



## Temperature regulating equipment



In the process of vinification, temperature monitoring and control are of a vital importance. The temperature affects virtually all the biological, physical and chemical processes in grapes and must, which determine the final character of wine.

The cooling/heating system in place allows the user to actively intervene in the processes taking place in the vessel in the course of vinification and to continuously adjust and steer these processes.

A range of cooling/heating systems is available; electronic temperature monitoring and control equipment allows a high degree of their automation.

Temperature monitoring and control allow us to influence:

- beginning of alcoholic fermentation (initiation temperature),
- intensity of alcoholic fermentation,
- stabilisation of wine,
- temperature of stored wine, etc.



## Double jacket

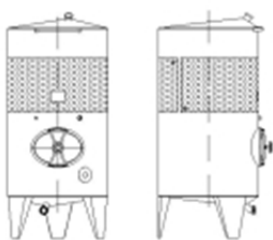


The double jacket is a component of the vessel envelope, designed to allow the control of temperature in the vessel by adjusting the through-flow of cooling/heating medium. Corrugated external sheet and the vessel envelope form an enclosure for the flow of the cooling/heating medium.

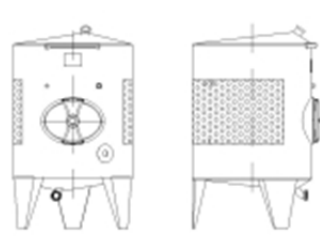
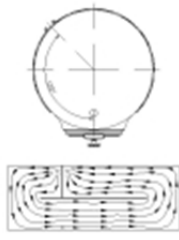
The cooling/heating medium flow rate can be controlled by different valves, operated manually or automatically, by using the SPR8 temperature controller or the computer operated system SCADA-SPR8.

Characteristics and specifications:

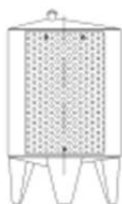
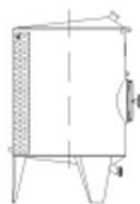
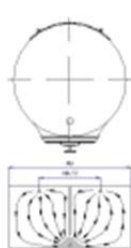
- operating pressure: max. 3 bar
- allowable pressure in the double jacket: max. 6 bar
- cooling medium: water, glycol
- connection fittings (for the medium flow) at the double jacket inlet and outlet are 3/4", external thread
- pressure test according to the TÜV Double jacket pressure test certificate (No. K11139)



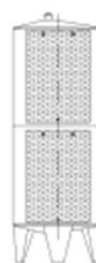
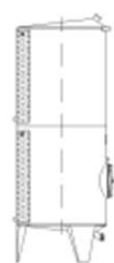
double jacket V1



double jacket V2



double jacket V3



double jacket V3\_2

## Plate heat exchangers





Plate heat exchangers are designed for the installation inside the vessel. They fit into vertical, horizontal, rectangular or oval vessels. Since the plate is in direct contact with the liquid in the vessel, the cooling/heating medium has a direct effect on the liquid. This provides for a high cooling/heating efficiency and thereby overall system efficiency.

Characteristics and specifications:

- material: stainless steel sheet EN 1.4301
- surface and welds electropolished
- cooling plate operating pressure: max. 2.5 bar
- test pressure: max. 4 bar
- cooling medium: water, glycol
- connection fittings (for the medium flow) at the double jacket inlet and outlet: 1/2" external thread

## Double bottom with heaters



The double bottom is a specially designed bottom of the vessel with a water reservoir and electric heating elements. The heating function may be controlled either manually with a thermostat on the heater, or automatically (heater on/off) by means of a SPR8 temperature controller.

Characteristics and specifications:

- installation possible in vessels with flat bottom;
- the number of heating elements depends on the vessel capacity. Normally, one heating element is required per 3000 - 4000 litres of vessel capacity;
- no overpressure is allowed inside the double bottom.



## Temperature control equipment

### Digital thermometer DT5



The digital thermometer DT5 is designed for use in wine and other food industries. Its main features are:

- simple use
- design suitable for use in wet places and an aggressive atmosphere (IP 65)
- all metal parts are made of stainless steel
- simple installation in tanks

## Temperature controller SPR8



The temperature controller SPR8 is used for measuring and regulating the temperature. Its main features are:

- ability to control two valves (cooling and heating)
- setting of parameters on three levels
- access protected by passwords to prevent accidental modifications
- possibility of connecting up to 247 controllers into a network (RS232/RS485)
- možnost priklopa na računalnik (RS232/RS485)
- design suitable for use in wet places and an aggressive atmosphere (IP 65)
- all metal parts are made of stainless steel
- simple installation and enlargement of the system

## SCADA System for the SPR8 Temperature Controller



SCADA - SPR8 System supports centralised computer aided operation of SPR8 controllers from a central location. Up to 247 temperature controllers SPR8 can be linked in a network and controlled respectively. This clear and easy to use program is an efficient solution for wine





makers who wish to closely monitor and control the process of the transition of grapes into wine.

SCADA-SPR8 System offers the user:

- current information on the actual and the desired temperature in each vessel;
- possibility to easily set and modify controller parameters (operation mode, temperature hysteresis settings, dead zone, etc.);
- possibility to operate the controller according to the pre-set time schedule (over extended time periods);
- clear graphic display of data;
- archiving of the overall temperature history for a particular vessel (data file can be opened in the Excel application).