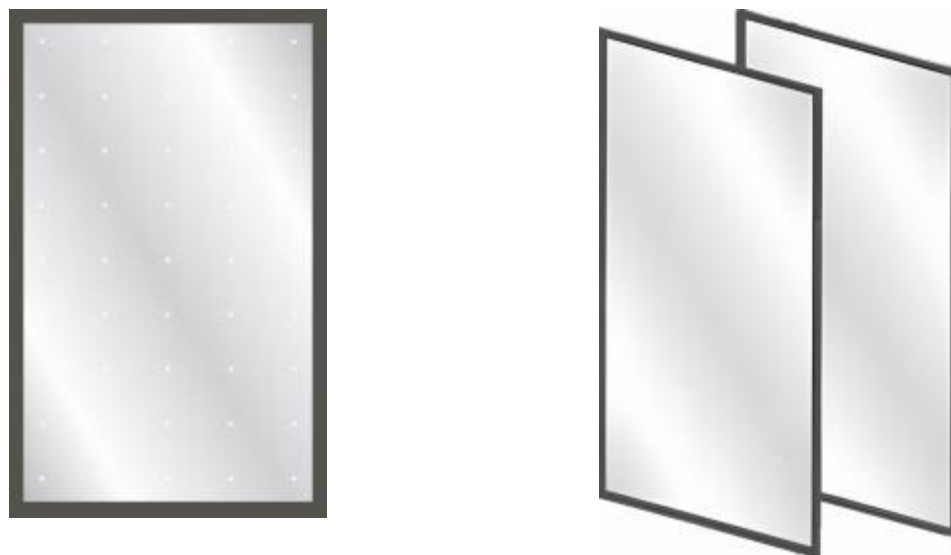




To minimize U value just choose  warm edge vacuum glass !

INTRODUCTION TO INTELLIGENT CONTINUOUS WARM EDGE VACUUM GLASS PRODUCTION LINE



2025 Global VIG Conference Overview & Insights



大会概况与核心洞察

■ 会议概况

名称: 2025第三届真空玻璃(VIG)国际研讨会 | 时间: 2025年9月11日
主办: 美国劳伦斯伯克利国家实验室(LBNL) | 性质: 全球顶级闭门技术峰会

■ 关键共识与结论

1. 北美正式确认VIG为下一代顶级节能玻璃, 市场需求强劲。
2. 中国在VIG产能与连续化生产线领域全球第一, 引领制造。
3. 低温暖边密封 = 最优耐久+节能技术方案。
4. 智能连续化产线是行业降本增效的唯一主流路线。

■ 参会机构

美国: LBNL、LuxWall、Guardian、Vitro | 中国: 国检集团及头部装备企业
全球: 知名建筑师、权威检测机构、标准组织及头部门窗企业



Conference Overview & Insights

■ Overview

Event: 3rd International VIG Symposium 2025 (Sept 11, Berkeley Lab)
Status: Top-tier global closed-door technical summit for the VIG industry.

■ Key Conclusions

1. **North America officially confirms VIG** as the next-gen top-tier energy-saving glass with strong demand.
2. **China ranks No.1** in global VIG production capacity & continuous lines.
3. Low-temp warm edge composite sealing = the best durability & energy efficiency solution.
4. Intelligent continuous production is the **only mainstream route** for cost reduction.

■ Participants

USA: LBNL, LuxWall, Guardian, Vitro, V-Glass
China: National Inspection Group, leading VIG equipment enterprises
Global: Architects, testing labs, standards bodies, window & door manufacturers.

INTELLIGENT CONTINUOUS WARM EDGE VACUUM GLASS PRODUCTION LINE



PRODUCTION PROCESS & ADVANTAGES

SMART MANUFACTURING TECHNOLOGY · 2026

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01

Core Technology & Advantages

- Vacuum Glass Value
- Edge Sealing Tech
- Performance Comparison

02

Production Process & Layout

- Intelligent Continuous Line
- Semi-Automatic Line
- Layout Options

03

Key Conclusion

- Key Takeaways
- Our Advantage

01. CORE TECHNOLOGY & ADVANTAGES

VACUUM GLASS VALUE & SEALING TECHNOLOGY

Core Value of Vacuum Glass

Extreme Energy Efficiency

The vacuum layer almost eliminates gas convection and heat transfer. Its U-value can be reduced to **below $0.4 \text{ W}/(\text{m}^2 \cdot \text{K})$** , making it the key material for passive and zero-energy buildings.



Zero Gas Convection

Eliminates convective heat transfer



Ultra-Low U-value

Reaches below $0.4 \text{ W}/(\text{m}^2 \cdot \text{K})$



Passive Building Ready

Ideal for passive design



Zero-Energy Compatible

Key material for zero-energy construction

Perfect Anti-Condensation



Above Dew Point

Inner surface temp stays high in cold/humid environments



Anti-Fogging

Fully prevents vision-obstructing fogging



Anti-Condensation

Solves condensation issues completely



Clear & Safe

Ensures unobstructed vision and safety

Two Core Edge Sealing Technologies

Warm Edge: Composite Sealing

- Uses low-melting-point composite sealed at 300°C above
- Forms a permanent, stable inorganic chemical bond
- Low thermal conductivity: 0.8–1.2 W/(m·K)



Long Lifespan

25–30 years of reliable service in harsh conditions



Strength Safe

Does NOT compromise tempered glass strength

Cold Edge: Metal Sealing

- Uses stainless steel, tin alloy, or aluminum frames
- Only physical bonding; organic sealant prone to aging
- Low long-term reliability compared to chemical bonding



Thermal Bridge Risk

High metal conductivity causes serious heat loss



High Risk

The mismatch in thermal expansion and contraction between metals and glass can lead to bent sealing edge, cracking and failure of sealing layer.

Summary: Key Advantages of Warm Edge Technology



Unmatched Efficiency

Through full automation and continuous flow, ensuring seamless production with minimal downtime. Achieves high yield and fast cooling.



Superior Product Quality

Ensured by advanced sealing technology, uniform heating, and rigorous quality control standards for premium performance and durability.



Cost-Effectiveness

Significantly reduced energy consumption (1/5 of traditional) and labor costs, maximizing your operational ROI.



Future-Proof Solution

Engineered to meet the fast-growing global demand for high-performance, energy-saving vacuum glass with intelligent automation.

02. PRODUCTION PROCESS & LAYOUT

INTELLIGENT CONTINUOUS MANUFACTURING TECHNOLOGY

01) Core Technology & Advantages

Sealing Technology

Our production lines adopt the latest superior warm edge sealing technology with **low-temperature composite**. This ensures:



High Yield

Maximized production efficiency



Energy Efficiency

Optimized power consumption



Sealing Reliability

Airtight and long-lasting bonds



Durability

Resistant to environmental wear

Impact Analysis



Substantial Increase in Output

Significantly boosts the production volume of warm edge vacuum glass.



Significant Reduction in Energy Consumption

More efficient processes lead to lower operational energy costs.



Significant Reduction in Required Workforce

Advanced automation minimizes manual labor needs.

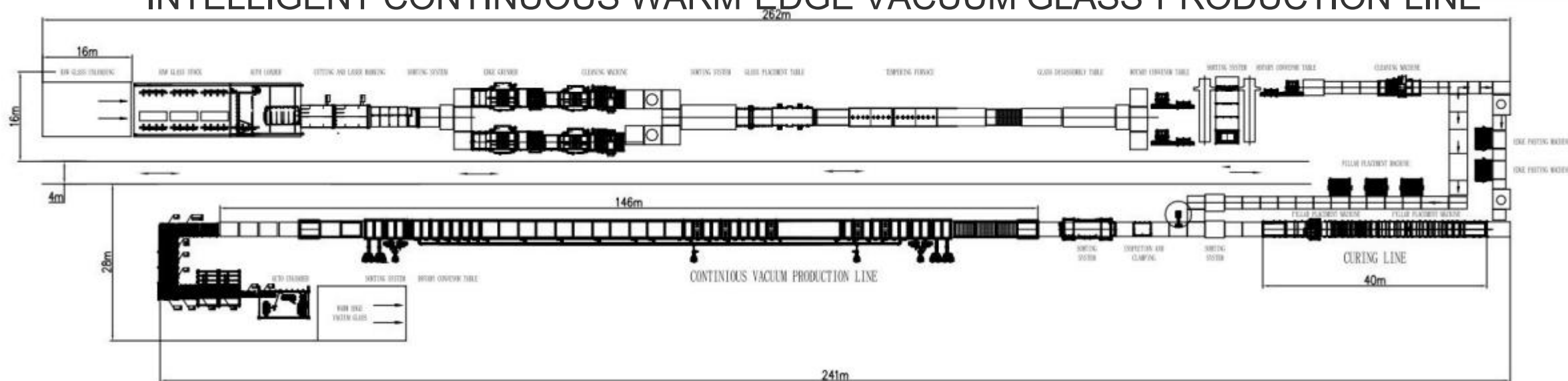


Ensures High Quality and Consistency

Continuous automated process guarantees uniform quality.

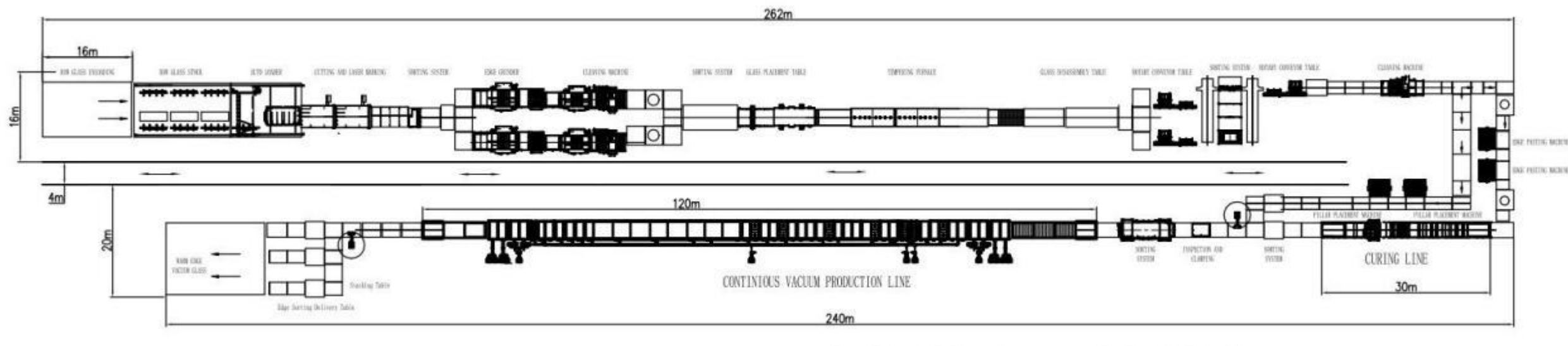
LAYOUT A: ANNUAL OUTPUT WARM EDGE VACUUM GLASS 300,000 SQUARE METERS

INTELLIGENT CONTINUOUS WARM EDGE VACUUM GLASS PRODUCTION LINE



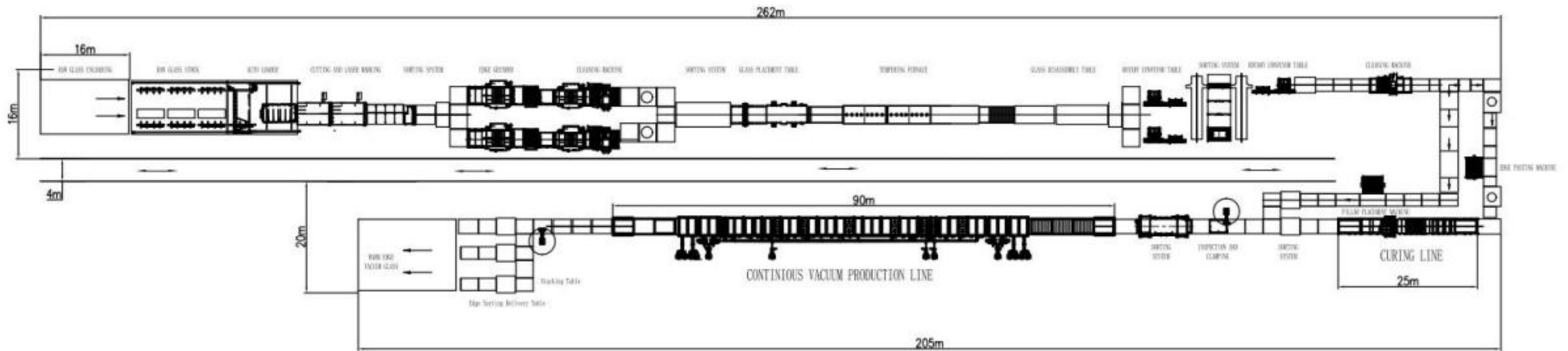
LAYOUT B: ANNUAL OUTPUT WARM EDGE VACUUM GLASS 200,000 SQUARE METERS

INTELLIGENT CONTINUOUS WARM EDGE VACUUM GLASS PRODUCTION LINE



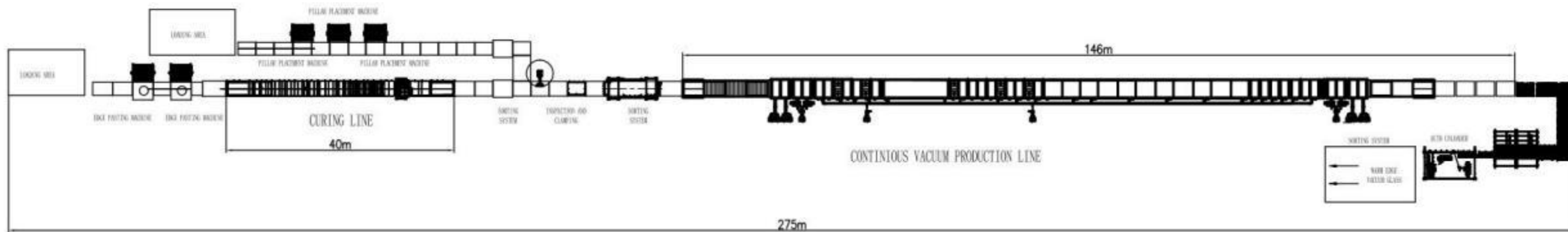
LAYOUT C: ANNUAL OUTPUT WARM EDGE VACUUM GLASS 100,000 SQUARE METERS

INTELLIGENT CONTINUOUS WARM EDGE VACUUM GLASS PRODUCTION LINE



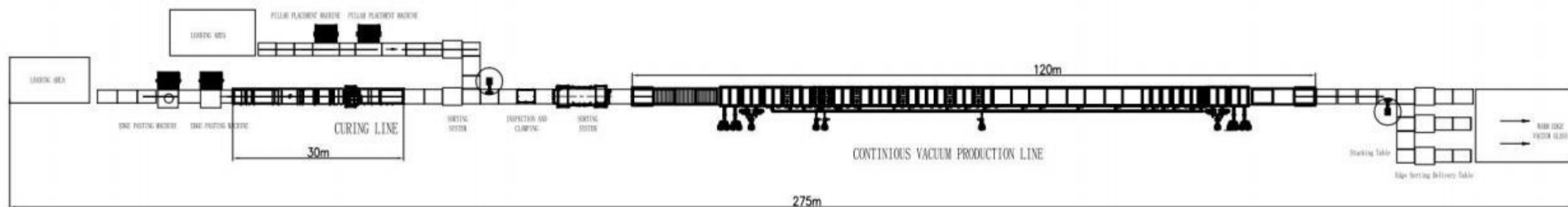
LAYOUT D: ANNUAL OUTPUT WARM EDGE VACUUM GLASS 300,000 SQUARE METERS

SEMI-AUTOMATIC CONTINUOUS WARM EDGE VACUUM GLASS PRODUCTION LINE



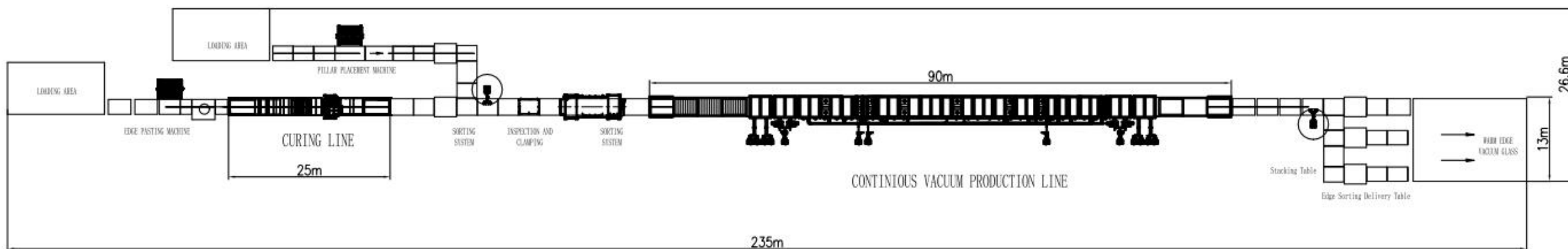
LAYOUT E: ANNUAL OUTPUT WARM EDGE VACUUM GLASS 200,000 SQUARE METERS

SEMI-AUTOMATIC CONTINUOUS WARM EDGE VACUUM GLASS PRODUCTION LINE



LAYOUT F: ANNUAL OUTPUT WARM EDGE VACUUM GLASS 100,000 SQUARE METERS

SEMI-AUTOMATIC CONTINUOUS WARM EDGE VACUUM GLASS PRODUCTION LINE



WARM EDGE VACUUM GLASS PLANT

Currently our company is the only warm edge vacuum glass and intelligent continuous production line manufacturer in China.

The longer the continuous vacuum glass production line, the longer the vacuum glass lifespan.



03. KEY CONCLUSION

THE BEST VACUUM GLASS & OUR ADVANTAGE

WARM EDGE VACUUM GLASS INDUSTRY LEADER · 2026



CONCLUSION

The Best Vacuum Glass

The best vacuum glass is characterized by:

- 1. Non-invasive design:** Vacuum glass without an pumpout port and cover on it, ensuring a sleek appearance and eliminating potential leak points, made possible by our high-vacuum technology.
- 2. Superior sealing technology:** Vacuum glass with low temperature warm edge composite sealing, maximizing energy efficiency and durability, achieved through our special heating and sealing process.
- 3. Advanced manufacturing:** Vacuum glass made with an intelligent continuous production line, ensuring high quality and consistency, powered by our fully automated and traceable system.

WARM EDGE VACUUM GLASS PLANT





To minimize U value, just choose  warm edge vacuum glass!

CHINA WARM EDGE TECHNOLOGY(NANJING) CO.,LTD.

E DIESEL INTERNATIONAL SYSTEM CO.,LIMITED

Add:56 Shi Dai Da Dao,Luhe Economic Development Zone,
Nanjing 211500,CHINA

Mobile: +86- 13905190580

WhatsApp: +86- 13905190580

Telegram: +86-13905190580

Wechat: 13905190580

Email: warmedge@126.com

Email: ediesel@126.com

<https://www.warmedgevig.com>



THANKS

Thank you for listening.

A P P R E C I A T E Y O U R T I M E