



TOMRA
SORTING SOLUTIONS

FOOD

DRIED FRUIT

English

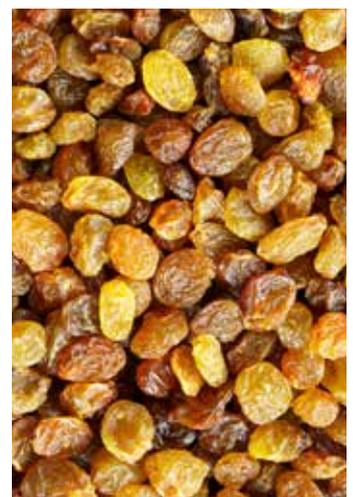
SAFE FOOD, CONSISTENT QUALITY

In order to meet the contemporary food quality standards it has become crucial to invest in reliable food sorting solutions. TOMRA Sorting offers sorters for a multitude of applications, removing defects such as discolorations, (loose) pits and pit fragments, stems, foreign material, blemishes and aflatoxin.

SORTING IS VITAL

Given the particularity of the dried fruit industry, and based on over 40 years of experience, TOMRA is the most trusted partner for the development, installation and support of sorting equipment worldwide.

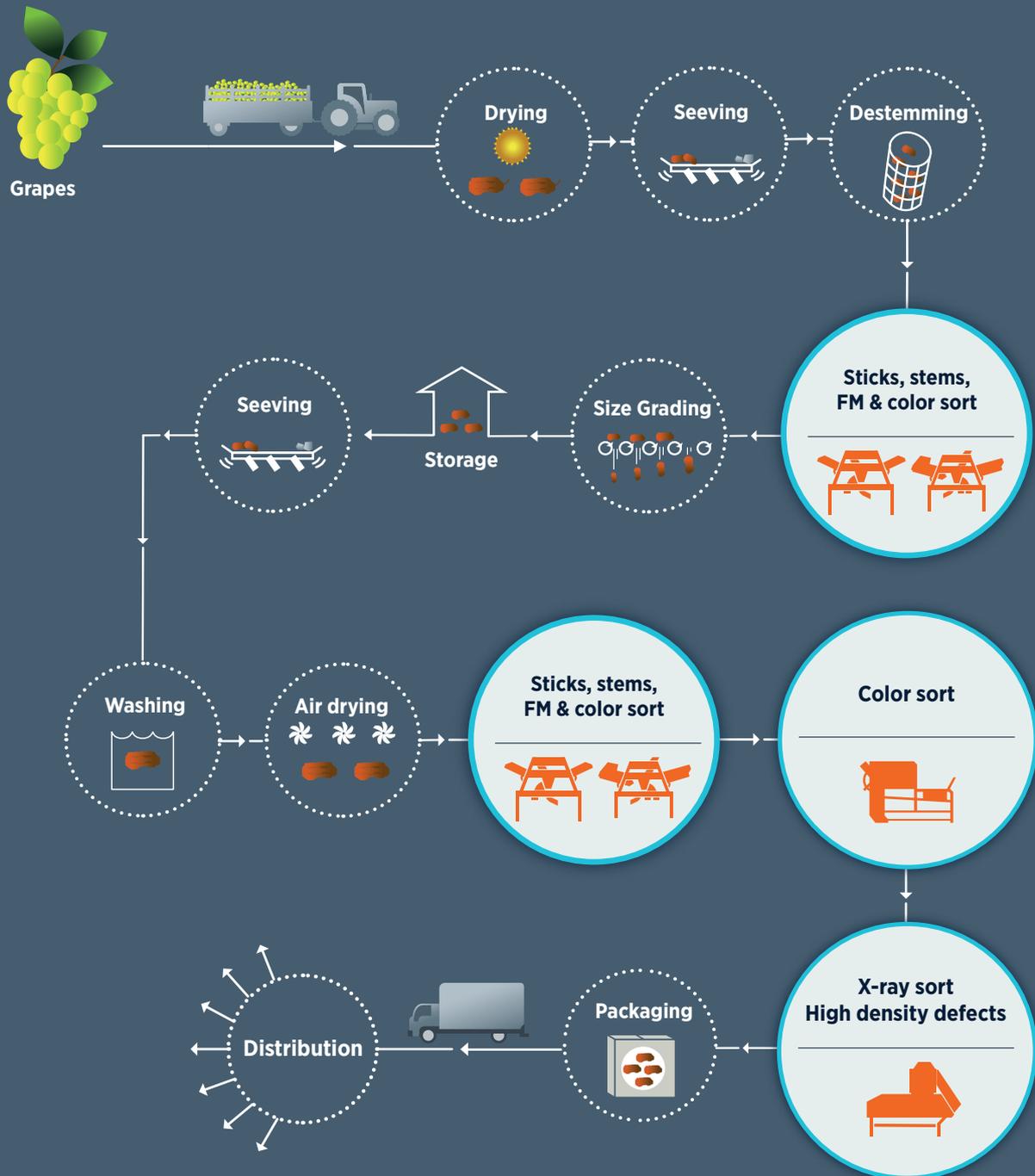
Through the combination of technologies and the versatility of the sorters we help you in delivering the requested product quality. Even when it concerns the removal of defects invisible with the human eye.



Applications:
apricots, cherries, dates,
figs, prunes, raisins and
many more

SENSOR-BASED SOLUTIONS, FROM FARM TO FORK

Depending on the production environment, throughput and other specific needs, we design the most efficient line lay-out. The actual machine configuration is defined based on our combined experience with similar processors and after extensive testing.



TOMRA offers a wide variety of machines for every stage in the processing line and every budget.

BENEFITS

FOOD SAFETY

The production of contaminated produce can damage your **reputation** forever. With regards to the dried fruit industry we are referring to defects such as stems, stalks, glass, metal, plastic and stones. Other characteristic defects like aflatoxin, embedded stones and pits might not always be visible with the bare eye but always imply a high level of risk for the consumer. Together with TOMRA you can tackle the risk of contamination and deliver a **constant output**.

YIELD OPTIMISATION

The Advanced Foreign Material Detector (AFMD) minimizes the false reject and drastically increases your sorting **efficiency**. Not only resulting in higher levels of yield, but of course also increasing your **profitability**.

HIGH THROUGHPUT

Implementing sorting technology reduces the need for manual labour, allowing you to deploy your staff in other crucial positions while the output **quantity** and **quality** increases. These combined advantages lower your costs and increase the level of **customer satisfaction**.

TECHNOLOGY

LASER

TOMRA's laser machines sort based on colour, structure, and biological characteristics. Laser scanning detects contaminants even when the product and the defects have the same colour or structure characteristics. In addition, the Advanced Foreign Material Detector (AFMD) module sorts on product specific features, like the moisture level in raisins.

CAMERA

Recognition of materials based on colour, biological characteristics and shape is guaranteed thanks to the use of cameras. Their capabilities go beyond the visible spectrum and include infrared, ultraviolet and other spectra. TOMRA has developed exclusive high resolution cameras with an adapted spectrum, ideal for optical food sorting.

BSI

Allows the examination of food products using light beyond the visible spectrum, into the near-infrared region. TOMRA's BSI technology inspects the characteristics of the product and can identify certain chemical and molecular differences and changes on the surface and within the objects being inspected.

X-RAY

Detects on density, irrespective of size, moisture or pollution level.





ADVANCED SORTING PARAMETERS

	High performance NIMBUS	Functional GENIUS	Performance IXUS BULK
● Gross ●● Good ●●● Excellent			
Technology	LASER & BSI	CAMERA & LASER	X-RAY
Rejection	2-3 way	2-3 way	2 way
⊗ Detailed size/ geometry		●●●	
⊗ Detailed shape		●●●	
○ Subtle color	●●	●●●	
☹ Subtle blemish	●●	●●●	
○ Defect	●●	●●	
○ Damage	●	●	
💧 Moisture	●●●	●●●	
* Biological characteristics	●●●	●●	
⚡ Foreign material	●●●	●●	●●
⚡ Advanced Foreign Material Detection	●●●	●●	
● Stones	●●	●●	●●●
⊙ Pits		●	●●
➤ Stems	●●●	●●	
☠ Aflatoxins	●●		
ρ Density			●●●
BSI Biometric Signature Identification	●●●		
📄 Data	Yes	Yes	Yes

Machine brochures available on www.tomra.com/food or on request.

OUR SORTING SOLUTIONS



●●●●○ FUNCTIONALITY
●●●●○ THROUGHPUT
●●●●○ FLEXIBILITY

NIMBUS

The Nimbus ensures the delivery of safe and healthy food by removing any unwanted discolorations and foreign material. In addition, the Nimbus is also able to sort based on biological characteristics, and removes aflatoxins. The new generation of free-fall sorting solutions combines the efficiency of laser detection and camera technology.

The sorter can also be equipped with a hyperspectral camera (Biometric Signature Identification). This **Nimbus BSI** can identify the material's unique fingerprint. The ejection system uses an optimal pitch for enhanced removal of defects. The Nimbus (BSI) can be equipped with a Front (FES) or Rear Ejection System (RES) for greater flexibility, lower false reject and improved yield.



●●●●○ FUNCTIONALITY
●●●●○ THROUGHPUT
●●●●○ FLEXIBILITY

GENIUS

The Genius removes all unwanted discolorations and foreign material from a variety of dried fruit. TOMRA's technology allows you to increase the level of produce quality and the delivery of safe food. With high resolution cameras and lasers, the Genius sorter offers a range of inspection technologies in different inspection zones. After being scanned, the state-of-the-art air guns reject any defect within milliseconds in 2 or 3 separate streams. The good

product follows the further steps in the processing line. This way, the Genius achieves an unequalled food sorting performance. Given its modularity, the Genius can be tailored to your unique requirements and needs.



●●●●○ FUNCTIONALITY
●●●●○ THROUGHPUT
●●●●○ FLEXIBILITY

IXUS BULK

The Ixus scans products in bulk to detect foreign material dangerous to your customer. Metal, glass and small rocks (free flowing and embedded) are detected by absorbing more x-rays than the good product. The type of x-ray source is defined per produce, type of defect and capacity. The Ixus is very flexible and easy to integrate into the production line and can be used as a complementary or stand-alone sorting machine.

Implementing an x-ray sorting machine at the beginning of the line will decrease your incoming defect load significantly and will facilitate further processing. At the furthest end of the line, it will minimize the risk of finding any unwanted material in your final product, just prior to packaging.



You are a Resource Revolutionary.

TOMRA Sorting Solutions Food is the leading provider of sensor based sorting, peeling and processing technology for the fresh- and processed food industries.

Turning yield into usage, profits into progress, TOMRA transforms the way the world obtains, uses, and reuses its resources.

If you are interested in a free demonstration with your own product or if you need more information, please contact us directly.



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