



## **Quality System Requirements for Suppliers and Sub-Contractors**

Version 10

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
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## 1 Scope

This procedure details the minimum Quality Requirements that Suppliers and Sub-Contractors to Penny & Giles Controls must maintain, should they wish to supply parts which may be fitted into Penny & Giles Controls deliverable products.

## 2 Definitions

- 2.1 Suppliers are providers of products and services to Penny & Giles Controls.
- 2.2 Sub-Contractors are providers of products or services in accordance with Penny & Giles Controls' documentation.
- 2.3 Initial Sample Inspection Report (ISIR). Evidence from the supplier that engineering design and specification requirements are fully understood, verified and documented for first production part. All specified requirements must be confirmed as compliant, within tolerances where appropriate and evidence provided to support this.
- 2.4 Foreign Objects are defined as items not highlighted on drawings e.g.: burrs and debris left from the manufacturing process. Products supplied to Penny & Giles Controls shall not contain any foreign objects, the requirements of AS9146 shall be applied to prevent foreign object contamination.
- 2.5 Essential Items are defined as, those parts, features or characteristics having significant affect on the product realisation and use of the product; including safety, performance, form, fit, function, manufacturability, service life etc; that require particular attention to assure they are adequately managed. Examples of essential items include critical safety items, fracture critical items, mission critical items etc.
- Key Characteristics  are features of a material, process, or part whose variation has a significant influence on product fit, performance, service life, or manufacturability and identified accordingly, and is an example of an Essential Item
- 2.6 Essential Requirements are defined as, those requirements identified by the customer or by the organisation as having significant effect on the safe or proper use of the product.
- 2.7 Risk is defined as, an undesirable situation or circumstance that has both a likelihood of occurring and a potentially negative consequence.
- 2.8 Some parts require specific controls which are indicted by a prefix within the Part Description. NB. This is within the Part Description and not the Part Number.

S	Source Controlled FAI Part
I	Industrial item
P	PPAP Controlled item

### **3 General**

- 3.1 This document defines the minimum Quality System requirements and ethical standards to be met by sub-contractors and suppliers.
- 3.2 The Penny & Giles Controls' code of conduct for suppliers can be found here: <https://www.curtisswright.com/investors/corporate-governance/Code-of-Conduct--Suppliers-and-Customers/>
- 3.3 Penny & Giles Controls' aim is to procure items and services from sources where Quality is assured.
- 3.4 Suppliers and sub-contractors with Third Party Certification of their QMS, from an internationally recognised Certification Body, will be preferred.
- 3.5 Penny & Giles Controls may carry out assessments of all approved suppliers and sub-contractors with optional physical audits as deemed appropriate.
- 3.6 Penny & Giles Controls shall be allowed reasonable access to a supplier or sub-contractor's premises.
- 3.7 Any significant changes to the management structure or company shall be notified to Penny & Giles Controls as soon as possible but within one month in any circumstance.

### **4 Penny & Giles Controls Code of Conduct for Suppliers**

- 4.1 Conducting business in accordance with all applicable laws and regulations

Penny & Giles Controls suppliers and sub-contractors must comply with all national and other applicable laws and regulations relating to the respective country of operation. This includes ensuring that business transactions with Penny & Giles Controls are fully reported and ensuring their employees are aware and properly trained.
- 4.2 Health, Safety and Environmental management

Penny & Giles Controls expect its suppliers and sub-contractors to make proper provision for the health, safety and welfare of visitors, contractors, customers and its own employees.

Suppliers and subcontractors are encouraged to implement a health and safety management system for the welfare of its people and those in the community who may be affected by their activities.

Penny & Giles Controls suppliers and sub-contractors should appreciate the impact their business has on the environment and adopt appropriate practises and procedures to minimise these impacts.

Business activities shall be conducted in accordance with all relevant Health, Safety and Environmental laws and regulations of the applicable country.
- 4.3 Conflict of interest

Employees within the supply base must deal with Penny & Giles Controls in a manner that avoids conflict between personal interests and those of the employer and Penny & Giles Controls. This requirement applies equally to business relationships and personal activities.

#### 4.4 Protect proprietary information

Any information received through business dealings with Penny & Giles Controls must be kept confidential and never used for personal or business gain. This includes both commercial and technical information. Information may not be disclosed to other parties unless agreed in writing with Penny & Giles Controls.

#### 4.5 Gifts and hospitality

Suppliers to Penny & Giles Controls should not offer gifts and favours to Penny & Giles Controls' employees that may be seen as an attempt to influence business decisions.

#### 4.6 Sub-contractors of Penny & Giles Controls will not employ forced labour and must follow the code of conduct: The Penny & Giles Controls' code of conduct for suppliers can be found here: <https://www.curtisswright.com/investors/corporate-governance/Code-of-Conduct--Suppliers-and-Customers/>

## **5 Quality Assurance**

#### 5.1 Quality Management System (QMS) Requirements

#### 5.2 All companies shall have a demonstrable Quality Assurance system, or be able to show that actions have been put in place to achieve such requirements.

The system should be based around the QMS defined in ISO 9001:2015 as applicable to the product or service provided and this document.

The company shall appoint a person with sufficient authority to make the final decisions on all Quality related matters.

## **6 Contract Review**

#### 6.1 The supplier/sub-contractor shall ensure that all Penny & Giles Controls purchase orders are subjected to review upon receipt and that all of the requirements and conditions of the purchase order, including the requirements of this document are flowed out to all relevant departments of the company and to all lower level suppliers of the sub-contractors.

#### 6.2 All Purchase Orders and business with Penny & Giles Controls is conducted in line with our terms and conditions which can be found here: <http://www.pennyandgiles.com/terms.php>

#### 6.3 The supplier will have systems and procedures in place for the assessment, control and mitigation of "Risks" to the achievement of all of their customers / Penny & Giles Controls' requirements.

## **7 Training**

#### 7.1 The supplier shall maintain training records for all employees and identify any on-going training requirements.

#### 7.2 The supplier shall only use suitably trained personnel for the manufacture, test, inspection and packaging of Penny & Giles Controls' products

## **8 Documentation Control**

- 8.1 The supplier shall operate an effective documentation control system to ensure that the correct issue of controlling drawings and specifications are used.

## **9 Configuration Control**

- 9.1 For all parts supplied to Penny & Giles Controls, with the exception of proprietary parts, no changes shall be made which have any effect on Form, Fit, Function, Safety, Life or Interchangeability of the part. This includes changes to Materials, Methods or Manufacturer. Any such changes being requested by the supplier must be approved by Penny & Giles Controls prior to the delivery of any products.
- 9.2 Specifically, for "S" or "P" prefixed parts, as defined by section 2.8, these parts must be accompanied by additional material and measurement data prior to submission to Penny & Giles Controls. Details of submission requirements are to be agreed prior to any parts being submitted.

## **10 Quality Records**

- 10.1 Quality records associated with manufacturing and all aspects of Traceability shall be maintained for a period not less than 3 years.
- 10.2 Records shall be stored in a manner that makes them readily available at the request of Penny & Giles Controls or Regulatory Bodies.
- Archived records must be stored in a manner to prevent damage or loss.
- 10.3 Penny & Giles Controls must be notified prior to disposition of any Quality Records.

## **11 Material Control**

- 11.1 Where suppliers and sub-contractors use other suppliers and sub-contractors in fulfilment of Penny & Giles Controls orders, then purchase orders on these second tier suppliers and sub-contractors must flow down the applicable Penny & Giles Controls purchase order requirements.
- 11.2 Suppliers and sub-contractors shall have a process for the approval, and ongoing evaluation, of their own sub-tier suppliers and sub-contractors and the status of such suppliers shall be communicated to relevant personnel.
- 11.3 Sub-tier Vendors may be subject to Quality Audit by the Supplier/Sub-Contractors to ensure compliance with Penny & Giles Controls requirements.
- 11.4 All raw materials must be obtained with appropriate material certification to allow traceability back to source. The information detailed on this certification is to be verified against the definitive standard.
- 11.5 Suppliers to Penny & Giles Controls should maintain vendor audit records for all of their suppliers.

- 11.6 For new or un-approved and problematic sub-tier vendors the supplier will have systems in place to demonstrate mitigation of risk in the use of these vendors.
- 11.7 All materials and components supplied to Penny & Giles Controls must comply to EU RoHS directive 2011/65/EU, including subsequent amendments (significantly 2015/863). The supplier must notify Penny & Giles Controls of any exclusions or exemptions, including expiration dates, to these directives before or during supply.
- 11.8 All materials and components supplied to Penny & Giles Controls must comply to EU REACH directive EC 1907/2006, including subsequent amendments. The supplier must notify Penny & Giles Controls of any exclusions or exemptions, including expiration dates, to these directives before or during supply. Any non-conforming materials that contain a Substance of Very High Concern (SVCH), as identified on the European Chemical Agency (ECHA) website, must be detailed to Penny & Giles at the point of quotation.
- 11.9 Chemicals, raw materials and finished goods supplied to Penny & Giles Controls which have a manufacturer's shelf life or expiry date shall have the date of expiry clearly identified on the product and also on the associated delivery documentation. Goods supplied to Penny & Giles Controls shall have no less than 80% of its stated life remaining. For example; a product with 365 days shelf life shall have no less than 292 days remaining at the time of delivery to Penny & Giles Controls.

## **12 Handling, Storage and Preservation**

- 12.1 The Supplier shall operate a stock rotation system; all stock issued on a "First In-First Out" basis.
- 12.2 On receipt of parts from a vendor, the supplier should have a receiving goods procedure. All parts should be checked in accordance with this procedure prior to parts being confirmed as acceptable for use.
- 12.3 All Penny & Giles Controls free issue material must be clearly identified and segregated.
- 12.4 Penny & Giles Controls shall instruct the supplier on the use of any free issue material.
- 12.5 The supplier or sub-contractor shall include within any planning documentation, provision for the prevention, detection and removal of any foreign objects as defined in section 2.4.
- 12.6 A process for the identification and disposition of perishable items with shelf life limitations shall be in place. Products with a defined shelf life shall only be submitted to Penny & Giles Controls in accordance with section 11.9.
- 12.7 The supplier will agree to conduct and/or allow Penny & Giles Controls' personnel on site for stock taking purposes as necessary but not less than annually.
- 12.8 Suppliers and sub contractors of components, which are at risk of damage from Electrostatic Discharge (ESD), must have a system in place such that they are suitably identified, handled stored in a manner which will protect them from electrostatic damage. The system should be formally documented and approved to a recognised code of practice e.g. BS IEC 61340-5-1(or equivalent).
- 12.9 All deliveries of components which are at risk of damage due to electrostatic discharge must be suitable packaged and identified.



**13 Parts subject to Production Part Approval Process (PPAP)**

- 13.1 Items subject to PPAP control will be identified with a “P” prefixing the item’s description e.g. P-SHAFT MAIN. No changes to PPAP controlled parts shall be made without the prior, written consent of Penny & Giles Controls.
- 13.2 As an example; changes which must be agreed by Penny & Giles Controls include:
- Relocation to another manufacturing site
  - Use of alternative methods of manufacture e.g. changes from milling to turning
  - Use of new equipment, tools and fixtures
  - Modifications and repairs to tools and equipment
  - Use of alternative lower tier suppliers.
  - The PPAP information provided can be limited to the affected parameters
- 13.3 Where changes are proposed and agreed, in writing with Penny & Giles Controls documentation requirements shall be agreed with Penny & Giles Controls prior to any product deliveries.


**14 Initial Sample Inspection Reports (ISIR)**

- 14.1 When accepting a purchase order for a bespoke part, made to a Penny & Giles Controls drawing or specification, initial samples of the part(s) if not already provided and approved shall be submitted for approval by Penny & Giles Controls. The number of samples to be submitted shall be agreed with Penny & Giles Controls and is in addition to the purchase order quantity. The samples shall be submitted along with documentation; to include but not limited to: ISIR/Measurement reports (confirming measurement method and equipment), SPC data where applicable and manufacturer’s material certification supporting the parts’ conformance to specification.
- 14.2 Parts are not considered approved for supply without appropriate approval documentation from Penny & Giles Controls being provided and retained by the supplier.
- 14.3 Suppliers and Sub Contractors shall not make changes to supplied products without the prior agreement, in writing of Penny & Giles Controls. If changes are required, for example due to availability of materials or repair of tooling then the supplier or sub-contractor must contact Penny & Giles Controls and obtain written permission for any proposed changes. Initial samples of the part(s) must be submitted to Penny & Giles Controls for approval. The number of samples to be submitted shall be agreed with Penny & Giles Controls and is in addition to the purchase order quantity. The samples shall be submitted along with documentation; to include but not limited to: ISIR/Measurement reports (confirming measurement method and equipment), SPC data where applicable and manufacturer’s material certification supporting the parts’ conformance to specification.
- 14.4 The requirement for ISIR shall also apply in the case of Penny & Giles Controls initiated changes such as drawing or specification changes. Suppliers are required to consider changes to parts as part of their contract review process, see section 6 and

## 15 Suppliers, Manufacturing Controls and Traceability

- 15.1 Manufacturing, assembly and inspection/test records shall be generated (if applicable) to allow the configuration history to be known at any point in time particularly at the point of release.
- 15.2 Where the supplier utilises jigs, fixtures and tooling for the manufacture, test or inspection of Penny & Giles Controls items a register of these tools is to be maintained, ensuring correct use and that they are maintained and calibrated. If these tools are the property of Penny & Giles Controls, the register to ensure that these tools are maintained and calibrated in accordance with the requirements set down by Penny & Giles Controls.
- 15.3 Manufacturing Controls / Traceability will allow for the following:
- Identification to be maintained throughout the products life.
  - Batch Traceability, back to the parent raw material, and forward to delivery to Penny & Giles Controls of the product.
  - The identity of Sub-assemblies shall be traceable, to and from, its parent assembly.
  - Parts shall only be procured from Quality Assured sources where Traceability is maintained. Original manufacturer certification shall be provided when requested.
  - To reduce the risk of counterfeit parts being supplied the requirements of JESD243 shall be adhered to.
  - Traceability is maintained if sub-tier vendors / outsourced processes are used.

## 16 Inspection Control and Calibration

- 16.1 Where a Key characteristic  (Essential Item and Requirement) is identified on the controlling document, it shall either be subjected to 100% inspection or statistical process control (SPC) by the supplier. Each measurement taken shall be recorded and submitted for each manufacturing batch, unless otherwise agreed by Penny & Giles Controls' Quality department.
- 16.2 Where specified on the Penny & Giles Controls' drawing, suppliers are to use the measurement equipment defined. Deviation from this must be agreed with Penny & Giles Controls prior to supply.
- 16.3 All Test and Measurement equipment used for verification of parts must be encompassed within the suppliers / sub-contractors Calibration system. The system and records for internally calibrated items must demonstrate that the calibration is traceable back to National Standards.
- 16.4 Penny & Giles Controls operate a Concession free policy for goods and services and shall be notified immediately of any instances that come to light where non-conforming product may have been inadvertently supplied without notification.

## 17 Non- Conforming Items

- 17.1 Within 3 working days of notification of non-conforming material, the supplier /subcontractor shall take those steps necessary to determine if other batches or related parts or processes already delivered may have been affected and advise Penny & Giles Controls accordingly.

- 17.2 The Supplier or Sub-Contractor shall supply a written response to any Reject, advising Penny & Giles Controls of containment actions within 5 working days from receipt of reject note with closure of the reject, within 20 working days of the reject note being received. The response should be completed on the Penny & Giles Controls Reject Note defining: -
- Remedial action on the product
  - Root cause
  - Corrective and preventative measures stating date of implementation, supplying evidence of these measures i.e. training, procedure changes, WI's, ITP's Quality Alerts, etc.
  - Other parts affected
- 17.3 The supplier shall have a system for identifying, controlling and disposing of all non-conforming product/material. Approval from Penny & Giles Controls must be sort, prior to any disposal.

## **18 Despatch**

- 18.1 Any special handling instructions shall be highlighted on the Penny & Giles Controls drawing or purchase order
- 18.2 Should no special requirements be called up, goods should be packed in such a way as to avoid damage during transit.
- 18.3 All deliveries must be accompanied by the appropriate paperwork as stipulated on the Penny & Giles Controls purchase order (for example: material certificate, surface finish certificate, etc.). All documentation must quote the Penny & Giles Controls purchase order, part number and issue.
- 18.4 A recognised vendor representative with the appropriate authority must sign Certificates of Conformity.

## **19 Design Control**

- 19.1 Where the supplier has been requested to develop a specific component for Penny & Giles Controls, they must ensure that all product development records are maintained. Records shall not be disposed of other than on the written authority of Penny & Giles Controls.
- 19.2 Any request for change to the defining documents/drawings must be supported by sufficient evidence as appropriate, such as Capability studies, to support the proposal.

## 20 Change Record

Iss N°	Section(s) Changed	Reason & Details of Change	Change Originated by:	Date
01	All	New Document	A. Harris	Jan 02
02	4.2.17	Added ESD handling/packing requirements	D. Alexander	Jan 02
03	2 4.2.10	KC dimensions identification marks. Paragraph numbers altered to clarify additional requirements for aerospace suppliers.	D. Alexander	Apr 02
04	4.3.8	Clarification of record retention periods	A. Harris	Mar 03
05	All	Review of complete procedure	S. Donaldson D. Alexander	May 03
06	All	Review of complete procedure	A. Harris	May 05
07	All	Review of complete procedure: Amendments to sections: 2.5, 9.1, 10.2, 10.4, 11.4, 13, 15.2, 16.1, 17.2, 17.3, 18.1 & 19.4 Additional sections at: 2.8, 2.9, 2.10, 2.11, 6.3, 7.2, 11.5, 11.6, 13.8 & 14.3	A. Harris N. Blake	Jul 09
08	6.2,10.4,1 1.516.1	6.2 Ref to delegated Verification Authority added 10.4 Need to specifically box and label records removed 11.5 Requirement to send material away removed (no longer required under ISO 9001 :2008 or AS91000 rev C 16.1 Clarification of the need to record each measurement on KC dimensions added	A. Harris N. Blake	Jun 2010
09	Para 2, 14 -21	Para 2 refers to new definition in appendix 1 New requirements for PPAP, Vital Parts & ITAR Para 15 -20 renumbering New appendix 1 added	A. Harris	Oct 2010
10	All	Removed Aerospace references and requirements to make document applicable to Curtiss Wright Industrial only. Updated format to Curtiss Wright standard Added: Shelf Life, REACH & RoHS requirements	S. Ganderton	Feb 2021