

General logistics requirements

for suppliers of the following companies of ZKW Group GmbH

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Preface

The “Logistics Requirements for Suppliers of ZKW Group GmbH” defined herein are valid for all suppliers of all branches of ZKW Group GmbH – referred to below as ZKW.

In order to provide our customers worldwide with products manufactured at ZKW in a timely manner, it is mandatory that the logistics processes are completed seamlessly across all stages of the supply chain.

Goals such as uninterrupted service, flexibility, stability and a continuous improvement of the processes along with the overall economic optimization of the supply chain in order to have top priority to guarantee a constructive and efficient collaboration between suppliers and ZKW.

The “Logistics Requirements for Suppliers of ZKW Group GmbH” regulate all collaboration matters in the product development process (PDP), in serial production, as well as the spare parts area. They also form the basis for creating transparency in the logistics processes between ZKW and the suppliers. ZKW regularly measures compliance with these requirements to improve the process quality.

In case of deviation, appropriate measures are taken in collaboration with the supplier.

The “Logistics Requirements for Suppliers of ZKW Group GmbH” were adapted to the project- and site-specific requirements and processes.

Due to changing framework conditions, it will be necessary to modify this document on occasion. It is the supplier’s responsibility to check its version for validity at regular intervals. An updated version can be downloaded at <https://www.zkw-group.com/en/suppliers/documents/>.

Further specific logistic documents will be provided if needed.

1. General Requirements

1.1. Organization

The organizational structure of the supplier's logistics during the product development process (PDP), in series production and the replacement part process after the end of serial production (EOS) must be shown to ZKW in a comprehensible way.

For the supply process in the PDP and in series production, ZKW must be notified of the respective contact persons responsible for the logistics along with their representatives who can competently and reliably make decisions.

It is mandatory that these contact persons can be reached during the ZKW production times (based on the respective shift model of the relevant ZKW production site, including weekends).

1.2. Location

The location of the goods must correspond to the pick-up and return address of the loading units. Any deviations from this regulation must be authorized in writing by the procurement and logistics departments at ZKW.

1.3. Notification of Changes

1.3.1. Change in Location

Any change in the production site or shipping location must be announced to the procurement, quality assurance and logistics departments at ZKW in writing with a detailed schedule no later than 12 weeks before the planned relocation date with a statement of reasons.

If the origin of pre-serial parts / serial parts / replacement parts / parts from foreign manufacturers do not correspond with the declaration of origin, the above-listed places must be informed. In addition the modified document for declaration of origin must be sent to the corresponding departments at the relevant ZKW site.

1.3.2. IT System Changes

If there is an upcoming IT system change that is relevant to logistics, the ZKW material planning department for purchase parts must be informed about the type of change, the application date and potential effects on the supply process.

1.3.3. Organizational Changes

If there are changes in the supplier's company or organizational structure that affect the logistics departments at ZKW, this must be communicated immediately with explanations of the structural modifications and any consequences.

1.4. Cross-Company Cooperation

The supplier is responsible for ensuring all logistics matters referring to the purchase parts management between itself and ZKW in the PDP, series production and end of lifetime (EOL), except from parts provided by ZKW.

The prerequisite for this is the availability of the appropriate resources for all activities in the scope of the collaboration between ZKW and the supplier. In addition, it is important for the supplier to be receptive towards innovative activities in the process optimization as part of the cross-company cooperation.

1.5. Communication Behavior

The supplier immediately must inform ZKW in writing and stating reasons of all potential risks to the customer/supplier relationship.

The supplier must competently answer any ZKW questions and inquiries immediately or within the agreed-on time period relating to system consistency.

ZKW will indicate any deviations from its requests by issuing a complaint and will process them by charging the agreed-on expenditure rates, so that any irregularities are permanently eliminated.

The communication between the contact persons / representatives and ZKW is performed in the national language of the relevant ZKW site, or in English.

2. Information Process / EDI

2.1. General Information

The data transfer for delivery call-offs (DCO) and delivery slips / advanced shipping notice (ASN) between ZKW and the supplier is generally performed electronically via the electronic data interchange (EDI).

ZKW generally uses the VDA standard for electronic data transfers; the necessary technical requirements and message formats are described in the ZKW form "*EDI Application Agreement for ZKW*" (see Chapter 6, "*Additional Documents*"). This form is provided by ZKW during the system integration.

To avoid interference with the electronic data transfer, the supplier must take appropriate precautions as part of maintenance. The supplier also must develop emergency concepts and communicate these to ZKW immediately upon request. If there are supply bottlenecks or additional administrative efforts at ZKW due to incorrect EDI transfers or emergency concepts, ZKW reserves the right to claim the resulting costs from the supplier.

Any deviations from this regulation must be authorized in writing by the procurement and logistics departments at ZKW.

2.2. System Consistency

The incoming delivery call-off information that the supplier receives is integrated into the supplier's IP-systems (information processing systems) without further manual processing. It is mandatory that this process is consistent, from the data entry to the parts shipment and the provision of the shipping data.

In particular, this refers to the ideal case of fully automatic entries into the supplier's production planning system (PPS), separation into parts lists, automatic generation and timely forwarding of orders / delivery call-offs to the third-party suppliers after a plausibility check regarding the required quantities.

The supplier must ensure that the various part revision statuses can be tracked throughout all process steps.

3. Third-party Supplier Management

The ZKW supplier must have tools and methods to measure and optimize the performance of the supply chain. Based on these tools, the supplier must be able to generate a status report of deviations and remedial measures for its first-tier level at all times.

The responsibility for the development of the third-party suppliers' supply chain lies with the respective suppliers of ZKW.

4. Production Process

4.1. Production Planning and Production Control

The intervals and outlook of the production planning correspond to the intervals and outlook of the delivery call-offs provided by ZKW. The production planning and control must be developed consistently and each production status must be transparent at any given time.

There must be emergency strategies in the process to secure against production risks.

4.2. First-In-First-Out (FIFO)

The supplier must consistently safeguard the FIFO principle for the entire material flow, from receiving to production to shipping.

4.3. Production Capacity

Production capacities must be able to cover the series requirements of the supplied ZKW branches as well as their spare parts requirements, along with the flexibilities as specified in the applicable version of the purchase orders or nomination letters.

If the requested quantities exceed the capacities agreed on in the purchase orders or nomination letters, the supplier immediately (and after each notification of order amounts by ZKW that may be too high) must inform purchasing and the relevant departments at ZKW's material planning department.

Upon request, the logistics departments at ZKW must be provided with detailed information about the capacities, including any variant differences. In addition, potential capacity changes and response times must be transparent.

4.4. Series Start-up/Conclusion

The start-up/conclusion of series requires capacity planning, where pre-series, series, spare parts requirements and the demands of the conclusion phase have the same priority. All quantities must be delivered in the right amounts and on schedule.

During the conclusion of the series, it must be kept in mind that no tools may be relocated or scrapped without approval by ZKW. The series supplier is obligated to ensure the capacity for subsequent deliveries for the period agreed on with ZKW after the conclusion.

5. Supply Process

5.1. Loading Units / Packaging

The responsibility and assumption of the costs for loading units and packaging for all products delivered to ZKW sites is given as an overview in the following table 5.1.

Assumption of the costs and responsibility		
	Assumed by	
	Supplier	ZKW
Procurement costs and responsibility for the acquisition of reusable, standard and special loading units		x
Procurement costs and responsibility for the acquisition of reusable and disposable interior packaging.	x	
Procurement costs and responsibility for the acquisition of the suppliers' own containers	x	
Costs and responsibility for the acquisition of containers for the suppliers' internal increased production demand and the setup of not-agreed on inventory reserves	x	
Costs and responsibility for the acquisition of containers for the temporary storage of semi-finished products	x	
Costs and responsibility for the acquisition of containers for the delivery by sub-suppliers.	x	
Costs and responsibility for the acquisition of containers for the internal batch production at the supplier's site	x	
Costs and responsibility for delivery in non-coordinated alternative packaging and the resulting follow-up costs	x	
Costs and responsibility for delivery in defective, wet and dirty packaging and the resulting follow-up costs	x	
Costs and responsibility for non-compliance with specified packaging.	x	
Costs and responsibility for non-coordinated deliveries of/in containers in need of repair.	x	
Repair costs of ZKW's standard and special loading units	Originator	
Costs of non-authorized scrapping of ZKW's own containers and loss of loading units due to negligence	x	
Responsibility for the procurement of disposable packaging	x	
Responsibility for notification of ZKW about changing the delivery location for empties	x	
Costs and responsibility for packaging that are not coordinated or coordinated inadequately or incorrectly	x	
Responsibility for the procurement of substitute packaging	x	
Costs of substitute packaging and resulting additional expenditures	Originator	
Costs and responsibility for the cleaning of heavily dirty loading units	Originator	
Responsibility for the delivery of purchased parts in clean loading units	x	
Reporting obligation for deliveries to ZKW that are incorrect or under or over ordered quantities	x	

Table 5.1: Overview of responsibility for loading unit / packaging

As part of ZKW's packaging planning, the supplier is requested to cooperate to the extent of its parts

that are concerned. The supplier makes sure that a contact person is available for the packaging planning.

For parts that are taken over, ZKW checks whether the loading units that have been coordinated with the departments and are already in use can be utilized. However, it is possible to coordinate own loading units even for these kinds of cases, depending on the need of the ZKW plant.

The supplier must provide all disposable packaging and disposable protective measures for parts; the costs must be indicated separately along with the price of the part.

Regulations and responsibility regarding the specification, coordination and labeling of loading units and packaging between ZKW and the suppliers, as well as the minimum requirements for the various types of packaging are defined in the ZKW packaging guidelines (*see Chapter 6, "Additional Documents"*).

The supplier defines adequate substitute packaging that is used in exceptional cases (e.g. bottlenecks, tool repair, etc.). This is approved as part of the packaging agreement. Before using the substitute packaging, the responsible department at ZKW must be informed and its use must be authorized.

The supplier is obligated to notify ZKW of damaged loading units within a period of two workdays after the receipt by the supplier.

The following information must be included:

- ZKW delivery slip or CMR noting the deviation and the signature of the truck driver as a confirmation (also with a stamp if available).
- Photo of the damaged loading units.
- Damage report

5.2. Parts Supply

The supplier must ensure that the requested parts are planned and made available in any case.

The minimal delivered batch sizes requested by ZKW in serial production generally correspond to one / several full loading unit(s) of the corresponding purchased part and are not necessarily related to the supplier's production batch sizes.

Additionally, the supplier guarantees that no series containers are used for deliveries that are not intended for series production (development volumes, spare parts).

The remarks in Chapter 5.1 are also applicable for sample deliveries. These parts must be labeled separately. Furthermore, sample deliveries must be delivered pre-sorted (no mixing with serial parts on one pallet) in the PDP (product development process). ZKW procurement must authorize any deviations in writing from this regulation.

Delivery of various part numbers on one pallet should always be avoided. Parts may never be delivered on the same pallet if they have different unloading points. Only the material planning department at ZKW may authorize the delivery of mixed pallets. In any case, mixed pallets must be clearly marked as such.

Change requests are subject to the Change Management which is regularized by the “Conditions for Purchasing” as well as by the “Quality Guideline” (see Chapter 6: Additional Documents).

5.3. Shipping Procedure

To guarantee the agreed-on receiving time slots at ZKW, the supplier must notify and provide the merchandise to the transport service provider according to the ZKW routing instructions (which the relevant ZKW department will issue to the supplier) in consideration of the transit period and the agreed-on loading and unloading time slots.

The agreed-on Incoterms must be taken into account. In the course of the requesting process, the ZKW procurement department always must be informed about prices based on the following Incoterms:

- Full containers: FCA supplier's production site and DAP ZKW's production site
- Empty containers: DAP supplier's production site and FCA ZKW's production site

In general the Incoterm FCA production site of supplier is preferred for all full container deliveries to ZKW sites and DAP production site of supplier is preferred for deliveries of empties and returns. Any deviations from this regulation must be authorized in writing by the procurement and logistics departments at ZKW.

The electronic delivery slip must be sent electronically up to max. 15 minutes before or max. 2 hours after the physical delivery. There may only be one delivery slip per delivery and unloading point.

Any deviations from this regulation must be authorized in writing by the procurement and logistics departments at ZKW.

ZKW reserves the right to determine concrete delivery or pickup time periods for full container deliveries or pick-ups of empties at the respective ZKW production plant.

The supplier immediately procures all complete documents and other information that are required according to customs regulations or other laws and regulations, especially documents relating to exemptions from customs duties, proofs of origin and any other information that refers to the legally relevant commercial or preferential origin of the merchandise and materials they contain. Long-term supplier declarations must be submitted to the responsible ZKW department within one work week after the request.

Insofar as this is required for customs purposes, the supplier issues a commercial invoice in duplicate. In case of free deliveries, the supplier identifies the merchandise with a declared value and the comment "For Customs Purpose Only". The reason for the free delivery must be noted on the invoice (free sample delivery, for example).

5.4. Processing of Empties

The supplier must ensure the availability of the empties required for its deliveries in accordance with the current production program early on.

The supplier must make sure that the supply for the production is guaranteed even if the empties are missing. A proposal for alternative packaging must be coordinated in advance with the ZKW loading unit management.

The supplier ensures that the loading units are retained in a usable condition. The supplier must store the loading units in a dry place. ZKW must be informed immediately about any loading units that are damaged or in need of repair. Loading units that are in need of repair must be handled according to the specifications of the ZKW packaging regulations (*see Chapter 6 "Additional Documents"*).

The supplier fulfills all of ZKW's requirements regarding the accounting for empties without any delays. In this context, it performs the inventory reconciliation based on the procedure arranged with ZKW. The coordination with the ZKW department must take place even if the accounts coincide. Additionally, the measures specified by the ZKW department (inventories, optimizations, etc.) must be ensured in an event-oriented and timely manner.

5.5. On-time Delivery

The specified dates and requested amounts must be complied with in all cases. In case of legal and religious holidays or other country specific limitations, the concerned ZKW department has to be informed by the supplier in time, in order to be able to keep the committed delivery day.

The supplier makes sure that there are no incorrect deliveries (content of the packaging unit and the packaging unit itself doesn't coincide with the labeling on the merchandise label), no back orders (due

to insufficient or missing deliveries) and no excessive quantities (deliveries without request or deliveries with excess quantities).

It must be guaranteed that all of ZKW's quality requirements regarding delivered parts are fulfilled (see Chapter 6). If any defects are assumed or determined, the relevant departments at ZKW must be notified of this immediately.

Any delivery bottleneck that affects the schedule or quantities must be communicated to the responsible ZKW logistics department (material planning department) immediately.

Special transports are generally organized by the responsible ZKW logistics department (material planning department) with a simultaneous determination of the cost responsibility. Special transports organized by the supplier require a written approval by the ZKW material planning department.

Potential contractual or legal claims by ZKW based on delivery bottlenecks (compensation for damages, for example), are unaffected by this disclosure requirement and do not constitute a release from liability.

5.6. Security of Supply

The supplier is obliged to carry the safety stock as defined in the Nomination Letter.

5.6.1. 24-hour Emergency Supply

The supplier is obliged to guarantee a 24 hours material supply (with the exception of overseas orders: Here the availability within the shortest possible transport period must be guaranteed). The 24-hour emergency supply must be ensured independently of the applicable transport agreements (24-hour / 7-day process). If the supplier's production site does not fulfill the requirements listed above, ZKW must be notified of this immediately and a separate procedure must be arranged with ZKW.

6. Additional Documents

To the extent that they are applicable within the scope of a respective project, the following general guidelines are mandatory for the supplier from a logistics perspective in addition to the specifications in this document:

Generally applicable guidelines:

- Conditions for Purchasing
- Quality Guideline
- Packaging Guideline for Suppliers of ZKW Group GmbH
- EDI Application Agreement for ZKW (this document will be provided as soon as EDI is implemented with the supplier)

The stated guidelines as well as the current version of the **Logistics Requirements for Suppliers of ZKW Group GmbH** can be found on the ZKW supplier information page at <https://www.zkw-group.com/en/suppliers/documents/>

7. List of Abbreviations

SCM	Supply chain management
ASN	Advanced shipping notice
EDI	Electronic data interchange
EOL	End of lifetime
FIFO	First-in-first-out
IV System	Information processing system
DCO	Delivery call-off
ZKW	ZKW Group GmbH
PDP	Product development process
PPS	Production planning system

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