Convoluted tubes

Advanced solutions for the management and protection of cables and wiring harnesses
As a global leading company in wiring harness protection, Delfingen offers a large range of convoluted tubes and dedicated accessories to protect, route and fasten your cable assemblies.

The convoluted tube protects the wiring harness from harsh environments in the vehicle. Thanks to its ribs, it provides high crush resistance while staying very flexible. Multiple rib profiles are available. Made of thermoplastic resin, the convoluted tube has excellent fluid and chemical resistance and is available in various temperature grades from 85°C to 260°C.

**Our different profiles according to the carmakers' specifications**

Delfingen offers various profiles of convoluted tubes meeting your needs:

- **The Soford and the COT (Standard Convoluted Tube)** meet the specifications of the carmakers on the American market (Ford, GM, Chrysler...).
- **The Soflex tube** answers French and Italian car manufacturers' requirements and specifications (Peugeot-Citroën, Renault, Fiat...).
- **The NAG convoluted tube** has specific profile characteristics meeting German carmakers' specifications (Volkswagen).
- **By complying with the Japanese Industrial Standards (JIS), the Syflex tube** fully answers the market's needs (Toyota, Nissan, Honda...).
- **The Korflex tube** meets the requirements of the Korean market (Hyundai, Kia).
- **Our Caflex tube** is designed for heavy-duty applications in trucks, buses or other heavyweight vehicles (Volvo, Renault, Man, Daimler...).
- **Gafmil™ is a lockable tapeless convoluted tube. Its locking system provides the benefits of non-slit tubes (dust protection, abrasion...) and slit tubes (assembly ease, installation time reduction, retrofit...). The overlap between the two convoluted portions eliminates the risk of wire exposure even in low radius curve zone. Gafmil™ can be assembled over the wires after the terminal has been crimped, very convenient for battery cables and high voltage cables.**

We use several types of thermoplastic materials such as Polyamide (PA), Polyester (PET), Polypropylene (PP), Polyethylene (PE), Polyurethane (PUR) and Elastomer. We develop specific grades and recipes with multiple additives (low flammability, high temperature, color...) depending on the vehicle environment and on the customer's needs. All products can be delivered slit for easy installation and time saving. All profiles are compatible with their dedicated branching and fastening accessories.

The standard color of our convoluted tubing is black. An orange version of these tube has been developed for high voltage applications (for hybrid and electric vehicles). However, other specific colors can be proposed: yellow, blue, gray, red...

Our local logistic centers offer customized support and Full Delivery Service (FDS) such as product preparation (cut-to-length) or just-in-time deliveries.

**Gafmil™: closeable tapeless solution**
Techniflex: wire retaining tongue

Thanks to its special tongue along the slit, Techniflex retains the wires inside the tube for safety and aesthetic reasons. It is available in various plastic grades including Polyamide, Polypropylene, Polyethylene...

Inoflex: customized routing solution

Inoflex is a convoluted tube designed with a sequence of flexible and straight sections in one piece for a better cable management. This sequence is 100% customized to be perfectly adjusted to the vehicle’s shape.

Oval tube: routing solution for narrow spaces

Oval tube is a very flat convoluted tube designed to protect electrical wires and for routing management. The oval shape maintains the wire bundle in a flat position for space concerns. This tube can be customized as the ribs provide an excellent flexibility, routing ease and crush resistance of the tube. Some possible straight sections may facilitate the installation or fastener localization on the vehicle. This solution is particularly suited for hybrid and electric vehicles where multiple harnesses increase the space concerns.

So-Kool: heat reflective convoluted tube

So-Kool is a convoluted tube wrapped with an aluminum foil laminated on a fiberglass fabric which adds thermal reflective properties. Therefore, it has an excellent delta of temperature compared to a non-protected tube and protects wires from radiant heat. Available in non-slit or slit plus flap versions, the So-Kool product range provides the same ease of installation as standard tubes.

GAB: sound suppressant tube

It is a standard convoluted tube which has been added a felt cover. Therefore, GAB provides a very good mechanical protection and has excellent sound dampening properties. It is usually used to protect headliner, door, seat, instrument panel, interior wiring, and all areas where wiring harnesses may be rattling and vibrating. This product is available in different material grades, slit or non-slit.

TwinVolt: high power lines routing

TwinVolt is a dual channel tubing designed for high power lines. This product can be customized as routed together in parallel; both tubes are linked every 300mm and can also be separated at the extremities if needed and as long as required. The two separate tubes reinforce protection and safety by reducing contact problems between cables and by limiting their mutual heating.

Scrollflex: semi-smooth and self-closing solution

Scrollflex is a scrolled semi-smooth tube designed to protect and hold together the wire bundle. It is available in different thicknesses (from flexible to stiff) and temperature classes T1 (85°C) and T2 (100°C).
Reducing weight and assembly time along with component optimization are the key challenges driving our innovation team. Located all around the world, our R&D centers give birth to new innovative ideas enabling Delfingen to develop advanced products to exceed your expectations for a successful future. Our local presence is essential to providing full support to our customers during the entire design phase and throughout each project management stage.

All our products are carefully tested in our laboratory to extreme conditions including elongation, aging, crush and flame tests to guarantee our products’ quality and performance, as well as safety and reliability of the vehicle. Our in-house test capabilities allow us to perform testing on our products for continuous improvement.

A global leading company in Protection Systems, Fluid Transfer Solutions and Assembly Technologies.