

Your one stop source for  
pipe, fittings, equipment,  
custom fabrications and  
technical support

# ISCO HDPE Pipe for Geothermal Systems

For HDPE, contractors know. Just call...

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# GEO THERMAL

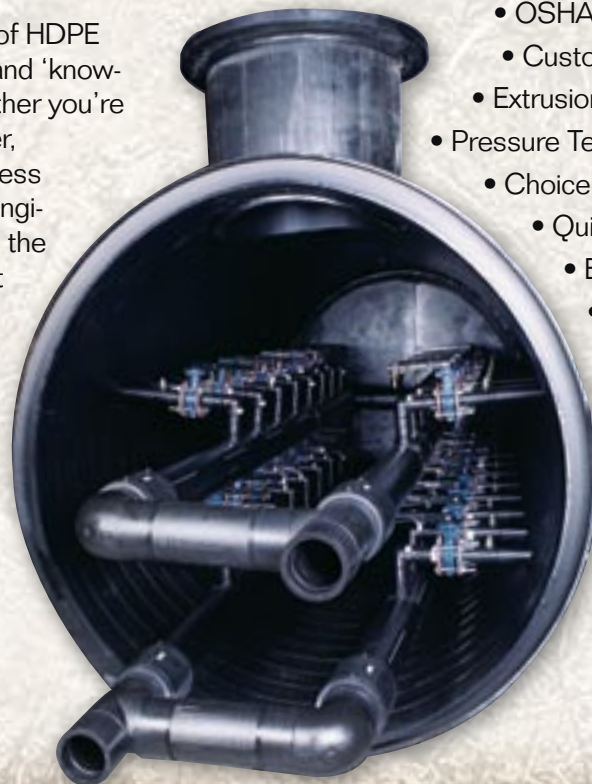
## THE ISCO SOLUTION.

Geothermal energy is safe renewable energy that is stored within the earth. Due to the earth's constant temperature, energy can be efficiently utilized for heating and cooling purposes without harm to the environment. The importance and demand of renewable energy sources are growing drastically due to the public's growing concern of reducing waste. The use of geothermal energy is also supported and endorsed by the United States Department of Energy and the Environmental Protection Agency.

By creating a heat exchanger in the ground, geothermal energy can be utilized efficiently. A heat exchanger is typically created by running a series of pipe loops horizontally or vertically throughout the ground, hence the term "ground loops". The ground loops are filled with water or water based liquid and connected to a heat pump inside the building. The heat pump circulates the water through the ground loops thus creating a heat exchanger that is far more efficient than any other source of air conditioning. Not only are they more energy efficient, but also the cleanest and the most cost efficient means of air conditioning.

As the nation's leading supplier of HDPE pipe, fittings, fusion equipment and 'know-how', ISCO can assist you whether you're an engineer, public utility, installer, contractor, homeowner or business owner. We regularly work with engineers, installers & contractors in the development of reliable, efficient geothermal systems for commercial and residential applications.

ISCO Industries is a proud member of the International Ground Source Heat Pump Association (IGSHPA).



### ISCO Industries Geothermal Products

#### Fabricated Headers

ISCO fabricates custom headers for commercial and residential needs. Prefabricated headers reduce the number of fusion joints, which in turn reduces expensive field time and labor.

#### Vaults

ISCO fabricates custom HDPE valve boxes, vaults and man-holes for your specific geothermal needs. HDPE vaults are strong, leak free structures that keep your valve systems and other equipment clean and safe for years to come.

#### ISCO Geothermal Vaults feature:

- Butt-Fused Circuitry
- 100% Leak-Free Polyethylene Structure
- H-20 (Highway Traffic) Load Rating Available
  - OSHA-Approved Access Ladder
  - Custom Fabrication to your specifications
- Extrusion Welding
- Pressure Temperature (P/T) Ports on all outlets
- Choice of Metal or Polyethylene Valves
  - Quick Pressure test of individual circuits
  - Easy purging and isolation of circuits
  - Plastic Cap Retainers

#### Purge Pumps

ISCO also sells the power needed to purge the air and debris from residential and commercial loop fields efficiently. Purge Pro is capable of producing 69 GPM at 80 ft head, making your purging jobs quick, easy and affordable.

#### GeoPro Bentonite Based Grout

Make your loop field more efficient and economical with GeoPro grout. GeoPro grout is a thermally enhanced two-part grout engineered for closed loop vertical loop systems. Grouting your borehole increases your thermal conductivity and insures protection for your local potable water source. GeoPro grout is certified by the National Sanitation Foundation International to ANSI/NSF Standard 60, Drinking Water Treatment Chemicals – Health Effects. GeoPro grout contains no harmful chemical polymers or organic matter to decay.

#### Gauge Adapter

The sturdy stainless steel probe construction provides optimal quality and durability. An optional aluminum probe guard is also available.

#### Geothermal Underground Detectable Tape

Special features include:

- 4.3 Mills Polyethylene Material
- 2" x 1000' Rolls
- Detectable to a depth of 18" with a common metal detector
- Easy to see blue tape with white ink
- Prevent unwanted excavation damage to horizontal earth coils and closed loop systems
- Ideal in both commercial and residential applications where future excavation may be required

#### Technicians and Training

ISCO provides on-the-job training for your crew. ISCO also has field fusion technicians available to help with complete installation of your geothermal system.



#### HDPE Pipe and Fittings

ISCO sells all the HDPE pipe and fittings needed for a complete Geothermal System. HDPE pipe is available in 20', 40', or 50' lengths, as well as 100' and 500' coils.

#### Unicoil

ISCO stocks and sells Pre-Fused Polyethylene U-Bend Coils for efficient, reliable installation. Unicoil is a pre-fused polyethylene u-bend coil which is factory pre-fused to two coils of HDPE pipe.

#### Connections in the Field: Socket Fusion, Electrofusion, Butt Fusion

ISCO is your primary source for each of three of the most common methods of connecting a HDPE geothermal system in the field.

**Socket Fusion Tooling** – ISCO stocks and sells all socket fusion tooling including heaters, heater adapter sets, chamfer tools, and cold ring tools.

**Electrofusion** – ISCO stocks and sells both Friatec and Central Electrofusion couplings and processors nationwide for connecting HDPE pipe in the field.



**Butt Fusion** – ISCO sells, rents and refurbishes equipment ideal for the job, such as the #14 McElroy Pitbull, the #2LC McElroy machine, as well as other McElroy units.

