Hose Technical Information

Usage and Storage Suggestions

Care and Maintenance

When Using Your Hose

The life of the hose is greatly influenced by the surrounding temperature, fluid temperature and time of exposure. Please select the proper hose according to the fluid used. Especially in the case of PVC hose, if the fluid temperature reaches or exceeds 120°F, do not exceed one half the rated working pressure of the hose. In pressure applications, please open and close the valve slowly to avoid impact pressure. Suddenly closing the valve could cause the hose to burst.

Please do not use high-grade chemicals with high toxicity and hazardous materials such as high concentrations of Acid or Alkalis and flammable or explosive gas. Please set pump pressure below working pressure when you use it in the upright part of an underwater pump; otherwise there is a possibility of a failure caused by a water hammer when the pump is turned off.

Please do not use for compressed air; there is a possibility of a burst. Please do not use for food grade applications unless indicated. Also, do not use for pharmaceutical products. Exposure to the weather will increase the deterioration rate of the hose. Remember hoses are replaceable items. The rate of their replacement will depend on the conditions under which they are used and deterioration.

Installation

Prior to the installation, please consider the impact on human health and surrounding facilities in case of a hose failure. Since the hose will expand and contract because of internal pressure, please provide sufficient slack at the time of installation for expansion and contraction. If twisted, the performance of a hose will fall. Please use a joint when a twist arises by rocking or rotation. The hose could be damaged if there is a sharp bend at the fitting. Use appropriate elbows and fittings to support the hose so that when it is operational it will not bend sharply at the fitting. Please use an elbow or allow extra length to avoid this problem. Please protect the hose against external impact (i.e. falling rock or running over the hose with a vehicle). If the installation of the hose requires 150 or more feet of continuous length, the resulting head or loss of pressure may disrupt the quantity of flow. The hose will deteriorate with age. If you find any defects in your periodic inspections please replace the hose.

Storage — As Stock

Temperature, humidity, ozone, sunlight, oils, solvents, corrosive liquids, fumes, insects, rodents, and radioactive materials can adversely affect hose products in storage. Exposure to direct or reflected sunlight should be avoided.

The hose needs to be stored under these conditions:

- Out of direct sun, preferably a dark location
- In a cool location
- Low humidity
- Free of dust and dirt
- First-in, first-out basis
- Ideal temperature range is 50 to 70 degrees F

The hose should not be piled or stacked to such an extent that the weight of the stack creates distortions on the lengths stored at the bottom.

Storage — After Use

Follow above recommendations. After using, remove residual substance by washing the hose in cold water, etc. Please store the hose with good ventilation so that air passes through the inside of a hose freely. In the case of rubber hose, please cap the ends.

Transport

When moving hose, please do not drag on the ground. Handle carefully to protect the hose from impact during loading and unloading. If you are lifting the hose by a crane, etc., do not lift it up by only one point but use several.

Exterior Inspection

If the following abnormalities are discovered, please stop use immediately and replace the hose.

- Hose shows any swelling or leakage near fittings
- Exterior cracking that allows any loss of fluid or creates a safety hazard
- Collapsing or kinking
- An inside swelling and exfoliation
- Others: hardening, swelling, cracking, etc

Minimum Bend Radius

Minimum bending radius is the smallest diameter to which a hose can be bent without casing internal damage to the hose or flattening in the cross-section of the hose (kinking). Minimum bending radius is measured to the inside curvature of the hose as illustrated.

For Kanaflex hose, minimum bend radius is established at 72°F. Temperature changes, either lower or higher, will affect minimum bend radius. Caution should be taken to assure proper hose selection for the actual application temperature of both the material handled and the ambient temperature surrounding the application.

During storage of the hose, ambient temperature should also be considered to prevent hose damage. When possible, minimum bending radius of the hose should be as large as possible to avoid damage to the hose and early hose failure.

Temperature Effects

Kanaflex conducts tests at 72°F to determine the recommended minimum bending radius, working pressures, and vacuum ratings. Straight lengths of hose are used during testing. If the ambient temperatures, or application induced temperatures, vary from the 72°F baseline, stated specifications and ratings for the hose will change. If the hose application and placement includes bends, the stated specifications and ratings of the hose will also change. Please take these variance guidelines into account when determining the suitability of a hose for a specific application.

Guideline for Tightening Kanaflex Powerlock Clamps

Please use the table below to determine the correct torque recommended when lightening down Kanaflex Powerlock clamps.

Size (in)	2	2 1/2	3	4	5	6	8	10	12
Torque (lbs-ft)	7.2	7.2	9.4	14.5	14.5	16.6	16.6	18.1	18.1