# GeoManifold®

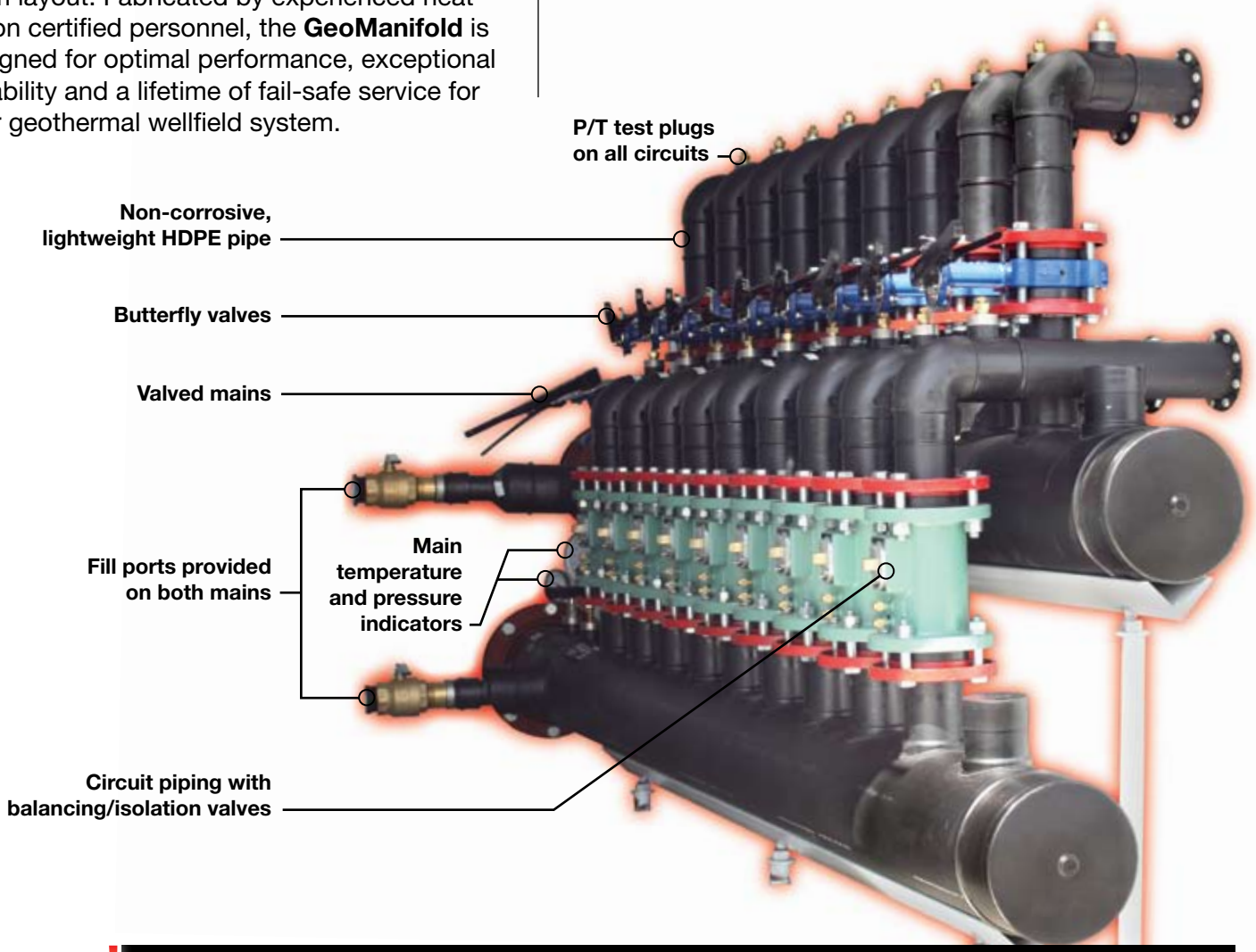
## *Custom-Fabricated HDPE Commercial Manifold*

*from GHP Systems, Inc.*

The **GeoManifold**® is a custom-fabricated HDPE commercial manifold designed exclusively for the commercial geothermal industry, by GHP Systems, Inc. The **GeoManifold** is factory-built using best-in-industry methods, workmanship and components. We can build to your exact design specifications or our engineers can make recommendations based on your mechanical room layout. Fabricated by experienced heat fusion certified personnel, the **GeoManifold** is designed for optimal performance, exceptional durability and a lifetime of fail-safe service for your geothermal wellfield system.

### GEOMANIFOLD FEATURES

- **Leak-Proof (Sealed) System**
- **Heat-Fused, Pressure-Checked Connections**
- **Quality Workmanship by Certified Personnel**
- **Built-In Features for Ease of Installation and Servicing**

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**www.ghpgeomanifold.com**

# GeoManifold® Built-In Features Allow for Ease of Installation and Servicing

The **GeoManifold** has safe and accurate built-in features that allow you to carefully install and service your geothermal wellfield system. Balancing/butterfly valves and pressure/temperature ports are included for all the circuits for complete isolation, pressure testing and flow balancing. Isolation valves, fill ports and temperature and pressure indicators are also incorporated on the mains. These features are provided unless otherwise specified.

**P/T Test Plugs on All Circuits** allow for pressure testing and measuring both entering and exiting water temperatures.

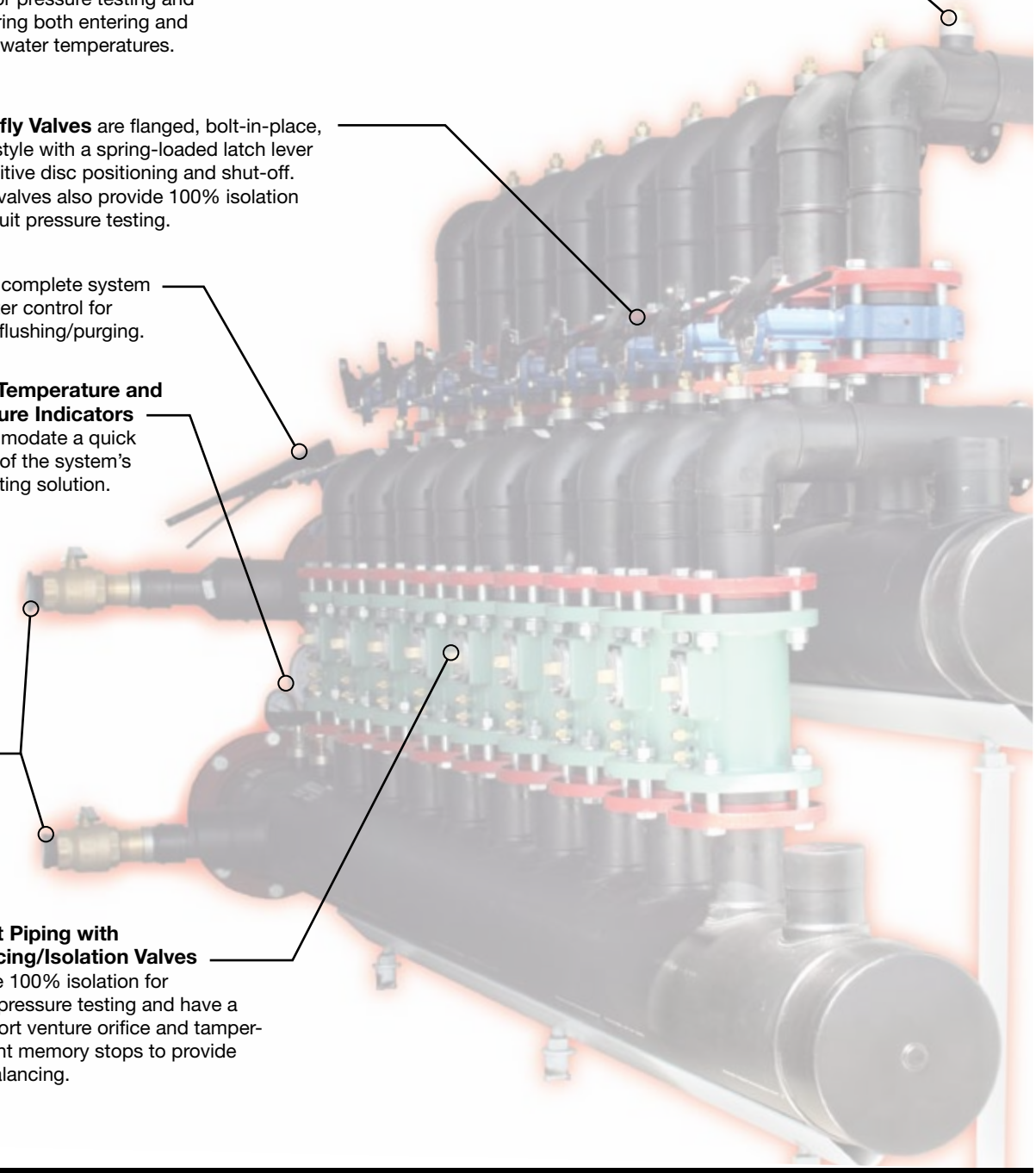
**Butterfly Valves** are flanged, bolt-in-place, wafer-style with a spring-loaded latch lever for positive disc positioning and shut-off. These valves also provide 100% isolation for circuit pressure testing.

**Valved Mains** provide complete system isolation, allowing greater control for pressure checking and flushing/purging.

**Main Temperature and Pressure Indicators** accommodate a quick check of the system's circulating solution.

**Fill Ports Provided on Both Mains** offer connections for flushing/purging and to fill the wellfield with its final solution.

**Circuit Piping with Balancing/Isolation Valves** provide 100% isolation for circuit pressure testing and have a fixed port venture orifice and tamper-resistant memory stops to provide flow balancing.



# Best-In-Industry Components and Workmanship

At GHP Systems, Inc., we are committed to providing you the best-in-industry design, materials and workmanship — from initial quote through final installation — count on us as your *Earth Energy Experts*. The **GeoManifold**® is no exception, engineered with more than a decade of specialized geothermal experience and manufactured using HDPE pipe by heat fusion certified fabricators.

### Non-Corrosive, Lightweight High Density Polyethylene (HDPE) Pipe

High density polyethylene (HDPE) pipe, joined together with heat fusion, is used for all of the **GeoManifold's** circuit and main heading piping. This HDPE is tough, non-corrosive and produces an absolutely leak-proof (sealed) system.

HDPE pipe is the product of choice for geothermal applications because it's accepted and field-proven for its reliability and durability. HDPE circuit piping meets or exceeds the requirements and applicable standards of:

- American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE),
- American Society for Testing and Materials International (ASTM),
- International Ground Source Heat Pump Association (IGSHPA) and the
- Plastic Pipe Institute (PPI).

### Experienced and Specialized Fabrication Division with Certified Personnel

All fabrication is performed and inspected by our experienced heat fusion certified custom fabrication personnel. A final inspection and pressure testing are performed on all **GeoManifolds**.

### Component Replacement

The **GeoManifold** design allows for all components to be replaced with minimal intrusion. All valves have flanged connections or HDPE flange unions, allowing components to be replaced with no heat fusion repair.

## Optional "Factory to Field" Features

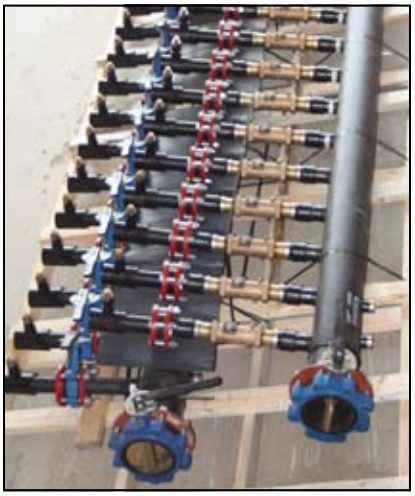
GHP Systems, Inc. is an industry leader, and our design and manufacturing approach goes beyond the factory and into the field—we develop innovative products and offer features that make installation easier and faster, plus reduce costs. The **GeoManifold**® is no exception, with these available optional features.

**Valved Main Bypass**
A valved bypass can be provided between the manifold mains to accommodate flushing/purging.

**Expansion Circuits**
When requested, future expansion saddles can be added on to the manifold ends.

**Manifold Floor Stand**
A manifold floor stand can be fabricated and included to support the manifold in your mechanical room.

## Secure Shipping and Hassle-Free Installation



All **GeoManifolds** are carefully inspected, and pressure tested before being palletized for shipment.

Because it's fabricated of lightweight HDPE, the **GeoManifold** is easily moved to the mechanical room and mounted for hook-up.

## Manifolds: HDPE vs. Steel

| | Steel Piping | HDPE Piping |
|---|---|---|
| **Life Expectancy** | Replacement needed in as little as 5 years | Lifetime of wellfield system (50-yr. warranty) |
| **Corrosive** | Yes | No |
| **Leak-proof** | Vulnerable to leaks through-out operating life | Yes |
| **Lightweight** | No | Yes |

**GHP Systems, Inc.** is a leading manufacturer and supplier of commercial geothermal wellfield products and design services located in Brookings, SD. The company offers customers nationwide a comprehensive product line coupled with industry-leading design, materials and quality workmanship for a lifetime of fail-safe service for geothermal wellfield systems. **GHP Systems, Inc.** also manufactures proprietary, trademarked turnkey product solutions including **GeoVault**®, **GeoHeader**® and **GeoManifold**®.

ASME

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