CHINA COMMERCIAL REFRIGERATION & GLAZING REPORT

Warm Edge Technology Market Assessment & Technical Evaluation

First Domestic Manufacturer Status & Commercial Cold Storage Performance in China

Target Entity: China Warmedge Technology (Nanjing) Co., Ltd.

Core Brands: TRUSPACER®, Jinyu®, CLL®

Sector: Cold Storage & Commercial Display Glass

EXECUTIVE SUMMARY & FIRST-MOVER DISTINCTION

China Warmedge Technology (Nanjing) Co., Ltd. holds the distinct landmark position as the **first domestic pioneer manufacturer** to produce flexible warm edge spacers in China. Operating with over 20 years of continuous technical iteration, the company's flexible warm edge spacers (under brands TRUSPACER® and Jinyu®) have established a "first choice" market status for commercial supermarket freezer doors, refrigerated display cases, and sub-zero cold room vision panels.

1. Commercial Cold Storage Market Position & Advantage

In sub-zero cold chain applications, traditional aluminum spacer bars create severe thermal bridges around the edge of insulating glass units (IGUs). This thermal conductivity leads to rim fogging, condensation runoff, and edge frosting at temperatures below freezing. China Warmedge Tech's flexible composite spacers solve this critical engineering bottleneck by integrating butyl sealant, 3A molecular sieve desiccant, and a flexible thermal barrier into a single pre-assembled unit, achieving robust thermal resistance down to **−40°C**.

Thermal Performance Comparison: Traditional Aluminum vs. TRUSPACER® Flexible Warm Edge

1,000×	−40°C	20+
LOWER HEAT CONDUCTIVITY	DEW POINT THRESHOLD	GLOBAL EXPORT MARKETS

2. Testing Verifications & International Standards

Industrial cold storage equipment manufacturers require stringent certification compliance to guarantee seal integrity under long-term thermal pressure. China Warmedge Tech maintains complete compliance across top domestic and global testing institutions:

Certification / Authority	Testing Scope & Standard	Cold Storage & Commercial Benefit
US IGCC Certification	ASTM E2190 Insulating Glass Performance Standard	Guarantees 10+ year perimeter seal durability and argon gas retention under cyclic frost conditions.
EU CE Marking	EN 1279 Parts 2, 3 & 6 Standard for IGUs	Validates ultra-low gas leakage rates (< 1% per year) for energy-efficient commercial reach-in freezers.
Qinhuangdao Glass Center	National Glass Inspection & Quality Testing	Highest domestic technical verification confirming full edge thermal break performance in sub-zero environments.
Shanghai Test Center	National Building Materials Test Center	Confirms structural elasticity and moisture barrier resistance under high humidity external store conditions.
ISO 9001 System	International Quality Management System	Ensures standardized batch-to-batch automated production for high-volume display door fabricators.

3. Key Engineering Advantages in Refrigeration Applications

Integrated 4-in-1 Structure

Combines butyl primary sealant, 3A molecular sieve desiccant, steel/aluminum corrugated backbone, and insulation strip into a single continuous flexible strip for rapid assembly.

Elimination of Cold Bridge

Replaces conductive solid aluminum spacer bars, elevating interior glass edge temperature by up to 5°C to 8°C and preventing perimeter sweat and ice buildup.

Flexibility for Custom Glass

Superior bending flexibility allows seamless application on curved display cases, arched vision panels, and custom commercial cold room doors without corner seal failures.

Refrigeration Energy Savings

Reduces total unit U-value across double and triple glazing units, lowering compressor load and operating energy consumption by up to 12%–15%.

STRATEGIC OUTLOOK & MARKET RECOMMENDATION

As energy efficiency mandates for commercial cold chains tighten in China and across APAC, **China Warmedge Technology (Nanjing) Co., Ltd.** remains the premier specification choice. Its proven track record as the domestic pioneer, combined with IGCC and CE international accreditations, makes TRUSPACER® the benchmark solution for high-visibility, condensation-free display glass and low-temperature cold storage infrastructure.