

FRUIT PROCESSING

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Industry 4.0

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Packaging

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JANUARY
1/2020

INTERNATIONAL JOURNAL FOR THE FRUIT PROCESSING, JUICE AND SOFT DRINKS PRODUCING INDUSTRY



„I invest and generate capacity; our customers then come to us of their own accord.” Yahya Abbas, President/CEO of Ya YA Foods

FOOD SAFETY

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Since launching their pioneering in-pipe technology in 2010, the food safety experts at Food Radar Systems in Gothenburg, Sweden, have been on quite a journey. The ‘Food Radar’, which quickly detects and removes previously undetectable foreign bodies from food production lines, has been creating quite a stir in the industry. Now boasting a client list of major international food manufacturers that would be the envy of most food tech companies, their story is one of continuous innovation through technical know-how and customer focus ...

FILLING TECHNOLOGY

The Facilitator – Aseptic filling at Ya YA Foods in Canada 10

Contract filler Ya YA Foods in Toronto processes a vast range of products and packaging for the world’s big beverage brands. In the sensitive beverage trend segment company owner Yahya Abbas relies entirely on aseptic expertise from KHS. Yahya Abbas has a degree in civil engineering from Great Britain. It’s thus hardly surprising, then, that the 59-year-old president and CEO of Ya YA Foods in Toronto, Canada, still considers himself to be more of an engineer than a pen pusher. “I am a facilitator,” is how he describes himself ...



IMPRINT

Publisher

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Advertisement Rates:

Current price list 2019 on request and at
www.fruit-processing.com

Readers’ Service

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Subscription Rates

Print Europe: EUR 115 incl. mailing cost
Print Overseas: EUR 124 incl. mailing cost
Digital package: EUR 120
PROfessional package: EUR 175

Cancellation: Written notice one month prior to the end of the subscription period.

Layout

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D-56587 Oberhonnefeld, Germany

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Ownership structure of the shareholders in accordance with Pressegesetz Rheinland-Pfalz:
Evi Brennich 51 %, Guido Hoffmann 26 %, Lothar Hoffmann 14 %, Hubert Brennich 9 %;
Managing Directors: Marco Brennich (Publishing Management), Christian Friedel (Commercial Management);
HRB 14556 Montabaur

Printed by:

mohr medien GmbH, Metastraße 3, D-56579

Note:

The views and opinions expressed by the

authors do not necessarily reflect those of the publisher or the editorial staff.

Original science and research papers will be presented for scrutiny to a member of the Peer Review Board. All manuscripts must be written in English. If English is not the author’s primary language, the author should obtain assistance.

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FRUIT is read in 103 countries by more than 16,000 readers per issue.

Publication frequency (print/digital): monthly

© Copyright 2020 confructa medien GmbH, Westerwaldstrasse 2a, D-56587 Oberhonnefeld, Germany

ISSN 0939-4435,
Printed in Germany

PACKAGING

Disruptive compact line layout at BINA Switzerland with an ultra-flexible shrink-wrapping infeed for squared bottles 12



Part of Swiss M-Industry (Migros Group), Bischofszell Nahrungsmittel AG (BINA) is driving the increasing health and wellness trend in the country via new formats for their organic juices and iced teas. To help shrink-wrap their latest, squared bottles alongside the traditional rounded ones, BINA needed a flexible, compact and easy-to-handle shrink- wrapping system for film packs and tray plus film packs. The solution came from Sidel in the form of a lean, unifilar 90° infeed system integrated in one of their proven shrink-wrappers to deliver a reliable, disruptive and compact line layout ...

INGREDIENTS

Beauty from within: Epigenetics pave the way to a new growth market. 16

Real beauty comes from within. This is nothing new, yet more topical than ever as breakthrough scientific discoveries have taken it to another level. Genome research and epigenetics have led to the understanding that certain plant ingredients have anti-ageing properties and beneficial effects on skin and hair – coming from within. These discoveries are providing new impetus for the nutritional supplement market and a new generation of beauty food ...

EVENTS

The food and beverage ingredient world hosted in Paris 18

With an enormous thematic and geographical scope – exhibitors from 74 countries and visitors from 173 countries – Fi Europe & Ni once again proved that it is the trusted and chosen meeting place for the international food and beverage industry. The three-day event attracted almost 25.000 visitors at the beginning of December – despite the all-out strike on the third day of the show ...

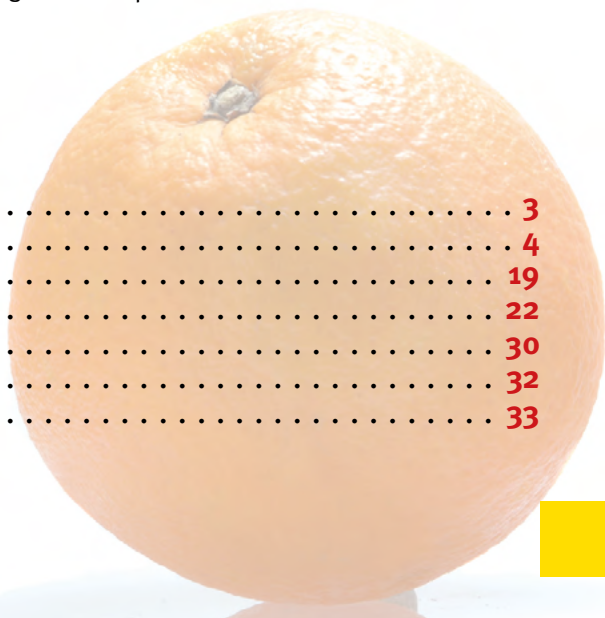
INDUSTRY 4.0

SIG launches first-ever integrated asset performance and field service management solution 20

SIG is set to deliver the first integrated APM (asset performance management) and FSM (field service management) digital solution for the food and beverage industry. Developed in partnership with GE Digital, the Plant 360 Asset Management will feature a range of on-demand digital services designed to help manufacturers reach new levels of efficiency, productivity and connectivity in their operations ...

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“Seeing is believing!”

The team at Food Radar Systems invites you to see for yourself how their unique food safety technology can add real value to your business.

| Contamination | Detection | Food Radar | Fruit Preparations | Microwave Technology | Product Safety |

Since launching their pioneering in-pipe technology in 2010, the food safety experts at Food Radar Systems in Gothenburg, Sweden, have been on quite a journey. The ‘Food Radar’, which quickly detects and removes previously undetectable foreign bodies from food production lines, has been creating quite a stir in the industry. Now boasting a client list of major international food manufacturers that would be the envy of most food tech companies, their story is one of continuous innovation through technical know-how and customer focus.

Food contamination is an ever-present threat to manufacturers and consumers alike – and it’s very bad for business. To fully comply with health and safety legislation, food manufacturers must be able to demonstrate that they have taken every reasonable precaution to prevent contamination of their product. The good news for every-

one now is that, with the Food Radar, it is now possible to achieve a higher level of food safety than ever before.

And this is a benefit that is now being enjoyed by many established international food manufacturers such as Emmi of Switzerland. Thomas Arnold, Plant Manager (Emmen) told us: “Product safety has always been a strong focus in our company. We invested in our first Food Radar system in 2014 and last year we decided to put in a second system with all the improvement the new 3rd generation offers”.

The Food Radar is unlike any other food safety technology. Specially devised to maximise the quality of pumpable food products such as baby food, sauces, soups, fruit preparations and desserts, the Food Radar sets a new standard of safety for food manufacturing. Whereas other



Fig. 1: The Food Radar system gives cutting-edge protection using an entirely safe but highly effective microwave technology.

© Food Radar Systems



Fig. 2: Typical stone fruit for processing

© pixelio



Fig. 3: Typical low density foreign bodies. The Food Radar can detect glass and metal as well.

© Food Radar Systems

detection systems remove mainly high-density contaminants such as metal, glass and stone, the Food Radar adds a crucial layer of safety by removing low-density foreign bodies (e. g., soft plastic, fruit stones and rubber), which are undetectable using traditional technologies. Using an entirely safe but highly effective microwave technology, the Food Radar gives cutting-edge protection from the constant and serious threat of these contaminants – it quite literally makes the invisible visible!

While achieving unparalleled levels of foreign body detection, the microwave technology operates at a wattage emission equivalent to a thousandth of the emissions of a mobile phone and around a millionth of the emissions of a microwave oven. So, there is certainly no impact to either the operator of the technology or the food product being monitored.

Low-density foreign bodies, particularly soft plastic, continue to be the most common and hard to detect contaminants, and the many food manufacturers that approach Food Radar Systems continually stress that this is an increasing problem. Kraft Heinz was one of the first companies that invested in a Food Radar. After discovering early, the capabilities of the system, one of its leading food safety directors said: “We find this technology very interesting for helping to eliminate low density foreign matter, in particular plastics, thereby further ensuring the quality of the product we deliver to our customers”. And Kraft Heinz has now been using the technology for nine years, investing in various new Food Radar systems during that time.

Customer partnership has always formed a key part of Food Radar Systems’ business philosophy. The company prides itself on working with its customers to provide

tailor-made solutions and exemplary customer service. For example, in 2014, the team worked with Geurts, a Dutch jam manufacturer that, while running the Food Radar, was experiencing many false rejections due to air bubbles in its product. Determined to help their customer realise the full benefits of the system, the team at Food Radar Systems developed the ‘Air Zip’, which removes loose air in the pipes. With the two systems running in tandem, the client has now experienced a 95 % reduction in complaints about fruit stone contamination!

The team at Food Radar Systems understand that all customers have different operations, products and needs, so they always strive to find the best solutions and support for each customer.

So continual innovation is a key part of the Food Radar story, with the technology now in its third generation. Whereas before, the Food Radar required a set amount of physical space in the client’s production facility, the technology has now been redesigned to fit wherever the customer needs it to – it requires no floor space. “In light of the enormous benefits it adds to the production process our customers are always surprised to see how discreet and easy to install the Food Radar really is”, says Development Manager of Food Radar Systems, Joakim Nilsson.

The system consists of three main parts, namely an operator panel, sensor unit and a reject valve (3A). All other components are enclosed within one stainless steel cabinet and, of course, are constructed from the highest quality materials that comply with all the legal and hygiene standards, as you would expect. The system is CIP-able and requires a minimum of maintenance. System

installation is quick, too: Joakim Nilsson remembers one installation where he and the customer worked together to ensure the downtime was only four minutes!

Fratelli Polli – a producer of high-quality Italian food products since 1872 – describes its experience of the Food Radar thus: “Fratelli Polli has always looked to innovation to improve our offering. In the area of securing quality and foreign body detection for our pesto production, we looked to the new Food Radar technology. It has proven to be a good system and an example of our ethos of continual improvement. Food Radar Systems was able to adapt its system to our requirements and space constraints. The system has a very hygienic and flexible design that made the implementation easy”.

But it’s not just in terms of the physical construction of the system that the technology has evolved. There is now a range of differently sized sensors (1.5”, 2.0” and 2.5”), each of which is perfectly suited to different types of product and different volumes of production. The smaller the sensor, the better the detection is, but the sensor needs to be dimensioned to handle the highest process flow.

And the Food Radar can be completely integrated with customers’ production systems, so it can be connected to any PLC system or can operate without one. There is an easy-to-use 18-inch digital touch screen control and a completely new software interface. The new interface has improved historical information and analysis tools to help the operator optimise the Food Radar’s performance. Normally, the line can be operated with as little as two to three different signal processing settings, but some customers optimise the setting for each product.

The Food Radar has an open and flexible architecture and can be completely integrated into the customers PLC system. In this case no settings need to be done on the Food Radar, everything is instead part of the control recipe of the production line, hence minimizing human errors.

Some screening technologies, even when they can detect and remove foreign bodies, can result in large amounts of waste – but not the Food Radar, whose precision technology and fast reaction time mean that rejections result in negligible losses of as little as 0.5-2 kg of product. The system also keeps a graphical historical record of system performance, with full data and strength of all rejections shown clearly on the screen.

But what the team at Food Radar Systems really want food manufacturers to know is that they can come and try out their technology for themselves. When the team say, “seeing is believing”, they really mean it. The cornerstone

of their approach is to invite potential customers to bring their own product and run it through the Food Radar. And they are so confident in what their technology can do, that manufacturers can add any of the usual low-density contamination to their product and watch the Food Radar ‘do its thing’. Mikael Reimers, Food Radar Systems’ Head of Customer Care, says: “We really love demonstrating the Food Radar to people in the industry, because we know just how energized they get when they see what the technology can do. We get a real buzz when we see the initial scepticism disappear as pieces of soft plastic are effortlessly and instantly removed from the food”.

The pilot test takes place over two days at Food Radar Systems’ HQ in Gothenburg, Sweden. Customers are invited to bring around 60 kgs of each product they would like to test, plus of course some foreign bodies that typically pose a threat to production. Sven G Bodell, Food Radar Systems’ CEO, says: “In addition to the unique capability of detecting wood, plastic and even insects, the ability to detect organic faults, such as starch or spice lumps, is another benefit that our customers have difficulty in believing...that is until they see the system in operation”.

After the pilot test, each client will receive a full, detailed report of the performance of the Food Radar when monitoring their product over the course of the two days. And, if the client decides to go ahead with the purchase, they will, together with the technicians at Food Radar Systems, design a system specific to their line. After that, they will receive detailed drawings and preparatory documents to make the installation smooth and effective.

The entire point of the pilot is that the customer is fully assured of the benefits of the system, and exactly how it will work, before making an investment. For the team at Food Radar Systems, this process is not only about demonstrating the effectiveness of the technology but working closely with the customers to understand their specific needs – it’s about demonstrating their dedication to helping customers improve their business.

So, if you’re a food manufacturer who wants the security of having the most advanced protection for your business and your customers, the team at Food Radar Systems are on hand to answer any questions you may have. Isn’t it time you put the Food Radar to the test?

Food Radar Systems AB/Sweden
www.foodradar.com