



Technology

Laser welding

Laser welding is a computer-controlled welding technology used to join pieces of metal using a laser beam. The advantage of laser welding, compared to traditional welding procedures, is a noncontact energy supply with no direct mechanical loads on the product surface.

This technology creates a very stable and nonporous weld that retains the metallic shine of the base material.



Noncontact process

Laser welding is a process based on the principle of melting the base material with no direct mechanical contact with the product surface.

Low heat input

Heating is limited and strictly controlled (time, location), which prevents base material deformations.

High-quality welds

All welds are extremely accurate and strong - no need for additional finishing. Laser welds retain the metallic shine of the base material.

Flexibility

The laser technology enables different welding lines, welding in spirals and irregular forms. Adapting to the elements on the basic jacket (door, connectors) is simple, which means heating surface loss is minimal.

Speed

One of the main advantages of laser welding is its speed, as it is significantly faster than traditional welding techniques.



Tanks with heat exchangers

A jacket equipped with a heat exchanger consists of two sheet metal plates that are welded together using laser welding.

The double jacket is then plastically transformed using water pressure. This creates a special single embossed profile (pillow plate) where the cooling or heating medium circulates. The improved cooling medium flow rate increases the cooling effect.



Purpose of use

Tanks with heat exchangers are perfect for use in the food and beverage industry, as well as any other industry where the production process requires constant temperature control (winemaking, beer brewing, production of juice and dairy products, etc.).

Heat exchanger installation

The laser technique enables heat exchanger installation:

- on the jacket of cylindrical, rectangular, or oval tanks,
- on flat, conical, or torispherical tank bottoms.

The surface can be ground, polished, marbled, Scotch Brite, or sandblasted.

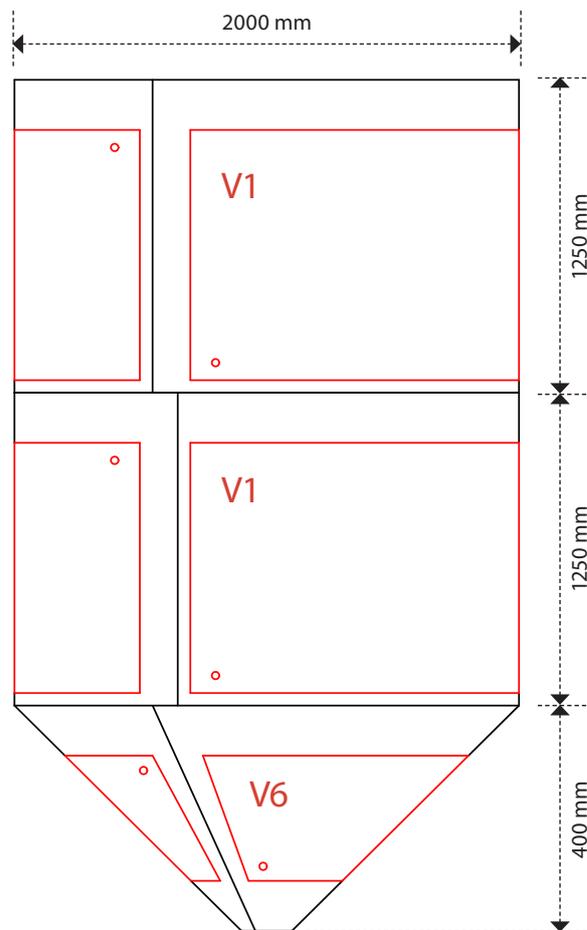
Heat exchanger dimensions, surface finishing, and connector layout are carried out in accordance with technical specifications and customer demands.



Conical tank with double jacket

The heat exchangers are installed in three zones:

Double jacket	Thickness (basic jacket)	Thickness (double jacket wall)
V1	2,5 mm	0,8 mm
V1	2,5 mm	0,8 mm
V6 (cone)	3,0 mm	0,8 mm



Double jacket flow rate diagram:

