## Integrated **Service Solutions**

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#### **Individual Consulting**

Our highly-qualified experts partner with customers throughout the entire production process, providing professional technical advice and bespoke solutions - goal oriented and competent.



#### **Research & Development**

Due to the close cooperation between our R&D department and our customers, current developments are continuously adapted to the needs - the driving force behind our technical progress.

#### **Technical and Competence Centers**

Our in-house technical centers provide the opportunity to test products and material properties under realistic conditions as well as process optimizations and new plant concepts close to production – even before the final production.

#### **Production Equipment**

We are your experienced partner for high volume production equipment for fuel cell components and stacks. Our equipment and tooling capabilities include pilot and production lines, and rotary forming and cutting tools.

#### **Installation & Commissioning**

Our team of experts is experienced in installing and commissioning production equipment for a variety of end markets, including

#### **After Sales Services**

We have the highest technological and quality standards for ourselves and our services. Comprehensive maintenance and repair work are part of our everyday services.



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#### **Matthews** INTERNATIONAL®

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# Turning ideas into powerful technologies

**HYDROGEN FUEL CELLS** 



# Technologies full of innovative power

Our brand portfolio of Saueressig, Olbrich, Polytype Converting and Terrella Energy Systems brings together a unique combination of comprehensive and in-depth knowledge of engineering competencies to offer integral solutions that meet the highest market demands. Based on decades of experience in processing web-shaped materials, we have evolved from a printing and converting market leader to an innovator for the energy and automotive industry.

We keep moving for you.















We are experienced in developing and optimizing of manufacturing processes, equipment and tooling for fuel cell components, including graphite and metal bipolar plates, catalyst coated membrane and gas diffusion layers.

#### Rotary Embossing & Cutting Cylinders

We offer specialized know-how for the design and manufacture of rotary forming and cutting tools used to manufacture components within the fuel cell stack.

## Purpose Built Assembly & Production Lines

We are specialists in the design and manufacture of prototyping, pilot and production lines for components and stack assembly. For plates, we offer comprehensive process expertise – including embossing, resin impregnation, curing, bonding and sealing. We are a comprehensive and innovative solution provider, offering expertise in turn-key machine and line concepts, especially in coating technology, drying technology, rotary embossing and cutting, calendering technology and roll-to-roll handling for hydrogen fuel cell production.

We draw on over 50 various coating methods and combine them with our sustainable drying concepts. We have long-term experience in calendering technology and offer specialized know-how for the design and manufacture of rotary forming and cutting tools. Utilizing of cleaning and treating systems, as well as quality control systems, ensures a streamlined production process and consistent product quality in our highly automated winding technology.

With us, you are side by side in the challenges of upscaling. We draw on decades of experience and you can benefit from our proven equipment concepts – from lab to mass production.

"Hydrogen technologies play a key element in the energy transition: They must be developed and made marketable on a large scale."

Brandon Babe | Sr. Director, Engineering & Energy

