

Relying on knowledge and experience



30 years of
HOF

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Dear Ladies and Gentlemen

On 1 October 1988, what was at that time Schäfer & Hof Vakuum- und Kältetechnik Sonderanlagenbau GmbH was founded in a former cigar factory in Lohra, central Hesse.

A lot has happened since then – the company has turned into one of the leading specialists in the field of freeze-drying technology in the pharmaceutical sector. With more than 270 employees in the HOF Group, which today consists of HOF Sonderanlagenbau GmbH and HOF Prüfsysteme GmbH, the former three-man operation has become a key pillar of economic stability in the region.

At the same time, HOF has grown from being a company that initially only operated on a national scale to a global player that is active worldwide and now manages more than 2,000 plants and machines in 27 countries at present.

HOF – 30 years of innovation and reliability

HOF turned 30 a few weeks ago. It's an anniversary we're all thrilled about. Many years of reliability and good relationships with our partners have made a key contribution to this.

In addition to our repertoire of suppliers, we're primarily including our customers in this too. The knowledge that we have solid and reliable counterparts is crucial for a successful business relationship in times of economic uncertainty and global crises.



Thank you for the last 30 years

Because there are the milestones that are perhaps less remarkable but still very special and that have shaped our history and we continue to take pleasure in – like the fact that the first plant HOF built in 1988 is still in stable production today, that the first three company employees are still loyal and reliable colleagues today, and that we have managed to remain true to our original site in Lohra despite our growth.

This is why we're seizing the opportunity and putting this year's 'HOFinsight' under the anniversary motto.

We'd like to take this chance to say 'thank you' too: thank you for the last 30 years and particularly for the trust you place in us. We wish you every success for the future and hope you enjoy reading this year's 'HOFinsight'.

Yours faithfully,
The HOF Family



We are very pleased to be counted among the winners for the third time and would like to thank all our employees for their motivation and power of innovation. And, of course, we'd also like to thank our customers for our regular exchange of knowledge.



In the innovation elite for the third year in a row

It's no coincidence that, after 2016 and 2017, HOF has now received the TOP 100 Seal in 2018 as well, once again making it one of the TOP 100 most innovative companies in Germany.

It's the power of innovation and a simple principle that make HOF so successful: always thinking a little further for the best solution for customers. With over 30 years of experience, HOF is the leading specialist for manufacturing individual freeze-drying plants, loading and unloading systems and freezing and thawing equipment for the pharmaceutical and biotechnology industries – and with good reason!



Sometimes things don't turn out as planned

According to the original idea, HOF (or Schäfer & Hof – Vakuum und Kältetechnik Sonderanlagenbau GmbH, as it was when it was founded in 1988) was to become a nationally active service company, offering and providing services in the form of maintenance and modifications for existing freeze-drying plants.

However, this service company never existed in this form, because when the company was founded the order for the construction of a new freeze-drying plant was placed directly. So, from day one, the business model was based in the mechanical engineering sector, and it was always clear that service in any form would have to play a key role.

A strong team, the right knack and the necessary amount of luck meant that the available space had already been used up in the business' second year and a large assembly building was erected. Since then, the company premises have been expanded in several stages to create a total building area of 13,500 m² at three sites.

Challenges: our driving force

HOF's development has been constantly accompanied by the growing demands of the pharmaceutical and biotechnology industries. At the same time, it was always our customers' challenges that served as the driving force for innovations and further developments. In addition to solutions in the field of freeze-drying technology, pioneering HOF products such as freezing and thawing equipment for blood plasma in blood donation centres, effective systems for loading and unloading freeze-drying plants, freeze-thaw units for tempering pharmaceutical and biotechnological products and, most recently, thawing and cutting devices for bottled plasma were developed.

Our philosophy

With the basic philosophy of offering and delivering "on-time quality for discerning customers", after a 30-year company history HOF is today the leading specialist for individual solutions. This much is underlined by the innovation and management awards that HOF has received in recent years.

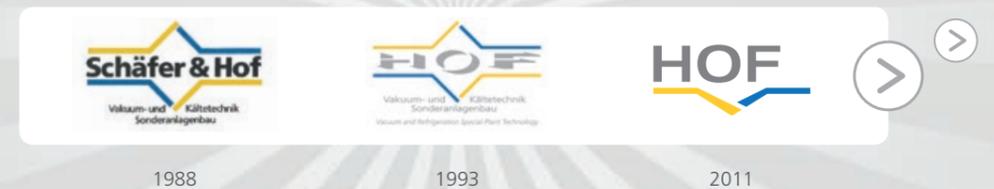


Letting knowledge grow

In keeping with this doctrine, HOF attaches a great deal of importance to training specialists and has been a training company for over 25 years. In addition to offering the classic skilled occupations in the commercial and industrial segments, HOF has been a university partner for the Dual Study integrated degree programme and other degrees for many years.

In-depth specialist knowledge, many years of experience and a high degree of flexibility, coupled with short decision-making paths and the spontaneity of a medium-sized, owner-managed family-run business, have made HOF strong – not only in the field of plant engineering, but also in the all-important area of service. This has been just as important as plant engineering since the company was founded, and, like the company, has been steadily expanded over the years.

Today, HOF manages more than 2,000 plants – both its own and ones from third-party manufacturers – at international level. With knowledge and experience, crucial quality and the familiar flexibility we're known for, HOF will remain a stable partner in the future as a specialist for individual solutions.



Hans-Georg Hof takes a look back

It all started in what was formerly a cigar factory

At that time, we spent a long time humming and hawing over whether acquiring such a large building would be worthwhile. I never thought that we'd have to contend with our first extension in the second financial year due to a lack of space – let alone today's dimensions.



Always a highlight

Whether it's a 0.5 m² laboratory plant, a 40 m² production plant, a compact FTU or a delicate loading and unloading system – integrating our solutions into our customers' buildings is always a very special event every single time and has required us to come up with lots of extraordinary ideas in the past.

It's all about overcoming challenges, particularly in existing buildings with specified access routes – and a task which I personally always really enjoy and am happy to take on.

Tinkering around in one way or another

Where 260 employees work today, in the early days I was a salesman, planner, electrician, locksmith, commissioning engineer, service fitter and manager all rolled into one.

Although nowadays I primarily deal with strategic matters, I don't let myself miss out on my daily walk through the workshop or tinkering around in one way or another.



The foundation of HOF Prüfsysteme GmbH

We founded HOF Prüfsysteme GmbH on 1 April 2004 through private connections and the roots of my professional career in the freeze-drying technology sector.

In this company, we primarily serve the automotive industry with our leak testing systems. As a corporate group, we have been working hand-in-hand ever since and complement one another with both limited companies.

Successful attendance at trade fairs

We have been an integral part of ACHEMA in Frankfurt since 1994. Although my feet usually hurt on the first evening of the trade fair, we can always look back on a very successful attendance. What I've always, liked – and still do like – most about this is the contact with our existing customers and the related opportunity to exchange ideas in both a business and a private context.

Sustainability and treating nature with respect are particularly important to me as an amateur farmer

Straw – the by-product created during cereal growing – can be put to more sensible use than being left chopped in the field. It took several years to get from the initial idea to the actual implementation process, but since 2013 we've been able to heat our Mornshausen site completely with straw.

The fact that the complete value creation chain – from cereal growing and pelleting the straw, to using the pellets in the heating system – comes entirely from a single source was a one-of-a-kind pilot project in Germany and therefore a milestone that makes me puff up with a certain feeling of pride.

A heavenly gift

On our company's 25th anniversary, we held a large family day in addition to our first HOF Specialist Forum. During the festivities, the staff surprised my wife and I with a balloon ride, which we took a short time later. The fact that we were able to maintain our team integrity and personal connection to one another – even after 25 years – and were thanked with such a beautiful experience truly was and is a special gift.



We're there for you ...

Customer service is especially significant in HOF's corporate philosophy. Proximity to our customers is very important to us, as is their involvement in all relevant decision-making processes that make up a good cooperative relationship. Competent and friendly HOF contacts are there for you and will assist you in any way they can.

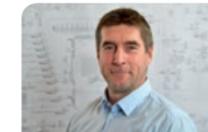
Here, we always focus on the essential elements: our customers.



Alexander Hof
General Management



Gerlinde Hof
General Management / Finances



Oliver Schreiner
Production / Operations Manager



Hans-Georg Hof
Managing Director / Business Owner



Stefan Becker
Project Controlling



Gerhard Schilder
Business Development Manager



Dirk Walbrecht
Sales Management



Jens Gemmecker
Sales and Distribution



Eva Hof
Research and Development



Hubert Sell
Head of Mechanical Engineering



Bernd Becker
Head of Electronics Engineering



Patrick Schuhmacher
Head of Software Engineering



Volker Höhn
Head of Software Engineering / Development



Uwe Happel
Automation / FTU Specialist



Holger Prinz
Head of Service / Manufacturing



Oliver Fleischer
Head of Service



Ralf Schäfer
Group leader, Qualification / Calibration



Hanno Kittel
Head of Qualification / Validation



Thorsten Friebertshäuser
Head of Logistics / Warehouse / Process Planning



Uwe Dickel
Head of Purchasing



Diana Hof-Schneider
Purchasing



Markus Achenbach
Head of Quality Control



Jochen Reinhard
Group leader, Manufacturing



Kai Schneider
Head of Manufacturing / Service loading / unloading systems



Bernd Klingelhöfer
Head of Electronic Manufacturing

Relying on knowledge and experience – 30 years

Always thinking a little further ... this is the principle that drives HOF time and again to “think outside the box” in technological terms – always on the lookout for the best solution for its customers.

HOF can now look back on more than 30 years of corporate history. Since HOF was founded in 1988, it has continued to develop – into a globally active and innovative company that makes individual freeze-drying plants, loading and unloading systems and freezing and thawing equipment.

Taking one step at a time and always keeping an eye the essentials, the company has set itself up in a market-oriented manner and has been the leading specialist for individual solutions in the pharmaceutical and biotechnology industries for more than three decades now.

Foundation of Schäfer & Hof Vaku- und Kältetechnik Sonderanlagenbau GmbH by Hans-Georg Hof and his uncle



The ownership situation changes – the company now has the name HOF Sonderanlagenbau GmbH

Hans-Georg Hof becomes the sole managing director
Another production and assembly building is erected. Various offices and meeting rooms are added in a separate building



A separate building is added to the office and meeting space

A new building is erected especially for commissioning multi-storey plants. Two 40-tonne cranes with a hook height of 12.5 m provide maximum flexibility



A new social building is erected at HOF's headquarters
Construction of a new production building and warehouse for HOF Prüfsysteme GmbH

A new building with 1,000 m² of warehouse space is added to the Mornshausen site



30 years of HOF – the specialist for individual solutions

1988 1989 1990 1991 · 1992 1993 1994 1995 1996 1997 · 1998 · 1999 2000 2001 · 2002 · 2003 2004 2005 2006 2007 2008 – 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018

A new production building is erected adjacent to the main building



A new workshop for refrigeration technology is added



The production building is expanded
New garage spaces are created for service vehicles



Foundation of the affiliated company HOF Prüfsysteme GmbH with its own production facility
Construction of a warehouse with 1,000 m² of floor space



A second site spanning a surface area of 5,700 m² is established in the Mornshausen district of Gladenbach



The corporate design is updated



HOF Sonderanlagenbau GmbH celebrates its 25th anniversary
The company receives the “Großer Preis des Mittelstands” (“Great SME Award”)



HOF receives the TOP 100 Seal in 2016, 2017 and 2018 for the most innovative companies in Germany.



The second HOF Specialist Forum takes place under the motto “Always thinking a little further”

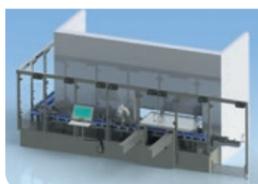
Power of innovation – to find answers

Mr Hof, you've been with the company for over five years now. Where do you see HOF in ten years' time?

We are on a more than promising course to further expand our position as a leading manufacturer of freeze-drying plants and loading and unloading systems. Years of tradition combined with the brand marks of the present, quality and reliability are testament to our determination that also offers major potential for the future.

Particularly with regard to new markets, we are constantly living up to our name as a manufacturer of special plants. Freeze-dryers and loading and unloading systems are unique and are tailored to our customers' needs.

But we also focus on new developments. In the future, HOF's development should therefore naturally be maintained with the continuity and stability it's known for.



What new developments are you touching on here?

Generally speaking, we were and are always on the lookout for development potential that can be successfully exploited in our plants. I would particularly like to mention the debotting systems at this point, which are relatively new for HOF. Deep-frozen bottles of plasma are fed into a thawing bath via an automated magazine and heated continuously so they are then cut open in a guillotine using robot systems; the core is separated and the empty containers are sorted. High cycle times, reliability and product protection are the crucial factors here.



Have you already been able to launch this new plant technology?

The HOF systems have been launched on the market for almost a year now. Well-known pharmaceutical companies have entered into dialogue with us in this regard. Plants for sites in Germany, Australia and the USA are already being planned and produced.



How important will the international markets be for HOF in the future?

Providing the market with a holistic service in conjunction with the company's organic growth has been important to us in the past and will continue to be in the future too. We are already working with our customers in 27 countries around the world.

HOF provides support for around 2,000 plants globally and is considered to be a reliable partner in the development and construction of new plants as well as the complete after-sales service segment. Our service team is available to our customers for the likes of maintenance, calibrations, repairs, conversions and modernisations – worldwide.



Dr Alexander Hof

- Born in 1984
- 2004 – 2009: degree in Molecular Biology (M. Sc.) at the University of Marburg
- 2009 – 2013: doctorate (Dr. rer. nat.) at the Max Planck Institute for Terrestrial Microbiology in Marburg
- 2016 – 2018: MBA degree (while in employment) at the ISM in Dortmund



TECHNOLOGY

HOF – Freeze drying systems

HOF systems – state-of-the-art technologies developed from practical experience for use in practical applications

With over 30 years of experience, HOF Sonderanlagenbau GmbH is the leading specialist for manufacturing individual freeze-drying plants, loading and unloading systems and freezing and thawing equipment.

HOF plants are often highly innovative and many new developments have been patented. HOF products can be characterised in three words that are important for daily pharmaceutical and biotechnology routines: future-proof, powerful and practical.

Customised, reliable and easy to operate

HOF freeze-drying systems are individually and precisely tailored to the task at hand and to the specific production requirements. For plants that are built for research or for product and process development, we guarantee that the respective process parameters are fully transferable to the production plants. That ensures reliable production! And: each plant is ideally adapted to the structural environment on site.

How can we help you?

Are you currently in a planning phase? Do you need technical support for your concept? Our consultants and engineers are on hand to assist you in any way they can. We would be delighted to provide you with more information in a personal meeting. We look forward to hearing from you.



HOF Sonderanlagenbau GmbH
Ludwig-Rinn-Str. 1–3 | 35102 Lohra | Germany
phone + 49 6462 9169-0 | www.hof-sonderanlagen.com

The specialist for individual solutions
Freeze drying systems | Loading and unloading systems | Freeze-Thaw Units | Service |



HOF quality is the sum of many success factors

HOF plants are often highly innovative and many new developments have been patented. The plants and systems are designed and precisely implemented in line with customers' individual requirements. HOF products can be characterised by three success factors that are important for daily pharmaceutical and biotechnology routines: they are future-proof, powerful and practical.



1 Consulting

A team of experienced employees provides you with individual advice from the outset and accompanies all processes until the plant is successfully in use. You can rely on employees who are continuously and specifically trained by HOF for this task. They all have well-founded training as engineers, natural scientists, technicians, service fitters or skilled workers.

24-hour service – 7 days a week

Comprehensive service is very important to us. That's why we don't let anyone else work on our plants: we transport, install and commission your system and even qualify it too. This minimises interfaces and eliminates problems. HOF plants are a key component in the pharmaceutical production process. This is why our employees are available 24 hours a day and are immediately ready to go in emergencies. Your HOF team from service and production knows every detail of your plant and can help without delay.

And spare parts? No problem!

Our very own warehouse with over 60,000 items ensures that the essential spare parts for all plants are always available, keeping downtimes as short as possible. Contact our emergency service on + 49 6462 9169-0 for immediate support.

6 Competence

The knowledge, skills and experience of our employees form the foundation of our work. Thorough, comprehensive training and constant transfer of knowledge are an important investment in the future. They help to safeguard our extensive expertise and identify with our very own products. And: this also gives you the knowledge that you have made the right choice for your everyday production operations.



2 Innovation

Future-proof, powerful and practical – these are the crucial parameters that HOF systems can be measured by. HOF is known for creative products that are precisely developed in line with customers' requirements using the latest technologies. With our individual solutions and pioneering design, we successfully support our customers in achieving their goals.

> Focus on your product

Individually designed, planned and manufactured – with state-of-the-art technology

5 Quality

For all HOF systems, the goal is only achieved when the result fully meets your requirements – not 99 %, but 100 %. Following the company philosophy, "on-time quality for discerning customers", quality is the highest standard for HOF. This applies to all areas, from concept design to customer service – you can rely on that.

3 Technology

At HOF, the product is not determined by the technology, but it is rather the product properties that determine the technology. We rely on state-of-the-art technologies in our plants and systems to achieve the best results for our customers as reliably and effectively as possible. You can rely on that!

4 Manufacturing

Our leading position is a constant commitment to excellent performance, continuously high quality and foresight for the development of pioneering technologies. All HOF systems are fully manufactured and tested by our employees at our production site. This allows us to ensure maximum quality.





Head office

HOF Sonderanlagenbau GmbH
Ludwig-Rinn-Str. 1–3 | 35102 Lohra | Germany
phone + 49 6462 9169-0 | fax + 49 6462 9169-199
info@hof-sonderanlagen.com | www.hof-sonderanlagen.com



Mornshausen facility

HOF Sonderanlagenbau GmbH
Vor dem Langen Loh 2 | 35075 Gladenbach-Mornshausen | Germany
phone + 49 6462 9169-0 | fax + 49 6462 9169-199
info@hof-sonderanlagen.com | www.hof-sonderanlagen.com



company information

publisher: HOF Sonderanlagenbau GmbH
Ludwig-Rinn-Str. 1–3 | 35102 Lohra | Germany
phone + 49 6462 9169-0 | fax + 49 6462 9169-199 | www.hof-sonderanlagen.com
responsible according to the press law: Alexander Hof, Stefan Becker

conception, design, editorial assistance: exposé Marketing & Werbung, Marburg, Michael Grebe, contact: + 49 6421 484880
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