

Product Instructions

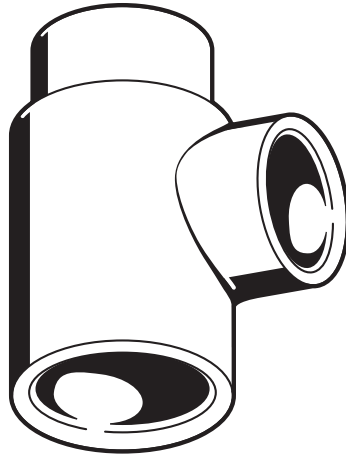


Viega® GeoFusion Fittings

GeoFusion socket heat fusion fittings are intended and recommended for use in open or closed loop, ground source heat pump systems installed with IPS-OD, HDPE pipe manufactured to a minimum pressure rating of SDR11 or Schedule 40.

Scope

This product specification designates the requirements for GeoFusion high density polyethylene (HDPE) socket heat fusion fittings to be used as connections for Iron Pipe Size Outside Diameter (IPS-OD) controlled HDPE pipe in ¾", 1", 1¼", 1½", and 2" sizes.



Materials

GeoFusion HDPE socket heat fusion fittings are manufactured from a bimodal polyethylene resin PE4710 with a cell classification, PE345564C per ASTM D-3350. This high performance resin exhibits enhanced performance properties including superior Slow Crack Growth (SCG) resistance plus improved tensile strength and modulus.

GeoFusion socket fusion by metallic adapter fittings are manufactured using machined components of brass alloy B360 per ASTM B-16 that are inserted into the molded polymer fitting body and attached by a stainless steel press ring.

Certifications

- ASTM D 2683
- NSF 358-1

Fittings suitable for direct burial:

Model numbers - V9016, V9016.2, V9016.3, V9018, V9018.2, V9056, V9015, V9040

Fittings that are not suitable for direct burial (accessible location only):

Model numbers - V9016.5, V9016.4, V9018.8, V9018.5, V9018.6, V9018.7, V9011, V9015.3, V9015.4, V9049, V9013.1

***Note:** Accessible is defined as being installed in a manner that provides open access or may require the removal of access door or panel, e.g. fittings installed in a mechanical room or installed in a mechanical box within the ground.

UV Resistance: Viega GeoFusion fittings are produced using a minimum of 2% carbon black, a material used to protect PE products from the effects of UV radiation. Viega GeoFusion

fittings can be used in exposed, above ground applications for indefinite periods of time and do not require protection from UV exposure during shipping, handling, storage, installation or use.

Shipping, handling and storage instruction

Prior to installation Viega GeoFusion fittings should be stored in the original packaging in a clean, dry location.

Viega GeoFusion fittings shall be installed and tested in accordance with industry accepted and approved procedures per applicable code requirements.

Fitting Installation Instruction

1. Attach the correct socket faces, which are in good condition, to the heating body of the tool.
2. Connect tool to an adequate power supply (120 volts A.C.)
3. Heat faces between 500 and 525 degrees F. Adjust temperature as necessary.
4. Square pipe ends with a pipe cutter designed for plastic pipe.
5. Wipe pipe end and fitting clean with a damp cloth.
6. Insert pipe end into the properly-sized depth gauge and attach the proper sized cold ring onto the pipe.
7. Begin timing the "HEAT CYCLE" as soon as the pipe and fitting are properly positioned on the pre-heated socket faces.
8. At the conclusion of the "HEATING CYCLE", snap the pipe and fitting from the tool.
9. Within three seconds, push the pipe and fitting together squarely without twisting.
10. Hold firmly together for the specified "HOLDING TIME".
11. Wipe hot socket faces clean with a clean, dry, non-abrasive cotton cloth.
12. Visually inspect each fusion joint.

HDPE fusion cycle time

It is important to follow and understand the instructions that come with your socket fusion tool. The integrity of your system will depend on how well the fitting connections are made. It is very important the heating and handling times be followed. Each tool manufacturer will provide charts outlining heating and handling times. In the absence of a manufacturers chart the table below can be used as a guide.

HDPE Fusion Cycle Holding Time Chart			
Size	Heating Cycle	Holding Time	Curing Time Before Handling
¾" IPS	8-10 seconds	30 seconds	20 minutes
1" IPS	10-14 seconds	30 seconds	20 minutes
1¼" IPS	12-15 seconds	30 seconds	20 minutes
1½" IPS	15-18 seconds	40 seconds	20 minutes
2" IPS	18-22 seconds	40 seconds	30 minutes

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Viega LLC, 100 N. Broadway, 6th Floor • Wichita, KS 67202 • Ph: 800-976-9819 • Fax: 316-425-7618