

**SEGMENT** 3

# MATTHEWS INDUSTRIAL **TECHNOLOGIES**

At Matthews Industrial Technologies, we make technology work – every day – across industries where precision, agility, and innovation are nonnegotiable. Our work is organized across three distinct yet deeply integrated business segments: Matthews Engineering, Matthews Marking Systems, and Matthews Automation. Each segment builds on decades of expertise and a relentless commitment to solving the industrial challenges of today while anticipating the demands Every solution we deliver is engineeof tomorrow.

Our legacy dates back to 1850 – and since then, we've been thinking about what's next. This forward-looking spirit has driven us to evolve, grow, and lead across generations of technological change. Today, to accelerate our ability to deliver breakthrough innovations, we have united Matthews Engineering, Matthews Marking, and Matthews Automation under one powerful platform: Matthews Industrial Technologies.

Whether it's advanced production machinery, precise product identification, or fully integrated warehouse execution systems - we've built the segment designed for your success. We empower visionaries to transform bold ideas into world-shaping innovations. Fueled by more than 175 years of precision engineering expertise, we help global brands and pioneering leaders move forward - faster, smarter, and with greater confidence. red to accelerate performance, drive progress, and create meaningful impact.

Together, they form a powerful ecosystem that not only enables efficiency but also sparks transformation across manufacturing, logistics, and beyond.

**WE MAKE TECHNOLOGY WORK, EVERY DAY.** 

# WHO WE ARE

At Matthews Engineering, our purpose is at the heart of everything we do. Guided by strong values, we're dedicated to empowering industries with precision engineering and intelligent processes. Our commitment to positive change drives both our strategy and our daily decisions.

### OUR INSPIRING HISTORY

Since decades, we've been thinking ahead – designing engineering solutions that don't just solve today's problems but anticipate tomorrow's challenges. Our heritage of industrial innovation has shaped us into a global leader in precision engineering. Today, we specialize in intelligent machines,

custom manufacturing systems, and advanced technical rollers that help industries scale with confidence. Built on decades of experience and forward-thinking expertise, Matthews Engineering is your partner in creating what comes next.

"At the core of our brand is an engineering powerhouse poised to service the mega trends shaping our world, blending cutting-edge technology and precision tooling with visionary thinking to meet tomorrow's needs today. This is an exciting time to be a part of Matthews!"

Brandon Babe, President, Matthews Engineering BUSINESS UNIT 5

## 2008

Acquisition of Saueressig by Matthews International Corporation.

## 2009

Development and production of the first large-scale lithium-ion batteries in Europe by "European Batteries OY".

## 2010

We have been awarded a contract for four calender lines, advancing innovation in electrode compaction with a new approach to processing intermittently coated electrodes.

# 2012

Pioneer of the world's first dry electrode production line, with in-house developed calender technology tailored to capacitor manufacturing.

#### 2020

- Completion of a new assembly hall in Vreden, Germany expanding manufacturing capabilities.
- Major equipment orders drive the start of large-scale dry battery electrode production.

## 2021

Acquisition of Terrella Energy Systems by Matthews International Corporation.

#### 2022

Acquisition of Olbrich and Polytype Converting by Matthews International Corporation.

### 2023

Vreden increases capacity for roller refurbishment and precision manufacturing.

## 2024

We officially protect our innovative dry electrode manufacturing process, reinforcing its leadership in solvent-free battery electrode production.

## 2025

Establishing a Development Center launching an innovative dry electrode battery solution, setting a new industry standard for R&D, testing, and industrial-scale DBE innovation.

# 2026 and beyond

Executing on our vision of precision engineered solutions for continuous production systems with our unique set of core technologies.

# DECADES OF ENGINEERING EXCELLENCE

# MATTHEWS ENGINEERING AT A GLANCE





polytype//converting®

Matthews Engineering is an architect of engineering solutions, specializing in the design and manufacture of specialty machines and production equipment for demanding, continuous industrial manufacturing processes.

>500

>75

75 >500

7

5%

**Employees** 

Years of experience

Customers & Partners

Locations

R&D spendings



BUSINESS UNIT 7

# GLOBALLY CONNECTED. LOCALLY ENGAGED.

# **OPERATING IN 6 COUNTRIES WITH 8 LOCATIONS**

#### **CANADA**

• Vancouver

Hydrogen Fuel Cell and Sales office

#### **SWITZERLAND**

• Fribourg

Engineering, Service and Technical Center



#### **CZECH REPUBLIC**

Holoubkov

Manufacturing Center

## **USA**

• San Antonio, TX

North America Service

Center

• Pittsburgh, PA

Matthews Corporate HQ

#### **GERMANY**

• Bocholt

Sales, Engineering and Technical

Center

• Vreden

Flagship site, Sales, Engineering, Technical Center and Precision Manufacturing

• Hamburg

Sales Office

# WHAT WE

# **MATTHEWS ENGINEERING**

Matthews Engineering is a global manufacturer of high-precision production machinery and technical rollers. For over 75 years, we've been architects of engineering solutions, specializing in the design and manufacture of specialty machines and production equipment for demanding, continuous industrial manufacturing processes.

We combine engineering expertise, intelligent processes, and a passion for solving complex industrial challenges. Through our strong network of trusted brands – Saueressig Engineering, Saueressig Rollers, Olbrich, and Polytype Converting – we bring together a legacy of innovation and proven performance.

From lab-scale formulation to full-scale production, we combine deep engineering expertise with a comprehensive understanding of materials and process behavior, to help customers optimize resources, increase efficiency, and accelerate innovations.

Our differentiators? Our core technologies cover all crucial process steps like calendering, coating, embossing, laminating, and printing – empowering future-focused industries to transform complex substrates into high-performance products where precision, reliability, and efficiency are essential. Through our global Development Centers, we enable customers to simulate, validate, and scale new processes under real-world conditions, ensuring a seamless transfer into series production.

We engineer the foundation for industrial innovation – with precision.

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# PRECISION ENGINEERING. INTELLIGENT PROCESSES.

# **SPECIALTY MACHINES**

We design and manufacture specialty machines and production equipment for the processing of continuous, webbased materials, for the converting industries and for producing energy storage components in battery, hydrogen fuel cells and electrolyzers.





# **TECHNICAL ROLLERS**

Specialized in high-precision rotary tools, we ensure durability, flexibility and efficiency to achieve industry-leading levels of production performance. From heat transfer & chill rollers for precise thermal control to calender & smoothing rollers for optimal surface quality, we deliver scalable solutions.

# TURNKEY SOLUTIONS

At Matthews Engineering, we turn breakthrough ideas into scalable industrial realities. New product innovations demand more than just imagination – they require precisionengineered machinery and tooling that can deliver consistent, high-performance output at industrial scale. That's where we excel.

With deep-rooted expertise in mechanical engineering, machine building, and technical rollers, we develop specialized equipment tailored to bexact specifications – matching the unique demands of your facilities, materials, and end products.

Our solutions empower businesses to test materials, substrates, and processes before full-scale rollout – ensuring validated concepts and scalable innovations that drive meaningful value.

Whether integrated as part of a production line or delivered as standalone solution, our cutting-edge machinery and custom roller systems ensure unmatched performance for industries that process roll-to-roll and web-shaped materials.



PRODUCTS & SERVICES 11

# FROM LAB-SCALE TO PRODUCTION LINES

# WE SUPPORT OUR CUSTOMERS AT EVERY STAGE OF INNOVATION



## Laboratory machines

At the beginning of any innovation journey, precision and flexibility are essential. Our lab-scale systems are designed to help customers test new materials, coatings, and process ideas on a small scale.



#### **Pilot lines**

The next step is to test the concept under conditions that closely replicate real production. Our pilot lines serve as a critical bridge between development and industrial scale.



#### **Production lines**

When ready to bring the innovation to market, Matthews Engineering delivers custom-built, industrial-scale production lines tailored to the specific materials, processes, and capacity requirements.

# OUR CAPABILITIES

# PRECISION ENGINEERING BUILT ON FUNDAMENTAL KNOW-HOW

From the first stages of lab-scale formulation to the challenges of full-scale production, we bring together deep engineering expertise with a thorough understanding of materials and process behavior. Our technologies cover every critical step of the journey - calendering, coating, embossing, laminating, and printing - ensuring precision and reliability at every stage. Supported by our global Development Centers, we give customers the unique ability to simulate, validate, and scale new processes under realworld conditions, accelerating innovation and turning ideas into proven solutions.

Material Science & Chemistry

Mechanical & Electrical Engineering

**Automation & Controls** 

**Precision Manufacturing** 

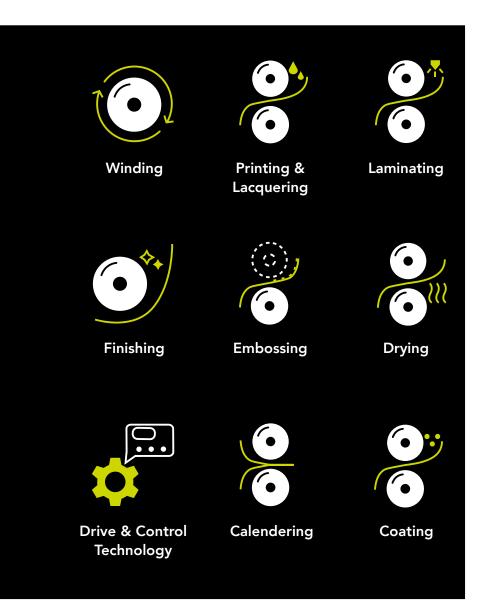
Field-Service & Installation

**IIoT & Digitalization** 



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# CORE TECHNOLOGIES

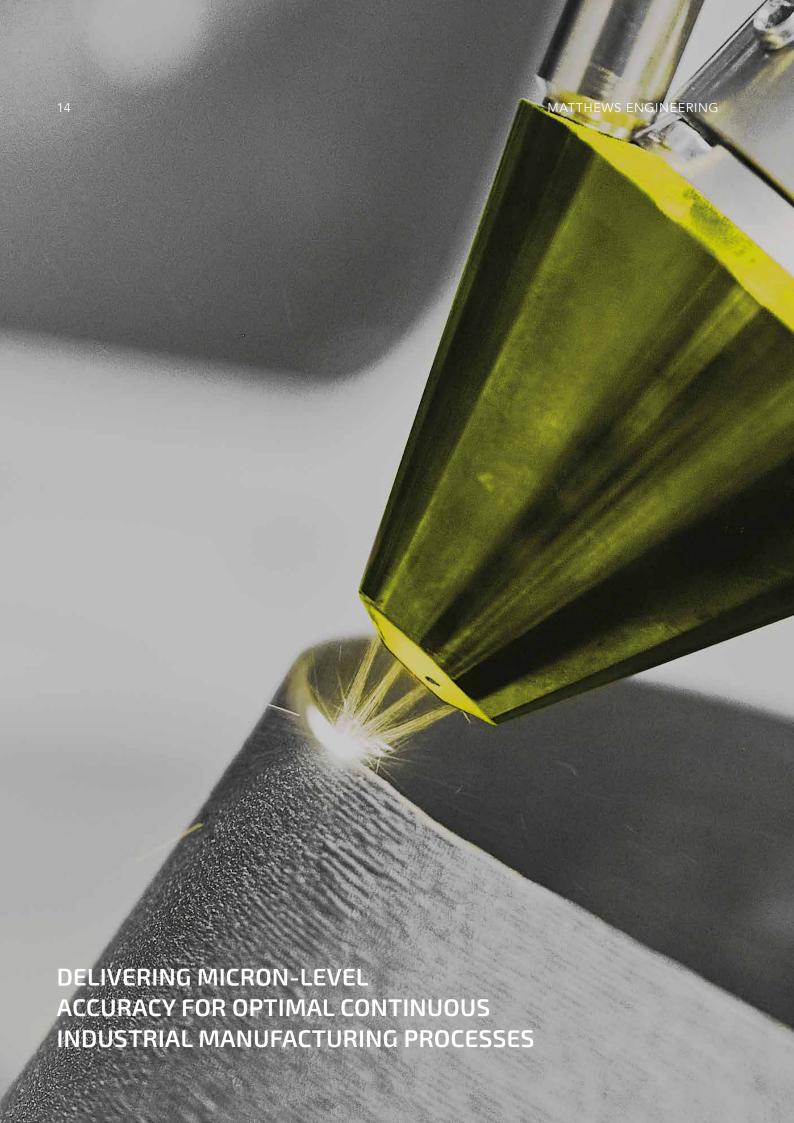


# INDUSTRIAL EXPERTISE ENGINEERED TO MOVE YOUR BUSINESS FORWARD

At Matthews Engineering, our strength lies in mastering every process that fuels industrial evolution.

Our core technologies are not just standalone capabilities; they are inter-connected innovations that solve complex challenges, deliver precision, and scale with agility.

They are available at every scale - from laboratory testing and pilot line experiments to full-scale production lines. Matthews Engineering provides seamless transitions, ensuring consistent quality and performance at each step.



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# LEGACY SHAPING INDUSTRIE

We develop specialty machines and technocal rollers tailored to the demands of diverse materials and markets. From films and foils to papers, nonwovens, and technical textiles, our solutions ensure precision, reliability, and scalability – enabling manufacturers to drive efficiency, enhance performance, and stay ahead of evolving industry needs.

## **MARKETS**



**Automotive** 



**Battery** 



Construction



Healthcare & Medical



Hydrogen



Home & Decor



**Packaging** 

# **MATERIALS**



**Artificial Leather** 



Metal



**Nonwovens** 



Conductive Powders



Paper & Board



Plastics & Film



**Technical Textiles** 



**Tissues** 

# **ENERGY STORAGE**

Our engineered energy solutions support the world's shift We develop the production machinery and precision processes behind battery electrodes, capacitors and hydrogen fuel cell components.

Whether it's shaping electrodes or forming the core of a fuel cell, we create the technology that transforms raw materials into powerful components - ready for use in cars, trucks, and capacitors for stationary and mobile end-use applications.



WE POWER TOMORROW'S **ENERGY WITH PRECISION ENGINEERING** 



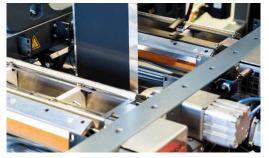
# BATTERY ELECTRODES MANUFACTURING

# PRECISION ENGINEERED SOLUTIONS FOR BATTERY PRODUCTION



## **Laboratory Calender**

Our laboratory calender replicates industrial conditions in a compact setup, enabling battery R&D teams to refine parameters, study materials, and optimize cell performance before scale-up.



## Calendering and laminating systems

Multi-roll calendering compresses and densifies the electrode structure to achieve optimal thickness, uniformity, and mechanical stability.



## Primer coating lines

A uniform primer coating enhances conductivity, adhesion, and stability – boosting efficiency and cycle life, and proving crucial for next-gen designs like solid-state batteries.



#### Battery separator film coating lines

A high-quality separator film ensures conductivity, stability, and safety in advanced batteries. Our lines deliver precise, consistent coatings at speeds up to 400 m/min.

BATTERY & HYDROGEN 19

# **HYDROGEN**

# INDUSTRIAL INNOVATION FOR HYDROGEN FUEL CELL COMPONENTS AND ELECTROLYZER



## Component development

We develop and optimize manufacturing processes, machinery, and tooling for key fuel cell and electrolyzer components.



#### **Coating lines**

Our coating lines meet the strict demands of fuel cell and electrolysis applications, delivering precise, scalable, and material-efficient solutions.



#### Laminating lines

Lamination bonds membrane layers with carrier or protective materials, ensuring adhesion, uniform thickness, and durability in fuel cell components.



#### **Embossing calender**

Our embossing calenders structure metal or composite sheets for bipolar plates, enabling complex flow fields with consistent depth and definition.

# COATING & CONVERTING

# WE DON'T JUST HANDLE MATERIALS – WE SHAPE WHATS POSSIBLE

From flexible films to technical surfaces - we engineer the production systems that give materials their function, finish, and form. Our coating and converting solutions turn raw substrates into high-performance products used in packaging, mobility, healthcare, and renewable technologies.

Our coating and converting technologies power the production of:

- Flexible packaging for food and pharma
- Decorative and technical laminates
- Medical barrier films and wound care products
- Textiles and filtration materials
- Thermal insulation foils
- Release liners and adhesive tapes
- and many more...



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# **Coating lines**

We develop roll-to-roll technologies tailored to the demands of diverse materials and markets. From films and foils to papers, nonwovens, and technical textiles - we enable manufacturers to drive efficiency, enhance performance, and stay ahead of evolving industry needs.



#### Printing & lacquering lines

Our lines combine performance, design flexibility, and precise control. Whether you're applying decorative finishes to floor coverings, or high-performance films - our machines deliver superior quality at industrial speed.



#### Laminating lines

Our laminating systems are designed for low-elongation, wrinkle-free processing with precise web tension and temperature control – ideal for sensitive materials such as packaging, technical textiles, automotive, and electronics.



### **Embossing & calender systems**

Our embossing systems are designed for precision, repeatability, and long-term reliability - even under high-temperature and high-pressure conditions. Whether you're processing plastic films or tissues, our technology ensures maximum uniformity, stability, and performance.

# DEVELOPMENT CENTER

# THE ORIGIN OF PIONEE-RING TECHNOLOGIES

Our Development Centers empower visionaries to validate, optimize, and industrialize breakthrough ideas with unmatched engineering expertise and real-world test environments.

Matthews Engineering's Development Centers are where scalable innovation takes shape. Equipped with leading-edge technologies and industry-exclusive equipment, we help customers take concepts from lab-scale testing to full production readiness – across industries and materials.

Whether you're validating next-gen battery solutions, developing new coating processes, or refining flexible substrates, our team transforms possibilities into high-performance realities.

## Purpose-Built Technology for Battery Innovation

From electrode coating to precision calendering and moisture-sensitive material testing — our equipment simulates real production conditions with the accuracy required for next-gen energy storage. Our Development Centers are equipped to support the full development lifecycle of battery materials — including Lithium-Ion, solid-state, and other advanced chemistries. Whether you're working on dry coating techniques, calendering of composite foils, or developing multilayer cell components, our facilities deliver unmatched testing accuracy, scalability, and environmental control.



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Individual consulting



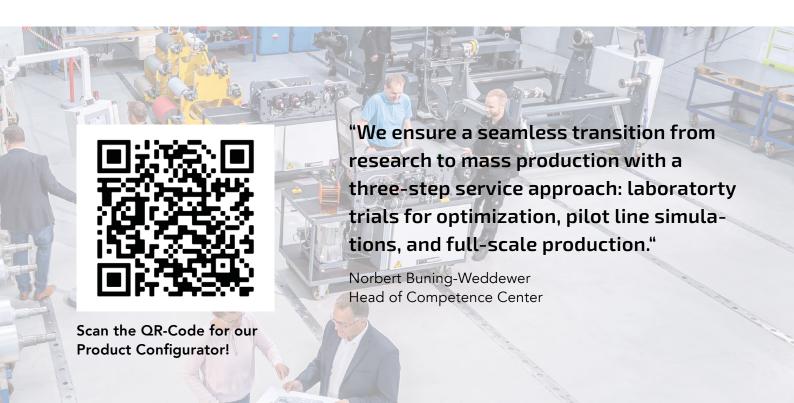
Laboratory-scale testing



Research & Development



Dry room technology



# INDUSTRIAL IOT SOLUTIONS

Industrial production is undergoing significant change, driven by increasing digitalization and system connectivity.

Matthews Engineering develops and implements technologies in the fields of Industrial IoT (IIoT), automation, and data-driven analytics (e.g., Al-based evaluations) to technically optimize production processes and improve resource efficiency.

Our smart factory solutions enable condition-based maintenance, real-time data acquisition, and the integration of cloud-based system architectures to ensure long-term process stability and scalability.

"IIoT is more than automation – it's about real-time intelligence that drives efficiency, reduces downtime and future-proofs industry. At Matthews Engineering, we turn data into competitive advantage."

Christian Groh, Manager Digitalization



# RESEARCH & DEVELOPMENT

5%

**R&D** spendings

>200

**Patents** 

3

**Development Centers** 

>50

Cooperations with universities, research facilities and start-ups

7

Active public funded research projects per year

# PRECISION MEETS INNOVATIONS

Research and Development is the heart of how we create industrial breakthroughs. Our commitment to precision engineering and intelligent processes ensures that we stay ahead of the evolving demands of industry.

We don't just follow innovation, we drive it. With an eye on tomorrow's trends, our innovations are continually adapted to meet the needs of the market. We are constantly innovating for you.

Ideation & Feasability

Prototyping & Testing

Validation & Compliance

Intellectual Property

Management

Knowledge & Data Management



# INNOVATION WITH SUSTAINABILITY



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# FOR A WORLD THAT BELONGS TO ALL OF US

For us, sustainable progress means continuously optimizing our technologies and business processes. With energy-efficient machines, digitalization, and a commitment to social equity, we are shaping not only a more sustainable industry — but a better future.

Our holistic ESG approach is aligned with the United Nations Sustainable Development Goals and built on three key pillars:



# **ENVIRONMENTAL**

Fo a green and regenerative future



# **SOCIAL**

Empowering people and strengthening communities



# **GOVERNANCE**

Excellence and transparency through responsibility



