

Delivery Interface

Use

The delivery interface groups all ALE and EDI outputs with reference to the delivery. Here, the EDI output is used mostly for external communication, and ALE output for internal communication. In the standard system, the following outputs are defined:

- Sending a shipping notification (DESADV, outbound EDI)
- Informing the forwarding agent (CARNOT, outbound EDI)
- Shipping order to warehousing contractor (SHPORD, outbound EDI)
- Shipping confirmation from service agent (SHPCON, inbound EDI)
- Warehouse order to internal warehouse (WHSORD, outbound ALE)
- Warehouse verification from internal warehouse (WHSCON, inbound ALE)
- Proof of delivery (STPPOD, outbound, EDI)
- Proof of delivery (STPPOD, inbound, EDI)

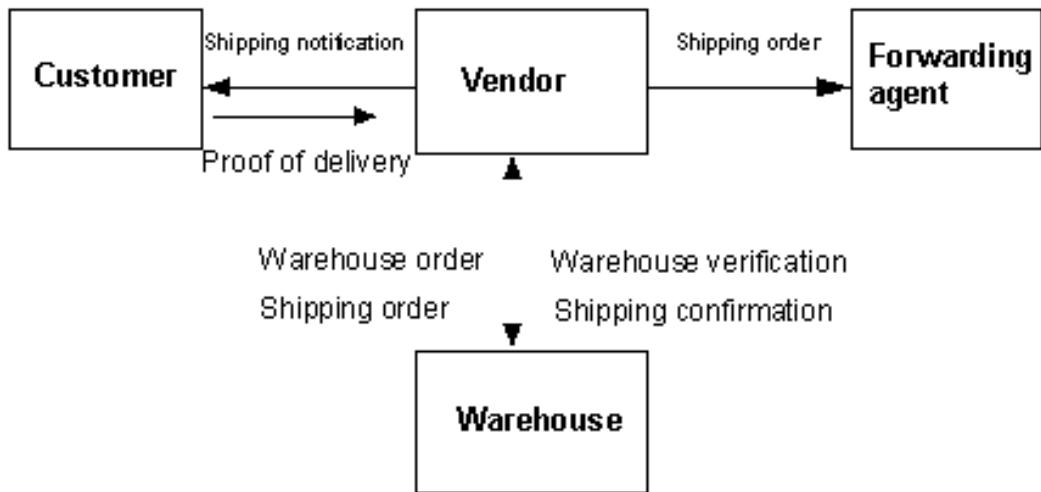
Integration

The shipping notification is the advance announcement of the delivery at the customer. When the forwarding agent makes this announcement (shipping order), the delivery data is transmitted so that the agent can organize the pickup and delivery of the goods on behalf of the customer.

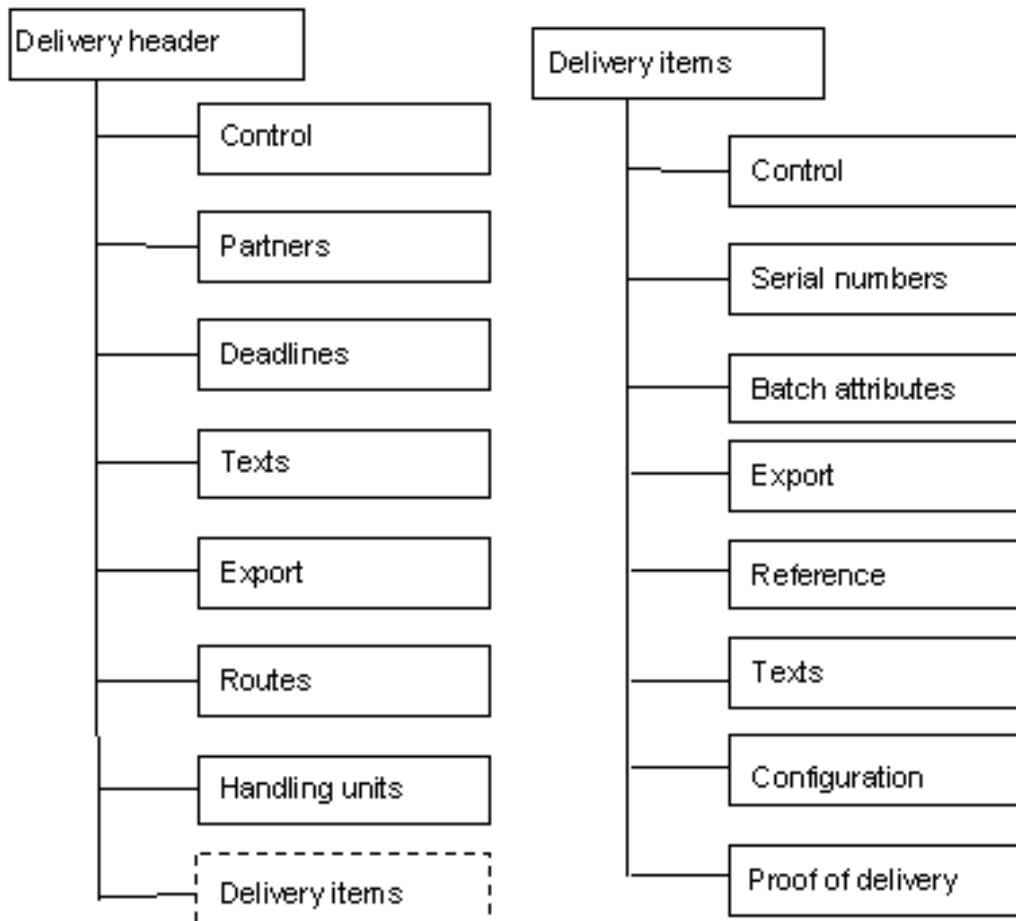
The shipping order and the shipping confirmation serve to communicate with a warehousing contractor / service agent. The latter supervises the warehouse and is responsible for the delivery. The contractor also either takes care of the delivery himself/herself or commissions a service agent.

The warehouse order and the warehouse verification both serve to connect a company's own external system (external software) with Warehouse Management.

The following overview shows the output flow:



All outputs are based on the basis IDoc type DELVRY03.



Range of Functions

Output that is outbound contains the complete structure, that is, all the fields in the individual segments are supplied with data.

In the case of inbound output, only certain fields in the segments for delivery header, delivery item, and handling units are used. Here you have control segments at your disposal in order to initiate the required behavior when you are processing the output.

The more significant segments and fields are listed below:

E1EDL20 Delivery header		
Segment field		Table field
VBELN	Sales document number	LIKp-VBELN
BTGEW	Total weight	LIKp-BTGEW
NTGEW	Net weight	LIKp-NTGEW
GEWEI	Weight unit	LIKp-GEWEI
VOLUM	Total volume of delivery	LIKp-VOLUM
VOLEH	Volume unit	LIKp-VOLEH
E1EDL18 Delivery header control		
Segment field		Table field
QUALF	Qualifier control	
	Post goods issue	PGI
	Delete delivery	DEL
	Picking with flow records	PIC
	Adopt gross weight	GWT
	Adopt net weight	NWT
	Adopt volume	VOL
PARAM	Control parameters	

E1EDT13 Deadlines delivery header		
Segment field		Table field
QUALF	Qualifier deadline	
	Goods issue	6
ISDD	Actual start date	VBDDL-ISDD
	Picking	10
NTANF	Planned start date	VBDDL-NTANF
NTANZ	Planned start time	VBDDL-NTANZ
E1EDL24	Delivery item	
Segment field		Table field
POSNR	Item number of sales document	LIPS-POSNR
MATNR	Material number	LIPS-MATNR
CHARG	Batch number	LIPS-CHARG
LFIMG	Quantity actually delivered	LIPS-LFIMG
NTGEW	Net weight	LIPS-NTGEW
BRGEW	Total weight	LIPS-BRGEW
GEWEI	Weight unit	LIPS-GEWEI
VOLUM	Total volume of the handling unit	LIPS-VOLUM
VOLEH	Volume unit	LIPS-VOLEH
E1EDL19	Control of delivery item	
Segment field		Table field
QUALF	Qualifier control	
	Adjust quantity	QUA
	Adopt gross weight	GWT
	Adopt net weight	NWT
	Adopt volume	VOL
	Batch split item	BAS

PARAM	Control parameters	
E1EDL37	Handling unit header	
Segment field		Table field
EXIDV	External handling-unit identifier	VEKP-EXIDV/-VENUM
TARAG	Tare weight of the handling unit	VEKP-TARAG
GWEIT	Weight unit Tara	VEKP-GEWEI
BRGEW	Total weight	VEKP-BRGEW
NTGEW	Net weight	VEKP-NTGEW
MAGEW	Allowed weight for the handling unit	VEKP-MAGEW
GWEIM	Weight unit	VEKP-GEWEI_MAX
BTVOL	Total volume of the handling unit	VEKP-BTVOL
NTVOL	Load volume of the handling unit	VEKP-NTVOL
MAVOL	Allowed load volume	VEKP-MAVOL
VOLEM	Volume unit	VEKP-VOLEH_MAX
TAVOL	Tare volume of the handling unit	VEKP-TAVOL
VOLET	Volume unit Tara	VEKP-VOLEH
VEGR1	Handling unit group 1	VEKP-VEGR1
VEGR2	Handling unit group 2	VEKP-VEGR2
VEGR3	Handling unit group 3	VEKP-VEGR3
VEGR4	Handling unit group 4	VEKP-VEGR4
VEGR5	Handling unit group 5	VEKP-VEGR5
VHILM	Packaging material	VEKP-VHILM
LAENG	Length	VEKP-LAENG
BREIT	Width	VEKP-BREIT
HOEHE	Height	VEKP-HOEHE
MEABM	Unit for length/width/height	VEKP-MEABM
INHALT	Description of the handling unit	VEKP-INHALT
EXIDV2	2. 2nd external identification	VEKP-EXIDV2
E1EDL44	Handling unit item	
Segment field		Table field

VBELN	Sales document number	VEPO-VBELN
POSNR	Item number of sales document	VEPO-POSNR
EXIDV	External identification	
VEMNG	Delivery item quantity	VEPO-VEMNG
E1EDL53	Proof of delivery	
GRUND	Reason for deviation for the POD	TVPOD-GRUND
PODMG	Quantity (in sales units) actually received for each delivery item	TVPOD-PODMG
LFIMG_DIFF	Deviation from the quantity actually delivered (in sales units)	TVPOD-LFIMG_DIFF
VRKME	Sales unit	TVPOD-VRKME
LGMNG_DIFF	Deviation from actual delivery quantity (in stockkeeping units)	TVPOD-LGMNG_DIFF
MEINS	Base unit of measure	TVPOD-MEINS
E1EDL54	Repacking handling units	
SOURCEHU	External HU identification of the source HU	HUM_REPACK-SOURCEHU
DESTHU	External HU identification of the destination HU	HUM_REPACK-DESTHU
PACKHU	Handling unit is to be packed	HUM_REPACK-PACKHU
PACK_QTY	Base quantity that is packed in the HU item	HUM_REPACK-PACK_QTY
BASE_UOM	Base unit of measure	HUM_REPACK-BASE_UOM
DELIV_NUMB	Delivery	HUM_REPACK-DELIV_NUMB
DELIV_ITEM	Delivery item	HUM_REPACK-DELIV_ITEM

Below you find a description of the options for inbound output with the required fields:

1. Picking verification without flow records.

This type of verification is used if the delivery items in the central system are set in Customizing as non-picking-relevant. The picked quantities are reported by the subsystem to the central system. There, the delivery quantity is adjusted, if allowed. In the IDoc, the following fields must have data:

E1EDL20-VBELN

E1EDL24-POSNR

E1EDL24-MATNR

E1EDL24-LFIMG

E1EDL19-QUALF = 'QUA'

2. Picking verification with flow records

If, in the central system, the items are set as relevant for picking, the picked quantities can be reported to the central system. However, only the complete, picked quantity of an item can be taken. Multiple reporting with an accumulated figure for the reported quantities is not allowed. So that the picking flow records can be updated, the following IDoc field must also be transmitted, in addition to the fields described under step 1.

E1EDL18-QUALF = 'PIC'

3. Verification of batch split items from the subsystem

If batch split items occur in the central system, the original item must not be reported. Instead, the new items are transferred as follows:

E1EDL24-POSNR = Item number of batch split item

E1EDL24-MATNR

E1EDL24-CHARG

E1EDL24-LFIMG

E1EDL24-HIPOS = Item number of main item

E1EDL19-QUALF = 'BAS'



If there is no batch splitting, the batch for the main item can be verified.

E1EDL24-POSNR = Item number of batch split item

E1EDL24-MATNR

E1EDL24-CHARG

E1EDL24-LFIMG

4. Weight and volume verification

It is possible to report back (verify) the gross weight, net weight, and the volume for the entire delivery or for individual items. Using the qualifier in the segments E1EDL18 and E1EDL19, you can control which fields are to be updated in the delivery.

E1EDL20-VBELN

E1EDL20-BTGEW

E1EDL20-NTGEW

E1EDL20-GEWEI

E1EDL20-VOLUM

E1EDL20-VOLEH

E1EDL18-QUALF = 'GWT'

E1EDL18-QUALF = 'NWT'

E1EDL18-QUALF = 'VOL'

E1EDL24-POSNR

E1EDL24-MATNR

E1EDL24-NTGEW

E1EDL24-BRGEW

E1EDL24-GEWEI

E1EDL24-VOLUM

E1EDL24-VOLEH

E1EDL19-QUALF = 'GWT'

E1EDL19-QUALF = 'NWT'

E1EDL19-QUALF = 'VOL'

5. Post delivery goods issue

For the goods issue posting, the following additional field must exist.

E1EDL18-QUALF = 'PGI'

6. Delete delivery

You can delete a delivery in the subsystem if the following fields are transmitted:

E1EDL20-VBELN

E1EDL18-QUALF = 'DEL'

7. Packing verification (only for creating handling units)

When you report back (verify) handling units, the (external) identification and the packaging material must always be transmitted.

E1EDL37-EXIDV

E1EDL37-VHILM

If a non-assigned handling unit is to be created, no contents data (items) must be transmitted. If a delivery is packed, the item number and the packed quantity must be transmitted (use the quantity unit of the delivery item). If you have a batch split, use the actual (external) item number.

E1EDL44-POSNR

E1EDL44-VEMNG

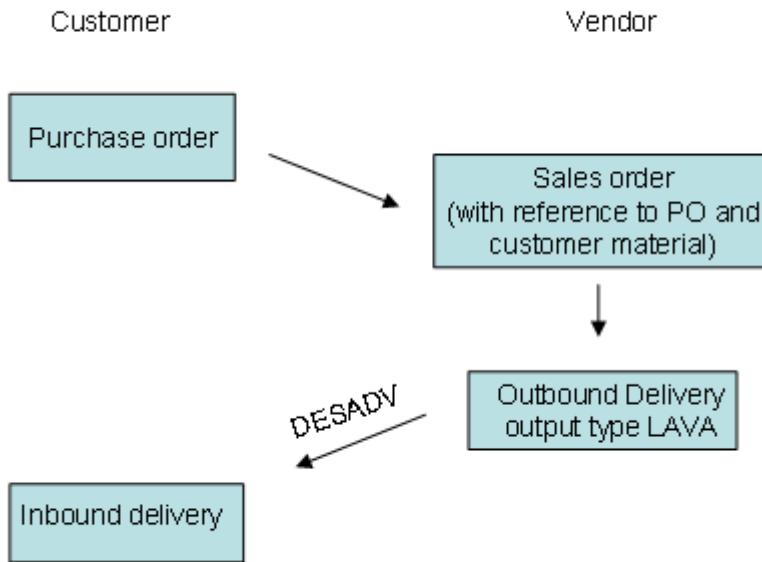
If a handling unit in another handling unit is to be verified (multi-step packing), you must specify the (external) identification of the lower-level handling unit.

E1EDL44-EXIDV

8. Repacking handling units

Enter data in all the segment fields in segment E1EDL54.

DESADV Scenario



Outbound(Vendorsystem):

From an outbound delivery, an EDI shipping notification can be sent to the customer using output type LAVA, IDoc message DESADV.

Inbound(Customersystem):

In the receiving system, an inbound delivery is created like in VL31N with reference to a purchase order.

DESADV Outbound (Basic Type DELVRY0*)

DESADV IDoc is sent via output type LAVA.

Delivery w/o Ref.: Output

Communication method

Delivery 0080001558

Output

Stat	Output	Description	Medium	Fun	Partner
OK	LAVA	Outg. ship.notif6	EDI	SH	TM-CUST

Customizing of Partner Profile with WE20

Partner profiles

Partner	Description																								
Partner Profiles	<ul style="list-style-type: none"> Partner Type B Bank Partner Type BP Benefits Provider Partner Type GP Business Partner Partner Type KU Customer 																								
TM-CUST	<p>Partner No. TM-CUST Mohs</p> <p>Partn.Type KU Customer</p> <p>Post processing: permitted agent Classification</p> <table border="1"> <tr> <td>Ty.</td> <td>JS </td> <td>User</td> </tr> <tr> <td>Agent</td> <td>MOHS</td> <td>MOHS</td> </tr> <tr> <td>Lang.</td> <td>EN</td> <td>English</td> </tr> </table> <p>Outbound parmr.</p> <table border="1"> <thead> <tr> <th>Partner Role</th> <th>Message Type</th> <th>Message var</th> <th>MessageFu...</th> <th>Test</th> </tr> </thead> <tbody> <tr> <td>SH</td> <td>DESADV</td> <td></td> <td></td> <td></td> </tr> <tr> <td>CL</td> <td>WICODD</td> <td></td> <td></td> <td></td> </tr> </tbody> </table> <p>Partner No. TM-CUST Mohs</p> <p>Partn.Type KU Customer</p> <p>Partner Role SH Ship-to party</p> <p>Message Type DESADV Delivery: Shipping notification</p> <p>Message code</p> <p>Message function</p> <p><input type="checkbox"/> Test</p> <p>Outbound Options Message Control Post Processing: Permitted Agent Tele...</p> <p>Receiver port A000000019 Transactional RFC Q4ACLNT004</p> <p>Pack. Size 1</p> <p><input type="checkbox"/> Queue Processing</p> <p>Output Mode</p> <p><input checked="" type="radio"/> Transfer IDoc Immed. Output Mode</p> <p><input type="radio"/> Collect IDocs</p> <p>IDoc Type</p> <p>Basic type DELVRY03 Delivery interface</p> <p>Extension</p> <p>View</p>	Ty.	JS	User	Agent	MOHS	MOHS	Lang.	EN	English	Partner Role	Message Type	Message var	MessageFu...	Test	SH	DESADV				CL	WICODD			
Ty.	JS	User																							
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Partner Role	Message Type	Message var	MessageFu...	Test																					
SH	DESADV																								
CL	WICODD																								

Partner No.	TM-CUST	Mohs
Partn.Type	KU	Customer
Partner Role	SH	Ship-to party
Message Type	DESADV	Delivery
Message code		
Message function		<input type="checkbox"/> Test
Outbound Options Message Control Post Processing: Permitted		
 Application: V2 : Shipping  Message Type: LAVA : Outg. ship.notifica.  Process Code: DELV : Delivery DELVRY01: DESADV/CARNOT/WH		
Application	Message type	Process code
V2	DESA	DELV
Process code	DELV	
Description	Delivery DELVRY01: DESADV/CARNOT/WH	
Function module	IDOC_OUTPUT_DELVRY	

DESADV Inbound

Characteristics:

- No batch splits are created. See [SAP note 209240](#) .
- Batches are only transferred as “vendor batches”, i.e. the batch field (LIPS-CHARG) is not filled in standard but could be filled by customer function in IDOC_INPUT_DESADV1. If batch items should also be packed, then the delivery item category should allow packing without batches (TVLP-CHHPV “pack accumulated batches”).
- In case of packed batch items then:
 - E1EDL44-CHARG (Handling Unit Item) transferred to VERPO-CHARG but
 - E1EDL24-CHARG (Delivery Item) transferred to LIPS-LICHN
- EXIDV segment at HU level

In case the customer and the vendor system are both using the EAN128 / SSCC (unique HU number see the [SAP Help page](#)), it makes sens to transfer the EXIDV number with the Idoc.

- HU packing item are created via DESADV if all the customizing is set correctly. See [SAP note 831204](#) .
- Several inbound deliveries could be created automatically due to an automatic delivery split.
- IDoc Status:
 - 51: only if inbound delivery could not be created
 - 52: if at least one inbound delivery could be created but errors or warnings occurred
 - 53: if no error/ warning occurred