

CATALOG

product range



www.storm-company.com



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Presentation

"STORM S" S.A. was established in 1990 in Gabrovo, Bulgaria and has manufactured machines and equipment for food processing industry for more than 20 years. The enterprise has two production bases – in Gabrovo and Plovdiv, Bulgaria. The main headquarter of the company is in Plovdiv.

"STORM S" S.A. offers full range of services, technologies, machines and equipment for food processing industry - consulting, technological projects, modernization, introducing of new technologies.

Thanks to its 20-year history, our company is able to offer complete decisions based on experience, contemporary technologies and tempting financial terms.

Engineering and design work of the company aims to develop high-technological machines with low energy consumption based on its own patents, thereby providing high quality world-class self-engineering production.



Two patents of the company were awarded with medals in 2001 in Pittsburgh, USA at the 17th World Salon of INPEX Innovations:

- **gold medal:**

for automatic cutting of carcasses into halves with no waste for the needs of conveyor systems in slaughterhouses;

- **silver medal:**

for energy saving method and equipment for pressing raw materials into briquettes.

The same year, at "Euro Intellect" exhibition in Sofia, Bulgaria these patents were awarded again. The **two gold medals** proved again the world level of the company.

On March 1st 2010 in Paris, France our company was awarded with **GOLDEN EUROPEAN AWARD FOR QUALITY 2010** in recognition for business success and quality of production.

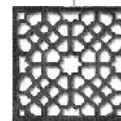
The company complies with **ISO 9001:2008, CE, GOST**.



STORM S S.A. company has two modern equipped production bases. In the recent years the company has made large investments to modernize its machinery park.



WATERJET CNC 3D



BENDING CNC 3D PRESSBRAKE



GUILLOTINE CUTTING

LASER CUTTING

PRECISE ARGON WELDING



LATHE CNC 4 AND 5-AXES VERTICAL CENTRES

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WASHING MACHINE FOR KNIVES BASKETS



The STORM S S.A. company informs that individual differences may appear between the machines shown in this catalogue and those offered for sale due to either design changes or the individual orders of our customers.

WASHING MACHINES

Our company produces a wide range of different washing machines:

- Pass-through (tunnel) washing machines for washing a great deal of standard stock (crates, boxes, trays) with capacity up to 2000 crates per hour.
- Washing machines for serial work; for specific and non-standard packages with different sizes.

All the types of washing machines can be equipped with automatic dosing systems, mechanical ventilation, pre-washing sections, drying, disinfection units and PLC controllers.

Our company is entirely Customer oriented. We offer standard and optional equipment depending on our customers' needs and requirements.

Our washing machines are designed following the latest technologies and in accordance with all safety rules.

Our equipment is entirely made of stainless steel 1.4301 (AISI 304) which is permitted in food industry.

Machines comply with the Council Directives No. 2006/42/EC and 2006/95/EC and USDA regulations.

ISO 9001:2008



Machines comply with standards HACCP, EN 1672-2, the Council Directives No. 2006/42/EC and 2006/95/EC and USDA regulations.



WASHING MACHINE FOR CRATES

The pass-through washing machine is designed to clean plastic crates, buckets, boxes etc.

It is made entirely of stainless steel, 1.4301 DIN (AISI 304) grade with permission for contact with food - according to the standard.

The washing process is performed by means of a centrifugal pump and adjustable nozzles. The proper cleaning agent is added manually in the feed tank before starting the machine. As an option automatic dosing of the cleaning agent can be provided. Washing is performed by water circulation in a closed filtered cycle. General water supply is used for rinsing.

The main tank is equipped with manually cleaned filter (drum filter – option) for catching the bigger soils. The water (cleaning agent) for washing is heated by means of electric heaters or a steam injector.

The desired water temperature for washing can be adjusted between 30-60°C via a thermostat.

For the rinsing is used general water supply. The water used during the rinsing process is afterwards led away into the main tank and thus the water inside is constantly refreshed.

The crates are transported through the various washing zones by a motor driven transport chain. The transport speed is smoothly adjustable. The gear motor is equipped with a sliding connector to prevent eventual injuries to the personnel from the transport chain.

The control panel can be mounted either on the left or on the right side of the machine in accordance with the customer requirements.

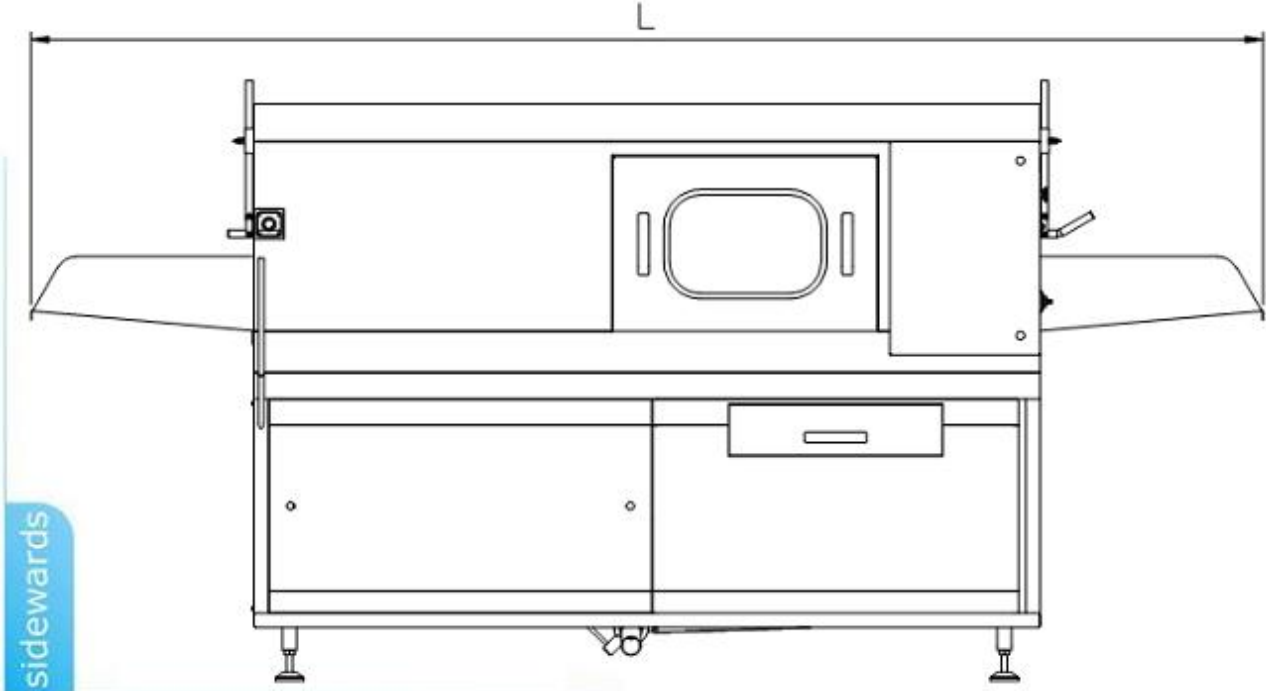
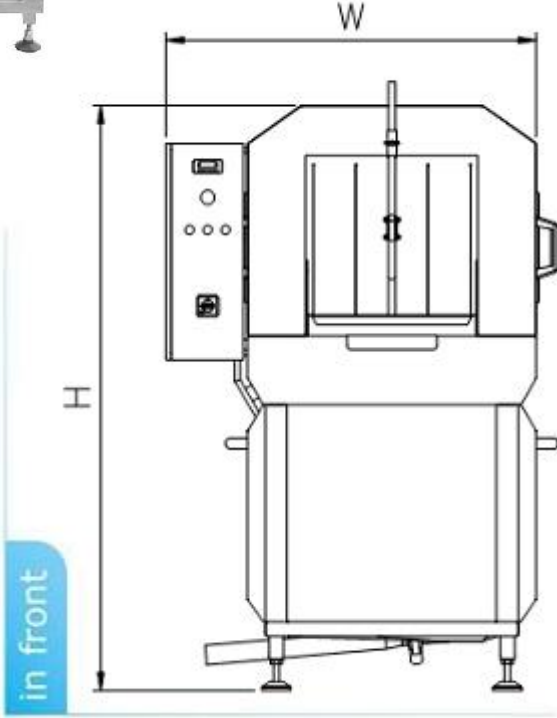
Options:

- Automatic system for detergent filling and dosing (with concentration measurement);
- Flange Ø150 for plugging to aspiration;
- Ventilation-flange, fan, control;
- Chemical disinfection - including disinfectant in the rinse;
- Thermal disinfection (additional rinsing section) – hot water 82°C is provided from the customer;
- Safety switches;
- Drum filter in pre-washing.

It is possible non-standard equipment depending on the customers' needs and requirements to be produced.

The machines comply with the Council Directives No. 2006/42/EC and 2006/95/EC and USDA regulations.

Washing machines, capacity max. 320 crates

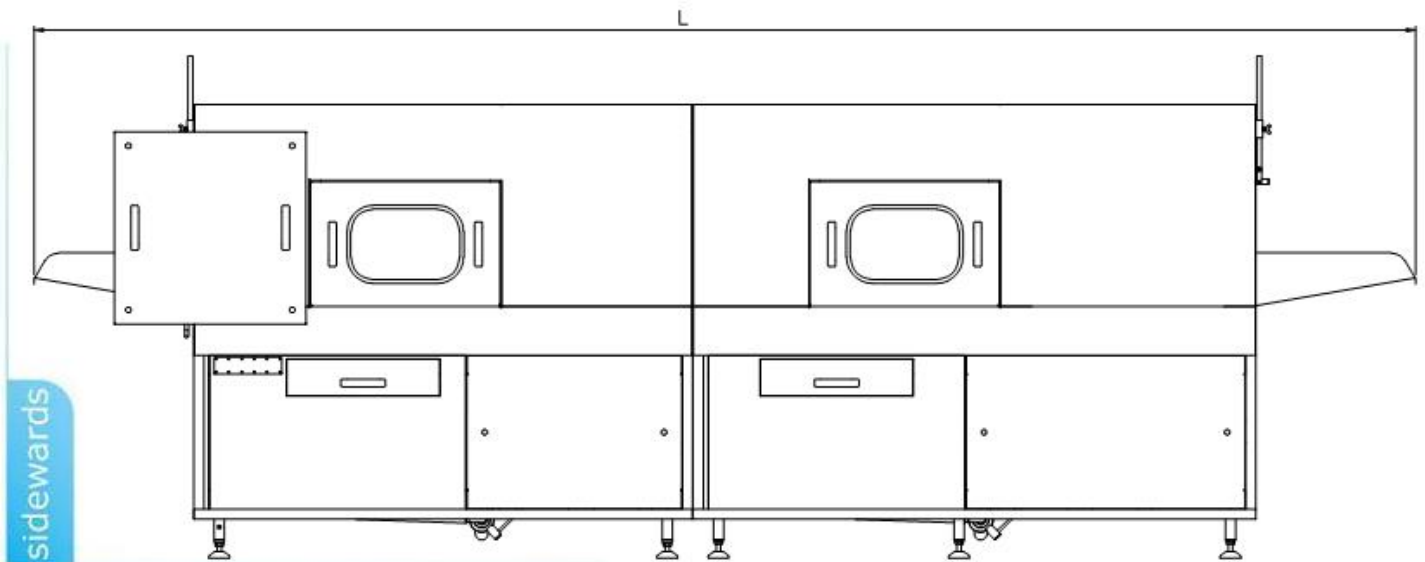
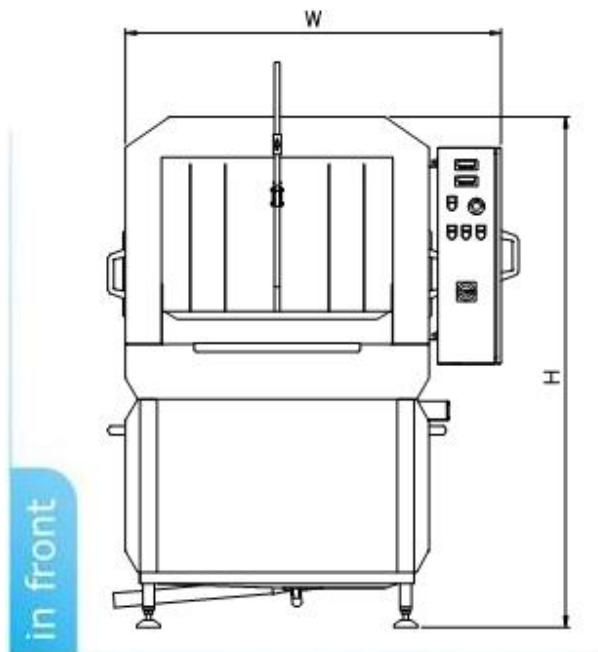


WASHING MACHINES FOR CRATES

| Art. No. | 20.0001.03 | 20.1001.03 | 20.0001.00 | 20.1001.00 | 20.0002.00 | 20.1002.00 | 20.0003.00 | 20.1003.00 |
|--|---|----------------|---|----------------|---|----------------|---|----------------|
| Dimensions (L,W,H-mm) | 2990/1050/1620 | | 2990/1050/1620 | | 3445/1050/1620 | | 3445/1300/1670 | |
| Designation | crates max 600/400/400 mm | | crates max 600/400/400 mm | | crates max 600/400/400 mm | | crates max 600/400/400 mm | |
| Capacity- pcs/h* | 80-100 | | 100-140 | | 180-240 | | 260-320 | |
| Filter - band/drum | no/no | | no/no | | no/no | | no/no | |
| Dosing/ventilation | no/no | | no/no | | no/no | | no/no | |
| Pre-washing/air-drying | no/no | | no/no | | no/no | | no/no | |
| Heating- electricity/steam | 14 kW | 3-10 bar,135°C | 14 kW | 3-10 bar,135°C | 22 kW | 3-10 bar,135°C | 22 kW | 3-10 bar,135°C |
| Washing nozzles adjustable | 18/no | | 18/no | | 38/no | | 38/no | |
| Tank Volume | 150 | | 200 | | 300 | | 400 | |
| Pump | 1.5 kW/10 m ³ /h/ 2-2.5 bar | | 2.2 kW/14 m ³ /h/ 3 bar | | 4.0 kW/33 m ³ /h/ 3 bar | | 4.0 kW/33 m ³ /h/ 3 bar | |
| Drive - kW | no | | 0.18 | | 0.25 | | 0.25 | |
| Installed power - kW | 16 | 2 | 17 | 3 | 27 | 5 | 27 | 5 |
| Power supply - electricity/water/steam/ compressed air/drain | 3x400 V,50Hz/water min. 3 bar/3-10 bar,135°C / drain DN50 | | 3x400 V,50Hz/water min. 3 bar/3-10 bar,135°C / drain DN50 | | 3x400 V,50Hz/water min. 3 bar/3-10 bar,135°C / drain DN50 | | 3x400 V,50Hz/water min. 3 bar/3-10 bar,135°C / drain DN50 | |
| Miscellaneous | Manual crates moving | | | | | | Cross crates moving | |

* Machine capacity depending on how dirty the crates are.

Machines for washing, capacity max. 600 crates



WASHING MACHINES FOR CRATES

| Art. No. | 20.0004.00 | 20.1004.00 | 20.0006.00 | 20.1006.00 |
|--|--|----------------|--|----------------|
| Dimensions (L,W,H-mm) | 5395/1050/1620 | | 5395/1300/1670 | |
| Designation | crates max 600/400/400 mm | | crates max 600/400/400 mm | |
| Capacity- pcs/h* | 380-450 | | 520-600 | |
| Filter - band/drum | no/no | | no/no | |
| Dosing/ventilation | no/no | | no/no | |
| Pre-washing/air-drying | yes/no | | yes/no | |
| Heating pre-washing- electricity/steam | 22 kW | 3-10 bar/135°C | 22 kW | 3-10 bar/135°C |
| Heating main washing- electricity/steam | 22 kW | 3-10 bar/135°C | 22 kW | 3-10 bar/135°C |
| Installed power - kW | 53 | 9 | 53 | 9 |
| Washing nozzles pre-wash adjustable | 38/no | | 38/no | |
| Tank Volume pre-wash | 300 | | 400 | |
| Pump pre-wash | 4 kW/33 m ³ /h/ 3 bar | | 4 kW/33 m ³ /h/ 3 bar | |
| Washing nozzles main wash adjustable | 38/no | | 38/no | |
| Tank Volume main wash | 300 | | 400 | |
| Pump main wash | 4 kW/33 m ³ /h/ 3 bar | | 4 kW/33 m ³ /h/ 3 bar | |
| Drive - kW | 0.37 | | 0.37 | |
| Power supply - electricity/water/steam/ compressed air/drain | 3x400 V,50Hz/water min. 3 bar/3-10 bar,135°C / drain DN50 | | 3x400 V,50Hz/water min. 3 bar/3-10 bar,135°C / drain DN50 | |
| Miscellaneous | | | Cross crates moving | |

* Machine capacity depending on how dirty the crates are.

Boxes overturner
25.1100.20



NONSTANDART



20.0002.26 - incoming and outgoing chute – 1200 mm, on wheels



20.1032.25 – crates for fruits , 25 pieces tied



23.1013.00 – boxes and forms



20.1003.00 – nonstandard crates

**Washing machine for plastic crates –
single and packs (25 pcs. crates for berries)**
20.1032.25



WASHING MACHINES FOR CRATES

| Art. No. | 20.0002.26 | 20.0001.11 | 20.7011.00 | 20.0003.00 |
|--|---|--|---|--|
| Dimensions (L,W,H-mm) | 4600/1100/1770 | 2990/1150/1620 | 3085/1110/1720 | 3157/1307/1770 |
| Designation | crates max 600/400/400 mm | crates 480x480x280 mm | boxes – 240 mm height, Ø280; 195 mm,Ø230 | crates max 600/400/400 mm |
| Capacity- pcs/h* | 180-240 | 100-140 | 100-140 | 260-320 |
| Filter - band/drum | no/no | no/no | no/no | no/no |
| Dosing/ventilation | no/no | no/no | no/no | no/no |
| Pre-washing/air-drying | no/no | no/no | no/no | no/no |
| Heating- electricity/steam | 22 kW/no | 22 kW/no | 8.5 kW/no | 22 kW/no |
| Washing nozzles adjustable | 38/no | 16/no | 38/no | 38/no |
| Tank Volume | 300 | 200 | 200 | 400 |
| Pump | 4.0 kW/33 m ³ /h/ 3 bar | 2.2 kW/14 m ³ /h/ 3 bar | 2.2 kW/14 m ³ /h/ 3 bar | 4.0 kW/33 m ³ /h/ 3 bar |
| Drive - kW | 0.25 | 0.18 | 0.18 | 0.25 |
| Installed power - kW | 27 | 25 | 23 | 27 |
| Power supply - electricity/water/steam/ compressed air/drain | 3x400 V,50Hz/water min. 3 bar/ drain DN50 | 3x400 V,50Hz/water min. 3 bar/ drain DN50 | 3x400 V,50Hz/water min. 3 bar/ drain DN50 | 3x400 V,50Hz/water min. 3 bar/ drain DN50 |
| Miscellaneous | chute – 1200 mm, on wheels, without pressure sensor, separate water outlets | nonstandard crates, with two moving chains | for boxes | Without incoming chute , outcoming chute – 900x800 mm, plastic runners |

WASHING MACHINES FOR CRATES

| Art. No. | 20.1032.25 | 20.1003.00 | 23.1013.00 |
|--|---|---|---|
| Dimensions (L,W,H-mm) | 3950/1080/2100 | 3448/1367/1768 | 3445/2200/1620 |
| Designation | crates for fruits , 25 pieces tied | crates – 510/420/150, 530/350/310 mm | boxes max. 300/300/380, forms max. 250/250/150mm |
| Capacity- pcs/h□ | 180-240 | 260-320 | 260-320 |
| Filter - band/drum | no/no | no/no | no/no |
| Dosing/ventilation | yes/yes | no/no | no/no |
| Pre-washing/air-drying | no/no | no/no | no/no |
| Heating- electricity/steam | 18 kW/no | no/3-10 bar/135°C | no/3-10 bar/135°C |
| Washing nozzles adjustable | 38/no | 38/no | 38/no |
| Tank Volume | 300 | 400 | 400 |
| Pump | 4.0 kW/33 m ³ /h/ 3 bar | 4.0 kW/33 m ³ /h/ 3 bar | 4.0 kW/33 m ³ /h/ 3 bar |
| Drive - kW | 0,37 | 0.25 | 0.25 |
| Installed power - kW | 23 | 4.5 | 4.5 |
| Power supply - electricity/water/steam/ compressed air/drain | 3x400 V,50Hz/water min. 3 bar/ drain DN50 | 3x400 V,50Hz/water min. 3 bar/3-10 bar,135°C / drain DN50 | 3x400 V,50Hz/water min. 3 bar/3-10 bar,135°C / drain DN50 |
| Miscellaneous | crates for fruits , 25 pieces tied | nonstandard crates | Empty cheese boxes, cheese forms, pads, leads |



WASHING MACHINE FOR CRATES WITH AIR-DRY MODULE

The pass-through washing machine is designed to clean plastic crates, buckets, boxes etc.

It is made entirely of stainless steel, 1.4301 DIN (AISI 304) grade with permission for contact with food - according to the standard.

The machine is with air-dry and ventilation module (option). Drying is performed by means of high pressure centrifugal valves. Washing is performed by means of a centrifugal pump and adjustable nozzles. The proper cleaning agent is added manually in the feed tank before starting the machine. As an option automatic dosing of the cleaning agent can be provided. Washing is performed with water circulation in closed filtered cycle. For rinsing is used general water supply.

The main tank is equipped with manually cleaned filter (drum filter – option) for catching the bigger soils.

The centrifugal pump is equipped and ensured against working in the dry.

The water (cleaning agent) for washing is heated by means of electric heaters or steam injector.

The desired temperature of the water for washing can be adjusted between 30-60°C via a thermostat.

For the rinsing is used general water supply. The water used during the rinsing process is

Air-drying is fulfilled through nozzles type air knives, supplied by centrifugal fans.

The containers are transported through the various washing zones by a motor driven transport chain. The transport speed can be adjusted on the machine control panel depending on how dirty the respective containers are. The gear motor is equipped with a sliding connector to prevent eventual injuries to the personnel from the transport chain.

The control panel can be mounted either on the left or on the right side of the machine in accordance with the customer requirements.

Options:

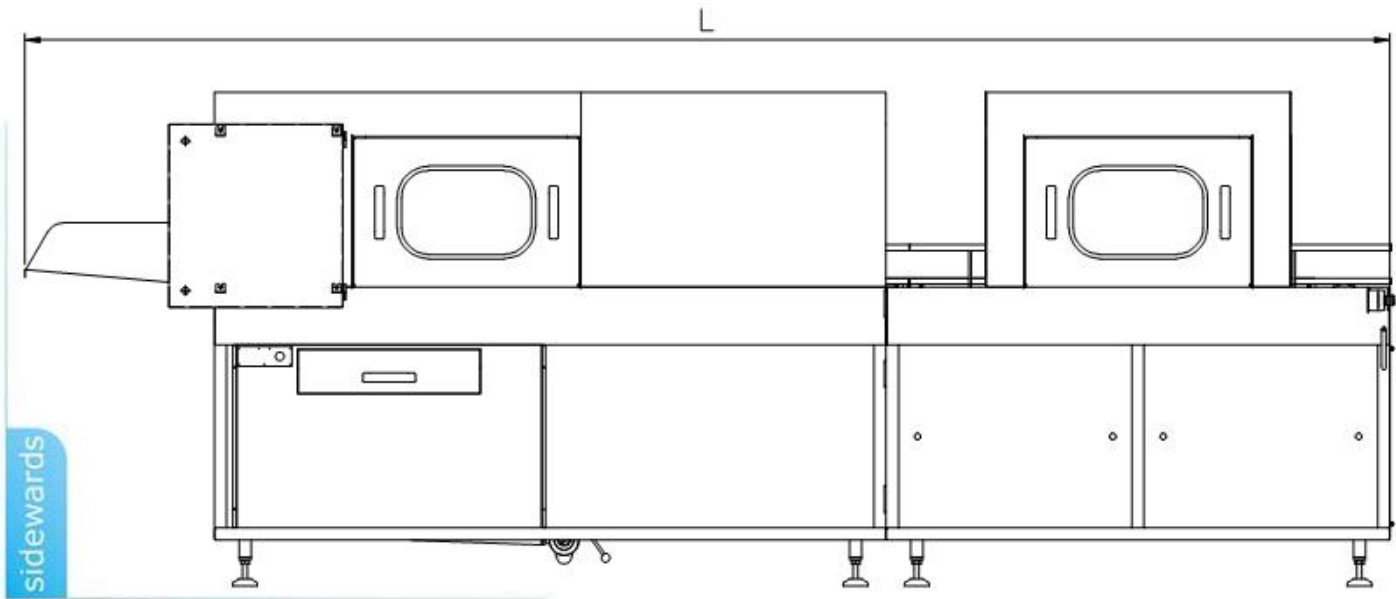
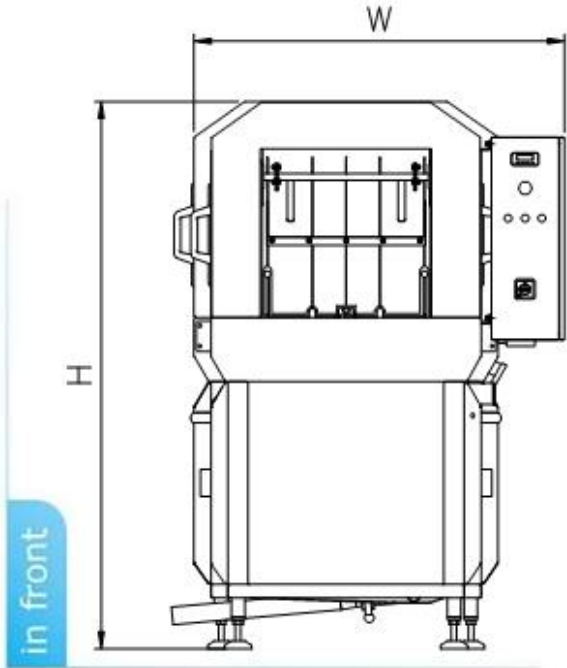
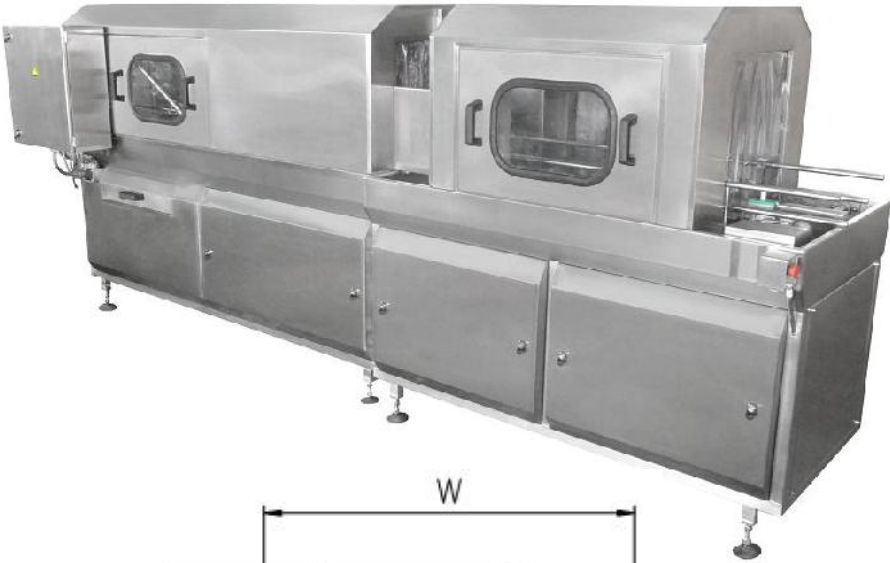
- Automatic system for detergent filling and dosing (with concentration measurement);
- Flange Ø150 for plugging to aspiration;
- Ventilation-flange, fan, control;
- Chemical disinfection - including disinfectant in the rinse;
- Thermal disinfection (additional rinsing section) – hot water 82°C is provided from the customer;
- Safety switches;
- Drum filter in pre-washing.

It is possible non-standard equipment depending on the customers' needs and requirements to be produced.

The machines comply with the

afterwards lead away into the main tank and thus the water inside is constantly refreshed.

Council Directives No. 2006/42/EC and 2006/95/EC and USDA regulations.



WASHING MACHINE FOR CRATES WITH AIR-DRY MODULE

| Art. No. | 20.0202.00 | 20.1202.00 | 20.0203.00 | 20.1203.00 | 20.0204.00 | 20.1204.00 | 20.0206.00 | 20.1206.00 | 20.1316.32 |
|---|---|----------------|---|----------------|---|----------------|---|----------------|---|
| Dimensions (L,W,H-mm) | 4625/1125/1620 | | 4625/1375/1770 | | 6575/1125/1620 | | 6575/1375/1770 | | 6030/1460/1870 |
| Designation | crates max 600/400/400 mm | | crates max 600/400/400 mm | | crates max 600/400/400 mm | | crates max 600/400/400 mm | | crates – 600x400x250, 520x400x140 mm |
| Capacity- pcs/h* | 180-240 | | 260-320 | | 380-450 | | 520-600 | | 520-600 |
| Filter - band/drum | no/no | | no/no | | no/no | | no/no | | no/yes |
| Dosing/ventilation | no/no | | no/no | | no/no | | no/no | | yes/no |
| Pre-washing/air-drying | no/2x2.2 | | no/2x2.2 | | yes/3x2.2 | | yes/3x2.2 | | yes/yes |
| Heating- electricity/steam | 22 kW | 3-10 bar/135°C | 22 kW | 3-10 bar/135°C | 44 kW | 3-10 bar/135°C | 44 kW | 3-10 bar/135°C | no/3-10 bar/135°C |
| Washing nozzles adjustable | 38/no | | 38/no | | 38/no | | 38/no | | 38 |
| Tank Volume | 300 | | 400 | | 300 | | 400 | | 400 |
| Pump | 4.0 kW/33 m³/h/3 bar | | 4.0 kW/33 m³/h/3 bar | | 2x4.0 kW/33 m³/h/3 bar | | 2x4.0 kW/33 m³/h/3 bar | | 2 x 4.0 kW/33 m³/h/3 bar |
| Drive - kW | 0.37 | | 0.37 | | 0.55 | | 0.55 | | 0,37 |
| Installed power - kW | 31 | 8 | 31 | 9 | 60 | 16 | 60 | 16 | 16 |
| Power supply - electricity/water/steam/compressed air/drain | 3x400 V,50Hz/water min. 3 bar/3-10 bar,135°C / drain DN50 | | 3x400 V,50Hz/water min. 3 bar/3-10 bar,135°C / drain DN50 | | 3x400 V,50Hz/water min. 3 bar/3-10 bar,135°C / drain DN50 | | 3x400 V,50Hz/water min. 3 bar/3-10 bar,135°C / drain DN50 | | 3x400 V,50Hz/water min. 3 bar/3-10 bar,135°C / drain DN50 |
| Miscellaneous | | | Cross crates moving | | | | Cross crates moving | | with crates counter, flange |

* Machine capacity depending on how dirty the crates are.



20.0213.00
– for 240 crates

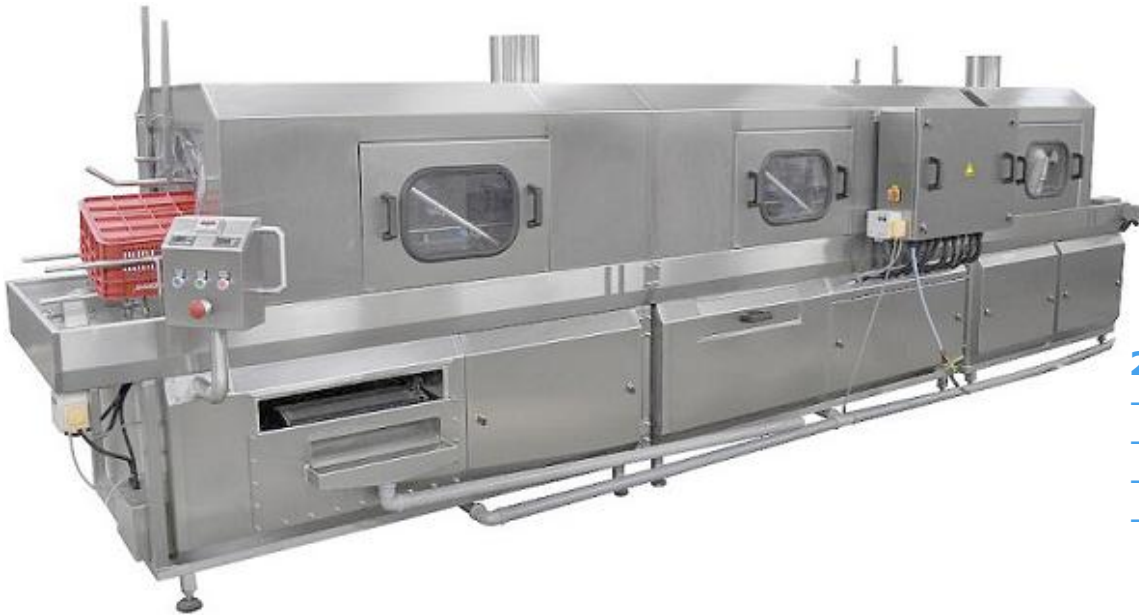


20.0222.00
– for 240 crates
– with ventilation
– metal lateral covers
– safety switches



20.0202.00
– for 240 crates,
– metal lateral covers
– safety switches

20.0206.00
– for 600 crates



20.1316.32
– for 600 crates
– drum filter
– flange
– crates counter

20.0226.00
– for 600 crates
– with ventilation





WASHING MACHINE FOR PLASTIC CRATES WITH TURNING MECHANISM

This is a tunnel type washing machine. It is designated for plastic crates with a min height to 150 mm and max height of 400mm washing.

It is made entirely of stainless steel, 1.4301 DIN (AISI 304) grade with permission for contact with food - according to the standard.

The washing process is performed by means of a centrifugal pump and adjustable nozzles. The proper cleaning agent is added manually in the feed tank before starting the machine. As an option automatic dosing of the cleaning agent can be provided. Washing is performed with water circulation in a closed filtered cycle. General water supply is used for rinsing.

The main tank is equipped with manually cleaned filter for catching the bigger soils. The water (cleaning agent) for washing is heated by means of electric heaters or a steam injector.

The desired water temperature for washing can be adjusted between 30-60°C via a thermostat.

For the rising is used general water supply. The water used during the rinsing process is afterwards led away into the main tank and thus the water inside is constantly refreshed.

The machine is designed for operation by a single operator. The crates are placed on the transport rolls and are pushed to the turning mechanism. Once they reach the washing area, the crates are taken on a transport chain, which transports them through the various areas. The transport speed is smoothly adjustable. The gear motor is equipped with a sliding connector to prevent eventual injuries to the personnel from the transport chain.

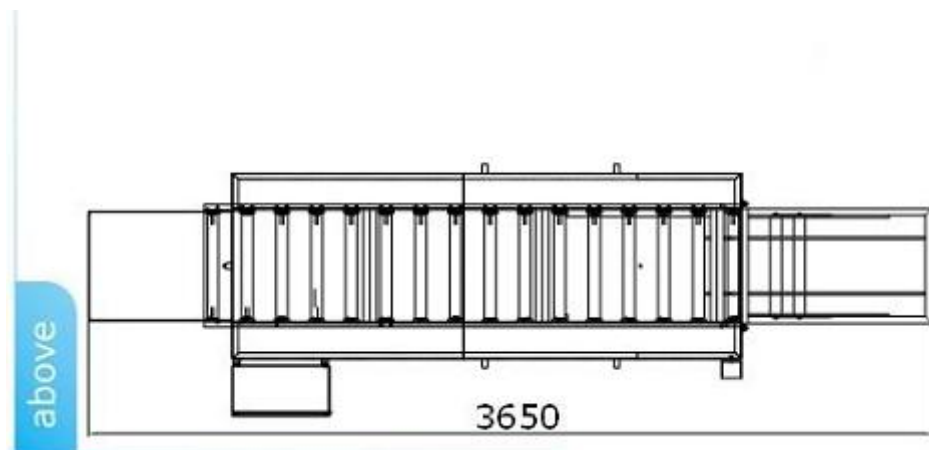
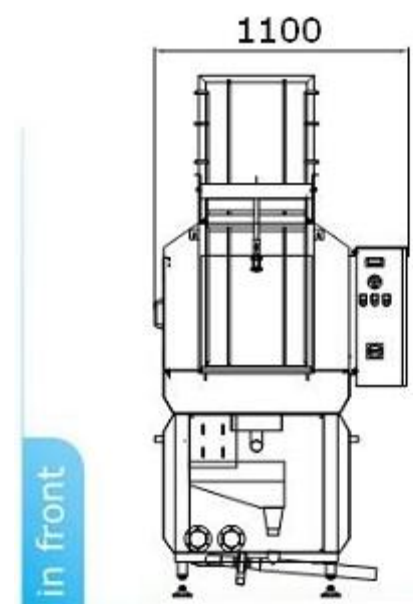
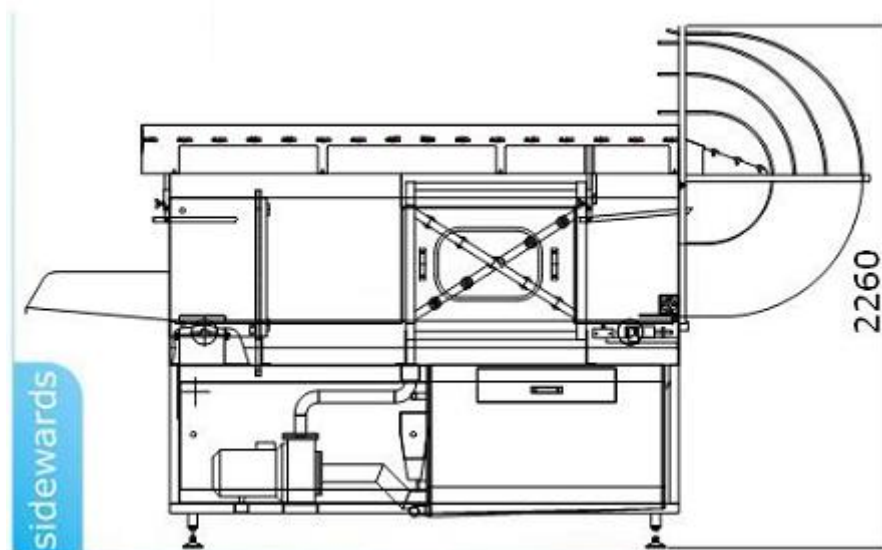
The control panel can be mounted either on the left or on the right side of the machine in accordance with the customer requirements.

Options:

- Automatic system for detergent filling and dosing (with concentration measurement);
- Chemical disinfection - including disinfectant in the rinse;
- Thermal disinfection (additional rinsing section) – hot water 82°C is provided from the customer;
- Safety switches.

It is possible non-standard equipment depending on the customers' needs and requirements to be produced.

The machines comply with the Council Directives No. 2006/42/EC and 2006/95/EC and USDA regulations.



WASHING MACHINE FOR PLASTIC CRATES WITH TURNING MECHANISM

| Art. No. | 20.0001.20 | 20.1001.20 | 20.0002.20 | 20.1002.20 | 20.0002.27 |
|---|--|----------------|--|----------------|---|
| Dimensions (L,W,H-mm) | 3245/1050/2260 | | 3650/1050/2260 | | 3165/1065/2335 |
| Designation | crates max 600/400/400 mm | | crates max 600/400/400 mm | | crates max. 490/690/210 mm |
| Capacity- pcs/h* | 100-140 | | 180-240 | | 180-240 |
| Filter - band/drum | no/no | | no/no | | no/no |
| Dosing/ventilation | no/no | | no/no | | yes/no |
| Pre-washing/air-drying | no/no | | no/no | | no/no |
| Heating- electricity/steam | 14 kW | 3-10 bar/135°C | 22 kW | 3-10 bar/135°C | 2x8 |
| Washing nozzles adjustable | 18/no | | 38/no | | 38/no |
| Tank Volume | 200 | | 300 | | 300 |
| Pump | 2.2 kW / 14 m ³ /h / 3 bar | | 4 kW / 33 m ³ /h / 3 bar | | 4 kW / 33 m ³ /h / 3 bar |
| Drive - kW | 0.18 | | 0.25 | | 0.25 |
| Installed power - kW | 17 | 3 | 27 | 5 | 21,5 |
| Power supply - electricity/water/steam/compressed air/drain | 3x400 V,50Hz/water min. 3 bar/3-10 bar,135°C / drain DN50 | | 3x400 V,50Hz/water min. 3 bar/3-10 bar,135°C / drain DN50 | | 3x400 V,50Hz/water min. 3 bar/drain DN50 |
| Miscellaneous | Roller conveyor for feeding the soiled crates with a turning mechanism | | Roller conveyor for feeding the soiled crates with a turning mechanism | | on wheels; control panel - wall fixation; two-stage heating - 8 and 16 kW |

* Machine capacity depending on how dirty the crates are.

20.0001.20
– for 140 crates



20.0001.20
– with metal side lids



20.0002.20
– for 240 crates



20.0002.27
– for 240 crates
– on wheels
– control panel – wall fixation
– two-stage heating





TWO-ROW WASHING MACHINE

The washing machine is pass-through, with two rows, designed to clean plastic crates, buckets, boxes etc.

It is made entirely of stainless steel, 1.4301 DIN (AISI 304) grade with permission for contact with food - according to the standard.

The washing is performed by means of a centrifugal pump and adjustable nozzles. The proper cleaning agent is added manually in the feed tank before starting the machine. As an option automatic dosing of the cleaning agent can be provided. Washing is performed with water circulation in a closed filtered cycle.

The tank is equipped with manually cleaned filter (drum filter – option) for catching the bigger soils. The water (cleaning agent) for washing is heated by means of electric heaters or a steam injector. The desired water temperature for washing can be adjusted between 30-60°C via a thermostat.

For the rinsing is used general water supply. The water used during the rinsing process is afterwards led away into the main tank and thus the water inside is constantly refreshed.

The crates are transported in two parallel tunnels by a motor driven transport chain. The transport speed is smoothly adjustable. The gear motor is equipped with a sliding connector to prevent eventual injuries to the personnel from the transport chain.

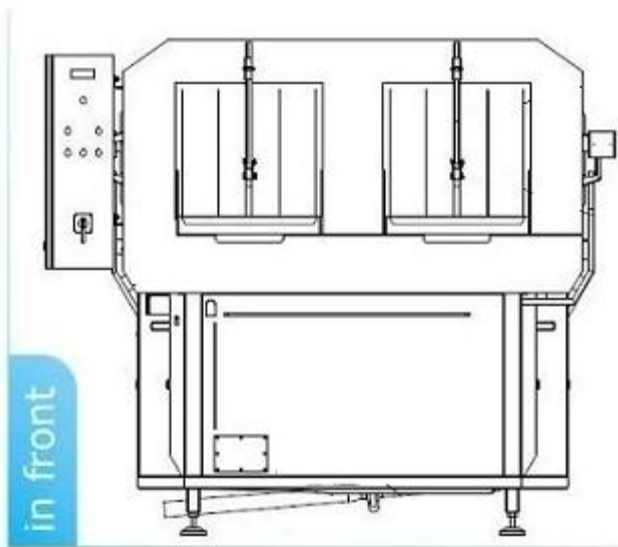
The control panel can be mounted either on the left or on the right side of the machine in accordance with the customer requirements.

Options:

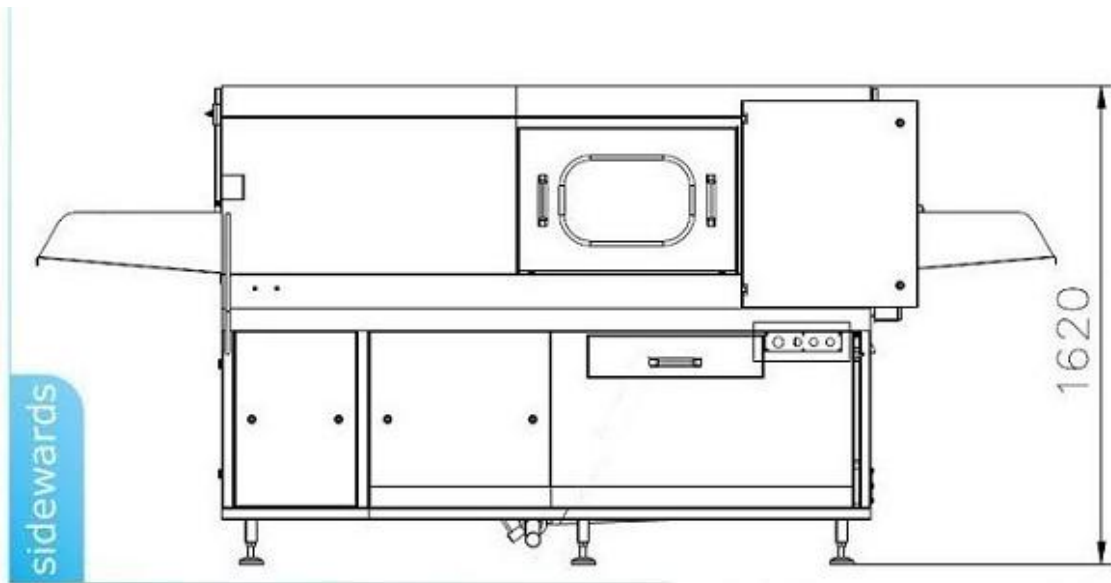
- Automatic system for detergent filling and dosing (with concentration measurement);
- Flange Ø150 for plugging to aspiration;
- Ventilation-flange, fan, control;
- Chemical disinfection - including disinfectant in the rinse;
- Thermal disinfection (additional rinsing section) – hot water 82°C is provided from the customer;
- Safety switches;
- Drum filter in pre-washing.

It is possible non-standard equipment depending on the customers' needs and requirements to be produced.

The machines comply with the Council Directives No. 2006/42/EC and 2006/95/EC and USDA regulations.

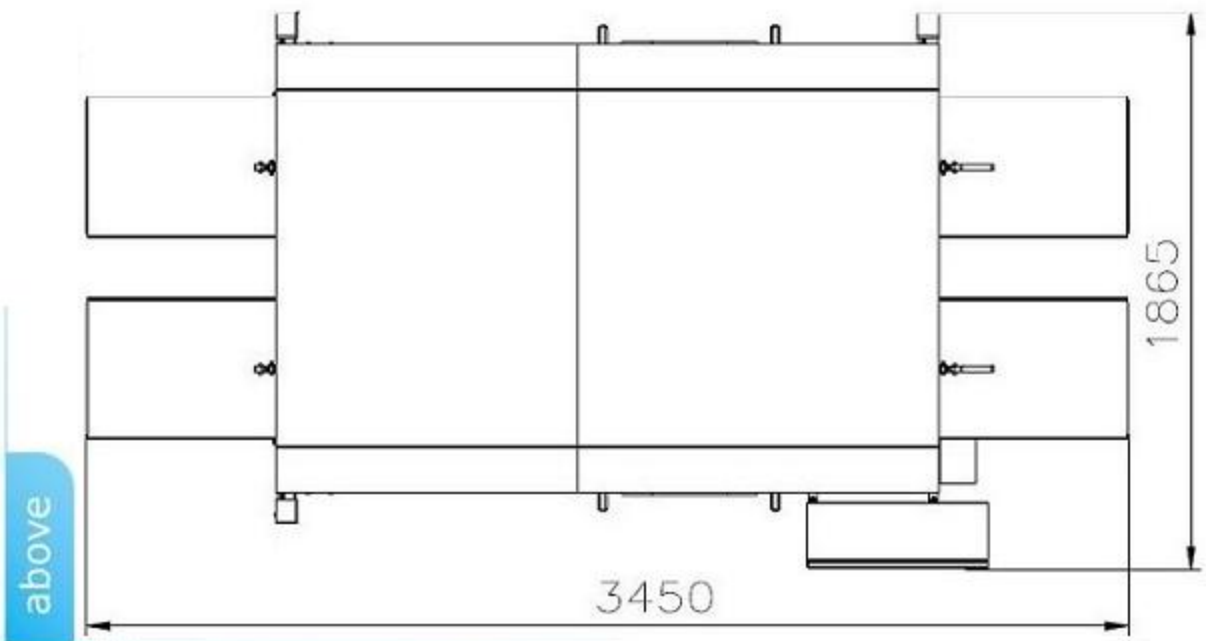


in front



sidewards

1620



above

3450

1865

TWO-ROW WASHING MACHINE

| Art. No. | 20.0009.22 | 20.1009.22 | 20.0159.22 | 20.1159.22 | 20.0159.23 | 20.1159.23 |
|--|---|----------------|---|-------------------|--|-------------------|
| Dimensions (L,W,H-mm) | 3450/1865/1620 | | 5400/1945/1675 | | 5400/1945/1675 | |
| Designation | crates max 600/400/400 mm | | crates max 600/400/400 mm | | crates max 600/400/400 mm | |
| Capacity- pcs/h* | max. 800 | | max. 1150 | | max. 1150 | |
| Filter - band/drum | no/no | | no/yes | | no/yes | |
| Dosing/ventilation | no/no | | yes/no | | yes/no | |
| Pre-washing/air-drying | no/no | | yes/no | | yes/no | |
| Heating pre-washing- electricity/steam | no | no | 3x11 | 3-10 bar/135°C | 3x11 | 3-10 bar/135°C |
| Heating main washing- electricity/steam | 4x11 kW | 3-10 bar/135°C | 4x11 | 3-10 bar/135°C | 4x11 | 3-10 bar/135°C |
| Installed power - kW | 53 | 10 | 92 | 15 | 92 | 15 |
| Washing nozzles pre-wash adjustable | no/no | | 2x76/no | | 2x76/no | |
| Tank Volume pre-wash | no | | 400 | | 400 | |
| Pump pre-wash | no | | 5.5 kW/48 m ³ /h/ 2,5 bar | | 5.5 kW/40 m ³ /h/ 3 bar | |
| Washing nozzles main wash adjustable | 2x38/no | | 2x76/no | | 2x76/no | |
| Tank Volume main wash | 400 | | 400 | | 400 | |
| Pump main wash | 7.5 kW/54 m ³ /h/ 3 bar | | 7.5 kW/54 m ³ /h/ 3 bar | | 7.5 kW/60 m ³ /h/ 4 bar | |
| Drive - kW | 2x0.37 | | 0,75 | | 0,55 | |
| Power supply - electricity/water/steam/ compressed air/drain | 3x400 V,50Hz/water min. 3 bar/3-10 bar,135°C / drain DN50 | | 3x400 V,50Hz/water min. 3 bar/3-10 bar,135°C / drain DN50 | | 3x400 V,50Hz/water min. 3 bar/3-10 bar,135°C / drain DN50 | |
| Miscellaneous | | | | | with additional hatch for cleaning the drum filter, signal lamp, additional channels, common pre-wash and washing water channels, water transfer from the washing tank to the pre-wash | |

* Machine capacity depending on how dirty the crates are.



20.0009.22

- with automatic system for detergent filling and dosing

- 20.0159.22**
- with automatic system for detergent filling and dosing
 - drum filter



20.0159.23

- with dosing system
- drum filter
- additional hatch for cleaning the drum filter
- safety switches on the side lids
- signal lamp
- additional channels, common pre-wash and washing water channels
- water transfer from the washing tank to the pre-wash





WASHING MACHINES FOR CRATES AND PALLETS

The pass-through washing machine is designed to clean E1-E3 plastic crates and H1 Pallets. It is made entirely of stainless steel, 1.4301 DIN (AISI 304) grade with permission for contact with food - according to the standard.

The machine consists of an input transporter, a washing and rinsing section, air-blasting and an output, passive transporter.

The washing is performed by means of a centrifugal pump and adjustable nozzles. The automatic dosing of the cleaning agent is standard integrated. Washing is performed with water circulation in a closed filtered cycle. General water supply is used for rinsing.

The tank is equipped with manually cleaned filter (drum filter – option) for catching the bigger soils. The water (cleaning agent) for washing is heated by means of electric heaters or a steam injector. The desired water temperature for washing can be adjusted between 30-60oC via a thermostat.

For the rinsing is used general water supply. The water used during the rinsing process is afterwards led away into the main tank and thus the water inside is constantly refreshed.

The air-blasting is performed by nozzles of the air-blade type, supplied by centrifugal fans.

The crates are transported, placed transversely with their bottoms up. The pallets – lengthwise (if necessary, special devices are installed on the pallets), with the platform facing down. The transport speed is smoothly adjustable. The gear motor is equipped with a sliding connector to prevent eventual injuries to the personnel from the transport chain.

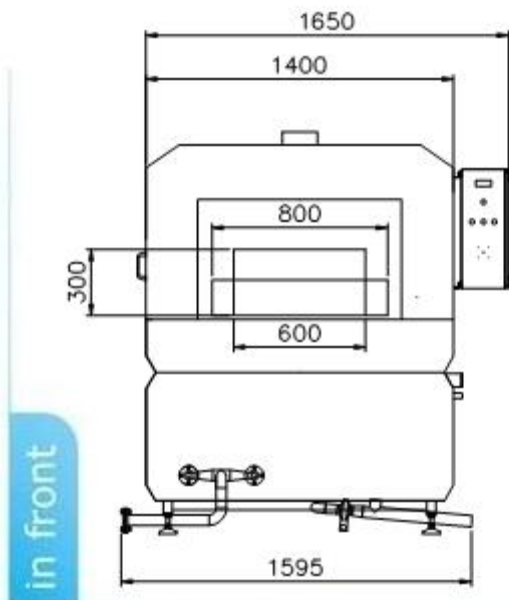
The control panel can be mounted either on the left or on the right side of the machine in accordance with the customer requirements.

Options:

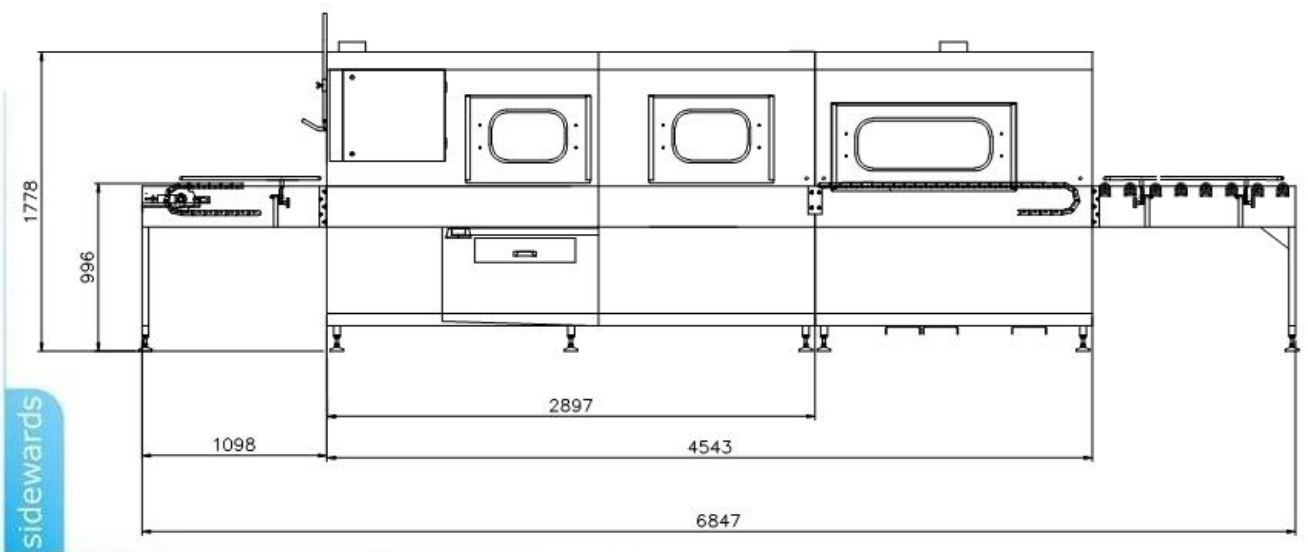
- Flange Ø150 for plugging to aspiration;
- Ventilation-flange, fan, control;
- Chemical disinfection - including disinfectant in the rinse;
- Thermal disinfection (additional rinsing section) – hot water 82°C is provided from the customer;
- Safety switches;
- Drum filter in pre-washing.

It is possible non-standard equipment depending on the customers` needs and requirements to be produced.

The machines comply with the Council Directives No. 2006/42/EC and 2006/95/EC and USDA regulations.



in front



sidewards

WASHING MACHINES FOR CRATES AND PALLETS

| Art. No. | 20.2011.02 | 20.3011.02 | 20.2211.02 | 20.3211.02 | 20.2211.00 | 20.3211.00 |
|--|---|----------------|---|----------------|---|----------------|
| Dimensions (L,W,H-mm) | 5225/1630/1776 | | 6900/1630/1776 | | 8050/1630/1776 | |
| Designation | crates max. 600/400/400 mm; pallets 1200/800/160 mm | | crates max. 600/400/400 mm; pallets 1200/800/160 mm | | crates max. 600/400/400 mm; pallets 1200/800/160 mm | |
| Capacity- pcs/h* | crates max. 380, paletts max. 160 | | crates max. 380, paletts max. 160 | | crates max. 380, paletts max. 160 | |
| Filter - band/drum | no/no | | no/no | | no/no | |
| Dosing/ventilation | yes/no | | yes/no | | yes/no | |
| Pre-washing/air-drying | no/no | | no/3x2.2 kW | | no/3x2.2 kW | |
| Heating- electricity/steam | 33 kW | 3-10 bar/135°C | 33 kW | 3-10 bar/135°C | 33 kW | 3-10 bar/135°C |
| Washing nozzles adjustable | 38/no | | 38/no | | 38/no | |
| Tank volume | 400 | | 400 | | 400 | |
| Pump | 7.5 kW/60 m ³ /h/ 3-4 bar | | 7.5 kW/60 m ³ /h/ 3-4 bar | | 7.5 kW/60 m ³ /h/ 3-4 bar | |
| Drive - kW | 0.55 | | 0.55 | | 0.55 | |
| Installed power - kW | 42 | 11 | 48 | 17 | 48 | 17 |
| Power supply - electricity/water/steam/ compressed air/drain | 3x400 V,50Hz/water min. 3 bar/3-10 bar,135°C / drain DN50 | | 3x400 V,50Hz/water min. 3 bar/3- 10 bar,135°C / drain DN50 | | 3x400 V,50Hz/water min. 3 bar/3- 10 bar,135°C / drain DN50 | |
| Miscellaneous | input and output transporter | | input and output transporter | | Input, intermediate and output transporter | |

* Machine capacity depending on how dirty the crates are.

20.2212.00
– with input,
intermediate and
output transporter



20.2211.02
– with input and
output transporter





WASHING MACHINE FOR 200L BUGGIES FIRST MODEL 21.0330.00 and 21.1330.00

The machines are designated for washing of 200l buggies (DIN 9797).

It is made entirely of stainless steel, 1.4301 DIN (AISI 304) grade with permission for contact with food - according to the standard.

They are manufactured with steam or electrical heating of the washing detergent into the tank.

The washing process is performed by water circulation in a closed filtered cycle. General water supply is used for rinsing. There are added stationary nozzles for further washing of the buggy's bottom and wheels.

When safety fence is closed and "START" button pushed loading and unloading processes are automatic (using hydraulic driven door)

Standard equipment:

- Automatic dosing system for detergent dosing with measurement of the concentration
- Continuously working band filter for constant separating and removing of insoluble dregs
- Automatic ventilation system
- Entirely computerized control SIEMENS SIMATIC controller
- Safety fence

Like option, the machine can be manufactured dual (for washing of two buggies simultaneously).

The machine complies with the Council Directives No. 2006/42/EC and 2006/95/EC and USDA regulations.



WASHING MACHINES FOR 200l BUGGIES FIRST MODEL

| Art. No. | 21.0330.00 | 21.1330.00 | 21.0111.00 | 21.1111.00 |
|--|---|---|---|---|
| Dimensions(L,W,H-mm) | 1510/2178/2456 | 1510/2178/2456 | 1510/2178/2456 | 1510/2178/2456 |
| Designation | 200l buggies | 200l buggies | 200l buggies | 200l buggies |
| Capacity- pcs/h* | 15-20 | 15-20 | 15-20 | 15-20 |
| Execution-single/double | single | single | single | single |
| Filter - band/drum | yes/no | yes/no | no/no | no/no |
| Dosing/ventilation | yes/yes | yes/yes | yes/no | yes/no |
| Pre-washing/air-drying | no/no | no/no | no/no | no/no |
| Heating- electricity/steam | 33 kW/no | no/3-10 bar | 33 kW/no | no/3-10 bar |
| Pump | 7,5 kW/62 m ³ /h 3-4 bar | 7,5 kW/62 m ³ /h 3-4 bar | 7,5 kW/62 m ³ /h 3-4 bar | 7,5 kW/62 m ³ /h 3-4 bar |
| Installed power - kW | 42 | 9 | 42 | 9 |
| Power supply - electricity/water/steam/co mpressed air/drain | 3x400 V/50Hz Water min. 3 bar, drain DN50 | 3x400 V,50Hz/water min. 3 bar/3-10 bar,135°C / drain DN50 | 3x400 V/50Hz Water min. 3 bar, drain DN50 | 3x400 V,50Hz/water min. 3 bar/3-10 bar,135°C / drain DN50 |
| Miscellaneous | 1st model- hydraulic loading | 1st model- hydraulic loading | 1st model- hydraulic loading | 1st model- hydraulic loading |

* Machine capacity depending on how dirty the crates are.



WASHING MACHINE FOR 200l BUGGIES NEW MODEL

21.0120.00, 21.1120.00 and 21.8330.00

The machine is designated for washing of 200 ltr. buggies (DIN 9797).

It is made entirely of stainless steel type DIN 1.4301 (AISI 304) grade with permission for contact with food - according to the standard.

The continuously working band filter and dosing system (with concentrate measurement) for washing liquid are options!

Loading and unloading processes are manual. The washing process begins when the buggy is loaded, the door is closed manually and the "Start" button is pressed. The buggy is washed by means of a stainless steel pump and combination of rotating frame with nozzles (for inside washing) and fixed collectors with nozzles (for outside washing). Buggy's bottom is also washed with special mounted collectors. Water (washing liquid) circulates in closed filtered cycle.

The water (cleaning agent) for washing is heated by means of electric heaters or a steam injector or mixed. Rinsing is done by fresh water from the set. There is combination of spraying heads and fixed collectors with nozzles for rinsing.

The control panel for loading/unloading and electrical control box can be mounted on the left or right side of the machine (according to the customer's requirements), but has to be on the same side.

Additional advantages in the new model:

- better washing and draining
- time for washing and washing detergent quantity per hour are decreased
- increased number of washed buggies per hour
- buggy gripping is better
- smaller size of the machine (overall dimensions)
- electrical engine with reduction gear instead of hydraulic driving
- electrical consumption is decreased
- left or right side opening of the door
- machine is more safety

Options:

- Automatic system for detergent filling and dosing (with concentration measurement);
- Continuously working band filter for constant separating and removing of insoluble dregs;
- Continuously working drum filter for constant separating and removing of insoluble dregs.

Like option, the machine can be manufactured dual (for washing of two buggies simultaneously).

The machine complies with the Council Directives No. 2006/42/EC and 2006/95/EC and USDA regulations.

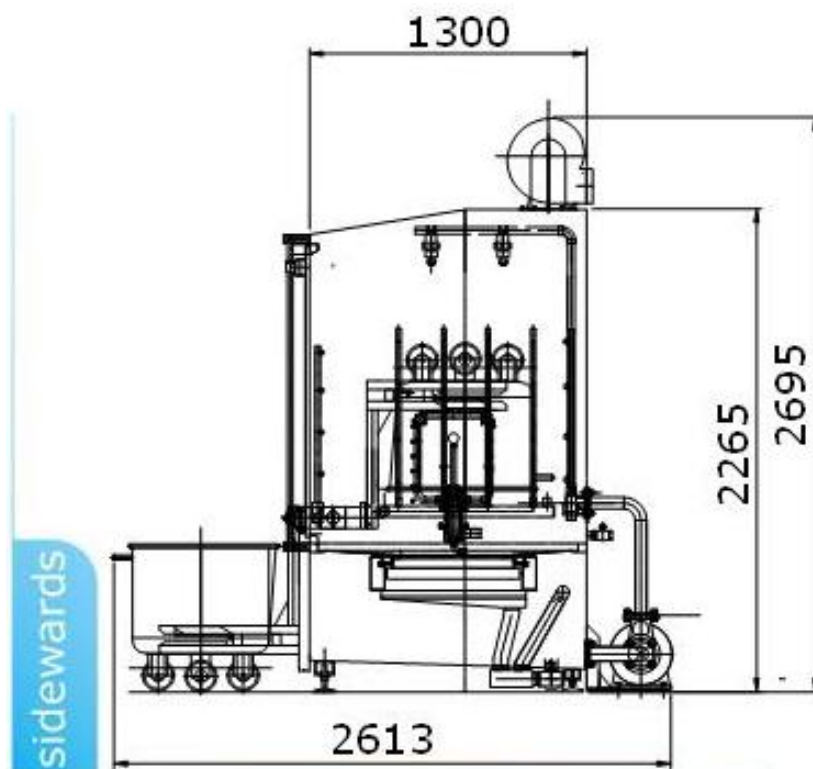
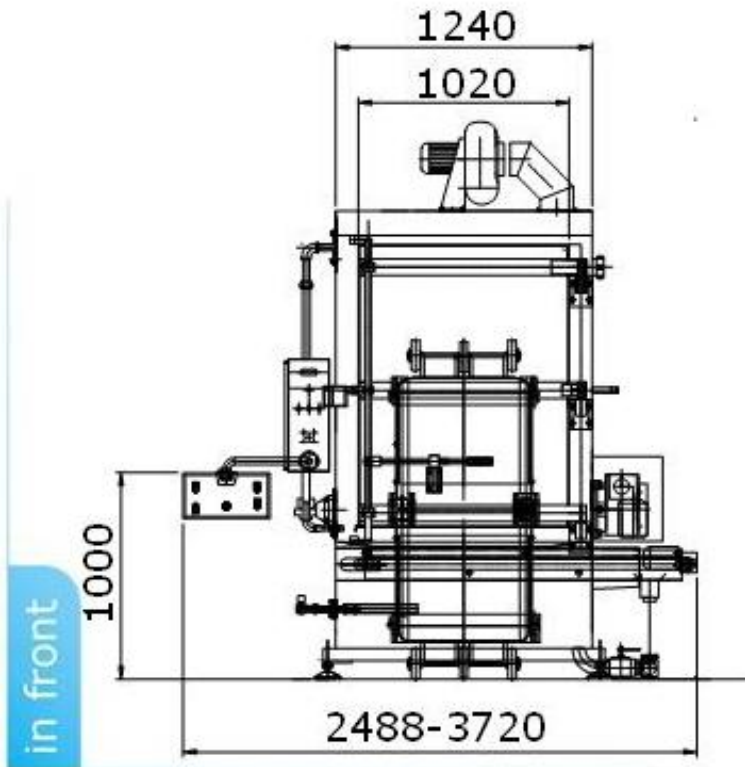


Technical data:

| | | |
|-------------------------------|-----------------------|----------------|
| Capacity | | |
| -trolleys | pcs/h | max. 30 |
| Tank capacity | l | 600 |
| Heating steam | Bar/ °C | Steam 3-10/135 |
| Total installed power steam | kW | 9 |
| Heating electro | kW | 33 |
| Total installed power electro | kW | 42 |
| Supply voltage | V/Ph/Hz | 400/3/50 |
| Level of protection | IP | 65 |
| Pump capacity/ pressure | m ³ /h/bar | 62/3-4 |
| Pump motor power | kW | 7.5 |
| Loading/unloading motor power | kW | 0.55 |
| Water outlet orifice | | 2" |
| Pressure of inlet water | bar | 3-8 |
| Weight | kg | 1200 |

Dimensions:

| | | |
|-----------------------------|----|-----------|
| Length in working condition | mm | 1980 |
| Length with loading unit | mm | 2613 |
| Width | mm | 2488-3720 |
| Height without fan | mm | 2265 |
| Height with fan | mm | 2695 |



WASHING MACHINES FOR 200l BUGGIES NEW MODEL

| Art. No. | 21.0120.00 | 21.1120.00 | 21.8120.00 |
|--|---|--|--|
| Dimensions(L,W,H-mm) | 2613/2488/2695 | 2613/2488/2695 | 2613/2488/2695 |
| Designation | 200l buggies | 200l buggies | 200l buggies |
| Capacity- pcs/h* | 25-30 | 25-30 | 25-30 |
| Execution-single/double | single | single | single |
| Filter - band/drum | no/no | no/no | no/no |
| Dosing/ventilation | no/yes | no/yes | no/yes |
| Pre-washing/air-drying | no/no | no/no | no/no |
| Heating- electricity/steam | 33 kW/no | no/3-10 bar | 33 kW/3-10 bar |
| Pump | 7,5 kW/62 m ³ /h 3-4 bar | 7,5 kW/62 m ³ /h 3-4 bar | 7,5 kW/62 m ³ /h 3-4 bar |
| Installed power - kW | 42 | 9 | 42 |
| Power supply - electricity/water/steam/co mpressed air/drain | 3x400 V/50Hz Water min. 2 bar, drain DN50 | 3x400 V/50Hz Water min. 2 bar, drain DN50, steam 3-10 bar/135°C | 3x400 V/50Hz Water min. 2 bar, drain DN50, steam 3-10 bar/135°C |
| Miscellaneous | manual controlled (electrical driven) loading/unloading | manual controlled (electrical driven) loading/unloading | manual controlled (electrical driven) loading/unloading |

* Machine capacity can be regulated



WASHING MACHINE FOR 200l BUGGIES AND STANDARD CONTAINERS 21.6120.00 and 21.7120.00

The machine is designated for washing of 200 ltr. buggies (DIN 9797) and standard containers (up to 1200x1 000x800 mm).

It is made entirely of stainless steel type DIN 1.4301 (AISI 304) grade with permission for contact with food - according to the standard.

21.6120.00 – electrical heating, automatic ventilation system

21.7120.00 – steam heating, automatic ventilation system

The continuously working band filter and dosing system (with concentrate measurement) for washing liquid are options!

Loading and unloading processes are manual.

The washing process begins when the buggy/container is loaded, the door is closed manually and the "Start" button is pressed.

The buggy or container are washed by means of a stainless steel pump and combination of rotating frame with nozzles (for inside washing) and fixed collectors with nozzles (for outside washing).

Buggy's/container's bottom is also washed with special mounted collectors. Water (washing liquid) circulates in closed filtered cycle.

Rinsing is done by fresh water from the set. There is combination of springing heads and fixed collectors with nozzles for rinsing.

The control panel for loading/unloading and electrical control box can be mounted on the left or right side of the machine (according to the customer's requirements), but has to be on the same side.

Like option, the machine can be manufactured dual (for washing of two buggies/containers simultaneously).

Options:

- Automatic system for detergent filling and dosing (with concentration measurement);
- Band filter with continuous operation, for the catchment and removal of solids;
- Drum filter with continuous operation, for the catchment and removal of solids.

Like option, the machine can be manufactured dual (for washing of two buggies/containers simultaneously).

The machine complies with the Council Directives No. 2006/42/EC and 2006/95/EC and USDA regulations.

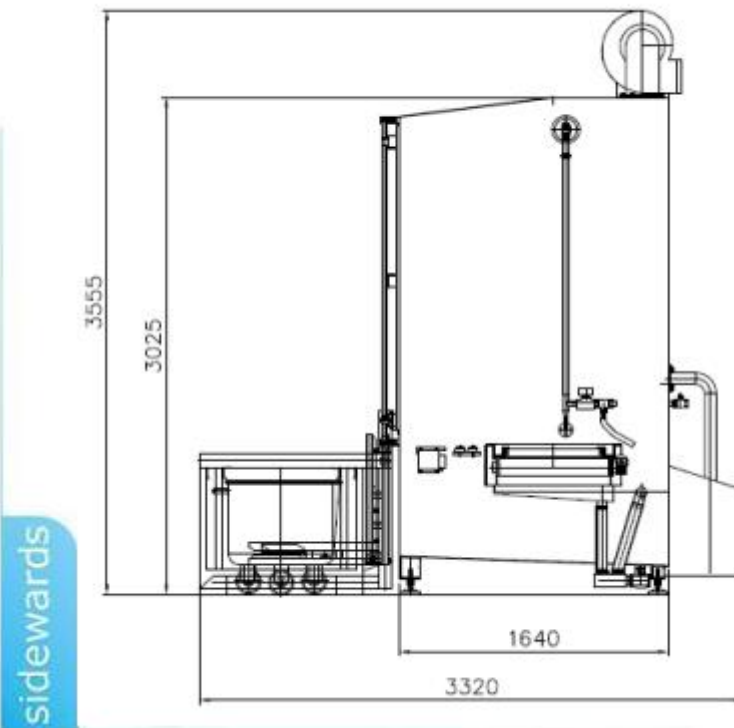
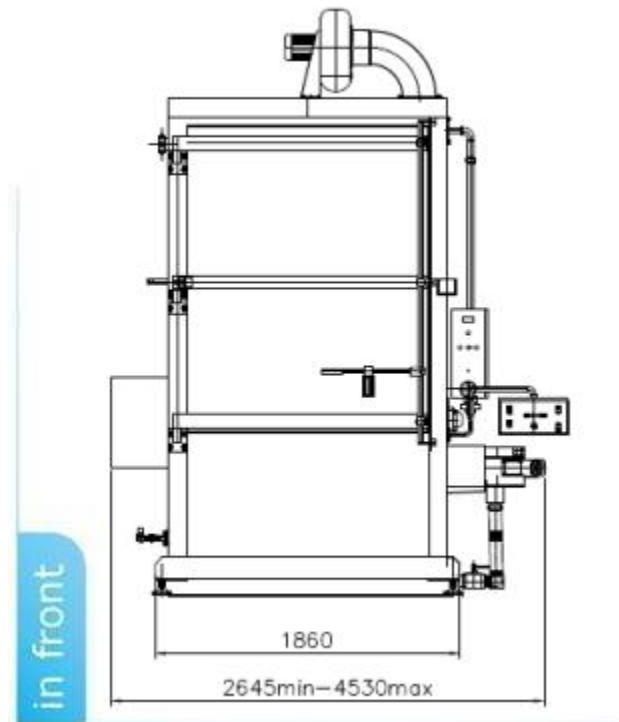


Technical data:

| | | |
|-------------------------------|-----------------------|----------------|
| Capacity | | |
| -buggies | pcs/h | max. 30 |
| -containers | pcs/h | max. 25 |
| Tank capacity | l | 1100 |
| Heating steam | Bar/ °C | Steam 3-10/135 |
| Total installed power steam | kW | 12 |
| Heating electro | kW | 66 |
| Total installed power electro | kW | 78 |
| Supply voltage | V/Ph/Hz | 400/3/50 |
| Level of protection | IP | 65 |
| Pump capacity/ pressure | m ³ /h/bar | 90/3-4 |
| Pump motor power | kW | 11 |
| Loading/unloading motor power | kW | 0.55 |
| Water outlet orifice | | 2" |
| Pressure of inlet water | bar | 3-8 |

Dimensions:

| | | |
|-----------------------------|----|-----------|
| Length in working condition | mm | 2200 |
| Length with loading unit | mm | 3318 |
| Width | mm | 2644-4530 |
| Height without fan | mm | 3025 |
| Height with fan | mm | 3548 |
| Weight | kg | 1450 |



WASHING MACHINES FOR 200l BUGGIES AND STANDARD CONTAINERS

| Art. No. | 21.6120.00 | 21.7120.00 |
|---|---|--|
| Dimensions(L,W,H-mm) | 3318/2644/3548 | 3318/2644/3548 |
| Designation | 200l buggies / standard containers | 200l buggies / standard containers |
| Capacity- pcs/h* | max 30/max 25 | max 30/max 25 |
| Execution-single/double | single | single |
| Filter - band/drum | no/no | no/no |
| Dosing/ventilation | no/yes | no/yes |
| Pre-washing/air-drying | no/no | no/no |
| Heating- electricity/steam | 66 kW/no | no/3-10 bar |
| Pump | 11 kW/90 m ³ /h / 3-4 bar | 11 kW/90 m ³ /h / 3-4 bar |
| Installed power - kW | 78 | 12 |
| Power supply - electricity/water/steam/compressed air/drain | 3x400 V/50Hz Water min. 2 bar, drain DN50 | 3x400 V/50Hz Water min. 2 bar, drain DN 50, steam 3-10 bar/135°C |
| Miscellaneous | manual controlled (electrical driven) loading/unloading | manual controlled (electrical driven) loading/unloading |

* Machine capacity can be regulated



WASHING MACHINE FOR SMOKING TROLLEYS

21.4120.00 and 21.5120.00

The machine is designated for washing of smoking trolleys standard. It is made entirely of stainless steel type DIN 1.4301 (AISI 304) grade with permission for contact with food - according to the standard.

The automatic dosing system (with concentrate measurement) for washing liquid is an option!

Loading and unloading processes are manual. . Electromagnetic interlock, preventing the opening of the doors, during the washing process. Before starting the washing process, the trolleys are steamed, by introducing steam in the working area (in a steam heating mode).

The washing process is performed by water circulation in a closed filtered cycle incl. a suitable detergent. General water supply is used for rinsing.

The duration of the washing and rinsing programmes is adjusted by the operator, depending on how dirty the trolleys are.

Machine control is entirely computerized-SIEMENS SIMATIC controller.

The automatic ventilation system is a standard feature.

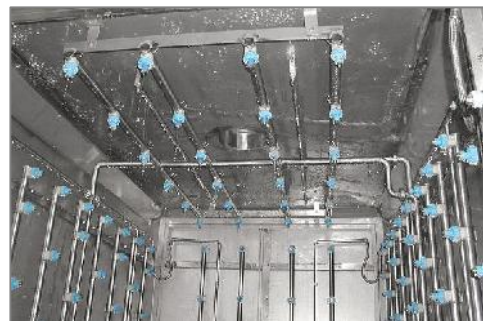
The machine tank is dug into the ground.

Options:

- Automatic system for detergent filling and dosing (with concentration measurement).

Like option, the machine can be manufactured dual (for washing of two trolleys simultaneously) and pass-through (with second door on the back side).

The machine complies with the Council Directives No. 2006/42/EC and 2006/95/EC and USDA regulations.

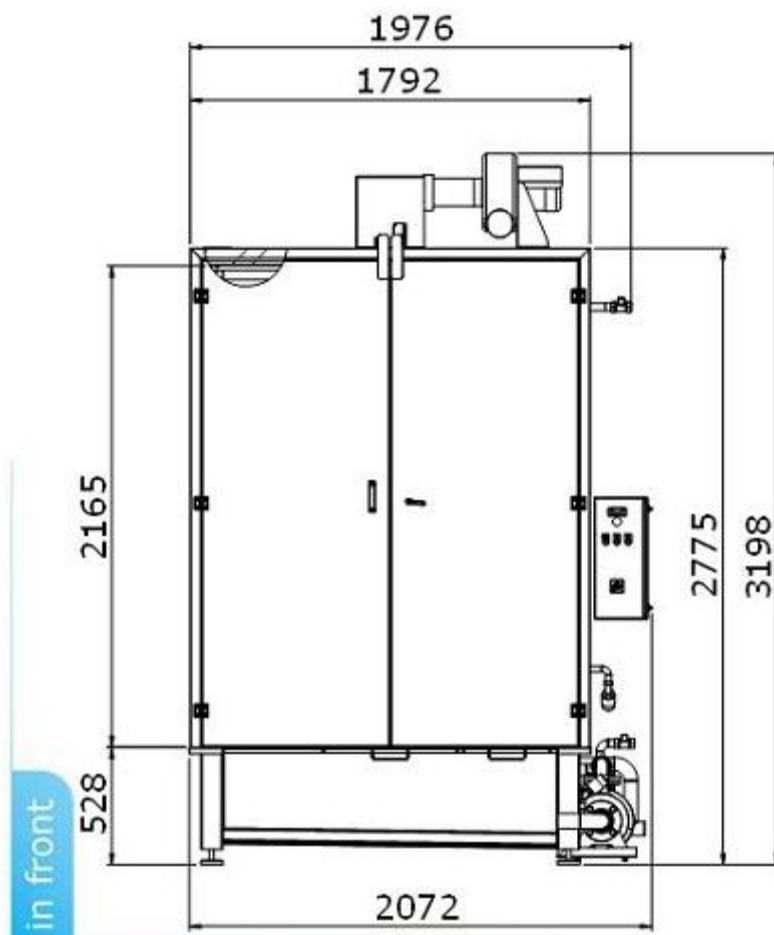
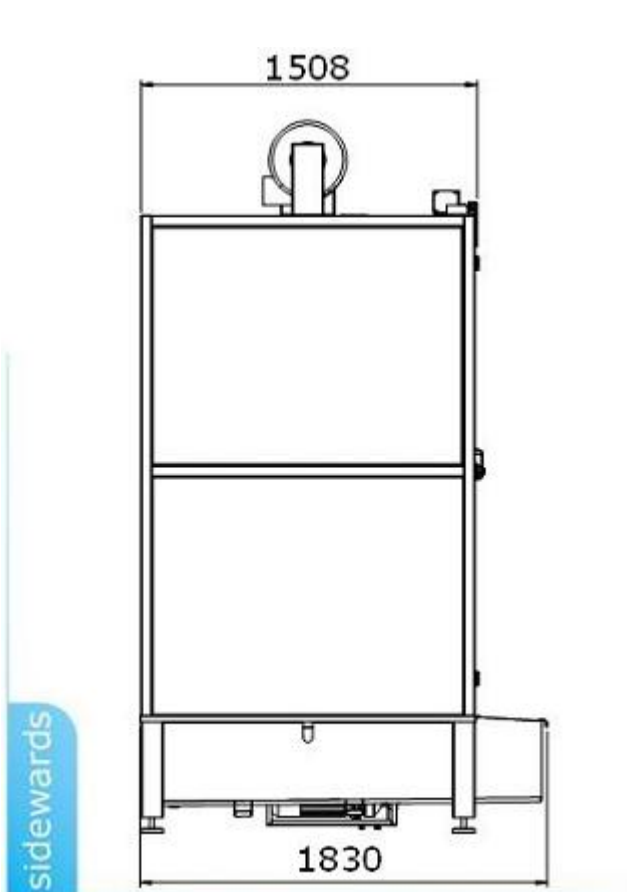


21.4120.00



21.5120.00





Technical data:

| | | |
|--|-------------------|-----------------------------------|
| Capacity | trolleys/ hour | 20 |
| Power supply | V / Hz / P | 400 / 50 / 3 |
| Installed power | | |
| -steam | kW | 8 |
| -electricity | kW | 41 |
| Water temperature for the main washing | °C | 20-65 |
| Water supply | R " | 1 |
| Water pipeline pressure | bar | 3 |
| Outlet orifice for waste water | R " | 2 |
| Water tank capacity(with overflow) | l | ~400 |
| Pump capacity | m ³ /h | 62 |
| Pump pressure | bar | 3-4 |
| Pump motor power | kW | 7.5 |
| Level of protection for motor | IP | 55 |
| SIEMENS control unit | | |
| Level of protection | IP | 65 |
| Air inlet valve | | |
| Steam inlet pressure | bar | min. 2 - max. 12 (max. 130 °C) |
| Heaters power | kW | 33 |
| Weight | kg | ~1250 |

Dimensions:

| | | |
|----------------------------------|----|------|
| Full length | mm | 2093 |
| Full width | mm | 1830 |
| Height (over the floor) with fan | mm | 3200 |

WASHING MACHINES FOR SMOKING TROLLEYS 21.4120.00 and 21.5120.00

| Art. No. | 21.4120.00 | 21.5120.00 |
|---|---|--|
| Dimensions(L,W,H-mm) | 2093/1830/3200 | 2093/1830/3200 |
| Designation | smoking trolley | smoking trolley |
| Capacity- pcs/h* | max 20 | max 20 |
| Execution-single/double | single | single |
| Filter - band/drum | no/no | no/no |
| Dosing/ventilation | no/yes | no/yes |
| Pre-washing/air-drying | no/no | no/no |
| Heating- electricity/steam | 33 kW/no | no/3-10 bar |
| Pump | 7.5 kW/62 m ³ /h / 3-4 bar | 7.5 kW/62 m ³ /h / 3-4 bar |
| Installed power - kW | 41 | 8 |
| Power supply - electricity/water/steam/compressed air/drain | 3x400 V/50Hz Water min. 2 bar, drain DN50 | 3x400 V/50Hz Water min. 2 bar, drain DN 50, steam 3-10 bar/135°C |
| Miscellaneous | manual loading/unloading | manual loading/unloading |

* Machine capacity can be regulated



WASHING MACHINE FOR NON-STANDARD EQUIPMENT

22.2020.00 AND 22.1020.00

This machine is designated for washing of non-standard (with different sizes and dimensions) packs – yellow/white cheese forms, machine details, etc.

It is made entirely of stainless steel type DIN 1.4301 (AISI 304) grade with permission for contact with food - according to the standard.

22.2020.00 – electrical heating, automatic ventilation system

22.1020.00 – steam heating, automatic ventilation system

The automatic dosing system (with concentrate measurement) for washing liquid is an option!

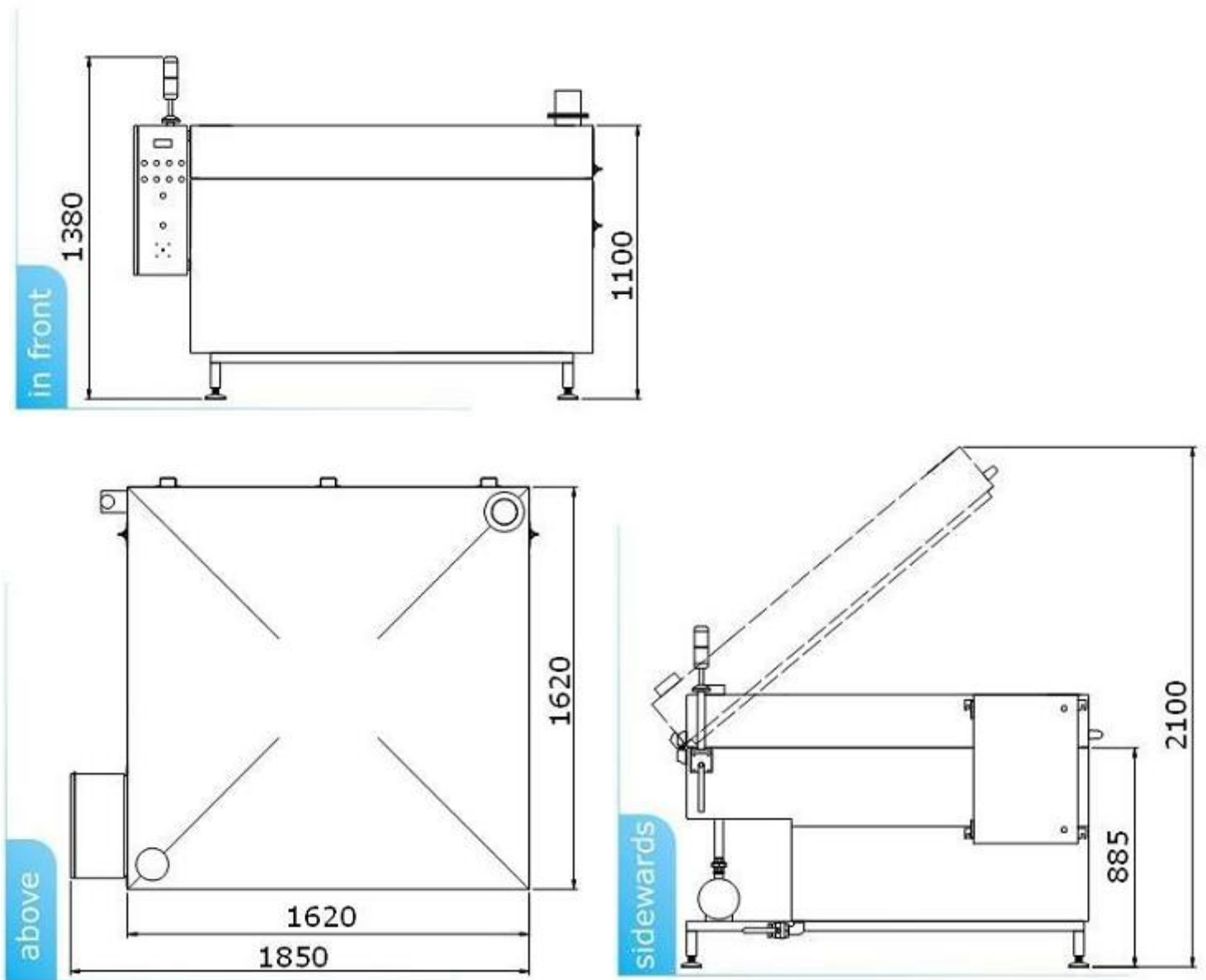
It operates on cyclic basis. Loading and unloading processes are manual.

The washing process is performed by water circulation in a closed filtered cycle incl. a suitable detergent. General water supply is used for rinsing. The duration of the washing and rinsing programmes is adjusted by the operator, depending on how dirty are.

The machine operations are fully computerized – SIEMENS SIMATIC controller.

The machine complies with the Council Directives No. 2006/42/EC and 2006/95/EC and USDA regulations.





Technical data:

| | | |
|---------------------|----------------------|----------|
| Installed power: | | |
| -electricity | kW | 38 |
| -steam | kW | 5 |
| Power supply | V/Ph/Hz | 3x400/50 |
| Heating | | |
| -electricity | kW | 33 |
| -steam | bar/°C | 3-12/135 |
| Pump | kW/m ³ /h | 4/33/3 |
| Tank water capacity | l | 450 |
| Weight | kg | 200 |

Dimensions:

| | | |
|------------------------|----|------|
| Length | mm | 1850 |
| Width | mm | 1620 |
| Height with closed lid | mm | 1380 |
| Height with open lid | mm | 2100 |

WASHING MACHINES FOR NON-STANDARD EQUIPMENT 22.2020.00 and 22.1020.00

| Art. No. | 22.2020.00 | 22.1020.00 |
|---|---|--|
| Dimensions(L,W,H-mm) | 1850/1620/1380 | 1850/1620/1380 |
| Designation | non-standard equipment | non-standard equipment |
| Capacity- pcs/h* | depending the equipment | depending the equipment |
| Execution-single/double | single | single |
| Filter - band/drum | no/no | no/no |
| Dosing/ventilation | no/yes | no/yes |
| Pre-washing/air-drying | no/no | no/no |
| Heating- electricity/steam | 33 kW/no | no/3-10 bar |
| Pump | 4 kW/33 m ³ /h / 3 bar | 4 kW/33 m ³ /h / 3 bar |
| Installed power - kW | 38 | 5 |
| Power supply - electricity/water/steam/compressed air/drain | 3x400 V/50Hz Water min. 2 bar, drain DN50 | 3x400 V/50Hz Water min. 2 bar, drain DN 50, steam 3-10 bar/135°C |
| Miscellaneous | manual loading/unloading | manual loading/unloading |



AUTOMATIC WASHING MACHINE FOR SMOKING STICKS

This machine is designated for washing of smoking sticks.

It is made entirely of stainless steel type DIN 1.4301 (AISI 304) grade with permission for contact with food – according to the standard.

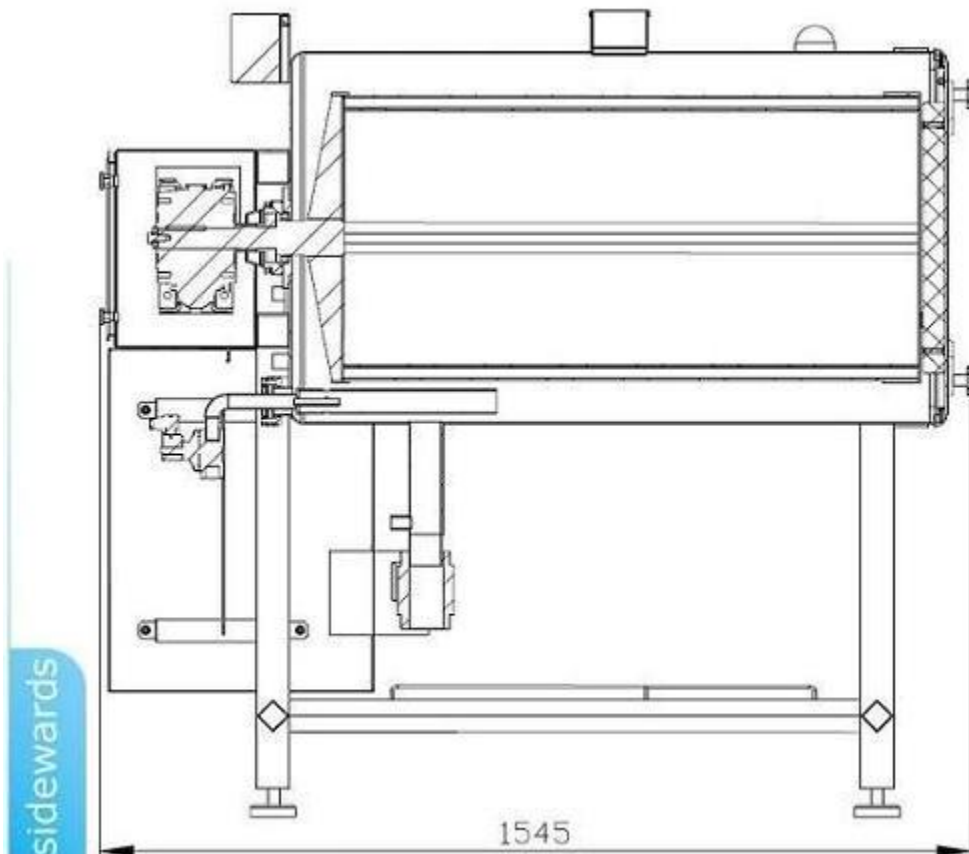
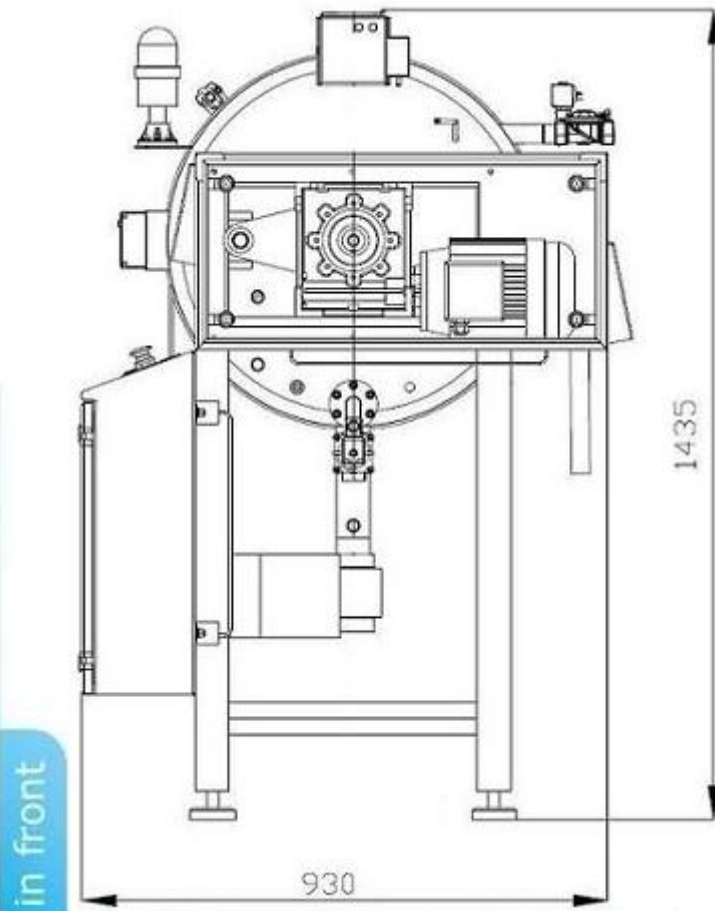
It consists of a drum for washing and rinsing and a control panel for managing process. Loading the sticks into the washing chamber is manually and must be max. 2/3 of the capacity of the drum, for sticks good cleaning.

Water is heated by electric heaters, a steam injector, or hot water (provided by the client) is directly fed into the machine.

The filling, detergent dosing, washing, rinsing and used water draining processes, are carried out automatically. The duration and temperature of washing and rinsing are adjustable.

The machine complies with the Council Directives No. 2006/42/EC and 2006/95/EC and USDA regulations.







23.1200.00
- steam heating



23.0210.00
- hot water heating



23.2210.00
- electrical heating

WASHING MACHINE FOR SMOKING STICKS

| Art. No. | 23.1200.00 | 23.2210.00 | 23.1210.00 | 23.0210.00 |
|---|---|---|--|---|
| Dimensions (L,W,H-mm) | 1600/915/1470 | 1530/930/1435 | 1545/930/1432 | 1540/930/1430 |
| Designation | smoking sticks | smoking sticks | smoking sticks | smoking sticks |
| Capacity- pcs/h* | 250 | 500 | 500 | 500 |
| Dosing | no | yes | yes | yes |
| Heating | steam | electricity | steam | Hot water - 60° provided by the client |
| Motor-reduction unit | 1,1 | 1,1 | 1,1 | 1,1 |
| Installed power - kW | 1,2 | 62 | 1,2 | 1,2 |
| Power supply - electricity/water/steam/compressed air/drain | 3x400 V/50Hz Water min. 3 bar, drain DN 50, steam 3-10 bar/135°C | 3x400 V/50Hz Water min. 3 bar, drain DN 50 | 3x400 V/50Hz Water min. 3 bar, drain DN 50, steam 3-10 bar/135°C | 3x400 V/50Hz Water min. 3 bar, drain DN 50 |
| Miscellaneous | Manual feeding and draining of water, detergent dosing, starting of the washing and rinsing processes | | | |



TUNNEL WASHING MACHINE FOR KNIVES BASKETS UP TO 120 PCS 23.2211.12

The machine is designated for fast and effective washing of standard baskets with/without knives in the food processing enterprises.

It consists of a washing and a rinsing sections.

After the knives baskets enter the main-washing section, the washing process starts. It is carried out by means of properly positioned washing solution dispensing nozzles.

The main tank is equipped with manually cleaned filter (drum filter – option) for catching the bigger soils. The water (cleaning agent) for washing is heated by means of electric heaters. The desired water temperature for washing can be adjusted between 30-60°C via a thermostat.

The rinsing of the knives baskets, entering the main-washing area takes place by spraying of clean water through nozzles. The water used during the rinsing process is afterwards led away into the main tank and thus the water inside is constantly refreshed.

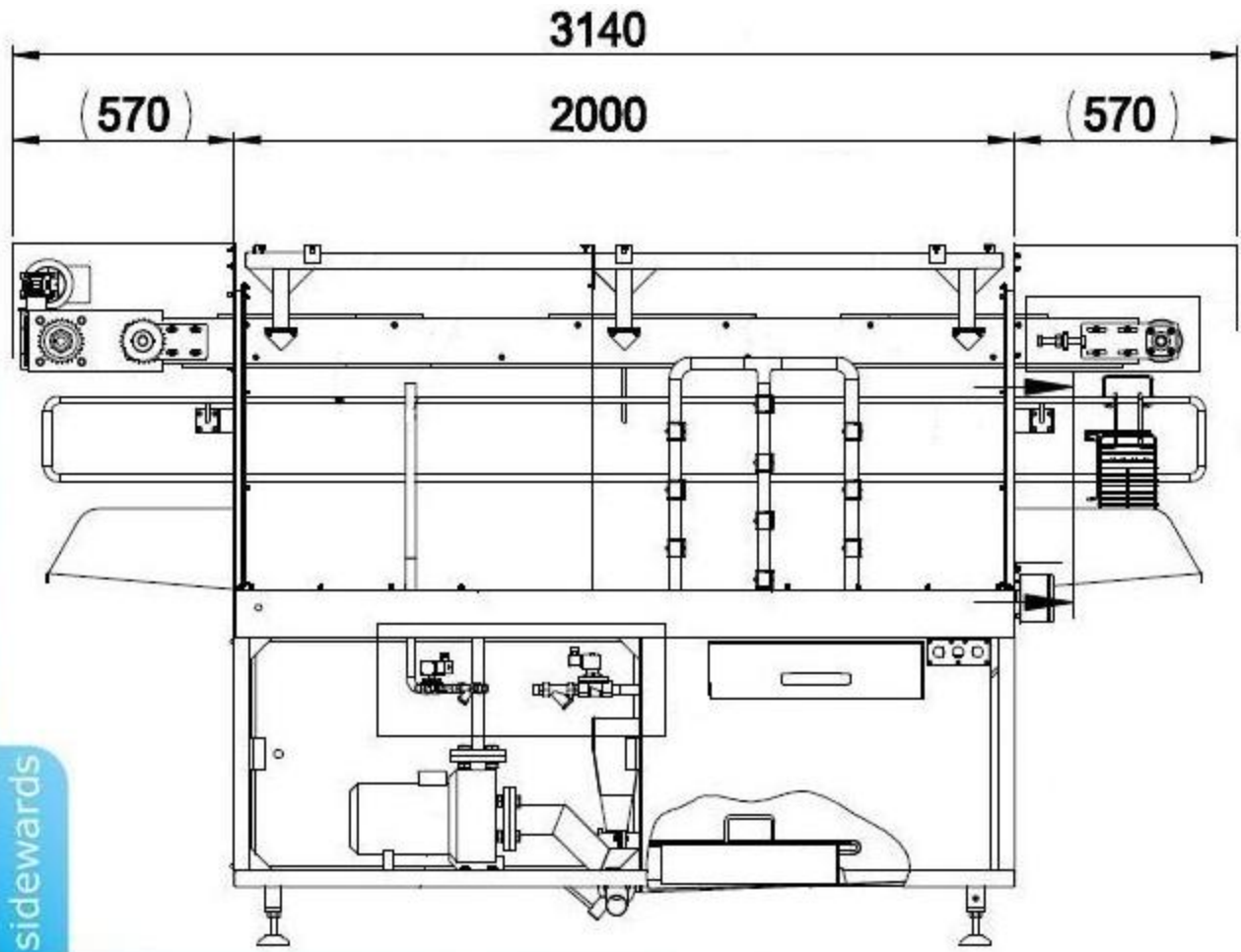
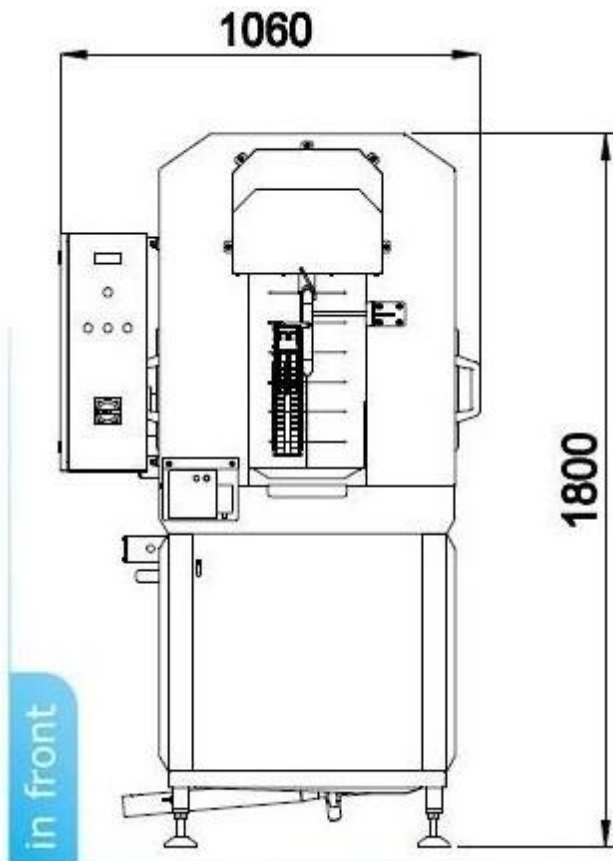
The baskets are connected to the transport system, which carries them through the various areas. In order to prevent any damage of the knives basket, as a result of jamming, and to ensure the safety of the attending personnel, the transporter's power shaft is supplied with a protective friction coupling.

Options:

- Automatic system for detergent filling and dosing (with concentration measurement);
- Ventilation-flange, fan, control;
- Safety switches.

It is made entirely of stainless steel type DIN 1.4301 (AISI 304) grade with permission for contact with food – according to the standard.

The machine complies with the Council Directives No. 2006/42/EC and 2006/95/EC and USDA regulations.





Technical data:

| | | |
|-------------------------|---------|---------------------------------------|
| Total installed power | kW | 16,5 |
| Power supply | V/Ph/Hz | 400(3L, N, PE)50Hz |
| Heating | kW | 2 x 7 |
| Motor - reduction unit | kW | 0,18 |
| Pump | | 2,2 kW/ 12,3 m ³ /h/ 3 bar |
| Pressure of inlet water | bar | 3 |
| Water outlet | mm | DN50 |
| Water supply main tank | R " | 3/4 |
| Water supply rinsing | R " | 1/2 |
| Input water temperature | ° C | max. 43 |
| Weight | Kg | ~425 |

Dimensions:

| | | |
|--------|----|-------|
| Lenght | mm | 3 140 |
| Width | mm | 1 060 |
| Height | mm | 1 800 |



DOUBLE-TUNNEL WASHING MACHINE FOR KNIVES BASKETS UP TO 360 PCS 23.2311.23

The machine is designated for fast and effective washing of standard baskets with/without knives in the food processing enterprises.

It is a double-tunnel machine, as the baskets move in opposite directions in each tunnel.

Each tunnel consists of a washing and a rinsing section.

After the knives baskets enter the main-washing section, the washing process begins. It is performed by properly positioned detergent solution spraying nozzles.

The main tank is equipped with manually cleaned filter (drum filter – option) for catching the bigger soils. The water (cleaning agent) for washing is heated by means of electric heaters. The desired water temperature for washing can be adjusted between 30-60°C via a thermostat.

The rinsing of the knives baskets, entering the main-washing area takes place by spraying of clean water through nozzles.

The water used during the rinsing process is afterwards led away into the main tank and thus the water inside is constantly refreshed.

The baskets are connected to the transport system, which carries them through the various areas.

In order to prevent any damage of the knives basket, as a result of jamming, and to ensure the safety of the attending personnel, the transporter's power shaft is supplied with a protective friction coupling.

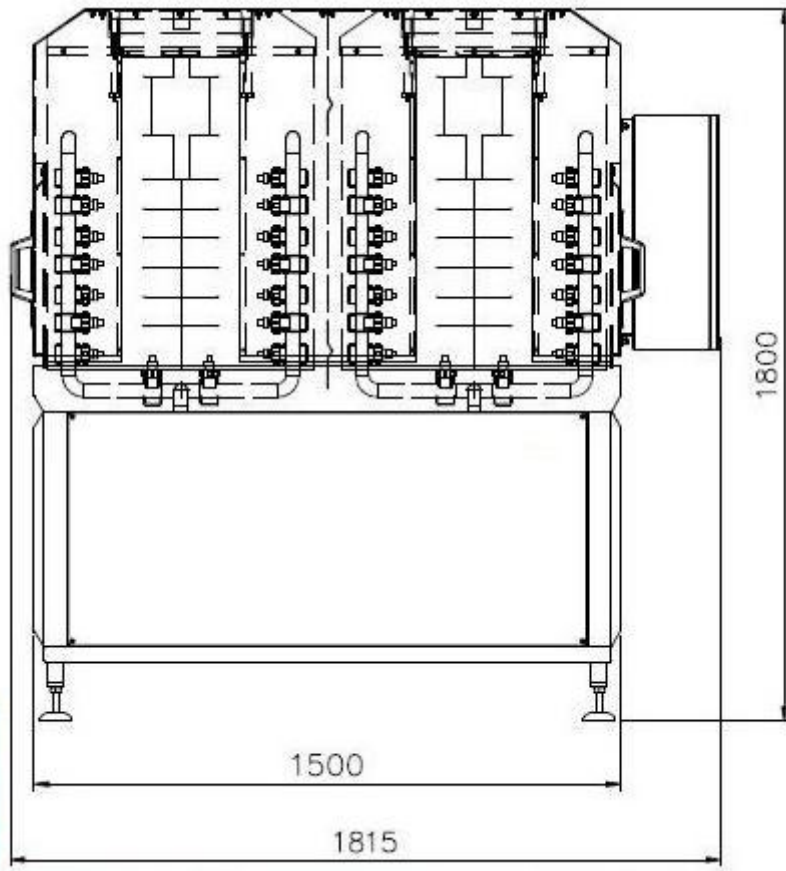
Options:

- Automatic system for detergent filling and dosing (with concentration measurement);
- Ventilation-flange, fan, control;
- Safety switches.

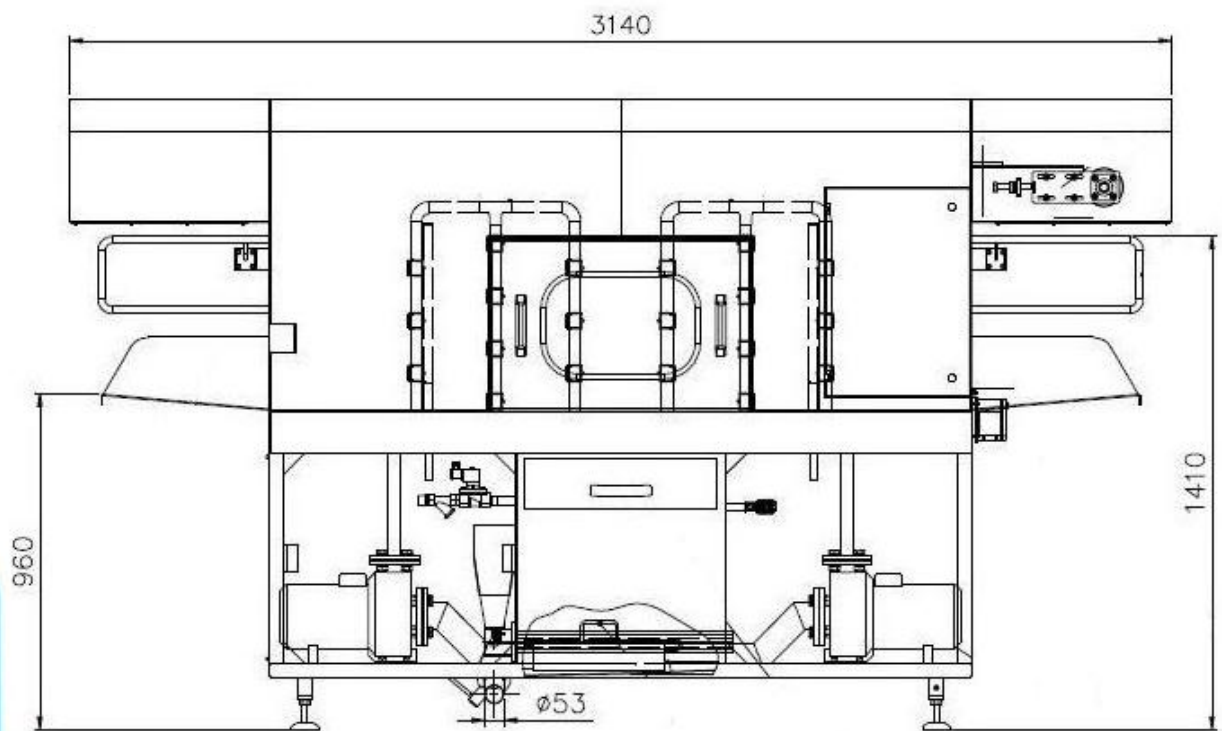
It is made entirely of stainless steel type DIN 1.4301 (AISI 304) grade with permission for contact with food - according to the standard.

The machine complies with the Council Directives No. 2006/42/EC and 2006/95/EC and USDA regulations.

in front



sidewards





Technical data:

| | | |
|-------------------------|---------|---|
| Total installed power | kW | 27 |
| Power supply | V/Ph/Hz | 400(3L, N, PE)50Hz |
| Heating | kW | 3 x 7 |
| Motor - reduction unit | kW | 2x 0,18 |
| Pumps | | 2x2,2 kW/ 12,3 m ³ /h/ 3 bar |
| Pressure of inlet water | bar | 3 |
| Water outlet | mm | DN50 |
| Water supply main tank | R " | 3/4 |
| Water supply rinsing | R " | 1/2 |
| Input water temperature | ° C | макс. 43 |
| Weight | Kg | ~900 |

Dimensions:

| | | |
|--------|----|-------|
| Length | mm | 3 140 |
| Width | mm | 1 815 |
| Height | mm | 1 800 |



WASHING MACHINE FOR KNIVES BASKETS 23.2111.00

The machine is designated for fast and effective washing of standard baskets with/without knives in the food processing enterprises.

It consists of a cabinet washer, rinsing/sterilization, tanks located under the cabinet and operation.

The trolley with the knives baskets loaded is placed in the machine with the machine door open. The trolley enters the washing and rinsing/sterilization chamber, and the door is closed.

The washing and rinsing / sterilization of the knives is performed by two rotating liquid-spraying collectors. Washing is performed by circulated solution, dosing of detergent is automatically.

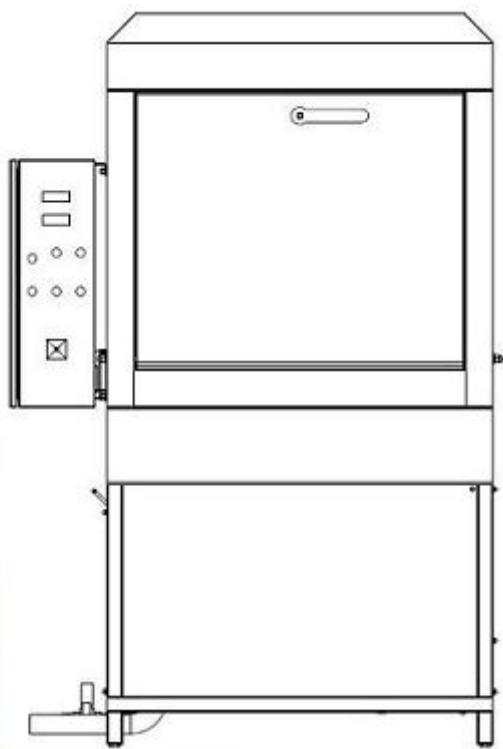
The rinse/sterilization water flows into the main tank for washing. The machine is equipped with a filter to capture undissolved particulate pollution. The filter is removable and can be easily cleaned.

The machine has two tanks – one for washing and one for rinsing. Water (detergent solution) is heated by means of an electric heater. The desired temperature may be maintained within the limits 30-60°C by a thermostat.

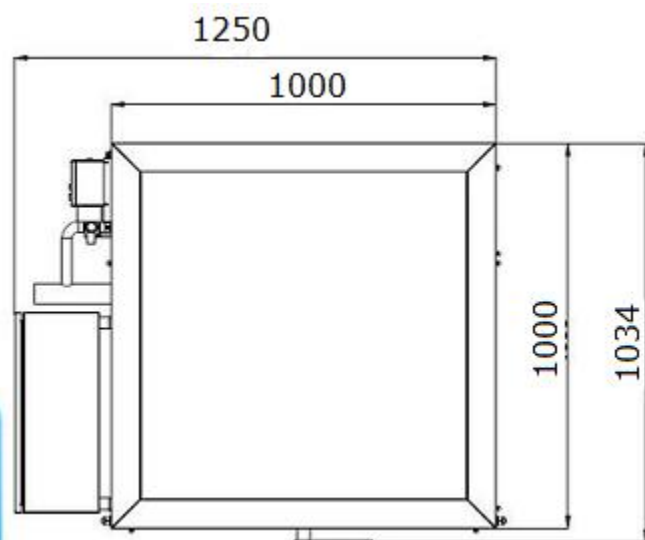
It is made entirely of stainless steel type DIN 1.4301 (AISI 304) grade with permission for contact with food - according to the standard.

The machine complies with the Council Directives No. 2006/42/EC and 2006/95/EC and USDA regulations.

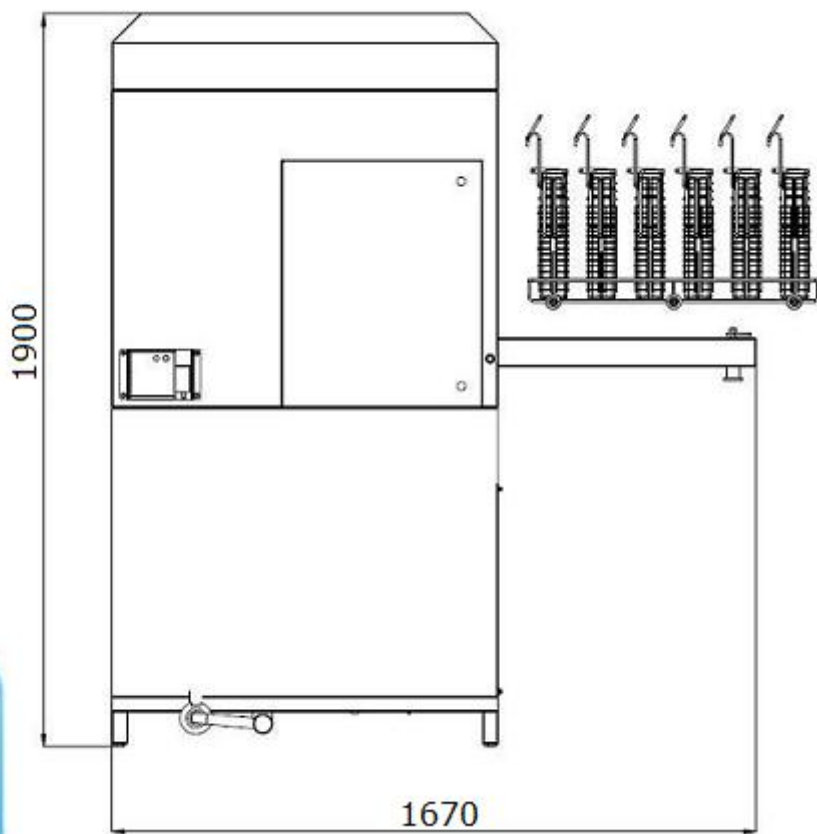
in front



above



sidewards





Technical data:

| | | |
|-------------------------------|-----------|--------------------------------------|
| Capacity | pcs/cycle | 18 small or 12 large baskets |
| Total installed power | kW | 16,5 |
| Power supply | V/Ph/Hz | 400(3L, N, PE)50Hz |
| Heating main washing | kW | 6 |
| Pump main washing | | 1,5 kW/9 m ³ /h/ 3 bar |
| Main tank | l | 100 |
| Heating rinsing/sterilization | kW | 7,5 |
| Pump rinsing/sterilization | | 0,75 kW/1,3 m ³ /h/ 3 bar |
| Tank rinsing/sterilization | l | 16 |
| Pressure of inlet water | bar | 3 |
| Water supply main tank | R " | 3/4" |
| Water outlet main tank | MM | DN50 |
| Water supply rinsing tank | R " | 3/4" |
| Water outlet rinsing tank | R " | 3/4" |
| Weight | Kg | ~900 |

Dimensions:

| | | |
|---------------|----|-------|
| Length | mm | 1 250 |
| Width | | |
| - closed door | mm | 1 000 |
| - open door | mm | 1 670 |
| Height | mm | 1 900 |

WASHING MACHINE FOR KNIVES BASKETS

| Art. No. | 23.2211.12 | 23.2311.23 | 23.2111.00 |
|--|--|--|--|
| Dimensions (L,W,H-mm) | 3140x1060x1800 | 3140x1815x1800 | 1250x1670x1900 |
| Designation | knives baskets | knives baskets | knives baskets |
| Capacity- pcs/h* | max. 120 | max. 360 | 18 small or 12 large |
| Dosing | no | no | yes |
| Heating (kW) | 2x7 | 3x7 | 6+7,5 |
| Gear motor (kW) | 0,18 | 2x0,18 | - |
| Installed power - kW | 16,5 | 27 | 16,5 |
| Power supply - electricity/water/steam/ compressed air/drain | 3x400 V/50Hz Water min. 3 bar, drain DN 50 | 3x400 V/50Hz Water min. 3 bar, drain DN 50 | 3x400 V/50Hz Water min. 3 bar, drain DN 50 |
| Miscellaneous | | | Non-tunnel |



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