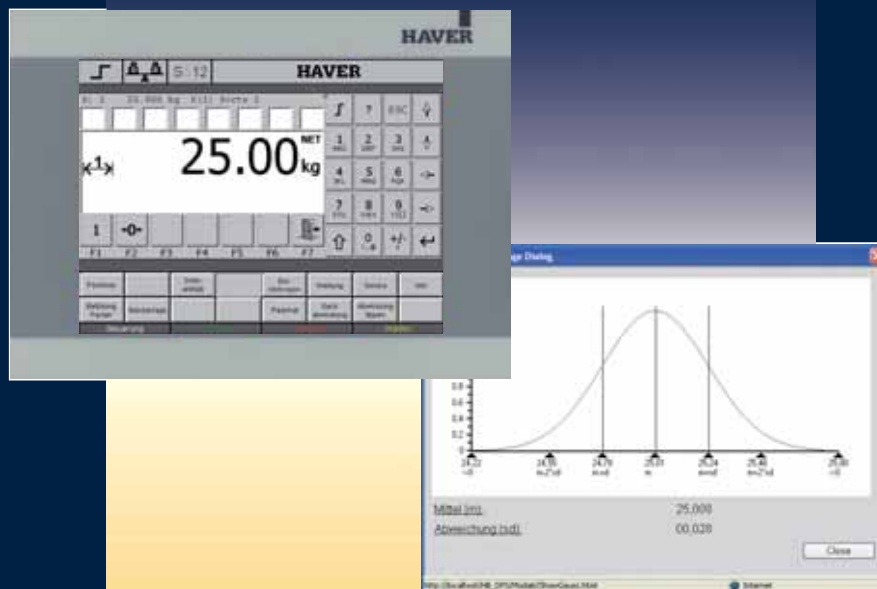


HAYER & BOECKER



Information



HAVER

**Weigher Electronics MEC III
Data Processing System 6.0**

HAVER Weigher Electronics MEC III

The MEC III results from the continuous development of the 6th generation of HAVER electronic weighers. Up to now, more than 20,000 electronic weighers are used worldwide on HAVER filling machines.

The MEC III is a PTB approved electronic measurement device that can be calibrated and has a resolution of 6000 increments. It may be operated as multi-range or multi-division weigher with three different increment settings.

The zero-setting is done via a dialog and may be securely stored against power outages.

In addition to the weighing functions, the MEC III controls machine functions via digital inputs and outputs.

The operation and display of all functions is done through an external control terminal.

This terminal has a contrast graphic display for showing all operational situations such as:

- weight values
- weigher settings
- dialogs

- status information
- error messages

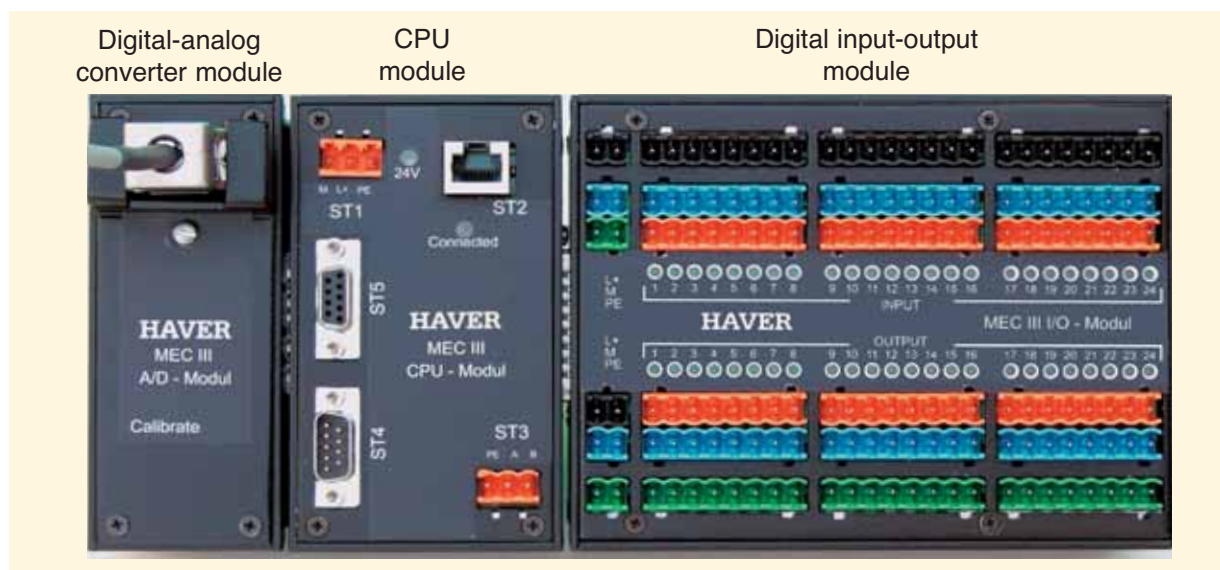
The simple and well-structured operational sequences are done through menus or via function keys with actual pictograms. Text and numerical values are inputted using the combined alpha-numeric keypad. The plain text information

may be displayed in many national languages.

For the appropriate setting of the filling machine, there are aids for analyzing the filling process with respect to the filling time and the mass flow rate.



MEC III control terminal

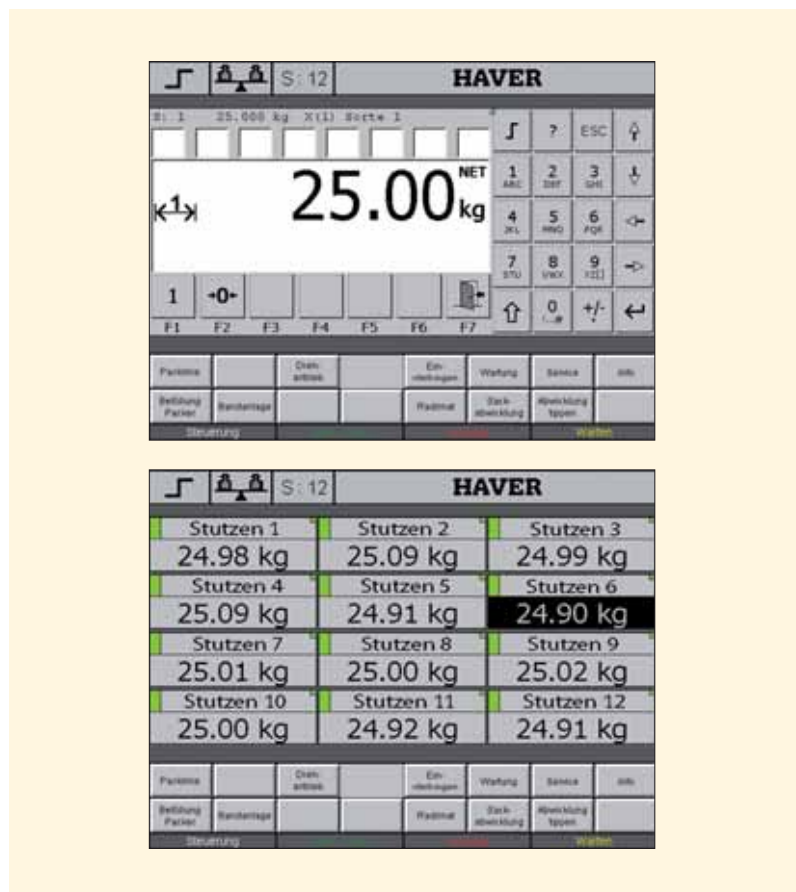


MEC III control unit in modular design

Technical specifications of weigher features:

- gross / net
- taring / zero setting
- dosing time regulator
- after-flow regulator
- dynamic filling cut-off point
- filling by weight or by volume
- tolerance evaluation
- adjustable weigher signal damping
- bag breakage detection
- regulated filling vessel aeration as a function of mass flow rate
- product memory for 99 sorts
- weight correction by an end-of-line check weigher is possible

The computer unit is modularly designed. It consists of an operating unit, keypad, display and the control unit. The operating unit is easily accessible and is built into a switch cabinet door, while the control unit module is placed inside the switch cabinet. All electrical connections to the modules are plug-in type, which makes exchanging components an easy task, even for non-specialists.



MEC III terminal emulation on touch panel TP 104

TECHNICAL SPECIFICATIONS

Type of protection

- Operating terminal IP65
- Control unit IP20

Ambient conditions

- Operating temperature range:
 - 10°C up to +40°C for guaranteed accuracy, and
 - 10°C to +50°C for complete function
- Storage temperature: -20°C to +70°C
- Relative humidity: 0 - 95% no condensation for max. 30 days per year, as to DIN 40040/OIML
- EMC: not sensitive to high frequency waves, power supply interference in accordance with

EN 45501 and EN 50081 (interference) emissions and EN 50082 (interference stability)

Power supply requirements

- 24V DC, +/- 20% at max. 5% undulation
- Consumption: 10VA.

Memory

- Weigher comparison: EEPROM
- Parameters: buffered RAM
- Program: FLASH

Analog unit

- AD converter 20bit sigma/delta
- 20ms conversion time
- Max. resolution 6000 increments at 1µV/increment
- Weigher cell input: 10V DC

- 1-4 strain-gauge load cells, each 350 Ω
- Calibration: dialog zero-setting

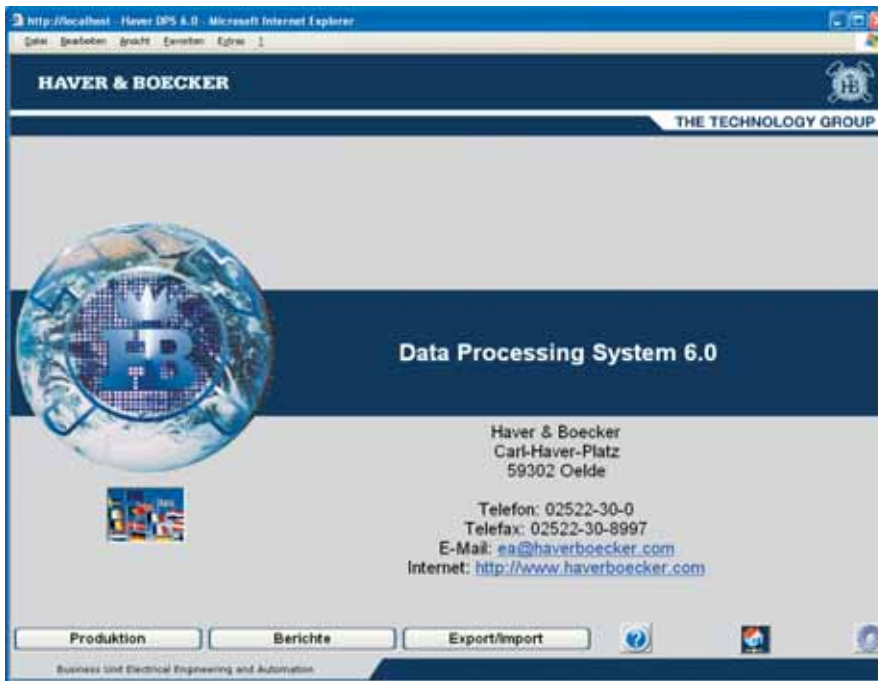
Digital inputs and outputs

- 24V DC isolated
- Short circuit check of 0.5 A/output
- 24 inputs and 24 outputs per module with LED status and triple wire connection via spring type terminals
- Optionally expandable to maximum 3 modules

Interfaces

- Ethernet for networking from weigher-server-PC-check weigher
- RS232/ RS485 for modem and DPS-PC
- RS485 free
- RS485 for operating terminal and secondary display

HAVER Data Processing System 6.0



DPS V6.0 start screen

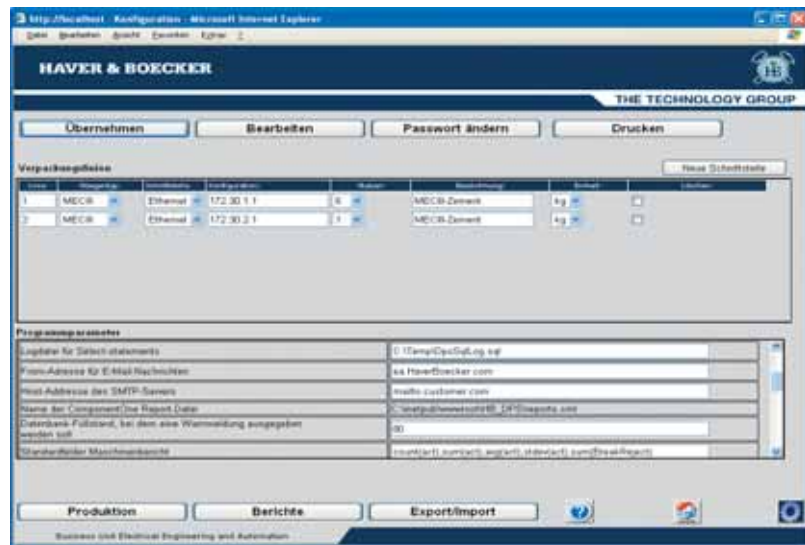
- Configuration mask
- adjustments
- packing lines
- descriptions

The 6.0 Data Processing System is a program for recording, reporting and evaluating process data

These data are fed via the Ethernet or via serial interfaces and saved in a databank. The data from HAVER weight controllers and suitable check weighers can be received. The number of connected packing lines is not limited by the software, but rather by the capacity of the hardware.

Recordable are the line number, weigher number, sort description, actual weight, specified weight, tare weight, over-weight and under-weight and much more. From these data machine reports, single weight reports and error reports may be generated. These may be configured in a wide variety of ways to display the information as to personal wishes.

It is also possible to display the computed weight data as a normal distribution curve.

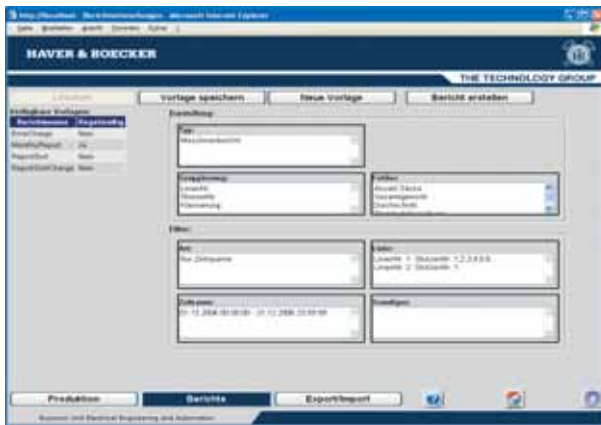


Reports may be automatically generated daily, weekly or monthly as chosen.

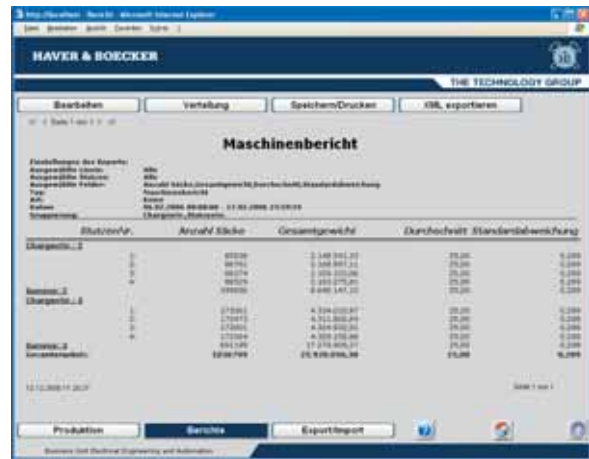
In addition to reports, the operator can also observe the actual production in a diagram and a table which can be configured. This allows rapid intervention in the event of a production problem.

And because the program works as a web-application, it may be operated from any workstation in the plant.

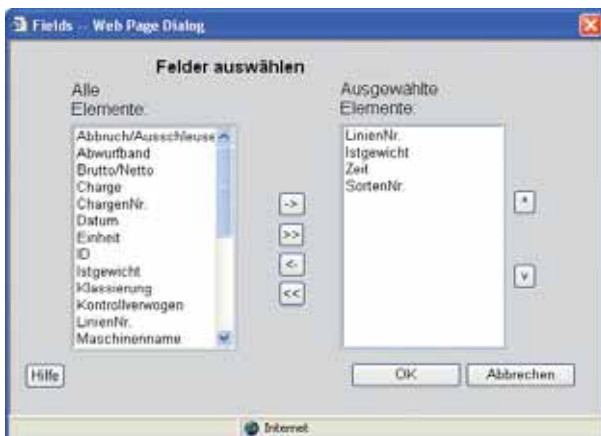
One only needs an up-to-date version of Internet Explorer, meaning only an installation on the server is necessary. Windows 2000 Professional or Windows XP Pro-



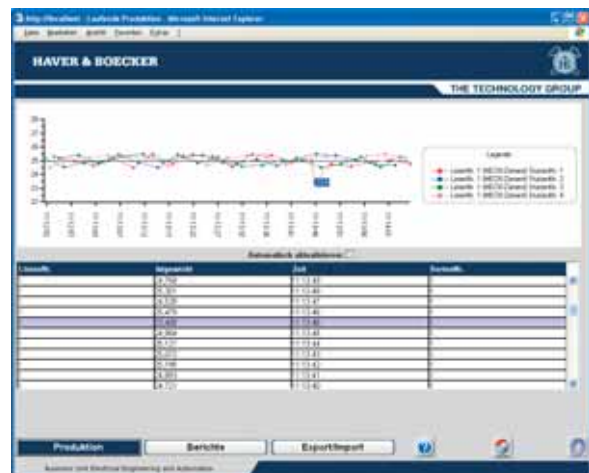
Setting dialogue for reports



Machine report for analysing production data



Selection for data columns in the report

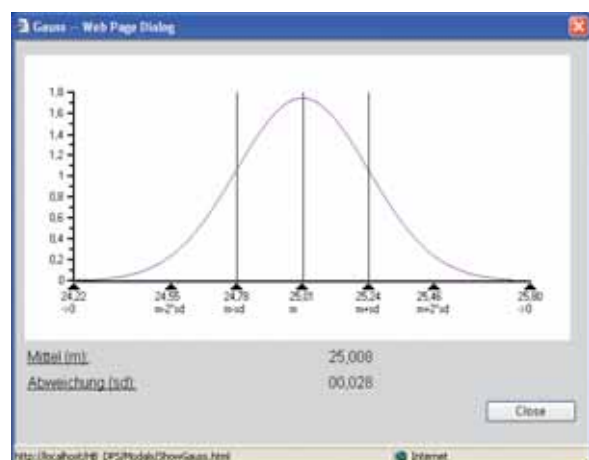


Display of the actual production data

fessional or newer may be used as the server or operating system.

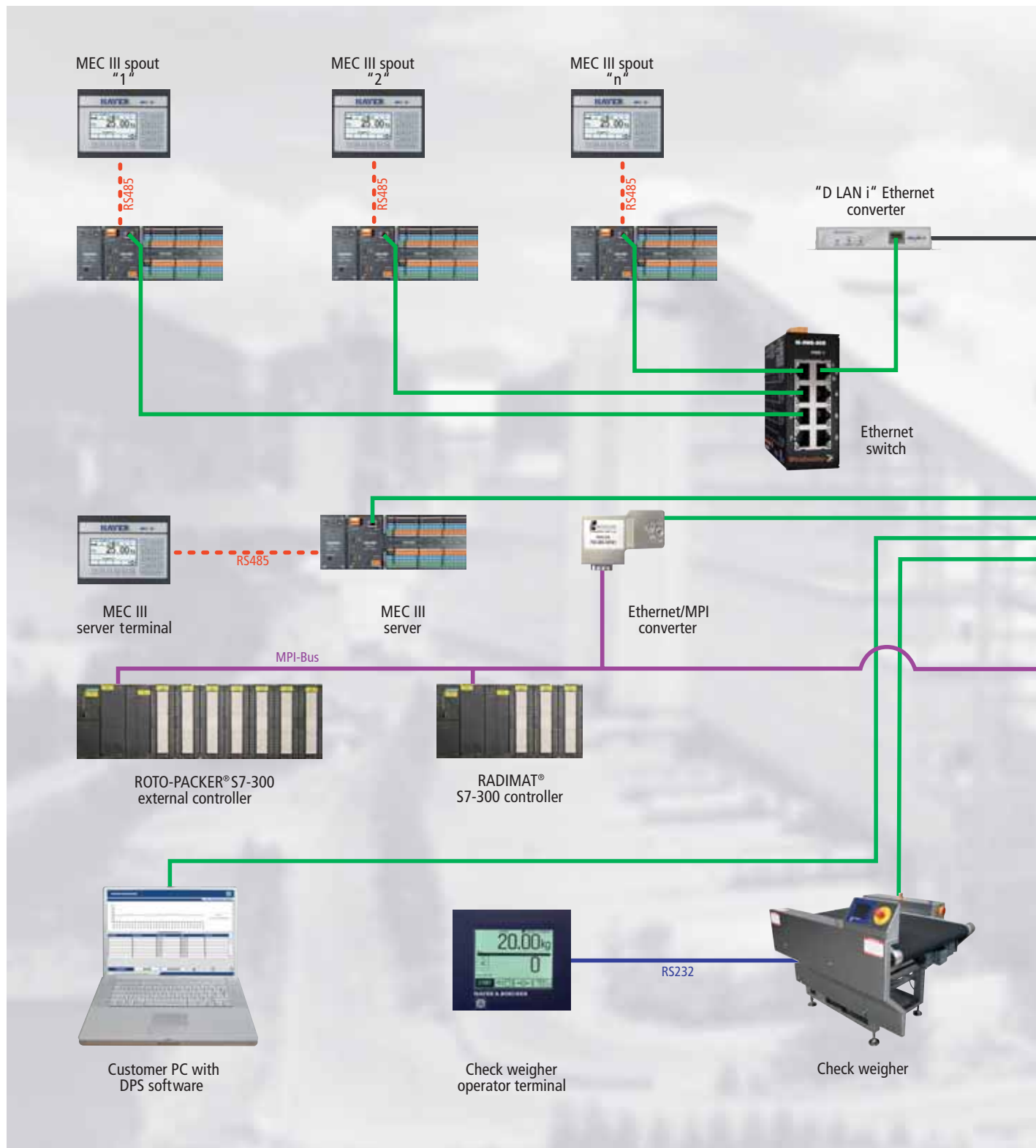
By using a free databank it is possible to store up to 25 million data sets. If larger data amounts are expected, then a licensed full version of the databank must be utilised. As databanks, the Microsoft SQL Server 2005 or Oracle 10 or newer are supported.

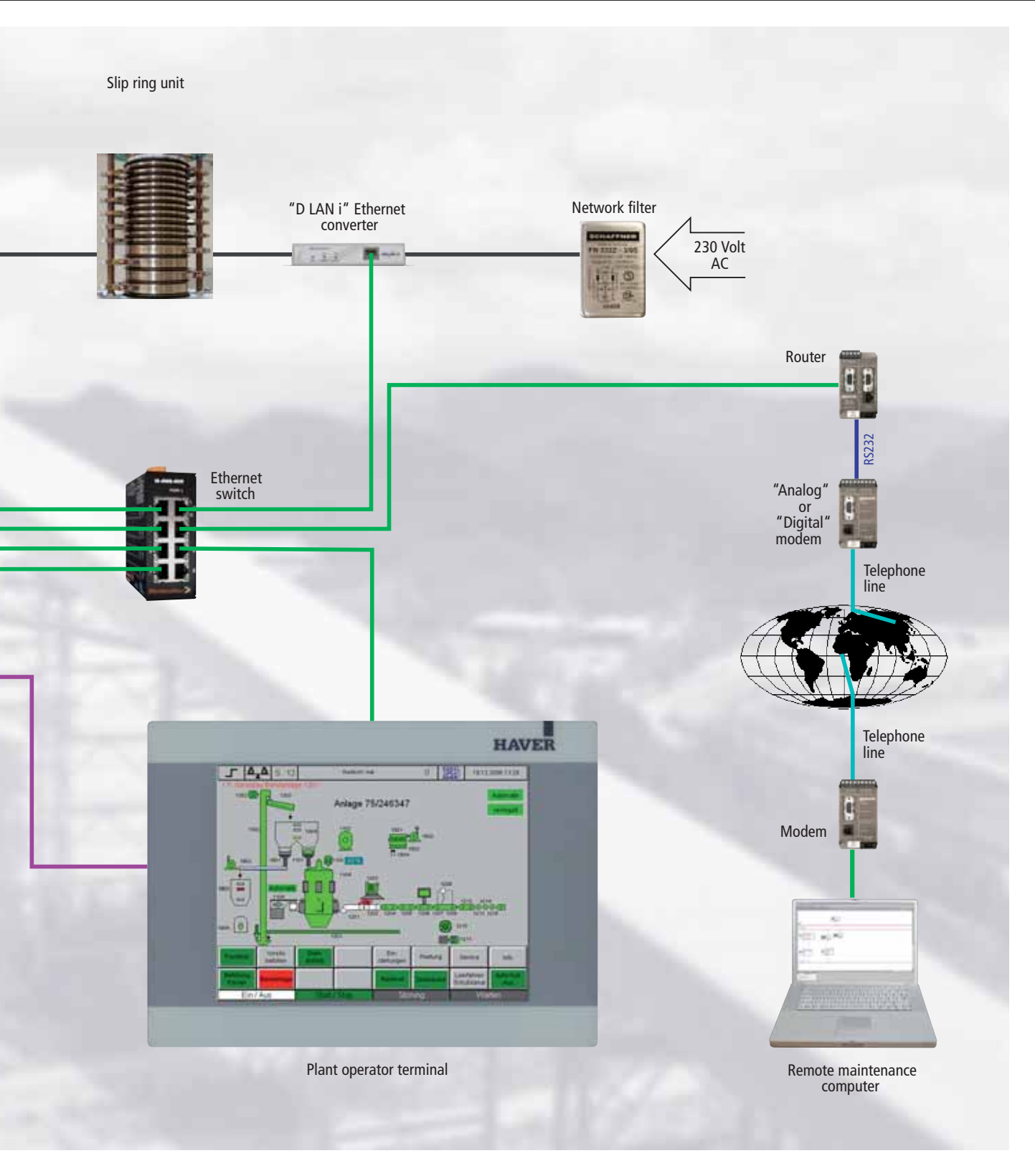
In addition, the data from the databank may be exported in XML files, thus allowing the data to be read and further processed by other software (e.g. Microsoft Excel).



Normal distribution curve of data from a report

Control system of a HAVER-ROTO-PACKER® packing line





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THE ORIGINALS

 ROTO-PACKER® HAVER	 THE BENJAMIN® HAVER	 INTEGRA® HAVER	
 SILOS IBAU HAMBURG	 Felge FILLING	 LIQUIDUS	 BEHN + BATES FRONTLINE®
 Pelletising Discs HAVER	 Fine-Line HAVER	 T-CLASS HAVER	
 水泥回转包装机 ROTOCEM®	 TYCAN H-CLASS	 水泥单嘴包装机 FILLCEM	

MADE BY
THE HAVER® GROUP

PM 203 E 2842 0407 1 Fe

The machines and plants shown in this leaflet as well as the stated technical parameters are examples of customer-specific technical solutions. Therefore they are subject to modifications. The ® symbol indicates that the mark has been registered in Germany.



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