# SERVING INDUSTRY SINCE 1947



#### RAILWAY SECTOR



### Air, Fume, and Vapor Hoses

Hoses for suction and ventilation of air, gases, fumes, and condensates at medium to high temperatures, for air conditioning and powders transport — whose static electricity can be dissipated through the use of specific technical fabrics — and for ambient ventilation.

Hoses with self-extinguishing, antistatic, or anti-abrasive properties, compliant with the specific standards of each sector. Resistant to ozone and UV rays. Lightweight and highly flexible. Can be secured with clamps, which can be supplied in combination.



#### Rubber Hoses, Including Fitted Hoses

Flexible hoses suitable for the transfer and transport — under pressure or vacuum — of any type of fluid: organic and inorganic acids, salts, bases, ketones, paints, petroleum products, alcohol, gasoline, and animal and vegetable oils.

Robust hoses — antistatic on request — compliant with industry regulations or ATEX requirements. Certain constructions provide specific characteristics such as transparency, lightness, or a peculiar flexibility. Suitable for rail tank cars unloading: if required, they are supplied pre-cut to size and fitted with end connections.





#### Metal expansion joints

Connection systems made of corrugated stainless-steel plates — flanged or sleeved — capable of expanding, compressing, and flexing to compensate for thermal excursions and misalignments in rigid installations.

Optionally equipped with conveyors and tie rods specifically designed to respond to individually complex operational requirements. The use of stainless steel provides this item with a wide range of applicability in most situations.



#### **Rubber Fenders**

Elastic elements designed to absorb shocks and abrasions. Applied as protection for boats, docks, and wharves; as barriers to safeguard walls and columns inside parking garages and hangars; in warehouses as bumpers for shelving and fittings against forklifts and pallet trucks impacts; on trucks to protect liftgates during the operations of loading and unloading; on the rear of trucks to prevent damages during docking.

The rubber is particularly resistant to impact, abrasion, tearing, aging, weathering, and seawater.



#### **Protection and Signage**

Protective and warning profiles made of expanded polyurethane.

Comply with mandatory requirements to mark and let hazardous areas visible in working environments through the use of distinctive yellow and black stripes. They cover edges, corners, and panels to prevent accidental contacts. A special film protects the external coating, the graphic markings, and the colored bands from abrasion and UV rays. They are durable and self-adhesive for an easy application.







#### EN45545-2 Compliant Hoses

EN 45545-2 is mandatory for passenger railway vehicles in the European Community. Our EN45545-2 compliant hoses are used in train cars for air ducting and air conditioning systems and are classified by hazard level: HL1, HL2, and HL3.



# Ohmvo Products for Railways

Cold and ice can cause operational problems in various sectors, such as industry, transportation and rail operations. On trains, trams, cable cars, and other similar transport vehicles — where space is primarily intended for passengers — flexible and shape adaptable heating systems, which take up minimal space, are the ideal solution. They improve the engineering of cabins, carriages, and driver compartments and ensure the functioning of moving parts (doors, extendable steps, ramps, mirror adjustment, etc.) whose mechanisms are prone to freezing. Besides, modern vehicles have sophisticated onboard sensors whose operations must be ensured under all weather conditions.







#### Rubber, Expanded Rubber, Coextruded, and Reinforced Extrusions

Square, rectangular, round, oval, tubular, and custom-designed profiles. Some sections are made of solid rubber, others of expanded rubber; coextrusions and extrusions with a metal core are also available. The usual compounds include FKM, NBR, EPDM, CR, SBR, NR, and VMQ, but it is possible to produce them in specific colors and hardnesses, and in compliance with specific certifications.



#### **Inflatable Gaskets**

Inflatable gaskets are manufactured by extruding the best-fitting profile for the specific application. The extruded gasket is cut to size and closed into a loop by hot or cold bonding, based on overall system efficiency and performance required. The necessary valve is installed, and the gasket is tested to ensure a correct functioning.



#### **Custom-Designed Gaskets**

We can produce molded rubber items, die-cut, or waterjet-cut according to specific designs. The constant availability of all commercial rubber types, combined with an expanding in-house processing facility, allows us to perform each production quickly and independently, meeting the most demanding requirements.







#### Railway Sector

#### **Anti-Vibration Systems**

Unwanted vibrations can dissipate energy, generate noise, damage nearby equipments, impair sensitive instruments, or invalidate measurements.

Our anti-vibration solutions are made with an elastomer rubber body and a specific metal structure designed to absorb vibrations or cushion against shocks. A wide range of models are available for every kind of application. ATAG has an extensive catalog capable of meeting every need.

The most common anti-vibration types have different levels of hardness; system rigidity can be adjusted to address a wide range of situations.



#### High-Pressure Hydraulic Hoses

Hoses designed for high-pressure hydraulic systems engineered to ensure reliability and safety in transporting hydraulic fluids even under extreme working conditions. Made of synthetic rubber, thermoplastic materials, or steel, they are reinforced with high-strength braids or spirals to withstand high pressures and intensive working cycles. Compliant with international standards (EN, ISO, SAE), they ensure durability, safety, and operational continuity. Available in various diameters and configurations, they offer a wide range of performance. Generally supplied pre-cut to size with fittings at the ends.







#### Railway Sector

### Silicone hose bends, Elbows and Sleeves

ATAG manufactures molded silicone sleeves and hoses with textile inserts — also custom-designed — with smooth ends matching the tube section or with cuffs of different diameters to fit various connection systems. The composition and manufacturing processes are adapted to the required operating temperatures and pressures, with different silicone compounds and reinforcement inserts used accordingly.

ATAG also produces hoses in silicone with textile inserts up to 4 meters in length.



### Custom-Manufactured Items

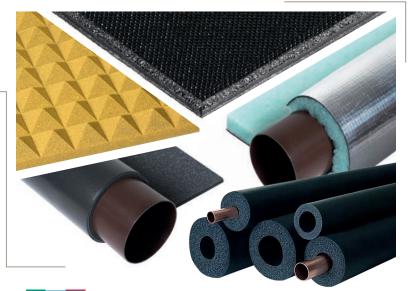
ATAG offers machining services for the production of technical components according to drawings, even highly complex ones. We use all types of plastics, such as PVC, PA, POM, PTFE, PEEK, HDPE, etc. This tailor-made production service complements the sale of ATAG semi-finished products. Processing is performed in-house with 3- and 5-axis pantographs, waterjets, automatic lathes, and cutting tables, an equipment continuously expanded. ATAG follows all production phases, from raw material to final inspection.



# Sound-Absorbing and Sound-Blocking Products

Noise can cause serious hearing damage, discomfort, and limit concentration. Acoustic comfort is very important. ATAG provides materials specifically designed to prevent noise propagation (sound-blocking) and/or absorb environmental reverberation (sound-absorbing).

The same type of expanded material is also used to insulate rigid pipes in order to prevent condensation, provide thermal insulation, and protect against accidental contact, avoiding the risk of burns or injuries.











IT\_20128 MILANO ph. +39 02 255.22.51 mob. +39 329 68.78.260 ufftec@atag-europe.com

WWW.ATAG-EUROPE.COM