

Pneumatic presses

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Brilliant products

Pneumatic Presses
SERIES M



Pneumatic Presses
SERIES L



Pneumatic Presses
SERIES X



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With their advanced yet simple design, the series M pneumatic presses meet in particular the needs of small and medium volume winemakers.

A broad range of accessories will satisfy those seeking simple operation and maintenance and those looking for a press, adapted to the processing characteristics (central filling, level switch, filling funnels, platforms).

Pneumatic presses series M are available in two basic designs, based on the pressing system:

- **PSP model:** open pressing system, open drum with perforated surface
- **PST model:** closed pressing system, closed drum with interior drain channels

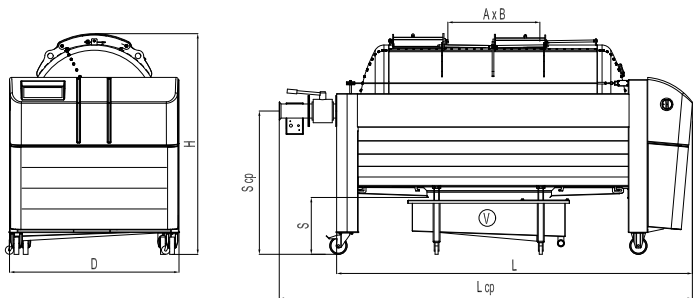


PST 12

ID		PSP 5	PST 5	PSP 8	PST 8	PSP10	PST 10	PSP 12	PST 12	PSP 16	PST 16
Drum volume	l	500		800		1000		1200		1600	
Length (L)	mm	1820		2320		2530		2575		3070	
Length (Lcp)	mm					2960		3005		3500	
Width (D)	mm	1000		1000		1220		1220		1220	
Height (H)	mm	1420		1420		1540		1600		1610	
Height (S)	mm	450		400		390		390		390	
Height (Scp)	mm					1035		1035		1045	
Hatch dimensions (A x B)	mm	345 x 425		345 x 425		345 x 650		345 x 650		345 x 900	
Weight approx.	kg	330		350		500		520		610	
Juice collection pan volume (V)	l	150		150		250		250		250	
Grid connection power (P)	kw	3,1 / 1,55		3,9 / 1,95		3,9 / 1,95		3,9 / 1,95		4,6 / 2,3	
Capacity	integral grapes	kg	250 - 400	400 - 650		500 - 800		600 - 950		800 - 1200	
	fresh lees	kg	700 - 1000	1100 - 1500		1400 - 1800		1650 - 2250		2400 - 4000	
	fermented lees	kg	1000 - 1600	1500 - 2500		1800 - 3100		2250 - 3750		3500 - 5500	

STANDARD ACCESSORIES:

- AE automatics: 5 preset programs, manual and automatic operation mode
- vacuum pump
- integrated piston compressor
- sliding hatch
- safety cord
- electropolished drain channel (PST)
- electropolished drum (PSP)
- axial filling connector DN100, without valve (PS_10,12,16)
- press and juice collection pan with wheels
- cleaning opening DN50 DIN11851 with plug (PSP_10,12,16)
- main supply voltage 400V 50Hz 3PH
- EU Declaration of Conformity (CE) / PED (2014/68/EU) documentation

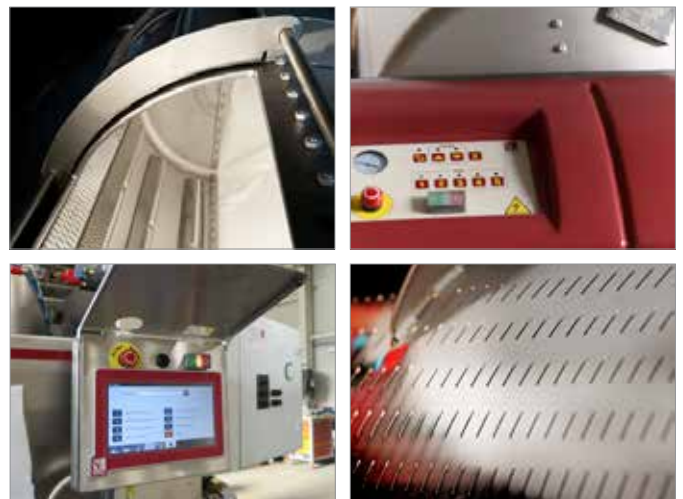


OPTIONS:

- AV automatics (installed) or AVk automatics (on cable), keypad
- AT automatics (installed) or ATK automatics (on cable), touch screen
- integrated rotary vane compressor
- axial filling valve DN65, 80 or 100, thread DIN11851, Garolla or TC (PS_10,12,16)
- overfilling signalisation
- strainer on the collection pan outlet
- level switch (only with AV automatics)
- press frame and juice pan leg extensions
- dumping hopper
- mains supply voltage 230V, 1PH (only with compressor)
- mains supply voltage other than 230/400V 50Hz

EXTRA OPTIONS (PST):

- hatch opening cover and channel plugs (for maceration)
- cooling jacket (connections on the drum or with rotational entry)
- drain channel wash tube, 3 m



The series L pneumatic presses are designed for large volume and advanced medium volume winemakers. A sophisticated and simple yet robust design guarantees long service life and easy maintenance.

The series L pneumatic presses enable grape pressing at different time intervals, overpressures, with the presence or absence of oxygen, maceration of the grape mass. A wide range of additional accessories enables each winemaker to order the press that perfectly corresponds to his manner of production.

Series L pneumatic presses are available in three different designs, based on the pressing system:

- **PSP model:** open pressing system, open drum with perforated surface
- **PST model:** closed pressing system, closed drum with interior drain channels
- **PSH model:** closed pressing system, closed drum with interior drain channels, possibility of oxygen-free pressing

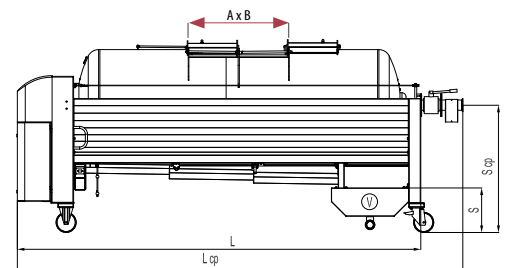
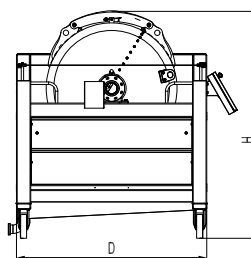


PST 29

ID		PSP 21	PST 21	PSP 29	PST 29	PSP 42	PST 42	PSP 55	PST 55
Drum volume	l	2100		2900		4200		5500	
Length (L)	mm	3250		4000		4415		4965	
Length (Lcp)	mm	3750		4500		4915		5465	
Width (D)	mm	1600		1600		1800		1905	
Height (H)	mm	1910		1910		2335		2435	
Height (S)	mm	500		500		680		750	
Height (Scp)	mm	1221		1221		1560		1630	
Hatch dimensions (A x B)	mm	470 x 900		470 x 900		490 x 900		490 x 900	
Weight approx.	kg	810		1120		1800		2200	
Juice collection pan volume (V)	l	220		220		500		500	
Grid connection power (P)	kw	5,4 / 3,1		9,6 / 4,2		11 / 5,6		14,1 / 7,7	
Capacity	integral grapes	kg	1100 - 1700	1500 - 2300		2100 - 3200		2600 - 4000	
	fresh lees	kg	3300 - 5300	4500 - 7300		6500 - 11000		8500 - 14000	
	fermented lees	kg	4800 - 7300	6700 - 10000		9700 - 15000		11000 - 19000	

STANDARD ACCESSORIES:

- AVk automatics (on cable): 10 preset programs, adjustable
- vacuum pump
- integrated rotary vane compressor
- sliding hatch
- safety cord
- electropolished drain channels (PST)
- wheels 200x50, 2 fix, 2 swivel with brake (PS_21, 29)
- axial filling connector DN100, without valve
- fix juice collection pan, movable plateaus
- cleaning opening with plug
- mains supply voltage 400V 50Hz, 3PH
- EU Declaration of Conformity (CE); PED (2014/68/EU) documentation

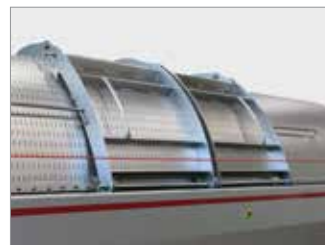


OPTIONS:

- ATK automatics (on cable), touch screen
- pneumatic sliding hatch drive; option - adjustable hatch opening
- auxiliary compressor (for hermetic hatch, pneumatic drive or must selector)
- axial filling valve DN65, 80 or 100, thread DIN11851, Garolla or TC
- axial filling pneumatic pinch valve (with auxiliary compressor only)
- overfilling signalisation
- juice collection pan with wheels and fixed plateau
- pneumatic drive of the movable plateaus
- strainer on the collection pan outlet
- wheels 200x50 mm (PS 42); wheels 250x60 mm (PS 55); additional option - motorized drive of the wheels
- must selector DN50, pneumatic
- level switch
- dumping hopper, platform
- mains supply voltage other than 400V 50Hz

EXTRA OPTIONS (PST):

- hermetic hatch 485x600 mm and channel plugs (for maceration)
- cooling jacket (connections on the drum or with rotational entry)
- connected drain channels, big draining surface
- drain channel wash tube, 3 m



The series X pneumatic presses meet in particular the needs of large volume winemakers. The press enables grape pressing at different time intervals, overpressures, with the presence or absence of oxygen, maceration of the grape mass.

The sophisticated and simple yet robust design of the press guarantees long service life and easy maintenance.

Series X pneumatic presses are available as the PST model – closed drum with interior drain channels (closed pressing system).

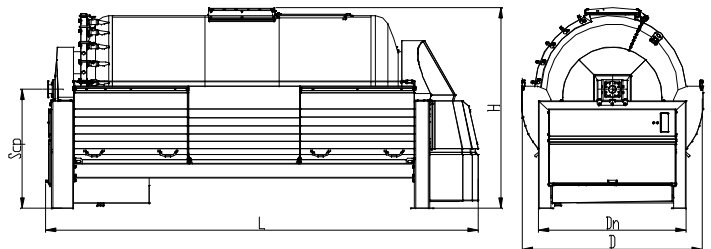


PST 100

ID		PST80	PST 100	PST 130	PST 150	PST 200	
Drum volume	l	8000	10000	13000	15000	20000	
Length (L)	mm	5980	5750	5810	6560	7500	
Width (D)	mm	2100	2300	2450	2450	2600	
Height (H)	mm	2550	2650	2750	2750	2730	
Height (Scp)	mm	1612	1612	1612	1612	1538	
Hatch dimensions (A x B)	mm	800 x 600	800 x 600	800 x 600	800 x 600	800 x 600	
Weight approx.	kg	3410	3580	4025	4220	4600	
Juice collection pan volume (V)	l	450	450	450	450	450	
Grid connection power (P)	kw	7,2	9	13	13	15	
Capacity	integral grapes	kg	4000 - 5600	5000 - 7000	6500 - 9000	7500 - 10500	10000 - 14000
	fresh lees	kg	12400 - 17600	15500 - 22000	20100 - 28600	23250 - 33000	30000 - 45000
	fermented lees	kg	20000 - 24000	25000 - 30000	32500 - 39000	37500 - 45000	50000 - 60000

STANDARD ACCESSORIES:

- AVk automatics (on cable): 10 preset programs, adjustable (6 standard, 3 sequential, 1 special program)
- vacuum pump
- prepared for external compressor
- hermetic hatch 800x600mm, pneumatic drive
- electropolished drain channels
- auxiliary compressor (for hermetic hatch, pneumatic drive or must selector)
- safety cord
- axial filling connector DN125, without valve
- juice collection pan 450 L, fix
- mains supply voltage 400V 50Hz, 3PH
- EU Declaration of Conformity (CE)
- PED (2014/68/EU) documentation



OPTIONS:

- ATK automatics (on cable), touch screen
- laser welded jacket (pillow-plate)
- cooling jacket connections on the drum
- cooling jacket connection with rotational entry
- axial filling pneumatic pinch valve DN125 DIN11851
- overfilling signalisation DN125
- cleaning opening DN100 DIN11851 with plug
- integrated rotary vane compressor
- adjustable hatch opening (closed / partially open / open)
- channel plug DN50 DIN11851 (7 pcs)
- channel valve, manual (8 pcs)
- pressure washer, mounted with hose and nozzle
- must selector, pneumatic DN50
- level switch
- mains supply voltage other than 400V 50Hz



Hyperreductive technology

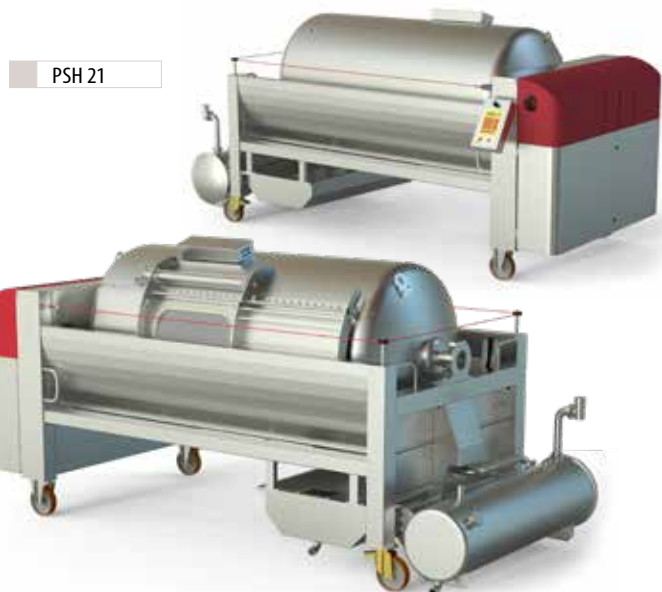
grape pressing under controlled presence of oxygen

During the processing of wine, oxygen plays a very important role, which can be either positive or negative. It is a known fact that exposure of must or wine to oxygen reduces the quality and exquisiteness of wine due to oxidation, loss of fruitiness, caramelization, and other changes in the characteristics of wine.

In recent years, hyperreductive mode of processing is prevailing for white wines – the technology of vinification of white wines in the absence of oxygen.

Advantages of hyperreductive technology:

- reduced use of sulphur
- more aromatic, fruitier, and fresher white wines,
- increased elegance and softness of wine,
- prevents must oxidation of white wine varieties,
- reduced concentration of oxygen (less than 1 % in wine press atmosphere) in the must during grape processing reduces the enzymatic oxidation reactions and influences the increased content of phenols (hydroxycinnamic acids) and glutathione in the grape must. Hydroxycinnamic acids and glutathione are important must antioxidants that oxidize quickly in the presence of oxygen and enzymes (polyphenoloxidase);
- glutathione plays an important role in the prevention of must oxidation; in conditions of a better glutathione preservation there exist better possibilities of preservation of aromatic characteristics of dry white wines;
- wines with a larger content of glutathione show lower levels of 2-aminocetofenon and sotolone – two very important compounds in sensing the oldness of wine. In hyperreductive processing of white wines higher levels of glutathione are preserved, therefore this technology is very important in reducing the oldness of wines and prolonging their life-span.



Hyperreductive press PSH

Hyperreductive wine press PSH enables grape pressing in an atmosphere below 1 % of oxygen throughout the grape pressing process. During the entire pressing process, inert gas (N_2 , CO_2 , Ar) is supplied into the system. The gas is supplied from a stack of gas bottles. The gas supply valve is located at the connector for central press filling.

Cost of nitrogen N_2 supply during pressing is very low:

- approx. 15.00 € / 2000 l must
- approx. 0.75 € / hl wine
- approx. 0.01 € / bottle wine

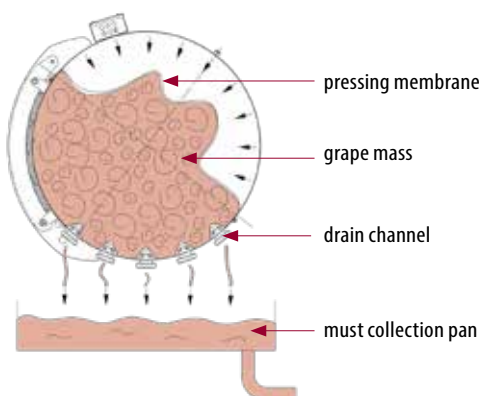
Two systems in one press

The PSH pneumatic press combines two systems of pressing.

It can be used for the classical method of pressing (PST) or for hyperreductive pressing (PSH). According to the quality and variety of grapes, the user can decide which system of grape pressing to use.

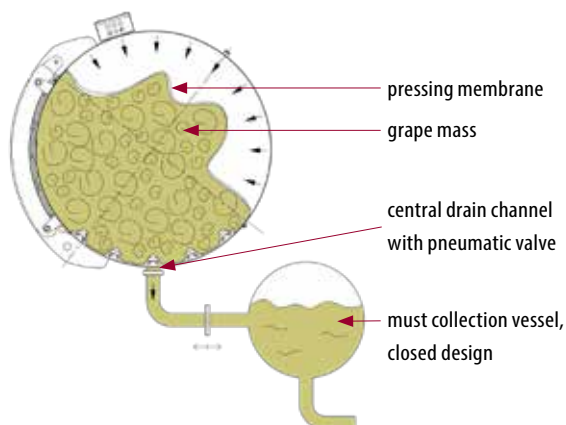
Switching from one system to the other is simple and easy.

Classic pressing method (PST)



- inert gas supply is not provided
- must flows through all drain channels
- must is collected in the open collection pan
- presence of oxygen in the must (higher oxidation)

Hyperreductive pressing method (PSH)

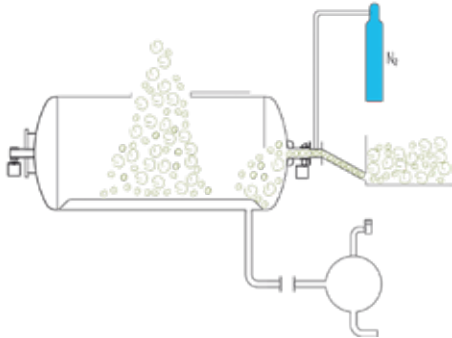


- inert gas supply is provided
- must flows only through the central drain channel
- must flows into the closed collection vessel at inert atmosphere
- absence of oxygen (no must oxidation)

Hyperreductive pressing method – a graphic presentation

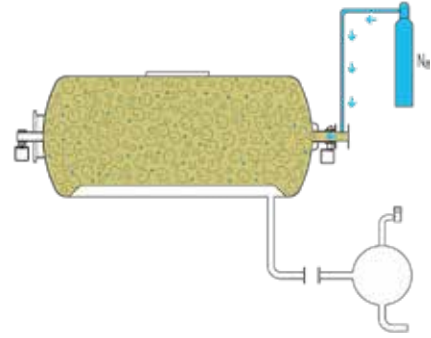
1 Filling of the press

The press is filled through the hatch on the drum or through the central filling connector. The inert gas supply connector is closed. When minimizing the SO_2 concentration, the must oxidation is reduced, in spite of the classic press filling.



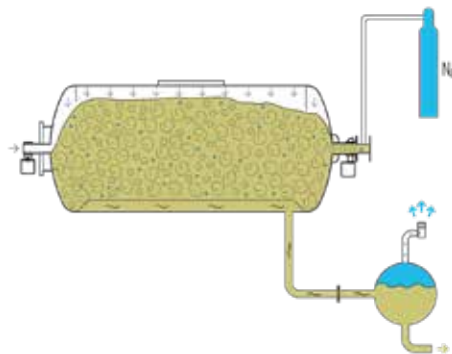
2 Replacement of oxygen with nitrogen

Before pressing, oxygen is blown out from the press. The hatch is closed and the inert gas is supplied into the press.



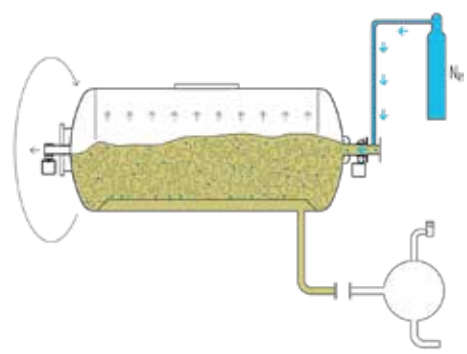
3 Pressing

The pressing is effectuated with pressed air through the impermeable membrane. Must flows through connected drain channels into the closed collection pan at inert atmosphere.



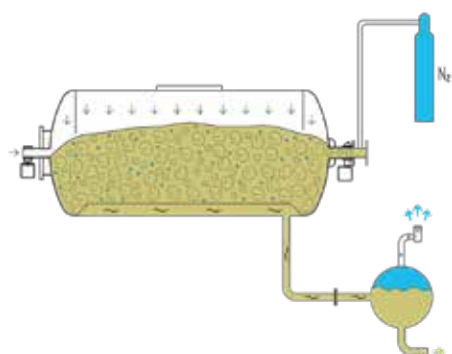
4 Crumbling

Before crumbling, the connection of the drum with the must collection pan is automatically interrupted. The air is pumped out, inert gas is supplied into the space with grapes, the membrane is drawn to the inner walls. The drum rotates.



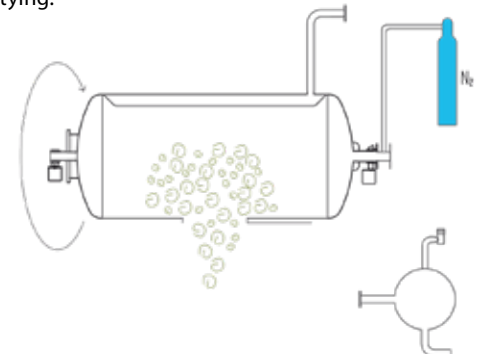
5 Pressing

The connection of the drum and the must collection pan is automatically restored. Must flows into the closed collection pan at inert atmosphere.



6 Emptying

The connection of the drum and the collection pan is interrupted. The inert gas supply connector is closed. The hatch is open and the drum rotates. When the drum rotates, grape skins fall from the drum. The large hatch enables fast and simple press emptying.



Cooling jacket

On request, pneumatic presses with a closed PST system can be equipped with a cooling jacket and accompanying connectors to the cooling medium source. The cooling medium circulates in the space between the press drum jacket and the additional external jacket. The cooling system enables the user to actively interfere with the processes, which evolve in the drum during grape pomace pressing, and to guide them into the desired direction.

A pneumatic press with a cooling jacket enables cooling of the drum before its filling, cooling of grape pomace during pressing and adaption of temperature of grape mass in the drum according to enological recommendations and demands.

A press with a cooling jacket is also suitable for maceration. With maceration of grape pomace at low temperatures, a more intensive extraction of aromatic precursors can be influenced.

Technical data:

- operating pressure: 3 bar
- test pressure: 6 bar
- cooling medium: water, glycol
- inlet/outlet connectors: 3/4" quick couplings

Cooling surface (indicated values are approximate):

Pneumatic press	Drum volume (l)	Cooling jacket (m ²)
PST 5	500	1,40
PST 8	800	2,25
PST 10	1000	2,30
PST 12	1200	2,75
PST 16	1600	3,50
PST 21	2100	3,95
PST 29	2900	7,60
PST 42	4200	9,60
PST 55	5500	11,25
PST 80	8000	15,70
PST 100	10000	16,65
PST 130	13000	18,85
PST 150	15000	23,20



Cooling jacket connections on the drum

The cooling jacket is connected to the cooling medium through two connectors on the external drum surface. Each of the two connectors can be used as an inlet or outlet connector.



The cooling jacket can be connected to the cooling medium only when the drum does not rotate. Before the drum starts rotating, the supply of the cooling medium should always be disconnected, so that the inlet pipe does not roll on the moving drum.

Cooling jacket connection with rotational entry

The connectors for the cooling medium source can also be placed on the central filling unit of the press. Such design enables the cooling jacket to be connected to the cooling medium source also during the rotation of the drum.



Automatics



AE automatics

In manual mode, the user starts and ends a particular operation by pressing a button (drum rotation, compressor, vacuum pump on/off).

In automatic mode, the user can choose between five standard pressing programs. The incorporated programs result from many years of experience and are adjusted to different types of grapes.

The programs are factory preset.



AVk automatics

In manual mode, the user starts and ends a particular operation by pressing a button.

In automatic mode, the user can choose between 10 pressing programs, which are adjusted, observing professional experience, to different grape types.

The user can set the pressing parameters and adjust them during the pressing process as required.



ATk automatics _ touch-screen

A large touch screen colour display enables graphical presentation of all program phases and gives information about the current press operation.

Easy programming and adjustment of pressing cycles (operating pressure, pressure holding time, drum rotation and other settings).

10 factory preset programs, possibility of entering additional 10 pressing programs, parameters can be changed and adjusted during the pressing process.

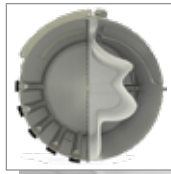
Reporting and recording of errors during the execution of the pressing program.

Pneumatic press drum



Drum design PSP

- open drum
- half of the drum is covered by an impermeable membrane
- half of the drum is perforated
- electropolished drum for presses PSP 5, 8, 10, 12, 16



Drum design PST

- closed drum
- half of the drum is covered by an impermeable membrane
- half of the drum is equipped with perforated drain channels
- electropolished drain channels



Drum design PST (connected drain channels)

- closed drum
- half of the drum is covered by an impermeable membrane
- half of the drum is equipped with perforated drain channels
- electropolished drain channels

Drums and drain channels with electropolished surface

Sticking of grape pomace on the electropolished surface is reduced, which consequently leads to a better flow of must and liquid through drainage holes.

Better and faster cleaning of the surface, which also results in reduced water consumption.

Reduced possibility of building of coats on the material.

Electropolished surface:

- with electropolishing all impurities of the basic material are removed
- material surface irregularities are evened and cleaned
- glossy and shiny surface
- distinctively reduced surface roughness
- increased resistance to corrosion
- extended product life

Pneumatic press hatch

Pneumatic presses are equipped with large sliding hatches that allow fast and easy filling and emptying of the press drum. The execution and dimensions of the hatch depend on the press type.

Basic hatch versions:

- sliding hatch (one or two leaves)
- hermetic hatch



sliding hatch (two leaves)
manual opening



sliding hatch (two leaves)
pneumatic drive



hermetic hatch - manual opening
(only with drum design PST)



hermetic hatch with pneumatic drive
(only with press drums PST_21, 29, 42 and 55)



hermetic hatch with pneumatic drive
(only with press drums PST_80, 100, 130, 150 and 200)



About Škrj d.o.o.



Škrj d.o.o. is a business with a strong foundation that was built on rich family tradition and is today a valued European company with an established international market.

We design, manufacture, and sell stainless steel equipment for:

- winemaking
- beer brewing
- the food industry
- the pharmaceutical industry

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

We offer the following range of services:

- sheet metal coil cutting line
- plain sheet polishing and grinding line
- internal and external grinding (tank and tank bottom)
- sheet metal bending, shaping
- manual, machine (linear and circular), and robotic welding (TIG, MIG/MAG, plasma)
- automatic sandblasting of larger products in special sandblasting chamber (using CrNi beads)
- passivation of finished products
- treatment with CNC processing machine
- abrasive water jet cutting
- 3D scanning
- 2D and 3D laser cutting
- laser welding
- electropolishing





Winemaking



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

Beer brewing



- Fermentation tanks
- Brite beer tanks
- Compact Brewhouses
- Microbreweries
- CIP-stations
- Yeast propagators
- Cold and hot water tanks
- 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

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



Address:

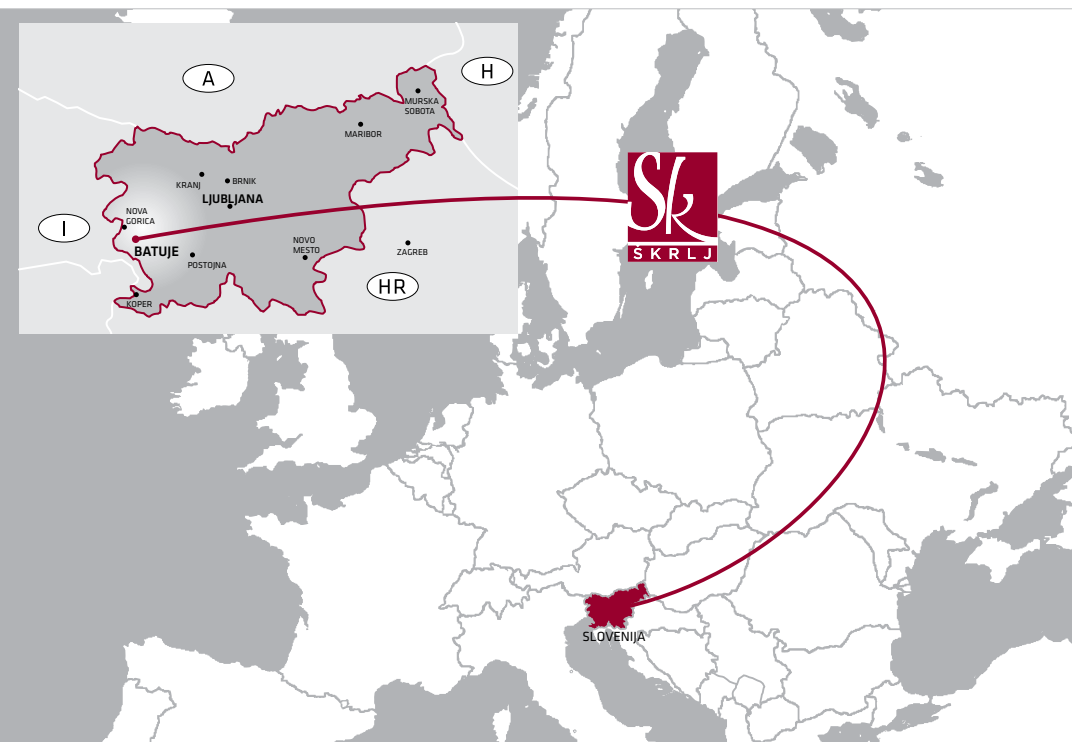
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