



HOSE INSTALLATION TIPS

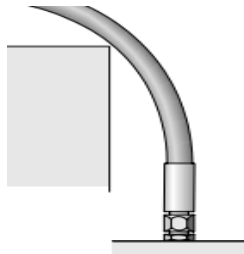
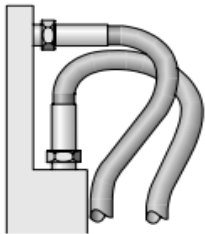
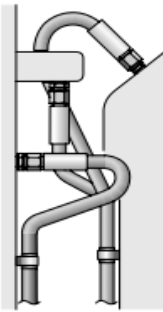
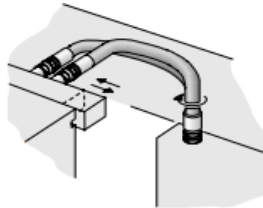
The routing of the hose assembly and the environment in which the hose assembly operates directly influence the service life of the hose assembly. The following diagrams indicate the correct routing of hose assemblies that will maximize its service life and assure a safe working functionality.

When hose installation is straight, there must be enough slack in the hose to allow for changes in length that occur when pressure is applied. When pressurized, hose that is too short may pull loose from its hose fittings or stress the hose fitting connections, causing premature metallic or seal failures.

The hose length must be determined so that the hose assembly has enough slack to allow the system components to move or vibrate without creating tension in the hose.

However, do not allow too much slack and therefore introduce the risk of the hose snagging on other equipment or rubbing on other components. Mechanical straining of the hoses needs to be avoided, so the hose must not be bent below its minimum bend radius or twisted during installation. The plane of movement must also be considered and the hose routing selected accordingly. Hose routing also plays an important role on the selection of the hose fittings, as the correct fittings can avoid straining the hoses, unnecessary hose length or multiple threaded joints.

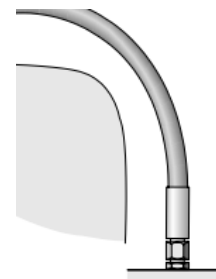
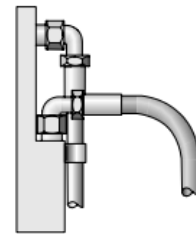
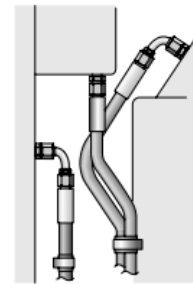
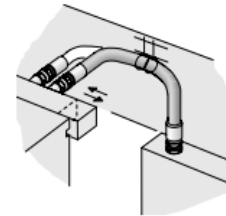
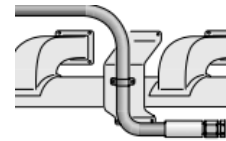




Correct clamping (holding/supporting) of the hose should be exercised to securely route the hose or to avoid the hose contacting surfaces that will cause the hose damage. It is however, vital that the hose be allowed to keep its functionality as a “flexible-pipe” and not be restricted from changing in length when under pressure. It should also be noted that hoses for high- and low-pressure lines shall not be crossed or clamped together, as the difference in changes in length could wear the hose covers. Hose should not be bent in more than one plane. If hose follows a compound bend, it shall be coupled into separate segments or clamped into segments that each flex in only one plane. Hoses should be kept away from hot parts as high ambient temperatures shorten hose life. Protective insulation may need to be used in unusually high ambient temperature areas. While the importance of the functionality is primary, the aesthetics and practicality of the installation should also be considered in the design. Maintenance might be necessary at some point in the future, so prohibitive design routings should be avoided.

Abrasive influences.

In general care should be taken so that the hose is not exposed to direct surface contact that will cause abrasive wearing of the outer cover (either hose to object or hose to hose contact). If however, the application is such that this cannot be avoided, either a hose with a higher abrasion



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