Perma-Grip

Internally Expanded Permanent Hose Couplings Reference Sheet

Ferrule Selection Procedures

Method 1 - Quick (Least accurate)

a. Measure hose O.D. using O.D. tape. Inserting a coupling body into hose end will increase accuracy.
b. Select a UMI ferrule from the UMI Ferrule Specification Chart, targeting a line-to-line fit up to 1/32" loose, based on the ferrule serration I.D.
c. Push ferrule on to hose using up to approximately 40 lbs. of force. Always allow 3/16" to 1/4" space between hose end and front surface of ferrule. Do not push the hose to the front surface of the ferrule.
d. Check fit of ferrule by inserting coupling body into hose and inspecting the space between hose O.D. and ferrule I.D. The ferrule should remain stationary from the line-to-line fit, or loose to the extent whereby a standard #1 paperclip (1/32") will fit snugly between the surfaces of the hose and ferrule in one location.

Method 2 - Controlled (Slower, more accurate)

a. Insert coupling body into hose.
b. Using a vernier caliper, measure the hose O.D. in two places, equally spaced apart.
c. Take average of O.D. readings.
d. Select a UMI ferrule from the UMI Ferrule Specification Chart, targeting a line-to-line fit up to 1/32" loose, based on the ferrule serration I.D.
e. Push ferrule on to hose using up to approximately 40 lbs. of force. Always allow 3/16" to 1/4" space between hose end and front surface of ferrule. Do not push the hose to the front surface of the ferrule.
f. Check fit of ferrule by inserting coupling body into hose and inspecting the space between hose O.D. and ferrule I.D. The ferrule should remain stationary from the line-to-line fit, or loose to the extent whereby a standard #1 paperclip (1/32") will fit snugly between the surfaces of the hose and ferrule in one location.

Method 3 - Precise (Slowest, most accurate)

a. Using a vernier caliper, measure the wall thickness of the hose in four equally spaced places.
b. Take average of the wall thickness readings.
c. Multiply this average by 2 and add it to the hose I.D. dimension to determine the actual O.D. of the hose.
d. Select a UMI ferrule from the UMI Ferrule Specification Chart, targeting a line-to-line fit up to 1/32" loose, based on the ferrule serration I.D.
e. Push ferrule on to hose using up to approximately 40 lbs. of force. Always allow 3/16" to 1/4" space between hose end and front surface of ferrule. Do not push the hose to the front surface of the ferrule.
f. Check fit of ferrule by inserting coupling body into hose and inspecting the space between hose O.D. and ferrule I.D. The ferrule should remain stationary from the line-to-line fit, or loose to the extent whereby a standard #1 paperclip (1/32") will fit snugly between the surfaces of the hose and ferrule in one location.

These ferrule selection procedures apply exclusively to ferrules produced by United Metal Industries.
If you have any questions regarding ferrule selection, please consult the factory at 800-359-6801.

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