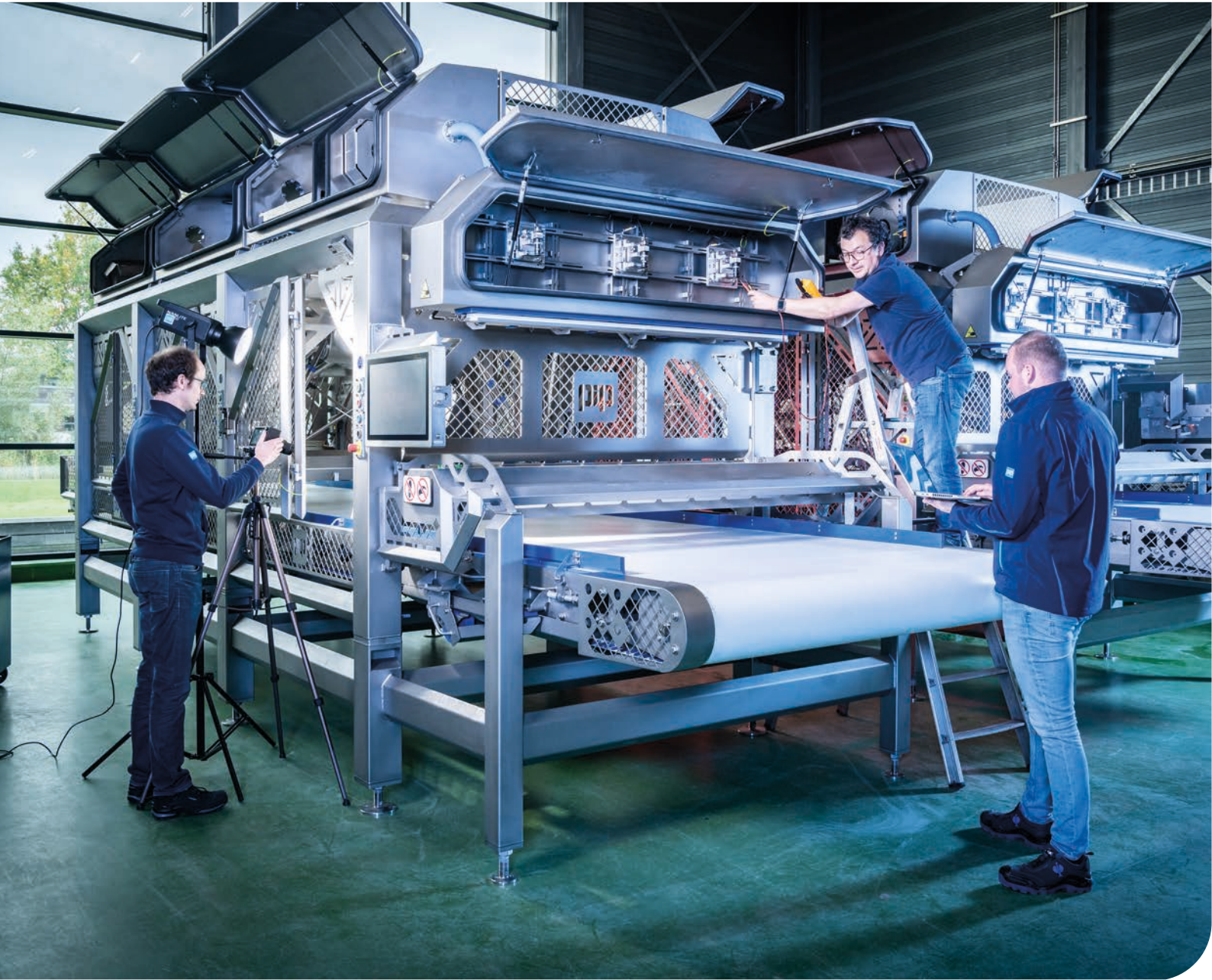




PRODUCT RANGE

INNOVATION
FOR INNOVATORS

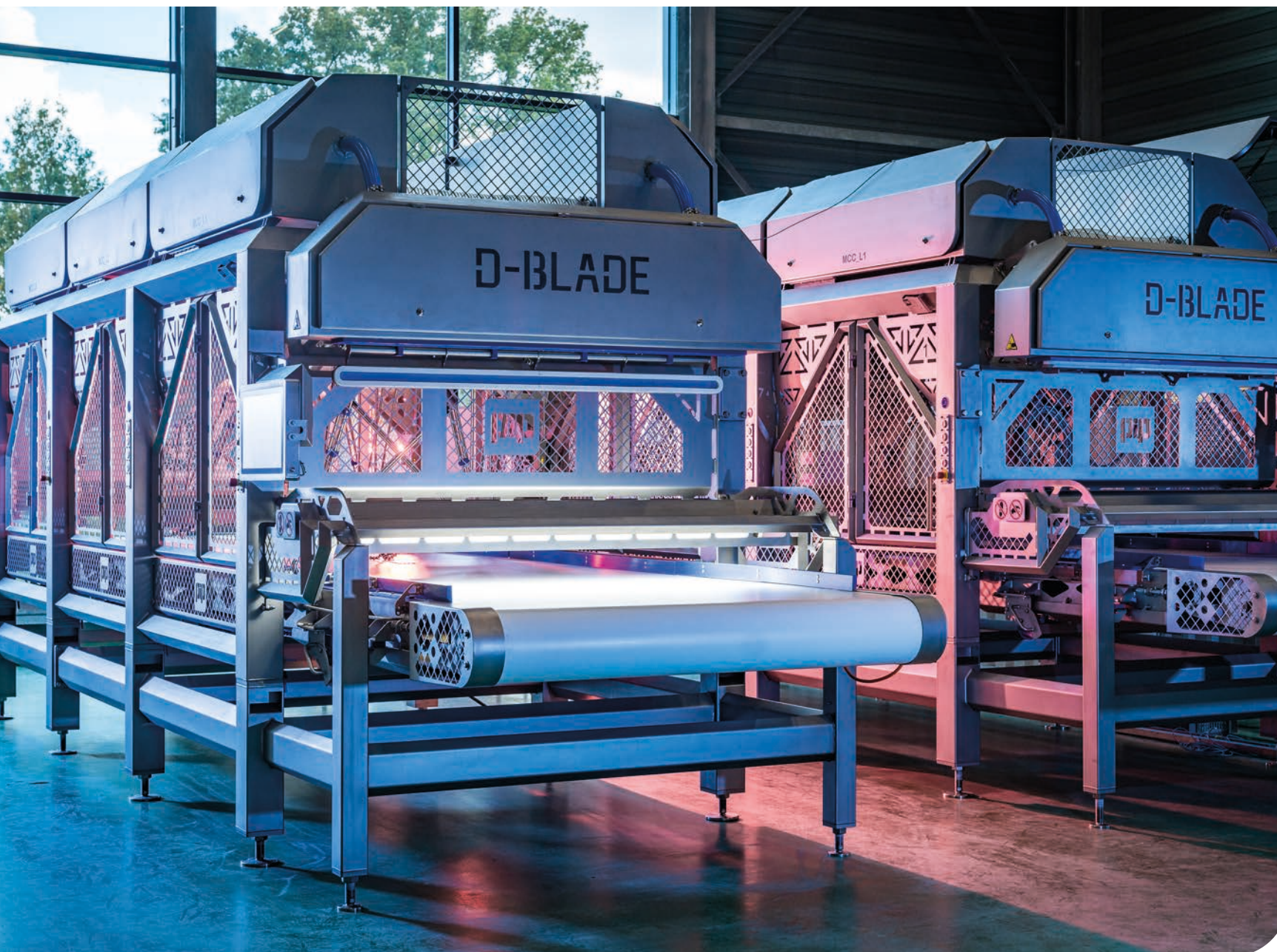


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Revolutionize your product line with the latest cutting technology by delta robots, vision technology and patented multipurpose blade designs.



Transform your cutting process with the most advanced Robotic Cutting System on the market.

■ D-BLADE

D-BLADE ensures the removal of defects, and streamlines the entire cutting process, providing you with a quick and efficient way to produce a variety of potato, carrot or strawberry products. D-BLADE is a revolutionary designed system that offers a number of advantages. With its precise cuts, you can expect consistent and uniform pieces every time. Reduce waste, increase productivity, and improve the overall quality of your product and cutting process. Join us in shaping the future of food processing technology.



Benefits of the intelligent robotic cutting system: D-BLADE



High yield

Only remove what you need to remove, i.e. potato black spots or carrot tops



High capacity

Up to 4 cuts per second per robot



Improved product quality

Precise position of the cut and clean, straight cuts



Handle any size or shape

Size or shape do not matter



Low maintenance

Few moving parts and open accessible design



Defect removal

Remove black spots from potato slices



Multifunctional

All functionalities work on one system



Minimize labor

Automate your current manual processes



Hygienic

Minimum product contact, full stainless steel framework, IP69K robots



High accuracy

Using machine vision technology to identify size and exact position of the produce



New development

With our pick & place and cutting functionalities, the opportunities are endless

We are not finished yet and welcome your suggestions. Join us in shaping the future.

The capacity of D-Blade is not calculated in kilo's or pounds but in cuts per second.

CAPACITY PER ROBOT

Cutting speed is determined by the distance the arms need to move from cut to cut. The higher or bigger the product, the more time it takes. For pick and place applications, i.e. Hasselback, the speed is approximately 1 hasselback per second. Please see the minimum cutting speed for different applications, assuming proper belt load.

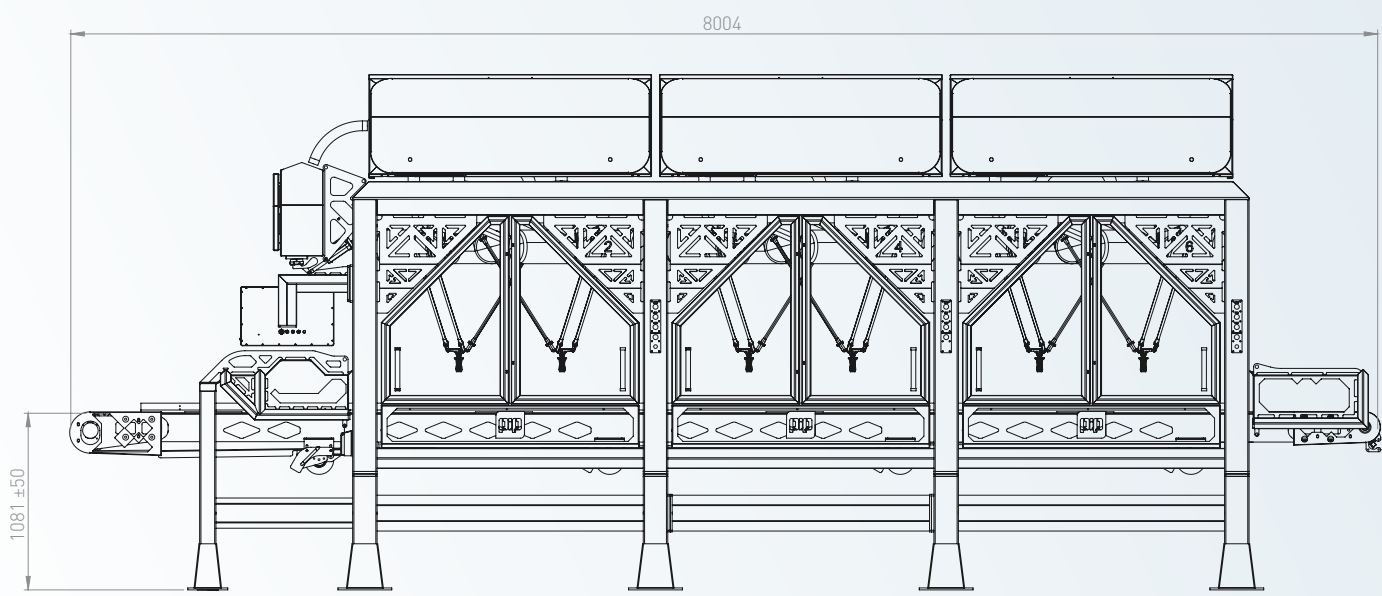
EXAMPLE CALCULATION

To calculate your required capacity in metric tons per hour use the following calculation:
[# of robots] * [3600 seconds] * [average weight of produce in kg's] * [cuts per robot per second] =
6 * 3600 * 0,2 * 3,5 = 15.1 metric tons per hour

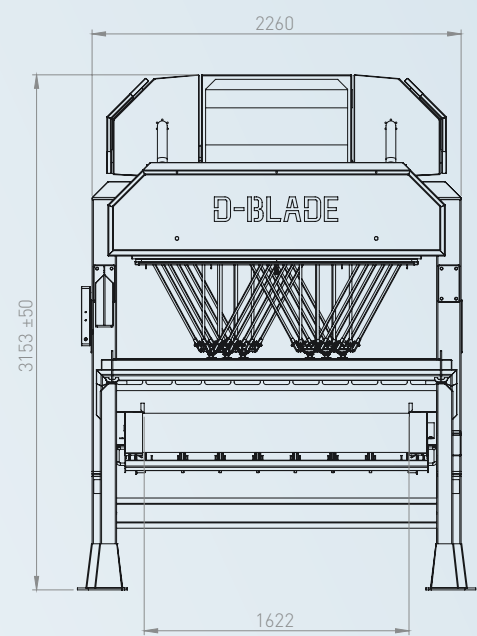
Produce	Cuts per second per robot
Large potatoes	3
Small potatoes	3,5
Potato slices	5
Carrots (topping, portioning)	3,5
Strawberries	3

D-Blade 6 header

Side view



Front view

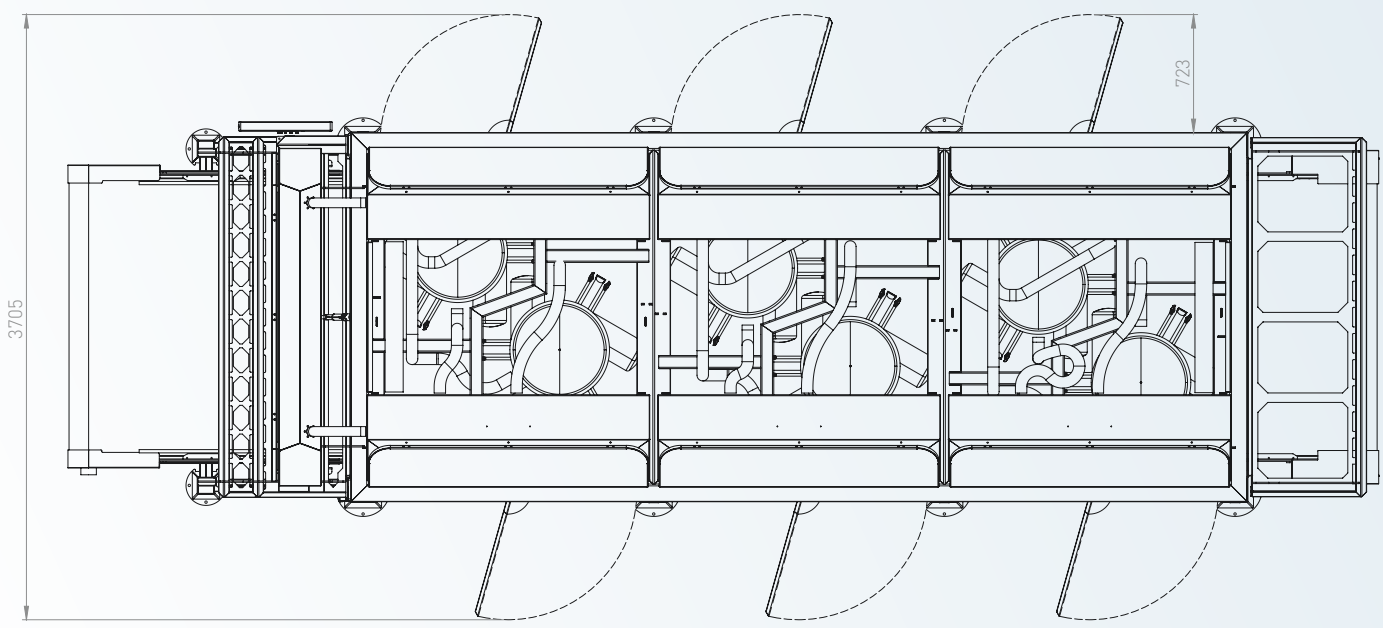


Facts & figures

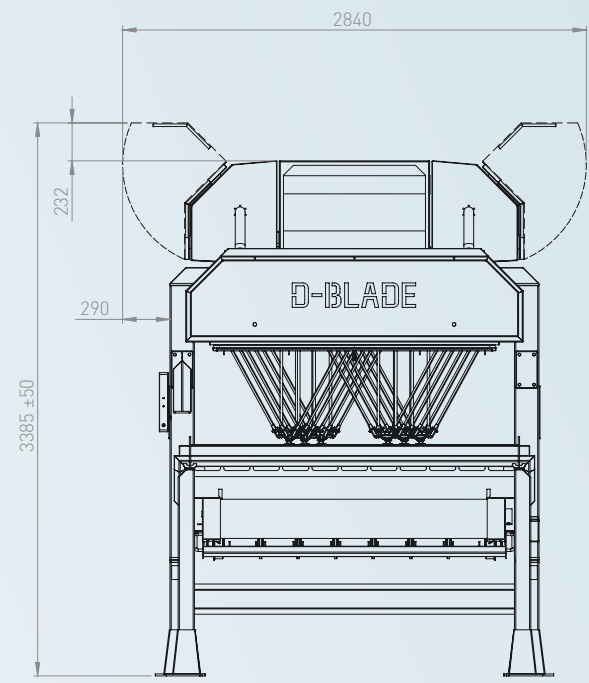
Assembled L X W X H	8004 x 2260 x 3158 mm
Transport L X W X H	8004 x 2260 x 2451 mm
Weight	6000 Kg
Supply capacity	32A
Supply Voltage	400 / 480 VAC
Belt speed	150 - 1000 mm/sec
Air supply	8 bar (when applicable)
Clean with water	Max 60 bar, 60°C
Cuts per robot	3-5 cuts per second

D-Blade 6 header

Robot access doors open; top view

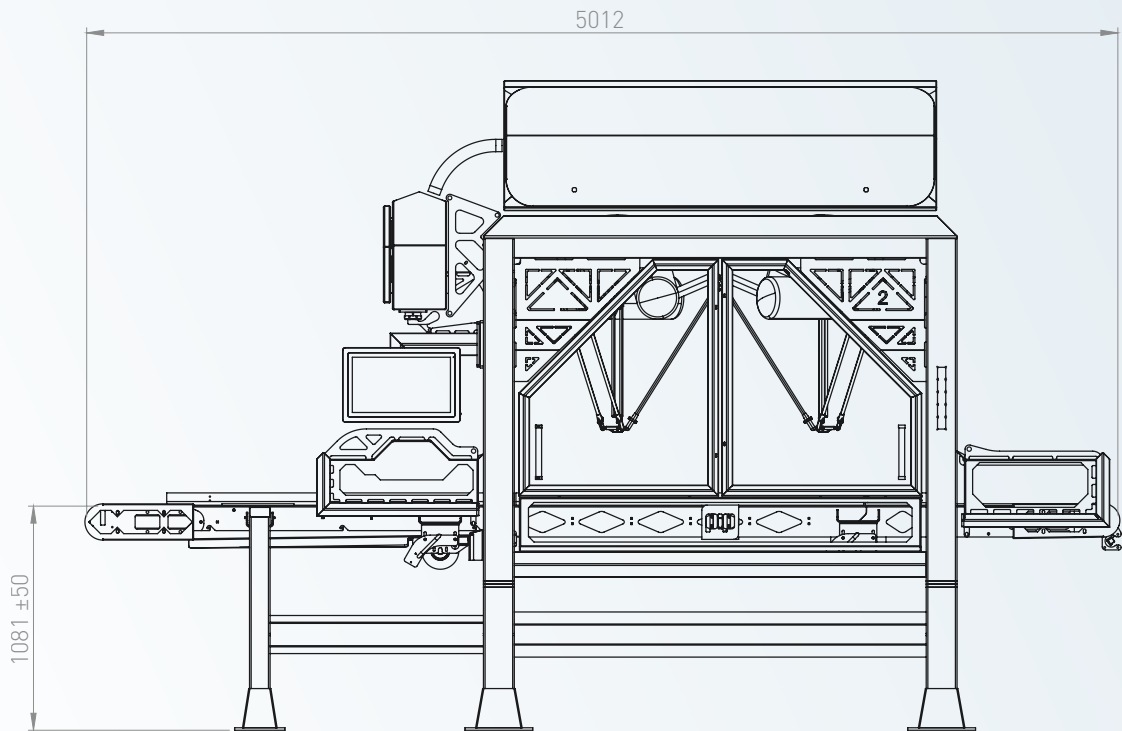


Top cabinet covers open: front view

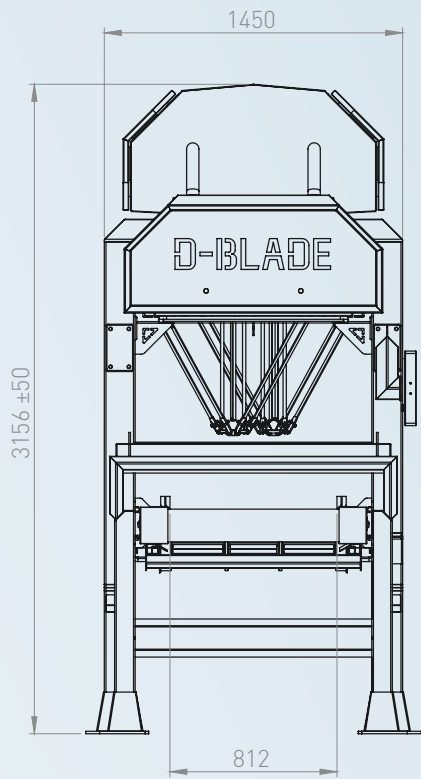


D-Blade 2 header

Side view



Front view

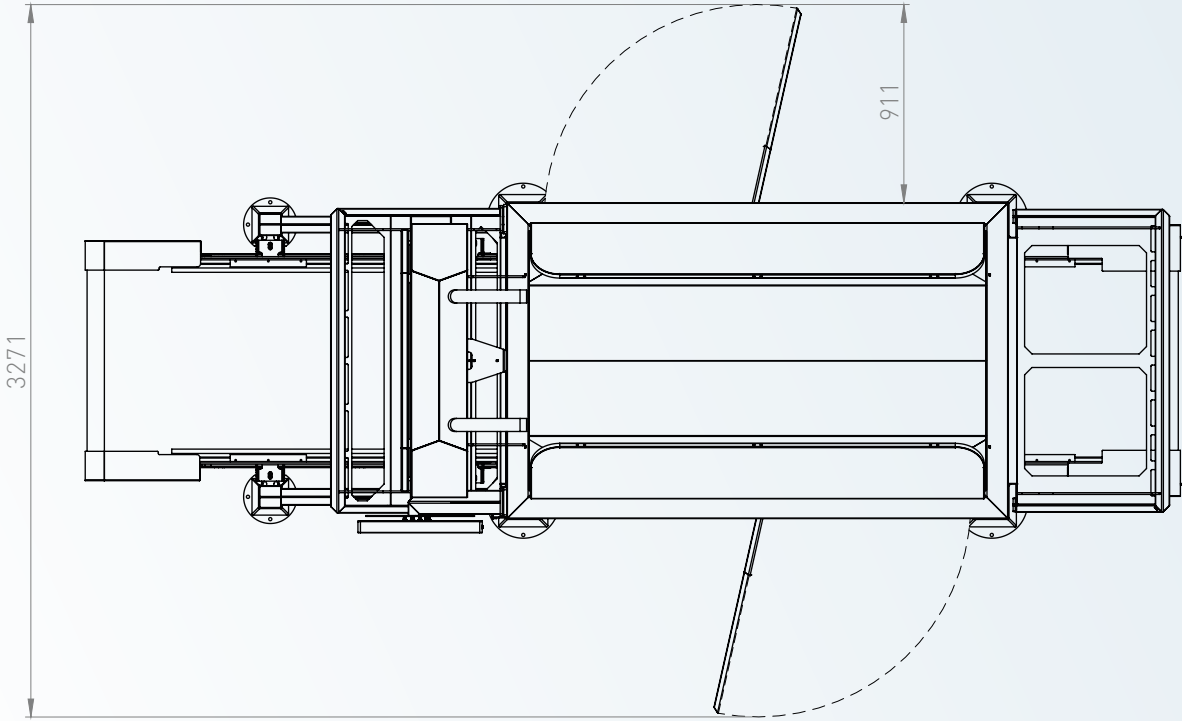


Facts & figures

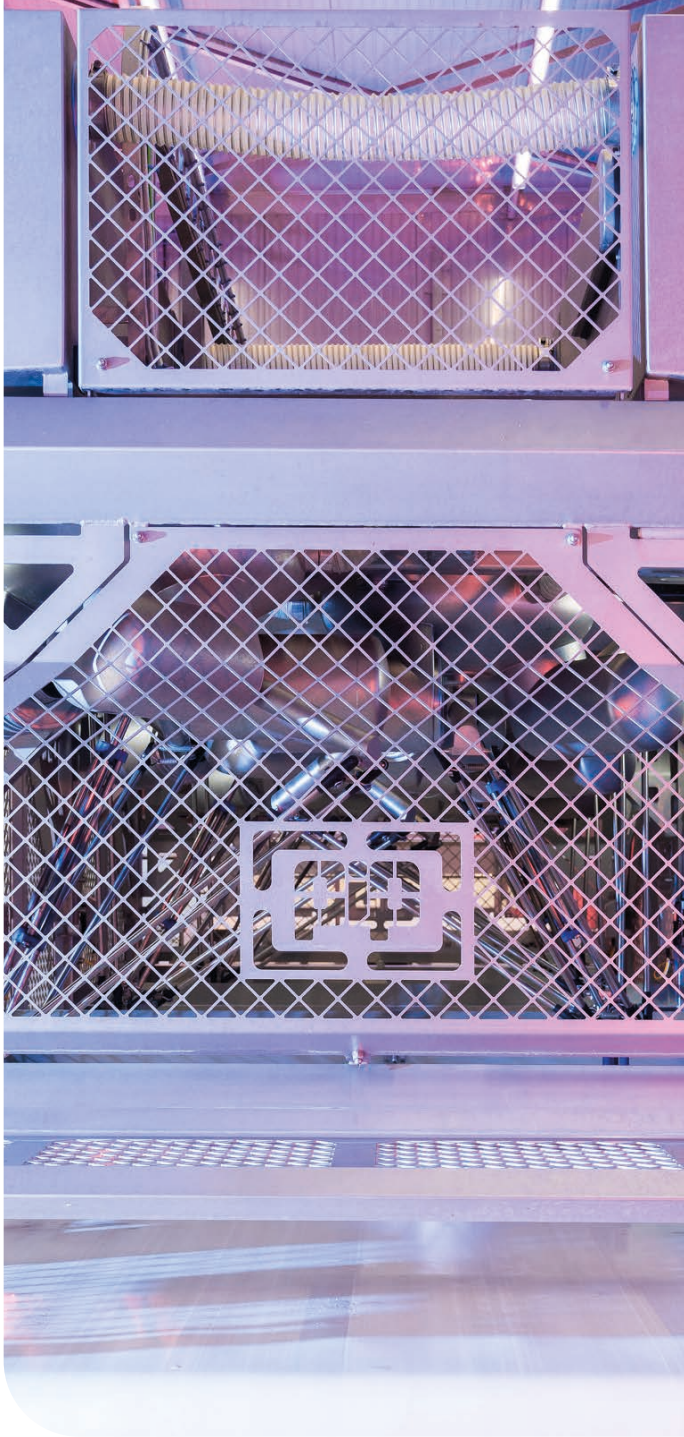
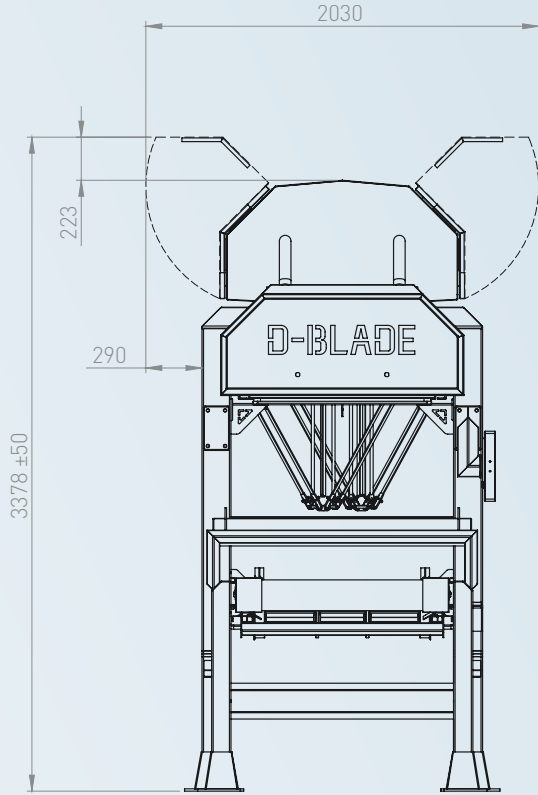
Assembled L X W X H	5012 x 1540 x 3158 mm
Transport L X W X H	5012 x 1540 x 2451 mm
Weight	3000 Kg
Supply capacity	25A
Supply voltage	400 / 480 VAC
Belt speed	150 - 1000 mm/sec
Air supply	8 bar (when applicable)
Clean with water	Max 60 bar, 60°C
Cuts per robot	3-5 cuts per second

D-Blade 2 header

Robot access doors open: top view

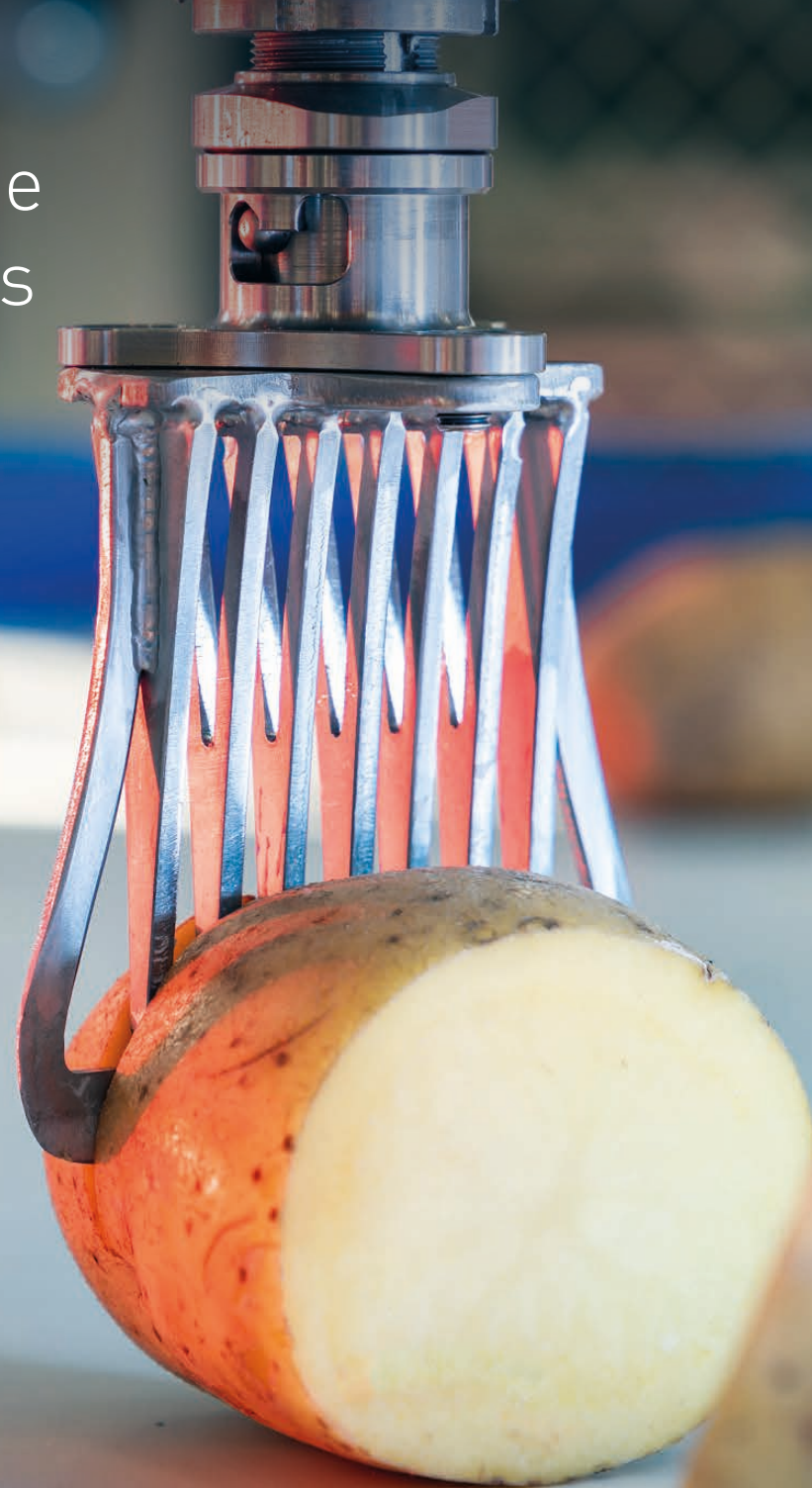


Top cabinet covers open: front view



Maximize efficiency and minimize defects with our cutting solutions for the potato industry.

■ POTATO INDUSTRY



Applications potato industry



Defect removal

Remove defects from potato slices or fries



Halving potatoes

Cutting potato in halves across width or length



Quartering potatoes

Quarter potato in 4 parts with one cut



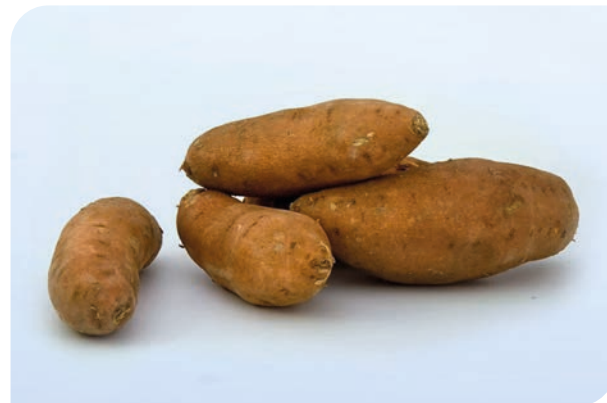
Dynamic portioning

Cut potato once or twice depending on size



Baked potatoes

Cut cross halfway through potato



Sweet potatoes dynamic portioning

Cut potato once or twice depending on size



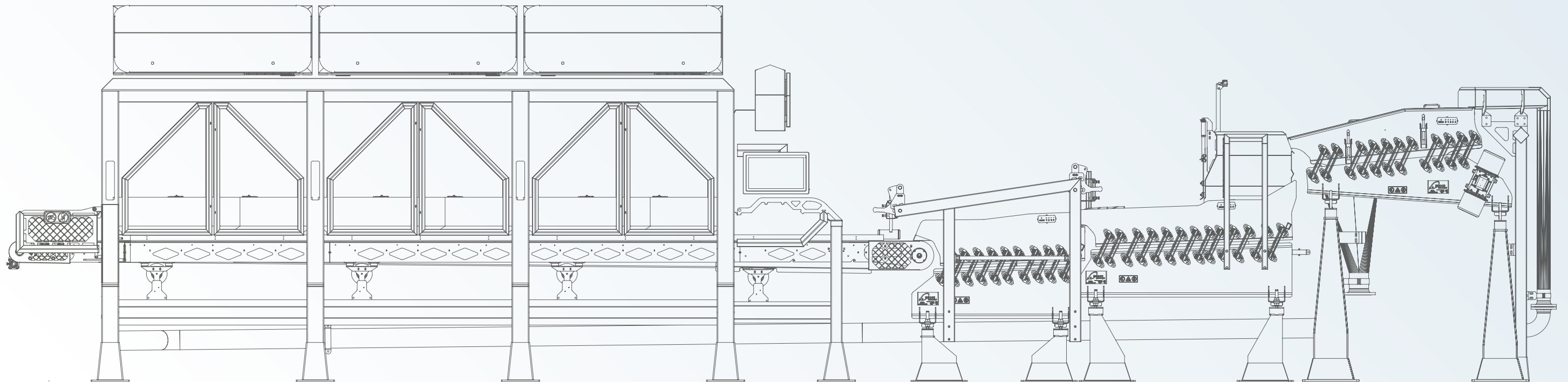
Hasselback potatoes

Production of the famous Hasselback potato

We are not finished yet and welcome your suggestions. Join us in shaping the future.

Example of potato line with 6 robots

Line measurement LxBxH (mm): 13389 x 3783 x 3513



Upgrade the quality and minimize foodwaste by effortlessly topping, tailing and cutting any size carrots.

■ CARROT INDUSTRY

Applications carrot industry



Topping / tailing carrots

Remove top and / or tail



Dynamic portioning

For best product utilisation, determine optimal part size per carrot



Static portioning

Cut the carrot in same sized same parts with our multi-knife



Waste upgrade

Remove tops from larger carrot pieces



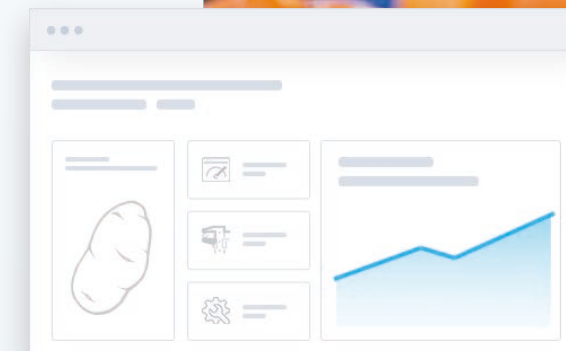
Baby carrot production

Create baby carrots with one precise cut with our multi-knife



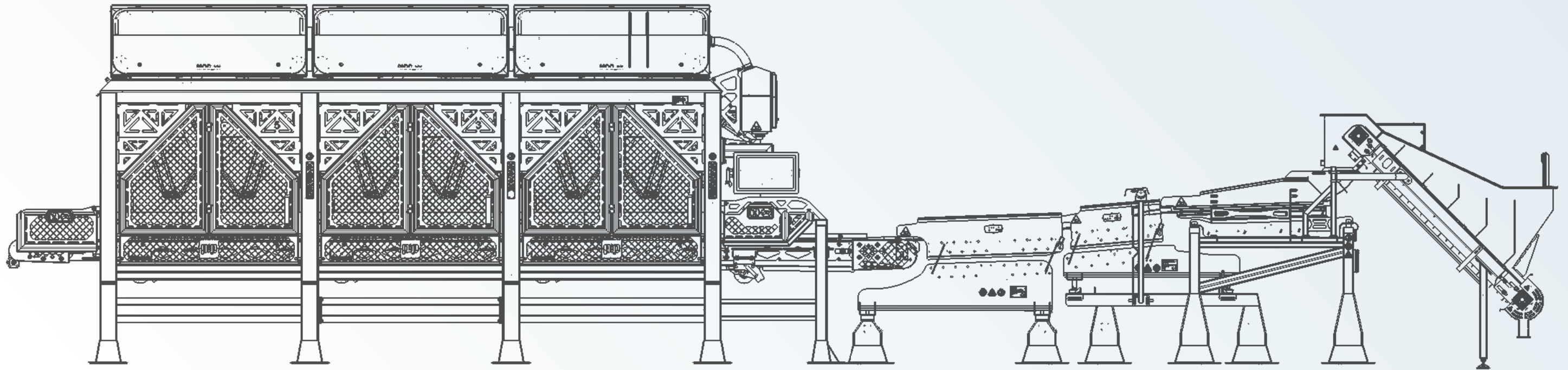
Custom made software for all your cutting needs

Our in-house software is programmed with one-click-easy control buttons to start up every cutting process



Example of carrot line with 6 robots

Line measurement LxBxH (mm): 19264 x 2560 x 3158



Save labor and achieve the highest yield with our patented calyx cutting system, designed for all sizes and shapes of strawberries.

■ STRAWBERRY INDUSTRY

Application strawberry industry



Calyx removal

Based on color and shape, D-BLADE recognizes the exact position of the calyx and determines the optimal cut to achieve the highest yield. During this process, the calyx will be removed from the belt and collected in a bin outside the system.

It will handle all varieties regardless of shape, color, softness and quality. D-BLADE can process 50.000 strawberries each hour, saving the industry significant labor costs.



Cutting efficiency

Yield is between 80% and 95% (depending on size)



Cutting performance

90% of all calyxes is cut

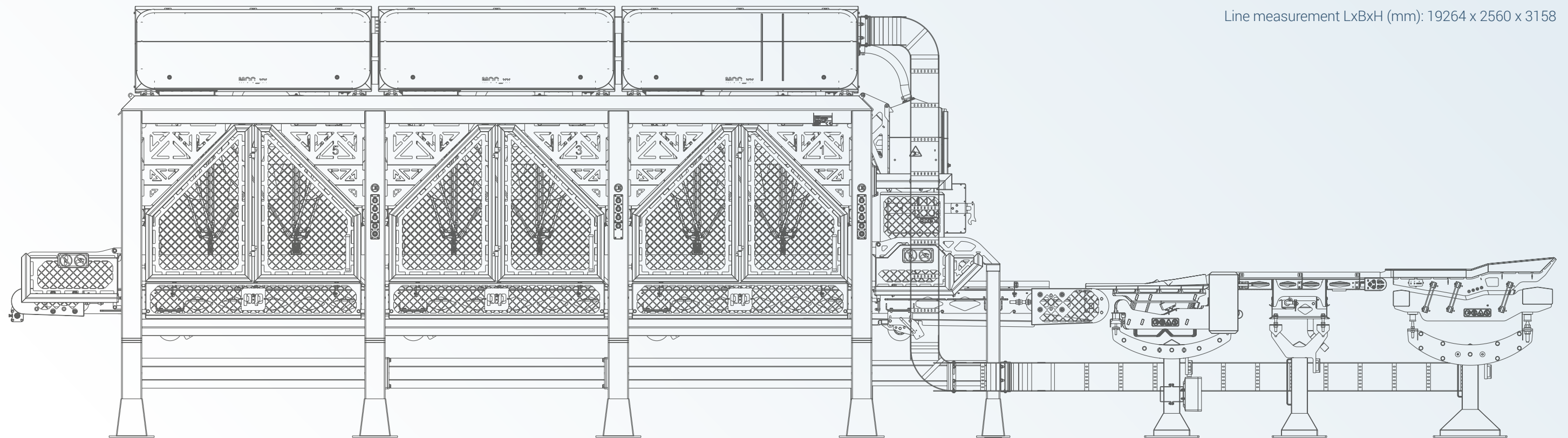
Infeed requirements

Requirement	Specification
Size	23 - 65mm
Shape	Elongated
Orientation on belt	Calyx visible and in cuttable position
Weight ranges or mixed	Mixed
Debris on belt	No debris
Capacity	3 cuts per robot



Required orientation of calyx on belt

Example of strawberry line with 6 robots





Years ahead of any other cutting system
and many more applications to come.
Join us in shaping the future of food
processing technology.

Precision in every cut: Patented knives for the ultimate intelligent cutting experience

■ ADVANCED PATENTED TECHNOLOGY

Introducing our patented line of knives designed specifically for use with intelligent robotic cutting systems. These knives are engineered to provide precision and accuracy in every cut, making them the ideal choice for a wide variety of applications. Whether you need to halve, quarter, or dynamically portion your products, our knives have you covered. With our patented technology, you'll experience unparalleled performance and efficiency in your cutting operations.





Learn what innovation looks like for your business

Innovation for Innovators

Established in 2015 PIP Innovations is a Dutch technology company delivering new technologies to the potato, vegetable, and fruit processing industry at large. D-BLADE is designed to perform long hours in the harshest of environments and comes with very low operating and service costs.

■ ABOUT PIP INNOVATIONS

- ✓ More than 50 years experience
- ✓ Patented technologies
- ✓ In-house software development
- ✓ World wide remote control support
- ✓ The future of food processing
- ✓ Request and discover the possibilities to suggest custom upgrades

Intelligent Robotic Cutting System

After launching the first generation D-BLADE in 2017 at the PEKA potato processing plant in The Netherlands, our 4th generation system is now used in the potato, carrot and strawberry processing industry across Europe and the United States.

Good to know

The high levels of reliability and quality that PIP Innovations offers you, helps you to become a highly dependable and steady partner for your customers.

Benefits of robotic cutting

- Boost productivity
- Increase yield
- Increase product quality
- High reliability



We invite you to visit us to see D-BLADE in action and to discuss your needs

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