

Standard Quality Requirements for Suppliers

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1.0 Aim and purpose

These instructions define the standard quality assurance requirements for suppliers to VERWO AG (hereinafter referred to as VERWO). All technical and organisational framework conditions between VERWO and the supplier are regulated with the aim of ensuring the quality of the products and services ordered.

2.0 Scope

These quality requirements apply to all deliveries of individual components and/or assemblies, including purchased services, and must be complied with by all suppliers. If other quality requirements are specified as part of the order (e.g. test plans, standards, etc.), the other quality requirements described here still apply.

3.0 Responsibility

The supplier/manufacturer is responsible for maintaining the requirements of this instruction. VERWO quality management is responsible for the production and content of this work instruction.

4.0 Viability

Any ambiguities in the order documents or requests for modifications to the product or services that deviate from the order specification are to be clarified in writing via the VERWO Purchasing team before starting production.

5.0 Testing methods

Appropriate testing methods for the components are to be defined by the supplier and, if necessary, documented with a test plan.

6.0 Measuring and testing equipment

The supplier will ensure that suitable measuring and testing equipment is used. All measuring and testing equipment used must be subject to regular and documented inspection (calibration).

7.0 Qualification of personnel

The supplier will ensure that all tests are carried out by trained and qualified personnel. The certificates for the certified test personnel required for specific tests (non-destructive tests, weld seam testing, etc.) are to be provided on request.

8.0 Scope of testing

8.1 Initial sample

If required (as noted on the order), an initial sample inspection can be requested for products and services that are being produced for the first time. All specified features are to be measured/inspected on at least one component and documented in an initial sample inspection report. The printed initial sample inspection reports (including all measurement and inspection reports) are to be included with the delivery.

8.2 Volume production

Irrespective of the production batch size, at least two components are to be measured/tested (first and last items manufactured in a production batch) and the results are to be documented. These reports are to be provided on request. The features to be tested are described in the following table depending on the type of manufacture.

Type of Manufacture	Dimensional Tolerances	Geometrical Tolerances	Positional Tolerances	Visual Inspection	Surface Quality
Prototype (e.g. casting, sintering)	≤ 1 mm (e.g. ≤ +/- 0.5 mm ≤ +0.2 mm / -0.8 mm)	≤ 1 mm	≤ 1 mm	Yes	-
Forming (e.g. chamfering, deep drawing)	≤ 1 mm	≤ 0.5 mm	≤ 0.5 mm	Yes	-
Separating (e.g. laser cutting, sawing)	≤ 0.2 mm	≤ 0.2 mm	≤ 0.2 mm	Yes	-
Machining (e.g. turning, milling)	≤ 0.2 mm	≤ 0.2 mm	≤ 0.2 mm	Yes	≤ Ra 1.6 (N7)
Joining (e.g. welding, soldering)	-	-	-	Yes	-
Coating (e.g. painting)	-	-	-	Yes	-

Table 1: Features to be tested

In addition to the obligatory first and last component test, further measurements/tests may be required (e.g. due to the complexity of the products and services, stability of the manufacturing process, history of errors, modifications to the manufacturing process, etc.). The definition of an appropriate scope for the test (number of components and features to be tested) is to be established by the supplier.

9.0 Visual requirements

The components to be delivered must be visually perfect. Bulk deliveries must correspond to the approved sample.

10.0 Raw material

An inspection certificate 3.1 as per DIN EN 10204 can be demanded (note on the order) for metallic components. If this request cannot be met, an alternative proof of material must be agreed with the purchaser.

11.0 Deviations / concession request

If a component does not meet the requirements or specifications of the order, this component may not be delivered without special release in writing from VERWO (so-called concession request).

The 'Concession request' form can be downloaded from the supplier download area on VERWO's home page. If other request forms are used, it is essential that they contain at least the same information as the VERWO form.

12.0 Obligation to retain documents

All documents associated with the relevant delivery are to be archived for at least 10 years and must be available to responsible VERWO personnel at any time at least on site.

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