

# Leaflet on sampling

## 关于样品的宣传册

### 1. Contractual basis 合同基础

The drawing, 3D model, technical delivery terms and other technical specifications of the part to be delivered form the contractual basis for the initial sample test.

所供部件的图纸、三维模型、技术交付条款和其它技术规范构成初始样品测试的合同基础。

This initial sample test is used to determine whether the part as "initial sample" (definition: manufactured using the final production equipment and tools under regular production conditions) meets these contractual conditions.

初始样品测试用于确定部件是否符合合同要求。“初始样品”（定义：在常规生产条件下,使用最终生产设备和工具生产的）

If requirements in leaflet on sampling are defined in contradiction to quality requirements, requirements in quality requirements shall prevail.

如果宣传册中定义的样品要求与质量要求相矛盾，则以质量要求为准。

### 2. Approval as a precondition for series delivery 批准是批量交货的前提条件

The initial samples including the documentation shall be submitted to BSH Hausgeräte GmbH and its affiliates (hereinafter referred to as "BSH") in due time (by the agreed sample date). The regular shipment of products may commence only after the supplier has proved his ability to meet the specified quality requirements and the BSH Quality Management (hereinafter referred to as "BSH-QM") has issued its approval.

初始样品包括其文件应按时（在约定的送样日期内）提交给 博西家电 Hausgeräte GmbH 及其关联公司（以下简称“博西家电”）。只有在供应商证明其有能力满足规定的质量要求并且获得 博西家电质量管理部（以下简称“博西家电质量”）的批准后，产品的常规发运才可以开始。

If, by way of exception, only a "Limited Approval" can be issued by BSH, the supplier may make deliveries only in accordance with the details defined in the test report (conditions, quantity, schedule). If neither a "Limited Approval" nor an "Approval" has been issued, regular deliveries are not permitted.

如果作为例外，博西家电只签发了“有限批准”，供应商则只能根据测试报告中规定的细节（条件、数量、时间表）交货。如果既没有“有限批准”也没有“批准”，则不允许常规交货。

If the supplier receives a regular delivery order although no approval has been issued, he must request the approval from BSH in a timely manner. In general, in the event of deviations from sample parts, this must be agreed with BSH before the parts are shipped and a deviation report including measures must be enclosed.

如果供应商收到了常规交货的订单然而还没有得到批准，供应商须及时向 博西家电申请批准。一般而言，如果与样品部件有偏差，则必须在发货前与 博西家电达成一致，并且必须附上一份包括改进措施的偏差报告。

The approval of the initial samples by BSH does not absolve the supplier from the responsibility for the quality of his products.

博西家电对初始样品的批准并不免除供应商对其产品质量应负的责任。

### 3. Component Qualification Planning (CQP) 元器件合格计划 (CQP)

With the request for quotation to supplier, the component qualification planning, CQP (with reference to PPAP/PPF), will be handed over to the supplier. The aim is to ensure an early involvement of the supplier in BSH's product development process.

元器件合格计划，即 CQP（参考 PPAP/PPF）在询价时提交给供应商。其目的是确保供应商尽早参与 博西家电的产品开发流程。

The component qualification planning should provide an overview of the specific BSH requirements, which are mandatory for the part and process qualification.

作为元器件和工艺过程合格的强制要求，元器件合格计划中需包含博西家电特定要求的概述。

The part classification (A/B/C) is done by BSH according to the anticipated part criticality. The part classification defines the scope of required release documents.

博西家电根据零部件关键程度进行（A/B/C）分类。零部件分类规定了要求的放行文件范围。

The supplier has to incorporate the requested activities according to the component qualification planning in his own internal project planning and meet the mutually defined specific due dates for the release information and release documents.

供应商须根据元器件合格计划将所要求的行动纳入其内部的项目计划中，并且满足双方确定的关于放行信息和放行文件的具体截止日期。

With his offer, supplier acknowledges the fulfillment of the requirements for component qualification and the further contractual obligations in point 1.

在报价中，供应商需确认满足元器件合格要求和第 1 点中进一步的合同义务。

Deviations, risks and further information on contractual bases in accordance with point 1 must be indicated via the feasibility study (Feasibility Commitment) and agreed with BSH before conclusion of the contract.

根据第 1 点中的偏差、风险和合同基础的进一步信息必须通过可行性研究（可行性承诺）中报告，并且在合同签订之前与博西家电达成一致。

In the event of changes, the Supplier must send an updated copy of the Feasibility Commitment to BSH without being requested to do so.

如果发生变化，供应商须主动向博西家电提交一份更新的可行性承诺。

## 4. Initial sample test by the supplier 供应商的初始样件测试

The supplier's initial sample test provides proof of the following:

供应商的初始样件测试应提供以下证明：

- the part meets the contractual requirements (according point 1)  
部件符合合同要求（根据第1点）
- the part can be inspected by the supplier  
供应商的检验部件
- the conformity of the used materials is mandatory and must be presented to BSH \*.  
强制要求提交所用材料的一致性给博西家电\*

Before start of serial delivery, initial samples must be provided in a timely manner. In particular, this applies to any of the following:

初始样件必须在批量交货开始前及时提供。特别是以下情况：

- Any changes to the PRODUCT, in particular any changes to functional/Processing or safety relevant product parts (e.g. bought-in parts, material)  
产品的任何变更，尤其是与功能/工艺或安全相关的任何变更（如外购件、材料）；
- Changes to manufacturing processes, equipment procedures and materials,  
制造工艺、设备程序和材料的变更；
- Change of a sub-supplier,  
次级供应商的变更；
- Changes in test procedures/equipment,  
测试程序/设备的变更；
- Relocation or establishment of production sites, and  
生产地址的搬迁或变更；

- Other changes where an influence on the quality cannot be excluded  
其他不能排除对质量影响的变更。
- For necessary follow-up sampling due to a limited approval  
由于有限批准，必要的后续抽样

In case of process changes or if no delivery occurred during the last two years, the need for another initial sample test must be determined in cooperation with the BSH-QM of the respective location. Any deviation from the specifications identified during testing at the supplier must be rectified or agreed with BSH before the initial samples are delivered.

如果工艺发生变更或者在过去的两年中没有交货，则需与对应地点的博西家电质量确定是否需要再进行再一次初始样件测试。在供应商测试中发现任何产品偏离规格，必须在交付初始样件之前进行纠正或与博西家电达成一致。

The initial sample test of the supplier must be performed with suitable and calibrated measuring equipment.

供应商的初始样件测试必须使用合适的和校准过地测量设备进行。

## 5. Test report of the supplier 供应商的测试报告

The supplier is requested to use the BSH templates for the initial sample presentation and the preparation of the measurement report.

供应商须使用博西家电模板进行初始样件展示和测量报告的准备。

The Supplier shall send the in electronic form completed documents and further documents for the clear assignment of the specified criteria to the e-mail address specified by BSH or shall use a portal specified by BSH.

供应商应将填写好的文件和进一步的文件以电子形式发送到博西家电指定的电子邮件地址，或者使用博西家电指定的门户网站。

If the documents are sent in advance via e-mail, the subject line must show the supplier's name and at least one material number.

如果文件预先通过电子邮件发送，主题栏应注明供应商的名称、和至少一个物料编号。

## 6. Testing scope for special characteristics 特殊特性的测试范围

### Category 1: Critical Characteristic (CC)

#### 第一类：关键特性（CC）

are product- or process characteristics

是产品或工艺的特性

- of clearly safety relevant characteristics.  
明确的安全相关特性。
- their violation can lead to dangers to life or physical condition  
违反这些特性可能会导致生命或身体状况的危险

### Category 2: Significant Characteristic (SC)

#### 第二类：显著特性（SC）

are product- or process characteristics

是产品或工艺的特性

- which are qualitative product characteristics but not critical to safety  
是定性的产品特性，但对安全不是关键的
- their violation leads to restricted functional capability, devalued esthetics or limited further workability of the product or component

违反这些特性会限制产品或部件的功能能力、降低美观性或影响进一步的可操作性

### Category 3: important Characteristic

#### 第三类：重要特性

are product- or process characteristics

是产品或工艺的特性

- which are limited critical to quality and not critical to safety  
仅限于对质量关键的特性，但对安全不是关键的特性
- their violation may lead to restricted functional capability, devalued esthetics or limited further workability of the product or component  
违反这些特性可能会限制产品或部件的功能能力、降低美观性或限制进一步的可操作性

### Category 4: Relevant Characteristic

#### 第四类：相关特性

are product- or process characteristics

是产品或工艺的特性

- which have a slightly influence on the quality  
对质量有轻微影响的特性
- For critical characteristics (CC) BSH demands 100 % of the parts comply with the tolerance limits for all measurements at any point.  
对于关键特性（CC），博西家电要求在任何点的所有测量都必须100%符合公差限制。

For significant characteristics (SC) BSH demands a machine capability index of  $cmk \geq 1,67$  for the pilot production. Measurements are carried out according to test plan ( $n=50^{(4)}$ ,  $k=1^{(5)}$ ).

对于显著特性（SC），博西家电要求中试生产的机器能力指数为  $cmk \geq 1,67$ 。根据测试计划（ $n=50^{(4)}$ ,  $k=1^{(5)}$ ）进行测量。

For series release BSH demands a preliminary process capability index of  $ppk \geq 1,67$  and for series attendant inspections a process capability index of  $cpk \geq 1,33^{(2)}$  (SCM/SPC). The measurement is carried out at 100 parts (20 batches of 5 parts each) for series release respectively on more than 100 parts according to test plan for series attendant inspection.

对于批量放行，博西家电要求初始的过程能力指数为  $ppk \geq 1,67$ ，对于系列伴随检查，过程能力指数为  $cpk \geq 1,33$  (2)(SCM/SPC)。根据系列伴随检查的测试计划，对 100 个以上的批量放行部件分别进行 100 个（20 批，每批 5 个）的测量。

For important characteristics BSH demands a machine capability index of  $cmk \geq 1,67$  for the pilot production. Measurements are carried out to testplan at 50 parts of 1 batch ( $n=50^{(4)}$ ,  $k=1^{(5)}$ ). For series release BSH demands according to test plan a preliminary process capability index of  $ppk \geq 1,67$ .

对于重要特性，博西家电要求中试生产的机器能力指数为  $cmk \geq 1,67$ 。根据测试计划，对 1 批的 50 个部件进行测量（ $n=50^{(4)}$ ,  $k=1^{(5)}$ ）。对于批量放行，博西家电要求根据测试计划，初始的过程能力指数为  $ppk \geq 1,67$ 。

For relevant characteristics BSH demands compliance with the tolerances according to test plan at any point.

对于相关特性，博西家电要求在任何点的所有测量都必须符合公差限制。

The following applies to all special characteristics: If the process capability cannot be proven for one of the characteristic categories, a 100% test must be carried out.

以下适用于所有特殊特性，如果某一特性类别的过程能力不能被证明，则必须进行 100% 的测试。

# Tabular presentation

## 表格式表示

		Category 1  Critical characteristic  $123,45 \pm 0,2   CC$	Category 2  Significant characteristic  $123,45 \pm 0,2   SC$			Category 3  Important characteristic  $123,45 \pm 0,2$			Category 4  Relevant characteristic  $123,45 \pm 0,2$
Target criterion for pilot series	Criterion	within tolerance	within tolerance	$C_{mk} \geq 1,67$ (1, 2)	$p_{pk} \geq 1,67$ (3, 5)	within tolerance	$C_{mk} \geq 1,67$ (1, 2)	$p_{pk} \geq 1,67$ (1, 3, 5)	within tolerance
	Random sample	100% measuring	according to inspection plan	$n=50$ <sup>(6)</sup> $k=1$ <sup>(7)</sup>	$n=3 - 5$ ; $k=25$	according to inspection plan	$n=50$ <sup>(6)</sup> $k=1$ <sup>(7)</sup>	$n=3 - 5$ ; $k=25$	according to inspection plan
Series attendant inspections	Criterion	within tolerance	SPM <sup>(8)</sup> $C_{pk} \geq 1,33$		SPC <sup>(9)</sup> $C_{pk} \geq 1,33$	within tolerance			within tolerance
	Random sample	100% measuring	$n \geq 5$ ; $k \geq 20$ $n \geq 5$ ; $k \geq 20$ ongoing according to inspection plan			according to inspection plan			if applicable: according to inspection plan

		第一类  关键特性  $123,45 \pm 0,2   CC$	第二类  显著特性  $123,45 \pm 0,2   SC$			第三类  重要特性  $123,45 \pm 0,2$			第四类  相关特性  $123,45 \pm 0,2$
试生产的目标准则	准则	公差范围内	公差范围内	$C_{mk} \geq 1,67$ (1, 2)	$p_{pk} \geq 1,67$ (3, 5)	在公差范围内	$C_{mk} \geq 1,67$ (1, 2)	$p_{pk} \geq 1,67$ (1, 3, 5)	公差范围内
	随机特性	100%测量	根据检验计划	$n=50$ <sup>(6)</sup> $k=1$ <sup>(7)</sup>	$n=3 - 5$ ; $k=25$	根据检验计划	$n=50$ <sup>(6)</sup> $k=1$ <sup>(7)</sup>	$n=3 - 5$ ; $k=25$	根据检验计划
系列伴随检查	准则	公差范围内	SPM <sup>(8)</sup> $C_{pk} \geq 1,33$		SPC <sup>(9)</sup> $C_{pk} \geq 1,33$	公差范围内			公差范围内
	随机特性	100%测量	$n \geq 5$ ; $k \geq 20$ $n \geq 5$ ; $k \geq 20$ ongoing according to inspection plan			根据检验计划			如果适用, 根据检验计划

## Footnotes 脚注

(1) Optional inspection, only necessary if determined in Agreement (e.g. Quality Requirements)

检查可选, 仅在协议 (如质量要求) 中确定的情况下才需要进行

(2) Machine capability index Cmk (short-term capability)

Cmk机器能力指数（短期能力）

Within the scope of the acceptance of production equipment, a short-term capability test, also called machine capability test, is usually carried out at the manufacturer's premises. The aim of this test is to ensure that only the influences coming from the production equipment itself have an effect. For this purpose, the general conditions are kept as constant as possible so that possible influences from people, materials and the environment are minimised or avoided. The result of the short-term capability test is a preliminary statement on the suitability of the production facility to meet specified requirements. As a rule, at least 50 parts are manufactured in uninterrupted sequence. The quality characteristics of interest are measured and the measurement results are recorded according to the production sequence and statistically evaluated, e.g. with regard to stability and distribution time model. Finally, a machine capability index cmk is calculated

在生产设备的验收中，通常在制造商的场所进行短期能力测试，也称为机器能力测试。该测试的目的是明确生产设备本身产生的影响。为此，总体条件应尽可能保持恒定，从而将人员、物料和环境的可能影响降至最低或避免。短期能力测试的结果是对生产设施是否满足规定要求的初步评估。通常情况下，至少需不间断的生产50个零件。对有关的质量特性进行测量，测量结果根据生产顺序被记录，并进行统计评估，例如关于稳定性模型和分布时间模型。最后，计算出机器能力指数 Cmk。

(3) Preliminary process capability index Ppk

初步过程能力指数 Ppk

An investigation of the series conditions becomes possible, as all scattering influences become effective. An assessment of the process capability before the start of series production becomes possible. When carrying out this investigation, at least 125 units to be investigated are usually taken from the process. The allocation of these 125 parts to the individual samples and also the sampling intervals must be determined specifically for the process and cannot be specified across the board. A sample size of 3-5 parts is usual

当各类方差影响均生效的情况下，可以检查批量生产条件。在批量生产之前可评估过程能力。实施该测试至少需要从过程中取样125个部件。这125个部件在各个样品中的分布以及取样间隔应根据具体过程确定，不能一概而论。样品量通常为3-5个部件。

(4) Process capability index Cpk (long-term capability).

过程能力指数 Cpk（长期能力）。

The long-term capability is assessed by statistical evaluation of control charts. The quality capability under real process conditions is determined. The effect of process improvements becomes apparent. The observation period is at least 20 production days

长期能力由对控制图的统计评估来评估。而质量能力是根据实际过程条件确定的。这对过程改进的效果会愈加明显。观察期至少为20个生产天数。

(5) The series use of parts with process capability study (PFU) relevant measurements is to be managed with limited releases until the completion of the PFU. Should there be changes on the tool during the Ppk determination it has to be clarified if the Ppk needs to be determined new in agreement with the BSH departments Development, QM and if applicable Production.

在完成过程能力研究（PFU）的过程中，相关测量的部件应采用限量放行的方式。如果在工装在计算Ppk期间发生变更，必须与博西家电的开发部门、质量管理部门和生产部门（如适用）一同确认是否有必要重新计算Ppk。

(6) Quantity of parts 零件数量

(7) Random sample 随机抽样

(8) Statistical process monitoring 统计过程监控

(9) Statistical process control 统计过程控制

If the manufacturing process enables a statistical process control (SPC) and the necessary measuring and controlling devices are available or invest is planned for it, SPC is to be preferred to statistical process monitoring. For monitoring and controlling of the process the quality control chart (QCC) is used. This serves the responsible as control loop where the process represents the control path and the geometry to be produced (measurements, tolerances of form and orientation) represents the control variable (machine setting variable). In the QRC the following limits are to be specified: Tolerance limits (UTL, LTL), action limits (OEG, UEG), warning limit (UWL, LWL).

若生产过程允许进行统计过程控制（SPC），并且有必要的测量和控制设备或计划进行此类投资，则较之统计过程监控，应优先采用 SPC。质量控制图（QCC）用于监控和控制过程。对于负责人而言，该图可作为控制回路，其中过程代表控制路径，被生产的几何形状（尺寸、形状和位置公差）代表控制变量（机器设置）。在QCC中应明确以下极限：

公差限值（UTL、LTL），缺陷限值（OEG、UEG），警告限值（UWL、LWL）。

## 7. Contents of the report 报告内容

Together with the initial samples, the supplier must submit a test report in the form specified in item 5 covering all contractual attributes (in most cases, the drawing and specification), which shows the following:

供应商必须按条款 5 规定的格式，与初始样本一起提交一份包含所有合同要求的测试报告（大多数情况下包括图纸和规格），包括以下内容：

- Status changes of drawing and other basics  
图纸或者其他基础情况的变更
- Tools used (or cluster in case of multi-cavity tools)  
使用的工具（如果是多模腔工具，则为一组工具）
- Sub Supplier  
下级供应商
- For each attribute: - Target value with tolerance  
每个属性：-具有公差的目标值
- Actual value  
实际值
- Marking of attributes with an actual value outside of the tolerance range  
标记超出公差范围的实际值属性
- For parts produced with multi-cavity tools, a separate sample test report must be prepared for each cluster  
对于多模腔部件，必须为每组编制单独的样品测量报告
- To link the measured values to the corresponding parts, the parts must be marked clearly  
为了将测量值与相应的部件相对应，部件必须标记清楚
- Part weights must be given in grams or kilograms  
零件重量必须以克或公斤为单位
- The supplier must confirm that the parts were produced using the final tools under regular production conditions. Any deviations from this must be specified and coordinated in advance with the BSH-QM.  
供应商必须确认部件是在常规生产条件下使用最终模具生产的。任何偏差的情况必须事先与博西家电质量协调和说明。
- For specified attributes: - Number of test specimens  
指定属性：-试样数量
- Arithmetic mean and variance  
算术平均值和方差
- Capability indexes  
能力指数
- The individual values of a machine capability analysis or process capability analysis must be provided.  
必须提供设备能力分析或过程能力分析的每个指数
- A machine and preliminary process capability required depending on the feature category must be proven with the initial sample documents (see description point 6).  
必须同初始样本文件一起提供根据特征类别区分的机器和初步过程能力证明（见点6）
- The proof of long-term process capability is to be submitted to BSH without request as soon as possible.  
长期过程能力证明应尽快提交给博西家电

## 8 Shipping and secure receipt 装运和安全接收

As projects are usually time-critical, shipping initial samples and test reports quickly and reliably is particularly important.

由于项目通常时间紧迫，快速可靠地装运初始样件和测试报告是尤为重要的。

- Initial samples must not be delivered together with regular shipments  
初始样件不能与常规货物一起交付
- They must be shipped in a separate container or separate package with its own delivery shipping ticket, including the details of the order  
它们必须被装在单独的集装箱或包装中，并附上含有详细订单信息的单独的送货单
- They must be sufficiently protected against damage and environmental factors  
部件必须被充分保护，以免受到损坏或受环境影响
- The containers/packages must be clearly marked with “Samples” (“Mustersendung”)  
容器/包装上必须清楚地标明“样品” (“Mustersendung”)

The forms and requirements of BSH must be used and complied with.

必须使用并遵守博西家电质量的表格和要求。

Further information on this can be found in the BSH Supplier Handbook:

更多的信息请参见博西家电质量供应商质量保证手册：

<https://ocp.bsh-group.com/en/documents>

If you have any questions, please get in touch with the respective BSH-QM contact person.

如果您有任何问题，请与博西家电质量各自的联系人联系。