ESP Supplier Manual

ESP INTERNATIONAL™

Engineered Solutions for a Global OEM Marketplace

ESP International is dedicated to providing Engineered Solutions to the Global OEM Market with exceptional quality and on-time delivery. ESP's core values of Customer Focus, being a Thought Leader, Professionalism, Passion, and Entrepreneurial Spirit drive an organization and our suppliers to achieve our goal of world class performance. ESP International wants to take this opportunity to welcome you to our supply base.

To compete successfully in the global market, our suppliers must share our vision and commitment to continuous improvement in all areas. It is understood that each supplier is on their own continuous improvement path, however, it is expected that the requirements in this standard will be complied with regardless of the state of the supplier's current systems.

To achieve continuous improvement, ESP International expects our suppliers to embrace a sound quality system and to work with us in a spirit of trust, cooperation, and teamwork. The ESP Supplier Manual establishes expectations for quality and ESP support activities. This manual is not intended to replace a supplier existing quality system.

1. Purpose

The purpose of the ESP International Supplier Manual is to provide a uniform method to communicate requirements, expectations, and guidelines throughout the supply chain. This manual defines the fundamental activities that ESP International expects from our supply chain to ensure ongoing planning, control, and improvement activities, while conducting business with a high degree of integrity in a socially and environmentally responsible manner.
It is the expectation that all levels within the ESP International supply chain implement and maintain an effective quality management system that fosters the supply of quality products and services at a globally competitive price. ESP International supports the development of a quality management system that provides for continuous improvement, emphasizing risk mitigation, defect prevention, change management, and reduction in waste throughout the supply chain. Suppliers can utilize this manual as an aide to further develop their own systems and those of the sub-tier suppliers.

2. Quality Management System

The supplier's quality management system shall include:

- Elements needed by the organization to ensure the effective planning, operation and control of its

processes, and/or documented elements as recommended by this ESP Supplier Manual.

Control of Documents

- Suppliers shall maintain a documented process for control of both internal and external documents. Examples include, but are not limited to: process control sheets, work instructions, or prints. For specifications referenced within a document or print, the supplier shall maintain currently released versions of those specifications at all applicable manufacturing locations.

Control of Records

- Records shall be established and maintained to provide evidence of conformity to requirements and of the effective operation of the quality management system. Records shall remain legible, readily identifiable and retrievable. A documented procedure shall be established to define the controls needed for the identification, storage, protection, retrieval, retention time and disposition of records.

3. Management Responsibilities

A supplier to ESP International shall demonstrate a top management commitment to continuous improvement. Top management shall provide documented evidence of its commitment to the development and improvement of the quality management system by:

- Communicating to the organization the importance of meeting customer as well as regulatory and legal requirements.
- Establishing the quality policy and objectives.
- Conducting regularly scheduled management reviews of the quality system.
- Ensuring the availability of necessary resources.

4. Resource Management

Employees shall be qualified for the job they perform through education, training, or work experience and be knowledgeable of appropriate quality tools and processes that affect the quality of products and services. Further, employees shall be provided with the equipment, facilities and a work environment conducive to producing high quality products and services that consistently meet functional requirements and product specifications. The supplier will consistently measure the capacity of facilities, equipment, and employees to ensure that timely delivery of product is uninterrupted.

5. Product Realization and Production

Planning of Product Realization:

- The supplier shall implement and maintain an effective and structured product realization planning process which will result in the determination of:
  - The quality objectives for the product or service as defined by the print plus any

additional quality planning requirements defined by ESP
- The need to develop specific processes, resources, facilities, and documentation
- Verification and validation activities and the criteria for acceptability

- Quality planning activities shall be completed during the Production Part Approval Process (PPAP). Parts must be production intent for PPAP and all subsequent ESP PO's. Parts should be produced using production tooling in a production process, unless approved by the ESP International representative. Quality planning activities must be repeated for parts that are supplied not using production tooling and processes.

- When quoting to ESP, the supplier shall identify and document on the quote form any and all exceptions to the print or product standards and specifications provided by ESP.
  - Material Control and Communication
  - An equivalent material is one whose specifications, in their full range of variation, meet those of the drawing-specified material. Determination that a material is equivalent requires a careful evaluation of all related specifications and characteristics. This review must only be performed by individuals who are well versed in those particular materials, qualified to make that evaluation, able to provide supporting documentation (e.g. mill certifications), and fully compatible with the relevant specification. If material is deemed equivalent, then ESP Engineering will provide approval to use the equivalent material through a deviation or drawing change.
  - Alternate materials that appear on the drawing can be used interchangeably.
  - Before an alternate material from the material used in the PPAP can be used, the supplier must receive written approval from ESP.

Product Realization Process

- Important outputs of the product realization process are:
  a) Identification of the design and development processes.
  b) Identification of the verification and validation activities appropriate for each design and development stage.
  c) Identification of responsibilities and authorities for each of the design and development stages.
  d) Determination of the requirements for, and methods of, communication at each stage in the design and development process.
  e) Functional and performance requirements of the product or service.
  f) Identification of criteria for acceptability, including key characteristics plus other characteristics that are identified by ESP International.
  g) Determination of applicable regulatory and legal requirements.
  h) Identification of applicable information derived from previous similar designs.

i) Identification of product or service acceptance criteria.
j) Definition of the characteristics of the product that is essential for safe and proper use.

- Design and Development Review
  - Upon request, supplier shall make available pictures, process documents, detailed explanation, and/or on-site audit access to verify planned processes for any part sold to ESP.

- Initial Sample Inspection Report (ISIR)
  - Verification shall be performed in accordance with planned quality objectives for the product or service. Records of the results of the verification and any necessary actions shall be maintained.

- Control of Design and Change Management
  - The supplier shall identify and implement a communication plan with ESP International relating to product or service information, contracts or order handling, product or process changes, contract amendments, and customer feedback. Where product requirements are changed, the supplier shall ensure that relevant documentation is revised appropriately. The supplier shall also ensure that personnel involved in the realization of the product or service are made aware of the changed requirements.

  -The supplier agrees to obtain ESP's prior written approval before implementing any change in manufacturing method, manufacturing materials, supply chain including sub-suppliers, outsourced activities, factory location or product packaging specification prior to making any change. Any change in manufacturing may require a new PPAP and qualification for the Parts. The supplier agrees to cover all costs associated with the requalification process other than ESP's internal process approval costs.

- Determination of Timelines Related to the Product
  - Part Realization timeline is developed and agreed upon by all parties. The following are critical milestones that are required:
    - Tool Completion Date
    - First Physical Build
    - QC Documentation Data
    - Sample Ship Date

- Customer-Designated Special Requirements

  <u>- KCC – Key Control Characteristic</u>

  Component or assembly characteristic identified as being critical to fit, form, or function of the part. Characteristic will be identified as <KCC> on print.

  A KCC requires an initial process study to determine the capability to meet the specification, and on-going monitoring to verify continuous capability.

  KCC shall be identified as such on the control plan.

-CPC – Critical Process Control

Component or assembly characteristic identified as high risk potential so that appropriate action can be taken to eliminate or reduce the risk. Characteristic will be identified as <CPC> on print.

A CPC shall be identified as such on the control plan.

- Sub-Supplier Control
  - As a primary supplier to ESP International, the supplier shall be responsible for the quality of the products and services provided by their supply chain.
  - A supplier shall have a documented system to properly select suppliers with the capability to meet the defined requirements. A supplier shall communicate the latest specifications to their supply chain and verify the product on an ongoing basis. A change in the supply chain or process changes by the supply change shall require documented approval before implementation.
  - The supplied product must be free of asbestos and other banned substances.
  - Supplier PO to sub-suppliers shall contain all information describing the requirements for approval of the product and the qualification of the procedures, processes, specifications, equipment and personnel necessary to produce the product to ESP print specifications.
  - Verification of purchased product from sub-suppliers shall be conducted using a documented quality assessment methodology. The primary supplier to ESP International is fully responsible for the quality of the products and services they provide, including that of their supply chain.

- Production and Service Provision
  - Process control is needed to ensure that the manufacturing process is performed under stable conditions. Documentation is essential to assure quality of products at initial production and is used to maintain ongoing acceptable quality levels.
  - Process control documents shall be in place prior to initial production and be readily available to the employees responsible for the operation of the process. The key processing parameters and product characteristics identified during the Product Realization Process shall be addressed in the process control documents.

- Validation of Processes for Production and Service Provision
  - The supplier shall validate any processes for production and service processes where the resulting output cannot be verified by subsequent monitoring or measurement. This includes any processes where deficiencies may become apparent only after the product is in use or the service has been delivered. Examples of this are weldments, heat treatment, plastics, rubber, powdered metal, and coatings.
  - Validation shall demonstrate the ability of the processes to achieve planned results.

- Identification and Traceability
  - A supplier shall establish and maintain documented procedures for product identification. The supplier shall have product traceability to the extent required so that if a discrepancy is found, product can be contained and corrective action initiated.

- Identification is a process to identify product during all stages of production. - Traceability allows for parts to be matched to a certain time frame, processes, and specific lots of material.
- Bar Coding is a requirement to be considered for the Preferred Supplier Program.

- Customer Property
  - The supplier shall exercise care with all ESP International property, including intellectual property, while it is under the supplier's control or being used by the supplier. The supplier shall identify, verify, protect and maintain ESP International property provided for use or incorporation into product. ESP property that is lost, damaged or otherwise found to be unsuitable for use shall be recorded and reported to ESP International. Processing equipment, tooling, and measuring equipment / fixtures owned by ESP International are covered under this section.

- Preservation of Product
  - The supplier shall preserve conformity of product with customer requirements during internal processing and delivery to the intended destination. This shall include identification, handling, packaging, storage, and protection.

  - Packaging

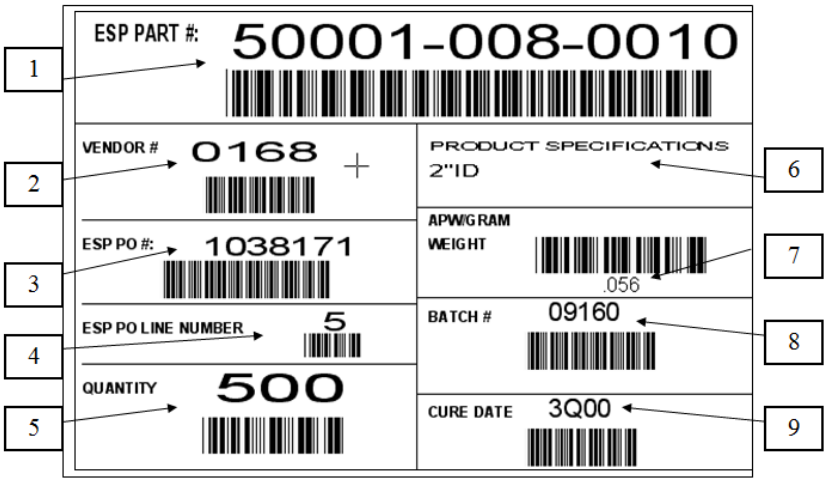
  Product shall be packaged in a manner to prevent damage to product during shipping and handling process, while maintaining the integrity of the product in relation to the print specifications.
  Any special packaging or handling requirements shall be communicated to the supplier by ESP International.

  - Shipping

  Product to be shipped according to instructions identified on purchase order issued by ESP International. Authorization must be obtained by ESP International prior to shipment should deviation from identified shipping method be required.

  - Labeling

  Barcode labeling is the preferred ESP method as shown below:



1. **ESP Part Number**
2. Vendor Number
3. **Purchase Order Number**
4. Item Line Number (From Purchase Order)
5. **Quantity Shipped**
6. Description/Specifications of Product
7. Price Gram Weight
8. **Batch/Lot Number**
9. **Cure Date**

Items Underscored and Bold are required fields

- Control of Monitoring and Measuring Devices
  - In selecting measuring equipment, ESP International is concerned with the capability of the measurement system to detect and indicate even small changes of the measured characteristic. The measuring equipment selected should have a discrimination of less than one-tenth of the total product tolerance being measured.

- Calibration
  - A supplier shall establish and maintain documented procedures for the calibration, control, and maintenance of measuring, inspection, and test equipment used to assure that products and processes conform to applicable requirements. A supplier shall calibrate these devices at consistent periodic intervals against applicable standards with known traceability, and safeguard them against adjustments that would invalidate the calibration. Whenever a gage is found out of calibration and it has been used to verify parts for ESP International, the supplier shall notify ESP International of the suspect parts.
  - For certain applications ESP International will send gages/tools to a supplier. After the receipt of ESP International gages/tools, a supplier is responsible for calibration, repair, and replacement. A supplier shall review all gages/tools to assure proper function and application.

- Confidentiality
  - The organization shall ensure the confidentiality of customer-contracted products and projects under development, and related product information.
  - Supplier must agree to enter into Non-Disclosure Agreement (NDA) with ESP International.

6. Measurement, Analysis and Improvement

Measurement, analysis and improvement is the process of planning, defining, and using performance metrics in processes and products critical to ESP International. These performance metrics are used to determine the current level of performance, drive continuous improvement activities, and monitor long-term performance levels.

Critical to the use of these performance metrics are statistical tools. These statistical tools are not only used on processes and products, but also measure customer satisfaction and supply chain performance.

- Customer Satisfaction
  - As one of the measurements of the performance of the quality management system, the supplier shall monitor activities and information relating to customer satisfaction as to whether the supplier has met ESP requirements.
  - Suppliers are expected to use this data to drive improvements in ESP International satisfaction metrics.
  - Supplier will measure and track performance to Quality PPM and On-Time-Delivery (OTD) goals provided by ESP.

- Internal Audit
  - It is recommended that a supplier to ESP International develop and implement an effective internal audit process. For assistance in development of a process, suppliers may contact ESP International.

- Monitoring and Measurement of Processes
  - A supplier shall determine and implement measurements necessary to monitor processes critical to customer satisfaction. Mistake-proofing activities should be the first method of control considered. If mistake proofing is not feasible, statistical techniques shall be used to monitor the process.

- Monitoring and Measurement of Product
  - Product measurements and monitors are required to confirm the products are being produced properly and remain stable over time. Included in product measurement and monitoring are capability studies for identified KCC's.

- Control of Nonconforming Product
  - The supplier shall establish and maintain documented procedures to ensure that proven or suspected nonconforming products are prevented from unintended use or installation. This control shall provide for identification, documentation, evaluation, isolation, disposition of nonconforming

products, and for notification to the departments concerned (both internal and external).

- If parts are found to be nonconforming at ESP International, the supplier is expected to provide the resources necessary to evaluate, contain, sort, reclaim, and/or scrap the nonconforming product.
- If nonconforming products get into ESP International products or become a warranty problem, it shall be the supplier responsibility to aid ESP International in evaluating and correcting the problem. ESP International shall be entitled to recover from the supplier all costs and expenses reasonably incurred in taking corrective action.
- When nonconforming product is corrected it shall be subject to re-verification to demonstrate conformity to the requirements.
- ESP International shall be informed promptly in the event that nonconforming product has been shipped.
- If a supplier wants to ship a product not meeting the specified requirements, written approval shall be obtained from ESP International prior to shipment of the product. This applies equally to products or services purchased from the supply chain. A supplier shall concur with any requests from their supply chain before submission to ESP International. A supplier shall maintain a record of the expiration date and quantity authorized. A supplier shall also ensure compliance with the original or superseding specifications and requirements when the authorization expires. Each shipping container of deviated product shall be properly identified.

- Analysis of Data
  - ESP International expects our suppliers to obtain appropriate data and apply statistical and problem solving techniques to solve specific problems and to drive continuous improvement activities.

- Continual Improvement
  - Evidence shall demonstrate the use of data, past experience, and lessons learned to show continuous improvement of the quality management system.

- Corrective Action

  Suppliers shall take action to eliminate the causes of nonconformities to prevent their recurrence. Suppliers shall implement a disciplined, documented problem solving approach that encompasses:

  1. Identification of the nonconformities
  2. Implementation of containment actions
  3. Determination of root causes of nonconformities
  4. Implementation of long term actions to address nonconformities
  5. Verification of implemented long term actions

- Preventive Action

  Suppliers shall take action to eliminate the causes of potential nonconformities in order to prevent their occurrence. Suppliers shall implement systematic approaches to define and implement

preventive action activities. Such approaches may include, but are not limited to: Process Failure Mode Effect Analysis (PFMEA), Risk Analysis, Cause and Effect Diagrams.

7. Dock to Stock Inspection Program

In an effort to continually improve the Customer to Supplier relationship, ESP International has established a Dock to Stock program. This program is related to components procured from Suppliers with established quality systems and have demonstrated the ability to provide conforming products.

Qualification Requirements

The Dock to Stock program utilizes three factors to determine the qualification requirements and eligibility for the program:

1) Part Classification Level of a purchased component
2) Supplier Quality System rating
3) Demonstrated conformance to the component drawings and specifications

Qualification Process for Dock to Stock Status

ESP International maintains a qualification matrix that combines the Part Classification Level and Supplier Quality System rating to determine the required number of accepted ESP International inspections for a component to be eligible for Dock to Stock status.

Part Classification Level	Supplier Quality System Rating				
	10 – 8.8	8.8 – 6.5	6.4 – 3.3	3.2 – 1.7	1.6 - 0
5	DTS Count = 5	DTS Count = 5	DTS Count = 7	DTS Count = 7	DTS Count = Not Eligible
4	DTS Count = 4	DTS Count = 8	DTS Count = Not Eligible	DTS Count = Not Eligible	DTS Count = Not Eligible
3	DTS Count = 4	DTS Count = 6	DTS Count = 8	DTS Count = Not Eligible	DTS Count = Not Eligible
2	DTS Count = 3	DTS Count = 3	DTS Count = 5	DTS Count = 5	DTS Count = 5
1	DTS Count = 1	DTS Count = 1	DTS Count = 3	DTS Count = 3	DTS Count = 5

DTS count is the required number of sequential receipts of conforming product for the component to be eligible for the Dock to Stock program. It is at the discretion of ESP International to determine if the Dock to Stock status is applied to eligible components.

Removal from Dock to Stock Status

ESP International may remove qualified components from Dock to Stock status. Reasons for removal may include, but are not limited to:

- A confirmed nonconformance with a component
- Supplier systemic nonconformance affecting multiple components procured from supplier
- Mitigation of an identified risk

Escalation process for removal of Dock to Stock Status

Event	ESP Action	Dock to Stock Impact
Single occurrence of product nonconformance.	Quarantine inventory of applicable part number.	DTS count reset to zero for applicable part number upon confirmation of nonconformance.
Supplier systemic nonconformance affecting multiple part numbers.	Quarantine inventory of all part numbers from supplier.	DTS count reset to zero for applicable part numbers upon confirmation of nonconformance.
Product recall.	Quarantine inventory of all part numbers from supplier.	Supplier suspended from DTS program. All part numbers from supplier are removed from DTS status.

Re-Qualification Process for Dock to Stock Status

In the event components and/or suppliers are removed from Dock to Stock status, there shall be a re-qualification process to re-instate the Dock to Stock status.

Event	Requirement	Dock to Stock Impact
DTS reset for part number.	Completion by supplier of requested corrective action to address nonconformance. Accepted sequential ESP International inspections per qualification matrix.	DTS status re-instated for part number.
Supplier removed from DTS program.	Process / Product Verification Auditing at Supplier. Completion by supplier of requested corrective action to address all identified nonconformance.	Supplier eligibility for DTS program re-instated. All part numbers subject to requalification.

Changes to Supplier Quality System Rating

Through the monitoring of ESP International's supplier performance and quality systems, adjustments to the Supplier Quality System Rating may have an impact on the Dock to Stock status of a Supplier's components.

Event	ESP Action	Potential Dock to Stock Impact
Improvement in Supplier Quality System rating.	Update Supplier Quality System rating for DTS matrix.	Reduction in number of sequential conforming receipts for Dock to Stock eligibility. Eligibility of components for Dock to Stock status.
Reduction in Supplier Quality System rating.	Update Supplier Quality System rating for DTS matrix.	Increase in number of sequential conforming receipts for Dock to Stock eligibility. Removal of Dock to Stock status on components.

8. Supplier Code of Conduct

ESP's commitment to integrity and social responsibility extends to its worldwide supply base. To ensure that suppliers conduct business with a high degree of integrity and in a socially and environmentally responsible manner, all of ESP's suppliers are expected to adhere to this Supplier Code of Conduct.

General Responsibility

Suppliers are expected to do what is necessary to comply with this code without delay. Suppliers are expected to be familiar with the business practices of their suppliers and sub-contractors and ensure they operate within the guidelines of this code. Failure to comply with this code may result in discontinuance of business relationships with ESP.

Key Expectations

- Gifts and Gratuities
  ESP and its employees are not permitted to accept gifts from current or potential suppliers. This includes gifts of nominal value. Although giving gifts is acceptable in some cultures, ESP requests that suppliers respect its policy of not accepting gifts

- Improper Payments
  ESP conducts business with high integrity and within the bounds of the law. Bribery and kickbacks are illegal and subject to criminal penalties in many countries, including the United States. Bribes, kickbacks, and similar payments to government officials, ESP employees or agents acting on ESP's

behalf are strictly prohibited. This prohibition also applies in areas where such activity may not violate the law.

- Insurance Requirements: Supplier will maintain insurance coverage and will provide proof of insurance coverage as required by ESP on an annual basis.

- Child Labor
  ESP will not engage in or support the use of child labor. Suppliers are expected to comply with applicable local child labor laws and employ only workers who meet the applicable minimum legal age requirement for their location. In the absence of local law, suppliers shall not employ children under the age of 14.

- Forced Labor
  ESP will not engage in or support the use of forced or involuntary labor. ESP will not purchase material or services from a supplier utilizing forced or involuntary labor.

- Compensation and Working Hours
  ESP pays employees a competitive wage. Suppliers are expected to comply with all applicable wage and hour labor laws and regulations governing employee compensation and working hours.

- Discrimination
  ESP supports diversity and equal opportunity in employment. Unlawful discrimination in the workplace is not tolerated. Suppliers are expected to comply with all applicable local laws concerning discrimination in hiring and employment practices.

- Environment
  ESP respects the environment and conducts its operations in compliance with applicable laws and regulations. Suppliers are expected to conduct their operations in a way that protects the environment. Suppliers are expected to comply with all applicable environmental laws and regulations in the countries in which they operate.

- Health and Safety
  ESP is committed to the safety and health of its employees and conducts its operations in compliance with applicable laws and regulations. Suppliers are expected to provide a safe working environment that supports accident prevention and minimizes exposure to health risks. Suppliers are expected to comply with all applicable safety and health laws and regulations in the countries in which they operate.

Contact Information

- For questions or comments on the ESP Supplier Code of Conduct please contact your Supply Management representative.

- Violations of the ESP Supplier Code of Conduct should be reported using one of the following confidential options:
    - Telephone 1-888-377-9002 (US and Canada only)
    - Post Office –
        - Compliance / Human Resources, 5920 Dry Creek NE, Cedar Rapids, IA, 52402 USA