



Supplier Quality Manual

Quality Manual for Suppliers of the Zollner Group

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Quality Manual for Suppliers to the Zollner Group of companies

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1. Preamble

This Quality Guideline for Suppliers (hereinafter referred to as "SQM" = "Supplier Quality Manual") defines Zollner's minimum quality requirements for suppliers for the procurement of products and various services. The requirements are based on the regulations of the current DIN EN ISO 9001 and assume its validity as a basis.

This SQM describes Zollner's requirements for the quality program of its suppliers as well as the obligations to be met by the suppliers with regard to the manufacture, testing and delivery of products, which are manufactured or provided for Zollner.

The supplier shall ensure, and it is the supplier's responsibility, to review and evaluate these requirements with respect to its sub-suppliers and to pass them on to its supply chain to the appropriate extent.

1.1 Subject Matter and Scope of the Manual

All deliveries and services by the supplier or by one of its affiliated companies to Zollner Elektronik AG and all of its affiliated companies in the sense of Section 15 of the German Stock Corporation Act (AktG) are subject to this SQM. The Zollner Group of companies is hereinafter referred to as "Zollner". This SQM applies to all Zollner sites, worldwide. The supplier bears sole responsibility for the quality of the products manufactured for or delivered to Zollner. Further quality-related requirements can be regulated in an additional quality assurance agreement.

2. Quality Management System and Audit Access Rights

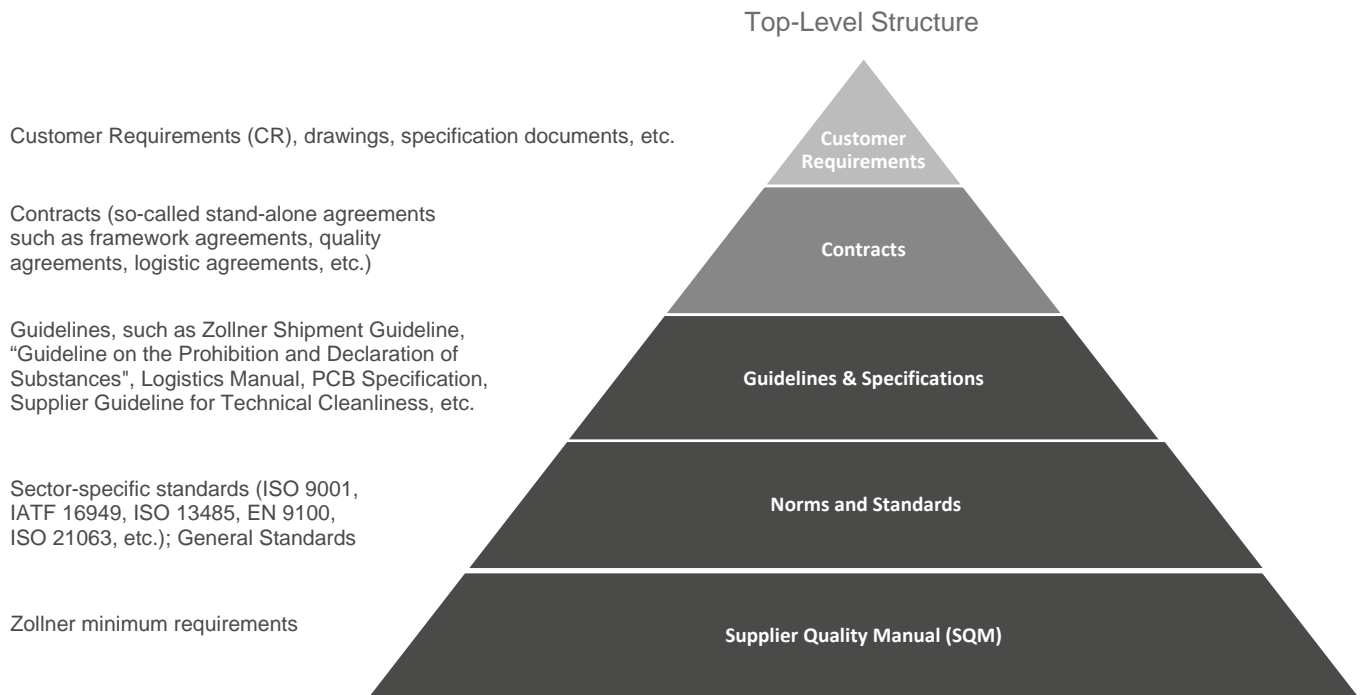
As a minimum requirement, the supplier shall maintain a certified quality management system in accordance with DIN EN ISO 9001, with the willingness to further develop its system with regard to additional sector-specific requirements (e.g. Automotive, Aviation, Rail Technology, and Medical Technology). Suppliers who do not meet this minimum requirement must provide Zollner with a specific implementation schedule or at least planning.

Upon request, the supplier shall grant employees of Zollner and third parties (e.g. customers and authorities) access to all relevant areas and the corresponding documented information involved in the production and delivery of the products and services as part of an audit.

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3. Hierarchy of Requirements and Documents



4. Compliance

a) Environmental, Health and Occupational Safety

The supplier obligates itself to comply with all statutory regulations on environmental protection, health and safety at the workplace and to keep the impact on people and the environment to a minimum by means of appropriate environmental protection management. For this purpose, introduction and further development of an environmental management system according to DIN EN ISO 14001 or equivalent systems is expected.

The supplier's products must comply with the statutory regulations applicable in the country of manufacture as well as in the country of distribution, safety regulations and environmental protection regulations in particular, as well as the respective applicable standards.

b) Social Responsibility/Code of Conduct

The supplier shall comply with the Code of Conduct of the RBA (Responsible Business Alliance) or a comparable Code of Conduct (Global Compact or own Code of Conduct) in its current valid version.

c) Material Compliance – Conflict Minerals, RoHS, REACH, Prohibited Substances, General

The handling of the order process between respective parties is based on the requirements of the "Guideline on the Prohibition and Declaration of Substances" in its current valid version. This guideline is available on the Zollner website (www.zollner-electronics.com). The supplier shall ensure compliance with regulations in this guideline.

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d) Handling of Lithium Batteries

See item 5.3 in the "Guideline on the Prohibition and Declaration of Substances" as amended from time to time, available on the website of Zollner (www.zollner-electronics.com), and also applies to products containing lithium batteries. The supplier shall ensure compliance with the regulations of this guideline.

e) Counterfeit – Counterfeit, Tampered, or Suspected Products

The supplier shall ensure that no counterfeit, suspected products or products that have been tampered with are delivered to the customer.

5. Assessment of Product Requirements/Feasibility Check

The supplier shall control all technical documents, check them and ensure that they comply with the respective requirements and accompanying documents in the order.

The supplier is obligated to examine all documents, drawings and specifications for errors or ambiguities. This examination must take place before the start of production.

If, after checking the information sent, the supplier finds that it is incomplete, contradictory or not feasible for the supplier from a technical point of view, or uneconomical from a commercial point of view in order to provide the service, the supplier shall contact Zollner immediately, at the latest within one working day, and provide the appropriate data.

This shall also apply to applications critical to feasibility/producibility.

If customer specifications or standards are communicated to the supplier by Zollner, these shall additionally apply to the respective products.

6. Goods Labeling / Marking for Traceability

The supplier shall mark the products in the form agreed upon with Zollner. The marking must be clearly and visibly attached to the delivered goods. Each shipping unit must be labeled at least with information on the consignee, delivery note/slip number, purchase order number, material number, quantity, sender, date of manufacture and shelf life. It is mandatory to have additional information on each smallest packaging unit. These details as well as the associated label are coordinated and agreed upon in advance between Zollner and the supplier.

The supplier shall implement a suitable traceability concept according to the state-of-the-art for all products delivered to Zollner.

As part of the traceability concept, the supplier must be able to identify the material supplied and, in the event of quality deviations, isolate all affected products in order to minimize possible damage.

Furthermore, the handling of the ordering process between the parties, including packaging guidelines, is based on the requirements of the "Logistics Manual" in its current valid version. The manual is available on the Zollner website (www.zollner-electronics.com). The supplier shall ensure compliance with the regulations of the Logistics Manual.

7. Retention Periods

The retention period for documents subject to retention (e.g. applicable test and production documents, approved deviations, test sample quantities, material specifications, measured values, test data as well as all data required for traceability) is based on statutory and sector-specific regulations, but may in no case be less than three years. The beginning of the calculation of the period is determined by legal regulations, but the beginning of the period must not be before the end of the respective project.

8. Quality Target / Zero Defect Target / Continuous Improvement

The supplier is committed to the zero defect target and communicates it both internally and to its sub-suppliers. The supplier continuously works on measures to improve and achieve the zero defect target.

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9. Complaint Handling

The supplier shall provide Zollner with a Return Material Authorization number (RMA) within two days, if available. If the supplier does not send the RMA number in due time, Zollner is entitled to return the goods even without the RMA number. Return deliveries are always charged to the supplier.

Requested statements or 8D reports must be sent to the person in charge named in the test report by the deadline specified in the test report, quoting the test report number and Zollner part number.

For this purpose, the industry-specific problem solving tools are to be used according to the state-of-the-art.

Complaints as well as the receipt of untimely RMAs, statements and 8D reports have an impact on the supplier rating. Please also refer to our 8D Guideline, which can be provided on request by the person responsible for complaints or the central supplier quality department.

10. Notification of Product and Process Changes

Intended changes of products and processes by the supplier as well as discontinuation of products are at least to be reported to Zollner in the form of a

- Process Change Notification (PCN) or a
- Product Termination Notification (PTN)

in text form and in advance.

The central receiving address for this is pcn@zollner.de.

Only information received at this email address is considered received.

11. Control of Defective Products

The following additions apply in particular, but not conclusively, to the control of defective products:

- products suspected of being defective or not marked shall be controlled like defective products and
- Zollner must be informed immediately, if a defective product has been delivered; the delivered product must remain blocked until final release, and
- defective or suspect products may only be delivered after approval/release by Zollner.

12. Escalation Process/Matrix/Contacts

The supplier shall inform Zollner about the respective contact persons by providing contact details per escalation level for the following work areas:

- Key Account Management
- Marketing
- Engineering
- Quality
- Logistics
- Research & Development
- Legal & Patent Department

If the contact persons and/or contact data provided change, the supplier shall proactively inform Zollner.

Upon request, the supplier shall transmit the description of the escalation process with the respective escalation levels to Zollner.

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13. Initial Sampling/Product Release

If Zollner requests initial sampling in the order, the supplier shall enclose the relevant documents with the delivery in the form requested by Zollner. Serial product delivery may then only take place after release of the initial samples.

14. Emergency Plans

The supplier shall draw up plans to ensure that the requirements of Zollner and its customers are met in the event of an emergency (e.g. in case of failure of the power supply or important operating equipment/information technology, shortage of manpower, field complaints, etc.).

15. Technical Cleanliness

Products and/or projects with technical cleanliness requirements are to be handled by the supplier in accordance with the "Supplier Guideline for Technical Cleanliness". This can be requested on a case-by-case basis from the respective contact person in the Zollner Purchasing Department, if required.

16. PCB Specification

If the supplier delivers printed circuit boards to Zollner, the Zollner PCB specification shall apply in the respective valid version, provided that no other customer requirements exist and those have been explicitly agreed upon with the supplier.

This specification is agreed upon individually between Zollner and the supplier and serves as a guideline for the procurement of Printed Circuit Boards. The specifications can be requested case-by-case basis from the respective contact person in the Zollner Purchasing Department, if required.

17. Selection and Approval of Suppliers

Selection and approval of suppliers for production material, quality-relevant deliveries and services are carried out according to a standardized process.

The following criteria are sometimes used for the basic qualification of new suppliers:

- Certification according to QM systems
- Available standards on the subject of compliance
- Information security requirements
- Requirements regarding occupational, health and environmental regulations
- Positive evaluation by the Central Purchasing Department in cooperation with the Supplier Quality Department
- Positive financial information
- etc.

18. Explanation of the Supplier Evaluation from Zollner

As a matter of principle, we carry out comprehensive supplier evaluation once a year for strategic and selected suppliers. The result of the evaluation is communicated in written form at the beginning of the following year.

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Criteria and Weighting of the Supplier Evaluation

Hard Facts (80 %)

Soft Facts (20%)

Criteria	Weighting in %
Hard Facts	
PPM on Q-notes	19
complaint rate	3
quality score	14
8D report	4
quantity reliability	20
date reliability	17
supply reliability	3
Soft Facts	
accessibility	3
reaction time	4
good will	3
engagement	4
price level	6

The classification results from the determined valuation ratios:

A-supplier 100–86 points

B-supplier 85–71 points

C-supplier 70–0 points

Our expectation of suppliers is to promptly eliminate identified weaknesses and independently initiate measures as well as actions that lead to improvement in the evaluation results.

In the case of a C-rating, an action plan is expected within a four-week period.

Please also refer to our Supplier Evaluation Guideline, which can be provided on request by the person responsible for complaints or the central Supplier Quality Department.

19. Sub-Supplier Management

a) Risk Management

The supplier shall maintain a risk management system with regard to its relevant sub-suppliers.

b) Forwarding of Specific Requirements

It is the responsibility of the supplier to pass on to or clarify specific requirements with relevant sub-suppliers (for the supplier as well as for Zollner) to ensure final component delivery to Zollner. This sometimes also includes minimum requirements with regard to documentation and traceability.

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c) Change Management and Audit Access Rights

The supplier shall proactively request notification of changes, identical to Section 10, from its sub-suppliers and document them accordingly.

Additionally, the sub-supplier shall grant access upon request to all relevant areas and corresponding documented information involved in the production and delivery of the products and services (identical to Section 2, last paragraph) to the direct customer and third parties (e.g. customers and authorities) within the scope of an audit.

d) Supplier Evaluation and Supplier Development

The supplier also sets up an up-to-date supplier rating with the minimum criteria of delivery reliability and quality (complaints) for its relevant supply chain. The supplier updates this rating at least once per year.

This should be actively used in order to at least carry out a supplier development activity (e.g. with action plans, supplier development programs, audits, etc.) to re-qualify the sub-supplier to the accepted delivery quality or to further develop the supplier with regard to (increased) customer requirements.

e) Receiving Inspection

Appropriate incoming goods/receiving inspections must be carried out at the supplier's premises for all deliveries from sub-suppliers. However, depending on the area of application where the deployment takes place (e.g. Aviation, Automotive, etc.), further requirements may be necessary (e.g. Certificate of Conformance [CoC] or a factory test certificate). As minimum requirements, statutory and normative regulations apply for the supplier.

f) Qualification Processes

Zollner expects its suppliers to have systems in place for the qualification of sub-suppliers and to implement management of their sub-suppliers that ensures the quality of the products. The system used must be suitable to prevent errors in supplier deliveries and services. Suppliers shall ensure that their sub-suppliers are aware of and implement all customer, product, statutory, regulatory and environmental requirements that apply to the design and which are necessary to manufacture and supply materials and components.

Global Procurement Quality Team, Mar. 21, 2023