

# GEYSER GEOTHERMAL SUBMERSIBLE PUMPING SYSTEM



REDUCE PUMP-RELATED  
CARBON EMISSIONS BY  
25-30%

THE RIGHT PUMP, AT THE RIGHT TIME,  
FOR THE RIGHT APPLICATION



# GEYSER GEOTHERMAL SUBMERSIBLE PUMPING SYSTEM

## Choosing the Right Geothermal Pump

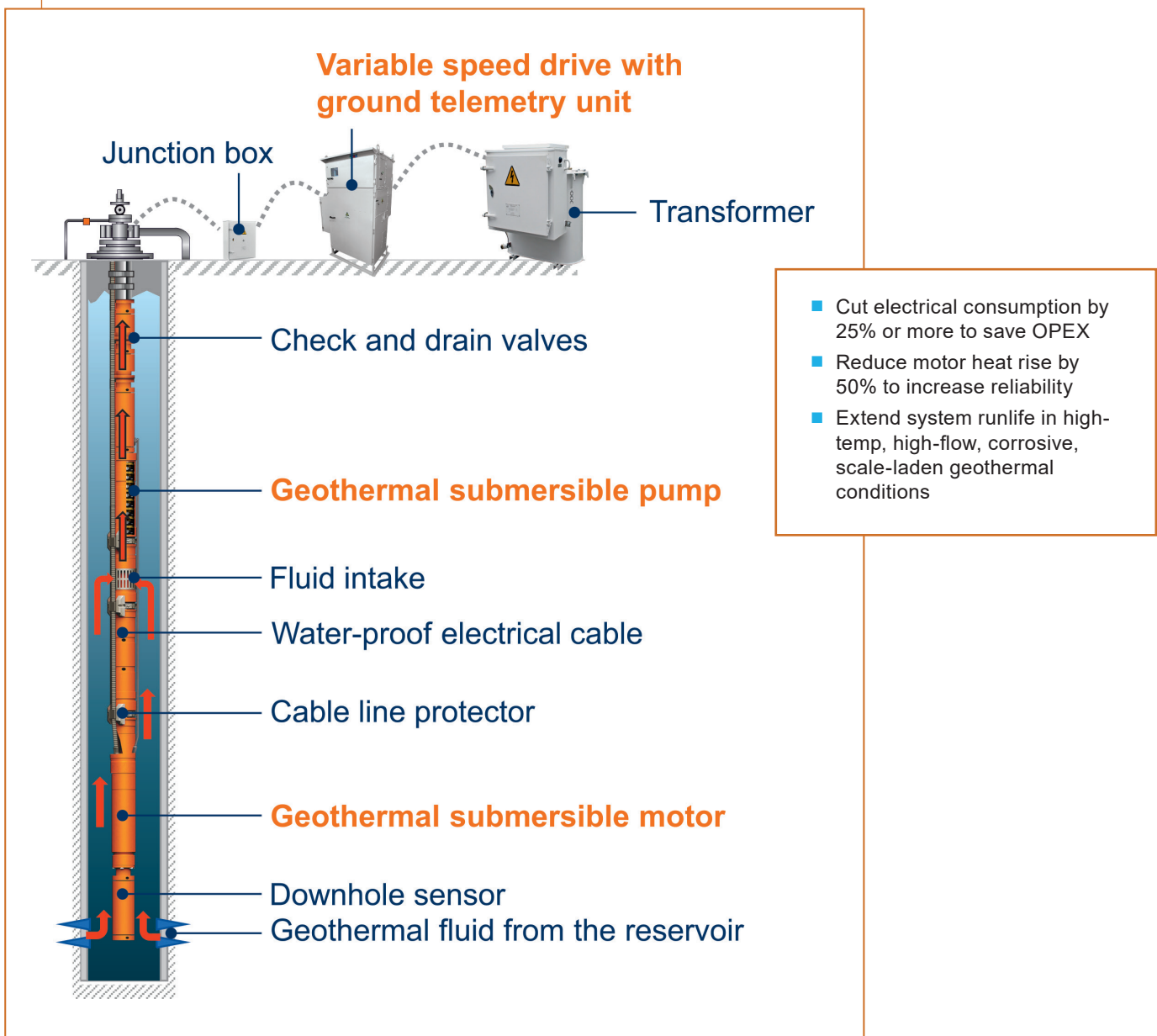
Choosing the right submersible pump for geothermal applications makes a difference. Inefficient pumps waste energy, asynchronous induction motors overheat, long systems cannot pass through deviated or damaged wells, and outdated designs break down in harsh geothermal conditions.

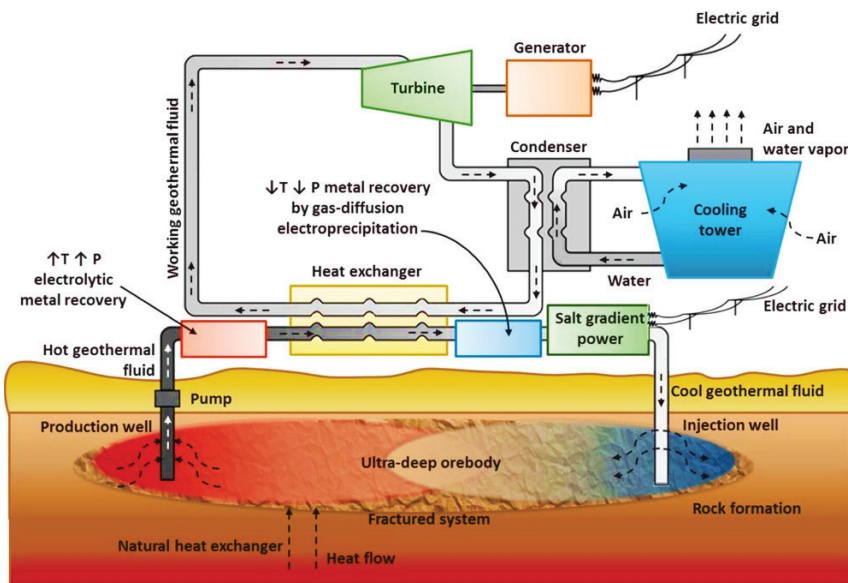
Novomet designed **Geyser geothermal submersible pumping (GSP) systems** to solve all these problems. We used decades of knowledge gained designing downhole pumping systems for harsh oil and gas wells to give geothermal pumps a makeover. Unlike line-shaft pumps, our Geyser GSP systems can be run deep downhole to access more geothermal fluid and produce greater volumes. And while we started in the oil and gas industry, we totally redesigned Geyser GSP systems to stand up to the hot, briny, corrosive environments found in geothermal operations.

## Stay a Step ahead with Superior Technology

Pumps and permanent magnet motors elevate the Geyser geothermal submersible pumping system ahead of other geothermal pumping technologies. The pumps are built to handle the high flowrates required in geothermal applications. They are heat-resistant, designed to run at high RPMs, and feature splice-free electrical connections to increase reliability and runlife. Permanent magnet motors run cooler, use less electricity, and last longer than asynchronous induction motors. Geyser systems offer the most reliable, most versatile, most energy-efficient GSP systems available.

## Geyser GSP Systems





- Cut power costs
- Reduce OPEX and carbon consumption
- Produce high flowrates with pump diameters up to 254 mm (10 in.)
- Extend runlife in briny fluid environments

### Deliver more Electricity to the People, Not the Pump in Binary Cycle Power Plants

Binary cycle power plants use a closed-loop configuration that reduces the environmental impact of geothermal power generation. Geothermal fluid is passed through a heat exchanger at the surface and pumped back downhole into the reservoir. Special fluid in the heat exchanger has a lower boiling point than water, so it is converted to steam in the heat exchanger and used to generate electricity in a turbine.

Because Geyser GSP systems use 25% less electricity than competing pumps, they effectively lower the cost of producing power. This enables our customers to use less electricity on running their pumps and deliver more electricity to the people.

Novomet currently leads GSP installations in binary cycle power plants in Turkey and we have recently expanded into Iceland.

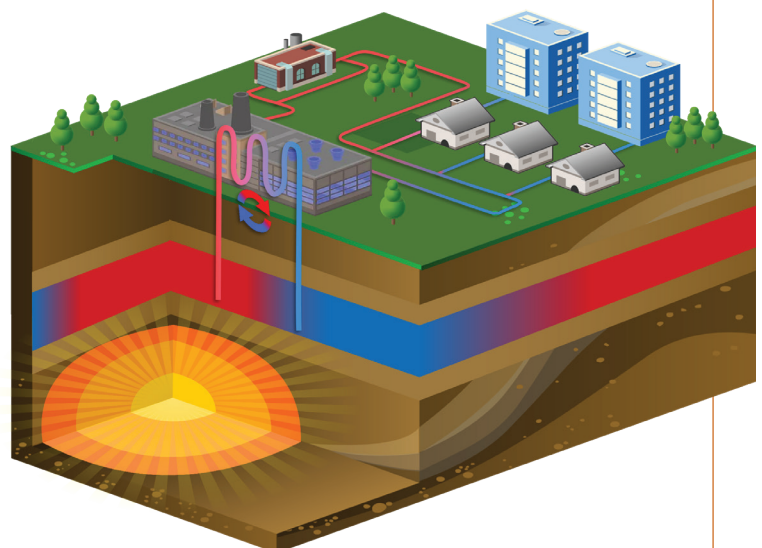
### Produce more Fluid for Less Cost in Heating Operation

Geothermal fluid is commonly used as a direct heat source for homes, offices, and greenhouses. The fluid is produced from the geothermal reservoir, pumped through the structures to be heated, and then returned back to the reservoir with an injection well.

Geyser GSP systems are optimal for heating operations because they cut electrical consumption while simultaneously increasing fluid volume. That combination effectively reduces cost and expands the area a customer can heat with a single pump.

This solution was recently used in Turkey to increase geothermal fluid production by 400% in a well used by a tomato producer. The extra fluid volume enabled the grower to triple their greenhouse grow space and tomato production, all while reducing the electricity required to produce the fluid by more than 30%.

- Reduce power costs
- Increase production volumes and heating capacity
- Adjust production up or down as needed without sacrificing efficiency



# GEYSER GEOTHERMAL SUBMERSIBLE PUMPING SYSTEM

## Geyser GSP Lowered Power Consumption, Reduced Carbon Emis

### Challenge

Produce 5000+ m<sup>3</sup>/day of geothermal fluid from a 164°C-reservoir in Turkey.

### Solution

Deployed a 740 series Geyser GSP powered by a permanent magnet motor.

### Results

- Accommodated 5127 m<sup>3</sup>/day average flowrate
- Reduced power consumption by 28%
- Performed reliably in a 164°C-reservoir for 40 weeks and counting
- Prevented 1735 kg of CO<sub>2</sub> from entering the atmosphere from entering the atmosphere in just 280 days



## CONTACT US TODAY

To learn more about how the Geyser geothermal submersible pumping system can help you cut costs and extend runlife, contact us today.

<https://www.novometgroup.com/contacts/>

