USi designs, manufactures, supplies, installs, integrates, maintains, and repairs pressurizing, circulation and forced-cooling plants, as well as providing on-going maintenance and trouble shooting services. Although we are considered a supplier of forced-cooled equipment and hydraulic hardware, we characterize ourselves as system integrators and forced-cooled systems designers and that sets us apart from the competition. We have completed many projects involving comprehensive system designs that meet a “performance or rating” requirement. Our designs insure proper hydraulic integration with the cable system so that safe pressures and flows are guaranteed under all operating conditions. We provide state-of-the-art systems employing PLC control, electronic variable speed drives, and environmentally responsible components, including low-impact coolants and refrigerants and low-noise components.

We have designed and furnished pressurizing systems ranging from pressurization skids to 30,000-gallon self-contained plants, including new plants as well as refurbishment and upgrade of existing equipment. Our circulation and cooling plants are supplied to major utilities for operation on critical transmission circuits. Our plants incorporate USi advanced PLC-based control systems and remote control, monitoring and diagnostic systems, allowing our clients to maximize the effectiveness of their operating personnel.

**Unique staff experience ensures plants meet system needs**

USi is more than hardware fabricator. We bring an understanding of cable design and system operational requirements, ensuring our plants will successfully support your underground transmission system. The staff of USi has been intimately involved in all aspects of underground cable system planning, design, implementation, maintenance, operations, and research and development.

**Integrated systems designed to meet the critical needs of your transmission system**

USi Refrigeration Cooling Plant, capable of providing a rating increase of approximately 45% over normal static ratings.
This broad-based capability is unique in the industry. Our senior technical staff is the most experienced group of professionals in the industry, with extensive experience in the various aspects of underground cable system design, installation, rating and operation, maintenance and repair. Heat dissipation from underground cables and hydraulic performance is of utmost concern. Our expertise in heat transfer and hydraulic analysis for power cable systems is widely recognized.

**40+ years of experience**

USi has been a supplier of pipe-type cable system accessories for over 40 years, including joint casings, dielectric fluid bypass assemblies, automatic crossover assemblies, pothead pressure switch and diffusion chambers, and leak detection systems.

USi is an approved supplier of pressurizing and cooling plants at many US utilities, including Commonwealth Edison, Consolidated Edison, Arizona Public Service, Cleveland Public Power, Dominion Virginia Power, Duquesne Light, Florida Power and Light, Northeast Utilities, NSTAR, Public Service Electric and Gas, PECO Energy, American Electric Power, Xcel Energy, and Potomac Electric Power Company. USi completed pressurizing plants include units for Dominion Virginia Power, Duquesne Light, Arizona Public Service, Consolidated Edison, Cleveland Public Power, American Electric Power, Xcel Energy, and Potomac Electric Power Company. These pressurizing plants utilize our modular pressurizing skid design, and our advanced full PLC-control, monitoring and diagnostics system. Some systems also include integration of real-time cathodic protection monitoring and load monitoring in the user interface and diagnostic system.

Most USi plants also include remote monitoring and control and use our Web-based HMI, allowing multiple users to access the plant status and history via their company network.

USi is custom-designed by the utility to meet unique needs.
USi provides integrated monitoring and automatic control of the pressurizing plants and all connected refrigeration and high speed circulation cooling plants. This system allows optimum control of the cable cooling systems, while ensuring safe pressurization.

**USi pressurizing plant in commercial service with state-of-the-art PLC-control, USi Smart Diagnostics and remote monitoring and control**

USi not only assures a PLC-based software and hardware system that works reliably at the plant but USi is unique in this industry providing the capability to connect to and operate within your existing computer, control, and communication networks.

**USi staff experience**

USi staff has vast experience in pressurizing and circulation/cooling plant design, fabrication, maintenance, operation and repair, covering more than 40 years. In addition to new plant design, our staff members have been responsible for defining plant operation and maintenance procedures, testing circulation and pressurizing plants, and adjusting and repairing both hydraulic and electrical control systems. Our direct staff experience includes virtually every plant manufacturer and vintage, including Pirelli Jerome, MAC Products, Pikwhit, Salter, and older Okonite, Phelps Dodge, and General Cable units. Our experience with plant testing, upgrades, and repairs includes plants at Consolidated Edison, NSTAR, Baltimore Gas and Electric, Cleveland Public Power, Duquesne Light, Jacksonville Electric Authority, Memphis Light, Gas and Water, Philadelphia Electric, Public Service Electric and Gas, Rochester Gas and Electric, Keyspan, Dominion Virginia, American Electric Power, and Potomac Electric Power Company.

**From plants to complete system design and installation**

USi can design and supply plants, or we can do the complete job, including substation design, modification, installation of piping, fabrication of foundations, installation of power, control, and communications, fluid filling, commissioning, and testing.

After installation, USi’s support can include remote system monitoring and evaluation of equipment performance. We offer multi-year preventive maintenance programs, emergency repair services (on the cable system itself, as well as the plants), and continuing training programs.

**USi customized pressurization skid being installed during a pumphouse upgrade project**