

Vahterus Steam Generator

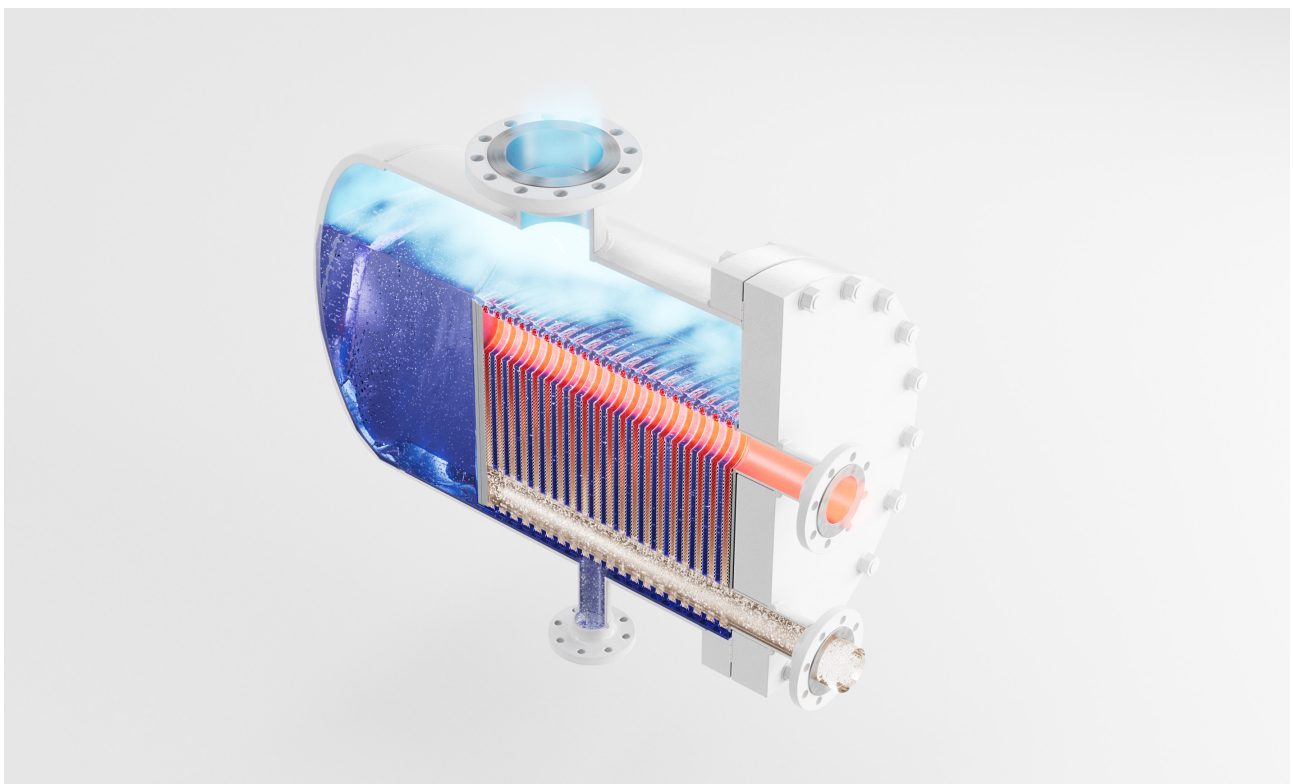
What is a non-fired steam generator

Vahterus' Steam Generator is a product used in cases where water vapour is produced with a heat pump or other non-fired high-temperature heat source. Vahterus' Steam Generator is a sturdy and unique solution, utilising fully welded heat-transfer plates for steam production.

Vahterus is an experienced supplier of steam generators to various users, condensing hot gases from heat pumps, high-temperature steam, gas and liquids.

Where to use it

Vahterus' steam generator is a perfect fit when connected to industrial heat pumps. The gas from the compressor is first cooled down to saturation temperature and then condensed. Heat from the hot gas is subsequently transferred through heat-transfer plates to enable water to evaporate. Vaporized water will be led to users of steam.

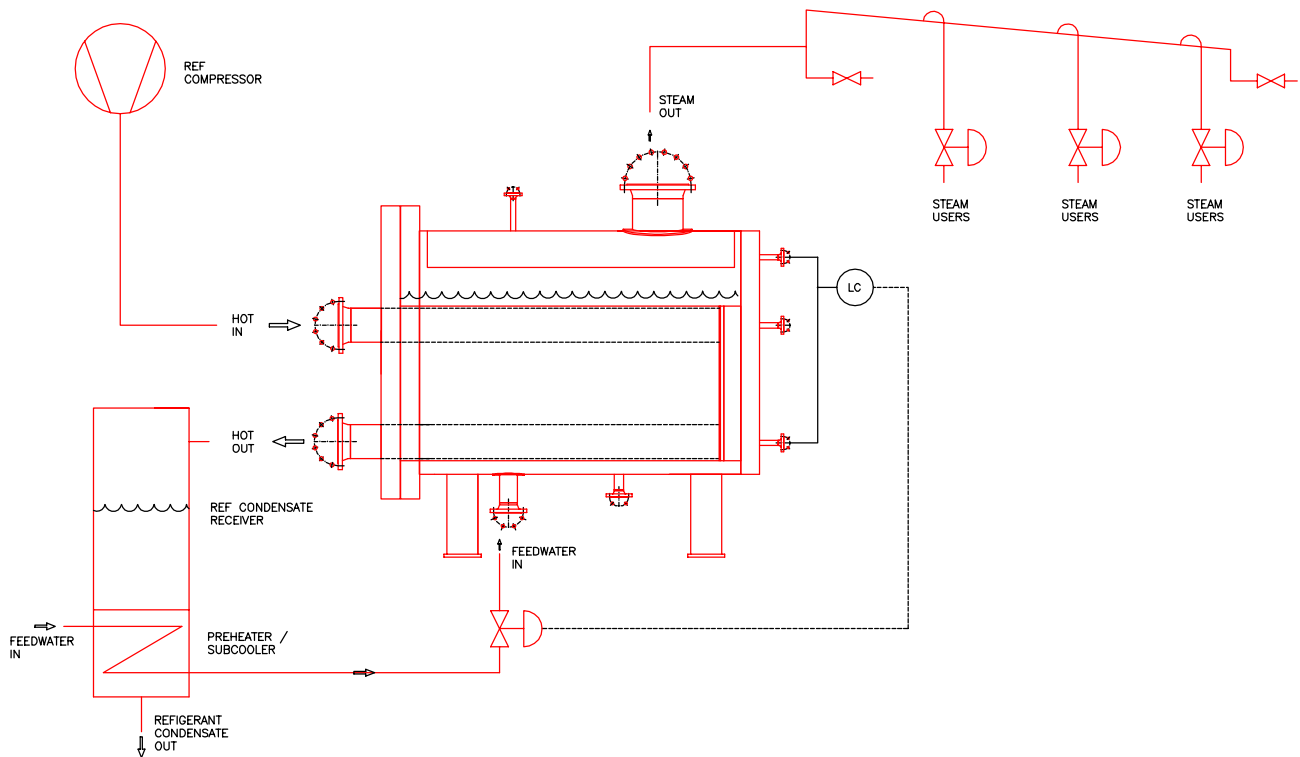


Operating principle with heat pumps

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In Vahterus' steam generator, the condensing takes place on the plate side of the heat-transfer surface. A compressor controls the steam generator's capacity, and water evaporation follows the hot-side capacity changes. The water condensate level is kept inside the shell so that the heat transfer surface remains submerged. A droplet separator is integrated into the design so that as the water is vaporised, condensate droplets are removed, providing optimum steam quality. Several uses can be supplied in the system where the heat-pump-driven steam generator is installed.

Vahterus solution



The unique design of the steam generator, where the plate pack is placed at the bottom of the large-diameter shell, enables greater gas volume on top of the heat-transfer surface. The default shell material is carbon steel, but stainless steel can also be requested. Design temperatures go to +380°C as standard and design pressure up to 80 barg, as required.

The default heat-transfer plates in the Vahterus steam generator are made from stainless steel (EN 1.4404), but can be supplied with SMO, titanium or other materials on request.

The standard range of products includes six different plate sizes, 3, 4, 5, 6, 7 and 9, ranging from approximately 200 kW to 10 MW steam generation. Typical steam pressure can vary from 1 to 4 barg.

The Vahterus Steam Generator is supplied with standard auxiliary connections for level control and other services.