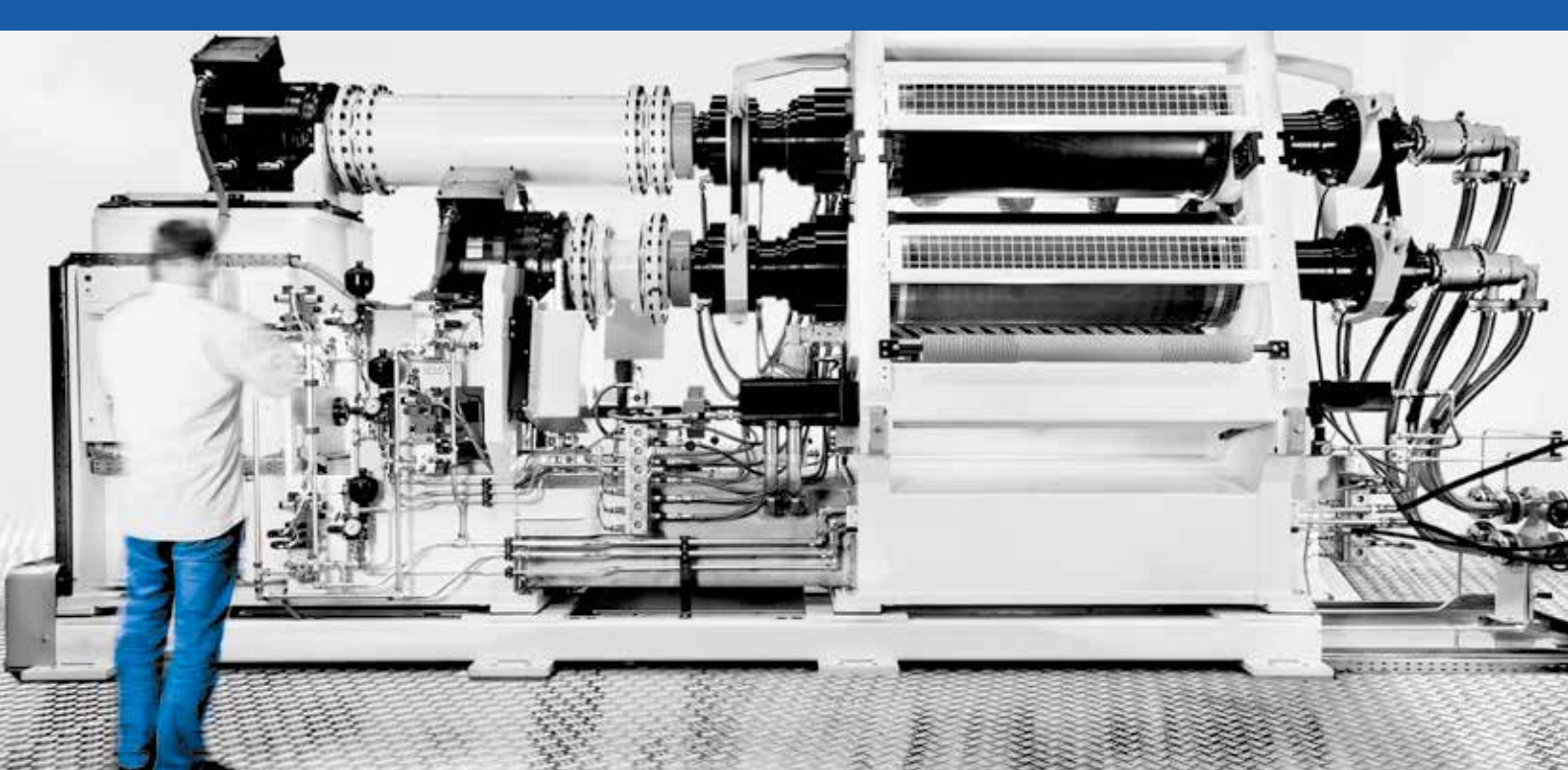


ENGINEERING IDEAS

Technology Full of Innovative Power



SAUERESSIG Engineering

WELCOME TO THE WORLD OF IDEAS

In our industry it's often a question of finding the silver bullet. On the one hand there are high cost-pressures and increasing requirements regarding process efficiency and machine productivity. On the other hand there are rising demands for design, sophistication and quality. We guide you through these challenges. Using our solid knowledge of the

market, we are able to take your individual processes into account. Our team develops specific machines, roller systems, steel cores and sleeves especially designed for rotogravure printing, with decades of engineering experience. Additionally, we enrich everything we do for you with a generous helping of creativity and innovative spirit.



- A team of 130 highly qualified and experienced employees
- Future-oriented system solutions for our customer's individual needs
- Manufacturing of high-precision calendar technologies, roller systems and sleeves

Our locations:

- Vreden, Germany
 - Poznan, Poland
 - Izmir, Turkey
- Engineering
- Grenzach-Wyhlen, Germany
 - Mönchengladbach, Germany
 - Warsaw, Poland
 - Bristol, UK
 - Veliky Novgorod, Russia
 - Istanbul, Turkey
 - Milwaukee, USA

WORLDWIDE COMPETENCES

Founded in 1953, SAUERESSIG, with headquarters in Vreden, Germany, is one of the leading manufacturers in the printing and converting industry. Creative solutions for diverse industries are part of our company's foundations.

We have office locations in Germany, Poland, Great Britain, Russia and Turkey and the USA, as well as further agents and joint ventures. As part of Matthews International, we are part of a strong network and a proven, reliable partner for leading companies, beyond all borders.

From the initial idea to the final converting line, many steps are required. Our highly qualified team of electrical and mechanical engineers puts an emphasis on closely coordinating every step with you. Only when individual requirements are met technologies full of innovative strength originate. Once your new machine is operating at your site, we accompany you with technical support and maintenance service. If against all odds, a defect occurs, our spare part and repair service guarantees the smoothest solutions. We develop special machines and roller systems with unrivalled engineering experience. Innovative lightweight steel cores and sleeves, specifically developed for rotogravure printed packaging, complement our portfolio.

INNOVATION ARISES FROM INDIVIDUALITY

For Special Challenges SYSTEM SOLUTIONS

The processing of web materials has many facets. Whether it's calendaring, coating, laminating, lining, lotioning or condensing – each must meet the highest standards of precision and functionality. For this reason, we develop system solutions that master every challenge. This is why we rely on the very latest technologies in the production of purpose-built machines – from individual to complex converting lines.

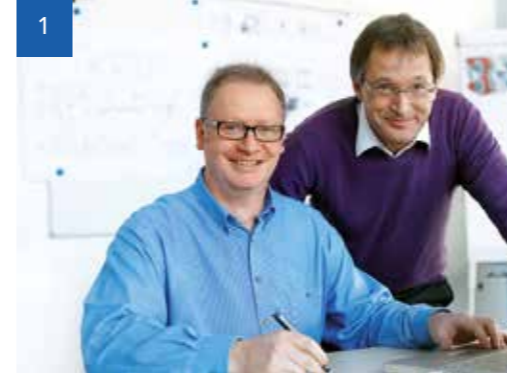
From Vision to Reality TECHNICAL CENTRE

No matter how good an idea is, the decisive factor is that it must work. Our in-house technical centre allows us to conduct embossing tests, patterns or pilot-runs with the aid of diverse laboratory equipment for all product areas. This way, we combine research and development work with the finest manufac-

turing technology – a guarantee for innovative products.

Industry Expertise at the Highest Stage ROLLER SYSTEMS

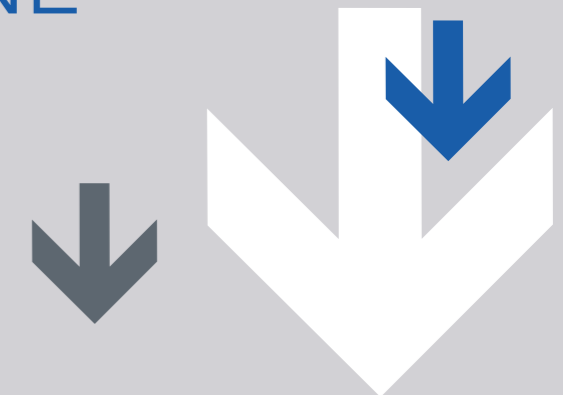
As one of the leading specialists and suppliers in the converting industry, we apply modern roller technology everyday. We know the central requirements and understand the connected processes. Whether it's in the development of polishing, coating and application rollers, heating and cooling rollers or expansion technology – our highly efficient manufacturing team, construction division and work preparation department keep in constant dialogue with one another. We use our synergy to ensure fixed check routines according to the highest quality standards.



7 Steps

TO THE PERFECT CONVERTING LINE

1. Individual consultation
2. Research & development
3. Technical centre
4. Construction / FEM
5. Manufacturing
6. Assembly



7. Converting line





CUTTING-EDGE TECHNOLOGIES

Active Gap Control

SMOOTHING CALENDER

- Constant material density on discontinuous coating of the whole web length and width
- Electro-hydraulic gap control for the calendaring of intermittent coated foils
- Electrical and mechanical gap control
- Roll-bending-system for deflection compensation

Efficient Sleeve Technology

SLEEVE CHANGE CALENDER

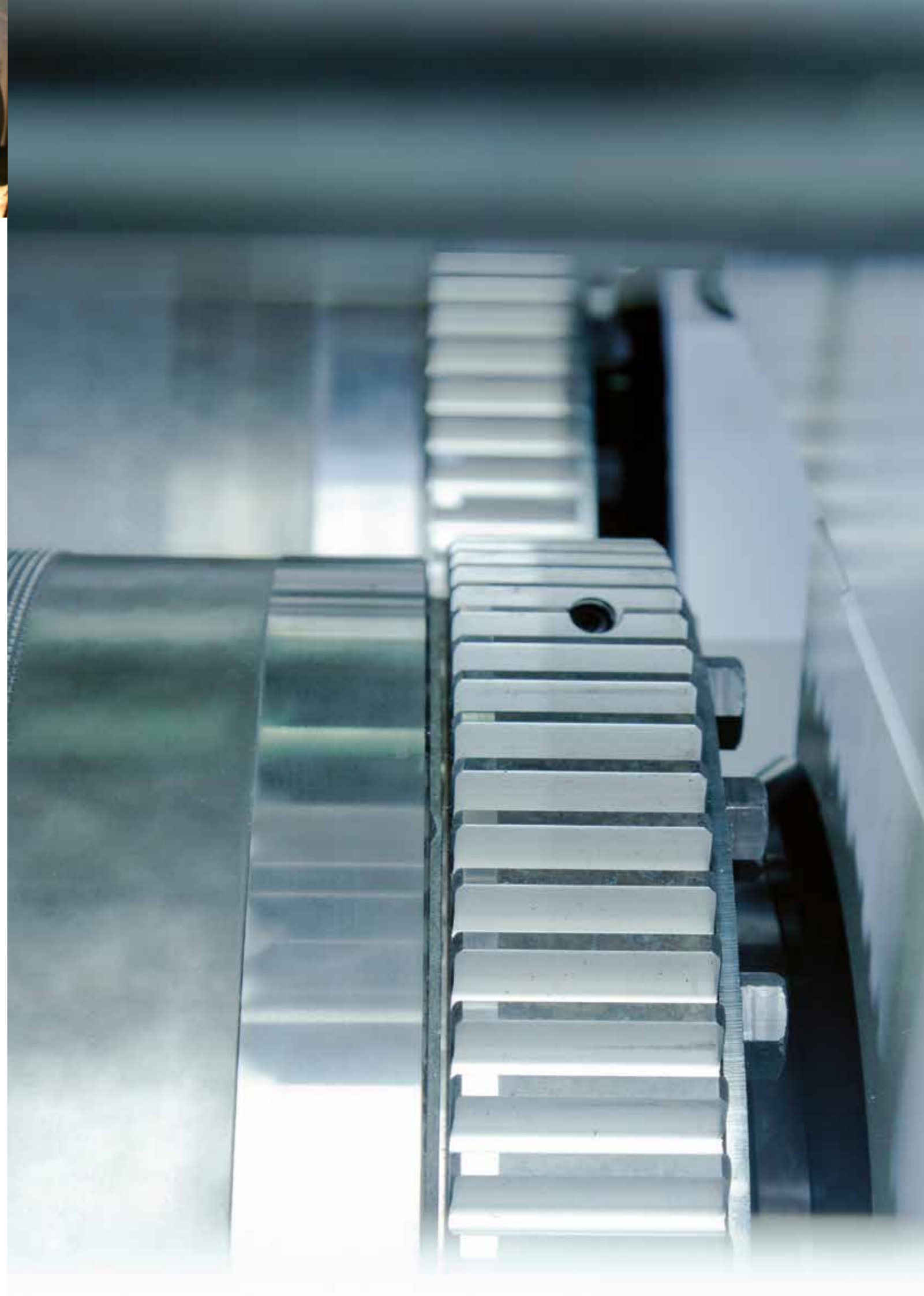
- High flexibility due to the applicability of traditional rollers, but also expanding cores for the fixing of sleeves
- Sleeve change in less than 15 minutes
- Fully automated alignment from male to female roller

- Versatile setting possibilities for an optimal embossing result during production
- Higher productivity due to the application of sleeves

Challenging Roller Systems

SMOOTHING ROLL FOR FILM MANUFACTURING

- Especially developed software and simulation tools
- Profile grinding adapted to individual requirements
- Perfect temperature precision even on high-mass throughputs
- Perfect form and location tolerances for optimal results
- Extraordinary surface quality of the roller-body (super mirror polish)





SAUERESSIG®

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