New DPD Barcode Specification Effective from 01.08.2006

Version 1.2 _ 2006-02-27

| DELI*Com* DPD Deutscher Paket Dienst GmbH & Co. KG, Aschaffenburg/Germany |

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Changes from the previous version

In the following chapters changes from the respective previous version have been made:

- Vesion 1.2 _ Text adaptations
- Version 1.1 _ Changes to the layout of the parcel labels
- Version 1.00 _ First version created on 30.09.2005

1 Introduction

The parcel labels (and especially their barcode information) are the logistic backbone of the DPD system. This specification defines the standard required for the creation and handling of DPD parcel labels for all people involved. This is necessary to operate the DPD system efficiently.

This specification will only become effective once the new barcode system has been introduced. However, it may me used as a programming reference prior to that.

2 General process

2.1 The DPD system

The logistic process in the DPD system and the **DELIS®*track*** parcel tracking IT solution are based on regular parcel scanning using stationary or mobile scanners. The necessary information is contained in a barcode that must be present on every parcel. In special cases **additional code labels** containing additional information have to be attached to the parcel. In the interests of safety, the parcel labels also contain all the information encoded in the barcode in plain writing. This includes the following information:

- Tracking number (parcel label number)
- Destination post code
- Destination country code
- Route information
- Service code
- Additional codes (additional information) if necessary

To ensure the safe, correct and quick shipment of the parcels, at least these pieces of information must be included on each parcel.

2.2 Shipping requirements

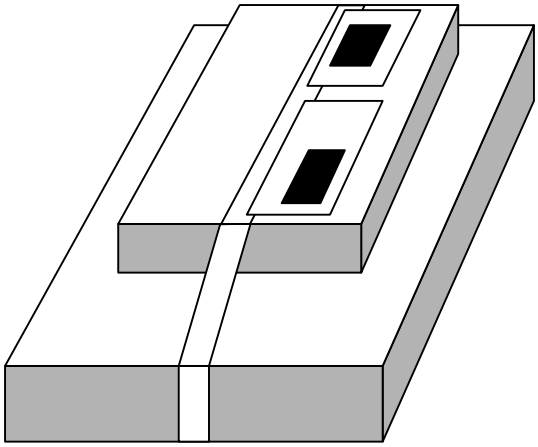
To ensure the safe and timely shipment of the parcels in the DPD system, it is necessary to observe certain rules regarding the handling of parcel labels.

2.2.1 Handling

The handling is the same for all parcel label types. Since the parcels in the DPD system will also be processed by fully automatic scanners at high hauling speeds, the following guidelines are necessary to ensure a trouble-free shipping process:

- To ensure the parcel can be properly sorted, the largest area of the parcel must face down to prevent the parcel from tipping.
- All DPD relevant parcel labels must be attached to the upper side of the parcel.
- The labels/barcodes must not overlap each other, i.e. they must be located side by side.
- The labels and thus the parcel information must not be covered by pack thread.
- The labels must not be covered by colors (e.g. felt-tip pencil) or other labels.
- Old labels/barcodes (e.g. from multiple use of the packing) must be removed or covered by the new labels/barcodes.

If shrink film is used, the area covering the labels must be smooth and without print. To ensure readability throughout the DPD system, the shrink film must be tested and approved by DPD GmbH & Co. KG before it can be used. Please contact your appropriate depot for the necessary arrangements.



Correct parcel orientation

2.3 Shipping

After a parcel label has been attached to the parcel, it will be transferred to the DPD depot. There the route information (and **additional codes** if applicable) will be printed on the parcel label if this has not already been done by the customer.

The parcel will then pass through the DPD system and will finally be properly delivered.

3 Parcel labels

3.1 Using the standard parcel labels

To ensure the quick and smooth shipment of a parcel by DPD, it must be handled properly and the parcel label has to be filled in correctly.

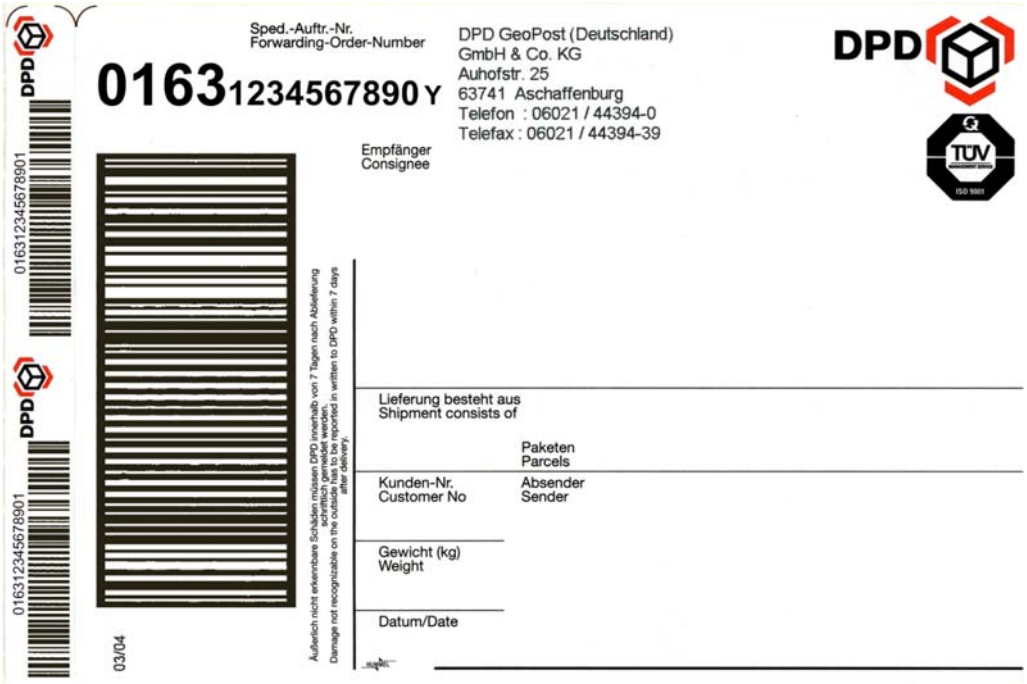
Following are the most important points:

- Correct and complete recipient address (no P.O. box)
- Correct and complete sender address
- Weight indication
- Shipment consists of “X” parcels (only for multiple parcel shipments)

The following information is optional:

- Customer number
- Shipping date
- Shipment consists of one parcel (for single parcel shipments)

Standard parcel example:



During the inbound-from-customer process in the appropriate depot a label containing the route field and the barcode field as well as additional service information (if applicable) will be generated from the barcode information and the relevant recipient address information (destination country, destination post code).

To be able to better distinguish between “0“ (the number zero) and “O“ (the capital letter “O”) when reading the information manually, all zeros in the route and barcode field must be struck through. Otherwise, since post codes may also contain letters (e.g. in the UK), it may lead to confusion if the letter “O” is immediately followed by the number “0” which in turn may lead to shipping delays.

Should it be impossible to print struck through zeroes you can dispense with it. Delays in parcel transport may result, though.

3.2 Parcel labels printed by the customer

If the parcel labels are printed by the customer, the DPD parcel label (including all barcode information) will be created at the time it is required. This makes it possible to associate customer- or order-specific data with the DPD parcel label number (complete parcel tracing from order processing to delivery: “reference number”).
In addition to the option for the customer to program parcel label printing applications himself/herself, ready-to-use shipping systems manufactured by various system vendors are also available. To find the best solution for the customer, the appropriate depot is available for giving advice regarding the advantages and capabilities of these shipping systems. DPD itself offers the DELIS*print* parcel label printing program.

3.2.1 Information on the parcel label

In addition to the information contained in chapter 3.1 the following information must be printed on the parcel label:

- Damage notification in the language of the source country and in English: “Notifications about damage which is not visible from the outside have to be submitted in writing to DPD within 7 days.”
- Mailing address of the depot which intends to channel in the parcels (email address if necessary) including the depot number
- DPD logo

If the customer intends to include proprietary information in plain writing in addition to the **customer number** and the **date** or possibly even as barcode on the parcel label or as customer barcode on the parcel, this must be agreed with DPD. This ensures that possible sources of errors can be avoided.

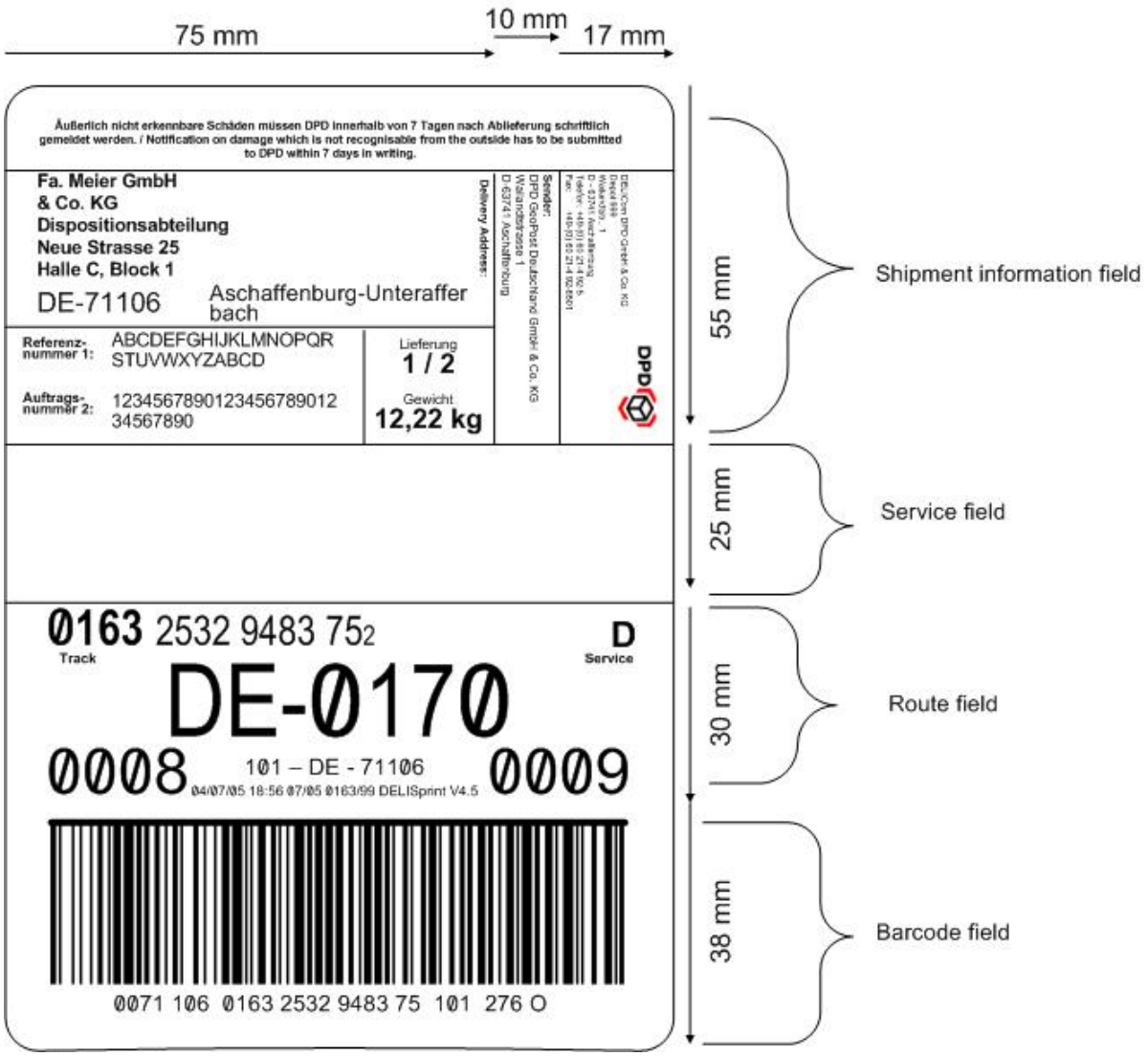
Do not use 28-digit **code 128** or **2/5 interleaved** (any length) barcodes, since DPD uses this barcode type. If there is no other possibility, this has to be approved by the appropriate depot and the code 128 barcode must under no circumstances start with a “%“ (per cent) or “!“ (exclamation) mark.

3.2.2 Parcel label with routing

Ideally, the route information will be placed next to the parcel label number. The route information (destination information) can be directly determined from the destination address. This reduces the likelihood of possible errors even further and maximizes the sorting security.

The DPD route information consists of the outbound sort (O-Sort, origin sort), the destination text and the inbound sort (D-Sort, destination sort) in plain writing.

The route information is based on the destination information **country** and **post code** (which can be determined from the recipient address) as well as the product definition and the location. This information is then placed in the so-called route field the structure of which is described in chapter 4.1.2. route field.



3.2.3 Information transfer from the customer to the depot

The self-printing customer has two different options to transfer the data for parcels for which advance or accompanying information is required to the appropriate depot:

- via transfer list
- via remote data transmission, e.g. DELIS*transfer*

3.2.3.1 Transfer list

The depot receives a so-called self-booking list containing all relevant data for the shipped parcels:

- Tracking number
- Recipient (complete address)
- Weight
- Shipping type
- Advance information for services (e.g. for COD currency, collection type, amount) if applicable

V. 4.0.0

Kundenadresse
Kundennr.: 90909_001
DPD Geopost (Deutschland)
GmbH & Co. KG -EDV-Abteilung-
Elbestr. 39
D-49090 Osnabrück

Depotadresse
DPD GeoPost (Deutschla
nd) GmbH & Co. KG
Elbestr. 39
D-49090 Osnabrück

Selbstbucherliste Nr 4
Datum : 28.09.2005 16:37:30
Anzahl Pakete: 13

Nr.	Paketnr	Versandart	Empfänger	Referenznummer	Gewicht (kg)	ND
1	14988679140	NP	Maschinenbau OHG Kramer; Dieselstr. 43c; D-63741 Mustercity		21,000	
2	14988679141	NP	Eisenhandel Schmidt Scraube; Handelstrasse 34; D-36037 Musterstadt		5,000	
3	14988679142	NP	Transport GmbH & Co. KG Kirsch; Muster Str. 64; D-65479 Musterort		6,000	
4	14988679143	NP	Wilhelm Schulze; Musterstrasse 2; D-47447 Musterstadt		15,000	
5	14988679144	NP	Schaller Transport GmbH Schaller; Muster Straße 20; D-95182 Musterland		7,000	
6	14988679145	NP	TestFirma AG Kirsch; Muster Str. 64; D-95182 Musterort		5,000	
7	14988679146	NP	Verlag Aktuell Zeile; Buchbinderstr.45c; D-95182 Musterort		4,000	
8	14988679147	NP	Rhenania GmbH & Co. KG Röckle; Musterweg 31; D-74078 Musterort	123456789	10,000	
9	14988679148	NP	Transport GmbH Nurmann; Muster Str. 13a; D-48163 Musterstadt	23A43C5676	1,000	
10	14988679149	NP	Honold GmbH & Co. KG Schubert; Musterstrasse 5-7; D-89231 Musterland	L 1 C 456	0,800	
11	14988679150	NP	Stückgut Versand GmbH & Co. KG Mueller; Schraubergasse 1a; D-36037 Musterhausen	7799885544	13,000	
12	14988679151	NP	Schlosserei Klein Klein; Eisenweg. 18; D-49661 Kleiner Ort	34-656-3445	3,000	
13	14988679152	NP	Bau AG Maurer; Industriestr. 99; D-65479 Musterort	KLMOPEWD	4,000	

Unterschrift _____

Diese Liste bitte an das DPD Depot weiterleiten Seite 1 / 1

The version of the routing data base must be printed on the transfer list (own booking list) !

3.2.3.2 Remote data transmission

Advance/accompanying information for certain services are transferred to the depot in a special data format. These are the data formats used:

- CODCUSDATA for COD
- HAZDATA for dangerous goods
- IEXPRESSDATA for EXPRESS*International*
- EXPORTDATA for customs clearance parcels

You may obtain more detailed information and the corresponding format description from your appropriate depot.

If the customer wants to associate order-specific data with the DPD barcode to be able to track the parcels from order processing to delivery, a so-called reference number file (“CINFO“) may be transferred to DPD automatically using DELIS*transfer* or DELIS*transfer* automated.

4 Technical background

This chapter describes the technical framework for the parcel label specification which ensures the familiar reliability of the DPD system. These technical data can also be accessed via the list contained in “Checklist for customer-side parcel label printing“ in chapter 8.3. (e.g. for programming a customer-side parcel label printing application). This checklist contains an abridged version of the data listed below.

The necessary routing information and the service codes are taken from the routes database.

4.1 Tracking Number

The DPD tracking number is the only basis for the identification of parcels in the DPD system. This identity code (a serial number selected from a predefined number circle) may only be used once in the DPD system within 6 months. The following number key describes the format for plain writing and the parcel label number barcode.

$$DDDD\ X_1\ X_2\ LLLLLLLL\ P$$

DDDD	:	Depot code
X_1	:	Identifier X_1
X_2	:	Identifier X_2
LLLLLLLL	:	Serial number
P	:	Check digit (acc. to chapter check digit calculation 4.2.6.1)

	X_1		X_2	
Standard parcel labels[1]	0-4		0-9	Maxi and Mini
Parcel labels printed by the customer[2]	5-8		0-9	
	9		0-7	
	9		8	blocked for conversion of self-printing customers
DPD GmbH & Co. (for special purposes)	9		9	blocked for internal purposes

[1] Production only by the parcel label suppliers assigned to the depots by DPD GmbH & Co.
[2] According to the DPD organisation manual and the parcel label specification, the DPD dispatch depots are responsible for proper parcel label printing.

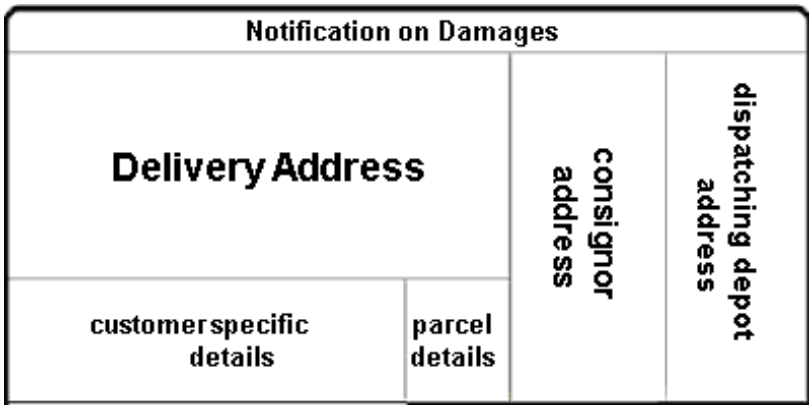
The dispatch depots must decide whether customers are allocated a new, 14-digit tracking number range for conversion or whether the existing range is supposed to be transferred into the new system. If no new tracking number range is assigned the existing number range will be converted into a new one by adding a “0” (zero) in front of the depot code and adding “98” as 5th and 6th digit.
For example parcel number 163 8111 1111 becomes tracking number **0**163 **98**81 1111 11.

4.2 General description

4.2.1 Shipment information field

The shipment information field contains all parcel-specific data such as sender address, recipient address, DPD sending depot address, damage notification, customer-specific information (e.g. reference numbers, etc.) and parcel details.

Shipment information field layout:



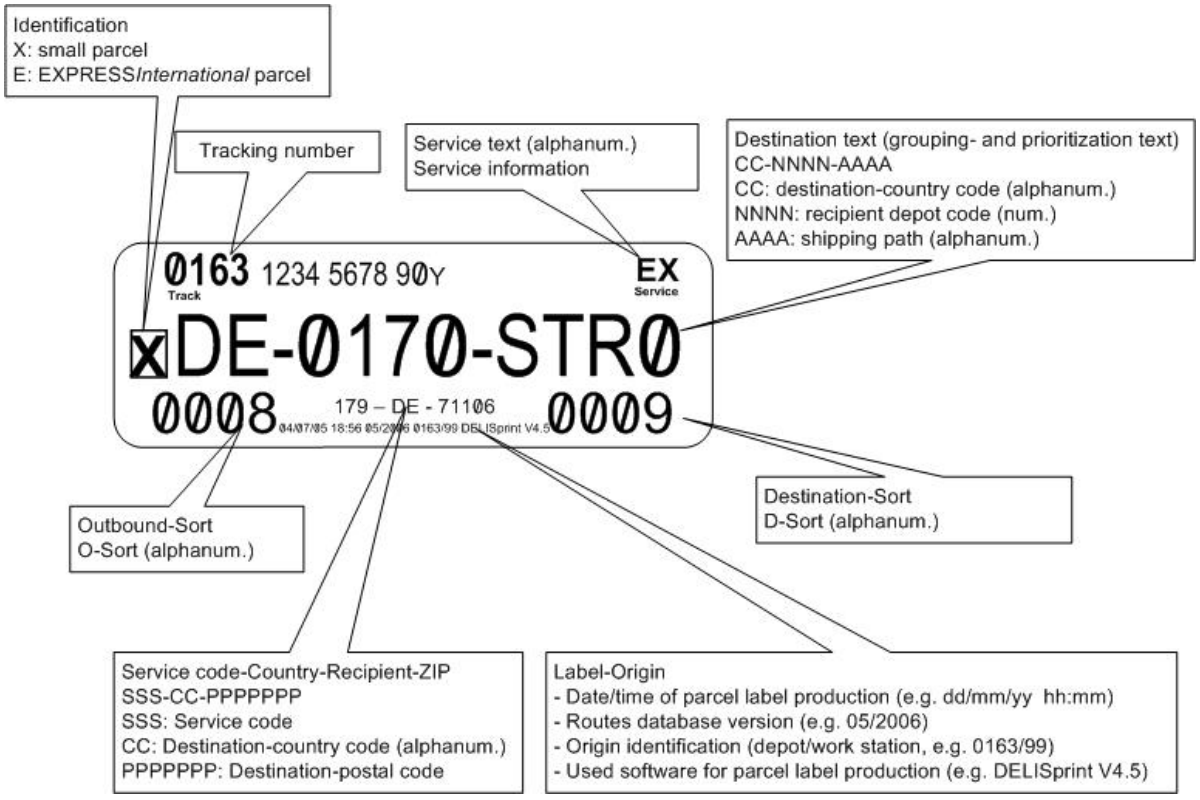
Shipment information field example:

4.2.2 Route field

The route information is determined based on the recipient address and the routes database and printed accordingly. It is printed as plain text only and is intended as an aid for visual inspection or manual sorting processes. The Outbound route sort is also called O-Sort, while the inbound sort is also called D-Sort.

Printing the complete route information is mandatory, even if the depot does not utilize all information. However, it may be the case that the routes database does not contain the shipping path, because it is not necessary for some routes. If this is the case, there is no need for a shipping path and the destination country code and the recipient depot code will be printed in centered fashion.

The country codes used in the barcode are based on the ISO 3166 standard. Pertinent examples can be found in chapter 8.4 Country table.



Mandatory type heights:

- Outbound route and inbound route sort: at least 7mm high
- Destination text: at least 11mm high
- Tracking number: digits 1 to 4 at least 6mm high, digits 5 to 14 at least 4mm high, check digit at least 2mm high
- Service text: at least 4mm high
- Marking: at least 7mm high

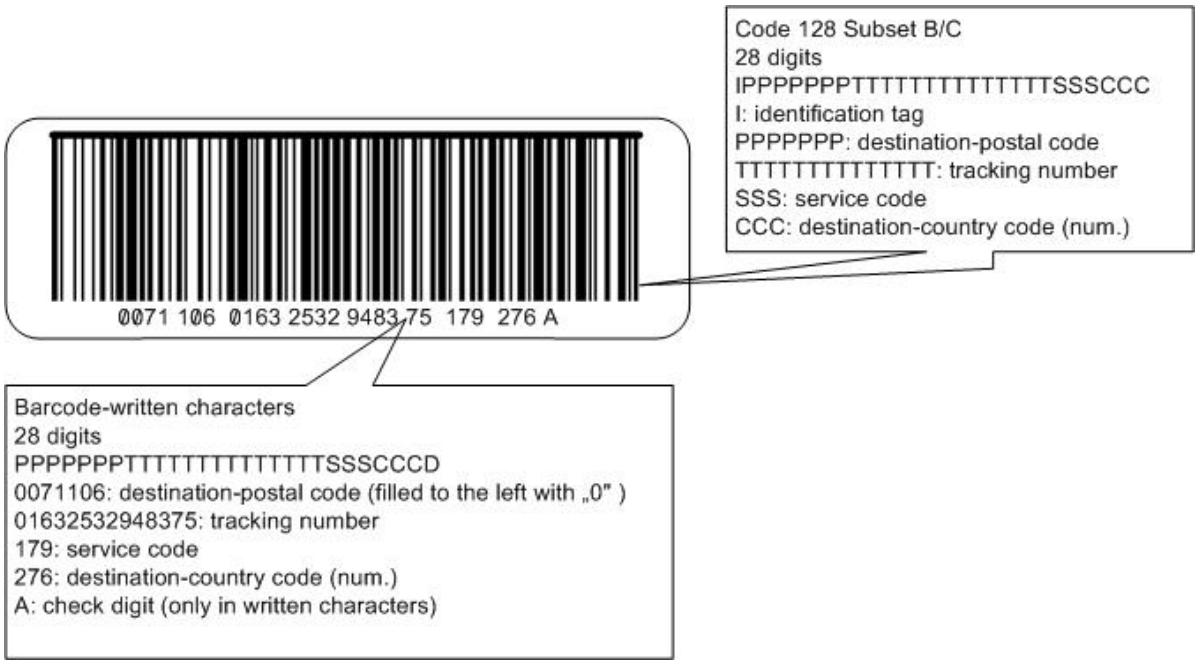
4.2.3 Barcode field

The DPD tracking number is the only basis for parcel identification within the DPD system. This code must not appear more than once in the DPD system within 6 months. The following number code describes the structure of the plain writing and the DPD barcode contents.

(I)PPPPPPPTTTTTTTTTTTTTTSSSCCC(P)

Character	:	Description (only in barcode)	Data type*	Length
I	:	Identification tag	A	1
P	:	Destination post code	A	7
T	:	Tracking number	A	14
S	:	Service code	N	3
C	:	Destination country code	N	3
(P)	:	Check digit (in plain writing on the label only)	N	1

Barcode field example:



The barcode must be at least 25mm high so that it can be properly processed even at high sorting speeds.

Note: All barcodes used in the examples are identical in form and content and just serve as a reference for barcode Code 128. They do not correspond with the respective written characters in the examples.

Barcode specification

In the DPD system, parcels sometimes have to be identified at high speeds in fully automatic sorting systems. This is only possible if the bar-coded information print quality is good and the following specifications are met:

Barcode type	Code 128 (B/C subset)
Modulus width (x dimension):	X: 375µm
Reflection factor of the white background	$R_w \geq 75\%$
Reflection factor of the bars	$R_b \leq 10\%$
Contrast value	PCS $\geq 90\%$
White region without bars on both sides	$s_{min} \geq 5\ mm^3$ White regions without bars running at an angle of 45°
Code coloring	dull black - opaque
Barcode height	$h \geq 25mm$
Barcode placement for thermoprinting	90° in relation to the thermo rail

4.2.4 Printing methods

Basically all printing methods which meet the barcode print quality according to chapter 4.1.4. Barcode specification can be used. We recommend using one of the following methods:

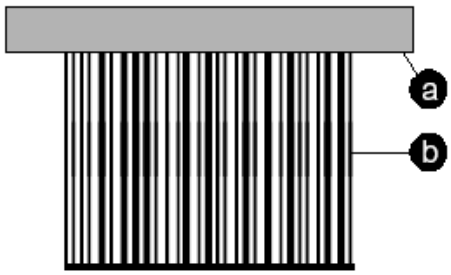
- Thermo direct printing
- Thermo transfer printing
- Laser printing
- Ion printing
- Magnetic printing

Due to its insufficient barcode print quality, matrix printing must not be used!

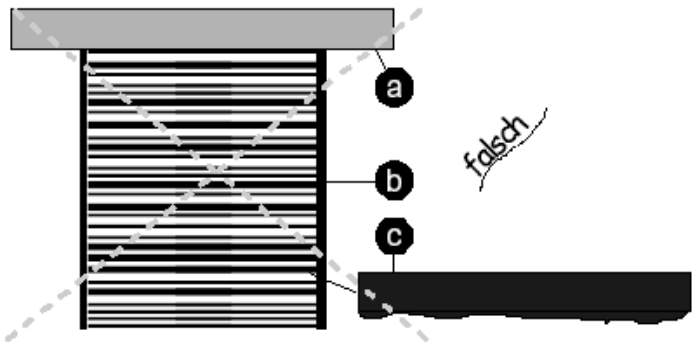
Ink printing is only acceptable if the requirements described in chapter 4.1.5.2. Ink printing are met.

4.2.4.1 Thermoprinting

When using thermoprinting, make sure that the barcode is printed 90° in relation to the thermo rail, otherwise the print quality will suffer.



Correct thermoprinting arrangement



Incorrect thermoprinting arrangement

a Thermo rail

b Barcode

c Magnified component

As depicted in the previous figure, the print will be blurred if the barcode is printed the wrong way. When using thermo direct printing or thermo transfer printing it is therefore necessary to print the barcode as depicted in the “Correct thermoprinting arrangement” figure.

4.2.4.2 Ink printing

Since ink print is not very weathering resistant and its quality depends largely on the base material used, the following points have to be considered:

- Always print on high-quality ink jet paper. Low-quality paper absorbs the ink resulting in a fuzzy print pattern which does not meet the barcode specifications.
- Cover the parcel labels with protective film or use transparent protective covering when attaching the parcel label. The protective film or covering has to be submitted for approval together with the parcel labels, because it affects barcode readability.

4.2.4.3 Paper quality

Color	white
Reflection factor	$R_w \geq 50\%$
Surface	moisture-resistant, abrasion-proof
UV-resistant	Contrast change < 10% within two hours, at a constant temperature of 50°C and intensive insolation
Label adhesiveness	Glue permanently adhering, if possible use glues which are not harmful to the environment (water-soluble, solvent-free)
Temperatures	- 20°C to + 80°C
Storage	No visible quality deterioration within 6 months at a constant temperature of 20°C and a humidity of 40%

For sources of supply please contact your appropriate depot!

4.2.5 Barcode code 128

The DPD parcel label barcode type is 128 B/C.

Code 128 is a variable length, alphanumerical code with high packing density. Three different character sets (A, B and C) make it possible to change the character set within the barcode symbol. DPD requires the character set C for the numerical barcode portion. The character set B is used for the alphanumeric portion.

Character set	Description
Code 128 A	The first character set encodes all capital letters and ASCII control characters.
Code 128 B	The second character set encodes all capital letters.
Code 128 C	The third character set encodes the numerical pairs 00 to 99.

4.2.5.1 Check digit calculation

Check digits are necessary for the plain writing of

- 28-digit barcode contents
- 14-digit tracking number (e.g. for standard parcel labels).

Check digit calculation method:

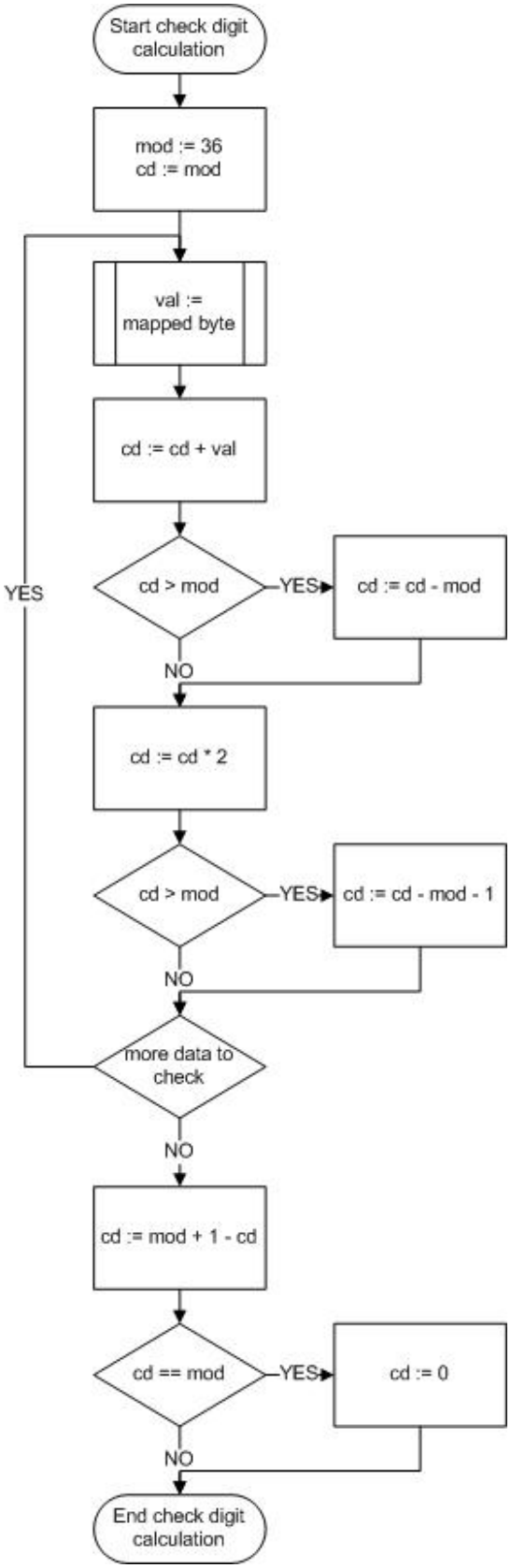
Check digits are created according to the ISO/IES 7064 mod. 37/36 standard. The following table contains the values which the algorithm uses for each alphanumeric character to calculate the check digit.

Char	Value	Char	Value	Char	Value
0	0	A	10	N	23
1	1	B	11	O	24
2	2	C	12	P	25
3	3	D	13	Q	26
4	4	E	14	R	27
5	5	F	15	S	28
6	6	G	16	T	29
7	7	H	17	U	30
8	8	I	18	V	31
9	9	J	19	W	32
		K	20	X	33
		L	21	Y	34
		M	22	Z	35

For each character contained in the barcode the following algorithm has to be applied to finally yield the check digit.

Please consider the following notes:

mod=36
cd = is equivalent to mod at the beginning and will be modified according to the subsequent calculation
val= value of the character to be calculated (e.g. the character M has the value 22 in the check digit calculation algorithm)


Start check digit calculation
mod := 36
cd := mod
val := mapped byte
cd := cd + val
cd > mod
YES
cd := cd - mod
NO
cd := cd * 2
cd > mod
YES
cd := cd - mod - 1
NO
more data to check
YES
NO
cd := mod + 1 - cd
cd == mod
YES
cd := 0
NO
End check digit calculation

5 Parcel labels for various services

This chapter describes the parcel label variations for the different services (standard parcel label).

When a parcel label is printed, service-specific information must be added to the service field.

Note: All barcodes used in the examples are identical in form and content and just serve as a reference for barcode Code 128. They do not correspond with the respective written characters in the examples.

5.1 Small parcel

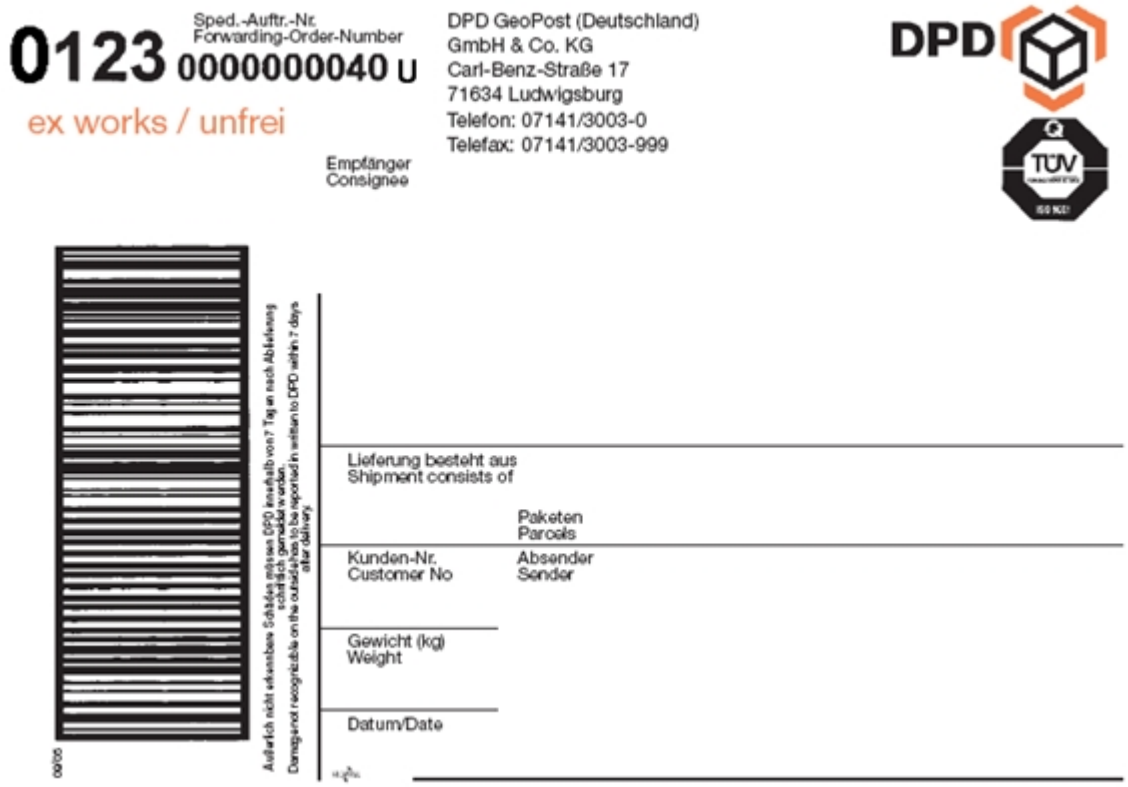
Parcels weighing less than 3kg and having a length of no more than 50cm and a girth of no more than 111cm are called small parcels in the DPD system.

For customers who print their parcel labels themselves the following information must be printed on the parcel label:

- „X“ marking acc. to specification in the routing data base before the destination text with a type height of at least 7mm

5.2 Ex works

This is the ex works parcel label layout for customers with standard parcel labels:



For customers who print their parcel labels themselves the following information must be printed on the parcel label:

- "Ex works" marking acc. to specification in the routing data base with a type height of at least 4mm in the service field

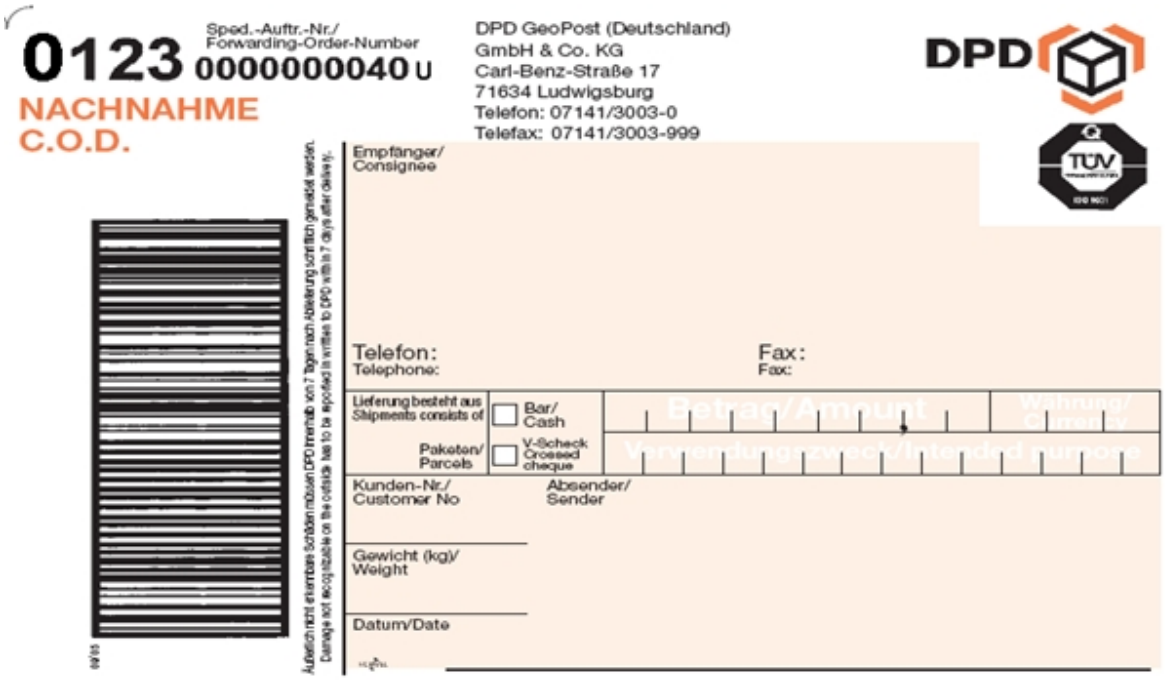
5.3 PARCEL*Letter*

For customers who print their parcel labels themselves the following information must be printed on the parcel label:

- "PARCEL*Letter*" marking (acc. to specification in the routing data base) with a type height of at least 4mm in the service field
- 0.05kg ≤ weight ≤ 1kg
- "X" (acc. to specification in the routing data base) before the destination text with a type height of at least 7mm

5.4 COD

This is the COD parcel label layout for customers with standard parcel labels:



For customers who print their parcel labels themselves the following information must be printed on the parcel label:

- "C.O.D." marking (acc. to specification in the routing data base) with a type height of at least 4mm
- Payment type (CASH or CROSSED CHECK)
- The amount and the currency
- Intended use (optional)

5.5 Express and guaranteed services

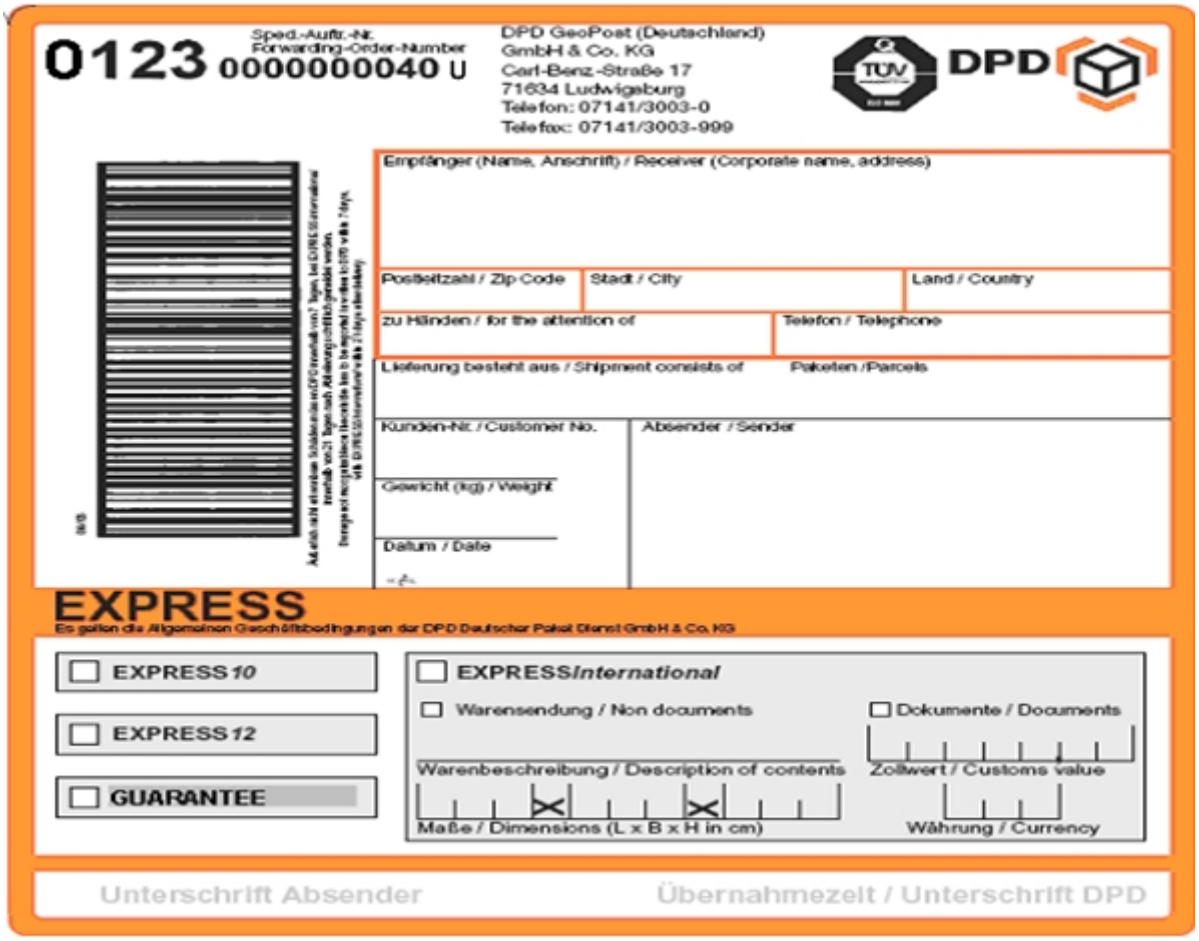
There are five express and guaranteed services in the DPD system:

- DPD EXPRESS*10:* guaranteed delivery until 10 a.m. on the next working day (domestic)
- DPD EXPRESS*12:* guaranteed delivery until 12 a.m. on the next working day (domestic)
- DPD GUARANTEE: guaranteed delivery to defined countries within a time window (cross-border)
- DPD Guaranteeparcel: domestic parcel with guaranteed end-of-business-day delivery (the exact designation is country-specific; please refer to your appropriate depot for more information)
- DPD EXPRESS*International:* worldwide express delivery

For DPD EXPRESS*International* an additional label must be printed in duplicate. The Express service quantity and the delivery time must be indicated on the self-booking list.

Please refer to your appropriate DPD depot for more information on the relations for which DPD GUARANTEE and the countries for which DPD EXPRESS*International* is available.

Customers with standard parcel labels must mark the appropriate Express service with a cross on the service label.


0123
Sped.-Auftr.-Nr.
Forwarding-Order-Number
0000000040 U
DPD GeoPost (Deutschland)
GmbH & Co. KG
Carl-Benz-Straße 17
71634 Ludwigsburg
Telefon: 07141/3003-0
Telefax: 07141/3003-999
DPD
Empfänger (Name, Anschrift) / Receiver (Corporate name, address)
Postleitzahl / Zip-Code
Stadt / City
Land / Country
zu Händen / for the attention of
Telefon / Telephone
Lieferung besteht aus / Shipment consists of
Paketen /Parcels
Kunden-Nr. / Customer No.
Absender / Sender
Gewicht (kg) / Weight
Datum / Date
EXPRESS
Es gelten die Allgemeinen Geschäftsbedingungen der DPD Deutscher Paket Dienst GmbH & Co. KG
EXPRESS 10
EXPRESS 12
GUARANTEE
EXPRESS International
Warensendung / Non documents
Dokumente / Documents
Warenbeschreibung / Description of contents
Zollwert / Customs value
Maße / Dimensions (L x B x H in cm)
Währung / Currency
Unterschrift Absender
Übernahmezeit / Unterschrift DPD

5.5.1 DPD EXPRESS*10*

For customers who print their parcel labels themselves the following information must be printed on the parcel label:

- "DPD EXPRESS*10*" marking (acc. to specification in the routing data base) with a type height of at least 4mm
- Be sure to print the "c/o" field as well.
- The telephone number

5.5.2 DPD EXPRESS*12*

For customers who print their parcel labels themselves the following information must be printed on the parcel label:

- "DPD EXPRESS*12*" marking (acc. to specification in the routing data base) with a type height of at least 4mm
- Be sure to print the "c/o" field as well.
- The telephone number

5.5.3 DPD GUARANTEE

For customers who print their parcel labels themselves the following information must be printed on the parcel label:

- "DPD GUARANTEE" marking (acc. to specification in the routing data base) with a type height of at least 4mm
- Be sure to print the "c/o" field as well.
- The telephone number

5.5.4 DPD Guaranteeparcel

Self-printing customers must print the following information on the parcel label:

- Country-specific designation (for Germany: “DPD GARANTIEPAKET*24*“) with a type height of at least 4mm. (Please refer to the routing data base for more information on designations in other countries)
- Be sure to print the “c/o“ field as well.
- The telephone number

5.5.5 DPD EXPRESS*International*

For customers who print their parcel labels themselves an additional label must be printed in duplicate.

A distinction is made between document and goods shipments.

For DPD EXPRESS*International* the damage notification deadline changes to 21 days:
“Damage not recognizable on the outside has to be reported in writing to DPD within 21 days after delivery.“

For the DPD EXPRESS*International* additional labels for goods shipments (no documents) the following information must be provided:

- Description of the goods (please note that there is an ASCII file articles.tab available from your appropriate depot which contains the approved articles)
- Customs value and currency (euros, US dollar or currency of the recipient country)
- Parcel dimensions in cm (length x width x height)
- Be sure to fill in the “c/o“ field.
- The telephone number of the recipient
- The “E“ for EXPRESS*International* must be printed on the parcel label.

Äußerlich nicht erkennbare Schäden müssen DPD innerhalb von 7 Tagen nach Ablieferung schriftlich gemeldet werden. / Notification on damage which is not recognisable from the outside has to be submitted to DPD within 7 days in writing.
Watson & Sons Ltd.
Department of Foreign Affairs
Mr. Michael Smith
2255 Melrose Blvd.
Phone 001 512 428-6523
US-78550 Harlingen, Tx.
Delivery Address:
Sender:
Referenz-nummer 1:
ABCDEFGHIJKLMNOPQRS TUVWXYZABCD
Auftrags-nummer 2:
12345678901234567890123 4567890
Lieferung
1 / 2
Gewicht
13,2 kg
DPD EXPRESSInternational
0163 2532 9483 752
Track
IE2
Service
E US-0785-JFK3
0008
302 - US - 78550
04/07/05 18:56 07/05 0163/99 DELISprint V4.5
0009
0078 550 0163 2532 9483 75 302 001 H

A table (iexpress.tab) containing the countries to which DPD EXPRESS*International* parcels may be shipped can be obtained from your appropriate depot.

5.6 Dangerous goods

The shipment of dangerous goods is subject to the GGVS/ADR dangerous goods provisions. Please contact your appropriate depot regarding the shipping options for dangerous goods provided by the DPD system.

The following information is intended as an aid for self-printing customers to enable them to mark their cargo correctly and completely according to the DPD system requirements and dangerous goods provisions.

The identification as dangerous goods in the DPD system is based on the scan of the corresponding barcode and is a requirement for printing the dangerous goods documents in the system.

5.6.1 Limited quantities (small quantity arrangement)

If dangerous goods are packed according to the small quantity arrangement, GF barcodes must not be used. According to the dangerous goods provisions these items have to be marked as follows:

a) Cargo identification number with “UN” prefix
b) For several different goods with different UN numbers in the same cargo item:
   - Cargo identification numbers with “UN” prefix
     or
   - with “LQ” (limited quantity) prefix

The print must be surrounded by a square standing on one of its corners (side length at least 100mm; smaller dimensions are only permissible for smaller items). This label must be attached on the same side as the parcel label.

LQ label, (scale 1:2)

5.6.2 Dangerous goods

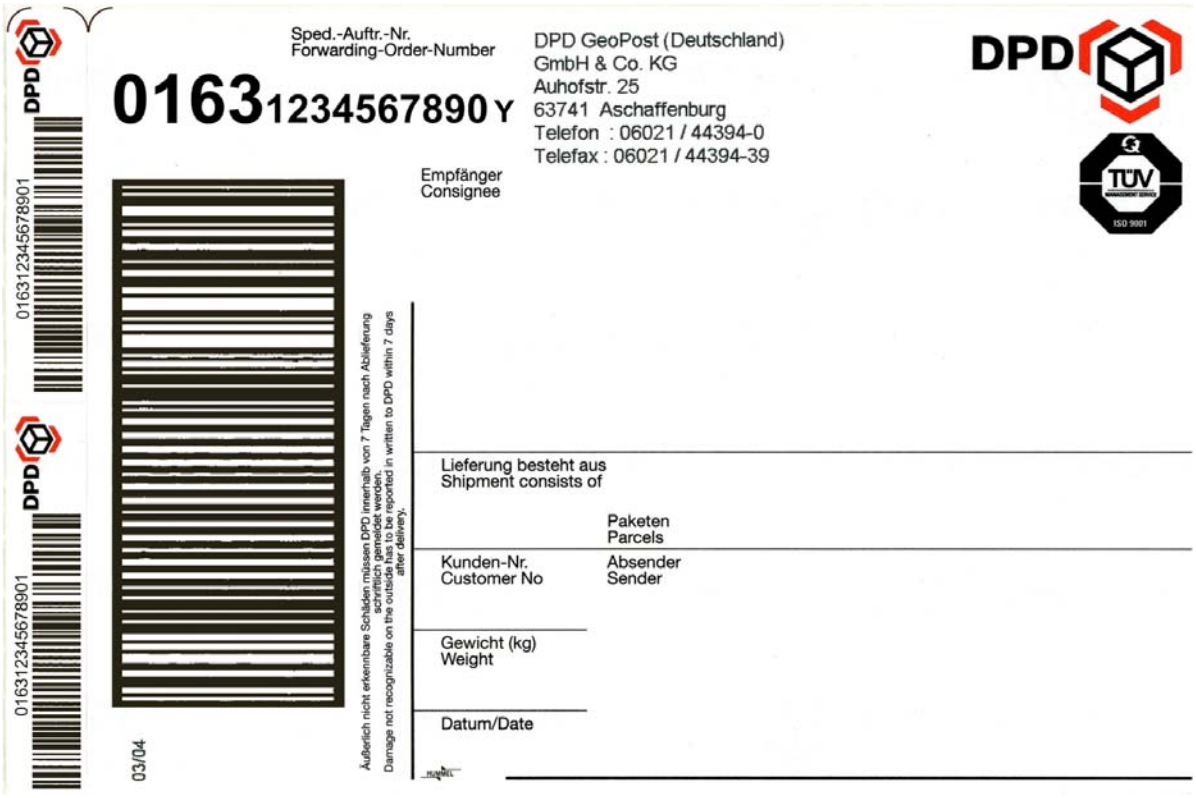
The dangerous goods data have to be included on the parcel label or the dangerous goods label.

- "UN" + UN number (4 digits)
- Substance name
- ADR class
- Additional hazards
- Classification code
- Packing group
- Gross weight

In addition, the following information must be printed to be able to identify the dangerous goods:

- Dangerous goods barcode (contents incl. check digit 0109), (only for customers using standard parcel labels)
- Additional codes for dangerous goods "10" (type height at least 7mm), (only for customers using standard parcel labels)
- The words "Dangerous goods" or the abbreviation "G" (type height ≥ 15mm)

Customers with standard parcel labels have to attach the dangerous goods label in addition to the parcel label.



Customers who print their parcel labels themselves must print an additional label with the following information about the dangerous goods:

5.7 Exchange service

Four labels are required for the DPD exchange service. Two are needed for the outward shipment and two for the return shipment.

5.7.1 Outward shipment

Customers with standard parcel labels have to attach the exchange service outward shipment label.

For customers who print their parcel labels themselves the following labels are required:

1st label: Customer-created parcel label with routing according to the current parcel label specification

2nd label: Exchange service order

DPD
MA / 18
Austausch-Service
Inhalt / Paket ist bei Anlieferung auszutauschen
Tausch gescheitert:
Tauschobjekt stand heute nicht zur Verfügung 72
(2. Zustellversuch)
Tausch verweigert 15
(Retoure)
kein Tauschobjekt vorhanden 73
(Retoure)
Zusatzvermerke:

5.7.2 Return shipment

Customers with standard parcel labels have to enclose a standard parcel label and an exchange service return shipment label in the parcel.

These two labels must then be attached to the outside of the parcel by the parcel recipient after the goods have been exchanged. This has to be done such that the original labels are hidden below the new ones.

For customers who print their parcel labels themselves the following labels are required:

1st label: Customer-created parcel label (during inbound from customer processing in the appropriate depot the parcel will be recognized as an exchange parcel on its return path and will be correctly rerouted automatically)

2nd label: (Delivery) receipt with the following information:

1. Parcel label number for the return shipment
2. Recipient address
3. Sender address
4. Date
5. Collector signature
6. If necessary, the order number/delivery number
7. If necessary, the address of the depot returning the parcel

The exchange service label must then be attached to the outside of the parcel by the parcel recipient after the goods have been exchanged. This has to be done such that the original label is hidden below the new one. The receipt is signed by the DPD driver and remains with the recipient as proof for the goods exchange.

6 The customer printing approval procedure

Printing bar-coded information may result in shipping delays if done incorrectly. This may ultimately affect the entire DPD system. If no preprinted DPD parcel labels are used, it is therefore necessary for the DELI*Com* DPD Deutscher Paket Dienst GmbH & Co. KG to approve the printed parcel labels at least **2 weeks** prior to the intended channeling in of the parcels. Please contact your appropriate DPD depot to arrange for the approval of your parcel labels.

Each customer must have his/her self-printed parcel labels approved even if he/she uses a DPD recommended software. The approval applies only to the respective customer installation the printers of which print the parcel labels.

There will be no approvals for software, even if it is already known to DPD and many customers have already been using it. Because of the many different installation and/or configuration options and the various printers/drivers used, problems may arise leading to the parcel labels not meeting the parcel label specification. The approval of the respective customer installation is therefore inevitable.

There is no “generic“ approval for a customer. If a customer has several locations, for each location where parcels are to be printed a few samples have to be submitted for approval. This is necessary, because installation errors may occur even if the layout has already been approved.

6.1 Development process

During the development of customer-side parcel label printing the customer and the appropriate depot must cooperate closely. During this process the customer requirements and the DPD system requirements have to be matched.

Once this has been achieved, the developed print samples which have been pre-examined by the appropriate depot will be submitted to DELI*Com* DPD Deutscher Paket Dienst GmbH & Co. KG which will examine especially the layout and the barcode quality and approve the customer’s layout if appropriate.

6.2 Customer printing approval

Because of the reasons explained above it is necessary to have DELI*Com* DPD Deutscher Paket Dienst GmbH & Co. KG approve each installation of a customer-side parcel label printing system. Even if a layout has been approved in principle, errors may be made during the installation process. It is therefore necessary to have DELI*Com* DPD Deutscher Paket Dienst GmbH & Co. KG approve each installation at least **2 weeks** prior to the first shipping day.

To do this, the DPD depots submit parcel label samples on original base material (labels) to DELI*Com* thus initiating the approval procedure.

- 10 parcel labels printed using the customer’s printer have to be submitted. The tracking numbers should be continuous to avoid duplicate numbers. For each service the customer wants to use, an additional five parcel labels have to be submitted.
- The parcel labels will be examined within five working days and the appropriate depot will be informed about any necessary modifications.

- Often the modifications are software-specific, i.e. text fields have to be moved and the layout definition needs to be changed. However, it may also be necessary to change the barcode (incorrect barcode type used, incorrect check digit calculation, etc.). Depending on how much time it takes for the customer to implement the modifications, the process of submitting and examining parcel labels may involve several repetitions.
- Once the parcel labels have been accepted, the appropriate depot will receive a "provisional approval" for the customer via email. From then on the customer is allowed to use these parcel labels within the DPD system.
- The written approval will be sent to the depot the following month.

Please note that each self-printing customer must be approved individually. The parcel label approval procedure thus belongs to the quality-relevant measures and will be checked in a DPD-internal audit.

6.3 Minimum requirements for the approval samples for customer-side parcel label printing

The application for the proper approval of the customer-side parcel label printing process will be submitted by the appropriate depot once the customer installation is complete.

The following points are "minimal requirements" for the parcel labels created by the customer and are therefore absolutely necessary. The samples must have a tracking number from the currently assigned number circle.

- Correct parcel label number circle
- Current DPD routes database for determining the DPD destination information
- Damage notification in the language of the source country and in English: "Notifications about damage which is not visible from the outside have to be submitted in writing to DPD within 7 days."
- Physical recipient address (no P.O. box)
- Physical sender address (no P.O. box)
- Original parcel label on base material (no copy)
- If film is used to cover the parcel label, it has to be included as well
- If the parcel labels are glued, glued samples have to be included to be able to assess the barcode quality.
- DPD logo

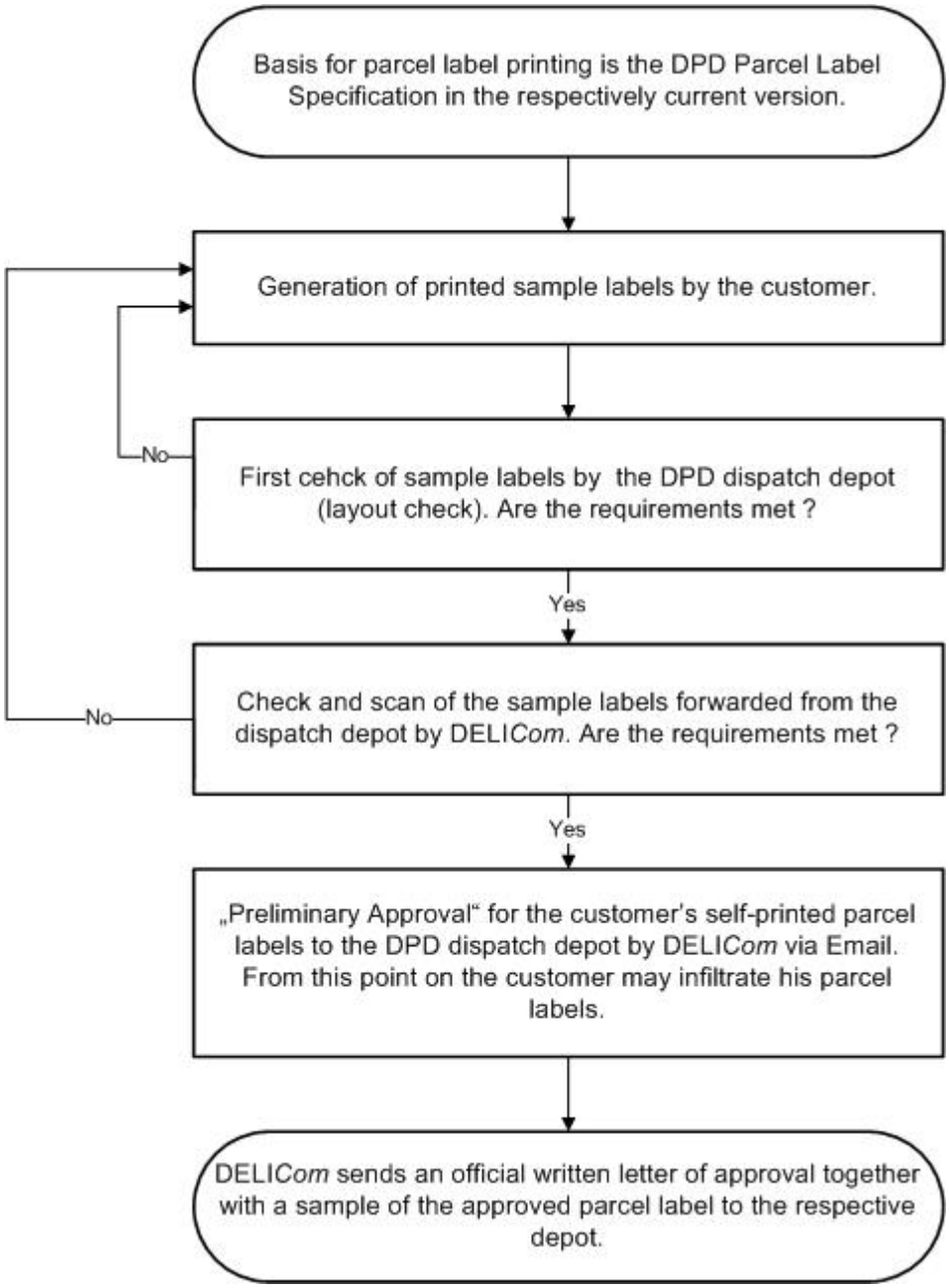
The fact that the appropriate depot is able to scan the parcel labels successfully does not mean that the parcel labels are 100% OK! Since many different barcode reading devices (scan pens, hand scanners, overhead scanners, omnidirectional scanners, etc.) are used in the DPD system, the minimal requirements can only be ensured if the parcel labels meet the requirements of the DPD parcel label specification, if they pass the test under laboratory conditions and if this is certified by DELI*Com*.

6.4 Summary

Only parcel labels which meet the requirements of this specification may be approved. DELI*Com* DPD Deutscher Paket Dienst GmbH & Co. KG may revoke approvals if major quality failures exist.

The required quality levels can be achieved much more quickly if one of the available “shipping systems“ is used. If one of these shipping systems is used, the approval can usually be granted once the necessary print samples have been submitted.

The following diagram shows the approval procedure for the customer-side parcel printing process:



7 Conclusion

DPD utilizes a barcode system for data flow and material flow purposes. This ensures its familiar reliability and safety. To make this system work, each DPD parcel has to have a DPD parcel label including barcode.

There are different methods available to attach the information to the DPD parcels. Basically either standard products can be used or the corresponding information is printed by the DPD customers themselves.

To ensure that the entire DPD system uses consistent technical data, this specification represents the technical standard for all barcode information media within DPD. We apologize for any inconvenience regarding the (more or less labor-intensive) approval process for customers who wish to print their parcel labels themselves. This is necessary to ensure the familiar high DPD quality standard in the long run.

If you wish to implement customer-side parcel label printing, you should read this specification very carefully to find the necessary detail information.

We wish you every success and are looking forward to working with you.

DELI*Com* DPD Deutscher Paket Dienst GmbH & Co. KG

8 Appendix

8.1 Glossary and abbreviations

Ink jet printing method	Printing method where ink is deposited using piezoelectric or capacitive effects
Laser	Laser beams are artificial light with a certain wavelength spectrum und a certain intensity.
Laser printing method	Printing method where data are stored on a toner medium using laser beams. The deposition of toner on the base material is followed by thermal aftertreatment.
Ion printing method	Printing method where data are stored on a toner medium using ion beams. The deposition of toner on the base material is followed by thermal aftertreatment.
Magnetic printing method	Printing method where data are stored on a magnetic toner medium. The deposition of toner on the base material is followed by thermal aftertreatment.
Parcel life history	Parcel-specific record for each parcel shipped within the DPD system. It describes the logistic path of the parcel in the DPD system.
Parcel label	Identification medium in the DPD system
Tracking number	The identification code for DPD parcels which is printed on the parcel label
Routing	Creation of the DPD destination information
Thermo printing method	Printing method utilizing thermal effects and heat-sensitive material.
Thermo transfer printing	Printing method utilizing thermal effects and heat-sensitive transfer foil with dye transfer to subjacent material.
Element	Term describing a bar or a gap, respectively
Gap	The bright element between two barcode bars
Module	The smallest element in a barcode
Module width	Width of the smallest element
Ratio	Ratio of a small and a wide element
Region without bars	The bright region before and behind the barcode
Bar	The dark barcode element
Start/Stop sign	Each barcode starts with a start sign and ends with a stop sign.

8.2 The DPD logo

8.3 Checklist for customer-side parcel printing

Parcel label layout				
			Yes	No
DPD logo exists			❑	❑
Current depot address exists			❑	❑
Information exists?	♦ Number of parcels:		❑	❑
	♦ Weight:		❑	❑
	♦ Date:		❑	❑
Sender address exists?			❑	❑
Recipient address field is emphasized with regard to the sender address			❑	❑
Damage notification exists			❑	❑
Route field completely printed			❑	❑
Barcode field completely printed			❑	❑
Samples of the services used exist			❑	❑
Parcel label geometry				
			Yes	No
Barcode contents in plain writing	♦ 28 digits altogether		❑	❑
Route field plain writing	♦ O-Sort	h ≥ 7.0mm	❑	❑
	♦ Destination text	h ≥ 11.0mm	❑	❑
	♦ D-Sort	b ≥ 7.0mm	❑	❑
Barcode geometry	♦ Barcode (28 digit) height ≥ 25.0mm		❑	❑
Barcode regions without bars (white margin)	♦ right ≥ 5mm (for modulus x = 375µm)		❑	❑
	♦ left ≥ 5mm (for modulus x = 375µm)		❑	❑
	♦ White regions without bars running at an angle of 45°		❑	❑
Technology (barcode printing)				
			Yes	No
Barcode type code 128 B/C, modulus x=375µm			❑	❑
Coded numbers barcode contents: 28 + check digit			❑	❑
Routing according to current routing data base			❑	❑
Sample material is equivalent to the material used			❑	❑

If you can answer all above items with “Yes”, please submit about 5 parcel labels to your appropriate depot at least **2 weeks** prior to the intended channeling in of the parcels including the proper number circle and the current routing data base and service code table. Your appropriate depot will take all further steps to apply for the required approval. The fact that the above items are fulfilled does **not** mean you have approval for parcel label printing. This checklist is only intended to be an aid to be able to achieve the necessary parcel label quality more easily.

8.4 DPD country table

(AN) ISO 3166	(N) ISO 3166	DPD country abbreviation	DPD code	Name
DE	276	D	49	Germany
SE	752	S	46	Sweden
IS	352	IS	54	Iceland
FO	234	FO	68	Faeroe Islands ***)
GL	304	GL	69	Greenland ***)
RU	643	RUS	75	Russia
OM	512	OM	60	Oman***)
KW	414	KWT	61	Kuwait***)
NO	578	N	47	Norway
FI	246	FIN	58	Finland
FR	250	F	33	France *)
-	-	GUS	77	Rest of CIS ***)
DK	208	DK	45	Denmark
NL	528	NL	31	Netherlands
BE	056	B	32	Belgium
LU	442	L	52	Luxembourg
AE	784	UAE	62	United Arab Emirates***)
SA	682	KSA	63	Saudi Arabia***)
BH	048	BRN	64	Bahrain***)
QA	634	Q	65	Qatar***)
GB	826	GB	44	Great Britain
IE	372	IRL	53	Ireland
CH	756	CH	41	Switzerland**)
AT	040	A	43	Austria
CZ	203	CZ	20	Czech Republic
SK	703	SK	21	Slovakian Republic
HU	348	H	36	Hungary
BG	100	BG	59	Bulgaria
RO	642	RO	40	Romania
MX	484	MEX	67	Mexico
ES	724	E	34	Spain
PL	616	PL	48	Poland
TN	788	TN	16	Tunisia
IT	380	I	39	Italy
TR	792	TR	90	Turkey
KZ	398	KZ	78	Kazakhstan***)
AL	008	AL	55	Albania***)
GR	300	GR	30	Greece***)
YU	891	YU	81	Serbia and Montenegro
MK	807	MK	89	Macedonia***)

HR	191	HR	85	Croatia
SI	705	SLO	86	Slovenia
BA	070	BiH	87	Bosnia-Herzegovina
AZ	031	AZ	79	Azerbaijan***)
-	-	RoW	91	Rest of world***)
-	-	I	39	Republic of San Marino***)
-	-	CHR	97	Chronopost Express International***)
AD	020	AD	76	Andorra***)
PT	620	P	51	Portugal
EE	233	EE	72	Estonia
LT	440	LT	70	Lithuania
LV	428	LV	71	Latvia

*) including Monaco (alpha: MC, num. code: 33)
**) including Liechtenstein (alpha: FL, num. code: 41)
***) via Chronopost International

Version: ROUTEN.TAB V3/05

8.5 DPD service code table

The DPD service code table is part of the routes database. To make the examples shown in this specification better comprehensible, an excerpt from the service code table is shown below:

Code	Service text	Service description
101	D	normal parcel
102	D-HAZ	normal parcel, dangerous goods
105	D-EXW	normal parcel, ex works
106	D-EXW-HAZ	normal parcel, ex works, dangerous goods
109	D-COD	normal parcel, COD
110	D-COD-HAZ	normal parcel, COD, dangerous goods
113	D-SWAP	normal parcel, swap service
118	SWAPBACK	normal parcel, swap service (back)
136	D	small parcel
154	PARCELLetter	PARCELLetter
155	PM2	Guarantee
161	PM2-COD	Guarantee, C.O.D.
179	AM1	Express10
191	AM1-COD	Express10, C.O.D.
225	AM2	Express12
237	AM2-COD	Express12, C.O.D.
302	IE2	International Express Classic (day certain delivery in 220 countries)

The routes database is separately provided.

8.6 Service combinations

Following are some examples for parcel labels with combined services developed by self-printing customers:

8.6.1 Ex works and dangerous goods

The dangerous goods additional label containing the dangerous goods information must be attached to the parcel as well (omitted due to lack of space here).

8.6.2 COD and dangerous goods

The dangerous goods additional label containing the dangerous goods information must be attached to the parcel as well (omitted due to lack of space here).

8.6.3 COD and DPD Guaranteeparcel

8.6.4 COD and DPD EXPRESS*10*

8.6.5 COD and DPD EXPRESS*12*

8.7 Requirements for shipping system vendors

Three times a year a new routes database is provided in order to be able to map modified relations in the DPD system.

This database is the heart of the parcel routing. It is therefore necessary that all customers use the current routes database to avoid incorrect routings and thus delayed parcel deliveries.

To meet the high quality expectations of our customers, we must ensure that our customers will have the current routes database version on the first Monday of January, May and September, respectively.

DPD maintains the routes database on a central server. You may either program the routes database download yourself (see separate documentation) or (if possible) utilize our API (Application Programming Interface) to receive the routes database.