

	<b>TECHNICAL DATA</b>	<b>GROOVED COUPLING INSTALLATION GUIDE</b>
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**DESCRIPTION**

This guide covers the proper installation and assembly procedures for your VGS grooved coupling. To ensure the proper installation, assembly and performance of the product, read this guide thoroughly before the installation of any product and keep this guide on hand for future reference.

VGS grooved couplings are manufactured for use with standard roll or cut grooves as specified in ANSI/AWWA C606 (latest edition) and ISO/FDIS 6182-12.



**LISTINGS AND APPROVALS**







Refer to the specific VGS Coupling technical data pages for listings and approvals.

The latest VGS® Technical Data can be accessed at  
<http://www.vikinggroupinc.com>.  
 Scan to visit our Mobile website:



<http://vikinggroup.mobi/p/46374>

**GASKET INSTALLATION - PRELIMINARY STEPS**

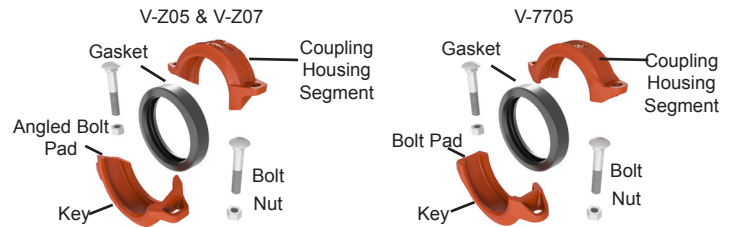
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|--|---|
| <p><b>1. Inspect Pipe Ends:</b> For optimum sealing by the gasket, the exterior surface of the pipe ends must be free from any indentations, projections, roll marks or other harmful surface defects such as loose paint, scale, dirt, chips, grease and rust.</p>                  |  |
| <p><b>2. Check Gasket:</b> Verify the gasket supplied is correct for the intended service. Color code identifies gasket grade. Refer to form F_031014 for additional information on gaskets.</p>   |  |
| <p><b>3. Lubricated Gasket:</b> To help insert pipe and mount couplings smoothly without pinching, apply a thin layer of lubricant to the sealing lips of the gasket and as well as to the exterior of the gasket. Be sure to use a lubricant that is not harmful to the gasket.</p> |  |
| <p><b>NOTICE</b> <b>Pre-Lube gasket:</b> Normally no lubricant is required when using a prelube gasket.</p>  |  |
| <p><b>4. Install Gasket:</b> Install the gasket over one end of the pipe so that the pipe end is exposed. No part of the gasket should overhang this end of the pipe.</p>  |  |
| <p><b>5. Bring the Mating Pipe Together:</b> Bring together and align the two pipe ends to be joined. Slide the gasket over the ends and center it between the grooves of the pipe to be joined. No part of the gasket should protrude into the groove of either pipe.</p>           |  |


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**MODELS V-Z05 & V-Z07 ANGLE PAD RIGID  
AND V-7705 FLEXIBLE COUPLINGS**

*Please read the instructions carefully before installation.  
Refer to page 1 for preliminary steps 1 through 5.*







**6. Assembling Coupling:** For a “swing-over” assembly loosely install one bolt and nut on one side of the coupling. For a standard assembly start with the two housings separated.



**7. Install Coupling Halves:** For a “swing-over” installation, place one of the coupling halves around the bottom side of the gasket and swing over the other coupling half into position over the top side of the gasket. For a standard installation install the coupling halves one at a time. In both cases make sure the coupling keys are engaged in the grooves.



**8. Insert Bolt & Nut:** Insert the remaining bolt and apply the nut hand-tight. Make sure that the oval neck of the bolt engages into the bolt hole of the housing.



**9. TIGHTEN NUTS:** Tighten nuts alternately and equally until the bolt pads are drawn together. Tighten nuts by another one quarter to one half turn to make sure the nuts and bolts are snug and secure. The use of a torque wrench is usually not required.

**⚠ CAUTION**

1. Uneven tightening of bolts and nuts may cause the gasket to be pinched, resulting in an immediate or delayed leak.
2. Excessive tightening of nuts may cause a bolt or joint failure. Do not exceed the listed torque values on page 3 by more than 25%.

**NOTICE**

As the coupling bolts are tightened, the angled bolt pads slide in opposite directions causing the coupling keys to tightly grip the pipe, while at the same time the pipe grooves are forced outward against the coupling keys.



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### **BOLTS AND NUTS**

#### **BOLT TORQUE FOR PROPER ASSEMBLY OF COUPLINGS**

VGS pipe couplings are always supplied with factory bolts and nuts. Always use factory supplied bolts and nuts for assembly of VGS pipe couplings. Shown below are required torque ranges for proper installation with factory supplied bolts and nuts. These are not maximum torques, though never exceed the listed torque values by more than 25%, as excessive torque could lead to bolt or joint failure. Always tighten nuts evenly and equally by alternating sides to prevent the gasket from being pinched. Pinching of gasket may cause an immediate or delayed leak.

These torque range values can be used for setting the torque on power drivers.

Bolt Size		Torque Range	
mm	inch	N-m	Lbs - ft
M10	3/8	20 - 30	15 - 22
M12	1/2	40 - 68	30 - 50
M16	5/8	80 - 120	60 - 90
M20	3/4	100 - 235	74 - 170
M22	7/8	170 - 275	125 - 200
M24	1	275 - 400	200 - 300

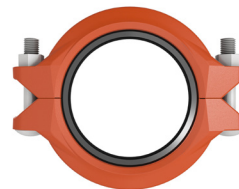
**Metal-to-metal Contact:** All VGS grooved couplings are designed so that bolt pads typically make metal-to-metal contact when properly installed. In many cases proper installation can be achieved with smaller torque values than listed. For couplings smaller than 300 mm / 12" size, the use of a torque wrench is usually not required. After metal-to-metal contact is achieved, tighten nuts by another one quarter to one half turn to make sure the bolts and nuts are snug and secure. If gaps (or off-sets) exist, both gaps (or off-sets) on either side of the coupling should be equal.



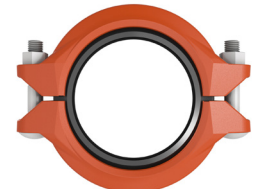
**Angle Pad Aligned**



**Angle Pad Off-set**



**Metal-to-metal Contact**



**Even Gaps**

If bolt pad gaps (or off-sets) are evident after installation, check the following:

- The coupling, pipe and or fitting being connected are the correct size.
- The coupling keys are fully engaged in the pipe and or component grooves.
- The gasket is not being pinched.
- The grooves conform to the applicable groove dimension specifications.
- The pipe end flare is within the specification tolerance.