

Editorial 2

News 3



Customers Demand BITZER Compressors 4

How Kylma and Grenholms provide deep-frozen wild berries in Sweden



"Nothing's Possible without People" 5

Interview with Helmut Meyer



Original or Counterfeit? 6

BITZER's Fight against Product Piracy



Combating Counterfeiters with Innovation and Speed 7

Interview with Rainer Große-Kracht



Like One Big Family 8

Profile of the Rottenburg-Ergenzingen Location



For the Good of the Environment 9

New F-gas Regulation



Efficient and Sustainable 10

Exemplary Renovation in Vienna



Premiere of the BITZER Arena 11

Chillventa 2014



Dear Readers,

Counterfeit products are a problem the world over. Professional counterfeiters are active all over the globe and endanger people's lives. In the worst-case scenario, counterfeit compressors fail, while interrupted cooling chains, damaged systems and spoiled goods can cost a lot of money.

To protect customers and users, BITZER is taking action against product piracy: the new QR code (see page 8) makes it easy to verify the authenticity of original BITZER compressors in no time. Of course, you can also contact us at any time if you have any questions.

We're always looking for innovative solutions, which is something you've come to expect from BITZER—and can see in the new issue of COMPACT. Our customer magazine now sports a fresh new design. And we'll continue to include tried-and-tested features such as interesting articles, informative graphics and high-quality pictures. You can find lots of additional information and pictures in the online issue of COMPACT.

I hope you enjoy reading the magazine.

A handwritten signature in black ink that reads "Peter Schaufler".

Peter Schaufler, Senator h. c., Chief Executive Officer

NEWS

A Faster Process from Start to Finish

The new BITZER website boasts a fresh design with lots of brand-new features.

The new BITZER website went online in December 2014. In addition to the fresh, modern design, BITZER has revamped the entire website structure. "From the texts to the search functions, our product section now offers so much more value for all users," says Marcus Loistl, BITZER's Director of Marketing and Communication. The top feature of the new website is the easy-to-use search function, which offers you several methods for getting to where you want to go. Customers can now base their search on technologies and applications and thus find the right compressor in next to no time. Useful tools such as the BITZER selection software are now available on each subpage. The key benefit of the software is that it allows you to simulate the desired operating conditions and determine the right refrigerant and maximum allowable pressure. There are also direct links to the BITZER

software, the documentation, EPARTS and myBITZER. You can now submit questions to BITZER from each product page. "Good service is our top priority. With the new website, we've developed the right tool for our customers," says Loistl. www.bitzer.de

New Software

The new BITZER selection software 6.4.3 is now available for download from the BITZER website and as an online version at www.bitzer-software.com. It always helps you to find the right product. Since 2015, the new version has been offering a selection of compressors with the latest generation of refrigerants, including the ECOLINE series with R448A, R449A, R450A and R513A, and HSK/HSN with R448A and R449A.

With global warming potential around 65% lower, R448A and R449A are a suitable alternative for R404A. ECOLINE compressors do not require cooling through liquid injection, even in the low temperature application.

All the refrigerants are allocated to the safety group A1 and therefore declared as noncombustible.

PRACTICAL APPLICATIONS

Customers Demand BITZER Compressors

Swedish companies Grenholms and Kylma rely on BITZER compressors to deliver fresh wild berries in Arvidsjaur.

A successful joint project was recently brought to completion in Arvidsjaur, Sweden, not far from the polar circle. Refrigeration company Grenholms helped food producer Frostab AB expand its refrigeration and freezer systems, while wholesaler Kylma supplied the necessary technology with BITZER compressors.

The family company Frostab AB specializes in processing local game and forest products such as meat, fish and wild berries. A new refrigerated storage facility and blast freezer were built for processing the wild berries. The latter blast-freezes up to 40 metric tons of wild

berries every day before further processing. Another low temperature storage facility was also added.

SUCCESSFUL COLLABORATION

Based in Umeå, Sweden, Grenholms employs around 25 people at four subsidiaries. The company specializes in refrigeration and air conditioning systems for commercial and industrial applications, and uses HFC refrigerants, CO₂ and NH₃.

Kylma is Sweden's leading wholesaler of refrigeration technology and has eight subsidiaries and stores in Sweden. Established in 1946, the com-

pany has been a sales partner of BITZER since 1961. "Nearly all our customers demand BITZER compressors because they're so durable," says Peter Nordin, district head at Kylma. "I know of a few systems that are still reliably working with the BHS-350S to this day. Those compressors have been in operation for more than 35 years. News of the reliability of BITZER products has spread quickly and generated trust."

BITZER COMPRESSORS ENSURE RELIABLE OPERATION

"In the first construction phase in 2012, we built a low temperature storage facility and blast freezer," says Håkan Karlsson,

CEO of Grenholms. The low temperature storage facility is maintained by six independent cooling systems, each of which is equipped with a BITZER 6G-30.2Y reciprocating compressor. The overall refrigerating capacity is 105 kW at -32/+42°C. The blast freezer is powered by two independent cooling systems, each of which is equipped with a BITZER HSN 8571-125Y screw compressor. The overall refrigerating capacity is 130 kW at -40/+42°C. All the compressors are frequency-regulated and operate with the HFC refrigerant R404A.

At the end of 2014, Grenholms expanded the low temperature storage facility from six to eight cooling systems. "The low temperature storage facility now offers 600 cubic meters of

space," says Anders Vestin, Managing Director of Frostab. "It's divided into two sections which maintain a temperature between -30 and -35°C to ensure an effective cooling chain." Håkan Karlsson is delighted with the successful project: "The planning took

about three months and we completed system installation after another three months." The BITZER compressors have been running seamlessly since November 2012—that should be enough to secure the supply of berries for fruit enthusiasts throughout Sweden. ◀

BITZER compressors in operation at Frostab.



► FACTS & FIGURES

Name: Frostab AB

Employees: 15

Location: Arvidsjaur, Sweden

Products: Meat, fish, berries



INTERVIEW

“Nothing’s Possible without People”

Five questions for the new Chief Sales and Marketing Officer Helmut Meyer



Mr. Meyer, how would you describe your experiences in your first few months as Chief? The most important experience is the same one I’ve had repeatedly over the years: nothing’s possible without people. That’s why I’m so happy to have a great team to support me in so many areas.

You’ve been a member of the BITZER sales team for more than 13 years. How has that prepared you for your new responsibilities?

The fact that I’ve been with BITZER for so long is a huge advantage, as I personally know many employees and am familiar with the corporate

culture. I’m also well connected in the global BITZER network. For instance, I spent several years working for BITZER in South America, where I saw people dealing with challenges in ways we’re not used to. That expanded my horizon significantly in terms of experience and taught me to always look for innovative solutions.

What are you planning to do first? I’d like to continue the positive developments of recent years and am therefore working with my team to develop a new structure for sales and marketing, the foundation of which will be fast interdepartmental communication. We’ll also be in-

creasing our focus on customer requirements by closely coordinating the local support provided by BITZER subsidiaries with the specialized support of the company headquarters. With the support of our BITZER subsidiaries, we can maintain a stronger presence in growth markets and a closer proximity to our customers. At the same time, we’re boosting our image as a manufacturer of high-quality compressors that boast exceptional quality, reliability and efficiency.

Where will you be introducing changes?

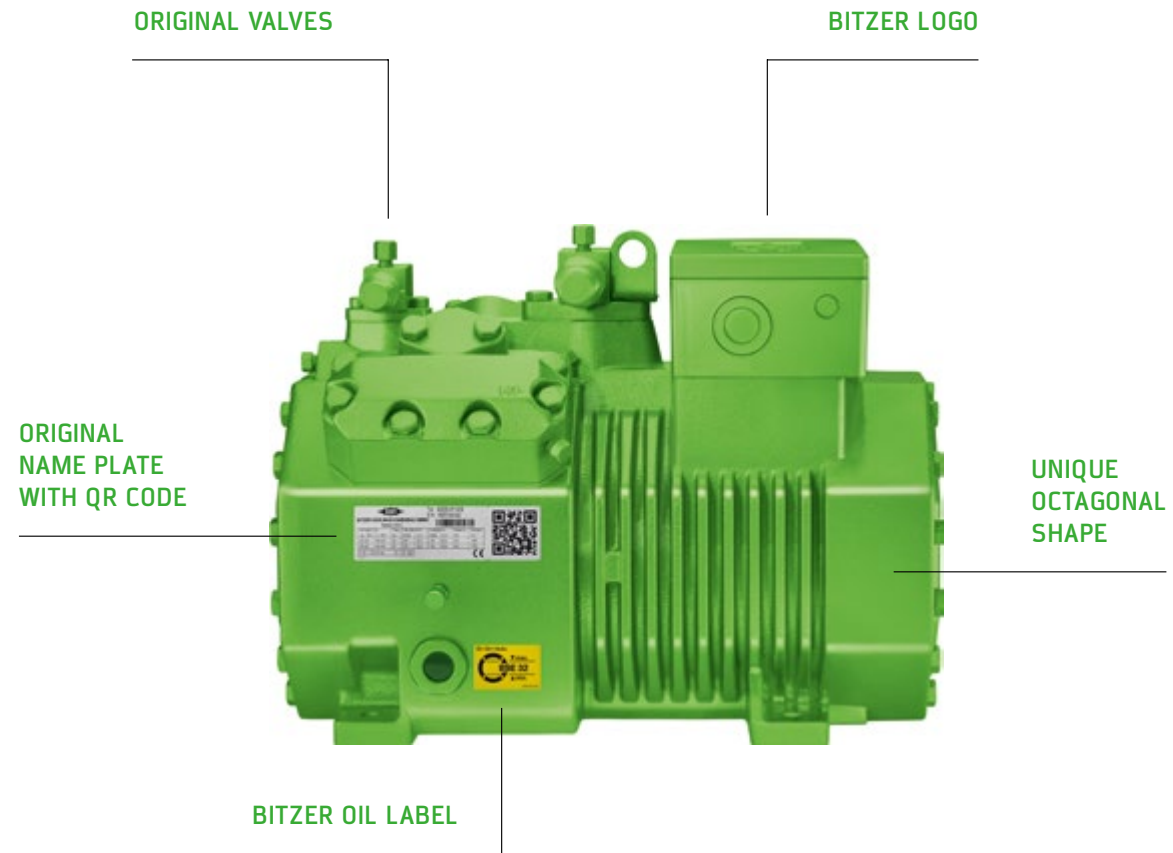
There’s a clear focus on the stationary sales [read on...](#)

IM FOKUS

Original or Counterfeit?

Counterfeit products are on the rise in the refrigeration and air conditioning industry. Many compressors are looking similar to the originals, but they are of poor quality. BITZER is taking a more proactive approach to dealing with counterfeiters in order to protect its customers and itself.

► **IF YOU HAVE ANY QUESTIONS** about this issue, simply send an email to: fake-check@bitzer.de.



Copyrights are a precious commodity, as they not only protect materials, but also intellectual property. In Europe, they've been protecting artists from the economic damages resulting from unauthorized copies for centuries. This is still the case, particularly for companies such as BITZER, which invest a lot in innovation and are always technologically one step ahead. Now they protect their rights with patents, registered designs and utility models. But product pirates go after this form of manufacturer and customer protection more and more frequently. Professional counterfeiters now copy manufacturer and conformity declarations, brochures and pamphlets, and that's no minor offense. Copied compressors, which look enough like the originals to deceive buyers, are dangerous. This type of product piracy is a major problem in Asia in particular. "We fear that the number of counterfeit products there is equivalent to one-third of all the BITZER originals sold. This issue also poses a danger in the spare parts business," says Rob de Bruyn, Managing Director of BITZER Southeast Asia.

GLOBAL THREAT

Product piracy is a phenomenon that harms the entire refrigeration and air conditioning industry, including oil and refrigerant manu-

1.7

trillion US dollars:

The estimated amount of economic and social damages resulting from counterfeit products and piracy in 2015.*

* Source: ICC study, Estimating the global economic and social impacts of counterfeiting and piracy

facturers. "In addition to copied compressors, the use of counterfeit refrigerants and oils is also dangerous," says de Bruyn. "They can damage original compressors, which in the worst-case scenario can lead to an explosion." According to the most recent studies carried out by the German Engineering Association (VDMA), around 71 percent of German machine builders have come across counterfeit products—the association estimates damages amounting to approximately €8 billion a year. Almost everything is copied, from spare parts and components to entire machines.

A HIGH PRICE

As a driver of innovation and global player in the refrigeration and air conditioning indus- [read on...](#)



KEY TOPIC

► THE MOST IMPORTANT MEASURE TAKEN AGAINST PRODUCT PIRACY:

Since April 2015 a QR code is applied to all BITZER products worldwide.



Combating Counterfeiters with Innovation and Speed

Interview with Rainer Große-Kracht,
Chief Technology Officer at BITZER

Mr. Große-Kracht, as the Chief Technology Officer you are not only closely involved in BITZER innovations, but also carefully monitor the market as a whole. Is product piracy currently an issue in the industry?

Yes, it certainly is. Counterfeiters are not only interested in watches and handbags, but also target the refrigeration and air conditioning industry. We're currently monitoring 14 companies in China alone that manufacture deceptively similar-looking counterfeit BITZER products and sell them primarily in the Asian market.

China always comes up in discussions about counterfeit products. Why is that?

The legal framework associated with protecting intellectual property has yet to establish itself. But we're currently observing a change here. An awareness of patents, registered designs, general intellectual property and the like is beginning to develop. While registered designs, for instance, are protected for 17 years in Europe, in China it is only ten years, and there is no option to renew. We have often observed copycats introducing imitations onto the market once this period of time has elapsed. A key reason is that a lot of companies in China have the technological means to manufacture large quantities of counterfeit products.

What is generally copied?

Just about everything is copied, including compressors, spare parts, logos, documentation and brochures. We even discovered a brochure with BITZER's company history rewritten and a double of our company owner and entrepreneur Mr. Senator h. c. Peter Schaufler.

We have to be one step ahead of the imitators in terms of technology at all times. And that's precisely what BITZER's strength is. We've been driving innovation in the industry for 80 years and will continue to do so in the future.

Rainer Große-Kracht

How similar do the counterfeit products look to the originals?

As is the case with consumer goods, the compressor copies look very similar to the originals. Even we have problems occasionally telling them apart at first glance. That can be difficult, particularly in dingy, cramped engine rooms where compressors are usually located. But you can see the difference immediately on the inside. The materials, phases or milling work and other technical specifications are not copied due to high costs or uncertainty despite the fact that these play a key role in compressor performance, safety and efficiency. Further analysis quickly reveals that the process for manufacturing the motors doesn't even come close to BITZER's standards. The result is that the copies fail much sooner due to the fluctuating loads and levels of stress that refrigeration compressors are exposed to. Experience and technical expertise simply cannot be copied.



Part of BITZER for 32 years: Bernhard Sorge even did his training at the company and has been working for the compressor specialist ever since. "We're like one big family at the Rottenburg-Ergenzingen factory," he says.



+ OS.A95 – ANOTHER PRODUCT HIGHLIGHT

The Rottenburg-Ergenzingen factory is like a second home to industrial mechanic Bernhard Sorge, who's been working there for 32 years, and his colleagues are almost like family members. "I've spent a lot of time here, so we've experienced a lot together and helped make changes. That kind of thing brings people together," says the 47-year-old. The Rottenburg-Ergenzingen location is a cornerstone of the BITZER company. The international competence center for screw compressors is the world's largest manufacturing facility for this product group. More than €70 million has been invested over the past ten years to increase efficiency, quality and capacities, though investments have also been made to secure jobs. "Employee turnover at the Rotten-

LOCATIONS

Like One Big Family

550 employees manufacture high-quality screw compressors at the Rottenburg-Ergenzingen factory. Over the last ten years, BITZER has invested more than €70 million in the location.

burg-Ergenzingen factory is extremely low," says Christian Wehrle, Chief Production Officer at BITZER. Like Bernhard Sorge, around 75 other employees have also been here for more than 25 years, with some 550 men and women at the location in total. [read on...](#)

+ FACTORY LAYOUT ROTTENBURG-ERGENZINGEN



INDUSTRY

For the Good of the Environment

Introduced in all EU countries in January 2015, the new F-gas Regulation requires the use of refrigerants with lower global warming potential. With its extensive product portfolio of compressors for natural refrigerants and refrigerants with reduced GWP, BITZER is very well prepared for the future.

➤ **F-GASES** are synthetically manufactured fluorinated hydrocarbons that can be used as refrigerant, foam propellant and fire extinguishing agent. Due to their high stability, they contribute to the greenhouse effect when released into the atmosphere.

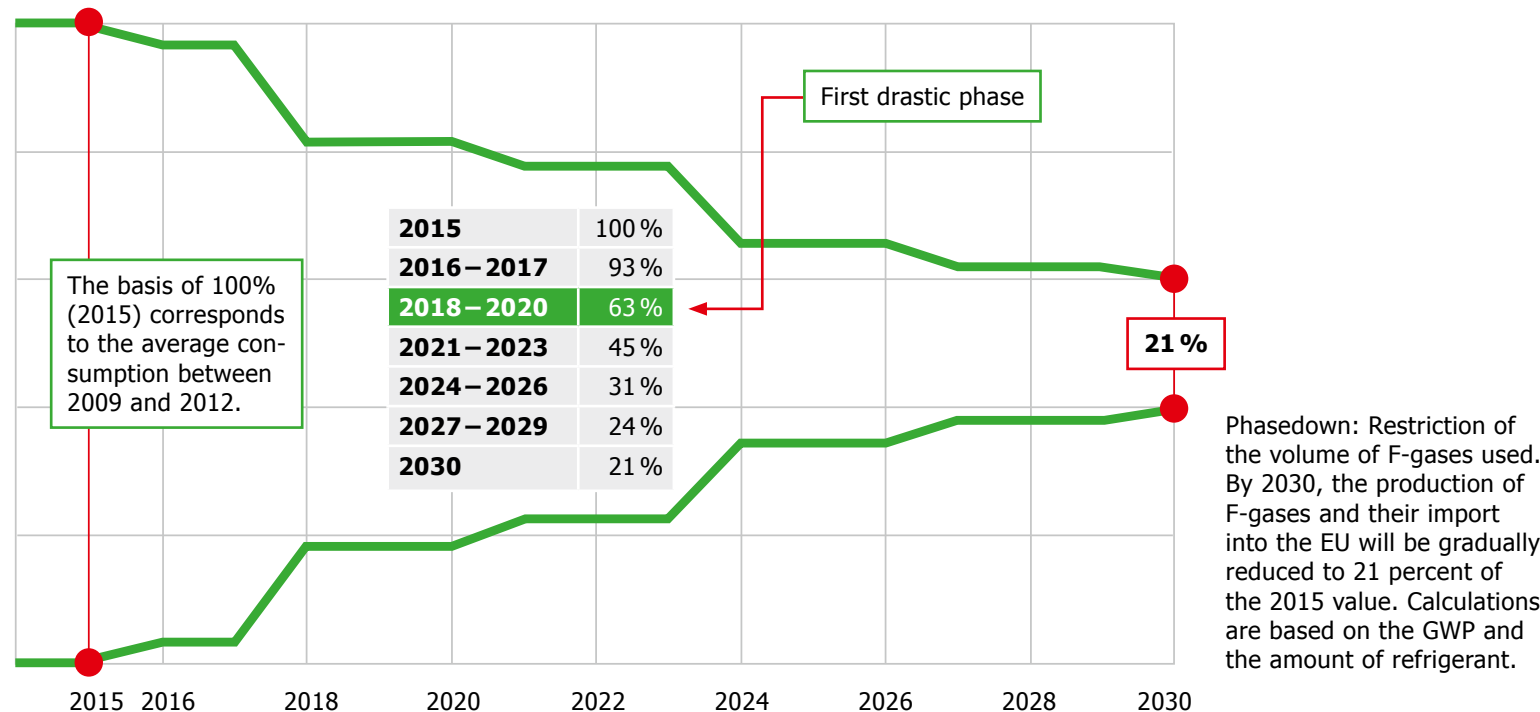


Dr. Heinz Jürgensen, Director of Application Technology and Special Projects



Hermann Renz, Technical Programs Manager

➤ Is it possible to retrofit existing devices? Please consult your BITZER contact representative.



Passed in 2014, the new F-gas Regulation no. 517/2014 went into effect at the beginning of 2015 and brings with it some major changes. It stipulates a significant reduction in the use of refrigerants with high global warming potential (GWP). The charged amount no longer forms the basis of calculations, but rather the CO₂ equivalent—as a product of the charged amount and GWP in question. Refrigerants with low GWP can therefore be used in higher volumes than those with high GWP.

“The biggest challenge for companies is the gradual reduction of F-gas volumes to 21 percent of the 2015 value by 2030. It’s going to be difficult. The phasedown has been in effect since January of this year,” says Dr. Heinz Jürgensen, Director of Application Technology and Special Projects. “The regulation will also limit the use of refrigerants in certain applications in the future. The first big reduction will occur in 2020, at which time the stationary use of refrigerant with GWP of more than 2,500 will be prohibited—and that includes the important R404A.” [read on...](#)

+ EXPERIENCE AND SERVICE

LINKS
[BITZER refrigerant report New EU F-Gas Regulation](#)

PRACTICAL APPLICATIONS

Efficiency and Sustainability

The renovation of the office building of the Austrian Institute of Economic Research (WIFO) in Vienna is a good example of modern renovation and eco-friendly technology. Here, BITZER's ORBIT scroll compressors make a major contribution.

When discussing climate protection, it's not long before the concept of building renovation is mentioned," says Michael Eichberger, Managing Director of BITZER Austria. "Poorly insulated houses featuring older building technology often have unnecessarily high energy consumption." It's estimated that around 8,500 office buildings built in Austria between 1960 and 1980 require renovation. Outdated refrigeration and air conditioning

systems play a key role, as most of them have extremely high energy requirements. That's why it's important to replace them—for instance, with energy-efficient solutions featuring BITZER's refrigeration compressors. The Austrian Institute of Economic Research (WIFO) building in Vienna is a good example of what successful renovation looks like. The HVAC industry book 'Klima – Kälte – Lüftung 2015' showcased this project, calling it exemplary.

BITZER EXPERTISE FOR GREATER ENERGY EFFICIENCY
When it came to modernizing the office building, engineer Manfred Hoffelner (Head of the Facility Office, ART for ART), engineer Markus Goldsteiner (Facility Office, ART for ART), engineer (University of Applied Sciences) Clemens-Andreas Baldia (pwb Baldia GmbH) and Robert Novotny (Facility Manager, WIFO) employed an extensive range of energetic measures: the roof was re-insulated, the [read on...](#)

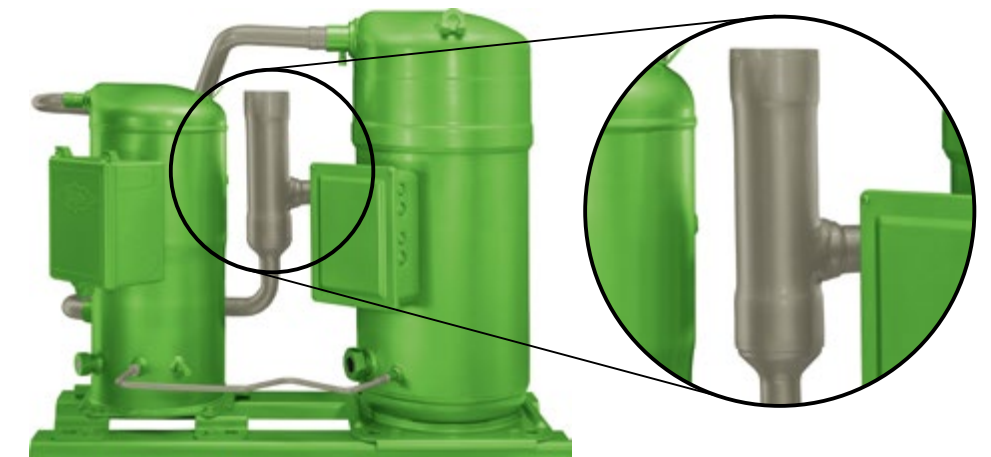
+ ORBIT SCROLL COMPRESSORS



The new BITZER refrigeration system in the WIFO office building in Vienna.

Image: HLK/E. Herrmann

+ BITZER ADVANCED HEADER TECHNOLOGY (BAHT)



► FACTS & FIGURES

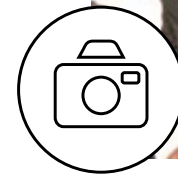
30,595 visitors

984 exhibitors

375 square meters of space
in the BITZER Arena

163 BITZER employees on-site

39 journalists at the
BITZER press conference



► BEHIND THE SCENES AT CHILLVENTA:

A video about construction of the BITZER Arena

TRADE FAIRS

Premiere of the BITZER Arena

New trade fair concept offers an exceptional opportunity to showcase products and get visitors interested.

The concept is unique—and impressed everyone right off the bat: the new BITZER Arena at the Chillventa 2014 trade fair in Nuremberg attracted a crowd in no time at all. Customers from all over the world met with the experts of the world's largest independent manufacturer of refrigeration compressors—not to compete in their specific disciplines in the arena, but to learn more about the latest developments and experience forward-looking innovations in refrigeration and air conditioning technology. Faster, higher, further—the motto of the Olympic Games could be replaced by 'More efficient, more durable, more robust' in the BITZER Arena.

BITZER focused on team spirit again at last year's Chillventa. The employees traveled to Nuremberg

as a team in order to represent the company and showcase the high-quality products. And the new trade fair stand offered the perfect framework: an elegant design in the typical BITZER green, an impressive interior design and an alternating, pleasant lighting concept all came together to form the perfect setting for introducing the systems. The spacious presentation area created a clear link between products and services. "We offered all the necessary information about our full range of products in the form of cutaway models, whole devices and digital animations," explains Marcus Loistl, BITZER Director of Marketing and Communication. "What impressed our customers most was that we were able to showcase true highlights and lots of innovations throughout our entire product portfolio."

HIGHLIGHTS IN THE BITZER ARENA

Highlights included the new and improved refrigeration compressors and corresponding electronic components, including the OS.A95 ammonia compressor with a volume flow nearly double that of its predecessor and a tailored oil separator. The ECOSTAR LHV7E also proved to be a huge industry hit: the optimized condensing unit facilitates precise capacity adjustment to meet actual conditions and allows you to monitor the entire refrigeration system with preinstalled monitoring software. Further innovations included the CRII capacity control for ECOLINE reciprocating compressors, the BAHT system for ORBIT scroll compressor tandems and trios, the CSVW2 and CSVH3 compact screw compressors and the SE-i1 diagnosis system. Two new reciprocating compressor series for CO₂ applications also celebrated their premiere at Chillventa 2014—namely the eight sub-critical CME and the five trans-critical CKH models. These two series are advancing into whole new areas of performance. [read on...](#)