



# Quality Guidelines and Expectations for KUHN Suppliers

May 2015



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## **KUHN SQM – May 2015 – Revision 0**

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**Revision history**

<b>Revision</b>	<b>Date</b>	<b>Description of changes</b>
0	May 2015	Initial release

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## 1. Introduction

### 1.1. General

The target of KUHN is to ensure that the product or service is consistent with our specifications at the best cost.

KUHN's purchasing policy is based on the willingness to engage with its suppliers a robust process to provide its customers zero defaults products and deliver worldwide at the most competitive cost. This objective can only be achieved with close collaboration and mutual commitment between the supplier and KUHN group. Concise and clearly defined expectations and requirements are mandatory for a supplier / customer healthy and lasting relationship.

### 1.2. Scope

This manual is a guide to help suppliers understand the key elements of KUHN's quality requirements and the way KUHN selects the suppliers and follows their performances.

### 1.3. Application

This document applies to all existing and new supplies or services that affect the quality of the final product delivered by KUHN to its customers.

## 2. KUHN expectations

KUHN expect all suppliers to meet the following requirements:

- Provide parts and services with 100% quality and "on time" schedule deliveries.
- Strive for continuous improvement of product quality and productivity to meet the growing competitive pressure on the international markets.
- Pay attention to KUHN in the solving of complaints of a product or service provided.
- Produce evidence of a quality-based continuous improvement, defect prevention and process mastering.

## 3. Quality Management System

Suppliers should establish, maintain and demonstrate a quality management system to ensure compliance to KUHN quality expectations.

In general, those expectations have been inspired by the ISO 9001 standard.

In reading this manual, it is important to note the following:

- Should, may, expect – action is strongly recommended
- Must, will, shall – action is required

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### 3.1. Documentation requirements

The supplier should maintain a documentation to ensure the quality of its process, such as:

- Management commitment
- Product identified at all-time throughout the manufacturing process via lot number, item code dates, or other ways applicable. (from raw material storage to finished stock)
- Work instruction
- Inspection instructions and records
- Calibration plan and records
- Root cause analysis with corrective and preventive action process

### 3.2. Control of documents

It is the supplier's responsibility to obtain and manage all the documents required for accomplishing the order, such as:

- Drawings
- Technical specifications
- Instructions
- Standards

KUHN does not provide national and international standards. The supplier must subscribe to them through its own means.

KUHN standards can be find in the supplier's portal.

### 3.3. Control of records

Registered data must be stored on electronic format or paper to always be reachable and available on request. If asked, the supplier must be able to link the records to the part traceability. Records must be stored for at least 5 years in an environment that prevent deterioration, damage or loss.

Obsolete drawings must be destroyed or identified for limited edition.

## 4. Management responsibility

### 4.1. Management commitment

The supplier must demonstrate a commitment by top management to continuous improvement by :

- Communicating to the organization the importance of meeting customer satisfaction

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- Establishing the quality policy and objectives
- Taking appropriate action when indicators are unfavourable
- Ensuring the availability of necessary resources, including continuous improvement

#### **4.2. Organization efficiency and management review**

The management should check if the organisation is performing as required by the quality systems or manager's objective by using Key Performance Indicators or other relevant systems. A regular management review should be done to ensure the effectiveness of the quality management system.

A list of Key Performance Indicators must be define with minimum quality (internal / external) and lead time.

#### **4.3. Customer focus**

The supplier's management must ensure that KUHN needs and expectations are identified, covered into requirements, and fulfilled with the aim to achieve KUHN's customer satisfaction. Suppliers must meet requirements for reliability, delivery, cost management and technical support.

### **5. Resource management**

#### **5.1. Human resources**

The supplier should identify the need for training and manage human resources and take into account employee polyvalence. Employees performing particular tasks must be identified, trained and qualified for their tasks (including temporary workers).

#### **5.2. Work environment**

##### **5.2.1. Health, safety and environment**

Suppliers delivering products to KUHN must care about health and safety of the workers, environment protection, toxic and hazardous materials (in compliance with European REACH standard when required).

The supplier is encouraged to engage actions to limit its impact on environment, these actions could be managed and driven by following ISO14001 environment standard.

##### **5.2.2. Organization of workshops**

In order to preserve the quality level throughout the manufacturing process, the supplier must have its workshops and warehouse cleaned and well organized.

## 6. Product realization

### 6.1. Contract review

The supplier must hold a contract review of the requirements related to the product to ensure that the product requirements are defined and in accordance with its internal documentation. Orders requirements are understood and the supplier has the ability to meet the defined requirements. These contract reviews must be done during the quotation process and at each order receipt.

### 6.2. Effective communication with customer

The supplier must implement an effective communication organization with KUHN for product information, contracts, orders, customer feedbacks and complaints.

The supplier must maintain its data in the supplier portal (supplier file).

The supplier and KUHN might collaborate to develop the communication under specific format (EDI, CAD, etc...)

### 6.3. Release for production

The supplier is responsible for obtaining the release for production on products when initial samples are validated.

### 6.4. Design and development

#### 6.4.1. Technical reviews

The supplier must identify the critical process steps and determine an appropriate control plan to ensure the long term stability and capability of the manufacturing processes.

It allows to ensure that all technical information defining the part or components have been reviewed, clearly understood by the supplier and are feasible.

If asked by the supplier, KUHN can provide technical support.

In case of standard parts, the supplier must have the concerned technical norms.

#### 6.4.2. Design review

When the supplier has to design the product for KUHN, it should establish and maintain design reviews to ensure that formal documented reviews of the design of product are planned and conducted as appropriate stages in design development.

#### 6.4.3. Initial sample

The supplier will provide to KUHN initial sample with a detailed inspection report (measured values of all dimensions, samples of materials and specific treatments results...)

When initial sample are ordered, serial production cannot be launched without official approval from KUHN.

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#### 6.4.4. Design changes

- Design change from the supplier

KUHN must be informed for any design change from the supplier, with sufficient anticipation and validate the new design before any delivery.

- Design change from KUHN

The supplier must have a process to identify, document and validate design changes. The supplier shall follow appropriate change control procedure.

### 6.5. Purchasing

#### 6.5.1. Selection of suppliers/subcontractors

Except special cases defined between KUHN and the supplier, the supplier must select its subcontractors itself.

It is the suppliers' responsibility to monitor its own supplier and to ensure and control the quality of all components and raw material that are purchased to manufacture components or parts for KUHN.

### 6.6. Production

The supplier must plan and carry out production activities to meet expected quality and service. Depending on production type, it should be managed by efficient use of, for example:

- Item data (item code data, bill of material...)
- Work instructions (routines, technological process..) with suitable equipment
- Production monitoring, measurement and tools availability
- Inspections tools management
- Product release process

### 6.7. Work instructions

The supplier should prepare documented work instructions, if necessary, for all employees having responsibilities for the operation of processes that impact product quality. These instructions shall be maintained and accessible at the work station.

### 6.8. Maintenance

The supplier must organise the maintenance for each equipment that affects the conformity of the product.

### 6.9. Management of production tools

The supplier is responsible for purchase, identification, maintenance and calibration of all fixtures and equipment necessary to maintain process and product control.

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Productions tools must be identified, maintained, stored with appropriate documentation follow up. When tools are provided by KUHN, see chapter 6.13.

#### **6.10. Production scheduling**

The supplier must implement an organization to meet KUHN delivery dates.

The schedule should be compatible with the product manufacturing lead time (including the supply lead time for the components and /or raw materials).

The supplier should implement a load/capacity calculation procedure from short to long term. He must analyse the results and identify the actions necessary (increase the machine capacity, increase in working ours, outsourcing, multi-skilled operators) to meet the KUHN' requirements.

The supplier should implement a real-time monitoring procedure for its production and be in a position to provide to KUHN at any time reliable information on the state of progress of the production.

#### **6.11. Production reporting**

To establish proper priorities, answer questions regarding deliveries, shortages, and the status of orders, the supplier shall use data of what has actually happened on the plant floor with on-hand and on-order balances, job status, shortages, and scrap.

These information may be helpful for cost controlling and productivity improvement.

#### **6.12. Identification and traceability**

The supplier must identify the products from the receipt of components and materials up to the delivery with a batch number, item codes or any relevant methods.

The quality management system of these suppliers should guarantee the traceability of raw materials and components used in the production process.

#### **6.13. KUHN property**

Products entrusted by KUHN shall be identified and isolated from the other products and each grade of material shall be stored separately.

In case of non-conformity affecting the entrusted product, KUHN shall be informed immediately. No corrosion issue reported more than 1 month after receipt will be considered as the responsibility of KUHN.

Products entrusted by KUHN (toolings, raw materials and components) must be stored under appropriate conditions to avoid deterioration, corrosion, scratches, impacts, etc.

The supplier must monitor the stock level of entrusted products from KUHN.

##### **6.13.1. Tools provided by KUHN**

When KUHN supplies tools, the supplier must check before starting production that they are correctly identified and well maintained

For any issue, contact the purchasing department to take adequate actions.

The supplier must keep an up to date list of all KUHN tools in its possession.

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#### 6.13.2. Raw material provided by KUHN

The supplier shall check that the material provided by KUHN matches the requirement specified in the order. This material must be exclusively used for KUHN orders. In case of reference mistake from KUHN, a replacement will be proceeded.

#### 6.13.3. Components provided by KUHN

The supplier shall verify that the components provided by KUHN correctly match the requirements specified in the order. These components must be exclusively used for KUHN orders. In case of reference mistake from KUHN, a replacement will be proceeded.

### 6.14. Handling and packaging

The supplier must adapt proper packaging with protection to avoid any quality or safety problem during handling and transportation. In specific cases, Packaging Instructions are provided to the supplier (available on KUHN portal)

### 6.15. Control of monitoring and measuring devices

The suppliers must determine the process of monitoring and measurement as well as the means needed to provide the evidence of the product conformity.

The measurement and quality control equipment used by the supplier should be recorded, identified, maintained, correctly stored and calibrated.

The supplier should specify and implement at least:

- Quality control skills
- Measuring tools to check the product

## 7. Measurement, analysis and improvement

### 7.1. Control plan

The supplier must define the control plan according to the manufacturing process stability and the possible KUHN inspections requirements.

If required by the control plan, records must be kept in order to prove that the product has been controlled and/or tested

These records must show clearly whether the product met the acceptance criteria or not (including shipping authorisation criteria)

We encourage the supplier to use error-proofing devices and techniques as a form of process control; especially for repetitive functions, difficult tasks subject to mistakes, or where the cost of error is high.

*Nota : A control plan is a documented description of the quality control of the product and the process in order to address the technical specifications*

*Each control plan should include:*

- *Identify the critical products and /or process requiring monitoring*

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- *Describe the actions required at each phase of the process including receiving, work in process, delivery with their frequencies as well as the means.*
- *Define the measurement records necessary for each inspection*

## **7.2. Non compliance**

KUHN suppliers have the responsibility to deliver conform products or services. If any quality issue, the supplier is requested to take immediate actions to contain, solve the situation, determine the cause and take corrective action to solve the problem identified and guaranty that it will not appear again.

The non-compliance can be identified at any time of the process (incoming inspection, handling, manufacturing, storage, assembly, shipping). It can also be detected by KUHN's customer.

Suppliers receive a first notification as soon as the NC report is validated by the inspection department.

After KUHN's analysis, the non-compliance is handled as such:

- Parts accepted
- Parts accepted by derogation
- Parts rejected and not reworkable (back to supplier or internal scrap)
- Parts rejected and to be reworked by the supplier
- Parts rejected and to be reworked by KUHN
- Parts rejected and to be reworked by a third-party supplier

## **7.3. Corrective and preventive actions - Request of answer**

The supplier must process a deep analyse of any non-compliance to identify root cause and corrective actions.

The supplier shall be asked by notification to give an answer to KUHN after detection of a non-compliance. This expected answer must be filled in the supplier portal according the 8D format.

We recommend that the supplier uses this 8D problem solving tool also for its internal non compliances.

## **7.4. Cost of NC**

For non-conforming products supplied to KUHN, including those that reach a KUHN customer, the supplier must cover all cost to correct the non-conformance.

A cost package to cover administrative disturbance will be required for each non conformity report.

## **7.5. Request for exemption**

The supplier can submit a request for exemption to KUHN for the part that are not fitting with the design requirements. The supplier must wait for the official answer from KUHN before any shipment.

- If the exemption is accepted, the supplier must identify the concerned parts accordingly.

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- If the exemption is not accepted, no delivery can be made for these parts (they are not in conformance with the requested specifications)

No official approval can be done by phone or mail. The supplier must use the specific form on the KUHN supplier portal.

### **7.6. Improvements**

Suppliers are expected to demonstrate a commitment to continuous improvement in products and services provided to KUHN. Its quality system organization should be focused on preventing the non-compliance.

Suppliers are expected to reduce the cost by implementing quality and process improvements.

## **8. KUHN supplier selection and evaluation**

Our Quality Assurance strategy aims to ensure in a permanent way the respect of our specifications in terms of quality products and supply chain without any additional inspection from KUHN. Its' achievement by the supplier is a condition for lasting cooperation.

This approach is built on:

- A reliable homologation process based on audits and action plans
- A supplier notation and classification system
- An Industrialization assistance
- Technical reviews
- PPQA (Process and Product Quality Assurance)

### **8.1. Homologation process**

The potential supplier is firstly evaluated by purchasing under several criteria such as

- Type of product or service (supplier's area of activity, catalogue, documentation)
- Industrial equipment (production and inspection)
- Reputation (customer references)
- Buyer's knowledge and experience
- Verification of the supplier offer (the supplier offers the product or service requested)
- Purchase price and terms (comparison of supplier offers)
- Deadline (supplier credibility, acceptance of penalties)
- Terms of delivery (appropriate packaging, easy routing, transport costs)
- Financial health
- Structure defined and durable (functions and resources)

During the initial contact and first offer review by purchasing, KUHN will decide if a SQA audit is necessary. These audits are performed by a KUHN audit team according to a program sent to the supplier before the audit.

## 8.2. Audit

The audit is oriented on the manufacturing organization and rates how the human resources and the equipment are managed to obtain the customer's satisfaction.

The audit document is a questionnaire with a number of 77 questions split in 6 chapters:

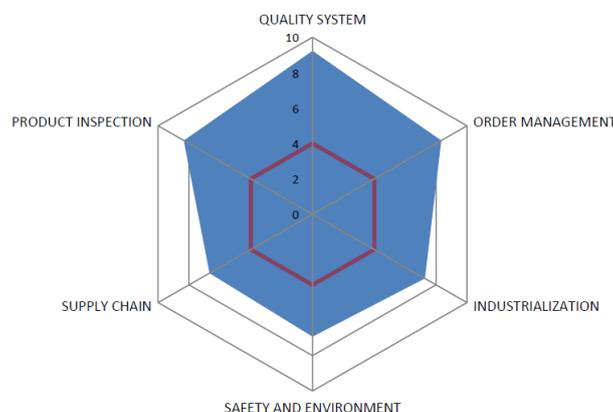
- Order management
- Contract review
- Industrialisation
- Environment and safety
- Supply Chain
- Product inspection

When the audit is completed the supplier will be ranked and homologated in one of 3 categories (S1, S2 or NH):

- **Supplier S1**  
This supplier demonstrates a stabilized organization. Action plan with some rooms of improvements can be requested to maintain and improve the notation.
- **Supplier S2**  
This supplier has a minimum organization to perform production or services for KUHN. Action plan needs to be carried out with corrective actions to reach the S1 level.
- **Supplier NH**  
This supplier doesn't reach the sufficient organizational level to produce parts for KUHN. Drastic improvement actions are mandatory before any development.

Classification levels defined in % are available on the KUHN portal.

The major rooms of improvement are shown in a "spider web".



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### 8.3. Actions plan follow up

The KUHN auditor will communicate an audit report to the quality manager or general manager who has been audited. The supplier is required to implement the action plan (content, responsible, lead time) and ensure about its effectiveness.

### 8.4. Supplier evaluation rules

KUHN follows for each supplier day-to-day performance indicators for delivery and quality in order to check if KUHN's expectations are fulfilled.

2 measurement indicators:

- **Quality:** This metric defines the number of parts accepted to the total of received parts within a selected period.
- **Delivery:** This metric defines the number of delivery within the period. Orders received before or after this period are considered as non performing.

These indicators allows to class each supplier according to his mark A, B or C and to his turnover with KUHN. Each class conveys the expectations of the KUHN group as regards the performance of the suppliers.

Using this classification:

C = Disqualification

B = Immediate improvement required

A = Satisfactory

- **PRIVILEGED:** With the mark A the supplier proves his ability to respect a level of quality and service that meets our requirements. The supplier is in a position to be favoured if there is an increase in business and to take part in the development of new products.
- **AUTHORISED:** The supplier has obtained the mark B subject to improvement. We ask him to correct his actions in order to progress in the short term towards the "Privileged" class.
- **CONDITIONAL:** The mark C expresses an insufficient performance that disrupts our production. The supplier has to consider a plan of improvement in order to avoid an exclusion from the panel.
- **TRANSITIONAL:** This supplier realizes a small turnover that can progress insofar as he reaches the mark A.

In addition, KUHN follows an 8D answers metric that indicates the reactivity and the relevance of the supplier answer.