SYSCONA

Fill Level, Cap and Label Control System
Type System Expert

System Expert, the high end system for the complete full bottle inspection with camera for the installation after the filler or labeller.

- **Fill Level Underfilling**
- **Fill Level Overfilling**
- **Foam Density (Residual air detection)**
- **Floating Detection**
- **Cap Control Position**
- **Cap Control Logo**
- **Cap Control Presence**
- **Label Presence**
- **Label Position**
- **Label Logo**
- **Date Control**

System characteristic and technical data

Basis Mechanics

- Solid mechanical construction in stainless steel for the installation of the detection systems and the sensor technology.
- The electronics, control and operation panel are installed in a functional, optimal protected stainless steel commander housing.
- The system is equipped with the system of protection IP65 and corresponds to the CE conformity instructions.
- Height adjustment via spindle with handwheel and digital indicattion for the adaptation of the control systems to different bottle heights.

Electrical / electronic construction

The electric and the analysis electronics as well as the operation panel are integrated in a separate commander housing that should be installed nearby the detection system (length of the camera cable: max. 15 m) with easy access.

The system hardware is, among others, composed of 1 high performance industrial HP computer with Intel Core I3 / I5 Xeon Processor.

The complete digital and analogue I/O periphery is read-in via a high speed Ethernet connection in real time.

The integrated operator interface is realized as comfortable operator panel with 15" TFT screen and touch screen and with an additional trackball and function key block.

Each system is equipped with a CD burner and an additional hard disk for an easy data security and creation of backups.

The data transmission to a parent control is made via an Ethernet interface (TCP/IP).

(ProfiBus interface is not included, optionally available against extra charge - technical clarification necessary)
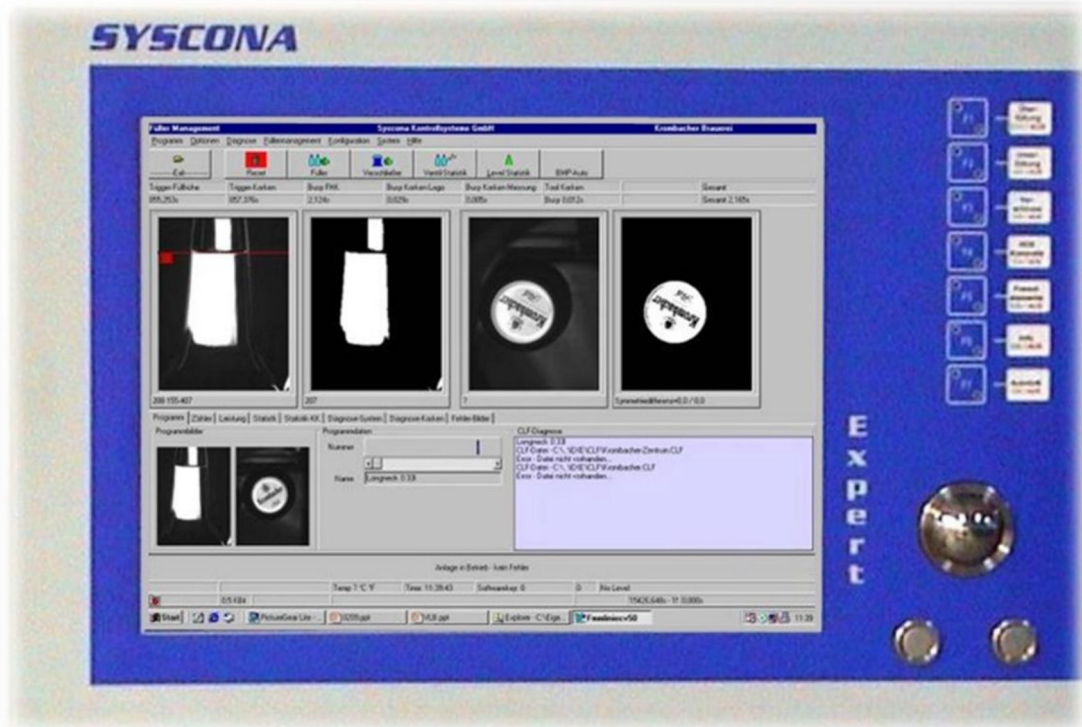
The commander housing is fully air-conditioned with no filter fan to the outside. The easy access to the electronics is realized by hinged doors at the front and back side as well as by the removable cover.

An integrated UPS prevents malfunctions due to short supply fluctuations and ensures the controlled running down of the systems in case of a power failure (optional).

Software functions and Features

Via the menu-driven Windows® oriented user surface the access to all functions and system parameter is possible, including full visualization of system and diagnosis data.

The access into different user levels is password protected, alternatively, the set-up of different user profiles is possible.

The current operational status is indicated by means of a constant clear text indication, eventually with warning and malfunction messages as well as maintenance instructions. .

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All functions and sensors are permanently monitored by the auto-system check. In case of an error trapping, an error signal is given.

An auto-log file registers and stores automatically all status messages, accesses and parameter changes with date and time.

Integrated software service tools with multi-channel storage- oscilloscope functions.
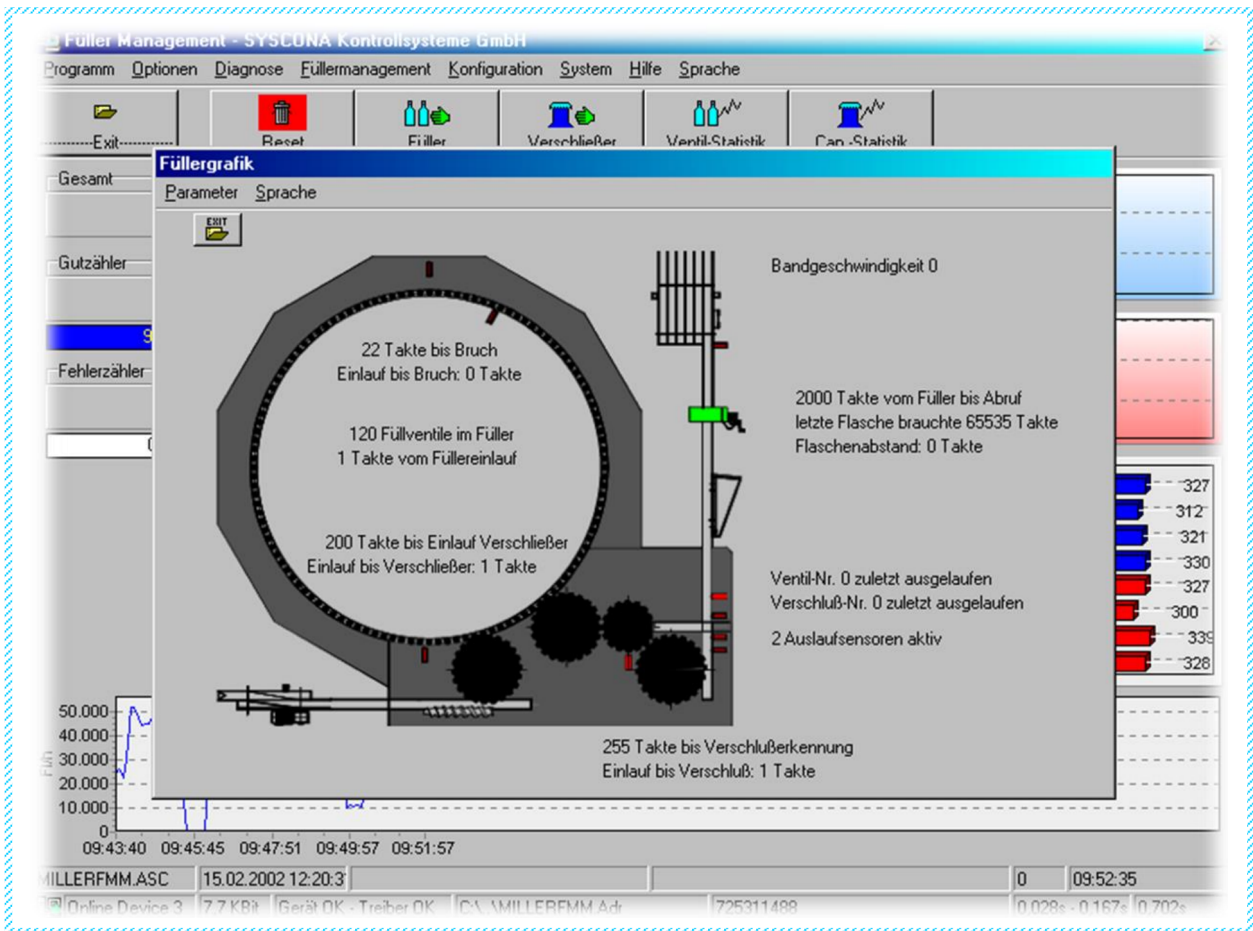
Operating and System Software (Licenses)

The operating software of the computer is based on Windows (OEM-License).

The image processing software with integrated vision tools, the software for visualization and operation, the tracking software, specific drive and communication software are licensed products and protected via hardware key.

Backups for data security are included in the delivery and can be created at any time later. Source programs are not included in the delivery. All rights with regard to the software are reserved to our company.

Module Production Data Collection

Counting, graphical display and memorization of production data such as:

- Total bottles
- Good bottles
- Underfilled bottles
- Overfilled bottles
- Cap fault
- Fault type 1...n

All production data inclusive head data are stored in the internal data base and can be called and external processed.

Tele-maintenance connection

Module for tele-maintenance connection via a direct Internet connection (VPN – Team Viewer) existing at the client's site.

Signal Lamp and signal horn

Multiple signal lamp and signal horn for indication of the operational status of the system, installed externally and well visible.

# Fill Level Control System by means of video camera system

Level camera

- Housing made of stainless steel with high resolution CCD BW camera and special LED illumination system.
- Independent of container color tolerances and blinded against external light.
- Image recording and analysis in the area of the fill level for the reliable control on:

  - **Fill Level Underfilling**
  - **Fill level Overfilling**
  - **Foam Density Measuring**
  - **Floating Detection**

- The foam measurement detects errors at bottles with coarse-grained, permeable foam or bottle not complete foamed up. (Residual air detection, HDE-monitoring)

Cap Control System by means of video camera system
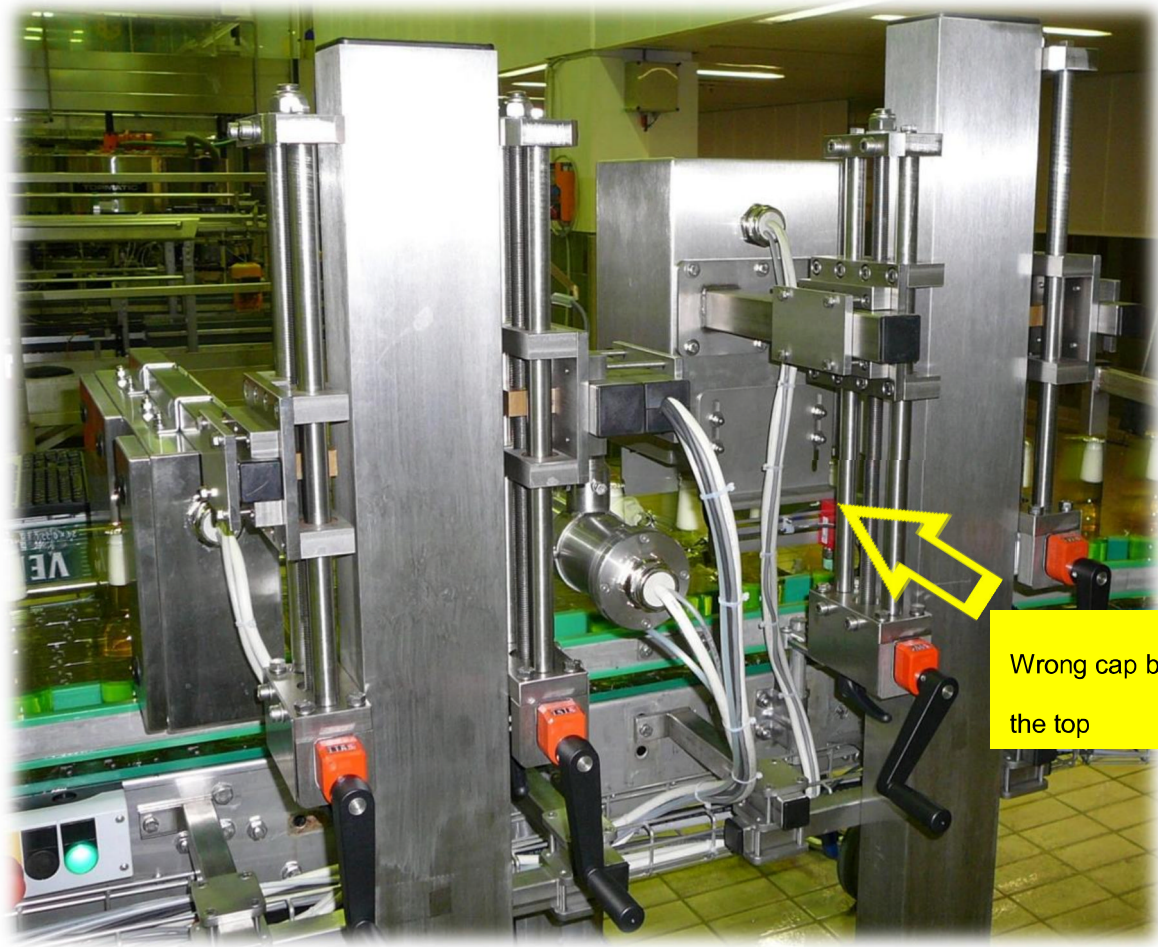
Wrong cap by camera from the top

Measuring bridge with high resolution CCD camera and special illumination system. Independent of container color tolerances and blinded against external light.

Image recording and analysis from the top for the safe and reliable control on:

- **Cap Presence**
- **Cap deformation**
  (detailed specification/samples necessary)
- **Cap off center**
- **correct logo**
- **quality of the logo (print)**

The logo control can store up to 100 different crown corks.
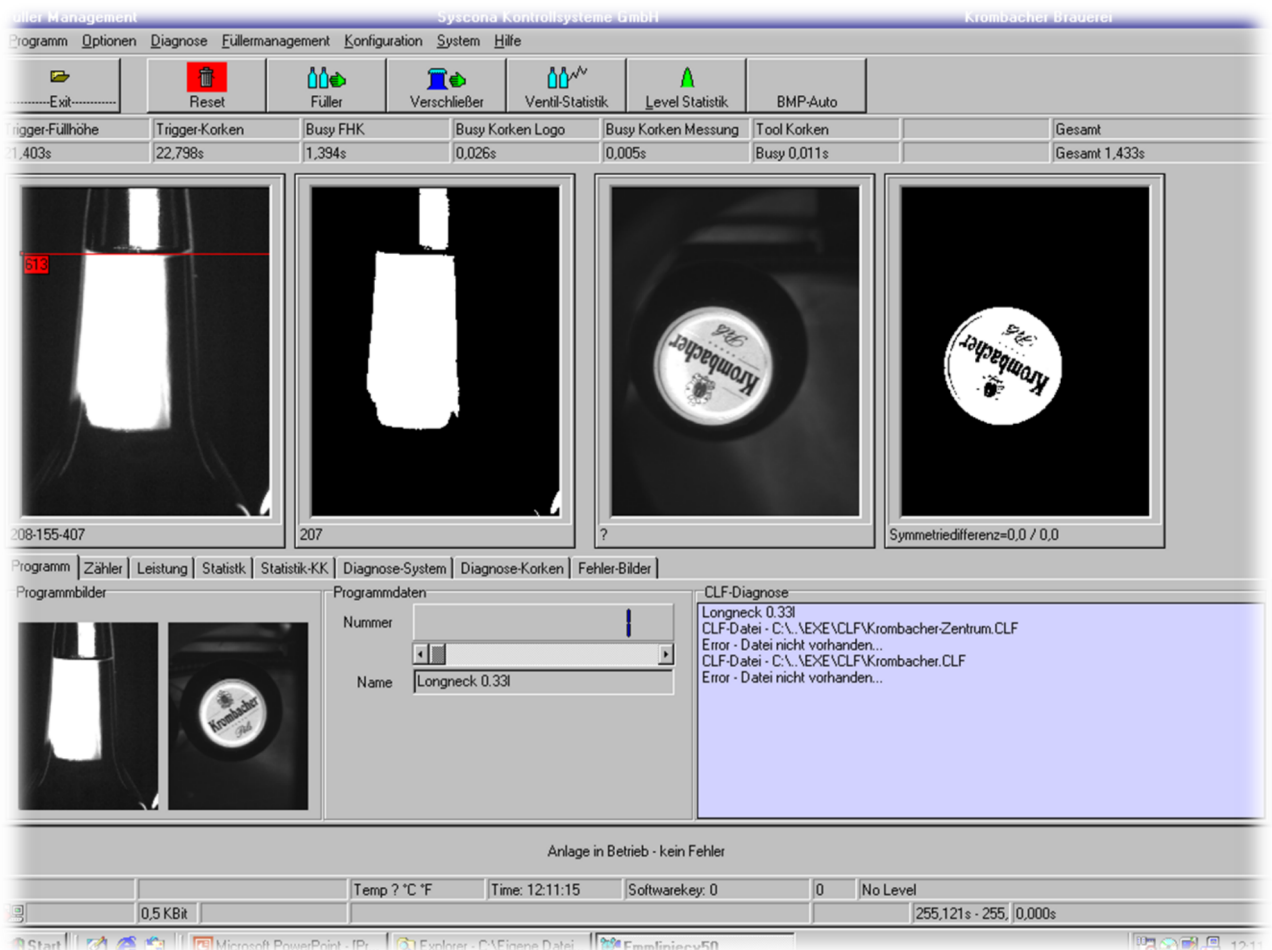
Menu Image (example)

Program

Bottle type 0,33 l Longneck
Type of the crown cork: No. 1 Pils

Indication of the live camera pictures for fill level and cap as well as the digitised analysis.

Fill Level Control System by means of high frequency

- Housing made of stainless steel with sender and receiver for the safe and reliable control on:

  ■ **Fill Level Underfilling**
  ■ **Fill level Overfilling**
 **(second high frequency measuring system necessary)**

Fill Level Control System by means of X-Ray resp. gamma ray

- Housing made of stainless steel
- Microprocessor controlled measuring method by means of x-rays resp. gamma rays for the non-contacting and safe detection of underfilled containers.

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Label Control by means of video camera system
(Body label front, body label back and neck label)
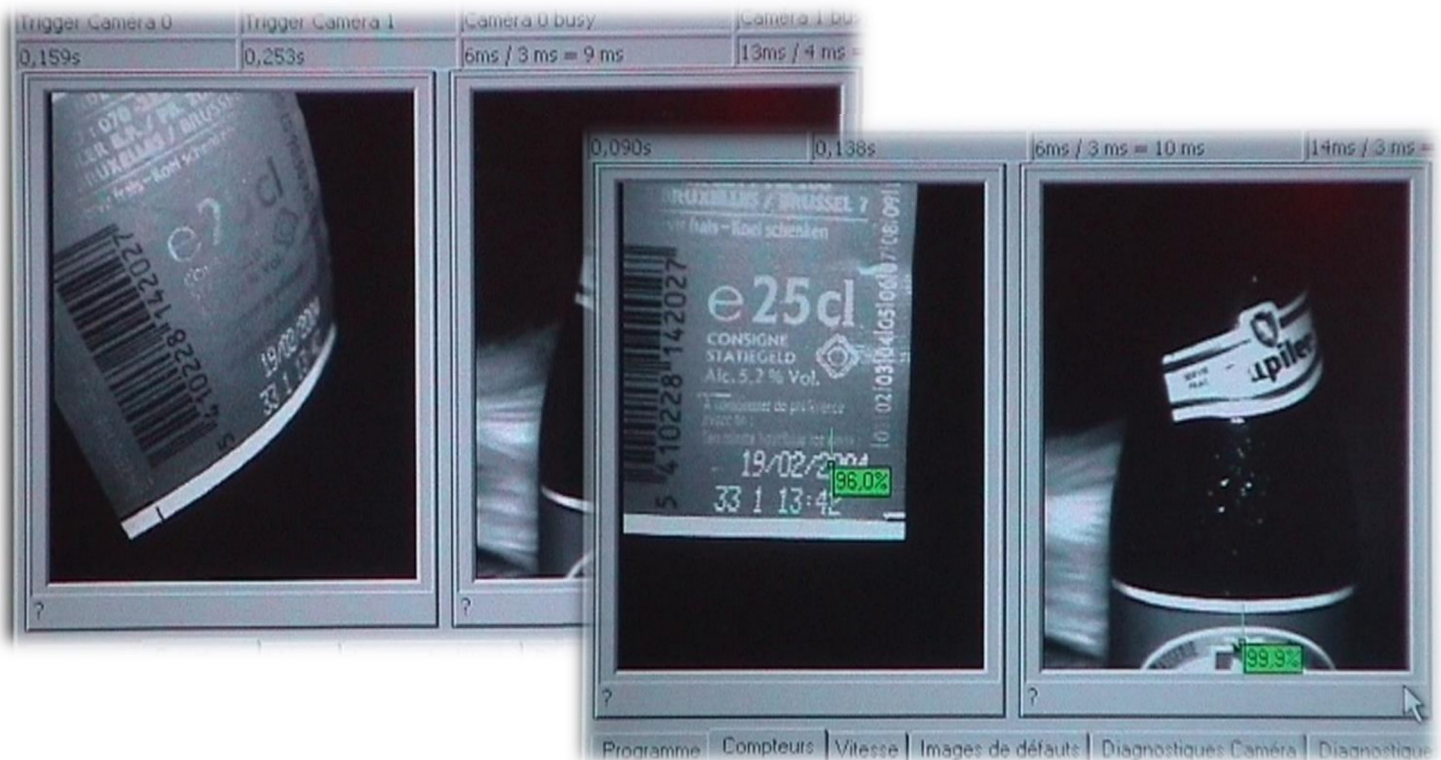
Two independent measuring bridges with high resolution CCD camera and special illumination system. Independent of container color tolerances and blinded against external light.

Image recording and analysis of a label section (Neck label, body label front or back label) for the safe and reliable control on:

⇒ Presence
⇒ Correct label

⇒ Position
 - vertical
 - horizontal
 - Rotation

■ High-resolution CCD camera
■ Progressive-scan-camera technology
■ Image transmission in video-real-time
■ Hardware platform on IPC basis
■ Parameterization via teach functions
■ Special illumination system for optimal illumination incl. external light shielding.

Control of the best before date (e. g. on the body label back)

Measuring bridge with high resolution CCD camera and special illumination system. Independent of container color tolerances and blinded against external light.

Image recording and analysis of the best before date on:

⇒ Presence
⇒ Reading
(with a special OCR software tool)

Image recording and analysis of a label section for the safe and reliable control on:

⇒ Presence
⇒ Position
- vertical
- horizontal
- Rotation

- High-resolution CCD camera
- Progressive-scan-camera technology
- Image transmission in video-real-time
- Hardware platform on IPC basis
- Parameterization via teach functions
- Special illumination system for optimal illumination incl. external light shielding.

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Filler Management System
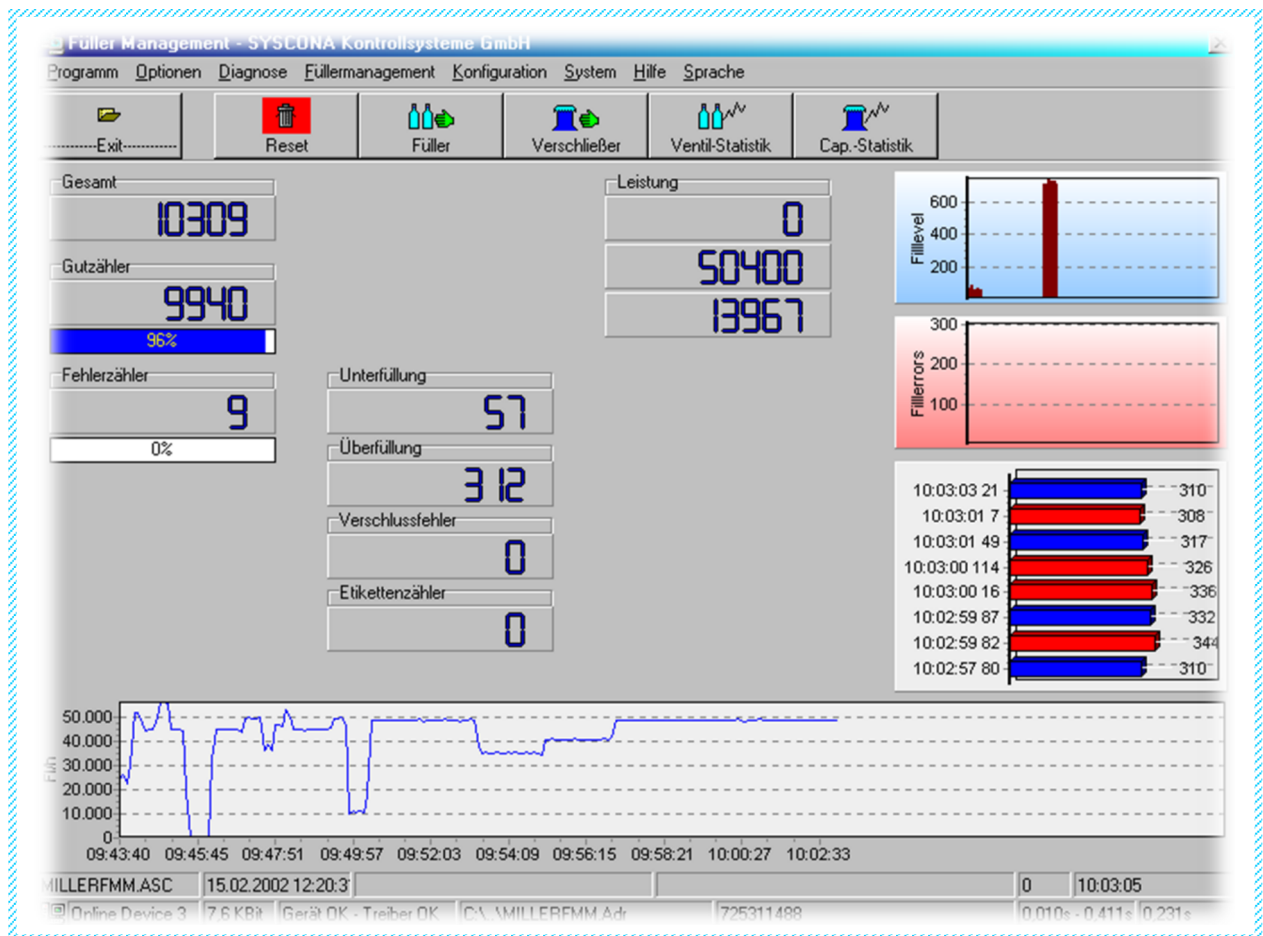
System Expert offers the functionality of complete filler- and sealing device system.

- Product Data Collection Module
- Filling Valve Analyser Module
- Sealing Cap Device Analyser Module
- Broken Bottles Analyser Module
- Bottle Sampling Module

All data are memorised in an internal data base and can be called and external processed.
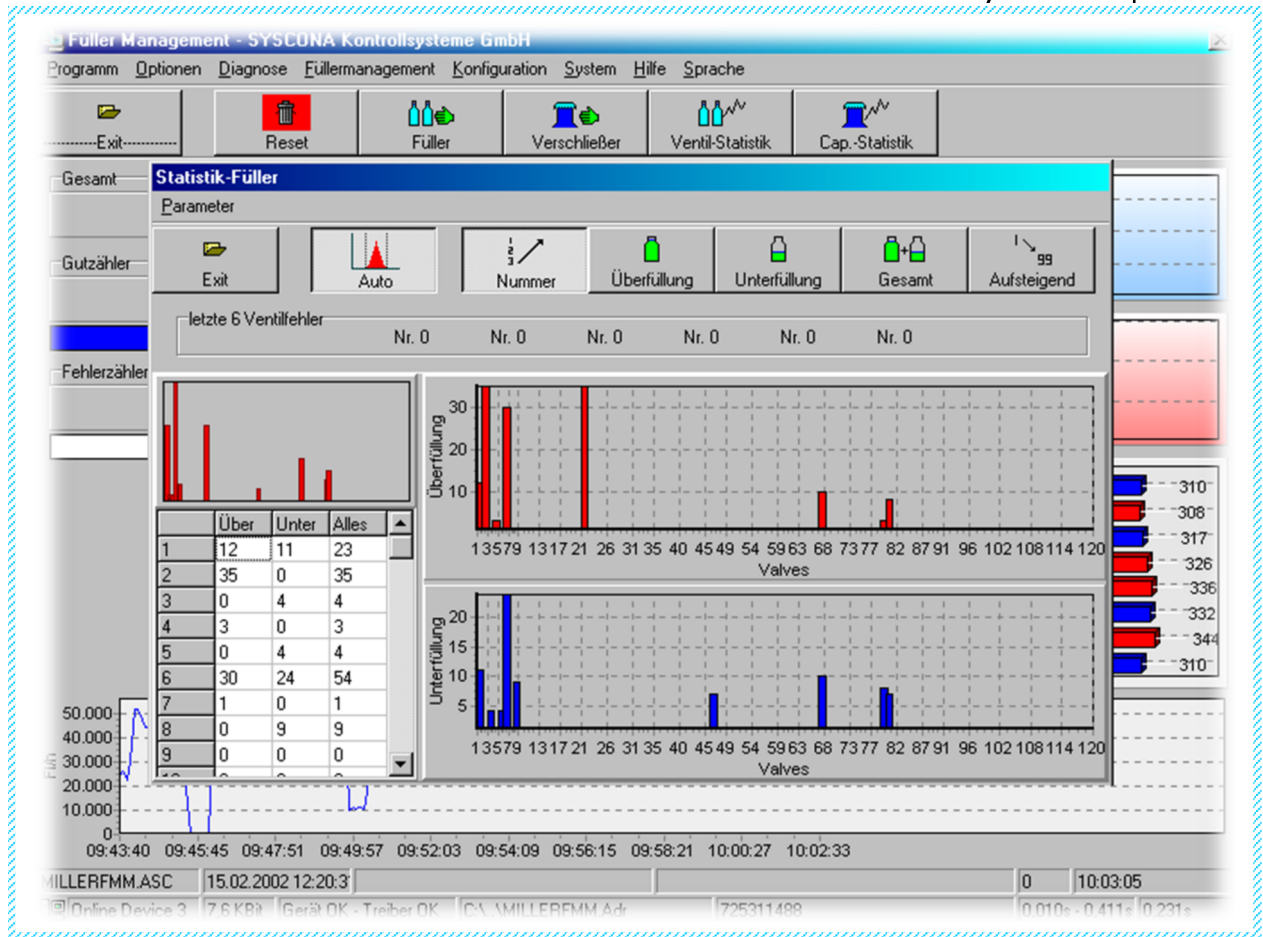
Example: Statistics of filling valves

- Convincing histogram indication of all filling valves according to error frequency, separate for under and overfilling.
- Indication of the relevant last valve errors.
- Tabular listing of all valves with error number.
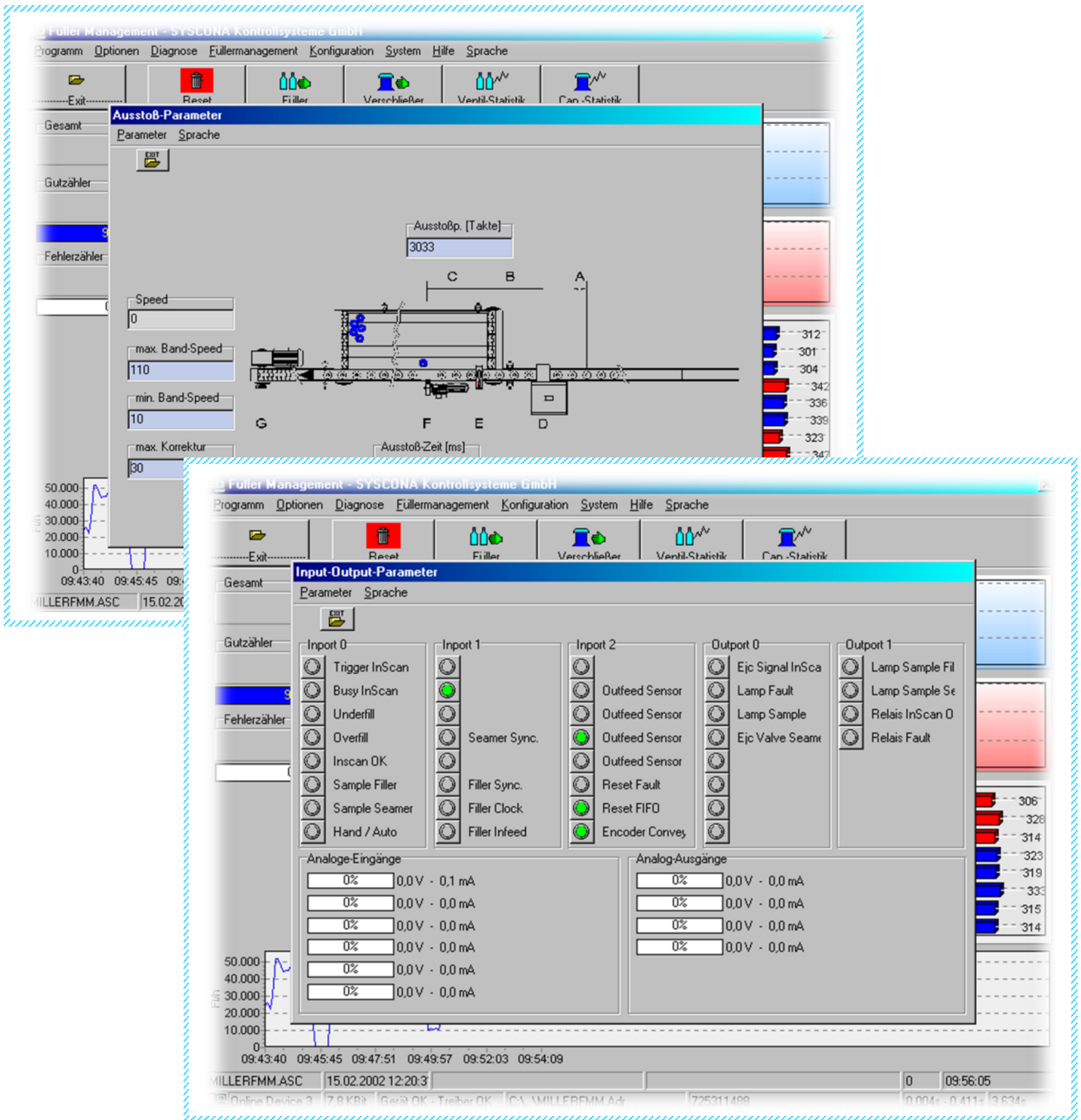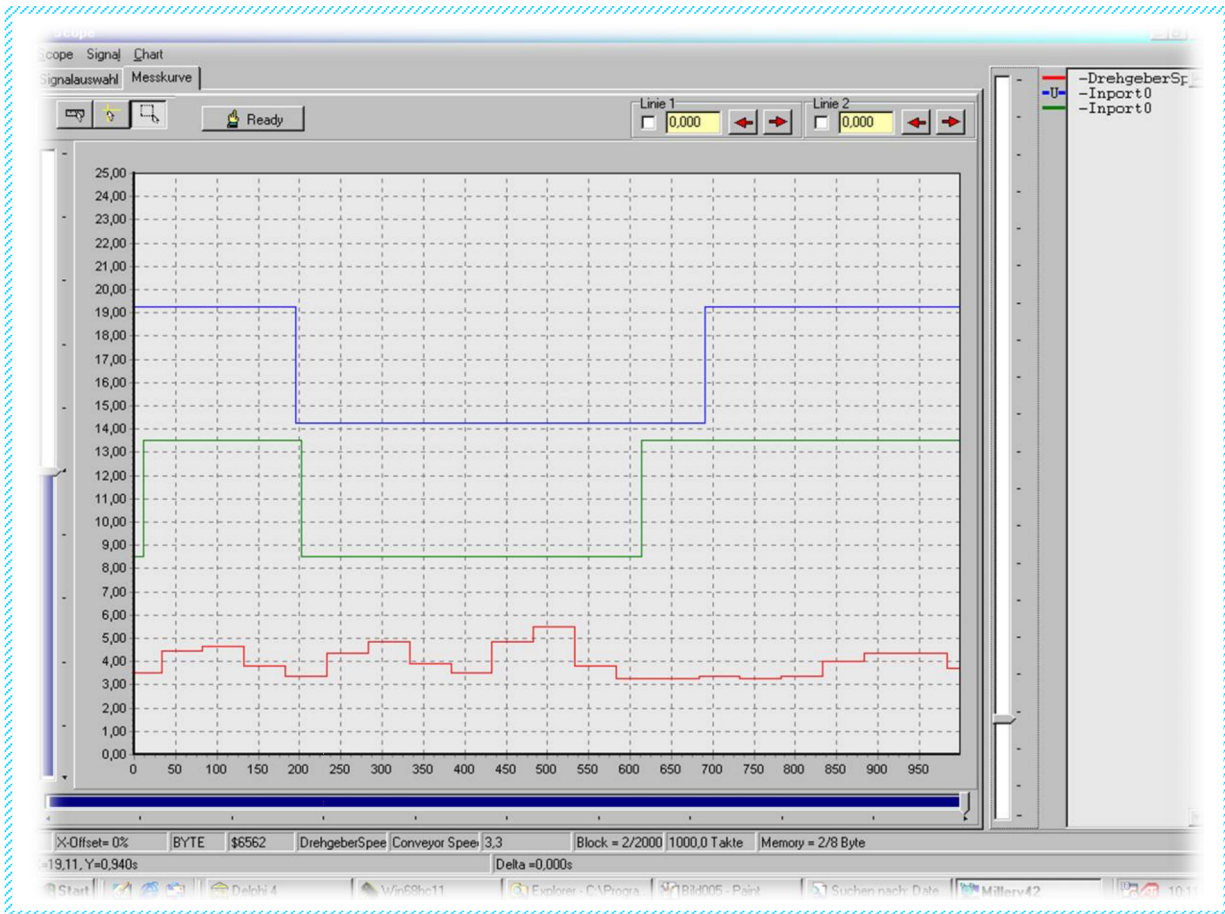- Sorting alternatively: in order or frequency.
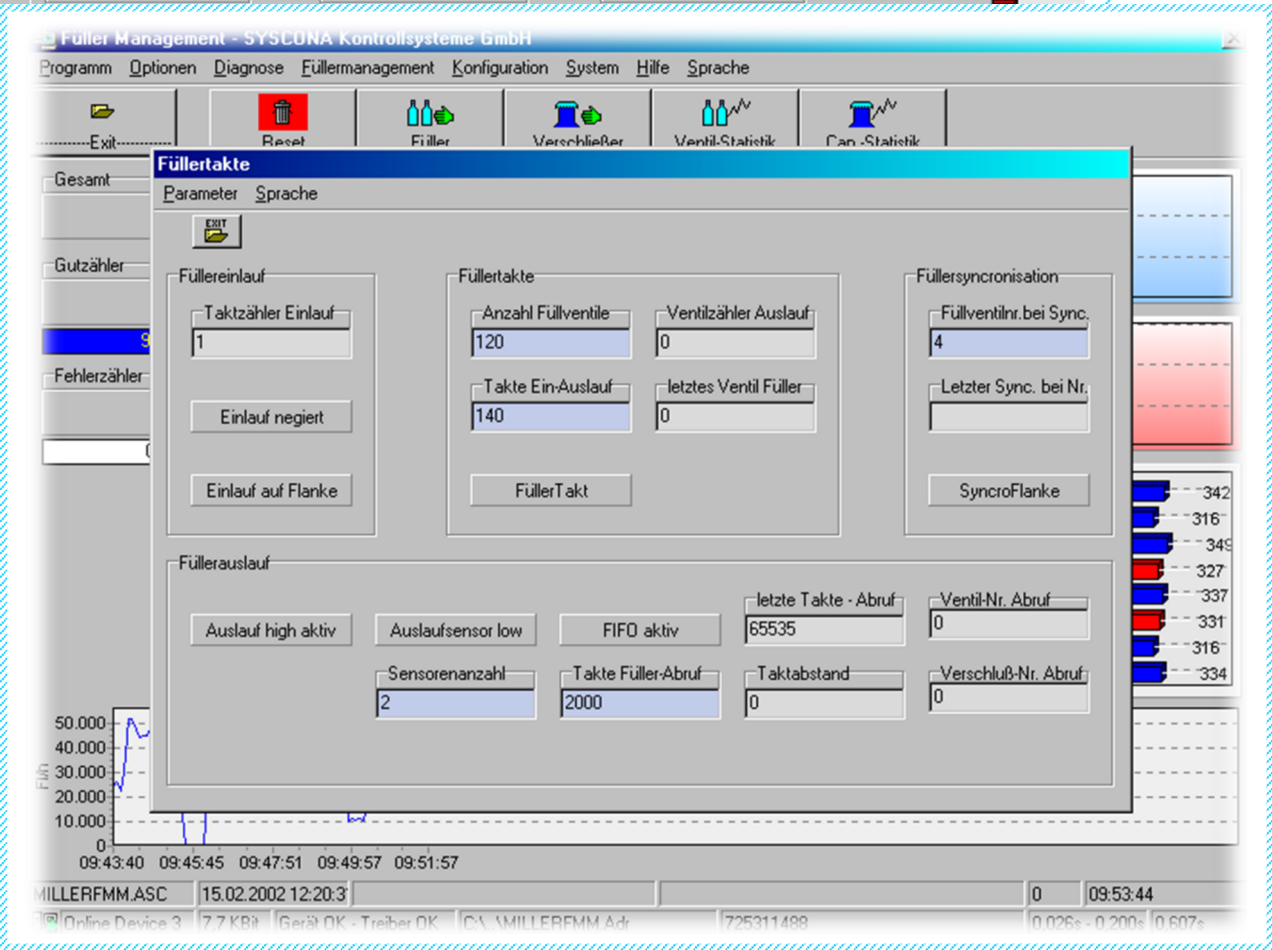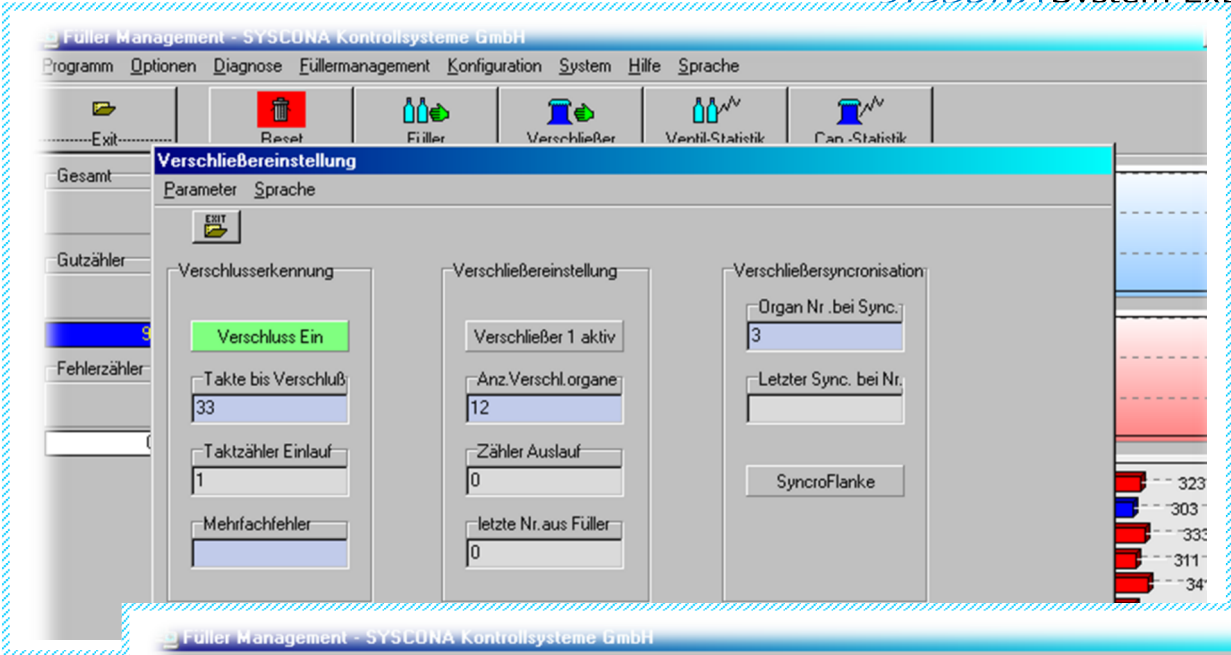
Parameter setting

Surface for the input of the basic data for the filler- and sealing setting.

Online indication of all digital and analog input/output

Integrated software service tools with multi-channel memory oscilloscope functions.

SYSCONA **Kontrollsysteme – the think tank:**

- Complete product program for inspection and separation tasks

- In particular, very successful in the development of up-to-date and future technology

- World-wide represented by competent partners and distributors, full in situ service

- Well-known for customer optimized solutions, reliable and low-maintenance systems

- Top references in the most important filling and distribution plants all over the world

Technical data:

- Housing: optimal protected stainless steel commander housing.
- Standard measurements commander housing: depth: 960 mm, width: ca. 600 mm, height: 500 mm

- Electronical data: 230V, 50Hz, consumption: 700VA

- Operation surface: 15" TFT-Touch-Screen with Trackball plus left and right mouse button

- Interface: standard communications ports RS232, RS485 optional ProfiBus.

- Industrial Ethernet connection 10/100 Mbit/s for direct PC network connection (TCP/IP).

Your contact:

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