

**Aerospace & Defense****Thermal Management Systems - ROTRON Business Unit**

55 Hasbrouck Lane, Woodstock, NY 12498 U.S.A.
Telephone: 845-679-2401 Fax: 845-679-1870

SUPPLIER QUALITY REQUIREMENTSGeneral Quality Requirements (GQR)GQR01: Quality Management System Requirements

Items supplied on this order shall be designed and/or produced and serviced under a quality management system that is;

- a) Certified or compliant to ISO9001/AS9100.
- b) or approved by Ametek Rotron (AR)
- c) For distributors, AS9120 may be substituted ISO9001/AS9100.

GQR02: AR or Nadcap Special Process Approval

Items supplied on this order shall be processed only by AR or Nadcap Accredited Sources for special processes. Nadcap-approved special processors are listed in the eAuditnet Online QML at: www.eauditnet.com/eauditnet/ean/user/login.htm

GQR03: Certificate of Compliance

A legible "Certificate of Conformance" (C of C) statement shall be provided with each shipment submitted to. The C of C shall be in the supplier's format and may either be a separate document or included within the packing slip. The C of C statement shall state that the items were produced in conformance with requirements as specified in the purchase order. As a minimum, the C of C shall note:

- a) the manufacturer or distributor's name and address;
- b) the AR purchase order number; c) the part number(s) and revision(s) when applicable;
- d) traceability information including serial numbers, lot codes, or date codes as appropriate; and
- e) name or signature of the supplier's authorized representative.

GQR04: Material Review Authority

Material Review Authority for Use As Is and Repair dispositions is not granted to the supplier without specific written approval from the AR's authorized quality assurance and engineering representatives

GQR05: Nonconforming Material Waiver/Deviation

- a) The supplier shall not ship non-conforming product prior to receiving a signed waiver/deviation approval from AR's engineering and quality representatives. The supplier shall request the waiver/deviation form from AR's purchasing representative.
- b) Post shipping discovery of any quality escapes or latent defects must be reported, in writing, to the AR purchasing representative. This requirement also includes previously unknown quality escapes or latent defects that affect material already submitted to AR. A written notice to AR purchasing representative is required within 24 hours of discovery.

GQR07: Change Notification

Supplier shall not make any changes to the processes or materials specified under the purchase order. Supplier shall notify AR in writing prior to any proposed changes, parts, materials, fabrication methods, or processes, that may affect function, interchangeability or reliability of hardware delivered to AR; or, of any changes to facility location, ownership or quality management following a quality survey /audit by AR.



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GQR06: AS9102 First Article Inspection Report (FAIR)

The supplier shall submit a FAIR consisting of complete dimensional data, special processes, material certifications (must include chemical and physical), functional test results, a ballooned drawing and 100% acceptance to specifications per purchase order. The FAIR shall be conducted and documented in accordance with AS9102.

GQR08: Special Process Certifications

The supplier shall submit a copy of Special Processes Certifications for each lot processed with serial numbers, as applicable, processes performed, referenced specification(s) with revision level(s). The certification name or signature of an authorized representative of the supplier's quality management. Special Processes are defined as Anodize (Chromic and Sulphuric), Chem Film, Chromate, Heat treating, Nickel plating, Paint / Powder Coat, Passivation, Welding, Brazing, and other platings.

GQR09: Life Limited Material (Shelf Life)

The supplier shall not submit product containing shelf life material(s) (i.e age limited) with less than 75% of the useful life remaining without written approval in the form of an AR approved Supplier Deviation, available from AR purchasing representative. The supplier shall label each individual container of shelf life materials with:

- a) the supplier lot number;
- b) the date of manufacture and/or cure date;
- c) the date of expiration; and
- d) storage conditions (if applicable).

GQR10: Raw Material Test Reports or Certifications

Supplier shall provide a copy of physical and/or chemical test reports and mill certification for each lot, batch or heat, as applicable. The report must show that material delivered is acceptable and shall be identifiable to the material being delivered. The heat number and material manufacturer must appear on the certification. All metal alloys shall require traceability to the original heat number and shall comply with the current material specification revision in effect when melted. The heat number and material manufacturer must appear on the certification.

GQR11: Refurbished and Reused Items

Supplier shall not provide refurbished or re-used parts, components, hardware, or materials.

GQR12: Preservation, Packaging and Identification

The supplier shall ensure that all items shipped are adequately packaged to prevent damage, contamination or deterioration and use best commercial shipping practices. Suppliers re-using AR provided packaging material are responsible to supplement this material, if required, to ensure compliance. Material shipped to AR shall, as a minimum, be identified with the AR Part Number and Purchase Order Number on the outside of the shipping container. Additional marking and/or identification shall be as required by specification, drawing or Purchase Order.

GQR13: Counterfeit Parts & Materials

Supplier shall have a counterfeit parts avoidance, detection, mitigation, and disposition program meeting the requirements of Aerospace Standard AS5553. Supplier shall only deliver authentic material traceable OEM/OCM, or authorized distributors. Supplier shall make available to AR documentation that authenticates and provides traceability of the parts to the applicable OEM or OCM.



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GQR14: Foreign Object Detection/Damage (FOD)

All materials, parts, and assemblies must be protected from the intrusion of foreign object debris that could potentially cause damage. As appropriate, the supplier shall develop and implement a Foreign Object Damage/Foreign Object Debris Prevention Program guided by National Aerospace Standard 412.

GQR15: Right of Entry

Representatives of AR, its customers, Government, and/or regulatory agencies reserve the right to visit the supplier and its sub-contractors with the intent of performing surveillance activities including inspections, surveys, audits, resolution of product quality issues, etc.

GQR16: Record Retention

The supplier shall maintain Records of Inspection and Test for a minimum of ten years from the end of the contract date unless otherwise specified.

GQR17: Mercury Free

The supplier acknowledges its products or processes DO NOT contain intentionally added mercury (Hg) or mercury compounds with more than 250 ppm in the manufacture of Ametek Rotron products. Suppliers unable to conform to this requirement shall inform their Ametek Rotron Buyer prior to acceptance to a Purchase Order.

Specific Quality Requirements (SQR)

The following are commodity specific. Suppliers providing these commodities shall meet the following SQR's.

SQR01: Casting – ENG-STD3.18, ESM 3085

SQR02: Sheet Metal Box – ESM 2149, ESM 2499

SQR03: Choke and Toroid – ESM 3120

SQR04: Dip Braze – ESM 3352

SQR05: Printed Circuit Board Assembly – ENG-STD-7.0

SQR06: Printed Circuit Board – ENG-STD 7.1

SQR07: Metal Processing (applies to suppliers of metal components) – ENG-STD-1, ENG-STD-1.1, ESM 3333

Part Quality Requirements (PQR)

Quality Requirements that are part number or drawing specific will be identified separately on the Purchase order. They will usually be noted as an "ICS", Inspection Criteria Sheet.