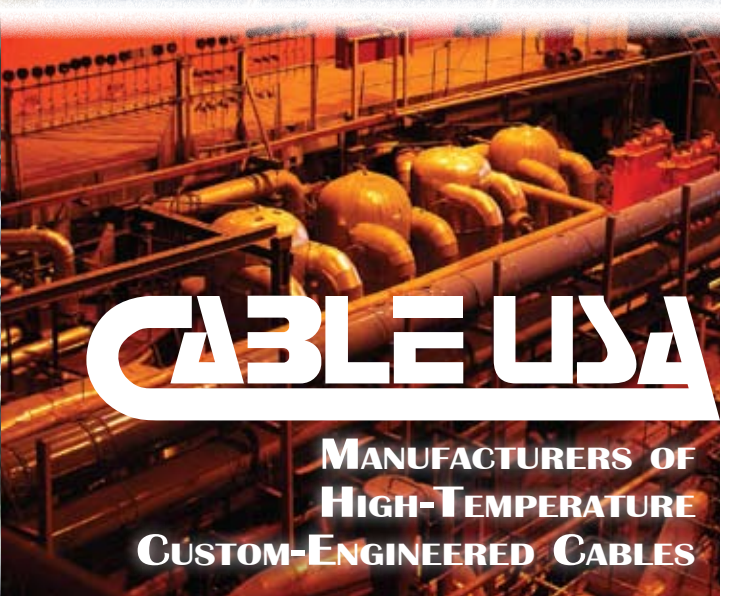
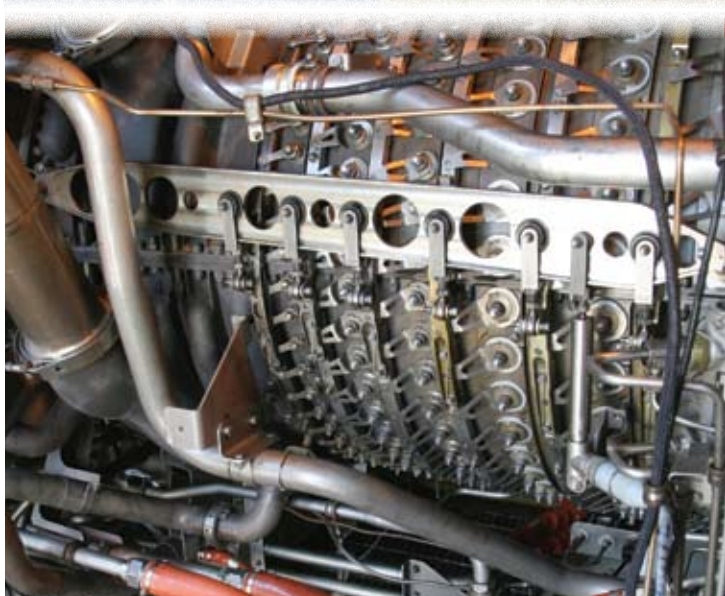


# High Temperature and Specialty Cables for the Power Generation Industry



**CABLE USA**

MANUFACTURERS OF  
HIGH-TEMPERATURE  
CUSTOM-ENGINEERED CABLES



A Global Leader in Custom-Engineered Wire and Cable for the Power Generation Industry

Cost-effective, rugged and dependable, **FLEXIBLE ETFE/ETFE (Ethylene Tetrafluoroethylene Fluoropolymer) Control, Instrumentation and tray cables** are much lighter in weight and more compact than rubber cables, up to 40 percent smaller in diameter and are designed to surpass today's demanding engineering specifications:

- Provides reliable data and signal transmission performance
- Easily tolerates severe mechanical stress, extreme temperature variation including arctic conditions, corrosive chemical exposure and are chemically inert.
- Fluoropolymer exterior offers advanced resistance to cut-through, crush and abrasion damage

**ETFE/ETFE Control and Instrumentation cables** are highly cost-effective:

- Facilitate the use of smaller, more cost-effective connectors, trays, fittings and conduit
- Reduced cable pulling time and faster terminations
- Reduced operational or emergency shutdowns
- Easier cable rack terminal pull-off and will not stretch like rubber products

**ETFE INSULATED TRAY CABLE TYPE TC 150°C, 600V:**

- 600V, 90° damp or dry 150°C special applications
- Multi-conductor and Class I Division 2 rated

**FG2000® – CABLE USA'S PREMIER EXTREME HEAT PRODUCT:**

- Designed for use in continuous heat



- conditions of 450°C/843°F (UL)
- Tolerates extreme heat up to 538°C/1000°F (non-UL)
- Remains flexible to -160°C/-320°F
- Engineered to resist moisture, acids, alkalis, chemicals, oils, physical and mechanical abuse

**FG2000® Features:**

- High insulation resistance, advanced dielectric strength and low dissipation factor
- Superior tensile strength, tear and impact resistance
- Moisture barrier intact up to 260°C
- Highly resistant to radiation.
- Fused PTFE layer under the glass braid, mica and fiberglass
- Inorganic materials

**FEP INSULATED INSTRUMENTATION CONTROL CABLES (Fluorinated Ethylene Propylene) - 200°C, 600V**

Features:

- Multi-conductor Fluorinated Ethylene Propylene (FEP)
- FEP – exceeds requirements of 70,000 BTU cable tray fire propagation test (IEEE-383)
- Passes UL VW-1 vertical flame propagation test

**PFA INSULATED TRAY CABLE (Perfluoroalkoxy fluoropolymer) 250°C, 600V UL Type TC**

Features:

- Multi-conductor UL listed tray cables
- PFA insulation and jackets
- 600V, 90°C damp or dry locations
- 250°C special applications

**FEP, PFA Options:**

- Cable-clad exterior armor (galvanized steel or aluminum interlocked armor available with or without jacket), tin-plated copper-braid shield and aluminum Mylar® shielding for pairs, triads or overall shielding.

**Applications where FG2000® High-Temperature Cables, PFA Insulated Tray Cable 250°C Type TC UL 600V, excel include:**

- Non-safety areas in Nuclear Power Plants - Teflon® cables, ETFE, FEP, PFA
- Control Rooms - Teflon® cables including Power, Control, and Instrumentation Cables, ETFE (150°C), FEP(200°C), PFA(260°C)
- Installation in trays - Teflon® cables, ETFE, FEP, PFA), and UL Power Limited Tray Cables (PLTC)
- Steam turbines (FG2000)
- Data Processing Centers (DP-1P Cables)
- High Temperature Thermocouple
- FG2000® Pressurized Heaters in non-safety areas of "PWR" reactors

*For more information on applications, technical data sheets are available.*



# Premier Products from



## ETFE-FEP-FG2000®

Product	Part Number	Description	AWG Size	No. of Conds.	Insulation Thickness	Jacket Thickness	Overall Diameter	Net wt. lbs./m ft.
ETFE Tray Cable 150°C/200°C								
	181837C6	37/C 18 ETFE Tray Cable	18	37	0.016	0.046	0.646	344
	181637C6	37/C 16 ETFE Tray Cable	16	37	0.016	0.046	0.723	482
	181219C6	19/C 12 ETFE Tray Cable	12	19	0.016	0.046	0.705	549
	180605C6	5/C 6 ETFE Tray Cable	6	5	0.026	0.046	0.783	576
FEP Tray Cable 200°C								
	181837C6	37/C 18 FEP Tray Cable	18	2	0.021	0.062	0.748	474
	181637C6	37/C 16 FEP Tray Cable	16	37	0.021	0.062	0.825	623
	181219C6	19/C 12 FEP Tray Cable	12	19	0.021	0.062	0.785	660
	180605C6	5/C 6 FEP Tray Cable	6	5	0.031	0.081	0.880	720
FEP 200°C								
	321602S1.012	2/C 16 Shield 200 C	16	2	0.013	0.012	0.199	37
	321603S3.012	3/C 16 Shield 200 C	16	3	0.013	0.012	0.212	49
	321404U3.015	4/C 14 Unshield 200 C	14	4	0.014	0.012	0.252	68
	321407U3.015	7/C 14 Unshield 200 C	14	7	0.014	0.015	0.312	117
	321203U1.015	3/C 12 Unshield 200 C	12	3	0.014	0.013	0.266	78
	321005U3.015	5/C 10 Unshield 200 C	10	5	0.016	0.016	0.410	201
FG2000® 450°C/538°C								
	491203U3	3/C #12 FG2000	12	3	0.037	0.039	0.430	140
	491204U4	4/C #12 FG2000	12	4	0.037	0.039	0.470	181
	491403U1	3/C #14 FG2000	14	3	0.034	0.038	0.370	100
	491603S5	3/C #16Shielded FG2000	16	3	0.034	0.032	0.400	110
Thermocouple 150°C/200°C/250°C      Consult factory. We offer many designs in ETFE, FEP, PFA and FG2000®. 450°C/538°C              We also offer Thermocouple Extension Cables.								
All data is subject to change. Please confirm dimensions and weights with factory before ordering.								



**FACILITY HISTORY**

Business Established ..... 1984  
Present Building Constructed ..... 1987  
First Expansion ..... 1989  
Second Expansion..... 1994  
Third Expansion..... 2008

**FACILITY SIZE**

Land Area..... 3.37 Acres  
Total Size of Facility..... 66,000 Square Feet  
Office Space ..... 6,000 Square Feet  
Factory / Production..... 57,000 Square Feet  
Distribution / Warehouse..... 3,000 Square Feet  
Insulated Fine-Wire Building ... 10,000 Square Feet

**PRIMARY PROCESSES**

Cable USA is an integrated facility which houses all engineering, manufacturing, quality control and administrative operations under one roof.

**PRODUCT TYPES AND PROCESSES**

- Thermoplastic Fluoropolymer Extrusion – Specializing in FEP, ETFE, and PFA
- Textile Braiding
- Stainless Steel Braiding
- Short-Run / Specialty Cables
- Miniature Multi-Conductor Cables
- Extreme-Temperature Applications
- Composite Cable Design
- Coiled / Retractable Wire and Cable

**MATERIALS USED**

- FEP
- ETFE
- PFA
- Polyurethane
- Silicone Rubber
- Polyester Elastomer
- E-CTFE
- Polyethylene
- Polypropylene
- PVC
- PVDF
- High-Temperature, Low-Smoke Zero Halogen

**EXTRUSION CAPABILITIES**

- (9) Hot-Melt Extrusion Lines
- (2) Silicone (HAV) Extrusion Lines



**CONDUCTORS AND ADDITIONAL MATERIALS**

- All types and platings of copper conductors
- Copper-alloy high performance conductors
- Thermocouple alloys
- PTFE tape
- Mica tape
- Ceramic tape
- Fiberglass tape
- Fluoropolymer tape (sintered, un-sintered, conductive, colored)
- Shielding Braids (copper, NPC, alloy)
- Armoring Braids (SS302, 304, 316)
- Textile Braids (glass, K-fiber)

**PRODUCT SIZE RANGE**

**MINIMUM**

- #40 AWG / .002 wall thermoplastic
- #24 AWG / .015 wall silicone

**MAXIMUM**

- 1100 MCM
- 3.000" O.D. (braided jacket)
- 2.000" O.D. (high-temperature jacket)
- 1.750" O.D. silicone rubber

Maximum Reel Size: 84"

**SOME OF OUR SPECIALTY CABLE TYPES**

- High-Temperature Wire and Cables
- Coil Cords
- Very Large Cables
- Flat-Festoon Cables
- Vented Cables
- Pump Cables
- Custom Products per Customer Specifications

**SYNERGIZING TECHNOLOGY**

Cable USA has the unique ability to provide a comprehensive family of high-temperature wire and cable products to address the specialized needs of industry. With more than 75 years of combined experience in solutions for the Wire and Cable industry, our World Class team of polymer scientists and engineers are uniquely qualified to develop solutions to new technology challenges.



**MANUFACTURERS OF  
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A Marmon Wire and Cable/Berkshire Hathaway Company