

Primary **E**ngineering (THAILAND) **L**td

For all your Processing Needs



Primary **E**ngineering **A**ssociates

PRIMARY ENGINEERING



The objective of our company is to provide, what we believe to be, a necessary service to the Food and Tobacco Industry with regards to the Processing, Service & Maintenance of its equipment.

For our core tobacco industry we have a team of AMF Legg “Time Served”, experienced technicians and engineers for the maintenance, servicing, and overhauling of Tobacco machinery, particularly Legg Cutters, Dryers, Weighers, and Controls as well as all other manufacturers processing machinery.

Our Controls division is able to support from small minor projects such as weigher conversions, through to individual process controls, single line panels right up to complete plant automation systems.

We are also able to supply a range of processing equipment such as, Conditioning Cylinders, Stem Conditioners, Casing / Flavouring Cylinders, Weigh conveyors, Casing & Flavour Tanks, service panels and application systems.

Product/Service Information

WE OFFER :-

- ◆ Installation Engineers
- ◆ Commissioning Engineers
- ◆ CUTTER Specialist
- ◆ Process / PLC Engineers



- ◆ Servicing & Maintenance
- ◆ Operator + Technician Training
- ◆ Overhauling at Site
- ◆ Equipment upgrades



CONTROLS & AUTOMATION



Our Automation site in Bangkok is capable of design and manufacture of high quality industrial control systems, offering innovative and practical solutions to all your automation requirements ranging from simple MCC and dedicated controller applications, to networked PLC and SCADA systems. Full 'turn-key' service from design through to commissioning of bespoke systems or upgrade an existing control system using the latest technologies enabling you to reduce downtime without replacing equipment.



- **Control Panels, PLC Panels, Instrument panels,**
- **MCC, LV switchgear**
- **PLC software, HMI & SCADA software**
- **Installation of industrial electrical systems**
- **Panel fabrication and installation**
- **Instrumentation & Calibration**



WEIGHERS

High Accuracy Weighbelt.



High Accuracy <math><0.2\%</math>

High Resolution Encoder and Load Cells

Automatic Belt Tracking

Fully Stainless Steel Construction

Single Ply pre-joined belt

Cantilever construction for easy belt change



Eco-Weighbelt.

Cost effective solution for when budgets necessitate.

Accuracy <math><0.6\%</math>

High Resolution Encoder and Load Cells

Fully Stainless Steel Construction

Single Ply pre-joined belt

Cantilever construction for easy belt change



BIN FILLING SYSTEM.





The FAM Tridis™ 180 is a new tridimensional FAM dicer. It is specifically designed to help processors of fresh vegetables and IQF vegetables and fruits reach perfect cut quality at medium-high volumes. The cutting principle is based on the proven technology of the FAM Tridis 240, a very successful high capacity dicer in use by many leading food processors.

Specifications

Cut shapes:	Slices Strips Dices
Cut sizes:	Flat slices: 1,60 mm - 25,00 mm Crinkle slices: up to 25,00 mm Strip cutting: circular knife cuts: 3,00 mm - 60,00 mm, crosscut knife cuts: 3,00 mm - 65,00 mm. Dices: flat cut: 3,00 mm - 25,00 mm crinkle cut: 7,10 mm - 16,00 mm
Motor:	2,2 kW



The FAM Tridis™ 240 is a tridimensional dicer, designed for the very demanding frozen vegetable & fruit and French fry industry. Compared to other available cutting machines, the FAM Tridis™ 240 increases capacity by 10% to 40%. Perfecting the product flow has led to an excellent cut quality and yield, with less slivers and fines.

Specifications

Cut shapes:	Slices Strips Dices
Cut sizes:	Flat slices: 1,60 mm - 25,00 mm Crinkle slices: up to 25,00 mm Strip cutting: circular knife cuts: 3,00 mm - 60,00 mm, crosscut knife cuts: 3,00 mm - 65,00 mm. Dices: flat cut: 3,00 mm - 25,00 mm crinkle cut: 7,10 mm - 16,00 mm
Motor:	4 kW

Cutting Trials

Worldwide, FAM is ready to advise you in one of its fully equipped test centres. You are invited to send us products for evaluation and you are most welcome to be present during the trials.

Find Your Agent

Go to www.fam.be/en/agents and find all relevant contact data to get in touch with FAM, the regional branch offices and the worldwide agent network.

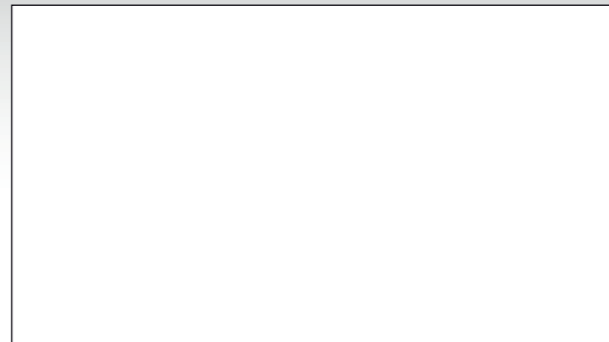
Contacts and Information

For a complete overview of our machines, applications, services and agents, please visit our website. FAM will be happy to respond immediately to your information request.

Please visit www.fam.be.



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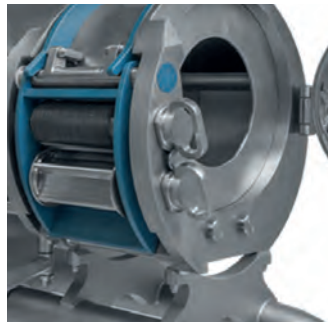
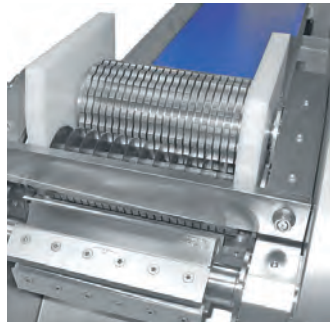
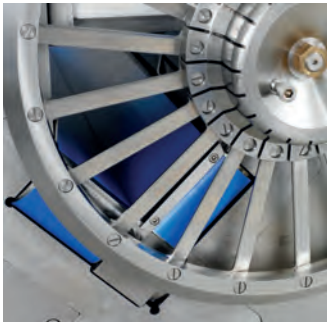
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How to cut better?



How to cut better?





TOMRA 5B OPTICAL SORTER



**Interested in a free demonstration
with your own product or require
more information?**

Please contact us directly.

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The TOMRA 5B sorting machine guarantees optimal sorting of your food products. It helps you meet the highest standards for both food safety and quality. The sorter has a user-friendly design, excellent performance, and state-of-the-art hygiene features that comply with the latest standards and regulations.

STABLE TECHNOLOGY

The TOMRA 5B sorting machine has been designed and developed with optimum performance, food safety and quality in mind. A strategic combination of **multiple sensors** and object processing with new, **advanced shape algorithms**, enables the distinct and targeted identification of individual defects in high-volume production flows. The innovative **360° inspection** with smart surround view technology boosts product quality and guarantees swift **removal of foreign material**, resulting in a highly efficient sorting process and the ultimate protection of your brand reputation.

THE BEST OF MACHINE DESIGN

The machine design strives to meet the latest applicable **safety and hygiene regulations**, providing peace of mind when audits are carried out. It concerns an open system with a **fast and efficient cleaning process**, resulting in fewer unreachable areas and a lower risk of waste material building up. The TOMRA 5B sorting machine is equipped with an **application driven, innovative new interface**. It incorporates an intuitive, very easy to use, functional design and an ergonomic interface that brings you one step closer to a higher product quality and productivity levels.

BENEFITS

- **Maximum food safety**
- **Highest quality product output**
- **Optimized yield**
- **High performance**
- **User-friendly**
- **Hygienic design**



WORKING PRINCIPLE

The produce is spread uniformly onto the infeed belt. After that, lasers and smart surround view camera technology inspect the product in different inspection zones. A few milliseconds later, defects are rejected in 1 or 2 separate reject streams by small-pitch TOMRA ejector valves, which are part of an innovative smart ejection system. These ejector valves are positioned at the end of the infeed belt. The good produce continues its way along the processing line.

DIMENSIONS AND SPECIFICATIONS*

Model	Dimensions				Utilities	
	Width**	Length	Height	Infeed elevation	Power	Air
TOMRA 5B SERIES 800	1600 mm (63")	4125 mm (162")	2950 mm (116")	1200 mm (47")	3ph+N: 5 kVA	87-102 psi 6-7 bar
TOMRA 5B SERIES 1200	2000 mm (79")	4125 mm (162")	2950 mm (116")	1200 mm (47")	3ph+N: 7,5kVA	87-102 psi 6-7 bar
TOMRA 5B SERIES 1600	2400 mm (94")	4125 mm (162")	2950mm (116")	1200 mm (47")	3ph+N: 10kVA	87-102 psi 6-7 bar
TOMRA 5B SERIES 2000	2800 mm (110")	4125 mm (162")	2950 mm (116")	1200 mm (47")	3ph+N: 10kVA	87-102 psi 6-7 bar

*Information shown for reference and may change depending on the actual application.

** Width of machine with open doors



HELIUS OPTICAL SORTER



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The Helius free-fall sorter is the perfect fit for growers and processors sorting nuts, dried fruit, (IQF) fruit and vegetables. The technology enables the removal of undesired discolorations, foreign material, defects, blemishes and contaminations invisible to the human eye.

VERSATILE TECHNOLOGIES

With up to 12 individual laser signals, the Helius detects all **colour, structure defects** from a stream of good product. The Helius is also able to sort based on **biological characteristics**. Combined with TOMRA's patented FLUO™ technology, the Helius detects the slightest shades of **chlorophyll** to create an even better contrast between good products and defects. Other technologies available are SWIR comparing the objects' **water content**, and Detox™ for **afatoxin** detection.

FAST & RELIABLE REMOVAL OF DEFECTS

After the inspection of the produce, the unwanted material is ejected via a **front or rear ejection system**. The manifold position before or behind the produce provides higher rejection accuracy, efficiency and more consistent sorting.

BENEFITS

- **Maximum efficiency in all conditions**
- **Calibration free**
- **Small footprint**
- **Upgradeable**
- **Self-learning**
- **Low maintenance**
- **Easy to operate**



WORKING PRINCIPLE

A feed shaker or hopper uniformly spreads the product over the free-fall chute. The product falls down towards the inspection zone, where it is scanned by lasers. A few milliseconds later the defects are hit with a precise powerful burst of air sending them into the rejection zone while the good product continues its natural free-fall.

DIMENSIONS AND SPECIFICATIONS*

Model	Dimensions				Utilities	
	Width	Length	Height	Infeed Elevation	Power	Air
HELIUS 640	2759 mm (109")	3433 mm (135")	2094 mm (82")	2904 mm (114")	1ph: 3kVA 3ph: 2,5kVA	29-87 psi 2-6 bar
HELIUS P 640	2759 mm (109")	2784 mm (110")	2486 mm (97,7")	2483 mm (98")	1ph: 5kVA	87-102 psi 6-7 bar
HELIUS 1200	3219 mm (127")	4198 mm (165")	2088 mm (94,8")	2088 mm (82")	1ph: 3kVA 3ph: 2,5kVA	29-87 psi 2-6 bar
HELIUS P 1200	3219 mm (127")	2997 mm (118")	2486mm (98")	2486 mm (98")	1ph: 5kVA	87-102 psi 6-7 bar
HELIUS 1600	3619 mm (142")	5546 mm (218")	2366 mm (93")	2366 mm (93")	1ph: 3kVA 3ph: 2,5kVA	29-87 psi 2-6 bar

*Information shown for reference and may change depending on the actual application.