



# LabelMaster

## Software for the Reinforcement Industry

### 1. Description

LabelMaster is a program for the planning, management and control of working processes in rebar shops and precast company. It enables the management of master data of the reinforcement industry as well as the creation of schedules and steel lists. On the basis of master data new schedules can be created respectively existing schedules can be processed. Steel lists, tags and possibly cutting lists can be printed for the schedules. Then the entered bar marks can be transferred directly to the machines.

The programme is structured modularly and thus an optimal adaption to customer's requirements is possible.

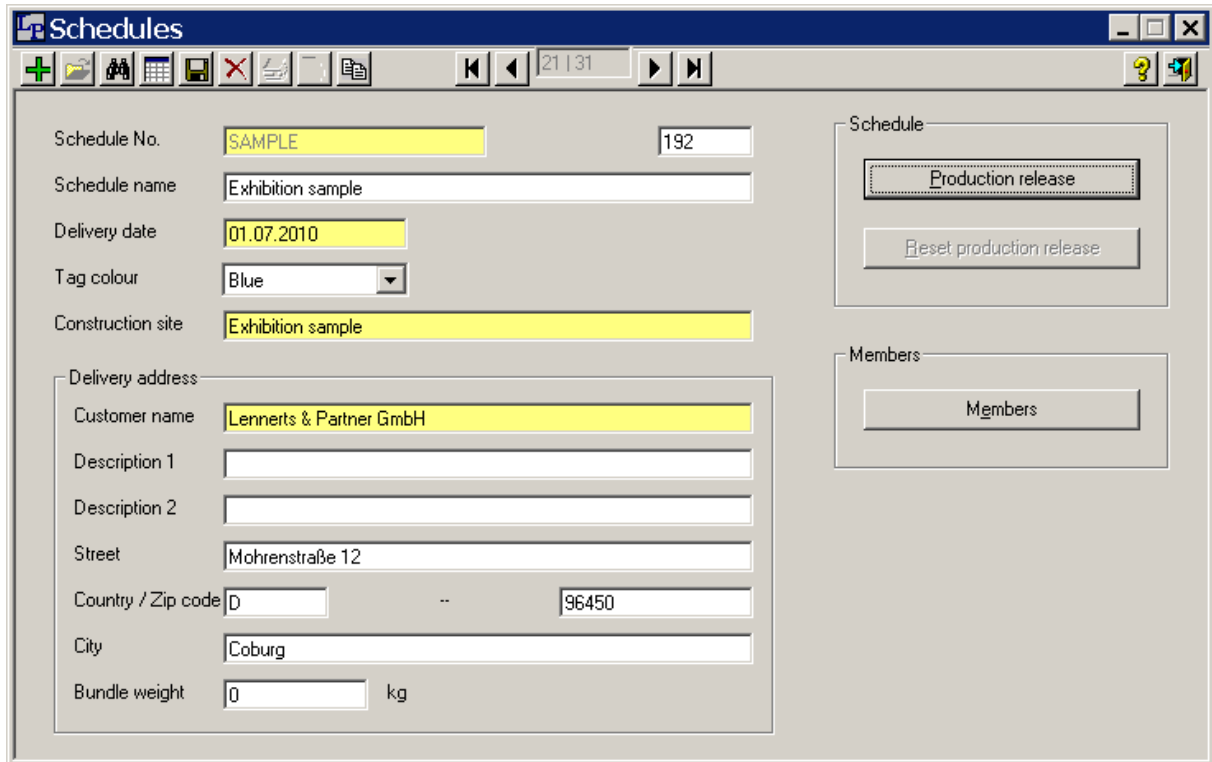
### 2. Features

Inside the program LabelMaster you have the possibility to create and process shape codes. This includes also a simple graphical entry of the shape codes which are freely definable. Reduced lengths for the corresponding shape codes are calculated automatically by the program. An extensive shape code catalogue has already been integrated to the program when buying it.

LabelMaster is able to manage steel grades easily. For each steel grade the available diameters can be entered and one steel grade can be defined as standard steel grade.

In the master data also your machinery can be entered and managed. Here you have the possibility to create machines and then to make free parameterization in case of a shearline. So for example cutting tolerances for straight and bent bars, details for head cut and the filling of the conveyor respectively the bins can be fixed. For the shearlines also a bin system can be created. With information of the number of channels as well as the bins therein the actual conveyor system for each shearline can be entered. There are information regarding channel and bin lengths, minimum and maximum length of bars and the use of channels where it can be divided according to straight and bent bars. The user has also the possibility to define the maximum number of bars which can be loaded at the same time. A flexible definition of the stock lengths, enabling the entry of particular lengths for the respective diameters in dependency of existing real stock lengths, completes the machinery. Following the existing machines can be pooled to production lines to meet the actual material flow during production.

Based on the master data then schedules can be entered and processed. The creation of a schedule includes the entry of schedule number and schedule description, delivery date, description of the construction site, the customer name and the dispatch address. Heavy bar marks can be separated automatically by entering a bundle weight. Following you will see the schedule dialogue.



The screenshot shows the 'Schedules' application window. The main form contains the following fields:

- Schedule No.: SAMPLE (highlighted in yellow), 192
- Schedule name: Exhibition sample
- Delivery date: 01.07.2010 (highlighted in yellow)
- Tag colour: Blue (dropdown menu)
- Construction site: Exhibition sample (highlighted in yellow)
- Delivery address section:
  - Customer name: Lennerts & Partner GmbH (highlighted in yellow)
  - Description 1: (empty)
  - Description 2: (empty)
  - Street: Mohrenstraße 12
  - Country / Zip code: D -- 96450
  - City: Coburg
  - Bundle weight: 0 kg

On the right side of the window, there are two sections:

- Schedule:** Contains buttons for 'Production release' and 'Reset production release'.
- Members:** Contains a button for 'Members'.

For existing schedules then the bar marks can be created. These will be entered with bar mark number, quantity, steel grade and diameter as well as shape code number and the desired machine where the bar mark shall be produced. When creating priorities the allocation of machine can also be made automatically. The creation of the shape code dimensions is made by an easy graphical input.

As an easy control of created bar marks the bar bending schedule (BBS) can be printed. This one gives you a list containing all bar marks of a schedule and also a graphical display of the shape code with the corresponding shape dimensions. Following you will see the printing of a BBS.

**SAMPLE**  
**Exhibition sample**  
 01.07.2010

Blue

LABELMASTER

06/28/2010 12.00.  
 Page 1

Exhibition sample  
 Lennerts & Partner GmbH

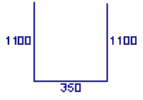
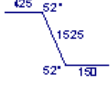
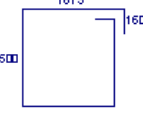
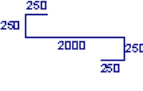
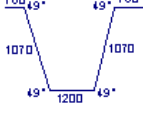
# 192

Mohrenstraße 12  
 D 96450 Coburg

|          |              |          |               |       |
|----------|--------------|----------|---------------|-------|
| Bar mark | No. of bars  | Diameter | Steel quality | Shape |
| Length   | Total length | Weight   | Machine       |       |

**1 x Member01**  
 01.07.2010

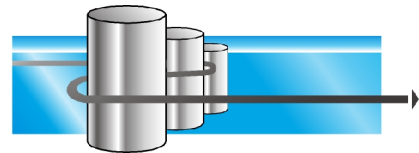
Blue

|       |         |           |              |                                                                                       |
|-------|---------|-----------|--------------|---------------------------------------------------------------------------------------|
| 01    | 129     | 12.0      | IV S         |   |
| 2,550 | 328,950 | 292,108   | SB 1         |                                                                                       |
| 02    | 25      | 20.0      | IV S         |  |
| 2,100 | 52,500  | 129,675   | SL 1 -> BM 2 |                                                                                       |
| 03    | 17      | 16.0      | IV S         |  |
| 4,670 | 79,390  | 125,436   | SB 1         |                                                                                       |
| 04    | 24      | 8.0       | IV S         |  |
| 3,000 | 72,000  | 28,440    | SB 2         |                                                                                       |
| 05    | 137     | 20.0      | IV S         |  |
| 4,860 | 665,820 | 1,644,575 | SL 1 -> BM 2 |                                                                                       |

|      |      |           |
|------|------|-----------|
| IV S | 8.0  | 28,440    |
| IV S | 12.0 | 292,108   |
| IV S | 16.0 | 125,436   |
| IV S | 20.0 | 1,774,250 |

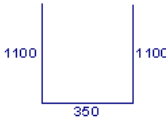

Furthermore there is a possibility to export the bar marks of a schedule to a spreadsheet application.

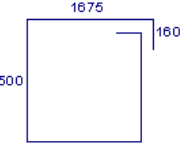

For the production of the bar marks in a schedule tags can be printed for the corresponding schedule. There the graphical display of the shape code with its dimensions is included. In addition it is also possible to print a PDF-barcode on

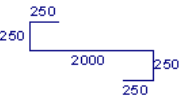



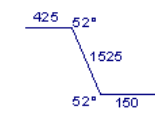

LENNERTS & PARTNER GmbH

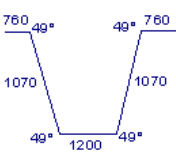

the tag enabling an offline downloading of the machines. By means of reading the barcode there are no entry times on the machine and possible entry errors do not arise. Following you will see the printing of tags.

|                                                                                                                            |                                                                                   |                                                                           |                                                                                                                                      |                                                                                                                               |
|----------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|---------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|
| Site: <b>Exhibition sample</b><br>Lennerts & Partner GmbH                                                                  |                                                                                   | Schedule:<br><b>SAMPLE</b>                                                |                                                                                                                                      | Weigh: <b>284.891 kg</b> dBr: <b>80 mm</b><br>Shed: <b>SAMPLE</b> Mark: <b>01</b>                                             |
| No: <b>129</b><br>Ø: <b>12.0 mm</b><br>Steel: <b>Betonstahl</b><br>Len.: <b>2.550 m</b><br>DD: <b>01.07.2010</b><br>1 of 5 |  | Mbr: <b>Member01</b><br>Mark.: <b>01</b><br>Bundle: 1 / 1<br><b>1 9 2</b> | Mbr: <b>Member 192</b> DD: <b>01.07.2010</b><br>No: <b>129</b> Ø: <b>12.0</b> Len.: <b>2.487 m</b><br>Steel: <b>Betonstahl 500 S</b> | <br>SB 1                      Bundle: 1 / 1 |





|                                                                                                                           |                                                                                    |                                                                           |                                                                                                                                     |                                                                                                                                |
|---------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|---------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|
| Site: <b>Exhibition sample</b><br>Lennerts & Partner GmbH                                                                 |                                                                                    | Schedule:<br><b>SAMPLE</b>                                                |                                                                                                                                     | Weigh: <b>120.521 kg</b> dBr: <b>80 mm</b><br>Shed: <b>SAMPLE</b> Mark: <b>03</b>                                              |
| No: <b>17</b><br>Ø: <b>16.0 mm</b><br>Steel: <b>Betonstahl</b><br>Len.: <b>4.670 m</b><br>DD: <b>01.07.2010</b><br>2 of 5 |  | Mbr: <b>Member01</b><br>Mark.: <b>03</b><br>Bundle: 1 / 1<br><b>1 9 2</b> | Mbr: <b>Member 192</b> DD: <b>01.07.2010</b><br>No: <b>17</b> Ø: <b>16.0</b> Len.: <b>4.487 m</b><br>Steel: <b>Betonstahl 500 S</b> | <br>SB 1                      Bundle: 1 / 1 |

|                                                                                                                          |                                                                                     |                                                                           |                                                                                                                                    |                                                                                                                                 |
|--------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|
| Site: <b>Exhibition sample</b><br>Lennerts & Partner GmbH                                                                |                                                                                     | Schedule:<br><b>SAMPLE</b>                                                |                                                                                                                                    | Weigh: <b>27.814 kg</b> dBr: <b>32 mm</b><br>Shed: <b>SAMPLE</b> Mark: <b>04</b>                                                |
| No: <b>24</b><br>Ø: <b>8.0 mm</b><br>Steel: <b>Betonstahl</b><br>Len.: <b>3.000 m</b><br>DD: <b>01.07.2010</b><br>3 of 5 |  | Mbr: <b>Member01</b><br>Mark.: <b>04</b><br>Bundle: 1 / 1<br><b>1 9 2</b> | Mbr: <b>Member 192</b> DD: <b>01.07.2010</b><br>No: <b>24</b> Ø: <b>8.0</b> Len.: <b>2.934 m</b><br>Steel: <b>Betonstahl 500 S</b> | <br>SB 2                      Bundle: 1 / 1 |

|                                                                                                                           |                                                                                     |                                                                           |                                                                                                                                     |                                                                                                                             |
|---------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|
| Site: <b>Exhibition sample</b><br>Lennerts & Partner GmbH                                                                 |                                                                                     | Schedule:<br><b>SAMPLE</b>                                                |                                                                                                                                     | Weigh: <b>127.823 kg</b> dBr: <b>140 mm</b><br>Shed: <b>SAMPLE</b> Mark: <b>02</b>                                          |
| No: <b>25</b><br>Ø: <b>20.0 mm</b><br>Steel: <b>Betonstahl</b><br>Len.: <b>2.100 m</b><br>DD: <b>01.07.2010</b><br>4 of 5 |  | Mbr: <b>Member01</b><br>Mark.: <b>02</b><br>Bundle: 1 / 1<br><b>1 9 2</b> | Mbr: <b>Member 192</b> DD: <b>01.07.2010</b><br>No: <b>25</b> Ø: <b>20.0</b> Len.: <b>2.070 m</b><br>Steel: <b>Betonstahl 500 S</b> | <br>SL 1 -> BM 2          Bundle: 1 / 1 |

|                                                                                                                            |                                                                                     |                                                                           |                                                                                                                                      |                                                                                                                             |
|----------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|
| Site: <b>Exhibition sample</b><br>Lennerts & Partner GmbH                                                                  |                                                                                     | Schedule:<br><b>SAMPLE</b>                                                |                                                                                                                                      | Weigh: <b>1626.302 kg</b> dBr: <b>140 mm</b><br>Shed: <b>SAMPLE</b> Mark: <b>05</b>                                         |
| No: <b>137</b><br>Ø: <b>20.0 mm</b><br>Steel: <b>Betonstahl</b><br>Len.: <b>4.860 m</b><br>DD: <b>01.07.2010</b><br>5 of 5 |  | Mbr: <b>Member01</b><br>Mark.: <b>05</b><br>Bundle: 1 / 1<br><b>1 9 2</b> | Mbr: <b>Member 192</b> DD: <b>01.07.2010</b><br>No: <b>137</b> Ø: <b>20.0</b> Len.: <b>4.806 m</b><br>Steel: <b>Betonstahl 500 S</b> | <br>SL 1 -> BM 2          Bundle: 1 / 1 |

With the technical module you have the possibility to use a bar cutting optimization. When using the optimization the personnel expenditure on the machine can be reduced so that for the same working expenditure higher machine utilization and thus higher productivity will be reached. Another advantage of the optimization is the reduction of scrap and offcuts resulting in lower material cost. The optimization can be made schedule or diameter related. A schedule related optimization enables the fast production of a schedule whereas a diameter related optimization of several schedules enables minimum scrap and offcuts. The result of the optimization is a cutting list with a PDF-barcode. With this PDF-barcode the data for each cutting cycle can be transferred to the machine. On the cutting list also a summary of the used stock lengths will be shown where you can see how many of the corresponding stock lengths have been used and what is about scrap and offcuts of each stock length.

| Cutting list                                                                        |       |             |    |        |          |          |     |        |        |         |                 |          |          |        |
|-------------------------------------------------------------------------------------|-------|-------------|----|--------|----------|----------|-----|--------|--------|---------|-----------------|----------|----------|--------|
| Machine: SSA 1                                                                      |       | Steel: IV S |    |        |          | 28.06.10 |     | 10:46  |        | Page: 1 |                 |          |          |        |
| Cycle                                                                               | Bar   | Diam        | No | Pieces | Length   | Cuts     | Box | Tag    | Deload | Order   | Schedule        | Bar mark | Result % |        |
| 1                                                                                   | 14,00 | 20.0        | 12 | 24     | 4,806    | 2        | 401 | N      |        | 43      | SAMPLE-Member01 | 05       | 1,77     |        |
| 1                                                                                   |       |             | 12 | 24     | 2,070    | 2        | 403 | N      |        | 43      | SAMPLE-Member01 | 02       |          |        |
|  |       |             |    |        |          |          |     |        |        |         |                 |          |          |        |
| 2                                                                                   | 12,00 | 20.0        | 1  | 2      | 4,806    | 2        | 401 |        |        | 43      | SAMPLE-Member01 | 05       | 2,65     |        |
| 2                                                                                   |       |             | 1  | 1      | 2,070    | 1        | 403 | X      |        | 43      | SAMPLE-Member01 | 02       |          |        |
|  |       |             |    |        |          |          |     |        |        |         |                 |          |          |        |
| 3                                                                                   | 15,00 | 20.0        | 19 | 57     | 4,806    | 3        | 401 |        |        | 43      | SAMPLE-Member01 | 05       | 3,88     |        |
|  |       |             |    |        |          |          |     |        |        |         |                 |          |          |        |
| 4                                                                                   | 15,00 | 20.0        | 18 | 54     | 4,806    | 3        | 401 | X      | X      | 43      | SAMPLE-Member01 | 05       | 3,88     |        |
|  |       |             |    |        |          |          |     |        |        |         |                 |          |          |        |
|                                                                                     |       |             |    | Bars   |          | Scrap    |     | Offcut |        |         |                 |          |          |        |
|                                                                                     | 20    | 12,00       |    | 1      | 29,640   |          |     |        |        |         |                 |          | 0,785    | 2,65 % |
|                                                                                     | 20    | 14,00       |    | 12     | 414,960  |          |     |        |        |         |                 |          | 7,351    | 1,77 % |
|                                                                                     | 20    | 15,00       |    | 37     | 1370,850 |          |     |        |        |         |                 |          | 53,189   | 3,88 % |
| gesamt:                                                                             |       |             |    |        | 1815,450 |          |     |        |        |         |                 |          | 61,325   | 3,38 % |
|                                                                                     |       |             |    |        |          |          |     |        |        |         |                 |          | 0,00 %   |        |

In addition to downloading of the machine via PDF barcode it is also possible to make downloading of the machines directly via cable. Here the machines can also resend feedback to the programme when a bar mark is produced.

Furthermore a manual reallocation is available. Here the machine allocation for bar marks can be changed later.

For material tracing and to verify the material certain bar marks are produced from, incoming material can be registered in the programme and allocated to the produced bar marks also during and after production. Also linked and scanned certificates can be printed automatically when steel list will be printed.

It is not only possible to enter schedules and bar marks directly in the programme, but there is also the possibility to enter the schedules and bar marks in a pre-configured Excel-file and then to import these to the programme.

### 3. Expandability and individual adaptation

Already before installation the program LabelMaster can be provided with master data. Furthermore an individual adaptation of the printings is possible. The expandability of the program is given by updates to be installed easily.

### 4. System requirements

|                  |                                                                                                                                                                                               |
|------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Processor        | Pentium III 600 MHz or comparable processor (Pentium IV 2 GHz or comparable processor recommended)                                                                                            |
| Main storage     | 192 MB (1 GB recommended)                                                                                                                                                                     |
| Hard disk        | 1 GB (5 GB recommended)                                                                                                                                                                       |
| Operating system | Microsoft Windows 2000 Service Pack 4<br>Microsoft Windows XP Service Pack 1<br>Microsoft Windows 2003 Service Pack 1<br>Microsoft Windows Vista (only with Service Pack 1 of the SQL Server) |
| Printer          | Laser printer including correct drivers                                                                                                                                                       |



## 5. Information

For questions concerning use of the software modules, please contact the LENNERTS & PARTNER GmbH.

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