

Seydelmann

In the hands of the best

Mixers

Mixer-Grinders





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Grey printed variants are alternatively available.



Mixer P 1500

Mixer technology

Mixers are ideal machines to mix pre-ground meat and fat with salt, nitrite, spices or additives for the production of hamburger, coarse frying sausage, coarse spreading sausage, kebab, various types of raw sausage, vegetables, cheese and salads. A cutter or grinder may be installed before or after the Mixers.

Mixer as standardization unit

A weighing device at the Mixer determines the current weight of the mixture in the machine. Therefore, the Mixers are essential in production in order to strictly adhere to the composition of recipes. When employed in production lines, Mixers are often used as buffers between the grinder and cutter respectively Konti-Kutter. While a batch is being cut in the cutter, the upstream Mixer simultaneously mixes and standardizes the next batch. This achieves optimised work processes and the shortest working times possible.

If the Mixer is installed upstream of a batch preparation system, it mixes the various types of meat. The batch preparation system is supplied by mobile containers, belt conveyors or screw conveyors from the Mixer.



Vacuum-Mixer PV 750

Vacuum-Mixer

The use of Vacuum Mixers results in the volume of the meat cell being increased. Intensive mixing opens the cells on the meat surface. Liquid cell plasma comes out and covers the surface of the meat pieces as a binding protein film. In this manner, additives can best be absorbed by the meat cell. The taste of the raw goods is significantly improved in this manner. The mixed goods are heated only little due to the use of vacuum. In further processing, the cut material becomes denser and clearer, as the mixed product has fewer air inclusions.

Chemical effect of vacuum

Considerably longer freshness and shelf life of the meat products. The low amount of air inclusion, primarily in fine-grained mixtures, results in significantly improved taste preservation in the product. Due to the small amount of oxygen from air entrained in the vacuum-mixer, the reaction of oxygen with fatty acids (fat oxidation) is significantly reduced. The product has better shelf life.

Biological effect of vacuum

Due to the exclusion of oxygen, respectively the replacement of residual atmosphere by chemically and biologically neutral nitrogen, the growth of germs is greatly suppressed. Aroma degradation and ageing of sausage starts significantly later. Longer shelf life.



Cooking-Mixer PV 750

Cooking-Mixer

In the Cooking-Mixer, the products are heated very rapidly by means of direct steam. The Cooking-Mixer cooks the raw material for cooked sausage production, considerably decreasing the working time in the Cutter.

The cooking system results in about 10% material gain. Complete retention of taste, aroma and proteins that would otherwise be lost by the boiling water. Due to the extremely short cooking time in the Cooking-Mixer at an ideal temperature, the taste and aroma-forming ingredients are completely preserved in contrast to cooking in the kettle or steam cabinet.

The Cooking-Mixer is ideal for the production of cooked sausage, soups, cooked meat stuffings of various kinds, etc.

Mixer with cooling

Ideal processing temperatures can be achieved by adding LCO₂ (liquid carbon dioxide) or LN₂ (liquid nitrogen) using a temperature control unit. The LCO₂ is injected into the hopper from the bottom.

The Mixer with cooling then replaces refrigerator capacity in an ideal manner. It creates the ideal thermal conditions for all further processing. There is a permanent expansion chamber above the hopper via which it is possible to extract the gas. The models with direct steam heating or LCO₂ or LN₂ are equipped as a standard with the temperature control unit PT 100 with digital display and pre-adjustable switch-off. The heating respectively cooling will be switched off automatically when the pre-adjusted temperature is reached.



Mixer P 2000

Weighing unit with batch preparation device

A weighing unit with batch preparation device and programmed discharge is also available on request. Along with indication of the hopper capacity, it also allows batch and weight-oriented discharge under program control.

The current weight of the mixture is determined by the weighing unit of the mixer. The nominal weight of spices and additives are accurately calculated and displayed relative to this weight.

At the spice scale, which is available as optional equipment on request, the quantities displayed are added manually and then acknowledged at the terminal.

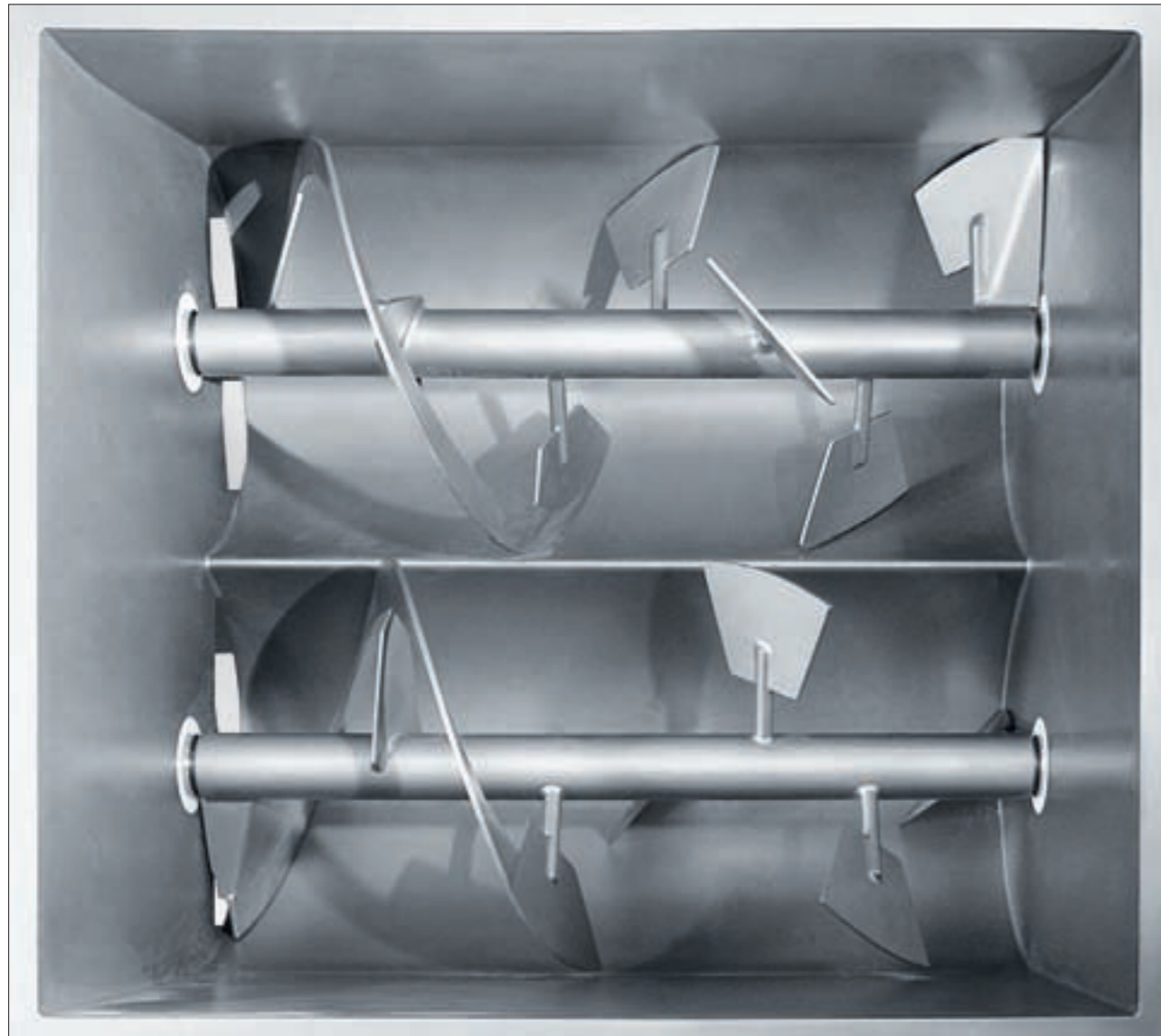
A total of 5 recipes, each with up to 10 different components can be saved with their compositions in percentage.

Weighing unit for the hopper capacity

On request, the Mixers, Vacuum-Mixers, Cooking-Mixers and Mixer-Grinders can be fitted with a weighing unit with digital display to accurately determine the weight of the hopper capacity. This allows the adding of individual ingredients in sequence in order to exactly achieve the desired composition of the entire mixture. As the desired mixture is maintained without deviations, exactly calculable production is possible. A uniform quality standard is ensured.

Kebab

The Mixer is loaded with beef, veal or turkey pre-ground to 2 or 3 mm. During the mixing process, salt, spices, additive if desired water or other liquid materials are added and intensively mixed within a short period of time. Due to the special mixing geometry of the Seydelmann mixer, intensive and stable blending is achieved within a short period of time. Beef fat is mixed in very homogeneously. It is no longer visible in the cut. This produces a Kebab-Spit of the best, smooth consistency, no grease drips out on the grill, the knife cuts optimally.

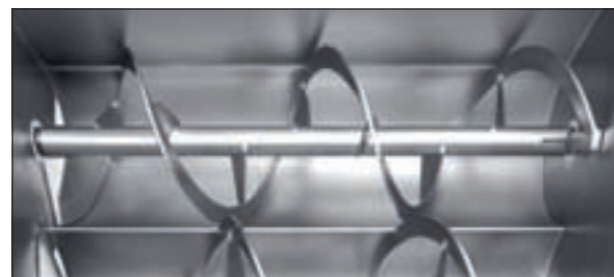


Combined design with mixing paddles as well as -spirals

Mixing axles

Adaptable designs of the mixing axles.

- Depending on the application different combinations of mixing-paddles as well as mixing spirals are possible.
- The Mixers can be equipped with a reinforced drive for processing special products, such as kebab or cheese.



Design with mixing spirals

Technology of Mixers/Vacuum-Mixers/Cooking-Mixers

2 mixing axles each driven by 2-speed 3-phase gear motor, independently switchable forward and reverse, at high and low speed. The P 500 with one mixing axle.

The product is optimally and gently mixed by the special arrangement and position of the paddles. In the discharge direction, short spirals are mounted to the paddle axles for gentle and fast discharge.

At the display, which is separately mounted in a stainless housing, the interval time is set and displayed by 2 time settings, i.e. the shift from forward to reverse gear, as well as the total mixing time.

Program control with adjustable interval and mixing time, or program control to program various mixing speeds and mixing intervals, for LCO₂ or LN₂ injection, for vacuum or total mixing time on request.

Frequency control

The mixing shafts can be equipped with a stepless frequency drive unit. By means of this frequency drive the optimised speeds can be pre-selected for the mixing and unloading.



Mixer-Grinder PU 200

Mixer-Grinders

Discharge via the pneumatically operated discharge flaps, or via the Grinder housing with 160 or 200 mm hole plate diameter is possible only with the loading bin BW 200 pushed in.

This allows the use of the machine both as a Mixer-Grinder or an efficient Mixer. This offers options that otherwise are only available with two separate machines.

For example, premixing, standardization and grinding, then reloading into the machine for mixing with additives, then discharge through the pneumatically operated discharge flap.

The worm, worm housing and bayonet locking of the Mixer-Grinder are made of solid stainless steel. Mechanical wear of the stainless steel worm housing is largely prevented by a special material of the internal housing surfaces.

The working worm is fitted with a short-term reverse gear. This allows to return small quantities of the mixing product to the mixing process.



Mixer-Grinder PG 161



Application example:

Coarse, spreadable- or sliceable dry sausage explained by the exemplary production of Westphalian sausages. Cooled pork is mixed and coarsely pre-ground in the Mixer-Grinder. Then the cutting set is changed to a 5 mm hole plate and 7-winged final knife. The meat is returned to the Mixer-Grinder and mixed with salted pork and spices. Grinding is continued as long as the meat has little binding. This gives the sausages a good and clear cut. Coarse sausage for spreading is made in the same

manner, but using the 3 mm hole plate and 9-winged final knife. Nuremberg sausage, frying sausage, Krakow and other cooked sausages with coarse show meat can be made in the same manner. The sausages produced in this manner meet the highest demands for appearance and quality. Working with the Mixer-Grinder is efficient, of high quality and cost-efficient.

Details Mixer-Grinders

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Outlet hand guard

The outlet hand guard is to be understood as required security equipment. Its electrical interlocking prevents injury from the cutting set.

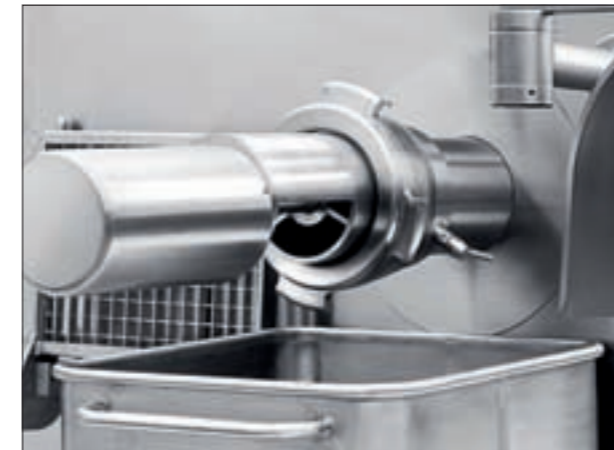


Outside knife*

The outside knife is running on the last hole plate. Meat coming out of the grinding set in the form of threads is cut once again getting a uniform size and blend. Ideal for coarse meat pieces, dry sausage, frying sausage etc. The outside knife can only be used in connection with the hand safety guard.

Bayonet locking

The solid stainless bayonet locking ensures a fast and easy change of the hole plates and knives. As the outer ring remains on the housing, the front part of the bayonet is considerably lighter than the whole screw nut. The bayonet locking also protects the thread of the worm housing.



Outside cutting device*

The outside cutting device has a separate motor and drives the outside cutting knife independently of the working worm. The permutations are steplessly preadjustable to achieve the desired size of granulation. Higher speed produces shorter particles, slower speed produces longer particles. The outside cutting device produces exact uniform particle sizes of any material.

Control panel

All control elements are clearly installed at the operator position. The control panel of the machine is laid-out in an ergonomic way. Clear symbols for the functions of the machine guarantee an ease of operation and avoid errors.



Holding device*

The holding device for the pre-cutting plate (kidney plate) guarantees an almost friction-free and careful cut. The grinding set is not pressed together under the high pressure of the meat flow. The wear of hole plates and knives is reduced considerably.

Separating set*

Separating set for the improvement of the meat quality. Gain of time during deboning. Gristle and sinew, etc. do not have to be cut out. The separating kit sorts out a great portion of the hard components in meat. No blocking of the cutting set as the hard particles are removed automatically. Therefore improved throughput with clearest cut.



The meat quality is upgraded by 1 to 2 quality levels (GEHA). The sinew material which was once sorted out is now used in deep-frozen condition for further processing. The Cutter is able to cut up this material to a structure-free and homogenous sinew emulsion being added in standard products.



Pneumatic separating device*

The pneumatic separating device, used with the separating unit, ensures even more exact and precise control of separation and sorting out sinew and meat. The pneumatic separating device controls the desired flow by means of a ball valve (separate compressed air connection required). The interval time between opening and closing of the valve can be set individually as required. The transparent discharge hose allows you to continuously check the quality of the discharged product.



Worm cradle*

The stainless worm cradle is delivered as an option. It is used as a storage device and for the cleaning of the worm and the cutting set.



Vacuum-continuous pass Mixer and Konti-Kutter

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Vacuum-continuous pass Mixer KVM 210

The premixed product is sucked through the vacuum into the mixing area. In case of considerable distances or continuous transportation into other production areas a pump is necessary as filling device. It is possible to fill smaller batches into the machine via a loading station however the cover has to be opened.

In the mixing area a mixing screw is working. Air spaces, which arose during the pre-shredding and pre-mixing between the meat and pieces of fat, break up. The remaining air pockets come to the surface by the mixing paddles pitch and their rotation in order to create a complete vacuum thanks to the preset vacuum.

The conveyor screw which is located in the hopper bottom is operating as conveying system so that the material is directly passed on into the housing of the cutting set of the Emulsifier. Should the Mixer be situated in considerable distance of the Konti-Kutter a tube connection possibly via a pump is necessary. Thus the Konti-Kutter is filled with raw material which is mixed, vacuumized and roughly precrushed.

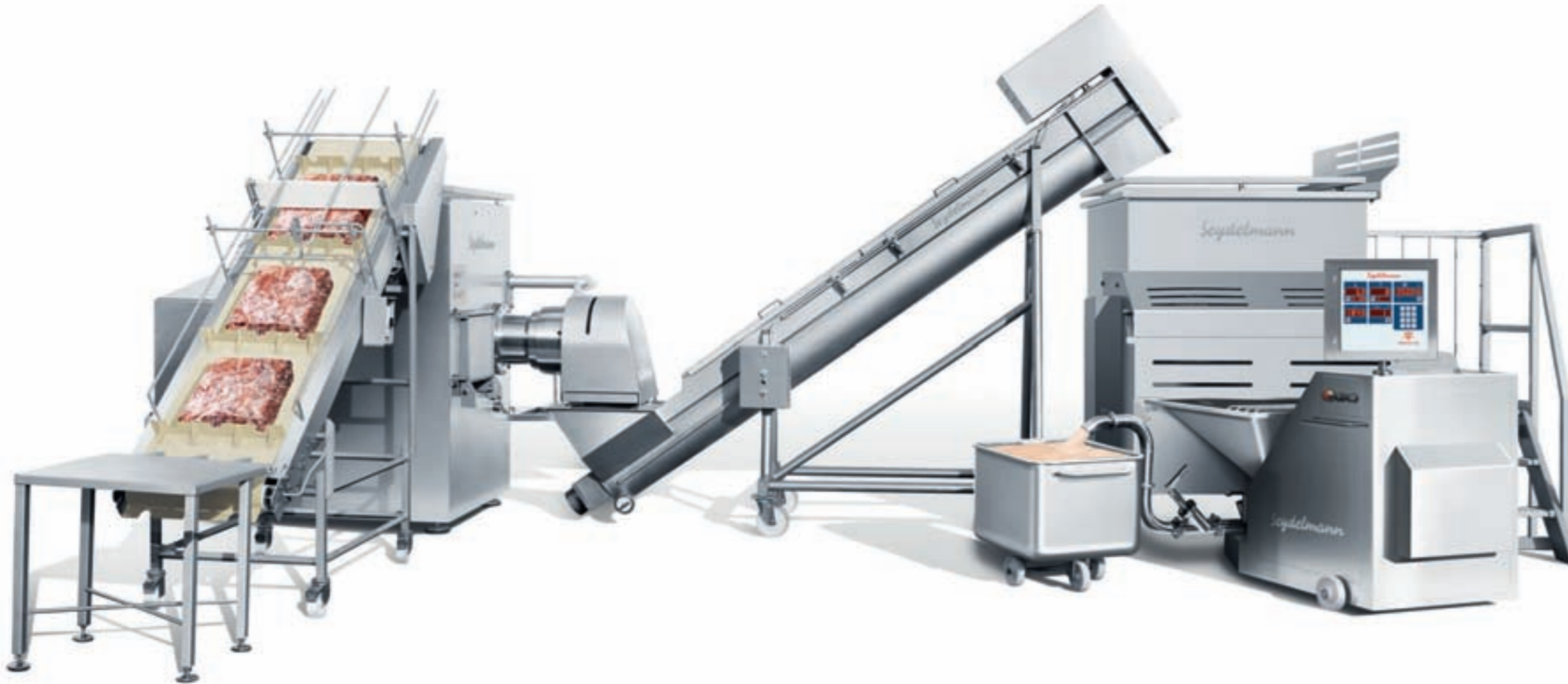
The Vacuum-continuous pass Mixer evacuates the air out of the premixed mass. Thanks to the advantages of vacuum an absolute homogenous and compact emulsion of very high quality is produced. This mode of production is extremely efficient. No operator errors are possible.



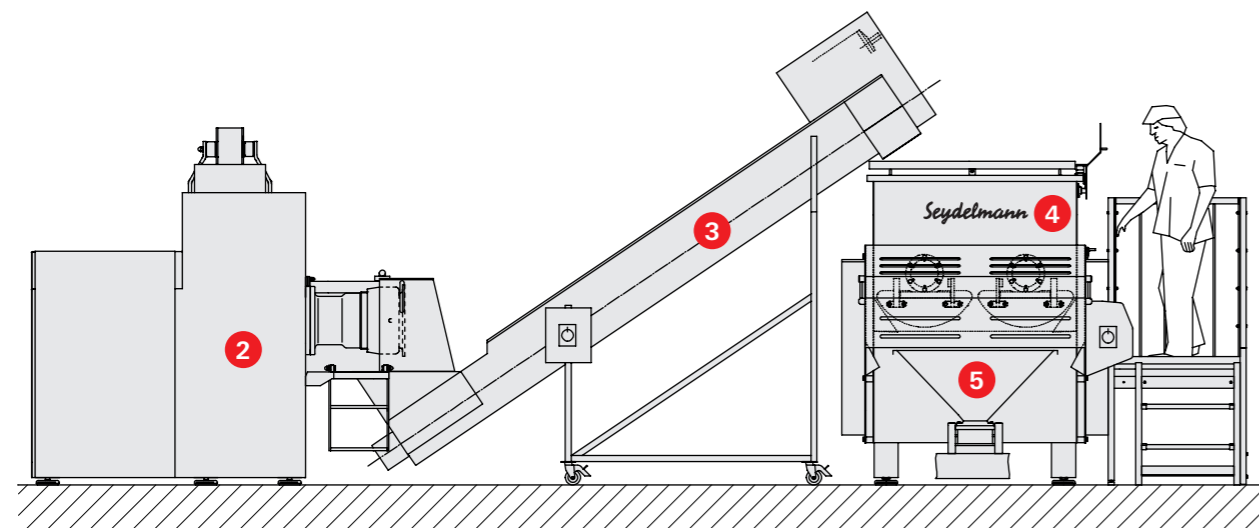
Konti-Kutter KK 250 AC-6 with Vacuum-continuous pass Mixer

Production lines

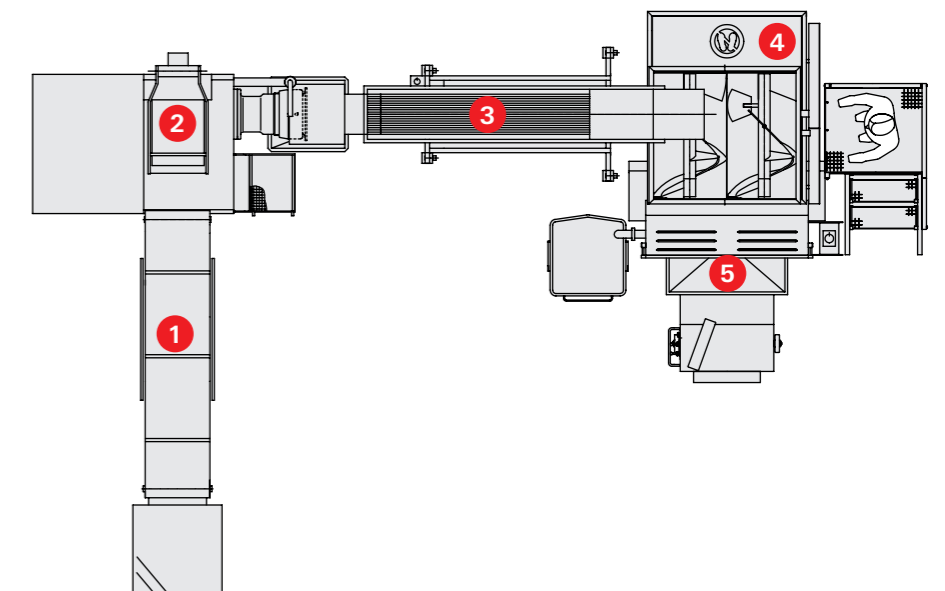
Machines from Seydelmann can be integrated into production lines and connected via conveyors. Thus all products that are manufactured in the food industry can be produced almost completely automatically. These production lines are used e.g. for the manufacturing of meat-, fish-, cheese-, vegetable- and fruit products, soups, sauces, marzipan, nougat cream, chocolate, confectionary etc.



Automatic production line with Mixer P 1500



- 1 Conveyor belt with flights
- 2 Frozen Meat Grinder
- 3 Screw conveyor
- 4 Mixer
- 5 Konti-Kutter



Planning

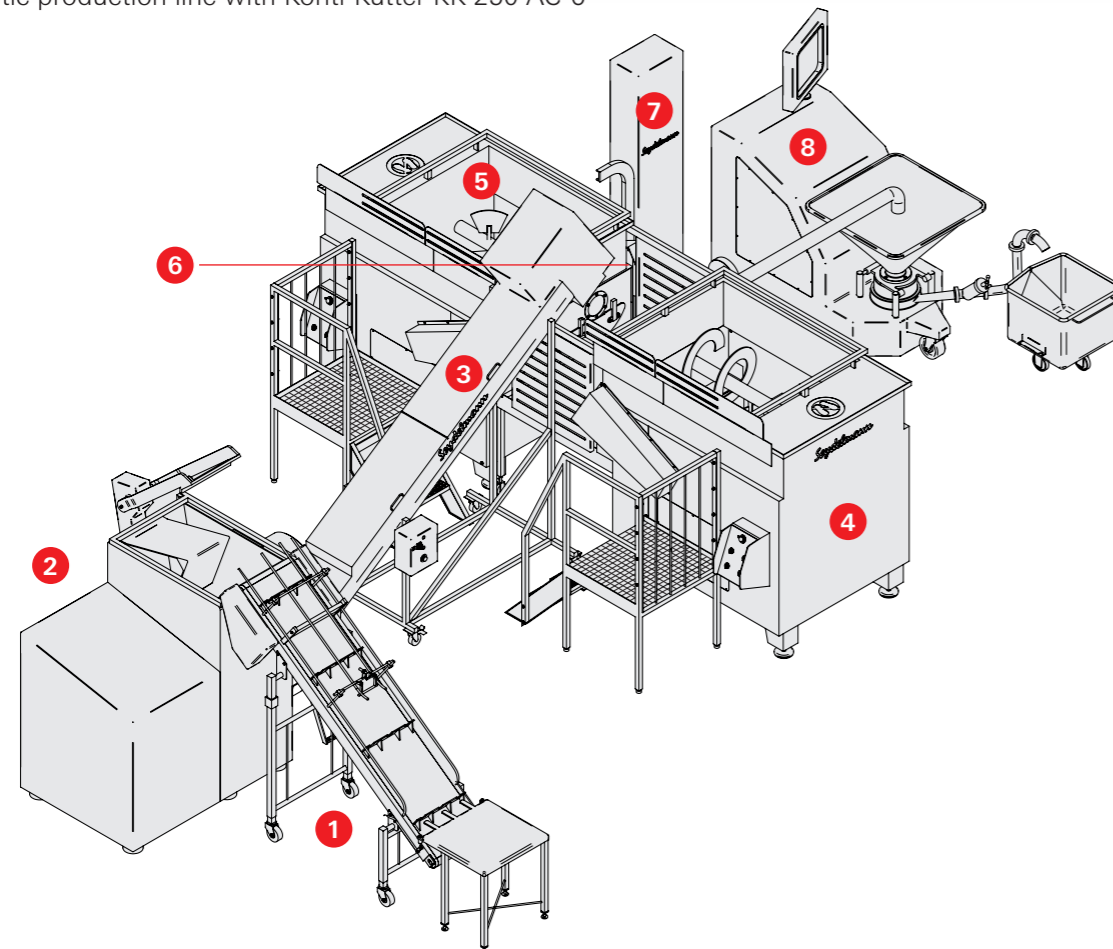
Due to the immense expertise and long-time experience in the field of food processing Seydelmann supports and consults extensively the planning of entire production lines as well as the integration of individual components into existing production flows.

Thus, individual production steps like pre-cutting, mixing, standardising, further cutting, thermal editing and much more requirements in all areas of the food processing can be planned, developed and integrated.

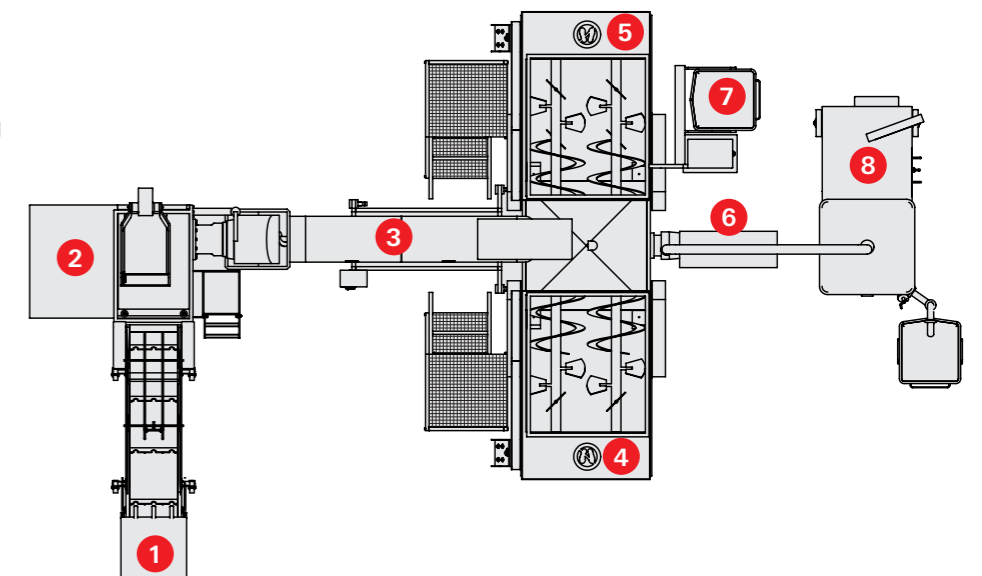
Thereby Seydelmann offers complete solutions and integrates the needed conveyor components in the production lines. Drawings and CAD layouts provided by Seydelmann are tailored to the individual customers needs.



Automatic production line with Konti-Kutter KK 250 AC-6



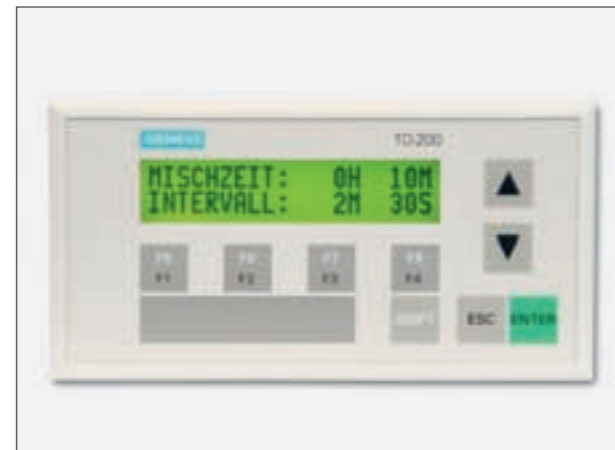
- 1 Conveyor belt with flights
- 2 Frozen Meat Grinder
- 3 Screw conveyor, swivelling
- 4 Mixer
- 5 Mixer
- 6 Emulsion pump
- 7 Loading Mixer
- 8 Konti-Kutter



Controls

TD 200

By the control TD 200 it is possible to enter the mixing time, the intervals and brakes. 10 programmes are optionally possible.



TP 177

Additionally to the functions of the TD 200 this control type shows the values for the water addition, the temperature as well as the vacuum.



SPM 177

All available values can be displayed when working with the SPM 177. Additionally this control provides for 10 programmes with 20 programme steps for each individual programme. Those can be retrieved and started via a cross switch directly at the Mixer.



Online-Analysis



Online-Analysis*

Sensors for an online visual observation and control mode in the production of high quality foods gain more and more significance in the food processing industry.

In high volume situations even small mistakes in production can have serious consequences - like complex and cost intensive improvement procedures in quality.

Serious analysis figures from outside sources such as laboratories can only produce data regarding quality ex post.

For this reason Seydelmann offers its customers the Seydelmann Online-Analysis System, which is a means to quickly analyse ingredients such as fat, protein, water and connective tissue.

This is how a total control is guaranteed. The system is working by the help of a spectrometer within the Mixer which makes it possible to analyse the complete production flow continuously.



Loading possibilities



Mixer P 3000

Loading

The Mixers and Mixer-Grinders are loaded either by means of a column hoist, conveyor belts or screw conveyors. On request, the column hoist is mounted to the machine or to the floor (exclusively in the design with weighing unit). It is fitted to accept loading bins BW 200 and BW 300.

Working platform

The mixed goods can easily be controlled from a stainless safety working platform normally mounted on the right - mounting on the left is possible on request. If space

is limited, an electrically locked safety step may also be chosen on request in place of the working platform.

Hopper covers

On request, special hydraulically operated hopper covers are available for different requirements: For example for dust-producing products, or to attach feeding connections for liquid nitrogen LN₂ or carbon dioxide LCO₂. For low room heights, a special, 2-piece cover with hydraulic operation is available for all Mixers.



Mixer PV 450

Hygiene

All machines are mostly made of stainless steel, all edges are rounded. The drives of the mixer shafts, gear motors and pneumatic cylinders of the discharge flaps are covered. Easy cleaning is possible.

Safety

Seydelmann machines are manufactured in accordance to legal safety regulations and have the CE-Declaration of Conformity.

Advanced quality

Innovating thinking, economic acting, quality production. Certified by the sought-after certificate to ISO 9001 we will continue to safely meet the highest demands in the future.

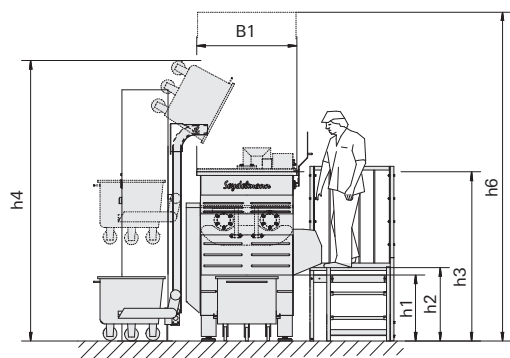
Service

- Global service
- Qualified service technicians
- Extensive spare parts supply warranted for many years
- Emergency service 7 days/week
- Loan machine service

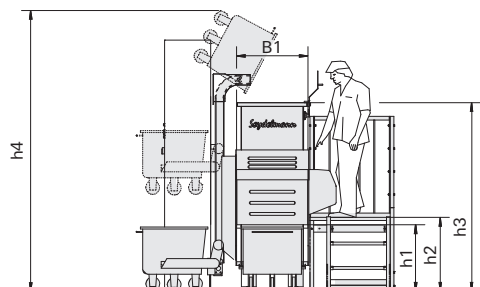
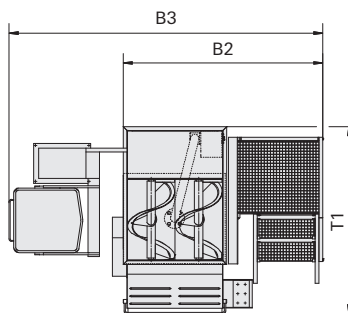
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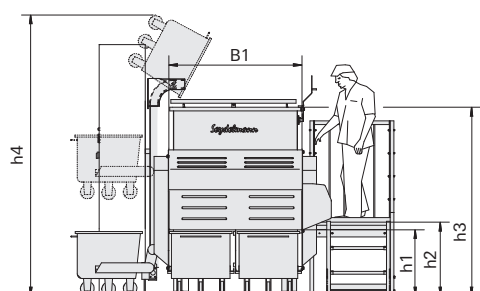
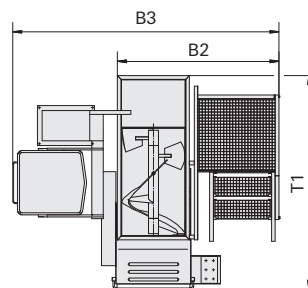
Technical Data



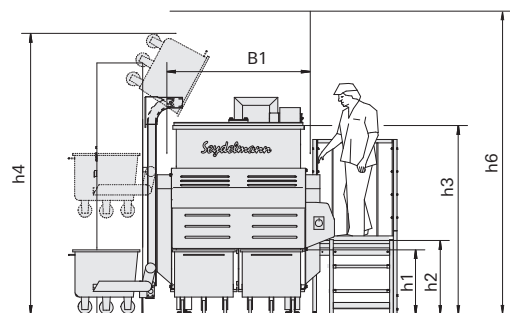
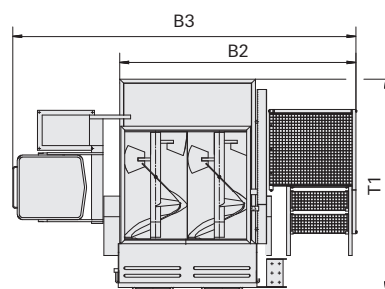
P 450/P 750
PV 450/PV 750



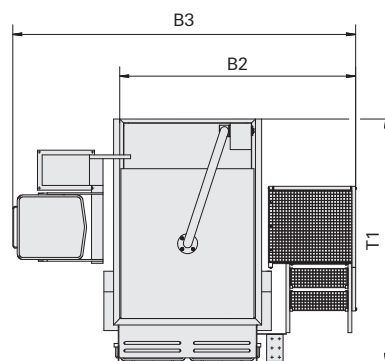
P 500



P 1000-P 4000



PV 1000 - PV 4000

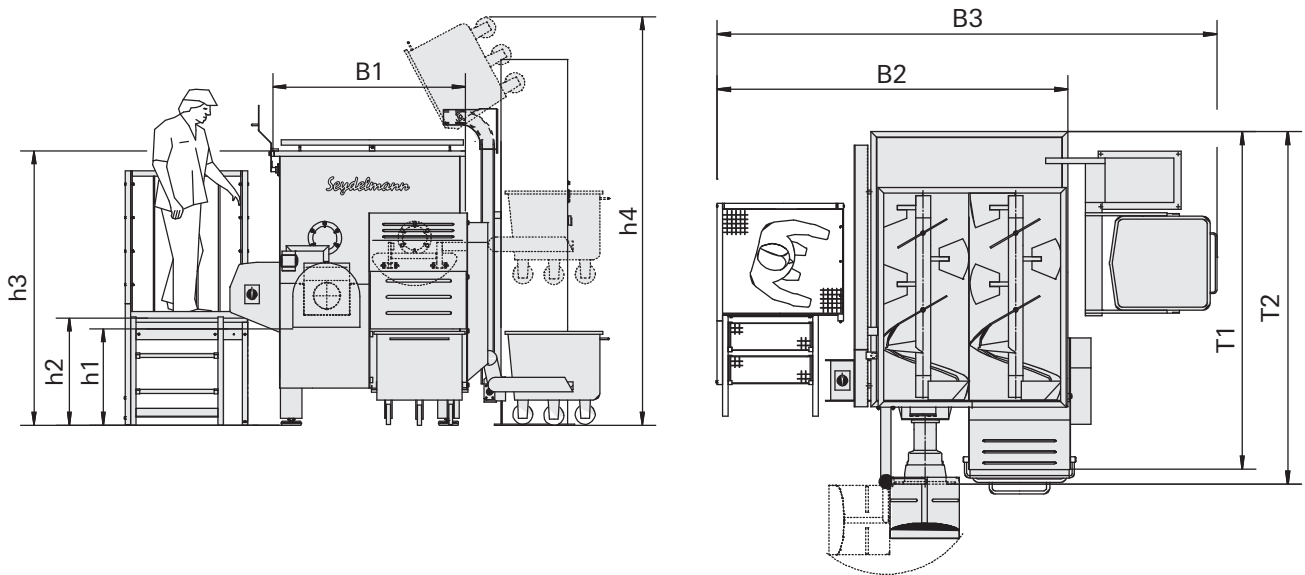


Mixers and Vacuum Mixers

Type	mixing capacity in kg (approx.)	hopper capacity in ltrs. (approx.)	2 mixing- motors each kW	weight in kg	weight with loading device in kg	dimensions in cm									min. width of door
						B ₁	B ₂	B ₃	T ₁	h ₁	h ₂	h ₃	h ₄	h ₆	
P 450	325	580	2,6/3,2	1250	1550	110	215	330	191	75	80	184	305	-	113
P 500	350	650	1 mixing- motor 6,5/8	1200	1500	79	176	290	220	75	80	205	305	-	82
P 750	550	990	2,6/3,2	1400	1700	110	215	330	246	75	80	184	305	-	113
P 1000	700	1300	6,5/8	1750	2050	145	250	360	220	75	80	205	305	-	148
P 1500	1000	1800	6,5/8	2050	2350	145	250	360	257	75	80	205	305	-	148
P 2000	1400	2500	6,5/8	2300	2600	145	250	360	312	75	80	205	305	-	148
P 3000	2300	3800	10/13,5	2600	2900	181	280	390	305	75	80	197	305	-	184
P 4000	3000	4700	15/20	3100	3400	181	280	390	355	75	80	197	305	-	184
PV 450	325	580	2,6/3,2	1530	1830	110	215	330	191	75	80	184	305	325	116
PV 750	550	990	2,6/3,2	1680	1980	110	215	330	246	75	80	184	305	380	116
PV 1000	700	1300	6,5/8	2030	2330	158	250	360	220	75	80	205	305	375	161
PV 1500	1000	1800	6,5/8	2330	2630	158	250	360	257	75	80	205	305	412	161
PV 2000	1400	2500	6,5/8	2580	2880	158	250	360	312	75	80	205	305	467	161
PV 3000	2300	3800	10/13,5	2880	3180	195	280	390	305	75	80	197	305	400	198
PV 4000						technical data on demand									
KVM 210						technical data on demand									

Technical Data

Seydelmann



Mixer-Grinders

Type	mixing capacity in kg (approx.)	hopper capacity in ltrs. (approx.)	main motor kW	2 mixing- motors each kW	weight in kg	weight with loading device in kg	dimensions in cm								min. width of door	
							B ₁	B ₂	B ₃	T ₁	T ₂	h ₁	h ₂	h ₃		h ₄
PG 1 60	1000	1800	18/29	6,5/8	2250	2550	145	255	360	245	253	75	80	205	305	148
PG 1 61	700	1300	18/29	6,5/8	1950	2250	145	255	360	208	216	75	80	205	305	148
PU 2 00	1000	1800	25/37	6,8/8	2300	2600	145	255	360	245	255	75	80	205	305	148
PU 2 01	700	1300	25/37	6,5/8	2000	2300	145	255	360	208	218	75	80	205	305	148

Dimensions/data not binding. Alterations reserved.

Mixers

Mixer-Grinders



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