



G R E I F
V E L O X

SMARTER
PACKAGING.
SMARTER
BUSINESS.



VELOVAC® - VACUUM PACKER



RALF DREWS,
CHAIRMAN OF THE BOARD & CEO

DEAR CUSTOMERS, DEAR PARTNERS,

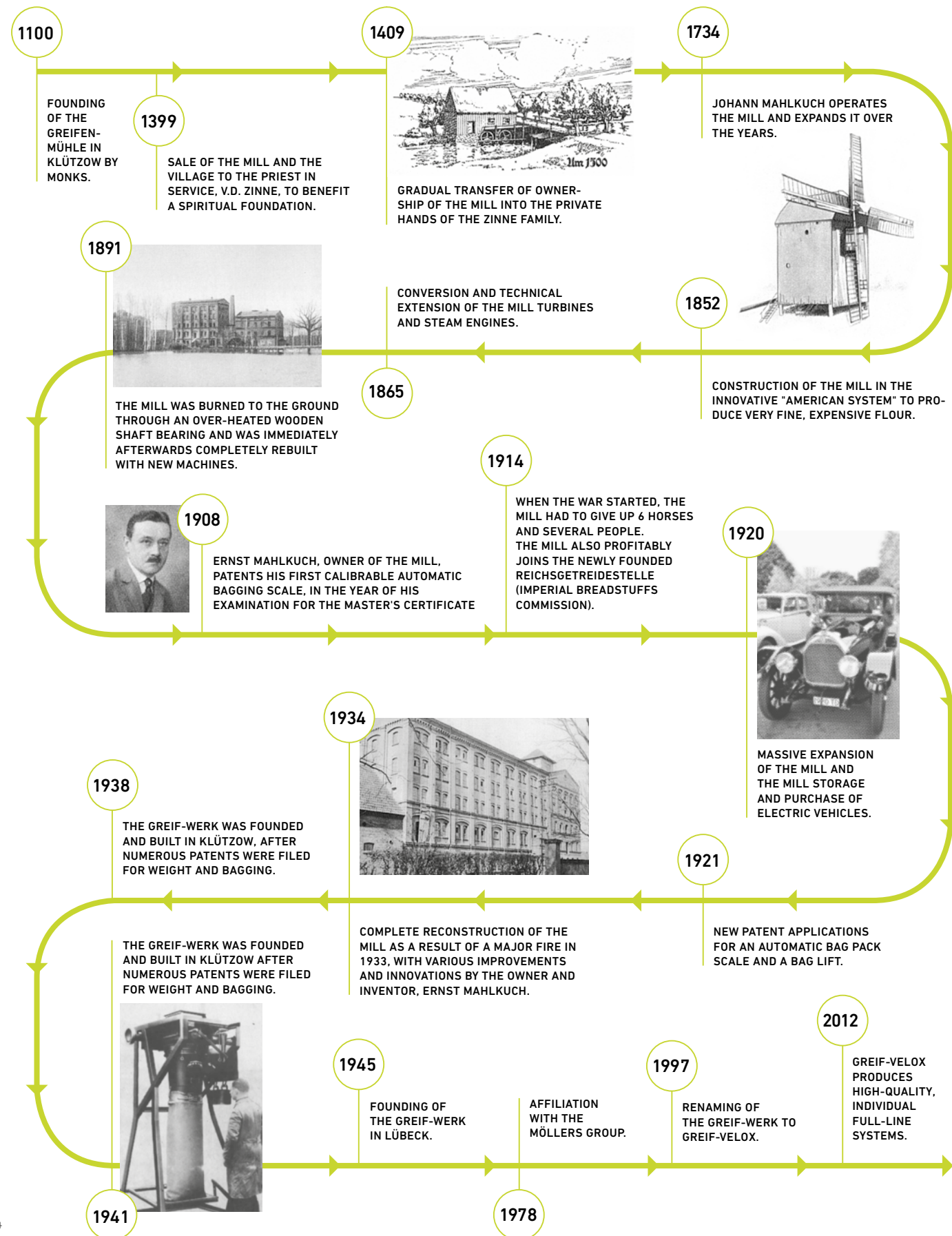
Our passionate engineers have always been proud of designing and providing solutions to complex challenges that many of our competitors were unable to overcome, giving us a real competitive edge. The crowning achievement is, of course, when such an innovative idea creates a worldwide standard product that is simply unrivalled in its advantages. Thirty years ago, we managed this with our VELOVAC vacuum packer system, which can pack extremely light material at an unprecedented level of quality. I am pleased that you will be able to find out more about the VELOVAC in this brochure and hope you enjoy reading.

Kind regards,

RALF DREWS, CEO

A JOURNEY THROUGH TIME

GREIF-VELOX looks back on one of the longest corporate histories in the world. The development of GREIFEN Mühle to GREIF-VELOX took almost 1,000 years. A journey full of innovation and experiences which has truly paid off:



GREIF-VELOX TODAY IN OUR HEARTS

A company without values is like a tree without roots. Our roots have grown over the centuries and have given us sufficient time to identify what has anchored us and what we can do really well. Convince yourself of the values we embody and experience our ...



RELIABILITY

We know that machine downtime comes with high costs. Therefore, we are reliable when it comes to delivering our machines, we offer trustworthy machine quality, and guarantee safe, accessible and operational service.

INNOVATION

Digitalization and constant mechanical optimization in turn lead to more process optimization and automation. Here, the focus is not placed on real innovation but rather on its benefits. A philosophy that has proved its worth with us for a thousand years.

EFFICIENCY

Bagging and filling revolves around more than just effectiveness. Efficiency decisively sets companies apart from the competition. Therefore, we stage workshops with our customers to combine our shared skills and know-how to provide solutions that create long-term benefit for them.

GREIF-VELOX

TODAY IN NUMBERS

Informing and inspiring: Here, you will find some interesting facts and figures about us, for our 1000-year history has been quite eventful.



+30000 PROJECTS COMPLETED TO DATE.

60 KM CABLE PROCESSED ANNUALLY.



243,062 ARTICLES AND PARTS LISTS IN OUR ERP SYSTEM.



840,000 OARS ARE PRODUCED ANNUALLY BY OUR GREIF-VELOX DRAGON BOATERS.

1,156,320 TONS CAN BE BAGGED BY OUR PNEUMATIC PACKERS ANNUALLY. THIS IS EQUAL TO 2,753 A380 AIRPLANES.

+150 EMPLOYEES

WORKING FOR GREIF-VELOX AROUND THE WORLD.



89 COUNTRIES SUPPLIED BY US TO DATE. A NUMBER THAT KEEPS GROWING.



92 % OF OUR CUSTOMERS SOLELY REQUEST FUTURE PROJECTS WITH US.

AVAILABLE 24/7 WORLDWIDE.





CLEAN BUSINESS! VALVE BAGGING

Important to know:
For mono products that must be packaged with extreme speed and where dust generation is not expected, open mouth bags are the better solution – select valve bags are best for virtually all other situations as they offer many advantages, such as low-dust bagging and secure closure options. Let us evaluate together what type of bag is best suited to your use.

CONFIRMED WORLDWIDE

Our VELOVAC systems are used efficiently by various industry-leading companies around the world. As a result, our customers save up to 75% on their logistic costs and surprise their customers with an accurate, secure pallet pattern.

LANXESS
Energizing Chemistry

WACKER

BASF
We create chemistry

CABOT

EVONIK
KRAFT FÜR NEUES

Budenheim

GRACE

SONGWON

IMERYS
Graphite & Carbon

LOOKS LIKE A MACHINE BUT IS, IN FACT, A WORLDWIDE REVOLUTION



VACUUM PACKER VELOVAC®

You and your customers can expect a new level of quality in the packaging of low-weight powders. Our VELOVAC system offers your operation air purity, product savings, delivery reliability and pallet attractiveness, as well as high savings potential for bags and logistic costs. And if you have any special challenges, our engineers will adapt the VELOVAC system and the entire line to your needs. We are not just here to sell you something, we are here to listen to you and to foster high-performance, reliable developments and innovations together that bring lasting competitive advantages to you.

"THE VELOVAC IS AN ABSOLUTELY REPRESENTATIVE EXAMPLE OF GERMAN ENGINEERING PASSION. AN EXTREMELY RELIABLE, WELL-THOUGHT-OUT SOLUTION FOR A CHALLENGE THAT HAD PREVIOUSLY SEEMED INSURMOUNTABLE."

DR. ALEXANDER MILDNER,
DIRECTOR RESEARCH AND DEVELOPMENT



DON'T SAVE ON SECURITY, BUT ENSURE SAVINGS!

Goods with a very low bulk weight usually create an airy and dusty impression on clients. This is due to the air retention property of the product. This results in a "dirty" pallet pattern for two reasons: the bags are often "contaminated" with product residues and the airy bags can only be stacked in an unorganized and imprecise manner. As a result, you not only lose valuable product

that flies away in the packaging process but you also pay even higher logistic costs for bloated bags. The VELOVAC system ensures that your bags and your factory remain clean as product residues are vacuumed away and economically fed back into the packaging process. With this system you are saving product and bag volume, since you are able to

pack your products free from air. The result: brick-like, hard bags with much more product content than regular packaging. This not only looks better for your customers but can also be transported more easily and at lower cost. Bottom line: an investment in both cleanliness and safety, resulting in a high logistic savings potential at the same time! A result to be proud of!

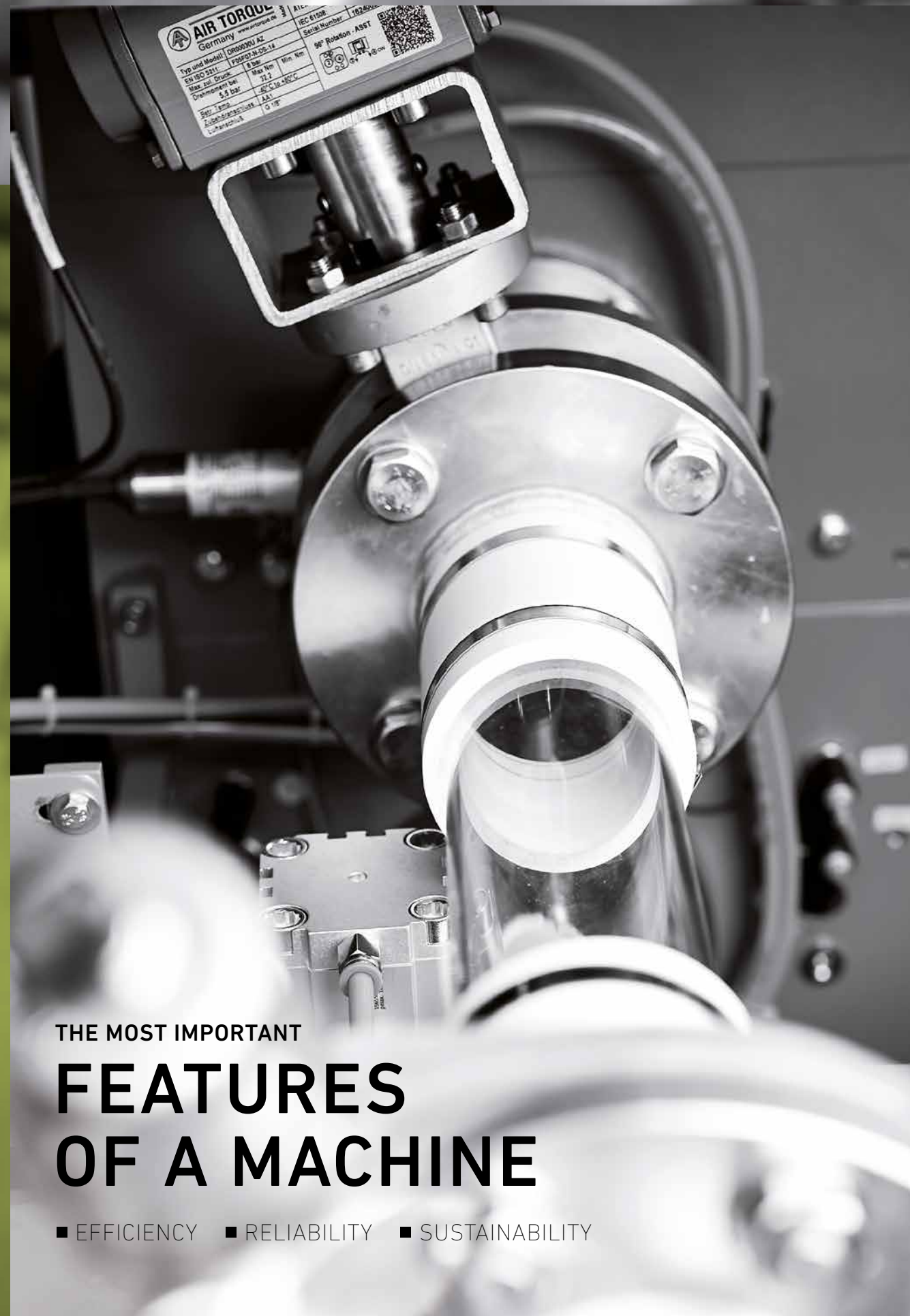
THE VELOVAC®

REAL ADVANTAGE!

Reliable. Efficient. Innovative – thanks to its many upgrades. A product that fully reflects our values and anchors these into your daily business.

The function of the complex technique is explained in simple terms: In the VELOVAC vacuum chamber, we create an atmospheric vacuum, through which your product is sucked into the bags. Any resulting dust is extracted and immediately fed back into the bagging process. After filling, the bag is hermetically sealed and can be transported highly efficient in its compact, attractive form.





THE MOST IMPORTANT

FEATURES OF A MACHINE

■ EFFICIENCY ■ RELIABILITY ■ SUSTAINABILITY



EVERYTHING YOU NEED WHEN YOU NEED IT

Empty bagging, valve welding for hermetic bag closures, a wide range of test components, samplers, metal detectors, check weighers and marking components, such as labelling or ink-jet systems and of course a wide range of digital upgrades. We would be happy to work with you to assess which functions and processes will support your bagging processes most efficiently and will provide you with a long-term advantage.



GREIF – TANGIBLE SOLUTIONS:
REAL CUSTOMER STORIES

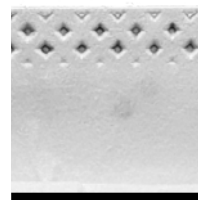
NO HOT AIR

Packing carbon black is considered the ultimate challenge in bagging. The product is not only extremely precious but also extremely light. Particles remain in the air for a very long time and cause lasting contamination in the environment as cleaning is extremely costly. With our VELOVAC system, we have not only provided safe and clean air during bagging in a globally operative company, we have also reduced logistics costs by more than 75% since vacuum technology allows a much lower air content in the packaging process and thus enables clean, stable and efficiently filled bags



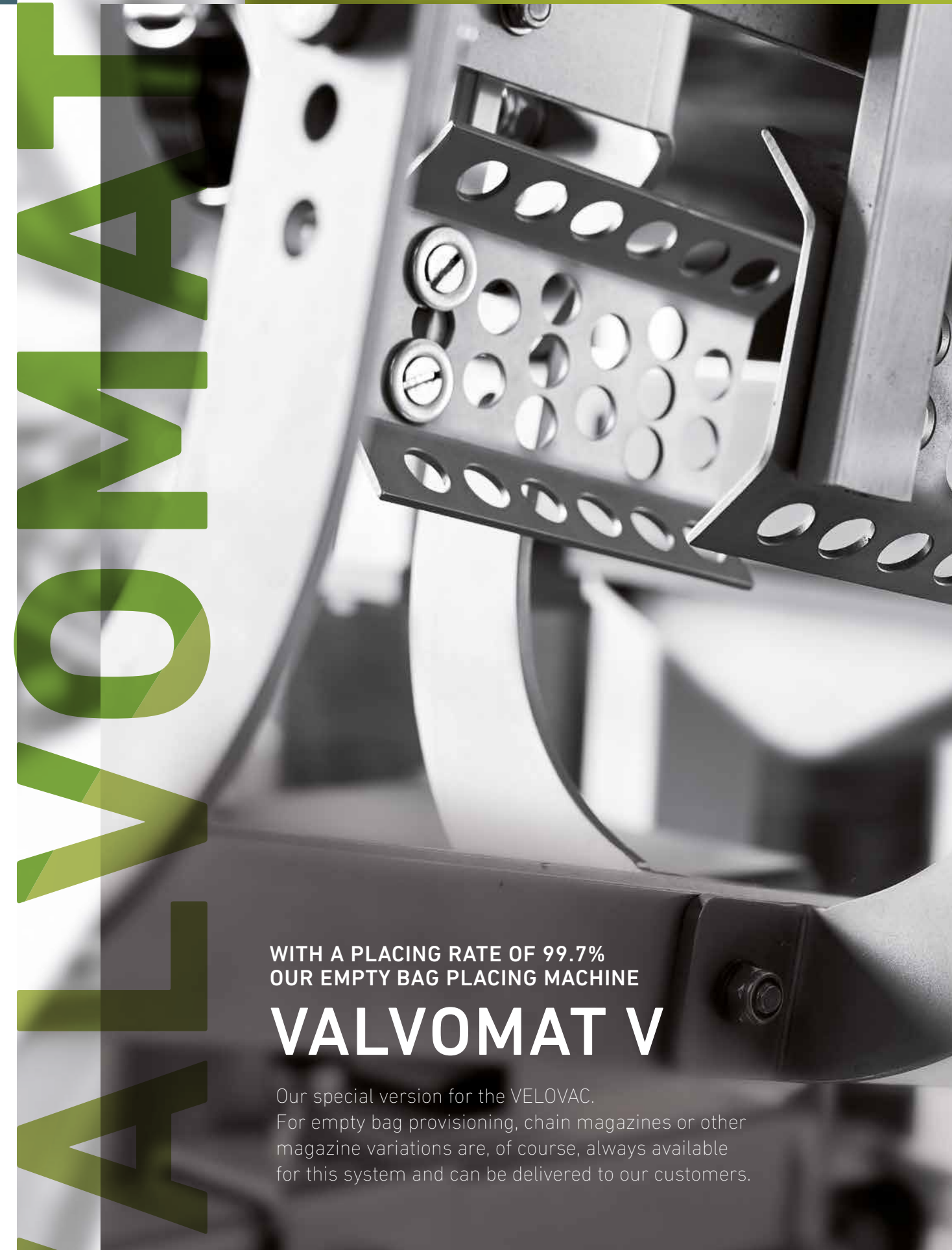
VELOPACK ROBOT PALLETIZING

Our six-axis robot palletizer reduces your employees' workload. It transports the bags from the chambers to the sealing station and then places them on a conveyor or immediately palletizes them, doing everything fully automatically. Of course, the robot comes with all the advantages of this technology, including very low maintenance costs and great flexibility.



WE GIVE IT OUR SEAL OF APPROVAL

Our secure "waffle welding" is another company patent. The VALVOSEAL keeps all dust out via ultrasonic welding and does so directly after filling, even before dropping. This makes transport as safe as filling. And for a direct truncation of the valve excess, you can combine this solution with our ultra sound lab cutter VALVOCUT. Fully automatic.



WITH A PLACING RATE OF 99.7%
OUR EMPTY BAG PLACING MACHINE

VALVOMAT V

Our special version for the VELOVAC. For empty bag provisioning, chain magazines or other magazine variations are, of course, always available for this system and can be delivered to our customers.

COMPRESSED ADVANTAGES
AND DATA AT A GLANCE

GROSS VACUUM PACKER VELOVAC



AREAS OF APPLICATION

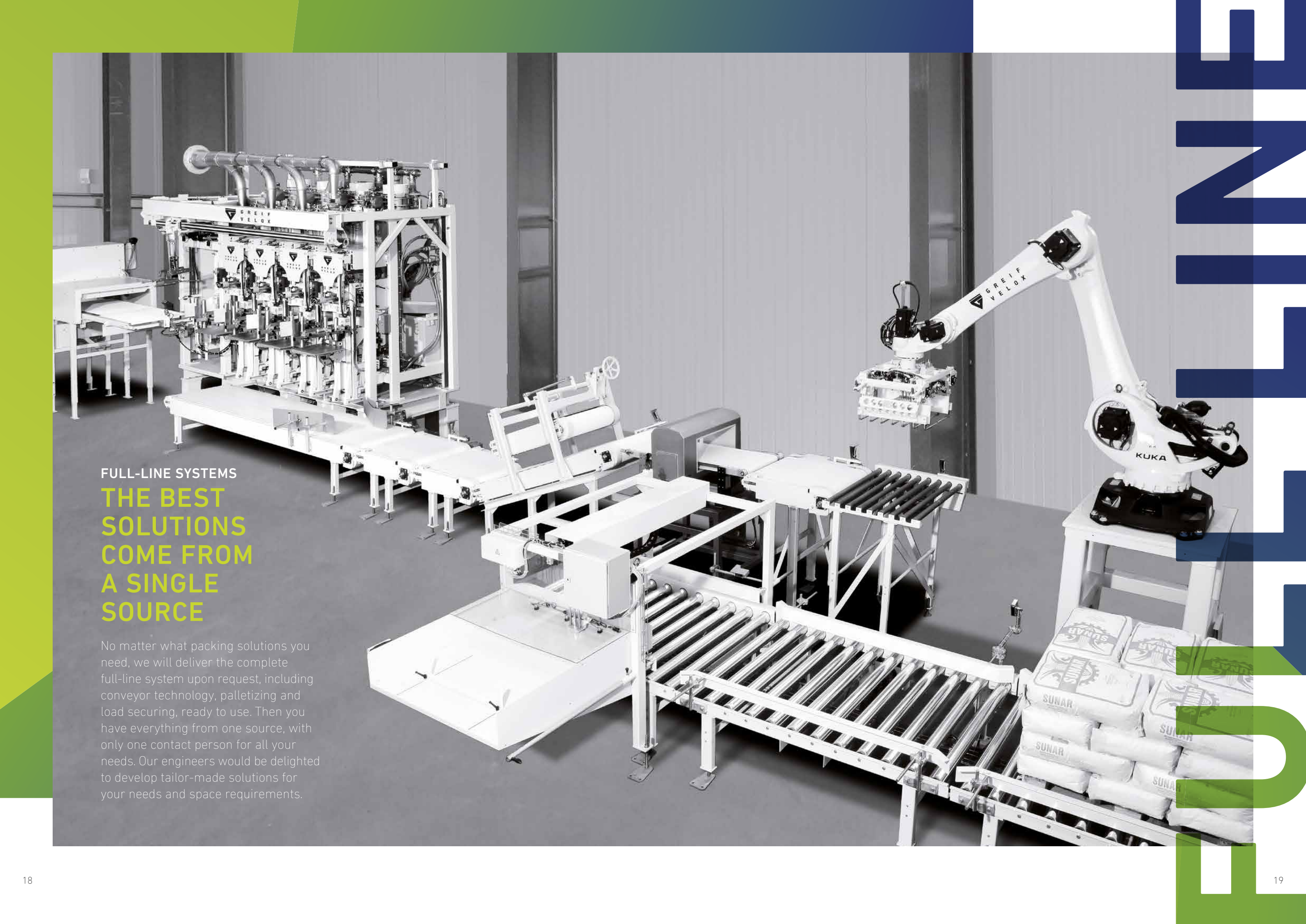
- **Bag types:** paper valve bags
- **Medium:** finest powder up to 10 – 350 g/L
- **Grain Sizes :** small 200 µm
- **Industries:** chemicals, petrochemicals, food, building materials
- **Performance:** up to 100 bags/hr

YOUR BENEFITS

- Maximum product compression of up to 400%
- Best bagging process for extremely light products
- Residual-free emptying by self-cleaning
- No Up- or Downstream compacting equipment required
- 100% product protection due to the product-specific optimization of bagging parameters
- Fast and efficient product change by storing variety-related machine parameters

ACCESSORIES/EXTENSIONS

- Ultrasonic welding VALVOSEAL
- External valve cutting VALVOCUT
- Fully automatic placer VALVOMAT
- Fully automatic full-bag handling via 6-axle robot VELOPACK
- Full line – The complete solution for filling, palletizing and packaging

A large industrial facility with a complex conveyor system, a robotic arm, and a palletizing machine. The conveyor system is made of metal frames and rollers, with a large hopper at the end. A robotic arm with a gripper is positioned above the conveyor. A palletizing machine is also visible, with a stack of bags on a pallet. The background shows a large industrial building with a glass facade.

FULL-LINE SYSTEMS THE BEST SOLUTIONS COME FROM A SINGLE SOURCE

No matter what packing solutions you need, we will deliver the complete full-line system upon request, including conveyor technology, palletizing and load securing, ready to use. Then you have everything from one source, with only one contact person for all your needs. Our engineers would be delighted to develop tailor-made solutions for your needs and space requirements.



MECHANICAL + ELECTRIC = EFFICIENT SERVICE

Our service technicians are double experts as they are well acquainted with both mechanical and electrical support. In this way, our team can provide comprehensive support on site. You will clearly notice the difference as this will not only make service more efficient but also your systems, as our professionals recognize correlations and approach them holistically.

**"SERVICE
DETERMINES
WHETHER
A CUSTOMER
BECOMES A
REGULAR
CUSTOMER.
THIS IS WHY
EACH SUPPORT
REQUEST IS
OF PERSONAL
CONCERN
TO US!"**

CARSTEN DIETRICH,
DIRECTOR OF CUSTOMER SERVICE



OUR GOOD SERVICE: VERY GOOD SERVICE

Our service team already proves itself a reliable and efficient partner for you during system construction as well as implementation. We are your true professional partner at eye level! Rediscover what service is all about in an ocean of service possibilities. We would be delighted to offer you the best services that fit your requirements and would gladly develop tailored solutions as well. We ensure that your users can quickly and efficiently learn to operate the machine, and we reliably guarantee a high level of machine availability:

- Helpdesk: direct contact person, immediate support
- Special remote assistance team
- 95% of all incidents can be resolved via teleservice and video communication
- Modem, Ethernet and VPN support for remote troubleshooting
- Mobilization of technical personnel within 12 hours
- General assistance with questions about operation or maintenance
- Average response time after receiving your message < 60 minutes



RALPH ARNDT, SALES ENGINEER
SPARE PARTS AND RETROFIT

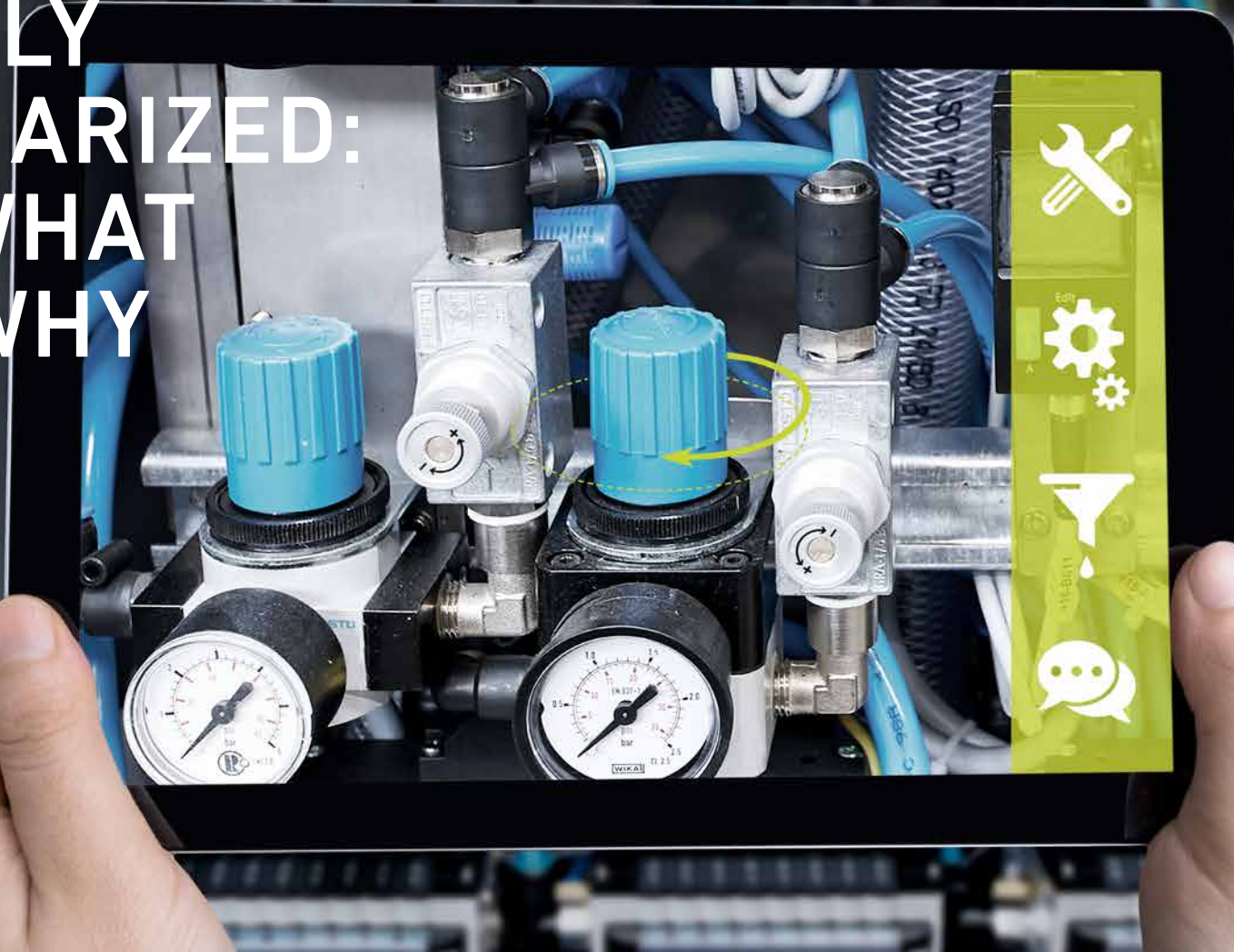
BREAKING NEWS: OUR WIKI

FINDING THE RIGHT PARTNER

Good service lies at the base of every good business relationship, as with every system that we deliver to you we also make a promise to provide you with solutions that function reliably and are highly economical from day one! The service component is a decisive criterion, particularly when purchasing a machine. In this brochure, our colleague Henrik Johns reveals in our wiki "GREIF: tangible solutions" what to be aware of when buying machinery and equipment. In our service brochure, however, our service team provide you with tips on the meaning of good service and what you should focus on here. Are you interested but unable to visit us at a trade fair? You can, of course, also find the brochure online on our website under the NEWS section.

INTERNET
OF THINGS/
INDUSTRY 4.0

BRIEFLY SUMMARIZED: THE WHAT AND WHY



Digitalization has now arrived in every part of our lives and, quite honestly, our lives are easier and enriched as a result! In the industrial sector, the digital revolution is also making waves, improving production and efficiency in a comprehensive way. In future, "Industry 4.0" will decide how competitive companies are. Only if you are at least as good as your international colleagues in networking, tracking and optimizing your production processes, will you be able to find the best offers with the best margins. The great advantages of such digitalization processes are often easy to calculate and you can clearly determine what to expect directly and indirectly in terms of added value and whether an investment is worthwhile. We would be pleased to advise you and support you with our expertise during our vibrant "GREIF: tangible solutions" workshops.

GREIF – TANGIBLE SOLUTIONS: REAL CUSTOMER STORIES MEASURABLE BENEFITS

DR. ALEXANDER MILDNER,
DIRECTOR OF RESEARCH AND
DEVELOPMENT



A large food manufacturer wanted to achieve impressive bagging speed with a complex full-line installation using our BVP systems. Since "Formula 1" solutions are not provided off the peg, our engineers put their heads together with our R&D department. As the specifications went beyond the maximum speeds available on the market, small and large optimizations were necessary to ensure that the resulting system met the reliability and sustainability standards we set for our solutions. Here too, Industry 4.0 played a decisive part in in meeting the customer's demands: We structurally monitor compliance with various process parameters using sensors and compare this data with MES as well as system and sensor data from various installation locations. All systems immediately readjust to any deviation that might occur to directly correct for it. This not only resulted in a surprised and delighted customer but also in a significantly reduced rejection rate as well as clear competitive advantage thanks to unique bagging speed.

Kind regards,

Dr. Alexander Mildner



CARSTEN DIETRICH,
DIRECTOR OF CUSTOMER SERVICE



KAI LAUSCH,
HEAD OF ELECTRICAL
OPERATIONS



STEFAN HOFFMANN,
SENIOR DESIGN ENGINEER



RALF DREWS,
CHAIRMAN OF THE
BOARD & CEO

RALPH ARNDT,
SALES ENGINEER
SPARE PARTS AND RETROFIT



INSIGHTS FOR OUTLOOKS

THIS COULD BE YOUR TEAM



BENJAMIN JOHN,
DIRECTOR
OF ENGINEERING



VOLKER MARKS,
DIRECTOR OF
MANUFACTURING



DR. ALEXANDER
MILDNER,
DIRECTOR OF
RESEARCH AND
DEVELOPMENT

TILMANN FRANKSEN,
DIRECTOR OF PROJECT ENGINEERING



GREIF– TANGIBLE SOLUTIONS!

Our Sales Engineer Henrik Johns offers real insider tips that you should keep in mind when buying a machine – regardless of what you buy and where you buy it.



HENRIK JOHNS,
SALES ENGINEER

DEAR READERS AND PERHAPS EVEN POTENTIAL CUSTOMERS,

It is time, a machine purchase is just around the corner. This may not be your first purchase but, unless you have already ordered and installed the same system numerous times, it is always an important job, which I would like to make easier and more valuable for you using my 25 years of experience.

YOUR BRIEFING FOR POTENTIAL PARTNERS

Before purchasing a machine, it is worth roughly planning "the journey" – a metaphor we like to use here at Greif-VELOX. When planning, use the following three phases:

- **The Horizon phase:** First, if possible, roughly define the target that you already have in mind – what kind of system do you need and what functions should it have?
- **The Cloud phase:** Let your imagination run wild and, without a care in the world, express what you would like your system to be able to do if there weren't any limitations or rules. This phase still plays an important role in partner selection.
- **The Ground Floor phase:** You then return to the solid ground of the facts and first define a rough possible budget framework and a schedule. You can also divide these points into any number of levels between maximum/minimum to be able to differentiate limits and scenarios for yourself.

Now you have a rough but inspiring briefing that you can use to inspire engineers

and system builders. You should select them in the next phase so that you can work together with them to create a realistic budget.

PARTNER SELECTION

If you have already had a very good experience with existing partners and are satisfied with the value for money, you already have a clear favorite! Of course, there are always cheaper options in today's globalized economy, but this could also result in much worse results and production losses due to non-confined delivery times. Machine defects usually cost far more money than initial savings and in any case are a considerable source of stress and take up your precious time. If you involve other providers, although your standard supplier is still a clear favorite, be fair and open. Share all the information and allow new impulses, visions and potential.

If you leave your standard supplier or need a new partner, such differentiation investments are not determined by prices – as long as they are somewhat comparable – but rather by your gut feeling, reinforced by corresponding references, customer recommendations and provider cases. It is also important that you are confident that your partner has honest intentions. Consider the following:



- Does the seller just want to sell you something or does he really want to find the best solution for you?
- Do you know the team behind the seller, with whom you will have to work later?
- Do you understand the project?
- Do you trust the senior designers?

Team charts in presentations already provide you with a first important impression.

How your contact persons react to your briefing components from your "cloud phase" is especially important. If your contact persons or essential team members are thinking in problems and not in solutions, then beware! Even the best engineers cannot solve every challenge, but they can be inspired to find alternatives. Partners work with you on how to make the impossible possible through creative ideas. Non-partners will only inform you in detail why things are not working. Such people are inflexible later on in the project and likely to miss important market trends.

However, priorities must be set to develop a realistic budget. And even if everything is technically possible, budgeting leaves little room for creativity and passion. In budgeting, a realistic figure for all involved is literally "worth its weight in gold".

As a further tip, I can share with you that, for major projects, it helps to stage workshops with potential partners to deal with challenging requirements. This could also be a fee-based workshop, if there has not yet been an assignment and several important persons must attend. This will still pay off. Here, you will not only get to know the team but also learn how the team works:

- How prepared are the participants?
- How is the workshop conducted?
- How do they work together?
- Is the chemistry in the team right?
- Are skill synergies being used?

And, above all:

- Will you and your needs be addressed?
- Does the team really listen to you?

Such workshops are performance-oriented "chemistry meetings", which should always result in specific ideas leading to realistic budget frameworks.

THE PURCHASE

After the budget has been released internally, the shopping part follows. In this part, prices and technical details will be negotiated and clarified. Think of all contingencies, especially the requirements for further cooperation after delivery. Many system deliveries are preceded by a partnership that can extend over a period of 15-20 years. This is why you personally assist in the purchasing negotiations, as bargains cost a lot of time and money and cause a great deal of stress – as we already learned during partner selection. If the prices are in your budget and in a similar range, a reliable, efficient partner with sustainable solutions justifies a reasonable but higher price.

You are not only purchasing a machine but also acquiring a long-term partnership with many hours of intensive contact and collaborative work.

If you would like to gain further insight, for example into what you should be aware of regarding services and how order processing works, you will find further insider reports from my colleagues on our website's Blog section, "GREIF: tangible solutions!".

If you have any questions about this report, my colleagues and I look forward to hearing from you and assisting you with any challenges and upcoming projects.

Kind regards,

HENRIK JOHNS, SALES ENGINEER

IN THE KNOW-HOW SERIES ON OUR WEBSITE, EXPERTS OFFER YOU FURTHER VALUABLE ADVICE ON HOW TO MAKE SURE YOUR PROFESSIONAL LIFE IS MORE EFFICIENT AND INNOVATIVE.

GREIF-VELOX.DE

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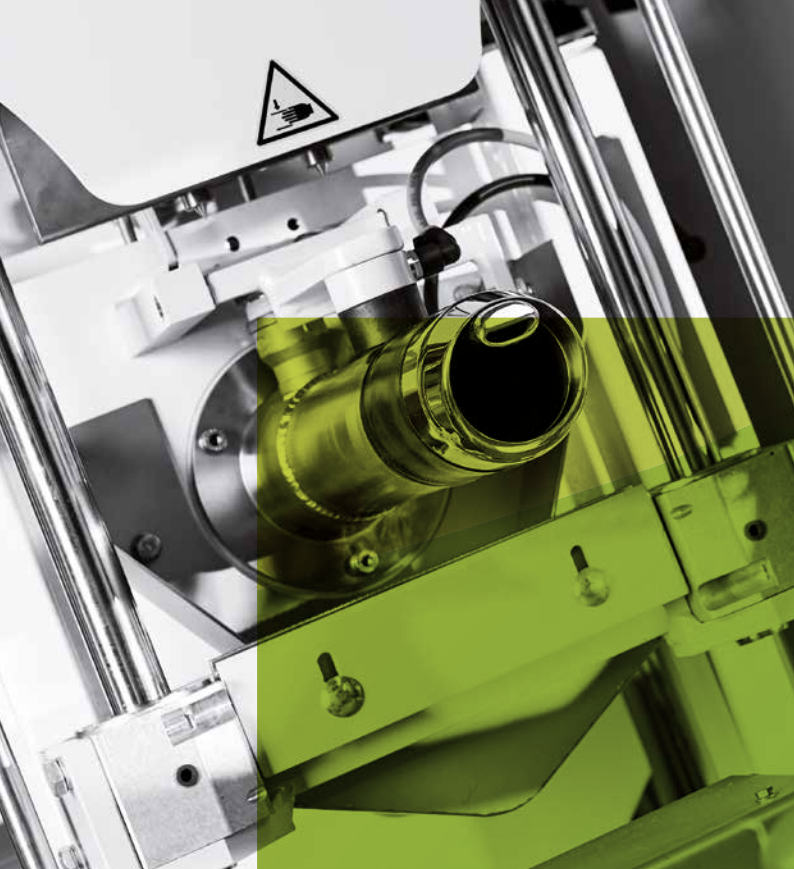
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