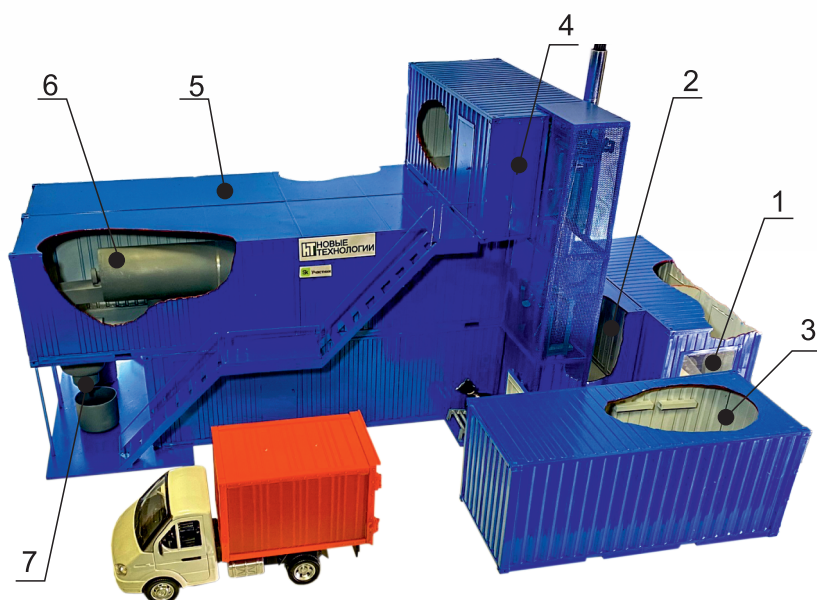


## PLANT FOR PROCESSING OF HAZARDOUS (MEDICAL AND BIOLOGICAL) WASTES

using method of vortex afterburning of flue gases without the use of replaceable filters



- 1) Management and staff accommodation container
- 2) Container for afterburning (cleaning) and cooling gases (2 pcs.).
- 3) Refrigerator container.
- 4) Waste loading container.
- 5) Container with a rotating reactor for thermal destruction of waste.
- 6) Container with a rotating reactor for thermal destruction of waste.
- 7) Container for cooling and collecting ash residue (2 pcs.).

### Features of the plant:

- Plant for processing or disposal of hazardous (medical and biological) waste, with a capacity of 15 or 30 tons per day, using effective methods of waste disposal and reducing emissions into the environment.
- Plant is designed for waste disposal in a thermochemical reactor with subsequent flue gas purification in a vortex afterburner of an own design.
- Plant allows disposal of all types of hazardous waste (including medical and biological), except for mercury-containing and radioactive waste.

### Technical specifications:

Productivity of the plant during operation of one waste processing unit or two waste processing units	15 tons of waste per day (625 kgs per hour)
	30 tons of waste per day (1,250 kgs per hour)
Electricity consumed by the plant	150-170 kWh
Fuel used for the operation of the plant	Diesel fuel, gas, fuel oil, and other liquid or gaseous fuels
Dimensions of the loading hatch of the thermochemical reactor	diameter up to 1,000 mm
Volume of the thermochemical reactor	6,5 m <sup>3</sup>

## Main advantages of the plant for processing of medical and biological wastes compared to the existing counterparts:

- Absence of expensive replacement filters that accumulate hazardous substances (vortex afterburners of flue gases are used instead.)
- Absence of harmful emissions into the atmosphere during waste loading into the thermochemical reactor.
- Waste processing takes place in a thermochemical reactor at a temperature of up to 1,000°C, and the afterburning of flue gases after the reactor takes place in vortex afterburners at a temperature of 1,500°C to 2,000°C.
- Indicators of harmful emissions in waste gases conform to the requirements of the Russian legislation and the EU regulations.
- Independence and mobility of the plant.
- Possibility of equipment operating in both continuous and cyclic modes.
- Elimination of burner flame failure and stoppages in the operation of the plant during waste loading into the reactor (use of vortex combustion chambers instead of burners in operation.)
- Reliability of the plant with the possibility of continuous operation of the plant up to 350 days a year with maintenance breaks every 450 to 500 hours.
- Ability to operate the plant in different climatic zones (temperature range from -50°C to +60°C.)
- Storage of hazardous waste before disposal takes place in a refrigerator container included in the equipment.

**Plant holds a patent for the invention issued by the Russian Federation.**

Staff required for the plant operation is 2 to 3 people per shift.

Plant manufacture time is 10 to 12 months.

Warranty for the plant equipment is valid for 18 months.

Plant payback period is 10 to 18 months.

Land size required to locate the plant is 20 by 20 meters (400 m<sup>2</sup>.)

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