



# Beckhoff TwinCAT ®

The Window Control and Automation Technology

**XML Production data format  
for**

**PVC/ALUMINIUM-Window manufacture**

- Cutting and Treatments
- Version: 1.3.16

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## 1 General features of the XML - format

The abbreviation XML stands for Extensible Markup Language. XML is particularly suitable for storing structured data in a text file. XML extends SGML (Standard Generalised Markup Language in accordance with ISO) by adding a facility for individual extensions.

The use of this format is based on the following reasons:

- It is particularly easy for humans and machines to read.
- Structured data can be particularly well stored, represented and transmitted in this form.
- Standard mechanisms for searching, filtering and display are available.
- Individual extensions to the data structure can be made at any time.
- There is support for display in a PC web browser.
- Support and further development of XML technology across the whole company (Microsoft, SUN, IBM).
- Simple cross-platform, system-independent data exchange (business to business communication).
- Availability of working XML parsers for various development sectors.

Information regarding document type definitions and other notations will not initially be given here.

## 2 Number formats

It is possible that when figures for position or velocity are given, resolution in mm or m/min is inadequately precise. In such cases, and depending on the regional settings, the corresponding number formats from the operating system can be used.

Under Windows, the number format must be changed as follows:

Settings ⇒

Regional settings ⇒

Number formats

## 3 Text formats

For text characters it should be noted that umlauts and special characters from other languages can only be read properly if the file coding is set to Unicode or UTF-8. This must be done when the file is saved. If it is not possible to save the file UTF-8 coded, it should be saved ANSI-coded, and the language area selection can be done via the "ISO-8859-x" encoding option. Further information can be found in chapter "Example encoding".

Only literals may be used as attribute values for the XML elements. Within a literal the markup characters »<",">« and the »&« sign may not be used. They must be masked through so-called entity references: &lt; &gt; und &amp;. Further information can be found in the chapter: Entity references.

If the text field contains further special characters that belong to the parser control characters, then the data of the element should additionally be enclosed in a CDATA block.

**<![CDATA[...]]>**

For instance, in association with the element <Designation> (data content=Transom ^):

**<Designation><![CDATA[Transom ^]]></Designation>**

For the sake of simplicity, this information can generally be enclosed in CDATA blocks.

## 4 Units

Unless additional or varying specifications are made, the following dimensional information applies:

Velocities are in mm/min

Position values are in mm

Angle in degrees

Times in seconds

Decimal places can be transferred without problems. Use of the separator set for your language.

## 5 The main level of the XML data is the filename <File>

Dataline:

<File Name="ExampleProdDat.xml"> ... (Data structures see chapter 6) </File>	<Datei Name="BeispielProdDat.xml"> ... </Datei>
--	---

Principal element: <File>

Attribut: **Name**

Value: "**(Filename)**"

Data type: **Text**

- Identifier for filename
- Original filename
- The file name should only contain numbers from 0 – 9, letters from a – z, A – Z, no spaces, and should not be longer than 40 characters.

This entry is only use for the internal description of the principal area for the following production data.

## 6 Structure of the file levels

```

<File Name="NCProdDat.xml">
  <OptiCuttingData>
    <OptiData Name="Meier">
      <BarData BarNo="1" BarLength="6500.99" Designation="Blr. 67 mm" ProfileName="Schueco" >
        <PieceData PieceNo="1" BarNo="1" CaseNo="12" Commission=.....>
          <LabelPrintData PieceNo="1">
            <PrintData>
              DIR4:AN1:FT"SW030RSN.2":MAG2,2.....
            </PrintData>
            <InkJetPrintData>
              $001$010$001$203$033$002$056Imaje$001$052Ink....
            </InkJetPrintData>
          </LabelPrintData>
          <ToolData PieceNo="1">
            <Treatment TNo="12" XPos="120" YPos="20" ZPos="30"/>
          </ToolData>
        </PieceData>
        <PieceData PieceNo="2" BarNo="1" CaseNo="12" Commission=.....>
          <ToolData PieceNo="2">
            <Treatment TNo="12" XPos="120" YPos="20" ZPos="30"/>
          </ToolData>
        </PieceData>
      </BarData>
      <BarData BarNo="2" BarLength="6500" Designation="Blr. 67 mm" ProfileName="Schueco" >
        .....
      </BarData>
    </OptiData>
    <SteelOptiData Name="Meier">
      <SteelBarData BarNo="1" BarLength="6500.99" Designation="Blr. 67 mm" SteelName="744SS" >
        <SteelPieceData PieceNo="1" BarNo="1" Commission="Meier 6789" Position="3" Length="1200">
          <SteelToolData PieceNo="1">
            <SteelTreatment ToolNo="12" XPos="120" YPos="20" ZPos="30"/>
          </SteelToolData>
        </SteelPieceData>
        <SteelPieceData PieceNo="2" BarNo="1" Commission="Meier 6789" Position="3" Length="1200">
          <SteelToolData PieceNo="2">
            <SteelTreatment ToolNo="12" XPos="120" YPos="20" ZPos="30"/>
          </SteelToolData>
        </SteelPieceData>
        <SteelPieceData PieceNo="3" BarNo="1" Commission="Meier 6789" Position="3" Length="1200">
          </SteelPieceData>
      </SteelBarData>
      <SteelBarData BarNo="2" BarLength="6500" Designation="Blr. 67 mm" SteelName="744SS" >
        ....
      </SteelBarData>
    </SteelOptiData>
  </OptiCuttingData>
</File>

```

All elements and attributes identified as optional have not to be transferred. If they are transferred, they must be transferred as empty fields (="").

The format described above represents the basic information for window production machines. Extensions can be implemented at any time in consultation with the machine manufacturer.

## 6.1 Optimised cutting data <OptiCutData>

Optimised cutting data for PVC, aluminium, wood cutting centre with machining, print and NC data.

Dateline:

<OptiCuttingData>	<OptiZuschnittdaten>
... (Optimising data, see chapter 6.1.1)	...
</OptiCuttingData>	</OptiZuschnittdaten>

Element name: <OptiCuttingData>

No attributes necessary.

### 6.1.1 Optimisation data <OptiData>

Dateline:

<OptiData Name="Meier" Run=" Job: 21108897 Date:19.8.01">	<Optidaten Name="Meier" Lauf="Los: 21108897 Datum:19.8.01">
...(BarData, see chapter 6.1.1.1)	... (Bar data)
</OptiData>	</Optidaten>

Element name: <OptiData>

Attribut: **Name**

Value: **"(Batch name)"**

Data type: **Text**

- Identifier for batch name
  - Distinguishing feature for multiple results
  - The batch name should only contain numbers from 0 – 9, letters from a – z, A – Z, no spaces, and should not be longer than 40 characters.
- Under this designation, the order is stored on the controller and he is available.

The batch name must be unique, since a batch is already on the machine located in resubmit them, would be overwritten by the newly default. In this case, there is appropriate message on the machine, which needs to quit by user.

The choice of this name should be taken that it be used as a file name for the machine; he became the father-exchange files with other machines or machine parts. It should therefore be dispensed with the use of special characters.

The next two attributes are only for advanced native file job description, they are not transferred to the machine controller!

Attribut: <b>Run</b>	- Identifier for designation the optimisation run (optional)
Value: <b>"(Designation)"</b>	Run designation with any informative text
Data type: <b>Text</b>	- max. 255 characters
Attribut: <b>Machine</b>	- Identifier for machine name (optional)
Value: <b>"(Machine)"</b>	- Distinguishing feature for multiple results
Data type: <b>Text</b>	- The machine name should only contain numbers from 0 – 9, letters from a – z, A – Z, no spaces, and should not be longer than 40 characters.

Because the batch data are stored under the name that you are hand over in “*OptiData*⇒*Name*” on the machine, it would be possible within a XML file to hand over also different batches. In this case a new *OpitData* element would have to be opened, with a new name.

#### 6.1.1.1 Bar data <BarData>

Dataline:

<pre>&lt;BarData BarNo="1" BarLength="6500" Designation="Blr. 67 mm" ProfileName="Schueco" RestLength="100" RestCode="2" RestPieceNo="1001"&gt;  ... (PieceData, see chapter 6.1.1.1.1)  &lt;/BarData&gt;</pre>	<pre>&lt;Stabdaten StabNr="1" Rohlaenge="6500" Bezeichnung="Blr. 67 mm" ProfilName="Schueco" ResteLaenge="100" ResteKennung="2" ResteTeileNr="1001"&gt;  ... (Piece data)  &lt;/Stabdaten&gt;</pre>
---	---

Element name: <BarData>

Attribut: <b>BarNo</b>	- Identifier for bar number
Value: <b>"(Bar number)"</b>	- Bar number
Data type: <b>Number</b>	- Number from 1 – 9999
Attribut: <b>BarLength</b>	- Identifier for uncut length
Value: <b>"(BarLength)"</b>	- Uncut length of the bar in mm
Data type: <b>Number</b>	- Number in mm
Attribut: <b>Designation</b>	- Identifier for profile designation
Value: <b>"(Designation)"</b>	- Text for general profile information
Data type: <b>Text</b>	- max. 255 characters
Attribut: <b>Comment</b>	- Identifier for comment (optional)
Value: <b>"(Comment)"</b>	- Text for any commenting purpose
Data type: <b>Text</b>	- max. 255 characters
Attribut: <b>ProfileName</b>	- Identifier for profile name
Value: <b>"(Profile name)"</b>	- Name of the profile
Data type: <b>Text</b>	- The profile name should only contain numbers from 0 – 9, letters from a – z, A – Z, no spaces, and should not be longer



than 40 characters. In addition, all special use, with exception of: ' \ / < > \* „ ? “

Attribut: **Color**

Value: **"(Profile color)"**

Data type: **Text**

- Identifier for profile colour
- Colour of the profile
- The profile colour should only contain numbers from 0 – 9, letters from a – z, A – Z, no spaces, and should not be longer than 80 characters. In addition, all special use, with exception of: ' \ / < > \* „ ? “

Using a special coding of color specification, the transport speed (following TS) of the bars / parts is controlled in the machine. For this purpose, the following definition applies:

*insideColor;outsideColor;any sequence text*

**Note the semicolon as separator! The identifier of the colors no special characters, spaces or the semicolon itself may be used!**

The marking of the outside color determines whether to work with normal or with the special TS.

By defining the outside color "White" working with the normal TS. For all other color codes is then worked with the special TS. The various spellings for "White" or its translations are taken into account.

If the handover of the outsider color omitted or the color is transferred encoded prefer the normal transport speed.

Attribut: **RestLength**

Value: **"(Rest length)"**

Data type: **Number**

- Identifier for residual length (optional)
- Residual length in mm
- Value in mm

Attribut: **RestCode**

Value: **"(Rest identifier)"**

Data type: **Number**

- Identifier for rest (optional)
- Rest identifier 1 = rest; 2 = waste
- Number 1 or 2

Attribut: **RestPieceNo**

Value: **"(Rest piece no.)"**

Data type: **Number**

- Identifier for rest piece number (optional)
- Rest piece number for printing labels
- Number from 1 – 9999

The following default is evaluated only by the optimisation modules in the machine. Hence, they are to be handed over only optionally if the described qualities should be used.

Attribut: **NormLength**

Wert: **"(Norm length)"**

Datentyp: **Number**

- Identifier for norm length
- Norm length of bar in mm
- Number in mm

This default is used by the optimisation or rest length input always then when new bars must be put on by these. If the field does not hand over, the functions fall back on the norm length default from the profile data on the machine for it. However, it is about to note that within an order for a profile type and colour always only one norm length default can be valid!

The following options can only be use, if special function in the plc and the pc application are enabled! Please talk for these features with your machine manufacturer.

Attribut: **Barcode**

Value: **"(Barcode)"**

Data type: **Text**

- Identifier for barcode (optinal)
- Bar barcode for bar enable with scanner
- The barcode should only contain numbers from 0 – 9, letters from a – z, A – Z, no spaces, and should not be longer than 40 characters.

This information serves only for the unique selection possibility of the bar for scanner function.

### 6.1.1.1.1 Piece data <PieceData>

Dateline:

<pre>&lt;PieceData PieceNo="1" BarNo="1" CarriageNo="1" CaseNo="12" Commission="6789" Position="3" Length="1200" AngleOnCut="90" AngleOffCut="90" Steel="1" Steelnumber="12" SteelLength="1200" Barcode="12345"&gt;</pre> <p>... (ToolData, see chapter 6.1.1.1.1)</p> <pre>&lt;/PieceData&gt;</pre>	<pre>&lt;Teiledaten TeileNr="1" StabNr="1" WagenNr="1" FachNr="12" Kommission="6789" Position="3" Laenge="1200" AnGehrung="90" AbGehrung="90" Stahlanwahl="1" Stahlnummer="12" Stahllaenge="1200" Barcode="12345"&gt;</pre> <p>... (Tool data)</p> <pre>&lt;/Teiledaten&gt;</pre>
--	---

Element name: <PieceData>

Attribut: **BarNo** - Identifier for bar number

Value: **"(Bar number)"** - Bar number

Data type: **Number** - Number from 1 – 9999

Attribut: **PieceNo** - Identifier for piece number

Value: **"(Piece number)"** - Piece number

Data type: **Number** - Number from 1 – 9999

Attribut: **CarriageNo** - Identifier for carriage number (optional)

(Only necessary if an automatic sorter unit is installed at the machine)

Value: **"(Carriage no.)"** - Carriage number

Data type: **Number** - Number from 1 – 999.999.999, or coded

If the possibility exists in the machine that parts in the area of the sorting unit may be ejected, then the concerning part can be marked about the default by CarriageNo = 0 for it.

With the possibility of simultaneous filling of several carriages, the carriage number is for a "large" carriage. A change in the carriage number in the job be a carriage has changed.

Attribut: **CaseNo** - Identifier for case number (optional)

Value: **"(Case number)"** - Case number

Data type: **Number** - Number from 1 – 999.999.999, or coded for case arrangement

About the following coding of the case number is able, with the possibility of the filling of several carriages which an one sub carriage are marked:

u	f	f	f
---	---	---	---

Case number for the part made in accordance with the definition made by your machine manufacturer.

This number must be specified for the sub-carriage, with the largest number results from the maximum number of carriages can be filled simultaneously. In general, this is the '1' - '2'.

Please call your machine manufacturer for details.

Attribut: <b>Designation</b>	- Identifier for piece designation (optional)
Value: <b>"(Designation)"</b>	- Text for general piece information
Data type: <b>Text</b>	- max. 255 characters
Attribut: <b>Commission</b>	- Identifier for commission (optional)
Value: <b>"(Commission)"</b>	- Commission designation / -number
Data type: <b>Text</b>	- max. 255 characters
Attribut: <b>Position</b>	- Identifier for position (optional)
Value: <b>"(Position)"</b>	- Position designation / -number
Data type: <b>Text</b>	- max. 255 characters
Attribut: <b>Piectype</b>	- Identifier for piece type (optional)
Value: <b>"(Piece type)"</b>	- Piece type designation for additional information
Data type: <b>Text</b>	- max. 10 characters
Attribut: <b>WindowNo</b>	- Identifier for Window number (optional)
Value: <b>"(Window no.)"</b>	- Unique Window number to assign all piece for this window
Data type: <b>Number</b>	- Number from 1 – 999.999.999
Attribut: <b>Length</b>	- Identifier for part length
Value: <b>"(Part length)"</b>	- Part length in millimetres, possibly with decimal places, measured from tip to tip
Data type: <b>Number</b>	- Value in mm
Attribut: <b>AngleOnCut</b>	- Identifier for start cut angle
Value: <b>"(First cut angle)"</b>	- First cut angle in degrees (see example in chapter 7.2.1)
Data type: <b>Number</b>	- Value in degrees
Attribut: <b>AngleOffCut</b>	- Identifier for end cut angle
Value: <b>"(Last cut angle)"</b>	- Last cut angle in degrees (see example in chapter 7.2.1)
Data type: <b>Number</b>	- Value in degrees

Please note that intermediate angle, i.e. angle unequal to 45° and 90°, can only be defined if the machine has a stepless pivoting saw.

Attribut: **AngleOnCutID** - Identifier for first cut function  
Value: **"(Start cut func)"** - First cut angle function number (see example in chapter 7.2.1)  
0 = Angle default over AngleOnCut  
1 = 45 degrees  
2 = 90 degrees  
3 = Transom cut  
4 = cut for butt weld (cross-cut, top)  
5 = cut for inverse butt weld (cross-cut, bottom)  
Data type: **Number** - Number from 0 - 5

Attribut: **AngleOffCutID** - Identifier for last cut function  
Value: **"(End cut func)"** - Last cut angle function number (see example in chapter 7.2.1)  
0 = Angle default over AngleOnCut  
1 = 45 degrees  
2 = 90 degrees  
3 = Transom cut  
4 = cut for butt weld (cross-cut, top)  
5 = cut for inverse butt weld (cross-cut, bottom)  
Data type: **Number** - Number from 0 – 5

Please note that the predetermined cut angle function numbers are depending from the machinery configuration. The cutting height for cut code '4 – 5' must be specified under separately attribute.

Attribut: **CutHeightOnCut** - Identifier for cutting height start cut  
Value: **"(cutting height)"** - Cutting height in mm,  
(Measured from the upper/lower edge of the profile up to the mitre)  
Data type: **Nummer** - Value in mm

Attribut: **CutHeightOffCut** - Identifier for cutting height end cut  
Value: **"(cutting height)"** - Cutting height in mm  
(Measured from the upper/lower edge of the profile up to the mitre)  
Data type: **Nummer** - Value in mm

Attribut: **Barcode** - Identifier for barcode  
Value: **"(Barcode)"** - Part barcode for part production request  
Data type: **Text** - The barcaode should only contain numbers from 0 – 9, letters from a – z, A – Z, no spaces, and should not be longer than 40 characters.  
This information serves only for the unique selection possibility of the part for functions those requests the part data over bar code information. (Scanner functions)  
This information can also used to pass it from the BAZ to subsequent machines. Please contact your machine facturer, if you will use this function over a special communication part.

Attribut: <b>TeilePos</b>	- Identifier for piece position in batch (optional)
Value: <b>"(Piece index)"</b>	- Piece index in batch
Data type: <b>Number</b>	- Value 1 – 9999 This continuous index must always be defined if the piece numbers (PieceNo) in a batch is not continuously, starting at '1' must be passed! With reference to this index is then applied to the machine, the cutting sequence of parts determined. In other words, if this index is not passed, the piece cutting order determined by PieceNo.

The following attribute can be used for advanced print data selection.

By default, every part of a label is assigned, so they do not explicitly label selection in the pieces data must be made, regardless of the label data itself. If a part is assigned, for example, two labels, or to print only certain parts of labels, can work with this additional attribute.

Attribut: <b>PrintPicture</b>	- Identifier for advanced print selection (optional)
Value: <b>"(Selection)"</b>	- Label selection as coded information (i.e. 12 or 23;1023)
Data type: <b>Text</b>	- Selecting data for all labels to be printed on a PVC part. The various selections must be passed separated by semicolons. Will be only one selection, the separator must be omitted. When selection is by default the label you must pass-on the number of the printed label. If the field is not passed, then it defaults, PVC piece number = label number. The behavior of the machine with respect to this field can be configured on the machine on machine parameters.

The following specifications for the associated steel are only required if the machine has a manual steel loading and cutting unit or an automatic steel insertion unit.

- Attribut: **Steel** - Identifier for steel selection (optional)  
Value: **"(Steel selection)"** - Steel selection  
- 0 = no steel  
- 1 = Steel inserted manually  
- 2 = Steel inserted automatically  
- 3 = Special steel inserted manually  
(The steel part is supplied externally)  
5 = Special part with special equipment or special treatment  
at the manual steel insertion unit.  
(Please talk with the machine builder about this function.)  
yx = Two steel parts, inserted manually and/or automatically,  
combinations of selection codes  
Data type: **Number** - Number 0 – 3, 5 and yx for special use
- Attribut: **SteelNo** - Identifier for steel typ name  
Value: **"(Steel typ)"** - Name of the steel  
Data type: **Text** - The steel typ name should only contain numbers from 0 – 9,  
letters from a – z, A – Z, no spaces, and should not be longer  
than 40 characters. In addition, all special use, with  
exception of: ' \ / < > \* , ? “
- Attribut: **SteelLength** - Identifier for steel length (optional)  
Value: **"(Steel length)"** - Steel length in millimetres, possibly with decimal places  
Data type: **Number** - Value in mm
- Attribut: **Steelnumber** - Identifier for steel number (optional)  
Value: **"(Steelnumber)"** - Note for the operator at the manual insertion unit. The  
specified number can have different meanings. For example,  
it can refer to the steel type number or the number of the case  
from which the steel part is to be taken. It may also be used  
to provide information for special steel inserts, if the steel is  
not cut on the steel saw that may be present.  
Datentyp: **Text** - Code number or text identifier
- Attribut: **SteelPieceNo** - Identifier for Steel piece number (optional)  
Value: **"(Steel-PieceNo)"** - Steel piece number associated with pvc part.  
Data type: **Number** - Number from 1 – 9999

If the machine only features a manual steel loading unit, only the following fields have to be transferred: *Steel*, *SteelNo*, *Steelnumber*, *SteelLength* and *SteelPieceNo*. This information is displayed at the manual steel loading unit for the operator. Please note that usually only the steel length and the steel number are displayed.

If a CPxxxx panel is used for displaying the steel information, any text information can be displayed without problems, but by default only the first ten characters from the field *Steelnumber* can be displayed. Through a customization it is possible to display longer fields or other additional informations.

If an automatic steel insertion or an automatic steel lowering unit is available, the steel insertion depth must be specified in addition to the steel length. For details please look at chapter 6.3.1 “One steel piece with additional steel information”.

In special cases two steel parts may have to be assigned to one PVC part. In this case can the information for the two steel parts can be specified via additional fields. Further information can be found in chapter 6.3.2 “Two steel pieces in one pvc piece”.

For details relating to data handling please refer to the machine manufacturer.



#### 6.1.1.1.1.1 Tool data <ToolData>

Dateline:

<ToolData PieceNo="1">	<Werkzeugdaten TeileNr="1">
...	...
( <Treatment TNo=.....)	( <ProfilBearb BNr=.....)
( <Treatment TNo=.....)	( <ProfilBearb BNr=.....)
...	...
</ToolData>	</Werkzeugdaten>

Element name: <ToolData>

Attribut: **PieceNo** - Identifier for piece number  
 Value: **"(Piece number)"** - Piece number  
 Data type: **Number** - Number from 1 – 9999

#### 6.1.1.1.1.1.1 Any type of treatment with profile reference <Treatment>

The type of processing (treatment) is defined using the treatment numbers individually specified by the machine constructor. Each treatment number is stored in the system's profile data together with full dimensional and speed information. Optionally, in addition to the minimum information represented by TNo and XPos, further values such as ToolNo, YPos, Zpos and so forth may also be transferred. This type of treatment always accesses the system's profile data. The treatment cannot be carried out unless the treatment number is defined at the machine. The treatment processes, including the treatment numbers, are to some extent pre-defined by the machine builder, and can be taken from his detailed documentation.

Dateline:

<Treatment TNo="1" XPos="120" YPos="20" ZPos="30" />	<ProfilBearb BNr="1" XPos="120" YPos="20" ZPos="30" />
---	---

Element name: <Treatment>

Attribut: **TNo** - Identifier for treatment number  
 Value: **"(Treatment no.)"** - Treatment number (see detailed list provided by machine manufacturer)  
 Data type: **Number** - Number from 1 – 9999

Attribut: **XPos** - Identifier for X-position of the treatment  
 Value: **"(Position)"** - Centre of the treatment in the X direction in mm, possibly with decimal places  
 Data type: **Number** - Value in mm

Attribut: **Designation** - Identifier for treatment designation (optional)  
 Value: **"(Designation)"** - Text for general processing information  
 Data type: **Text** - max. 255 characters

Attribut: **Comment** - Identifier for comment (optional)  
 Value: **"(Comment)"** - Text for any commenting purpose  
 Data type: **Text** - max. 255 characters

#### 6.1.1.1.2 Label data <LabelPrintData >

You can specify five labels per piece. Each label can be given different information and also for different types of printers. When specifying the print data, the syntax of the printer to be addressed must be taken into account. The definition which label, where the machine can be printed, is defined during the preliminary discussion of the machine and must therefore be coordinated with the machine manufacturer.

For each label, you have the properties that can be activated in the print server. That would be:

- Print the label as specified in the serial interface
- - Print the label as specified by the network
- - Print via RAW print function
- - Print over the specification of an image

By default, it is assumed that the entire print information is made via the following specifications. Please note that changed settings are required for the "PrintPicture" option. Please ask your machine manufacturer.

All predefined label data are always assigned to the part which you specify by means of the attribut "PieceNo" of the label data.

Dateline:

<pre>&lt;LabelPrintData PieceNo="1"&gt;   &lt;PrintData&gt; ... &lt;/PrintData&gt;   &lt;PrintData1&gt; ... &lt;/PrintData1&gt;   &lt;PrintData2&gt; ... &lt;/PrintData2&gt;   &lt;PrintData3&gt; ... &lt;/PrintData3&gt;   &lt;InkJetPrintData&gt; ... &lt;/InkJetPrintData&gt; &lt;/LabelPrintData&gt;</pre>	<pre>&lt;Etikettendaten TeileNr="1"&gt;   &lt;Druckdaten&gt; ... &lt;/Druckdaten&gt;   &lt;Druckdaten1&gt; ... &lt;/Druckdaten1&gt;   &lt;Druckdaten2&gt; ... &lt;/Druckdaten2&gt;   &lt;Druckdaten3&gt; ... &lt;/Druckdaten3&gt;   &lt;TintenDruckdaten&gt; ... &lt;/TintenDruckdaten&gt; &lt;/Etikettendaten&gt;</pre>
--	--

Element name: <LabelPrintData>

Attribut: **PieceNo** - Identifier for piece number  
 Value: **"(Piece number)"** - Piece number  
 Data type: **Number** - Number from 1 – 9999

## Print data <PrintData>

When presetting the print data you have to make the possibility of up to four targets. The element names are to be specified as follows:

```
<Print data>
<Print data1>
<Print data2>
<Print data3>
```

It should only use the respective for the machine defined elements. The syntax can be found in the corresponding manual from the used printer. Example:

DIR: Print alignment / PP: Print position X Y / PT: Print output text / ...

Data line:

<pre>&lt;PrintData&gt; DIR4:AN1:FT"SW030RSN.2":MAG2,2 PP80,80:PT"BLANCO 2236 /\ 1" P130,80:PT"Piece vertical " PP180,80:PT"10578/ 2236/ 6 /1 " PP310,80:MAG4,2:PT"Example":MAG2,1 PP360,80:PT"A / 900 X 2150" PF\$013 &lt;/PrintData&gt;</pre>	<pre>&lt;Druckdaten&gt; DIR4:AN1:FT"SW030RSN.2":MAG2,2 PP80,80:PT"BLANCO 2236 /\ 1" PP130,80:PT"Teil vertikal " PP180,80:PT"10578/ 2236/ 6 /1 " PP310,80:MAG4,2:PT"Beispiel":MAG2,1 PP360,80:PT"A / 900 X 2150" PF\$013 &lt;/Druckdaten&gt;</pre>
--	---

Element name: <PrintData>

Attribut:	- none
Text: <b>"(Print text)"</b>	- Print text for the label printer being used
Data type: <b>Text</b>	- Max. 3000 characters text without control codes. Control characters can be specified starting with a dollar sign (\$) followed by three digits according to their decimal number code. Please note also the special features are listed in the chapters 7.2.3 and 7.2.4.

Example of additional labels:

<pre>&lt;PrintData1&gt; DIR4:AN1:FT"SW030RSN.2":MAG2,2 PP80,80:PT"BLANCO 2236 /\ 1" ... PF\$013 &lt;/PrintData1&gt;</pre>	<pre>&lt;Druckdaten1&gt; DIR4:AN1:FT"SW030RSN.2":MAG2,2 PP80,80:PT"BLANCO 2236 /\ 1" ... PF\$013 &lt;/Druckdaten&gt;</pre>
<pre>&lt;PrintData2&gt; DIR4:AN1:FT"SW030RSN.2":MAG2,2 PP80,80:PT"BLANCO 2236 abc 99" ... PF\$013 &lt;/PrintData2&gt;</pre>	<pre>&lt;Druckdaten1&gt; DIR4:AN1:FT"SW030RSN.2":MAG2,2 PP80,80:PT"BLANCO 2236 abc 99" ... PF\$013 &lt;/Druckdaten&gt;</pre>

#### 6.1.1.1.2.1 Inkjet printer data <InkJetPrintData>

Data for an inkjet printer: The syntax can be found in the corresponding manual from the used printer.

Data line:

<InkJetPrintData> \$001\$010\$001\$203\$033\$002\$056Imaje\$001\$052InkJet \$010\$001\$053Print example\$013 </InkJetPrintData>	<TintenDruckdaten> \$001\$010\$001\$203\$033\$002\$056Imaje\$001\$052Tintenstrahl \$010\$001\$053Druckbeispiel\$013 </TintenDruckdaten>
--	--

Element name: <InkJetPrintData>

Text: **"(Print text)"**

Data type: **Text**

- Print text for the inkjet printer being used
- Max. 3000 characters text without control codes. Control characters can be specified starting with a dollar sign (\$) followed by three digits according to their decimal number code.  
Please note also the special features are listed in the chapters 7.2.3 and 7.2.4.

The difference between the two possible print data selections is that the inkjet printer integrated in the machine and thus an automatic labeling is possible. Whereas the normal printer usually is standing at the buffer, and the labels must be put to the pieces manually. The handover is therefore dependent on the configuration of the machine.



If the XML file is opened with an xml enabled text editor or Explorer, the long text lines break automatically. These breaks are only apparently present in the data specifications. If you are within your print data the default line ending with a newline, it should be noted that these breaks are also transferred to the printer. Does this represent a problem, the compressed data input in one row.

Line breaks can be passed without problems, then it must be made sure that any unused command separator (eg ':' for Intermec printers) not at the end of a line may be passed.

## 6.1.2 Steel optimisation data <SteelOptiData>

Dateline:

<SteelOptiData Name="Meier">	<StahlOptidaten Name="Meier">
... (SteelBarData, see chapter 6.1.2.1)	... (Steel bar data)
</SteelOptiData>	</StahlOptidaten>

Element name: <SteelOptidata>

Attribut: **Name**

Value: "**(Batch name)**"

Data type: **Text**

- Identifier for steel batch name
  - Distinguishing feature for multiple results
  - The batch name should only contain numbers from 0 – 9, letters from a – z, A – Z, no spaces, and should not be longer than 40 characters.
- Please note that this batch name is identical to the batch name of the corresponding PVC-data!

Attribut: **Run**

Value: "**(Designation)**"

Data type: **Text**

- Identifier for designation the steel optimisation run (optional). This information is not stored on the controller.
- Run designation with any informative text
- max. 255 characters

### 6.1.2.1 Steel bar data <SteelBarData>

Dataline:

<pre>&lt;SteelBarData BarNo="1" BarLength="6500" Designation="Blr. 67 mm" SteelName="744SS" RestLength="100" RestCode="2" &gt;  ... (SteelPieceData)  &lt;/SteelBarData&gt;</pre>	<pre>&lt;StahlStabdaten StabNr="1" Rohlaenge="6500" Bezeichnung="Blr. 67 mm" StahlName="744SS" ResteLaenge="100" ResteKennung="2" &gt;  ... (Steel piece data, see chapter 6.1.2.2)  &lt;/StahlStabdaten&gt;</pre>
---	--

Element name: <SteelBardata>

Attribut: <b>BarNo</b>	- Identifier for steel bar number
Value: <b>"(Steel bar no.)"</b>	- Steel bar number
Data type: <b>Number</b>	- Number from 1 – 9999
Attribut: <b>BarLength</b>	- Identifier for uncut steel length
Value: <b>"(Steel bar len.)"</b>	- Uncut steel length of the bar in mm, possibly with decimal places
Data type: <b>Number</b>	- Value in mm
Attribut: <b>Designation</b>	- Identifier for steel designation
Value: <b>"(Designation)"</b>	- Text for general steel information
Data type: <b>Text</b>	- max. 255 characters
Attribut: <b>FirstCut</b>	- Identifier for first cut value (optional)
Value: <b>"(First cut)"</b>	- Value of stick first slice in millimetres, perhaps with postcomma places. With default of value "0" it is worked with in the data on the machine given.
Data type: <b>Number</b>	- Value in mm
Attribut: <b>SteelName</b>	- Identifier for steel name
Value: <b>"(Steel name)"</b>	- Name of the steel
Data type: <b>Text</b>	- The steel name should only contain digitss from 0 – 9, letters from a – z, A – Z, no spaces, and should not be longer than 40 characters. Special characters can also be used, except: ' \ / < > * " ?.
Attribut: <b>RestLength</b>	- Identifier for residual steel length
Value: <b>"(Steel residual length)"</b>	- Residual steel length in mm
Data type: <b>Number</b>	- Number in mm
Attribut: <b>RestCode</b>	- Identifier for steel residual
Value: <b>"(Steel residual identifier)"</b>	- Steel residual identifier identifier 1 = residual, 2 = waste
Data type: <b>Number</b>	- Number 1 or 2

### 6.1.2.2 Steel piece data <SteelPieceData>

In the steel piece data only the parts may be handed over which should be processed by the steel cutting saw and must be inserted then either by hand or automatically.

Dataline:

<pre>&lt;SteelPieceData PieceNo="1" BarNo="1" Commission="Customer 6789" Position="3" Length="1200" AnGehrung="90" AbGehrung="90" Steel="1" &gt;  ... (SteelToolData, see chapter 6.1.2.2.1)  &lt;/SteelPieceData&gt;</pre>	<pre>&lt;StahlTeiledaten TeileNr="1" StabNr="1" Kommission="Kunde: 6789" Position="3" Laenge="1200" AnGehrung="90" AbGehrung="90" Stahlanwahl="1"&gt;  ... (Steel tool data)  &lt;/StahlTeiledaten&gt;</pre>
---	--

Element name: <SteelPieceData>

Attribut: <b>BarNo</b>	- Identifier for steel bar number
Value: <b>"(Steel bar no.)"</b>	- Steel bar number
Data type: <b>Number</b>	- Number from 1 – 9999
Attribut: <b>PieceNo</b>	- Identifier for steel part number
Value: <b>"(Part number)"</b>	- Steel part number
Data type: <b>Number</b>	- Number from 1 – 9999
Attribut: <b>Designation</b>	- Identifier for piece designation (optional)
Value: <b>"(Designation)"</b>	- Text for general part information
Data type: <b>Text</b>	- max. 255 characters
Attribut: <b>Comment</b>	- Identifier for comment (optional)
Value: <b>"(Comment)"</b>	- Text for any commenting purpose
Data type: <b>Text</b>	- max. 255 characters
Attribut: <b>Commission</b>	- Identifier for commission (optional)
Value: <b>"(Commission)"</b>	- Commission designation / -number
Data type: <b>Text</b>	- max. 255 characters
Attribut: <b>Position</b>	- Identifier for position (optional)
Value: <b>"(Position)"</b>	- Position designation / -number
Data type: <b>Text</b>	- max. 255 characters

Attribut: <b>Length</b>	- Identifier for steel length
Value: <b>"(Steel length)"</b>	- Length of the steel in mm
Data type: <b>Number</b>	- Value in mm
Attribut: <b>AnGehrung</b>	- Identifier for first cut angle
Value: <b>"(First cut angle)"</b>	- First cut angle in degrees
Data type: <b>Number</b>	- Value in degrees
Attribut: <b>AbGehrung</b>	- Identifier for last cut angle
Value: <b>"(Last cut angle)"</b>	- Last cut angle in degrees
Data type: <b>Number</b>	- Number in degrees On standard machines the steel saw has no swivel function. So only a cut angle of 90° is possible. (Value = 0)
Attribut: <b>AngleOnCutID</b>	- Identifier for start first function (optional)
Value: <b>"(Start cut func)"</b>	- First cut angle function number 0 = Angle default over AnGehrung 2 = 90 degrees
Data type: <b>Number</b>	- Number from 0, 2
Attribut: <b>AngleOffCutID</b>	- Identifier for first cut function (optional)
Value: <b>"(End cut func)"</b>	- Last cut angle function number 0 = Angle default over AbGehrung 2 = 90 degrees
Data type: <b>Number</b>	- Number from 0, 2
Attribut: <b>Steel</b>	- Identifier for steel selection (optional)
Value: <b>"(Steel selection)"</b>	- Steel selection - 1 = Steel inserted manually - 2 = Steel inserted automatically
Data type: <b>Number</b>	- Number 1 – 2
Attribut: <b>Steeldepth</b>	- Identifier for steel insertion depth (optional)
Value: <b>"(Depth)"</b>	- Steel insertion depth in millimetres, possibly with decimal places, relative to the reference edge of the PVC part. This must be agreed with the machine manufacturer.
Data type: <b>Number</b>	- Number in mm
Attribut: <b>SteelChamber</b>	- Identifier for the number of the steel insertion chamber in the PVC part (optional).
Value: <b>"(Steel chamber)"</b>	- Steel Chamber numbered from top to bottom, starting with '1'. This selection only has to be transferred in conjunction with an automatic steel insertion unit, if the steel is to be inserted in a special steel compartment within the PVC profile that differs from the standard compartment. Otherwise the standard compartment is used.
Data type: <b>Number</b>	- Number from 1 – 9



Attribut: **PVCPieceNo** - Identifier for PVC piece number (optional)  
 Value: "(PVCPieceNo)" - PVC piece number associated with the steel part.  
 Data type: **Number** - Number from 1 – 9999

Attribut: **PVCBatchName** - Identifier for PVC batch name  
 Value: "(PVCBatchName)" - PVC batch name (optional if the steel batch name is not the same as the PVC batch name)  
 Data type: **Text** - The PVC batch name should only contain numbers from 0 – 9, letters from a – z, A – Z, no spaces, and should not be longer than 40 characters.  
 Please note that the PVC batch name must match the name specified in the field "Name=" in the PVC *OptiData*.

#### 6.1.2.2.1 Steel tool data <SteelToolData>

Dataline:

<SteelToolData PieceNo="1">	<StahlWerkzeugdaten TeileNr="1">
...	...
( <SteelTreatment TNo=..... )	( <StahlBearb BNr=..... )
( <SteelTreatment TNo=..... )	( <StahlBearb BNr=..... )
...	...
</SteelToolData>	</StahlWerkzeugdaten>

Element name: <SteelToolData>

Attribut: **PieceNo** - Identifier for steel piece number  
 Value: "(Steel piece number)" - Steel piece number  
 Data type: **Number** - Number from 1 – 9999

#### 6.1.2.2.1.1 Steel treatment with profile reference <SteelTreatment>

The type of treatment is defined using the treatment numbers individually specified by the machine constructor. Each treatment number is stored in the system's profile data together with full dimensional and speed information. Optionally, in addition to the minimum information represented by TNo and XPos, further values such as ToolNo, YPos, Zpos and so forth may also be transferred. This type of treatment always accesses the system's profile data. The treatment cannot be carried out unless the treatment number is defined at the machine. The treatment processes, including the treatment numbers, are to some extent pre-defined by the machine builder, and can be taken from his detailed documentation.

Dataline:

```
<SteelTreatment TNo="1"
XPos="120" YPos="20" ZPos="30" />
```

```
<StahlBearb BNr="1"
XPos="120" YPos="20" ZPos="30" />
```

Element name: <SteelTreatment>

Attribut: <b>TNo</b>	- Identifier for treatment number
Value: <b>"(Treatment no.)"</b>	- Treatment number (see detailed list provided by machine manufacturer)
Data type: <b>Number</b>	- Number from 1 – 9999
Attribut: <b>XPos</b>	- Identifier for X-position of the treatment
Value: <b>"(Position)"</b>	- Centre of the treatment in the X direction in millimetres, possibly with decimal places.
Data type: <b>Number</b>	- Number in mm
Attribut: <b>Designation</b>	- Identifier for treatment designation (optional)
Value: <b>"(Designation)"</b>	- Text for general treatment information
Data type: <b>Text</b>	- max. 255 characters
Attribut: <b>Comment</b>	- Identifier for comment (optional)
Value: <b>"(Comment)"</b>	- Text for any commenting purpose
Data type: <b>Text</b>	- max. 255 characters

The following points must be considered with the default of the steel data:

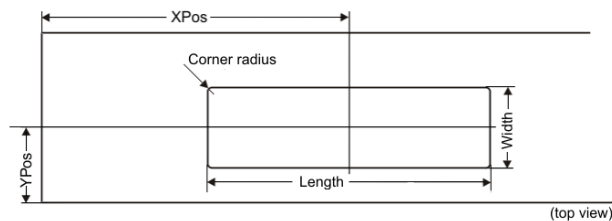
- The steel PiecerNo must be always identical to the PieceNo its assigned PVC part.
- If some PVC parts do not get steel, then also further the point specified before is valid. That is called it arises jumps within the part numbering of the steel parts, which represent no problem.
- The default in the field PVCPieceNo must be under normal conditions identical to steel PieceNo.
- In the running of machine process a steel part only identified over the steel PieceNo.

## 6.2 Specific features

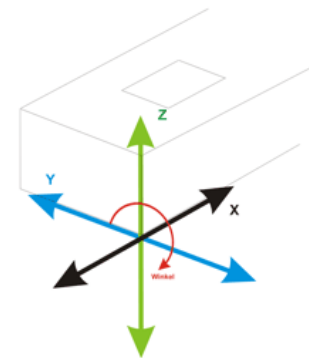
In this chapter is described which can be handed over in addition to the before described data fields, and therefore handing over of specific features allows. Here only the additional fields or the special handing over are described in the standard fields.

### 6.2.1 Extended treatment transfers

The type of processing (treatment) is defined using the treatment numbers individually specified by the machine constructor. Each treatment number is stored in the system's profile data together with full dimensional and speed information. Optionally, in addition to the minimum information represented above, you can transfer additional treatment data to use the treatment order more generally.



Example of treatment



Coordinate system

The specific treatment orders are predefined by the machine manufacturer and can be taken from the detailed documentation. Here are only the descriptions for the possible additional fields.

Data line:

<pre>&lt;Treatment TNo="165" XPos="605.00" YPos="7.50" ZPos="22.00" Length="36.5" Width="17.00" Depth="12" ToolAngle="45" Length="34" /&gt;</pre>	<pre>&lt;ProfilBearb BNr="165" XPos="605.00" YPos="7.50" ZPos="22.00" Laenge="36.5" Breite="17.00" Tiefe="12" WkzWinkel="45" Laenge="35" /&gt;</pre>
---	--

Element name: **<Treatment>**

Attribut: **TNo**

Value: **"(Treatment no.)"**

Data type: **Number**

- Identifier for treatment number

- Treatment number (see detailed list provided by machine manufacturer)

- Number from 1 – 9999

Attribut: **XPos**

Value: **"(Position)"**

Data type: **Number**

- Identifier for X-position of the treatment

- Centre of the treatment in the X direction in mm, possibly with decimal places

- Value in mm

---

Attribut: <b>YPos</b> Value: " <b>(Position)</b> "	- Identifier for Y-pre-position of the treatment - Y-position for pre-positioning at the application position of the treatment. The treatment position in the coordinate system is to be observed.
Data type: <b>Number</b>	- Value in mm
Attribut: <b>YPos</b> Value: " <b>(Position)</b> "	- Identifier for Z-pre-position of the treatment - Z-position for pre-positioning at the application position of the treatment. The treatment position in the coordinate system is to be observed.
Data type: <b>Number</b>	- Value in mm
Attribut: <b>Length</b> Value: " <b>(Length spec.)</b> "	- Identifier for total length of treatment - Total length of treatment in X-direction from beginning to end. The diameter of the milling bit is automatically offset.
Data type: <b>Number</b>	- Value in mm
Attribut: <b>Width</b> Value: " <b>(Width spec.)</b> "	- Identifier for the width of the treatment - Treatment width. The diameter of the milling bit is automatically offset.
Data type: <b>Number</b>	- Value in mm
Attribut: <b>Radius</b> Value: " <b>(Circle radius)</b> "	- Identifier for the radius of a circle treatment - Radius for circle treatments
Data type: <b>Number</b>	- Value in mm
Attribut: <b>Cornerradius</b> Value: " <b>(Radius)</b> "	- Identifier for the corner radius of a rectangle treatment - Corner radius of rectangle treatments
Data type: <b>Number</b>	- Value in mm
Attribut: <b>Depth</b> Value: " <b>(Depth spec.)</b> "	- Identifier for insertion depth of the tool - Depth of the treatment in relation to the coordinate zero point
Data type: <b>Number</b>	- Value in mm
Attribut: <b>ToolAngle</b> Value: " <b>(Treatm.angle)</b> "	- Identifier for treatment angle - Feeding angle of the tool for the treatment. (The machine must be equipped for this function in order be able to use it!)
Data type: <b>Number</b>	- Degree value from 0° - 360°

The following must be observed with these special transfers for treatments:

- The x-coordinate is always related to the direction of transport of the piece.
- The limits of the profile are to be observed in the depth specifications.
- Circle radius and tool radius are to be observed in the case of circle treatment.
- Extended treatment transfers should only take place in the case of treatments that have been approved by the machine manufacturer for this.
- Please use only the transfer possibilities that have been agreed with the machine manufacturer.
- It is not compulsory for the extended treatment transfers to always take place. If they are not transferred, the standard parameters stored in the machine are used.

The specification possibilities that you have for each particular treatment must always be agreed with the programmer of the NC programs or the machine manufacturer. The same applies to the rules that govern the dimensioning and specification parameters. Further parameters could still be defined if necessary.

If you have any questions about this type of transfer, please contact the Schirmer company's service dept.

## 6.2.2 One steel piece with additional steel information

### 6.2.2.1 Piece data <PieceData>

Dataline:

<pre>&lt;PieceData BarNo="1" PieceNo="14" Length="1200" AngleOnCut="90" AngleOffCut="90" Steel="1" SteelNo="12" Steelnumber="12-3mm" SteelLength="1000" SteelDepth="44"&gt;  ... (ToolData,)  &lt;/PieceData&gt;</pre>	<pre>&lt;Teiledaten StabNr="1" TeileNr="14" Laenge="1200" AnGehrung="90" AbGehrung="90" Stahlanwahl="1" StahlNr="12" Stahlnummer="12-3mm" Stahllaenge="1000" Stahleinschubtiefe="44"&gt;  ... (Werkzeugdaten)  &lt;/Teiledaten&gt;</pre>
--	--

Element name: <PieceData>

Attribut: **BarNo** - Identifier for bar number  
 Value: **"(Bar number)"** - Bar number  
 Data type: **Number** - Number from 1 – 9999

Attribut: **PieceNo** - Identifier for piece number  
 Value: **"(Piece number)"** - Piece number  
 Data type: **Number** - Number from 1 – 9999

...

Attribut: **Steel** - Identifier for steel selection  
 Value: **"(Steel selection)"** - Steel selection  
 - 1 = Steel inserted manually  
 - 2 = Steel inserted automatically  
 - 3 = Special steel inserted manually  
     (The steel part is supplied externally)  
 5 = Special part with special equipment or special treatment  
     at the manual steel insertion unit.  
     (Please talk with the machine builder about this function.)  
 Data type: **Number** - Number 1 – 3 or 5, whereby the selected number determines  
     whether steel parts data must be passed.

Attribut: **SteelNo** - Identifier for steel typ name  
 Value: **"(Steel typ)"** - Name of the steel  
 Data type: **Text** - The steel typ name should only contain numbers from 0 – 9,  
     letters from a – z, A – Z, no spaces, and should not be longer  
     than 40 characters. In addition, all special use, with  
     exception of: ‘ \ / < > \* „ ? “

Attribut: **SteelLength** - Identifier for steel length  
 Value: **"(Steel length)"** - Steel length in millimetres, possibly with decimal places  
 Data type: **Number** - Value in mm

- Attribut: **SteelNumber** - Identifier for steel number (optional)  
Value: "(SteelNumber)" - Note for the operator at the manual insertion unit. The specified number can have different meanings. For example, it can refer to the steel type number or the number of the case from which the steel part is to be taken. It may also be used to provide information for special steel inserts, if the steel is not cut on the steel saw that may be present.
- Datentyp: **Text** - Code number or text identifier
- Attribut: **SteelPieceNo** - Identifier for Steel piece number (optional)  
Value: "(SteelPieceNo)" - Steel piece number associated with first pvc part.  
Data type: **Number** - Number from 1 – 9999

The additional information for the steel member can be transferred in the following fields:

- Attribut: **SteelDepth** - Identifier for steel insertion depth  
Value: "(Depth)" - Steel insertion depth in mm, referring to profile reference edge.
- Data type: **Number** - Number in mm
- Attribut: **SteelChamber** - Identifier chamber number for steel piece in PVC piece (optional)  
Value: "(SteelChamber)" - Steel Chamber numbered from top to bottom, starting with '1 '. This selection needs only be passed if the steel must be inserting in a special steel chamber in the PVC profile. Otherwise, always the standard chamber for the insertion hand, as for the automatic insertion of steel
- Data type: **Number** - Zahl von 1 – 9

## 6.2.3 Two steel pieces in one pvc piece

### 6.2.3.1 Piece data <PieceData>

Dataline:

<pre>&lt;PieceData BarNo="1" PieceNo="14" Length="1200" AngleOnCut="90" AngleOffCut="90" Steel="21" SteelNo="12" SteelLength="1507" Steel1="2" SteelNo1="12" Steelnumber1="12" SteelPieceNo1="1" SteelLength1="1000" Steel2="1" SteelNo2="12" Steelnumber2="12" SteelPieceNo2="10001" SteelLength2="500" SteelDepth2="1244"&gt;  ... (ToolData,)  &lt;/PieceData&gt;</pre>	<pre>&lt;Teiledaten StabNr="1" TeileNr="14" Laenge="1806" AnGehrung="90" AbGehrung="90" Stahlanwahl="21" StahlNr="12" Stahlnummer="12" Stahllaenge="1507" Stahlanwahl1="2" StahlNr1="12" Stahlnummer1="12" StahlTeileNr1="1" Stahllaenge1="1000" Stahlanwahl2="1" StahlNr2="12" Stahlnummer2="12" StahlTeileNr2="10001" Stahllaenge2="500" Stahleinschubtiefe2="1244"&gt;  ... (Werkzeugdaten)  &lt;/Teiledaten&gt;</pre>
--	---

Element name: <PieceData>

Attribut: **BarNo** - Identifier for bar number  
 Value: **"(Bar number)"** - Bar number  
 Data type: **Number** - Number from 1 – 9999

Attribut: **PieceNo** - Identifier for piece number  
 Value: **"(Piece number)"** - Piece number  
 Data type: **Number** - Number from 1 – 9999

...

Attribut: **Steel** - Identifier for steel selection  
 Value: **"(Steel selection)"** - yx-Steel selection as a combination of the individual selections  
     x: Steel selection 1  
     Y: Steel selection 2  
 You can use the standard identifiers (1, 2, 3). If you need to insert two pieces automatically in one pvc-part, please contact your manufacturer.  
 11 = Two steel parts, to be inserted manually  
 12 or 21 = Two steel parts, manual and automatic insertion  
 13 or 31 = Two insertion parts, one of which is cut with the steel saw, the other one is provided externally.

Data type: **Number** - Number combination of this special case  
 (Optional – In this case)

Attribut: **SteelNo** - Identifier for steel typ name  
 Value: **"(Steel typ)"** - Name of the steel. This field is necessary for an eventuelle manual optimisation with inclusion of the steel data.

Data type: **Text** - The steel typ name should only contain numbers from 0 – 9, letters from a – z, A – Z, no spaces, and should not be longer than 40 characters. In addition, all special use, with exception of: ' \ / < > \* „ ? “



- Attribut: **Steelnumber** - Identifier for steel number (optional)  
Value: "(Steelnumber)" - Note for the operator at the manual insertion unit. It may also be used to provide information for special steel inserts, if the steel is not cut on the steel saw that may be present.
- Data type: **Text** - Code number or text identifier
- Attribut: **SteelLength** - Identifier for steel length (optional in this case)  
Value: "(Steel length)" - Total length of the steel to be inserted + offcut in mm  
This is only used for the purpose of operator information.  
The information for the individual steel parts must be transferred via subsequent fields.
- Data type: **Number** - Value in mm

In assignment of two steel parts with PVC-parts, the data must always be passed on the two steel data parts in all the fields described below.

## Data for the first steel part

Attribut: <b>Steel1</b>	- Identifier for steel selection for first steel part
Value: <b>"(Steel selection)"</b>	- Steel selection
	- 1 = Steel inserted manually
	- 2 = Steel inserted automatically
	- 3 = Steel to insert comes from external
Data type: <b>Number</b>	- Number 1, 2 or 3
Attribut: <b>SteelNo1</b>	- Identifier for steel typ name
Value: <b>"(Steel typ)"</b>	- Name of the steel
Data type: <b>Text</b>	- The steel typ name should only contain numbers from 0 – 9, letters from a – z, A – Z, no spaces, and should not be longer than 40 characters. In addition, all special use, with exception of: ' \ / < > * , ? "
Attribut: <b>SteelLength1</b>	- Identifier for steel length
Value: <b>"(Steel length)"</b>	- Length of the steel part in mm
Data type: <b>Number</b>	- Value in mm
Attribut: <b>Steelnumber1</b>	- Identifier for steel number
Value: <b>"(Steelnumber)"</b>	- Note for the operator at the manual insertion unit. The specified number can have different meanings. For example, it can refer to the steel type number or the number of the case from which the steel part is to be taken.
Data type: <b>Text</b>	- Code number or text identifier
Attribut: <b>SteelDepth1</b>	- Identifier for steel insertion depth (optional)
Value: <b>"(Depth)"</b>	- Steel insertion depth in mm, referring to profile reference edge.
Data type: <b>Number</b>	- Value in mm
Attribut: <b>SteelChamber1</b>	- Identifier chamber number for steel piece in PVC piece (optional)
Value: <b>"(SteelChamber)"</b>	- Steel Chamber numbered from top to bottom, starting with '1'. This selection needs only be passed if the steel must be inserting in a special steel chamber in the PVC profile. Otherwise, always the standard chamber for the insertion hand, as for the automatic insertion of steel
Data type: <b>Number</b>	- Value von 1 – 9
Attribut: <b>SteelPieceNo1</b>	- Identifier for Steel piece number
Value: <b>"(Steel-PieceNo)"</b>	- Steel piece number associated with first PVC part.
Data type: <b>Number</b>	- Number from 1 – 9999

## Data for the second steel part

Attribut: <b>Steel2</b>	- Identifier for steel selection for second steel part
Value: "(Steel selection)"	- Steel selection
	- 1 = Steel inserted manually
	- 2 = Steel inserted automatically
	- 3 = Steel to insert comes from external
Data type: <b>Number</b>	- Number 1, 2 or 3
Attribut: <b>SteelNo2</b>	- Identifier for steel typ name
Value: "(Steel typ)"	- Name of the steel
Data type: <b>Text</b>	- The steel typ name should only contain numbers from 0 – 9, letters from a – z, A – Z, no spaces, and should not be longer than 40 characters. In addition, all special use, with exception of: ' \ / < > * , ? "
Attribut: <b>SteelLength2</b>	- Identifier for steel length
Value: "(Steel length)"	- Length of the steel in mm
Data type: <b>Number</b>	- Value in mm
Attribut: <b>Steelnumber2</b>	- Identifier for steel number
Value: "(Steelnumber)"	- Note for the operator with manual feed. The importance of the prescribed number is arbitrary, it can be a steel type number, or instruct number from where the steel part should be taken. This can also be a reference to the insertion of special steel, if the steel was not cutting on the existing steel saw.
Data type: <b>Text</b>	- Codenumber or piece code description
Attribut: <b>SteelDepth2</b>	- Identifier for steel insertion depth
Value: "(Depth)"	- Steel insertion depth in mm, referring to profile reference edge.
Data type: <b>Number</b>	- Value in mm
Attribut: <b>SteelChamber2</b>	- Identifier chamber number for steel piece in PVC piece (optional)
Value: "(SteelChamber)"	- Steel Chamber numbered from top to bottom, starting with '1'. This selection needs only be passed if the steel must be inserting in a special steel chamber in the PVC profile. Otherwise, always the standard chamber for the insertion hand, as for the automatic insertion of steel
Data type: <b>Number</b>	- Value von 1 – 9
Attribut: <b>SteelPieceNo2</b>	- Identifier for Steel piece number
Value: "(Steel-PieceNo)"	- Steel piece number associated with second pvc part.
Data type: <b>Number</b>	- Number from 1 – 9999

### 6.2.3.2 Steel piece data <SteelPieceData>

Dateline:

<pre>&lt;SteelPieceData BarNo="1" PieceNo="1" Length="1000" AngleOnCut="90" AngleOffCut="90" Steel="2" SteelDepth="44" PVCPieceNo="14"&gt; &lt;SteelPieceData BarNo="1" PieceNo="10001" Length="500" AngleOnCut="90" AngleOffCut="90" Steel="1" SteelDepth="1244" PVCPieceNo="14"&gt; &lt;/SteelPieceData&gt;</pre>	<pre>&lt;StahlTeiledaten StabNr="1" TeileNr="1" Laenge="1000" AnGehrung="90" AbGehrung="90" Stahlanwahl="2" Stahlneinschubtiefe="44" PVCteileNr="14"&gt; &lt;StahlTeiledaten StabNr="1" TeileNr="10001" Laenge="500" AnGehrung="90" AbGehrung="90" Stahlanwahl="1" Stahlneinschubtiefe="1244" PVCteileNr="14"&gt; &lt;/StahlTeiledaten&gt;</pre>
---	--

Element name: <SteelPieceData>

- Attribut: **BarNo** - Identifier for steel bar number  
Value: **"(Steel bar no.)"** - Steel bar number  
Data type: **Number** - Number from 1 – 9999
- Attribut: **PieceNo** - Identifier for steel piece number  
Value: **"(Piece number)"** - Steel piece number  
Data type: **Number** - Number from 1 – 9999
- Attribut: **Length** - Identifier for steel length  
Value: **"(Steel length)"** - Length of the steel in mm  
Data type: **Number** - Value in mm
- Attribut: **Steel** - Identifier for steel selection  
Value: **"(Steel selection)"** - Steel selection  
- 1 = Steel inserted manually  
- 2 = Steel inserted automatically  
Data type: **Number** - Number 1 – 2
- Attribut: **PVCPieceNo** - Identifier for PVC piece number  
Value: **"(PVC-PieceNo)"** - assigned number of the PVC piece  
Data type: **Number** - Number from 1 – 9999



The following points must be considered for this special steel data:

- For both steel parts apply, that the steel parts must be assigned to the PVC part via the field "*PVCPieceNo*".
- The steel part number (*PieceNo*) must be specified unambiguously; whereby it is not compelling that the piece number of second steel part is sequential for the number of first steel part.
- That the steel *PieceNo* in the *SteelPieceData* must correspond to the default over the fields *SteelPieceNo1* and *SteelPieceNo2* in the PVC piece data.
- Those only steel parts to be cut on the machine may be transferred.
- The order of the steel parts must match the order of the PVC parts.
- In the running of machine process a steel part only identified over the steel *PieceNo*.

If automatic steel insertion is used, the order in which the information for the two steel parts is transferred is irrelevant. Parameter "Steel" is used to specify which part is to be inserted automatically. The steel part to be inserted manually is discharged automatically, if it is cut on the machine.

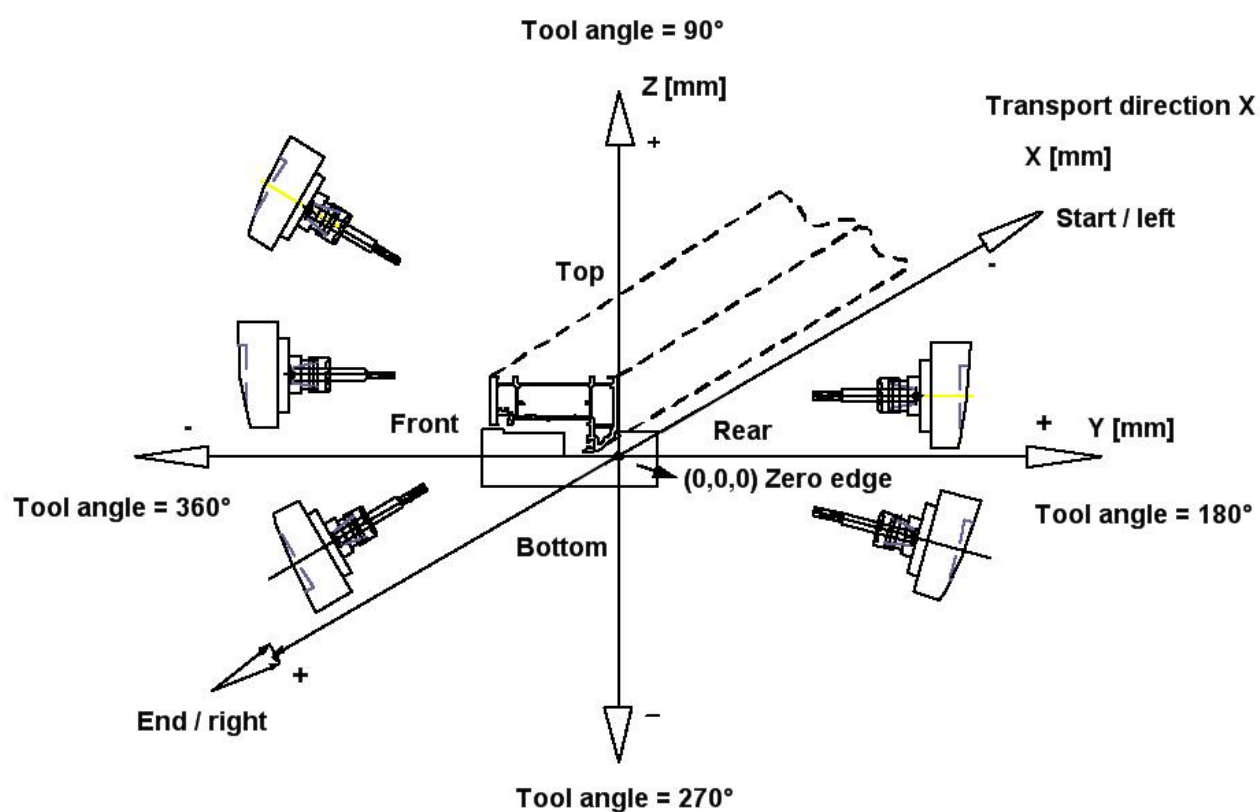
## 7 Appendix

### 7.1 System constants

#### 7.1.1 Material types

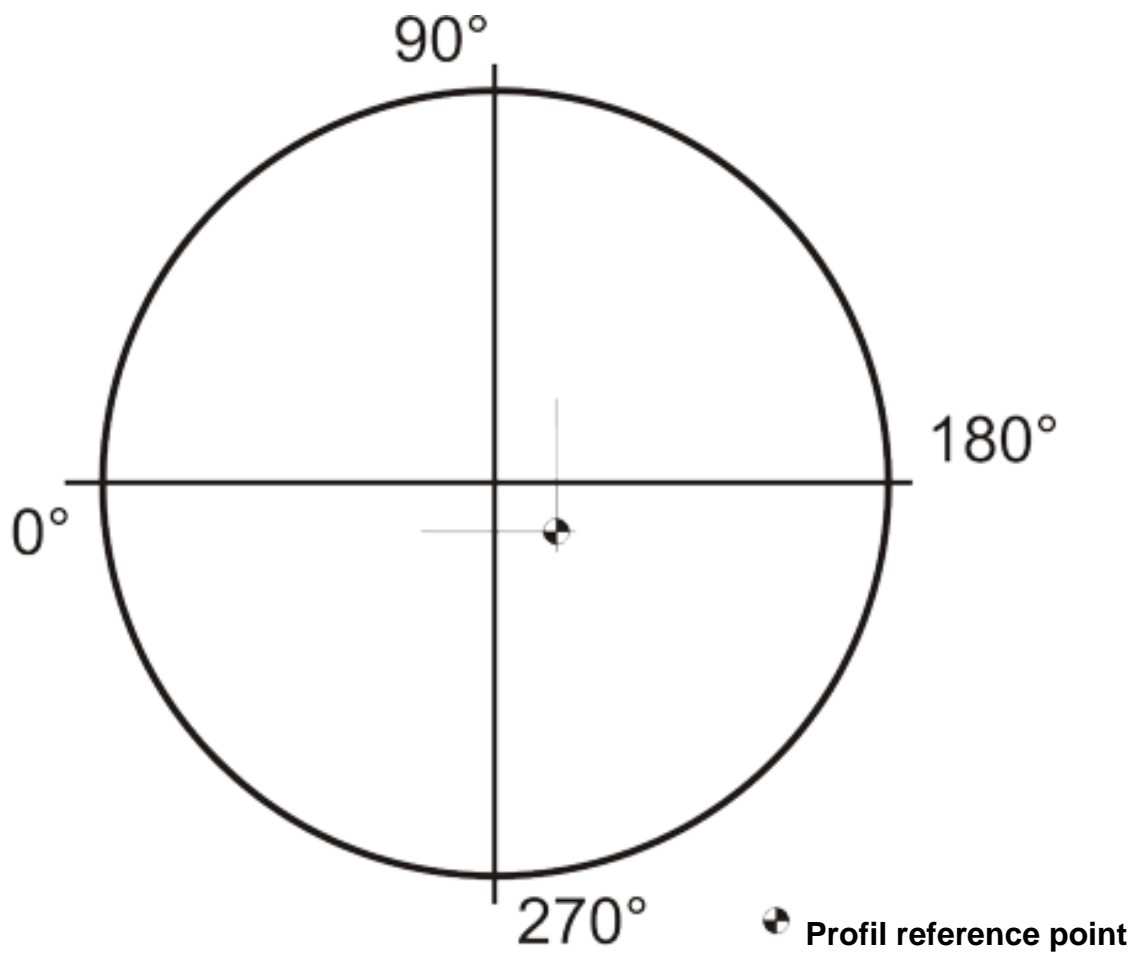
0	No material
1	PVC
2	Aluminium
3	Wood
4	Steel

#### 7.1.2 Tool angle



Coordinate system for the tools

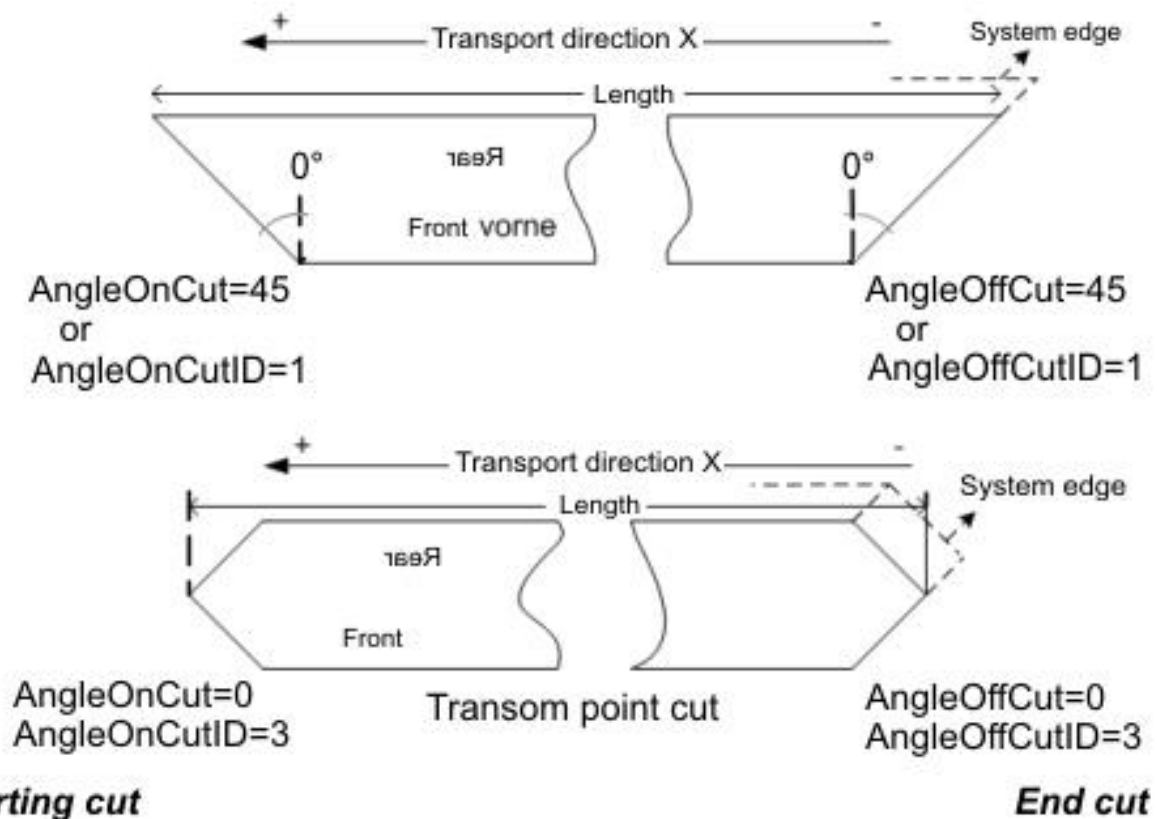
### 7.1.3 Tool rotation



## 7.2 Examples

### 7.2.1 Examples of cutting to length

Angle specification for first and last cut:



If 45 and 90 degrees are the only angle specifications required for the machine,  $\text{AngleOnCut}$  and  $\text{AngleOffCut}$  should be used. In this case the fields  $\text{AngleOnCutID}$  and  $\text{AngleOffCutID}$  are no longer required or should be specified as 0, as shown in the example.

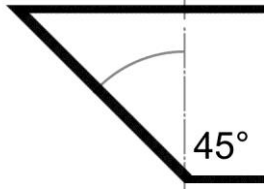
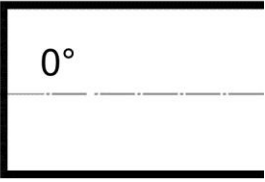
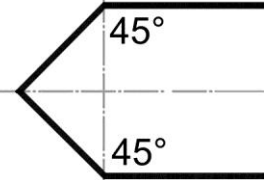
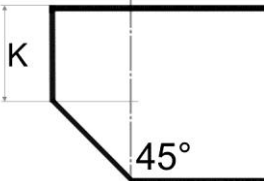
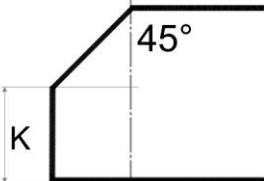
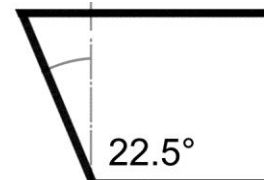
Angle specifications in the other direction must be specified as negative numbers. Note that this does not correspond to the machine standard and may only be specified after consulting the machine manufacturer!

Specification via Angle IDs is possible for compatibility reasons. Normally the angle should be specified via  $\text{AngleOnCut}$  and  $\text{AngleOffCut}$ . If an identifier is transferred there, this takes precedence over the angle specifications!

The use of the Angle IDs is only compulsory when selecting cutting functions such as first and last transom cuts.



The cut default can be handed over as follows:

Cut	First cut specification	Last cut specification
	AngleOnCut="45" AngleOnCutID="0" or AngleOnCut="0" AngleOnCutID="1"	AngleOffCut="45" AngleOffCutID="0" or AngleOffCut="0" AngleOffCutID="1"
	AngleOnCut="90" AngleOnCutID="0" or AngleOnCut="0" AngleOnCutID="2"	AngleOffCut="90" AngleOffCutID="0" or AngleOffCut="0" AngleOffCutID="2"
	AngleOnCutID="3" AngleOnCut="0"	AngleOffCutID="3" AngleOffCut="0"
	AngleOnCutID="4" AngleOnCut="0" CutHeightOnCut="K"	AngleOffCutID="4" AngleOffCut="0" CutHeightOffCut="K"
	AngleOnCutID="5" AngleOnCut="0" CutHeightOnCut="K"	AngleOffCutID="5" AngleOffCut="0" CutHeightOffCut="K"
	AngleOnCut="22.5" AngleOnCutID="0"  (Angle in the opposite direction must be given negative)	AngleOffCut="22.5" AngleOffCutID="0"  (Angle in the opposite direction must be given negative)

Please, note that the default possibilities for on and off cutting as well as on and off cut function are dependent on the respective construction of the saw module in the machine! Please ask your machine builder.

### 7.2.2 Example for encoding

The coding is necessary if linguistic-dependent special characters must be handed over and the file cannot be stored UTF-8 encoded. The selection of the language area will give in the prologue of the XML file. The default for for Western Europe, e.g., is:

```
<?xml version="1.0" encoding="ISO-8859-1"?>
```

For other language areas there must use the following codes:

Encoding	Language area
ISO-8859-1	Latin 1, Latin West, für westerb europe langauges: English, German, Icelandic, Italian, Spanish, Portuguese, Swedish, Norwegian, Finnish, Danish
ISO-8859-2	Latin 2, east europe languages : Polish, Czech, Slovene, In Slovak, Croatian, Roumanian, Sorbian
ISO-8859-4	Latin 4, baltic languages: Lithuanian, nevertheless, herewith Estonian, Latvian, Can be also written German, English among other things
ISO-8859-5	Cyrillic writing languages: Russian, Bulgarian, Serbian, Macedonian, White Russian, Ukrainian
ISO-8859-7	Modern Greek, for Ancient Greek there is no norm

Please note that encoding="UTF-8" can only be transferred if the file is saved in UTF-8-coded format, otherwise umlauts and special characters used in various languages would be interpreted as errors. Further information on coding can be found in the relevant literature or on the Internet.

### 7.2.3 Entity references

As in the introduction described, attributes of the XML elements may be only quoted strings. Within a quoted string the markup character »><« and the character »&« not may be used. However, they have to pass following possibilities this in the values and you can use the entity reference or the character reference.

Character	Entity reference	Character reference
< (smaller as)	&lt;	&#60;
> (greater than)	&gt;	&#62;
' (singel quotation marks)	&apos;	&#39;
" (double quotation marks)	&quot;	&#34;
& (ampersand)	&amp;	&#38;

```
<?xml version="1.0" encoding="ISO-8859-1"?>
<File Name="Example_24.xml">
  <OptiCuttingData>
    <OptiData Name="Example_24">
      <BarData BarNo="1" ProfileName="30190.W" BarLength="6000,00"
        Designation="Test spezial characters" RestLength="3686,00">
        <PieceData PieceNo="1" Commission="Test &lt; -- 1234 -- &gt;";"
          Length="1051,00" AngelOnCut="45" AngelOffCut="45" >
            <Treatment TNo="165" XPos="605,00"/>
            <LabelPrintData PieceNo="1">
              <PrintData>
                DIR1:AN1:FT"SW030RSN.1":NASC1252
                PP50,205:PT"Example part 1 Meier &amp; Muller"
                PF$013
              </PrintData>
            </LabelPrintData>
          </Teiledaten>
        <PieceData PieceNo="2" Commission="Test &#60; -- 5678 -- &#62;";"
          Length="1051,00" AngelOnCut="45" AngelOffCut="45" >
            <Treatment TNo="165" XPos="605,00"/>
            <LabelPrintData PieceNo="2">
              <PrintData>
                DIR1:AN1:FT"SW030RSN.1":NASC1252
                PP50,205:PT"Example part 2 Meier &#38; Mayer"
                PF$013
              </PrintData>
            </LabelPrintData>
          </PieceData>
        </BarData>
      </OptiData>
    </OptiCuttingData>
  </File>
```

On the machine the following would be displayed:

Bar 1 / part 1:

Commission: Test < -- 1234 -- >

Label: Example part 1 Meier & Muller

Bar 1 / part 2:

Commission: Test < -- 5768 -- >

Label: Exampel part 2 Meier & Mayer

Please request that you do not use this kind of the default in the selection of the profile type or the steel type!

Within the printing data the references must be also used to print out these characters on the label.

The defaults in part ' 1 ' and '2' differs only in the kind of the used reference, however, causes the same.

#### 7.2.4 Character references (Label data)

Additional non-displayable characters can be transferred in coded form under the print data for a label printer. In principle, any character with a character reference can be transferred. This applies in particular to following characters:

Character	ASCII (decimal)	Character reference
STX	2	\$002
ETX	3	\$003
TAB	9	\$009
LF (line feed)	10	\$010
CR (carrige return)	13	\$013
ESC	27	\$027

The characters transferred in this way are only interpreted in the print data specification and transferred to the printer as a hex value.

## 7.2.5 Examples for XML data

### 7.2.5.1 Example file for PVC start cut (English):

```

<File Name="NCProdDat.xml">
<OptiCuttingData>
<OptiData Name="Meier">
<BarData BarNo="1" BarLength="6500.99" Designation="Blr. 67 mm" ProfileName="Schueco" >
<PieceData PieceNo="1" BarNo="1" CaseNo="12" Commission="Meier 6789" Position="3" Length="1200" AngleOnCut="90" AngleOffCut="90" Steel="1"
SteelNo="12" SteelLength="1200">
<LabelPrintData PieceNo="1">
<PrintData>DIR4:AN1:FT"SW030RSN.2":MAG2,2
PP80,80:PT"AC2 BLAN 2236 /\ 1"
PP130,80:PT"DORMANT VERTICAL "
PP180,80:PT"10578/ 2236/ 6 /1 "
PP310,80:MAG4,2:PT"LES ZELLES ":MAG2,1
PP360,80:PT"A / 900 X 2150"
PF
</PrintData>
<InkJetPrintData>
$001$010$001$203$033$002$056Imaje$001$052InkJetstrahl-$010$001$053druckbeispiel$013
</InkJetPrintData>
</LabelPrintData>
<ToolData PieceNo="1">
<Treatment TNo="12" XPos="120" YPos="20" ZPos="30"/>
</ToolData>
</PieceData>
<PieceData PieceNo="2" BarNo="1" CaseNo="12" Commission="Meier 6789" Position="3" Length="1200" AngleOnCut="90" AngleOffCut="90" Steel="1"
SteelNo="12" SteelLength="1200">
<ToolData PieceNo="2">
<Treatment TNo="12" XPos="120" YPos="20" ZPos="30"/>
</ToolData>
</PieceData>
<PieceData PieceNo="3" BarNo="1" CaseNo="12" Commission="Meier 6789" Position="3" Length="1200" AngleOnCut="90" AngleOffCut="90" Steel="1"
SteelNo="12" SteelLength="1200">
<LabelPrintData PieceNo="3">
<PrintData>DIR4:AN1:FT"SW030RSN.2":MAG2,2
PP80,80:PT"AC2 BLAN 2236 /\ 1"
PP130,80:PT"DORMANT VERTICAL "
PP180,80:PT"10578/ 2236/ 6 /1 "
PP310,80:MAG4,2:PT"LES ZELLES ":MAG2,1
PP360,80:PT"A / 900 X 2150"
PF
</PrintData>
<InkJetPrintData>
$001$010$001$203$033$002$056Imaje$001$052InkJetstrahl-$010$001$053druckbeispiel$013
</InkJetPrintData>
</LabelPrintData>
</PieceData>
</BarData>
<BarData BarNo="2" BarLength="6500" Designation="Blr. 67 mm" ProfilName="Schueco" >
<PieceData PieceNo="5" BarNo="2" CaseNo="12" Commission="Meier 6789" Position="3" Length="1200" AngleOnCut="90" AngleOffCut="90" Steel="1"
SteelNo="12" SteelLength="1200">
<ToolData PieceNo="5">
<Treatment TNo="12" XPos="120" YPos="20" ZPos="30" />
</ToolData>
</PieceData>
</BarData>
</OptiData>
<SteelOptiData Name="Meier">
<SteelBarData BarNo="1" BarLength="6500.99" Designation="Blr. 67 mm" SteelName="744SS" >
<SteelPieceData PieceNo="1" BarNo="1" Commission="Meier 6789" Position="3" Length="1200" AnGeherung="90" AbGehrung="90" >
<SteelToolData PieceNo="1">
<SteelTreatment ToolNo="12" XPos="120" YPos="20" ZPos="30"/>
</SteelToolData>
</SteelPieceData>
<SteelPieceData PieceNo="2" BarNo="1" Commission="Meier 6789" Position="3" Length="1200">
<SteelToolData PieceNo="2">
<SteelTreatment ToolNo="12" XPos="120" YPos="20" ZPos="30"/>
</SteelToolData>

```

```
</SteelPieceData>
<SteelPieceData PieceNo="3" BarNo="1" Commission="Meier 6789" Position="3" Length="1200" AnGeherung="90" AbGehrung="90">
</SteelPieceData>
</SteelBarData>
<SteelBarData BarNo="2" BarLength="6500" Designation="Blr. 67 mm" SteelName="744SS" >
<SteelPieceData PieceNo="5" BarNo="2" Commission="Meier 6789" Position="3" Length="1200">
<SteelToolData PieceNo="5">
<SteelTreatment ToolNo="12" XPos="120" YPos="20" ZPos="30" />
</SteelToolData>
</SteelPieceData>
</SteelBarData>
</SteelOptiData>
</OptiCuttingData>
</File>
```

## 7.2.5.2 Example file for PVC start cut (German):

```
<Datei Name="$TX.xml">
<OptiZuschnittdaten>
<Optidaten Name="Meier" Lauf="Los Meier Kommission 13627 Datum:19.8.01">
<Stabdaten StabNr="1" Rohlaenge="6500,99" Bezeichnung="Blr. 67 mm" ProfilName="Schueco" >
<Teiledaten TeileNr="1" StabNr="1" FachNr="12" Kommission="Meier 6789" Position="3" Laenge="1200" AngleOnCut="90" AngleOffCut="90"
Stahlanwahl="1" StahlNr="12" Stahllaenge="1200">
<Etikettendaten TeileNr="1">
<Druckdaten>DIR4:AN1:FT"SW030RSN.2":MAG2,2
PP80,80:PT"AC2 BLAN 2236 /\ 1"
PP130,80:PT"DORMANT VERTICAL "
PP180,80:PT"10578/ 2236/ 6 /1 "
PP310,80:MAG4,2:PT"LES ZELLES ":MAG2,1
PP360,80:PT"A / 900 X 2150"
PF
</Druckdaten>
<TintenDruckdaten>
$001$010$001$203$033$002$056Imaje$001$052Tintenstrahl-$010$001$053druckbeispiel$013
</TintenDruckdaten>
</Etikettendaten>
<Werkzeugdaten TeileNr="1">
<ProfilBearb Wkz="12" BNr="1" XPos="120" YPos="20" ZPos="30" />
<ProfilBearb Wkz="22" BNr="1" XPos="120" YPos="50" ZPos="30" />
<ProfilBearb Wkz="112" BNr="1" XPos="120" YPos="40" ZPos="30" />
</Werkzeugdaten>
</Teiledaten>
<Teiledaten TeileNr="2" StabNr="1" FachNr="12" Kommission="Meier 6789" Position="3" Laenge="1200" AngleOnCut="90" AngleOffCut="90"
Stahlanwahl="1" StahlNr="12" Stahllaenge="1200">
<Werkzeugdaten TeileNr="2">
<ProfilBearb Wkz="12" BNr="1" XPos="120" YPos="20" ZPos="30" />
<ProfilBearb Wkz="22" BNr="1" XPos="120" YPos="50" ZPos="30" />
<ProfilBearb Wkz="112" BNr="1" XPos="120" YPos="40" ZPos="30" />
</Werkzeugdaten>
<Etikettendaten TeileNr="2">
<Druckdaten>DIR4:AN1:FT"SW030RSN.2":MAG2,2
PP80,80:PT"AC2 BLAN 2236 /\ 1"
PP130,80:PT"DORMANT VERTICAL "
PP180,80:PT"10578/ 2236/ 6 /1 "
PP310,80:MAG4,2:PT"LES ZELLES ":MAG2,1
PP360,80:PT"A / 900 X 2150"
PF
</Druckdaten>
<TintenDruckdaten>
$001$010$001$203$033$002$056Imaje$001$052Tintenstrahl-$010$001$053druckbeispiel$013
</TintenDruckdaten>
</Etikettendaten>
</Teiledaten>
<Teiledaten TeileNr="3" StabNr="1" FachNr="12" Kommission="Meier 6789" Position="3" Laenge="1200" AngleOnCut="90" AngleOffCut="90"
Stahlanwahl="1" StahlNr="12" Stahllaenge="1200">
<Etikettendaten TeileNr="3">
<Druckdaten>DIR4:AN1:FT"SW030RSN.2":MAG2,2
PP80,80:PT"AC2 BLAN 2236 /\ 1"
PP130,80:PT"DORMANT VERTICAL "
PP180,80:PT"10578/ 2236/ 6 /1 "
PP310,80:MAG4,2:PT"LES ZELLES ":MAG2,1
PP360,80:PT"A / 900 X 2150"
PF
</Druckdaten>
<TintenDruckdaten>
$001$010$001$203$033$002$056Imaje$001$052Tintenstrahl-$010$001$053druckbeispiel$013
</TintenDruckdaten>
</Etikettendaten>
</Teiledaten>
</Stabdaten>
<Stabdaten StabNr="2" Rohlaenge="6500" Bezeichnung="Blr. 67 mm" ProfilName="Schueco" >
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