

Deviation approval: controlled handling of product and process deviations in procurement

The deviation approval is the formalised procedure by which a customer or manufacturer releases a temporary or permanent deviation from a drawing, standard, specification or process requirement. It is a central quality assurance instrument in supply chains and prevents non-conforming parts or processes from entering production unchecked. For buyers and supply chain managers, it is an interface obligation that directly influences supplier management, quality planning and delivery capability.

Key facts

- A deviation approval documents and legitimises deviations from specifications, drawings or agreed processes.
- It is typically granted for a limited period, often for a specific quantity, batch or time period.
- Responsibility generally lies with the customer and its quality assurance; the supplier applies for the release.
- Without a deviation approval, non-conforming parts are treated as blocked stock and must not be processed.
- In the automotive and aerospace sectors, standardised procedures exist, for example Deviation Request or Concession.
- A accumulation of deviation approvals is an early warning indicator of problems in supplier management and process stability.

Definition: deviation approval

A deviation approval is the written release of a defined deviation from agreed specifications, drawings, standards or process requirements for a defined quantity, a batch or a time-limited period.

Distinction from concession and lot disposition

A deviation approval is often equated with a concession, but it is narrower in scope: it legitimises a known, documented deviation from the target state, before or after it occurs. The classic lot disposition, by contrast, concerns a quantity that has already been produced and is classified as blocked stock. In practice, both procedures run through similar release processes but differ in timing and scope.

Typical types of deviation

Deviations concern dimensions and geometric tolerances, material compositions, surfaces, colours, documentation content or process parameters. A fundamental distinction is made between deviation before production, when a supplier reports a proposed change, and deviation after production, when parts already produced deviate from the target dimension. Both variants require an assessment by

engineering, quality and production.

Methods and procedure in the deviation approval process

A functioning process follows a clear sequence from notification of the deviation to documented release or rejection. Responsibilities between procurement, quality assurance, engineering and production must be clearly regulated.

Process from notification to release

The supplier reports the deviation with a concrete description, scope of impact, cause and proposed quantity or period. The quality management process assesses the risk, engineering reviews the functional impact, and production clarifies manufacturability. The decision is documented in a numbered deviation approval and communicated to all affected parties. Today this is frequently handled via a digital ticket or system tool linked to the procurement approval workflow and goods receipt processes.

Time limitation, scope and follow-up

Deviation approvals are typically time-limited, for example to one batch, a defined quantity or a period of a few weeks to months. Once expired, either a permanent correction of the specification or a return to the original target state must take place. A systematic follow-up management with reminder functions prevents time-limited approvals from unnoticed becoming permanent states.

Integration into supply contracts and drawing management

The supply contract should stipulate that deviations are only permissible with written release and that unreported deviations constitute defects. Change services for drawing and specification revisions must be interlinked with the deviation process so that approved permanent deviations are consistently fed back into the documentation.

Key KPIs for managing deviation approvals

Deviation approvals can be monitored using a few practical key figures. They provide procurement and quality management with early warning signals on supplier performance.

Volume and frequency per supplier

The number of deviation approvals per supplier and per material group is a key figure. A single supplier with repeatedly high values indicates unstable processes or insufficient first article inspection. The figures frequently feed into supplier evaluations, delivery delay analyses and general quality assessments.

Lead time and backlog

The lead time from deviation notification to decision is a critical figure, as blocked parts burden delivery capability and the time-to-market of orders. Companies typically strive for practical targets of a few working days for the internal decision. A high backlog of old cases indicates process weaknesses and should be cleared in regular reviews.

Risks and controls in handling deviation approvals

The greatest risk area lies in tacit practice: when deviations are not reported or are tolerated

retrospectively, quality management loses control over the product state. Clear rules and audits counteract this.

Risk of habituation and permanent deviation

In practice, time-limited releases are often not followed up and silently become the standard state. This gradually changes master data, drawing revisions and inspection content, leading later to complaints and additional work in the master data process. A regular evaluation of all open and expired deviation approvals is therefore mandatory.

Control through audits and supplier development

Suppliers with elevated deviation rates should be prioritised for audits as part of supplier management. A structured supplier development concept addresses the root causes rather than managing the symptoms through individual approvals. On the customer side, verification sampling at goods receipt and documented release authorities ensure the effectiveness of the process.

Legal and contractual safeguards

The contract should stipulate that deviations are only permissible with written approval, that the supplier bears cost-bearing consequential damages for unreported deviations, and that approvals do not set a precedent. In practice, these provisions are frequently part of the General Terms and Conditions of Purchase. In individual cases, particularly in cross-border transactions or regulated industries, the design should be reviewed legally.

Current developments: digitalisation and standardisation

The deviation process is increasingly mapped digitally and standardised internationally. For buyers, this shortens lead times and significantly improves traceability across supply chains.

Digital workflows and supplier portals

A growing number of companies treat deviation approvals as part of digital supplier relationship systems: the supplier reports the deviation via a portal, attachments such as measurement reports or photos are uploaded directly, and internal release runs as a rule-based workflow. This reduces media discontinuities, which in paper-based processes frequently lead to losses and delays. Integration into the procurement approval workflow and quality management systems is an increasingly common standard.

Industry standards and standardised forms

In regulated industries, standardised formats have become established, such as Deviation Requests in aerospace or Concession Requests in the automotive sector. These formats define binding minimum content such as root cause analysis, impact analysis and evidence documentation. Buyers sourcing internationally should take the formats required by the respective industry into account in supplier selection and contract negotiation, similar to specifying Commercial Invoices and HS Classification in foreign trade.

Typical metrics

Number of deviation approvals per supplier: 0–2 per quarter

Guideline value; higher figures indicate process instability at the supplier

Lead time for deviation decisions: < 5 working days

Short decision times reduce blocked stock and delivery delays

Share of expired, unprocessed approvals: < 5 %

Indicator of follow-up quality in the deviation process

Recurrence rate of the same deviation: < 10 %

A high recurrence rate indicates a lack of root cause correction at the supplier

Practical example

A medium-sized mechanical engineering company sources precision-forged components from a long-standing supplier. After a change in the supplier's own upstream supplier, dimensional deviations outside tolerance accumulate in an assembly with safety-relevant requirements. Instead of releasing each batch individually, the head of procurement, together with quality assurance, introduces a structured deviation procedure.

- Introduction of a central digital deviation form with mandatory fields for cause, quantity and time limitation
- Requirement that every deviation approval be reviewed after four weeks for corrective action or extension
- Prioritised audit at the supplier as part of the supplier development concept
- Inclusion of the deviation rate in the supplier evaluation and in the regular supplier review

Conclusion

A deviation approval is far more than a formal act: it governs how a company handles quality deviations in the supply chain and directly influences delivery capability, costs and risks. Those who regulate the process clearly, map it digitally and follow it up consistently gain control over product state and supplier performance. At the same time, a high number of approvals reveals structural problems in supplier management and process stability. Buyers should therefore use this instrument actively to prevent a tolerated practice and to safeguard quality requirements on a lasting basis.

Frequently asked questions

What is a deviation approval?

A deviation approval is the written release of a defined deviation from a drawing, specification or process requirement. It is typically time-limited, for example for one batch or a specific quantity. Without this approval, non-conforming parts must not enter production.

Who issues a deviation approval?

The supplier applies for the approval, the customer grants it. Internally, the decision is usually made by a round of engineering, quality assurance and production, often coordinated via the quality management process. Procurement manages the process with the supplier and monitors implementation.

What is the difference between a deviation approval and a concession?

A deviation approval legitimises a known, documented deviation from the specification, often before production as well. A concession typically concerns parts that have already been produced and blocked, which are nevertheless to be used despite the deviation. In practice, both procedures run through

similar release processes.

How long is a deviation approval valid?

It is typically time-limited and restricted to a specific quantity, batch or period of a few weeks to months. Once expired, either the specification must be changed or the original target state restored. A systematic follow-up management prevents time-limited approvals from becoming permanent states.

What belongs in a deviation approval?

Typical minimum content includes unambiguous identification of the part and drawing revision, a description of the deviation, the affected quantity or batch size, the root cause and the proposed corrective action. In addition, the validity period, the decision and the authorised signatories should be documented. In regulated industries, additional standardised formatting requirements apply.