



# Solutions for the Automotive Industry



## Expect High Performance<sup>®</sup>

Amphenol TPC Wire & Cable is a leading supplier of high-performance wire, cable, connectors, and assemblies designed and engineered to withstand harsh industrial environments. We know how critical it is that your cables and connectors be able to survive abuse from caustic chemicals, extreme temperatures, continuous flexing, impact, and abrasion. Our products help solve the most difficult application problems by reducing your downtime, labor, overall costs, and long-outlasting commodity cable.

- ✓ Wire & Cable
- ✓ Cable Assemblies
- ✓ Cable Management
- ✓ Cordsets
- ✓ Electrical Components
- ✓ Custom Solutions

# Specialized Solutions for the Automotive Industry

Industrial wire and cable play a vital role in the automotive industry, as they are used in a wide range of applications such as power distribution, signal transmission, and data communication. With the constant advancements in technology and the increasing demand for electric and hybrid vehicles, the importance of reliable and high-quality industrial wiring and cables will only continue to grow. At Amphenol TPC, we offer an extensive range of durable and reliable cable products that are specifically designed to withstand the demanding conditions of industrial environments.

Our **Super-Trex®** and **Trex-Onics®** products are engineered for flex-life and to withstand impact and abrasion making them ideal for various applications within the automotive industry. Whether it's in the assembly process, door check lines, bolsters, robotic welders, and countless other applications, Amphenol TPC wire and cables have an industry-leading life expectancy that saves time, labor, and overall cost of ownership.



## Featured Products

Scan the QR codes to view more product information, including full list of ratings, features and benefits.



### Super-Trex® Ultra-Gard™ Portable Cord




600V
Max Conductor Temp 90°C
Type SOOW

**Engineered to Resist**  Flexing  Abrasion  Impact  Chemicals

- ✓ **Finely Stranded Tinned Copper Conductors**
- ✓ **Live-Flex & Fluid Resistant Thermoset Insulation with Separator**

**Excels in** Tools and Equipment Industrial Machinery Welding Units  
Battery Chargers Conveyors Testing Equipment Lighting Fans

---



### Super-Trex® Multi-Conductor P&R Cable




600V
Max Conductor Temp 90°C
Type TC-ER
FT4 Flame Rating

**Engineered to Resist**  Flexing  Tension  Abrasion  Impact  Chemicals

- ✓ **Live-Flex XLPE Insulation System**
- ✓ **Finely Stranded Tinned Copper Conductors**

**Excels in** Festoon Systems Cranes & Hoists Cable Carrier Systems  
Retractable Reels Transfer Vehicles Positioning Equipment

---



### Trex-Onics® Reduced Diameter Control Cable




Type TC-ER
600V
Suitable for Class I, II, Div. 2
FT-4 Flame Rating

**Engineered to Resist**  Flexing  Abrasion

- ✓ **Finely Stranded Tinned Copper Conductors**
- ✓ **Specially Compounded TPE Insulation**

**Excels in** Cable Carrier Systems Control Circuits Positioning Equipment  
Festoon Systems Transfer Vehicles

## Case Study

# Automotive Stamping Plant Boosts Production & Eliminates Failure with Custom Bolster Cable

## Customer Problem

A large vehicle manufacturing plant in Kentucky was replacing bolster cable on its stamping press every 10-11 months due to failure. The inner conductors would fatigue, deteriorate, and ultimately fail from constant environmental pressures that included flexing, motion, and tension. In addition, the outer jacket was being abraded and cut by metal scrap in the area. Over the course of 32 months, the failures added up to \$12,767 in product and labor expenses plus, as a result, the application was down for 53 hours total during that time period.

## Amphenol TPC Wire & Cable Solution

The customer's Amphenol TPC representative worked with ATPC's in-house engineering team to develop a custom solution stemming from the **Trex-Onics®** product line designed for continuous flexing applications in harsh environments. The cable featured an aramid fiber braid embedded into the jacket to add 1,800 lbs tensile strength as well as tinned copper conductors that lengthen flex life in flexing and twisting applications. A polyurethane jacket also served as a superior first line of defense by providing heavy-duty abrasion resistance.

## Result

Checking in on the application 32 months after installation, it was determined that the custom bolster cable still had not yet required repair or replacement. The total cost for product & labor to implement the solution amounted to just \$5,145, saving the customer **\$7,622** and allowing the plant to **increase production time by 37 hours**.



# \$7,622

Material Cost &  
Labor Savings



# 37 Hours

Downtime Saved

*Results from 32 Month Time Period*

## We've Got You Covered

Amphenol TPC provides high-performance cables engineered with cost-saving durability designed for use in a number of industry-specific applications.

### Area: Trim / Chassis / Final

- Air Conditioning Fill
- Battery Charging Stations
- Battery Test Stations
- Brake Fill
- Door System Test
- Drive System
- Elevators / Skillet System AGVs
- Festoon Systems
- Gas Fill
- Hand Tools
- Master Power Distribution Drop
- Moving Cable Carriers
- Photo Eyes
- Prox Switch
- Radiator Fill

### Area: Paint Shop

- Ecoat & Oven (Motors & Drives, Lights)
- Phosphate Wash
- Plastics (Molding)
- Primer & Oven (Power for Robots, Drive Systems, Prox Switches, Light Curtains)
- Resolvers
- Sealing & Oven

### Area: Aluminum Casting

- Engine Test Harness

### Area: Engine Assembly

- Engine Test
- Festoon Systems
- Machine Tending Robots
- Material Handling Equipment Robots
- Nut Runner
- Palletizers

### Area: Forging of Cranks & Camshafts

- Valve Control

### Area: High Pressure Diecasting

- Casting Machines & Pendant Stations
- Die Blocks, Light Curtains
- Manifolds & Sand Molding
- Material Handling Equipment Robots
- Photo Eyes
- Safety Switches
- Sensors

### Area: Machining / Metalworking

- CNC Machine
- Die Casting Machinery
- Drive System
- Limit & Proximity Switches
- Material Handling Equipment
- Portable Welding Units
- Profibus Systems

### Area: Tool Making

- Pendant
- Portable Power
- Prox Sensor, Signal & Control
- Tooling & Valves

### Area: Body (Body Weld)

- 7-Axis Robot
- Robot Welders
- Tool Changer
- Weld Cable Assemblies
- Weld Cell

### Area: Die Shop

- Hand Tools
- Portable Power

### Area: Stamping

- Cable Carriers
- Die Power & I/O
- Moving Press Bolster Cables
- Reeling Systems
- Retractable & Coil Cord Systems
- Shorting Plugs for Safety Gates



## Performance Testing

Amphenol TPC offers a wide variety of products that adhere to the most reputable and stringent, manufacturing, quality, and performance standards.

Testing, and application protocols: For cables in flexing applications, Amphenol TPC utilizes a UL Recommended Practice RP 5770 for performance testing protocols, ensuring the customer receives unbiased results. Data collected from testing provides a level of confidence and expectation for cables installed in an actual application.

✓ **Tick-Tock Test**

✓ **Torsion Test**

✓ **Continuous Flex Test (Cable Carrier Testing)**

## Custom Solutions Engineered For You



## Custom Designed to Meet Your Needs

If your industrial operation requires a unique solution, Amphenol TPC offers custom-engineered products **designed to your specifications**. These product solutions represent a unique and valuable service offered by Amphenol TPC to save you time and money. Our engineers are focused on providing the best solutions, through tested electrical, mechanical, and industrial engineering experience. There is no job that our team can't tackle. Our engineering team is ready to design a custom solution for you!



**Custom Wire & Cable**



**Stainless Steel Braid Sleeving**



**Cordsets**



**Cable Assemblies**



**Custom Cable Carrier Systems**



**Custom Storage & Trailers**



**Cables Reels & Enclosures**

→ For more Custom Solutions, please visit [tpcwire.com](http://tpcwire.com)



**Headquarters**  
9600 Valley View Rd.  
Macedonia, Ohio 44056

**USA** 800-521-7935 / Fax 866-528-2930  
**Canada** 800-545-0122  
**Mexico** 001-877-283-1696  
**Chile** 1230-020-0229  
**Columbia** 0-1-800-915-7519  
**Peru** 0800-54863

[tpcwire.com](http://tpcwire.com)



**WARRANTY AND DISCLAIMER:** Seller makes no warranties, express or implied, with respect to this product, and seller disclaims any implied warranties of merchantability or fitness for any particular purpose. Further, seller will not be responsible for any consequential, incidental or indirect damages (including, but not limited to, any loss of profit) from any cause whatsoever.

TPC1316 © Copyright 2024 by Amphenol TPC Wire & Cable. All rights reserved.

No portion of this publication, whether in whole or in part, can be reproduced without the express written consent of Amphenol TPC Wire & Cable.



FS 35910