



新能源汽车用 Plug & Seal 密封管接头



Plug & Seal 密封管接头是一种附着有橡胶层的管路模块，可以在热管理系统的各元件之间建立安全、无泄漏的连接，并实现热源和散热部件之间的有效热传递。密封管接头是一种安全、低成本的流体运输解决方案，适用于水、乙二醇和油等工程流体。管接头可以在单个部件中集成多种功能，并补偿管道偏心 and 公差变化。

为客户带来的价值

- 集成多种功能于单个部件上
- 可靠的密封性和高抗振性
- 偏心补偿功能允许相配件有更大公差
- 特有的专利低安装力密封筋结构
- 可根据客户的具体要求进行设计开发

特点和优势

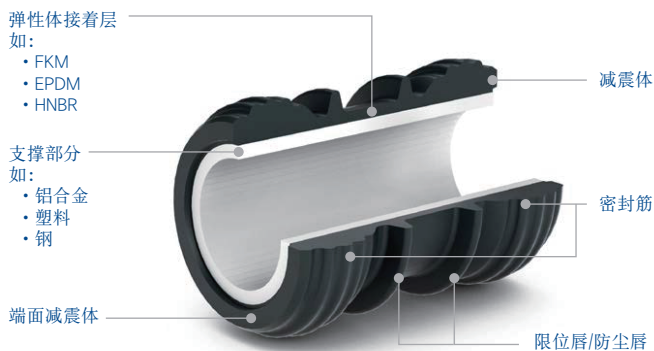
恩福提供多种长度、内/外径的密封管接头，以及多种表层弹性材料，如FKM、HNBR、EPDM、ACM、AEM和VMO橡胶等。

根据客户的具体需求，内部管道可灵活选择钢、不锈钢、铝和塑料等材料，可应用于所有介质的传输。

其他信息

- 减重、减振、降噪
- 低的热传导率 $<0.2 \text{ W/[m}\cdot\text{K]}$ ，提高热效率
- 2K制造工艺为软质和硬质部件提供了高度的设计灵活性
- 化学结合消除了潜在的泄露点
- 内部几何形状，使介质产生湍流，以提高传热效率
- 通过Y型连接减少密封需求
- 可集成附加功能，如可变流量分配器、温度传感器等

管接头结构



管接头类型



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以上信息均真实可靠，但对其准确性和适用性需要视实际情况而定。
以上信息基于实验室测试，并不一定代表最终产品的性能，具体产品性能需要客户实机测试并确认。

NOK-FREUDENBERG
恩福(中国)

E-Mobility Plug & Seal Connectors



Plug & Seals are rubber-coated pipe sections that create a safe, leakfree connection between the elements of the thermal management system, enabling an efficient heat transfer between the heat source and the heat consumer.

A secure, low-cost solution for the transport of water, water-glycol, engineered fluids and oils, Plug & Seals can combine several functions in a single component and compensate for conduit misalignment and tolerance variations.

Features & Benefits

Plug & Seals are available in a wide range of dimensions (length, internal and external diameters). NOK-Freudenberg offers a large selection of rubber coatings, such as FKM, HNBR, EPDM, ACM, AEM, VMQ optimized for performance in the customer specific application.

The base material of the insert can be flexibly chosen from steel, stainless steel, aluminum and plastic, depending on the specific customer needs.

Values for the Customer

- Combine several functions in a single component
- Reliable sealing combined with high resistance against vibrations
- Compensation for misalignment allow larger tolerances of the mating partners
- Reduction of assembly forces by patented low-load sealing- bead-geometry
- Design development according to customer-specific requirements

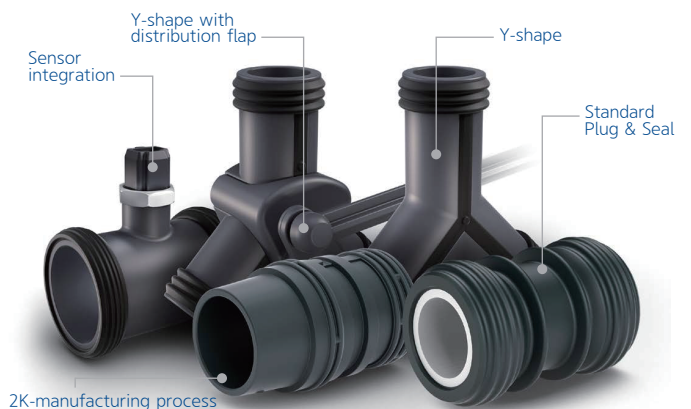
Additional Information

- Weight reduction, optimized NVH
- Low thermal conductivity of $< 0.2 \text{ W}/[\text{m} \cdot \text{K}]$ increases thermal efficiency
- 2K-manufacturing process allowing high design flexibility for the soft and the hard component
- Chemical bonding eliminating potential leakage areas
- Special flow-optimized inner geometries generating turbulent stream in the media to increase heat transfer efficiency
- Reduction of sealing locations by Y-shape connectors
- Integration of add-on functions, e.g. flow distributor, temp sensor

Plug & Seal Connector scheme



Plug & Seal Connector options



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