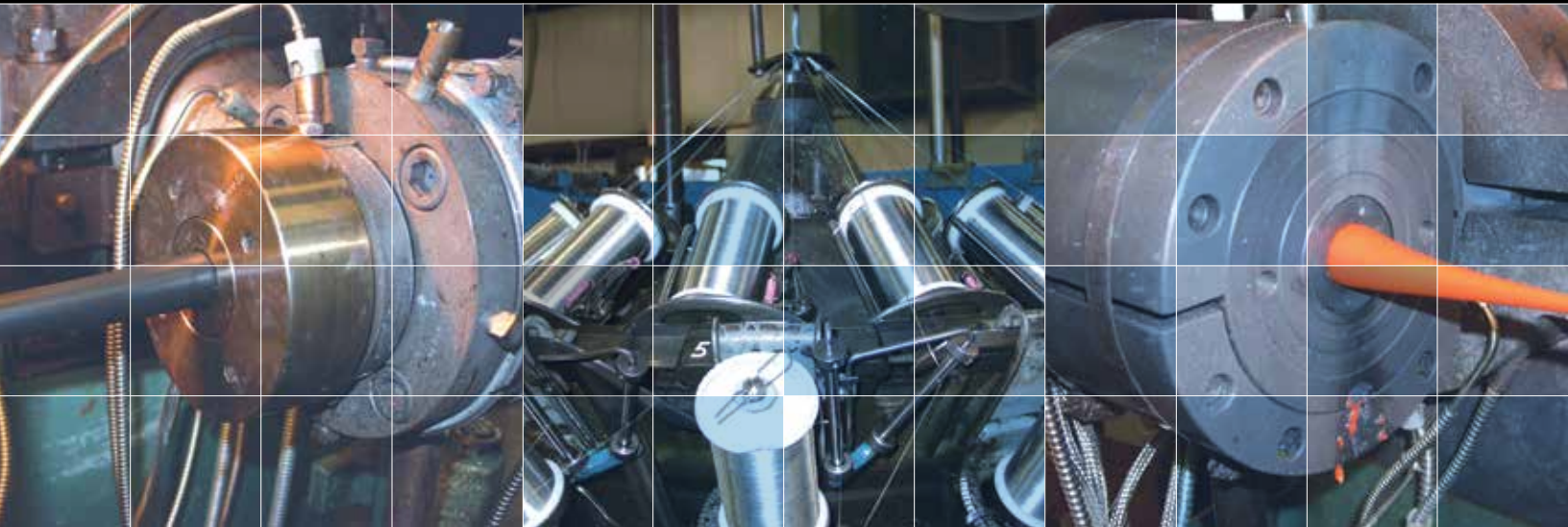


CUSTOM SOLUTIONS



CUSTOM DESIGNED & ENGINEERED WIRE & CABLE SOLUTIONS

For Specific Application Requirements



TPC WIRE & CABLE CORP.
EXPECT HIGH PERFORMANCE®

TPC Wire & Cable Corp.

Customer Testimonial

Custom Designed & Engineered

TPC Wire & Cable Corp. provides custom engineered products designed with application and environmental information supplied by the customer. These products are built specifically to solve a particular problem for an individual customer and represent a valuable service. The engineers who solve these problems are from the electrical, mechanical, chemical and industrial engineering disciplines.

TPC's custom designed and engineered high performance cables are designed for the most demanding industrial applications. Cable designs include:

- Chemical Resistant Cables
- Composite Cables
- Custom Data Communications Cables
- Custom Thermocouple Cables
- High Temperature Cables
- High Tension Reeling Cables
- Aramid Reinforced Cables
- Low Temperature Cables
- Water Resistant Cables

A major part of TPC's capabilities is working with customers to custom design and develop cables specifically for their application needs. Many of these applications subject their electrical cable to harsh environments like abrasion, impact, vibration, flexing, pulling, oil, water, chemicals or year round weather conditions.

TPC's expertise in materials, design and manufacturing provides superior cable performance resulting in longer cable life and reduced equipment downtime. TPC's cable design engineers can assemble the critical components of your cable into a final design that will give you a longer lasting cost effective alternative to constantly replacing cables.



Steve Uhler, Operations Manager Classic Diagnostic Imaging

I am always looking for local vendors to buy products from. I just thought I was over my head when I was looking for custom cable. On a drive by at lunch, I stopped in to TPC [Wire & Cable] just to inquire about custom cable. What I left with was so much information. I was looking for a durable cable that was flexible enough to make tight turns in a confined area and not stress the cable shield. I found it at TPC. Not only did I find it there, I was informed that because it was custom, I could orient each wire in the cable to sit next to the one I wanted it to; making a neater pony tail and in the end taking up less room in the junction box. Then I was told I could put whatever I wanted on the exterior of the shield. TPC gave me the idea to put our name and phone number on the cable jacket for future customers so, I just stuck with that idea. I worked with Tim [TPC custom cable engineer] and he designed a cable that is more flexible and able to move freely within the constraints of the imaging machines our company refurbishes. Since we're local, Rick [TPC sales rep] put the reel in his car and dropped it off! I couldn't be happier with the service and results.

A week or so later, TPC received this note:

Hi, I just wanted you to know that it is a dream to work with this cable. I cannot believe how flexible the cable is! It is a joy not to fight this cable and force it to hold down with zip ties, it really does what you say it does. The other thing I love about the cable is the orientation of the individual wires within the shield, it makes it so much easier, not to mention neater to assign the wires to the designated place. Our phone number on the cable looks really cool too. I just wanted you to know that we have just finished our third refurb with the new wire, and I really love it. Thanks again. Please tell Tim!!!



Steve Uhler is working on a refurbishment using the custom cable provided by TPC.

Common Materials

Conductor Capabilities:

- Copper
- Nickel-Plated Copper (2%)
- Nickel-Plated Copper (27%)
- Silver-Plated Copper
- Tinned Copper

Blanket & Sleeving Capabilities

- Ceramic
- Fiberglass
- Silica
- Silicone
- Reflective Fiberglass
- Abrasion Resistant
- Stainless Steel Overbraid

Braid Capabilities:

- Aramid
- Brass
- Copper
- Fiberglass
- Nickel-Plated Copper
- Nylon
- Polyester
- Rayon
- Silver
- Silver-Plated Copper
- Stainless-Steel
- Tinned Copper

Insulation Capabilities:

Thermo-Set Materials:

- EPR
- HV Silicone
- Silicone
- XLPE
- XLPO

Thermo-Plastic Materials:

- ETFE
- FEP
- TPE
- TPR

Other:

- Ceramic
- Mica
- Mica-Glass
- Semi-Conductive

Jacket Capabilities:

Thermo-Set Materials:

- CPE
- NBR
- Silicone
- XLPO

Thermo-Plastic Materials:

- FEP
- Halogen-Free, Low Smoke Polyurethane
- Halogen-Free, Low Smoke TPR
- Polyurethane
- SBC
- TPE
- TPR
- TPV

High Temperature Braid:

- Glass Braid
- Aramid Braid

Cable Components

1. Construction: Includes cabling and positioning of the conductors within the jacket to reduce the internal stresses and maximizing performance.

2. Conductors: Can be bare copper or copper that is plated with nickel, tin, or silver. The type of conductor is determined by both the application and the environment.

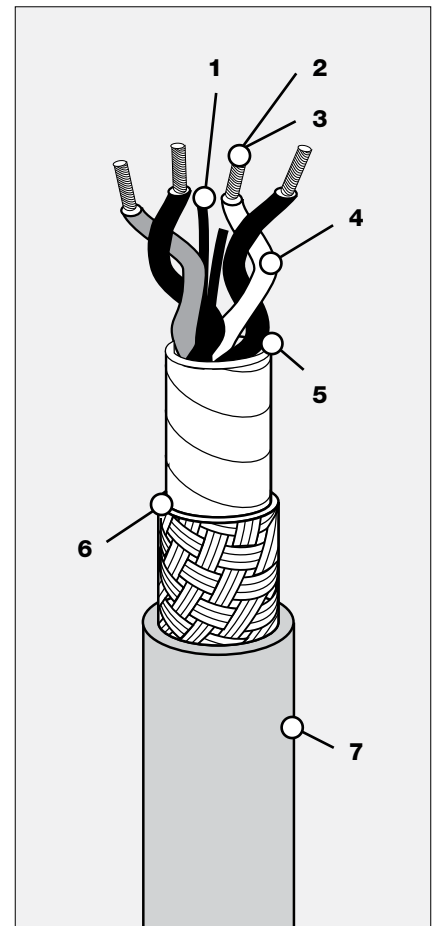
3. Stranding: Makeup has a significant impact on the flexibility of the final cable design. Selecting the proper stranding is critical to the product's overall flexibility.

4. Insulation: Life is affected by voltage, ampacity, temperature, flexing and frequency. Matching the insulation system to the application and environment is critical to maximizing cable performance.

5. Cabling: "Lay" of the conductors is the length of the twist applied to the conductors for one complete rotation. Depending on what the cable is designed to do, the conductors are twisted together in different ways. The longer the lay the better the cable will perform in twisting applications. The shorter the lay the better the cable will perform in bending applications.

6. Shielding: Protects the electrical signal against EM and RF interference. In power cables, the shielding contains potential interference within the cable so that it does not affect control/ communications conductors under the same jacket and other cables in close proximity.

7. Jacketing: The first line of defense for any cable. Selection of the proper jacketing or over jacket materials is critical for cable life.



Custom Capabilities

CONNECTORS:

TPC's custom connectors are manufactured to address a specific industry or environmental issue and can also improve upon a well established method.



- **Molded Circular Connectors** – Now an in house capability at TPC
- **Molded Locking Connectors** – IP69K Rated
- **Molded Ball Nose (18 Series) and Taper Nose (16 Series) Cam Style Locking Connectors** – Quickly connects and disconnects
- **Molded Nema 5-15 Extension Cords & Light Stringers** – Custom lengths that accept standard light bulb sizes
- **Molded Quick-Connects™ and many others...**

ASSEMBLIES:

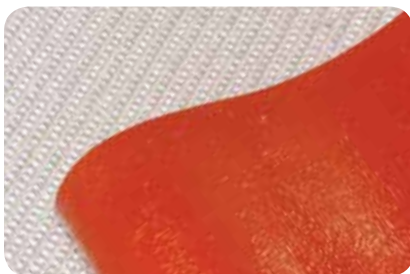
Providing a complete solution saves the customer valuable downtime and labor costs. TPC can provide a “plug and play” option for a customer’s assembly needs.



- **Friction Coupling System** – Prevents component destruction due to unforeseen pulling forces
- **Over Molded Back Shell Assembly** – Over molded with thermoplastic elastomer
- **Pond Aeration Cable Assemblies** – Meets a specific need for specific market segment
- **Cable Carrier Systems** – Can create a complete system; connectorized & pre-loaded

MATERIALS/PRODUCTS:

Striving to meet customer expectations, TPC provides materials and products to enhance a custom solution.



- **Stainless Steel Tubing** – Extra level of protection for cable that is exposed to sharp edges, metal chips, abrasion and harsh outdoor environments
- **High Temperature Blanket** – Provides exceptional strength and insulation properties and is available in eight basic shapes
- **Multiple Sleeving Options**— Provides protection for a very high temperature range and is available with hook & loop closures options



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