VQM-001

Revision #: --

VENDOR QUALITY MANUAL

INITIAL APPROVAL

Prepared	Daniell Gitzler	18 Jun 25
Checked	Daniel Brezina	07 Jul 25
Approval QA	Daniell Gitzler	07 Jul 25

LOG OF REVISIONS

REVISION	DATE	DESCRIPTION	APPROVAL
--	DD MMM YY	Initial Release	

LIST OF EFFECTIVE PAGES

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All	--				

GLOSSARY OF TERMS

Aeronautical Product: Any aircraft, aircraft engine, aircraft propeller or aircraft appliance or part of those things, including computer system and software.

Airworthiness Requirement: A requirement which specifies the physical, functional or system characteristics of an aeronautical product as applicable to aircraft safety for flight and in conformity with its type design.

Analysis: A method of demonstrating compliance to the requirements by analytical procedures and/or reference to accepted methods.

CMM: coordinate measuring machine, is a measurement system designed for precise verification and documentation of manufactured parts and assemblies.

Compliance Matrix: A document which summarizes the mission and airworthiness requirements of an aeronautical product and provides cross a reference to the design standards

Compliance Program: A document which defines the methods and processes used to demonstrate compliance to the mission and airworthiness requirements of an aeronautical product.

Design Data: Technical drawings, sketches, processes or material specifications and reports which define an aircraft, product, system or installation in accordance with its mission and airworthiness requirements.

Drawing Review: a method of demonstrating compliance to mission and airworthiness requirements by means of evaluating the content of drawings.

Evaluation: a method of demonstrating compliance to mission and airworthiness requirements by assessment of substantiating data for their compliance content.

Inspection: a method of demonstrating compliance to mission and airworthiness requirements by examination of a design or design data to establish that there are no apparent unacceptable features.

Master Data Summary: a document which summarizes the design data for a system and its installation.

Design Requirement: A requirement which specifies the operational environment and performance criteria of an aeronautical product as applicable to its action or role.

Statement: a method of noting that the requirement listed is considered as information and by examination of the description of the change to the aircraft it has been concluded that there are no apparent compliance issues.

Test: A method of demonstrating compliance to mission and airworthiness requirements by a set procedure which is intended to validate a predefined or substantiated quality and/or quantities.

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1. INTRODUCTION

This Vendor Quality Manual (VQM) is part of the contract between the Vendor and Airdyne as described in the Purchase Order (PO). As part of the PO the Terms and Conditions can be reviewed at https://airdyne-aero.com/terms-and-conditions/ or requested from the Airdyne Materials representative.

1.1 RIGHT OF ACCESS

Vendor shall grant Airdyne access to Vendor's premises or manufacturing facilities. This includes the freedom to witness and audit all phases of fabrication, testing, storage or goods sold to Airdyne. Advance notice shall be provided to the Vendor (typically 48 hours minimum).

2. QUALITY SYSTEM REQUIREMENTS

The Vendor shall complete QA-401 Vendor Quality System Questionnaire or an equivalent, and provide any other requested documentation.

Per AS9100 Section 8.4.3, the Vendor shall place emphasis on the need to:

- implement a quality management system;
- use customer designated or approved external providers, including process sources;
- notify Airdyne of nonconforming processes, products, or services and obtain approval for their disposition;
- prevent the use of suspected unapproved, unapproved, and counterfeit parts;
- notify Airdyne of changes to processes, products, or services, including changes of their external providers or location of manufacture, and obtain approval;
- flow down to external providers applicable requirements, including Airdyne and end-customer requirements;
- Employ statistical techniques for determining product acceptance
- retain documented information, including retention periods and disposition requirements;
- ensure that persons performing tasks affecting product or process quality are properly trained and competence validated to the extent necessary to assure consistent performance;

Vendor shall notify the Airdyne Material Department and Quality Assurance Department in writing within 48 hours of any changes of status to its Quality Management System, relocation, or changes in top management including the Quality Management Representative.

Performance shall be reviewed periodically for demonstration of compliance to these requirements. When not meeting performance standards as determined by Airdyne, the Vendor may be subject to any of the following:
Initiation of a Vendor Non-Conformance (NCR) and /or an on-site audit at the Vendor's facility.

2.1 RISK MANAGEMENT

Risk Management consists of risk management planning, identifying risks, qualitative and quantitative assessment of their potential impact on the project, risk response planning and risk monitoring and control.

The vendor shall incorporate risk management into their quality management system.

2.1.1 Risk Management Processes

- Plan Risk Management - define how to conduct risk management activities for a project.
- Identify Risk - determine which risks may affect the project and document their characteristics.
- Perform Qualitative Risk Analysis - prioritize risks for further analysis or action by assessing and combining their probability of occurrence and impact.
- Perform Quantitative Risk Analysis - numerically analyze the effect of identified risks on overall project objectives.
- Plan Risk Responses - develop options and actions to enhance opportunities and to reduce threats to project objectives by implementing continuous improvement techniques..
- Monitor and Control Risks - implement risk response plans, tracking identified risks, monitoring residual risks, identifying new risks, and evaluating risk process effectiveness throughout the project.

3. CONFIGURATION MANAGEMENT

Vendor shall comply with specifications stated on the Purchase Order and with applicable engineering drawings, including industry, association, society, regulatory and United States Government specifications and standards. Any questions regarding requirements should be directed to the Airdyne Materials Department.

Vendor shall:

- Notify the Airdyne Materials Department if any engineering revision levels received conflict with the revision levels on the Purchase Order.

- Maintain control of documents via control procedure, where they are maintained and issued as the latest revision in effect at the time of the Purchase Order unless otherwise stated by the Purchase Order.
- maintain a change control management and verification system for documents and electronic media, including applicable government, association, society, industry and customer furnished configuration data.

4. SUBCONTRACTING

Vendor shall not enter a subcontract for the procurement of any goods, in their complete or substantially complete form, without prior written consent of the Airdyne Materials Department.

5. COUNTERFEIT PART PREVENTION

The Vendor shall have a counterfeit detection process:

- for all parts, like fasteners, nuts, washers, springs, O-rings, inserts, and pins that meets the intent of SAE standard AS6174

- for all electrical, electronic, electro- mechanical and electro-optical component parts that meets the intent of SAE standard AS5553

Any certification shall clearly identify the name and location of all supply chain intermediaries from the original manufacturer to the final source of the product delivered to Airdyne. Distributors shall, in addition to the above, include their company's certification for each part number shipped.

If evidence of supply chain traceability is not available, the Vendor must notify Airdyne immediately and get authorization to purchase this product.

Confirmed counterfeit parts will be segregated from conforming parts and controlled until rendered unusable by physical destruction.

Suspect or confirmed counterfeit parts may not be returned to the Vendor for refund or replacement except under controlled conditions which would preclude the resale or re-introduction into the supply chain. The Vendor shall be notified and authorization to scrap obtained before product is destroyed.

Confirmed counterfeit parts will be reported to the Government and applicable US Government investigative authorities.

6. TOOLS, DIES, AND PROVIDED MATERIAL

Airdyne furnished and/or owned property condition shall be identified, maintained and inspected regularly for suitability of use. Vendor shall notify Airdyne immediately if the property is lost, stolen, or unfit for use for any reason. Airdyne makes no warranties of any nature with respect to any property or data it may furnish to Vendor hereunder.

Property furnished by Airdyne shall be used solely in the performance of work ordered by Airdyne or the Government, if the Government has title or rights in the property.

Property shall be subject, at all times, to disposition as Airdyne may direct. Vendor shall maintain inventory control of all such tooling and property and to furnish inventories thereof when required by Airdyne.

Unless otherwise specified, Vendor shall be liable for any loss or destruction or damage to property furnished to Vendor by Airdyne. Vendor shall be responsible for returning property in a suitable for use condition as when received at a time specified in accordance with the provisions of the Purchase Order.

Vendor shall notify Airdyne prior to destruction of any furnished materials, or equipment.

6.1 RAW MATERIAL

The Vendor is required to verify the correct material including temper (where applicable), to prior to fabrication of a product. Evidence of verification shall be on the Vendor's Certificate of Conformance (CofC), work order, planning, or other inspection status documentation.

If Airdyne has provided the raw material for an order, no material substitution is allowed unless authorized in writing by Airdyne. The Vendor shall not return any furnished material without prior approval by Airdyne.

7. CRITICAL COMPONENTS

Parts designated as Critical, i.e. Fracture or Fatigue Critical, Durability Critical, or Maintenance Critical by the Purchase Order, Airdyne Engineering or specifications, require the submittal of the Vendor’s manufacturing plan 30 days prior to start of production.

Upon approval of the Vendor’s manufacturing plan, the Vendor shall control all processes as stated in the plan. No deviation from the approved plan is permitted without written approval from Airdyne.

Record retention requirements for Critical Components are the standard 10 year requirement. Vendor is to ensure that the retention period is applied in accordance with the Engineering and Quality requirements for the program and product.

8. KEY CHARACTERISTICS

When identified on the Engineering drawing, model, or documentation, all key characteristics will require a statistical process control plan. This statistical process control plan is subject to review and audit by Airdyne at any time during the conduct of the contractual work.

9. DIGITAL PRODUCT DEFINITION (DPD)

When Airdyne, or Airdyne's Customer, provides electronic engineering definition of the product, the Vendor shall have a documented procedure for:

- Verifying the integrity of the file transfer
- A system for storing and maintaining the file
- A system for the security (limited access) of a file
- A system for change verification and notification
- Full traceability of all derivative data back to the original Airdyne/Customer provided definition.

When models are provided by Airdyne, along with other configuration control documents (engineering drawings, specifications, condition of supply, etc.), the Vendor is to ensure that all documents have been properly reviewed prior to production. This includes the evaluation of all imbedded notes in the engineering model. Any conflict between these documents and files shall be brought to the attention of Airdyne, through the Airdyne Materials Department for resolution.

10. NONDESTRUCTIVE TESTING (NDT)

Vendor shall review the purchase order and associated drawings, notes and related documents to determine if NDT is required. Submittal to and approval of NDT general procedures and part-specific techniques by Airdyne is required prior to performing NDT. After approval, any changes to subject documents must be resubmitted to Airdyne for approval.

Vendors using outside sources for NDT shall ensure that the selected NDT sub-contractor has Airdyne approval.

11. CALIBRATION REQUIREMENTS

The Vendor shall control the calibration of all measuring and test equipment to measurement standards, traceable to the National Institute of Standards and

Technology (NIST). Where no such standards exist, the basis for calibration will be defined and documented.

Certificate or record of calibration performed will be maintained. Records will include the following at a minimum:

- Equipment Type
- Identification number/Control number ○ Manufacturer
- Calibration date
- Due date
- Interval
- Range of measurement
- Standards used/Instructions used ○ Acceptance criteria/Tolerance
- Test measurement results
- Record retention 10 years unless otherwise directed.

12. PART MARK

Part Marking shall be in accordance with Airdyne provided requirements, drawings, specifications or Purchase Order.

When a part mark requirement or direction is not provided by the drawings, specifications or Purchase Order, the part mark shall be applied in accordance with MIL-STD-130 or its equivalent.

13. FOREIGN OBJECT DAMAGE CONTROL

The Vendor will ensure that product delivered to Airdyne is controlled in a manner that will prevent FOD from being introduced into the final product.

14. INSPECTION

The Vendor shall perform 100% inspection of products being delivered and records kept. Sampling may only be performed when authorized, in writing by Airdyne Quality Assurance, through the Airdyne Materials Department.

If any goods that are found to be defective or otherwise not in conformance with the requirements of the Purchase Order, Airdyne may, in addition to its other rights and remedies, reject such goods and require their prompt correction or their replacements at the Vendor's expense, including shipping and packaging charges.

14.1 NON-CONFORMING MATERIAL

When a nonconforming product is discovered at the Vendor's facility, and it requires a technical review/disposition, the Vendor shall submit a Non-Conforming Report (NCR) to the Airdyne Materials Department.
When nonconforming product is reported to Airdyne, and it is determined to be the responsibility of the Vendor, immediate containment and evaluation of all such Product at the Vendor's facility shall take place. The Vendor will notify Airdyne of any additional product impacted.

Airdyne shall be provided with copies of the Vendor discrepant material information will be provided to the Airdyne as notification of the discovered discrepancy.

If requested, the Vendor shall provide a Root Cause and a Corrective Action statement, within the appropriate time frame, and return it to the Airdyne Materials Department.

Vendor disposition authority for non-conforming product is limited to Rework, Return-to-Vendor, and Scrap.

- A Non-conformance document shall be submitted to Airdyne, by the Vendor, for Airdyne/Customer furnished material; regardless of the Vendor's MRB status.
- If material is procured solely by the Vendor, they retain the authority to Scrap at their discretion.
- Rework is defined as a process performed entirely within the confines of the drawing and referenced specifications that will result in characteristic(s) that conforms completely to the drawings, specifications, and contract requirements.

The Vendor shall notify the Materials Department in writing immediately if the disposition actions taken have an effect on the ability to deliver product as specified or agreed upon.

14.2 FIRST ARTICLE INSPECTION

When required by Purchase Order, First Article Inspection (FAI) and any supporting reports shall be compliant with the latest revision of AS9102. The Airdyne Purchase Order will communicate the need for First Article reporting by the Vendor. All First Article Inspection reports shall be submitted via email to Airdyne Quality Assurance.

Delivery of the products cannot take place until approved by Airdyne Quality Assurance. This will be communicated via email.

Reports shall be traceable to the specific part and FAI, be retained and shall be given a naming convention that can be identified on the AS9102 form 3. A copy of the report shall accompany the FAI.

Any coordinate measuring machine (CMM) report that identifies the tolerance for each feature point and the amount of deviation from nominal must clearly indicate any out of tolerance conditions. Documents must be controlled and reference the model file name/drawing and revision level.

14.3 SOURCE INSPECTION

Airdyne retains the right to invoke source inspection of product, processes and goods at the Vendor or Vendor sub-contractor Vendor's facility. Source Inspection requirements may be a result of the Vendor's quality performance or other mandates, at Airdyne's discretion. When invoked:

- The requirement for Source Inspection will be noted on the Airdyne Purchase Order, or a notification to the Vendor will be provided in writing by Airdyne Quality Assurance.
- When Source Inspection is relative to a FAI, the complete FAI package will be presented to the Airdyne Representative at the time of Inspection. The Vendor will include a copy of the work order, with the submission of the FAIR to the Source Inspector.
- The Vendor is not permitted to initiate a 3rd Party Source Inspection without written authorization from Airdyne Quality Assurance.
- The Vendor shall provide adequate resources to the Airdyne representative requested, in the course of verifying conformance to requirements.
- The cost of such services may become the responsibility of the Vendor.

Upon completion of Source Inspection, the Airdyne Representative will provide a completed Source Inspection Checklist to the Vendor for inclusion with the shipping documents.

Airdyne's verification of goods, by source inspection, shall not be deemed to constitute acceptance of any goods which do not conform to the specifications. Source Inspection does not waive any of the Materials Department's rights or remedies arising by virtue of such defects or non-conformances being discovered at a later time.

Source Inspection may be waived or rescinded at the discretion of Airdyne Quality Assurance.

14.4 CERTIFICATE OF CONFORMANCE

The Vendor may use their Certificate of Conformance if it contains the following minimum requirements:

- Vendor's name and address
- Part number
- Purchase Order number and line item number
- Quantity
- The number used by the Vendor to provide traceability of their quality records (e.g., Serial Number, Lot Number, Control Number, Work Order/Traveler Number)
- A certification statement that meets the intent of the following: "(Vendor) certifies that these parts were purchased, and/or manufactured, and/or processed, and/or

assembled, and inspected and meets all applicable OEM, customer and Materials Department requirements."
- An authorized Quality Assurance signature and date.

15. PACKAGING AND DELIVERY DOCUMENTATION

When a packaging specification or direction is not provided by the engineering drawings, specifications or Purchase Order, the packaging shall be in accordance with:

- Commercial: ASTM-D3951, Standard Practice for Commercial Packaging
- Military: MIL-STD-2073-1D, Standard Practice for Military Packaging

Vendor shall provide a Packing Sheet for each separate shipment that includes as a minimum:

- Vendor's name and address
- Purchase Order number and line item number
- Part number and quantity
- Engineering drawings/models and revision levels, engineering drawing changes, as provided on the Purchase Order
- Vendor shall provide a Certificate of Conformance.
- Vendor shall include a copy of the Airdyne Source Inspection Checklist, if applicable, as provided by the Airdyne Representative
- Foreign Vendors shall additionally provide:
    - Custom's Declaration Letter
    - Declaration of Origin

16. RECORDS

Quality records, material, and process certifications that are created and/or retained by the Vendor must be complete, legible and identifiable to the corresponding product. These records shall be retained for a minimum period of 10 years or as specified by on the Purchase Order. These records will be made available upon request by Airdyne at no charge. Quality records, material and process certifications will be maintained in English, unless written authorization from Airdyne is provided. Airdyne may request shipment of the records, at no cost to Airdyne.

17. CUSTOMER & PROGRAM SPECIFIC REQUIREMENTS

In addition to the requirements noted in the Airdyne VQM, there are Customer and Program related requirements that apply based on the type of product being provided by the Vendor and the Materials Department's end item Customer. The Vendor is required to implement Airdyne and Program specific requirements per the PO.

18. REFERENCES

1. AS9102 First article Inspection (FAI) Requirements. [conisio://Airdyne_EPDM_Production/explore?projectid=137289&documentid=302676&objecttype=1 AS9102 First article Inspection (FAI) Requirements