jagenberg Group

Create.Future.Together.

Equipment for battery production

Agenda.

01 Jagenberg Group

02 Integrated LIB competence

03 Turnkey equipment

04 Slitter & Winder

05 Automation & Safety

01 Jagenberg Group

Key facts.

2022: ~330
Turnover in Mio. €

23
Companies
Jagenberg Group

2022: ~1.300
Employees

Kleinewefers GmbH
85 %
Jagenberg AG
83 %
Equity ratio

100 %
Private ownership

7
Business parks

Management
Dr. Erich Bröker (CEO)
Dr. Stephan Witt (COO)

Kleinewefers Group

jagenberg Group

INDUSTRIAL SOLUTIONS

MACHINERY & PLANTS

- kampf – Jagenberg Group
- jagenberg – Converting Solutions
- kampf lsf – Jagenberg Group
- wdb – Jagenberg Group
- atlas – Jagenberg Group
- elrond – Jagenberg Group
- jagenberg – Textile
- zima – Jagenberg Group
- jagenberg – Paper
- kusters calico – Jagenberg Group

AUTOMATION & DRIVES

- lebbing – Jagenberg Group
- lauer – Jagenberg Group

DIGITAL

- jagenberg – Digital Solutions

OTHERS

- SURVIVAL ARMOR

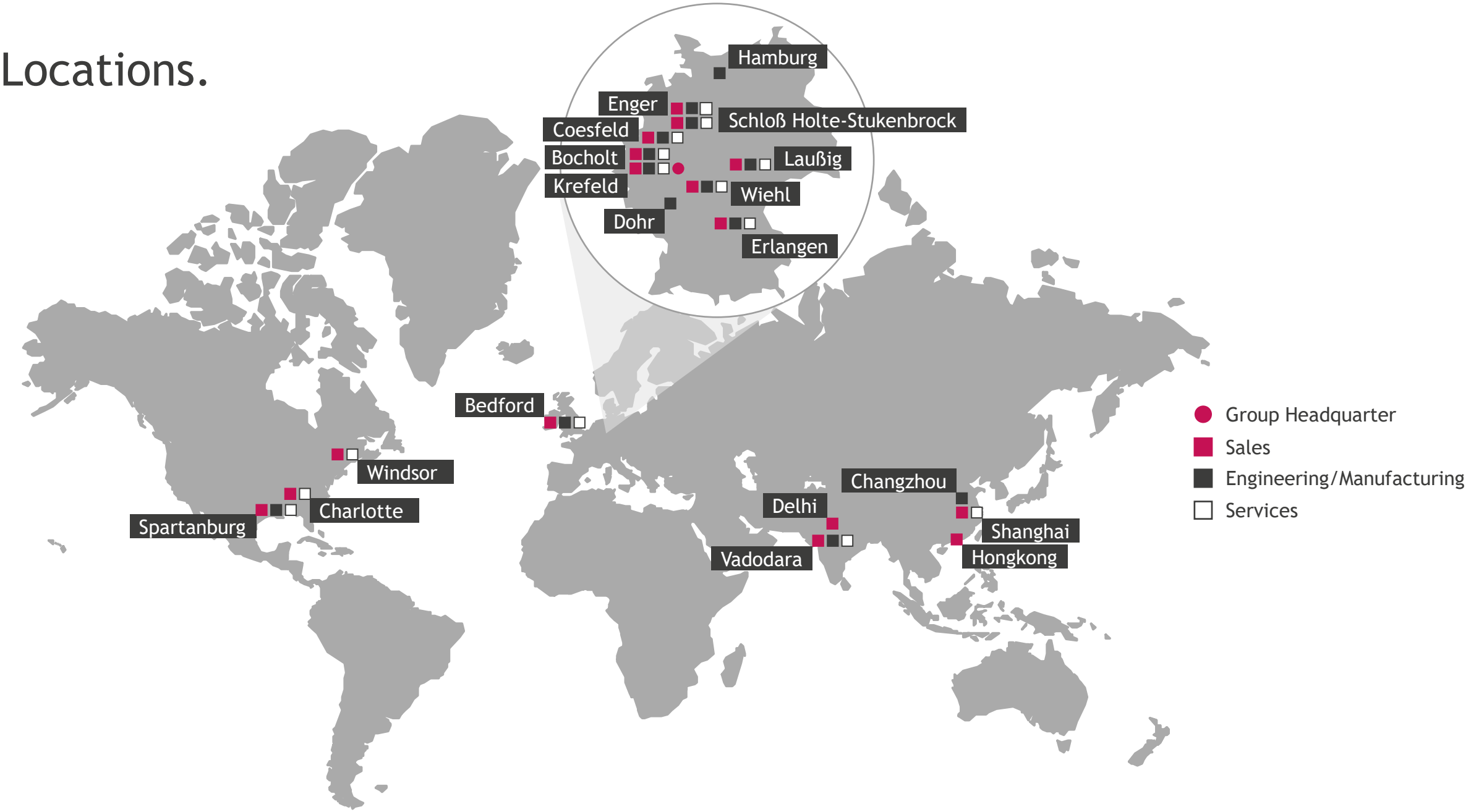
KLEINEWEFERS

REAL ESTATE

- MONFORTS QUARTIER
- K2 TOWER + INDUSTRIEPARK
- LOGWERK Krefeld

and others ...

Locations.


Hamburg
Enger
Schloß Holte-Stukenbrock
Coesfeld
Bocholt
Laußig
Krefeld
Wiehl
Dohr
Erlangen
Bedford
Windsor
Charlotte
Spartanburg
Changzhou
Delhi
Shanghai
Hongkong
Vadodara
Group Headquarter
Sales
Engineering/Manufacturing
Services

Jagenberg Group - Our fields of business.

jagenberg Group

INDUSTRIAL SOLUTIONS

MACHINERY & PLANTS

AUTOMATION & DRIVES

DIGITAL

SOLUTIONS FOR ROLL-ROLL PROCESSES

Our fields of application.

- Coating/ Laminating
- Laquering/ Embossing
- Drying
- Printing
- Calendering
- Slitting/Winding/ Spooling
- Handling
- Dyeing/Bleaching/ Mercerising
- Automation & Drives
- Machine safety/ CE-conformity
- Digitization

jagenberg Group

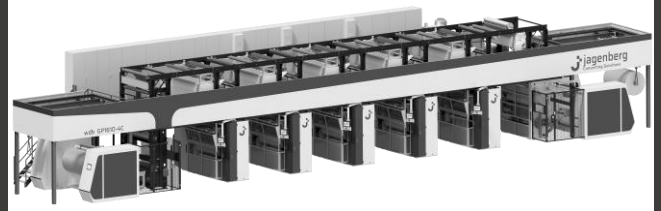
Jagenberg Group – Solutions for a wide range of applications.

jagenberg Group

SOLUTIONS FOR ROLL-ROLL PROCESSES

Slitting and Winding

Coating and Printing



Textile Finishing

Automation & Drives, Digitization, Handling, Lifecycle Service

Our mission statement.
Create.Future.Together.

Create.

Innovative technologies for processing web-shaped materials are the historically grown core of the Jagenberg Group and have been our focus for over 140 years. We design creative and future-oriented solutions for our customers. Our thinking is entrepreneurial and our culture medium-sized. Short decision-making processes, a high level of action competence and an agile organization enable us to take successful steps into the future quickly and decisively.

Future.

We are ready to face the dynamic changes that the future holds for all of us. Be it technological progress, digitization or climate change. Based on our values, we as a Group are actively working on innovative solutions to harness these megatrends in an economically and ecologically sustainable way for our customers and ourselves.

Together.

Together we are strong! This motto characterizes the cohesion in our group. We face the future as a strong team of doers and creative minds. Together with our customers, suppliers and partners, we create the future. Through a fair and trusting exchange, we learn from each other and build long-term and reliable partnerships together.

What our mission statement stands for.

Create. points out the creative power of the group, of the ability to develop individual customer-oriented solutions as an agile organization.

Future. expresses the future orientation in thinking and acting of all members of the group.

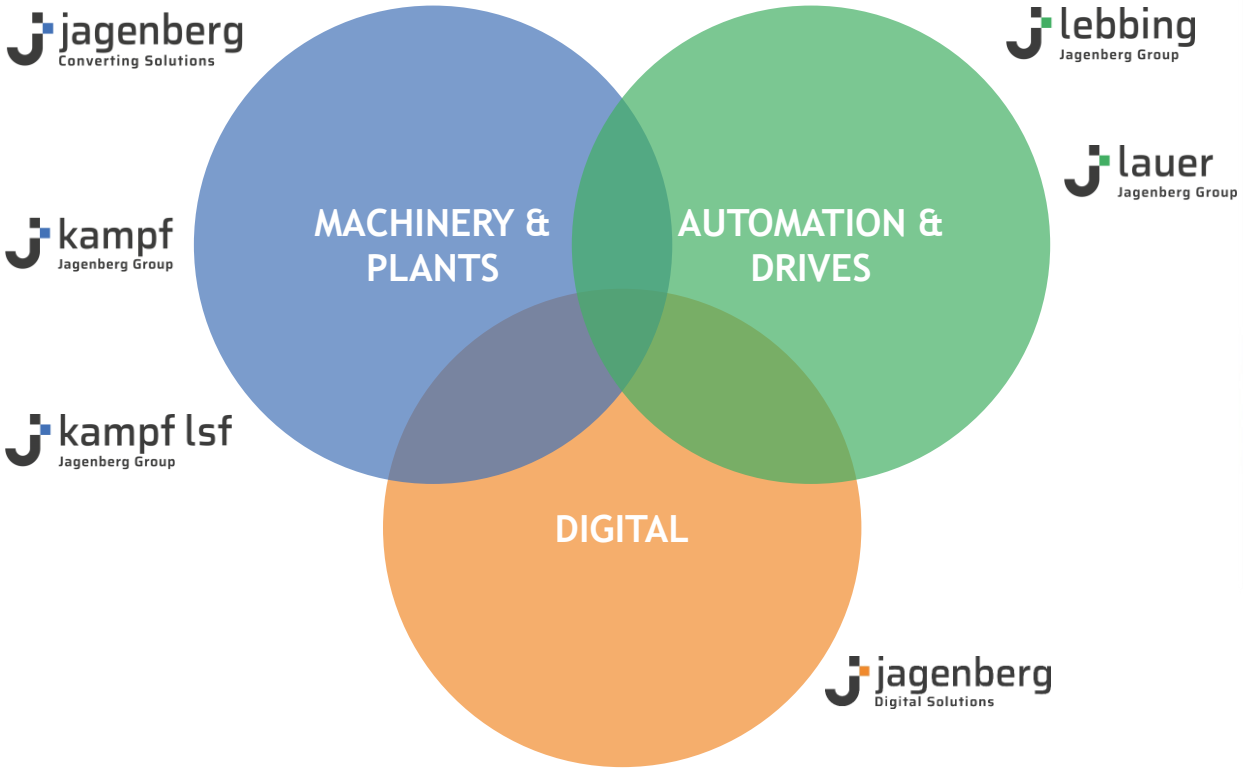
Together. stands for the conviction that acting together in the group brings the best benefit - for customers, partners, employees and the companies of the group themselves.

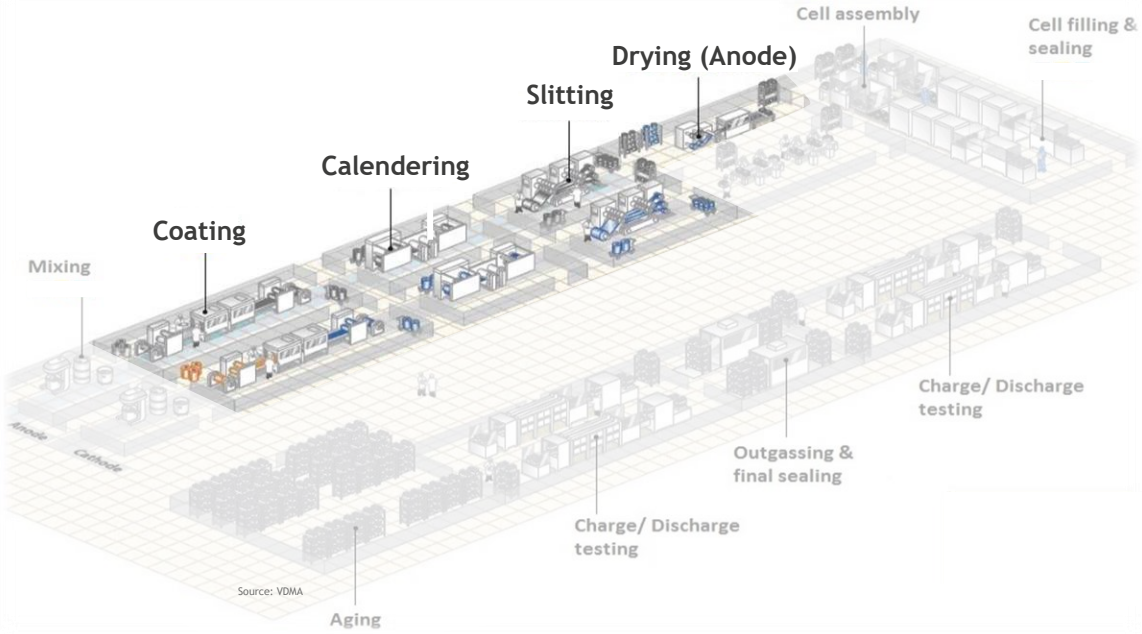
02
Integrated LIB competence

Turnkey solutions – for coating, drying, slitting & winding.

A strong network of technology leaders in the battery industry

jagenberg Group

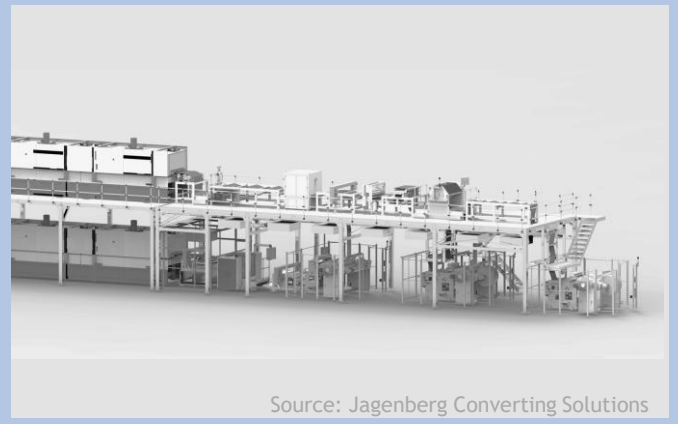




jagenberg Group

Our offering for the battery industry.

Coating Lines



Source: Jagenberg Converting Solutions

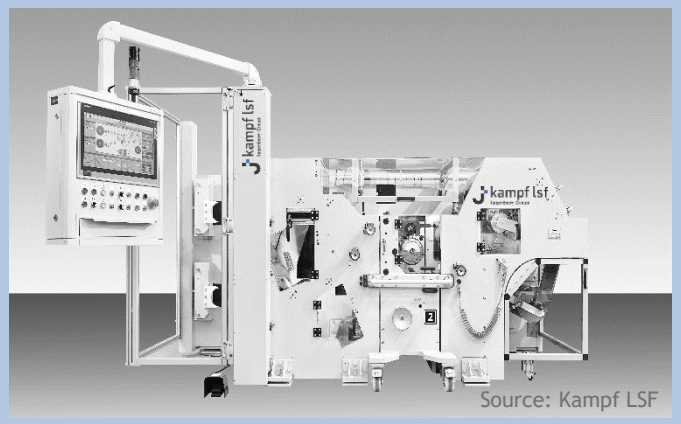
- Anode
- Cathode
- AGT Dryer (BATTRION)

Unwinder / Rewinder

Source: Kampf LSF

- Turret unwinder
- Turret rewinder
- Splicing systems, Slitting units

Slitter



Source: Kampf LSF

- Pilot line slitter rewinder
- Production machines

Planning

- Planning
- Process engineering
- Project management

Added value from a single source.

jagenberg Converting Solutions
kampf lsf Jagenberg Group
kampf Jagenberg Group
lebbing Jagenberg Group

Digitalization

- Production overview
- Digital roll protocols
- Connectivity (ERP / MES)
- Data mining

Battery Forum Jagenberg Group April 2023 I

03
Turnkey equipment

Jagenberg Converting Solutions GmbH
Integrate.Converting.Competences.

JCS integrates the competences of Jagenberg Group companies into a single solution from one source.

Purpose

Bocholt
Hamburg
Krefeld
Ostwestfalen-Lippe
Spartanburg, US

Locations

>30
and >500
located within other group companies

Employees

Management Team
Thomas Lebbing (Managing Director)
Guido Lebbing (Managing Director)
Steffen Heckmann (Managing Director)

Our offering for the battery industry - Coating.

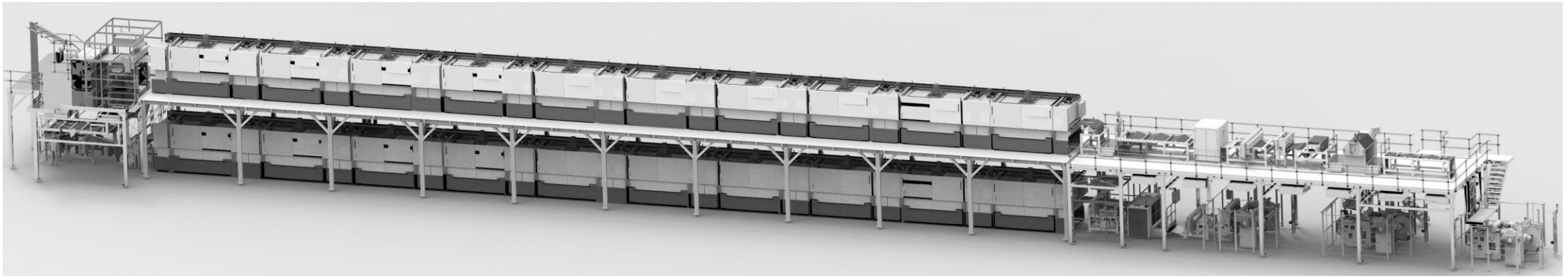
jagenberg Converting Solutions

Integrate.Converting.Competences.

Project Mgmt. | Process Technology | Turnkey | Dryer | Coating Unit

BATTRION

AGT Technology



kampf lsf Jagenberg Group

Converting.Processing.Unlimited.

- Unwinder
- Rewinder
- Slitter

kampf Jagenberg Group

Slitter.Winder.Kampf.

- Slitter

lebbing Jagenberg Group

Automation.Drives.Future.

- Automation

lauer Jagenberg Group

Safety.Compliance.Trust.

- Safety

jagenberg Digital Solutions

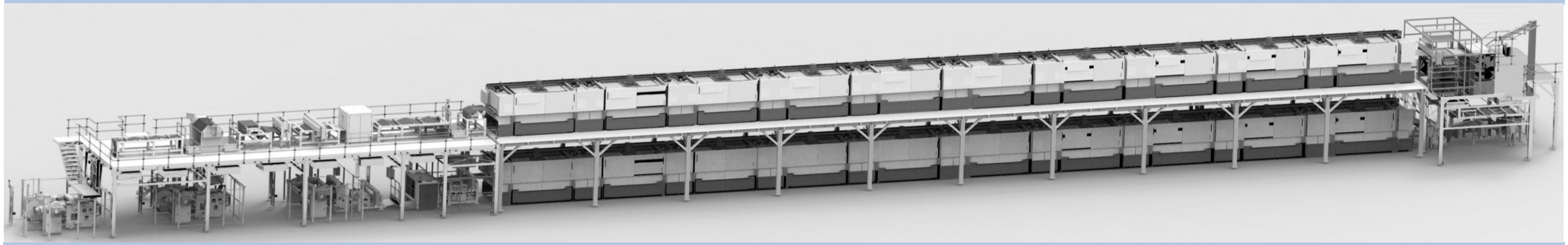
Connect.Develop.Advance.

- Digitization

Turnkey solution from a single source.

Process Technology | Project Mgmt.

Rewinder (2x) | Slitter | Pulling Station | Measuring Systems | Web Guiding | Dryer | Coating Unit | Measuring Systems



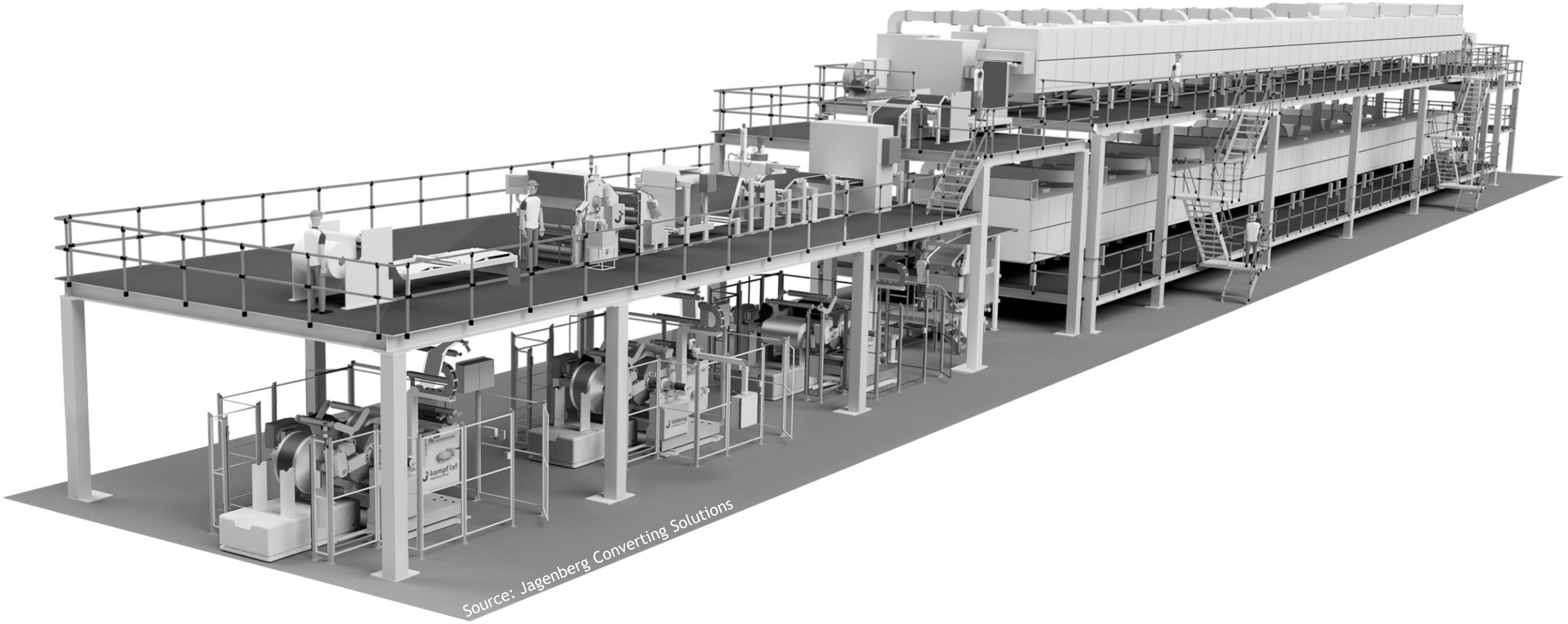
Unwinder | Coating Unit | Measuring Systems | Web Guiding | Dryer | Web Guiding | Pulling Station

Automation | Safety | Digitization

Frames | Ducting | Piping | Cabling | Fencing | Housings | Recovery System

Installation | Commissioning | Start-up / Process Optimisation | 24/7 Service

References – Tandem coating line for battery electrodes.

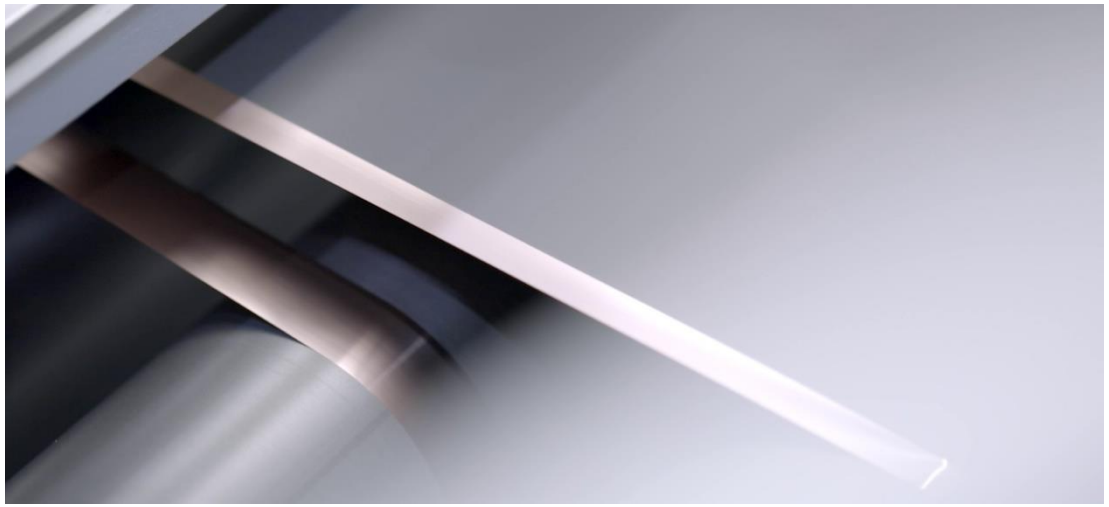


References – Tandem coating lines for battery electrodes.

Your direct contact.

INFORMATION MATERIAL

For additional information about the product and service portfolio, please refer the separate presentation by Jagenberg Converting Solutions.



YOUR PERSONAL CONTACT

Managing Director
Mr. Thomas Lebbing
Email: thomas.lebbing@jagenberg-converting.com

04
Slitter & Winder

Kampf Schneid- und Wickeltechnik GmbH & Co. KG
Slitter.Winder.Kampf.

1920
Foundation

~800
Employees

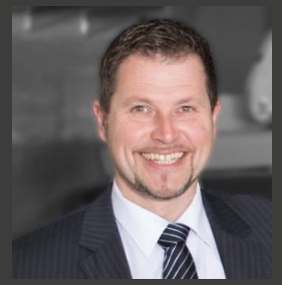
Mühlener Straße 36 - 42
51674 Wiehl
Germany

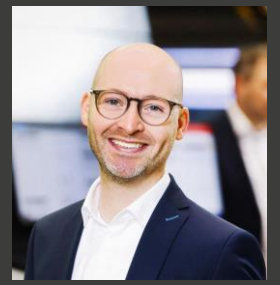
Phone: +49 2262 81 0
Fax: +49 2262 81 208
Email: info@kampf.de

Main contact

EUR ~230m
Revenue

> 15.000
machines
Installed base





Management
Markus Vollmer (CEO)
Rike Johnson (CFO)
Dr. Benedikt Sitte (COO)

Note: Fiscal year 2022

Our locations.

Headquarter
Mühlen
(Germany)

>420
employees

Germany
Dohr

>70
employees

Great Britain
Bedford

>110
employees

China
Changzhou
Shanghai
Hong Kong

>85
employees

USA
Windsor
Charlotte

>25
employees

India
Baroda
Noida

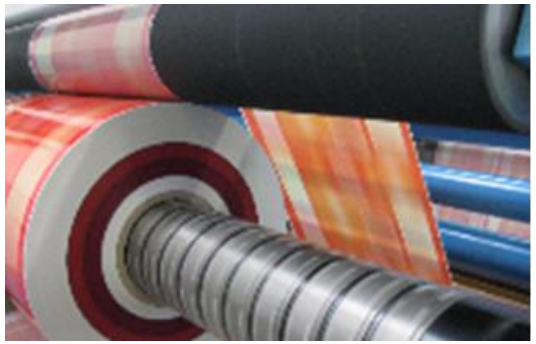
>30
employees

Our offering.

Slitter and Winder

Flexible Films

Flexible Packaging



Energy and Tech App

Rigids – alu, label, paper

Beyond slitting and winding

Life Cycle Services

Kampf Academy

Converting 4.0

Automation

Kampf LSF GmbH & Co. KG
Converting.Processing.Unlimited.

kampf lsf
Jagenberg Group

100% subsidiary of Kampf	1905 Foundation	
Laußig (GER) Locations	~60 Employees	EUR ~10m Revenue

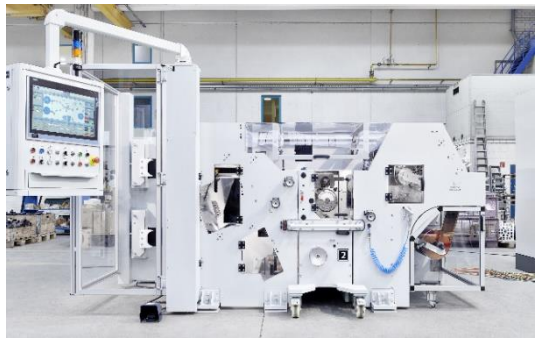
Management Team
Mr. Sven Lasch (CEO)

jagenberg Group

Our offering.

Energy
Unlimited

Our experts bring in-depth know-how and many years of personal experience in slitting and winding technology as well as in the production of battery cells to the joint work. Thus, we are able to provide you with competent advice for your slitting and winding processes and offer technically proven, reliable and target-oriented solutions.



Winder
Unlimited

Our rewinding technology unites the know-how and the experience gained in more than 100 years of special machine manufacturing by KLSF and Kampf under one common umbrella for you. You benefit from this application expertise and solution competence regarding your new project.

Processing
Unlimited

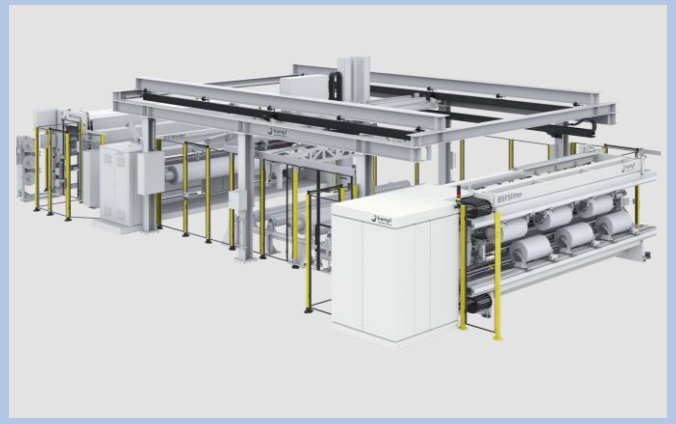
Coating or printing, laminating or embossing. The integration of a wide range of process modules such as drier, corona and inspection systems. No matter whether we design a complete plant together with you or only a module is concerned: We always aim at developing the ideal machine for your process. For us, Special Machine Manufacturing is more than just a buzzword.

Service
Unlimited

Sooner or later, each plant requires service. The KLSF specialists advise and support you by phone or on site regarding Maintenance and servicing, Spare parts, Training, or any other enquiries.

Our offering for the battery industry - Slitting & Winding.

Separator

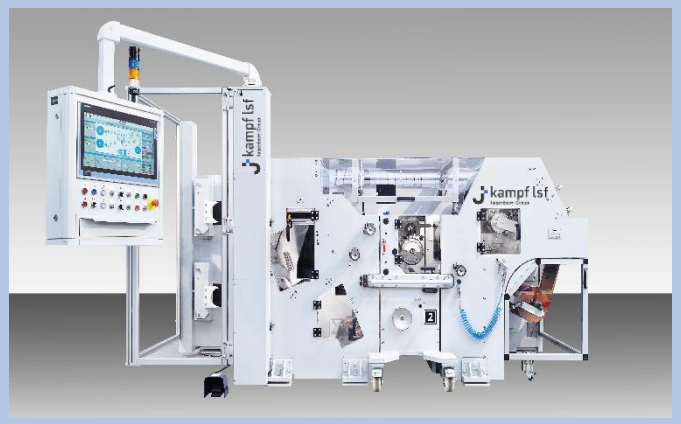


- Full width winder
- Primary slitter
- Secondary slitter

Anode & Cathode

- Turret rewinder
- Turret unwinder
- Splicing systems, Slitting units

Anode & Cathode



- Pilot line slitter rewinder
- Production machines

Automation

Consistent increase in productivity for you:

- Planning
- Simulation (Digital Twin)
- Continuous communication & data flow
- Project management and implementation

Added value from a single source.

kampf Jagenberg Group

kampf lsf Jagenberg Group

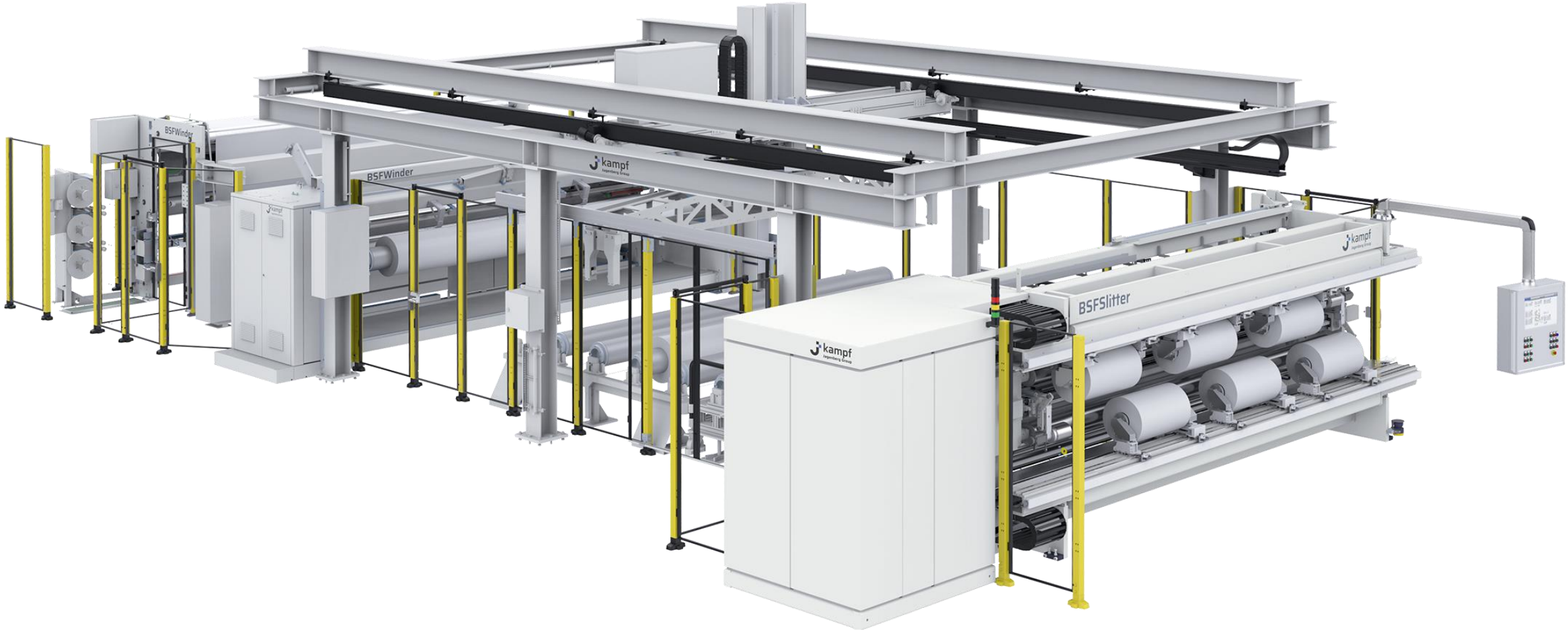
Digitalization

Integrative digital added value for you:

- Production overview
- Digital roll protocols
- Connectivity
- Data mining

jagenberg Group

References – Fully automated slitting cell for BSF.



Machinery scope

- Non Stop turret winder
- Primary slitter

Automation scope

- Roll storage
- Portal robot

Digitisation Scope

- IIoT Platform
- MES / ERP communication
- Cloud connection

References – Slitting for Anode and Cathode.

Source: BMW Group, Battery Cell Competence Center

Your direct contact.

INFORMATION MATERIAL

For additional information about the product and service portfolio, please refer the separate presentation by Kampf & Kampf LSF.

YOUR PERSONAL CONTACT

Kampf.

Sales
Mr. Oliver Conrad
Email: oliver.conrad@kampf.de

CEO
Mr. Markus Vollmer
Email: markus.vollmer@kampf.de

Kampf LSF.

Sales
Mr. Martin Partikel
Email: martin.partikel@kampf-lsf.com

CEO
Mr. Sven Lasch
Email: sven.lasch@kampf-lsf.com

05
Automation & Safety

Lebbing automation & drives GmbH
Automation.Drives.Future.

1998 Foundation	~90 Employees
3 Locations	EUR ~15m Revenue
Solution Partner Automation Drives SIEMENS Partner	

Management Team
Thomas Lebbing (Managing Director)
Guido Lebbing (Managing Director)

Our locations.

Headquarter
Bocholt (Germany)

69
employees

Germany
Krefeld

11
employees

Germany
Schloß Holte-Stukenbrock

6
employees

Our offering.

Automation & Drives

We develop mechatronic drive concepts which increase performance, flexibility, reduce maintenance and change over / setup time. Our motion control solutions offer uniform and transparent programming and diagnostic options.

In addition to the Siemens high-performance and modular motion control systems, we offer and implement solutions from AB Rockwell, Lenze, Parker or other motion control systems.

Data Systems

Maximum data collection and transparency on the basis of reliable and proven industrial standards for SCADA systems.

We develop comprehensive visualizations with maximum transparency across all layers, from the field and control level, through the operations management level, up to the ERP control level (e.g. SAP®).

Retrofitting

Retrofitting is the cost- and time-efficient alternative to a new machine investment. Only the electrical drive and automation part needs to be replaced to increase system performance and availability.

The modernization is carried out with compliance to the latest EU standards for machine design and in accordance with operator safety guidelines.

Service 24/7

With our reliable service network in Europe and North America, we offer individual and flexible support options, even with 24/7 service.

With our skilled service engineers and remote services, you can reduce your machine downtimes. In addition the on-site- as well as maintenance services are possible anytime.

Lauer CE-Safety GmbH
Safety.Compliance.Trust.

100% subsidiary of Lebbing

1994
Foundation

15
Employees

Coesfeld (GER)
Locations

EUR ~2m
Revenue

Certification

Management Team
Thomas Lebbing (Managing Director)

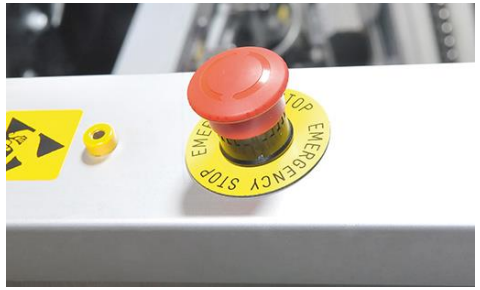
Our offering.

CE Marking & Risk Assessment

Machinery sold and operated in Europe is subject to the strict safety requirements of CE marking. Lauer CE-Safety GmbH knows the laws, directives and standards that your machinery must comply with in order to obtain the CE marking. Lauer CE-Safety GmbH performs precise risk analysis and risk evaluation following the applicable directives, including comprehensive research and analysis of standards (i.e. DIN EN ISO 12100) as well as safety-related review of machinery under construction. Training is offered on all these topics.

Functional Safety Engineering (FSE)

Application of standard EN ISO 13849 is mandatory for machinery to assess the reliability and availability of electronic control for safety applications.
Lauer CE-Safety GmbH has several specially trained control engineers to support machinery constructors by designing, verifying and validating safety functions.

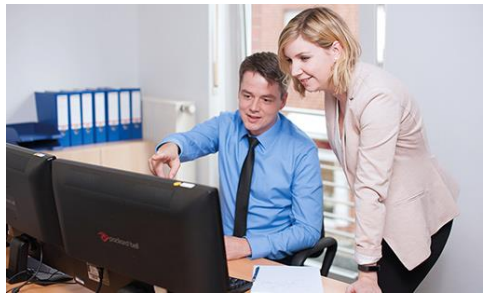


User manuals & assembly instructions

Operating instructions and technical documentation are required by law and are indispensable components of the service package for your customers. Lauer CE-Safety GmbH offers full service in creating complete preparation of operating and assembling instructions or alternatively evaluates pre-prepared technical documentation and supports the creating process at the customers site by training.

Professional CE-Software

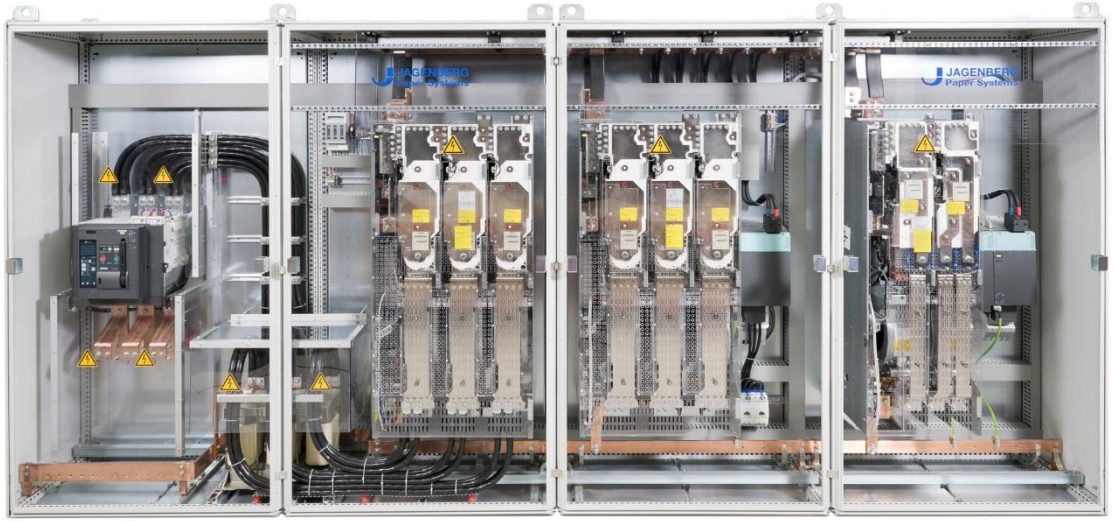
Anyone who develops, manufactures, sells or operates machinery in Europe must know directives, assess risks and draw up manuals. With the right software, these tasks can be completed faster and more efficiently. Lauer CE-Safety GmbH offers proven CE software products that are continuously updated.



Your direct contact.

INFORMATION MATERIAL

For additional information about the product and service portfolio, please refer the separate presentation by Lebbing and Lauer.



YOUR PERSONAL CONTACT

Automation.

Managing Director
Mr. Guido Lebbing
Email: guido.lebbing@lebbing.com

Managing Director
Mr. Thomas Lebbing
Email: thomas.lebbing@lebbing.com

Safety.

Site Manager Technology
Mr. Christoph Vrenegor
Email: christoph.vrenegor@lauer-ce.com

jagenberg Group

Create.Future.Together.

Jagenberg AG

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47803 Krefeld

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Fax: +49 2151 93 40 99-85

info@jagenberg.com