



PSS SM / SOM

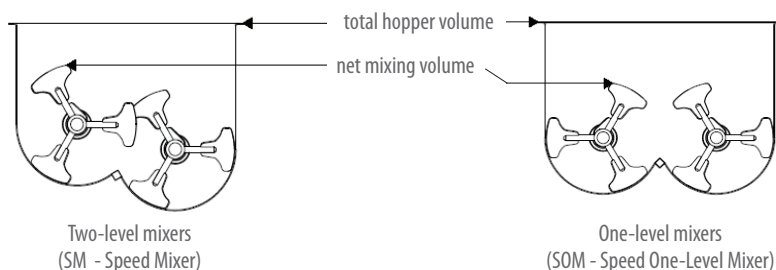
Speed Mixers

PSS speed mixers (SM, SMV and SOM) are designed for food industry operations for the fast mixing of any kind of product. PSS speed mixers ensure even and gentle mixing regardless of product structure.

The mixers achieve the best mixing times thanks to its special and modern design. The product is mixed up by maximally overlapping paddles in an almost square, two-level or one-level hopper. Rotating overlapping paddles gently move the product in every direction to deliver the desired final structure. The clearance

between the paddles and the hopper is minimal so that there is no compression or squashing of product. PSS speed mixers also optimize fast emptying because of the two – level hopper, minimize final product residue and thereby significantly reduce operating time between batches, and can eliminate cross contamination, too.

Choosing the type of mixer by size



| MIXER TYPE | TOTAL HOPPER VOLUME | NET MIXING VOLUME |
|---------------------|---------------------|-------------------|
| SOM / SM / SMV 500 | 650 l | 500 l |
| SOM / SM / SMV 700 | 900 l | 700 l |
| SOM / SM / SMV 900 | 1 200 l | 900 l |
| SOM / SM / SMV 1200 | 1 500 l | 1 200 l |
| SOM / SM / SMV 1700 | 2 100 l | 1 700 l |
| SOM / SM / SMV 2200 | 3 200 l | 2 200 l |
| SOM / SM / SMV 2700 | 3 900 l | 2 700 l |
| SOM / SM / SMV 4000 | 5 500 l | 4 000 l |

SMV - marking for SM speed mixers with a vacuum system



Advantages of speed mixers

- Fast and quality mixing of any product type
- Soft and gentle mixing of products of any structure
- Maximally overlapping paddles in an almost square, two-level hopper (SM, SMV)
- Maximally overlapping paddles in an almost square, one-level hopper (SOM)
- The paddles gently move product every direction
- No product compression or squashing
- Avoidance of air intake during mixing (SMV)
- Final product with excellent consistency
- Fast mixing times - approx. 10 min *
- Fast emptying and minimizing of product residues - 5 to 15 min. **
- Setting of required programmes and procedure steps
- The N2 or CO2 connections placed behind covers
- Mirror-effect polished surfaces
- Easy and fast sanitation
- Cooling system can significantly extend the product lifetime and reduces the growth of bacteria

* The total mixing time depends on the type of input raw material, its temperature and the recipe for the final product

** The total time of hopper emptying after completion of the mixing program depends on the density of the resulting mixture and whether it is emptied into the handling trolleys (5 min.) or for further processing through the speed pump to other machines within the line (10-15 min.)



PSS SMV – speed mixer SM with vacuum system



Speed pump



Handling trolley



PSS SM - version START

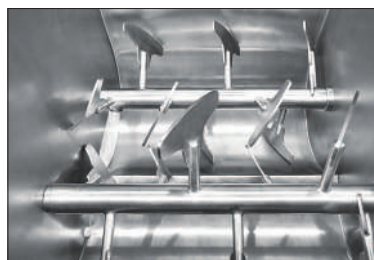
Version START

The main differences between the classic versions of the speed mixers and between the START version:

- cover the outlet is fixed
- without frequency inverter with dual speed engine
- the control is on the side of the frame, without the PLC



Distance between hopper and gearboxes



Mixing paddles



Mixing paddles



The minimum space between the mixing paddles and the hopper wall



Discharge outlets of PSS SOM



Control panel



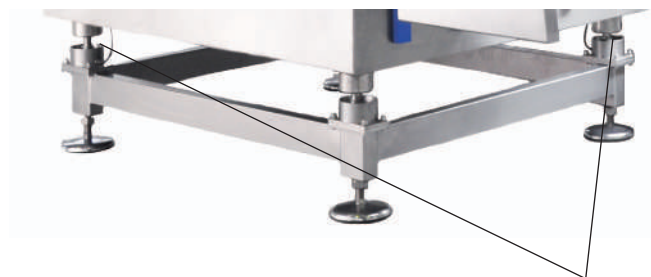
Discharge outlet of PSS SM



Sensors of the presence of handling trolley

Basic options selection

- Easily removable mixing paddles for daily sanitation
- Weighing system on frame
- Vacuum system
- Grid cap
- Cover plate with sealing
- Cooling system of top injection of CO₂ and N₂
- Cooling system of bottom injection CO₂ and N₂
- Steam injection system
- Water dosing system
- Double jacket
- Insulation
- Inspection platform



Weighing system on frame



Dosing hole for water dosing

| MIXER TYPE | TOTAL HOPPER VOLUME | NET MIXING VOLUME | TOTAL INPUT | WEIGH OF THE MACHINE | CONTROL VIA FREQUENCY INVERTERS |
|------------|---------------------|-------------------|-------------|----------------------|---------------------------------|
| SM 500 | 650 l | 500 l | 5,7 kW | 900 kg | no |
| SM 700 | 900 l | 700 l | 8 kW | 1 700 kg | yes |
| SM 900 | 1 200 l | 900 l | 11,5 kW | 1 800 kg | yes |
| SM 1200 | 1 500 l | 1 200 l | 15,5 kW | 2 100 kg | yes |
| SM 1700 | 2 100 l | 1 700 l | 22,5 kW | 2 500 kg | yes |
| SM 2200 | 3 200 l | 2 200 l | 25 kW | 3 300 kg | yes |
| SM 2700 | 3 900 l | 2 700 l | 30 kW | 4 600 kg | yes |
| SMV 500 | 650 l | 500 l | 7 kW | 1 500 kg | yes |
| SMV 700 | 900 l | 700 l | 11,45 kW | 1 800 kg | yes |
| SMV 900 | 1 200 l | 900 l | 14,95 kW | 1 850 kg | yes |
| SMV 1200 | 1 500 l | 1 200 l | 21,7 kW | 2 500 kg | yes |
| SMV 1700 | 2 100 l | 1 700 l | 28,7 kW | 2 580 kg | yes |
| SMV 2200 | 3 200 l | 2 200 l | 31,2 kW | 3 140 kg | yes |
| SMV 2700 | 3 900 l | 2 700 l | 37,5 kW | 3 540 kg | yes |
| SOM 500 | 650 l | 500 l | 6,3 kW | 1 450 kg | no * |
| SOM 700 | 900 l | 700 l | 9,4 kW | 1 550 kg | no * |
| SOM 900 | 1 200 l | 900 l | 12,4 kW | 1 850 kg | no * |
| SOM 1200 | 1 500 l | 1 200 l | 22,6 kW | 2 100 kg | no * |
| SOM 1700 | 2 100 l | 1 700 l | 23,6 kW | 2 350 kg | no * |
| SOM 2200 | 3 200 l | 2 200 l | 34,6 kW | 2 650 kg | no * |
| SOM 2700 | 3 900 l | 2 700 l | 34,6 kW | 2 850 kg | no * |
| SOM 4000 | 5 500 l | 4 000 l | 44,5 kW | 8 000 kg | no * |

* Frequency inverter control is only possible when using single-speed motors (two-speed motors are standard on the SOM mixers)

Control

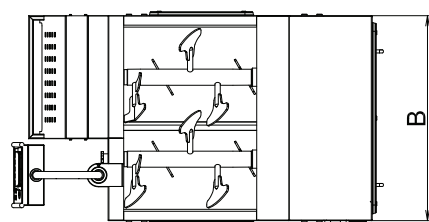
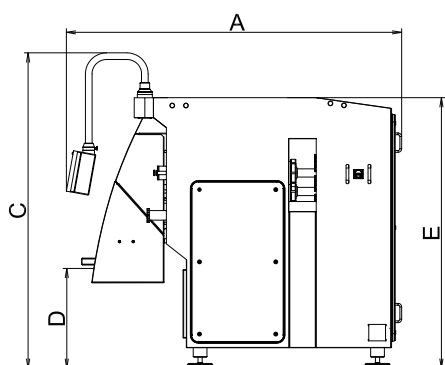
PSS speed mixers are controlled from the PSS CCP – Central Control Panel – with easy movement to give the best operator position. The coloured touch screen enables easy setting of the required programmes and procedure steps. Paddle speeds, mixing and emptying times are selective. With the optional cooling system of N₂ or CO₂, cooling is adjustable together with impulses and intervals.

PSS cooling system (N₂ or CO₂)

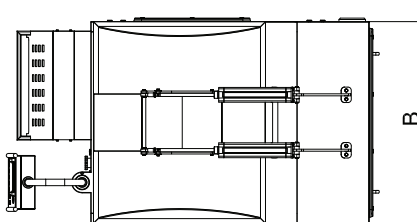
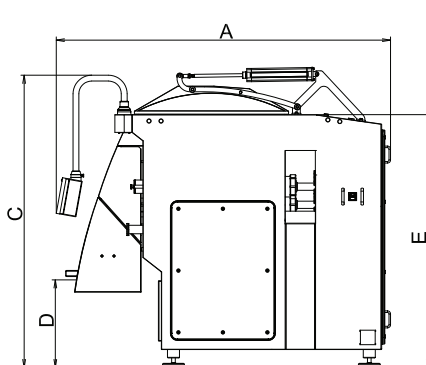
PSS speed mixers can be supplied with a cooling system of top injection N₂ and a cooling system of top or bottom injection CO₂. The cooling system can significantly extend the product lifetime and reduces the growth of bacteria. The required crystallization is achieved and the product retains the correct structure during further processing.

CO₂ valves

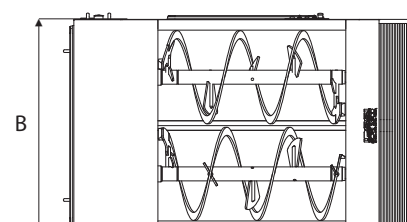
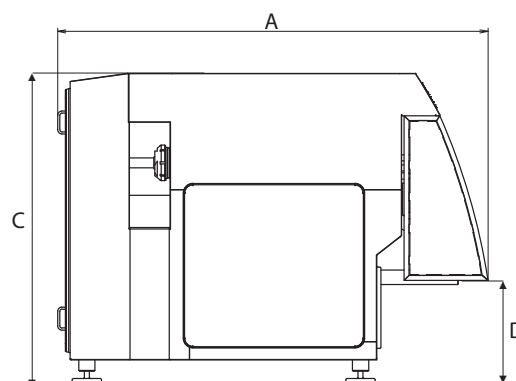
PSS SM




PSS SMV




PSS SOM



| MIXER TYPE | A | B | C | D | E |
|------------|----------|----------|----------|----------|----------|
| SM 500 | 2 158 mm | 1 185 mm | 2 100 mm | 700 mm | 1 740 mm |
| SM 700 | 2 420 mm | 1 350 mm | 2 110 mm | 720 mm | 1 785 mm |
| SM 900 | 2 725 mm | 1 350 mm | 2 300 mm | 720 mm | 1 980 mm |
| SM 1200 | 2 720 mm | 1 500 mm | 2 430 mm | 720 mm | 2 100 mm |
| SM 1700 | 3 170 mm | 1 500 mm | 2 430 mm | 720 mm | 2 100 mm |
| SM 2200 | 3 270 mm | 1 800 mm | 2 740 mm | 720 mm | 2 420 mm |
| SM 2700 | 3 570 mm | 1 800 mm | 2 740 mm | 720 mm | 2 420 mm |
| <hr/> | | | | | |
| SMV 500 | 2 158 mm | 1 185 mm | 2 226 mm | 700 mm | 1 740 mm |
| SMV 700 | 2 500 mm | 1 350 mm | 2 300 mm | 720 mm | 1 980 mm |
| SMV 900 | 2 775 mm | 1 350 mm | 2 300 mm | 720 mm | 1 980 mm |
| SMV 1200 | 2 700 mm | 1 500 mm | 2 430 mm | 720 mm | 2 100 mm |
| SMV 1700 | 3 220 mm | 1 500 mm | 2 430 mm | 720 mm | 2 100 mm |
| SMV 2200 | 3 320 mm | 1 800 mm | 2 740 mm | 720 mm | 2 420 mm |
| SMV 2700 | 3 620 mm | 1 800 mm | 2 740 mm | 720 mm | 2 420 mm |
| <hr/> | | | | | |
| SOM 500 | 2 160 mm | 1 400 mm | 1 740 mm | 712 mm | - |
| SOM 700 | 2 400 mm | 1 420 mm | 2 100 mm | 741 mm | - |
| SOM 900 | 2 550 mm | 1 450 mm | 2 310 mm | 741 mm | - |
| SOM 1200 | 2 650 mm | 1 650 mm | 1 950 mm | 741 mm | - |
| SOM 1700 | 3 000 mm | 1 850 mm | 2 150 mm | 741 mm | - |
| SOM 2200 | 3 150 mm | 1 950 mm | 2 500 mm | 741 mm | - |
| SOM 2700 | 3 500 mm | 1 880 mm | 2 650 mm | 741 mm | - |
| SOM 4000 | 5 500 mm | 4 000 mm | 2 698 mm | 1 091 mm | - |

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**Notice:**

As a result of continuous process improvement and modernization of our products there may be modifications and changes in characteristics and descriptions of machines. Therefore the manufacturer PSS SVIDNÍK, a.s. reserves the right to change any specifications and technical parameters of its products.

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