



Quality management guide for suppliers

(Rev. 11/2010)

Foreword

Quality is a central factor in competition, and, it goes without saying, a commitment to our customers all over the world.

We are aware that our suppliers have a considerable influence on the quality of Kärcher products. The aim of this guide is to help you to put the requirements of our common market into practice.

Only on the basis of trusting collaboration with partners who place equally high demands on the quality and quality management of their products can we make high-quality products at optimal prices.

That is why we want to introduce our quality management system to you.

Together with you, we want to address and lay down all the quality measures required in the process of creating a product.

The goals we aspire to in working together:

- To reduce development times and costs
- To find the most cost-efficient solution for both companies
- High-quality, robust products
- To lower the risks and costs of mistakes
- Series production on schedule with technically perfected products.

In order to achieve these objectives, we are depending on cooperation with our suppliers in an atmosphere of trust, fairness and partnership.

Alfred Kärcher SE & Co. KG

Executive Vice President of Operations Quality

Supplier Quality Engineer

Thomas Beutel

Michael Baier



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1 Introduction

Kärcher, a family-owned firm based in Winnenden in the German state of Baden-Württemberg, is the world's leading provider of cleaning equipment of all kinds. They include cleaning equipment for contract cleaners, industry, trades, car dealerships, hotels and restaurants, farmers, local government and private households. Our core competencies are the cleaning of means of transport, buildings and floors, along with the purification and delivery of liquids.

Kärcher's product portfolio includes pressure washers, vacuums and steam cleaners, pumps for home and garden, sweepers and scrubber-driers, car and commercial vehicle washes, detergents, dry ice blasting machines, waste water and drinking water treatment plants and water dispenser.

The goal of our work is our customers' satisfaction.
That is why high quality of both products and services
is one of our foremost corporate objectives.

The quality of our products is an essential component of our corporate policy as a producer of brand-name goods. Quality creates confidence and is an indispensable prerequisite for sustainable growth in our markets worldwide.

In the context of international competition and against a background in which quality, as well as price and service, is an important factor influencing a decision to buy, Kärcher makes product quality an indispensable criterion. This ensures the success of our products on the international market, thus securing the livelihood of both Kärcher and our suppliers.

In order to guarantee product quality, Kärcher has set up a comprehensive quality management system. In the past, quality management (QM) was essentially geared to identifying and eliminating faults. However, faults that had already occurred gave rise to costs, caused deadlines to be overrun and affected customers. Now, preventive measures are taken to ensure that faults do not happen in the first place.

Thereby is the "No-error-quality" of all suppliers a necessary condition, which is only to achieve and to protect by common effort of Kärcher and its suppliers.

Fault avoidance takes priority over fault elimination

Statement of the board of directors regarding quality

The Kärcher guiding principles on quality set out below express in brief the things are important to use. Quality does not just happen by itself. Everyone involved in the production process must contribute to producing and improving it.

1. Satisfied customers are the aim of our work. That is why one of our foremost corporate goals is to provide products and services of the quality customers want. The same applies to services provided in our name by dealers and customer service providers.
2. The quality yardstick is set by the customer. It is the customer's verdict on our products and services that counts. Our quality goal is always "zero faults" or "100% correct."
3. Every company employee has a contribution to make in achieving our quality aims. So it is the duty of every employee to produce impeccable work.
4. All work should be done correctly from the outset. That not only improves quality but reduces our costs. Quality enhances economic viability.
5. In addition to the faults themselves, the causes of faults must be eliminated. Fault avoidance takes priority over fault elimination.
6. **The quality of our products depends to a considerable degree on the quality of bought-in parts. That is why we demand the highest quality from our suppliers, and support them in pursuing common quality goals.**

This guide is not a set of rigid rules but an aid, reflecting current requirements, to ensure the quality of bought-in parts. At the same time it sets out the demands we place on suppliers with whom we will work in a long-term partnership to the satisfaction of our common customers.

2 Product safety and product liability

Kärcher bears responsibility for its products to those who buy them. Thus Kärcher also bears responsibility to its customers for any bought-in parts incorporated.

However, the manufacturing responsibility for the bought-in part incorporated in the final product always remains with the supplier.

Therefore the supplier is obliged to do everything technically and organizationally possible and reasonable to produce safe, faultless products and to minimize the risks of product liability.

We therefore expect

- Well-developed quality consciousness throughout the supplier's company.
- The required product safety to be guaranteed in planning products and processes.

- Safe processes to be designed in advance through preliminary quality planning.
- The occurrence of faults to be avoided by quality management measures accompanying series production.
- Suitable measures to be taken to identify and rectify faults, and to rule out the possibility of delivering faulty parts.
- The introduction of a system to trace back materials, so that faulty units with the supplier and with Kärcher can be reliably limited.

The supplier's goal must be to deliver 100% faultless goods.

3 Quality assurance in the acquisition of bought-in parts

To manufacture our products, we need an extensive range of bought-in parts.

That is why our suppliers play a considerable part in achieving the quality of our products in terms of faultless condition and reliability. Only together can we achieve customer satisfaction.

In order to guarantee the quality of bought-in parts and to create the foundation for smooth cooperation with our suppliers, we aim through this brochure to give **you** more details of measures and requirements relating to the placing and processing of orders.

Quality assurance in the acquisition of bought-in parts is divided into several steps:

1. Supplier selection on the basis of information requested or supplier audits
2. Testing of initial samples
3. Inspection of incoming goods
4. Continuous supplier assessment
5. Support to suppliers in pursuing common quality goals

3.1 Supplier selection

Due to the major significance of the quality of bought-in parts and products, cooperation with our suppliers is of utmost importance. That is why we obtain a general overview of a future partner right from the initial inquiry stage. This is done partly at trade fairs and on the Internet, but also on the basis of information provided by the supplier, for example on its machinery capacity. A visit to your premises helps us to get to know your company better.

We then draw up a supplier profile. In this we go into various subjects that are important to us and which we set store by in your company (costs, technology/innovation, quality, flexibility/service and environment). If we find the result satisfactory we can take further steps towards collaboration.

If need be (in the case of large numbers of units or special products) special supplier audits (system or process audits) are carried out. These give us an overview of your quality management system in terms of its ability to achieve quality. In other cases (e. g. very small quantities or standard parts) we may dispense with an audit. In this case we take you on straight away as a Kärcher supplier.

In addition to the fulfillment of technical specifications, price, and ability to meet delivery deadlines, your quality management is a fundamental criterion for selection as a supplier.

With new suppliers, we attach particular importance to:

- The organization of quality planning
- Initial sample testing
- The performance of incoming goods, production and final inspections
- The use of statistical methods
- Fault analysis and monitoring of the efficiency of measures to put a stop to faults
- The keeping and filing of test protocols
- Monitoring of measurement equipment
- QM system, description of processes in your operation
- Preventive measures such as fault potential and influence analysis (FMEA), QFD (see also **point 11.3** Obersontheim sales center)

1.1.13.2 Submission of offer

After receiving an inquiry from Kärcher, when submitting an offer the supplier is asked to check whether

- All necessary specifications and documentation for the product have been received.
- The requirements are fully and unambiguously documented
- The key features are known and documented
- The requirements can be met.

If documents are missing or unclear, it is the supplier's duty to get in touch with Kärcher to obtain clarification.

1.1.23.3 System and process audit

We carry out system and process audits of our suppliers in order to identify the potential for improvement in your QM system and to institute appropriate measures.

The supplier allows Kärcher on an agreed date to carry out an inspection of its QM system, look at available documents and examine the capability of its processes.

The audit is carried out by means of a specific Kärcher questionnaire.

The system audit findings document the effectiveness of the supplier's QM System. The audit forms the basis for the decision whether Kärcher and the supplier can work together.

With new suppliers the first priority is to carry out a process audit.

In process audits we observe and inspect the process chain for planning and manufacturing a product, in order to see whether it meets the main requirements for fault-free manufacture.

Other possible reasons for process audits can be

- to identify the causes for deviations in the quality of goods supplied
- to optimize processes
- to inspect the process chain if production location is moved
- new production technology.

Depending on the reason, the audit can include all processes, or partial processes required in the planning and manufacture of a product.

As part of this more in-depth quality capability assessment the supplier will provide evidence of the instruments and/or criteria applied to ensure its ability to supply products of the consistent quality required.

Quality capability will be assessed on the basis of a checklist, with quality assurance measures being evaluated according to their level of development on a points system ranging from "non-existent" to "optimal."

Detected weak points/risks will be discussed. The supplier will be asked to take improvement measures.

3.4 Quality assurance agreement

Before placing an order we enter into a quality assurance agreement which forms the framework for trusting collaboration in with our supplier.

It includes agreements relating to requirements of

- The quality management system
- Pollution-free products
- Testing instructions
- Documentation
- Initial sampling
- Quality audits

- Guarantees and liability.

(for template see <https://supplierinfo.kaercher.com>)

4 Free Pass Suppliers

The aim of appointing a supplier as a self-checking supplier is so that we can dispense with the quality inspection of goods received. Only identity, quantity and damage during transport will be inspected.

In order to become a self-checking supplier, the following criteria must be fulfilled:

- The supplier must have been supplying Kärcher for at least half a year and must have been below his target ppm during this period (see also Supplier Assessment).
- The supplier carries out its own in-house initial sampling.
- A quality assurance agreement must have been signed.
- Kärcher has carried out a successful system audit.
- Testing instructions and documentations are well-matched p. r. n.

5 Technical documents

The technical documents form the basis of collaboration with our suppliers. Kärcher refers to these in placing orders and reaching agreements.

Technical documents in this sense are:

- Kärcher drawings
- Kärcher outsourced parts order forms (FTB)
- Production and checking regulations (FKV)
- Kärcher test regulations and palleting plans.
- Other standards and regulations (see annex: regulations for the manufacture of molded and injection-molded parts, packaging regulations)
- Documents which have a Kärcher stamp of approval.

Our suppliers and their subcontractors undertake to manufacture in accordance with the latest technical documents. They are supplied with these when an order is placed, or if any alteration is made, by the central purchasing department at the Winnenden plant or by the buyers at the Illingen, Bühlertal, Obersontheim and Winnenden plants or the Sales center.

No departure from the technical documents may be made without Kärcher's prior agreement in writing. Alterations made by the supplier to the design drawings must be approved by Kärcher.

6 Initial sampling procedure

With new suppliers or new bought-in parts, initial samples based on the technical documents supplied are requested, together with an initial sample test report.

The initial sample test forms part of a parts approval procedure. Thus, for Kärcher it is an elementary component for guaranteeing the quality of bought-in parts.

The procedure involves checking material, dimensional and functional features against the requirements stipulated in the technical documents (e. g. drawings, specification, test regulations).

The first initial sample test is carried out by the supplier. This enables faults or deviations to be identified and corrected more quickly. The test for adherence to the agreed specifications must be carried out using appropriate testing means and methods.

The supplier draws up an initial sample test protocol (for template see <https://supplierinfo.kaercher.com>) containing the desired and actual values of the agreed specification. This is handed over to Kärcher together with the initial samples.

Approval of the initial sample by Kärcher does not release the supplier from responsibility for the quality of the subsequent series deliveries.

In the following cases the supplier must always produce initial sample test reports as a matter of principle:

- New parts
- Changes to the technical documents
- Changes in the production process (use of new or shifted tools and/or production facilities or lengthy interruption in production, also at subcontractors)
- Change in place of production (manufacturing location)
- Change in the source of supply of "critical" intermediate products, if in the supplier's proper judgment this has a disadvantageous influence on important product features.

In sending initial samples and drawing up initial sample test reports, attention must be paid to the following points:

1. Initial samples must be accompanied by the supplier's test findings in the form of initial sample test reports and measurement sheets (Kärcher initial sample test report see <https://supplierinfo.kaercher.com>).
2. The reason for sampling, e. g. modification, new part, must be stated.

3. Initial samples must have been fully manufactured with series-production machinery and in series-production conditions, and carefully tested with in respect of all quality characteristics. If you cannot carry out tests yourself, have them done by external testing authorities. If you need addresses, we will be pleased to assist you with them.
4. Initial sample consignments must be clearly marked “initial sample” on each package and on the delivery note.
5. The number of samples required in the individual case will be stipulated when the order is placed. As a rule, at least five samples are required.
6. In the case of multiple tools, samples from each application must be measured and supplied separately. Series deliveries will be approved when the samples meet requirements.
7. Series delivery may not be commenced without Kärcher’s go-ahead in writing.
8. Samples for which the go-ahead has been given, and the test findings, must be kept until the relevant part is discontinued or modified (see also **Point 12.3** Obersontheim sales center).

7 Ensuring product quality in series production

Regardless of Kärcher’s inspection of incoming goods, it is solely the supplier’s responsibility to adopt quality assurance measures to guarantee that the agreed product quality is maintained.

Quality assurance measures:

- Using competent personnel
- Planning and making a written record of the required production and testing operations and the related means of production and testing, as well as the procedure to be adopted if reworking is needed.
- If required, a failure mode and effect analysis (FMEA) of production and testing processes
- Using suitable equipment and procedures
- Process release and process supervision
- Carrying out machine and process capability investigations
- Statistical process control (SPC), use of quality control cards
- If processes are disrupted, faulty parts must be sorted out, causes analyzed, improvement measures instituted and their effectiveness checked.
- Labeling faulty parts so as to rule out the possibility of mixing up perfect and faulty parts. Faulty parts that have been reworked must be re-tested.

- If products not conforming to specification are to be supplied, a deviation permit must be obtained. The consignment must be clearly labeled.
- Kärcher must be informed without delay of any deviations identified retrospectively.

Units or batches identified as non-conformity must without delay be labeled and stored accordingly (restricted access store), so as to rule out the possibility of further processing and / or delivery.

In the case of parts or batches which have already been processed or delivered, inspections must be instituted immediately.

If parts have already been delivered, Kärcher must be informed without delay.

The cause of the fault must be analyzed and reliably eliminated by suitable process improvements.

A written record must be kept of the cause of the fault, its consequences and corrective measures.

8 Continuous assessment of suppliers

Continuous assessment of suppliers enables to identify the current position and any changes in quality capability.

After approval and commencement of series production for Kärcher, all suppliers are regularly assessed in terms of:

- the quality of goods received
- non conformity rate
- costs resulting from quality deficiency
- pricing
- accuracy of deadlines and quantities
- time taken to respond to inquiries, orders, changes
- cooperation and flexibility

8.1 Non-conform units

Non-conformities will be reported in written way to the supplier.

As a matter of principle, deliveries containing faulty parts or products will be returned, together with a deadline set for replacement (depending on the degree of urgency).

If ever this should be impossible for scheduling reasons, the measures that need to be taken will be agreed with the supplier.

Supplying Kärcher's ongoing production always has top priority.

If the delivery cannot be returned the supplier will have the option to sort out non conformity parts directly on Kärcher's premises. Otherwise the parts will be sorted by Kärcher employees at the supplier's expenses.

All expenses incurred as a result of non-conform products will be borne by the supplier.

8.1.1 Inspection of incoming goods

We will execute mainly spot-checks. The goods will be compared if they are conform with the technical documentation. In case of deviations from the defined quality we will calculate the number of non conformity units as followed:

- the proportion of non-conform units in the spot-check is projected to the total number of units delivered
- in case of sorting / reworking, the quantity of rejects = actual number of non-conform units identified.

If a delivery is returned, the supplier is given the opportunity within 5 working days to state the actual number of non conformity units (FE_{Kunde}) among the returned goods. This actual number is then incorporated into the non-conform quotation calculation. (FE_{WE} is then replaced by FE_{Kunde}). Corrections after the end of a quarter can no longer be taken into account.

8.1.2 Following processes or assembling

All non-conform units will be collected and sent back to the supplier.

8.1.3 Classification of complaints

Each complaint sent to suppliers will be classified by the responsible Quality manager. Corresponding to the classification the periodical ppm rating for suppliers will be calculated.

Classification

K10-K16	fault caused by Kärcher-organisation	<ul style="list-style-type: none"> Order information not up to date other mistakes in communication with suppliers mainly caused by Kärcher
L10	accepted complaints	<ul style="list-style-type: none"> minor non conformity, no decrease of the function, goods will be used for production without rework and selection
L11	Acceptance in spite of failures	<ul style="list-style-type: none"> Due to capacity bottlenecks goods are urgently required. Failure according to classification L10 won't be accepted furthermore.
L12	Rework at supplier's expense	
L13	Partly scrapping at supplier's expense	
L14	Complete scrapping at supplier's expense	
L15	Partly return of goods at supplier's expense	
L16	Complete return at supplier's expense	

Kärcher will inform you in writing about each complaint and classification.

If you don't agree with the calculation / classification of the complaint you should get in contact immediately with our responsible Quality manager.

1.1.28.2 Quotation of non-conform units (Defect parts per million; DPPM)

DPPM means the number of non-conform units per million units delivered in relation to the overall quantity delivered in a period.

The non-conform quotation (DPPM) is calculated by the following formula:

$$\text{non conformity(DPPM)} = \frac{FE_{\text{Montage}} + FE_{\text{WE}}}{\text{number_delivered}} \cdot 1.000.000 \text{ (1 Mio.)}$$

FE_{Montage}: Number of non conformities reported by assembly, during following processes or by using the product

FE_{WE}: Number of non conformities reported by incoming goods inspection

Only complaints with a classification L11 – L16 are considered in the calculation of the DPPM figure.

Depending on the product different target groups where fixed. For each group we discussed a maximum non conformity proportion.

Together with the responsible Quality managers we assign every year the suppliers to those groups.

We compare, if suppliers has met the targets or if they exceeded them.

The supplier is informed of the outcome of these assessments in a quarterly supplier's letter. Exceeding the non-conformity proportion we will request in written way measures you will do to improve in future the quality of your products or organization.

The agreement of DPPM-Values are no from Kärcher accepted quality level. All non-conform parts will be principle not accepted and will

9 Technical alterations procedure

In the case of the following alterations to product and / or process, Kärcher must be given **prior** notice in writing:

- Product alteration
- Change in the material used
- Change in the manufacturing process
- Use of new tools
- Change in the production location
- Change of subcontractor

No changes may be made without a written go-ahead from Kärcher.

After receiving the go-ahead and implementing the change, initial sampling must be carried out without being asked.

The supplier undertakes to work to the most up-to-date drawings approved by Kärcher. Only in exceptional cases and with written approval can there be any deviation from this instruction.

10 QM measures accompanying series production

10.1 Employee qualification

All employees who carry out quality-relevant work must be given appropriate training, and evidence must be provided of this training.

10.2 Qualification of subcontractors

The supplier is responsible for its choice of suppliers, except where Kärcher nominates specific subcontractors. The supplier must guarantee the quality capability of its subcontractors.

It must ensure that its suppliers use appropriate QM systems. The supplier is in any case responsible for the product supplied.

1.310.3 Labeling of deliveries

Each delivery must be accompanied by an appropriate delivery note or dispatch sticker.

The label must contain the following information:

- Name of supplier
- Description of parts
- Quantity / Quantity per transport unit
- Dispatch and production date
- Internal order number
- If appropriate, test ID code

Labeling must be at the level of the smallest packaging unit (Schäfer box, carton, bag, etc.).

In addition, each delivery unit (crate, pallet, etc.) must be visibly labeled.

In the case of the following deliveries, the goods and delivery note must be specially labeled.

Type of delivery	Labeling
First delivery after a product change	Product change, post-change status
Returns that have been reworked or sorted	Redelivery after reworking
Sample deliveries	Sample description (e.g. initial sample)
Deliveries after a special go-ahead has been given	Delivery with special go-ahead from dated ...

11 Quality assurance in our factories

11.1 Winnenden

All the above procedures apply without restriction. (Points 1-10)

11.2 Obersontheim

All the above procedures apply without restriction. (Points 1-10)

11.3 Obersontheim sales center

The Obersontheim sales center is the spare parts and accessories store.

Its main duties are storage and dispatch.

Packaging is one of the most important features affecting quality.

Parts are stored for months (years). For this reason, packaging has a special significance for the quality of goods delivered.

Additional packaging requirements are:

- neutral packaging without the imprint of outside companies
- neutral label containing machine-printed Kärcher parts number

Please obtain the necessary regulations in good time from your contact in our sales center.

The following additions to Points 1-10 also apply:

to 3.1 Supplier selection

Suppliers are usually the same companies which supply production, however, considerably smaller quantities are required in the Sales Center.

In addition, one further important demand is placed on suppliers:

→ they must be prepared to supply packaged goods.

Ultimately, however, supplier selection takes place centrally in Winnenden.

to 4 Criteria for self-checking/ free pass suppliers

A further criterion for becoming a self-checking supplier to the Sales Center is:

→ that the supplier must deliver its products in the **packed** condition we require.

to 6 Initial sampling procedure

In the context of initial sampling, attention must also be paid to the following points:

- In the case of inquiries about packaging options the product must also be submitted in a packed condition.
- The packaging must also be approved in writing by our company.

to 8.2.2 Faulty units **Identified by Kärcher**

Parts whose packaging are not as agreed, or is absent, will also count as faulty.

In this case the delivery, if schedules permit, will be returned.

Should this not be possible, the supplier will have the option of repackaging its products at our premises, or we will repackage the parts at the supplier's expense.

11.4 Bühlertal

All the above procedures apply without restriction. (Points 1-10)

11.5 Illingen

All the above procedures apply without restriction. (Points 1-10)

12 Concluding remarks

In order to do justice to our quality principles, in this guide we have informed you, under the motto "**Quality as a common aim**" of the prerequisites for successful collaboration with Kärcher.

We are sure that this guide has not been able to answer all your questions in as much detail as it perhaps should have done.

Our Central Quality Manager and Central Purchasing Manager will be happy to answer any further questions relating to quality, as will the relevant quality managers and buyers in our Winnenden, Illingen, Obersontheim, Bühlertal and Gissigheim plants.

13 Contact information

<p>Alfred Kärcher SE & Co. KG</p> <p>Alfred-Kärcher-Str. 28-40 71364 Winnenden</p> <p>Central quality department Telefon: (07195) 14-3089 Telefax: (07195) 14-3198</p> <p>Central purchasing Telefon: (07195) 14-2237 Telefax: (07195) 14-2104</p>	<p>Plant Obersontheim</p> <p>Schlossstr. 1 74423 Obersontheim</p> <p>Quality department Telefon: (07973) 692-6435 Telefax: (07973) 692-6447</p> <p>Purchasing Telefon: (07973) 692-6429 Telefax: (07973) 692-6422</p>	<p>Plant Bühlertal</p> <p>Eberhard-Herzog-Str. 12-20 74423 Obersontheim</p> <p>Quality department Telefon: (07973) 692-6192 Telefax: (07973) 692-6181</p> <p>Purchasing Telefon: (07973) 691-6189 Telefax: (07973) 691-6199</p>
	<p>Plant Winnenden:</p> <p>Quality department Telefon: (07195) 14-3324 Telefax: (07195) 14-2118</p> <p>Purchasing Telefon: (07195) 14-2456 Telefax: (07195) 14-2885</p>	<p>Obersontheim Sales center</p> <p>Irene Kärcher Str. 2-8 74423 Obersontheim</p> <p>Quality department Telefon: (07973) 692-6282 Telefax: (07973) 692-6258</p> <p>Purchasing Telefon: (07973) 692-6328 Telefax: (07973) 692-6317</p>

Alfred Kärcher SE & Co. KG
 Alfred-Kärcher-Straße 28-40
 71364 Winnenden/Germany
 P.O. Box 160
 71349 Winnenden/Germany
 Tel. +49 (0) 7195/14-0
 Fax +49 (0) 7195/14-2212
www.kaercher.com