

QUALITY ASSURANCE STANDARD & INSPECTION PROTOCOL

Quality Policy & Scope:

This quality framework governs all custom OEM/ODM Inflatable Stand-Up Paddle Board (SUP) manufacturing for QINGDAO VATRAD GROUP.,LTD. Quality requirements are dynamically controlled against project-approved specifications, technical drawings, artwork proofs, and confirmed Bill of Materials (BOM) for each production lot.

1. Four-Stage Quality Control Methodology

STAGE	SCOPE & ITEM	INSPECTION METHOD & CRITERIA	RECORD / OUTPUT
1. Incoming (IQC)	Drop-stitch Fabric, PVC, EVA Pad, High-Pressure Valve, Accessories (Fin, Leash, Pump, Paddle, Bag)	Verify supplier batch specs, density, thickness, physical flaws, color match against master swatch, valve thread integrity, and artwork proof accuracy.	Incoming Material Inspection Report (IQC-R)
2. In-Process (IPQC)	Cutting, Printing, Rail Bonding/Welding, Valve Seat Assembly, EVA Placement	Check dimension tolerances against pattern, graphic alignment, seam continuity (no void/bubbles), symmetry, and logo spelling/ placement.	In-Process Quality Checklist (IPQC-R)
3. Final Board (FQC)	Completed Board Inflation & Air-Tightness Verification	Inflate boards to project-approved pressure (e.g. 12–15 PSI). Hold for standard duration. Check valve base, seams, and stress zones using leak-detection bubble spray.	Air-Tightness Testing Log (ATT-L)
4. Outgoing (OQC)	Complete Kit Verification, Barcode, Master Carton, Shipping Mark	Check full accessory kit completeness against BOM, barcode scan test, carton weight/dimensions, drop test (if specified), and container loading cleanliness.	Pre-Shipment Inspection Certificate (PSI-C)

2. Air-Tightness & Structural Inspection Standard

Air retention is the core metric for inflatable SUP durability. All boards must pass the following standardized protocol before proceeding to packaging:

TEST PARAMETER	STANDARD OPERATING PROCEDURE	ACCEPTANCE CRITERIA
Inspection Inflation	Inflate board using calibrated pressure gauge to approved test PSI.	100% nominal working pressure achieved (e.g. 15 PSI ± 0.5 PSI).
Hold Duration	Maintain inflated board in temperature-controlled stabilization zone for specified holding window.	Pressure loss ≤ threshold specified in project Quality Plan.
Seam & Valve Inspection	Apply approved soap-solution spray around high-stress areas (Valve housing, inner rail, outer rail seam, nose cone).	Zero active bubbling or hiss sound observed during visual/acoustic scan.
Non-Conformance Action	Quarantine failing board immediately. Tag with Red Non-Conforming Identification Label. Move to Rework Area.	Repaired board must undergo full 100% re-test cycle from Step 1.

SAMPLE PRE-SHIPMENT INSPECTION (PSI) REPORT

Customer Name:		PO Number:	PO-2026-
Factory:	QINGDAO VATRAD GROUP.,LTD.	Inspection Date:	2026-XX-XX
Product / SKU:	Custom Inflatable SUP [Model X]	Total Order Qty:	500 Pcs
Sample Size:	80 Pcs (AQL Level II)	AQL Acceptance:	Critical: 0 Major: 1.5 Minor: 4.0

Inspection Checklist & Defect Summary

NO	INSPECTION POINT	SPECIFICATION / REQUIREMENT	SAMPLE CHECKED	RESULT / STATUS
1	Air Pressure Retention	Hold test pressure (15 PSI) for defined window. No measurable pressure drop or seam bubbles.	80 Pcs	PASS
2	Visual & Cosmetic	No adhesive residue, scratches, print smudges, or color discrepancy on deck/rail.	80 Pcs	PASS (2 Minor)
3	EVA Alignment & Bonding	EVA pad aligned with artwork proof. Margin tolerances ±2mm. No lifting or air bubbles.	80 Pcs	PASS
4	Valve & Accessories	Valve opens/closes cleanly. Cap fits tightly. D-rings and handles secure under pull load.	80 Pcs	PASS
5	Full Kit Verification	Board, 3-piece paddle, dual-action pump, leash, fin, repair kit, and manual matched to BOM.	20 Kits	PASS
6	Packaging & Barcode	Outer carton shipping mark, barcode readability, manual language version, and SKU label match PO.	20 Master CTN	PASS

Defect Evaluation & Final Disposition

DEFECT DESCRIPTION	DEFECT CATEGORY	FOUND QTY	ALLOWED MAX	STATUS
Air leakage at valve base or rail seam	Critical	0	0	COMPLIANT
Misaligned EVA pad (>3mm) or severe glue smudge	Major	0	3	COMPLIANT
Minor surface dirt/dust cleanable by wipe	Minor	2	7	COMPLIANT

FINAL INSPECTION RESULT: PASSED / APPROVED FOR SHIPMENT

Note: Inspection results are bound to Lot PO-2026-XXXX. All batch records and air-tightness logs have been archived into QINGDAO VATRAD GROUP.,LTD. ISO Document Management System.

QC Inspector:Quality Director:Client Authorization:

Date:Date:Date: