



Equipment for battery production

Battery Exhibition 2021

Agenda.

01 Jagenberg Group

02 Integrated LIB competence

03 Turnkey equipment

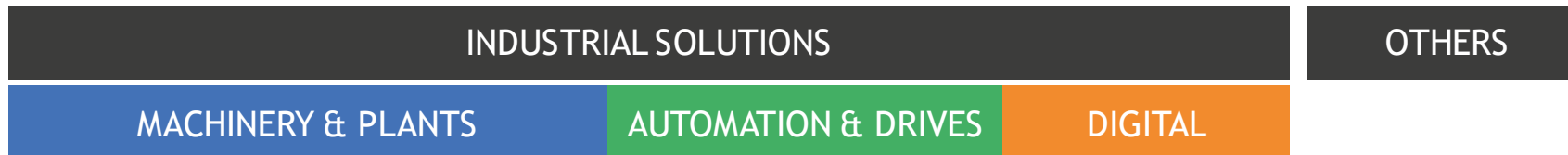
04 Slitter & Winder

05 Automation & Safety

01
Jagenberg
Group



Kleinewefers Group



Kleinewefers Group. Key facts.

2020: ~280
2003: ~100

Turnover in Mio. €

19
Companies

Jagenberg Group

2020: ~1.300
2003: ~480

Employees

Kleinewefers GmbH
80 %
Jagenberg AG
79 %

Equity ratio

100 %

Private ownership

7

Business parks



Management
Dr. Erich Bröker (CEO)

Jagenberg Group. Our locations.



Jagenberg Group. Our fields of application.



Coating/
Laminating



Laquering/
Embossing



Printing



Calendering



Slitting/Winding/
Spooling



Handling



Dyeing/Bleaching/
Mercerising



Automation
& Drives



Machine safety/
CE-conformity



Digitization

Jagenberg Group. Our mission statement.



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 mid-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.

02
Integrated LIB
competence



Solutions for the battery production - from the single component to the turnkey solution



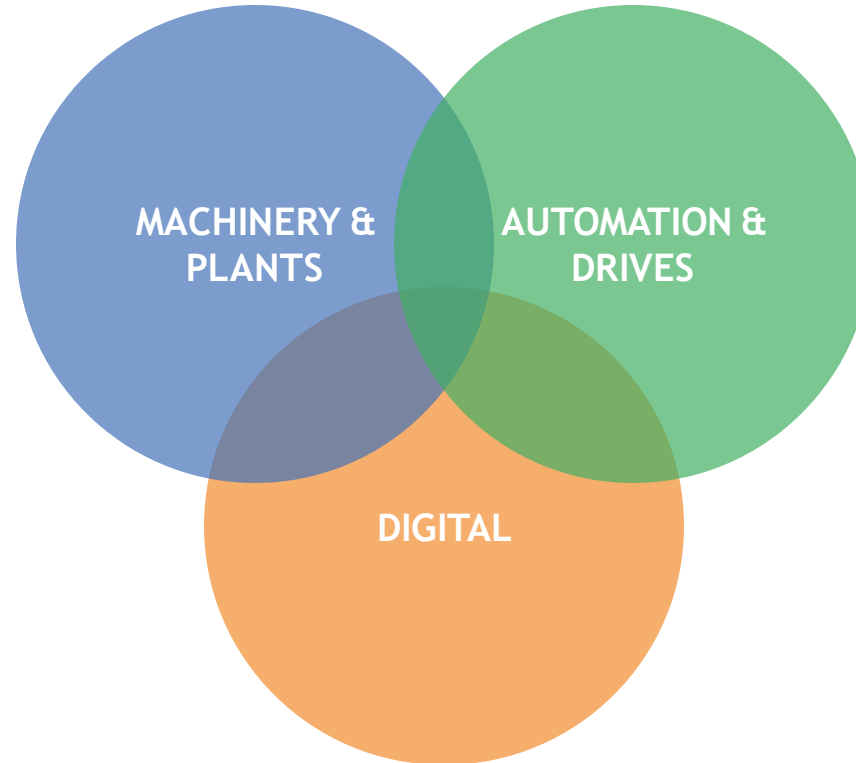
Integrated project management, general contractor, turnkey equipment



Slitting and winding technology for the production/ processing of electrode as well as battery separator foils



Slitting and winding technology for plant components and pilot lines



Automation, drives, data systems for machines and plants

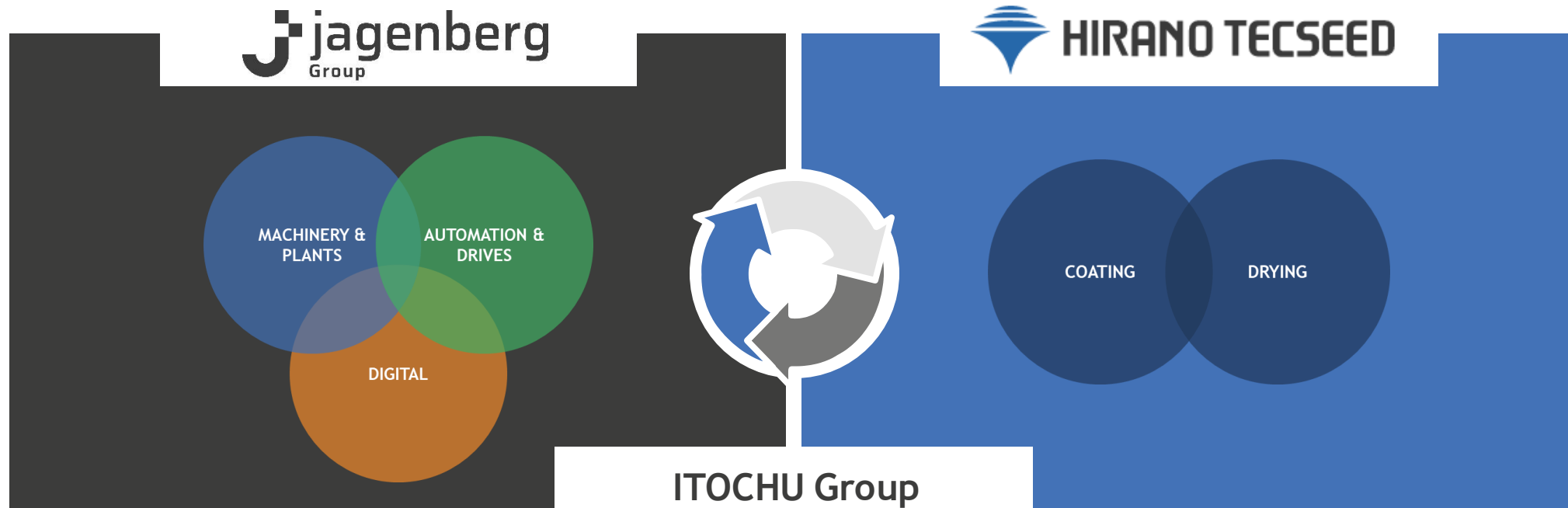


Safety installations, CE and UL certifications



Digital solutions for process control and supervision of machines, plants, and production lines

We are happy to announce the cooperation with our new strategic partners in Europe: HIRANO TECSEED Co., Ltd. and ITOCHU Group



HIRANO TECSEED Co., Ltd. is the market leader for continuous, intermittent and striped-pattern coating technology for lithium-ion batteries. Together with its established drying technology, Hirano perfectly complements the product portfolio of Jagenberg Group.

ITOCHU Group is supporting us with sales and project activities.

We are now able to supply turnkey equipment to our customers that range from coating to the final anode and cathode roll.

Hirano completes the offering of Jagenberg with world leading coating and drying technology



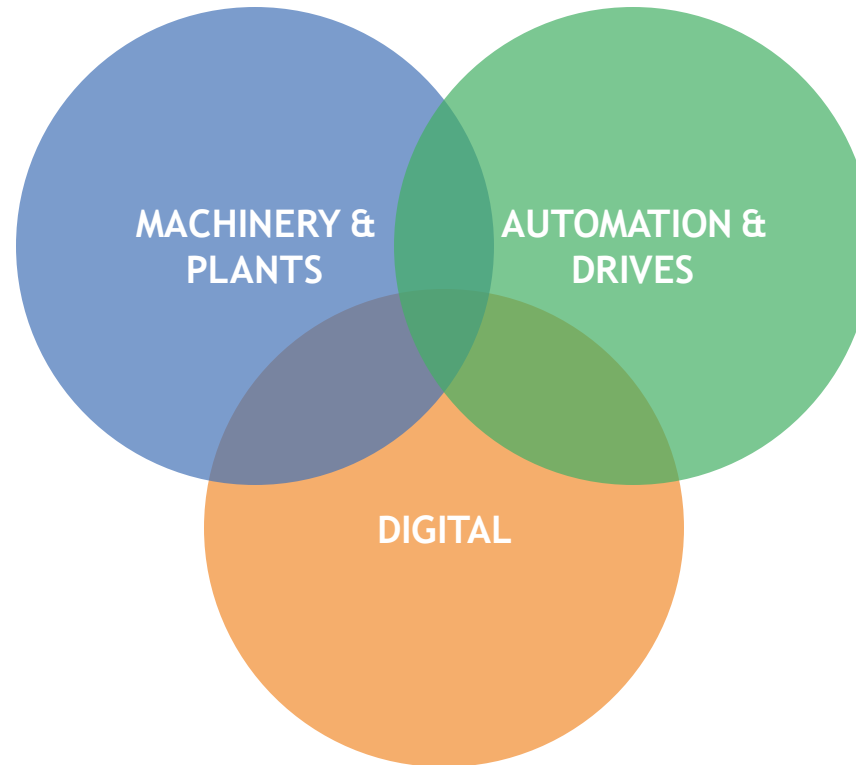
Integrated project management, general contractor, turnkey equipment



Slitting and winding technology for the production/ processing of electrode as well as battery separator foils



Slitting and winding technology for plant components and pilot lines



Automation, drives, data systems for machines and plants



Safety installations, CE and UL certifications



Digital solutions for process control and supervision of machines, plants, and production lines

Our strategic partners in Europe



Coating and drying technology, process technology

03
Turnkey
equipment



Jagenberg Converting Solutions GmbH

Integrate. Converting. Competencies.

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

Purpose

**Krefeld
(GER)**

Locations

>500

located within other group companies

Employees



Management Team

Thomas Lebbing (Managing Director)

Guido Lebbing (Managing Director)

Dr. Stephan Witt (Managing Director)

Turnkey equipment for your battery production.



Your general contractor.
Integrates all competencies in state-of-the-art battery production.



Coater

Dryer

Process technology

Unwinder

Coater

Dryer

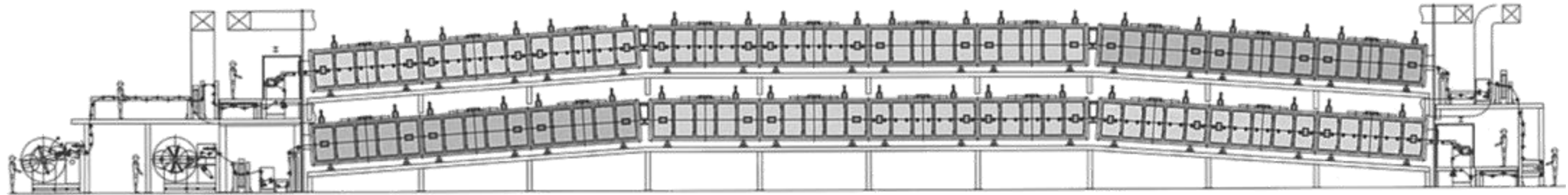
Slitter

Rewinder

Automation

Safety

Digitization



Unwinder

Rewinder

Slitter



Slitter



Automation

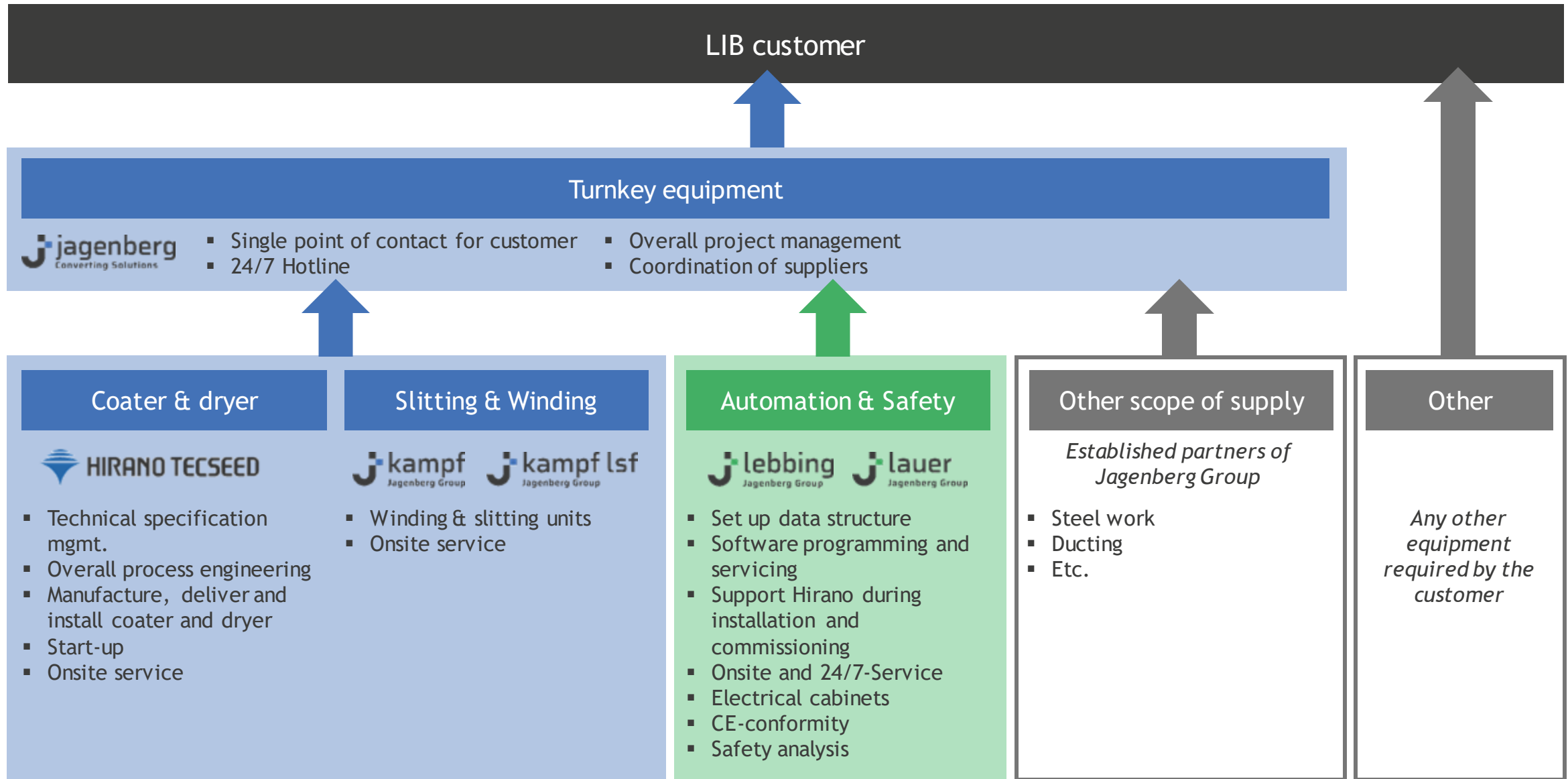


Safety



Digitization

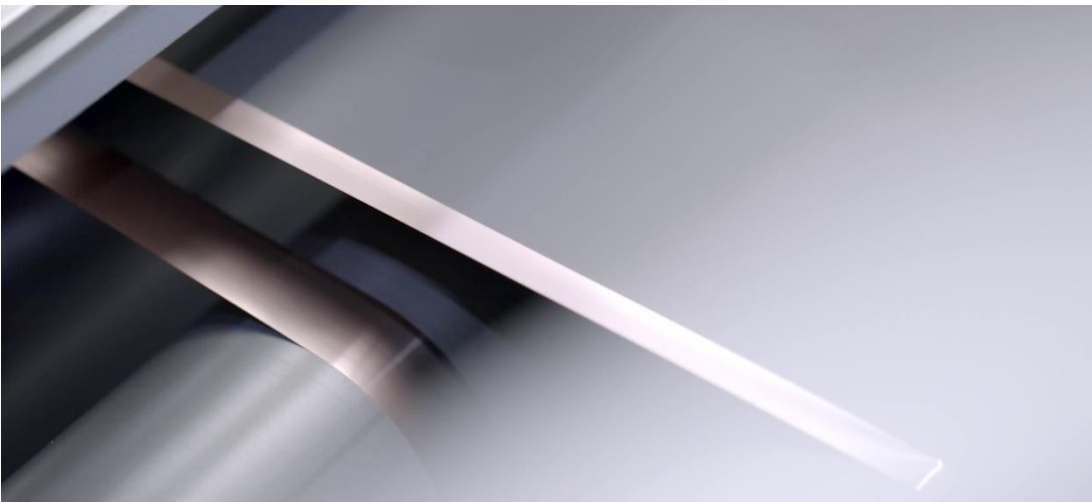
Turnkey equipment - project example



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
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Managing Director
Dr. Stephan Witt
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04
Slitter & Winder



Kampf Schneid- und Wickeltechnik GmbH & Co. KG

Slitter.Winder.Kampf.

1920

Foundation

~750

Employees

13

Locations

EUR ~165m

Revenue

> 15.000

machines

Installed base



Management Team

Lutz Busch (CEO)

Dr. Stephan Witt (COO)

Note: As per fiscal year 2020

Our locations.

Headquarter
Mühlen (Germany)

>400
employees



Germany
Dohr

>70
employees



Great Britain
Bedford

>110
employees



China
Changzhou
Shanghai
Hong Kong



USA
Windsor
Charlotte

>25
employees



India
Baroda
Noida

>20
employees



>80
employees



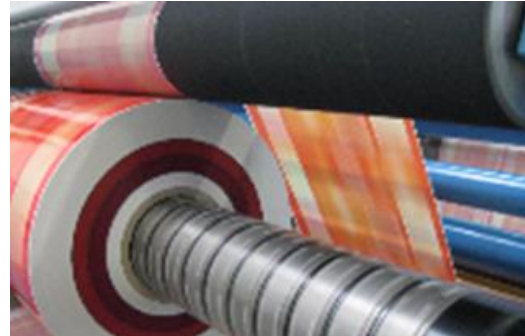
Our offering.

Slitter and Winder - processing and converting of web shaped materials

Flexible Films



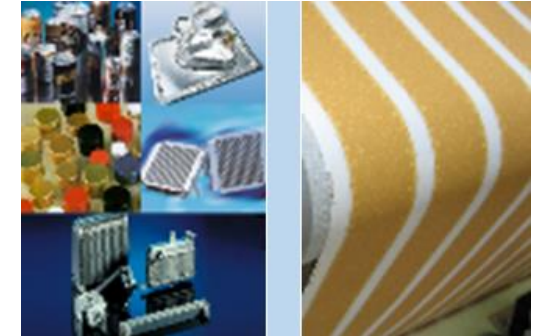
Flexible Packaging



Energy and Tech App



Rigids - alu, label, paper



Beyond slitting and winding - providing full package solutions

Life Cycle Services



Kampf Academy



Converting 4.0



Automation



Kampf LSF GmbH & Co. KG

Converting.Processing.Unlimited.

100%
subsidiary
of Kampf

1905

Foundation

Laußig
(GER)

>60

EUR ~9m

Locations

Employees

Revenue



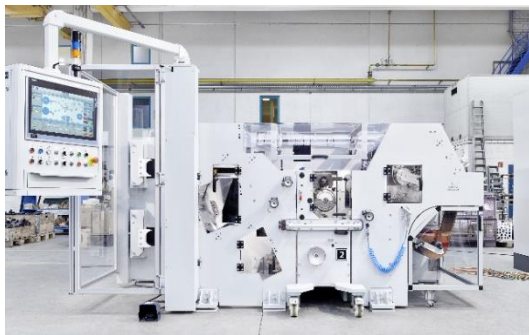
Management Team
Mr. Sven Lasch (COO)
Dr. Stephan Witt (CEO)

Note: As per fiscal year 2020

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.



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

Sales

Mr. Michael Strathmann

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CEO

Mr. Lutz Busch

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COO

Dr. Stephan Witt

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05
Automation &
Safety



Lebbing automation & drives GmbH

Automation.Drives.Future.

1998

Foundation

86

Employees

4

Locations

EUR ~13m

Revenue

Solution
Partner

Automation
Drives



Partner



Management Team

Guido Lebbing (Managing Director)

Thomas Lebbing (Managing Director)

Our locations.

Headquarter
Bocholt (Germany)

67
employees



Germany
Krefeld

11
employees



Germany
Enger

6
employees



USA
Spartanburg

2
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.



100%
subsidiary
of Lebbing

1994

Foundation

15

Employees

Coesfeld
(GER)

Locations

EUR ~2m

Revenue



Certification



Management Team

Ulrich Kleine-Boes (Managing Director)
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.



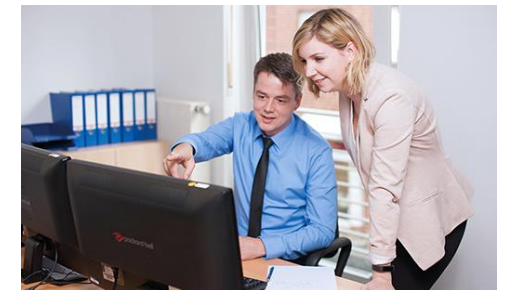
User manuals & assembly instructions

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

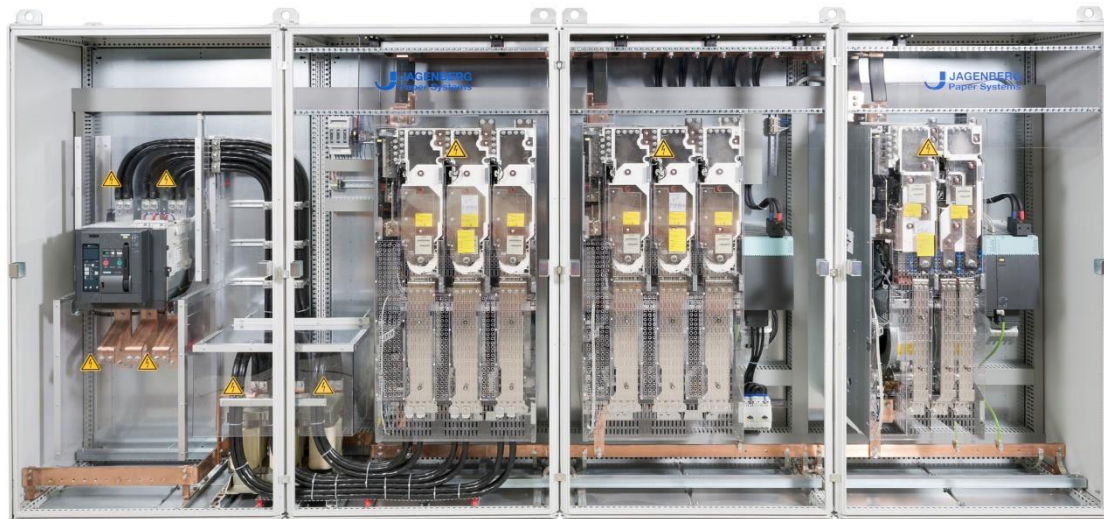
Anyone who develops, manufactures, sells or operates machinery in Europe must know directives, assess risks and draw up manuals. With the right software, these tasks can be completed faster and more efficiently. Lauer CE-Safety GmbH offers proven CE software products that are continuously updated.



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

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Safety.

Managing Director
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