

Destoning
Washing
Peeling
Cutting
Blanching
Cooking
Drying
Forming
Frying
Cooling
Freezing
Pasteurising
Sorting
Packaging
Handling

The most productive processing line worldwide for hash brown products

Kiremko is active worldwide in designing, producing and installing complete processing lines, factory upgrades and individual machines for formed potato specialties. With over 50 years of knowledge and experience in the field of processing potatoes into hash brown products and other shredded specialties with the latest technologies and techniques, Kiremko, together with its partners Idaho Steel Products and Reyco Systems, provides you with industry leading knowhow that goes far beyond simply specifying the necessary equipment.

Formed potato specialties have been around for decades. Worldwide these products are found in our diets, be it in the shape of hash brown patties, tater tots, potato pancakes or potato gems. The basis of these products typically being a shredded, grated or riced potato, formed into a particular shape, and pan-fried.

In the potato processing industry, a hash brown line can be a stand-alone unit or be part of a French fry plant. In

the latter case, rejected and off-sized potatoes from the primary processing lines are used to create a high quality formed product and through this, improve the overall yield of the potato processing facility. Many different products and shapes can be made, such as hash brown patties, waffles, rounds, triangles and more complex shapes like cartoon characters, letters or numbers.

A formed product made with vegetables like peas and carrots mixed with potatoes, is also possible.



The products are delivered pre-fried and frozen and distributed into the same channels as French fry products.

Kiremko designs, manufactures and integrates all the necessary components to complete this process for hash brown products. From the washing and peeling lines, optical sorters, blanchers, retro-graders, shredding and mixing units, forming and frying systems up to the spiral freezer and if required, the final packaging solutions. The machinery is designed for high capacities, ease of operation and maintenance and in compliance with European and worldwide safety and hygiene standards. Together with our strategic partners we have the ability to deliver small, medium and large processing lines in all the defined market groups.

Prior to forming, the potatoes are shredded. This is done by the Nex-Shred potato shredder, that is specifically designed for shredding potatoes. The size of the shred influences the look of the product, but also the texture experienced during consumption. With a wide range of different shredding plates, the Nex-Shred is able to shred in numerous sizes; from very fine, almost mash-like, to large potato pieces.

With the Nex-Gem+ rotary former from Idaho Steel in the heart of the process, our hash brown processing lines can be considered the most productive processing lines available. We offer complete systems from 1.000 kg/hr up to unprecedented capacities such as 8.000 kg/hr of hash brown patties in a single line. For these high capacities, both the Nex-Gem+ and fry by wire specialty fryer, have been further developed to become the largest available in this particular segment.

In the forming process it is critical that the potato shreds will hold together in the correct shape. To achieve this, the product is prepared through a series of steps to remove moisture and condition the starch cells to ensure that the shreds stick together. This is done in a unique unit called the retro grader.

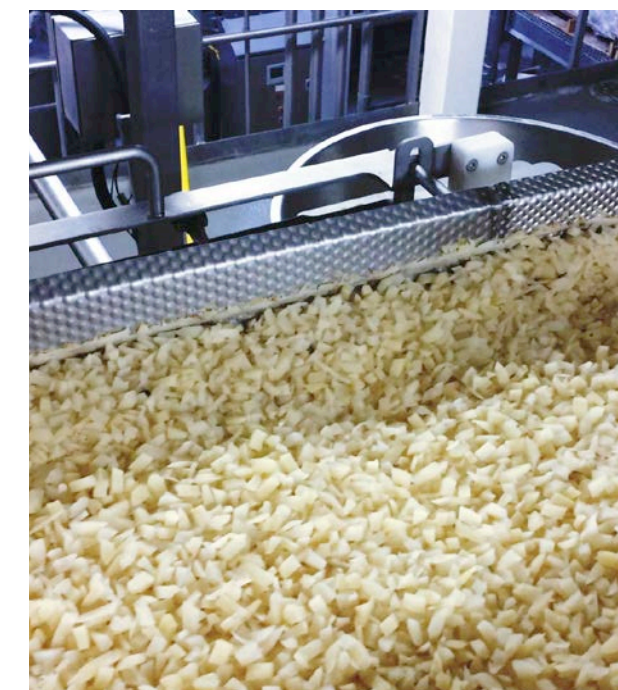
The fry by wire specialty fryer is an ingenious system that maintains the frying oil level to the top level of the product.



This prevents it from floating and damaging the shape or disturbing the stacking pattern on the belt, which is essential for a proper frying and freezing process.

After frying, the EcoMiser™, a unique design by Reyco Systems, is installed to recover surface frying oil. The recovered oil will then be filtered to remove crumb and reintroduced into the fryer. During this process, from the moment the formed product touches the oil, during the oil filtering process and afterwards, the freezing, the shape, consistency and colour of the product will never be compromised.

Process control, data-collection and self-managing functionalities in processing lines are of increasing importance. All lines can be delivered with SCADA systems for automatic control and continuous process monitoring and data recording.



Processing line for hash brown products



Cyclone destoner

The cyclone destoner removes stones and clay shells. The gradient of the funnel and the variable water flow determine the optimum result.

Dry brush machine

The dry brush machine will remove the peel after the steam peeling process. Rotating brushes will make sure the peeled potato remains smooth, while the peel remnants are removed.

Cutting machine FAM Tridis™ 240P

The FAM Tridis™ 240p is a new generation of tridimensional dicers designed by FAM. A wide variety of cutting tools make slicing, strip cutting and dicing possible with only one machine.

Dewatering vibrator

The dewatering vibrator combines the transport of the product with an effective dewatering step. The direct drive of the vibrator will ensure optimum removal of any moisture adhering to the product, while minimally disrupting the process.

WeighGuard®

The WeighGuard® is an advanced system that ensures the accurate dosing of salt, dextrose or other ingredients as an addition to your product.

Nex-Shred

The shredder reduces the size of the incoming product. The size of the shred influences the outlook and texture of the product. The Nex-Shred uses a wide range of different shredding plates to make very fine (almost mash) shred up to large potato shred.

Continuous mixer

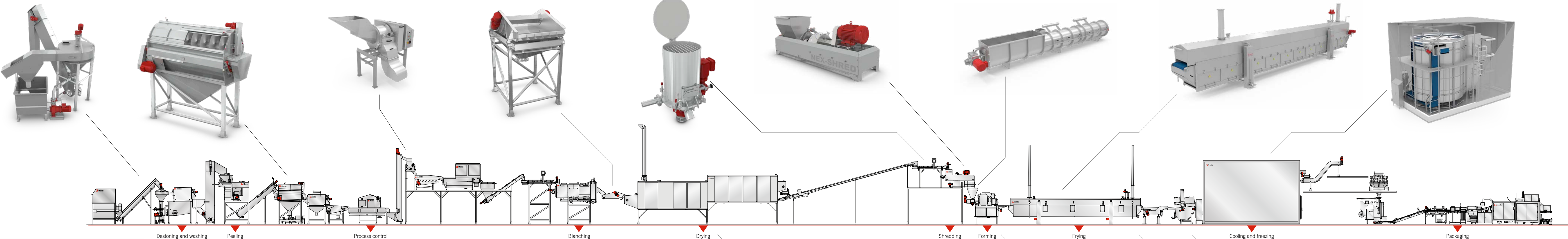
The continuous paddle mixer has a horizontal shaft with individually adjustable paddles to create the optimal mixing intensity. Shredded potato and ingredients, (modified) starch, potato flakes or granules are mixed into the desired consistency to form the right product.

Fry by wire specialty fryer

A fryer with an extremely accurate frying technology to ensure that vulnerable products emerge from the fryer, row by row, perfectly coloured and cooked.

Spiral freezer

Kiremko integrates custom made freezing solutions on the customer's request. Available in different belt widths to ideally match the net width of the former and fryer to accommodate the forming pattern of the product.



Drum washer

Based on mutual friction, the drum washer will remove clay, sand and soil from the potatoes.

STRATA Invicta®

The STRATA Invicta® steam peeler sets the new standard in steam peeling systems, offering the highest yield at the shortest possible cycle times. It peels potatoes thinner than any machine, removing only the skin with a minimum of cooking ring.

PeelGuard®

The PeelGuard® is an optical measuring and weighing device to detect residual peels and green or black spots and control your steam peeler.

Screw type blancher

The screw type blancher can be installed in French fry, potato flake and formed specialty lines. The intensive pump systems ensures an equal distribution of temperature.

Retro grader

The retro grader conditions the potato shreds through drying and chilling to help ensure a formable product.

Nex-Gem+

The Nex-Gem+ forming machine is an ultra-modern rotary former, which has been provided with numerous exceptional extras such as the 'Quick Change Inserts', a very swift way to exchange forming tools without the need of any special tools.

Primary Oil Filter

The frying oil pumped out of the fryer, is fed directly to the Primary Oil Filter and filtered. Adding the Primary Oil Filter to your process enables you to have a simplified circulation system with reduced oil volume.

EcoMiser™

The EcoMiser™ is the most effective and cost-effective process to remove and recover surface oil after frying.