Technical Bulletin

Swagelok
Bangalore

System Variables to Consider While Selecting a Hose

A hose is a lot more than just a long flexible tube, especially when it is designed for use in industrial applications. Unfortunately, plants often treat hose selection as an afterthought. But there are several system variables that must be considered while selecting Hose.


Temperature

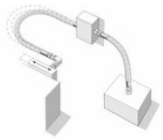
Identify the minimum and maximum temperatures to which the hose assembly will be exposed and also give regard to the system media and environment.

Pressure

Identify the minimum and maximum pressures (or vacuum) within and outside the hose assembly

Chemical / Material Compatibility

Identify the system media and the environment to which the hose assembly will be exposed. This will help determine the materials of construction best suited to the application demands and whether the hose requires a static or dissipative core.



Movement / Dynamic Application

Confirm whether the hose assembly will be installed in a dynamic application as this requires different consideration than a static application.

Cleanability and Drainability

Consider whether the system needs to be cleaned. Systems requiring cleanability demand specific core material and construction. System that necessitate cleability also requires the cleaning fluids to be properly drained.

Some systems that require drainability may not require cleanability. Consider core construction as this will impact drainability.

Also gas applications can tolerate annular convolutions while more critical liquid applications (chemical and/ or sanitary) will require helical convolutions or smooth-bore cores.

Flow

Consider the desired flow velocity. Hose connection size, core tube construction, and routed installation can all affect flow.

Permeation

Gases, vapors and liquids may migrate or permeate through cores of some materials. The rate of permeation is affected by many application specific variables.

Absorption

Some system media may be absorbed into some types of core materials. This absorption can result in leeching of material back in process media, which can result in contamination. The hose core material needs to be specifically chosen if absorption is a concern.

Please talk to our Associate or call us for more info

Head Office
#1, Doddanakkundi Industrial Area
Mahadevapura Post
Bangalore - 560048
Phone : 080 - 42669100
Email : bangalore@swagelok.com

Branch Offices

Chennai	Tel: 044 - 45502005	Email : chennai@swagelok.com
Delhi	Tel: 0124 - 4045631	Email : delhi@swagelok.com
Hyderabad	Tel: 040 - 40077652	Email : hyderabad@swagelok.com

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