

Hydrodynamic cavitation rotary heat-steam generators GVER037

Presentation of innovative technology



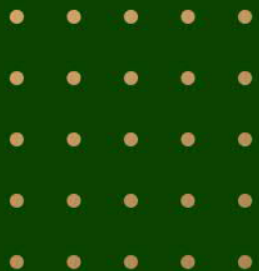
MAIN CHARACTERISTICS

01. Electric power consumption:
motor 37 kW (3000 rpm)

02. The produced amount (per hour):
70 kg steam or 180 kg water-steam mixture

03. Working outlet temperatures:
150 ° C of steam or 85 ° C of mixture

04. Working pressure of outlet steam:
0,4-0,5 МПа



Main advantages of our generators



Preparation of water:

No need for special preparation of water - any filtered water is used



Safety:

Complete safety in use - there is not a tank with water vapor under pressure



Heating elements:

There are no heating elements in our steam generators, no need to replace it



Economy:

Our generators are more economical - about 25 percent, compared to classic generators

Main application

Autonomous work, a work in the winter time:

Work on oil fields (with diesel motors), for the heating of mains for supplying water and heat in settlements, foundations of houses, wells for cable ducts and communications, well rings, bottoms, covers; trays: drainage, rainwater, road;

Industry:

For steaming concrete and reinforced concrete products; for the production of paving slabs, curbs, artificial decorative stones, elements of small garden architecture, products from foam concrete, polystyrene concrete, expanded polystyrene concrete, aerated concrete, gas silicate, pin-silicate; expanded clay concrete blocks, cinder blocks; lids of trays, ready-mixed concrete, polystyrene; for heating concrete, crushed stone and sand in winter; for heating bitumen; production of corrugated packaging, paper, cardboard, plywood; heating of drying drums;

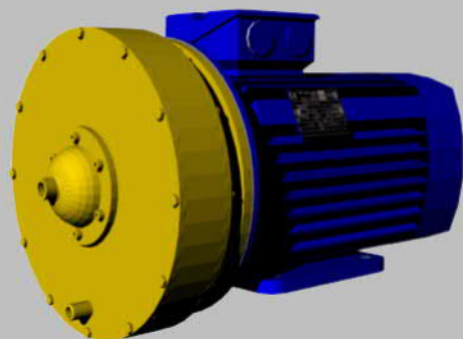
Energy:

The steam, a water-steam mixture and the hot water supply; the heating of industrial premises; when unloading fuel oil and other thick fuels and lubricants for heating them and steaming containers, for defrosting pipes, for heating viscous media (oil, fuel oil);

Food and agricultural sector:

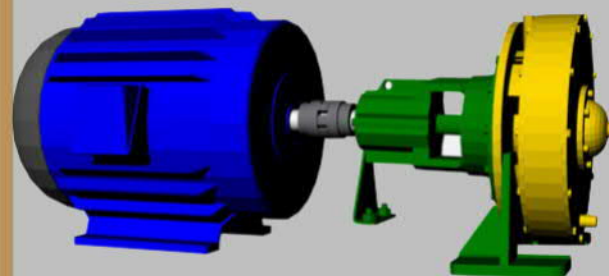
Disinfection and sterilization of technological lines, containers and tanks for milk, wine, juice, kvass, extracts; sterilization of milk, cooking cheese mass, condensed milk, sausages in chambers, production of beer, sunflower oil, juices, cool drinks, various canned food; production or cooking of various confectionery masses, which are heated in boilers by supplying steam to the steam jackets of these boilers; in the meat-processing industry for the defrosting of fish and meat; disinfection, steaming the soil with steam in greenhouses; growing mushrooms in greenhouses ;preparation of the substrate for growing mushrooms; for brewing feed and the production of pelleted feed;

Design of our generators



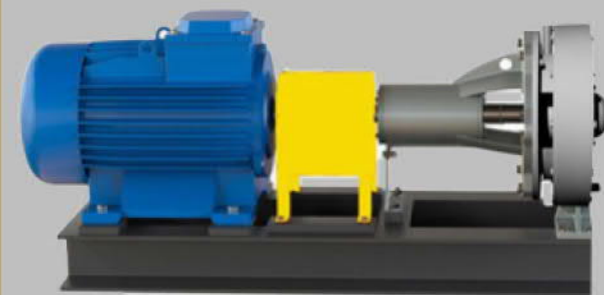
GVER022 Compact

Additional parameters :motor - 22 kW,
3000 rpm, rated current - 42,7 A,
Energy conversion factor of our steam
generator - (COP) - 1,27
Assembly - on a motor flange directly.



GVER022 Universal

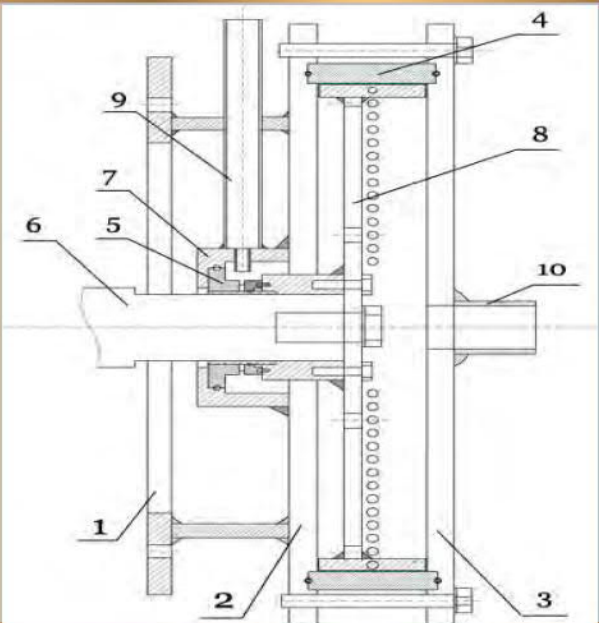
Additional parameters :motor - 22 kW,
3000 rpm, rated current - 42,7 A,
Energy conversion factor of our steam
generator - (COP) - 1,27
Assembly - on a bearing housing.



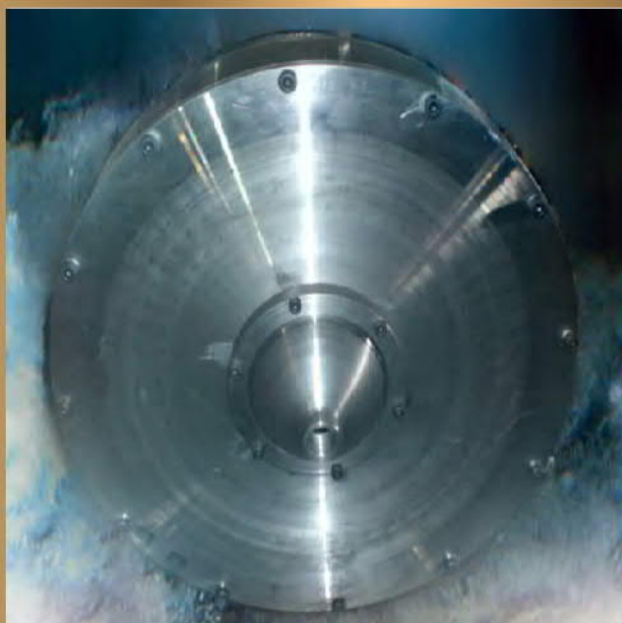
GVER037 Universal

Additional parameters :motor - 37 kW,
3000 rpm, rated current - 67 A,
Energy conversion factor of our steam
generator - (COP) - 1,27
Assembly - on a bearing housing.

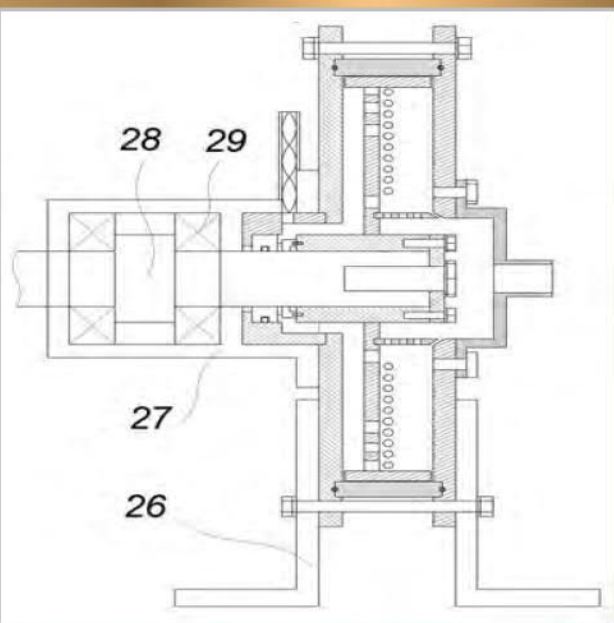
Technology and design of steam generators



GVER022 Compact



GVER022 Universal



GVER022 Universal

Technology and design of hydrodynamic cavitation rotary steam generators Gver022 and Gver037 created by the Gverlab laboratory together with our Ukrainian partners: the drawings from our patents and photos. New hydrodynamic cavitation rotary steam generators Gver037 was designed on the basic parameters of steam generators Gver022 with some improvements.



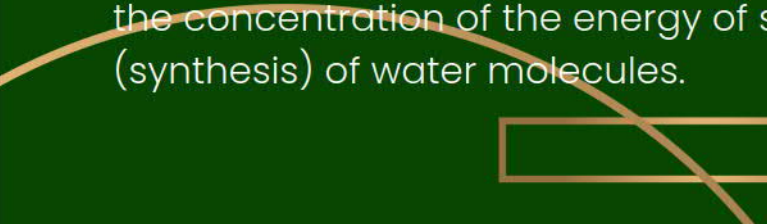



Technology of steam generators



Technology of hydrodynamic cavitation rotary steam generators Gver022 and Gver 037 created by the laboratory of alternative energy Gverlab together with our Ukrainian partners - the brief description.

Hydrodynamic heating of the device and the liquid occurs in the zone farthest from the axis of rotation at an increased pressure created during the rotation of the multilayer volume of the liquid. During the operation of the rotor, the vapor-generating liquid turns into a multilayer ring, rotates with a steam funnel inside and, due to the higher rotation speed of the rotor, is intensively pumped into the working gap and heats up in it to temperatures exceeding the normal boiling temperature. The liquid displaced from the layer rises to the interface due to the difference in density and inertia of motion, expands into rotating small layers and rings. Then the superheated liquid boils, vapor bubbles are separated at the interface, creating a product flow, while the temperature of the ascending liquid flows decreases due to expansion and boiling at reduced pressure and cooling by counter descending flows. Under the action of rapid compression in the flow, the bubbles collapse with the release of additional heat, which is added to the heat obtained due to friction with structural elements, while increasing the heating efficiency (mixing or disinfecting) water. In addition, as a result of the collapse of cavitation bubbles, high-amplitude energy impulses appear, accompanied by hydraulic shocks with a duration of several nanoseconds and the concentration of the energy of such impulses in discrete local working zones of nanometer sizes, as well as the sociation (synthesis) of water molecules.





The creative team of engineers, scientists, inventors and business partners of the Laboratory of alternative energy GVERLAB invites interested persons and companies to cooperate for joint further development and improvement, development, manufacture and implementation of energy-saving green devices.

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