

Safety precautions



DO'S

Treat high pressure hose with extreme caution. Parker Hannifin hoses are ultra high pressure hoses, not garden hoses and should be treated like a high pressure vessel

Always visually inspect for frayed, damaged or wear spots before using

Check the end connections for wear, rust, cracks or other deterioration which could produce a dangerous projectile

Know the working pressures and burst pressures of all hoses before using them

Always use clean, filtered medium to prolong hose life

Always clean, drain and coil hoses after use

Use only hoses assembled by an authorized Parker distributor



DON'TS

Never fix a hose at the sleeves

Never use a hose with cuts or wire showing through the outer cover

Never use a hose with bubbles, blisters or kinks o Don't exceed the bend radius and pressure rating for each hose

Don't run over or crush the hose with vehicles

Hoses with corroded or leaking end connections should be avoided

Avoid using a dirty medium or medium with sulfur compounds in it or don't bend the hose over scaffolding or pull heavy equipment with the hose

Don't let hose support its own weight off towers or buildings

Never use hose without hose arrestors (containment grips)

Don't expect water jetting or hydraulic hose to last forever

Don't change or repair a hose without instructions from the manufacturer

Never disconnect a hose under pressure

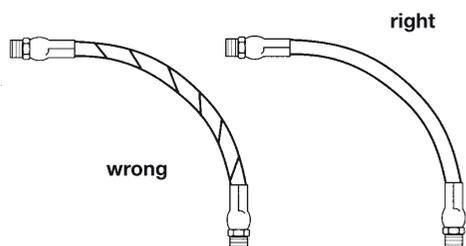


Spon Lane South, Smethwick, West Midlands. B66 1QJ
Tel : 0121 525 6450
Fax : 0121 553 5951
Email polyflex@lister.co.uk
Web : www.lister-polyflex.com

Safety Precautions & Installation Tips

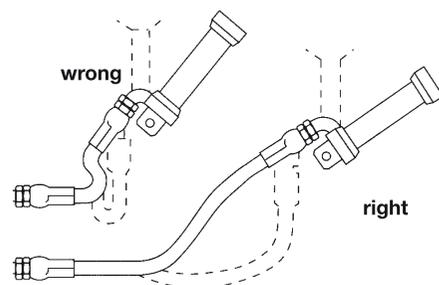
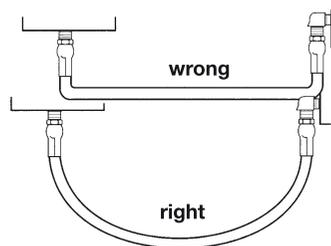
Please read before use.
All information is readily available from Parker Hannifin
Catalogue 4462 Global Edition

Installation tips



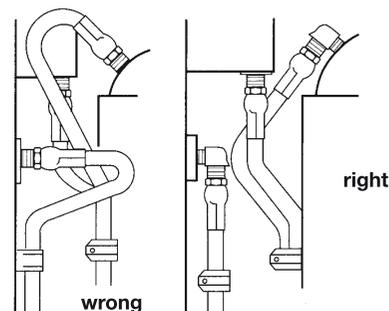
Hose is weakened when installed in twisted position. Also, pressure pulses in twisted hose tend to fatigue wire and loosen fitting connections. Design so that machine motion produces bending rather than torsion.

Hose should exit coupling in a straight position rather than side loaded. The minimum bend radius must not be exceeded to avoid kinking of hose and flow restriction.

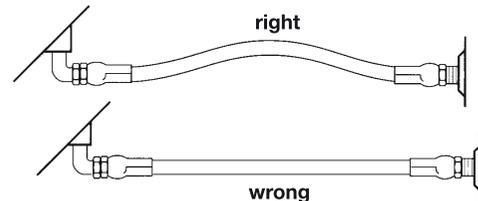


When hose assembly is installed in a flexing application, remember that metal hose fittings are not part of the flexible portion.

Use elbows or adaptors as necessary to eliminate excess hose length and to ensure neater installation and easier maintenance.

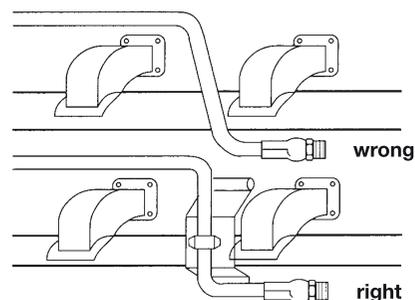


Free hose length allowance:



Pressure can change hose in length by as much as $\pm 2\%$. This must be considered when cutting hose to appropriate length.

Avoid installing hose assemblies close to heat sources. However, if this should be required, insulate hose.



Selection, installation, and maintenance of *polyflex* hose and hose assemblies

Hose and hose assemblies have a finite life span and many factors can reduce this time. This recommended practice should be read by designers and users of hose to assist them in the proper selection of hose. These guidelines, while not exhaustive, will assist the user in maintaining hydraulic and pneumatic systems.

READ THE PARKER SAFETY GUIDE CONTAINED IN THIS CATALOGUE IN ITS ENTIRETY.

PART 1 - How to select hose

- **Pressure** - Maximum operating pressure of the hose must be greater than or equal to the system pressure. Pressure surges or system "spikes" in excess of the maximum operating pressure will shorten hose life and must be avoided.
- **Temperature** - Ambient and fluid temperatures must not exceed the hose/fittings rated design temperature. Attempt to route hose or shield hose from high temperature sources.
- **Size** - Adequately size hose and fittings to avoid damaging hose with excessive turbulence, or heat build-up, while maintaining proper flow and pressure. (Refer to fluid velocity nomogram.)
- **Fluid Compatibility** - Refer to Chemical Compatibility Guide in this catalog for use of fluids with various materials. If unsure of an application, contact the factory. Additional care must be taken with gaseous applications. (See Safety Guide at end of catalog.)
- **Environment** - Conditions such as ozone, UV light, harsh chemicals, salt water, and other airborne contaminants can degrade hose and shorten its life.
- **Length** - Hose length changes with pressure. This, along with equipment movement, must be considered in the system design.
- **Proper couplings** - Always follow manufacturers specifications and do not mix components of different manufacturers.
- **Mechanical loads** - Conditions such as tensile and side loads, vibration, excessive flexing, and twist will reduce hose life. Use swivel fittings and adaptors to avoid hose twisting. Test the hose if the application is potentially problematic or unusual.
- **Electrical conductivity** - Determine if the hose must be non-conductive to prevent electrical current flow or conductive to dissipate static electricity. Choose hose and fittings accordingly. (See Safety Guide for Electrical Conductivity issues.)

PART 2 - Installation and maintenance

- **Inspect components** - Check hose for cover cracks, blisters, cleanliness, kinks, cracks or core tube obstructions or other defects. Examine fittings for poor threads, obstructions, cracks, rust. Do not use hose or fittings if these problems exist.
- **Assemble per instructions** - Instructions are available for companies, trained and authorized by Polyflex.
- **Do not exceed specified minimum bend radius** - Use stress relievers to prevent sharp bends at the hose and fitting juncture. These can be spring guards or other stress relieving members.
- **Ensure that hose bends rather than twists with equipment motion.**
- **Use a torque wrench or the flats from finger tight method to properly install port connections.**
- **After installation, eliminate air entrapped in system, pressurise to maximum operating pressure, and check for leaks and proper system function.**
- **After installation, periodically (frequency depends on severity of application and potential risk) inspect the system for the following:**
 1. Blistered, degraded, or loose hose covers.
 2. Stiff, cracked, or charred hose.
 3. Cuts or abrasion of hose. Look for exposed reinforcement.
 4. Leaks in hose or fittings.
 5. Damaged or corroded fittings.
 6. Excessive build up of dirt, grease, oils, etc.
 7. Defective or broken accessories (clamping devices, kink guards)
 8. Kinks in hoses.

Upon discovery of any of these items, replace it, repair it, but **DO NOT IGNORE IT!**

- Retest the system after all maintenance procedures.
- Establish replacement schedules based on previous service life, or when failures could result in damage, personal injury, excessive or unacceptable downtime.