

Model Specifications DRISCOPLEX[®] 5300 Series Climate Guard[®] Systems for Geothermal Applications

Scope: This specification designates requirements for geothermal (ground source heat pump) pipe and fittings.

Material: All pipe and heat fused materials shall be manufactured from high density, extra-high molecular weight PE 3608 material. The material shall have a 1600 psi Hydrostatic Design Basis at 73.4 degrees F per ASTM D-2837, and shall be listed in PPI TR4 as a PE3608 piping formulation. The material shall have a cell classification of 345464C or greater as specified in ASTM D-3350.

Pipe: The extruded pipe shall conform to the specifications and requirements of ASTM D-3035. Clean rework material from the manufacturer's own production may be used provided the pipe or fittings meet all requirements of this specification. Recycled and reclaimed materials from outside the manufacturer's plant shall not be used. Pipe used for vertical bore applications shall include a fused, single, piece, injection molded U-bend Polywing fitting. The approved pipe product is DRISCOPLEX[®] 5300 Series Climate Guard[®] Pipe from Performance Pipe.

Fittings: Molded fittings shall be manufactured to the specifications and requirements of ASTM D-2683 for socket fittings, ASTM D-3261 for butt fittings. All fittings shall be rated for pressure service equivalent to SDR 11 PE 3608 pipe.

The approved fittings are DRISCOPLEX[®] 5300 Series Climate Guard[®] Systems from Performance Pipe.

Joints: Where heat fusion is used for joining, persons performing heat fusion shall be qualified in accordance with the manufacturer's recommended fusion joining procedures. Electrofusion and mechanical joints shall be made in accordance with the fitting manufacturer's instructions.

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Manufacturer: The pipe and fittings manufacturer shall have in place a functional quality assurance program shall and be ISO (the International Organization for Standardization) Certified.

The approved manufacturer for pipe and fittings is Performance Pipe

Marking: Each pipe shall be durably marked with the manufacturer's name, nominal size, pressure rating, ASTM standard, material designation or cell classification number and date and location of manufacture. Coils shall be marked with footage marks at intervals no greater than two feet. Each fitting shall be identified with the manufacturer's name, nominal size, ASTM standard and lot number.

Installation: Construction and installation shall be in compliance with IGSHPA Standards and all applicable local, state and federal regulations. The Contractor shall observe all appropriate safety requirements in accordance with local, state and federal codes and regulations.

Hydrotesting: The completed system shall be hydrostatically tested at a pressure not greater than 150% of the pipe pressure rating in accordance with industry accepted hydrostatic leak testing procedures. Testing with compressed air or a compressed gas is prohibited.

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