

GEOHERMAL SERIES



MODEL SPECIFICATION Stab-Type Fittings for Geothermal Applications

Scope: This specification covers requirements for mechanical connectors for polyethylene (PE) pipe for geothermal applications.

Material: All heat fused materials shall be manufactured from high density, PE3408 or PE4710 material. The PE material shall maintain a 1600 psi Hydrostatic Design Basis at 73.4 degrees F per ASTM D 2837, and shall be listed in PPI TR4 as a PE3408 or PE4710 material.

For stab type connectors, the stiffener, and PE overshoot shall be PE4710 material as described above. The shell shall be injection molded thermoplastic with a Hydrostatic Design Basis greater than or equal to 1600 psi at 73.4 degrees F per ASTM D 2837. The gripper shall be acetel. The elastomer sealing elements shall be nitrile or EPDM.

Pipe: Stab type connectors have been designed for polyethylene pipe meeting the requirements of ASTM D 3035.

Fittings: Stab type connectors shall be rated for pressure service equivalent to SDR 11 PE 3408 and PE 4710 pipe. Mechanical connectors shall be manufactured to the specifications and requirements of ASTM F 1924 Section 6.2.2.1. Mechanical connectors shall have a non-metallic internal tubular stiffener. Mechanical connectors shall not contain metallic support rings. Mechanical connectors must be designed to provide a seal on the interior surface of the polyethylene pipe.

Joints: Stab style joints shall be made in accordance with the fitting manufacturer's instructions.

Manufacturer: The fitting manufacturer shall have in place a functional quality assurance program and shall be ISO 9001 2000 certified.

Marking: Stab type connectors shall be marked with the manufacturer's name, nominal size, ASTM standard F 1924, and lot number. Mechanical connectors shall be permanently marked with a date code.

Installation: Construction and installation shall be in compliance with IGSHA Standards and all applicable local, state and federal regulations.

Hydrotesting: The completed system shall be hydrostatically tested at a pressure not greater than 150% of the pipe pressure rating. For SDR 11 PE pipe, the test pressure shall not be greater than 240 psi.

Flow coefficient: C_v values have been obtained through tests conducted by NSF in accordance with ISO/ISA S75.02-1996. For further information regarding flow coefficients, contact Continental.

Referenced Standards:

- ASTM D 3035 "Standard Specification for Polyethylene (PE) Plastic Pipe (DR-PR) Based on Controlled Outside Diameter"
- ASTM F 1924 "Standard Specification for Plastic Mechanical Fittings for Use on Outside Diameter Controlled Polyethylene Gas Distribution Pipe and Tubing"
- ASTM D 2837 "Standard Test Method for Obtaining Hydrostatic Design Basis for Thermoplastic Pipe Materials or Pressure Design Basis for Thermoplastic Pipe Products"
- TR-4 Plastic Pipe Institute (PPI) "Listing of Hydrostatic Design Basis (HDB), Strength Design Basis (SDB), Pressure Design Basis (PDB) and Minimum Required Strength (MRS) Ratings for Thermoplastic Piping Materials or Pipe"