

COMSCALE4

SOFTWARE



CENTRAL DATA MANAGEMENT FOR INSPECTION SYSTEMS

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WHAT IS COMSCALE4?

Comscale4 networks and gives you access to all your inspection systems – no matter where they are, across all sites and in real time. Comscale4 allows you to monitor your production from the point of view of the inspection systems by collecting all data arising during your inspections, generating reports and statistics, compiling analyses and archiving all your inspection system data for you. It tracks data and events and links them to an alarm system. Comscale4 provides you with information for optimised and effective production.

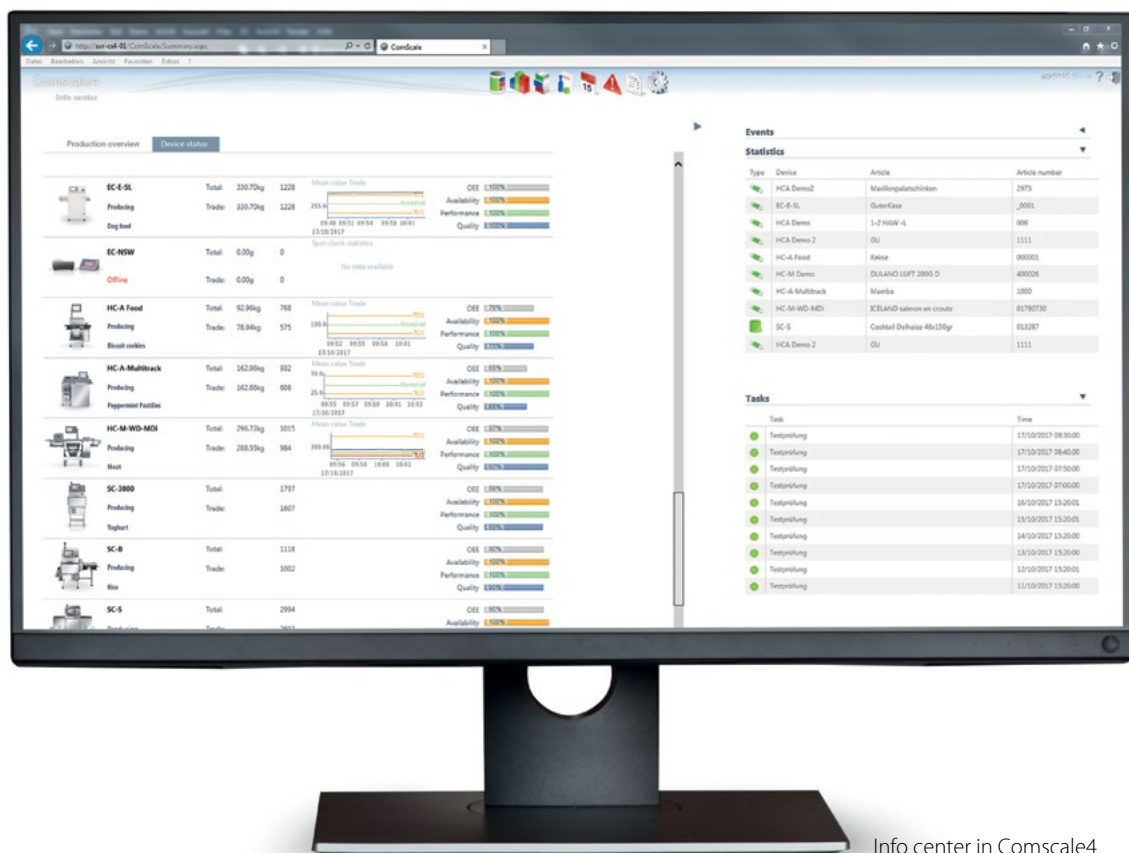


WHAT COMSCALE4 OFFERS

Comscale4 compiles all the current information you need for maximum production efficiency. It supports quality data management by generating and providing configurable standard reports. This enables you to quickly identify bottlenecks and the effects of quality problems based on reports about production figures, waste, machine utilisation and product quality.

ONLINE MONITORING FOR INSPECTION SYSTEMS

Every quality-assured product, whether raw goods, intermediate or end product, packaged or unpackaged, must be checked at some point. These tasks are performed by inspection systems. Because of these tests, information is obtained that ultimately determines how effectively the production in this process has been overall. The entire history of past production can be viewed from the quality aspect point of view by recording all the relevant quality data of your inspection systems. As a result, it is possible to set production parameters for the future, which enable optimum production. Data processing is handled by Comscale4 online monitoring.



Info center in Comscale4

COMSCALE4 ONLINE MONITORING

Online monitoring records and displays the most important production data for the connected production lines in real time. To do this, Comscale4 displays all the local units and machines connected to the system for which the currently logged on user is enabled.

For every machine, Comscale4 can call up a detailed display of the machine's current production on request or display quality or statistical data in numerical and graphic form. This

also applies to the product data history. It is possible to track and trace the counter readings for rejected products online according to system, production line or site. There is no longer any need for time-consuming on-site checks on production lines.

The X-ray images of non-compliant products are also stored in the Comscale4 database.

OPTIMISE BEYOND ALL LIMITS

Optimum production means producing products that are 100% correct. On the way to this optimum, you need as much information as possible about your production process. To produce as effectively as possible – beyond the limits of your lines. Even beyond the boundaries of your sites. Whenever it's a case of quality assurance processes, Comscale4 takes over.

COMSCALE4 NETWORKS INSPECTION SYSTEMS

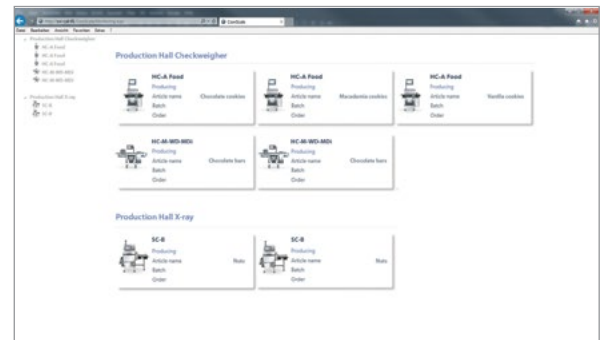
Production monitoring requires access to data to evaluate the efficiency of production lines in real time. To achieve this, Comscale4 networks product inspection equipment such as WIPOTEC-OCS checkweighers and X-ray systems, metal detectors and optical inspection systems.

Comscale4 is the software, which gathers all the information about these automated inspection and decision processes. The software makes the information available to you and upon request can evaluate and analyze the information. With Comscale4, it is possible to control product inspection processes across all sites from a central location. The time required compared to manual data entry is considerably reduced, manual errors are excluded.

CHECKWEIGHERS FOR EXAMPLE

WIPOTEC-OCS checkweighers not only provide complete control and documentation of the prepackages in accordance with the Prepackage Directive, they also prevent overfilling in future

and thus save valuable raw materials and packaging materials. Comscale4 quickly compiles all the information, which you need for maximum efficiency production. Comscale4 supports quality data management by generating and providing configurable standard reports. It shortens your setup times for product changes due to the decentralised adjustment of product inspection equipment.



Machine overview in Comscale4

The checkweigher family of WIPOTEC-OCS



SUPPORT FOR QUALITY ASSURANCE

Employees in quality assurance have real-time access to inspection and process data. Comscale4 thus supports proof that the products comply with industrial standards, internal company regulations and legal requirements.

DATA POOL FOR QUALITY ASSURANCE

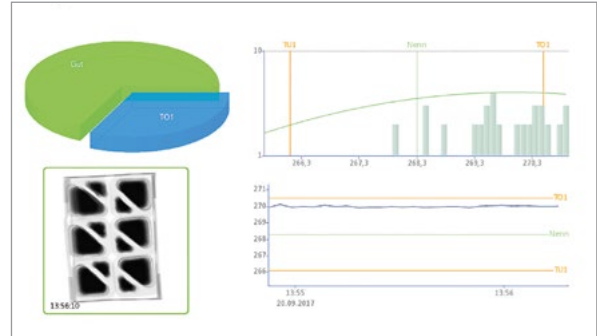
All integrated control and inspection stations are monitored, regardless of location or position in the production process. Operator interventions, such as adjusting product inspection systems, are logged and time-stamped.

Production, final or batch statistics are stored, X-ray images of rejected products can be stored for planned corrective and preventive actions. All data and reports can be exported in Excel, PDF, XML and CSV formats for later evaluations in quality assurance.

USER-FRIENDLY OPERATING CONCEPT

Comscale4 is a powerful networking and statistics program which is easy to operate and predictable despite complex functions. The data necessary for decision-making can be put together extremely flexibly, thus enabling both informative and multi-layered evaluation of process-relevant information.

The user interface allows you to visualise your data in the form of meaningful charts and tables in dynamic dashboards and reports. This data can be accessed anytime and from anywhere. Comscale4 offers permanent access to your most important key figures and decision-relevant data.



Display of X-ray images for later evaluations in quality assurance



Easy networking with Comscale4: WIPOTEC-OCS X-ray inspection system

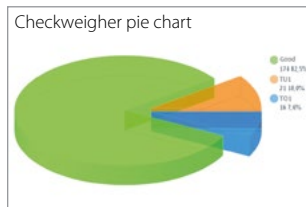
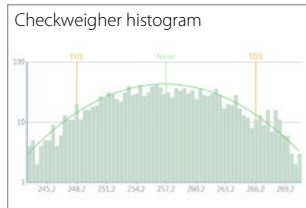
” The Ostfriesische Tee Gesellschaft has been a WIPOTEC customer for more than 25 years now, almost from the very beginning. With Comscale, the central data management software in our production, we now network

over a hundred weighing systems in four branches in Germany and France. WIPOTEC has been a good partner to us over the years and we have always been impressed with the hardware and software solutions from Kaiserslautern.”

Björn Herrmann
Technical Manager
Ostfriesische Tee Gesellschaft,
Seevetal

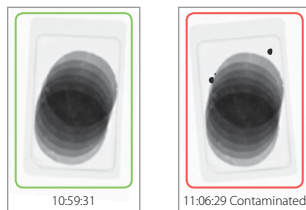
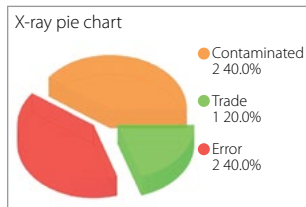
SUPPORTED INSPECTION SYSTEMS AND THEIR FUNCTIONALITIES

Comscale4 networks inspection systems: Checkweighers and X-ray systems, metal detectors, optical inspection systems, static scales and density scanners. Different functionalities are supported depending on the type of each inspection system. Each type of device has its own device server.



CHECKWEIGHERS AND ALL ABOUT COMSCALE4 NETWORKED SYSTEMS

Comscale4 supports the general overview and view of all lines, the display and storage of all production data and the machine and system status (automatic), in addition to reporting with standard templates.



X-RAY SYSTEMS

Comscale4 supports the display and storage of all production data and the machine status, the transmission of statistical data to Comscale4 as well as transmission of the X-ray images. Weigh-and-Ray Systems, i.e. systems combining X-ray technology and checkweighers, are also supported. In addition, Comscale4 provides separate statistics for results of X-ray inspection and weight checking.

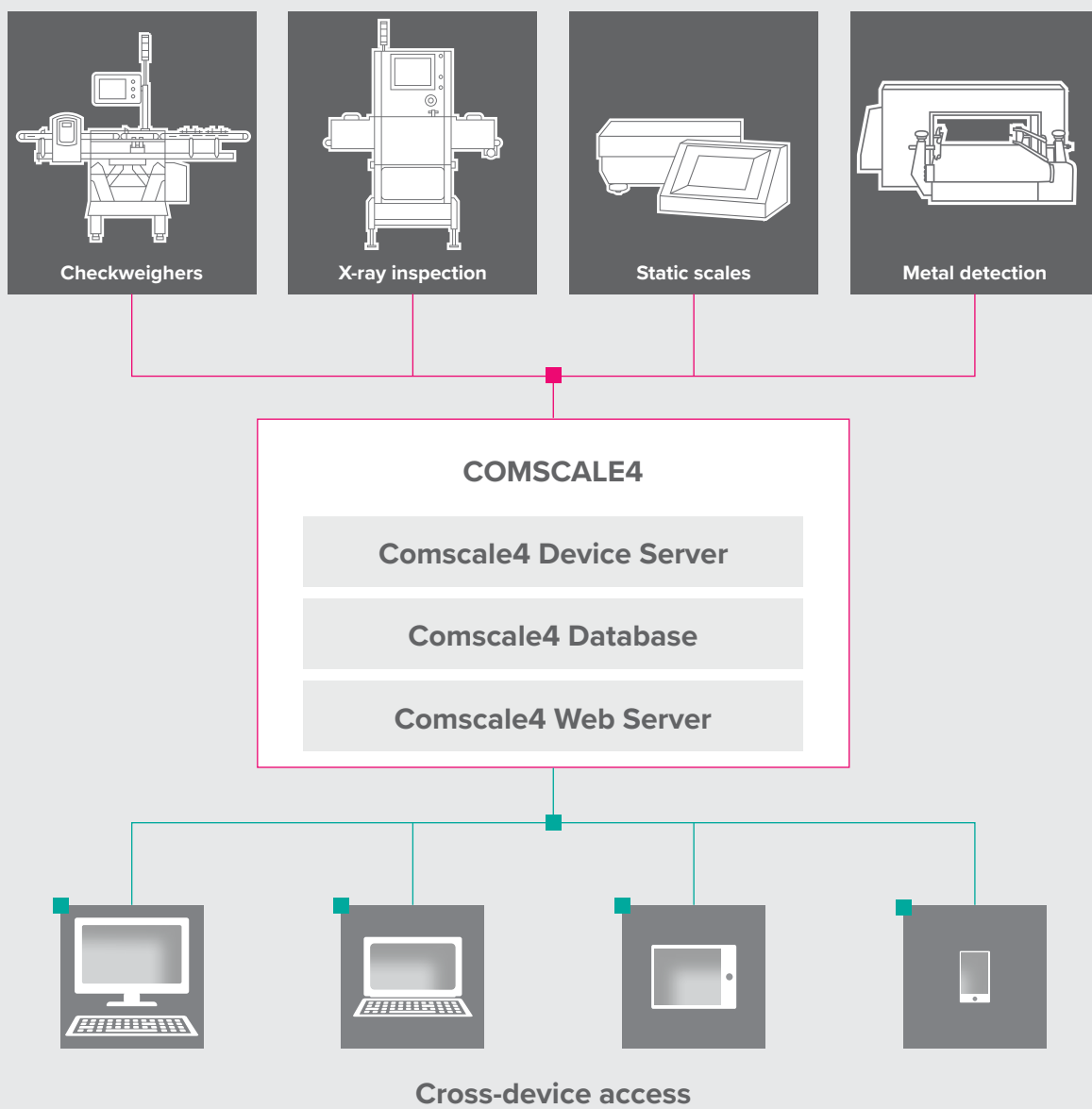


STATIC SCALES

Static scales are used to manually record individual weights, e.g. for random sampling. A connected handheld scanner can also be used to jointly record barcode information, e.g. to activate the checking job. Weighing is triggered manually or by automatic standstill detection. Results are logged and the data are sent to Comscale4.

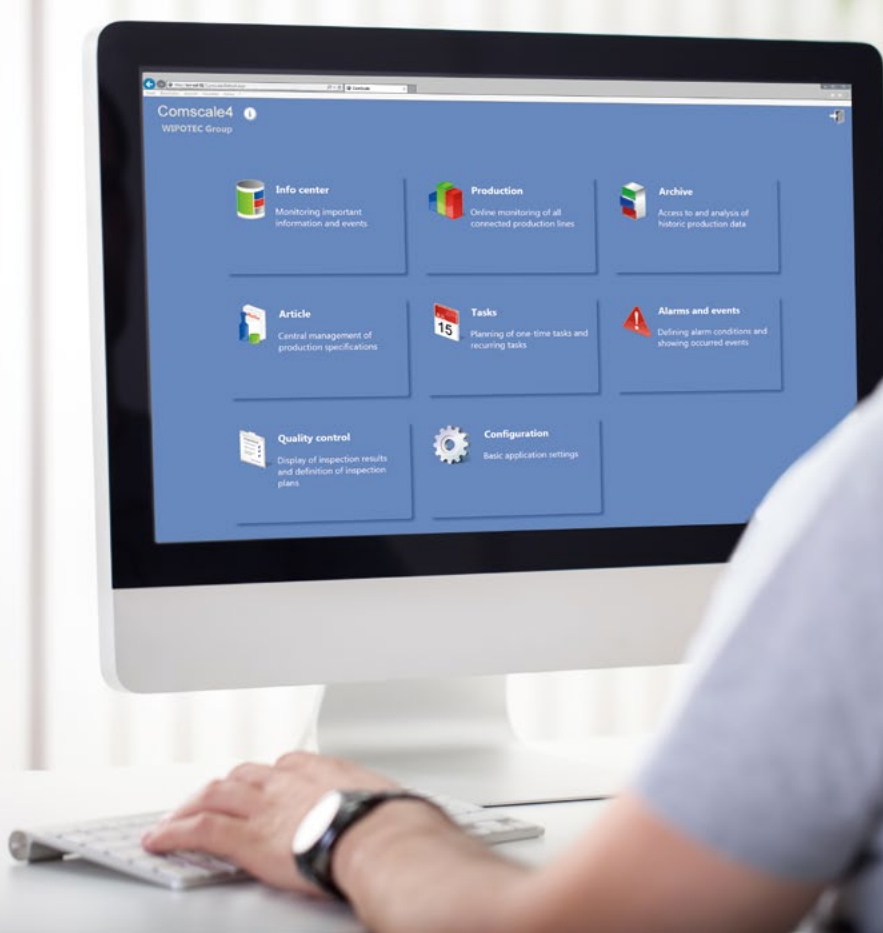
THE FOUNDATION: POWERFUL TECHNOLOGY

Comscale4 is a multi-user solution based on the concept of floating licences. A central service manages the user licences and ensures access to Comscale4 for authorised users. A Microsoft SQL database is required to operate Comscale4. Comscale4 and its graphical, interactive user interface can be used on all browser-enabled devices including smartphones and tablets. Program operation is optimised for Internet Explorer.



Comscale4 architecture: Device servers provide the connection to the machines

PROGRAM ENTRY AND SOFTWARE MODULES



Main screen: Provides central access to all available modules.

Central program access provides a view of all the modules activated for the relevant user. The graphical user interface stands for easy-to-learn operation with the shortest routes to the desired functionality in each case.

The permanently visible status and navigation bar ensures orientation at all times. Information areas can be expanded with the help of symbol buttons to achieve a greater wealth of detail without losing clarity. Comscale4 has the Info center, Production, Archive, Reporting and Admin modules from the Start version upwards. The Standard and Professional versions have an Article Management module and, depending on the connected machine's range of functions, have write access to it.

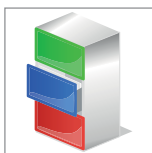
All Comscale4 data and functions can be accessed via browser-enabled devices without having to install additional software on the clients. Report templates are stored system-wide for standardised reports. The Alarms and Test Schedule options are included from the Professional version up.



INFO CENTER

Online monitoring of current production: In the Info center, Comscale4 provides a compilation of the most important data and events. This includes the production overview and the machine status in the form of a live view, enabling immediate response since Comscale4 has online access to the machines. The overall view in the Info center provides an overview of the overall equipment effectiveness (OEE) of the individual machines as a measure of a plant's added value. For this, Comscale4 provides a lot of real-time data and allows proactive management to maximise operating times.

The Info center provides different ranges of information depending on the authorisation and hierarchy level: A production manager sees his plant at a glance in the Info center and is notified about which tasks the operators still have to carry out. Managers with cross-site responsibilities can display on a "plant-by-plant" basis which lines are running and producing, how long they have been producing and how many products have been produced and in what quality.



DATA ARCHIVING

Data are archived so that it is possible to compare production data from the past with each other and with current actual performances. There is no longer any need for the ticket printers, which used to be necessary for this. The Comscale4 archive function stores all previously collected statistics and files of all machines in the entire system. Statistics results can be pinpointed precisely with powerful query criteria. Long-term access to the archives reduces overall paper consumption and permits a range of views for which data can be structured differently.

Various operators (greater than/less than, equal/unequal, contains/does not contain, starts with/ends) are available to filter data before output. It is also possible to filter according to ejection reasons (contaminated, underfilled, overfilled, defective, shape/angle error, clip error, product broken, etc.). Statistics can be summarised cumulatively. There are several options for exporting them so that the data can be processed in other systems (e.g. xml, csv).

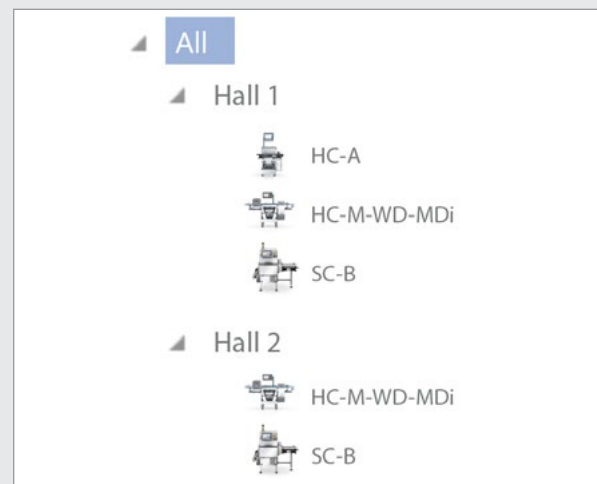


PRODUCTION

In Comscale4, you can map your company's production structure in the form of local units (e.g. production site, production hall, production line) in a multi-dimensional hierarchy. Comscale4 supplies you with a reality-based illustration of your company in conjunction with decision-relevant data regarding the production performance of your lines. The overviews provide insight into all the machine's production details and settings. X-ray images of inspected products are also displayed here.

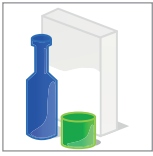


Production details of a machine with information on the mean, standard deviation and sorting limits.



Production structure in a multi-dimensional hierarchy.

SOFTWARE MODULES



ARTICLE MANAGEMENT

This is where the central management of production specifications is located. Only one central article master has to be managed. The articles can be assigned their own product photos and a number of article parameters. Among other things, Comscale4 offers the management of production-typical master data such as limit values for overweight/underweight articles, length of the article in the conveying direction and production performance for the article. Inspection systems always access the current data in the article management.

The screenshot displays the 'Article Management' interface for 'Article 1'. It includes fields for Name, Number, GTIN, and Family. Below this are several expandable sections:

- Weighing:** Contains sorting limits (Nominal, Tare, TO2, TO1, TU1, TU2), Nominal output, Package length, Spotcheck Range, and Spotcheck Time.
- Production parameters:** Includes Target PLW, Tare tolerance, Empty package limit, BBD offset, Price, and checkboxes for 'Enabled to use in production', 'Lock article', 'Mean value requirement', 'FPV/AWC TU1 percent regulation', and 'FPV sorting limits'.
- Device parameters:** (Section header visible)
- Tare components:** (Section header visible)

Article management with weighing parameters and sorting limits as well as production specifications.



TASKS

This module assists production managers in particular to manage employee tasks on production lines. The options for planning and production support can be defined via unique or recurring tasks and the time of performance can be specified. Examples of task types: Stopping the machine, notification (e-mail or message to the machine), sampling, product change, statistics check (e.g. all 1,000 products), triggering of time-based statistics and attribute checking (Enterprise version).

The screenshot shows the configuration for a 'Statistics check' task. Key settings include:

- Name:** Production hall 1: mean value check
- Active:** Yes (indicated by a green dot)
- Statistics:** Intermediate statistics
- Inspection plan:** Schedule
- Filter:** Type is equal to 'Intermediate statistics' (with an Edit button)
- Device / Location:** Highspeed
- Article / Family:** 00000001 Article 1
- User / User group:** All
- E-mail:** q-check@sample.com
- Show message at device:** Check mean value
- Warning level:** Warning

Creation of a task for the statistics check.



ALARMS AND EVENTS

Alarms and events can be user-defined. No programming or SQL skills are required. It is possible to monitor individual machines or complete lines. Monitoring periods can be limited and the view can be restricted to certain products and machines. With the help of alarms and events, it is possible to monitor production and, for example, to detect systematic faults or prevent machine downtimes.

Definition of an alarm indicating a line's production deviation.

In this case, Comscale4 automatically reports all production deviations. The number of ejections is monitored and the ejection rate is determined. Even pseudo ejections are identified if, for example, the machines are set too sensitively. Filling quantities can be optimised and average values monitored. This minimises manual rectification of rejects. A number of logical operators are available for comparing current production data with reference values. With Comscale4, it is possible to define alarm conditions and display events that have occurred. This also includes alarm level management (with traffic light function to indicate the warning level) and a time stamp. Comscale4 reports the occurrence of triggered alarms to preset e-mail addresses or displays them to the user on the PC or other devices.



QUALITY CONTROL WITH TEST SCHEDULES

In quality control, processes or product characteristics, which are not automatically recorded by the networked machines, such as test schedules with user-definable test attributes, are documented manually. Implementations can be documented in Comscale4 or scheduled as a task. They contribute significantly to quality assurance of the monitored processes. For example, it is possible to check the label, printing, positioning or best-before date.

All characteristics of a test are stored as a single data set. Random sampling checks can be defined and criteria can be user-specified in the form of a test schedule per article. If a quality check is scheduled, the operator receives an appropriate message and carries out the test as specified.

Specification of an article test.

SOFTWARE MODULES



CONFIGURATION

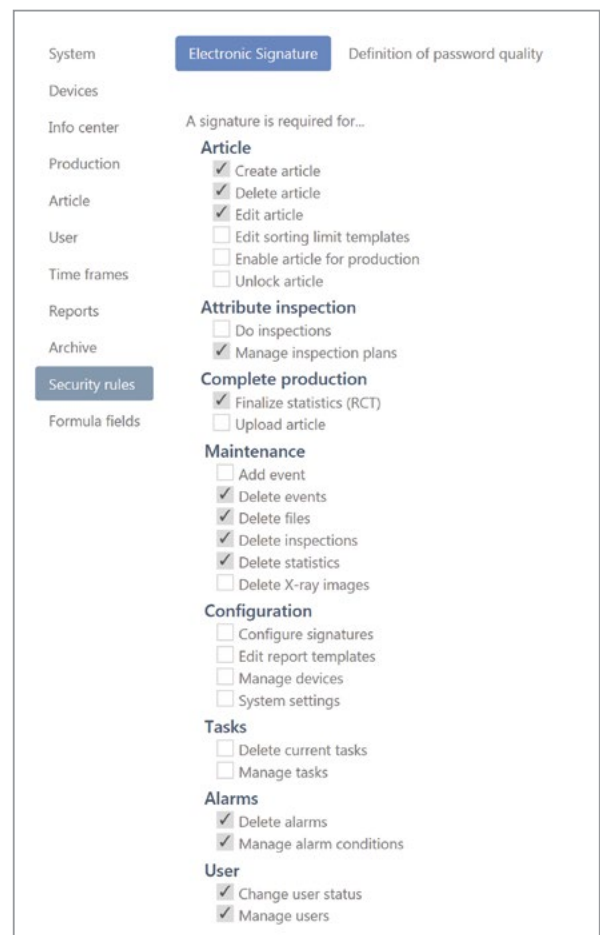
The Configuration module is used to manage basic settings, such as the language versions stored in Comscale4. This also includes the machine parameters, the production structures with details of the machine setup and the article definition as well as the user-defined layout of the software itself.

Other settings relate to time-based statistics and shift times, which can be defined on a daily basis and for multi-shift operation. Depending on the machine type selected, the layout of the reports can also be defined in the configuration module, as well as the detailed view of the machine status.



Graphic report layout.

User management is also located here. It allows the creation of user groups for which rights can be assigned. The settings for the electronic signature can be used to determine which actions require a signature. Only a logged on user can initiate actions in this case. Each individual action must be acknowledged with a password.



Settings for the electronic signature in the Configuration module.

EXPANDABLE PROGRAM PACKAGES

	Start	Basic	Standard	Professional	Enterprise
Simultaneous users	5	5	10	20	100
Networkable machines	2	5	10	25	100
Device server ¹⁾	1	1	2	10	50
Info center	■	■	■	■	■
Production	■	■	■	■	■
Archive	■	■	■	■	■
Article management ²⁾	□	□	■	■	■
Alarms and events	□	□	□	■	■
Report designer	□	□	□	■	■
Electronic signatures	□	□	□	■	■
Tasks	□	□	□	□	■
Quality control	□	□	□	□	■

Installable as an expansion
 Component program packages
¹⁾ Can be distributed between different computers
²⁾ Requires write access to connected machines

Overview of the Comscale4 program packages.

Depending on your requirements, Comscale4 can be flexibly adapted to the structures of your production and thus to your needs. There are five different program packages available. Additional program modules are included in the higher versions. Program packages can be customised by adding further program modules.

All programs allow the logging and display of different production data and statistics as well as a detailed view of the current production for a single device. This also includes graphic representation of the production process. From the Standard version upwards, there is bi-directional access to the inspection machines for a maximum of 10 users accessing concurrently. From this version upwards, integrated article management can be used to create and change product data for connected machines centrally.

The Enterprise version offers an additional alarm system with event and task management and other management functions, such as report management and signatures. This top level of expansion has additional task and attribute management modules, allows custom configuration of test schedules and attribute tests and up to 100 users accessing concurrently.

COMBINED EXPERTISE UNDER ONE ROOF CUTTING-EDGE TECHNOLOGY MADE IN GERMANY

WIPOTEC HEADQUARTERS



WIPOTEC-OCS is a sales and service company for dynamic, high-precision weighing and inspection solutions. As a wholly owned subsidiary of the high-tech specialist WIPOTEC, which develops and produces all machinery solutions at its headquarters in Kaiserslautern, WIPOTEC-OCS has been setting global standards in the production lines of leading manufacturers for more than 30 years. Throughout the world, customers in the pharmaceutical, food and chemical industries and in the mail and logistics sectors highly appreciate the solutions provided by WIPOTEC-OCS.

EXCELLENT SOLUTIONS FOR YOUR APPLICATION

WIPOTEC-OCS stands for sophisticated high-tech systems with maximum ease of use. The impressive product portfolio provides solutions for nearly all customer applications. If necessary, we take special requirements and conditions into account in supplying customized equipment.

EXTRAORDINARY MANUFACTURING DEPTH, ALL SIDE BY SIDE

WIPOTEC-OCS contributes great importance to the in-house development of all necessary technologies as well as the in-house manufacturing of all core components. Consequently, we develop a depth of manufacturing that differentiates us from other vendors and makes us largely independent of suppliers, while forming the basis for our delivery reliability. At WIPOTEC, the entire value chain from basic research, to planning, design, and manufacture to sales and service is all under one roof. The benefit of short channels of communication is the guarantee of maximum flexibility in the implementation of every individual product configuration. No matter how unusual your application may be, we will show you a possible solution that is sure to convince you. That's what makes the difference



GLOBALY RESPECTED, INDEPENDENT, FLEXIBLE, AND INNOVATIVE: THAT IS WIPOTEC

- ✔ GLOBALLY RESPECTED PARTNER IN INDUSTRY FOR MORE THAN 30 YEARS
- ✔ WORLDWIDE PRESENCE THANKS TO NUMEROUS SUBSIDIARIES AND PARTNERS
- ✔ FOUNDER-MANAGED COMPANY
- ✔ COMPANY WITH HIGH INNOVATION POWER THROUGH LARGE R&D EFFORT, INCL. BASIC RESEARCH
- ✔ ALL EXPERTISE COMBINED UNDER ONE ROOF
- ✔ IN-HOUSE PRODUCTION OF ALL KEY COMPONENTS
- ✔ USE OF HIGH PRECISION WIPOTEC WEIGHING SYSTEMS FOR OPTIMUM PRODUCT QUALITY
- ✔ LARGE PRODUCT PORTFOLIO FOR ALMOST ANY APPLICATION
- ✔ EXTENSIVE EXPERTISE IN THE IMPLEMENTATION OF CUSTOMER-SPECIFIC SOLUTIONS
- ✔ OUTSTANDING SERVICE CAPABILITIES



INNOVATIVE, HIGH-END INSPECTION SYSTEMS FOR BETTER IMPROVED EFFICIENCY AND PRODUCTIVITY



WE ARE THE IDEAL PARTNER FOR ALL YOUR NEEDS, FROM PRE SALES CONSULTING TO AFTER SALES SERVICE

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