

Sempell safety valves

Overpressure protection for Concentrated Solar Power (CSP) applications

Concentrated Solar Power (CSP) uses the heat of the sun to produce large-scale clean thermal energy which can then be stored and used for commercial power generation. One of the main challenges with this type of renewable technology is efficiency. As temperatures increase in power plants they can operate at higher efficiency and with reduced environmental impact.

Sempell safety valves are ideal for the high temperatures and high pressures used in the thermal power process with products specifically developed to manage high thermal cycles and meet stringent environmental requirements.



Extend lifetime and reduce downtime

Rigid configuration

The special rigid design used in our thermal safety valves extends operating times and reduces the lifecycle cost for valves experiencing the high thermal cycling found in solar thermal power processes.



Proven design

Backed by over 140 years' experience Sempell safety valves will fit your exact requirements to reliably protect your assets.

Organise maintenance schedules with reduced costs

Wireless monitoring

Valves can now be equipped with Emerson wireless devices and monitoring systems to assist with maintenance schedules and reduce operating costs.



RFID technology

You can also track your assets with an optional RFID tag to collate critical information and maximize your maintenance resources.

Mitigate environmental risk

Leak-free performance

Our proven high temperature bellows ensures no exposure of heat transfer fluid (HTF) or molten salt into the environment.



High back pressure capability

The balanced bellows design means that any product released following an event can be fed back into the system. This minimizes product loss and maintains safe operation at all times.

Improve safety, reliability and performance

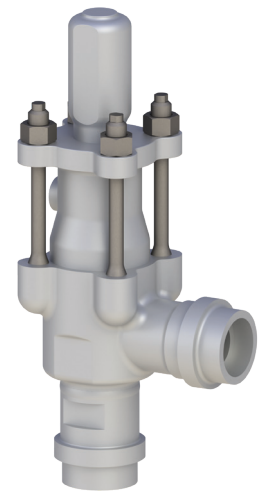
Engineered solutions

You can rely on Emerson's safety valves to deliver protection against overpressure providing security for personnel, plant and assets.



Controlled safety relief systems

Sempell safety valves can be equipped with control systems, combining the advantages of spring loaded safety valves with pilot operated safety valves in a TÜV type tested unit.

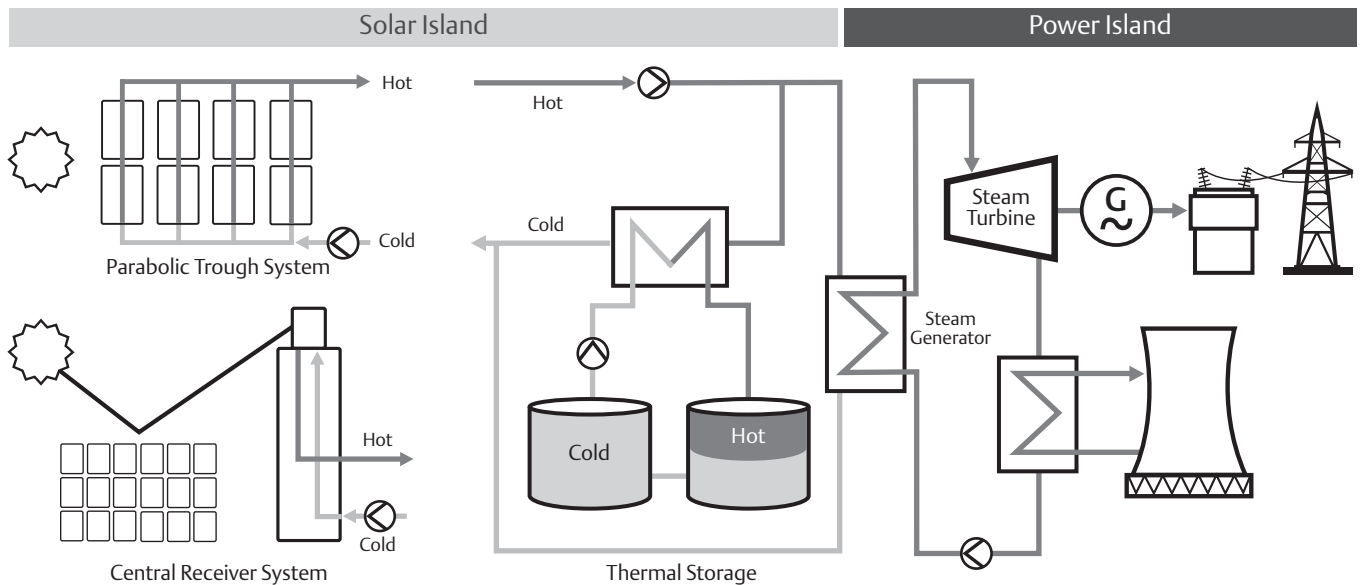


Sempell Safety Valves

Designed to protect processes against over-pressure, the Sempell range of spring loaded, pilot operated, and pneumatic piloted safety valves have certifications from ASME, PED, TÜV, CU-TR, SELO, LRS and others.

Sempell safety valves

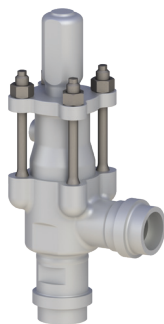
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Solar Field and Heat Exchanger

The heat transfer fluid used to transport heat around the system has to be managed in a closed system with no leakage permitted to the environment.

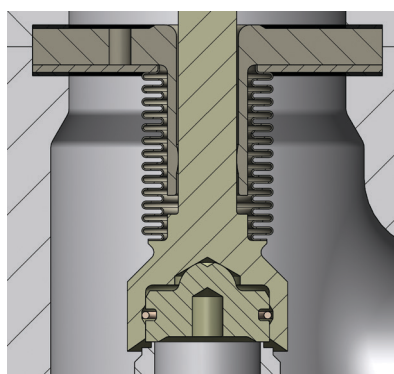
The rigid design of the Sempell MiniS thermal expander has been specifically developed for this process. It is a small thermal safety relief valve with a reliable bellows design.



Thermal Storage

High temperature thermal storage systems are used in both solar thermal power plants and in Power-to-Heat systems to increase energy efficiency.

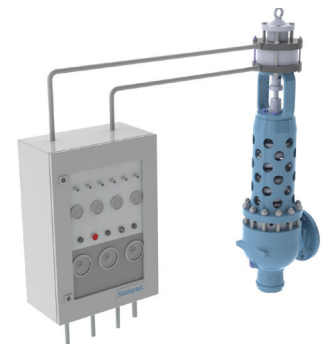
Sempell safety valves with bellows design are balanced against high backpressure conditions and their secure operation ensures there is no leakage to the environment.



Balance of plant (BOP)

For years, Emerson has built a reputation as an expert in safety relief valves for the Balance of Plant (BOP) in commercial and industrial power installations including solar fields.

Using Sempell controlled safety pressure relief systems for BOP provides a cost-effective, best engineered valve solution reducing both your project CAPEX and ongoing OPEX.



Contact

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