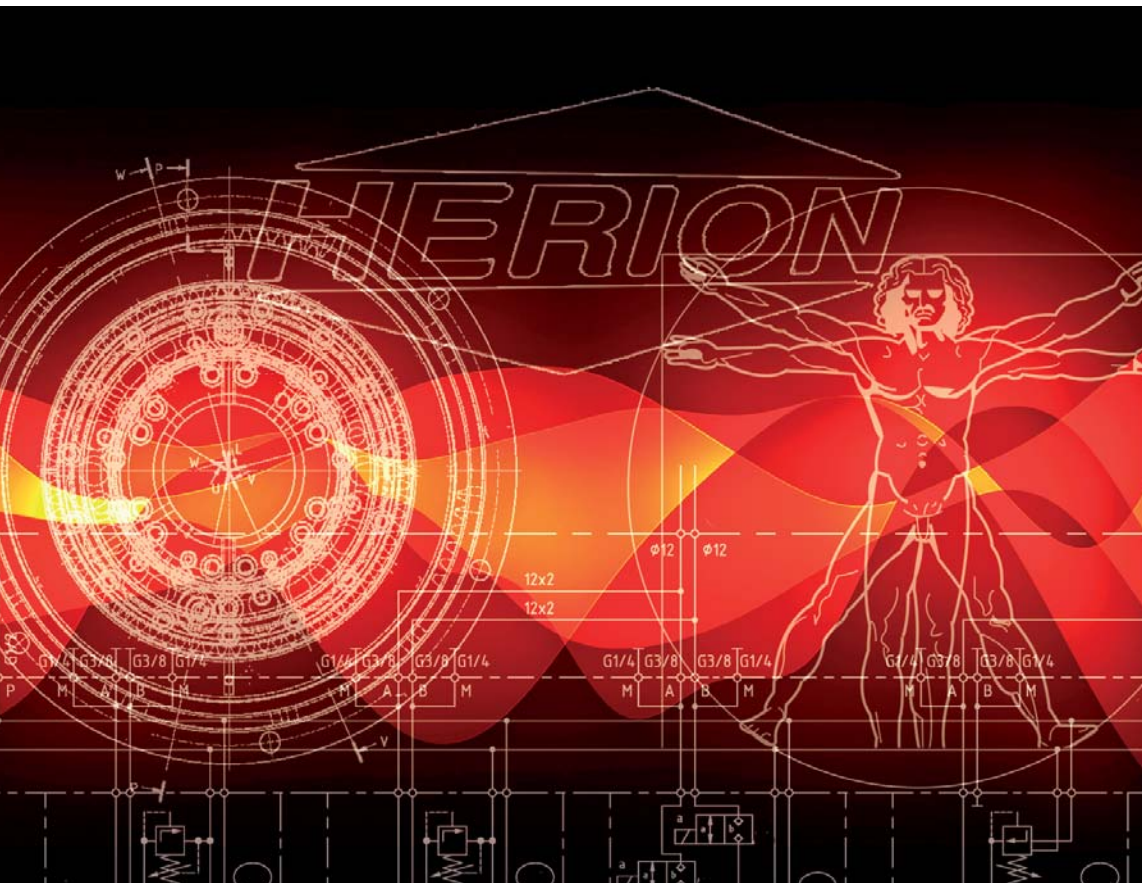


>> HYDRAULICS AND SAFETY TECHNOLOGY FROM HERION – COMPLETELY INDIVIDUAL FOR YOU!

Safety, economy and productivity at the highest level



ENGINEERING ADVANTAGE



Safety valves
and solutions



Systems
and components
for presses and
drive technology



Hydraulic
components
and cylinders



Hydraulic
systems



Hydraulic
power packs
and units



THREE BRANDS WITH ONE SINGLE THREEFOLD AIM

2



Only a company that acts responsibly for humanity and the environment, whilst at the same time maximizing business and efficiency, is fit to meet the challenges of the future. The HERION Systemtechnik brand name accepts this challenge and has in the meantime been producing products and solutions for hydraulics, safety technology and the mechanical and pneumatic press engineering industries for some 50 years. As far as we are concerned, a safe working environment, product quality and safety have absolute priority. Together with our parent company Norgren and the corporate holding company IMI we are jointly following the pathway towards a clear objective: to be worldwide the most innovative and highly respected engineering company of our size-category. We are achieving this objective through the consistent implementation of our company strategy. Through qualitatively high-value, safe and innovative products and services, through the consistent and professional behaviour of our employees and through a strong ethical leadership and value-driven business management. It is this mentality that lifts us above the competition and unifies and guides more than 14,000 people within the IMI Corporation. For the benefit of our customers – worldwide.

As a medium-sized company, we enjoy the benefit of the financial support of our large parent cor-

poration and in this way we are able to make long-term plans and realise our objectives. It is thanks to our employees and their motivation and commitment that the HERION Systemtechnik brand-name has become what it is today.

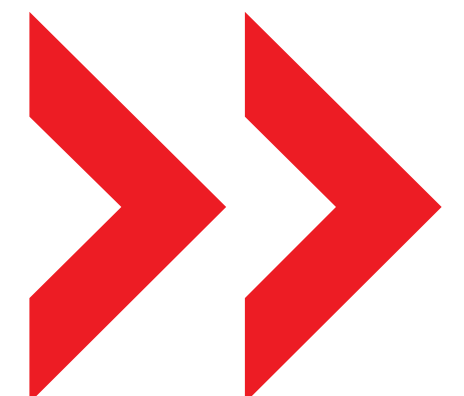
We create the solutions to the problems that our clients want us to resolve with a combination of technology, innovation and technical know-how and we offer them THE decisive advantage in the race for the best technology – namely

leadership. We call this Engineering Advantage. At the centre of all this stands the intellect, the drive and the commitment of all employees who are engaged each day with something new for their clients and who act with integrity.

Excellence, innovation, integrity – these are three guideline values for an ethically-correct, customer-oriented and efficient business operation.

Check this out for yourself!

3



MORE EXPERIENCE CREATES MORE KNOW-HOW

4



5



The company's founder Erich Herion

Progress is first of all initiated in the head. Since the foundation of the company in 1938 by Erich Herion, we have been developing and creating milestones in the pneumatic and hydraulic safety engineering fields. HERION Systemtechnik has not become a modern technology company with tradition without there being a reason for this.

**FOR MORE THAN 50 YEARS
WE HAVE BEEN DEVELOPING
MILESTONES OF TECHNOLOGY**

Pneumatic safety valves:

- 1938**
3/2-way-seat valve
- 1948**
Double three-way valve
- 1950**
Double three-way valve parallel-switched
- 1956**
Double three-way valve with static monitoring
- 1964**
3/2-double valve to prevent clutch and brake overlapping.
- 1966**
Double three-way valve with static monitoring, residual pressure-free
- 1977**
XS valve with dynamic pressure monitoring and failure indicator unit

Hydraulic safety valves:

- 1964**
Hydraulic double 3/2-way valve, pilot controlled
- 1973**
Electrically monitored safety valve
- 1985**
Hydraulic PSV DN 10
- 1988**
Hydraulic PSV DN 16
- 1990**
Special hydraulic safety valve in redundant version
- 1992**
Hydraulic PSV with damping component
- 2011**
Hydraulic PSV DN 25 residual pressure-free
- 2012**
5/2-way safety valve, self-monitoring, residual pressure-free, SIL-capable

TEAM SPIRIT FOR YOU AND CODE OF HONOUR FOR US

ENGINEERING ADVANTAGE THROUGH WORLDWIDE SYNERGIES, INNOVATION, TECHNICAL COMPE- TENCE AND A COMPREHENSIVE SERVICE NETWORK WE ARE CREAT- ING THE DECISIVE ADVANTAGE...

Thanks to intelligently applied corporate synergies and through the focusing on potentials within IMI and Norgren, we are able to offer our customers tailor-made and absolutely individual solutions. As part of our Engineering Advantage, the objective of the creative solution is always a central point and always targeted in the tasks that are set by the customer. Whether it be individual components, systems or complete installations: We provide specific solutions at precisely the added-value depth that you require. Right from the development stage through to testing, our specialists from engineering, sales and service are there for you - in person, with the right know-how, quickly and cost effectively.

Our specifications: We operate with a broad view and recognise today the product need for the industry specifications of tomorrow.

Our designs/developments: Close collaboration with OEMs makes tailor-made solutions possible.

Our technology: Progress through synergies. As a subsidiary of the Norgren and IMI group of companies, we can access a multitude of technological areas to find the right solutions for your application.

Our environmental protection: We help our customers not only to meet the current regulations, but also to exceed them without compromising performance.

The IMI Way

In March 2012 IMI plc was the first company to gain the Investing In Integrity accreditation for an ethical and integral business operation.



Clean-up business

With "The IMI Way", our code of practice for a sustainable, responsible business operation, we have a commitment in our business against corruption, child exploitation or forced labour practices and to the observance of strict rules in relation to health and safety at work and to the environment. And what applies for us also naturally applies for our business partners. We would all like to leave behind for future generations a world, in which life is worth living. In view of global warming, environmental pollution and diminishing resources, an acceptable and sustainable approach to natural resources and environmental protection is a matter of the highest priority for everyone at HERION Systemtechnik. Wherever it is possible we are developing economic, energy-efficient products and are thereby helping our customers in their own efforts to achieve ecological sustainability. We are also supporting measures for the reduction of environmental pollution caused by waste materials, sewage, pollutant emissions and noise. Integrated cooling systems in a closed-circuit (for example for test rigs) are at the same time saving resources and reducing volumes of waste water.

Learn more about our ethics program:
www.herion-systemtechnik.de/about-us/Philosophy



... AND DO BUSINESS
IN A RESPONSIBLE MANNER:
PROFITABLY SOCIALLY AND
ECOLOGICALLY

OUR 5-FOLD COMPETENCE MAKES YOU STRONGER

8



9

ENGINEERING AND QUALITY – ARE SUPPLIED BY US TAILOR-MADE

What our customers want is our challenge. Just with standard components on their own, there is not always sufficient flexibility to allow many ideas and aspirations to be satisfactorily fulfilled. In such cases, we support you with further individual or new developments. The modular concept of our products and the flexibility of our engineering teams that are involved enable us to develop and produce "in-house" individual components in a short period of time cost-effectively, regardless of whether these are hydraulic, pneumatic or hybrid.

We offer to our customers tailor-made engineering and quality in 5 core competence areas:

- Safety valves and safety solutions
- Systems and components for presses and drive technology
- Hydraulic components and cylinders
- Hydraulic systems
- Hydraulic power packs and units

Prior to any development we provide you with consultancy and testing on what is conceivable and feasible and draw up a detailed specification list as a solid basis for a successful project. In this way we secure your competitive capability and give you a decisive edge.



SAFETY VALVES AND SOLUTIONS

10

When safety counts you have come to the right place. Herion's products and solutions in safety as well as pneumatical and mechanical press technology combine safety and economic efficiency at the highest level and are 'the reference standard' in many machines and systems the world over.

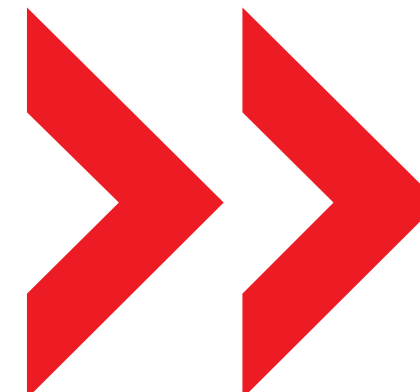
- Pneumatic safety valves, 3/2- or 5/2-way, electrically or pneumatically controlled
- Hydraulic safety valves, 3/2- or 5/2-way
- Additional components



There are safety valves and solutions also to be found in mining in wind-ing towers. Further examples for the application of HERION Systemtech-nik safety valves are to be found in pneumatic and mechanical presses, fairground rides, cable cars, road vehicles, process engineering, ma-chinery and plant construction. Atexc solenoids for mining industry ap-plications on the ground are possible. Our valves can be utilised for SIL 3 applications.

PROVEN THOUSANDS OF TIMES

Press safety valves not only for presses. Regardless of whether they may be on large presses or in a fairground - press safety valves and safety valves from HERION Systemtechnik protect people from accidents that can cause the most serious injuries in addition to protecting the mechanism. Up until now press safety valves have mainly been thought of as being used in connection with mechanical presses. As a safety element, the valve ensures that, in the event of breakdowns such as power failure, or if for one reason or another the valve spindle gets stuck, the machine is immediately stopped by the safe depressurization of the press brake. Whatever applies for press brakes can also be used for any applications, in which safety brakes are closed with spring power and are opened with pneumatic or hydraulic pressure, whether they are on fairground rides, on cable cars or in process engineer-ing, etc.



Safety valves from HERION Systemtechnik provide increased productivity – safely. The self-monitoring double valves make external monitoring components superfluous - this saves space and makes monitoring systems no longer current-dependent. In addition, time is saved when making exchanges thanks to the quick mounting on connecting plates and in this way any down-time of your machines is reduced. We will be happy to discuss your safety applications with you - to assure protection of both people and machines.

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Welding cell equipped with safety valves from HERION. Courtesy of the Lewa Attendorn company.

Very highest safety standards:

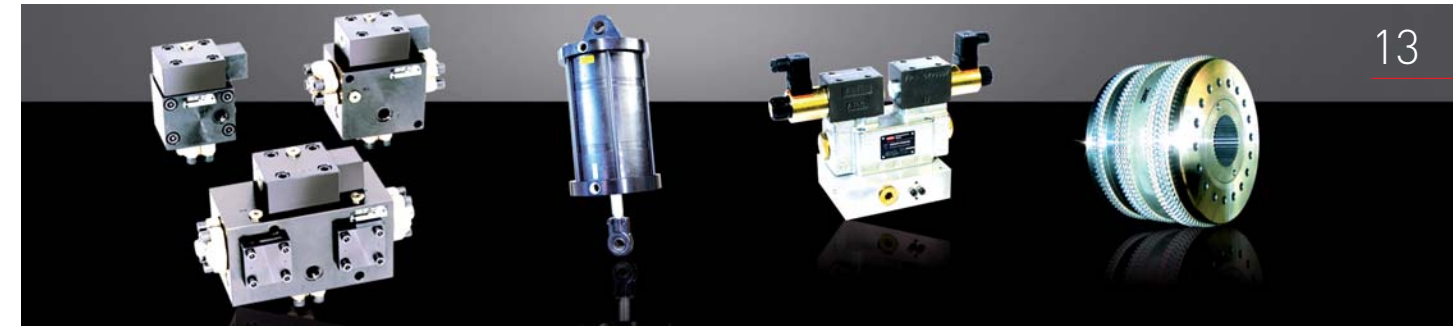
- DIN EN ISO 13849-1 (Performance level e, category IV)
- DIN EN 692
- inherently safe, residual pres-sure-free
- international approvals (BG, OSHA, CSA etc. ...)
- Hundreds of thousands of valves in Application
- More than 50 years of experience

SYSTEMS AND COMPONENTS FOR PRESSES- AND DRIVE TECHNOLOGY

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HYDRAULIC AND PNEUMATIC

HERION Systemtechnik is the competence centre for press and safety technology, as with 50 years of experience one just has to be good. That's how long we have been developing and producing hydraulic and pneumatic safety components and drive systems for equipping pneumatic and mechanical presses. Thanks to international approvals and test certificates our products are in use worldwide in safety-relevant systems.

Our products for presses and press safety:

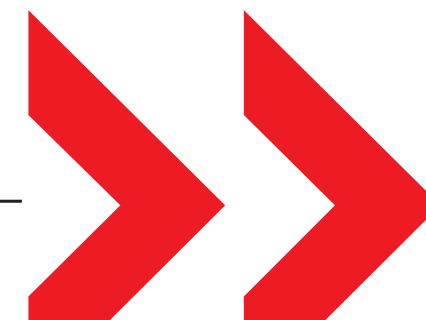
- Hydraulic clutch-brake combinations in different designs
- "Sliptronic" electronic monitoring
- Press safety valves
- Fast exhaust devices for blocks for the roller advanced control system
- Hydraulic overload safety devices
- Cylinder for the ram weight compensation
- Hydraulic standard and special units

Application for press and drive technology:

- Mechanical presses
- Servo presses
- Spindle presses
- Roller feeds

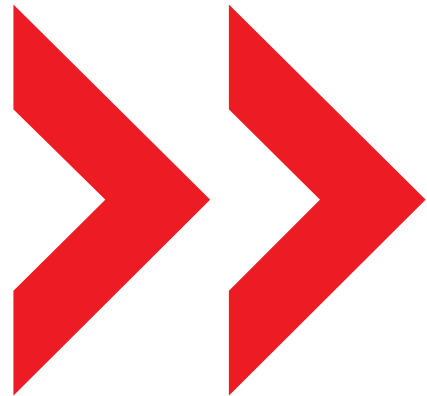


*All application illustrations
courtesy of Schuler AG,
Göppingen.*



HYDRAULIC COMPONENTS AND CYLINDERS

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HERION Systemtechnik hydraulic components and cylinders are used in general machinery construction and many other fields.

WHETHER IT BE **STANDARD** OR **COMPLETELY INDIVIDUAL**

We manufacture products both for your standard or your special applications... could there be a little more to it than that? More know-how, more efficiency, more special --- there isn't really any switch symbol that we can't or wouldn't like to produce. Hydraulic and individual components in proportional and on/off technology are used in all areas of the industry in hydraulic controls and drives. **We resolve it hydraulically!**

Our own complete range of standard valves from DN 6 up to DN 25:

- Directional valves
- Directional valves with inductive or electro-mechanical Switch position monitoring
- Manually controlled directional valves with or without locking system
- Pressure valves
- Flow control valves
- Check valves
- DN 3 miniature solenoid valves for hydraulic applications up to 350 bar

Proportional valve range from DN 6 up to DN 25:

- Directional valves
- Pressure valves
- Flow control valves
- Integral or external electronics

Hydraulic cylinders:

- Rod-type cylinders up to Ø 200

Applications:

- General machine construction/mechanical engineering
- Vehicle construction
- Plant construction



MORE KNOW-HOW, MORE EFFICIENCY, MORE SOLUTIONS

15



High-powered engine of a luxury yacht, equipped with hydraulic components and cylinders supplied by HERION Systemtechnik. Courtesy of MTU Friedrichshafen GmbH.

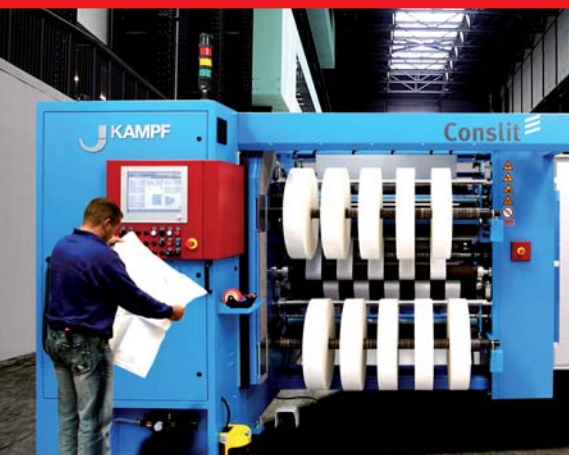


Hydraulic giant excavator used for brown coal extraction in Schleenhain near Leipzig.

HYDRAULIC POWER PACKS AND INSTALLATIONS

FULL POWER FOR EFFECTIVE SOLUTIONS

16



HERION Systemtechnik develops and supplies hydraulic solutions for general machine construction, in this case for controlling a foil machine. Courtesy of KAMPF Schneid- und Wickeltechnik GmbH & Co. KG.



Our hydraulic units and systems are an indispensable part of the frigates of the German Navy.

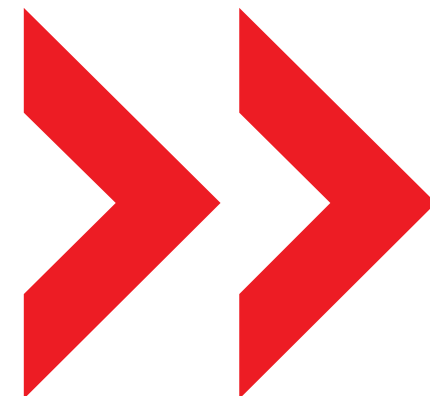


We supply hydraulic units for safe operation, for example of steam turbines. Courtesy of Alstom Power.

Whether it be a small unit or large installation ... we will plan, develop and manufacture your specific solution. Even with the most complex requirements, special versions, explosion-proof units or multifunctional units, at HERION Systemtechnik you will get everything from one single source with a minimum number of people that you need to contact.

Applications for units up to a tank capacity of 5000 l:

- General machine construction/mechanical engineering
- Energy technology (Turbine control systems)
- Military technology

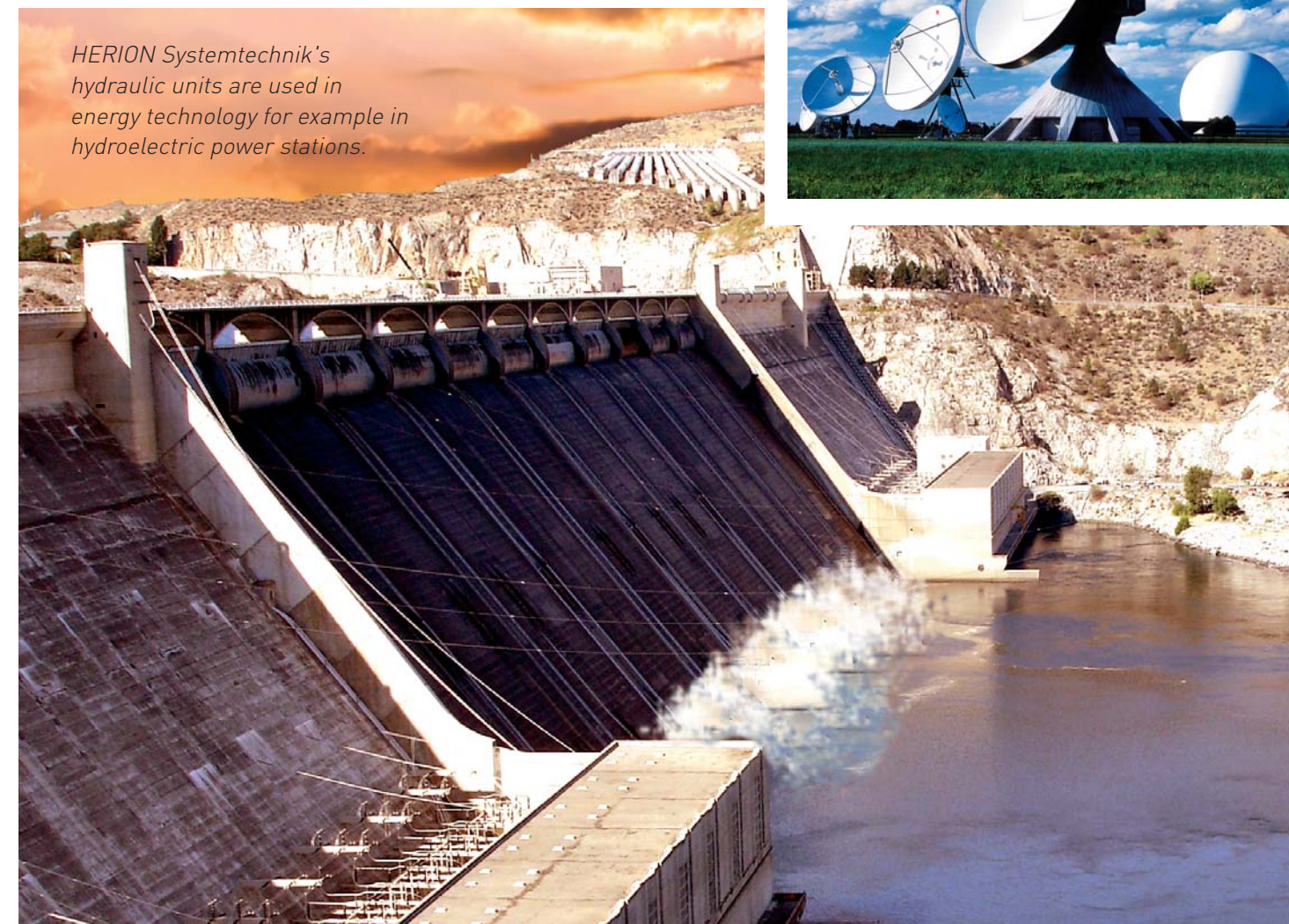


17



EVERYTHING FROM ONE SINGLE SOURCE – FROM OUR

HERION Systemtechnik's hydraulic units are used in energy technology for example in hydroelectric power stations.



HYDRAULIC SYSTEMS

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HERIONS systems are not things that are available off-the-shelf.

Check this out for yourself. You set our specialists their individual task. We produce rapidly and flexibly whatever it was that you were expecting from us right through from the planning up to the supply.

Hydraulic systems from HERION Systemtechnik – set us a challenge!

The things we can do - just a few examples of HERION Systemtechnik's hydraulic systems

- Hydraulically driven dosing cylinders for the control of a linear drive

- Hydraulic blocks for precise and leakage-free control of heavy loads

- Hydraulic and electro-hydraulic control units and systems for rear axle steering of commercial vehicles

- Hydraulic remote control for the clutch application on commercial vehicles

- Articulation safety systems for articulated buses



INDIVIDUAL, FAST AND FLEXIBLE



Our tailor-made system solutions can also be found in the hydraulic control systems of mobile waste disposal technology.

WE ARE SPECIALISTS IN THINGS THAT ARE VERY SPECIAL

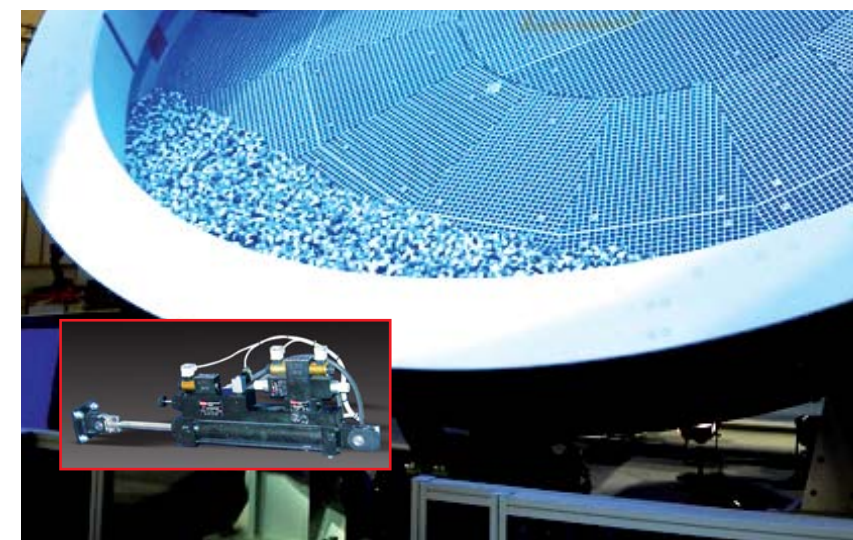
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HERION Systemtechnik's hydraulic systems more than meet the most demanding requirements in vehicle technology - for example damping cylinders in articulated buses.



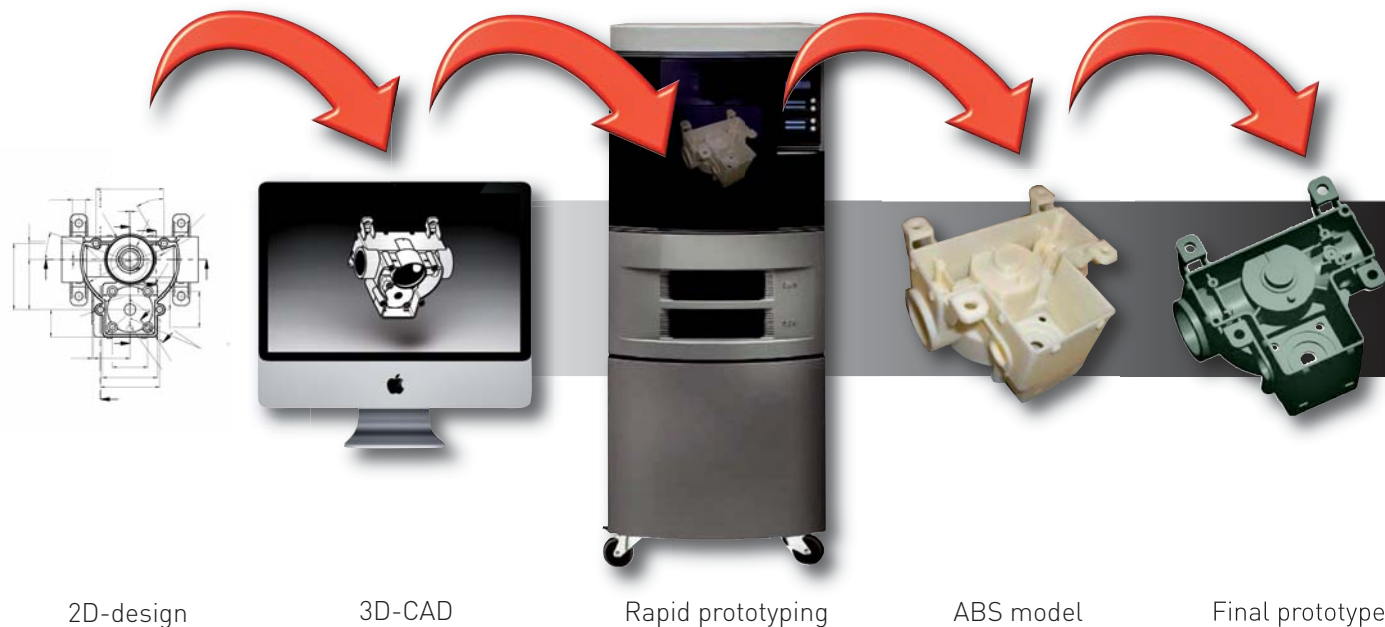
HERION valve units control externally the coupling and uncoupling of a hydraulic auxiliary function on the main drive of special commercial vehicles. In this case the mobile hydraulic turntable ladder of a fire engine.



An hydraulically-driven dosing cylinder controls precisely and in an almost leakage-free manner the height and the angle of inclination of heavy loads, such as for example on palletising plates. The system permits the synchronisation of multiple cylinders without a distance measuring system. Courtesy of Haver & Böcker OHG.

YOUR SUCCESS WILL BE PLANNED AND CONTROLLED

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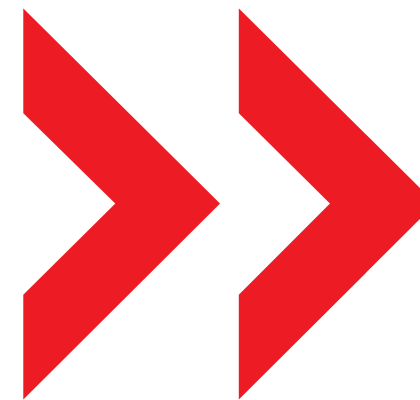


FROM THE START IT IS THE MOST MODERN AND RAPID PROTOTYPING...

The development centre in Fellbach, equipped with the most modern technology provides the innovative product research. Here we produce amongst other things prototypes made from

ABS plastic which are so robust that they can be used directly as test models. Shape, accuracy and functional method are tested in all of the necessary phases. The prototypes are even more pre-

cisely and accurately compared with photo chemicals, wax models or other forms of 3D impressions. They also do not shrink or absorb any moisture. This saves time and money.



...FINALLY THE MOST SEVERE TESTS!

The development of a new product is one thing - it being proven in the day-to-day application is another thing. When developing and testing our products we have one aim before our eyes: This is to design and produce them in such a way that at their expected loads they fulfil their tasks in a consistent and enduringly reliable manner. The Fellbach Testing Centre offers all of the possibilities for a comprehensive testing and quality control of our products. There is an extensive range of testing equipment available in the test laboratories and a neutral team of experts that is disconnected from the development departments. The available experience and capability enables a rapid implementation of the testing requirements, the planning of tailor-made test schedules, which include taking into account the particular demands of the actual application and operating conditions found in individual industries and in addition guarantees the neutrality and correctness of the test results. We have available extensive experience for the area of environmental simulation with the focus points being climate, temperature, temperature shock, corrosion, vibration and mechanical impact. A competence that is of benefit for our customers.

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Coldness test



Vibration test



Vibration test



Vibration test device



Material testing device



Influence test with overlaid temperature profile



Electronic microscope



Climate cabinets



Salt spray mist test

WE DO NOT RECOGNISE FOR OUR CUSTOMERS ANY LIMITS IN TERMS OF SERVICE!



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Anyone who believes that HERION is just pure hardware manufacturer just doesn't yet know us.

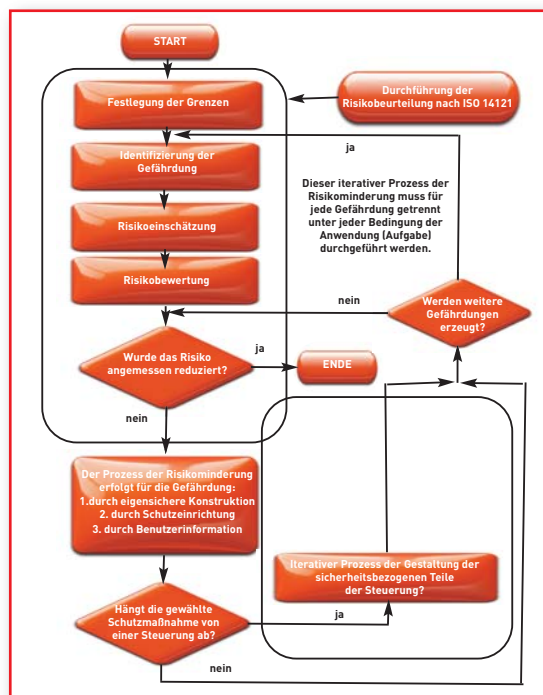
A focus point of our work is also in the provision of personal service for our customers. Thus, certified experts carry out amongst other things evaluations, classifications and calculations on matters of safety of machines and systems. And draw up risk reduction evaluations as per DIN ISO 13849 and the Machinery guidelines 2006/42/EC.



SAFETY WITHOUT RISK – WITH A SIGNED AND SEALED LETTER



The safety of machines and systems is evaluated by us in a risks evaluation report.



Our service for you:

- Set the required performance levels
- Evaluating the safety principles for hydraulic and pneumatic systems
- Selecting suitable valves and sensor technology
- Compiling of Block diagrams
- Classification of hazardous movements
- Calculating the failure probability
- Checking the security function

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CONSULTANCY AND FOLLOW-UP – DIRECTLY ON-SITE AT YOUR PREMISES

The whole world is our backyard. We will be happy to discuss your safety applications with you – to assure protection of both people and machines. We operate with some 6000 employees in the field of Fluid Power around the globe. It's also certain that we are probably not far away from you. Thanks to our growth strategy our network is constantly expanding everywhere as we feel our customers should be able to take advantage of our "made in Germany" quality.

Give us a call – we will look forward to hearing from you!



DISTRIBUTION PARTNERS

CHINA

ESTUN INDUSTRIAL AUTOMATION CO., LTD
No. 155 South Jiangjun Road Jiangning Development Zone
P.R.C. 211100, Nanjing
Tel.: +86-25-52785866
E-mail: info@estun.com
Website: www.estun.com

JAPAN

RIKEN OPTTECH CORPORATION
2-6-9, Higashi Ohio, Shinagawa – Ku
Tokyo 140-8533
Tel.: +81 3 34748602
E-mail: contact@rikenoptech.com
Website: www.rikenoptech.com

KOREA

CHUNGWOO CO., LTD.
#416-4 Dokjeongri
Janganmyun Hwaseongsi
Kyungkido, Korea
Tel.: +82 (0)31 351-5340
E-mail: blueox2@unitel.co.kr
Website: www.chungwooco.co.kr

SPAIN

EUROTECH SYSTEMS, S.L.
Av. Can Lluç, 25
08690 SANTA COLOMA DE CERVELLO
Tel.: +34 93 634 0101
E-mail: eurotech@eurotechsys.com
Website: www.eurotechsys.com

SOUTH AFRICA

Ernest Lowe ELCO
Pneumatic & Hydraulic
Automation Solutions
6, Skew Road, Boksburg North 1459
Gauteng, South Africa
Tel.: +27 (11) 898-6600
E-mail: corporate@elco.co.za
Website: www.elco.co.za

TAIWAN

FULL LIFE TRADING CO., LTD.
16F-4, No. 2, Jian Ba Rd., Chung Ho City
Taipei County, Taiwan 23562
Tel.: +886-2-82261860
E-mail: sales-dept@fulllifetrading.com
Website: www.fulllifetrading.com


TURKEY

Power Pnomatik Proses A.S
Necatibey Cad. No:44/2
Karaköy
İstanbul 34420
Tel.: +90 212 2938870
E-mail: info@powerpnomatik.com
Website: www.powerpnomatik.com

HERION Systemtechnik GmbH
Untere Talstraße 65
D-71263 Weil der Stadt

Telephone: +49(0)7033 3018-0
Fax: +49(0)7033 3018-10

E-mail: info@herion-systemtechnik.de
Website: www.herion-systemtechnik.de

 **Systemtechnik GmbH**
When safety counts

A company of the
Norgren- and IMI-Group

