



# FICKERT+WINTERLING

core values shown in

# GLASS FUTURES

partnership

Coherent with everything that typifies its commitment to environmental responsibility and sustainable glass manufacturing, FICKERT + WINTERLING's groundbreaking KWM 8s Line reduces energy consumption and CO2 emissions as the company partners with Glass Futures to focus on eco-friendly innovation - all while advancing precise, flexible production.

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Glass Futures' unique 165,000 square foot Global Centre of Excellence in St Helens, UK where an industrial scale 30 tonnes per day pilot furnace is currently being installed.



## **D** RIVING **INNOVATION: FICKERT + WINTERLING'S SIGNATURE GERMAN PRECISION**

The glass industry finds itself at a critical juncture, facing the pressing challenge of climate change and the urgent need for sustainable manufacturing practices. Glass, a ubiquitous material with far-reaching applications, must evolve to minimize its environmental

impact without compromising quality or efficiency. In this transformative era, the Glass Futures Global Centre of Excellence in St Helens, UK, emerges as a beacon of innovation, spearheading the development of groundbreaking technologies for low-carbon glass production. At the forefront of this endeavor stands Fickert + Winterling, a German company renowned for its unwavering commitment to excellence in engineering and technology. For generations, Fickert + Winterling has been the epitome of 'Made in Germany' quality

- consistently pushing sustainable glass manufacturing boundaries of innovation within the glass industry. With the delivery of its groundbreaking Continuously Rolled Glass (KWM) line to Glass Futures, Fickert + Winterling once again reaffirms its position as a pioneer in sustainable glass manufacturing.

## **A LEGACY OF GERMAN ENGINEERING EXCELLENCE**

Established in 1940, family-owned company Fickert + Winterling boasts a rich her-

itage that's deeply-rooted in German engineering excellence. Nestled in Marktrewitz, Bavaria, the company has grown from its humble beginnings into a global leader in glass processing machinery. Today, Fickert + Winterling employs a team of approximately 100 highly skilled engineers, technicians and craftspeople - all dedicated to upholding the company's unwavering commitment to quality and innovation.

## **BEYOND MACHINE BUILDING: A HOLISTIC APPROACH**



## TO GLASS MANUFACTURING

Fickert + Winterling expertise extends far beyond the realm of machine design and manufacturing. The company operates a state-of-the-art laser cutting facility and a specialized welding workshop, enabling them to provide a comprehensive one-stop shop for all your glass manufacturing needs. This holistic approach ensures seamless integration and optimal performance of their machinery within your production environment.

## INNOVATION AND EFFICIENCY: DELIVERING UP TO 40 LINES PER YEAR

Fickert + Winterling dedication to efficiency is as

remarkable as its commitment to quality. The company possesses the impressive capacity to deliver up to 40 glass manufacturing lines per year. This high production output is a testament to their streamlined manufacturing processes and their ability to meet the demands of the ever-evolving glass industry.

## HALLMARK OF GERMAN EXCELLENCE: UNWAVERING COMMITMENT TO QUALITY

An uncompromising focus upon 'Made in Germany' excellence is a cornerstone of Fickert + Winterling's philosophy. From the sourcing of high-grade materials to rigorous testing and quality control procedures, the company

ensures that every machine and component surpasses the highest standards. Such dedication has earned Fickert + Winterling a global reputation for reliability and durability, making its products the preferred choice for glass manufacturers worldwide.

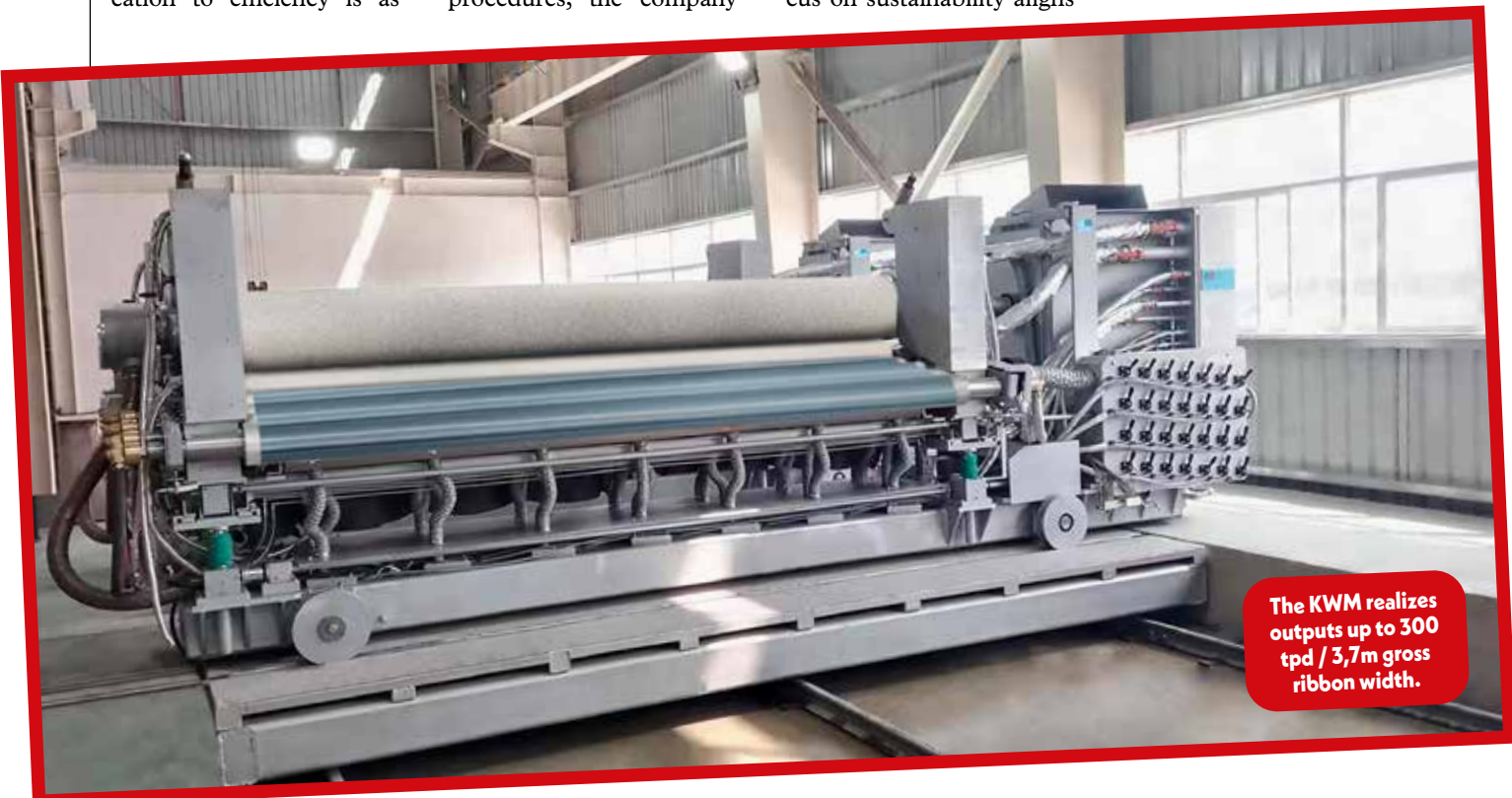
## THE KWM 8S LINE: A TESTAMENT TO SUSTAINABLE INNOVATION

The KWM 8s Line stands as a prime example of Fickert + Winterling's dedication to sustainable innovation. The machine's continuous rolling process significantly reduces energy consumption compared to traditional drawing methods, contributing to a lower CO2 footprint in glass production. This focus on sustainability aligns

perfectly with Glass Futures' mission to develop eco-friendly glass manufacturing technologies.

## UNVEILING THE POWERHOUSE: A CLOSER LOOK AT THE KWM 8S LINE

At the heart of the KWM 8s Line lies German engineering prowess, meticulously crafted to deliver exceptional performance and precision. Unlike the conventional drawing process, where molten glass is pulled from a heated shaft and then cooled and shaped, the KWM 8s Line enables uninterrupted flat glass production. Molten glass is passed between two precise rollers, creating a wide ribbon of glass that can then be rolled to



The KWM realizes outputs up to 300 tpd / 3,7m gross ribbon width.

the desired thickness and further processed. The KWM 8s Line boasts an impressive capacity, effortlessly handling up to 300 tons of glass per day. This remarkable output is complemented by its versatility, seamlessly producing flat glass for a wide spectrum of applications, from solar modules to countless other architectural and industrial uses.

### **PRECISION AT ITS FINEST: UNCOMPROMISING QUALITY WITH HIGH-TECH CONTROL**

Fickert + Winterling commitment to quality extends beyond the impressive output of the KWM 8s Line. High-precision rollers and cutting-edge control technology work in harmony to ensure consistently high glass quality, even at such impressive production rates. This unwavering focus on precision is a hallmark of Fickert + Winterling's engineering philosophy - ensuring that every piece of glass produced meets the highest standards.

### **FLEXIBILITY: EMPOWERING RESEARCH AND DEVELOPMENT**

The KWM 8s Line's flexibility extends beyond its impressive production capabilities and diverse

range of applications. This innovative machine serves as a powerful tool for research and development within the glass industry. Here's how:

- **Variable Process Parameters:** The KWM 8s Line allows for precise control over various process parameters, including roller temperature, line speed, and cooling rates. This enables researchers to experiment with different glass compositions and production techniques, accelerating the development of new and improved glass formulations with enhanced properties.
- **Scalability for Pilot Production:** The KWM 8s Line's manageable size makes it ideal for pilot production runs. Researchers can test new glass formulations and processes on a smaller scale before committing to full-scale manufacturing, reducing risks and costs associated with large-scale production line adjustments.
- **Rapid Prototyping:** The ability to produce glass with varying thicknesses and characteristics on the KWM 8s Line facilitates rapid prototyping for researchers developing novel glass applications. This allows for quicker iteration and refinement of glass products, accelerating the innovation cycle.

### **A SYMBIOTIC PARTNERSHIP: FICKERT + WINTERLING AND GLASS FUTURES**

The collaboration between Fickert + Winterling and Glass Futures represents a powerful force for positive change in the glass industry. By combining Fickert + Winterling's cutting-edge KWM 8s Line with Glass Futures' world-class research expertise, the partnership unlocks exciting possibilities for the future of glass manufacturing.

- **Sustainable Glass Innovation:** The partnership focuses on developing and implementing sustainable glass production practices. The KWM 8s Line's energy efficiency and Glass Futures' commitment to eco-friendly technologies pave the way for a greener future for glass.
- **Knowledge Sharing and Collaboration:** The collaboration fosters an environment of knowledge sharing and collaboration between industry leaders and researchers. This exchange of expertise accelerates innovation and the development of next-generation glass manufacturing technologies.
- **Building a Sustainable Future Together:** By

working together, Fickert + Winterling and Glass Futures are pushing the boundaries of what's possible in glass manufacturing. Their dedication to sustainability ensures that glass remains a viable and eco-friendly material for generations to come.

### **CONCLUSION**

Fickert + Winterling stands as a beacon of German engineering excellence. Its KWM 8s Line is a testament to the company's unwavering commitment to innovation and sustainability. The partnership between Fickert + Winterling and Glass Futures signifies a new era for the glass industry - one focused on both environmental responsibility and groundbreaking technological advancements.



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