

Key Components „made in Austria“

ECO-R filter

Filters and sieves are indispensable components in the highly complex process of paper manufacturing and finishing. The ECO-R filter is used to filter agglomerates and contaminants from liquids, dispersions, emulsions, coating pigments and coating colours.

The medium to be filtered is conveyed through the upper intake, through the sieve blades of the strainer basket, to the outlet at the bottom of the filter. The coarse particles stick to the outside of the strainer basket.

The strainer basket is designed as a slotted mesh insert or lasered perforated basket, depending on the application. Depending on the dimensions and field of application, the ECO-R filter is equipped with a varying number of blades or brushes made of carbon or metal.

The agglomerates and contaminants that adhere to the sieve basket are cleaned by the blades or brushes, conveyed to the filter bottom and introduced into the reject space. Optionally, the reject space can be designed as a lock, whereby the discharge of the agglomerates and impurities during continuous operation is possible.

The displacement body of the ECO-R filter reduces the working volume to a minimum and allows optimum flow conditions. The dimensioning of the filter is based on the flow rate, type of impurities and the viscosity and abrasiveness of the medium. Several filters can be interconnected to achieve necessary capacities.

ADVANTAGES

- › Compact design with high throughput
- › Screen finenesses 50 µm and higher
- › Easy disassembly of the strainer basket
- › Easy cleaning
- › Backwashing / rinsing of the filter with a small amount of water during thorough cleaning
- › Easy handling during service work
- › Minimal production losses





SIZES

The ECO-R filter is available in four sizes:

- › Ø 167
- › Ø 215
- › Ø 301
- › Ø 470

GENERAL TECHNICAL DATA

Size	Ø 167	Ø 215	Ø 301	Ø 470
Medium capacity	20l	37.4l	52.5l	106.8l
Weight	90kg	120kg	220kg	380kg
Max. operating pressure	10bar	10bar	10bar	10bar

ECO-S filter

The ECO-S filter is used to filter agglomerates and contaminants from liquids, dispersions, emulsions, coating pigments and coating colours.

The pressure filter system is composed of static filter elements that combine into one unit. The number of filter elements per filter station varies depending on the intended flow rate. A filter element consists of a filter housing and a filter unit with mesh fabric.

Developed for continuous operation, the ECO-S filter station is a closed filter system. The filter system has a function for recovering the residual medium remaining in the individual filter elements. In this way, the residual medium is recycled before the rinse and completely returned to the process.

The cleaning process of the filter station takes place in continuous operation. The dirty filter elements are temporarily switched off and backwashed. The ECO-S filter is sometimes used for cleaning fresh process water. In this case, the dimensioning of the single filter is tuned to the flow rate of the pump.

ADVANTAGES

- › Continuous operation
- › Low medium volume
- › Screen finenesses 50 µm and higher
- › Closed system
- › Compact design with high throughput
- › Backwashing / rinsing of the filter with a small amount of water during thorough cleaning
- › Highest-possible filtration





SIZES

The ECO-S filter station is available in three sizes:

- › Ø 50 x 200 / 50 x 300
- › Ø 95 x 445 / Ø 95 x 545 / Ø 95 x 645
- › Ø 120 x 645
- › Ø 160 x 700

GENERAL TECHNICAL DATA

Size	Ø50x200 Ø50x300	Ø95x445 Ø95x545 Ø95x645	Ø120x645	Ø160x700
Medium capacity	1.33 l 1.77 l	6.64 l 7.69 l 8.71 l	10.84 l	18.69 l
Weight	15 kg	20 kg	30 kg	40 kg
Max. operating pressure	10 bar	10 bar	10 bar	10 bar

Dispersing machines

GAW dispersing machines, the heart of every coating colour kitchen, are constructed under the premises of energy efficiency, consistent and reproducible qualities, scalability, preservation of the medium and optimum process connection.

In decades of reliable partnerships with key customers, the processes and technology of the dispersing aggregates have been continuously improved and developed into highly efficient dispersing systems.

GAW dispersing machines enable the preparation of homogeneous dispersions and emulsions with desired viscosities, solids contents and rheological properties.

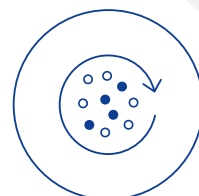
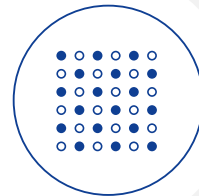
01 HOMOGENIZATION

Two or more product phases are distributed in such a way that exactly the same distribution of components occurs in each subset.



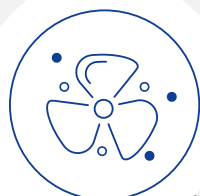
08 FOAMING

Foaming is the introduction and even distribution of air / gas in a liquid.



07 ELUTRIATION

Sedimented solids are fluidized by turbulence to restore the mixture.



06 REACTION ACCELERATION

The mechanical action of the rotor / stator accelerates chemical reactions (e.g. for foamed products).

02 EMULSIFICATION

Two non-miscible liquids, such as a hydrophobic and a hydrophilic phase, are permanently mixed together.



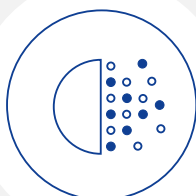
03 SUSPENSION

The distribution of a non-soluble solid in a liquid.



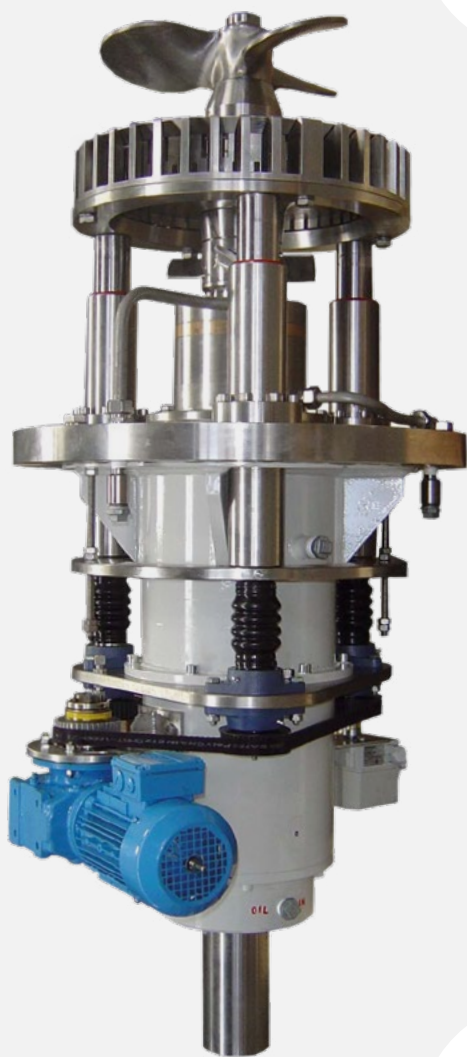
04 SOLVING

Here, soluble substances are to be introduced into a liquid.



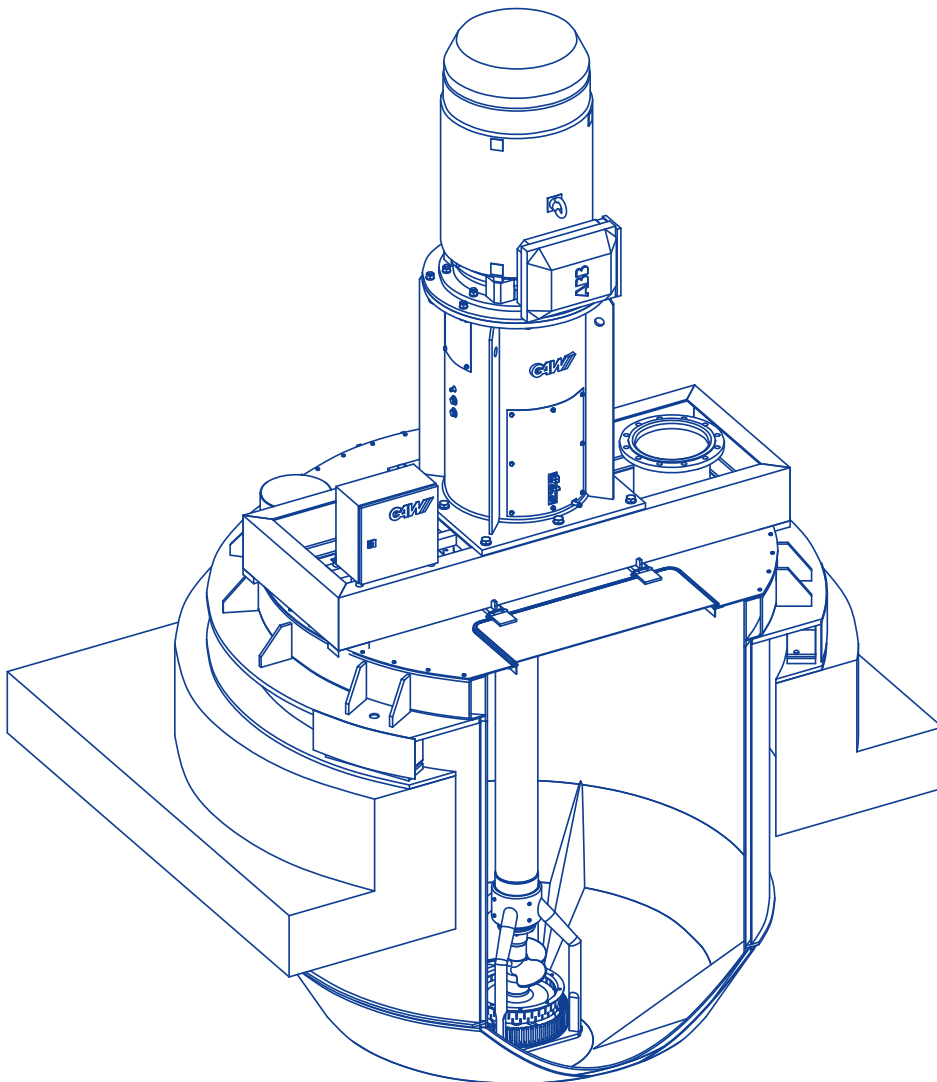
05 DEAGGLOMERATION

Dry particles (e.g. in powder) clump to form agglomerates when mixed with liquids. These agglomerates are broken up mechanically during dispersion.



Top-drive system

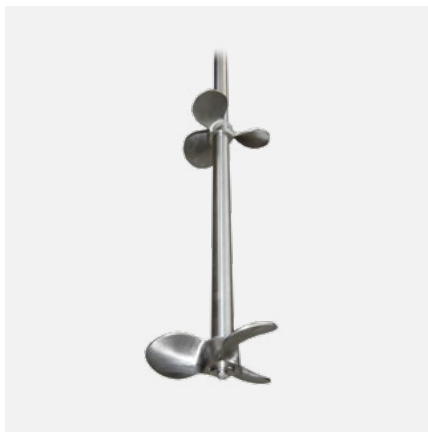
GAW dispersing machines with top-drive systems are designed under the premises of energy efficiency, consistent and reproducible qualities, scalability, preservation of the medium and optimum process connection.





Dispersing disc

The classic dispersing disc is ideal for simple dispersing and homogenizing tasks. The design of the toothed disc, the number of revolutions, and the positioning of the components within the containers, which are adapted to the respective application, ensure optimum results.



Rotor-standard

GAW's top drive rotor-standard dispersing machines enable the gentle preparation of simple product formulations. For more complex applications, these dispersing machines can easily be retrofitted to the patented Combined Dispersing System (CDS).



Rotor-CDS

The patented GAW Combined Dispersing System enables the user to disperse difficult-to-process products at a high solids content, allowing for tremendous flexibility when it comes to recipe formulation. The CDS optimizes the entry of the dry product, reduces the use of dispersant and massively reduces energy consumption.



Rotor-stator-standard

GAW's rotor-stator-standard dispersing machines are based on the basic principle of kinetic energy. The use of a rotor-stator unit ensures the forced dispersion of the product to be processed. The top and bottom propellers assist in delivering the media to the rotor-stator system, thereby providing optimum circulation in the dispersing tank.



Rotor-stator-VST

The GAW Variable Shear Technology (VST) combines the advantages of the rotor-stator standard systems and dispersing toothed discs. VST is based on the stepless adjustment of the rotor-stator overlap during operation. This allows the user to set an optimal ratio between rotation and shear for all applications.

ADVANTAGES

- › No mechanical seals
- › Little need for space
- › No need for sealing water
- › Easy handling during service work
- › No oil for lubrication or cooling
- › Design of dispersion tank
- › Reduction of operation costs

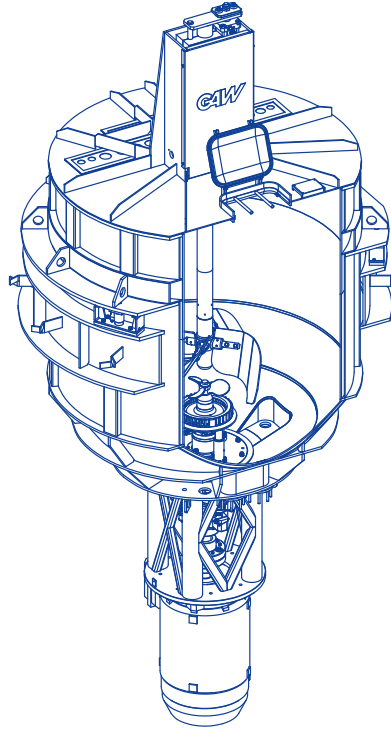
Bottom-drive system

GAW bottom-drive dispersing machines are designed in a suspended or chassis type design.

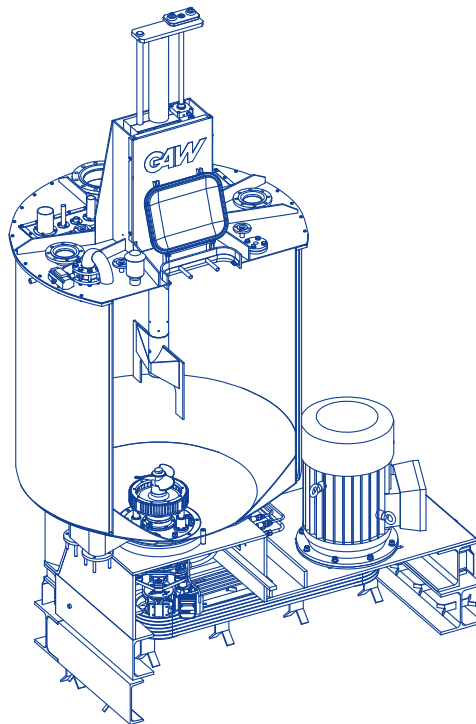
Here, the design of the containers of the bottom-drive dispersing machines is adapted to the respective case of application. Options such as dosing monitoring, process temperature control via double-walled containers and connection of the GAW Quality Loop enable customers to achieve the desired qualities in a targeted manner.

The pneumatic flow breaker influences the circulation. It is controlled via pneumatic cylinder. In the lower position it ensures more efficient dispersion, in the upper position increased circulation in the container.

GAW bottom-drive dispersing machines are available in the low shear standard, high shear standard or Variable Shear Technology (VST) adjustment units.



Hanging / suspended type



Standing / chassis type

The pneumatic flow breaker is controlled via a pneumatic cylinder. In the lower position it ensures more efficient dispersion, in the upper position increased circulation in the container.



BENEFITS OF GAW BOTTOM-DRIVE DISPERSING MACHINES

- › Optimal energy conversion and high efficiency
- › Short batch times
- › Easy retrofitting of the dispersing unit
- › Processing of high solids contents
- › No air in the coating colour
- › No vortex

SIZES

- › DA 60
- › DA 65
- › DA 75
- › DA 90
- › DA 100



Low shear standard



High shear standard



Variable Shear Technology (VST)



DISPERSING

ContiMixer

The GAW ContiMixer is a continuous dispersing machine in which a large number of raw materials are processed into a coating mass.

In its maximum size CC750, the Conti-Mixer enables a throughput of up to 35,000 litres per hour, around the clock. Its special division into four different mixing zones prevents the heating of the coating medium and enables correspondingly high solids contents and viscosities. Since the ContiMixer is a completely closed system, impurities are eliminated and consistent colour quality is ensured.

Compared to the batch process, the continuous processing of coating compounds offers enormous advantages for the manufacturer.

Generally, the total cost of operation of the system is considerably reduced. Connected load and energy consumption are reduced by up to 75%, coating colour losses during recipe changes are avoided, and water consumption and maintenance costs are drastically reduced.

ADVANTAGES

- › Dispersing and Mixing in four zones (from high to low shear)
- › Little need for space
- › Compact design with high throughput
- › Fast paper grade change
- › No coating colour losses during recipe change

The GAW ContiMixer offers enormous advantages for the continuous processing of coating compounds and ensures a massive reduction of the total cost of operation.



Agitators, mixing systems, special apparatus construction



GAW technologies offers individually tailored agitating and mixing systems and systems for a wide range of process applications, including slurry stations, starch processing systems and sewage collection pits.



The optimized procedural and control engineering design guarantees maximum cost-effectiveness. Different stirring and mixing elements are used, depending on the job. The dimensioning and design of the mixing elements is adapted to the size and shape of the tanks, the chemical-physical properties of the process medium and the process task.

For the task of agitating and circulating, GAW technologies has an extensive product range of tanks and special apparatuses with agitators for targeted individual solutions.

The agitating systems are used to prevent sedimentation in a container and to maintain a homogeneous mixture. It is essential to keep the medium continuously in motion in its entirety in order to keep the quality of the process medium constant over long periods of time.

Depending on the application, GAW uses vertical, horizontal or inclined stirrers with optimally matched stirrer elements. Special care is taken in the design of agitators in special apparatus construction, where the process media are dissolved or cooked and a variety of chemical reactions take place.

In addition to the optimal design of containers and stirrers, GAW technologies pays special attention to the sealing of the stirrers. Due to the prevailing processes and required safety regulations, these often require a special design.

APPLICATIONS

- › Agitators for storage containers
- › Agitators for small and medium sized containers
- › Agitators for targeted process control

ADVANTAGES

- › Optimal energy conversion
- › Compact, low-maintenance design
- › No deposits due to construction and design
- › Individual adaptation of the stirring elements
- › Optimal adjustment to the manufacturing process



MILLING

GAW Ultramill

The vertical GAW Ultramill is unique as an extension of conventional horizontal grinding ball technology. It enables the treatment of particles of the desired order of magnitude adapted to the application.

The agitator ball mill is made of steel. The parts that are particularly exposed to abrasion are furnished with highly resistant alloys. The grinding chamber, which is encased in cooling water, is divided into different sections for easy inspection and maintenance.

The grinding discs are built in an exclusive GAW design. They are configured in a modular concept to enable different end- product characteristics.

All operating parts (e.g. grinding discs, spacers, ball separators and the intake rotor) have been designed to slide over the shaft in any required configuration. This feature provides great flexibility in design, optimizes energy consumption, milling efficiency and maintenance costs.

Depending on the design and intended application, the mill is filled with grinding media of adequate diameter. The product to be ground is introduced through the distributor at the bottom of the mill.

For this purpose, a controlled pump with adjustable speed is used, regulated by a mass flow meter (Coriolis principle). Performance, particle size distribution, fineness and the grinding speed of the system are managed by automated production control.

Immediately after entering the mill via the distributor at the bottom, the product is homogeneously dispersed by the intake rotor and the bottom grinding disc.

The agitator ball mill drive is equipped with a frequency converter. As a result,

the rotational speed and configuration of the grinding discs can be optimized. As soon as the product is dispersed, the product and grinding balls rise in a spiral-like rotary motion to the height of the agitator ball mill.

The spiralling, upward movement provides a zone of high pressure while a low-pressure zone forms around the shaft.

The strong vortex movement prevents the exit of the grinding balls because they move along the shaft, spiralling downward.

The rotation of the grinding media takes place in a closed circuit. In combination with the tremendous working speed, this achieves the ultimate grinding efficiency.

GAW Ultramills grind calcium carbonate into fillers and ultrafine coating pigment. It achieves fineness from $60\% \leq 2 \text{ micron}$ up to $98\% \leq 2 \text{ micron}$. Hundreds of installed agitator mills in GCC grinding plants worldwide ensure system capacities of 30,000 tons up to 1,000,000 tons per year.

ADVANTAGES

- › Low energy consumption
- › Efficient control of particle size
- › No liquid leakage
- › High grinding efficiency
- › Low maintenance costs
- › No filtration problems
- › Standard IEC drives
- › Little need for space



GAW Airvent

The GAW Airvent is a cyclone deaerator used for deaerating media, dispersions, emulsions and coating colours.

The GAW Airvent uses the centrifugal force created by the tangential inlet and rotational movement of the fluid inside the cyclone. The part of the medium with a high number of air bubbles (and thus low density) forms into a core and is withdrawn upwards via a central vent nozzle. The part of the medium with lower air content (and thus higher density) migrates to the outside and is discharged through the bottom of the cyclone.

The GAW Airvent consists of a variable number of cyclones, which can be switched on or off with ball valves according to the respective coating colour consumption. The cyclones are constructed with inlet and outlet pipes on

a frame. Each cyclone has a separate channel valve for cleaning and emptying.

Depending on the volume flow or the proportion of air in the medium, the necessary number of cyclones can be switched on or off during operation. The optimum setting is made via differential pressure measurement; coriolis or radiometric measuring instruments on the drainpipe allow efficient operation of the GAW Airvent.





ADVANTAGES

- › Flow-optimized design
- › Modular construction
- › No deposits
- › Easy handling during service work

Based on the proven, modular GAW design, the Airvent reduces air content in the coating by up to 7%.

GAW Airvac



The GAW Airvac is a vacuum deaerator used for deaerating media, dispersions, emulsions and coating colours. It removes air from the coating compound and enables a bubble-free coating application on the paper.

The GAW Airvac, a true masterpiece, has been specially developed for air-sensitive applications. For a curtain coater, it is part of the GAW working station.

Specially developed for the needs of the paper and board industry, the GAW Airvac combines all the common basic deaeration methods.

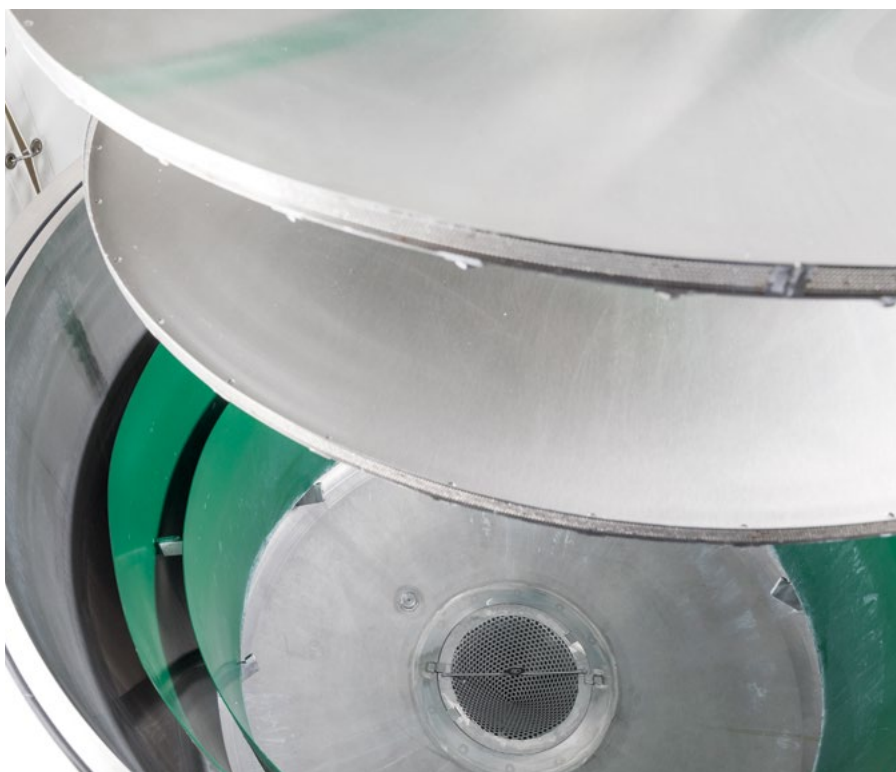
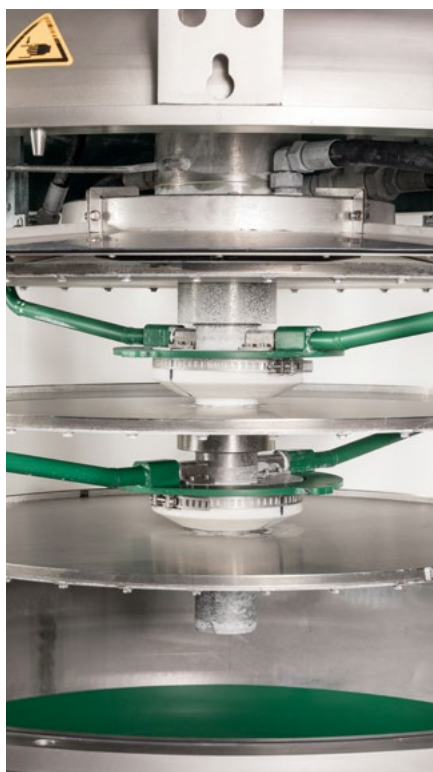
The vacuum deaerator consists of the main components vacuum container, motor, coating colour distribution system and centrifugal discs. The medium to be deaerated is distributed in parallel via three separate connections on the rotating centrifugal discs. These throw the coating colour radially against a double wall system, where it drains off and is collected in the container bottom.

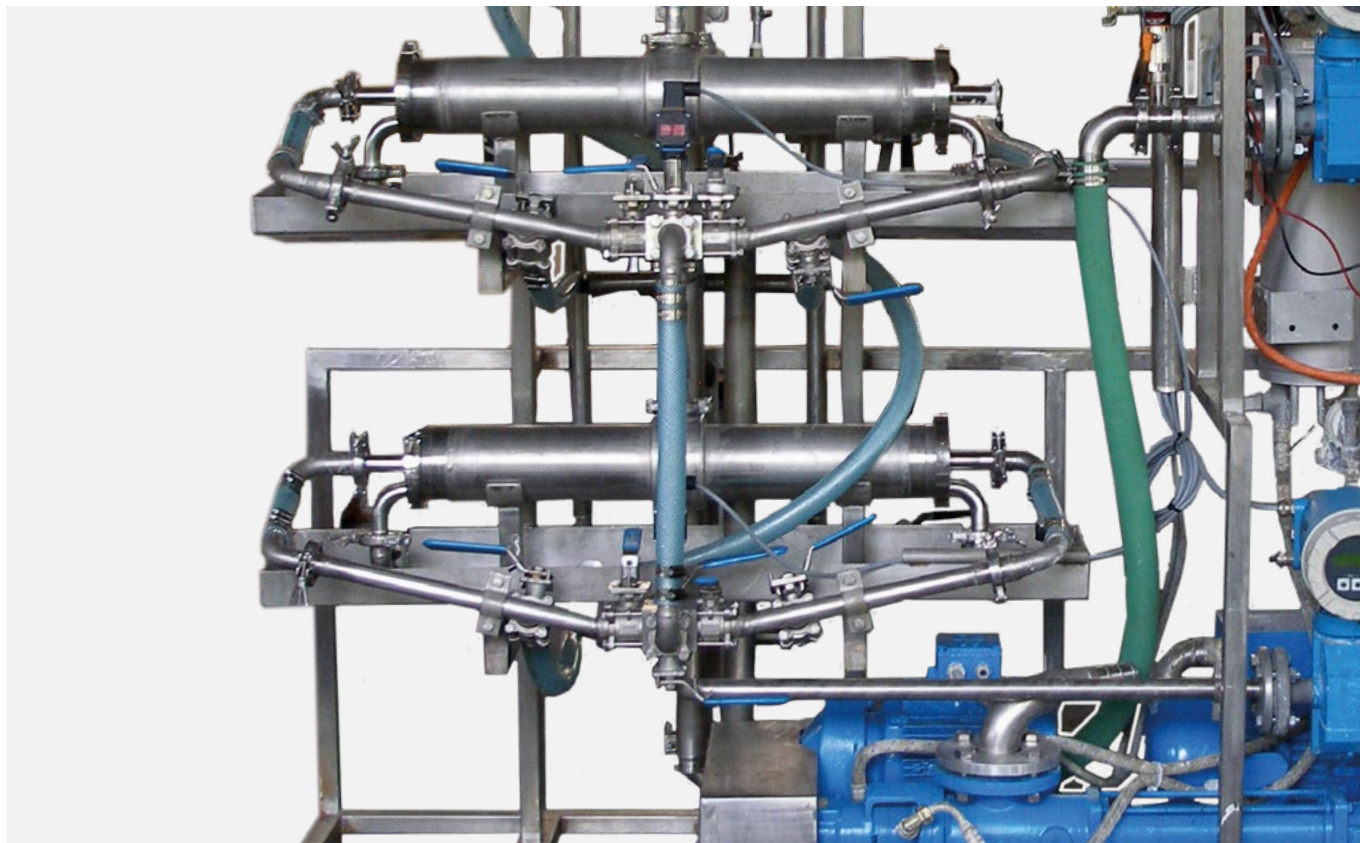
In this process, fine drops of paint are formed, which favour the deaeration.

Negative pressure in the vacuum container causes the air bubbles contained in the paint droplets to expand and burst. The released air is extracted by the vacuum system.

The vacuum deaerator is a basic part of the working stations for curtain coater applications.

If the bubble-free quantity of coating colours required on the coating unit exceeds the nominal colour flow rate of the deaerator, several deaerators are interconnected.





DEAERATING

GAW Airmem

The GAW Airmem membrane deaerator is suitable for venting all liquid or paste-like spreading media used for coating, inkjets, dispersions, developer solutions, emulsions and oils.



Finishing processes for paper or cardboard webs are significantly determined by the homogeneity of the coating composition to be applied. In order to ensure a uniform coating of the material web, the application layer must not show any imperfections.

In this case, depending on the respective application unit, the air content of the coating composition is crucial. Very small air bubbles in particular are a big challenge for the manufacturers. In the continuous operation of a curtain coater, a completely deaerated medium is an essential prerequisite.

The GAW air membrane deaerator is the only efficient solution. Despite minimal space requirements, there is an immensely large surface area available for the efficient deaeration of the spreading media. The medium to be deaerated is circulated around hollow fibre tubes of polyolefin, which are incorporated into a fabric-like array. During this process, no shearing acts on the coating mass, so that it retains its chemical-physical values achieved in the preparation.

Since its foundation, AutomationX has been operating in an excellent partnership with GAW technologies. Today, the company is already implementing total solutions in the pulp & paper, food, petrochemical, energy and infrastructure sectors.





LABORATORY EQUIPMENT

Laboratory dispersion equipment

Excellent, reproducible results!

GAW technologies has been developing mixers for homogenizing liquids for over 40 years. Extending beyond our traditional business – the paper and board industry – our developments are now used in a variety of industries that employ mixing technology.

In research and development, GAW technologies relies on a synergetic network of know-how within the group of companies as well as on cooperation with national and international universities, colleges, research institutes and in particular on joint developments with their customers.

Thanks to many years of development partnerships, processes and key components are constantly being improved, the knowledge is integrated globally and our key customers are supported worldwide to create innovative solutions in the dispersing technology.

Our GAW laboratory dispersers were perfected in the same way. These offer

- › Volume from 5 to 50 l
- › Motor performance from 5.5 to 7.5 kW
- › Stepless speed control via frequency converter
- › Speeds up to 5,000 rpm
- › Easily exchanged dispersing units
- › Propeller, turbine wheel and rotor-stator equipment
- › Standard rotor-stator design with 1 row of teeth
- › Cooling and heating jacket
- › Single-acting mechanical seal with sealing water device

Quality loop

In order to be able to achieve the desired quality of the coating compound in the coating process – which is demanding technologically – the relevant parameters must be kept within narrow limits.

The complete system, including all gauges, peripherals (e.g. pumps, filters or irrigation), is packaged in a compact and mobile unit to allow flexible deployment in different locations.

The modular measuring system GAW Quality Loop enables the continuous monitoring of the parameters and ensures the uniform and excellent quality of the coating compound.

MEASURED PARAMETERS

- › Solids content
- › Viscosity
- › High shear viscosity / shear rate
- › pH value
- › Temperature
- › Density
- › Air content
- › Mass flow
- › Volume flow
- › Redox potential

ADVANTAGES

- › Continuous monitoring and recording
- › Data transfer via ProfiBus
- › Fully automatic measuring, cleaning and calibration processes
- › Real-time measurement and traceability of quality features
- › Easy operation
- › Reduction of quality control costs (laboratory)

PERFORMANCE

- › Optimization of raw material batches
- › Precise adjustment of the additives
- › Significant prevention of reject rates



automationX[®]

The worldwide established process control system automationX[®] by the homonymous company is the product of over thirty years of experience in project execution and is continuously improved and advanced in development partnerships with key customers in the paper industry.



This scalable, hardware-independent, modular Distributed Control System (DCS) enables the customer-optimized implementation of simple, single-user solutions right through to system-wide distributed systems in which the entire breadth of automation and control technology can be configured with a single tool.

automationX[®] is not limited to control and visualization but includes a number of integrable modules such as Advanced Process Control (APC) solutions, batch and continuous operation production management systems (MES) and energy management systems.

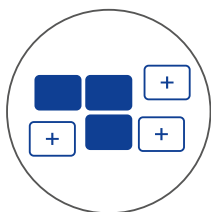
The scope of services of AutomationX includes concept development, project

planning including customer-specific developments, complete implementation of system technology including network technology and interfaces, electrical engineering with IO level including control cabinet construction, commissioning and system optimization, customer training, follow-up, maintenance and 24 / 7 standby service.

AutomationX and GAW technologies, two strong partners within the GAW Group, have already automated and optimized hundreds of plants in the pulp and paper industry worldwide.

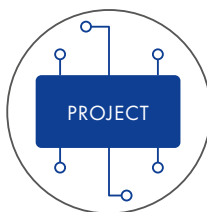
Since its foundation, AutomationX has been operating in an excellent partnership with GAW technologies. Today, the company is already implementing total solutions in the pulp & paper, food, production, building materials and infrastructure sectors.

automationX® process control system for processing systems – open, adaptable, efficient, modular.



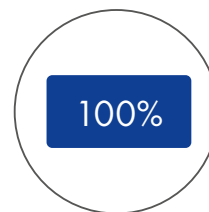
Open

Industrial plants in the paper industry are usually designed for decades of operation. Therefore, it is necessary to couple different subsystems and field components with different interfaces to a process control technology. AutomationX has implemented a large number of interfaces in their automationX® system, which means they can combine the most diverse generations of components on a single control system. A consistent system configuration from the operating stand to the control as well as the scalability from a single-user solution to highly redundant cluster solutions round out the performance profile.



Adaptable

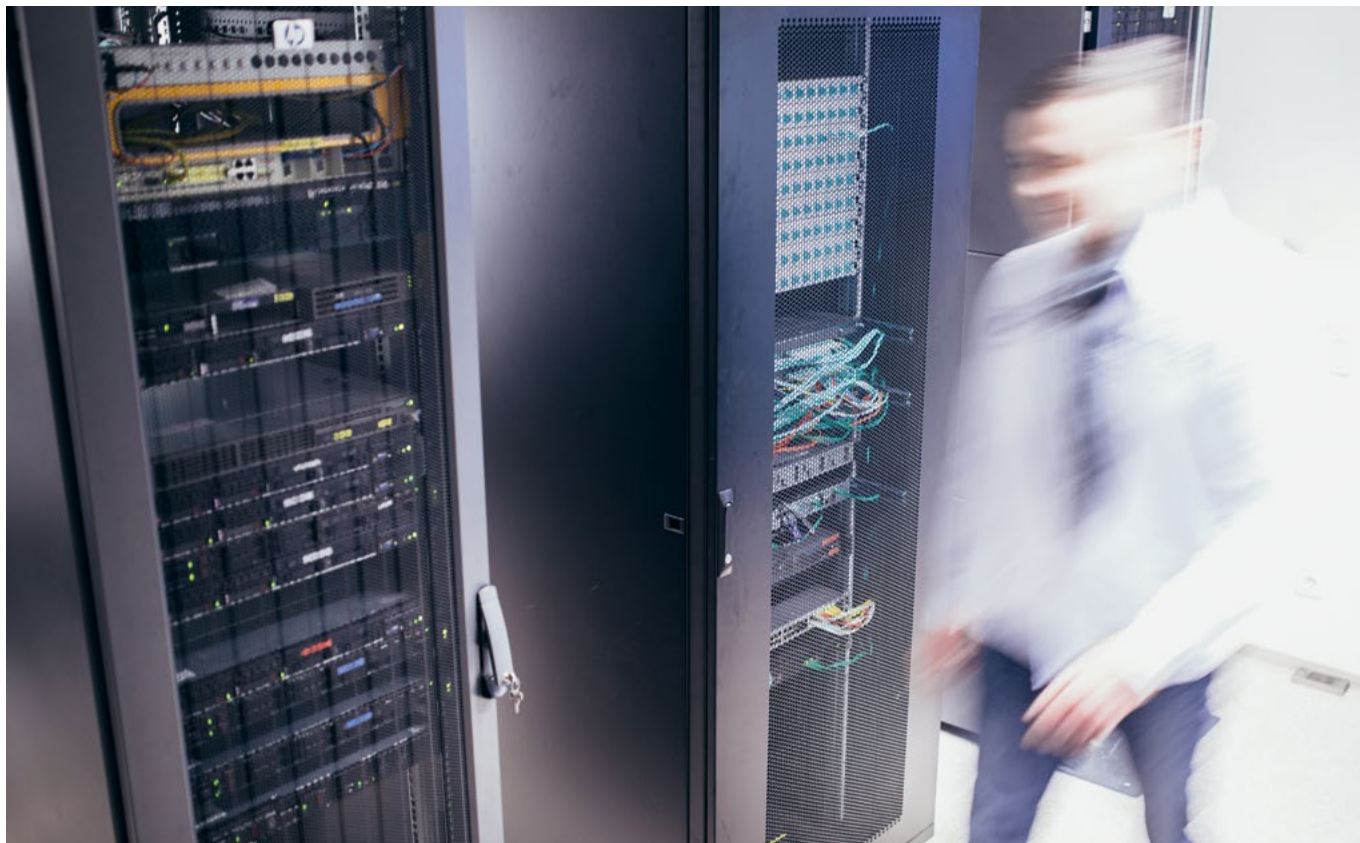
Experience has shown that, in the course of implementing a project, there are often a number of adjustments and changes in comparison to the originally designed variant. automationX® offers the opportunity to influence all mechanisms of the automation system comprehensively. In this way, changes and adjustments to the project can be carried out quickly, simply and without interruption.



Efficient

An experienced team and a network of selected system integrators ensure swift and professional implementation of the projects. Thanks to this structure, AutomationX offers the best possible training, 24/7 support and tailor-made, optimal follow-up support.





AUTOMATION

Advanced process control-solutions (APC)

Use the full potential of your system.

Your goal as an operator is to exploit the full potential of your production plant. AutomationX® supports you without the need to invest in expensive conversions. Intelligent model-based simulations and regulations enable you to break new ground.

AutomationX's advanced process control (APC) solutions are systems that provide both convenient and efficient analysis of process data as well as intelligent control and regulation of the process based on the data obtained. In doing

so, AutomationX works with historical data and the process know-how of your operating team, represented in mathematical models.

These APC solutions can react much more quickly to disturbances, thus reducing or completely eliminating variances in the process.

The focus of APC solutions from AutomationX is on the complete digitization of individual system components through to system-wide production optimization.

In combination with other AutomationX modules, such as production management (MES), indispensable synergy effects are created.

The expanded e-solutions of AutomationX® contain defined guarantee values that you will achieve with the most modern technology!

The GAW ContiMixer offers enormous advantages for the continuous processing of coating compounds and ensures a massive reduction of the total cost of operation.

The APC classic has been enhanced with e(nhanced) modules

Enhanced Model Predictive Control (eMPC)-solutions

eMPC solutions optimize individual-process sections in a targeted manner. AutomationX uses the classic advance process control (APC) approach. The optimization of individual process stages in consideration of all conditions ensure high potential savings (raw materials, additives etc.) and lead to the maximization of the desired quality.

ePO (Enhanced Process Optimizer)-solutions

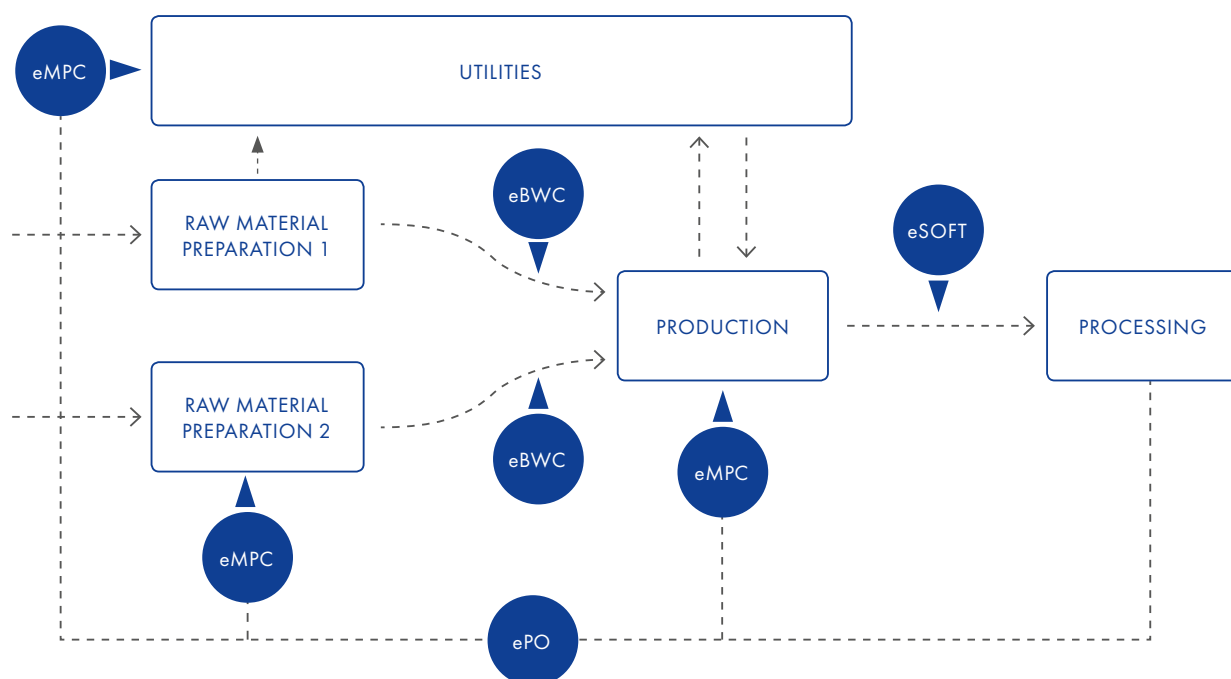
ePO solutions enable fully networked process optimization across all process stages (time and energy). Hybrid models from physics and history, networked with all relevant systems (ERP, PLS, QCS, etc.) enable a combination of time and energy optimization (balanced manufacturing - BaMa) compared to conventional APS and PPS. The factory-wide simulation or optimization is made possible

by the BaMa Tool Chain. Hybrid Discrete Event System (DEVS) mechanisms are the foundation of AutomationX tools. They allow you to link a variety of different models together to model your systems.

ePM (enhanced Paper Machine)-solutions

ePM solutions enable the cost-effective production of all types of paper and quick and precise grade changes. The substantial savings are achieved by maximizing the filler content, which is to be entered depending on the availability of the rejects and / or the filler. The stepless weighting between quality and cost-optimal operating style allows the flexible adaptation to the product requirements.

The continuous adjustment of filler, rejects and chemical additives reduces the variance of ash in the base paper as well as the fluctuations in the retention system. →



—> This allows the user to raise the ash target values for all paper types according to the physical potential. In combination with the novel hybrid eMPC technology, it is possible to map discrete process states and continuous dynamic process behaviour in a common process model and thus decisively improve the control behaviour.

ePULP (enhanced pulp) solutions

The ePULP system monitors the bleach effect minute by minute and adjusts the use of chemicals continuously. This achieves more stable process conditions (e.g. pH value) as well as a significantly reduced variance of the final quality, without the operating team having to deal with the process changes. The operating team can concentrate exclusively on system operation. Avoiding over-quality brings immediate savings on chemicals. The lower variance reduces the target and average values in the area of white/finished fabric by several

tenths of a percentage point and the total bleaching agent input is optimally distributed over all stages. In addition to the economic effects, the ePULP solution thus leads to demonstrable relief for the operating team and the environment.

eTMP (enhanced Thermo Mechanical Pulp)-solutions

eTMP solutions ensure cost-optimized refining operation. Process models for each refining stage bring about local optimization. Missing quality online measurements are displayed in the form of soft sensors. A higher-level optimization module enables energy savings through load shifting. As a result, energy-efficient system components can be used much better. Minute-by-minute calculation cycles allow the constant adjustment of the necessary target values. In addition, the daily forecast of energy prices can be taken into account in production. Smart optimization algorithms skilfully exploit tank levels to

run refiner facilities at the lowest energy cost.

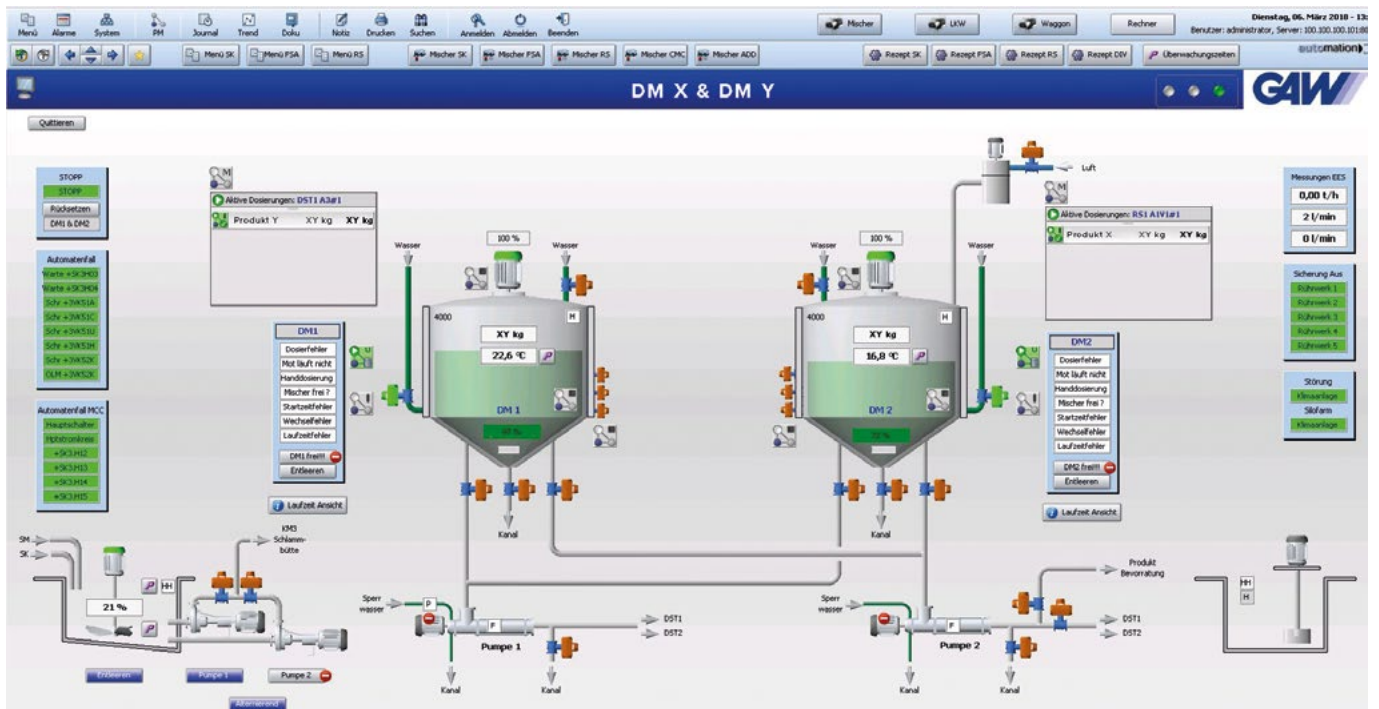
eDIP (enhanced Deinked Pulp)-solutions

The implementation of an eDIP solution in the area of the deinking system creates the basis for a process management that counteracts raw material fluctuations and process variations immediately and with suitable means, stabilizes quality, saves costs and increases the yield. In addition to the control of the individual stages (dissolving drums, pre-flotation, post-flotation, bleaching stages), a higher-level optimizer enables total regulation across all stages. As a result, the goal of the most cost-effective DIP substance treatment can be achieved while adhering to the specified quality objectives with regard to ash content and whiteness.

eDRY (enhanced Drying)-solutions

Drying processes in the paper industry require about 70% of the total energy requirement. This is reason enough to invest in the reduction of steam consumption. eDRY reduces steam consumption without the need for your operating team to intervene. Hybrid process models (empirical and physical) depict the drying process with all relevant ancillary processes. The result is a virtual representation of the real paper machine. A closed-loop operation of the real paper machine makes it possible to optimize the steam consumption in the dryer group. The key to success is the calculated dry content after the press section. With the additional application of the ePM solution, a substantial reduction in steam consumption can be achieved without disregarding quality specifications.





AUTOMATION

Production management systems for batch and continuous operation

Manufacturing Execution Systems (MES)

AutomationX offers a range of components for planning, visualizing, monitoring and analysing your production. The production management module is based on the ANSI/ISA S88/95 standard and has all the MES functionalities. The individual components are mapped in object-oriented technology libraries and connected to the process peripherals via various interfaces. This creates a transparent production system that schedules the relevant order data, optimizes and executes sequences, and records, visualizes and analyses performance and quality data.

The automationX® production management system enables

- › Product and batch tracking
- › Process modelling, planning, execution
- › Trending, statistics, journal
- › Resource management (warehouse management, material, personnel)
- › Communication to local controllers and data buffering
- › Control of marking systems
- › Performance and quality analyses (VDI 3423, OEE)
- › Reporting
- › Operating and machine data acquisition
- › Alarm management
- › ERP interface
- › Data archiving and recovery

