

## EDI Guideline

### 1 Electronic Data Interchange (EDI) for business management applications

Electronic data interchange (EDI) ensures the optimal alignment of information flows between all commercial companies involved. Any information regarding company-to-company business processes can be made available to the relevant parties, without delay and with no additional processing problems as the volume of information increases.

To gain full advantage of electronic communication, the exchange of information must be integrated into the application systems.

Where data reception is normally carried out automatically, new measures are required to a certain degree, to ensure that no errors occur during the process. Such measures will include automatic plausibility tests, as well as a revision of the communication structures.

Electronic data exchange must be compatible with various application systems, transfer media and formats.

#### WebEDI: Information Interchange via Internet-Service

A web application can be used mainly for partner relations with a small number of transactions, to provide additional information for external users or for processes that require very close interaction in a user dialog.

The web application can be used from any desktop with internet browser.  
(you will find detailed information in the internet at: [www.kostal.com](http://www.kostal.com): Partner -> WebEDI )

The technical setup of EDI connections between European partners and all KOSTAL companies worldwide is done via our EDI Center in Germany. Partners in the American area will be setup at our EDI Center in Mexico.

Because all companies within KOSTAL group are responsible for their own partner communication from the application point of view, any general agreements for new relationships and changes in the EDI communication should be made in direct negotiation with the KOSTAL Company involved. Setup of the EDI connection will be organized within our organisation.

For information on the basic principles of EDI communication, please contact the EDI Service at KOSTAL Holding (Germany).

#### Overview

KOSTAL group supports the following EDI messages:

Scenario		Message type	Format	Sender
obligat. in case of EDL	obligat. in case of VMI			
X	X	Forecast/Calloff	VDA4905	KOSTAL
			EDIFACT DELFOR	KOSTAL
X	X	Delivery note (ASN)	VDA4913	Supplier
			EDIFACT DESADV	Supplier
		Selfbilling Invoice	VDA4908	KOSTAL
			EDIFACT INVOIC	KOSTAL
	X	Stock balance (VMI)	EDIFACT INVRPT	KOSTAL

## 2 Application Agreement

Agreements relating to information and applications.

### 2.1 Delivery Schedules

Delivery schedules are generated for all orders which refer to an agreed blanket contract. Agreements relating to the blanket contract are carried out by fax.

Schedules showing changes to the demand situation are issued each day. At somewhat longer intervals a complete overview is also issued, to ensure the validity of the current information-level regarding individual items.

Where orders have been delivered in full, a "No Requirement" schedule is issued (showing a call-off quantity of zero). If there are follow-on orders, a new requirement is issued, covered by a new order number.

The issue level is confirmed as a suffix to the material reference number. Thus, the material reference number is extended by a hyphen (-) and a 2-digit code to show the issue level - e.g., 66550000011311-01. If there are requirements for different issue levels, these are issued separately.

Requirements must be allocated by reference to the Supplier No., factory/plant code, unloading point and Purchasing Order Number. Only a combination of these data will ensure a clear allocation.

The list of plant codes and unloading point will be provided by our purchasing department.

#### 2.1.1 VDA 4905

The information message is described in detail in VDA Recommendation 4905. KOSTAL does not use any particular, special codings for the fields described here. See also Para. 2.1.1.3

If you do not have a copy of the VDA Recommendations, they can be downloaded or ordered at: [www.vda.de](http://www.vda.de)

##### 2.1.1.1 Parameters

Virtual File Name: LAB.<Short name of Kostal company>.<Supplier code>  
File format: Fix, 128 character/set  
Character set: EBCDIC (ASCII by special agreement)

(please use your supplier code at KOSTAL for <Supplier code>, 6 digits without leading zero)  
(please use the short name of the individual Kostal company.)

##### 2.1.1.2 Information Structure

See VDA Recommendation 4905.

The following are used by KOSTAL:

511 1 x per transfer file  
512 1 x per material number/issue level  
513 1 x per material number/issue level  
514 n x as long as divisions are available  
518 n x as long as text is available (max. 5 repeats)  
519 1x per transfer file

##### 2.1.1.3 Agreements

The release "horizons" in set type 512 contain information in weeks (not in months). KOSTAL material reference numbers are extended to include the issue level. If you handle the various issue levels in a different way (that is, not via the material reference number) you must break down the field for the customer's material reference number instead. In doing so, please bear in mind that delivery schedules can also be drawn up without an issue level. The main material number can also be of length 8.

## **2.1.2 Edifice DELFOR**

### **2.1.2.1 Parameters**

Virtual File Name: LAB.<Short name of Kostal company>.<Supplier code>  
File format: unstructured  
Character set: ASCII

(at the point shown as <supplier number> please enter your supplier number for KOSTAL : 6 digits without the initial 0)

### **2.1.2.2 Information Structure**

Branching diagram, structure description and example:

KOSTAL Homepage:

<https://www.kostal.com/-/media/files/downloads/edi/en-en/edifact-delfor01-enl.pdf>

### **2.1.2.3 Agreements**

KOSTAL material reference numbers are extended to include the issue level. If you handle the various issue levels in a different way (that is, not via the material reference number) you must break down the field for the customer's material reference number instead. In doing so, please bear in mind that delivery schedules can also be drawn up without an issue level for the material. The master material number can also be an 8-digit reference.

Material release and Production release correspond to general purchasing agreements of KOSTAL.

The classification in the SCC group is only informative. This should not be used to control relevance for delivery. All schedule lines should be represented in the application system of the receiver and can get relevant for delivery with time proceeding.

#### **ATTENTION:**

The repetition factor of the SCC group is not restricted in our message. The limit of 50 repetitions is not applied. You must be able to process also more than 50 schedule lines.

The backlog quantity is in general no separate schedule line, but given as a sum in segment QTY+83. This quantity is still an open requirement and has to be delivered immediately.

## 2.2 Delivery Notes (ASN)

Every delivery is preceded by a EDI Delivery note. The message has to be sent when the truck leaves the supplier. The delivery should be accompanied by a paper document which should be a bill of loading like defined in VDA 4912 or actually a paper delivery note.

Pallets and inner packages have to carry a standardized label that fulfils KOSTAL shipping instructions. Information on labels have to correspond the contents of the EDI transmission. Your labels have to be checked in advance by our goods reception.

ATTENTION: delivery note number on the label has to be barcoded without leading zeros.

With the EDI delivery note Plant code, Unloading point and PO number have to be used corresponding to the contents of the calloffs previously received.

**Please note:** The KOSTAL reference numbers have to be used in any case, also if it refers to a single order that is not transmitted by EDI.

This references are:

- Kostal material number of the material delivered, including revision level, separated by a hyphen "-".
- 12-digit PO number, composed from No. of Scheduling agreement or single order and the last two digits of the line item no.  
e.g.: Purchasing document: 551000001  
Line item: 00020  
leads to PO number 55100000120
- Kostal plant code (see table)
- Kostal unloading point (see table)
- Kostal material number of all packing material that is used in the ASN message (a number with 14 digits, beginning with 719...)

Regard to fulfil the correct packing structure according the instructions provides with the message descriptions.

Packing structure will be checked when the message arrives at KOSTAL.

Especially the Handling Unit Identifications are essential. There has to be a unique identification for every inner and outer packaging unit. Packing material numbers have to be used like specified by KOSTAL.

ASN for KOSTAL Germany for storage locations with HU-Management:

(it is recommended to apply these rules for all storage loactions)

- always with the whole packaging structure (which are returnable or which build up a handling unit)
- only one item per delivery (it is only allowed to have multiple line items, if they represent the same article, but different vendor batches (lot numbers). Consider subsequent documentation for the different message formats.)
- maximum length of delivery note number is 10.
- maximum length of vendor batch is 10.
- maximum length of handling unit number is 9.

General advice:

If you do change the structure of ASN that are already in productive use, your ASN has to be tested and released again.

### 2.2.1 VDA 4913

The information message is described in detail in VDA Recommendation 4913. KOSTAL does not use any particular, special codings for the fields described here. See also Para. 2.2.1.3

If you do not have a copy of the VDA Recommendations, they can be downloaded or ordered at: [www.vda.de](http://www.vda.de)

#### 2.2.1.1 Parameters

Virtual File Name: LS.<Short name of Kostal company>.<Supplier code>

File format: Fix, 128 character/set

Character set: EBCDIC (ASCII by special agreement)

(at the point shown as <supplier number> please enter your supplier number for KOSTAL : 6 digits without the initial 0)

#### 2.2.1.2 Information Structure

See VDA Recommendation 4913.

**Please note:** All deliveries within one transmission file has to be related to the same unloading point. Because we will decide by this code once for every file, if the message will be processed or not.

The following records are used by KOSTAL:

711 1 x per transfer file

712 1 x per shipment

713 1 x per delivery  
 714 1 x per article  
 715 for the first M-Label  
 715 for S-Label belonging to first M-Label (S-Label separate or from/to possible)  
 715 for the second M-Label  
 715 for S-Label belonging to second M-Label (S-Label separate or from/to possible)  
 [etc.]

Additional packing (lids or tops, if returnable) of the pallet should follow the 715 record of the pallet.  
 Additional packing (lids or tops, if returnable) of the box should follow the 715 record of the box.  
 719 1x per transfer file

**Examples for packing structures:**

**LK01 Box on Europallet:**

KOSTAL-Material		Handling Unit		Labeltype
		from	to	
715 71947128131001	[...]	010471001	010471001	M
715 71946000010001	[...]	010471002	010471017	S
715 71947128131001	[...]	010471018	010471018	M
715 71946000010001	[...]	010471019	010471034	S
715 71947128131001	[...]	010471035	010471035	M
715 71946000010001	[...]	010471036	010471051	S
715 71947128131001	[...]	010471052	010471052	M
715 71946000010001	[...]	010471053	010471068	S

(Simplified 715 records, in the message the records have to be generated in full extend according VDA4913)

**Reels in Carton on Pallet, if carton is M-Label:**

KOSTAL-Material	Qty	Handling Unit		Labeltype
		from	to	
715 71948000000000	[...]	1	010471001 010471001	M
715 71939000000000	[...]	15	010471002 010471017	S
715 71948000000000	[...]	1	010471018 010471018	M
715 71939000000000	[...]	15	010471019 010471034	S
715 71947128131001	[...]	1		(Label ID is BLANK)

(simplified 715 records, in the message the records have to be generated in full extend according VDA4913)

The pallet is not represented as a handling unit in this case, therefore the pallet has to be given separately to follow the stock balance of the packing material. Any of these additional packing (type BLANK) has to follow on a real HU record (type S or M).

One-way packing material that does not build a handling unit, has not to be represented in the message. But whenever used in the message, it has to be used with a valid Kostal material number

**Mixed pallets:**

Use real G-Label as specified in recommendation VDA4913.

**Vendor Batch:**

For parts requiring traceability, please use vendor batch or lot numbers.

If your delivery do only contain one vendor batch, the structure remains unchanged, it is sufficient just to map the vendor batch additionally like follows:

Record type 714, Field 14: „Chargen-Nummer“ (Batch number) (10 characters maximum due to restrictions of internal data structures)

If your delivery contain different batches, you have to create separate line items.

Following variants are accepted by KOSTAL:

Variant 1:

713...

714... Line Item 1, Batch A

714... Line Item 2, Batch B

715... complete packing structure for both line items as described above (each 715 record with line item number as reference)

Variant 2:

713...

714... Line Item 1, Batch A

715... Handling Units with Batch A. On two-level packing the corresponding master label FIRST (each 715 record with line item number as reference)

714... Line Item 2, Batch B

715... Handling Units with Batch A. On two-level packing the corresponding master label FIRST. If it is the same master label, the repeated occurrence has to have filled field „Anzahl Packmittel“ (No. of packing material) with Zero! (Each 715 record with line item number as reference)

(Variant 2 will be transformed to Variant 1 by us)

### 2.2.1.3 Agreements

Using additional packing material as returnable requires the sequence of 715 records like described above.

The label identification (M or S) is deviating from standard VDA obligatory. That means that all inner and outer handling units (boxes and pallets) has to be indicated with "S" or "M" in record 715. Additional packing material, tops or lids, that do not represent a handling unit must have no label type (= BLANK).

## 2.2.2 Edifact DESADV

### 2.2.2.1 Parameters

Virtual File Name: LS.<Short name of Kostal company>.<Supplier code>

File format: unstructured

Character set: ASCII

(at the point shown as <supplier number> please enter your supplier number for KOSTAL : 6 digits without the initial 0)

### 2.2.2.2 Information Structure

Branching diagram, structure description and example:

KOSTAL Homepage:

<https://www.kostal.com/-/media/files/downloads/edi/en-en/edifact-desadv01-engl.pdf>

#### Shipment with assigned Delivery Notes in DESADV:

There has to be one transport per DESADV message.

The BGM segment corresponds to a shipment.

There has to be one segment group of CPS+++4 segment per delivery.

Important: All packing material groups have to follow directly to the CPS+++4 group.

Only after these packing material groups, can be repeated CPS+++4 for the next delivery.

That is:

CPS+++4

LIN+...

CPS+++1

PAC+...

CPS+++3

PAC+...

CPS+++4

LIN+...

CPS+++1

etc.

If your ASN has no transport level, it is also possible to use the BGM segment for the delivery note number.

#### Vendor Batch:

For parts requiring traceability, please use vendor batch or lot numbers.

If your delivery do only contain one vendor batch, the structure remains unchanged, it is sufficient just to map the vendor batch additionally like follows:

In segment PIA:

„1“ in PIA\_4347

„BB“ in PIA\_7143 (“EC” will be interpreted by us as vendor batch as well)

For example:

PIA+1+0724D1157L:BB::92

(10 characters maximum due to restrictions of internal data structures)

If your delivery contain different batches, you have to create separate line items.

This leads to following structures:

UNB+UNOA:2+00013TEST+O0013000124KOSTAL01+060511:1510+60++DESADV  
UNH+1+DESADV:D:97A:UN  
BGM+351+051423+9 represents transport level  
DTM+137:20060511:102  
NAD+BY+10322::91  
NAD+SE+836160::92  
TDT+25+1234+T:TRUCK++:92:UPS

CPS+001+++4 represents delivery level  
LIN+1++66250101180301-01:BP::92 represents delivery line item for the 1<sup>st</sup> batch  
PIA+1+BATCH\_A1:BB::91  
QTY+12:16000:PCE  
DTM+11:20060511:102  
NAD+ST+001::92  
RFF+CT:551000384320  
RFF+AAK:193802  
LOC+11+11570::92

LIN+2++66250101180301-01:BP::92 represents delivery line item for the 2<sup>nd</sup> batch  
PIA+1+BATCH\_A2:BB::91  
QTY+12:8000:PCE  
DTM+11:20060511:102  
NAD+ST+001::92  
RFF+CT:551000384320  
RFF+AAK:193802  
LOC+11+11570::92

CPS+002++1 First packing level (S-Label)  
PAC+1++71939000000000::92  
QTY+52:4000:PCE  
PCI+17+1000876+1  
PCI+17+1000877+1  
PCI+17+1000878+1  
PCI+17+1000879+1  
LIN+1++66250101180301-01:BP::92 shows which material is packed here (reference to corresponding line item)  
PIA+1+BATCH\_A1:BB::91

CPS+002++1 First packing level (S-Label)  
PAC+1++71939000000000::92  
QTY+52:4000:PCE  
PCI+17+1000901+1  
PCI+17+1000902+1  
LIN+2++66250101180301-01:BP::92 shows which material is packed here (reference to corresponding line item)  
PIA+1+BATCH\_A2:BB::91

CPS+003++4 a second delivery  
LIN+3++66990009420301-00:BP::92  
PIA+1+BATCH\_B1:BB::91  
QTY+12:12000:PCE  
DTM+11:20060511:102  
NAD+ST+001::92  
RFF+CT:551001414201  
RFF+AAK:193803  
LOC+11+11570::92

LIN+4++76990009420301-00:BP::92  
PIA+1+BATCH\_B2:BB::91  
QTY+12:12000:PCE  
DTM+11:20060511:102  
NAD+ST+001::92  
RFF+CT:551001414201  
RFF+AAK:193803  
LOC+11+11570::92

CPS+004++1  
PAC+1++71939000000000::92  
QTY+52:4000:PCE  
PCI+17+1000869+1  
PCI+17+1000870+1  
PCI+17+1000871+1  
LIN+3++66990009420301-00:BP::92  
PIA+1+BATCH\_B1:BB::91

CPS+004++1  
PAC+1++71939000000000::92  
QTY+52:4000:PCE

PCI+17+1000873+1  
PCI+17+1000874+1  
PCI+17+1000875+1  
LIN+4++66990009420301-00:BP::92  
PIA+1+BATCH\_B2:BB::91  
UNT+90+1  
UNZ+1+60

The example shows only a message with one packing level. Second packing level (= M-Label) will be possible as well. CPS+++3 groups can follow the CPS+++1 groups like described in the current guideline.

### **2.2.2.3 Agreements**

Also in the EDIFACT format the limited length of delivery note and HU number is applied.



## 2.3 VMI-Message

With Vendor-Managed-Inventory (VMI) the stock balance and the goods movements are supervised on responsibility of the supplier. The required deliveries to the warehouse are planned by the supplier as to guarantee that the stock is always within min/max limits.

For this purpose you will receive two EDI messages accompanying this process:

- a) forecast (DELFOR or VDA4905 as a VMI version, that means quantities are gross quantities)
- b) Inventory Report (INVRPT)

On Vendor Managed Inventory the calloff message is only a forecast for your MRP.

The deliveries are created from your side on basis of the stock balance and goods movement information. This is represented in a daily INVRPT message that holds all stock information of the external warehouse.

- a) Quantity in stock in categories "on hand", "in quality check" and "rejected".
- b) All delivery numbers of your deliveries into the warehouse since the last report. (as references on header level)
- c) All withdrawals from the warehouse with quantity, date and handling unit number

Also you will get all identifications of the handling units in the warehouse. These HU-Numbers can be package identifications of S- and M-labels.

The forecast message does also contain quantities in the short-term period. These quantities can be used to calculate the reach of the current stock. It is responsibility of the vendor to supply the warehouse in an optimal way.

### 2.3.1 VDA

For the Inventory Report message VDA format is not supported at KOSTAL.

The Forecast message can be send in VDA format as well.

There is a substitute for this process using VDA4913 with External Warehouse Processes with process codes 30, 35 and 36. Details on request.

### 2.3.2 Edifact INVRPT 97A

#### 2.3.2.1 Parameter

Virtual File Name: VMI.<Short name of Kostal company>.<Supplier code>

File format: unstructured

Character set: ASCII

(Please use your supplier code at KOSTAL for <Supplier code>, 6 digits without leading zero)

#### 2.3.2.2 Information Structure

Branching diagram, structure description and example:

KOSTAL Homepage:

<https://www.kostal.com/-/media/files/downloads/edi/en-en/edifact-invrpt05-engl.pdf>

#### 2.3.2.3 Agreements

None.

### 2.3.3 Edifact DELFOR 97A

For the VMI process it is possible to receive the EDIFACT Forecast also in version 97A.

#### 2.3.3.1 Parameter

Virtual File Name: FC.<Short name of Kostal company>.<Supplier code>

File format: unstructured

Character set: ASCII

(Please use your supplier code at KOSTAL for <Supplier code>, 6 digits without leading zero)

### **2.3.3.2 Information Structure**

Branching diagram, structure description and example:

KOSTAL Homepage:

<https://www.kostal.com/-/media/files/downloads/edi/en-en/edifact-vmi-delfor01-engl.pdf>

### **2.3.3.3 Agreements**

None

## 2.4 Selfbill

In case of self-billing there is not booked an invoice of a supplier, but the deliveries are billed on the basis of goods receipts by the customer.

The Selbill message gives notice of this account that can be used at the supplier for clearing the internal invoice.

You can receive this billing document from KOSTAL by EDI

The EDI message contains several self-billing documents in one transmission with a summarized information at the end to cross check the amounts.

Additionally it is possible to receive a summarizing list as a paper document.

### 2.4.1 VDA 4908 Version 04

The information message is described in detail in VDA Recommendation 4913. KOSTAL does not use any particular, special codings for the fields described here. See also Para. 2.4.1.3

If you do not have a copy of the VDA Recommendations, they can be downloaded or ordered at: [www.vda.de](http://www.vda.de)

#### 2.4.1.1 Parameter

Virtual File Name: GA.<Short name of Kostal company>.<Supplier code>

File format: Fix, 128 character/set

Character set: EBCDIC (ASCII by special agreement)

(Please use your supplier code at KOSTAL for <Supplier code>, 6 digits without leading zero)

#### 2.4.1.2 Information Structure

See VDA recommendation 4908.

Used at KOSTAL:

821 1 x per Transmission file

822 1 x per Selfbilling document

823 1 x per Delivery

824 1 x per Article

829 1x per Transmission file

Each goods receipt will be billed separately. That means there is one self-billing document per goods receipt.

### 2.4.2 Agreements

None

### 2.4.3 Edifact INVOIC 97A

#### 2.4.3.1 Parameter

Virtual File Name: GA.<Short name of Kostal company>.<Supplier code>

File format: unstructured

Character set: ASCII

(Please use your supplier code at KOSTAL for <Supplier code>, 6 digits without leading zero)

#### 2.4.3.2 Information Structure

Branching diagram, structure description and example:

Send a request to: [ediservices@kostal.com](mailto:ediservices@kostal.com)

#### 2.4.3.3 Agreements

None.

## **3 Communication Agreement**

### **3.1 EDI Parameter**

In order to implement the parameters of the EDI-connection it is necessary to complete an EDI Data Sheet.

KOSTAL Homepage:

<https://www.kostal.com/en-gb/fuer-partner/edi>

If you will need the customer number within the message as identification of the partner, please give this information to the EDI service. We will include your codes in the message. Otherwise we will send the files with customer identification "KOSTAL" in the NAD segment and you have to identify by use of supplier code, plant code and unloading point.

### **3.2 Introduction Date**

You will receive an individual letter to advise the introduction date planned for you. Or by mutual agreement.