Bend Radius (for polymer hose and all rubber hose)
• The radius of a bend section of hose measured to the innermost surface of the curved portion (R1).

Bend Radius (Metal hose)
• The radius of a bend section of hose measured to the hose centerline (R2).

Minimum Bend Radius
• The smallest radius at which a hose can be used.

Force to Bend
• The amount of stress required to induce bending around a specified radius - a measure of stiffness.

Maximum Rated Working Pressure
• The maximum pressure hoses should be subjected to on a continuous basis.

Maximum Rated Test Pressure
• The maximum rated pressure is multiplied by 150%.

Nominal Rated Burst Pressure
• The average pressure at which the core or braid will rupture at ambient temperature.

Pressure / Temperature Correction
• Hose pressure capabilities decrease as the temperature increases. Consult Pressure / Temperature Correction tables to determine pressure rating at elevated temperatures.

Hydraulic Shock...

 Hydraulic Shock... Due To Instantaneous Pressure Increase

Formula to determine minimum hose length given bend radius and degree of bend required:

\[ L = \frac{A}{360} \times 2 \times B \]

- \( L \) = Minimum length of hose to make bend
- \( A \) = Angle of bend
- \( B \) = Given bend radius of hose

Example: To make a 60° bend at the hose's rated minimum bend radius of 15 cm

\[ L = \frac{60}{360} \times 2 \times 3.14 \times 15 \approx 16 \text{ cm} \]

Thus, the bend must be made over approximately 16 cm of hose length. The bend radius used must be equal to or greater than the rated minimum bend radius. Bending the hose to a smaller bend radius than minimum may kink the hose and the result in damage and early failure.

Seal-Rite™ radial crimp couplers are the purest unitized assemblies available today. Our external crimp design provides a 360° fixed seal at the coupler stem to hose junction point that eliminates the possibility of product wicking between the hose and coupler. Unlike internal expansion which can deform metal and yield die impressions, radial crimp technology will not interfere with the internal surface of the coupling stem. A full flow smooth bore transition is created after fabrication that excludes ledges or crevices that can collect bacteria.

Flexibility / Bend Radius

Reprinted from RMA Hose Handbook IP-2 Fourth Edition

Flexibility and minimum bend radius are important factors in hose design and selection if it is known that the hose will be subjected to sharp curvatures in normal use. When bent at too sharp an angle, hose may kink or flatten in the cross-section. The reinforcement may also be unduly stressed or distorted and the hose life thereby shortened.

Adequate flexibility means the hose should be able to conform to the smallest anticipated bend radius without over stress. The minimum bend radius is generally specified for each hose in this catalog. This is the radius to which the hose can be bent in service without damage or appreciably shortening its life. The radius is measured to the inside of the curvature.

Hydraulic Shock...

 Hydraulic Shock... Due To Instantaneous Pressure Increase

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TwistLOC™ components become a single unit that resist separation under severe applications. Internal surface finishes exceed 15 Ra. Each coupling stem is manufactured from 316L grade stainless steel and stamped with a material traceability number which is our commitment to quality. Seal-Rite radial crimped couplers are available for attachment on Flex-Rite hoses. A wide range of end styles, sizes 1/2” through 6” are available.