

AUTOMOTIVE INDUSTRY

PRODUCT OVERVIEW

GREMCO

PERFECT CONCEPTS FOR THE AUTOMOTIVE INDUSTRY

HIGH-TECH TUBING SOLUTIONS for the automotive industry



Your contact

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THE PERFECT PARTNER FOR COMPLETE SYSTEM SOLUTIONS.

From high volume sleeving solutions to bespoke custom-made products. All our products are designed to meet the most demanding of automotive standards. Our products are manufactured using state of the art equipment ensuring high quality and consistency. GREMCO has built a reputation on technical excellence, ensuring products are created to meet specification needs without over-engineering.

EXPERTS FOR THE AUTOMOTIVE INDUSTRY.

Our expertise lies in providing protective sleeving solutions within the cable and wire harness and fluid transfer sectors. Our products provide outstanding levels of thermal protection, abrasion resistance, moisture protection, strain relief and electrical insulation, to name but a few of our sleeves' technical characteristics.

UNDERSTANDING CUSTOMER NEEDS.

We pride ourselves on maintaining close technical contacts at the OEM level. We ensure that our products meet relevant OEM standards whilst striving to deliver parts that remain cost effective and fit for purpose.

INTERNATIONAL KNOW-HOW FOR A GLOBAL WORLD.

We combine our competence with the expertise of our long-term cooperation partners in the USA and Mexico to achieve the highest levels of innovation and quality. Modern production facilities in Europe, the USA, Central America and Asia also guarantee reliable and first-rate quality. Our highly qualified staff is looking forward to assisting you with any technical issues or design challenges you may have.

RESPONSIBILITY FOR PEOPLE AND THE ENVIRONMENT.

We are committed to complying with and where possible exceeding environmental protection laws. We do this not just because we have to but because it is, in our view, the right thing to do. Reducing our environmental impact is an ongoing goal. We are happy to work with customers or suppliers on projects to further this goal. Please get in touch!

GREMCO will always act in accordance with health and safety laws.

For further information regarding GREMCO's product range and potential automotive applications please do not hesitate to contact us.

We look forward to hearing from you.

j: tersch

Your GREMCO Team

POLYOLEFIN HEAT-SHRINK TUBES

FITCOTUBE[®] - thin-wall

	Description	Typical Application	Temp. range	Shrink ratio	Shrink Temperature
FT100 UL	Top quality, flexible, flame-resistant tubing, available in various colours.	Insulation, mechanical relief and protection against environ- mental influences.	-55°C +135°C	2 : 1	+90°C
FT300 UL	Top quality, flexible, flame-resistant tubing with high shrinkage capacity, available in various colours.	Protection and insulation of parts with large diameter differences.	-55°C +135°C	3 : 1	+90°C
FT330	Flexible, flame-resistant, universally applicable tubing with high shrinkage capacity.	Ideal multi-purpose heat-shrink tubing, as a wide range of diameters can be covered with just a few sizes. Reduced storage costs!	-55°C +125°C	3 : 1	+90°C
FT400	Top quality polyolefin heat-shrink tubing (flexible and flammable), with high shrinking capacity.	Excellent for repair, protection and insulation of previously assembled cables and parts with large diameter differences.	-55°C +135°C	4 : 1	+90°C
FT500	Flexible, flame-resistant, universally applicable tubing, available in various colours.	Sheathing, insulation and marking of wires and cables in automotive construction.	-55°C +125°C	2 : 1	+90°C
FT555	Halogen-free, radia- tion-crosslinked heat-shrink tubing made of flexible material. Anti-outgassing.	Insulation and marking of wires and cables in automotive engineering.	-70°C +135°C	2 : 1	+90°C
FT700	Radiation crosslinked, infusible heat-shrink tubing with glossy surface.	Protection of components where a smooth surface quality is required, e.g. anchor cables of seat belts.	-55°C +105°C	2 : 1	+120°C

FITCOTUBE® - thin-wall

	Description	Typical Application	Temp. range	Shrink ratio	Shrink Temperature
FT175 UL	Semi-rigid, highly abrasion- resistant, non-flammable Kynar® tubing.	Protection from high temperature as well as liquid chemicals, e.g. in fuel tanks.	-55° +175°	2 : 1	+170°C
FT190 UL	Semi-rigid, abrasion- resistant, flame-resistant high-temperature PVDF heat-shrink tubing for reliable insulation.	Protection of solder and crimp connections. High chemical stability.	-55°C +190°C	2 :1	+175°C
FT275 UL	Flexible, highly abrasion- resistant, non-flammable heat-shrink tubing. High chemical resistance.	Meeting the standards of Kynar® heat-shrink tubing FT175, but with greater flexibility and better transparency.	-55°C +175°C	2 :1	+150°C
TF/TF-R	High temperature resistant, chemically resistant heat-shrink tubing made of modified PTFE.	Used at high ambient temperatures as well as protection of wires and cables against aggressive chemical substances.	-67°C +250°C	1,5 - 3,5 : 1	+327°C



ELASTOMER HEAT-SHRINK TUBES

FITCOTUBE® - thin-wall

	Description	Typical Application	Temp. range	Shrink ratio	Shrink Temperature
FT200	Flexible, highly abrasion- resistant tubing with excellent oil and fuel resistance.	Cable sheathing especially for self-propelled machines, protection of measuring probes.	-75°C +150°C	2 : 1	+130°C +250°C
FT-R25	Fuel-resistant elastomer shrink tubing with excellent protective and abrasion properties.	Used for reliable insulation as well as mechanical and electrical protection of wires and cables, especially in the automotive, military and marine industries.	-75°C +150°C	2 : 1	+170°C
FTV	High temperature resistant, highly durable Viton® heat-shrink tubing.	Cable sheathing, protection of measuring probes in aggressive ambient conditions.	-40°C +200°C	2 : 1	+150°C
FT-VD	High temperature resistant, highly durable Viton® heat-shrink tubing for cable sheathing in aircraft and vehicle construction under extreme mechanical, chemical and thermal loads.	Cable sheathing, protection of measuring probes exposed to high temperature and aggressive media.	-55°C +220°C	2:1	+175°C +220°C

FITCO® IS A REGISTERED AND PROTECTED TRADEMARK OF GREMCO.

POLYOLEFIN AND FLUOROPOLYMER HEAT-SHRINK TUBES

FITCOTUBE® - dual-wall

	Description	Typical Application	Temp. range	Shrink ratio	Shrink Temperature
Polyolefin					
FT800 UL	Radiation crosslinked heat-shrink tubing, adhesive coated, with high shrinking capacity.	Highly suitable for moisture- and waterproof sealing of wires, cables, crimp and plug connectors as well as other electrical and mechanical components.	-55°C +125°C	3:1 and 4:1	+110°C
FT888	Radiation cross-linked commercial heat-shrink tubing made of flexible, adhesive-coated material with high shrinking capacity.	Highly suitable for moisture- and waterproof sealing of wires, cables, crimp and plug connectors as well as other electrical and mechanical components.	-55°C +110°C	3:1 and 4:1	+110°C
FT-WB	Flame resistant, radiation crosslinked heat-shrink tubing with high hot melt adhesive and shrinking capacity.	For liquid-tight encapsula- tion, sealing and insulation of electrical connections and components in the automotive industry.	-40°C +130°C	4 :1	+120°C
FT-WB-CP	Transparent polyolefin tubing with high shrink ratio and thick black hot melt adhesive inner liner.	ldeal for controllable sealing of electrical connections and components in the automotive industry.	-40°C +125°C	4.5 : 1	+150°C
FT-WB-HT	Flame resistant polyolefin - high temperature tubing with high shrink ratio and thick inner liner made of hot melt adhesive.	ldeal for electrical connec- tions and components in the automotive industry.	-40°C +150°C	4.5 : 1	+150°C
Fluoropolyme	r				
TF/FP (A-Z)	Double-walled, high-temper- ature resistant heat-shrink tubing made of PTFE with melting FEP core.	For sealing and encapsulat- ing components with the highest requirements for temperature resistance and/ or chemical resistance to highly aggressive substances.	-200°C +190°C	1.5 : 1	+346°C +354°C

FITCO®SEAL

	Description	Typical Application	Temp. range	Diameter range
FTLV-NT	Low-temperature solder connector that solders, insulates, seals and mechanically relieves at the same time.	Reliable shield connections with consistent, repeatable connection quality, connection and termination of temperature-sensitive cables on contact strips and connectors.	-55°C +105°C	0.9 mm 6 mm
FTLV-HT	High-temperature solder connector that solders, insulates, seals and mechanically relieves in a single step.	Reliable shield connections with consistent, repeatable connection quality, connection and termination of temperature-resistant cables to contact strips and connectors.	-55°C +150°C	0.9 mm 6 mm
FITCO®Seal	Extremely durable, waterproof universal crimp connector, water- proof due to insulation with adhesive-coated heat-shrink tubing.	Moisture-proof cable splice. Resistant to many liquids used in the automotive industry.	-55°C +125°C	0.2 mm 6 mm



FITCOFLEX®

	Description	Typical Application	Temp. range	Diameter range
FITCOFLEX® B-PET22	Self-extinguishing braided sleeve with ROHS and REACH compliance and made of 0.22 mm thick PET monofilaments.	Bundling and protection of automotive wiring, measuring cable sets and media lines. Provides good abrasion resist- ance and excellent protection against oil, fuel or other chemical substances.	-70°C +150°C	3.0 mm 45 mm
FITCOFLEX® B-PET25	Halogen-free, self-extin- guishing braided protec- tion sleeve with ROHS and REACH conformity made of 0.25 mm thick PET monofilaments.	Bundling and protection of automotive wiring, measuring cable sets and media lines. Provides good abrasion resist- ance and excellent protection against oil, fuel or other chemical substances.	-70°C +150°C	3.0 mm 45 mm
FITCOFLEX® B-PA25	Mechanical, halogen- free fabric protection sleeve made of polyamide 6.6 with high expansion rate.	Bundling and protection of automotive wiring, measuring cable sets and media lines. Provides good abrasion resist- ance and excellent protection against oil, fuel or other chemical substances.	-40°C +125°C	25 mm 32 mm
FITCOFLEX® B-2PA/PET	Halogen-free, expand- able braided sleeve made of PET and polyamide 6.6. Excellent abrasion resistance.	Mechanical protection of pipes, tubes and cable harnesses as well as bundling. Chemical resist- ant. Allows liquids to drain and prevents condensation.	-40°C +150°C	3.0 mm 48 mm
FITCOFLEX® B-PA/2PET	Braided sleeve made of polyamide 6.6 and PET monofilaments with high flexibility and abrasion resistance.	Abrasion protection for cable harnesses, pipes, tubes or mounting sensors in demanding environments. Good resistance to oils, liquids, fuels and various chemical substances.	-40°C +125°C	3.0 mm 60 mm
FITCOFLEX® I-WRAP	Mechanical, halogen-free and tightly woven tape made of PET monofila- ment and multifilament fibres, which enables subsequent installation or repair due to its open sleeve shape.	Bundling and mechanical protection of already assembled cable, line and fluid systems. The open structure allows for easy and subsequent assembly.	-55°C +150°C	3.0 mm 50 mm

HEAT PROTECTION

	Description	Typical Application	Temp. range	Diameter range
FITCO®Flect	Reflective, flexible, aluminium-coated fibre- glass sleeve for protection against heat exposure.	FITCO®Flect is the ideal protection for building components against radiant heat at high temperatures. Individual solutions for complex components are also possible.	-40°C +250°C	6.3 mm 101.6 mm
FITCO®Flect CIFG	Reflective, flexible sleeve providing thermal protection from radiant heat. Made of braided glass fibre and polyester as base material and enclosed in a laminated aluminium foil.	As heat protection, of media-carrying tubes, electrical cables or components in high-temperature areas. High flexibility, even with larger bend radii the product retains its round shape, simplified installation.	-40°C +200°C	9.5 mm 31.7 mm
FITCO®Flect SWFG	Self-rolling, flexible, reflective sleeve with glass fibre and polyester base fabric and aluminium foil lamination. Easy installation, sealable with aluminium tape.	Universally applicable for protection in high temperature environments. Retrofitting is possible.	-40°C +200°C	9.5 mm 38.1 mm
FITCO® Therm	Glass fibre heat protec- tion sleeve with good temperature resistance in various designs, such as ribbed or smooth surface.	Thermal protection of exhaust gas recirculation systems in combustion engines, hydraulic, fuel and coolant lines, electrical components as well as cable harnesses. Protec- tion against liquid metal drops in coolant lines in electromobility.	-70°C +538°C	9.5 mm 25.4 mm
FITCO® Therm V-FS	Short-term flame resistant glass fibre heat protection sleeve with silicone rubber coating.	Thermal protection of wiring, cables, tubes and cable harnesses against welding sparks, open flames, melting drops of metals, etc.	-54°C +260°C temporarily 1100°C	6.3 mm 101.6 mm
FITCOFLEX® GFS-SIL-ALU	Temperature-resistant glass fibre sleeve, coated with aluminised silicone rubber, puncture-re- sistant, excellent media resistance.	Thermal insulation and temperature-re- sistant abrasion protection of cable, line and media-carrying systems in the electrical and automotive industries. Also frequently used in electric vehicles.	-60°C +250°C temporarily 275°C	3.0 mm 25 mm
FITCOFLEX® GLS SIL	Glass silk sleeve coated with silicone elastomer lacquer, provides thermal, electrical, chemical and mechanical protection.	Used in electrically controlled devices, in heating and air conditioning technology construction as well as machine and vehicle construction.	-45°C +230°C	0.3 mm 16 mm

MECHANICAL AND THERMAL PROTECTION TUBES

FITCO® INSULATING TUBE

	Description	Typical Application	Temp. range	Diameter range
PTFE	Tight-tolerance extrusions made of PTFE, with additives if necessary, with high temperature resistance as well as extreme chemical resistance and excellent gliding properties.	Various applications with high standards on temperature and gliding properties, e.g. Bowden cables, as well as the transfer of aggressive or hot media. Liner for mechanical control cables such as gearshift cables, emergency releases, door locks, handbrake cables, boot releases etc.	-67°C +260°C	0.3 mm 39.37 mm
FEP	Tight-tolerance extru- sions made of FEP with high surface quality and wide operating temperature range.	Highly flexible tubes for the transfer of aggressive liquids and gases.	-55°C +200°C	0.3 mm 22.91 mm
PFA	Similar to PTFE, but produced by melt extrusion process, with excellent transparency/ clarity, flexibility and good gliding properties.	Versatile and suitable for almost all solid, liquid and gaseous media. Furthermore, the PFA hose is almost transparent, which allows fluids to be observed precisely.	-67°C +260°C	0.3 mm 16.33 mm
Corrugated hose	Corrugated hose made of high-qual- ity materials.	Flexible cable protection made of PP, PA6, PA12, Arnitel and PFA.	-80°C +260°C	NW3 NW70
Smooth- bore pipe	Extruded pipes and tubes made of high-quality materials (PVC, PA, PE, PFA, PUR, PTFE, FEP, ETFE).	Protection of cabling, rubber tubes, and metal pipes against abrasion, stone impact and other environmental influences, as well as Bowden cable cores and foamed variants for noise damping.	-75°C +260°C	2.0 mm 50 mm

TEMPERATURE-RESISTANT WIRES AND CABLES

WIRES & CABLES

	Description	Typical Application	Temp. range	Cross Section
Wires & cables	Temperature-resistant, high-strength and extremely flexible electrical wires and cables with fluoropolymer insulation (PTFE, PFA, ETFE, FEP), among others. Despite thin insulation, these materials have high mechanical strength, excellent chemical resistance and are non-combustible.	Space- and weight-saving wiring of racing and sports cars with high requirements, especially at the engine.	-75°C +260°C (depending on material)	0.14 mm 70 mm
Coaxial cable	Coaxial cables and micro-coaxial cables according to standard RG specification and various designs specially developed for use in motor vehicles.	Antenna cabling for high-frequency components such as audio, video and multimedia systems, as well as GPS receivers and other radio equipment, including autonomous driving.	-75°C +200°C (depending on material)	
Litz wire	Individual construction of combined and, if necessary, insulated, single baked enamel wires. Reduced of AC loss in high-frequency applications. Insulation with various plastics including FEP, PFA or ETFE possible.	Use in power conversion equipment and all applications requiring additional dielectric strength between windings, especially motor windings, inductive charging or inverters (converters).	-40°C +250°C	

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PROCESSING EQUIPMENT

	Description	Typical Application	Temp. range	Alt. Naming
HG2520E HG2620E (2300 W) Heat gun	Electronically controlled heat gun with brushless motor, digital temperature setting with joystick. Air volume regulation from 150 - 500 I/ min. LCD display and residual heat indicator included. (approx. 10,000 h operating time)	Processing of heat-shrink tubing and soldering sleeves, shrinking of electronic components. Suitable for construction sites.	+50°C +700°C	Heat gun / hot air wand
Mecalbi STCS series shrink fit machines	Mecalbi specialises in the production and development of customised hot air and infrared shrink systems. All devices have a control module in which process parameters such as temperature or shrink time can be set.	Depending on the machine type, one or more shrink sleeves can be processed simultaneously. Optimally suited for areas of appli- cation with highly specific application requirements.		
SQUIX4M 300 Thermal Transfer Printer	Prints with a resolution of 300 or 600 dpi, barcodes, serial numbers, markings or logos in excellent quality on shrink sleeves.	Designed for printing heat shrinkable tubing in an industrial environment and does not require print head adjustment due to its centred material guide.		

COMPONENTS FOR HIGH-TECH SOLUTIONS.

INNOVATIVE PRODUCTS. PROVEN QUALITY.

Since 1990, we have been advising and supplying our customers in wide range of high-end markets with quality technical solutions. GREMCO stands for modern manufacturing methods, the highest levels of professionalism and world class customer service. Since 2001, our company has been increasingly involved in the automotive industry. We are now an established partner of leading global tier 1 suppliers and regularly advise and consult with automotive OEM's. HEAT PROTECTION TUBES. HEAT-SHRINK TUBES. BRAIDED SLEEVES. INSULATING TUBES. WIRES / CABLES. SOLDER AND CRIMP CONNECTORS. PROCESSING EQUIPMENT. "The outstanding quality of our products and our competent advice are what make GREMCO so successful in the automotive industry. This is proven by our long-standing loyal and satisfied customers."

GÜNTER FERSCH, SALES DIRECTOR

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OUR COMPANY AT A GLANCE

- Leading provider of protective sleeve solutions
- Production facilities in Europe, North America and Asia
- High environmental standards
- FITCO[®] trademark
- Quality management according to ISO 9001:2015
- High material competence
- Complete system solutions
- OEM approved products
- Custom-made / Bespoke products

OUR COMPETENCIES

AUTOMOTIVE INDUSTRY INDUSTRIAL AND ENVIRONMENTAL TECHNOLOGY AVIATION INDUSTRY MEDICAL TECHNOLOGY

DO YOU HAVE ANY QUESTIONS? Please give us a call on: +49 (0)82127263-0

GREMCO

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