1. Contractual Basis

Drawing, 3D models, technical delivery terms and other technical specifications for the part to be supplied constitute the contractual basis for the initial sample inspection.

The initial sample inspection demonstrates that the part as “initial sample” (definition: manufactured using the final production equipment and tools under series production conditions), including all required documentation, complies with the contractual requirements.

In the event of any discrepancies between the requirements defined in the leaflet on sampling and those defined in the Process Requirements, the Process Requirements shall prevail.

2. Release as a Prerequisite for Series Delivery

The initial samples, including the documentation, must be submitted to BSH Hausgeräte GmbH and its affiliates (hereinafter referred to as “BSH”) by the agreed sample deadline. Series production and deliveries of products may only begin once the supplier has demonstrated their ability to meet the specified Process Requirements and the BSH Quality Management (hereinafter referred to as “BSH QM”) has granted the part release.

If, by way of exception, only a limited release can be granted by BSH, deliveries may only be made in accordance with the provisions outlined in the inspection report (conditions, quantity, schedule). If neither a limited nor an unlimited series release has been granted, series deliveries are not permitted.

If the supplier receives a series delivery order although no release has been granted, he must request the release from BSH in a timely manner.

With the release of the submitted initial samples, the supplier undertakes to guarantee that the products in series production consistently meet the quality of the approved samples.

3. Component Qualification Planning (CQP)

The Component Qualification Planning (CQP) will be provided to suppliers as part of the Process Requirements document accompanying the request for quotation. It ensures early supplier involvement in the product development process at BSH and specifies the mandatory requirements for part and process approvals.

The part classification (A/B/C) is defined by BSH and is based on both the functional relevance of the purchased part in the final product and the complexity of its production process. Part classification defines the scope of required release documentation.

The supplier must incorporate the requested activities according to the component qualification planning in their internal project planning and comply with the delivery deadlines for required information and release documentation as agreed with BSH QM.

With the submission of the offer, the supplier confirms the fulfillment of the requirements for component qualification and the further contractual obligations specified in section 1.

Any deviations, risks, or further comments regarding the contractual provisions must be indicated through the feasibility study (Feasibility Commitment) and agreed with BSH before conclusion of the contract. A template for this purpose will be provided with the request for quotation. It must be fully completed, signed, and submitted to BSH together with the offer.

In the event of changes, the supplier shall submit an updated Feasibility Commitment to BSH without further request.

4. Scope of Initial Sample Inspection

With the initial sample inspection, the supplier demonstrates the following:

- Part meets the contractual requirements according to section 1.
- Part is inspectable and measurable at the supplier.
- Compliance of the used substances and materials with the applicable legal requirements, such as RoHS, REACH, as well as any customer-specific requirements.

Before start of serial production and deliveries, initial samples must be submitted in a timely manner. This applies to the following cases:

- Any changes to the PRODUCT, particularly changes to functionally-, processing- or safety-relevant product parts (e.g. bought-in parts, material).
- Changes to manufacturing processes, equipment, procedures and materials.
- Change of sub-supplier.
- Changes in test procedures and equipment.
- Relocation or establishment of production sites.
- Other changes where an influence on quality cannot be excluded.
- For necessary follow-up sampling due to an expiring limited release.

In the event of process changes, or if no deliveries have been made during the last two years, the need for a renewed initial sampling must be clarified with the BSH QM of the respective location. Any deviation from the specifications must be resolved or agreed with BSH before the initial samples are shipped.

The initial sample inspection of the supplier must be conducted with suitable and calibrated measuring equipment.

5. Supplier Inspection Report

The supplier is requested to use the BSH templates for the initial sample presentation and, if available, to include the measurement machine protocol or measurement machine report.

The electronically completed documents, as well as additional documents for the clear assignment of the specified criteria, are to be sent to the email address specified by BSH or uploaded through a BSH-specified portal.

If the documents are sent in advance via email, the subject line must include the supplier's name and at least one material number.

6. Inspection Scope by Characteristic Category

The following points summarize the characteristic categories. Detailed information can be found in the table at the end of this section.

All decisions made within the scope of the specifications must be agreed component-by-component between the supplier and BSH technical team and documented in the defined transfer document (e.g., Control Plan).

Safety Characteristics (formerly Critical Characteristic, CC)

- Definition: even minimal deviation can directly endanger life or limbs.
- 100% of the parts must always comply with the tolerance limits and in all measurements.

Legal Characteristics (formerly Significant Characteristic, SC)

- Definition: characteristics that directly represent a legal requirement.
- Limited series release: machine capability $C_{mk} \geq 1{,}67$.
- Unlimited series release: short-term process capability $C_{pk\text{-}ST} \geq 1{,}67$.
- Series production: appropriate test method and inspection scope (n, m) must be defined based on a risk assessment (e.g., SPC, $C_{pk} \geq 1{,}33$, Poka-Yoke, inline inspection, or go/no-go test).

Functional Characteristics (formerly Significant Characteristic, SC)

- Definition: even minimal deviation can lead to early/unexpected failure of a main function or the entire product during field use.
- Limited series release: machine capability $C_{mk} \geq 1{,}67$.
- Unlimited series release: short-term process capability $C_{pk\text{-}ST} \geq 1{,}67$.
- Series production: appropriate test method and inspection scope (n, m) must be defined based on a risk assessment (e.g., SPC, $C_{pk} \geq 1{,}33$, Poka-Yoke, inline inspection, or go/no-go test).

Inspection Characteristics (formerly Important Characteristic)

- Definition: inspection characteristics describe qualitative product features that are not legally or safety-relevant but do affect product quality.
- Limited series release: proof of manufacturability considering the influence of machine/fixture via machine $C_{mk} \geq 1{,}67$, unless otherwise agreed.
- Unlimited series release: proof of manufacturability considering the influence of machine/fixture and relevant process influences via short-term process capability $C_{pk\text{-}ST} \geq 1.33$, unless otherwise agreed.
- Series production: long-term process capability $C_{pk} \geq 1{,}33$ or another agreed suitable monitoring method.

General Characteristics (formerly Relevant Characteristic)

- Definition: minor influence on safety, function, or manufacturing processes.
- Limited and unlimited series release: compliance with allowable tolerances.
- Series production: suitable monitoring method to be agreed.

Manufacturing Characteristics

- Definition: characteristics used for process control and monitoring; documented on the drawing where required.
- Suitable monitoring method to be agreed.

Overview Chart

As of 15.07.2024, the notation of special characteristics in BSH has been changed. Existing drawings remain valid, the symbol reference between old and new is shown in the table below.

Used until 06/24	Category	Special characteristics				
		1. Critical characteristics	2. Significant characteristics	3. Important characteristics	4. Relevant characteristics	
		123,45 ±0,2 CC	123,45 ±0,2 SC	123,45 ±0,2	123,45 ±0,2	

Category	Special characteristic			Additional characteristic		
	Safety characteristic 123,45 ±0,2 S	**L**egal characteristic 123,45 ±0,2 L	**F**unctional characteristic 123,45 ±0,2 F	**I**nspection characteristic 123,45 ±0,2 I	**G**eneral characteristic 123,45 ±0,2	**M**anufacturing characteristic 123,45 ±0,2 M
Criterion before series release	Compliance must be ensured for any delivery to BSH!					
Criterion for restricted series release	Same as criterion during running production	Proof of manufacturability by means of a machine capability analysis must be provided in a suitable form. ($C_{mk} \geq 1,67$)		Proof of manufacturability must be provided depending on the product functionality.[2]	within tolerance	Relevant tolerances to be defined from process responsible inside the control plan or inspection plan. No general tolerances valid.
Criterion for unrestricted series release	Same as criterion during running production	Statistical evidence of process capability must be provided in a suitable form. ($C_{pk\text{-}ST} \geq 1,67$)		Proof of manufacturability under series production condition must be provided depending on the product functionality.[3]	within tolerance	
Criterion during running production	A risk-based inspection method (e.g. SPC Cpk ≥ 1,33, Poka Yoke system, inline detection, OK/NOK,…) including the scope of inspection (n and m) must be defined for each characteristic in the transfer document (QAP, control plan, inspection plan or similar) and in alignment with the BSH technical team.			according to QAP, control plan, inspection plan or similar in alignment with the BSH technical team.[4]		

1) Applicable to **all special characteristics**: If a risk-based inspection method cannot be applied a 100% test must be carried out.
2) If there is no separate agreement, this must be proven by means of a machine capability study with $C_{mk} \geq 1,67$
3) If there is no separate agreement, this must be proven by means of a process capability study with $C_{pk\text{-}ST} \geq 1,33$
4) For Inspection Characteristic only: If there is no separate agreement, this must be proven by means of a long-term process capability with $C_{pk} \geq 1,33$

n / m	**n**: Quantity of parts in a row / **m**: Number of representative production lot or batch, representing diverse events (e.g. shifts, material change, make-ready process, etc.) to have all possible influences which affect the manufacturing process.
SPC	Statistical Process Control, incl. regularly process capability revalidation, SPC is only applicable if there is a technical possibility to adjust the process.
C_{mk} Machine capability index	The machine capability needs to be proven (usually with $C_{mk} \geq 1,67$ for 50 parts). The minimum requirement for the number of produced and measured parts is 50 (100 parts would be even more beneficial). If this number can´t be met, the C_{mk}- value increases accordingly. The calculations needs to be done with regards to Bosch Booklet No. 9 and in alignment with the BSH technical team.
$C_{pk\text{-}ST}$ Process capability index short-term	To use parts in series production the relevant characteristics need to have a proven process capability. For the start a $C_{pk\text{-}ST} \geq 1,67$ has to be proven. If the usual scope of inspection n=5 and m=25 can´t be used for the calculation, a possible suitable scope must be specified with regards to the process, in accordance with Bosch Booklet No. 9 and in alignment with the BSH technical team
C_{pk} Process capability index	To use parts in series production the relevant characteristics need to have a proven process capability. Usually, $C_{pk} \geq 1,33$ has to be proven. If the usual scope of inspection n=5 and m=25 can´t be used for the calculation, a possible suitable scope must be specified with regards to the process, in accordance with Bosch Booklet No. 9 and in alignment with the BSH technical team

Applicable to **all special characteristics**: If a risk-based inspection method cannot be applied, a 100% test must be carried out.

7. Contents of the Inspection Report

Together with the initial samples, the supplier must submit an inspection report in the format specified in section 5, covering all characteristics defined in the contractual basis outlined in section 1, which demonstrates:

- Revision status of the drawing and other base documents.
- Indication of the tool as well as cavity nests in multi-cavity tools.
- Information about sub-suppliers.
- For each characteristic:
  - Target value with tolerance
  - Actual value
  - Highlighting the characteristic when actual value is outside the tolerance
- For multi-cavity tools: separate inspection protocol for samples from each cavity.
- Clear identification of the samples included in the inspection report to ensure results can be matched.
- Sample part weight information in grams or kilograms.
- For special characteristics:
  - Sampling scope and sample size
  - Mean and standard deviation (variation)
  - Capability indices

The individual values of the respective machine or process capability analyses must be provided.

Machine and preliminary process capability, as required according to the characteristic category, must be proven with the initial sample documentation (see description section 6).

The evidence of long-term process capability is to be submitted to BSH proactively as soon as possible.

8. Shipping and Secure Receipt

The secure and prompt shipment of initial samples with inspection reports is of particular importance, especially in time-critical projects.

- Initial samples must not be delivered together with regular production shipments.
- Delivery in separate containers or packaging with a separate delivery note including the order details.
- Adequate protection of the parts against damage and environmental influences.
- Containers or packaging must be clearly marked as ”Sample Shipment“ (“Mustersendung”). Corresponding packaging labels are available in the SIR template, which will be provided with the respective RFO.

BSH forms and guidelines must be used and strictly followed.

Further information on this can be found in the BSH Supplier Quality Assurance Manual:
https://ocp.bsh-group.com/en/documents

For any questions, contact the designated BSH QM representative.