

Quality Assurance Guidelines for Suppliers of Phytron GmbH

Preamble

A decisive factor in establishing our value and position in the stepper motor market is the quality of our products and services.

A properly designed quality management system (QM system), well-trained, quality-conscious employees, the quality of processes and procedures and adherence to schedule determine the quality capability of a company.

Phytron's QM system is certified in accordance with ISO 9001 and EN 9100. "Quality" is defined as "the totality of the characteristics and features of a product or service relating to its suitability to meet specified or expected requirements". Therefore, to Phytron, quality means meeting requirements and expectations.

The quality of Phytron products is heavily influenced by purchased goods and services. The quality capability of a supplier and the quality of its products are important criteria in our decision to purchase. Therefore, we subject the QM systems of our suppliers to the requirements and expectations described in these Guidelines. We regard our suppliers as partners. These Guidelines are intended to contribute to avoiding problems, ensuring smooth interactions between Phytron and our suppliers and minimizing quality-related costs.

The objective of the supplier's efforts must be to ensure acceptable delivery in accordance with the contractually specified conditions, regardless of whether such deliveries are made by the supplier directly or by its sub-suppliers.

These Guidelines are an integral part of Phytron's General Terms of Purchase and supplement the terms of the contract and the specifications contained in the technical documents.

In General

In general, the supplier is responsible for the quality of its performance. An effective QM system that meets the requirements and recommendations of Standard ISO 9001 is desirable to guarantee that the performance meets Phytron's specifications.

The purpose of a QM system is to prevent defects, recognize deviations from the specifications at the earliest possible time and finally eliminate the causes of the defects in a timely manner.

To this end, the supplier must establish suitable measures and monitor and document their implementation. Phytron must be able to inspect instructions and records. Acceptance of performance or monitoring of the supplier by Phytron do not release the supplier from its responsibility for quality.

Supplier's Responsibility of the Quality of its Performance

The supplier is responsible for providing quality goods and services. To this end, it is necessary for the supplier to establish, use and refine an effective QM system, which is commensurate to its structure, company size, and business activities. The elements to be included in a QM system are described in Standard ISO 9001. Proven use of an appropriate and effective QM system, which consistently seeks to avoid defects in all phases of product development, engenders trust between the supplier and its customers. If additional specifications are necessary, they can be included in supplementary quality assurance agreements.

The supplier should develop a level of consciousness of the contribution it makes to the conformity of its products and services and product safety. In addition, employees should be aware of the significance and importance of ethical conduct as part of product execution.

Counterfeit Parts Prevention

The supplier shall take suitable measures to prevent the use of counterfeit parts. Since the performance of counterfeit parts is unforeseeable, counterfeit parts can have serious effects on operational safety and production costs. Sensitizing all persons in the

supply chain can contribute to improved knowledge about counterfeiting and to inform all persons of how to prevent fraud.

Measures to safeguard procurement from uncertain source such as unknown broker

If a component can only be procured from an uncertain source, risk minimization must be agreed with Phytron. Internal release patterns, test setups, certificates, special test houses etc. can contribute to risk minimization. Timely recognition of procurement from an uncertain source should allow adequate time for reaction without causing delivery delays.

Training of Employees

It is of great importance for the supplier's employees to be adequately trained in quality assurance techniques. Only then can methods be applied efficiently, and the correct measures be initiated based on technically sound analysis. Therefore, it is expected that employees will be properly trained.

Sub-Suppliers

The supplier is responsible for the goods and services provided by sub-suppliers. The supplier shall ensure that its sub-suppliers meet the requirements of these Guidelines. This means that the supplier must ensure the quality capability of its sub-suppliers throughout the entire supply chain.

In justified cases, the supplier shall grant Phytron, its customers and the relevant authorities, if necessary, access to the areas involved with the order and the relevant records at all levels of the supply chain.

Evaluation of the QM system by Phytron

Phytron reserves the right to conduct audits to evaluate the QM system of the supplier and its sub-suppliers, if necessary. In so doing, Phytron will accept the reasonable restrictions required to protect business secrets. Phytron shall inform the supplier of the results of the audit.

If Phytron concludes that measures must be taken, they shall be coordinated and agreed upon with the supplier. The measures shall be implemented in accordance with an established schedule.

Technical Documents

The documents/data transmitted contain confidential and/or legally protected information. Disclosure of the same must be limited to the amount necessary to fulfill the order. Unauthorized copying and disclosure are not permitted.

The supplier shall utilize a distribution system to ensure that all affected offices always have the most recent, technical documents approved by Phytron. It shall also ensure that documents that have been rendered invalid by changes are removed. If the technical documents specify sources of supply and the supplier wishes to use different ones, it must obtain the approval of Phytron. The supplier must allow Phytron's agents to inspect all technical documents relating to Phytron products.

Parts Requiring Documentation

The supplier must document its quality assurance measures and test results with respect to parts requiring documentation. The documents created must be retained in accordance with the relevant retention periods and availability requirements. In addition to the "Quality Assurance Guidelines for Suppliers of Phytron," all other agreements concluded with the supplier must be followed.

First Article Inspection (FAI)

Before the mass production of parts manufactured specifically for Phytron, initial samples must be submitted for:

- new products,
- modified products,
- the use of new or relocated tools or production facilities,
- modified production processes.

FAI's must be manufactured using standard means of production and under standard conditions. The number of samples required shall be coordinated on a case-by-case basis. There shall be no delivery of mass-produced goods without the written approval of Phytron.

Testing

The characteristics to be tested must be specified, and the test results must be documented.

After intermediate and final testing, the product's stage of production and the test results must be identifiable on all products and parts.

The determination for testing accuracy shall depend on the execution of the manufacturing processes under controlled conditions.

Knowledge of recognized quality methods is the prerequisite for correct and reasonable application of testing accuracy and testing frequency.

Measures to be Taken when Nonconformances Are Determined

If inspections indicate that parts are defective, the production process must be promptly corrected and Phytron must be informed. If it is determined in the localization of the fault, that defective parts have – or may have – already been delivered, Phytron shall be promptly informed of this.

Deviations from the specifications must be agreed to by Phytron.

Reworking

The supplier must ensure that the rectification of defects in its products have no adverse effects (on dimensions, function, lifetime, etc.).

Reworking, which changes the characteristics of the product or results in deviations from the specifications, must be approved by Phytron – including the planned defect rectification procedure. Reworked products must be labeled with information regarding the reworked features.

Obligation to Provide Information

For all changes for which Phytron does not require initial samples and prior approval, the supplier shall conduct all necessary tests to ensure compliance with the technical documents. In addition, the supplier shall inform Phytron of the following:

Changes to production processes, including those made by sub-suppliers (e.g. production method or production conditions)

- A change of sub-suppliers
- Changes in testing methods/facilities
- Modifications of tools
- A change to the production facility (e.g. of the location or sphere of responsibility)
- Changes to sources of supply for 'critical' intermediate products or primary materials, if they may have an adverse effect on production characteristics.

Labeling of Deliveries

The products, transport containers, and shipping documents delivered to Phytron shall be labeled in accordance with the relevant agreement so that they are clearly identifiable. Parts that deviate from specifications must be clearly labeled.

Packaging

The packaging shall ensure the quality of the product from the supplier until the intended use at Phytron.

If Phytron has not provided packaging requirements, the supplier shall propose packaging that is suitable and appropriate for the product, taking transport risk in to account. Phytron's regulations regarding package units, quantities and labeling shall be followed.

Preventive Maintenance

The supplier shall maintain a formal system for routinely inspecting its facilities, which shall include appropriate documentation. The supplier must prove that it is maintaining its quality capability and taking timely measures against wear and tear to its facilities.

Control of Monitoring and Measuring Resources

The supplier must maintain a system that identifies the facilities and measuring equipment used to evaluate characteristic values and approve them for use. This measuring equipment and these testing facilities must be regularly monitored, calibrated, repaired, and taken out of service, if necessary.

The aforementioned requirements shall also apply to production facilities used as measuring equipment.

Phytron's Inspection of Delivered Parts

Incoming goods shall only be sample-tested by Phytron on a random basis in accordance with sampling rules, which are currently in effect.

This inspection of incoming goods may be further reduced (up to "skip lot sampling inspection") for suppliers whose parts have a positive quality history and who have proven their quality capability under these Quality Guidelines. If defects for which the supplier is responsible are not discovered until the parts are used, the supplier shall bear the costs of eliminating the defects. The parts already delivered shall be shipped back to the supplier or reworked at Phytron. The supplier must immediately replace the parts or provide appropriate personnel to eliminate the defects, if necessary.

Evaluation of Deliveries

The supplier shall be notified of every complaint in form of an 8D-Report. We expect that measures will be taken to permanently prevent defects based on the 8D-Report. Every delivery will be recorded and used as part of the supplier's evaluation.