

Purchase Order Terms & Conditions

Quality Requirements of Purchased Product and Services
SMD Fluid Controls, a division of Strain Measurement Devices, Inc.

General Requirements

Strain Measurement Devices Quality Terms and Conditions requirements apply to suppliers, including sub-tiers used by a supplier, providing purchased products or processing services. Supplied products or processes shall conform to the latest revision level of the applicable drawing and specification unless otherwise noted on the Purchase Order (PO).

Suppliers shall flow down to their sub-tier(s) the applicable requirements in their purchasing documents, including the requirements for certifications and First Article Inspection.

Strain Measurement Devices documentation and information shall be maintained and considered proprietary in nature.

Order of precedence of documentation is based on PO, drawing, specification and authorized Strain Measurement Devices change documents. Should a conflict occur over requirements, questions must be directed to purchasing management at Strain Measurement Devices.

Strain Measurement Devices shall reserve the right to make changes to the PO using written change notification and/or an amended PO. The supplier shall notify Strain Measurement Devices in a timely manner, in writing, confirming the change.

Suppliers shall review the PO and any changes and notify Strain Measurement Devices regarding compliance, such as; quality, price and delivery. The supplier must immediately notify Strain Measurement Devices in writing of changes that could affect product quality, including, but not limited to changes in personnel, location, process, equipment, and/or procedures.

Inspection and Quality System

Suppliers must provide product and processes that are controlled by a quality system that assures the following:

Gauges and equipment used for processing and acceptance shall be calibrated at documented intervals and traceable to NIST. The calibration shall be based on ANSI Z540-1, or equivalent.

Provide inspection to confirm all product requirements. The inspection system shall include documented results for incoming, in-process and final inspection. Product shall not be released to Strain Measurement Devices until successful completion of inspection checks are completed and documented. Inspection sampling maybe used based on ANSI/ASQ Z1.4, Sampling Procedures and Table for Inspection by Attributes, utilizing C=0 criteria.

Work instruction, routers, travelers, test reports and inspection records shall be maintained.

Quality system structure shall be based on ISO9001, AS9001, ISO13485 or similar requirements.

Right of Entry

Strain Measurement Devices, its customers and applicable regulatory agency shall be assured “right of entry” without prior notice, to all facilities and to applicable records and materials involved in the execution of the PO to perform Quality Audits and Inspection Surveillance at their discretion.

Certification of Conformance (C of C)

Suppliers shall submit with each shipment a typed, legible, reproducible statement certifying conformance referred to as a Certification of Conformance (C of C). The C of C specifies the items listed thereon comply fully with all purchase order requirements. The C of C shall include: the supplier name, authorizing signature with title, date, purchase order number, part number, revision, quantity and lot or serial number (when required).

Material and Special Certifications

Suppliers shall maintain on file, and submit with the first shipment, the Material Certifications associated with the PO. When a specific material or alloy is specified, a Material Certification must accompany each shipment. Suppliers shall maintain on file, and submit with the first shipment any special process certification of test pieces. The Certifications shall include: description of the material, trade name, manufacture’s name; specification number (type, grade etc.) manufactures part number, batch and heat lot number if applicable.

Raw Material Certifications

Raw Material Certification that specifies chemical and physical analysis shall be provided with each order of Raw Material. Suppliers shall maintain copies of Raw Material Certifications. Raw Material Certifications shall include:

- a) Batch, heat or lot, number.
- b) The material specification and revision.
- c) Certification of the composition to within acceptable limits where MIL reports are not available. (Metals require specific values of composition.)

Functional Test Reports

The supplier providing product requiring functional or final test reports shall submit the report, with each shipment. The report shall include: actual test results, identifiable to the respective parts or products, part number, revision, quantity, test requirements, and other technical information.

First Piece Inspection

First Piece Inspection shall be performed by the supplier prior to initial production and shipment to Strain Measurement Devices. The supplier shall furnish Strain Measurement Devices the initial pieces separately identified, to be retained as samples for the initial production. The initial piece samples shall be made to the process that will be used for production, with the same material, process and

manufacturing cycle as for the production run, including any sub-contracted processing based on production ready work instructions. Whenever practical, variable data is to be recorded and the inspection device documented. One to five initial piece samples shall be utilized.

First Article Inspection (FAI) Reports

First Article Inspection (FAI) Reports shall be provided for a first production run, or when the manufacturing method has changed, or when the print revision has changed. The FAI report shall include: a list all characteristics including notes, tolerance limits, dimensions, inspection devices, pass/fail status, and material requirements. An itemized ballooned drawing shall accompany the FAI report. FAI shall be provided to Strain Measurement Devices and be maintained on file by the supplier.

Substitutions

The supplier shall not make any changes/substitutions to materials, products, or processes required by the engineering documents without written authorization from Strain Measurement Devices. Authorization must be in writing based on approved engineering change documentation and may be contingent upon a facility visit.

Aged Control Material

Materials or articles having manufacturer's expiration date or having characteristics subject to degradation with age shall be marked in a manner to indicate the date of manufacture and the expiration date. The supplier shall not deliver articles with less than 80% of shelf life remaining at the time of delivery. Examples of shelf life materials include but are not limited to shrink tubes, RTV compounds, sealants, rubber-molded articles, etc. Material without appropriate shelf life may be rejected by Strain Measurement Devices.

ESD Controls

Electrical, electronic, and electromechanical parts with conductive silicon based components are treated as electrostatic sensitive devices to ESD. Product sensitive to ESD must be protected from ESD and enclosed in ESD protective materials when delivered. ESD labeling indicating that the contents contain electrostatic sensitive devices shall be used.

Foreign Object Damage (FOD)

Suppliers shall ensure that foreign objects are eliminated from parts prior to shipment. Suppliers shall maintain a FOD free environment during machining, manufacturing, assembly, soldering, inspection, storage, packaging and shipment.

Nonconforming Material

Strain Measurement Devices shall be notified of the discovery of Nonconforming goods and/or services which deviate from the requirements as specified on the purchase order/contract and relevant drawings and specifications, regardless of when the discrepancy was discovered, either during the processing of the product, inspection or after delivery. Strain Measurement Devices has the right to give notice of

defects for a period of 12 months from receipt of the material, and supplier is responsible for replacement or refund for non-conformances found after shipment.

Nonconforming goods and/or services which deviate from the requirements as specified on the purchase order/contract and relevant drawings and specifications must be documented by the Seller and submitted to Strain Measurement Devices Purchasing or Quality for consideration and disposition. The supplier shall take action to eliminate the cause of non-conformities in order to prevent recurrence.

Non-conforming products shall not be shipped to Strain Measurement Devices until authorized in writing by the appropriate Strain Measurement Devices Purchasing representative and must be identified with authorizing nonconformance document when shipped.

At no point is it authorized for a supplier to send product to Strain Measurement Devices which does not meet the engineering requirements (nonconforming product), without first going through the authorization request process. If supplier finds a discrepancy after an order is shipped, it is their responsibility to notify Strain Measurement Devices Purchasing or Quality.

The supplier must control, identify and maintain records of non-conforming product. Records are to include: affected quantity, quantity ship, expiration date, and condition.

Corrective and Preventive Action

The supplier shall take action to eliminate the cause of non-conformities in order to prevent recurrence and determine action to eliminate the causes of potential non-conformities in order to prevent their occurrence. The supplier shall have a corrective and preventive action system for responding to Strain Measurement Devices requests for corrective action. Supplier must respond to corrective action requests on or before the requested response due date. Supplier Corrective and Preventive Action forms shall include: root cause, corrective action, preventive action, verification and follow-up.

Process Changes

The supplier shall notify Strain Measurement Devices in advance of any major changes to the production process. Major changes include: new production machine, location change, special processes, sub-tiered sources, etc. This notification is required to be submitted in writing to Strain Measurement Devices Purchasing Department.

Documentation Control

The supplier must maintain a documentation configuration control system to assure that the correct drawings, revision levels, specifications and purchase order are on file as required by the latest customer purchase orders. It is the supplier's responsibility to request and obtain copies of engineering drawings and related documents. If the engineering drawings and specifications, reference other documents, the supplier must obtain and maintain these reference documents. Concurrent with the effective dates of product changes, the supplier must insure that the obsolete information is removed from all points of

use. All changes must have written Strain Measurement Devices approval prior to being incorporated in production.

Records

Suppliers shall prepare, maintain and retain adequate records described herein, including production, shipping and quality system records for a minimum of 10 years, or life of contract, whichever is greater. The supplier must also prepare and maintain quality performance records indicating inspection and test results. Suppliers shall be able to provide reproducible copies of any requested record within 48 hours of a written request from Strain Measurement Devices.

Handling, Packaging and Delivery

Supplier shall handle and package product to preclude damage during processing and shipment. Preservation of product is to include, where necessary and in accordance with product specifications and/ or applicable regulations, provisions for: cleaning; handling for delicate products; marking and labeling, including safety warnings; special handling for hazardous materials. If material is received in a damaged condition it shall be handled as nonconforming material.

The supplier shall not package Strain Measurement Devices product directly against the surfaces of the shipping package/box. Protective insulating material or double boxing should be used. The protective abilities of the shipping package/boxes shall not be degraded by over packing. Package quantities shall be controlled to ensure that product sensitive to damage is not in direct contact with each other. Product packaging methods shall consider limiting the quantity of product in individual bags and containers to preclude damage.

Shipments

Packing lists shall be enclosed with all shipments. Supplier shall mark containers or packages with applicable shipping information, purchase order number, item number and dates of shipments. C of C shall accompany the shipment, or form a part of the packing list. Bill of Lading shall include the purchase order number.

Supplier Rating System

A rating system based on the use of Supplier Scorecard to provide performance feedback is used.

The scorecard consists of objective elements related to delivery, quality and documentation such as Certification of Conformance (CoC).

The total rating will be based on the weighted percentage scheme below:

Delivery - 40% of the score

Quality – 50% of the score

Documentation – 10% of the score

Weighted percentages are categorized based on the total score as follows:

85% or greater is 'A' (Excellent or Green)

70% or greater is 'B' (Acceptable or Blue)

69% or less is 'C' (Poor or Red)

Suppliers shall review the scorecard for accuracy. Scores of 69% or less require an improvement plan.

Improvement plans are initiated by through discussion with Strain Measurement Devices Inc, purchasing department.