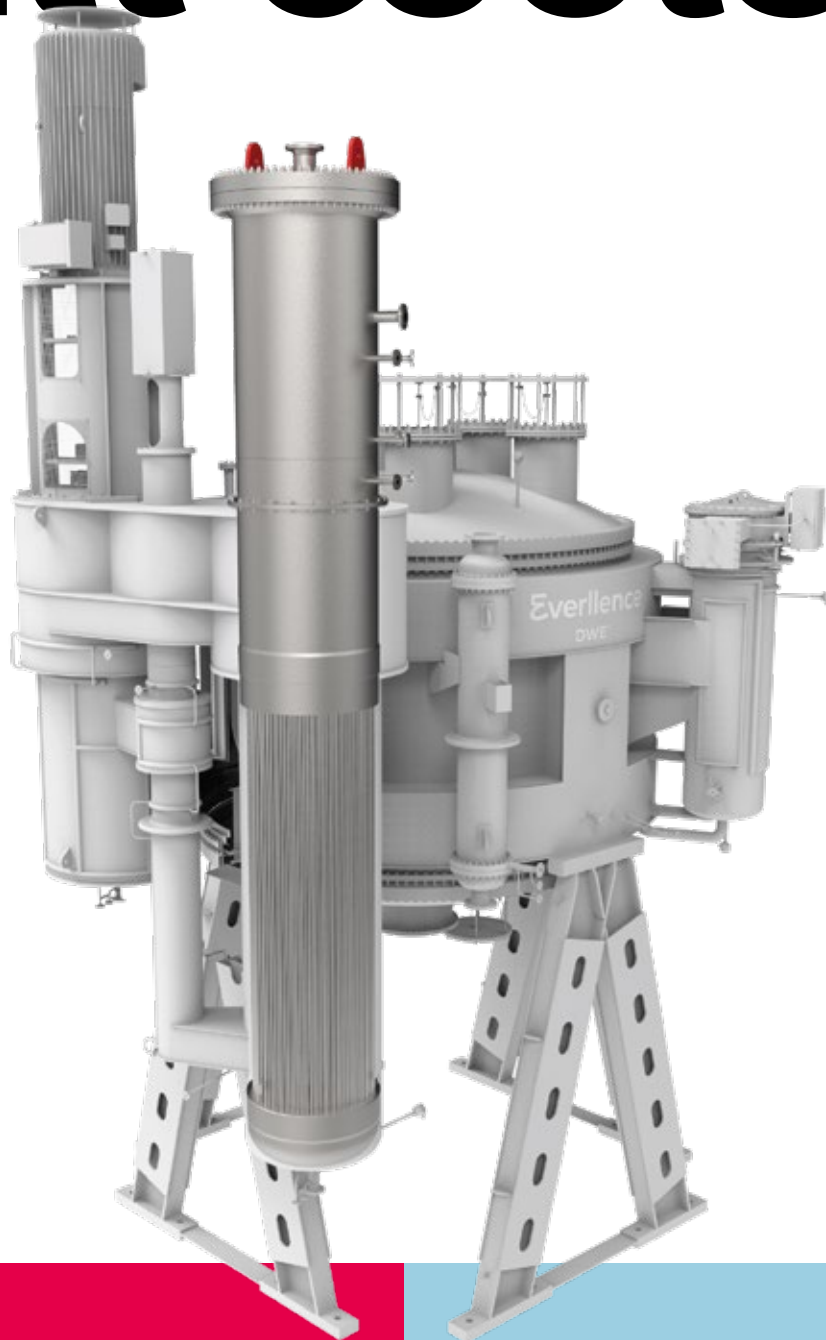


Salt coolers



Benefits at a glance

- Steam from salt coolers with integrated steam separators can be used for further applications
- Existing salt coolers in older reactor systems can be adapted
- End-to-end calculation and simulation of steam circuits to improve the reactor and cooler performance

Salt coolers

DWE® – Heat exchangers for reactors

Performance parameters

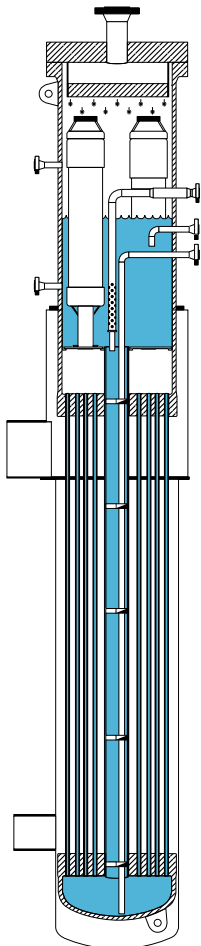
Operating pressures	Up to 100 bar
Operating temperatures	Up to 550 °C
Design codes	AD 2000, PED 2014/68/EU, ASME Sec. VIII Div. 1, IBR, China TSG, and others
Materials	16Mo3, SA-204 Gr. B, SA-516 Gr. 70, SA-209 Gr. T1, stainless steel, and others
Cooling capacity	10 kW – 50 MW Up to 100 t/h steam generation
Tube bundle length (L)	From 1,800 – 8,500 mm
Weight	Up to 75 metric tons

More details available on request.
Last updated September 2025



General

The primary function of a salt cooler is to cool the salt within the salt circuits by evaporating boiler feedwater into steam. This process stabilizes the reaction and prevents undesirable side reactions. The steam produced can be subsequently processed in a steam superheater for further use. Everllence offers two types of cooler: regular salt coolers and salt coolers with integrated steam separators.



We tailor our coolers to your reactor's requirements and offer retrofits that can increase heat exchange surfaces, reduce operating temperature, enhance heat removal, and improve steam quality and purity. Our solutions are proven and reliable, based on the experience of over 800 reactors built since 1955.

Individual cooling applications

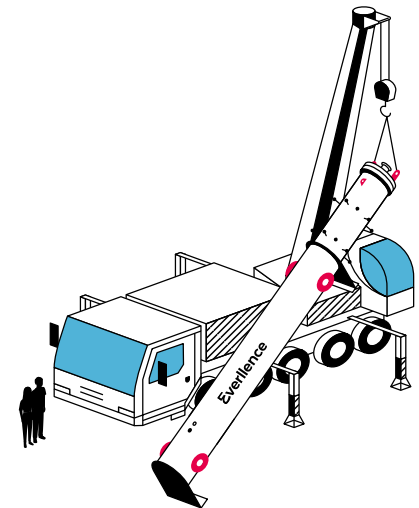
We offer tailor-made solutions for the individual requirements of your salt-operated reactor systems e. g. salt cooler with integrated steam separator, regular salt cooler with external steam drum, salt cooler to steam superheater applications etc.

Modeling and testing

With state-of-the-art simulation tools, we can simulate the operating points of the salt cooler to optimize the water flow in the salt cooler and the salt flow around the salt cooler to achieve best results e.g. for reactor system revamps. This includes improvement of cooling duty, avoidance of cavitation issues etc.

Skirt for cooler storage and transportation

Our protective skirts are designed to safeguard salt coolers during transportation and storage. These skirts provide a robust barrier against potential damage, ensuring the integrity of the salt coolers. The skirt is nitrogen blanketed, which protects the salt cooler tubes from corrosion. This feature enhances handling efficiency during turnarounds and inspections, facilitating smoother and safer operations.



Contact

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