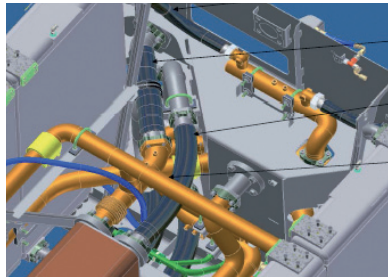
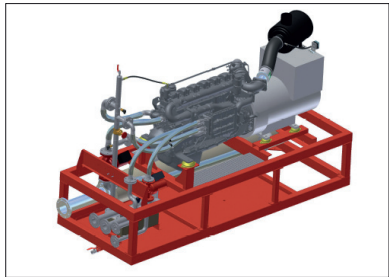
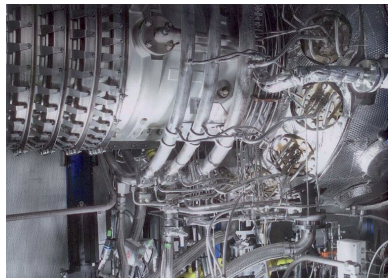


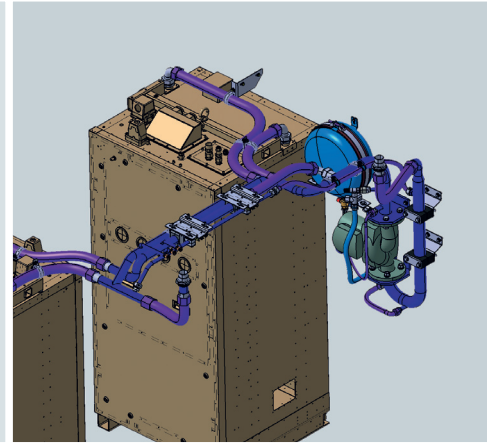


Fluid Handling Technology
FT FLASH

ASSIWELL® METAL HOSES

<p>Performance characteristics</p>	<ul style="list-style-type: none"> • Very wide temperature resistance range (from -173 °C to +600 °C) • High flexibility even for hoses with large nominal diameters • Very good resistance to chemicals • Huge selection of connections • Durable construction
<p>Engineering and design success</p>	<ul style="list-style-type: none"> • Consulting and engineering support (CAD drawings) • Wide range of products and services • Short reaction times, intensive customer service • Flexible fabrication capabilities • New automatized welding machines ensure highly consistent quality with certified processes at European Logistics Center
<p>Parameters required to design an ASSIWELL® hose assembly</p>	<ul style="list-style-type: none"> • Medium/Pressure/Temperature • Installation conditions (static, dynamic, pressure shocks, etc.) • Small batch to Mass/quantity
<p>Certifications and approvals</p>	<ul style="list-style-type: none"> • Pressure Equipment Directive 97/23/EG, module A1 • DIN EN 15085-2 CL1 certification rating for welding of railway vehicles and their components • DVGW approval for gas applications according to DIN 3384 • SVGW approval for gas applications according to DIN 3384 • SVGW approval for water applications according to W/TPW 119 • EN 287-1 welder certification





More than just a FLIRT –
Stadler Rail Group and Angst+Pfister

FLIRT is the name of one of the successful train models manufactured by the Stadler Rail Group. As an electric low-floor train, the FLIRT is equipped with a power converter that needs to be cooled. Angst+Pfister outfits FLIRT trains with perfectly tailored high-grade cooling conduit systems.

Technical application challenge

The coolant fluid needed to cool the power converter circulates through a hose assembly system. Tight bending radii, countless connection points and an enormous temperature spectrum that ranges from -40°C to $+80^{\circ}\text{C}$ put the hose lines to a severe test, especially since a service life of up to 30 years is required. Optimal hose lines must be lastingly impermeable to diffusion and must guarantee trouble-free performance in the face of harsh stresses and strains.

Technical solution

Custom-fabricated ASSIWELL® hose lines from Angst+Pfister meet the toughest demands. The all-metal hoses do not become porous when exposed to enormous temperature swings, unlike many conventional elastomer hoses. The corrugated hoses effortlessly cope with even the tightest bending radii. The hose fittings are professionally welded so that connection points do not pose any potential weak spots. Angst+Pfister possesses the highest certification level rating for welding of components for railway vehicles: CL1 according to DIN EN 15085-2. Whether in the frigid Finnish winter or the sweltering southern summer, ASSIWELL® metal hoses stand up to any challenge.

Angst+Pfister – product solutions in the area of fluid-handling technology

The customer has access to the entire ASSIWELL® product range, and our APSOfuid® specialists possess the requisite skills to refine the hoses into perfect cooling conduit systems. Long-standing experience in the railway industry enables Angst+Pfister to assist its customers competently, flexibly and with quick response times even during early stages of construction and to optimize hose lines for individual installation situations. The end outcome is highly dependable hose lines with enormous service lives, which results in long maintenance intervals, minimal downtimes and an excellent price-performance proposition.

Your contact

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