



*Brilliant products*



# Fermentation and brite beer tanks



## Introduction to the company Škrlj d.o.o.



The company Škrlj d.o.o. has been built on solid grounds of a rich family tradition and is today a renowned European company and an already established name on the international markets.

The main activities of the company are research, development, production and selling of stainless-steel equipment for different industries:

- winemaking industry
- beer-brewing industry
- food processing industry
- pharmaceutical and biopharmaceutical industry

High-quality products, adaptability and innovation – these are the reasons which have convinced our customers.

Our company is offering the following technological solutions and manufacturing capacities:

- line for cutting of sheet metal discs
- line for polishing and grinding of plain sheet
- internal and external grinding of tank bottoms and containers
- bending and remodeling of sheet metal
- manual, machine (linear and circular) and robotic welding (TIG, MIG/MAG, plasma)
- automatic sandblasting in the grinding chamber (using Cr-Ni beads)
- passivation of finished products
- treatment with CNC processing machines
- abrasive water jet cutting
- 3D Scanning
- 2D- and 3D- laser cutting
- laser welding
- electropolishing





## Stainless steel beer tanks



Standards in the beer brewing and beverage industry are very high. For this part of food industry we design and manufacture various types of storage and process vessels – either vessels, which are used under atmospheric pressure, or pressure vessels, which are manufactured according to the PED Directive (2014/68/EU):

- fermentation tanks
- bright beer tanks
- water tanks

We design and manufacture standard and custom-made equipment for small and medium-size breweries.

In designing and manufacturing equipment the requirements of our customers, general rules of the profession and good engineering and manufacturing practice are respected.

Planning, production, control and environmental management are regulated according to the ISO9001 and ISO14001 standards.

### *Series mini ...*



Brite beer tanks type  
LMI



Fermentation tanks type  
ZMI



Fermentation tanks  
type ZK



Brite beer tanks  
type LT



Open top fermenters  
type FT



## Brite beer tanks type LMX / LMI

❖ 250 L / 500 L / 1000 L / 1500 L / 2000 L

### Design:

- cylindrical pressure tanks manufactured in accordance with the PED Directive (2014/68/EU)
- **LMX:** single wall design, without insulation
- **LMI:** double wall design, with insulation (polyurethane foam PU)
- external visible surface: scotch brite (SB)
- internal product contact surface: smooth, bright, and reflective 2R (BA) surface

### Components and accessories:

- height-adjustable tank legs
- top manway, outswing door, Ø 420 mm, EN1.4301
- pressure regulating valve (overpressure and vacuum) + safety valve, 2,5 bar
- dismantlable CIP tube with spray ball, butterfly valve
- additional connection on the CIP tube, ball valve 3/8"
- pressure gauge,
- bottom drain and racking port, butterfly valves
- sample valve (option: with installation of a T-piece the connection can also be used for wort aeration using the aeration stone)

### Temperature control:

- heat exchanger (pillow plate) in the tank jacket area
- welded thermometer well
- SPR8 temperature regulator
- HSE01 connection module
- solenoid valve



Series mini ...



	Tank	Double jacket
Operating pressure (barg)	0 - 2,5	0 - 3,0
Test pressure (barg)	3,6	6,0
Operating temperature (°C)	0 to +50	-5 to +50
Medium	beer	glycol / water
Material	stainless steel EN1.4301	stainless steel EN1.4301





## Cylindroconical fermentation tanks type ZMX / ZMI

❖ 250 L / 500 L / 1000 L / 1500 L / 2000 L

### Design:

- cylindrical pressure tanks manufactured in accordance with the PED Directive (2014/68/EU)
- **ZMX**: single wall design, without insulation
- **ZMI**: double wall design, with insulation (polyurethane foam PU)
- external visible surface: scotch brite (SB)
- internal product contact surface: smooth, bright, and reflective 2R (BA) surface

### Components and accessories:

- height-adjustable tank legs
- top manway, outswing door, Ø 420 mm, EN1.4301
- pressure regulating valve (overpressure and vacuum) + safety valve, 2,5 bar
- dismantlable CIP tube with spray ball, butterfly valve
- additional connection on the CIP tube, ball valve 3/8"
- extra connector on CIP tube for T-piece with manometer pressure vacume relief valve (option)
- pressure gauge
- bottom drain and racking port, butterfly valves
- sample valve

### Temperature control:

- heat exchanger (pillow plate) in the tank jacket and cone area
- welded thermometer well
- SPR8 temperature regulator
- HSE01 connection module
- solenoid valve



Series mini ...



	Tank	Double jacket	Double jacket - cone
Operating pressure (barg)	0 - 2,5	0 - 3,0	0 - 3,0
Test pressure (barg)	3,6	6,0	6,0
Operating temperature (°C)	0 to +50	-5 to +50	-5 to +50
Medium	beer	glycol / water	glycol / water
Material	stainless steel EN1.4301	stainless steel EN1.4301	stainless steel EN1.4301







## Brite beer tanks type LTI

❖ 1000 L / 2000 L / 4000 / 5000 / 6000 / 8000 / 10000 / 12000 / 16000 L

### Design:

- cylindrical pressure tanks manufactured in accordance with the PED Directive (2014/68/EU)
- double wall design, with insulation (polyurethane foam PU)
- external visible surface: scotch brite (SB)
- internal product contact surface: smooth, bright, and reflective 2R (BA) surface

### Components and accessories:

- height-adjustable tank legs
- oval manway, 440X310 mm, EN1.4301
- level indicator
- inlet connection
- pressure regulating valve (overpressure and vacuum) on the tank lid
- dismantlable CIP tube with spray ball
- pressure vacume relief valve on the CIP tube
- additional connection on the CIP tube, ball valve 3/8"
- pressure gauge
- sample valve
- drain and racking port
- butterfly valves

### Temperature control:

- laser welded heat exchangers (pillow-plate); separate cooling zones can be individually controlled
- welded thermometer well
- SPR8 temperature regulator
- HSE01 connection module
- solenoid valve



	Tank	Double jacket	Double jacket - cone (option)
Operating pressure (barg)	0 - 2,5	0 - 3,0	0 - 3,0
Test pressure (barg)	3,6	6,0	6,0
Operating temperature (°C)	0 to +50	-5 to +50	-5 to +50
Medium	beer	glycol / water	glycol / water
Material	stainless steel EN1.4301	stainless steel EN1.4301	stainless steel EN1.4301





## Cylindroconical fermentation tanks type ZKI

❖ 1000 L / 2000 L / 4000 / 5000 / 6000 / 8000 / 10000 / 12000 / 16000 / 20000 L

### Design:

- cylindrical pressure tanks manufactured in accordance with the PED Directive (2014/68/EU)
- double wall design, with insulation (polyurethane foam PU)
- external visible surface: scotch brite (SB)
- internal product contact surface: smooth, bright, and reflective 2R (BA) surface, tank cone surface mechanically polished to high shine finish (option for larger tanks)

### Components and accessories:

- height-adjustable tank legs
- oval manway, 440X310 mm, EN1.4301
- level indicator
- inlet connection
- pressure regulating valve (overpressure and vacuum) on the tank lid
- dismantlable CIP tube with spray ball
- pressure vacume relief valve on the CIP tube
- additional connection on the CIP tube, ball valve 3/8"
- pressure gauge
- sample valve
- racking port, racking arm, butterfly valve
- drain port with tube and butterfly valve

### Temperature control:

- laser welded heat exchangers (pillow-plate); separate cooling zones can be individually controlled
- welded thermometer well
- SPR8 temperature regulator
- HSE01 connection module
- solenoid valve



	Tank	Double jacket	Dvojni plašč konus
Operating pressure (barg)	0 - 2,5	0 - 3,0	0 - 3,0
Test pressure (barg)	3,6	6,0	6,0
Operating temperature (°C)	0 to +50	-5 to +50	-5 to +50
Medium	beer	glycol / water	glycol / water
Material	stainless steel EN1.4301	stainless steel EN1.4301	stainless steel EN1.4301





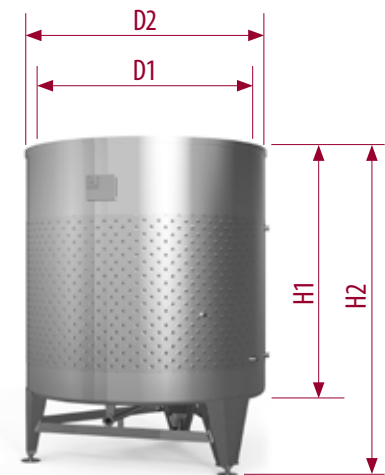
## Open top fermenters type FTX / FTI

### Design:

- open top cylindrical tanks,
- available in two designs: tanks without insulation (FTX) / tanks with insulation (FTI),
- equipped with laser welded heat exchangers (pillow-plate),
- height-adjustable tank legs,
- materials and surface finishing depend on intended application and can be adapted to customer's requirements.



Material	stainless steel EN1.4301 (AISI 304)
Insulation (option)	polyurethane foam
External surface finishing	scotch brite (SB)
Internal surface finishing	mirror finish (BA)
Working pressure	atmospheric



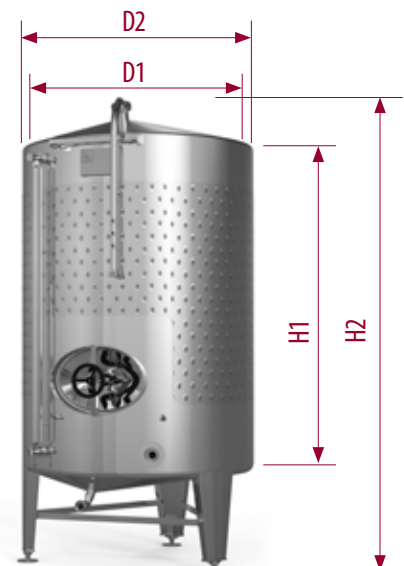
ID		FT 500	FT 1000	FT 2000	FT 4000
Volume _ effective capacity	L	500	1000	2000	4000
Total volume approx.	L	840	1620	3010	5860
Diameter [D1]	mm	1020	1270	1580	2200
Diameter outside [D2]	mm	1120	1370	1680	2300
Tank wall height [H1]	mm	1000	1250	1500	1500
Total height [H2] approx.	mm	1300	1600	1850	1850

## Closed fermentation tanks type GTX / GTI

### Design:

- closed cylindrical tanks to be used under atmospheric pressure,
- available in two designs: tanks without insulation (GTX) / tanks with insulation (GTI),
- equipped with laser welded heat exchangers (pillow-plate), separate cooling zones can be individually controlled,
- height-adjustable tank legs,
- components and accessories: sample valve port, racking port, drain port, oval manway, CIP tube with spray ball, level indicator.

Material	stainless steel EN1.4301 (AISI 304)
Insulation (option)	polyurethane foam
External surface finishing	scotch brite (SB)
Internal surface finishing	mirror finish (BA)
Working pressure	atmospheric



ID		GT 500	GT 1000	GT 2000	GT 4000	GT 6000	GT 8000	GT 10000	GT 12000	GT 15000	GT 20000
Volume _ effective capacity	L	500	1000	2000	4000	6000	8000	10000	12000	15000	20000
Total volume approx.	L	890	1540	2660	5250	7800	10900	13550	14730	19440	26510
Diameter [D1]	mm	920	1110	1270	1780	2050	2200	2450	2450	2450	2700
Diameter outside [D2]	mm	1020	1210	1370	1880	2150	2300	2550	2550	2550	2840
Tank wall height [H1]	mm	1250	1500	2000	2000	2250	2750	2750	3000	4000	4500
Total height approx. [H2]	mm	1900	2100	2650	2700	2900	3400	3400	3700	3700	5400

\* Dimensions listed in the tables are approximate and may vary slightly.



## Construction and equipment

### Materials

The selection of material depends on the intended application of the tank and can be adapted to customer's requirements. We use the following stainless steel materials:

EN1.4301, AISI 304,	EN1.4401, AISI 316
EN1.4404, AISI 316L	EN1.4571, AISI 316Ti
EN1.4435, AISI 316L	EN1.4307, AISI 304L

Other materials are available on request.

### Cooling / heating surfaces:

- laser welded pillow plates (design pressure max. 6 bar; operating pressure max. 3 bar);
- separate cooling zones can be individually controlled (a separate section for cooling, and heating);
- the pillow plate is usually installed on the tank wall, but it can also be applied on tank bottom. The laser-welding technique enables an accurate adjustment to openings, connectors and fittings on the tank surface without losing the cooling surface;
- the surface of the pillow-plate can be brushed, mechanically polished, marbled, scrubbed with scotch brite or sandblasted.

### Insulation:

- tank can be partial or entirely insulated,
- insulation material is polyurethane foam or mineral wool,
- insulation is covered with an outer insulation jacket, which is welded diffusion resistant onto the tank.

### Operating pressure:

- tanks for use under atmospheric pressure;
- pressure tanks adapted to technological process; planning and production according to the Pressure Equipment Directive 2014/68/EU, Module H/H1.

### Fittings and accessories options:

- flange, threaded, TC or other connections
- CIP system: cip tube with a spray head and valves
- temperature monitoring equipment: digital thermometer DT5, temperature controller SPR8, regulation valves, temperature control box
- safety valve for pressure tanks
- sample valve port, racking port, drain port with valves
- sight glasses,
- different types of manways
- gas pipe with accessories
- level indicator with litre scale
- height-adjustable tank legs

... and other fittings and accessories according to specifications



ZKI with pillow plates on the tank wall and tank bottom



tank bottom with pillow-plate

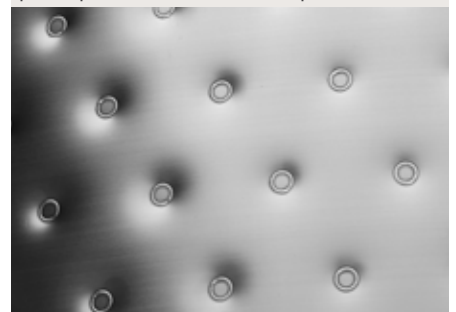
temperature controller SPR8



manway



pillow plate surface (different options)



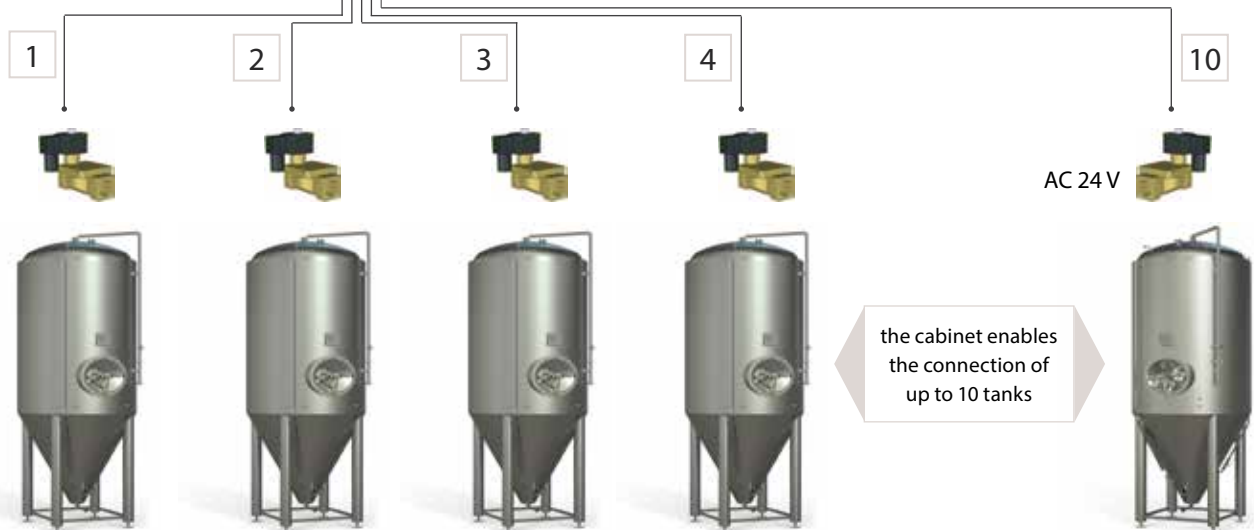
Control box design is suitable for use in wet places and an aggressive atmosphere (IP 65). The electrical cabinet enables the connection of up to 10 units, which means that the system enables you to monitor and control up to 10 tanks. Each tank must be equipped with a temperature probe and solenoid or motorized ball valve, and be connected to the suitable control unit in the cabinet. Installed control units are numbered from [1] to [10].



Technical data of the control unit:	
Operating range	from -40°C to 105°C / from -40°F to 221°F
Resolution	0,1°C (-19.9÷99.9), 1°C
Accuracy	< ± 0.3°C (-40÷100), ± 1°C
Consumption	<3W (without loads)
Supply voltage	12 V AC
Output 1 for cooling and heating	max. 4A / 240V AC
Temperature probe	NTC10K

The control unit enables:

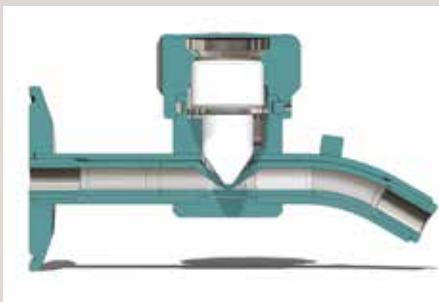
- cooling/heating regulation,
- current temperature display,
- target temperature setup,
- hysteresis setup



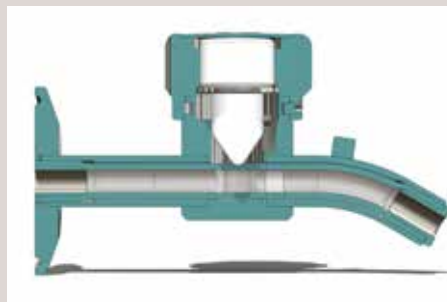
## Sample valve DIN11851 DN20 ~ TC 6/4

- sanitary design
- made from FDA-approved materials
- stainless steel EN1.4301
- silicon tube inside the valve is easy to replace

Valve closed:



Valve open:



Winemaking



- Wine storage tanks
- Fermenters
- Pneumatic presses
- Temperature regulating equipment
- Labeling machines

Beer brewing



- Fermentation tanks
- Beer storage tanks
- Pressure vessels
- Compact Brewhouses
- Microbreweries
- Labeling machines

Food industry



- Storage tanks for milk and yoghurt
- Process vessels for milk and dairy products
- Tanks for production and storage of alcoholic drinks
- Tanks for production and storage of juices and fizzy drinks
- Storage tanks for water, oil and vinegar

Pharma  
Biotechnology



- CIP / SIP tanks
- Vessels for preparation of sterile water WFI and purified water PW
- Vessels for treatment of sterile and non-sterile solutions
- Reactors / bioreactors
- Fermenters
- Agitator vessels
- Extraction equipment

Other products



- Containers for processing and storage of chemical substances
- Silos for storage of bulk materials (grain, flour, etc.)
- Containers for storage of liquids
- Containers for storage of waste materials
- Walk-on gratings, platforms and staircases
- Stainless steel drain channels





[www.sk-skrlj.com](http://www.sk-skrlj.com)



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