

1. **Cutting the Hose.**

Two terms are used:

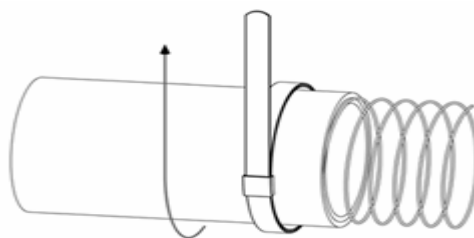
- a. Cut to length means cut the hose to the length requested excluding the length of the fitting.
- b. Overall Length (O.A.L.) refers to the overall length of the assembly including fittings.
- c. Example:  
 O.A.L. = requirement is 50 ft.  
 Fitting Length (each end) = 7 inches  
 Shank Length (each end) = 4 inches

A.	Fitting Length	7"
B.	Shank Length	4"
C.	Subtract A from B	3"
D.	Multiply C by 2	x 2
E.	Total Coupling Length	6"
F.	Overall Length Required	50'
G.	Subtract E from F	6"
	Cut Hose Length	49' 6"

- 2. **Cut Ends Square.** Hose ends must be cut square (90° to the length of the hose) for proper coupling insertion. Improper insertion can reduce coupling retention.
- 3. **Clean Hose End.** Debris left inside the hose from the cutting process must be removed prior to coupling insertion. This is especially important when an abrasive wheel or "chop saw" is used to make the cut. Debris will reduce coupling retention.
- 4. **Determine number of clamps required.** Refer to the Pressure Chart in the DPL for correct number of clamps to install.
- 5. **Mark Hose for Proper Clamp Placement.** Bolt clamps without gripping fingers, all styles of band clamps (both pre-formed and bands & buckles) and Pinch-On clamps require proper placement to achieve maximum retention. Place marks as follows:
  - a. For shanks having serrations that are all the same size, like King Combination Nipples:
    - 1) Place shank next to hose to simulate shank being fully inserted.
    - 2) Place mark on hose corresponding with point of last serration (furthest from hose end).
    - 3) For multiple clamp installation, place additional mark(s) equally spaced between first mark and hose end ensuring that 1/4" to 3/8" space is left between hose end and last clamp installed.

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- b. For shanks having very pronounced serrations or with some serrations larger than others like Cam & Groove:
- 1) Place shank next to hose to simulate shank being fully inserted.
  - 2) Place mark(s) on hose corresponding with the point(s) of the pronounced or large serration(s).
6. **Static Grounding.** When static grounding is required it is essential that it be done properly. Typically, it is accomplished by bending the built-in static wire or the helical wire (or wires) in to the hose I.D. (Inside Diameter) so that the wire or wires make contact with the metal coupling. Bend in no more wire than necessary. One half inch is usually sufficient. Other methods of static grounding may be required due to hose type, hose manufacturer or style of coupling being installed. Always contact the hose manufacturer to verify proper static grounding techniques for that particular hose. Improper static grounding can lead to fire, explosions, reduced assembly life, damage to property and injury or death to personnel.
7. **For hoses having a helical wire.** Determine which direction the helical wire is pointing. Proper installation of pre-formed band clamps or bands and buckles relies upon the proper orientation of the clamp tail with the helical wire. See illustration below.



Note: If helical wire is not used for static grounding, trim the wire flush with the hose. This will prevent operator injuries during the assembly.

8. **Seal the Hose Ends.** At each end of the hose, the reinforcing material is exposed to outside elements. This exposure could lead to premature assembly failure if those outside elements are allowed to penetrate that reinforcing material. For this reason, the ends of the hose should be sealed. Typically, rubber cement or shellac is used. Contact the hose manufacturer for specific recommendations.
9. **Apply Coupling Lubricant.** Lubricate the coupling shank and hose inside diameter prior to coupling insertion. Dixon Valve & Coupling Company recommends using Dixon Coupling Lubricant (DCL10 pint, DCL80 gallon). Do not use hand soap, oil, grease, WD 40, Silicone Spray, or other substances that may attack the hose tube material and / or reduce coupling retention.

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