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GENERAL

This Packaging Guideline contains the requirements set out by Kostal Automobil Elektrik – hereinafter referred to as Kostal - regarding the planning, procurement and management of packaging materials for bought-in parts.

In setting up arrangements for bought-in parts, the supplier must carry out the planning and procurement of packaging in accordance with this Guideline. Kostal project purchasing will be pleased to assist the supplier in this.

The Kostal Logistics Guideline must also be observed when drawing up packaging planning. This can be down-loaded from www.kostal.com/english/3-02-02-01.html.

Where appropriate, Kostal can appoint companies and / or logistics services organisations in the logistics links between the supplier and the Kostal organisation. Companies of this kind in the packaging circulation system will handle specific tasks as described in this Guideline.

1 PACKAGING PLANNING

1.1 Packaging materials

Kostal differentiates between packaging materials as follows :

Packaging material	External packaging (pallets; covers; containers)	Internal packaging e.g., foil; interlays)
Non-returnable packaging	X	X
Returnable packaging for KOSTAL (KMV)	X	X
Returnable packaging, not for KOSTAL (non-KMV)		X

Returnable packaging for Kostal (KMV) refers to all the standard returnable packaging listed in Kostal's literature and any non-KMV which Kostal may decide to introduce as KMV following investigation and release. Kostal's packaging literature is available on the Internet under : www.kostal.com/english/3-02-02-01.html.

Non-KMV are all returnable packaging which is not used as KMV.

1.2 Essential documentation

The project-specific and general appendix documents form the basis for carrying out packaging planning (see "Appendix Documents").

1.3 Packaging planning

The supplier is responsible for planning the packaging of bought-in items. In this respect, a separate packaging planning exercise must be carried out for each bought-in part. The supplier draws up the packaging planning on the basis of the essential documentation (see Section 1.2). The packaging planning is used by the supplier as an estimating point for his quotation. Technical approval/release of the packaging planning by Kostal is issued only when the supplier applies for this (see Section 1.4).

1.3.1 Components of the packaging planning process

The packaging planning to be carried out by the supplier comprises the following components :

Component	Documentation	Explanation	Basis ¹
Make-up of the packaging	Data sheet : Packaging structure	Specifies the packaging structure (internal & external packaging; GLT; etc.)	-list of Kostal returnable packaging -Kostal Logistics Guideline -packaging check-list -drawing of the bought-in part
Planning quantities	Data sheet : Circulation quantity planning	Calculates the stock in circulation of packaging material	-run-up curve as delivery schedules -average annual demand as Kostal enquiry
Technical execution	Technical drawing	Technical structure of the packaging	-list of Kostal returnable packaging -Kostal Logistics Guideline -packaging check-list -drawing of the bought-in part

¹ see "Appendix Documents "

The packaging structure sets out the structure of the packaging (boxes; cartons; etc.) and, therefore, the relevant master data for packaging when a bought-in part is delivered to Kostal. This packaging structure must be followed for each and every shipment to Kostal.

The packaging structure must be planned on the basis of the technical requirements for the make-up of packaging units. These technical requirements are contained in the packaging check-list. The specified packaging structure for the basis for the planning of what quantities of packaging materials will be required (quantity planning).

The quantity planning specifies the minimum essential quantities of packaging materials, based on the demand for the bought-in part. The supplier must obtain this demand from the delivery schedules and will be as in line with the annual quantities stated in the request for quotation issued by Kostal Purchasing. In addition, when planning the packaging materials in circulation, the supplier must take into account the quantities which will be required for future production locations in the Kostal Group, as well as possible losses of returnable packaging. The resultant packaging material requirements must be divided by the supplier in relation to the planning forecasts for the bought-in part, so that the necessary quantities of packaging materials are available to the supplier at the right time, for deliveries to Kostal.

In addition, the supplier must specify a reasonable batch size for the empty packaging and take into account the space required for holding these empty packaging units.

1.3.2 Disposable (non-returnable) packaging

The necessary quantity of non-returnable packaging covers the supplier's internal requirements and the packaging needed for deliveries to Kostal. The procurement of non-returnable packaging is the supplier's task and is carried out at his cost.

When deliveries are received at Kostal, the bought-in goods supplied in non-returnable packaging (external packaging) will be transferred by Kostal or by companies authorised by Kostal, into KMV. For each KLT (small load carrier) involved in this, the supplier will be debited € 1,17.

1.3.3 Planning Kostal returnable packaging (KMV)

The supplier is responsible for carrying out the planning of KMV in terms of quality and logistics aspects. The quality aspects are co-ordinated with the specialist Kostal departments affected, via Project Purchasing, and confirmed in the form of the packaging check-list. The peripheral logistics conditions are described in the Kostal Logistics Guideline and are fixed in the planning of the packaging structure.

In differentiating between returnable and non-returnable packaging, consideration must be given to the peripheral economic conditions applying with regard to the return transport of returnable materials, the

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costs of transferring to other packaging and the processing cost for handling empty packaging in Kostal's Goods Inwards department.

The following list of charges is definitive :

Transfer-packing a carton :	€ 1,17
Returning a GLT (large load carrier) in Kostal's Goods Inwards :	€ 3,00 *
Returning a KLT (small load carrier) in Kostal's Goods Inwards :	€ 0,40 *

* Figures may differ for Kostal locations outside Germany. The costs are not paid by the supplier.


Under the general conditions described, the following guidelines apply to the planning of returnable packaging :

1. The use of returnable packaging should be checked via an individual case, involving the above general conditions, for supplier shipment points outside Germany.
2. For supplier shipment points in Germany, the use of returnable packaging is recommended.
3. Where deliveries to a single Kostal factory are made from more than one of the supplier's shipment points, non-returnable packaging should not be used. However, if the supplier can guarantee that there will be a single shipment point responsible for the 1:1 exchange of empty packaging, non-returnable packaging can be used (see Section 3.1).

1.4 Approval / release of packaging materials

The following illustration gives an overview of the steps involved in the approval/release of packaging, related to the project-specific run-up curve (see "Appendix Documents").

By the "first production samples" date in the project, the necessary releases must have been issued by Kostal. To achieve this, the supplier must make his submission of the packaging planning, the packaging of samples and initial production samples for each bought-in item, in good time. The timings are agreed between the supplier and Kostal :

Project timing date (Kostal)	Supplier
Equipment release (authorisation to supplier)	
	Submission of packaging planning, based on project-specific and general requirements (see Section 1.3)
	Submission of sample packaging with a sample bought-in part
	Submission of initial sample packaging from full production tool
Initial production samples (release of initial sample inspection reports for all bought-in parts)	

* detailed timing plan will be advised by Kostal project purchasing

Kostal issue release of the sample packaging in accordance with the packaging check-list. The checks are based on the packaging requirements relating to the specific part.

Following final release of the production packaging, all deliveries must be made in the specified packaging. Any earlier introduction of this packaging must be covered by a deviation approval (AWG), issued by Kostal.

The supplier must request the AWG from the Kostal procurement scheduling department (APL1.2). The Kostal Goods Inwards Quality department will then, if appropriate, issue an AWG for the packaging, restricted either in time or in quantity. The Kostal procurement scheduling department will advise the supplier that the AWG has been released.

2 PROCUREMENT OF RETURNABLE PACKAGING (KMV)

When sourcing returnable packaging, the supplier must ensure that, to achieve a clear identification, each piece of returnable packaging is marked with the in the packaging planning data sheets listed characteristics. The supplier must request the information for this from the Kostal Logistics department, after the packaging panning has been released (see Section 1.4).

2.1 Setting up packaging tools

Arrangements for a new packaging tool (not KMV) are made by the supplier. Once the packaging has been released by Kostal project purchasing, Kostal will bear the initial costs of setting up the packaging tool. The set up of the packaging tool is done under the regulations of the Kostal tool loan contract.

2.2 Procuring KMV packaging

As far as internal packaging is concerned, the supplier is 100% responsible for having the appropriate quantities available at the right time, both for the run-up to production and for full production. With regard to external packaging, the supplier and Kostal will jointly obtain the necessary quantities for the packaging circulation system, based on the proportions agreed in the quantity planning exercise. The supplier will obtain his proportion of the quantities to be in circulation from a packaging manufacturer nominated by Kostal, or agreed between the supplier and Kostal. As proof of the procurement and delivery of the KMV, Kostal will receive a copy of the delivery note. The quantity will be booked at Kostal as an inward movement of the supplier.

2.3 Procuring non-KMV packaging

The supplier is responsible for procuring all the returnable packaging used in the entire packaging circulation system.

2.4 Ownership

The ownership of the packaging is determined by the proportions involved in the procurement. When a project is completed (balance-out), a stock inventory is carried out, with the stocks being disposed of as described in Section 4. The quantities owned by the parties are calculated on the basis of the Goods Inwards ongoing figures for the quantities delivered.

3 MANAGING RETURNABLE PACKAGING

3.1 Loaned packaging account

3.1.1 *Setting up new loaned packaging accounts*

All the quantities of returnable packaging required for the movement of goods between the supplier and Kostal are logged and managed in so-called loaned packaging accounts. In this, a separate loaned packaging account is set up and run for each type of returnable packaging used by the supplier. The supplier's loaned packaging accounts represent a direct one-to-one relationship between the relevant Kostal factory (or company authorised by Kostal) and the supplier. This applies to deliveries to any of the Kostal divisions : Automobil Elektrik, Industrie Elektrik and Kostal Kontakt Systeme.

The loaned packaging accounts are set up by Kostal (or a company authorised by Kostal) once the full production packaging has been approved and released. The accounts record stock-levels and movement data (entries and withdrawals).

The supplier must also set up loaned packaging accounts to cover the movements of returnable packaging, so that any losses in the course of circulation (see Section 3.1.5) are detected at an early stage and can be corrected. These accounts must enable stock-levels and movement data to be recorded. In accordance with Kostal EDI Guideline (www.kostal.com/english/3-02-02-01.html) the supplier must ensure that, when an electronic delivery note advice is sent, simultaneously a deduction is made in the loaned packaging account, covering the packaging used in that shipment.

3.1.2 *Changes to existing loaned packaging accounts*

Existing loaned packaging accounts with the supplier must be adapted when new procurements are made. To do so, and to make a new start with the loaned packaging account, firstly a stock check is made (see Section 3.1.4). The balance-out of any discrepancies must be agreed between the supplier and Kostal. The returnable packaging which has been provided to the supplier, or which he has obtained himself as his part of the new packaging arrangements, are booked initially as the starting inward movement in the loaned packaging account.

3.1.3 *Bookings against accounts*

All incoming and outgoing returnable packaging is booked in the loaned packaging accounts. Incoming packaging is the packaging delivered to Kostal (containing goods) and outgoing packaging is the packaging which leaves (empty packaging). Incoming packaging is booked on the basis of the delivery note or delivery note advice. Outgoing packaging is booked on the basis of the delivery note accompanying the empty packaging.

3.1.4 *Balancing accounts*

On 30 June and 31 December each year, or whenever requested by Kostal, the supplier will carry out an account balance. To do so, the supplier will ask the Kostal empty packaging admin. department (or the company authorised by Kostal) to provide movement data from the Kostal empty goods account. He will then carry out a physical stock check on the specified day (no movements must take place that day). The results of the stock-check and balance-out are submitted to Kostal with 14 days of the stock-check.

Differences in stock records can be eliminated by booking corrections in the accounts operated by Kostal and the supplier. This is done by a comparison of the delivery notes. The only delivery notes taken into account are those which contain packaging data in accordance with then Kostal Guideline. Losses are replaced by the party which caused the loss.

If the supplier does not carry out a stock-check within 6 months, the stock-level data in the Kostal loaned packaging account are taken as correct and accepted by the supplier. The supplier is responsible for losses (see Section 3.1.5) in the stocks as recorded in the loaned packaging account.

The balance-out of losses is entirely at the supplier's cost. This covers the period starting from the date of the last account balance-out, up to the present date.

3.1.5 Losses

In this context, losses are missing quantities of returnable packaging which are greater than the "shrinkage" planned by the supplier. The basis for establishing losses of returnable packaging in the stock in circulation is the balance-out of inventory data and loaned packaging accounts figures held by the supplier, with those held by Kostal. Losses are replaced by the party which caused the loss.

3.2 Repairs

The supplier must ensure that the returnable packaging held at his premises is fit for use and must carry out repairs as necessary. Returnable packaging not fit for use must not be used for deliveries to Kostal or a company authorised by Kostal. Such packaging must be sent back separately to Kostal, appropriately identified. Kostal will dispose of returnable packaging which is not fit for use. The charge of the disposal costs will be done due to the parties responsibilities.

Packaging is fit for use when, apart from external signs of use, no further damage is evident which will permit a deterioration in the quality of the goods to be shipped, if it continues to be used.

3.3 Cleaning

The supplier must ensure that only cleaned returnable packaging is used for deliveries to Kostal or a company authorised by Kostal. In this connection, the supplier must discover the cleanliness requirements for the returnable packaging, according to the needs relating to the specific product and must meet those requirements.

3.4 Replacing returnable packaging

3.4.1 Transporting empty packaging

The delivery terms agreed with the supplier form the basis for the organisation and acceptance of costs relating to the return of empty packaging.

If the delivery terms are "free house" (that is, the price of the product includes all charges to deliver the goods to Kostal or a company authorised by Kostal) the return of the empty packaging is the supplier's responsibility and takes place at his cost. Kostal accept the organisation and costs of transporting empty packaging only if this becomes necessary because of inadequate stock levels at Kostal.

If the delivery terms are "ex works" Kostal accept the cost of transporting empty packaging.

In both cases, the supplier must ensure that, when full packaging is delivered, a return shipment of empty packaging also takes place, to guarantee the 1:1 exchange. Reasonable quantities of empty packaging to be returned in any single shipment must be indicated by the supplier in his quantity planning (see Section 1.3.1) and agreed by Kostal. In this connection, the supplier is free to rent external logistics space near the Kostal plant, so that return shipments of empty packaging can be made to an optimum batch size.

3.4.2 Bought-in items for pre-production use

For the first deliveries of bought-in products which are still in the setting-up stage (pre-production) it may be appropriate to agree deviations from the normal rule of a 1:1 exchange of full and empty packaging, in order to ensure that the stock of packaging in circulation is properly distributed.

3.4.3 Bought-in items for use in full production

The exchange of empty packaging for full packaging takes places exclusively on arrival of the shipment, when it is booked into Goods Inwards and is made on a 1:1 basis or, by agreement, in fixed batches of empty packaging, firmly agreed with Kostal. The exchange with empty packaging may be handled by logistics services companies authorised by Kostal.

If the replacement of full packaging by empty packaging is handled by a logistics service company authorised by Kostal, the supplier must advise that company of the quantity of empty packaging required, to cover the exchange. This is done with the " Empty Packaging Request " form (see "Appendix Documents").

3.5 Adjusting packaging stock in circulation to meet changes in demand

At regular intervals, the supplier will carry out a comparison between the packaging in circulation and the real demand for returnable packaging. This is based on the demand issued by Kostal for bought-in parts.

If a change in the level of packaging in circulation become necessary, the supplier must inform Kostal of this and draw up a new planning status. This new planning status is based exclusively on the changes in demand and not based on stock-checks.

3.6 Technical changes to the bought-in item

Kostal Purchasing will send enquiries to the supplier regarding technical changes. The supplier will check the previous packaging planning and packaging requirements, based on the technical change to the product. If necessary, the supplier must quote for a technical change to the packaging. This is done on the basis of a new packaging planning (see Section 1.3).

4 BALANCE-OUT PROCEDURE FOR BOUGHT-IN ITEMS

When a bought-in part is balanced out, a stock-check must be made of the returnable packaging (see Section 3.1.4).

4.1 Kostal returnable packaging

The supplier checks the future spares demand for the bought-in part and specifies the maximum level of returnable packaging in circulation for deliveries to Kostal, based on the new quantity planning. All returnable packaging no longer required must be returned to Kostal. When doing so, the supplier is responsible for any losses. The loaned packaging account is adjusted accordingly (see Section **Fehler! Verweisquelle konnte nicht gefunden werden.**).

4.2 Non-Kostal returnable packaging

The supplier checks the future spares demand for the bought-in part and specifies a maximum level of returnable packaging in circulation for deliveries to Kostal, based on the new quantity planning. Alternatively, the supplier can apply to Kostal's APL1.2 department (procurement scheduling) for permission to use disposable packaging for deliveries of spares to Kostal. In this connection the supplier must draw up a new packaging planning (see section 1.3) and present this to Kostal for approval (see Section 1.4).

All returnable packaging in circulation, no longer required for use with the product, must be checked by the supplier to see if it can be used for other products to be delivered to Kostal. In this connection the supplier draws up a new packaging planning and submits it to Kostal for approval.

All returnable packaging not required for deliveries of spares and which cannot be used for other bought-in parts are returned to Kostal and disposed of. The supplier is responsible for any losses. The associated empty goods account is closed.

5 CLOSING STIPULATIONS

Any changes or additions to this Guideline must be made in writing.

APPENDIX DOCUMENTS

Appendix	Description	Given to the supplier
Project-specific attachments		
Drawing of the bought-in part	Technical drawing of the bought-in part	Order paperwork
Packaging check list	Packaging requirement relating to the specific bought-in part	Part of the logistics assurance agreement – specific to supplier and bought-in part
General attachments		
Data sheet - Packaging structure	Specification of packaging structure	www.kostal.com/english/3-02-02-01.html
Data sheet - Circulation quantity planning	Calculation of quantities of packaging materials in circulation; determination of empty packaging batch size	www.kostal.com/english/3-02-02-01.html
Data sheet - Demand preview	Supplier's forecast of empty packaging requirement	www.kostal.com/english/3-02-02-01.html
List of KMV	Overview of KMV in use	www.kostal.com/english/3-02-02-01.html
Kostal Logistics Guideline	Requirements of supplier's delivery logistics	www.kostal.com/english/3-02-02-01.html