



Supplier - Quality Requirements

Revision A: Revised 3.2 to reference AS9102, removed 3.3, revised 5.1.2.2.1 & 5.1.2.2.1.1.1 for clarity, added 5.2.2.1.1 to require first article requirements per AS9102, revise 5.2.5.1.1 to include Boeing D1-8007 Sampling Plan, added 5.2.8 to identify proprietary data protection, revised 5.2.6.1.5 to add “inspection”, revised 1.2 to add “supplier”, revised 5.2.1 to add applicability of the calibration requirement. R Crislip 01-23-2004

Revision B: Revised logo and Section 1.2 and 2.3 to incorporate Ball Glide Products within the scope of this document. R Crislip 05-07-2004

Revision C: Added 2.4. Revised Section 5.2.2.1 for FAIR requirements, Added Section 5.2.7 to add Shelf Life Requirements. R Crislip 07-15-2004

Revision D: Added 2.4.1, revised 5.2.2. R Crislip 04-21-2005.

Revision E: Revised the scope to remove reference to FAA-PMA product, added section 5.2.6.7, added section 5.2.6.9, and added section 5.3 D. Creelman 04-08-2008. Replaced with new K|V logo, replaced “KAPCO” with KAPCO|VALTEC throughout the document, revised 3.1, 4.2, 4.3, 5.1.2.1.1, 5.2.1.1, 5.1.2.2.1, 5.1.2.2.1.1.1, Added 5.1.2.1.5, 5.3 R Crislip 04-08-2008

Revision 5: Renumbered to numerical revision system.

1.0 PURPOSE AND SCOPE:

- 1.1 The purpose of this document is to establish the criteria to be used for supplier evaluations and to flow-down the minimum quality system requirements to our suppliers.
- 1.2 The scope of this document extends to all suppliers accepting KAPCO|VALTEC or KAPCO|Ball Glide Purchase Orders, with the exception of supplier proprietary part numbers and standard catalog items.

2.0 DEFINITIONS:

- 2.1 Quality Records: All records created to verify and substantiate product conformance. This will include planning documents, Purchase Orders, material and process certifications, testing, First-Article Inspection, in-process, final inspection, and other pertinent records to verify conformance to the established requirements.
- 2.2 AQL: Acceptable Quality Level
- 2.3 KAPCO|VALTEC: KAPCO|VALTEC (CT or CA Site), or KAPCO|Ball Glide.
- 2.4 Standard Catalog Hardware: A part or material that conforms to an established industry or national authority published specification, having all characteristics identified by text description, National/Military Standard Drawing, or catalog item.
 - 2.4.1 Boeing, Douglas, Lockheed standards are considered as industry standards.

3.0 REFERENCES:

- 3.1 AS9100 7.4.2
- 3.2 AS9102



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4.0 RESPONSIBILITY AND AUTHORITY:

- 4.1 The KAPCO|VALTEC Purchasing Manager is responsible to flow-down these requirements and to ensure supplier compliance to this work instruction, and monitor their performance.
- 4.2 KAPCO|VALTEC Product Quality Management is responsible to ensure all appropriate requirements are fulfilled, and provide feedback to Purchasing and the Supplier Quality Engineer as needed.
- 4.3 The KAPCO|VALTEC Supplier Quality Engineer is responsible to periodically review each supplier to ensure they continue to meet the Quality System Requirements.
- 4.4 The supplier is responsible to ensure all appropriate requirements are adequately fulfilled, in accordance with the Purchase Order (contract) requirements and this document.

5.0 REQUIREMENTS:

5.1 Quality System Requirements

- 5.1.1 The supplier shall maintain a documented Quality System.
- 5.1.2 The Quality System established by the supplier will be periodically reviewed by KAPCO|VALTEC via an on-site visit, the completion of KAPCO|VALTEC's Quality Systems Questionnaire (QC-200 and/or QC-200SS), and/or information provided by the supplier and its subsequent evaluation. Rather than stipulating a specific Quality System, KAPCO|VALTEC's approach is to review the actual system in place, and ensure the supplier is maintaining their specifically identified system.
 - 5.1.2.1 Acceptable Quality Systems:
 - 5.1.2.1.1 ISO 9001, ISO 9003, or ISO 9004 Compliant or Registered.
 - 5.1.2.1.2 QS9000, AS9000, or AS9100 Compliant or Registered.
 - 5.1.2.1.3 Other 2nd Party approved Quality System of the "Original Equipment Manufacturer (OEM)" for FAA Type Certificated Aircraft (Boeing, Lockheed, Northrop, Airbus, Honeywell, etc...). i.e. BQMS D6-82479 Appendix A or B or other.
 - 5.1.2.1.4 NADCAP Registration
 - 5.1.2.1.5 FAA Approved Fabrication Inspection System in accordance with Part 21 CFR 21.303 (h). (Vendor FAA-PMA), or other National Aviation Regulatory approval. (See Sec 5.3 for documentation requirements)



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5.1.2.2 Other Quality Systems:

5.1.2.2.1 Systems not meeting the above “Acceptable Quality Systems” may still be approved provided must meet the following “KAPCO|VALTEC Basic Quality System Requirements”.

5.1.2.2.1.1 A “Limited Approval” may be granted to a supplier for a specific part number based upon historical performance and/or the supplier maintains tooling, or has a specifically approved manufacturing and/or special process by the OEM.

5.1.2.2.1.1.1 When purchasing from a “Limited” supplier, a note (F20) will be created by the KAPCO|VALTEC buyer and linked to the Purchase Order to inform Outsourced Product Quality (OPG) to adhere to the limitation as listed in the Approved Supplier List

5.2 KAPCO|VALTEC’s Basic Quality System Requirements for Suppliers:

5.2.1 Calibration (Applicable if the supplier is using measuring tools and equipment to determine product conformance):

5.2.1.1 The Calibration System shall be in compliance with ISO 10012-1, and/or ANSI/ASQC Z540.

5.2.2 Inspection:

5.2.2.1 First-Article Inspection Records must be maintained by the supplier in accordance with AS9102 requirements, with the following exceptions:

5.2.2.1.1 Existing Supplier FAI, Honeywell FAI, or Boeing FAI (BFAI) on file will be acceptable, unless it is the first time manufacture of a part by the supplier and/or a change of configuration has occurred. In such cases, either:

5.2.2.1.1.1 A new FAI will be required in accordance with AS9102 guidelines and requirements, or;

5.2.2.1.1.2 A Delta FAI must be conducted for any changes to parts or processes in accordance with AS9102 guidelines and standards, and attached to the original FAI.

5.2.2.1.2 For Boeing proprietary product, if the supplier has a current Boeing-verified FAI, KAPCO|VALTEC will accept the verified FAI in lieu of the supplier’s FAI, provided that it was conducted to the latest engineering configuration and there was

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- no break in production at the supplier's facility which has exceeded 24 months for Boeing product.
- 5.2.2.1.3 For Boeing proprietary product, the FAI may be waived if the product has been 100% inspected to the drawing requirements by the supplier; and records are properly maintained to record such inspection.
 - 5.2.2.1.4 For Honeywell proprietary product, the initial shipment of a specific product detail (line item of the Purchase Order) shall include a complete First-Article Inspection Report (FAIR).
 - 5.2.2.1.5 For Honeywell proprietary product only, a new FAIR must be submitted if 36 months have elapsed since the previous FAIR was completed.
- 5.2.2.2 Forms other than the AS9102 may be used; however they must contain all "Required" and "Conditionally Required" information and have the same field reference numbers.
- 5.2.2.3 Exemptions to the FAIR requirement:
- 5.2.2.3.1 Procured Standard Catalog Hardware.
 - 5.2.2.3.2 Bar or sheet stock (raw material)
 - 5.2.2.3.3 Non-Functional Hardware and supplies (protective covers, shipping hardware/materials, tooling, etc.)
 - 5.2.2.3.4 For Honeywell product, FAIR exemptions apply per SPOC 124.
- 5.2.2.4 Where subsequent monitoring or measurements cannot be obtained due to processing and/or assembly, the supplier shall maintain inspection records to verify characteristic conformity. These records shall be made available upon request. (Example: Before plating dimensions, bore diameter prior to a bushing installation, etc. etc...)
- 5.2.2.5 The supplier shall maintain records to substantiate product conformance.
- 5.2.3 Non-Conforming Product:
- 5.2.3.1 The supplier shall ensure that nonconforming product is identified and controlled to prevent its unintended use or delivery.
 - 5.2.3.2 If non-conforming product is identified after delivery to KAPCO|VALTEC, the supplier must notify KAPCO|VALTEC immediately and disclose the nonconformance. At a minimum, a description of the nonconformance, the part number, PO number, and the date shipped shall be provided to KAPCO|VALTEC.

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5.2.3.3 If non-conforming product is identified prior to delivery, the KAPCO|VALTEC buyer must be immediately notified and written authorization obtained, prior to delivering to KAPCO|VALTEC.

5.2.4 Corrective & Preventative Action:

5.2.4.1 A Supplier Corrective Action Notice (SCAN) may be sent for system and/or product non-conformities that are deemed as “Supplier Responsibility”.

5.2.4.1.1 If specified, an issued SCAN must be completed and returned within the stipulated time frame.

5.2.4.1.1.1 Extensions may be granted, upon formal request and justification.

5.2.4.1.1.2 Failure to respond may result with the removal of the supplier as an approved source and preclude bidding opportunities.

5.2.4.1.2 If responsibility is contested, notify KAPCO|VALTEC Product Quality for review and reassessment.

5.2.5 Statistical Sampling:

5.2.5.1 General Requirements:

5.2.5.1.1 Statistical Sampling shall be in accordance with ANSI/ASQC-Z1.4, Boeing D1-8007, or other statistically sound sampling plan. (Mil-STD-105 has been cancelled and superseded by ANSI/ASQC Z1.4)

5.2.5.1.1.1 If non-conforming product is discovered during the sampling inspection, the entire lot must be sorted to remove all discrepant material. Using this method, this plan becomes equivalent to a C=0 sampling plan.

5.2.5.1.2 If statistical sampling is not utilized, 100% inspection is required.

5.2.5.2 Special Requirements for Honeywell Proprietary Part Numbers produced under contract and/or licensing agreements with Honeywell.

5.2.5.2.1 Statistical Sampling shall be in accordance with ANSI/ASQC-Z1.4 Level II Single Sampling Inspection Plan

5.2.5.2.1.1 Critical (H): 100% Inspection

5.2.5.2.1.2 Major (H): 1.0 AQL

5.2.5.2.1.3 Minor (H): 4.0 AQL

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5.2.5.2.2 If statistical sampling is not utilized, 100% inspection is required.

5.2.5.2.3 Honeywell Proprietary Classifications Definitions:

5.2.5.2.3.1 There are three classifications used for Honeywell Proprietary Product. These classifications are Critical (H), Major (H), and Minor (H). Outsource Product Quality Management is responsible to classify characteristics and determine an appropriate AQL. The Customer Contract may also stipulate an AQL requirement. The definition for these Honeywell classifications is as follows:

5.2.5.2.3.1.1 Critical (H): A characteristic that judgment and experience indicate, is likely to result in hazardous or unsafe conditions for individuals using, maintaining,, or other personnel/equipment depending on the product. All test reports, raw materials, testing requirements, and processing certifications are considered critical characteristics. Specific characteristics identified on the drawing as “SC” (Structural Critical) or “HC” (Hardness Critical) ” are also classified as “Critical”.

5.2.5.2.3.1.2 Major (H): A characteristic that is likely to result in failure, or to reduce or limit the usability of the unit, for its intended purpose. All characteristics requiring a total tolerance band of .010 or less are considered a major characteristic (Re: +/- .005 or less).

5.2.5.2.3.1.3 Minor (H): A characteristic that is not likely to result in failure, or to reduce or limit the usability of the unit, for its intended purpose. All characteristics requiring a total tolerance band greater than of .010 are considered a minor characteristic (Re: greater than +/- .005).

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- (H) Represents driven requirements due to the Honeywell license and/or contact.

5.2.6 Quality Requirements:

- 5.2.6.1 As required, additional quality requirements may be identified on the Purchase Order. These requirements may include:
 - 5.2.6.1.1 In-Process Source Inspection, staged during the production run.
 - 5.2.6.1.2 Witness of testing and/or inspection verification.
 - 5.2.6.1.3 On-Site Source Inspection, prior to shipment from the supplier's facility.
 - 5.2.6.1.4 The requirements for test specimens (e.g., production method, number, storage conditions) for design approval, inspection, investigation, or auditing.
 - 5.2.6.1.5 The requirements for design, test, examination, inspection and related instructions for acceptance by KAPCO|VALTEC.
 - 5.2.6.1.6 Any requirements for the approval of product, procedures, processes, and equipment.
 - 5.2.6.1.7 The requirements for qualification of personnel.
- 5.2.6.2 The supplier shall flow-down to sub-tier suppliers the applicable requirements in the purchasing documents, including key characteristics where required.
- 5.2.6.3 The supplier shall notify KAPCO|VALTEC of changes in product and/or process definition and, where required, obtain KAPCO|VALTEC approval.
- 5.2.6.4 A copy of all material, process, inspection, or test certifications identified on the KAPCO|VALTEC Purchase Order must be provided with each shipment.
- 5.2.6.5 If stipulated, material and/or processes must be procured or performed by the approved sources as required.
- 5.2.6.6 All certifications must include the appropriate configuration/revision levels as stipulated on the Purchase Order.
- 5.2.6.7 All certifications for elastomeric products must include cure dates for all product supplied.
- 5.2.6.8 KAPCO|VALTEC's suppliers and their facilities are hereby subject to FAA surveillance and investigation. A "Right of Entry" clause is in effect for all contracts. This provision shall allow for KAPCO|VALTEC, its customers, and regulatory agencies to determine and verify the quality of work, records and material at any place, including the plant of the sub-contractor.



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5.2.6.9 Suppliers are required to provide written notification to KAPCO|VALTEC should the supplier relocate it's manufacturing operations.

5.2.7 Shelf Life Requirements:

5.2.7.1 All shelf life sensitive materials must have a minimum of 80% remaining at the time of receipt at KAPCO|VALTEC.

5.2.8 Records:

5.2.8.1 Quality Records shall be retained by the supplier for 7 years from the date of invoice.

5.2.8.2 As needed, Quality Records shall be made available to KAPCO|VALTEC upon request.

5.2.9 Proprietary Data Protection:

5.2.9.1 Prior to KAPCO|VALTEC's release of proprietary information to a supplier, all suppliers must review, sign, and return Form QC-603 (Proprietary Agreement Acknowledgement)

5.3 Vendor FAA/PMA Product

5.3.1 The supplier may provide product under their National Aviation Regulatory Authority or FAA-PMA authority as applicable, as stipulated per the KAPCO|VALTEC Purchase Order. In such cases, the following documentation shall be provided with the shipment:

5.3.1.1 A completed "Airworthiness Certificate" as authorized by the National Aviation Authority (FAA Form 8130-3, Form 1).

5.3.1.2 The "Manufacturer's Certificate of Conformance".