# glassmachinery plants&accessories

BI-MONTHLY INTERNATIONAL MAGAZINE FOR GLASS MANUFACTURING



YEAR 35 • ISSUE NO. 5/2022





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KOENIG & BAUER
KAMMANN: Advances
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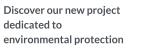








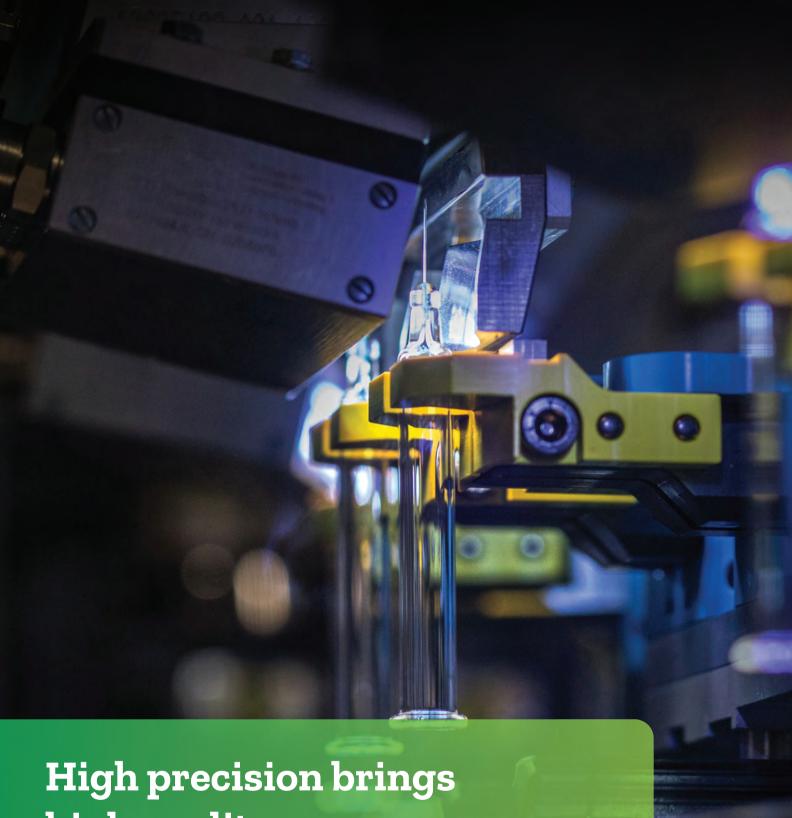












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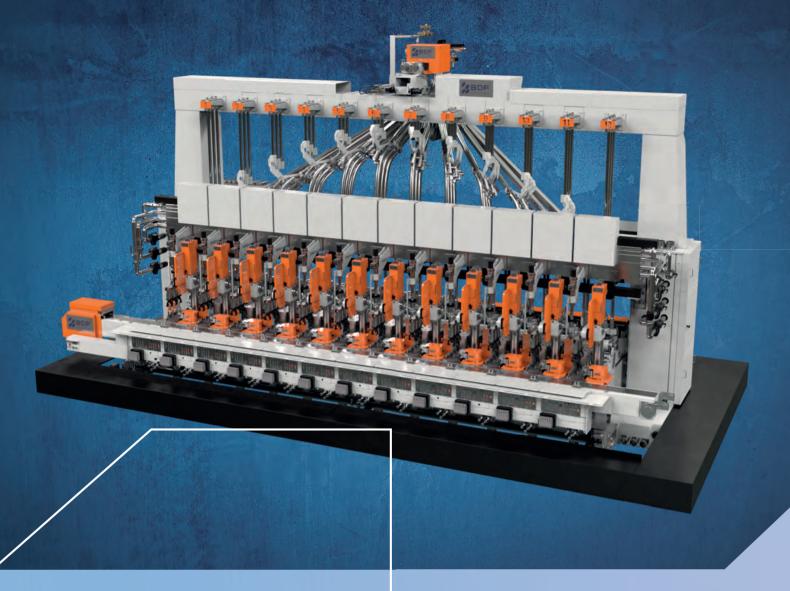


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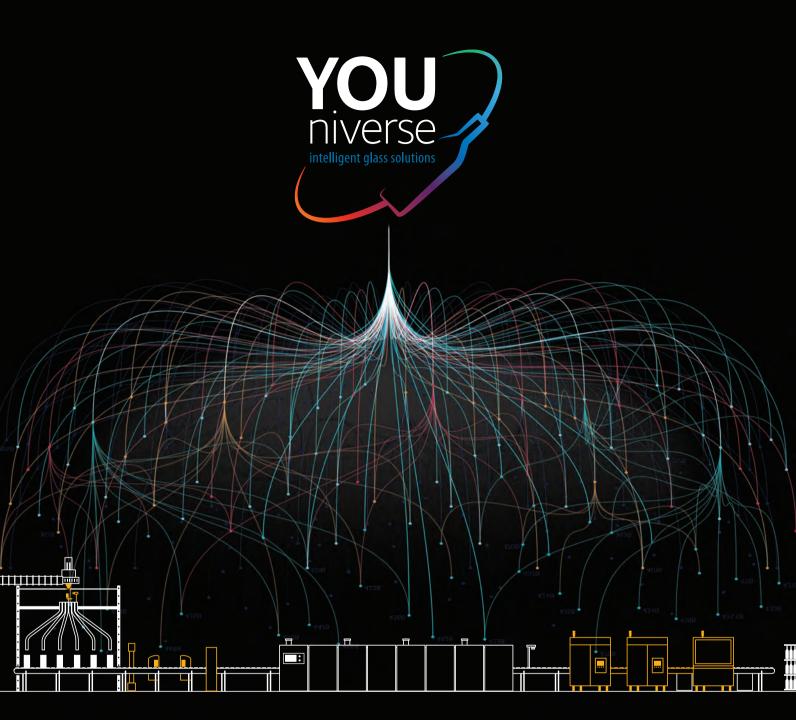
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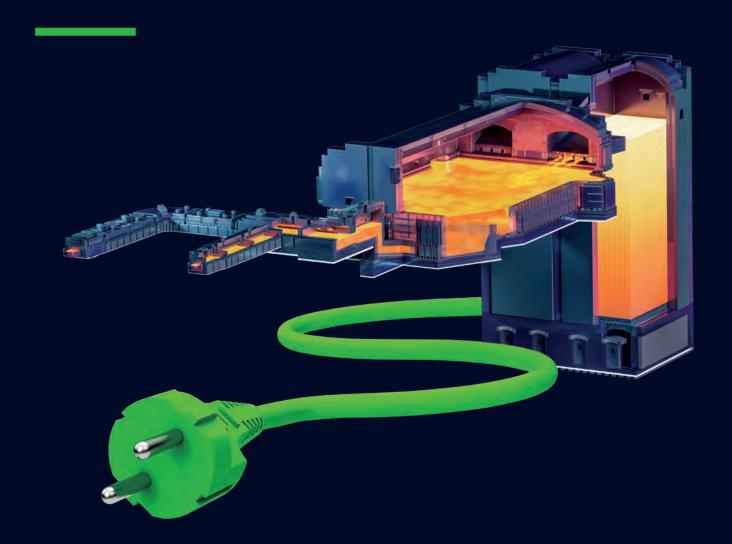
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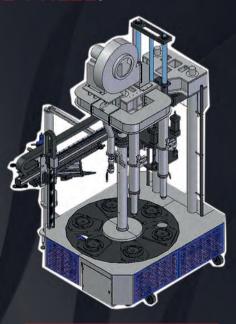
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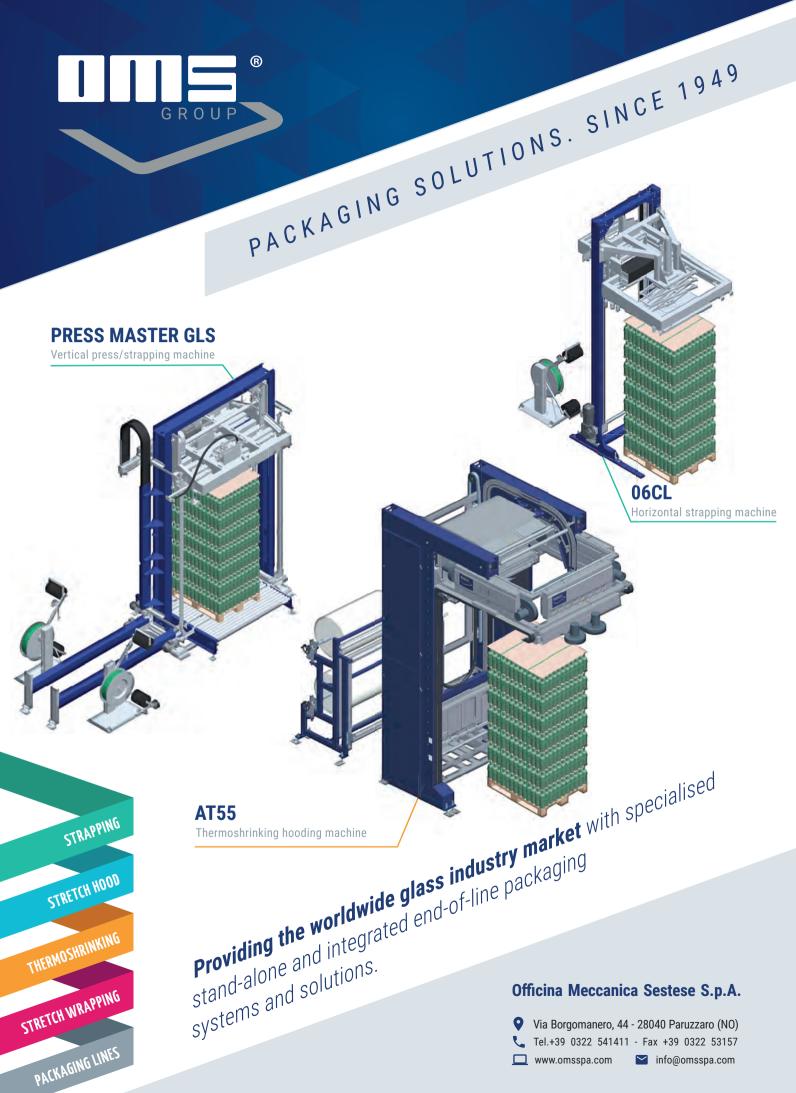




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The magazine will be distributed at the following Trade Fairs

i	ssue	exhibition/conference	date	venue	deadlines
000 000		GLASSMAN ASIA	postponed to 2023	<b>SEOUL</b> South Korea	
		GLASSPEX INDIA	postponed to 2023	<b>MUMBAI</b> India	Editorial files: 14-01-2022
		<b>ostponed to</b> 8 April - 2 May	BOLOGNA Italy	Deadline Adv files: 21-01-2022	
N N N N	2	CHINA GLASS	postponed	<b>SHANGHAI</b> Cina	Editorial files:  25-02-2022  Deadline Adv files:  04-03-2022
20 20 20 30 30 30 30 30 30 30 30 30 30 30 30 30	3	GLASSMAN LATIN AMERICA	11-12 May	MONTERREY Mexico	Editorial files:  04-04-2022  Deadline Adv files:  11-04-2022
טט		MIR STEKLA	6-9 June	MOSCOW Russia	Editorial files: 28-04-2022
		ICG ANNUAL CONFERENCE	3-8 June	<b>BERLIN</b> Germany	Deadline Adv files: 06-05-2022
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N		GLASSTEC	20-23 September	<b>DUSSELDORF</b> Germany	
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LU		XXXIV INT'L ATIV CONFERENCE	19-21 October	<b>PARMA</b> Italy	Deadline Adv files: 25-07-2022
		INTERNATIONAL YEAR OF GLASS	GLASS CORRESPONDENCE OF THE PROPERTY OF THE PR	SPECIAL ISSUE	
N N		AFGM	30 October - 3 November	<b>PATTAYA</b> Thailand	
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		ALL4PACK EMBALLAGE	21-24 November	PARIS VILLEPINTE France	Deadline Adv files: 8-10-2022



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#### ARDAGH GROUP

### Furnace launched in South Africa



rdagh Glass Packaging – Africa (AGP – Africa), part of the **ARDAGH GROUP**, has announced the commissioning of a ZAR 1.5 billion (USD 95 million) extension of its Nigel production facility in Gauteng, South Africa.

The investment more than doubles the facility's capacity to provide sustainable glass packaging to support their customers' current and projected demand growth, and incorporates a new furnace and production lines. It also provides significant energy, water efficiency and environmental benefits, representing another important step in AGP – Africa's journey to decarbonise the glass production process and reduce emissions in the communities in which it operates.

This significant capital investment will bolster the government's economic recovery plans and the project will offer much-needed job opportunities in Ekurhuleni, a city that has always had an unemployment rate that is above the Gauteng and national averages. The expansion has created more than 150 direct jobs and significant ancillary supply-chain expenditure.

Paul Curnow, AGP-Africa's CEO, said, "We are proud to commission this significant capacity investment, which supports strong demand from our customers for sustainable, premium glass packaging. Completion of this project, on time and budget despite the Covid-19 and supply chain challenges of the past two years, represents a tremendous achievement by our technical and operational teams. The outlook for premium, sustainable glass packaging remains positive and AGP-Africa expects to continue to invest in support of future market growth."

Paul Coulson, Chairman and CEO of Ardagh Group, said, "Demand for sustainable packaging in Africa is growing strongly, supported by multiple factors, including rising income levels, growing sustainability awareness, favourable demographics and a shift to one-way packaging. We are committed to investing in our people and our asset base to enable us to serve this strong demand growth over the near term."

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#### VERALLIA ESPAÑA

## Group in Spain relies on Heye International inspection technology

tronic control system are characteristic of the SmartLine.

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install two Heye International's SmartLine2 inspection machines in its new cold-end line at the Montblanc, Spain, plant.

The HiSHIELD SmartLine 2 has been developed as an inspection and sorting machine for the hollow glass production industry. The ongoing integration of the newest technology combined with robust electrics and an elec-



400 items per minute.

#### FORGLASS

#### On track to deliver new batch plant to Ardagh

s always, Forglass is proud to report that all deliveries and assembly work are being completed according to the established timetable.

Construction is proceeding on schedule at the new Ardagh Glass Packaging factory in Wyszków, Poland. The environmentally-conscious investor chose **FORGLASS**, leading European supplier of glass melting technologies, to design and deliver the batch plant for their greenfield project.

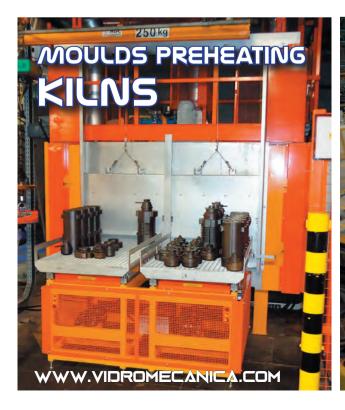
The new batch plant will be paired with a new, 400-tonnes-per-day furnace that Forglass is also erecting. For this project, Forglass has designed and fabricated raw material and cullet storage silos, dosing, mixing and batch transport equipment, as well as the cullet return system, including two of the company's innovations: Selectable Grain Crusher™ and SmartScraper™.

HTTP://WWW.FORGLASS.EU



### **VIDROMECANICA**

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GERRESHEIMER

## **EUR 126 M investment for new factory in North Macedonia**

Gerresheimer is a leading global partner to the pharma and healthcare industries. The company has production facilities in North and South America as well as in Europe and Asia.

The government of North Macedonia has announced that **GERRESHEIMER** will invest over EUR 126 million in the construction of a new factory for medical glass products and syringes in North Macedonia's capital Skopje.

The company plans to start the construction of the facility in the third quarter of 2022, with a view to launching operations in 2024, North Macedonia's government said in a press release. The new plant is expected to create more than 180 jobs.

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HORN

#### Wiegand-Glas in Schleusingen puts furnace 2 into operation

With a history of over 450 years and plenty of experience in development and production, Wiegand-Glas has become one of the most successful container glass manufacturers in Europe. A family-run business group, the company is committed to innovative packaging concepts made of glass and PET.

In October 2020, **HORN** was commissioned with the construction of furnace 2 in the new glass plant in Schleusingen, Thuringia, Germany. The new end-fired furnace, which produces container glass in amber and green, was successfully commissioned at the end of the first quarter of 2022 - despite the postponement of the start of production at the end of 2021. Exploding prices for energy and raw materials

were the main drivers for this.

The project included complete refractory and steel planning as well as its delivery, the combustion system, tank and throat cooling, measuring and control equipment; the boosting system, reversing system, stirring system, HORN drainage system VARI-DRAIN® as well as the installation of the batch charging machine HVR® 700 S-2P.

In March 2022, the time had come: the furnace was heated up by HORN and successfully put into operation. On 21 March Wiegand-Glas and HORN celebrated the first glass produced.

#### WWW.HORNGLASS.COM









### Successful hydrogen test for furnace

A MAISON FRANÇAISE DU VERRE has just completed the injection tests of up to 20 percent (in power) of hy-



drogen mixed with natural gas at its plant in Châteauroux, France, which produces borosilicate glass.

The company was thus able to verify the merits of its decarbonization approach by validating "in

real size" many hypotheses on its melting furnace at full load. It is a first step on an exciting path with many more milestones to come.

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#### O-I GLASS

## Glassworks in Vayres, France, goes green

-I GLASS' GOAT (Gas Oxy Advanced Technology) furnace, to be installed by the end of the year in their Vayres glassworks, is just the latest example of the investments that container glass manufacturers are making to reduce their carbon footprint.

The new GOAT furnace will be equipped with an energy recovery system to heat raw materials. A new on-site oxygen production unit will also ensure supply.

By using oxygen as its main energy source, the new furnace is set to reduce CO2 emissions by 20 percent and NOx emissions by 60 percent.

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#### CINER GLASS

#### **Investments in Wales**

ciner Glass' vision is to build a centre of excellence in glass technology which can compete with the best in the world and make a positive contribution to the long-term prosperity of Wales. The hope is that the project can act as a catalyst for the economic regeneration of the Valleys, and CINER GLASS seeks to work with Blaenau Gwent Council and the UK and Welsh Governments to make this a reality. There has been no intention to construct a new glass production facility in Wales and the UK of this size and scale for a generation.

Said Mrs Didem Ciner, President of Ciner Glass: "Ciner Glass is committed to working in partnership with the local community to provide opportunities for local people and businesses as well as offer comprehensive training to young people from the area in partnership with local colleges. Indeed the company wants to develop the kind of skills and expertise that will be needed for decades to come. This state-of-the-art glass manufacturing facility producing beverage bottles for the UK market will also benefit the environment and reduce the distance that the empty bottles travel. Glass is infinitely recyclable and environmentally friendly. It is a sustainable industry of tomorrow. Ciner Glass intends to use extensive amounts of recycled glass as it uses fewer natural resources and requires less energy."

Plans for a new glass production facility will be integrated with the Welsh and UK Government's vision for a sustainable, low-carbon circular economy. The company has already started working with universities in Wales on new production techniques. Ciner Glass is committed to protecting and improving the environment and is developing both shortterm and long-term plans to achieve the goal of carbonneutral production in Wales. Here Ciner Glass also seeks to play its part in ensuring Wales is an acknowledged global leader in collecting and recycling glass of very high quality. In just over a decade, Ciner Glass, a family business headquartered in the UK, has grown to become an industry leader, committed to constant innovation. The company's pioneering technology has created some of the lightest beer bottles in the world, which have reduced their transportation costs and environmental impact.



Existing Turkish operations at the Park Cam plant in Bozuyuk have recently undergone significant expansion, making Ciner Glass Turkey's second-largest producer, producing over three billion bottles a year. As a family-run business, the company is also proud of its reputation as a responsible employer who maintains the highest quality and safety standards.

This development in Wales, Ciner Glass' biggest outside Turkey so far, is part of its ambitious plans to increase capacity and expand its presence across Europe. Ciner Glass believes this is a market which presents long-term opportunities and significant growth potential. In recent years there has been limited investment in the European glass production sector, particularly in new facilities - as distinct from upgrades of existing plants and machinery. Ciner Glass intends to reverse that trend. Indeed the investment in Wales demonstrates its determination to be one of the world's leading glass producers.

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SEFPRO

#### **Joint Venture with Anhui Sino-Refractory** Technology Co.

nhui Sino-Refractory Technology Co., Ltd. -also known as AFR- is a young company producing high performance fused cast refractories for the glass industry. It was founded early 2016, and is located at Bengbu in the Anhui province of China - close to major glass customers and strategic suppliers.

Fused cast refractories are essential building blocks for glass furnaces, able to resist extreme conditions such as high temperatures, corrosive atmospheres and glass flow. Critical to the performance and lifetime of furnaces, they are key to supporting the glass industry in achieving carbon-neutrality.

SEFPRO has been present in China since 1991 with a fused cast refractory plant in Beijing to serve solar, flat, container, specialty and display glass markets. In 2005, a sintered refractory plant was started up in Linyi - mainly dedicated to reinforcement fibre and specialty glass markets. Since 2005, both plants have relied on the R&D expertise of Saint-Gobain Research Shanghai (SGRS).

With this partnership, Sefpro will be better positioned to support the growth of the Chinese glass industry and to provide high-performance solutions to Chinese customers.

Laurent Cohen-Scali, Sefpro Vice President, said, "We are very pleased with this new strategy partnership (JV) which strengthens our ability to deliver high-end refractories to China's growing glass market. High-performance refractories are key to decarbonize the glass industry, in line with our mission to achieve carbon neutrality. The joint venture with AFR will support this decisive transition."

WWW.SEFPRO.COM



Leading glassmakers have chosen Pneumofore Rotary Vane machines for their crystal clear results: high energy savings, trouble-free operation and the lowest Total Cost of Ownership.







#### TIAMA

### Group's HOT systems combined with its ECO-System

or several years now, TIAMA has been one of the most important providers of hot-end solutions. 'Tiama HOT systems' are sensors located all around the IS machine, from the gob with the Tiama HOT mass to the exit of the IS machine with the Tiama HOT eye, the Tiama HOT form and the Tiama HOT move. Each sensor has specific features to meet different customer expectations, though all share a single electrical cabinet. With this modular approach, customers can gradually invest over the years to facilitate the integration of these systems into their plant. In recent years, customer needs have changed in factories, with more and more wanting their different systems to be able to communicate with

each other. To fulfill this need Tiama has developed a solution called the Tiama ECO-System. Tiama ECO-System is a web page available anywhere in the plant that gathers different data from all TIAMA machines. The Tiama HOT systems range is fully integrated into the Tiama ECO-System.

Images of the articles rejected at the hot end by the Tiama HOT eye and the Tiama HOT form, and also by the cold end machines, the MCAL4 and MULTI4 are displayed in the 'Gallery' menu of the Tiama ECO-System.

In the 'Analytics' menu, statistics of rejects by machines and detections are represented over time or by section or mould numbers. The Tiama ECO-System facilitates the link be-

tween the hot-end and the cold-end. It is even possible to link the cavity with the mould numbers and to apply lehr time to get an accurate correlation between what happened at the hot-end and at the cold-end for the same batch of articles.

The combination of Tiama HOT systems and Tiama ECO-System is totally in line with the company's overall strategy to develop solutions that gather and analyze more data all over the plant.

Also part of the Smart Glass Solutions provided by Tiama is the YOUniverse concept by which customers are supported towards the Smart Factory.

WWW.TIAMA.COM

#### VIDRALA

## Installation of photovoltaic plant announced

n March 2022, **VIDRALA**, one of Europe's leading glass producers, revealed the construction of a solar photovoltaic power generation plant to be used for consumption in the industrial process - partially substituting fossil and electrical energy from the grid.

Vidrala is now proud to announce that the installation of the photovoltaic plant, the largest solar project in the glass industry in Spain, will soon begin its electrification. The facility, located at the Crisnova plant in Caudete, Castilla La Mancha, Spain, has a capacity of 12 MW using cutting-edge, ground-based technology. The project is part of Vidrala's sustainability and energy efficiency strategy and is a clear demonstration of its commitment to the environment and to the communities where the group operates.

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#### O-I GLASS

#### New glass plant to be built in Bowling Green, USA

-I Glass, Inc. will build a new greenfield glass plant in Bowling Green, KY, USA. In line with strong consumer trends towards healthy, recyclable and sustainable food and beverage packaging, the company is adding capacity to support its customers, with brand-building premium glass containers. The company plans to invest up to USD 240 million in multiple expansion waves over time and create approximately 140 new jobs in the region.

The new plant will be the first facility purposely-built for **O-I GLASS**' revolutionary MAGMA technology that is set to redefine the glass production process for the future. MAGMA is expected to further enhance O-I's capabilities to support multiple product categories and expand in today's highly differentiated product segments.

The production facility is also expected to set new standards in sustainable glass manufacturing. Using renewable electricity, gas-



oxy fuel and other innovative solutions, it will significantly advance O-l's sustainability roadmap and make glass an even more compelling choice for consumers, customers, and the environment.

"O-I is determined to be the most innovative, sustainable and chosen supplier of brand-building packaging solutions," said Andres Lopez, CEO of O-I Glass. "The new plant is an important milestone as we continue the pursuit of our expansion plan in the US and globally, building a bright future for the company and its stakeholders. Glass is more relevant than ever, and we are proud to support our customers with innovative solutions."

"We continue to target new employers within the commonwealth that are focused on longevity, sustainability and creating quality jobs for Kentuckians," Andy Beshear, Governor of Kentucky, said. "O-I Glass is a company that meets all such criteria - and more. This new facility in Warren County will create great job opportunities for our residents

and bring innovative new technology to Kentucky's manufacturing sector. Thank you to the leaders at O-I Glass for selecting the commonwealth for this significant investment. I look forward to a long, successful partnership between the company and our state." "O-I has a reputation for excellence that has led to jobs for over 24.000 employees in 19 different countries. We are thrilled that they have chosen to grow and invest in Bowling Green," said Bowling Green Mayor, Todd Alcott.

The new facility is earmarked to serve the Premium Spirits category. The proximity to key customers in Bourbon country will reduce logistics and further enhance O-I's customer service, flexibility and sustainability. Start of the first production line is expected mid-year 2024, followed by up to two more production lines to serve the growing market and continued development of MAGMA.

WWW.O-I.COM

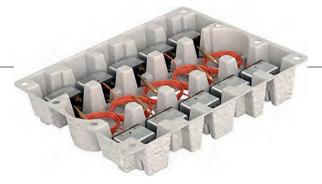
#### HEINZ GLAS

# Trust invested in PAPACKS® fibre-cast packaging

ccording to **HEINZ GLAS**, the fibre cast packaging developed together with the Cologne-based company

PAPACKS Sales GmbH and with COTY has more than ful-





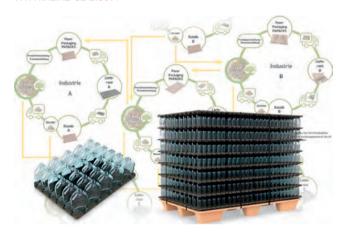
filled the expectations placed on it.

The most important thing the Upper Franconian bottle manufacturer emphasizes is that the three-dimensional transport bowls are more dimensionally stable and shock-absorbent than their plastic predecessors and guarantee improved protection. The innovation is based on 100 percent renewable fibres such as cellulose from trees and industrial hemp. This alone reduces the CO2 footprint by a factor of four.

According to the zero-waste principle, the cast fibre transport packaging produced can either be recycled as waste paper in the green circulation system or decompose as biocompost within 6 weeks.

Of course, cast fibre transport packaging is robot-compatible, can be stacked to save space and allows easier handling when assembling the pallets due to the reduced number of components. The mould concept for manufacturing the cast fibre transport packaging was developed and patented over the years based on PAPACKS 3D printing technology. The fibre casting moulds coming from the 3D printer can therefore be adapted to individual customer requirements in a cost-efficient and flexible manner.

#### WWW.HEINZ-GLAS.COM





SGD PHARMA

### New CEO announced as company targets further growth



orldwide glass primary packaging supplier **SGD PHARMA** has announced the appointment of Olivier Rousseau as its new Chief Executive Officer. Olivier brings over 30 years of industrial experience to the role. He joins the business after four years as CEO & President of Verallia France, global producer of glass packaging for food and beverages, and brings a strong track record of developing strategies to support a company's global growth.

Prior to Verallia, Olivier worked for more than 20 years at The Goodyear Tire and Rubber Company, where his roles included Chief Financial Officer of the EMEA region, managing a portfolio worth EUR 5 billion. After that, Olivier led the consumer business unit for the EMEA region, managing a portfolio with a value of EUR 3 billion.

This experience will support Olivier to accelerate the implementation of SGD Pharma's global strategy, focusing on profitable growth and high value-added products. He will also drive the company's mission to grow both organically and through acquisition. Commenting on his appointment, Olivier said, "I am proud to join SGD Pharma and am looking forward to supporting the business at this exciting stage in its growth trajectory. I will continue to build on the strong foundation created by all members of the global SGD Pharma team in providing customers with high quality, innovative products to meet their changing demands, while improving our industrial performance across all plants.

"I have a strong interest in corporate social responsibility and decarbonization and as part of our proud sponsorship into the United Nations International Year of Glass, I will be continuing our initiatives into making glass products even more sustainable for society. "In a market where we are having to react quickly to customer demand, due to the difficult environment the industry is currently facing, it is key that we work together to serve and deliver to our customers. I'm thrilled to be leading the team as we continue to improve our glass primary packaging offer to meet the demands of the future."

WWW.SGD-PHARMA.COM

GERRESHEIMER GROUP

### New EUR 150 M credit facility signed

Gerresheimer has reached another milestone in the realization of its financing strategy by signing a revolving credit facility in the amount of EUR 150 million.

After successfully issuing a promissory loan to the amount of EUR 150 million in November 2021 as a first step, GER-RESHEIMER GROUP has now finalized a revolving three-year credit facility of EUR 150 million as a second step to prematurely secure repayment tranches on the promissory loan to the amount of EUR 306 million - due later in 2022. Overall, the refinancing provides slightly better conditions and higher flexibility than the due promissory loan.

"The successful early refinancing of our promissory loan proves the attractiveness of our resilient business once again - particularly in challenging market environments," said Dr Bernd Metzner, CFO of Gerresheimer. "We remain firmly on a course of profitable, sustainable growth."

HTTPS://WWW.GERRESHEIMER.COM/EN/HOME

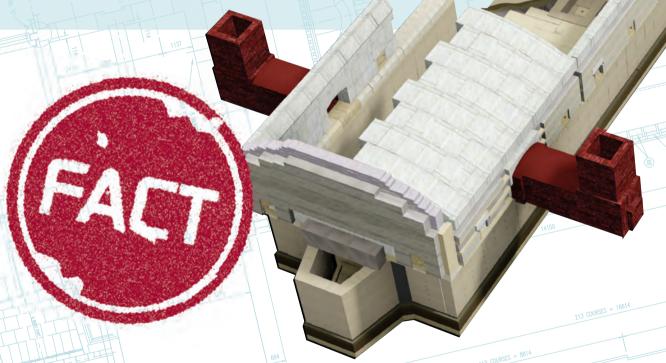


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#### FEVE

### Highest production growth for EU container glass industry

ew 2021 industry data points to strong growth in container glass production in Europe and demonstrates that the sector continues its recovery from a 2020 decline. Industry production volume of glass packaging for the food and beverage sector increased strongly by 5.0 percent compared to 2020 figures, to reach its highest level ever recorded.

According to newly-available data released by **FEVE** – the European Container Glass Federation:

- More than 4 million tonnes, or 83.3 billion bottles and jars, were produced for the European and global markets in 2021.
- Since 2012, container glass production has grown by 18.6 percent, at an average growth rate of 1.7 percent per year.
- Likewise, production of glass flacons for the perfumery, cosmetics and pharmaceutical segments delivered a strong growth of 2.2 percent to reach 13.6 billion units by the end of 2021.

Reflecting on the record growth in production, Vitaliano Torno, President of FEVE, commented, "These figures prove our industry is working at pace to meet unprecedented market demand, with our glassworks producing at full speed, and we continue to go



the extra mile to best address customer needs. We are proud of how the container glass industry has risen to the challenges of the last two years – including uncertainties around supply of energy and raw materials, increasing production costs and market dynamics – to provide critical packaging that ensures continued supply of food and beverages to consumers, all while meeting health, well-being and sustainability trends. This record growth underscores that glass packaging remains the preferred choice for our customers to enhance their products, communicate quality and value and provide products in a packaging that consumers trust."

WWW.FEVE.ORG

#### CANPACK GROUP

# Relocation to new corporate headquarters

Based in Krakow, Poland, CANPACK GROUP's new head office is located in a state-of-the-art MK29 complex in the heart of the city, overlooking the Wawel Royal Castle and the Vistula Boulevards. Designed by Trzop Artichekci, one of the most prestigious design studios in Poland, the concept has been inspired by Canpack's strong brand coupled with the company's vision for the future.

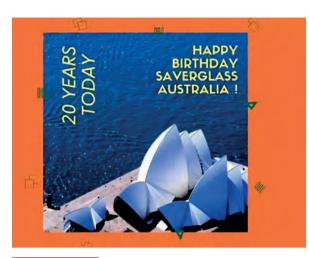
The new corporate offices encourage cooperation and integration, encompassing new technology that befits Canpack's culture. There's space for formal and informal meetings, breakout areas for 'brainstorming' and co-working

space to reflect the company's commitment to innovation as it embraces the new model of hybrid working.

"To create an impact, our new offices have been designed to foster increased knowledge, cooperation, and creativity," said Roberto Villaquirán, Canpack Group CEO. "A crucial element of the project was the involvement of Canpack employees throughout all stages. From identifying the new office and the required space to outlining the hybrid working model and designing and delivering it, employees were consulted throughout."

#### WWW.CPGLASS.EU





SAVERGLASS

#### 20 years in Australia

nitially created to target the wine industry, **SAVERGLASS**Australia has also contributed to the resurgence of BVS wine bottle caps in Australia and New Zealand.

In 2001, Australia was the sixth largest wine producer in the world. Saverglass was, at that time, the only glassmaker willing to produce a 750ml BVS Riesling bottle for the Clare Valley vineyards on a commercial scale. Following the success of the first bottle launched, Saverglass decided to develop a range of different models and capacities, resulting in over 30 BVS models in the catalogue today.

While the spirits market was only five percent for almost 15 years, today it's booming in the spirits industry. The development of vodka and craft gins has been very fast. The new Australian trend is even moving towards alcohol-free spirits. The challenge for Saverglass Australia for the next 20 years will be to continue to grow and maintain its leadership position in the Australian and New Zealand markets.

#### WWW.SAVERGLASS.COM





#### VERALLIA

### Partnership with Fives for all-electric melting technologies

Verallia, the world's third largest producer of glass packaging for food and beverages, signed a strategic partnership with the industrial engineering group Fives to reduce carbon emissions towards greener glass production.

The new investment is part of VERALLIA's strategy to modernize production capabilities with a view to long-term growth, par-



ticularly in France, the historical birthplace of Verallia. It is an illustration of the Group's desire to ensure the sustainability of its sites and to innovate so that its customers and employees can benefit from state-of-theart technologies.

The project includes design and supply of Prium® E-Melt cold-top vertical melters, one of the most advanced technologies available, to significantly reduce CO2 emissions at plant level. The melters will have the capacity to produce 150 to 200 metric tonnes of glass per day, which globally makes them stand out conspicuously as all-electric furnaces for food packaging. Melter design formulation was based upon Fives' significant electric melting operational experience.

The development is fully in line with Verallia France's intention to fulfill its ambitious environmental commitments made at the Group level, targeting a 46 percent reduction in its CO2 emissions by 2030 to limit global warming to 1.5 degrees Celsius (scopes 1 and 2) and reach carbon neutrality by 2050.

Patrice Lucas, CEO of Verallia, said, "I am very pleased to announce this excellent news as a priority to the employees of our Cognac site. Electric furnaces of such capabilities have never been implemented in France, or even in the world, for food packaging glass and we are very proud to be pioneers in this area."

Alexandre Brusset, Vice-President of Glass at Fives, said, "This is a milestone project for the packaging glass industry. This cost-effective technology is the only proven solution that's available to significantly decarbonise the glass industry, and Fives is proud to share its expertise and experience with Verallia to electrify the Cognac plant."

WWW.VERALLIA.COM

#### GERRESHEIMER GROUP

### Focus upon sustainable glass production

s part of its global sustainability strategy, the GER-RESHEIMER GROUP has set itself the goal of reducing its CO2 emissions by 50 percent by 2030 as compared with those of 2019. An important component of this endeavor is the use of state-of-the-art furnace technology in container glass production. The company produces high-quality glass packaging for the pharma, food and cosmetics industries at locations in Europe, America and Asia. Gerresheimer is currently replacing one of its two furnaces at the German plant in Tettau, Bavaria.

( Against the backdrop of the current economic and geopolitical situation, Gerresheimer is sending a strong signal for a successful future with this investment in more sustainable technology. We believe in glass as a futureoriented packaging solution and are committed to the expansion of the Tettau plant," explained Kay Rohn, Managing Director of Gerresheimer Tettau.

At the Tettau plant Gerresheimer employs around 600 people and produces over 700 million glass containers a year. With the new multi-fuel oxygen furnace, Gerresheimer is laying the foundation for more sustainability in glass production. In particular, the use of green electricity, which in future will account for up to 50 percent of the energy input, will make a significant contribution to reducing the CO2 footprint in container glass production after completion at the end of July 2022.

To start the new furnace construction, the existing furnace was first drained and dismantled in mid-June so that the new furnace with fresh technology can be built afterwards. This furnace technology will help Gerresheimer continue to support its international customers as a reliable partner on its way to more sustainable products.

Glass can be recycled an infinite number of times and is therefore an attractive material in the context of a sustainable packaging economy. In addition, the Gerresheimer Group has already been working for over a decade on various projects for the more energy-efficient production of glass containers for the pharma, cosmetics and food industries. Besides innovative furnace technology, this includes the increased use of post-consumer recycled (PCR) glass and eco-design concepts.

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# SORG Group supplies AMMAT GLASS with full turnkey solution

After AMMAT GLASS sought to improve its hot-end processes to lower energy and maintenance costs, expand capacity and enhance its glass conditioning quality, the Dubai-based container glass manufacturer chose SORG Group to deliver a single source for all its melting and conditioning requirements.

omprising Nikolaus SORG, EME and SKS, the Group harnessed the 'Power of 3' to deliver a seamless hot end process through an unrivalled combination of products and services.

#### **NIKOLAUS SORG**

Here it was Nikolaus SORG that was responsible for designing and engineering a new furnace rebuild for Ammat Glass Industries, which produces glass bottles and jars for the food and beverage industry.

The newly-built furnace had to have a 140 m<sup>2</sup> melting surface and 450 tpd melting capacity for flint, green and amber glasses. It incorporated Deep Refiner® technology, which increased the residence time of the glass in the furnace to improve the glass quality.

ARD regenerators were used to achieve the required regenerator height without high costs for civil work while converting the former double pass regenerators to modern, highly-efficient single pass regenerators.

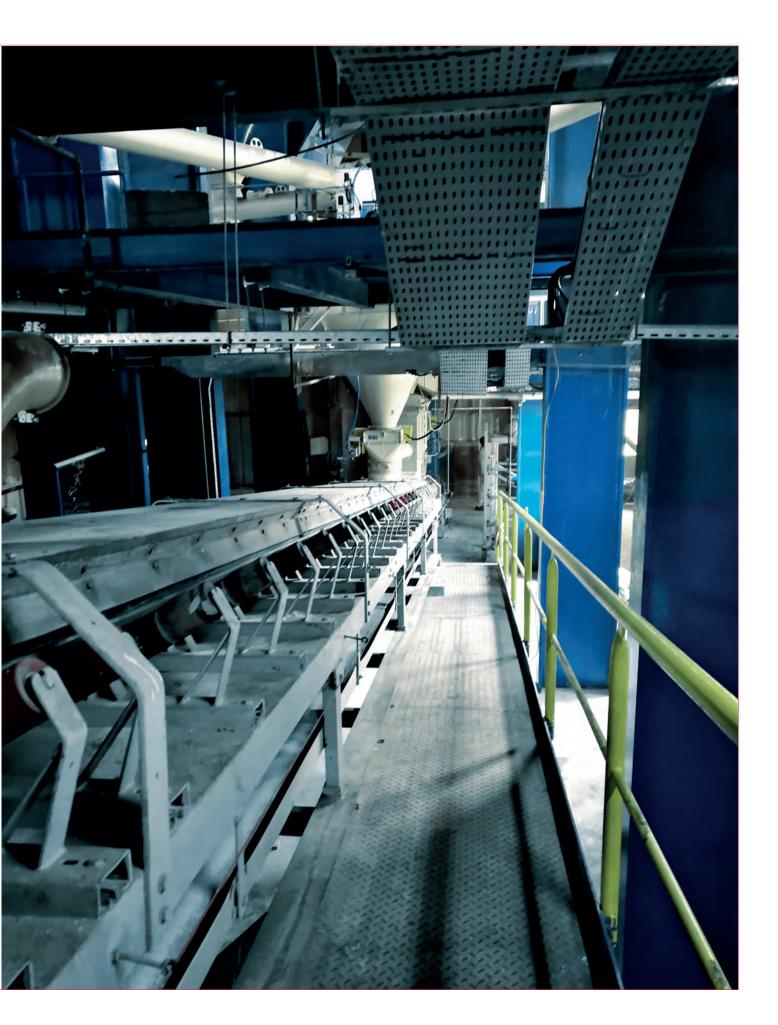
Two IRD dog-houses were also installed to combat possible problems caused by batch carry-over into the regenerators. By combining the dog-houses with the EME-NEND® R2 chargers the system is now completely closed, avoiding both energy losses and dust around the furnace.

Nikolaus SORG installed three SORG 340S+® forehearths - supplying three IS 12 section TG machines to increase production capacity, with the ability to add a fourth forehearth in the future. Boosting was also used through-

out to assist with melting, thermal barrier boosting and throat boosting.

#### **EME**

While Nikolaus SORG led the furnace rebuild, EME improved both the efficiencies and capacity of the batch house system. After auditing the batch plant, the company devised a facility upgrade concept. Here the main goal was to increase plant capacity while improving dosing and weighing accuracies. EME replaced pieces of equipment to enhance accuracy and it installed a new high duty pan mixer. Three new EME-NEND® R2 chargers with wetting screws were also supplied. These are equipped with vibratory chutes and specially-designed for high cullet ratios to guarantee low wear. The company also supplied a new cullet return system,



#### **PARTNERSHIPS**

including a single forked-link chain scraper conveyor with a capacity of 450 tpd. The electric control system was upgraded to a more modern system completely controlled by the PLC.

#### **SKS**

**SKS** supervised erection of the steelwork for furnace rebuilding and provided support with the refractory installation, with over 100 workers present on-site at any given moment. SKS guided both the heating and the commissioning of the furnace. "The aim of SORG Group has always been to offer glass manufacturers with more. By working together with a shared belief in quality, performance and support, Nikolaus SORG, EME and SKS were able to jointly demonstrate to Ammat Glass its Power of 3 in action," said Project Department Head, Hartmut Jaques. "The SORG Group transformed the hot-end process with minimal disruption. It will continue to provide the company with the support it needs to continuously monitor, analyse and improve efficiency throughout the furnace lifecycle."



#### **IN SUM**

Nikolaus SORG designed and engineered a furnace that now achieves high energy efficiency coupled with lowered CO<sub>2</sub> emissions. EME's expertise in batch house systems enabled a batch plant capacity increase of 30 percent and SKS successfully supervised the erection and installation of the furnace and batch house

system - including the heating up process to glass flow. Here, by harnessing its Power of 3, SORG Group was able to deliver a single hot-end processes solution - from batch and cullet handling to melting technologies and furnace design to furnace construction and complete lifecycle services.



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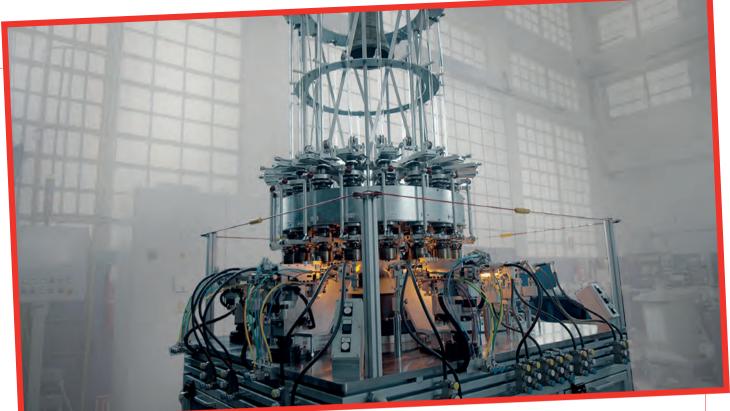




# Glasstec: OCMI-OTG does it again with vial production innovation

OCMI-OTG is to introduce its new tubular glass vial production line at Glasstec 2022 - complete with its FLA18 index rotation forming machine as well as its LF518 after-forming line with servo-driven stations and high-reliability dimensional controls.





LA18 FORMING MACHINE Developed with index rotation and twenty stations traditionally manufactured by OCMI -leading supplier of borosilicate glass tube processing lines for medical containers worldwide- the FLA18 forming machine can assure the same output as that of continuous-rotation forming machines. As such, it can assure a maximum output of 55 pcs/min. with 2R vials and the possibility of processing glass tube diameters from 10 mm to 30 mm. Tube-loading is performed by automatic equipment that picks the glass tube directly from the bundle. OCMI can offer two loader options of different bundle and tube manipulator positionings. Here there's no manual handling of the tubes, except during bundle loading of the machine, which means minimising the risk of cosmetic defects, cracks or glass surface marks caused by friction between the tubes. Customers can choose the most suitable loading option according to the space available in their plant. FLA18 machine burners are suitable for either natural gas or hydrogen alimentation. The hydrogen option can be especially interesting to customers after building 'green' factories that offer

a safer environment for operators working around the machines. The fluid also assures a stabler flame - particularly important for operations like tube-cutting. The combination between 18 upper mouth forming crown stations and nine lower bottom finishing turret stations allows maximum productivity to be sustained - even when a lower station goes out of service for some reason. Machine rotation is driven by a torque-motor that's supplied with a water chiller for cooling, which can also be used for cooling the forming plungers. Forming operations are performed via three dedicated servo-driven stations following rotation of the upper chucks and removable where maintenance operations are required. Parameters related to positions and movements of forming tools, plungers and rollers can be set from the touch panel and saved as dedicated recipes linked to each type of manufactured vial. From this same touch-panel the operator can manage all parameters associated with the movement of setting plates when loading the column and cutting station, machine and spindle speed, loading stations and dimensional control by camera.

#### OPTIVIAL CAMERA INSPECTION SYSTEM

Placed after mouth forming operations with its new generation camera, the Optivial camera inspection system can take up to 15 pictures of the same rotating vial while getting a more precise average value for each dimension. This camera inspection system software allows for control statistics saving including rejections for each defect type and each spindle. In the lower machine turret bottom, after the cutting operation, the vial bottom is finished by fire-polishing burners and a special flattening buffer. Nine lower chucks, driven by independent motors, are equipped with blowers enabled by solenoid valves - all aimed to remove smokes from the inner side of vials in order to keep alkalinity within the limits fixed by ISO standards.

#### **LF518 AFTER-FORMING LINE**

Take-out, via servo-driven transfer system, has been developed for connection with OCMI's LF518 after-forming line. Here servo-motors drive the main after-forming line mechanisms - even in the completely-renovated printing station, which is available on customer request. Immediately after forming-machine unloading, the



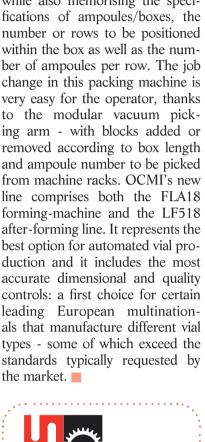
conveyor chain V-carriers are covered by insulating plates to protect hot glass from contact with the cold metal needed to avoid thermal shocks and consequent marks upon the glass surface. The same protection is applied to packing conveyors following annealing lehr vial unloading. After the cooling chain, vials arrive at the dimensional control section, which includes a check of the total length and inner mouth diameter. Contact gauge total length control is made by pushing the vial against a bottom guide to detect the measure needed. Inner mouth diameter is detected via camera which takes both minimum and maximum diameters with just one picture. The average value is taken into consideration for acceptance or rejection of the vial. Data from

both control stations is displayed on a dedicated control panel via software that follows the same, userfriendly Optival concept. The new, electrically-powered vial annealing lehr version is alimented by a feeding manipulator with six mechanical grippers that picks vials from the line chain and places them in a horizontal position upon drilled metal trays. The design of vial lodging trays, e.g. that of lehr width and length, can be modified according to the vial specifications to be processed and the vial number to be conveyed. The pickplace manipulator, which has adjustable gripper jaws,

allows for vial processing at a minimum length of up to 30 mm. Main annealing lehr parameters, too, can be set via a dedicated control panel from which the operator can fix temperatures and keep control of all heaters while setting oven chain, feeder and unloader synchronisation parameters. Before the packing station, the length of the vision/packing conveyor can be adjusted should the other camera inspection system be installed.

#### **PM-V PACKING MACHINE**

Available with four or five boxfilling stations placed upon a rotating table, the automatic PM-V packing machine can replace the traditional manual packing operation. With this option there's no contact between vials, since they're directly picked from the line chain by way of vacuum cups. This minimises the risk of scratches or breakages during packing. The automatic PM-V packing machine software allows for recipe-saving while also memorising the specithe market.





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FLA18-9 is the new machine engineered and manufactured by OCMI to produce parenteral glass containers. Cutting-edge technology, innovation, quality are the features that make FLA18-9 a real "star maker", a new point of reference in the panorama of the pharmaceutical industry.

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## KOENIG & BAUER KAMMANN: Advances in High Speed Screen Printing

The development of the process for digital printing in order to obtain stable and repeatable decorations with commercial industrial digital printing machines has received much attention in the last few years. Much less attention has been paid to the screen printing process, which has made great developmental leaps within the same time period.

This exploartion of technologies used in the Kammann HS 300 is not a comparison between digital and screen printing: both decoration techniques have their own merits and advantages, and it is a topic to be explored another time. Forthe moment the advancements in the field of screen printing deserve a closer look.

Screen printing has been rediscovered as a tool for producing premium decoration in glass packaging markets, such as beer and soft drink bottles. The sector has shown impressive growth rates, which go above and beyond their expected averages.

These types of bottles are with few exceptions round and have a volume between 200ml and



Koenig & Bauer Kammann in Löhne, Germany, is the global market leader in machinery for the direct decoration of premium quality containers for the cosmetic and food industries. In developing the Kammann HS 300 the company's engineers considered several technological innovation to increase the printting speed.

700ml. Since this is a very specific and clear specification for the products to be decorated, it is possible for a machine manufacturer to design a machine customized to this application.

#### THE DECORATION PROCESS

Before starting the design of a screen printing machine, it has to be decided which process to use: ceramic or organic (UV/LED) process. In this case it was an easy decision for various reasons. First of all, the use of UV/LED inks do not meet the criteria for adhesion during the filling process. Only ceramic thermoplastic inks offer the adhesion and strength again abrasion, which is required for high speed decoration.

Secondly, although UV technology has matured and is safely curing at production speeds of 100ppm, it still is not possible to cure at much higher speeds, especially on a machine with continuous motion articles transport.

This brings us to the next point.

#### **PRODUCTION SPEED**

While the average production speed of machines currently in the market is less than 150 ppm

(pieces per minute), the next generation of machines can offer double the speed, or 300 ppm. Why 300 ppm? It has been identified as the most desirable printing speed, because on one hand, this is the level at which in-line decoration becomes viable with with glass production,

and on the other hand known and proven infrastructures can be used or upgraded for integration of the new high speed printing machine.

Infrastructure is intended to mean existing screen making processes can be used, the same ink suppliers can offer modified versions of the standard inks and, if necessary, down flow equipment, such as stackers can be upgraded to meet the higher speeds.

#### **MACHINE CONCEPTS**

The choice between two common concepts, which is an indexing and a continuous motion type design, is not difficult to make. Machine speeds exceeding 100 cycles per minute typically prohibit the use of indexing type machinery, because of the extremely high forces applied during acceleration and deceleration.

This leaves us with a continuous motion process, which safely allows article transportation at 300 ppm and higher.



#### **SCREEN PRINTING**

#### **FEATURES AND BENEFITS**

#### Optical/camera registration

The light weight glass bottles, which are produced to use less energy and less material, make it impossible to use mechanical type registration, which uses a lug/ramp on the base or on the side of the bottle.

Touchless optical/camera systems are necessary to replace the old process.

A long awaited improvement, which goes along with the implementation of optical/camera systems, is the perfect color to color registration, which mechanical systems simply can not offer.

#### **Dual Squeegees**

At speeds of 300ppm, the use of a dual squeegee technology is strongly advised.

The reason is that with 2 squeegee heads per print station, the relative printing speed, which is the rotational speed of the bottles relative to the squeegee during the printing process, is almost the same as the relative printing speed of 150 ppm machines. Again, the advantages are that existing screen technology, squeegees and set up procedures can be used. Additionally, there are no higher instances of wear and tear on the screens, which typically work well at higher speeds.

#### Ink Pumps

The use of ink pumps, which is rare on standard speed machines with a maximum output of 100 ppm, becomes mandatory on a high speed printer. Ink pumps serve a dual purpose: first by supplying the ink in the exact amount, which is sent to the printing station by programmable dosing; and secondly by holding the correct temperature by means of a controlled heating system in an insulated container. Depending on the print image, a consumption between 1kg and 4kg of thermoplastic ink is not uncommon.

#### **Print Image Inspection**

Another mandatory feature is the print image inspection system. Fortunately, the existing systems used on standard machines offered a good base for the development of a high speed system. However, there are differences. In order to match the high speeds without scarifying inspection accuracy, the print image is looked at by the inspection system in 6 segments. These 60 degree segments are inspected individually and put together by software, allowing operators to easily identify potential or actual quality problems. This greatly reduces reject rates and increases customer satisfaction.

All of these advanced high speed options are brought together in the Kammann HS 300, presented as the next great leap in screen printing for speed, quality results and reliable and consistent output.

To position premium products in the highly competitive field of beer and soft drinks, brand owners have re-discovered screen printing as way of decoration, which consumers can easily identify as premium. At the same time, glass manufacturers and decorators are forced to offer this kind of decoration at lowest possible price. To make this possible and profitable, the glass manufacturers/decorators must use state of the art equipment.

As one of the leading manufactures of glass container decoration equipment, Koenig&Bauer Kammann offers equipment to meet these criteria for implementing the process successfully.

#### KOENIG & BAUER

#### KOENIG & BAUER KAMMANN GmbH

Weidehorst 80 - 32584 Löhne Germany Tel: +49-5744-7710-0 Fax: +49-5744-7710-5130 E-mail: mail@kammann.de

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#### **KOENIG & BAUER**





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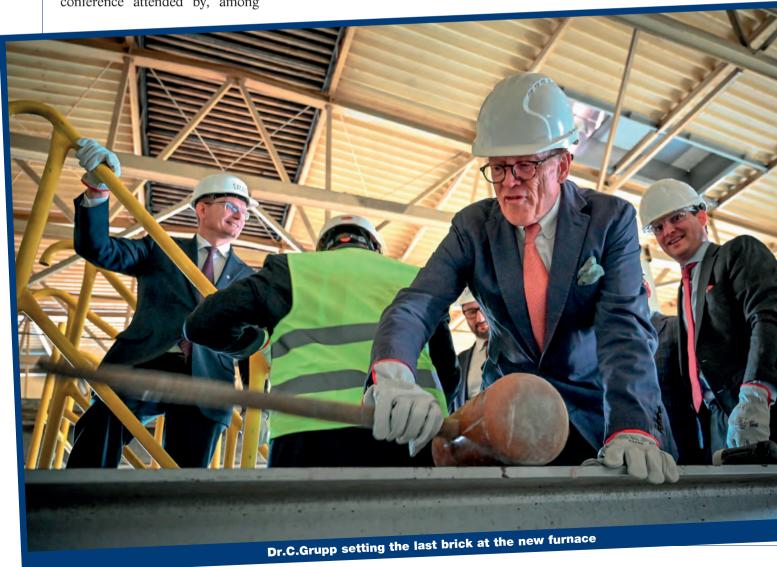
# A first for STOELZLE with its biggest glass furnace eve naugurated on July 13, Stoelzle's new furnace in Poland was scheduled to start operations at the end of that same month and will have an increased output of 45 percent. The last brick was A first for STOELZLE with its biggest others, Krzysztof Matyjaszczyk, the Mayor of Częstochowa, Dr Cornelius Grupp, owner of Stoelzle Glass Group, Dr August Grupp, Head of Stoelzle Glass Group is Spirits Business Unit, and and faster production glass furnace ever

of 45 percent. The last brick was symbolically set during a solemn celebration that included a press conference attended by, among

Group's Spirits Business Unit, and Artur Wołoszyn, CEO of Stoelzle Częstochowa.

#### A WHOPPING UPGRADE

The new, expanded furnace is to reach a production capacity of 480 tons per day and will be provided with three, more efficient and faster production lines. Total investment amounts to EUR 45M (PLN 200M). State-of-the-art



STOELZLE recently celebrated the successful rebuilding and expansion of its flint furnace in Częstochowa -one of the largest in Europe- in a project completed within the impressively short time of just eleven weeks.

melting technology will reduce the amount of energy used in the melting process by at least 10 percent per ton of glass and improved E-boosting will allow for the more flexible use of green electricity so as to reduce natural gas consumption.

"Construction of the new furnace was completed in less than 80 days. It involved a lot of work, challenges and experiences for our team, which handled the whole project very well thanks to excellent planning over the last two years," said CEO of Stoelzle Częstochowa Artur Wołoszyn. "I'd like to thank them all for their commitment! Several hundred people helped to ensure that the investment went according to plan and, above all, adhered to the highest safety standards. In the next two weeks we will commission the technological infrastructure of the furnace so it resumes full operation at the end of July."

#### A WIN FOR SPIRITS

Said Head of the Spirits Business Unit, August Grupp: "With its increased capacity, this furnace enables our Glass Group to service the Prestige Spirits market segment. We see a growing demand and wish to address it with the additional capacity. Together with a new printing machine in our decoration department we'll be able to fulfill our customers' needs for decorated glass bottles out of one hand."

#### STOELZLE'S **CONTINUING SUCCESS**

Now with investment into another glass furnace and three



new production lines at its Polish site at Czestochowa the Glass Group has reached a further milestone in its long-term growth strategy. Already in 2021 the new Logistics Centre was opened in March 2022 and a new high speed spraying line installed at Stoelzle Częstochowa - thereby increasing the decorations product portfolio, both for existing customers and new ones.

tors have mainly been regional

companies from Poland. These include TechGlass, Kobnext, Zremb, MAKO, Alpinet, as well as El-Logic, Tech-Met and Forglass.



# VETROMECCANICA makes its global debut at Glasstec Düsseldorf **VETROMECCANICA**



An emerging company in the glass sector, VETROMECCANICA eyes its future opportunities as it strives to become a reference within the industry over the coming years - finally making its first appearance in 2022 at the most important international trade show in the glass world after two years of pandemic.

etromeccanica has been offering solutions for the handling of containers in glass, PET, HDPE and aluminium since 1992. As indicated by the company's name (vetro in Italian meaning 'glass'), Vetromeccanica was responsible at its founding for the manufacture of both mechanical parts and conveying solutions for the glass industry. It has since diversified its product offer, acquiring many important customers within both

the food and beverages and plastic converters industries.

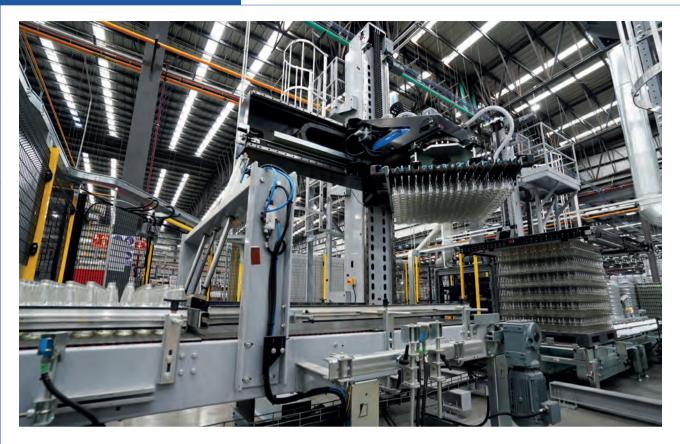
#### **EXPANDING FROM THE ORIGINS**

In 2019, Vetromeccanica inaugurated its new factory of 6.000 square metres - entirely dedicated to the hollow glass industry. Today, current installations for the hollow glass, food and beverages, as well as the personal and home care sectors, all meet the growing demand for automation of the production cycle and are designed with a focus on efficiency and quality. Thanks to its attention to detail and highly qualified after-sales service, the company has become an important player in over seventy countries over the years, already counting thousands of turnkey installations.

#### **EVENT PREPARATION**

"We're looking forward to finally meeting our existing and future customers at Glasstec Düsseldorf in September," says Francesco Cavatorta, Cold-end and Palletizer Department Sales Manager. "It'll be a great opportunity for the company to introduce itself to the glass industry. We also invite everyone to visit





our head office close to Parma in Italy to view first-hand the 'work in progress' of our glass installations."

Vetromeccanica is to showcase its installations, performed over the years, which include new cold-end solutions for green field furnaces as well as simple cold-end lines and rebuilt palletizers. Besides providing feasibility studies, design, manufacturing and installing cold-end lines, Vetromeccanica's offer is completed by telescopic shuttle cars as well as "Alpine" mass flow conveyors that connect new furnaces

to existing ones. Besides, the company performs electrical revamping and mechanical maintenance projects of old palletizers. It also certifies machine conformity and supplies new electric panels and new software whilst replacing layer formation tables and their related separators.

#### **DÜSSELDORF 2022: RARING TO GO**

Vetromeccanica entered in the APAC Glass Market in 2022 with

two important projects - each one consisting of two cold-end lines and two palletizers: "We're very proud of this commercial result and we're working hard to continue expanding Vetromeccanica's footprint throughout the world," said APAC Area Manager Filippo Mattioli. Now with the company all set to attend Glasstec, its sales team looks forward to welcoming all event attendees to the Vetromeccanica stand.





#### VETROMECCANICA SRL

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#### ULTRASONIC CLEANING MULTIVIBRAX POLISHING

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#### **INNOVATIVE SYSTEM**

The **Ecotecne** team has come up with an innovative ultrasonic high cavitation cleaning system for glass moulds.

This technology, which has been developed in collaboration with university, offers a faster and complete microcleaning/molecular process compared to traditional sand blasting systems;

the process is achieved by means of submersion in ultrasonic tanks that contain alkaline and acid solutions, powered by very strong cavitation.



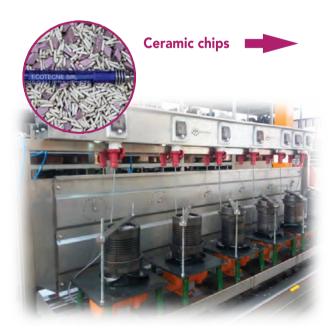


**MULIVIBRAX** unit, polishes up the inner surface of the moulds acting a **double vibration**, **vertical and horizontal**.

Special polishing compounds are so 'in touch with the entire inner surface of the mould cavity. The inner surface will become polish easily.



**Ultrasonic Cleaned** 



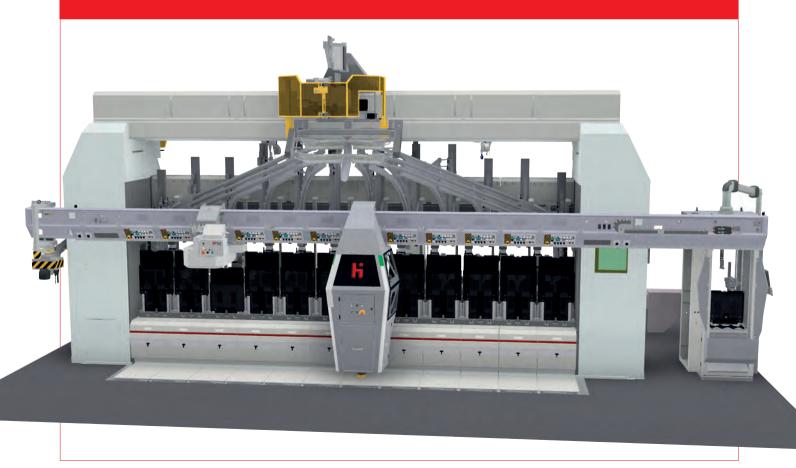
**Multivibrax** 



**Polished** 

# HEYE INTERNATIONAL presents the new BlankSideRobot

The new BlankSideRobot is the latest in a series of equipment developments from Heye International aimed at optimising the glass container production process. In combination with the company's Multilevel Safety and Protection Concept and SpeedLine IS-Machine, the new BlankSideRobot increases work safety in addition to providing higher product quality and improved productivity.



#### **OPTIMIZATION**

eve International will present its new lubricating robot for the blank side at Glasstec - the BlankSideRobot. This new robot is impressive with its compact design, which means that no additional control cabinets are required. The complete control is integrated in the robot itself and in the set-up station. In addition, Heye engineers have also given thought to the oil supply. The main focus was to give priority to short distances for the oil supply. The reservoir for the oil, including an oil level indicator, is located in the robot cage. The use of a higherquality oil results in segregation and sedimentation, supporting a focus on the ecological impact. The user can refill lubricant at any time through a special service opening.

#### WHAT'S NEW ABOUT THE BLANKSIDEROBOT?

The first thing that catches the eye is the new compact design with the integrated LED strips. The direction of travel, oil level, general operating status, operating mode and countdown to the start of the robot are displayed by the LEDs. Particular attention was paid to both safety of the system and safety of the user personnel. When it comes to system safety, the focus is on collision prevention/detection (between robot and invert) and a non-destructive tool. The first stage is collision avoidance. The SpeedLine's invert mechanism stops as soon as the lubrication robot is in the collision area. The second stage is collision detection. If a collision does occur, the station is automatically stopped to prevent further damage. The third stage is the use of a "non-destructive" lubrication tool. Heye International uses a breakaway magnetic coupling. If there is actual contact between the invert and the lubricating head, the front part of the tool detaches from a magnetic coupling on the lubricating tool. A catch rope, similar

to the rims in Formula 1, prevents the lubricating tool from falling uncontrolled into the machine. Simple and clever.

Safety is guaranteed by several equipment features. First, a safety cage avoids operator contact with the moving robot arm. The whole unit (hanging on the overhead rail) is equipped with sensors. When the

tion of travel is monitored by sensors. If someone enters this area, the BlankSideRobot stops automatically. In addition, retractable panels prevent the robot. Due

#### **OPERATING PRINCIPLE**

The robot runs on a rail in the overhead beam. This means that the floor is free from obstructions and mould changes can be performed without any interference from the robot. All new Heye IS-Machines are prepared for the

someone from reaching past the

robot and into the IS machine.

the robot. Due to the excellent control of force from the robot into the overhead beam, there is a low susceptibility to vibration. The robot sprays into the opened moulds on the blank side. "Swabbing on the fly" is the key advantage, which means that a production stop is unnecessary. Short spraying cycles with a small amount of lubricant results in avoidance of any need to reject

bottles after swabbing. A special program allows spraying of the neck ring, within the same time an operator swabs the blow moulds by hand.

Depending on local conditions, as well as the production process and container type, many advantages can be realised:

- Zero rejects from swabbing
- Avoidance of section stops
- Up to 75 percent savings on lubrication
- Improved operator safety
- Stable and repeatable volume,

- thickness and location of swabbing lubricant
- More time available for operators to focus on production optimization
- Automation solutions and closed loops to reduce manual operator interference

#### **SET-UP**

Another unique advantage is the robot set-up procedure. This can be performed by a zero-station in front of the IS-Machine. While one job is running, the settings

for the next article can already be adjusted. The user sets the trajectory points and movement speeds. Once stored in the control system's article database, the settings can be reused if the article is produced again. In assortment operation, the HeyeBlankSideRobot can support up to 4 mold and finish jobs. This is perfect for use in product testing. Running the robot is easy, supported by its advanced control with an easy-to-use touch screen to help the operator to do his job. The lubrication process is fully automated with a simple start/stop command. No additional control cabinets are necessary.

#### INTEGRATION INTO SPEEDLINE IS MACHINE

In order to be able to use all the features, a Speedline IS machine with HMST/FMT control is required. The integration into an on-site machine is easy. Only four electrical lines (1x power supply, 3x data lines) and a compressed air line are required. There are also a few mechanical adjustments to the existing SpeedLine IS machine. The signals are transmitted via CanBus and Profinet. This innovative solution is suitable for all production processes (Blow & Blow. Press & Blow and NNPB) as well as for round and non-round goods in any glass colour.

You will find Heye International at Glasstec in Hall 14 / C 18. ■





# GlassFORM.ai has BOTTERO joining forces with TIAMA for Al In a winning innovation partnership, GlassFORM.ai has seen BOTTERO teaming up with TIAMA, world leader in quality sensors. GMP&A recently spoke to them bot about the project, which will have advanced machine and the secont of the project.

In a winning innovation partnership, GlassFORM.ai has seen BOTTERO teaming up with TIAMA, world leader in quality sensors. GMP&A recently spoke to them both about the project, which will have advanced machine learning and artificial technology solutions controlling and optimising the process of forming glass containers.

#### LASS MACHINERY **PLANTS & ACCESSORIES** (GMP&A):

Fabio, you're Technical Manager at the Italian multinational Bottero. Why is automation so important within the glass industry at this time?

Fabio Galliano: Since the outset hollow glass production has relied a lot upon human intervention. That's because managing molten glass whilst turning it into final containers is a somewhat complicated and unstable process by nature - all of which depends upon many influencing factors that are mainly related to temperature and glass composition.



Many glass plants installed a lot of sensors over recent decades in order to closely monitor the hot end process, albeit in a standalone manner. Those sensors then started getting connected over the years delivering data, and sometimes even comparing and correlating information. With that culture of real data getting established, it stands to reason that the next level of solutions is now strongly anticipated.

Within this context, process automation has become a great need. This is already demonstrated in other industrial segments where the usage of modern technology related to AI and ML are being perfectly adopted thanks to the availability of much data and

measurements from a variety of sensors and inspection systems. Indeed these form the very basis of 'big-data' theory.

Today the challenges are to increase productivity, to contain environmental impact by reducing the carbon footprint and to increase operator safety whilst coping with the lack of available expertise. So, to continue sustaining glass as a material of the future, the industry needs to change that earlier approach by equipping itself to fully control and automate its production processes.

Here, of course, considerable investment in research and development is expected to reinforce the market position of the glass manufactur-

ing industry. That's the reason automation fosters Industry 4.0 principles in its aim to optimise the production process, which is why we predict that stakeholders in the hollow glass industry will reap the rewards of advanced automation techniques and machine learning-based approaches.

**GMP&A:** Bottero is a leading supplier of technologically advanced glass making machinery. Why has your company decided to take on GlassFORM.ai?

Fabio Galliano: Today the glass industry is investing significant resources in R&D programmes. It's developing fresh ways to produce and use glass as it makes new products avail-



### MACHINE LEARNING



able and enhances productivity. It's also improving the efficiency of energy at manufacturing sites while raising the environmental performance of glass products over their full life span.

Within this context, a drastic reduction of specific skills owing to working conditions is creating a lack of expertise, which represents a clear trend that needs to be addressed.

Production machines in a glass factory manipulate molten

glass at a temperature over 1000°C with systems in motion, which creates a potentially dangerous environment. It's therefore imperative that we mobilise our efforts to protect operators by minimising the risk of accidents and injuries.

In sum, the glass industry is facing several challenges to productivity increases, operator safety, environmental impact and an increasing lack of specific skills - all of which converge towards a unique and essential

key element, which is the capability to better control and automate the production process in order to render it stable, replicable and, ultimately, optimised.

For all these reasons, and after several years of collaboration, Bottero and Tiama have decided to create a dedicated company, GlassFORM.ai, that will be fully focused upon developing and selling plug-in solutions (made of hardware, software

and sensors) that are based on Machine Learning (ML) and Artificial Intelligence (AI) - all with the purpose of optimally controlling and managing the glass manufacturing process.

**GMP&A:** Benoit Burin Des Roziers, you're CEO of Tiama. I see GLASSFORM. ai has a young team. It's clear the project is determined to drive new talent with all the latest technical expertise. Your comment.

Benoit Burin Des Roziers: Ours is a young team, true, but each engineer is wellexperienced in his field of expertise. Besides, they've all been trained in the glass-making process and they're backed up by the Bottero team with its own know-how and experience of IS machines as well as the Tiama team with its own know-how and experience in terms of sensors within a glass environment.

**GMP&A:** In developing winning software solutions for the glass industry, all know-how in which your company has a rich experience, GLASSFORM. ai is pointing to a better relationship between operator and machines. How would the project improve glass production going forward?

Benoit Burin Des Roziers: Today there's tons of data available in our sensors, even if it's from other machines involved in the process. Albeit displayed, such data remains unexploited where it could instead be put to good use. To quote Bottero Sales & Marketing Director Paolo Mazzone: 'Potentially, we could make this data rich.'

Making capable correlations between hot end data and cold end data would first allow us to successfully determine key parameters by which to act on the process, then identify rules to act on the process. Here our joint goal is to develop a digital platform that will automate such rules - thus acting on the process to prevent defects. Here the idea is to transform a process that's currently in firefighting mode into one that's stabilised and mastered.





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https://www.glassform.ai





### METAL CONVEYOR BELTS

### **SINCE 1950**

Pietro Bonaiti Srl specialises in the production of conveyor belts for the glass industry, with particular reference to belts for annealing furnace and those for decorating hollow glass, two sectors in which it has a very high level of know-how.

### Pietro Bonaiti Srl

Via della Pergola, 7 - Lecco - Italy Ph. +39 0341362357 info@pietrobonaiti.com

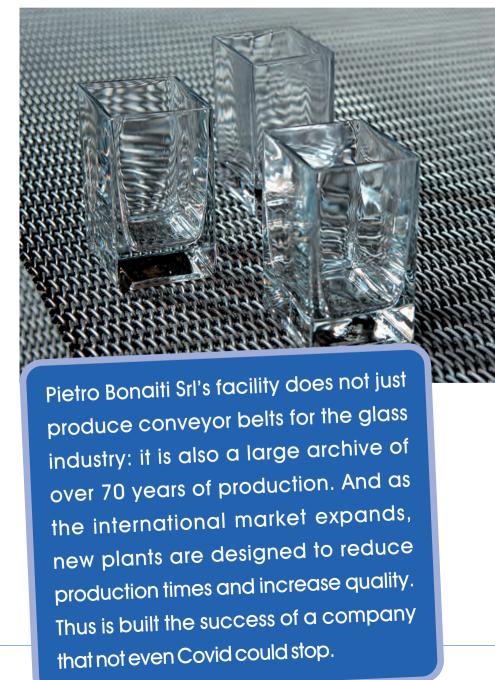
www.pietrobonaiti.com

## Pietro Bonaiti: The history of the glass industry is written on these walls

he sample of conveyor belt they sent us is not suitable for their temperatures," said Massimiliano, owner of Pietro Bonaiti Srl. One look is enough for him to recognise a material and its characteristics, even before chemical and mechanical analyses. On the other hand, for decades now, conveyor belts no longer hold any secrets for him and for a company that has helped write the history of industrial hollow glass automation.

Their history hangs on the walls of this company, founded over 70 years ago: in the hall, between a machine and a large workbench, hang the sample links of every belt produced during its long life.

"You never know," said a smiling Pietro, the third generation of the company together with his sister Marta. "The belts have a long service life, but it happens that you have to replace parts of them or even, at the end of their service life, have to remake them identically. And getting samples sent in is not always possible or easy. So here it is, this silent army of belts, the result of irreplaceable craftsmanship knowledge, now also aided by technological innovation and increasingly marked





international expansion, but which maintains its roots here."

### WIDTHS UP TO 5 METRES

The 'here' he refers to is the Lecco area, in Italy: a place blessed by the beauty of Lake Como and its majestic mountains, but at the same time historically devoted to production, especially in the engineering sector. Among the local specialisations, that of the production of conveyor belts stands out, distingushed by quality, durability and performance: specifically, Pietro Bonaiti Srl over the years has dedicated itself to belts for glassworks, in particular those for hollow glass decoration furnaces and even more so those for annealing furnaces.

"Over the years, we have not only acquired specific know-how that allows us to act as consultants for our customers, but we have also developed and produced application-specific systems," Pietro explained. "This is why we are able to fulfil our customers' wishes and needs even when dealing with new applications. This knowledge, capability, and equipment cannot be found everywhere."

These statements convey all the passion for a profession handed down between generations and also some justified pride. "Today we have arrived at producing conveyor belts up to 5 metres wide by several tens of metres long: these are important dimensions, even more so if we think that every characteristic of the belt is customised: shape and length of the links, material used, operating temperatures and so on."

### A COMMITMENT TO CUSTOMERS

As far as customised and exclusive applications are concerned, Pietro Bonaiti Srl is introducing new systems into its machine park, specifically designed to increase process automation, without sacrificing flexibility and the possibility of producing highly customised products. "These are important investments, aimed in particular at continuing to guarantee full compliance with better manage any emergencies, especially when the customer has to deal with machine downtime. Those who turn to us know that

they can count on our full availability and that we will do everything to provide timely and quality responses."

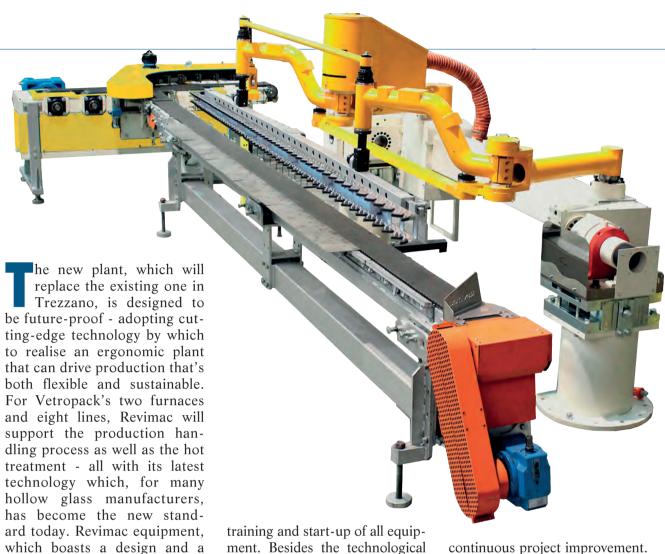
The owners of the company are well aware of how it is precisely these characteristics that make the difference in the market. "Many of our customers have been buying from us for years, if not decades: this is because once you have experienced the difference in both product and service you realise how much what seem to be details can make the difference. Specialisation in the glass sector, in-depth knowledge of materials, requirements, solutions and products, the ability to become reliable consultants, adherence to specifications and timeframes, flexibility, the ability to implement special productions, the creation of tailer-made machinery... only such a comprehensive business culture, rooted in its artisanal history, can create this unique mix."



### Vetropack chooses REVIMAC for process reliability and operator comfort

Leading European producer of glass containers for the food and beverages industry Vetropack has chosen and contracted REVIMAC to be one of its strategic partners for its new greenfield plant in Boffalora Sopra Ticino, Italy, where production is set to begin in 2023.





LINES CONFIGURATION

to-melt performances.

concept that puts process reli-

ability and operator comfort at

the centre of any development,

represents a key player for all

end-users who, at the same

time, are after both flexibility

in production and high pack-

All eight lines of the new Vetropack Italy plant are to be equipped with Servo Lehr RSS100 Loader (stacker). Cross Conveyor RC900 and Hot Treatment Hood HTH150 MK5. With respect to the hoods, an Intelligent Centralised Feeding Unit will serve and distribute the liquid treatment accurately and in complete safety. For this project Revimac will provide a full turnkey installation service by taking care of the installation of piping, cable trays and cables as well as the set up, commissioning,

training and start-up of all equipment. Besides the technological features of each item of equipment -so fundamental when taking on such an ambitious projecta very well-structured, tight-knit team comprising both Revimac and Vetropack professionals is working closely to support each other in a pleasant, harmonic and fruitful cooperation that's proudly worthy of the term partnership.

### DRIVING FUTURE GROWTH BY INVESTING IN PEOPLE

That said, even when using a high level of technology, cutting-edge production, remote control and whatever can automate the smooth flow of operations, people training remains a further essential focus with which the team is now jointly collaborating. It definitely marks another key aspect of the Revimac mindset which, more than ever, is correlated to the initial phase of each development phase and, with time, to

continuous project improvement. When it's easy to use, it's easy to teach and it's easy to learn. For now especially, that's precisely how Revimac technology is being leveraged to serve people. Having first made little steps, the company still has a long road ahead. However, once again, Revimac is showing its capabilities while being ever willing to improve both itself and all that surrounds it - walking side-by-side with the market leaders.



### REVIMAC SRL

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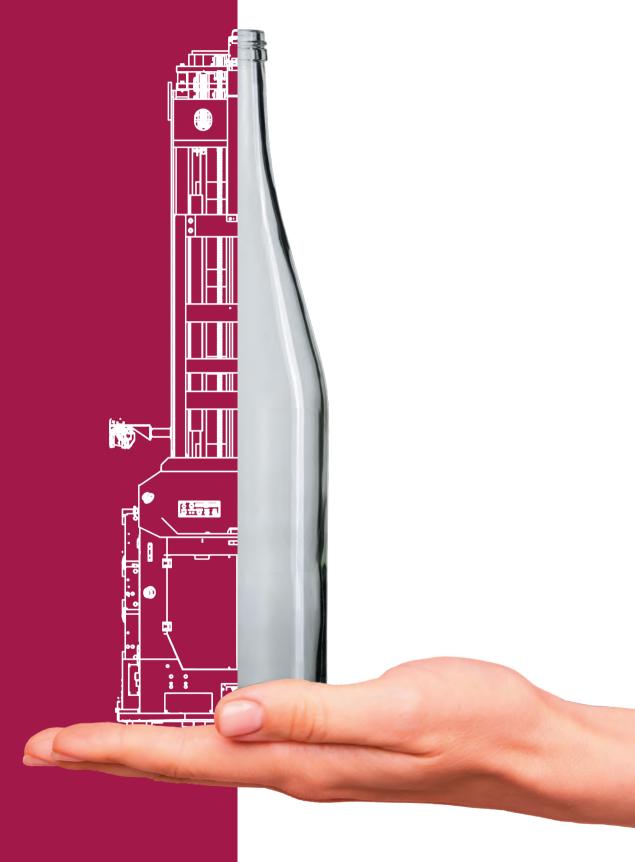
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### the Right Move!



### TECHNOLOGY MOVING SAFELY











## TECNOFERRARI's advances in logistics automation for glass

n recent years the evolution of logistics automation has been undergoing strong development within the industrial sectors -all of which are also very different, one from the other. Here, of course, the glass industry is fully included.

As such, automatic systems implementation in plants is now the only solution to stay abreast of market evolution.

Improper monitoring and finished product traceability are among the factors putting a strain upon glass production efficiency - all against the backdrop of ever-increasing demand with ever-shorter delivery times as well as a need to guarantee the correct management of products and the safety of operators. Indeed it is at this point that forward-thinking entrepreneurs decide to invest in a logistics automation system to improve their companies.

### **VALUE PROPOSITION**

Within this scenario, TecnoFerrari continues to look to the future with its automation evolution - providing customers with the kind of maximum flexibility that can meet their individual requirements by supplying logistics automation systems that are characterized by quality, reliability, innovation, customization and ease of use.



Once a marginal consideration, automation logistics is now becoming increasingly indispensable to plant design and organisation - extending no less to the workforce. TecnoFerrari's solutions increase production efficiency and safety within plants.

The company focuses on logistics automation since 1973, having developed automatic systems such as LGV and AGV shuttles for handling, storage and management of the product. What most distinguishes the Italian company, founded in 1966, is the modus operandi with which it presents itself as a partner and consultant to meet the needs of the market.

### PUTTING THE CUSTOMER FIRST

TecnoFerrari's team of professionals works directly with customers, actively listening to their needs while searching together for the ideal, personalised solution that can achieve the set goals. The company has more than 180 patents and provides excellent solutions. TecnoFerrari puts full attention to product safety by developing design concepts that comply with food

safety regulations, such as GMP.

For each installed plant, both continuous monitoring and traceability of the movement of goods are guaranteed by an ad hoc control and supervision system.

All vehicles are equipped with the most sophisticated devices for the security of the operators in the common areas.

### **CUSTOMER CARE**

**TECNO** 

TecnoFerrari has 5 branches worldwide located in Brazil, China, Spain, Türkiye, and the USA guarantees 24/7 assistance with specialised technicians and immediate availability of spare parts.

TecnoFerrari will be present in Dusseldorf at Hall 13 Stand D95 for logistic automation solutions and at Hall 12 Stand B67 for digital printing for flat glass. ■

FERRARI



### VETROPACK RINGS in a new era

A new glass works for a new era: one of the leading glass manufacturers in Europe is investing in a new flagship facility for the storied Italian market. The aim is for cutting-edge production to commence in Boffalora sopra Ticino near Milan in 2023 – not far from the old site and designed to be future-proof, flexible and sustainable.

for the food and drinks industry with products ranging from olive oil and preserves to nut nougat spreads and juices, soft drinks and spirits of all kinds. Wine and prosecco are particularly popular with the Italian market.

The subsidiary Vetropack Italia S.r.l. has belonged to the Group since 2015, though the glass making at the Trezzano site dates back to 1960. As Johann Reiter, CEO of Vetropack, points out: "It was already clear from early on that the old site in Trezzano sul Naviglio was not going to meet the company's long-term objectives. The important Italian market with its rich culinary traditions and many world-famous brands plays a central role in our strategy."

he future started on the canals: from the thirteenth to the twentieth century, goods for the burgeoning Milanese industrial region were transported on the Naviglio Grande, a canal that connects to the river Ticino and forms the border between Lombardy and Piedmont. The groundbreaking ceremony for the new glass works of the Vetropack Group a listed Swiss company and one of Europe's leading glass manufacturers - took place on 25 October 2021. With nine glass works and around 4,000 employees, Vetropack delivers high-quality glass packaging to markets in central, eastern and southern Europe, in particular



This is in addition to the ambitious quality and sustainability targets the company has set for itself for the year 2030, including flexible and bespoke production on the one hand and the most efficient usage of resources on the other.

### SO MUCH MORE THAN JUST A GLASS WORKS – A LIVING PIECE OF THE FUTURE

Planning for the new production facility, the investment for which amounts to more than CHF 400 million, has begun, with preparations long in the making. All stakeholders - including the Italian authorities, landscape designers, architects, employees in Trezzano and experts from the Vetropack Group - were involved in good time in order to draw up a particularly futureproof and sustainable concept. The production facility, which is being built on the site of the former Reno di Medici paper factory and abides by all environmental requirements, has 347,000 square metres with approximately 170.000 square metres dedicated to production equipment.

Large parts of the site's structural remains are being reused. A historically important warehouse is being restored and opened to the public as an information centre. Even the SP225 main road will be modified during the construction works, with additional relief provided by parking spaces built for cars and lorries. Part of the area is also envisioned as a 31,000 square metre park, which, as a public green space, will strike an attractive contrast with the modern industrial landscape. All trees felled in the course of the construction work will be planted anew elsewhere. The glass façades blend into the landscape harmoniously - not least because of the muted colour palette of greens and browns. In addition to this, the roof is being



constructed so it is possible to install photovoltaic cells over its entire surface area, a portion of which will be in use right from the outset.

Great importance is therefore being placed on sustainability, not only in terms of construction and landscaping but also technologically and socially: all 301 employees at the old Trezzano site will be given the opportunity to transfer to the new Boffalora site approximately 25 kilometres away. Even though the output

per employee is being significantly increased, the size of the workforce will also slightly increase due to the higher capacity, with both new and existing employees already being trained since 2020 to use the new production machinery.

### DOING MORE WITH LESS, BESPOKE MINI-SERIES AND INDUSTRY 4.0

How will production work in the new glass works? Vetropack





is capitalising on the benefits of a smart factory, while leaving space for human expertise and creativity: all glass production processes are based on the Vetropack Group's expertise and are being brought in line with the latest technology. The Vetropack philosophy of "safety first" has been implemented consistently and the newest developments within ergonomic workplace design have been taken into consideration. Both white and cuvée coloured glass will be manufactured at the site and the productivity per tonne of glass will increase significantly as a result of the ultra-modern machinery. As in the previous glass works, there will also be two furnaces in operation at Boffalora at first. The complete infrastructure is, however, already designed for an expansion of production capacity as a positive market development is anticipated both in Italy and abroad in the medium term. Even with only two furnaces, an increase in production capacity of around 50 percent will have been achieved.

"As such, Boffalora will be one of the Vetropack Group's largest sites," says Christoph Burgermeister, Project Manager at Vetropack. "We will be able to produce more flexibly at the new glass works and will therefore be more able to meet the rising demand for high-quality packing, including in smaller batches so-called semi-specialities." A stand-out is the fully automated warehouse: automated vehicles will transport the finished bottles and glasses from the production facility into the warehouse and from there to the

loading ramp safely and without human intervention.

Vetropack Project Manager Cristoph Burgermeister

### VETROPACK IS A PIONEER IN SUSTAINABILITY ISSUES

In particular, environmental sustainability and efficient use of resources are being heavily invested in at the new glass works. Glass is without doubt one of the most sustainable packaging materials as it is 100 percent and often endlessly recyclable. Vetropack is one of the pioneers of recycling and started

collecting used glass in Switzerland as early as 1970. Nowadays, the proportion of recycled glass within the Vetropack Group is approximately 55 percent, with the aim of surpassing 70 percent by 2030.

The specific measures for boosting sustainability include:

- decontaminating the industrial site
- reusing materials from the demolition of the original building and facilities
- low noise pollution during the day and at night
- energy-efficient processes and production equipment and using waste heat
- producing green electricity using photovoltaic systems
- reducing emissions using the newest filtration systems (dust and NOx)
- low water consumption using closed-loop systems

Production of glass packaging will commence at Vetropack's new Italian site in the first quarter of 2023. Precise planning as to how to shift production from the old glass works to the new one, as well as training at various sites and suppliers' premises, are already under way.

Ultimately, Burgermeister is thinking ahead: "As there are back-up solutions for the product lines within the Italian market at other Vetropack glass works, continuity of supply will be guaranteed at all times. We are looking forward to the beginning of a new era for our customers and are confident that Boffalora's success will reflect positively on the entire Vetropack Group."



### VETROPACK GROUP

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www.vetropack.com



### LUBEN GLASS a company of firsts

Active in the hollow glass market since the 1980s, LUBEN GLASS has established itself as a leading company specialized in the supply of spare parts, special equipment, plants,

machines and chemicals while adding engineering and energy consulting services alongside its sales department.

■ VOLUTION OF A
■ GREAT SUCCESS

Being the first to devise a vibration polishing system that can polish moulds through the controlled supply of polishing liquid, the company was also the first to conceive the mould-saving project - thanks to which it has guaranteed a significant lengthening of the average life of





moulds by polishing them with its vibration polishing technology. Today, in an evolution of its incredible vibration polishing system. Luben Glass announces the birth of VR1 EVO to both its customers and to glass factories around the world.

### **VR1 EVO: ORIGINAL, UNIQUE** AND INIMITABLE

VR1 EVO is the evolution of VR1, a machine that has been widely-used within mould glass factory workshops around the world together with the main mould makers - all thanks to its

ease of use as well as many other pluses that make it one of a kind. VR1 EVO is characterized by the unmistakable silenced vibration motor and compact design that makes it suitable for installation, even in small spaces. The performance of the engine and new air suspensions have helped reduce polishing times while a third access to the work area allows for a more effective and comfortable mould loading.

### **PENDING PATENT**

With a pending priority dating back a few years ago, VR1 EVO has been enriched with a new system. Loading of the moulds from a single station is now possible thanks to the presence of the rotary table, thus facilitating the operator's work - a system that also allows for automatic loading of the moulds. For example, by using an anthropomorphic robot. As vibration polisher, VR1 EVO can proudly boast the use of a vibrating-rotating table with a load capacity of 12 singledrop No.7 moulds.

### **TRENDSETTER**

The compact design, the access on three sides, the use of the silenced motor and the robustness of the rotating system all afford VR1 EVO its possibility to consolidate its position - also as future mould polishing reference point for glassworks all over the world.

Luben Glass' mission is to satisfy the needs of its clients. It offers innovative products based upon the creation of components for different types of forming machines and plants - thus responding to the many functional needs of both the hot- and cold-end of glassworks. Thanks to the work carried out by its skilled technicians, Luben Glass is able to provide standard products as well as those which respond to specific client needs - guaranteeing the maximum reliability of its products. Dynamism and construction expertise are the winning features of Luben Glass. The company has always been, as it remains, committed to innovation whilst offering solutions that respond to the ever-more stringent needs of its clients. Active in the search for new materials and in the study of tailormade solutions and items for its clients, Luben Glass is specialized in the manufacture of different types of equipment and spares for IS machines. This service range reaches 360° with its plants and chemical divisions. The company is now looking to the future with the aim of ensuring a more proactive service to its customers with its worldwide network of branches and agents.



Fax: +39-0373-244401 E-mail: info@lubenglass.it

www.lubenglass.eu

## EUROMATIC attains to ever higher levels of excellence in pharma



### **ORE VALUES**

Euromatic focuses on the design and realization of complete production units for converting glass tubes into containers for the pharmaceutical industry. This critical approach manifests itself in a driving force that won't be satisfied with past achievements. Such is the foundational innovative spirit that distinguishes the Euromatic team. The company's technologically advanced facilities, its wealth of experience and its continuous investment in human resources are all cornerstones that have it meeting customer needs while being always proud of its products.

Euromatic is now a solid, wellorganized group with facilities spanning over 13.000 square meters and with 105 employees operating in technical, sales and administrative departments - all intensely loyal to the company, which is accounted for by the low personnel turnover. Highly-qualified design staff equipped with significant expertise are guaranteeing the best synergy between mechanics and electronics for both equipment efficiency and production quality. Euromatic customers are market leaders within the field of

primary packaging for pharmaceutical glass and the company's equipment is commissioned by some of the best glass converting companies around the world.

### **PRODUCTS**

Euromatic's portfolio of products reflects its strong focus on glass conversion machines for the pharmaceutical industry. The company's tube converting equipment covers the complete range of pharmaceutical products, from vial to cartridge, syringe to ampoule glass conversion machines - thus providing a complete range of solutions for many



A strongly innovative approach, a consolidated experience and commitment to quality have been the impetuses for an increase in demand from international markets as well as the true motivation behind customer loyalty that makes the company a leader in its field.

### **PHARMA**

glass processing machine needs.

### **ENGINEERING**

Euromatic is a company known worldwide for its glass transformation production processes. Its engineering and R&D teams are dedicated to developing technological state-of-the-art solutions for converting glass tubes into vials, cartridges, syringes and ampoules. The complete project cycle is internally-managed and directly handled as follows by highly-specialized human resources:

- feasibility study, technical and economic proposal;
- time planning;
- design activity;
- production of parts;
- logistics;
- assembly, cabling & software development;
- FAT/SAT activity;
- after sales service.

### **TUBE-LOADER**

Euromatic's automatic vertical tube loader is suitable for accepting six glass tube bundles in just 1.2 square metres of floor surface. The Lambda tube loader can be integrated for both index and continuously forming machine carousels. Glass bundles are easily loaded onto the revolving table in vertical position by an operator thus ensuring frictionless contact

between tubes. The automated system is provided to pick one tube at a time from the bundle gently so as to avoid potential tube damage, with glass-to-glass contact avoided throughout the entire process. A superior PLC structure provides recipe storage and recovery for a considerable reduction in change format size and start up.

### **FORMING MACHINES**

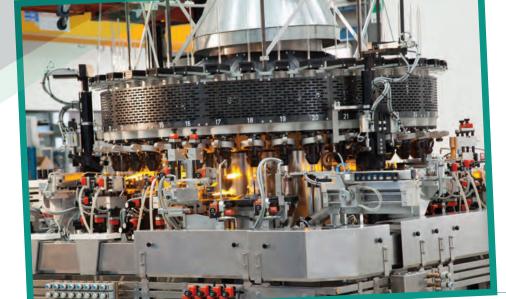
Thanks to decades-long experience in the forming process, Euromatic offers a sizable range of different forming machines all designed and distinguished by various special features:

### Zeta 18-10 for vials

- Outer diameter: 10.0 30.0 mm (other working ranges upon request)
- Total length: 27.0 100.0 mm
- Product geometry: ISO 8362-1, ISO 11418-7 and blow back
- Machine performance: 3.600 cycles per hour
- Single indexed motion
- No glass-to-glass contact
- Tube economizer
- 18 chucks for the main carousel
- Self-centering chucks
- Plug cooling system

### Zeta 16-10 for vials

- Outer diameter: 10.0 – 32.0





mm (other working ranges upon request)

- Total length: 27.0 100.0 mm
- Product geometry: ISO 8362-1, ISO 11418-7 and blow back
- Machine performance: 3.000 cycles per hour
- Single indexed motion
- No glass-to-glass contact
- Tube economizer
- 16 chucks for the main carousel
- Self-centering chucks
- Plug cooling system

### Tau 36 for ampoules

- Outer diameter: 8.75 22.5 mm (other working ranges upon request)
- Total length: 60.0 160.0 mm
- Product geometry: Din/ISO and Marzocchi
- Machine performance: 7.200 cycles per hour
- 36 chucks
- -In-line first bottom of a new tube
- One stem system



- Solid structure for the main body

### Kappa 36-30 for cartridges

- Outer diameter: 8.65 12.6 mm (other working ranges upon request)
- Total length: 35.0 95.0 mm
- Product geometry: Dental and insulin cartridges
- Machine performance: 7.200

cycles per hour

- Single indexed motion
- 3 out
- In-line dimensional control
- Self-centring chucks
- Plug cooling system

### AFTER-FORMING WORKING LINE

Euromatic automatic after forming working lines are suita-

ble for connection with any kind of upstream forming machine and conveyor line speed is automatically synchronized with the forming machine speed. All the equipment is CE-compliant as standard. Guards and doors are safety interlocked and the safeguarding system monitors the position of a guard or gate. It is then used to power off, control



personnel access and prevent the machine from powering on when the guard is open.

All the handling systems have been specifically developed to avoid glass to glass-to-glass contact and to hold the containers in a proper way in order to elude possible marks on the surface of the product. Furthermore, pick and place are designed with special features in order to handle the containers from the external surface gently - nothing must be admitted inside the container.

The after-forming working line can also perform the following functions, if required:

- dimensional camera system to inspect internal diameter and total length of the vial;
- system of electro-mechanical gauging heads to detect the total length of the vial and/or concavity of the bottom;
- servo-motor driven silk screen printing station;
- optical sensor to measure bottom thickness and concavity.

### **ANNEALING LEHRS**

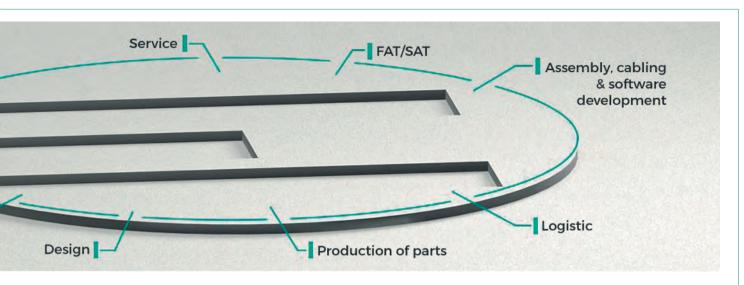
Annealing lehrs can be electrically heated or gas-heated. Here Euromatic lehrs are designed with special features that guarantee a homogeneous temperature distribution inside the chamber through the different product lanes/rows. The products are positioned on a corrugated mesh belt carrier system made of transversal flight channels to allow the products to be placed in a horizontal position, slightly inclined, with V-shaped attachments that support the vial neck. The channel trays are designed to cover the product size range, thereby avoiding the need for a changeover. Thanks to a controlled heating and cooling process, the annealing lehr allows for a perfect release of residual stress of the glass products. The annealing curve perfectly represents the required heating time to reach the above annealing point temperature while being kept constant for a set time period. Following this, the atoms have the possibility to rearrange themselves. The annealing lehr has been developed with thermocouFeasibility study, technical & economical proposal

ples installed in specific positions in order to detect the temperature in those areas. The loading and unloading systems at the lehr inlet and outlet are equipped with servo-driven motors with self-teaching functions to provide easy changeover from one size to another.

The annealing lehr, if required, can also integrate:

- sampling stations both at the lehr inlet and outlet to collect samples of containers during production without stopping the equipment;
- visual camera system for print inspection.





### AUTOMATIC PACKING MACHINE

The automatic packing machine is CE-compliant as standard. The glass products are transferred from the annealing oven, thanks to a pick and place system which moves the products without glass-to-glass contact and via positive handling.

The automatic packing unit can handle different box sizes according to customer needs. The different format sizes are managed by recipes with a friendly user interface. Upload and recovery of the recipes includes the possibility to have a quick format size change and start up in order to reduce downtime.

The handling systems are all developed to ensure glass-to-glass contact is avoided.

The indexed revolving table can handle five trays.

If required, the automatic packing unit can also perform the following functions:

cosmetic inspection system via camera to detect such imperfections as cracks, air lines, scratches, chips, etc. for the finish, body and bottom.



Euromatic offers both after-sales service as well as assistance to respond to customer needs. Not only. Remote analysis and diagnostics enables the company's technicians to guide maintenance staff to support customer requests.

Offered services include:

- Telephone support to our customers' staff;
- Remote assistance in collecting data on equipment status as well as correcting malfunctions without onsite intervention;
- Intervention at customer premises, saving time thanks to preliminary analysis and consultation of diagnostic messages.



### **EUROMATIC**

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DÜSSELDORF, GERMANY HALL 13/C33

20-23 SEPT 2022



## WE OFFER CUTTING-EDGE SOLUTIONS TO THE HOLLOW GLASS INDUSTRY



repair specialist for Bucher Emhart Glass products

www.ergonmeccanica.com - ITALY Dego (SV)

# ERGON MECCANICA: cutting-edge solutions for the hollow glass industry

The Italian company, repair specialist for Bucher Emhart Glass products, is attending GLASSTEC 2022 as co-exhibitor of Bucher Emhart Glass, Hall 13 C33.

ver seventy years ago the Sambin family started its long business journey with heavy industry services and installation. More than thirty years of experience and professionalism in the hol-





low glass industry consolidated into Ergon Meccanica, a well-established company operating internationally, pursuing worldwide customer satisfaction through the most advanced technologies, overhaul, installation and maintenance of industrial machines.

### A TRUSTED PARTNER

Today Ergon Meccanica is lead-

er in the installation and repair of IS Machines, as well as refurbishment or assembly from available components in stock, according to the customer's needs and requests, including tailor-made interventions, with special executions carried out by a dedicated team of experts.

Following a successful history of cooperation with Bucher Emhart Glass, being the main Emhart's third parties supplier for in plant service activities and installations, at present, Ergon Meccanica is "Repair specialist for Bucher Emhart Glass products".

Major repair and upgrade projects on the existing Emhart's installations are carried out directly by Ergon Meccanica, managing repairs and maintenance throughout the whole machine life cycle and offering to customers class C repairs carried out exclusively using genuine Bucher Emhart Glass spare parts.

At Ergon Meccanica's facilities all the components, mechanisms and whole machines are duly "coldrun" tested before delivery.

### CUSTOMISED SOLUTIONS AND ON SITE SERVICES

Main works are usually carried out in the specialized workshop based in Dego (Italy), but projects quantity and variability bring Ergon's expert staff directly into some of the most important hollow glass industries around the world.

Moreover, Ergon Meccanica has set up a fully functional training room with a two section IS machine, running with FlexIS 3 Timing system, where it is possible to carry out custom tailored training courses for machine operators also with specific mechanisms insights.

This is why no challenge is too big for Ergon's experts when searching for the best solution for its customers.



repair specialist for Bucher Emhart Glass products

### **ERGON MECCANICA**

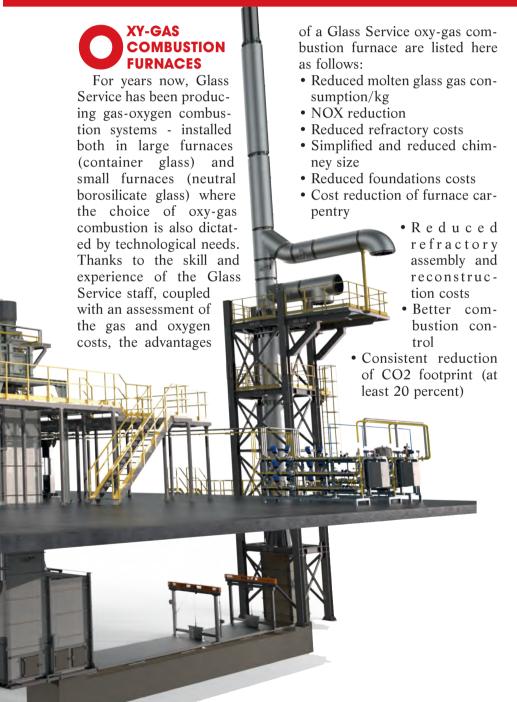
Via al Colletto 17058 - Dego - SV - ITALY Tel.: +39-019-450-7700 E-mail: info@ergonmeccanica.it



# GLASS SERVICE ITALIA's efficiency-adding, emissions-cutting solutions at Glasstec



Recently, the urgency to solve problems related to energy savings and CO2 footprint has forced a boost in technological innovation, especially in the glass industry. Over many years Glass Service has studied, tested and applied new solutions, step by step, on its systems and since 2010 has established itself as a leader in the production of extremely complex and technologically advanced furnaces for neutral borosilicate glass production.



### **ELECTRIC BOOSTERS**

Glass Service has over 10 years' experience installing dozens of electric booster systems, which display the following advantages:

- Internal production of electrode holders
- Booster systems controlled either by thyristors (up to 800 kW) or by variable voltage transformers (for larger sizes)
- Barrier boosters
- Power boosters
- Evaluation of actual energy saving in relation to possible alternatives of the "fossil / electric heating" ratio
- Optimizing the position of the electrodes and the circulating currents
- One or more boosters helps to reduce CO2 emissions

### **MIXED-MELT FURNACES**

By integrating oxy-gas combustion systems and the extended application of electric booster systems at the bottom of the furnace, Glass Service has created more than 20 mixedmelt furnaces for producing hydrolytic Class I neutral glass for pharmaceutical applications. Multiple sole booster systems achieve electric melting while oxy-gas systems achieve fossil fuel combustion. Here positive results have led Glass Service to develop mixed-melt furnaces up to current capacities that are presumed to reach 70-80

### PRODUCTION SYSTEMS



TPD where electrical components attaining high fusion energy percentages obtain a much reduced gas consumption. Consequently, a very low CO2 footprint that can maintain a high flexibility with production quality guaranteed by cross-fired furnaces with oxygas combustion.

### **CHANNEL AND DISTRIBUTOR INTERVENTIONS**

Often overlooked, these interventions can both improve the energy balance and reduce CO2 emissions. Here Glass Service is actively working on:

- Use of oxy-gas burners instead of normal gas-air premix burners - resulting in more than double the efficiency of the combustion of the channels
- Realization of electrical channels with radiant elements
- Installation of heat recovery

and redistribution units above the chimnevs

- Upstream insertion of the gas reduction stations of the working ends, of Wobbe Index measurement and stabilization systems (by means of controlled injection of compressed air) in order to guarantee the stability of the operating conditions - mindful that a fluctuation of the calorific value inlet can lead to an extra 4-5 percent gas consumption due to unnecessary excess gas, or to the equally unnecessary excess of combustion air
- Stabilization of the combustion air temperature by inserting heaters downstream of the combustion fans
- In relation to the above, Glass Service can study various scenarios, comparing consumption in classic conditions - or in the case of oxy-gas combustion or electric channels

• Finally, Glass Service has started testing H2-O2 burners of its own design

Glass Service team members will be at Glasstec 2022 Pavilion 13, Stand F14 to answer any questions - providing a long list of plants the company has built while explaining the cost-saving advantages of its products.



### GLASS SERVICE SRL

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www.glassservice.it



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wine bottles.
Avoids the formation of
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solenoids.

### (Very High Quality)



BOHEMI P1500
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emulsion.
Suitable for precious bottles
as liquor, champagne or
returnable containers to be
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We supply nearly 100 customers all over the world in every continent.

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# OMS brings the market its experience, reliability and flexibility

### **OMS** in the World













Headquartered in Italy and with 12 subsidiaries in Italy, Europe, North and South America, Asia and Oceania, OMS is a global leader in end-of-line packaging of palletized products for all market sectors. Founded in 1949, the group has long been designing and manufacturing strapping, wrapping and hooding systems.

xperience, reliability and flexibility comprise the three key drivers powering OMS' response to today's market demands - from the simplest strapping machine to the most sophisticated packaging plant, as well as complete packaging lines for the hollow glass market. This has been made possible thanks to the group's many years of experience within the market, along with a vast number of tailormade solutions - all specificallystudied for its customers.

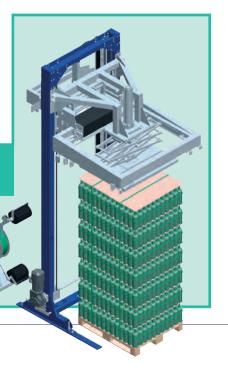
### MAIN PRODUCT RANGE:

### **HORIZONTAL** STRAPPING 06CL

OMS' horizontal strapping machine for palletized products features an arch that's driven on a linear rack - guaranteeing an optimum positioning of the straps on the pallets, simplified head maintenance with quick action connectors and different strapping programs that can be easily handled from the operator panel.

### HORIZONTAL STRAPPING 06CL







### VERTICAL STRAPPING **PRESS MASTER GLS**

For palletized products -especially for the hollow glass industry- the vertical press/strapping machine has a top press capacity of up to 2.4t.

Thanks to a perfect combination between strapping heads, swords and the turntable placed under the machine, it can apply multiple strapping patterns in both directions (from 2x0 up to 4x6).

The customer conveyor system can either have the basic built-in design or be equipped with OMS conveyors.

### **PACKAGING**

### **AT55 HOOD SHRINKING**

AT55 is an automatic machine specifically-designed for the hollow glass industry, which applies and shrinks the hood on the pallet of bottles at a single workstation. Depending upon the chosen model, it can use up to three different coils of shrinkable tubular film with side gussets. The film is shrunk onto the product by a flameless ring gas oven.



### FT53 TOP PAL

This is OMS' automatic system for applying and thermo-shrinking a sheet of plastic film on top of the load. It hermetically and mechani-

cally protects the top part of the load which, owing to stacking, is generally subject to tears. When welding the hood this operation also ensures a better hermetic seal.





### COURSING THE **FUTURE** WITH WINNING SYNERGIES

Such important results are credited to third generation businessmen who've consistently remained in lockstep with the market - all driven by a vision of the future that's characterised by innovation and continuous improvement. Indeed it's this constant attention to new technologies and market demands that has OMS models all designed to interface with the customer's network - in sync with





### **AVR1000 RING WRAPPING**

The AVR1000 was developed with a carbon fibre ring, slip ring contacts and a patented prestretch carriage reaching a ratio of 300 percent.

It's possible to start and stop the wrapping cycle at any height of the pallet load (whether top or bottom). Besides the high-speed, simplicity and flexibility, results here include largely-increased reliability and reduced maintenance, as well as stable loads with minimal film consumption.

At the end of the cycle, the final film tail is safely inserted beneath the previous wrap or else welded with a halogen lamp device (based upon a chosen option) - yielding no loose film ends whilst guaranteeing a perfect finish.



### **OMS GROUP**

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www.omsspa.com

Industry 4.0 protocols. According to the horizontal, vertical integration and cloud criteria, operation and production data acquisition devices provide all the necessary data to verify and monitor the entire system while collecting production data.

Here's why OMS is now undergoing a new phase of transformation to stay ahead of the times - elevating its current position in the market to an ever more global industrial reality.



## THE WORLD IS CHANGING. GLASS QUALITY CONTROL TOO.

The new generation of vision technologies and artificial intelligence developed by Video Systems takes glass quality control to a new level:

- Hyper personalization
- Minimization of false positives
- Intelligent online self-learning
- Advanced control and traceability
- Reduction of energy consumption
- Predictive condition monitoring
- Servitization for quality

0

VIDEOSYSTEMS
Technologies for a new world

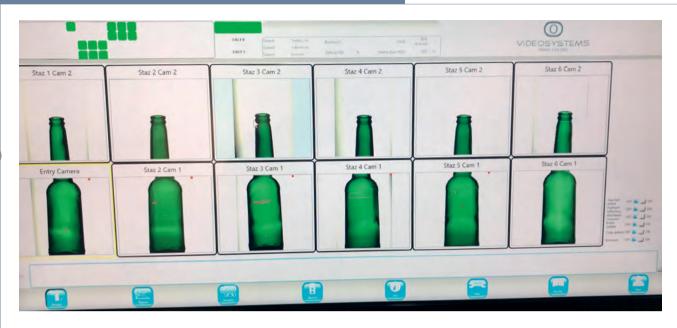


# VIDEO SYSTEMS finetunes glass container optical inspection

After recent decades saw glass container inspection processes characterised by human manpower coupled with optical inspection technologies, VIDEO SYSTEMS' solutions now go the extra mile in identifying those defects that remain undetected.



### ARTIFICIAL INTELLIGENCE

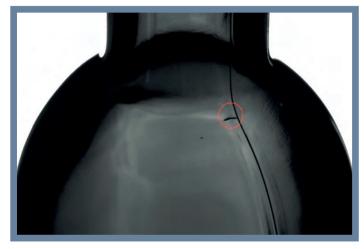


hanks to today's electronic and optical devices, glass container inspection systems will typically perform well when identifying small defects. However, this ability has been increasingly affected by a phenomenon of false positives. That said, it's maximised production that glass manufacturers are mostly after nowadays - thanks also to optimal defect identification. Still, the goal of green production must be factored in as well, such that optimised production also yields the desired effect of reducing pollution generation per-producttons delivered to the market. Here Video Systems has proposed an artificial intelligence approach for optimising inspection methods for standard glass containers. Thanks to a methodology the company developed in 2003 as well as colour image analysis from 2018 annually adapted thereafter to new studies, technologies and market feedback, Video Systems noted an important reduction in false positives, coupled with an increased ability of its Imago line systems to identify specific defects that often go undetected.

### **QUALITY CONTROL SYSTEMS**

Technology in quality control systems is growing swiftly. That makes sense, considering how key it is to hollow glass production, given that the final products (bottles, tableware, containers) are made for such high-qualitydemand markets as those of pharma and food and beverages. Here all non-conforming containers are removed from the production chain and used as recycled glass (scrap). Then, upon exiting the line, products are packed and finally palletized for subsequent delivery to end-customers. Though certain companies are very experienced with control, current production cycles mean that not all can guarantee sustained reliability in reaching the required speed. For this reason automated systems for the quality control of glass containers have been introduced to production lines in recent years. The purpose of every hollow glass maker is to produce as many containers as possible at the highest quality and the lowest cost. Here's why, respecting any quality control system, the industry must work daily





to augment inspection capabilities with 2 main goals in mind:

- to increase the system capability to identify defects
- to reduce any false positives during container inspection

Today at Video Systems, the Imago product range is powered by many AI engines - each dedicated to various defects, including the following:

### SIDEWALL QUALITY CONTROL

By leveraging artificial intelligence technology, false positives could be significantly reduced during stones identification - an approach that simultaneously cuts machine setup time thanks to reduced parameters and the self-tailoring system. With new containers, the AI engine also equips the system for automatic receipt generation based upon machine experience as well as the management of containers of different shapes - all at the same time. Indeed thanks to its AI-engine, the Imago Omnia sidewall machine can now cut the effect of false positives down to 0.5 percent.

In this case the ability of the system to identify real stress defects instead of container surface reflections (a typical problem on high density containers like champagne bottles) is among the greatest advantages of the AI engine approach.





### **SHOULDER AND FINISH CRACKS**

To identify a shoulder and/or finish crack in standard carousel machines the operator needs to perfectly align a light emitter and receiver with the reflection angle, meaning that if the crack is different then the machine needs a new alignment. For such defects, the Linea system comes as a contactless solution which, thanks to its AI engine, requires no operator setup of the light emitter and receiver. Here, instead, the only requirement is to select the ROI of analysis together with certain added parameters like minimum defect size. As for special containers like those used for perfumes, development of the tailor-made machine had the AI engine prompting the final application to detect either very hard defects like small base cracks or else broken corners.

### **CONCLUSIONS AND OUTCOMES**

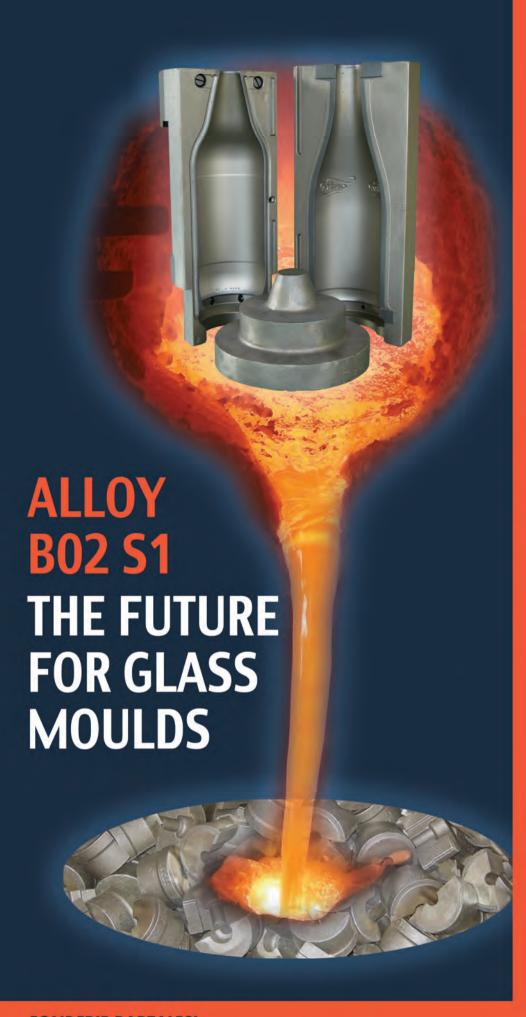
Owing to the rising demand for quality by the final market for such products, quality control of articles is an increasingly important requirement for hollow glass producers. For many years, glass inspection was performed by hand, i.e. without the required reliability and speed of today's production cycles. Nowadays, however, almost all production lines provide automated systems for the quality control of glass containers. Here the preference is for vision systems that can both analyse bottles and identify any defective ones. These use classic algorithms to detect defects and, as such, must set high parameter numbers. Also, some such methods need the defective sample to prepare the analysis recipe. Existing systems perform well in identifying small defects, though this ability is increasingly affected by a phenomenon of false positives. The last years saw Video Systems working on AI solutions, managing colour images with a simple and fast machines setup that reduce the false positives, and working on new tailor-made solutions that applies robotics, AI and machine vision technologies to provide solutions to the market research supported by EU in APICUS and ZDMP H2020 projects.



# VIDEO SYSTEMS

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### **FONDERIE BARTALESI**

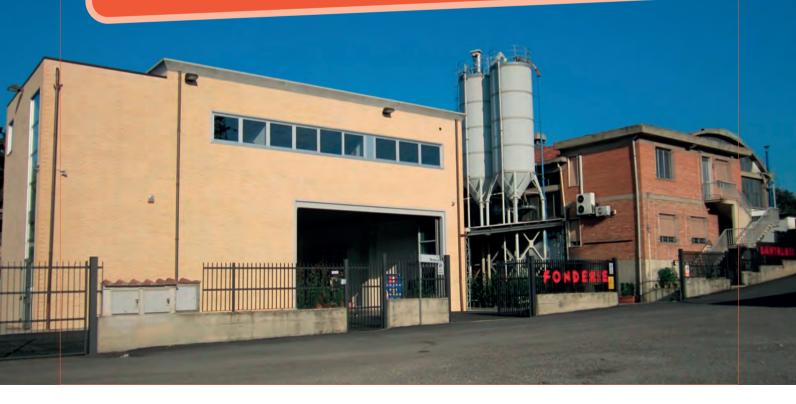
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E-mail: info@fonderiebartalesi.com - www.fonderiebartalesi.com



# Updates from FONDERIE BARTALESI on its latest patented alloy

When it comes to sand and shell casting manufacture for copper and aluminium alloys, including cast iron, FONDERIE BARTALESI has been operative within both the Italian and global markets for over fifty years. Headquartered in Tuscany, its complete service offer spans design and finished casting, as well as machining.





onderie Bartalesi's production consists in sand casting, sand and resin casting, and includes gravity casting of both not-ferrous metals and cast iron. Together with its particular work procedures, the company's latest equipment and technologies afford it the scope to offer high-

quality products to its customers. Not least among these is the internationally-registered "B02 S1" industrial patent - of which it remains the proud proprietor.

### **CUSTOMER FEEDBACK**

Almost five years following the production of its B02 S1 cop-

per, Fonderie Bartalesi reports updated glassmoulding data from glassmaker customers that attest now to the alloy's optimum performance in comparison with others currently on the market - a success the company attributes to the alloy's high conductibility and thermal diffusion, coupled with its great durability, excellent mould cleaning and ease of metallization.

### WHAT THE DATA SHOWS

All this has a positive effect upon

mould lifespan, which submitted data indicates at an added 50 percent circa. Here, in two different materials, the significant difference in production of the same set of blow moulds:

B03 alloy production (standard bronze) 65.324.356



B02S1 alloy production (special, Fonderie Bartalesi bronze) 94.425.240 (and the mould is still working)

This means a 44.55 percent production increase in comparison with standard bronze - all moulds being still in production.

End-of-life hypothesis, with another campaign, at an added 60 percent circa.

### OVER 2.5 MILLION MOULD-MANUFACTURED BOTTLES

As certain major glassmaking groups have used this new alloy for a while already, some are now including it as their exclusive reference for "bronze" mould production. Indeed the alloy has achieved noteworthy results - not only in mould production but also in the production of neck rings - and bottom plates/baffles as well. Always relative to mould and accessories production, whilst developing existing materials Fonderie Bartalesi continues to invest still in research and development around new ones.

FONDERIE Bartalesi

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# **ALL GLASS** and 2022 International Year of Glass

his year celebrates the very important material "Glass", exinsting for over 3000 vears in the history of humanity (the first uses of this noble material are dated around the vear 1000 BC).

endlessly recycla-The ble manterial, glass is characterized by its Ecological / Sustainability and its respect for the environ¬ment.

The history of the company All Glass does not have an age comparable to that of glass, but it begins at the end of the second millennium where it can be said that the glass indu-stry gave a strong indication of a turning point towards the automation of the productive process with particular atten-tion to the Cold-End Area.

### **COLD-END INNOVATION**

Innovative systems have been developed over the years, heralding marked improvements both to the handling of items and to production efficiency. Here's why the company strives to improve and innovate always more in the cold-end area - especially considering the important part it plays in the production process. Today its foremost goal remains that of increasing equipment ergonomics whilst reducing current manual interventions of the operating team - which is all tantamount to meeting the growing challenge to solely perform the tasks of checking equipment operability, which lie at the very heart of the 'automation' concept.

Thanks also to its customer network, which spans a large range of the items it produces (from pharmaceuticals to large bottles, and including perfumery as well as the most "bizarre" forms of design). All Glass is now well-placed on the market - providing its knowhow to adapt ever closer to the real needs of its customers.

For this reason, its thanks to twenty-years' experience in the cold-end area that the company can now propose a full service that covers study, planning and delivery to its partners, starting from a technical analysis of each of the articles, coupled with the efficiency and flexibility requested by the market - all in an unconditional, unique manner.





### **COLD-END TECHNOLOGY**



**CASE PACKER** 







**FOCUS ON: GLASS CONTAINER CASE PACKAGING SYSTEM BY ALL GLASS** 

### **COLD-END TECHNOLOGY**

### FLEXIBILITY, EFFICIENCY, RELIABILITY

From packing and handling to the palletizing of glass containers, the demand for automated systems has increased considerably over the last ten years. Here the company has made every effort to consistently seize this new opportunity on both the national and international market. Thanks to significant acquisition as well as constant help given to customers, the company has quickly improved its know-how within this sector of the glass industry. As such, All Glass can now offer customers its complete automated handling systems for packed containers - which

includes a design that's dedicated to product type, manufacturing, turn-key installation and commissioning of the entire system. Consequently it has achieved excellent results in machinery flexibility, efficiency and reliability. Here's why it's ranked among the best suppliers within this specific market. Today several international companies, as well as single companies, are improving the automation of this particular system. Each aims to considerably reduce its costs in workers currently involved in the activity whilst striving to take their efficiency, productivity and consequent final-product margin to new levels of excellence.



### **OVERTURNER**



**ALL GLASS SRL** 

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# GMI eyes key role of recycled glass in transition to net-zero transition to net-zero

Snehal Jadhay -**Senior SEO Executive GLOBAL MARKET INSIGHTS** 

lassmaking ingredients have remained relatively unchanged since the emergence of the material thousands of years ago. Indeed even today most glass formulations contain silica sand, which accounts for around 70 percent of the weight, as well as other components like soda ash, also known as sodium carbonate, and limestone.

**FACTORING IN THE ENERGY EQUATION** 

However, in recent years the growing focus has been on a fourth ingredient, which is nearly always a part of the mix - namely recycled glass. As a prominent ingredient in most glass recipes, recycled waste glass can significantly decrease energy consumption in the glassmaking process. The higher the content of this product, the lesser the use of energy in the furnace – a fact that has considerably altered the outlook of the recycled glass industry over the last couple of decades. These properties, alongside other benefits spanning from reduced manufacturer costs to improved environmental health, all contribute to the long-term profitability of the recycled glass

According to global markets watcher GMI, complete recyclability without sacrificing quality -and alongside its indispensable position as glassmaking raw material- will likely position recycled glass as a strong contender in the transition to a circular economy.





market, which is set to surpass USD 1.5 billion by 2027 according to one Global Market Insights report. By decreasing the reliance on virgin natural resources and the need for the CO2-emitting reaction in the soda-lime glass manufacturing process, the use of recycled waste glass or cullet is helpful in mitigating GHG emissions considerably. In Europe alone, glass recycling can save nearly 925.000 tons of waste glass from going into landfills each year, saving over 1.23 million tons of critical raw materials. and reducing CO2 emissions by almost 230,000 tons.

### **RECYCLED GLASS AS EMERGING TOOL OF** SUSTAINABLE DEVELOPMENT

With current usage crossing 50 billion tons each year, sand has established itself as a critical industrial material for the global economy and is the second most-used resource across the globe after water. However, given the lack of specific regulations pertaining to its use, it's being consumed at a much faster pace than it can be replenished, with a UNEP (UN Environment Programme) report suggesting that rampant unregulated use could bring about an eventual "sand crisis". To address this impending crisis, which climate scientists hail

among the most daunting sustainability challenges in the 21st century, the need for sustainable development remains paramount. This requires a dramatic evolution in the way products, services, and infrastructures are produced and consumed. Waste glass recycling is emerging as a key contributor to this transition, with the prospect of using recycled glass in highperformance industries like construction becoming increasingly appealing to contractors in recent years. To that end, scientists worldwide have initiated numerous R&D efforts to evaluate the potential of recycled waste glass, which would otherwise end up in landfills as an alternative to sand. For instance, in April 2022 researchers from NTU Singapore (Nanyang Technological University) devised a new way to utilize recycled glass as a material for the 3D printing of daily-use items. As a proof of concept, the team 3D printed a concrete bench using a specially formulated concrete mix consisting of commercial cement products, additives, water, and recy-



cled glass - which demonstrated enough mechanical strength to comply with accepted industry standards.

### **HOLLOW GLASS RECYCLING GETS A BOOST FROM BOTH PUBLIC AND PRIVATE ENTITIES**

Also known as container glass, hollow glass is rapidly becoming a common packaging material in various aspects of daily life, from food & beverages to medicine to perfumes - and more. Since hollow glass products are used extensively across the industrial spectrum, the recycling of glass is becoming an important consideration for manufacturing sustainability in recent years. Bottles or containers made from glass are 100 percent recyclable, unlike other kinds of glass items like ovenware, windows, or Pyrex, which usually undergo different manufacturing processes. Despite this potential, however, a report from the Glass Recycling Foundation has revealed that only a third of these items are recycled each year, while over 6 million metric tons end up in landfills. Against this backdrop, entities across public and private sectors worldwide have initiated efforts to boost glass bottle recycling. To illustrate this, in June 2021, Constellation Brand, via its beer brand Corona, joined forces with the Glass Recycling Foundation to establish a glass recycling initiative under its 'Our Beaches' Corona Protect campaign. The objective behind this initiative was to divert glass from landfills and increase public awareness regarding the significance and merits of glass recycling. As part of the pilot program, participating Chicago-based restaurants and bars have pledged to separate glass bottles, both Coronabranded and others, into separate bulk bins for pick up. Since the project requires no colour sort-



ing and permits a small amount of incidental contamination, it has created a relatively simple process, further encouraging participation in the glass bottle recycling ecosystem.

### **BRINGING THE BUSINESS** COMMUNITY ABOARD

Food and beverage manufacturers have also penetrated the recycled glass market and are growing more attuned lately to the sustainability benefits of using this product in their packaging. A notable example of this is Coca-Cola United, which announced the goal to use 50 percent recycled glass material in its bottles by 2030. As part of its broader target of creating a World Without Waste, this initiative was supported by its partnership with O-I Glass, which facilitated the procurement of more recycled waste glass to be converted into new glass bottles. Glass is among the longest lasting man-made materials across the globe. Yet despite the multitude of benefits associated with its

longevity, if left unaddressed the waste generated by the material can become harmful to the environment in the long run, since glass in landfills can take anywhere from 4.000 to a million years to break down. Fortunately, awareness regarding the importance of recycling has been growing steadily over the years - reinstating glass' position as a sustainable and highly recyclable material. In this context, the recycled glass market is headed for tremendous growth over the years ahead and could prove a prominent contributor to a circular economy in the long run.



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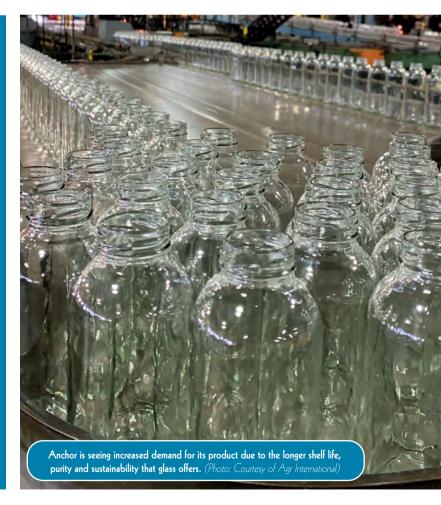
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# AGR Gawis Automated Measurem System ele ANCHOR's ASSURANCE With the recent installation of AGR INTERNATIONAL's Gawis4Glass® Automated AGR Gawis4Glass® Automated Measurement System elevates **ANCHOR's Quality**

Gawis4Glass® Automated Measurement System -which troubleshoots stopgap measure errors and saves time in dimensional measurement devices-ANCHOR can now perform swift job change and container tests with unmatched precision and repeatability.





hanks to the improved accuracy and boost in throughput of its innovative Autolob® feature, Agr International's Gawis4Glass® was chosen by Anchor after staff at the Anchor Quality Assurance Lab at Shakopee shifted to a manual job-change qualification process when an aging dimensional measurement device could no longer be repaired - all in a procedure that took as long as four hours to hand-measure a set of 30 bottles.

### **PLANT SETUP**

Located within the Twin Cities metro area, the Anchor plant is situated within a landscape rich in sandstone formations. The high purity level of the silica mined from these deposits is one of the factors that inspired Henry Ford to establish an auto glass factory near his St Paul assembly plant in the mid-1920s. The Ford glassworks closed down in 1959. One year later -and 45 minutes to the westa different kind of glass facility opened its doors.

That operation was Anchor's new 600.000 square foot glass container factory in Shakopee. As it was originally, today's plant is equipped with two furnaces (of newer vintage), with capacities of 314 and 343 tons respectively. Each furnace feeds three IS (individual section) forming machines, four configured with 20 moulds and two with 30. A total of six shops on the hot-end feed into 20 lines on the cold-end, producing bottles as well as round and nonround jars of 4 to 20 oz. in size - all flint. Current output is evenly split between two market segments, food and ready-to-drink beverages - items like pickles, hot sauce, gravy, salad dressing, and kombucha. "We're seeing increased demand for our product due to the longer shelf life and purity that glass offers," observes Shakopee Quality Assurance manager Brandy Speikers. "Glass containers are also attracting more interest in response to sustainability concerns." The corporate focus is on the growing, premium

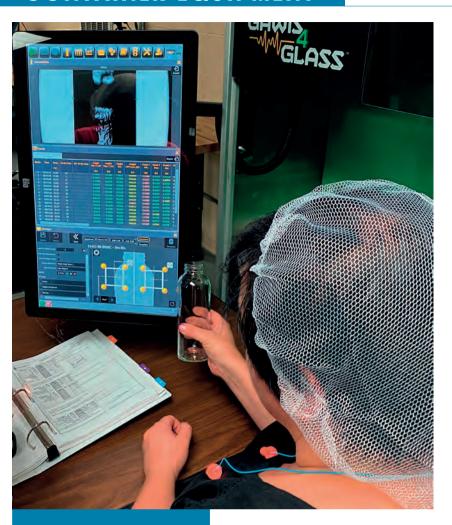
specialty segments of the market, and as new food items continue to proliferate, "that's the way we want to go," she says.

Considered a 'job-change' plant, Shakopee produces long and short runs of many different container types. This varied line-up means that job changes occur four to five times per week. Staffed by a workforce of 265 employees across four crews and three rotating shifts, the plant runs around the clock all year through, and production schedules are prepared monthly.

### **GAWISS4GLASS QUALIFIES PRODUCTION**

While the Shakopee plant leads the Anchor organization in the quantity and speed of its job changes, it's still a process that involves many sequential steps. On the hot-end, technicians in fireproof suits replace the moulds in the forming machine in roughly half an hour. On the cold-end, it can take almost an hour for workers to reconfigure conveyors and other devices before the line

### CONTAINER EQUIPMENT



The large touch panel display on the Gawis4Glass allows operators to view the container as it's being scanned, then calls up dimensional values in a separate window on the same screen.

is ready to run again, gradually ramping up its pace.

Within two hours of each job start, a full set-out of containers (20 or 30, depending upon the number of moulds in the IS machine) is taken from the line and delivered to the QA lab for dimensional measuring. inspection step is essential to qualifying production - thus confirming that the forming process is under control and customer specifications are being met. It's also labour intensive. Given the plant's high frequency of job changes, the task has to be repeated almost daily. Performing the qualifica-

tion measurements by hand easily consumes 15 to 20 hours of lab technician time every week.

### **WHY GAWIS4GLASS?**

The latest generation in Agr's long line of automated measurement systems for glass containers, Gawis4Glass provides fast, accurate, non-destructive measurement of critical dimensional attributes. Designed specifically for the quality control lab in a production environment, it simplifies container measurement operations and improves efficiency and testing throughput by integrating multiple measurements into a single automated operation. Measurement on every sample is performed exactly the same way, with complete dimensional analysis available in a matter of seconds.

The powerful quality control tool is built on a completely new measurement platform, incorporating advances in vision technology like high-resolution USB 3 camera components, optimized lensing, and telecentric optics with 360° imaging to provide documented details on physical dimensions over 100 percent of the bottle. Sophisticated optical gauging capabilities work in combination with Agr's proprietary control systems and intuitive operational software to deliver unmatched precision and repeatability with results that exceed all relevant international standards. In addition, the device is equipped with Industry 4.0 compatibility for the fast and easy transfer of data to the corporate network.

### **AUTOJOB®**

The breakthrough Gawis4Glass feature that really got Speikers' attention was AutoJob®. One of the biggest challenges posed by the multitude of job changes is job setup for the measurement system. Most measurement systems need to be told what and how to measure each job brought into the lab. It takes a considerable amount of time to identify the measurements, locations, and tolerances for each. In contrast, Agr's innovative AutoJob capability incorporates all GPI finish standards in the system to dramatically streamline job setup. Gawis4Glass scans the sample, identifies its standard finish measurements and then adds these to the job within a matter of seconds.

"The AutoJob feature is great to remove human error in setting up the finish dimensions," says Speikers. "All GPI standards are in there, so the acceptable limits are already in place for the various attributes. You only have to input specifications for the body - and, once you do, the history is locked in and can be recalled when that job is in production again. With all our job changes, that's a big advantage."

The myriad of containers Anchor produces have specific design parameters. For example, a customer job where the T and E specs must be modified for a smaller closure. Gawis4Glass gives the lab technicians the flexibility to adjust the finish measurement standards accordingly, even when selecting a single measurement or combination of measurements for a particular job. Once a customer's custom requirements are entered into jobs, they can be saved as templates for future use in others. As with the individual selectable routines, setup for these custom tests is straightforward and intuitive.

Before committing to the Gawis4Glass purchase, Anchor team watched a live demonstration using a batch of their sample bottles. "We saw how easily machine setup was - just a few seconds and it was complete," says Speikers. "This was one of the many selling factors in our decisions in obtaining this machine."

### **MONITORING THE PROCESS**

Even with Shakopee's long history of stable operations, the variability of the plant's output makes it essential to have a high-level quality assurance programme to confirm the process is under control. Gawis4Glass's comprehensive dimensional gauging capabilities cover the gamut of finish attributes, diameter and body measurements, container height, and push-up - all with an optimum precision respecting container design specifications.

As Speikers points out: "The equipment in the customer plant is set up for a particular bottle design. It's key for us to meet their bottle specifications. The data from the Gawis4Glass allows us to make sure that our process is under control and on target."

### **MANAGING CHALLENGING SHAPES**

Speikers also speaks Gawis4Glass' delivery of the same high degree of accuracy when it comes to challenging shapes. In addition to a wide variety of round containers, the Shakopee plant runs an array of non-round containers throughout the year, with jobs that always require extra attention.

"Non-rounds are very difficult," she observes. "They don't like to go down lines and their angles are hard to measure."

Before Gawis4Glass, lab technicians used an optical comparator to measure angles, an imperfect method that took a lot of time. Results lacked repeatability due to differences in the individual's depth perception when measuring. Here Gawis4Glass automation turned the situation around.

"Precision and repeatability for angular measurements is spot on, much better than with our other equipment," relates Speikers. "We're seeing a marked improvement in time, too, along with new capabilities such as measuring locking angles and knock-outs."

Anchor lab technician Evelina Gerulis is especially pleased with the Gawis4Glass user interface - a large, high-resolution touch panel with swipe and zoom navigation and easy-to-understand icons for selecting measurement routines. Gerulis can access all operations, information and data from the main screen - and multiple windows can be displayed at once, including live image, measurement results, job and sample details. The visibility of the live image inspection on the large screen is particularly helpful. "You can watch the scan and then call up the values in a different frame on the same screen," she points out. Comparing her work today to previous routines, she notes: "After the old machine broke down. I took all the measurements by hand with calipers. It used to take three or four hours for a set of 20 or 30 containers. Now with the Gawis4Glass I can do the job in 45 minutes or less."

### **ONE ANCHOR**

Under the corporate vision "Value Creation for All," Anchor Glass has identified "flawless customer experience" as one of its three strategic pillars. Behind this

Quality Assurance manager Brandy Speikers reports that Gawis4Glass performance is spot-on when it comes to hard-to-measure angles on nonround containers.



### **CONTAINER EQUIPMENT**



Gawis4Glass's ease of use and time-saving AutoJob were the features that really sold Anchor on the automated system.

commitment is the recognition of the critical role its containers play both for a customer's product integrity and packaging line. To maintain the same level of performance across Shakopee's five sister plants (in Henrietta, OK; Jacksonville, FL; Warner Robbins, GA; Lawrenceburg, IN; and Elmira, NY), the company developed the One Anchor Standard.

"One Anchor' means that the quality assurance department operates in the same way in each facility," says Speikers. "Down the road, we expect to have the same equipment in all other facilities."

Another expectation, much closer on the horizon, is adding Agr's AutoFeed option to the Gawis4Glass. The robotic component significantly increases throughput, enabling lab technicians to set up the system to test and measure up to 40 samples in a single walk-away operation. The time saved will allow Anchor to move the task of taking 'nogo' bottle measurements from the production floor to the QA lab. The results can be input into Gawis4Glass' data gathering capability to produce detailed process monitoring reports that serve as instant indicators that adjustments are necessary on the hot-end.

"Once we get the AutoFeed system we'll begin to measure bottle rounds every two hours,"

says Speikers. "If we can automate no-go testing on the Gawis4Glass, that frees up labour to look more frequently for measurement errors."

### **MORE BOTTLES INTO OUTPUT**

Anchor's new Gawis4Glass has been up and running since March. Reflecting on its impact, Speikers comments that it's been "like night and day," adding that "the switch from a manual to an automated process is a major leap forward, saving labour, improving accuracy, reducing downtime and waste."

"We want to put more bottles into output and less into cullet. Here our purpose is to render our process lean. Automating dimensional measurement for job qualification enables us to be more proactive. she concludes: "For us, the container is the golden egg."





# <u>glasstec</u>

In the following pages, readers will find a highly useful guide regarding advertisers of this issue who are exhibiting at Glasstec 2022

COMPANY	HALL & STAND		COMPANY	HALL & STAND	
ACH - ADVANCED CONTAINER HANDLING	13	D03	KOENIG & BAUER KAMMANN	12	В33
ALL GLASS	13	D03	LUBEN GLASS	13	C03
ANTONINI	13	013	MARPOSS	14	C38
BDF INDUSTRIES	13	F62	NIROX	14	A05
BONAITI PIETRO	14	G07	осмі-отg	13	A24
BUCHER EMHART GLASS	13	C33	OLIMERK	13	D48
CAR-MET	13	C14	OLIVOTTO GLASS TECHNOLOGIES	13	D48
CHANGSHU JIANHUA MOULD TECHNOLOGY	13	B85	OMS - OFFICINA MECCANICA SESTESE	13	F64
COMMERSALD IMPIANTI	13	A03	PNEUMOFORE	13	A71
ЕМЕ	15	B38	REGINA CATENE CALIBRATE	13	C84
ERGON MECCANICA	13	C33	REVIMAC	14	F33
EUROMATIC	13	E91	S.I.G.MA. GROUP	13	D63
FALORNI TECH	13	F46	SORG NIKOLAUS	15	B38
FERMAC	12	A19	STM MICROTEC	14	G41
FIMA OLIMPIA FONDERIE	13	A60	TECNOFERRARI	13	D95
FONDERIE BARTALESI	13	A13	TECNOSENS	14	A05
FONDERIE VALDELSANE	13	В03	TECO GROUP	13	B62
FORGLASS	13	C16	TIAMA	14	F22
GCG - GLASS CONSULTING GROUP	13	A31	VETROMECCANICA	13	F32
GLASS SERVICE	13	F14	VIDEO SYSTEMS	14	G56
HEYE INTERNATIONAL	14	C18	VIDROMECANICA	13	D62
HFT	13	C48-1	VMA	14	G07
HORN GLASS INDUSTRIES	13	C34	ZIPPE	13	A31

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### **ADVANCED CONTAINER** HANDLING S.R.L.











Domenico Tarantolo President & CEO

### ADVANCED CONTAINER **HANDLING S.R.L**

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### **COMPANY PROFILE**

ADVANCED CONTAINER HANDLING S.R.L. (ACH) started its first steps in 2020 as a start-up by promoting and maintaining as a basis the idea of creating for its customers those solutions that can enhance the project itself in the glass manufacturing, production environment.

The company, making use of the experience of its collaborators, is able to provide: design and optimization of new and existing line configura-tions, implement the complete cold-end transport systems through its network by adopting all the specifications that enhance not only the finished product but to the benefit of a better productivity, create customized palletization solutions using new technologies such as full robotic islands or redefining the types of systems that require a very high product customization.





### **PRODUCT RANGE**

- COLD-END Lines special handling customized solutions
- ROBOT HANDLING SYSTEMS.
- PALLETIZING CUSTOMIZED SOLUTIONS

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M. Ballerini, C. Avvanzini, C. Pecciarelli, G. Bigi, A. Bertinelli, P. Beatini, L. Starciuc, G. Cuda Sales Managers



### **PRODUCT RANGE**

STAND DO3

- Palletizing/ Depalletizing systems
- · Cold-End lines
- LGV System
- Automatic Ware House



### ALL GLASS S.R.L

Via Cesare Sarti, 20 43029 Traversetolo (PR) - Italy **\*** +39 - 0521 - 340810

<u>=</u> +39 - 0521 - 340805 

www.allglass.it

### **COMPANY PROFILE**

ALL GLASS S.r.l. is a well-known reliable supplier in the glass industry.

The company is able to design and supply turnkey cold-end lines, ranging from lehrs to palletizers, including cullet conveyors, accumulating tables, bottle inverters, elevators and lowerators.

Our range of products can also provide customers with the following, according to their requests:

- · special devices such as vibrating tables, dividers, sorters, spacers, orientators, motorized edges, etc.;
- · manual and automatic depalletizers;
- pallet transport lines fully equipped with all necessary accessories such as deviators, rotating and modular built chain and

roller conveyors, shuttle cars and LGV;

- semi-automatic and automatic shrink packaging machines for pharmaceutical and food glass containers;
- mould pre-heating furnaces.

With the aim of increasing the flexibility of its pal-depal systems, ALL GLASS started installing 4- and 6-axes robots some years ago, and, thanks to their simple use and reduced maintenance, the number of such installations is growing monthly.

Moreover, thanks to the extensive and diversified experience of the company's technical management in the glass industry, it can follow its customers step by step, providing reliable after-sales service and assistance.







### NTONINI S.r.I.



### **PRODUCT RANGE**

- Annealing lehrs
- · Toughening lehrs
- Decorating lehrs
- Mould preheating ovens
- Annealing lehr
- · Decorating lehr
- Tempering Lehrs
- Nis Lehr
- Thermal shock lehr
  - · Mould preheating kiln
  - Cold end spray and dosing unit
  - Scraper
  - Upgrading and overhauling





### ANTONINI S.R.L.

Via Medaglie d'Oro della Resistenza 2 50053 Empoli (FI) - Italy

- **\*** +39 0571 93221
- +39 0571 931828

www.antoninisrl.com



### **PEOPLE TO CONTACT** AT OUR STAND

Barbara Antonini, Francesca Δntonini Δlessandro Δntonini Andrea Bassi, Giacomo Orselli, Andrea Cella, Lorenzo Frediani Sales Managers





### BDF INDUSTRIES S.p.A.



### **PRODUCT RANGE**

- FORMING: Gob Forming, Delivery, Gob Distributor IS Machines, Servo Mechanisms (feeder, invert, take out) Ware Handling (AP pusher, conveyor, transfer wheel, cross conveyor, stacker, ancillaries), Variable Equipment, Forming Process (blow-blow, press and blow, NNPB), Control Systems, & Process Control, Ancillaries.
- MELTING: Engineering and feasibility studies, Furnaces, Working-Ends & Forehearths, Regenerative End-Fired & Cross-Fired, Recuperative, Stirrers, Batch Chargers, Glass Level 3.1.
- AUTOMATION: Batch Plant Control, Furnace Control, Working End & Forehearths Control, Energy Monitoring, Emission Monitoring via PLC and SCADA Systems, Utilities.
- ENERGY: Filtering and Energy Recovery Systems, Cogeneration and Trigeneration Systems. Waste Gases Treatment, Compressor Line Control System, Smart Glass Factory.
- SERVICES: Assistance for installation and overhauling, Gob Forming and Delivery, IS Machines, Servo Mechanisms, Ware Handling, Variable Equipment, Forming Process, Control Systems, & Process Control, Ancillaries, IS Machine overhauling, Melting minor repair
- ENGINEERING: Turnkey plants and plant co-management.





### **BDF INDUSTRIES S.P.A.**

Viale dell'Industria, 40

- 36100 Vicenza Italy 36100 +39 0444 286100 36100 +39 0444 286299
- bdf@bdf.it
- extstyle extsales@bdf.it.
- ☑ Marketing Department: marketing@bdf.it

www.bdf.it

### PEOPLE TO CONTACT AT OUR STAND

Our sales and technical staff will be glad to meet you.



### 🔰 PIETRO BONAITI SRL

HALL 14 **STAND G07** 

### **COMPANY PROFILE**

At Pietro Bonaiti Srl, we do not only produce conveyor belts for the glass industry, in particular for annealing furnaces and hollow glass decoration: we also have a large archive of over 70 years of production. And as the international market expands, now touching every continent, new plants are being designed to reduce production time and increase quality: product and material knowledge, customised processing, quick and competent response and adherence to delivery times and specifications are what has always distinguished the company since its

This is why many of our customers are still customers after several decades, because of our ability to work with seriousness and passion, our high level of craftsmanship that is now supported by increasingly advanced technological equipment, and our propensity to become not just suppliers, but true consultants for those who turn to us.

This is how to build the success of a company that not even Covid has been able to stop, on the contrary: expansion in both size and sales has never stopped, just as investment has never stopped to make Pietro Bonaiti Srl an increasingly modern company dedicated to customer satisfaction.





# **PRODUCT RANGE**

PIETRO BONAITI SRI **Metal Conveyor Belts** 

info@pietrobonaiti.com

www.pietrobonaiti.com

Via della Pergola, 7 23900 Lecco (LC) Italy

**2** +39 0341-362357 **+39 0341-285546** 

Pietro Bonaiti Srl specialises in the production of conveyor belts for the glass industry, with particular reference to belts for annealing furnace and those for decorating hollow glass, two sectors in which it has a very high level of know-how.

Certified for the ISO 9001:2015 Quality Management System, it offers in its catalogue various types of belts: wire link belts, triple spiral wire link belts, loose mesh belts, wire link belts with reinforced edges, double spiral wire link belts with Ushaped wire ends, wire link belts with lateral chain. Its real strengths, however, lie in its ability to make customised conveyor belts for special applications and in the dimensions it has achieved: today the company is able to produce belts up to 5 metres wide by several tens of metres long.





### NEMHART GLASS SA

# **PEOPLE TO CONTACT**

Matthias Kümmerle President Werner Gessner

AT OUR STAND

Vice President Sales

### **PRODUCT RANGE**

Products on display at the Bucher Emhart Glass booth will include an AIS section equipped in triplegob and double configurations, showing the ease of switching between centre distances, and carrying out rapid job changes. In addition, this AIS section will demonstrate all the latest sensor technologies enabling closed loop functionalities.

Bucher Emhart Glass' glasstec stand will also feature the firm's FleXinspect M, C and BC vision inspection machine in its very latest configuration.

Additionally, BEG will feature the FlexControl Center, a major building block for the End to End strategy.



### **BUCHER** emhart glass

### EMHART GLASS SA

Hinterbergstrasse 22 CH-6312 Steinhausen Switzerland

**\*** +41 - 41 - 7494200 +41 - 41 - 7494271

www.emhartglass.com



HALL 13

STAND C33





### HALL 13 STAND C14

### PEOPLE TO CONTACT AT OUR STAND

Antonio Zanin - President Mario Zanin - Sales Manager International CAR-MET Agents

### **PRODUCT RANGE**

- Annealing and decorating lehrs
- Tempering lines
- · Lehrs for special use
- Mould pre-heating ovens
- Stackers
- · Cross conveyors
- Hot glass scrapers

### **COMPANY PROFILE**

CAR-MET has been dedicating its activities to the hollow glass and decorating industry for 53 years. It has developed its own technology aiming to improve the performance of its machines, always assuring lower consumption.

Strategic choices have been made to offer customers the highest technology available on the market.

CAR-MET has complete control of the construction of its machines: design, structure, mechanical components, combustion installation, burners and electrical installation, which are carried out inside the Italian plant. This system enables to control and assure quality standards, enabling to respect delivery terms, to have spare parts always available and to be always in the condition to satisfy customers' requests.





# AR-MET

Via Cayour 9 - 31010 Cimetta Di

Codogne' (TV) - Italy

1 +39 - 0438 - 794784

<u>+39 - 0438 - 795320</u>

www.carmetspa.it





### **CHANGSHU JIANHUA MOULD** ECHNOLOGY CO., LTD











### **CHANGSHU JIANHUA** MOULD TECHNOLOGY CO., LTD.

Shajiabang Town, 215559 Changshu City, Jiangsu Province - China **\*** +86 512-52506751

**+86 512-52506790** 

☐ info09@jhmould.com www.jhmould.com

### **COMPANY PROFILE**

Changshu Jianhua Mould Technology Co., Ltd. was founded in 1976, with 46 years of experience in mould production and sales of over 350 million yuan. Now it has realized the production of all types of glass moulds components and can provide one-stop service from designing, casting, manufacturing to delivery to customer factories.

Jianhua always insists on innovation and re-

search, and has passed 122 valid patent applications, including 49 invention patents, the number of patents is far ahead in the industry. The company has been committed to the research of laser cladding since 2013. At present, it has

8 laser cladding equipment, which can meet the current requirements of various products. And in 2016, the Tungsten Carbide plunger production line was put into operation. Now the daily output is 300 pieces, which has been supplied to first-class customers all over the world.

We always adhere to the concept of "peopleoriented, customer first". In order to reduce

> the load of employees and improve production efficiency, the company has investment in automation. By 2022, we have successfully realized the automatic production of batching and pouring for both cast iron and copper alloy, as



well as automation production of various components. In the future, Jianhua Mould will have ability to serve our customers with better quality and faster delivery.

Jianhua sincerely invites you to come to the factory for guidance. Your opinion is the driving force for our progress, and we look forward to serving you.





### 💜 COMMERSALD IMPIANTI S.r.I.

HALL 13 STAND A03

PEOPLE TO CONTACT AT OUR STAND

Massimo Trigari - General Manager Claudio Corni - Welding Division

Anna Loschi - Sales Division

### COMMERSALD IMPIANTI

### COMMERSALD IMPIANTI S.R.L.

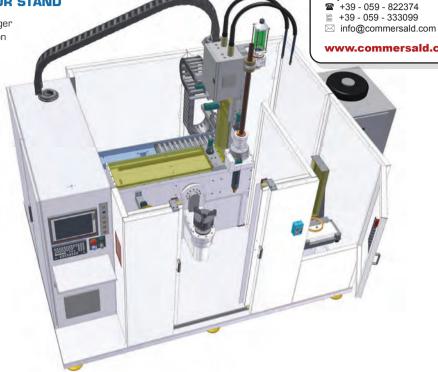
Via Labriola, 42 - 41123 Modena Italy

+39 - 059 - 333099

www.commersald.com

### **PRODUCT RANGE**

- · P.T.A. with powder welding machines
- Robot plants for P.T.A. welding complete with:
  - P.T.A. welding machine; Cartesian motion system;
  - NC machines
- · Programming console
- · P.T.A. welding powders
- HEAT Induction pre-heating systems







### **PEOPLE TO CONTACT AT OUR STAND**

Jens Rosenthal - Managing Director

Dr. Sebastian Woltz - Sales Director

Grant Bailey - Technical Director

Walter Sturm - Sales Manager Germany, Austria & Switzerland

Bernd Baunach - Sales Manager Asia

Andreas Beier - Sales Manager Central

& South America

### **PRODUCT RANGE**

- Batch Plants
- Cullet Handling
- Glass Recycling & Treatment
- Batch Charging Technology



### EME GMBH

Wockerather Weg 45 41812 Erkelenz Germany **2** +49 2431- 9618 0

⊠ contact@eme.de

www.eme.de



### **COMPANY PROFILE**

EME is a world-leading batch and cullet treatment systems specialist. After more than a century of using tailored solutions and the best technology available, we are a customer-centric partner dedicated to designing, constructing and improving batch and



cullet plants. Since 1987, EME has also played an integral role within the wider SORG Group. Having designed, commissioned and supported some 250 glass production facilities across the world, we are committed to delivering batch plants that perform and endure like no other. Discover for yourself how EME's solutions are Engineered for Endurance at glasstec 2022.





### HALL 13 STAND C33

# Meccanica

repair specialist for Bucher Emhart Glass products

### EPGON MECCANICA

Località Colletto, 3 17058 Dego (SV) Italy 2 + 39 019-4507700 

www.ergonmeccanica.it

### PEOPLE TO CONTACT AT OUR STAND

Pietro Sambin - CEO Matteo Callegaro - Project Manager Daniele Taverna - Project Manager

### **COMPANY PROFILE**

### ERGON MECCANICA: CUTTING-EDGE SOLUTIONS FOR THE HOLLOW GLASS INDUSTRY

The Italian company is "Repair specialist for Bucher Emhart Glass products" and is attending GLASSTEC 2022 as coexhibitor of Bucher Emhart Glass, Hall 13 C33.

Ergon Meccanica is an Italian company leader in the installation and repair of IS Machines, as well as refurbishment or assembly from available components in stock, according to the customer's needs and requests, including tailor-made interventions, with special executions carried out by a dedicated team of experts.

Following a successful history of cooperation with Bucher Emhart Glass, being the main Emhart's third parties supplier for in plant service activities and installations, at present, Ergon Meccanica is "Repair specialist for Bucher Emhart Glass products".

Main works are usually carried out in the specialized workshop in Dego (Italy) but projects quantity and variability bring Ergon's expert staff directly into some of the most important hollow glass industries around the world.

Ergon Meccanica has set up a fully functional training room with a two section IS machine, running with FlexIS3 Timing system, where it is possible to carry out custom tailored training courses for machine operators, also with specific mechanisms insights.



### EUROMATIC SRL

### **COMPANY PROFILE**

Euromatic, located in Treviglio (Italy), was founded in 1983 and is, today, a solid and well-organized group with facilities of over 13,000 square meters and 105 employees. The company's engineering and R&D teams are dedicated to developing technological state-of-theart solutions to convert glass tube into vials, cartridges, syringes and

Euromatic customers are market leaders in the field of glass primary packaging for the pharmaceutical sector; Euromatic equipment is commissioned all over the world in the best glass converting companies.







# EUROMATIC

### **EUROMATIC SRL**

Via Ugo La Malfa, 4 24047 Treviglio (BG) - Italy **2** +39 0363-303200

www.euromatic.it

### **PRODUCT RANGE**

Euromatic's portfolio of products reflects the company's strong focus on glass conversion machines for the pharmaceutical industry. It covers the complete range of pharmaceutical products from vial, cartridges, syringes and ampoules:

- Tube-loaders
- Forming machines
- After-forming processing lines
- Annealing lehrs
- Automatic packing machines

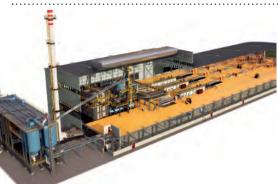
Our commitment to pharmaceuticals has enabled us to develop and supply "ready for filling" systems, for container preparation, including sterilization, approaching the "white area", offering the following units for syringes, cartridges and vials:

- · Washing machines
- Siliconization units
- · Nest & tub units



### **FALORNI TECH** GLASS MELTING TECHNOLOGY





### **PEOPLE TO CONTACT** AT OUR STAND

Riccardo Scarselli - General Manager Simone Scarselli - Deputy General Manager Andrea Zucconi - Commercial Director

Francesco Prosperi Gabriele Campani Biagio Bifano Simone Scarselli

-Technical Office

Eleonora Bogatti - Commercial Office





### **FALORNI TECH GLASS MELTING TECHNOLOGY**

Workshop. Viale IV Novembre, 15 50053 Empoli (FI) İtaly

Office:

Via della Libertà, 177 50059 Vitolini, Vinci (FI) Italy **\*** +39 0571-922333 E-mail: info@falornitech.com

**WWW.FALORNITECH.COM** WWW.FALORNIGLASS.COM

### **COMPANY PROFILE**

Know-how and expertise in glass melting technology as well as in the production process of all kind of glass (hollow glass, fibre glass, float glass, special glass, etc.) are the key advantages of choosing Falorni Tech. Falorni Tech supplies melting furnaces, glass conditioning technology and all ancillaries and services related. Thanks to its in-depth knowledge of glass melting technology, Falorni Tech is also able to manage as a Main Contractor complete EPC project. Starting from concept engineering proposal, Falorni Tech undertakes projects in the glass field from its early definition stage up to post commissioning assistance. One unified flow of work from initial concept through completion together with teamwork, innovation and problem solvina.

### **PRODUCT RANGE**

- ENGINEERING
  - · Basic and Detail
- Process And Auxiliary
- FPC PROJECTS
- GLASS MELTING FURNACES
  - Air/Gas
  - Oxy Fuel
- · Low Emission Technologies
- GLASS CONDITIONING SYSTEMS
- ANCILLARIES FOR MELTING FURNACES AND CONDITIONING
- ON SITE SERVICES
  - Auditing and Technical Consultancy
  - · Supervision and Training
  - · Maintenance and Repair
- OFF SITE SERVICES
  - Remote Assistance
  - Batch/Raw Material Analysis

### FERMAC S.r.I.

### **PRODUCT RANGE**

After such a long break, finally **FERMAC** will be pleased to meet its customers on booth n°A19 to present the latest innovation and development:

Double production machine for screen printing and inkjet printing, Hybrid machine for UV screen printing and Hot foil stamping, UV led curing system for screen printing machines.

All the staff will be available to



### PEOPLE TO CONTACT AT OUR STAND

STAND A19

Stefano Paini - President Alessandro Ghirardini, Sebastien Antoine Sales Department



### FERMAC S.R.L.

Via La Spezia, 162/A 43126 Parma Italy

**≅** +39 - 0521 - 989056 +39 - 0521 - 989118 ⊠ sales@fermac.it

www.fermac.it

share the latest brochures and introduce our social network profile. CER leading company for the manufacturing of hot foil stamping machines will co exhibit with FERMAC during this show and will present a CNC hot foil stamping machine developed on a FERMAC frame.



Screen printing Hot stamping UV and Ceramic inks systems

**Digital printing** 



Creative decoration system





### 🔰 FIMA-OLIMPIA FONDERIE



### PEOPLE TO CONTACT AT OUR STAND

Alessandro Fontanelli - President & CEO • Andrea Vienni - Production Manager Simona Grazioli - Export Sales

# Fima-Olimpia

### FIMA-OLIMPIA **FONDERIE**

Via di Poneta 17 - 50021 Barberino

☐ info@fimaolimpia.it

### **PRODUCT RANGE**

Special cast irons for glass industry moulds:

- · castings for moulds
- neck rings
- baffles
- bottom plates









### FONDERIE BARTALESI S.r.I.









### **PEOPLE TO CONTACT AT OUR STAND**

Fabio Petri - Sales Manager

Stella Maria D'Ascola - Import-Export Department



### **INNOVATION**

"The future of bronze moulds lies in the new BO2 S1 allov"

The new BO2 S1 alloy was developed in response to the needs of metalworking foundries and the demands of glassworks and mould manufacturers.

This new alloy features:

- excellent anti- hot corrosion;
- excellent weldability for a combination of elements that improve the welding process;
- simplified metallization;
- higher thermal diffusivity/conductibility
- increased market performance;
- no loss of hardness during welding or glass forming as with other alloys;

- lower thermal expansion coefficient compared to other alloys, guaranteeing higher mould stability on the machines. The characteristics of this new BO2 S1 alloy guarantee an important increase in

the working life of moulds.

Laboratory tests, confirmed in glassworks, show that the working life of bronze moulds often ends due to 'over capacity', as when the moulds undergo maintenance and consequent removal of material caused by polishing, the moulds become bigger and have larger capacity.

The BO2 S1 alloy, on the other hand, has lower abrasion, thus increasing the working life of moulds.

### **PRODUCT RANGE**

- · Special bronze alloys for moulds · Neck rings with or without Ni-Insert
- Bottom plates Baffles Accessories Cast iron for moulds and accessories



### **FONDERIE BARTALESI S.R.L.**

Via Tevere 1

53036 Poggibonsi (SI) - Italy \$\frac{1}{2}\$ +39 - 0577 - 936669

+39 - 0577 - 982221

info@fonderiebartalesi.com estero@fonderiebartalesi.com

www.fonderiebartalesi.com







### FONDERIE VALDELSANE S.p.A.

HALL 13 STAND BO3

### **PRODUCT RANGE**

The company is a leader manufacturer of cast irons and alloys for glass moulds, generally considered as a quality reference in the international market.

Our success owes to the glass manufacturers, as well as themselves benefited from the presence of a pioneer company devoted to the production and development of special alloys, to give higher and higher performances to the glass moulds.

Nowadays more than ever, greater demand of glass containers urges the industries to increase their outputs by producing more bottles with existing furnaces, beside building new ones.

Selection of K 250 cast irons and special copper alloys







produced by Fonderie Valdelsane is no more than a simple guarantee that moulds will comply with their important job at the best of their possibilities. A guarantee that is internationally acknowledged.

### Fonderie Valdelsane are proud to disclose excellent results of their new bronze furnaces.

After the installation of a dedicated and fully-automated line for bronze casting, we had to bring forward the investment of a second furnace to meet growing demand for bronzes B 203, B 204 and B 210, as our customer satisfaction. has been even beyond expectations.



### Fonderie Valdelsane ...

### FONDERIE VALDELSANE S.P.A

Strada di Gabbricce 6 - P. O. Box 30 53035 Monteriggioni (SI) - Italy

\*\* +39 - 0577 - 304730 +39 - 0577 - 304755

⊠ com@fonderievaldelsane.com

www.fonderievaldelsane.com

### **PEOPLE TO CONTACT** AT OUR STAND

Roberto Gerbi

President

Claudio Anniballi CFO

Stefano Gerbi

Sales Director

Manuel Papi Export Manager



### **COMPANY PROFILE**

Forglass is a technology company, specialising in the design and construction of glass furnaces and batch plants for producers of all types of glass, including packaging, tableware, float and fibreglass.

The company's business activities involve designing, computer modelling and testing of glass furnaces that answer the demands of glass producers, not only today, but decades into the future. Forglass also designs innovative mechanical systems and automation for batch plants, including their auxiliary equipment. Additionally, the company provides servicing and repairs of furnaces and batch plants.

Forglass employs teams of experts that include master engineers with decades of experience and young engineers with the most modern approach. Together, they move the glass industry forward by providing greater efficiency of glass melting, reducing its impact on the environment and allowing more flexibility in production.





### **PEOPLE TO CONTACT** AT OUR STAND

Piotr Knast - CEO

Kinga Horodek - Assistant to the CEO (kinga.horodek@forglass.eu; +48 517 252 006)

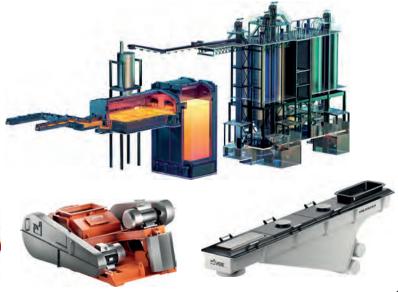


### **FORGLASS**

Wadowicka 8a, 30-415 Kraków, Poland

**2** +48 517-252-006 

www.forglass.eu





### GCG **GLASS CONSULTING GROUP SRL**



### **PEOPLE TO CONTACT AT OUR STAND**

Raffaele Scaglioni - Managing Director



### PRODUCT RANGE

- feeder coloration
- glass frits
- · batch plants
- furnace forehearths
- thermometry
- combustion equipment
- thermocouples
  - fibroptic

### **COMPANY PROFILE**

The company was created in 1984 by glass technicians highly experienced in the glass sector of containers, tableware, perfumery glass and special glass.

Through continued focus on research and close cooperation with glassmakers, **GLASS CONSULTING** GROUP can quickly develop and supply special colouring frits which are adapted to the glass composition and forehearth processing parameters of each customer.







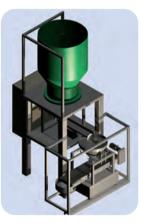


### GCG **GLASS CONSULTING GROUP SRL**

Via Monte Bardone, 2 43123 Parma (PR) - Italy

- **\*** +39 0521 242823
- <u>+39 0521 494747</u>
- $\ \ \square$  r.scaglioni@glassconsultinggroup.it

www.glassconsultinggroup.it www.glassfrits.eu



### **GLASS SERVICE S.r.I.**



### **PRODUCT RANGE**

- Oxy-Gas Combustion Furnaces
- Electric boosters Mixed Melt Furnaces
- Batch plants Melting furnaces
- Refiner and forehearths Combustion plants
- Ancillary equipments
   Gatherer robots



HALL 13 STAND F14



### **GLASS SERVICE S.r.I.**

Via Cascina Lari 56028 San Miniato (PI) - Italy

**\*** +39 - 0571 - 4442

+39 - 0571 - 417051

www.glassservice.it

### **PEOPLE TO CONTACT** AT OUR STAND

Fulvio Puccioni - Technical Office Giulio Isernia - Commercial Director Emanuele Donati - Sales Manager Roman Kotzelko, Anne Dorazio,



### **COMPANY PROFILE**

Glass Service provides the highest standards of technology applied to the hollow glass industry. The Italian company designs, produces and maintains a wide and complete range of equipment.

### **GLASS MELTING TECHNOLOGY DIVISION**

- automatic and semi-automatic batch plants and cullet recycling plants
- day tanks and pot furnaces
- · recuperative and regenerative continuous meltina furnaces
- boosting systems
- · forehearths
- colouring forehearths with frit dosing systems
- batch chargers
- heat recuperators for day tanks and con-

tinuous furnaces

- automatic control level machines with platinum probe or radar model
- · stirrers and stirring machines
- · control boards
- combustion systems for any kind of fuel
- burners for any kind of fuel
- special machinery for the glass industry Moreover, the company provides complete assistance service for customers, assembling and maintaining all the supplied plants. Start-up and training are also provided.

### ROBOTICS DIVISION

Glass service is, today, a leader in the field of robotics for the glass industry.

• Gathering robots (4 and 5 axes)



### HEYE INTERNATIONAL GMBH



### **COMPANY PROFILE**

Your partner on the smart road to Industry 4.0

- Our smart plant portfolio is based on:
- HiPERFORM Smart Forming Solutions
- HiSHIELD Smart Inspection Solutions
- · HiTRUST Passion and Experience

We are Glass People - join us on the road to a smart glass plant!

### **PRODUCT RANGE**

- Heye Smart Plant Concept
- · Innovative Swabbing Robot
- · Smart closed loop solutions for blank and blow side
- · High performance coolings
- SmartLine 2 next generation of inspection machines
- Heye Process Control



### **HEYE INTERNATIONAL GMBH**

I ohnlatz 1

31683 Obernkirchen - Germany

**\*** +49 - 5724 - 26-0

+49 - 5724 - 26539

www.heve-international.com







### PEOPLE TO CONTACT AT OUR STAND

Mark Piedmonte - CEO and President Kevin Yung Chief Revenue Officer **Brad Hall** 

Chief Operations Officer

Sam Leaper - Director of Glass Business Development Matt Rodgers - Business Development Manager, Glass Phil Mills - European Service Manager



A global leader in EPC (engineering, procurement, and construction) contracting, HFT focuses on providing comprehensive, reliable project solutions for all sectors of the glass market. The company's expertise includes design-build of turnkey glass plants, redevelopment and modernization/ upgrades of existing sites, cold repairs, project, as well as other project solutions. HFT supports all stages of a project - from project feasibility reviews, initial concept-development and securing of financing options, to preconstruction, to equipment and materials procurement, to designbuild general contracting, project management and project execution. HFT's expert glass team offers a combined 500+ years of experience, more than \$13.5 billion in installed value across 47 countries and more than 300 EPC projects completed worldwide.

HFT has the expertise to support glass makers in the following areas:

Turnkey glass plants: for manufacturing high quality float glass, container glass, fiberglass, tableware, sodium silicate, foam glass and other specialty glass with an EPC(M) approach. This includes all process areas from raw material reception to packaging, as well as buildings, utilities and infrastructure.

Melting furnaces: up to 1,200 MTPD for melting a wide range of products. End-port and side port designs, for natural gas, oxy-fuel and heavy oil fuels. All available with electric boost.

Float glass tin bath: including tin



bath automation and fully automatic top roll machines.

Waste Heat Recovery and Power Generation: systems designed to meet client needs to reduce overall energy costs and carbon emissions.

Cold repairs and plant modernization: HFT's engineering and construction teams continue to meet the reducing turn-around time schedules of specialty glass producers around the world while providing state-of-the-art engineering design, achieving optimum energy efficiency and meeting even the strictest of environmental constraints.





Your vision. Our expertise. The perfect partnership

3009 Washington Road McMurray, PA 15317 - USA

**≅** +1 - 724 - 9419550 **≘** +1 - 724 - 9413479 info@hft.com

www.hft.com

### **PRODUCT RANGE**

- Turnkey epc projects
- Engineering / procurement
- Construction / project
- · Management and Commissionina
- Furnaces / batch plants / tin
- · Baths / lehrs
- · Waste heat recovery systems
- · Power generation
- Solar energy







### HORN GLASS INDUSTRIES AG



### HORN GLASS INDUSTRIES AG

Bergstrasse 2 D-95703 Plössberg - Germany

**\*** +49 - 9636 - 92040 +49 - 9636 - 920410

info@hornglas.de

www.hornglass.com



Stephan Meindl - President CEO Ekaterina Firsova - Executive Director Glass Plant Technology Ulrich Imhof - Executive Director Container/Special Glass

Matthias Kunz, Sebastian Gallenberger, Farid Ghafourian, Raimund Hüttner, Andreas Mattes, Johannes Wittmann



HORN Glass Industries plans and builds glass melting technology and turnkey plants for the float and container glass industry. The high-performance glass melting furnaces and turnkey plants are delivered to glass manufacturers all over the world and serve the production of beverage bottles, food containers, drinking glasses, glass panes, glass tubes, glass fibers or special glass. With more than 135 years of expertise in the construction of glass melting furnaces HORN is well known as specialist and expert in the glass industry. Over the years, HORN has continued to extend its capabilities and has grown from being a glass melting furnace builder into one of the leaders of the industry in turnkey operations.







### **KOENIG & BAUER** KAMMANN GMBH





### PEOPLE TO CONTACT AT OUR STAND

Matthias Graf - Managing Director Dr. Christian Maas - Managing Director Daniel Gildehaus, Axel Bohlmeier, Andre Tiesmeier, Holger Tiemann, Nicolas Meyer, Tim Schnelle, Bilgkin Aptoulach Area Sales Manager

### KOENIG & BAUER

### **KOENIG & BAUER KAMMANN GMBH**

Weidehorst 80 32584 Löhne

**2** +49-5744 - 77100 ± +49 57447710-5130 

www.kammann.de/en

### **COMPANY PROFILE**

Koenig & Bauer is the world's longest established manufacturer of printing systems, with the widest product range in the industry. For over 200 years, the company has provided customers with innovative technology, tailored processes, and diverse services. Its portfolio includes solutions for banknotes, for cardboard, foil, sheet-metal, and glass packaging, and for books, displays, labels, decor, magazines, advertising materials and newspapers. Koenig & Bauer is a proven expert and often market leader in nearly all printing processes - offset

and flexographic printing on sheets and rolls, waterless off-set printing, steel engraving, plus simultaneous, screen and digital inkiet printing. In fiscal 2021, its 5,397 highly skilled employees across the globe generated revenues of 1.116 billion euros. Koenig & Bauer Kammann GmbH, headquartered in Löhne, Germany, is the group's specialist for finishing hollow objects made of glass, plastic, metal and diverse other substrates, by means of screen printing, digital printing, hot stamping and labelling.

The latest developed high speed screen printing machine Kammann HS300 has established itself in the market within a very short time and enables Kammann customers 50% more output than was previ-ously possible in

the market. In addition to traditional screen printing and hot stamping, the K15 and K20 also serve digital printing, which enables a variety of new possibilities for decoration in the YMCK process. As a result, it is now possible to decorate the most complex article geometries from batch size 1. This has opened up new sales and decoration possibilities for many customers in terms of personalization and individualization.

### **PRODUCT RANGE**

- K15 Product Family
- · High Speed Screen printing
- Digital Printing
- · Hot Stamping



### LUBEN GLASS Sri



### **LUBEN GLASS Srl**

Via Meucci, 23 26010 Offanengo (CR) Italy

**\*\*** +39 - 0373 - 244396 <u>+39 - 0373 - 244401</u>

www.lubenglass.eu



### **COMPANY PROFILE**

The mission of Luben Glass is to satisfy the needs of its clients, offering innovative products based on the creation of components for different types of forming machines and plants, in response to the many functional needs of both the hot and cold-end of glassworks.

Thanks to the work carried out by our skilled technicians, we are able to provide standard products as well as those responding to the specific needs of our clients, guaranteeing the maximum reliability of our products, designed according to Industry 4.0, manufactured to offer a rigorous and attentive response to the concept of smart industry and energy saving.

### **PRODUCT RANGE**

- · Spare parts and accessories for forming machine
- Plants and machines
- Integrated software for energy saving and process control

### **PEOPLE TO CONTACT AT OUR STAND**

Our skilled and qualified personnel will be at our stand to discuss and present our products, providing all the details regarding our product range.



### MARPOSS



### **COMPANY PROFILE**

Marposs is a worldwide leader in precision equipment for measurement, inspection and testing in production environment.

Founded in 1952 and headquartered in Bentivoglio (Italy), is present with its sales and service network in 34 countries.

Production is based in Italy and also in other countries such as China, France, Germany, Japan, Korea, Mexico and USA

Marposs has been operating in the Glass Industry for over 20 years, providing products and applications for dimensional and geometric measurement of:

- Glass Packaging (for food & beverage, pharmaceutical, cosmetic and perfumery sectors)
- Flat/Automotive Glass



### MARPOSS SPA

Via Saliceto, 13 40010 Bentivoglio (BO) **2** +39 899111

+39 899870

www.marposs.com

### **PRODUCT RANGE**

- · VisiQuick, a fully flexible and modular gauging machine, including one or more stations for measuring
- External dimensions on body, neck and finish
- Weight
- Push-up
- Bore diameter and profile
- Wall-thickness
- Labelling area profile (sinks and bulges)
- Robotized machine for automotive glass measurement
- Tactile and contactless sensors
- Software

### **PEOPLE TO CONTACT AT OUR STAND**

Eleonora Bordini - International Industry Manager Glass Packaging







# HALL 14 STAND A05

# **COMPANY PROFILE**

NIROX is an Italian company that manufactures optoelectronic measuring sensors and systems for Glass, Plastic and Metal Industries. Our devices can work directly in production line or in laboratory, they do not touch the measured object and provide micrometric accuracy. NIROX also supplies tailor-made projects.

Pharmaceutical, Automotive, Scientific and Electronic Glass are the main markets served with our product range:

Our m-Thick and multi-Thick optical sensors can measure total thickness of glass panels, tubes and objects as well as complex structures by measuring the thickness of each layer, including coating.







# NIROX SRL

Sensori e Sistemi Ottici di Misurazione Via Ferri. 2 25010 Borgosatollo (BS) - Italy

**\*** +39 030-2304606 ☑ info@nirox.it

www.nirox.it

OTS optical sensor is used in the alass chemical etching process of electronic displays to measure directly in the slimming chamber the whole panel thickness.

NCSline is a family of turn-key systems for pharmaceutical qlass tubes production lines to measure wall-thickness and concentricity

outer diameter and ovality, and inner diameter, while NCSlab is an offline measuring system for a complete dimensional mapping of the tube and defects inspection.

VISline is a family of turn-key devices designed for the pharmaceutical primary packaging, to be installed on the glass tube converting machines. Depending on the models, it can measure bottom features, length, and other dimensions.

CMSline systems provide the inline cross-sectional measurements of glass capillaries in the drawing process. All dimensions such as outer diameter, thickness and inner diameter are obtained with just one sensor with multiple heads expansions.

Offline solutions are also available.

# OCMI-OTG S.p.A.



· Automatic glass tube

· Cold-end camera inspection

**INNOVATIONS** 

· Complete vial production

line developed for new

index rotation forming

· Fully renovated ampoule

production line LA504.0

with servo-driven stations

and integrated functions

control from main control

machine FLA18

panel

Inaders

# **PRODUCT RANGE**

"OCMI is leading supplier of complete production lines to manufacture tubular glass containers for pharmaceutical and cosmetic use (ampoules, vials, droppers, dental cartridges) with four production plants located in Milan - Italy (OCMI headquarters), Chelles - France (Moderne Mecanique), Madrid - Spain (KYP) and Ahmedabad - India (OCMI India), as well as a commercial office in Shandhai - China, OCMI is also dedicated to the supply of glass processing machines for tableware articles such as sealing/stretching machines for stemware, presses and press-blow machines.

Thanks to the partnership with Italian company MT Forni Industriali, OCMI can also supply turnkey factories for the production of technical glass items such as high voltage insulators and glass bricks. MT Forni Industriali has been operating since 1968 in the field of industrial furnaces for the glass industry, specially used for the preparation of glass raw materials, melting, thermal treatment, annealing and bending."

- · Ampoule, vial, dropper, cartridge forming machines
- Vial after-forming lines
- Hot-end camera inspection systems
- · Automatic glass tube loaders
- Automatic ampoule/vial packing machines
- Sealing/stretching machines for stemware · Pressing, press-blow
- machines Glass blocks production

lines

· Glass insulators production lines

# MODERNE MECANIQUE

- · Ampoules, vials, dropper. cartridges after-forming
- · Ampoule forming machines
- · Ampoule and vial printing lines

# OCMI INDIA

- · Vial index forming machines
- Vial cooling conveyors
- · Droppers, cartridges forming machines

# KYP ACCESORIES

- · Ampoule forming machines
- · Ampoule after-forming lines
- Automatic ampoule packing machines

Via Venezia Giulia 7, 20157 Milano Italy

# MODERNE MECANIQUE

13. Avenue de la Trentaine

**\*** +33 - 1 - 60087171 +33 - 1 - 60086575

# KYP ACCESORIES S.L.U.

- +34 918868371

# OCMI-OTG SPA

- +39 02 3909181 +39 02 3570944

77507 Chelles - France

# info@ocmigroup.com

#### C/Madrid 22 - Nave 07-12 28813 Torres de Alameda Madrid - Espana

+34 918863090

# OCMI INDIA

Office & Works Plot: 92 to 94, Phase - I G.I.D.C. - Estate Vatva, Ahmedabad, 382 445 - India

- **\*\*** +91 79 25834010/11 **\*\*** +91 79 25834012

# OCMI GLASS TECHNOLOGY (SHANGHAI)

5H, 2880 Hechuan Road, Shanghai 201103

- **\*** +86 21 54711716
- +86 21 54711716  $\ oxdots$  paul.wang@ocmigroup.com
- WWW.OCMIGROUP.COM







# HALL 13 STAND D48

# **PEOPLE TO CONTACT AT OUR STAND**

Volkan Fidan - General Manager Engin Firtina - Sales Manager



# **PRODUCT RANGE**

- Moulds
- Mould Holders
- Neck Rings
- Funnels
- Gob Deliveries
- Others Production Equipment
- Accessories
- Belt Conveyors
- Push Bar Stackers
- Transfer Systems
- Technical Assistance
- Production Support



# **OLIVOTTO GLASS** TECHNOLOGIES S.P.A.





# **PEOPLE TO CONTACT AT OUR STAND**

Sergio Sarvia - President & CEO

Massimo Pucci - Sales Director (BU Hollow Glass)

Elia Rizzi - Senior Area Manager (BU Hollow Glass) Andrea Valle - Sales Director (BU Pharma Packaging),

BU Manager (BU Mineral Wools)

Pierluigi Terzuolo - BU Manager (BU Solar)

Marco Giraudo - Sales Director (BU Solar)

Massimiliano Iuli - After Sales Manager

Gianluca Corrias - Spare Parts Service

# MACHINERIES • SYSTEMS • SOLUTIO

OLIMERK OGT

# **OLIVOTTO GLASS** TECHNOLOGIES S.P.A.

Headquarters: Viale Gandhi 22 - 10051 Avigliana (TO) - Italy **≅** +39 - 011 - 9343511

☑ info@olivotto.it

www.olivotto.it

# **PRODUCT RANGE**

- Feeders
- Press & Blow Machines
- Blowing Lines
- Multifunction Machines for Stemware Production
- Stretching Machines
- Burn-Off Machines
- Welding/Sealing Machines
- Fire Polishing Machines
- Press Machines

- Spinning Machines
- · Container Glass Machines
- · Automatic Packaging Line
- Tubing Lines For Pharma-Packaging
- Glass Wool And Rook Wool Manufacturing Lines
- · Rook Wool Sandwich Panels Production Line
- Equipment And Turn-Key Systems for Photovoltaic Modules







# **OMS PACKAGING** SYSTEMS TECHNOLOGY

HALL 13 STAND F64

OMS Group one of the reference companies in the production of endof-the line packaging solutions for the glass industry.

In addition to the Italian headquarter, the group is composed by 12 subsidiaries in Europe, North and South America, Asia and Oceania. BELOW SOME OF OUR SOLUTIONS FOR THE GLASS INDUSTRY.

# **PEOPLE TO CONTACT** AT OUR STAND

Claudio Cerutti

Sales Director



#### **OFFICINA MECCANICA** SESTESE S.P.A.

Via Borgomanero, 44 28040 Paruzzaro - Italy **2** +39 - 0322 - 541411

⊠ oms@omsspa.com www.omsspa.com

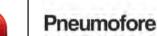


VERTICAL PRESS/STRAPPING MACHINE



# PNEUMOFORE S.P.A.

HALL 13 STAND A71



# PNEUMOFORE S.P.A.

Via N. Bruno, 34 10098 Rivoli - Italy

HORIZONTAL STRAPPING MACHINE

**\*** +39 011-9504030 +39 011-9504040

www.pneumofore.com



THERMOSHRINKING HOODING MACHINE

Pneumofore is a leading supplier of centralized vacuum and compressed air systems for glass manufacturing. Founded in 1923, the company manufactures vacuum pumps and air compressors for industrial applications worldwide and supplies the glass industry with a full range of product solutions designed for top performance and constant efficiency. The air compressors and vacuum pumps are built to last and are found worldwide, even in remote areas where customers require extraordinary reliability. Leader in Rotary Vane Technology, Pneumofore solutions focus on constant performance. long lasting operation, minimal Life Cycle Cost and high environmental respect.

# **PRODUCT RANGE**

- Energy Savings Solutions for the Supply of Vacuum and Compressed Air in Glassworks
- Centralized Vacuum Systems
- Compressed Air Systems
- Rotary Vane Technology
- System Engineering



# **PEOPLE TO CONTACT** AT OUR STAND

Our qualified personnel will be at our stand to present Pneumofore full range of products and solutions for the Glass Industry and their clear results: high energy savings, trouble-free operation over decades and the lowest Total Cost of Ownership.





# NEGINA CATENE CALIBRATE S.p.A.

# **COMPANY PROFILE**

Established in 1919, Regina is a world leading developer and manufacturer of highquality conveyor chains, belts, roller chains, components, offering a complete cutting edge product portfolio of standard and special applications for glass, beverage, food, packaging and many other industries. Regina is recognized among the 'fathers' of high performance conveying and power transmission solutions for the Glass Industry at global level.

Our products are fully developed and manufactured at our premises by means of a wide range of top-tier engineered plastics and steel grades and available in metric and imperial standards.



We are strongly committed towards continuous innovation and development of our value proposition, process capabilities and human capital, with a continuous drive on sustaina-

We are stable partners of the leading OEMs and producers at global level in the glass industry and across overall industry sectors in which we operate.

# Highlights for the Glass Industry:

- Full range of dedicated high-quality chains, modular belts and components for toptier cold-end lines
- State-of-the-art product design, engineering and materials
- Fully proofed low-dusting solutions
- Unique high-performing solutions for Lube-Free Bottle-Turner applications
- Innovative eco-sustainable product portfolio of POM solutions
- Complete in-house manufacturing and control of overall product portfolio
- More than 1,000 lines installed worldwide

# HALL 13 STAND C84



#### **REGINA CATENE CALIBRATE** S.n.A.

Via Monza, 90 23870 Cernusco Lombardone (LC)

**\*** +39 - 03999801

www.reginachain.net

# **PRODUCT RANGE**

- New imperial standard heavy duty modular belts and dedicated widths chains, 1305 Series
- New gripper chain with GS rubber pad design for bottle-turner applications, top-tier solution for conveying unstable products
- Lube-Free Gripper Chains for bottle-turner applications
- · Full-range of chains, modular belts and components for top-tier Cold-End lines
- State-of-the-art lube-free material (e-SLIDE and SUPREME-S) for guides and curves
- Innovative eco-sustainable product portfolio of POM solutions



# **PEOPLE TO CONTACT AT OUR STAND**

Francesco Baldin - Key Account Manager Gianfranco Tempesta - Export Manager Giorgio Milano - Area Manager

# **COMPANY PROFILE**

**REVIMAC** belongs to the Bottero group of companies. The company boasts an experience of over 30 years with the major glass containers manufacturers in the world by supplying a wide range of machinery and equipment in the hot-end area. On one hand, RE-VIMAC is engaged in the forming process by supplying high efficiency forehearth combustion systems and by performing professional IS machine re-manufacturing and, on the other, it is one of the few companies able to deliver complete high performance ware handling units and ancillary equipment such as ware transfers, cross conveyors, stackers, hot treatment hoods and cold tre-







**REVIMAC** has recently perfected its range of High Performance Ware Handling equipment with the so called Ensemble Evo, a composition of synchronized, harmonic and stable system putting together the ware

transfer with double auxiliary belt XHS900, the cross conveyors RC900 (without cooling system) and the lehr loader (stacker) RSS100.



# **\*** +39 - 0444 - 493494 +39 - 0444 - 492358

36075 Montecchio Maggiore (VI)

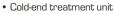
□ revimac@revimac.com

**REVIMAC S.R.L.** Via Mario Carraro 19

# www.revimac.com

# **PRODUCT RANGE**

- Re-manufactured IS machines & section boxes
- · Re-manufactured feeder
- Forehearths & Working-ends
- Ware handling equipment
- Hot-end treatment unit











# Shop on sigmaref.it

# PEOPLE TO CONTACT AT OUR STAND

Radostina Saenko -

Roberto Mari - CEO Federico Mari - COO Luigi Mandelli Alberto Tedeschi - Sales

Locate Varesino facility

Plovdiv facility





#### S.I.G.MA. S.R.L.

Via delle Grigne 12/A 22070 Locate Varesino (CO) - Italy

\*\* +39 - 0331 - 823195 a.r. \*\* +39 - 0331 - 823198

#### SIGMAREF SRLU

Koshovete, 158 str. - Municipality Maritsa 4199 Trud, Plovdiv - Bulgaria

**\*** +359 - 32 - 396423

□ office@sigmaref.bg

www.sigmaref.it

# **COMPANY PROFILE**

Despite its rapid growth with the recent opening of the fourth facility in Plovdiv, Bulgaria, SIGMA is and remains a family-owned and managed company. Passion, know-how, specialization and high reactivity in both manufacturing facilities allow Sigma to offer a quick response to Customers' both programmed and urgent requirements.

In step with the times, SIGMA has also recently upgraded its E-commerce Refractory Shop to offer an easier and faster way of acquiring products.

Moreover it enables to be continuously updated with regards to product availability.

# **PRODUCT RANGE**

- Furnace refractories
- Working ends and forehearths
- Feeder expendables



# **NIKOLAUS SORG GMBH &** CO. KG .....





Alexander Sorg - Managing Partner

Karl-Heinz Sorg - Managing Partner

Michael Sorg - Director SORG Group, Sales

Matthias Haas - Associate Sales Director

Jens Rosenthal - Managing Director EME

Afonso Morna - Managing Director SKS

Herbert Lorz - Managing Director SFB

Holger Mayer - Managing Director Fusetech Key group employees and Sales Team

# **PRODUCT RANGE**

- Melting Technologies
- Conditioning Technologies
- Mathematical Modelling
- Engineering & Equipment
- Full-service Services
- Sustainable Solutions



#### **NIKOLAUS SORG GMBH &** CO. KG

Stoltestraße 23 - 97816 Lohr am Main - Germany

**\*** +49 9352-5070

± +49 9352-507196

 □ nsorg@sorg.de www.sorg.de



# **COMPANY PROFILE**

As Nikolaus SORG celebrates 150 years at the forefront of glass melting and conditioning, we are proud to be one of three industry-leading specialists in the SORG Group. Responsible for designing the world's most advanced furnaces and related technologies, our tireless commitment to research and development supports glassmakers in improving the sustainable performance of their furnaces to maximise asset lifespan.

As the only furnace company globally with a research and development department for glass melting and conditioning, our technical innovations include mathematical modelling, modern design tools and digitalisation.

At glasstec 2022, you can discover more about how our advanced technologies are Designed for Performance and our mission to help create a more sustainable future using our newly improved VSM++ and CLEAN Melter®.



# STM MICROTEC S.R.L.

# HALL 14 STAND G41

# **PEOPLE TO CONTACT AT OUR STAND**

Emanuele Fratto - Corporate Sales Manager Giovanni Oliverio - Business Developer Davide Marcon - Technical and R&D Manager



# **COMPANY PROFILE**

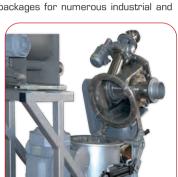


Since 1971 STM Microtec has been providing integrated solutions and tests for grinding and dosing. A wide and complete range of customized services, from a single machine to complete packages for numerous industrial and

environmental applications.

STM provides major glass manufacturers globally with Bicarmill®: a

reliable stand alone system for grinding and injecting sodium bicarbonate for emission control. According to the specific abatement parameters of the type of pollutant Bicarmill® neutralizes the acid components in flue gases to easily comply with legal emission limits. STM has a Pilot Plant where to simulate and verify the performance of the technologies, varying the input material and the operating and process parameters, adapting the solutions to every need.





#### STM MICROTEC S.R.I.

Sede legale:

Via Milano 14/N, 20064 Gorgonzola (MI)

Sede operativa:

Via G. Mazzini 66, 21020 Ternate (VA)

**2** +39 0332-943411

± +39 0332-961585

www.stm-microtec.com





# 🔪 GRUPPO TECNOFERRARI SPA



# **PEOPLE TO CONTACT AT OUR STAND**

Francesco Diemmi - Sales Area Manager



# **PRODUCT RANGE**

Automatic logistic solutions for conveying, handling, storage, palletizing and packaging:

- AGVs (automated guided vehicles)
- LGVs (laser guided vehicles)
- Consulting
- · Flow analysis
- Customized software
- · Customer care
- · Digital printing solutions



# **GRUPPO TECNOFERRARI SPA**

Via Ghiarola Vecchia 91 - 41042 Fiorano Modenese (MO) - Italy

**\*** +39 0536-915000

www.tecnoferrari.it

# **COMPANY PROFILE**

TecnoFerrari, founded in 1966, is specialized in automatic logistics solutions for handling and packaging in industry 4.0. The know-how acquired over time, in particular in the ceramic industry, has allowed the company to extend its solutions to the glass sector.

High flexibility and ongoing research allow TecnoFerrari to project, design and build customized solutions that best suit the customers' needs and respond to the continuous evolution of the glass automation industry.

Today, TecnoFerrari has more than 4,000 AGV and LGV vehicles installed worldwide and thanks to its offices, and partners it is also present in the USA, Turkey, Brazil, China and India





# 🔰 TECNOSENS S.p.A.





# **COMPANY PROFILE**

With over 20 years of activity in the world of sensors and measurement systems, Tecnosens S.p.A has been able to develop complete solutions for the dimensional control of glass for automotive and container glass thanks to an R&D with an extensive know-how on multiple measurement technologies.

To this date, Tecnosens has consolidated partnerships with leading manufacturers in the world of automation, in particular in the world of glass, for which it is a specialized integrator.

# **AUTOMATIC BOTTLE'S SURFACE** INSPECTION

The Caliber ZetaPi system is a set of customizable solutions for measuring glass containers,

# **PEOPLE TO CONTACT AT OUR STAND**

# Carlo Salvagni

Team Leader sensors & solutions for glass measurement Franco Zanelli - Sales Manager

in-line and off- line. Tecnosens ZetaPi allows to detect the presence of any deformation on the bottle that may create labelling defects, by alerting the process in advance before starting the actual labelling phases.

# **GLASS STRAIN ANALYSIS**

Tecnosens implemented a system for the analysis of residual strain in the glass container, a solution that can be applied both off-line and in automatic line. With this system it is possible to monitor 100% of production, avoiding subsequent stops due to accidental breakage of the containers.

# **AUTOMOTIVE GLASS** INSPECTION

With Caliber, it is possible to measure the shape, curvature and perimeter of the glass.



#### TECHOSENS S DA

Via Vergnano 16 25125 Brescia (Italy) **\*** +39 030 - 3534144

± +39 030 - 3530815 ☐ info@tecnosens.it

www.tecnosens.it www.glassgauging.com

The target application fields in which this system is used are for example that of auto glass, safety glass, industrial vehicle glass and special glass.

#### AN OPTICAL SENSOR TO RECOGNIZE THE LAMINATED GLASS LAYERS

Tecnosens Multi-Layer, using confocal and interferometric optical technologies, quickly and accurately measure the layers that compose a laminated glass, including the plastic ones between the layers

These tools are used in various fields such as the production of plastic films, laminated glass, glass for mobile phones... The innovative Multi-Laver technology can also be used to measure the thickness of the plastic film layer (PVB, EVA ...) before it is heated to be lami-



# **PROMOTED PRODUCTS**

- · Glass furnaces of all types
- · Forehearths and working ends
- · Glass plant equipment including the SX electrode holder and electric boosting

# COMPANY PROFILE

As part of the TECO Group, Toledo Engineering, Tecoglas, and KTG Systems, can offer total furnace capabilities in glass furnaces of all types with KTG Engineering supporting this activity as glass plant equipment manufacturers. Zedtec are the TECO Group specialists in forehearth and working end technology. EAE Tech provide high quality industrial automation engineering services and custom control systems. The

TECO Group has been designing, building and modernising for the world's primary glass manufacturing industry since 1927.





nated.

# TECO GROUP

Toledo Engineering Co., Inc. 3400 Executive Parkway P.O. Box 2927 Toledo, Ohio 43606-2927 - USA

\* +1 - 419 - 5379711 +1 - 419 - 5371369

/ww.teco.com





# NAIT 🕊



# **PRODUCT RANGE**

Tiama is a global provider of real-time process data and quality controls for glass packaging.

The company's machines are filled with sensors installed both at the hot-end and cold-end of the glass plant.

All these Tiama sensors, backed-up by specific expertise in traceability and services, offer a powerful source of data and knowledge preparing for the arrival of the Smart Factory.

Today, Tiama is capable of sending highly value data (unique bottle laser-engraved identification, container images, measurements) coming from the hot-end and cold-end to ensure optimized productivity and to strongly connect these two glass plant areas.

To better prepare future Business Intelligence capabilities, Tiama has structured its unique offer around five product families:

· Intelligence: all production and quality data are then recorded and displayed in a single smart database that enables to have optimized production management and immediate actions.

- · Monitoring: modular and affordable technological bricks at the hot-end provide process information at the earliest stage of the bottle's life and detect early production drifts.
- Traceability: with the patented device Total Tracer, engraving an individual

code on the bottle. All defects, information and events at the H-E and C-F will be correlated down to a single container creating a unique identity card for each ware.

• Inspection: with the development of flexible and automated machines.

At Tiama, advanced technologies such as learning processes, deep learning and artificial intelligence concepts are being pushed, with machines to provide operators with precise data in the fastest possible time.

TIAMA

215 Chemin du Grand Revoyet

69230 Saint-Genis-Laval **\*** +33 - 4 - 37201500

+33 - 4 - 78079450

www.tiama.com

• Services: with a panel of support programmes giving the possibility to use all the Tiama equipment at their highest performance rates, maximizing initial investments. Tiama Support also includes predictive and preventive solutions to reduce costs of ownership. • Sampling: either at the H-E, C-E or at the Laboratory,

TIAMA develops new sampling solutions. One of them, the Tiama Xlab is a revolutionary machine which uses Xray technology to create a 3D mapping of the container. Ultimately, based on this powerful database. Tiama will develop data mining solutions, and will build business models around correlations between all the parameters of a glass plant. Tiama has, in fact, already started to work on customer cases attesting the value of these correlations.

Discover the Tiama Xlab on our booth





# **PEOPLE TO CONTACT AT OUR STAND**

Francesco Cavatorta - Glass Division Sales Manager Filippo Mattioli - Area Sales manager

VETROMECCANICA SRL

Luca Bucci - Area Sales Manager

# **COMPANY PROFILE**

Vetromeccanica, established in 1992 in the province of Parma, the heart of the Italian packaging area, has been an important industrial international player right from the very beginning.

With 30 years of expertise in containers handling, Vetromeccanica is a reliable partner during all the phases of the process: from feasibility studies, executive engineering, the choice of the best supplies,





right up to the supply of innovative, patented and competitive handling and automation solutions to meet specific needs.

Vetromeccanica offers Cold End Lines from Jehr exit up to palletizing units for the handling of glass containers of different sizes and shapes



# VETROMECCANICA SRL

Strada Isolanda, 26 - 43024 Loc. Provazzano (Parma) - Italy **2** +39 0521 - 343011 □ coldend@vetromeccanica.it

www.vetromeccanica.it

# **PRODUCT RANGE**

- · Cold End Lines
- Stacker Units
- Columnar Palletizers / Depalletizers
- Beam Palletizers / Depalletizers
- · Robotic Units
- Tray Formers
- · Labelling Systems
- Empty Pallets Dressing Lines
- Shuttle Cars
- · Sorting & Decorating





# HALL 14 **STAND G56**

# PEOPLE TO CONTACT AT OUR STAND

Alessandro Liani - CEO Jacopo Zoratti - Sales manager

# **PRODUCT RANGE**

- Omnia Multi-format total sidewall control
- Linea Shoulder checks contactless control and checking of mouth defects
- Extrema Advanced bottom control of containers
- Arcus Continuous glass colour monitorina
- Oculus The universal portable micro control
- SBI Checking mouth defects
- Multi oculus Smart cut search
- Versus Smart product selection
- Vertigo Geometric contactless control
- · Kit finish Intelligent quality control of container Finish
- · Proximus Counting and check for hot bottles clogging
- · Libra A20 Liquid level check, presence and conformity of the plug/cap position
- Vip line Federal Mark codes tracking solution





# VIDEOSYSTEMS

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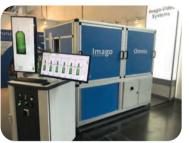
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www.videosvstems.it

# **COMPANY PROFILE**



Video Systems is specialised in the design and construction of high-tech sensors, vision and quality control systems for the main industrial sectors, including the hollow glass market, where our company has developed a vertical competence deriving from a long term experience with important companies of this sector. Imago is the complete range of advanced solutions for in-line quality control in hollow glass production - bottles, jars etc. - developed by Video Systems and based on its deep expertise in Artificial intelligence, artificial vision and IIOT.

Imago solutions learn directly

from the production line, with great advantages in terms of reliable results, cost reduction and great ease of use; moreover, they guarantee fault-finding of any kind of defect, while reducing false rejects to the minimum. Video Systems supplies customised solutions that matches the customer needs, starting from an accurate study of data and production line. A full tele-assistance service is part of Viden Systems, support to our customers.



# VIDROMECANICA

# **PRODUCT RANGE**

# Vidromecanica - thermal equipment for the glass industry

Vidromecanica manufactures annealing, decorating and tempering equipment; equipment for hot- & cold-end coating; and internal cullet processing plants able to run on long-term production. Vidromecanica's main equipment includes:

- Annealing and decorating lehrs
- Belt tempering lines for tableware
- Spindle toughening lines for stemware
- Thermal Shock Test Machine
- Mould pre-heating kilns
- Stackers + Cross Conveyors
- Hot end coating hoods
- Cold-end coating spraying systems
- Scraper conveyors and Cullet crushers

In close cooperation with its customers and glass industry, Vidromecanica has been a partner in this market for the last 38 years - since 1984.

Vidromecanica has supplied equipment to +70 countries and +120 plants.



# VIDROMECANICA:

# VIDROMECANICA

Rua Central 22, Garcia, Apt 387 2431-905 Marinha Grande Portugal

**\*** +351 - 244 - 555060

= +351 - 244 - 552410

□ vidromecanica@vidromecanica.com

ww.vidromecanica.com



Annealing Lehrs

# PEOPLE TO CONTACT AT OUR STAND

Vitor Maia - CTO - Chief Technical Officer Ricardo Barreto - CEO - Chief Executive Officer

João Curado - CTIO - Chief Technology Innovation Officer





# VMA GMBH

# HALL 14 STAND CO7

# **PEOPLE TO CONTACT AT OUR STAND**

Nico Thomae - Managing Director Fred Vogler - Sales Manager

# **COMPANY PROFILE**

VMA is specialized in designing and manufacturing opto-electronic measuring and testing equipment for the glass industry worldwide. The company's equipment is designed in accordance with the special requests and needs of its customers, and contains all necessary components for turnkey systems.

VMA's engineers have been working in the glass industry for many years and are therefore familiar with the special demands regarding the testing of glass articles as well as the technological problems of glass manufacturing.

VMA's strength is to provide its clients with a complete system of know-how and service, combining its experience with innovative solutions and sophisticated

#### Products and Business fields:

- TMC (Thickness Measurement system for Container glass), on-line and off-line
- TMF (Thickness Measurement system for Float glass), at hot-end and cold-end
- Special solutions like thickness and dimensional systems for tubular glass (TMT, TC, OD) at hot-end and cold-end, on-line and off-line; diameter measuring systems for quartz glass resizing machines

# PROMOTED PRODUCTS

#### Non-contact measurement equipment

inspection systems

non-contact thickness measurement for:

- float glass
- tubes
- hollow alass

automation systems for tubing lines and tube manufacturing

diameter gauges

automatic regulation

supervision computers

defect detection systems

automatic quartz glass resizing

rental equipment

tailor-made design

installation, start-up, training

thickness measurement systems for laboratory use

# **INNOVATIONS**

- new measurement system C46x80 for multilayer glass/thick glass
- new stress measurement system for flat glas
- new sensor system FLX-C42 for very non-round



und Automatisierung

#### VMA GMBH

Gräfinauer Str. 2 D-98693 Ilmenau

☑ info@vma-online.de

www.vma-online.de



# 🔪 ZIPPE INDUSTRIEANLAGEN GMBH



# **PEOPLE TO CONTACT AT OUR STAND**

Dr. Philipp Zippe - CEO Dr. Andreas Emrich - CTO





# **PRODUCT RANGE**

- · Batch plants
- · Cullet plants
- · Engineering
- Automation
- Modernization
- · Factory cullet recycling
- · Glass recycling
- Batch charging
- · Glass level controlling
- Preheating
- Maintenance and service

# **COMPANY PROFILE**

Our core business is the development and construction of batch and cullet plants.

We pride ourselves on being amongst our customers' most reliable partners, with an infrastructure, the expertise and capability to deliver projects of any magnitude. As one of the few full-service providers in

our industry, our spectrum covers all service

areas within plant construction - engineering, planning, design, production, automation technology, installation, site management for all disciplines, commissioning, training for personnel, and services for ongoing operations.

Be it flat glass or hollowware, Zippe batch plants ensure that the batch for every glass type is fully automatically fed into the furnace with the exact consistency and homogeneity needed, at the required amount and at the right

point in time - 24 hours a day, every day.

State-of-the-art control technology is a key element for optimal operation of a batch plant. There are around 40 Zippe automation and control systems specialists hard at work for you. This means we are one of the few companies able to develop and realise complete control systems in house.

Our 24-hour support service enables our customers to contact an expert around the clock either by phone or email.

**Zippe** has been focused on the future for more than 100 years and, having realised well over 650 batch plant projects, has the longest standing experience in our industry sector.

**ZIPPE** - right from the start.





# ZIPPE INDUSTRIEANLAGEN

P.O. Box 1665, D-97866 Wertheim Alfred-Zippe-Str. 11, D-97877 Wertheim Germany **≅** +49 - 9342 - 8040

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www.jhmould.com/En



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**COMMERSALD IMPIANTI** 

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**FORGLASS** 

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**GCG GLASS CONSULTING GROUP** 

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**ECOTECNE** 

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**COMPANY COMPANY** website



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**TECNOSENS SPA** 

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VIDROMECANICA

**VIDEO SYSTEMS** 

website

www.videosystems.it\en



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www.teco.com



**VIDROMECANICA** 

www.vidromecanica.com



TIAMA

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**VMA** 

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Perego Giancarlo

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# Luben Glass

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MOULDS: **MAINTENANCE EQUIPMENT** 

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# **BUCHER EMHART GLASS** and Novaxion partner to create FlexRobot



he glass industry, like all manufacturing industries, is in the midst of a paradigm shift. Purely mechanical equipment is gradually becoming a thing of the past, and the spotlight is shifting to robotics

and automation for key tasks, sensors to monitor operations, and data science to analyze and improve performance.

In theory, a maker of industrial equipment could develop and build all this technology from scratch. But to acquire all the necessary skills and then carry out all the development takes a great deal of resource – not to mention time. And in a fast-moving industry like consumer goods packaging, time is never on your side.

FlexRobot, Bucher Emhart Glass' solution for automatic swabbing of IS forming machines, was developed through a major strategic partnership with Novaxion. Glass Machinery Plants & Accessories takes a look at the origins and progress of the collaboration.

"Our ambition is to make glass more competitive with other packaging materials," said Martin Grönblad, Product Manager at Bucher Emhart Glass (BEG). "Both our customers and we can clearly see which technologies are state-of-the-art right now. So we focus our efforts on partnering with the companies who can provide them.

"We bring the technologies into our own ecosystem, and combine them with our own R&D expertise in automation. That's where we can add value."

# **FLEXROBOT**

The most recent fruit of this approach is FlexRobot, BEG's automated system for swabbing blank molds and neck rings. Although the device is branded as a BEG solution, it was developed through a strategic partnership with French technology startup Novaxion.

The FlexRobot system is mounted on the blank side panel and swabs blank molds "on the fly," helping to increase output, reduce wear and tear, and prolong mold lifespan. It also saves material and cost by using less swab liquid than manual intervention. Consistent swabbing by FlexRobot helps to achieve outstanding process stability, reducing the incidence of certain defects and improving pack-to-melt ratios.

# **SEARCH FOR A PARTNER**

The project began when BEG saw the potential of an automatic swabbing solution. "We wanted something that would improve the process, but also make the user's life easier by enhancing the safety and ergonomics of the machine," said Martin.

The search led to Novaxion, who offered the perfect mix of technical and commercial skill. "Our technical assessment concluded that spraying in closed blanks was and is the superior technology for lubricating blanks and neck rings - and the market agrees. On top of that, Novaxion's employees showed a real entrepreneurial spirit, and they shared our passion for great customer service, so the cultural fit was perfect. The collaboration between the Novaxion and BEG service organizations has always been excellent."

# CONSTRUCTIVE COLLABORATION

The two firms signed an agreement in 2018, and the cooperation began in earnest in the following year. The partnership team included Martin





Grönblad, Inge Friberg, Leo Diehm and Christian Modula from BEG, and the founder of Novaxion: Christophe Duplan. Additionally. Iean-Baptiste Echevin and Mathieu Dumnesy were part of the team.

While the collaboration was always constructive and trusting, there were some challenges along the way. That's hardly surprising, given the sharp contrasts between the two firms: while BEG is an established multinational with over a century of experience behind it, Novaxion began life as a startup, founded in order to develop and market advanced swabbing technology. (The firm's slogan is "We swab smart.")

# **BUILDING TRUST**

While the two firms shared a common goal, the partnership still took some effort. "What you have to understand is that for these three entrepreneurs, Novaxion was their life's work," Martin said. "Being courted by a giant like BEG may have been flattering, but it was probably intimidating too - and it's only natural to question what intentions might lie behind the approach."

Trust always takes time and effort, but the two firms have worked hard to build a strong relationship based on openness. "We had to get to know each other well, and we had to put the right structures in place too," said Frédéric Nio, Managing Director of Novaxion. "But the collaboration has been openminded from the start. For us, the deal has brought us new customers, but it's also allowed us to grow on the technical side and the way we organize our business."

# WINNING FORMULA

"We've defined our vision, we've agreed the strategy to achieve it and we apply that strategy in our daily operasaid Martin. "That's tions,' the winning formula that has allowed us to scale the business to a new level. We've enhanced the basic technology and the integration with BEG machines, reaching milestones like developing the first hanging robot."

With Novaxion's technical capabilities on board. BEG has been free to focus on refining the user experience. "The great advantage of FlexRobot is that customers can buy everything from a single source," Martin explained. "When they take delivery of their forming machine, the swabbing robot is already integrated and ready to go."

FlexRobot is available on all new IS forming machines from BEG.

# BUCHER emhart glass

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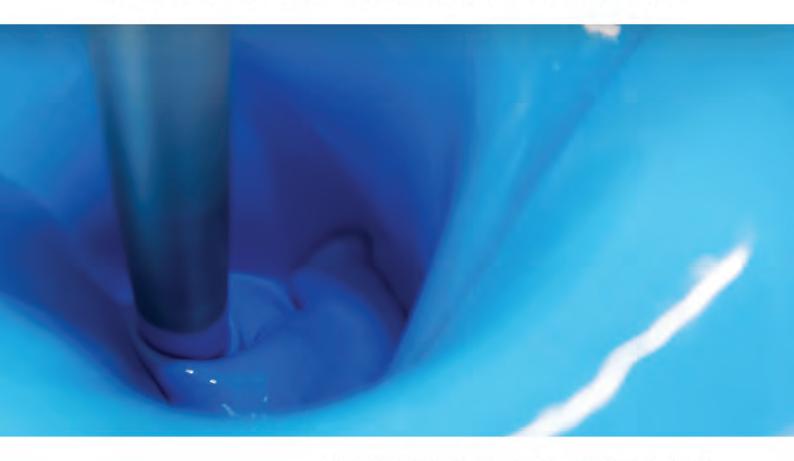






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