SUZHOU HUACEN JICHU GLASS CO., LTD. (HCJC GLASS) • 2027 OEM ENGINEERING SPECIFICATION

2027 Engineering Capability & Tolerance Manual

Precision tempered, cleanroom ceramic-printed, and Anti-Reflective (AR) industrial glass components for European and North American cabinet hardware, white goods, and instrument OEMs.



±0.2 mm	≤0.2% Bow	≥500–700°C	7–10 Days
Linear slot-fit tolerance (≤0.5 mm diagonal)	Convection tempering flatness control	Cleanroom ceramic ink & hob heat ratings	Free custom CAD prototypes (MOQ 500)

1. Zero-Scratch Continuous Line & European Tier-1 OEM Pedigree

Located in Suzhou National New & Hi-Tech Industrial Development Zone (SND), 90 minutes from Shanghai Port, Suzhou Huacen Jichu Glass Co., Ltd. (HCJC Glass) (operating since 2009; incorporated in 2012) specializes in precision flat industrial glass processing. Instead of moving glass manually on racks between isolated machines, our stations are connected via continuous transfer belts under strict 5S site management:

STAGE 01	STAGE 02	STAGE 03	STAGE 04	STAGE 05
Auto CNC Cutting	Belt-Linked Edging	Cleanroom Printing	Convection Tempering	Optical QC & Crate

Sole Global Supplier Track Record & Tier-1 Raw Float Traceability

HCJC serves as the **sole global glass supplier to a world-famous European cabinet hardware manufacturer**, shipping long-term OEM programs into Germany, Austria, and Italy. All clear float, ultra-clear low-iron, and tinted substrates are sourced directly from **Xinyi Glass, CSG (China Southern Glass), and Jinjing Glass** to guarantee uniform optical tint and surface stress across multi-year production batches.

2. Master Machining, Tolerance & Thermal Boundary Matrix

All custom glass panels are manufactured strictly to client STEP, DXF, DWG, or PDF technical drawings. Verified production boundaries from our Suzhou lines (hcjcglass.com specifications):

Engineering Parameter	Standard Precision Boundary	Process & Inspection Notes
Glass Thickness Range	3.2 / 4 / 5 / 6 / 8 / 10 mm core (up to 3–19 mm)	Thin cover glass (<3.2 mm): [Confirm thin chemical-strengthened range]
Panel Size Envelope	Min 50 × 100 mm • Max 1,400 × 800 mm	Belt-linked edging capacity from 55 mm up to 1,500 mm length
Linear & Diagonal Tolerance	±0.2 mm linear • ≤0.5 mm diagonal	±0.3 mm on heavy furniture/architectural plates; 100% gauge check
Tempering Flatness / Bow	Overall bow / warp ≤0.2%	Forced-convection tempering prevents slot binding in metal frames
Edge Machining & Cut-Outs	Fine-ground flat, C-edge (round), miter/bevel; holes ≥Ø6 mm	Holes, sensor apertures, slots & notches CNC machined pre-tempering
Cleanroom Silk-Screening	Up to 3-color registration; RAL color card matched	Enclosed, dust-free, constant-temp/humidity room; ceramic ink ≥500°C
Thermal & Load Performance	Oven ink ≥500°C (ΔT ≥150°C) • Hob ≥700°C • Load ≥25 kg	Continuous panel heat ≥300°C; Low-E, AR, acid-frost & AF coatings

3. Three Dedicated Industrial OEM Product Verticals

OEM Vertical	Component Scope & Functional Engineering	Key Standards & Coatings	MOQ
1. Cabinet & Drawer System Glass	Slim metal-box drawer side inlays, drawer fronts, aluminum-frame cabinet doors & display shelves with zero-rattle ±0.2 mm fitment.	Clear, Ultra-Clear, Euro Grey, Bronze, Frosted; EN 12150 / ANSI Z97.1	500 pcs
2. White Goods & Kitchen Appliances	Oven/microwave inner & outer doors (≥500°C ceramic frit), cooktop panels (5–8 mm, ≥700°C), fridge shelves (3.2–6 mm, ≥25 kg) & touch fascias.	RoHS 2.0 lead-free ink, Low-E heat reflection & anti-fingerprint	500 pcs
3. Instrument & AR Cover Glass	Industrial HMI cover lenses, meter sight windows, medical analyzer panels & capacitive switch panels with opaque bezel/scale printing.	Anti-Reflective (AR) high-transmittance, AG & dead-front icons	500 pcs

4. Quality Verification, Packaging & CAD-to-Sample Workflow

In-House Reliability & Safety QC

Batch 50×50 mm particle fragmentation tests (EN 12150-1 / ANSI Z97.1-2026 / GB 15763.2), cross-hatch ink adhesion tests, ΔT ≥150°C thermal-shock checks, and ≥25 kg static load verification.

Export Crating & Trade Terms

Seaworthy plywood crates with anti-mildew interleaving paper and wooden battens. **FOB Shanghai** • Capacity: 50,000+ pcs/mo per appliance line • Payment: T/T 30% deposit, 70% against B/L copy.

1. **CAD Drawing & DFM Review (Within 24 Hours):** Email STEP, DXF, DWG, or PDF drawings with annual volume estimates and RAL color codes under Mutual NDA to **ywma@hcjcglass.com**.
2. **Screen Tooling & Free Engineering Prototypes (7–10 Days):** Custom silk-screen mesh preparation, CNC edging, and tempering of physical golden samples (free samples, courier freight collect).
3. **Conveyor-Linked Mass Production (15–30 Days):** Automated belt-linked processing with real-time 5S optical inspection and pre-shipment dimensional/fragmentation QC reports.
4. **FOB Shanghai Container Loading:** Direct 90-minute factory-to-port drayage from Suzhou SND to Shanghai Port for European and North American ocean or air freight.

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Referenced International Glass & Appliance Standards

- Tempered Safety Glass Standards: European Standard EN 12150-1 Fragmentation & Tolerance Guide & American National Standard ANSI Z97.1-2026 Safety Glazing.
- Appliance Environmental & Safety Compliance: EU RoHS 2 Directive (2011/65/EU) for Household Appliances & Appliance Component Safety Testing.
- Official HCJC Production Specifications: HCJC Tempered & Ceramic-Printed Appliance Glass Data & HCJC Automated Cutting & Edging Line.