

APSOfluid®

Drinking-Water and

Food-Grade Hoses



APSOfluid® – Groundbreaking Solutions in Fluid Technology



The APSOfluid® name stands for exceptional application expertise accompanied by engineering services that cover Angst+Pfister's entire spectrum of product lines. APSOfluid® offers targeted solutions for practically every fluid technology application. Good value for money distinguishes the comprehensive APSOfluid® product range, which – thanks to international procurement logistics – extends from standard products to highly specialized components. Exemplary C-parts management and our own production facility capacity to fabricate even complex customized components ready for installation guarantee the shortest possible delivery times.

Engineering

Exceptional knowledge of materials, customer- and solution-oriented consulting and profound manufacturing technology expertise – engineering is the connecting link between all Angst+Pfister product lines. Our specialists pass their knowledge on to customers from start to finish of an order. These services provide customers not just with parts, but with components optimally tailored to their needs.



Angst+Pfister's engineering services in the field of drinking-water and food-grade hoses range from selecting materials that precisely match customer specifications to procuring declarations of conformity and factory certifications. In close cooperation with capable partners, Angst+Pfister conducts in-depth testing and is thus in a position to issue certifications.

Customization

Angst+Pfister offers an array of customization services that create significant added value for our partners, who benefit from the expertise of Angst+Pfister's specialists, thus saving time and money. Our service portfolio ranges from simple prefabrication to manufacturing ready-to-install hose lines with preassembled fittings and seals. It goes without saying that hygiene regulations for the food industry are observed. Hoses can be custom-labeled on request.



Logistics and Quality Assurance

Our state-of-the-art logistics center is the linchpin of Angst+Pfister's logistical services. At the roughly 18,000-square-meter logistics center, 150,000 different stock-keeping units are warehoused and a daily order volume encompassing more than 1,500 separate items is reliably processed and shipped. Excellent C-parts management coupled with a world-spanning procurement network guarantees high product availability – even for custom items – with fast delivery times. With logistics concepts such as just-in-time, kanban and supply management, Angst+Pfister enables customers to synchronize their incoming parts shipments to precisely match their production rhythm and to thus minimize inventory carrying costs.

Angst+Pfister is an ISO-certified company. Optimized consistent processes guarantee absolute quality assurance – from unvaryingly high product quality to appropriately packaging hoses for shipment.

Drinking Water



The term “drinking water” encompasses much more than just water for drinking. Drinking-water and food regulations define drinking water as, among other things, all water used for cooking, for preparing food and beverages, or for cleaning production facilities. Exacting strict regulations apply to all drinking-water applications. The experts at Angst+Pfister meticulously select the ideal products for your application from a vast assortment of high-grade hoses.

Angst+Pfister offers three different types of hoses suitable for different deployment areas:

1. hoses without liners for pressureless applications;
2. stainless steel braided hoses as connecting lines to the water supply grid;
3. hoses with a pressure carrier and an outer ply for mobile water supply.

Our drinking-water hoses have an inner ply made of high-grade anti-adhesive polymeric materials; depending on the deployment area, their outer ply consists of an elastomer or thermoplastic with stainless steel braiding. Hoses with a pressure carrier are suitable for operating pressures of up to 18 bars and operating temperatures up to +90°C. GEKA Plus couplings and pressed fittings, for example, can be used as connectors.

Drinking Water Certifications

- KTW Germany
- DVGW W270 microbiological test, Germany
- DVGW W534 type examination certificate, Germany
- DVGW VP 549 type examination certificate, Germany
- SVGW Switzerland
- WRSA United Kingdom
- ACS France
- NSF 61/9 USA
- ETA Denmark



Application Example

APSOFluid® Water drinking-water hoses for mobile water supply

Fat-Containing Media



For transport hoses for fat-containing media such as milk, oil, margarine, quark, etc., gapless transitions to connections are just as important as using the right hose material. Operating temperatures of up to +100°C, various viscosities and concentrations, and the pH levels of the media are all factors that must be carefully checked when selecting the ideal hose. Well-grounded application expertise and a broad selection of high-grade hoses made of various materials such as NBR, UPE, FEP and MFA enable us to supply optimum, hygienically perfect APSOf fluid® solutions for nearly any application.

Conical nipples and slotted nuts that meet the DIN 11581 standard serve as fittings. They are either press-fitted or connected to the hoses with clamps or a binding.

The CIP-capable hoses can be quickly and efficiently cleaned with common cleansers such as 2% nitric acid or a 2% sodium hydroxide solution at temperatures up to +85°C. For hygienic reasons, however, the medium may not be stored in the hose for extended periods.

The hoses must be rinsed with hot or cold water after cleaning. Rapid steam cleaning at temperatures up to +130°C is also possible (for up to 20 minutes).



Application example

Milk hose at a truck unloading station at a dairy plant

Non-Fat-Containing and Alcoholic Fluids



Beer, wine, grappa, soft drinks, drinking water, fruit and vegetable juices – there is a broad range of alcoholic and non-fat-containing fluids. Parameters such as temperature, pH value, pressure and alcohol concentration are decisive factors for selecting the ideal hose. Angst+Pfister meticulously analyzes the relevant factors and additionally checks the electrical conductivity of the hoses if electrostatic charges pose a potential risk. Based on the data obtained, our employees choose from a comprehensive assortment of high-grade hoses. Various materials for the inner ply (such as EPDM, CIIR, UPE or FEP) and different types of hoses for overpressure or vacuum applications give us the flexibility to supply the ideal product for almost any situation.

Conical nipples with slotted nuts that meet the DIN 11581 standard and standardized Tri-Clamp connections are used as fittings. They are press-fitted or connected to the hoses with clamps or a binding.

The hoses can be cleaned conventionally or in CIP mode using common cleansers such as 2% nitric acid or a 2% sodium hydroxide solution at temperatures up to +85°C. Besides rinsing with hot or cold water, rapid steam cleaning at temperatures up to +130°C is also possible (for a maximum of 20 minutes).



Application Example

Purple Snake hose line for use in breweries

Dry, Abrasive and Viscous Media



Coffee, sugar, grains, salt, flour, yogurt and chocolate cream represent just a fraction of the vast array of dry, abrasive and viscous media. The requirements for suitable transport hoses are just as varied as the products to be transported. Angst + Pfister precisely analyzes all deployment parameters: the type of medium, fat content, pressure, temperature and viscosity determine the choice of the optimum hose. With powdery media, it is especially important to check the electrical conductivity of the hoses.

An extensive selection of high-grade abrasion-resistant transport hoses with inner plies made of NR, SBR, NBR or PUR together with the well-grounded knowledge of the experts at Angst + Pfister form the basis of efficient APSOfluid® solutions for virtually any application.

Conical nipples and slotted nuts that meet the DIN 11581 standard, Tri-Clamp connections that meet DIN, ISO or BS standards, and Storz couplings serve as fittings. The connections are press-fitted or connected with clamps or a binding. In special cases with polyurethane hoses, fittings can also be cast on the hose. Depending on the type of hose and material, declarations of conformity with FDA and BfR guidelines, EC Directive 2002/72/EC including the latest amending directive 2007/19/EC, as well as TRBS 2153 with regard to conductivity are available on request.



Application Example

Highly abrasion-resistant transport hoses in industrial coffee grinders

Drinking-Water and Food-Grade Hoses



Strict requirements apply to drinking-water and food-grade hoses. They must be tasteless and odorless and must be resistant against the medium being transported while at the same time meeting strict hygienic standards. Product quality isn't the only thing that counts; qualified advice also matters. Whether for drinking water, fat-containing, alcoholic or abrasive media, Angst+Pfister combines superior expert knowledge, excellent product quality and a wide range of hoses with diameters of up to 500 mm to create efficient APSOfuid® solutions for practically any application.

Drinking Water

Extremely strict regulations apply to hoses used for drinking-water applications. Angst+Pfister provides its customers with expert advice on certifications and hose quality.



Fat-Containing Media

In the food industry, many different types of fat-containing media can be encountered. Whether for milk- or olive-oil-based media for example, selecting the proper hose is extremely important.

Non-Fat-Containing and Alcoholic Fluids

Based on the specified application parameters, the specialists at Angst+Pfister are able to provide customers with advisory support in selecting the ideal hose. Particularly in connection with alcoholic media, the concentration of alcohol requires special attention.



Dry, Abrasive and Viscous Media

The more abrasive the medium, the greater the potential wear on the hose. Alongside information regarding the structure of the medium (e.g. fine, medium-grained, coarse), the installation situation is also a decisive criterion in selecting the ideal hose.



Services from Angst + Pfister Group

Angst + Pfister – Your supply and solutions partner

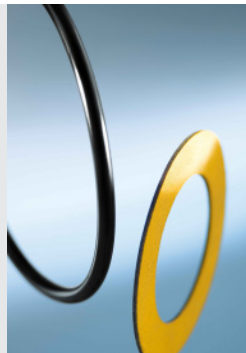
The Angst + Pfister Group is a leading international technical manufacturer and service provider for high-end industrial components. As a supply and solutions partner for engineering plastics, sealing, fluid handling, drive, and antivibration technology as well as

sensors, Angst + Pfister combines efficient logistics concept with comprehensive product application engineering services. Besides providing customer-specific parts, the Group offers a product range consisting of approximately 100,000 standard items.

Our core product divisions



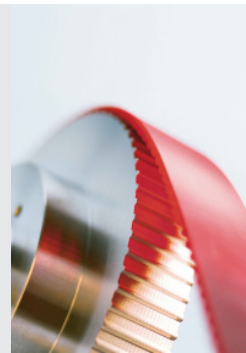
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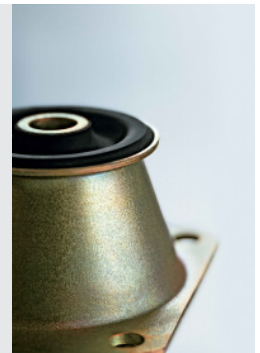
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