initial design and ongoing support

- **Deep Inventory of Cable —** Significantly reduces lead time and requires no minimum runs

- **Cable Trailer Options —** Provide safe storage and deployment of medium voltage cables, protecting personnel from harm and equipment from damage

When emergency or maintenance requires installation of a mobile or portable substation, TPC provides the electrical power connections to make the job fast, easy, and safe.

TPC Wire & Cable is a leading supplier of high quality, flexible, medium voltage cables ranging from 5kV -35kV. Our in-house engineering team provides technical support to ensure that cables, connectors, and electrical systems all work together seamlessly. We have provided thousands of cable assembly terminations for customers across the globe, so you can rest assured that our experienced team will not only provide a high-quality product but also ongoing support to make sure you have exactly what you need to get the job done right.



High-Performance Cable – Flexible medium voltage cable designed to withstand abuse in emergency and temporary power situations

Connector Services – Certified technicians that install a wide variety of customer-specified terminations

Electrical Testing – Complete assemblies tested and documented prior to shipping to verify workmanship and traceability

Storage & Deployment – Customizable work trailers that ensure fast, easy, and safe deployment in your time of need

Flexible Medium Voltage Cables

Super-Trex® Type MV-105 Flexible Medium Voltage Single Conductor Power Cable

- Useful where tight spaces, small bend radius, or otherwise difficult installations are encountered
- Braid shield system improves flexibility, allowing users to maneuver into place by hand
- Tin-coated bunch-stranded copper conductors extend flex-life in harsh environments
- TSE jacket protects against flame, oil, sunlight, extreme heat/cold, weather, impact and abrasion

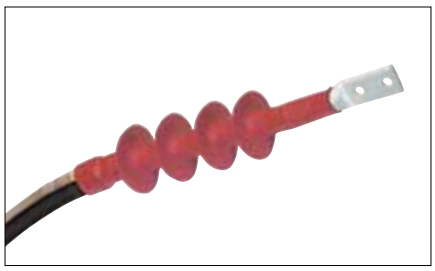
Super-Trex® Medium Voltage Single Conductor Power Cable

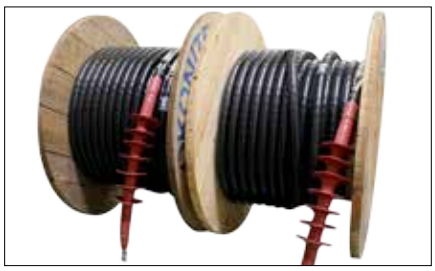
- Commonly used as flexible mobile substation cable, excellent overall flexibility and durability
- Shielded medium voltage cable designed to ICEA standards
- Ideal where flexibility and ease of use is required
- Tin-coated bunch-stranded copper conductors extend flex-life in harsh environments
- TSE jacket protects against flame, oil, sunlight, extreme heat/cold, weather, impact and abrasion

Super-Trex® Unshielded Jumper Cable, 15kV

- Ideal where a flexible medium voltage cable is needed
- Semi-conductive tape placed over tinned copper conductors prevent insulation compound from bonding to the conductor
- Intended for temporary use only
- Not for use in applications requiring shielded cable

Connector Services

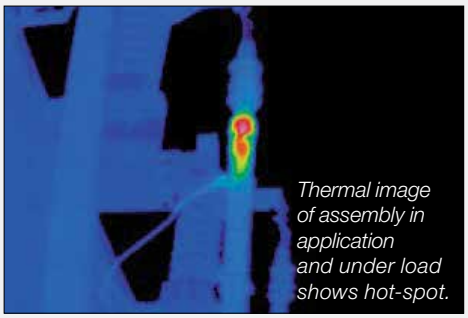




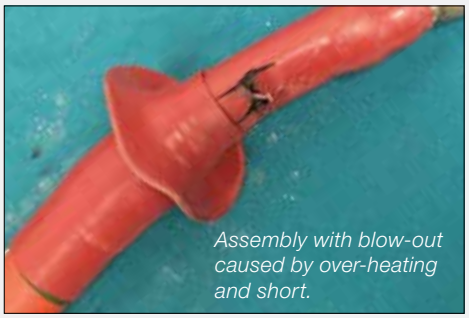
- Connectors added to TPC's high-quality, flexible medium voltage cables to deliver a complete ready-to-install assembly
- Terminations installed by factory-certified installers
- Electrical testing in accordance with ANSI/NEMA WC 58-2008, 6.17 - 100% AC or DC Hi-pot testing prior to shipment
- Documentation provided to ensure quality workmanship and traceability

Avoid Using Aged/Untested Cable Assemblies

Actual failure determined to have been caused by damage to insulation during installation of the termination kit.



Thermal image of assembly in application and under load shows hot-spot.



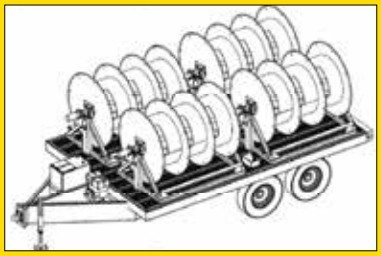
Assembly with blow-out caused by over-heating and short.

Storage & Deployment Solutions

Work safety requirements and the potential for natural disasters may dictate the need for a storage system designed to keep materials in optimal condition. TPC offers work trailer solutions that protect cable while in storage and ensure fast, easy, and safe deployment in temporary and emergency power situations. Customizable to match your unique needs, TPC engineers and product managers will work with you to deliver a trailer system that fits specifications for safety, theft prevention, ease of use, rapid deployment, and more. While the possibilities are endless, TPC is the constant — we are your single source from design to implementation.

Custom Designed to Meet Your Needs

TPC Wire & Cable Corp. offers custom-engineered trailer systems that are designed using specific application and environmental information supplied by the customer. These solutions represent a unique and valuable service offered by TPC, whose engineers are experienced in the electrical, mechanical, chemical, and industrial engineering disciplines. TPC engineers will assemble the critical components into a final design that delivers a long-lasting, cost-effective alternative to the constant replacement and grueling manual deployment of ordinary cable.



Visit tpcwire.com/trailer to view our demo video.

Energy Company Discovers A Better Way with TPC

PROBLEM:

A leading energy company was looking for a better way to store and deploy medium voltage cables. The customer's existing method for storage & deployment consisted of a standard trailer from which cables could be deployed in just one direction – requiring the trailer to be parked in the exact orientation necessary to allow cable to pay off in the desired direction. Because space was often tight and/or visibility was poor when the need arose, feasibility was an ongoing issue as well as occasional damage to the trailer, equipment, and cables due to imperfect positioning of the trailer. Personnel were also at risk for injury due to the antiquated, labor-intensive methods that were being used to load, store, and deploy cable.

SOLUTION:

TPC's engineering team collaborated with the customer's engineering team to design an improved trailer system featuring a pivoting reel turret, which allows operators to pull up to the site from any direction, park the trailer, and then easily rotate the reel on the deck of the trailer to achieve the desired positioning. TPC also provided all medium voltage cables required for the project, which were cut to length, terminated, and tested prior to loading.

RESULT:

The customer is now able to properly store medium voltage cables, efficiently deploy them when needed, and safely protect operators from harm and equipment from damage.

Visit tpcwire.com/trailer to view the full case study & video!

Ordering Information

VOLTAGE/ JACKET COLOR	PART NO.	CABLE SIZE	CONDUCTOR STRANDING	AMPACITY[1]	INSULATION THICKNESS (IN)	JACKET THICKNESS (IN)	NOMINAL O.D. (IN)	WT. (LBS) PER 1000'
5kV YELLOW	70502	2	259	190	0.110	0.125	0.975	674
	70510	1/0	266	260	0.110	0.140	1.060	825
	70520	2/0	323	300	0.110	0.140	1.170	1039
	70540	4/0	532	400	0.110	0.155	1.300	1393
	70525*	250	627	445	0.120	0.155	1.300	1477
	70535	350	888	550	0.120	0.170	1.490	1926
	70550	500	1221	695	0.120	0.190	1.700	2662
8kV BLACK	70840	4/0	532	400	0.150	0.155	1.37	1483
15kV ORANGE	70102	2	259	195	0.210	0.155	1.203	881
	70110*	1/0	266	260	0.210	0.155	1.325	1147
	70120*	2/0	323	300	0.210	0.155	1.350	1226
	70140*	4/0	532	400	0.210	0.170	1.497	1594
	70125*	250	608	445	0.210	0.170	1.550	1760
	70135* †	350	888	550	0.210	0.190	1.765	2364
	70150* †	500	1221	685	0.210	0.190	1.900	2937
25kV RED	70201*	1	259	225	0.260	0.170	1.450	1170
	70210*	1/0	266	260	0.295	0.170	1.500	1350
	70220*	2/0	323	300	0.295	0.170	1.560	1507
	70240* †	4/0	532	395	0.295	0.190	1.713	1909
	70225*	250	627	440	0.295	0.190	1.765	2085
	70235* †	350	888	545	0.295	0.190	1.886	2517
	70250* †	500	1221	680	0.295	0.205	2.048	3168
	70275 †	750	1850	870	0.295	0.205	2.253	4253
35kV BLACK	70310	1	259	225	0.340	0.170	1.623	1465
	70316	1/0	266	260	0.340	0.170	1.725	1632
	70320	2/0	342	300	0.340	0.205	1.840	1898
	70340 †	4/0	532	395	0.340	0.205	1.895	2235
	70325 †	250	608	440	0.340	0.205	1.960	2429
	70335 †	350	888	545	0.340	0.205	2.100	2901
	70350 †	500	1221	680	0.340	0.205	2.280	3396

NOTES: (1) Allowable ampacity per conductor of insulated single conductor in air based on conductor temperature of 90°C and ambient air temperature of 40°C. NEC 2011 Table 310.60(C)(69).
**CSA Approved. †These cables include rayon reinforcement.*

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