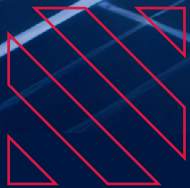




How AVS Römer ensures secure connections to PVT modules



Best Practice

AVS Römer connector and hose – a perfect combination



Best Practice

AVS Römer connector and hose – a perfect combination



Photovoltaics and heating technology have long been regarded as a powerful combination, but their full potential is only realised when they are combined in a single PVT module. The idea: the PV layer generates electricity, whilst the underlying heating unit absorbs excess heat and makes it usable. This significantly increases efficiency. However, a good idea requires a well-thought-out technical implementation.

Right at this point, the manufacturer of a new PVT module was faced with a key question: how can a durable, cost-effective and reliable connection system be created for a component that is constantly exposed to the outdoor elements?



At a glance

The challenges: Durable, flexible, affordable

The customer was looking for a solution that works reliably whilst remaining affordable. Hence the desire for a cost-effective plastic solution.

From a technical perspective, connecting the individual PVT modules to the system circuit presented a particular challenge. Flexible hoses and secure fittings had to be perfectly matched. The requirements were demanding: temperature fluctuations, UV radiation, moisture and pressure loads caused by strong winds all had to be taken into account.

The solution: Expertise in materials meets practical experience

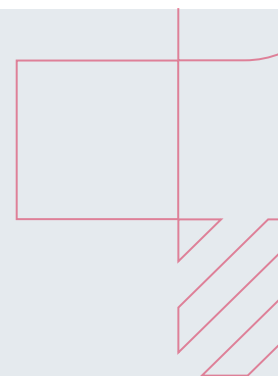
Following a detailed analysis of the practical situation, a connection solution was developed that not only makes installation significantly easier but also performs exceptionally well in practice.

The heart of the solution is a plastic fitting with a special retaining ring, combined with a highly flexible connecting hose. Precise crimping creates a stable, leak-proof yet flexible connection that can withstand the demanding conditions of outdoor use in the long term.

Plastic instead of stainless steel?

Yes! The chosen combination of plastic and elastomer offers cost benefits and boasts excellent technical properties:

- ✓ High temperature resistance
- ✓ UV stability
- ✓ Oxygen tightness
- ✓ Excellent flexibility



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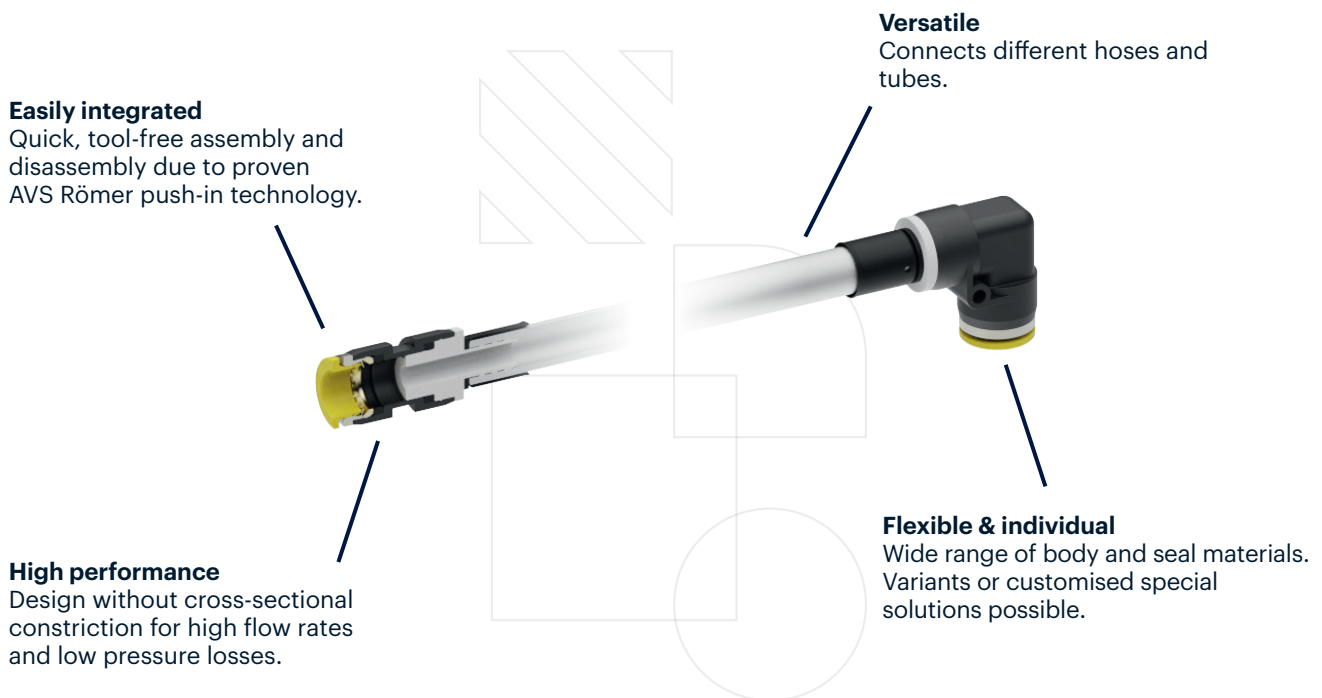


The highlight: Checked, tested, verified

What makes this solution so reliable is AVS Römer's extensive expertise. The connection technology was put through its paces in their own test laboratory. All relevant stress factors were simulated, including extreme temperatures, flow rates and leak-tightness. Once the lab values had been verified, the test was conducted at the customer's premises. The results were also confirmed in actual system operation: the flow rates and the stability of the connection convinced across the entire spectrum.

This double validation – laboratory testing and real-world application – is one of the key factors in finding the best solution.

AVS Römer push-in connectors



The conclusion

AVS Römer as a system supplier

This project is a striking example of how AVS Römer brings technical ideas to the market. Drawing on in-depth materials expertise, smart engineering and professional testing, a solution was developed that not only works but also impresses. The result is a future-proof connection technology that maximises the use of PVT modules and gives the customer a clear advantage in the market.

