

glassmachinery world plants & accessories

BI-MONTHLY INTERNATIONAL MAGAZINE FOR GLASS MANUFACTURING



YEAR 29 • ISSUE NO. 1/2016

Poste Italiane Spa - Sped. in a. p. - D.L. 353/2003 (conv. in L. 27/02/2004 n° 46) art. 1, comma 1 - DCB Milano • € 2, Copia omaggio

Refractories Experience S.r.l.

Our experience in support of your business
Demolition, reconstruction and hot works for glass production

**Baku
Glass
2016**

OFFICIAL
CATALOGUE
first edition

STD GLASS

LEADING IN THE DOMESTIC
MARKET; EXPANDING TO
INTERNATIONAL MARKETS

BDF

SAVING THE ENVIRONMENT
WHILE MAINTAINING MARKET
COMPETITIVENESS

VIDROMECHANICA

PRODUCING THE MOST
LONG-LASTING GLASSWARE

GPS

UNDERSTANDING WHAT
THE MARKET NEEDS

FALORNI TECH

BRANCHING OUT WITH
INDUSTRIAL FURNACES

www.glassonline.com

glassOnline

The **best vial** coming from the **best line**



FLA-20



LF-520



OPTIVIAL



LF-535



FLA-35

There's only
ONE WAY
to make an high quality product

The OCMi-OTG group, together with MODERNE MECANIQUE, is leader manufacturer of machinery for the production of tubular pharmaceutical and cosmetic glass containers, such as: ampoules, vials, cartridges, glass dropper



Ampoule Production Lines
Vial Production Lines
Dental Cartridge Lines
Dropper & Test Tube Lines



Ampoule Production Lines
Vial Cartridge Processing Lines
Dental Cartridge Processing Lines
Sprinkler Production Lines

Phone: +39 02 39.09.18.1 - Fax: +39 02 35.70.944
E-mail: info@ocmigroup.com - Web: www.ocmigroup.com

A great vintage stays forever.

This year we are celebrating 110 years together, while looking forward to exciting new challenge for the time to come. Thank you for trusting and believing in our love for tradition, passion and innovation.

Your trust and loyalty are our success.



1906-2016
110th anniversary

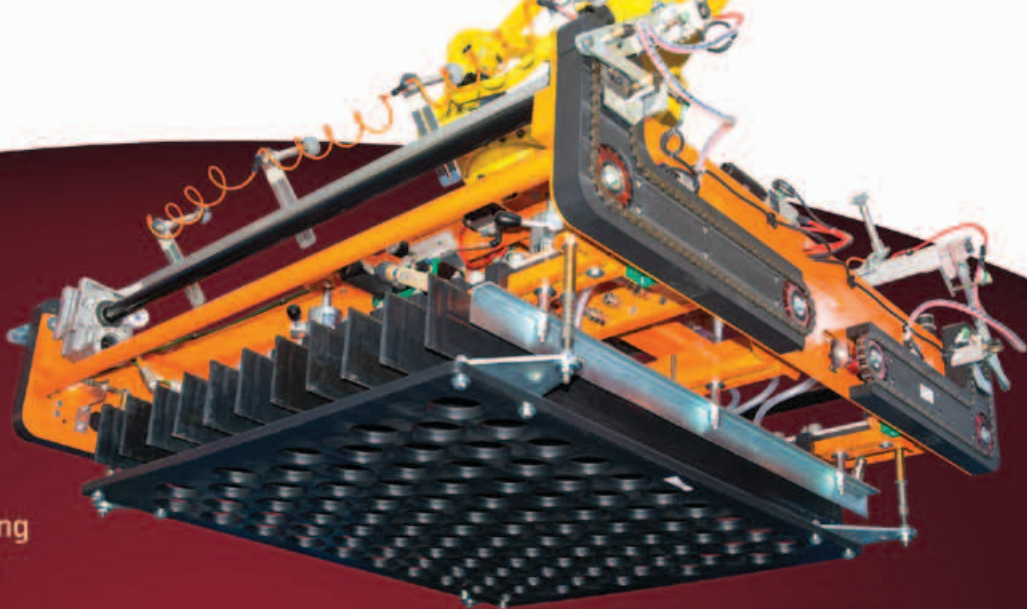
Melting | Forming | Automation | Energy
All in one
www.bdf.it



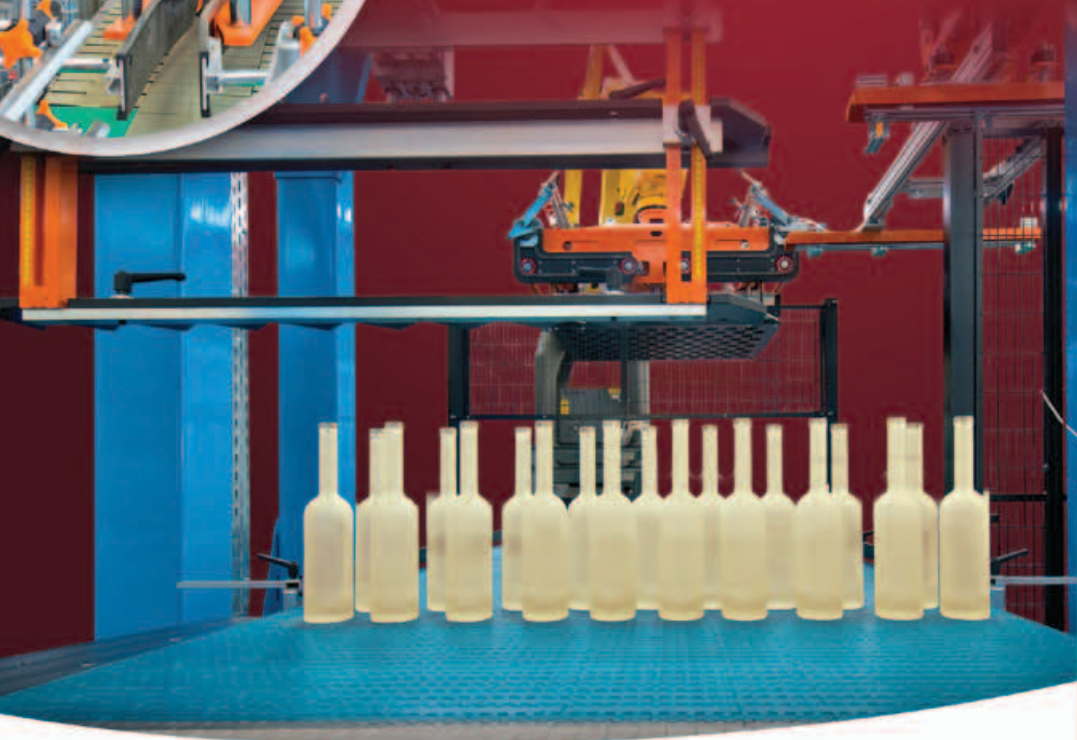
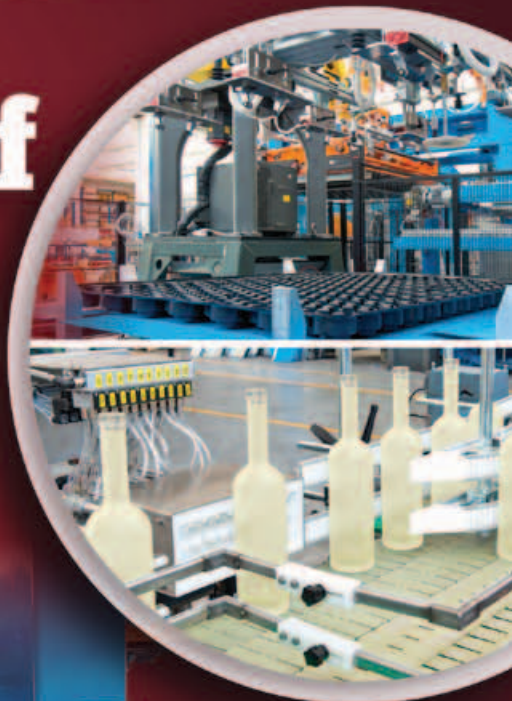
www.emmeti-spa.it
www.sipac.pr.it

Complete lines and palletizing
systems for difficult to handle
bottles and glass items:

- Special design of lines and
palletizers without buffers
- No contact between bottles along
conveyors and during handling



**Taking care of
your quality**
with a satin touch...



EMMETI

EMMETI SpA Via Galileo Galilei, 29
42027 Montecchio Emilia (RE)
Phone: +39 0522 861911
email: emmeti@emmeti-spa.it

SIPAC

Sipac SpA Via Berettinazza, 25
43010 - Fontevivo (Parma)
Phone: +39 0521 611811
email: sipac@sipac.pr.it

Special cast irons and alloys for glass moulds



Fonderie Valdelsane

S.p.A.

STRADA DI GABBRICCE, 6 - P.O. BOX 30 - 53035 MONTERIGGIONI (Siena) - ITALY

Tel. +39-0577-304730 - Fax +39-0577-304755 - ifv@fonderievaldelsane.com - www.fonderievaldelsane.com



THE DOUBLING THE DOUBLING



To meet the growing demands of refractories for glass furnaces

**S.I.G.MA. Group
HAS DOUBLED ITS
PRODUCTION
CAPACITY** *by opening a
NEW FACTORY
IN BULGARIA*

ITALIAN FACTORY



BULGARIAN FACTORY

S.I.G.MA. Group with its 5,000 ton/year is now the biggest European refractory supplier in the glass field for vibro-casting special shapes, offering significant benefits to its Customers such as flexibility in case of emergency and safe & prompt delivery.

The strengths of **S.I.G.MA. Group** have always been the specialization within glass furnace refractories in addition to detailed understanding of the glassmakers' demands and to continuous investments, both in the factory and in the laboratory.

Thanks to its technical competence and refractory quality **S.I.G.MA. Group** is a reliable partner with the most important worldwide Glass Groups among its Customers.



S.I.G.MA. GROUP

S.I.G.MA. S.r.l. - Italy
Refrattari Tecnici Industriali

SIGMAREF SRLU - Bulgaria
Technical Industrial Refractories

REFRATRADE S.r.l. Italy
Refractory & Technology

S.I.G.MA. S.r.l. - Italy - Via delle Grigne no. 12/A - 22070 Locate Varesino (CO) - Italia
Tel. 0039-0331-823.195 - Fax 0039-0331-823.198
e-mail: sigmaref@tin.it - www.sigmaref.it - P.IVA 01872290133



SIGMAREF SRLU - Bulgaria

Koshovete, 158 str. - Municipality Maritsa - 4199 Trud, Plovdiv - Bulgaria
VAT N. BG202598406 - Phone: 00359-32-396.423 - e-mail: office@sigmaref.bg

PUBLISHER/EDITOR-IN-CHIEF

Marco Pinetti..... marco.pinetti@glassonline.com

ASSOCIATE EDITOR

Valerie Anne Scott..... valerie.scott@glassonline.com

CONTRIBUTING EDITOR

Jennifer Pressman

ADVERTISING

ITALY

Maurizio Lozza..... maurizio.lozza@glassonline.com

WORLDWIDE

Luciano Molina luciano.molina@glassonline.com

GRAPHIC DESIGN & PAGINATION

Sonia Prevato sonia.prevato@glassonline.com

PRINTED BY

TIPOGRAFICA DERTHONA Srl

Strada Vicinale Ribrocca 6/5

15057 Tortona (AL) - Italy

BACK COPIES

€ 29 air mail included

Italy: € 15

Published by Smartenergy S.r.l.; owned by ARTENERGY PUBLISHING S.r.l. All rights reserved. Reproduction even partially in any form is strictly prohibited unless written permission has first been obtained from the Publisher. The magazine is open to collaboration from all, but no manuscripts or photographs will be returned. The editor's office does not accept responsibility for opinions expressed in signed articles. Court responsible: Milan. Publication registered at no. 4 of the Milan Court Records Office on 11.1.1988 - ISSN 0394-9893

MEMBER OF:



Glass Machinery Plants & Accessories,
n. 166, anno 29, 2016,
Dir. Resp. Marco Pinetti.
Periodico bimestrale.



glassOnline

**NEW
WEB SERVICE**



IS PUBLISHED EVERY TWO MONTHS BY

SMARTENERGY
S.r.l.

Via Antonio Gramsci, 57 - 20032 Cormano (Milano) - Italy

Tel.: +39-02-66306866, Fax: +39-02-66305510

E-mail: publications@glassonline.com • www.glassonline.com

regular features

- 8 OUR FAIRS CALENDAR 2016
- 10 ADVERTISERS INDEX
ALL COMPANIES MENTIONED
- 12 NEWS AND PRODUCTS
- 59 BAKU GLASS - OFFICIAL CATALOGUE
- 88 SUPPLIERS GUIDE - YELLOW PAGES
- 94 SUBSCRIPTION SERVICE

Refractories Experience S.r.l.

Our experience in support of your business
Demolition, reconstruction and hot works for glass production

COVER ADVERTISERS:

REFRACTORIES EXPERIENCE

Via Villani 48/50, 29122 Piacenza (PC) - Italy
Tel.: +39-0523-648260 - Fax: +39-0523-695185
E-mail: produzione@refractoriesexperiencesrl.it
www.refractoriesexperiencesrl.it

Contents

articles

32

28 **STD GLASS:**

leading in the domestic market;
expanding to international markets

30 **SCHOTT:**

improving algae production for ecoduna
with glass components

32 **BDF INDUSTRIES:**

saving the environment while
maintaining market
competitiveness

36 **OCMI GROUP:**

top-level technology

40 **TIAMA:**

change in corporate
name

42 **KOPP GLASS:**

the clear choice - how
to choose the best
transparent material

45 **VIDROMECANICA:**

producing the most long-lasting glassware

49 **FALORNI TECH:**

branching out with industrial furnaces

55 **GPS:**

understanding what the market needs

28

30

36

49

55

This issue also contains:

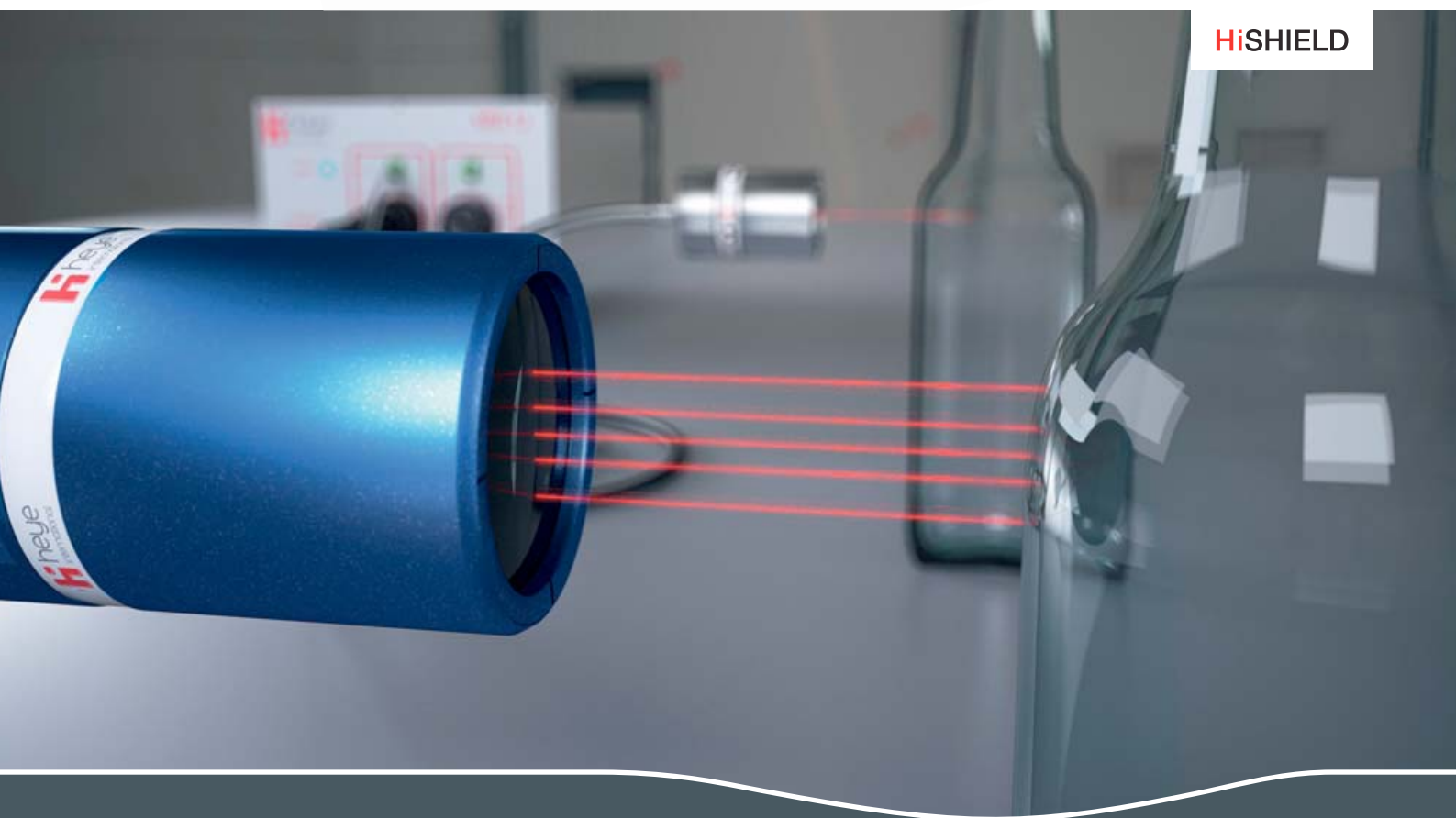


OFFICIAL
CATALOGUE

59

WE ARE GLASS PEOPLE

MULTIPOINT WALL THICKNESS



MULTIPOINT THICKNESS SENSOR MTS10/05 STAND-ALONE OR INTEGRATED IN HEYE SMARTLINE

- Covers all critical areas of a container
- Flexible combination with single point sensor
- Superior chromatic confocal method
- Independent of measuring range and angle
- Suitable for round and non-round containers

issue	exhibition/conference	date	venue	insert
2016 1 Deadline Adv files: 29-01-2016	BAKU GLASS	1-2 March	BAKU Arzerbaijan	 OFFICIAL CATALOGUE
OFFICIAL CATALOGUE AS INSERT IN THIS ISSUE ▶▶▶				
2016 2 Deadline AD files: 7-03-2016	CHINA GLASS	11-14 April	SHANGHAI China	
CHINESE SUPPLIERS GUIDE / YELLOW PAGES RESERVED FOR ADVERTISERS OF THIS ISSUE ▶▶▶				
2016 3 Deadline Adv files: 4-04-2016	GLASSMAN MIDDLE EAST	10-11 May	ABU DHABI UAE	
2016 4 Deadline Adv files: 2-05-2016	MIR STEKLA	6-9 June	MOSCOW Russia	
RUSSIAN SUPPLIERS GUIDE / YELLOW PAGES RESERVED FOR ADVERTISERS OF THIS ISSUE ▶▶▶				
2016 2016 SUPPLIERS & GLASSWORKS COMPLETE PROFILES Deadline Adv files: 3-06-2016	 WORLD GLASS DIRECTORY		suppliers & glassworks	
2016 5 Deadline Adv files: 25-07-2016	GLASSTEC	20-23 Septemberr	DUSSELDORF Germany	
ALL GLASSTEC EXHIBITORS ADVERTISING IN THIS ISSUE ALSO RECEIVE A FREE GLASSTEC PREVIEW ▶▶▶				
2016 6 Deadline Adv files: 10-10-2016	CONFERENCE ON GLASS PROBLEMS	7-10 November	COLUMBUS (OH) USA	 OFFICIAL CATALOGUE
	HOLLOWGLASS ASIA	24-27 November	HO CHI MINH CITY Vietnam	
	CUBA GLASS	6-7 December	HAVANA Cuba	
OFFICIAL CATALOGUE AS INSERT IN THIS ISSUE ▶▶▶				



Handling technologies?
A matter of skill!

100% MADE IN ITALY

www.zecchetti.it



companies mentioned & advertisers index

...in this issue of **GMP&A**. Advertisers are indicated in **bold**

COMPANY NAME	PAGE NO.	COMPANY NAME	PAGE NO.	COMPANY NAME	PAGE NO.
ADI	68	Fonderie Valdelsane..	3, 88-93	Parkinson-Spencer Ref.	23
Ardagh Group	24	futronic	74, 88-93	Refractories Experience	
Ayrox	68	Generalmatic	20-21, 88-93	 Front Cover, 88-93	
Baku Glass	59-87	Gerresheimer	22	Ritsteklo	79, 88-93
Basturk Glass	16	Gimav	16	Saint-Gobain	22
BDF Industries.....	First Page,	glassonline.....	58	San Miguel	24
..... 27, 32-34, 88-93		Glass Service.....	74, 88-93	Saverglass	18
Bohemi Chemicals	69, 88-93	Glass South America.....	48	Schiatti	80
Borosil	13	glasstec	67	Schott.....	30-31
Bottero Hollow Glass...70, 88-93		Glasston	75	SDC.....	81
British Glass Confederation ...22		GMIC	38-39	Sigma	4, 88-93
Bucher Emhart Glass.....		GPD Baku	64-65	Softeco	82
..... 23, Back Cover, 88-93		GPS	55-57	Sorg Nikolaus.....	16
Buhler Leybold	71	Heye	7, 14, 88-93	Sparklike	82
BV Glas.....	26	Horn Glass Industries ...75,88-93		Stara Glass	83, 88-93
Bystronic	71	Iris Inspection Machines	12, 15, 76, 88-93	STD Glass.....	28-29
Car-Met	19, 72, 88-93	Istanbul Glass Expo.....	96	Teichmann, Henry F.	13,
Changshu Janhua Mould.....		Italcarrelli.....	76	 88-93	
.. Back Inside Cover, 72, 88-93		Kopp Glass	42-44	Tiama	26, 40-41
China Glass	35	Linn High Therm.....	19	TK	83
Colorobbia.....	73, 88-93	Lubisol.....	25, 88-93	Vidromecanica.....	
Corning Inc.	22	LWN Lufttechnik.....	77	 15, 17, 45-47, 88-93	
Cuba Glass.....	85	Mappi International.....	77	Vitrum.....	16
Emmeti-Sipac 2, 73, 81, 88-93		Neptun	78	Waltec.....	84,88-93
ESG European Society of Glass..12		Mir Stekla	54	Wiegand-Glas	13
Falorni Tech.....	49-53	OCMI-OTG Front Inside Cover,		XPAR Vision.....	16
Ferro Corporation.....	14	 36-37, 78, 88-93		Zecchetti.....	9, 88-93
Feve.....	17	Olivotto-Antas-Lynch-Lindner ..		Zignago Vetro	18
Fluorital	11, 88-93	 23, 79, 88-93		Zippe.....	84,88-93
		Owens Illinois (O-I)	16, 27		
		Piramal.....	15		

NEW FREE-OF-CHARGE WEB SERVICE:

Read our glass publications online, easy to navigate, with **INTERACTIVE SUPPORT**, slide shows, movies and more.

Available also for tablets and smartphones.



This issue is also available on:



www.glassOnline.com

LET THE COLORS OF YOUR MIND RUN FREE



We give color to your imagination

With more than **25 years of experience** in the research and production of organic paints and silk-screen inks for **glass decoration**,

Fluorital produces different types of spray paints, roller varnishes, and screen printing inks: water-base, UV-curable and solvent-based inks.

The application fields of its products include perfume and cosmetic packaging, wine and spirit bottles, tableware, flat glass for furniture and interiors, and lighting glass.

All products are lead and heavy metal free, and can be applied directly on glass, as they do not require any primer. All products are curable at **low temperature** or with UV lamps, enabling important energy savings compared with other products. The physical and mechanical resistance to the most severe tests required in the different market fields make Fluorital's products the top reference on the market. Fluorital **invests a lot in Research** and in its laboratories; beside the continuous update of more consolidated products, the research is oriented on developing new finishing and new products with even more efficient resistances and environmentally friendly characteristics.

Fluorital produces top quality products to give colour to your imagination.



Headquarter: Fluorital S.r.l.
Treviso - Italy - Ph.: +39.0422.919203
info@fluorital.com - www.fluorital.com
Worldwide: France - U.S.A. - Polska - Turkey



IRIS

ARTISTIC INSPIRATION FOR OPTICAL R&D ENGINEERING

To celebrate the company's 15th anniversary, as well as its installation of 1,000 *Evolution* camera-based inspection machines throughout the world, Lyon-based **IRIS Inspection machines** sponsored an exhibition by Indo-British sculptor Anish Kapoor, staged at the Dominican Convent of La Tourette on the outskirts of Lyon.

Anish Kapoor is one of the most influential contemporary artists of his generation, using different types of mirrors in sculptures that combine simple materials, geometric shapes and organic forms. Born in Mumbai, the Turner Prize winner has lived and worked in London since the early 1970s, when he moved there to study art, first at the Hornsey College of Art and later at the Chelsea School of Art and Design. Within his work, Anish Kapoor plays with light and optics, employing giant convex/concave lenses, magnifying effects, deforming mirrors and so on to create an array of optical effects.

Sainte Marie de La Tourette was designed by contemporary French architects Le Corbusier and Iannis Xenakis and was constructed between 1956 and 1960. The building makes extensive use of glass for its façades, providing variations in light that reflect perfectly on Anish Kapoor's sculptures.

The artist recently attended an inauguration of the exhibition together with IRIS CEO Jean Luc Logel, followed by a private viewing for all IRIS personnel

and their families.

The event provided a unique source of inspiration for the company's optical R&D engineering experts as they strive to help customers in their quest for improved production efficiency via the ongoing development of advanced non-contact glass container inspection equipment.

A subsidiary of the Wisetec Group, IRIS Inspection machines was established to provide turnkey inspection solutions for mass-produced glass containers of any shape or colour, including wine, beer, liquor and Champagne bottles, pharmaceuticals and food containers. A team of dedicated Research and Development engineers has evolved a range of equipment to match the industry's demanding requirements and satisfy the inspection needs of key international customers.

The company has based its development on a long-term partnership with glassmakers in the field of glass defects detection, as well as on an exceptional knowhow in the most innovative vision technologies. The success of IRIS is due not only to the exceptional efficiency of its *Evolution* machines range but also to the excellent support provided by engineers worldwide. Thanks to a network of international agents and technical support service centres, IRIS is able to support customers throughout Asia, Europe, the Americas, Africa and Australia.

ESG

GLASS - BACK TO THE FUTURE!

The Society of Glass Technology Centenary Conference & European Society of Glass Science and Technology 2016 Conference, including British Society Scientific Glassblowers will be held in Sheffield UK, 4-8 September 2016.

The conference will be a significant opportunity to review the state of glass in its widest manifesta-

tions - from the theoretical challenges of understanding the glassy state and the glass transition to the latest developments in the application of glasses in windows and containers, information technology, medical applications and waste vitrification, as well as the history and artistic applications of glass. "We are proud that the SGT100 meeting is also the

2016 European Society of Glass (ESG 2016) meeting - a meeting that traditionally has a strong industrial focus and thus we therefore look forward to a conference that brings people from all parts of the glass community together," said Professor Russell Hand, President of the Society of Glass Technology. Plenary and keynote talks, invited talks, contributed

papers and poster sessions will cover all aspects of glass science, technology, manufacture, engineering, art, archaeometry and heritage.

Topics will be addressed within five key themes:

- Fundamental Glass Science
- Applied Glass Science and Technology
- Glass Industry, Manufacture and Applications
- History, Heritage and Archaeometry of Glass
- Glass Art and Craft

WIEGAND-GLAS

ACQUISITION OF GLASWERK ERNSTTHAL

Germany's Wiegand-Glas group has acquired 100% of shares of Glaswerk Ernstthal GmbH and Glaswerk Ernstthal GmbH & Co. KG. Oliver Wiegand and Nikolaus Wiegand have been appointed as Managing Directors of all companies. Thomas Köhler will remain managing director of Glaswerk Ernstthal. The company's registered office will be moved from Wuppertal to Steinbach am Wald. Employment conditions for all employees at the Ernstthal, Neuhaus am Rennweg and Holzminden locations will remain unchanged.

Wiegand Glass said the takeover would secure its competitiveness in the glass containers market, which has consolidated rapidly in recent years. "By integrating Glaswerk Ernstthal into the Wiegand-Glas group, two complementary product and customer portfolios come together, thus considerably strengthening the position of Wiegand-Glas on the spirits and spirit miniatures market. An important strategic advantage of Wiegand-Glas has always been the use of the latest technologies and innovations. This will remain one of the key factors for the future success of the group," a company spokesperson said. The acquisition reaffirms the confidence of the group in glass as well as in the economic strength of the region and its workforce. The geographical proximity was an important consideration for the takeover.

BOROSIL

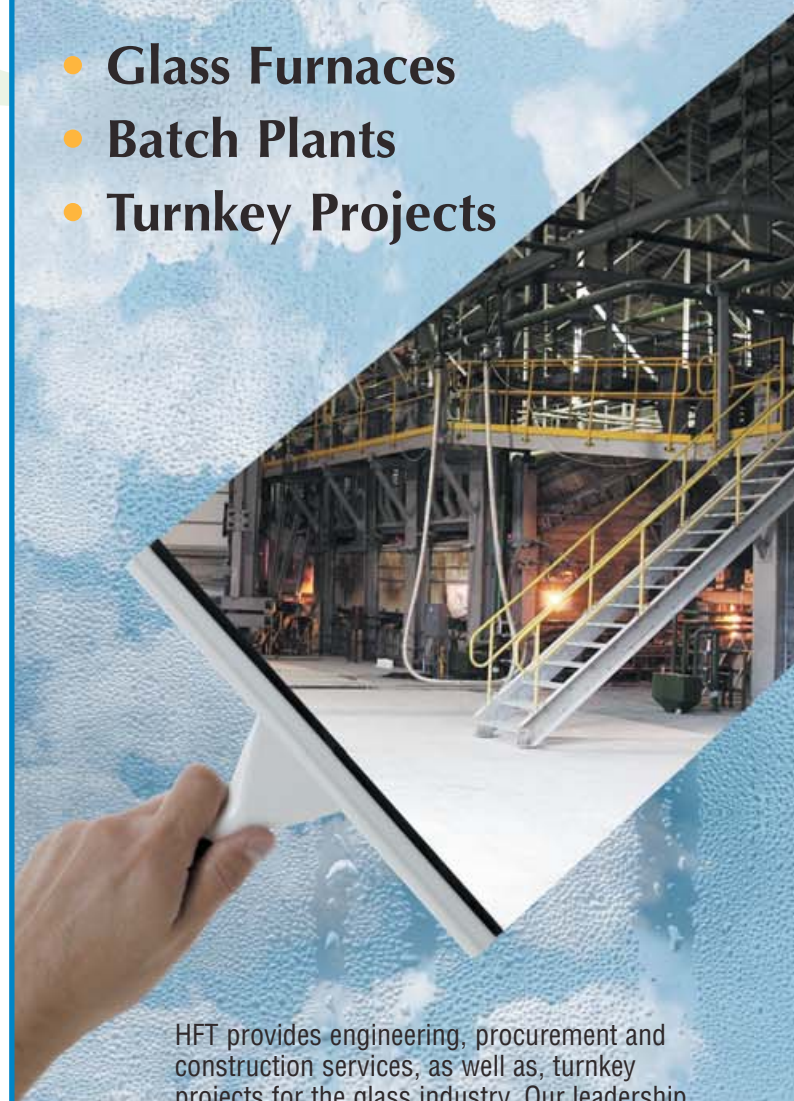
HOPEWELL TABLE- WARE ACQUISITION

Borosil Glass Works has approved its decision to acquire Jaipur-based Hopewell Tableware for a total Rs 27.03 crore. The company will acquire 100% shares of Hopewell and convert it into a wholly-owned subsidiary.

"As a part of the company's growth strategy, it has been decided to enter into the opal dinnerware business. There are many potential synergies for Borosil in this business," the company said in a BSE filing. At its meeting held on 14 January 2016, the Board of Directors of the company, has approved entering into a share purchase agreement, as per which the company is to inter-alia, acquire entire equity shares of Hopewell Tableware Pty Ltd, a closely held non-listed domestic private company. Borosil intends to invest Rs 10.89 crore into Hopewell Tableware.

We Didn't Make the Glass, We Made It Possible.

- Glass Furnaces
- Batch Plants
- Turnkey Projects



HFT provides engineering, procurement and construction services, as well as, turnkey projects for the glass industry. Our leadership, abilities and attention to details have given HFT a highly respected reputation worldwide.

Henry F. Teichmann, Inc.
Engineers and Contractors to the Glass Industry

3009 Washington Road
McMurray, PA 15317-3202, USA

Fax: +1 (724) 941-3479

www.hft.com

+1 (724) 941-9550

dchen@hft.com

cyoest@hft.com

FERRO

STRENGTHENING OF POSITION IN FAST-GROWING TURKEY MARKET

Ferro Corporation has announced that it has purchased 100% of the equity of privately held Istanbul-based Ferer Dis Ticaret Ve Kimyasallar Anonim Sirketi A.S. (Ferer) for approximately USD 9.0 million in cash, on a cash-free and debt-free basis, subject to working capital and other adjustments.

The transaction will be funded with excess cash and a draw on the company's revolving credit facility.

The acquisition of Ferer is the third step Ferro has taken in the past 18 months to strengthen its position in the fast-growing Turkey market. In July 2014, Ferro acquired assets of a reseller of Ferro porcelain enamel products in Turkey, providing a commercial base for direct marketing and sales opportunities. In November 2015, Ferro

completed the acquisition of Egypt-based tile coatings manufacturer Al Salomi for Frit and Glazes, adding production capacity to meet current and future demand in Turkey as well as other markets in the Middle East and North Africa. Now, the Ferer acquisition brings Ferro an operational presence in Turkey focused on the glass market.

Ferer is a distributor in Turkey of Ferro colour and glass coating products and also provides customized, blended products and technical support primarily for the glass industry. Ferer's primary focus is on servicing manufacturers of automotive, flat and container glasses as well as non-tile ceramic applications, including dinnerware, stoneware and porcelain. Ferer also distributes pigments into the paint

and plastics industries. Among other activities, Ferer provides local operational capabilities to produce and distribute customized paste and powder products from intermediates supplied by Ferro. Ferer recently opened a new blending, mixing and pasting plant that is expected to significantly expand production and distribution capabilities.

Ferro estimates that in 2016 the acquisition will generate incremental sales of approximately USD 3 million and incremental adjusted EBITDA of approximately USD 2.0 million.

Commenting on the transaction, Peter Thomas, Chairman, President and CEO of Ferro Corporation, said, "The acquisition of Ferer advances our strategy to invest in

higher-growth opportunities and to expand sales in this fast-growing region. The acquisition adds to our existing presence in Turkey and enables us to serve our customers more directly and effectively. The new Ferer plant expands our capabilities to produce customized products and colour solutions and will serve as a platform to build a broader marketing and customer support infrastructure."

Thomas concluded, "The Ferer management team have been valued partners of Ferro over the past 17 years. They have built a company that is well known and respected in the glass market in Turkey. We look forward to working with the Ferer team to build on that foundation and to accelerate our growth in the region."

US COLD-END SERVICE PARTNER

Heye International has appointed Gen-In LLC as its exclusive service partner for cold-end products in the US. Gen-In LLC offers a range of cold-end inspection solutions and services for the container glass industry specialising in upgrades and retrofits to existing inspection equipment. With more than 60 years' experience in the container glass, food and beverage industry, the company supports Heye with supervision, installation, commissioning and training for machines commissioned in North America. It also visits customers to perform maintenance routines and repairs. Heye International's HiShield cold-end solutions deliver advanced hardware and software for hollow glass quality control.

This includes two versions of the company's SmartLine on-line inspection equipment (Match and Speed), the HiShield Plant Management System for process monitoring and information integration between the hot and cold ends of the glassworks, Heye quality control software for the statistical quality control of containers and retrofit solutions for many existing inspection machines.



IRIS

LATEST GENERATION INSPECTION EQUIPMENT FOR PIRAMAL

Piramal Glass has recently ordered the latest generation EVOLUTION camera-based inspection equipment for its Kosamba glassworks in Gujarat, India.

Manufactured by IRIS Inspection machines, the order comprises two EVOLUTION 12 and two EVOLUTION 5 machines for base and finish inspection, which will be used for the on-line inspection of pharmaceutical vials. Installation is scheduled for early 2016.

Piramal Glass has been successfully using EVOLUTION equipment for sidewall inspection for three years and is pleased with the operational results achieved, and so is purchasing further IRIS equipment. Area Sales Manager, Sonia Podleiszekova has been the face of IRIS Inspection machines in India since 2013, as well as representing the company's interests in North, Central and Eastern Europe, Russia and the CIS countries. Ms Podleiszekova confirmed that the latest generation EVOLUTION inspection technology sold to Piramal Glass features improved image resolution and display, as well as upgraded computers.

The EVOLUTION range now provides better performance than ever, thanks to its upgraded PC, bigger HD touch screen (21.5in), new HD cameras and innovative software. Within its specially designed processing unit, IRIS has reduced maintenance costs via the innovative design and assembly employed.

The high resolution cameras are 400% more powerful, providing sharper and more accurate images, as well as improved discrimination between different types of defects (e.g. small stones and blisters), better definition of container shapes and excellent dark glass inspection capabilities. They also feature higher dynamics in terms of noise interference, thereby improving image quality.



- Belt and spindles tempering lines • Annealing lehrs • Chemical tempering ovens • Hot-end coating • Mold pre-heating kilns • Stackers + cross conveyors • Scraper conveyors • Cullet crushers • Thermal shock test systems

Contact us: vidromecanica@vidromecanica.com

www.vidromecanica.com

O-I MEXICO DEEPENS PARTNERSHIP WITH XPAR VISION SYSTEMS

The cooperation began four years ago, when director Juan Farias from FAMA, plant manager Eduardo Servin from Vitro Queretaro and Michael Podgorski from XPAR Vision agreed to install IR-D systems at the Queretaro glass plant. The partnership grew towards new technologies such as the Gob Assist and Blank Temperature Control module and resulted in extending the Hot End inspection and monitoring capacity, by installing five additional GA and BTC systems: three at the O-I Queretaro plant and two at the O-I Monterrey plant, including two IR-D systems. This year, four more GA/BTC systems will be installed at the O-I Queretaro plant, under leadership from the plant manager Jose Gonzalez. O-I Mexico manufactures glass containers for food and beverages at its five plants in Mexico and employs about 4,700 people.

BASTÜRK GLASS SELECTS SORG

SORG

SORG is honored to have been selected as the furnace supplier by Bastürk glass for their greenfield project in Turkey. Bastürk, a new player to the glass industry is building a site in Malatya in the Eastern Province of Turkey. The new factory will go into operation at the beginning of 2017 and will produce 300 tons per day of glass containers. SORG wants to thank Y & H Foreign Trade Limited for their assistance in securing this prestigious order and Bastürk Glass for placing their trust in us.



GIMAV AND VITRUM

DIRECTOR STEPS DOWN AFTER THREE DECADES

Mrs. Renata Gaffo has retired from her role as director of GIMAV and Vitrum after 30 years as a leader of Italian Industry. She announced the decision at the end of December 2015 in an open 'goodbye letter'.

"I did invest a lot of time and passion into the world I am leaving, and I will miss it, which is only natural," she wrote. "Nonetheless, I can say that the wealth of love, personal and professional gratification I take with me makes me far richer than all the companies that travelled along my path, and built their own success." Laura Biason, who was deputy director, has taken over as director for both GIMAV and the Vitrum trade show, effective 1 January 2016. Mrs Gaffo commenced her journey in 1984 when she was hired by the Federation of Industrial Associations to oversee participation in expositions and international events. She soon became director of both the GIMAV association and Vitrum. Her first Vitrum event was in 1985 at Fiera Milano Meccanica Pavilion - where she says the show occupied just 7,000 square meters. The expo was then held in Lacchiarella for ten years, growing to 16,000 square-meters. It returned to Milan and was held at the Portello Fairgrounds before permanently moving in 2007 to the Rho Fairgrounds, where it reached a record 31,560 net square meters in size. "Impressive growth, we said, which is also proof of the hard work and innovative approach the Italian glass industry managed to gain over time, and the presti-

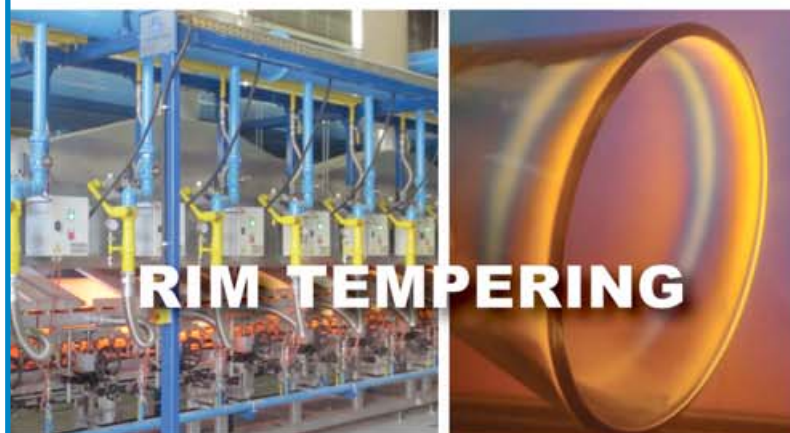
ge it rightfully earned by it," Mrs Gaffo said. It made a formidable contribution to the worldwide image of 'Made in Italy.' "The brilliant result I am most proud of is the relationship inspired by mutual esteem and trust that developed over the years between GIMAV's members and numerous collaborators." She says she looks forward to observing a 'brand new chapter' of the association and trade show, "knowing that the joint story of Gimav and Vitrum will continue to delight both those directly involved and those who will follow it from the outside, like me. Ms Biason particularly contributed to the success of the most recent edition of Vitrum, one of the top-ranked global events that last year drew 18,450 visitors, 50% of whom from abroad, attracting attention in the world of glass for the four days of the event.

"We will continue to partner with the other organizations in our industry, following the guidelines mapped out by Vitrum President Dino Zandonella Necca and by Gimav President Cinzia Schiatti, consistent with what has been done to date," said Ms Biason. "We already have many future projects in the works, proof of the vitality of this Italian industry that manages to achieve state-of-the-art qualitative and technological advances acknowledged around the world. We are wholly committed to providing the best business and development opportunities to Gimav members and to all the businesses that will take part in the forthcoming editions of Vitrum."

FEVE

EUROPEAN CONTAINER GLASS INDUSTRY WELCOMES CIRCULAR ECONOMY PACKAGE

The European Container Glass industry welcomed the long awaited European Commission's package, which paves the way for a real EU Circular Economy. The new recycling targets for glass packaging are ambitious but the industry is ready to take on the challenge with the right support in a level-playing field for all materials. Glass holds a special place in the EU Circular Economy. It is a permanent material that is 100% and endlessly recycled without any degradation of its intrinsic properties, as long as it is separately collected and treated. According to the latest statistics, 73% of all post-consumer glass packaging in the EU is collected for recycling. "Our industry is engaged in a real circular business model! We endlessly recycle glass bottles to produce new ones since 40 years, and by doing so we reduce environmental impacts, we create jobs, we reduce costs and grow our businesses. It is encouraging that the closed loop now becomes the model for the whole EU economy," said Vitaliano Torno, President of FEVE, the European Container Glass Federation. "The proposed recycling targets for glass packaging are challenging especially for those countries where a lot still needs to be done; more investment will be needed to develop glass recycling infrastructures." Closed loop production systems must be at the heart of the future EU circular economy. A strong partnership between the manufacturing industry and other important partners of the value chain such as national and local authorities, waste processors, EPR schemes and consumers, will be essential to ensure a successful transition. Public and private investments should be channelled to reduce waste, improve separate collection systems (i.e. bottle banks for glass) and foster research into the use of technology as well as behavioural science to engage the end-consumer. "As there is almost 30% of glass that is not yet collected in the EU, our goal is to get this precious resource back in the bottle-to-bottle loop. With the help of national and EU authorities, collectors and processors, our ambition is to increase the quantities of good quality glass collected so that we can make our production system even more environment friendly," said Vitaliano Torno. The European Container Glass industry looks forward to an open debate with policy makers on how to best achieve ambitious recycling targets and guarantee that the EU economy becomes more circular and more competitive.



- Annealing lehrs • Decorating Lehrs • Hot&Cold-end coating
- Mold pre-heating kilns • Stackers • Scraper conveyors
- Cullet crushers • Thermal shock test systems

SAVERGLASS**CARLYLE AND ASTORG IN TALKS ON ACQUISITION**

Global alternative asset manager, The Carlyle Group has entered into exclusive discussions with Astorg to acquire a majority controlling stake in high-end glass packaging manufacturer Saverglass, alongside the Management. Headquartered in Feuquières (Oise, France), Saverglass designs, manufactures and decorates premium glass packaging for high-end Wines and Spirits. Saverglass operates six glass and decoration facilities in France and one in United Arab Emirates (UAE). It employs approximately 2,600 people across the globe. Founded in France in 1897, Saverglass has successfully expanded its footprint globally and sells 400,000 tons of glass per year in more than 80 countries. Saverglass' savoir-faire, inherited from a long-standing tradition of glassmaking, combined with its innovative design and decoration capabilities is widely recognised across the industry. It positions Saverglass as a partner of choice for premium Wine and Spirits companies. Loïc Quentin de Gromard, CEO, Saverglass, said: "The exciting and promising partnership envisaged with Carlyle would take place at the end of a challenging period in the Wine and Spirit industry. Saverglass has embraced in the recent years several sizable investments such as the construction of a 100,000-ton glassworks in the UAE as well as a state-of-the-art decoration plant in Arques (Pas-de-Calais, France). Carlyle's global footprint and expertise will help us to sustain the international development of Saverglass."

Xavier Moreno, Chairman and Managing Partner of Astorg, commented: "Since 2011, we have led and financed a major step in Saverglass development, and investment in its production capacity, combined with an export driven fast growth in North America and Australia. We have benefited from the remarkable set of skills and dedication of all Saverglass employees and managers. We thank them for the performance achieved. They deserve the credit for the 25 years of successes of this French world champion in high-end glass bottles for Wines and Spirits. No doubt that Saverglass, backed by its new shareholder, will keep its entrepreneurial spirit and growth momentum." Jonathan Zafrani, Managing Director, Carlyle Europe Partners, added: "We are particularly impressed by Saverglass' 25-year track-record and its unique position on the market, supported by its technological expertise, its creative abilities and its quality of service. We are delighted to partner with its management team, support the Group in its next phase of development and to help promote French luxury expertise throughout the world." Benjamin Deshayes, Director, Carlyle Europe Partners, added: "Saverlglass perfectly fits Carlyle's investment philosophy: the Group has attractive prospects based on the secular growth trends underpinning its markets and has developed a proven business model to meet the needs of its demanding premium customers."

ZIGNAGO**LEADING THE WAY IN STAFF BENEFITS**

Zignago Vetro, Portogruaro, north-east Italy, has signed new contracts for 380 employees.

The contract, valid until 31 December 2017, offers worker participation in the company's strategies and business plans, its corporate social responsibility, and includes a code of ethics for procurement downward, as well as for the retirement plans of workers when they reach 60 years of age. The agreement also includes provisions for health and safety in the workplace. Wages will be increased according to the parameters of viability and productivity. It is also planned to launch a corporate welfare program via a number of benefits such as financing services such as shopping, fuel, childcare, family health care, and more.

Zignago Vetro produces glass containers of high quality for various uses and in September the Group's consolidated revenues reached EUR 238.1 million, compared to EUR 226.5 million in the corresponding period last year (+ 5.1%).



LINN HIGH THERM

FURNACES AND KILNS

Linn High Therm, founded by Horst Linn in 1969, is a family owned business headquartered in Bavaria, Germany, specializes in the custom-made production of electrically heated furnaces and kilns. Varieties of standard products complete the production programme and are the basis for cost-efficient designs based on a modular construction system.

LHT principally uses three heating technologies, along with their combinations:

- Resistance heating
- Microwave heating
- Induction heating

LHT can look back on over 45 years of experience, flexibility driven, and never satisfied with past suc-

cess. Innovation and continuous improvement is the company's mission. Providing customers with the best applicable solution is LHT's goal. Over 90 registered patents are proof of this quest.

There are only a few companies of such qualification and production spectrum: R&D, design, production and quality control all under one roof – from prototype to pilot-scale systems in almost no time. Continuous investments in production facilities ensure extraordinary production depth, which is essential for in-time delivery of units as well as for keeping knowledge and know-how for critical parts.

Linn serves the following industries directly or via cooperation partners worldwide: metal, ceramics, chemicals, glass, building materials, research and development, medical, nuclear, recycling, education and food.

Linn products can be found everywhere heat treatment takes place – in all types of production.

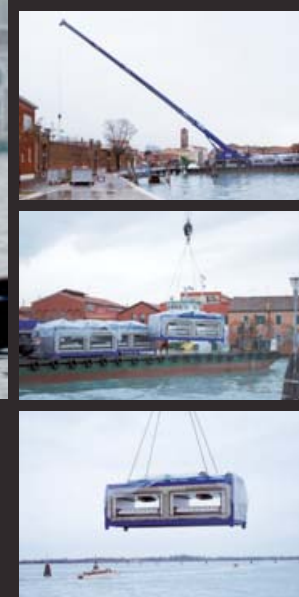
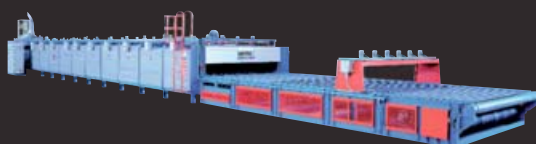
CREATIVITY TV

ITALIAN *detail*

The right answer to all your needs!

40 years of experience serving the glass industry

- annealing lehrs
- decorating lehrs
- toughening lines
- 2/3 axis servo stackers
- cross conveyors
- hot glass scrapers
- mould pre-heating ovens



Murano, february 2010
Annealing Lehrs' Unloading for Ferro Murano company.



made in Italy



www.carmetspa.it



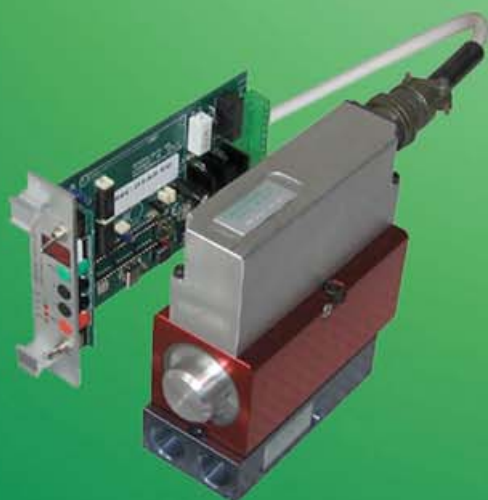
Generalmatic

S.R.L.

<http://www.generalmatic.com>



POPPET VALVES for GLASS INDUSTRIES



RPB DMT5 XHD4 DMT4 2RSG 2CBG 3SCG 1RSG AMG



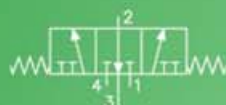
DIRECT SOLENOID OPERATED
3/2 NC - G1/4"
-35°C to +120°C - 180NL/min



SOLENOID AND AIR PILOT OPERATED
3/2 NC NO - G1/2" - VACUUM OPT
-35°C to 160°C - 5000NL/min



SOLENOID AND AIR PILOT OPERATED
5/2 - G1/2" - G3/4" - ISO 3
-35°C to 160°C - 5300NL/min



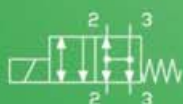
SOLENOID AND AIR PILOT OPERATED
4/3 - G3/4" - VACUUM OPT
Hi Lo PRESSURE AND COUNTER BLOW
-35°C to 160°C - 8000NL/min



SOLENOID AND AIR PILOT OPERATED
3/2 NC NO - G3/4" - G1" - VACUUM OPT
-35°C to 160°C - 13000NL/min



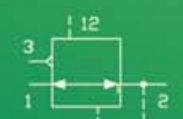
ELECTRONIC AND DIGITAL INPUT
G1/2" - DMT BUS ®
-25°C to 80°C - 2100NL/min



SOLENOID PILOT OPERATED
2/2 NO - G1/2" - DMT4 ENHANCEMENT
QUICK EXHAUST VALVE
-35°C to 120°C - 2400NL/min



ELECTRONIC AND DIGITAL INPUT
G3/4" - DMT BUS ®
-25°C to 80°C - 8000NL/min



KNOB AND AIR PILOT OPERATED
G3/4" - RELIEVING - TWIN PISTONS
-35°C to 160°C - 8000NL/min





SAINT-GOBAIN

CONSTRUCTION PRODUCTS ROMANIA CLOSES PLOIESTI PLANT

Saint-Gobain has halted glass mineral wool production at its Ploiesti-based plant for an undetermined period of time due to the impact of the financial crisis over the construction sector. Production is not expected to be resumed in the immediate future while 42 employees will be laid off, according to a recent company statement.

The economic crisis has affected sales and profitability and since – for the continuation of the production line in Romania additional investments of several million euro would have been required, investments which could not be supported by the financial results they would generate – stop-

ping activity at the plant was decided, according to company officials.

The company aims to support the redundant employees through severance payments, retraining orientation sessions and specialized courses with certification and psychological support. Saint-Gobain will continue to produce basaltic mineral wool on its second line of production in Ploiesti, with a total of 86 employees in the departments of production, trade, logistics, finance and human resources.

To ensure the necessary volumes of cotton fiberglass market in Romania, the company will import such products from other Isovex factories in the region.

ACQUISITION OF GERRESHEIMER'S PHARMACEUTICAL GLASS TUBING BUSINESS FINALIZED

Corning Incorporated has announced that it has completed its acquisition of Gerresheimer AG's pharmaceutical glass tubing business and has formed an equity venture with Gerresheimer to accelerate Corning innovations in the pharmaceutical packaging market. With operations in Vineland, New Jersey and Pisa, Italy, the acquisition positions Corning as a leading worldwide supplier of glass pharmaceutical tubing. Corning and Gerresheimer have also entered into a 10-year supply agreement for borosilicate tubing. Concurrent with the acquisition, the equity venture will commence operations. "We are pleased to complete these transactions, which create a strong, long-term relationship with Gerresheimer, an established market leader, said Eric S. Musser, executive vice president, Corning Technologies & International. "We anticipate a number of synergies with our global glass operations and existing Life Sciences business." "We think this is a tremendous opportunity to expand in a growing market with evolving needs for glass, remarked Wendell P. Weeks, chairman, chief executive officer and president. We are applying our unparalleled glass science capability and precision-forming platform to solve difficult challenges related to pharmaceutical glass, and to create value for our long-time pharmaceutical and bio-tech customers. Leveraging multiple capabilities where we are already a leader characterizes the strategic and capital allocation framework that we recently shared with investors."

BRITISH GLASS MANUFACTURERS' CONFEDERATION

NEW PRESIDENT

Davia Walmsley, Creative Director at Daedalian Glass, has been voted in as President of the British Glass Manufacturers' Confederation. The appointment was effective from 1 January 2015 for two years, and will see Davia work closely with the team at British Glass to promote glass as a material in all its forms and applications, raising the profile of the industry. Davia is the driving force behind Daedalian as co-director and creative head of the business. Educated at Hornsey College of Art in ceramics and glass, Davia moved around the UK, building her skills and knowledge in glass art, until settling on the Fylde Coast in Lancashire and founding Daedalian Glass Design with her husband, Chris. Davia has continued to expand her repertoire of glass design skills, travelling the world to learn new techniques and styles in Germany, Switzerland, Italy and America. Dave Dalton, CEO of British Glass, said: "We are delighted that Davia will be our President for the forthcoming two years. "With a wealth of experience working in the glass industry and a passion for inspiring the next generation to join the sector, she has much to offer as our President."

The first female President of British Glass in its 100 year history, Davia is also keen to support the organisation's Women in Manufacturing initiative, which aims to attract, support and retain women into roles in manufacturing across all job roles and levels.

BUCHER EMHART GLASS AND PSR

RENEWAL OF REFRACTORY LICENCE AGREEMENT

Halifax-based Parkinson-Spencer Refractories Ltd. (PSR) has been the UK licensee of Bucher Emhart Glass for the manufacture of Emhart designed feeder expendable refractories since 1970.

This licence gave access to the original Bucher Emhart Glass refractory drawings and manufacturing tolerances and was originally one of four worldwide refractory manufacturing licences operated by Bucher Emhart Glass. Following a recent review of refractory licensee operations, Bucher Emhart Glass decided that such relationships no longer suit the current market situation and with the exception of PSR's licence, all other licensee arrangements were terminated at the end of 2015.

David Parkinson, Managing Director of PSR said: "I am delighted that Bucher Emhart Glass has decided to continue our licensee arrangement. It is a relationship that PSR has enjoyed for the past 45 years and is one that has benefitted both ourselves and the Bucher Emhart Glass refractory manufacturing plant in Owensville Missouri by means of mutual cooperation and exchange of ideas in this specialised area of refractory manufacture. Under the new arrangement, PSR will have access to all the latest Bucher Emhart designed feeder expendable parts including the type 585 high capacity metering spout refractory parts."

OLIVOTTO GLASS TECHNOLOGIES GROUP**OGGT****THE GLOBAL PARTNER****olivotto****ANTS****LYNCH****LINDNER**

Avigliana • Viale Gandhi, 22 • 10051 Avigliana (TO) • Italia
Tel. +39 011 9343511 • Fax +39 011 9343593

Caronno P.la • P.zza S. Pertini, 75 • 21042 Caronno P.la (VA) • Italia • Tel. +39 02 96190611 • Fax +39 02 96190636

Worldwide • Istanbul - Turkey • Bainbridge - USA

www.olivotto.it

ARDAGH GROUP

NEW GBP 15M FURNACE AT AYRSHIRE PLANT

Glassmaker Ardagh Group has opened a new GBP 15 million flint furnace at its bottle plant in Irvine, Ayrshire, Scotland. Ardagh secured GBP 499,575 in grant funding from the Scottish Enterprise Aid for Environmental Protection Scheme as part of the overall investment. Ardagh Group said the Scottish Enterprise investment secures the future of the skilled 225 strong workforce at the Irvine plant, which produces bottles primarily for the Scottish drinks industry.

The principal objective of the Aid for Environmental Protection Scheme is stated as to encourage investment in environmental protection measures by companies in Scotland to secure both long-term economic benefits to Scotland and help achieve Scotland's low carbon targets". Ardagh Group noted in 2013 its Ayrshire facility produced 310 million spirit bottles a year, ranging from 20cl to two litres. Its new P5 green furnace, along with new state-of-the-art inspection and manufacturing equipment, will allow the group to increase annual production to 330 million bottles a year whilst also reducing energy consumption and use of raw materials. The company said previously that furnace and equipment investment at the Irvine plant would reduce its annual CO2 emissions by approximately 2,400 tonnes a year, despite the increased output. The new facility was officially opened by First Minister Nicola Sturgeon MSP. Ardagh, which operates across 21 countries and generates annual revenue of approximately EUR 4.7 billion (GBP 3.36 billion), said its Irvine plant is now one of the most advanced and efficient bottle producers in Europe. Graeme Shepherd, Ardagh Group's director of operations for Glass in the UK, said "I am very pleased to welcome the First Minister to this important manufacturing centre in this, her home town, as well as the many colleagues, customers, suppliers and supporters, who have made it possible for our plant to continually thrive and provide such an important service to the drinks industry here in Scotland. "The Irvine plant is well regarded within the Ardagh Group for the quality of our output, the calibre of our management and workforce and the professionalism of our customer service, supported by on-going investment in technology and systems." First Minister Nicola Sturgeon said: "I am delighted to visit Ardagh to officially open its new furnace. This is evidence of the company's continued investment in its Irvine site, which is something to be commended."

SAN MIGUEL

RISE IN NET INCOME

San Miguel Corp. (SMC) reported higher profits in the January to September period of 2015. The company grew its consolidated net income by 7% to P26.8 billion in the first nine months of the year from P25 billion in the comparable 2014 period, according to a recent presentation to investors on its website. SMC's financial results did not include the effect of forex losses, which had weighed on the food and beverage giant's earnings in the first six months of the year. The company incurred forex losses amounting to P1.1 billion during that period, a turnaround from the gains recorded in the prior year. The company has yet to submit its financial statement to regulators. Net sales dropped 15% year-on-year to P504.5 billion at end-September from P593.5 billion, which SMC attributed to falling oil prices and a decline in generation volumes on the back of the scheduled maintenance shutdown of the Malampaya facilities as well as the Ilijan and Sual power plants. San Miguel Brewery, Inc.'s net profit grew 6% to P9.97 billion. Consolidated revenues rose 4% to P58.8 billion on strong domestic beer sales. San Miguel Pure Foods Co., Inc.'s net income climbed 7% to P2.92 billion with consolidated revenues rising 3% due to the solid performance of its branded value-added, feeds, and flour businesses. Ginebra San Miguel, Inc. posted a net profit of P9 million, a turnaround of the net loss of P281 million recorded the previous year, backed by an 8% rise in consolidated revenues to P11.5 billion. The growth in its glass business and strong contributions from its Australian operations also boosted San Miguel Yamamura Packaging Group's revenues by 5% to P18.2 billion. SMC Global Power Holdings Corp., its holding firm for energy ventures, registered a 10% drop in revenues to P58.997 billion from P65.52 billion. Petron Corp., the country's largest refiner and retailer, netted P5.1 billion, 58% higher than last year's P3.2 billion. Revenues fell 27% to P278.3 billion due to declining oil prices. Consolidated operating income jumped 23% to P58.1 billion in the first nine months on higher revenues from its infrastructure unit and core food, beverage and packaging businesses. San Miguel Holdings Corp., the holding firm for the group's investments in infrastructure, recorded a 17% rise in net sales to P10.95 billion from P9.36 billion following the consolidation of the Skyway 1 and 2, and the South Luzon Expressway in March.

LUBISOL

HERMETIC SEALING AND HOT REPAIR OF SILICA CROWNS



The research work of **Lubisol** was based on the principle, that the condensation corrosion in glass furnace silica crowns can be reduced or totally eliminated by hermetic sealing of the crown, thus preventing the movement and passing of hot flue gases through the crown joints. In this connection we have developed our special material – **Lubisol Si-Seal** kit, designed to be applied directly over the silica crown. The hermetic sealing kit Lubisol Si-Seal has unique properties: a long lasting durable bond with the silica crown brick up to 1620 °C and a coefficient of expansion equal with the one of the silica. The Si-Seal kit is usually applied in a layer of 30 mm over the whole surface of the new silica crowns for hermetic sealing and protection against rat-holes.

The hot repair is done only once and no new corrosion is taking place in the same area. No new repairs are needed during the next several years and the service life of the silica crown is significantly increased. Excellent results have been reported by a large number of clients making hot repairs on small and big rat-holes.

This is the best solution to the corrosion and rat-hole problems in glass furnace silica crowns. The Si-Seal kit proved also to be very suitable for sealing of expansion joints of silica crowns.

The special sealing and insulating materials offered by Lubisol have been applied with big success on more than 150 glass furnaces over the world.

Contact: Prof. S. Lyutskanov,
e-mail: office@lubisol.com, www.lubisol.com



Lubisol Si-Seal is a monolithic silica repair kit used for hermetic sealing and hot repair of glass furnace silica crowns.

- Strong and durable adhesive bond with silica refractories up to 1620 °C, and a coefficient of thermal expansion - very similar to the one of silica bricks.
- Very high corrosion resistance against the action of alkalis and other fluxes.
- Applied as a protection hermetic sealing layer during the heat-up of the furnace at 800 °C temperature, or after the heat-up of the glass furnace.
- Very suitable for hot application in the form of plastic balls to fill up the Rat-holes during a hot repair or the expansion joints of a silica crown after heat-up.



Lubisol Si-Seal is a heat setting composition, and it is converted into a hard body under the action of the heat of the silica crown.

THERMAL
LUBISOL
INSULATIONS

BV GLAS

CHANGE AT THE TOP

The Federal Association of the Glass Industry (Bundesverband Glasindustrie e.V.) has elected Dr Frank Heinrich, Chairman of the Board at Schott AG, as its new president. This means he will also take office as president for glasstec 2016. Presidency for this, the world's leading trade fair alternates in line with its two-year cycle of glasstec between the Bundesverband Glasindustrie e.V. (BV Glas) and the Federal Association of Glazier Trades (BIV). Both organisations

alongside the VDMA, the German Engineering Industry Federation (Verband Deutscher Maschinen- und Anlagenbauer e.V.), serve as conceptual sponsor of glasstec. glasstec 2016 is a must for professionals in mechanical engineering, industry, architecture, the trade sector and solar power. Its wide-ranging additional programme includes special shows and conferences, providing added value for all visitors. The main highlight of the trade fair

will be the special show 'glass technology live'. As before, it will be organized by Prof. Stefan Behling, a Senior Executive Partner at Fosters & Partners and his team from IBK 2 (Institute of Construction Design) at the University of Stuttgart. The show will feature spectacular exhibits, innovative products and pioneering solutions. This time the focus will be above all on free-form, ultra-thin and solid glass as well as on glass used for information purposes.

Again, participation in any of the trade-fair symposia will be free for visitors. Other special thematic areas will be the Crafts Centre with Craft LIVE, providing opportunities for a hands-on experience, the Glass and Façade Competence Centre as well as the Glass Art exhibition. glasstec 2016 will be held at the Düsseldorf Exhibition Centre from 20 to 23 September 2016. Information about the trade fair is available at www.glasstec-online.com.



TIAMA LEADS THE WAY IN NE ASIA HOLLOW GLASS QUALITY

Tiama leads the way in NE Asia hollow glass quality 2015 saw South-Korean small glass industry awaking and upgrading a large number of its old inspection equipment to the most advanced technology from TIAMA. A total of 7 new generation inspection machines, MCAL4 (for sidewall & dimensional control), MULTI4 (finish & base), MX4 (carousel machine) equipped with ATLAS (non-contact check detection), and ARGOS (Non-contact on line check detection in the finish) have been implemented last year in South-Korea showing very strong appreciation from a market highly focusing on Quality for its pharmaceutical and food industry. Taiwan, a very competitive market oriented toward export to APEC countries, has also been evolving during the last 3-4 years to become one of the most advanced in Asia. Today, it represents the second market in the region after mainland China to use the TIAMA's new generation of inspection machines, already more than 20 units of the new generation MCAL4/MULTI4/MX4 with ATLAS are in operation in Taiwan. TIAMA advanced check detection ATLAS system is already well appreciated with the 7th ATLAS unit put into operation by the end of 2015. Nevertheless China, the biggest glass market in the region is the most demanding in technology for its high level industry. Already ordered for beginning of 2016, TIAMA will deliver more than 14 inspection machines, MCAL4, MULTI4 and MX4 equipped with ATLAS. By the first semester of 2016, TIAMA will have more than 31 ATLAS systems in operation throughout China, Taiwan and South Korea, the most progressive countries in the Asian region.



O-I

CHIEF STRATEGY AND INTEGRATION OFFICER NAMED

Owens-Illinois (O-I) has appointed John Haudrich as Senior Vice President and Chief Strategy and Integration Officer. Until a new Chief Financial Officer is announced, Haudrich will continue in the role of Acting CFO. Haudrich is a member of O-I's Global Leadership Team and will report to CEO-elect Andres Lopez. The newly-created role of Chief Strategy and Integration Officer will be responsible for developing O-I's strategy, executing key enterprise-wide activities and leading the global supply chain organization. Areas of focus include increasing value through greater operational stability, driving sustainable performance improvements, and enabling longer-term breakthroughs to advance the company's position in the marketplace.

"The integrated business approach we are developing is at the heart of creating a performance-improvement culture that will deliver increased efficiency, enhanced flexibility and improved execution," said Lopez. "John has done an excellent job as Acting CFO and is uniquely skilled to lead this strategy and integration work. I am confident he will continue to deliver incredible value to our company."

Haudrich has held the role of Vice President and Acting CFO since April 2015. Prior to that, he led the Global Finance operations for O-I's four business segments and the Corporate Finance team. He joined O-I in March 2009 as Vice President of Investor Relations, was named Vice President of Finance in 2010, and Vice President of Finance and Corporate Controller in 2011.

CHIEF FINANCIAL OFFICER

Owens-Illinois appointed Jan Bertsch as Senior Vice President and Chief Financial Officer, at the end of November 2015. In addition to assuming responsibility for the company's financial function, Bertsch will lead O-I's Information Technology organization. She will report to CEO-elect Andres Lopez. Most recently, Bertsch served as Executive Vice President and Chief Financial Officer for Sigma-Aldrich, a USD 2.8 billion life science and technology company. Sigma-Aldrich was recently acquired by Merck KGaA. Prior to joining Sigma-Aldrich in 2012, Bertsch was Vice President, Controller and Principal Accounting Officer at BorgWarner. She also spent nearly 30 years at Chrysler LLC and Ford Motor Company in various roles of increasing responsibility in Finance, Treasury and Information Technology. She also serves on the BWX Technologies, Inc. Board of Directors. "Having served as a senior financial leader in several global manufacturing companies, Jan brings a great wealth of experience to O-I. She is a CFO with a solid track record of operational and cost improvement, value creation and asset optimization," said Lopez. "Her impressive credentials, combined with her leadership style and approach will strengthen our Global Leadership Team and makes her an ideal fit for our organization." Jan succeeds John Haudrich, who had served as Acting CFO since April 2015 and was recently named Senior Vice President and Chief Strategy and Integration Officer. "I look forward to joining the O-I team and having an opportunity to leverage my prior experience facing many similar challenges and opportunities to make a positive difference for the company," said Bertsch.

BDF ANNOUNCE NEW FURNACE IN NIGERIA

BDF and GZI achieve furnace rebuild in record time. This is a great world record from Africa, rebuilding a Furnace with full modifications, new IS lines and new automation control systems for melting and forming equipment, in 34 days and Glass to Glass 49 days. Within 48 hours plant operation had reached 90% packed efficiency in Green glass, with lines ready to run with Light Weight Blow-Blow production. This result has been achieved thanks to the full cooperation between the BDF team and the Glass Plant management team, and with the cooperation and assistance of Mr. Agarwal Jagdish (COO of GZI Glass operation).

STD Glass

LEADING IN THE DOMESTIC MARKET; EXPANDING TO INTERNATIONAL MARKETS



This article gives us an overview of one of Azerbaijan's leading container glass manufacturers, founded in 2000 to produce glass containers for the food and beverage industry.

STD Glass is a division of STD Group (Santexdetal Ltd.) established by Sarkhan Huseynov in 2000, which started to produce glass containers for the food and beverage industry under the trademark STD.

STD GLASS is located in Sumgait – the second industrial city of Azerbaijan – which is about 30 kilometres from Baku. The company is staffed by engineers, technologist, marketing



managers, who have studied abroad, along with highly skilled local operators able to solve and overcome each and every kind of difficulty related to the use of glass forming machines.

COMPANY PRODUCTION

STD Glass manufactures all kinds of glass bottles and jars needed by the domestic Azerbaijan market. STD Glass manufactures at affordable prices and this economic approach enables its customers to have the desired products with the highest quality. Moreover, STD Glass offers fundamental services, such as:

1. production and delivery of standard jars and bottles;
2. design, production and delivery of exclusive jars and bottles;
3. deliver of original moulds directly to customers.

The company manufactures transparent glass containers which are used in the food and beverage industry for multi-purposes, with volume ranges of 100-3000ml.

Additionally, STD Glass produces glass bottles for beverage industries such as milk, mineral water, soft drinks, beer, wine and beverages, including the spirits sectors with volume ranges of 200-1000ml.

At present, STD Glass manufactures glass containers for the biggest nutrition brands of

Azerbaijan, such as, Slavyanka (Azerbaijan mineral water), Falken (Germany beer) etc.

EXPANDING

Now one of the leading glass companies of Azerbaijan, STD Glass is planning to expand and launch its services in the neighbour country Georgia.

STD Glass plant consists of the following areas:

1. raw material preparation area
2. glass melting area
3. manufacturing area
4. quality control

5. packaging area
6. finished product warehouse
7. auxiliary equipment and tools area ■



STD GROUP
(STD GLASS DIVISION)

Samad Vurghun Str. 20D
AZ 5000 Sumgait, Azerbaijan
Email: r.huseynov@stdgroup-az.com
www.stdgroup-az.com

STD GROUP COMPANY HISTORY

- 1997 Foundation under name "SANTEXDETAL LTD" by Dipl.-Ing. Sarkhan Huseynov who had 20 years experience in HVAC industry
- 1999 Projecting aspiration systems for wood processing factories, manufacturing and installing required shaving separators
- 2000 Foundation glass industry (STD GLASS) and starting design and manufacturing of glass containers for food industry under trade mark "STD"
- 2000 STD HVAC and STD Glass united and continued their framework as STD Group
- 2001 As being the only and first local company started to design, produce and mounting Jet-Pulse dust control bag systems for furniture industry under trade mark "STD HVAC"
- 2003 Applied CAD 2D software programs in projecting and desinging works
- 2008 Related the increased HVAC projecting works foundation "Sanaye Ventilyasiya" LTD reproduction company
- 2009 Application SolidWorks and Autocad MEP for designing HVAC systems and products
- 2013 The establishment and operation of a modern automated production line at the company GLASS STD release
- 2013 Application 3D CAD (Unigraphics NX8) design software systems in designing of glass container products (jars and bottles)
- 2016 Promotion of Dr.-Ing. Rafiq Huseynov to technical director of the STD Group after graduating his PHD study at the TU Bergakademie Freiberg (Germany)

DIVERSIFIED USES

ecoduna's world-
patented vertical
photobioreactor
constructed with
glass tubes from
SCHOTT AG at
ecoduna's plant

SCHOTT

IMPROVING ALGAE PRODUCTION FOR ECODUNA WITH GLASS COMPONENTS

Photo: ecoduna

International
technology group
SCHOTT and
ecoduna, an Austria-
based commercial
technology and
algae producer,
have teamed up
to maximize algae
production efficiency
while cutting expenses
by using glass tubing

ALGAE PRODUCTION

A ecoduna produces and harvests different algae such as chlorella or spirulina, blue-green algae used for dietary supplements and animal feeds, in vertical photobioreactors and previously changed its production technology from plastic panels to SCHOTT 65mm glass tubes. Glass tubes, in fact, require less cleaning and downtime while generating the same biomass output. After switching to glass tubing at its Austrian plant in June, ecoduna's photobioreactors ran continuously for months, simultaneously increasing output and reducing operating costs.

Algae manufacturers are increasingly replacing plastic with glass in their photobioreactor components, favouring glass' cleanability, strength and clarity – important parameters that affect output and cost for large scale algae production. Moreover, the material's longevity is one of its key advantages: ecoduna says it scheduled replacing of plastic plates every 10 years, but the 50-year lifespan of glass tubing makes a full system replacement far less common.

GLASS INSTEAD OF PLASTIC

ecoduna's world-patented vertical photobioreactors, which eliminate pumps and where CO₂ and nutrients are introduced continuously at the bottom, are highly efficient and guarantee maximum purity. However, biofilms accumulate on the walls of the plastic panels that require frequent cleaning, leading to regular shutting down of the production systems. Because SCHOTT's high quality, round DURAN® glass tubing has a smooth inner surface, biofilm formation is strongly reduced and are on the brink of self-cleaning, which extends production to a near-continuous process. The cleanliness of the glass allows the system to run on a continuous industrial scale, making cultivation possible 365 days of the year.

"Bacteria are algae's enemies, and the scratches that are common on the inside of plastic tubing after many cleaning cycles make the perfect breeding ground for those enemies. The robustness of SCHOTT's glass tubing makes the photobioreactor strong without the risks of contamination," said Johann Mörwald, CEO at ecoduna. "Using glass tubing has proven to be a smart investment that pares operating expenses and practically eliminates replacement costs."

ecoduna plans to use glass tubing at its new production facility in Austria, and in a facility that it runs with a partner in Denmark.

"As commercial algae producers work to improve biomass yields and harvests, it's clear that the hardware in photobioreactors plays a critical role in algae growth," said Dr. Niko Schultz, PBR Designer at SCHOTT Research and Development. "Glass tubing has proven effective in both horizontal and vertical photobioreactors, and its robustness and cleanliness extend the lifespan of these systems by mul-

tiples factors. Our work with ecoduna will continue as together we find ways to improve system efficiencies, enhance algae growth, and increase biomass yields."

ABOUT SCHOTT

SCHOTT is a leading international technology group in the areas of specialty glass and glass-ceramics. The company has more than 130 years of outstanding development, materials, and technology expertise and offers a broad portfolio of high-quality products and intelligent solutions. SCHOTT is an innovative enabler for many industries, including the home appliance, pharmaceutical, electronics, optics, automotive, and aviation industries. SCHOTT strives to play an important part in everyone's life and is committed to innovation and sustainable success. The group maintains a global presence with production sites and sales offices in 35 countries. With its workforce of approximately 15,400 employees, sales of USD 2.55 billion were generated in fiscal year 2013/2014.

ABOUT ECODUNA

ecoduna is the global technology leader in the construction of algaculture systems. The company's worldwide-patented process enables continuous, industrial-scale production of biomass with the greatest possible conservation of resources and the environment. ecoduna specializes in the research, development and operation of efficient systems for the cultivation of micro-organisms on an industrial scale.

SCHOTT
glass made of ideas

555 Taxter Road
Elmsford,
NY 10523, USA

SCHOTT NORTH AMERICA

Tel.: +1-914-8312200 - Fax: +1-914-8312201
E-mail: info@us.schott.com

www.us.schott.com

BDF saving the environment while maintaining market competitiveness

Responding to market demands no longer means just supplying machinery to increase productivity and quality. Today's machinery and equipment manufacturers now need to bear in mind the ever more stringent rules and regulations imposed the world over to reduce emissions and carbon footprints of glassworks. BDF is doing this and in this article the company gives us an idea of how it can assist its customers in reaching their goals.



Glass manufacturing industries from all around the world have to face a series of challenges to maintain their financial gains. Now more than ever the laws are aimed at protecting the environment in terms of emissions, carbon footprint and recycling. The glass industry is already deeply involved in recycling waste for and from the world but has a lack of innovation to enhance its carbon footprint throughout energy saving and energy recovery.

It has also to be considered that not every country is promot-

ing changes in the glass industry with the aim of protecting the environment.

However, things are slowly changing and world's governments are becoming more responsive to this matter by introducing new environmental laws and lowering the emission values in the near future.

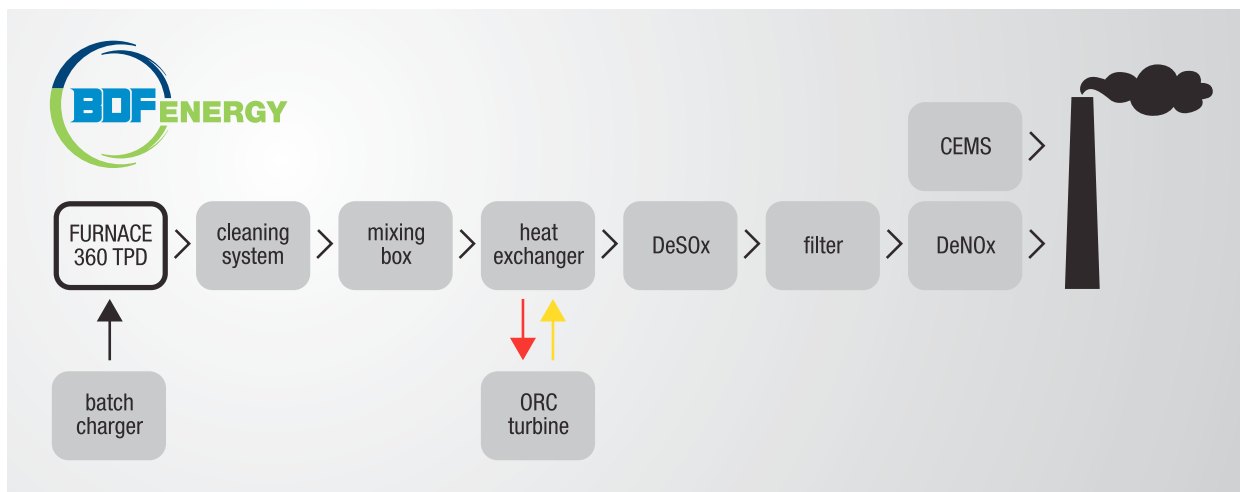
Analyzing these new challenges, BDF's Energy Division has focused its mission on helping glass manufacturing plants to maintain their competitiveness on the market while, at the same time, complying with environmental law-restrictions by means of environmental friendly technologies.

With the introduction of this type of equipment, important environmental targets can be achieved, not only by adding

costs to the plant, as happens, for instance, with simple filtration systems, but also introducing economical advantages.

GLASS MANUFACTURING PLANT EQUIPMENT

Nowadays, because of emission restrictions, especially in Europe and US, almost every plant is obliged to install DeSOx systems, dust filters, DeNOx systems and Emissions Monitoring System. BDF Energy portfolio includes all equipment needed such as hydrated lime injection, ceramic candles/fabric bag filter, Selective Catalytic and Non Catalytic Reduction, and CEMS. All systems can be easily integrated in the plant controls by BDF Automation Division for fast and easy management of all the equipments.



This could be a pure cost or, with BDF solutions, switched to an investment aimed at obtaining a payback and also future revenues. Melting furnace waste gases are full of enthalpy that is still spread into the atmosphere. For instance, the production of electricity is one of the fully tested solutions proposed by BDF. This kind of application enables to obtain financial gains thanks to electricity production while saving because there is no longer the need for heat abatement systems upstream to the filtration units.

A common belief is that energy recovery plants are not so applicable to glass manufacturing industries, because of the nature and the quantity of the dust contained in the waste gasses, which generate serious fouling to the heat exchangers and valves. BDF Energy has, in response, developed an innovative system to protect and keep efficient the sensible parts of the recovery plant with acceptable maintenance costs.

Simple, but useful and innovative systems are installed to remove dust deposits on moving parts such as valves, dampers, and promote the dust deposit in chosen spots. Such results are obtained with tested automatic compressed air cleaning systems that have shown very high cleaning efficiency, mini-

mizing maintenance operations. In addition, appropriate equipment is installed on the waste gases ductworks to increase the dust deposit in precise spots that are easy to clean and to empty. BDF has realized and started up the first complex plants in this sector.

Regarding the furnace itself, many parameters are involved regarding the efficiency of the melting process that can be set to obtain the best energy saving working conditions. It is already known that doghouse and connection with batch charger is one of the thermal weak point of the furnace; BDF batch charger has been studied, designed and produced to be able to save the maximum possible energy by means of the possibility to adjust and control a large set of operations.

BDF 360 TPD REGENERATIVE FURNACES

If we consider a 360 TPD furnace it is possible to quantify and estimate the economical advantages obtained from the insertion of the two above mentioned BDF Products.

Considering an electricity cost of 0.1 EUR/kWh and a CH₄ cost of 0.30 EUR/m³, the total savings will be about EUR 610,000.00 per year. Said amount does not take into consideration all the benefits that the Energy Recovery

plant generates, such as less false air, no need of a heat abatement system, etc.

Additionally, local incentives should be considered, i.e. for a furnace as mentioned above, the present Italian incentives may generate a EUR 100,000.00 per year of white certificates and carbon credits.

Obviously, design and manufacture of these systems are focused on very long lifetimes and electricity production is only one of the many possibility to convert waste gasses.

With considerable experience and deep knowledge on environmental laws, economical incentives, energy benefits, each and every glass plant could not only enhance its carbon footprint, but could also achieve some important economical benefits. ■

BDF INDUSTRIES SPA

Viale dell'Industria 40
36100 Vicenza (VI) - Italy
Tel: +39 - 0444 - 286100
Fax: +39 - 0444 - 286299
E-mail: bdf@bdf.it
www.bdf.it



CHINA GLASS 2016

27th China International Glass Industrial Technical Exhibition

Shanghai New International Expo Centre

April 11-14, 2016

Organizer: The Chinese Ceramic Society

Sponsor: Shanghai Ceramic Society

Tel: + 86-10-57811261, 57811409

Fax: + 86-10-57811262

www.chinaglass-expo.com

E-mail: ceramsoc@163.com



WeChat ID: CHINAGLASSEXPO

TECHNICAL GLASS PRODUCTION



Ocmi Group

TOP-LEVEL TECHNOLOGY

Thanks to the continuous collaboration and activities with its partner, OCMI has been able to exploit the synergies with MT Forni to supply complete turnkey plants for specialized glass items such as glass insulators and glass bricks. In this article we take a look at how the two companies work together to provide glassworks with top-of-the-range machinery and services.

OCMI GROUP started its activities in the field of production machinery for technical glass production in 1997, together with its partner MT Forni Industriali, an Italian company specialized in the development and supply of glass melting furnaces, annealing and decorating lehrs for diverse types of glass items and volumes. The synergy between the skills of these

two companies enabled them to supply complete turnkey factories for the manufacture of two high-tech products: glass insulators for high tension airlines and glass bricks used for architectural purposes. The turnkey plants supplied, examples of highly prestigious achievements, have been created for business leaders in Italy, Algeria, Iran and China. Lines installed for these types of production go from 30 to 60 tons

per day of pulled glass, since only high production levels can justify such important investments.

GLASS INSULATORS

Machinery for the production of glass insulators has been installed in countries with a high level of availability of raw materials and where the governments decided to be the main investors of these electrification processes. Due to the very delicate function of the items to

be manufactured, this type of production needs maximum attention for each and every detail, starting from the quality of raw materials, percentage of each component in the glass composition, glass temperature in every point of the processing line up to storage method used and time needed. This is the reason why the production process does not terminate with the packing of the products, and, in fact, sophisticated control machines and tests are required before including the item in the final supply. Furthermore, manufacturing is not limited to glass processing, but also includes the preparation, control and assembling of cement caps and pins needed to realize the insulator chains for high tension airlines. For these reasons, OCMI and MT Forni's scope of supply covers a wide range of machinery and, more specifically, the following processes:

For glass shell production:

1. Melting of a batch of suitable composition
2. Forming by means of a special press
3. Temperature homogenising
4. Toughening
5. Thermal, mechanical and dimensional tests.

For insulator assembly and controls:

1. Assembly with cement and metal fittings
2. Routine thermal, mechanical and dimensional tests

For insulator qualification:

1. Type tests and sample tests in accordance with International Standards.

The production line can be purposely developed according to various volumes of glass tons pulled from the melting furnace.

The pressing machines supplied by OCMI perform the forming of glass shells, and can be adapted for the production of the different shapes of suspension-type insulators: standard, fog-type, open profile. The shape is given to the glass gob by means

of a multiple rotating plunger with integrated cooling system.

The thermal treatment performed using a homogenising tunnel, toughening machine, two annealing lehrs and water bath, enables to give the finished insulator the requested characteristics of mechanical resistance. This is a really critical passage in this workflow since the insulator will be exposed to all types of environmental conditions and, despite that, it must keep its intrinsic characteristics. Temperature changes are purposely applied according to the level of thermo-mechanical resistance requested for the items. Regarding post-production operations, OCMI and MT Forni are able to supply the needed know-how or equipment for the development of assembly departments and test laboratories.

GLASS BRICKS

On the other hand, glass bricks do not require such complex thermal treatment and testing operations, but in this case too, the complete workflow involves several steps. First and foremost, glass bricks are produced in two halves using an OCMI pressing machine of 10 or 12 stations, working with hydraulic or pneumatic pressing mechanism. The take-out of the press machine unloads the semi-finished bricks on a conveyor going to the next working phase: hot welding. The welding process is carried out by means of the pre-heating and melting of edges of each half-brick and the consequent coupling of the two parts. OCMI can upgrade traditional glass blocks forming lines in order to double capacity with two presses feeding the welding machine. This type of solution makes the new OCMI "high capacity" glass blocks line much more profitable in terms of both investment and operation costs. This double configuration can achieve a daily production of 25,000 finished glass bricks. After



final cooling, the finished items are unloaded and transferred to the last annealing process using anthropomorphic robots purposely programmed by OCMI specialists. On customers' requests, a painting machine for the colouring of the sides of the glass bricks can be supplied. OCMI manufacturing lines for glass insulators and glass bricks are developed with great attention to details with the primary purpose of maximising efficiency. These arrangements are made possible thanks to skilled glass experts from OCMI and MT Forni with specific knowledge in products with high technical content. For both production lines, OCMI offers maximum technical assistance since, particularly in the first weeks, the support of glass experts and engineers is an absolute priority to ensure and stabilize machine running and final quality. ■

ocmi
a Division of OCMI-OTG

AMIG
a Trademark of MT Forni & OCMI-OTG

OCMI OTG SPA

Via Venezia Giulia 7
20157 Milano (MI) - Italy
Tel.: +39-02-3909181
Fax: +39-02-3570944
E-mail: info@ocmigroup.com
www.ocmigroup.com

M * T F
Forni Industriali
Eurovetromeccanica

Via Pialoi 104
30020 Marcon (VE) - Italy
Tel: +39 - 041 - 4569356
Fax: +39 - 041 - 4567002
E-mail: info@mtforni.com
www.mtforni.com

OVER 135 PAGES

THE GLASS MANUFACTURING INDUSTRY COUNCIL GLASS MANUFACTURING INDUSTRY REPORT

A detailed and comprehensive reference source for intelligence on the glass manufacturing industry produced by the Glass Manufacturing Industry Council

Comprehensive Data – Industry Contacts – Emissions Regulations

INDUSTRY DATA

Contained in the report are vital metrics broken out by glass manufacturing segments, Flat Glass, Container Glass, Specialty Glass, Fiberglass - Glass Wool, and Fiberglass - Glass Fiber Reinforced Plastics/Polymers (GFRP)

- Production volumes
 - Sales volumes
 - Market share by segment
 - Market share by region
 - Capital expenditures
 - Production facilities
 - Employment
 - Energy usage and cost
 - Recycling analysis
 - Competitive industries comparative analysis
 - Operating ratios and other relevant financial and industry benchmarks
 - Historical trends
 - Industry predictions
 - Major manufacturing company profiles
 - Inventory turnover
 - Plant utilization
 - Research & development
 - Value added
 - Detailed charts and tables
- and many other relevant metrics...

SPECIAL SECTION ON EMISSIONS REGULATIONS

A detailed and comprehensive survey of emissions regulations relevant to glass manufacturing in North America and Europe, along with recommended best available techniques

CONTACT LISTS

- US glass manufacturer list
- US glass factory list
- Supplier lists - alphabetical and by category

ORDER THIS VALUABLE RESOURCE TODAY

Download Order Form at **www.GMIC.org**



save the date

November 7-10, 2016

Greater Columbus Convention Center
Hilton Columbus Downtown

glassproblemsconference.org

77th Conference on Glass Problems

where glass manufacturers & suppliers meet

GPC is the largest glass manufacturing event in North America, attracting global manufacturers and suppliers to exchange innovations and solutions.

Mark your calendar for the 77th GPC—the premier glass manufacturing conference. Hear the latest advancements in glass melting; refractories; process control, sensors and modeling; energy management; raw materials, batching and recycling; and more from topic leaders.

Brush up on skills with exclusive glass manufacturing short courses taught by industry experts or take part in day-long technical symposia on emerging topics. Network with suppliers during dedicated exhibit hours and social events. Registration opens in June, 2016.

Showcase your company during the 77th GPC. Contact Mona Thiel at mthiel@ceramics.org to reserve your daytime exhibit or evening hospitality space today. Space is running out!

Organized by:



Alfred University

Endorsed by:



COMPANY UPDATE

1963

S G C C

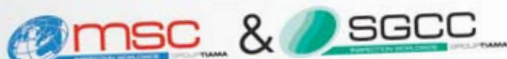


MSC



SGCC / MSC: two different key market players.

2008

Together in **tiamo**

Every machine adopts the Tiamo yellow color code.

2011



Although the official company name is « MSC & SGCC », this logo enables a stronger visual TIAMA branding.

1st of December 2015Official company name: TIAMA
Website: www.tiamo.com

New emails: @tiamo.com

Eg. contact John SMITH becomes j.smith@tiamo.com

Identification numbers remain the same.

ANY QUESTIONS? marketing@tiamo.com

TIAMA

change in corporate name

On 1 December 2015, TIAMA - msc & sgcc changed its company name definitely to TIAMA. This evolution has been undergoing preparation for several years now.

TIAMA is the combination of two major players of the hollow glass inspection market with truly similar paths and half a century of experience: msc & sgcc. In 2008, both companies joined forces under the umbrella of the TIAMA group. In 2011, all the external communication and more generally the corporate identity started carrying the double branding TIAMA – msc & sgcc.

This new corporate name responds to a will for identity simplification and brand strengthening.

The visual brand is now just TIAMA, consequently the company changes its email addresses from @msc-sgcc.com to @tiamo.com. Both of these email structures will allow you to reach all of your TIAMA contacts during our transition period.

No revolution though, TIAMA legal status and identification numbers do not change, “neither our vision & strategy, nor people” adds Ursula Baudry, the marketing & communication manager.

When we speak about company developments we usually speak about machinery, people and growth. TIAMA is, on the other hand, providing us with information on how the company has worked and prepared operations to reach an important evolution – the change of company name from TIAMA msc & sgcc to TIAMA. We also speak to Benoit BURIN DES ROZIERES/ TIAMA Sales & Marketing Director to have an overview of the company, products and people.

Today, TIAMA remains a global provider offering a one-stop-shopping that covers five product ranges:

1. IT intelligence tools for real-time analysis and management of plant performances: Tiamo IQ range
2. Process monitoring solutions: I-Care (Hot imaging), the new range: Tiamo HOT systems (HOT mass, HOT move, HOT lab...)
3. Glass article quality control: vision and carousel technologies such as MCAL4, MULTI4 and MX4
4. Traceability solutions: laser code engraving and readers
5. Complete range of service activities: customer local support, multilingual on-line

spare-parts catalogues, tooling, repairs and refurbishment.

SPEAKING TO BENOIT BURIN DES ROZIERES - TIAMA SALES & MARKETING DIRECTOR

How would you describe the philosophy of your company?

Benoit Burin Des Roziers: TIAMA is a global provider of real-time process and quality controls.

Our philosophy lies in providing real-time recommendations and technical data to help our customers to deliver products with the required quality and to improve the pack-to-melt ratio.

The combination of our expertise, innovative approach and reliability, allows TIAMA to offer individual solutions that go way beyond the normal scope of inspection. As a worldwide supplier and market leader in high precision monitoring systems our reputation lies in minimizing any margins of error. This illustrates the kind of benchmark we set ourselves and we won't settle for less.

We have clearly made it our objective to help improve process and productivity.

We noticed how TIAMA prefers to think about the future, what are the company's future projects and strategies – products, marketing?

The strategy of TIAMA relies on four pillars:

- Keep our worldwide leadership in the Cold End;
- Be the world leader in supplying the Hot End Systems;
- Use 1 & 2 to develop IT intelligent tools to make the Glass process more statistical, in order to gain productivity;
- Focus on servicing our customers in real time.

Of course you have clients worldwide but in this moment is there any market more interesting

than others? Which, if any, are the new markets you would like to work with?

We would like to keep this confidential.

How much important is R&D for TIAMA? Is there any future project you would like to talk about? If yes, what made you decide to develop it? What effect will this/these new projects have on the market?

Our R&D represents more than 90 people out of 250 employees.

It is the main department with the after sales department (60 people) and also the most critical one. R&D plays a major role as we strongly believe that it is the only way to survive.

The customers of our customers are more and more demanding in terms of quality and customization, and we have to support our own customers in that sense.

What is the current turnover of TIAMA, have you seen growth in these last years? What about personnel numbers? What are your forecasts for the future?

We evolve in CAPEX driven industry and in an industry that is very cyclical. Therefore we have a turnover that varies from EUR 80 to 100 million. Our product ranges the Tiamo HOT systems and Tiamo INTELLIGENCE tools are already helping to develop one step further this turnover. ■



TIAMA

Za Des Plattes
1 Chemin Des Plattes
69390 Vourles - France
Tel: +33 - 4 - 37201565
Fax: +33 - 4 - 78079450
E-mail: marketing@tiamas.com

www.tiamas.com

GLASS VERSUS PLASTIC



Choosing the right material to use for lighting is not always easy, and there are a series of important aspects to consider. This article gives us some ideas to bear in mind, along with a series of different aspects and environments.

Justine Galbraith KOPP GLASS

KOPP
GLASS

the clear choice - how to choose the best transparent material

There are many transparent materials out there for you to consider when designing a lens for a lighting application. Take a look at the image above; these different transparent materials all look fairly similar don't they? You may be asking yourself "What makes glasses and plastics so different? Which material is right for my lens?" To answer these questions, you need to look not only at the material properties

but also consider everything from your lens' operating environment, the transmission requirements of your application, to the durability needs and expected lifetime of your part.

To help make your selection a little bit easier, in this article we compare some of the mechanical, optical, and thermal properties of three common transparent materials - borosilicate glass, polycarbonate, and optical silicone - and

discuss how they may perform in different environments.

The table above contains generalized properties that are representative of common borosilicate glass, polycarbonate, or optical silicone materials. Keep in mind that properties will vary depending on the specific type and composition of the material that you select, and can often be tailored to meet the requirements of your application. In this article, we'll discuss this generalized data, but in the near future, we will publish several detailed comparative studies that examine specific material compositions.

MECHANICAL PROPERTY
COMPARISON

In harsh, demanding environments, lenses and other compo-

nents are subject to mechanical stresses that demand material with high strength, rigidity, and durability. Borosilicate glasses and polycarbonates are both strong materials. They can both withstand above 60MPa of tensile pressure before failing; while optical silicone fails at lower pressures of around 10MPa. The rigidity of the three materials, indicated by their Young's or Elastic Modulus, is varied. Glass is a rigid, elastic material, which means that it will not deform out of shape permanently in application, even when loaded with stress or pressure; however, under severe conditions, it can fail through instant crack propagation and subsequent shattering. Polycarbonate has a smaller elastic modulus than glass, but it is still fairly rigid, while optical silicone is comparatively more flexible. Both polycarbonate and optical silicone, unlike glass, are plastic materials that can undergo permanent deformation when overloaded. After that point, both materials will fail, with polycarbonate fracturing and silicone tearing.

In an application, transparent material will often need to withstand mechanically or chemically abrasive conditions with minimal surface degradation or transmission loss. Borosilicate glass can withstand mechanical and chemical abrasion while maintaining high levels of light transmission. Uncoated polycarbonate and optical silicone are less resistant to mechanical abrasion, and these polymers have varying levels of chemical resistance. For instance, they can withstand environments including water, humidity, and various alcohols, but they will degrade in many chemicals such as oils, hydrocarbons, and ketones. It's important to check the chemical compatibility of the material with its operating environment at the beginning of the design phase.

THERMAL PROPERTY COMPARISON

It is often necessary to consider thermal properties when choosing a transparent material for your application. For example, if your lens design incorporates a variety of materials, such as coatings, adhesives, sealants, or metal fixtures, you might need to take into account the different coefficients of thermal expansion (CTE). Borosilicate glass, polycarbonate, and optical silicone have differing thermal expansions. Glass expands the least, with a CTE of $43\text{E-}7/^{\circ}\text{C}$, while silicone has the largest CTE of $2750\text{E-}7/^{\circ}\text{C}$, which means it will expand much more with temperature changes. You need to be careful not to mismatch materials of significantly different CTE's, because the differences, when heating or cooling, can induce stress and potential breakage in your lens.

You will also need to know the operating temperature range for your lens. Borosilicate glass can maintain its shape and optical properties over a large temperature range, surviving temperatures above 400°C . Polycarbonate begins to degrade at 145°C while some silicones can be used at temperatures above 200°C . Heating a material above its recommended maximum operating temperature can negatively affect your application in a number of ways. First, the material can soften and slump, which reduces the effectiveness of lens prisms and other optical design features.

Exposure to excess heat can also discolor many plastics, including polycarbonate and silicone. This results in a yellow appearance and a reduction in the transmission of the lens. Be aware of the thermal limits of each material you are considering - and the application's operating temperature - before making a final selection.

OPTICAL PROPERTY COMPARISON

When you are choosing between transparent materials, you typically have a specific optical performance in mind for your lens, which could include a targeted chromaticity or minimum transmission requirement. In many respects, the three materials considered here are optically similar. Borosilicate glasses, polycarbonates, and optical silicones all exhibit excellent light transmission throughout the visible region. When designed for optimal optical output, the internal transmittance can be near unity and the external transmission values are typically above 90 per cent with any loss being caused by surface reflections. Additionally, specific colorants can be added to each material to adjust the light output and to produce a wide chromaticity range.

The difference between the materials becomes apparent in the ultraviolet region. Polycarbonate is a poor UV-transmitter, with low transmission in the UV-A range (315-400 nm) and no transmission at UV-B (280-315 nm) or UV-C (100-280 nm) wavelengths. Optical silicone transmits well in the UV-A and UV-B regions but has more limited transmission in the UV-C region and can even degrade with UV-C exposure. Borosilicate glass compositions can be designed to either transmit UV light (as far down as UV-C) or to absorb the UV light at targeted cut-off wavelengths, depending on the application.

The optical properties of polymers and glasses can degrade with prolonged UV exposure, especially in the UV-C region. You're probably familiar with car headlight lenses yellowing over time; in addition to this visual change, transmission is also decreased. UV-C light can be damaging not only to polymeric and glass materials, but to people. In general

lighting and some medical phototherapy applications, you may need to use a material that will absorb UV light at specific wavelengths. In contrast, some applications, like UV curing, require high UV-C transmission.

The optical performance of a material can also be affected by abrasion and heat exposure, as discussed in the previous sections. It can be critical, then, to choose a material with good optical, thermal, and mechanical stability to prolong the operating lifetime of a lens in a harsh environment.

A LOOK AT DIFFERENT ENVIRONMENTS AND APPLICATIONS

In the paragraph below, we describe several examples that demonstrate how these materials are commonly used. This is by no means a definitive guide to what materials you should use but serves to illustrate how some materials may be better suited for specific applications.

Borosilicate glasses are the preferred material used in aerospace lighting applications such as aircraft wingtips or runway lighting, because of their ability to withstand impact and abrasion with minimal degradation. They can be moulded into Fresnel lenses for spotlights that direct light and withstand the high temperatures of the bulbs without deforming. And moulded optics made from UV transmitting borosilicate glasses can improve UV light distribution and working distance for industrial curing applications. Polycarbonates are commonly used for automotive headlights. Their low weight, low cost, and high transmission in the visible light region make them ideal for this high volume application. Silicones are often used for secondary optics with LED lighting applications. For example, a moulded silicone lens can be used in street lighting both to seal the LED circuit board against mois-

		Borosilicate Glass	Polycarbonate	Silicone
Thermal Properties	CTE (1E-7/°C)	43	650	2750
	Maximum operating temperature (°C)	480	145	200
Optical Properties	Index of Refraction (nD)	1.49	1.58	1.41
	Transmission range	UV-C to near-IR	UV-A to near-IR	UV-C to near-IR
Mechanical Properties	Abrasion resistance	High	Medium	Medium
	Density (g/cm ³)	2.3	1.2	1.5
	Tensile strength (MPa)	60	65	11
	Young's modulus (GPa)	64	2	0.002



ture and to direct the output of the light.

GENERAL GUIDELINES FOR SELECTING THE BEST TRANSPARENT MATERIAL

When it comes to transparent materials, there is no one-size-fits-all solution. Every lighting fixture has its own set of requirements and operating environment that will influence your selection. It is important to understand the temperature range, light output, and durability requirements for your optical lens. Once you know these operating conditions, you can choose a material that will best meet your performance needs.

When selecting a material, you should:

- **Identify:** Outline the operating parameters for your light fixture.
- **Prioritize:** List properties from most important to least important.
- **Analyze:** Be aware of the advantages and limitations of each material.
- **Communicate:** Work with a manufacturer as early as possible. They will be able to help you select a material that meets your performance requirements while assisting you in optimizing your design for manufacturing, thus reducing costs.

Having a better under-

standing of the properties of different transparent materials, including their advantages and limitations, will help you find the right fit for your application.

For about glass, read our three-part series that discusses the thermal, optical, and physical properties of glass. These articles will help you gain a better understanding of the relationship between these properties and their impact on product design.

ABOUT THE AUTHOR - JUSTINE GALBRAITH

Justine recently joined Kopp Glass after spending almost a decade researching glass. She obtained her Ph.D. in Physics at Dalhousie University in Halifax, NS, where her work focused on the relationship between glass composition and photoelastic properties. As a Glass Engineer, Justine applies her lab research to large-scale glass production challenges. She designs and improves glass compositions to increase manufacturability and quality. Her passion for glass and light drives her to develop new compositions that push the boundaries of technical glass manufacturing. ■

KOPP GLASS INC.



2108 Palmer St.
Pittsburgh, Pa 15218 - USA
Tel.: +1 - 412 - 2710190
Fax: +1 - 412 - 2714103
E-mail: sales@koppglass.com
www.koppglass.com

Vidromecanica

PRODUCING THE MOST LONG-LASTING GLASSWARE

Rim tempering

Vidromecanica started manufacturing at its own facilities in 1984. Today, the company's team of engineers with experience in glass equipment manufacturing develop different types of equipment such as: annealing and decorating lehrs, tempering lines, chemical tempering, mould pre-heating kilns, stackers and cross-conveyors, cullet recycling equipment such as cullet crushers and scraper conveyors. Vidromecanica has sold over 1,000 machines for the glass industry to 55+ countries and +110 glass plants.

RIM TEMPERING

Rim Tempering produces some of the most durable glassware in the industry. The Rim Tempering process created by Vidromecanica performs only on the upper portion of the glass, such as tumblers and stemware, increasing its resistance to mechanical and thermal shock. These two big factors affect glassware performance in foodservice operations.

Rim Tempering can be carried out after the articles have been formed on the press machine or blown machine, and after being

Experienced engineers, development of different types of equipment for hollow glass manufacturing, more than 1,000 machines sold to over 55 countries. These are just some of the facts and figures of Vidromecanica. In this article, the company speaks about its Rim Tempering process, which gives glass items resistance and strength.

Rim tempered Glass

RIM TEMPERING

annealed or decorated. For this reason, after the heat treatment of the rim process, the glass articles have both performances of annealed in the body and toughened at the rim.

Vidromecanica's Rim Tempering treatment is a heating process with quick cooling, which strengthens the glass only on the upper third of the glass item, putting less stress on the glass if we compare with complete glass tempering. The end edge of glass – the rim – is more resistant, has longer life and the glass articles will have added value for customers.

It is not so easy to carry out complete tempering on some stemware and blown glass articles due to their shape and the small thickness, which is not enough to have good full tempering. Rim tempering is a great and economical option to increase the resistance of glass, increase durability and safety in the upper part of the glass items where they have more probability of breakage.

The heating process raises the rim and the upper portion of the tumbler uniformly to a temperature near the softening point (680°C) through a localized application of a flame for heating and then cooling the glass quickly in a controlled manner near the strain point (450°C) through the application of jets of cooling air, to set the desired degree of compression stress.

The duration and intensity of the heating and cooling effects produce stresses in the glass on both surfaces.

The photos on these pages show the level of the strains analyzed by polariscope, located in the Rim Tempered zone of glass articles. Vidromecanica has, together with its partner, developed a new machine capable of achieving high quality glass, annealed in the body and toughened at the rim. This can be done

with perfect equilibrium of tensions in the transition zone.

Vidromecanica's Research Department collaborates constantly with its customers in order to provide equipment with the maximum efficiency to meet customers' needs. Energy saving criteria are always present in order to manufacture articles with minimum costs and maximum quality.

Rim Tempering equipment

The equipment consists of:

- 1) The heating zone, comprised of specially designed burners to heat the rim of the articles during their transport on spindles. The burners have been developed by Vidromecanica to allow heating of the articles using radiation, reducing power consumption to a minimum. The tuning and adjustment of the burners is easy to do.
- 2) A tempering rotating head, especially designed for this purpose, takes advantage of the displacement between articles to perform blowing of compressed air on the inner and outer side of the articles. The air blow is directed to the articles in an intelligent way, with variable flow and pressure according to the desired tempering quality. The tempering head developed by Vidromecanica allows the injection of compressed air.
- 3) A cooling zone with blowing boxes at the sides provides further cooling of the article after the tempering, using cooling air from a fan.
- 4) The transport of the articles is performed on spindles that rotate continuously along its displacement on the heating zone as well as on the tempering and cooling zone. The chain and spindles method was developed by Vidromecanica and is based on all of its expe-

Annealed versus Rim Tempered Tumblers



rience and knowledge on the chain used in its Spindles Tempering Lines.

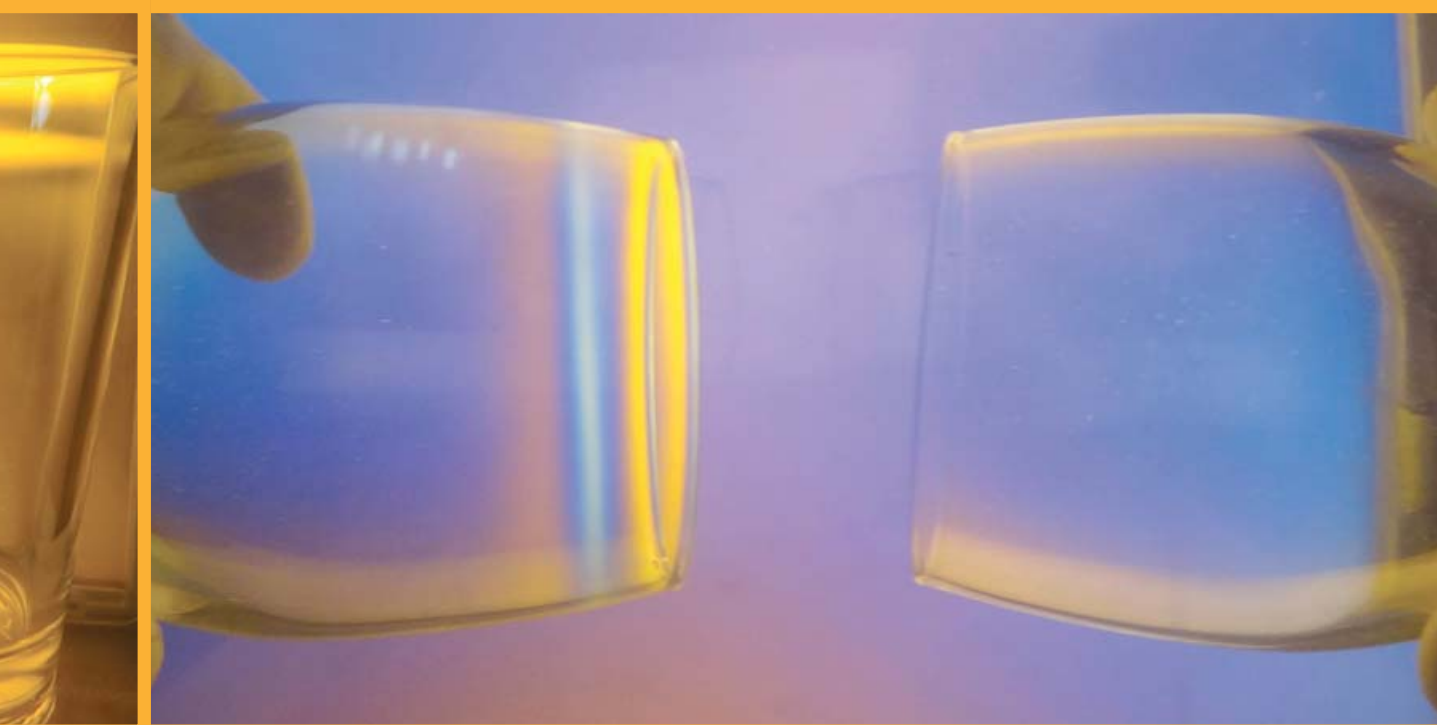
- 5) The articles can be loaded manually or automatically using loaders and unloaders with synchronized movements that enable to position the articles on the spindles without productivity losses.

The machine is designed to perform production rates of about 40 to 60 articles per minute, with high performance and high quality tempering at the lower cost.

FULLY TEMPERED



EXTRA RESISTANT



Annealed versus Rim Tempered Stemware

SPINDLES - FULL TEMPERING OR RIM TEMPERING

Tableware tempering manufacturers sometimes have difficulty choosing between one type of equipment or the other. It is better for glass manufacturers to have both types of equipment according to the market requirements.

For thinner and less uniform articles with more difficult geometry, in which full tempering quality is impossible or difficult to obtain, Rim Tempering is the superb solution with the most affordable cost.

For articles with higher thickness that require a high level of mechanical strength and thermal shock, Full Tempering is the solution. Full Tempering results in articles at a higher price when compared with Rim Tempering.

The fragmentation of a Rim Tempered article will have higher dimensions of glass pieces when compared with a Full Tempered article. In this case, fragmenta-

tion will be of small pieces of glass. All these advantages and disadvantages must be analyzed in order to choose the most interesting solution for glass manufacturers.

Vidromecanica is and has been a leader in the technology of tempering of tableware glass thanks to over 30 years in this field of technology, and with vast experience in the manufacture of both types of heat treatment. With diverse types of equipment operating at major glass manufacturers, the company can help customers choose the most interesting solution to adapt, providing samples of both processes to the clients.

GLASSMECHANICS

Glassmechanics is a company of the group, which is now responsible for the export of equipment manufactured by Vidromecanica, with dedication, research and development that involves testing and experimenting of a wide range of technical solutions to meet customer needs - top performance machin-

ery able to run 24 hours per day on long-term production.

Company mission is to develop, manufacture and supply equipment for the glass industry, with par excellence technology and quality, thus contributing in increasing the productivity of customers.

Vidromecanica is engaged in the research and development of innovative technical solutions aimed at simplifying the use of equipment, reducing energy consumption and increasing their longevity. ■



VIDROMECHANICA, LDA.

Rua Central 22, Garcia
2430-017 Marinha Grande - Portugal
Tel: +351 - 244 - 555060
Fax: +351 - 244 - 552410
E-mail: vidromecanica@vidromecanica.com
www.vidromecanica.com

12th Edition

TECHNOLOGY, DESIGN
AND INNOVATION
AWAIT FOR YOU

GLASS

SOUTH AMERICA technology
& design

JUNE, 2016

08th – 11th

June 08th - 10th - 12pm to 7pm

June 11th - 10am to 7pm

Transamerica Expo Center
São Paulo - SP / Brazil

Book your space
now and amplify
your participation in
the plain glass market.

glass@nm-brasil.com.br

Phone: +55 11 3205-5027

Co-located Event:



R+T SOUTH AMERICA

International Trade Fair
for Roller Shutters, Doors/Gates
and Sun Protection Systems

www.GLASSEXPO.com.br/en

Exclusive Partnership:



Support:



Organizer:



Falorni Tech

BRANCHING OUT WITH INDUSTRIAL FURNACES

After almost 60 years in the glass industry, machinery up and running worldwide, and an extensive range of machinery and service on offer for glassmakers, Falorni Gianfranco founded, in 2015, Falorni Tech. Dedicated to the sector of industrial glassworks, the company is moving and developing fast, with a short-term goal of being present at global level with its avant garde technical plants and machinery.



THE COMPANY FROM ITS ROOTS TO THE PRESENT DAY

Falorni Gianfranco Srl, located in Empoli, Italy, is, and has been for many years, a well-known and trusted name and brand in the sector dedicated to equipment and machinery for the glass industry. The company was founded in 1958 by Gianfranco Falorni, who started working mainly as a dealer of refractory material, with the aim of supplying the glass sector in the area of Empoli, Valdarno, Val d'Elsa and many more, which, at that time, were home to a large number of production and manufacturing companies.

Over the following 20 years,

the company grew and developed, making its name ever more important and well-known in the domestic market of Italy, becoming the trusted supplier of important manufacturers of refractory material, consolidating its position, and becoming a reference point for operators of the sector. At the same time, the company started to provide furnace demolition and construction services, as well as other additional and connected services.

During the second half of the 1980s and the following 1990s, the company underwent an important technical development, thanks, above all to the present-day sole Managing Director Riccardo Scarselli, who started up the activities regarding the design, supply and start-up of complete furnaces equipped with the necessary equipment. In this way, Falorni Gianfranco became

Furnaces

FURNACES

a plant engineering company to all effects, working with the glass melting furnace sector.

From the on, and up to and following the end of the 1990s, the company continued to develop, creating numerous plants and continuous furnaces.

In particular, the company designed and built developed a complete range of highly reliable small- and medium-sized furnaces easy to install, and aimed at and designed for manual and artisan operations for which, today, it is leader both in Europe and worldwide.

During the first ten years of the new millennium, the crisis of the manual and semi-automat-

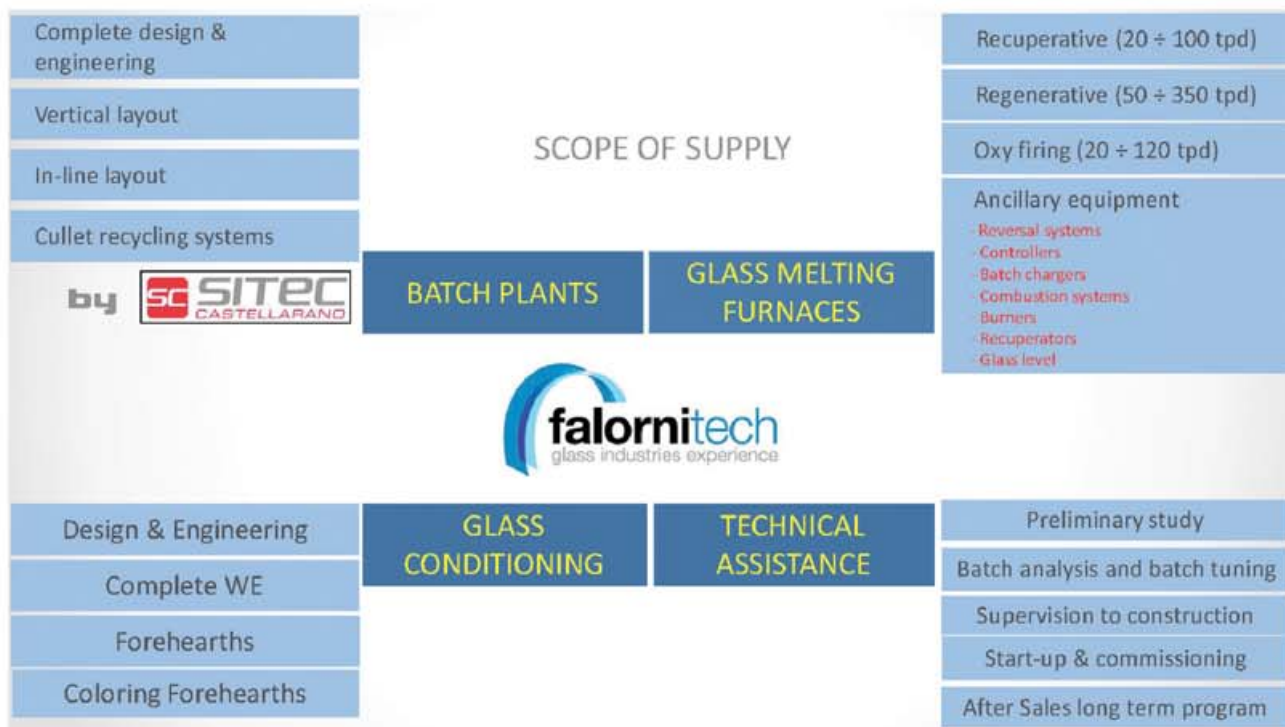
installed numerous plants.

And starting from this period until now, Falorni Gianfranco has started to deal more and more with requests from industrial glassworks regarding glass tableware and containers, in need of high technology and solutions for their high-capacity plants.

The consolidation of this activity and the need to maintain separate the two company divisions – manual and semi-automatic – has pushed Falorni Gianfranco Srl to set up an individual division dedicated to industrial glassworks - Falorni Tech.



extremely flexible company structure to face today's challenges, in particular those regarding industrial glassworks manufacturing tableware and containers, which is the need to adapt and respond



ic glass sector in Europe, and the will of Falorni Gianfranco to respond to international markets with new products and technologies, pushed the company towards new markets such as North America and North Africa, as well as Eastern Europe and the Middle East, with focus on Turkey, where Falorni has

THE FOUNDING OF FALORNI TECH

Falorni Tech was founded in 2015 with the aim of designing, planning, building and installing avant garde technical plants and machinery for large, modern industrial glassworks. Falorni Tech has a high-tech and

to the ever more dynamic market demand, requiring response in short- to medium-term. This phenomenon is taking root in all developed markets, and not only, and is leading to a fast developing generational change with regards to production technology. Where, previously, consolidated but obsolete technology



By glass formula

Glass Melting Technology Grid

	Recuperative		Regenerative		Oxy fuel	Applications
	Oil	Gas	Oil	Gas		
SODA LIME						Tableware Container
CRISTALLINE						Tableware
CRISTAL						Tableware
BOROSILICATE						Kitchenware - Glass wool Glass fiber
SODIUM SILICATE						Industrial process (glue, soaps, paintings, special material for building, etc.)

was used, we now need to give space to new and more modern technology, which combine production flexibility with increasing quality levels and ever more focus on the environment and costs.

This means that there is less space for suppliers of glassworks' technology still tied to the past and now truly outdated. In fact, at present, the market that dominates the demand for glass, along with global offer, has pushed numerous glassworks to review their production processes, along with the capabilities of their premises and synergies with other groups.

FALORNI TECH - OPERATIONS AND STRATEGIC PARTNERS

Falorni Tech was set up to be both agile and flexible, but, at the same time, to maintain and provide a high-quality technical background. Design operations are carried out using high-tech tools. Falorni Tech's Engineering department is staffed by the company's own employees and, when necessary, an intense network of specialized partners who are involved in the projects depending on the size and work needed to complete said projects. The

construction of the machines and plants are also carried out in the same way, that is with intelligent outsourcing aimed at improving their technical levels, while maintaining optimum price/quality ratios for end users. This way of working, not really new but not often used by the furnace construction sector, is not just a banal "Buy and Sell" scheme but is, in fact, a synthesis of careful analysis of project specifications and a careful selection of technical partners. Falorni Tech works as a direct supplier and Project Manager for quality on each project, coordinating its partners and establishing high standards of design and construction in line with Falorni's traditional work methods.

Falorni Tech obviously owns the technical know-how, and all operations are analyzed and defined in-house by its technical department, which then establishes the entire project.

Falorni Tech has strategic agreements with suppliers of batch plant technology, oxygen and traditional combustion technology with reduced emissions, heat-recovery technology, special equipment, top quality refractory material and much more.

Design technology regarding furnaces and plants is carried out with the collaboration of third partner companies and highly skilled engineers and designers.

Falorni Tech's strategy is that of creating functional synergies with other companies to share specialization and to be structurally better suited to the projects undertaken.

A perfect example of this is Falorni Tech's collaboration with Colorobbia Consulting, the Engineering division of the Colorobbia Group, based in Empoli, central Italy. This synergy enables both companies to take advantage of a solid structure, with widespread global distribution, and technical knowledge regarding production processes for hollow and technical glass to create high-capacity turnkey plants.

Another important collaboration agreement is that with INTCO, Germany, with Falorni as the company's official agent for Italy and France. INTCO is a supplier of turnkey refractory systems starting from those in contact with the molten glass (electro-formed, chrome, alumina, etc.) up to all types of refractory and insulating mate-

rials. INTCO manufactures its products by outsourcing to Asia, using selected and reliable manufacturers with European quality standards. This particular synergy enables clients to have high-quality materials with prices lower than the average for “premium” materials, which are, in fact, also produced in Asia.

TECHNOLOGY AND SERVICES OFFERED BY FALORNI TECH

Falorni Tech offers a range of solutions in response to better respond to the needs and demand of industrial glassworks, as well as to supply technology for a wide range of production types.

Complete design of glass plants

Plant design is inspired by a long company tradition which, however, are combined with modern design methods such as 3D CAD, predictive analysis of performance and mathematical modelling of furnaces and conditioning systems. Falorni Tech can provide feasibility studies as well as complete designs, including production layout, creation and organization of production areas and connected areas such as those for supply, maintenance, storage, auxiliary, etc.) integrat-

ing technologies used in the project as per the type of glass and melting technology used.

Glass mixing plant technology

Glass mixing plants are developed and built in collaboration with SITEC, Castellarano, Italy, a leader in the ceramic sector and partner of Falorni Tech for the glass sector. The synergy between these two companies results in high-tech batch plants in line with quality and reliability specifications required by modern glassworks.

Glass melting furnace technology

Melting technology is the core of the technology provided by Falorni Tech, which includes tens of years of in-field experience and tradition. Falorni Tech supplies the following range of high-tech melting furnaces:

- Regenerative furnaces;
- Recuperative furnaces;
- Oxy-fuel furnaces.

Each solution can be equipped with technology and equipment able to significantly increase performance in terms of flexibility, productivity, glass quality, energy consumption and emissions. Furnaces dimensions vary as per the type of application, starting from a few dozen tons per day for glass tableware, up to 350

tons per day for

Falorni Tech’s melting technology produces the following glass types:

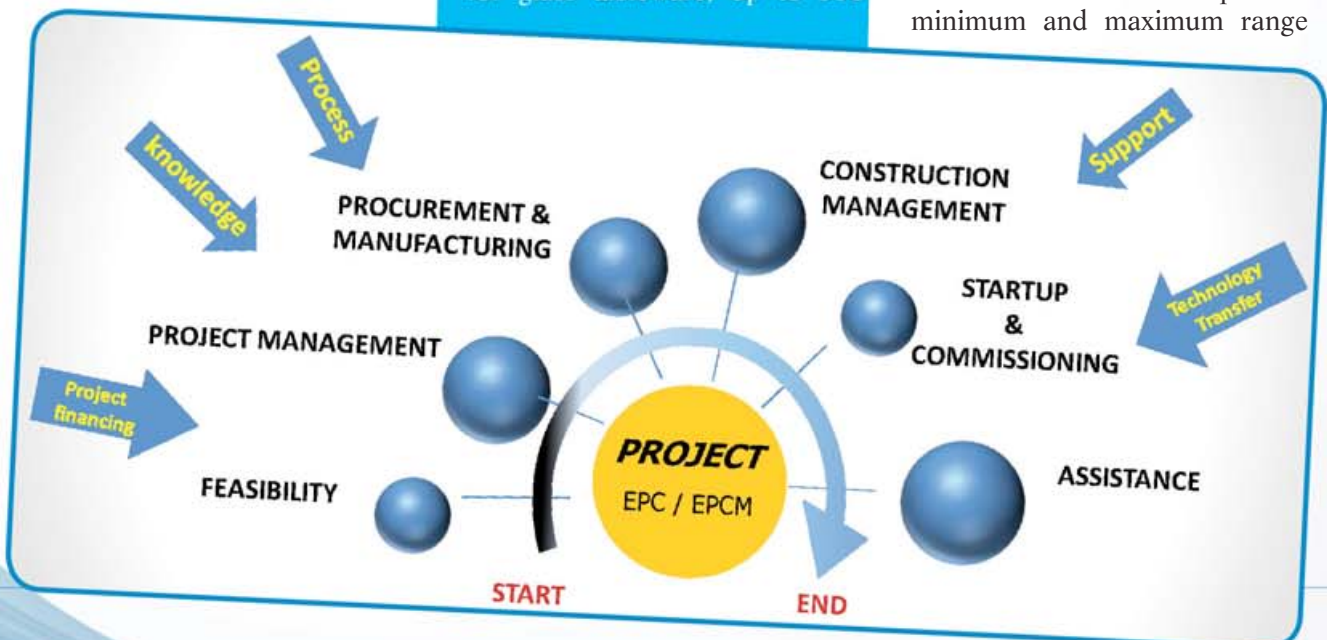
- soda lime
- crystalline
- crystal
- light borosilicate
- sodium silicate
- frits

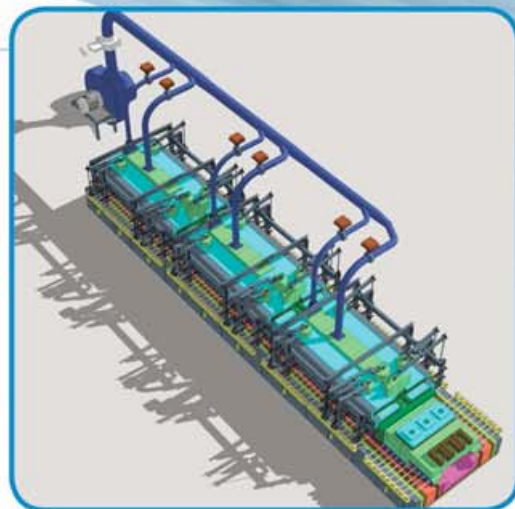
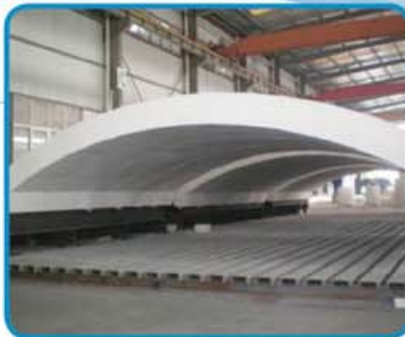
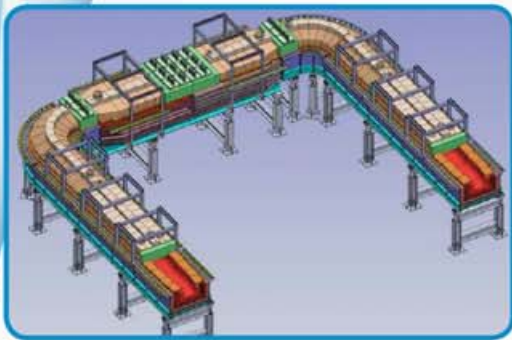
The glass types can then be used to manufacture:

- glass tableware
- container glass
- glass wool
- glass fiber
- water glass
- ceramic enamels, etc.

TECHNOLOGY FOR GLASS CONDITIONING AND COLOURING

Falorni Tech has developed technology for the conditioning of avant garde glass which uses heating and cooling management to considerably increase productivity levels, while reducing the time needed to set up the conditioning profile, increasing the thermal homogeneity of the glass at the spout and optimizing the temperature curve of the glass gob. Falorni Tech’s conditioning technology uses a specific superstructure combined with the optimized dimensioning of insulation of the channel as per the minimum and maximum range





of the line and the type of glass to be produced. The superstructure can be equipped with both direct and indirect cooling system simple and efficient to use, which does not require the dismantling and removal of moveable refractory parts or other complicated and costly operations. This system is perfect for the production of amber or coloured glass, where the cooling of the glass is limited by the need to maintain atmospheric combustion at reduced levels. Thanks to this technology, Falorni Tech can guarantee thermal homogeneity up to and higher than 98 per cent.

The colouring of glass in a channel is now found on most modern glassworks, both in the production of tableware, as well as for large glass containers. Falorni Tech has developed a range of colouring channels that can be integrated perfectly with existing machinery and equipment, and responding to all needs with regards to flexibility and production capacity. This range of colouring channels starts with those of a few tons per day, up to those for glass tableware and those of more than 100 tons per day for container glass.

ASSISTANCE AND SUPERVISION IN ALL PHASES OF THE PROJECT

Each project developed by Falorni Tech includes personalized and highly professional assistance and supervision service. Falorni Tech works side by side with its clients right from the preliminary phases of the project,

for the entire development, up to start up and production of the equipment. But Falorni Tech does not stop there. In fact, also supply its clients with a long term post sales assistance programme so as to ensure the highest level of technology transfer and shorten the time needed for the fine tuning of production processes.

GEOGRAPHICAL AREAS COVERED

Falorni Tech is active all over the world, with strong focus on Italian and European markets, which, together, represent the highest level of industrial technology in the world. Falorni Tech has its own network of agents and representatives, undergoing continuous development and growth. Company aim is that of tapping new projects and listen/respond to the needs of the global glass sector, to consolidate Falorni Tech's market position and guarantee growth in both production volume and turnover. The most important international markets in which Falorni Tech has its machinery up and running are Turkey, Middle East, North Africa and North America. The aim over the next two years is to be present globally in all markets with the addition of Asia and Central/South America.

FUTURE DEVELOPMENTS

Falorni Tech was set up with the natural ability to develop and commercialize new technologies. Even if the market of the glass sector is one of the most tradi-

ditional regarding technological changes, Falorni Tech continues to work on and develop new ideas that provide flexibility, productivity and quality. At present, the company is studying new ideas for induction melting of glass, low NOx combustion systems both for recuperative and regenerative furnaces, new systems to enable the upgrade of conditioning channels in colouring channels without needing to rebuild, lengthen or widen the channel or even reduce production levels of the line. ■



FALORNI GIANFRANCO SRL

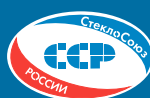
Viale IV Novembre 15, 50053
Empoli (FI) - Italy
Tel: +39 - 0571 - 922333
Fax: +39 - 0571 - 920816
E-mail: info@falorniglass.com
www.falorniglass.com



MIR STEKLA

**Production.
Architecture.
Decor**

06–09.06.2016



EXPOCENTRE

Organized by

- Expocentre ZAO
- StekloSoyuz United National Council
of the Glass Industry Enterprises

Supported by
Russian Ministry of Industry
and Trade

Under auspices of the Russian
Chamber of Commerce and Industry

**18th International
Exhibition
for Glass Products,
Manufacturing,
Processing
and Finishing
Technology**



12+
Advertising



Expocentre Fairgrounds, Moscow, Russia

www.mirstekla-expo.ru

GPS, a globally operating supplier of IS machines, spare parts and services, has become independent. With effect from 1 January 2016, current GPS Managing Director Rolf Themann and two partners have acquired the company in a management buyout.

GPS

Photo: gps

UNDERSTANDING WHAT THE MARKET NEEDS

INTERVIEW

“As an independent, medium-sized German engineering company, we’ll be able to respond more flexibly to market demands”, says Rolf Themann. The 47-year-old was born in Winterthur, Switzerland to German parents, studied Mechanical Engineering, then gained his MBA in Zug and Geneva. After 11 years as Technical Director and Managing Director at Sklostroj in the Czech Republic, he joined GPS at the beginning of this year. In the following interview, the new owner explains what will stay, what will change, and what the industry can expect from GPS in future. Klaus Rudolph, former Executive Chairman of GPS, explains the reasons for the sale.

Glass Machinery Plants & Accessories: *Mr. Themann, you’re the Managing Director of GPS and now the new owner. How will the management buyout affect the company?*

Themann: Well, for our workforce it means saying goodbye to a certain level of security the Saint-Gobain group provided. On the other hand, we’ll have more business freedom. That means fresh opportunities. As a medium-sized enterprise, we’ll be able to take our own decisions and achieve more for ourselves.

INTERVIEW

Klaus Rudolph, CFO of Saint-Gobain Oberland AG and previously Executive Chairman of GPS, left, in

conversation with Rolf Themann, Managing Director and new owner of GPS

Photo: gps



Klaus Rudolph, CFO of Saint-Gobain Oberland AG and previously Executive Chairman of GPS, talking about the management buyout

GMP&A: So why was Saint-Gobain Oberland prepared to let GPS go, Mr. Rudolph?

Rudolph: We're confident GPS can develop much better as an independent outfit. It doesn't need to be part of a large group. I'd say what we expect from this move are rejuvenation and stability. As a container glass producer, we know Mr. Themann will steer GPS into an innovative future, supporting the same direction we've been going in for the recent two years. There are

plenty of potential new customers out there for GPS.

GMP&A: What will change at GPS?

Themann: First, we'll drive innovation – not just for its own sake, but because we have to. In the past, not enough has been done to thoroughly upgrade our IS machines. They've been around for more than 80 years. That makes people think there's nowhere new they can go. We will present our innovations at next year's glasstec.

GMP&A: You mean totally silent, cool machines that make flawless products?

Themann (laughs): Actually, you'll have to wait for the next-but-one glasstec for that... No, I don't want to promise too much. But we're determined to make a big difference in major aspects like mould lubrication or swabbing.

GMP&A: What technical developments are you planning?

Themann: Well of course everybody wants better, more precise control systems. And so do we. But we also have to understand what the market really needs. We're designing the new IS machine with users in mind,

so it'll be user-friendly and stable. Operators shouldn't need a degree in rocket science to operate it. We're also looking at practical things like faster re-equipping.

Photo: gps



Rolf Themann, Managing Director and new owner of GPS



Photo: gps

GMP&A: What about green technology and work safety?

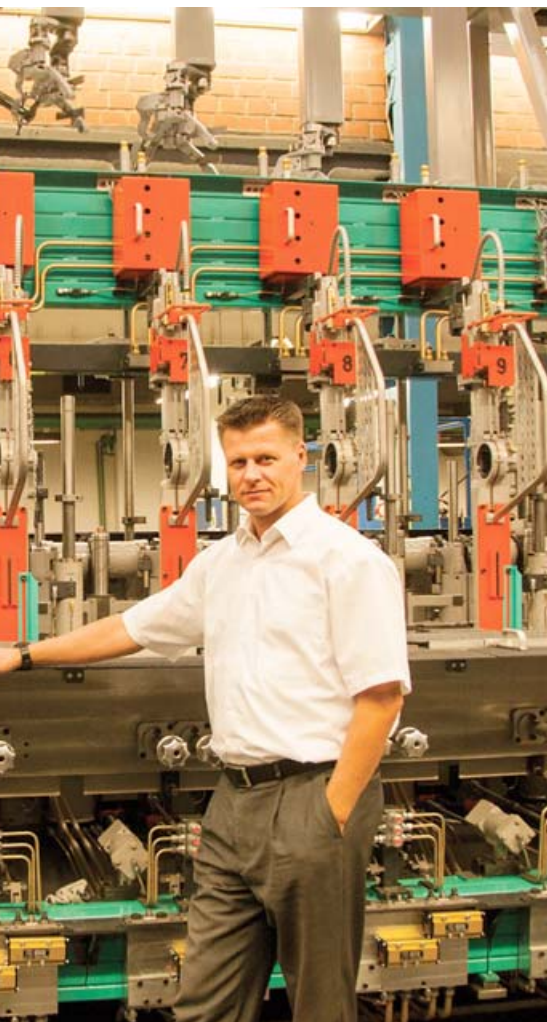
Themann: When you find smart technical solutions for the processes inside the machine, you automatically increase work safety and cut energy consumption. You have to look at the system as a whole. Apart from that, the new IS machine will be more flexible and versatile in production.

GMP&A: Where will future GPS innovations be hatched and produced?

Themann: GPS is proud to be a German company and to use the "Made in Germany" mark of quality. That won't change. Final assembly will definitely always be here in Essen. The same goes for commissioning, cold testing and customer presentations. All



Rolf Themann (left) and Klaus Rudolph are confident that customers will benefit from the independence of GPS



that will happen in Essen. Some components could be "Made in Europe", depending on where we can source the best quality.

GMP&A: What about "Made in China"?

Themann: We're not planning to buy components from China. "Made in Germany" or "Made in Europe" are hallmarks still worth a lot in mechanical engineering. And rightly so in my experience. We'll continue to build on this reputation, experience and expertise. After all, it's what our customers expect!

GMP&A: What does the change mean for customers?

Themann: Our customers know us well. They know they can rely on GPS. So they trust our

machines, spare parts and services. That isn't going to change. In fact, as an independent, medium-sized company, we'll be able to respond even more specifically to individual requirements. Not being part of a group will make us a lot more flexible.

GMP&A: What's your vision for 2025?

Themann: Well, first I've got a vision for 2016! You'll have to wait and see, but you can expect a few surprises... For a start, we're going to completely re-think container glass production. That's a major future project. Glass is such a valuable packaging material, irreplaceable even. It's important to make sure it remains attractive all round for the food and beverage industry. ■

Rolf Themann, Managing Director and new owner of GPS with a new IS machine at the GPS plant in Essen

GPS

Ruhrglasstraße 50 - 45329 Essen

Germany

Tel.: +49-201-3600771

Fax: +49-201-3600737

E-mail: vertrieb@gps-essen.de

www.gps-essen.de





www.glassOnline.com

The World's Leading Glass Industry Website



NEW WEB SERVICE:
interactive
MAGAZINES



Baku Glass

The Glass Industry
Event for the Caucasus
and Caspian Sea Region

2016

1 - 2 MARCH 2016
BAKU, AZERBAIJAN

HOLIDAY INN
HOTEL

• MANUFACTURING • PROCESSING • PRODUCTS • SERVICES

In conjunction with



OFFICIAL CATALOGUE

first edition

➔ GPD BAKU
➔ EXHIBITORS & SPONSORS
➔ COMPANY WORKSHOPS
➔ YELLOW PAGES

WWW.GLASSONLINE.COM

ORGANIZER:



SALES OFFICE:



Smartenergy Srl

Via Antonio Gramsci 57, 20032 Cormano, Milan (Italy)
Tel.: +39-02-66306866 • Fax: +39-02-66305510

EDITORIAL

I began to work with international glass markets at the end of the 1980s – almost 30 years ago. Time and again I have seen the growth of interest in important new market areas, followed, as is natural when a certain territory becomes stable or saturated, by the departure of the self-same leading players in search of fresh opportunities.

Then came globalization, followed by the financial crisis of 2008, both of which had a significant impact on our approach to markets. Firstly it was the local operators, glassworks or sales agents who took part in the important international sector events. Since the arrival of Internet, clients have all the information they need at hand on their PC or Tablet so if the customer no longer 'moves' the supplier now has to go to him. From a certain point in time, it has become ever more important for machinery and technology manufacturers to reach out to clients (both physically and virtually) as well being constantly on the move at a series of events so as to cover the main markets for their services and products.

Nowadays, it is not the major markets such as the US, China or Russia which need to be explored, but smaller areas that cannot offer commercial opportunities on the same scale but do have a growing role thanks to their demand for cutting-edge technology. Being active in these markets can really make a difference: a rise in turnover, albeit minimal, can enable companies to develop, leading to the possibility of double-digit growth, diversification and risk reduction by avoiding over-exposure to certain territories.

Baku Glass came about thanks to these considerations: an event with a 'lightweight' exhibition style, which does not require a heavy commitment in financial or personnel terms, unlike the more traditional trade fair; it also has advantages for visitors, who do not need to travel thousands of kilometers. Business meetings that enable direct, personal contact (face to face and not through a screen) with the leading players in promising new areas, or the consolidation of a position in a specific market. Whatever your company strategy, it is my firm belief that you cannot ignore the idea of expanding your company's market reach thanks to these up-to-date, though in reality long-established, tools. And, as ever, we will be there at your side.

Marco Pinetti - Editor-in-chief



CONTENTS

- 59** **Cover**
- 60** **Editorial**
- 62** **Hall Plan
Exhibition Area**
- 64** **Gpd Baku
Conference
Programme**
- 66** **Gpd Baku
Sponsor**
- 68** **Alphabetical
List of
Exhibitors**
- 86** **Workshops**
- 88** **Yellow Pages**

Baku Glass 2016

First Edition

ORGANIZER:

 **A151 Srl**

SALES OFFICE:

Smartenergy Srl
Via Antonio Gramsci 57
20032 Cormano, Milan (Italy)
Tel.: +39-02-66306866
Fax: +39-02-66305510

CONTACT US:

LUCIANO MOLINA
Sales - International
luciano.molina@glassonline.com

JESSICA GIULIETTI
Sales - International
jessica.giulietti@glassonline.com

MAURIZIO LOZZA
Sales - Italy
maurizio.lozza@glassonline.com

PARTNERS



Ministry of Culture and Tourism
of the Republic of Azerbaijan



**AZERBAIJAN
CONVENTION
BUREAU**



glasstec

INTERNATIONAL TRADE FAIR FOR GLASS
PRODUCTION • PROCESSING • PRODUCTS

SUPPORTED BY

glassmachinery
world
plants & accessories
BI-MONTHLY INTERNATIONAL MAGAZINE FOR GLASS MANUFACTURING

glassOnline
The World's Leading Glass Industry Website

**Glass-Technology
International**
THE LEADING MAGAZINE FOR THE INTERNATIONAL FLAT GLASS INDUSTRY

MEDIA PARTNERS

glassglobal
Community

**MIDDLE EAST
glass**

GlassNews

**Glass
onWeb**

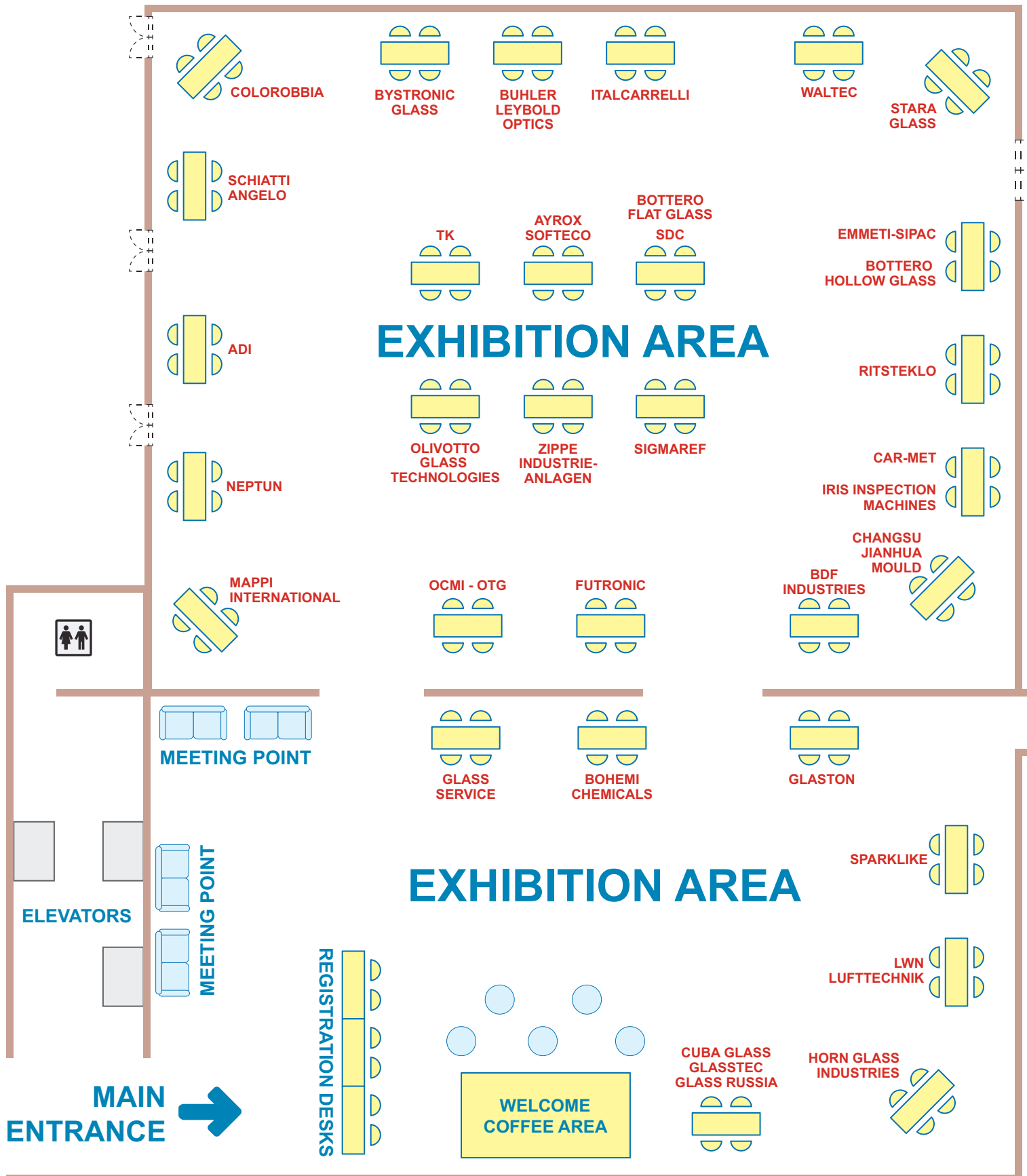
Glass Russia

**glass
WORLDWIDE**

Kačh

Vidrio

vidrioperfil.com
EL PORTAL DEL VIDRIO Y LA CARPINTERÍA



- MANUFACTURING • PRODUCTS
- PROCESSING • SERVICES



HOLIDAY INN HOTEL

GPD BAKU sponsors:

GOLD SPONSORS:



SILVER SPONSOR:



Sparklike

CLOAKROOM

MEETING POINT

MEETING POINT



ENTRANCE

ENTRANCE

ENTRANCE

FOYER



MOSCOW CONFERENCE ROOM



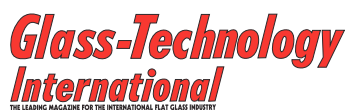
Baku Glass COMPANY WORKSHOPS



ISTANBUL CONFERENCE ROOM



Supported by:



Partners:



AZERBAIJAN
CONVENTION
BUREAU



Media partners:



GPD BAKU Conference Programme

13.30 - 13.50

WELCOME ADDRESS

Michelsson Christer, Ambassador of Finland to Azerbaijan
Giampaolo Cutillo, Ambassador of Italy to Azerbaijan

13.50 - 14.20

WELCOME AND EXECUTIVE SUMMARY OF GLOBAL GLASS INDUSTRY TRENDS OF 2015

Jorma Vitkala, Chairman, Glass Performance Days

The Chairman of the Glass Performance Days Organizing Committee Jorma Vitkala analyzes glass industry developments and trends by reviewing the state-of-the-art as reflected by the GPD 2015 Conference. In addressing the future challenges facing glass design, construction and glass industry solutions Jorma Vitkala makes broad-based use of the 140 presentations of the conference and proceedings in a special Executive Summary of the highlights of the GPD in June 2015.

The GPD has developed into the hub of the international glass industry as the leading forum for the presentations of innovations, new technologies, new industrial practices and above all energy-efficient solutions in the service of construction, design and interior decorating applications. The total number of addresses at the interactive conference sessions and workshops was around 140 and total expert attendance numbered 550.

14.20 - 14.50

BAKU HUB - A FRESH POINT OF DEPARTURE

Johann Sischka, Waagner - Biro

14.50 - 15.20

BUILDING THE OPUS - CASE STUDY AND HISTORY OF A DOUBLE CURVED GLAZED DUBAI PROJECT

Agnes Koltay, Koltay Façades

The Opus project was initiated in 2006, with a futuristic 3D vision that exceeded the limits of commonly used technologies. Commissioned by Omniyat, Zaha Hadid Architects developed a design resembling a cube with the core melted out. The 20 story building, - originally offices, later changed to mixed used- situated in Business Bay, Dubai, UAE, is fully glazed. The outer flat facades are neutral transparent glazed with silver mirror pattern, while the core area is dark blue 3D formed glazing. To achieve this vision, several glass processing technologies were studied, selected, specified – and some abandoned after further studies. Challenges included achieving the 3D double curved shape, achieving the color, achieving adequate performance for Dubai climate, dealing with the radiation focusing effect the geometry imposes, ensure seamless visual appearance among different support systems – roof, wall, soffit - , procure special materials in sufficient quantities in reasonable time and keeping the project affordable. Being involved from the beginning and acting as façade consultant to achieve expected project handover by the end of 2015, the presentation will give a summary of the project's technical development.

15.20 - 15.50

TOWARDS HIGHER QUALITY AND ENERGY EFFICIENCY. THE LATEST DEVELOPMENT IN GLASS HEAT TREATMENT SOLUTIONS

Miika Äppelqvist, Glaston Finland Oy

Glass business is facing more global competition today than ever before. This means that all glass processors, local or global, need to prepare themselves for global competition. This presentation sets the framework for global quality and energy efficiency requirements for heat-treated glass. First, this presentation goes through the current heat-treated glass quality requirements and gives practical quality requirements for façade glazing. Reaching the quality requirements is becoming even more challenging as the buildings are made to more energy efficient. From façade point of view, this means new high-performing coatings and integrated intelligent glass solutions that change the way glass can be heat-treated and the requirements set for the glass. This presentation will also cover the latest technologies used to meet the growing quality demands globally in and neighboring countries of Azerbaijan. We will also paint the future for growing quality requirements and how glass processors can prepare themselves for the future requirements.

MOSCOW CONFERENCE ROOM / 1st March 2016

15.50 - 16.20

BREAK

16.20 - 16.40

EXPECTATIONS OF ARCHITECTURE FROM GLASS AND ŞİŞECAM FLAT GLASS NEW PRODUCTS

Ekin Safkan, Şişecam Flat Glass

What is the expectations of architecture from glass? With the latest architectural trends; glass area on the buildings are expanding which creates more transparent buildings with increasing safety requirements. The green building certification systems require buildings with natural light, maximum heat and solar control. We are the one's who are creating solutions for architectural glass.

80 Years of Experience, Innovative Approach, 21.000 Employees... We are Şişecam... Şişecam Group is the leader in Business lines encompassing all areas of glass production including Flat Glass, Glassware, Glass Packaging, and Chemicals. Our large range of products for architecture; offers architects unlimited creativity; about insulation, decoration, safety and security. We are producing valuable products which enhance people's lives and environment. As a global manufacturer we are providing solutions to the major needs and challenges of our times, now and in the future.

16.40 - 17.00

TECHNOLOGIES FOR NON-INVASIVE MEASUREMENT OF GAS FILL FOR INSULATING GLASS

Mauri Saksala, Sparklike Ltd

Sparklike workshop discusses the advantages of gas fill for thermal performance and the latest developments in gas fill measurement. Sparklike is the developer of the world's first non-invasive gas analyzer for insulating glass. Non-invasive technologies allow manufacturers to deliver tested IGU, without ever having to break the units.

17.00 - 17.20

THE RISE IN LAMINATED GLASS – ADDING SAFETY AND DURABILITY TO MODERN DESIGN

Miika Äppelqvist, Glaston Finland Oy

Lamination only recently has really started to gain momentum in global perspective. This growth has been fueled by three main factors: safety, more creative architecture designs and the increasing use of glass as a structural element. Regulations are becoming stricter, requiring glass providers to move forward to safer building solutions. Modern architectural designs are calling for more complex glazing solutions. Coated glass, screen printing, multilayer lamination is increasingly finding its way into today's architecture. Lamination is now presenting a business opportunity to glass processors world-wide. However, with all the ongoing trends there are many things to consider when thinking of entering the laminating business. This presentation goes through some of the major trends in lamination and their impact in selecting right processing technology.

17.20 - 17.45

BASIC THEORY OF TEMPERING

Jorma Vitkala, Glaston Finland Oy

This presentation is intended as a brief into the state-of-the-art in the glass tempering theory and specially tempering of Low-E glass. The trend of architectural glass towards larger and larger sizes causes a growing need for glass processors related to large sizes and coated products. The balancing of process efficiency and economy with quality is a central issue, for limiting or eliminating roller wave, end curving and frame effects. Views on end and edge curving and its effects on the quality aspects of laminated glass are also briefly discussed.

Şişecam Flat Glass



Şişecam Flat Glass' large range of products for architecture; offers architects unlimited creativity; about insulation, decoration, safety and security. As a global manufacturer we are providing solutions to the major needs and challenges of our times, now and in the future.

Şişecam Low-E Glass and Şişecam Temperable Low-E Glass reduce heat loss from windows by 50% compared to traditional IG unit. Therefore effective heat insulation in winter is provided and heating expenses are reduced. These products eliminate cold spots in winter and heat inside the room is radiated equally.

Şişecam Solar Control Low-E Glass and Şişecam Temperable Solar Control Low-E Glass can transmit substantial amounts of daylight while significantly minimizing solar heat transmission. More daylight means less artificial lighting is needed inside the building, reducing utility costs and making the environment more pleasant for those living inside. Better solar control in summer reduces air-conditioning costs, while better thermal performance in winter reduces heating costs. They also reduce UV transmission which causes fabrics to fade and have a neutral appearance close to clear float glass. These products eliminate cold spots in winter and hot spots in summer close to windows.

Şişecam Temperable Solar Control Low-E Glass offers best solution for commercial buildings and conservatories where security is required, enabling toughening, heat strengthening, laminating and enameling after the coating process.

- Neutral 62/44; ensures to benefit from maximum daylight in projects such as residential and education complex where high light transmittance is needed; also reduces solar energy transmission by 40% compared to standard Insulating Glass Unit and decreases cooling expenses.
- Neutral 50/33; provides solutions for green building certified (LEED and BREEAM) projects such as offices, hotels and hospitals where optimum daylight transmittance and efficient solar control is necessary.
- Neutral 41/27; is preferred in skylights or warm climate areas where daylight control and more efficient solar protection is required.

В линейке продукции «Şişecam Flat Glass» имеется большой выбор архитектурных стекол, которые предлагают архитекторам неограниченное поле для творчества: от изоляции, дизайна до сохранности и безопасности. Так же, как и сейчас, так и в будущем, мы, как мировой производитель, предоставляем решения исходя из основных потребностей и задач нашего времени.

Стекла марки Şişecam Low-E и Şişecam Temperable Low-E уменьшают потери тепла на 50% по сравнению с традиционным стеклопакетом. Поэтому эффективная теплоизоляция зимой обеспечивает уменьшение расходов на отопление. Эти продукты исключают потерю тепла даже в самые суровые зимы, и равномерно распределяют прохладу в помещении летом.

Şişecam Solar Control Low-E стекло и Şişecam Temperable Solar Control Low-E стекло может передавать значительные объемы дневного света и минимизировать передачу солнечного тепла. Более того, пропускание дневного света означает - меньше искусственного освещения в помещении, уменьшая тем самым расходы на коммунальные услуги и делая окружающую среду более светлым и приятным для тех, кто находится внутри. При использовании солнцезащитного стекла снижаются затраты на кондиционирование (охлаждения) воздуха, в то время как более высокую эффективность показывает использование стекла в зимнее время, т.е. снижение расходов на отопление. Данный вид стекол уменьшает передачу UV-лучей, которые препятствуют выгоранию материи.

Стекла Şişecam Temperable Solar Control Low-E лучшее решение для коммерческих зданий, где требуется безопасность, эти стекла можно закалять, ламинировать и эмалировать.

- Neutral 62/44; используется в тех помещениях, жилых комплексах и проектах, где требуется высокое пропускание дневного света, уменьшается передача солнечной энергии на 40% по сравнению со стандартным единичным остеклением и уменьшаются расходы на охлаждение.
- Neutral 50/33; используется для проектов, которые имеют сертификат по экологическому строительству (LEED и BREEAM), такие помещения как офисы, гостиницы и больницы, где необходимо оптимальное дневное пропускание света и эффективное солнцезащитное остекление.
- Neutral 41/27; предпочтительно использовать для остекления мансард или в теплых климатических областях, где требуется контроль дневного света и более эффективная солнечная защита.



**ŞİŞECAM
FLAT GLASS**

İş Kuleleri, Kule 3 Kat: 11
343304 4. Levent - Istanbul
Turkey

☎ +90-212-3505050

☎ +90-212-3504040

✉ esafkan@sisecam.com

www.sisecamflatglass.com



glasstec

INTERNATIONAL TRADE FAIR FOR GLASS
PRODUCTION • PROCESSING • PRODUCTS

20-23 September 2016

GLASS IS LIMITLESS

www.glasstec-online.com

Messe Düsseldorf Moscow 000
Ul. Timura Frunze, 3 bld. 1 _ 119021 Moscow _ Russia
Tel.: +7 (495) 955-9199 _ Fax: +7 (499) 246-9277
Email: info@messe-duesseldorf.ru
www.messe-duesseldorf.ru



Adi

ADI is a technological excellence, solid, flexible, customer oriented, able to offer customized and advanced solutions. A strong commitment is necessary to face a competitive market in constant evolution, this is why aimed investments in R&D and infrastructures are preeminent at ADI.

We strongly believe that through those efforts and the support of a prompt service, we can supply the "excellence" to keep our customers always on the edge.

ADI manufactures all kind of tools for flat glass and hollow glass processing.

Cup wheels for Straight Edgers and Bevellers. Tools for Horizontal and Vertical CNC machines.

Ultra High Speed Tools for Automotive Glass and CNC machines.

Vacuum Pods and other Accessories.

Cutting Discs.

Core drills.

Patented Tools for special applications.

Компания ADI ориентирована на использование новейших технологий, основательность и гибкость, а также индивидуальный подход к каждому клиенту, что позволяет предлагать клиентам индивидуальные и передовые решения.

Мы твердо привержены цели быть конкурентоспособными, в условиях постоянных изменений. Мы глубоко верим, что благодаря таким усилиям и оперативному техническому обслуживанию, мы в силах поставить все самое лучшее, что позволит нашим клиентам всегда занимать лидирующие позиции.

Компания ADI производит все виды инструментов для обработки листового и пустотелового стекла.

Чашечные круги для прямолинейных кромочных и фасетных станков

Инструмент для горизонтальных и вертикальных обрабатывающих центров

Высокоскоростной инструмент для автомобильных стекол и обрабатывающих центров

Вакуумные присоски и другие аксессуары

Пильные диски

Сверла

Запатентованный инструмент для специальных сфер применения

ADI

INDUSTRIAL DIAMOND APPLICATION

Via dell'Economia 12/16

36016 Thiene (VI), Italy

☎ +39 - 0445 - 360244

☎ +39 - 0445 - 366862

✉ info@aditools.com

www.aditools.com



PATENTED

Ayrox

A complete range of Quality Control instruments complying with international standards regarding tempered, heat strengthened and laminated glass, and IGU units.

Testing services in an accredited laboratory for infrequent tests or for tests requiring sophisticated equipment.

In-house calibration, repair and maintenance services of optical quality control instruments.

PVB treatment for lamination and PVB wiring machinery for heatable laminates.

Production accessories for laminated and tempered glass such as silicone free vacuum rings and aramide fibre tapes.

Over 25 years of experience in the glass industry for the study and analysis of manufacturing and glass processing issues.



Полный ассортимент инструментов для контроля качества в соответствии с международными стандартами для закаленного, упрочненного и многослойного стекла, а также стеклопакетов.

Услуги по проведению испытаний в аккредитованной лаборатории.

Услуги по калибровке, ремонту, и техобслуживанию оптических инструментов для контроля качества.

Обработка ПВБ для многослойного стекла и оборудование для нанесения электрической нити на ПВБ для обогреваемых лобовых стекол.

Технологическая оснастка для многослойного и закаленного стекла, в том числе вакуумные кольца без силикона и ленты из арамидного волокна.

Более 25-и лет опыта в стекольной индустрии по изучению и исследованию проблем производства и обработки стекла.

AYROX

Avenue De Fre 98/Bte 7

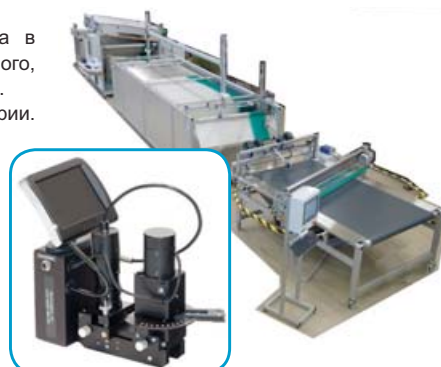
1180 Brussels - Belgium

☎ +32-23756198

☎ +32-23720351

✉ deals@ayrox.be

www.ayrox.com



BDF Industries

BDF Industries S.p.A. is an Italian company with headquarters in Vicenza and has 110 years of history and tradition in mechanical and automation skills.

Serving glass manufacturers all over the world for more than 60 years, and thanks to its own internal division competences of melting - forming - automation - energy, it is the sole player in the hollow glass market able to offer turnkey plants: from engineering to maintenance services, with advanced technological products and solutions.

Our mission is to serve customers with competitive plants and process technology, and automation to produce quality at the lowest depreciation and production costs, offering skilled after-sales service involving top-specialized engineers.

BDF Industries range of products include:

- IS machines
- Gob forming
- Timing systems
- Forehearth
- Furnaces
- Batch chargers
- Glass levels
- Control systems
- Energy recovery systems

BDF Industries S.p.A. - итальянская компания со 110 летней историей и традициями в механике и автоматизации. Работая с заводами по всему миру более 60 лет и благодаря собственным отделам стекловарения – формования - автоматизации - энергетики, BDF единственный игрок на рынке тарного стекла, способный предложить завод «под ключ» с технологией и решениями, начиная от проектирования и заканчивая техническим обслуживанием. Наша цель – предоставить заказчику конкурентоспособный завод с возможностью постпродажного обслуживания высококлассными инженерами, что позволяет делать качественную продукцию при низком износе и минимальных затратах.

Ассортимент BDF

включает:

- | | | |
|-------------------------|-----------------------|-------------------------------|
| • СФ Машины | • Каналы питателя | • Систему регенерации энергии |
| • Формирование капли | • Стекловаренные печи | |
| • Систему синхронизации | • Загрузчики шихты | |
| | • Уровнемеры стекла | |
| | • Системы контроля | |



Viale dell'Industria, 40
36100 Vicenza, Italy
☎ +39-0444-286100
☎ +39-0444-286299
✉ bdf@bdf.it

www.bdf.it



Bohemi Chemicals

Bohemi Chemicals is committed to supplying its clients with the products and services they need to produce the best glass containers and bottles. Bohemi Chemicals provides Hot End and Cold End treatments certified by a European Institute for contact with food, as well as the most versatile Cold End treatment on the market: Polyglas D 4218M.

Polyglas D 4450 is the optimum treatment for Champagne bottles and other heavy-bottomed containers. Polyglas D 4450 provides maximum protection during transportation, even over long distances.

STARTIN S is the company's Hot End treatment based on stabilized MBTC for low-dosage use in Hot coatings.

If clients don't return discarded bottles, manufacturing costs will be reduced.



Via XX Settembre 9
20080 Zibido San Giacomo (MI), Italy
☎ +39 - 02 - 90005047
☎ +39 - 02 - 90005684
✉ bohemi@bohemicchemicals.com

www.bohemicchemicals.com

Bohemi Chemicals -это предприятие , работа которого , направлена на улучшение качества стеклотары . В производстве используется европейский сертифицированный метод холодного и горячего напыления , что позволяет использовать тару в пищевой промышленности .

Покрытие " Polyglas D4218M "более распространен и универсален в холодном покрытии стеклотары , "Polyglas D4450" - напыление которое лучше всего подходит для стеклотары с толстым стеклом а также максимальная защита стекла при перевозках (более 1000км). "Startin S " - продукт который используется в горячем покрытии стеклотары , в основу которого входит MBTC (Monobutyltintrichloride).

Отличное качество стеклотары -это гарантия Вашего успешного бизнеса и Ваших клиентов !

Bottero - Flat Glass Division

Since 1957, the year of its foundation, Bottero has specialised in the production of glass working machinery and is one of the world's largest equipment manufacturer in three sectors:

- Flat glass;
- Hollow glass;
- Special equipment.

The company also provides the best services in supplying complete production lines on turnkey basis.

Bottero's continuous attention to detail and comprehensive range of products responding to its customers' every need. From float glass lines to cutting tables with a wide range of automatic loading options, to glass grabs, high volume laminated lines and high speed bottle manufacturing machinery.



The concrete and reliable nature of the company has, over time, generated a mixture of competitive peculiarities in technological innovation, product performance and the integration of new products and solutions.

С 1957 года, года своего создания, Bottero специализируется в выпуске машин для обработки стекла и является одним из крупных производителей оборудования в трех секторах:

- листовое стекло;
- тарное стекло;
- специальное оборудование.

Компания также предоставляет свои услуги в поставке комплексных линий на основе "под ключ".

Постоянное внимание Bottero к новшествам и широкий диапазон её продукции вполне удовлетворяют все нужды клиентов. Гамма продукции компании охватывает: линии по обработке флоат-стекла, вместе с широким выбором автоматических погрузочных систем, высокопродуктивные

линии ламинированного стекла, а также оборудование для производства тарного стекла.

Постоянный рост и высокая надежность компании со временем слилась с чертами высокой конкурентоспособности в технологической инновации, привела к повышению качественных характеристик её продукции, а также способствует ей в интеграции к выпуску новых продуктов и технических решений.

Bottero
Glass Technologies

Via Genova 82
12100 Cuneo (CN), Italy
☎ +39 - 0171 - 310611
☎ +39 - 0171 - 40 16 11
✉ bottero@bottero.com

www.bottero.com

Bottero - Hollow Glass Division

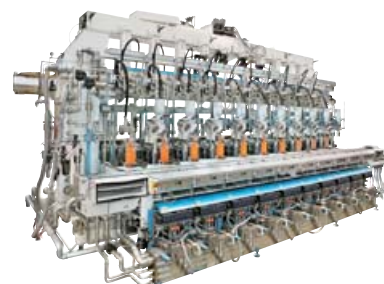
Bottero Hollow Glass, with its associated Revimac, has been a successful story thanks to its drive to deliver innovative glass container solutions to customers from the glass conditioning to the transport of wares.

The Hollow Glass Unit designs and realizes electronic and mechanical gob feeders, for different production needs, IS machines for every kind of glass containers and a complete set of controls and automation systems ; whereas Revimac, besides the overhauling and the reconditioning of IS machines, develops and realizes forehearts, accessories, fittings and complementary equipment for Hot End of glass container production lines.



Компания "Боттеро" вместе с дочерней компанией "Ревимак" ведут многолетний успешный бизнес в стеклотарной отрасли, благодаря постоянному вниманию к инновациям на "горячем конце" стеклотарного производства, начиная от кондиционирования стекла и заканчивая передачей горячих изделий на отжиг.

Отделение тарного стекла компании "Боттеро" разрабатывает и производит электронные и механические капельные питатели для различных производств, секционные ИС-машины для выпуска стеклянной тары любого типа и комплектные электронные системы управления для "горячего конца". Компания "Ревимак" специализируется на капитальном ремонте ИС-машин, а также разрабатывает и производит каналы питателей, оснастку и вспомогательное оборудование для "горячего конца".



Bühler Leybold Optics

Leybold Optics - the pioneer of vacuum technology – nowadays business unit of the division “Advance Materials” of Swiss company Bühler AG – supplies progressive solutions for automated vacuum deposition of functional coatings for architectural glass and other optical applications.

For producers and processors of architectural glass, Bühler offers comprehensive eco-friendly and flexible industrial solutions with the magnetron vacuum coaterseries LEYBOLD OPTICS GLC H, equipped with state-of-the-art transportation and coating deposition systems. Efficient free-of-royalty proprietary coating technology enables newcomers to become reliable suppliers of high-quality low-E glass from the first day of production.



Bühler Alzenau GmbH
BUSINESS AREA LEYBOLD OPTICS
Siemensstrasse 88
63755 Alzenau, Germany
☎ +49 6023 500 0
☎ +49 6023 500 150
✉ leyboldoptics@buhlergroup.com

www.buhlergroup.com
<http://БакумноеНапыление.рф>

Leybold Optics – новатор вакуумной индустрии со 160-летней историей, ныне подразделение швейцарского концерна Бюлер АГ – предлагает передовые решения для нанесения низкоэмиссионных покрытий на архитектурное стекло методом магнетронного напыления. Производителей и переработчиков стекла мы обеспечиваем технологическими комплексами, стоящими между точкой подачи стекла без покрытия и местом отгрузки стекла с покрытием.

Применение в коатерах серии LEYBOLD OPTICS GLC H инновационной системы транспортировки стекла обеспечивает максимальную эффективность производства, а наши технологические разработки позволяют конкурировать с мировыми лидерами по качеству покрытий даже новичкам.



Bystronic Steklo RUS

Bystronic glass symbolizes innovation with machinery, systems and services for the processing of architectural and automotive glass. From basic requirements through to entire, customized installations, Bystronic glass provides pioneering solutions – naturally, all with the highest quality.

- Individually configurable lines for insulating glass unit manufacturing with all common spacers
- Efficient handling equipment for flat glass and plate processing



- Individually developed system solutions for efficient automotive glass pre-processing
- Bystronic glass is an international brand with globally operating companies that support their customers on-site and through own sales and service companies.

Bystronic glass- это инновационный подход в области производства оборудования для обработки архитектурного и автомобильного стекла. Bystronic glass представляет как начальные решения, так и сложные индивидуальные системные решения высочайшего качества.

- Индивидуально проектируемые линии для производства стеклопакетов со всеми видами рамок
- Надежное подъемное оборудование для плоского стекла и листовых материалов
- Индивидуальные системные решения для эффективной предварительной обработки автомобильного стекла

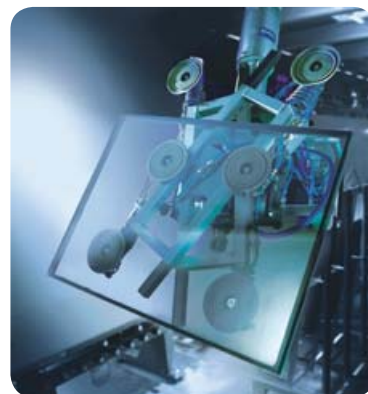
Bystronic glass – это всемирно известная компания с подразделениями по всему миру; подразделения занимаются продажами оборудования и оказывают сервисную поддержку клиентам.



Because we care

Proesd Serebrykova 14, Office 12
129343 Moscow, Russia
☎ +7 - 495 - 9332336
☎ +7 - 495 - 9332336
✉ information@bystronicglass.ru

www.bystronic-glass.com



Car-Met

CAR-MET dedicates its activities to the hollow glass, decorating and tempering industry. The company has chosen to develop its own technology with the aim to improve the performance of its machines, always assuring lower consumption while offering customers the highest technology available in

the market. CAR-MET controls the complete construction of its machines: design, structure, mechanical components, combustion installation, burners and electrical installation are carried out inside the Italian plant. This system enables to control and assure qualitative standards, enabling to respect delivery

terms, allowing to have spare parts always available.

PRODUCTION:

Annealing & decorating lehrs;
Toughening lines;
Mould pre-heating ovens;
Cross conveyors;
Stackers;
Hot glass scrapers.

Фирма Кар-Мет изготавливает печи для отжига, декорирования тарного стекла и закалки стеклоизделий. Фирма постоянно работает над улучшением конструкции печей с целью снижения энергопотребления, повышения качества и надежности.

Фирма имеет собственные производственные площади на севере Италии, где выполняет весь цикл работ от проектирования печи до ее сборки и испытания. Кар-Мет выпускает горелки собственной конструкции, отличающиеся повышенной эффективностью горения и долговечностью. Современное металлорежущее оборудование позволяет

с высокой точностью раскраивать листовую сталь и надежно сваривать ее различными способами, в зависимости от сорта стали. На заводе Кар-Мета внедрена система контроля производства, обеспечивающая соответствие продукции европейским стандартам качества и безопасности.

ПРОДУКЦИЯ:

Печи отжига и декорирования;
Линии закалки;
Печи подогрева форм;
Поперечные конвейеры;
Стакеры;
Грануляторы стекломассы.



Via Cavour 9
31010 Cimetta (TV),
Italy
☎ +39 - 0438 - 794784
☎ +39 - 0438 - 795320
✉ info@carmetspa.it

www.carmetspa.it



Changshu Jianhua Mould Technology

Jianhua Mould, founded in 1976, now is Asia's largest mould manufacturer with about 40 years' experience in the design and manufacturing of glass moulds for glass containers & tableware. Now we run 2 plants and 1 subsidiary, with total 800 employees for total 3 plants.

In 2008, Jianhua Mould became the biggest glass mould manufacturer in Asia.

In 2014, we built another one glass mould plant with the most advanced resin sand casting line in the world.

In 2014 end, we acquired the mould plant ACI from the World's first glass packaging company OI.



Основанная в 1976 г., компания «Jianhua Mould» имеет почти 40-летний опыт производства форм для стеклянной тары и сортовой посуды. На данный момент «Jianhua Mould» является крупнейшей базой по производству форм для стекла в Азии, 70% производимых форм для стеклянной тары экспортируется в США, Францию, Германию, Италию, Россию и более 20 стран и регионов.

Компания «Jianhua Mould» — это крупное производство, основанное на 3-х производственных площадках полного цикла производства, с общим штатом сотрудников в 800 человек. Все от начального литья до оригинального изготовления пресс-форм.

В 2008 году «Jianhua Mould» стала крупнейшим производителем пресс-форм для стеклянной тары в Азии.

В 2014 году, мы построили еще один завод по производству формокомплектов для стеклянной индустрии с самыми передовыми технологиями литья в мире.

В конце 2014 года, мы приобрели завод по производству пресс-форм «ACI» у мирового лидера по производству стеклотары — «Owens-Illinois».



NO.3 Zhongtian Rd Changkun
Industrial, Shajiabang Town
215559 Changshu, Jiangsu, China
☎ +86 - 512 - 52509323
☎ +86 - 521 - 52506790
✉ joe@jhmould.com

www.jhmould.com



Colorobbia

Glass Engineering & Contracting is a new division of Colorobbia Consulting of the Colorobbia group dedicated to the supply of integrated services. Thanks to the wide experience and expertise acquired in raw materials in glass industry, the GE&C Division aims at providing knowhow in R&D, design, realization, and supplying technical services in the main industries of flat glass, hollow glass, glass ceramic and technical glasses, as well as skilled contracting services necessary to these types of production.

The Colorobbia group is specialized in the production and distribution of raw materials and half-finished products for ceramic and glass industry. The head office is in Sovigliana, Vinci (Firenze) with 28 companies and more than 2000 employees in 18 countries.

Glass Engineering & Contracting, является новое разделение Colorobbia Consulting в составе Группа Colorobbia посвящена поставку интегрированных услуг.

Благодаря большому опыту и квалификации, в сфере приобретенных сырья в стекольной промышленности.

Glass Engineering & Contracting направлен на обеспечение ноу-хау в области исследований и разработки, проектирования, реализации и поставке технических услуг в основных отраслях промышленности плоского стекла, полого стекла, стеклокерамики и технических стекол, а также услуги консалтинга, необходимые для этих видов деятельности.

Группа Colorobbia специализируется на производстве и распределении сырья и полуфабрикатов для керамической и стекольной промышленности, находится в Италии, г. Совильяна Винчи (Флоренция) присутствует в 18 странах мира и в настоящее время имеет 28 предприятий и около 2000 сотрудников.



COLOROBbia CONSULTING

Glass Engineering & Contracting

Via Pietramarina, 53
50053 Sovigliana, Vinci (FI),
Italy

☎ +39 0571 7091

☎ +39 0571 709874

✉ info@glasscontracting.com

www.glasscontracting.com

Emmeti

Established in 1982, Emmeti is one of the leading suppliers of palletisers and depalletisers to the global glass market. The synergy between Emmeti and its associate companies, Sipac and Mectra, allows the company to offer a complete range of palletising, depalletising and conveying lines - either semi or fully automatic, sweeping or gripping, high or low level solutions. Emmeti can also design, in conjunction with Sipac, complete cold end and packaging lines manufactured, assembled and tested entirely at its own plant. Customers deal with one supplier only for the integration of all the equipment.

Со времени своего основания в 1982 г. фирма "Эммети" является одним из ведущих поставщиков паллетайзеров и депаллетайзеров на мировой рынок. Тесное взаимодействие с ассоциированными компаниями "Сипак" и "Мектра" позволяет нам предлагать комплексные автоматические или полуавтоматические упаковочные линии для различных отраслей промышленности, включающие в себя паллетайзеры захватного или сдвижного типа с неподвижным или опускающимся поддоном. В кооперации с "Сипаком" мы спроектировали, поставили и запустили большое количество комплексных "холодных окончаний" на стеклотарных заводах по всему миру. В таких проектах "Эммети" выступает как генеральный подрядчик, отвечающий за работу всего комплекса оборудования.



EMMETI

Via G. Galilei, 29
42027 Montecchio Emilia (Re),
Italy

☎ +39 - 0522 - 861911

☎ +39 - 0522 - 861912

✉ emmeti@emmeti-spa.it

www.emmeti-spa.it



futronic GmbH has attained an exceptionally well reputation as a high-tech electronics engineering company worldwide.

futronic has the experience of more than 40 years developing and manufacturing electronic control systems for the hollow glass manufacturing and tableware industry, i.e. Electronic Timing Systems for diverse needs, Synchronous Drive Systems, hot-end reject systems, gateways to integrate components from other suppliers, controlling of proportional valves, automation of the lehr, training systems and various, useful software packages. Customer satisfaction reflects in fast delivery, comprehensive pre- and after-sales support, training and remote maintenance service.



Tolnauerstr. 3-4
88069 Tettnang, Germany
☎ +49 - 7542 - 5307 0
✉ +49 - 7542 - 5307 70
✉ info@futronic.de

www.futronic.de

Futronic приобрел безупречную репутацию как мировой производитель высокотехнологичной электроники. Имеет 40-летний опыт работы по разработке и производству электронных систем управления для тарного стекла и сортовой посуды, а именно: производство систем синхронизации для различных нужд, производство систем синхронизации приводов и систем отбраковки тары на горячем конце; возможность интеграции компонентов различных поставщиков, управление редукционными клапанами и автоматизация лера.

В целях удовлетворения потребностей клиентов, Futronic предоставляет быструю доставку, проводит полное пре- и послепродажное обслуживание, предлагает обучение и дистанционное техническое обслуживание.



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 melting furnaces
- Boosting systems
- Forehearth
- Colouring forehearth with frit dosing system
- Batch chargers
- Heat recuperator for day tanks

- and continuous furnaces
- Automatic control level machines with platinum probe, with or without electronic controller
- Stirrers and stirring machines
- Control boards
- Combustion systems for any kind of fuel, gas, oil and reversal plants
- Burners for any kind of fuel, gas, oil
- Special machines 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- 5- and 6-axes)
- Blowing robots
- Suction robots
- Fire polishing robots
- Handling robots

Glass Service предоставляет технологические решения в области производства сортового стекла на уровне самых высоких мировых стандартов. Итальянская компания проектирует, производит и обслуживает широкую гамму оборудования для стекольной промышленности.

Группа технологий стекловарения

- Автоматические и полуавтоматические составные цеха и линии рециркуляции стеклобоя
- Суточные и горшковые печи
- Рекуперативные и регенеративные варочные печи непрерывного цикла
- Системы электроподогрева
- Каналы питателей
- Окрашивающие каналы и системы дозирования фритты
- Загрузчики шихты
- Рекуператоры тепла для суточных печей и печей непрерывного цикла

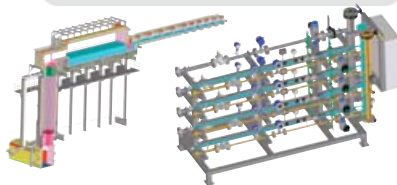
- Системы автоматического контроля уровня стекломассы контактного и бесконтактного типа с электронным или электромеханическим управлением
- Мешалки стекломассы
- Системы управления
- Комбустийные системы для любого топлива, оборудование для реверса
- Горелки для газа и жидкого топлива
- Специальное оборудование для стекольного производства

Помимо этого компания предоставляет заказчику полный комплект услуг техподдержки как на стадии монтажа, так и при обслуживании систем.



Via Cascina Lari
56028 San Miniato (PI), Italy
☎ +39 - 0571 - 4442
✉ +39 - 0571 - 417051
✉ glass-service@glassservice.it

www.glassservice.it



Это включает также запуск и обучение персонала заказчика.

Группа робототехники

Glass service является лидером в разработке решений по применению роботов в стекольной промышленности.

- Роботы-наборщики стекломассы (4, 5 и 6 осей)
- Роботы-выдувальщики
- Роботы для огневой полировки
- Транспортные роботы

Glaston

Glaston is an industry-leading company committed to delivering technologies and services for the manufacturing of the world's best heat-treated glass. Our machines are used to create high-quality glass for use in architectural, solar, appliance and automotive applications. Our portfolio includes a comprehensive selection of heat treatment machines and services. In addition to excellent end product quality, our machines are known for providing superior reliability in operations and high level energy efficiency. Technological excellence combined with dedicated support and services gives our customers a competitive edge in their business. We have a strong sales, service and manufacturing presence around the globe with production on three different continents and a sales presence in more than 20 locations.



glaston

Vehmaistenkatu 5
33730 Tampere, Finland
☎ +358 - 10 - 500500
✉ +358 - 10 - 5006190
✉ info@glaston.net
www.glaston.net

Компания Glaston - лидер отрасли по поставке технологий и услуг для производства лучшего безопасного стекла. Наше оборудование используется для производства высококачественного стекла для строительной отрасли, солнечной энергетики, производства мебели и бытовых приборов, а также для автомобильной промышленности. Мы предлагаем широкий выбор оборудования для термической обработки стекла и сопутствующий сервис. В дополнение к отличному качеству конечной продукции, производимой на наших печах, наше оборудование известно также превосходной надежностью и высоким уровнем энергоэффективности. Технологическое превосходство Glaston в сочетании с долгосрочной и надежной поддержкой и услугами предоставляют нашим заказчикам неоспоримое преимущество в бизнесе. У нас широкая сеть офисов продаж, сервисных центров и производственных площадок по всему миру. Мы производим свое оборудование на трех разных континентах, и у нас более 20 представительств в разных странах мира.



Horn Glass Industries



HORN Glass Industries AG is a leading international supplier of high quality glass melting solutions and services. As a competent partner, we strive to deliver the best product for an improved glass production process. HORN has vast expertise in engineering, design and manufacturing of different kind of glass melting furnace types, distributor and Forehearth for Container, Float Glass, Table ware, Glass fibre and special Glass. With its service HORN covers all glass industry requirements. A team of professionals with a wealth of know-how are at the customers' disposal to install and commission glass plants worldwide. Meeting the expectations of our customers is our most important goal!

HORN
GLASS INDUSTRIES

Bergstrasse 2
95703 Ploessberg, Germany
☎ +49 9636 92 04 0
✉ +49 9636 92 04 10
✉ info@hornglas.de
www.hornglas.de

HORN Glass Industries AG – один из ведущих поставщиков высококачественных технологических решений и услуг в области стекловарения. Как опытный партнер, мы поставляем качественную продукцию, обеспечивая высокое качество производства стекла. HORN имеет обширный опыт разработки, проектирования и строительства различных видов стекловаренных печей, распределительных каналов и каналов питателя для производства тарного и флоат стекла, изделий из стекла и пр. Ассортимент услуг HORN охватывает все потребности стекольной промышленности. Команда профессионалов, а также ценные "ноу-хау" предлагаются клиенту во время монтажа и запуска линий по всему миру. Наша задача – оправдать ожидания наших клиентов!



Iris Inspection Machines

IRIS is the worldwide leader in camera cold-end inspection of glass containers for international brands with high quality standard articles, produced by worldwide companies. IRIS provides inspection solutions for glass containers of any shape or colour, including wine, beer, liquor and Champagne bottles, pharmaceuticals, perfumes and food containers. A team of dedicated R&D engineers has evolved a range of equipment to match the industry's demanding requirements and satisfy the inspection needs of key international customers. The company has based its development on long-term partnerships with glassmakers in the field of glass defects detection, as well as on exceptional know-how in the most innovative vision technologies. IRIS was the first to develop and propose a 12-camera inspection machine. The success of IRIS is due not only to the exceptional efficiency of its Evolution machine range but also to the excellent support provided by its engineers worldwide.



Фирма ИРИС является мировым лидером в области оптического контроля качества стеклянной тары на холодном конце. Мы успешно работаем с ведущими мировыми брендами напитков, предъявляющими самые высокие требования к качеству тары. Оборудование ИРИС позволяет inspectировать бутылки любой формы, размера, и цвета, в том числе фармацевтическую тару, парфюмерные флаконы и бутылки с толстым дном, например, для шампанского. Наши инженеры разработали ряд инспекционных машин, отвечающих за выполнение определенных задач контроля и обладающих набором специфических функций.

Наша фирма развивается в постоянном тесном контакте с производителями стекла и разработчиками технологии промышленного "машинного зрения". Мы были первыми, кто предложил стекловикам машины с 12-ю камерами для инспекции.

Своим успехом фирма ИРИС обязана не только высокой эффективности машин серии Эволюшн, но и отличной сервисной поддержке по всему миру.

IRIS Inspection machines

14, rue du 35eme Regiment
d'Aviation, Parc du Chêne
69500 Bron, France
☎ +33 - 4 - 72783527
☎ +33 - 4 - 72783507
✉ spodleiszekova@iris-im.fr

www.iris-im.com

Italcarrelli

Italcarrelli® is a world leader in the design and construction of special machineries and solutions for the storage and handling of goods. Thanks to many years of experience in this sector the company has acquired remarkable knowledge of the glass sector and, thanks to investments in the research of innovative solutions, it is providing its own products to all the most important glass manufacturing companies all over the world.

Range of products:

- Platform glass transporters
- In-loader glass transporters
- Multi-directional side-loaders
- Special equipment for glass handling
- Machines to handle packed glass inside closed top containers

Italcarrelli® является мировым лидером в разработке и производстве специализированной техники и решений для подъема и перемещения различных грузов. За многолетнюю работу в реальных условиях компания получила уникальный опыт и знание потребностей стекольной промышленности. Благодаря инвестициям в разработку инновационных решений, Italcarrelli® предоставляет собственный модельный ряд всем крупнейшим производителям стекла.

Номенклатура выпускаемой продукции:

- Платформенные перевозчики стекла
- Перевозчики стекла типа «инлоудер»
- Многоходовые погрузчики
- Нестандартное оборудование для обращения со стеклом
- Техника для загрузки упакованного стекла в контейнер



ITALCARRELLI®

Via Monte Rosa 9
36072 Chiampo (VI), Italy
☎ +39 - 0444 - 623393
☎ +39 - 0444 - 420195
✉ info@italcarrelli.eu

www.italcarrelli.eu



LWN Lufttechnik

LWN Lufttechnik is worldwide market leader in cooling systems for glass industry. We are producer not only of the high efficiency fans but also of the valves (up to 1000°C), air ducts, nozzles, electrical cabinets and automatic control systems. With our innovative cooling systems its possible not only to save energy but also to increase production speed. Our cooling systems are successfully installed and used in over 50



countries all around the world by biggest glass producers for both container (i.a. Ardagh, Vetropack, Can-Pack) and float (i. a. AGC, Euroglass, Saint-Gobain). We are also providing all kind of engineering and thermal calculations. We will cool Your glass.

LWN Lufttechnik является лидером мирового рынка в системах охлаждения в рамках стекольной промышленности. Мы являемся производителем не только из высоких боельщиков эффективности, но также из клапанов (до 1000 ° C), воздуховоды, сопла, электрических шкафов и автоматических систем управления. С нашими инновационными системами охлаждения можно не только сэкономить энергию, но также увеличить скорость производства. Наши системы охлаждения успешно установлены и используются в более чем 50 странах по всему миру крупнейших производителей стекла как для контейнеров (Ardagh, Vetropack, Can-Pack) и поплавков (AGC, Euroglass, Saint-Gobain). Мы также оказываем все виды инженерных и тепловых расчетов. We will cool Your glass.

 **LWN Lufttechnik GmbH**

Hühndorfer Höhe 7
01723 Wilsdruff, Saxon, Germany
☎ +49 - 35204 - 2708 27
✉ +49 - 35204 - 2708 39
✉ a.pinda@lufttechnik-lwn.de
r.giesbert@lwn-lufttechnik.de

www.lufttechnik-lwn.de



Mappi International

Mappi International is the leading Italian manufacturer of tempering furnaces and systems for the glass industry that stand out for their technologically advanced design and construction and simple use. The company is active in both national and international markets thanks to its long-standing knowledge and experience in safety glass, using some of the most sophisticated technological innovations and maintaining high standards of quality.

Mappi ATS J is the latest product, and is one of the world's largest furnaces for the tempering of flat glass. The machine is designed to meet all the needs of the market, and tempers the largest glass sheets. The project related to the new ATS J is truly ingenious: it promoted the creation of a new range, corresponding to the new needs of the construction market. It is also the result of the hard work of an Italian design department, in which Mappi has always invested and believed.

MAPPI является итальянским лидером по производству печей закаливания, высококачественных закаливающих систем для стекольной промышленности, что подчеркивает их технологическое превосходство, дизайн, конструкцию и простое использование.

Активны на национальном и международных рынках благодаря продолжительному опыту и знаниям в технологии безопасного стекла, используя некоторые их наиболее замысловатых технологических инноваций и поддержания высоких стандартов качества.

ATS J является их последним продуктом. Это одна из известнейших в мире печей закаливания листового стекла. Машина разработана, чтобы удовлетворить все потребности рынка и увеличить объемы закаливания листового стекла. Проект, связанный с новинкой ATS J является поистине гениальным: он способствовал созданию новой номенклатуры, соответствующей новым потребностям строительного рынка. Это также является результатом кропотливой работы отдела итальянских дизайнеров, который MAPPI всегда инвестировал и делал на это ставку.



Via A. Fieramonti, 1
04012 Cisterna (LT), Italy
☎ +39 - 06 - 96873284
✉ +39 - 06 - 96873211
✉ info@mappi.it

www.mappi.it



Neptun

Neptun was founded by Stefano Bavelloni, with the direct involvement of the Bavelloni family.

Thanks to proven ability and strong roots, combined with a modern innovative approach, Neptun is quickly becoming a prominent player in the flat glass processing sector. Straight-line edgers and mitring machines, vertical NC working centers, horizontal and vertical washing machines - now also with automatic integrated corner cutting - all conceived to deliver expertise and affordable high technology to the glass industry.



The Bavelloni Family



Компания Neptun была основана Stefano Bavelloni (Стефано Бавеллони), при непосредственном участии семьи Bavelloni.

Благодаря проверенным временем возможностям и патентованным технологиям, в сочетании с современным инновационным подходом, Neptun быстро становится заметным игроком в секторе обработки плоского стекла.

Вертикальные станки для обработки кромки и станки с регулируемым углом фаски (0° - 45°), горизонтальные и вертикальные моечные машины, вертикальные обрабатывающие центры с ЧПУ теперь также с встроенным автоматическим подрезанием угла: всё это создано, чтобы предоставить свой опыт и новейшие высокие технологии для стекольной промышленности.



Via Mazzini, 63 E/F
22070 Rovello Porro (CO), Italy
☎ +39 - 02 - 96979011
☎ +39 - 02 - 96754375
✉ info@neptunglass.com

www.neptunglass.com

OCMI-OTG

The production of OCMI-OTG S.p.a. is organized in two divisions.

The first division is dedicated to the development of complete lines for glass tube processing finalized to the production of pharmaceutical and cosmetic containers such as ampoules, vials, droppers and cartridges.

The second division is dedicated to the development of equipment for the production of glass stemware, pressed-blown and pressed items.

The range of this division includes sealing/stretching machines for stemware, press-blow machines for jug production, single- or double-gob presses for any size of tableware items such as cups, mugs, plates, tumblers etc...

Along with valued partners, OCMI also supplies turnkey solutions for the production of technical glass items such as glass bricks and glass insulators for high tension lines.



Производство OCMI-OTG S.p.a. организовано в двух направлениях.

Первое направление - это разработка и производство комплектов линий для изготовления ампул, флаконов, капельниц и картриджей из стеклянной трубки для фармацевтической и косметической промышленности.

Второе направление - это разработка и производство оборудования для производства стеклянной посуды, прессовываемых изделий и изделий, полученных путем прессования. Сфера деятельности этого подразделения включает в себя: спаянные машины для бокалов, пресс-выдувные машины для производства кувшинов, одно/двухкапельные прессы для любого размера посуды, таких как чашки, кружки, тарелки, стаканы и т.д. ...

OCMI со своими надежными партнерами, также могут поставлять под ключ решения для производства изделий из технического стекла, таких как стеклоблоки и стеклянные изоляторы для высоковольтных линий электропередач.



Via Venezia Giulia 7
20157 Milan, Italy
☎ +39-02-3909181
☎ +39-02-3570944
✉ info@ocmigroup.com

www.ocmigroup.com



Olivotto Glass Technologies

OGT is the worldwide leader in the supply of machinery and production technology for hollow glass, from stemwares lines, to spinning machines, tubing lines, and press machines for the production of any type of glass.

Our supplies include:

Welding/sealing machines, Multifunction machines for stemware production, Feeders, Blowing lines, Tubing lines, Press and Blow machines, Presses, Fire polishing machines, Spinning machines, Stretching machines, Burn-off machines, Large Containers machines, Glass brick and glass insulator lines, Revamping and Overhauling for all the above machines – Engineering and services for turnkey projects.



ОГТ является мировым лидером в поставке оборудования и технологий, использующих стекло любого типа в производстве полых изделий: от линий изготавливающих винный бокал, до центрифужных машин, линий стеклотрубки, прессов.

Наша поставка включает:

Машины сварки/запайки, многофункциональные машины выпускающие бокалы, фидеры, выдувные линии, линии стеклотрубки, прессовывающие машины, прессы, машины огневой полировки, центрифужные, растяжные машины, машины "горячего реза шапки", оборудование для больших бутылей, производственные линии для стеклоблоков и стеклянных изоляторов, реконструкция и ремонт всего вышеперечисленного оборудования, инжиниринг и полный технический сервис, включая проекты под ключ.

OGT
OLIVOTTO GLASS TECHNOLOGIES

Viale Gandhi, 22
10051 Avigliana (TO), Italy
☎ +39 - 011 - 9343511
✉ +39 - 011 - 9343592
✉ info@olivotto.it

www.olivotto.it

Risteklo

Since 2003, we have been agents in Russia and CIS for numerous leading European manufacturers of glass machinery: Bottero spa, Revimac srl, Car-Met srl, Emmeti spa and Sipac spa, Iris Inspection, Fermac srl and CER.

RITSTEKLO Ltd. promotes the sales of glass forming machines with relevant equipment, annealing lehrs, packing equipment, on-line inspection machines and decoration equipment for glass containers.

We deliver complete installations for new projects or stand-alone machines and/or units for the retrofit of existing factories. Warranty and post-warranty service is done by our Russian speaking engineers who have vast experience of installation and adjustment of IS machines. Our contribution to a project starts from provision of basic layouts, engineering data and selection of equipment for the particular target. Our experience and close co-operation with the Principals allow us to always find the most efficient solution for any customer and project.

С 2003 года мы являемся официальным представителем в России и СНГ нескольких ведущих европейских фирм-поставщиков оборудования: Боттеро, Ревимак, Кар-Мет, Эммети, Сипак, Ирис Инспекшн, Фермак и CER.

"Ристекло" предлагает Заказчикам стеклоформирующие машины с сопутствующим оборудованием, печи отжига и декорирования, упаковочное оборудование, инспекционные машины и оборудование для декорирования стеклянной тары.

Мы поставляем комплектные машинолинии для новых производств или отдельные машины и агрегаты для модернизации действующих заводов. Гарантийный и послегарантийный сервис выполняется русскоговорящими инженерами, имеющими большой опыт наладки и ремонта стеклоформирующих машин.

Наше участие в новом проекте начинается с предоставления Заказчику предпроектных данных, основных планов и разрезов, подбора оборудования для реализации конкретной задачи. Наш опыт и тесное сотрудничество с Поставщиками всегда позволяет найти оптимальное решение для любого Заказчика и проекта.

РИСТЕКЛО
RITSTEKLO

off. 316, no3, Kholodilny per.
115191 Moscow, Russia
☎ +7-495-7716844
✉ rit@ritsteklo.ru

www.ritsteklo.ru



Schiatti Angelo

Schiatti Angelo's production offers a complete range of straight- and double-edgers - also in line, drillers, multi heads drillers, bevellers, glass loaders/unloaders, drilling centres and vertical arising machines. Production has recently been enriched with the vertical drilling/milling machine models of the TFV series, able to carry out holes and mill shapes on glass sheets ranging from 3 to 15mm. This machine is completely automateis, and is managed by a personalized programmed PC "TOUCH SCEEN" system. Automatic tool changing is also available as an option. All Schiatti machines are built in conformity with the European Community standards in force.



Via alla Porada, 188
20831 Seregno (MB), Italy
☎ +39 - 0362 - 238496
☎ +39 - 0362 - 327990
✉ info@schiattiangelosrl.com
www.schiattiangelosrl.com

Производство Schiatti Angelo предлагает полный ассортимент прямолинейных и двойных кромко-обрезных станков и линий, стеклопогрузчики и разгрузчики, буровые центры и вертикального типа машины, сверлильные станки и многоголовные сверлильные станки. Недавно производство было оснащено вертикальными сверлильно-фрезерными станками моделей TFV серии, способные осуществлять переноску без отверстий, выполнять формы на стекольных листах толщиной от 3 до 15 мм. Машина полностью автоматизирована, управляемая персональным компьютером и снабжена сенсорным экраном. В качестве опции также доступна автоматическая смена инструмента.

Все машины Schiatti построены и утверждены в соответствии с действующими стандартами Европейского сообщества.



Sigmatref (S.I.G.M.A. Group)

S.I.G.M.A GROUP - a leading European refractory producer for glass industries, manufactures Feeder Expendables, Forehearthers & special shapes at its production plants in Italy: S.I.G.M.A S.r.l and in Bulgaria: SIGMAREF SRLU. The company has more than 100 clients, 90% of sales from glass, 80% production for export. Manufacturing capacity: 7000 tons pressed + 6000 tons vibrocast at its 50 000m² plant areas, more than 40 years of refractory experience. more than EUR 25 million sales, 10 shuttle kilns.

What we can produce?

- Complete melting end bottoms • Complete working end superstructure and bottom insulation
- Forehearthers - Complete superstructure and channels • Regenerators - Complete regenerator walls in mullite, sillimanite and fireclay • Feeder expendables - Spouts, Tubes, Plungers, Orifice rings, Spout covers and Burner blocks, Stirrers, Rotors, Insulation, etc.

With strategic partnerships for fused cast & basic materials, S.I.G.M.A can supply refractories for complete furnaces and turnkey projects.

SIGMA GROUP - ведущий европейский производитель огнеупорых для стекольной промышленности - элементы фидера, питателей & специальные формы. Производственные фабрики в Италии: SIGMA Srl и в Болгарии: SIGMAREF SRLU. 100+ клиенты, 90% продаж от стекла, 80% продукция для экспорт. Мощность: 7000 тонн прессованные + 6000 тонн виброванные материалы. 50 000m² площ завода, 40 + лет опыта в производство огнеупорах. 25+ млн евро продаж, 10 печей. Что мы можем производить?

- Покрывтие для дна печи • Блоки и надстройки для выработочная часть & изоляции дно • Канальные блоки и надстройки питателя
- Стены в муллита, силлиманита и шамота для регенераторные камеры • Расходные элементы для фидера - Чаши, Бушинги, Плунжеро, очка, крышки для чаши, горелочны блоки, мешалки, роторы, изоляции и т.д.

С наши стратегические партнерства для електроплавачны и базовых материалов, SIGMA в состоянии поставлять огнеупоров для полной ремонт печи и проектов под ключ.



158 Koshovete
Str. Maritsa Municipality,
4003 Plovdiv, Bulgaria
☎ +359 - 32 - 396423
☎ +359 - 879 661315
✉ office@sigmaref.bg
www.sigmaref.it



The company has been in glass business since 1990. Its activities are focused on sales and after-sale services with regards to marketing and sales of:

- flat glass processing machines;
- hollow glass and packaging machines;
- glass melting furnaces;
- float glass manufacturing equipment and complete turnkey projects.

After successful development in the Turkish market, the company has also expanded its sales network in Azerbaijan, Georgia and Mid-Asian countries, where it represents the

following manufacturers: BOTTERO FLAT GLASS, LANGENDORF, OPTIMA, TENON, WINDO, YUNTONG, BOTTERO HOLLOW GLASS, REVIMAC, TECO, TECOGLAS, CAR-MET, ZEDTEC, KTG ENGINEERING, RAMSEY CHAIN.

The main principle of the company is based on its clients goals, starting before sales, and maximum gratification of their needs by giving them its best service.

The company is ready to collaborate in every kind of glass business in order to further develop its sphere of activities.

Компания существует на рынке стекольного бизнеса с 1990.

Её деятельность фокусирована на продаже и оказывании услуг после продажи в области маркетинга и продаж:

- оборудования для промышленной обработки листового стекла;
- оборудования для производства и упаковки тарного стекла;
- стеклоплавильных печей;
- оборудования для производства флоат-стекла и комплексные проекты оборудования, сдаваемые «под ключ».

После освоения рынка Турции, компания расширила свою географию продаж в Азербайджане, Грузии и в странах Средней Азии, где реализует продукцию таких компаний, как: BOTTERO FLAT GLASS, LANGENDORF, OPTIMA, TENON, WINDO, YUNTONG, BOTTERO HOLLOW GLASS, REVIMAC, TECO, TECOGLAS, CAR-MET, ZEDTEC, KTG ENGINEERING, RAMSEY CHAIN.

Основное кредо компании заключается в правильной ориентации своих клиентов до продажи и максимальное



SDC İç ve Dış Ticaret A.Ş.

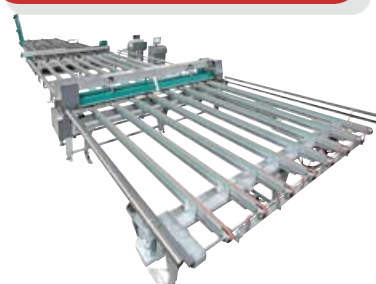
Varyap Meridian Grand Tower, Al Zambak Sok., No: 2 A-Blok D: 142 - 34746 Istanbul, Turkey

☎ +90 - 216 - 5040434

☎ +90 - 216 - 5040430

✉ sdc@sdctr.com

www.sdctr.com



удовлетворение их нужд после продаж, путём предоставления им наилучшего сервиса.

Компания готова сотрудничать в любой области стекольного бизнеса.



SIPAC designs and produces bottle and package conveying systems, elevators, lowerators and other package transportation systems. The combined resources and capabilities of these three companies enable Emmeti to offer a turnkey approach to package handling systems. Along with the systems designed and produced by Emmeti, we can incorporate equipment from sub-suppliers for turnkey projects.



Via Berettinazza, 25

43100 Parma, Italy

☎ +39 - 0521 - 611811

☎ +39 - 0521 - 611850

✉ sipac@sipac.pr.it

www.sipac.pr.it

Фирма "Сипак" проектирует и производит конвейерные системы, включая однорядные и многорядные конвейеры, элеваторы, погрузчики, "перевертыши" и прочие специальные устройства. Вместе с фирмами "Эммети" и "Мектра", мы участвуем в комплексных проектах по транспортировке и упаковке продукции в различных отраслях, в том числе, в поставке комплектов "холодного окончатий" для стеклотарных заводов. В таких проектах "Сипак" выступает как субподрядчик фирмы "Эммети", которая берет на себя ответственность за весь проект.

Softeco



Softeco is the worldwide leading supplier of Quality Control equipment for the flat glass industry, both architectural and automotive. We follow closely all the changes in EU regulations and international norms.

This year at Baku Glass we will present:

- Wedged PVB cutting and shaping technology
- PVB treatment technology, from roll handling to cut sheets ready for lamination.
- Quality control equipment, necessary for the application for international certification for automotive and architectural glass.

Softeco

Kalevankatu 18 A3
FIN 00100 Helsinki, Finland
☎ +358 - 33600424
✉ +358 - 33600434
✉ reima.makinen@softeco.com

www.softeco.com

Softeco это ведущий поставщик оборудования контроля качества для производства плоского автомобильного, и строительного стекла по всему миру. Мы следим за всеми изменениями в Европейских и Международных нормативных требованиях.

В этом году мы вам представим :

- Технологию по угловой резке и формированию ПВБ.
- Технологию по обработке ПВБ, от рулона до готовых к ламинированию листов.
- Оборудование для контроля качества, необходимое для международной сертификации автомобильного и строительного стекла.



Sparklike Group

Sparklike offers insulating glass manufacturers non-invasive testing methods to verify gas concentration inside insulating glass units (IGU). This allows manufacturers to test their production without breaking the glass units, and deliver superior quality to their customers.

Sparklike is the developer of world's first non-invasive argon analyzer for insulating glass gas fill, and is now introducing new innovative products to its testing portfolio. Sparklike Gasglass product line products allow testing both double- and triple-glazed IGUs. The company was founded in 2001, and its headquarters are located in Helsinki, Finland. www.sparklike.com

Компания Sparklike предлагает производителям стеклопакетов методы неразрушающего контроля концентрации газа внутри стеклопакетов. Это позволяет производителям протестировать свои производства, не разрушая стеклопакетов, и обеспечить превосходное качество своей продукции для клиентов.

Sparklike является разработчиком первого в мире анализатора аргона для заполнения стеклопакетов неразрушающим методом и в настоящее время внедряет новые инновационные продукты для тестирования продукции. Ассортиментная линейка приборов Sparklike Gasglass позволяет тестировать как однокамерные, так и двухкамерные стеклопакеты. Компания Sparklike была основана в 2001 году и ее штаб-квартира расположена в городе Хельсинки, Финляндия. www.sparklike.com



Kaivokatu 8 B
00100 Helsinki, Finland
Contact: Mauri Saksala,
Sales Director
☎ +358 400 834796 (mobile)
✉ mauri.saksala@sparklike.com

www.sparklike.com



Stara Glass



Design;
Engineering;
Turnkey supply of glass melting furnaces (regenerative, recuperative, **hybrid**, oxy-fuel, day tanks) for all kind of glass (container, rolled pattern glass, tableware, sodium silicate, opal and borosilicate glass, etc);
Repairs: Demolition, re-construction, hot repair;
Supply of all refractory materials, equipment,

combustion systems, recuperators, steel structure process control, cooling liquid and gas fluid systems;
Technical assistance;
Heat balance calculation on operating furnaces;
Technical due diligence;
Endoscopies;
Advanced systems for NOx containment;
Research and Development in the glass industry.



Piazza Rossetti, 3 A/1
16129 Genova, Italy
☎ +39 - 010 - 576391
✉ +39 - 010 - 564763
✉ staraglass@hydragroup.it

www.staraglass.com



Проектирование;
Инжиниринг;
Поставка «под ключ» стекловаренных печей: регенеративных, рекуперативных, комбинированных, кислородных для производства различных видов стекла (стеклотары, сортовой посуды, боросиликатного, декоративного, опалового стекла и т.д.);

Ремонтные работы: разборка, печей, реконструкция, горячий ремонт;
Поставка огнеупорных материалов, оборудования, систем горения, рекуператоров, металлоконструкций, систем управления);
Техническая поддержка;
Тепловой баланс на работающих печах;

Технический аудит;
Эндоскопы;
Фильтры для снижения выбросов NOx;
Научно-исследовательские работы в стекольном производстве

TK

TK produces high-quality industrial equipment for the thermal treatment of glass. It targets small-, medium- and large-sized enterprises, in Italy and abroad, who need to increase their production capacity, while increasing the quality and performance of finished products.

Our range:

1. flat and curved tempering machines, chemical tempering ovens;
2. EVA laminating furnaces and EVA/PVB laminating lines with and without autoclave;
3. bending ovens and lines;
4. furnaces for artistic fusion.

We guarantee:

- the best technology and innovation, the re-



sult of constant investments in research and development;

- the most advanced European components for the construction of all the plants and equipment in our factory;
- turnkey processes: from preliminary analysis to after-sales service, passing through design, installation and monitoring of the furnaces;
- 100% customized solutions: tailored to meet the needs of customers, as each machine is designed and built together with the customer.



Via Rossini, 4
23847 Molteno (LC), Italy
☎ +39 - 031 - 3574873
✉ +39 - 031 - 5472199
✉ ask@tkitaly.com

www.tkitaly.com



TK производит высококачественное промышленное оборудование для термической обработки стекла.

Для малых, средних и больших по размеру предприятий, в Италии и за рубежом, которым необходимо увеличить свои производственные мощности, качество и производительность готового продукта. Наш ассортимент :

1. Печи для закалки плоского и изогнутого стекла, печи химической закалки;

2. Печи ламинирования с EVA и линии ламинирования с EVA / PVB с и без автоклава;
3. Печи и линии моллирования;
4. Печи для художественного фьюзинга.

Мы гарантируем:

- лучшую технологию и инновации, результат постоянных инвестиций в исследования и разработки;
- передовые европейские материалы для

конструирования наших печей ;

- процесс под ключ : от предварительного анализа до послепродажного обслуживания, проходящее через проектирование, монтаж и мониторинг печей;
- 100% индивидуальные решения: специально разработаны для удовлетворения потребностей клиентов, каждая наша печь сделана вместе с заказчиком.

WALTEC Maschinen

Production programme:

FULLY AUTOMATIC PRODUCTION LINES WITH PLC/CNC ELECTRONIC CONTROL FOR tableware, spinning articles, stemware, press-blown articles, blow-blow articles, toughening/tempering, microwave and technical articles, washing machine glasses, cold light reflectors, glass insulators, glass blocks

Press and blow machine W12



Quadruple Gob lines
Triple Gob lines
Double Gob lines
Single Gob lines
Spinning lines
Stemware lines
Press-Blow lines
Blow-Blow lines
Toughening/Tempering lines

Программа производства и продажи:

ПОЛНОСТЬЮ АВТОМАТИЗИРОВАННЫЕ ПРОИЗВОДСТВЕННЫЕ ЛИНИИ С ЭЛЕКТРОННЫМ УПРАВЛЕНИЕМ SPS/CNC ДЛЯ

Столовой посуды, изделий центробежного формования, изделий на ножке, пресси-выдувных изделий, изделий двойного выдува, закалки, посуды для микроволновых печей и технические изделия, стёкол для люков стиральных машин, отражателей холодного свечения, стеклянных изоляторов, стеклоблоков

Четырехкапельные линии

Трёхкапельные линии

Двухкапельные линии

Однокапельные линии

Линии центробежного формования

Линии производства изделий на ножке

Пресси-выдувные линии

Линии двойного выдувания

Линии для закалки



Kronacher Str. 2a
96352 Wilhelmsthal, Bavaria
Germany

☎ +49 - 9260 - 9901-0

☎ +49 - 9260 - 9901-99

✉ info@waltec.de

www.waltec.de

ZIPPE Industrieanlagen

ZIPPE is the market leader in the area of melting material preparation in terms of design, manufacturing, installation and commissioning of plants. Scope of services:

- Batch Plants
- Engineering
- Control and Automation Technology
- Modernization of existing plants, mechanical and electrical
- Modernization of Electronic Control and Weighing Systems
- Processing Plants for Factory Cullet, Post-consumer Glass, Special Glass Waste
- Batch Chargers
- Glass Level Controllers
- Batch Preheating
- Maintenance & Service

ZIPPE not only offers delivery and installation of equipment, but also consulting and engineering. Well-trained engineers and supervisors install and commission the plants.

ЦИППЕ занимает ведущее положение на международном рынке в области подготовки сырья по части проектирования, изготовления, монтажа и ввода в эксплуатацию готового комплексного оборудования. В объем наших услуг входят:

- Дозировочно-смесительные установки
- Инженерно-проектные работы
- Система контроля и управления и система автоматизации
- Механическая и электрическая модернизация действующих заводов
- Модернизация системы управления и систем взвешивания
- Перерабатывающее системное оборудование для заводского стеклобоя, утилизированного стекла и отходов специального стекла
- Загрузчики шихты
- Датчики уровня стекломассы
- Системы предварительного подогрева шихты
- Ремонтное и сервисное обслуживание



Alfred-Zippe-Strasse 11
97877 Wertheim, Germany

☎ +49 - 9342 - 804 0

☎ +49 - 9342 - 804138

✉ zippe@zippe.de

www.zippe.de

Cuba Glass

The Glass Industry Event for Cuba and the Caribbean Region

2016

6 - 7 DECEMBER 2016
LA HABANA, CUBA

MELIÀ COHIBA
HOTEL

• MANUFACTURING • PROCESSING • PRODUCTS • SERVICES



FREE ENTRY FOR BUSINESS
& PROFESSIONAL VISITORS

MEDIA PARTNERS:

WWW.GLASSONLINE.COM

glassmachinery
world
plants & accessories
BI-MONTHLY INTERNATIONAL MAGAZINE FOR GLASS MANUFACTURING

glassOnline
The World's Leading Glass Industry Website

Glass-Technology
International
THE LEADING MAGAZINE FOR THE INTERNATIONAL FLAT GLASS INDUSTRY

Vidrio
PLANO E INDUSTRIAS AFINES

ORGANIZER:

 A151 Srl

SALES OFFICE:

Smartenergy Srl

Via Antonio Gramsci 57, 20032 Cormano, Milan (Italy) • Tel.: +39-02-66306866 • Fax: +39-02-66305510

Company Workshops

FLAT GLASS SESSION

10.30 - 10.45

INDUSTRIAL SOLUTIONS FOR FUNCTIONAL COATING DEPOSITION TO GLASS

Buhler - Leybold Optics

Swiss company Buhler AG with its business unit Leybold Optics – pioneer in vacuum technology – introduces innovative industrial solutions for deposition of energy-saving, sun-protective and other functional coatings to the glass factories and window-makers; also batch-type machines for multi-layer coating of precision optics components, ophthalmic lenses.

10.50 - 11.05

FOCUS ON PRESENT READY FOR FUTURE

Schiatti Angelo

Since 1950, SCHIATTI ANGELO srl manufactures machines for the glass processing. The experience gathered in over than 65 years of activity, and more than 17.000 machines manufactured from among straight and double edgers, straight bevellers, automatic arising machines, drillers and glass loaders/unloaders make us an ideal partner to small and big companies both nationally and internationally.

11.10 - 11.25

NEW PRODUCTION TRENDS: MODULAR CNC UNITS

Neptun

Neptun presents the alternative to the traditional multifunctional centers. The innovative division of the work phases into CNC units which are independent the one from the other but completely integrated in the production flow, allows you to reach new targets in efficiency and production costs.

11.30 - 11.45

SURFACE STRESS MEASUREMENT USING THE GASP POLARIMETER

Ayrox / Softeco

Instrument presentation; Working principle; Application fields; Models and variants; Benefits and limitations.

11.50 - 12.05

BOTTERO - UNIQUENESS IN GLASS / FLAT – HOLLOW – FLOAT

Bottero

Since 1957, the year of its foundation, Bottero has specialised in the production of glass working machinery and is one of the world's largest equipment manufacturer in three sectors: flat glass, hollow glass and special equipment. Bottero's continuous attention to detail and comprehensive range of products provides for its customers every need. From float glass lines to cutting tables with a wide range of automatic loading options, pre-processing and processing, high volume laminated lines and high speed bottle manufacturing machinery.

12.10 - 12.25

BYSTRONIC GLASS – FUTURE ORIENTED SYSTEMS FOR PROCESSING OF ARCHITECTURAL AND AUTOMOTIVE GLASS

Bystronic Glass

Bystronic glass will present an overview about the latest machinery for the manufacturing of insulating glass, handling equipment and for the pre-processing of automotive glass. Bystronic glass supports its customers onsite with own sales and service companies worldwide.

HOLLOW GLASS SESSION

14.30 - 14.45

OGT LATEST GENERATION TABLEWARE MACHINES

Olivotto Glass Technologies

ISTANBUL CONFERENCE ROOM / 1st March 2016

Olivotto Glass Technologies is the World Leader in the supply of machineries and production technologies for hollow glass, from the gob feeding to the entrance of the lehrs for the production of any type of glass. Technologies, products and services coming from the best know-how of OLIVOTTO, ANTAS, LYNCH and LINDNER.

14.50 - 15.05

EMMETI AND SIPAC TOGETHER IN PARK CAM SUCCESS

Emmeti & Sipac

PARK CAM has proved to be the most successful, brand new glass factory ever built over the past 3 years. Today, the factory runs two furnaces for a total capacity of about 1000 tons per day at an efficiency of a good 90%. Each workshop is equipped with state of the art equipment where Emmeti and Sipac have played their role by delivering the most automated cold end lines each capable to handle up to 700 bpm without human intervention.

15.10 - 15.25

INNOVATIVE TOOLS IN HOLLOW GLASS VISION INSPECTION

Iris Inspection Machines

Thanks to non-contact inspection solutions and innovative software for image processing, IRIS Inspection machines is the leader in camera inspection. The EVOLUTION range of machines developed by IRIS inspect each bottle at 360° in high resolution. The in-house electronic and software developments allow to control difficult zones such as engravings or finish thread. This makes the EVOLUTION machines unique by giving glassmakers the best plant efficiency.

15.30 - 15.45

ZIPPE INDUSTRIEANLAGEN GMBH: FULL RANGE OF SERVICES BOTH FOR FLAT AND HOLLOW GLASS

Zippe Industrianlagen

Zippe is the market leader in the area of melting material preparation in terms of design, manufacturing, installation and commissioning of plants. It offers all service ranges within plant construction – engineering, planning, design, production, automation technology, installation, site management for all disciplines, commissioning, training for personnel, and services for ongoing operations. With over 550 batch plant projects completed, the company has the greatest wealth of experience in the glass industry sector.

15.50 - 16.05

EFFECT OF OPTIMAL SELECTION OF THE OPERATING POINT OF THE MOLD COOLING FAN ON ENERGY SAVINGS AND PRODUCTION SPEED DURING PRODUCTION OF CONTAINER GLASS

LWN Lufttechnik

With the constantly growing costs of energy and increasing requirements for speed and accuracy of the production, every factor that may improve production and bring savings is important. Thus the aim of these studies was the optimization of the whole process of the mold cooling on IS machines.

16.10 - 16.25

FROM RAW MATERIALS TO GLASS ENGINEERING

Colorobbia

Glass Engineering & Contracting is a new division of Colorobbia Consulting of the Colorobbia group dedicated to the supply of integrated services. Thanks to the wide experience and expertise acquired in raw materials in glass industry, the GE&C Division aims at providing knowhow in R&D, design, realization, and supplying technical services in the main industries of flat glass, hollow glass, glass ceramic and technical glasses, as well as skilled contracting services necessary to these types of production. The Colorobbia group is specialized in the production and distribution of raw materials and half-finished products for ceramic and glass industry. The head office is in Sovigliana, Vinci (Firenze) with 28 companies and more than 2000 employees in 18 countries.

16.30 - 16.45

HORN GLASS INDUSTRIES – INNOVATION ENGINEERED IN GERMANY

Horn Glass Industries

With more than 125 year experience in glass melting HORN has a wide range of experience in the design, manufacture and supply of different furnace types for production of lighting ware, tableware, containers, cast glass, float glass, solar glass and technical glassware.

suppliers guide

Y E L L O W P A G E S

Reserved for advertisers of this issue | www.glassonline.com | Reserved for advertisers of this issue | www.glassonline.com

Listing in this section is reserved for advertisers of this issue.

FOR FURTHER INFORMATION PLEASE CONTACT OUR ADVERTISING DEPARTMENT:
Tel: +39 - 02 - 66306866 • Fax: +39 - 02 - 66305510
E-mail: publications@glassonline.com • www.glassonline.com

The listing in this "Suppliers Guide - Yellow Pages" is free of charge and reserved to advertisers of this issue. The "Suppliers Guide - Yellow Pages" promotes their products and services worldwide.

L'insertion dans le "Guide des Fournisseurs" est gratuite et réservée aux annonceurs de ce numéro. Le "Guide des Fournisseurs" assure la promotion des produits et des services proposés par les annonceurs dans le monde entier.

Die Anzeigen im "Verzeichnis der Lieferanten - Gelbe Seiten" ist kostenlos und den Inserenten vorliegender Ausgabe vorbehalten. Das "Verzeichnis der Lieferanten - Gelbe Seiten" wirbt weltweit für die Produkte und das Service seiner Inserenten.

La introducción en la "Guía de los Proveedores" es gratuita y está reservada a los Anunciadores de este número. La "Guía de los Proveedores" promueve sus productos y servicios en todo el mundo.

AGENT

Risteklo

ALLOYS FOR MOULDS

**Changshu Jianhua
Mould Technology
Fonderie Valdelsane**

AMPOULE AFTER-FORMING MACHINES/LINES

OCMI OTG

AMPOULE FORMING MACHINES/LINES

OCMI OTG

AMPOULE PACKAGING MACHINES

OCMI OTG

AUTOMATIC SPRAY NOZZLES

Generalmatic

AUTOMATIC TUBE LOADERS

OCMI OTG

AUTOMATIC WAREHOUSES

Zecchetti

BAG FILTERING PLANTS

BDF Industries

BATCH CHARGERS

BDF Industries

**Colorobbia
Glass Service
Horn
Stara Glass
ZIPPE**

BATCH/CULLET PREHEATERS

**Colorobbia
ZIPPE**

BATCH PLANTS

**Colorobbia
Glass Service
Horn
Teichmann, Henry F.
Vidromecanica
ZIPPE**

BLOWING MACHINES

**Bucher Emhart Glass
Olivotto-Antas-Lynch-
Lindner
Waltec Maschinen**

BURN-OFF MACHINES

**Olivotto-Antas-Lynch-
Lindner
Waltec Maschinen**

BURNERS & ACCESSORIES

**BDF Industries
Car-Met
Glass Service
Horn
OCMI OTG
Stara Glass
Waltec Maschinen**

BURNERS/LOW NOx

**BDF Industries
Glass Service
Stara Glass**

BURNERS/OXY-FUEL

**BDF Industries
Glass Service**

CARPOULE AFTER-FORMING MACHINES/LINES

OCMI OTG

CARPOULE FORMING MACHINES/LINES

OCMI OTG

CAST IRON FOR MOULDS

Fonderie Valdelsane

COATING OF GLASS - SYSTEMS & MATERIALS (HOT- / COLD-END)

**Bohemi Chemicals
Fluorital
Horn
Vidromecanica**

COLD-END LINES

**Bucher Emhart Glass
Emmeti-Sipac
Heye International
Iris Inspection Machines
Stara Glass
Zecchetti**

COLOURS & ENAMELS

**Bohemi Chemicals
Colorobbia
Fluorital**

CONSULTING SERVICES

**BDF Industries
Bucher Emhart Glass
Colorobbia
futronic
Horn
Lubisol
Olivotto-Antas-Lynch-
Lindner
Teichmann, Henry F.**

CONTROL & AUTOMATION SYSTEMS

BDF Industries

Bottero

**Bucher Emhart Glass
Colorobbia
futronic
Glass Service
Horn
Iris Inspection Machines
Olivotto-Antas-Lynch-
Lindner
Stara Glass
Waltec Maschinen
ZIPPE**

CONVEYING & STOCKING SYSTEMS

ZIPPE

CONVEYOR BELTS

**Car-Met
Olivotto-Antas-Lynch-
Lindner
Vidromecanica
ZIPPE**

CONVEYOR CHAINS & SPROCKETS (HOT- END)

ZIPPE

CRACK-OFF MACHINES

**Olivotto-Antas-Lynch-
Lindner
Waltec Maschinen**

CROSS- CONVEYORS

**BDF Industries
Bucher Emhart Glass
Car-Met
Heye International
Vidromecanica
Waltec Maschinen**

CULLET SEPARATION & TREATMENT SYSTEMS

**Vidromecanica
ZIPPE**

DECORATION CUTTING MACHINES

Waltec Maschinen

DECORATIVE ENAMELS

Fluorital

DEDUSTING & FILTERING SYSTEMS

BDF Industries

DOSING SYSTEMS: COLD-END EMULSIONS

Vidromecanica

DRIVE SYSTEMS / VARIABLE SPEED

**BDF Industries
Bottero
futronic
Heye International
Olivotto-Antas-Lynch-
Lindner**

DROPPER AFTER-FORMING MACHINES/LINES

OCMI OTG

DROPPER FORMING MACHINES/ LINES

OCMI OTG

ELECTRIC BOOSTING SYSTEMS

**BDF Industries
Colorobbia
Glass Service**

ELECTRONIC CONTROL SYSTEMS AND IT

**BDF Industries
futronic
Glass Service
Waltec Maschinen
ZIPPE**

ELECTRODE HOLDERS

**Colorobbia
Glass Service
Horn**

EMISSION MONITORING SYSTEMS

BDF Industries

ENERGY RECOVERING SYSTEMS

**BDF Industries
Stara Glass
ZIPPE**

suppliers guide

Y E L L O W P A G E S

Reserved for advertisers of this issue | www.glassonline.com | Reserved for advertisers of this issue | www.glassonline.com

EXHAUST SILENCERS - MUFFLERS

Generalmatic

FEEDERS & MECHANISMS

BDF Industries
Bottero
Bucher Emhart Glass
Glass Service
Heye International
Olivotto-Antas-Lynch-
Lindner
Waltec Maschinen
ZIPPE

FIBERGLASS / GLASSWOOL PRODUCTION LINES, EQUIPMENT & PRODUCTS

Colorobbia
Glass Service
Olivotto-Antas-Lynch-
Lindner
Teichmann, Henry F.
ZIPPE

FIRE POLISHERS & EQUIPMENT

futronic
Olivotto-Antas-Lynch-
Lindner
Vidromecanica
Waltec Maschinen

FOREHEARTHS & SYSTEMS

BDF Industries
Bottero
Colorobbia
Glass Service
Horn

Stara Glass
Teichmann, Henry F.

FORMING MACHINES

BDF Industries
Bottero
Bucher Emhart Glass
Heye International
OCMI OTG
Olivotto-Antas-Lynch-
Lindner
Waltec Maschinen

FURNACES: BUBBLING SYSTEMS

BDF Industries
Glass Service
Stara Glass

FURNACES: CLEANING SYSTEMS

Glass Service

FURNACES: DRAINING SYSTEMS

Glass Service
Refractories Experience
Stara Glass

FURNACES: ELECTRIC

Colorobbia
Glass Service

FURNACES: HEAT- UP

BDF Industries
Glass Service

Refractories Experience
Stara Glass

FURNACES: HOT CULLET FILLING

Stara Glass
Refractories Experience

FURNACES: MELTING

BDF Industries
Colorobbia
Glass Service
Horn
Refractories Experience
Stara Glass
Teichmann, Henry F.

FURNACES: METAL STRUCTURES

BDF Industries
Car-Met
Colorobbia
Glass Service
Refractories Experience
Stara Glass
Teichmann, Henry F.

FURNACES: OXY-FUEL OR RECUPERATIVE

BDF Industries
Colorobbia
Glass Service
Stara Glass
Teichmann, Henry F.

FURNACES: PREHEATING SYSTEMS

Colorobbia
Glass Service
Horn

Olivotto-Antas-Lynch-
Lindner
Refractories Experience

FURNACES: REPAIR, MAINTENANCE & REVAMPING

BDF Industries
Colorobbia
Glass Service
Horn
Lubisol
Refractories Experience
Stara Glass
Teichmann, Henry F.

GASES

Glass Service

GLASS BRICK PRODUCTION LINES

Colorobbia
Olivotto-Antas-Lynch-
Lindner
Waltec Maschinen

GLASS LEVEL CONTROL DEVICES

BDF Industries
Glass Service
Horn
Olivotto-Antas-Lynch-
Lindner
Stara Glass
ZIPPE

GLASS METALISATION PROCESS MATERIALS

Fluorital

GLASS RECYCLING PLANTS

**Colorobbia
Vidromecanica
ZIPPE**

GOB WEIGHT CONTROL SYSTEMS

**BDF Industries
Bucher Emhart Glass
Heye International
Waltec Maschinen**

HANDLING EQUIPMENT

**BDF Industries
Bottero
Bucher Emhart Glass
Olivotto-Antas-Lynch-
Lindner**

HEAT RECUPERATORS

**BDF Industries
Glass Service
Horn
Stara Glass**

HEAT REGENERATION PLANTS

**Glass Service
Horn**

HEAT RESISTORS

Horn

HEATING SYSTEMS

Colorobbia

Glass Service Horn

HIGH TEMPERATURE INSULATION PRODUCTS

Lubisol

HOT GLASS CONTACT MATERIALS

**Bucher Emhart Glass
Olivotto-Antas-Lynch-
Lindner**

HOT GLASS SCRAPERS

**Car-Met
Vidromecanica
ZIPPE**

INJECTION MACHINES

**Heye International
Olivotto-Antas-Lynch-
Lindner**

INSPECTION MACHINES: COLD- END

**Bucher Emhart Glass
Heye International
Iris Inspection Machines
Stara Glass**

INSPECTION MACHINES: HOT- END

**BDF Industries
Bucher Emhart Glass**

Heye International OCMI OTG Stara Glass

INSPECTION MACHINES: VIALS & AMPOULES

**Iris Inspection Machines
OCMI OTG**

I.S. MACHINES

**BDF Industries
Bottero
Bucher Emhart Glass
Heye International**

I.S. MACHINE LUBRICATION SYSTEMS

**BDF Industries
Bucher Emhart Glass
Heye International**

I.S. MACHINE RECONDITIONING

**BDF Industries
Bucher Emhart Glass
Heye International**

LASER CUTTING MACHINES

Waltec Maschinen

LEHR DRIVES

Heye International

LEHRs: ANNEALING

**Heye International
OCMI OTG**

Vidromecanica

LEHRs: DECORATING

Vidromecanica

LOW NOx BURNERS

**BDF Industries
Glass Service
Stara Glass**

MEASUREMENT & CONTROL SYSTEMS

**BDF Industries
Bucher Emhart Glass
futronic
Horn
Stara Glass
Waltec Maschinen**

MIXERS

ZIPPE

MOULDS

**Changshu Jianhua Mould
Technology
Olivotto-Antas-Lynch-
Lindner
Waltec Maschinen**

MOULDS: CLEANING/ POLISHING MACHINES

BDF Industries

suppliers guide

Y E L L O W P A G E S

Reserved for advertisers of this issue | www.glassonline.com | Reserved for advertisers of this issue | www.glassonline.com

MOULDS: COMPONENTS & ACCESSORIES

**Changshu Jianhua Mould
Technology**

MOULDS: PREHEATING OVENS

**Car-Met
Olivotto-Antas-Lynch-
Lindner
Vidromecanica**

MOULDS & PLUNGERS COATING SYSTEMS & MATERIALS

**Changshu Jianhua Mould
Technology**

NECK RINGS

**BDF Industries
Bucher Emhart Glass
Changshu Jianhua Mould
Technology
Heye International**

PALLETIZING/ DEPALLETIZING LINES

**Emmeti-Sipac
Stara Glass
Zecchetti**

PASTE MOULD MACHINES

**Olivotto-Antas-Lynch-
Lindner**

PLANT UTILITIES

Colorobbia

PLATINUM FEEDER SYSTEMS

**BDF Industries
Glass Service
Olivotto-Antas-Lynch-
Lindner**

PLUNGER HONING MACHINES

Bottero

PLUNGERS & MECHANISMS

**BDF Industries
Bucher Emhart Glass
Olivotto-Antas-Lynch-
Lindner
Waltec Maschinen**

POLISHING/ GRINDING MACHINES

**Olivotto-Antas-Lynch-
Lindner**

POPPET VALVES

Generalmatic

PRESS MACHINES

**Bucher Emhart Glass
Waltec Maschinen**

PRESS & BLOW MACHINES

**Bucher Emhart Glass
Heye International
Waltec Maschinen**

PUSHERS

BDF Industries

**Bottero
Car-Met
Heye International
Olivotto-Antas-Lynch-
Lindner
Waltec Maschinen**

QUARTZ EQUIPMENT

RAW MATERIALS

**Bohemi Chemicals
Colorobbia**

RECYCLING SYSTEMS

**Colorobbia
ZIPPE**

REFRACTORIES

**Bucher Emhart Glass
Lubisol
S.I.G.MA.
Waltec Maschinen**

REFRACTORIES INSTALLATION SERVICES

**Bucher Emhart Glass
Colorobbia
Lubisol
Teichmann, Henry F.**

REPLACEMENT PARTS

Waltec Maschinen

ROBOTS: BALL GATHERERS

**Glass Service
Waltec Maschinen**

ROBOTS: HANDLING & PACKAGING

**Emmeti-Sipac
Waltec Maschinen**

ROTATING TABLES

**Olivotto-Antas-Lynch-
Lindner
Waltec Maschinen**

SANDBLASTING MACHINES

**Olivotto-Antas-Lynch-
Lindner**

SAW MACHINES

**Olivotto-Antas-Lynch-
Lindner**

SECOND-HAND EQUIPMENT

**BDF Industries
Heye International
Horn
Olivotto-Antas-Lynch-
Lindner
Vidromecanica**

SHEAR BLADES

**BDF Industries
Heye International**

SHEAR SYSTEMS

**BDF Industries
Bottero
Heye International
Olivotto-Antas-Lynch-
Lindner
Waltec Maschinen**

SHUTTLE CARS

Zecchetti

STRETCH & SHRINK FILM WRAP MACHINES

Zecchetti

SILKSCREEN INKS

Fluorital

SILKSCREEN PRINTING LINES: VIALS & AMPOULES

OCMI OTG

SOFTWARE

BDF Industries
Bottero
Bucher Emhart Glass
futronic
Heye International
Waltec Maschinen

SPINNING MACHINES

**Olivotto-Antas-Lynch-
Lindner**
Waltec Maschinen

STACKERS

BDF Industries
Bottero
Bucher Emhart Glass
Car-Met
Emmeti-Sipac
**Olivotto-Antas-Lynch-
Lindner**
Vidromecanica
Waltec Maschinen
Zecchetti

STEMWARE PRODUCTION LINES

**Olivotto-Antas-Lynch-
Lindner**
Vidromecanica
Waltec Maschinen

STEMWARE SEALING MACHINES

OCMI OTG
**Olivotto-Antas-Lynch-
Lindner**
Waltec Maschinen

STIRRERS

BDF Industries
Bottero
Colorobbia
Glass Service
**Olivotto-Antas-Lynch-
Lindner**
Stara Glass
Vidromecanica

SUCTION GATHERERS

**Olivotto-Antas-Lynch-
Lindner**

TAKE-OUT DEVICES & EQUIPMENT

BDF Industries
Bottero
Bucher Emhart Glass
**Olivotto-Antas-Lynch-
Lindner**
Vidromecanica
Waltec Maschinen

TEMPERATURE MEASUREMENT & CONTROL

BDF Industries

Bucher Emhart Glass

TEMPERING LINES

Vidromecanica
Waltec Maschinen

THERMAL SHOCK TEST MACHINE

Vidromecanica

THERMO SHOCK MACHINE

BDF Industries

TIN OXIDE ELECTRODES & CONNECTORS

Horn

TRAY FORMERS

Zecchetti

TOOLS & EQUIPMENT

Bottero

TUBING LINES

**Olivotto-Antas-Lynch-
Lindner**

TURNKEY PLANTS ENGINEERING & CONSTRUCTION

BDF Industries
Colorobbia

Glass Service
Refractories Experience
Teichmann, Henry F.
Waltec Maschinen
ZIPPE

VIAL AFTER - FORMING MACHINES/LINES

OCMI OTG

VIAL FORMING MACHINES/LINES

OCMI OTG

VIAL PACKAGING MACHINES

OCMI OTG

VIBRATING EQUIPMENT

Stara Glass
ZIPPE

WASTE GAS CLEANING SYSTEMS

BDF Industries

WASTE GASES DUCT WORKS AND VALVES CLEANING SYSTEMS

BDF Industries

WATER CLEANING SYSTEMS

BDF Industries
ZIPPE

SUBSCRIBE NOW TO THE WORLD'S

GLASS MAGAZINES



since 1989

Glass-Technology International

GLASS-TECHNOLOGY INTERNATIONAL is the leading international magazine for professionals involved in the flat and bent glass industry, from building to automotive, and from furniture to household appliances. **G-TI** is useful for those working in float glass plants as well as glass processors/fabricators, glazing contractors, automotive glass installers, window and door manufacturers, glass merchants, wholesalers, etc. With about 100 pages per issue, it is the bi-monthly tool for keeping abreast of new technology, new products, company life and all innovations in the world of flat and bent glass.

Also available in interactive digital format.



since 1988

glassmachinery world plants & accessories

GLASS MACHINERY PLANTS & ACCESSORIES is the leading international magazine for glass manufacturing, and is targeted at glassworks involved in the production and processing of hollowware and special glass (bottles, containers, household, lighting, technical, scientific, industrial and medical glassware).

GLASS MACHINERY PLANTS & ACCESSORIES is a bi-monthly periodical with about 100 pages of product news, current world news, focus on..., technical articles and dossiers, worldwide exhibitions, glassworks in the world, Yellow Pages, etc.

Also available in interactive digital format.



since 1990

WORLD GLASS DIRECTORY

The **WORLD GLASS DIRECTORY** is a unique international annual guide which gives a complete overview of international glassworks and suppliers involved in hollowware and special glass manufacturing. About 200 pages of complete company profiles: addresses, management, sister companies, plants, number of employees, turnover, banks, year of company foundation, capital, trademarks, areas of activity, innovations, product-by-product and country-by-country breakdowns.

The WORLD GLASS DIRECTORY is the annual reference point for the international glass manufacturing industry comprising bottles and containers, domestic glassware, tubing, vials and ampoules, lighting glassware, technical and industrial glassware, scientific, laboratory and medical glassware and automotive glassware. **Also available in interactive digital format.**



since 2013

FLATGLASS 2015 world directory

The **FLAT GLASS WORLD DIRECTORY** is a unique international annual guide providing a complete overview of glassworks and suppliers for the flat glass sector. More than 150 pages of company profiles and information about worldwide glassmakers, glass processors and suppliers, including addresses, management, sister companies, plants, number of employees, turnover, banks, year of company foundation, capital, trademarks, areas of activity, innovations, sales network, exhibitions, and, of course, interactivity in digital format, make the **FLAT GLASS WORLD DIRECTORY** the annual reference point for the international flat glass industry.

Also available in interactive digital format.

ANNUAL GUIDES

For multiple subscriptions: **10% DISCOUNT**

LEADING SECTOR PUBLICATIONS

Subscription order form

- ☐ wish to subscribe for **one year** (6 issues) at
€ **130,00**, air mail included
- ☐ wish to subscribe for **two years** (12 issues) at
€ **220,00**, air mail included
- ☐ Please **send me** no. back copy/ies
of issue no. year
(single copy 29,00 post free)

**Glass-Technology
International**

Tot. :
.....

- ☐ wish to subscribe for **one year** (6 issues) at
€ **130,00**, air mail included
- ☐ wish to subscribe for **two years** (12 issues) at
€ **220,00**, air mail included
- ☐ Please **send me** no. back copy/ies of issue
no. year
(single copy € 29,00 post free)

**glassmachinery
plants & accessories**
INTERNATIONAL MAGAZINE FOR GLASS INDUSTRIES

Tot. :
.....

- ☐ Please **supply me** with no. copy/ies
of this year's edition at the price of € **30,00**
each, air mail included

**2012
SUPPLIERS &
GLASSWORKS
COMPLETE
PROFILES**

**WORLD
GLASS
DIRECTORY**

Tot. :
.....

- ☐ Please **supply me** with no. copy/ies
of this year's edition at the price of € **30,00**
each, air mail included

2015 world directory

FLATGLASS

Tot. :
.....

TOTAL PRINTED GLASS PUBLICATIONS

TOTAL, LESS 10% DISCOUNT (FOR MULTIPLE SUBSCRIPTIONS)

€:

€:

PAYMENT

Buy online and save time!

<http://smartenergysrl.com/en/subscribe-purchase-issue/>

for ALL payment options, buy online
Credit Card - Bank Credit Transfer - Cheque

**For orders sent by fax, post or email,
please complete the form below
Payment by cheque or bank credit transfer ONLY**

☐ **Cheque** has been sent to Smartenergy Srl

☐ **Bank credit transfer** payable to
SMARTENERGY srl has been sent to
A/c No. 000006595X74
BANCA POPOLARE DI SONDRIO, Agenzia 15
Via Murat, 76 - 20159 Milano (MI), Italy
Bank coordinates: ABI 05696 - CAB 01614 - CIN N
Swift code: POSOIT2106D
IBAN code: IT 28 N 05696 01614 000006595X74

Name

Job Title

Company

Street

Post Code City

Country

Tel. (int. + /)

Fax

E-mail

www.

EU COMPANIES: MUST ENTER VAT/TVA

NUMBER:

PLEASE TYPE OR PRINT IN CAPITAL LETTERS

N.B. **AFTER RECEIPT OF PAYMENT WE WILL SEND YOU
AN INVOICE. ALL BANK TRANSFERS MUST INCLUDE YOUR
COMPLETE COMPANY ADDRESS AND THE MAGAZINE
TITLES OR THE SERVICES REQUESTED. PLEASE ALSO NOTE
THAT SMARTENERGY IS NOT RESPONSIBLE FOR ANY
BANK EXPENSES, COMMISSION OR OTHER COSTS.**

Date: Signature:

FAX THIS PAGE TO: +39 - 02 - 66305510

Smartenergy S.r.l.

Via Antonio Gramsci, 57 - 20032 Cormano (Milano) - Italy

Tel. +39-02-66306866, Fax +39-02-66305510

E-mail: publications@glassonline.com

www.glassonline.com

İSTANBUL GLASS EXPO 2016

6th Glass Products and Applications,
Production - Processing Technologies
and Machinery, Auxiliary Products and
Chemicals Fair

www.glassexpoistanbul.com

March 9 - 12, 2016

Co-located with
İstanbul Window 2016
and
Doorexpo İstanbul 2016
Fairs



REED TÜYAP FUARCILIK A.Ş. / HEAD OFFICE & FAIR AREA

Tüyap Fair Convention and Congress Center

E5 Karayolu Üzeri, Gürpınar Kavşağı 34500, Büyükçekmece - İstanbul Phone: +90 212 867 11 00 - 867 12 00 Fax: +90 212 886 66 98

E-mail: Domestic Sales: yurticisatis@tuyap.com.tr Overseas Sales: sales@tuyap.com.tr Overseas Fairs: tuyapoverseas@tuyap.com.tr

Project Marketing: tanitim@tuyap.com.tr Fair Area: fairarea@tuyap.com.tr Technical Services: teknikofis@tuyap.com.tr



İSTANBUL

TÜYAP FAIR CONVENTION AND CONGRESS CENTER

Büyüçekmece, İstanbul / Turkey





CHINA'S LEADING GLASS MOULD MAKER!



Website: www.jhmould.com
E-mail: info09@jhmould.com
Phone: +86-512-52506751

Add: No.3, Changkun industrial park E section, Changshu City, Jiangsu Province, China.



BIS machine



NIS machine

Bucher Emhart Glass Machine Portfolio



IS machine



AIS machine

No compromises!

...engineered precisely to match your business case

We can supply the precise solution for your production needs. Our machine range spans traditional pneumatic to sophisticated servo operation and the flexibility built into every machine ensures a perfect fit for your current needs with adaptability for the future. We're committed to your success with leading performance, outstanding customer support and continuing advances to the glassmaking process.

Bucher Emhart Glass. The future of glassmaking technology, delivered today.

WE,
GLASS,
& YOU